Grain Handling

FRONT FOLDING X-TREME®
GRAIN CART
MODELS 1019 & 1119

1019 Serial Number B37660100 and Higher
1119 Serial Number B37660100 and Higher

Part No. 292499

Foreword

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

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

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

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

Product Information

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. The serial number plate is located on the frame as shown below.

Purchase Date _____ Model _____Serial No._____

Dealer _____ City _____

Dealer Contact _____ Phone _____

SERIAL NUMBER DECAL LOCATION

IMPORTANT

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

Table of Contents

SECTION I
Safety

Table of Contents

SECTION II
Set Up

FOR TRACK INFORMATION, PLEASE REFER TO YOUR TRACK MANUAL.
FOR SCALE INFORMATION, PLEASE REFER TO YOUR SCALE MANUAL.
FOR ELECTRIC ROLL TARP INFORMATION, PLEASE REFER TO YOUR ELECTRIC ROLL TARP MANUAL.
FOR HYDRAULIC DRIVE INFORMATION, PLEASE REFER TO YOUR HYDRAULIC DRIVE MANUAL.

Table of Contents

SECTION III
Operation

FOR TRACK INFORMATION, PLEASE REFER TO YOUR TRACK MANUAL.
FOR SCALE INFORMATION, PLEASE REFER TO YOUR SCALE MANUAL.
FOR ELECTRIC ROLL TARP INFORMATION, PLEASE REFER TO YOUR ELECTRIC ROLL TARP MANUAL.
FOR HYDRAULIC DRIVE INFORMATION, PLEASE REFER TO YOUR HYDRAULIC DRIVE MANUAL.

Table of Contents

SECTION IV
Maintenance

FOR TRACK INFORMATION, PLEASE REFER TO YOUR TRACK MANUAL.
FOR SCALE INFORMATION, PLEASE REFER TO YOUR SCALE MANUAL.
FOR ELECTRIC ROLL TARP INFORMATION, PLEASE REFER TO YOUR ELECTRIC ROLL TARP MANUAL.
FOR HYDRAULIC DRIVE INFORMATION, PLEASE REFER TO YOUR HYDRAULIC DRIVE MANUAL.

Table of Contents

SECTION V
Parts

FOR TRACK INFORMATION, PLEASE REFER TO YOUR TRACK MANUAL.
FOR SCALE INFORMATION, PLEASE REFER TO YOUR SCALE MANUAL.
FOR ELECTRIC ROLL TARP INFORMATION, PLEASE REFER TO YOUR ELECTRIC ROLL TARP MANUAL.
FOR HYDRAULIC DRIVE INFORMATION, PLEASE REFER TO YOUR HYDRAULIC DRIVE MANUAL.

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

DANGER

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

WARNING

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

CAUTION

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

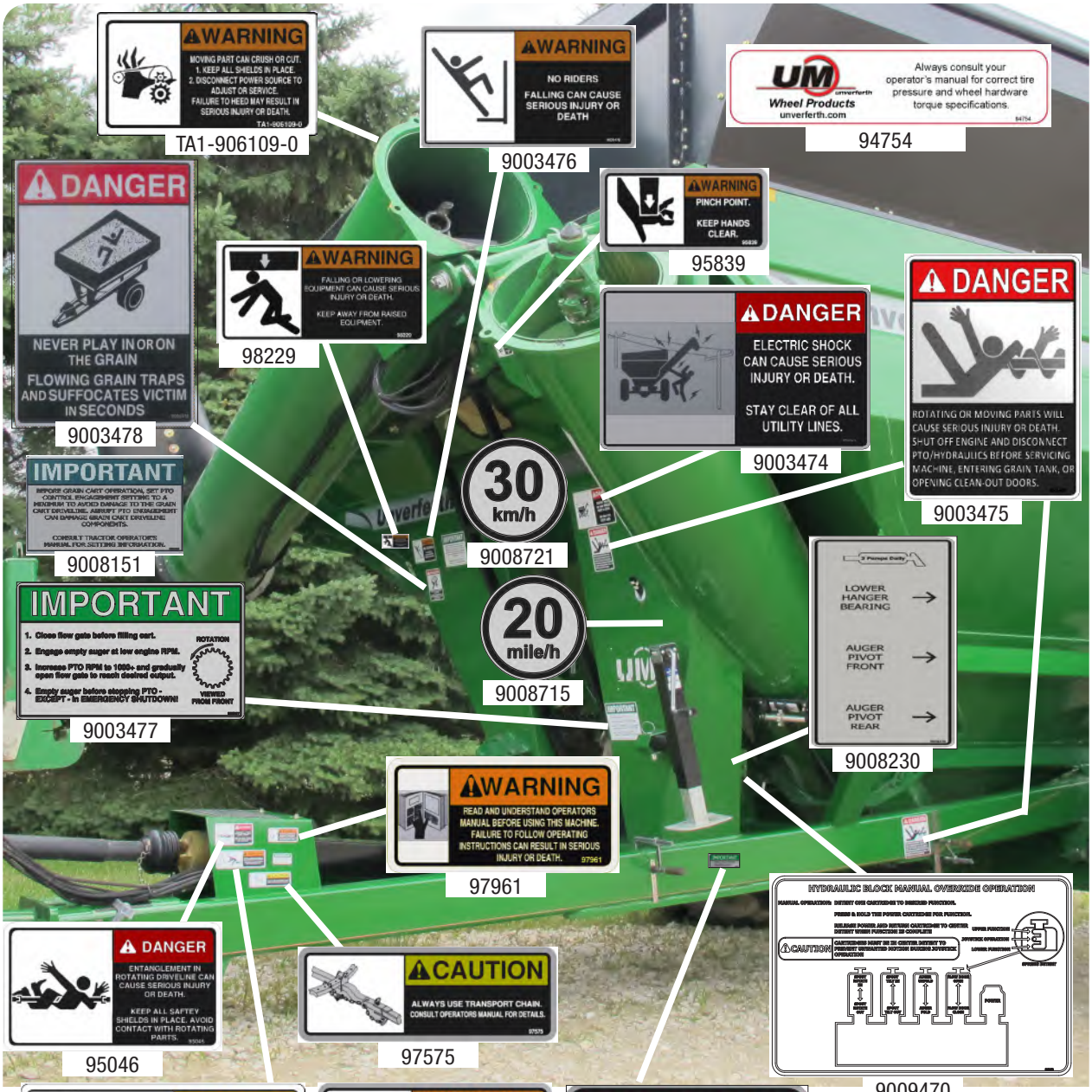
IMPORTANT

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.**



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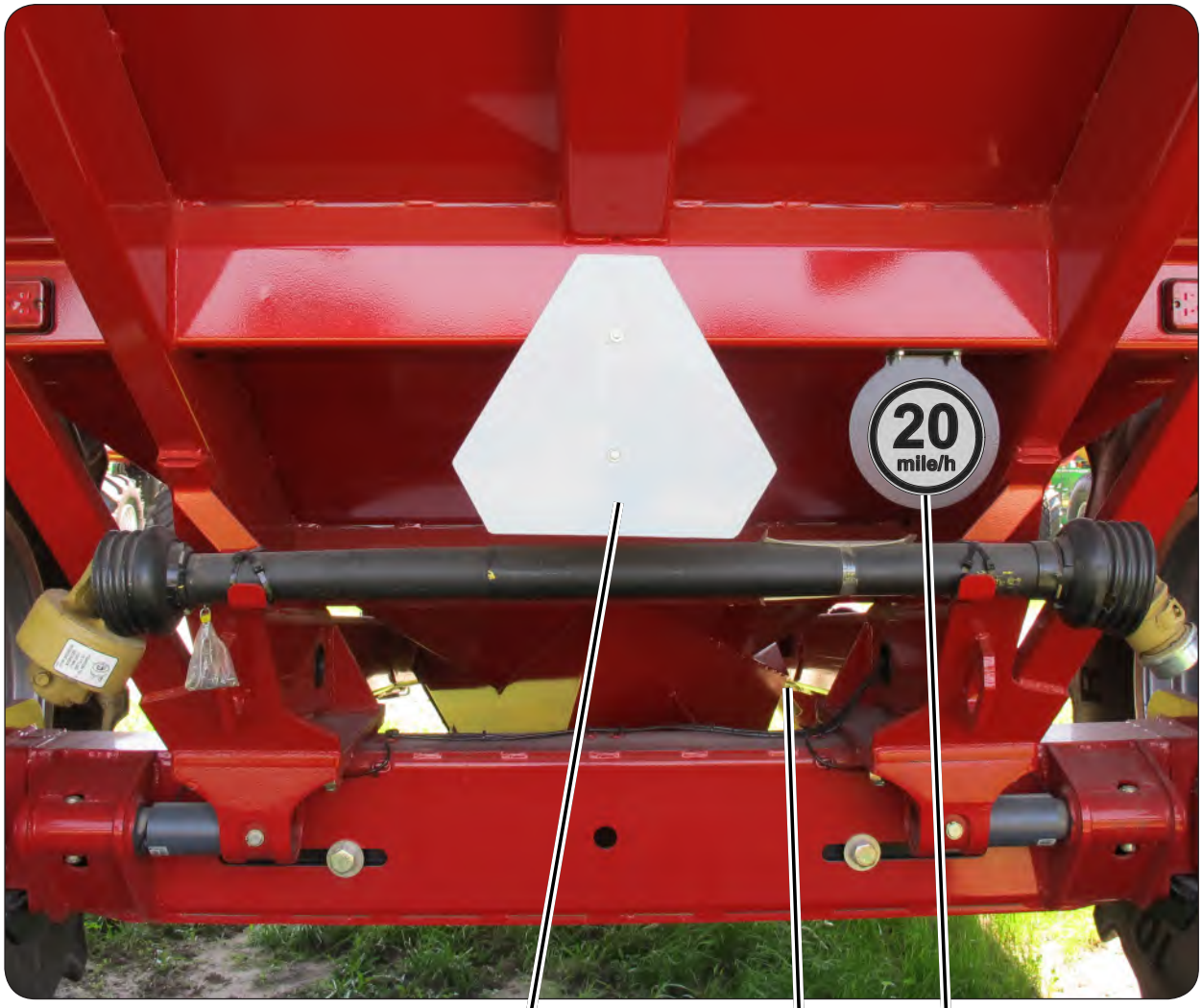
Safety Decals (continued)

Safety Decals (continued)



20 mile/h
9008714

30 km/h
9008720

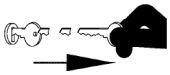
TA510514

REFLECTORS
9003125 (Fluorescent)
9003126 (Red)
9003127 (Amber)

Following Safety Instructions

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

- All machinery should be operated only by trained and authorized personnel.
- To prevent machine damage, use only attachments and service parts approved by the manufacturer.
- Always shut 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 the driver's seat.
- Never enter a cart containing grain. Flowing grain traps and suffocates victims in seconds.

Before Operating

- Do not stand between towing vehicle and implement during hitching.

- Always make certain everyone and everything is clear of the machine before beginning operation.
- Verify that all safety shields are in place and properly secured.

- Ensure that all applicable safety decals are installed and legible.
- When working around the implement, be careful not to be cut by sharp edges.
- Secure drawbar pin with safety latch and lock tractor drawbar in fixed position.

Before Servicing

- 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.
- To prevent personal injury or death, always ensure that there are people who remain outside the cart to assist the person working inside, and that all safe workplace practices are followed. There are restricted mobility and limited exit paths when working inside the implement.
- Secure drawbar pin with safety lock and lock tractor drawbar in fixed position.
- 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.
- Add sufficient ballast to tractor to maintain steering and braking control at all times. Do not exceed tractor's lift capacity or ballast capacity.

During Operation

- Regulate speed to field 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 chain to towing vehicle before transporting. DO NOT transport without chain.
- Check for proper function of all available transport lights. Make sure that all reflectors are clean and in place on machine. Make sure the SMV emblem and SIS decals are visible to approaching traffic.
- This implement may not be equipped with brakes. Ensure that the towing vehicle has adequate weight and braking capacity to tow this unit.

During Transport

- Comply with all laws governing highway safety when moving machinery.
- Use transport lights as required by all laws to adequately warn operators of other vehicles.
- Regulate speed to road conditions and maintain complete control.
- Maximum transport speed of this implement should never exceed 20 m.p.h. 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 m.p.h. during off-highway travel.
- Slow down before making sharp turns to avoid tipping. Drive slowly over rough ground and side slopes.
- Do not transport grain cart on roads while loaded.
- 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.

Driveline Safety

- Do not allow children near equipment that is running or engaged.
- Do not exceed 1000 r.p.m. PTO speed.
- Disengage the PTO, stop the tractor engine, and remove key from ignition before making inspections, or performing maintenance and repairs.
- Inspect the driveline, quick disconnect, overload shear-bolt limiter or clutch, and shielding often. Repair immediately. Use replacement parts and attaching hardware equivalent to the original equipment. Only alterations described in this manual for overall length adjustment are allowed. Any other alteration is prohibited.
- Avoid excessively long hardware or exposed and protruding parts which can snag and cause entanglement.
- Lubricate the driveline as recommended in the MAINTENANCE section.
- Keep hoses, wiring, ropes, etc. from dangling too close to the driveline.
- Install driveline and shields according to recommended lengths and attaching methods with recommended hardware. The driveline shield should rotate independently a full rotation and telescope freely. The retaining chain must be secured to the implement safety shield.
- Adjust drawbar to height and length recommended in OPERATION section.
- Use caution when turning to avoid contact between tractor tires and driveline.
- Check the length of the telescoping members to insure the driveline will not bottom out or separate when turning and/or going over rough terrain.
- Proper extended and collapsed lengths of the telescoping PTO shaft must be verified before first operation with each and every tractor. If the extended length of the PTO shaft is insufficient, it may become uncoupled during operation and cause serious injury or death from contact with uncontrolled flailing of PTO shaft assembly components.

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. 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:
  - o End fittings damaged, displaced, or leaking.
  - o Outer covering chafed/cut or wire reinforcing exposed.
  - o Outer covering ballooning locally.
  - o Evidence of kinking or crushing of the flexible part of a hose.

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 and servicing.

- Wear hearing protection when exposed to loud noises.

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

Notes

SECTION II
Set Up

FOR TRACK INFORMATION, PLEASE REFER TO YOUR TRACK MANUAL.
FOR SCALE INFORMATION, PLEASE REFER TO YOUR SCALE MANUAL.
FOR ELECTRIC ROLL TARP INFORMATION, PLEASE REFER TO YOUR ELECTRIC ROLL TARP MANUAL.
FOR HYDRAULIC DRIVE INFORMATION, PLEASE REFER TO YOUR HYDRAULIC DRIVE MANUAL.

Pre-Delivery Checklist

Inspect all listed items that apply and when satisfactory or completed, check the box:

- ❑ Adjust axles from shipping to desired operating position. (If applicable, for Model 1119 only.)
- ❑ Install wheels/tires and torque wheel nuts as specified in MAINTENANCE section.
- ❑ Inflate tires to specified air pressure. See MAINTENANCE section for tires pressures.
- ❑ Verify track has been aligned and is properly conditioned. (If applicable)
- ❑ Unfold sideboards and install into operating position.
- ❑ Install weather guard tarp and place into operating position. (Optional for Model 1019 only.)
- ❑ Attach ladder.
- ❑ Make sure all safety decals are correctly located and legible. Replace if damaged.
- ❑ Make sure all reflective decals are correctly located.
- ❑ Make sure SMV emblem and SIS decals are in place, clean and visible after shipping.
- ❑ All grease fittings have been lubricated and gearbox oil level checked.
- ❑ Check cleanout door assembly play or movement. See MAINTENANCE section for adjustment procedure.
- ❑ Check Driveline Assembly phasing. See “Auger Driveline Assembly” in OPERATION section.
- ❑ Install PTO driveline and verify telescopic PTO shaft length. See “PTO Shaft and Clutch” in MAINTENANCE section.
- ❑ Verify all lights are operational. See ”Electrical System Diagram - Overall” in MAINTENANCE section.
- ❑ Check to be sure screens over auger are in place and properly secured.
- ❑ Check all hydraulic parts for leakage.
- ❑ Check size of hitch adapter bushing.
- ❑ Transport chains are properly installed and hardware is torqued to specification. See “Transport Chain Connection” in OPERATION section.
- ❑ Set tractor PTO control engagement setting to a minimum, refer to tractor operator’s manual for setting information.
- ❑ Paint all parts scratched in shipment.
- ❑ Check auger alignment, timing, and spline gap. See “Auger System” in MAINTENANCE section.
- ❑ Test run the augers. See “Auger Operation” in OPERATION section.

Basic Set Up

Due to shipping requirements and various dealer-installed options, some initial cart set-up will be required after it arrives from the factory. Use the following procedures as needed for initial cart set-up.

⚠ WARNING

- **TO PREVENT PERSONAL INJURY OR DEATH, ALWAYS ENSURE THAT THERE ARE PEOPLE WHO REMAIN OUTSIDE THE CART TO ASSIST THE PERSON WORKING INSIDE THE CART, AND THAT ALL SAFE WORKPLACE PRACTICES ARE FOLLOWED. THERE IS RESTRICTED MOBILITY AND LIMITED EXIT PATHS WHEN WORKING INSIDE THE CART.**
- **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 16,000 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 IMPLEMENT.**

Hydraulic System

Check all hoses and cylinders for signs of leakage. Hoses should not be kinked, twisted or rubbing against sharp edges. Re-route or repair hoses as necessary. Refer to SAFETY section for additional information on safe repair and inspection of hydraulic components.

Driveline Storage

Storage brackets are located on the rear runner rails. Secure the PTO shaft to these brackets for extended transporting or seasonal storage. (Fig. 2-1)

IMPORTANT

- *Remove and store the complete PTO before towing grain cart behind a truck. Interference could occur when turning resulting in damage to PTO and cart.*

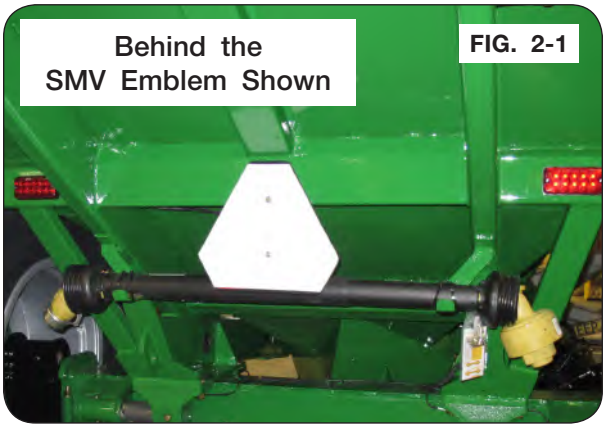


FIG. 2-1

Basic Set Up (continued)

Wheel/Tire Set Up

Tire Pressure

Tire pressure must be verified before first use and adjusted as necessary. Refer to MAINTENANCE of this manual for information on tire pressure.

Wheel Nuts

⚠ WARNING

- **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 16,000 LBS. SPECIFIC LOAD RATINGS FOR INDIVIDUAL LOADS WILL BE GIVEN AT THE APPROPRIATE TIME IN THE INSTRUCTIONS.**
- **KEEP HANDS CLEAR OF PINCH POINT AREAS.**
- **EYE PROTECTION AND OTHER APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT MUST BE WORN WHILE SERVICING IMPLEMENT.**
- **TIPPING OR MOVEMENT OF THE MACHINE CAN CAUSE SERIOUS INJURY OR DEATH. BE SURE MACHINE IS SECURELY BLOCKED.**

⚠ 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.**

IMPORTANT

- *Installing wheels without the proper inset/offset could result in hub or spindle failure. This will cause substantial damage to cart and is not covered by warranty. Inset/offset will vary depending on tire size. Consult dealer for proper inset/offset.*
- *Single tire hubs and spindles are slid in for shipping and need to be slid out before attaching wheels/tires to provide adequate clearance between tires and wheel wells.*

Basic Set Up (continued)

SMV Emblem & SIS Decal

The reflective surface of the SMV must face rearward. This may require removal of film protecting the reflective surface or removing and reinstallation of the SMV. When reinstalling the SMV make sure that it is mounted with the wide part of the SMV at the bottom. (Fig. 2-2)

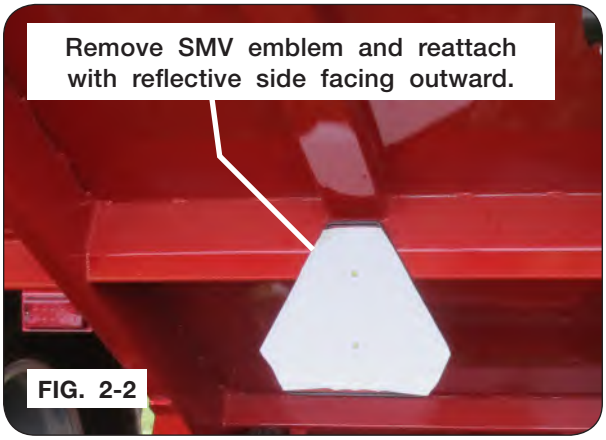


FIG. 2-2

Ensure the front and rear SIS decals are clean and visible after shipping. (Fig. 2-3)

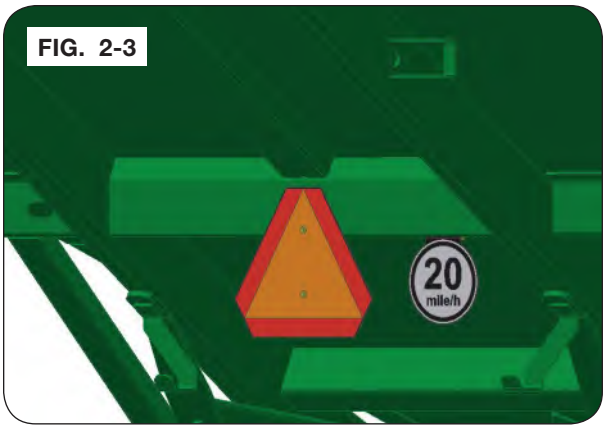


FIG. 2-3

Video System (Optional)

The video system includes its own installation instruction sheet. Reference the provided instruction sheet.

Basic Set Up (continued)

Lamp Set Up

Pivot lamp extension arms into position at sides of cart. The lamp bracket width is adjustable, if necessary, adjust lamp mount position to achieve dimension shown. Ensure that the brackets are adjusted such that the reflectors are no more than 16" from outer edge of the tires. Be sure that amber reflector is facing the front of the cart (some lights on certain cart models will be flipped down for shipping). (Fig. 2-4 and 2-5)

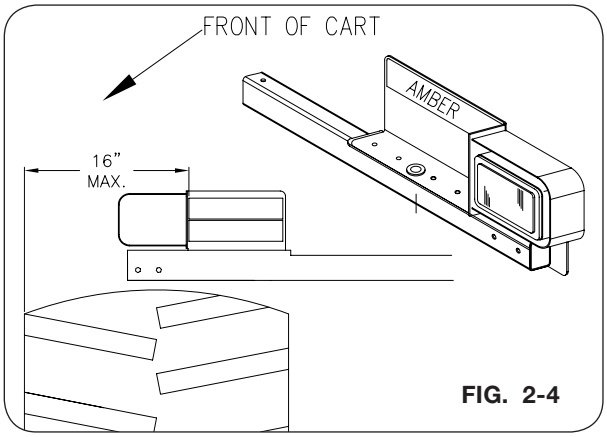


FIG. 2-4

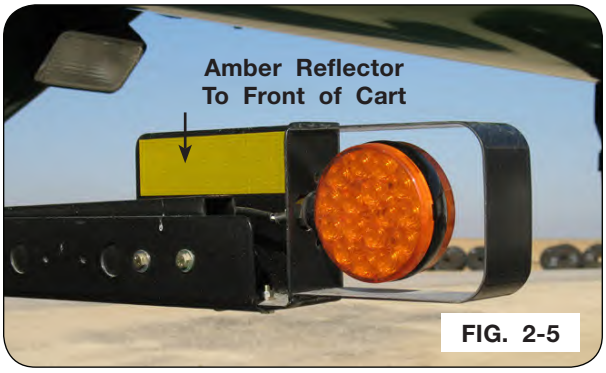


FIG. 2-5

Basic Set Up (continued)

Driveline Set Up

Clean and grease the Implement PTO splined shaft.

⚠ DANGER

- **ENTANGLEMENT WITH THE DRIVELINE WILL CAUSE SERIOUS INJURY OR DEATH. KEEP ALL GUARDS AND SHIELDS IN GOOD CONDITION AND PROPERLY INSTALLED AT ALL TIMES. AVOID PERSONAL ATTIRE SUCH AS LOOSE FITTING CLOTHING, SHOE STRINGS, DRAWSTRINGS, PANTS CUFFS, LONG HAIR, ETC. THAT CAN BECOME ENTANGLED IN A ROTATING DRIVELINE.**

Coupling The Cut-Out Clutch

Engage PTO driveshaft onto implement PTO shaft until retaining groove of implement PTO shaft aligns with clamping cone hole. Insert clamping cone into threaded hole, hand tighten. Torque cone to 75 ft.-lb. (Fig. 2-6)

NOTE: See MAINTENANCE section - PTO Quick Disconnect - for disassembly instructions.

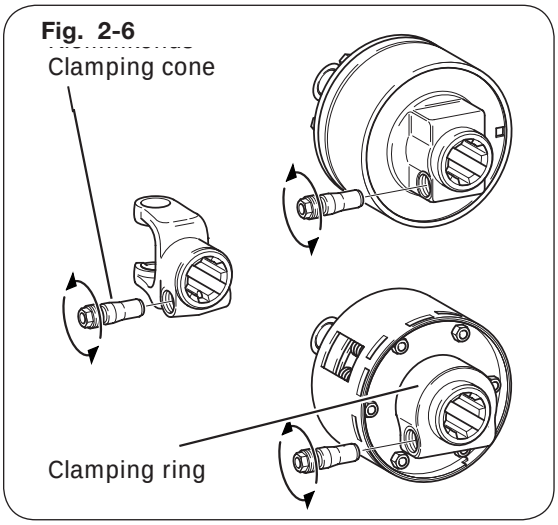


Fig. 2-6

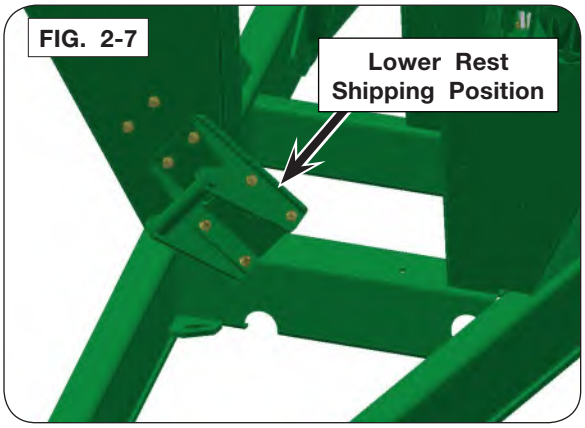
Basic Set Up (continued)

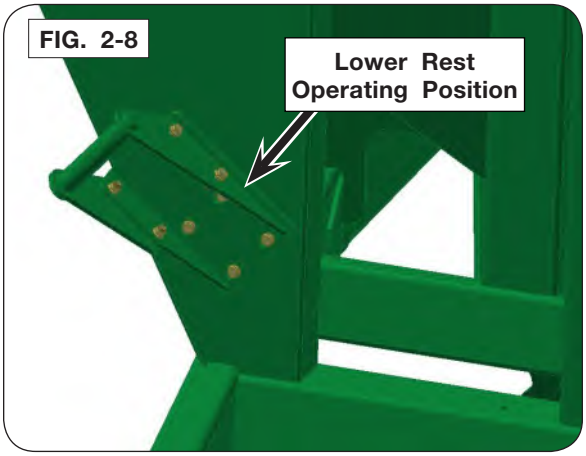
Auger Stand/Lower Rest

1. Move the lower rest to operating position. (Fig. 2-7 and 2-8)

NOTE: Stop bolt must be lengthened after the lower rest is moved to operating position.

2. Lengthen the stop bolt near the auger linkage until the stop bolt almost touches the linkage, when the auger is folded.





Basic Set Up (continued)

Auger Hood Installation

1. Remove brackets (292578 Qty. 2 and 292579) on the ladder rungs retaining the auger hood assembly. (Fig. 2-9)

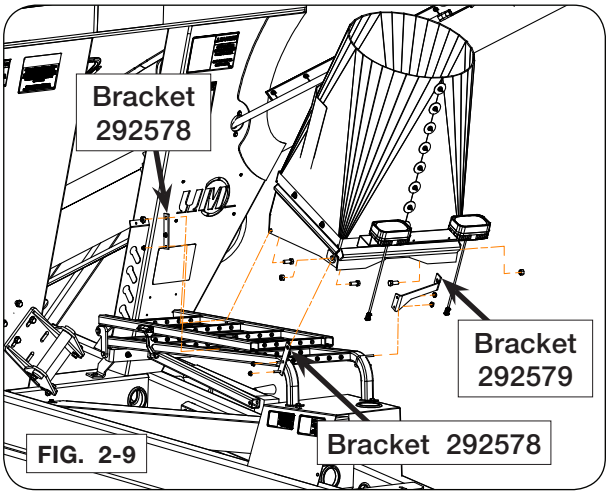


FIG. 2-9

2. *(2-person operation)* Place the auger hood assembly over the spout.
3. Align the auger hood and spout holes.
4. Slide the pivot rod (290993) through the auger hood assembly, and attach 2 retaining rings (9003810) to each end of the pivot rod. (Fig. 2-10)
5. Reattach the cylinder (9008152) using 2 bushing sleeves (285290), 2 flat washers 1/2" (9405-088), 2 lock washers 1/2" (9404-025), and 2 capscrews 1/2"-13UNC x 3" (9390-107). (Fig. 2-10)
6. Reattach wiring harness. (Fig. 2-10)

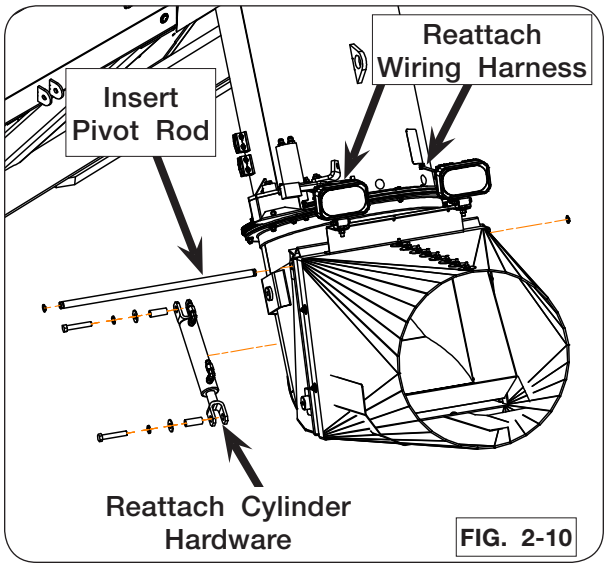


FIG. 2-10

7. Install spout stop weldment and hardware. (Fig. 2-11)

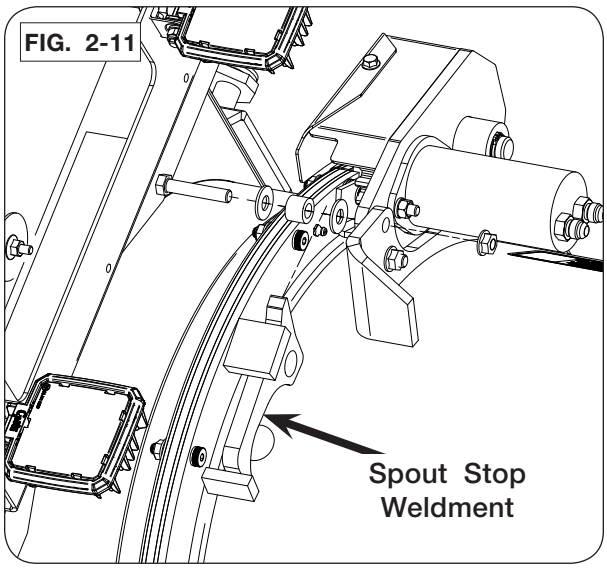


FIG. 2-11

Basic Set Up (continued)

Ladder Installation

1. Remove the bolts from the top of the dog house, shipping bracket at the bottom end of the ladder, and zip ties on the rungs retaining the ladder assembly. (Fig. 2-12)

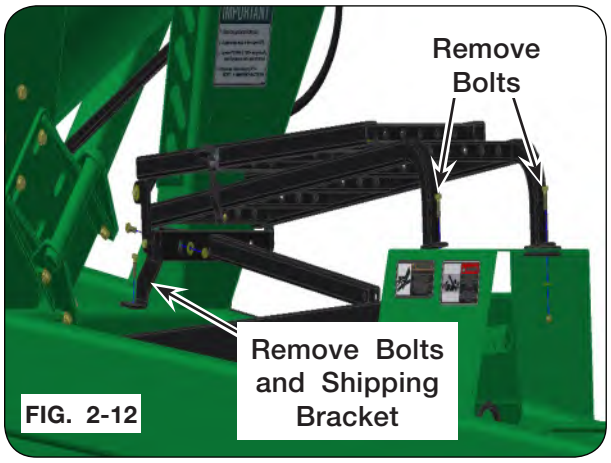


FIG. 2-12

2. Attach ladder assembly to the right-hand side using capscrews provided. (Fig. 2-13)

FIG. 2-13

Sideboards Set Up and Installation

WARNING

- **TO PREVENT PERSONAL INJURY OR DEATH, ALWAYS ENSURE THAT THERE ARE PEOPLE WHO REMAIN OUTSIDE THE CART TO ASSIST THE PERSON WORKING INSIDE, AND THAT ALL SAFE WORKPLACE PRACTICES ARE FOLLOWED. THERE IS RESTRICTED MOBILITY AND LIMITED EXIT PATHS WHEN WORKING INSIDE THE CART.**
- **KEEP HANDS CLEAR OF PINCH POINT AREAS.**
- **EYE PROTECTION AND OTHER APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT MUST BE WORN WHILE SERVICING IMPLEMENT.**
- **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 250 LBS. SPECIFIC LOAD RATINGS FOR INDIVIDUAL LOADS WILL BE GIVEN AT THE APPROPRIATE TIME IN THE INSTRUCTIONS.**
- **TIPPING OR MOVEMENT OF THE MACHINE CAN CAUSE SERIOUS INJURY OR DEATH. BE SURE MACHINE IS SECURELY BLOCKED.**

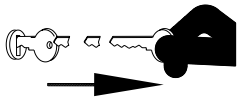
Sideboards and End Caps

1. Park the empty grain cart on a firm, level surface. Block the tires/tracks on the machine to keep it from moving. Set the vehicle parking brake, shut off engine, and remove the ignition key.

2. Remove the tarp crank handle and the crank handle holder from inside the cart.

Set Up (continued)

Sideboards and End Caps

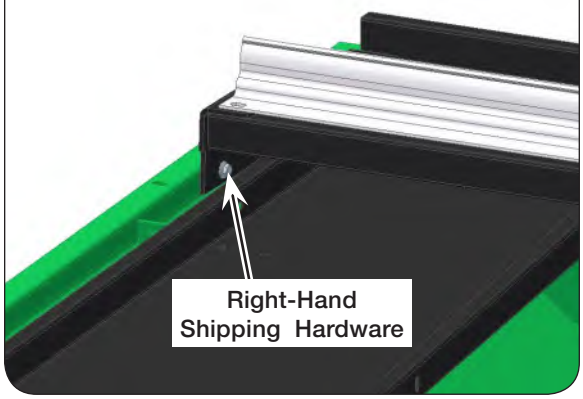


1. Park the empty grain cart on a firm, level surface. Block the tires/tracks on the machine to keep it from moving. Set the tractor's parking brake, shut-off the engine, remove the ignition key and disconnect the PTO shaft.

2. Remove the crank handle, crank handle holder, shipping bundle which includes front and rear end caps, and small front and rear sideboards from inside the cart.

3. Remove and discard shipping hardware for right-hand sideboards. (Fig. 2-14)

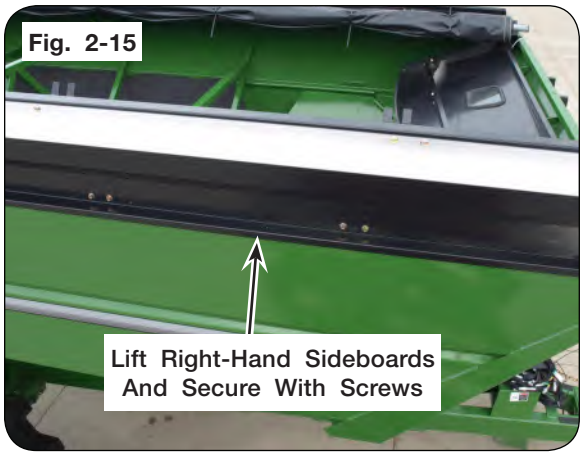
Fig. 2-14



4. Lift the right-hand sideboards into position and loosely secure sideboard into place using 3/8" flange screws and flange nuts along sideboard bottom edge. (Fig. 2-15)

NOTE: Hinge brackets WILL support the sideboard. (Fig. 2-15 and 2-16)

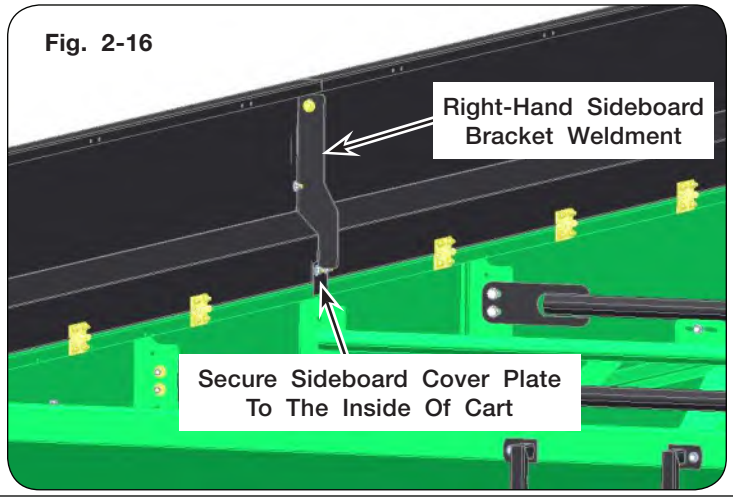
Fig. 2-15



NOTE: For shipping, the right-hand sideboard bracket weldment (296226B) is attached between the right-hand front and rear sideboards. (Fig. 2-16)

5. Loosely secure sideboard cover plate (295691B) with 3/8" flange screws and flange nuts to the inside bottom right-hand front and rear sideboards. (Fig. 2-16)

Fig. 2-16

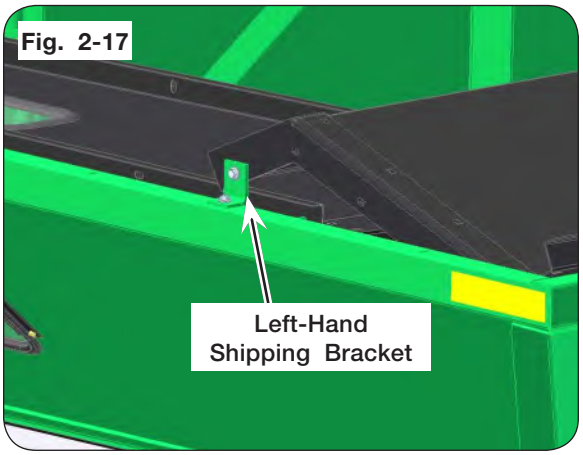


Set Up (continued)

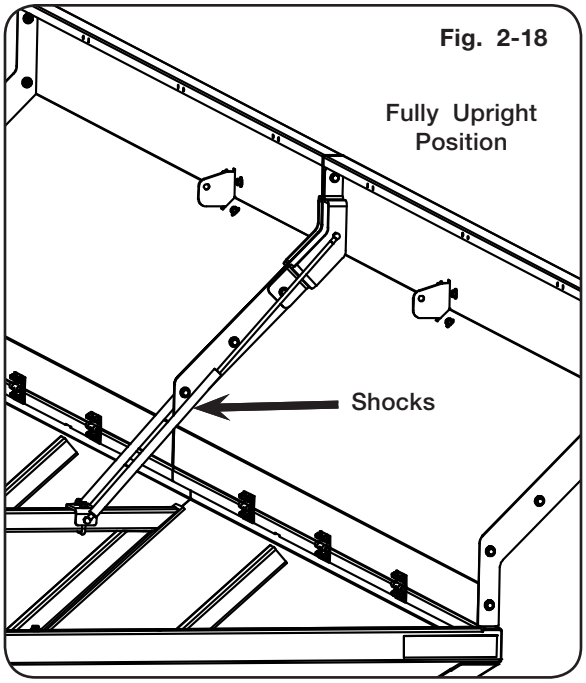
6. Remove and discard shipping bracket for left-hand sideboard, (Fig. 2-17)

7. Lift the left-hand sideboard into position.

NOTE: Hinge brackets WILL support the sideboard and tarp.



NOTE: Shocks are attached to the left-hand sideboard, (Fig. 2-18)



8. Loosely secure left-hand sideboard with 3/8" flange screws and flange nuts along the bottom. (Fig. 2-19)

Sideboards Set Up and Installation (continued)

9. Install brace tubes.

1019 CARTS - ONE PIECE BRACE TUBE: Install sideboard brace tubes on each cross tube weldment. Each weldment will have one left-hand and one right-hand sideboard brace tube. Loosely secure with 3/8" flange hardware. (Fig. 2-20)

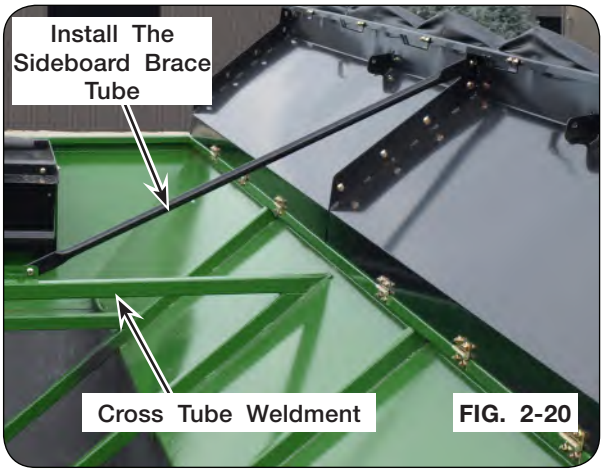


FIG. 2-20

1119 CARTS - TWO PIECE BRACE TUBES: For factory-mounted two-piece brace-tubes, straighten and secure the 2-piece brace tubes with an additional 3/8" flange screw and flange nut. Torque these two screws at this time. (Fig. 2-21)

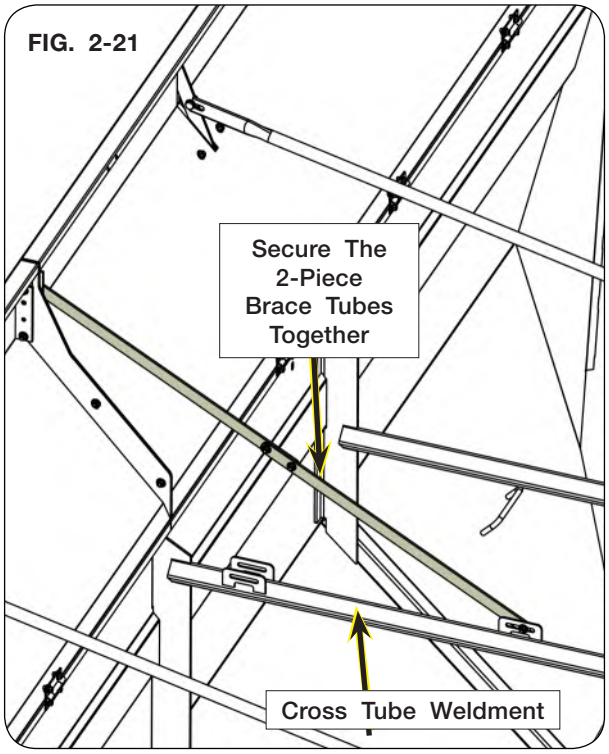


FIG. 2-21

1119 ONLY -
TWO PIECE CROSS CART BRACE TUBES: Install cross-cart, full-width brace tubes. Loosely affix with 3/8" flange hardware. (Fig. 2-20, 2-21, and 2-22)

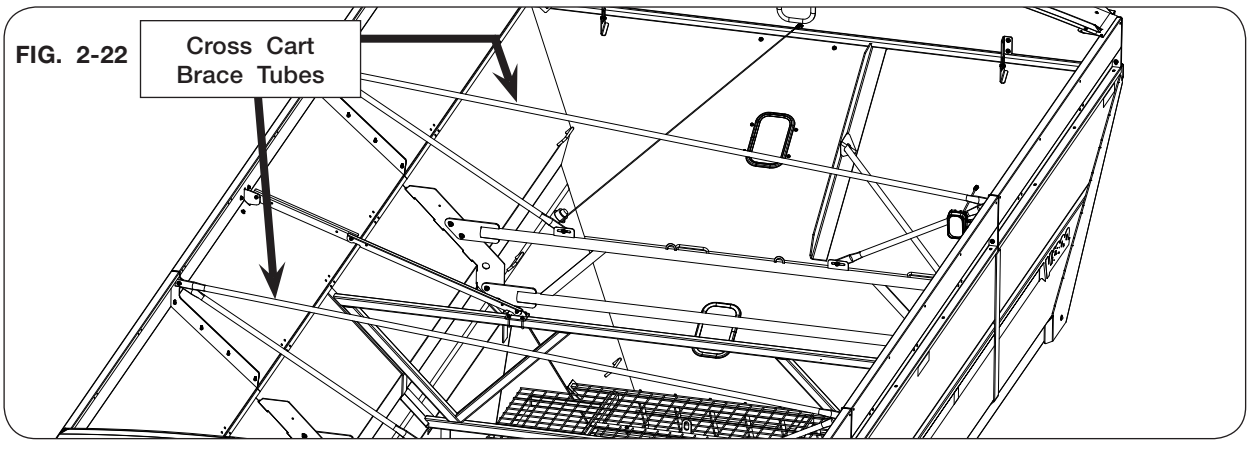


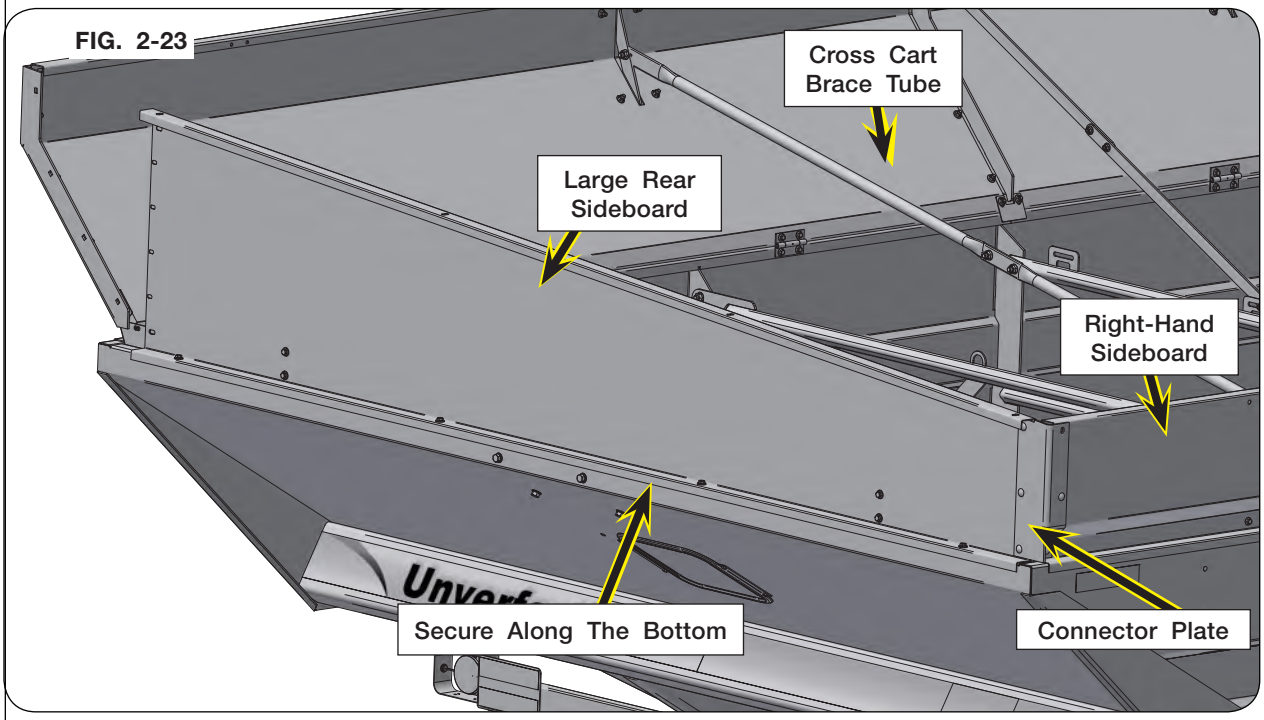
FIG. 2-22

Sideboards Set Up and Installation (continued)

10. For 1119 carts, remove and discard the shocks and associated brackets from the left-hand sideboard.

11. Lift the large rear sideboard up into position and loosely secure with 3/8” flange screws and flange nuts along the bottom. (Fig. 2-23)

FIG. 2-23



12. Connect large rear sideboard to the right-hand sideboard using the connector plate. Loosely secure using 3/8” hardware. (Fig. 2-23)

Sideboards Set Up and Installation (continued)

11. If included, remove and discard the shipping bracket from the small rear panel.

12. Connect the large rear sideboard to the left-hand sideboard using the small rear panel. Loosely secure using 3/8" hardware. (Fig. 2-24)

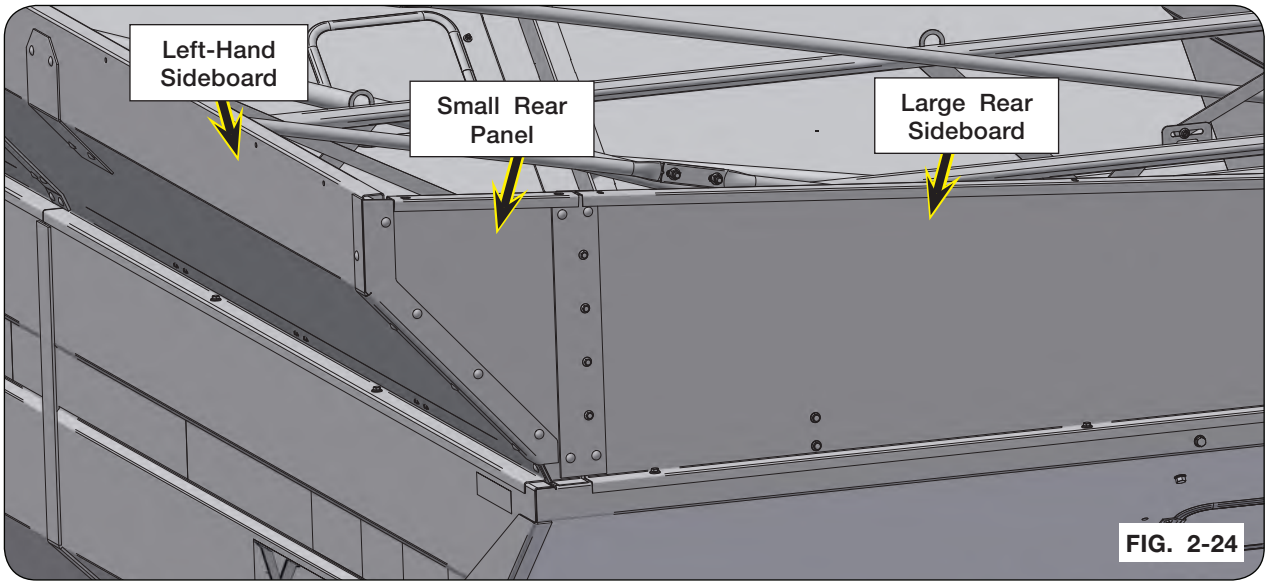


FIG. 2-24

Sideboards Set Up and Installation (continued)

13. Attach smaller end cap on top of rear sideboards using 3/8" hardware and one 1/4" self-drilling screw. (Fig. 2-25)

    NOTE: The small end cap tab will fit underneath the large end cap.

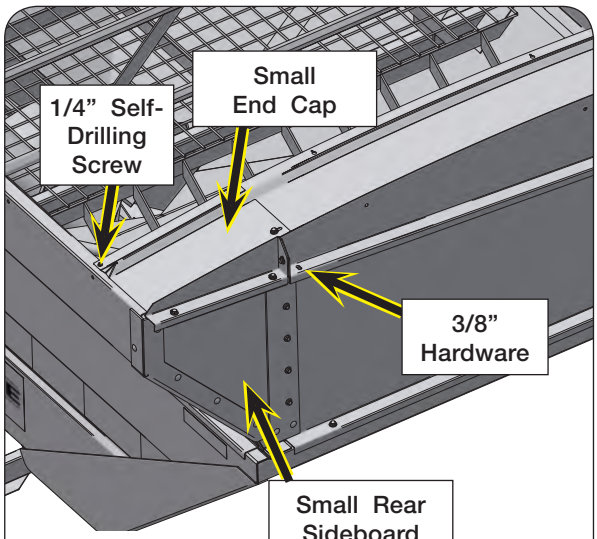


FIG. 2-25

14. Attach larger end cap on top of rear sideboards using 3/8" hardware. (Fig. 2-26)
    NOTE: Tabs on smaller end cap go UNDER the larger end cap.

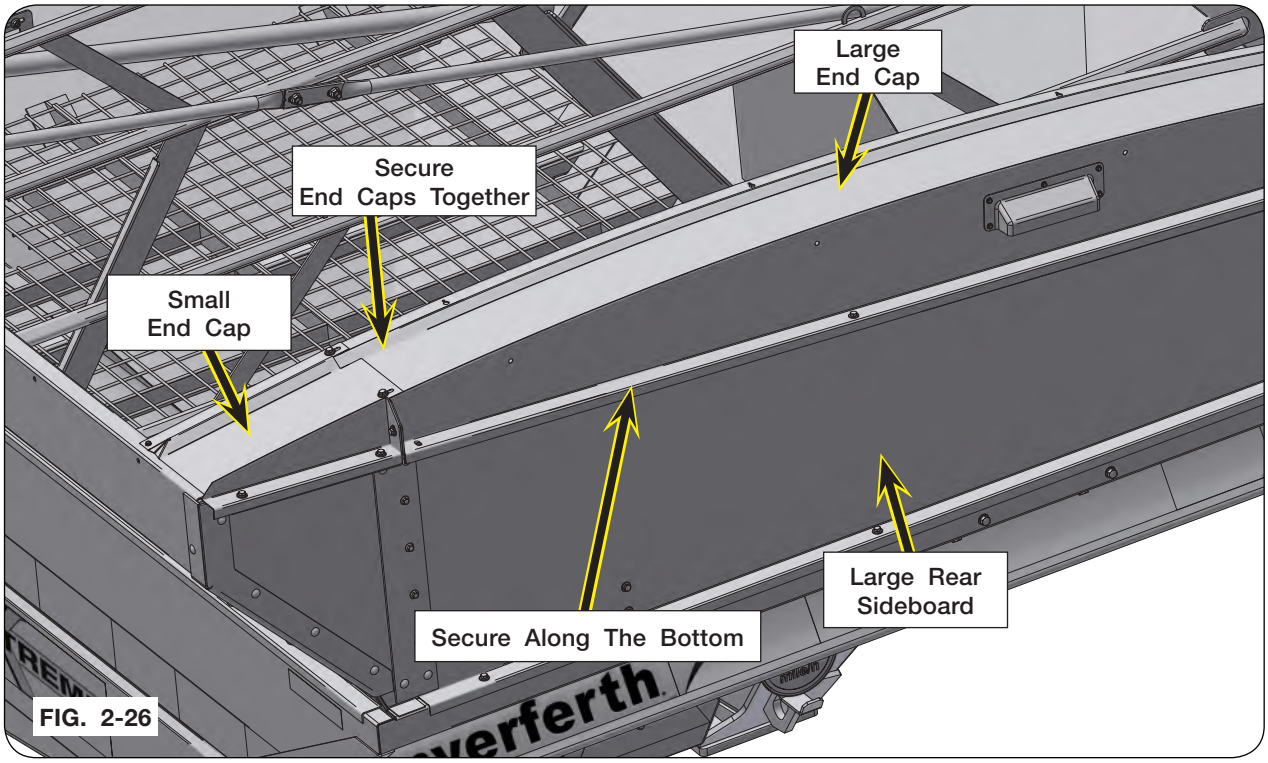


FIG. 2-26

Sideboards Set Up and Installation (continued)

15. Remove and discard the shipping bracket from the front sideboard.

16. Lift large front sideboard into position and loosely secure with 3/8” flange screws and flange nuts along the bottom. See Fig. 2-27.

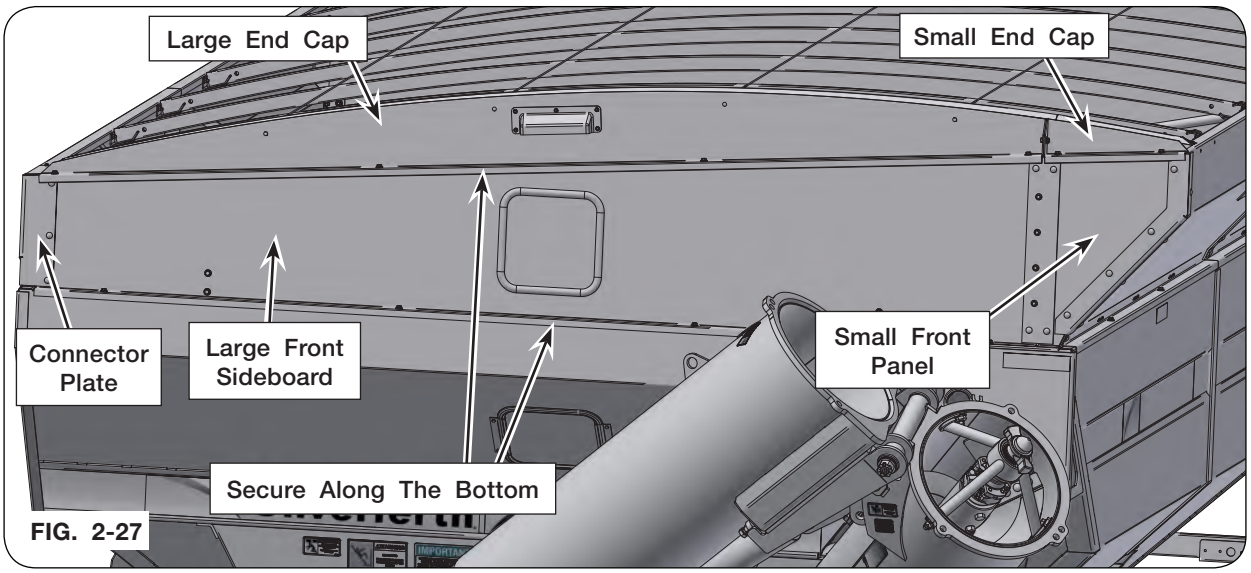


FIG. 2-27

17. Connect large front sideboard to the right-hand sideboard using the connector plate. Loosely secure using 3/8” hardware. (Fig. 2-27)

18. Connect large front sideboard to the left-hand sideboard using the small front panel. Loosely secure using 3/8” hardware. (Fig. 2-27)

19. Attach smaller, end cap on top of front sideboards. (Fig. 2-27)
    NOTE: The small end cap tab will fit underneath the large end cap.

20. Attach larger end cap on top of rear sideboards. (Fig. 2-27)
    NOTE: Tab on smaller end cap go UNDER the larger end cap.

NOTE: DO NOT tighten hardware at this time. Wait until tarp bows are in place before torquing hardware.

Weather Guard Tarp Set Up

WARNING

- **TO PREVENT PERSONAL INJURY OR DEATH, ALWAYS ENSURE THAT THERE ARE PEOPLE WHO REMAIN OUTSIDE THE CART TO ASSIST THE PERSON WORKING INSIDE, AND THAT ALL SAFE WORKPLACE PRACTICES ARE FOLLOWED. THERE IS RESTRICTED MOBILITY AND LIMITED EXIT PATHS WHEN WORKING INSIDE THE CART.**
- **KEEP HANDS CLEAR OF PINCH POINT AREAS.**
- **EYE PROTECTION AND OTHER APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT MUST BE WORN WHILE SERVICING IMPLEMENT.**
- **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 250 LBS. SPECIFIC LOAD RATINGS FOR INDIVIDUAL LOADS WILL BE GIVEN AT THE APPROPRIATE TIME IN THE INSTRUCTIONS.**
- **TIPPING OR MOVEMENT OF THE MACHINE CAN CAUSE SERIOUS INJURY OR DEATH. BE SURE MACHINE IS SECURELY BLOCKED.**

1. Assemble the end caps (286839B) to the front and rear side boards with flange screws (95585) and flange nuts (91263). (Fig. 2-28)

2. Fasten end cap panels (286843B - right-hand front & left-hand rear; 286842B - left-hand front & right-hand rear) to the side board and end cap with 5/16”-18UNC x 3/4” large flange screws (91256), 5/16”-18UNC flange nuts (91257), 1/4”-14 x 1” self-threading screws (9512), 3/8”-16UNC x 1” truss head screws (9005312), and 3/8”-16UNC large flange nuts (91263). (FIG. 2-1)

3. Install Trim-lok on front board. (Fig. 2-28)

NOTE: Ensure that end cap filler panel is set back at least 1/4” back from outside of sideboard to prevent tearing of tarp.

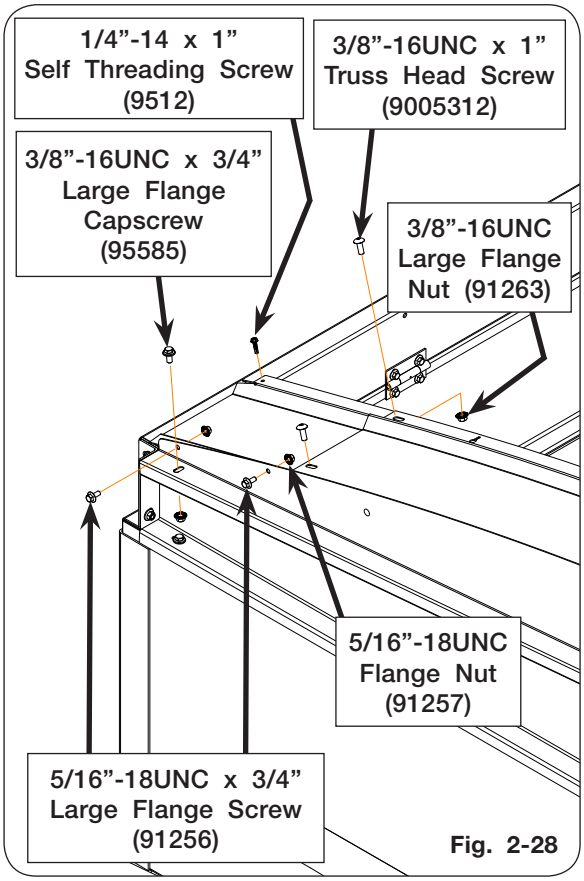


Fig. 2-28

Weather Guard Tarp Set Up (continued)

Tarp Installation

NOTE: For carts SN B41010099 & lower, skip to step 5 on next page.

NOTE: Ensure RH and LH doublers are inside the sideboard lip. (Fig. 2-29).

4. For carts SN B41010100 & higher, assemble the bow brackets (283425B) to the inside, right-hand side of the cart with 5/16”-18UNC x 1” large flange screws (97604) and 5/16”-18UNC flange nuts (91257), RH doubler (289986B), LH doubler (294634B), 3/8”-16UNC x 3” capscrew (902703-046), 3/8”-16UNC flange nut (91263), and 3/8”-16UNC x 1” truss screw (9005312). (Fig. 2-29)

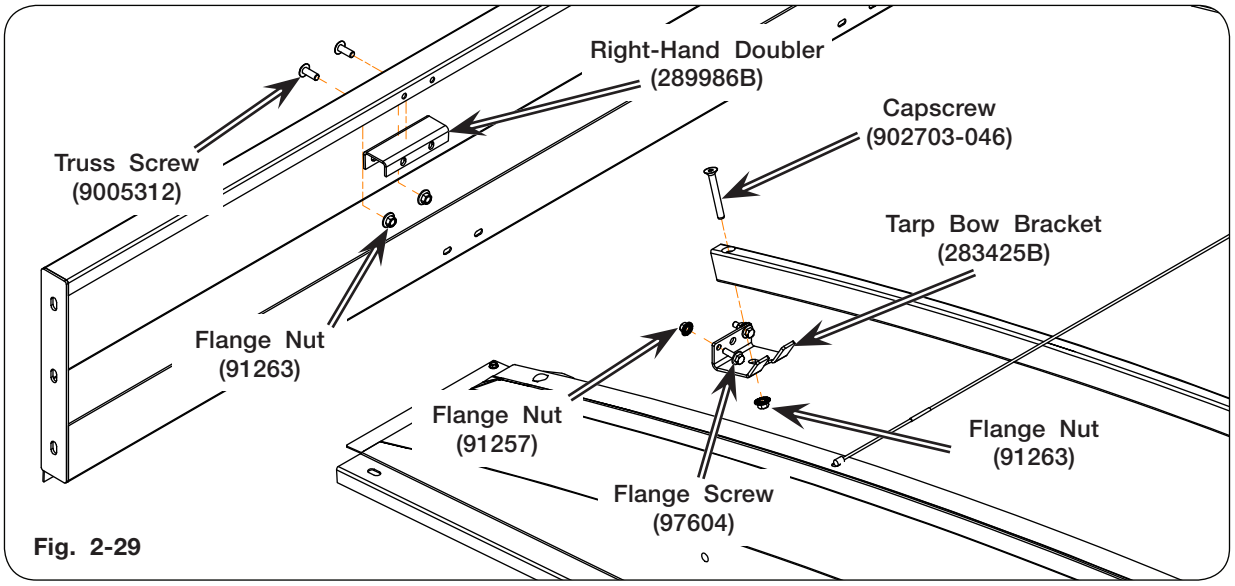
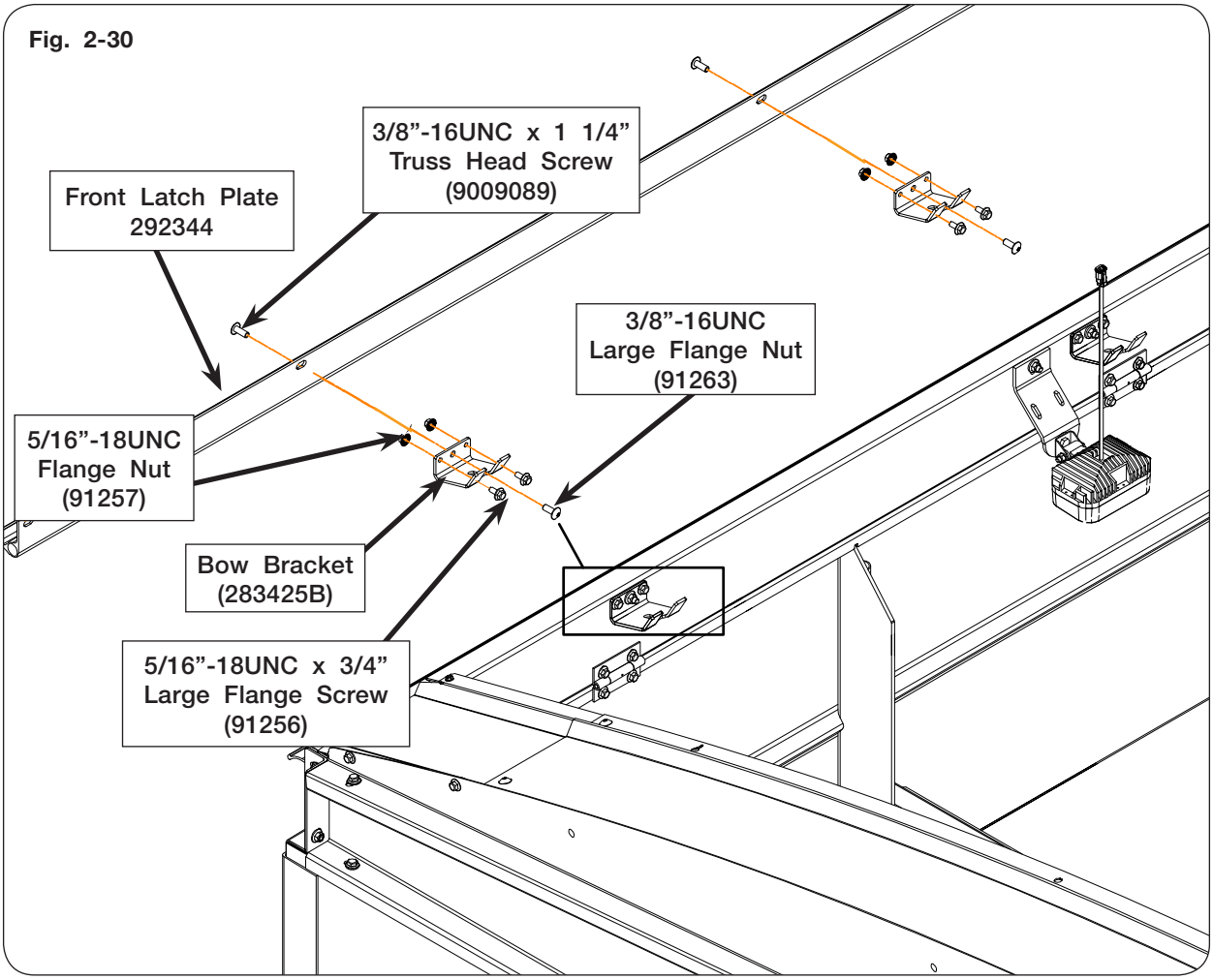


Fig. 2-29

Weather Guard Tarp Set Up (continued)

5. For carts SN B41010099 & lower, assemble the bow brackets (283425B) to the inside, right-hand side of the cart with 5/16”-18UNC x 3/4” large flange screws (91256) and 5/16”-18UNC flange nuts (91257). (Fig. 2-30)

Fig. 2-30



6. Attach the latch plates (296851 - front & 296852 - rear) to the outside, right-hand side of the cart with 3/8”-16UNC x 1 1/4” truss head screws (9009089), 3/8”-16UNC large flange nuts (91263), and through the bow bracket (283425B). (Fig. 2-30)

Weather Guard Tarp Set Up (continued)

7. Secure the front latch plate (292344) to the front of the panel with eyebolt (9004548), 3/8" flat washer (9405-074) and 3/8"-16UNC large flange nut (91263). (Fig. 2-31)

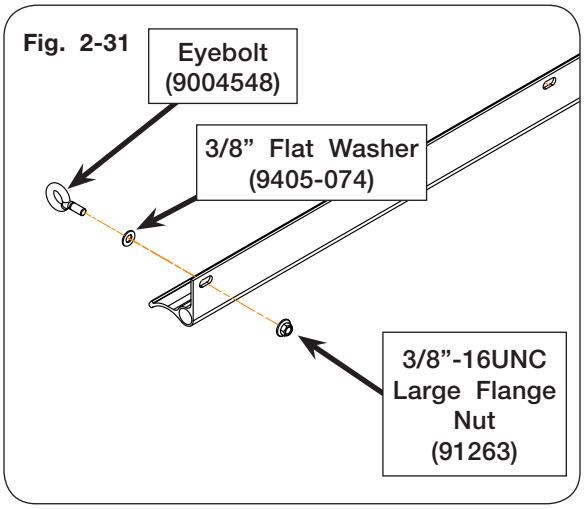


Fig. 2-31

8. For carts SN B41010100 & higher, attach the middle of the front latch plate (296851) with 3/8"-16UNC x 1 1/4" truss head screw (9009089) and 3/8"-16UNC large flange nut (91263). (Fig. 2-32)

9. For all carts, attach the rear of the front latch plate (296851) and the front and rear of the rear latch plate (296852) with 3/8"-16UNC x 1" truss head screws (9005312) and 3/8"-16UNC large flange nuts (91263). (Fig. 2-32)

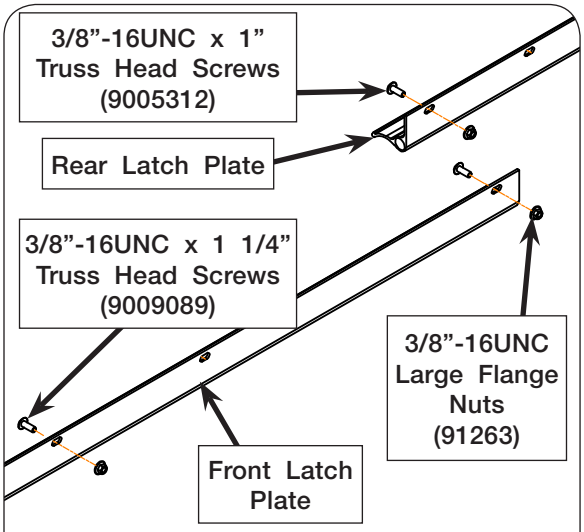


Fig. 2-32

NOTE: For carts SN B41010100 & higher, ensure sideboard doublers (294634B) are inside the left-hand sideboard lip. (Fig. 2-33).

10. For carts SN B41010100 & higher, assemble the bow brackets (283427B) and sideboard doubler (294634B) to the left sideboard with 5/16"-18UNC x 1" large flange screws (97604) and 5/16"-18UNC flange nuts (91257). (Fig. 2-32)

11. For carts SN B41010099 & lower, assemble the bow brackets (283427B) to the left sideboard with 5/16"-18UNC x 3/4" large flange screws (91256) and 5/16"-18UNC flange nuts (91257). (Fig. 2-33)

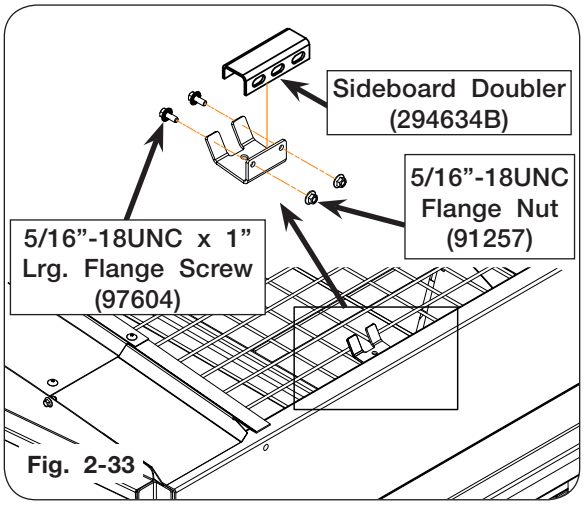


Fig. 2-33

Weather Guard Tarp Set Up (continued)

12. Install 3/8”-16UNC x 3” capscrews (902703-046) and 3/8”-16UNC flange nuts (91263) to both sides of tarp bow (283424B). (Fig. 2-34)

NOTE: Ensure capscrew head (902703-046) is flush with the top of tarp bow (283424B) (Fig. 2-34).

13. Tighten all hardware.

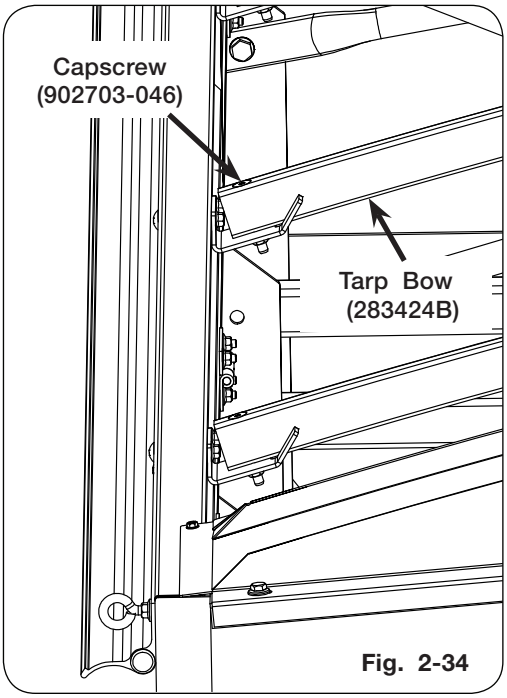


Fig. 2-34

Weather Guard Tarp Set Up (continued)

14. *(2-person operation)* On a clean floor, lay the tarp out flat with the raw edge of the hems and pockets down and the exterior side facing up.

15. Insert the small 1 1/8" tube (292346) by sliding it into the small pocket of the tarp. Leave 1" of the tube sticking out one end and drill a 3/16" hole through the center of the outer reinforcement strap and tube. Fasten with self drilling scew (9005197). At the other end, pull on the tarp by hand to stretch it until there is 1" of tube sticking out. Drill hole and install rivet. Press the 1 1/8" plugs (9005088) into each end of the tube (Fig. 2-35 and Fig. 2-36).

INSTALLATION TIP:
Tarp is designed to be stretched the length of the tube to reduce wrinkling. For easier assembly apply liberal dusting of baby powder on tube and inside of tube pockets before sliding tubes in pockets.

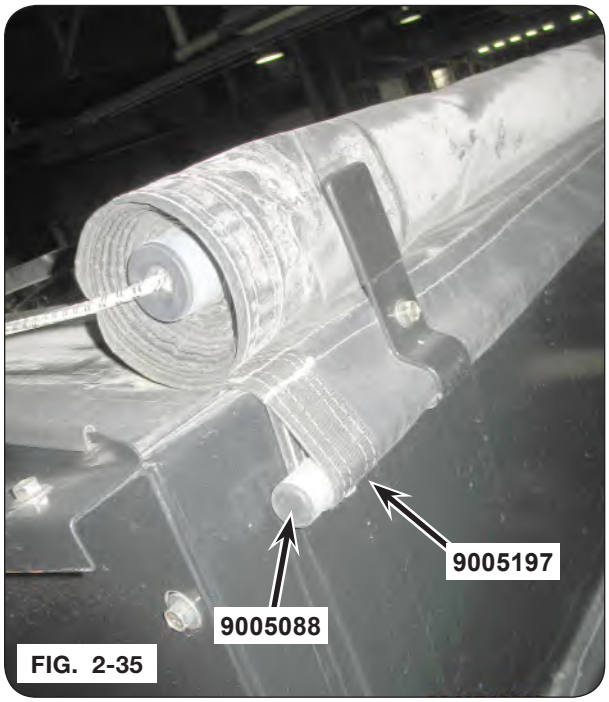


FIG. 2-35

Insert the 2" roll tube into the large pocket, with the splined shaft to the rear. Measure 10 1/2" from the end of the spline to the start of the tarp. Install the first U-clamp (9004949) and self-drilling screws (9005197) to the first reinforcement strap, to secure the tarp to the tube. Work down the roll tube putting the U-clamps and self-drilling screws on each reinforcement strap. Make sure to keep the tarp pulled tight to reduce wrinkling. (Fig. 2-36).

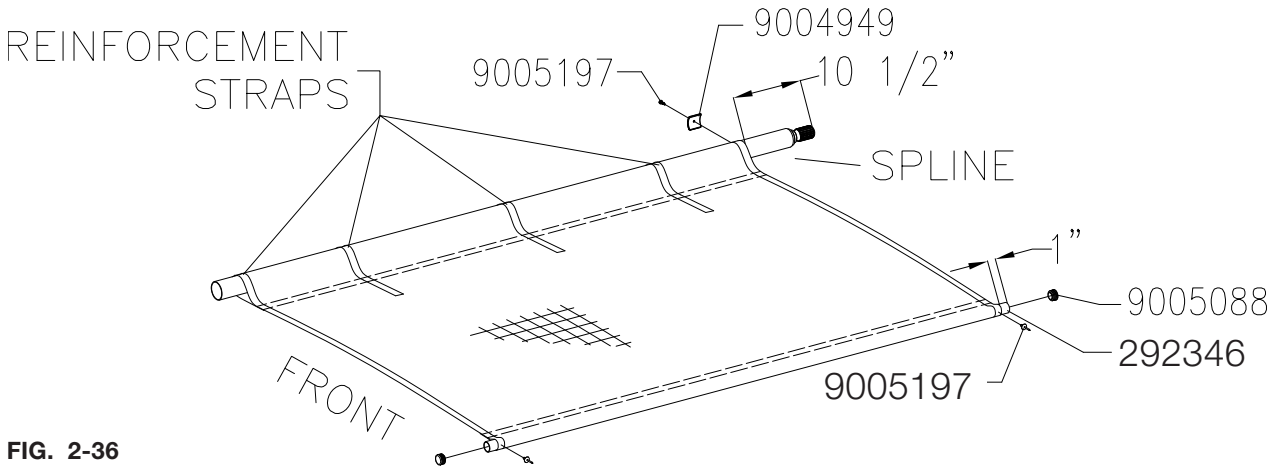


FIG. 2-36

Weather Guard Tarp Set Up (continued)

16. Insert knotted stretch rope/bungee (221722) through flat washer (9405-074), plastic tube (221668), end plug (9004947) and hose (TA806225). Place these items as an assembly into front end of 2" tube (294870) and press the end plug (9004947) into the end of the tube. Screw self-drilling screw (9001396) through the roll tube into end plug (9004947) to retain the end plug. (Fig. 2-37 and Fig. 2-38).

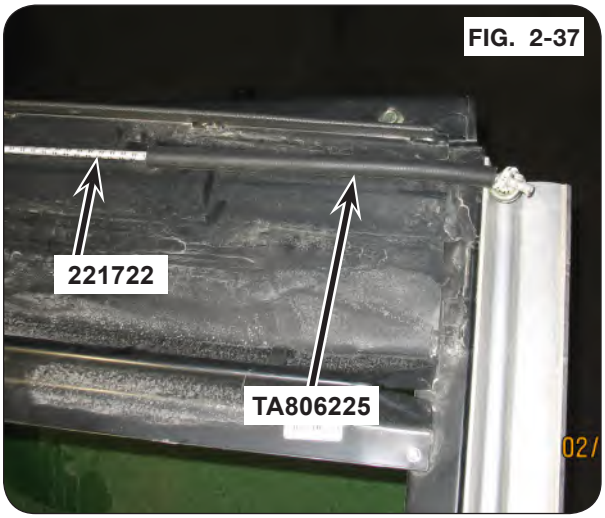


FIG. 2-37

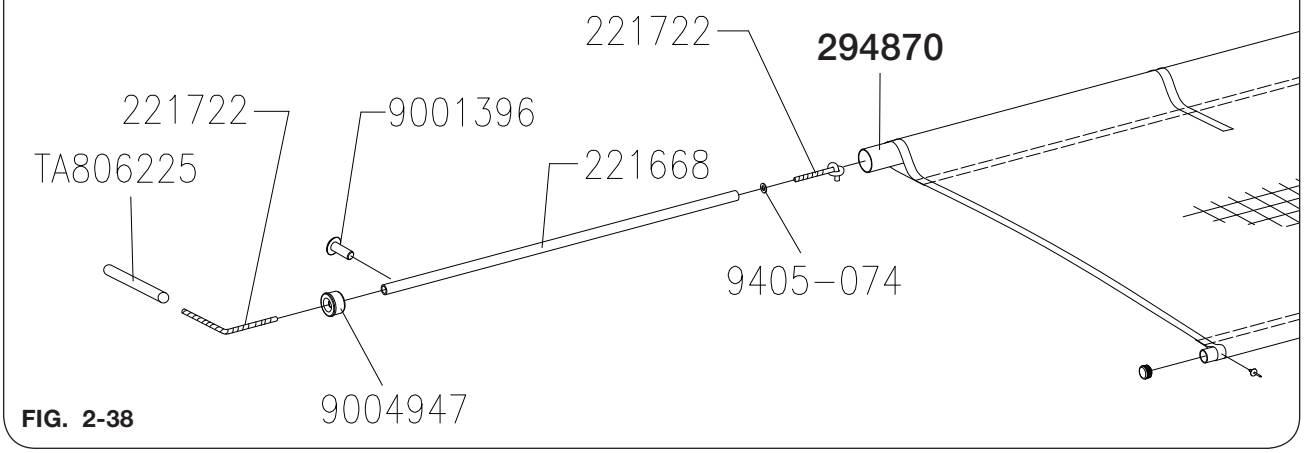


FIG. 2-38

17. Unroll the tarp and insert stretch cord through the top of the eye bolt (9004548) and knot off (Fig. 2-39).

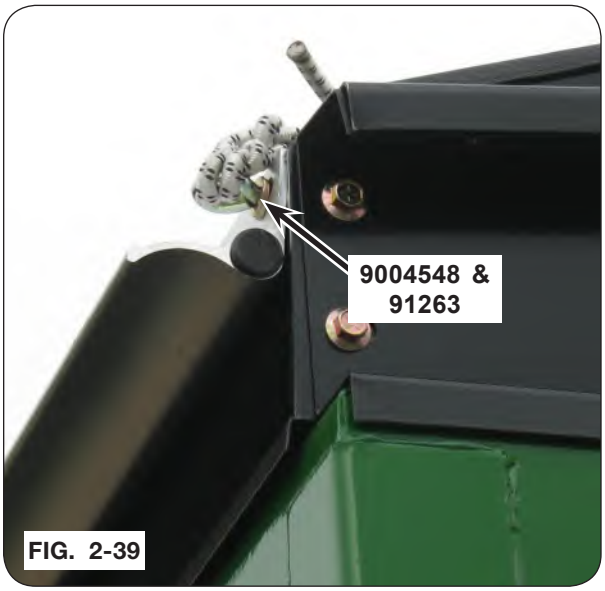


FIG. 2-39

Weather Guard Tarp Set Up (continued)

18. Insert U-joint (9004977) over splined coupling (221604) and secure with wire lynch pin (9005305). Insert tarp handle weldment (221749) into U-joint and secure with roll pin (9392-180). (Fig. 2-40).

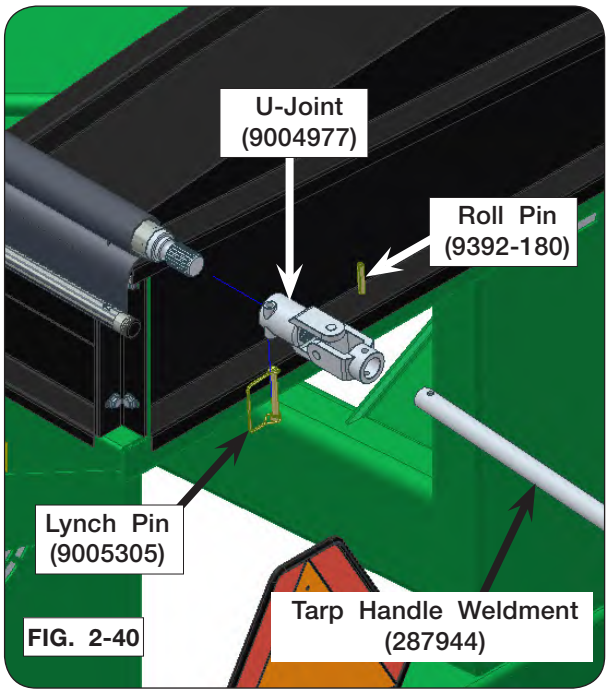


FIG. 2-40

19. Using a safe lifting device rated for a minimum of 250 lbs., position the tarp on top of the left hand side of the cart. Hand roll the tarp into open position. Place the 1" stationary tube side of the tarp on top of the left side of the box, centered from front to back of box. BE CAREFUL NOT TO LET THE TARP ROLL OFF OF THE BOX. Assemble the tarp, spacers (295183B), and stops (266689B) with caps (9003078) to the left sideboards and fixed tube weldment (292346) by poking a hole through the tarp and secure using capscrews 3/8-16UNC x 1 1/4 (9003259 for SN B41010100 & higher); capscrews 3/8-16UNC x 3/4 (95585 for SN B41010099 & lower) and large flange nuts (91263) (Fig. 2-41).

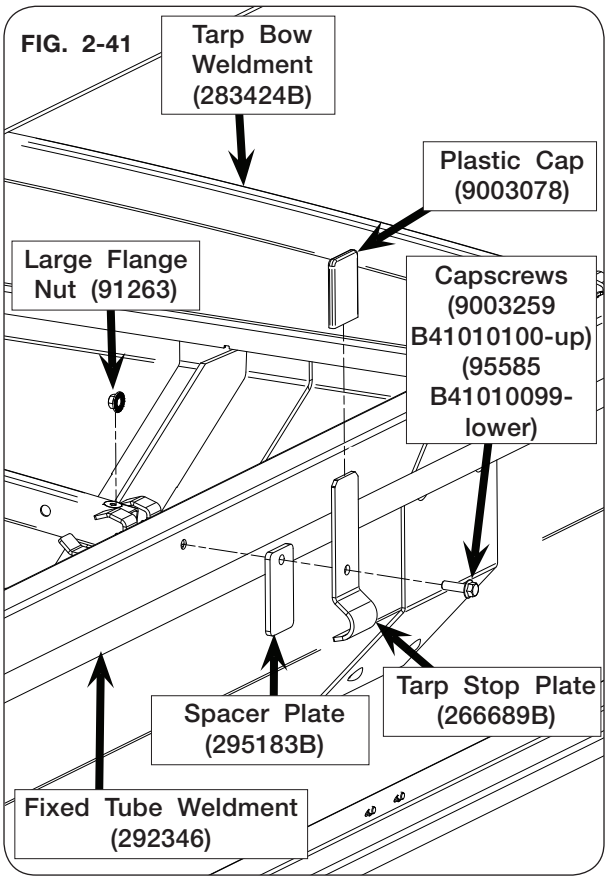


FIG. 2-41

Weather Guard Tarp Set Up (continued)

20. Insert phillips head screw (903172-450) into bottom hole of tarp handle weldment (287944) and slide the plastic handle (9004969) onto bolt securing with locknut (9398-012). Insert 1 1/4" plug (9005089) into end of handle (Fig. 2-42).

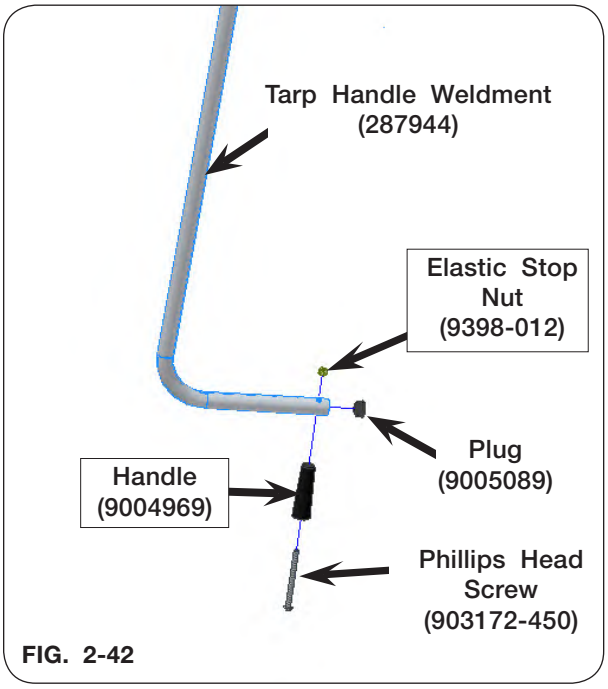


FIG. 2-42

21. Locate the crank holder weldment (265706B) underneath the rear perimeter, centered on the cart and secure using capscrews 1/2-13UNC x 1" (9390-099) and flange lock nuts 1/2" (9002058) as shown in (Fig. 2-43).

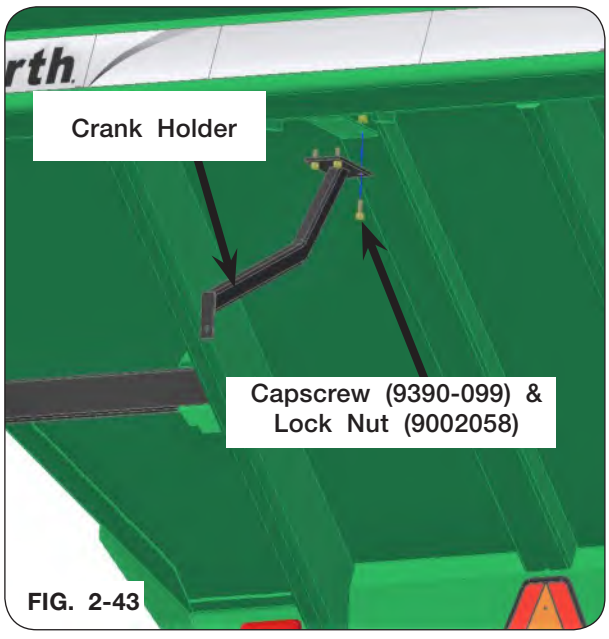


FIG. 2-43

Weather Guard Tarp Set Up (continued)

22. Attach the handle retainer (221770B) to offset bracket (221700B) using 3/8-16UNC x 1" capscrew (9390-055) and 3/8-16UNC locknut (9928). Attach extension channel (265743B) to crank holder weldment (265706B) and offset bracket using 3/8-16UNC x 1" flange screws (91262) and 3/8-16UNC locknuts (91263) as shown in (Fig. 2-44). Place crank handle in the handle retainer.

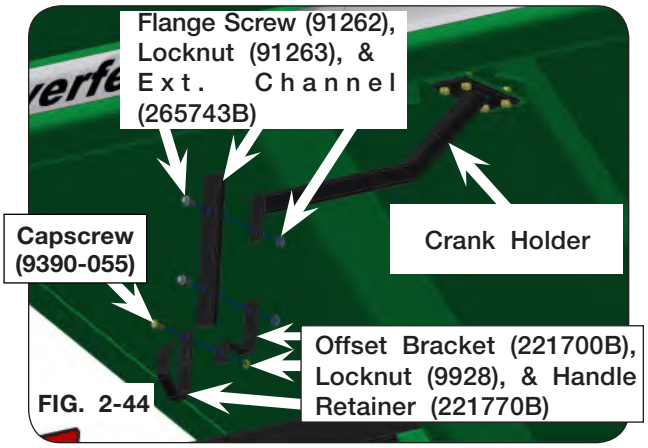


FIG. 2-44

NOTE: A slight bow in the crank tube should indicate adequate tension.

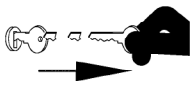
NOTE: U-Joint may need to be re-indexed on the splined shaft of the roll tube to achieve an ideal tarp tension. Over time it may need to be readjusted.

Adjustable Axle Set Up and Settings

WARNING

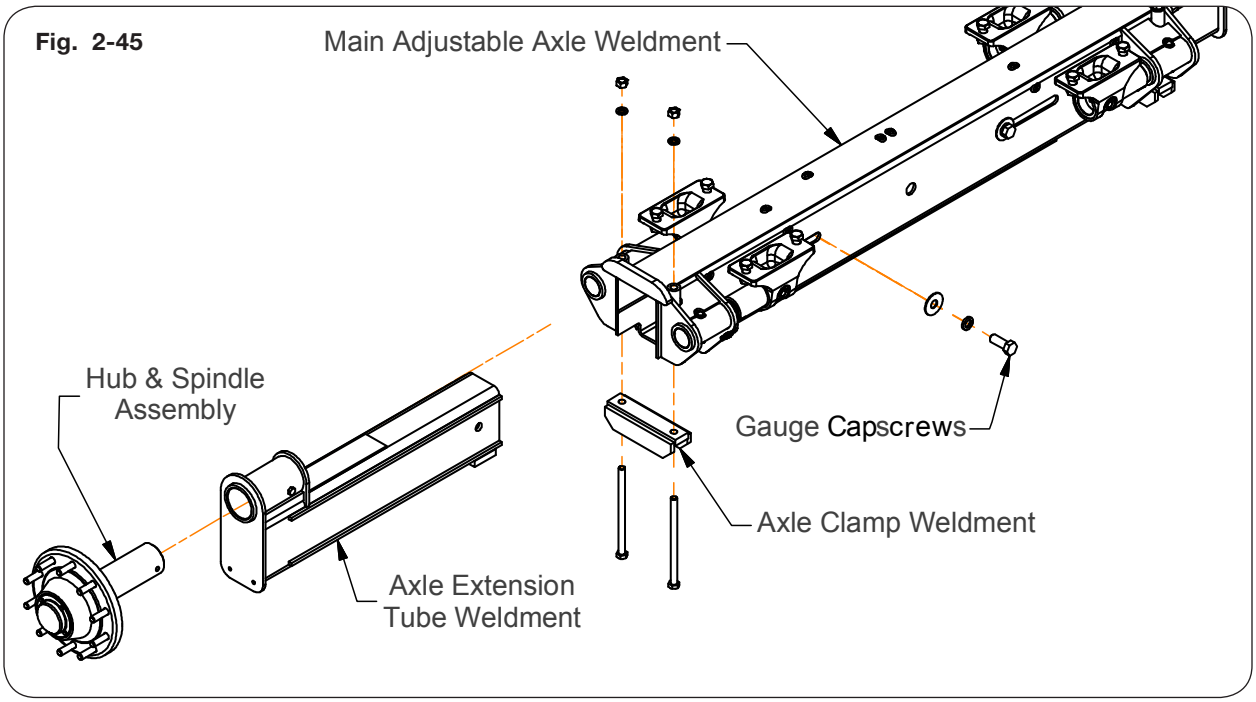
- **FALLING OBJECTS CAN CAUSE SERIOUS INJURY OR DEATH. DO NOT WORK UNDER THE MACHINE AT ANY TIME WHILE BEING HOISTED. BE SURE ALL LIFTING DEVICES AND SUPPORTS ARE RATED FOR THE LOADS BEING HOISTED. THESE ASSEMBLY INSTRUCTIONS WILL REQUIRE SAFE LIFTING DEVICES UP TO 16,000 LBS. SPECIFIC LOAD RATINGS FOR 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 IMPLEMENT.**
- **KEEP HANDS CLEAR OF PINCH POINT AREAS.**
- **TIPPING OR MOVEMENT OF THE MACHINE CAN CAUSE SERIOUS INJURY OR DEATH. BE SURE MACHINE IS SECURELY BLOCKED.**

1. Hitch cart to tractor. Park the empty unit on a firm, level surface. Set the tractor's parking brake, shut-off engine and remove the ignition key.



2. Using a safe lifting device rated for a minimum of 16,000 lbs. and supports rated at 8,000 lbs. minimum, raise the cart and place supports under the axle near the axle clamps.
3. Loosen axle clamp weldment and axle gauge bolts. Do not remove. (Fig. 2-45)

Fig. 2-45



Adjustable Axle Set Up and Settings (continued)

4. Slide extensions to desired tire gauge spacing. Axle extensions should be extended equally. Refer to chart below and (Fig. 2-46).

Tire Size	Slide Out Distance (From end of the main axle tube to inside of the extension weldment end cap plate.)	Distance Hub Flange to Hub Flange	Distance End to End
900/65R32	11 3/4”	132”	143”
900/70R32	12 3/4”	134”	145”
1050/50R32	13 3/4”	138”	149”
1250/50R32	20 3/4”	148”	159”

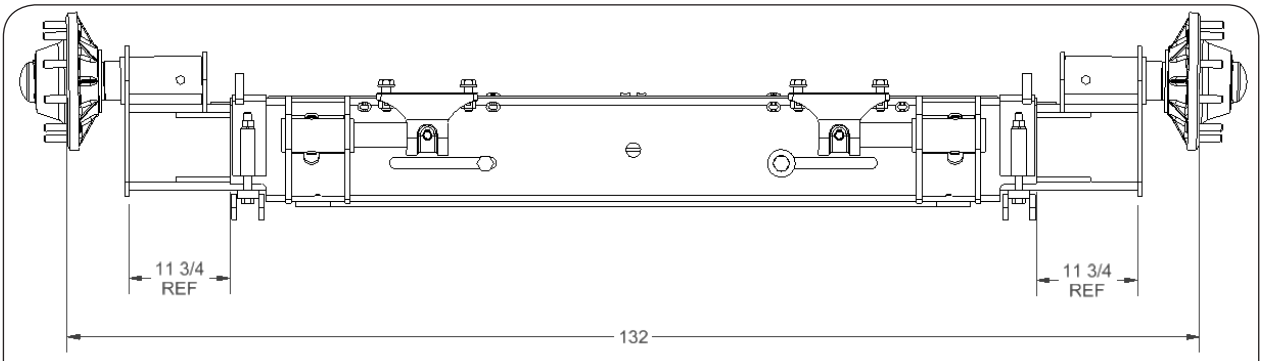
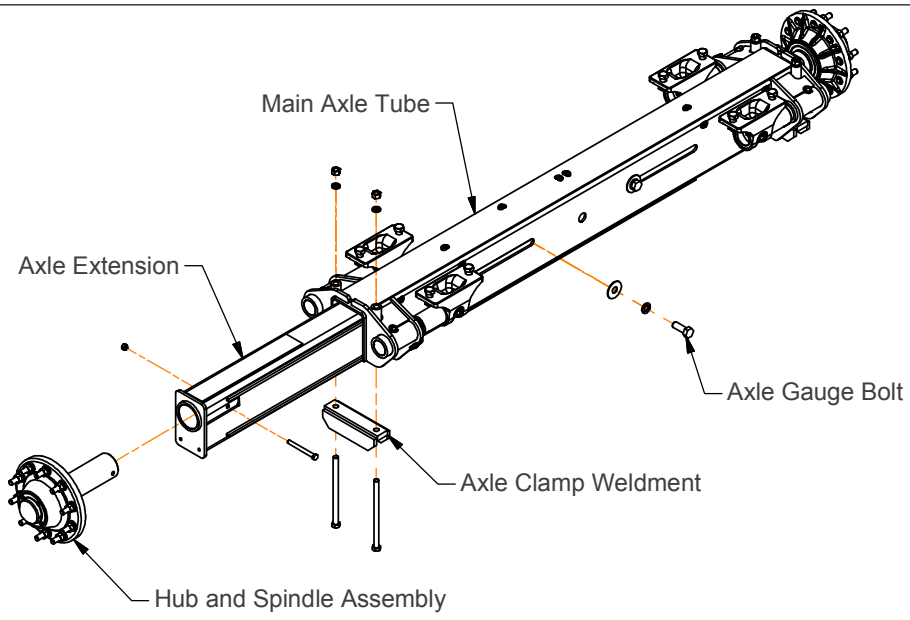


FIG. 2-46

5. Tighten axle gauge bolts followed by axle clamp bolts, refer to MAINTENANCE section for proper torque specifications. (Fig. 2-47)

FIG. 2-47



6. Remove supports and lower cart to ground.

NOTE: If tires are positioned at a wider tread width, make sure lights are also moved out to within 16” of the outside of tires. Refer to page 2-6 for details.

Operational Check

WARNING

- **MOVING OR ROTATING COMPONENTS CAN CAUSE SERIOUS INJURY OR DEATH. ENSURE SERVICE COVERS, CHAIN/BELT COVERS AND CLEAN-OUT DOOR ARE IN PLACE AND SECURELY FASTENED BEFORE OPERATING UNIT.**

IMPORTANT

- *Before running the auger, inspect and verify all grain dust and filings are removed from inside the lower auger to prevent machine damage and the cleanout door is completely closed.*

NOTE: For cleanout door assembly adjustment, refer to "Adjusting Cleanout Door" in the MAINTENANCE section.

Once set-up has been completed, run the cart to check for operation and functionality:

1. Lights - Work, Turn, Brake
2. Flow Door
3. Flow Door Indicator
4. Auger Fold
5. Spout Rotate & Pivot (if applicable)
6. Auger Startup & Shut-down
7. Brakes (if applicable)

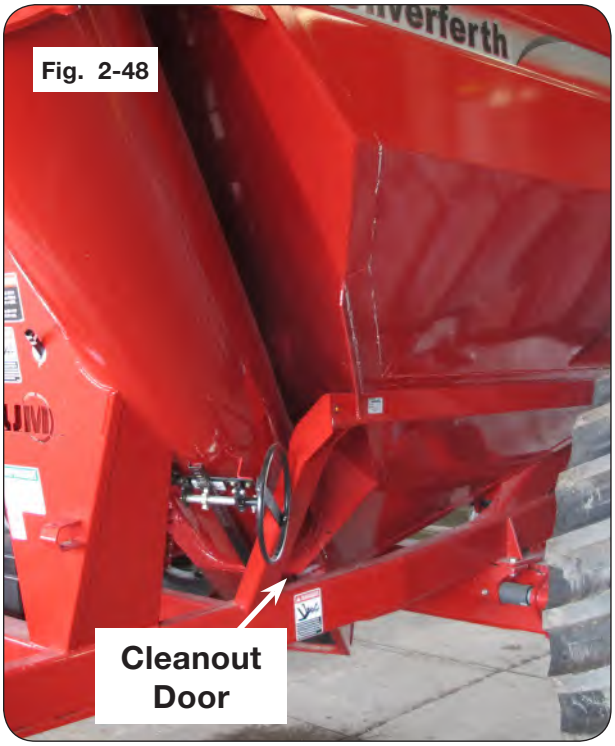


Fig. 2-48

SECTION III
Operation

FOR TRACK INFORMATION, PLEASE REFER TO YOUR TRACK MANUAL.
FOR SCALE INFORMATION, PLEASE REFER TO YOUR SCALE MANUAL.
FOR HYDRAULIC DRIVE INFORMATION, PLEASE REFER TO YOUR HYDRAULIC DRIVE MANUAL.
FOR ELECTRIC TARP INFORMATION, PLEASE REFER TO YOUR ELECTRIC TARP MANUAL.

Pre-Operation Checklist

- ❑ Read and understand all safety precautions before operating cart.
- ❑ Set or Calibrate tractor PTO control engagement to MINIMUM setting. Refer to tractor operator's manual for setting information.
- ❑ Torque wheel nuts and check tire pressure as specified in MAINTENANCE section.
- ❑ Verify track has been aligned and is properly conditioned. (If applicable)
- ❑ Inflate tires to specified air pressure. (if applicable)
- ❑ Lubricate all grease fittings and check gearbox oil level.
- ❑ Inspect cleanout door assembly for play or movement, refer to "Adjusting Cleanout Door" in the MAINTENANCE section.
- ❑ Test operation and functionality of flow door, flow door indicator, auger fold, auger pivot, upper auger chute rotation, rotational limiter in unloading position and chute tilt movement.
- ❑ Verify all the reflective decals are correctly located.
- ❑ Check SMV sign and SIS decals are clearly visible with the cart attached to the tractor.
- ❑ Verify transport lights are working properly. Check and follow all regulations before towing on a road or highway.
- ❑ Verify that hitch height and length when attached to the tractor are sufficient to prevent severe bends in PTO U-joint angles.
- ❑ Verify PTO length, see "Verify Telescoping PTO Shaft Length" in MAINTENANCE section.
- ❑ Ensure safety screens are in place and properly secured.
- ❑ Install transport chains and torque hardware to specification. See "Transport Chain Connection" in OPERATION section.
- ❑ Test run the augers. See "Auger Operation" in OPERATION section.

Preparing Tractor

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

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

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

Check if the tractor has multiple PTO engagement modulation settings and has the latest PTO engagement software from the OEM. If unsure, contact your local dealer for tractor capabilities and recommended setting for grain cart operation.

Verify that the tractor is adequately ballasted for drawbar operation at the anticipated draft load. See tractor manual for ballasting instructions.

If possible, adjust the tractor drawbar vertically so the topside of the drawbar is approximately 17-22 inches from the ground. Ensure that the drawbar is locked in the center position.

On tractors equipped with a 3-point hitch, raise and secure the linkage to prevent interference with the cart tongue, hydraulic hoses, and PTO during turning. It may be necessary to remove tractor 3-point quick attach to avoid damage during turning.

Preparing Cart

Perform the service checks in the Preparing Cart section. 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.

Hitch

Check hitch wear plates for damage and wear. Be aware of the size of hitch adapter bushing that is being used. Select correct size for the hitch pin/draw bar you are using.

NOTE: The cart comes standard with a Category 4 hitch. A Category 5 tongue is available. Contact your dealer for a CAT 5 tongue if required. Check that the drawbar is in the required 20" position and will adequately support loads.

Preparing Cart (continued)

Auger Driveline Assembly

NOTE: Ends of driveshaft are symmetrical.

1. Slide driveshaft down into the universal joint attached to the gearbox until the end of the shaft extends into the universal joint about 2 3/8". Ensure universal joint and driveshaft splines completely engage. Verify the hitch end for adequate length for driveline assembly to connect. (Fig. 3-1 and 3-3)
2. Tighten all flangette mounting hardware.
3. With bearing mounting hardware completely tightened, drill a setscrew dimple in the driveshaft by going through the bearing setscrew threaded hole to dimple the driveshaft being careful to not damage threads. Drill the dimple to a depth that setscrews are flush with the bearing prior to applying blue thread locker and installing setscrews. (Fig. 3-1)
4. For alignment of the yoke, the orientation of the universal joint at the gearbox must be in line with the driveshaft drill dimple when the driveline assembly is attached. (Fig. 3-1, 3-2, and 3-3)
5. Install the universal joint cover to the bearing flange mounts. Review to ensure PVC driveshaft covers and driveline cover located behind the ladder are in place prior to operation.
6. Apply blue thread lock on bearing setscrews and tighten.

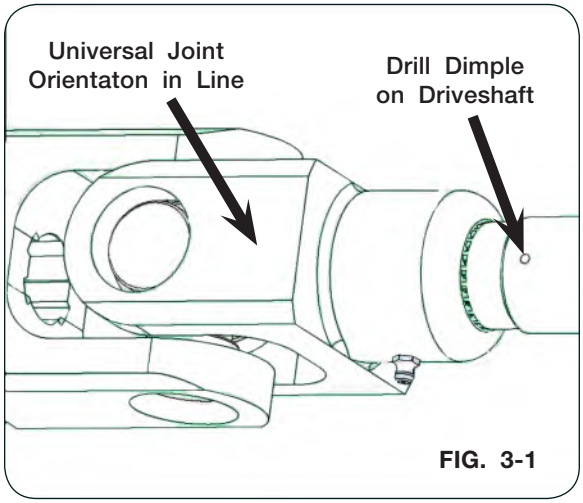


FIG. 3-1

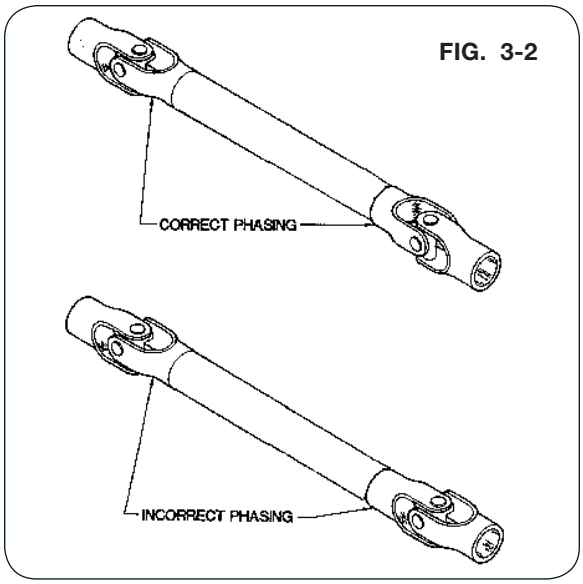
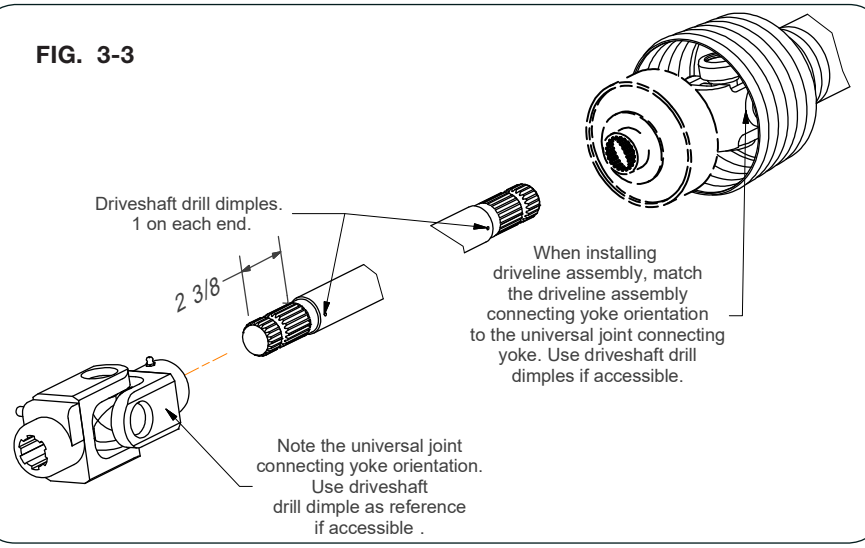


FIG. 3-2

FIG. 3-3



Preparing Cart (continued)

Auger

Inspect auger for damage and wear.

Hydraulic System

Check all hoses and cylinders for signs of leakage. Hoses should not be kinked, twisted or rubbing against sharp edges. Re-route or repair hoses as necessary. Refer to SAFETY section for additional information on safe repair and inspection of hydraulic components.

Optional Hydraulic Brake System

On carts equipped with the optional hydraulic brake system, ensure hose is properly connected to the tractor's hydraulic trailer brake coupler. Consult your tractors Operator's Manual or your tractor dealer for more information.

Tires/Wheels

Check tire pressures and maintain at recommended values listed in the MAINTENANCE section of this manual.

⚠ 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.**

IMPORTANT

- *Installing wheels without the proper inset/offset could result in hub or spindle failure. This will cause substantial damage to cart and is not covered by warranty. Inset/offset will vary depending on tire size. Consult dealer for proper inset/offset.*
- *Single tire hubs and spindles are slid in for shipping and need to be slid out before attaching wheels/tires to provide adequate clearance between tires and wheel wells.*

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.

Lubrication

Lubricate the cart as outlined in the MAINTENANCE section of this manual.

Video System (Optional)

IMPORTANT

- *Do not operate video system below 15°F. Damage to video system can occur.*

The video system includes its own operation instruction sheet.

Hitching to Tractor

Drawbar Connection

This cart is intended to be hitched to a tractor drawbar. Do not attempt to hitch to any other location on the tractor other than the drawbar.

The cart comes with a CAT 4 hitch for use with a 1 1/2" pin and designed for a clevis-type tractor drawbar. If a 1 1/2" or 1 3/4" diameter hitch pin is used, a corresponding bushing must be inserted into the hitch tang and held in place with o-rings. If a bushing is already in the hitch, use a punch and hammer to remove and replace with the correctly sized bushing. (Fig. 3-4)

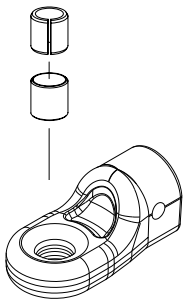


FIG. 3-4

NOTE: Use of the proper hitch pin/bushing will prevent excessive wear and tear on both the cart and tractor.

NOTE: Bushings and o-rings are stored in the toolbox on the front right-hand side of cart.

Lock tractor drawbar in center position.

Set tractor drawbar length to 20" from the end of the tractor PTO shaft to center of hitch tang pinhole.

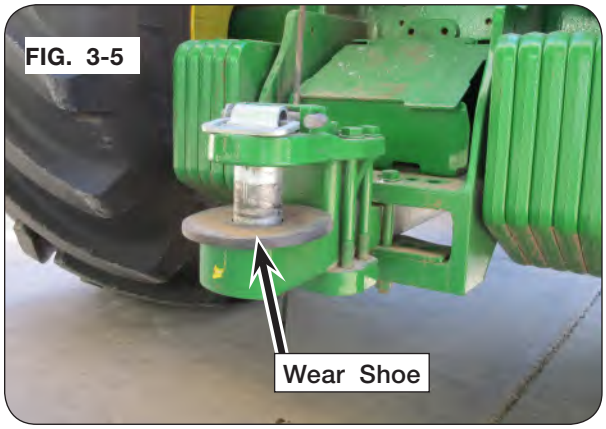


FIG. 3-5

⚠ WARNING

- **DO NOT STAND BETWEEN THE CART AND TOWING VEHICLE WHEN HITCHING. ALWAYS ENGAGE PARKING BRAKE AND STOP ENGINE BEFORE INSERTING HITCH PIN.**

Place wear shoe (281663-CAT 3; 281898-CAT 4) between tractor hitch and grain cart hitch. (Fig. 3-5)

After inserting drawbar pin, secure drawbar pin with a locking device to help prevent uncoupling during use.

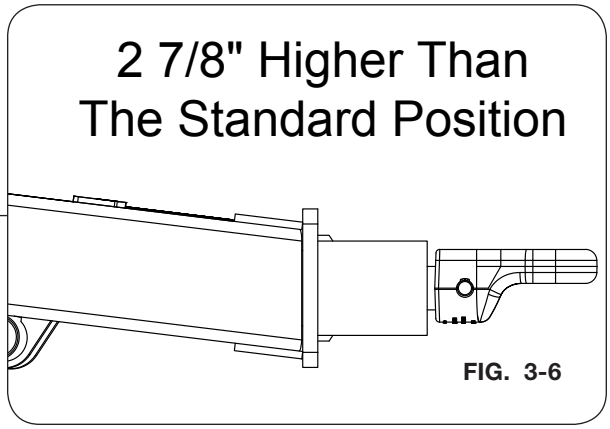


FIG. 3-6

NOTE: Hitch tag can be flipped providing a drawbar connection height difference of 2 7/8" (Fig. 3-6). Position the hitch tag to help assure a level cart when loaded, or the rear of the hopper slightly higher than the front, to maintain rear slope cleanout. Whenever the hitch tag is flipped, the driveline clearance need to be reviewed.

Jack Usage

⚠ WARNING

- **UNHITCHING A LOADED GRAIN CART CAN CAUSE SERIOUS INJURY OR DEATH DUE TO THE TONGUE RISING OR FALLING. ALWAYS HAVE A LOADED GRAIN CART ATTACHED TO A TRACTOR. THE JACK IS INTENDED TO SUPPORT AN EMPTY GRAIN CART ONLY.**

IMPORTANT

- *When hitched to a tractor, store the jack on the left-hand frame rail with the top end of the jack towards the hitch. Failure to store the jack in transport position could result in damage to the jack, cart, or tractor tire. (Fig. 3-8)*

Use the jack provided to support an empty grain cart, never a loaded grain cart. (Fig. 3-7)

Always have a loaded grain cart hooked to tractor.

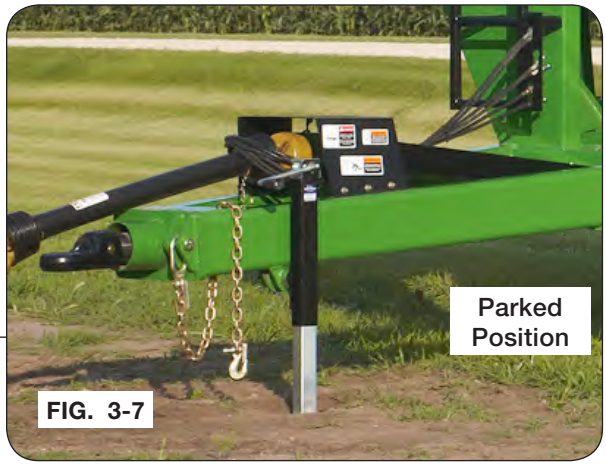


FIG. 3-7

FIG. 3-8

Transport Chain Connection

CAUTION

- **ALWAYS USE TRANSPORT CHAIN WHEN TRANSPORTING IMPLEMENTS. FAILURE TO USE A TRANSPORT CHAIN COULD CAUSE PERSONAL INJURY IF CART BECOMES DISENGAGED.**

IMPORTANT

- *Replace transport chain if any link or end fitting is broken, stretched, or damaged. DO NOT WELD TRANSPORT CHAIN.*

Tractor must be equipped with a transport chain support. Always use intermediate support when connecting cart directly to a tractor. DO NOT use the intermediate chain support as the chain attaching point. Figure 3-9 shows how the transport chain must be installed between cart and tractor.

The chain is rated for towing the grain cart empty on public roads. Never tow a loaded grain cart on public roads. Use only ASABE approved chains. Allow no more slack in chain than necessary to permit turning.

FIG. 3-9

Hydraulic Connections

IMPORTANT

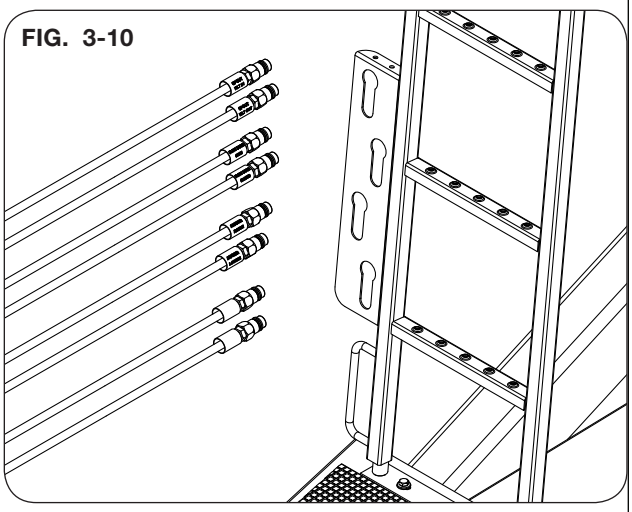
- *When coupling hydraulic hoses to ports on the tractor, be sure that the coupler ends are clean of dust, dirt and debris. Failure to do so could contaminate hydraulic system resulting in excessive wear and possible failure*

Clean hydraulic hose couplers before connecting to tractor. For convenience it is recommended to connect the flow door circuit hoses to tractor implement coupler #1, auger spout circuit hoses to couplers #2 and #3, and attach auger fold circuit to coupler #4.

This unit is equipped with color bands attached to the hydraulic hoses. This will help in identifying the hose function and correct hook up. (Fig. 3-10)

Color	Hose Function
Red	+ Flow Door Open
	- Flow Door Closed
Green	+ Auger Raise
	- Auger Lower
Tan	+ Spout Out
	- Spout In
Yellow	+ Spout Tilt Out
	- Spout Tilt In

FIG. 3-10



NOTE: After initial set-up or replacement of any hydraulic component on the cart, air must be removed from the cart hydraulic system. Refer to "Hydraulic System" in the MAINTENANCE section.

Route hoses away from areas that may cause abrasion or kinking of hoses during operation.

Before disconnecting hoses from tractor, place tractor in Park and shut PTO off, operate auger fold and tilt to the lowest positions. Where possible, remove hydraulic pressure loads and avoid potential pressure buildup in the lines from long storage periods such as upper auger not in rest position. See tractor operator's manual for proper procedure to relieve pressure from the lines. After SCV pressures have been relieved and tractor engine is off, disconnect hoses from tractor. Install couplers into storage slots provided.

Hydraulic Connections (continued)

Hydraulic Connections for Hydraulic Drive

It is possible that the tractor utilizes more than one pump to achieve higher hydraulic flow rates. To maximize hydraulic flow to auger hydraulic drive motor, refer to tractor's Operator's Manual to determine which couplers should be used to achieve maximum flow. A flow test by your dealer's tractor technician can be performed and is recommended to assure maximum flow without exceeding motor limits.

A case drain hose is supplied with the 55 and 100 gpm kits and can be used.

IMPORTANT

- *The case drain line is to be connected to the tractor's low pressure return line ONLY! DO NOT connect to the hydraulic couplers! DO NOT plumb both case drain and hydraulic drive return lines to low pressure return. Pressure in return lines will back flow into case drain and shorten motor life.*

To avoid thermal shock, maintain a temperature difference less than 50 degrees between the tractor's hydraulic fluid and the motor's hydraulic fluid. With the flow door closed, run the motor in very short intervals (bursts with 15 second pauses) or low hydraulic flow rate at startup, in order for hydraulic oil to slowly exchange colder oil in the motor with warmer oil from the tractor. Particularly advised on cold days and/or first loads of the day.

Electrical Connections

This cart is equipped with a seven-pin SAE connector plug which will connect with the receptacle found on most newer tractors. If your tractor does not have this type of receptacle, an SAE J-560 seven-point socket can be purchased from your Unverferth dealer (Part number 92824). (Fig. 3-11)

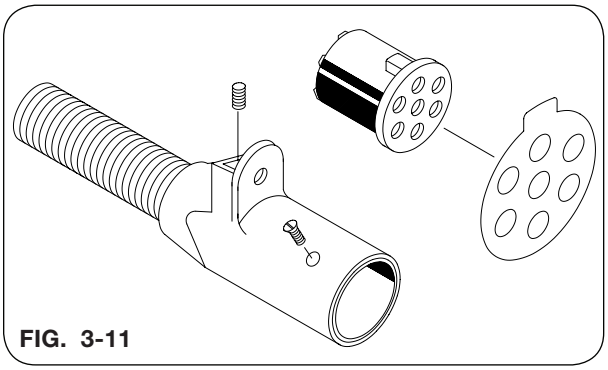


FIG. 3-11

NOTE: 7-pin connector must be plugged into the tractor in order for the spout system to operate.

The wiring schematic for this cart, shown in the MAINTENANCE section, complies with ASABE standards. Always verify correct electrical function before using this cart.

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.

This unit is equipped with Side Marker lights for enhanced visibility. These lights will have different functionality depending upon the tractor lighting selection.

If the tractor field lights switch is on; the Side Marker lights and the amber turn signal lights are on solid and will not flash.

If the flashers and/or turn signal is on; the Side Marker lights flash in unison with their perspective side's amber turn lamp.

Optional Implement Brake Connection

Connector should comply with ISO:5676 standards. Brake hydraulic hose is designated with blue color band. See tractor's operators manual for connection location.

Optional Electric Over Hydraulic Operation
Optional - 4 Function Joystick

Before operating cart, familiarize yourself with the functions associated with the joystick controller by operating with an empty cart.

The joystick comes with a mounting pin allowing storage inside the tractor cab when not in use.

1. Connect the red wire from power harness (9008402) to a key switched +12VDC power supply. (Fig. 3-12)

2. Connect the white wire from power harness (9008402) to ground. (Fig. 3-12)

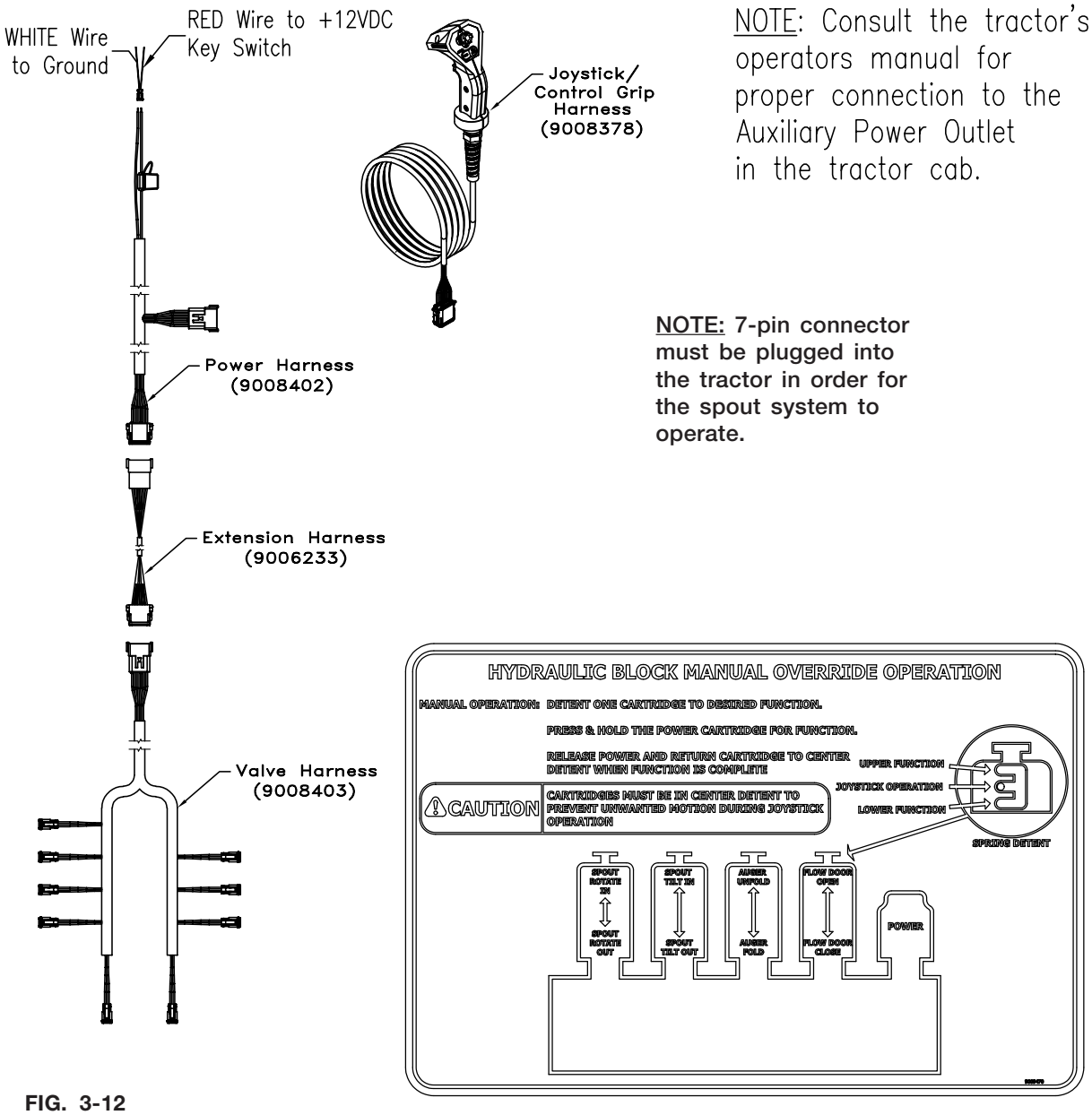


FIG. 3-12

Optional Electric Over Hydraulic Operation (continued)
Optional - 4 Function Joystick

3. Connect the Hydraulic Pressure and Return hoses to the tractor SCV remote so that the Pressure line is able to be put in continuous detent.

4. Place the remote in continuous detent so that the Hydraulic Pressure hose is pressurized and set the hydraulic flow to a maximum of 6 gal/min. to minimum 4 gal/min.

5. To fold auger out from transport to operating position, push down the auger unfold button on joystick controller face. Hold the auger unfold button down until the upper and lower auger are engaged. See Fig. 3-13.

NOTE: Joystick has a double tap feature, which allows the operator to quickly double tap a function in order to operate it for a set time. If the auger fold or auger unfold buttons are double tapped, the function will stay on for 60 seconds to complete the full cycle without holding the buttons down. Pressing either of those buttons during these timed cycles will CANCEL the cycle. This double tap feature only applies to auger fold and unfold functions.

6. To pivot spout OUT away from cart, push hat switch toward OUT. Hold the switch until desired position is achieved. See Fig. 3-13.

7. To pivot spout IN toward cart, push hat switch toward IN. Hold the switch until desired position is achieved. See Fig. 3-13.

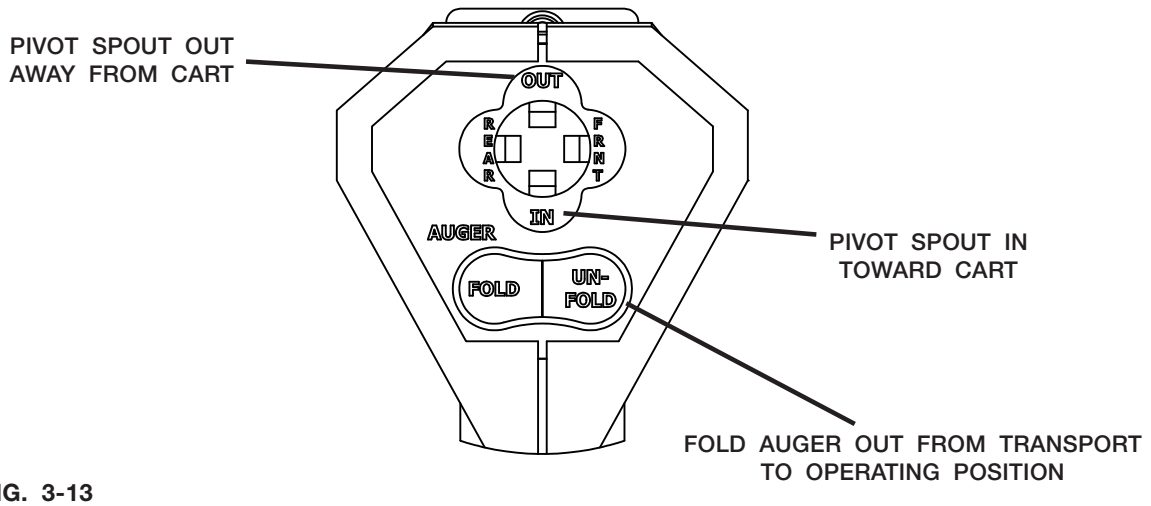


FIG. 3-13

Optional Electric Over Hydraulic Operation (continued)
Optional - 4 Function Joystick

8. To rotate spout FORWARD, push hat switch toward FRNT. Hold the switch until desired position is achieved. See Fig. 3-14.

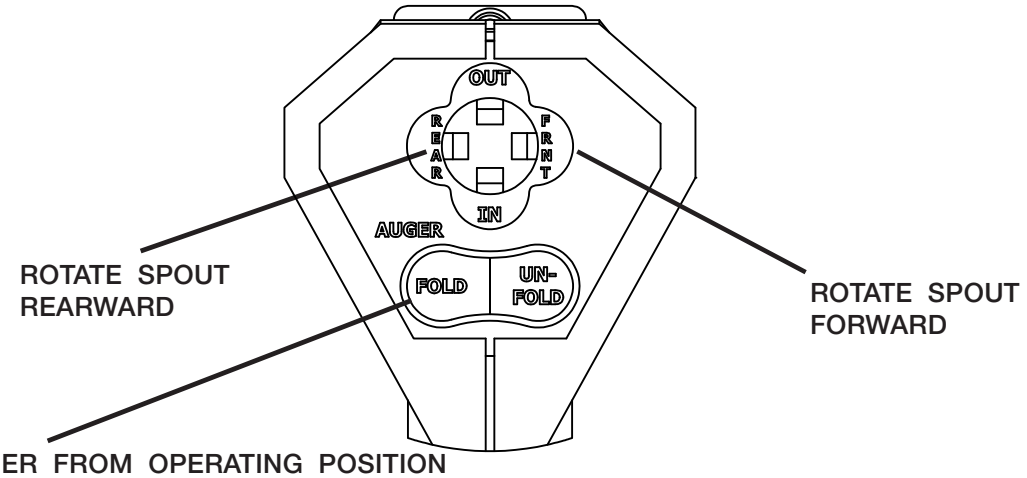
9. To rotate spout REARWARD, push hat switch toward REAR. Hold the switch until desired position is achieved. See Fig. 3-14.

10. To fold auger from operating position to transport position:

    A. Press auger FOLD button on joystick.

    B. Hold or double tap FOLD button until upper auger is seating on field rest. See Fig. 3-14.

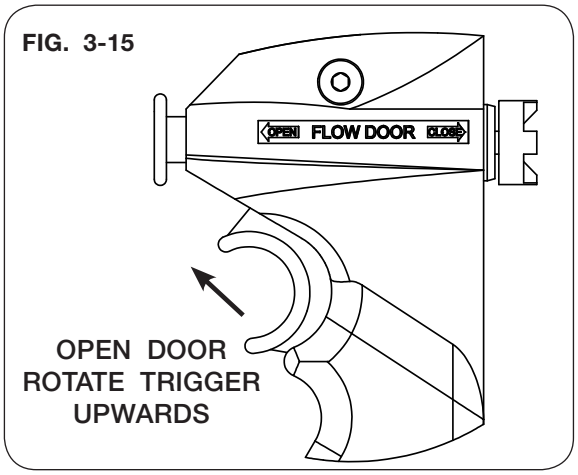
FIG. 3-14



Optional Electric Over Hydraulic Operation (continued)
Optional - 4 Function Joystick

11. To open flow door, rotate the switch upwards. Observe flow door indicator to determine when to release trigger and stop flow door movement. See Fig. 3-15.

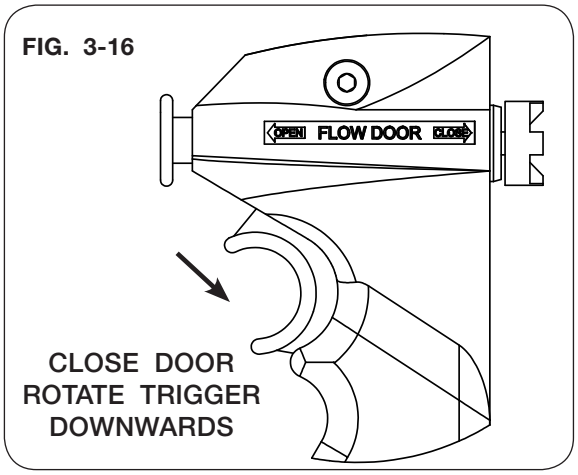
FIG. 3-15



12. To close flow door, rotate the switch downwards. Observe the flow door indicator and release trigger when door is closed to desired position. See Fig. 3-16.

13. Once unloading is complete, stop hydraulic flow. ALWAYS stop continuous detent when auger functions are not required or active.

FIG. 3-16



Manual Override for Optional Electric Over Hydraulic System

⚠ WARNING

- **MOVING OR ROTATING AUGER COMPONENTS CAN CAUSE SERIOUS INJURY OR MACHINE DAMAGE. BEFORE OPERATING MANUAL OVERRIDE(S), ENSURE EVERYONE IS AWAY FROM THE SPOUT AND THAT THE SPOUT WILL NOT CONTACT ANY OTHER PARTS OF THE GRAIN CART.**
- **MOVING OR ROTATING PTO COMPONENTS CAN CAUSE SERIOUS INJURY OR DEATH. DO NOT OPERATE PTO WHILE UTILIZING MANUAL OVERRIDE(S).**
- **ALL SAFETY SWITCHES ARE DEACTIVATED WHILE UTILIZING MANUAL OVERRIDE(S).**

NOTE: Manual override operation is intended for emergency use **ONLY** and is not intended for continuous operation.

1. Park the empty grain cart on a firm and level surface. Block the tires/tracks on the machine to keep it from moving. Set the tractor's parking brake.

2. Connect the Hydraulic Pressure and Return hoses to the tractor SCV remote so that the Pressure line is able to be put in continuous detent.

NOTE: Center rotating spout before activating auger fold.

3. To operate the manual override functions, place the tractor SCV remote in continuous detent so that the Hydraulic Pressure hose is pressurized.

4. Push and hold the manual override button on valve (9008438). (Fig. 3-17)

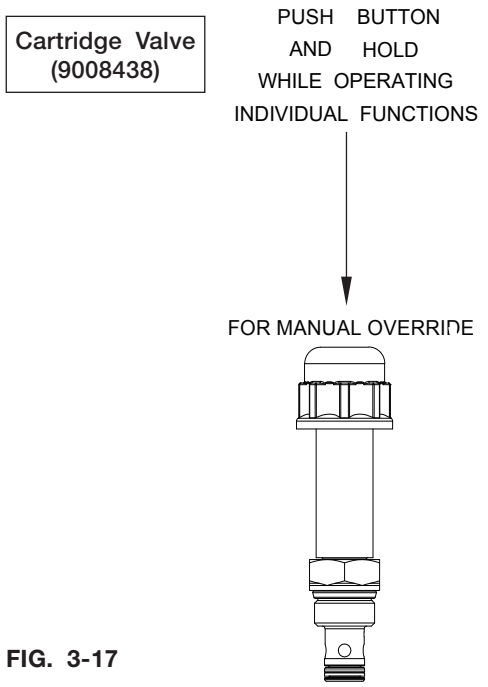


FIG. 3-17

Manual Override for Optional Electric Over Hydraulic System (continued)

5. While holding the manual override button, operate the desired function on valve (9008416) by rotating the manual override knurled knob from the locked neutral position. (Fig. 3-18 & 3-19)

6. Push or pull the knob to operate the valve function in the desired direction. (Fig. 3-19)

7. Once the desired position is reached, release manual override button on valve (9008438).

NOTE: Cartridge valve (9008416) must be locked in the middle detent position to function properly. (Fig. 3-18 & 3-19)

8. Return knurled knob to center and lock valve (9008416) in position. (Fig. 3-18 & 3-19)

NOTE: Refer to "Troubleshooting" for EOH, vertical auger and/or rotating spout issues in the OPERATION section.

9. Turn off hydraulic circuit when done. Correct electric/hydraulic system before continued use. Consult your dealer for service and parts.

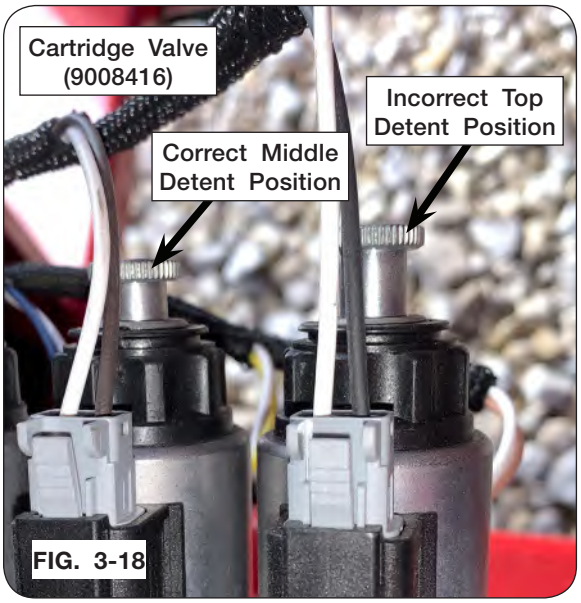


FIG. 3-18

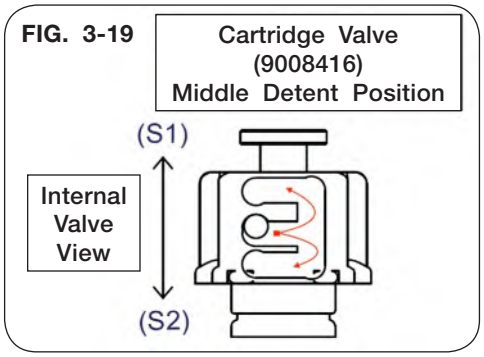
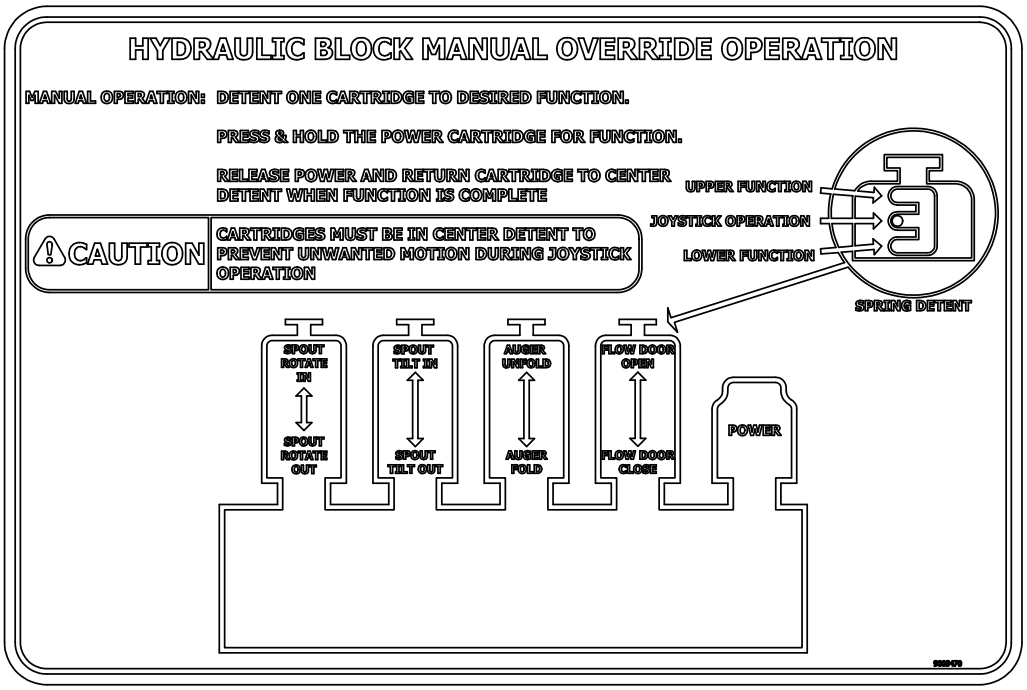


FIG. 3-19



Towing

Even if the cart is equipped with brakes, ensure that the towing vehicle has adequate weight and braking capacity to tow this implement. See towing vehicle manual for towing and braking capacity. Never tow a loaded grain cart over public roads.

IMPORTANT

- *To prevent damage to the cart brake system, manually release pressure from the cart hydraulic brakes if towing without a hydraulic brake equipped vehicle.*

Maximum speed of cart should never exceed 20 m.p.h. Do not exceed 10 m.p.h. during off-highway travel. Do not exceed 8 m.p.h. when cart is fully loaded.

Secure drawbar pin with a locking device and lock tractor drawbar in centered position. Connect the PTO driveshaft to the tractor.

Secure the transport chain to the chain attaching point on the tractor before towing.

⚠ CAUTION

- **THE STANDARD TRANSPORT CHAIN IS DESIGNED TO SUPPORT AN EMPTY GRAIN CART DURING ROAD TRAVEL.**

Regulate speed to road conditions and maintain complete control.

It is probable that this cart is taller, wider and longer than the towing tractor. Become aware of and avoid all obstacles and hazards in the travel path of the equipment, such as power lines, ditches, etc.

Slow down before making sharp turns to avoid tipping. Drive slowly over rough ground and side slopes.

NOTE: Always have auger folded back in field transport position when auger is not in use.

IMPORTANT

- *To prevent damage to the cart during turning, when using non-PTO equipped towing vehicles, store the PTO driveshaft in the brackets provided on the inside right frame rail.*

Auger

In-Field Transport Stand (SN B37670129 and Lower)

1. Extend auger to the unload position.

NOTE: Turn the hydraulic flow GPM down on auger fold outlet to decrease the speed of the auger.

2. Move the field rest stand to the down position and lock into place (Fig. 3-20). Fold auger back to field position making sure it engages the upper auger hook.

3. Tighten bolts on the field rest stand assembly.

4. Fold auger out to the unload position.

5. Unlock field rest stand and move to the up position. (Fig. 3-21)

6. Move auger to storage position.

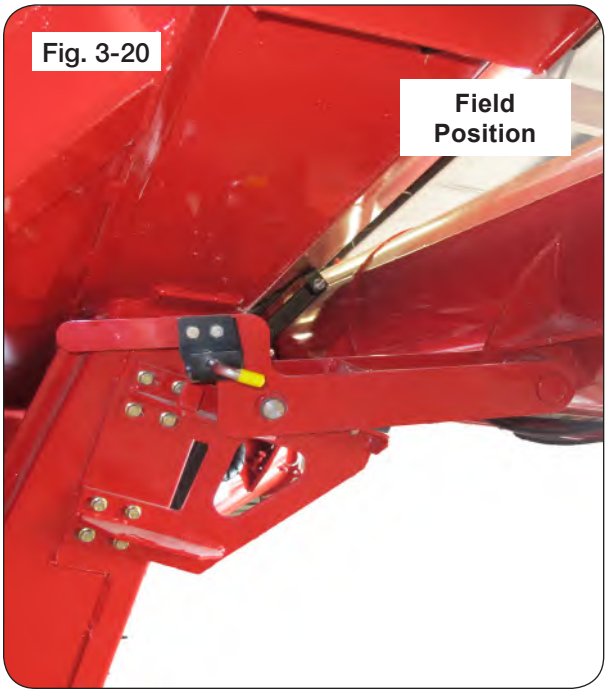


Fig. 3-20

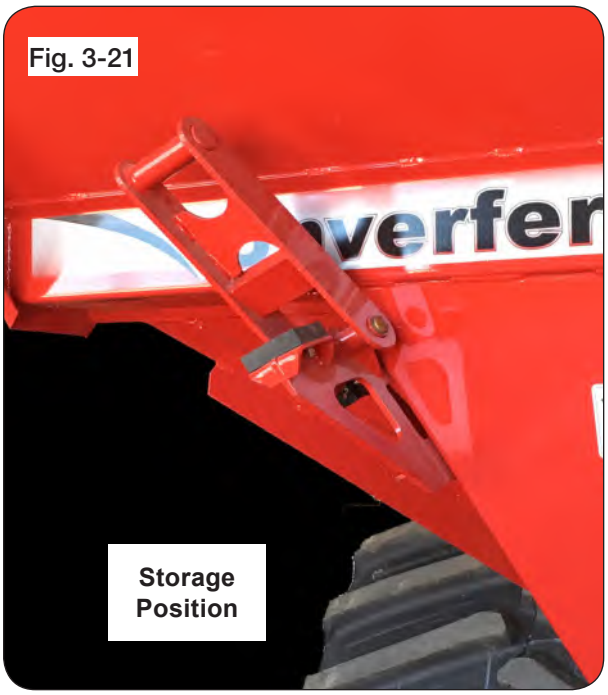


Fig. 3-21

Auger (continued)

In-Field Transport Stand (SN B38090100 and Higher)

1. Raise the auger to the unloading position and pivot the field rest stand forward.

2. Slide the field rest handle up so the field rest stand is in the working position. (Fig. 3-22)

NOTE: Turn the hydraulic flow GPM down on auger fold outlet to decrease the speed of the auger.

3. Fold the auger until it fully contacts the field rest assembly. Turn off the tractor and relieve pressure from the hydraulics.

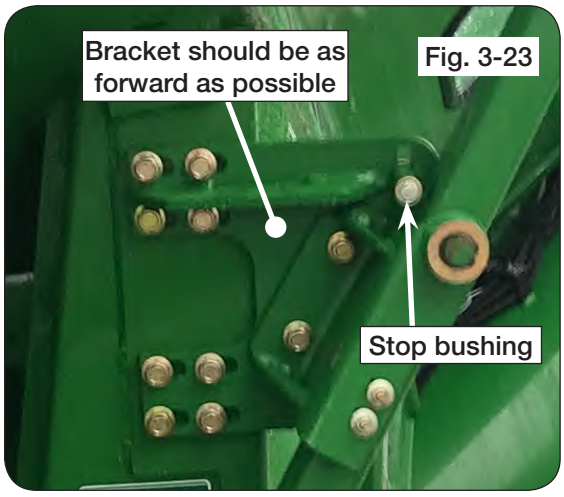
4. Check the engagement between the auger tube bracket and the field rest stand. The auger tube bracket should be close to centered on the field stand.

5. If adjustment is needed, raise the auger to the unloading position. Make the necessary adjustments and repeat steps 3 and 4 as needed.

6. Once all adjustments are made, slide the field rest arm down and pivot the field rest into the storage position. Make sure the arm does not contact the hopper. If contact is made, loosen the 3/8" bolt securing the stop bushing and adjust up or down in the slotted hole as needed. Torque the 3/8" bolt to 35-39 ft. lbs. (Fig. 3-23)

7. Tighten bolts on field rest stand assembly.

8. Fold the auger to storage position.



Auger Operation

PTO Driven Auger & Flow Door Cylinder Stop

DANGER

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

- **ENTANGLEMENT WITH THE DRIVELINE WILL CAUSE SERIOUS INJURY OR DEATH. KEEP ALL GUARDS AND SHIELDS IN GOOD CONDITION AND PROPERLY INSTALLED AT ALL TIMES. AVOID PERSONAL ATTIRE SUCH AS LOOSE FITTING CLOTHING, SHOE STRINGS, DRAWSTRINGS, PANTS CUFFS, LONG HAIR, ETC. THAT CAN BECOME ENTANGLED IN A ROTATING DRIVELINE.**

1. Before loading cart or operating auger, verify that the flow control door is closed.
2. Choose an area free from obstructions and unfold the auger into the unloading position. Allow sufficient time for the cylinder to fully engage the two augers.
3. Rotate spout to the most forward position to engage the spout cylinder stroke bracket, then rotate the spout to the desired operating position.

NOTE: In order to increase grain flow to the maximum bushels per minute, cylinder stop (293781B) can be removed from the flow door cylinder. (Fig. 3-24)

4. Locate the cylinder stop on the end of the flow door cylinder. (Fig. 3-24)
5. Remove the capscrew and lock nut retaining the cylinder stop.
6. Remove the cylinder stop from the flow door cylinder rod and keep for future use.

NOTE: Upon removal of the cylinder stop, a minimum of 1000 PTO RPM MUST be maintained when operating the flow door at the maximum setting.

7. Engage the PTO at low RPM; increase tractor PTO RPM to 1000 RPM.
8. Open the flow control door to the desired unloading rate. Numbers on auger tube provide a reference for operator convenience.

NOTE: If overload occurs, (excessive heat/smoke or a ratcheting or clicking noise from the cut-out clutch) shut off PTO immediately. Close flow control door and relieve auger grain pressure by opening cleanout door to remove some grain from auger before resuming. When resuming operation, allow clutch to cool, then engage PTO at low speed. (Fig. 3-25)

Fig. 3-24

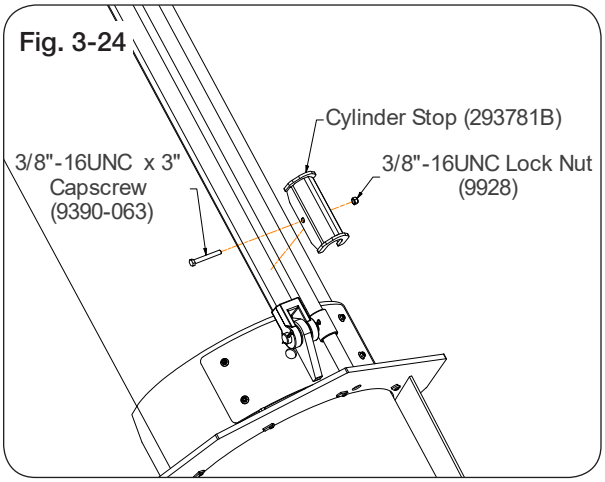
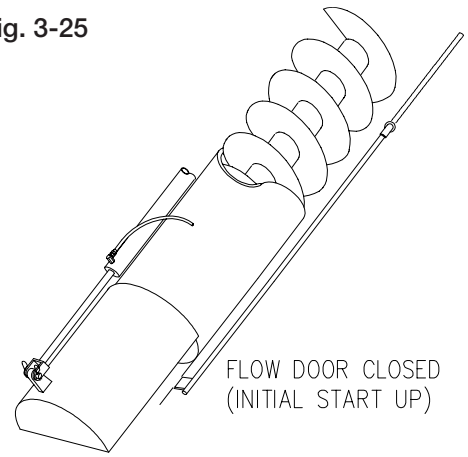


Fig. 3-25



(Continued on next page)

Auger Operation (continued)

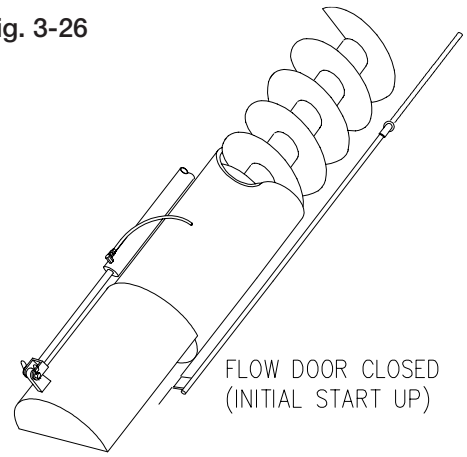
9. To slow or stop the grain flow, close the flow door, DO NOT reduce tractor/PTO RPM as a means to control grain flow. Close the flow door fully when unloading is complete. (Fig. 3-26)

10. Stop PTO.

11. After PTO has come to a complete stop, fold the auger to the desired auger rest position. Rotate the spout to point rearward.

NOTE: No damage will occur if the auger is folded to the rest while the spout is rotated rearward.

Fig. 3-26



Troubleshooting

Problem	Possible Cause	Corrective Action
No Electric Over Hydraulic (EOH) Functions work	7 Pin connector not supplying good ground to cart.	Check the connections to the main power harness in the tractor cab, and check the 5 AMP fuse in the fuse holder of the main power harness. Replace fuse if necessary.
	Not getting good connection at Deutch connectors in the harnesses	Unplug the Deutsch connectors at the hitch point and in the extension harness (if used). Clean up the connectors with electrical contact cleaner. Make sure the connectors are aligned correctly and re-connect them.
	Not pressurizing the correct hydraulic hose	Make sure the quick couplers are properly connected to the tractor SCV and the Hydraulic Pressure line is being pressurized when engaging the tractor SCV.
One single function will not work	Defective coil on the EOH valve for that function	Loosen the cap for the coils associated with that function on the EOH valve. Depress the button on the remote, and determine if the coils are getting magnetized. Inspect the wiring connectors to these coils, and replace the coil if necessary.
	Defective valve on the EOH valve for that function	Remove the coil and the cartridge valve on the EOH valve block for that function. Replace the valve if it doesn't operate when the coil is magnetized.
	Debris in the EOH block at the base of the vertical auger	Remove the coil and the cartridge valve on the EOH valve block. Remove any debris and reinstall cartridge and coil.
Functions continue to operate after the button on the remote is released	Tractor hydraulic flow is set too high	Turn tractor hydraulic flow down so that flow doesn't exceed 6 gallons per minute.
	Defective valve on the EOH valve for that function	Remove the coil and the cartridge valve on the EOH valve block for that function, and replace the cartridge.

Troubleshooting (continued)

Problem	Possible Cause	Corrective Action
Spout rotate does not operate	7 pin connector is not plugged into tractor.	Plug in 7 pin connector to same power source as the 4 function controller.
	Proximity Switch at the auger hinge is not getting Power or Ground.	Check power and ground to the proximity switch harness on the vertical auger.
Rotating spout will not function	Proximity Switch at the hinge plate is not adjusted correctly	This proximity switch has a 1/4" effective operating range. The upper auger hinge plate needs to be within that range when it is unfolded in to the operating position. Adjust the proximity switch in or out in order for the sensor to activate when it is in the operating position.
	Switch located at the hinge plate of the vertical auger is not getting power, ground or is defective	Check the ground wire on the top plate of the lower vertical auger and on the left hand standard just behind the front plate of the harness. Unplug the 3 pin connector on the hinge plate proximity switch. With a multi-meter or test light, confirm that the pin in socket B has +12V constant power and socket A has +12V when the sensor is activated.
One single function will not work	Defective coil on the EOH valve for that function	Loosen the cap for the coils associated with that function on the EOH valve. Depress the button on the remote, and determine if the coils are getting magnetized. Inspect the wiring connectors to these coils, and replace the coil if necessary.
	Defective valve on the EOH valve for that function	Remove the coil and the cartridge valve on the EOH valve block for that function. Replace the valve if it doesn't operate when the coil is magnetized.
	Debris in the EOH block at the base of the vertical auger	Remove the coil and the cartridge valve on the EOH valve block. Remove any debris and reinstall cartridge and coil.
Functions continue to operate after the button on the remote is released	Tractor hydraulic flow is set too high	Turn tractor hydraulic flow down so that flow doesn't exceed 6 gallons per minute.
	Defective valve on the EOH valve for that function	Remove the coil and the cartridge valve on the EOH valve block for that function, and replace the cartridge.

Optional Equipment

Hydraulic Drive

The optional hydraulically-driven auger permits cart operation using tractors that are not equipped with a PTO. However, due to the power requirements of a grain cart, it should be expected that a hydraulically-driven grain cart will not unload as quickly as a PTO driven cart. (Fig. 3-27 and 3-28)

IMPORTANT

- *Depending on the option chosen, the motor is rated for either 55 or 100 gpm hydraulic flow at 3000 psi. Sustained flow and pressure above these amounts will dramatically reduce motor life. Be aware of maximum tractor hydraulic flow and pressure before operating auger.*

NOTE: A motor containing two pressure and two return lines is a 55 GPM motor. A motor containing three pressure and three return lines is a 100 GPM motor. If unsure of motor size, contact your dealer providing your cart's serial number.

FIG. 3-27

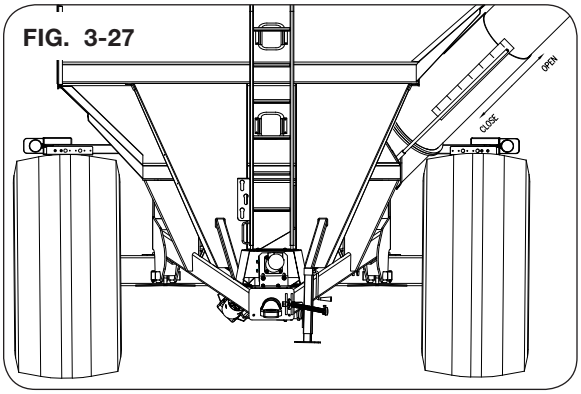
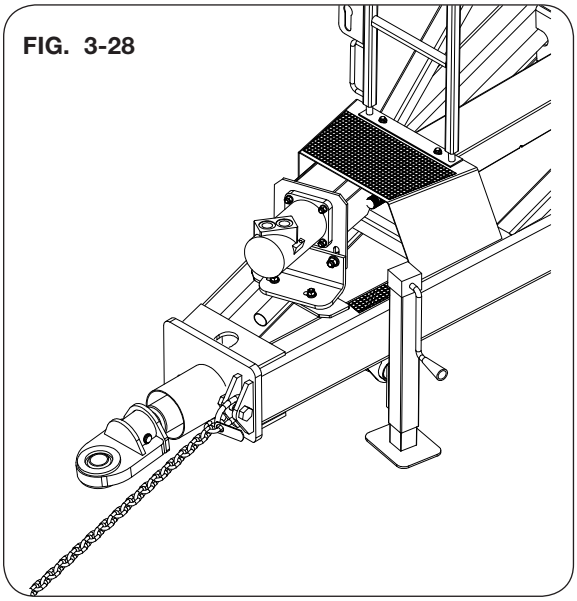


FIG. 3-28



Optional Equipment (continued)

Hydraulic Drive (continued)

NOTE: For complete assembly and operation details for the Hydraulic Drive, please refer to the Hydraulic Drive manual (282894).

1. Before loading cart or operating auger, verify that the flow control door is closed.

2. Choose an area free from obstructions and fully unfold auger to the unloading position.

3. Connect hydraulic hoses to tractor hydraulic circuits. Attach pump pressure hoses to RETRACT ports on tractor.

Multiple connections help utilize the tractor's fully hydraulic power and flow. Use the tractor's flow controls to regulate total output. See hydraulic connections for hydraulic drive in previous OPERATION sections.

NOTE: The dual connections help utilize full tractor hydraulic power at the cart's hydraulic motor. For tractors that have more than 55 GPM available pump output, use tractor flow controls to regulate total output to a maximum of 55 GPM.

4. Engage hydraulic drive circuits at low engine RPM one at a time, then increase engine to full throttle. See hydraulic connections for hydraulic drive in previous OPERATION sections for cold starts.

5. While watching hydraulic pressure gauge, begin slowly opening flow control door. Stop opening flow control door when pressure (on hydraulic gauge by pump) climbs to within 200 psi less than maximum tractor hydraulic pressure. Ideally, maintaining maximum PTO RPM will optimize unloading performance.

IMPORTANT

- *If auger stalls during unloading, **immediately** place tractor hydraulic controls for motor functions in **FLOAT** to stop auger. Close flow control door, then move all hydraulic controls to **HOLD**. Relieve auger grain pressure by opening auger cleanout door to remove some grain before attempting to restart auger.*

6. To slow or stop grain flow, close flow door rather than reducing tractor RPM. Close flow door fully when unloading is complete.

7. Stop auger by placing both auger hydraulic circuits in FLOAT. This reduces strain on driveline components and prolongs hydraulic motor life. Move controls to HOLD after auger has come to a complete stop.

8. Choose an area free from obstructions and fully fold auger to the transport position.

Ladder Operation

⚠ WARNING

- **FALLING OR LOWERING EQUIPMENT CAN CAUSE SERIOUS INJURY OR DEATH. KEEP EVERYONE AWAY FROM EQUIPMENT WHEN SUSPENDED, RAISING, OR LOWERING.**
- **DO NOT ALLOW ANYONE TO RIDE ON THE LADDER. MAKE SURE EVERYONE IS CLEAR BEFORE OPERATING MACHINE OR TOWING VEHICLE.**
- **KEEP HANDS CLEAR OF PINCH POINT AREAS.**
- **TO PREVENT PERSONAL INJURY OR DEATH, ALWAYS ENSURE THAT THERE ARE PEOPLE WHO REMAIN OUTSIDE THE CART TO ASSIST THE PERSON WORKING INSIDE, AND THAT ALL SAFE WORKPLACE PRACTICES ARE FOLLOWED. THERE IS RESTRICTED MOBILITY AND LIMITED EXIT PATHS WHEN WORKING INSIDE THE IMPLEMENT.**
- **NEVER ENTER A CART CONTAINING GRAIN. FLOWING GRAIN TRAPS AND SUFFOCATES VICTIMS IN SECONDS.**

NOTE: Ensure ladder and steps are free from snow/debris before changing ladder positions and climbing.

NOTE: The lower ladder section must be locked in the storage position when not used.

Storage to Working Position

1. Standing in front of ladder, place hands on ladder handle and rubber latch.
2. Keep one hand on ladder handle and with opposite hand, remove rubber latch from holder. (Fig. 3-29 and 3-30)
3. With one hand on ladder handle and opposite hand on the lower ladder, slowly lower and swing the lower ladder section completely down to working position. (Fig. 3-31)

(Continued on next page)

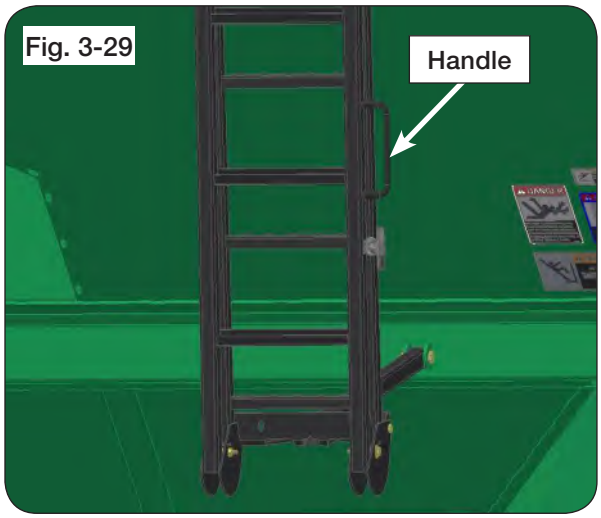


Fig. 3-29

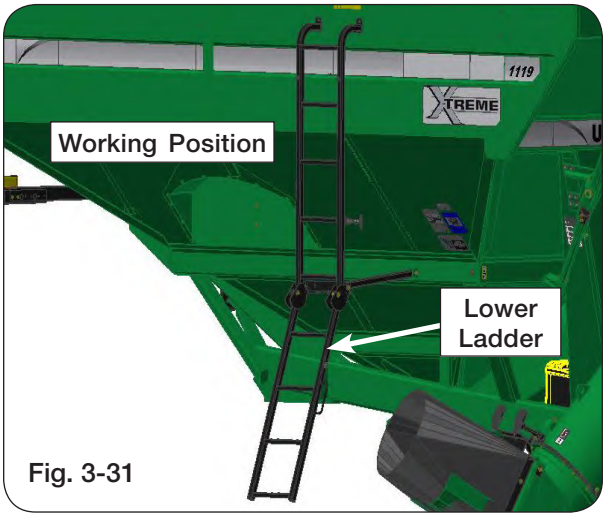


Fig. 3-31

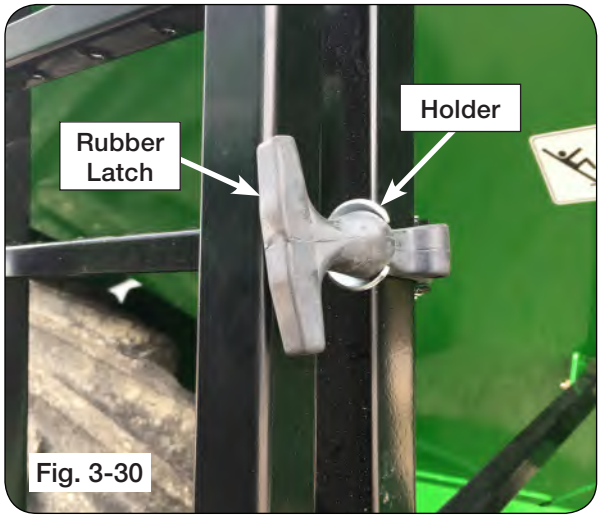


Fig. 3-30

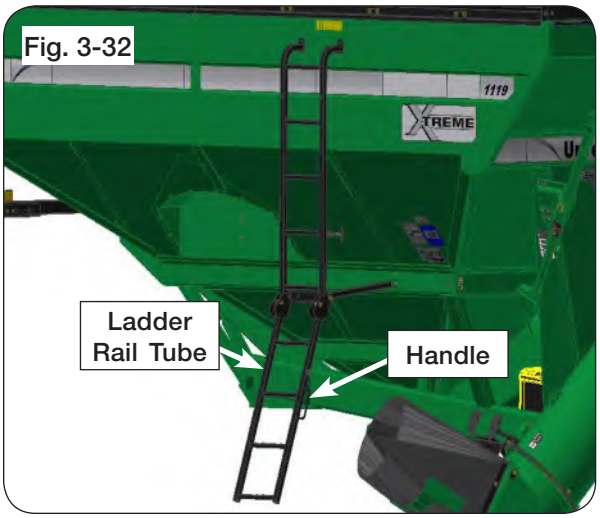
Ladder Operation

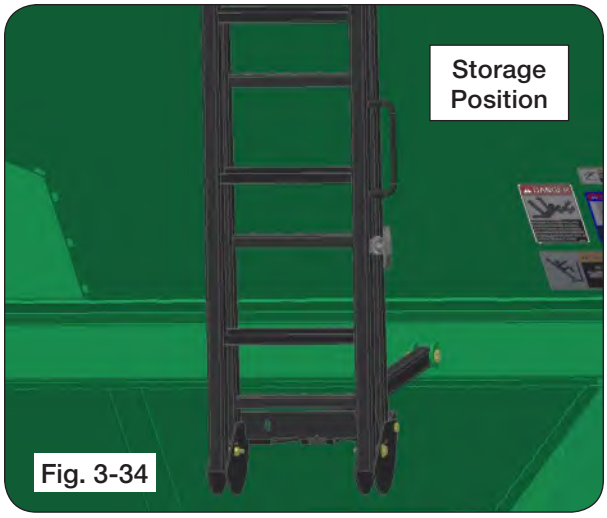
Working to Storage Position

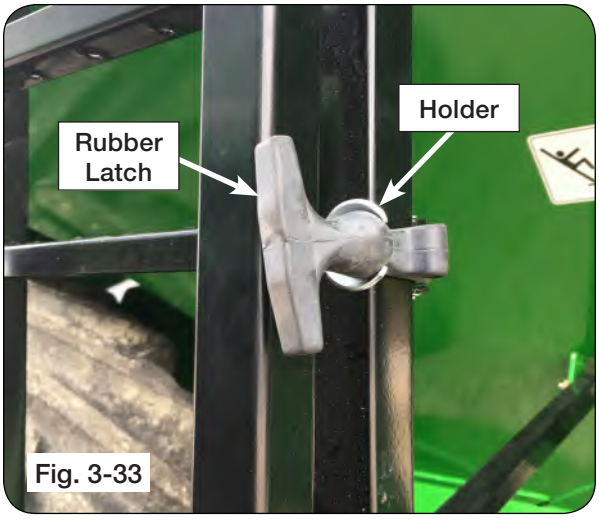
4. Standing in front of ladder, place hands on ladder handle and outside ladder rail tube. (Fig. 3-32)

5. Slowly lift and swing the lower ladder section to storage position. (Fig. 3-32)

6. Keep one hand on ladder handle and with opposite hand, attach rubber latch to holder to lock ladder in storage position. (Fig. 3-33 and 3-34)







Weather Guard Tarp Operation

WARNING

- **TO PREVENT PERSONAL INJURY OR DEATH, DO NOT ALLOW ANYONE ON A CLOSED TARP. TARP SYSTEM IS NOT DESIGNED TO SUPPORT A PERSON.**
- **FALLING OBJECTS CAN CAUSE SERIOUS INJURY OR DEATH. REMOVE ACCUMULATED WATER/SNOW/ICE OR ANY OTHER OBJECTS FROM TARP BEFORE OPENING TARP.**

IMPORTANT

- *Do not open or close tarp while moving or in high wind conditions. Damage to the tarp may occur.*
- *Tarp should not be used if it is torn or the bungee cords are frayed or show damage. If water pools on the tarp, adjust tension of tarp cables and/or arm springs as required.*

Always use adequate caution when operating tarp.

Make sure tarp is open before unloading or loading.

Make sure nobody is near the tarp system before and during operating.

Do not operate tarp with cart hoisted in an elevated position.

If tarp is covered with snow, it is important to remove snow before operating.

End caps must be free from grain that may be piled on them. Grain should not be heaped higher than the end caps or tarp bows.

Tarp may be fully opened or completely closed while in transit. However, the closed position is recommended.

Ensure everyone who operates the tarp is familiar with the correct procedures outlined in this manual.

Weather Guard Tarp Operation (continued)

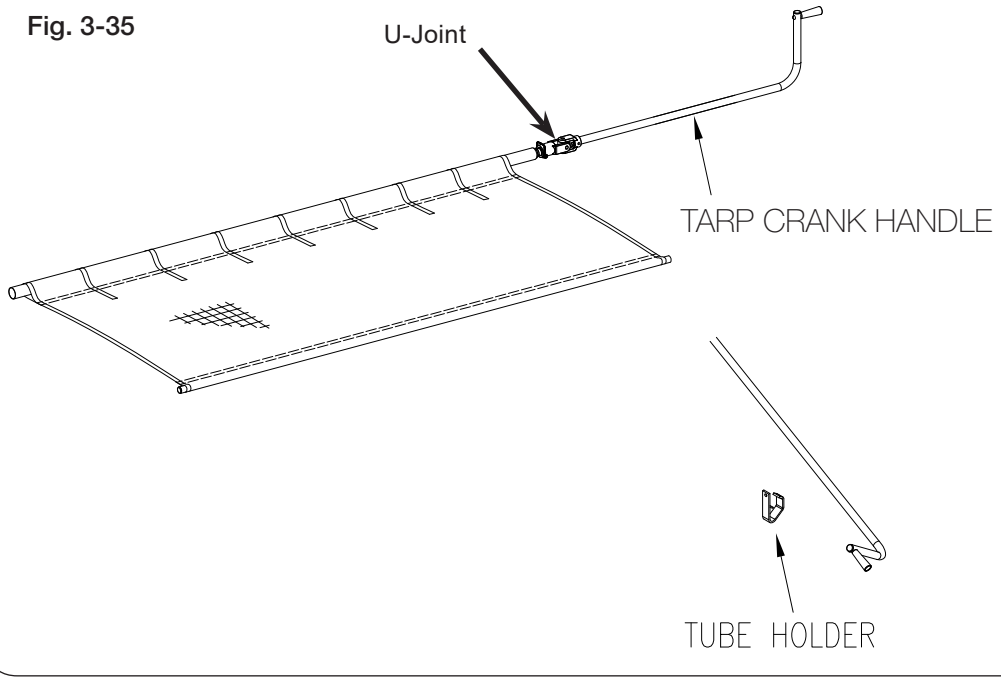
Open/Close Tarp

1. Using both hands, carefully remove the tarp handle from the tube holder. (Fig. 3-35)
2. Roll tarp to the desired location, choosing either a fully open or fully closed position.
3. To close the tarp, roll the main tarp tube clockwise up under the latch plate. Next, bring the crank handle down perpendicular to the ground. Continue by lifting it up into the crank retainer.

NOTE: U-joint may need to be re-indexed on the tarp tube to achieve an correct tension.

4. Place crank in holder.
5. To open tarp, turn the main tarp tube counter clockwise until the tarp is fully open. Place crank in the holder.

Fig. 3-35



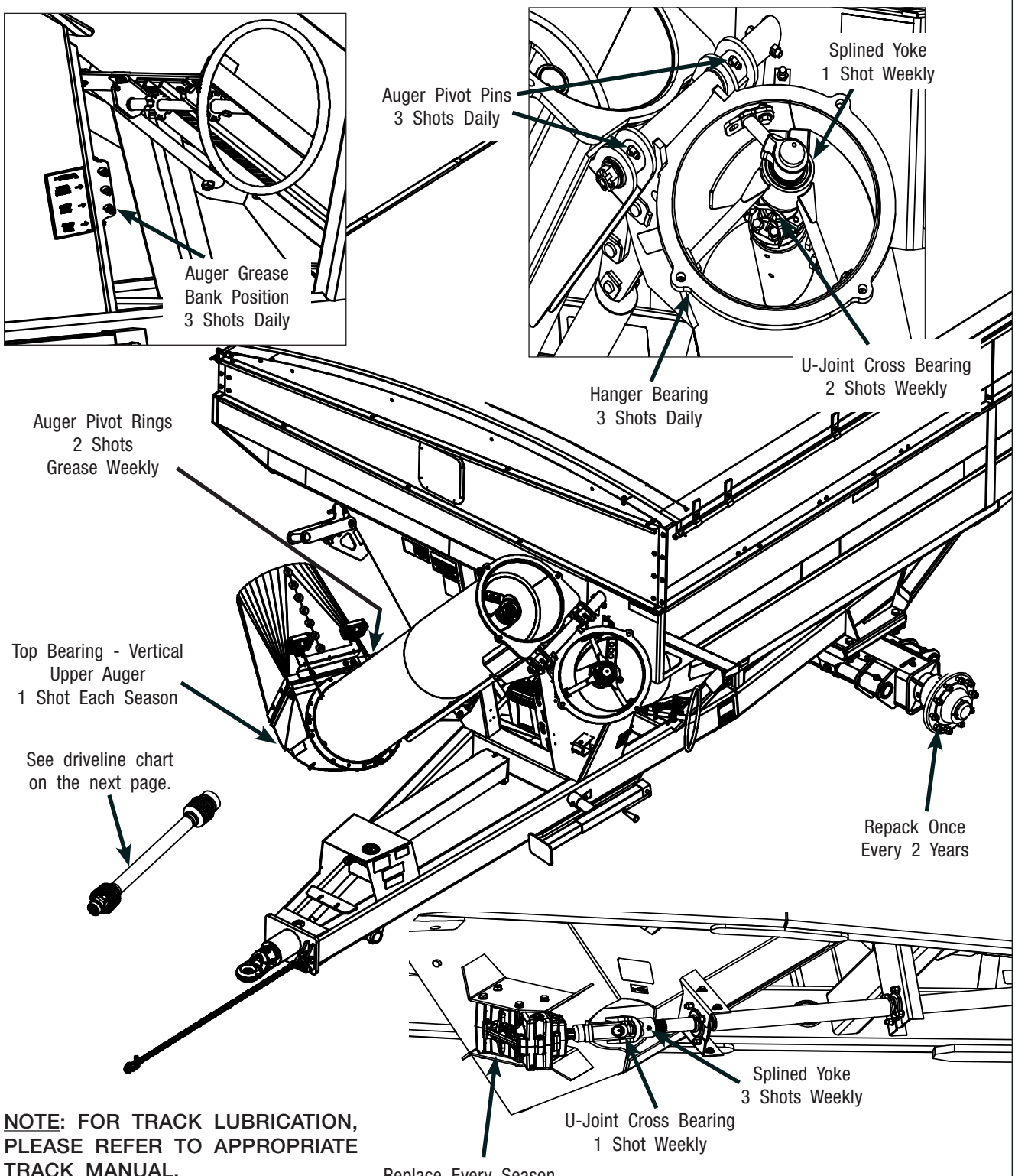
Notes

SECTION IV
Maintenance

FOR TRACK INFORMATION, PLEASE REFER TO YOUR TRACK MANUAL.
FOR SCALE INFORMATION, PLEASE REFER TO YOUR SCALE MANUAL.
FOR ELECTRIC ROLL TARP INFORMATION, PLEASE REFER TO YOUR ELECTRIC ROLL TARP MANUAL.
FOR HYDRAULIC DRIVE INFORMATION, PLEASE REFER TO YOUR HYDRAULIC DRIVE MANUAL.

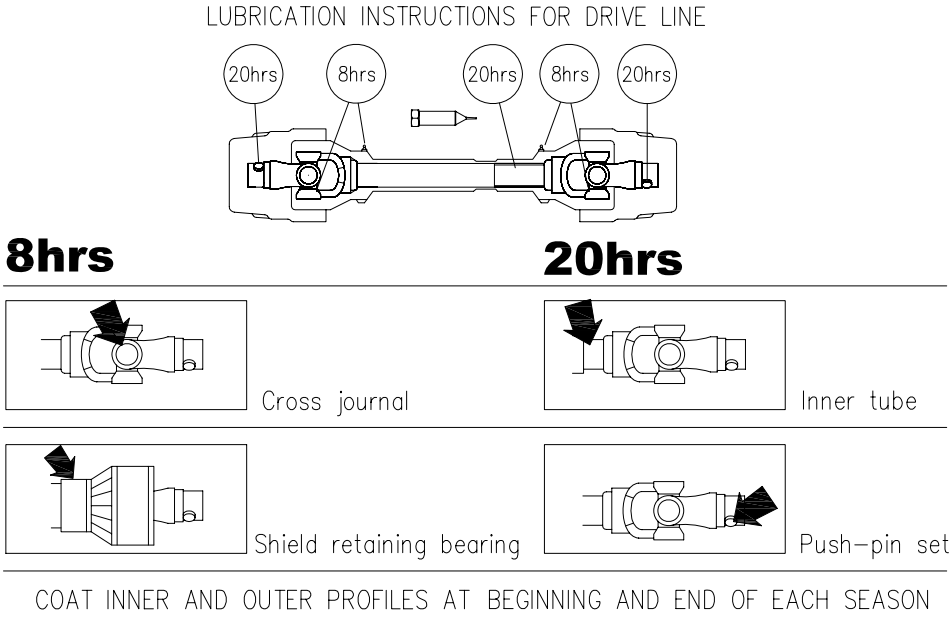
Lubrication

To keep your grain cart 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.



NOTE: FOR TRACK LUBRICATION, PLEASE REFER TO APPROPRIATE TRACK MANUAL.

Lubrication (continued)



Lubrication (continued)

To keep your grain cart 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.

Unverferth Mfg. recommends use of NLGI #2 Extreme Pressure grease.

The lubrication locations and recommended schedule are as follows:

DESCRIPTION	POINT	LUBRICANT	QTY.	HOURS
PTO Driveshaft	7	EP-2	1 Shot	See Previous Page
Gearbox -- Remove Cover - Check oil level every 2 weeks. Replace oil every season. Refer to Gearbox in MAINTENANCE section for instructions.	1	EP80W90	55oz	Once Every Season
U-Joint Cross Bearing - Driveline	1	EP-2	1 Shots	Weekly
Splined Yoke - Driveline U-Joint	1	EP-2	3 Shots	Weekly
Grease Bank Hanger Bearing - Vertical Lower Auger *See note below.	1	EP-2	3 Shots*	Daily
Auger Hanger Bearing - U-Joint Cross Bearing	1	EP-2	2 Shots	Weekly
Splined Yoke - Vertical Lower Auger	1	EP-2	1 Shot	Weekly
Top Bearing - Vertical Upper Auger	1	EP-2	1 Shot	Each Season
Auger Pivot Rings	4	EP-2	2 Shots	Weekly
Grease Bank Auger Pivot Pins - Front and Rear	2	EP-2	3 Shots	Daily
Hubs	2	EP-2	Repack	2 Years

*NOTE: Hanger bearing contains hydraulic shut-off grease zerk (9005240) with pressure relief to prevent over-greasing that could push bearing seals out. If grease is coming out of the relief on the zerk this is normal and the bearing contains enough grease.

Seasonal Storage

Your cart 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.

Do the following before placing the cart in storage:

1. Remove dirt and trash which could cause rusting.
2. Repaint any chipped or scraped areas.
3. Lubricate points, refer to lubrication pages in the MAINTENANCE section.
4. Inspect for damage or worn parts, replace before next season.
5. Store cart inside, away from livestock.
6. Replace all worn, torn or faded decals and reflectors.
7. Fully open flow door and auger cleanout door to remove any remaining grain and to allow moisture to drain. See Fig. 4-1.
8. If unit is equipped with a scale indicator, electric hydraulic controls, store these indoors in a dry location.
9. Close the tarp to keep debris out of the hopper, if equipped.

FIG. 4-1

Gearbox Lubrication

IMPORTANT

- *For 45° gearbox (9009053), the fill plug is inaccessible. Add oil at the vent plug on the left-hand side of the housing.*

For 45° gearbox with 20 spline input shaft (SN B42720100 and higher), (9008711), the fill plug is located on the left-hand front side of the housing for reference. See figure 4-2.

For 45° gearbox with 20 spline input shaft (SN B41340100 - B42720099), (9009053), the fill plug is located on the right-hand front side of the housing for reference. See figure 4-3.

To check oil fluid level, place cart on a level surface with the tongue elevated to hitch height. Oil level should be visible in the sight glass. Fill with oil to the sight glass only.

Maximum gearbox life for (9009053, 9002812, and 9008711):
Check oil level every 2 weeks.
Replace oil every season starting with a minimum of 55 fl. oz. of 80W90 EP gear lubricant.

For 45° gearbox with 6 spline input shaft (SN B41340099 & lower), (9002812), the check/fill plug is located on the right-hand front side of the housing. To check oil fluid level, place cart on a level surface with the tongue elevated to hitch height and remove the plug. Oil level should be at the bottom thread or approximately 5/8" below the outside gearbox surface. See figures 4-4 and 4-5.

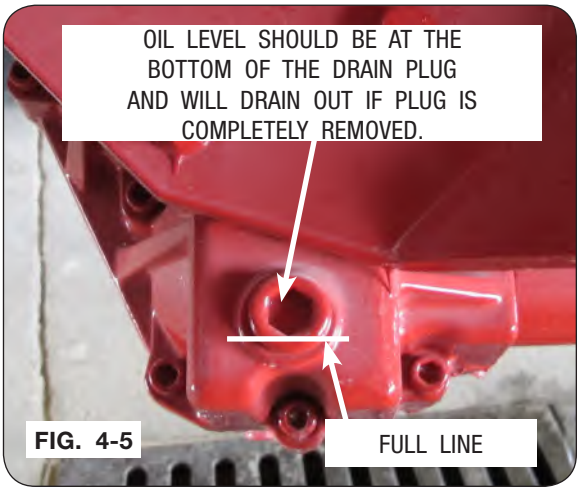


FIG. 4-5

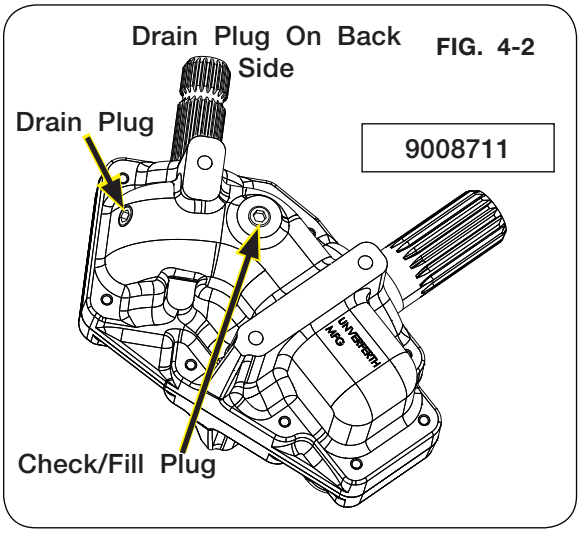


FIG. 4-2

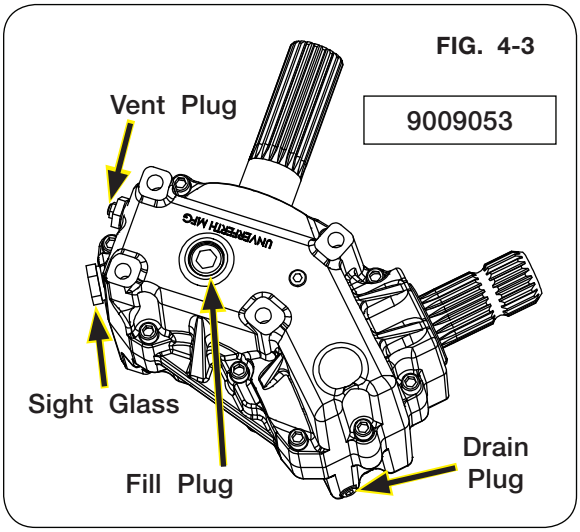


FIG. 4-3

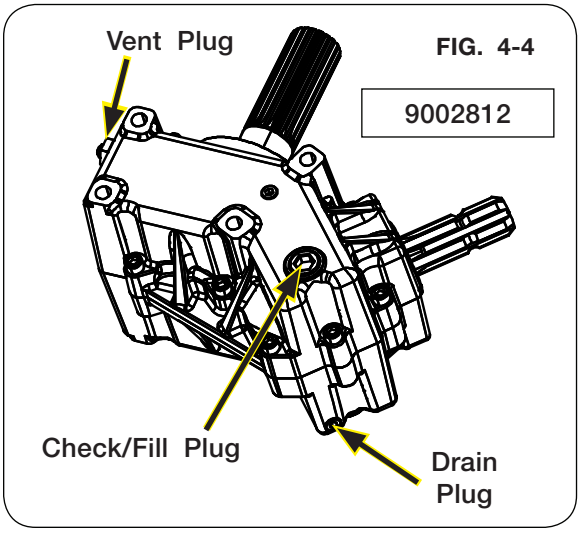


FIG. 4-4

Hydraulic System

Refer to parts section for hydraulic component detail listing.

When properly assembled and maintained, the hydraulic system of the grain cart requires little maintenance.

Replacing Hoses/Fittings/Cylinders:

1. Use replacement hoses, fittings, and cylinders from your Unverferth Manufacturing dealer which are rated for 3000 psi.
2. Do not use hoses, fittings and cylinders that have pipe threads.
3. Do not use Teflon tape or thread sealant on JIC or O-ring fittings. Tighten fittings according to "Torque Chart" in this section.
4. When replacing hoses, always allow sufficient slack to permit hoses to move through the full range of motion of the cylinders.
5. Always purge the hydraulic system after servicing.

Purge Hydraulic System

⚠ WARNING

- **HYDRAULIC SYSTEM MUST BE PURGED OF AIR BEFORE OPERATING TO PREVENT SERIOUS INJURY OR DEATH.**
- **RELIEVE 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. USE CARDBOARD OR WOOD TO DETECT LEAKS IN THE HYDRAULIC SYSTEM. SEEK MEDICAL TREATMENT IMMEDIATELY IF INJURED BY HIGH-PRESSURE FLUIDS.**

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

Purge air from system as follows:

A. Disconnect the rod end of all cylinders in a circuit and block up cylinders so the rod can completely extend and retract without contacting any other component.
B. Pressurize the system and maintain system at full pressure for at least 5 seconds after cylinder rods stop moving. Check that all cylinders have fully extended or retracted.
C. Check oil reservoir in hydraulic power source and refill as needed.
D. Pressurize system again to reverse the motion of step B. Maintain pressure on system for at least 5 seconds after cylinder rods stop moving. Check that cylinders have fully extended or retracted.
E. Check for hydraulic leaks using cardboard or wood. Tighten connections according to directions in Torque Chart.
F. Repeat steps B, C, D, and E 3-4 times.
G. Depressurize hydraulic system and connect cylinder rod clevises to their mating lugs.

IMPORTANT

- *Machine damage will occur if the cylinder is incorrectly installed.*

Check for and correct any leaks. Make sure hoses are not kinked, stretched, or twisted. Secure hoses to prevent cuts or chafing during operation.

Hydraulic System (continued)

Relieving Hydraulic Pressure

To relieve hydraulic pressure in the system, be sure hydraulic motor is disengaged and/or hydraulic cylinder is not exerting force on the system. Next, consult tractor operators manual for procedure to relieve pressure.

Bleeding Procedure For EOH 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. USE CARDBOARD OR WOOD TO DETECT LEAKS IN THE HYDRAULIC SYSTEM. SEEK MEDICAL TREATMENT IMMEDIATELY IF INJURED BY HIGH-PRESSURE FLUIDS.**
- **EYE PROTECTION AND OTHER APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT MUST BE WORN WHILE SERVICING IMPLEMENT.**

Open and close the flow door. Unfold and fold the vertical auger. Operate the spout tilt, spout rotate, and auger tilt. Perform these functions several times.

Purging Procedure For Braking System (Optional)

⚠ 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. USE CARDBOARD OR WOOD TO DETECT LEAKS IN THE HYDRAULIC SYSTEM. SEEK MEDICAL TREATMENT IMMEDIATELY IF INJURED BY HIGH-PRESSURE FLUIDS.**
- **EYE PROTECTION AND OTHER APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT MUST BE WORN WHILE SERVICING IMPLEMENT.**

NOTE: System is intended for tractors with hydraulic trailer brakes. If your tractor does not have hydraulic trailer brakes, contact your dealer for support.

Connector should comply with ISO:5676 standards. Brake hydraulic hose is designated with blue color band. See tractor's operators manual for connection location.

1. Set the tractor parking brake, but leave tractor engine on throughout the procedure. Attach hydraulic brake coupler on the cart to the implement brake port at the rear of the tractor.
2. Apply and hold pressure to brake pedal.
3. Loosen the bleeder screw, at the top of the brake caliper and allow air bubbles to escape. Close bleeder screw when oil flow is free of bubble interruptions and flowing steady. If necessary, pump the brake pedal to build circuit pressure. See Fig. 4-6.
4. Repeat steps 2 and 3 to the next brake caliper in the brake circuit. Repeat until all brakes are bled.
5. Perform a final tightness check of all caliper bleed screws before beginning cart operation. Check that both brakes actuate and release properly with tractor brake pedal.

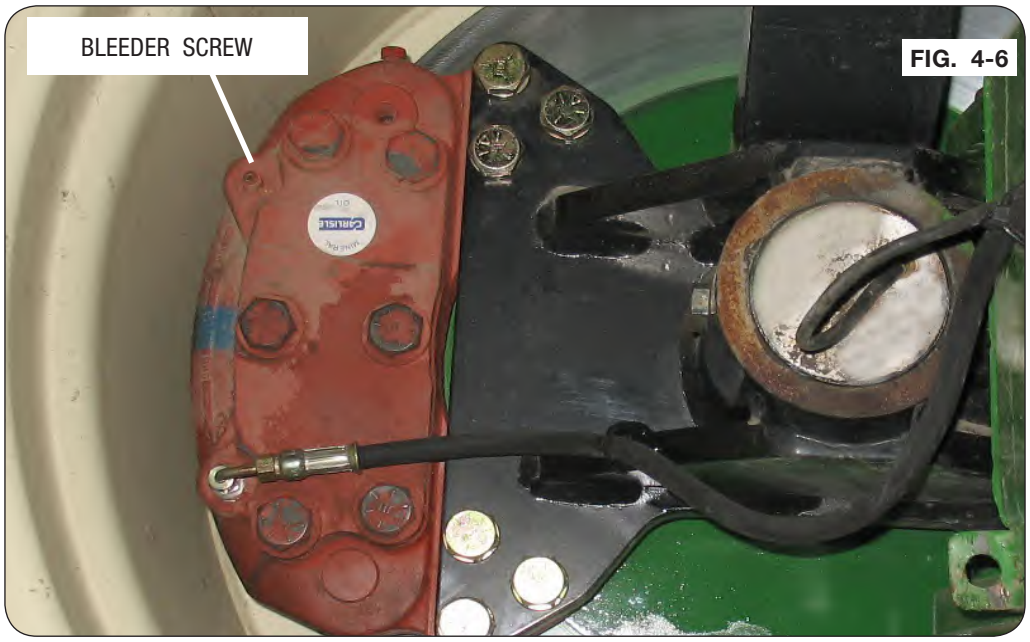


FIG. 4-6

Adjusting Cleanout Door

WARNING

- **MOVING PARTS CAN CRUSH AND CUT. KEEP AWAY FROM MOVING PARTS.**
- **KEEP HANDS CLEAR OF PINCH POINT AREAS.**
- **EYE PROTECTION AND OTHER APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT MUST BE WORN WHILE SERVICING THE IMPLEMENT.**

1. Park the empty grain cart on a firm and level surface. Block the tires/tracks on the machine to keep it from moving. Set the tractor's parking brake, shut-off the engine, remove the ignition key and disconnect the PTO shaft.

2. Inspect and verify that all the grain dust and filings are removed that may prevent the door from shutting completely. Completely close cleanout door. (Fig. 4-7)

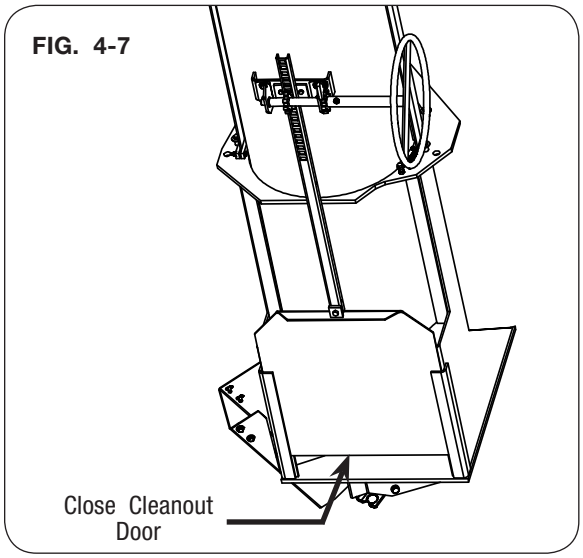


FIG. 4-7

3. Engage the locking plate (268313B). (Fig. 4-8)

4. Loosen mounting hardware. (Fig. 4-8)

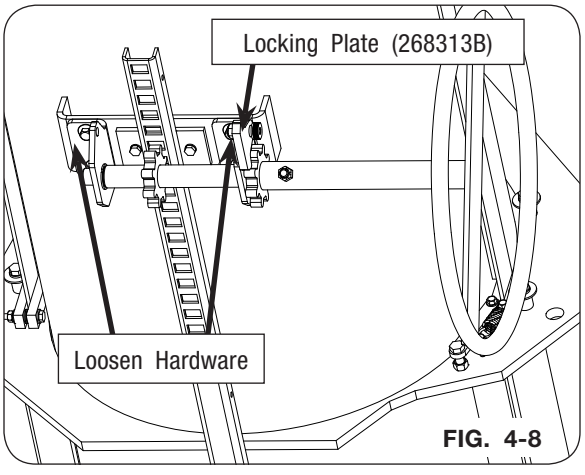


FIG. 4-8

Adjusting Cleanout Door (continued)

5. Push the gear assembly toward bottom of auger to remove excess movement and prevent the door from moving upward when unloading the cart. (Fig. 4-9)

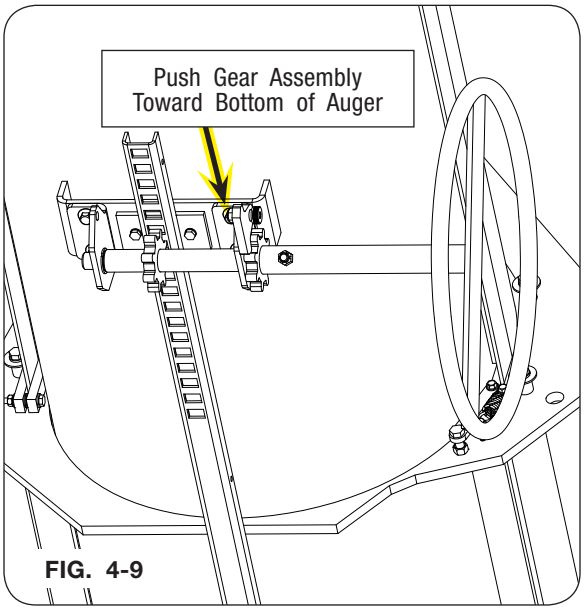
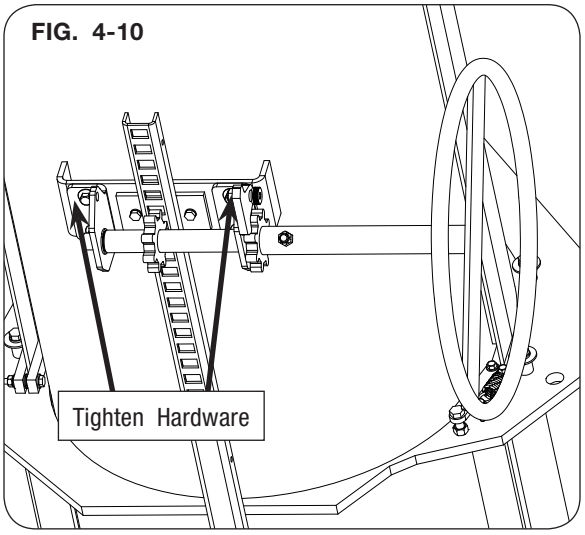


FIG. 4-9

6. Tighten hardware loosened in step 4. (Fig. 4-10)

7. Check door operation. Lock the handle weldment into position. (Fig. 4-10)

FIG. 4-10



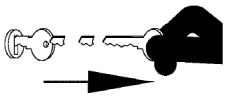
Auger System

WARNING

- **TO PREVENT PERSONAL INJURY OR DEATH, ALWAYS ENSURE THAT THERE ARE PEOPLE WHO REMAIN OUTSIDE THE CART TO ASSIST THE PERSON WORKING INSIDE, AND THAT ALL SAFE WORKPLACE PRACTICES ARE FOLLOWED. THERE IS RESTRICTED MOBILITY AND LIMITED EXIT PATHS WHEN WORKING INSIDE THE IMPLEMENT.**
- **KEEP HANDS CLEAR OF PINCH POINT AREAS.**
- **EYE PROTECTION AND OTHER APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT MUST BE WORN WHILE SERVICING IMPLEMENT.**
- **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 4,000 LBS. SPECIFIC LOAD RATINGS FOR INDIVIDUAL LOADS WILL BE GIVEN AT THE APPROPRIATE TIME IN THE INSTRUCTIONS.**
- **MOVING OR ROTATING COMPONENTS CAN CAUSE SERIOUS INJURY OR DEATH. ALWAYS DISCONNECT POWER SOURCE BEFORE SERVICING. ENSURE SERVICE COVERS, CHAIN/BELT COVERS AND CLEAN-OUT DOOR(S) ARE IN PLACE AND SECURELY FASTENED BEFORE OPERATING MACHINE.**

Lower Auger Removal

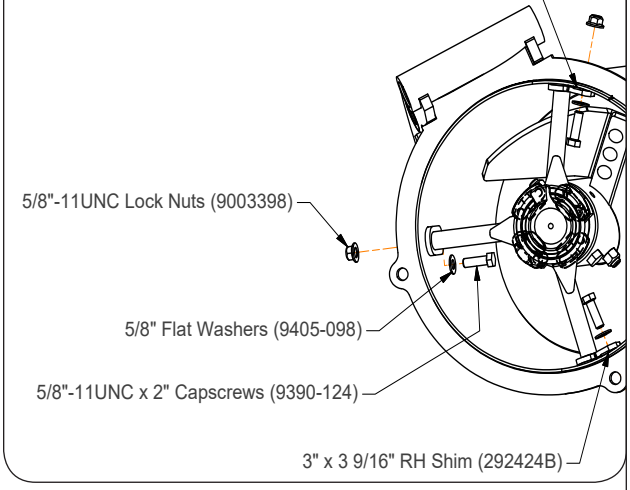
1. Hitch cart to tractor, connect hoses for flow door and upper auger hydraulic cylinders and fully open flow door. Keep upper auger in the folded position. Park the empty grain cart on a firm, level surface. Set the tractor's parking brake, shut-off the engine and remove the ignition key. Block the tires on the machine to keep it from moving.



2. Remove the three 5/8"-11UNC x 2" capscrews (9390-124), 5/8" flat washers (9405-098), 5/8"-11UNC lock nuts (9003398) and shims that secure the hanger bearing bracket to the auger tube. (Fig. 4-11).

3. Using a safe lifting device rated at a minimum of 1000 lbs., support the lower auger. Remove the hanger bearing assembly. Then remove the lower auger through the auger hinge opening.

Fig. 4-11



Auger System (continued)

Lower Auger Assembly

1. The replacement auger is factory balanced. Remove entire auger from shipping crate and secure from rolling. The lower auger assembly is pictured in Fig. 4-12 for reference.

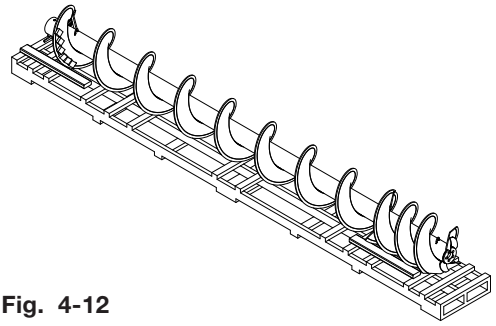


Fig. 4-12

2. Attach the u-joint assembly to the lower auger flighting by placing capscrews into the auger from opposite directions as shown in Fig. 4-13.

   Models 1019/1119
   5/8”-11UNC x 6” capscrews (9390-136)
   and 5/8”-11UNC lock nuts (9801)

NOTE: If removing flighting extension hardware, replace with new hardware. Do not reuse old flighting extension hardware.

3. Using a safe lifting device rated at a minimum of 1000 lbs., lift the auger and assembly. Slowly lower the auger down through the auger plate opening to intersect with the drive bushing.

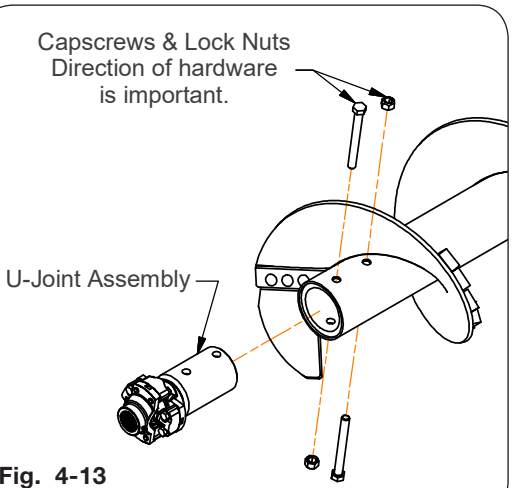


Fig. 4-13

4. Align auger end with the five pin drive bushing and securely engage together, see Fig. 4-14.

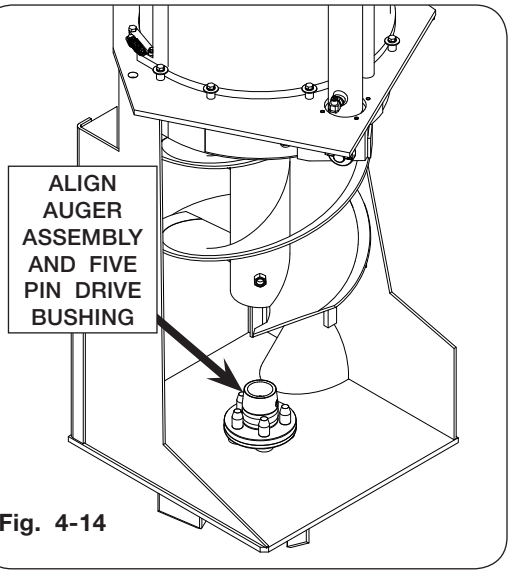


Fig. 4-14

Auger System (continued)

Hanger Bearing Centering

1. Once the lower auger is inserted into the auger tube, center the lower auger in the tube and support with two 5/8" thick bars/wedges near the auger hinge plate. (Fig. 4-15)

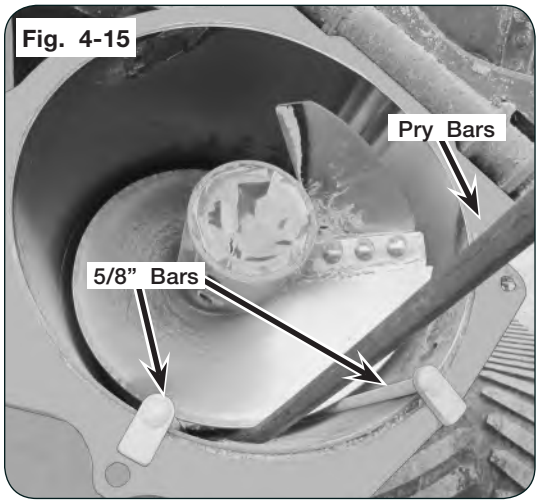


Fig. 4-15

Auger System (continued)

Lower Auger Timing

1. Apply anti-seize to the splines before sliding the drive dog into the u-joint. Time the splined connection as follows:

   Time the drive dog (as in Fig. 4-16) with the finished edge of the flighting at 12:00. Position the drive dog at 11:00.

NOTE: When looking down at the lower flighting (Fig. 4-16) the auger rotation will be clockwise.

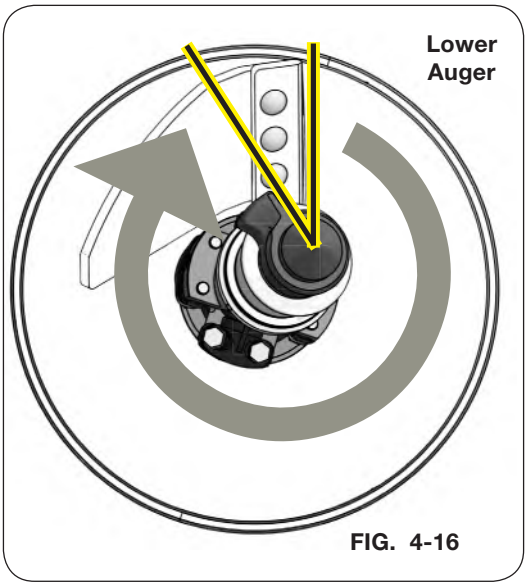


FIG. 4-16

2. Loosely attach the hanger bearing as follows to ensure all the feet are shimmed evenly:

   Loosely secure using one 3” x 3 9/16” left-hand shim (292423B), one 3” x 3 9/16” right-hand shim (292424B), three 5/8”-11UNC x 2” capscrews (9390-124), three 5/8” flat washers (9405-098), and three 5/8”-11UNC lock nuts (9003398) as shown in Fig. 4-17.

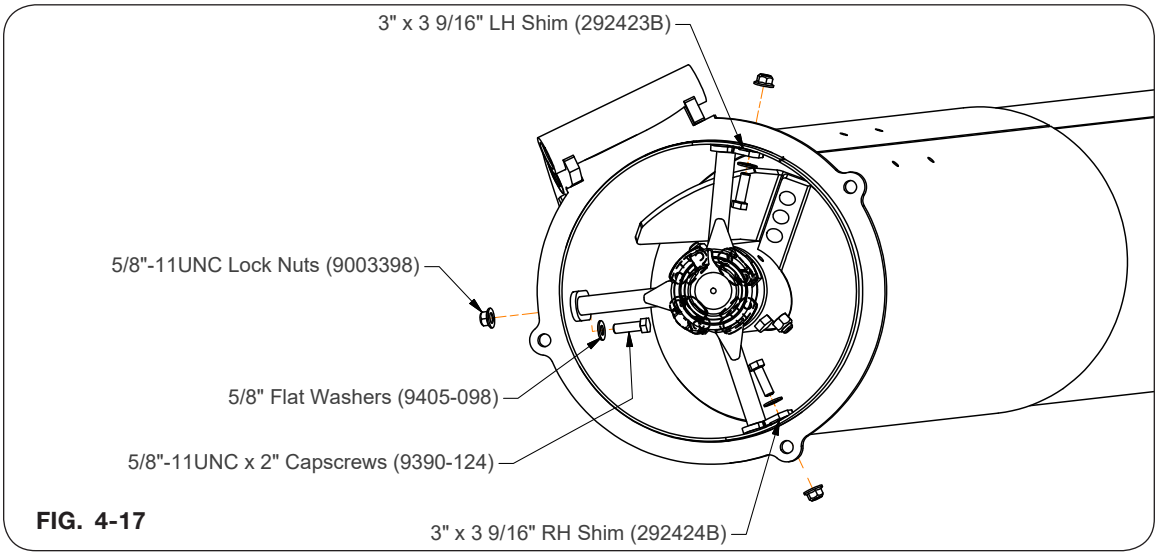


FIG. 4-17

Auger System (continued)

U-Joint Spline Gap

WARNING

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

1. Verify spline gap before tightening hanger bearing hardware. Spline gap should be a minimum of 3/16". Using a safe lifting device rated for 250 pounds, raise the hanger bearing in the holes so the proper minimum spline gap is achieved. (Fig. 4-18)

   NOTE: When auger components have been replaced or serviced, proper spline gap MUST be verified. It may be necessary to loosen the hanger bearing hardware and use the lifting device to achieve the proper spline gap.

2. Tighten the retaining hardware to the appropriate torque values listed in this section of the operators manual.

3. Grease the spline grease zerk. (Fig. 4-18)

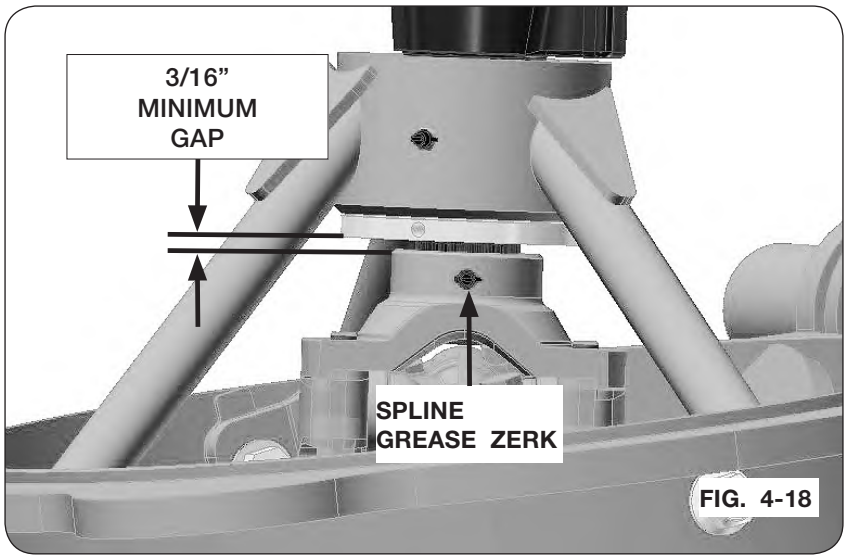


FIG. 4-18

NOTE: If no further changes are required, continue with the "Upper Auger" section.

Auger System (continued)

Upper Auger Removal

1. Keep upper auger in the folded position.

2. Loosen the two bearing set screws. Remove and save the 5/16”-18UNC x 2 3/4” capscrew (9390-037), four 5/16” SAE flat washers (9405-068) 5/16”-18UNC lock nut (901527) and 2” flat washers (93974). (Fig. 4-19)

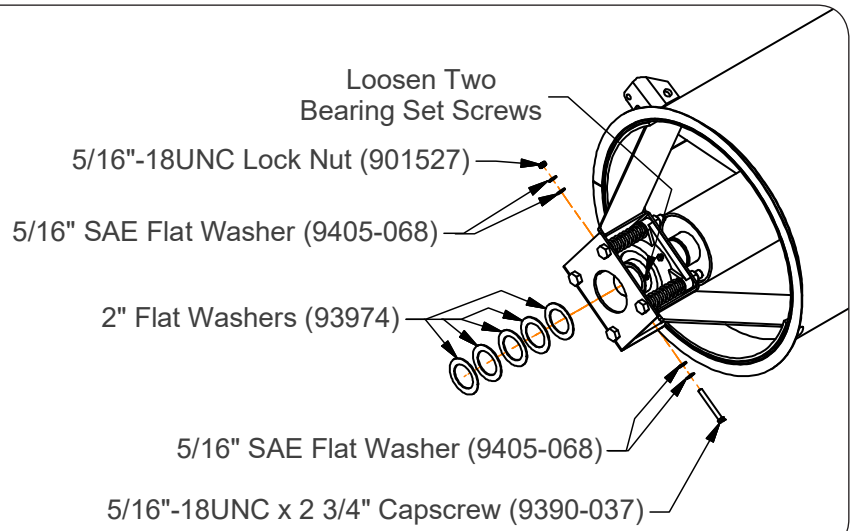


Fig. 4-19

Auger System (continued)

Soft Start Replacement

WARNING

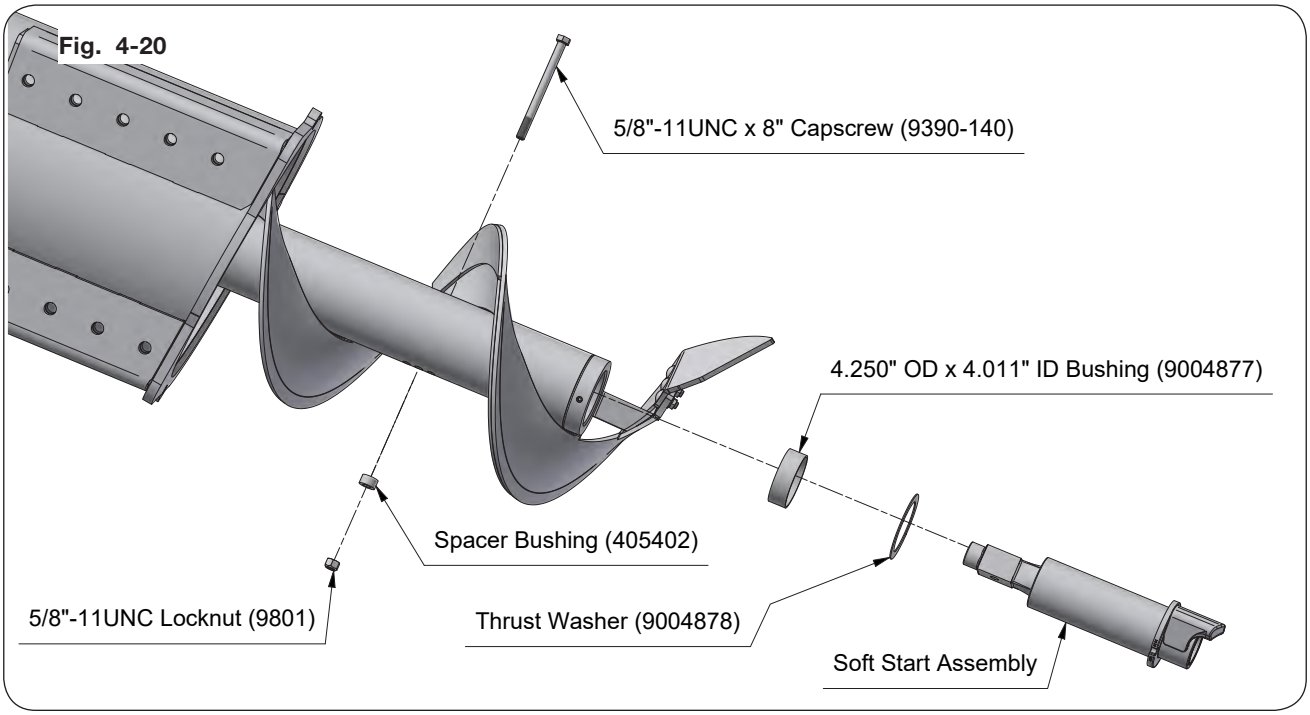
- **KEEP HANDS CLEAR OF PINCH POINT AREAS.**
- **EYE PROTECTION AND OTHER APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT MUST BE WORN WHILE SERVICING IMPLEMENT.**
- **FALLING OBJECTS CAN CAUSE SERIOUS INJURY OR DEATH. DO NOT WORK UNDER THE MACHINE AT ANY TIME WHILE BEING HOISTED. BE SURE ALL LIFTING DEVICES AND SUPPORTS ARE RATED FOR THE LOADS BEING HOISTED. THESE ASSEMBLY INSTRUCTIONS WILL REQUIRE SAFE LIFTING DEVICES UP TO 2,000 LBS. SPECIFIC LOAD RATINGS FOR INDIVIDUAL LOADS WILL BE GIVEN AT THE APPROPRIATE TIME IN THE INSTRUCTIONS.**

1. Use safe lifting devices rated at a minimum of 2,000 lbs. to support the upper auger, remove auger from tube.

2. Remove the 1/2”-13UNC capscrew (9390-140), 1/2”-13UNC lock nut (9801), soft start assembly, thrust washer (9004878), and bushing (9004877). Discard 1/2”-13UNC capscrew (9390-140). (Fig. 4-20)

   NOTE: If removing flighting extension hardware, replace with new hardware. Do not reuse old flighting extension hardware.

Fig. 4-20



3. Insert the bushing (9004877) into the end of the upper auger. Attach the thrust washer (9004878) and apply anti-seize to the soft start and insert into the auger tube.

Auger System (continued)

Upper Auger Timing

1. Time the drive pin as follows:

   Time the drive pin (as in Fig. 4-21) with the finished edge of the flighting at 12:00. Position the drive pin at 9:30.

NOTE: Looking up at the upper flighting (Fig. 4-21) the auger rotation will be counter clockwise.

NOTE: There is only one way the soft-start will go in.

NOTE: For additional auger timing assitance, refer to your dealer for an auger timing fixture (293329Y).

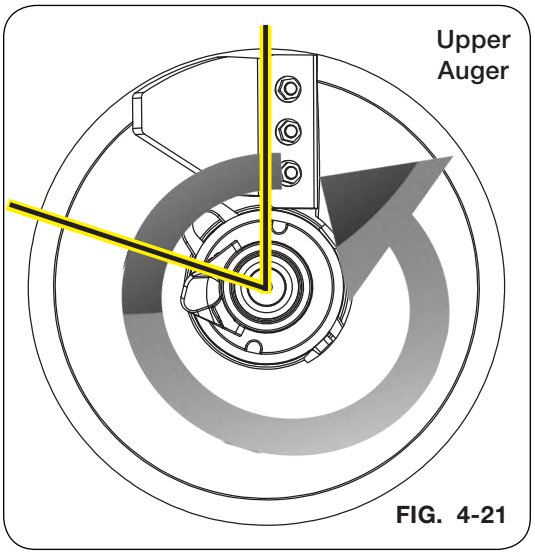


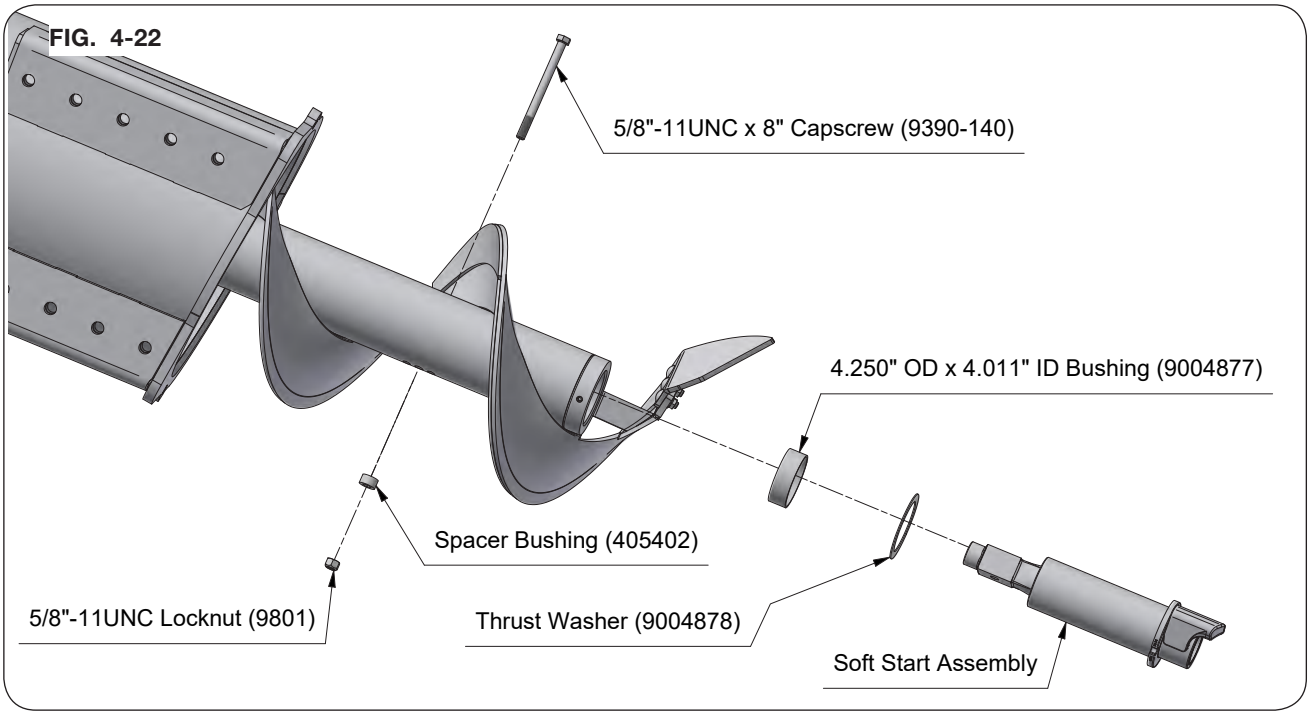
FIG. 4-21

Soft Start Replacement (continued)

NOTE: Before soft start reassembly, ensure the spacer bushing (405402) is on the same side as the lock nut (9801). (Fig. 4-22)

1. Retain the soft start into position with 1/2”-13UNC capscrew (9390-140), spacer bushing (405402), and 1/2”-13UNC lock nut (9801). (Fig. 4-22)

FIG. 4-22



Auger System (continued)

Upper Auger Assembly

⚠ WARNING

- **KEEP HANDS CLEAR OF PINCH POINT AREAS.**
- **EYE PROTECTION AND OTHER APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT MUST BE WORN WHILE SERVICING IMPLEMENT.**
- **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 2,000 LBS. SPECIFIC LOAD RATINGS FOR INDIVIDUAL LOADS WILL BE GIVEN AT THE APPROPRIATE TIME IN THE INSTRUCTIONS.**

1. The replacement auger is factory balanced. Remove entire auger from shipping crate and secure from rolling. The upper auger assembly is pictured in Fig. 4-23 for reference.

2. Using a safe lifting device and slings with a minimum capacity of 2,000 lbs. to support the upper auger, install upper auger into the tube.

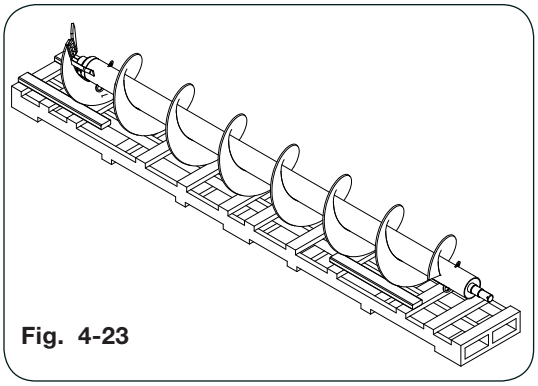


Fig. 4-23

3. Refer to “Upper Auger Timing” and position soft start accordingly.

Upper Auger Height

1. Place a flat bar across the center of the auger housing tube. Measure the distance between the center of the face of the soft start bushing that sits on the top of the drive dog and the center of the flat bar. Verify the upper auger in-set of approximately 8 1/8”. With the upper auger folded back, ensure the height of the upper auger is set correctly. If this dimension is not correct, loosen the set screws in the flange bearing at the top of the upper auger and slide the auger through the bearing to this correct position. Tighten set screws. (Fig. 4-24)

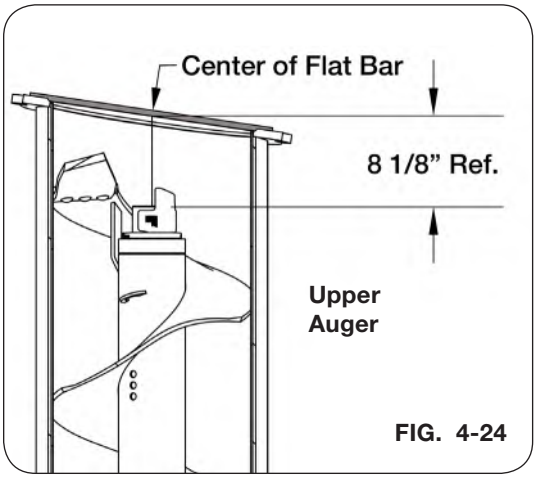


FIG. 4-24

Auger System (continued)

Upper Auger Assembly (continued)

1. Make sure that the 4 bolt flange bearing is sitting tight against the mounting plate and then tighten the two bearing set screws. Attach the upper auger with the 5/16”-18UNC x 2 3/4” capscrew (9390-037), four 5/16” SAE flat washers (9405-068) 5/16”-18UNC lock nut (901527) and as many 2” flat washers (93974) as required to fill the gap between the bearing and the cross bolt. (Fig. 4-25)

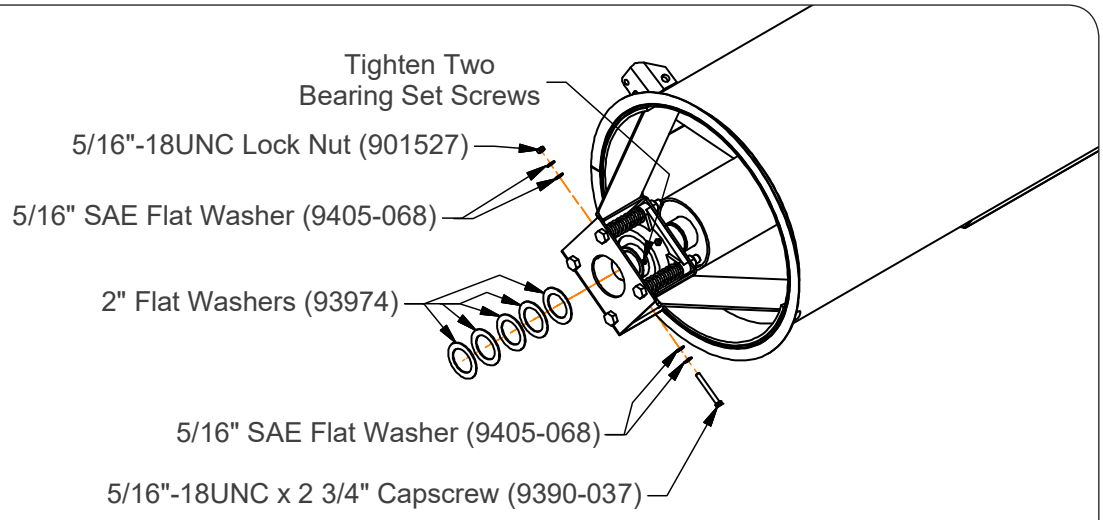


FIG. 4-25

Auger System (continued)

Upper Auger Bearing Gap

1. Verify the upper auger bearing height by inspecting the upper auger bearing in operating position. There should be minimum 1/16” to 1/8” gap between the bearing and mount plate with the upper auger in operating position and the drive dog completely engaged. If gap is present, no action is needed, go to step 2. If no gap or gap is too large, Re-adjust the upper auger placement to achieve a 1/16-1/8” gap. If there is no gap, the upper auger will need to be moved ahead. If there is too large of a gap, move it backwards in the upper auger housing. The number of washers (93974) will also need to be adjusted to eliminate any gap between the bearing and the cross bolt. (Fig. 4-26 and 4-27)
2. Place upper auger in the folded/transport position.
3. Once the upper auger height has been verified, remove the upper bearing set screws one at a time, and dimple the stud shaft with a 1/4” diameter drill bit. Apply medium strength blue thread locker to the set screws, and reinstall the set screws into the flange bearing and into the dimples on the stud shaft. Tighten set screws. Tighten all hardware.
4. Test run auger driveline. Verify smooth driveline operation.

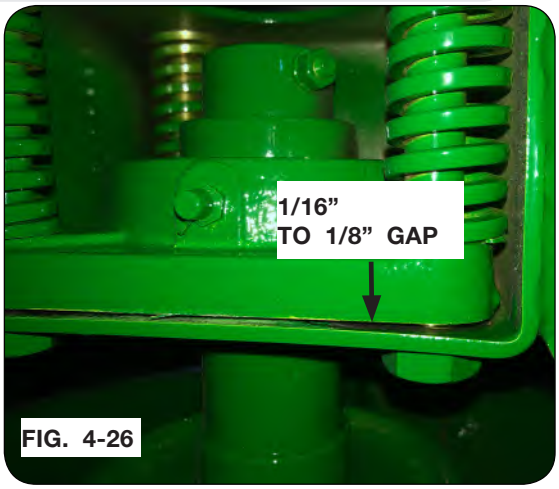


FIG. 4-26

FIG. 4-27

Auger Driveline

Bearings

It is important to periodically check set screws in all bearings at either end of the driveline for tightness.

Driveline Replacement

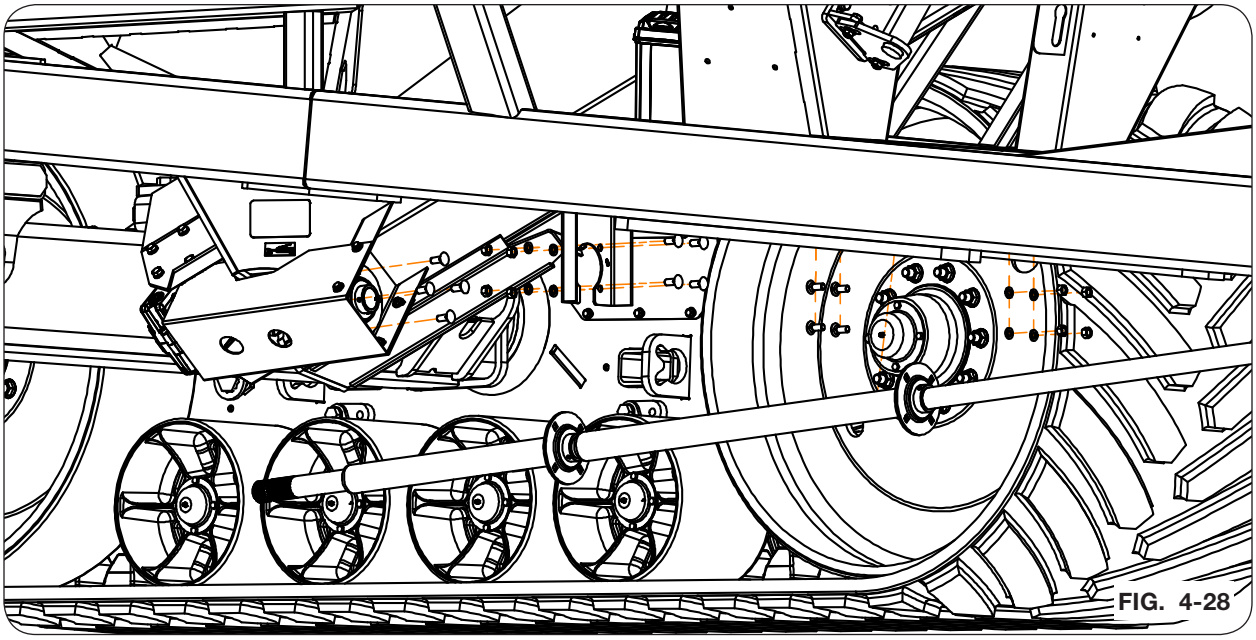


FIG. 4-28

1. Park the empty cart on a firm, level surface. Block the wheels or tracks on the cart to keep it from moving. Set the tractor parking brake, shut off the engine, and remove the ignition key from the tractor before disconnecting driveline assembly and bearing hardware.

2. Loosen the setscrews on the three flangette bearings (9005061) (Fig. 4-28).

3. Remove the 1/2” carriage bolts (9388-103), flange nuts (9394-010), and lock washers (9404-025) holding the flangette bearings. Keep hardware. (Fig. 4-28).

Auger Driveline (continued)

4. Remove paint on driveshaft to allow for easier movement. Slide driveshaft forward until the rear spline is out of the universal joint connected to the gearbox.

5. Drop the gearbox end of driveshaft down and slide driveshaft out of the flangette bearing on the hitch end of the driveshaft.

6. Remove bearings, bearing mounts, universal joint cover, driveshaft lock collars (if lock collars are attached to driveshaft), PVC driveshaft covers, and driveline cover off the current driveshaft.

7. Slide new 1 3/4" dia. two-piece lock collars (9008674) to both sides of new bearing (9005061) closest to the U-joint.

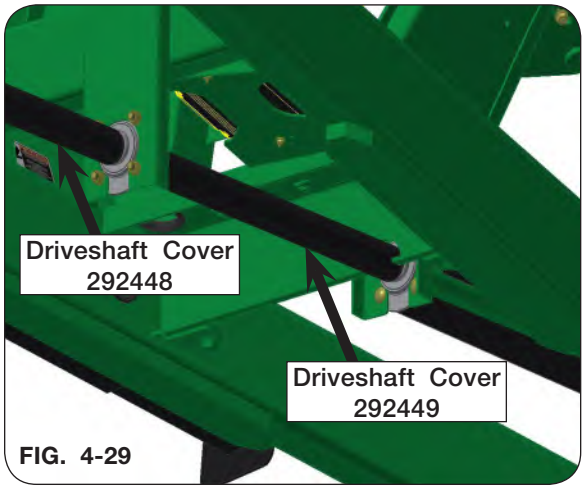


FIG. 4-29

8. Torque lock collars to 325 Inch-Lbs.

9. When installing new bearings onto new driveshaft (9008138), assemble new 20 1/2" PVC driveshaft cover (292448) between bearings near the gearbox, and new 33 1/2" PVC driveshaft cover (292449) between bearings behind the hitch driveline cover. (Fig. 4-29)

NOTE: Ends of driveshaft are symmetrical.

10. Slide the hitch end of the driveshaft, bearing and hitch driveline cover into the bearing near hitch of the cart. (Fig. 4-29)

11. Raise the gearbox end of the driveshaft up and insert the original 1/2" carriage bolts, flange nuts, and lock washers into the mounting flanges making sure that the bearing flanges are both on the front side of the mounting brackets. Only loosely tighten the hardware.

Auger Driveline (continued)

12. Slide driveshaft down into the gearbox universal joint attached to the gearbox until the end of the shaft extends into the universal joint about 2 3/8". Ensure universal joint and driveshaft splines completely engage. Verify the hitch end for adequate length for driveline assembly to connect. (Fig. 4-32)

13. Tighten all flangette mounting hardware.

14. For alignment of the yoke, the orientation of the universal joint at the gearbox MUST be in line with the driveshaft drill dimple when the driveline assembly is attached. (Fig. 4-30, 4-31, and 4-32)

15. With bearing mounting hardware completely tightened, drill a setscrew dimple in the driveshaft by going through the bearing setscrew threaded hole to dimple the driveshaft being careful to not damage threads. Drill the dimple to a depth that setscrews are flush with the bearing prior to applying thread locker and installing setscrews. (Fig. 4-30)

NOTE: Check gearbox oil level and grease universal joint before installing universal joint cover.

16. Attach new universal joint cover (290720B) to the bearing mount in front of the gearbox using original 3/8"-16UNC capscrews and 5/16"-18UNC weld nuts. Review to ensure PVC driveshaft covers and driveline cover, located behind the ladder, are in place and hardware tightened prior to operation.

17. Apply thread lock on bearing setscrews and tighten.

18. Test run driveline. Verify smooth driveline operation.

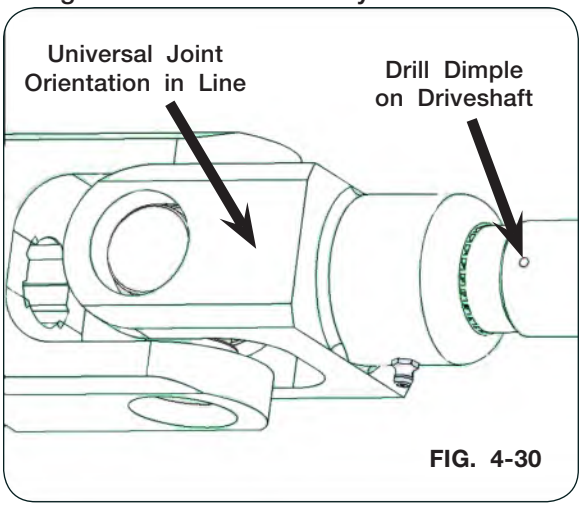


FIG. 4-30

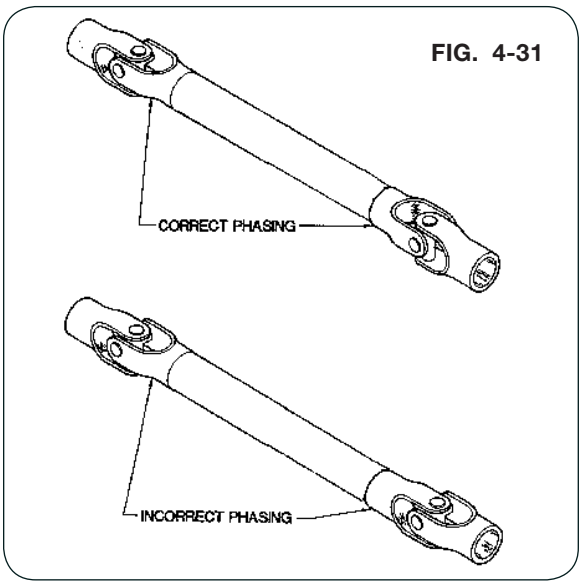
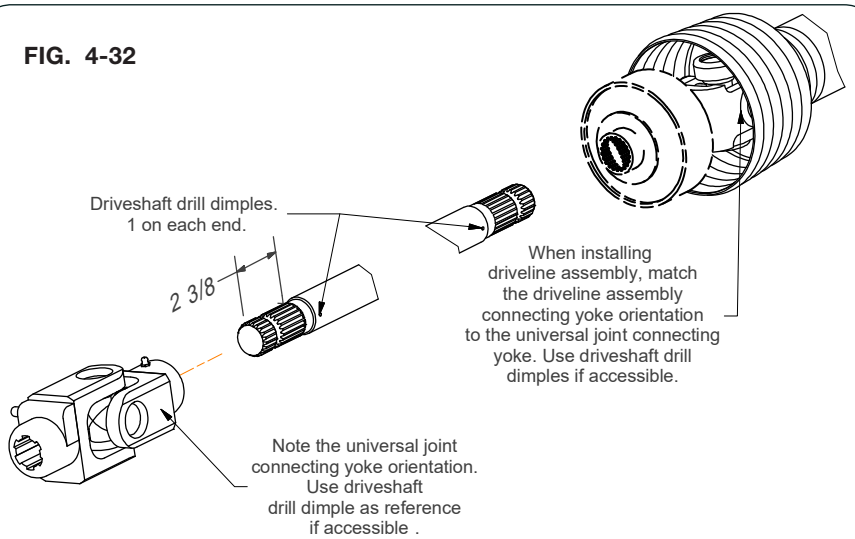


FIG. 4-31

FIG. 4-32



Verify Telescoping PTO Shaft Length

WARNING

- **PROPERLY EXTENDED AND COLLAPSED LENGTHS OF THE TELESCOPING PTO SHAFT MUST BE VERIFIED BEFORE FIRST OPERATION WITH EACH AND EVERY DIFFERENT TRACTOR. IF THE EXTENDED LENGTH OF THE PTO SHAFT IS NOT SUFFICIENT, IT MAY BECOME UNCOUPLED IN OPERATION AND CAUSE SERIOUS INJURY OR DEATH FROM CONTACT WITH UNCONTROLLED FLAILING OF PTO SHAFT ASSEMBLY COMPONENTS.**

An excessive collapsed length can result in damage to the PTO driveline and attached components. This is most likely to occur during extreme turning angles and/or travel over rough terrain. Conditions are amplified on tractors with tracks operating in uneven terrain, particularly rice levies. Damaged driveline components can result in unsafe operation and severely reduced driveline component life.

NOTE: Do not exceed 10 degrees beyond a straight pull line while operating the PTO.

To verify proper extended and collapsed lengths, use the following procedure:

1. Fully collapse PTO shaft and measure length "L" (Fig. 4-33).

   Enter here:_____(1) (Verify that outer tube does not bottom out on surrounding plastic shield components).

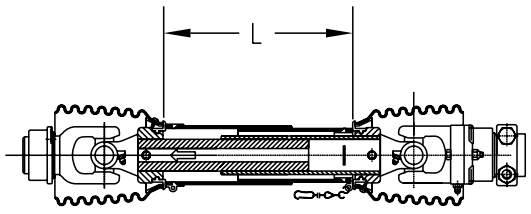


Fig. 4-33

2. Pull apart PTO telescoping shaft ends and measure lengths "T" & "C" (Fig. 4-34).

   Add "T" &"C" measurements together
   Enter total here:_____(2)

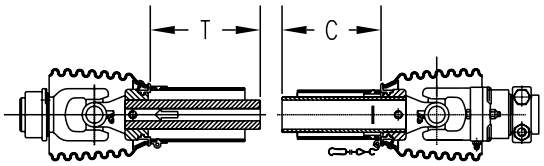


Fig. 4-34

3. Calculate maximum recommended extended length:
   a. Subtract line 1 from line 2. Enter here:_____(a)
   b. Divide line (a) by 2. Enter here:_____(b)
   c. Add line (b) to line 1. Enter here:_____(c)
   d. Subtract 3 inches from line (c). Enter here:_____(d)

This is the maximum recommended extended length (LB).

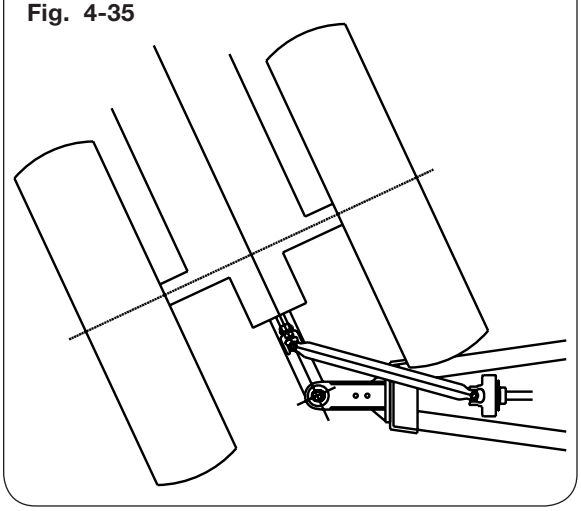
Verify Telescoping PTO Shaft Length (continued)

4. Hitch tractor drawbar to cart, ensuring that tractor and cart are on level ground and coupled as straight as practical.

5. Connect PTO shaft to tractor, and measure length "L" from same points as used in step 1. **Ensure that this measurement does not exceed the maximum recommended extended length calculated in step 3 above.** If necessary, choose a shorter drawbar position, or obtain a longer PTO shaft assembly before operating cart.

6. Position the tractor to obtain tightest turning angle, relative to the cart. (Fig. 4-35)

Fig. 4-35



7. Measure length "L" from same points as used in step 1. This distance must be at least 1.5 inches greater than the distance measured in step 1. If necessary, adjust length of PTO shaft by cutting inner and outer plastic guard tubes and inner and outer sliding profiles by the same length. Round off all sharp edges and remove burrs before greasing and reassembling shaft halves. (Fig. 4-36)

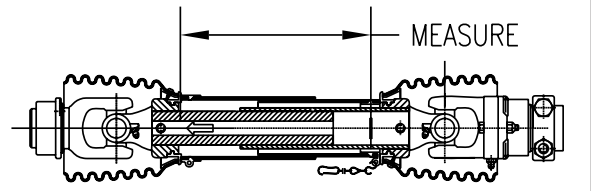
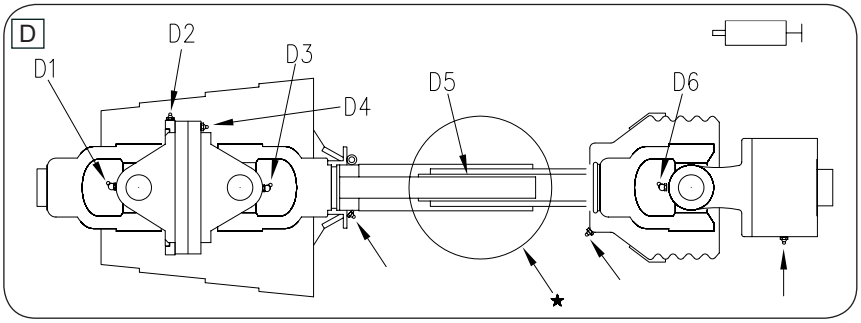


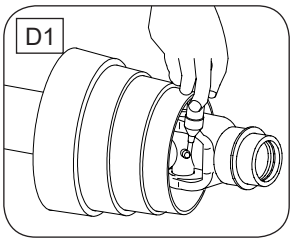
Fig. 4-36

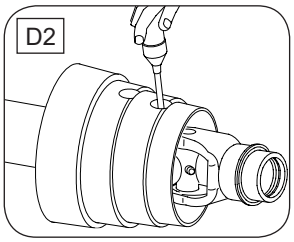
PTO Shaft and Clutch

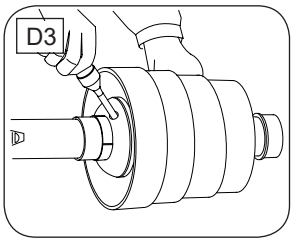
Lubrication (Figs. D1 - D6)

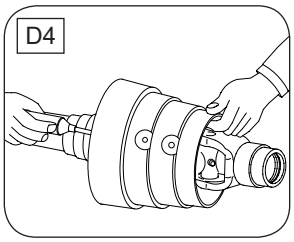
Lubricate with quality grease before starting work and every 8 operating hours. Clean and grease PTO drive shaft before each prolonged period of non-use. Molded nipples on the shield near each shield bearing are intended as grease fittings and should be lubricated every 8 hours of operation! Telescoping members must have lubrication to operate successfully regardless of whether a grease fitting is provided for that purpose! Telescoping members without fittings should be pulled apart and grease should be added manually. Check and grease the guard tubes in winter to prevent seizing.

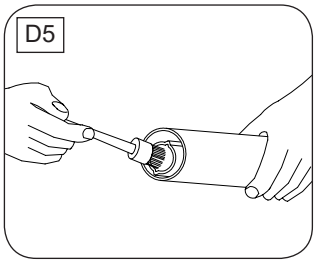


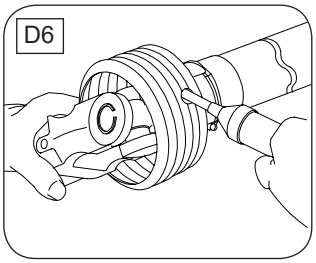












PTO Shaft and Clutch (continued)

Coupling the PTO drive shaft (Figs. E1 - E2)

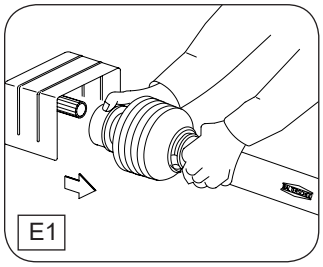
Clean and grease the PTO and implement input connection (IIC)

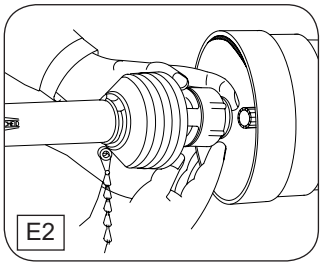
AS-Lock

1. Pull locking collar and simultaneously push PTO drive shaft onto PTO shaft until the locking device engages.

Push-Pull Lock

2. Pull locking collar and simultaneously push PTO drive shaft onto PTO shaft until the locking device engages.


E1


E2

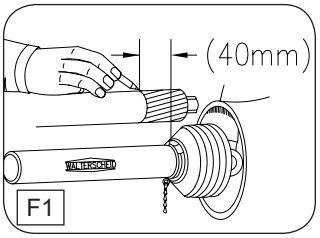
⚠ WARNING

- **CHECK TO INSURE ALL THE LOCKS ARE SECURELY ENGAGED BEFORE STARTING WORK WITH THE PTO DRIVESHAFT.**

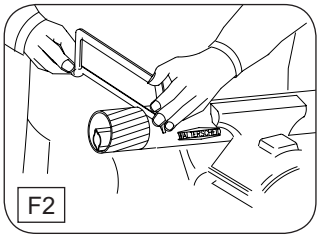
Length Adjustment (Figs. F1 - F4)

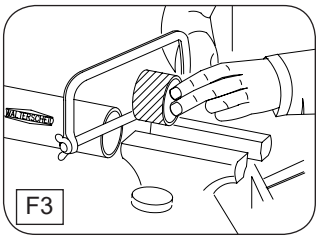
NOTE: Maximum operating length LB.

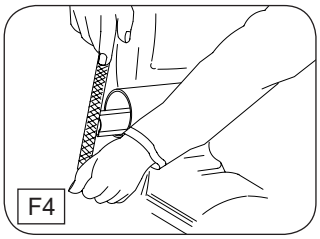
1. To adjust length, hold the half-shafts next to each other in the shortest working position and mark them.
2. Shorten inner and outer guard tubes equally.
3. Shorten inner and outer sliding profiles by the same length as the guard tubes.
4. Round off all sharp edges and remove burrs. Grease sliding profiles.



F1


F2


F3

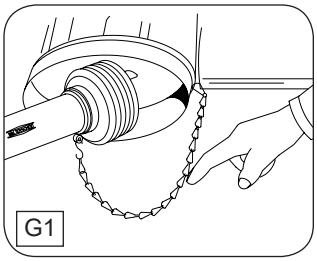

F4

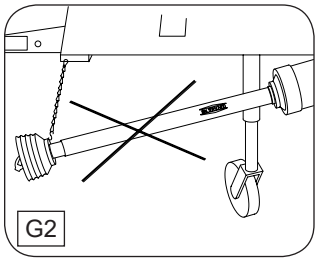
⚠ WARNING

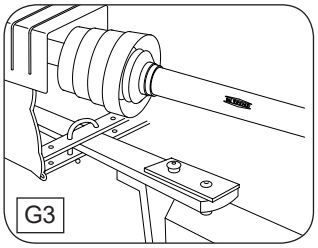
- **CHECK THE LENGTH OF THE TELESCOPING MEMBERS TO INSURE THE DRIVELINE WILL NOT BOTTOM OUT OR SEPARATE WHEN TURNING AND/OR GOING OVER ROUGH TERRAIN.**

PTO Shaft and Clutch (continued)

Chains (Figs. G1 - G3)







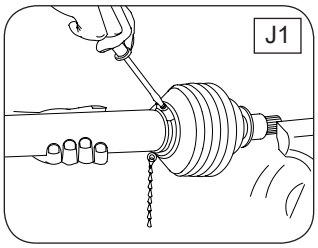
NOTE: The chain is intended to prevent the shield from rotating against non-moving parts and thereby preventing shield damage. A properly installed chain will increase the service life of the shield.

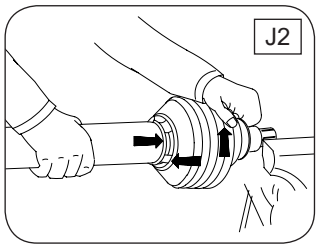
1. Chains must be fitted so as to allow sufficient articulation of the shaft in all working positions. Care must be taken to be sure that chain does not become entangled with drawbar hitch or other restrictions during operation or transport of machine.

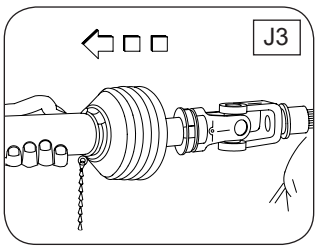
2. The PTO drive shaft must not be suspended from the chain.

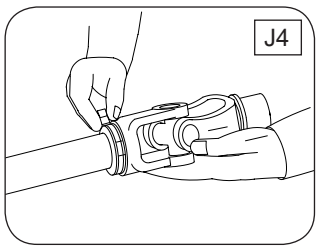
To Dismantle Guard (Figs. J1 - J4)

1. Remove locking screw.
2. Align bearing tabs with cone pockets.
3. Remove half-guard.
4. Remove bearing ring.





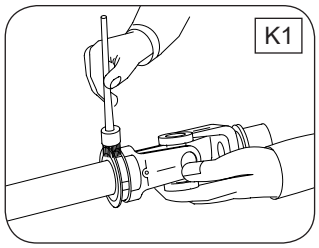


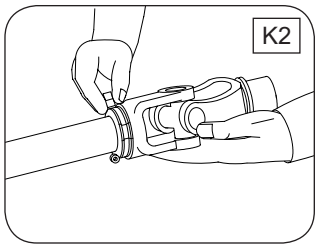


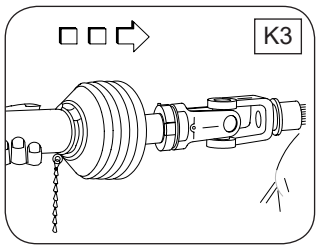
PTO Shaft and Clutch (continued)

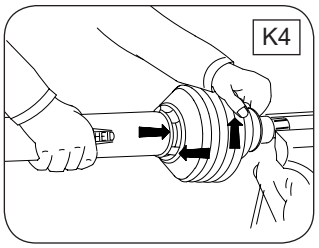
To Assemble Guard (Figs. K1 - K5)

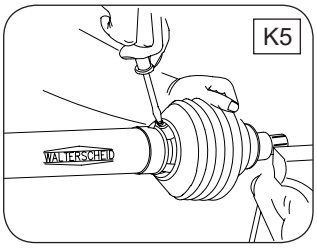
1. Grease yoke groove and inner profile tube.
2. Fit bearing ring in groove with recesses facing profile tube.
3. Slip on half-guard.
4. Turn cone until it engages correctly.
5. Install locking screw.





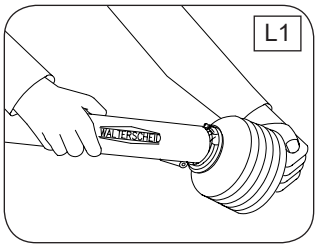


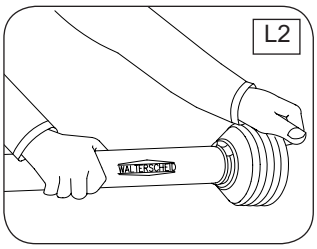


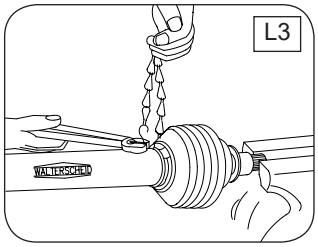


To Assemble Cone

1. Dismantle guard (Figs. J1 - J3). Remove old cone (e.g. cut open with knife). Take off chain. Place neck of new cone in hot water (approx 80° C / 180° F) and pull onto bearing housing (Fig. L1).
2. Turn guard cone into assembly position (Fig. L2). Further assembly instructions for guard (Figs. K1 - K5).
3. Reconnect chain if required (Fig. L3).





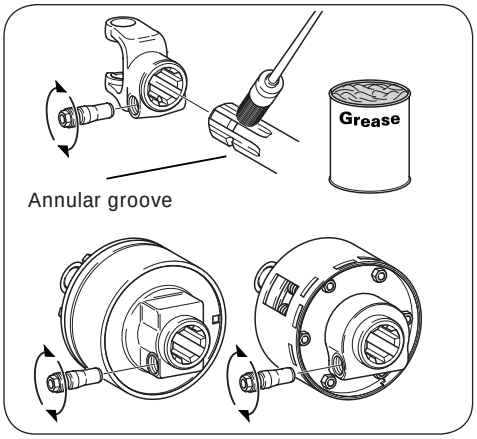


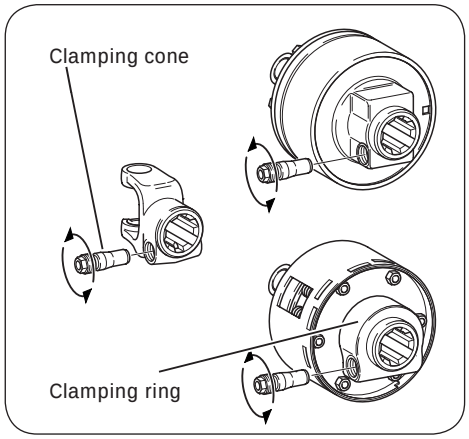
PTO Quick Disconnect

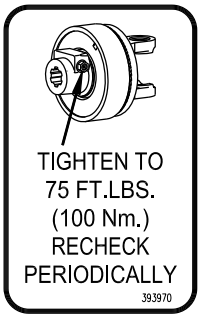
Coupling

Slide clamp yoke or clutch onto connecting shaft. Make sure the location hole for the clamping cone is positioned above the annular groove of the connecting shaft. Screw appropriate clamping cone into the location hole. Slightly moving the clamp yoke or clutch to and from in the axial direction will help drive in the clamping cone. Check the clamp yoke or clutch for a tight and safe fit and continue to check at regular intervals. Retighten the clamping cone as necessary. Torque clamping cone down to 75 ft.-lbs.

When over loading occurs, the clutch disengages and will repeatedly attempt to reset. The clutch will create a repeated “clicking” noise when resetting. Torque demand must decrease for clutch to reset.

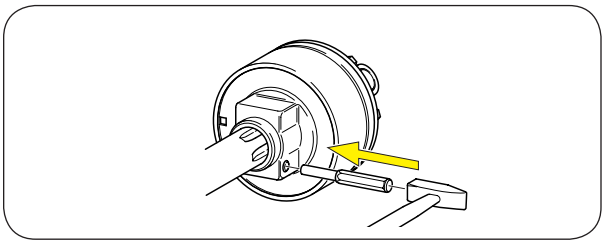




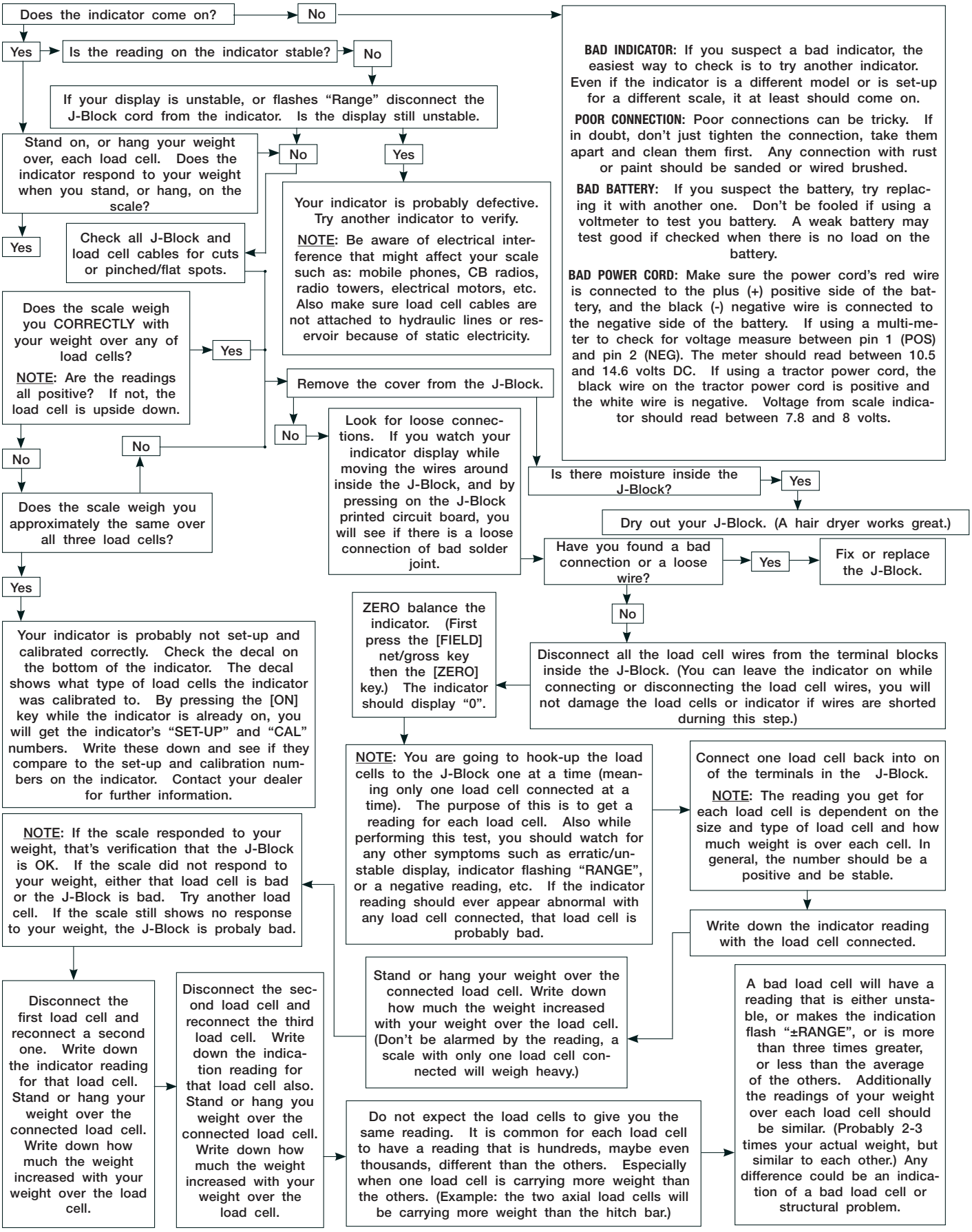


Uncoupling

Unscrew the clamping cone a partial turn. Use the punch and hammer to help alleviate the torque resistance on the wrench if necessary. After a few cycles the clamping cone will move freely with low torque resistance for the removal process.



Scale Troubleshooting



Weather Guard Tarp Troubleshooting

PROBABLE CAUSE	CORRECTION
Tarp sags in middle areas	1. Bows may be bent or adjusted too low.
	2. Missing or loose ridge strap. Replace or retighten.
	3. U-joint may need to be adjusted on splinded shaft to provide more tension.
Holes or tears in tarp	1. Consult your local dealer for repairs.
	2. Order tarp repart kit from dealer.
	3. When new tarp or parts are needed always replace with original parts.

Inspection and Maintenance

⚠ WARNING

- **TO PREVENT PERSONAL INJURY OR DEATH, DO NOT ALLOW ANYONE ON A CLOSED TARP. TARP SYSTEM IS NOT DESIGNED TO SUPPORT A PERSON.**
- **FALLING OBJECTS CAN CAUSE SERIOUS INJURY OR DEATH. REMOVE ACCUMULATED WATER/SNOW/ICE OR ANY OTHER OBJECTS FROM TARP BEFORE OPENING TARP.**

IMPORTANT

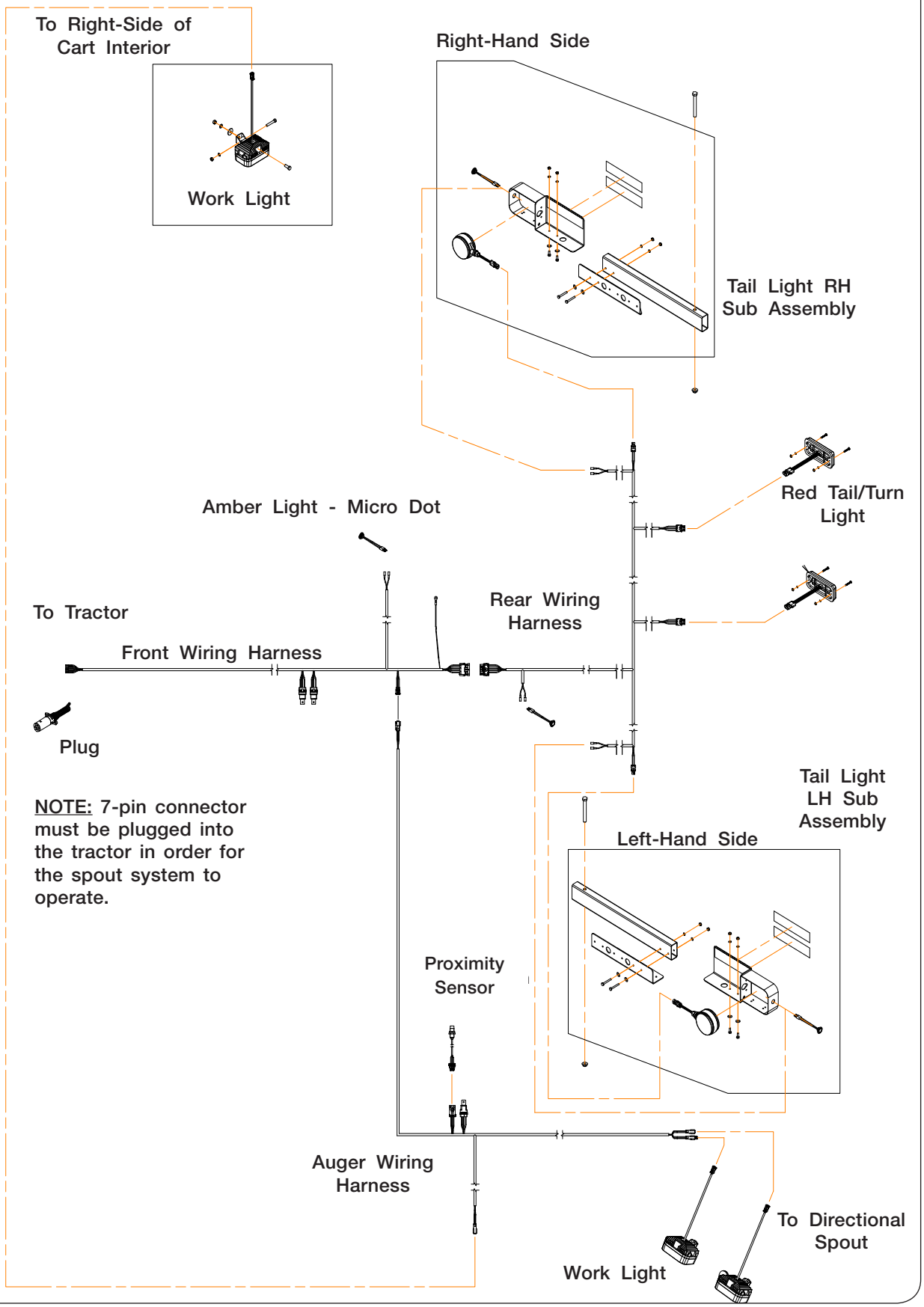
- *Do not open or close tarp while moving or in high wind conditions. Damage to the tarp may occur.*
- *Tarp should not be used if it is torn or the bungee cords are frayed or show damage. If water pools on the tarp adjust tension of tarp cables and/or arm springs as required.*

Periodic preventive maintenance should be practiced. Inspect tarp and hardware often for abrasions or loosened bolts that may need adjustment and/or repair. Check bungee cords for wear and adjust tension at the beginning of the season and again half way through the season.

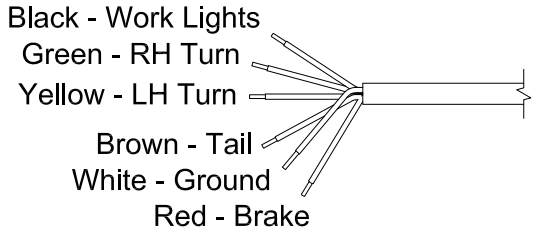
Tears in tarp should addressed before further tarp operation. If water pools on tarp, adjust tension of tarp cables and/or arm springs.

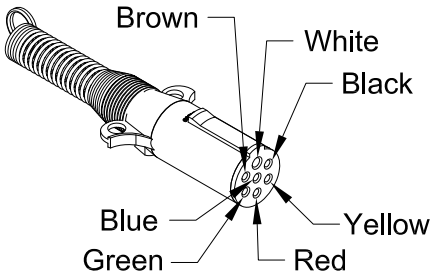
If installed correctly, tarp should always operate as well as when first installed. If tarp does not pass this simple inspection, make all appropriate repairs or adjustments immediately before serious damage occurs.

Electrical System Diagram — Overall



Electrical System Diagram — Plug #92450

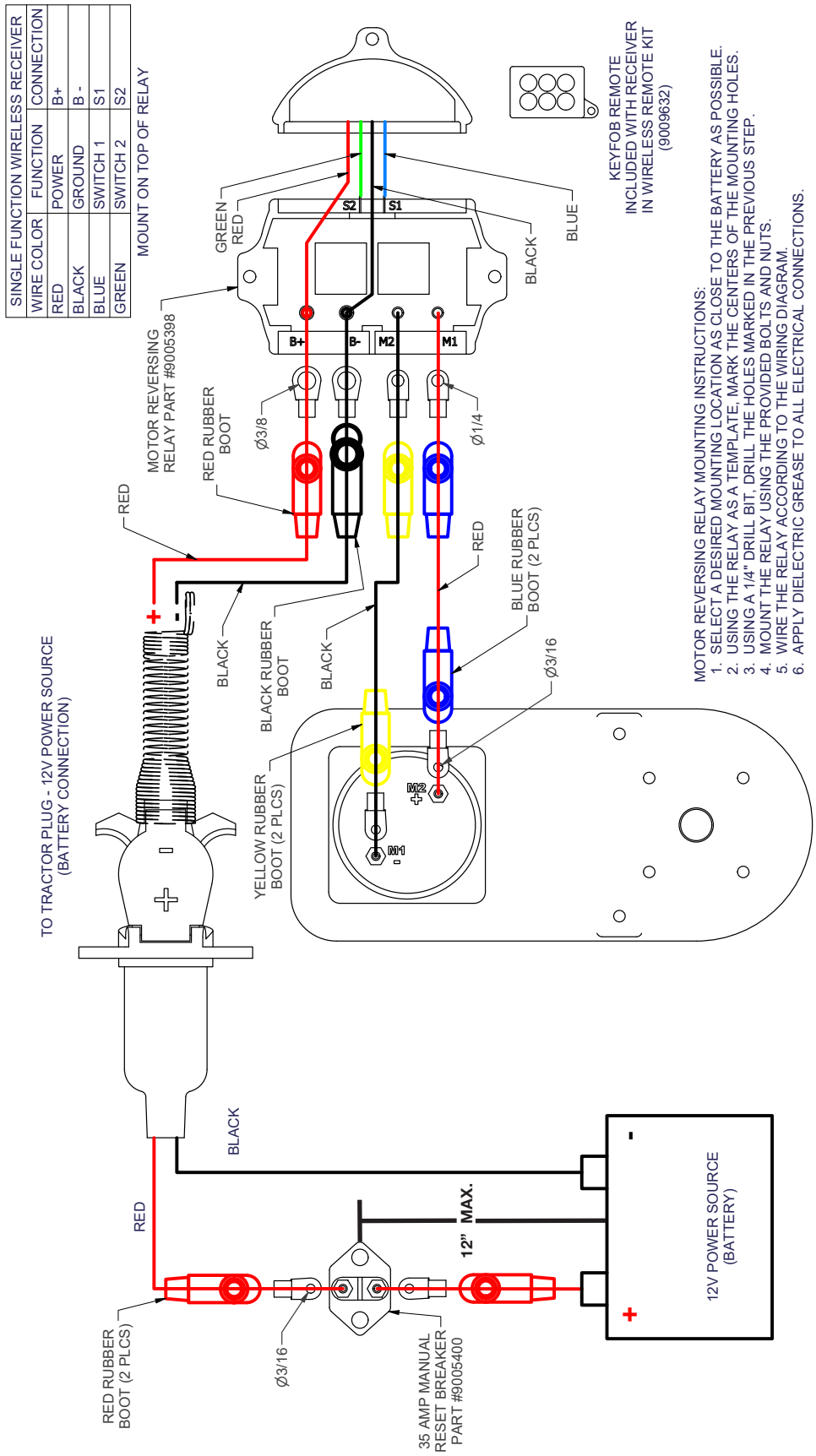




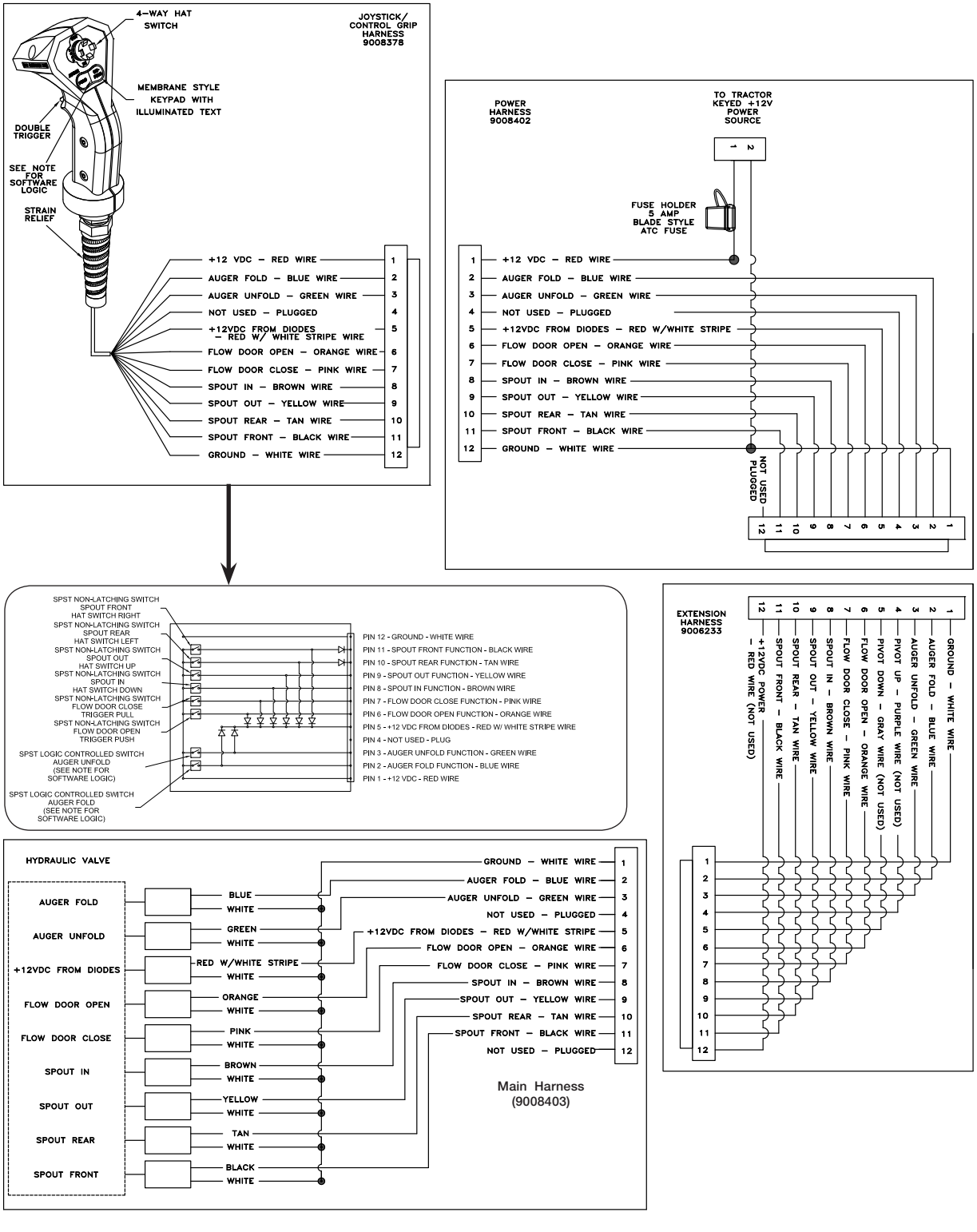
GRAIN CART WIRES

White -- Ground
Green -- Right amber flashing lamp
Yellow -- Left amber flashing lamp
Brown -- Tail light
Black -- Interior & Auger Lights
Red -- Brake Lights
Blue -- NOT USED

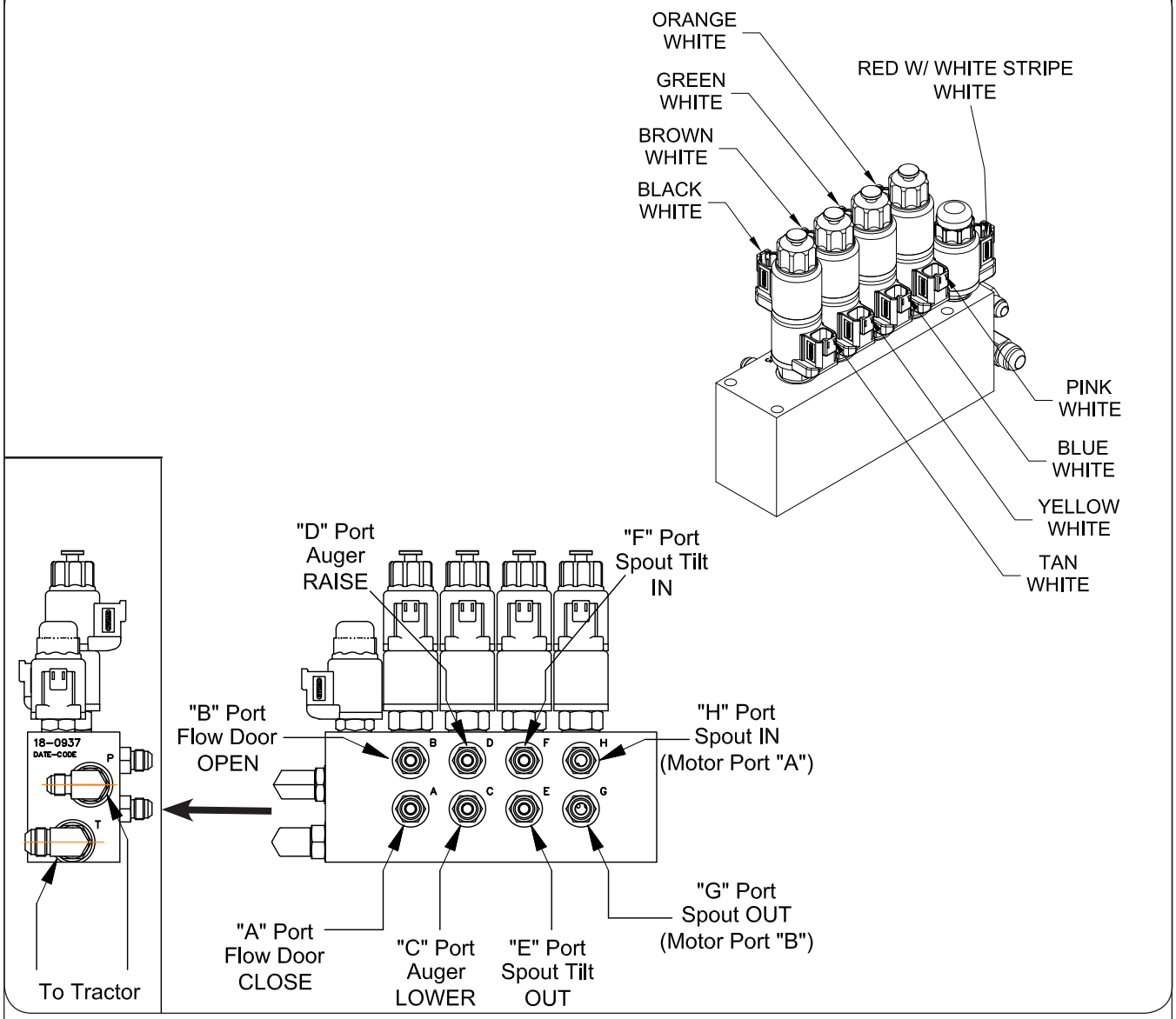
Electrical System Schematic



Electrical Over Hydraulic (EOH) System Schematic 4 Function Optional

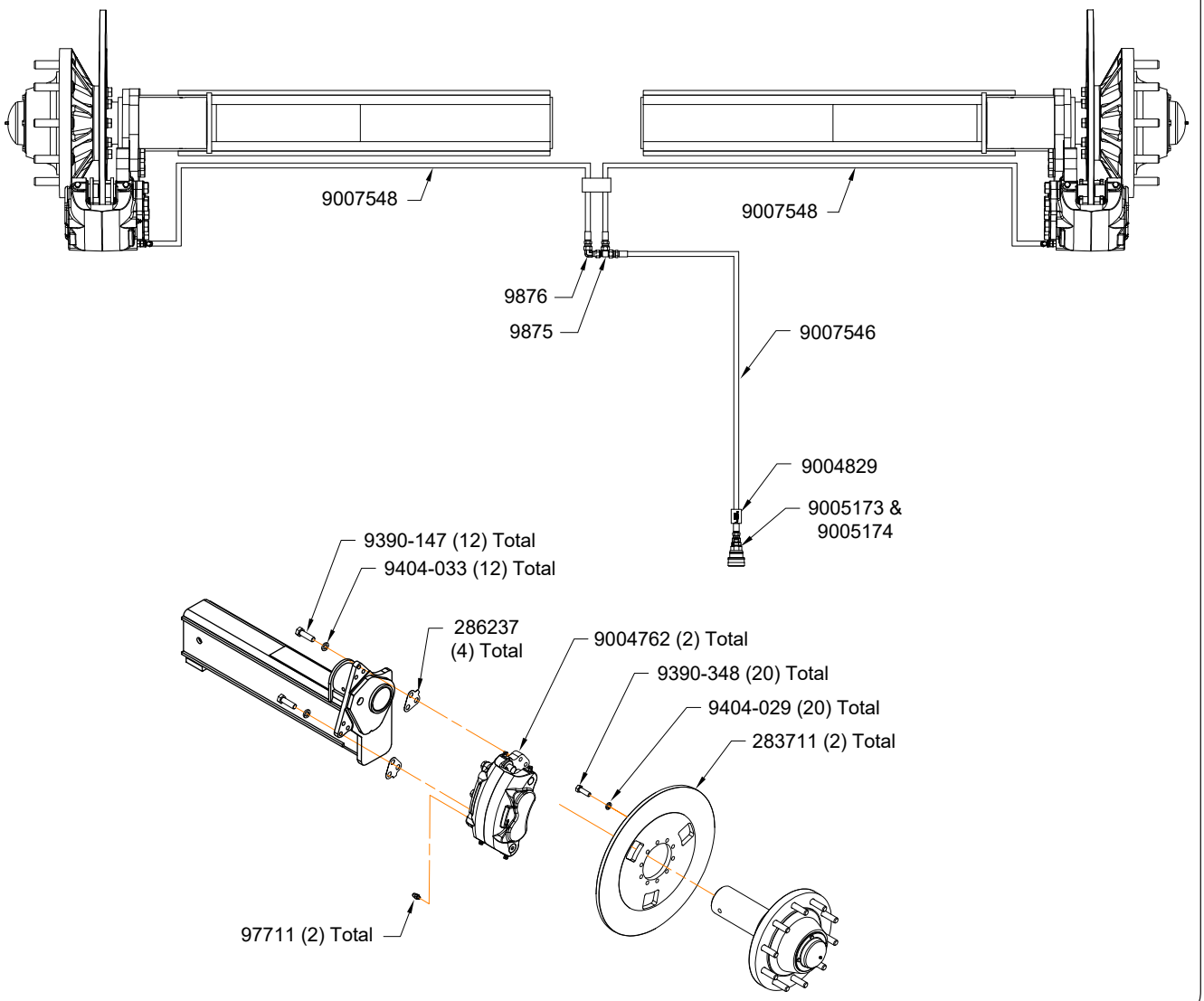


Optional Electric Over Hydraulic Valve Electric Schematic 4 Spool

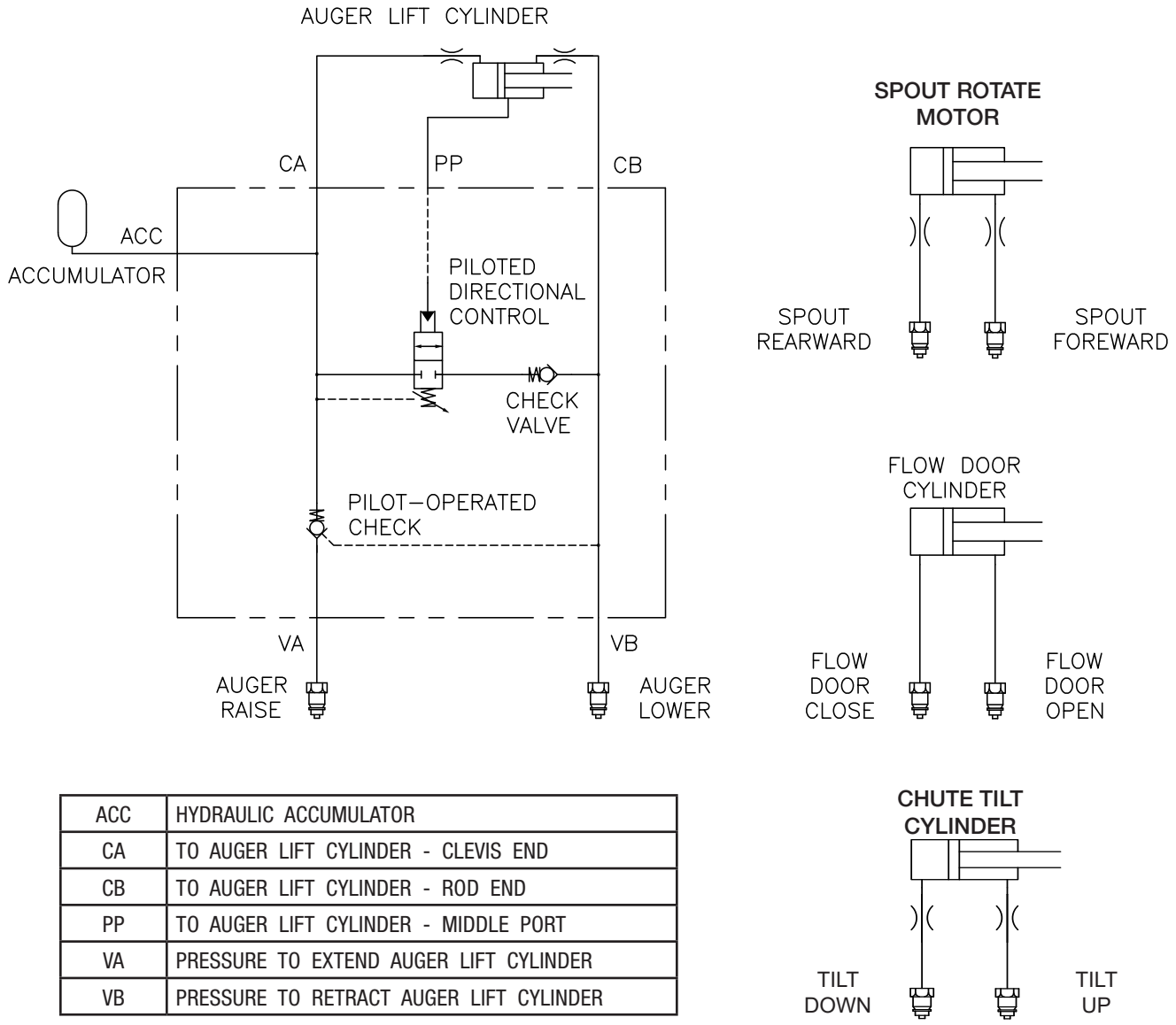


PORT	END OF CYLINDER	FUNCTION
A	BUTT END	FLOW DOOR CLOSE
B	RAM END	FLOW DOOR OPEN
C	RAM END	AUGER FOLD LOWER
D	BUTT END	AUGER FOLD RAISE
E	RAM END	SPOUT TILT OUT
F	BUTT END	SPOUT TILT IN
G	RAM END	SPOUT ROTATE OUT
H	BUTT END	SPOUT ROTATE IN
P		TRACTOR PRESSURE
T		TRACTOR RETURN

Braking System Schematic (Optional)



Hydraulic System Schematic



ACC	HYDRAULIC ACCUMULATOR
CA	TO AUGER LIFT CYLINDER - CLEVIS END
CB	TO AUGER LIFT CYLINDER - ROD END
PP	TO AUGER LIFT CYLINDER - MIDDLE PORT
VA	PRESSURE TO EXTEND AUGER LIFT CYLINDER
VB	PRESSURE TO RETRACT AUGER LIFT CYLINDER

Wheel, Hub and Spindle Disassembly and Assembly

⚠ WARNING

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

- **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 20,000 LBS. SPECIFIC LOAD RATINGS FOR INDIVIDUAL LOADS WILL BE GIVEN AT THE APPROPRIATE TIME IN THE INSTRUCTIONS.**

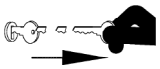
⚠ CAUTION

- **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 USE, AFTER ONE HOUR OF UNLOADED USE OR AFTER FIRST LOAD, AND EACH LOAD UNTIL WHEEL NUTS/BOLTS MAINTAIN TORQUE VALUE. CHECK TORQUE EVERY 10 HOURS OF USE THERE-AFTER. AFTER EACH WHEEL REMOVAL START TORQUE PROCESS FROM BEGINNING. WARRANTY DOES NOT COVER FAILURES CAUSED BY IMPROPERLY TORQUED WHEEL NUTS/BOLTS.**

IMPORTANT

- *Remove only one wheel and tire from a side at any given time in the following procedure.*

1. Hitch cart to tractor. Park the empty cart on a firm, level surface. Set the tractor's parking brake, shut off engine and remove key.



2. With cart empty, use 20,000 lbs. safe lifting and load holding devices rated at 20,000 lbs. to support the weight of your grain cart. Place the safe lifting device under the axle closest to the tire.

3. Use a 3,000 lbs. safe lifting device to support the wheel and tire during removal.

⚠ WARNING

- **INNER WHEEL AND TIRE MAY FALL FROM HUB CAUSING SERIOUS INJURY OR DEATH. ALWAYS SUPPORT INNER WHEEL WHEN REMOVING OUTER WHEEL.**

4. If only changing wheel and tire, skip to Step 8; otherwise continue with Step 4.

5. Remove the hardware retaining the hubcap. Next, remove the hubcap, gasket, cotter pin, castle nut and spindle washer. Using a 200 lbs. safe lifting device, remove hub with bearings from old spindle.

Wheel, Hub and Spindle Disassembly and Assembly (continued)

6. Inspect the spindle and replace if necessary. If spindle does not need to be replaced, skip to Step 7; otherwise continue with Step 6.

   Remove the bolt and lock nut that retains the spindle to the axle. Using a safe lifting device rated for 150 lbs., replace the old spindle with a new spindle. Coat axle contact length of spindle shaft (scale or non-scale) with anti-seize lubricant prior to installation. If installing scale spindle, install with 'top' decal facing upwards. Reuse bolt and lock nut to retain spindle to axle. Tighten as outlined in "Wheel and Tire" in the MAINTENANCE section.

7. Remove seal and inspect bearings, spindle washer, castle nut and cotter pin. Replace if necessary. Pack both bearings with approved grease and reinstall inner bearing. Install new seal in hub with garter spring facing the hub by tapping on flat plate that completely covers seal while driving it square to hub. Install until flush with back face of hub. Using a 200 lbs. rated lifting device, install hub assembly onto spindle. Install outer bearing, spindle washer and castle nut.

8. Slowly tighten castle nut while spinning the hub until drag causes the hub to stop freely spinning. Do not use an impact! Turn castle nut counterclockwise until the hole in the spindle aligns with the next notch in castle nut. Hub should spin smoothly with little drag and no end play. If play exists, tighten to next notch of castle nut. If drag exists, then back castle nut to next notch of castle nut. Spin and check again. Install cotter pin. Clean face for hub cap gasket and install gasket, grease filled hub cap and retain hubcap with hardware removed. Tighten hubcap hardware in alternating pattern.

9. Attach the wheel(s) and tire(s) to the hub using the same rated lifting device for removal. Tighten wheel nuts to appropriate requirements and recheck as outlined in "Wheel and Tire" in the MAINTENANCE section

10. Raise cart, remove safe load holding devices and lower tire to the ground.

Wheels and Tires

Wheel Nut Torque Requirements

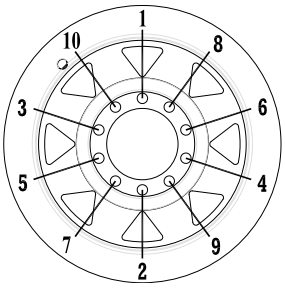
⚠ CAUTION

- **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 USE, AFTER ONE HOUR OF UNLOADED USE OR AFTER FIRST LOAD, AND EACH LOAD UNTIL WHEEL NUTS/BOLTS MAINTAIN TORQUE VALUE. CHECK TORQUE EVERY 10 HOURS OF USE THERE-AFTER. 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 load may damage wheel nut/bolt seats. Once seats are damaged, it will become impossible to keep nuts/bolts tight. Tighten nuts/bolts to applicable torque value shown in table. Start all nuts/bolts by hand to prevent cross threading. Torque nuts/bolts in the recommended sequence as shown in Diagram 1.

NOTE: Do not use anti-seize on wheel hardware.

WHEEL HARDWARE	
SIZE	FOOT-POUNDS
7/8-14 (UNF)	440 ft.-lbs.
M22x1.5	475 ft.-lbs.



10 BOLT

DIAGRAM 1

Wheels and Tires (continued)

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.** Each tire must be inflated to 35 PSI max to seat the beads, deflated to 5-10 PSI, then reinflated to the tire's max PSI when mounting.

Tire Pressure for Grain Carts

Tire Make	Tire Size	Load Index / Ply Rating	Max. PSI
Firestone	23.1x26 R-3	12	32
	23.1x26 R-1	12	32
	28Lx26 R-3	12	26
	24.5x32 R-3	12	32
	24.5x32 R-1	12	32
	30.5x32 R-1	14	28
	30.5x32 R-3	14	28
	30.5x32 R-3	16	34
	30.5x32 R-1	16	26
	35.5x32 R-3	20	36
	76x50.00x32 HF-3	16	40
	76x50.00x32 HF-3	20	50
	800/65R32 R-1W	172D	41
	800/60R32 R-3	181B	46
	900/65R32 R-3	191B	46
	900/60R32 R-1	176A8	44
	1250/50R32F IF/CFO R-1WNP	201D	46
	1250/50R32F IF/CFO R-1W	188B	30
	520/85R38 R-1	155A8	29
	520/85R38 R-1	173A8	64
	480/80R42 R-1	151A8	36
	520/85R42 R-1	157A8	29
	520/85R42 R-1	165A8	51
	520/85R42 IF/CFO R-1	169A8/B	35
	IF520/85R42 R-1W	169B	35
	VF520/85R42 R-1W	177B	35
	420/80R46 R-1	151A8	44
	480/80R46 R-1	158A8	44
	380/90R46 R-1	152B	51

Wheels and Tires (continued)

Tire Pressure (continued)

Tire Pressure for Grain Carts

Tire Make	Tire Size	Load Index / Ply Rating	Max. PSI
Titan/Goodyear	23.1x26 R-3	10	26
	23.1x26 R-1	10	26
	24.5R32 R-1	169A8/B (5-Star)	48
	24.5x32 R-3	12	32
	24.5x32 R-1	12	32
	30.5x32 R-3	16	26
	30.5x32 R-3	14	22
	30.5x32 R-1	14	22
	480/80x42 R-1	166A8	23
	1100/45R46 F-1W	195D	35
Mitas	650/75R32 R-1W	172A8	58
	650/75R32 R-1	176A8	41
	800/65R32 R-1W	172A8	46
	900/60x32 R-1W	176A8	41
	900/70R32 R-1W	188A8	53
	1050/50x32 R-1W	178A8	41
	1250/50R32 R-1W	188A8	41
	900/60x38 R-1W	181A8	44
	520/85x42 R-1W	162A8	44
	650/65x42 R-1W	168A8	44
Alliance	30.5B32	18-Ply	36
	35.5LR32	193A8	44
	900/60R32 R-1W	192D	46
	1050/50R32 R-1W	185A8	52
	1250/50R32 R-1W	201B	46
Trelleborg	VF1050/50R32 R-1	198D	52
	900/50R32 R-1W	181A8	55
	900/60x32	176LI	44
	850/55R42 R-1W	161A8	32

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:

Firestone	www.firestoneag.com Phone 800-847-3364
Titan or Goodyear	www.titan-intl.com Phone 800-USA-BEAR Fax 515-265-9301
Trelleborg	www.trelleborg.com Phone 866-633-8473
Continental/Mitas	www.mitas-tires.com Phone 704-542-3422 Fax 704-542-3474
Alliance	www.atgtire.com Phone 781-325-3801

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 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
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

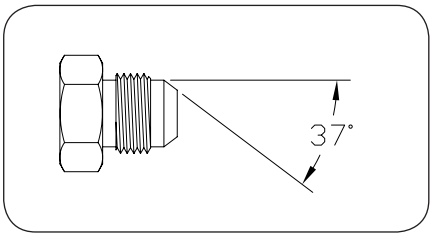
IMPORTANT

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

Hydraulic Fittings – Torque and Installation

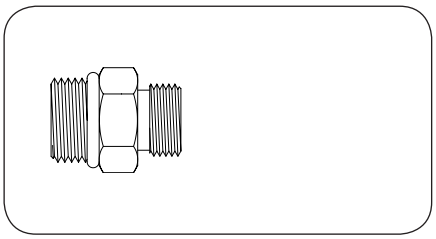
SAE Flare Connection (J. I. C.)

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



SAE Straight Thread O-Ring Seal

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



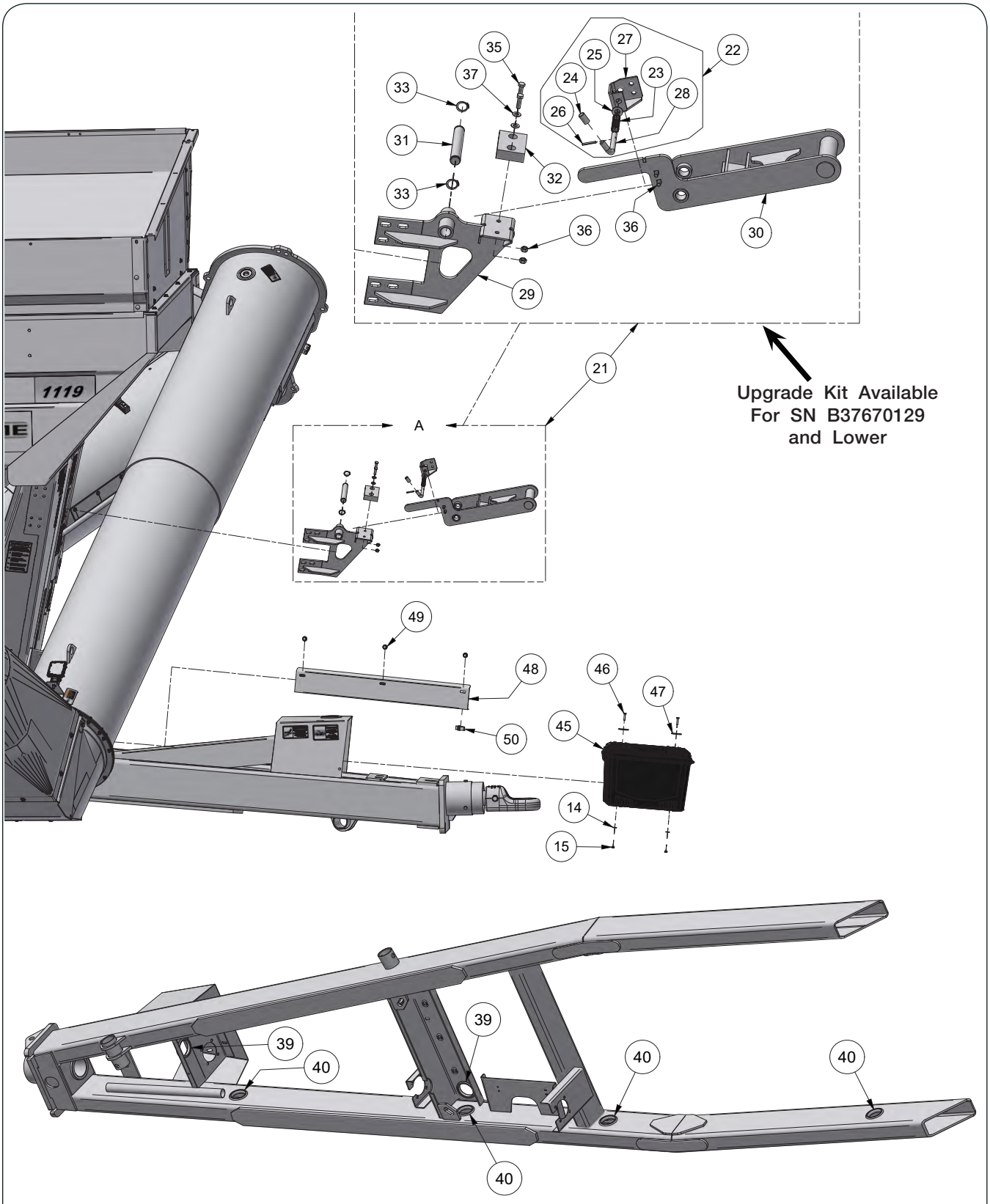
Notes

SECTION V
Parts

FOR TRACK INFORMATION, PLEASE REFER TO YOUR TRACK MANUAL.
FOR SCALE INFORMATION, PLEASE REFER TO YOUR SCALE MANUAL.
FOR ELECTRIC ROLL TARP INFORMATION, PLEASE REFER TO YOUR ELECTRIC ROLL TARP MANUAL.
FOR HYDRAULIC DRIVE INFORMATION, PLEASE REFER TO YOUR HYDRAULIC DRIVE MANUAL.

Final Assembly Components

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



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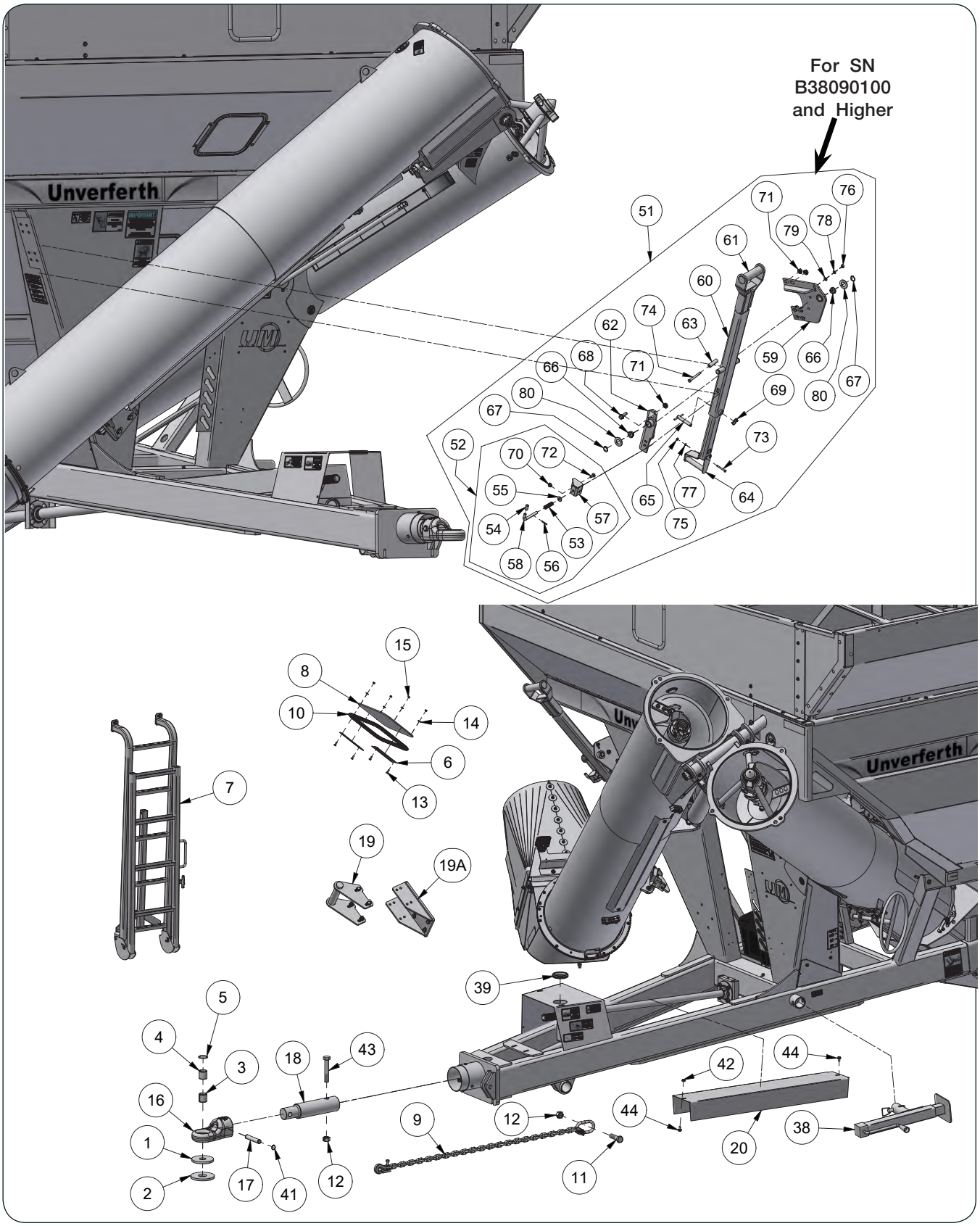
Final Assembly Components (continued)

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



Final Assembly Components (continued)

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

ITEM	PART NO.	DESCRIPTION	QTY.	NOTES
1	281663	Wear Shoe CAT 3	1	
2	281898	Wear Shoe CAT 4	1	
3	9001917	Tension Bushing 2" Dia. x 1.50" ID	1	
4	9002130	Split Tension Bushing 2" Dia. x 1.75" ID	1	
5	9005259	O-Ring	4	
6	250461B	Window Bracket	4	
7	292561B	Ladder Assembly	1	Refer to Ladder Assembly Components
8	9002544	Window	2	
9	9003278	Transport Chain 20,200 Lbs.	1	
10	271952	Window Moulding	1	
11	91299-189	Capscrew 1-8UNC x 4 Grade 8	1	
12	92199	Locknut 1-8UNC	1	
13	9390-003	Capscrew 1/4"-20UNC x 3/4 Grade 5	12	
14	9405-064	Flat Washer 1/4" USS	16	
15	9936	Locknut 1/4"-20UNC	16	
16	282875B	Hitch Casting	1	1119 Models with LSW-1100 Tires use Hitch Kit 293184B
17	282876	Hitch Pin 1" Dia. x 5 1/2	1	
18	284780	Load Bar 3 3/4" Dia. x 16 3/8	1	
19	293028G	Auger Rest Weldment =Green=	1	
	293028R	Auger Rest Weldment =Red=		
19A	293025G	Auger Rest Bracket =Green=	1	
	293025R	Auger Rest Bracket =red=		
20	292249B	Drive Cover	1	
21	292307G	Auger Rest Assembly =Green=	1	Upgrade Kit 293098G/R available for SN B37670129 and Lower
	292307R	Auger Rest Assembly =Red=		
22	292236B	Latch Assembly	1	
23	TA510035	Spring 2 1/2" Long	1	
24	9003870	Yellow Hand Grip	1	
25	9405-086	Flat Washer 1/2	1	
26	9392-100	Roll Pin 3/16" Dia. x 1 3/8	1	
27	292237B	Latch Weldment	1	
28	283256	Pin 1/2" Dia. x 5 9/16	1	
29	292284G	Support Rest Weldment =Green=	1	
	292284R	Support Rest Weldment =Red=		
30	292304G	Field Rest Weldment =Green=	1	
	292304R	Field Rest Weldment =Red=		
31	292309	Pivot Rest Pin	1	
32	9008197	Urethane Spring	1	
33	91192	Retaining Ring 1"	2	
34	9390-054	Capscrew 3/8"-16UNC x 7/8" Gr. 5	1	
35	9390-056	Capscrew 3/8"-16UNC x 1 1/4" Gr. 5	3	
36	9394-006	Hex Nut 3/8"-16UNC Gr. 5	4	
37	9405-074	Flat Washer 3/8" SAE	2	
38	9004156	Jack	1	
39	9006780	Rubber Grommet, 3 1/2 Dia. x 1/4 Wide Groove	4	
40	9007173	Rubber Grommet, 3 Dia. x 3/8 Wide Groove	8	
41	91192	Retaining Ring 1"	2	
42	91263	Large Flange Nut 3/8"-16UNC	7	
43	91299-195	Capscrew 1-8UNC x 6 Grade 8	1	
44	95585	Large Flange Capscrew 3/8"-16UNC x 3/4 G5	6	
45	9005850	Storage Box	1	
46	9390-006	Capscrew, 1/4"-20UNC x 1 1/4 Grade 5	2	
47	94763	Fender Washer, 2"	2	

(Continued on next page)

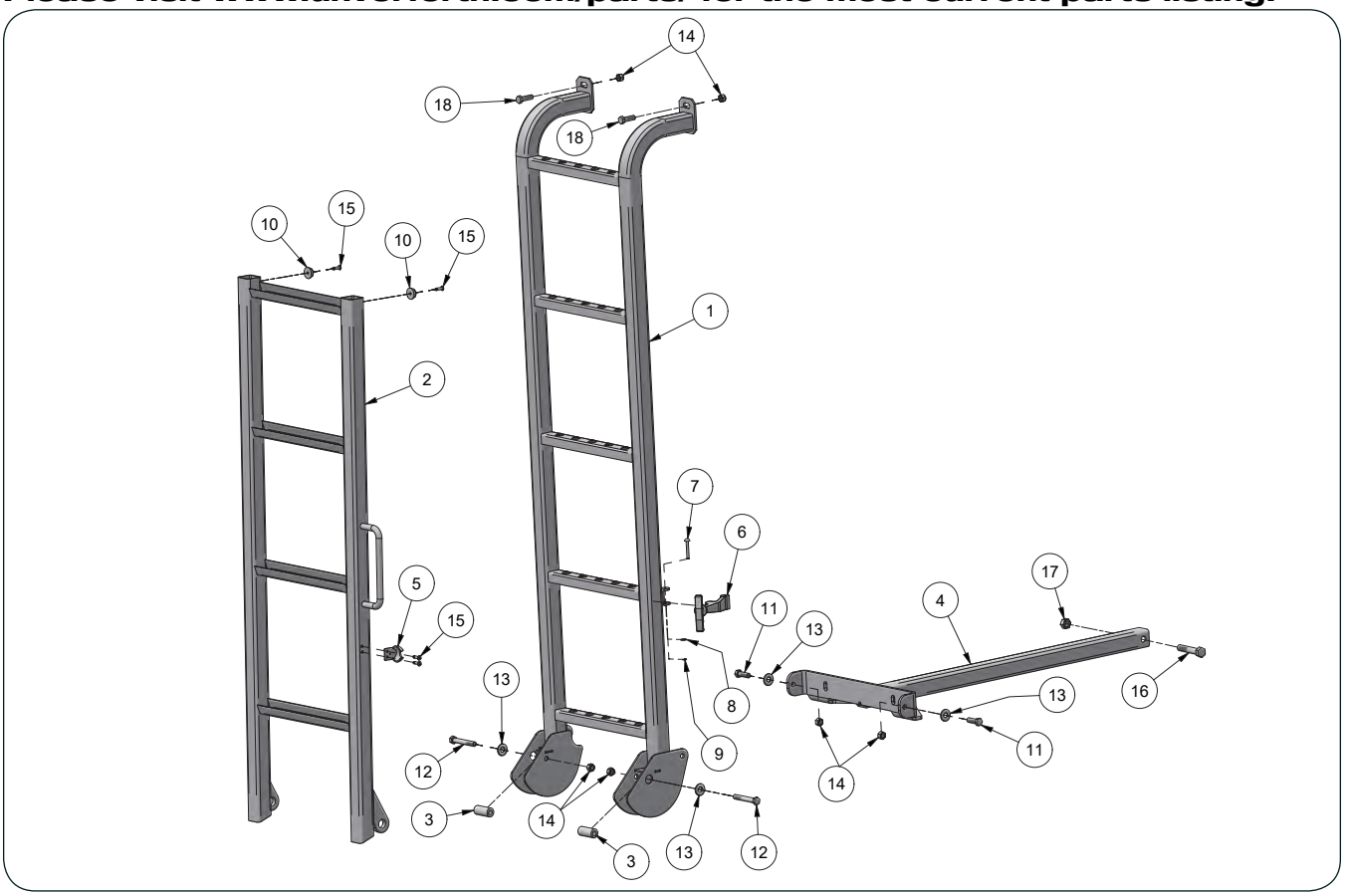
Final Assembly Components (continued)

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

ITEM	PART NO.	DESCRIPTION	QTY.	NOTES
48	292598G	Runner Cover Plate =Green=	1	
	292598R	Runner Cover Plate =Red=		
49	95585	Large Flange Screw 3/8"-16UNC x 3/4" G5	3	
50	9005376	U-Nut 3/8"-16UNC	3	
51	293042G	Auger Field Rest Assembly =Green=	1	For SN B38090100 and Higher
	293042R	Auger Field Rest Assembly =Red=		
52	293046B	Latch Assembly	1	
53	TA510035	Spring 2 1/2" Long	1	
54	9003870	Yellow Hand Grip	1	
55	9405-086	Flat Washer 1/2	1	
56	9392-100	Roll Pin 3/16" Dia. x 1 3/8	1	
57	293047B	Latch Weldment	1	
58	293049	Pin 1/2" Dia. x 6 1/16	1	
59	293041G	Support Rest Weldment =Green=	1	
	293041R	Support Rest Weldment =Red=		
60	293016G	Outer Rest Weldment =Green=	1	
	293016R	Outer Rest Weldment =Red=		
61	293038G	Inner Rest Weldment =Green=	1	
	293038R	Inner Rest Weldment =Red=		
62	293044G	Field Rest Bracket =Green=	1	
	293044R	Field Rest Bracket =Red=		
63	293045G	Spacer Bushing =Green=	1	
	293045R	Spacer Bushing =Red=		
64	293078G	Handle Weldment =Green=	1	
	293078R	Handle Weldment =Red=		
65	293036	Pin Weldment	1	
66	9003412	Split Bushing	2	
67	91192	Retaining Ring 1"	2	
68	9005705	Flange Screw 1/2"-13UNC x 1 1/2"	2	
69	9093	Cotter Pin 3/16" Dia. x 1 1/4" Min.	1	
70	91263	Large Flange Nut 3/8"-16UNC	2	
71	91267	Flange Nut 1/2"-13UNC Gr. 5	2	
72	9388-051	Carriage Bolt 3/8"-16UNC x 1" Gr. 5	2	
73	9390-010	Capscrew 1/4"-20UNC x 2 1/4" Gr. 5	2	
74	9390-065	Capscrew 3/8"-16UNC x 3 1/2" Gr. 5	1	
75	9394-002	Hex Nut 1/4"-20UNC Gr. 5	2	
76	9394-006	Hex Nut 3/8"-16UNC Gr. 5	1	
77	9404-017	Lock Washer 1/4"	2	
78	9404-021	Lock Washer 3/8"	1	
79	9405-074	Flat Washer 3/8" SAE	1	
80	9405-116	Flat Washer 1" SAE	2	

Ladder Assembly Components

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



ITEM	PART NO.	DESCRIPTION	QTY.	NOTES
1	292562B	Upper Ladder Weldment =Black=	1	
2	292568B	Lower Ladder Weldment =Black=	1	
3	295137	Pivot Bushing 3/4" O.D. x 13/32" I.D. x 1 7/8"	2	
4	292576B	Ladder Brace Weldment =Black=	1	
5	900059	Keeper Style R for Draw Latch	1	
6	900060	Handle for Draw Latch	1	
7	900066	Stud-Pin 3/16" Dia. x 1 1/2"	1	
8	900067	Washer 1/2" Dia.	1	
9	900068	Retainer for Draw Latch	1	
10	9003850	Bumper	2	
11	9390-056	Capscrew 3/8"-16UNC x 1 1/4" Grade 5	2	
12	9390-062	Capscrew 3/8"-16UNC x 2 3/4" Grade 5	2	
13	9405-076	Flat Washer 3/8" USS	2	
14	91263	Flange Nut 3/8"-16UNC	2	
15	TA0-908386-0	Rivet	4	
16	9390-106	Capscrew 1/2"-13UNC x 2 3/4" Grade 5	1	
17	94981	Lock Nut/Center 1/2"-13UNC	1	
18	91262	Flange Screw 3/8"-16UNC x 1" G5	2	

Decals

ITEM	PART NO.	DESCRIPTION	QTY	NOTES
1	9003127	Reflector =AMBER=	7	
2	TA1-906109-0	Decal, WARNING (Moving Parts...)	2	
3	9008230	Decal, Grease	1	
4	9008698	Decal, Flow Control Indicator	1	For SN B39510100 and Higher
	92563		1	For SN B39510099 and Lower
5	265384	Decal, Reflective Checker	1	
6	9005666	Decal, Extreme	2	
7	91605	Decal, FEMA	1	
31	9008348	Decal, IMPORTANT (Jack Storage)	1	

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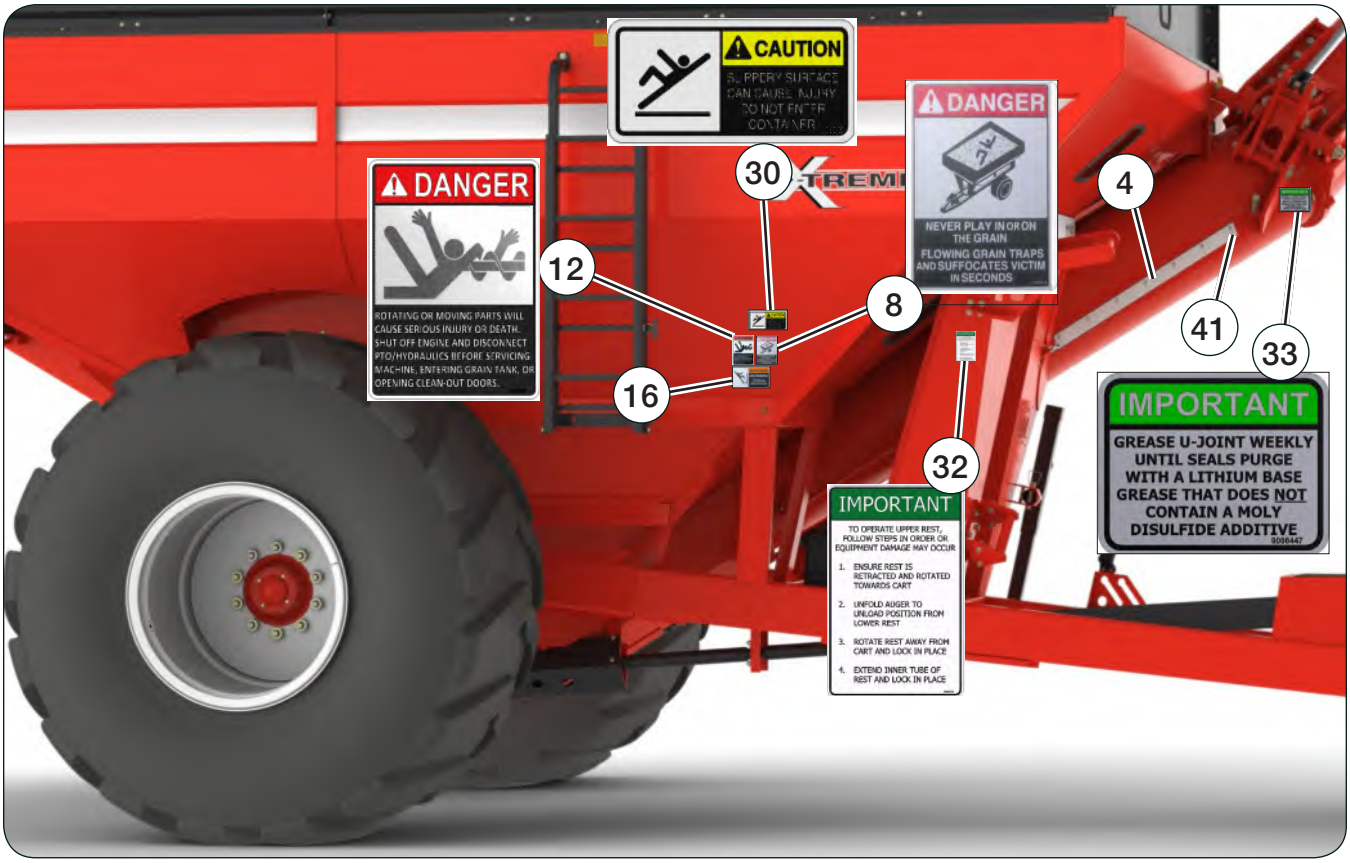
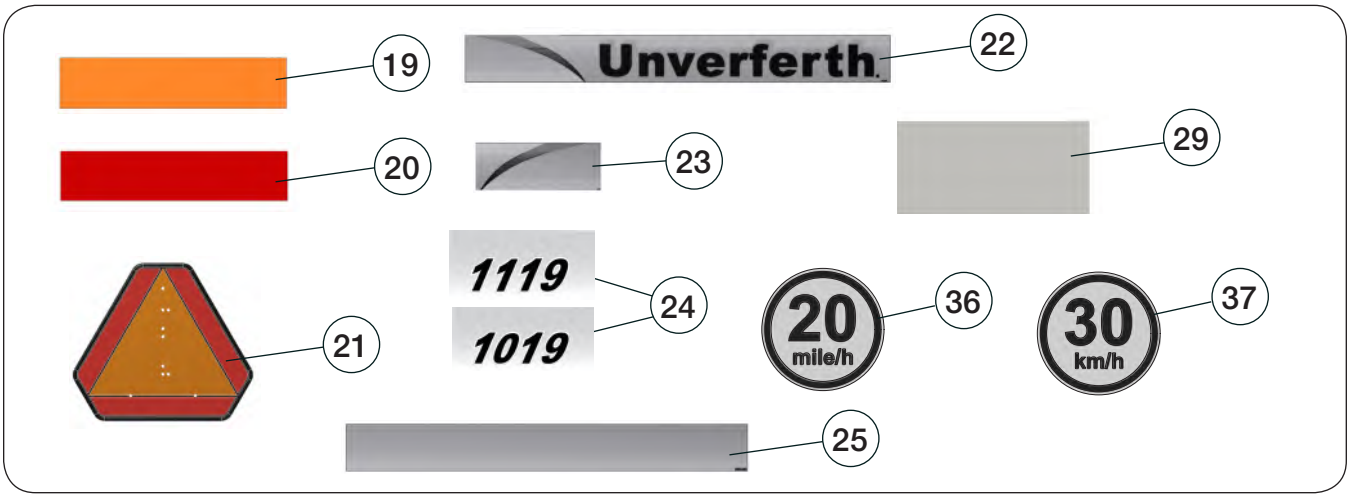
Decals (continued)





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Decals (continued)

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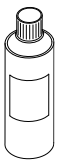
Decals (continued)

ITEM	PART NO.	DESCRIPTION	QTY	NOTES
8	9003478	Decal, DANGER (Just For Kids)	2	
9	97575	Decal, CAUTION (Transport Chain)	1	
10	9003474	Decal, DANGER (Electrical Lines)	1	
11	95046	Decal, DANGER (Drive Shaft Entanglement)	3	
12	9003475	Decal, WARNING (PTO Cut & Crush)	3	
13	95445	Decal, WARNING (High-Pressure...)	2	
14	97961	Decal, WARNING (Read & Understand)	1	
15	94094	Decal, WARNING (Tongue Drop)	1	
16	9003476	Decal, WARNING (No Riders)	2	
17	9008151	Decal, IMPORTANT (PTO Engagement)	1	
18	9003477	Decal, IMPORTANT (Operation)	1	
19	9003125	Fluorescent Stripe	2	
20	9003126	Reflector =RED=	2	
21	TA510514	SMV Emblem	1	
22	9004298	Decal, UM Logo	4	
23	9004213	Decal, UM Logo Tail	4	
24	9008168	Decal Model 1119	4	
	9008167	Decal Model 1019	4	
25	9004035	Decal, Stripe	12	
26	95839	Decal, WARNING (Pinch Point)	1	
27	98229	Decal, WARNING (Falling Equipment...)	1	
29	9008314	Decal, Reflective Backing	1	
30	95008	Decal, CAUTION (Slippery Surface)	1	
31	9008348	Decal, IMPORTANT (Jack Storage)	1	
32	9008424	Decal, IMPORTANT (Upper Auger Field Rest)	1	
33	9008447	Decal, IMPORTANT (Grease U-Joint Bearing)	1	For SN B38160100 and Higher
34	9008715	Decal, Front SIS 20 MPH	1	
35	9008721	Decal, Front SIS 30 KPH	1	
36	9008714	Decal, Rear SIS 20 MPH	1	Use Items 38, 39, and 40
37	9008720	Decal, Rear SIS 30 KPH	1	
38	276987B	SIS Decal Bracket =Black=	1	Not Shown
39	97420	Flange Screw 1/4"-20UNC x 3/4" G5	2	
40	97189	Hex Nut 1/4"-20UNC	2	
41	9008908	Decal, Max Flow, Indicator, Flow Door	1	
42	94754	Decal, UM Wheel Systems	1	

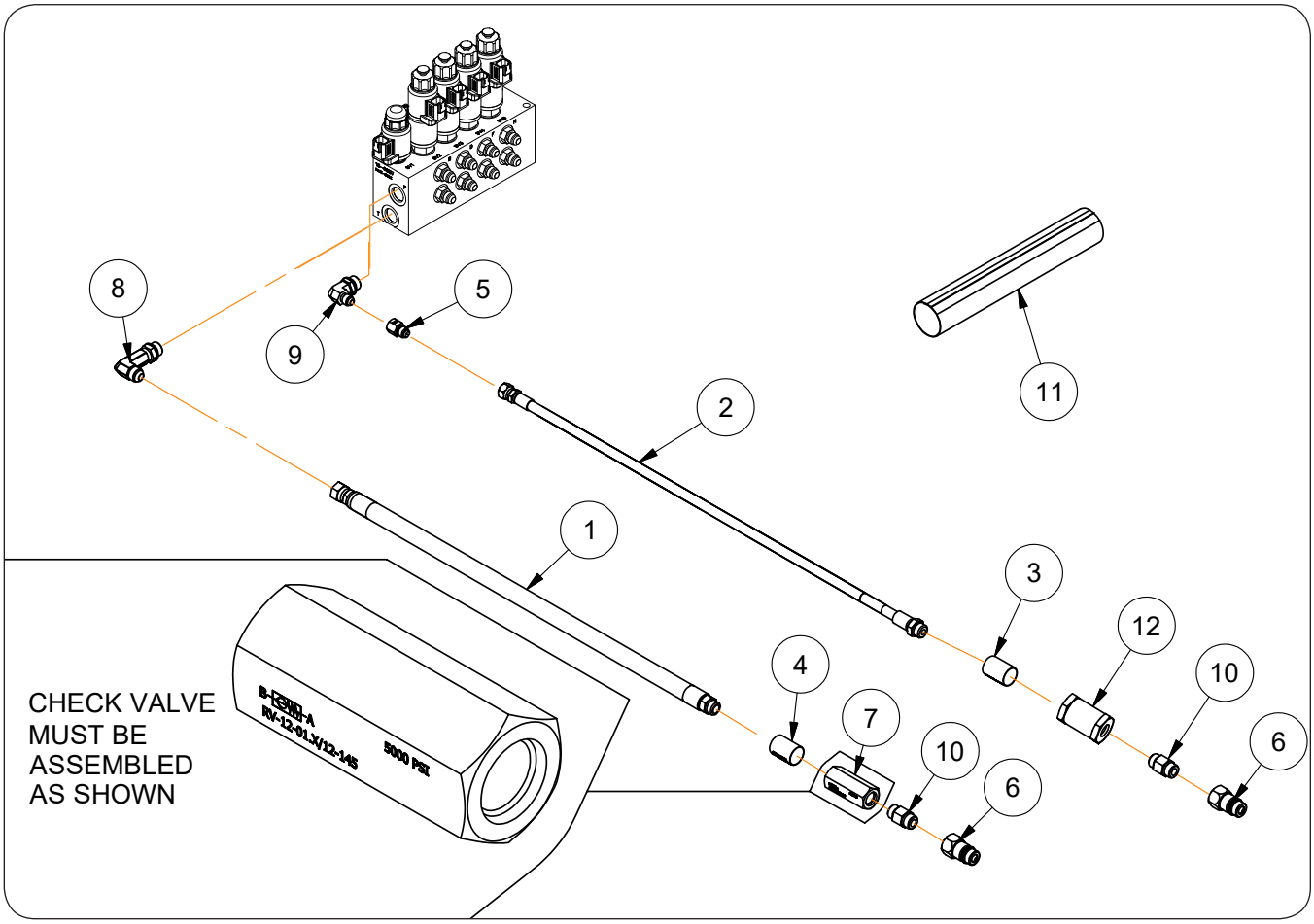
Touch-Up Paint

PAINT	SPRAY
Black	97013
Green	97015
Red	97301
Off White	97016
Primer, Gray	9500082



EOH Tractor Circuit Hydraulic Components (Optional)

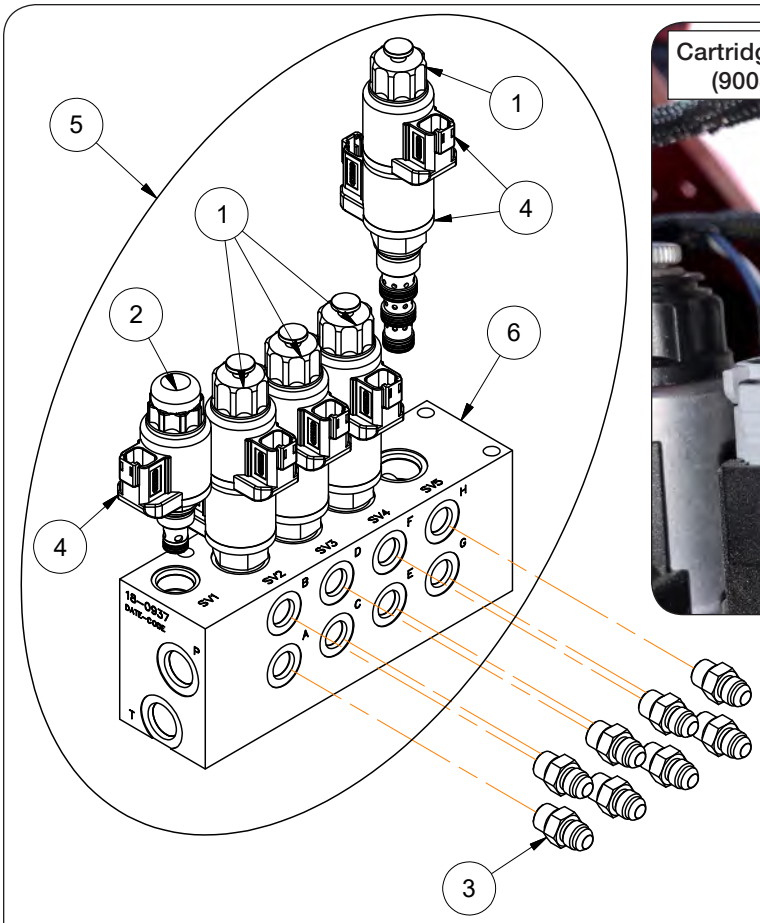
Please visit www.unverferth.com/parts/ for the most current parts listing.

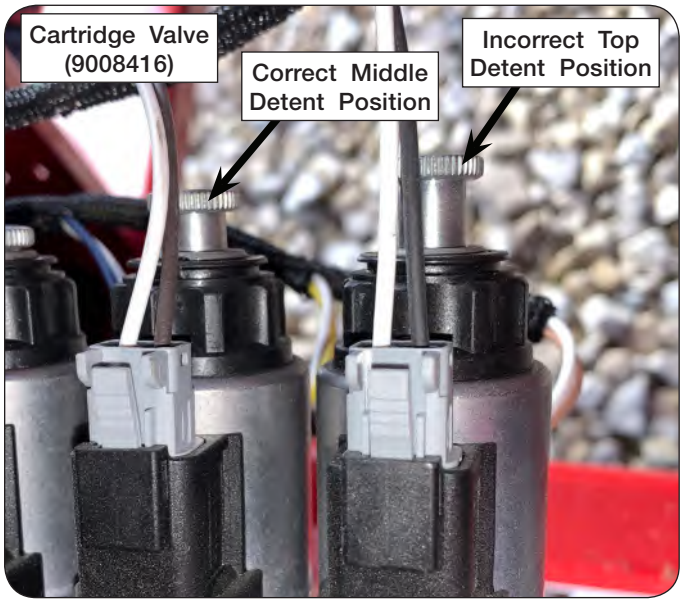


ITEM	PART NO.	DESCRIPTION	QTY.	NOTES
1	9002283	Hydraulic Hose, 1/2 x 184" - 3000 PSI	1	
2	9006587	Hydraulic Hose, 1/4 x 186" - 3000 PSI	1	
3	9005982	Hydraulic Pressure Hose Marker	1	
4	9005983	Hydraulic Return Hose Marker	1	
5	9006527	JIC Tube Reducer, 9/16-18 UNF Male x 9/16-18 UNF Female	1	
6	91383	Male Tip Coupling, 3/4-16	2	
7	9006994	Check Line Valve 145 PSI	1	
8	901568	90° Elbow 3/4-16 JIC Male x 3/4-16 O-Ring ADJ Male	1	
9	9874	90° Elbow 9/16-18 JIC Male x 3/4-16 O-Ring ADJ Male	1	
10	98508	Adapter 3/4-16 O-Ring Male x 3/4-16 O-Ring Male	2	
11	9003848	Velcro Hose Wrap, 2" ID x 127" Lg.	1	
12	9005403	120 Micron Hydraulic Filter	1	

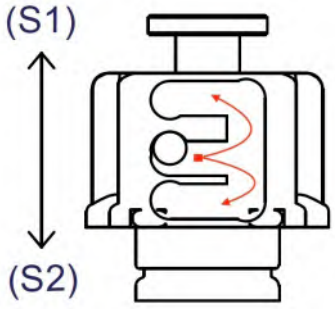
EOH Valve Assembly Components 4 Spool (Optional)

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





Cartridge Valve
(9008416)
Middle Detent Position

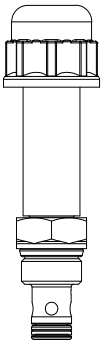


PUSH BUTTON
AND HOLD
WHILE OPERATING
INDIVIDUAL FUNCTIONS

Cartridge Valve
(9008438)

NOTE: Refer to "Electric Over Hydraulic Manual Override Operation (Optional)"

FOR MANUAL OVERRIDE



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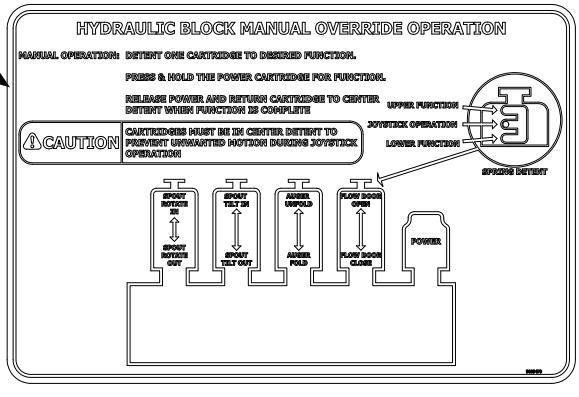
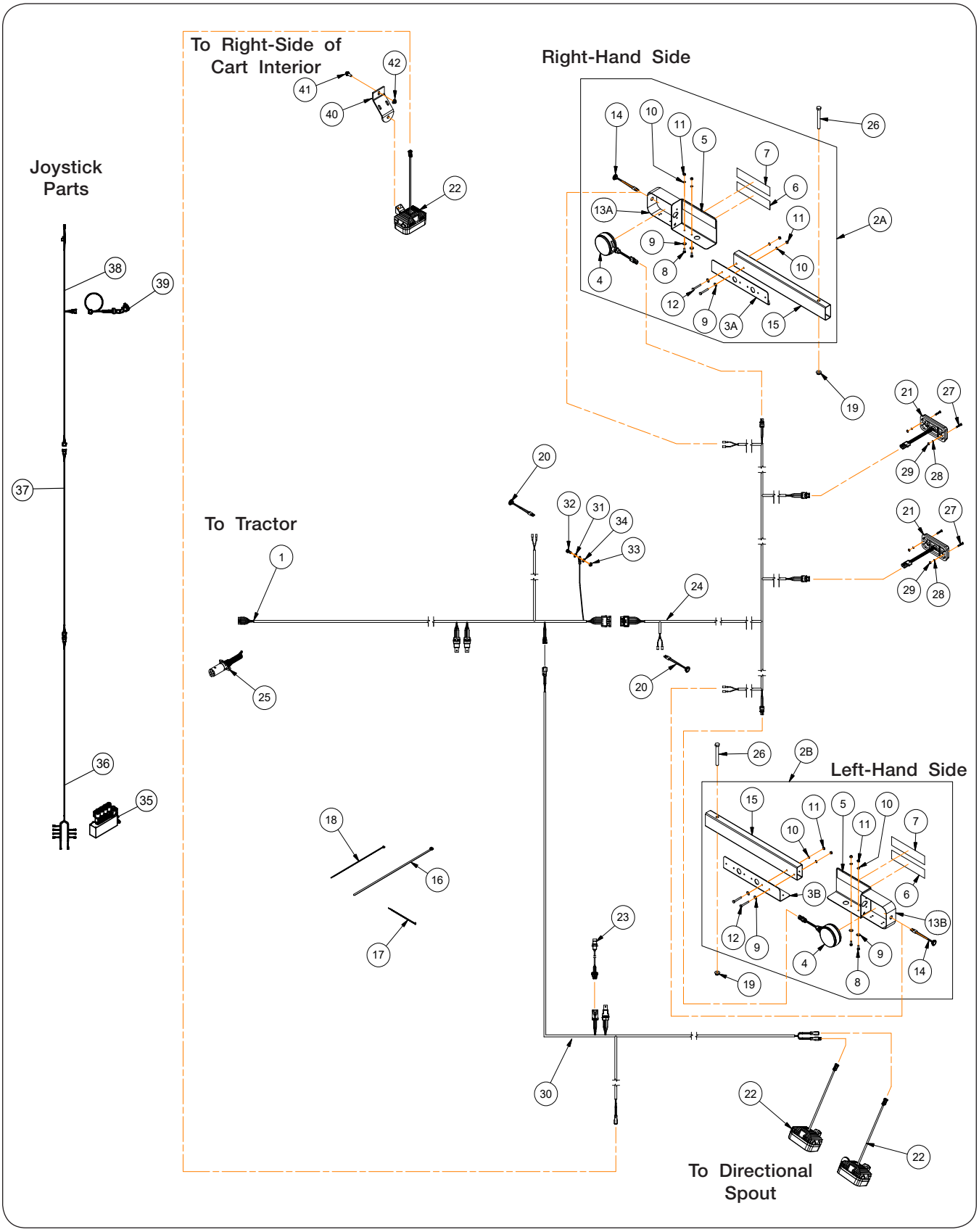


EOH Valve Assembly Components 4 Spool (Optional)

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

ITEM	PART NO.	DESCRIPTION	QTY.	NOTES
1	9008416	Cartridge Valve - 4 Way, 3 Position - Closed Center w/Detented Manual Override	4	
	9003906	Seal Kit	-	
2	9008438	Cartridge Valve - 2 Way, 2 Position w/Push Type Manual Override	1	
	9003904	Seal Kit	-	
3	9001495	Adapter 9/16-18 JIC Male x 9/16-18 O-Ring Male	8	
4	9005769	Coil - 12 VDC DN-40	9	
5	9008374	4 Spool Hydraulic Block Assembly	1	
6	9008366	Manifold Block - 4 Spool	1	
7	9009470	Decal, Valve Block Caution	1	

Electrical Components - Single Axle & Track Models

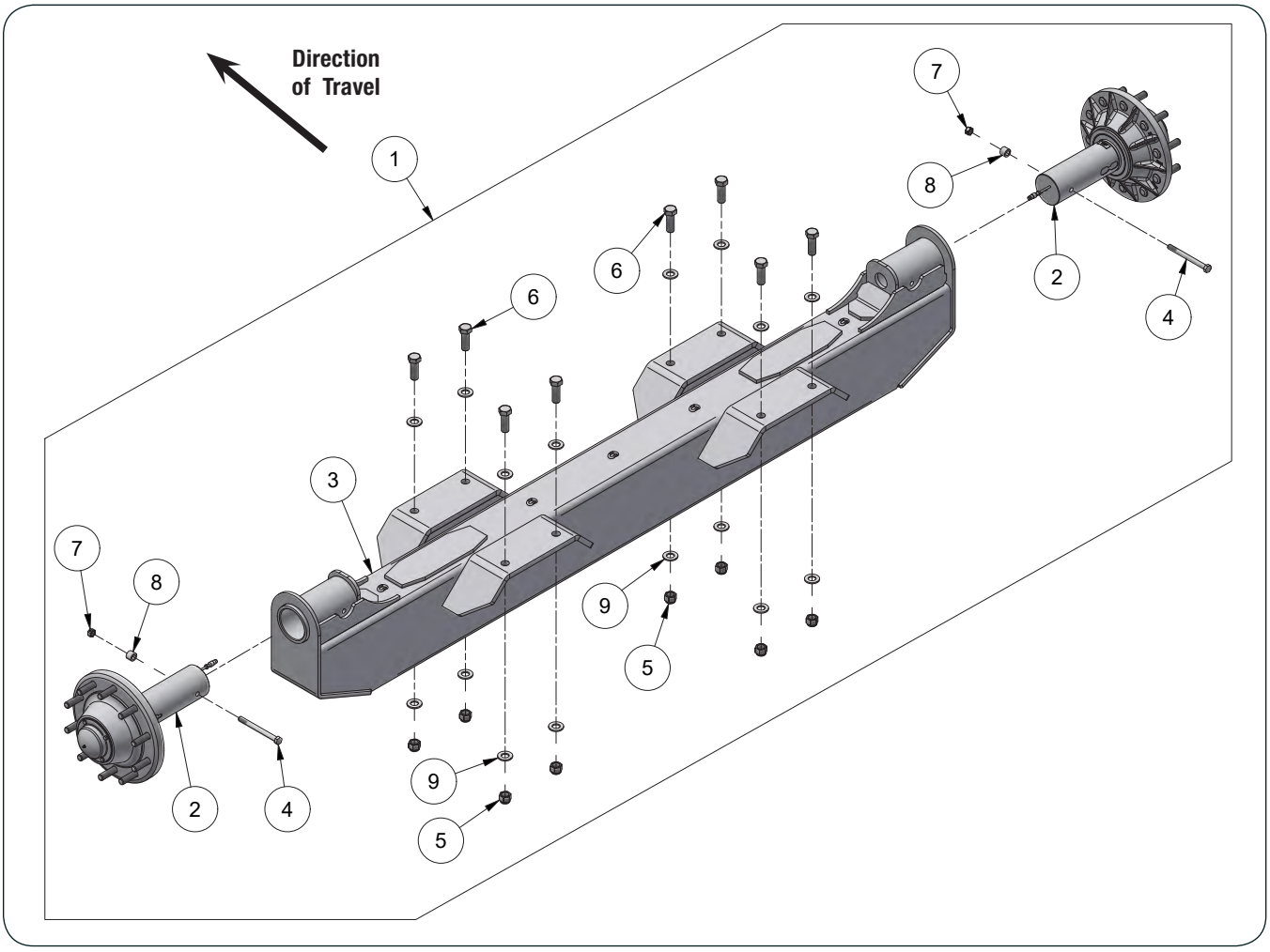


Electrical Components - Single Axle & Track Models

ITEM	PART NUMBER	DESCRIPTION	QTY	NOTES
1	9008212	Wiring Harness, Front 200"	1	
2A	290714B	Tail Light RH Sub Assembly	1	Includes Items 3A, 4 through 12, 13A, 14, 15
2B	290715B	Tail Light LH Sub Assembly	1	Includes Items 3B, 4 through 12, 13B, 14, 15
3A	251406B	RH Plate	1	
3B	251407B	LH Plate	1	
4	9005142	LED Light, Amber - Double Face	2	
5	9003127	Amber Reflector	7	2 x 9"
6	9003126	Red Reflector	2	2 x 9"
7	9003125	Fluorescent Strip, Red-Orange	2	2 x 9"
8	9390-003	Capscrew, 1/4”-20UNC x 3/4	4	
9	9405-064	Flat Washer, 1/4	8	
10	9404-017	Lock Washer, 1/2	8	
11	9394-002	Hex Nut, 1/4”-20UNC	8	
12	9390-009	Capscrew, 1/4-20 UNC x 2	4	
13A	292719B	RH Light Bracket Weldment	1	
13B	292718B	LH Light Bracket Weldment	1	
14	9006107	Micro Dot Amber Light (LED)	2	
15	292356B	Tube, Light	2	
16	9000104	Cable Tie, 21 1/2"	2	
17	9000106	Cable Tie, 7 1/2"	9	
18	9000107	Cable Tie, 14 1/2"	2	
19	9003397	Locking Flange Nut 1/2”-13UNC	2	
20	9006107	Micro Dot Amber Light (LED)	2	
21	9006282	Red Light- Tail/Turn (LED)	2	
22	9008957	Work Light (LED)	3	For SN B41010100 & Higher
	9007186			For SN B41010099 & Lower
23	9007472	Proximity Switch	1	
24	9008214	Wiring Harness, Rear 219"	1	
25	92450	Electrical Coupler	1	
26	9390-112	Capscrew 1/2”-13UNC x 4 1/2	2	
27	903172-350	Pan Head Machine Screw, #10-32UNF x 1 1/4	4	
28	9404-013	Split Lock Washer, #10	4	
29	9830-016	Hex Nut #10-32 Grade 2	4	
30	9009079	Wiring Harness - Auger Light 364 1/2”	1	For SN B41010100 & Higher
	9008213	Wiring Harness - Auger Light 350"		For SN B41010099 & Lower
31	9004981	Lock Washer - External Tooth	1	
32	9390-003	Capscrew 1/4”-20UNC x 3/4	1	
33	9394-002	Hex Nut 1/4”-20UNC	1	
34	9404-017	Lock Washer 1/4”	1	
35	291585	Hydraulic Block Assembly 4 Spool	1	
36	9008403	Harness - Main	1	
37	9006233	Harness - Extension	1	
38	9008402	Harness - Power	1	
39	9008378	L-Series Control Grip - 4 Function	1	
40	271574B	Light Bracket	1	
41	9009089	Truss Head Machine Screw 3/8-16UNC x 1 1/4	1	For SN B41010100 & Higher
	9005312	Truss Head Machine Screw 3/8-16UNC x 1		For SN B41010099 & Lower
42	91263	Nut/Large Flange 3/8-16UNC	1	

Rigid Axle

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



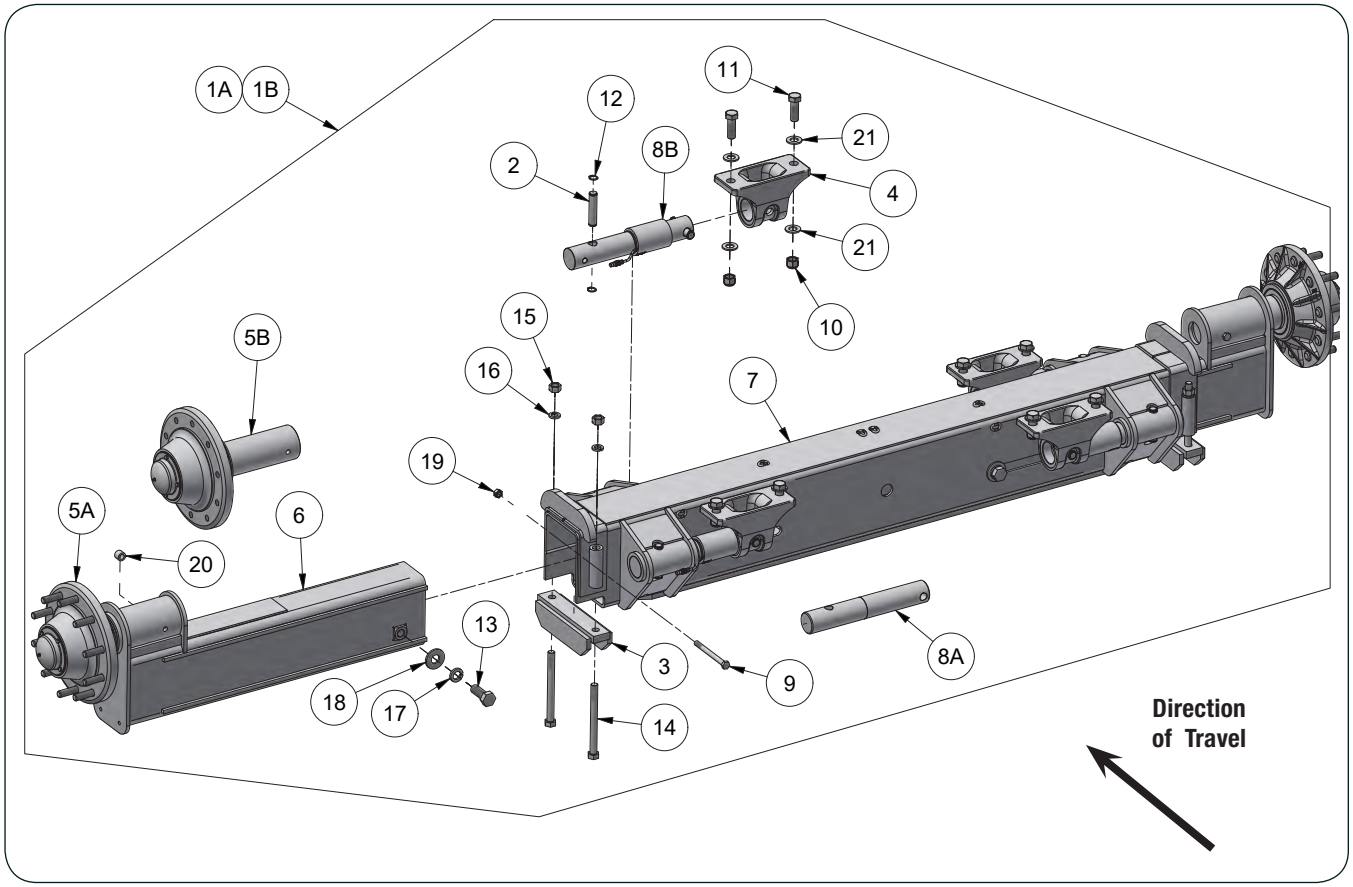
Rigid Axle

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

ITEM	PART NUMBER	DESCRIPTION	QTY.	NOTES
1	292516B	Rigid Axle Assembly w/out Scales =Black=	1	
	292517B	Rigid Axle Assembly w/Scales =Black=		
2	267284B	Hub & Spindle Assembly w/out Scales =Black=	2	See "Hub & Spindle PARTS Page
	267280B	Hub & Spindle Assembly w/Scales =Black=		
3	292250B	Axle Tube Weldment =Black=	1	
4	91299-138	Capscrew 5/8"-11UNC x 7" Grade 8	2	
5	9008441	Locknut 1"-14UNS Grade 8	8	
6	91299-1456	Capscrew 1"-14UNS x 3" Grade 8	8	
7	9008440	Locknut/Center 5/8"-11UNC Grade 8	2	
8	288789B	Spacer Bushing 1 1/8" Dia.	2	
9	804685	Washer 2" Grade 8	16	
10	97319	M22 x 1.5 Flanged Cap Nut	20	NOT SHOWN

Adjustable Axle

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



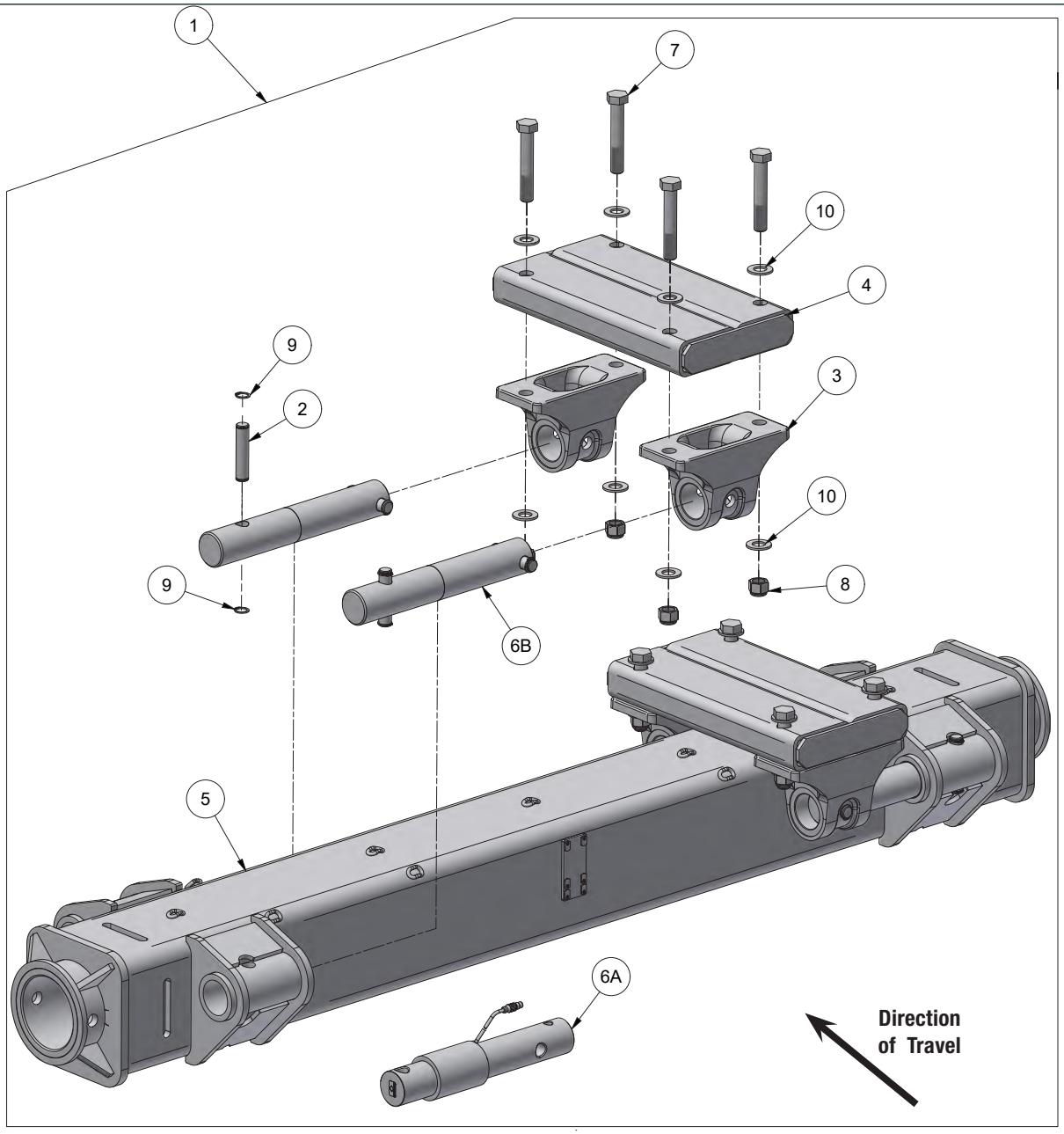
Adjustable Axle

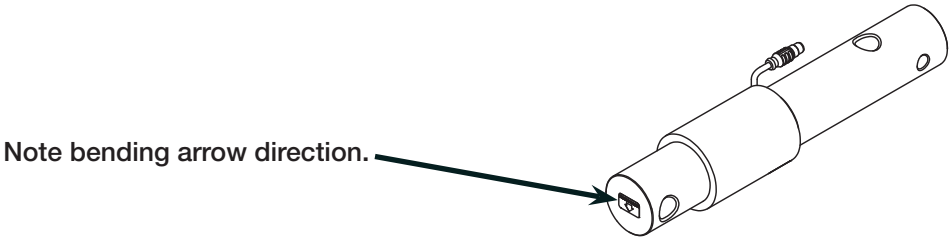
Please visit www.unverferth.com/parts/ for the most current parts listing.

ITEM	PART NUMBER	DESCRIPTION	QTY	NOTES
1A	292518B	Single Wheel/Tire Adjustable Axle Assembly w/out Scales =Black=	1	
	292519B	Single Wheel/Tire Adjustable Axle Assembly w/Scales =Black=		
1B	292520B	Straddle Duals Adjustable Axle Assembly w/out Scales =Black=	1	
	292521B	Straddle Duals Adjustable Axle Assembly w/Scales =Black=		
2	250843	Pin 1" Dia. x 4 9/16"	8	
3	280293B	Axle Clamp Weldment =Black=	2	
4	283855B	Axle Mount Casting =Black=	4	
5A	267284B	Hub & Spindle Assembly =Black=	2	For Single Wheel/Tire Adjustable Axle Assembly
5B	284269B	Hub & Spindle Assembly =Black=		For Straddle Duals Adjustable Axle Assembly
6	292217B	Axle Extension Tube Weldment =Black=	2	
7	292255B	Adjustable Axle Weldment =Black=	1	
8A	9004903	Load Bar For Units w/ Scales	4	
8B	268289	Load Cell For Units w/out Scales		
9	91299-138	Capscrew 5/8"-11UNC x 7" Grade 8	2	
10	9008441	Locknut 1"-14UNS Grade 8	8	
11	91299-1456	Capscrew 1"-14UNS x 3" Grade 8	8	
12	91192	Retaining Ring 1"	16	
13	9390-200	Capscrew 1 1/8"-7UNC x 3" Grade 5	2	
14	9390-457	Capscrew 7/8"-9UNC x 10" Grade 5	4	
15	9394-018	Hex Nut 7/8"-9UNC	4	
16	9404-037	Lock Washer 7/8"	4	
17	9404-045	Lock Washer 1 1/8"	2	
18	289325	Heavy Duty Flat Washer 1 1/8"	2	
19	9008440	Locknut/Center 5/8"-11UNC Grade 8	2	
20	288789B	Spacer Bushing 1 1/8" Dia. =Black=	2	
21	804685	Washer 2" Grade 8	16	
22	97319	M22 x 1.5 Flanged Cap Nut	20	NOT SHOWN

36” & 42” Track Axle Components with 5 Point Scale System

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



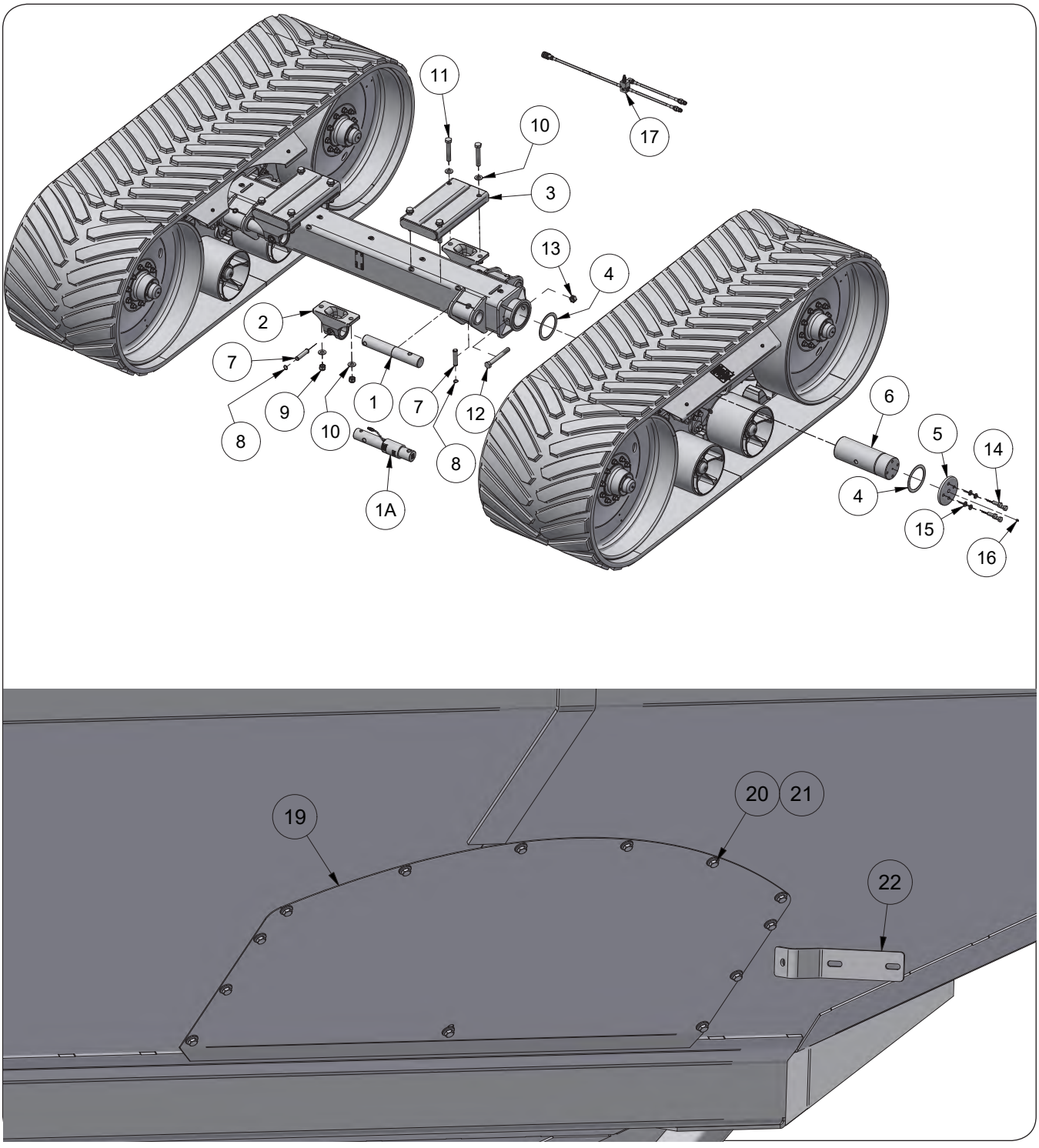


36” & 42” Track Axle Components with 5 Point Scale System

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

ITEM	PART NO.	DESCRIPTION	QTY	NOTES
1	291394B	36” Track Axle Bundle, Scale =Black=	-	Includes Items 1-10
	292525B	42” Track Axle Bundle, Scale =Black=		
	292522B	36” Track Axle Bundle, Non-Scale =Black=	-	
	292524B	42” Track Axle Bundle, Non-Scale =Black=		
2	250843	Pin 1” Dia. x 4 9/16	8	
3	283855B	Axle Mount Casting =Black=	4	
4	287945B	Riser Weldment =Black=	2	
5	291393B	Axle Weldment =Black=	1	For 36” Track Axle (SHOWN)
	292264B	Axle Weldment =Black=		For 42” Track Axle
6A	9004903	Scale Load Cell 2.875” Dia.	4	For Units with Scales (SHOWN)
6B	268289	Load Bar 2.875” Dia.		For Units without Scales
7	91288-1464	Capscrew 1-14UNS x 6 Grade 8	8	
8	9008441	Locknut 1-14UNS Grade 8	8	
9	91192	Retaining Ring 1”	16	
10	804685	Washer 2” Grade 8	16	

Track Axle Mounting Components

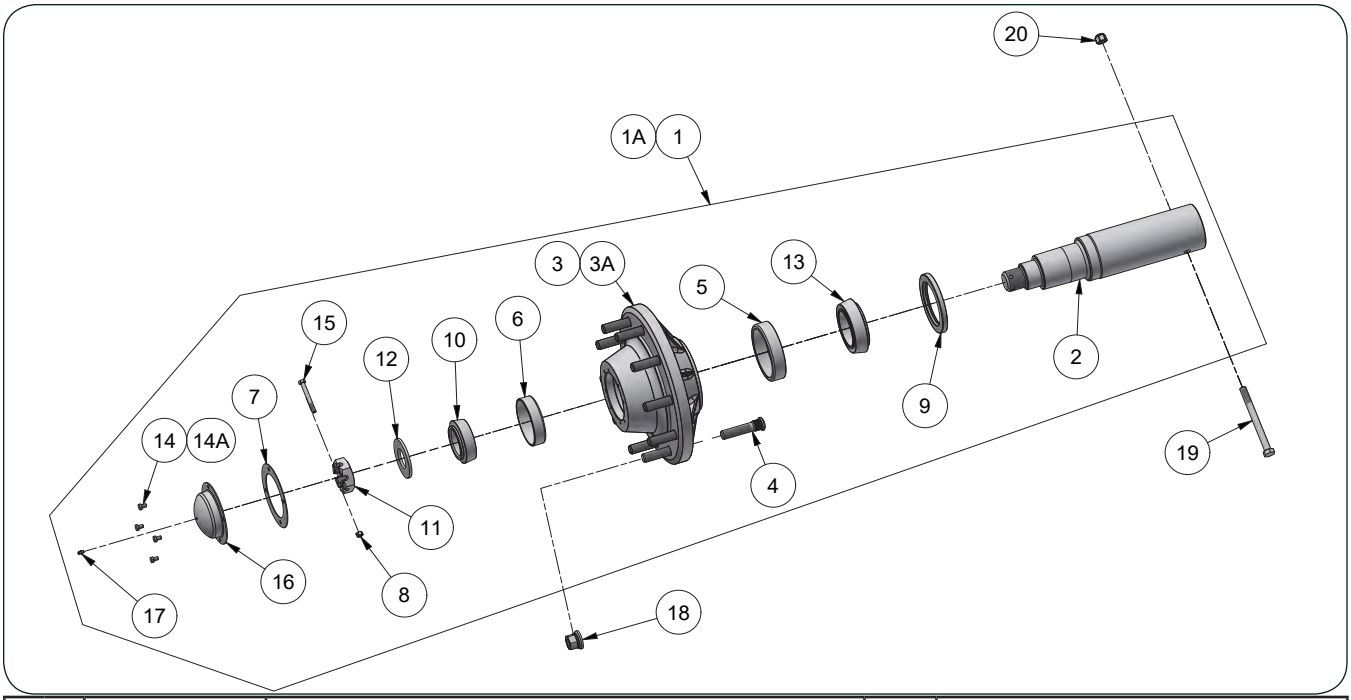


Track Axle Mounting Components

ITEM	PART NO.	DESCRIPTION	QTY	NOTES
1	268289	Load Bar 2 7/8" Dia. x 18"	4	
1A	9004903	Scale Load Bar 2 7/8" Dia.	4	
2	283855B	Axle Mount =Black=	4	
3	287945B	Riser Weldment =Black=	2	
4	268619	Washer 7 1/2" Dia.	4	
5	268121B	Cover Plate =Black=	2	
6	268640	Track Pivot Shaft 6" Dia. x 16 5/8"	2	
7	250843	Pin 1" Dia. x 4 9/16"	8	
8	91192	Retaining Ring	16	
9	9008441	Lock Nut 1" UNS Grade 8	8	
10	804685	Washer 2" OD x 1 1/16" ID	16	
11	91299-1464	Capscrew 1"-14 UNS x 6" Grade 8	8	
12	9390-462	Capscrew 1"-8 UNC x 8 1/2" Grade 8	2	
13	92199	Lock Nut 1"-8 UNC	2	
14	9390-145	Capscrew 3/4"-10 UNC x 2" Grade 5	8	
15	9404-033	Lock Washer 3/4"	8	
16	93426	Grease Zerk	2	
17	268345	Tensioner Hose Assembly	1	
18	292483G	Wheel Well Cover Kit =Green=	1	
	292483R	Wheel Well Cover Kit =Red=		
19	292482G	Wheel Well Cover Panel =Green=	1	
	292482R	Wheel Well Cover Panel =Red=		
20	9005376	U-Nut 3/8"-16 UNC	13	
21	95585	Flange Screw 3/8"-16 UNC x 3/4" Grade 5	13	
22	287691B	Plate Weldment	1	

Hub & Spindle — Rigid Axle Without Scales & Adjustable Axle

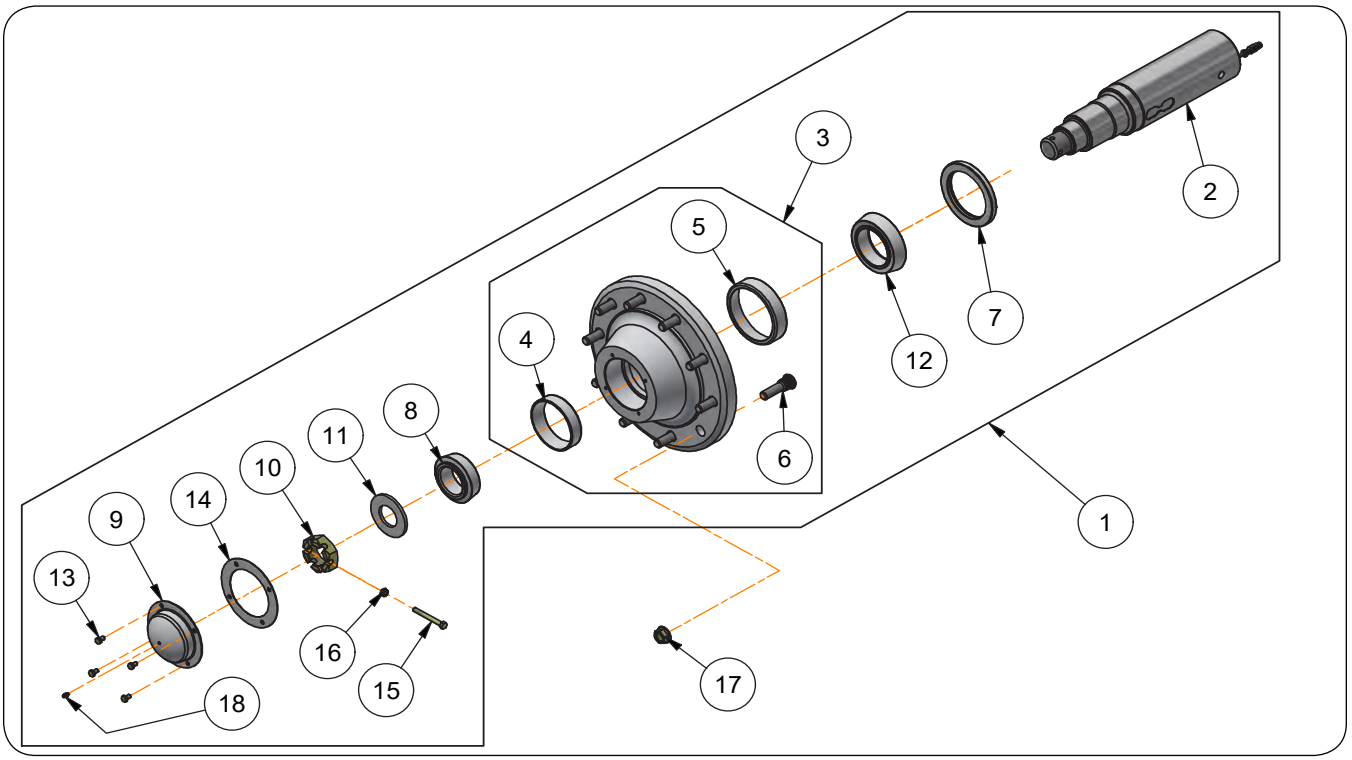
Please visit www.unverferth.com/parts/ for the most current parts listing.



ITEM	PART NUMBER	DESCRIPTION	QTY	NOTES
1	284268B	Hub & Spindle Assembly =Black=	-	Includes 2, 3 through 17
1A	284269B	Hub & Spindle Assembly =Black=		Includes 2, 3A-12, 13A-17 For 1019 Only
2	286172	Spindle Dia. 4.50" x 19 7/8"	1	
3	265390B	Hub Sub Assembly =Black=	1	Includes Items 4, 5, 6
3A	266455B	Hub Sub Assembly =Black=		
4	9007001	Stud Bolt M22x1.5x4	10	
5	92476	Bearing Cup	1	HM218210
6	92462	Bearing Cup	1	HM212011
7	284230	Gasket	1	
8	902875	Locknut 3/8”-16UNC	1	
9	92455	Seal - 4.375" I.D.	1	43605SA
10	92464	Outer Bearing Cone	1	HM212049
11	92470	Nut	1	
12	92472	Washer	1	
13	92545	Inner Bearing Cone	1	HM218248
14	9390-026	Capscrew 5/16”-18UNC x 1/2” Grade 5	4	
14A	9390-028	Capscrew 5/16”-18UNC x 3/4” Grade 5	4	
15	9390-064	Capscrew 3/8”-16UNC x 3 1/4” Grade 5	1	
16	286171G	Hub Cap (Green)	1	
	286171R	Hub Cap (Red)		
17	91160	Grease Zerk	1	
18	97319	Flanged Cap Nut M22x1.5	10	
19	9390-138	Capscrew, 5/8”-11UNC x 7” G5	1	
20	9398-019	Elastic Lock Nut, 5/8”-11UNC	1	

Hub & Spindle — Rigid Axle With Scales

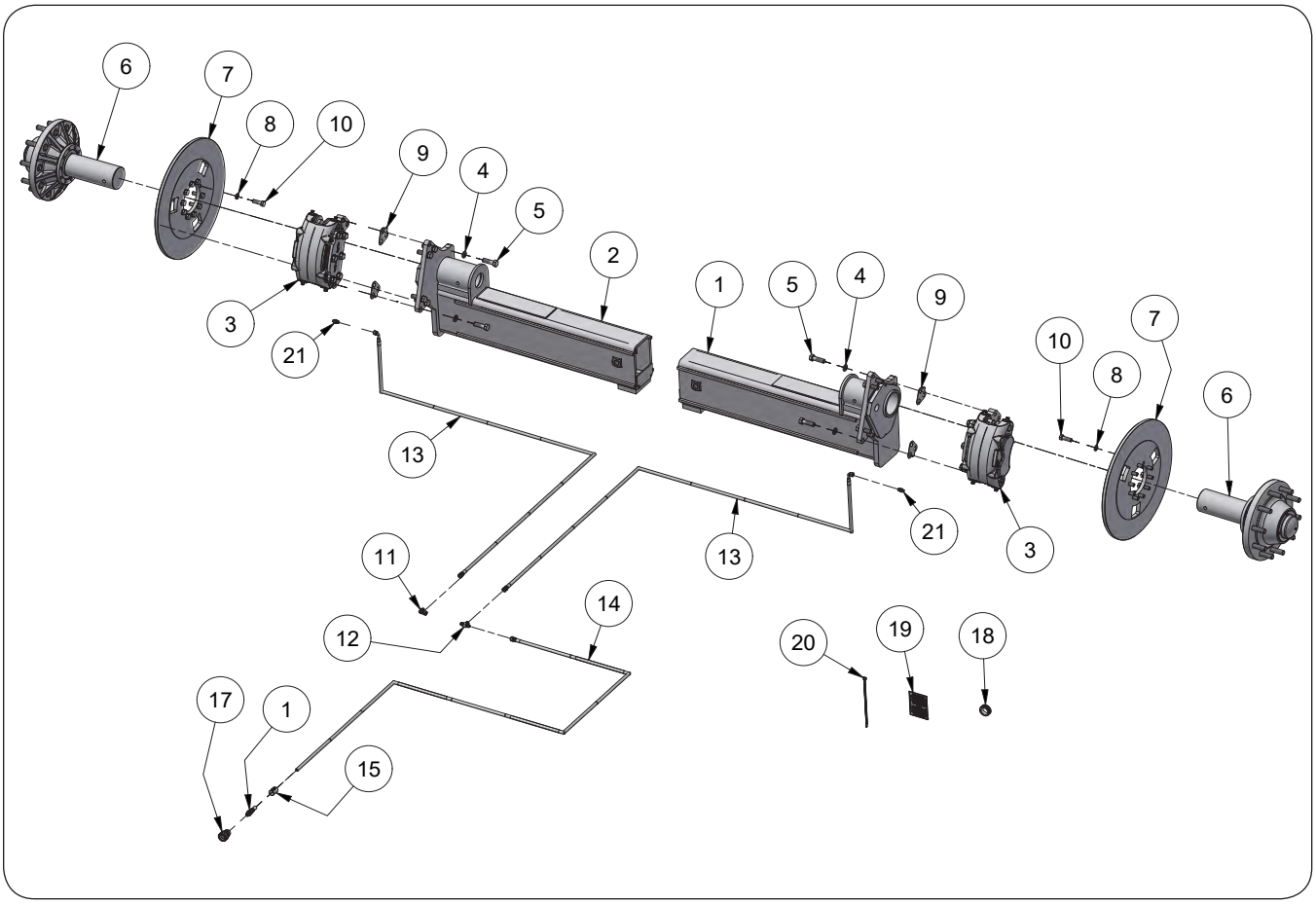
Please visit www.unverferth.com/parts/ for the most current parts listing.



ITEM	PART NUMBER	DESCRIPTION	QTY	NOTES
1	267205B	Hub & Spindle Assembly =Black=	-	Includes 2 through 16
2	9006348	Scale Spindle Dia. 4.50”	1	
3	265390B	Hub Sub Assembly =Black=	1	Includes Items 4, 5, 6
4	92462	Bearing Cup	1	HM212011
5	92476	Bearing Cup	1	HM218210
6	9007001	Stud Bolt M22x1.5x4	10	
7	92455	Seal - 4.375" I.D.	1	43605SA
8	92464	Outer Bearing Cone	1	HM212049
9	286171B	Hub Cap =Black=	1	
10	92470	Nut	1	
11	92472	Washer	1	
12	92545	Inner Bearing Cone	1	HM218248
13	9390-026	Capscrew 5/16”-18UNC x 1/2” Grade 5	4	
14	284230	Gasket	1	
15	9390-064	Capscrew 3/8”-16UNC x 3 1/4” Grade 5	1	
16	902875	Locknut 3/8”-16UNC	1	
17	97319	Flanged Cap Nut M22x1.5	10	
18	91160	Grease Zerk	1	

Brake Components (Optional)
(Requires tractor with Implement Braking)

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



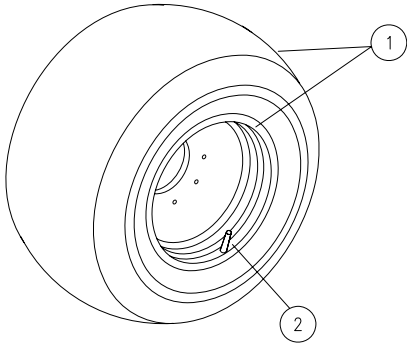
Brake Components (Optional)
(Requires tractor with Implement Braking)

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

ITEM	PART NUMBER	DESCRIPTION	QTY	NOTES
1	292496B	Axle Extension Weldment, Left-Hand =Black=	1	All Service Parts Are Black
2	292495B	Axle Extension Weldment, Right-Hand =Black=	1	
3	9004762	Brake Assembly	2	Includes Items 3A, 3B, & 3C
3A	9007135	Brake Pad - Outer	1	Quantity Per Brake Caliper (Not Shown)
3B	9007136	Brake Pad - Inner	1	
3C	9007137	Seal Kit	1	
4	9404-033	Lock Washer 3/4"	12	
5	9390-147	Capscrew 3/4"-10UNC x 2 1/2" Grade 5	12	
6	286170B	Hub & Spindle Assembly =Black=	2	All Service Parts Are Black See "Hub & Spindle - Single Wheel" with M22 Hardware PARTS Page
7	283711	Brake Rotor Plate	2	
8	9404-029	Lock Washer 5/8"	20	
9	286237	Shim	4	Use as Needed
10	9390-348	Capscrew 5/8"-18UNF x 2" Grade 5	20	
11	9876	90° Elbow 9/16"-18 JIC M x 9/16"-18 JIC F	1	
12	9875	Tee 9/16"-18 JIC M	1	
13	9007548	Hose 1/4" x 102" (3000 PSI)	2	
14	9007546	Hose 1/4" x 320" (3000 PSI)	1	
15	9004829	Hose Marker Sleeve = BLUE, Brake Pressure	1	
16	9005174	Adapter 9/16"-18 JIC M x 3/8"-19 BSPP	1	
17	9005173	Quick Coupler	1	
18	98487	Grommet	1	
19	9007162	Information Tag	1	
20	9003735	Cable Tie 11" Long	10	
21	97711	Adapter 9/16"-18 JIC M x 7/16"-20 OR M	2	

Wheels and Tires

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



TIRES

For questions regarding new tire warranty, please contact your local original equipment tire dealer. Used tires carry no warranty.

IMPORTANT

- *Verify whether you have a **straight plate** or **formed plate** wheel before ordering a replacement wheel.*

Wheels and Tires

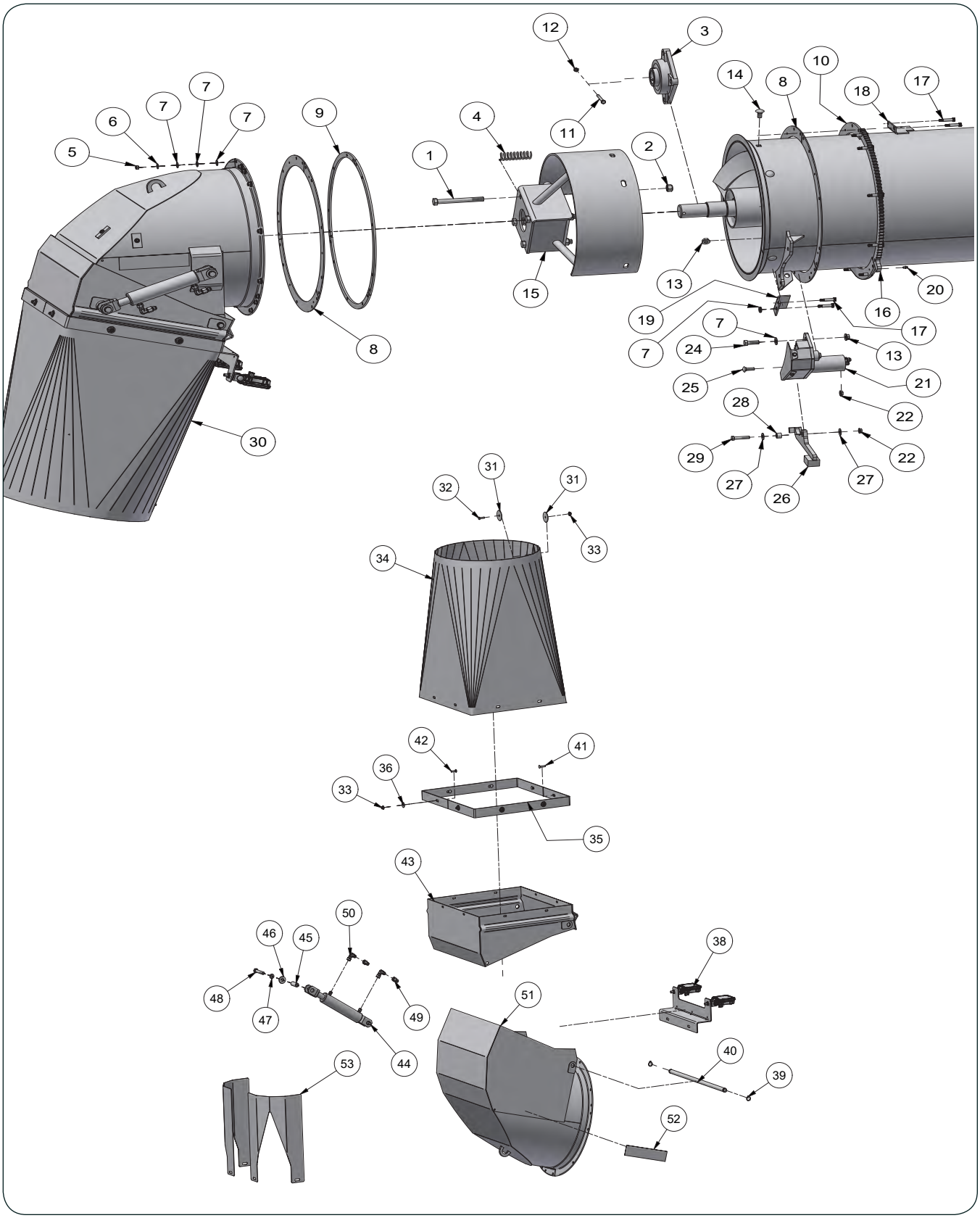
Please visit www.unverferth.com/parts/ for the most current parts listing.

STRAIGHT PLATE WHEELS					
ITEM	**PART NO.**	**DESCRIPTION**	**LOAD RATING**	**QTY**	**NOTES**
1	15366SM	Wheel Only (Dual Option for 1019)	158A8	4	16 x 46 / 480/80R46 R-1
1	14565SM	Wheel & Tire Assembly	165A8	4	18 x 42 / 520/85R42 R1
	14562SM	Wheel Only		4	18 x 42
1	110825SM/99478	Wheel & Tire Assembly		2	36 x 32 / 1050/50R32 (For 1119 Only)
	17923SM				36 x 32 / 1050/50R32 (For 1019 Only)
	110825SM	Wheel Only		2	36 x 32 (For 1119 Only)
	17922SM				36 x 32 (For 1019 Only)
1	11803SM/9500992	Wheel & Tire Assembly	188A8	2	44 x 32 / 1250/50R32 R-1W (For 1119 Only)
	19969SM				44 x 32 / 1250/50R32 R-1W (For 1019 Only)
	110803SM	Wheel Only		2	44 x 32 (For 1119 Only)
	19966SM				44 x 32 (For 1019 Only)
1	18904SM	Wheel & Tire Assembly	188A8 LI	2	30 x 32 / 900/70R32 R-1W (For 1119 Only)
	17939SM	Wheel Only			
1	110922SM	Wheel & Tire Assembly	195D	2	38 x 46 / LSW1100/45R46 R-1W (For 1119 Only)
1	17939SM/95000946	Wheel & Tire Assembly	191B LI	2	30 x 32 / IF900/65R32 R-3 (For 1119 Only)
	17939SM	Wheel Only			
2	93300SM	Valve Stem	N/A	4	
2	901207SM	Valve Stem Adapter	N/A	-	

FORMED PLATE WHEELS					
ITEM	**PART NO.**	**DESCRIPTION**	**LOAD RATING**	**QTY.**	**NOTES**
1	18519SM	Wheel & Tire Assembly	181A8 / 178B	2	30 x 32 / 900/60R32 R-1W (For 1019 Only)
	110314SM		191B LI	2	30 x 32 / 900/60R32 R-1W (For 1019 Only)
	903059SM	Wheel Only		2	30 x 32 (For 1019 Only)
1	110040SM	Wheel & Tire Assembly	20	2	30 x 32 / 35.5LR32 R-3
1	903059SM	Wheel Only		2	30 x 32
2	93300SM	Valve Stem		2	
	95365SM	Plug, Rim Hole		2	

Directional Spout Components

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



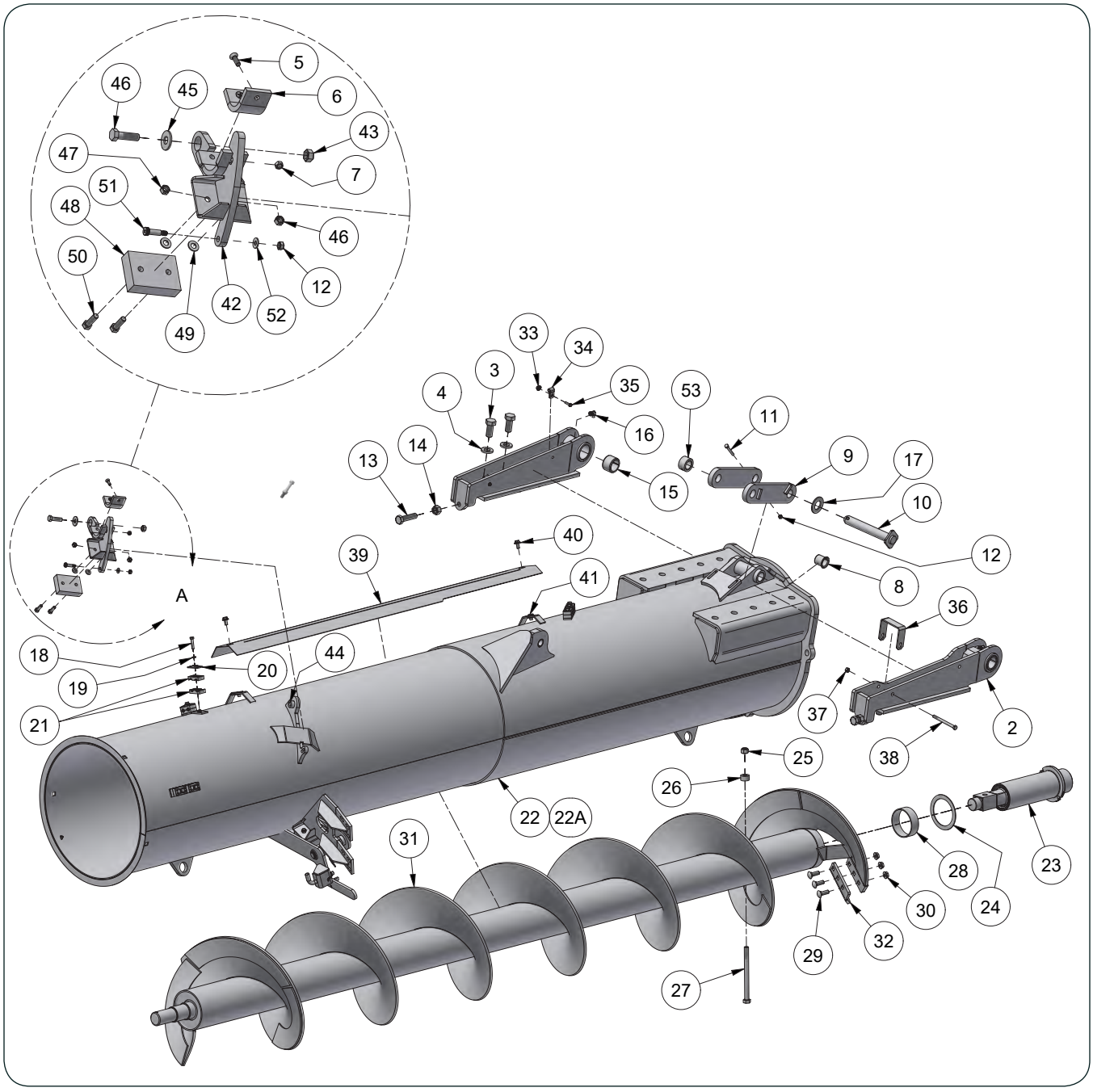
Directional Spout Components

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

ITEM	PART NO.	DESCRIPTION	QTY	NOTES
	293030G	Upper Auger Assembly =Green=	-	Includes Items 1-30 & ALL the Upper Auger Components
	293030R	Upper Auger Assembly =Red=		
1	9390-136	Capscrew 5/8-11UNC x 6 Grade 5	4	
2	9801	Locknut 5/8-11UNC	4	
3	9002492	Flanged Bearing 2" Dia.	1	
4	9001812	Compression Spring 4" Long	4	
5	9807	Locknut 5/16"-18UNC	16	
6	9405-064	Flat Washer 1/4	15	
7	9405-074	Lock Washer 1/2"	16	
8	272748	Pivot Pad 20 13/16" ID x 1/8	6	
9	291344B	Pivot Pad 22 7/19" ID x 1/4 =Black=	3	
10	272842B	Spout Pivot Plate =Black=	2	
11	9390-036	Capscrew 5/16"-18UNC x 2 1/2 Grade 5	1	
12	901527	Locknut 5/16"-18UNC	1	
13	9003397	Locking Flange Nut 1/2"-13UNC	5	
14	9388-102	Carriage Bolt 1/2"-13UNC x 1 Grade 5	4	
15	296451B	Hanger Bearing Weldment =Black=	1	
16	272719	Spout Pivot Gear	1	
17	9007837	Shoulder Bolt 3/8 Dia. x 1 1/4	8	
18	272855B	Stop Plate 3 3/4" Long =Black=	1	
19	290884B	Stop Plate 3 1/4" Long =Black=	1	
20	91160	Grease Zerk	4	
21	288188B	Spout Motor Assembly =Black=	1	
22	9003396	Locknut 3/8"-16UNC	2	
23	9405-086	Flat Washer 1/2 SAE	1	
24	9390-101	Capscrew 1/2"-13UNC x 1 1/2 Grade 5	1	
25	9388-052	Carriage Bolt 3/8"-16UNC x 1 1/4 Grade 5	1	
26	292432B	Stop Weldment =Black=	1	
27	9405-076	Flat Washer 3/8	2	
28	290882	Lock Pivot Bushing	1	
29	9390-059	Capscrew 3/8"-16UNC x 2	1	
30	292350B	Spout Assembly =Black=	1	
31	94763	Fender Washer	16	
32	9390-005	Capscrew 1/4"-20UNC x 1 Grade 5	8	
33	97189	Large Flange Hex Nut 1/4"-20UNC	16	
34	9008139	Rubber Chute	1	
35	292197B	Chute Strap/Plate =Black=	2	
36	9405-066	Flat Washer 1/4"	8	
37	292198B	Light Bracket =Black=	1	
38	9008957	Work Light, LED	2	For SN B41010100 & Higher
	9007186			For SN B41010099 & Lower
39	9003810	External Retaining Ring 3/4"	2	
40	290993	Pivot Shaft 3/4" Dia. x 23 1/2	1	
41	9388-004	Carriage Bolt 1/4"-20UNC x 1 1/4" Grade 5	2	
42	9388-003	Carriage Bolt 1/4"-20UNC x 1 Grade 5	6	
43	292352B	Spout Weldment =Black=	1	
44	9008152	Cylinder 1 1/2 x 6 (3000PSI)	1	
45	285290	Bushing Sleeve 2.0625" Long	2	
46	9405-088	Flat Washer 1/2" USS	2	
47	9404-025	Lock Washer 1/2"	2	
48	9390-107	Capscrew 1/2"-13UNC x 3 Grade 5	2	
49	95193	Adapter 9/16-18 JIC Female x 9/16-18 JIC Male	2	w/ .030" Restrictor
50	9876	90° Elbow 9/16-18 JIC F x 9/16-18 JIC M	2	
51	291668B	Spout Service Kit =Black=	1	
52	9003127	Reflector - Amber	2	
53	292292B	Chute Support Plate =Black=	2	

Upper Auger Components

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



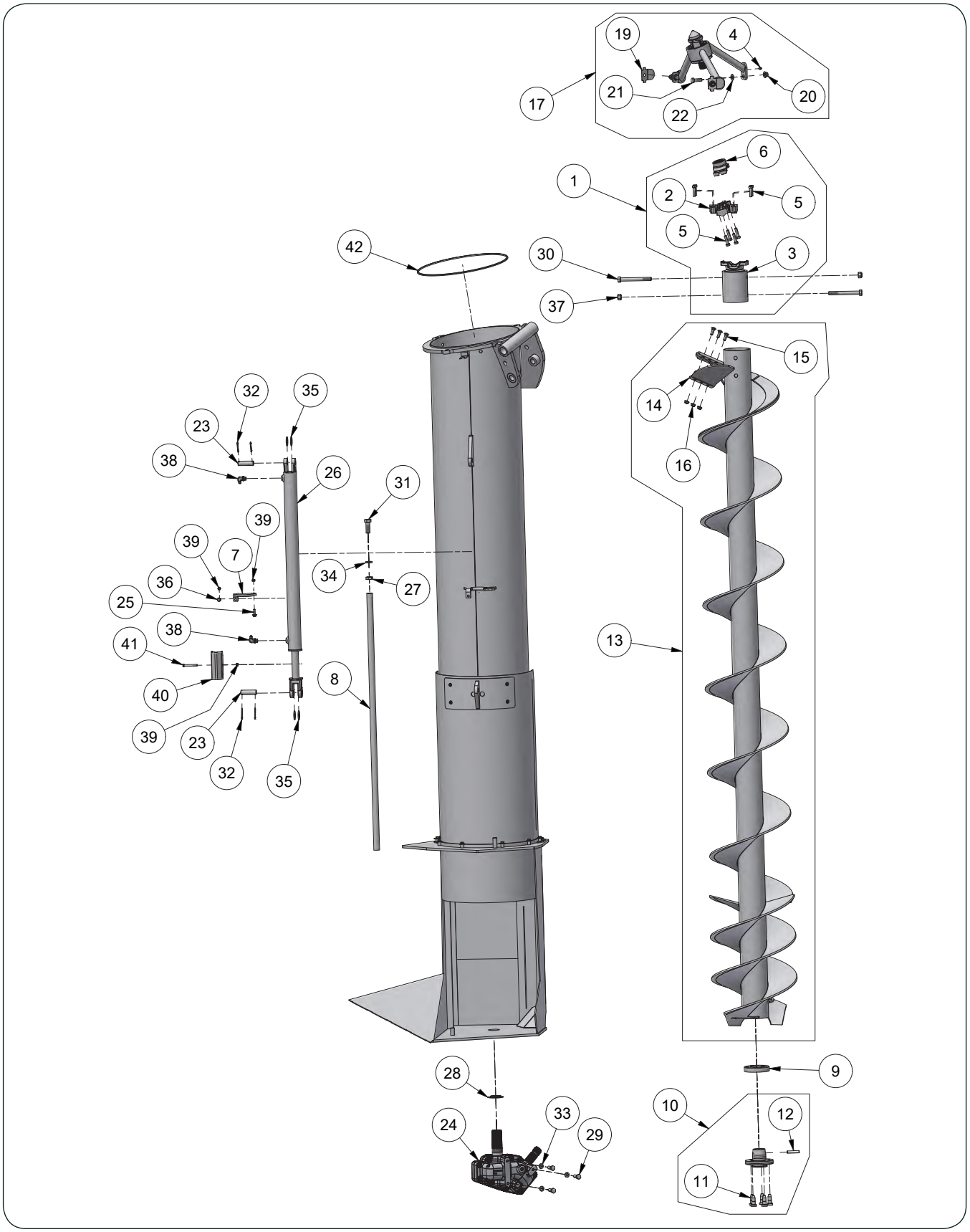
Upper Auger Components

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

ITEM	PART NO.	DESCRIPTION	QTY	NOTES
	293030G	Upper Auger Assembly =Green=	-	Includes Items 1-20 & ALL the Directional Spout Components
	293030R	Upper Auger Assembly =Red=		
1	292058G	Outer Auger Pivot Weldment (25 9/16 Lg.) =Green=	1	
	292058R	Outer Auger Pivot Weldment (25 9/16 Lg.) =Red=		
2	292057G	Inner Auger Pivot Weldment (27 3/8 Lg.) =Green=	1	
	292057R	Inner Auger Pivot Weldment (27 3/8 Lg.) =Red=		
3	9390-164	Capscrew 7/8"-9UNC x 2" Grade 5	10	
4	97041	Flat Washer 7/8"	10	
5	903171-660	Phillips Head 5/16"-18UNC x 1" Machine Screw	2	
6	9004263	Stop Pad 2" x 4 3/8"	1	
7	9397-008	Elastic Jam Nut 5/16"-18UNC	2	
8	9005522	Split Flange Bushing 1.25" OD x 1.2521" ID	2	
9	297190G	Linkage Weldment =Green=	1	
	297190R	Linkage Weldment =Red=		
10	292336	Pin Weldment 1 1/4" Dia.	1	
11	9390-036	Capscrew 5/16"-18UNC x 1 3/4" Grade 5	1	
12	9807	Locknut 5/16"-18UNC	1	
13	94733	Capscrew 3/4"-10UNC x 3" G5	2	Full Threaded
14	9394-016	Hex Nut, 3/4"-10UNC	2	
15	9008193	Split Tension Bushing 2 1/4" OD x 1 3/4" ID	4	
16	9008322	90° Elbow 9/16-18 JIC	2	
17	9405-128	Flat Washer 1 1/4" SAE	1	Item not used on S/N B45030100 and above
18	9390-032	Capscrew 5/16"-18UNC x 1 1/2" Grade 5	4	
19	9404-019	Lock Washer 5/16"	4	
20	9003814	Top Plate	4	
21	9003816	Poly Clamp Double	4	
22	292531G	Upper Auger Tube Weldment =Green=	1	For SN B38090099 and Lower
	292531R	Upper Auger Tube Weldment =Red=		
22A	293114G	Upper Auger Tube Weldment =Green=	1	For SN B38090100 and Higher
	293114R	Upper Auger Tube Weldment =Red=		
23	296488B	Soft Start Kit =Black=	1	
24	9004878	Self Lubricating Thrust Washer	1	
25	9801	Locknut 5/8"-11UNC	1	
26	405402B	Spacer Bushing =Black=	1	
27	9390-140	Capscrew 5/8"-11UNC x 7" Grade 5	1	
28	9004877	Self Lubricating Bushing	1	
29	9388-104	Carriage Bolt 1/2"-13UNC x 1 1/2" Grade 5	3	
30	9003397	Locknut 1/2"-13UNC	3	
31	292532B	Upper Flighting Replacement	1	Includes Soft Start Assembly and Hanger Bearing Weldment
32	293466	Extension Plate Replacement	1	Includes Items 28 and 29
33	97189	Hex Nut, 1/4"-20UNC	2	
34	9006037	Cable Clamp	2	
35	901101	Flange Screw 1/4"-20UNC x 1"	2	
36	293097B	Hose Guide Plate =Black=	1	
37	902875	Locknut 3/8"-16UNC	1	
38	9390-068	Capscrew 3/8"-16UNC x 4 1/2" Grade 5	1	
39	293031G	Hose Cover Plate =Green=	1	
	293031R	Hose Cover Plate =Red=		
40	95585	Large Flange Screw 3/8"-16UNC x 3/4"	2	
41	9005376	U-Nut 3/8"-16UNC	2	
42	293084G	Upper Rest Weldment =Green=	1	
	293084R	Upper Rest Weldment =Red=		
43	94981	Locknut 1/2"-13UNC	1	
44	293082	Rest Pivot Bushing	1	
45	9405-088	Flat Washer 1/2" USS	2	
46	9390-102	Capscrew 1/2"-13UNC x 1 3/4" Grade 5	1	
47	902875	Locknut, 3/8"-16UNC Grade 5	2	
48	9008197	Urethane Spring	1	
49	9405-074	Flat Washer 3/8" SAE	2	
50	9390-056	Capscrew 3/8"-16UNC x 1 1/4" Grade 5	2	
51	9007843	Shoulder Bolt 3/8" Dia. x 1"	1	
52	9405-064	Flat Washer 1/4" USS	1	
53	297191B	Retainer Bushing	2	

Lower Auger & Door Seal Components

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



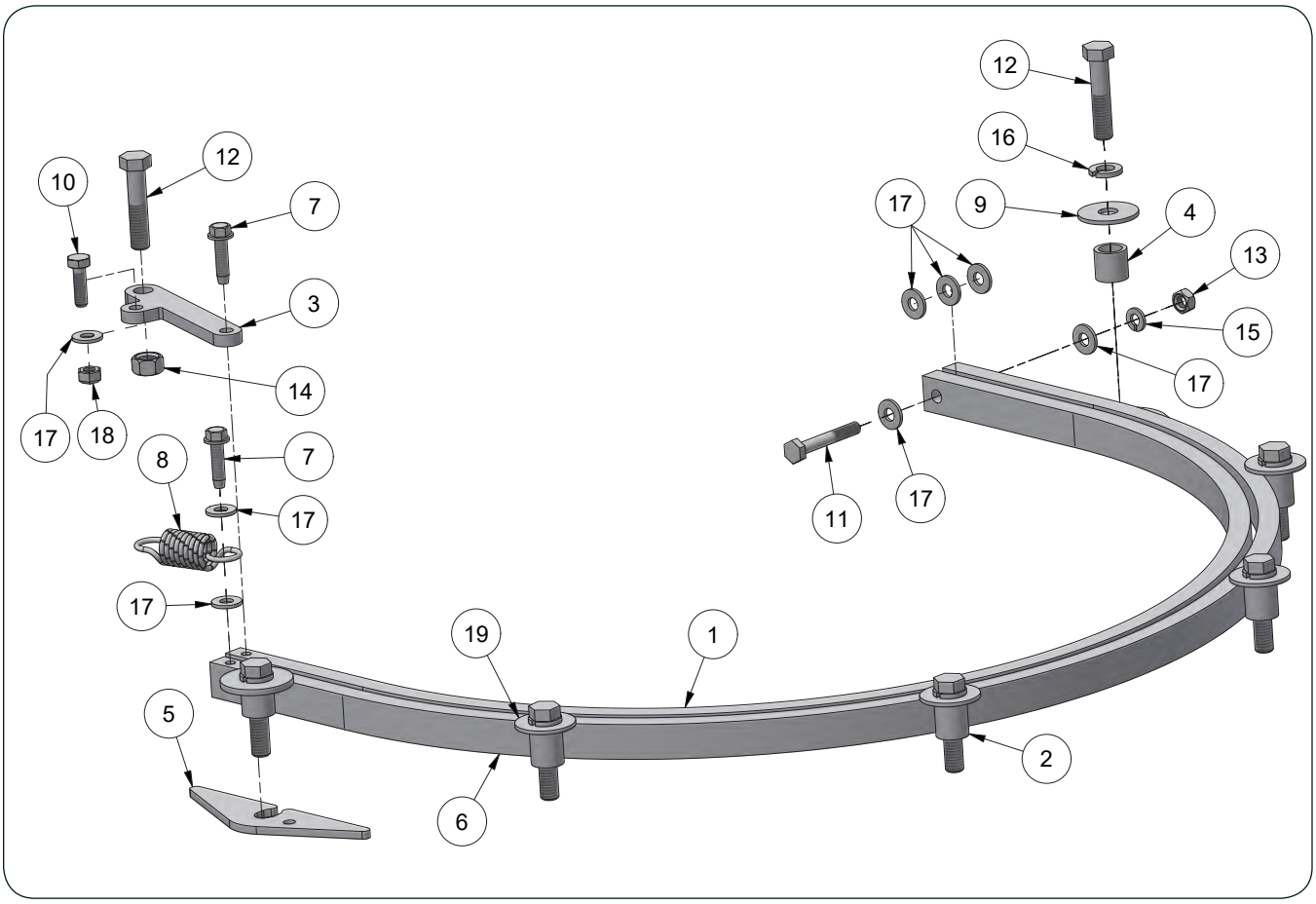
Lower Auger & Door Seal Components

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

ITEM	PART NO.	DESCRIPTION	QTY.	NOTES
1	283425	U-Joint Assembly	1	Includes Items 2-6
2	9008443	Greasable Wing Bearing Assembly	1	
3	288453	Adapter Tube Yoke Assembly	1	
4	91160	Grease Zerk	1	
5	9008432	Capscrew 1/2"-20UNF x 2" Grade 8	8	
6	280065	Yoke-Splined, Modified	1	
7	285207B	Plate-Cylinder Clamp =Black=	1	
8	285255	Pipe-Door Guide	1	
9	286083	Washer-Spacer	1	
10	287802	Auger Drive Plate Assembly 5-Pin	1	Includes Items 11-12
11	9007000	Headed Drive Pin	5	
12	902614-236	Spiral Pin 1/2" Dia. x 2 1/4"	1	
13	295193B	Lower Auger Weldment =Black=	1	Includes Items 14-16
14	293312B	Extension Plate Replacement =Black=	1	Includes Items 15, 16
15	9388-104	Carriage Bolt 1/2"-13UNC x 1 1/2" Grade 5	3	
16	9003397	Locking Flange Nut 1/2"-13UNC	3	
17	293447B	Hanger Bearing Replacement Kit =Black=	1	Includes Items 18-22, 4, 42 and 43
18	288679B	Shim Plate =Black=	1	---Not Shown---
19	288679B	Shim Plate =Black=	1	
20	9003398	Lock Nut, 5/8-11UNC	3	
21	9390-124	Capscrew, 5/8-11UNC x 2 Gr.5	3	
22	9405-098	Flat Washer 5/8" SAE	3	
23	804572	Axle Lift Pin 1" Dia. x 3 1/2"	2	
24	9008711	Gearbox 45°	1	For SN B42720100 & Higher
	9002812			For SN B41340099 & Lower
25	9003259	Flange Screw 3/8"-16UNC x 1 1/4"	1	
26	9005363	Hydraulic Welded Cylinder 2 1/2" x 36" 3000PSI	1	
	9005409	Seal Kit	-	
27	9395-018	Hex Jam Nut 7/8"-9UNC Grade 5	1	
28	9007377B	Dust Cover =Black=	1	
29	9390-123	Capscrew 1/2"-13UNC x 1 1/4" Grade 5	6	
30	9390-159	Capscrew 3/4"-10UNC x 7" Grade 5	2	
31	9390-166	Capscrew 7/8"-9UNC x 2 1/2" Grade 5	1	
32	9391-046	Cotter Pin 3/16" Dia. x 2"	4	
33	9404-029	Lock Washer 1/2"	6	
34	9404-037	Lock Washer 7/8"	1	
35	9405-116	Flat Washer 1" SAE	4	
36	95785	Flange Screw 3/8"-16UNC x 1 1/2"	1	
37	9802	Locknut/Top 3/4"-10UNC	2	
38	9874	90° Elbow 9/16-18 JIC	2	
39	9928	Locknut/Top 3/8"-16UNC	3	
40	293781B	Cylinder Stop Weldment =Black=	1	For SN B39820100 & Higher
41	9390-063	Capscrew 3/8"-16UNC x 3" G5	1	For SN B39820100 & Higher
42	9009728	Lower Auger Seal	1	
	296290	Lower Auger Seal Kit	--	

Flow Door Seals

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



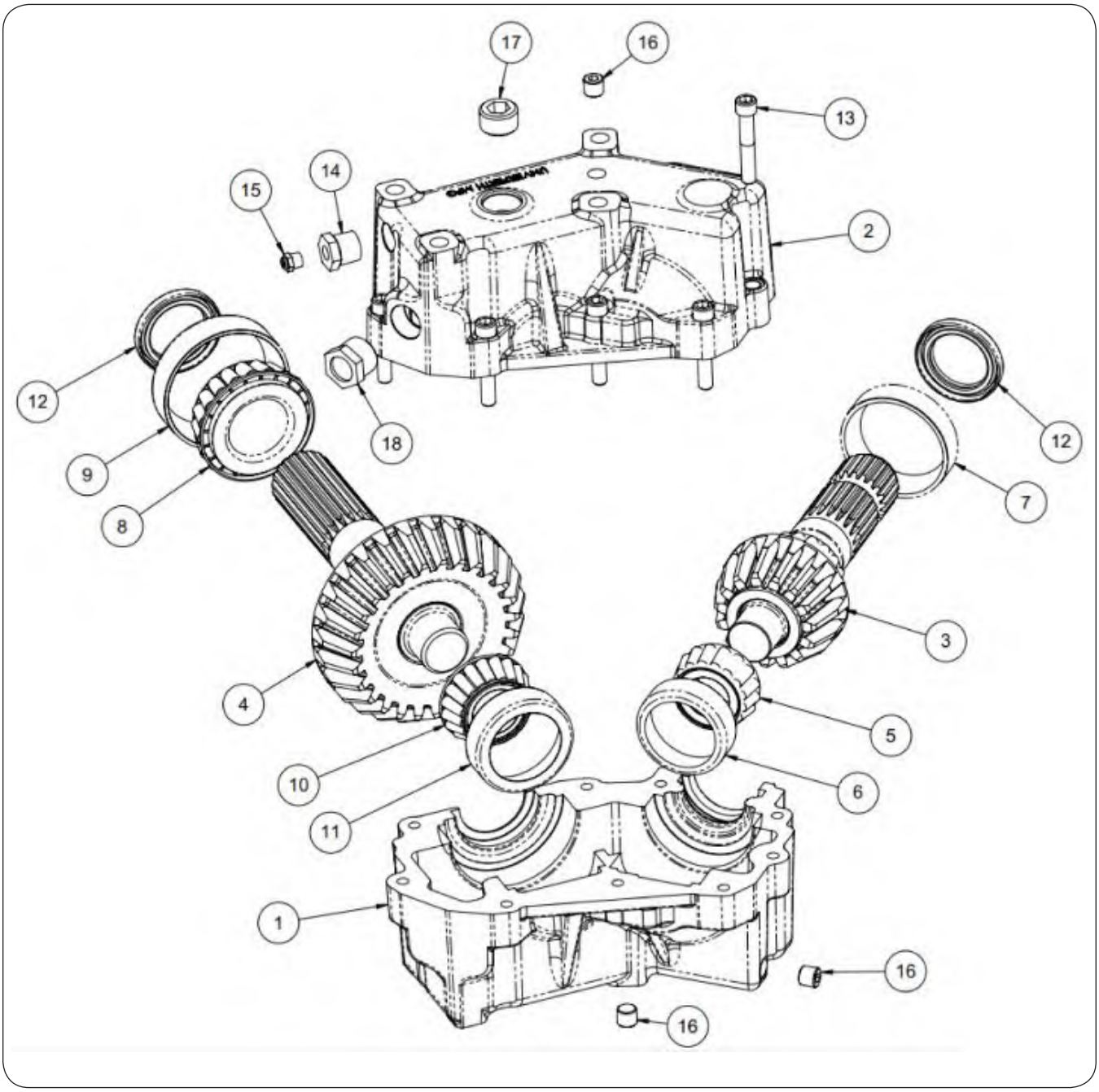
Flow Door Seals

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

ITEM	PART NUMBER	DESCRIPTION	QTY.	NOTES
1	293103	Seal - Poly	1	
2	281257G	Spacer Bushing =Green=	5	
	281257R	Spacer Bushing =Red=		
3	281258	Spring Bracket	1	
4	285960G	Spacer Bushing =Green=	1	
	285960R	Spacer Bushing =Red=		
5	288113B	Pusher Plate =Black=	1	
6	292294	Seal - Poly	1	
7	9004355	Screw, 1/4-20UNC x 1 (Self-Threading)	2	
8	9004375	Spring	1	
9	9005696	Fender Washer, 3/8	1	
10	9390-004	Capscrew, 1/4-20UNC x 7/8 Grade 5	1	
11	9390-008	Capscrew, 1/4-20UNC x 1 3/4 Grade 5	1	
12	9390-058	Capscrew, 3/8-16UNC x 1 3/4 Grade 5	7	
13	9394-002	Hex Nut, 1/4-20UNC Grade 5	1	
14	9394-006	Hex Nut, 3/8-16UNC Grade 5	1	
15	9404-017	Lock Washer, 1/4	1	
16	9404-021	Lock Washer, 3/8	6	
17	9405-062	Flat Washer 1/4	8	
18	9936	Lock Nut, 1/4-20UNC	1	
19	9004537	Washer 3/8	5	

45 Degree Gearbox Components - SN B42720099 and Below

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



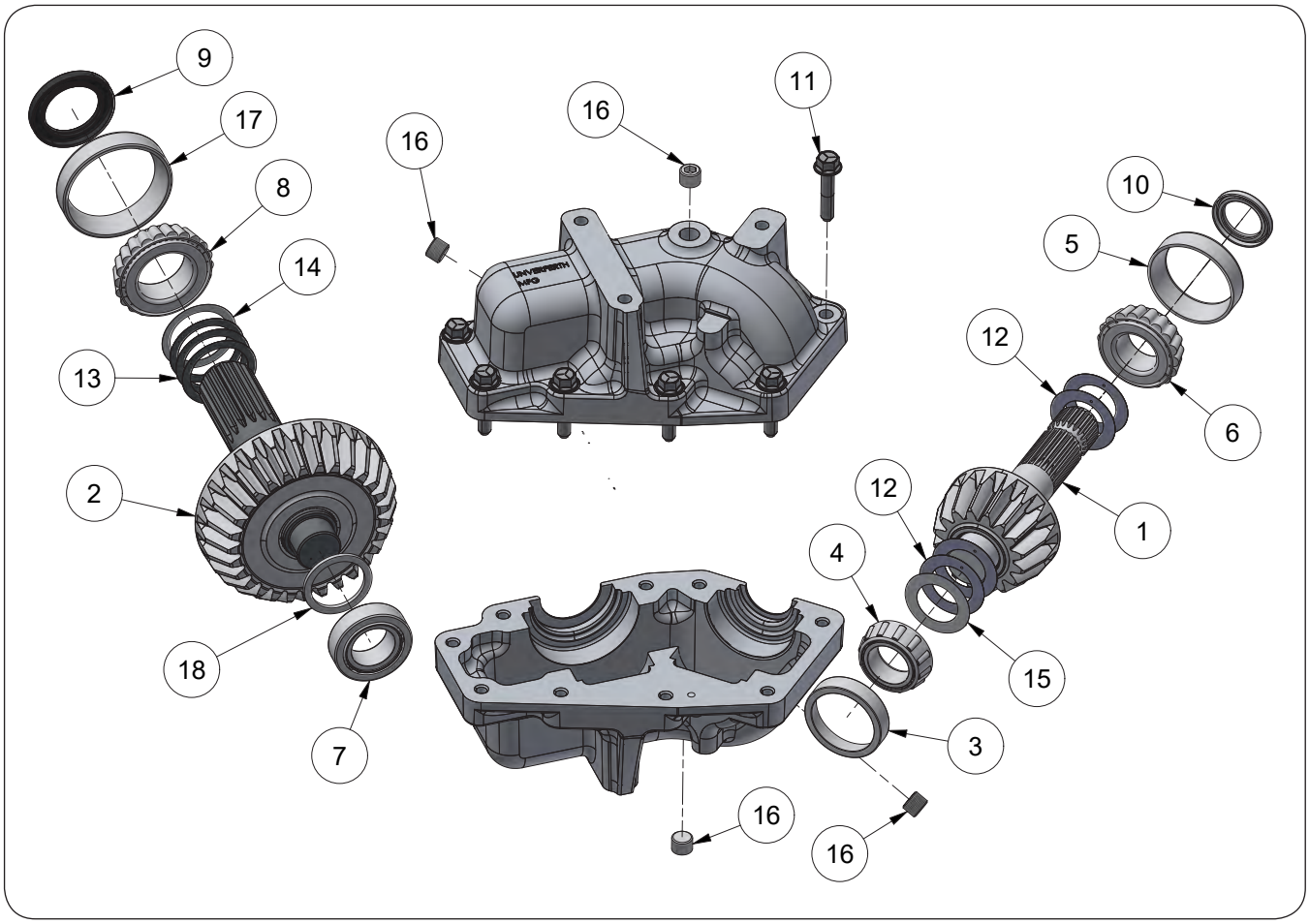
45 Degree Gearbox Components - SN B42720099 and Below

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

ITEM	PART NUMBER	DESCRIPTION	QTY.	NOTES
	9009053	Gearbox, Complete with 20 Spline Input Shaft	1	Includes Items 1 thru 18
1	9009157	Gearbox Bottom Half Housing	1	
2	9009158	Gearbox Top Half Housing	1	
3	9009159	Shaft, Input	1	1 3/4”-20 Input Spline
4	9001132	Shaft, Output	1	1.8:1 Gear
5	9009160	Bearing Cone	1	
6	9009161	Bearing Cup	1	
7	9009162	Bearing Cup	1	
8	92697	Bearing Cup	1	
9	91151	Bearing Cup	1	
10	9001133	Bearing Cone	1	
11	9001134	Bearing Cup	1	
12	92702	Seal, 2 7/16” OD x 1 11/16” ID	2	
13	95281	Socket Capscrew, 3/8”-16UNC x 2 1/4”	9	
14	9003453	Vented Reducer Bushing	1	Can be repalced with item 19
15	92352	Vented Pressure Relief Plug, 1/8” NPT, 5 PSI	1	
16	92350	Plug, 1/4” NPTF Male	3	
17	98523	Hex Plug, 3/4” NPTP Male	1	
18	9009163	Sight Glass Plug, 3/4" NPT Male	1	
19	98523	Plug 3/4”-14 NPTF	1	-Not Shown-

45 Degree Gearbox Components - SN B42720100 and Higher

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



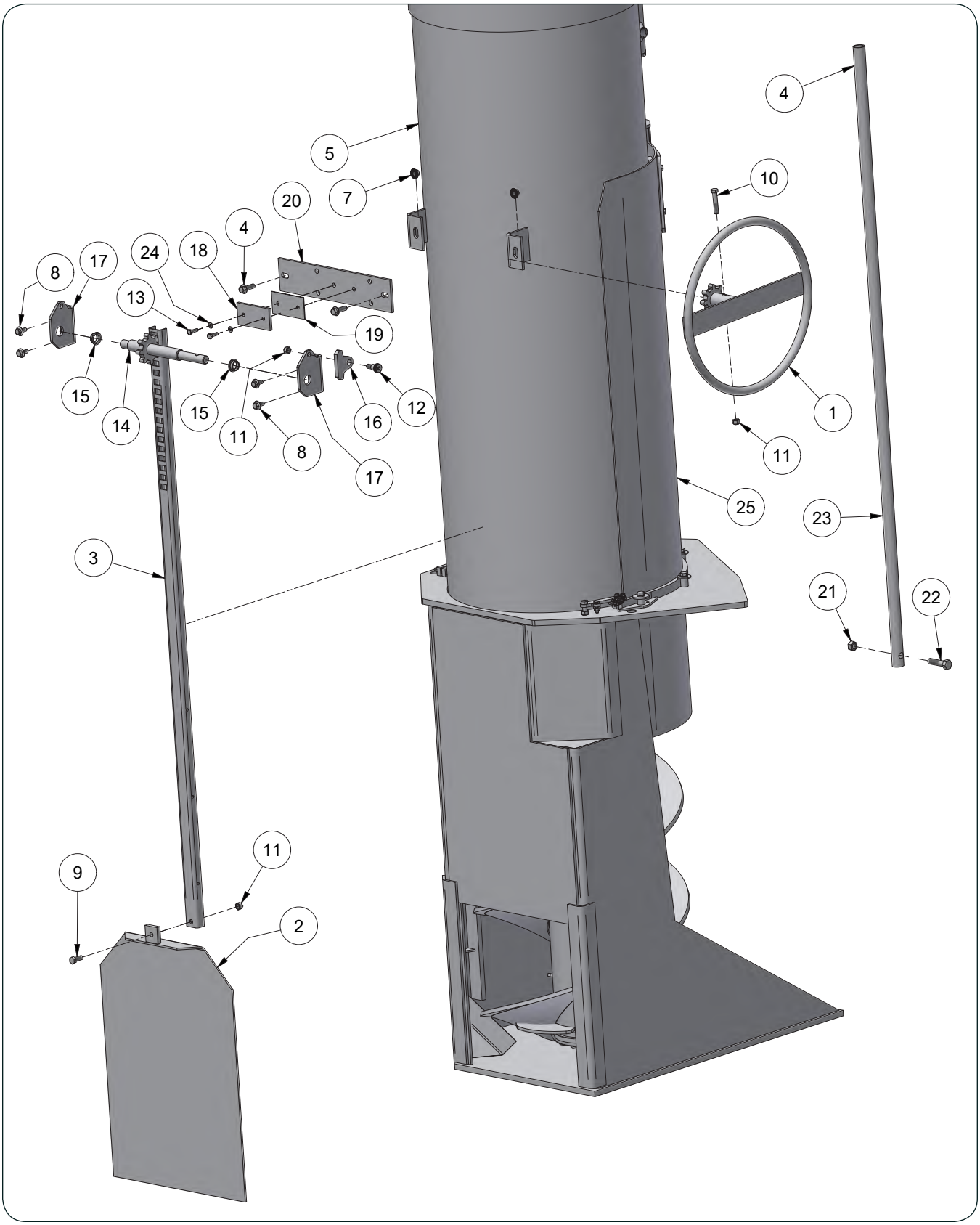
45 Degree Gearbox Components - SN B42720100 and Higher

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

ITEM	PART NUMBER	DESCRIPTION	QTY.	NOTES
	9008711	Gearbox, Complete with 20 Spline Input Shaft	1	Includes Items 1 thru 18
1	9008790	Shaft, Input	1	
2	9007516	Shaft, Output	1	
3	91812	Bearing Cup	1	
4	91822	Bearing Cone	1	
5	91151	Bearing Cup	1	
6	92697	Bearing Cone	1	
7	9007488	Bearing Set	1	
8	9007507	Bearing Cone	1	
9	9007508	Seal	1	
10	92702	Seal	1	
11	903161-060	Flange Screw 1/2”-13UNC x 2 1/2” Grade 5	9	
12	9007509	Shim 2.75” x 1.750” x .005”	4	
13	9007511	Shim 3” x 2.360” x .005”	3	
14	9007512	Shim 3” x 2.360” x .003”	1	
15	9007510	Shim 2.750” x 1.750” x .003”	1	
16	95283	Plug 1/2” NPT	4	
17	93819	Bearing Cup	1	
18	9008511	Spacer 0.167” x 2.75” x 2.2”	1	

Cleanout Door Components

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



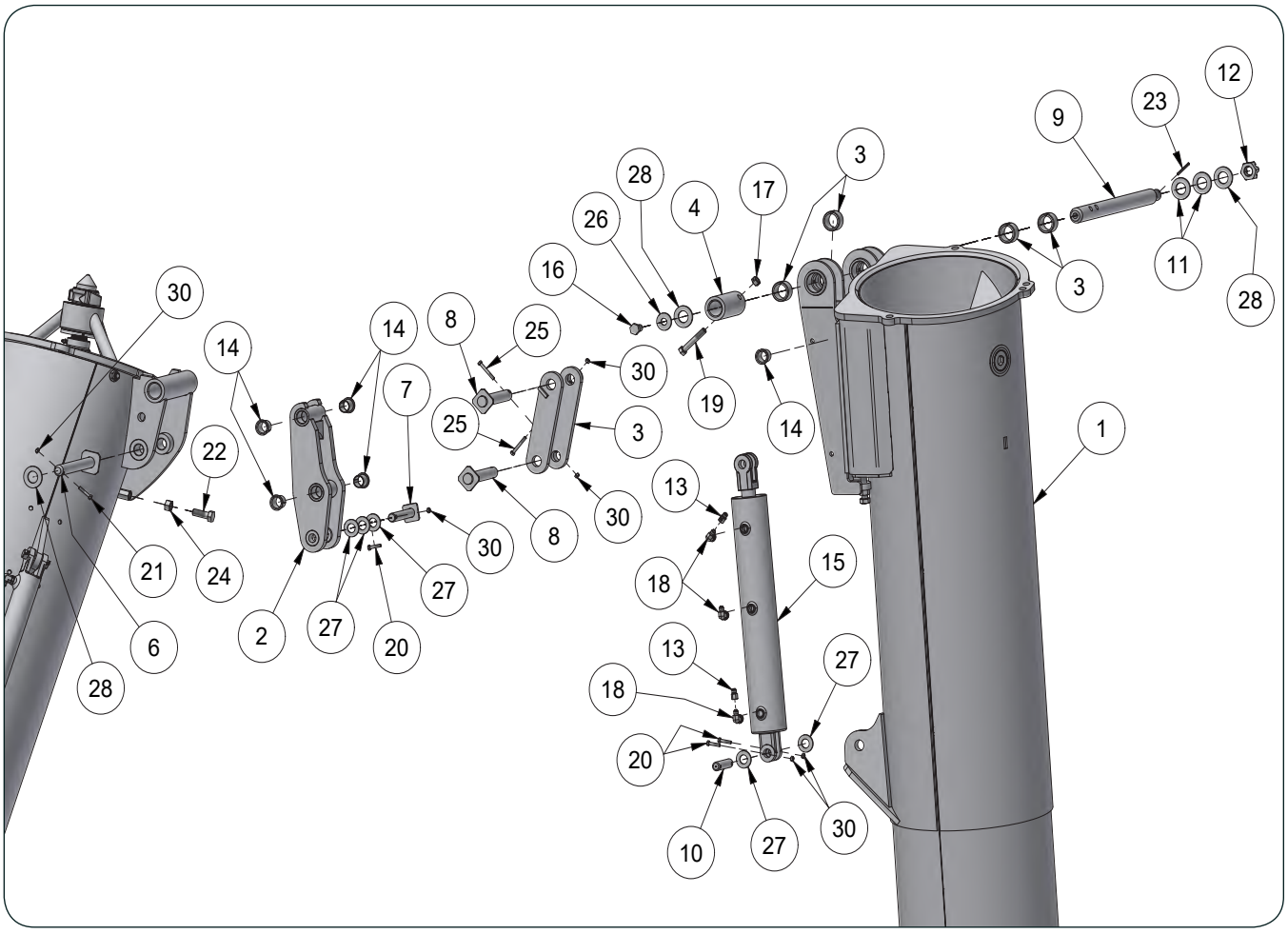
Cleanout Door Components

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

ITEM	PART NO.	DESCRIPTION	QTY.	NOTES
1	292298B	Door Wheel Weldment =Black=	1	
2	292207B	Cleanout Door Weldment =Black=	1	
3	292272B	Rail =Black=	1	
4	265384	Decal, Checker Tape	1	
5	-	Auger Weldment Assembly	1	
6	9003259	Capscrew, 3/8"-16UNC x 1 1/4 Grade 5	2	
7	91263	Locknut, 3/8"-16UNC	2	
8	91256	Flange Screw, 5/16"-18UNC x 3/4 Grade5	4	
9	9390-055	Capscrew, 3/8"-16UNC x 1 Grade 5	1	
10	9390-059	Capscrew, 3/8"-16UNC x 2 Grade 5	1	
11	9928	Locknut, 3/8"-16UNC	3	
12	9006181	Shoulder Bolt 3/8-16 x 1/2"	1	
13	9390-004	Capscrew 1/4"-20UNC x 7/8 Grade 5	2	
14	268901	Shaft Weldment	1	
15	9003411	Split Bushing	2	
16	268313B	Lock Plate	1	
17	286802B	Door Lift Plate	2	
18	286801	Wear Pad	1	
19	291087B	Shim Plate	2	
20	292297B	Door Lift Bracket Weldment	1	
21	94981	Locknut, 1/2-13UNC	1	
22	9390-103	Capscrew, 1/2-13UNC x 2	1	
23	292246B	Indicator Rod =Black=	1	
24	9404-017	Lock Washer 1/4"	2	
25	292544G 292544R	Flow Door Replacement Kit	1	

Auger Fold Components

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



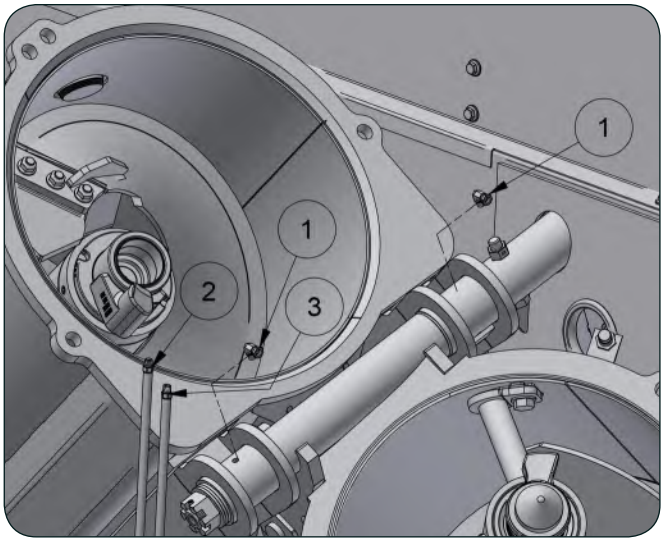
Auger Fold Components

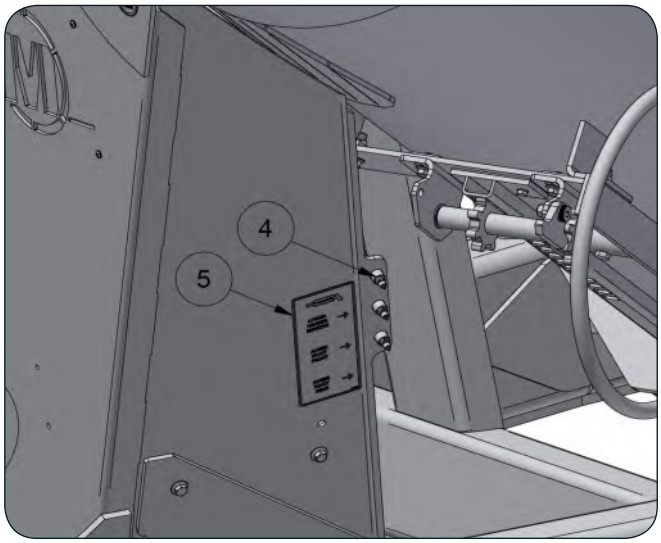
Please visit www.unverferth.com/parts/ for the most current parts listing.

ITEM	PART NO.	DESCRIPTION	QTY	NOTES
1	292531G	Upper Auger Weldment =Green=	1	
	292531R	Upper Auger Weldment =Red=		
2	292065G	Linkage Weldment =Green=	1	
	292065R	Linkage Weldment =Red=		
3	292200G	Linkage Weldment =Green=	1	For SN B45030099 and Below
	292200R	Linkage Weldment =Red=		For SN B45030099 and Below
	297192G	Linkage Weldment =Green=		For SN B45030100 and Above
	297192R	Linkage Weldment =Red=		For SN B45030100 and Above
4	9008193	Bushing-Tension (Hardened)	4	
5	292287	Auger Anchor Bushing	1	
6	292282	Fold Linkage Pin 11 7/16" Lg.	1	
7	292338	Pin Weldment 7 3/16" Lg.	1	
8	292336	Pin Weldment 8 15/16 Lg.	2	
9	292285	Shaft Fold/Pivot	1	
10	291988	Pin 1" Dia. x 4 3/4"	1	
11	9002072	Washer 2 1/2 OD (Hardened)	4	
12	9393-023	Slotted Hex Nut 1 1/4-7UNC Grade 2	1	
13	9002199	Adapter 9/16-18 JIC Female x 9/16-18 JIC Male w/ 0.060 Restrictor	2	
14	9005522	Split Flange Bushing 1 1/4" OD	6	
15	9008205	Cylinder 4 1/2 x 20 (3000psi)	1	
16	9390-143	Hex Flange Screw 3/4"-10UNC x 1 1/2 Grade 5	1	
17	95905	Lock Nut 5/8-11UNC Grade 5	1	
18	91508	45° Elbow 9/16-18 JIC Male x 3/4-16 O-Ring Male	1	
19	9390-131	Capscrew 5/8-11UNC x 3 3/4 Grade 5	1	
20	9390-032	Capscrew 5/16"-18UNC x 1 1/2 Grade 5	3	
21	9390-033	Capscrew 5/16"-18UNC x 1 3/4 Grade 5	1	For SN B45030100 and Above
			3	For SN B45030099 and Below
22	9390-146	Capscrew 3/4"-10UNC x 2 1/4 Grade 5	1	
23	9392-140	Roll Pin 1/4" Dia. x 2	1	
24	9394-016	Hex Nut 3/4"-10UNC	1	
25	9390-036	Capscrew 5/16"-18UNC x 2 1/2" Grade 5	2	
26	9405-106	Flat Washer 3/4"	1	
27	9405-116	Flat Washer 1" SAE	5	
28	9405-128	Flat Washer 1 1/4" SAE	3	For SN B45030100 and Above
			5	For SN B45030099 and Below
31	9807	Locknut 5/16"-18UNC	6	
30	9007472	Proximity Sensor w/Connector	1	--Not Shown--

Auger Fold Grease Components

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





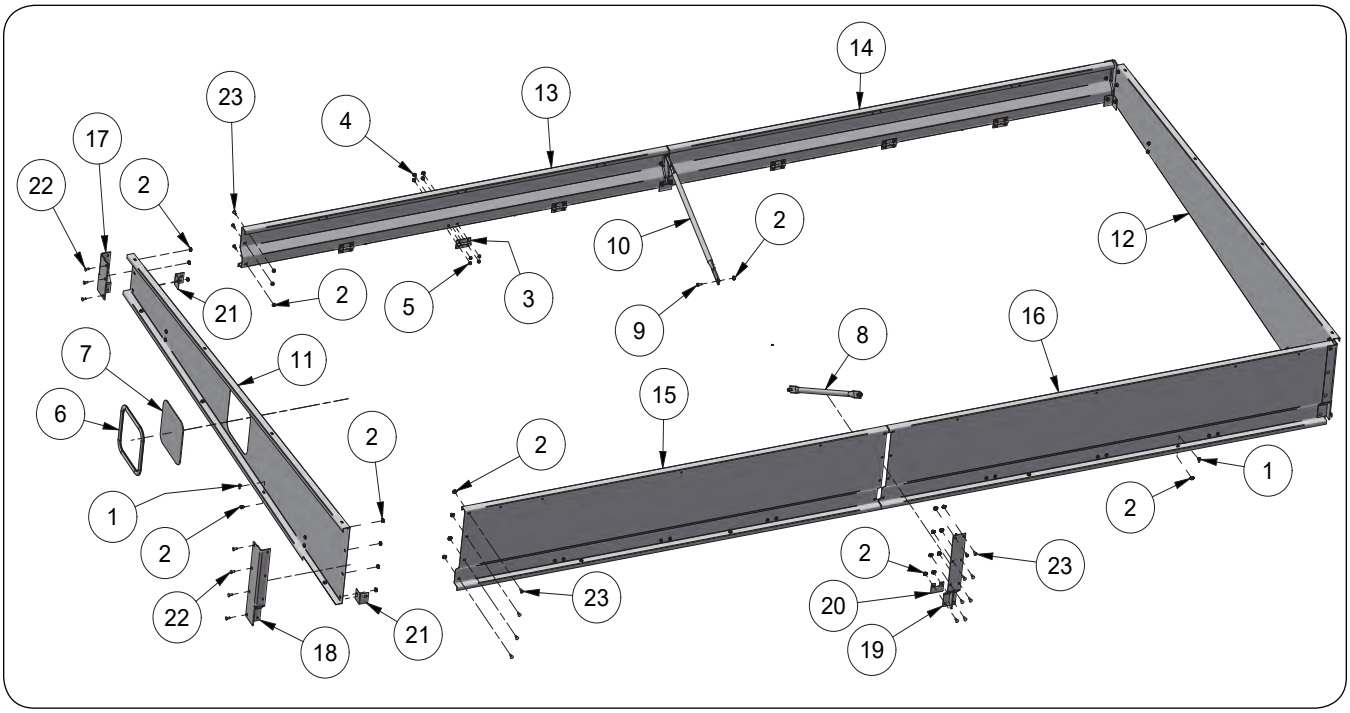
ITEM	PART NO.	DESCRIPTION	QTY	NOTES
1	9006268	Quick Fitting, 90° Elbow 1/8-27 NPT x 1/8 NPSM Female	6	
2	9008418	Hose 3/16", 1/8-27 NPT x 1/8-27 NPT x 120"	2	
3	9008421	Hose 3/16", 1/8-27 NPT x 1/8-27 NPT x 168"	1	
4	9008230	Decal, Grease	1	
5	93426	Grease Zerk	2	

Notes

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

Sideboard Components - Model 1019

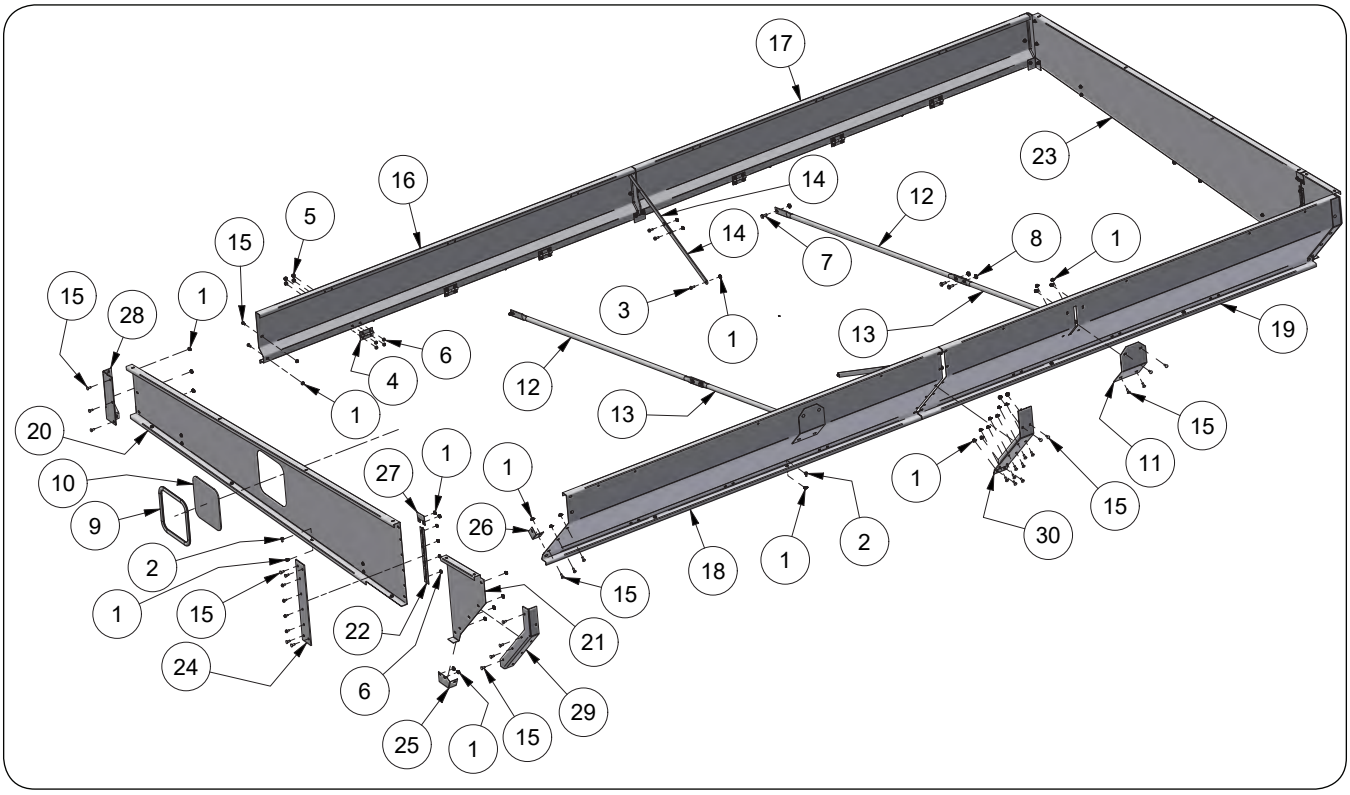
Please visit www.unverferth.com/parts/ for the most current parts listing.



ITEM	PART NO.	DESCRIPTION	QTY.	NOTES
1	95585	Flange Screw 3/8”-16UNC x 3/4” Grade 5	47	
2	91263	Flange Nut 3/8”-16UNC Grade 5	51	
3	9004626	Hinge	12	
4	91256	Flange Screw 5/16”-18UNC x 3/4” Grade 5	48	
5	91257	Hex Nut 5/16”-18UNC Grade 5	48	
6	9001489	Window Molding	1	
7	9002544	Window	1	
8	292556B	Sideboard Brace Tube =Black=	1	
9	91262	Flange Screw 3/8”-16UNC x 1” Grade 5	4	
10	220032B	Sideboard Brace Tube =Black=	1	
11	296500B	Front Sideboard =Black=	1	
12	296501B	Rear Sideboard =Black=	1	
13	296502B	RH Front Sideboard =Black=	1	
14	296503B	RH Rear Sideboard =Black=	1	
15	296504B	LH Front Sideboard =Black=	1	
16	296505B	LH Rear Sideboard =Black=	1	
17	296508B	RH Sideboard Corner Plate =Black=	2	
18	296506B	LH Sideboard Corner Plate =Black=	2	
19	296513B	Sideboard Bracket =Black=	2	
20	295691B	Sideboard Cover Plate =Black=	2	
21	295667B	Sideboard Cover Plate, Corner =Black=	4	
22	9388-051	Carriage Bolt 3/8”-16UNC x 1” Grade 5	14	
23	9005312	Truss Head Screw 3/8”-16UNC x 1”	30	

Sideboard Components - Model 1119

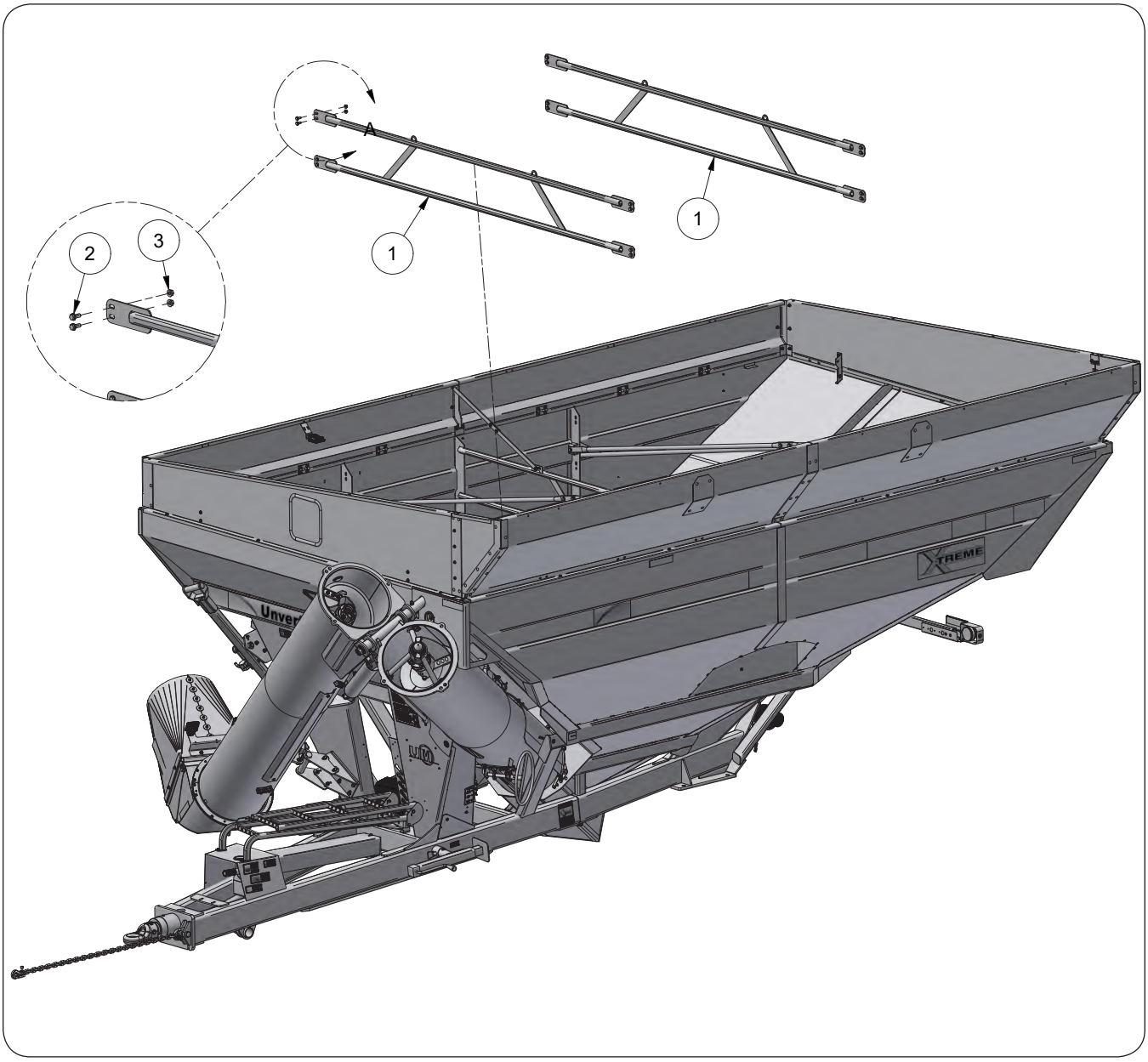
Please visit www.unverferth.com/parts/ for the most current parts listing.



ITEM	PART NO.	DESCRIPTION	QTY.	NOTES
1	91263	Flange Nut 3/8"-16UNC Grade 5	66	
2	95585	Flange Screw 3/8"-16UNC x 3/4" Grade 5	56	
3	91262	Flange Screw 3/8"-16UNC x 1" Grade 5	7	
4	9004626	Hinge	14	
5	91256	Flange Screw 5/16"-18UNC x 3/4" Grade 5	56	
6	91257	Hex Nut 5/16"-18UNC Grade 5	56	
7	91266	Flange Screw 1/2"-13UNC x 1 1/4" Grade 5	8	
8	91267	Flange Nut 1/2"-13UNC	8	
9	9001489	Window Molding	1	
10	9002544	Window	1	
11	292341B	Brace Weldment =Black=	2	
12	292390B	Brace Tube =Black=	2	
13	292391B	Brace Tube =Black=	2	
14	292244B	RH Sideboard Support =Black=	2	
15	9388-051	Carriage Bolt 3/8"-16UNC x 1" Grade 5	54	
16	296462B	RH Front Sideboard =Black=	1	
17	296463B	RH Rear Sideboard =Black=	1	
18	296464B	LH Front Sideboard =Black=	1	
19	296465B	LH Rear Sideboard =Black=	1	
20	296458B	Front Sideboard =Black=	1	
21	296459B	Front Corner Sidebaord =Black=	1	
22	403786	Hinge	2	
23	296460B	Rear Side Board =Black=	1	
24	296477B	Front/Rear Sideboard Bracket =Black=	2	
25	296486B	Front Sideboard Cover =Black=	2	
26	295667B	Rear Sidebaord Cover =Black=	2	
27	295691B	Sideboard Bracket =Black=	6	
28	296468B	RH Front Sideboard Corner Plate =Black=	2	
29	296466B	LH Front Sidebaord Cover Plate =Black=	2	
30	296471B	Sideboard Bracket Weldment =Black=	2	

Internal Bracing Components - For SN B41010100 & Higher

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



ITEM	PART NO.	DESCRIPTION	QTY	NOTES
1	294590B	Cross Brace Weldment =Black=	2	
2	9002058	Flange Nut 1/2-13UNC	16	
3	91266	Flange Screw 1/2-13UNC x 1 1/2 Gr.5	16	

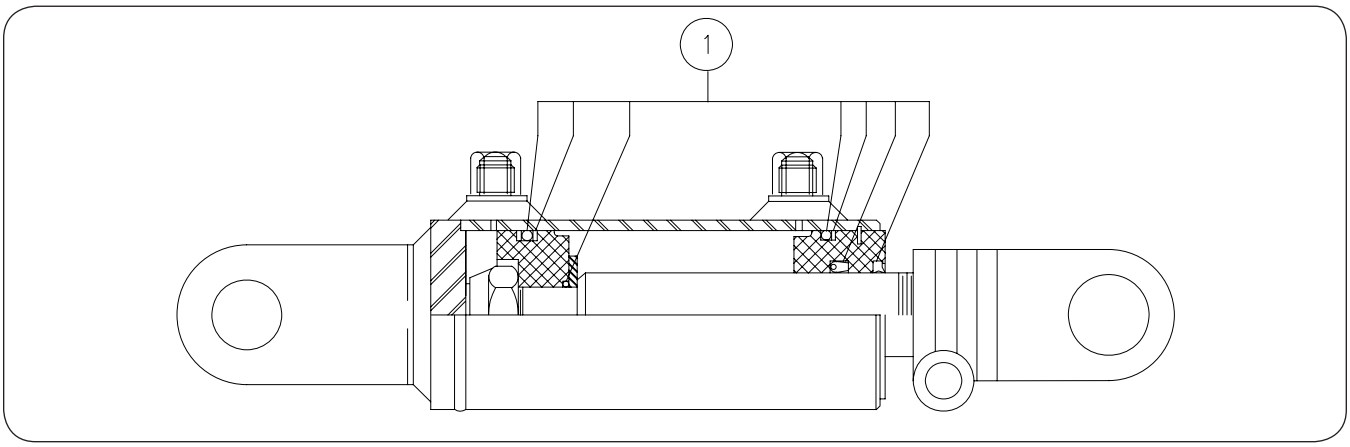
Auger Fold Cylinder - 4” x 20”

ITEM	PART NO.	DESCRIPTION	QTY.	NOTES
	4” x 20”			
	9008205	Cylinder, Complete	1	
1	9008025	Seal Kit	1	

Flow Control Door Cylinder - 2 1/2” x 36”

ITEM	PART NO.	DESCRIPTION	QTY.	NOTES
	2 1/2" x 36"			
	9005363	Cylinder, Complete	1	
1	9005409	Seal Kit	1	

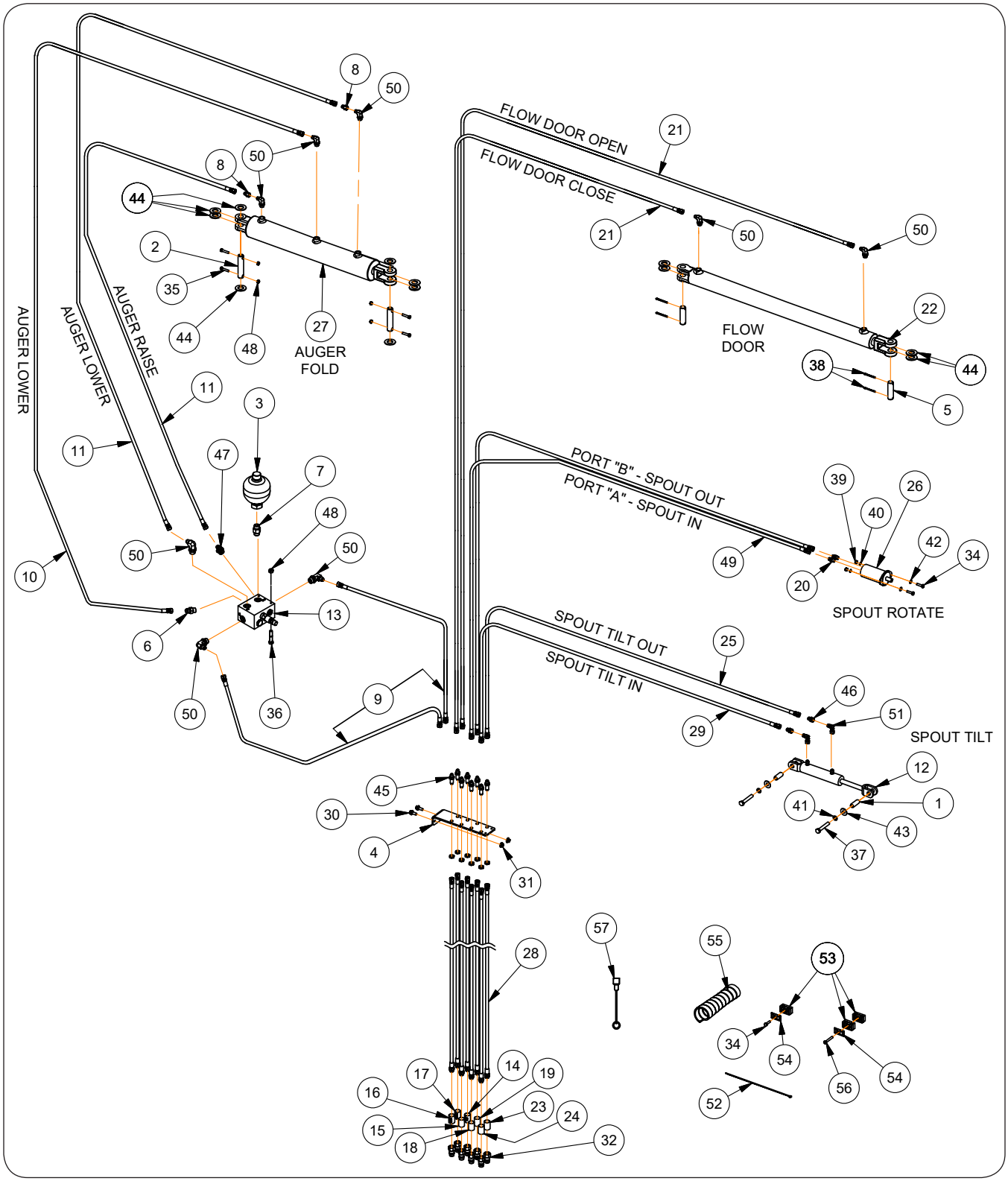
Directional Spout Cylinder - 1 1/2” x 6”



ITEM	PART NO.	DESCRIPTION	QTY.	NOTES
	1 1/2" x 6"			
	9008152	Cylinder, Complete	1	
1	9008341	Seal Kit	1	

Hydraulics — Beginning with Serial Number B38090100

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



Hydraulics — Beginning with Serial Number B38090100

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

ITEM	PART NUMBER	DESCRIPTION	QTY	NOTES
1	285290	Sleeve/Bushing	2	
2	291988	Pin 1" Dia. x 4 7/8"	2	
3	9006920	Hydraulic Accumulator	1	
4	288749B	Bulkhead Mounting Plate	1	
5	804572	Pin 1" Dia. x 3 1/2 (For Auger & Door Cylinders)	2	
6	9001495	Adapter (9/16-18 JIC Male x 9/16-18 O-Ring Male)	1	
7	98508	Fitting Union 3/4"-16 O-Ring Male	1	
8	9002199	Reducer	2	
9	9003273	Hose 1/4 x 20 (9/16-18 JIC Female x 9/16-18 JIC Female)	2	
10	9003216	Hose 1/4 x 168 (9/16-18 JIC Female x 9/16-18 JIC Female)	1	
11	9006407	Hose 1/4 x 162 (9/16-18 JIC Female x 9/16-18 JIC Female)	2	
12	9008152	Hydraulic Cylinder, 1 1/2 x 6	1	
	9008341	Seal Kit	-	
13	9008009	Valve Manifold	1	
14	9003995	Sleeve, Hose Marker (RED, Flow Door Open)	1	
15	9003996	Sleeve, Hose Marker (RED, Flow Door Close)	1	
16	9003997	Sleeve, Hose Marker (GREEN, Auger Raise)	1	
17	9003998	Sleeve, Hose Marker (GREEN, Auger Lower)	1	
18	9003999	Sleeve, Hose Marker (YELLOW, Spout Out)	1	
19	9004000	Sleeve, Hose Marker (YELLOW, Spout In)	1	
20	9004393	Adapter	2	
21	9005299	Hose 1/4 x 80 (9/16-18 JIC Female x 9/16-18 JIC Female)	2	
22	9005363	Flow Door Cylinder 2 1/2 x 36	1	
	9005409	Seal Kit	-	
23	9007260	Sleeve, Hose Marker (WHITE, Spout Tilt Out)	1	
24	9007261	Sleeve, Hose Marker (WHITE, Spout Tilt In)	1	
25	9007546	Hose 1/4 x 320 (9/16-18 JIC Female x 9/16-18 JIC Female)	1	
26	9007626	Spout Hydraulic Motor	1	
27	9008205	Hydraulic Cylinder, 4 x 20 - 3000 PSI	1	
	9008025	Seal Kit	-	
28	9006587	Hose 1/4 x 186 (9/16-18 JIC Female x 3/4-16 O-Ring Male)	8	
29	9008421	Hose 1/4 x 168 (1/8-27 NPT Male x 1/8-27 NPT Male)	1	
30	97604	Flange Screw 5/16"-18UNC x 1"	1	
31	91257	Nut/Large Flange 5/16"-18UNC	2	
32	91383	Male Coupler 3/4-16 Female O-Ring	8	
34	9390-031	Capscrew 5/16"-18UNC x 1 1/4" Grade 5	2	
35	9390-032	Capscrew 5/16"-18UNC x 1 1/2" Grade 5	4	
36	9390-040	Capscrew 5/16"-18UNC x 3 1/2" Grade 5	2	

(Continued on next page)

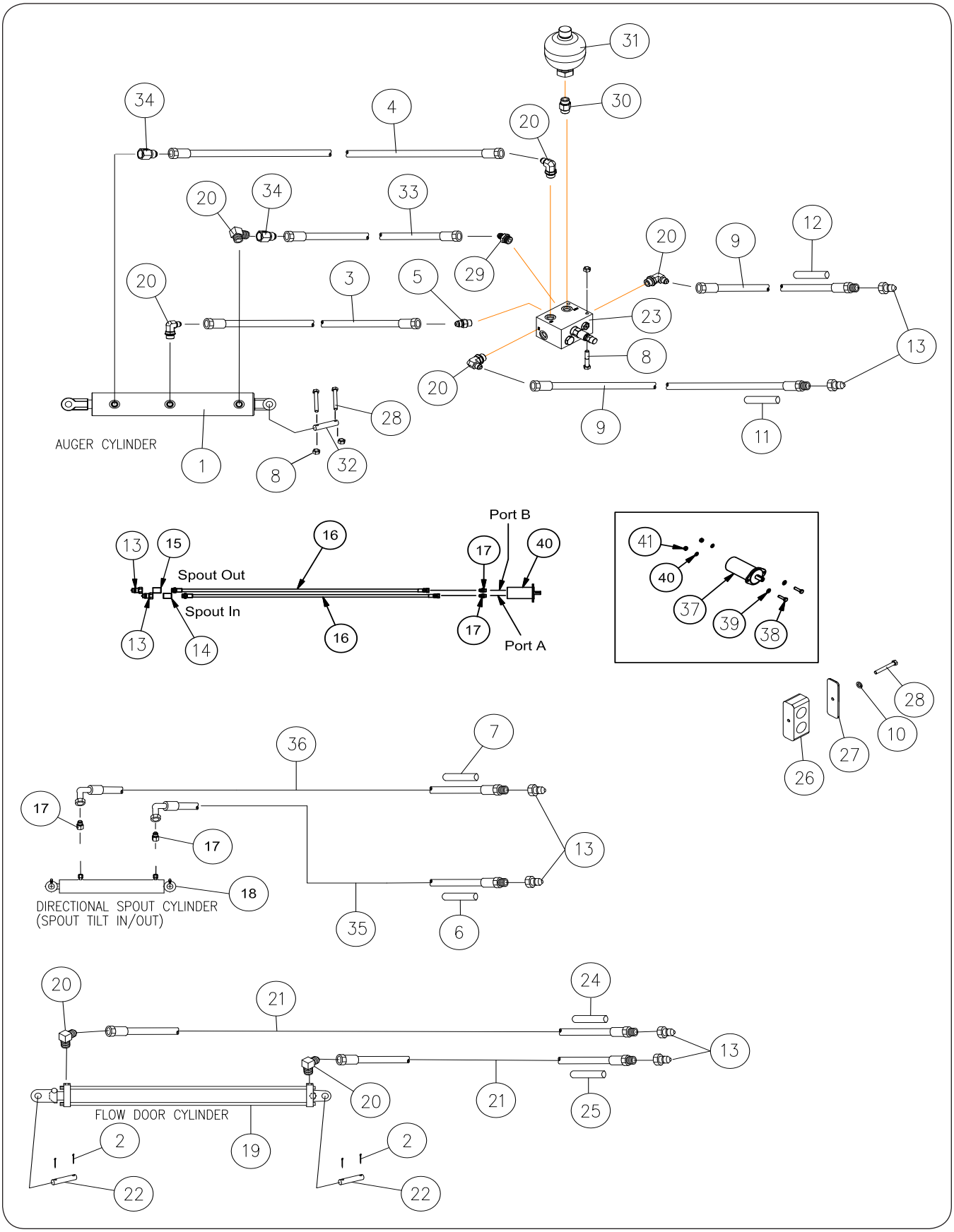
Hydraulics — Beginning with Serial Number B38090100

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

ITEM	PART NUMBER	DESCRIPTION	QTY	NOTES
37	9390-108	Capscrew 1/2"-13UNC x 3 1/4" Grade 5	2	
38	9391-046	Cotter Pin 3/16" Dia. x 2"	4	
39	9394-004	Hex Nut 5/16"-18UNC	2	
40	9404-019	Lock Washer 5/16"	2	
41	9404-025	Lock Washer 1/2"	2	
42	9405-068	Flat Washer 5/16" SAE	2	
43	9405-088	Flat Washer 1/2" USS	2	
44	9405-116	Flat Washer 1" SAE	8	
45	95192	Bulkhead Union 9/16"-18UNF JIC	8	
46	95193	Adapter (9/16-18 JIC Female x 9/16-18 JIC Male)	2	w/.030 Restrictor
47	92927	Adapter (9/16-18 JIC Male x 3/4-16 O-Ring Male)	1	
48	9807	Locknut 5/16"-18UNC	6	
49	9008418	Hose 3/16 x 120 (1/8-27 NPT Male x 1/8-27 NPT Male)	2	
50	9874	90° Elbow (9/16-18 JIC Female x 3/4-16 O-Ring Male)	6	
51	9876	90° Elbow (9/16-18 JIC Female x 9/16-18 JIC Male)	2	
52	9000104	Cable Tie 21 1/2"	4	
	9000106	Cable Tie 7 1/2"	22	
	9000107	Cable Tie 14 1/2"	8	
53	9003816	Clamp Pair	6	
54	9003814	Top Plate	6	
55	9004075	Spiral Hose Wrap	4	
56	9390-035	Capscrew 5/16"-18UNC x 2 1/4" Grade 5	2	
57	91511	Dust Cap	8	

Notes

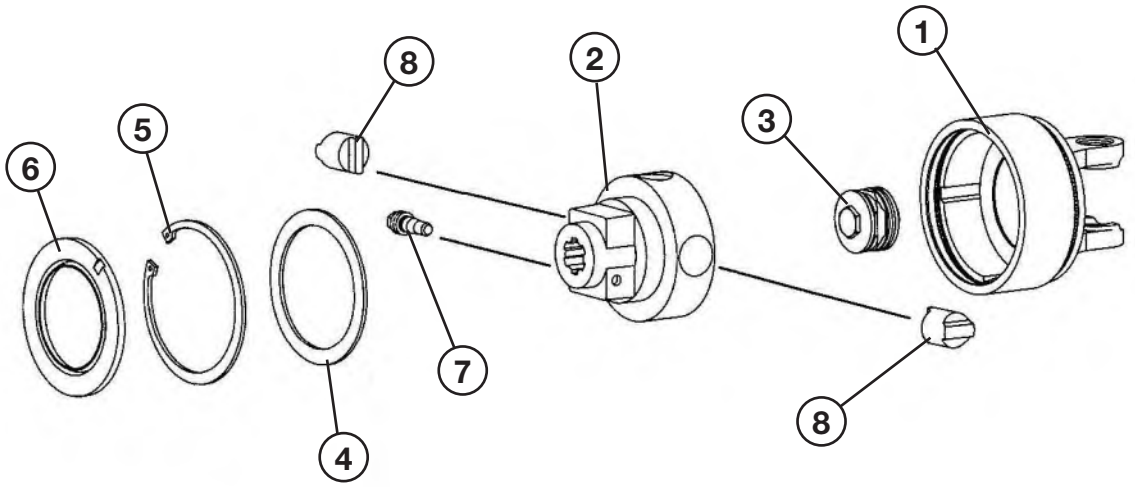
Hydraulic Components - For SN B38090099 and Lower



Hydraulic Components - For SN B38090099 and Lower

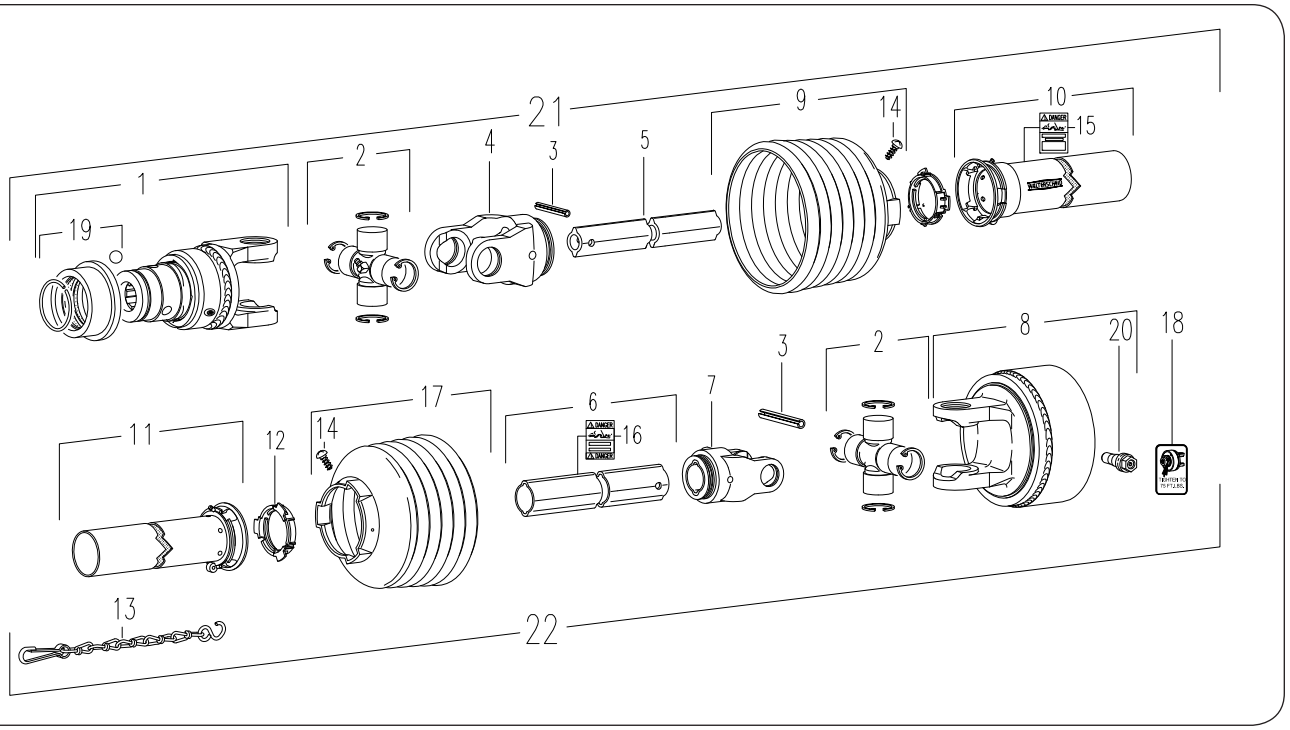
ITEM	PART NO.	DESCRIPTION	QTY.	NOTES
1	9008205	Cylinder 4 x 20	1	
2	9391-046	Cotter Pin 5/16" Dia. x 1/2	4	
3	9003345	Hose 1/4 x 150" (9/16-18 JIC Swivel Female both Ends)	1	
4	9005576	Hose 1/4 x 142" (9/16-18 JIC Swivel Female both Ends)	1	
5	9001495	Adapter (9/16-18 JIC Male x 9/16-18 O-Ring Male)	1	
6	9007261	Sleeve, Hose Marker (WHITE, Spout Tilt In)	1	
7	9007260	Sleeve, Hose Marker (WHITE, Spout Tilt Out)	1	
8	9390-040	Capscrew, 5/16"-18UNC x 3 1/2 Grade 5	2	
	9807	Locknut, 5/16"-18UNC Grade 5	4	
9	9003210	Hose 1/4 x 239 (9/16-18 JIC Swivel Female x 3/4-16 O-Ring Male)	2	
10	9404-019	Lock Washer, 5/16	-	Use with all hose clamps
11	9003998	Sleeve, Hose Marker (GREEN, Auger Lower)	1	
12	9003997	Sleeve, Hose Marker (GREEN, Auger Raise)	1	
13	91383	Male Coupler 3/4-16 Female O-Ring	8	
14	9004000	Sleeve, Hose Marker (YELLOW, Spout In)	1	
15	9003999	Sleeve, Hose Marker (YELLOW, Spout Out)	1	
16	9004635	Hose 1/4 x 460" (9/16-18 JIC Swivel Female x 3/4-16 O-Ring Male)	2	
17	9004393	Adapter (9/16-18 JIC Male x 9/16-18 JIC Male)	4	w/.055 Restrictor
18	9008152	Cylinder 1 1/2 x 6	1	
19	9005363	Cylinder 2 1/2 x 36	1	
20	9874	90° Elbow (9/16-18 JIC Female x 3/4-16 O-Ring Male)	8	
21	9004306	Hose 1/4" x 275" (3/4-16 O-Ring Male x 9/16-18 JIC Swivel Female)	2	
22	804572	Pin 1" Dia. x 3 1/2	2	
23	9008009	Valve Manifold	1	
24	9003995	Sleeve, Hose Marker (RED, Flow Door Open)	1	
25	9003996	Sleeve, Hose Marker (RED, Flow Door Close)	1	
26	9003816	Clamp Pair	18	
27	9003814	Top Plate	15	
28	9390-032	Capscrew, 5/16"-18UNC x 1 1/2 Grade 5	12	
	9390-036	Capscrew, 5/16"-18UNC x 2 1/2 Grade 5	3	
29	92927	Adapter, 9/16-18 JIC M x 3/4-16 OR M Boss	1	
30	98508	Adapter, 3/4-16 OR M x 3/4-16 OR M	1	
31	9006920	Hydraulic Accumulator, 800 PSI	1	
32	291988	Pin 1" Dia. x 4 7/8	1	
33	9003394	Hose 1/4 x 175" (9/16-18 JIC Swivel Female both Ends)	1	
34	9002199	Reducer, 9/16-18 JIC Female Nut x 9/16-18 JIC Male	2	
35	9004539	Hose 1/4 x 490" (90° Elbow 9/16-18 JIC Female x 3/4-16 O-Ring Male)	1	
36	9004540	Hose 1/4 x 500" (90° Elbow 9/16-18 JIC Female x 3/4-16 O-Ring Male)	1	
37	9007626	Spout Hydraulic Motor	1	
38	9390-031	Capscrew 5/16"-18UNC x 1 1/4	2	Grade 5
39	9405-068	Flat Washer 5/16" SAE	2	
40	9404-019	Lock Washer 5/16"	2	
41	9394-004	Hex Nut 5/16"-18UNC	2	

PTO Cut Out Clutch Components



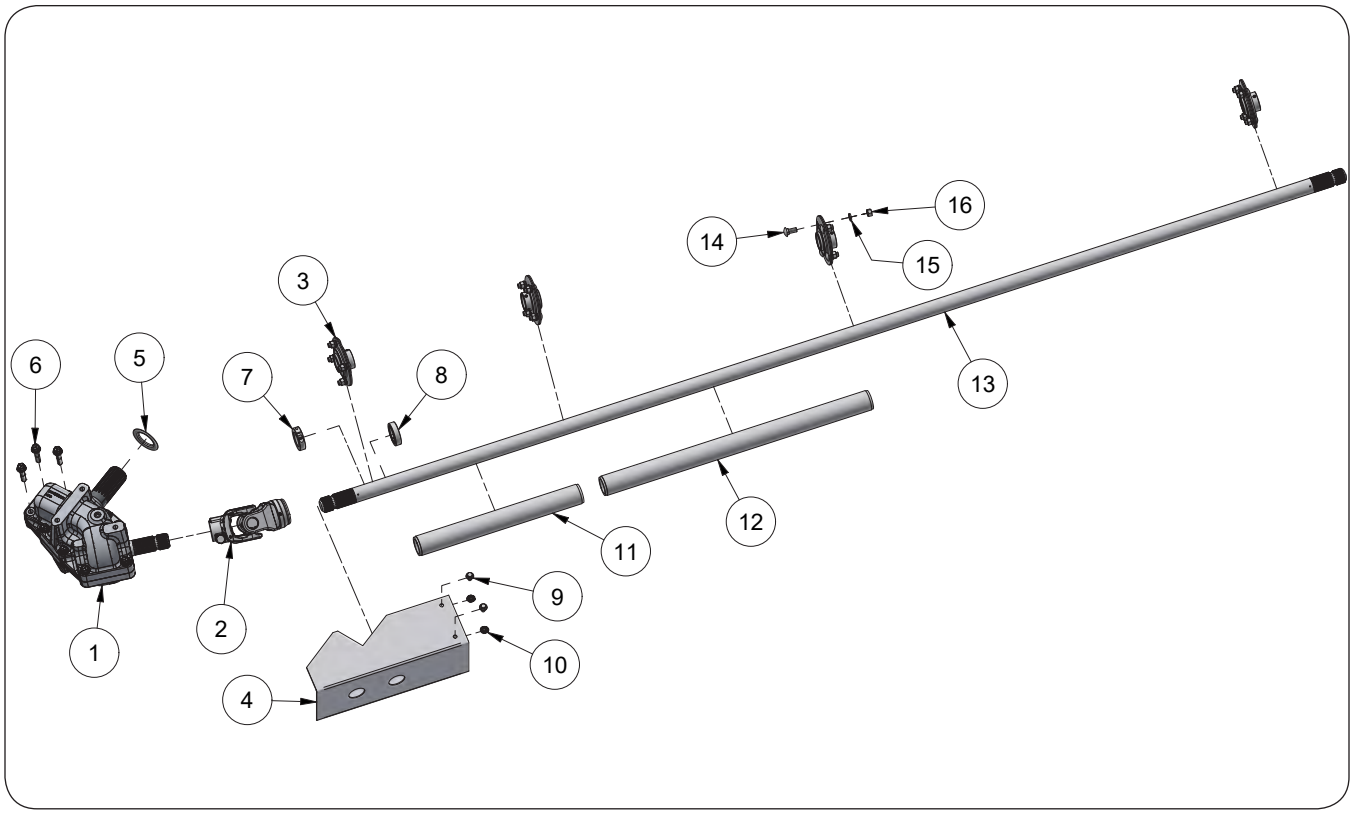
ITEM	PART NO.	DESCRIPTION	QTY	NOTES
	9009780	Cut Out Clutch (2500 N*m Setting)		Includes Items 1-8
1	9005679	Clutch Housing	1	
2	9005678	Clutch Hub 1 3/4-20 Spline	1	
3	9005421	Spring Pack	1	
4	9005250	Washer	1	
5	9005251	Retaining Ring	1	
6	9005252	Sealing Ring	1	
7	9005253	Clutch Clamp Cone Assembly	1	
8	9005254	Clutch Cam	2	

PTO Components



ITEM	PART NO.	DESCRIPTION	QTY	NOTES
	9009527	PTO Assembly Complete		Includes Items 21 & 22
1	9004778	Over-Running PTO Clutch Assembly	1	
2	93857	Cross & Bearing Kit	2	
3	93859	Spring Pin 10x80	2	
4	93858	Inboard Yoke 1b	1	
5	9004274	Inner Profile 1bH	1	
6	94837	Outer Profile 2a	1	
7	93862	Inboard Yoke 2a	1	
8	9005366	Cut Out Clutch (2500 N-m Setting)	1	1 3/4-20 Spline 1000RPM
9	93863	Shield Cone 6 Rib	1	
10	94839	Outer Shield Tube Oval	1	
11	94840	Inner Shield Tube Oval	1	
12	92373	Bearing Ring	2	
13	92374	Safety Chain	1	
14	92372	Screw	2	
15	92377	Decal Out	1	
16	92378	Decal In	1	
17	92371	Shield Cone 5 Rib	1	
18	9005233	Decal K64	1	“Tighten to 75 Ft.-Lbs.”
19	93856	Quick-Disconnect Kit	1	1 3/4-20 Spline w/Metal Collar
20	9005253	Cut Out Clutch Clamp Cone Assembly	1	
21	9004771	PTO Front Half Assembly 1 3/4-20 Spline	1	
22	9005343	PTO Rear Half Assembly 1 3/4-20 Spline	1	

Driveline U-Joint Components

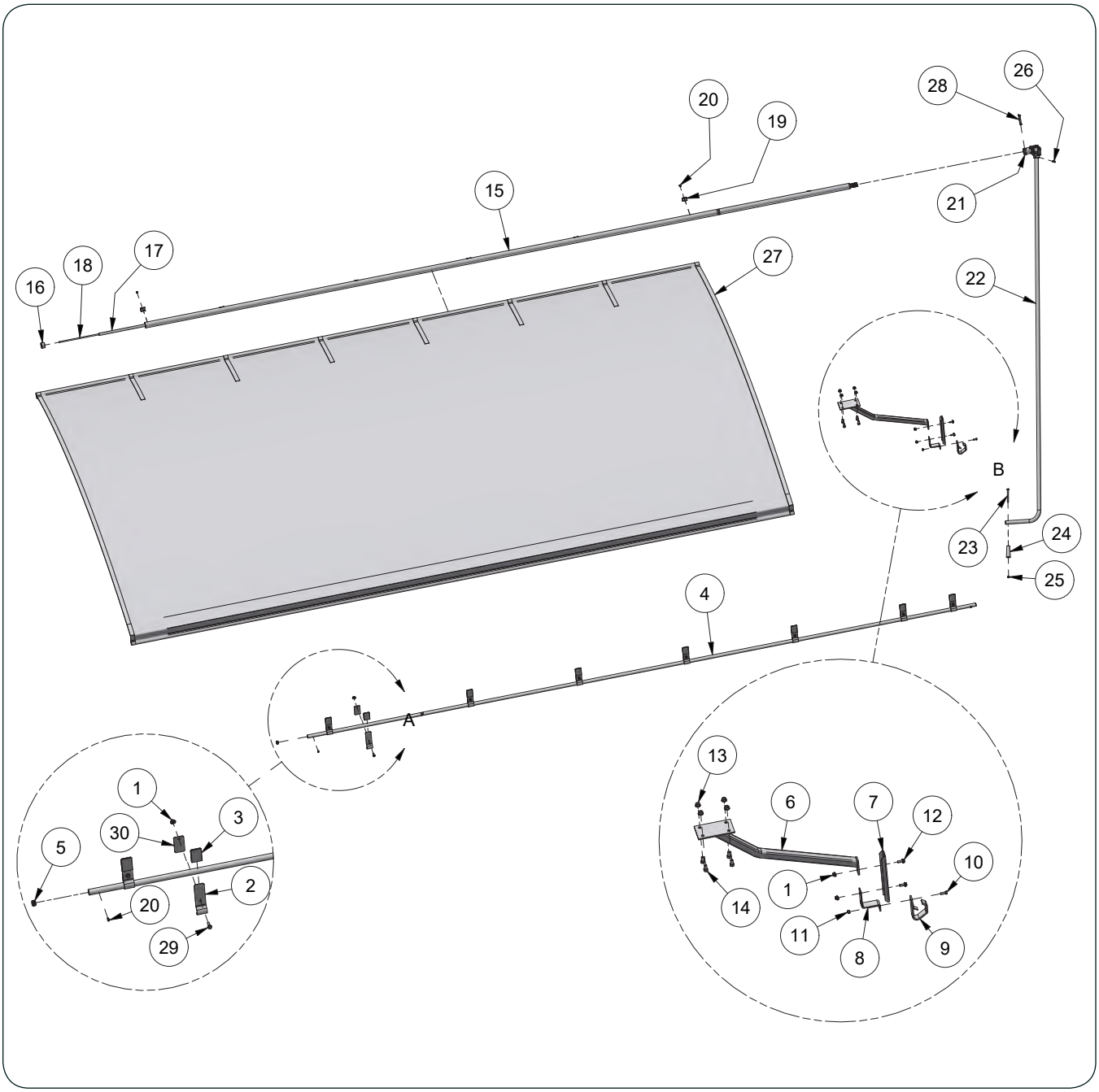


Driveline U-Joint Components

ITEM	PART NUMBER	DESCRIPTION	QTY.	NOTES
1	9008711	Gearbox 45 Degree		Refer to "45 Degree Gearbox With 1 3/4"-20 Spline Shaft - For SN B42720100 & Higher" in this Section for Parts Listing
	9009053			Refer to "45 Degree Gearbox With 1 3/8"-6 Spline Shaft - For SN B42720099 & Lower" in this Section for Parts Listing
2	9007808	Complete U-Joint Assembly	1	For 1 3/4"-20 Spline Shaft SN B41340100 and Higher
	9008326			For 1 3/8"-6 Spline Shaft SN B38090100 - B41340099
	9005065			For SN B38090099 and Lower
3	9005061	Flange Bearing for Driveline - 1 3/4"		
4	295296B	U-Joint Cover Plate =Black=		
5	9007377	Dust Cover		
6	903161-060	Flange Screw 1/2"-13UNC x 2 1/2" Grade 5		
7	9008677	Shaft Collar 1 3/4"		
8	95585	Flange Screw 3/8"-16UNC x 3/4" Grade 5		
9	91263	Flange Nut 3/8"		
10	292448	Rear Driveshaft Guard		
11	292449	Front Diveshaft Guard		
12	289770	Driveshaft Replacement Kit		Includes items 3, 10, 11, 13, 15 and instruction sheet
13	9388-103	Carriage Bolt 1/2"-13UNC x 1 1/4" Grade 5		
14	9404-025	Lock Washer 1/2"		
15	9394-010	Hex Nut 1/2"-13UNC Grade 5		

Weather Guard Tarp and Crank Handle Components — Model 1019

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



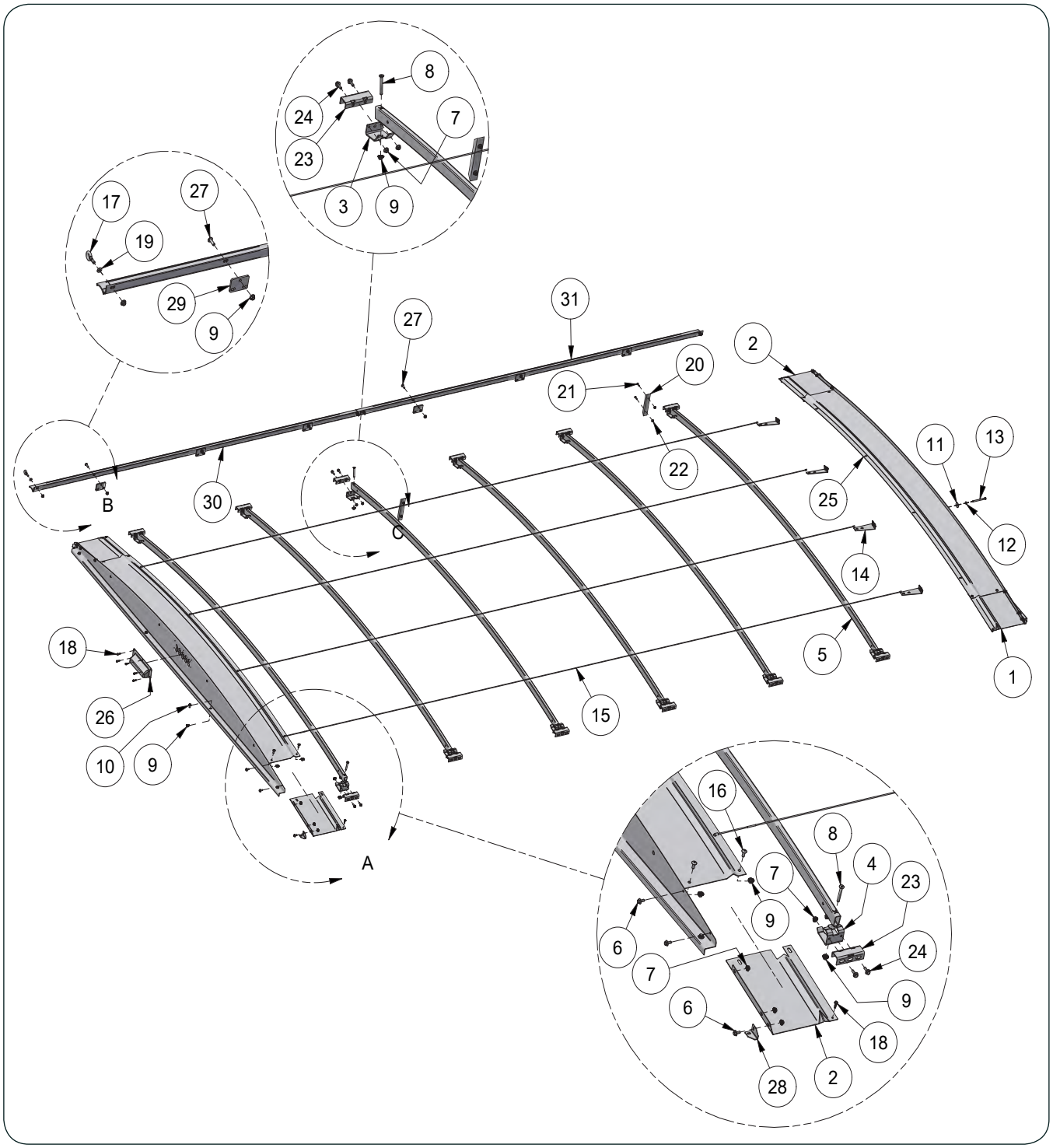
Weather Guard Tarp and Crank Handle Components — Model 1019

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

ITEM	PART NO.	DESCRIPTION	QTY	NOTES
1	91263	Flange Nut 3/8”-16UNC	10	
2	266689B	Tarp Stop Plate =Black=	8	
3	9003078	Plastic Cap 3/16”	8	
4	292346	Fixed Tube Weldment 243”	1	
5	9005088	Plug 1 1/8”	2	
6	265706B	Tarp Crank Holder Weldment =Black=	1	
7	265743B	Tarp Crank Holder =Black=	1	
8	221700B	Offset Bracket =Black=	1	
9	221771B	Retaier Bracket =Black=	1	
10	9390-055	Capscrew 3/8”-16UNC x 1” Grade 5	1	
11	9928	Locknut 3/8”-16UNC	1	
12	91262	Flange Screw 3/8”-16UNC x 1” Grade5	2	
13	9002058	Flange Nut 1/2”-13UNC	4	
14	9390-099	Capscrew 1/2”-13UNC x 1” Grade 5	4	
15	221604	Roll Tube Weldment	1	
16	9004947	Plug 1 7/8”	2	
17	221668	PVC Pipe 1/2” SCH 40	1	
18	221722	Bungee Cord 204”	1	
19	9004949	U-Clamp	7	
20	9005197	Self Drilling Screw #10-16 x 3/4”	7	
21	9004977	U-Joint	1	
22	287944	Tarp Handle Weldment	1	
23	903172-450	Machine Screw 3/8”-16UNC x 4 1/2”	1	
24	9004969	Handle	1	
25	9398-012	Lock Nut 3/8”-16UNC	1	
26	9392-180	Roll Pin 3/8”	1	
27	9008234	Tarp	1	
	9005581	Tarp Repair Kit	---	Not Shown
28	9005305	Lynch Pin	1	
29	9003259	Flange Screw 3/8”-16UNC x 1 1/4” Grade 5	8	
30	295183B	Tarp Stop Spacer =Black=	8	

Weather Guard End Cap, Bracket, & Bow Components — Model 1019

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



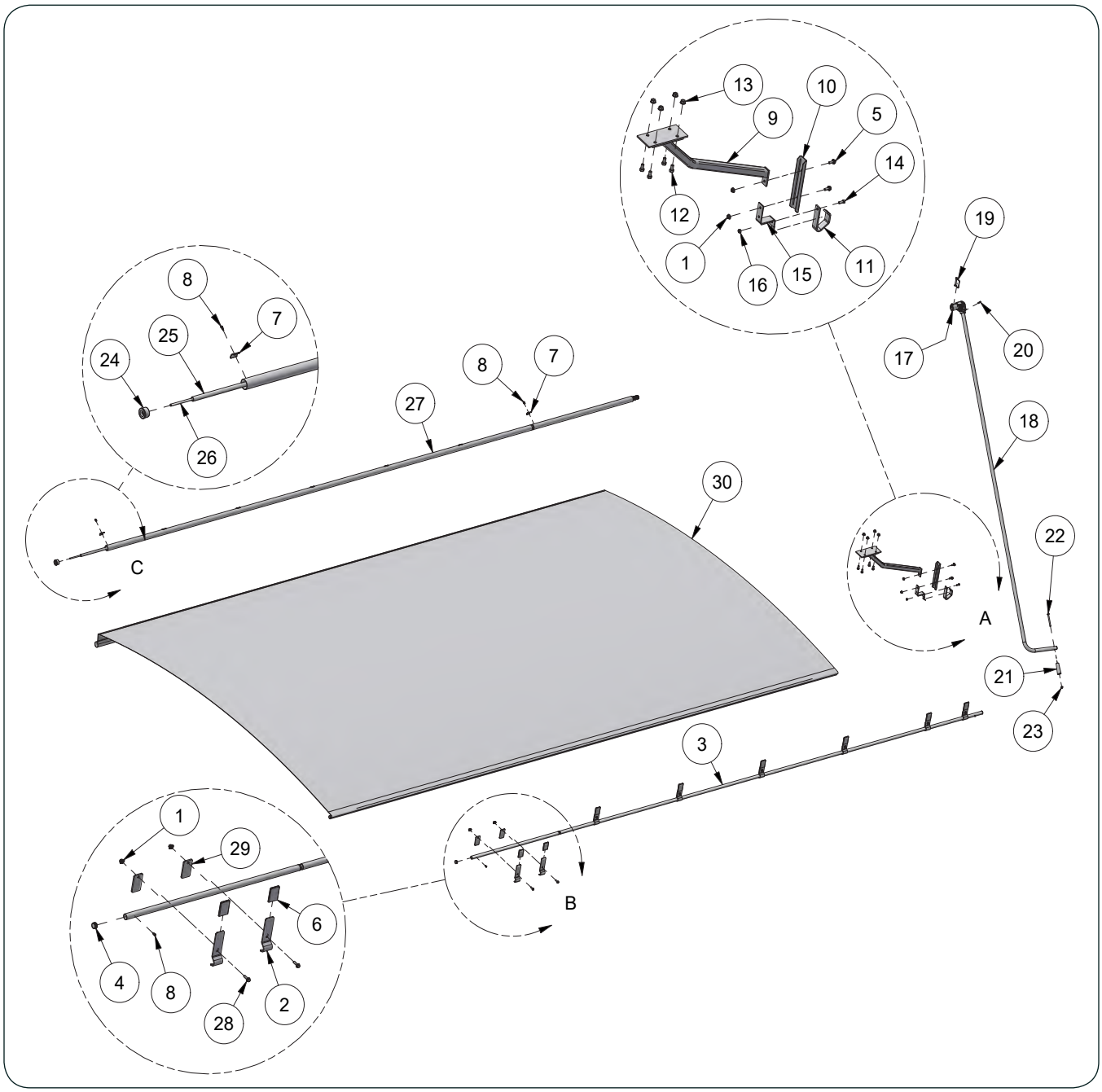
Weather Guard End Cap, Bracket, & Bow Components — Model 1019

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

ITEM	PART NO.	DESCRIPTION	QTY	NOTES
1	286843B	Left End Cap Panel =Black=	2	
2	286842B	Right End Cap Panel =Black=	2	
3	283425B	Right Tarp Bow Bracket =Black=	6	
4	283427B	Left Tarp Bow Bracket =Black=	6	
5	283424B	Tarp Bow =Black=	6	
6	91256	Flange Screw 5/16"-18UNC x 3/4" Grade 5		For SN B41010100 & Higher
				For SN B41010099 & Lower
7	91257	Flange Nut 5/16"-18UNC	36	
8	902703-046	Socket Cap Screw 3/8"-16UNC x 3"	12	
9	91263	Flage Nut 3/8"-16UNC	28	
10	95585	Flange Screw 3/8"-16UNC x 3/4" Grade 5	8	
11	9005696	Fender Washer 3/8"	4	
12	9005688	Lock Washer Extrenal Tooth 3/8"	4	
13	TA0-907131-0	Capscrew 3/8"-16UNC x 4 1/2" Full Thread Grade 5	4	
14	281711	Tarp Cable Bracket	4	
15	9008203	Tarp Cable Assembly 228"	4	
16	9005312	Truss Head Screw 3/8"-16UNC x 1"	8	For SN B41010100 & Higher
				For SN B41010099 & Lower
17	9004548	Eye Bolt 3/8"-16UNC x 1 3/4"	1	
18	9512	Self Drilling Screw 1/4"-14 x 1"	4	
19	9405-074	Flat Washer 3/8" SAE	1	
20	9005307	Poly Tarp Deflector	3	
21	9004355	Self Drilling Screw 1/4"-20UNC x 1"	6	
22	97189	Flange Nut 1/4"-20UNC	6	
23	289986B	Doubler Plate =Black=	12	
24	97604	Flange Screw 5/16"-18UNC x 1" Grade 5	24	
25	296127B	End Cap Panel =Black=	2	
26	9009504B	End Cap Vent Cover =Black=	2	
27	9009089	Truss Head Screw 3/8"-16UNC x 1 1/4"	6	
28	296249	Sideboard Cover Plate	4	
29	295259B	Tarp Spacer Plate =Black=	6	
30	9009743	Latch Plate 120 1/2"	1	
31	9009734	Latch Plate 126 1/2"	1	

Weather Guard Tarp and Crank Handle Components — Model 1119

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



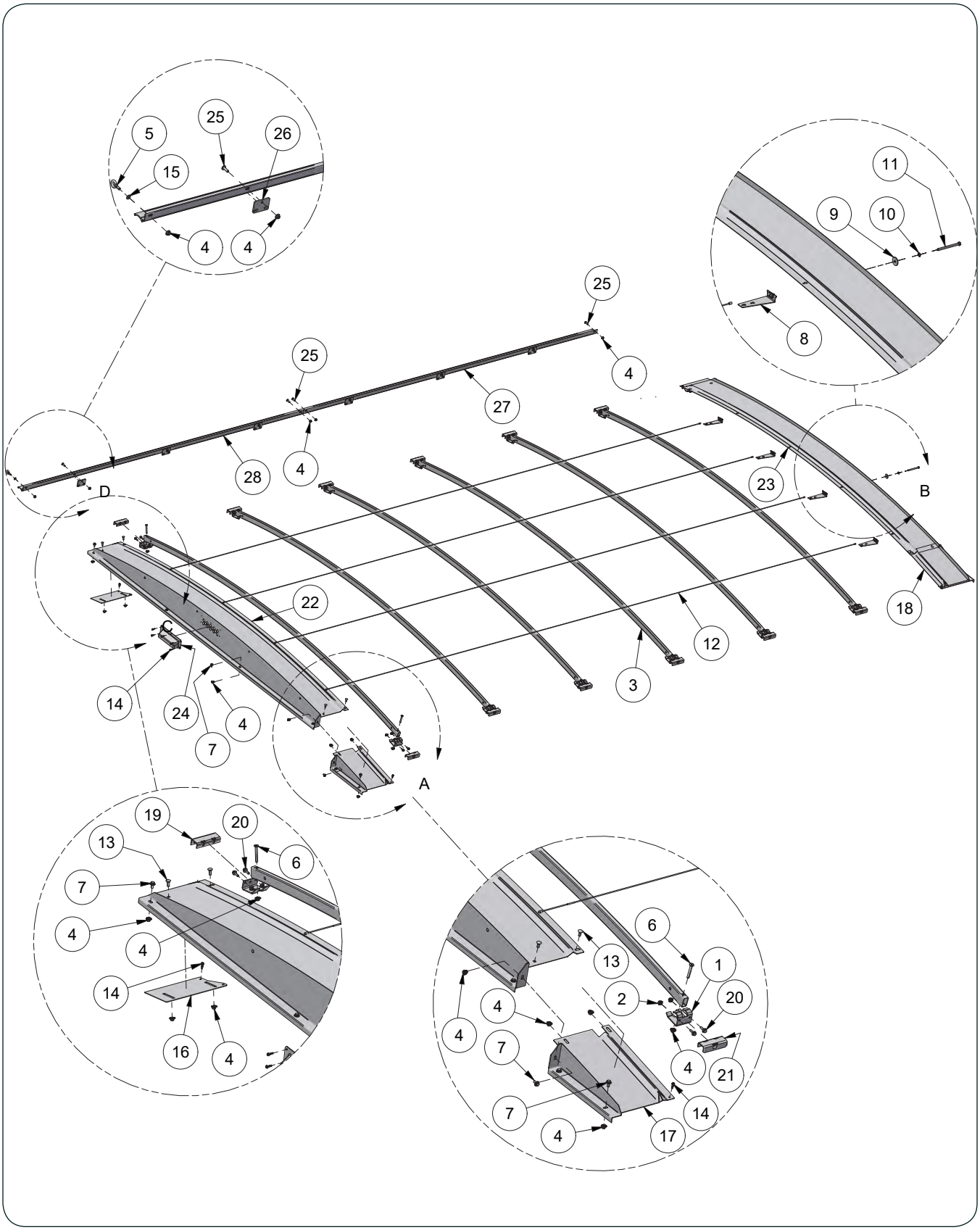
Weather Guard Tarp and Crank Handle Components — Model 1119

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

ITEM	PART NO.	DESCRIPTION	QTY	NOTES
1	91263	Flange Nut 3/8"-16UNC	8	
2	266689	Tarp Stop Plate	8	
3	292346	Fixed Tube Weldment 243"	1	
4	9005088	Plug 1 1/8"	2	
5	91262	Flange Screw 3/8"-16UNC x 1" Grade 5	2	
6	9003078	Cap	8	
7	9004949	U-Clamp	8	
8	9005197	Self Drilling Screw #10-16 x 3/4"	12	
9	265706B	Tarp Crank Holder Weldment =Black=	1	
10	265743B	Crank Holder Extension =Black=	1	
11	221771B	Tarp Crank Retainer =Black=	1	
12	9390-099	Capscrew 1/2"-13UNC x 1" Grade 5	4	
13	9002058	Flange Nut 1/2"-13UNC	4	
14	9390-055	Capscrew 3/8"-16UNC x 1" Grade 5	1	
15	221700B	Tarp Crank Retainer Bracket =Black=	1	
16	9928	Lock Nut 1/8"-16UNC	1	
17	9004977	U-Joint	1	
18	287944	Tarp Handle Weldment	1	
19	9005305	Lynch Pin	1	
20	9392-180	Roll Pin 3/8" Diameter	1	
21	9004969	Handle	1	
22	903172-450	Phillips Machine Screw 3/8"-16UNC x 4 1/2"	1	
23	9398-012	Lock Nut 3/8"-16UNC	1	
24	9004947	Plug 1 7/8" Diameter	1	
25	221668	PVC Pipe 1/2" SCH 40	1	
26	221722	Bungee Cord 3/8" x 204"	1	
27	294870	Roll Tube Weldment	1	
28	9003259	Flange Screw 3/8"-16UNC x 1 1/4" Grade 5	8	
29	295183	Tarp Stop Spacer	8	
30	9008202	Tarp 179" x 241"	1	
	9005581	Tarp Repair Kit	---	Not Shown

Weather Guard End Cap, Bracket, & Bow Components — Model 1119

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



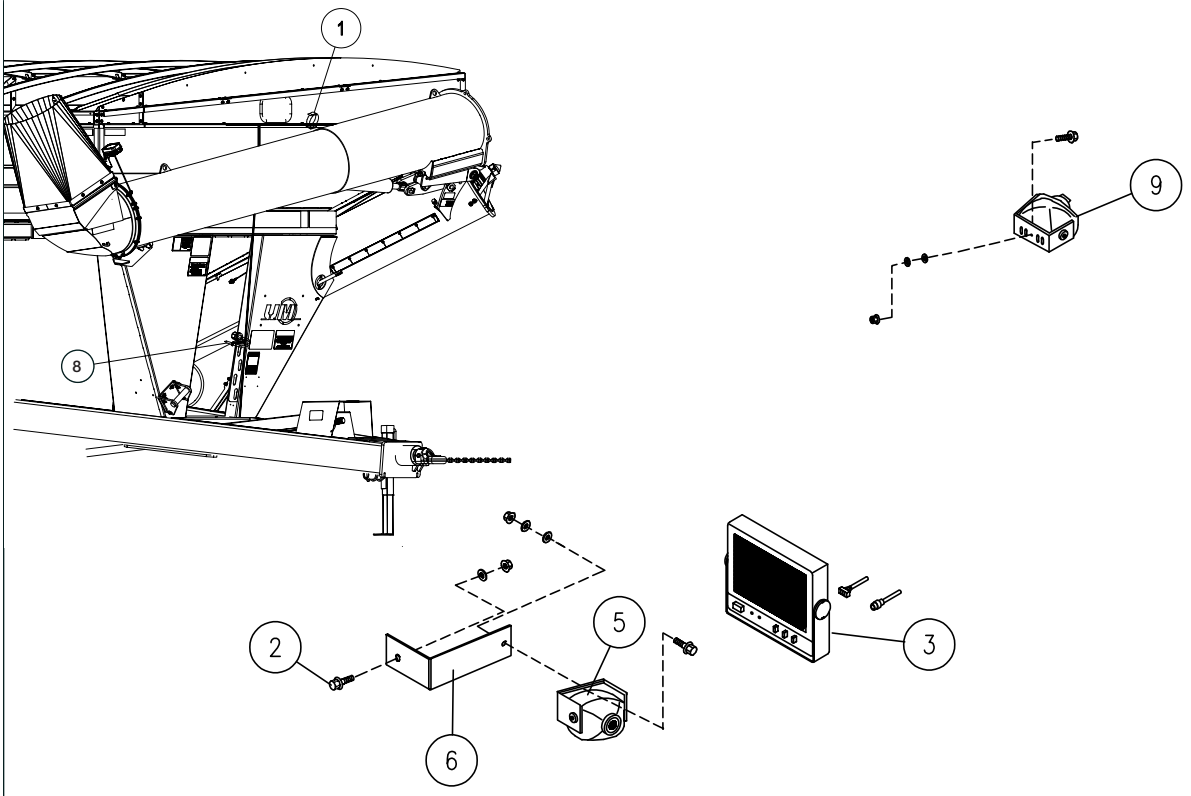
Weather Guard End Cap, Bracket, & Bow Components — Model 1119

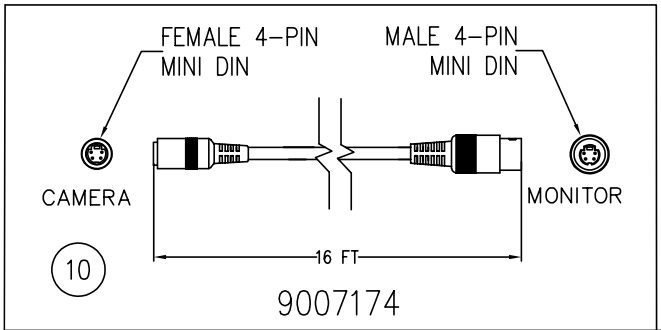
Please visit www.unverferth.com/parts/ for the most current parts listing.

ITEM	PART NO.	DESCRIPTION	QTY	NOTES
1	283427B	Tarp Bow Bracket =Black=	6	
2	91257	Flange Nut 5/16"-18UNC	24	
3	287400B	Tarp Bow	6	
4	91263	Flange Nut 3/8"-16UNC	36	
5	9004548	Eye Bolt 3/8"-16UNC x 1 3/4"	1	
6	902703-046	Socket Capscrew 3/8"-16UNC x 3"	12	
7	95585	Capscrew 3/8"-16UNC x 3/4" Grade 5	10	
8	281711B	Tarp Bracket =Black=	4	
9	9005696	Fender Washer 3/8"	4	
10	9005688	Lock Washer, External Tooth 3/8"	4	
11	TA0-907131-0	Capscrew 3/8"-16UNC x 4 1/2" Grade 5 Full Thread	4	
12	9008203	Cable Assembly 228"	4	
13	9388-051	Carriage Bolt 3/8"-16UNC x 1" Grade 5	4	
14	9512	Self Drilling Screw 1/4"-14 x 1"	4	
15	9405-074	Flat Washer 3/8"	4	
16	283431B	End Cap Plate =Black=	2	
17	292382B	Front End Cap Weldment =Black=	1	
18	292386B	Rear End Cap Weldment =Black=	1	
19	289986B	Double Plate =Black=	6	
20	97604	Flange Screw 5/16"-18UNC x 1" Grade 5	24	For SN B41010100 & Higher
	91256	Flange Screw, 5/16"-18UNC x 3/4" Grade 5		For SN B41010099 & Lower
21	294678B	Doubler Plate =Black=	6	
22	296138B	Front End Cap Weldment =Black=	1	
23	296140B	Rear End Cap Weldment =Black=	1	
24	9009504	End Cap Vent Cover	2	
25	9009089	Truss Head Machine Screw 3/8"-16UNC x 1 1/4"	8	For SN B41010100 & Higher
			9	For SN B41010099 & Lower
26	295259B	Tarp Spacer Plate =Black=	6	
27	296851	Latch Plate 126 1/2"	1	
28	296852	Latch Plate 120 1/2"	1	

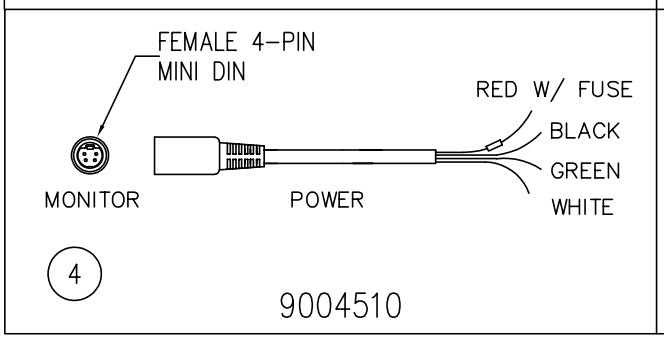
Video System (Optional)

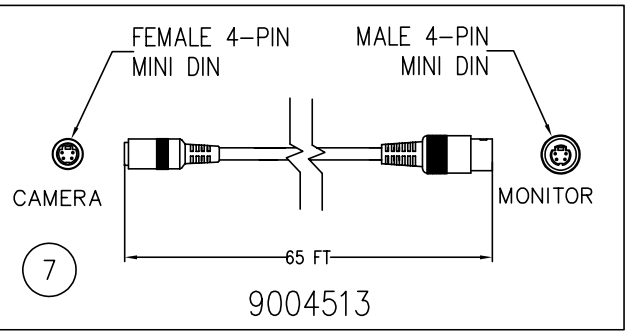
Please visit www.unverferth.com/parts/ for the most current parts listing.





IMPORTANT ! Do not operate Video System below 15° F.





Video System (Optional)

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

ITEM	PART NO.	DESCRIPTION	QTY	NOTES
	265770	Video System Kit for Front View	1	Includes Items 1 - 8, 10 and own instruction sheet
	9004506	Video System Kit for Rear View	1	Includes Items 5, 7, 10
1	TAAU14007	Snap Clip, Adhesive	10	
2	9512	Self-Drilling Screw 1/4-14 x 1	10	
3	9006273	Monitor, 7" LCD/LED	1	
4	9004510	Cable w/Fuse	1	
5	9006274	Camera	1	
6	265771B	Bracket	1	
7	9004513	Cable, 65'	1	
8	9000106	Cable Tie	AR	
9	9004506	Camera Kit for Rear View with 65’ Cable	1	
10	9007174	Camera Cable, 16 ft.	1	

MANUALS\\292499///July 2018-0//December 2018-1//July 2019-2//October 2019-3//January 2020-4//May 2020-5//September 2020-6//June 2021-7//September 2021-8//May 2022-9//February 2024-10