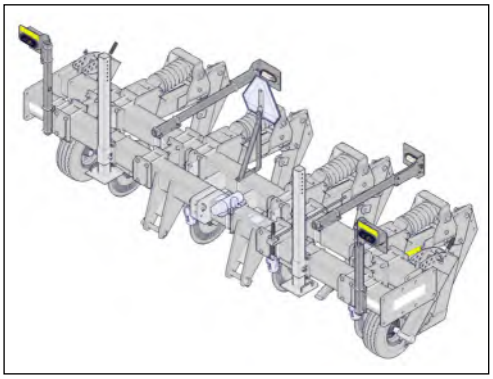
BLU-JET® by Unverferth

Primary Tillage



SubTiller® 4

3-Point & Pull-Type Rigid & Folding Frames

Beginning with Serial Number A66840100

Part No. 603430

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.

Pre-Delivery Checklist

- ☐ Hardware tightened
- ☐ Machine lubricated
- ☐ Safety and operating procedures reviewed
- ☐ Field adjustment information reviewed
- ☐ Warranty information reviewed

Product Information

When ordering parts or when requesting further information or assistance, always give the following information:

- Machine name
- Model number
- Serial number

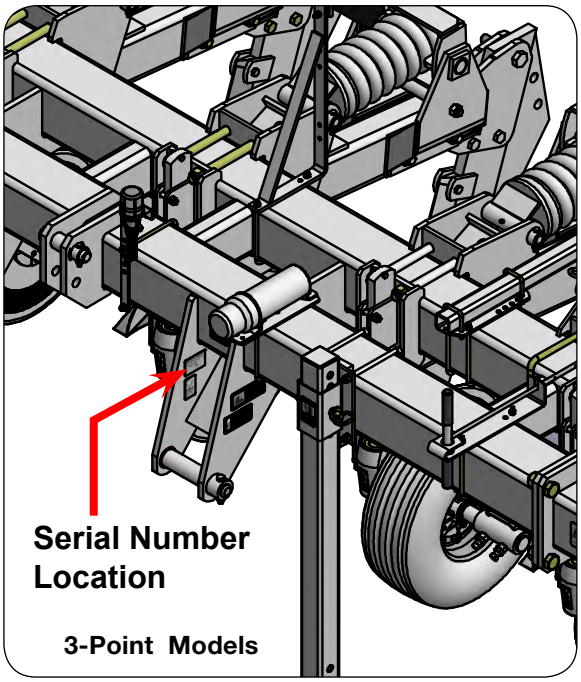
All products manufactured by Unverferth Mfg. Co., Inc. are warranted to be free from material and workmanship defects for one full year from time of consumer delivery. Your local dealer will gladly assist you with any warranty questions.

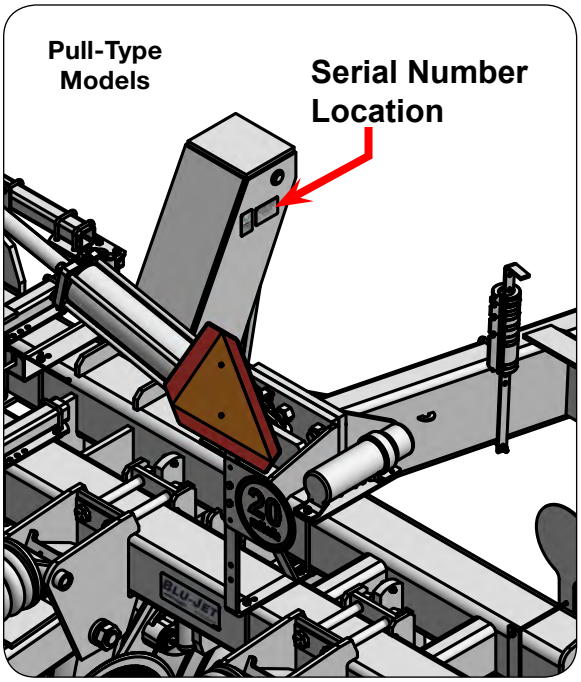
Please fill out and retain this portion for your records.

Purchase Date _____ Model _____Serial No._____

Dealer _____ City _____

Dealer Contact _____ Phone _____





IMPORTANT

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

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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.

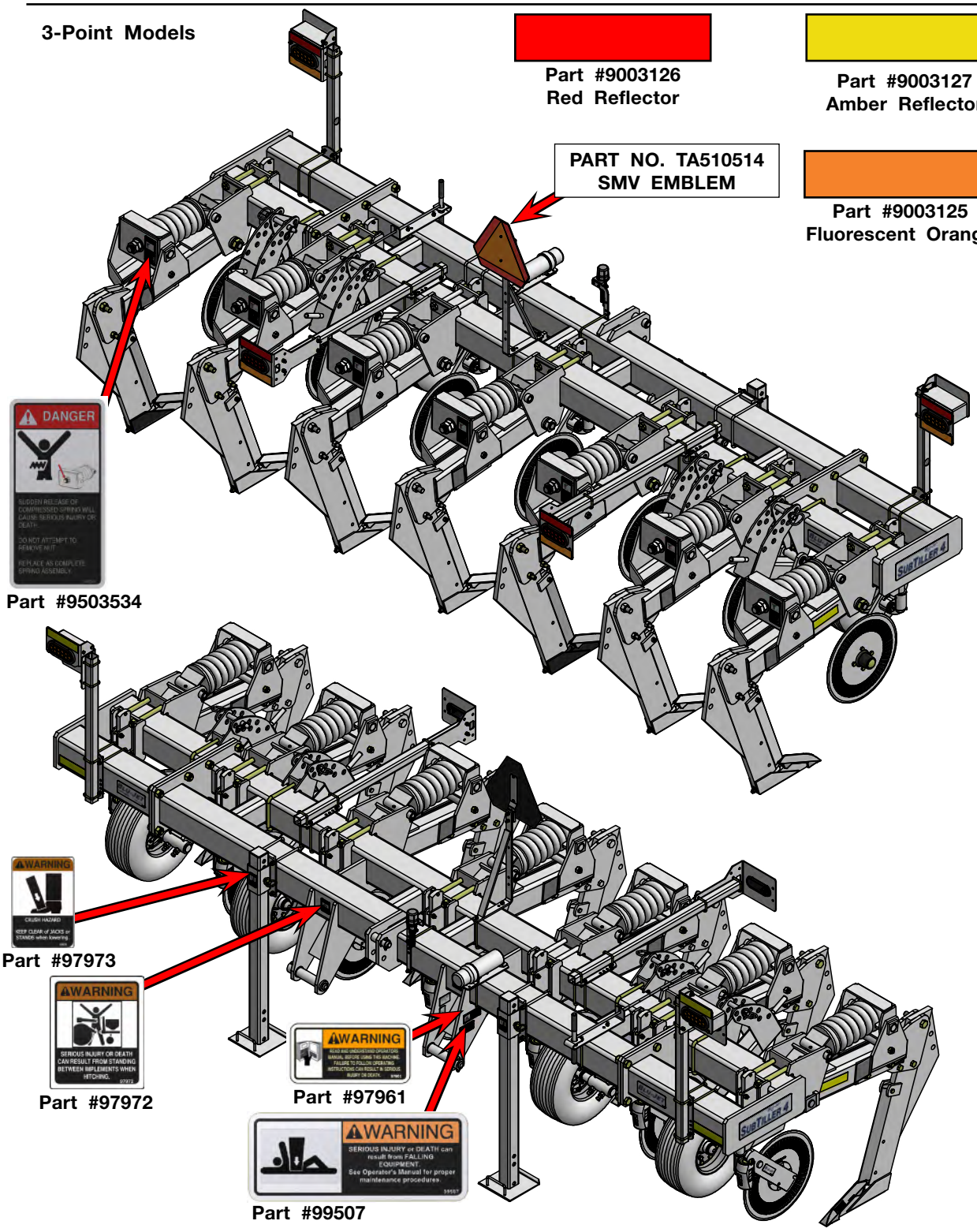
Is used for instruction on operating, adjusting, or servicing a machine.

Safety Decals

WARNING

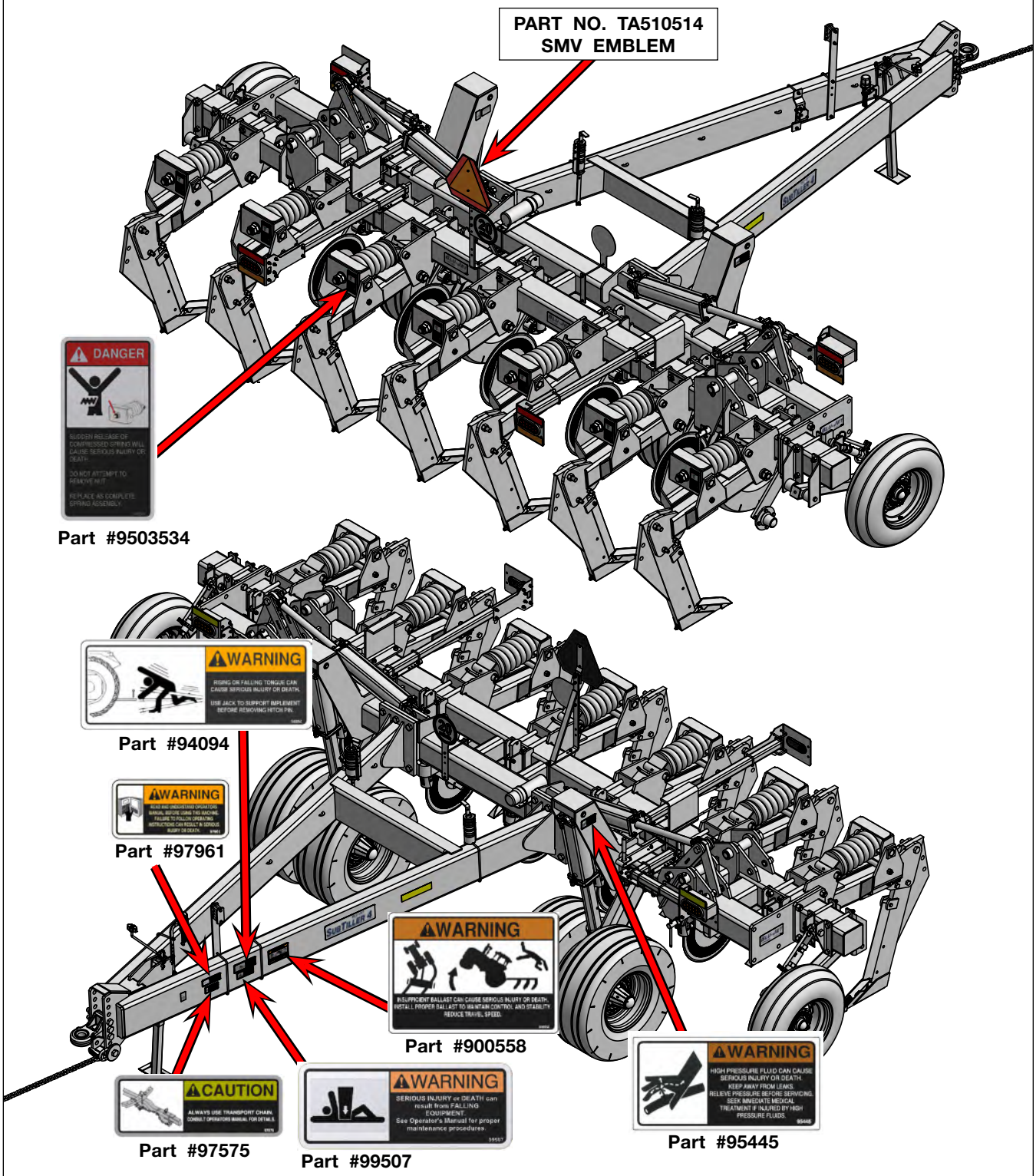
- **REPLACE LOST, DAMAGED, PAINTED, OR UNREADABLE DECALS IMMEDIATELY. IF PARTS THAT HAVE DECALS ARE REPLACED, ALSO MAKE SURE TO INSTALL NEW DECALS. THESE DECALS INFORM AND REMIND THE OPERATOR WITH OPERATIONAL INFORMATION AND SAFETY MESSAGES.**

3-Point Models



Safety Decals (continued)

Pull-Type Models



Part #9003126
Red Reflector

Part #9003127
Amber Reflector

Part #9003125
Fluorescent Orange

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 tractor engine off and remove key before servicing.

- Avoid personal attire such as loose fitting clothing, shoestrings, drawstrings, pants cuffs, long hair, etc., that may become entangled in moving parts.
- Do not allow anyone to ride on the implement. Make sure everyone is clear before operating machine or towing vehicle.

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

Before 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.
- When working around the implement, be careful not to be cut by sharp edges.
- Explosive separation of a tire and rim can cause serious injury or death. Only properly trained personnel should attempt to service a tire and wheel assembly.
- Do not stand between towing vehicle and implement during hitching.
- Always make certain everyone and everything is clear of the machine before beginning operation.
- Inspect fields for buried utility lines (electric, natural gas, water, etc.). To find buried lines in the US or Canada contact 1-888-258-0808, in the US you may also contact 811.

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

- Secure transport chains to towing vehicle before transporting. DO NOT transport without chains.
- Install transport locks 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 that the SMV emblem and SIS decal are visible to approaching traffic.

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.

- Hydraulic system must be purged of air before operating to prevent serious injury or death.

- Do not bend or strike high-pressure lines. Do not install bent or damaged tubes or hoses.

- Repair all oil leaks. Leaks can cause fires, personal injury, and environmental damage.

- Route hoses and lines carefully to prevent premature failure due to kinking and rubbing against other parts. Make sure that all clamps, guards and shields are installed correctly.

- Check hydraulic hoses and tubes carefully. Replace components as necessary if any of the following conditions are found:
  - End fittings damaged, displaced, or leaking.
  - Outer covering chafed/cut or wire reinforcing exposed.
  - Outer covering ballooning locally.
  - Evidence of kinking or crushing of the flexible part of a hose.

Preparing for Emergencies

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

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

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

Unloading Instructions

WARNING

- **BEFORE REMOVING SHIPPING CHAINS OR STRAPS FROM LOAD, POSITION UNLOADING EQUIPMENT INTO FORK POCKETS OF SHIPPING FRAME.**
- **READ AND UNDERSTAND SAFETY RULES BEFORE OPERATING OR SERVICING THIS MACHINE. REVIEW THE SAFETY SECTION IN THIS MANUAL IF NECESSARY.**
- **TIPPING OR MOVEMENT OF THE MACHINE CAN CAUSE SERIOUS INJURY OR DEATH. BE SURE THE MACHINE IS SECURELY BLOCKED.**
- **KEEP HANDS CLEAR OF PINCH POINT AREAS.**
- **FALLING OBJECTS CAN CAUSE SERIOUS INJURY OR DEATH. DO NOT WORK UNDER THE MACHINE AT ANY TIME WHILE BEING HOISTED. BE SURE ALL LIFTING DEVICES AND SUPPORTS ARE RATED FOR THE LOADS BEING HOISTED. THESE ASSEMBLY INSTRUCTIONS WILL REQUIRE SAFE LIFTING DEVICES UP TO 14,000 LBS. SPECIFIC LOAD RATINGS FOR INDIVIDUAL LOADS WILL BE GIVEN AT THE APPROPRIATE TIME IN THE INSTRUCTIONS.**
- **EYE PROTECTION AND OTHER APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT MUST BE WORN WHILE SERVICING THE IMPLEMENT.**

Be sure machine is fully supported. If two machines are placed beside each other on bed of truck, be sure the other machine is properly supported by another piece of unloading equipment. Use unloading equipment rated to handle the intended load.

Be sure the safe lifting device is rated for the load. Use the following guidelines for determining safe lifting device capacity requirement:

No. of Shanks	Shank Spacing	Frame Style	Fold Type	Minimum Safe Lifting Device
3	30”	3-Point	Rigid	4000 Lbs.
5	30”	3-Point	Rigid	5500 Lbs.
7	30”	3-Point	Rigid	8000 Lbs.
7	30”	3-Point	Folding	8000 Lbs.
7	30”	Pull-Type	Folding	10,000 Lbs.
9	30”	3-Point	Rigid	10,000 Lbs.
9	30”	Pull-Type	Folding	12,000 Lbs.
11	30”	Pull-Type	Folding	14,000 Lbs.

For ease of assembly, install all hardware loosely until assembly is complete and then tighten according to Torque Chart in the MAINTENANCE section of this manual.

Unloading Instructions (continued)

Be sure to unload in an area that is firm and level. Keep all personnel at least fifteen feet away from unit when removing unit from truck. Before moving to assembly area, lower machine to the ground. DO NOT move over rough or uneven ground. Move machine only over level surfaces. Maintain a maximum speed of 3 MPH or less, depending upon conditions.

With shipping stand still in place, position machine onto a level, firm surface and proceed as follows:

⚠ CAUTION

- **SHARP EDGES ON COULTER BLADES CAN CAUSE INJURY. BE CAREFUL WHEN WORKING AROUND COULTER BLADES.**

1. If coulter blades are attached to unit, remove blades and place in assembly area. Be careful of sharp edges.

NOTE: DO NOT install these blades onto coulter hubs until after machine is safely placed in the working position.

2. 3-Point models, raise front support stands and lock into place (FIG. 2-1).

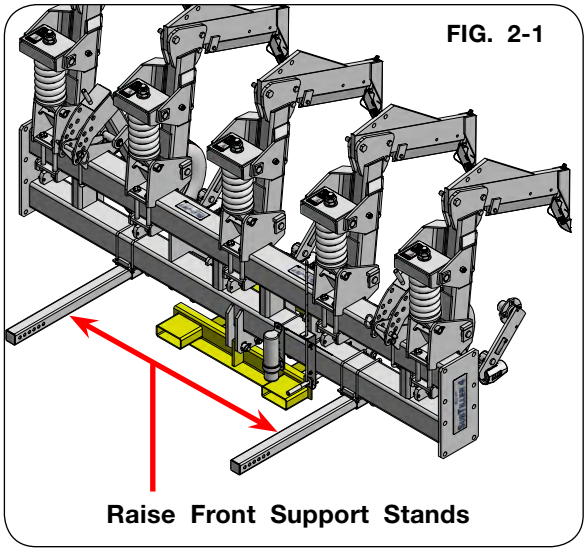


FIG. 2-1

Raise Front Support Stands

3. Be sure load is centered and safe lifting devices rated at a minimum of 14,000 lbs. are hooked equally and evenly on the machine.

4. Attach lower end of safe lifting device to the back of shank on the machine.

Unloading Instructions (continued)

5. **3-Point Models**
Remove upper mast pin from shipping stand (FIG. 2-2). STAND CLEAR of frame before proceeding.

NOTE: **3-Point Models** - It may be necessary to raise machine slightly to remove load from upper mast pin.

6. **3-Point Models**
With upper mast pin removed, move unit backwards, lowering the shanks to the ground. Be sure to lower as you proceed backwards. Keep the chains tight while lowering unit to the ground. Maintain control of frame as it is being rotated downward. (FIG. 2-2)

Pull-Type Models
Move unit backwards, lowering the shanks to the ground. Be sure to lower as you proceed backwards. Maintain control of frame as it is being rotated downward. (FIG. 2-3)

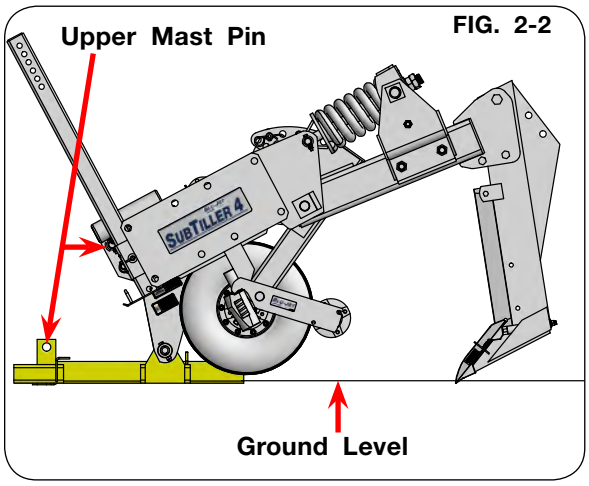


FIG. 2-2

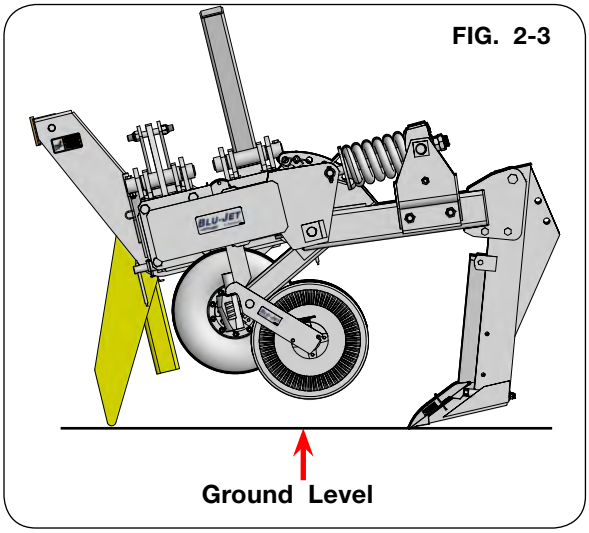


FIG. 2-3

7. After points are resting securely on the ground, relieve tension on safe lifting device.

8. **3-Point Models**
Using a safe lifting device rated at a minimum of 14,000 lbs., raise front of machine to a level position.

Reposition front support stands to support the frame and lock into position (FIG. 2-4). Then remove and discard the yellow shipping stand from the front of the machine.

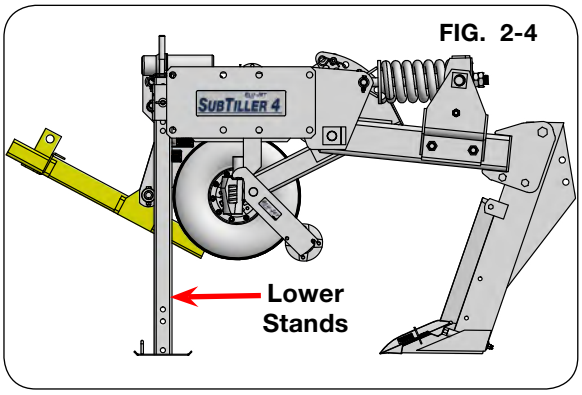


FIG. 2-4

Unloading Instructions (continued)

8. (continued)
Pull-Type Models
Using a safe lifting device and supports rated at a minimum of 12,000 lbs., raise the front of the machine to a level position (FIG. 2-5). Remove and discard the yellow shipping stands from the front of the machine.

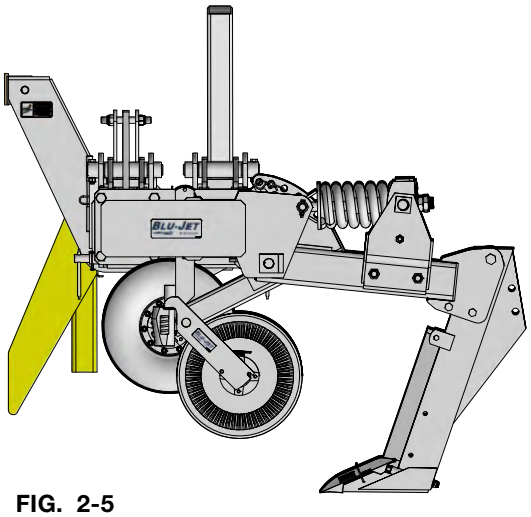


FIG. 2-5

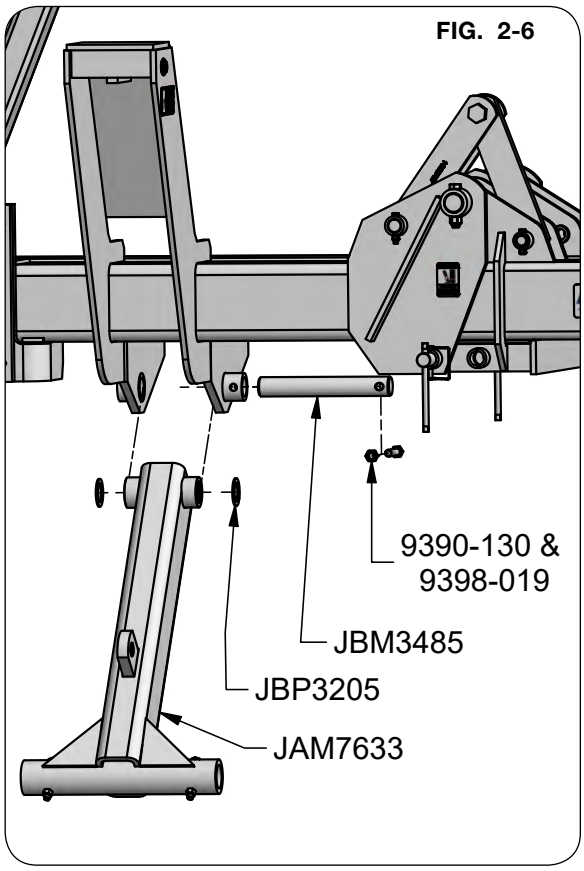
Axle Weldment — Pull-Type Models

1. Support implement with a safe lifting device rated at a minimum of 14,000 lbs.

2. Using a safe lifting device rated at a minimum of 150 lbs., position the axle weldment (JAM7633) on the main frame. Secure axle weldment with machinery bushings (JBP3205), 1 3/4" Dia. x 12 1/8" pin (JBM3485), 5/8"-11UNC x 3 1/2" capscrew (9390-130) and 5/8"-11UNC elastic locknut (9398-019). (FIG. 2-6)

3. Repeat process on the opposite side of the main frame.

FIG. 2-6



Axle Cylinders — Pull-Type Models

1. Using a safe lifting device rated at a minimum of 100 lbs., lift and attach the 4 3/4" x 16" cylinder with pins and cotter pins (JDP3994) to the left-hand axle weldment as shown in FIG. 2-7.

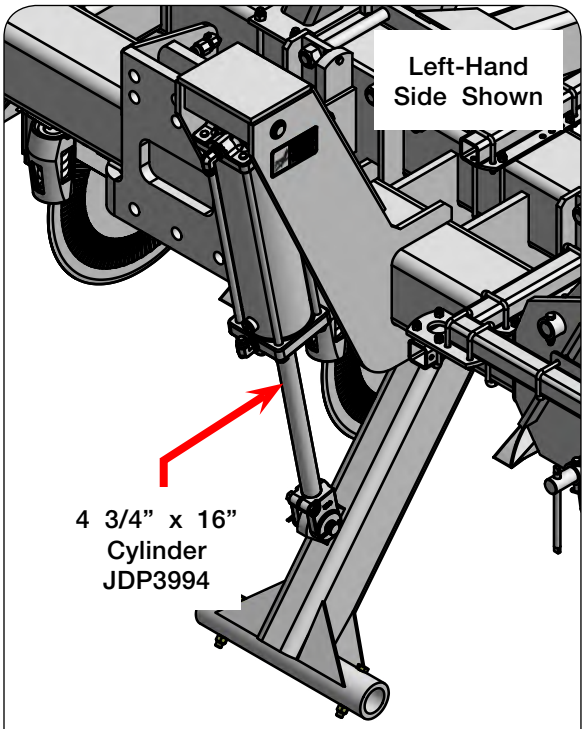


FIG. 2-7

2. Using a safe lifting device rated at a minimum of 100 lbs., lift and attach the 4 1/4" x 16" cylinder with pins and cotter pins (JDP4255) to the right-hand axle weldment as shown in FIG. 2-8.

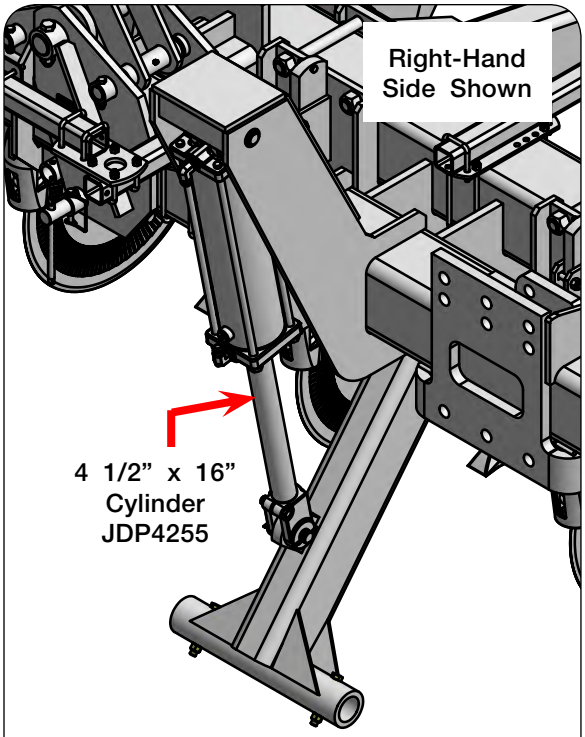


FIG. 2-8

Axle Hubs & Spindles — Pull-Type Models

1. Install transport locks

1. Remove the 1/2”-13UNC x 4” capscrews (9390-111) and 1/2”-13UNC locknuts (9800) (FIG. 2-9).

2. Insert the hub and spindle assemblies (JAAM2783) into the axle weldments. (FIG. 2-9)

3. Adjust hub and spindle assemblies (JAAM2783) on axle weldments until they are 1” from the axle weldment loop.

4. Install the 1/2”-13UNC x 4” capscrews (9390-111) and 1/2”-13UNC locknuts (9800). (FIG. 2-9)

5. Torque hardware according to “Torque Chart” in MAINTENANCE section.

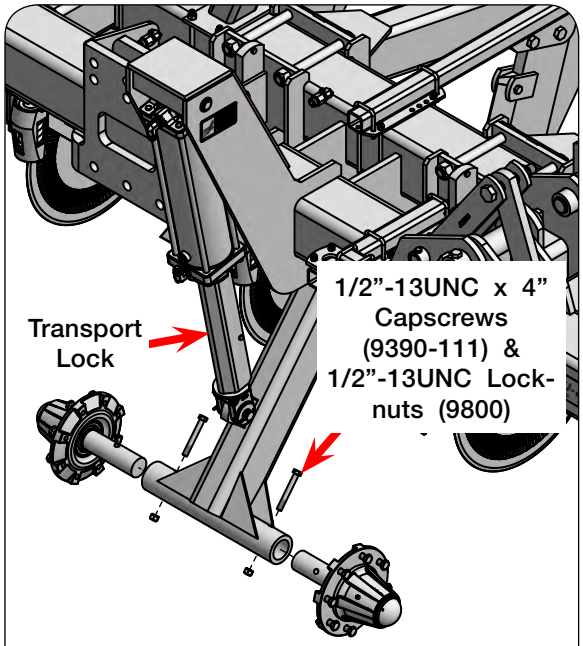


FIG. 2-9

Wheel Assembly — Pull-Type Models

1. Remove the 9/16”-18UNF wheel bolts (9231) from the hub assembly.

2. Attach the wheel assembly (603247SM) with the valve stem to the inside. Secure with the previously removed 9/16”-18UNF wheel bolts (9231). (FIG. 2-10)

3. Torque 9/16”-18UNF wheel bolts (9231). Refer to “Wheel Hardware Torque Chart” in MAINTENANCE section for proper torquing.

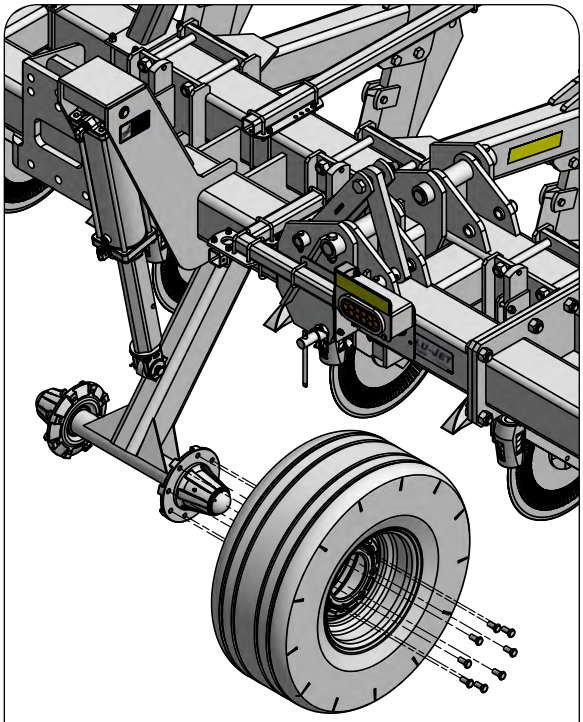
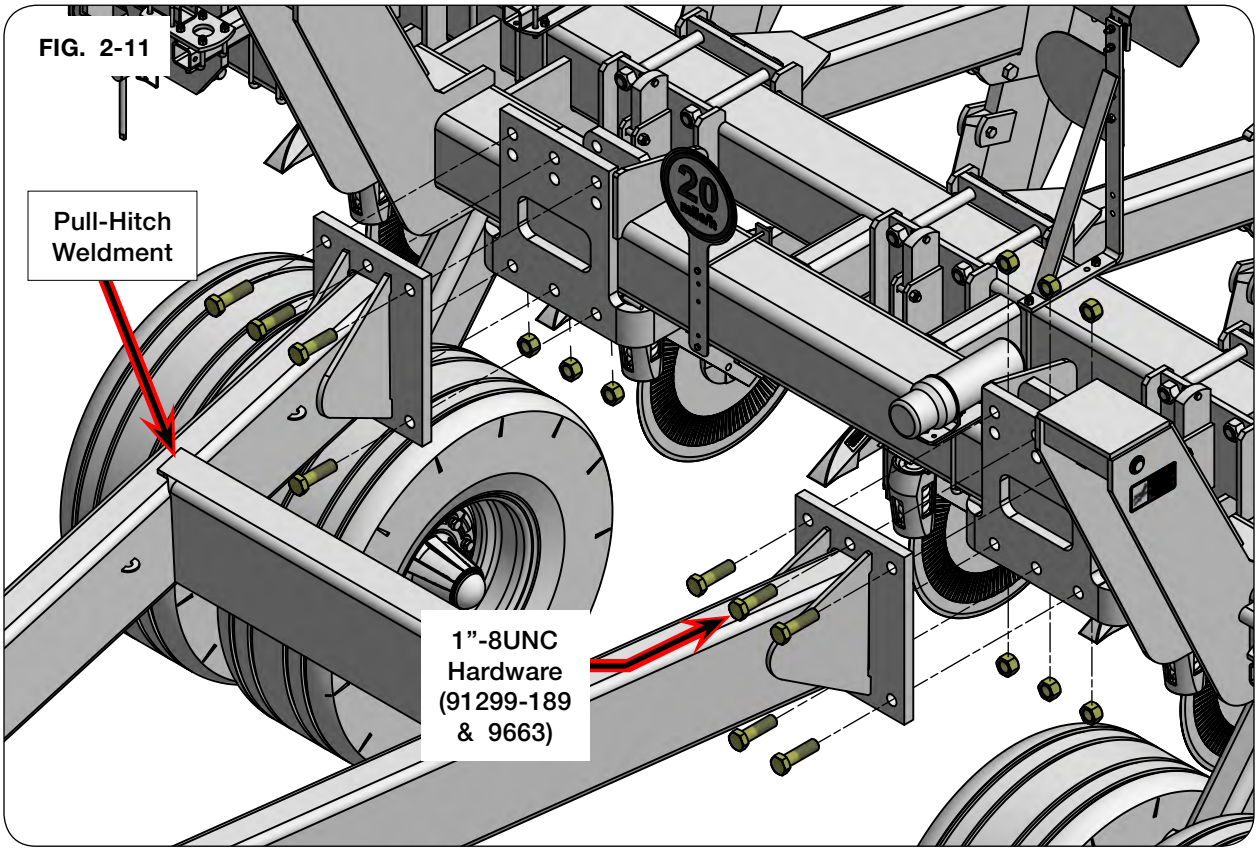


FIG. 2-10

Pull-Hitch Assembly — Pull-Type Models

1. Using a safe lifting device and supports rated at a minimum of 1,000 lbs., loosely attach the pull-hitch weldment to the main frame with 1”-8UNC x 3 1/2” capscrews grade 8 (91299-189) and 1”-8UNC locknuts (9663). (FIG. 2-11)

FIG. 2-11



Dust Cap Holder Assembly — Pull-Type Models

1. Attach the dust cap holder bracket (JAM4575) to the frame with 3/8”-16UNC U-bolt (9503892) and 3/8”-16UNC elastic locknuts (9398-012). (FIG. 2-12)

2. Secure the dust cap (9001968) to the top of the dust cap holder bracket with 1/4”-20UNC x 3/4” capscrews (9390-003) and 1/4”-20UNC locknuts (9936). (FIG. 2-12)

3. Torque hardware according to “Torque Chart” in MAINTENANCE section.

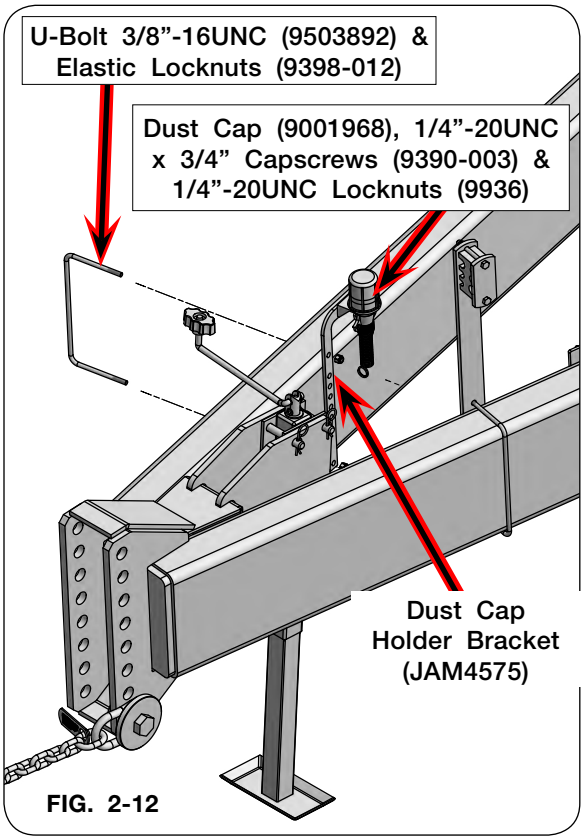


FIG. 2-12

Hydraulic Fittings and Hoses — Pull-Type Models

1. Install 7/8-14 JIC male x 3/4-16 O-ring male 90° elbows (98201) to the axle cylinders (JDP3994 and JDP4255). (FIG. 2-13)

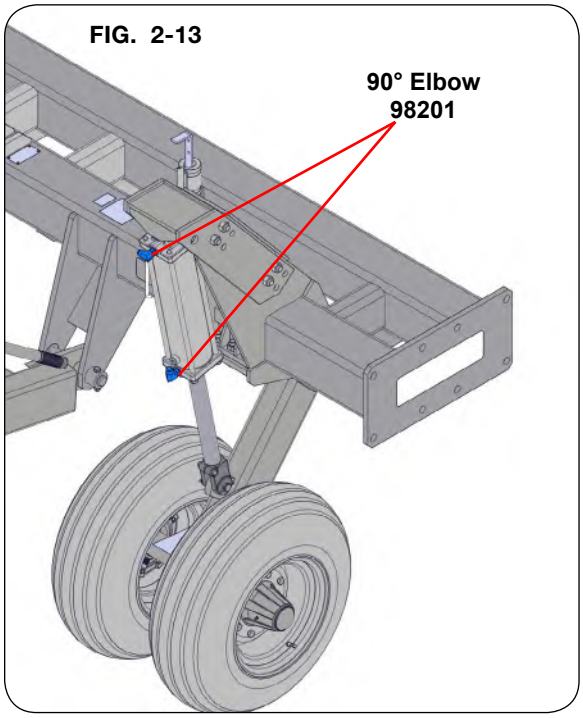


FIG. 2-13

2. Install 7/8-14 JIC male x 3/4-16 O-ring male adapters (9503026) to the transport hydraulic check valve (JDP3993). (FIG. 2-14)

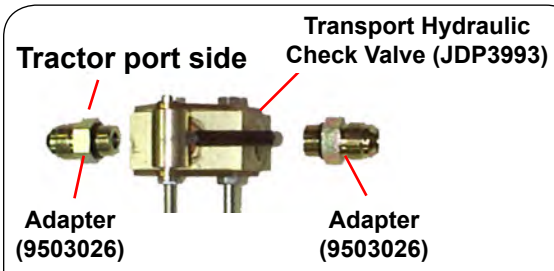


FIG. 2-14

Hydraulic Fittings and Hoses — Pull-Type Models (continued)

3. Secure the transport hydraulic check valve with mounting hardware (JDP3993) to the transport valve mount plate (79817B). (FIG. 2-15)

4. Loosely attach transport valve mount plate (79817B) to the left-hand side of the frame with 3/8”-16UNC U-bolt (9503892) and 3/8”-16UNC elastic locknuts (9398-012). (FIG. 2-15)

NOTE: Do not tighten transport valve mount plate until the hoses are installed.

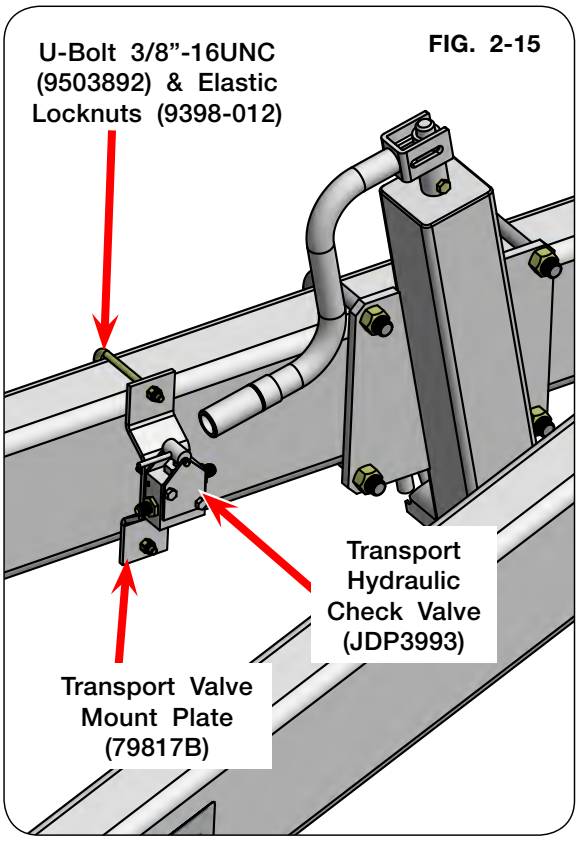


FIG. 2-15

5. Attach 3/8” x 126” hydraulic hose (JDP5024) to base end of 4 1/2” hydraulic cylinder on the right-hand side of the unit. The hose will extend to 4 3/4” hydraulic cylinder on the left-hand side of the unit and attach to rod end. (FIG. 2-16)

6. Install 3/8” x 252” hydraulic hose (JDP5133) to rod end of 4 1/2” cylinder on the right-hand side of the unit. This hose will extend to tractor. (FIG. 2-16)

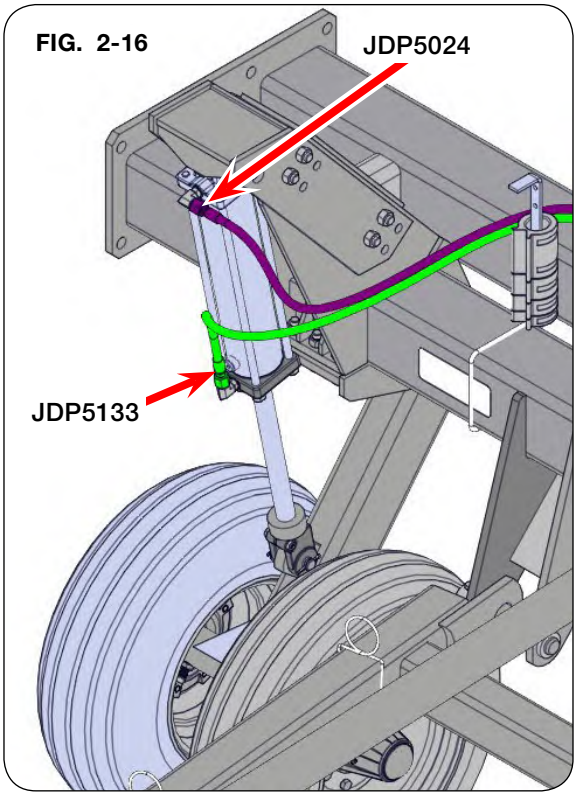
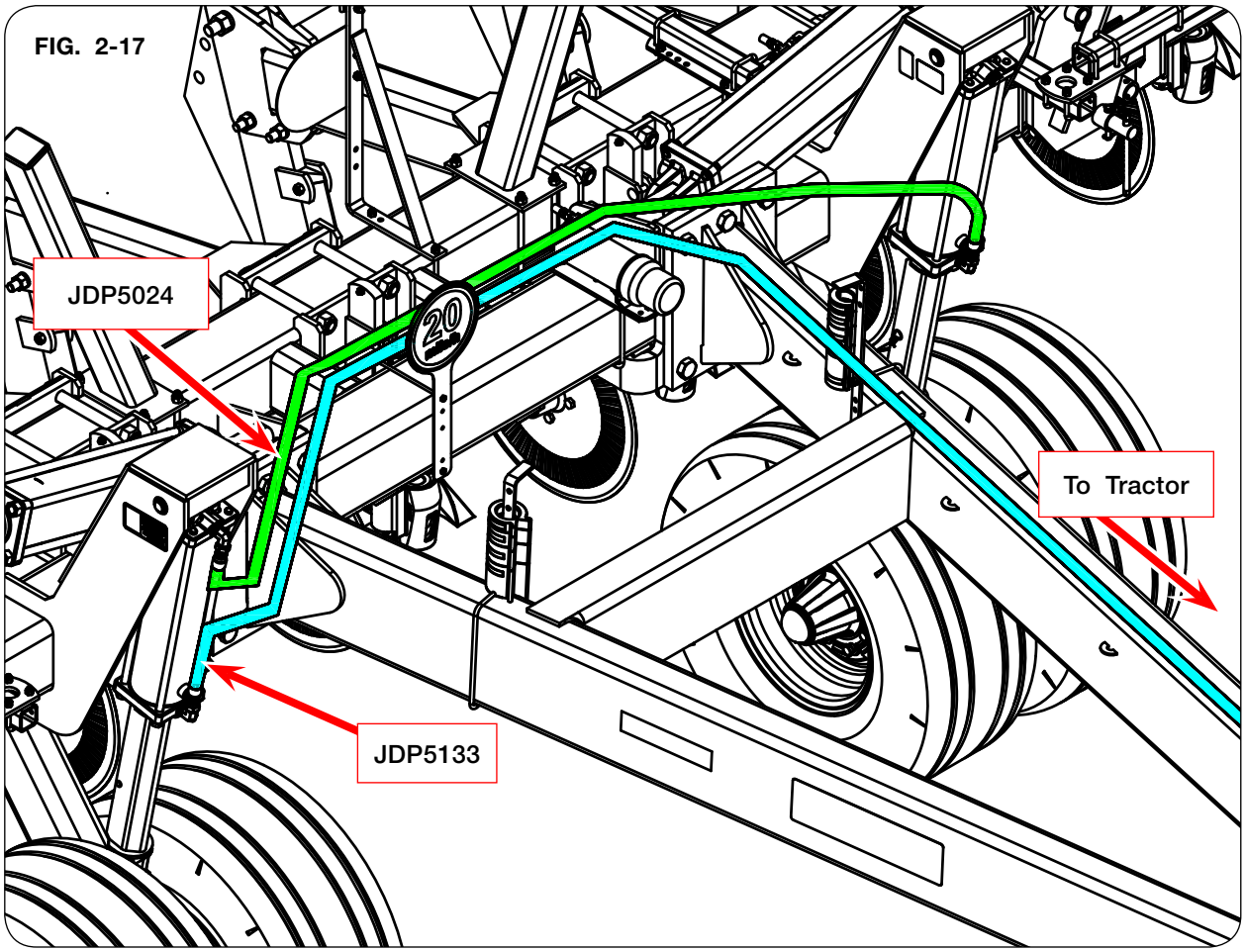


FIG. 2-16

Hydraulic Fittings and Hoses — Pull-Type Models (continued)

7. Route the 3/8” x 126” hydraulic hose (JDP5024) attached to the base end of the 4 1/2” hydraulic cylinder on the right-hand side of the unit to the 4 3/4” hydraulic cylinder on the left-hand side of the unit. Attach hose to 4 3/4” hydraulic cylinder rod end. (FIG. 2-17)

FIG. 2-17



8. Route 3/8” x 252” hydraulic hose (JDP5133) attached to the rod end of 4 1/2” cylinder on the right-hand side of the unit to the tractor. (FIG. 2-17)

9. Attach 7/8-14 JIC male x 3/4-16 O-ring male adapter (9503026) and 3/4-16 male tip coupling (91383) to tractor end of hose (JDP5133). (FIG. 2-18)

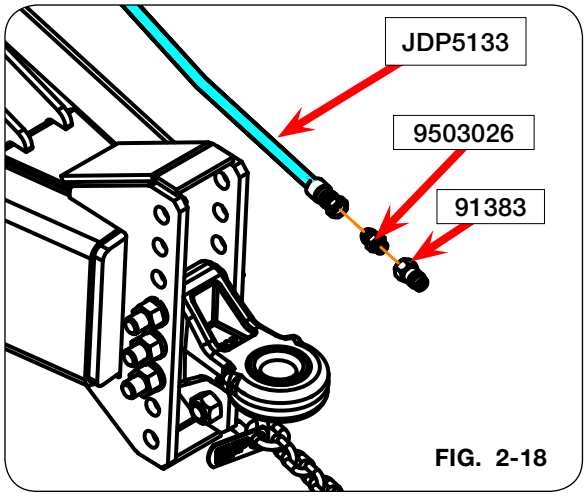


FIG. 2-18

Hydraulic Fittings and Hoses — Pull-Type Models (continued)

9. Attach 3/8" x 126" hydraulic hose (JDP5024) to base end of 4 3/2" hydraulic cylinder on the left-hand side of the unit. The hose will extend to transport hydraulic check valve (JDP3993). (FIG. 2-19)

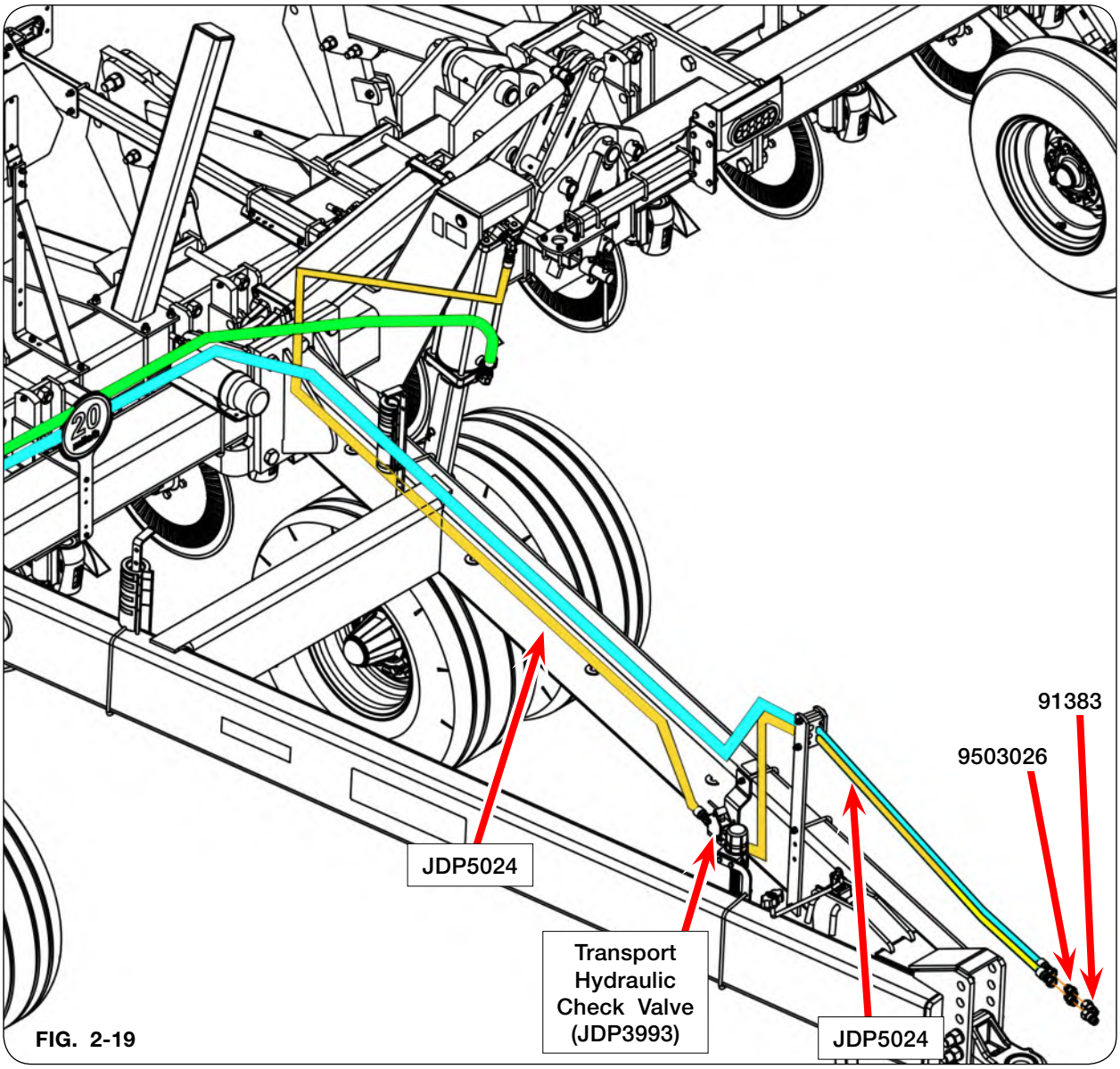


FIG. 2-19

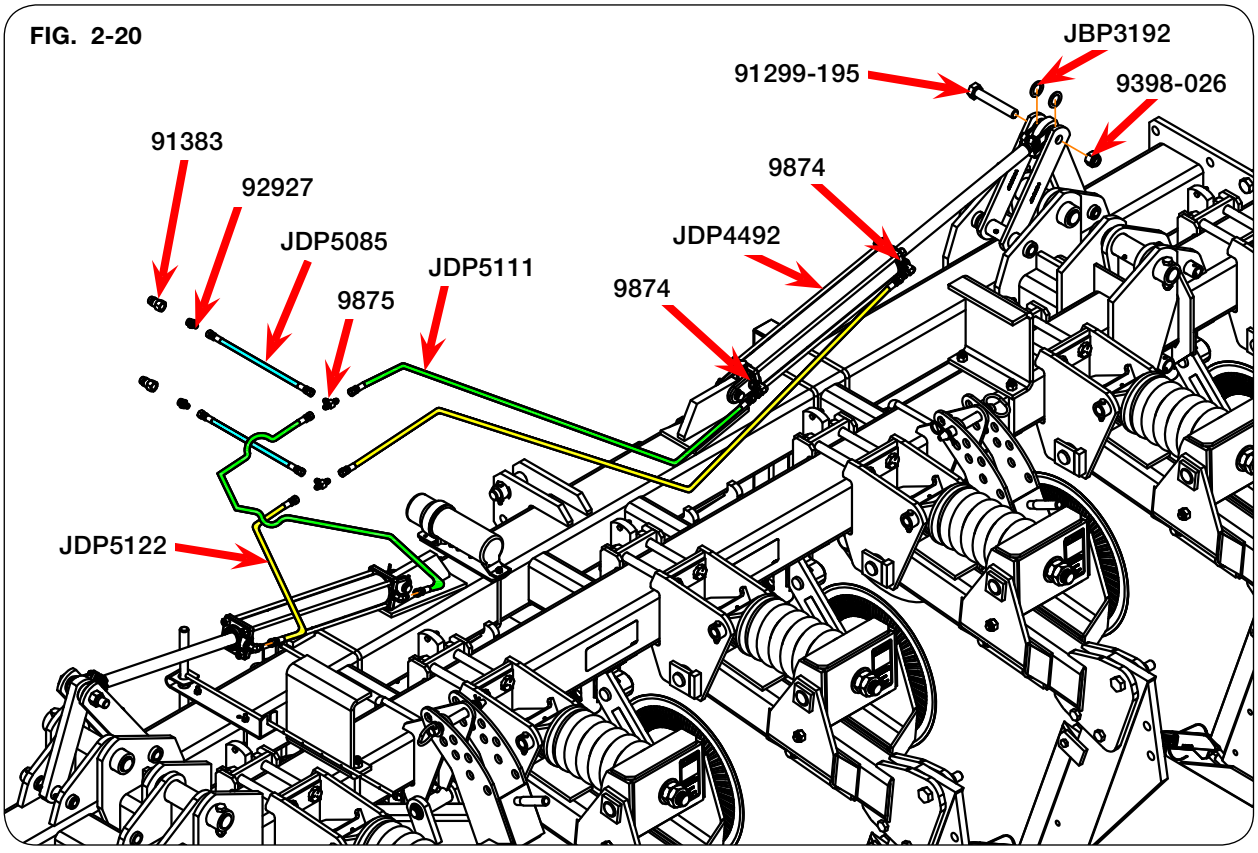
10. Attach 3/8" x 126" hydraulic hose (JDP5024) to transport hydraulic check valve. The hose will extend to tractor. (FIG. 2-19)

11. Attach 7/8-14 JIC male x 3/4-16 O-ring male adapter (9503026) and 3/4-16 male tip coupling (91383) to tractor end of hose (JDP5024). (FIG. 2-19)

Hydraulic Fittings and Hoses — 3-Point, Folding Model

1. Attach base end of 3” x 20” cylinders (JDP4492) to the center of the main frame as shown in FIG. 2-20 with the pins and cotter pins provided.
2. Secure the rod end of 3” x 20” cylinders (JDP4492) to the linkage with 1”-8UNC x 5” grade 8 capscrews (91299-195), bushings (JBP3192), and 1”-8UNC elastic locknuts (9398-026). (FIG. 2-20)
3. Install 9/16-18 JIC male x 3/4-16 O-ring male 90° elbows (9874) to the 3” x 20” cylinders (JDP4492). (FIG. 2-20)
4. Attach 1/4” x 56” hydraulic hoses (JDP5122) to rod ends of 3” x 20” hydraulic cylinders (JDP4492). The hoses will extend to center of the frame. (FIG. 2-20)
5. Secure the opposite ends of the 1/4” x 56” hydraulic hoses (JDP5122) to 9/16-18 JIC male x 9/16-18 JIC male x 9/16-18 JIC male tee (9875). (FIG. 2-20)
6. Attach 1/4” x 30” hydraulic hoses (JDP5111) to base ends of 3” x 20” hydraulic cylinders (JDP4492). The hoses will extend to center of the frame. (FIG. 2-20)
7. Secure the opposite ends of the 1/4” x 30” hydraulic hoses (JDP5111) to 9/16-18 JIC male x 9/16-18 JIC male x 9/16-18 JIC male tee (9875). (FIG. 2-20)
8. Attach 1/4” x 60” hydraulic hoses (JDP5085) to the tees (9875) (FIG. 2-20). Route hoses to tractor.
9. Attach 9/16-18 JIC male x 3/4-16 O-ring male adapter (92927) and 3/4-16 male tip coupling (91383) to tractor end of hoses (JDP5085). (FIG. 2-20)

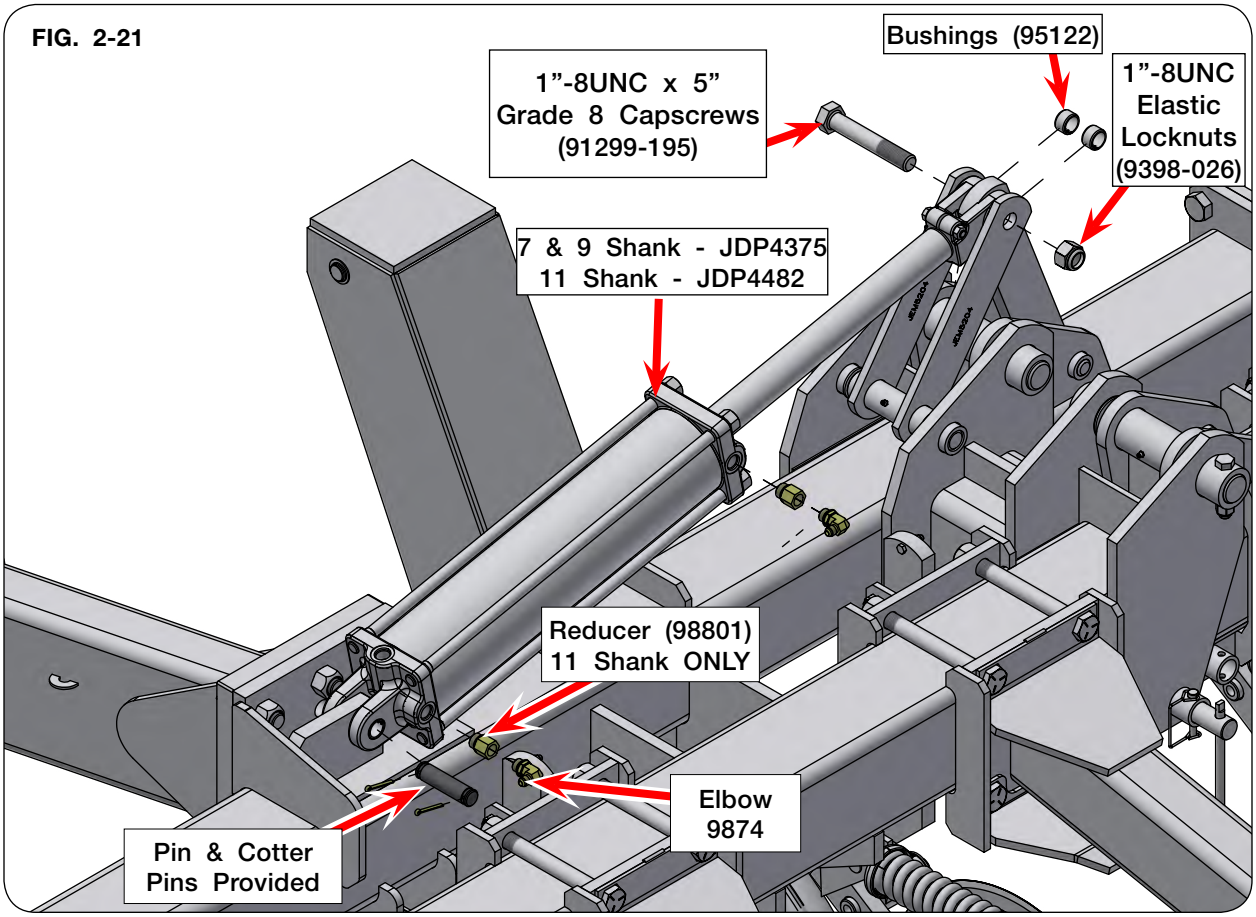
FIG. 2-20



Hydraulic Fittings and Hoses — Pull-Type, Folding Models

1. Attach base end of cylinders (7 & 9 Shank - 4” x 20” cylinder JDP4375; 11 Shank - 5” x 20” cylinder JDP4482) to the center of the main frame as shown in FIG. 2-21 with the pins and cotter pins provided.

FIG. 2-21



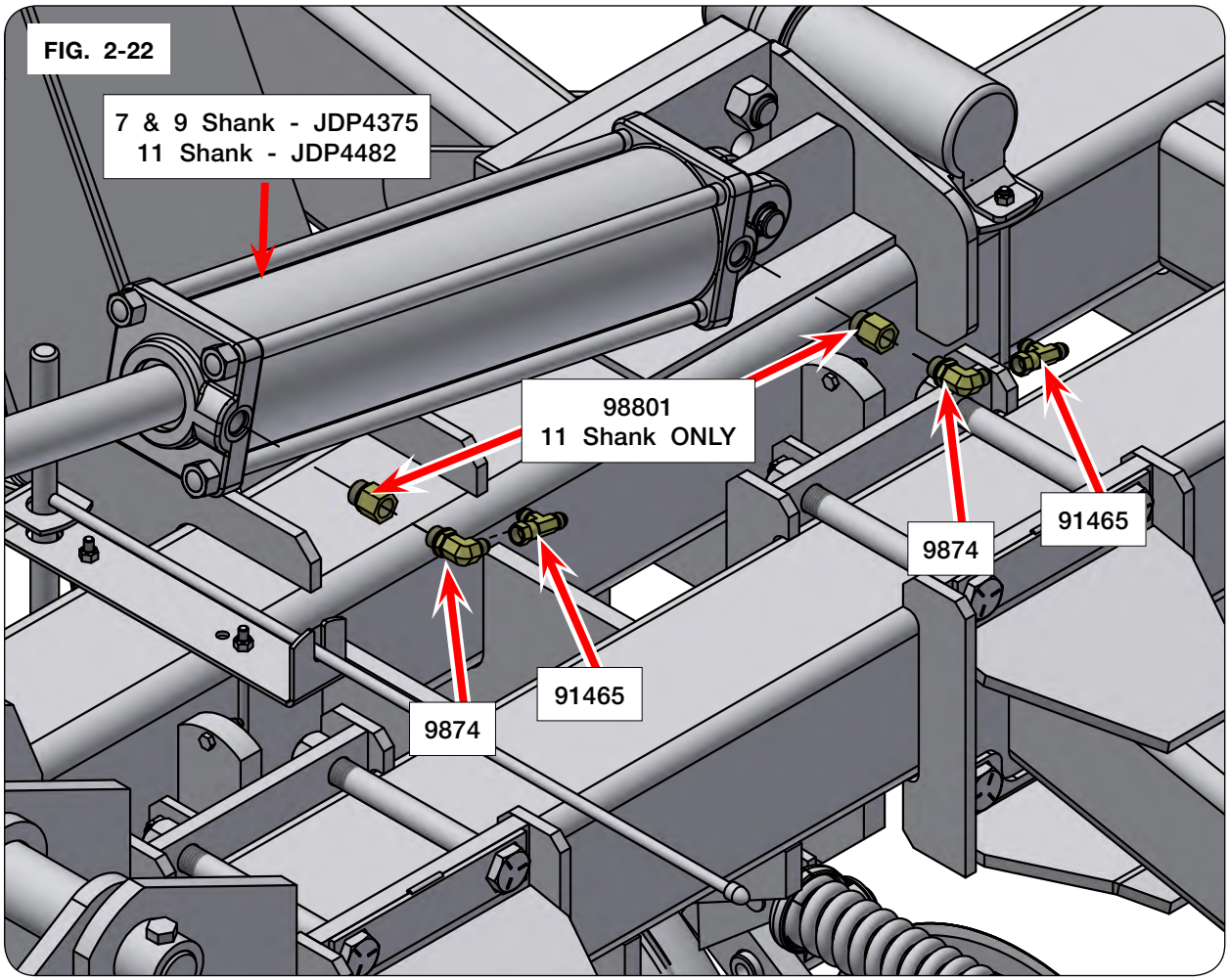
2. Secure the rod end of cylinders to the linkage with 1”-8UNC x 5” grade 8 capscrews (91299-195), bushings (95122) (11 Shank Models Only), and 1”-8UNC elastic locknuts (9398-026). (FIG. 2-21)

3. **11 Shank Models Only** - Install 7/8-14 o-ring male x 3/4-16 o-ring female reducers (98801) and 9/16-18 JIC male x 3/4-16 o-ring male 90° elbows (9874) onto the cylinder base and rod end ports. (FIG. 2-21)

   7 & 9 Shank Models Only - Install 9/16-18 JIC male x 3/4-16 o-ring male 90° elbows (9874) onto the cylinder base and rod end ports. (FIG. 2-21)

Hydraulic Fittings and Hoses — Pull-Type, Folding Models (cont.)

4. On the left-hand cylinder, attach 9/16-18 JIC male x 9/16-18 JIC female x 9/16-18 JIC male tees (91465) onto the cylinder base and rod end 90° elbows (9874). (FIG. 2-22)



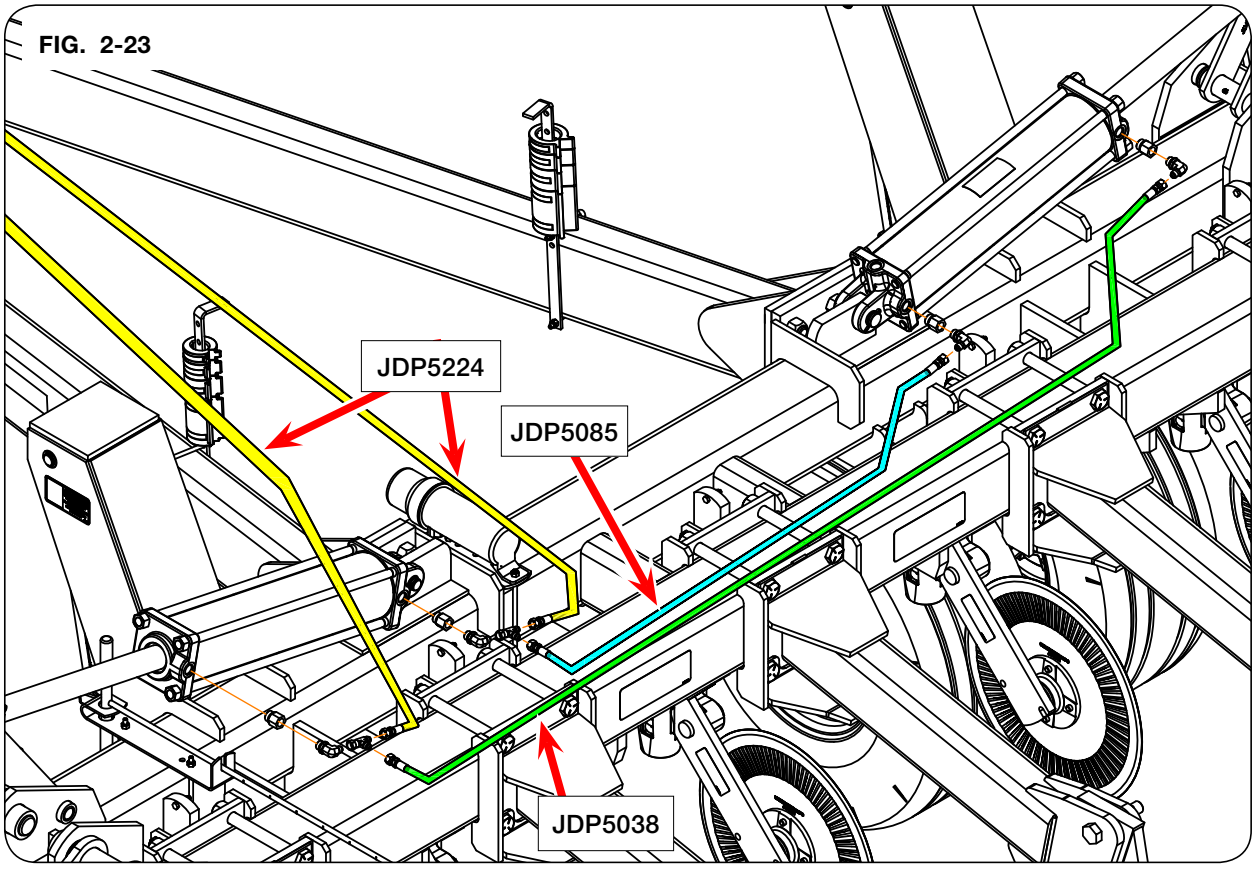
Hydraulic Fittings and Hoses — Pull-Type, Folding Models (cont.)

5. Attach 1/4" x 108" hydraulic hoses (JDP5038) to fittings on cylinder rod end. (FIG. 2-23)

6. Attach 1/4" x 60" hydraulic hoses (JDP5085) to fittings on cylinder rod end. (FIG. 2-23)

7. Attach 1/4" x 216" hydraulic hoses (JDP5224) to the tees on the left-hand cylinder. (FIG. 2-23) Route hoses to tractor.

FIG. 2-23



8. Attach 9/16-18 JIC male x 3/4-16 O-ring male adapter (92927) and 3/4-16 male tip coupling (91383) to tractor end of hoses (JDP5224). (FIG. 2-24)

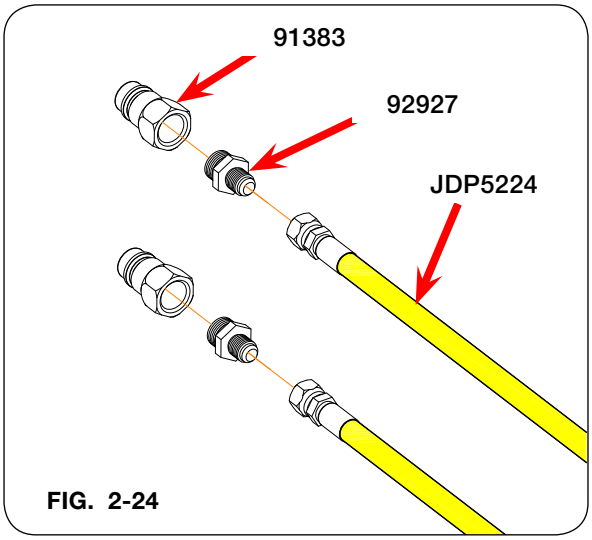


FIG. 2-24

Hydraulics - Purging Hydraulic System

⚠ WARNING

- **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.**

Purge air from the system as follows:

A. Clear all personnel and objects from the area, including where the machine will have full range of motion during the hydraulic movement. Remove transport locks from the machine.

B. Pressurize the system and maintain the system at full pressure for at least 5 seconds after the cylinder rods stop moving. Check that all cylinders have fully extended or retracted.

C. Check oil reservoir in the hydraulic power source and refill as needed.

D. Pressurize the system again to reverse the motion of step B. Maintain pressure on the system for at least 5 seconds after the cylinder rods stop moving. Check that all cylinders have fully extended or retracted.

E. Check for hydraulic oil leaks using cardboard or wood. Tighten connections according to directions in the Torque Specifications in the MAINTENANCE section.

F. Repeat steps in B, C, D, and E 10-12 times.

HYDRAULIC SYSTEM CHECKS ON ALL UNITS -- CHECK THE FOLLOWING:
ROUTING OF ALL HYDRAULIC HOSES: Hoses should not be kinked, twisted, or rubbing against sharp edges.

FITTINGS AND CONNECTIONS: Check for leaks. Refer to "Torque Chart" in MAINTENANCE section.

HOSES: Be sure hoses have room to "FLEX" (for folding) in hinge areas. Hoses must be secured with cable ties.

Attaching Coulter Blades

⚠ CAUTION

- **SHARP EDGES ON COULTER BLADES CAN CAUSE INJURY. BE CAREFUL WHEN WORKING AROUND COULTER BLADES.**

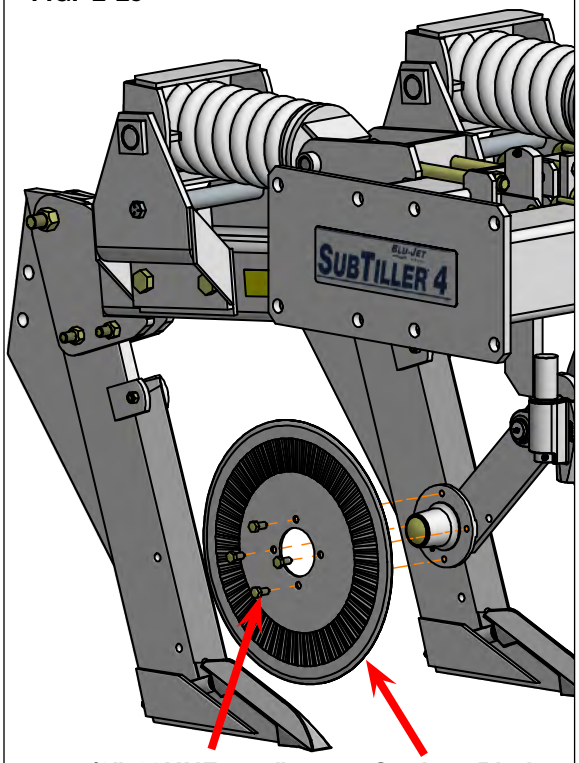
On some models, the coulter assembly may be repositioned for shipping purposes. Before installing coulter blades, check alignment of coulter assemblies with “Overhead Layouts”. Reposition as necessary.

Park the unit on a firm level surface. Unfold the wings to field working position and lower machine to the ground. Set the vehicle parking brake, shut off the engine, and remove the ignition key.

1. Install coulter blade to each hub using four 1/2”-20UNF x 1” capscrews (9390-323) (FIG. 2-25).

2. Torque hardware. Refer to “Wheel Hardware Torque” chart” in MAINTENANCE section for proper torquing.

FIG. 2-25



Rigid Models — Light and Panel Reflector Assembly

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.

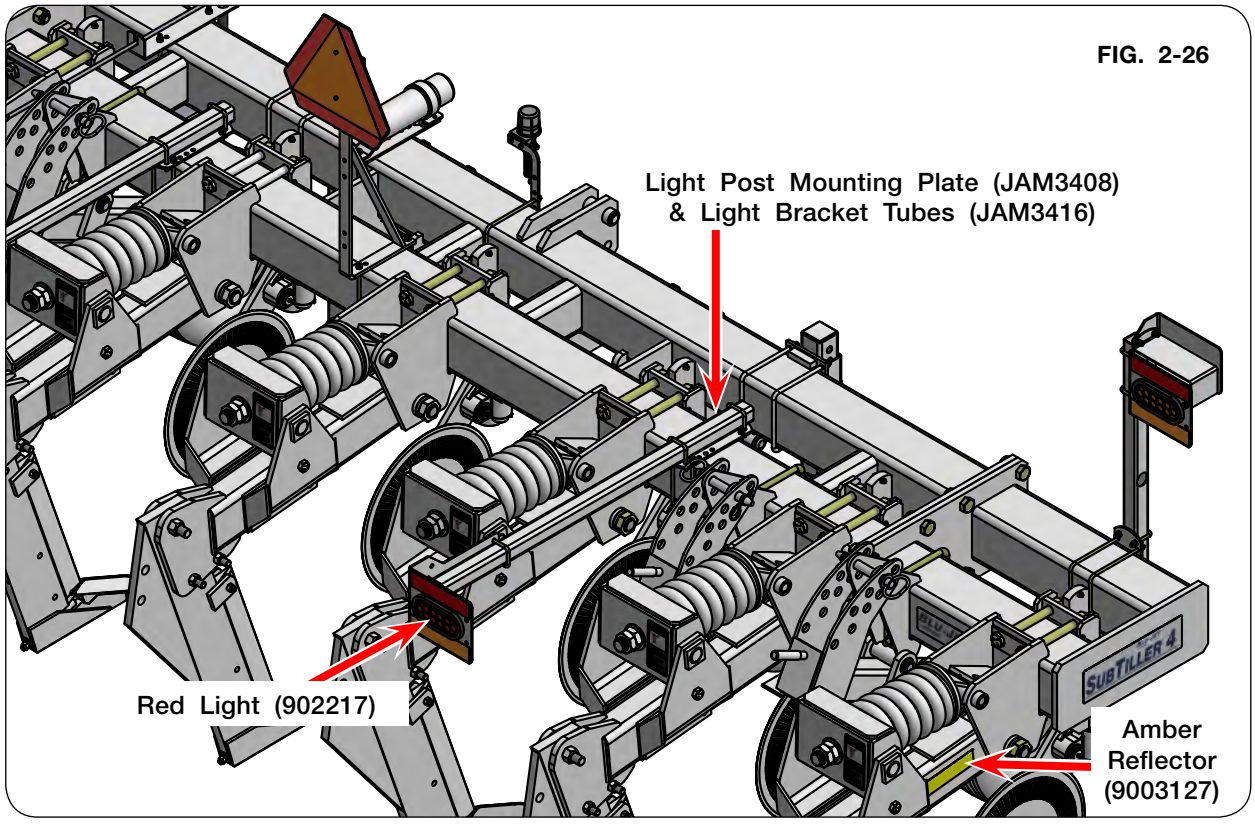
Attaching Inner Light and Reflector Assemblies

1. Mount the light post mounting plates (JAM3408) to the top of the rear main frame with 3/8"-16UNC x 8" U-bolts (JBP3335) and 3/8"-16UNC elastic locknuts (9398-012) (FIG. 2-26). Reference "Overhead Layouts" for proper positioning.
2. Place the light bracket tubes (JAM3416) on top of the light post mounting plates (JAM3408). Secure 3/8"-16UNC x 3" U-bolts (JBP3736) and 3/8"-16UNC elastic locknuts (9398-012). (FIG. 2-26)
3. Attach the rear light bracket plate (JAM3414) with 3/8"-16UNC x 3" U-bolts (JBP3736) and 3/8"-16UNC elastic locknuts (9398-012). (FIG. 2-26)

NOTE: Red light (902217) in the rear light bracket plate (JAM3414) MUST face the rear of the unit.

4. Place an amber reflector (9003127) on the outside of the outer shank assemblies.
5. Attach rear wiring harness (JAP3128) to the red lights (902217).
6. Torque hardware according to "Torque Chart" in MAINTENANCE section.

FIG. 2-26



Rigid Models — Light and Panel Reflector Assembly (continued)

Attaching Outer Light and Reflector Assemblies

1. Mount the light post mounting plates (JAM3408) to the front of the main frame with 3/8”-16UNC x 8” U-bolts (JBP3335) and 3/8”-16UNC elastic locknuts (9398-012) (FIG. 2-27). Reference “Overhead Layouts” for proper positioning.

2. Place the light bracket tubes (JAM3413) to the front of the light post mounting plates (JAM3408). Secure using 3/8”-16UNC x 3” U-bolts (JBP3736) and 3/8”-16UNC elastic locknuts (9398-012). (FIG. 2-27)

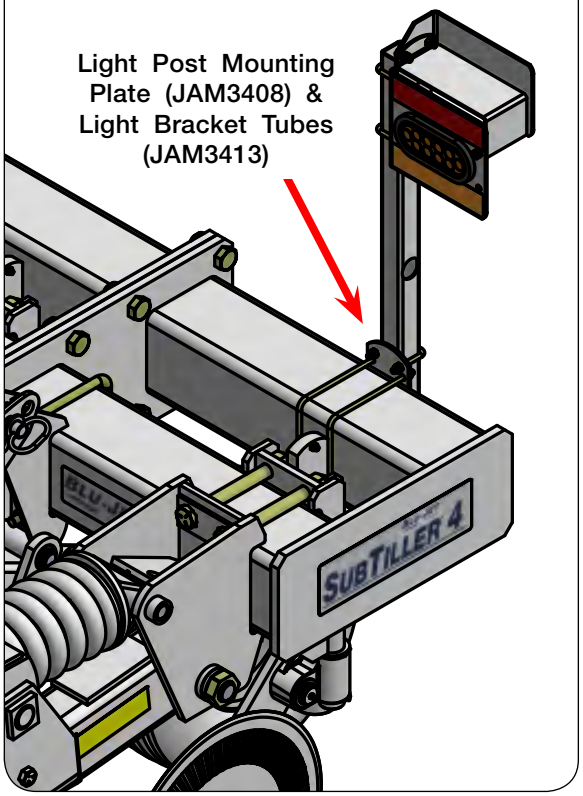
3. Attach the light brackets with 3/8”-16UNC x 3” U-bolts (JBP3736) and 3/8”-16UNC elastic locknuts (9398-012). (FIG. 2-27)

4. Attach rear wiring harness (JAP3128) to the amber lights (JAP4415).

5. Secure connector wires to tubes and frame with cable tie.

6. Torque hardware according to “Torque Chart” in MAINTENANCE section.

FIG. 2-27



Attaching SMV Emblem

1. Attach the SMV emblem mounting bracket to the top of the main frame with 3/8”-16UNC x 8” U-bolts (JBP3335) and 3/8”-16UNC elastic locknuts (9398-012) (FIG. 2-28). Reference “Overhead Layouts” for proper positioning.

2. Torque hardware according to “Torque Chart” in MAINTENANCE section.

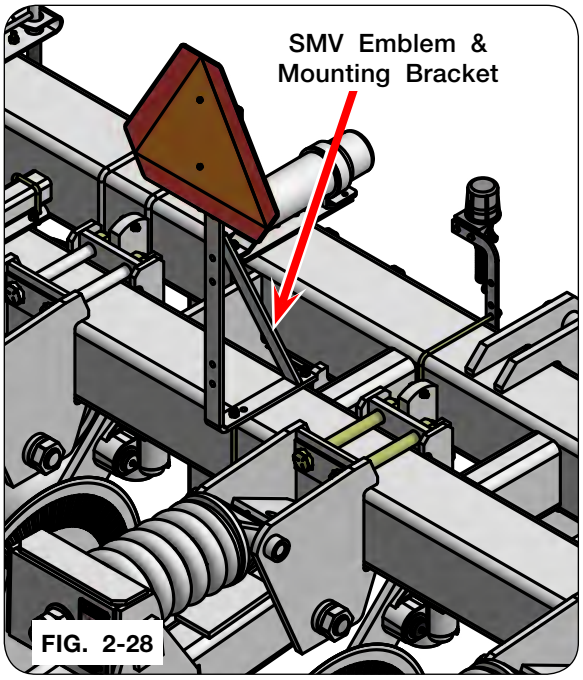


FIG. 2-28

Folding Models — Light and Panel Reflector Assembly

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.

Attaching Inner Light and Reflector Assemblies

1. Mount the light post mounting plates (JAM3408) to the top of the rear main frame with 3/8”-16UNC x 8” U-bolts (JBP3335) and 3/8”-16UNC elastic locknuts (9398-012). Reference “Overhead Layouts” for proper positioning.

2. Place the light bracket tubes (JAM3416) on top of the light post mounting plates (JAM3408). Secure using 3/8”-16UNC x 3” U-bolts (JBP3736) and 3/8”-16UNC elastic locknuts (9398-012). (FIG. 2-29)

3. Attach the rear light bracket plate (JAM3414) with 3/8”-16UNC x 3” U-bolts (JBP3736) and 3/8”-16UNC elastic locknuts (9398-012). (FIG. 2-29)

NOTE: Red light (902217) in the rear light bracket plate (JAM3414) MUST face the rear of the unit.

4. Attach rear wiring harness (JAP3128) to the red lights (902217).

5. Torque hardware according to “Torque Chart” in MAINTENANCE section.

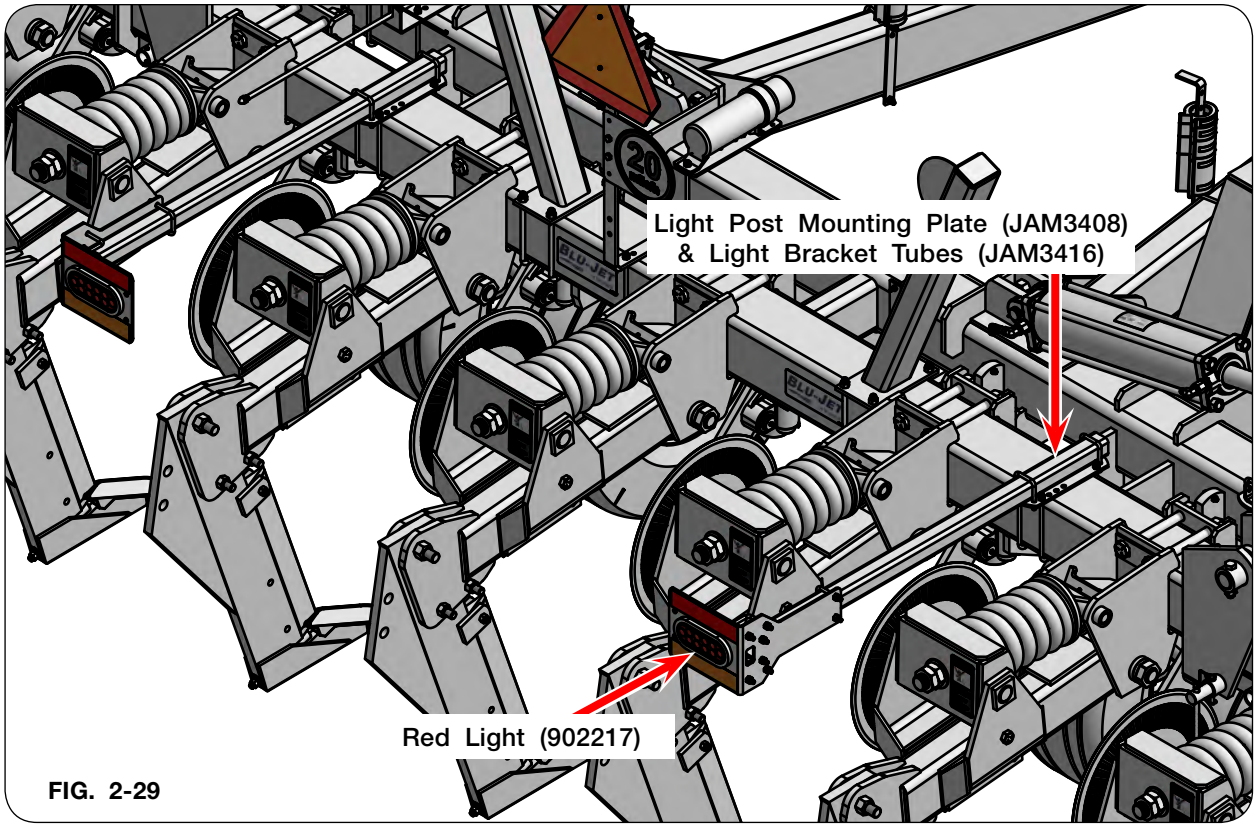


FIG. 2-29

Folding Models — Light and Panel Reflector Assembly (continued)

Attaching Outer Light and Reflector Assemblies

1. Mount the light post mounting plates (JAM3408) to the top of the main frame with 3/8”-16UNC x 8” U-bolts (JBP3335) and 3/8”-16UNC elastic locknuts (9398-012). Reference “Overhead Layouts” for proper positioning.

2. Place the light bracket tubes (JAM3419) to the top of the light post mounting plates (JAM3408). Secure with 3/8”-16UNC x 3” U-bolts (JBP3736) and 3/8”-16UNC elastic locknuts (9398-012). (FIG. 2-30)

3. Attach the light post mounting plates (JAM3410) to the top of the light bracket tubes (JAM3419) with 3/8”-16UNC x 3” U-bolts (JBP3736) and 3/8”-16UNC elastic locknuts (9398-012). (FIG. 2-30)

4. Secure the light bracket tubes (JAM3419) to the top of the light post mounting plates (JAM3410) with 3/8”-16UNC x 3” U-bolts (JBP3736) and 3/8”-16UNC elastic locknuts (9398-012). (FIG. 2-30)

5. Attach the light brackets with 3/8”-16UNC x 3” U-bolts (JBP3736) and 3/8”-16UNC elastic locknuts (9398-012).

6. Attach rear wiring harness (JAP3128) to the amber lights (JAP4415).

7. Secure connector wires to tubes and frame with cable tie.

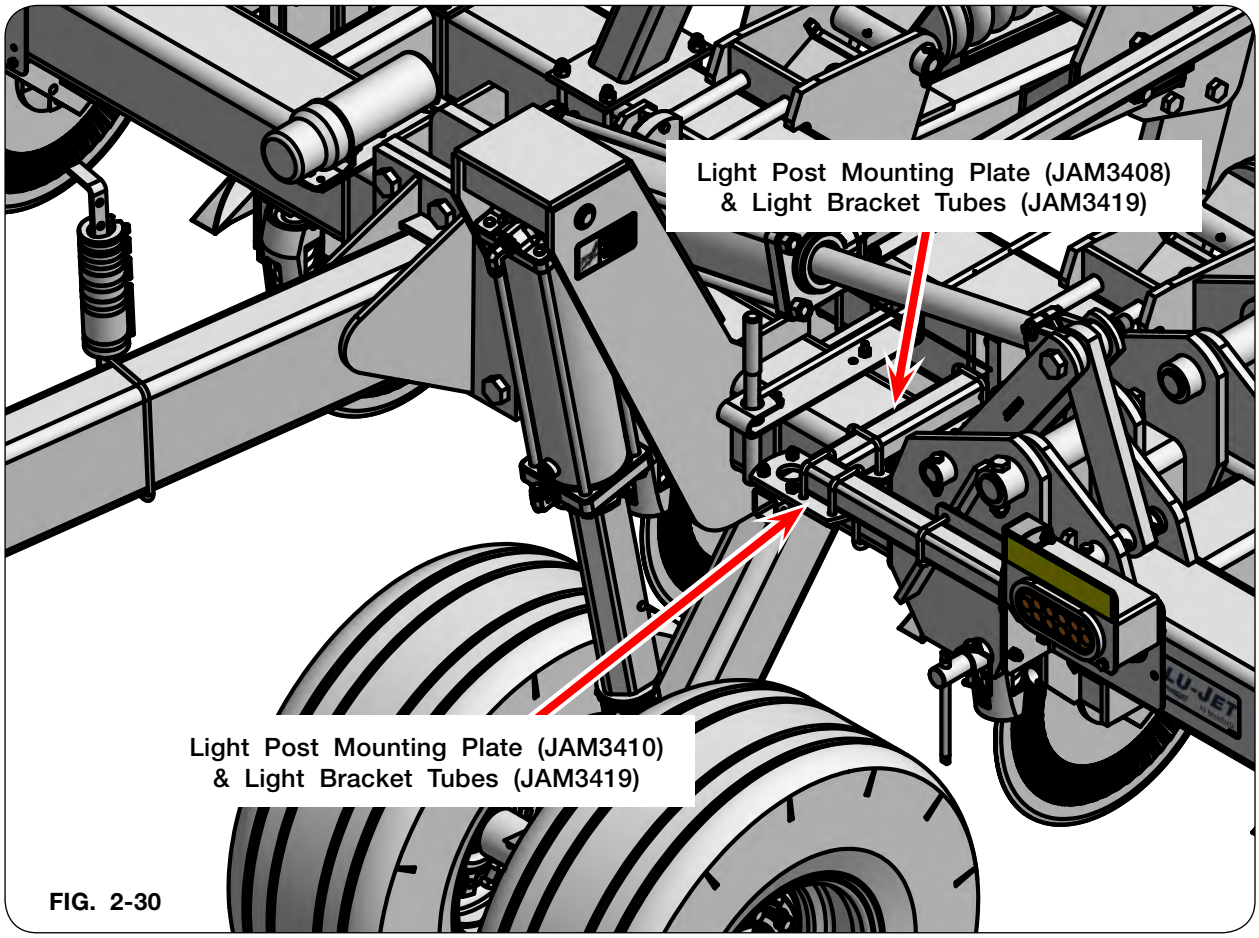


FIG. 2-30

Folding Models — Light and Panel Reflector Assembly (continued)

Attaching SMV Emblem & SIS Decal

1. Attach the SMV emblem mounting bracket with SIS Decal to the top of the main frame with 3/8”-16UNC x 8” U-bolts (JBP3335) and 3/8”-16UNC elastic locknuts (9398-012) (FIG. 2-31). Reference “Overhead Layouts” for proper positioning.

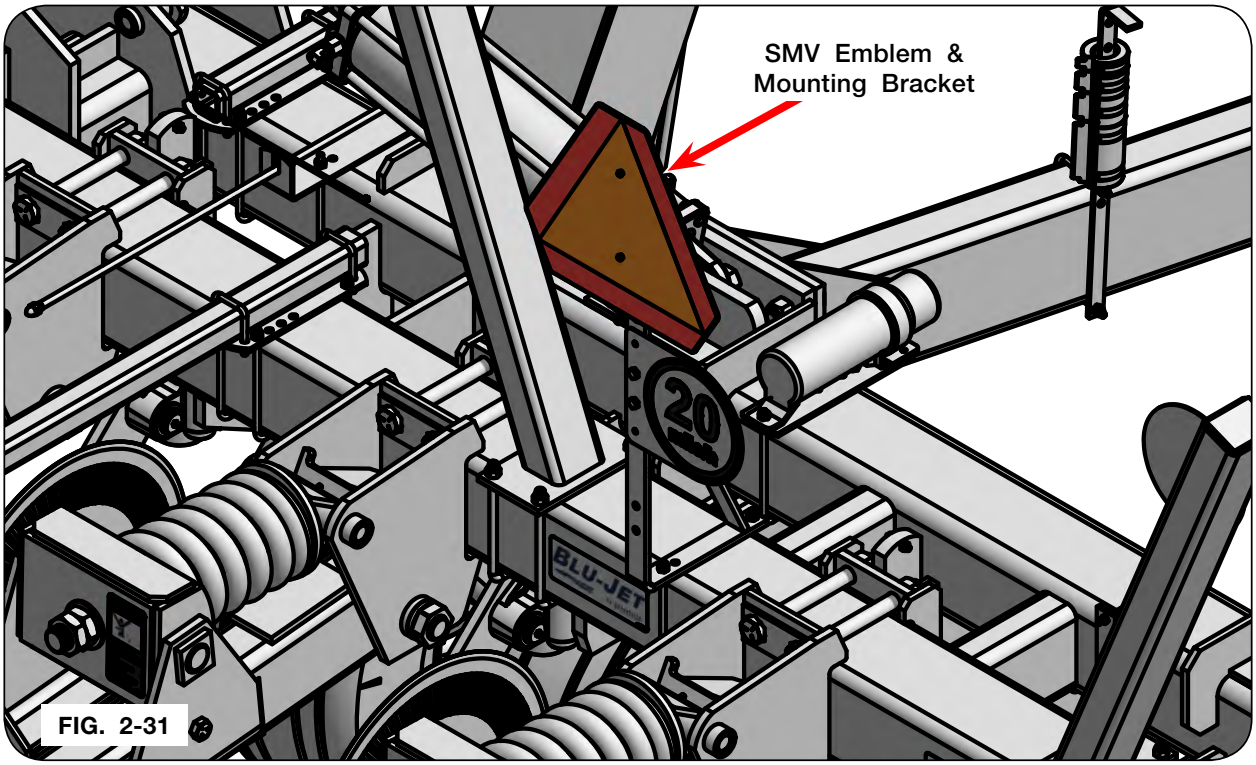


FIG. 2-31

Before the implement is used the reflective surface of the SMV must face rearward. This may require removal of film protecting the reflective surface.

When installing the SMV make sure that it is mounted with the wide part of the SMV at the bottom.

Ensure the SIS decals (one on the front and one on the rear of the implement) are clean and visible.

Strip-Till Basket Option Assembly

Attaching Strip-Till Basket Assembly to Shank

1. Using a safe lifting device rated at a minimum of 150 lbs., loosely attach the strip-till basket assembly to the rear of the shank with 1”-8UNC x 3 1/2” capscrew (9390-189), 1”-8UNC x 4” capscrew (9390-191), shank stop (JAM7653), and two 1”-8UNC locknuts (9663). (FIG. 2-32)

2. Torque hardware according to “Torque Chart” in MAINTENANCE section.

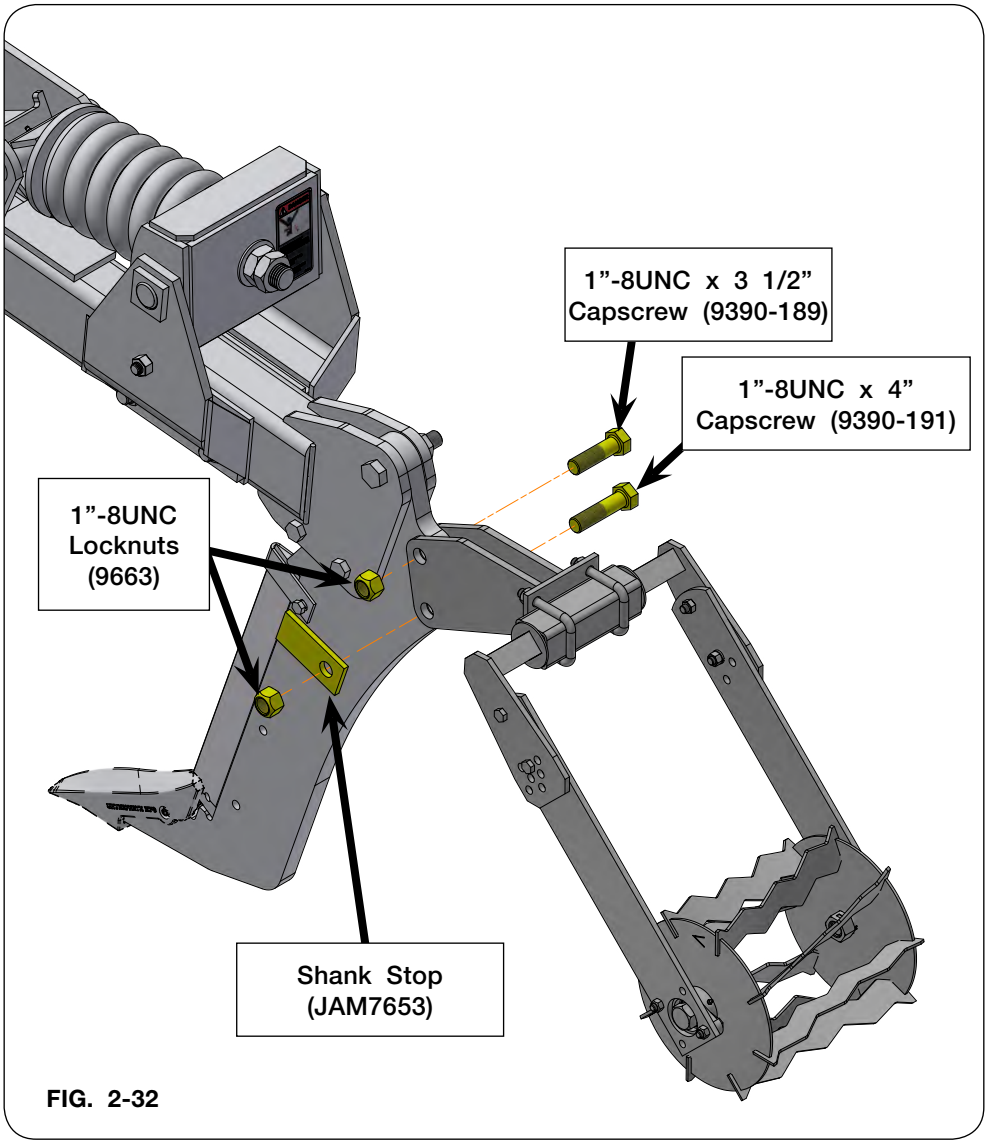


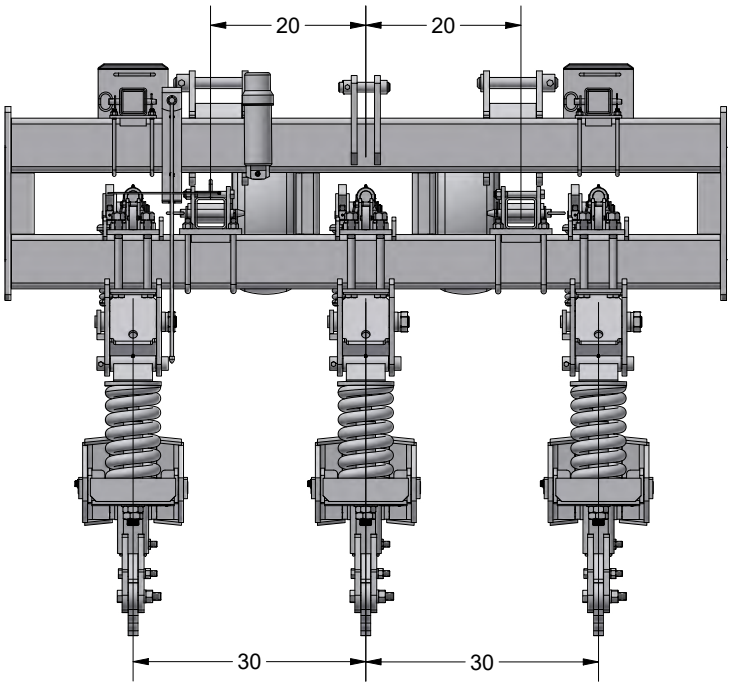
FIG. 2-32

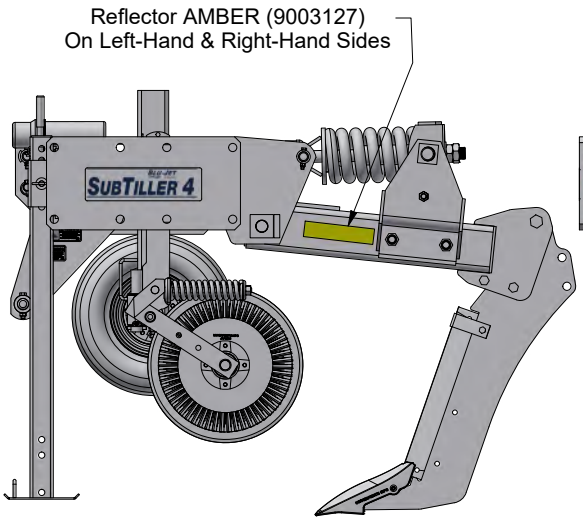
Overhead Layout

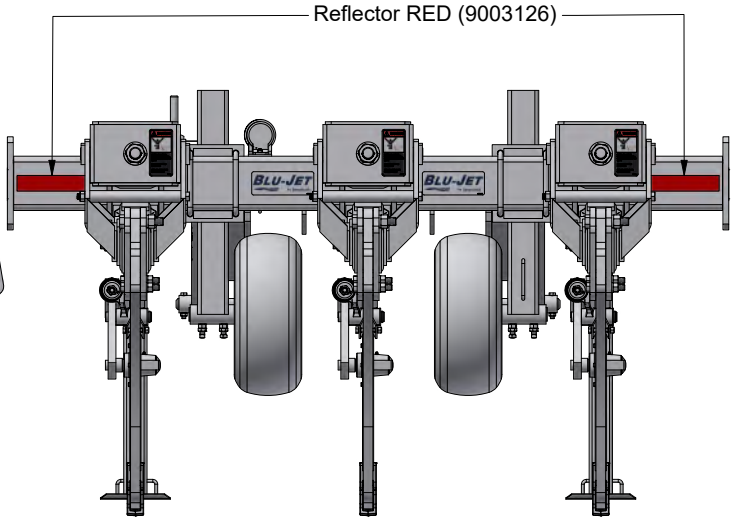
NOTE: All overhead layout dimensions shown in inches.

No. of Shanks	Shank Spacing	Frame Style	Fold Type	Frame Size	Refer to Page
3	30”	3-Point	Rigid	7’9” Base	Page 2-27
5	30”	3-Point	Rigid	11’3” Base	Page 2-28
7	30”	3-Point	Rigid	11’3” Base/29” Extensions	Page 2-29
7	30”	3-Point	Folding	12’4” Base/Hydraulic Wings	Page 2-30
7	30”	Pull-Type	Folding	12’4” Base/Hydraulic Wings	Page 2-31
9	30”	3-Point	Rigid	11’3” Base/59” Extensions	Page 2-32
9	30”	Pull-Type	Folding	12’4” Base/Hydraulic Wings	Page 2-33
11	30”	Pull-Type	Folding	12’4” Base/Hydraulic Wings	Page 2-34

Overhead Layout — 3-Point Rigid — 3 Row 30” Spacing, 7’9” Base

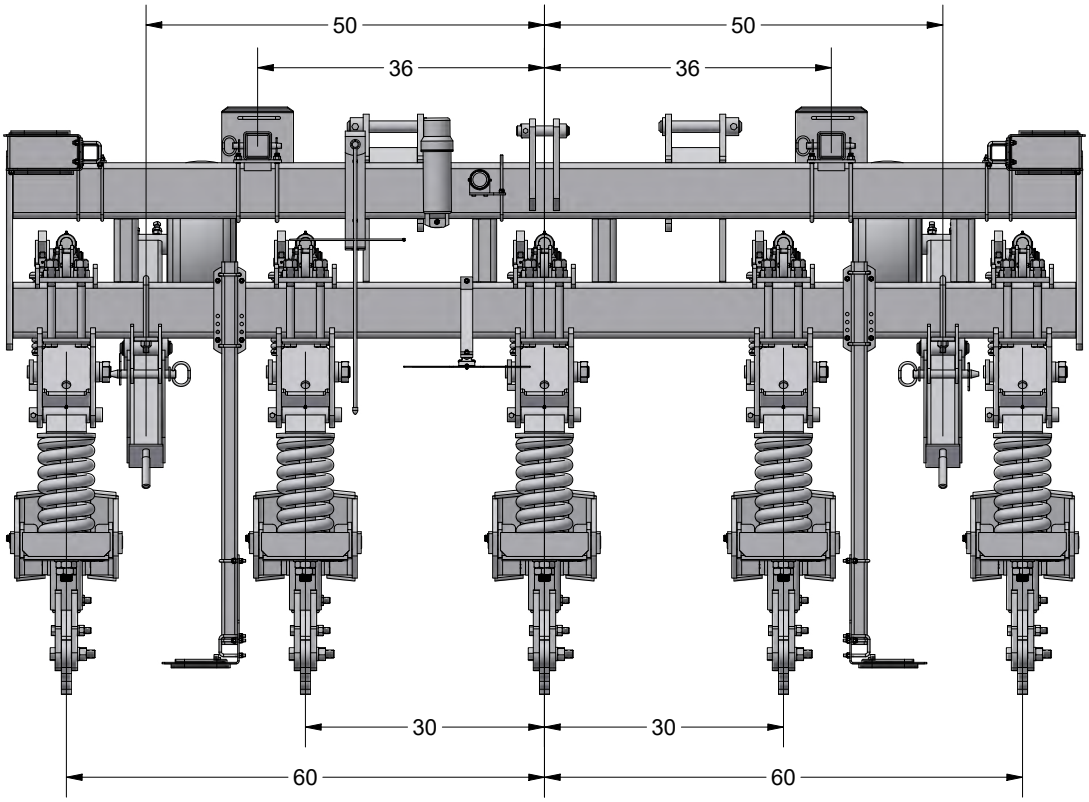


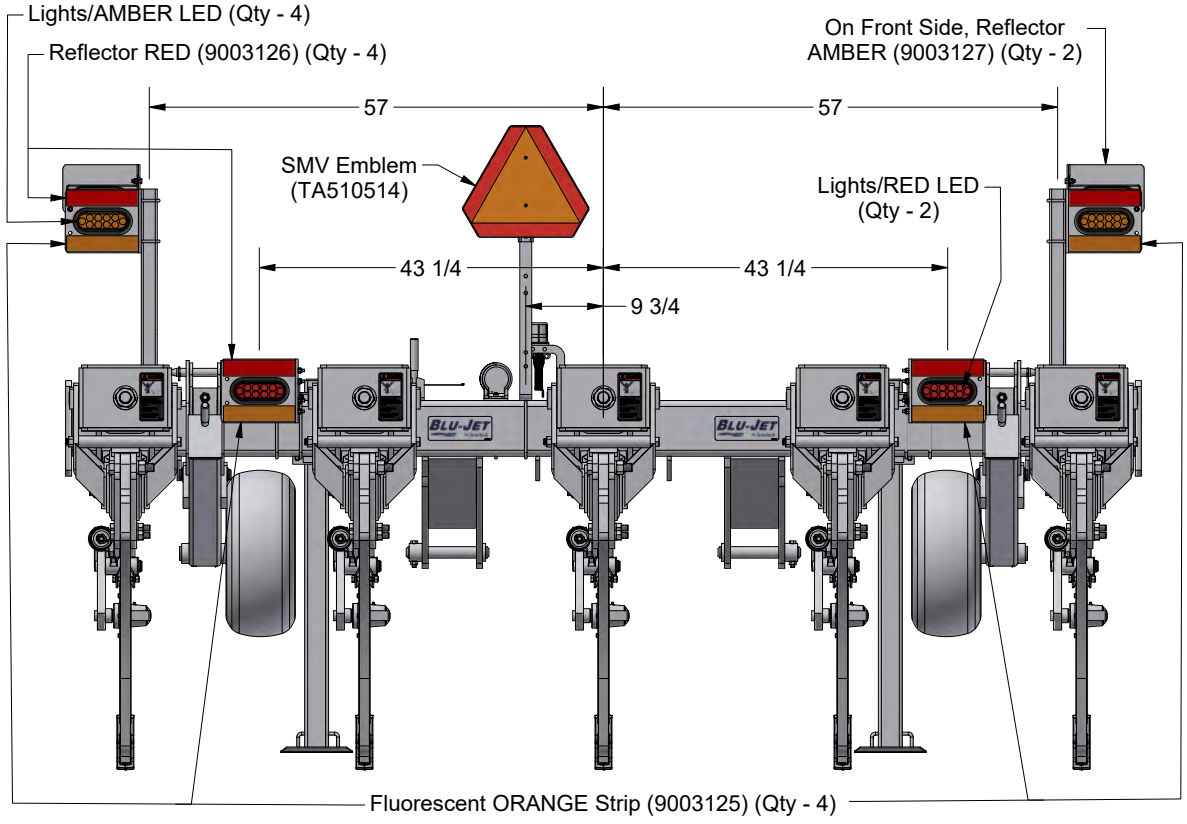




Overhead Layout

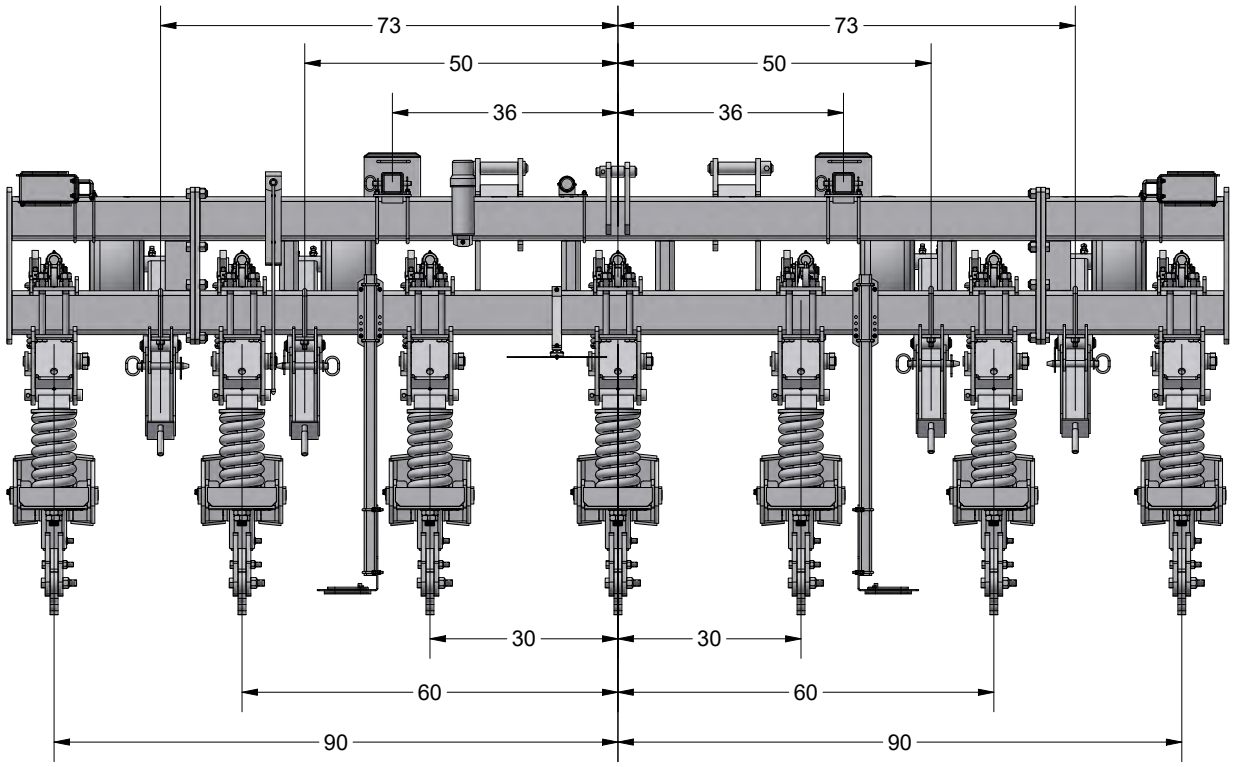
3-Point Rigid — 5 Row 30” Spacing, 11’3” Base

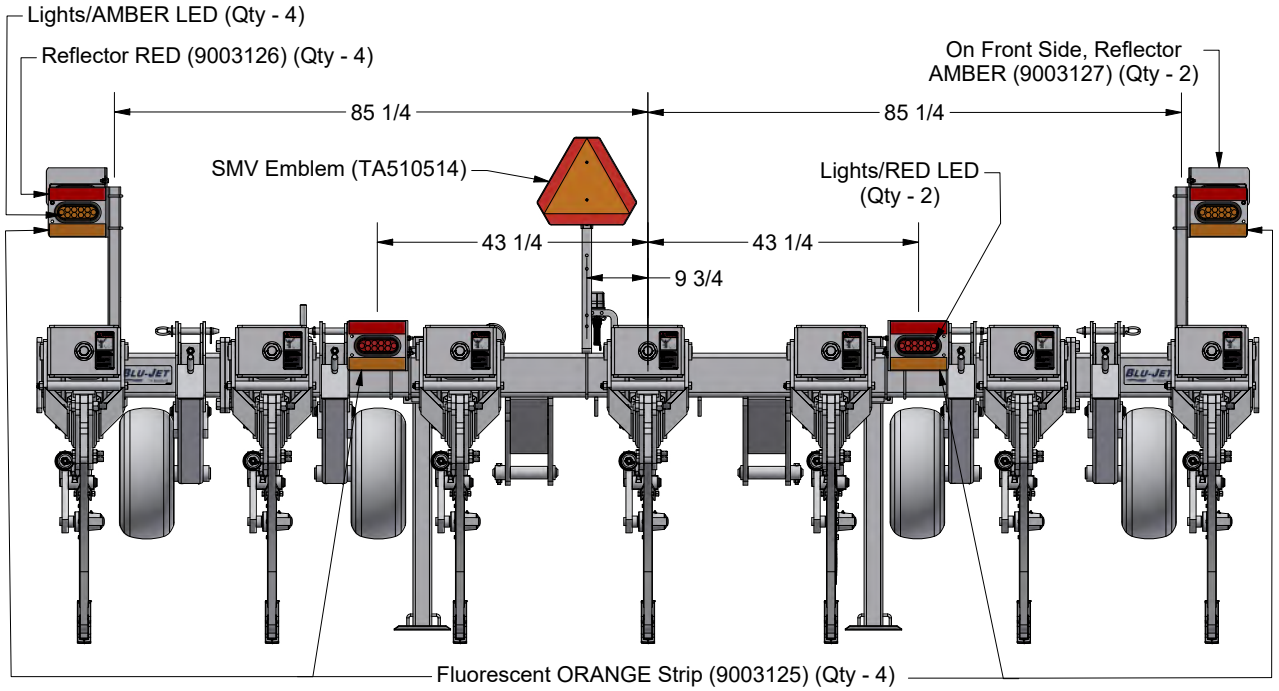




Overhead Layout

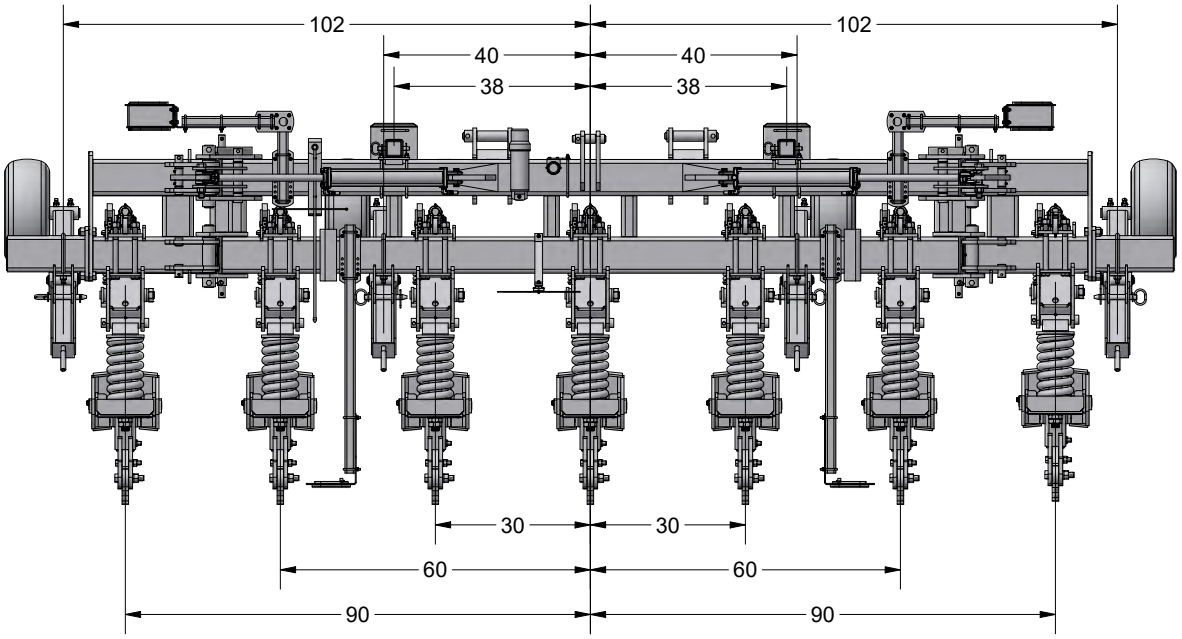
3-Point Rigid — 7 Row 30” Spacing, 11’3” Base/29” Extensions

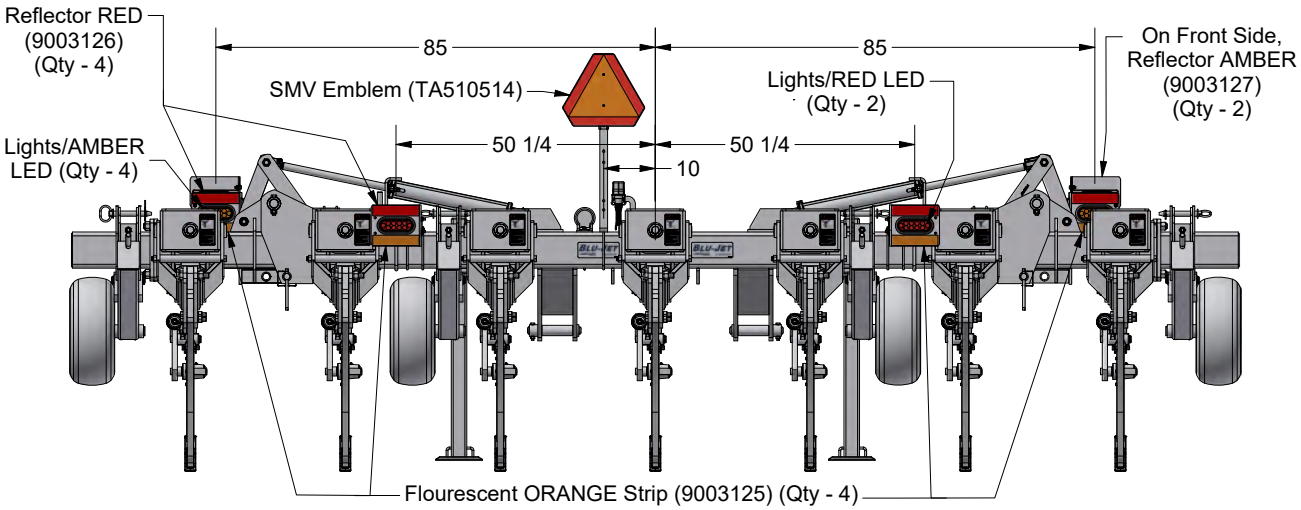




Overhead Layout

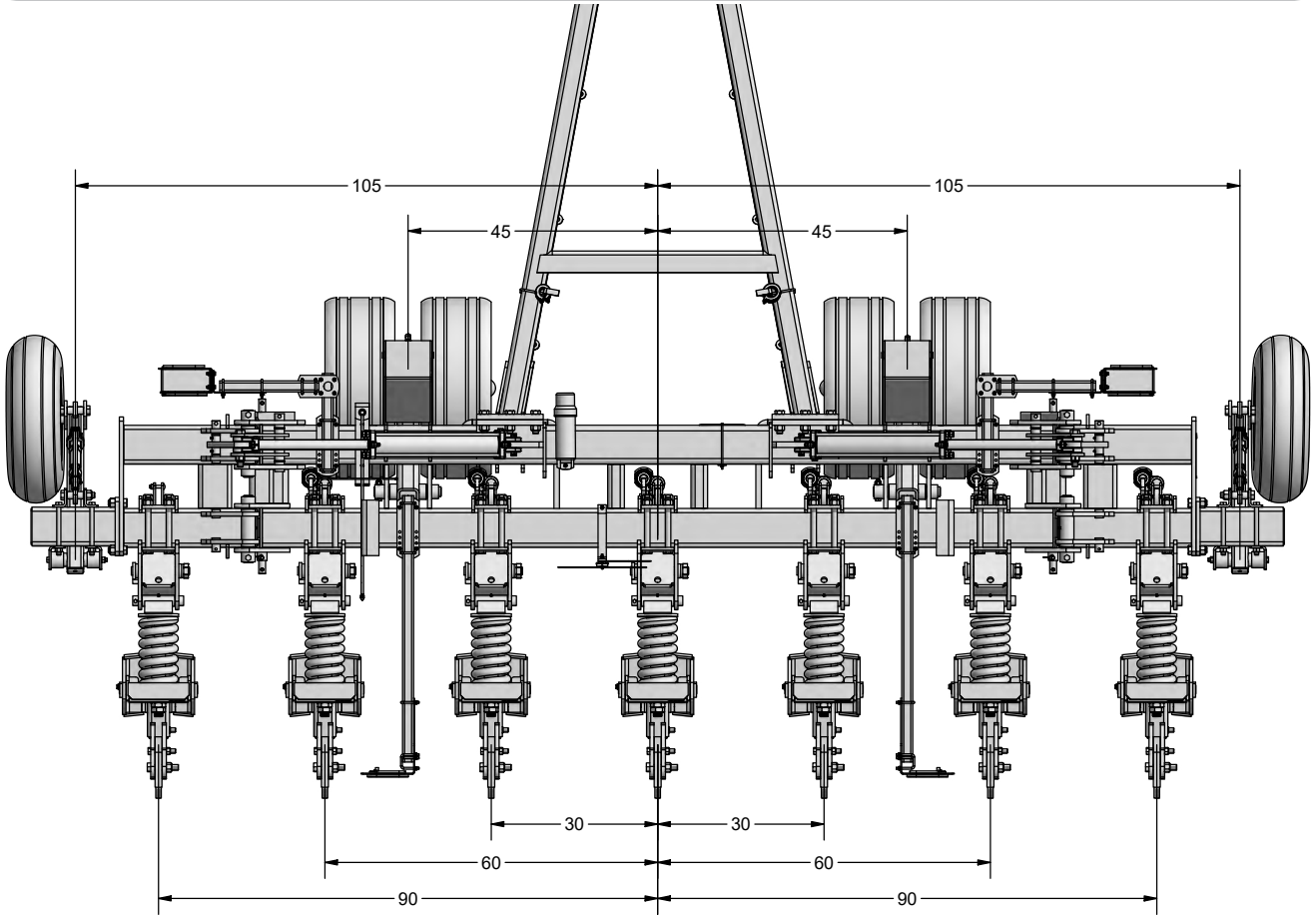
3-Point Folding — 7 Row 30” Spacing, 12’4” Base/Hydraulic Wings

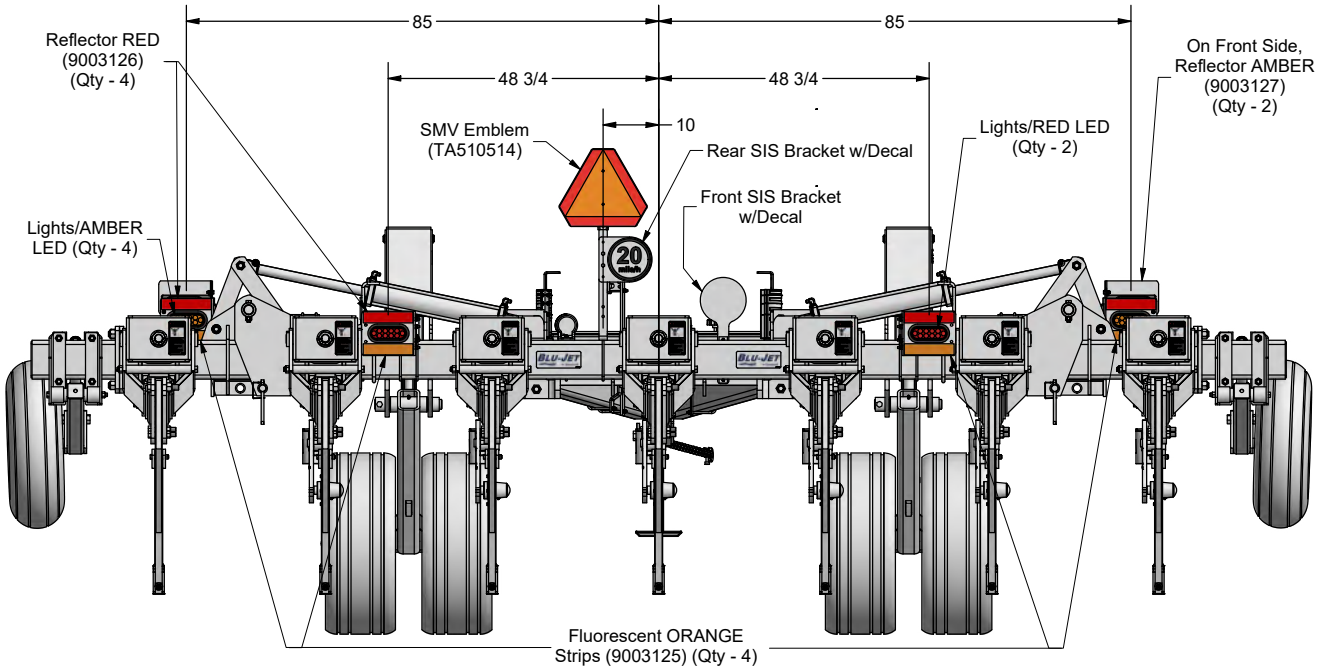




Overhead Layout

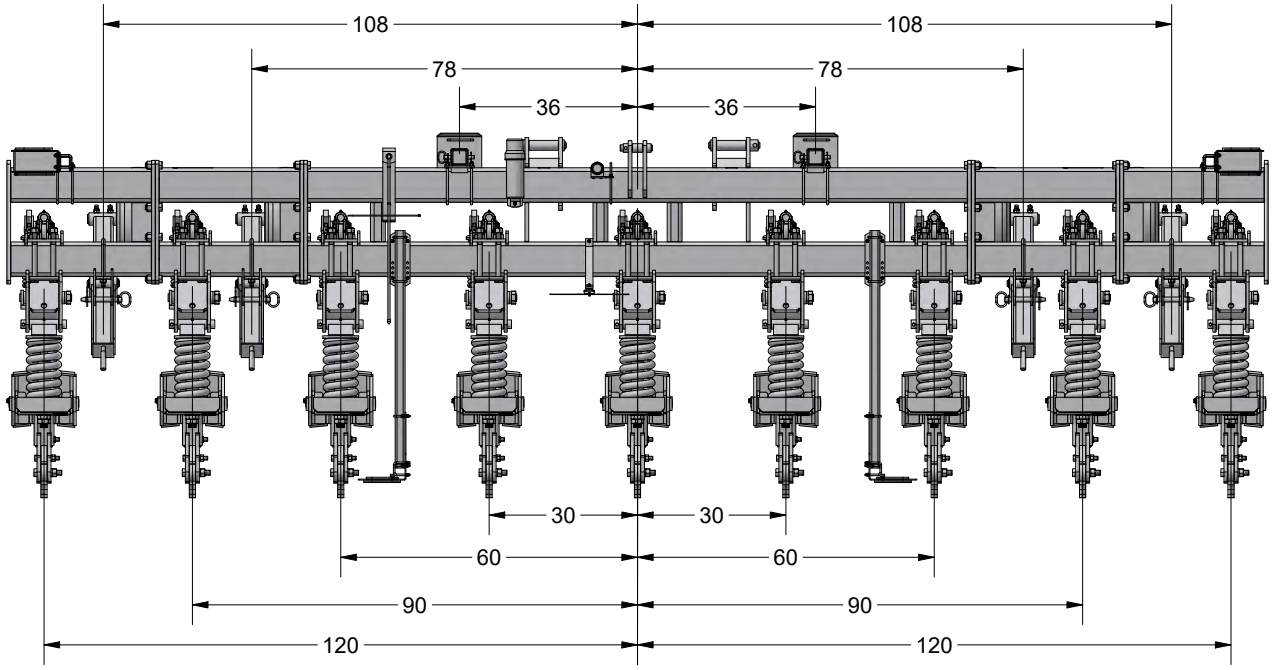
Pull-Type Folding — 7 Row 30” Spacing, 12’4” Base/Hydraulic Wings

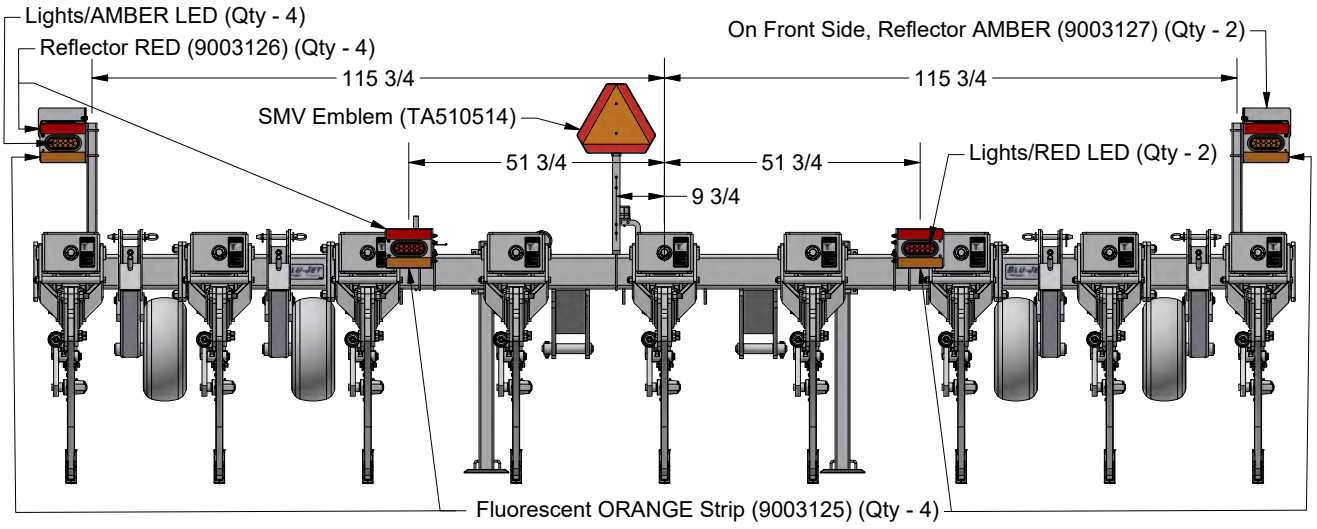




Overhead Layout

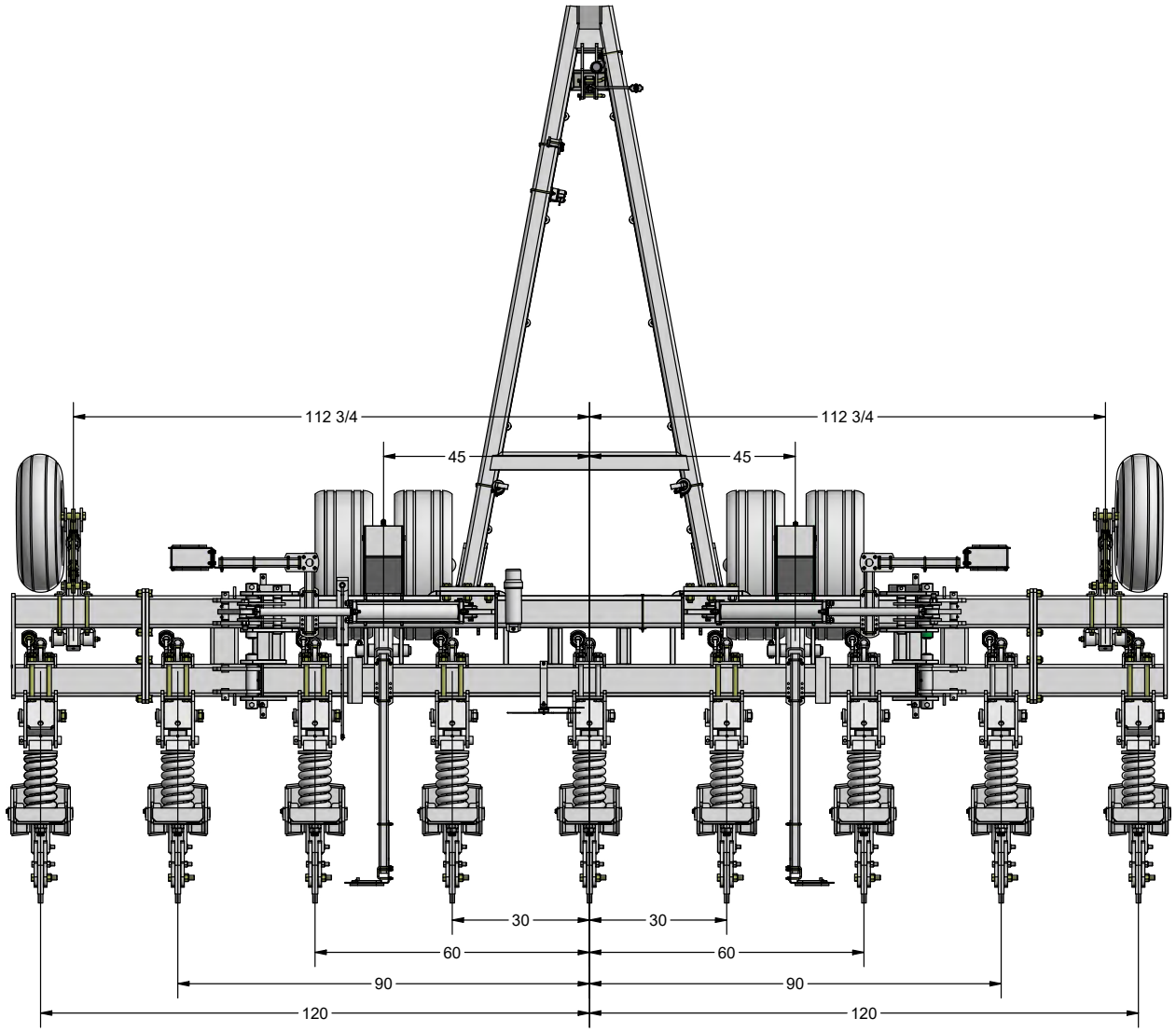
3-Point Rigid — 9 Row 30” Spacing, 11’3” Base/59” Extensions

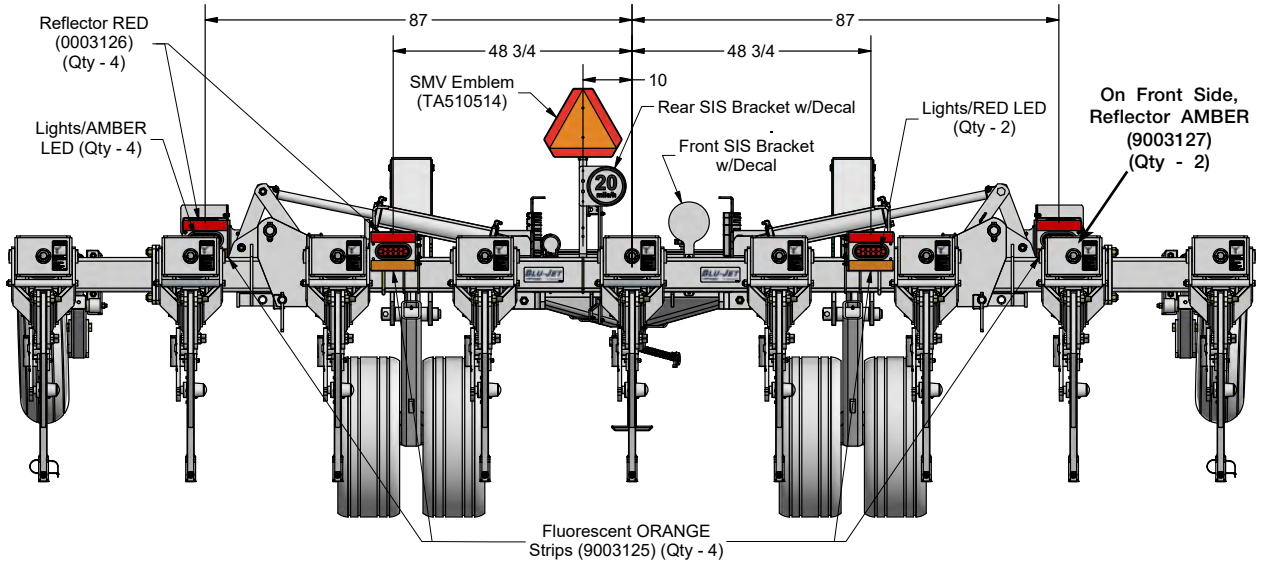




Overhead Layout

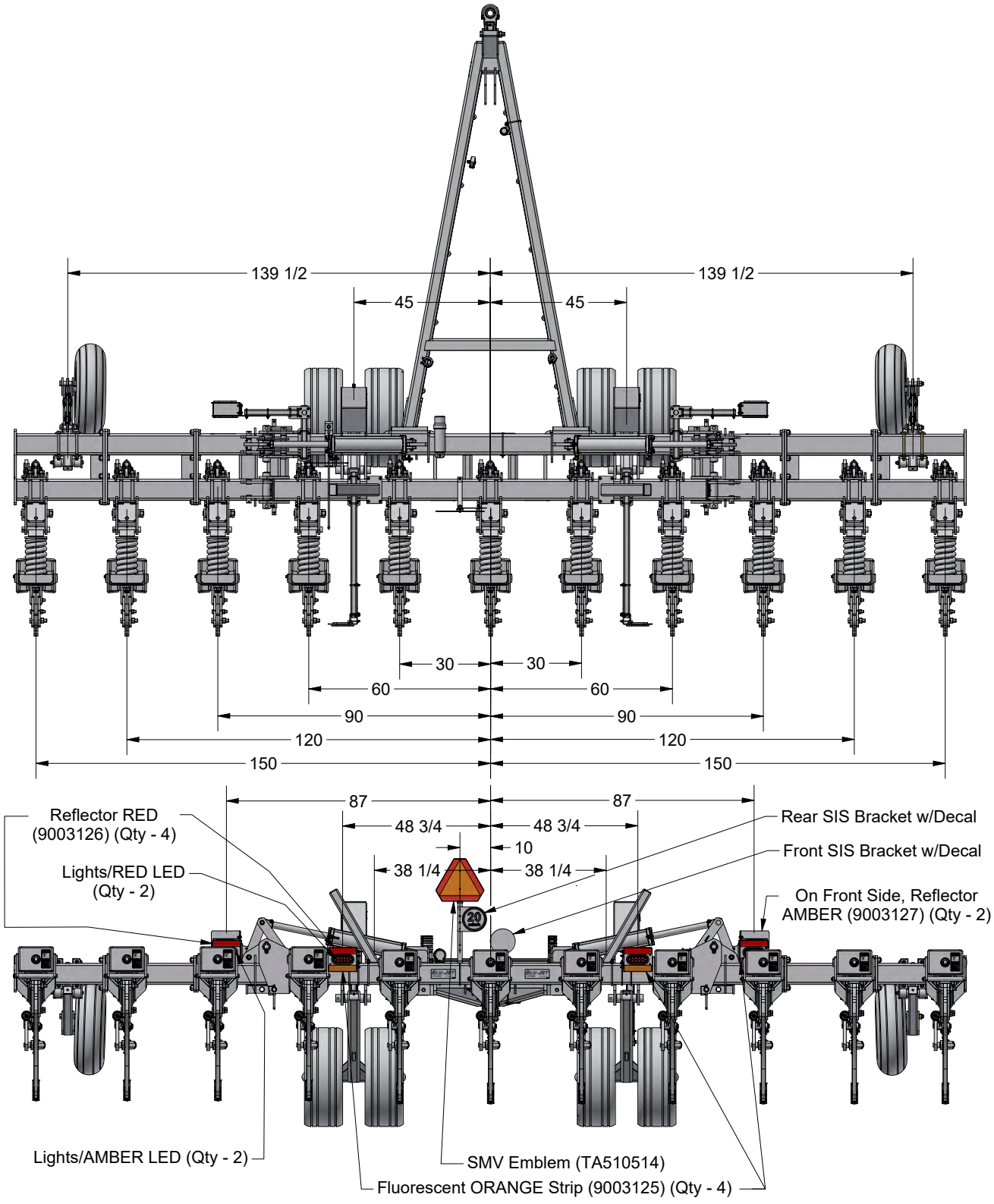
Pull-Type Folding — 9 Row 30” Spacing, 12’4” Base/Hydraulic Wings





Overhead Layout

Pull-Type Folding — 11 Row 30” Spacing, 12’4” Base/Hydraulic Wings



Pull-Type Conversion Option

⚠ WARNING

- **KEEP HANDS CLEAR OF PINCH POINT AREAS.**

- **FALLING OBJECTS CAN CAUSE SERIOUS INJURY OR DEATH. DO NOT WORK UNDER THE MACHINE AT ANY TIME WHILE BEING HOISTED. BE SURE ALL LIFTING DEVICES AND SUPPORTS ARE RATED FOR THE LOADS BEING HOISTED. THESE ASSEMBLY INSTRUCTIONS WILL REQUIRE SAFE LIFTING DEVICES UP TO 750 LBS. SPECIFIC LOAD RATINGS FOR INDIVIDUAL LOADS WILL BE GIVEN AT THE APPROPRIATE TIME IN THE INSTRUCTIONS.**

1. Remove and save the two lower link pins (JBM3628), 1/2”-13UNC x 3” capscrews (9390-107), and 1/2”-13UNC locknuts (94981).

2. Remove and save the upper link pin (JBM3629), 3/8”-16UNC x 2 1/2” capscrews (9390-061), and 3/8”-16UNC locknuts (902875).

3. Using a safe lifting device rated at a minimum of 750 lbs., install the CAT3 tongue conversion (J70210364). Secure using the previously removed hardware.

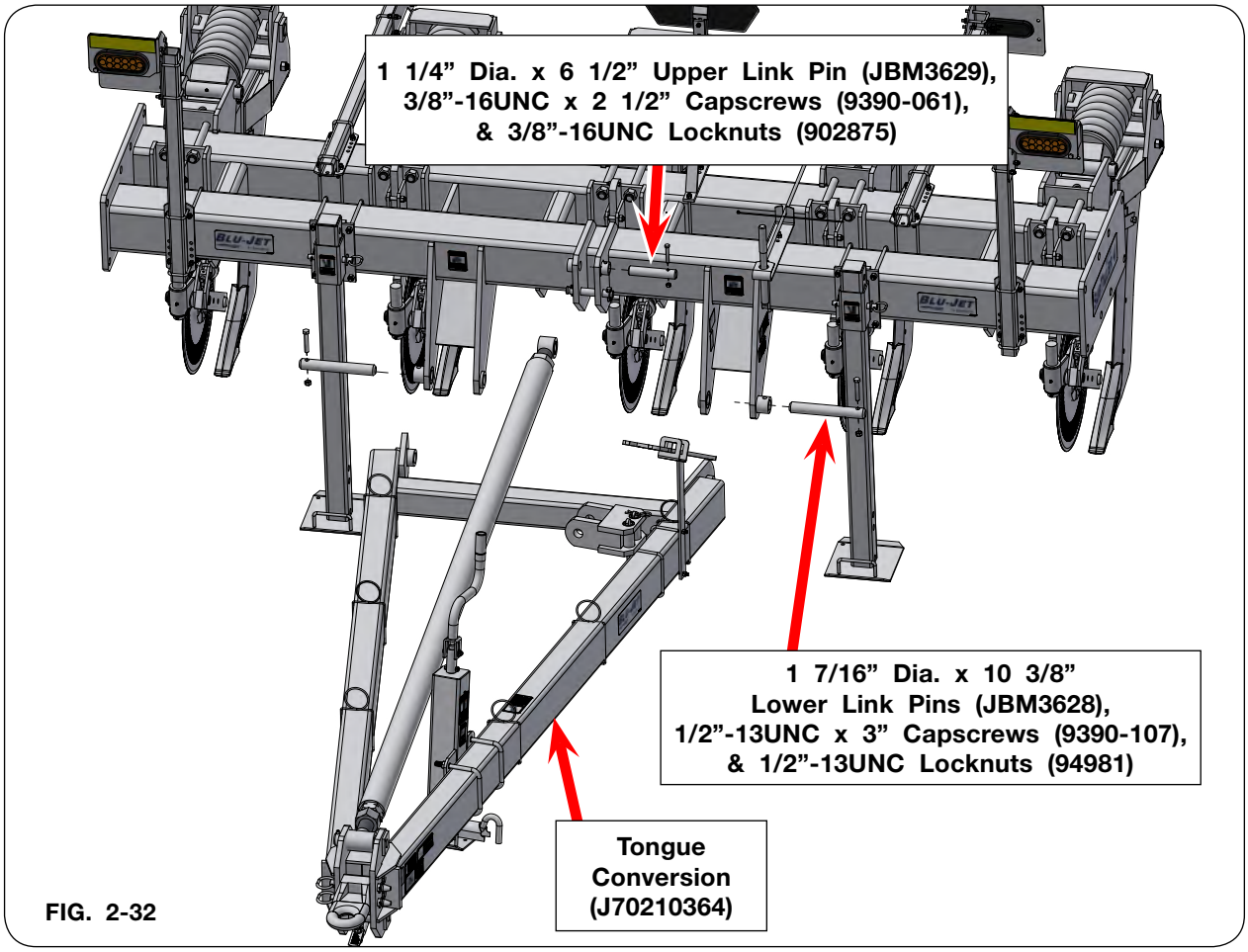


FIG. 2-32

4. Lower jackstand to the ground.

Pull-Type Conversion Option (continued)

5. Using a safe lifting device rated at a minimum of 500 lbs., attach the left-hand and right-hand axle tower assemblies to the front of the frame as shown in (FIG. 2-33). Torque the 3/4”-10UNC grade 8 hardware according to “Torque Chart” in MAINTENANCE section.

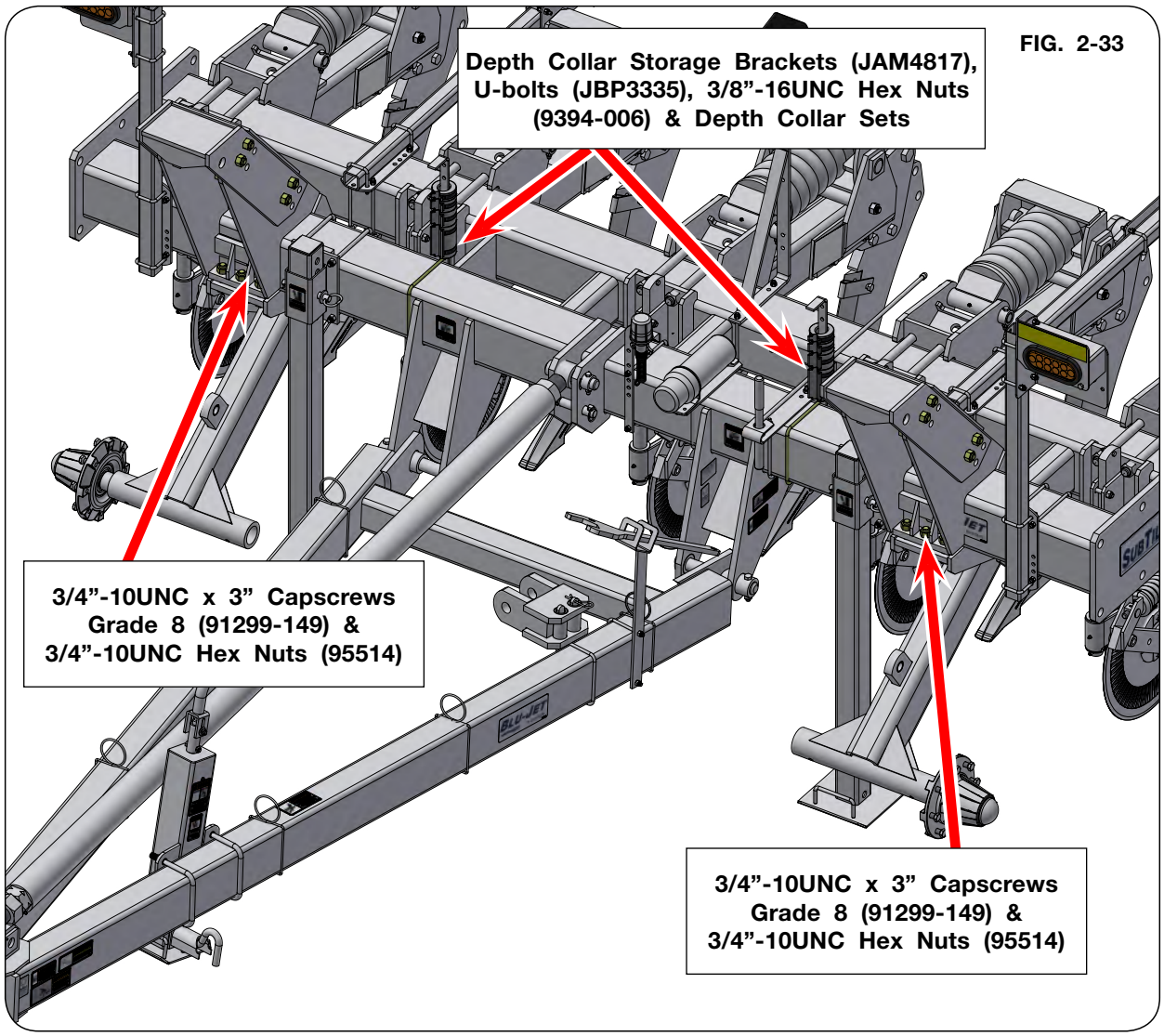


FIG. 2-33

6. Attach the depth collar storage brackets (JAM4817) to the back side of the front frame as shown in FIG. 2-33. Torque the 3/8”-16UNC grade 5 hardware according to “Torque Chart” in MAINTENANCE section.

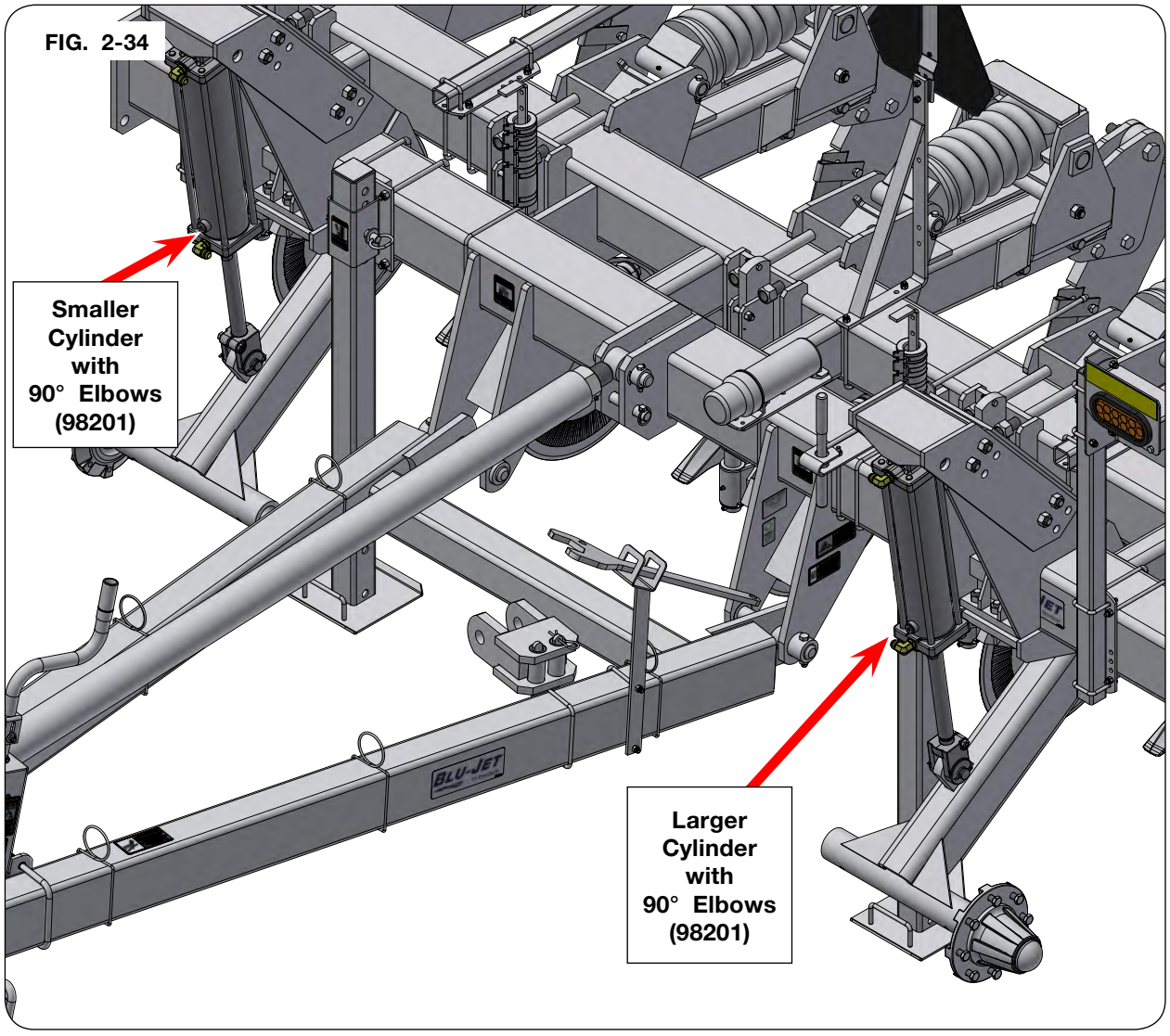
7. Place depth collar sets (JBP3076 and JPB3218) on the depth collar storage brackets (JAM4817). (FIG. 2-33)

Pull-Type Conversion Option (continued)

8. Using a safe lifting device rated at a minimum of 100 lbs., attach the larger cylinder (Single Wheel - 4” x 16” cylinder; Dual Wheels - 4 1/2” x 16” cylinder) to the left-hand axle tower assembly as shown in FIG. 2-34.

9. Using a safe lifting device rated at a minimum of 100 lbs., attach the smaller cylinder (Single Wheel - 3 3/4” x 16” cylinder; Dual Wheels - 4” x 16” cylinder) to the right-hand axle tower assembly as shown in FIG. 2-34.

FIG. 2-34



10. Attach 90° elbows (98201) to the cylinder ports.

Pull-Type Conversion Option (continued)

11. Remove and save the 9/16”-18UNC wheel bolts (9231) from the hubs.

12. Using a safe lifting device rated at a minimum of 100 lbs., attach the wheel assembly (111291SM).

13. Torque 9/16”-18UNF wheel bolts (9231). Refer to “Wheel Hardware Torque Chart” in MAINTENANCE section for proper torquing.

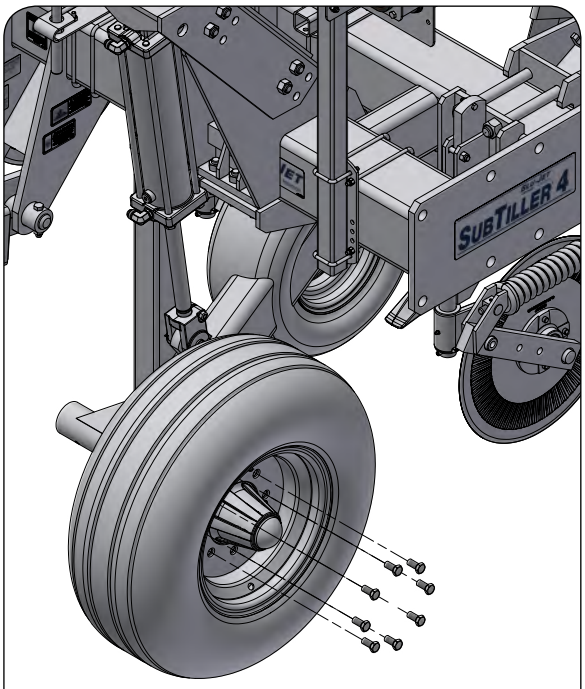


FIG. 2-35

14. Attach the hydraulic check valve (JDP3993) and adapters (9503026) to the left-hand side of the tongue approximately 61” from the tongue with U-bolt (JBP3045) and 3/8”-16UNC hex nuts (9394-004). (FIG. 2-36)

NOTE: Do not tighten transport valve mount plate until the hoses are installed.

15. Place decal (JAP2481) on tongue frame as shown in FIG. 2-36.

16. Attach the hitch storage bracket (JAAM2424) to the left-hand side of the tongue. (FIG. 2-36)

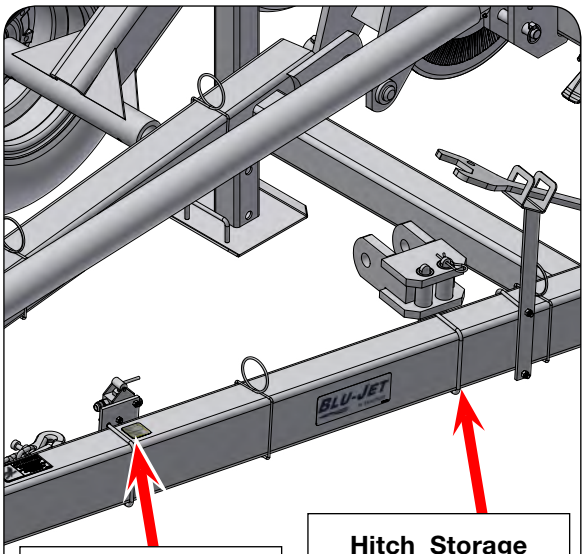
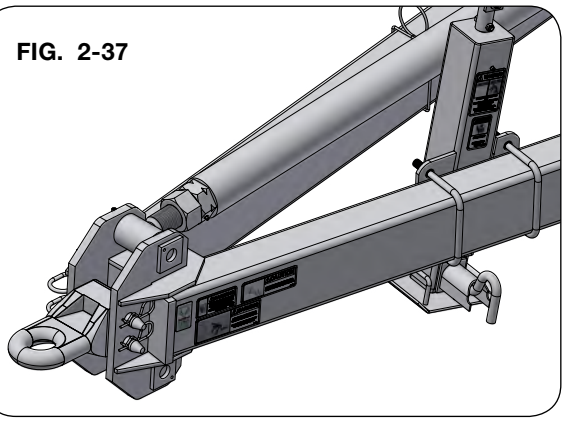


FIG. 2-36

Pull-Type Conversion Option (continued)

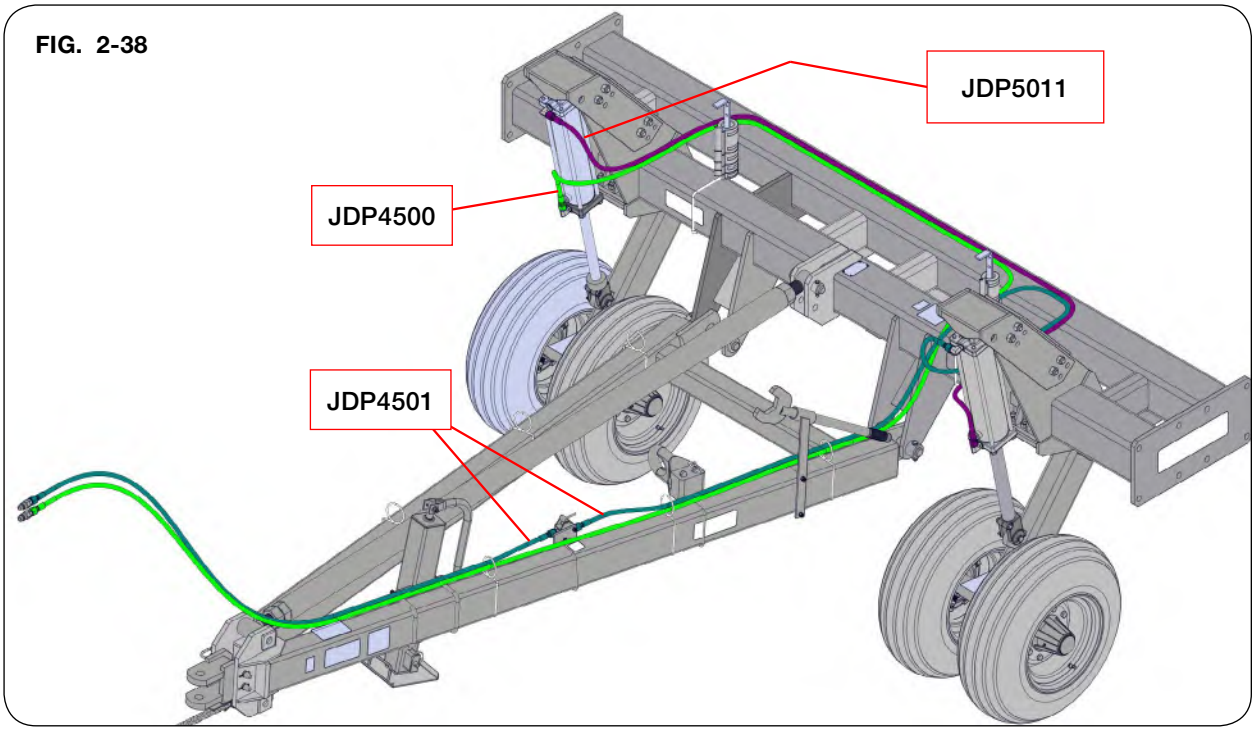
17. Secure the CAT3 hitch (JAP2850) or CAT4 hitch (JAP2864) to the tongue (FIG. 2-37).

FIG. 2-37



18. Route the 3/8” x 180” hydraulic hose (JDP5011) attached to the base end of the hydraulic cylinder on the right-hand side of the unit to the hydraulic cylinder on the left-hand side of the unit. Attach hose to left-hand side hydraulic cylinder rod end. (FIG. 2-38)

FIG. 2-38



19. Route 3/8” x 276” hydraulic hose (JDP4500) attached to the rod end of the cylinder on the right-hand side of the unit to the tractor. (FIG. 2-38)

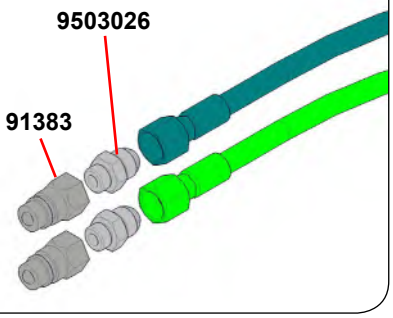
20. Attach 3/8” x 138” hydraulic hose (JDP4501) to base end of hydraulic cylinder on the left-hand side of the unit. The hose will extend to transport hydraulic check valve (JDP3993). (FIG. 2-38)

21. Attach 3/8” x 138” hydraulic hose (JDP4501) to transport hydraulic check valve. The hose will extend to tractor. (FIG. 2-38)

Pull-Type Conversion Option (continued)

22. Attach 7/8-14 JIC male x 3/4-16 O-ring male adapters (9503026) and 3/4-16 male tip couplings (91383) to tractor end of hoses. (FIG. 2-39)

FIG. 2-39



23. Refer to “Hydraulics - Purging hydraulic System” in this section to purge the hydraulics.

SECTION III

Operation

Preparing Tractor

Before operating implement refer to tractor operator's manual for information concerning safe methods of operation, hydraulics, hitch adjustment, tire inflation, wheel adjustments, and tractor weights.

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

Check tractor hydraulic oil reservoir and add oil if needed.

⚠ WARNING

- **TRANSPORTING THE IMPLEMENT SIGNIFICANTLY CHANGES THE WEIGHT AND BALANCE OF YOUR TRACTOR. MAKE SURE THE TRACTOR IS PROPERLY BALLASTED.**

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.

⚠ WARNING

- **DO NOT EXCEED THE TRACTOR'S LIFT CAPACITY OR BALLAST RECOMMENDATIONS.**

NOTE: Warranty consideration will only be given on items manufactured by Unverferth Mfg. Co., Inc.

Horsepower Requirements

The power requirement for this unit is 20-40 hp. per shank, depending on the depth of penetration and ground conditions. Select a tractor with sufficient power to operate this machine.

Sway Blocks

Sway blocks should be used and adjusted to limit movement in operating position. Your implement should be permitted to sway very little while operating and should be held rigid while transporting. See your tractor operator's manual.

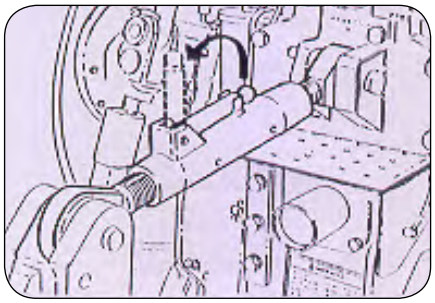
Wheel Spacing

Set tractor wheels so they are equally spaced from center of tractor. If using the tool to penetrate in fields of row crops, set tractor wheels so they are centered between the rows.

See your tractor operator's manual for correct tire inflation pressure.

Preparing Implement

Soil surface disturbance may be modified by using the third link adjustment. The implement will normally be operated in a “level” tool bar position or slightly tipped back position. By shortening the turnbuckle and running at shallower depths, soil surface disturbance will be increased. Tractor speed should be between 4 m.p.h. and 6 m.p.h. for optimum fracturing effect.



Perform the service checks as outlined. Repair or replace any damaged or worn parts before operating.

Hardware

Check for loose bolts and nuts, and tighten as needed. Check again after the first half-day of operation.

Pivot Pins

Check that all pins are in place and in good condition. Replace any worn, damaged or missing pins.

Hydraulics

Check routing of all hydraulic hoses. Hoses should not be kinked, twisted, or rubbing against sharp edges. Hoses should be secure with tie straps.

Check hoses and fittings for hydraulic leaks. Tighten or replace as required.

⚠ WARNING

- **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 CARD-BOARD OR WOOD TO DETECT LEAKS IN THE HYDRAULIC SYSTEM. SEEK MEDICAL TREATMENT IMMEDIATELY IF INJURED BY HIGH-PRESSURE FLUIDS.**

Preparing Implement (continued)

Tire Pressure

Check tire pressure, see "MAINTENANCE" section for recommended air pressure. Be sure tire pressure is equal in all tires.

⚠ CAUTION

- **IMPROPERLY TORQUED WHEEL NUTS/BOLTS CAN CAUSE A LOSS OF IMPLEMENT CONTROL AND MACHINE DAMAGE. WHEEL NUTS/BOLTS MUST BE CHECKED REGULARLY. SEE TORQUE PAGE IN THE "MAINTENANCE" SECTION FOR PROPER WHEEL NUT/BOLT SPECIFICATIONS. WARRANTY DOES NOT COVER FAILURES CAUSED BY IMPROPERLY TORQUED WHEEL NUTS/BOLTS.**

For questions regarding new tire warranty, please contact your local original equipment tire dealer. Used tires carry no warranty. Tire manufacturers' phone numbers and web sites are listed in the "MAINTENANCE" Section of this manual for your convenience.

Pins And Retaining Rings

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

Check that locking hardware for pins are in place and tight.

Point Selection

Fall Till Points

The fall till point is designed to fracture compacted soil when operated at a depth of 14" to 18" deep. Ideally the point of the shoe should be run 1" to 2" below the compacted "zone" which generally will be found at the 8"-14" depth. Do not run the SubTiller in-line ripper point too deep. This may result in wasted horsepower and a slicing effect through the hardpan rather than a lifting and shattering effect directly under the compacted zone.

Summer Till Points

The summer till point is designed to penetrate the soil for air filtration and water penetration combined with a slight fracturing effect. It is ideally suited for pivot irrigated crops and also may be used successfully on dry land row crops, pasture and hay land.

By penetrating soil from 10" to 14" the summer till point is most effective. If the soil appears to be lifting the dry land row crop excessively it may be advisable to quit. In extremely hard soil when weather conditions are hot and dry, the summer till point may injure roots structures, especially when water cannot immediately be applied.

Preparing Implement (continued)

Shanks

Replace the shear-bolt on the standard shank model only with 3/4" x 4 1/2" grade 2 bolts. Use of grade 5 or harder bolts will void the warranty of the machine. Do not attempt to hard surface the SubTiller in-line ripper summer till or fall till points. These cast items have undergone a special heat treating process that will be modified if additional heat is encountered.

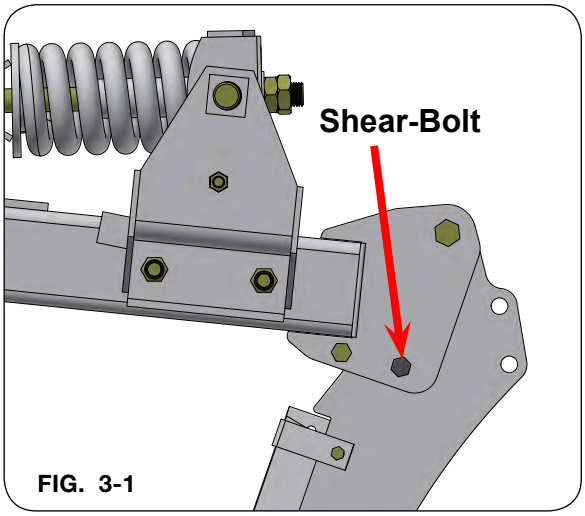
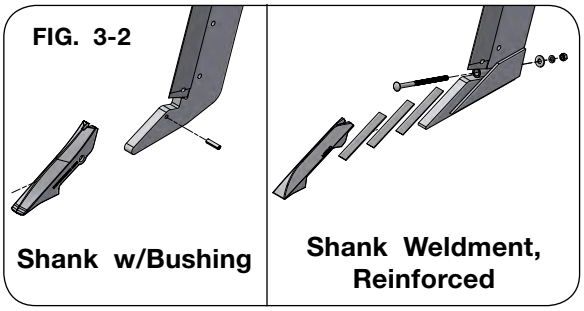


FIG. 3-1

Changing Points

The fall and summer points should rest flatly on metal shims placed between the lower shank and the point. Do not tighten with impact wrench. Over tightening can cause damage to point. Refer to "Shank Wear Bar & Point Replacement" in MAINTENANCE section for replacement instructions.

FIG. 3-2



Coulters

Coulter should be adjusted to slice 3" to 4" deep during operation. Running coulters too deep may result in premature bearing failure. Grease coulter pivot shaft generously and often.

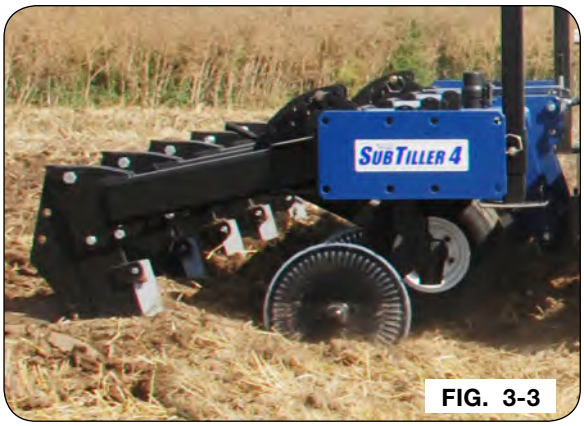


FIG. 3-3

Lubrication

Lubricate unit as outlined in MAINTENANCE section.

Attaching Implement To Tractor

⚠ WARNING

- **CRUSHING CAN CAUSE SERIOUS INJURY OR DEATH. DO NOT STAND BETWEEN TOWING VEHICLE AND IMPLEMENT WHEN HITCHING. ALWAYS ENGAGE PARKING BRAKE AND STOP ENGINE BEFORE INSERTING HITCH PINS OR SECURING LATCHES.**

Attach the unit to the tractor as specified in the tractor operator's manual. Use the appropriate size hitch pins and lock in place.

⚠ WARNING

- **RELIEVE THE HYDRAULIC SYSTEM OF ALL PRESSURE BEFORE ADJUSTING OR SERVICING. SEE THE HYDRAULIC POWER UNIT OPERATOR'S MANUAL FOR PROPER PROCEDURES.**

- **HYDRAULIC SYSTEM MUST BE PURGED OF AIR BEFORE OPERATING TO PREVENT SERIOUS INJURY OR DEATH.**

NOTE: Refer to SET UP section for purging process.

NOTE: Refer to MAINTENANCE section when checking hydraulic circuit operation.

Transporting

DANGER

- **ELECTROCUTION WILL CAUSE SERIOUS INJURY OR DEATH. ELECTROCUTION CAN OCCUR WITHOUT DIRECT CONTACT. KEEP AWAY FROM ALL UTILITY LINES AND DEVICES.**

WARNING

- **USE TRANSPORT LIGHTS AS REQUIRED BY ALL LAWS TO ADEQUATELY WARN OPERATORS OF OTHER VEHICLES.**
- **ALWAYS TRAVEL AT A SPEED WHICH PERMITS COMPLETE CONTROL OF TOWING VEHICLE AND IMPLEMENT.**

NOTE: Unverferth Manufacturing has designed the transport lighting and marking kit to meet all laws 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.

Do not operate near electrical lines. Know height and width of implement.

For safe transporting of this implement, the transport speed should never exceed 10 m.p.h. in the field or over rough terrain. Reduce transport speed to maintain full control of the implement and tractor at all times. Do not exceed 20 m.p.h. when transporting the implement on the highway.

Comply with all laws governing highway safety and regulation when moving machinery on public roads.

Be sure SMV Emblem, SIS decals, lights and reflectors are in place and clearly visible to approaching traffic.

Unhitching From Tractor

⚠ WARNING

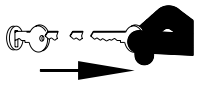
- **FALLING OR LOWERING EQUIPMENT CAN CAUSE SERIOUS INJURY OR DEATH. KEEP EVERYONE AWAY FROM EQUIPMENT WHEN SUSPENDED, RAISING, OR LOWERING.**

- **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.**

Select a firm, level surface for parking the machine. Lower all support stands to the same height. Lower unit with tractor's 3-point hitch until stands and shank points contact the ground.

Set parking brake and remove key from ignition before dismounting from tractor.



For Pull-Type Hitch units, lower implement to ground. Use jack to raise tongue. Remove hitch pin and disconnect hydraulic lines and electric connection.

Leveling Frame

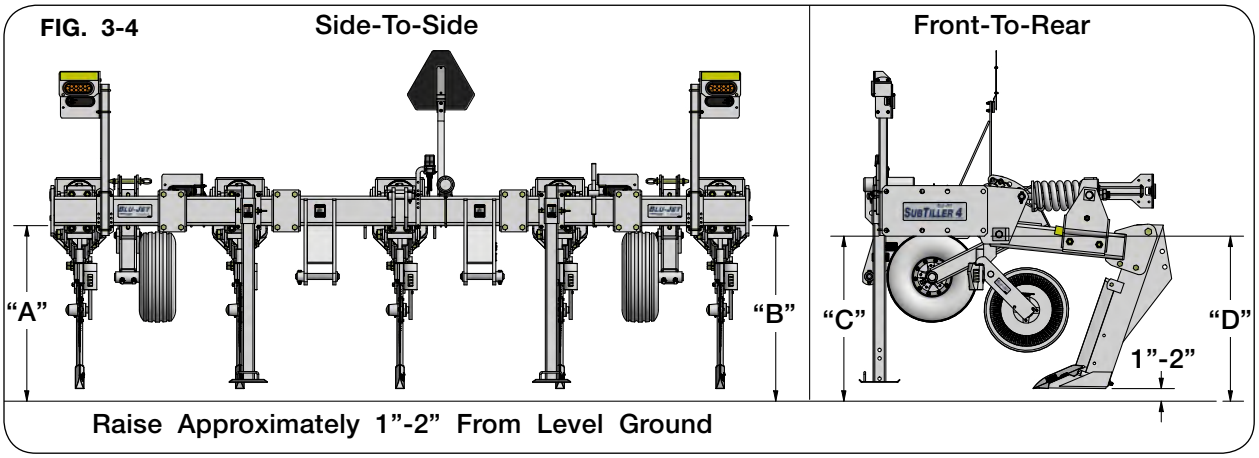
For best results, when leveling the implement, position the tractor with implement on a level surface. Check tractor tire pressure and inflate equally from side-to-side. See your tractor operator's manual for correct tire inflation pressure.

Side-to-Side Leveling - 3-Point Models

With the implement attached to tractor, raise the unit 1 to 2 inches off the floor. Shut-off engine and lock brakes on tractor. Measure to the bottom edge of the rear frame tube on each side of the machine. Frame will be level when dimension "A" is the same as dimension "B", Fig. 3-4. Level frame from side to side by adjusting the lift links on tractor 3-point hitch.

Consult your tractor operator's manual for correct 3-point hitch adjustment procedures and safety requirements.

FIG. 3-4



Raise Approximately 1"-2" From Level Ground

Front-to-Rear Leveling

Before setting the coulter and gauge wheels it is necessary to level the frame from the front to the rear.

For initial adjustment keep the machine raised off the ground 1 to 2 inches (being sure bottom of shanks clear floor). Measure to the bottom of the front frame tube "C" and the rear frame tube "D".

The SubTiller in-line ripper is normally operated level or slightly tipped back. Begin with the implement level front-to-rear and adjust the tractor third linkage to achieve different field results. Tipping the implement back (by lengthening the third linkage) will decrease the surface soil disturbance. Operating with the toolbar tipped back too far may prevent the implement from entering the soil and may result in premature wear on the unhardened areas of the point and shank. Operating with the toolbar tipped forward from the level position will increase the surface soil disturbance and horsepower requirements. A properly leveled implement will create a "wave" effect when operating where the points lift and fracture the hardpan with minimal disturbance on the surface.

Consult your tractor operator's manual for correct top-link adjustment procedures and safety requirements.

Further front to back adjustment may be required once machine is operated in the field.

Depth of Penetration

Before adjusting the depth of your coulter and shank, first test your soil for the depth of the hardpan. For optimum performance from your implement, the penetration of the shank should be 1-2 inches below the hardpan. The hardpan is the area in your soil which acts as a barrier preventing the roots of your crops from benefiting from the water and nutrients below this area.

To determine the precise location of the hardpan, use the “soil probe” located on the front, left-hand side. For more information on this device, refer to your local Unverferth dealer or contact us, at Unverferth Mfg. Co., Inc.

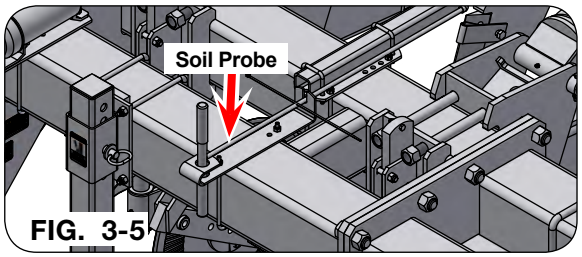
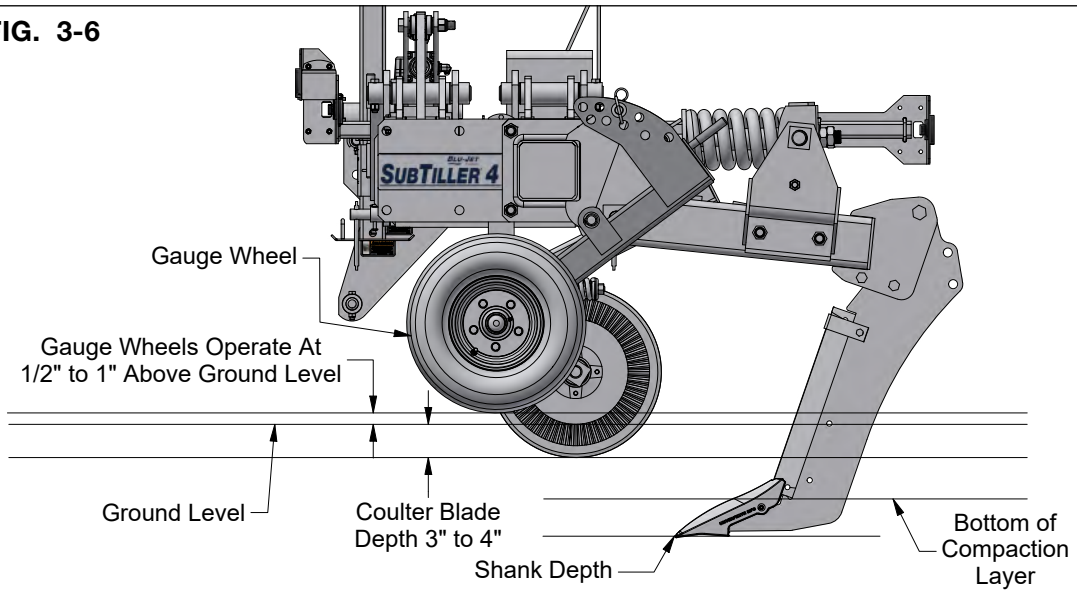


FIG. 3-5

An alternate method of locating the hardpan is to dig a hole to a depth of 24” or greater. Using a knife, slice the side wall of the hole vertically downward. You will be able to feel an increase in resistance upon entering the hardpan from the top. Repeat the knife slice from the bottom of the hole upward to determine the bottom of the hardpan.

Once the depth of the hardpan is determined, adjust the gauge wheels so that the shank will penetrate at least 2-3 inches below this barrier (Fig. 3-6).

FIG. 3-6



Use a safe lifting device rated at a minimum of 200 lbs. to adjust the gauge wheel. Remove the hitch pin, reposition gauge wheel, then reinsert hitch pin Fig. 3-7.

IMPORTANT

- *It is recommended that the gauge wheels are 1/2” to 1” off the ground during operation. This transfers more draft and weight onto the tractor rear tires for maximum traction.*

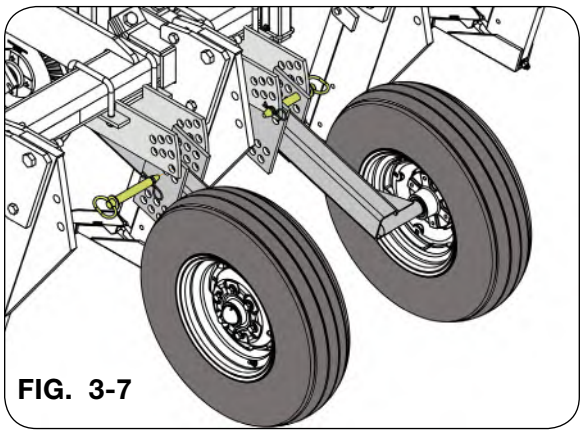


FIG. 3-7

Support Stand

⚠ WARNING

- **FALLING OR LOWERING EQUIPMENT CAN CAUSE SERIOUS INJURY OR DEATH. KEEP EVERYONE AWAY FROM EQUIPMENT WHEN SUSPENDED, RAISING, OR LOWERING.**

Before field operation can begin, support stands must be raised and locked into position. Raise unit into transport position and raise support stand by removing pin, raising the support stand and reinstalling the pin into the bottom hole (Fig. 3-8).

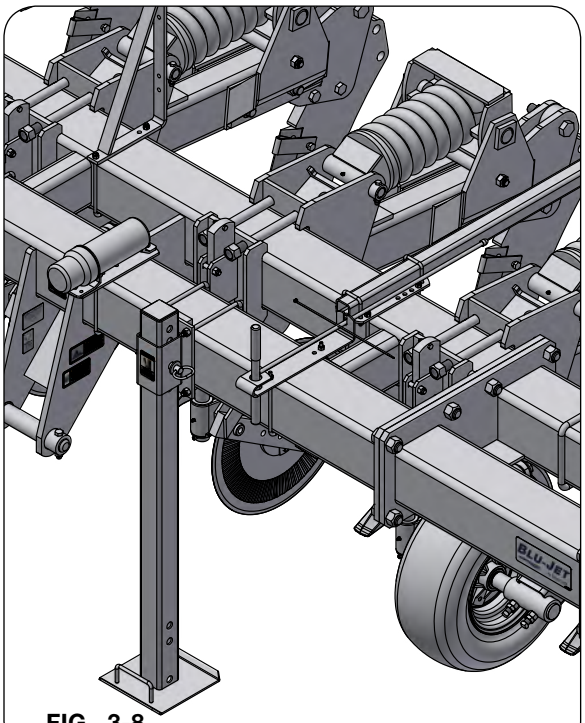


FIG. 3-8

Notes

SECTION IV
Maintenance

Lubrication

IMPORTANT

- *Do not use a high pressure grease gun to lubricate these bearings. Damage to bearing seals could occur.*

To keep your implement in top operating condition and to assure its proper performance and reliability for a long period of time, periodic inspection and lubrication is a must.

Use EP-2 lubricant at the locations described in the chart.

All exposed cylinder rods should be coated with grease before seasonal storage to prevent rusting. Remove depth collars and lubricate exposed cylinder rods.

The lubrication locations and recommended schedule are as follows:

ITEM	DESCRIPTION	POINT	QTY.	HOURS
A	Auto-Reset Shank	2	2 Shots	Weekly
B	Pull-Type Option Turnbuckle*	2	2 Shots	Once Every Season
C	Hitch (CAT4)	2	2 Shots	Weekly
D	Wheel Hubs	2	Repack	Once Every Season
E	Coulter Hub	-	10 Shots	Once Every Season
F	Coulter Swivel	2	2 Shots	Weekly
G	Wing Hinge	5	5 Shots	Weekly
H	Main Frame Wheel Pivot	8	5 Shots	Weekly
I	Gauge Wheel Turnbuckle*	2	2 Shots	Weekly

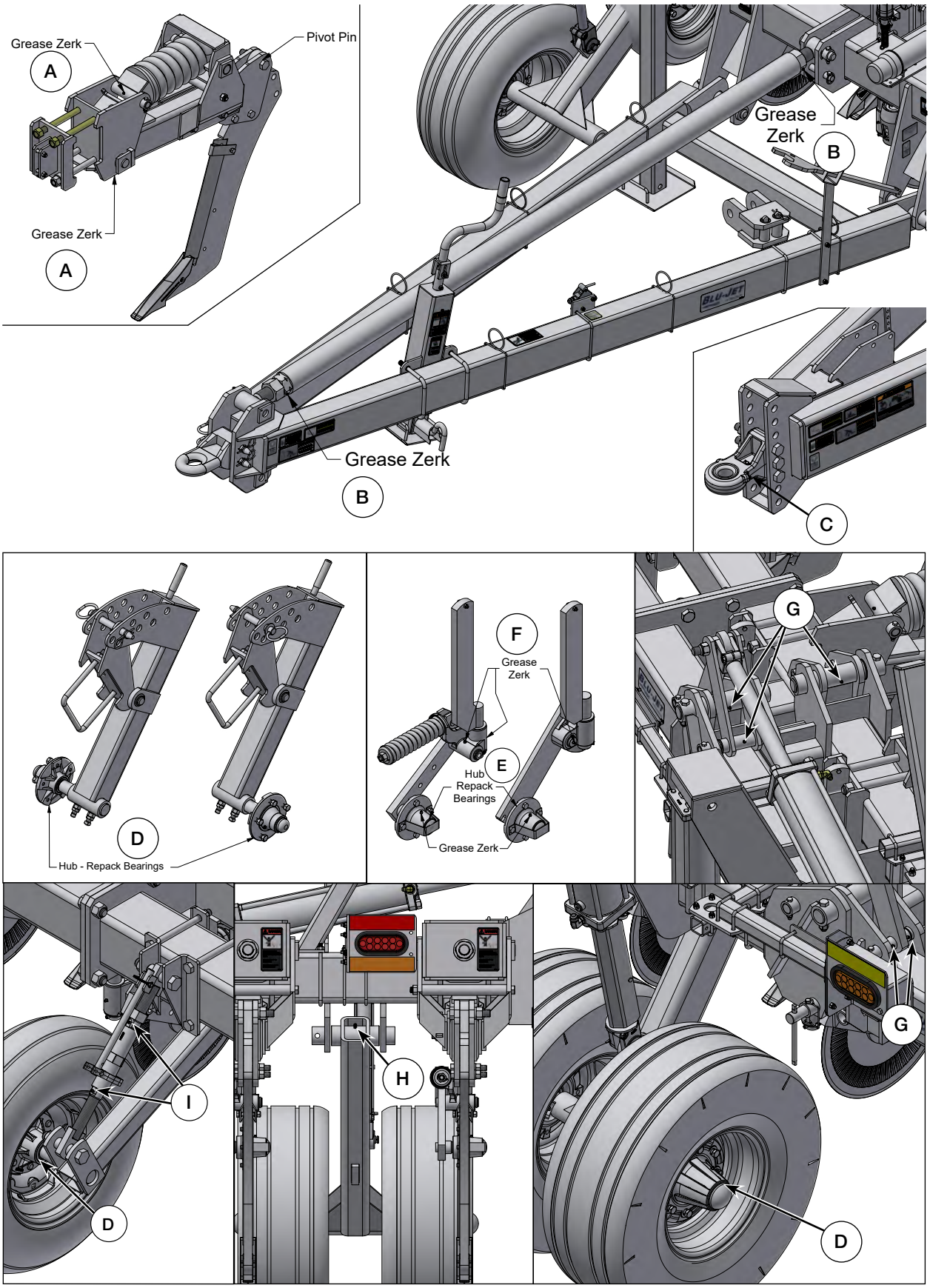
*NOTE - ITEM A: Turn adjustable link two full turns in each direction to ensure threads do not seize.

Wheel Bearings

Lubricate with an SAE multi-purpose grease. All fittings must be free from dirt and paint to insure entry of lubrication inside bearing.

The gauge wheel bearings should be cleaned, repacked and adjusted once per season. Use a NLGI #2 EP grease to repack the bearings and adjust per the Hub Assembly instructions in this section.

Lubrication (continued)



Daily Service

Beginning of Day

NOTE: Before initial use, ensure all lubrication points have been greased.

Check all U-bolts and bolts for tightness. This is especially important during the first days of operation. See “Torque Chart” in this section.

IMPORTANT

- *Inspect mast pins for any wear or damage. Replace any worn or damaged pins.*

Perform any daily lubrication outlined in “Lubrication” in this section.

Check tire air pressure and inflate to correct pressure, if necessary.

IMPORTANT

- *To assure level penetration of shanks, both tires must be inflated to the same pressure.*

End of Day

Clean off dirt and residue which may have accumulated on implement during operation.

Check implement for damage which could have occurred during operation, and repair.

Shank Wear Bar & Point Replacement

The shanks have a replaceable wear bar and point which, after a period of time, will need to be replaced. To replace these components on your machine, refer to the following guidelines:

⚠ WARNING

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

- **CHANGE ONLY ONE SHANK AT A TIME. IF PRESSURE IS RELIEVED ON ALL SHANKS THE UNIT COULD TIP OVER BACKWARDS.**

⚠ CAUTION

- **WEAR BAR IS RETAINED TO THE SHANK BY THE POINT. KEEP HOLD OF WEAR BAR AS POINT IS REMOVED TO PREVENT PERSONAL INJURY.**

With implement attached to a tractor, find a firm level surface. Lower the unit's jack stands until they are 1-2 inches below the points, and lower machine to the ground so that the stands support the entire implement and all points are off the ground. Shut off tractor engine, set parking brake, and remove the ignition key.

Wear Bar Replacement

1. Remove the hardware and point.
2. Remove the capscrew (9390-107) and locknut (9800) in order to remove the wear bar.
3. Replace with new wear bar (JCP5026) and secure with previously removed hardware.

NOTE: The wear bars are reversible and should be rotated or replaced often for maximum life of shank.

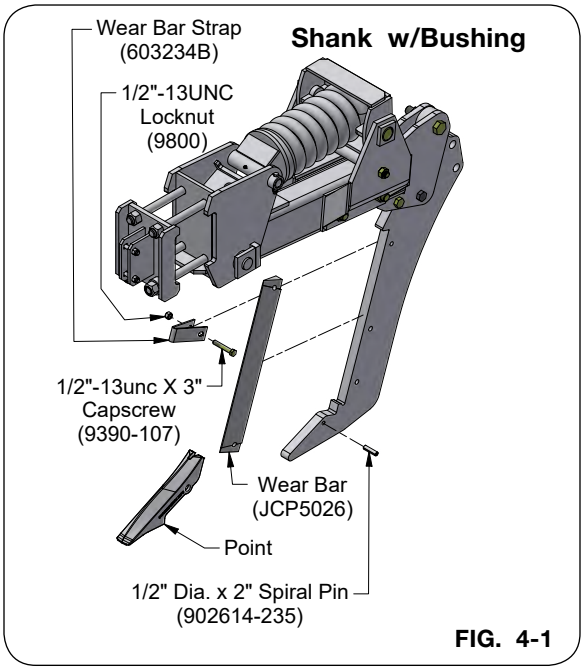


FIG. 4-1

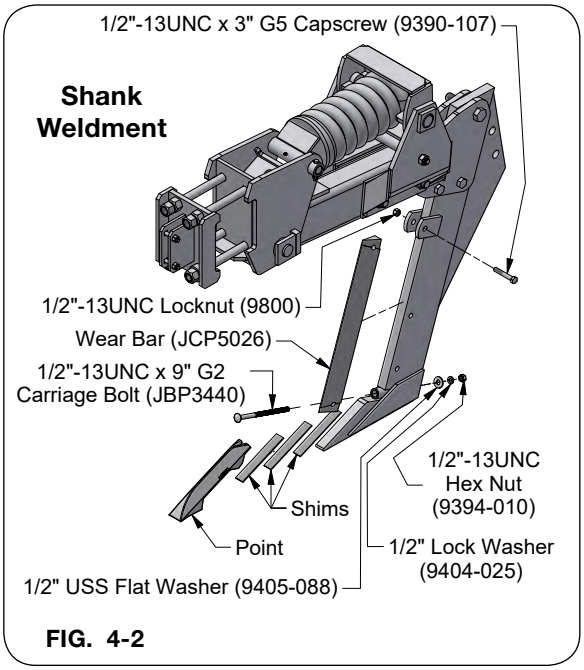


FIG. 4-2

Shank Wear Bar & Point Replacement (continued)

Point Replacement

1. Remove the retaining hardware and point.

2. Hook the point over the end of the shank and position "Vee" over wear bar end.

   SHANK WELDMENT ONLY
   Insert the head of 1/2"-13UNC x 9" grade 2 carriage bolt (JBP3440) into notch in new point. Start carriage bolt through hole in shank (FIG. 4-4).

3. **SHANK W/BUSHING ONLY**
   Retain into position with spiral pin. (FIG. 4-3)

   SHANK WELDMENT ONLY
   Place 1/2" flat washer (9405-088) and 1/2" lock washer (9404-025) on carriage bolt. Secure with 1/2"-13UNC hex nut (9394-010). (Torque 1/2" hex nut to 45-52 ft.-lbs.) (FIG. 4-4)

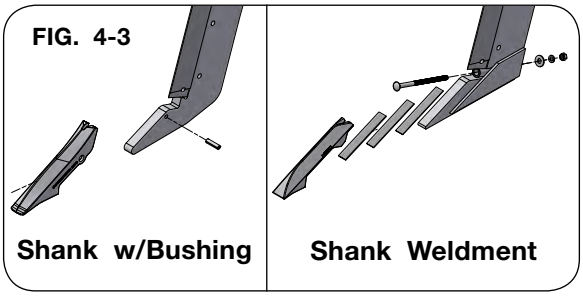
4. Allow 1/16" clearance between point "Vee" notch and wear bar. (FIG. 4-5)

5. **SHANK WELDMENT ONLY**
   If wear bar touches Vee notch, or clearance is less than 1/16", loosen 1/2"-13UNC x 9" grade 2 carriage bolt (JBP3440) and pull point back and install one shim or a combination of shims. Tighten carriage bolt to 45 ft.-lbs. and reverify 1/16" clearance (FIG. 4-5). Repeat procedure if wear bar is still tight in "Vee" notch.

IMPORTANT

- *Periodically check the lower half of the shank for wear - excessive shank wear will occur if point and wear bar are not replaced (or reversed).*

FIG. 4-3



Shank w/Bushing | Shank Weldment

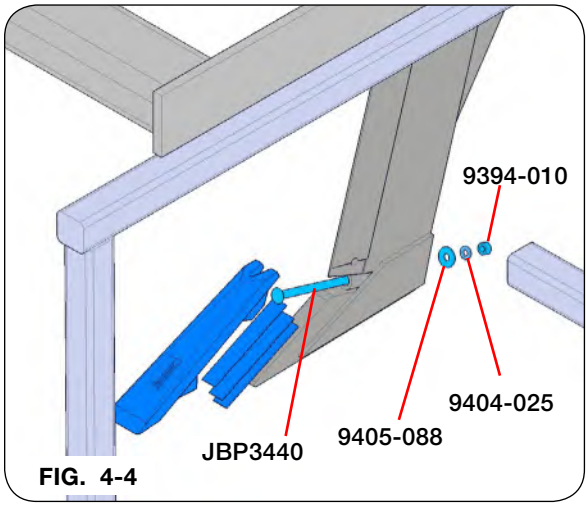


FIG. 4-4

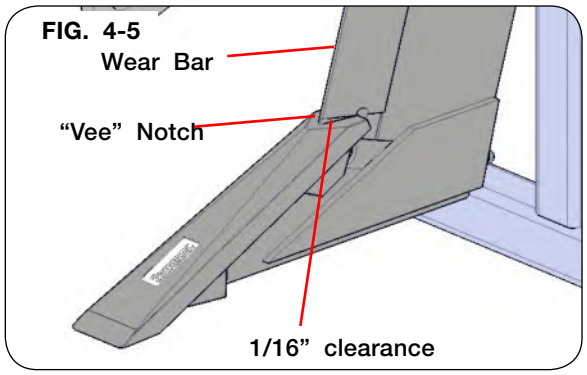


FIG. 4-5

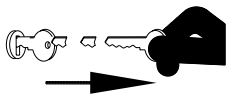
Shear-Bolt Replacement

The shear-bolt should shear only when the shank encounters an obstacle.

⚠ WARNING

- **KEEP HANDS CLEAR OF PINCH POINT AREAS.**
- **EYE PROTECTION AND OTHER APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT MUST BE WORN WHILE SERVICING IMPLEMENT.**

1. With implement attached to a tractor, find a firm level surface. Lower the unit's jack stands until they are 1-2 inches below the points, and lower machine to the ground so that the stands support the entire implement and all points are off the ground. Shut off tractor engine, set parking brake, and remove the ignition key.



2. Remove any remaining portions of the shear-bolt from the shank assembly. Inspect shear-bolt holes in the shank. Severely distorted holes will result in shorter shear-bolt life and should be repaired or replaced.

3. Align the holes and install UNVERFERTH 3/4"-10UNC x 4 1/2" grade 2 capscrew/ shear-bolt (JBP3021), 3/4" lock washer (9404-033) and 3/4"-10UNC hex nut (9394-016). Do not use a different size or different grade of shear-bolt; unsatisfactory performance and or shank damage may occur. Tighten the nut to 150 ft.-lbs.

NOTE: Additional shear-bolt, lock washer, and hex nut are stored in the front of the shank.

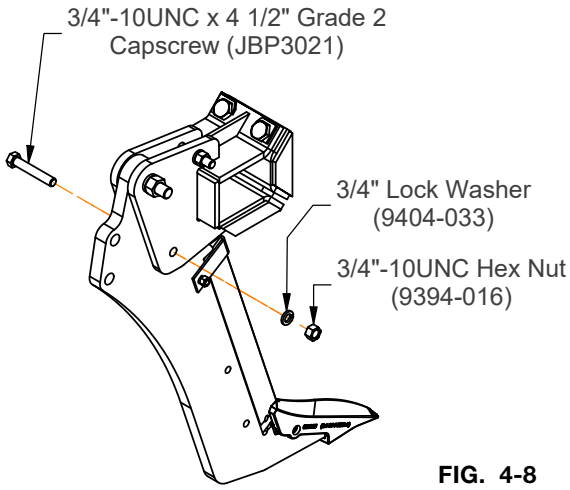


FIG. 4-8

Horizontal Spring Coulter Replacement

The following guidelines are for replacing the spring on the coulters.

WARNING

- **TIPPING OR MOVEMENT OF THE MACHINE CAN CAUSE SERIOUS INJURY OR DEATH. BE SURE MACHINE IS SECURELY BLOCKED.**
- **KEEP HANDS CLEAR OF PINCH POINT AREAS.**

CAUTION

- **SHARP EDGES ON COULTER BLADES CAN CAUSE INJURY. BE CAREFUL WHEN WORKING AROUND COULTER BLADES.**

IMPORTANT

- *The spring should only be adjusted when repairs are being made. The springs have been preset before leaving the factory.*

1. Loosen the set screw retaining the spring bolt on the coulter arm (FIG. 4-5).
2. Slowly unscrew the spring bolt which will relieve spring pressure (FIG. 4-5).
3. Once the bolt is removed, replace with new spring and re-insert bolt.

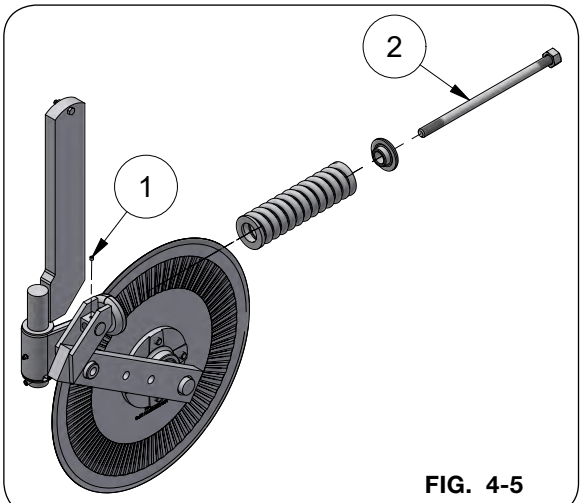


FIG. 4-5

4. Tighten bolt until a deflection of 1” is obtained on spring (FIG. 4-6).

The coulter springs are preset at the factory to 9 3/8”. This measurement is the total amount of exposed spring.

NOTE: Adjusting the spring below 9 3/8” could cause premature part failure and void any warranty considerations.

5. Tighten set screw to secure bolt.

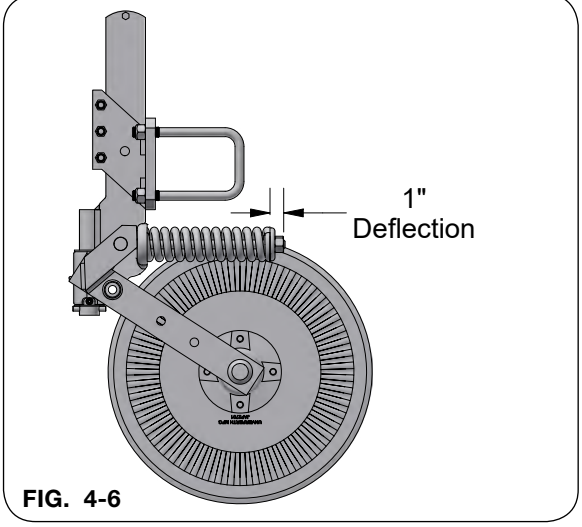


FIG. 4-6

Hub Assembly

1 Use grease to lubricate the seal lip.

2. Place the hub onto the spindle.

NOTE: Make sure the bearing is seated in the cone before the seal is put in place.

3. Rotate the hub while doing this so that the seal lip does not fold under as the lip goes on the seal lip of the spindle.

4. Be sure the outer cone slides on the spindle and into the cup.

5. Assemble the washer and the nut onto the spindle and tighten the nut to 20-25 Ft.-Lbs. Rotate the hub while tightening the nut.

6. Back off the nut until it becomes loose.

7. While rotating the hub, retighten the nut to remove all clearance.

8. Line up the next slot in the nut with the hole in the spindle, insert the cotter pin and bend the cotter pin.

9. Install the hub cap.

Annual Service

Beginning of Season

WARNING

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

Check all bolts, U-bolts, and wheel bolts for tightness. Refer to “Torque Chart” in this section.

Lubricate implement (see “Lubrication” in this section).

Check air pressure in tires and inflate to correct pressure if necessary (see “Daily Service” in this section).

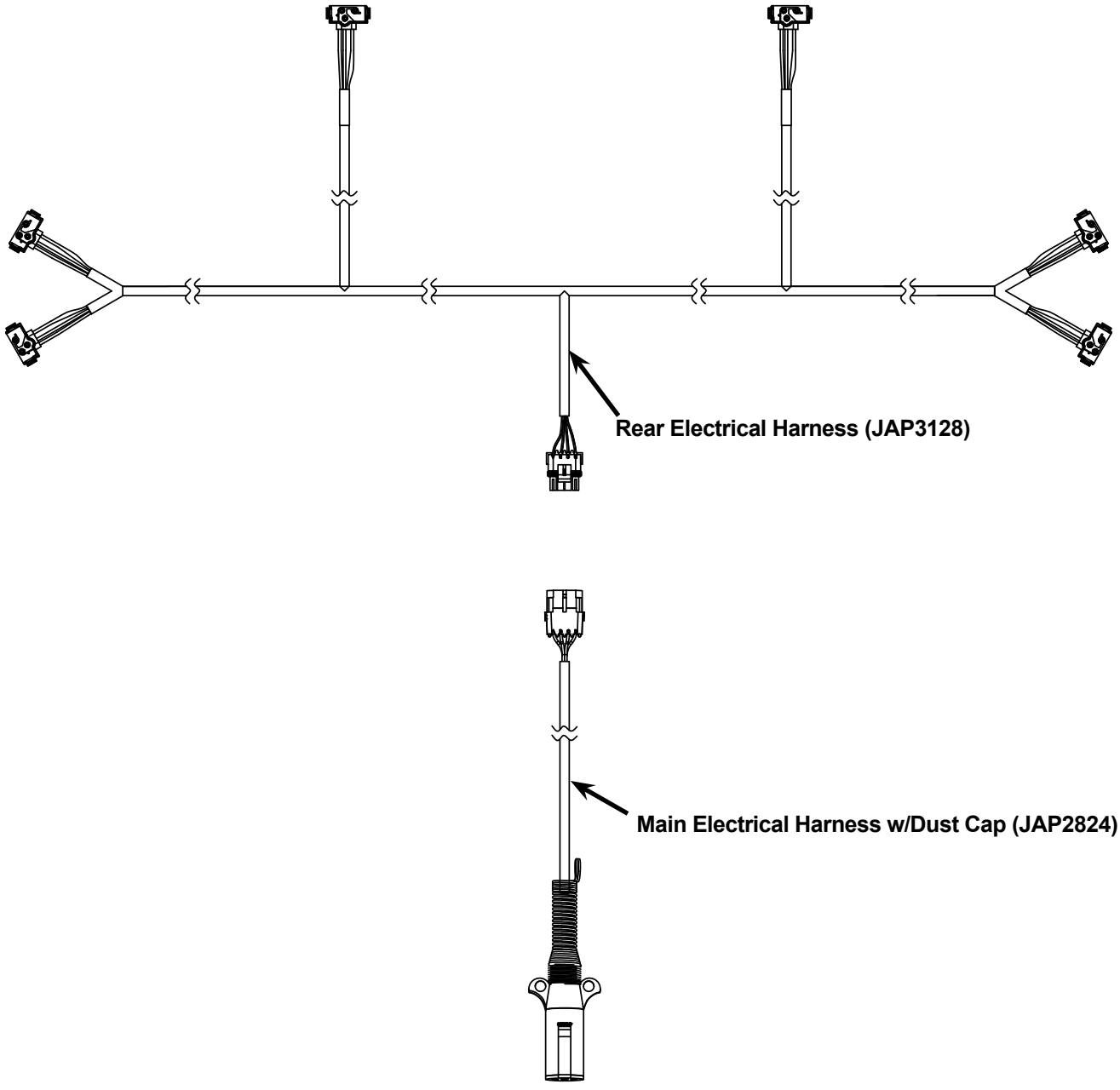
End of Season

Your implement is an important investment. Spend a little time to protect it from destructive rust and corrosion. You will be repaid in longer service life and better performance.

Perform the following before placing the implement in storage:

1. Remove dirt and residue which could cause rusting.
2. Repaint any chipped or scraped areas.
3. Lubricate implement (see “Lubrication” in this section).
4. Coat all earth moving surfaces with grease or suitable rust preventatives.
5. Inspect for damaged parts. Replace before next season.
6. Store implement inside, away from livestock.
7. Use blocking to keep implement tires and points up off bare ground.
8. Replace all worn, torn or faded decals and reflectors.

Electrical Schematic



Wheels and Tires

Wheel Hardware Torque

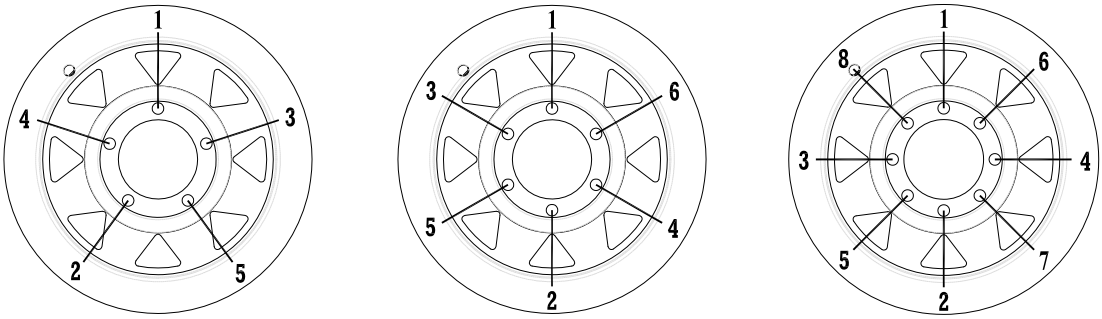
⚠ CAUTION

- **IMPROPERLY TORQUED WHEEL NUTS/BOLTS CAN CAUSE A LOSS OF IMPLEMENT CONTROL AND MACHINE DAMAGE. TORQUE WHEEL NUTS/BOLTS TO VALUES IN TABLE. CHECK TORQUE BEFORE INITIAL USE, AFTER ONE HOUR OF USE, AND EACH HOUR UNTIL WHEEL NUTS/BOLTS MAINTAIN TORQUE VALUE. CHECK TORQUE EVERY 10 HOURS OF USE THEREAFTER. AFTER EACH WHEEL REMOVAL START TORQUE PROCESS FROM BEGINNING. WARRANTY DOES NOT COVER FAILURES CAUSED BY IMPROPERLY TORQUED WHEEL NUTS/BOLTS.**

Failure to check torque before first use may damage wheel nut/bolt seats. Once seats are damaged, it will become impossible to keep nuts/bolts tight. Tighten nuts/bolts to the applicable torque value shown below. Start all nuts/bolts by hand to prevent cross threading. Torque nuts/ bolts in the recommended sequence as shown in Diagram 1.

WHEEL HARDWARE	
SIZE	FOOT-POUNDS
1/2”-20 (UNF)	75 Ft.-Lbs.
9/16”-18 (UNF)	110 Ft.-Lbs.

Diagram 1



5 Bolt 6 Bolt 8 Bolt

Tire Pressure

- The following is to be used as a general guide for tire inflation and figures can vary depending on specific brand of tire used. **It is important that tires are inspected after unit is loaded.** Start with minimum pressure indicated. The tire should stand up with no side-wall buckling or distress as tire rolls. Record the pressure needed to support the full load and maintain this pressure to achieve proper tire life. **Do not exceed maximum recommended tire pressure.**

For used tires recommended.....65 PSI maximum.

For new tires consult tire side wall for PSI information.

Wheels and Tires (continued)

Tire Warranty

For questions regarding new tire warranty, please contact your local original equipment tire dealer. Used tires carry no warranty. Following are phone numbers and Websites for your convenience:

Carlisle	www.carlisletire.com Phone 800-260-7959 Fax 800-352-0075

Installing Retaining Rings

1. USE PROPER TOOLS for assembling rings onto pins (for plain external retaining rings use a flat-blade retaining ring pliers).

2. Before inserting pins, be sure the GROOVE IS FREE FROM ALL FOREIGN MATERIAL (paint, dirt, etc.), to ensure a proper seating.

3. DO NOT OVERSTRETCH RING during assembly. Install ring into groove so that it is securely seated and will not rotate around the pin.

4. **BASIC EXTERNAL RETAINING RINGS**
On "D" shaped pins, the retaining ring OPENING SHOULD BE APPROXIMATELY 180˚ FROM FLAT of the pin (Fig. 4-9).

BASIC EXTERNAL RETAINING RINGS

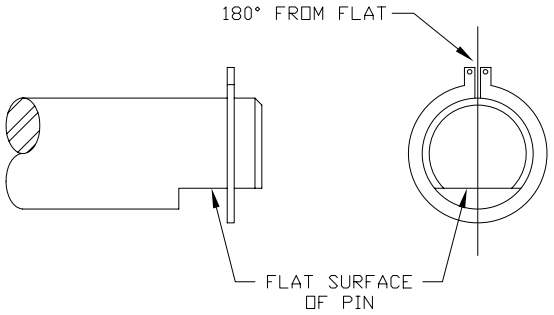


FIG. 4-9 OM-00155

PLAIN EXTERNAL RETAINING RINGS
On "D" shaped pins, the retaining ring OPENING SHOULD BE OVER THE FLAT of the pin (Fig. 4-10).

PLAIN EXTERNAL RETAINING RINGS

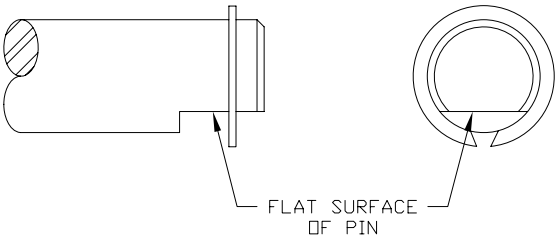


FIG. 4-10 OM-01214

NOTE: The retaining rings should fit tightly once released and should not rotate freely.

Complete Torque Chart

Capscrews - Grade 5

NOTE:

- Grade 5 capscrews can be identified by three radial dashes on the head.
- For wheel torque requirements, refer to Wheels and Tires.
- Tighten U-bolts evenly and equally to have the same number of threads exposed on each end.

SIZE	FOOT POUNDS	NEWTON METERS
1/4-20 1/4-28	8-10 9-11	11-13 12-15
5/16-18 5/16-24	15-17 17-19	20-23 23-26
3/8-16 3/8-24	25-28 28-31	34-38 38-42
7/16-14 7/16-20	40-45 45-50	54-61 61-68
1/2-13 1/2-20	62-68 68-75	84-92 92-102
9/16-12 9/16-18	90-98 100-110	122-133 134-148
5/8-11 5/8-18	120-135 124-137	162-183 168-186
3/4-10 3/4-16	200-220 210-230	270-300 285-310
7/8-9 7/8-14	330-350 360-380	425-475 460-515
1-8 1-14	500-525 540-560	675-710 730-760
1 1/8-7 1 1/8-12	600-635 665-700	815-860 920-950
1 1/4-7 1 1/4-12	850-895 940-990	1150-1215 1275-1340
1 3/8-6 1 3/8-12	1125-1175 1280-1335	1525-1590 1735-1810
1 1/2-6 1 1/2-12	1500-1560 1685-1755	2035-2115 2285-2380

IMPORTANT

- *Follow these torque recommendations except when specified in text.*

Complete Torque Chart

Capscrews - Grade 8

NOTE:

- Grade 8 capscrews can be identified by six radial dashes on the hea
- For wheel torque requirements, refer to Wheels and Tires.
- Tighten U-bolts evenly and equally to have the same number of threads exposed on each end.

SIZE	FOOT POUNDS	NEWTON METERS
5/16-18 5/16-24	20-22 21-23	27-30 28-31
3/8-16 3/8-24	35-39 36-41	47-53 49-55
7/16-14 7/16-20	54-58 55-60	73-78 75-80
1/2-13 1/2-20	82-88 94-99	110-120 125-135
9/16-12 9/16-18	127-134 147-155	170-180 199-210
5/8-11 5/8-18	160-170 165-175	215-230 225-235
3/4-10 3/4-16	280-295 330-365	380-400 445-495
7/8-9 7/8-14	410-430 420-440	555-580 570-595
1-8 1-14	630-650 680-700	850-880 920-950
1 1/8-7 1 1/8-12	900-930 930-950	1220-1260 1260-1290
1 1/4-7 1 1/4-12	1250-1300 1280-1320	1695-1760 1735-1790

IMPORTANT

- *Follow these torque recommendations except when specified in text.*

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)	Adjust-able 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

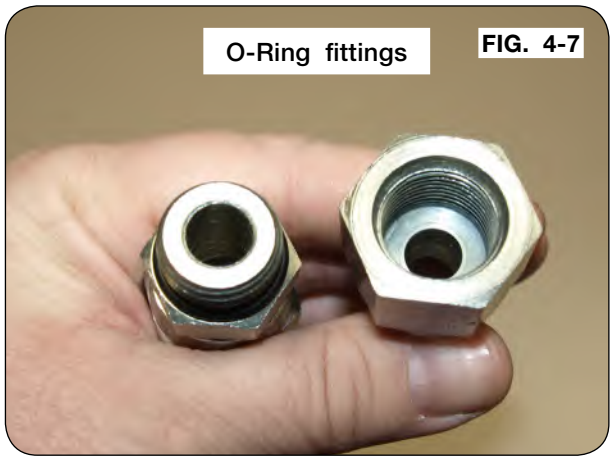


FIG. 4-7

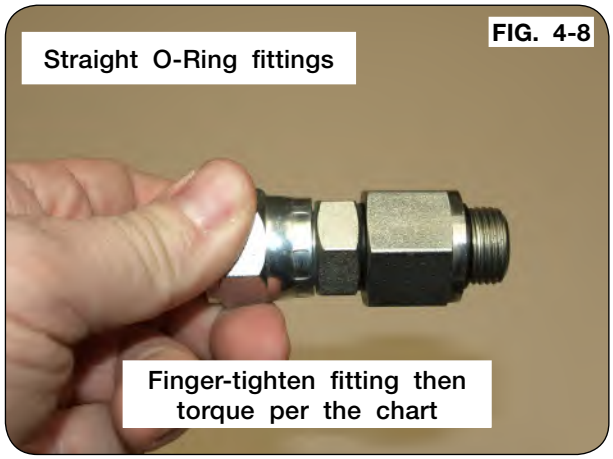


FIG. 4-8

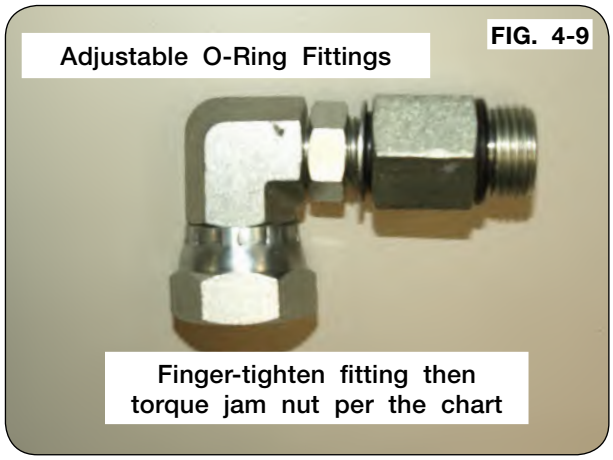


FIG. 4-9

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.

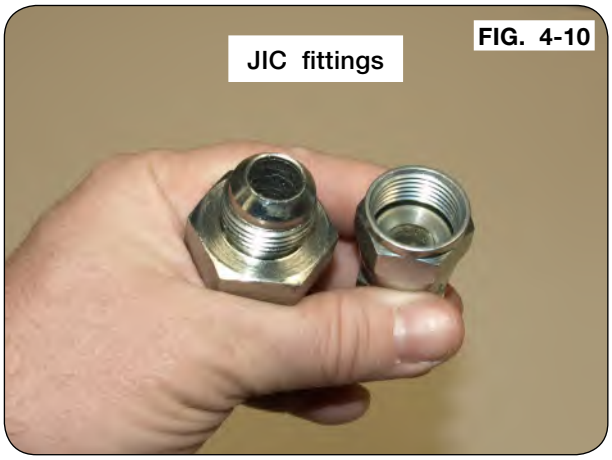


FIG. 4-10

JIC fittings

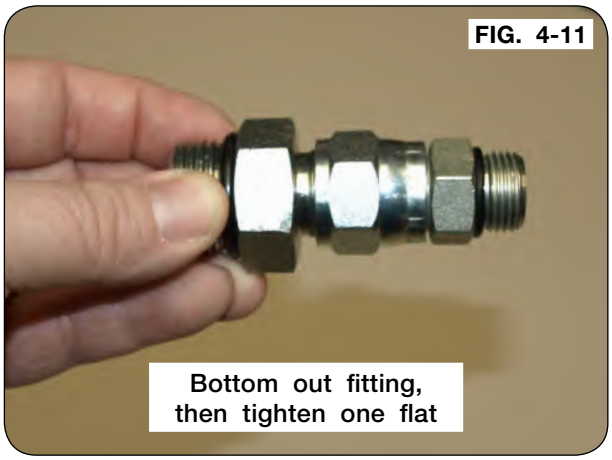


FIG. 4-11

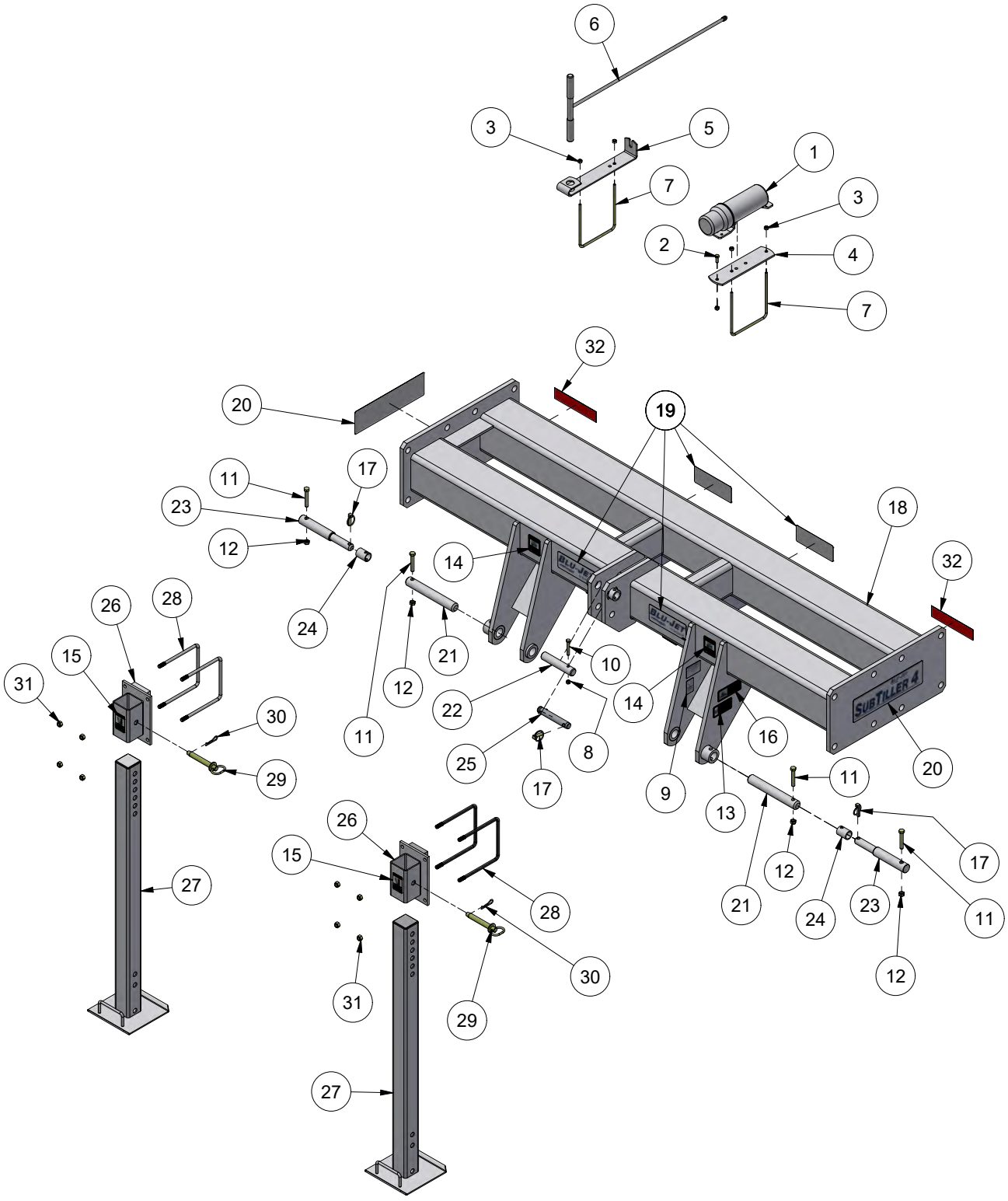
Bottom out fitting, then tighten one flat

SECTION V
Parts

Frame Assembly, 7'-9" Base, 3-Point Rigid Components

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

3 Row 30" Spacing



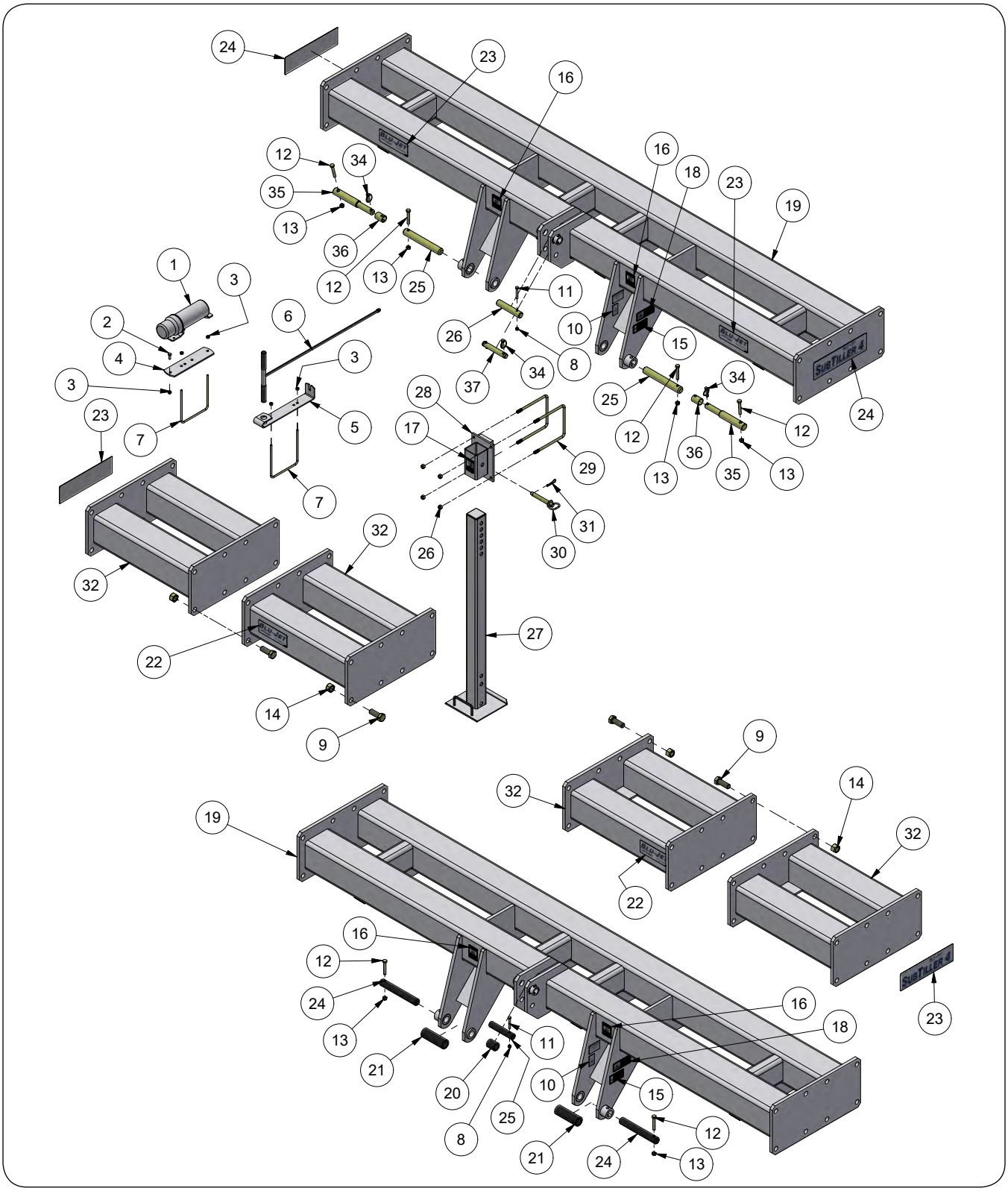
Frame Assembly, 7'-9" Base, 3-Point Rigid Components

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

ITEM	PART NUMBER	DESCRIPTION	QTY
			3 Shank
1	900552	Manual Holder	1
2	9390-055	Capscrew, 3/8"-16UNC x 1" G5	1
3	9928	Locknut/Top, 3/8"-16UNC	5
4	JAM7640	Manual Holder Mounting Bracket	1
5	JAM7646	Soil Probe Storage Bracket	1
6	JAM7647	Soil Probe	1
7	JBP3335	U-Bolt, 3/8"-16UNC x 7"W x 8"L	2
8	902875	Locknut/Center, 3/8"-16UNC	1
9	91605	Decal, FEMA (2 1/2" x 1 1/2")	1
10	9390-061	Capscrew, 3/8"-16UNC x 2 1/2" G5	1
11	9390-107	Capscrew, 1/2"-13UNC x 3" G5	4
12	94981	Locknut/Center, 1/2"-13UNC	4
13	97961	Decal, WARNING "Read and Understand Manual"	1
14	97972	Decal, WARNING "Hitching"	2
15	97973	Decal, WARNING "Crush Hazard"	2
16	99507	Decal, WARNING "Falling Equipment"	1
17	9951	Lynch Pin, 7/16" Dia. x 1 3/4" w/Lock Ring	3
18	JAM7523	Main Frame Weldment, 7'-9" Base, 3-Point Rigid	1
19	JAP2215	Decal, Blu-Jet (3" x 8")	4
20	JAP2989	Decal, SubTiller 4 (4 1/4" x 15")	2
21	JBM3628	Lower Link Pin, 1 7/16" Dia. x 10 3/8", CAT3	2
22	JBM3629	Upper Link Pin, 1 1/4" Dia. x 6 1/2", CAT3	1
23	JBM3637	Pin, 1 7/16" Dia. x 10.88", CAT2	2
24	JBM3638	Bushing/Tube, 1 7/16" OD x 1.188" ID x 1 15/16", CAT2/3	2
25	JBP3508	Pin, 1" Dia. x 6.39", CAT2	1
26	JAM7521	Mounting Bracket Weldment	2
27	JAM4682	Park Stand w/Tube Cap	2
28	JBP3356	U-Bolt, 1/2"-13UNC x 7"W x 8 1/4"L	4
29	JBP3502	Hitch Pin, 3/4" Dia. x 4 1/2" (Includes Item #33)	2
30	JBP3504	Hairpin Cotter, 1/8" Dia. x 2 1/2"	2
31	9800	Locknut/Top, 1/2"-13UNC	8
32	9003126	Reflector 2" x 9" =RED=	2

Frame Assembly, 11’-3” Base, 3-Point Rigid Components

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



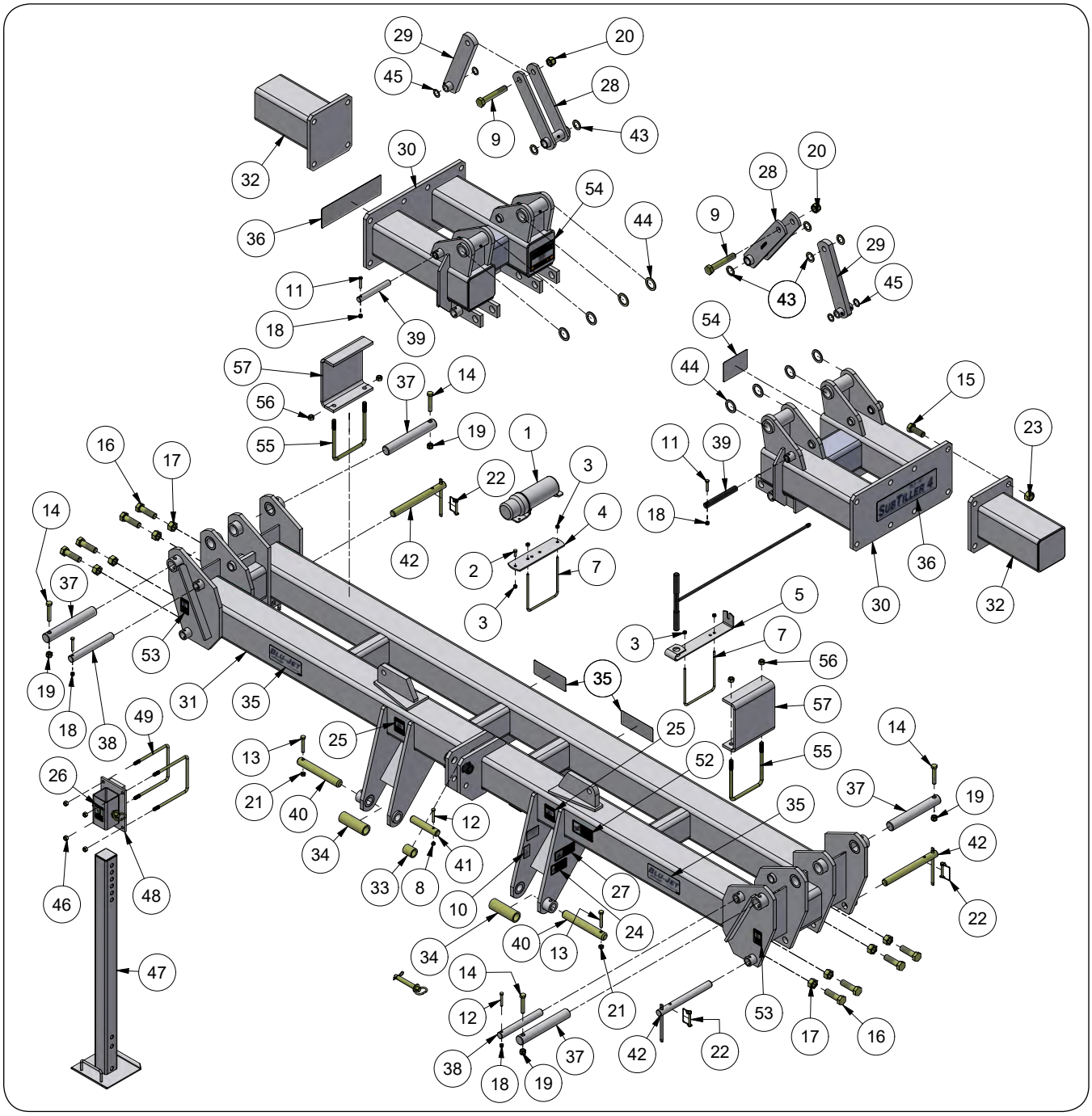
Frame Assembly, 11'-3" Base, 3-Point Rigid Components

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

ITEM	PART NUMBER	DESCRIPTION	QTY		
			5 Shank	7 Shank	9 Shank
1	900552	Manual Holder	1	1	1
2	9390-055	Capscrew, 3/8"-16UNC x 1" G5	1	1	1
3	9928	Locknut/Top, 3/8"-16UNC	5	5	5
4	JAM7640	Manual Holder Mounting Bracket	1	1	1
5	JAM7646	Soil Probe Storage Bracket	1	1	1
6	JAM7647	Soil Probe	1	1	1
7	JBP3335	U-Bolt, 3/8"-16UNC x 7"W x 8"L	2	2	2
8	902875	Locknut/Center, 3/8"-16UNC	1	1	1
9	91299-186	Capscrew, 1"-8UNC x 2 3/4" G8	0	16	32
10	91605	Decal, FEMA (2 1/2" x 1 1/2")	1	1	1
11	9390-061	Capscrew, 3/8"-16UNC x 2 1/2" G5	1	1	1
12	9390-107	Capscrew, 1/2"-13UNC x 3" G5	4	2	2
13	94981	Locknut/Center, 1/2"-13UNC	4	2	2
14	9663	Locknut/Top, 1"-8UNC	0	16	32
15	97961	Decal, WARNING "Read and Understand Manual"	1	1	1
16	97972	Decal, WARNING "Hitching"	2	2	2
17	97973	Decal, WARNING "Crush Hazard"	2	2	2
18	99507	Decal, WARNING "Falling Equipment"	1	1	1
19	JAM7522	Main Frame Weldment, 11'-3" Base, 3-Point Rigid	1	1	1
20	JAM7616	Bushing/Tube, 1 3/4" OD x 1.274" ID x 2", CAT4 Upper Link	0	1	1
21	JAM7654	Bushing/Tube, 2" OD x 1.5" ID x 5 15/16", CAT4 Lower Link	0	2	2
22	JAP2215	Decal, Blu-Jet (3" x 8")	4	4	4
23	JAP2989	Decal, SubTiller 4 (4 1/4" x 15")	2	2	2
24	JBM3628	Lower Link Pin, 1 7/16" Dia. x 10 3/8", CAT3	2	2	2
25	JBM3629	Upper Link Pin, 1 1/4" Dia. x 6 1/2", CAT3	1	1	1
26	9800	Locknut/Top, 1/2"-13UNC	8	8	8
27	JAM4682	Park Stand w/Tube Cap	2	2	2
28	JAM7521	Mounting Bracket Weldment	2	2	2
29	JBP3356	U-Bolt, 1/2"-13UNC x 7"W x 8 1/4"L	4	4	4
30	JBP3502	Hitch Pin, 3/4" Dia. x 4 1/2"	2	2	2
31	JBP3504	Hairpin Cotter, 1/8" Dia. x 2 1/2"	2	2	2
32	604391BB	Extension Weldment 30"	0	2	4
33	9951	Lynch Pin, 7/16" Dia. x 1 3/4" w/Lock Ring	3	0	0
34	JBM3637	Pin, 1 7/16" Dia. x 10.88", CAT2	2	0	0
35	JBM3638	Bushing/Tube, 1 7/16" OD x 1.188" ID x 1 15/16", CAT2/3	2	0	0
36	JBP3508	Pin, 1" Dia. x 6.39", CAT2	1	0	0

Frame Assembly, 12'-4" Base,3-Point Folding Components

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



ITEM	PART NUMBER	DESCRIPTION	QTY
			7 Shank
1	900552	Manual Holder	1
2	9390-055	Capscrew, 3/8"-16UNC x 1" G5	1
3	9928	Locknut/Top, 3/8"-16UNC	5
4	JAM7640	Manual Holder Mounting Bracket	1
5	JAM7646	Soil Probe Storage Bracket	1
6	JAM7647	Soil Probe	1
7	JBP3335	U-Bolt, 3/8"-16UNC x 7"W x 8"L	2

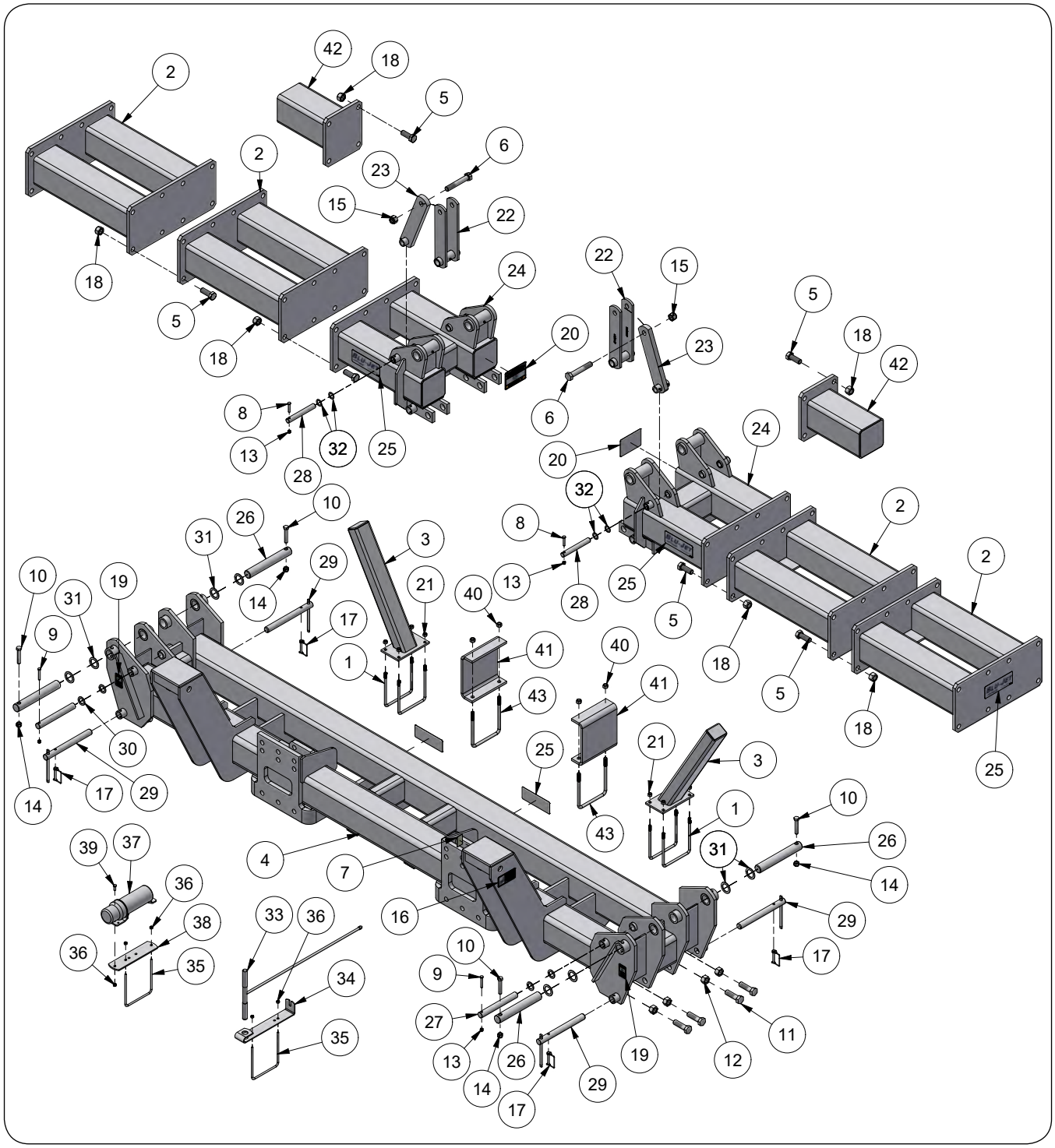
Frame Assembly, 12'-4" Base,3-Point Folding Components

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

ITEM	PART NUMBER	DESCRIPTION	QTY
			7 Shank
8	902875	Locknut/Center, 3/8"-16UNC	1
9	91299-195	Capscrew, 1"-8UNC x 6" G8	2
10	91605	Decal, FEMA (2 1/2" x 1 1/2")	1
11	9390-059	Capscrew, 3/8"-16UNC x 2" G5	2
12	9390-061	Capscrew, 3/8"-16UNC x 2 1/2" G5	3
13	9390-107	Capscrew, 1/2"-13UNC x 3" G5	2
14	9390-130	Capscrew, 5/8"-11UNC x 3 1/2" G5	4
15	91299-186	Capscrew, 1"-8UNC x 2 3/4" G8	8
16	9390-189	Capscrew, 1"-8UNC x 3 1/2" G5	8
17	9394-020	Hex Nut, 1"-8UNC	8
18	9398-012	Elastic lock Nut, 3/8"-16UNC	4
19	9398-019	Elastic Locknut, 5/8"-11UNC	4
20	9398-026	Elastic Locknut, 1"-8UNC	2
21	94981	Locknut/Center, 1/2"-13UNC	2
22	96571	Lynch Pin, 3/8" Dia. x 2 1/2"	4
23	9663	Locknut/Top, 1"-8UNC	8
24	97961	Decal, WARNING "Read and Understand Manual"	1
25	97972	Decal, WARNING "Hitching"	2
26	97973	Decal, WARNING "Crush Hazard"	2
27	99507	Decal, WARNING "Falling Equipment"	1
28	JAM4515	Gull Wing Linkage Weldment w/Zerks (Cylinder #1)	2
29	JAM4516	Gull Wing Linkage Weldment w/Zerks (Cylinder #2)	2
30	JAM7502	Wing Weldment	2
31	JAM7548	Main Frame Weldment, 12'-4" Base, 3-Point Folding	1
32	JAM7589	Extension Bracket, 15 15/16"	2
33	JAM7616	Bushing/Tube, 1 3/4" OD x 1.274" ID x 2", CAT4 Upper Link	1
34	JAM7654	Bushing/Tube, 2" OD x 1.5" ID x 5 15/16", CAT4 Lower Link	2
35	JAP2215	Decal, Blu-Jet (3" x 8")	4
36	JAP2989	Decal, SubTiller 4 (4 1/4" x 15")	2
37	JBM3485	Pin, 1 3/4" Dia. x 12 1/8"	4
38	JBM3486	Pin, 1 1/4" Dia. x 10 7/16"	2
39	JBM3487	Pin, 1" Dia. x 7 3/4"	2
40	JBM3628	Lower Link Pin, 1 7/16" Dia. x 10 3/8", CAT3	2
41	JBM3629	Upper Link Pin, 1 1/4" Dia. x 6 1/2", CAT3	1
42	JBM3634	Pin Weldment w/Handle, 1 1/4" Dia. x 13"	4
43	JBP3192	Machinery Bushing, 1 7/8" OD x 1 1/4" ID	8
44	JBP3205	Machinery Bushing, 2 1/2" OD x 1 3/4" ID	8
45	JBP3215	Machinery Bushing, 1 1/2" OD x 1" ID x 14GA	4
46	9800	Locknut/Top, 1/2"-13UNC	8
47	JAM4682	Park Stand w/Tube Cap	2
48	JAM7521	Mounting Bracket Weldment	2
49	JBP3356	U-Bolt, 1/2"-13UNC x 7"W x 8 1/4"L	4
50	JBP3502	Hitch Pin, 3/4" Dia. x 4 1/2"	2
51	JBP3504	Hairpin Cotter, 1/8" Dia. x 2 1/2"	2
52	95445	Decal, WARNING "High-Pressure Fluids"	1
53	97048	Decal, WARNING "Pinch Point"	2
54	97337	Decal, WARNING "Folding or Unfolding Wings"	2
55	JBP3306	U-Bolt, 5/8"-11UNC x 7"W x 8 1/2"L	2
56	9801	Locknut/Top, 5/8"-11UNC	2
57	JAM7514	Wing Stop	4

Frame Assembly, 12'-4" Base, Pull-Type Folding Components

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



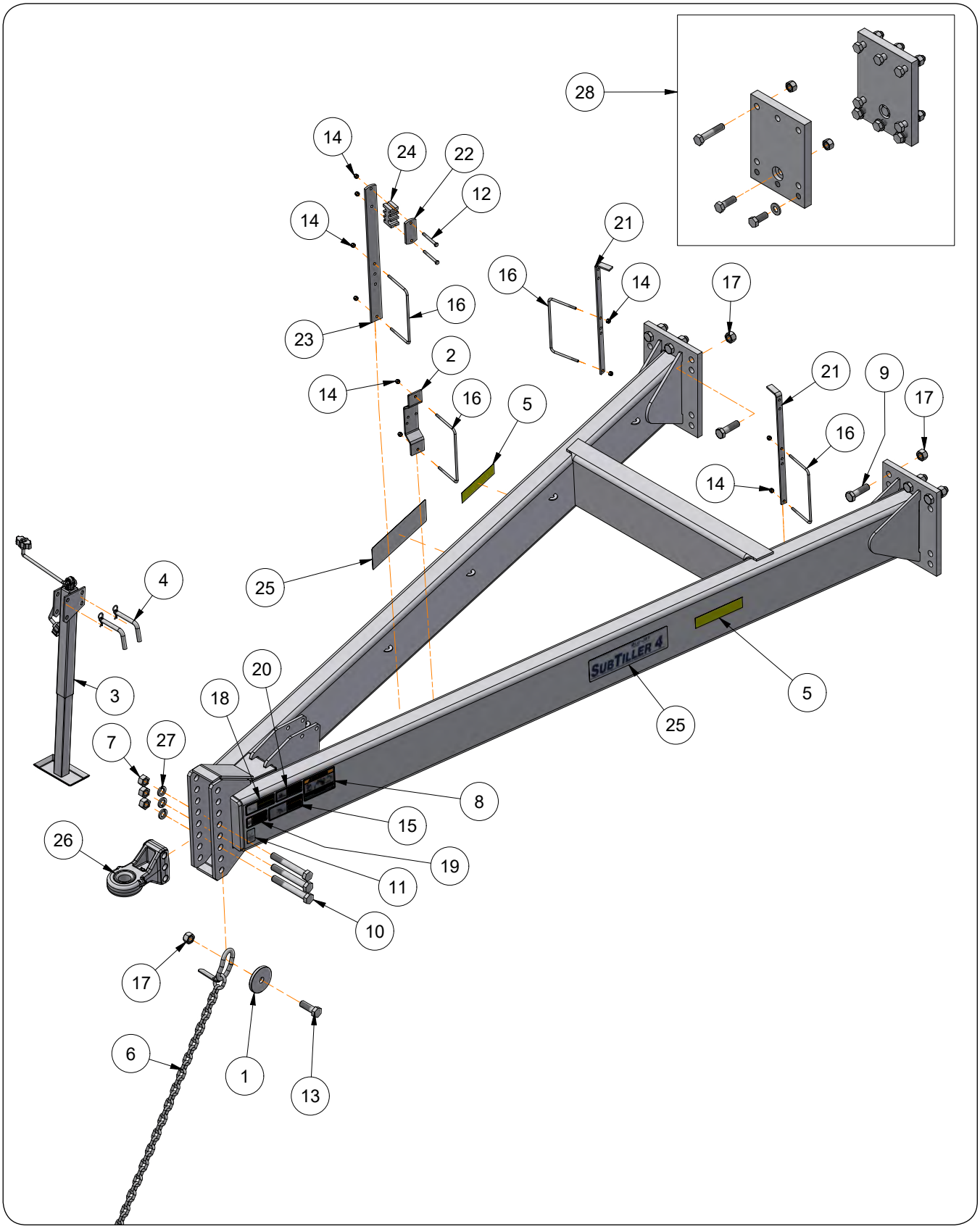
Frame Assembly, 12'-4" Base, Pull-Type Folding Components

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

ITEM	PART NUMBER	DESCRIPTION	QTY		
			7 Shank	9 Shank	11 Shank
1	JBP3356	U-Bolt, 1/2"-13UNC x 7" W x 8 1/4" L	0	0	4
2	604391BB	Extension Weldment, 30"	0	2	4
3	604471B	Wing Support Weldment =Black=	0	0	2
4	604233BB	Main Frame Weldment, 12'-4" Base, Pull-Type Folding	1	1	1
5	91299-186	Capscrew, 1"-8UNC x 2 3/4" G8	8	16	32
6	91299-195	Capscrew, 1"-8UNC x 6" G8	2	2	2
7	91605	Decal, FEMA	1	1	1
8	9390-059	Capscrew, 3/8"-16UNC x 2" G5	2	2	2
9	9390-061	Capscrew, 3/8"-16UNC x 2 1/2" G5	2	2	2
10	9390-130	Capscrew, 5/8"-11UNC x 3 1/2" G5	4	4	4
11	9390-189	Capscrew, 1"-8UNC x 3 1/2" G5	8	8	8
12	9394-020	Hex Nut, 1"-8UNC	8	8	8
13	9398-012	Elastic lock Nut, 3/8"-16UNC	4	4	4
14	9398-019	Elastic Locknut, 5/8"-11UNC	4	4	4
15	9398-026	Elastic Locknut, 1"-8UNC	2	2	2
16	95445	Decal, WARNING "High-Pressure Fluids"	2	2	2
17	96571	Lynch Pin, 3/8" Dia. x 2 1/2"	4	4	4
18	9663	Locknut/Top, 1"-8UNC	8	16	32
19	97048	Decal, WARNING "Pinch Point"	2	2	2
20	97337	Decal, WARNING "Folding or Unfolding Wings"	2	2	2
21	9800	Locknut/Top, 1/2"-13UNC	0	0	8
22	JAM4515	Gull Wing Linkage Weldment w/Zerks (Cylinder #1)	2	2	2
23	JAM4516	Gull Wing Linkage Weldment w/Zerks (Cylinder #2)	2	2	2
24	JAM7502	Wing Weldment	2	2	2
25	JAP2215	Decal, Blu-Jet (3" x 8")	6	6	6
26	JBM3485	Pin, 1 3/4" Dia. x 12 1/8"	4	4	4
27	JBM3486	Pin, 1 1/4" Dia. x 10 7/16"	2	2	2
28	JBM3487	Pin, 1" Dia. x 7 3/4"	2	2	2
29	JBM3634	Pin Weldment w/Handle, 1 1/4" Dia. x 13"	4	4	4
30	JBP3192	Machinery Bushing, 1 7/8" OD x 1 1/4" ID	4	4	4
31	JBP3205	Machinery Bushing, 2 1/2" OD x 1 3/4" ID	8	8	8
32	JBP3215	Machinery Bushing, 1 1/2" OD x 1" ID	4	4	4
33	JAM7647	Soil Probe	1	1	1
34	JAM7646	Soil Probe Storage Bracket	1	1	1
35	JBP3335	U-Bolt, 3/8"-16UNC x 7"W x 8"L	2	2	2
36	9928	Locknut/Top, 3/8"-16UNC	5	5	5
37	900552	Manual Holder	1	1	1
38	JAM7640	Manual Holder Mounting Bracket	1	1	1
39	9390-055	Capscrew, 3/8"-16UNC x 1" G5	1	1	1
40	9801	Locknut/Top, 5/8"-11UNC	4	4	0
41	JAM7514	Wing Stop	2	2	0
42	JAM7589	Gauge Wheel Extension Bracket Weldment, 15 15/16"	2	0	0
43	JBP3306	U-Bolt, 5/8"-11UNC x 7" W x 8 1/2" L	2	2	0

Pull-Hitch (Welded), Tongue, Jack, and Transport Chain Components

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



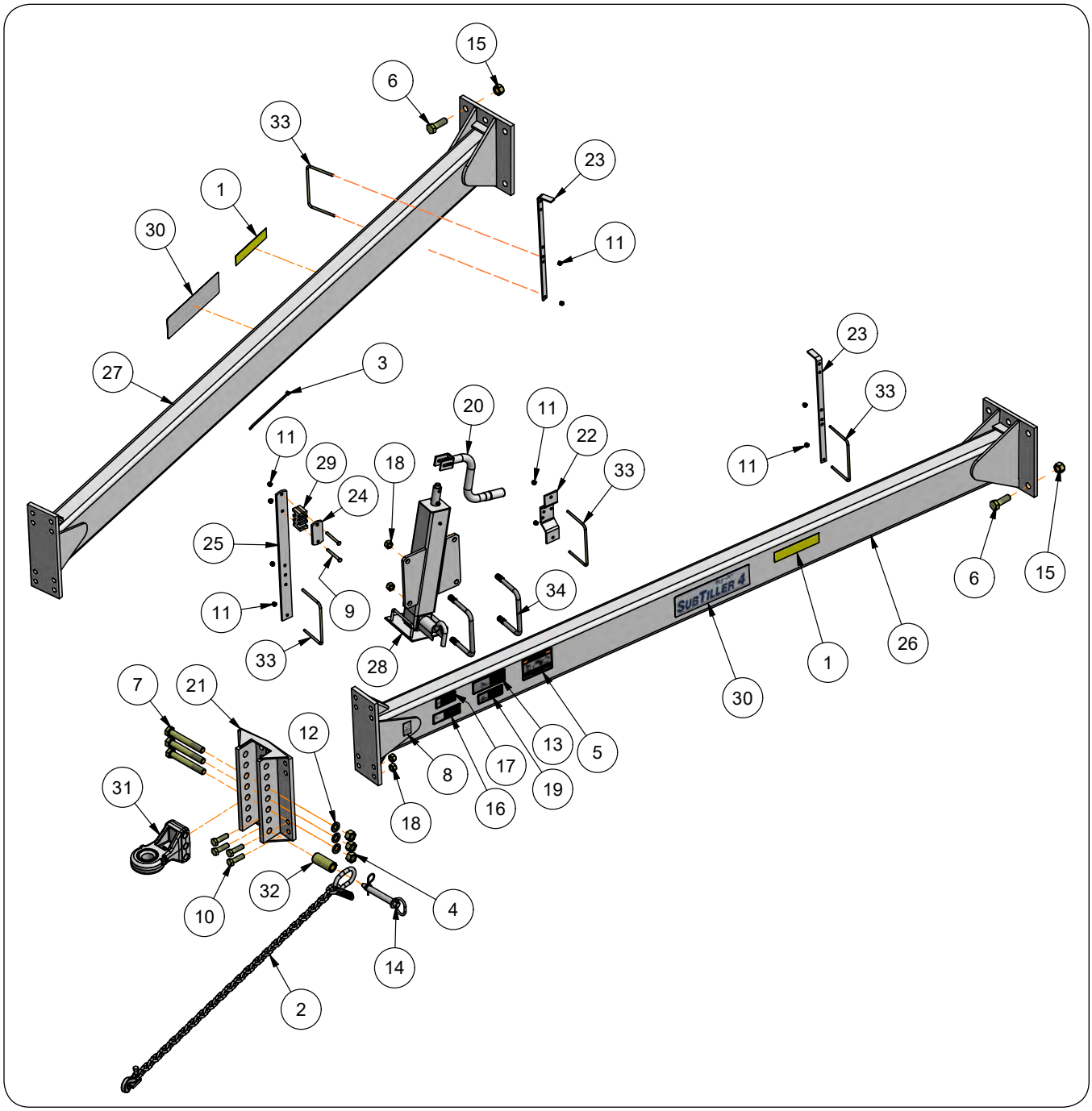
Pull-Hitch (Welded), Tongue, Jack, and Transport Chain Components

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

ITEM	PART NUMBER	DESCRIPTION	QTY	NOTES
1	106941	Washer, 4 1/2" Dia.	1	
2	79817B	Transport Valve Mounting Plate	1	
3	82313	Jackstand Complete, Top Wind	1	
4	84979	Bent Pin, 5/8" Dia. X 4" with Hairpin Cotter	2	
5	9003127	Reflector =AMBER= (2 x 9)	2	
6	9003278	Transport Chain 20,200 lbs.	1	
7	9005114	Hex Nut, 1"-8UNC	3	
8	900558	Decal, WARNING "Insuficient Ballast"	1	
9	91299-189	Capscrew, 1"-8UNC x 3 1/2" G8	12	
10	91299-198	Capscrew, 1"-8UNC x 7 1/2" G8	3	
11	91605	Decal, FEMA	1	
12	9390-065	Capscrew, 3/8"-16UNC x 3 1/2" G5	2	
13	9390-187	Capscrew, 1"-8UNC x 3" G5	1	
14	9398-012	Elastic Locknut 3/8"-16UNC	10	
15	94094	Decal, WARNING "Raising or Falling Tongue"	1	
16	9503892	U-Bolt, 3/8"-16UNC x 5", 10 7/16" C/C	4	
17	9663	Locknut/Top, 1"-8UNC	13	
18	97575	Decal, CAUTION "Transport Chain"	1	
19	97961	Decal, WARNING "Read and Understand Manual"	1	
20	99507	Decal, WARNING "Falling Equipment"	1	
21	JAM4817	Depth Collar Storage Bracket Plate	2	
22	JAM7518	Hose Holder Retainer Plate	1	
23	JAM7526	hose Holder Bracket	1	
24	JAP2871	Hose Retainer	1	
25	JAP2989	Decal, SubTiller 4	2	
26	JAP3228	Ball Swivel Hitch, CAT4	1	
27	9404-041	Lock Washer, 1”	3	
28	700171BB	Adapter Plate Bundle For 4” x 8” A-Frame	-	

Pull-Hitch, Tongue, Jack, and Transport Chain Components

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



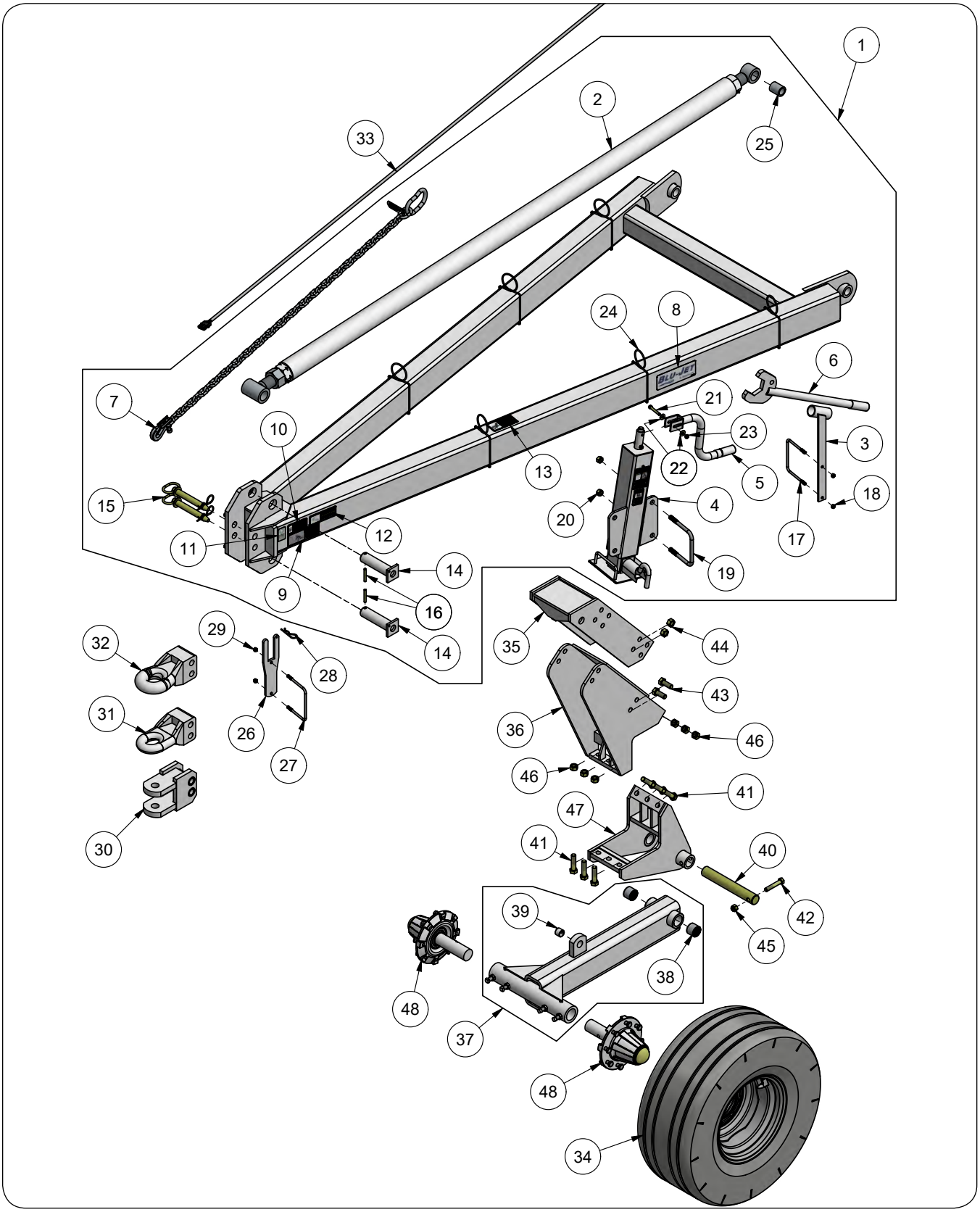
Pull-Hitch, Tongue, Jack, and Transport Chain Components

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

ITEM	PART NUMBER	DESCRIPTION	QTY	NOTES
1	9003127	Reflector, AMBER 2" x 9"	2	
2	9003278	Transport Chain (20,200#)	1	
3	9003735	Cable Tie, 11"	30	
4	9005114	Hex Nut, 1"-8UNC	3	
5	900558	Decal, WARNING "Insufficient Ballast..."	1	
6	91299-187	Capscrew, 1"-8UNC x 3" G8	12	
7	91299-198	Capscrew, 1"-8UNC x 7 1/2" G8	3	
8	91605	Decal, FEMA (2 1/2" x 1 1/2")	1	
9	9390-065	Capscrew, 3/8"-16UNC x 3 1/2" G5	2	
10	9390-147	Capscrew, 3/4"-10UNC x 2 1/2" G5	16	
11	9398-012	Elastic Locknut, 3/8"-16UNC	11	
12	9404-041	Lock Washer, 1"	3	
13	94094	Decal, WARNING "Tongue"	1	
14	93950	Hitch Pin, 1" Dia. x 8" w/Hairpin	1	
15	9663	Locknut/Top, 1"-8UNC	12	
16	97575	Decal, CAUTION "Transport Chain"	1	
17	97961	Decal, WARNING "Read and Understand"	1	
18	9802	Locknut/Top, 3/4"-10UNC	20	
19	99507	Decal, WARNING "Falling"	1	
20	JAM2580	Crank, 90° Top Wind Swivel Grip	1	
21	JAM4603	Tongue Connector Weldment	1	
22	79817B	Transport Valve Mount Plate	1	
23	JAM4817	Depth Collar/Storage Bracket	2	
24	JAM7518	Hose Holder Retainer	1	
25	JAM7526	Hose Holder Bracket	1	
26	JAM7528	Tongue Left-Hand Weldment	1	
27	JAM7529	Tongue Right-Hand Weldment	1	
28	JAM7697	Jack Weldment, 12,000#	1	
29	JAP2871	Hose Retainer	1	
30	JAP2989	Decal, SubTiller 4	2	
31	JAP3228	Ball Swivel Hitch CAT4	1	
	9503978	Replaceable Ball	-	
32	JBM3498	Transport Chain Bushing/Tube 1 3/4" OD x 1.124" ID x 4"	1	
33	9503892	U-Bolt, 3/8"-16UNC x 5", 10 7/16" C/C	4	
34	JBP3343	U-Bolt, 3/4"-10UNC x 5 3/4", 8 13/16" C/C	2	

Pull-Type Conversion Option Components Less Hydraulics

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



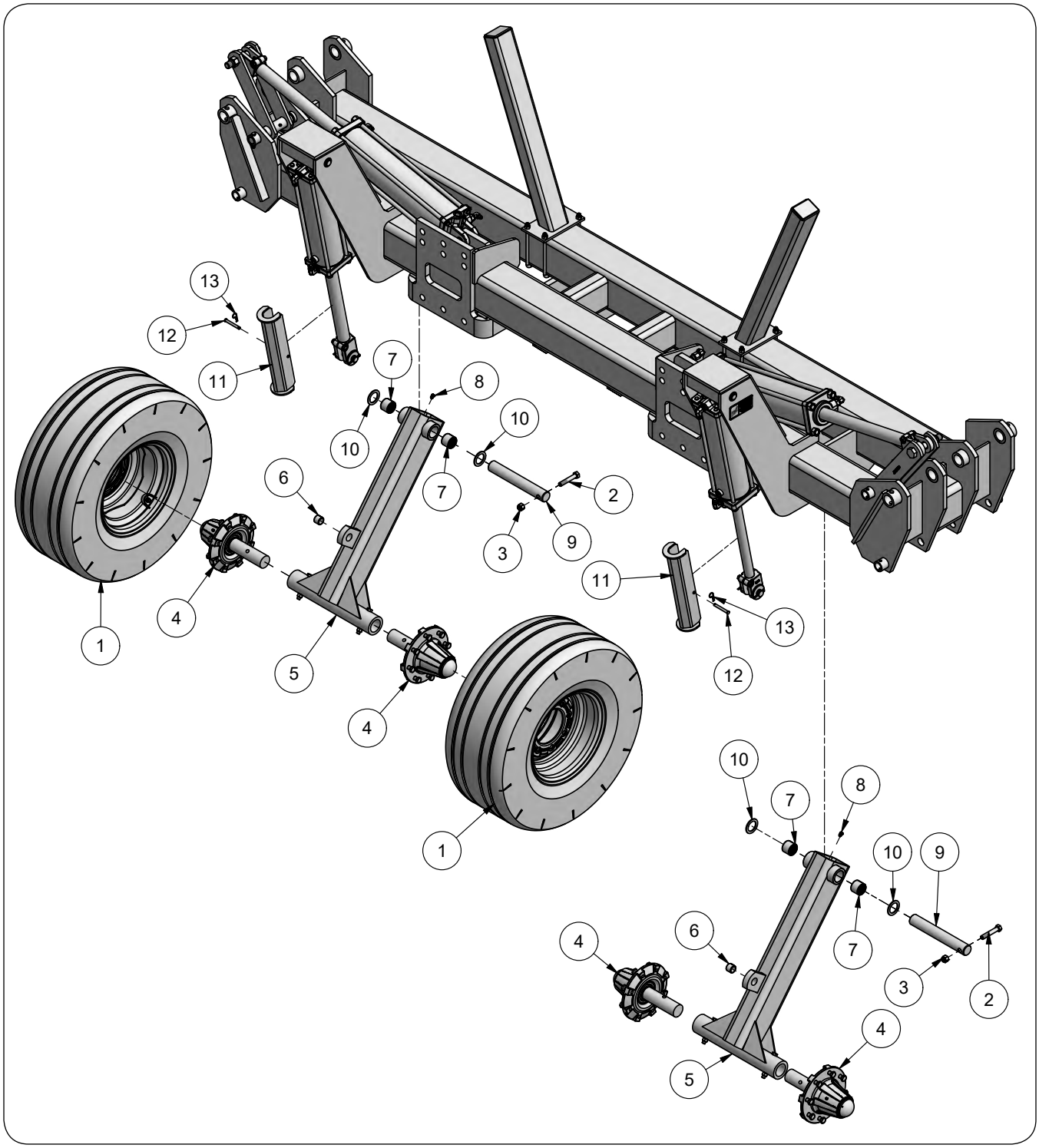
Pull-Type Conversion Option Components Less Hydraulics

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

ITEM	PART NUMBER	DESCRIPTION	QTY	NOTES
1	J70210364	Tongue Conversion Assembly, CAT3	1	Includes Items 2-25
2	JAAM4768	Turnbuckle Assembly	1	
3	JAM2197	Wrench Storage Bracket Weldment	1	
4	JAM2549	Jack, 12,000# Top Wind Drop Leg Weldment	1	
5	JAM2580	Crank, 90° Top Wind Swivel Grip	1	
6	JAM4759	Turnbuckle Wrench Weldment	1	
7	9003278	Transport Chain (20,200#)	1	
8	JAP2215	Decal, “Blu-Jet”	2	
9	94094	Decal, WARNING “Tongue”	1	
10	97961	Decal, WARNING “Read and Understand”	1	
11	91605	Decal, FEMA (2 1/2” x 1 1/2”)	1	
12	97575	Decal, CAUTION “Transport Chain”	1	
13	95445	Decal, WARNING “High-Pressure Fluids”	1	
14	JBM3610	Pin Weldment, 1 3/4” Dia. x 6 5/16”	2	
15	93950	Hitch Pin, 1” Dia. x 6”	1	
16	9392-182	Roll Pin, 3/8” Dia. x 2 1/2”	2	
17	JBP3045	U-Bolt, 3/8”-16UNC x 5”, 6 7/16” C/C	1	
18	9928	Locknut/Top, 3/8”-16UNC	2	
19	JBP3099	U-Bolt, 5/8”-11UNC x 6”, 6 11/16” C/C	2	
20	9394-014	Hex Nut, 5/8”-11UNC	4	
21	9390-061	Capscrew, 3/8”-16UNC x 2 1/2” G5	1	
22	9405-076	Flat Washer, 3/8” USS	2	
23	902875	Locknut/Center, 3/8”-16UNC	1	
24	JAP2282-1	Wire Hose Retainer w/Plastic Caps	6	
25	JEM3735	Bushing/Tube, 1 3/4” OD x 1.274” ID x 2 1/8”	1	
26	JAM2145	Hitch Storage Bracket	1	
27	JBP3045	U-Bolt, 3/8”-16UNC x 5”, 6 7/16” C/C	1	
28	JBP3500	Hairpin Cotter, 0.172” Dia. x 3 1/2”	1	
29	9928	Locknut/Top, 3/8”-16UNC	2	
30	JAM2144	Clevis Hitch Weldment	1	
31	JAP2850	Perfect Hitch CAT3	1	
32	JAP2864	Perfect Hitch CAT4	1	
33	JAP2828	Main Wire Harness, 180”	1	
34	603247SM	Wheel & Tire Assembly =Silver Mist=	2/4	
	9002500	Valve Stem	2/4	
	W1015-8-47RGSM	10 x 15 Implement Wheel (8-Bolt)	2/4	
	N/A	Implement Tire, IF320/70R15 (144D)	2/4	
35	JAM7632	Cylinder Upright Lug Weldment	2	
36	JAM7631	Cylinder Upright Tower	2	
37	JAM7633	Axle Weldment	2	
38	JAP2158	Bushing, 1.75” ID	2	
39	91268	Split Tension Bushing, 1 1/4” OD x 1” ID x 1”	1	
40	JBM3485	Pin, 1 3/4” Dia. x 12 1/8”	2	
41	91299-149	Capscrew, 3/4”-10UNC x 3” G8	12	
42	9390-130	Capscrew, 5/8”-11UNC x 3 1/2” G5	2	
43	9390-145	Capscrew, 3/4”-10UNC x 2” G5	16	
44	9394-016	Hex Nut, 3/8”-16UNC	16	
45	9398-019	Elastic Locknut, 5/8”-11UNC	2	
46	95514	Hex Nut, 3/4”-10UNC	12	
47	JAM7554	Pivot Mount Weldment	2	
48	JAAM2783	Hub & Spindle Assembly	2/4	

Base Wheels, Pull-Type Components

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



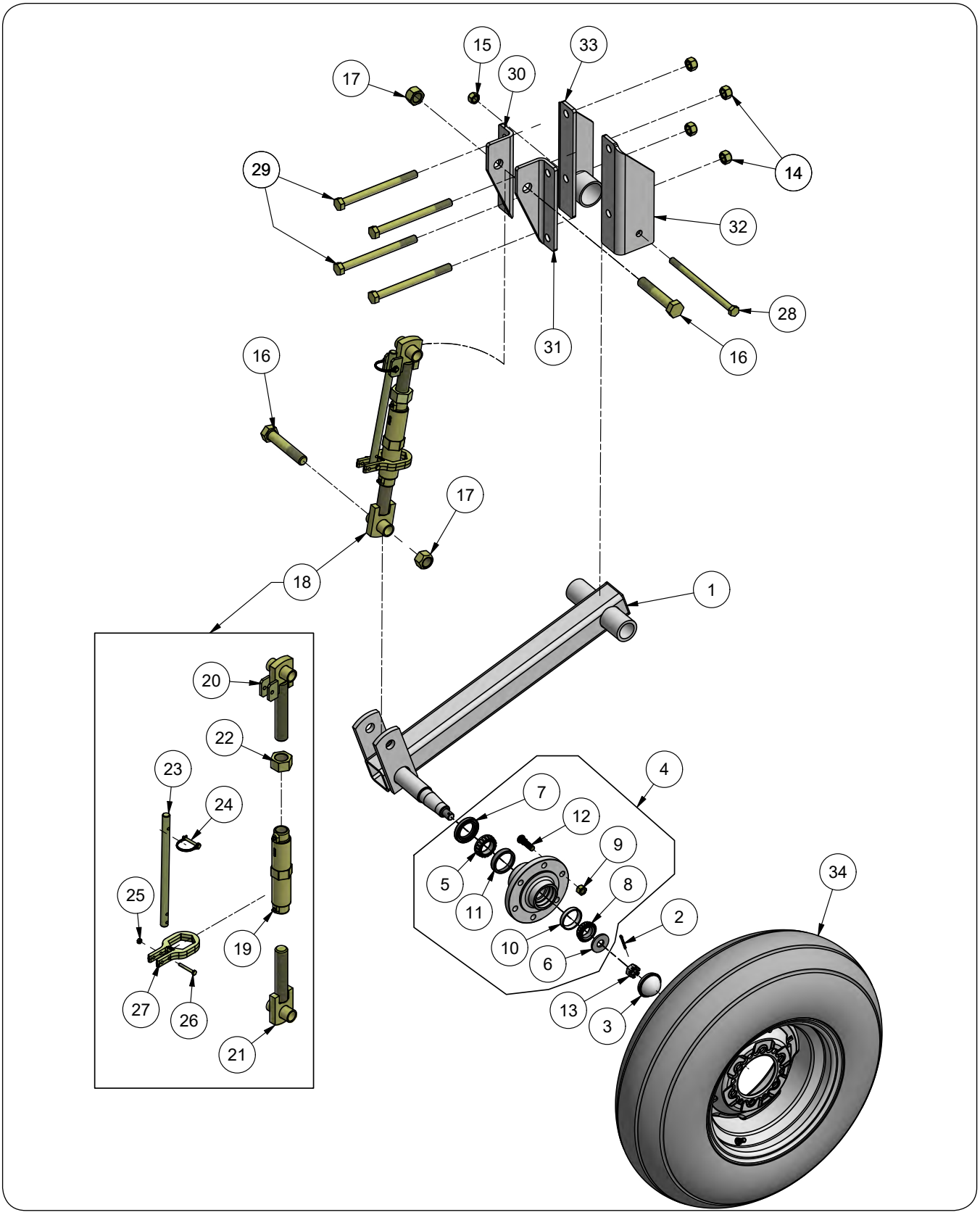
Base Wheels, Pull-Type Components

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

ITEM	PART NUMBER	DESCRIPTION	QTY	NOTES
1	603247SM	Wheel & Tire Assembly =Silver Mist=	4	
	9002500	Valve Stem	4	
	W1015-8-47RGSM	10 x 15 Implement Wheel (8-Bolt)	4	
	N/A	Implement Tire, IF320/70R15 (144D)	4	
2	9390-130	Capscrew, 5/8"-11UNC x 3 1/2" G5	2	
3	9398-019	Elastic Locknut, 5/8"-11UNC	2	
4	JAAM2783	Hub & Spindle Assembly	4	
5	JAM7633	Axle Weldment (Black)	2	Includes Items 6-8
6	91268	Split Tension Bushing, 1 1/4" OD x 1" ID x 1"	1	
7	JAP2158	Bushing, 1.94" OD x 1.765" ID (Pre-lubricated)	2	
8	93415	Zerk, 90°	1	
9	JBM3485	Pin, 1 3/4" Dia. x 12 1/8"	2	
10	JBP3205	Machinery Bushing, 2 1/2" OD x 1 3/4" ID x 10GA	4	
11	JAM4647	Transport Cylinder Lock Weldment	2	
12	92955	Clevis Pin, 3/8" Dia. x 3"	2	
13	9514	Hairpin Cotter, .092" Dia. x 1 7/8"	2	

Stabilizer Wheel Components — Pull-Type Model

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



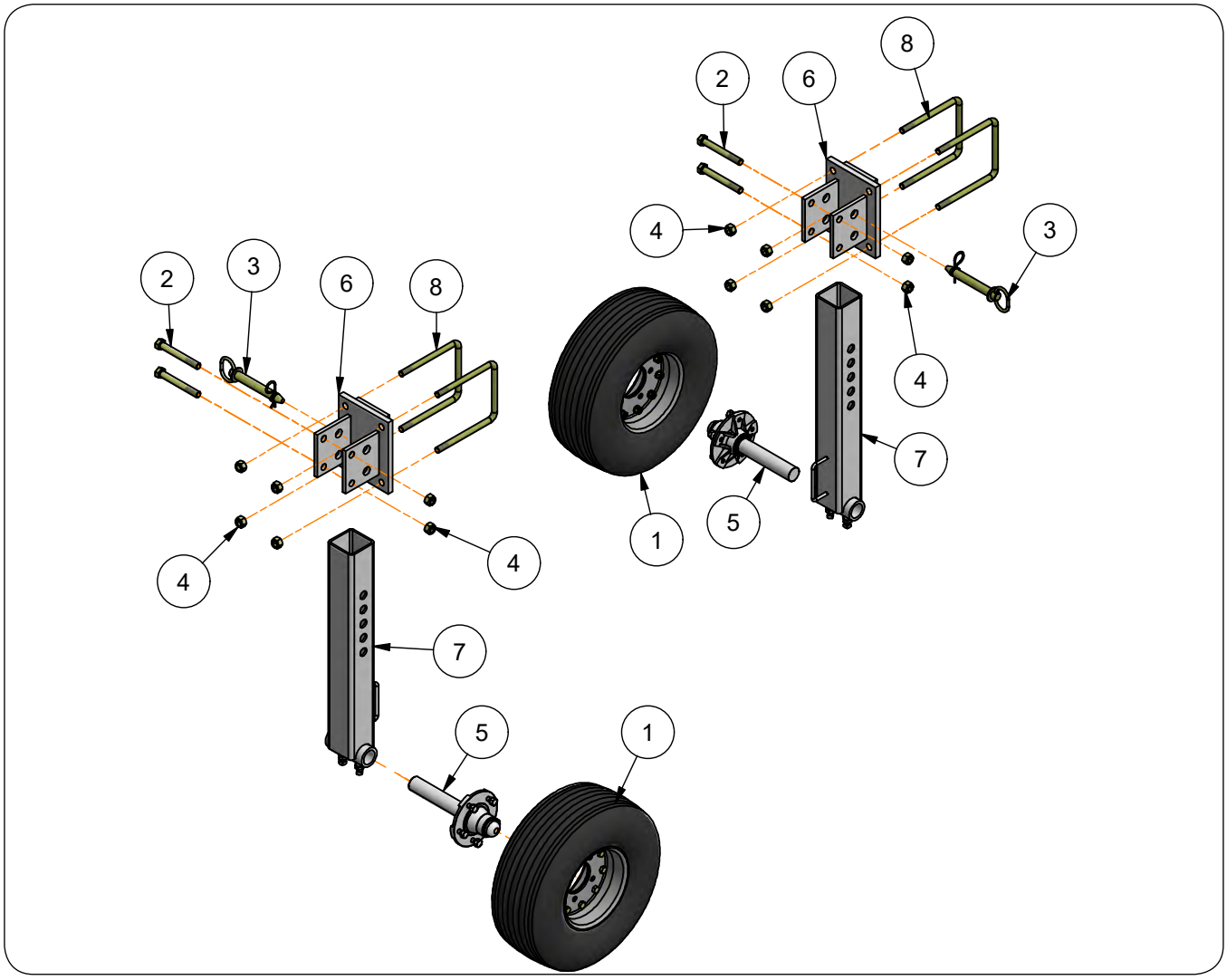
Stabilizer Wheel Components — Pull-Type Model

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

ITEM	PART NUMBER	DESCRIPTION	QTY	NOTES
	603344B	Stabilizer Wheel Right-Hand Assembly (Black)	-	Includes Items 1-33
	603353B	Stabilizer Wheel Left-Hand Assembly (Black)		
1	63621	Spindle Arm Right-Hand Weldment =Black=	1	SHOWN
	63622	Spindle Arm Left-Hand Weldment =Black=	1	
2	9391-035	Cotter Pin, 5/32" Dia. x 1 1/2"	1	
3	9162	Hub Cap	1	
4	9500002B	Hub 6 Bolt Assembly Complete	1	Includes items 5-12
5	9166	Bearing Cone, 1.5" ID	1	
6	9234	Flat Washer 13/16" ID	1	
7	9168	Seal, 1 3/4" ID	1	
8	9165	Bearing Cone 1.25" Bore (#LM67048)	1	
9	9348	Beveled Nut, 1/2"-20UNF	6	
10	9345	Bearing Cup, 2.328" Dia. (#LM67010)	1	
11	9346	Bearing Cup, (#LM29710)	1	
12	9347	Stud Bolt, 1/2"-20UNF x 1.88	6	
13	9393-016	Slotted Nut, 3/4"-16UNF	1	
14	9802	Locknut/Top, 3/4-10UNC	4	
15	9801	Locknut/Top, 5/8"-11UNC	1	
16	9390-194	Capscrew, 1"-8UNC x 5 1/2" G5	2	
17	9663	Locknut/Top, 1"-8UNC	2	
18	66833	Turnbuckle Assembly (20 1/2" Nom.)	1	Includes Items 19-27
19	62324	Turnbuckle Casting	1	
20	66832	Adjusting Rod Right-Hand Weldment	1	
21	60907	Adjusting Rod Left-Hand Weldment	1	
22	9394-024	Hex Nut, 1 1/4"-7UNC	1	
23	66830	Rod Handle/Bar, 3/4" Dia. x 13 1/4"	1	
24	9000936	Lynch Pin, 1/4" Dia. x 1 1/2"	1	
25	9936	Locknut/Top, 1/4"-20UNC	1	
26	9390-009	Capscrew, 1/4"-20UNC x 2" G5	1	
27	67957	Wrench Body	1	
28	9390-444	Capscrew, 5/8"-11UNC x 10 1/2" G5	1	
29	9390-449	Capscrew, 3/4"-10UNC x 9" G5	4	
30	603349B	Bracket Right-Hand =Black=	1	
31	603350B	Bracket Left-Hand =Black=	1	
32	603346B	Pivot Tube Weldment Left-Hand =Black=	1	
33	603348B	Pivot Tube Weldment Right-Hand =Black=	1	
34	60911	Wheel & Tire Assembly, 8 x 15 / TL9.5LB15	1	
	9503258SM	Wheel & Tire Assembly, 6x10/TL20.5x8.0B10CA		

Gauge Wheel, Vertical Adjust Components — 3 Point Model

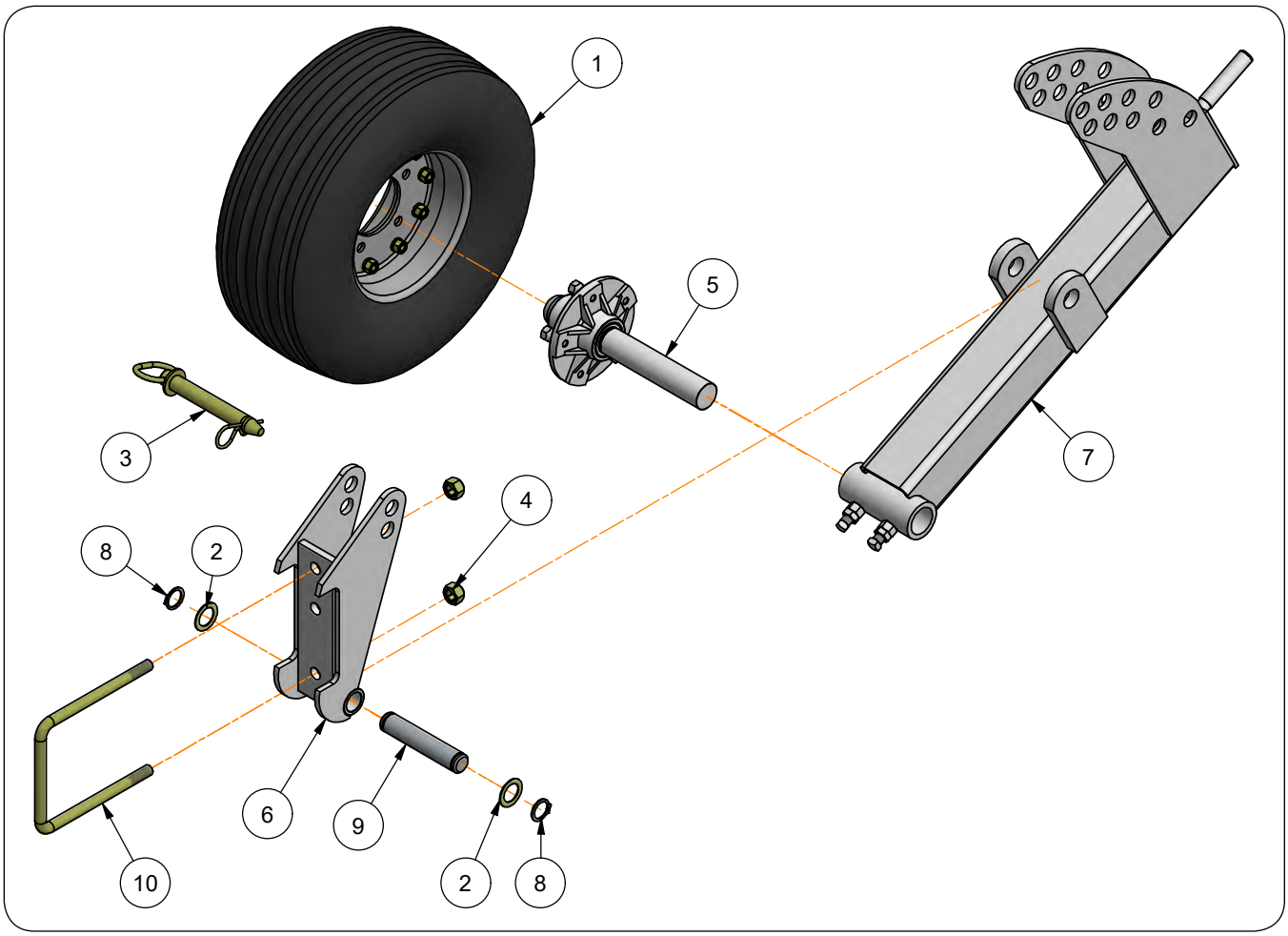
Please visit www.unverferth.com/parts/ for the most current parts listing.



ITEM	PART NUMBER	DESCRIPTION	QTY	NOTES
1	111270SM	Wheel & Tire Assembly =Silver Mist=	2	
	9002500	Valve Stem	1	
	9503512SM	6 x 10 Divided Wheel	1	
	N/A	Tire, 22 x 8.00 (NHS)	1	
2	9390-157	Capscrew, 3/4”-10UNC x 6” G5	4	
3	93950	Hitch Pin, 1” Dia. x 8” with Hairpin	2	
4	9802	Locknut/Top, 3/4”-10UNC	12	
5	JAAM2707	Hub & Spindle Assembly (5-Bolt Hub)	2	
	9503449B	Hub 5-Bolt Assembly Complete	-	
6	JAM7519	Gauge Wheel Mounting Bracket	2	
7	JAM7520	Gauge Wheel Leg Weldment	2	
8	JBP3058	U-Bolt, 3/4”-10UNC x 7” W x 9” L	4	

Gauge Wheel, Swing Adjust Components — 3 Point Model

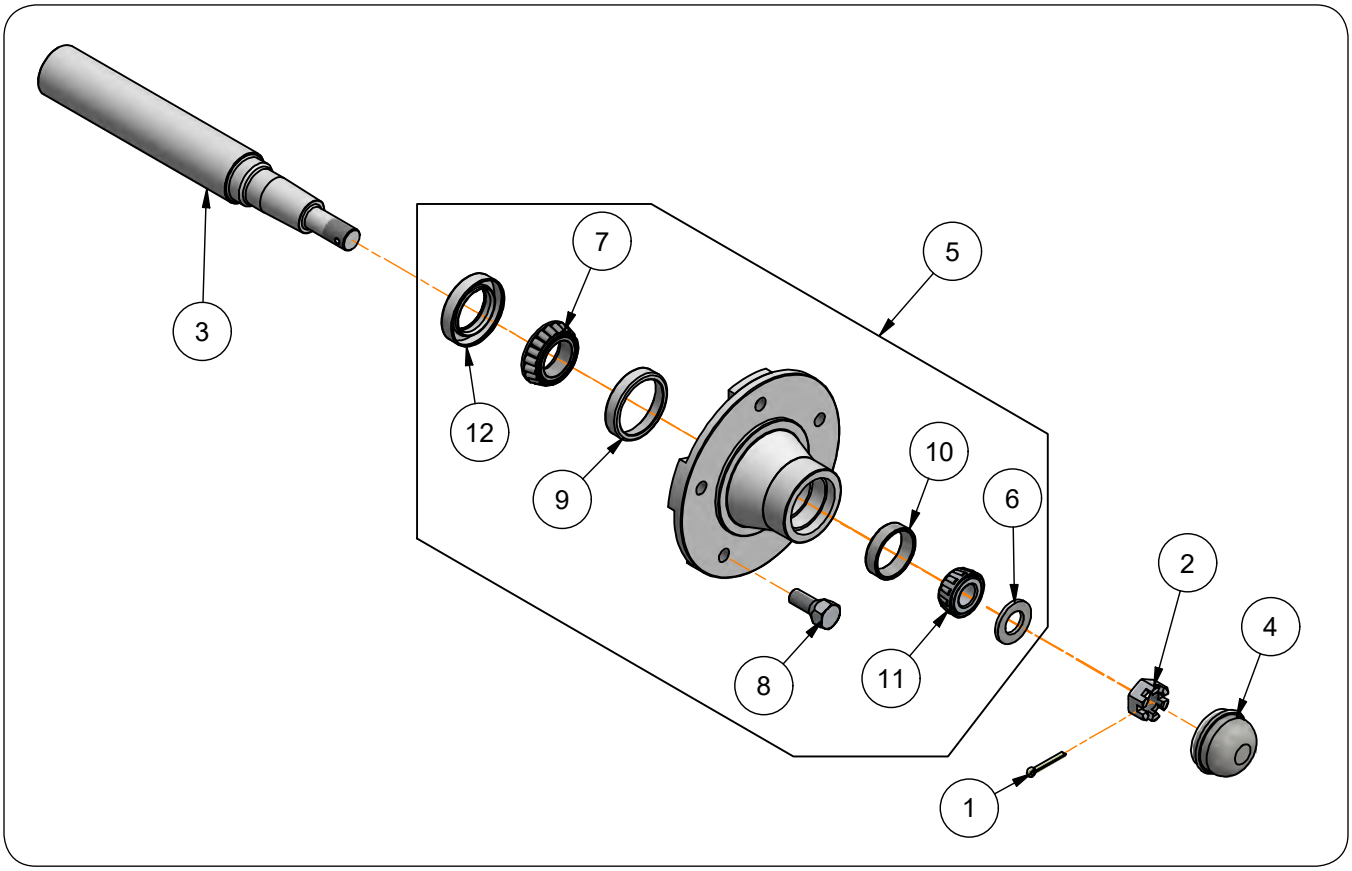
Please visit www.unverferth.com/parts/ for the most current parts listing.



ITEM	PART NUMBER	DESCRIPTION	QTY	NOTES
1	111270SM	Wheel & Tire Assembly =Silver Mist=	2	
	9002500	Valve Stem	1	
	9503512SM	6 x 10 Divided Wheel	1	
	N/A	Tire, 22 x 8.00 (NHS)	1	
2	91174	Machinery Bushing, 1.875" OD x 1.25" ID x 14 GA	4	
3	93950	Hitch Pin, 1" Dia. x 8" with Hairpin	2	
4	9802	Locknut/Top, 3/4"-10UNC	4	
5	JAAM2707	Hub & Spindle Assembly (5-Bolt Hub)	2	
	9503449B	Hub 5-Bolt Assembly Complete	-	
6	JAM7580	Mounting Bracket Weldment, Swing Adjust	2	
7	JAM7581	Gauge Wheel Lift Arm Weldment (Black)	2	
8	JAP2711	Snap Ring, 1 1/4", External Heavy-Duty Retaining Ring	4	
9	JBM3547	Pin, 1 1/4" Dia. x 6.53"	2	
10	JBP3058	U-Bolt, 3/4"-10UNC x 7" W x 9" L	2	

Hub and Spindle Assembly Components— 3-Point Model

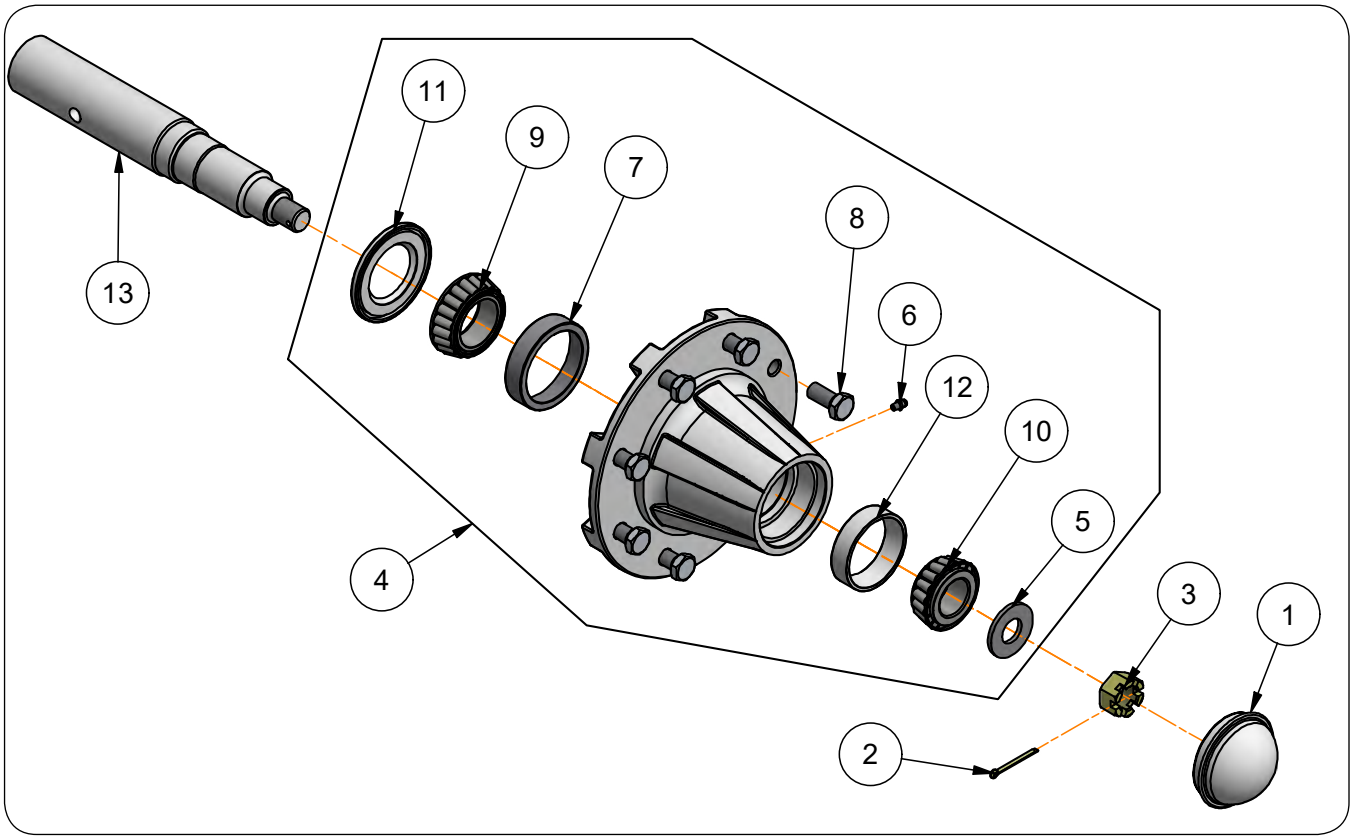
Please visit www.unverferth.com/parts/ for the most current parts listing.



ITEM	PART NUMBER	DESCRIPTION	QTY	NOTES
	JAAM2707	Hub & Spindle Assembly		Includes Items 1-12
1	9391-034	Cotter pin, 5/32" Dia. x 1 1/4"		
2	9393-016	Slotted Nut, 3/4"-16UNF		
3	JAP2169	Spindle, 1 3/4" Dia. x 13" with 3/4"-16UNF End		
4	9787	Hub Cap		
5	9503449B	Hub 5-Bolt Assembly Complete		Includes Items 6-12
6	91050	Flat Washer, 1.469" OD x 13/16" ID (Hardened)		
7	9165	Bearing Cone, 1.250" Bore (LM67048)		
8	91829	Wheel Bolt, 1/2"-20UNF x 1 5/8" G5		
9	9345	Bearing Cup, 2.328" OD x 1.906" ID (LM67010)		
10	9784	Bearing Cup, 1.780" OD x 0.474" ID (LM11910)		
11	9789	Bearing Cone, .750" Bore (LM11949)		
12	JAP2747	Seal, 2.328" OD x 1.500" ID (Double Lip)		

Hub and Spindle Assembly Components — Pull-Type Model

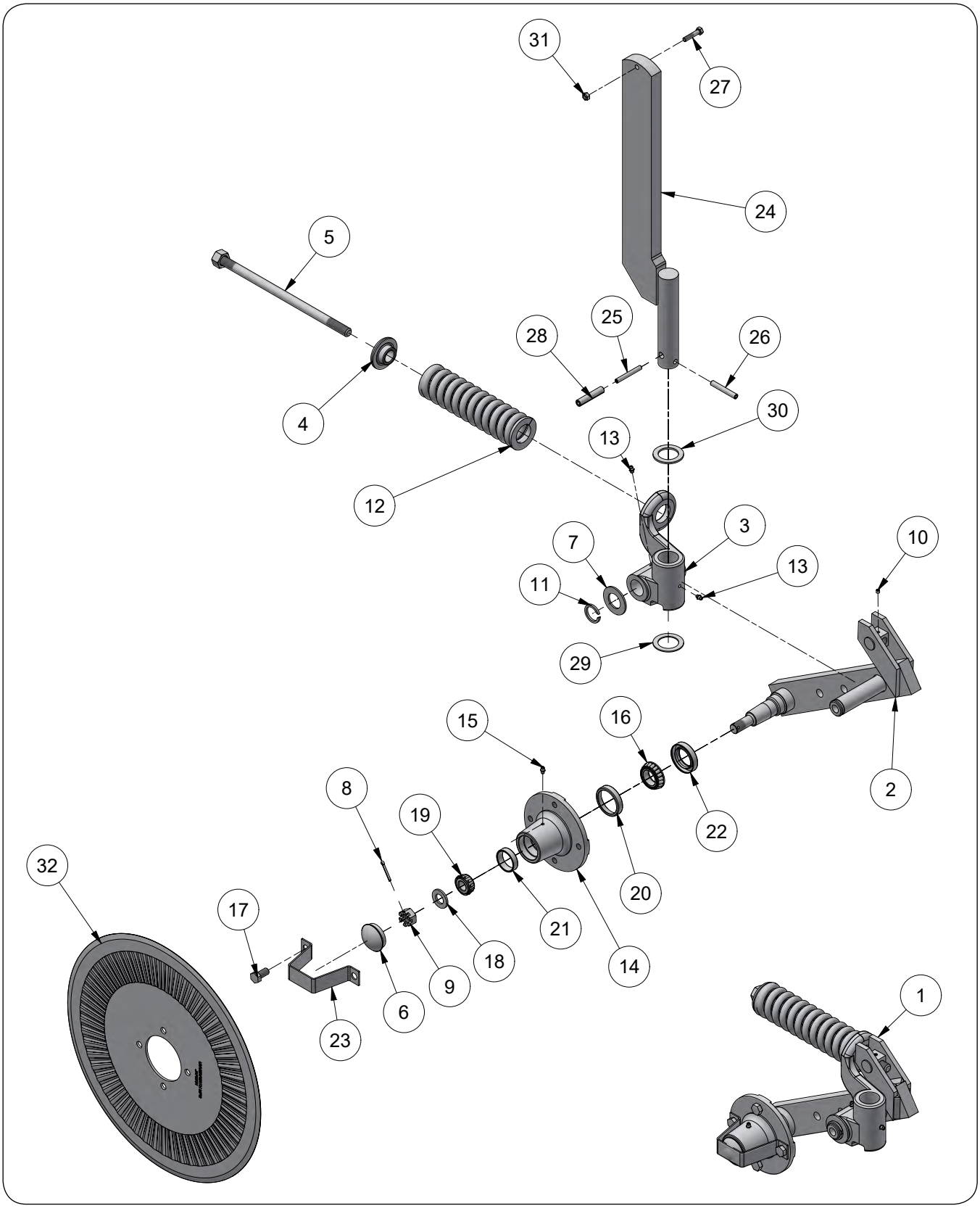
Please visit www.unverferth.com/parts/ for the most current parts listing.



ITEM	PART NUMBER	DESCRIPTION	QTY	NOTES
	JAAM2783	Hub & Spindle Assembly		Includes Items 1-13
1	91156	Hub Cap		
2	9391-036	Cotter Pin, 5/32" Dia. x 1 3/4"		
3	9393-018	Slotted Nut, 7/8"-14UNF		
4	9503450B	Hub 8-Bolt Assembly Complete		Includes Items 5-12
5	91146	Flat Washer, 15/16" ID		
6	91160	Zerk, 90°		
7	91812	Bearing Cup 3.265" OD x 0.75" (25520)		
8	9231	Wheel Bolt, 9/16"-18UNF x 1 1/8" G5		
9	JAP2430	Bearing Cone, 1.796" Bore x 1" (25590)		
10	JAP2431	Bearing Cone, 1.375" Bore x .970" (25877)		
11	JAP2432	Seal, 3.622" OD x 2.000" ID x .25" (Solid Lip)		
12	JAP2436	Bearing Cup, 2.875" OD x 0.75" (25821)		
13	JAP2429	Spindle, 2 1/8" Dia. x 13" with 7/8"-14UNF End		

Horizontal Spring Coulter Assembly Components

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



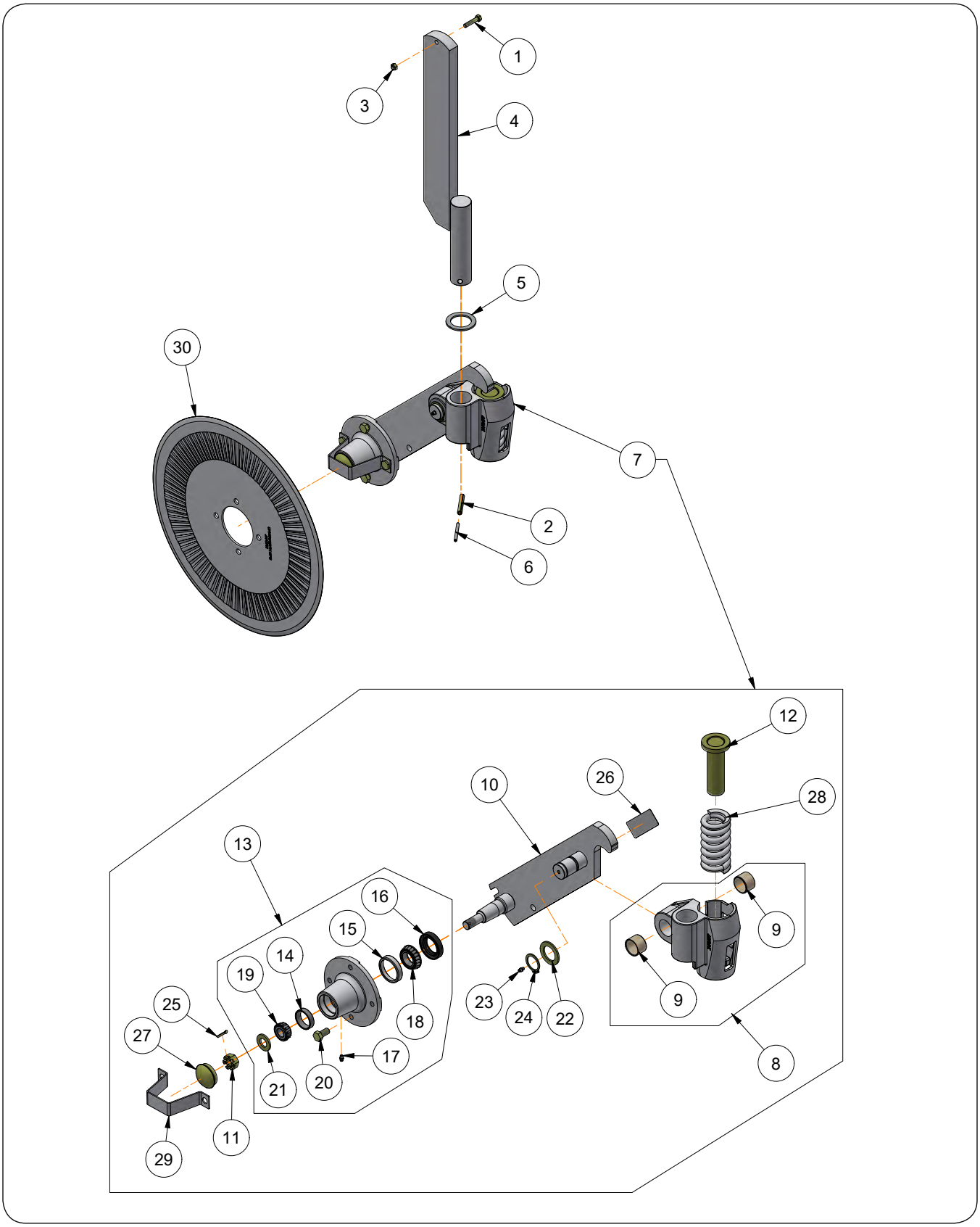
Horizontal Spring Coulter Assembly Components

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

ITEM	PART NUMBER	DESCRIPTION	QTY	NOTES
	604745B	Horizontal Spring Coulter Assembly, Less Mounting Bracket	-	Includes Items 1-31
1	45663B	Horizontal Spring Coulter Arm & Spring Left-Hand Assembly	1	Includes Items 2-23
2	45662B	Coulter Arm LH Weldment =Black=	1	
3	68280B	Swivel LH Bracket =Black=	1	
4	82826B	Spring Washer	1	
5	83371B	Spring Rod Weldment 3/4" Dia.	1	
6	90024	Hub Cap	1	
7	92528	Bushing, 2 1/4" OD x 1 1/4" ID	1	
8	9391-034	Cotter Pin, 5/32" Dia. x 1 1/4"	1	
9	9393-016	Slotted Nut, 3/4"-16UNF G2	1	
10	9399-057	Set Screw, 1/4"-20UNC x 1/4"	1	
11	94144	Retaining Ring, 1 1/4" Dia. Shaft	1	
12	94756B	Compression Spring, 2 5/8" Dia. x 10 5/8"	1	
13	9501603	Grease Zerk	2	
14	JAP2707	Hub 4-Bolt Assembly	1	Includes Items 15-22
15	91160	Grease Zerk	1	
16	9165	Bearing Cone, 1.25" ID (LM67048)	1	
17	9390-323	Capscrew, 1/2"-20UNF x 1" G5	4	
18	9405-103	Flat Washer, 3/4" SAE	1	
19	9789	Bearing Cone, 0.750" ID (LM11949)	1	
20	9345	Bearing Cup, 2.328" OD x 1.906" ID (LM67010)	1	
21	9784	Bearing Cup, 1.780" OD x 0.474" ID (LM11910)	1	
22	JAP2747	Seal, Double Lip 1.500" ID, 2.328" OD	1	
23	46842B	Hub Cap Strap =Black=	1	
24	604747B	Coulter Shank Weldment, 21" =Black=	1	
25	91144-188	Spiral Pin, 5/16" Dia. x 2 1/2"	1	
26	91144-209	Spiral Pin, 3/8" Dia. x 2 1/2"	1	
27	9390-032	Capscrew, 5/16"-18UNC x 1 1/2" G5	1	
28	9392-210	Roll Pin, 1/2" Dia. x 2 1/2"	1	
29	96581	Machinery Bushing, Washer 2 1/4" OD x 1 1/2" ID x 14GA	1	
30	97798	Machinery Bushing, Washer 2 1/4" OD x 1 1/2" ID x 10GA	1	
31	9807	Locknut, 5/16"-18UNC	1	
32	JAP2701	Coulter Blade 20" Dia. Fluted	1	

Super 1200 Coulter Mounting Components

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



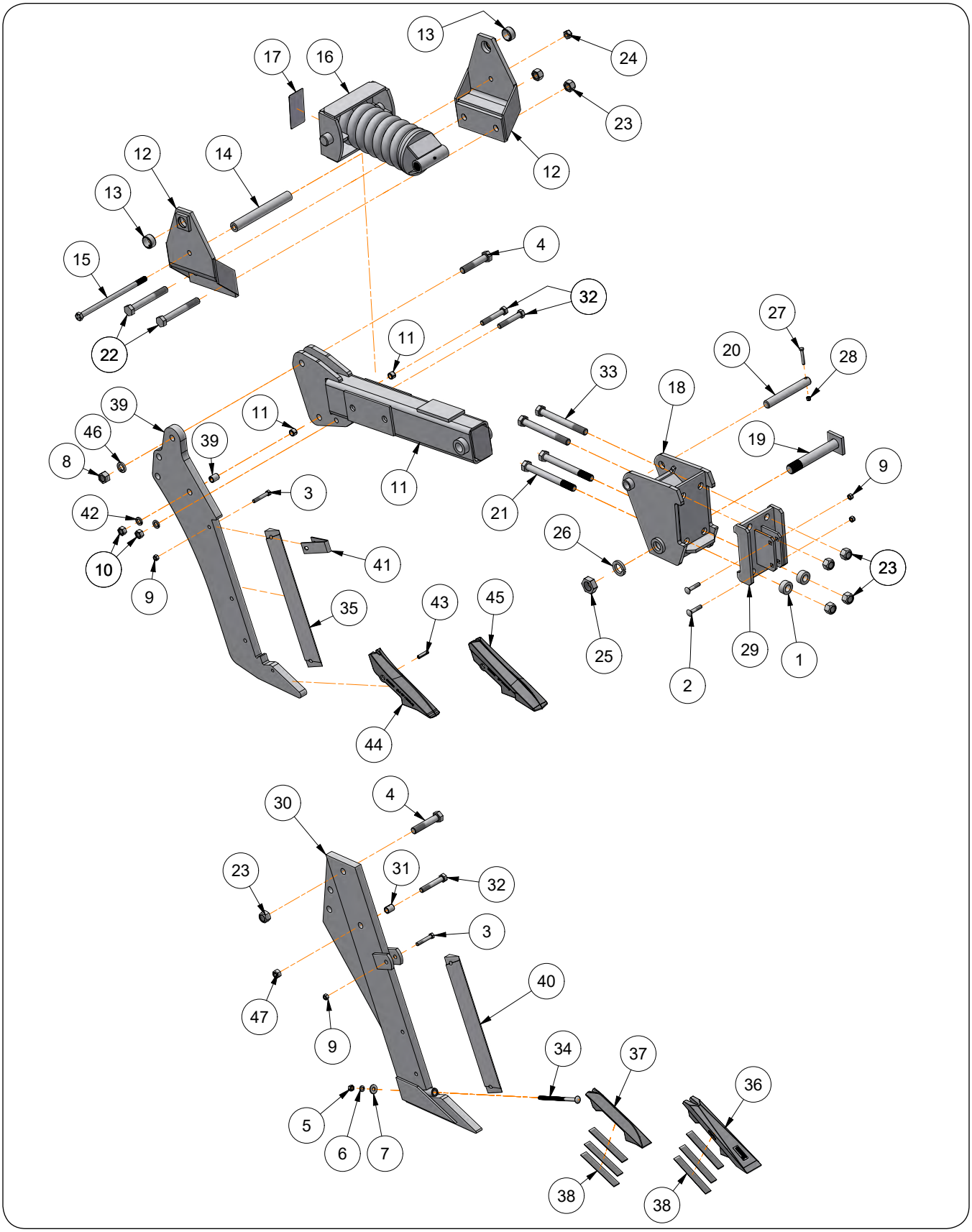
Super 1200 Coulter Mounting Components

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

ITEM	PART NUMBER	DESCRIPTION	QTY PER ROW	NOTES
	J70210504	Coulter Assembly, For Single Row		Includes Items 1-28
1	9390-032	Capscrew, 5/16”-18UNC x 1 1/2” G5	1	
2	9392-182	Roll Pin, 3/8” Dia. x 2 1/2”	1	
3	9807	Locknut/Top, 5/16”-18UNC	1	
4	JAM2738	Coulter Shank Weldment 19”	1	
5	JBP3205	Machinery Bushing 2 1/2” OD x 1 3/4” ID x 10GA	1	
6	JBP3534	Roll Pin, 7/32” Dia. x 2 1/2”	1	
7	JAM2799	Coulter Arm Assembly w/Hub & Knee	1	Includes Items 8 - 28
8	JAM2743B	Coulter Knee with Bushings	1	Includes Item 9
9	JAP2274	Self-Lubricating Bushing, 1 17/32” OD x 1 3/8” ID x 1”	2	
10	N/A	Coulter Arm Weldment	1	
11	9393-016			
12	JAM2796PL	Spring Cap & Guide Weldment	1	
13	JAP2777	Hub 4-Bolt Assembly	1	Includes Items 14 - 21
14	9784	Bearing Cup 1.780” Dia. (LM11910)	1	
15	9345	Bearing Cup 2.328” Dia. (LM67010)	1	
16	JAP2747	Seal 2.328” OD x 1.500” ID, Double Lip (15235TB)	1	
17	91160	Grease Zerk 1/4”-28 STT	1	
18	9165	Bearing Cone 1.25” Bore (LM67048)	1	
19	9789	Bearing Cone (LM11949)	1	
20	9390-323	Capscrew, 1/2”-20UNF x 1” G5	4	
21	9405-103	Flat Washer, 3/4” SAE	1	
22	JBP3404	Machinery Bushing, 2 1/8” OD x 1 3/8” ID x 10GA	1	
23	91160	Grease Zerk 1/4”-28 STT	1	
24	91575	Retaining Ring, 1 3/8” Dia. Nom.	1	
25	9391-034	Cotter Pin, 5/32” Dia. x 1 1/4”	1	
26	JAP2216	Decal, BLU-JET (1 1/2” x 4”)	1	
27	90024	Hub Cap	1	
28	JAP2881B	Compression Spring 2.472” Dia. x 5 7/8”	1	
29	46842B	Hub Cap Strap (Black)	1	
30	JAP2701	Coulter Blade 20” Dia. Fluted	1	

Shank Components - Auto-Reset

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



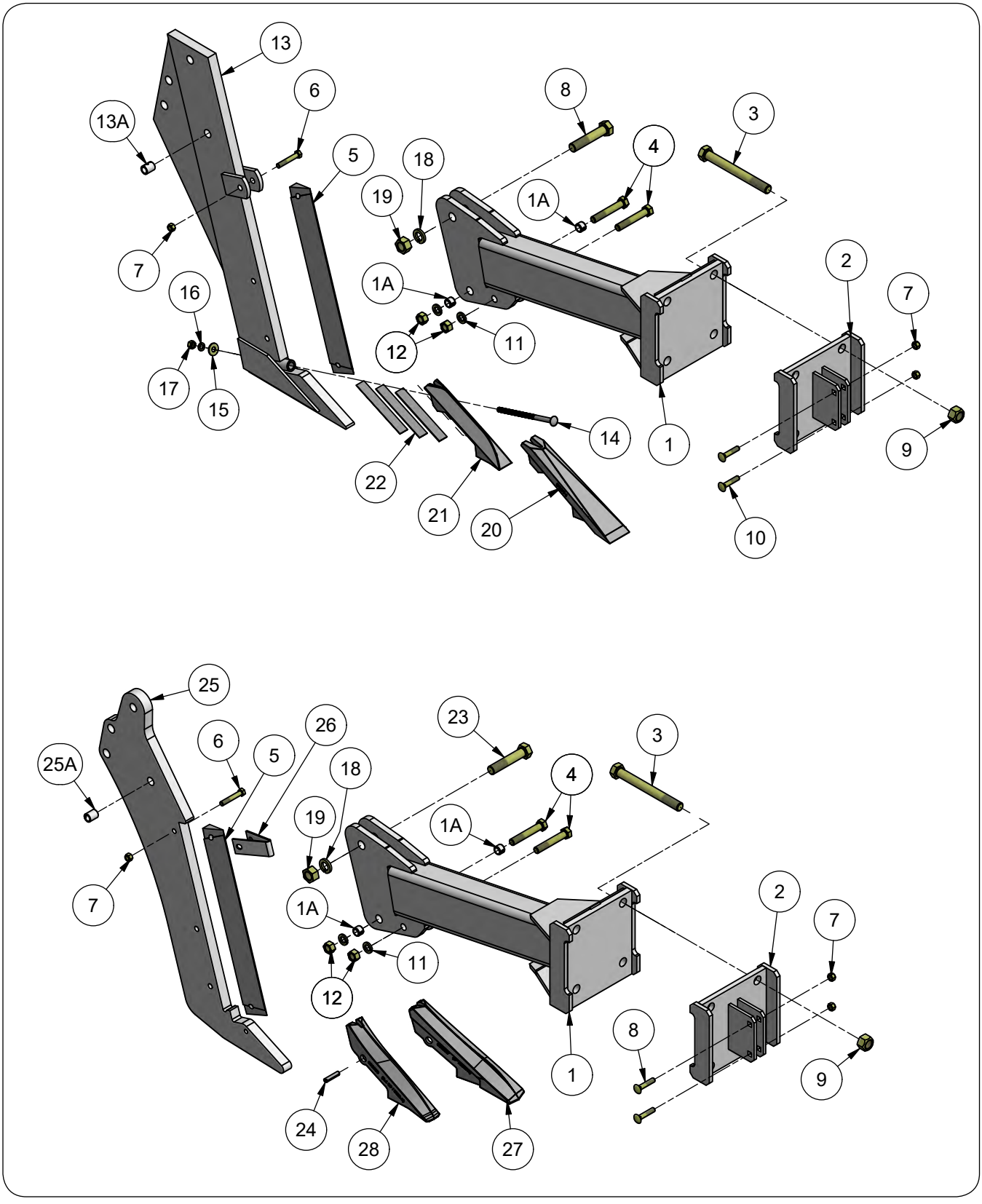
Shank Components - Auto-Reset

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

ITEM	PART NUMBER	DESCRIPTION	QTY	NOTES
1	800150	Roller/Tube, 2" OD x 1.124" ID x 7/8"	2	
2	9388-108	Carriage Bolt, 1/2"-13UNC x 2 1/2" G5	2	
3	9390-107	Capscrew, 1/2"-13UNC x 3" G5	1	
4	9390-193	Capscrew, 1"-8UNC x 5" G5	1	
5	9394-010	Hex Nut, 1/2"-13UNC	1	
6	9404-025	Lock Washer, 1/2"	1	
7	9405-088	Flat Washer, 1/2" USS	1	
8	9394-020	Hex Nut, 1"-8UNC	1	
9	9800	Locknut/Top, 1/2"-13UNC	3	
10	9394-016	Hex Nut, 3/4"-10UNC	2	
11	JAM4690	Shank Mounting Arm Weldment (Black)	1	
	9007693	Split Tension Bushing, 1" OD x 3/4" ID x 3/4"	2	
12	JAM7617	Spring Support Weldment (Black)	2	Includes Item 13
13	9502723	Tension Bushing 2" OD x 1 3/4" ID x 1"	1	
14	JAM7620	Spacer/Tube, 1 1/2" OD x .812" ID x 11 3/4"	1	
15	JBP3727	Capscrew, 3/4"-10UNC x 14" G2	1	
16	JAM7619	Spring Bundle Assembly w/Grease Zerk	1	
	91160	Grease Zerk	1	
17	9503534	Decal, DANGER "Sudden Release of Spring"	1	
18	JAM4656	Frame Mount Bracket Weldment (Black)	1	
19	JAM4657	Pivot Bolt Weldment	1	
20	JBM3488	Pin, 1 1/4" Dia. x 9 1/8"	1	
21	JBP3477	Capscrew, 1"-8UNC x 10" G8	2	
22	9390-198	Capscrew, 1"-8UNC x 7 1/2" G5	2	
23	9663	Locknut/Top, 1"-8UNC	2	
24	96732	Locknut/Center, 3/4"-10UNC	1	
25	9395-028	Hex Jam Nut, 1 1/2"-6UNC G2	1	
26	9404-057	Lock Washer, 1 1/2"	1	
27	9390-061	Capscrew, 3/8"-16UNC x 2 1/2" G5	1	
28	9398-012	Elastic Locknut, 3/8"-16UNC	1	
29	JAM4687	Clamp Bracket Weldment (Black)	1	
30	JAM7553	Shank Weldment, Reinforced	1	Includes Item 31
31	JBP3528	Split Tension Bushing, 1" OD x 3/4" ID x 1 1/4"	1	
32	JBP3021	Capscrew, 3/4"-10UNC x 4 1/2" G2	2	
33	JBP3398	Capscrew, 1"-8UNC x 9 1/2" G5	2	
34	JBP3440	Carriage Bolt, 1/2"-13UNC x 9" G2	1	
35	JCP5026	Reversible Wear Bar/Cutting Edge	1	
36	J70210153	CADI Fall Point Bundle	AR	Includes Item 38
37	J70210154	CADI Summer Point Bundle	AR	Includes Item 38
38	JFK1043	Shim Kit	1	
39	603230B	Shank w/Bushing	1	
	JBP3528	Split Tension Bushing, 1" OD x 3/4" ID x 1 1/4"	1	
40	JCP5026	Wear Bar	1	
41	603234B	Wear Bar Strap w/ Slot & Bend	1	
42	9404-033	Lock Washer, 3/4"	2	
43	902614-235	Spiral Pin, .5" Dia. x 2"	1	
44	603235SM	Point 2 1/8" (SPRING/SUMMER)	1	
45	603227SM	Point 3" (FALL)	1	
46	9404-041	Lock Washer, 1"	1	
47	9802	Locknut/Top, 3/4"-10UNC	2	

Shank Components - Shear-Bolt

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



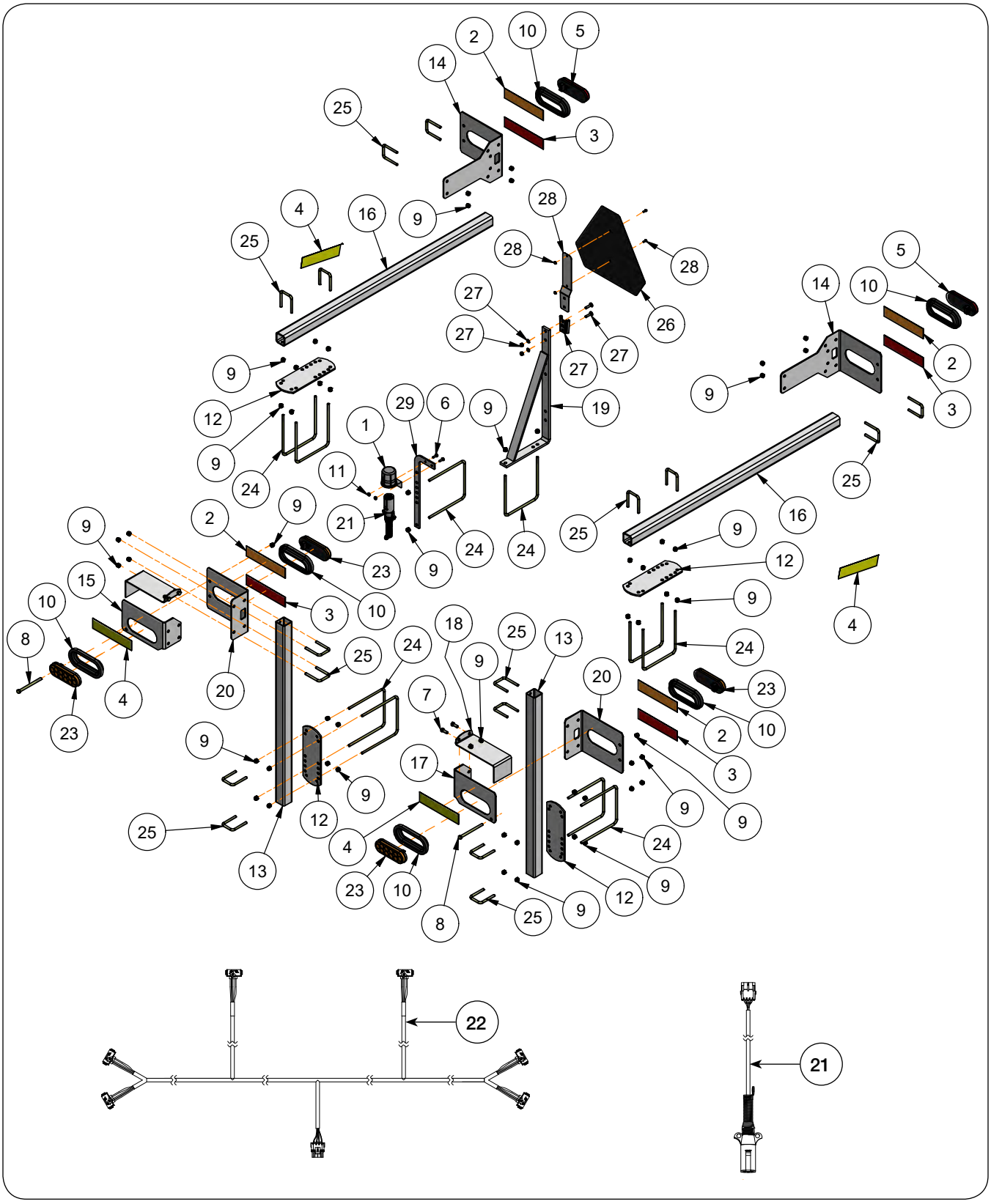
Shank Components - Shear-Bolt

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

ITEM	PART NUMBER	DESCRIPTION	QTY	NOTES
1	JAM4691	Shank Mount Arm Weldment (Black)	1	Includes Item 1A
1A	9007693	Split Tension Bushing, 1" OD x 3/4" ID x 3/4"	2	
2	JAM4686	Clamp Bracket Weldment (Black)	1	
3	JBP3398	Capscrew, 1"-8UNC x 9 1/2" G5	2	
4	JBP3021	Capscrew, 3/4"-10UNC x 4 1/2" G2	2	
5	JCP5026	Reversible Wear Bar/Cutting Edge	1	
6	9390-107	Capscrew, 1/2"-13UNC x 3" G5	1	
7	9800	Locknut/Top, 1/2"-13UNC	3	
8	9390-193	Capscrew, 1"-8UNC x 5" G5	1	
9	9663	Locknut/Top, 1"-8UNC	5	
10	9388-108	Carriage Bolt, 1/2"-13UNC x 2 1/2" G5	2	
11	9404-033	Lock Washer, 3/4"	2	
12	9394-016	Hex Nut, 3/4"-10UNC	2	
13	JAM7553	Shank Weldment, Reinforced	1	Includes Item 13A
13A	JBP3528	Split Tension Bushing, 1" OD x 3/4" ID x 1 1/4"	1	
14	JBP3440	Carriage Bolt, 1/2"-13UNC x 9" G2	1	
15	9405-088	Flat Washer, 1/2" USS	1	
16	9404-025	Lock Washer, 1/2"	1	
17	9394-010	Hex Nut, 1/2"-13UNC	1	
18	9404-041	Lock Washer, 1"	1	
19	9394-020	Hex Nut, 1"-8UNC	1	
20	J70210153	CADI Fall Point Bundle	1	Includes Item #22
21	J70210154	CADI Summer Point Bundle	1	Includes Item #22
22	JFK1043	Shim Kit	1	
23	9390-193	Capscrew, 1"-8UNC x 5"	1	
24	902614-235	Spiral Pin, 1/2" Dia. x 2"	1	
25	603230B	Shank w/Bushing	1	
25A	JBP3528	Split Tension Bushing, 1" OD x 3/4" ID x 1 1/4"	1	
26	603234B	Wear Bar Strap w/ Slot & Bend	1	
27	603227SM	Point 3" (FALL)	1	
28	603235SM	Point 2 1/8" (SPRING/SUMMER)	1	
	44936B	Wear Plate Kit Option	-	NOT SHOWN

Lighting Kit (J41000029), 3-Point Rigid Frame

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



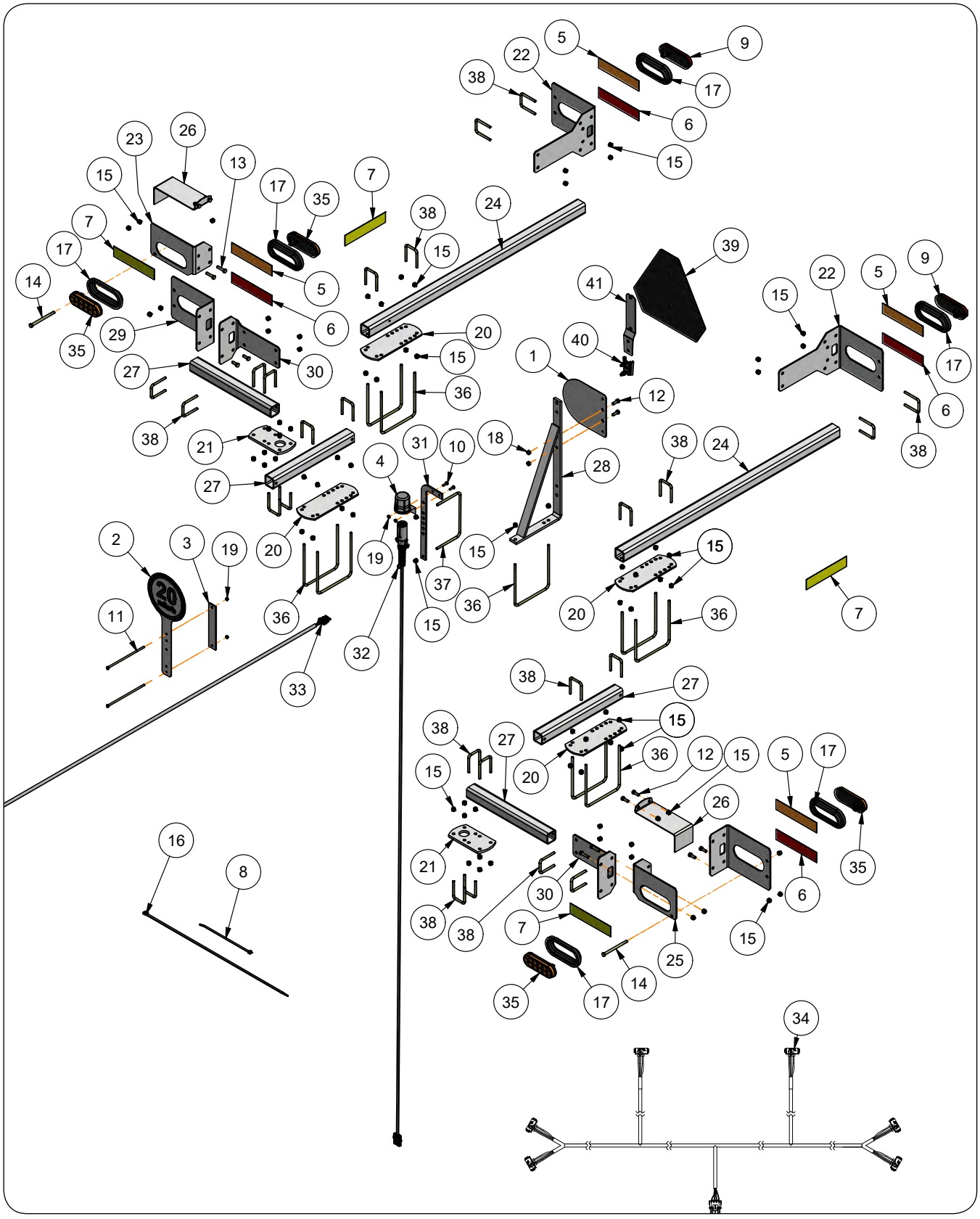
Lighting Kit (J41000029), 3-Point Rigid Frame

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

ITEM	PART NUMBER	DESCRIPTION	QTY	NOTES
	J41000029	Lighting Kit - 3-Point Rigid Frame		
1	9001968	Connector Holder	1	
2	9003126	Reflector RED, 2" x 9"	4	
3	9003125	Fluorescent Orange Strip, 2" x 9"	4	
4	9003127	Reflector AMBER, 2" x 9"	4	
5	902217	Light/RED, LED 10 Diode	2	
6	9390-003	Capscrew, 1/4"-20UNC x 3/4" G5	2	
7	9390-055	Cpascrew, 3/8"-16UNC x 1" G5	4	
8	9390-069	Capscrew, 3/8"-16UNC x 5" G5	2	
9	9398-012	Elastic Locknut, 3/8"-16UNC	58	
10	97182	Grommet For Light Panel	6	
11	9936	Locknut/Top, 1/4"-20UNC	2	
12	JAM3408	Light Post Mounting Plate (Black)	4	
13	JAM3413	Light Bracket Tube, 35 7/8" (Black)	2	
14	JAM3414	Rear Light Bracket Plate (Black)	2	
15	JAM3415	Light Bracket LH Front Plate (Black)	1	
16	JAM3416	Light Bracket Tube, 48" (Black)	2	
17	JAM3417	Light Bracket RH Front Plate (Black)	1	
18	JAM3418	Light Bracket Shield Plate (Black)	2	
19	JAM3420	SMV Mounting Bracket Weldment (Black)	1	
20	JAM3421	Side Mount Light Bracket Plate (Black)	2	
21	JAP2824	Main Wire Harness, 120"	1	
22	JAP3128	Rear Wire Harness, 27'	1	
23	JAP4415	Light/AMBER, LED 10 Diode	4	
24	JBP3335	U-Bolt, 3/8"-16UNC x 8", 7 7/16" C/C	10	
25	JBP3736	U-Bolt, 3/8"-16UNC x 3", 2 7/16" C/C	16	
26	TA510514	SMV Emblem	1	
27	TA510515	SMV Mounting Socket Bracket Taper Formed Channel with Hardware	1	
	9388-026	Carriage Bolt, 5/16"-18UNC x 1 1/4" G5	2	
	9394-004	Hex Nut, 5/16"-18UNC	2	
	9404-019	Lock Washer, 5/16"	2	
28	TA510516	Spade Mount with Hardware	1	
	N/A	Round Head Phillips Machine Screw, #10-32UNF x 1/2"	2	
	N/A	Hex Nut	2	
29	JAM4575	Dust Cap Holder Bracket (Black)	1	

Lighting Kits (J41000030 & 603708B), Folding Frames

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



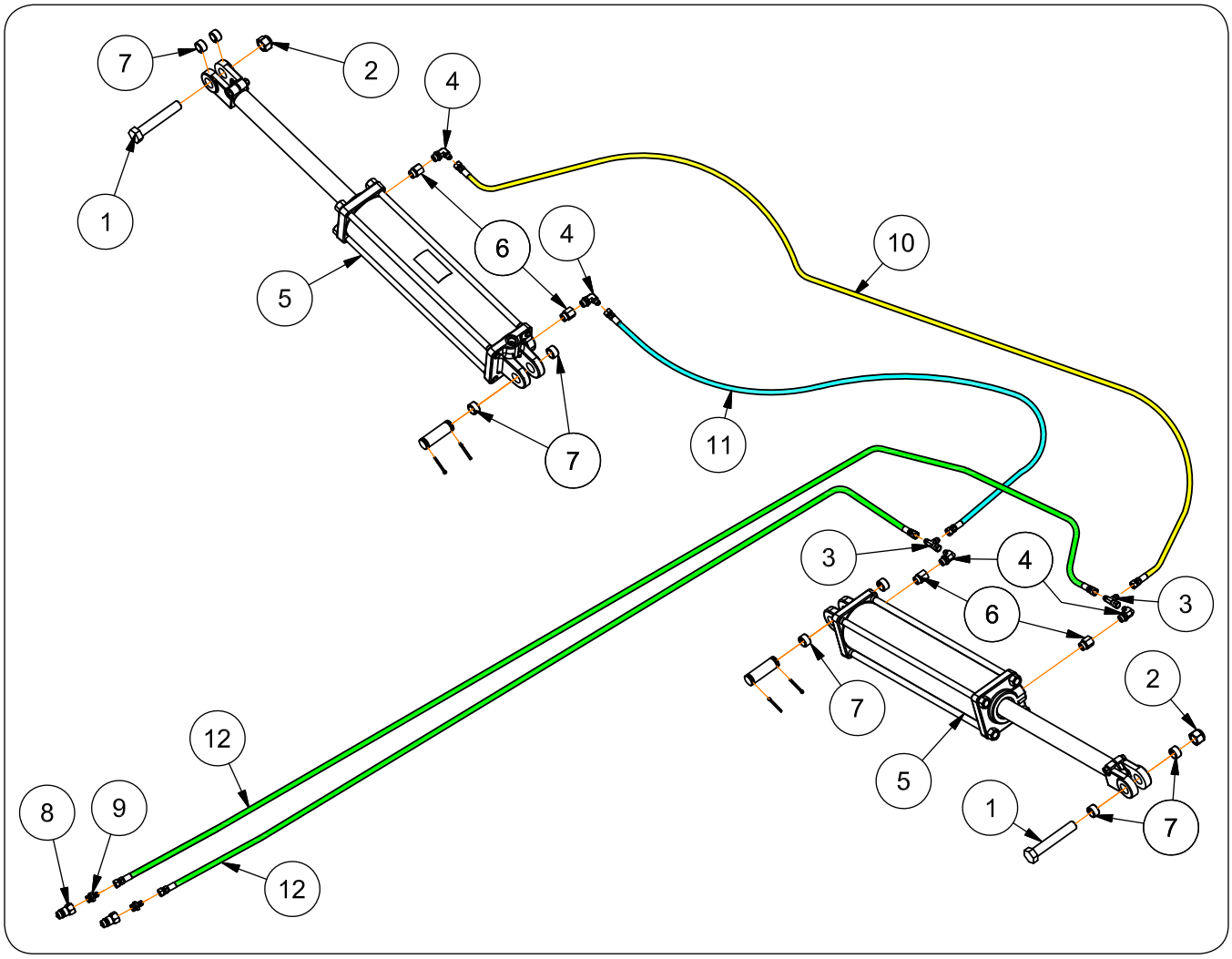
Lighting Kits (J41000030 & 603708B), Folding Frames

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

ITEM	PART NUMBER	DESCRIPTION	QTY. PER FRAME	
			3-POINT	PULL-TYPE
	J41000030	Lighting Kit - 3-Point Folding Frame	1	0
	603708B	Lighting Kit - Pull-Type Folding Frame	0	1
1	79339B	SIS Decal Plate	0	1
2	79670B	Plate w/ Decal 20MPH	0	1
3	79859B	Bar, 1 1/2" x 8 5/16" (Black)	0	1
4	9001968	Connector Holder	1	1
5	9003126	Reflector RED, 2" x 9"	4	4
6	9003125	Fluorescent Orange Strip, 2" x 9"	4	4
7	9003127	Reflector AMBER, 2" x 9"	4	4
8	9003735	Cable Tie, 11"	8	8
9	902217	Light/RED, LED 10 Diode	2	2
10	9390-003	Capscrew, 1/4"-20UNC x 3/4" G5	2	2
11	9390-025	Capscrew, 1/4"-20UNC x 8" G5	0	2
12	9390-055	Capscrew, 3/8"-16UNC x 1" G5	8	10
13	9390-057	Capscrew, 3/8"-16UNC x 1 1/2" G5	4	4
14	9390-069	Capscrew, 3/8"-16UNC x 5" G5	2	2
15	9398-012	Elastic Locknut, 3/8"-16UNC	82	82
16	94038	Cable Tie, 32"	14	14
17	97182	Grommet For Light Panel	6	6
18	9928	Locknut/Top, 3/8"-16UNC	0	2
19	9936	Locknut/Top, 1/4"-20UNC	2	4
20	JAM3408	Light Post Mounting Plate, 11 3/16" (Black)	4	4
21	JAM3410	Light Post Mounting Plate, 7 9/16" (Black)	2	2
22	JAM3414	Rear Light Bracket Plate (Black)	2	2
23	JAM3415	Light Bracket LH Front Plate (Black)	1	1
24	JAM3416	Light Bracket Tube, 48" (Black)	2	2
25	JAM3417	Light Bracket RH Front Plate (Black)	1	1
26	JAM3418	Light Bracket Shield Plate (Black)	2	2
27	JAM3419	Light Bracket Tube, 17 7/8"	4	4
28	JAM3420	SMV Mounting Bracket Weldment (Black)	1	1
29	JAM3421	Side Mount Light Bracket Plate (Black)	2	2
30	JAM3422	Side Mount Light Bracket Plate (Black)	2	2
31	JAM4575	Dust Cap Holder Bracket (Black)	1	1
32	JAP2824	Main Wire Harness, 120"	1	1
33	JAP2828	Main Wire Harness Extension, 180"	0	1
34	JAP3128	Rear Wire Harness, 27'	1	1
35	JAP4415	Light/AMBER, LED 10 Diode	4	4
36	JBP3335	U-Bolt, 3/8"-16UNC x 8", 7 7/16" C/C	10	9
37	9503892	U-Bolt, 3/8"-16UNC x 5", 10 7/16" C/C	0	1
38	JBP3736	U-Bolt, 3/8"-16UNC x 3", 2 7/16" C/C	24	24
39	TA510514	SMV Emblem	1	1
40	TA510515	SMV Mounting Socket Bracket with Hardware	1	1
41	TA510516	Spade Mount with Hardware	1	1

Hydraulic, Folding Components

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



Hydraulic, Folding Components

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

ITEM	PART NUMBER	DESCRIPTION	QTY
1	91299-195	Capscrew, 1”-8UNC x 5” G8	2
2	9398-026	Elastic Locknut, 1”-8UNC	2
3	91465	Tee, 9/16”-18 JIC Male x 9/16”-18 JIC Female x 9/16”-18 JIC Male	2
4	9874	90° Elbow, 9/16”-18 JIC Male x 3/4”-16 O-Ring Male	4
5	JDP4482	Hydraulic Cylinder, 5” x 20” For 11 Shank	2
	JDP4375	Hydraulic Cylinder, 4” x 20” For 7 & 9 Shank	
6	98801	Reducer, 7/8”-14 O-Ring Male x 3/4”-16 O-Ring Female For 11 Shank	2
7	95122	Bushing	8
8	91383	Male Tip Coupling, 3/4”-16 O-Ring Female	4
9	92927	Adapter, 9/16”-18 JIC Male x 3/4”-16 O-Ring Male	2
10	JDP5038	Hydraulic Hose, 1/4” x 108”	1
11	JDP5085	Hydraulic Hose, 1/4” x 60”	1
12	JDP5224	Hydraulic Hose, 1/4” x 216”	2

Hydraulic, Pull-Type Lift Wheel Components

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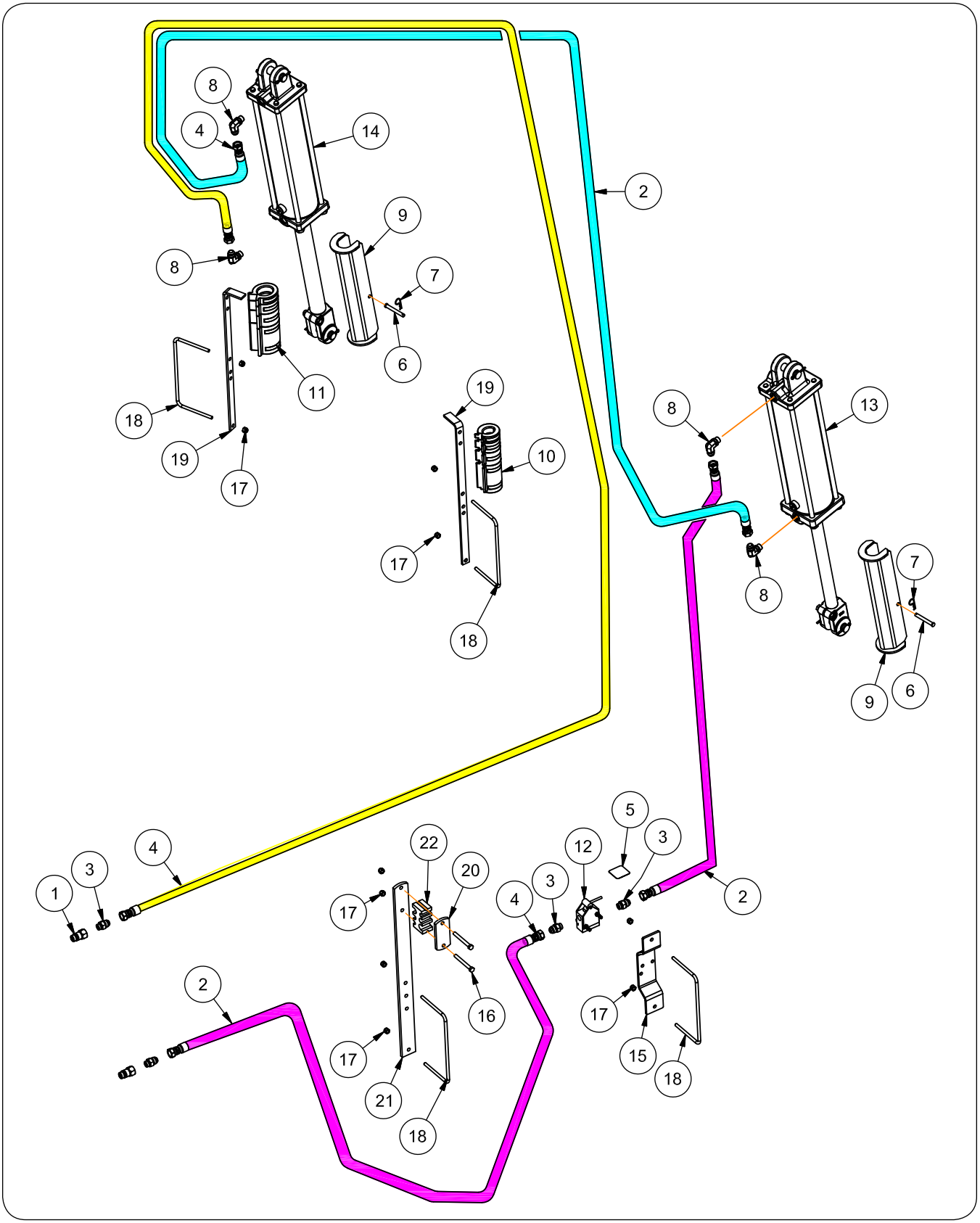


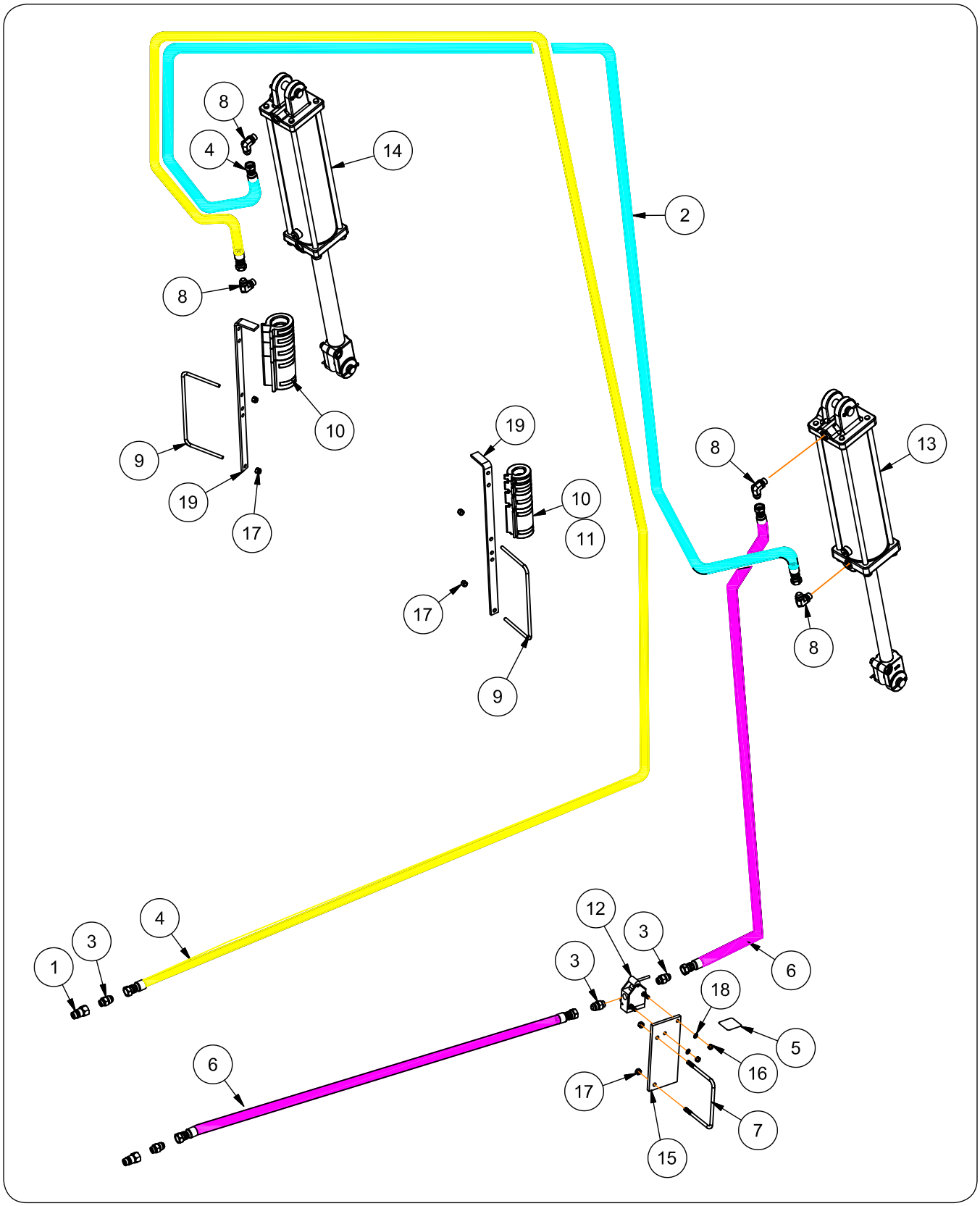
Hydraulic, Pull-Type Lift Wheel Components

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

ITEM	PART NUMBER	DESCRIPTION	QTY
1	91383	Male Tip Coupling, 3/4”-16 O-Ring Female	4
2	JDP5024	Hydraulic Hose, 3/8” x 126”	3
3	9503026	Adapter, 7/8”-14 JIC Male x 3/4”-16 O-Ring Male	4
4	JDP5133	Hydraulic Hose, 3/8” x 252”	1
5	JAP2481	Decal, Transport Lock	1
6	92955	Clevis Pin, 3/8” Dia. x 3”	2
7	9514	Hairpin Cotter, 0.092” Dia. x 1 7/8”	2
8	98201	90° Elbow, 7/8”-14 JIC Male x 3/4”-16 O-Ring Male	4
9	JAM4647	Transport Lock	2
10	JBP3076	Depth Collar Set, 1 1/4” to 1 1/2”	1
11	JBP3218	Depth Collar Set, 1 3/4” to 2”	1
12	JDP3993	Hydraulic Check Valve w/manual Release	1
13	JDP3994	Hydraulic Cylinder, 4 3/4” x 16”	1
14	JDP4255	Hydraulic Cylinder, 4 1/2” x 16”	1
15	79817B	Hydraulic Check Valve/Transport Lock Mounting Plate	1
16	9390-065	Capscrew, 3/8”-16UNC x 3 1/2” G5	2
17	9398-012	Elastic Locknut, 3/8”-16UNC	2
18	9503892	U-Bolt, 3/8”-16UNC	4
19	JAM4817	Depth Collar Storage Bracket	2
20	JAM7518	Hose Holder Retainer	1
21	JAM7526	Hose Holder Bracket	1
22	JAP2871	Hose Retainer	1

Pull-Type Conversion Option Hydraulic Components

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



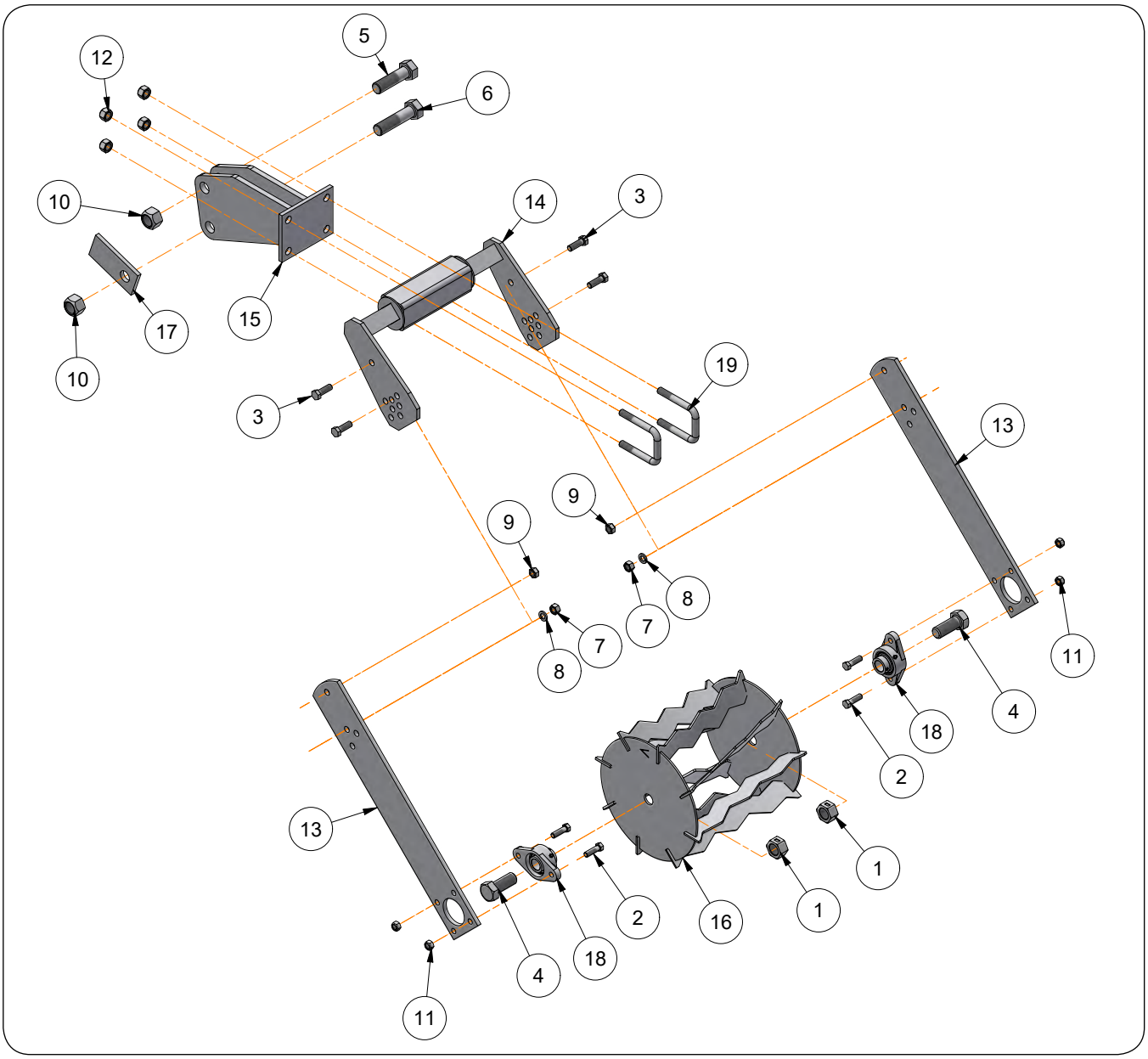
Pull-Type Conversion Option Hydraulic Components

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

ITEM	PART NUMBER	DESCRIPTION	QTY
1	91383	Male Tip Coupling, 3/4”-16 O-Ring Female	2
2	JDP5011	Hydraulic Hose, 3/8” x 180”	1
3	9503026	Adapter, 7/8”-14 JIC Male x 3/4”-16 O-Ring Male	4
4	JDP4500	Hydraulic Hose, 3/8” x 276”	1
5	JAP2481	Decal, Transport Lock	1
6	JDP4501	Hydraulic Hose, 3/8” x 138”	2
7	JBP3045	U-Bolt, 3/8”-16UNC x 5”, 6 7/16” C/C	1
8	98201	90° Elbow, 7/8”-14 JIC Male x 3/4”-16 O-Ring Male	4
9	JBP3335	U-Bolt, 3/8”-16UNC x 8”, 7 7/16” C/C	2
10	JBP3076	Depth Collar Set, 1 1/4” to 1 1/2”	1
11	JBP3218	Depth Collar Set, 1 3/4” to 2”)For Dual Wheels Only)	1
12	JDP3993	Hydraulic Check Valve w/manual Release	1
13	JDP4255	Hydraulic Cylinder, 4 1/2” x 16” (For Dual Wheels Only)	1
	JDP4256	Hydraulic Cylinder, 4” x 16” (For Single Wheels Only)	1
14	JDP4256	Hydraulic Cylinder, 4” x 16” (For Dual Wheels Only)	1
	JDP4257	Hydraulic Cylinder, 3 3/4” x 16” (For Single Wheels Only)	1
15	JAM4434	Hydraulic Check Valve/Transport Lock Mounting Plate	1
16	9394-004	Hex Nut, 5/16”-18UNC	2
17	9394-006	Hex Nut, 3/8”-16UNC	6
18	9404-019	Lock Washer, 5/16”	2
19	JAM4817	Depth Collar Storage Bracket	2

Strip-Till Basket Bundle, 12 3/4” Option Components

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



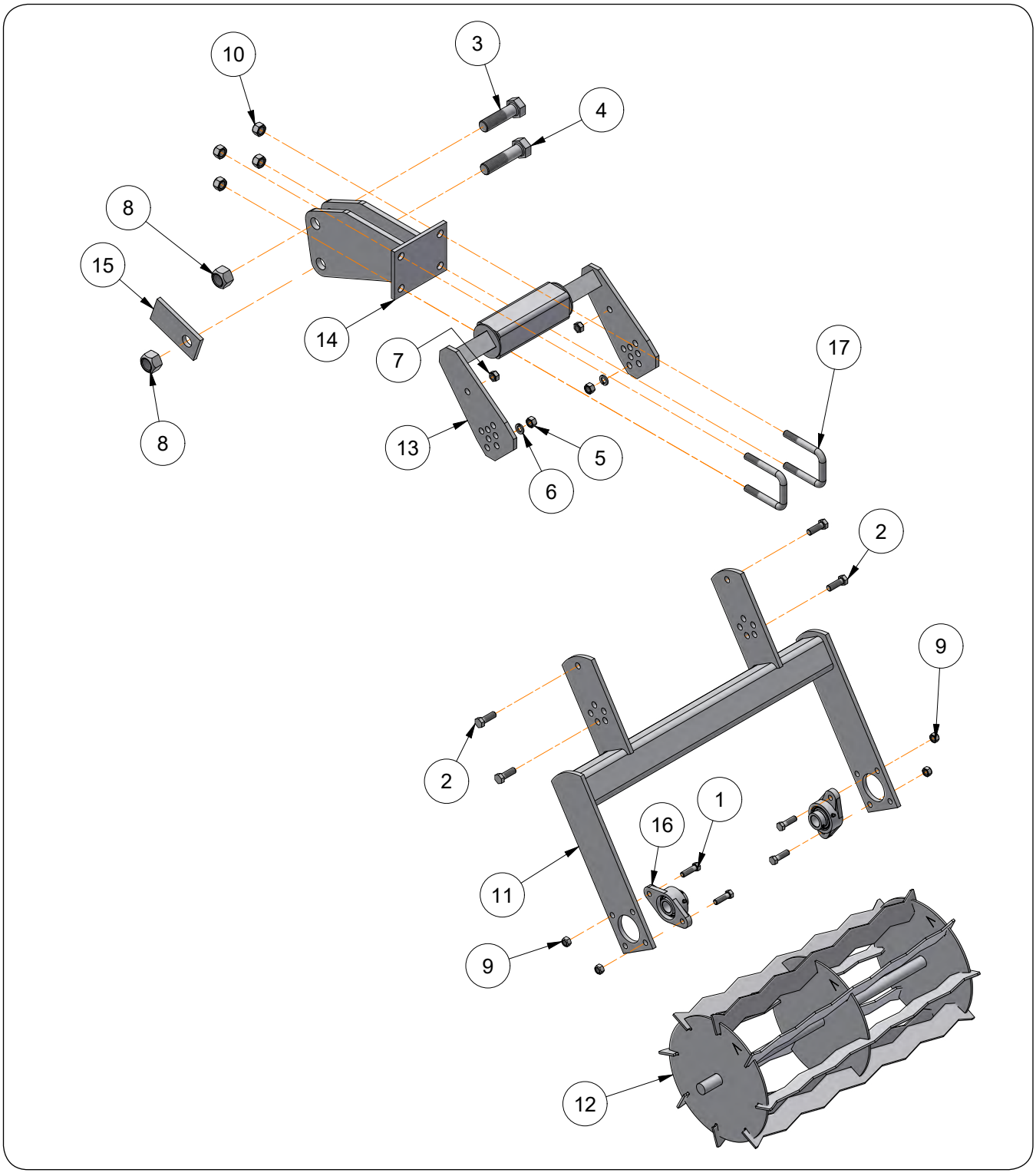
Strip-Till Basket Bundle, 12 3/4” Option Components

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

ITEM	PART NUMBER	DESCRIPTION	QTY
1	92199	Locknut/Center, 1”-8UNC	2
2	9390-080	Capscrew, 7/16”-14UNC x 1 1/2” G5	4
3	9390-101	Capscrew, 1/2”-13UNC x 1 1/2” G5	4
4	9390-185	Capscrew, 1”-8UNC x 2 1/2” G5	2
5	9390-189	Capscrew, 1”-8UNC x 3 1/2” G5	1
6	9390-191	Capscrew, 1”-8UNC x 4” G5	1
7	9394-010	Hex Nut, 1/2”-13UNC	2
8	9404-025	Lock Washer, 1/2”	2
9	94981	Locknut/Center, 1/2”-13UNC	2
10	9663	Locknut/Top, 1”-8UNC	2
11	9799	Locknut/Top, 7/16”-14UNC	4
12	9801	Locknut/Top, 5/8”-11UNC	4
13	JAM7567	Plate/Long, 3/8” x 4” x 24” =Black=	2
14	JAM7568	Torsiion Spring Weldment =Black=	1
15	JAM7605	Bracket Weldment =Black=	1
16	JAM7615	StripTill Basket Weldment, 12 3/4” =Black=	1
17	JAM7653	Shank Stop Plate =Black=	1
18	JAP2144	Flange Bearing 2-Bolt, 1” Bore with Collar & Zerk	2
19	JBP3300	U-Bolt, 5/8”-11UNC x 4, 3 3/16” C/C	2

Strip-Till Basket Bundle, 24” Option Components

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



Strip-Till Basket Bundle, 24” Option Components

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

ITEM	PART NUMBER	DESCRIPTION	QTY
1	9390-080	Capscrew, 7/16”-14UNC x 1 1/2” G5	4
2	9390-101	Capscrew, 1/2”-13UNC x 1 1/2” G5	4
3	9390-189	Capscrew, 1”-8UNC x 3 1/2” G5	1
4	9390-191	Capscrew, 1”-8UNC x 4” G5	1
5	9394-010	Hex Nut, 1/2”-13UNC	2
6	9404-025	Lock Washer, 1/2”	2
7	94981	Locknut/Center, 1/2”-13UNC	2
8	9663	Locknut/Top, 1”-8UNC	2
9	9799	Locknut/Top, 7/16”-14UNC	4
10	9801	Locknut/Top, 5/8”-11UNC	4
11	JAM5435	Mount Arm Weldment, 24” Basket =Black=	1
12	JAM5436	Basket Weldment, 24” =Black=	1
13	JAM7568	Torsiion Spring Weldment =Black=	1
14	JAM7605	Bracket Weldment =Black=	1
15	JAM7653	Shank Stop Plate =Black=	1
16	JAP2144	Flange Bearing 2-Bolt, 1” Bore with Collar & Zerk	2
17	JBP3300	U-Bolt, 5/8”-11UNC x 4, 3 3/16” C/C	2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