




Grain Handling

FRONT FOLDING X-TREME® GRAIN CART MODELS 1319 & 1519

Serial Number B37680100 and Higher

292860

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 Number _____

Dealer _____ City _____

Dealer Contact _____ Phone _____



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.

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FOR SCALE, TRACK, UHARVEST, HYDRAULIC DRIVE, ELECTRIC TARP, VIDEO SYSTEM
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FOR SCALE, TRACK, UHARVEST, HYDRAULIC DRIVE, ELECTRIC TARP, VIDEO SYSTEM OPTIONS, AND / OR WATER DELIVERY SYSTEM INFORMATION, PLEASE REFER TO THE SPECIFIC MANUAL.

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General Hazard Information

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

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

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

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



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

SIGNAL WORDS



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



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



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

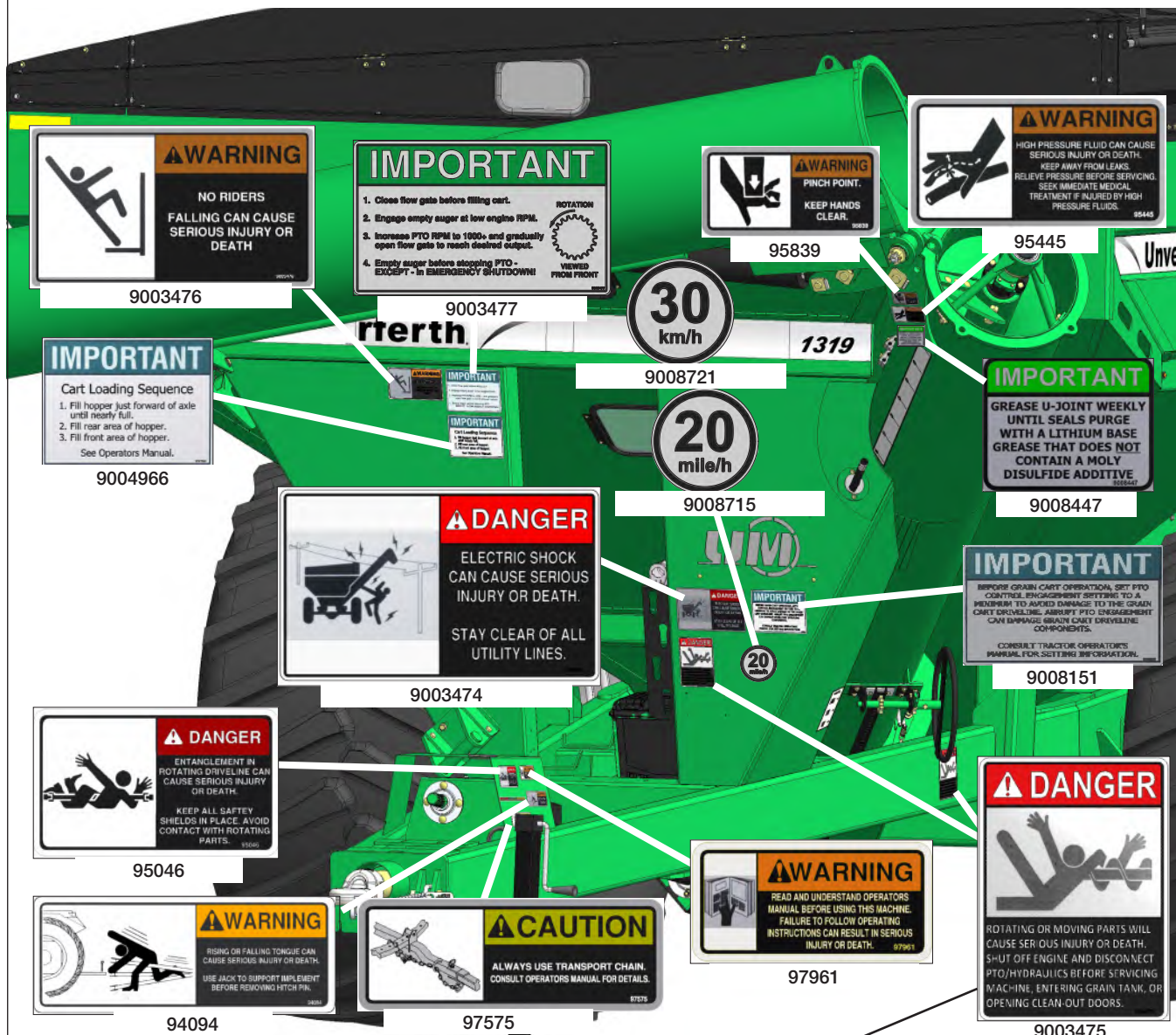


Is used for instruction on operating, adjusting, or servicing a machine.

Safety Decals

WARNING

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



Front, Right-Hand Side of Cart Shown



9003478



9003476

Safety Decals (continued)



Part No. 9003125
Fluorescent Strip



Part No. 9003126
Reflector RED



Part No. 9003127
Reflector AMBER

TA510514

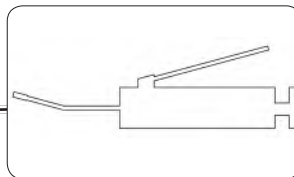
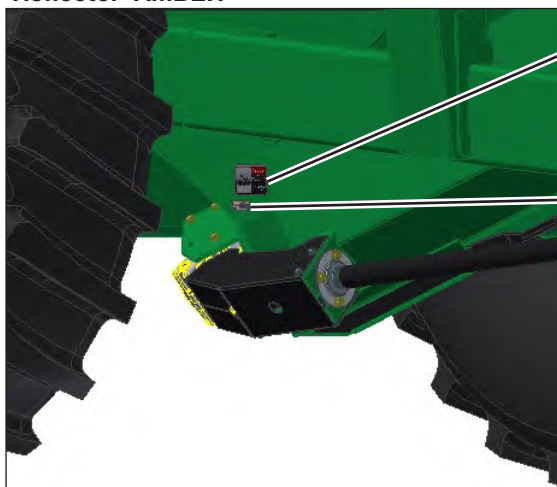
9008714 (20 MPH)
9008720 (30 KPH)



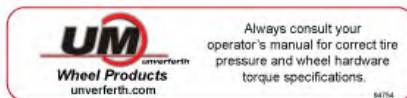
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Following Safety Instructions

- 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.

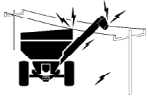
- Never enter a cart containing grain. Flowing grain traps and suffocates victims in seconds.



Before Servicing or Operating

- Avoid working under an implement; however, if it becomes absolutely unavoidable, make sure the implement is safely blocked. 
- Ensure that all applicable safety decals are installed and legible.
- Sharp edges on the machine can cause injury. Be careful when working around the machine.
- 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.
- 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.
- Hot parts can cause severe burns. Use caution when working around power system/ground engaging components. Allow parts to cool before servicing.

During Operation

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

Before Transporting

- Secure transport chain to towing vehicle before transporting. **DO NOT** transport without chains.

- Fold auger to transport position before transporting.

- Check for proper function of all available transport lights. Make sure that all reflectors are clean and in place on machine. Make sure the SMV emblem and SIS decals are visible to approaching traffic.

- This implement is not 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 it is 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 ensure the driveline will not bottom out or separate when turning and/or going over rough terrain. Refer to “PTO Shaft Length Adjustment” in MAINTENANCE section.

- 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. Leaks of high-pressure fluids may not be visible. Use cardboard or wood to detect leaks in the hydraulic system. Seek medical treatment immediately if injured by high-pressure fluids.

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

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

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

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

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

Preparing for Emergencies

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



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



Wearing Protective Equipment

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



- Wear steel-toed shoes when operating and servicing.



- Wear hearing protection when exposed to loud noises.



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



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FOR SCALE, TRACK, UHARVEST, HYDRAULIC DRIVE, ELECTRIC TARP, VIDEO SYSTEM OPTIONS, AND / OR WATER DELIVERY SYSTEM INFORMATION, PLEASE REFER TO THE SPECIFIC MANUAL.

Set Up Checklist

After the cart has been completely assembled, use the following checklist and inspect the cart. Check off each item as it is found satisfactory or after proper adjustment is made.

- Wash the unit and remove road salt tag #255000 from ladder.
- Attach auger hood and ladder.
- Reposition auger rest from transport position to operating position. Refer to “Auger Rest Positioning”.
- Complete sideboard and tarp set up. Remove tarp/sideboard shipping brackets.
- Set or Calibrate tractor PTO control engagement setting to a minimum, refer to tractor operators manual for setting information.
- Reposition spindles from transport position to operating position. Refer to “Spindle Positioning”.
- Torque wheel nuts as specified in MAINTENANCE section.
- Check tire pressure and inflate tires as needed to specified air pressure. See “Tire Pressure” in MAINTENANCE section. (If applicable)
- Verify track has been aligned and is properly conditioned. (If applicable)
- Lubricate all grease fittings and check gearbox oil level.
- Inspect cleanout door assembly for play or movement. See “Adjusting Cleanout Door” in MAINTENANCE section.
- Verify all safety decals are correctly located and legible. Replace if damaged.
- Verify all reflective decals are correctly located.
- Check SMV emblem and SIS decals are in place, clean and visible after shipping.
- Verify transport lights are operational.
- Check driveline assembly phasing. See “Auger Driveline Replacement” in MAINTENANCE section.
- Verify PTO length. See “Verify Telescoping PTO Shaft Length” in MAINTENANCE section.
- Ensure screens over auger are in place and properly secured.
- Ensure transport chains are properly installed and hardware is torqued to specification. See “Transport Chain Connection” in OPERATION section.
- Check auger alignment, timing, and spline gap. See “Auger System” in MAINTENANCE section.
- Check size of hitch adapter bushing.
- Paint all parts scratched in shipment.
- Test run the augers. See “Auger Operation” in OPERATION section.
- Check hydraulics for leaks and check hose routing.

Initial Cart 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 32,000 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

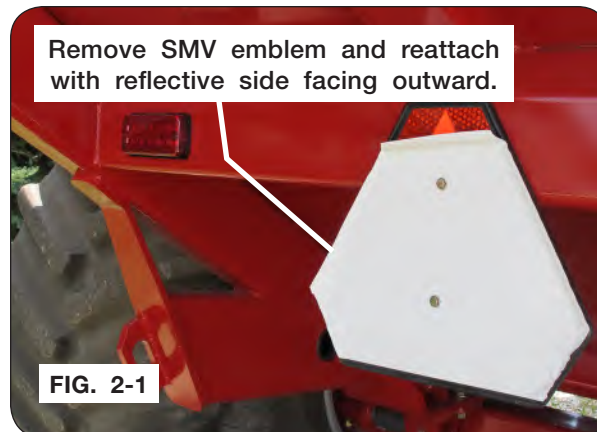
Check all hoses and cylinders for signs of leakage. Hoses should not be kinked, twisted or rubbing against sharp edges. Re-route or repair hoses as necessary. Refer to SAFETY section for additional information on safe repair and inspection of hydraulic components.

Video System (Optional)

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

SMV Emblem & SIS Decals

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. 2-1)

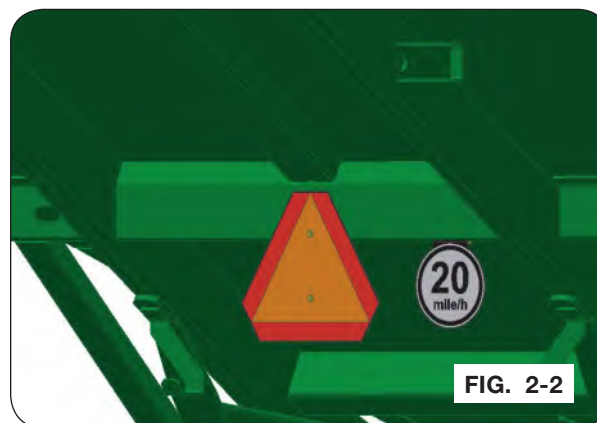


Ensure the front and rear SIS decals are clean and visible after shipping. (FIG. 2-2)

Remove rear SIS decal mounting bracket from shipping position and reinstall as shown. (FIG. 2-2)

For 20 M.P.H. SIS decals, order 9008715 for the front & 9008714 for the rear.

For 30 K.P.H. SIS decals, order 9008721 for the front & 9008720 for the rear.



Wheel & Tire Set Up

Tire Pressure

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

Wheel Nuts

Wheel nut torque must be verified before first use and adjusted as necessary. Refer to torque chart in the MAINTENANCE section of this manual for information.

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 32,000 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

- *Install wheels and tires in the narrowest position. 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.*

Spindle Positioning

IMPORTANT

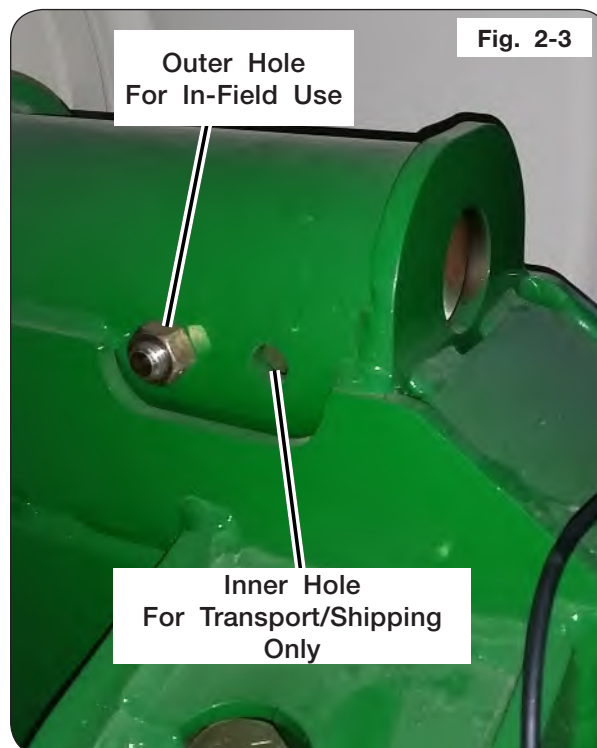
- *Single tire hubs and spindles are slid in for shipping and need to be slid out before attaching wheels/tires to provide adequate clearance between tires and wheel wells.*

Spindles on carts with single wheels are moved inward for transportation. To achieve proper tire clearance during field operation, these spindles must be moved outward prior to cart use. (Fig. 2-3)

1. Hitch cart to tractor. Park the empty cart on a firm, level surface. Set tractor parking brake, shut off engine, and remove ignition key. Block the machine to prevent movement.



2. Use safe lifting and load holding devices rated at 32,000 lbs. to lift and support the weight of the grain cart. Place the safe lifting device under the axle closest to the tire
3. Remove 3/4" X 8" spindle retainer capscrew and locknut.
4. Using a safe lifting device rated at a minimum 600 lbs, slide spindle out.
5. Reinstall capscrew and locknut. Torque to specification.
6. Remove safe lifting device (or support) and repeat for other side.



Jack & Optional Hydraulic Jack Set Up

Jack

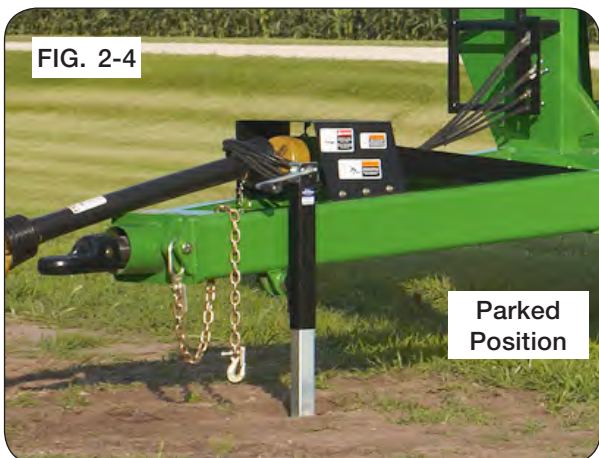
WARNING

- 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

- Failure to store the jack in transport position could result in damage to the jack, cart, or tractor tire. (FIG. 2-5)

Attach jack to left-outside frame using pin. Mount jack in storage position once cart is hitched to tractor. (Fig. 2-4 and 2-5)

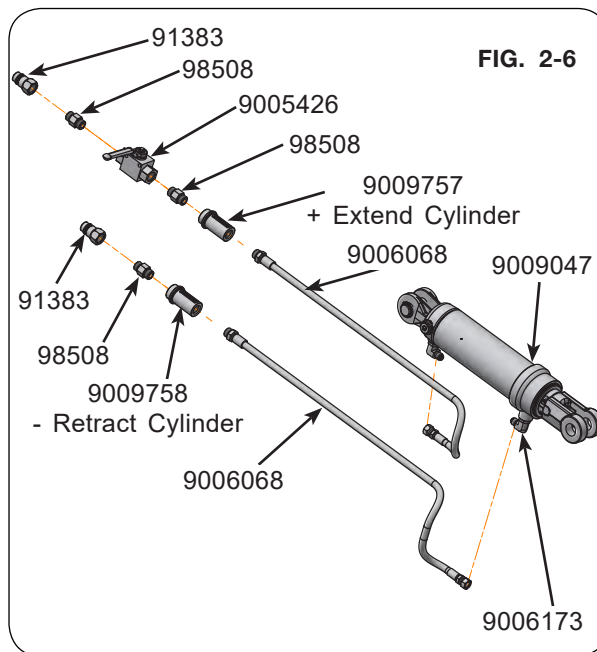


Install Hydraulic Jack (Optional)

1. Park the unit on a firm, level surface. Block the machine to keep it from moving. Set the vehicle parking brake, shut off the engine and remove the ignition key and disconnect the PTO shaft from the tractor.



2. On new hydraulic assembly (294143B), assemble hoses (9006068) and fittings to cylinder (9009047) as shown in figure 2-6. The valve needs to be assembled to the hose on the base end of the cylinder. Assemble the fittings on the cylinder so they face each other, then store the hydraulic hoses on the hose caddy.



Jack & Optional Hydraulic Jack Set Up (continued)

Install Hydraulic Jack (Optional) (continued)

⚠ WARNING

- KEEP HANDS CLEAR OF PINCH POINT AREAS.

3. Assemble the cylinder (9009047) and jack foot (271723B) to the jack weldment (271712B) as shown in figure 2-7 using 1"-8UNC x 7" capscrews (9390-197) and 1"-8UNC locknuts (92199).

NOTE: Ensure all jack leg weldment (271712B) joints can pivot freely, including jack foot (271723B).

4. Tighten 1" hardware on jack leg weldment and allow the cylinder and jack foot to freely pivot. (Fig. 2-7)

5. Attach mounting bracket (273808B) to jack leg weldment (271712B) using 1"-8UNC x 7" capscrew (9390-197) and 1"-8UNC locknut (92199), before mounting to the tongue. (Fig. 2-8)

6. Tighten 1" hardware on jack leg weldment and allow the joint to pivot. (Fig. 2-8)

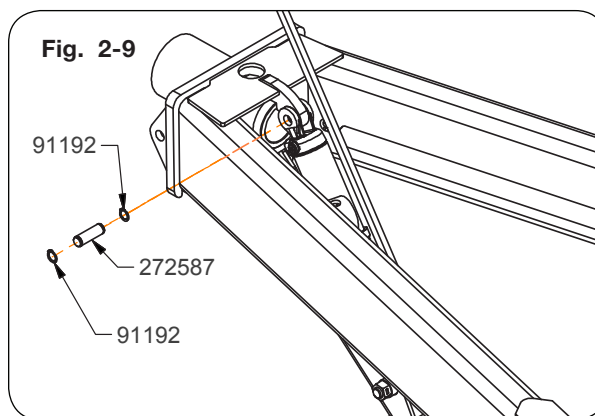
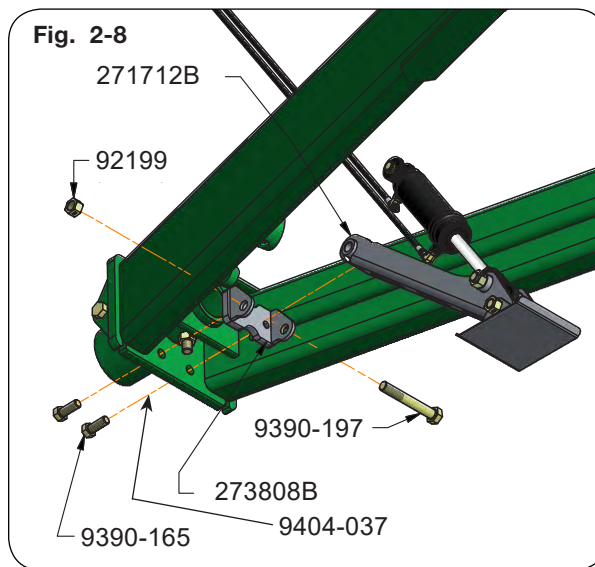
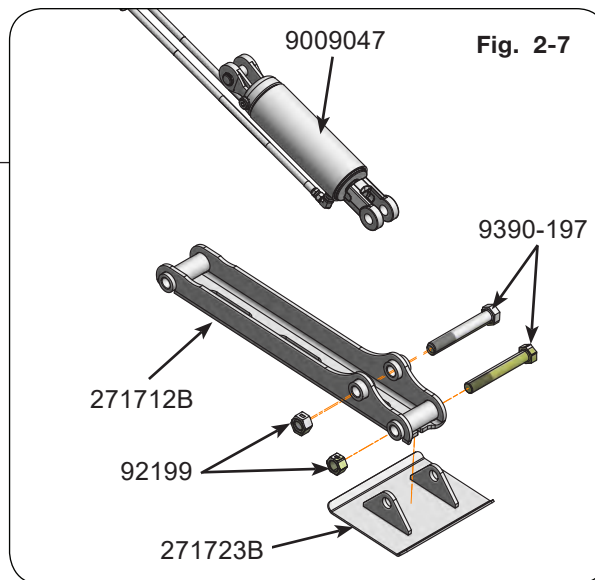
7. Attach the mounting bracket (273808B) to the back side of the front hitch plate with two 7/8"-9UNC x 2 1/4" capscrews (9390-165) and 7/8" lock washers (9404-037). (Fig. 2-8)

8. Torque 7/8" hardware to 330 ft.-lbs. (Fig. 2-8)

9. Align the base end of the cylinder with the lug on the top of the tongue and assemble the cylinder pin (272587) and snap rings (91192) shown in Fig. 2-9.

NOTE: Refer to "Optional Hydraulic Jack Usage" in the OPERATION section for additional information.

10. Purge air from system. See "Purge Hydraulic System" in the MAINTENANCE section for procedure.



Lamp Set Up

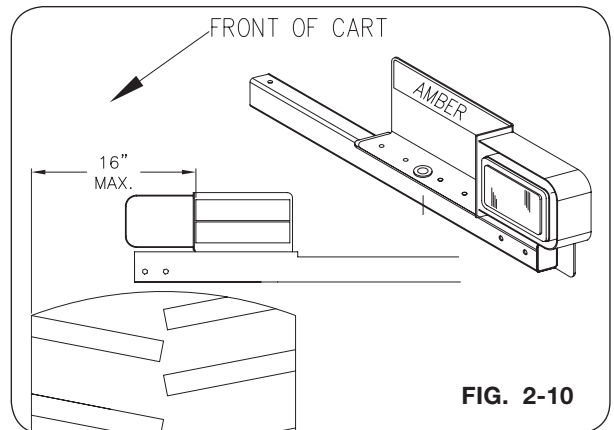
Pivot lamp extension arms into position at sides of cart. The lamp bracket width is adjustable. Adjust lamp mount position to ensure that the reflectors are no more than 16" from the widest part of the tires, tracks, or grain cart body.

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. 2-10 and 2-11)

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.



Driveline Installation

Driveline

Storage brackets are located on the inside right frame rail. Using a safe lifting device rated at 100 lbs., secure the PTO shaft to these brackets for extended transporting or seasonal storage. (FIG. 2-12)

IMPORTANT

- Secure the complete PTO shaft to brackets for extended transport or storage and for all transport behind a delivery truck. Interference could occur when turning resulting in damage to PTO and cart.



FIG. 2-12

Driveline Set Up

Clean and grease the Implement PTO splined shaft.

DANGER

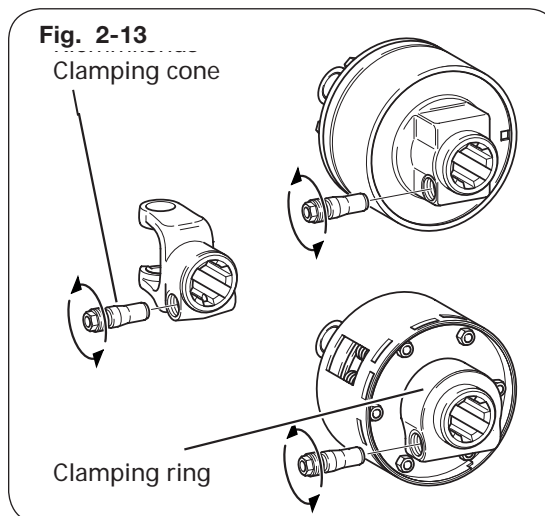
- ENTANGLEMENT WITH THE DRIVELINE WILL CAUSE SERIOUS INJURY OR DEATH. KEEP ALL GUARDS AND SHIELDS IN GOOD CONDITION AND PROPERLY INSTALLED AT ALL TIMES. AVOID PERSONAL ATTIRE SUCH AS LOOSE FITTING CLOTHING, SHOE STRINGS, DRAWSTRINGS, PANTS CUFFS, LONG HAIR, ETC. THAT CAN BECOME EN-TANGLED IN A ROTATING 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. 2-13)

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

NOTE: See MAINTENANCE section - Verify Tele-scoping PTO Shaft Length.



Auger Rest Positioning

WARNING

- KEEP HANDS CLEAR OF PINCH POINT AREAS.
- EYE PROTECTION AND OTHER APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT MUST BE WORN WHILE SERVICING THE IMPLEMENT.
- FALLING OR LOWERING EQUIPMENT CAN CAUSE SERIOUS INJURY OR DEATH. KEEP EVERYONE AWAY FROM EQUIPMENT WHEN SUSPENDED, RASING, OR LOWERING.

1. Hitch cart to tractor. Park the empty grain cart on a firm, level surface. Block the machine to keep it from moving. Set the tractor's parking brake, but leave tractor engine on throughout procedure.
2. Raise the auger to the unfolded position.
3. Move the auger rest from shipping position to operating position. (FIG. 2-14 and 2-15)

NOTE: Stop bolt (9390-146) must be lengthened after the lower rest is moved to operating position. See item #27 in "Auger Fold Components" located in PARTS section.

4. Lengthen the stop bolt near the auger linkage until the stop bolt almost touches the linkage, when the auger is folded.
5. Slowly fold the auger in and check the auger rest and upper auger rest fitment.

NOTE: For proper auger rest fitment, the auger rest should fit tightly in the radius of the upper auger rest.

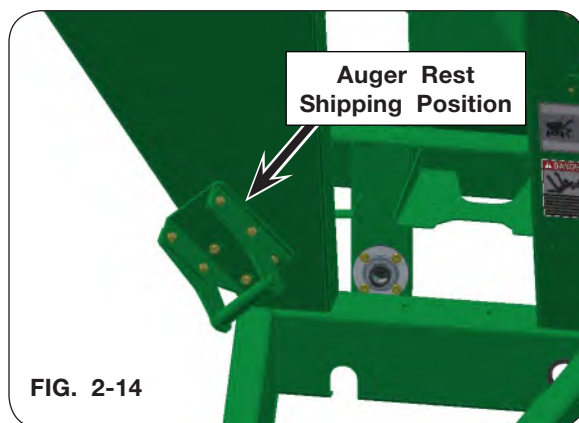


FIG. 2-14

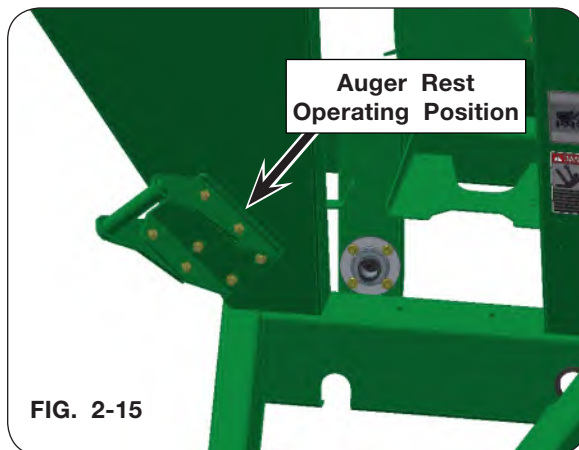
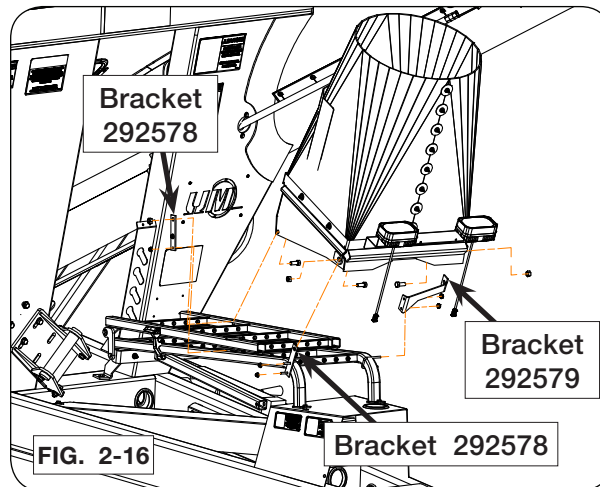


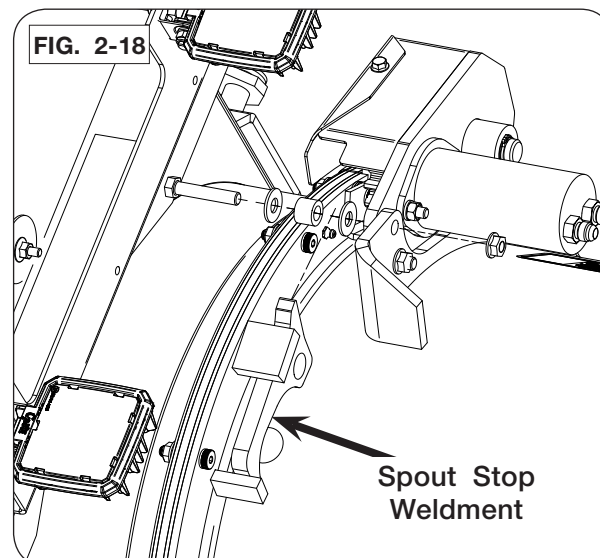
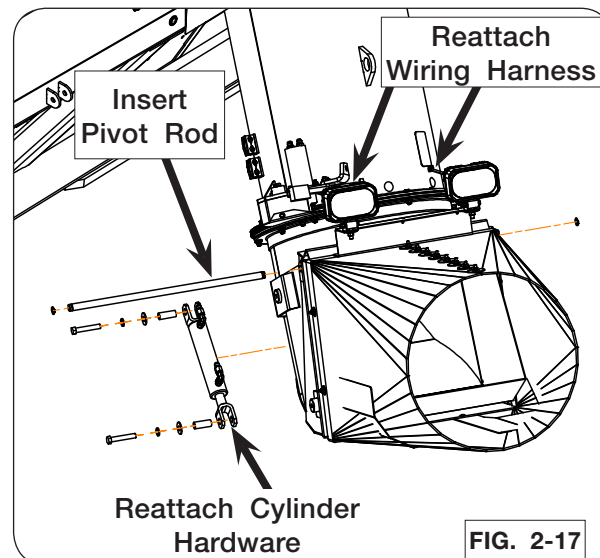
FIG. 2-15

Auger Hood Installation

1. Place the auger in the folded/transport position.
2. Remove brackets (292578 Qty. 2 and 292579) on the ladder rungs retaining the auger hood assembly. (Fig. 2-16)

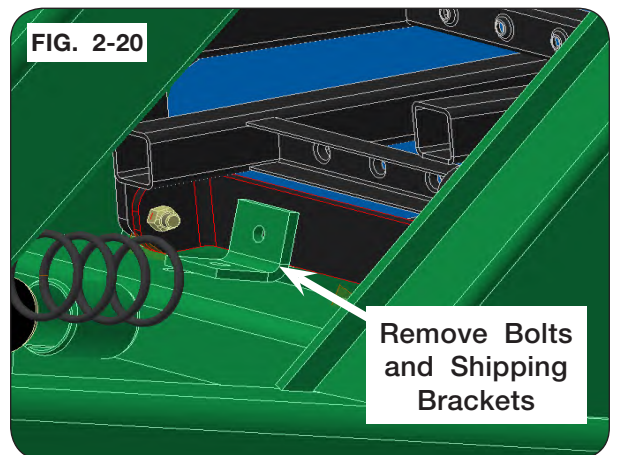
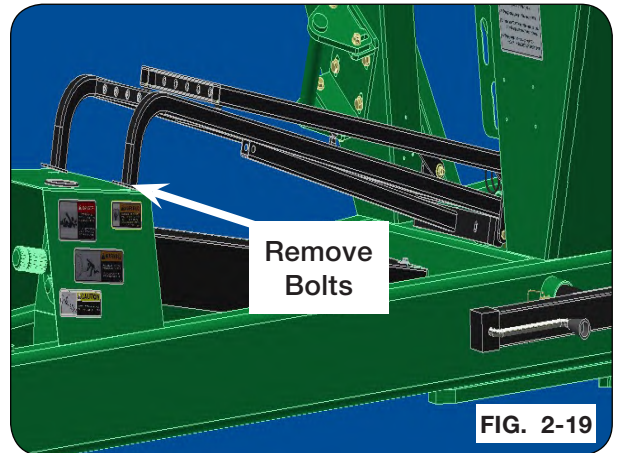


3. (2-person operation) Place the auger hood assembly over the spout.
4. Align the auger hood and spout holes.
5. Slide the pivot rod (290993) through the auger hood assembly, and attach 2 retaining rings (9003810) to each end of the pivot rod. (Fig. 2-17)
6. Reattach the cylinder (9008152) using 2 bushing 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. 2-17)
7. Reattach wiring harness. (Fig. 2-17)
8. Retrieve capscrew 3/8"-16UNC x 2" (9390-059), flat washers (9405-076), pivot lock bushing (290882), and locknut 3/8"-16UNC (9003396) from the toolbox to attach the spout stop weldment (292432B).
9. Install spout stop weldment and hardware. (Fig. 2-18)

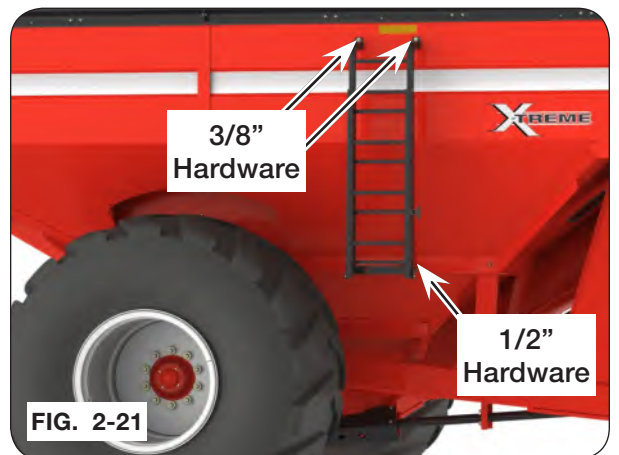


Ladder Installation

1. Remove the bolts from the top of the PTO (or driveline cover), shipping brackets at the bottom end of the ladder, and zip ties on the rungs retaining the ladder assembly. Discard shipping brackets and hardware. (FIG. 2-19 and 2-20)



2. Attach ladder assembly to the right-hand side using two 3/8"-16UNC x 1" hex flange screws, two 3/8"-16UNC hex flange nuts, 1/2"-13UNC x 2 3/4" capscrew, and 1/2"-13UNC locknut. (FIG. 2-21)

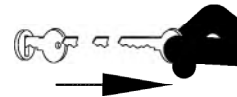


Sideboards and End Caps Installation

WARNING

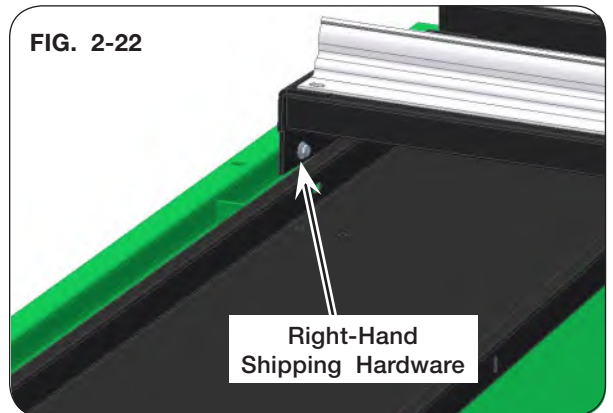
- TO PREVENT PERSONAL INJURY OR DEATH, ALWAYS ENSURE THAT THERE ARE PEOPLE WHO REMAIN OUTSIDE THE CART TO ASSIST THE PERSON WORKING INSIDE, AND THAT ALL SAFE WORKPLACE PRACTICES ARE FOLLOWED. THERE IS RESTRICTED MOBILITY AND LIMITED EXIT PATHS WHEN WORKING INSIDE THE CART.
- KEEP HANDS CLEAR OF PINCH 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 200 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. Park the empty grain cart on a firm, level surface. Block the machine to keep it from moving. Set the vehicle parking brake, shut off engine, and remove the ignition key.
2. Remove the tarp handle weldment (287944) and the crank handle holder weldment (287394B) from inside the cart.



Sideboards and End Caps Installation (continued)

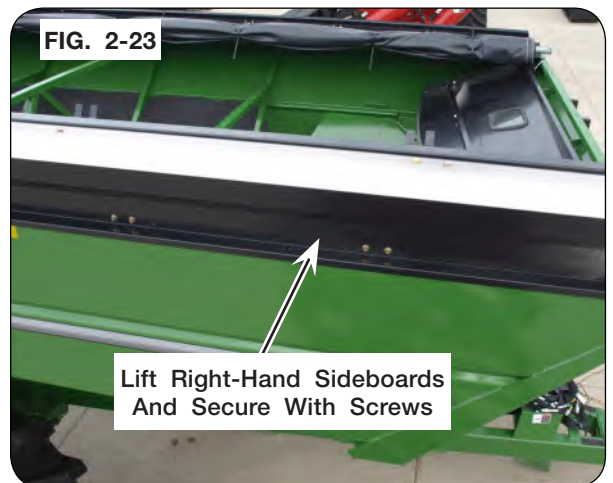
3. Remove and discard shipping hardware for right-hand sideboards from the front and rear. (FIG. 2-22)



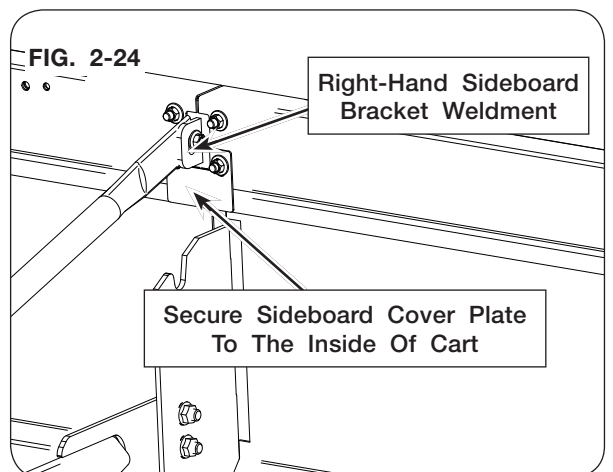
4. Lift the right-hand sideboards into position and loosely secure the sideboards in place using 3/8"-16UNC x 3/4" flange screws (95585) and 3/8"-16UNC locknuts (9008159) along sideboard bottom edge. (FIG. 2-23)

NOTE: When moving sideboards into position, hinge brackets WILL support the sideboard.

NOTE: The right-hand sideboard bracket weldments (296550B - 1319; 296573B - 1519) come from the factory attached between the right-hand sideboards. (FIG. 2-23 and 2-24)



5. Loosely secure sideboard cover plate (295691B) with 3/8"-16UNC x 1" carriage bolts (9388-051) and 3/8"-16UNC locknuts (9008159) to the inside of right-hand front and rear sideboards. (FIG. 2-24)



Sideboards and End Caps Installation (continued)

6. Remove and discard shipping bracket for left-hand sideboards from the front and rear. (FIG. 2-25)
7. Lift the left-hand sideboards into position.

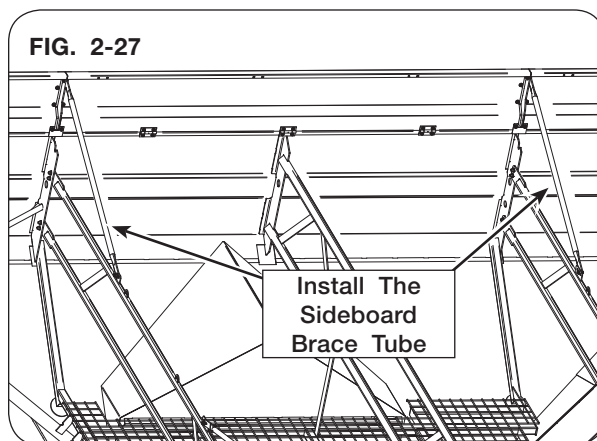
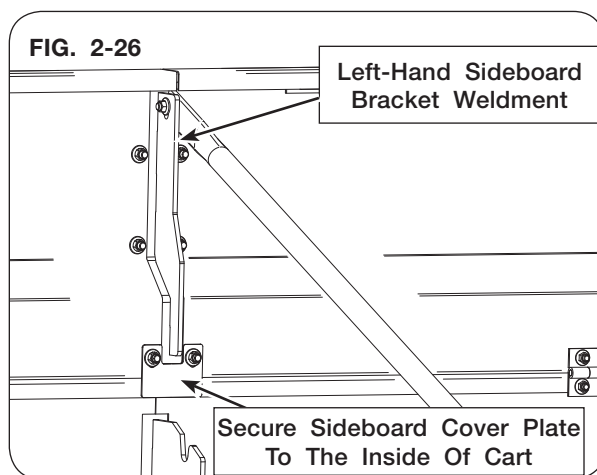
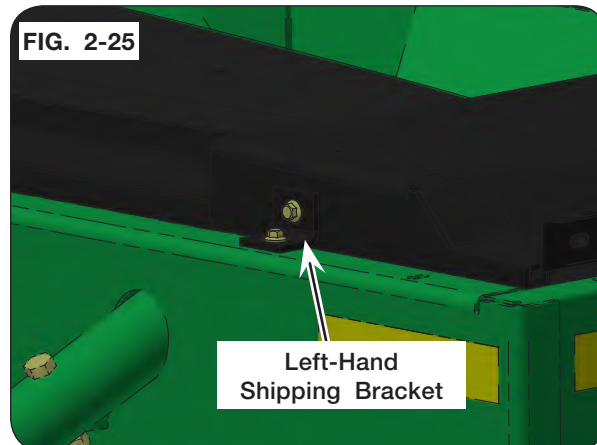
NOTE: Hinge brackets **WILL** support the sideboards.

8. Loosely secure left-hand sideboard with 3/8"-16UNC x 3/4" flange screws (95585) and 3/8"-16UNC locknuts (9008159) along the bottom.

NOTE: The left-hand sideboard bracket weldments (296551B - 1319; 296574B - 1519) come from the factory attached between the left-hand sideboards (FIG. 2-26)

9. Loosely secure sideboard cover plate (295691B) with 3/8"-16UNC x 1" carriage bolts (9388-051) and 3/8"-16UNC locknuts (9008159) to the inside bottom left-hand front and rear sideboards. (FIG. 2-26)

10. Install sideboard brace tubes (220032B - RH and 287524B - LH for 1319; 293219B - RH and 287629B - LH for 1519) to the LH and RH sideboards with 3/8"-16UNC x 1 1/4" flange screws (9003259), 3/8" flat washers (9405-078), and 3/8"-16UNC locknuts (9008159). (FIG. 2-27)



Sideboards and End Caps Installation (continued)

11. Using a safe lifting device rated at 200 lbs., lift the long rear end cap (296134B) and rear sideboard (296538B - 1319 and 296561B - 1519) into position and loosely secure rear sideboard with 3/8" flange screws (95585) and 3/8" locknuts (9008159) along the sideboard outside bottom edge. (FIG. 2-28)

NOTE: Hinge brackets WILL support the long rear end cap.

12. Loosely secure long rear end cap with 3/8" flange screws (95585) and 3/8" locknuts (9008159) along the bottom of the end cap. (FIG. 2-28)

13. Loosely install the right-hand (296548B - 1319 and 296572B - 1519) and left-hand (296547B - 1319 and 296570B - 1519) rear corner brackets to the outside of the sideboards with 3/8" carriage bolts (9388-051) and 3/8" locknuts (9008159). (FIG. 2-29)

14. Loosely install sideboard cover corner bracket (295125B) with (9388-051) and (9008159) hardware to the inside left-hand and right-hand bottom corner of rear sideboard. (FIG. 2-30)

FIG. 2-28

Secure Rear Sideboard
And Long Rear End Cap
To The Outside Of Cart

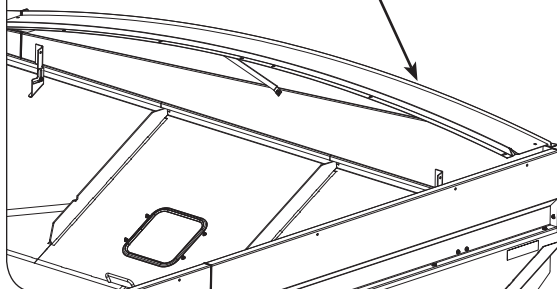


FIG. 2-29

Rear Corner
Brackets

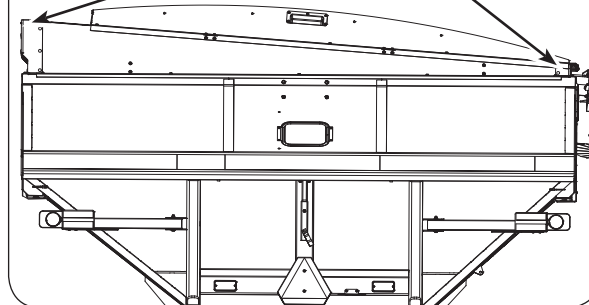
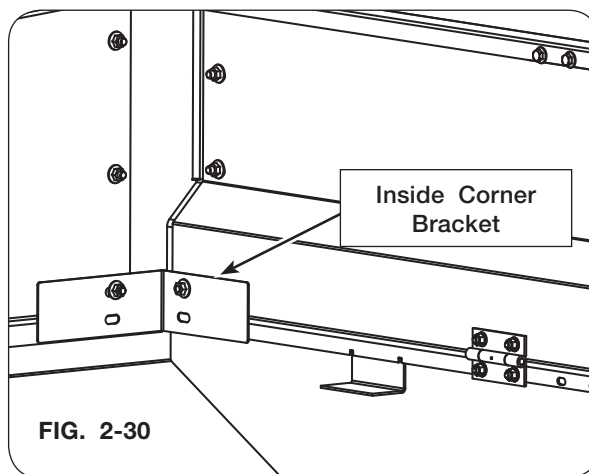


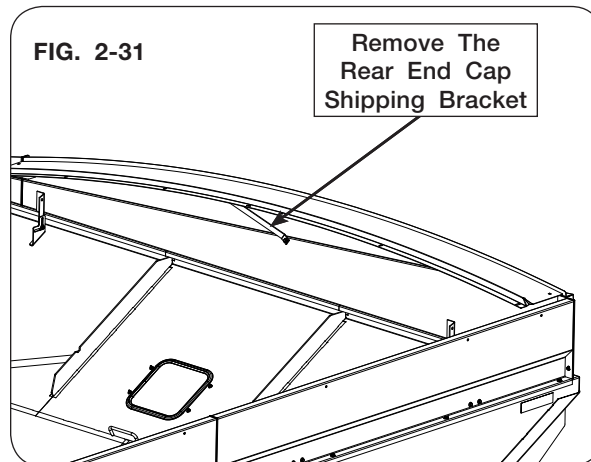
FIG. 2-30

Inside Corner
Bracket



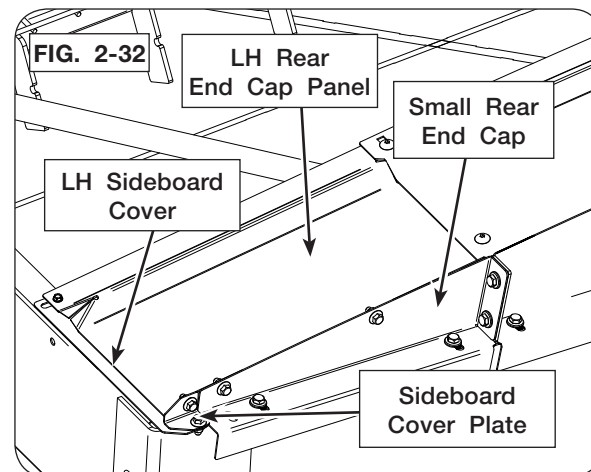
Sideboards and End Caps Installation (continued)

15. Remove and discard shipping bracket for the rear end cap and rear sideboard. (FIG. 2-31)
16. Reinstall flange screw (95585) and locknut (9008159) to plug the rear sideboard hole. (FIG. 2-31)



17. Loosely attach the small rear end cap (292888B) on top of rear sideboard and to rear end cap with 3/8" flange screws (95585) and 3/8" locknuts (9008159). (FIG. 2-32)

NOTE: The left-hand rear end cap panel (292896B) tabs will fit underneath the large rear end cap. (FIG. 2-32)



18. Loosely secure left-hand rear end cap panel (292896B) to small rear end cap with 3/8" flange screws (95585) and 3/8" locknuts (9008159) and to large rear end cap with 3/8" truss head screws (9005312) and 3/8" locknuts (9008159). (FIG. 2-32)

19. Loosely attach sideboard cover plate (296249B) to left-hand rear end cap panel with 3/8" flange screw (95585) and 3/8" locknut (9008159). (FIG. 2-32)

20. Loosely install left-hand sideboard cover (296549B) between the end cap and left-hand sideboard with 3/8" flange screw (95585) and 3/8" locknut (9008159). (FIG. 2-32 and 2-33)

NOTE: Left-hand sideboard cover must be installed at least 3/16" from the outside edge of the sideboard to prevent tearing the tarp.



Sideboards and End Caps Installation (continued)

21. Loosely install rear right-hand sideboard cover (283431B) between the end cap and right-hand sideboard with 3/8" truss screws (95585) and 3/8" locknuts (9008159). (FIG. 2-34 and 2-35)

NOTE: Right-hand sideboard cover must be installed at least 3/16" from the outside edge of the sideboard to prevent tearing the tarp.

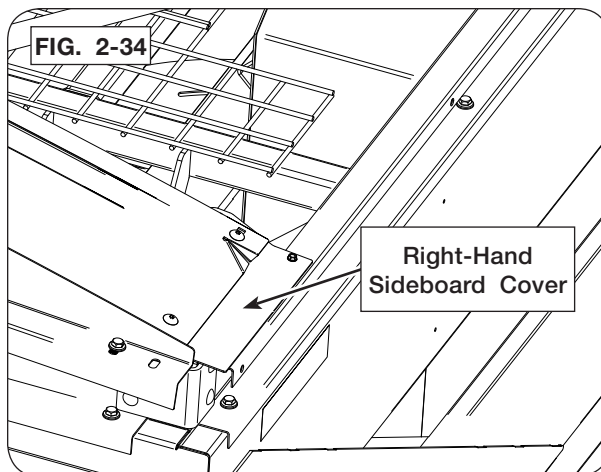
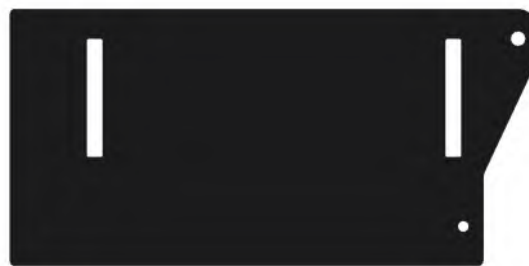


FIG. 2-35



Right-Hand Sideboard Cover (283431B)

22. Using a safe lifting device rated at 200 lbs., lift the long front end cap (296136B) and front sideboard (296536B - 1319 and 296559B - 1519) into position and loosely secure front sideboard with 3/8" flange screws (95585) and 3/8" locknuts (9008159) along the sideboard outside bottom edge. (FIG. 2-36)

NOTE: Hinge brackets WILL support the long front end cap.

23. Loosely secure long front end cap with 3/8" flange screws (95585) and 3/8" locknuts (9008159) along the bottom of the end cap. (FIG. 2-36)

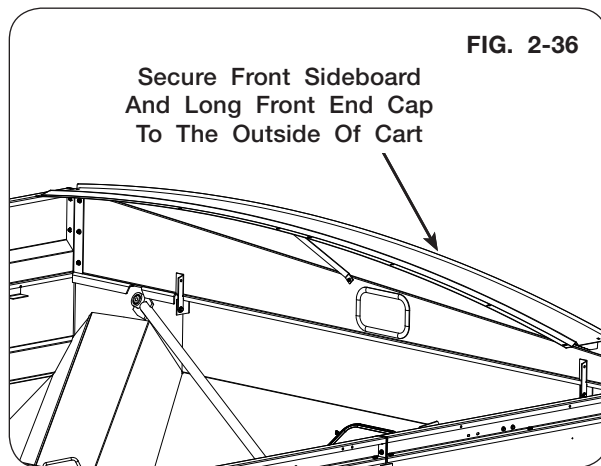
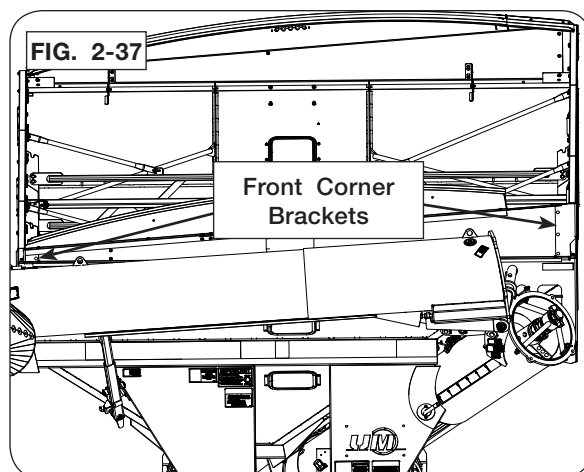


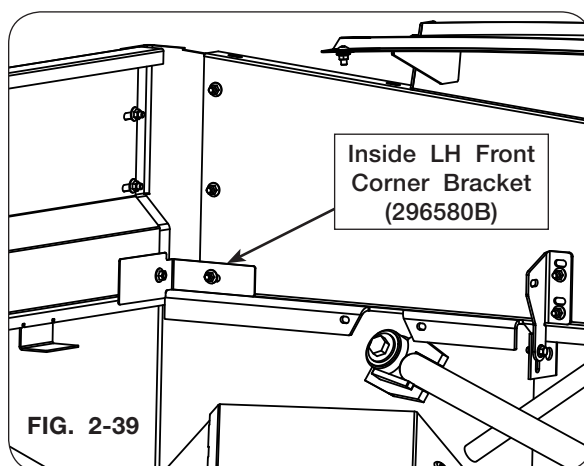
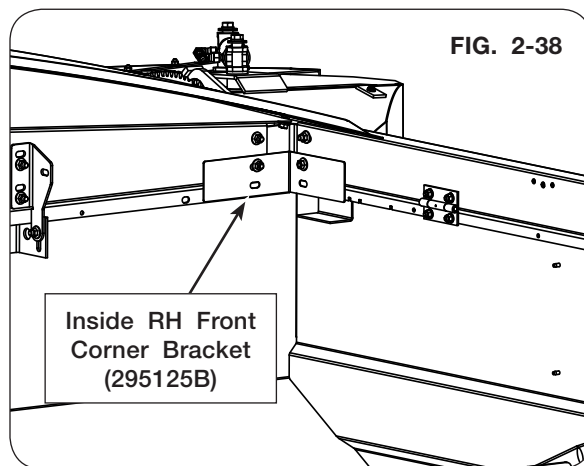
FIG. 2-36

Sideboards and End Caps Installation (continued)

24. Loosely install the right-hand (296548B - 1319 and 296571B - 1519) and left-hand (296546B - 1319 and 296569B - 1519) front corner brackets to the outside of the sideboards with 3/8" carriage bolts (9388-051) and 3/8" locknuts (9008159). (FIG. 2-37)



25. Loosely install the right-hand (295125B) and left-hand (296580B) front sideboard corner cover brackets to the inside bottom corner of the front sideboards with (9388-051) and (9008159) hardware. (FIG. 2-38 and 2-39)



Sideboards and End Caps Installation (continued)

- 26. Remove and discard shipping bracket for the front end cap and front sideboard. (FIG. 2-40)
- 27. Reinstall flange screw (95585) and locknut (9008159) to plug the front sideboard hole. (FIG. 2-40)

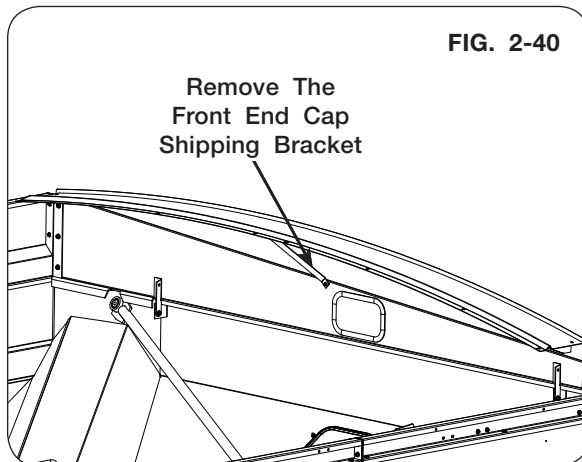


FIG. 2-40

- 28. Loosely attach the small front end cap (292892B) on top of front sideboard and to front end cap with 3/8" flange screws (95585) and 3/8" locknuts (9008159). (FIG. 2-41)

NOTE: The left-hand front end cap panel (292897B) tabs will fit underneath the large front end cap. (FIG. 2-41)

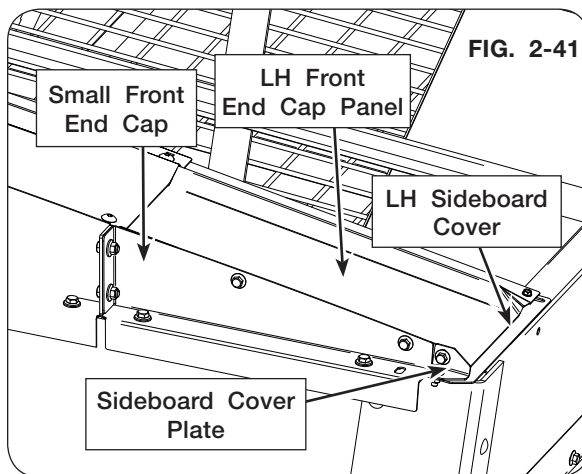


FIG. 2-41

- 29. Loosely secure left-hand front end cap panel (292897B) to small front end cap with 3/8" flange screws (95585) and 3/8" locknuts (9008159) and to large front end cap with 3/8" truss head screws (9005312) and 3/8" locknuts (9008159). (FIG. 2-41)

- 30. Loosely attach sideboard cover plate (296249B) to left-hand front end cap panel with 3/8" flange screw (95585) and 3/8" locknut (9008159). (FIG. 2-41)

- 31. Loosely install left-hand sideboard cover (296549B) between the end cap and left-hand sideboard with 3/8" flange screw (95585) and 3/8" locknut (9008159). (FIG. 2-41 and 2-42)

NOTE: Left-hand sideboard cover must be installed at least 3/16" from the outside edge of the sideboard to prevent tearing the tarp.



FIG. 2-42

LH Sideboard Cover (296549B)

Sideboards and End Caps Installation (continued)

32. Loosely install right-hand sideboard cover (283431B) between the end cap and right-hand sideboard with 3/8" truss screws (95585) and 3/8" locknuts (9008159). (FIG. 2-43 and 2-44)

NOTE: Right-hand sideboard cover must be installed at least 3/16" from the outside edge of the sideboard to prevent tearing the tarp.

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

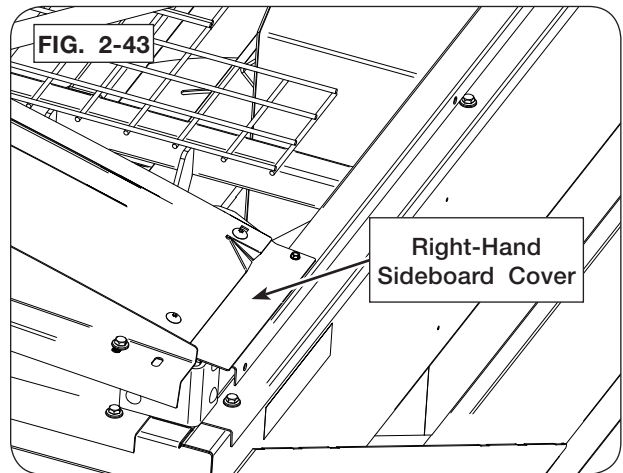
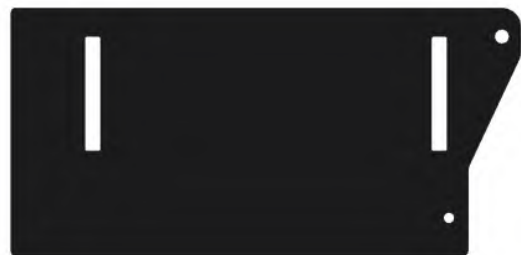


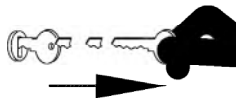
FIG. 2-44



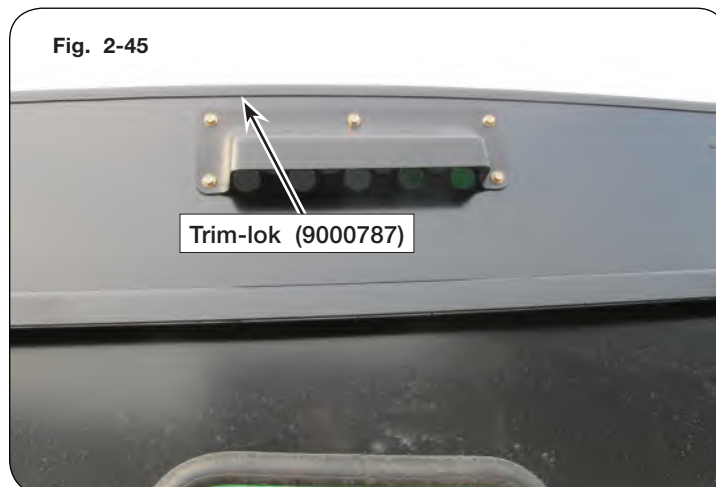
Weather Guard Tarp Set Up

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 OR LOWERING EQUIPMENT CAN CAUSE SERIOUS INJURY OR DEATH. KEEP EVERYONE AWAY FROM EQUIPMENT WHEN SUSPENDED, RASING, OR LOWERING
 - TIPPING OR MOVEMENT OF THE MACHINE CAN CAUSE SERIOUS INJURY OR DEATH. BE SURE MACHINE IS SECURELY BLOCKED.
1. Park the empty grain cart on a firm, level surface. Block the machine to keep it from moving. Set the vehicle parking brake, shut off engine, and remove the ignition key.



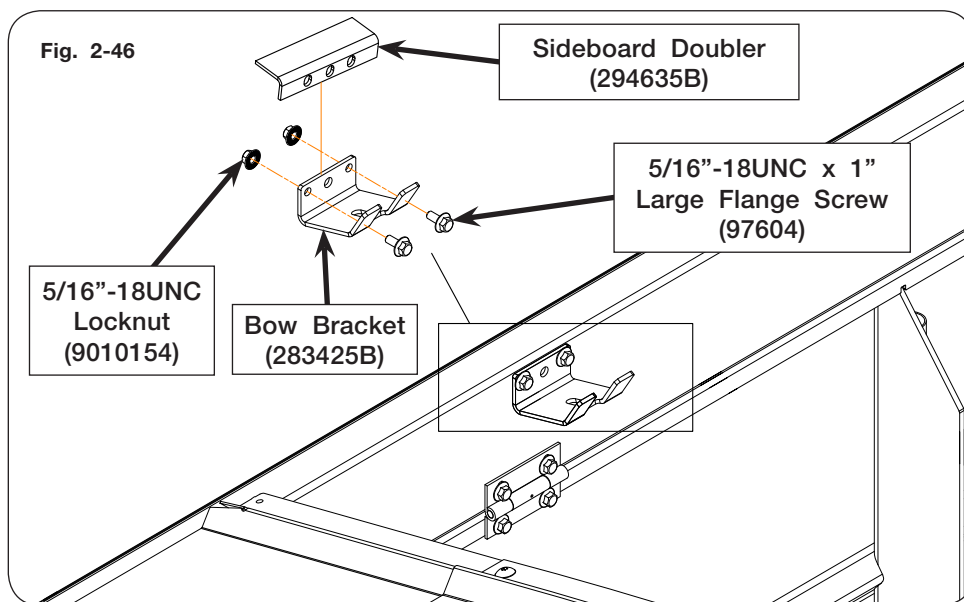
2. Install Trim-lok (9000787) along the top of the front end cap. (FIG. 2-45)



Weather Guard Tarp Installation (continued)

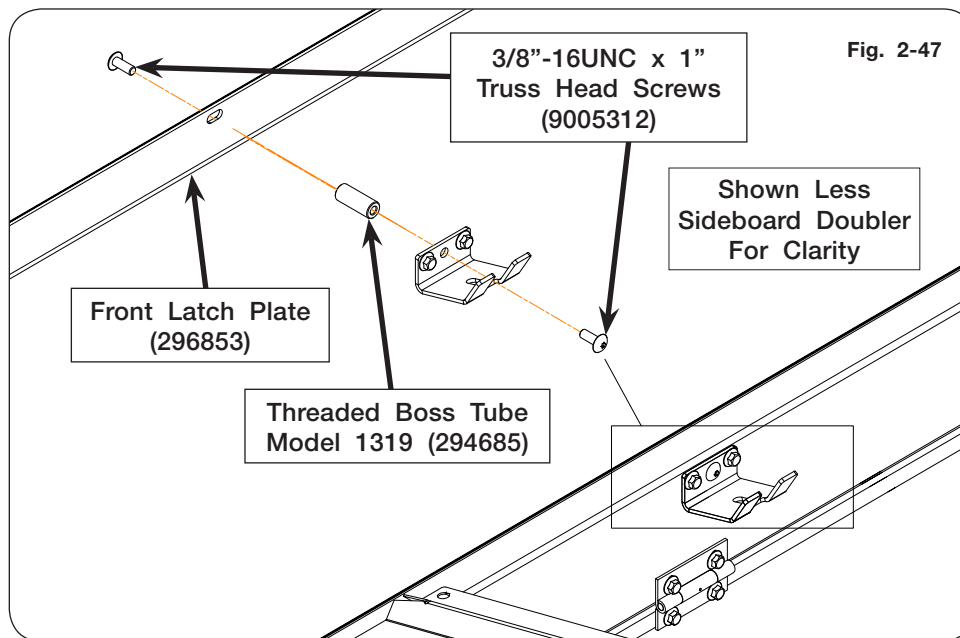
NOTE: Ensure RH and LH sideboard doublers are inside the upper sideboard lip. See FIG. 2-46.

3. Attach the bow brackets (283425B) by sliding the sideboard doubler (294635B right-hand side & 289986B left-hand side) under the upper lip of the sideboard. Place the bow brackets as shown in FIG. 2-43 and attach using 5/16"-18UNC x 1" large flange screws (97604) and 5/16"-18UNC locknuts (9010154). Repeat 6 additional times for right-hand side. (FIG. 2-46)

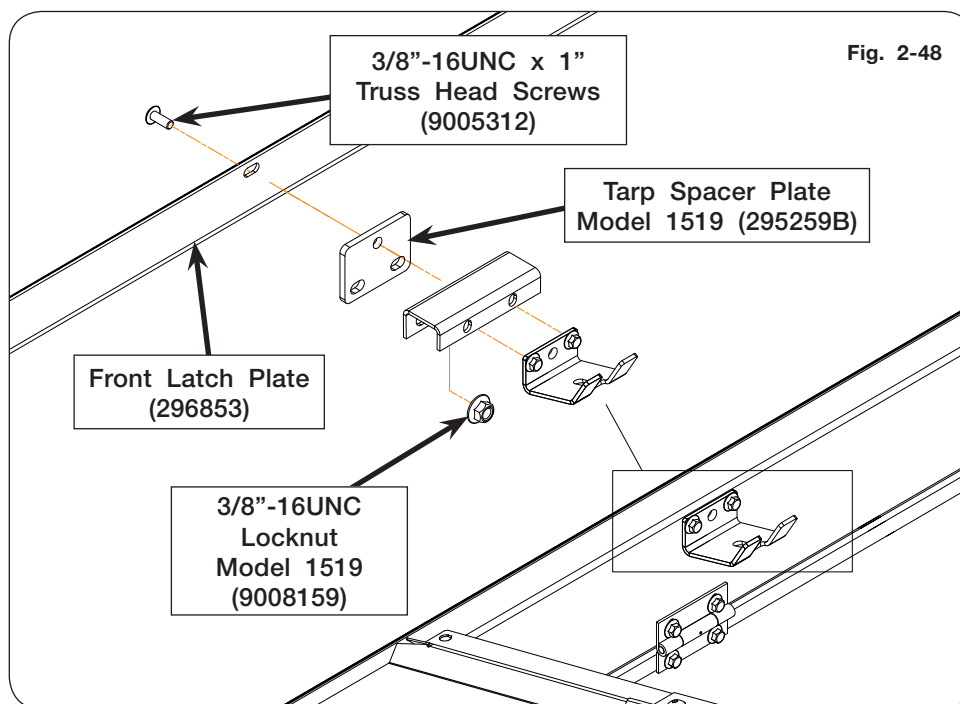


Weather Guard Tarp Installation (continued)

4. For 1319 carts, attach the front latch plate (296853) with 3/8"-16UNC x 1" truss head screws (9005312) and threaded boss tube (294685). Repeat 6 additional times for right-hand side. (FIG. 2-47)



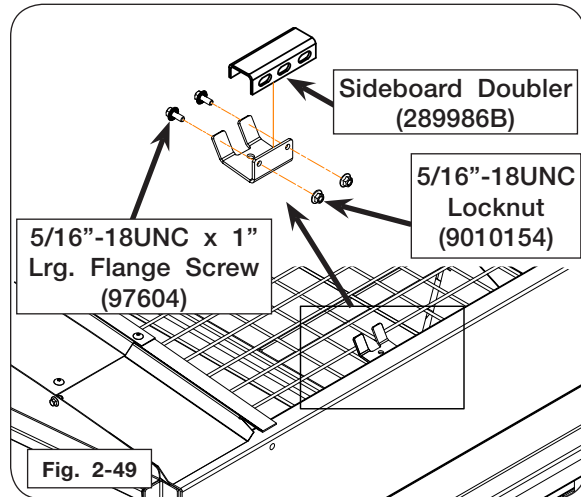
5. For 1519 carts, attach the front latch plate (296853) with 3/8"-16UNC x 1" truss head screws (9005312), tarp spacer plate (295259B) and 3/8"-16UNC locknut (9008159). Repeat 8 additional times for right-hand side. (FIG. 2-48)



Weather Guard Tarp Installation (continued)

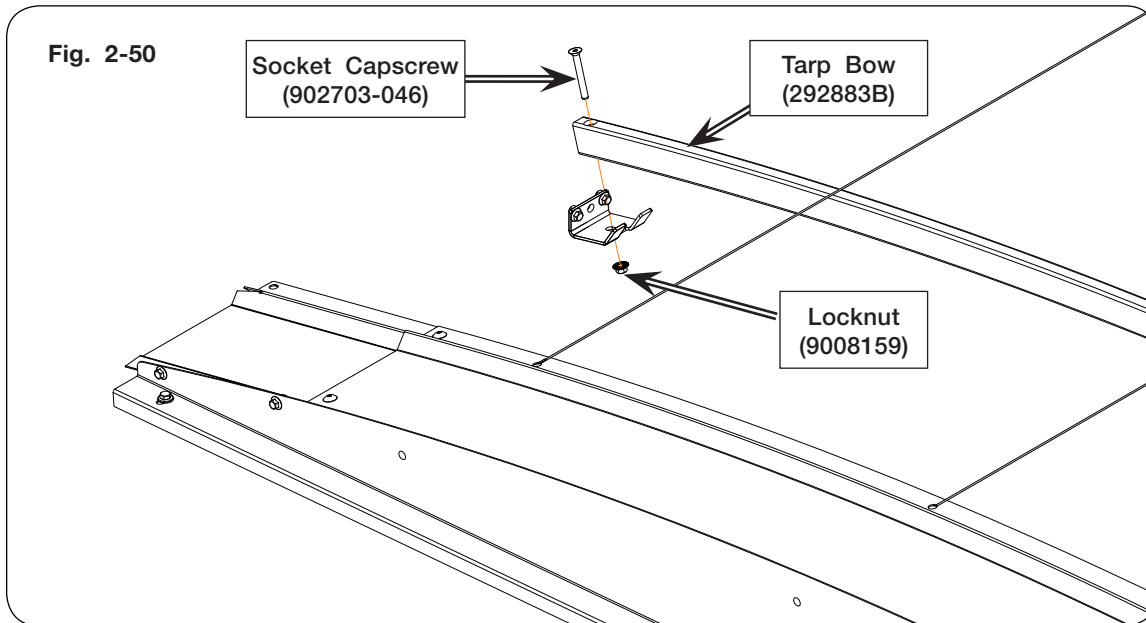
NOTE: Ensure sideboard doublers (289986B) are inside the left-hand sideboard lip. See FIG. 2-49.

6. Attach left-hand bow brackets (283427B) by sliding the sideboard doubler (289986B) under the upper lip of the sideboard. Attach bracket with 5/16"-18UNC x 1" large flange screws (97604) and 5/16"-18UNC locknuts (9010154). (FIG. 2-49)



7. Install seven tarp bows (292883B) to RH and LH brackets using 3/8"-16UNC x 3" capscrews (902703-046) and 3/8"-16UNC (9008159) locknuts. (FIG. 2-50)

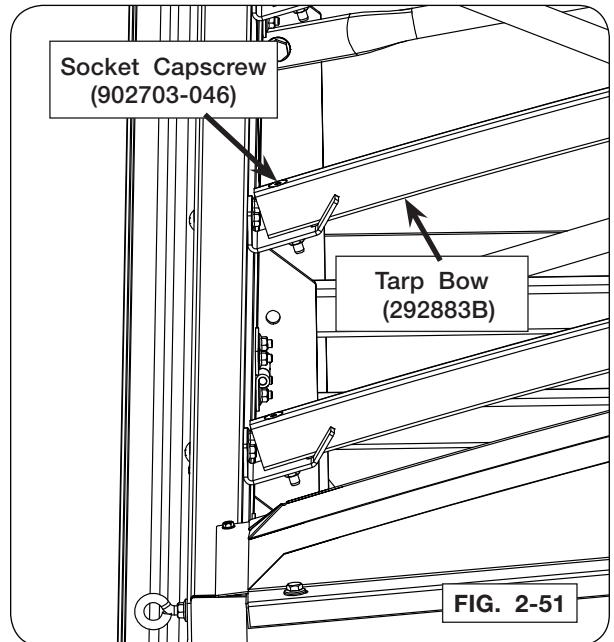
NOTE: Ensure socket capscrew head (902703-046) is flush with the top of bow weldment (292883B). (FIG. 2-50 and 2-51)



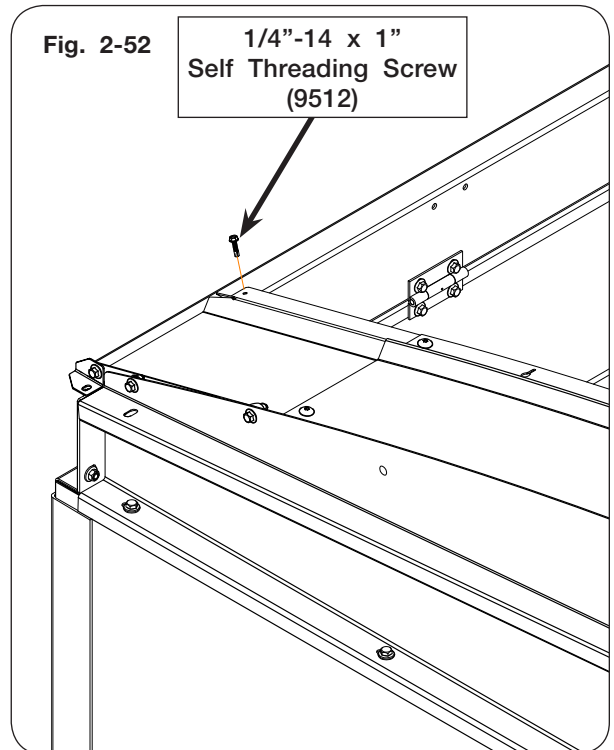
Weather Guard Tarp Set Up (continued)

NOTE: Ensure socket capscrew head (902703-046) is flush with the top of tarp bow (292883B). See Figure 2-51.

8. With the sideboards aligned and straight, tighten all hardware on sideboards, end caps, cart brace tubes, and tarp bows.
Torque 3/8" hardware to 25–28 ft.-lbs.

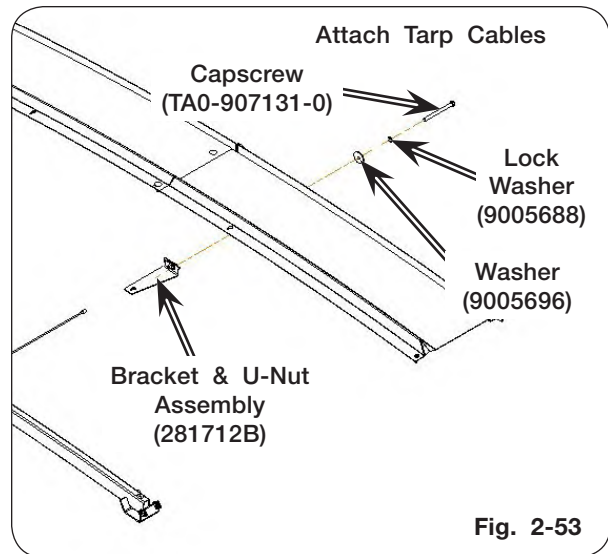


9. Retain sideboard covers (296549B - left-hand; 283431B - right-hand) to sideboards using 1/4"-14 x 1" self-threading screws (9512) (FIG. 2-52)

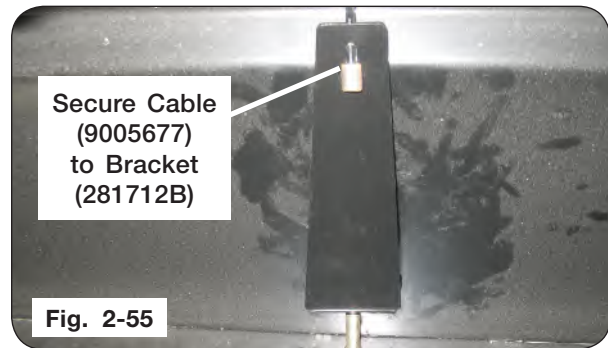
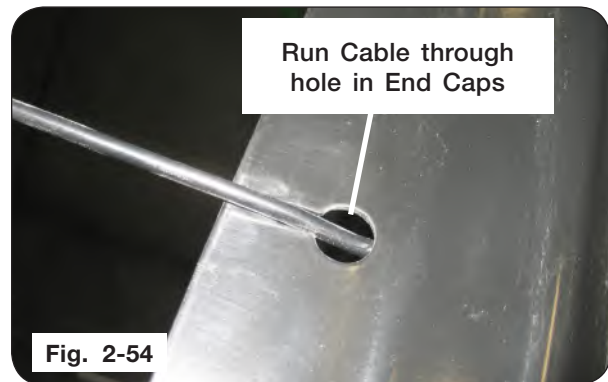


Weather Guard Tarp Set Up (continued)

10. Install four bracket & U-nut assemblies (281712B) using 3/8"-16UNC x 4 1/2" cap-screws (TA0-907131-0), 3/8" lock washers (9005688), and 3/8" fender washers (9005696). (FIG. 2-53)



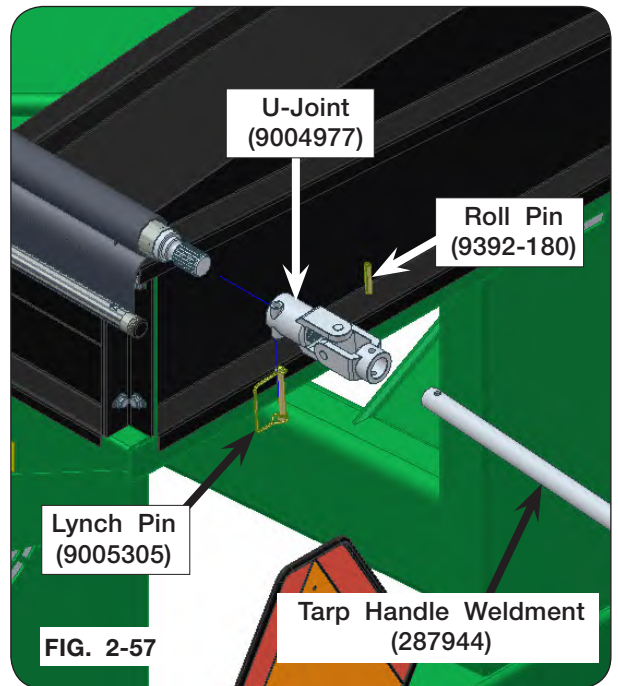
11. Insert nylon coated cable, through hole in front end cap and route over tarp bows. Insert through hole in rear end cap and secure to key-hole slot in adjusting bracket under end cap. (FIG. 2-54, 2-55 and 2-56)
12. Tighten cables until snug, without pulling front and rear board inward. Do not over-tighten.



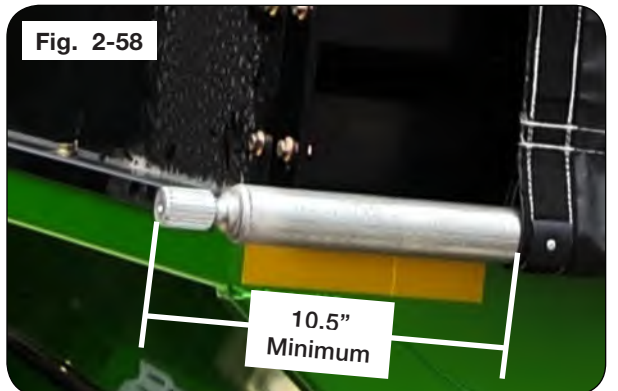
Weather Guard Tarp Set Up (continued)

13. Insert tarp handle weldment (287944) into U-joint and secure with roll pin (9392-180). Insert U-joint (9004977) over splined coupling and secure with wire lynch pin (9005305). (FIG 2-57).

NOTE: Remove cable ties holding tarp roll. Take care not to damage tarp.

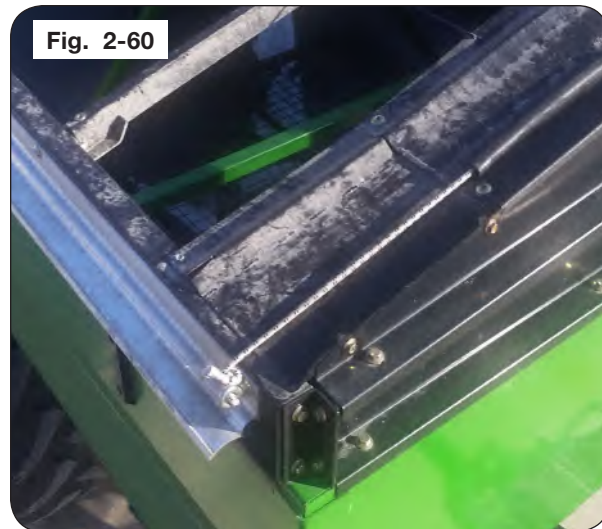
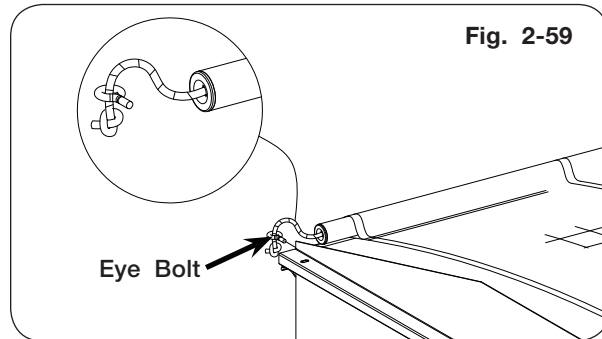


14. Remove tarp handle weldment from roll tube (221789).
15. Confirm that the roll tube protrudes at a minimum of 10.5 inches from the edge of tarp. (FIG. 2-58)
16. With the tarp in closed position and roll tube hanging over side of the cart, reattach crank handle to the roll tube with the lynch pin keeper (9005305) around the u-joint and roll tube. (FIG. 2-57)



Weather Guard Tarp Set Up (continued)

17. Turn the tarp handle clockwise with tarp rolled up under latch plate (296853 - front and rear; 296854 - middle), assemble bungee cord end through the top of the eye bolt (9004548). Leave 2-3" of slack and knot off. Cut off excess 2-3 inches past knot. Sear end with lighter to keep from fraying. (FIG 2-59 and 2-60).

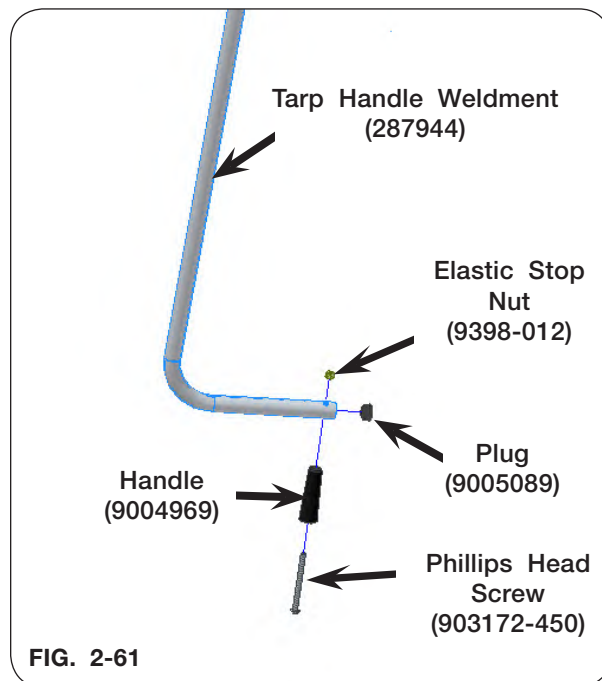


18. Insert phillips head screw (903172-450) into bottom hole of tarp handle weldment (287944) and slide the plastic handle (9004969) onto bolt securing with locknut (9398-012). Insert 1 1/4" plug (9005089) into end of handle (FIG 2-61).

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

NOTE: After the tarp is covering the cart, the 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.

19. Test tarp for proper working motion. (FIG. 2-61)



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.

NOTE: It is recommended the joystick and 7-pin connector be plugged into the same power source.

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

1. Lights - Work, Turn, Brake
2. Hydraulic Drive (if applicable)
3. Flow Door
4. Flow Door Indicator
5. Open & Close Cleanout Door
6. Auger Fold
7. Spout Rotate
8. Spout Tilt
9. Auger Startup & Shut-down
10. Tarp
11. Video System Camera (if applicable)
12. Scale (if applicable)



Notes

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FOR SCALE, TRACK, UHARVEST, HYDRAULIC DRIVE, ELECTRIC TARP, VIDEO SYSTEM
 OPTIONS, AND / OR WATER DELIVERY SYSTEM INFORMATION, PLEASE REFER TO THE
 SPECIFIC MANUAL.

Operating Checklist

- Read and understand all safety precautions before operating cart.
- R.V. antifreeze needs to be completely flushed from the Water Delivery System and disposed of properly. Make certain the Water Delivery System only contains water before placing the Water Delivery System in service. (If applicable)
- Test operation and functionality of flow door stop (293781B). See “Auger System - Auger Flow Door Cylinder Stop” in MAINTENANCE.
- Test operation and functionality of flow door, flow door indicator, auger fold, spout rotate, spout tilt, tarp, and if equipped, hydraulic jack stand, scale, joystick, scale remote display, video system, and water delivery system.
- Verify transport lights are working properly. Check and follow all regulations before towing on a road or highway.
- Verify tractor drawbar height and length. See “Preparing Tractor” in this section.
- Verify hitch height and length as outlined in OPERATION section.
- Ensure cleanout door is closed and latched.
- Ensure side ladder is in storage position.
- Ensure transport chains are properly installed and hardware is torqued 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.

If equipped, check the tractor and cart electric tarp connection. Refer to electric roll tarp manual (291206) for details.

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 set to lowest engagement modulation for smoothest operation.

Ensure that PTO engagement setting is set to minimum (or softest) setting.

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

Set tractor drawbar according to the tractor operators manual.

Preparing Tractor

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

Verify that the tractor has adequate weight to tow this implement and any combination of implements.

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.

NOTE: The grain cart comes with a CAT 4 hitch utilizing a 2" diameter pin. A CAT 5 hitch is available for a 2 3/4" diameter pin.

CAUTION

- **USE OF NON-MATCHING CATEGORY HITCH AND TRACTOR DRAWBAR CONNECTION WILL RESULT IN POOR HITCH PERFORMANCE AS WELL AS DAMAGE TO TRACTOR, IMPLEMENT OR BOTH.**

Hitch pin sizes for each Category to help identify which Category drawbar you have.

Category 4	2" Dia. (50 mm)
Category 5	2-3/4" Dia. (70 mm)

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

Preparing Cart

Perform the service checks as outlined below. 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/drawbar you are using.

Auger

Inspect auger for damage and wear.

Preparing Cart (continued)

Auger Driveline Assembly

Inspect auger driveline for damage and wear. Check for correct driveline phasing. Refer to MAINTENANCE section for additional information on safe driveline phasing, replacement and assembly.

Soft Start System

Check for wear or damage. Lubricate as recommended. Do not over lubricate.

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.

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.*

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.

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 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. (FIG. 3-1)

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.

NOTE: CAT 5 tongue is available for a 2 3/4" diameter pin. Contact your dealer if a CAT 5 tongue/hitch, if required.

Lock tractor drawbar in center position.

Refer to the tractor Operator's Manual for information on tractor drawbar length.

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. 3-2)

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

NOTE: Hitch tang can be flipped providing a drawbar connection height difference of 2 7/8" (FIG. 3-3). Position the hitch tang 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.

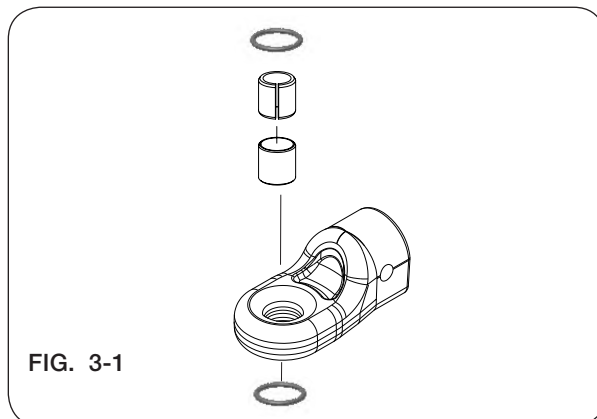


FIG. 3-1

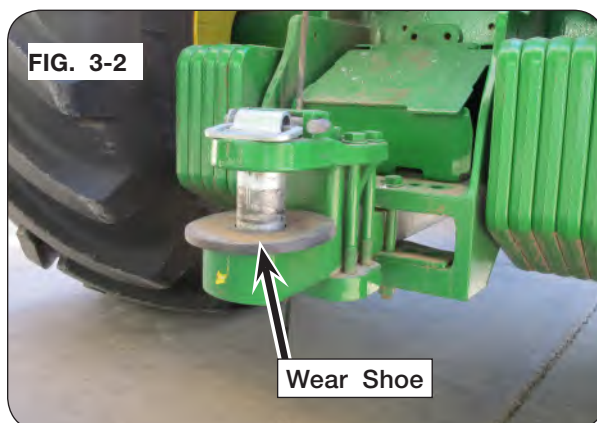


FIG. 3-2

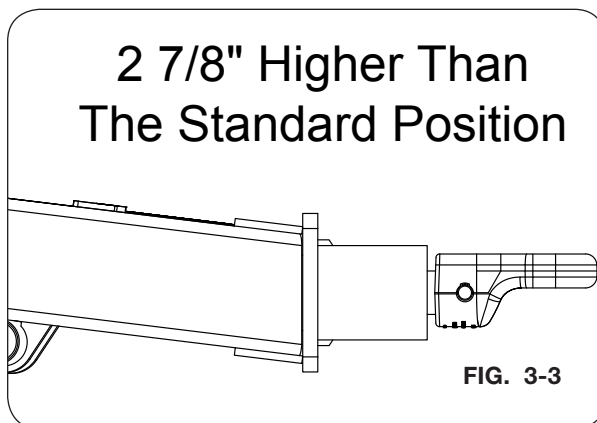


FIG. 3-3

Hitching to Tractor (continued)

Jack Usage

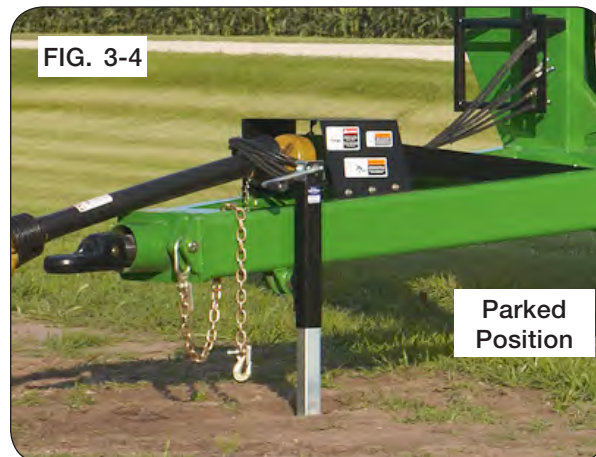
WARNING

- 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

- Failure to store the jack in storage position could result in damage to the jack, cart, or tractor tire. (FIG. 3-6)

Use jack to support an empty grain cart, never a loaded grain cart. Always have a loaded grain cart hooked to tractor. Attach jack to left outside frame using pin and hair pin. Mount jack in storage position once cart is hitched to tractor. (FIG. 3-4 and 3-5)



Hitching to Tractor (continued)

Optional Hydraulic Jack Usage

⚠ WARNING

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

Use jack to support an empty grain cart, never a loaded grain cart. Always have a loaded grain cart hooked to tractor.

IMPORTANT

- After cart is hitched to tractor, attach hydraulic hoses to tractor and fold hydraulic jack up between the frame rails.

Always close the manual valve for the hydraulic jack for in-field use and when unhitching from the tractor. (Fig. 3-6)

1. Remove hoses from storage slots.
2. Attach jack cylinder hoses to tractor.
3. Open valve to allow hydraulic flow.
4. Use tractor hydraulic valve to extend cylinder and lift tongue.
5. Once attached to tractor drawbar, retract cylinder to lower tongue and to raise jack into storage position.
6. Close valve and then disconnect hose couplers from tractor.
7. Place hose couplers into storage caddy. Be sure to route hoses to clear PTO driveline during operation.
8. Check for leaks.

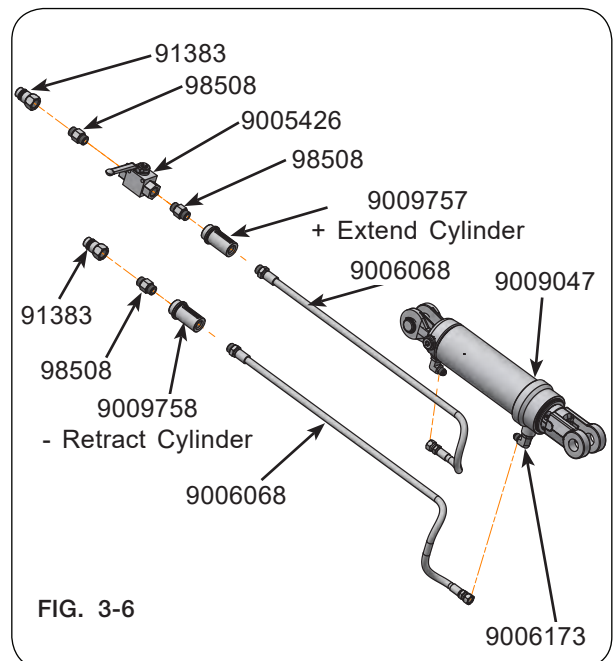


FIG. 3-6

Hitching to Tractor (continued)

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.
- REPLACE TRANSPORT CHAIN IF ANY LINK OR END FITTING IS BROKEN, STRETCHED, DAMAGED OR NOT FUNCTIONING. DO NOT WELD TRANSPORT CHAIN.
- THE STANDARD TRANSPORT CHAIN IS DESIGNED ONLY FOR AN EMPTY GRAIN CART DURING ROAD TRAVEL.
- USE ONLY AN UNVERFERTH ASABE TRANSPORT CHAIN WITH A WEIGHT RATING EXCEEDING THE GROSS COMBINED WEIGHT OF ALL TOWED IMPLEMENTS. CONTACT YOUR UNVERFERTH DEALER FOR ADDITIONAL INFORMATION.
- THIS ATTACHMENT WILL ADD TO THE WEIGHT OF THE IMPLEMENT. ENSURE THE IMPLEMENT IS RATED TO CARRY THE ATTACHMENT AND HAS A TRANSPORT CHAIN RATING THAT EXCEEDS THE TOTAL COMBINED WEIGHT. CONTACT YOUR UNVERFERTH DEALER FOR ADDITIONAL INFORMATION.

Tractor must be equipped with a transport chain support. Always use intermediate chain support when connecting the grain cart directly to a tractor. DO NOT use the intermediate chain support as the chain attaching point. See tractor operator's manual for proper chain attachment. Figure 3-7 shows how the transport chain must be installed between the tractor and grain cart.

The transport chain is rated for towing the grain cart empty on public roads. Never tow a loaded grain cart on public roads.

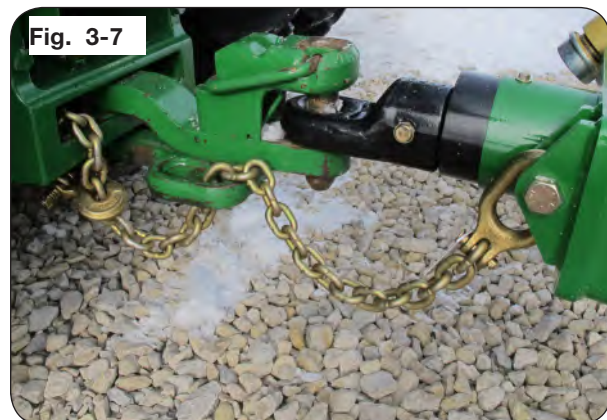


Fig. 3-7

Hitching to Tractor (continued)

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. (FIG. 3-8)

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-coded grips on the hydraulic hoses. This will help in identifying the hose function and correct hook up.

Color	Hose Function
Red	Flow Door Open (+) and Close (-)
Yellow	Spout Tilt Out (+) and Tilt In (-)
Tan	Spout Rotate Out (+) and In (-)
Green	Auger Unfold (+) and Fold (-)
Black	Jack Raise (+) and Lower (-)
Blue	Water Pump



FIG. 3-8

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.

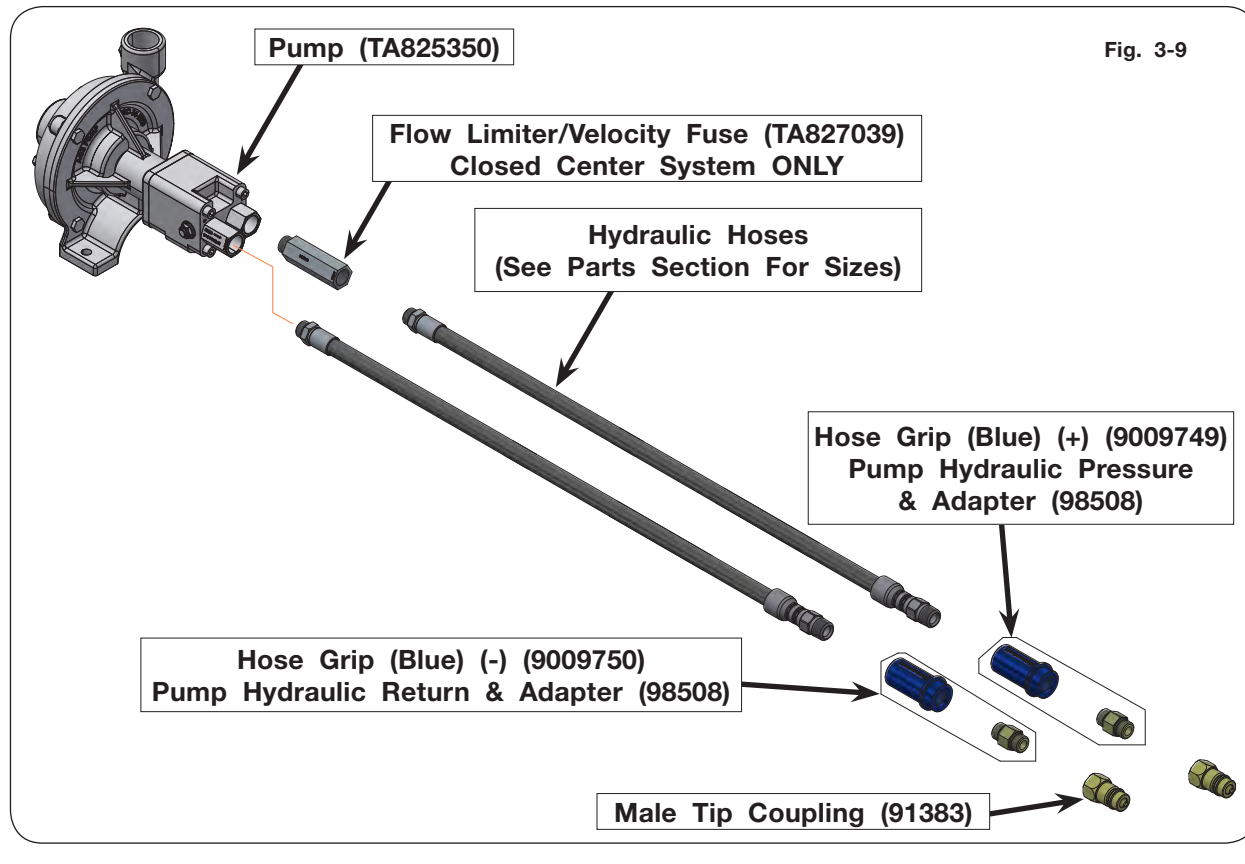
Before disconnecting hoses from tractor, place tractor in Park and shut PTO off, operate auger fold and tilt to the lowest positions. Where possible, remove hydraulic pressure loads and avoid potential pressure buildup in the lines from long storage periods such as upper auger not in rest position. See 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 for Hydraulic Drive

Refer to grain cart’s Hydraulic Drive Manual (282894) for installation, operation and parts of the Hydraulic Drive.

Hitching to Tractor (continued)

Hydraulic Connections For Optional Water Delivery System



Hitching to Tractor (continued)

Electrical Connections

This cart is equipped with a seven-pin SAE connector plug which will connect with the receptacle found on most tractors on the market today. If your tractor does not have this type of receptacle, an SAE J-560 seven-pin socket can be purchased from your Unverferth dealer (Part number 92824). (Fig. 3-10)

NOTE: It is recommended the joystick and 7-pin connector be plugged into the same power source.

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

If equipped, check the tractor and cart electrical tarp connection. Refer to electric roll tarp manual (291206) for details.

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

- When the tractor field lights switch is on; the Side Marker lights and the amber turn signal lights are on solid and will not flash.
- When the flashers and/or turn signal is on; the Side Marker lights flash in unison with their respective side's amber turn lamp.

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.

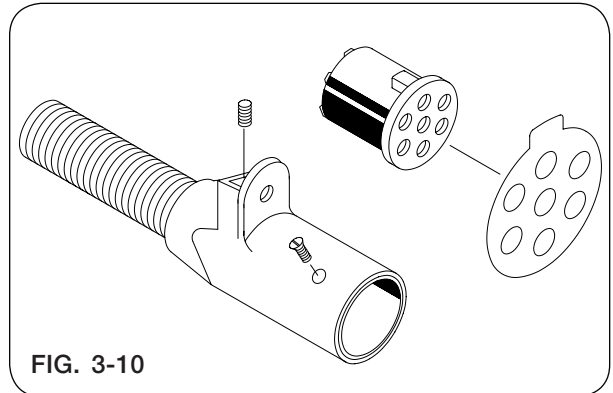


FIG. 3-10

Hitching to Tractor (continued)

Towing

This cart is not equipped with brakes. Ensure that the towing vehicle has adequate weight and braking capacity to tow this implement. See towing vehicle's owner's manual for towing and braking capacities. Never tow a loaded grain cart over public roads.

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.

The PTO driveshaft must be properly attached to the tractor during transport. See "Driveline Installation" in SET UP section and "PTO Shaft and Clutch" in MAINTENANCE section before connecting the PTO driveshaft to the tractor.

Secure the transport chain to tractor chain before towing.

CAUTION

- THE STANDARD TRANSPORT CHAIN IS DESIGNED ONLY FOR AN EMPTY GRAIN CART DURING ROAD TRAVEL.

Rotate the directional spout to the narrowest transport width position.

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.

Always fold auger into storage position when auger is not in use.

IMPORTANT

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

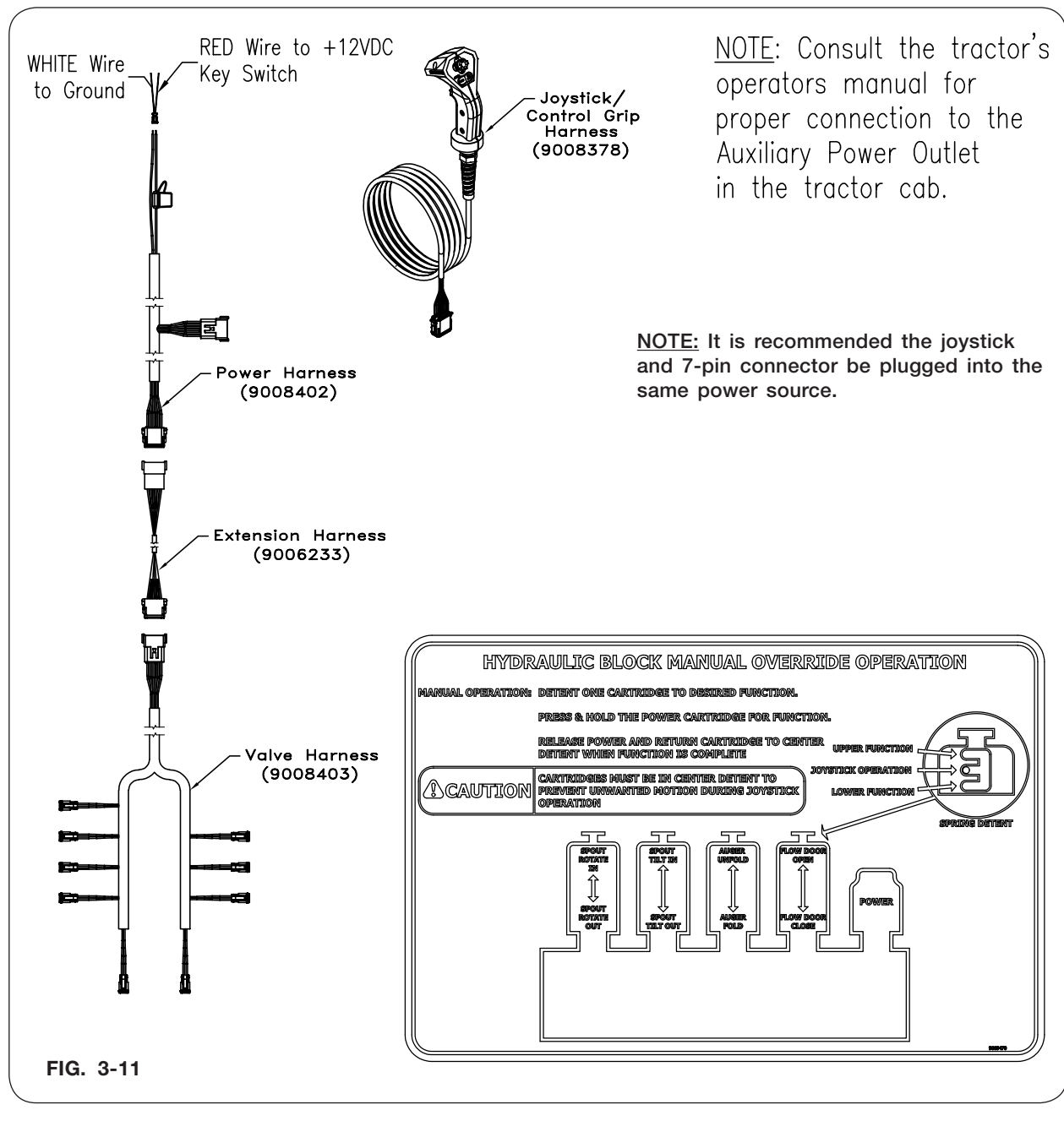
During transport, if the PTO shaft cannot be connected to the tractor, use a safe lifting device rated at 100 lbs. to remove the PTO telescoping shaft and place in the storage position. Damage to frame and driveline may result if PTO is not placed on storage brackets. To prevent damage during turning when using non-PTO equipped towing vehicles, use a safe lifting device rated at 100 lbs. to store the PTO driveshaft in the brackets provided on the rear of the frame rail.

Electric Over Hydraulic Operation (Optional)

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. 3-11)
2. Connect the white wire from power harness (9008402) to ground. (FIG. 3-11)



Electric Over Hydraulic Operation (Optional) (continued)

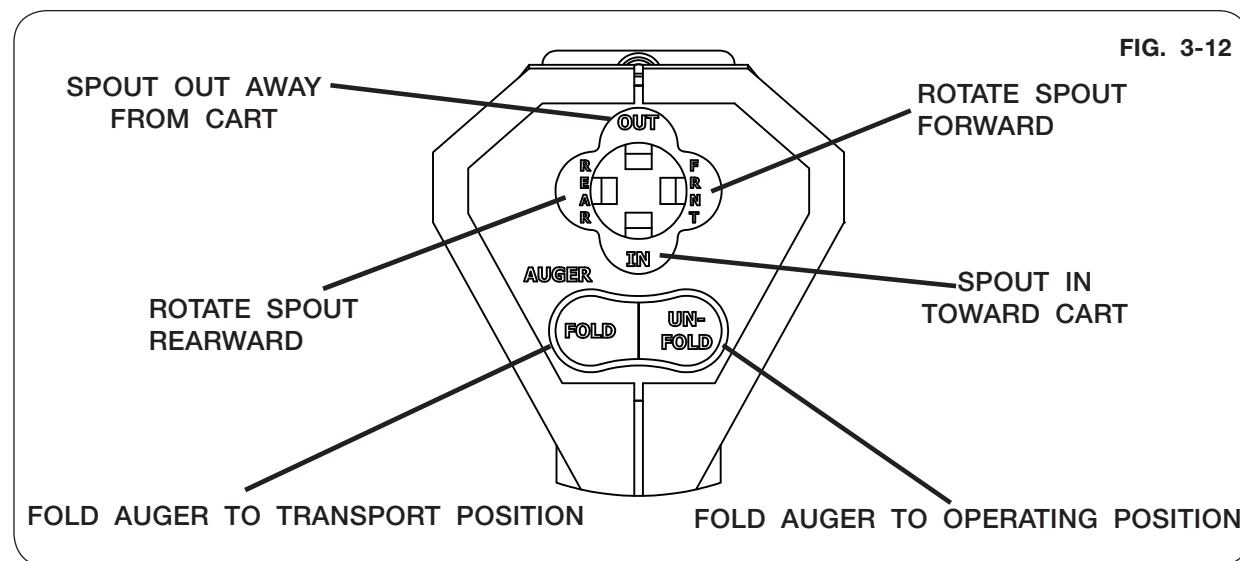
3. Connect the Hydraulic Pressure and Return hoses to the tractor SCV remote so that the Pressure line is able to be put in continuous detent.
4. Place the remote in continuous detent so that the Hydraulic Pressure hose is pressurized and set the hydraulic flow to a maximum of 6 gal/min. to minimum 4 gal/min.
5. To fold auger out from transport to operating position, depress the auger unfold button on joystick face until the upper and lower auger are engaged. See FIG. 3-12.

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 tilt spout OUT away from cart, push hat switch toward OUT. Hold the switch until desired position is achieved. See in FIG. 3-12.
7. To tilt spout IN toward cart, push hat switch toward IN. Hold the switch until desired position is achieved. See in FIG. 3-12.
8. To rotate spout FORWARD, push hat switch toward FRNT. Hold the switch until desired position is achieved. See FIG. 3-12.
9. To rotate spout REARWARD, push hat switch toward REAR. Hold the switch until desired position is achieved. See FIG. 3-12.

NOTE: Refer to “Troubleshooting” for EOH and/or auger issues in the MAINTENANCE section.

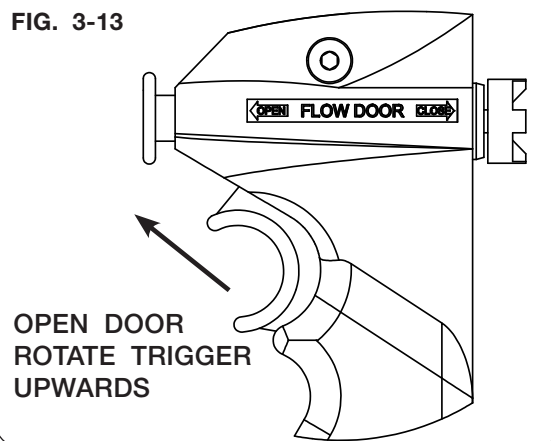
10. To fold auger from operating position to transport position, press auger FOLD button on joystick. See FIG. 3-12



Electric Over Hydraulic Operation (Optional) (continued)

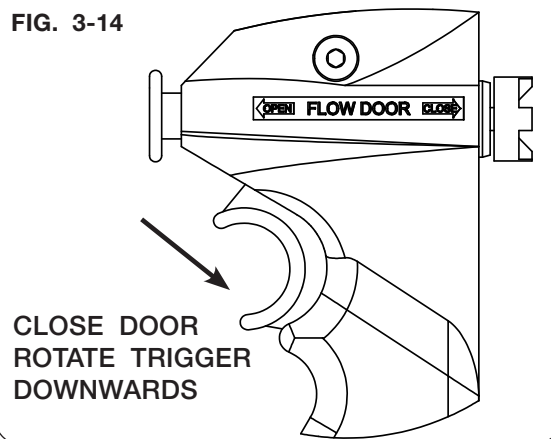
11. To open flow door, rotate the switch upwards. Observe flow door indicator to determine when to release trigger and stop flow door movement. See FIG 3-13.

FIG. 3-13



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. 3-14.

FIG. 3-14



NOTE: Refer to “Troubleshooting” for EOH and/or auger issues in the MAINTENANCE section.

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

Cart Loading Sequence

WARNING

- NEVER LOAD THE REAR OF A GRAIN CART FIRST. LOAD THE CART EVENLY TO MAINTAIN WEIGHT ON THE TRACTOR DRAWBAR. LOADING ONLY THE FRONT, OR ONLY THE REAR, CAN CAUSE A LOSS OF CONTROL.
- TIPPING OR MOVEMENT OF THE MACHINE CAN CAUSE SERIOUS INJURY OR DEATH. BE SURE THE MACHINE IS SECURELY BLOCKED.
- UNHITCHING A LOADED CART CAN CAUSE SERIOUS INJURY OR DEATH DUE TO THE TONGUE RISING OR FALLING. ALWAYS HAVE A LOADED CART ATTACHED TO A TRACTOR. THE JACK IS INTENDED TO SUPPORT AN EMPTY CART ONLY.
- NEVER ENTER A CART CONTAINING GRAIN. FLOWING GRAIN TRAPS AND SUFFOCATES VICTIMS IN SECONDS.

1. Ensure auger flow door is closed before loading cart.
2. Fill the cart starting just forward of the axle until nearly full.

NOTE: Overfilling the front or rear area of the hopper can result in reduced control of the cart when towing.

3. Fill the rear area of the hopper before topping off the front area. This maintains proper weight on the hitch of the tractor.

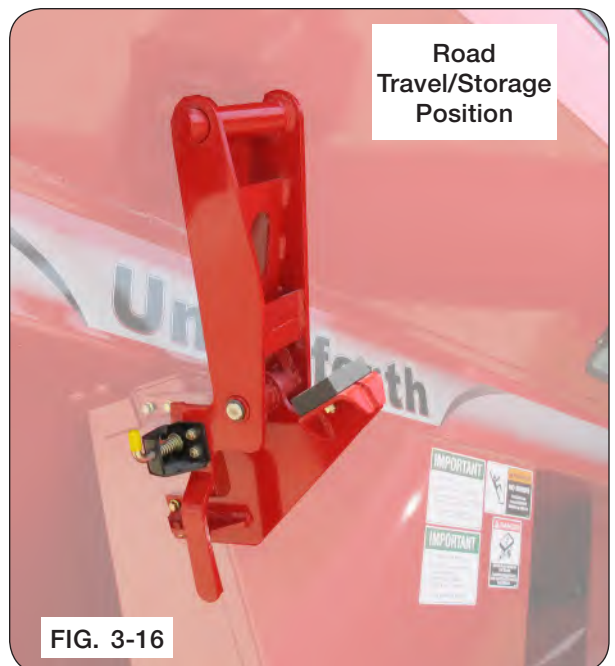
Auger

Using In-Field Transport Stand (SN B37680139 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. 3-15). 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. 3-16)
6. Move auger to storage position.



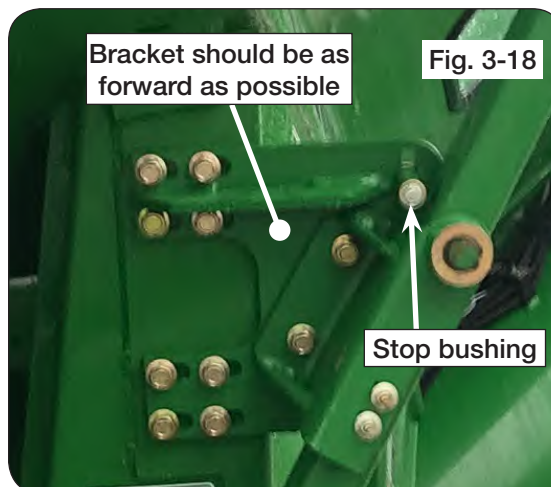
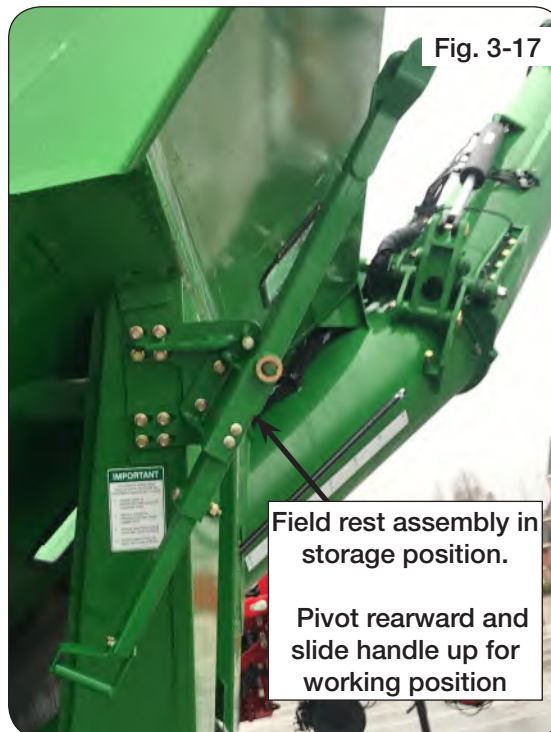
Auger (continued)

Using In-Field Transport Stand (SN B37680140 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. 3-17)

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 unload 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. 3-18)
7. Tighten bolts on field rest stand assembly.
8. Fold the auger to storage position.



Auger Operation

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 EN-TANGLED 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.

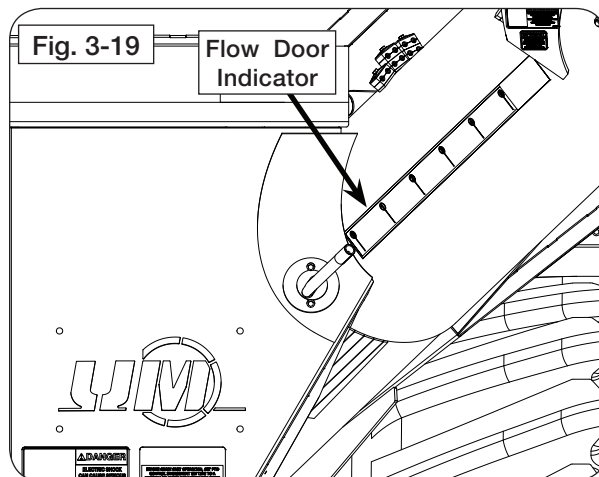
NOTE: Minimum of 1,000 PTO RPM MUST be maintained when operating the flow door at the maximum setting.

4. Engage tractor PTO at low engine RPM, then increase engine RPM until 1,000 PTO RPM is reached.

IMPORTANT

- *Operating the PTO at less than 1,000 RPM can result in damage to the PTO and driveline components in addition to excessive auger wear and cart vibration.*

5. Open the flow control door to the desired unloading rate. Numbers on auger tube provide a reference for operator convenience. (FIG. 3-19)



IMPORTANT

- *Extensive operation while the clutch is slipping may damage drive components.*

(Continued on next page.)

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 tractor PTO at low engine RPM, and increase engine RPM until 1,000 PTO RPM is reached.

NOTE: For maximum flow of material, the factory-adjusted cylinder stop may be moved. See “Auger System - Auger Flow Door Stop” in MAINTENANCE.

Auger Operation (continued)

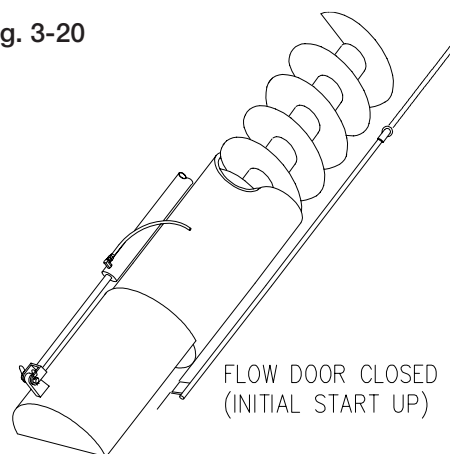
6. To slow or stop the grain flow, close the flow door, DO NOT reduce tractor/PTO RPM as a means to control grain flow. Close the flow door fully when unloading is complete. (FIG. 3-20)

NOTE: It is not recommended to disengage auger with flow control door open. Auger system will require substantially more torque to start, placing extra stress on both cart and tractor driveline.

7. When auger is empty, reduce tractor RPM to idle, then stop PTO.
8. 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. 3-20



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.

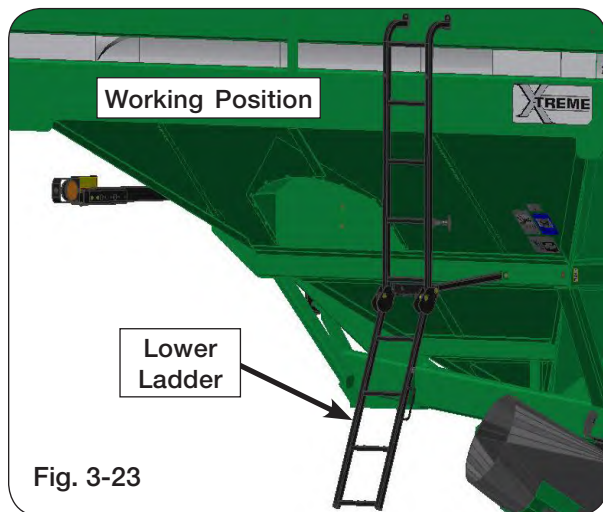
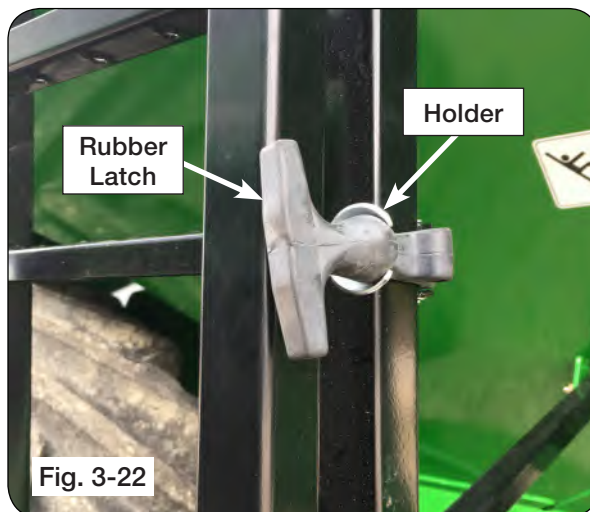
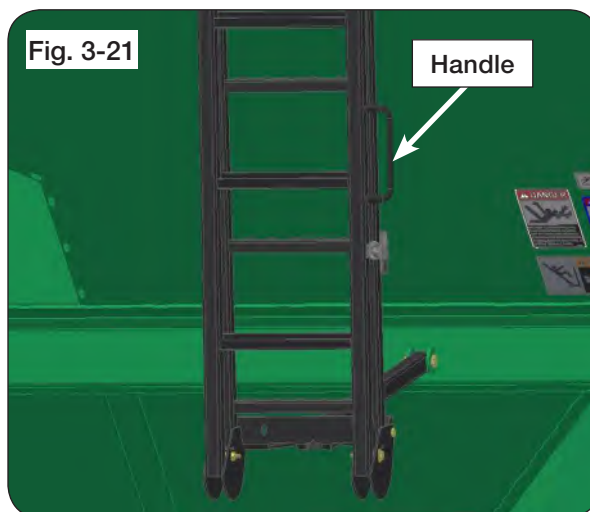
NOTE: Ensure ladder and steps are free from snow/debris before changing ladder positions and climbing.

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. 3-21 and 3-22)
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. 3-23)

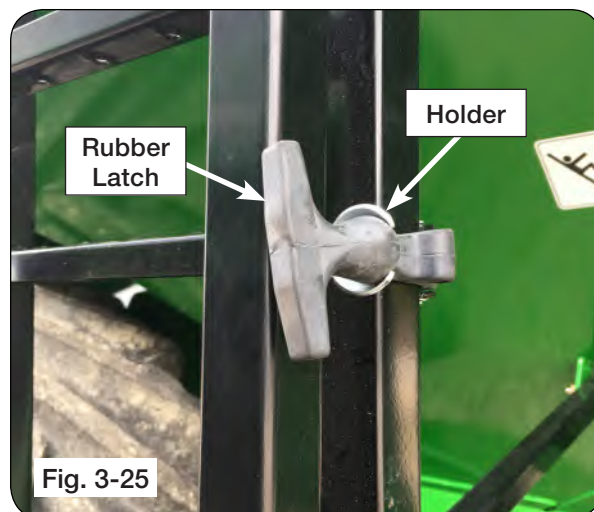
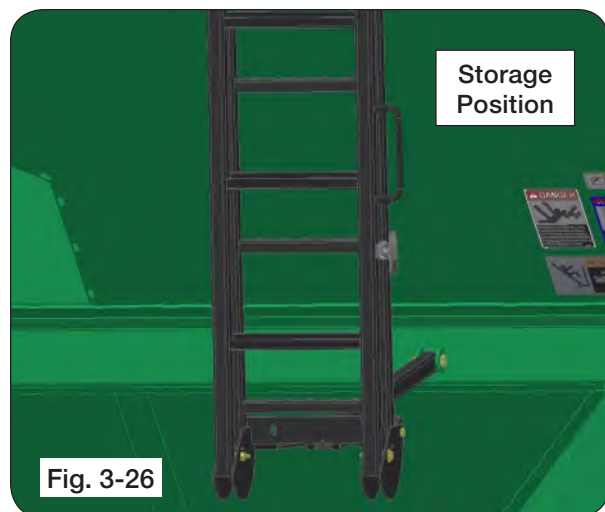
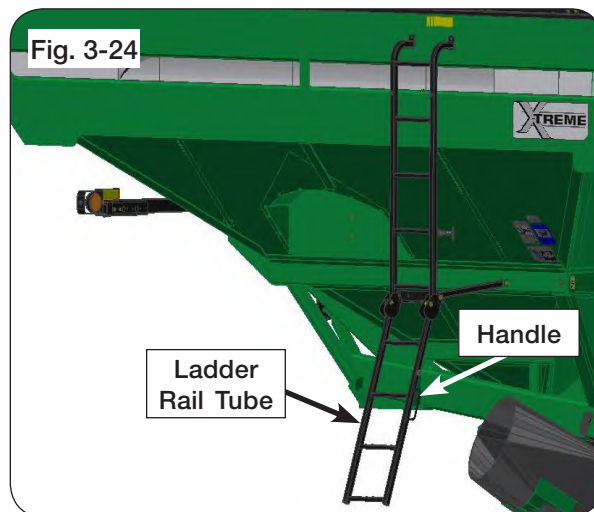
(Continued on next page)



Ladder Operation

Working to Storage Position

4. Standing in front of ladder, place hands on ladder handle and outside ladder rail tube. (FIG. 3-24)
5. Slowly lift and swing the lower ladder section to storage position. (FIG. 3-24)
6. Keep one hand on ladder handle and with opposite hand, attach rubber latch to holder to lock ladder in storage position. (FIG. 3-25 and 3-26)



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.

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. Fully close tarp with tension on the latch plate to prevent water from pooling.*

Always use caution when operating tarp.

If equipped, refer to electric roll tarp manual (291206) for operation details.

Open and close the tarp evenly.

Make sure tarp is open before loading.

Make sure all persons are clear of the tarp system before and during operating.

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

Remove any ice or 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.

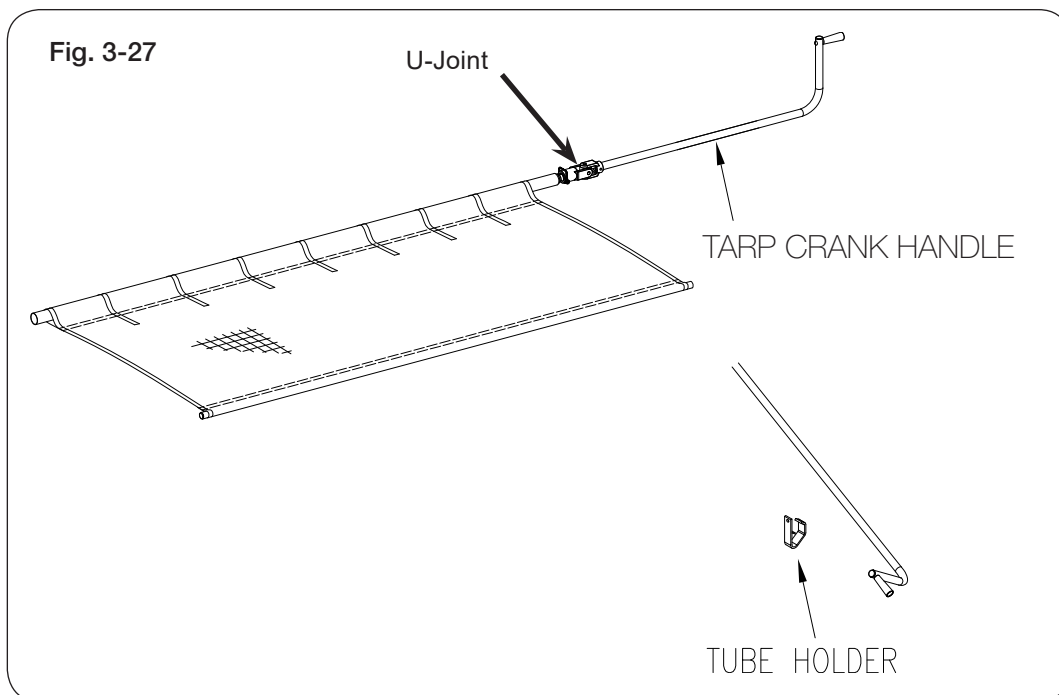
Ensure everyone who operates the tarp is familiar with the correct procedures outlined in this manual.

Weather Guard Tarp Operation (continued)

1. Using both hands, carefully remove the tarp handle from the tube holder. (Fig. 3-27)
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.

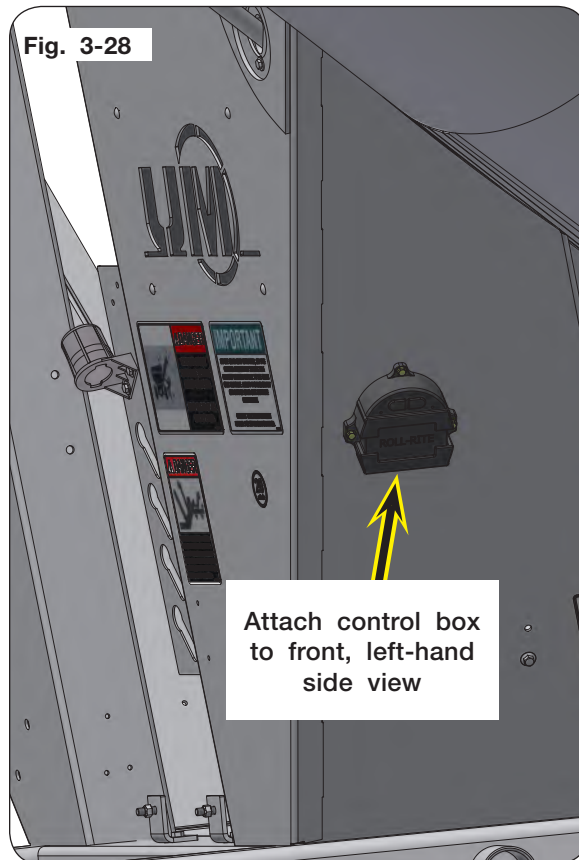


Weather Guard Tarp Operation (continued)

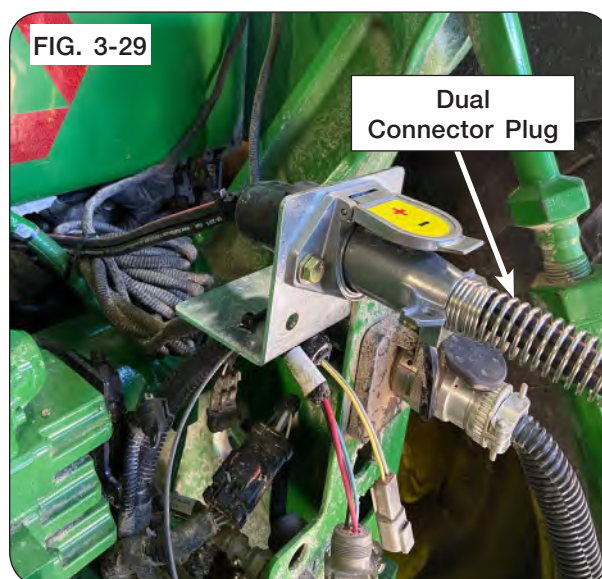
Electric Tarp Wireless Control Box Location - For SN B43320100 & Higher

NOTE: Refer to electric roll tarp manual (291206) for wireless operation details.

1. Position the control box on the cart to front, left-hand side support as shown in figure 3-28. If the holes are not predrilled, mark and drill the three 5/16" holes.
2. Secure control box to cart with hardware provided. (Fig. 3-28)
3. Route wire up to the front of the cart to the hose holder.



4. Dual connector plug (9005327) attaches to the socket on the back of the tractor as shown. (Fig. 3-29)
5. When electric tarp is not in use, place connector plug into storage caddy. Be sure to route connector plug harness to clear PTO driveline during operation.



Notes

SECTION IV

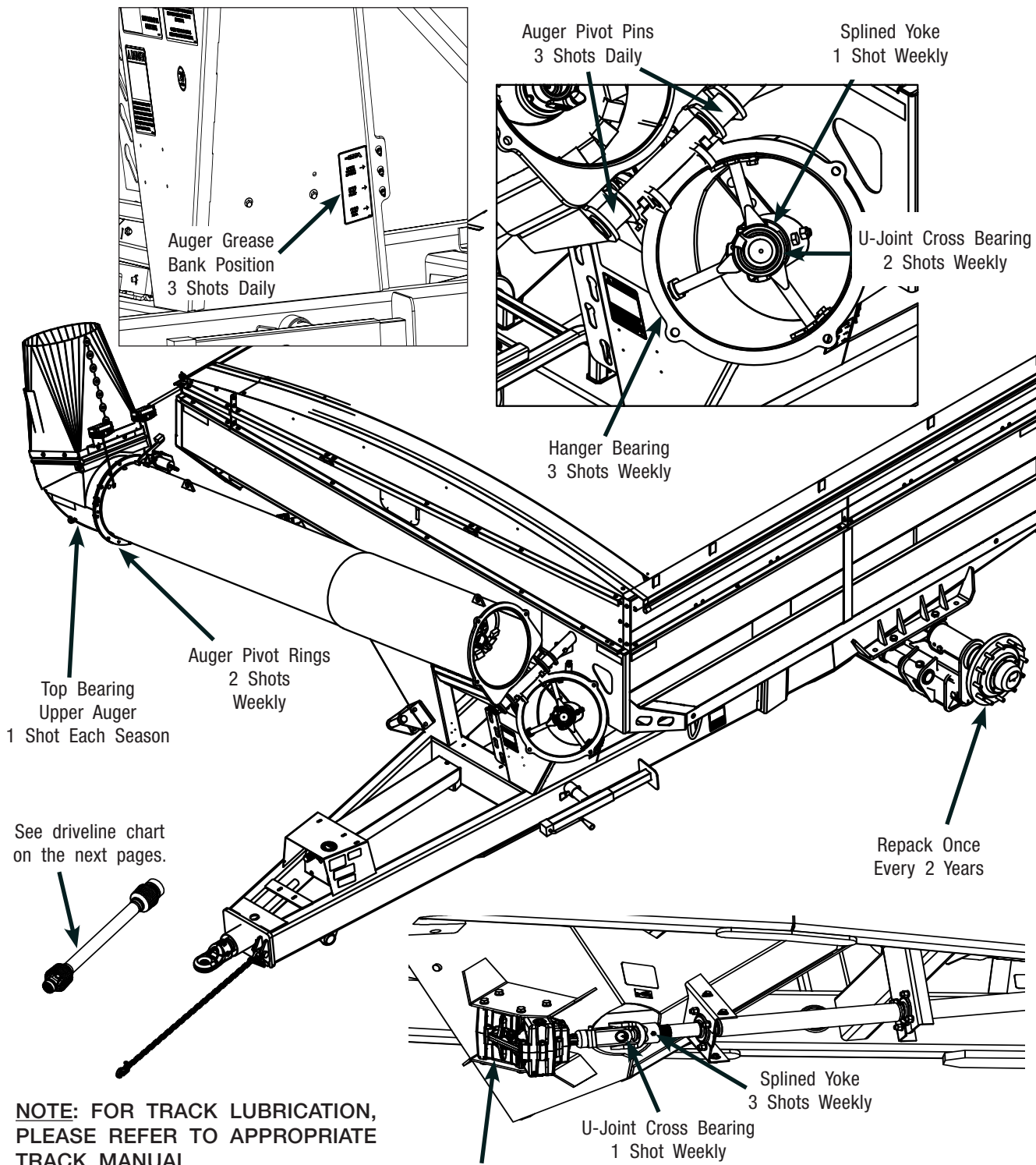
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FOR SCALE, TRACK, UHARVEST, HYDRAULIC DRIVE, ELECTRIC TARP, VIDEO SYSTEM
OPTIONS, AND / OR WATER DELIVERY SYSTEM INFORMATION, PLEASE REFER TO THE
SPECIFIC MANUAL.

Lubrication

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



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

Replace Every Season
 73 fl. oz. 80W/90 EP Lubricant
 or
 55 fl. oz. 80W/90 EP Lubricant

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:

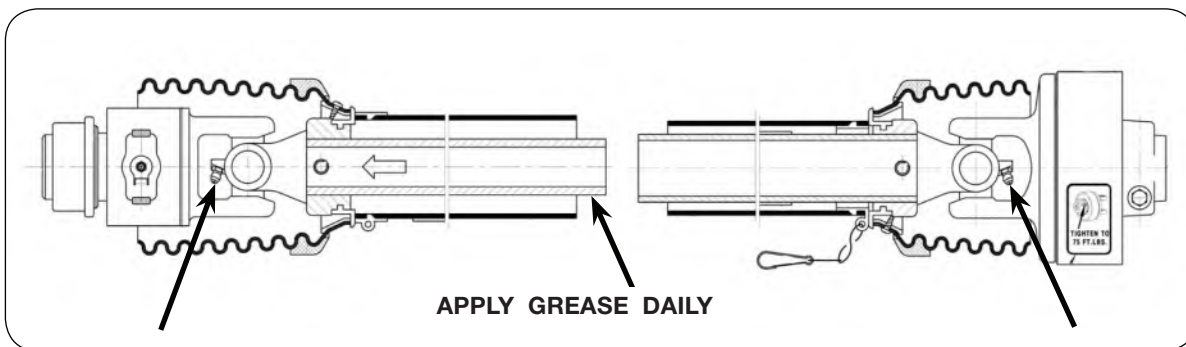
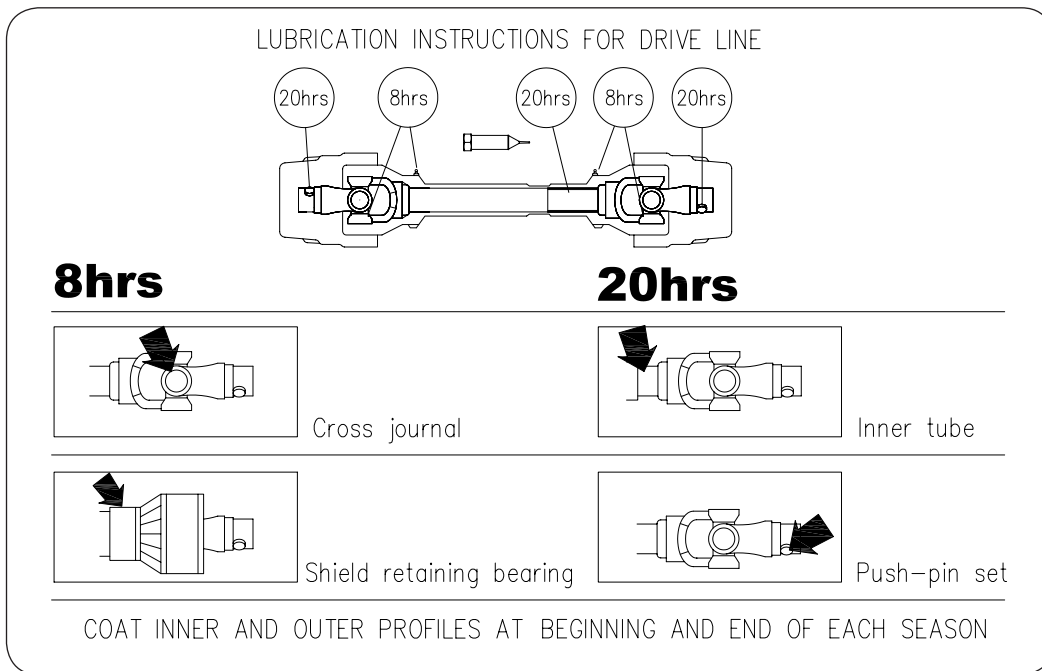
DESCRIPTION	POINT	LUBRICANT	QTY.	HOURS
PTO Driveshaft	7	EP-2	1 Shot	See Next Page
Gearbox - Check oil level every 2 weeks. Replace oil every season. Refer to Gearbox in MAINTENANCE section for instructions.	1	EP80W90	73 oz. Or 55 oz.	Once Every Season
U-Joint Cross Bearing - Driveline	1	EP-2	1 Shots	Weekly
Splined Yoke - Driveline U-Joint	1	EP-2	3 Shots	Weekly
Grease Bank Hanger Bearing - Lower Auger *See note below.	1	EP-2	3 Shots*	Daily
U-Joint Cross Bearing - Lower Auger	1	EP-2 Lithium Base w/o Moly	2 Shots	Weekly
Splined Yoke - Lower Auger	1	EP-2	1 Shot	Weekly
Top Bearing - Upper Auger	1	EP-2	1 Shot	Each Season
Pivot Rings - Upper Auger	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.

Lubrication (continued)

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! Check and grease the guard tubes in winter to prevent freezing.

NOTE: 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.



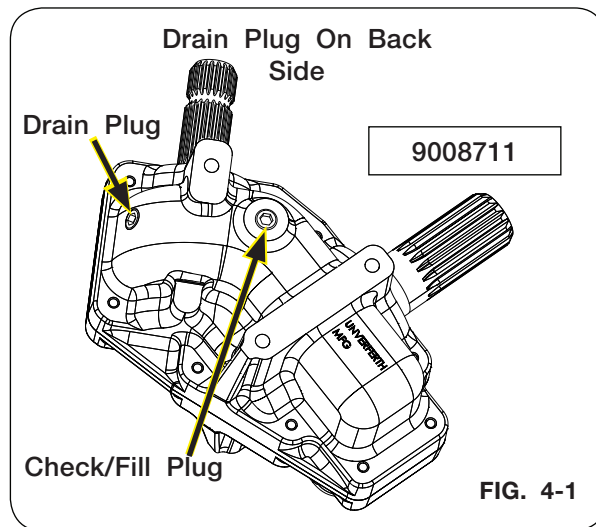
Gearbox Lubrication

For SN B42550100 & higher with gearbox (9008711), 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. (FIG. 4-1)

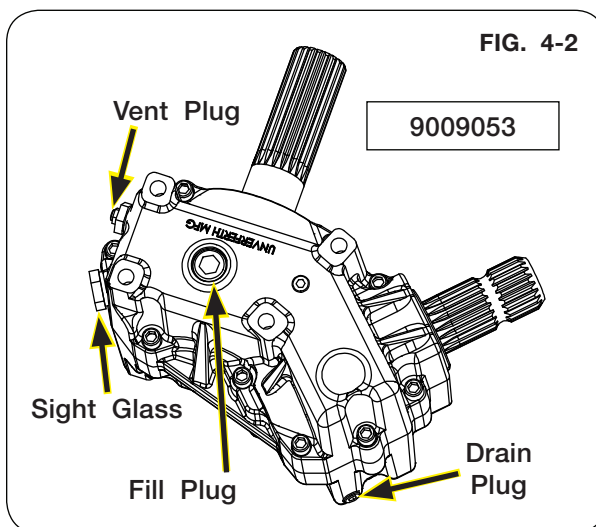
For Maximum gearbox life:

Check oil level every 2 weeks.

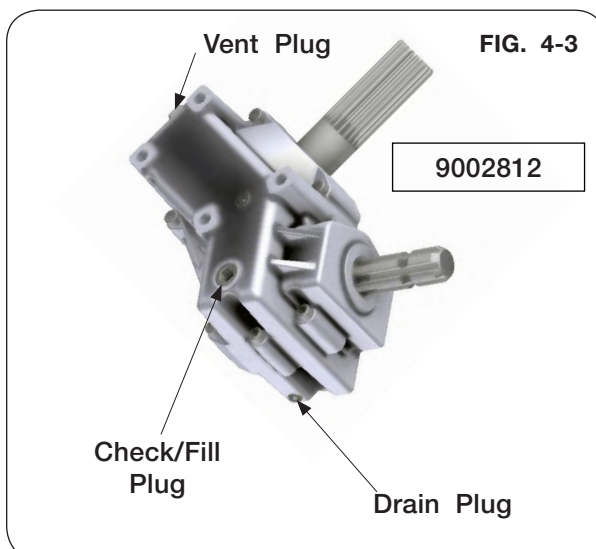
Replace oil every season with a minimum of 73 fl. oz. of 80W90 EP gear lubricant.



For SN B41330100 & B42550099 with gearbox (9009053), the fill plug is located on the left-hand front side of the housing. 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. (FIG. 4-2)



For SN B41330099 & lower with gearbox (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. (FIG. 4-3)



For Maximum gearbox life:

Check oil level every 2 weeks.

Replace oil every season with a minimum of 55 fl. oz. of 80W90 EP gear lubricant.

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 - Hydraulic Fittings” 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. LEAKS OF HIGH-PRESSURE FLUIDS MAY NOT BE VISIBLE. USE CARDBOARD OR WOOD TO DETECT LEAKS IN THE HYDRAULIC SYSTEM. SEEK MEDICAL TREATMENT IMMEDIATELY IF INJURED BY HIGH-PRESSURE FLUIDS.** 
- **KEEP CLEAR OF PINCH POINT AREAS.** 

Purge air from system as follows:

- A. Clear all personnel and objects from the area, including where the machine will have full range of motion during the hydraulic movement. Remove transport locks from the machine.
- B. Pressurize the system and maintain the system at full pressure for at least 5 seconds after the cylinder rods stop moving, or hydraulic motors have completed the required movement. Check that all movements are fully completed.
- C. Check oil reservoir in the hydraulic power source and refill as needed.
- D. Pressurize the system again to reverse the motion of step B. Maintain pressure on the system for at least 5 seconds after the cylinder rods stop moving, or hydraulic motors have completed the required movement. Check that all movements are fully completed.
- E. Check for hydraulic oil leaks using cardboard or wood. Tighten connections according to directions in the Torque Specifications in the MAINTENANCE section.
- F. Repeat steps in B, C, D, and E 10–12 times.

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.

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: It is recommended the joystick and 7-pin connector be plugged into the same power source.

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

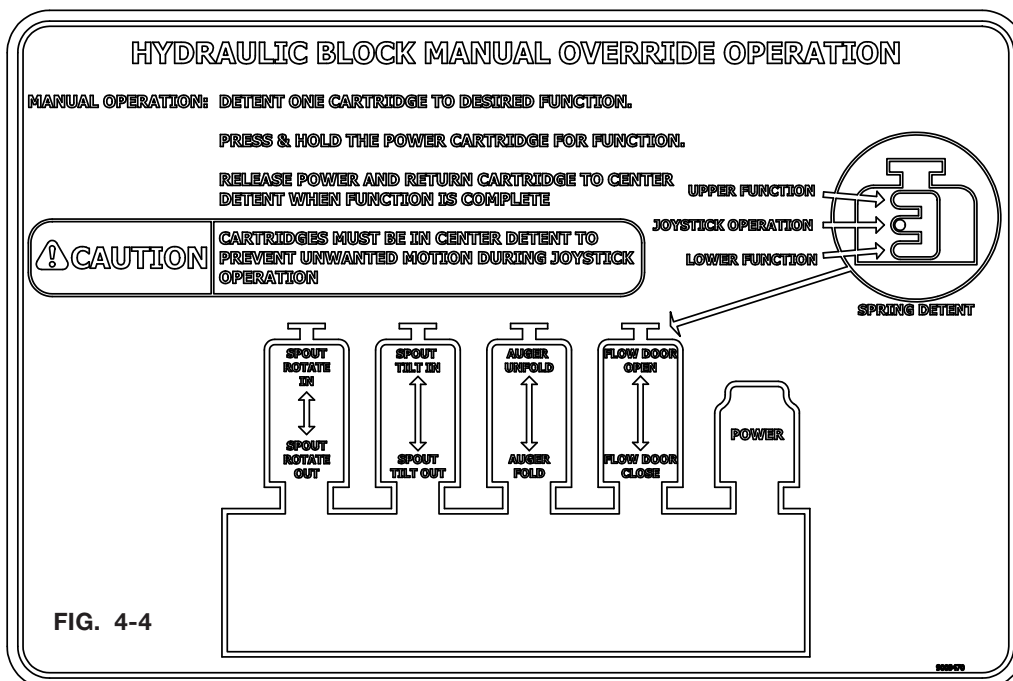


FIG. 4-4

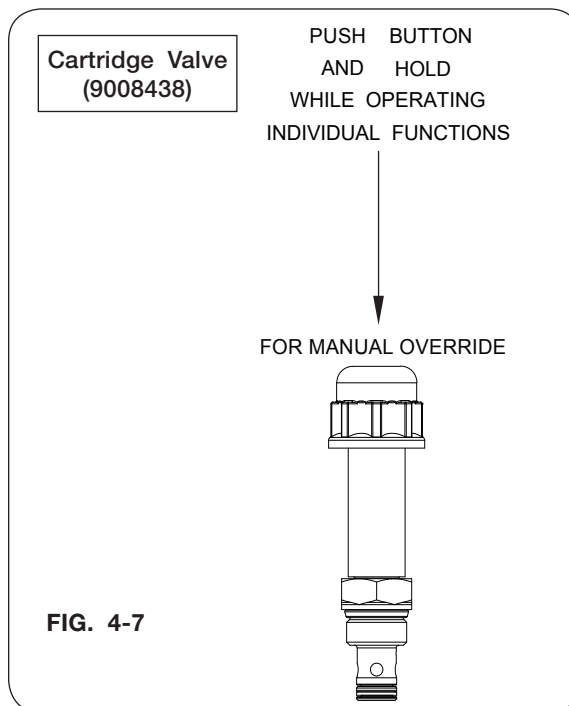
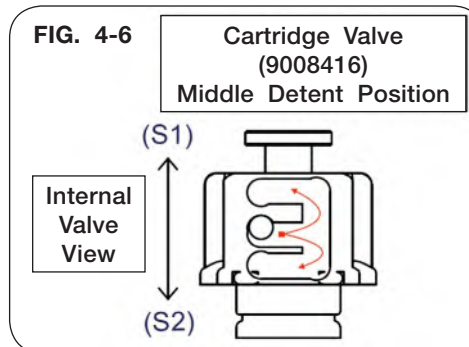
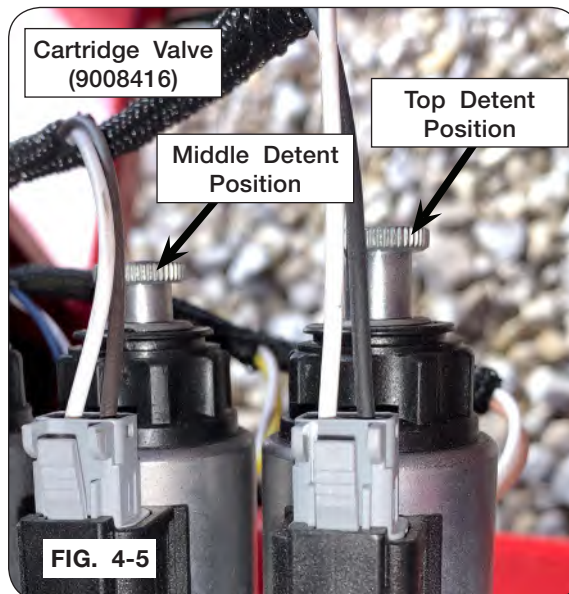
1. Park the empty grain cart on a firm and level surface. Block the machine to keep it from moving. Set the tractor’s parking brake.
2. Connect the Hydraulic Pressure and Return hoses to the tractor SCV remote so that the Pressure line is able to be put in continuous detent.
3. To operate the manual override functions, place the tractor SCV remote in continuous detent so that the Hydraulic Pressure hose is pressurized.

Manual Override for Optional Electric Over Hydraulic System
(continued)

NOTE: Only one cartridge valve (9008416) may be in the top or bottom detent position at a time to function properly. All other valves must be in the middle detent position. (FIG 4-5 & 4-6)

4. Locate desired function on valve (9008416) and move cartridge to top/bottom detent, as desired, and lock in position. (FIG. 4-7)
5. Push and hold the power cartridge on valve (9008438). (FIG. 4-7)
6. Once the desired position is reached, release manual override button on valve (9008438).
7. Return cartridge to center and lock valve (9008416) in position. (FIG. 4-5 & 4-6)
8. Turn off hydraulic circuit when done. Correct electric/hydraulic system before continued use. Consult your dealer for service and parts.

NOTE: Refer to “Troubleshooting” for EOH and auger issues in the MAINTENANCE section.



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.
- NEVER ENTER CART WITH AUGER OR TRACTOR RUNNING. SERIOUS OR FATAL INJURY CAN OCCUR DUE TO ENTANGLEMENT WITH ROTATING COMPONENTS. ALWAYS STOP ENGINE AND REMOVE KEY BEFORE ENTERING 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 2,000 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.
- SHARP EDGES ON THE MACHINE CAN CAUSE INJURY. BE CAREFUL WHEN WORKING AROUND THE MACHINE.



Auger System (continued)

Lower Auger

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 machine to keep it from moving.



Lower Auger Removal

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. 4-8)

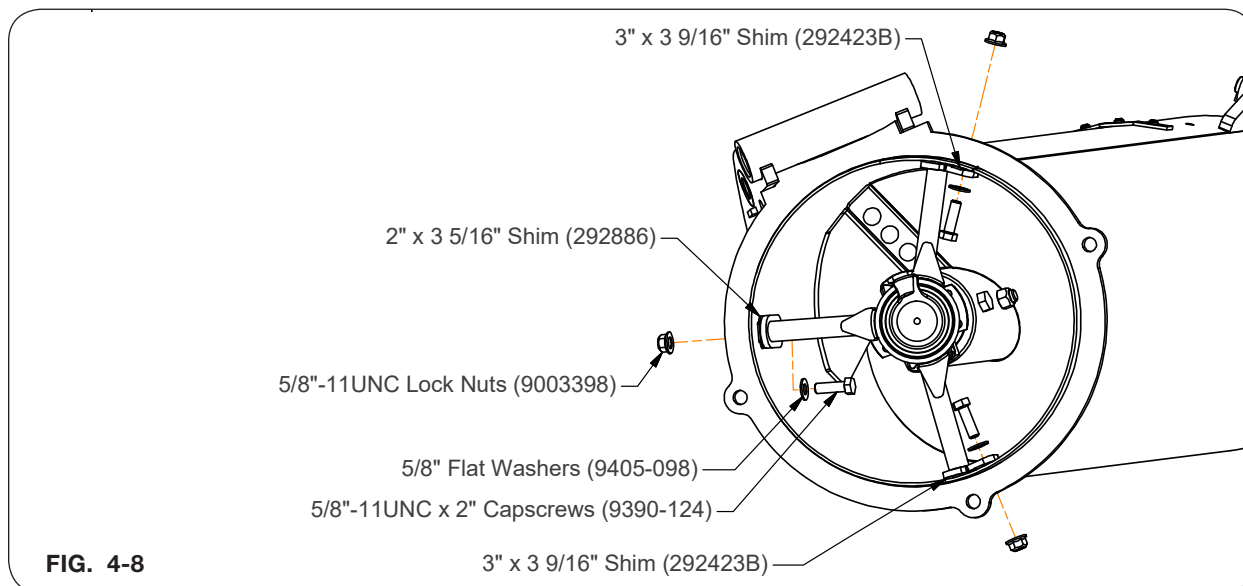


FIG. 4-8

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.

Auger System (continued)

Lower Auger Assembly

4. The replacement auger is factory balanced. Remove entire auger from shipping crate and secure from rolling. The lower auger assembly is pictured in FIG. 4-9 for reference.

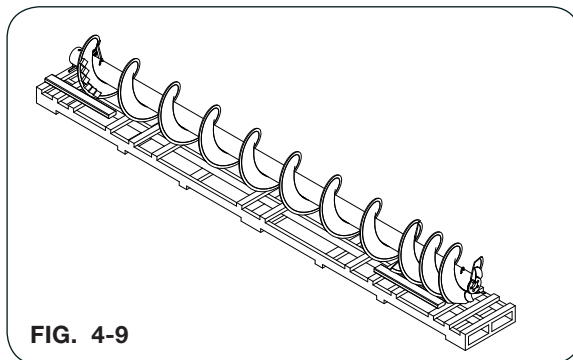


FIG. 4-9

5. Attach the u-joint assembly to the lower auger flighting by placing 3/4"-10UNC x 7 1/2" capscrews (9008114) and 3/4"-10UNC lock nuts (9802) into the auger from opposite directions as shown in FIG. 4-10.

NOTE: If reusing flighting extension, replace with new hardware and apply anti-seize to hardware before installing to auger flighting. Do not reuse old flighting extension hardware.

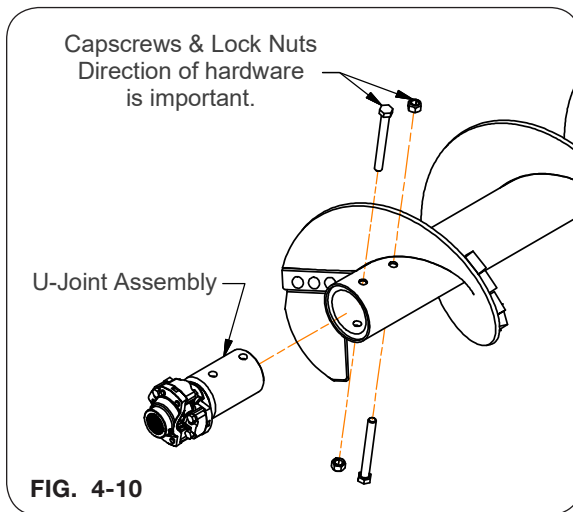


FIG. 4-10

6. 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.
7. Align auger end with the five pin auger drive plate assembly and securely engage together, see FIG. 4-11.

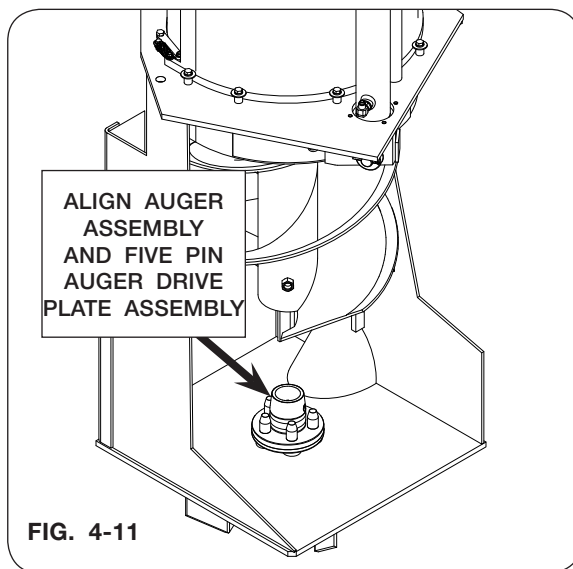
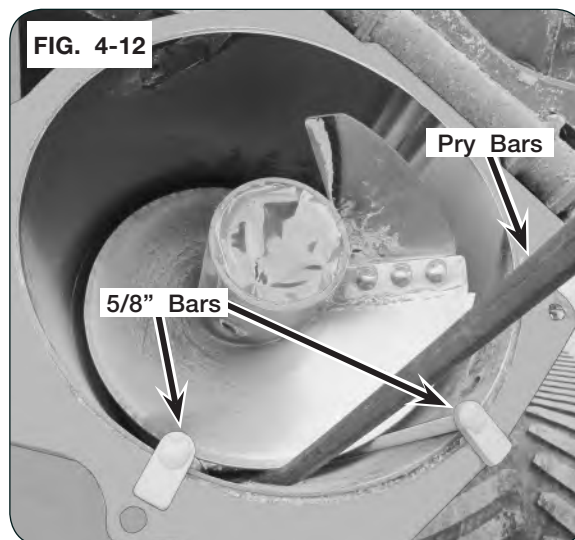


FIG. 4-11

Auger System (continued)

Hanger Bearing Centering

8. 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. 4-12)

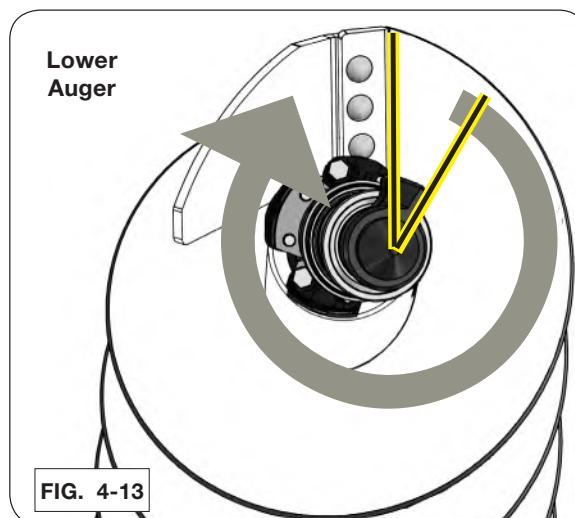


Lower Auger Timing

9. Apply anti-seize to the splines before sliding the drive dog into the u-joint. Time the drive dog (as in FIG. 4-13) with the finished edge of the flighting at 12:00. Position the drive dog at 1:30.

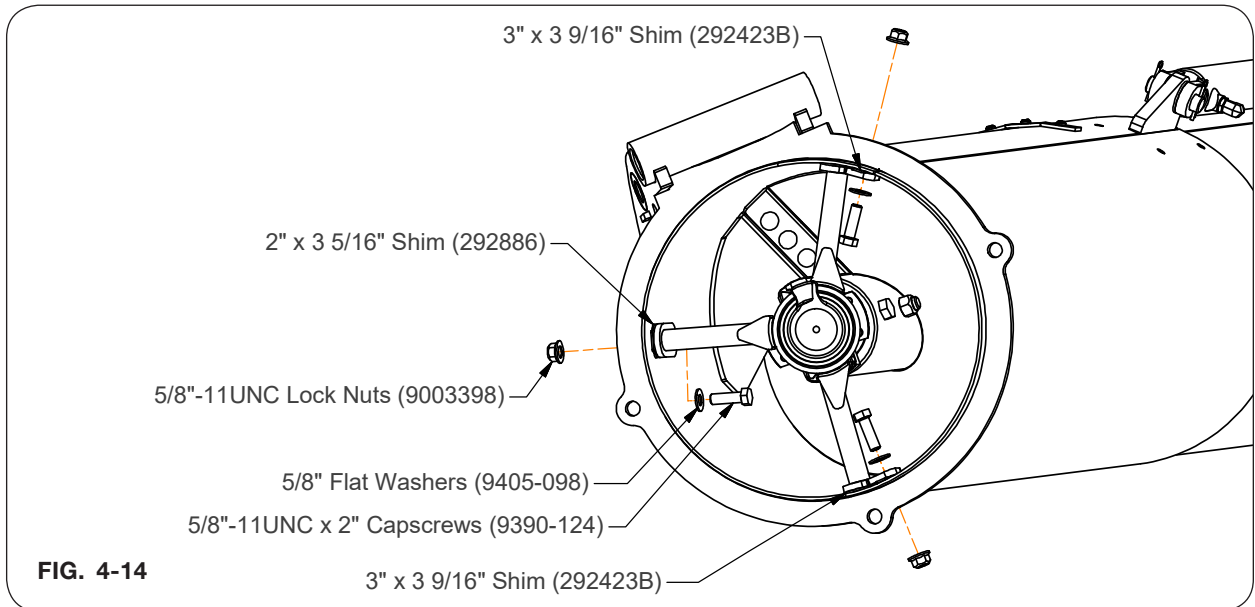
NOTE: When looking down at the lower flighting (FIG. 4-13) the auger rotation will be clockwise.

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



Auger System (continued)

10. Loosely secure the hanger bearing using two 3" x 3 9/16" shims (292423B), one 2" x 3 5/16" shim (292886), 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. 4-14.



Auger System (continued)

U-Joint Spline Gap

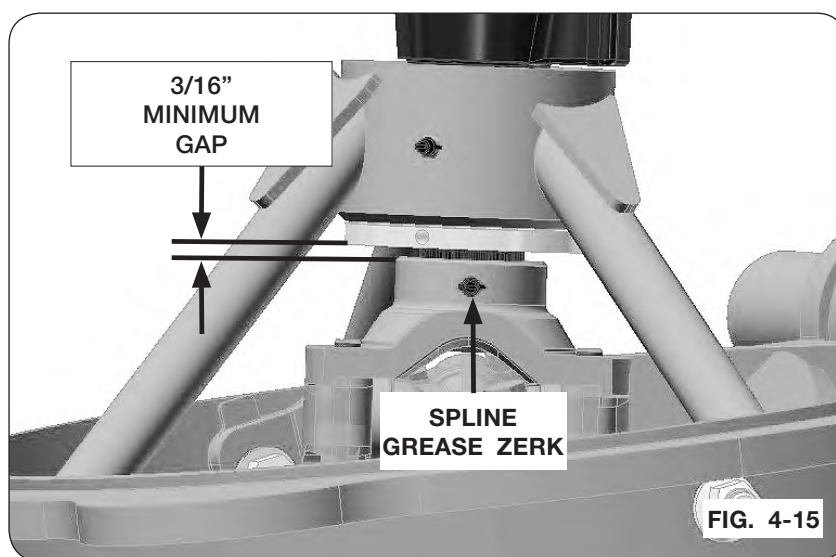
11. Verify spline gap before tightening hanger bearing hardware. Spline gap should be a minimum of 3/16". Using a lifting device rated for 250 pounds, raise the hanger bearing in the holes so the proper minimum spline gap is achieved. (FIG. 4-15)

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.

12. Tighten the retaining hardware to the appropriate torque values listed in the MAINTENANCE section.

13. Grease the spline and hanger bearing grease zerks. (FIG. 4-15)

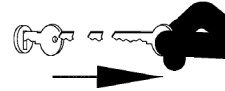
14. Fold upper auger to unload position and have a second user visually check for auger engagement. Test run augers at slow speed.



Auger System (continued)

Upper Auger

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 machine to keep it from moving.



Upper Auger Removal

2. Loosen the two bearing set screws.
3. 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. 4-16)
4. Use a safe lifting device rated at a minimum of 2,000 lbs. to support the upper auger, remove auger from tube.

NOTE: If replacing the soft start, continue to step 5. If replacing the upper auger, continue to step 9.

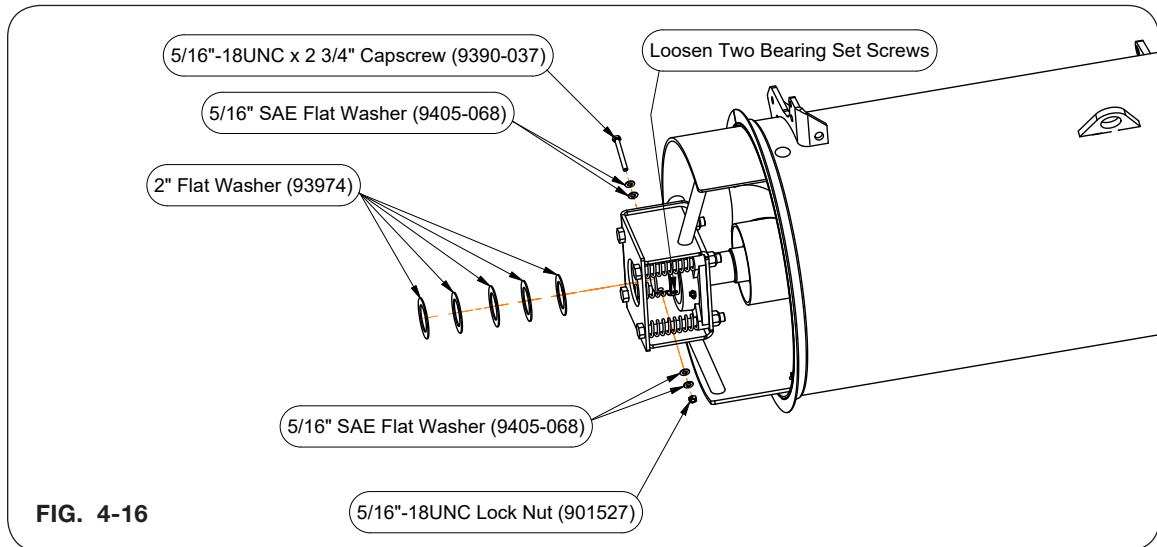


FIG. 4-16

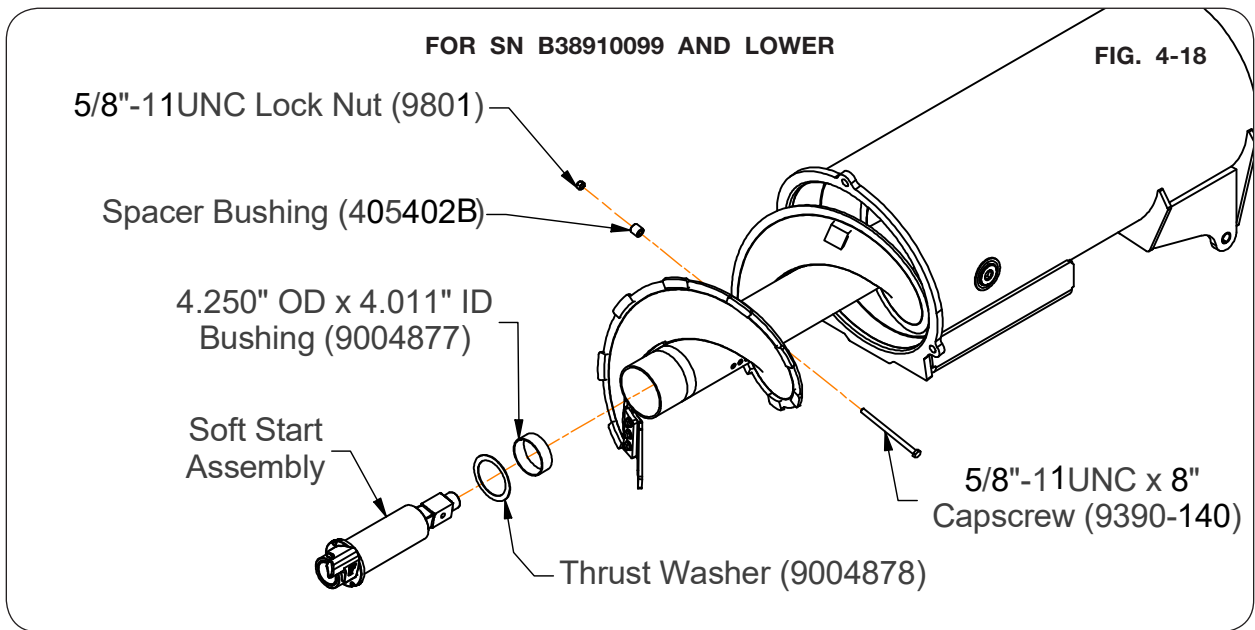
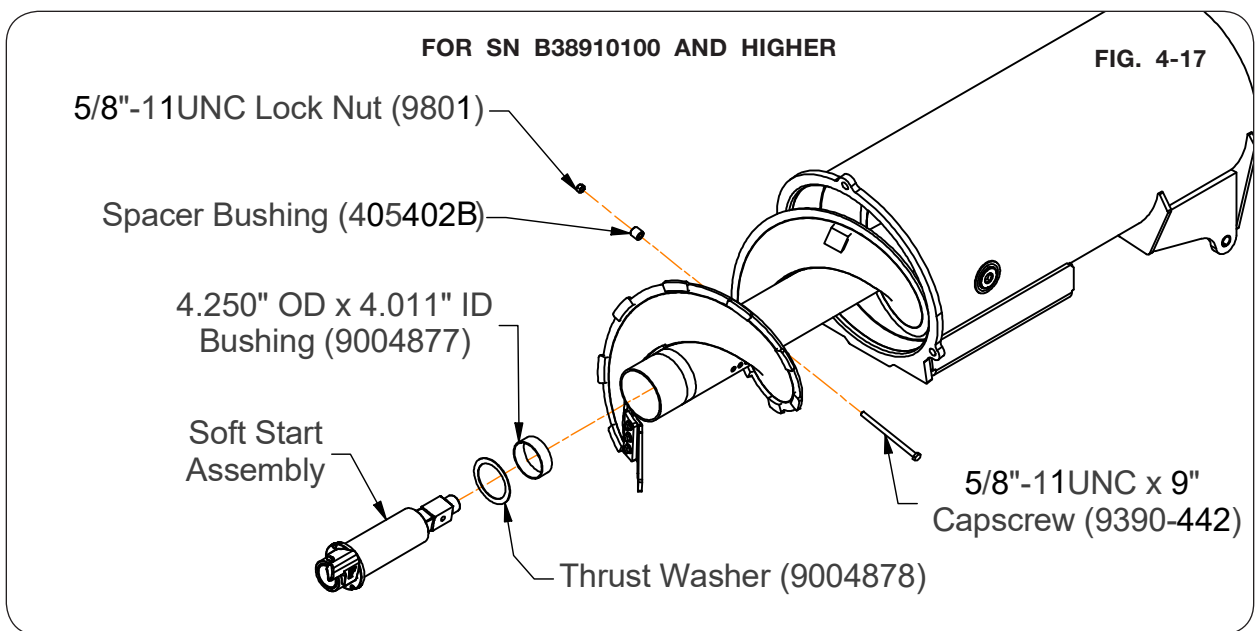
Auger System (continued)

Soft Start Replacement

- Remove the 5/8-11UNC x 9" capscrew (9390-442 - SN B38910100 and higher), 5/8"-11UNC x 8" capscrew (9390-140 - SN B38910099 and lower), spacer bushing (405402B), 5/8"-11UNC lock nut (9801), soft start assembly, thrust washer (9004878), and bushing (9004877). Discard 5/8" hardware and spacer bushing. (FIG. 4-17 and 4-18)

NOTE: If reusing flighting extension, replace with new hardware and apply anti-seize to hardware before installing to auger flighting. Do not reuse old flighting extension hardware.

- 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. (FIG. 4-17 and 4-18)



Auger System (continued)

Upper Auger Timing

7. Time the drive pin (as in FIG. 4-19) with the finished edge of the flighting at 12:00. Position the drive pin at 6:00.

NOTE: Looking up at the upper flighting (FIG. 4-19) the auger rotation will be counter clockwise.

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

NOTE: For additional auger timing assistance, refer to your dealer for a timing fixture kit (293329Y).

NOTE: Before soft start reassembly, ensure the spacer bushing (405402B) is on the same side as the lock nut (9801). (FIG. 4-17 and FIG. 4-18)

8. Retain the soft start into position with the 5/8-11UNC x 9" capscrew (9390-442 - SN B38910100 and higher), 5/8"-11UNC x 8" capscrew (9390-140 - SN B38910099 and lower), spacer bushing (405402B), 5/8"-11UNC lock nut (9801). (FIG. 4-17 and FIG. 4-18)

NOTE: The replacement auger is factory balanced. Remove entire auger from shipping crate and secure from rolling. The upper auger assembly is pictured in FIG. 4-20 for reference.

9. Using an adequate hoist and slings with a minimum capacity of 2,000 lbs. to support the upper auger, install upper auger into the tube. (FIG. 4-20)

10. If only installing upper auger, refer to "Upper Auger Timing" and position soft start accordingly.

Upper Auger Height

11. 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 7 5/8". 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. 4-21)

(Continued on next page.)

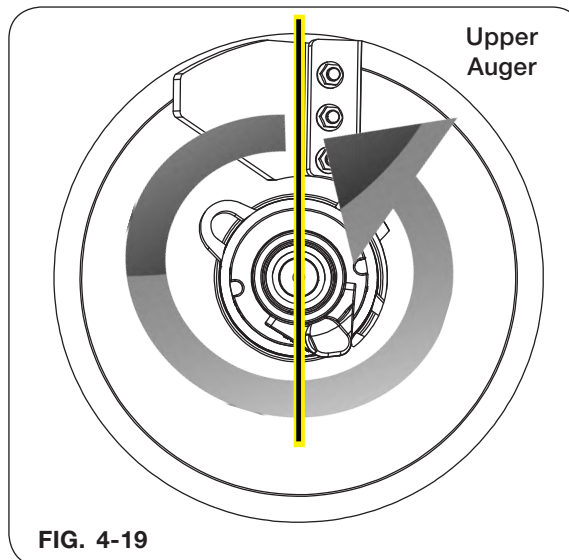


FIG. 4-19

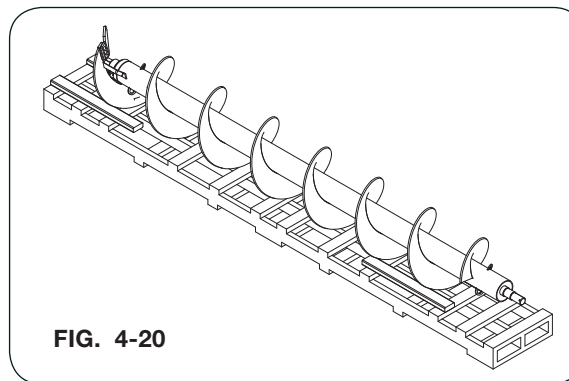


FIG. 4-20

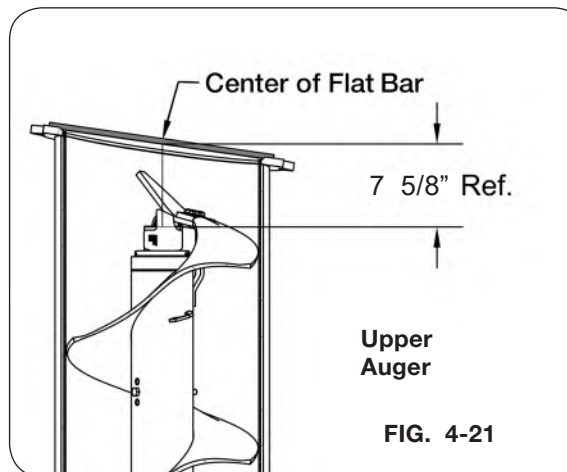


FIG. 4-21

Auger System (continued)

12. Make sure 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. 4-22)

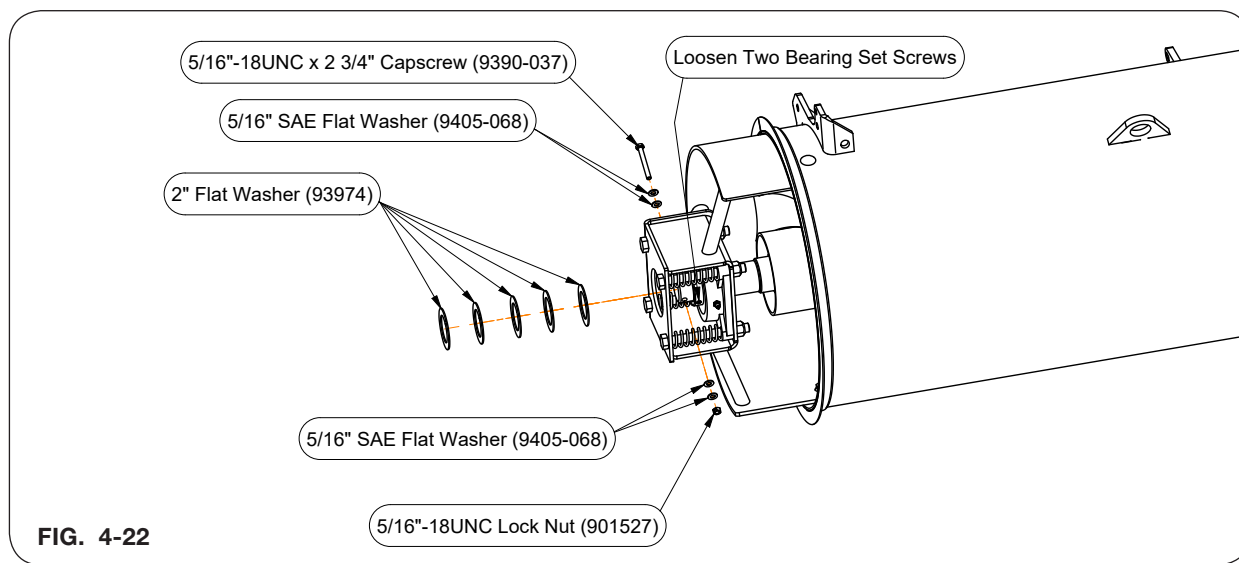


FIG. 4-22

Auger System (continued)

Upper Auger Bearing Gap

13. Unfold the auger to the operating position.
14. Engage PTO and test run augers to ensure drive dogs are engaged. Stop PTO, shut off tractor and remove key.



15. Remove upper auger tube plug and visually verify upper and lower auger engagement. (Fig. 4-25)

16. 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 3. 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. 4-23 and 4-24)

17. Place upper auger in the folded/transport position.

18. 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 TL-42 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.

19. If upper and lower auger engagement is good, install upper auger tube plug. (FIG. 4-23)

20. Test run auger driveline to verify smooth driveline operation. Check for noise and/or vibration and address immediately.

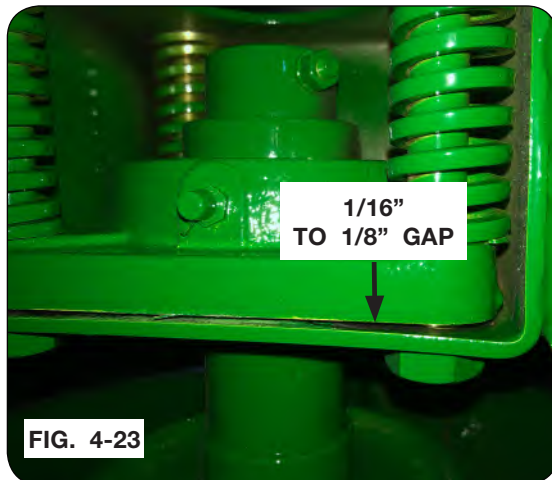


FIG. 4-23



FIG. 4-24

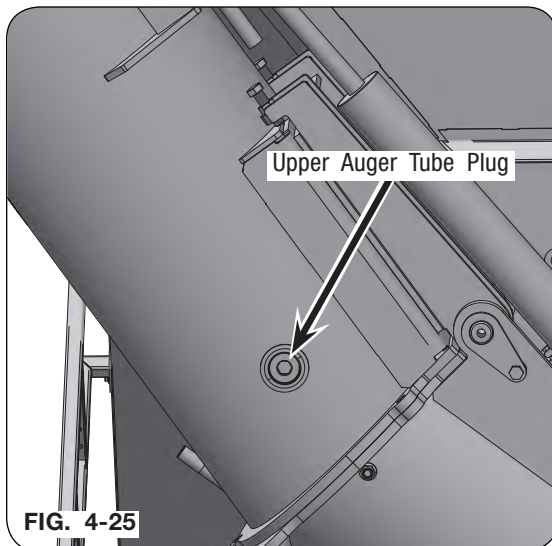


FIG. 4-25

Auger System (continued)

Flow Door Cylinder Stop



- **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 EN-TANGLED IN A ROTATING DRIVELINE.**



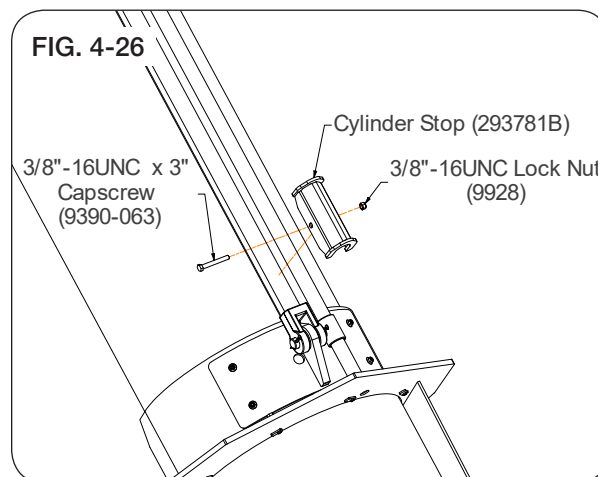
The floor door has been set with a stop to limit the maximum opening. The factory stop position provides full auger fill in most crops and conditions. For extra-difficult flowing crops, more auger opening may be required.

NOTE: Opening the auger flow door past the factory setting will increase power consumption, auger wear, and shorten driveline life. (FIG. 4-26)

1. Park the empty grain cart on a firm and level surface. Block the machine to keep it from moving. Set the tractor's parking brake. Leave the tractor on throughout procedure.
2. Before loading cart or operating auger, verify that the flow control door is closed.
3. 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.
4. 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. 4-26)

5. Locate the cylinder stop on the end of the flow door cylinder. (FIG. 4-26)
6. Remove the capscrew and lock nut retaining the cylinder stop.
7. 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.



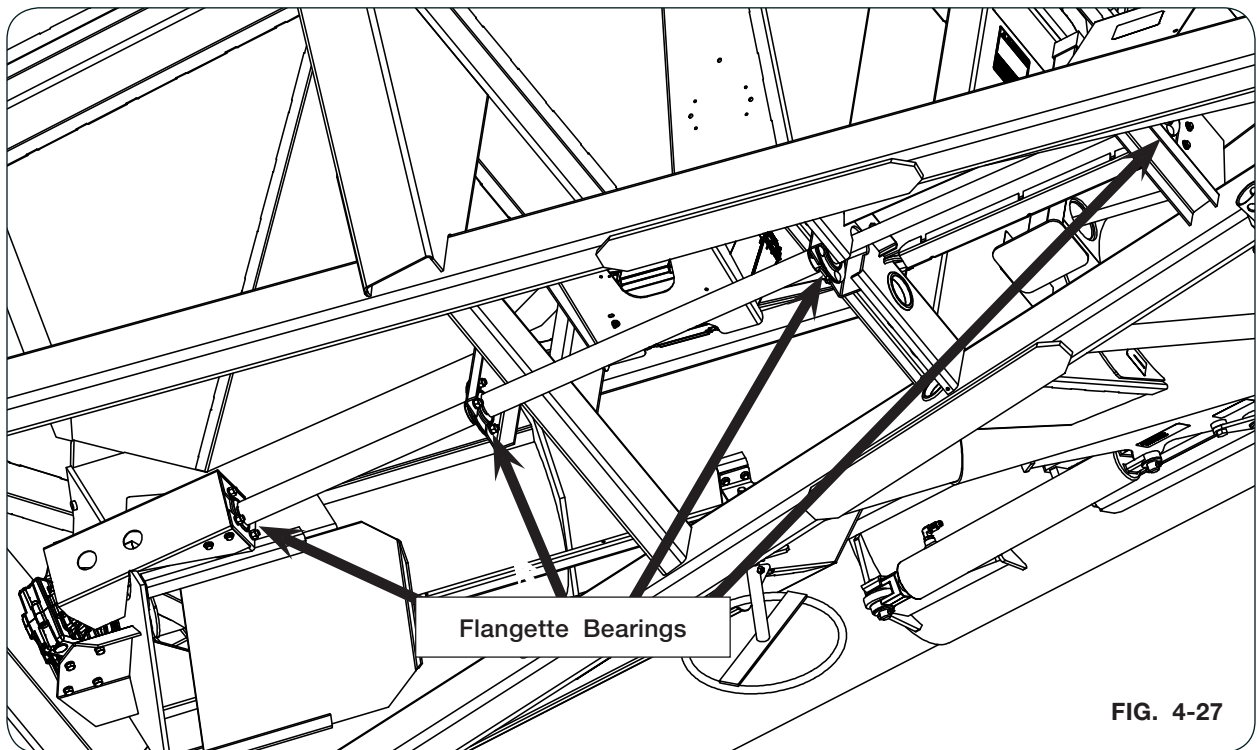
- *Operating the PTO at less than 1,000 RPM can result in damage to the PTO and driveline components in addition to excessive auger wear and cart vibration.*

Auger Driveline

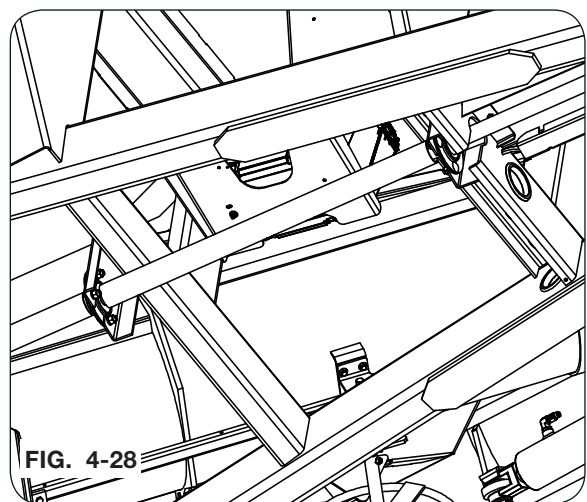
Bearings

It is important to periodically check setscrews in all bearings of the driveline for tightness.

Driveline Replacement



1. Park the empty cart on a firm, level surface. Block the machine to keep it from moving. Set the tractor parking brake, shut off the engine, and remove the ignition key from the tractor. Completely disconnect driveline assembly and bearing hardware.
2. Loosen the setscrews (9399-071) on all flangette bearings (9003920) (Fig. 4-27).
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).

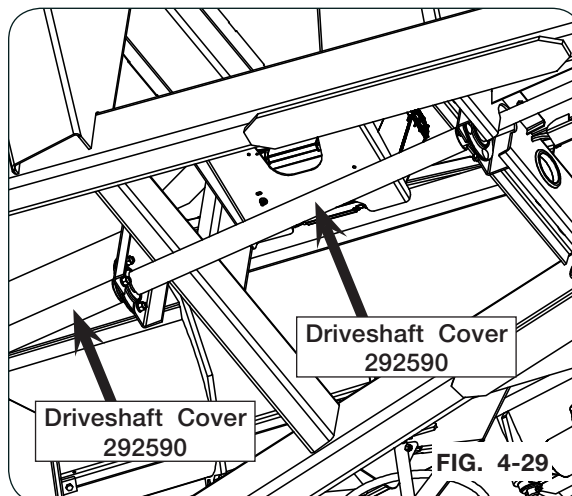


4. Remove paint on driveshaft to allow for easier movement. Slide driveshaft forward until the rear spline is out of the universal joint connected to the gearbox.
5. Drop the gearbox end of drive shaft down and slide driveshaft out of the flangette bearing on the hitch end of the driveshaft.

Auger Driveline (continued)

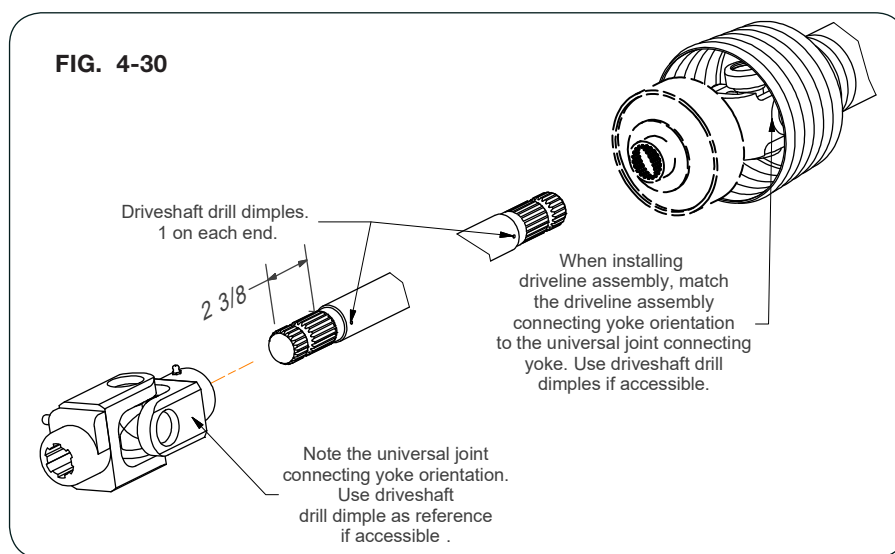
Driveline Replacement (continued)

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.
8. When installing new bearings (9005061) onto new 1 3/4" dia. driveshaft, assemble new PVC driveshaft covers (292590) between bearings near the gearbox and between bearings behind the hitch driveline cover. (FIG. 4-29)



NOTE: Ends of driveshaft are symmetrical.

9. Slide the hitch end of the driveshaft, bearing and hitch driveline cover into the bearing near hitch of the cart. (FIG. 4-29)
10. Raise the gearbox end of the drive shaft 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.
11. 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. 4-30)



Auger Driveline (continued)

Driveline Replacement (continued)

12. Tighten all flangette mounting hardware.
13. 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. 4-31)
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. 4-31 and 4-32)
15. Apply blue thread locker on bearing setscrews and tighten.
16. Torque lock collars to 170 inch-lbs.

NOTE: Check/fill gearbox oil and grease universal joint before installing new universal joint cover. See “Gearbox Lubrication” for oil specifications.

17. Attach new universal joint cover (292875B) 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 are in place and hardware tightened prior to operation.

18. Test run driveline. Verify smooth driveline operation.

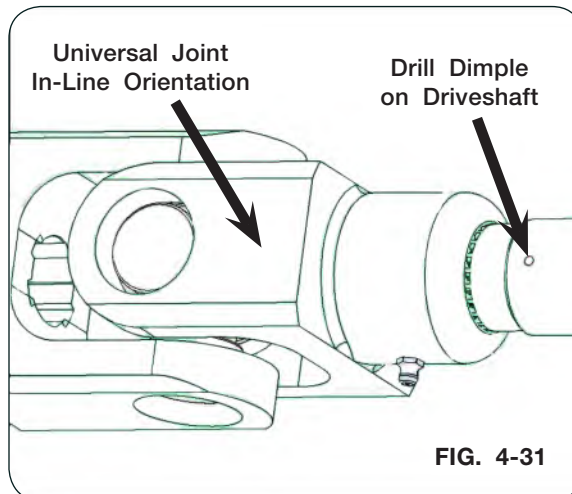


FIG. 4-31

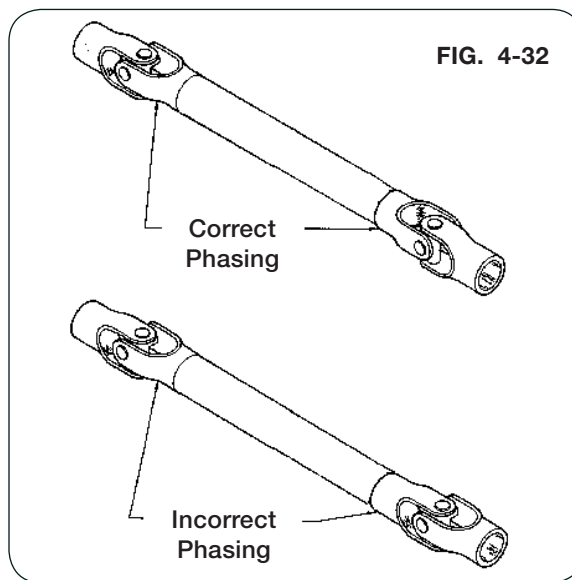


FIG. 4-32

Verify Telescoping PTO Shaft Length

⚠ WARNING

- 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 NOT SUFFICIENT, IT MAY BECOME UNCOUPLED IN OPERATION AND CAUSE SERIOUS INJURY OR DEATH FROM CONTACT WITH UNCONTROLLED FLAILING OF PTO SHAFT ASSEMBLY COMPONENTS.

IMPORTANT

- 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.

Consult your OEM dealer for recommended drawbar and PTO set up.

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).

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

Add "T" + "C" measurements together

Enter total here: _____(2)

3. Calculate maximum recommended extended length:

- a. Subtract line 1 from line 2

Enter here: _____(a)

- b. Divide line (a) by 2

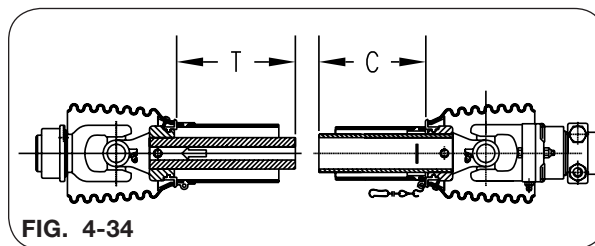
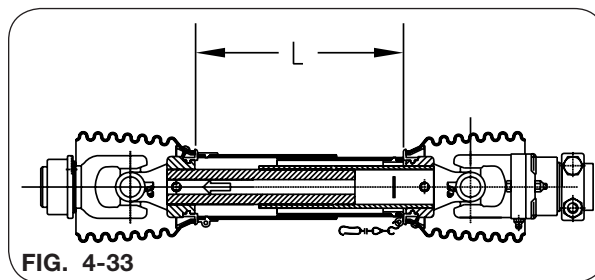
Enter here: _____(b)

- c. Add line (b) to line 1.

Enter here: _____(c)

- d. Subtract 3 inches from line (c)

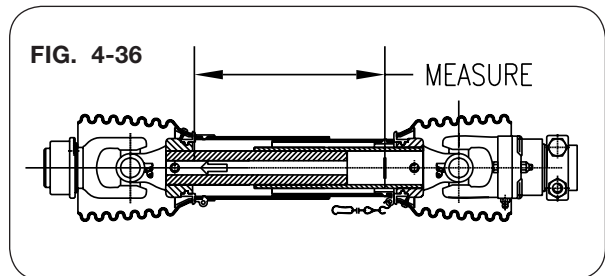
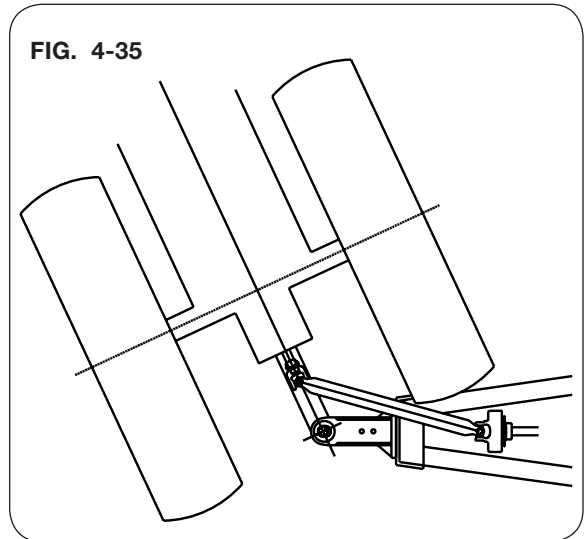
Enter here: _____(d)



This is the maximum recommended extended length.

Verify Telescoping PTO Shaft Length (continued)

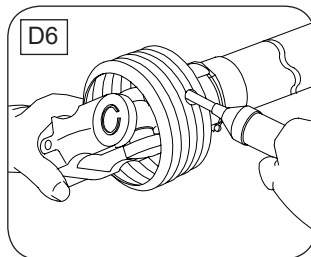
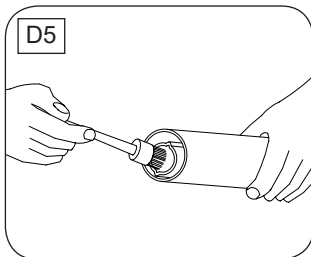
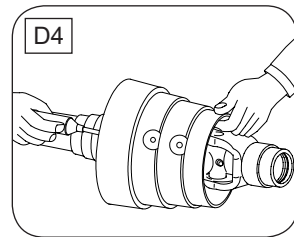
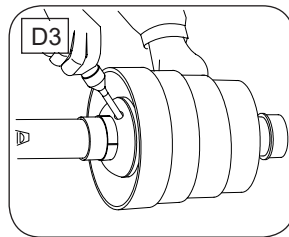
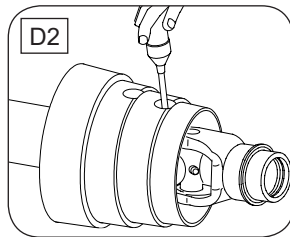
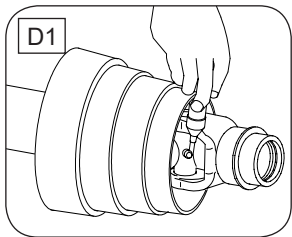
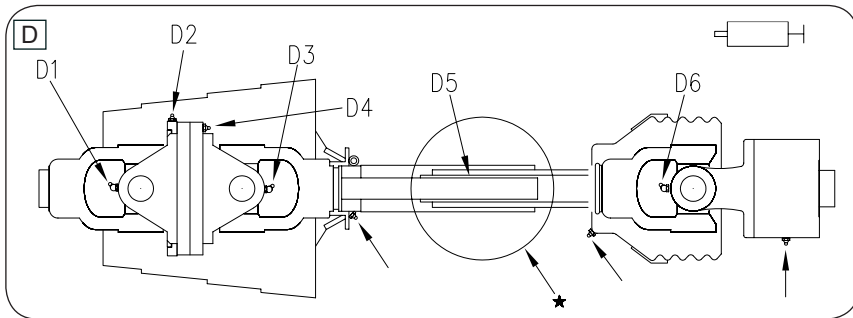
4. Hitch tractor drawbar to cart, ensuring that tractor and cart are on level ground and coupled as straight as practical.
5. Connect PTO shaft to tractor, and measure length “L” from same points as used in step 1. **Ensure that this measurement does not exceed the maximum recommended extended length 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)
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)



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.



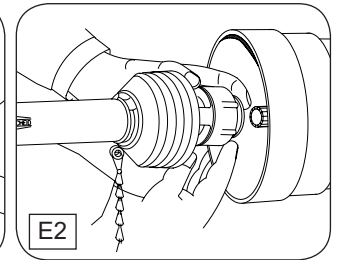
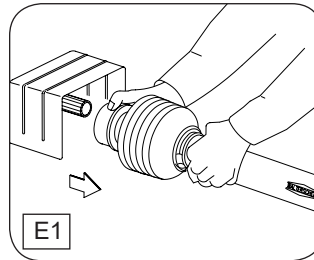
PTO Shaft and Clutch (continued)

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.

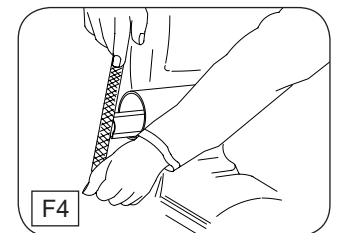
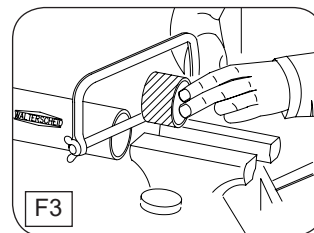
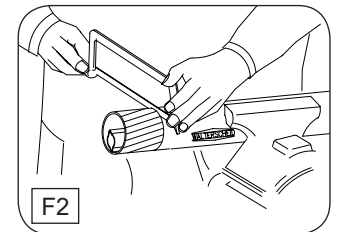
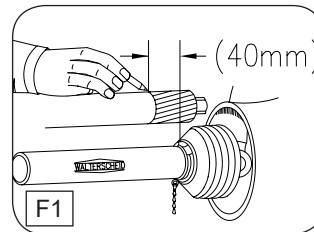
⚠ WARNING

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.



⚠ WARNING

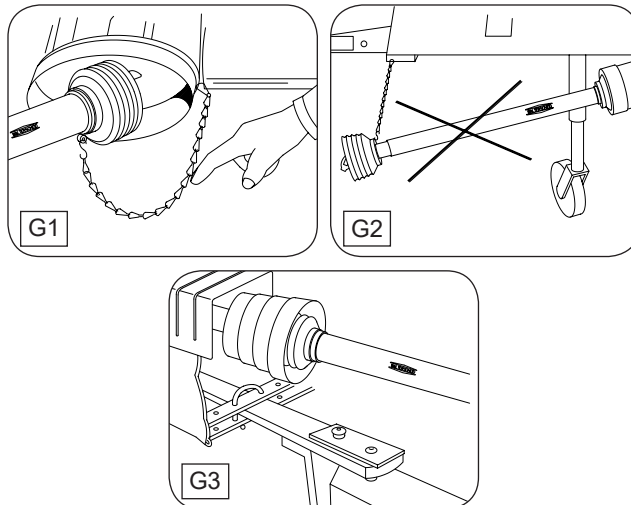
CHECK THE LENGTH OF THE TELESCOPING MEMBERS TO INSURE THE DRIVELINE WILL NOT BOTTOM OUT OR SEPARATE WHEN TURNING AND/OR GOING OVER ROUGH TERRAIN.

PTO Shaft and Clutch (continued)

Chains (Figs. G1 - G3)

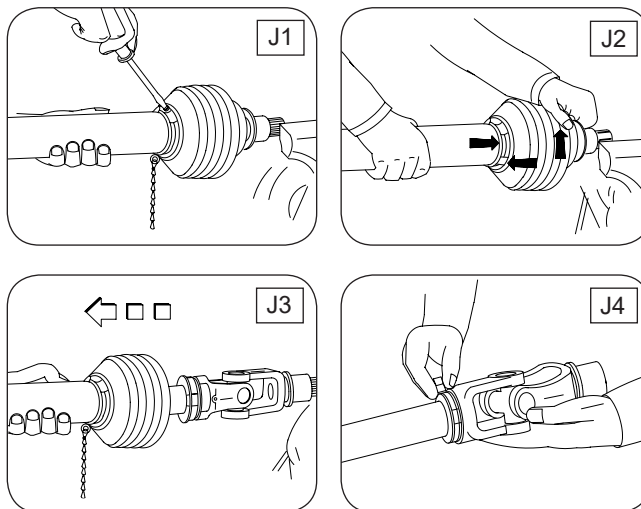
NOTE: The chain is intended to prevent the shield from rotating against non-moving parts and thereby preventing shield damage. A properly installed chain will increase the service life of the shield.

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)

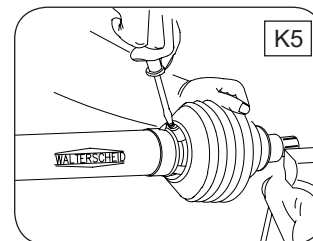
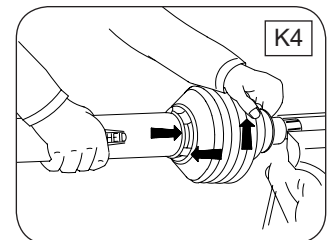
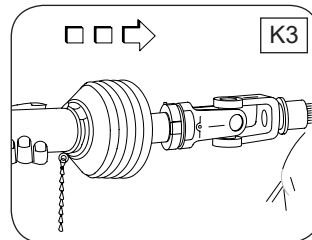
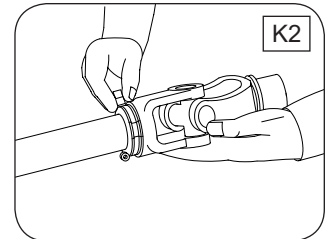
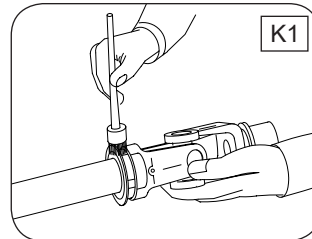
1. Remove locking screw.
2. Align bearing tabs with cone pockets.
3. Remove half-guard.
4. Remove bearing ring.



PTO Shaft and Clutch (continued)

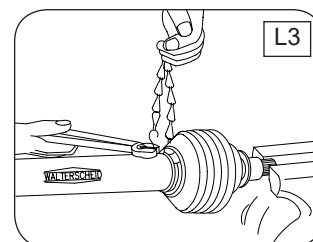
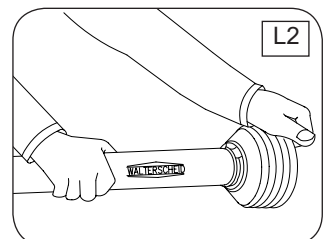
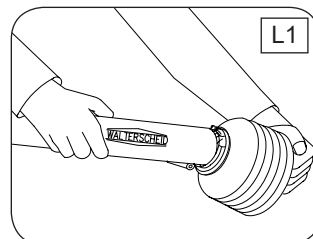
To Assemble Guard (Figs. K1 - K5)

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).

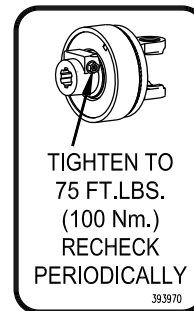
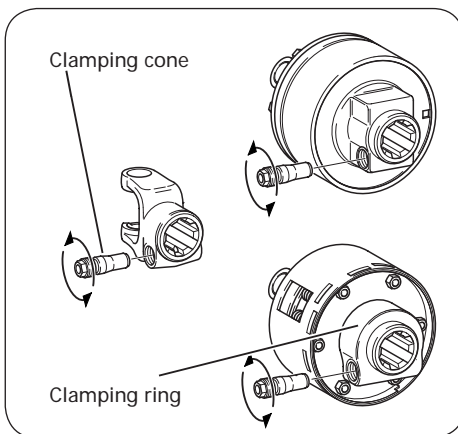
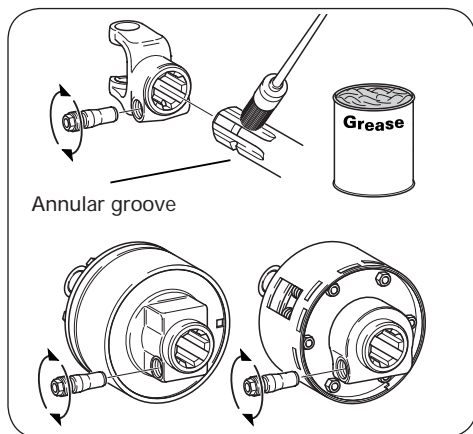


PTO Quick Disconnect

Coupling

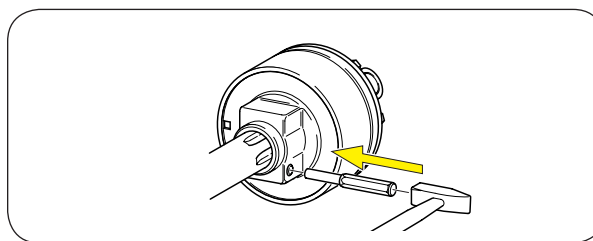
Slide clamp yoke or clutch onto connecting shaft. Make sure the location hole for the clamping cone is positioned above the annular groove of the connecting shaft. Screw appropriate clamping cone into the location hole. Slightly moving the clamp yoke or clutch to and from in the axial direction will 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

First dislodge the clamping cone with a punch and hammer from its current position. 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.



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 32,000 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.

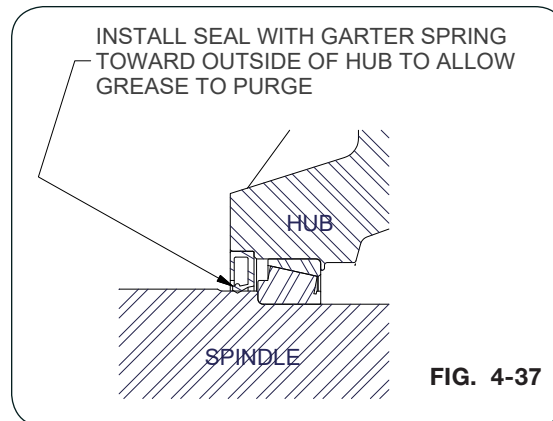
IMPORTANT

- Remove only one wheel and tire from a side at any given time using 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, place 32,000 lbs. safe lifting and load holding devices rated at 32,000 lbs. to support the weight of your grain cart. Place the safe lifting device under the axle closest to the tire/track.
 3. Use a 3,000 lbs. safe lifting device to support the wheel and tire then remove hardware.
 4. Remove the hardware retaining the hubcap. Next, remove the hubcap, gasket, cotter pin, castle nut and spindle washer. Remove hub with bearings from old spindle using a 250 lb. lifting device.
 5. Inspect the spindle and replace if necessary. If spindle does not need to be replaced, skip to Step 6; otherwise continue.

Remove the capscrew and lock nut that retains the spindle to the axle. Using a safe lifting device rated for 200 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 capscrew and lock nut to retain spindle to axle. Torque as outlined in MAINTENANCE section.

Wheel, Hub and Spindle Disassembly and Assembly (continued)

6. For Hub disassembly: 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. (FIG. 4-37) Install until flush with back face of hub. Using a 250 lb. rated lifting device, install hub assembly onto spindle. Install outer bearing, spindle washer and castle nut.



7. For Hub adjustment: 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 hub cap with hardware removed. Tighten hub-cap hardware in alternating pattern.
8. 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.
9. Raise cart, remove load holding devices and lower cart to the ground.

Wheels and Tires

Wheel Nut Torque Requirements

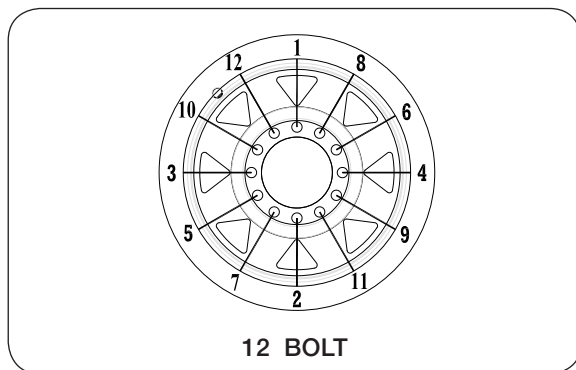
⚠ CAUTION

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.

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

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



12 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. 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 to recommended minimum pressure.

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 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
	900/60R32 R-1W	185A	49
	1050/50R32 R-1	196D	52
	1100/45R46 R-1W	195D	35
	IF1250/50R32 R-1W	201D	46
Mitas	650/75R32 R-1W	172A8	58
	650/75R32 R-1	176A8	41
	800/65R32 R-1W	172A8	46
	900/60x32 R-1W	181A8	58
	900/60x32 CHO R-1W	181A8	46
	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 www.titan-intl.com
or Phone 800-USA-BEAR
Goodyear 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

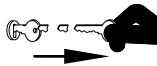
Alliance www.atgtire.com
Phone 781-325-3801

Adjusting Cleanout Door

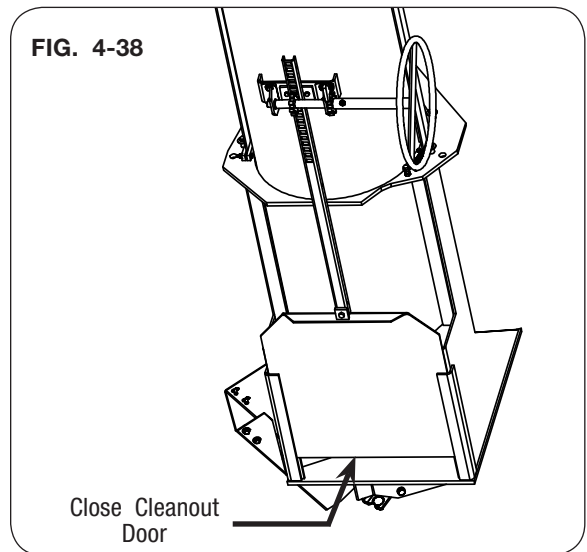
WARNING

- 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.

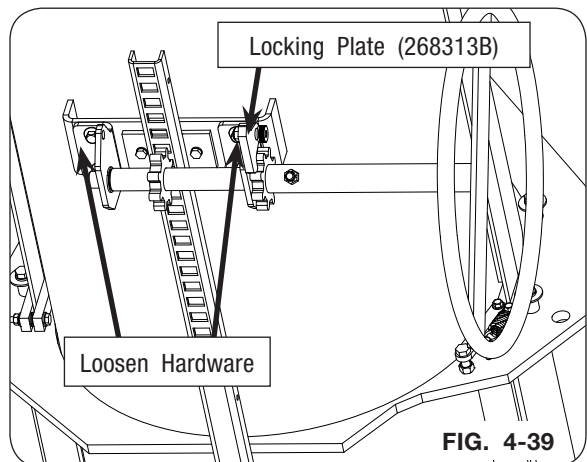
1. Park the empty grain cart on a firm and level surface. Block the machine to keep it from moving. Set the tractor's parking brake, shut-off the engine, remove the ignition key and disconnect the PTO shaft.



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. 4-38)

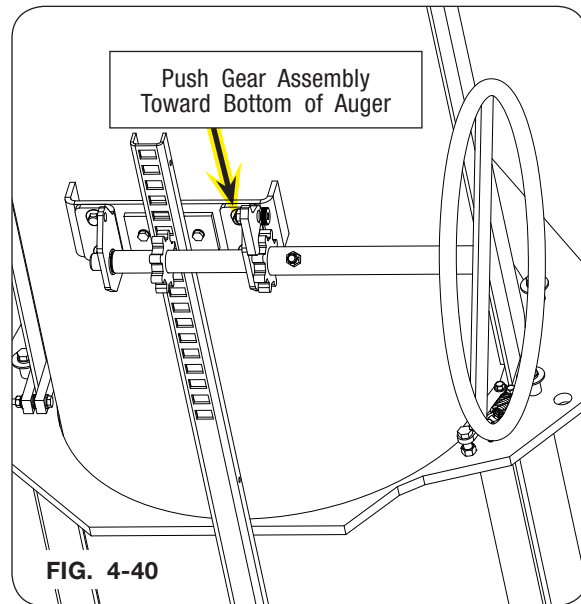


3. Engage the locking plate (268313B). (FIG. 4-39)
4. Loosen mounting hardware. (FIG. 4-39)

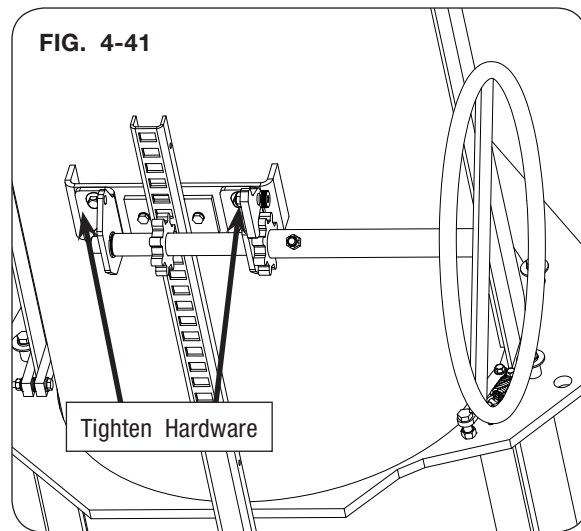


Adjusting Cleanout Door (continued)

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. 4-40)



6. Tighten hardware loosened in step 4. (FIG. 4-41)
7. Check door operation. Lock the handle weldment into position. (FIG. 4-41)

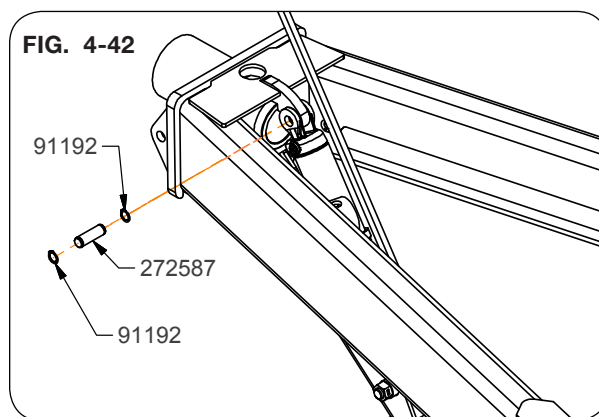


Hydraulic Jack Cylinder Replacement

⚠ WARNING

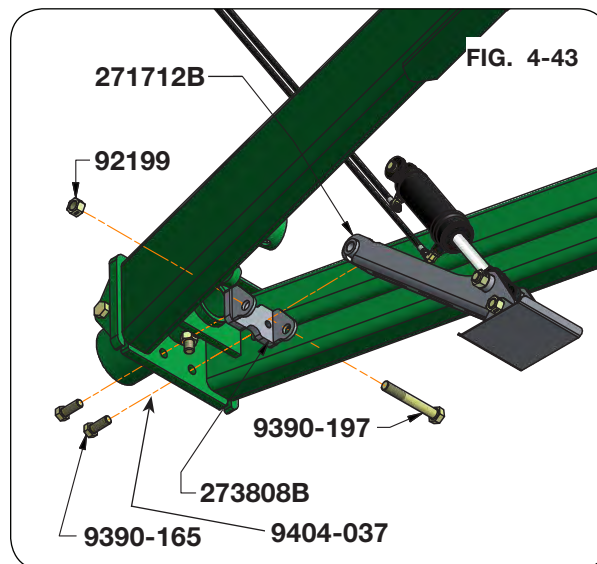
- HIGH-PRESSURE FLUIDS CAN PENETRATE THE SKIN AND CAUSE SERIOUS INJURY OR DEATH. LEAKS OF HIGH-PRESSURE FLUIDS MAY NOT BE VISIBLE. USE CARDBOARD OR WOOD TO DETECT LEAKS IN THE HYDRAULIC SYSTEM. SEEK MEDICAL TREATMENT IMMEDIATELY IF INJURED BY HIGH-PRESSURE FLUIDS.
- RELIEVE THE HYDRAULIC SYSTEM OF ALL PRESSURE BEFORE ADJUSTING OR SERVICING. SEE THE HYDRAULIC POWER UNIT OPERATOR'S MANUAL FOR PROPER PROCEDURES.
- HYDRAULIC SYSTEM MUST BE PURGED OF AIR BEFORE OPERATING TO PREVENT SERIOUS INJURY OR DEATH.
- 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.
- UNHITCHING A LOADED CART CAN CAUSE SERIOUS INJURY OR DEATH DUE TO TONGUE RISING OR FALLING. ALWAYS HAVE A LOADED CART ATTACHED TO A TRACTOR. THE JACK IS INTENDED TO SUPPORT AN EMPTY CART ONLY.
- 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 100 LBS. SPECIFIC LOAD RATINGS FOR INDIVIDUAL LOADS WILL BE GIVEN AT THE APPROPRIATE TIME IN THE INSTRUCTIONS.

1. Park the empty unit on a firm, level surface. Block tractor and machine to keep it from moving. Set the tractor parking brake, shut off the engine and remove the ignition key. Completely disconnect the PTO from the cart and tractor.
2. Attach hydraulic jack hoses to tractor SCV.
3. Open valve and lower jack leg to ground. DO NOT raise tongue.
4. Relieve pressure on hydraulic jack circuit. See tractor operator manual for procedure.
5. Close valve.
6. Support the hydraulic jack assembly with a safe lifting device rated for a minimum of 100 lbs.
7. Remove hydraulic jack hoses from tractor SCV.
8. Remove cylinder pin (272587) and snap rings (91192) from the base end of the cylinder at the lug on top of the tongue. (Fig. 4-42)

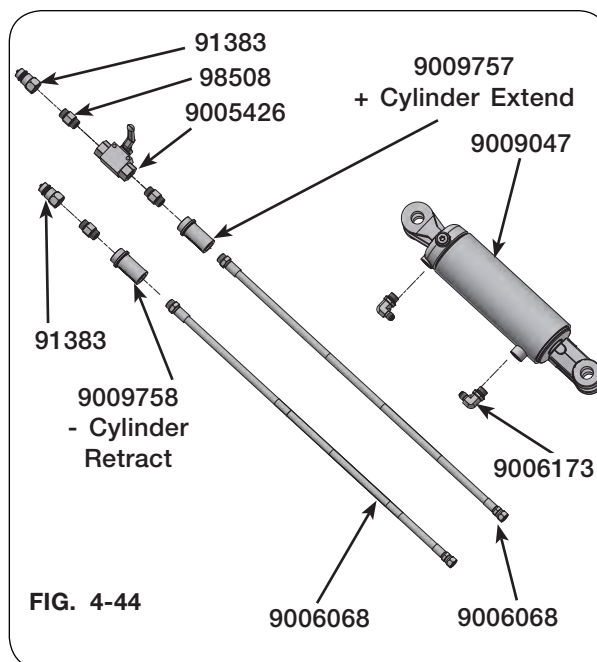


Hydraulic Jack Cylinder Replacement (continued)

9. Remove two 7/8"-9UNC x 2 1/4" capscrews (9390-165) and 7/8" lock washers (9404-037) from mounting bracket (273808B). (Fig. 4-43)
10. Remove hydraulic jack assembly from the tongue. (Fig. 4-43)



11. On new hydraulic assembly (294143B), attach hoses (9006068) and fittings to cylinder (9009047). (Fig. 4-53) The valve needs to be assembled to the hose on the base end of the cylinder. Assemble the fittings on the cylinder so they face each other, then store the hydraulic hoses on the hose caddy.
12. To reassemble hydraulic jack, see "Optional Hydraulic Jack" in SET UP section.



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. Wash machine inside and out before storing to remove dirt and debris that can draw and collect moisture. When using pressure washers, maintain an adequate distance so not to force water into bearings.
2. Using safe lifting device rated at 100 lbs., store PTO on the rest brackets at the rear of the cart.
3. Repaint all areas where paint has been removed to keep rust from developing. Rust will affect grain flow.
4. Coat exposed cylinder piston rods with rust preventative material if applicable.
5. Lubricate machine at all points outlined.
6. Inspect for damage or worn parts, replace before next season.
7. Store cart inside, away from livestock.
8. Replace all worn, torn or faded decals and reflectors.
9. If unit is equipped with a scale indicator or electric hydraulic controls, store these indoors in a dry location.
10. Fully open flow door and auger cleanout door to remove any remaining grain and to allow moisture to dry.
11. Close the tarp to keep debris out of the hopper.



EOH 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.
Auger unfolds part way and stops	Debris in the EOH block on the auger fold cylinder	Fold auger, remove the Coil and the cartridge valve on the EOH valve block. Remove any debris and reinstall cartridge and coil.
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.

Tarp - Troubleshooting Inspection and Maintenance

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 splined 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

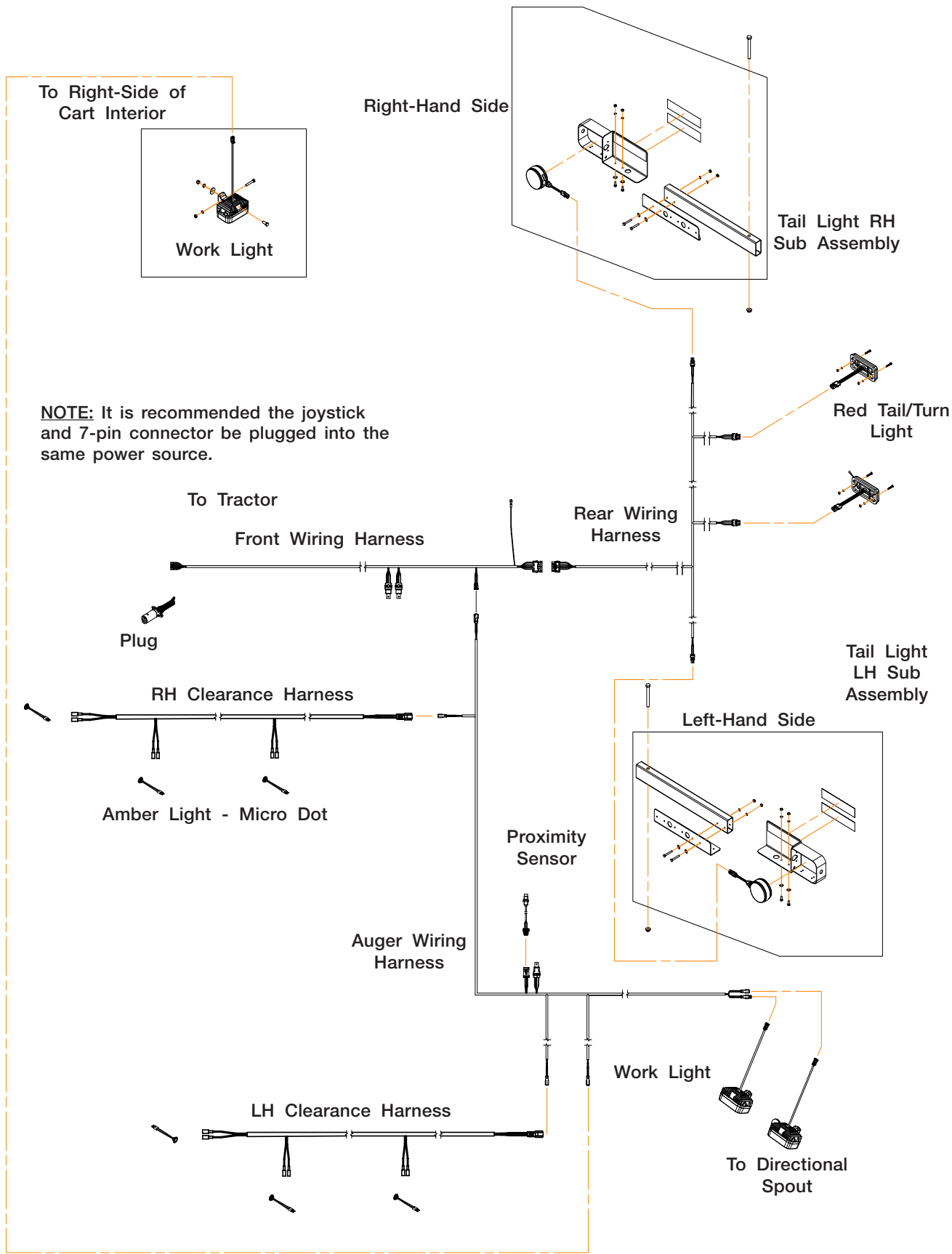
- *Do not open or close tarp while moving or in high wind conditions. Damage to the tarp may occur.*
- *Tarp should not be used if it is torn or the bungee cords are frayed or show damage. Fully close tarp with tension on the latch plate to prevent water from pooling.*

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.

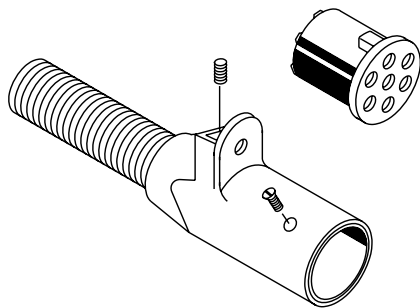
Electrical System Diagram — Overall



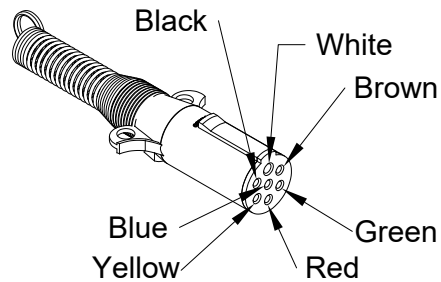
Electrical System Diagram — Plug #92450

GRAIN CART WIRES

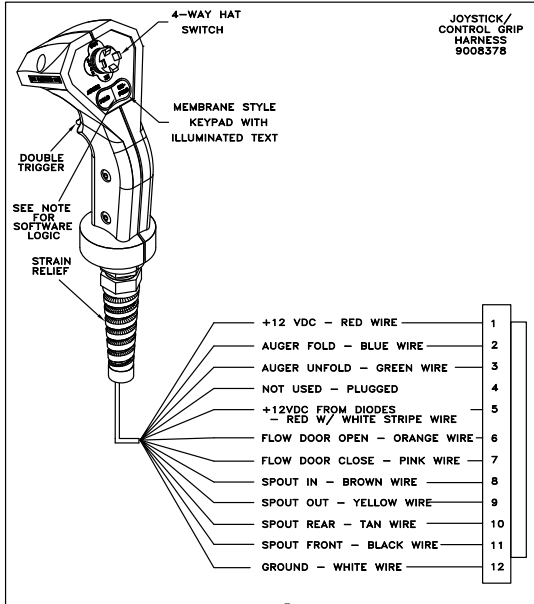
- White -- Ground
- Green -- Right amber flashing lamp
- Yellow -- Left amber flashing lamp
- Brown -- Tail Lights
- Black/White -- Interior & Auger Lights
- Black -- Side/Work Lights
- Red -- Brake Lights
- Blue -- NOT USED



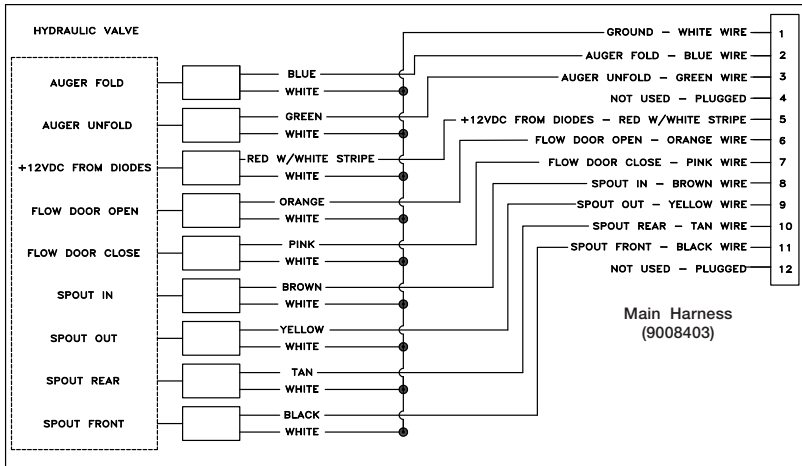
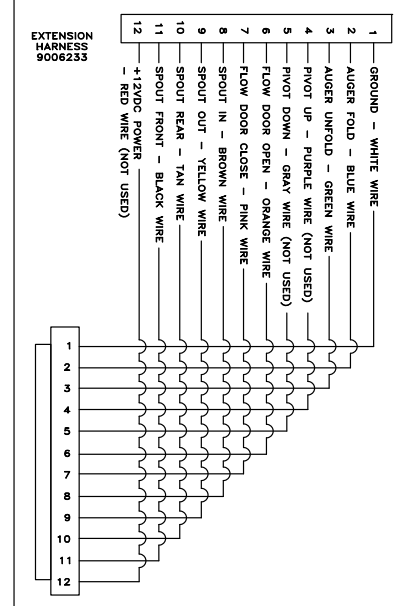
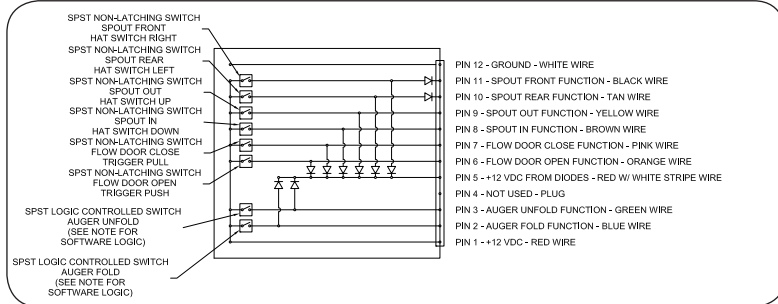
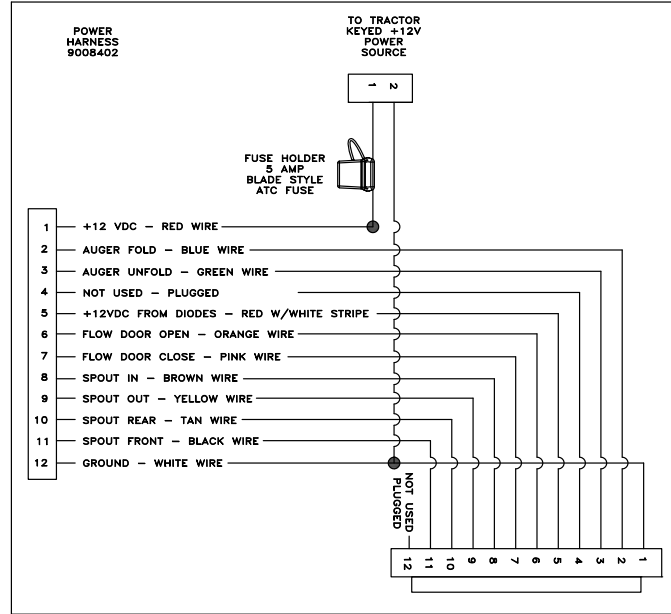
SAE SEVEN-POINT
CONNECTOR PLUG



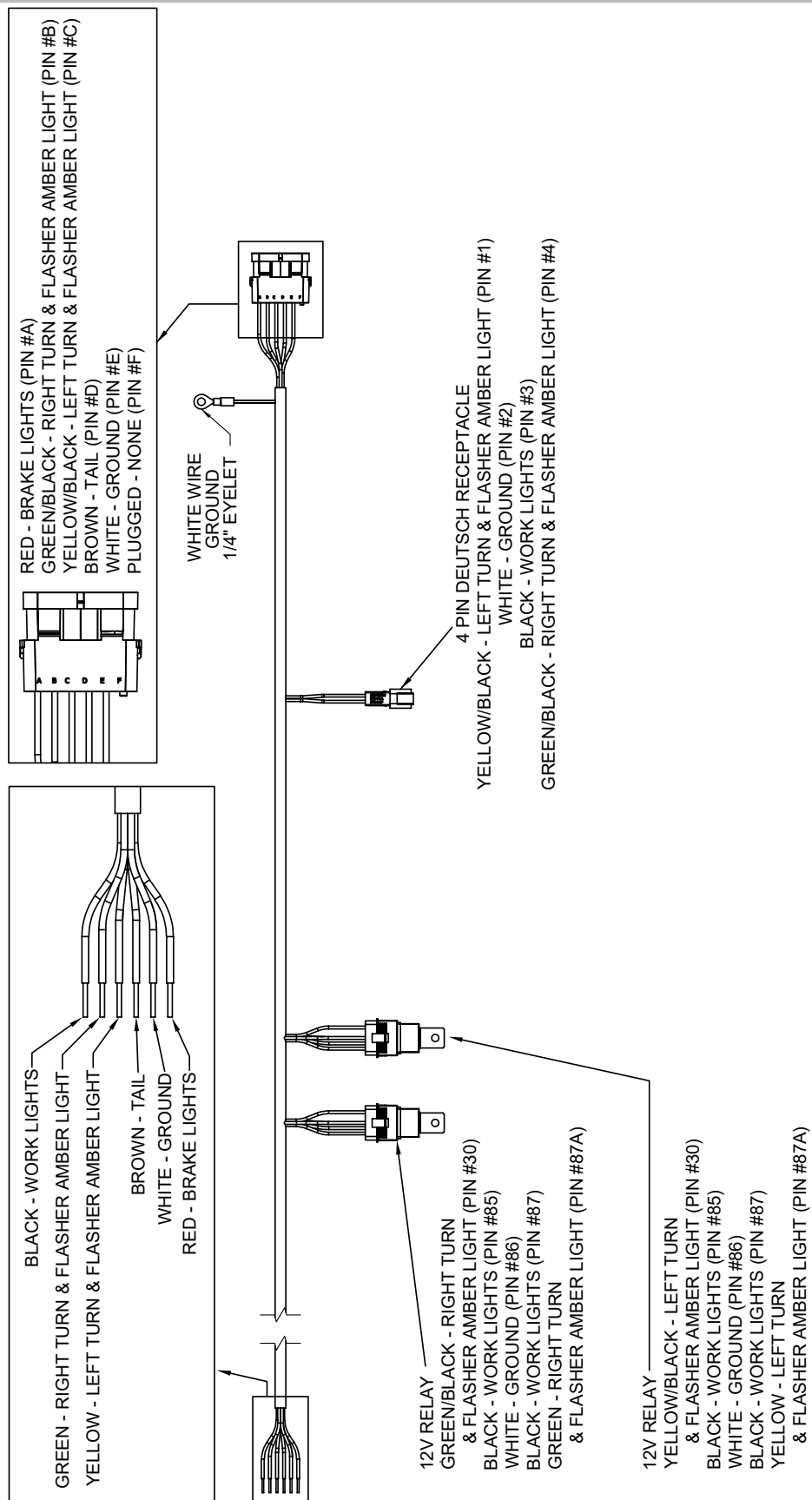
Electrical Over Hydraulic (EOH) System Schematic 4 Function Optional



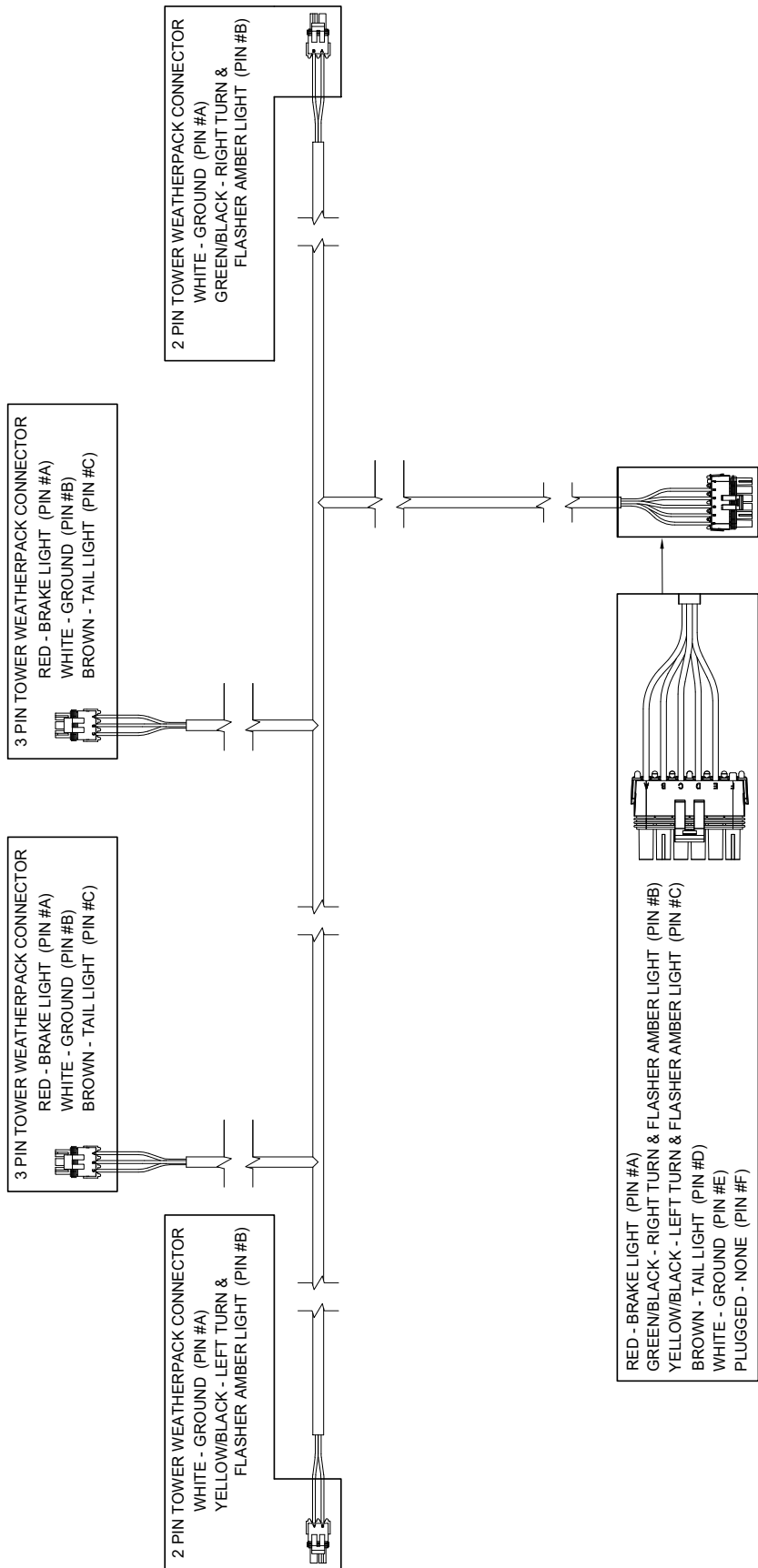
NOTE: It is recommended the joystick and 7-pin connector be plugged into the same power source.



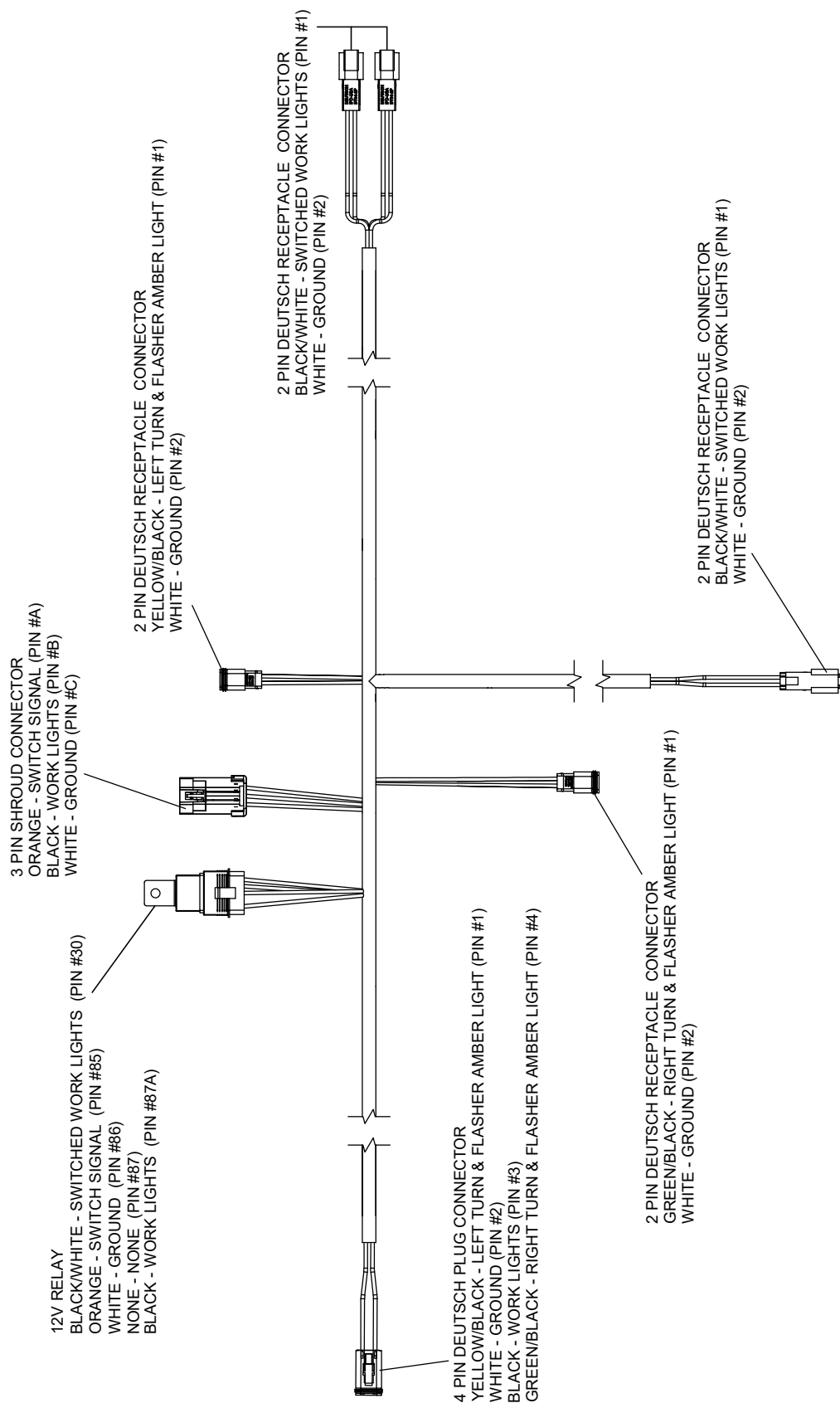
Electrical Diagram — Front Wiring Harness # 9008236



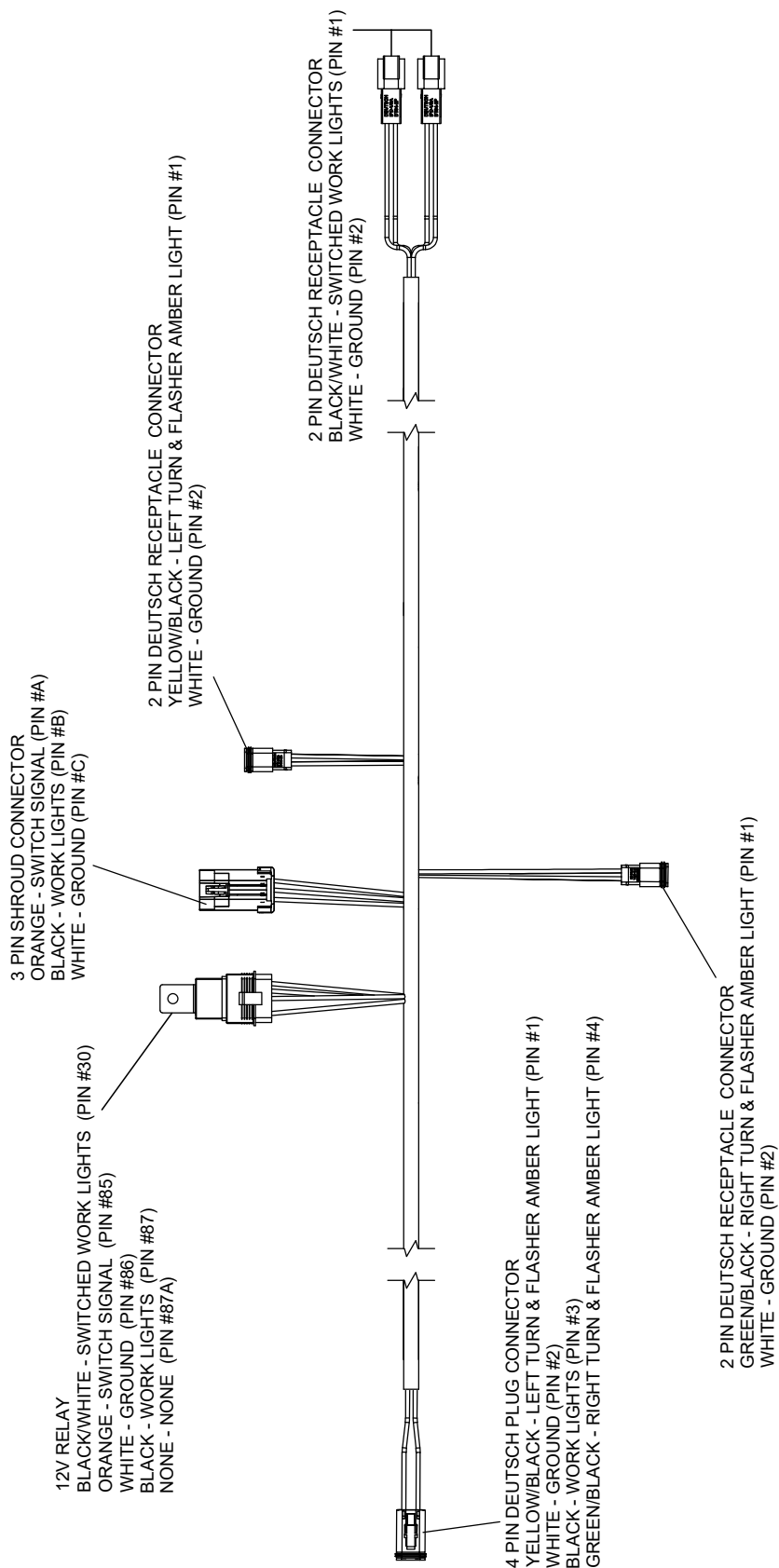
Electrical Diagram — Rear Wiring Harness # 9008237



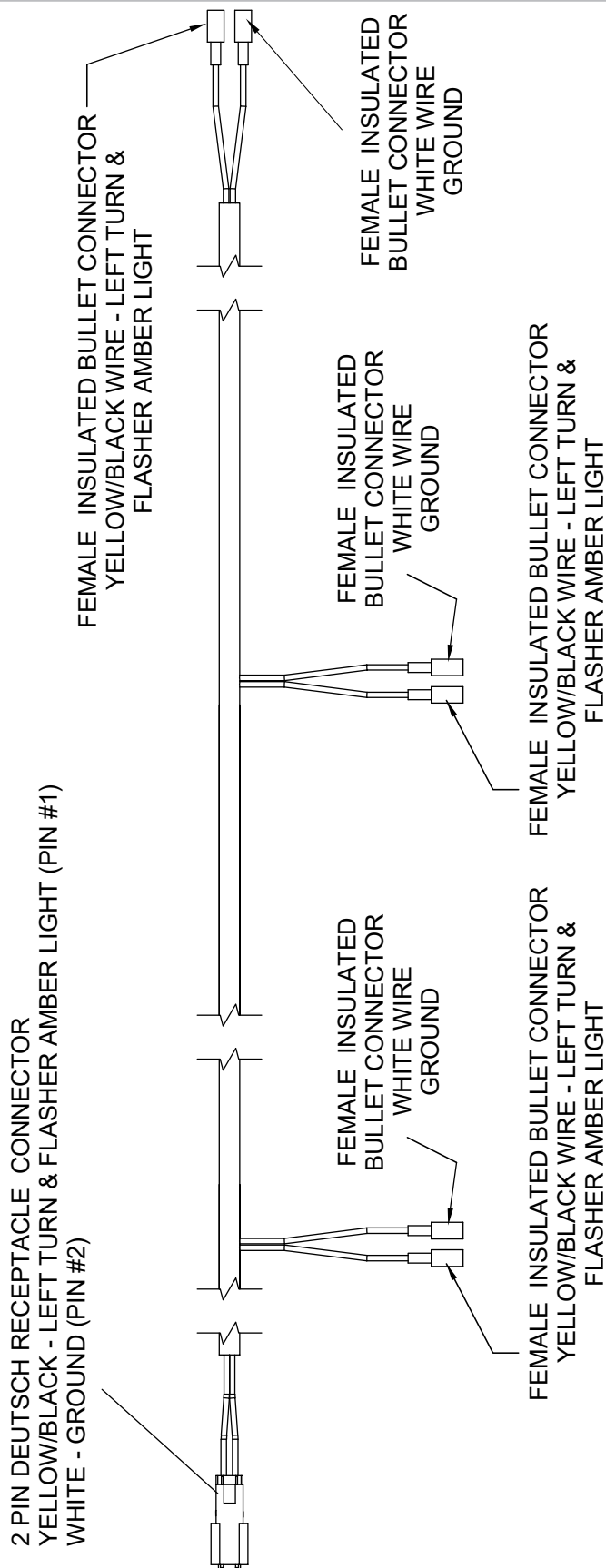
**Electrical Diagram — Auger Wiring Harness #9009078
For SN B41010100 & Higher**



**Electrical Diagram — Auger Wiring Harness #9008235
For SN B41010099 & Lower**

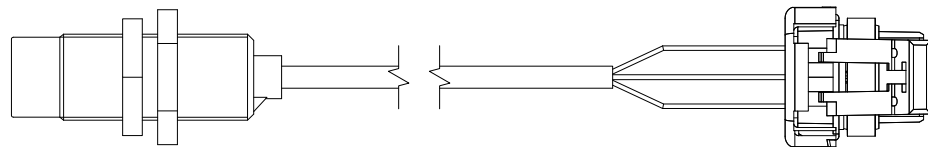


Electrical Diagram — LH Clearance Wiring Harness #9008234



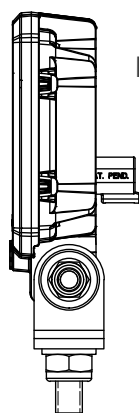
Electrical Diagram — Proximity Sensor #9007472

3 PIN FEMALE CONNECTOR



BLACK - SIGNAL (PIN #A)
BROWN - +12 V DC (PIN #B)
BLUE - GROUND (PIN #C)

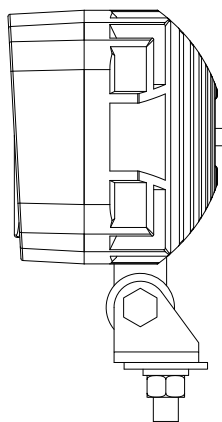
**Electrical Diagram — Work Light #9008957
For SN B41010100 & Higher**



2 PIN INTEGRATED
DEUTSCH CONNECTOR

POWER (PIN #1)
GROUND (PIN #2)

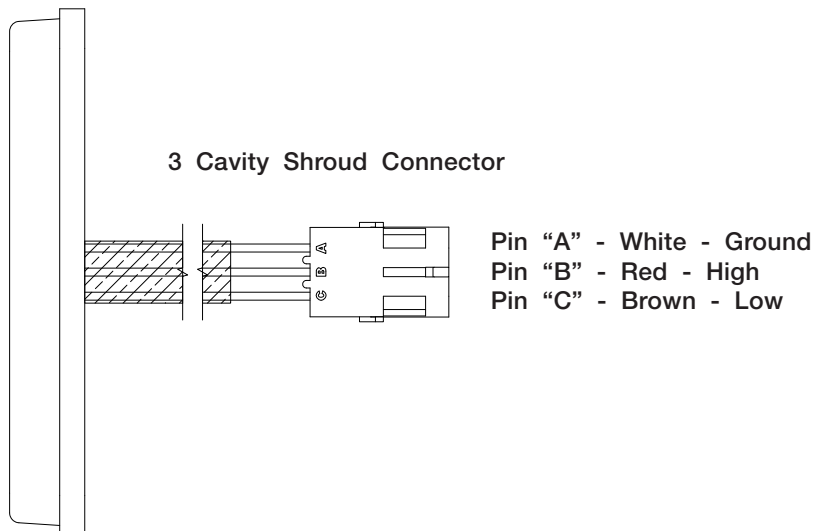
**Electrical Diagram — Work Light #9007186
For SN B41010099 & Lower**



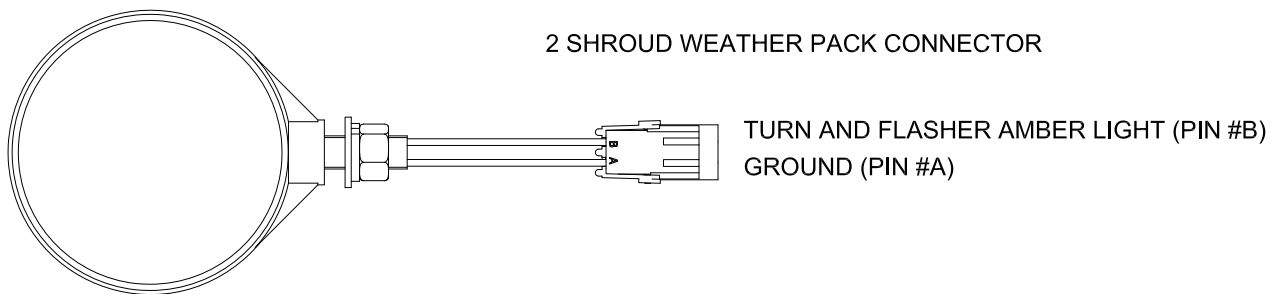
2 PIN DEUTSCH PLUG CONNECTOR

POWER (PIN #1)
GROUND (PIN #2)

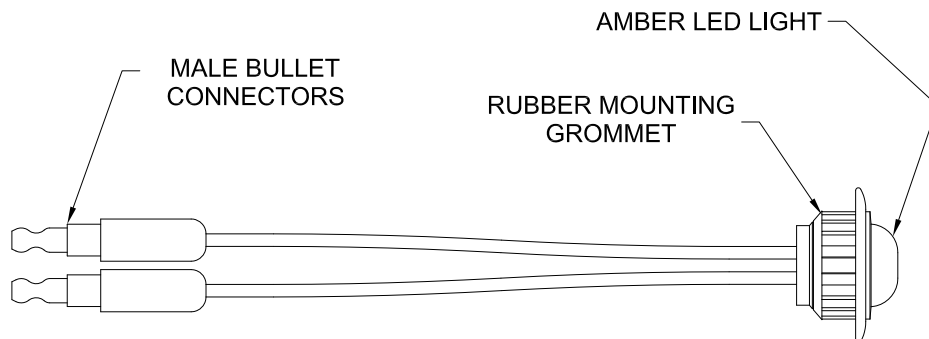
Electrical Diagram — Red Tail/Turn Light #9006345



Electrical Diagram — Amber Lamp Double Face #9005142

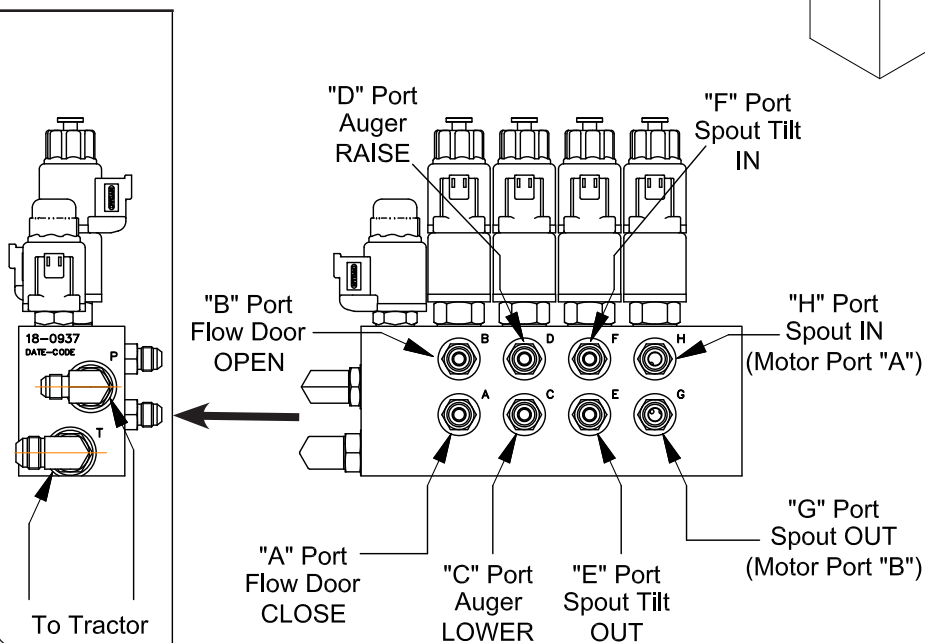
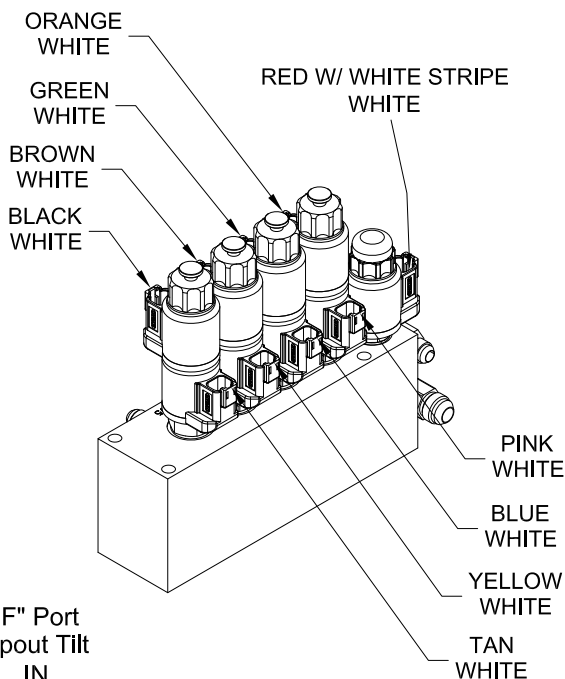


Electrical Diagram — Amber Light - Round Side Marker #9006107



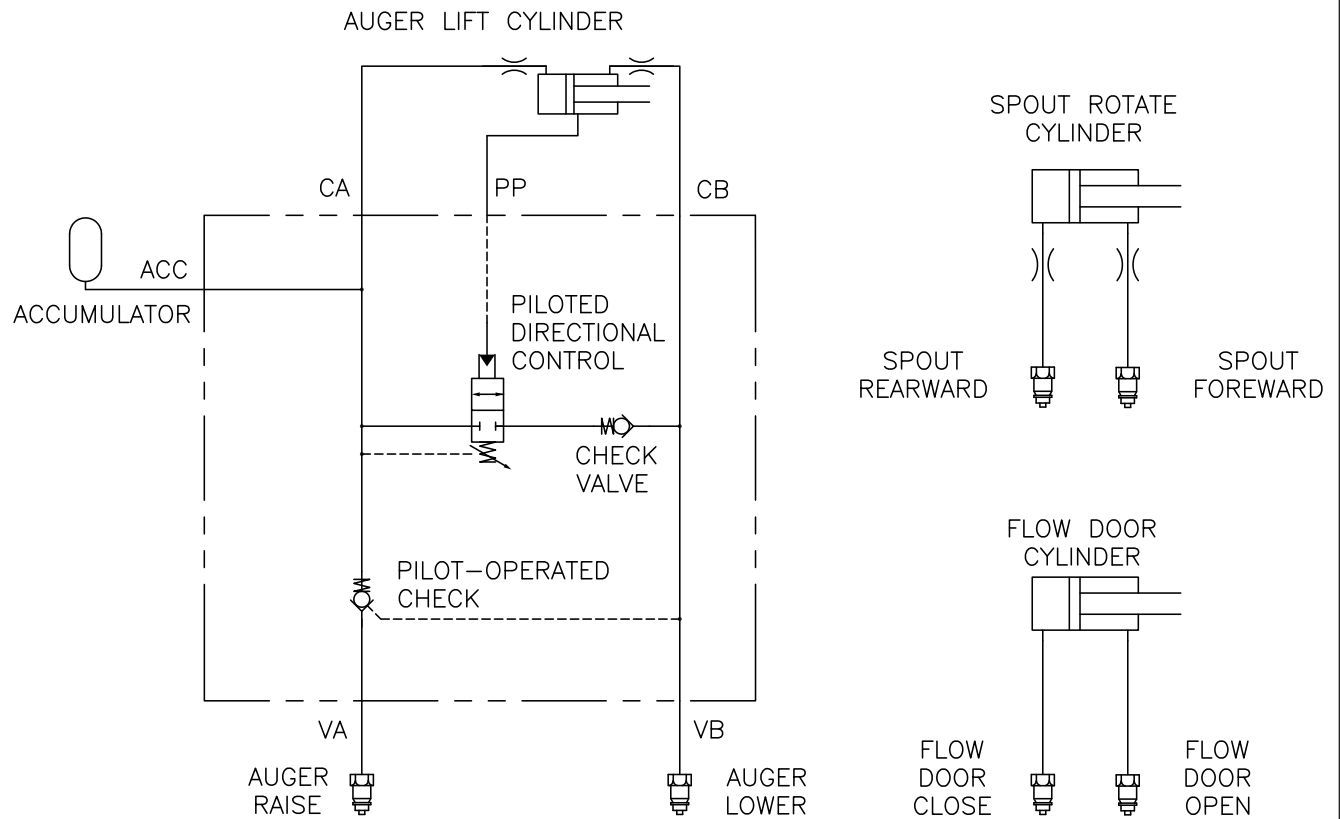
**Optional Electric Over Hydraulic Valve Electric Schematic
4 Spool**

NOTE: For hydraulic connections chart, refer to "Hitching to Tractor - Hydraulic Connections" in the OPERATION section.



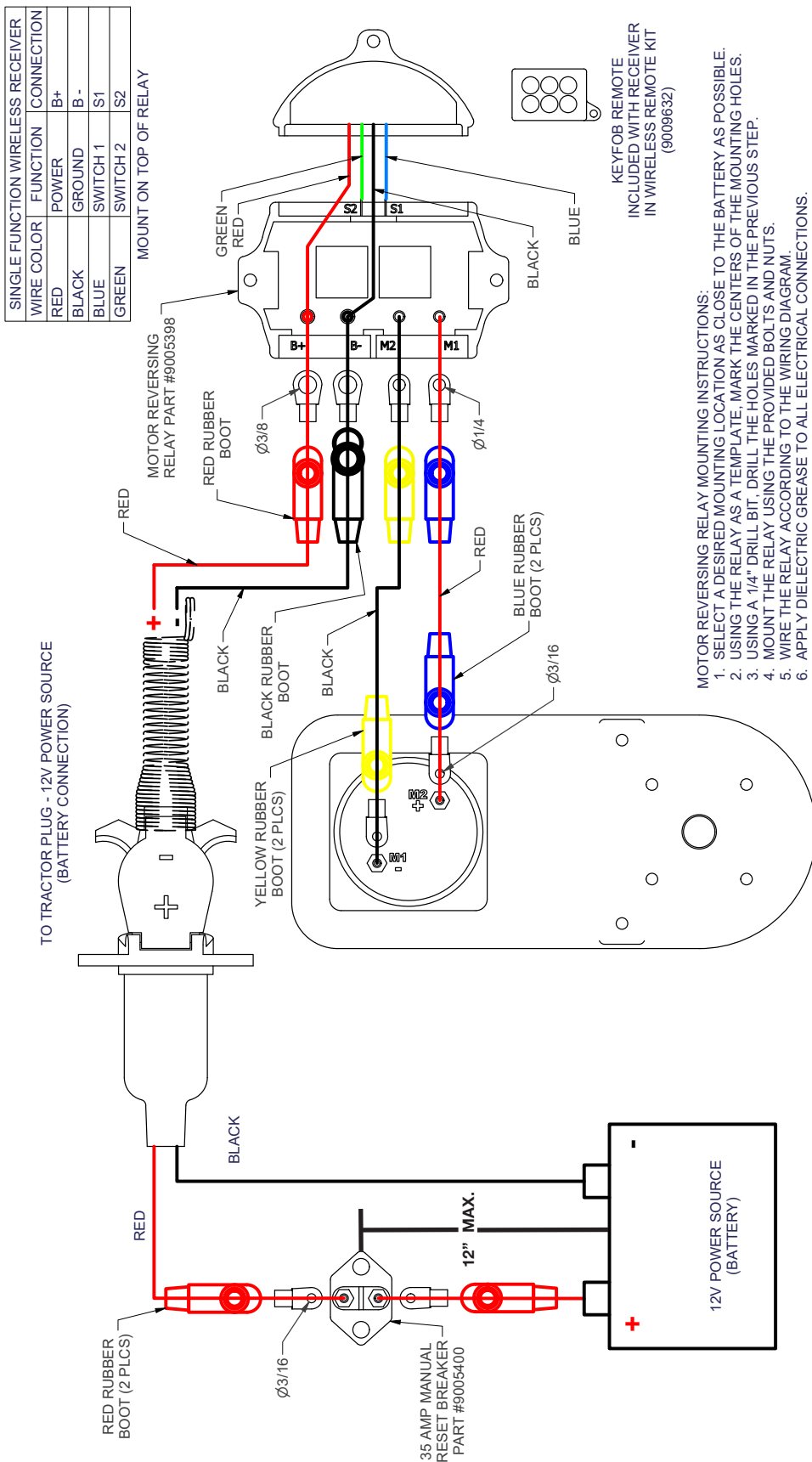
PORT	END OF CYLINDER	FUNCTION
A	BUTT END	FLOW DOOR CLOSE
B	RAM END	FLOW DOOR OPEN
C	RAM END	AUGER FOLD LOWER
D	BUTT END	AUGER FOLD RAISE
E	RAM END	SPOUT TILT OUT
F	BUTT END	SPOUT TILT IN
G	ORBIT MOTOR PORT B	SPOUT ROTATE OUT
H	ORBIT MOTOR PORT A	SPOUT ROTATE IN
P		TRACTOR PRESSURE
T		TRACTOR RETURN

Hydraulic System



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

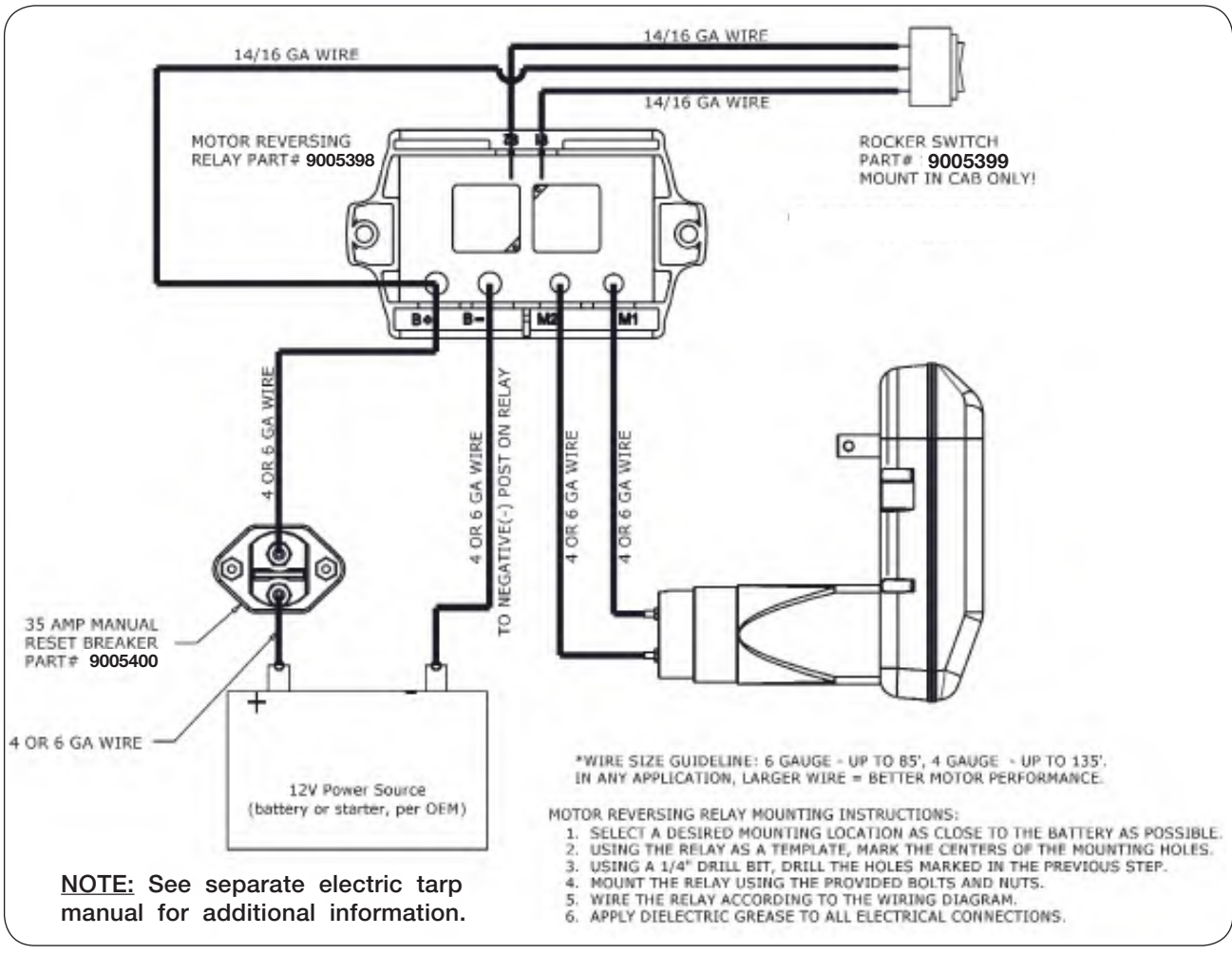
Electrical System Schematic - Optional Wireless Electric Tarp For SN B43320100 & Higher



NOTE: See separate electric tarp manual for additional information.

WIRELESS ELECTRIC TARP

**Electrical System Schematic - Optional Electric Tarp
For SN B43320099 & Lower**



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

IMPORTANT

- Follow these torque recommendations except when specified in text.

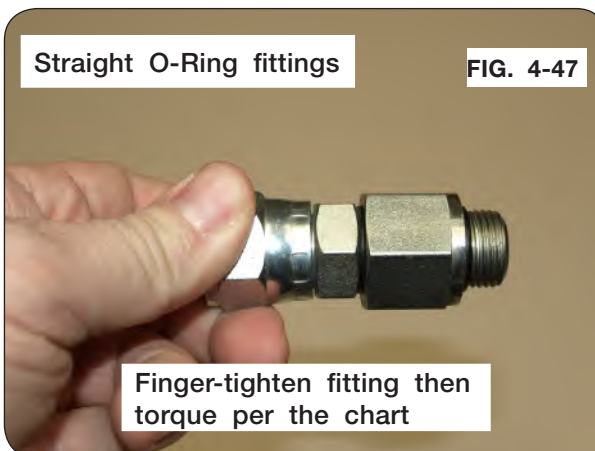
Hydraulic Fittings - Torque and Installation

Tightening O-Ring Fittings

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

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

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

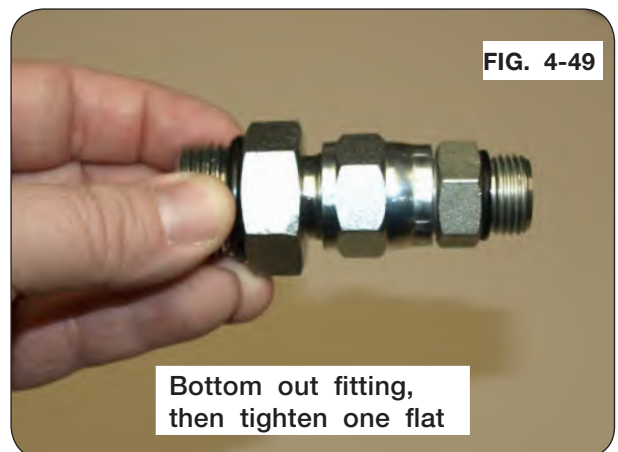


Hydraulic Fittings - Torque and Installation

Tightening JIC Fittings

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

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



Notes

SECTION V

Parts

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

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FOR SCALE, TRACK, UHARVEST, HYDRAULIC DRIVE, ELECTRIC TARP, VIDEO SYSTEM OPTIONS, AND / OR WATER DELIVERY SYSTEM INFORMATION, PLEASE REFER TO THE SPECIFIC MANUAL.

Decals

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

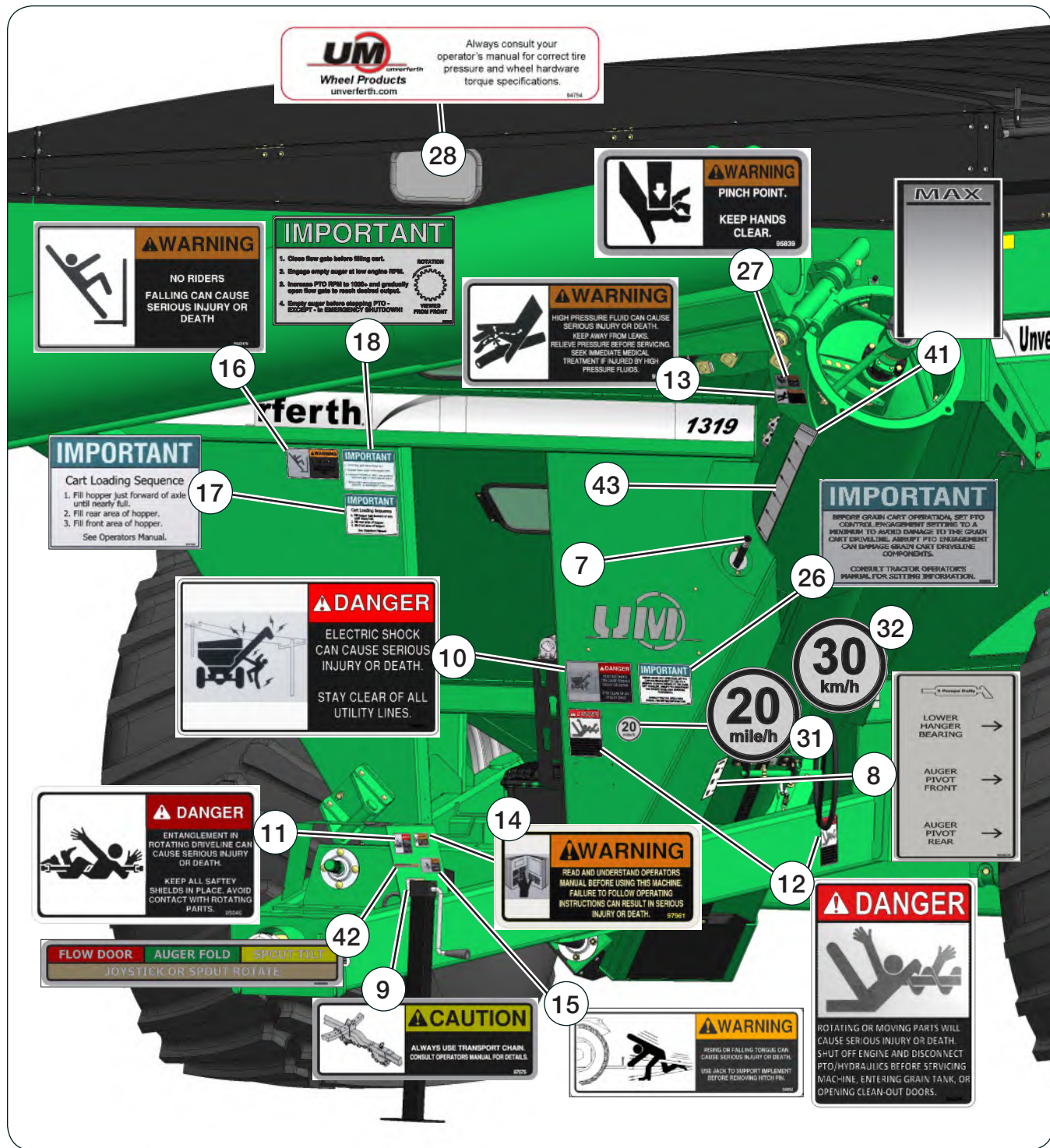


ITEM	PART NO.	DESCRIPTION	QTY.	NOTES
1	9003127	Reflector =AMBER=	8	
2	92563	Decal, Flow Control Indicator	1	
3	TA1-906109-0	Decal, WARNING (Moving Parts...)	1	
4	91605	Decal, FEMA	1	
5	9005666	Decal, Extreme	2	
6	9003478	Decal, DANGER (Never Play)	1	
12	9003475	Decal, WARNING (PTO Cut & Crush)	3	
16	9003476	Decal, WARNING (No Riders)	2	
30	9008447	Decal, IMPORTANT (Grease U-Joint Bearing)	1	For SN B38160100 and Higher

(Continued on next page)

Decals (continued)

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

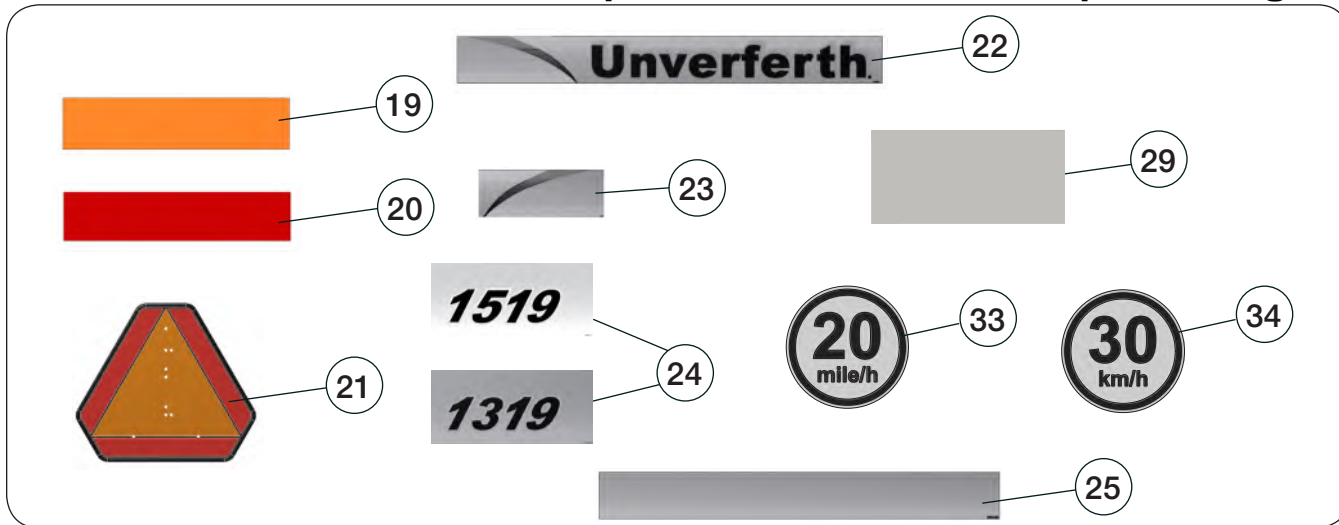


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1319/1519 GRAIN CARTS — Parts

Decals (continued)

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

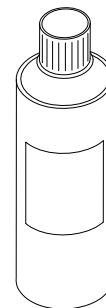


ITEM	PART NO.	DESCRIPTION	QTY.	NOTES
7	297599	Decal, Yellow Reflective Tape	1	
8	9008230	Decal, Grease	1	
9	97575	Decal, CAUTION (Transport Chain)	1	
10	9003474	Decal, DANGER (Electrical Lines)	1	
11	95046	Decal, DANGER (Drive Shaft Entanglement)	3	
12	9003475	Decal, WARNING (PTO Cut & Crush)	3	
13	95445	Decal, WARNING (High-Pressure...)	1	
14	97961	Decal, WARNING (Read & Understand)	1	
15	94094	Decal, WARNING (Tongue Drop)	1	
16	9003476	Decal, WARNING (No Riders)	2	
17	9004966	Decal, Important (Cart Loading Sequence)	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	293215	Decal Model 1519	4	
	9008169	Decal Model 1319	4	
25	9004035	Decal, Stripe	12	
26	9008151	Decal, Important (PTO Engagement)	1	
27	95839	Decal, WARNING (Pinch Point)	1	
28	94754	Decal, UM Wheel Systems	1	
29	9008314	Decal, Reflective Backing	1	
31	9008715	Decal, Front SIS 20 MPH	1	
32	9008721	Decal, Front SIS 30 KPH	1	
33	9008714	Decal, Rear SIS 20 MPH	1	Use Items 35, 36, and 37
34	9008720	Decal, Rear SIS 30 KPH	1	
35	276987B	SIS Decal Bracket =Black=	1	Not Shown
36	97420	Flange Screw 1/4"-20UNC x 3/4" G5	2	
37	97189	Hex Nut 1/4"-20UNC	6	
38	408485B	SMV Bracket =Black=	1	
39	9390-005	Capscrew, 1/4"-20UNC x 1" G5	4	
40	9405-064	Flat Washer, 1/4"	2	
41	9008908	Decal, Max Flow	1	
42	9009866	Decal, Hose Legend	1	
43	92563	Decal, Flow Indicator	1	

Touch-Up Paint

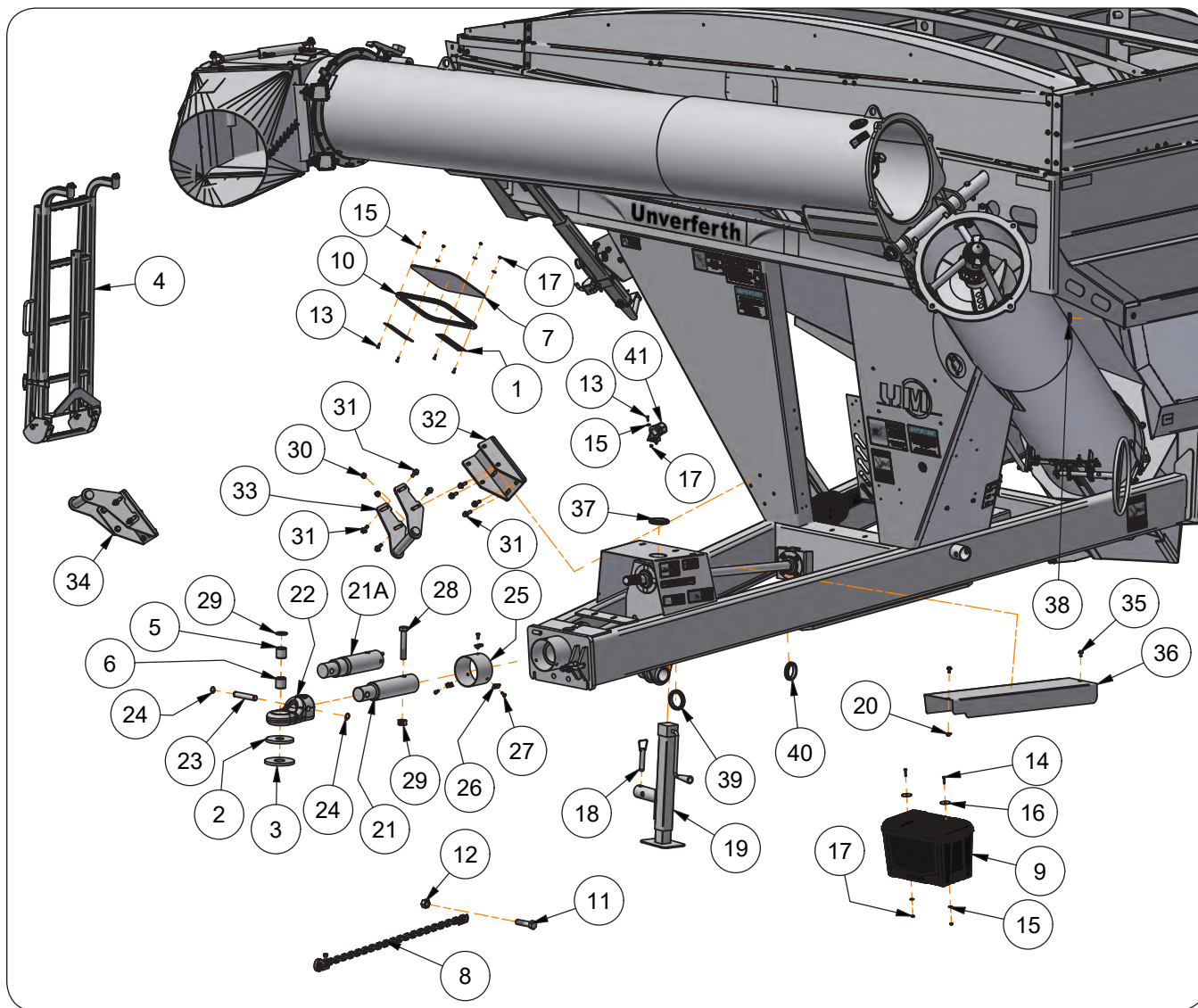
Please visit www.unverferth.com/parts/ for the most current parts listing.

PAINT	SPRAY
Black	97013
Green	97015
Red	97301
Sliver Mist	97012
Primer, Gray	9500082



Final Assembly Components

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



ITEM	PART NO.	DESCRIPTION	QTY.	NOTES
1	250461B	Window Bracket =Black=	6	
2	281663	Hitch Wear Shoe CAT 3	1	
3	281898	Hitch Wear Shoe CAT 4	1	
4	292925B	Ladder Assembly =Black=	1	See Ladder Components Page Below
5	9001917	Split Tension Bushing 2" Dia. x 1.50" ID	1	
6	9002130	Split Tension Bushing 2" Dia. x 1.75" ID	1	
7	9002544	Window	3	

1319/1519 GRAIN CARTS — Parts

Final Assembly Components (continued)

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

ITEM	PART NO.	DESCRIPTION	QTY.	NOTES
8	9003278	Transport Chain	1	
9	9005850	Storage Box	1	
10	271952	Window Moulding	3	
11	91299-191	Capscrew 1"-8UNC x 4" Grade 8	1	
12	92199	Locknut 1"-8UNC	2	
13	9390-003	Capscrew 1/4"-20UNC x 3/4" Grade 5	14	
14	9390-006	Capscrew 1/4"-20UNC x 1 1/4" Grade 5	2	
15	9405-064	Flat Washer 1/4" USS	16	
16	94763	Fender Washer 2" OD x 5/16" ID	2	
17	9936	Lock Nut 1/4"-20UNC	16	
18	9004171	Jack Pin	1	
19	9004156	Jack	1	
20	91263	Large Flange Nut 3/8"-16UNC	7	
21	284780	Hitch Bar 3 3/4" Dia. x 16 3/8" - CAT 4	1	SHOWN
	271894	Hitch Bar 3 3/4" Dia. x 14 5/8" - CAT 5	1	
21A	9004910	Scale Hitch Bar 3 3/4" Dia. x 16 3/8" - CAT 4	1	
	9008119	Scale Hitch Bar 3 3/4" Dia. x 14 5/8" - CAT 5	1	
22	282875B	Cast Hitch - CAT 4	1	SHOWN
	282329B	Cast Hitch - CAT 5	1	
23	282876	Hitch Pin 1" Dia. x 5 1/2 - CAT 4	1	SHOWN
	281691	Hitch Pin 1" Dia. x 7 3/8 - CAT 5	1	
24	91192	Retaining Ring	2	
25	271891B	Shield Tube =Black=	1	
26	9005376	U-Nut 3/8"-16UNC	3	
27	9390-053	Capscrew 3/8"-16UNC x 3/4" Grade 5	3	
28	91299-195	Capscrew 1"-8UNC x 6" Grade 8	1	
29	92199	O-Ring	1	
30	91267	Flange Nut 1/2"-13UNC Grade 5	4	
31	9005705	Flange Screw 1/2"-13UNC x 1 1/2"	8	
32	293132G	Auger Rest Bracket Weldment =Green=	1	Serial Number B37680140 and above
	293132R	Auger Rest Bracket Weldment =Red=	1	
33	293130G	Auger Rest Weldment =Green=	1	
	293130R	Auger Rest Weldment =Red=	1	
34	293135G	Rest Replacement Kit =Green=	1	Serial Number B37680139 and below
	293135R	Rest Replacement Kit =Red=	1	
35	95585	Flange Screw 3/8"-16UNC x 3/4" Grade 5	6	
36	282863B	Drive Cover =Black=	1	
37	9006783	Rubber Grommet, 3 1/2 Dia. x 1/8 Wide Groove	1	
38	97840	Rubber Grommet, 1 1/2 Dia. x 1/4 Wide Groove	1	
39	9006780	Rubber Grommet, 3 1/2 Dia. x 1/4 Wide Groove	4	
40	9007173	Rubber Grommet, 3 1/2 Dia. x 3/8 Wide Groove	10	
41	9001968	Connector Holder	1	

Ladder Assembly Components

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



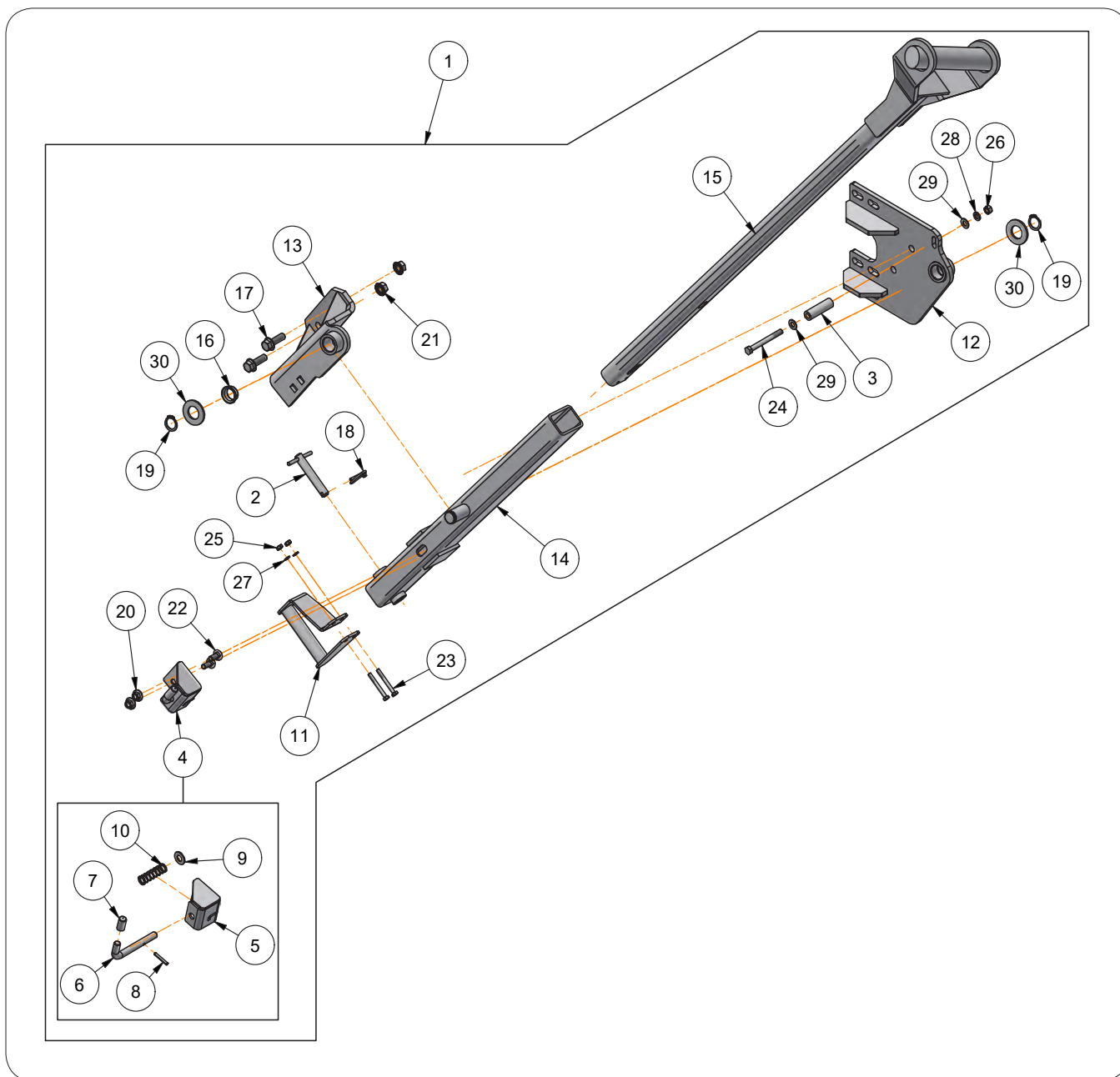
Ladder Assembly Components

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	292994B	Ladder Brace Weldment =Black=	1	
4	295137	Ladder Pivot Bushing	2	
5	900059	"R" Style Keeper	1	
6	900060	Ladder Handle	1	
7	900066	Draw Latch Pin	1	
8	900067	Washer 1/2"	1	
9	900068	E-Ring	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"	4	
14	9928	Lock Nut 3/8"-16UNC	4	
15	TA0-908386-0	3/8" Stainless Pop Rivet	2	
16	91262	Flange Screw 3/8"-16UNC x 1 Grade 5	2	
17	91263	Flange Nut 3/8"-16UNC	2	

Auger Rest Components — Serial Number B37680140 and Up

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



1319/1519 GRAIN CARTS — Parts

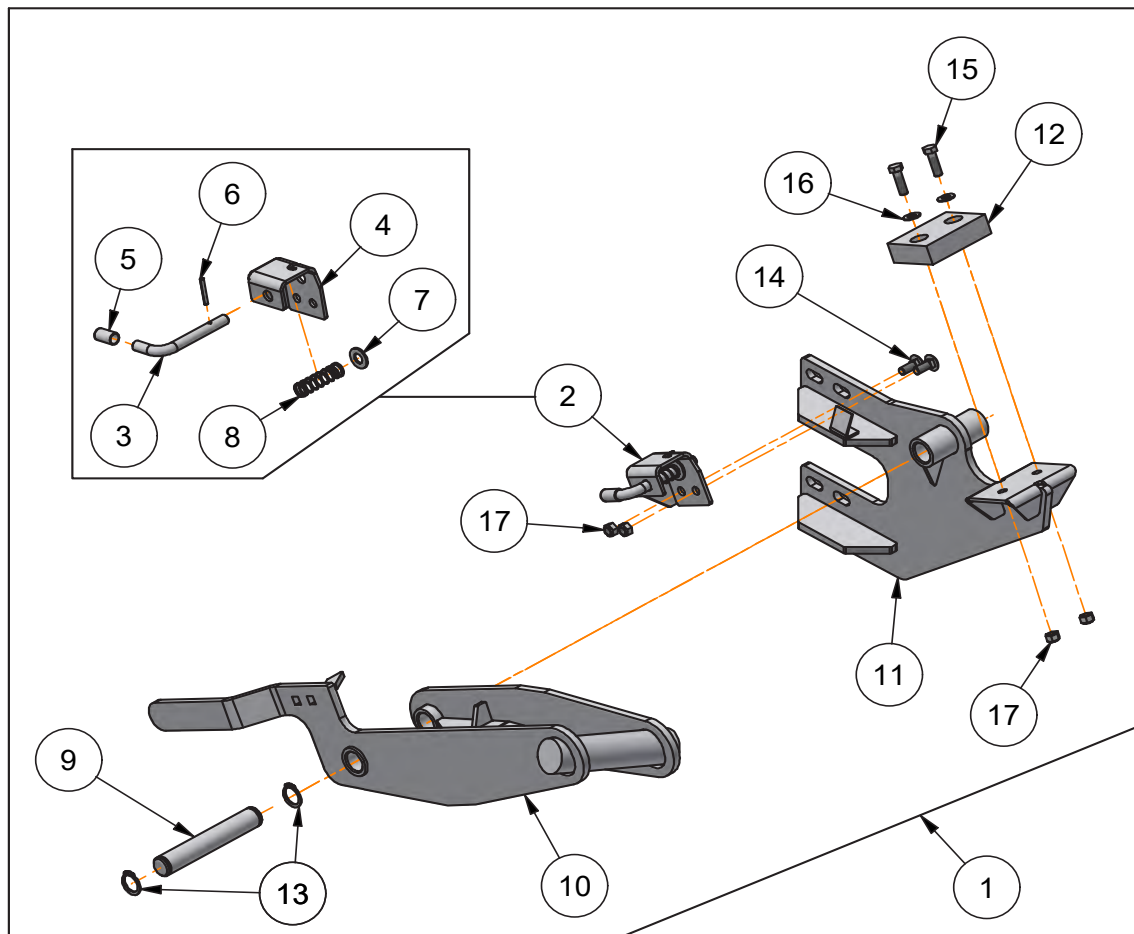
Auger Rest Components — Serial Number B37680140 and Up

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

ITEM	PART NO.	DESCRIPTION	QTY.	NOTES
1	293142G	Auger Rest Assembly =Green=	1	Includes items 2 through 30
	293142R	Auger Rest Assembly =Red=		
2	293036	Pin Weldment	1	
3	293045G	Spacer/Bushing 3/4" OD x 2 1/2" =Green=	1	
	293045R	Spacer/Bushing 3/4" OD x 2 1/2" =Red=		
4	293046B	Latch Assembly =Black=	1	Includes Items 5 through 10
5	293047B	Latch Weldment =Black=	1	
6	293049	Pin 1/2" Dia. x 6 1/16"	1	
7	9003870	Yellow Hand Grip	1	
8	9392-100	Roll Pin 3/16" Dia. x 1 3/8	1	
9	9405-086	Flat Washer 1/2"	1	
10	TA510035	Spring 2 1/2" Long	1	
11	293078G	Handle Weldment =Green=	1	
	293078R	Handle Weldment =Red=		
12	293136G	Rest Mount Weldment =Green=	1	
	293136R	Rest Mount Weldment =Red=		
13	293138G	Rest Bracket Weldment =Green=	1	
	293138R	Rest Bracket Weldment =Red=		
14	293140G	Outer Rest Weldment =Green=	1	
	293140R	Outer Rest Weldment =Red=		
15	293143G	Inner Rest Weldment =Green=	1	
	293143R	Inner Rest Weldment =Red=		
16	9003412	Split Output Bushing 1" OD Nom. x 1/2"	2	
17	9005705	Flange Screw 1/2"-13UNC x 1 1/2"	2	
18	9093	Klik Pin 3/16" Dia. x 1 9/16"	1	
19	91192	Retaining Ring 1"	2	
20	91263	Nut/Large Flange 3/8"-16UNC	2	
21	91267	Flange Nut 1/2"-13UNC	2	
22	9388-051	Carriage Bolt 3/8"-16UNC x 1"	2	
23	9390-010	Capscrew 1/4"-20UNC x 2 1/4"	2	
24	9390-065	Capscrew 3/8"-16UNC x 3 1/2"	1	
25	9394-002	Hex Nut 1/4"-20UNC	2	
26	9394-006	Hex Nut 3/8"-16UNC	1	
27	9404-017	Lock Washer 1/4"	2	
28	9404-021	Lock Washer 3/8"	1	
29	9405-074	Flat Washer 3/8" SAE	2	
30	9405-116	Flat Washer 1" SAE	2	

Auger Rest Components — Serial Number B37680139 and Below

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



1319/1519 GRAIN CARTS — Parts

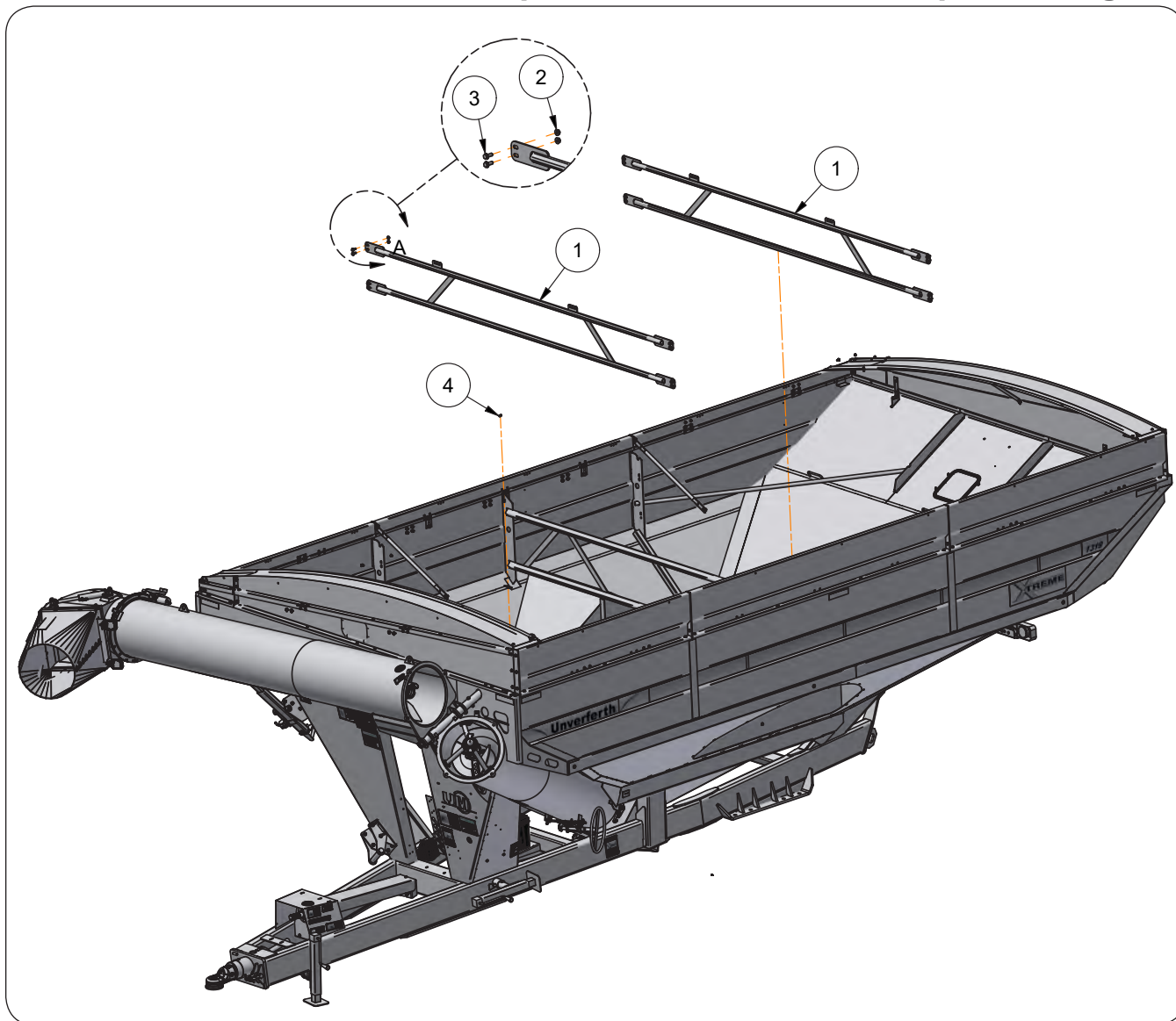
Auger Rest Components — Serial Number B37680139 and Below

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

ITEM	PART NO.	DESCRIPTION	QTY.	NOTES
1	292859G	Auger Rest Assembly =Green=	1	(Transport Position For In Field Use)
	292859R	Auger Rest Assembly =Red=		
2	292236B	Latch Assembly	1	
3	283256	Pin 1/2" Dia. x 5 9/16"	1	
4	292237B	Latch Weldment	1	
5	9003870	Yellow Hand Grip	1	
6	9392-100	Roll Pin 3/16" Dia. x 1 3/8	1	
7	9405-086	Flat Washer 1/2"	1	
8	TA510035	Spring 2 1/2" Long	1	
9	292309	Pivot Rest Pin	1	
10	292651G	Field Rest Weldment =Green=	1	
	292651R	Field Rest Weldment =Red=		
11	292733G	Support Rest Weldment =Green=	1	
	292733R	Support Rest Weldment =Red=		
12	9008197	Urethane Spring	1	
13	91192	Retaining Ring 1"	2	
14	9388-051	Carriage Bolt 3/8-16UNC x 1 Gr. 5	2	
15	9390-056	Capscrew 3/8"-16UNC x 1 1/4" Gr. 5	2	
16	9405-074	Flat Washer 3/8" SAE	2	
17	9928	Locknut 3/8-16UNC	4	

Hopper Cross Brace Components - For SN B41330100 & Higher

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

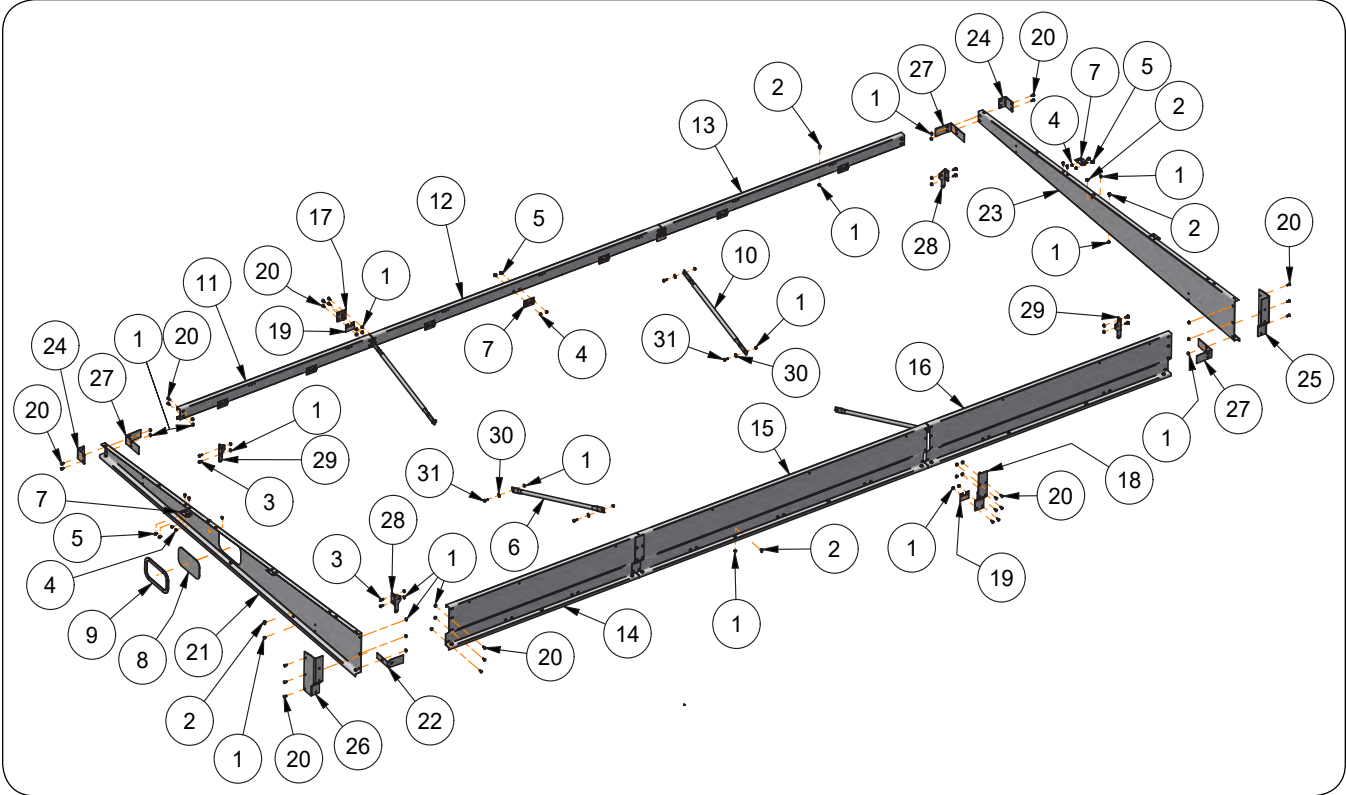


ITEM	PART NO.	DESCRIPTION	QTY	NOTES
1	292919B	Cross Brace Weldment =Black=	2	
2	9003397	Locknut 1/2"-13UNC	16	
3	91266	Flange Screw 1/2"-13UNC x 1 1/2" Gr.5	16	
4	9007987	Grommet 1" OD x 5/16" ID x 7/16"	1	

Notes

Sideboard Components - Model 1319
For SN B43320100 and Higher

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



1319/1519 GRAIN CARTS — Parts

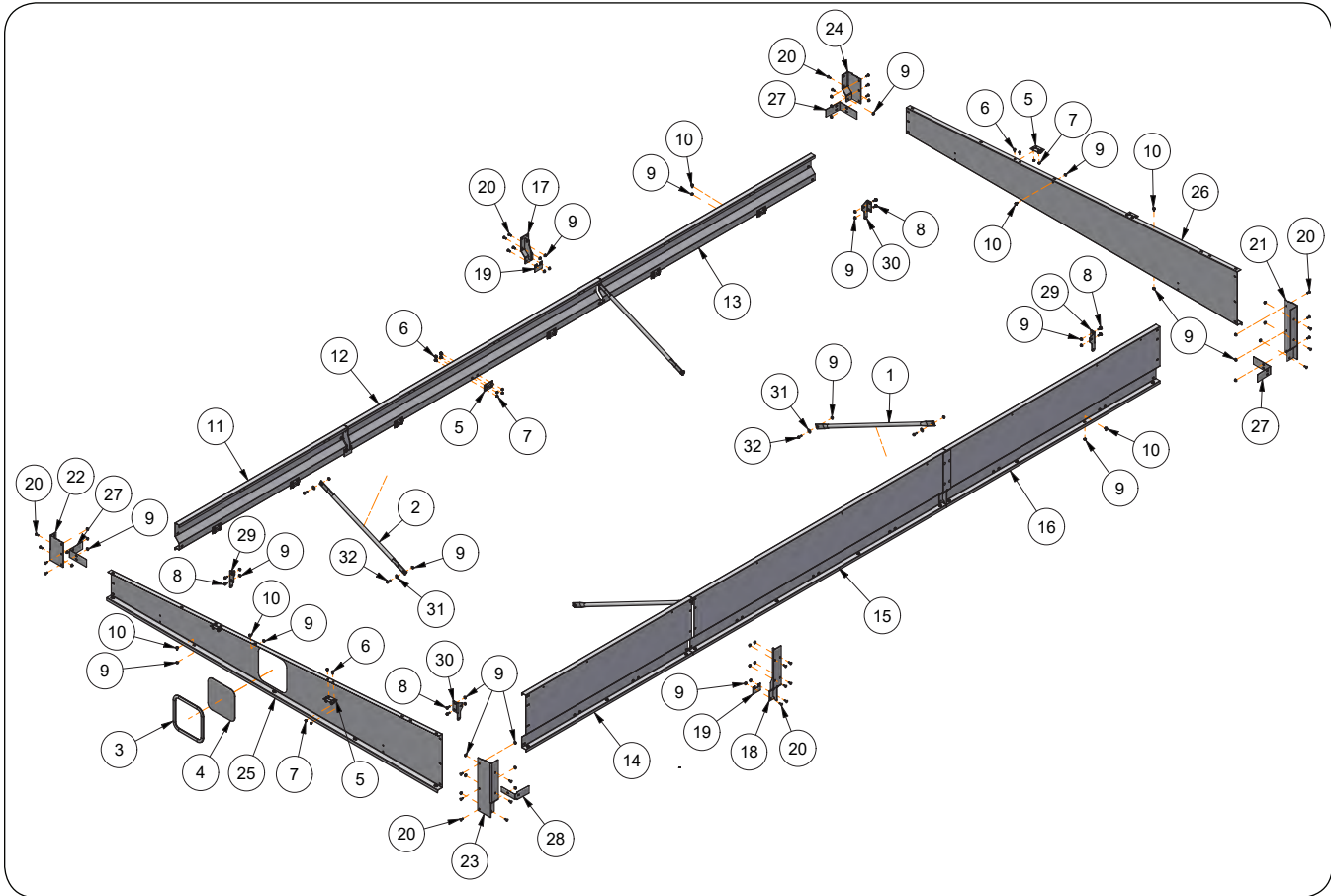
Sideboard Components - Model 1319 For SN B43320100 and Higher

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

ITEM	PART NO.	DESCRIPTION	QTY.	NOTES
1	9008159	Locknut 3/8"-16UNC	134	
2	95585	Flange Screw 3/8"-16UNC x 3/4" Grade 5	50	
3	91262	Flange Screw 3/8"-16UNC x 1" Grade 5	8	
4	9010154	Locknut 5/16"-18UNC	108	
5	91256	Flange Screw 5/16"-18UNC x 3/4" Grade 5	80	
6	287524B	Sideboard Brace Tube LH =Black=	2	
7	9004626	Hinge	18	
8	92403	Window Glass	1	
9	9001489	Window Molding	1	
10	220032B	Sideboard Brace Tube RH =Black=	2	
11	296540B	Front RH Sideboard =Black=	1	
12	296541B	Center RH Sideboard =Black=	1	
13	296542B	Rear RH Sideboard =Black=	1	
14	296543B	Front LH Sideboard =Black=	1	
15	296544B	Center LH Sideboard =Black=	1	
16	296545B	Rear LH Sideboard =Black=	1	
17	296550B	Sideboard Bracket RH =Black=	2	
18	296551B	Sideboard Bracket LH =Black=	2	
19	295691B	Sideboard Cover Plate =Black=	4	
20	9388-051	Carriage Bolt 3/8" x 1" Grade 5	40	
21	296536B	Front Sideboard =Black=	1	
22	296580B	LH Front Sideboard Cover Corner Plate =Black=	1	
23	296538B	Rear Sideboard =Black=	1	
24	296548B	RH Sideboard Cover Plate =Black=	2	
25	296547B	LH Rear Sideboard Corner Plate =Black=	1	
26	296546B	LH Front Sideboard Corner Plate =Black=	1	
27	295125B	Sideboard Cover Corner Plate =Black=	3	
28	288428B	RH Rear and LH Front Hinge Plate =Black=	2	
29	288427B	LH Rear and RH Front Hinge Plate =Black=	2	
30	9405-078	Flat Washer 3/8"	8	
31	9003259	Flange Screw 3/8"-16UNC x 1 1/4"	8	

Sideboard Components - Model 1519
For SN B43410100 and Higher

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



1319/1519 GRAIN CARTS — Parts

Sideboard Components - Model 1519 For SN B43410100 and Higher

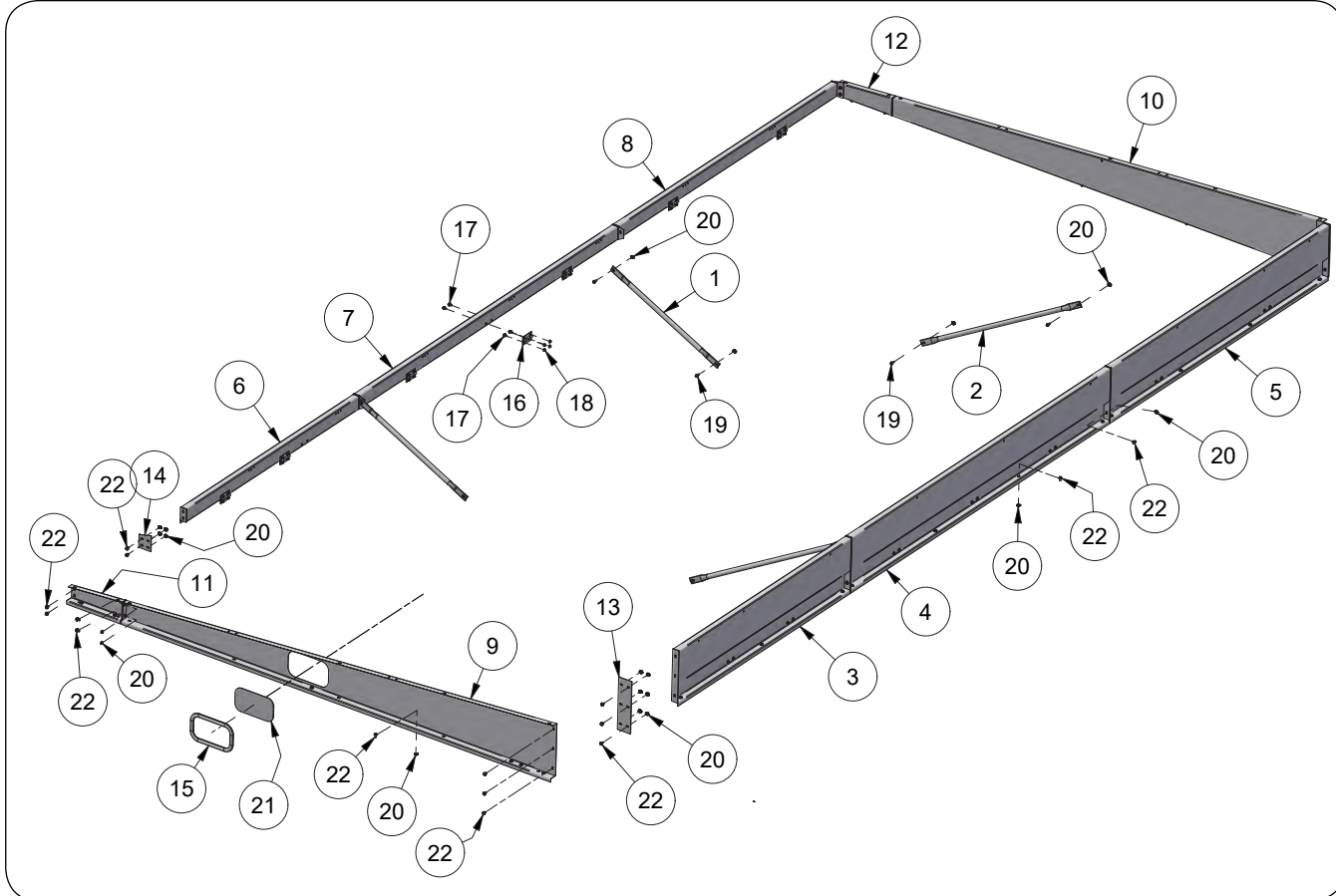
Please visit www.unverferth.com/parts/ for the most current parts listing.

ITEM	PART NO.	DESCRIPTION	QTY.	NOTES
1	287692B	Left-Hand Sideboard Brace Tube =Black=	2	
2	293219B	Right-Hand Sideboard Brace Tube =Black=	2	
3	9001489	Window Molding	1	
4	9002544	Window	4	
5	9004626	Hinge	18	
6	91256	Flange Screw 5/16"-18UNC x 3/4" Grade 5	80	
7	9010154	Locknut 5/16"-18UNC	108	
8	91262	Flange Screw 3/8"-16UNC x 1" Grade 5	8	
9	9008159	Locknut 3/8"-16UNC	143	
10	95585	Flange Screw 3/8"-16UNC x 3/4" Grade 5	50	
11	296563B	Right-Hand Front Sideboard =Black=	1	
12	296564B	Right-Hand Center Sideboard =Black=	1	
13	296565B	Right-Hand Rear Sideboard =Black=	1	
14	296566B	Left-Hand Front Sideboard =Black=	1	
15	296567B	Left-Hand Center Sideboard =Black=	1	
16	296568B	Left-Hand Rear Sideboard =Black=	1	
17	296573B	Right-Hand Sideboard Bracket =Black=	2	
18	296574B	Left-Hand Sideboard Bracket =Black=	2	
19	295691B	Sideboard Plate Cover =Black=	4	
20	9388-051	Carriage Bolt 3/8"-16UNC x 1" Grade 5	42	
21	296570B	Left-Hand Rear Corner Plate =Black=	1	
22	296571B	Right-Hand Front Corner Plate =Black=	1	
23	296569B	Left-Hand Front Corner Plate =Black=	1	
24	296572B	Right-Hand Rear Corner Plate =Black=	1	
25	296559B	Front Sideboard =Black=	1	
26	296561B	Rear Sideboard =Black=	1	
27	295125B	Sideboard Cover Corner Plate =Black=	3	
28	296580B	Left-Hand Front Sideboard Cover Corner Plate =Black=	1	
29	288428B	RH Rear and LH Front Hinge Plate =Black=	2	
30	288427B	LH Rear and RH Front Hinge Plate =Black=	2	
31	9405-078	Flat Washer 3/8"	8	
32	9003259	Flange Screw 3/8"-16UNC x 1 1/4"	8	

1319/1519 GRAIN CARTS — Parts

Sideboard Components - Model 1319 For SN B43320099 and Lower

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

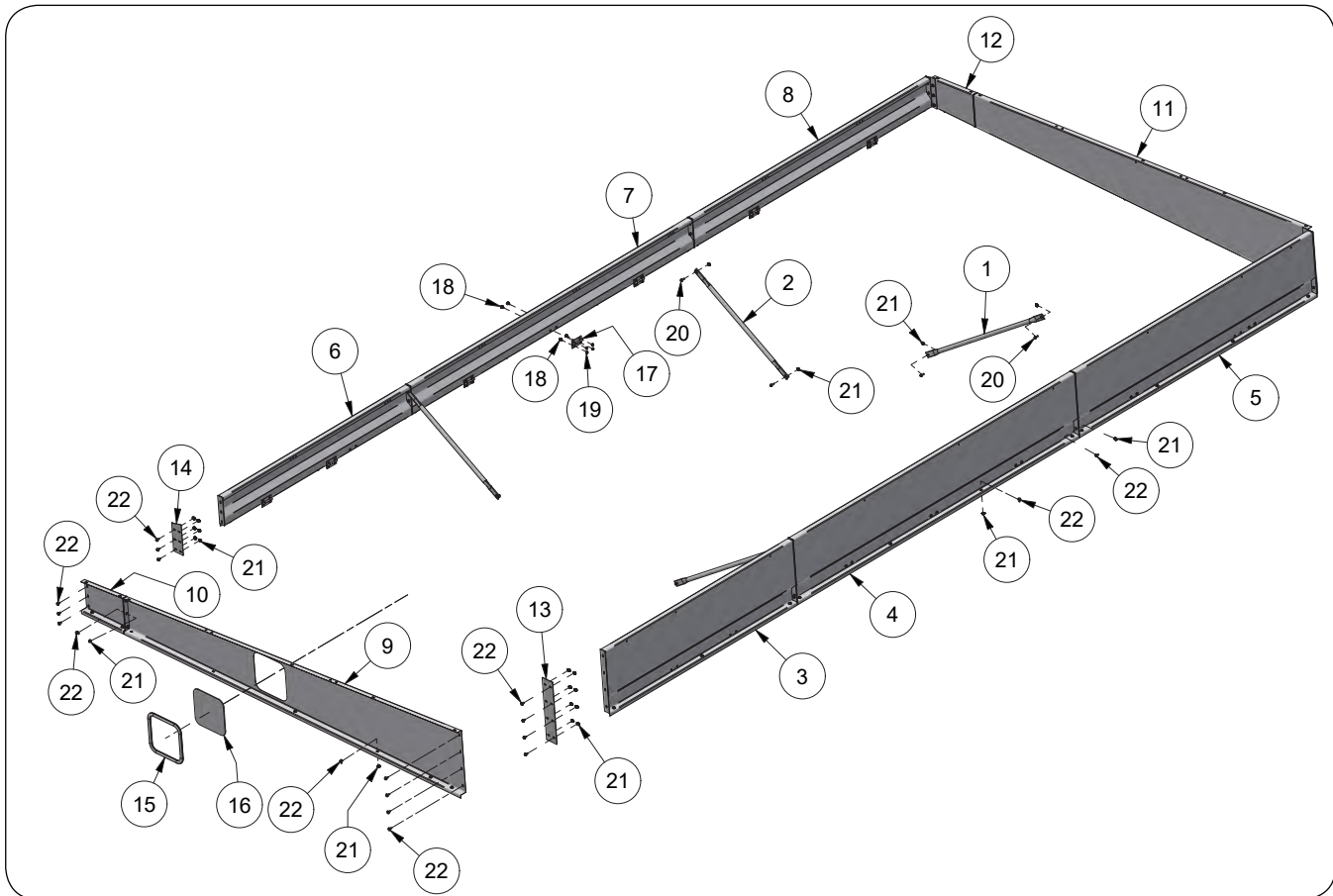


ITEM	PART NO.	DESCRIPTION	QTY.	NOTES
1	220032B	Sideboard Brace Tube RH =Black=	2	
2	287524B	Sideboard Brace Tube LH =Black=	2	
3	292780B	Sideboard Front LH =Black=	1	
4	292782B	Sideboard Middle LH =Black=	1	
5	292784B	Sideboard Rear LH =Black=	1	
6	292786B	Sideboard Front RH =Black=	1	
7	292788B	Sideboard Middle RH =Black=	1	
8	292790B	Sideboard Rear RH =Black=	1	
9	292792B	Sideboard Front - Long =Black=	1	
10	292794B	Sideboard Rear - Long =Black=	1	
11	292891B	Sideboard Front - Short =Black=	1	
12	292895B	Sideboard Rear - Short =Black=	1	
13	292898B	Sideboard Mount Plate LH =Black=	2	
14	292899B	Sideboard Mount Plate RH =Black=	2	
15	9001489	Window Molding	1	
16	9004626	Hinge	18	
17	91256	Flange Screw 5/16"-18UNC x 3/4" Grade 5	104	
18	91257	Flange Nut 5/16"-18UNC	104	
19	91262	Flange Screw 3/8"-16UNC x 1" Grade 5	14	
20	91263	Flange Screw 3/8"-16UNC	122	
21	92403	Window	1	
22	95585	Flange Screw 3/8"-16UNC x 3/4" Grade 5	88	

1319/1519 GRAIN CARTS — Parts

Sideboard Components - Model 1519 For SN B43410099 and Lower

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

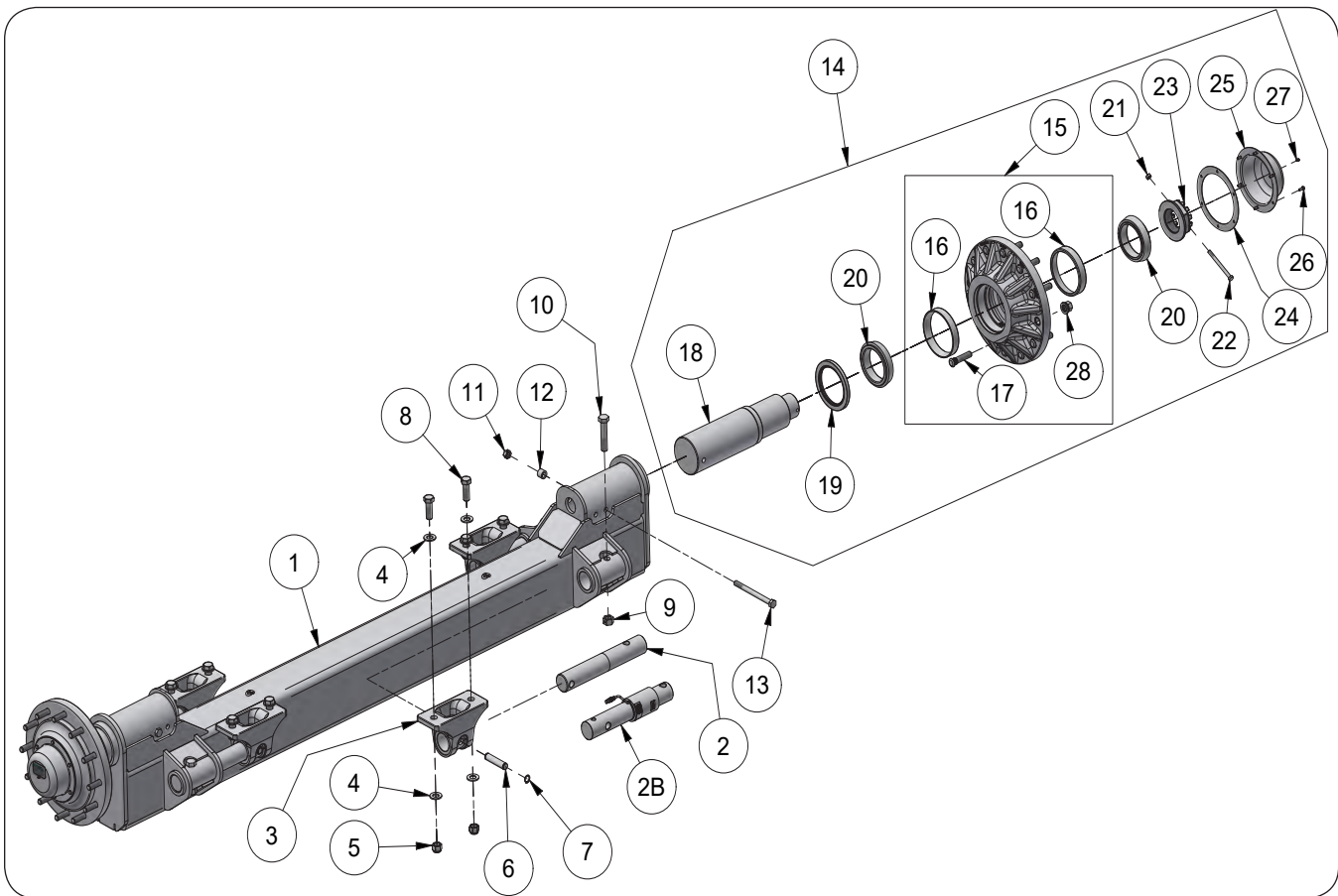


ITEM	PART NO.	DESCRIPTION	QTY.	NOTES
1	287692B	Sideboard Brace Tube LH =Black=	2	
2	293219B	Sideboard Brace Tube RH =Black=	2	
3	293227B	Sideboard Front LH =Black=	1	
4	293229B	Sideboard Middle LH =Black=	1	
5	293231B	Sideboard Rear LH =Black=	1	
6	293233B	Sideboard Front RH =Black=	1	
7	293235B	Sideboard Middle RH =Black=	1	
8	293238B	Sideboard Rear RH =Black=	1	
9	293241B	Sideboard Front - Long =Black=	1	
10	293243B	Sideboard Front - Short =Black=	1	
11	293245B	Sideboard Rear - Long =Black=	1	
12	293247B	Sideboard Rear - Short =Black=	1	
13	293248B	Sideboard Mount Plate LH =Black=	2	
14	293249B	Sideboard Mount Plate RH =Black=	2	
15	9001489	Window Molding	1	
16	9002544	Window	4	
17	9004626	Hinge	18	
18	91256	Flange Screw 5/16"-18UNC x 3/4" Grade 5	104	
19	91257	Flange Nut 5/16"-18UNC	104	
20	91262	Flange Screw 3/8"-16UNC x 1" Grade 5	14	
21	91263	Flange Nut 3/8"-16UNC	134	
22	95585	Flange Screw 3/8"-16UNC x 3/4" Grade 5	100	

1319/1519 GRAIN CARTS — Parts

Rigid Axle — Model 1319

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



1319/1519 GRAIN CARTS — Parts

Rigid Axle — Model 1319

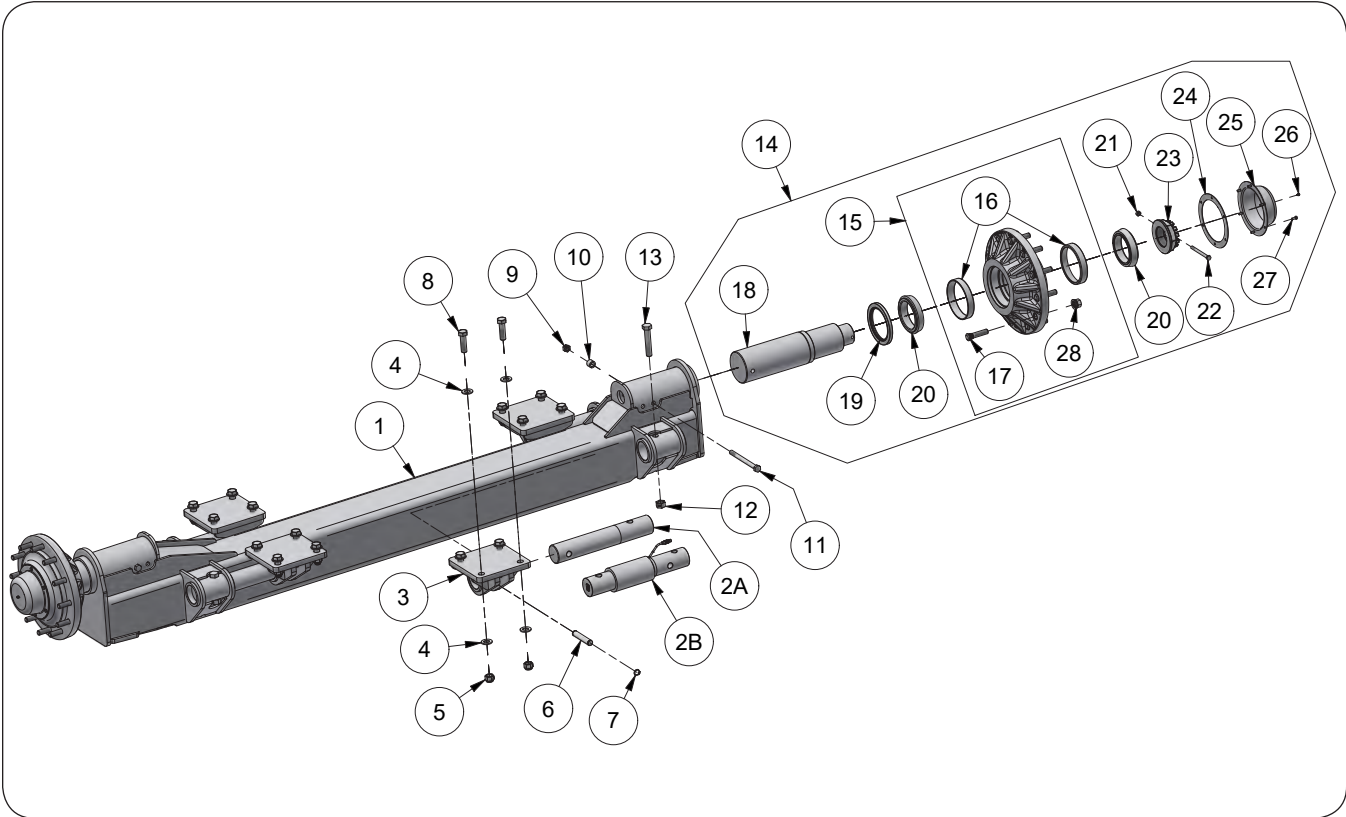
Please visit www.unverferth.com/parts/ for the most current parts listing.

ITEM	PART NUMBER	DESCRIPTION	QTY	NOTES
	288191B	Rigid Axle Assembly w/out Scales =Black=		Includes Items 1, 2 and 3 through 28
	288190B	Rigid Axle Assembly w/Scales =Black=		Includes Items 1, 2B and 3 through 28
1	288223B	Axle Weldment =Black=	1	
2	268289	Hitch Bar For Units w/o Scales	4	
2B	9004903	Hitch Bar For Units w/Scales	4	
3	283853B	Axle Mount Casting =Black=	4	
4	804685	Washer	16	
5	9008441	Lock Nut 1" UNS Grade 8	8	
6	250843	Axle Mount Pin	4	
7	91192	Retaining Ring	8	
8	91299-1456	Capscrew 1"-14UNS x 3" Grade 8	8	
9	92199	Lock Nut 1"-8UNC	4	
10	9390-193	Capscrew 1"-8UNC x 5" Grade 5	4	
11	9008442	Lock Nut 3/4"-10UNC Grade 8	2	
12	283895B	Spacer Bushing =Black=	2	
13	91299-256	Capscrew 3/4"-10UNC x 9	2	
14	282310B	Hub and Spindle Assembly =Black=	2	Includes Items 15 through 27
15	282312B	Hub Assembly =Black=	2	Includes Items 15 through 17
16	9006996	Bearing Cup	4	
17	9007001	Stud Bolt M22 x 1.5" x 4"	24	
18	282311PP	Spindle 6" x 23 3/16"	2	
19	9007010	Spindle Seal	2	
20	9007007	Bearing Cone	4	
21	94981	Lock Nut 1/2"-13UNC	2	
22	9007854	Capscrew 1/2"-13UNC x 5 3/4" Grade 5	2	
23	282317	Spindle Nut	2	
24	282315	Hub Cap Gasket	2	
25	282314B	Hub Cap =Black=	2	
26	9390-028	Capscrew 5/16"-18UNC x 3/4" Grade 5	12	
27	91160	Grease Zerk	2	
28	97319	Lug Nut M22 x 1.5"	24	

1319/1519 GRAIN CARTS — Parts

Rigid Axle — Model 1519

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



1319/1519 GRAIN CARTS — Parts

Rigid Axle — Model 1519

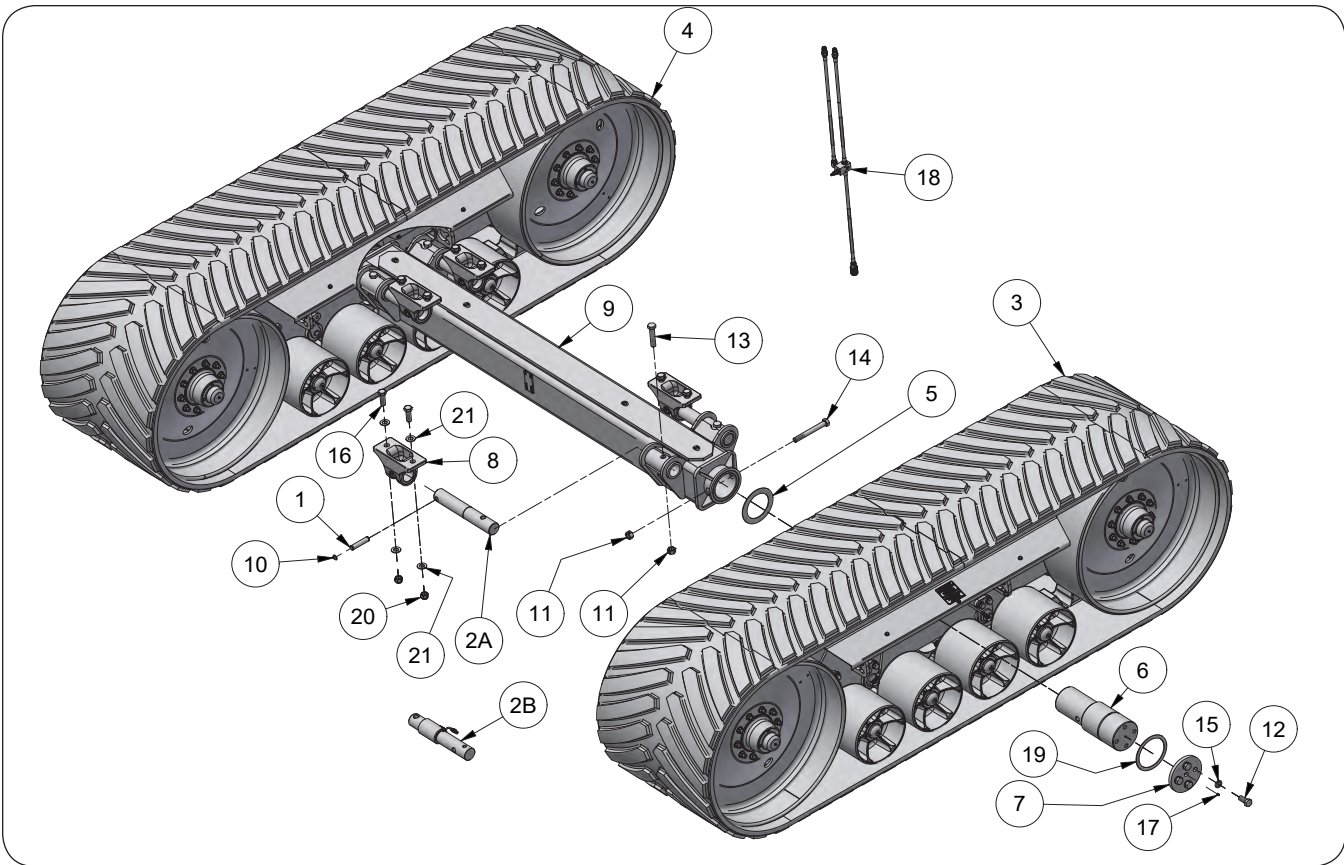
Please visit www.unverferth.com/parts/ for the most current parts listing.

ITEM	PART NUMBER	DESCRIPTION	QTY	NOTES
	294593B	Rigid Axle Assembly w/out Scales =Black=	1	Includes Items 1, 2A, and 3 through 28
	294592B	Rigid Axle Assembly w/Scales =Black=		Includes Items 1, 2B and 3 through 28
1	294594B	Axle Weldment =Black=	1	
2A	282745	Hitch Bar For Units w/o Scales	4	
2B	9005811	Hitch Bar For Units w/ Scales	4	
3	288609B	Axle Mount Weldment =Black=	4	
4	804685	Washer	32	
5	9008441	Lock Nut 1"UNS GRade 8	32	
6	282876	Axle Mount Weldment Pin	4	
7	91192	Retaining Clips	8	
8	91299-1458	Capscrew 1"-14UNS x 3 1/2" Grade 8	16	
9	9008442	Lock Nut 3/4"-10UNC	2	
10	283895	Spacer Bushing =Black=	2	
11	91299-256	Capscrew 3/4"-10UNC x 9" Grade 8	2	
12	92199	Lock Nut 1"-8UNC	4	
13	9390-194	Capscrew 1"-8UNC x 5 1/2" Grade 5	4	
14	282310B	Hub and Spindle Assembly =Black=	2	Includes Items 15 through 27
15	282312B	Hub Assembly =Black=	2	Includes itmes 15 through 17
16	9006996	Bearing Cup	4	
17	9007001	Stud Bolt	24	
18	282311PP	Spindle 6" x 23 13/16"	2	
19	9007010	Spindle Seal	2	
20	9007007	Bearing Cone	4	
21	94981	Lock Nut 1/2"-13UNC	2	
22	9007854	Capscrew 1/2"-13UNC x 5 3/4" Grade 5	2	
23	282317	Spindle Nut	2	
24	282315	Hub Cap Gasket	2	
25	282314B	Hub Cap =Black=	2	
26	91160	Grease Zerk	2	
27	9390-028	Capscrew 5/16"-18UNC x 3/4" Grade 5	12	
28	97319	Lug Nut M22 x 1 1/2"	24	

1319/1519 GRAIN CARTS — Parts

Track Axle - Model 1319 with 36" x 148" Standard Tracks

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



1319/1519 GRAIN CARTS — Parts

Track Axle - Model 1319 with 36" x 148" Standard Tracks

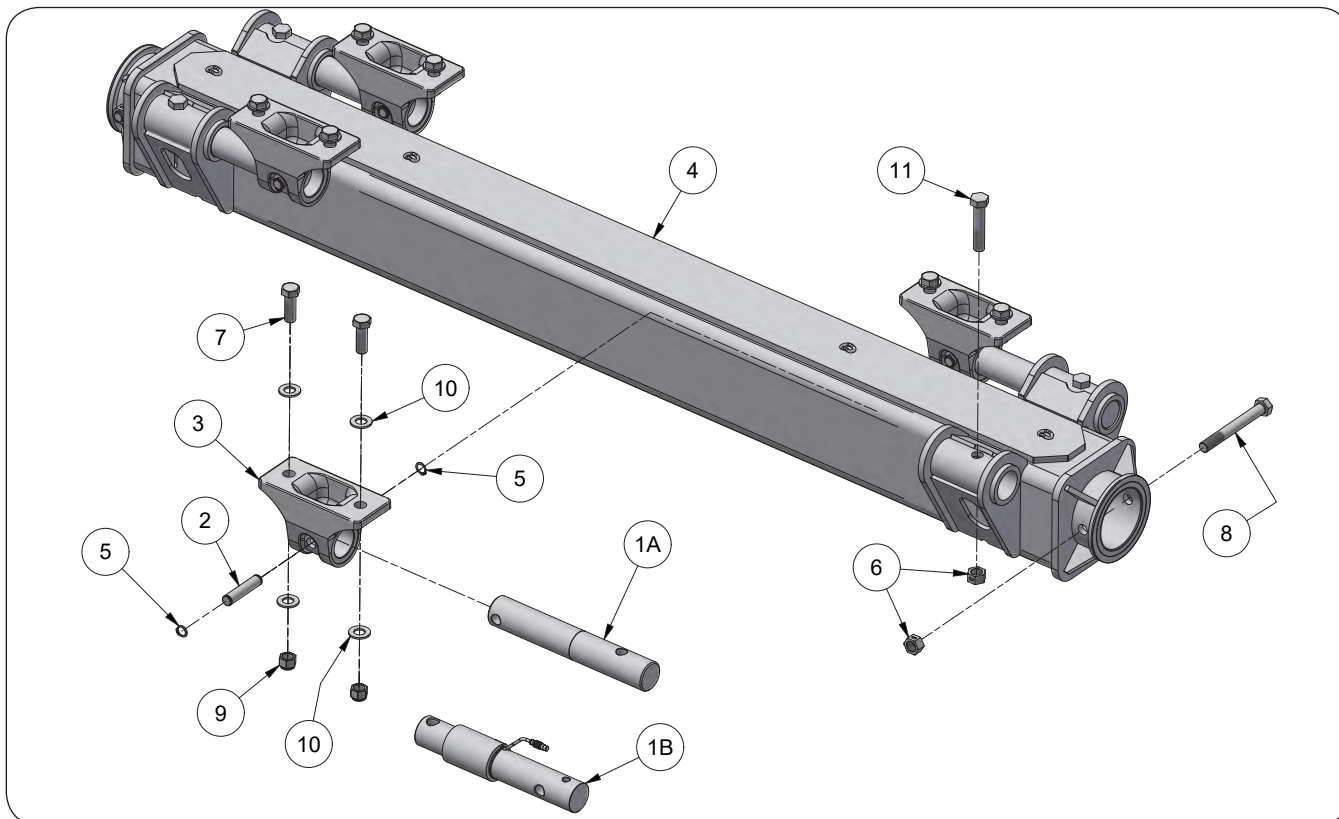
Please visit www.unverferth.com/parts/ for the most current parts listing.

ITEM	PART NO.	DESCRIPTION	QTY	NOTES
	288193B	Track Axle Assembly w/out Scales (Black)	1	Includes Items 1, 2A, 8-11, 13, 14, 16, 20, 21
	288192B	Track Axle Assembly w/Scales (Black)		Includes Items 1, 2B, 8-11, 13, 14, 16, 20, 21
1	250843	Pin 1" Dia. x 4 11/16"	4	
2A	268289	Hitch Bar For Units w/out Scales	4	
2B	9004903	Load Bar For Units w/Scales		
3	282681B	Track Assembly Left-Hand =Black=	1	
4	282680B	Track Assembly Right-Hand =Black=	1	
5	282397	Washer 8 1/2" OD	2	
6	282395	Track Pivot Shaft 7" Dia. x 19 3/16"	2	
7	282689B	Cover Plate =Black=	2	
8	283854B	Axle Mount Casting =Black=	4	
9	288224B	Track Axle Weldment =Black=	1	
10	91192	Retaining Ring 1"	8	
11	92199	Locknut 1"-8UNC	6	
12	9390-184	Capscrew 1"-8UNC x 2 1/4" Full thread Grade 5	8	
13	9390-193	Capscrew 1"-8UNC x 5" Grade 5	4	
14	9390-462	Capscrew 1"-8UNC x 8 1/2" Grade 5	2	
15	9404-041	Lock Washer 1"	8	
16	91299-1456	Capscrew 1"-14UNS x 3" Grade 8	8	For SN B38910100 and Higher
	9008339	Capscrew 1"-14UNS x 2 1/2" Grade 8		For SN B38910099 and Lower
17	93426	Grease Zerk	2	
18	268063	Tensioner Hose Assembly	1	
19	282690	Washer 8 1/2" OD	2	
20	9008441	Elastic Locknut 1"-14UNS Grade 8	8	For SN B38910100 and Higher
	9008338	Center Lock Hex Nut 1"-14UNS Grade 8		For SN B38910099 and Lower
21	804685	Washer 2" Grade 8	16	For SN B38910100 and Higher

Track Axle Mounting Components

Model 1319 with 42"x131" & 42"x148" Equalizer Tracks

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

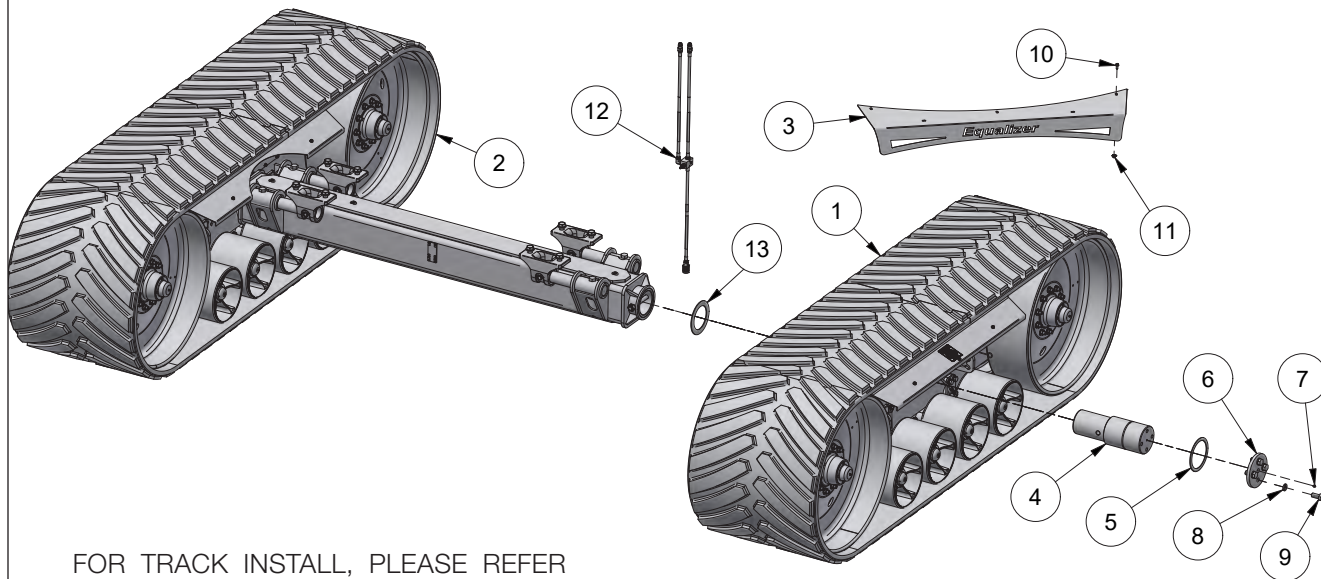


ITEM	PART NUMBER	DESCRIPTION	QTY	NOTES
	288193B	Track Axle Assembly w/out Scales =Black=	1	Includes Items 1A, 2 through 11
	288192B	Track Axle Assembly w/Scales =Black=		Includes Items 1B, 2 through 11
	267693B	Track Axle Assembly w/out Scales =Black=		Includes Items 1A, 2 through 11 Long Axle Option
	267692B	Track Axle Assembly w/Scales =Black=		Includes Items 1B, 2 through 11 Long Axle Option
1A	9004903	Load Bar For Units w/Scales	4	
1B	268289	Hitch Bar For Units w/out Scales		
2	250843	Hitch Pin 1" Dia. x 4 11/16"	8	
3	283854B	Axle Mount Casting =Black=		
4	288224B	Track Axle Weldment =Black=	1	
	267689B	Track Axle Weldment =Black=		Long Axle Option
5	91192	Retaining Ring 1"	8	
6	92199	Locknut/Center 1"-8UNC	6	
7	91299-1456	Capscrew 1"-14UNS x 3" Grade 8	8	
8	9390-462	Capscrew 1"-8UNC x 8 1/2" Grade 5	2	
9	9008441	Elastic Lock Nut 1"-14UNS Grade 8	8	
10	804685	Washer 2" OD	16	
11	9390-193	Capscrew 1"-8UNC x 5" Grade 5	4	

**Track Bundle Components
Model 1319 with 42"x131" & 42"x148" Equalizer Tracks**

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

FOR TRACK INFORMATION, PLEASE REFER TO YOUR TRACK MANUAL.



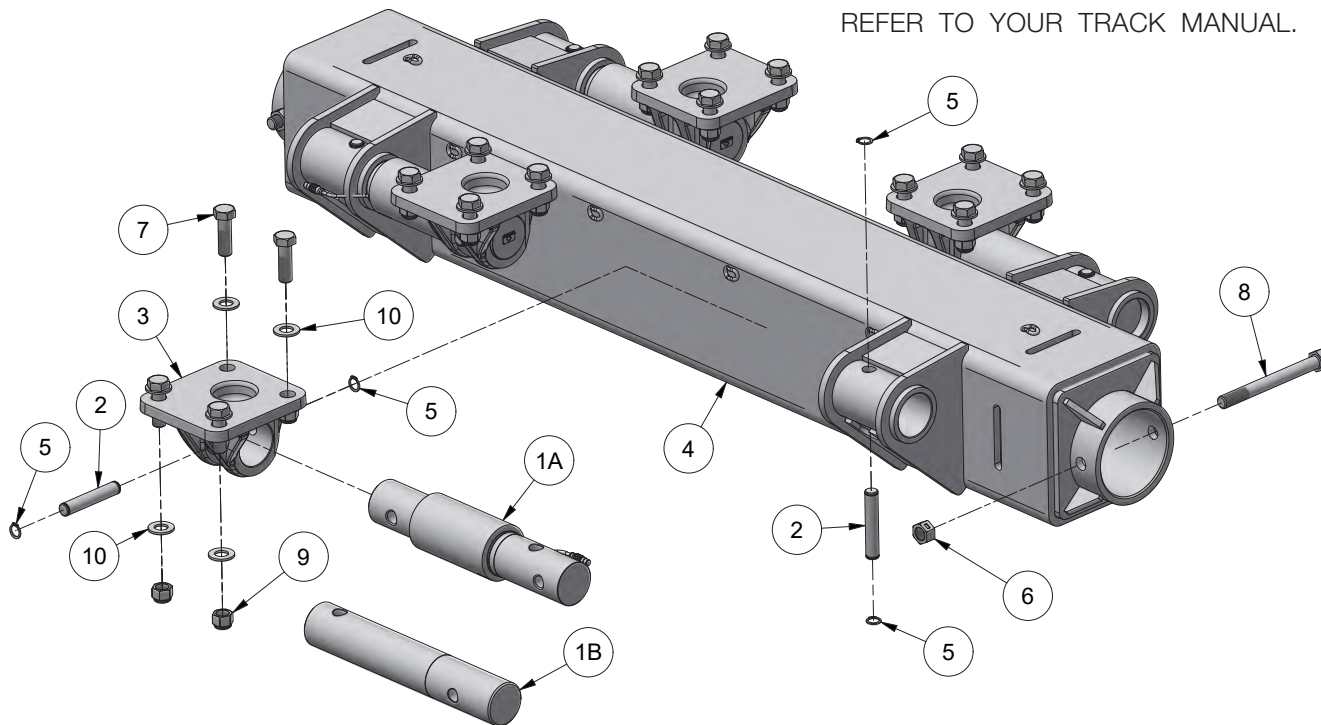
FOR TRACK INSTALL, PLEASE REFER TO TRACK ALIGNMENT CONE KIT 267939

ITEM	PART NO.	DESCRIPTION	QTY	NOTES
	282058B	Track Bundle Assembly =Black=	1	42" x 148"
	283290B			42" x 131"
1	282001B	Track Assembly Left-Hand =Black=	1	42" x 148"
	283268B			42" x 131"
2	282000B	Track Assembly Right-Hand =Black=	1	42" x 148"
	283269B			42" x 131"
3	282071SM	Debris Deflector Plate =Silver Mist=	2	42" x 148"
	283286SM			42" x 131"
4	282026	Track Pivot Shaft 7" Dia. x 19 3/16"	2	
5	282690	Washer 8 1/2" ID	2	
6	282689B	Cover Plate	2	
7	93426	Grease Zerk	2	
8	9404-041	Lock Washer 1"	8	
9	9390-184	Capscrew 1"-8UNC x 2 1/4" Grade 5	8	
10	91262	Flange Screw 3/8"-16UNC x 1" Grade 5	10	
11	91263	Flange Nut 3/8"-16UNC Grade 5	10	
12	268063	Tensioner Hose Assembly	1	
13	282397	Washer 8 1/2" ID	2	

Track Axle Mounting Components - Model 1519

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

FOR TRACK INFORMATION, PLEASE REFER TO YOUR TRACK MANUAL.

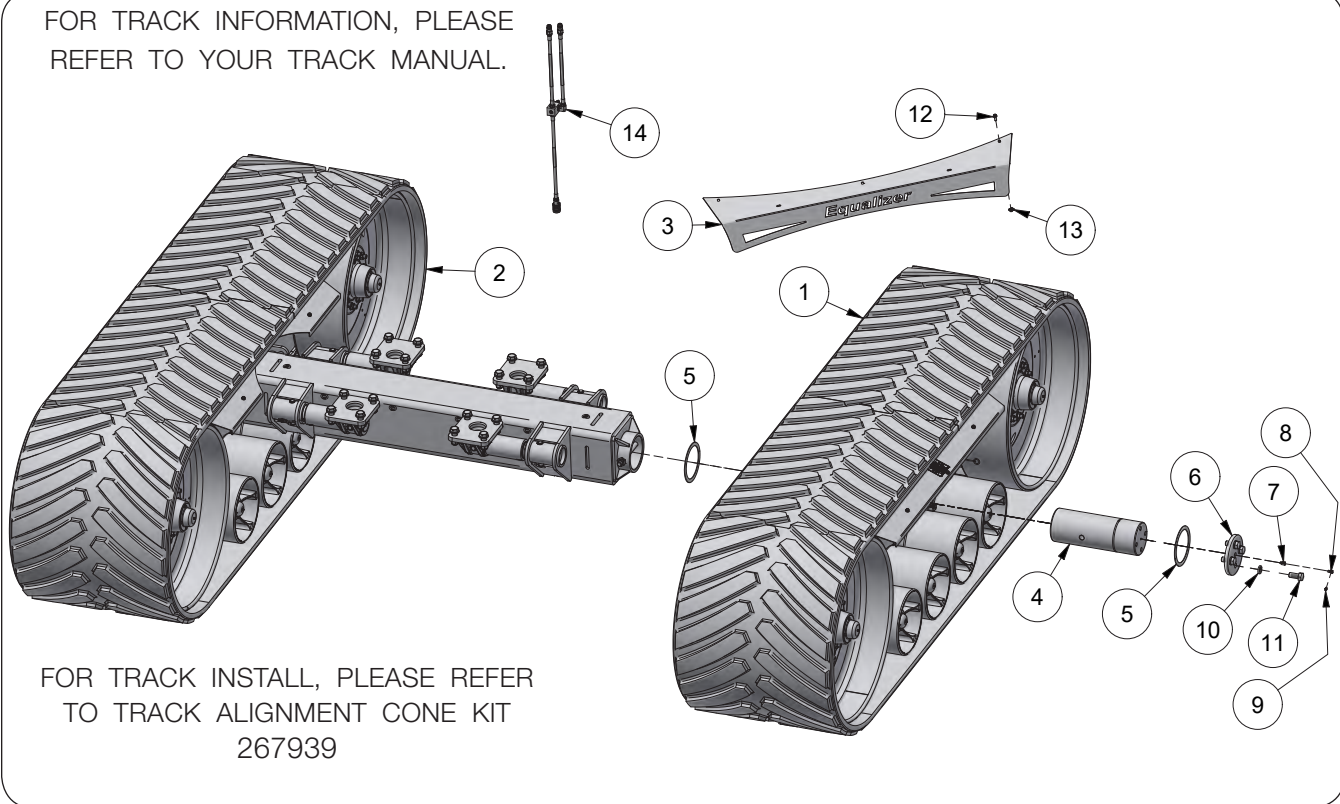


ITEM	PART NUMBER	DESCRIPTION	QTY	NOTES
	288197B	Track Axle Assembly w/out Scales =Black=	1	Includes Items 1A, 2 through 10 For Standard Track 36" x 148"
	288196B	Track Axle Assembly w/Scales =Black=		Includes Items 1B, 2 through 10 For Standard Track 36" x 148"
	267626B	Track Axle Assembly w/out Scales =Black=		Includes Items 1A, 2 through 10 For Equalizer Track 42" x 148"
	267625B	Track Axle Assembly w/Scales =Black=		Includes Items 1B, 2 through 10 For Equalizer Track 42" x 148"
1A	282745	Hitch Bar For Units w/out Scales	4	
1B	9005811	Load Bar For Units w/Scales		
2	282876	Hitch Pin 1" Dia. x 5 5/8"	8	
3	288437B	Axle Mount Casting =Black=	4	
4	288225B	Track Axle Weldment =Black=	1	For Equalizer Track 42" x 148"
	267623B	Track Axle Weldment =Black=		
5	91192	Retaining Ring 1"	16	
6	92199	Locknut/Center 1"-8UNC	2	
7	91299-1456	Capscrew 1"-14UNS x 3" Grade 8	16	
8	9390-464	Capscrew 1"-8UNC x 10" Grade 5	2	
9	9008441	Elastic Lock Nut 1"-14UNS Grade 8	16	
10	804685	Washer 2" OD	32	

Track Bundle Components - Model 1519

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

FOR TRACK INFORMATION, PLEASE REFER TO YOUR TRACK MANUAL.



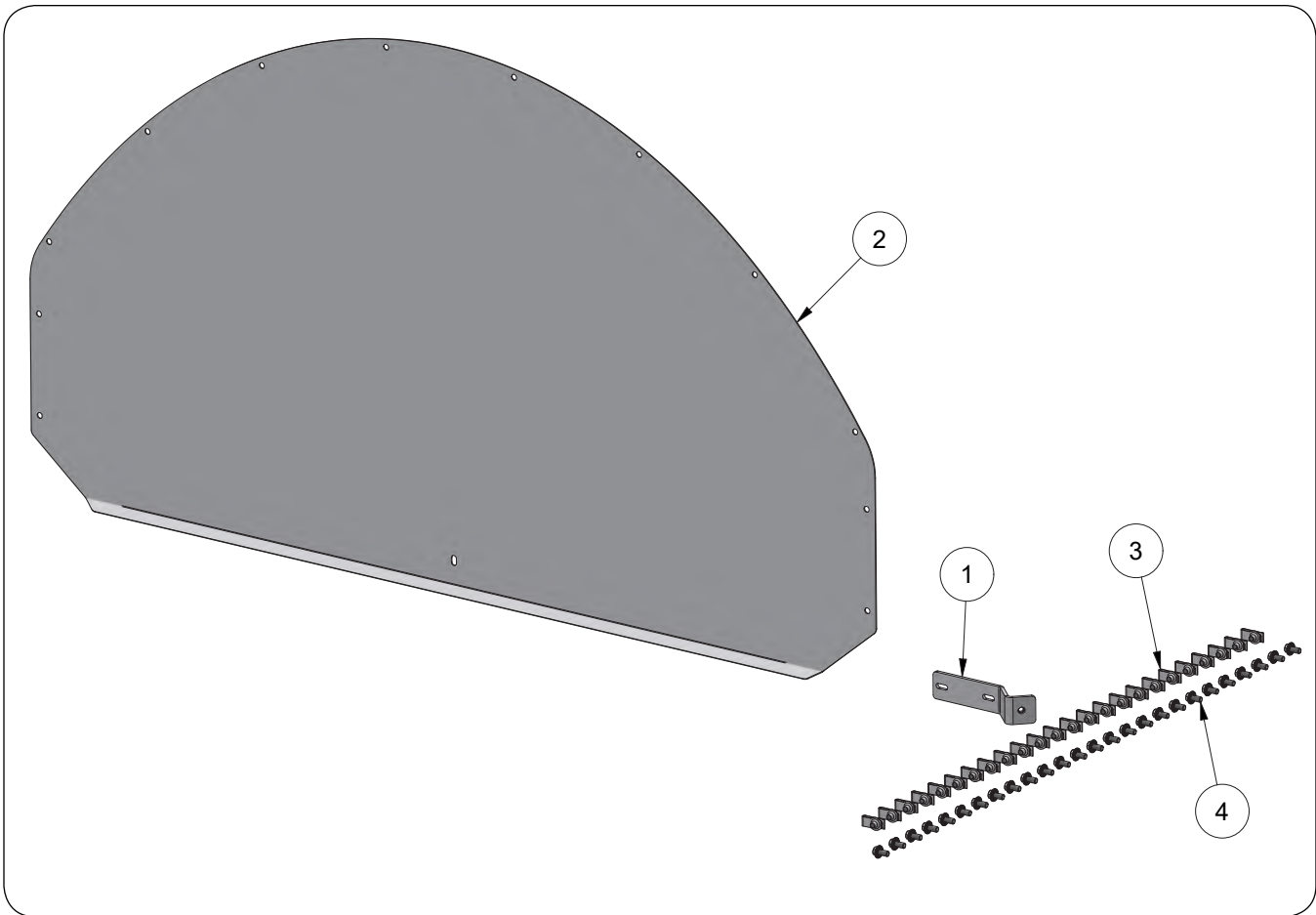
FOR TRACK INSTALL, PLEASE REFER TO TRACK ALIGNMENT CONE KIT 267939

ITEM	PART NO.	DESCRIPTION	QTY	NOTES
	282679B	Track Bundle Assembly =Black=	1	For Standard Track 36" x 148"
	282047B	Track Bundle Assembly =Black=		For Equalizer Track 42" x 148"
1	282681B	Track Assembly Left-Hand	1	For Standard Track 36" x 148"
	282001B			For Equalizer Track 42" x 148"
2	282680B	Track Assembly Right-Hand	1	For Standard Track 36" x 148"
	282000B			For Equalizer Track 42" x 148"
3	282071SM	Debris Deflector Plate =Silver Mist=	1	For Equalizer Track 42" x 148"
4	282742	Track Pivot Shaft 7" Dia. x 19 3/16"	2	For Standard Track 36" x 148"
	282102			For Equalizer Track 42" x 148"
5	282690	Washer 8 1/2" OD	4	
6	282689B	Cover Plate	2	
7	9006816	Adapter 1/8" NPT	2	
8	9006785	90° Adapter 1/8" NPT	2	
9	93426	Grease Zerk	2	
10	9404-041	Lock Washer 1"	8	
11	9390-184	Capscrew 1"-8UNC x 2 1/4" Grade 5	8	
12	91262	Flange Screw 3/8"-16UNC x 1" Grade 5	10	For Equalizer Track 42" x 148"
13	91263	Flange Nut 3/8"-16UNC Grade 5	10	
14	268063	Tensioner Hose Assembly	1	

1319/1519 GRAIN CARTS — Parts

Wheel Well Cover Kit #292910G or 292910R - Model 1319 & 1519

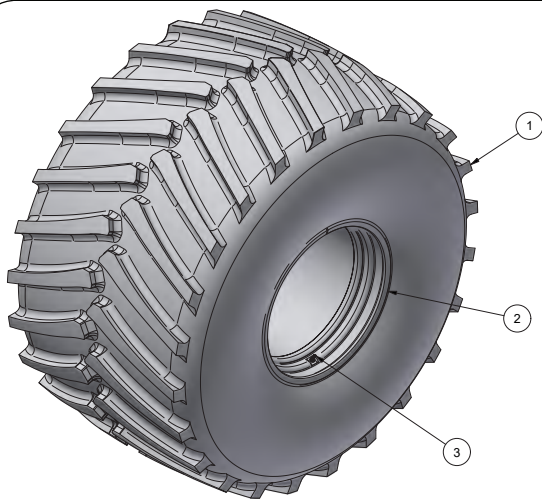
Please visit www.unverferth.com/parts/ for the most current parts listing.



ITEM	PART NO.	DESCRIPTION	QTY	NOTES
	292910G	Wheel Well Cover (Green)	1	
	292910R	Wheel Well Cover (Red)		
1	287691B	Plate Weldment =Black=	2	
2	292836G	Cover Panel =Green=	2	
	292836R	Cover Panel =Red=		
3	9005376	U-Nut 3/8"-16UNC	24	
4	95585	Large Flange Capscrew 3/8"-16UNC x 3/4" G5	26	

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

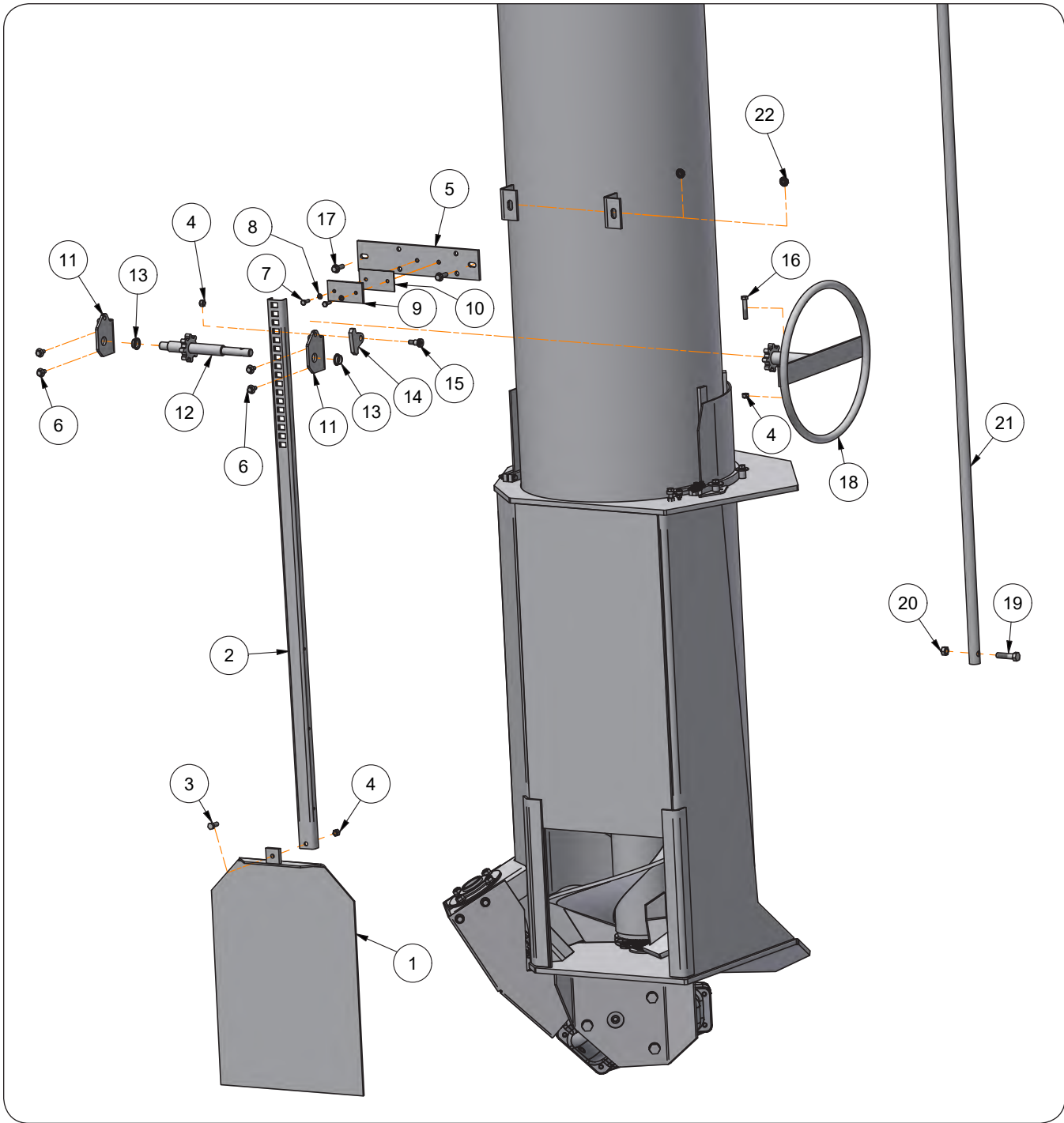
- Verify whether you have a **straight plate** or **formed plate** wheel before ordering a replacement wheel.

STRAIGHT PLATE WHEELS

ITEM	PART NO.	DESCRIPTION	LOAD RATING	QTY	NOTES
1	110598SM/9500943	Wheel & Tire Assembly - 12 Bolt	201D	2	44 x 32 / TLIF1250/50R32F R-1W (1319)
2	110598SM	Wheel Only		2	44 x 32 (1319)
3	93300	Valve Stem	N/A	4	
3	901207	Valve Stem Adapter	N/A	-	
1	111499SM	Wheel & Tire Assembly - 12 Bolt	201B	2	44 x 32 / TLIF1250/50R32AL R-1W (1519)
2	110566SM	Wheel Only		2	44 x 32 (1519)
3	93300	Valve Stem	N/A	4	

Cleanout Door Components

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



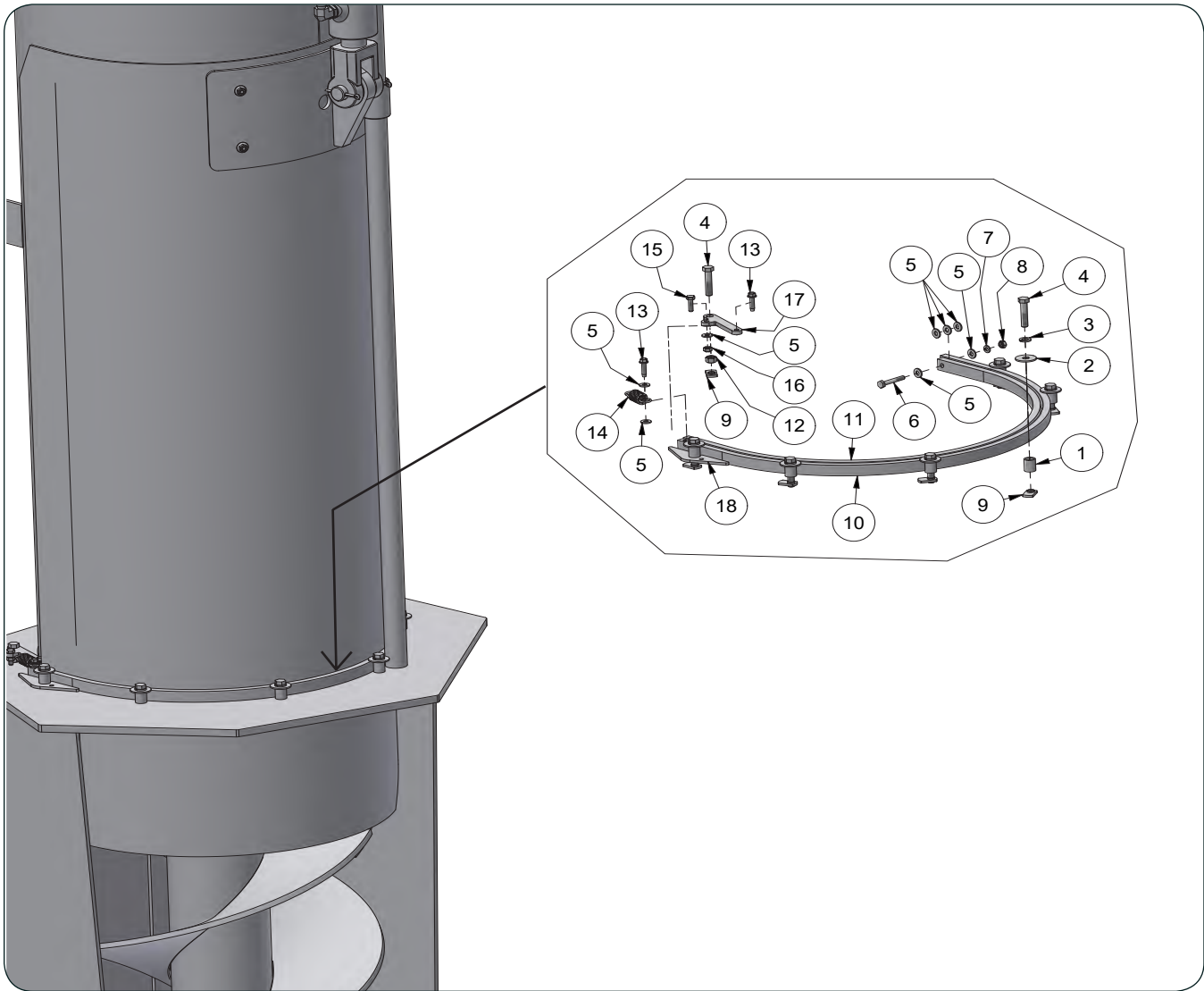
Cleanout Door Components

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

ITEM	PART NO.	DESCRIPTION	QTY.	NOTES
1	292207B	Clean Out Door Plate =Black=	1	
2	292272B	Rail Plate =Black=	1	
3	9390-055	Capscrew 3/8"-16UNC x 1" Grade 5	1	
4	9928	Locknut 3/8"-16UNC	2	
5	292297B	Lift Door Bracket =Black=	1	
6	91256	Flange Screw 5/16"-18UNC x 3/4"	4	
7	9390-004	Capscrew 1/4"-20UNC x 7/8" Grade 5	2	
8	9404-017	Lock Washer 1/4"	2	
9	286801	Wear Pad	1	
10	291087B	Shim Plate =Black=	1	
11	286802B	Door Lift Plate =Black=	2	
12	268901	Door Lift Shaft Weldment	1	
13	9003411	Split Bushing	2	
14	268313B	Lock Plate =Black=	1	
15	9006181	Shoulder Bolt 1/2"-13UNC	1	
16	9390-059	Capscrew 3/8"-16UNC x 2" Grade 5	1	
17	9003259	Flange Screw 3/8"-16UNC x 1 1/4" Grade 5	2	
18	291654B	Door Wheel =Black=	1	
19	9390-103	Capscrew 1/2"-13UNC x 2" Grade 5	1	
20	94981	Locknut 1/2"-13UNC	1	
21	292833B	Flow Door Pipe Indicator =Black=	1	
22	91263	Flange Nut 3/8"-16UNC	2	

Flow Door Seals

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



Flow Door Seals

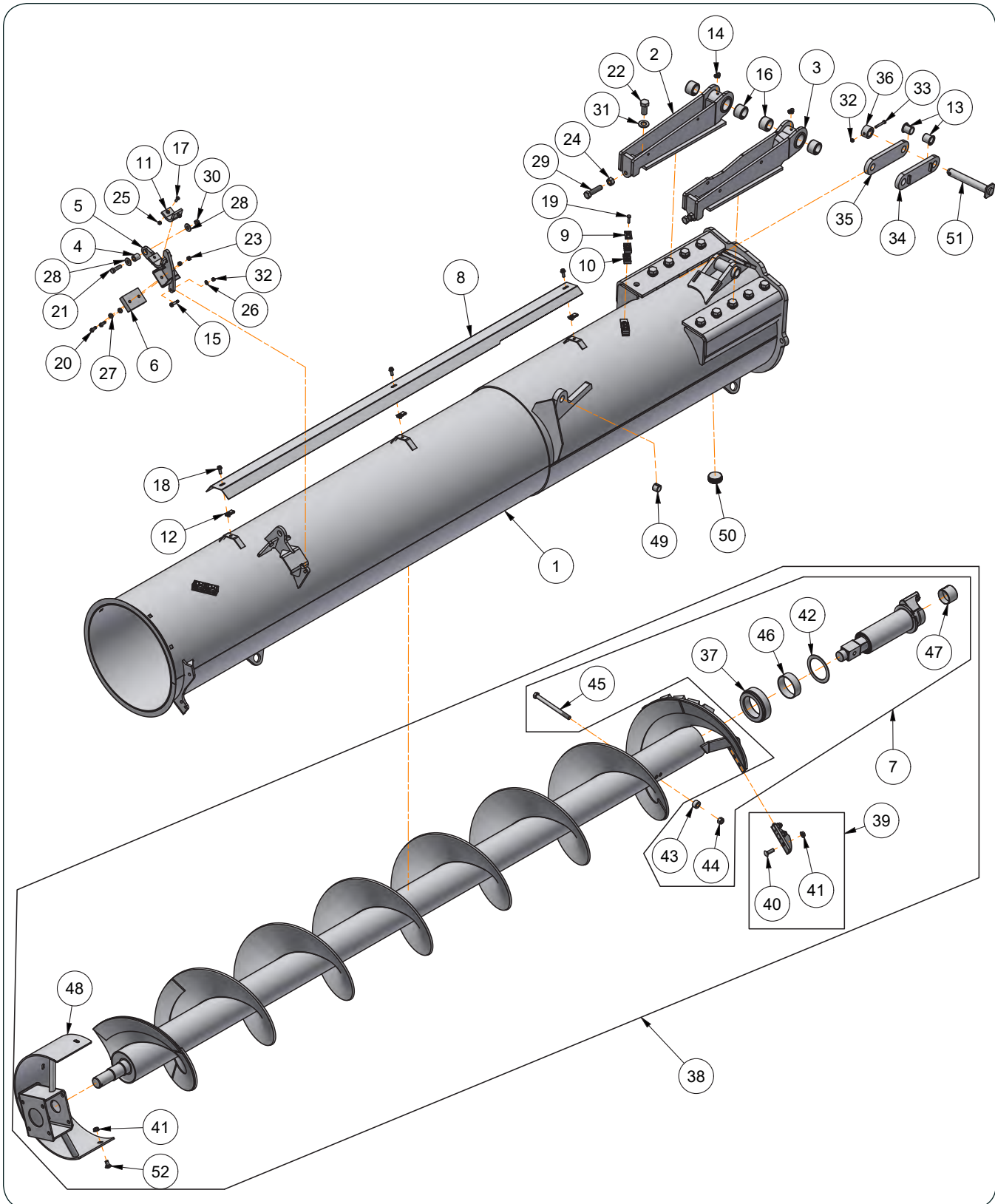
Please visit www.unverferth.com/parts/ for the most current parts listing.

ITEM	PART NUMBER	DESCRIPTION	QTY.	NOTES
1	281257G	Spacer Bushing =Green=	5	For SN B38910100 and Higher
			6	For SN B38910099 and Lower
	281257R	Spacer Bushing =Red=	5	For SN B38910100 and Higher
			6	For SN B38910099 and Lower
2	9405-078	Flat Washer 3/8"	6	
3	9404-021	Lock Washer 3/8"	6	
4	9390-058	Capscrew 3/8"-16UNC x 3/4" Grade 5	6	
5	9405-062	Flat Washer 1/4" SAE	8	
6	9390-008	Capscrew 1/4"-20UNC x 3/4" Grade 5	1	
7	9404-017	Lock Washer 1/4"	1	
8	9394-002	Hex Nut 1/4"-20UNC Grade 5	1	
9	9006452	Tab Weld Nut 3/8"-16UNC Offset	8	
10	292294	Poly Seal 43"	1	
11	281256	Poly Seal 40 27/32"	1	
12	9394-006	Hex Nut 3/8"-16UNC Grade 5	1	
13	9004355	Self Drilling Screw 1/4"-20UNC x 1"	1	
14	9004375	Extension Spring	1	
15	9390-004	Capscrew 1/4"-20UNC x 7/8" Grade 5	1	
16	9936	Locknut 1/4"-20UNC	1	
17	281258	Spring Bracket	1	
18	288113	Pusher Plate	2	

1319/1519 GRAIN CARTS — Parts

Upper Auger Components - For SN B38910100 and Higher

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



1319/1519 GRAIN CARTS — Parts

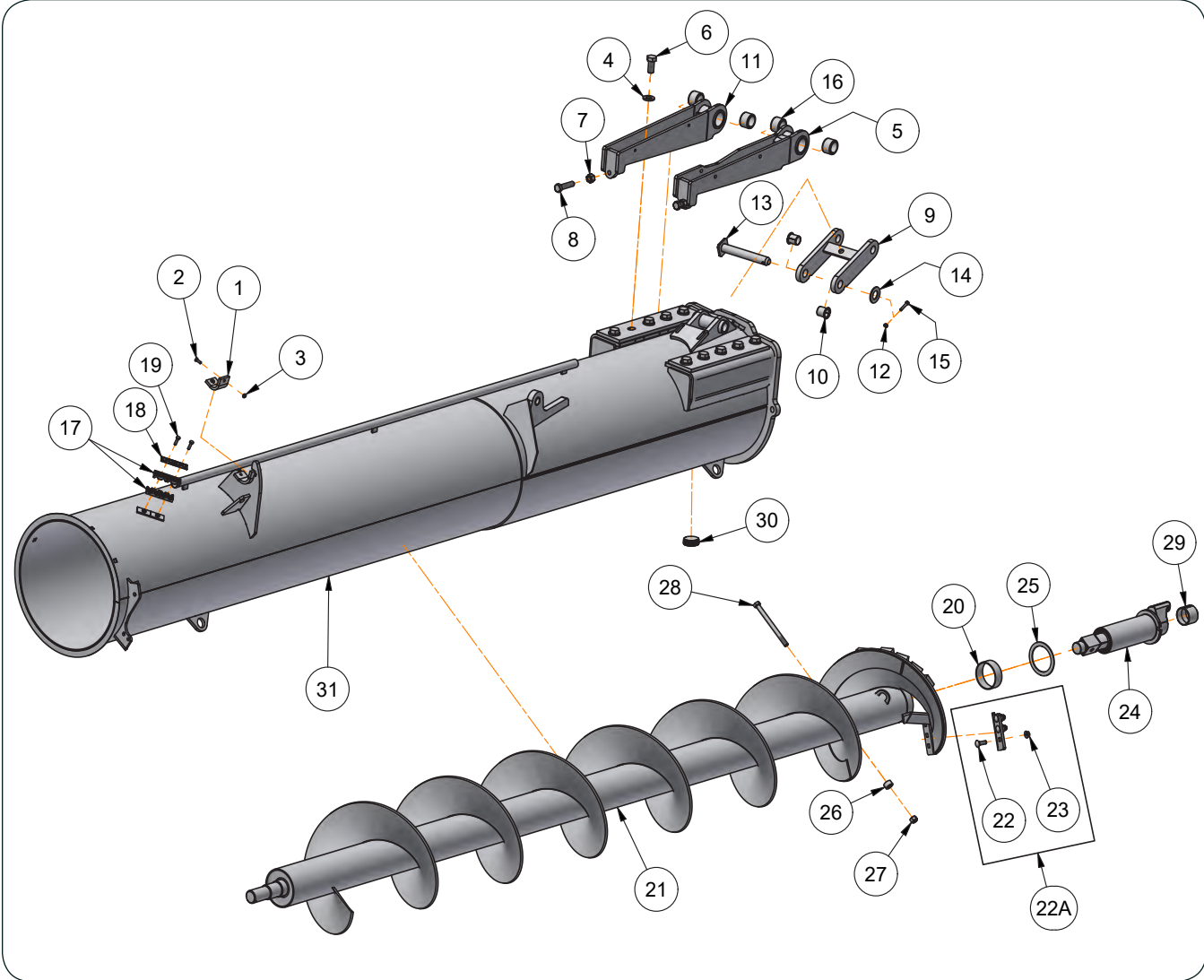
Upper Auger Components - For SN B38910100 and Higher

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

ITEM	PART NO.	DESCRIPTION	QTY	NOTES
1	293115G	Upper Auger Weldment Replacement =Green=	1	
	293115R	Upper Auger Weldment Replacement =Red=		
2	292837G	Outer Auger Pivot Weldment (24 7/8 Lg.) =Green=	1	
	292837R	Outer Auger Pivot Weldment (24 7/8 Lg.) =Red=	1	
3	292613G	Inner Auger Pivot Weldment (27 1/4 Lg.) =Green=	1	
	292613R	Inner Auger Pivot Weldment (27 1/4 Lg.) =Red=	1	
4	293082	Rest Pivot Bushing	1	
5	293084G	Upper Rest Weldment =Green=	1	
	293084R	Upper Rest Weldment =Red=	1	
6	9008197	Spring 1" Thick	1	
7	296488B	Soft Start Kit (Black)	1	Includes Items 37, 42 - 47
8	293157G	Hose Cover Plate =Green=	1	
	293157R	Hose Cover Plate =Red=		
9	9003814	Top Plate	4	
10	9003816	Poly Clamp Double	4	
11	9004263	Stop Pad	1	
12	9005376	U-Nut 3/8"-16UNC	3	
13	9005522	Split Flange Bushing	2	
14	9006268	90 Degree NPT Fitting	2	
15	9007843	Shoulder Bolt 3/8" x 1"	1	
16	9008193	Tension Bushing	4	
17	903171-660	Countersunk Phillips Screw 5/16"-18UNC x 1"	2	
18	91262	Flange Screw 3/8"-16UNC x 1"	3	
19	9390-031	Capscrew 5/16"-18UNC x 1 1/4" Grade 5	4	
20	9390-056	Capscrew 3/8"-16UNC x 1 1/4" Grade 5	2	
21	9390-102	Capscrew 1/2"-13UNC x 1 3/4" Grade 5	1	
22	9390-164	Capscrew 7/8"-10UNC x 2" Grade 5	10	
23	902875	Locknut 3/8"-16UNC Grade 5	2	
24	9394-016	Hex Nut 3/4"-10 UNC Grade 5	2	
25	9397-008	Jam Nut 5/16"-18UNC	2	
26	9405-064	Flat Washer 1/4" USS	1	
27	9405-074	Flat Washer 3/8" SAE	2	
28	9405-088	Flat Washer 1/2" USS	2	
29	94733	Capscrew 3/4"-10UNC x 3" Grade 5 Full Thread	2	
30	94981	Lock Nut 1/2"-13UNC	1	
31	97041	Flat Washer 7/8"	10	
32	9807	Lock Nut 5/16"-18UNC	1	
33	9390-036	Capscrew 5/16"-18UNC x 2 1/2" Grade 5	1	
34	297190G	Linkage Weldment =Green=	1	SN B44280100 and Higher
	297190R	Linkage Weldment =Red=		
35	297192G	Fold Linkage Weldment =Green=	1	
	297192R	Fold Linkage Weldment =Red=		
36	297191B	Pin Retainer Bushing =Black=	1	
37	284626	Flex Coupler Bushing Assembly	1	
38	292997B	Upper Flighting Replacement (Black)	1	Includes Item 7, 39 and 48
39	293466B	Upper Auger Extension Replacement Kit (Black)	1	Includes Extension Plate, Items 40, 41
40	9388-104	Carriage Bolt 1/2"-13UNC x 1 1/2" Grade 5	3	
41	9003397	Locknut 1/2"-13UNC	7	
42	9004878	Self Lubricating Thrust Washer	1	
43	405402B	Spacer Bushing =Black=	1	
44	9801	Locknut 5/8"-11UNC	1	
45	9390-442	Capscrew 5/8"-11UNC x 9" Grade 5	1	
46	9004877	Self Lubricating Bushing	1	
47	9003230	Split Bushing 2 3/4" OD x 2 1/4" ID	1	
48	296451B	Hanger Bearing Weldment =Black=	1	
49	91268	Tension Bushing, 1 1/4" OD x 1" ID	1	
50	9008430	Socket Plug	1	
51	292336	Pin Weldment	1	
52	9388-102	Carriage Bolt 1/2"-13UNC x 1" G5	4	

Upper Auger Components - For SN B38910099 and Lower

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



1319/1519 GRAIN CARTS — Parts

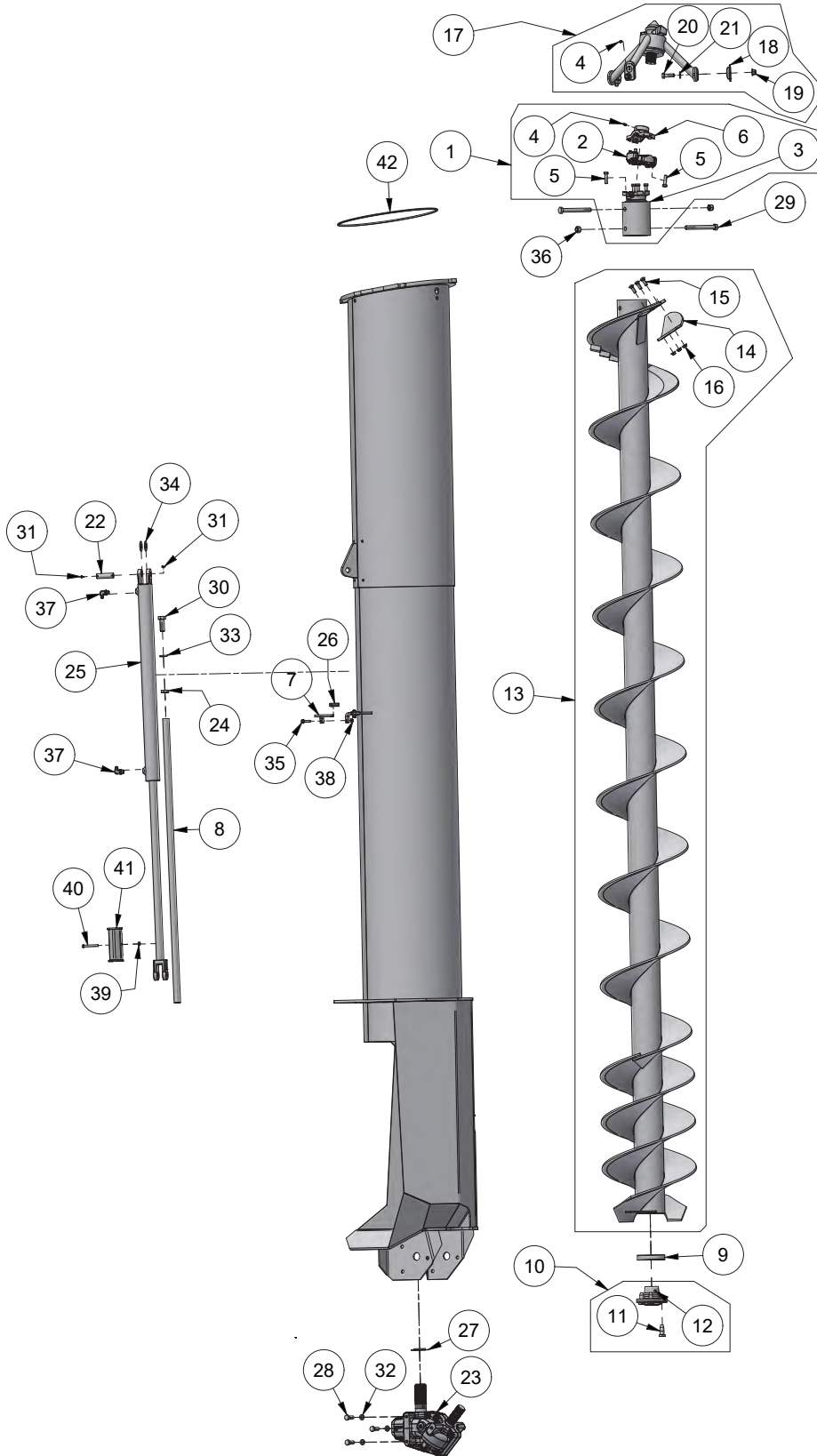
Upper Auger Components - For SN B38910099 and Lower

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

ITEM	PART NO.	DESCRIPTION	QTY	NOTES
1	9004263	Stop Pad	1	
2	903171-660	Countersunk Phillips Head Screw 5/16"-18UNC x 1"	1	
3	9397-008	Jam Nut 5/16"-18UNC	1	
4	97041	Flat Washer 7/8"	10	
5	292613G	Inner Auger Pivot Weldment (27 1/4 Lg.) =Green=	1	
	292613R	Inner Auger Pivot Weldment (27 1/4 Lg.) =Red=		
6	9390-164	Capscrew 7/8"-9UNC x 2" Grade 5	10	
7	9394-016	Hex Nut 3/4-10UNC Grade 5	2	
8	94733	Capscrew 3/4"-10UNC x 3" Grade 5 Full Thread	2	
9	292200G	Linkage Weldment =Green=	1	
	292200R	Linkage Weldment =Red=		
10	9005522	Split Flange Bushing	4	
11	292837G	Outer Auger Pivot Weldment (24 7/8 Lg.) =Green=	1	
	292837R	Outer Auger Pivot Weldment (24 7/8 Lg.) =Red=		
12	9807	Locknut 5/16"-18UNC	1	
13	292336	Pin Weldment 1 1/4" Dia.	1	
14	9405-128	Flat Washer 1 1/4" SAE	1	
15	9390-033	Capscrew 5/16"-18UNC x 1 3/4" Grade 5	1	
16	9008193	Tension Bushing	4	
17	9003816	Half Clamp	2	
18	9003814	Top Plate	1	
19	9390-031	Capscrew 5/16"-18UNC x 1 1/4" Grade 5	2	
20	9004877	Self Lubricating Bushing	1	
21	292997B	Upper Flighting Replacement (Black)	1	Includes Soft Start And Hanger Bearing Weldment
22A	293466B	Upper Auger Extension Replacement Kit	1	Includes Extension Plate and Items 22 and 23
22	9388-104	Carriage Bolt 1/2"-13UNC x 1 1/2" Grade 5	3	
23	9003397	Locking Flange Nut 1/2"-13UNC	3	
24	296488B	Soft Start Kit (Black)	1	Includes Items 20, 25 - 29
25	9004878	Thrust Washer	1	
26	405402B	Spacer Bushing =Black=	1	
27	9801	Locknut 5/8"-11UNC	1	
28	9390-140	Capscrew 5/8"-11UNC x 8" Grade 5	1	
29	9003230	Split Bushing 2 3/4" OD x 2 1/4" ID	1	
30	9008430	Socket Plug	1	
31	292599G	Upper Auger Tube Weldment Kit (Green)	1	
	292599R	Upper Auger Tube Weldment Kit (Red)		

Lower Auger Components

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



1319/1519 GRAIN CARTS — Parts

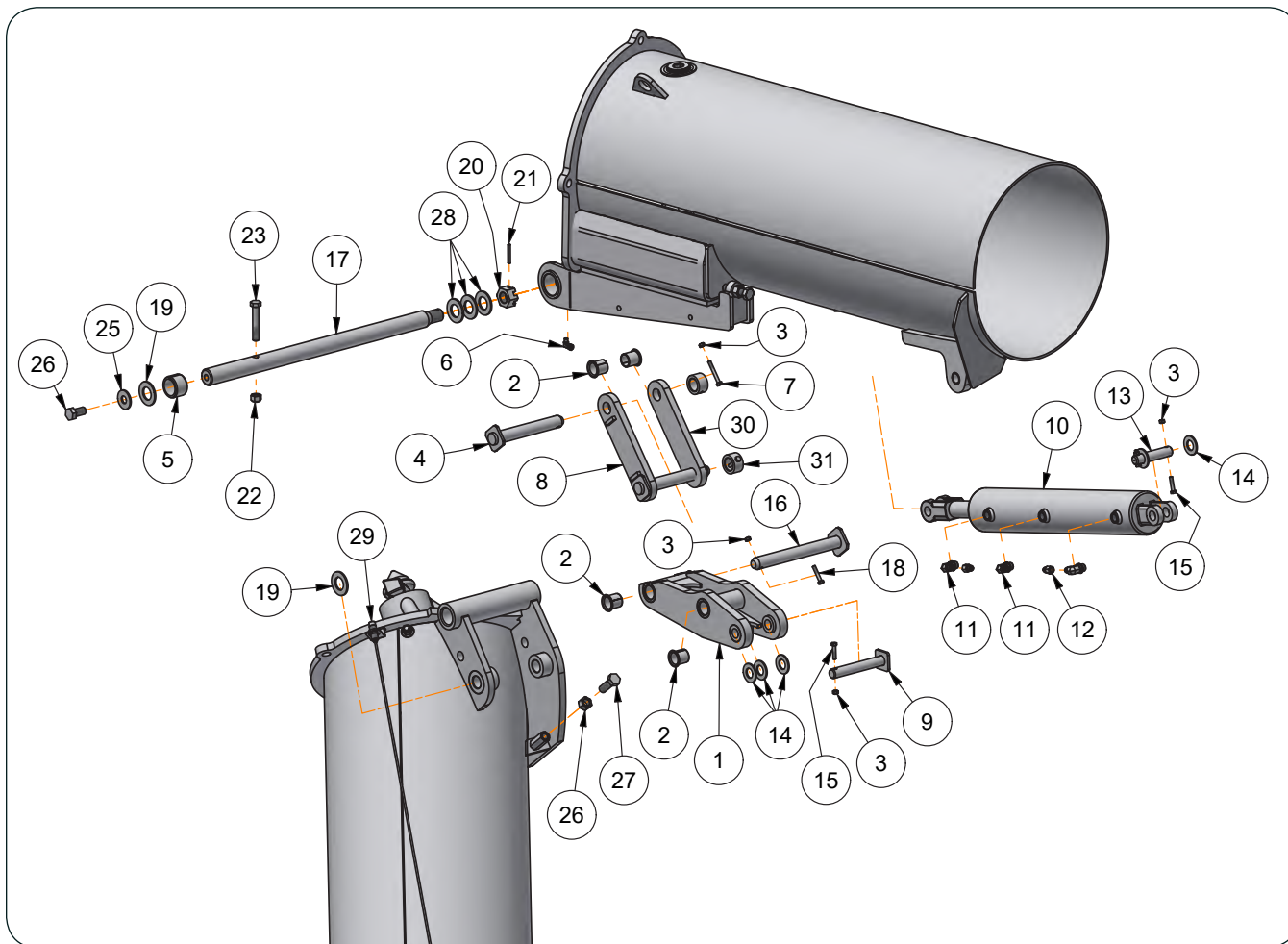
Lower Auger Components

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

ITEM	PART NO.	DESCRIPTION	QTY.	NOTES	
1	283452B	U-Joint Assembly =Black=	1	Includes Items 2-6	
	2	9008443	Wing Bearing Assembly		1
	3	288453	Adapter Tube Yoke Assembly		1
	4	91160	Grease Zerk		1
	5	9008432	Capscrew 1/2"-20UNF x 2" G8		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	For SN B42550100 & Higher Includes Items 11-12	
	286436		1	For SN B42550099 & Lower Includes Items 11-12	
	11	9007000	Headed Drive Pin	5	
	12	902614-236	Spiral Pin 1/2" Dia. x 2 1/4"	1	
13	295197B	Lower Auger Weldment =Black=	1	For SN B42550100 & Higher Includes Items 14-16	
	292806B		1	For SN B42550099 & Lower Includes Items 14-16	
	14	293465B	Extension Plate Replacement Kit (Black)	1	Includes Items 15, 16
	15	9388-104	Carriage Bolt 1/2"-13UNC x 1 1/2" G5	3	
	16	9003397	Locking Flange Nut 1/2"-13UNC	3	
	17	293453B	Hanger Bearing Replacement Kit =Black=	1	Includes Items 18-21
18	288679B	Hanger Bearing Shim Plate =Black=	2		
19	9003398	Lock Nut, 5/8-11UNC	3		
20	9390-124	Capscrew, 5/8-11UNC x 2 Gr.5	3		
21	9405-098	Flat Washer 5/8" SAE	3		
22	804572	Cylinder Pin	2		
23	9008711	Gearbox 45°	1	For SN B42550100 & Higher	
	9009053			For SN B42550099 - B41330100	
	9002812			For SN B41330099 & Lower	
24	9395-018	Hex Jam Nut 7/8"-9UNC Grade 5	1		
25	9005363	Hydraulic Welded Cylinder 2 1/2" x 36" 3000PSI	1		
	9005409	Seal Kit	-		
26	9005662	Rubber Trim-Lok 3/8" Gap	2		
27	9007377B	Dust Cover =Black=	1	For SN B42550100 & Higher	
	92805B		1	For SN B42550099 & Lower	
28	9390-123	Capscrew 5/8"-11UNC x 1 3/4" G5	6	For SN B42550100 & Higher	
	9390-100	Capscrew 1/2"-13UNC x 1 1/4" G5	8	For SN B42550099 & Lower	
29	9390-159	Capscrew 3/4"-10UNC x 7" G5	2		
30	9390-166	Capscrew 7/8"-9UNC x 2 1/2" G5	1		
31	9391-046	Cotter Pin 3/16" Dia. x 2"	4		
32	9404-029	Lock Washer 5/8"	6	For SN B42550100 & Higher	
	9404-025	Lock Washer 1/2"	8	For SN B42550099 & Lower	
33	9404-037	Lock Washer 7/8"	1		
34	9405-116	Flat Washer 1" SAE	4		
35	95785	Flange Screw 3/8"-16UNC x 1 1/2"	1		
36	9802	Locknut/Top 3/4"-10UNC	2		
37	9874	90° Elbow 9/16-18 JIC	2		
38	9928	Locknut/Top 3/8"-16UNC	3		
39	902875	Locknut 3/8"-16UNC	1		
40	9390-063	Capscrew 3/8"-16UNC x 3" Grade 5	1	For SN B40000100 & Higher	
41	293781B	Cylinder Stop Weldment =Black=	1	For SN B40000100 & Higher	
42	296290	Auger Seal Gasket Kit	1	For SN B44280100 & Higher (1319) For SN B44960100 & Higher (1519)	

Auger Fold Components

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



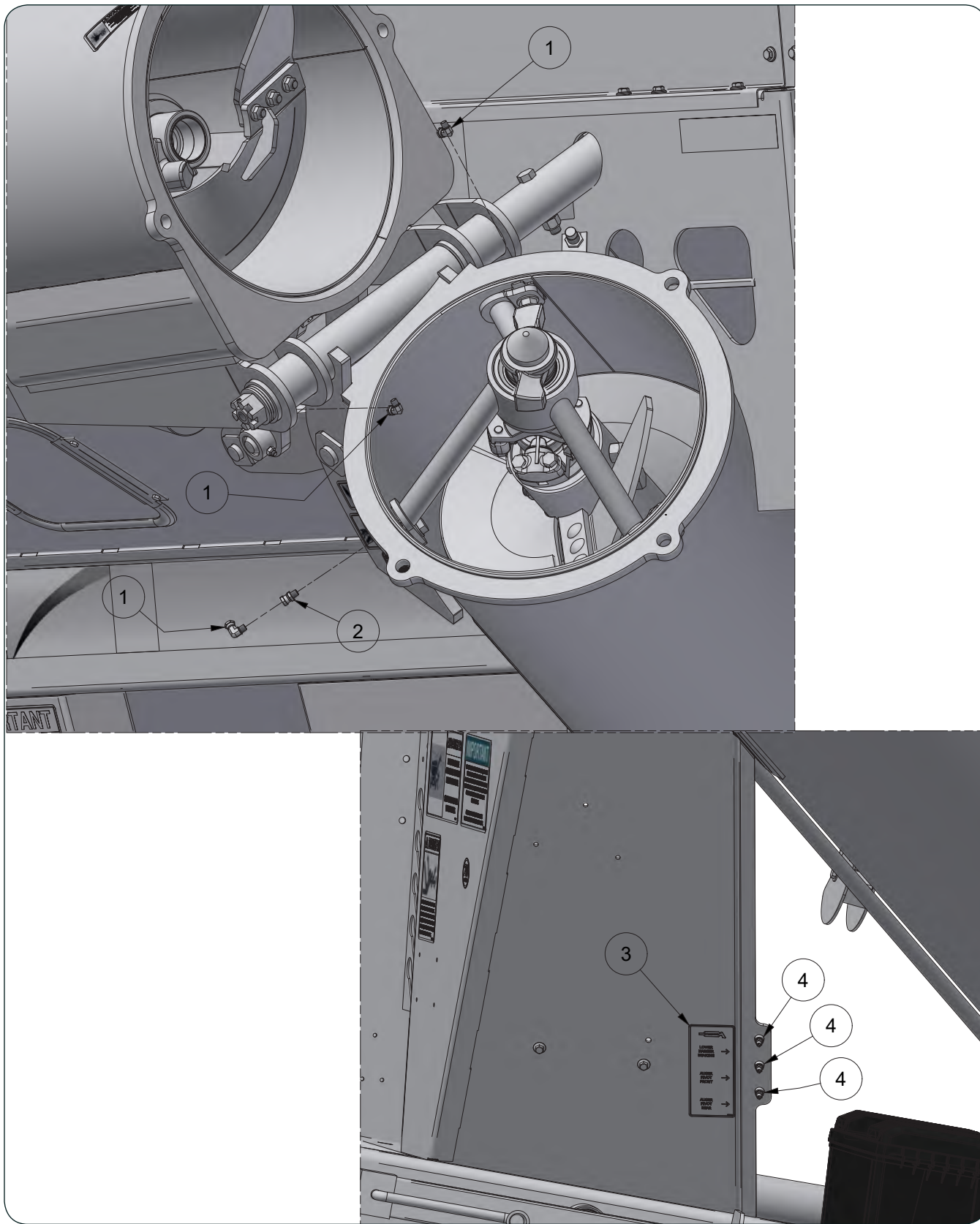
Auger Fold Components

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

ITEM	PART NO.	DESCRIPTION	QTY	NOTES
1	292065G	Auger Linkage Weldment =Green=	1	
	292065R	Auger Linkage Weldment =Red=	1	
2	9005522	Split Flange Bushing	6	
3	9807	Locknut 5/16"-18UNC	21	
4	292336	Pin Weldment 9 3/16"	2	
5	9008193	Tension Bushing	4	
6	9006268	90 Degree Fitting 9/16"-18 JIC	2	
7	9390-036	Capscrew 5/16"-18UNC x 2 1/2" Grade 5	2	
8	297190G	Linkage Weldment =Green=	1	
	297190R	Linkage Weldment =Red=	1	
9	292338	Pin Weldment 7 3/16"	1	
10	9008205	Hydraulic Cylinder	1	
11	9874	90 Degree Fitting 9/16-18 JIC	3	
12	9002199	Adapter Fitting 9/16"-18JIC Female to 9/16"-18JIC Male	2	
13	291988	Cylinder Pin	1	
14	9405-116	Flat Washer 1" SAE	5	
15	9390-032	Capscrew 5/16"-18UNC x 1 1/2" Grade 5	3	
16	292282	Fold Linkage Pin 11 11/16"	1	
17	292870	Pivot Shaft	1	
18	9390-033	Capscrew 5/16"-18UNC x 1 3/4" Grade 5	1	
19	9405-128	Flat Washer 1 1/4" SAE	2	
20	9393-023	Slotted Hex Nut	1	
21	9392-14021	Roll Pin 1/4" x 2"	1	
22	9801	Locknut 5/8"-11UNC	1	
23	9390-131	Capscrew 5/8"-11UNC x 3 3/4" Grade 5	1	
24	9405-106	Flat Washer 3/4" USS	1	
25	9390-143	Capscrew 3/4"-10UNC x 1 1/2" Grade 5	1	
26	9394-016	Hex Nut 3/4"-10UNC Grade 5	1	
27	9390-146	Capscrew 3/4"-10UNC x 2 1/4" Grade 5	1	
28	902645-128	Flat Washer 1 1/4" SAE	3	
29	9007472	Proximity Sensor	1	
30	297192G	Fold Linkage Weldment =Green=	1	
	297192R	Fold Linkage Weldment =Red=	1	
31	297191G	Pin Retainer Bushing =Green=	1	
	297191R	Pin Retainer Bushing =Red=	1	

Auger Fold Grease Components

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



Auger Fold Grease Components

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

ITEM	PART NO.	DESCRIPTION	QTY	NOTES
1	9008322	Quick Fitting, 9/16-18 JIC x 1/8 NPTF 90° Elbow	6	
2	9002479	Quicklink Fitting, 1/8 NPSM x 1/8 NPTF Straight Swivel	1	
3	9008230	Decal, Grease Daily	1	
4	93426	Grease Zerk	3	
5	9008435	Hose 3/16" x 155" (1/8"-27 NPT Male x 1/8"-27 NPT Male)	2	NOT SHOWN
6	9008434	Hose 3/16" x 180" (1/8"-27 NPT Male x 1/8"-27 NPT Male)	1	NOT SHOWN

1319/1519 GRAIN CARTS — Parts

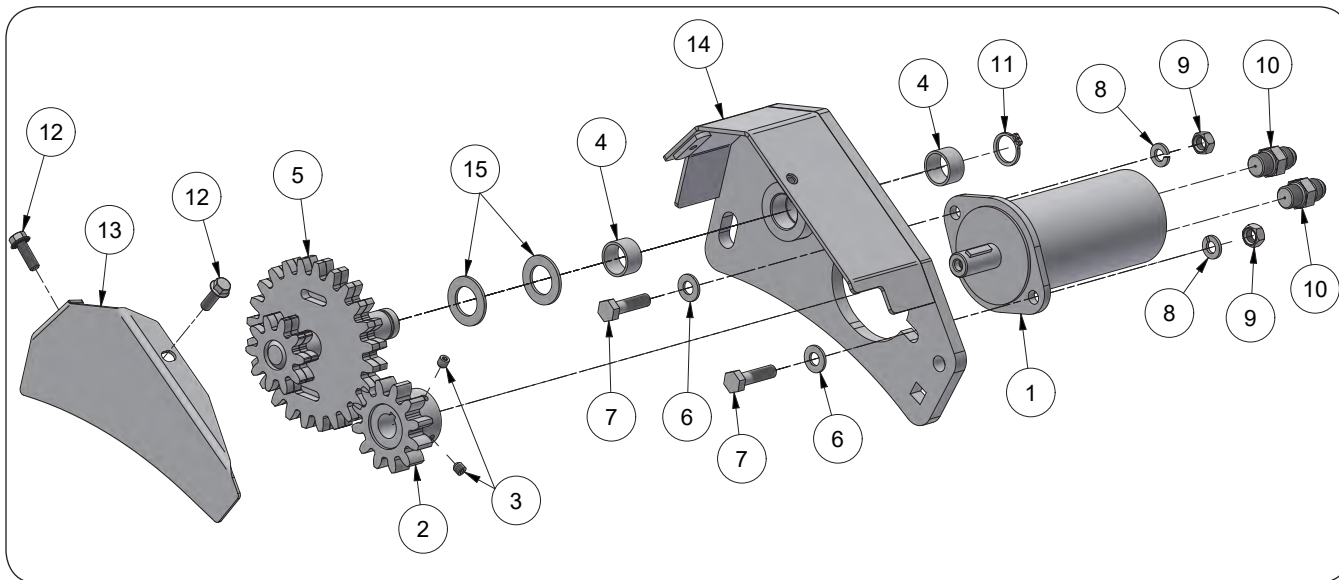
Directional Spout Components

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

ITEM	PART NO.	DESCRIPTION	QTY	NOTES
1	272719	Spout Pivot Gear	1	
2	272748	Pivot Pad 20 11/16" ID x 1/8"	6	
3	272842B	Spout Pivot Plate =Black=	2	
4	272855B	Stop Plate 3 3/4" =Black=	1	
5	288188B	Spout Motor Assembly =Black=	1	See Directional Spout Motor Components for Parts.
6	290882	Pivot Lock Bushing	1	
7	290884B	Stop Plate 3 1/4" =Black=	1	
8	291344B	Pivot Pad Plate =Black=	3	
9	292432B	Stop Weldment =Black=	1	
10	9388-102	Carriage Bolt 1/2"-13UNC x 1" G5	4	
11	9003397	Locking Flange Nut 1/2"-13UNC	5	
12	296451B	Hanger Bearing Weldment =Black=	1	
13	901527	Locknut/Center, 5/16"-18UNC	1	
14	9390-037	Capscrew, 5/16"-18UNC x 2 3/4" G5	1	
15	9001812B	Compression Spring =Black=	4	
16	9002492	Pillow Block	1	
17	9003396	Locknut/Top, 3/8"-16UNC	2	
18	9003397	Locknut/Top Lock Flange Hex Nut, 1/2"-13UNC	5	
19	9007837	Shoulder Bolt 3/8" x 1 1/4"	8	
20	9007838	Shoulder Bolt 3/8" x 7/8"	7	
21	91160	Grease Zerk	4	
22	9388-052	Carriage Bolt, 3/8"-16UNC x 1 1/4" G5	1	
23	9390-059	Capscrew, 3/8"-16UNC x 2" G5	1	
24	9390-101	Capscrew, 1/2"-13UNC x 1 1/2" G5	1	
25	9390-136	Capscrew, 5/8"-11UNC x 6" G5	4	
26	93974	Flat Washer, 2"	5	
27	9405-064	Flat Washer, 1/4" USS	16	
28	9405-068	Flat Washer, 5/16" SAE	8	
29	9405-074	Flat Washer, 3/8" SAE	17	
30	9405-076	Flat Washer, 3/8" USS	2	
31	9801	Locknut/Top, 5/8"-11UNC	4	
32	9807	Locknut/Top, 5/16"-18UNC	21	
33	292350B	Spout Assembly (Black)	1	Includes Items 34-55
34	292352B	Spout Weldment =Black=	1	
35	9405-088	Flat Washer, 1/2" USS	2	
36	9404-025	Lock Washer, 1/2"	2	
37	290993	Pivot Shaft, 3/4" Dia. x 23 1/2"	1	
38	9003810	Snap Ring 3/4"	2	
39	9008139	Rubber Chute	1	
40	9388-003	Carriage Bolt, 1/4"-20UNC x 1" G5	6	
41	9388-004	Carriage Bolt, 1/4"-20UNC x 1 1/4" G5	2	
42	9405-066	Fender Washer, 1/4"	8	
43	97189	Flange Nut/Large Flange, 1/4"-20UNC	16	
44	292198B	Work Light Assembly =Black=	1	
45	94763	Fender Washer, 2"	16	
46	9390-005	Capscrew, 1/4"-20UNC x 1" G5	8	
47	292197B	Chute Plate Strap =Black=	2	
48	9003127	Reflector, 2" x 9" =Amber=	2	
49	9008152	Chute Cylinder, 1 1/2" x 6" (3000 PSI)	1	
50	9390-107	Capscrew, 1/2"-13UNC x 3" G5	2	
51	9876	90° Elbow Fitting 9/16"-18JIC Male x 9/16"-18JIC Female	2	
52	95193	Adapter Fitting 9/16"-18 JIC Female x 9/16"-18 JIC Male	2	With .03" Restrictor
53	285290	Sleeve Bushing	2	
54	292292B	Chute Support Plate =Black=	2	
55	291668B	Spout Service Kit =Black=	1	Includes Item #48

Directional Spout Motor Components

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



ITEM	PART NUMBER	DESCRIPTION	QTY.	NOTES
1	9007626	Spout Hydraulic Motor 3.07 CID, 1" Dia. Shaft	1	
	9008974	Seal Kit	-	
2	272840	Gear Weldment	1	
3	9007653	Set Screw 1/4"-20UNC x 3/16"	2	
4	9003809	Bushing, Self Lubricating	2	
5	272844	Gear Weldment	1	
6	9405-068	Flat Washer 5/16" SAE	2	
7	9390-031	Capscrew 5/16"-18UNC x 1 1/4" Grade 5	2	
8	9404-019	Lock Washer 5/16"	2	
9	9394-004	Hex Nut 5/16"-18UNC	2	
10	9004393	Adapter 9/16"-18JICM x 9/16"-18ORBW W/ 0.055 Restrictor	2	
11	9003810	Snap Ring 3/4"	1	
12	97420	Flange Screw 1/4"-20UNC x 3/4" Grade 5	2	
13	288384B	Panel, Cover =Black=	1	
14	288385B	Spur Gear Mount Weldment =Black=	1	
15	TA500309	BUSHING 1 1/4" OD x 3/4" ID (14GA)	2	

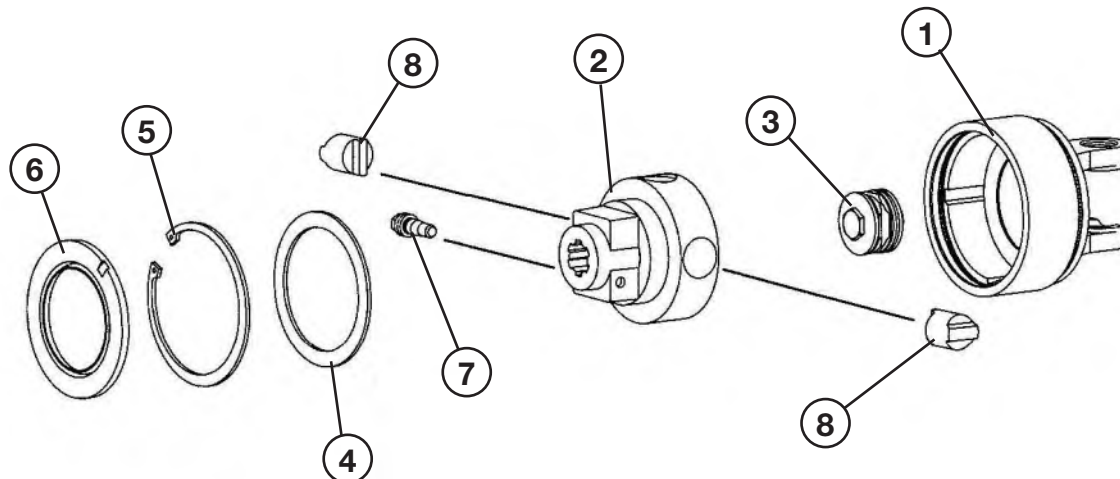
Notes

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

PTO Cut Out Clutch Components (GKN Walterscheid)

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

For GKN Walterscheid Clutch Components, Clutch Housing Color is Yellow.



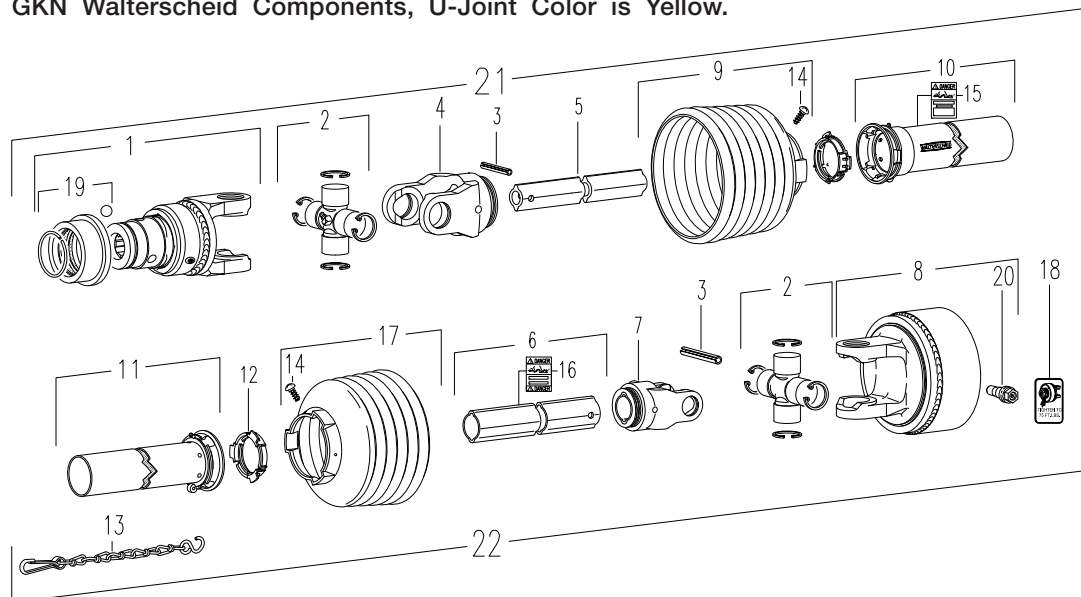
NOTE: Clutch Assembly (9005366) Must be used with the complete PTO Assembly (9005341).

ITEM	PART NO.	DESCRIPTION	QTY	NOTES
	9005366	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 (GKN Walterscheid)

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

For GKN Walterscheid Components, U-Joint Color is Yellow.

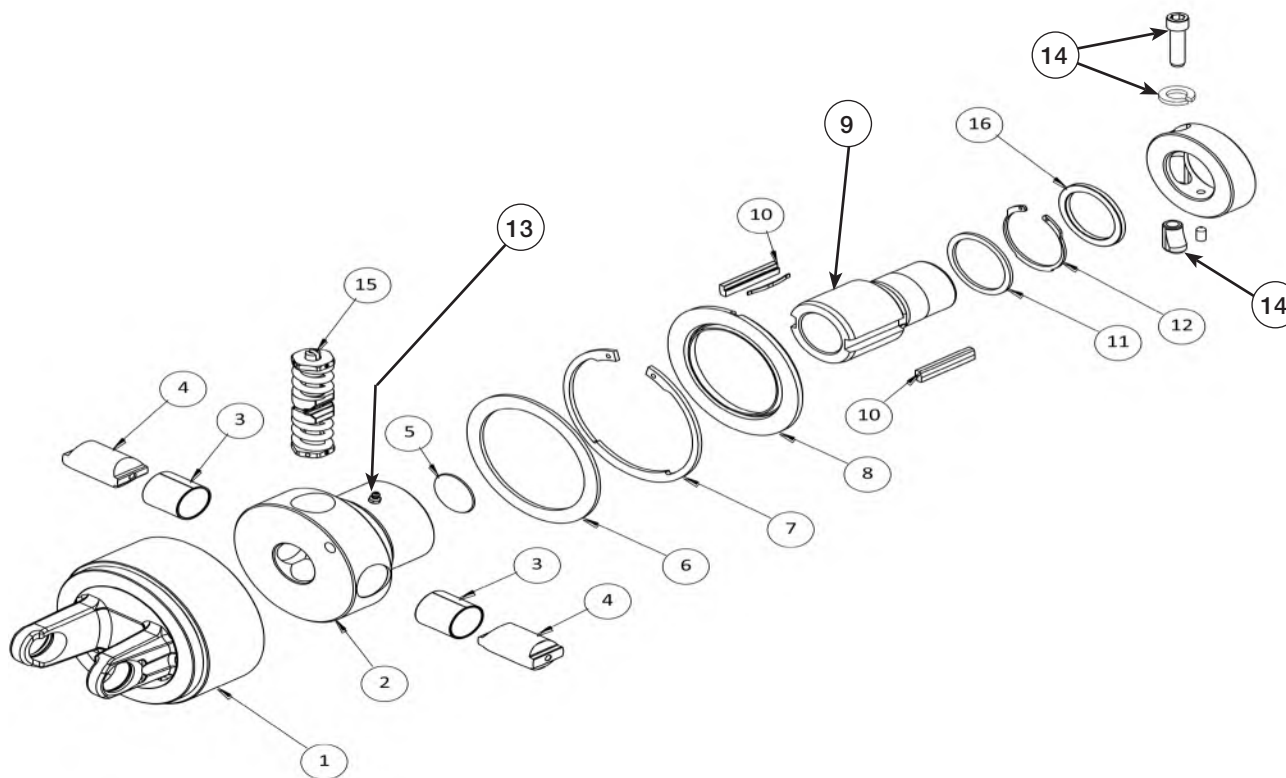


ITEM	PART NO.	DESCRIPTION	QTY	NOTES
	9005341	PTO Assembly Complete		Includes Items 21 & 22
1	9004778	Over-Running PTO Clutch Assembly	1	
2	93857	Cross & Bearing Kit	2	
3	93859	Spring Pin 10x80	2	
4	93858	Inboard Yoke 1b	1	
5	9004274	Inner Profile 1bH	1	
6	94837	Outer Profile 2a	1	
7	93862	Inboard Yoke 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	900535	Cut Out Clutch Lock 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	

PTO Cut Out Clutch Components (Benzi America)

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

For Benzi PTO Components, U-Joint Color is Gray.



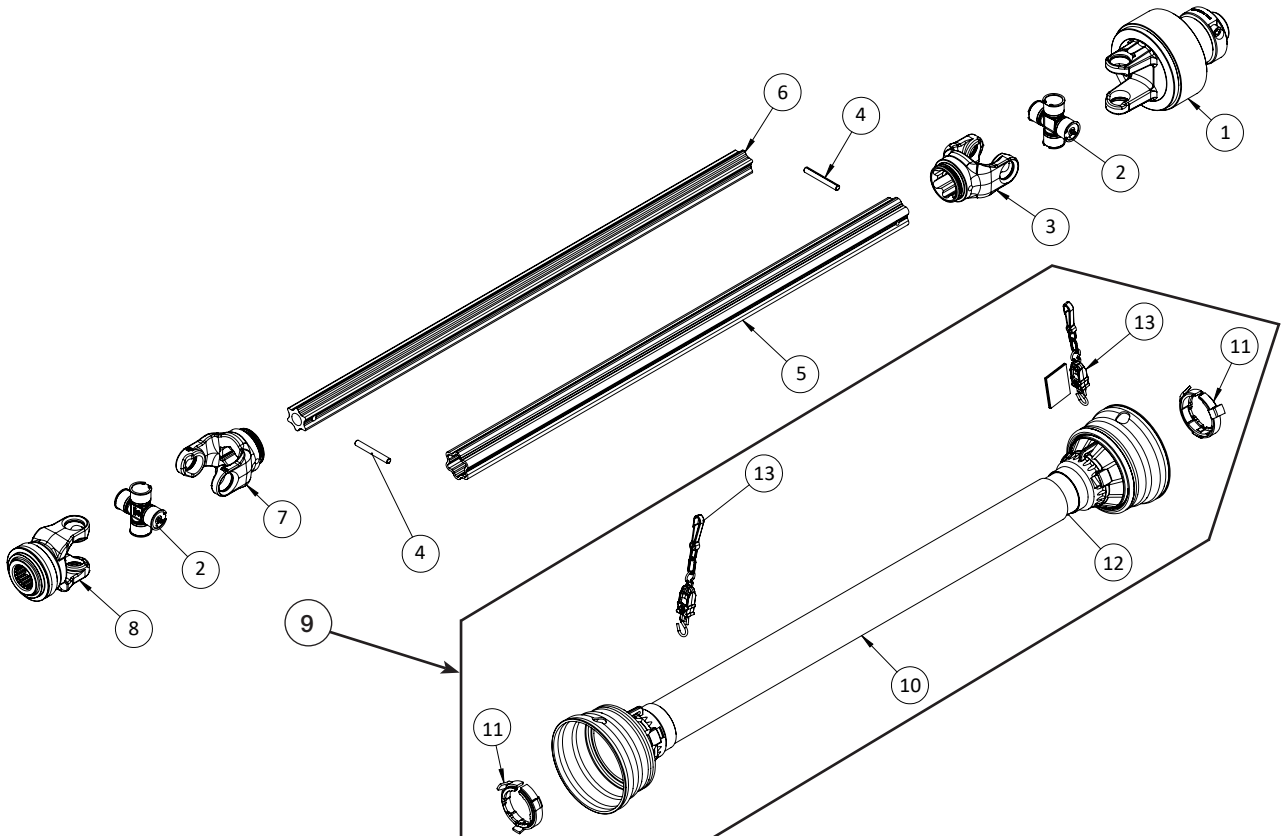
NOTE: Clutch Assembly (9009780) Must be used with the complete PTO Assembly (9009527).

ITEM	PART NO.	DESCRIPTION	QTY	NOTES
	9009780	Cut Out Clutch (2500 N*m Setting)		Includes Items 1-16
1	9008775	Clutch Housing	1	
2	9008776	Clutch Hub 1 3/4-20 Spline	1	
3	9008778	Bushing	2	
4	9008779	Pusher Rod	2	
5	9008780	Closer Ring	1	
6	9008781	Washer	1	
7	9008872	Snap Ring	1	
8	9008783	Grease Seal	1	
9	9008784	Over Running Clutch Hub	1	Includes Collar With Set Screw
10	9008785	Over Running Clutch Spring Pack	1	
11	9008786	Washer	1	
12	9008787	Snap Ring	1	
13	9008788	Grease Zerk (M8)	1	
14	9008789	Conic Bolt Set	1	Includes Socket Head Bolt, Lock Washer, and Threaded Insert
15	9009788	Automatic Cam Clutch Spring Assembly	1	
16	9009789	Clutch Hub Ring	1	

PTO Components (Benzi America)

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

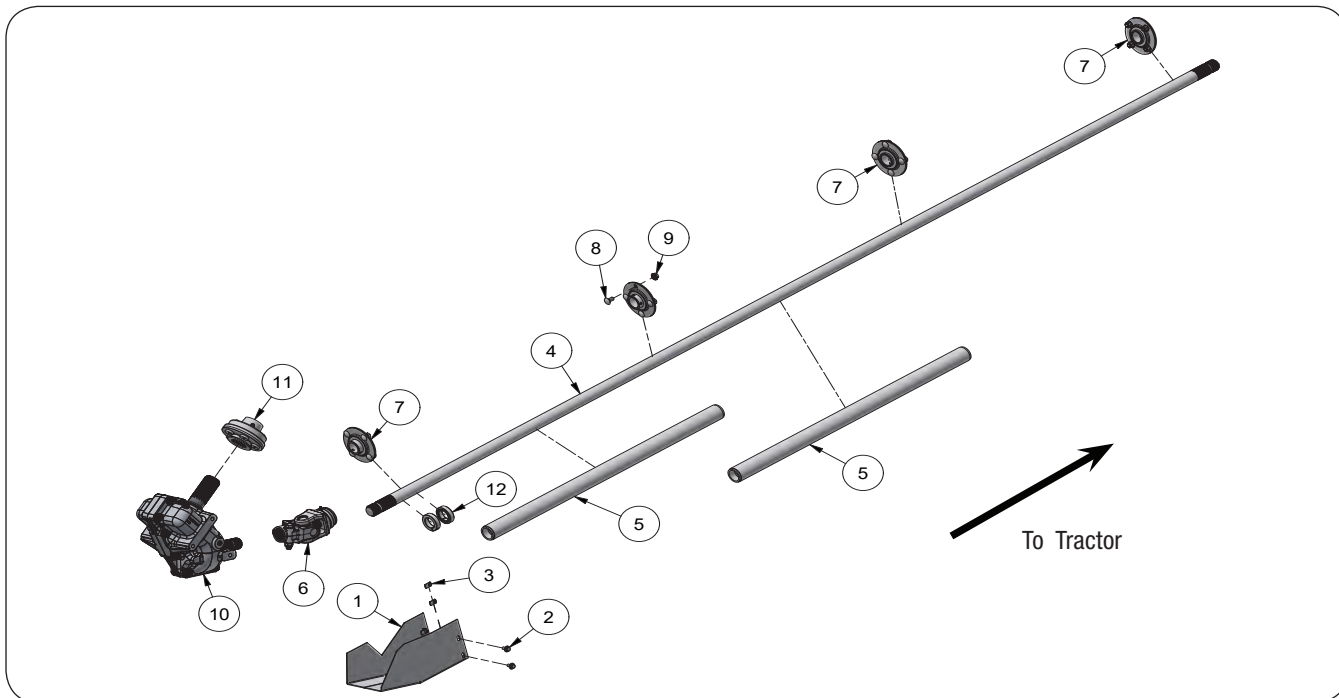
For Benzi PTO Components, U-Joint Color is Gray.



ITEM	PART NO.	DESCRIPTION	QTY	NOTES
	9009527	PTO Assembly Complete	1	Includes items 1 and 2
	9009792	PTO Rear Half Assembly	1	Includes items 2, 4, 6, and 9
	9009791	PTO Front Half Assembly	1	Includes items 1-5 & 9
1	9009780	Clutch Assembly	1	1 3/4"-20 Spline 1000RPM
2	9008792	Cross Universal Kit	2	
3	9008793	Outer Yoke	1	
4	9008794	Tension Pin	2	
5	9008795	Outer Profile Tube w/ Cap	1	
6	9009778	Inner Profile Tube W/ Cap	1	
7	9008797	Inner Yoke	1	
8	9008798	Yoke Assembly	1	
9	9009781	Safety Guard Assembly	1	
10	N/A	Outer Guard Half	1	
11	9008801	Retainer Clip PKG-Cone, Gaurding	1	Package of 2
12	N/A	Inner Guard Half	1	
13	9008804	Chain	2	

Driveline Components

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



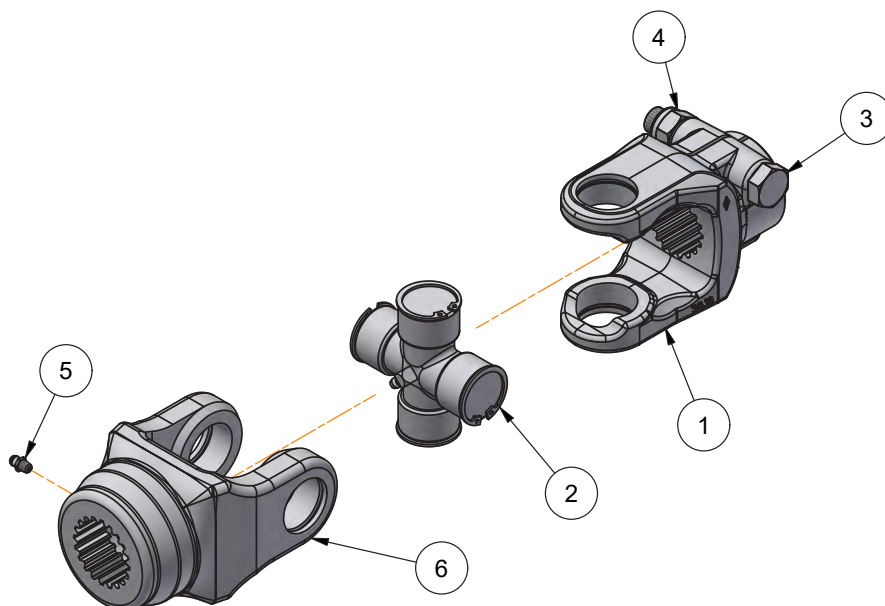
Driveline Components

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

ITEM	PART NO.	DESCRIPTION	QTY.	NOTES
1	292875B	Joint Cover Plate =Black=	1	
2	95585	Large Flange Screw 3/8"-16UNC x 3/4" Grade 5	4	
3	9006452	Tab Weld Nut	4	
4	289763	Drive Shaft Replacement, 1 3/4" Dia. x 160 1/2" Long	1	Includes Items 4, 5, 7, 8, 9 & Lock Collars 1 3/4"
5	292590	Drive Shaft Guard Assembly	2	
6	9007808	Complete U-Joint Assembly 1 3/4" - 20 Spline x 1 3/4" - 20 Spline	1	For SN B41330100 & Higher
	9008326	Complete U-Joint Assembly 1 3/8"- 6 Spline- 1 3/4" - 20 Spline		For SN B41330099 & Lower
7	9005061	Flange Bearing for Driveline - 1 3/4"	4	
8	9388-102	Carriage Bolt 1/2"-13UNC x 1" Grade 5	16	
9	91267	Flange Nut 1/2"-13UNC	16	
10	9008711	45° Gearbox	1	For SN B42550100 & Higher Refer to "45 Degree Gear-box" in this Section for Parts Listing
	9009053			For SN B42550099 - B41330100 Refer to "45 Degree Gear-box" in this Section for Parts Listing
	9002812			For SN B41330099 & Lower Refer to "45 Degree Gear-box" in this Section for Parts Listing
11	92805B	Gearbox Dust Cover =Black=	1	
12	9008674	1 3/4" Dia. Lock Collar	2	

Driveline U-Joint Components

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



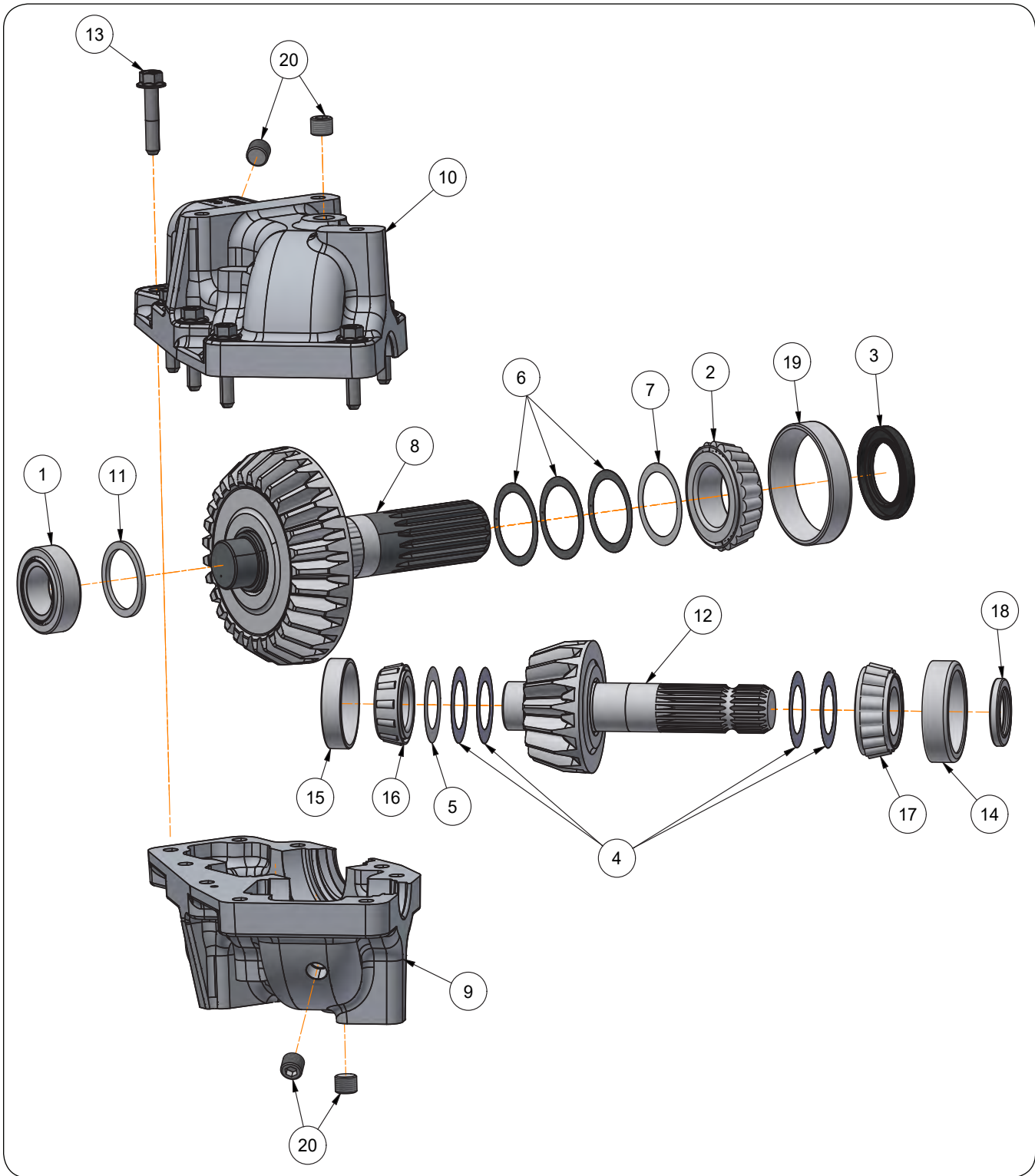
ITEM	PART NO.	DESCRIPTION	QTY.	NOTES
	9007808	Complete U-Joint Assembly 1 3/4" - 20 Spline x 1 3/4" - 20 Spline	1	For SN B41330100 & Higher
	9008326	Complete U-Joint Assembly 1 3/8"- 6 Spline- 1 3/4" - 20 Spline		For SN B41330099 & Lower
1	9007829	Yoke 1 3/4"-20 Spline with Interference Clamp Connection	1	For SN B41330100 & Higher
	9008401	Yoke 1 3/8"- 6 Spline with Slide Collar Connection	1	For SN B41330099 & Lower
2	92529	Cross Bearing Kit	1	
3	94916-127	Capscrew M16 x 90 Class 8.8	1	For SN B41330100 & Higher
4	9002785	Lock Nut M16	1	
5	91160	Grease Zerk	1	
6	9005318	Yoke 1 3/4"-20 Spline	1	

Notes

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

45 Degree Gearbox Q135 Series Components
SN B42550100 & Higher

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



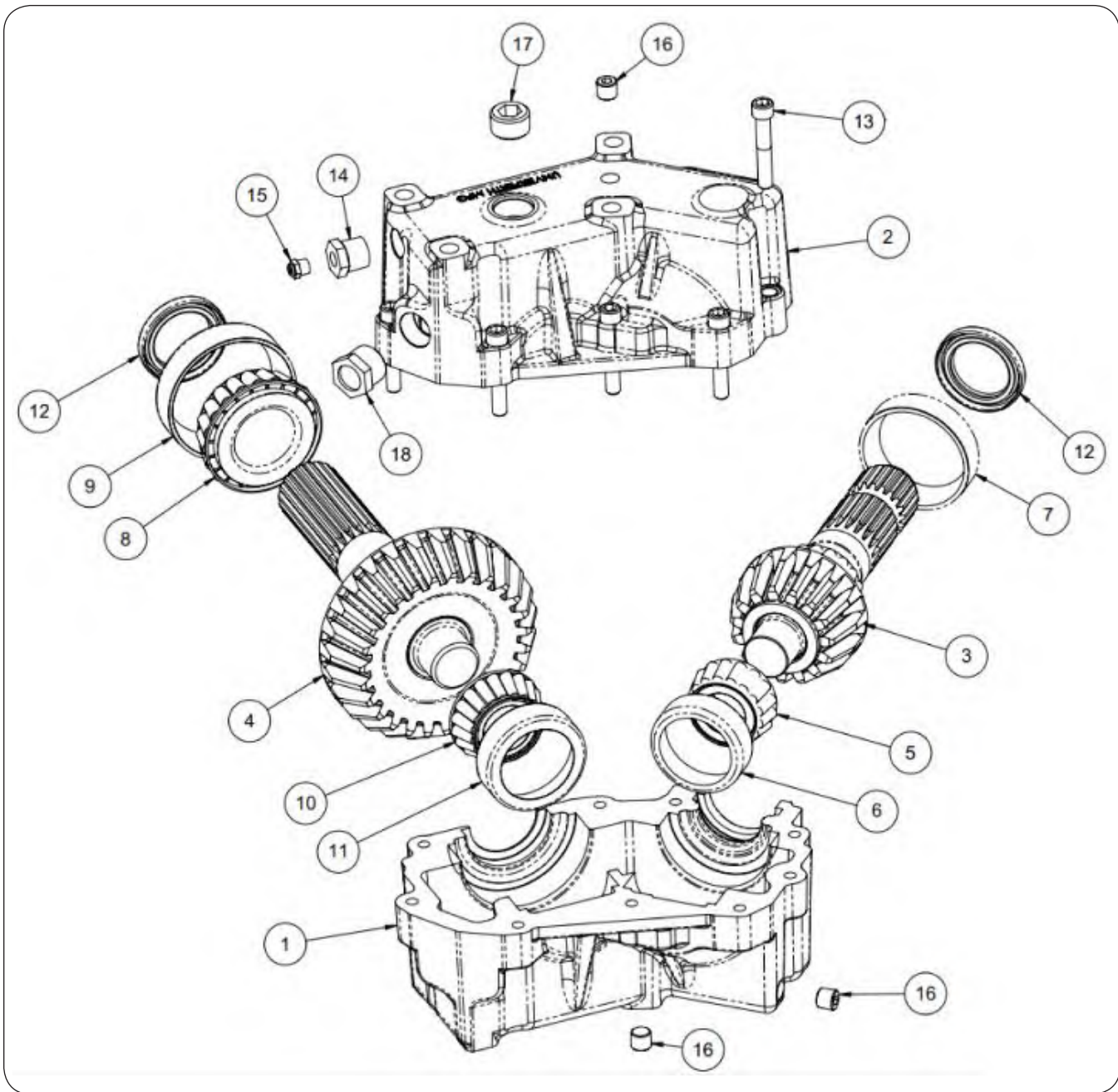
**45 Degree Gearbox Q135 Series Components
SN B42550100 & Higher**

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

ITEM	PART NO.	DESCRIPTION	QTY.	NOTES
	9008711	Gearbox 45° Q135 Series, Complete	1	Includes Items 1 through 20
1	9007488	Bearing Cup/Cone, 3.15" OD x 1.772" ID	1	
2	9007507	Bearing Cone, 2 1/4" ID x 1 1/4"	1	
3	9007508	Seal	1	
4	9007509	Steel Shim, 2.75" x 1.75" x .005"	4	
5	9007510	Steel Shim, 2.75" x 1.75" x .003"	1	
6	9007511	Steel Shim, 3.00" x 2.36" x .005"	3	
7	9007512	Steel Shim, 3.00" x 2.36" x .003"	1	
8	9007516	Gear Shaft Assembly, 29 Tooth, 2 1/4-17 Spline	1	
9	9008509	Gearbox Housing Q135 w/Tapped Holes	1	
10	9008510	Gearbox Housing Q135 w/Thru Holes	1	
11	9008511	Spacer	1	
12	9008790	Gear Shaft Assembly, 16 Tooth, 1 3/4"-20 Spline	1	
13	903161-060	Flange Screw, 1/2"-13UNC x 2 1/2" G5	9	
14	91151	Bearing Cup, #3720	1	Large
15	91812	Bearing Cup, 3.265" OD x 0.75"	1	
16	91822	Bearing Cone, 1.75" ID	1	
17	92697	Bearing Cone, 1.750" ID x 1 1/4"	1	Large
18	92702	Seal	1	Large
19	93819	Bearing Cup, 4 7/16" OD x 15/16"	1	
20	95283	Pipe Plug, 1/2" NPT	4	

45 Degree Gearbox Components
For SN B41330100 - B42550099

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



**45 Degree Gearbox Components
For SN B41330100 - B42550099**

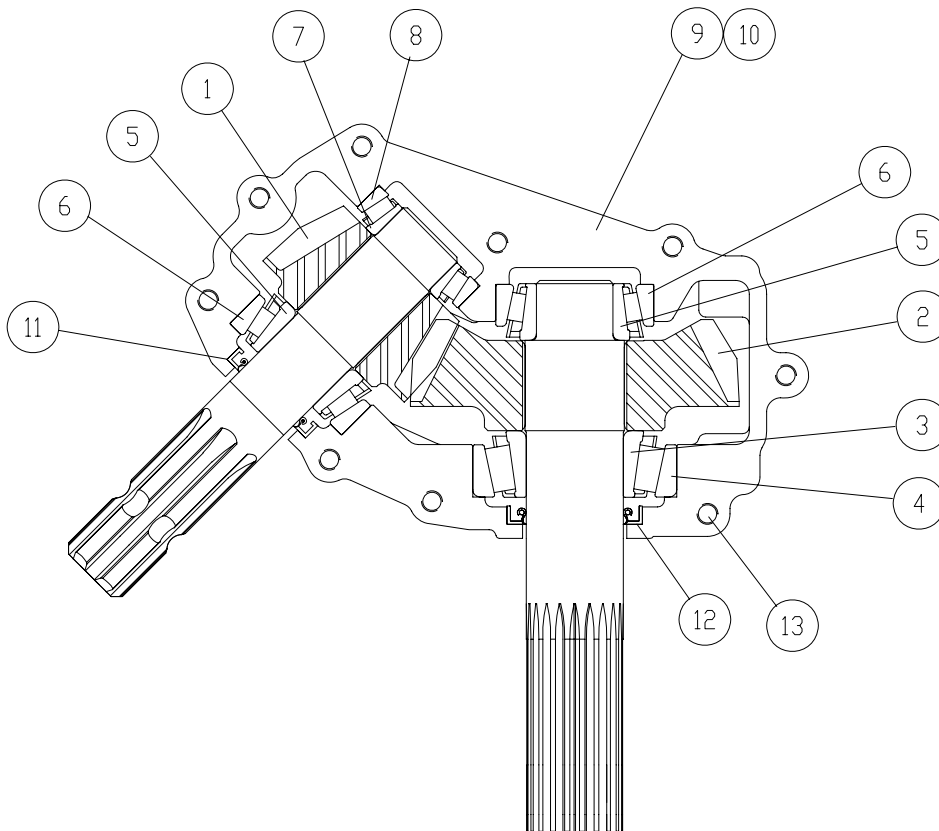
Please visit www.unverferth.com/parts/ for the most current parts listing.

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	Bearing Cup	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	Replacement Plug is Item #17
15	92352	Vented Pressure Relief Plug, 1/8" NPT, 5 PSI	1	Replacement Plug is Item #17
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	

45 Degree Gearbox Components - For SN B41330099 & Lower

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

NOTE: SN B41330099 and lower can upgrade to gearbox (9009053) with 20 spline input shaft. 20 spline U-joint (9007808) MUST be used the gearbox.



45 Degree Gearbox Components - For SN B41330099 & Lower

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

ITEM	PART NUMBER	DESCRIPTION	QTY.	NOTES
	9002812	Gear Box, Complete with 6 Spline Input Shaft	1	Includes Items 1 thru 17
1	9001131	Shaft, Input	1	1 3/8"-6 Input Spline
2	9001132	Shaft, Output	1	1.8:1 Gear
3	92697	Bearing Cone	1	Large
4	91151	Bearing Cup	1	Large
5	9001133	Bearing Cone	2	
6	9001134	Bearing Cup	2	
7	91816	Bearing Cone	1	Small
8	92896	Bearing Cup	1	Small
9	9003447	Casting w/ Tapped Holes - Model Q81 Gearbox	1	Use Kit #281885
10	9003448	Casting w/ Thru Holes - Model Q81 Gearbox	1	Not Shown - Use Kit #281885
9A	9007299	Casting w/ Thru Holes - Model Q145 Gearbox	1	Not Shown
10A	9007300	Casting w/ Tapped Holes - Model Q145 Gearbox	1	Not Shown
11	92688	Seal	1	Small
12	92702	Seal	1	Large
13	95281	Capscrew, 3/8-16 UNC x 1 1/2	9	
14	92352	Pressure Relief, 5-PSI	1	Not Shown Replacement Plug is Item #16
15	92350	Plug, Plain	3	Not Shown
16	98523	Plug, 3/4" NPT	1	Not Shown
17	9003453	Hex Bushing Reducer	1	Not Shown Replacement Plug is Item #16

EOH Valve Assembly Components 4 Spool (Optional)

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

1

2

3

4

5

6

Cartridge Valve (9008416)

Correct Middle Detent Position

Incorrect Top Detent Position

Cartridge Valve (9008416)
Middle Detent Position

(S1)

(S2)

PUSH BUTTON AND HOLD WHILE OPERATING INDIVIDUAL FUNCTIONS

Cartridge Valve (9008438)

FOR MANUAL OVERRIDE

NOTE: Refer to “Electric Over Hydraulic Manual Override Operation (Optional)” in MAINTENANCE.

7

HYDRAULIC BLOCK MANUAL OVERRIDE OPERATION

MANUAL OPERATION: DETENT ONE CARTRIDGE TO DESIRED FUNCTION.

PRESS & HOLD THE POWER CARTRIDGE FOR FUNCTION.

RELEASE POWER AND RETURN CARTRIDGE TO CENTER DETENT WHEN FUNCTION IS COMPLETE

UPPER FUNCTION

JOYSTICK OPERATION

LOWER FUNCTION

SPRING DETENT

CAUTION: CARTRIDGES MUST BE IN THE CENTER DETENT TO PREVENT UNDESIRABLE FUNCTION DURING JOYSTICK OPERATION

SPOT WHEEL IN

SPOT WHEEL OFF

SPOT TEST IN

SPOT TEST OFF

ARMER UP/OLD

ARMER FOLD

FLOW DOOR OPEN

FLOW DOOR CLOSE

POWER

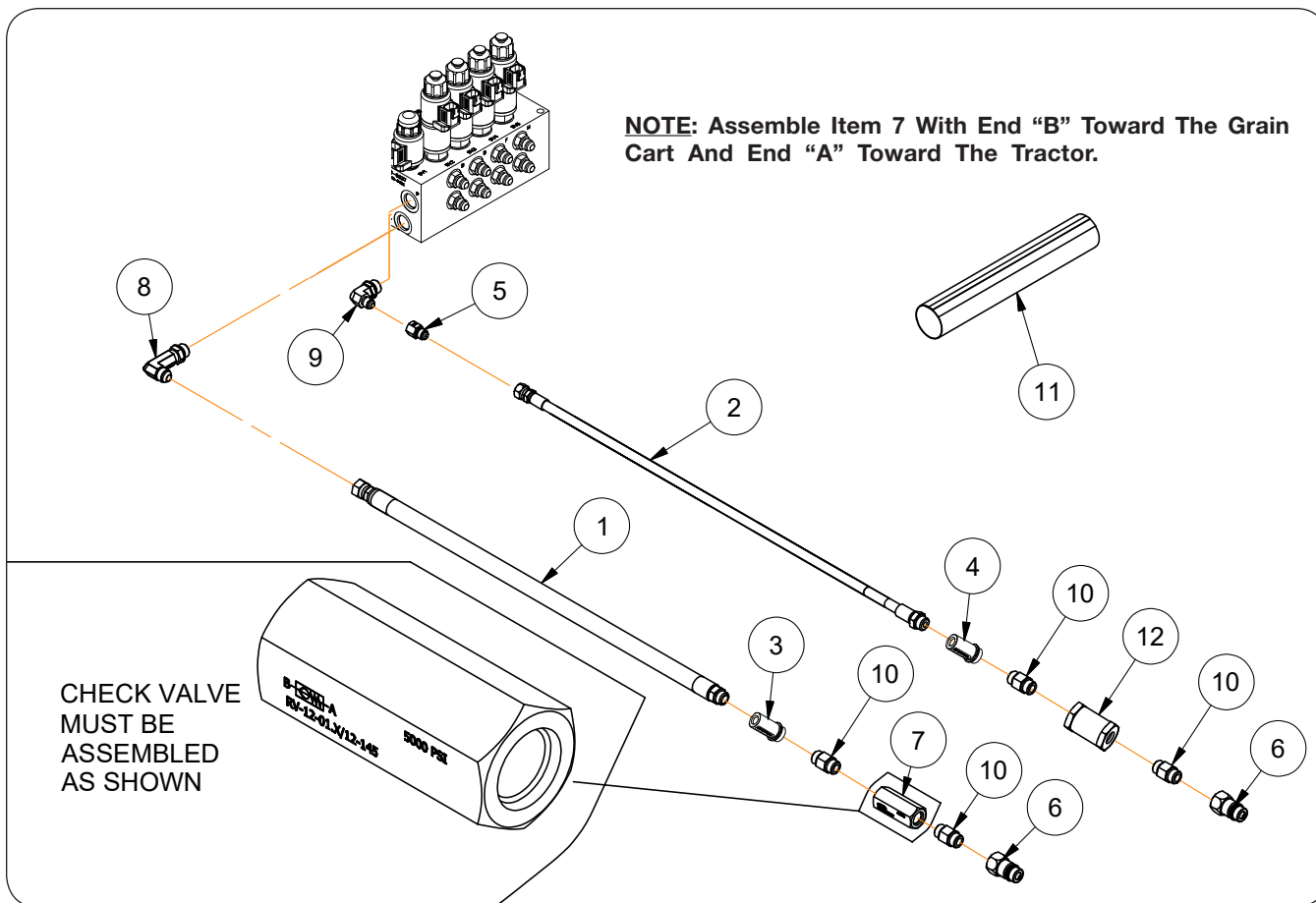
EOH Valve Assembly Components 4 Spool (Optional)

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	

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	9007842	Hydraulic Hose, 1/4 x 172" - 3000 PSI	1	
3	9009766	Hose Grip, Hydraulic Return (Tan -)	1	
4	9009765	Hose Grip, Hydraulic Pressure (Tan +)	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	4	
11	9003848	Velcro Hose Wrap, 2" I.D. x 127" Lg.	1	
12	9005403	120 Micron Hydraulic Filter	1	

Notes

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

Empty rounded rectangular box for notes.

1319/1519 GRAIN CARTS — Parts

Hydraulics — Serial Number B38910100 and Higher

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"	2	(For Auger & Door Cylinders)
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 9/16"-18 JICF x 9/16"-18 JICM	2	With 0.060 (Yellow) Restrictor
9	9003273	Hose 1/4" x 20" (9/16"-18 JIC Female x 9/16"-18 JIC Female)	2	
10	9003432	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)	1	
12	9008152	Hydraulic Cylinder, 1 1/2" x 6"	1	
	9008341	Seal Kit	-	
13	9008009	Valve Manifold	1	
14	9009755	Hose Grip (Flow Door Open) (RED -)	1	
15	9009754	Hose Grip (Flow Door Close) (RED +)	1	
16	9009751	Hose Grip (Auger Raise) (GREEN +)	1	
17	9009752	Hose Grip (Auger Lower) (GREEN -)	1	
18	9009765	Hose Grip (Spout Rotate Rear) (TAN +)	1	
19	9009766	Hose Grip (Spout Rotate Front) (TAN -)	1	
20	9004393	Adapter 9/16"-18 JIC Female x 9/16"-18 JIC Male	2	
21	9003130	Hose 1/4" x 100" (9/16"-18 JIC Female x 9/16"-18 JIC Female)	1	
22	9005363	Flow Door Cylinder 2 1/2" x 36"	1	
	9005409	Seal Kit	-	
23	9009759	Hose Grip (Spout Tilt Out) (YELLOW +)	1	
24	9009760	Hose Grip (Spout Tilt In) (YELLOW -)	1	
25	9009813	Hose 1/4" x 340" (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	9009806	Hose 1/4" x 334" (9/16"-18 JIC Female x 9/16"-18 JIC Female)	1	
30	91256	Flange Screw 5/16"-18UNC x 3/4"	2	
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" G5	3	
35	9390-032	Capscrew 5/16"-18UNC x 1 1/2" G5	4	
36	9390-040	Capscrew 5/16"-18UNC x 3 1/2" G5	2	

(Continued on next page)

1319/1519 GRAIN CARTS — Parts

Hydraulics — Serial Number B38910100 and Higher

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

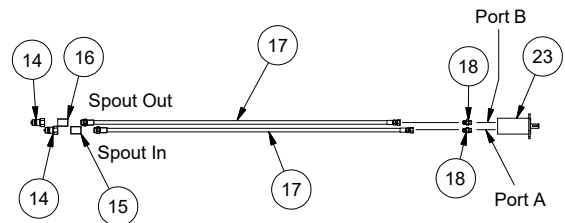
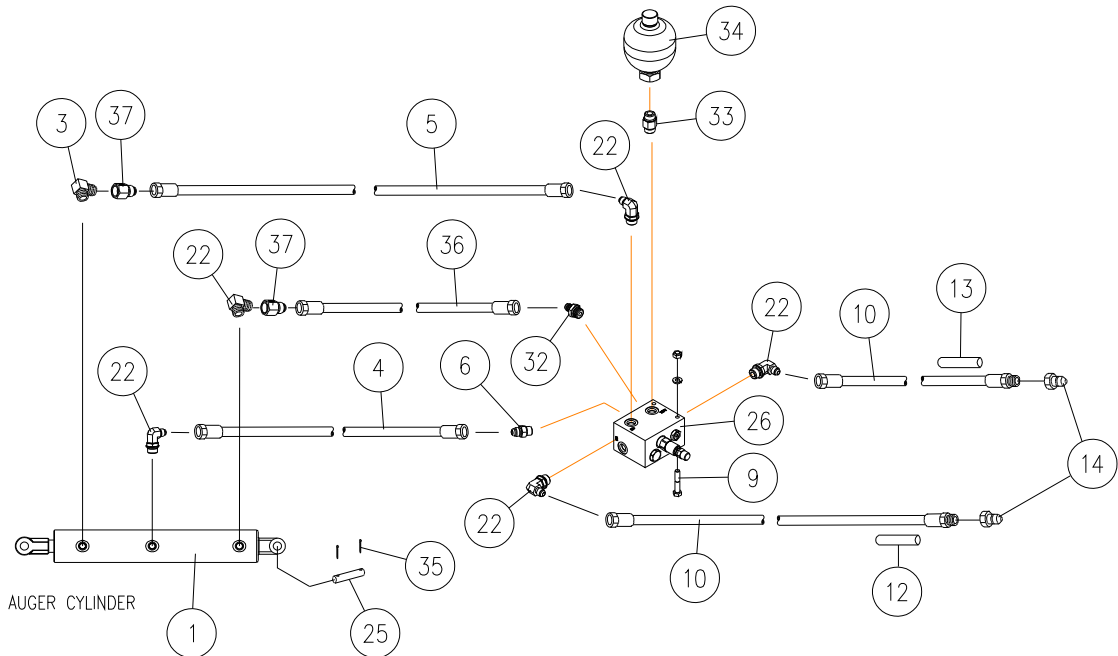
ITEM	PART NUMBER	DESCRIPTION	QTY	NOTES
37	9390-107	Capscrew 1/2"-13UNC x 3" G5	2	
38	9391-046	Cotter Pin 3/16" Dia. x 2"	4	
39	9394-004	Hex Nut 5/16"-18UNC	2	
40	9404-019	Lock Washer 5/16"	2	
41	9404-025	Lock Washer 1/2"	2	
42	9405-068	Flat Washer 5/16" SAE	2	
43	9405-088	Flat Washer 1/2" USS	2	
44	9405-116	Flat Washer 1" SAE	12	
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	9003912	Hose 1/4" x 288" (9/16"-18 JIC Female x 9/16"-18 JIC Female)	2	
50	9874	90° Elbow (9/16"-18 JIC Female x 3/4"-16 O-Ring Male)	8	
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" G5	2	
57	91511	Dust Cap	8	
58	9001041	45° Elbow (9/16"-18 JIC Female x 9/16"-18 JIC Male)	2	
59	9005299	Hose 1/4" x 80" (9/16"-18 JIC Female x 9/16"-18 JIC Female)	1	
60	9003216	Hose 1/4" x 168" (9/16"-18 JIC Female x 9/16"-18 JIC Female)	1	

Notes

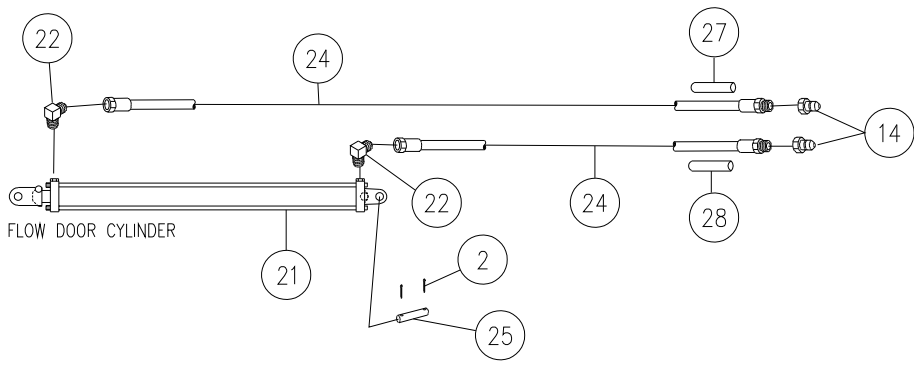
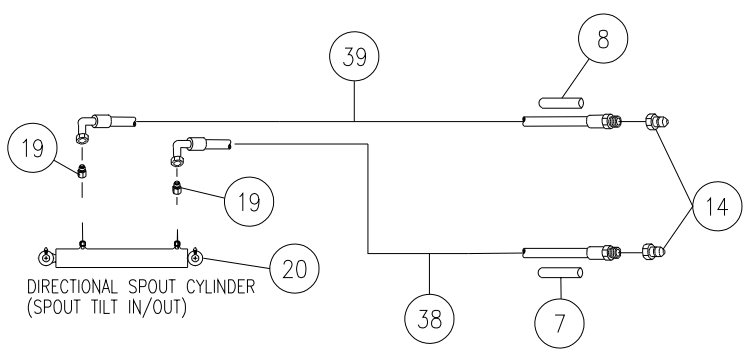
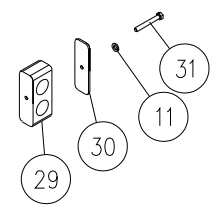
Please visit www.unverferth.com/parts/ for the most current parts listing.

Hydraulic Components - For SN B38910099 and Lower

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



DIRECTIONAL SPOUT MOTOR
(SPOUT IN/OUT)



1319/1519 GRAIN CARTS — Parts

Hydraulic Components - For SN B38910099 and Lower

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

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	91508	45° Elbow (9/16-18 JIC Male x 3/4-16 O-Ring Male)	1	
4	9003345	Hose 1/4 x 150 (9/16-18 JIC Swivel Female both Ends)	1	
5	9003432	Hose 1/4 x 185 1/2" (9/16-18 JIC Swivel Female both Ends)	1	
6	9001495	Adapter (9/16-18 JIC Male x 9/16-18 O-Ring Male)	1	
7	9007261	Sleeve, Hose Marker (WHITE, Spout Tilt In)	1	
8	9007260	Sleeve, Hose Marker (WHITE, Spout Tilt Out)	1	
9	9390-036	Capscrew, 5/16-18UNC x 2 1/2 Grade 5	2	
	9404-019	Lock Washer, 5/16	2	
	9807	Locknut, 5/16-18UNC Grade 5	2	
10	9008320	Hose 1/4 x 212 (9/16-18 JIC Swivel Female x 3/4-16 O-Ring Male)	2	
11	9404-019	Lock Washer, 5/16	-	Use with all hose clamps
12	9003998	Sleeve, Hose Marker (GREEN, Auger Lower)	1	
13	9003997	Sleeve, Hose Marker (GREEN, Auger Raise)	1	
14	91383	Male Coupler 3/4-16 Female O-Ring	8	
15	9004000	Sleeve, Hose Marker (YELLOW, Spout In)	1	
16	9003999	Sleeve, Hose Marker (YELLOW, Spout Out)	1	
17	9003059	Hose 1/4 x 476 1/2 (9/16-18 JIC Swivel Female x 3/4-16 O-Ring Male)	2	
18	9004393	Adapter (9/16-18 JIC Male x 9/16-18 JIC Male)	2	w/.055 Restrictor
19	95193	Adapter (9/16-18 JIC Female x 9/16-18 JIC Male)	2	w/.030 Restrictor
20	9003789	Cylinder 1 1/2 x 4	1	
21	9005363	Cylinder 2 1/2 x 36	1	
22	9874	90° Elbow (9/16-18 JIC Female x 3/4-16 O-Ring Male)	7	
23	9007626	Spout Hydraulic Motor	1	
	9008974	Seal Kit	-	
24	9004121	Hose 1/4 x 295 (3/4-16 O-Ring Male x 9/16-18 JIC Swivel Female)	2	
25	804572	Pin 1" Dia. x 3 1/2	2	
26	9008009	Valve Manifold	1	
27	9003995	Sleeve, Hose Marker (RED, Flow Door Open)	1	
28	9003996	Sleeve, Hose Marker (RED, Flow Door Close)	1	
29	9003816	Clamp Pair	9	
30	9003814	Top Plate	11	
31	9390-032	Capscrew, 5/16-18UNC x 1 1/2 Grade 5	7	
	9390-036	Capscrew, 5/16-18UNC x 2 1/2 Grade 5	3	
32	92927	Adapter, 9/16-18 JIC M x 3/4-16 OR M Boss	1	
33	98508	Adapter, 3/4-16 OR M x 3/4-16 OR M	1	
34	9006920	Hydraulic Accumulator, 800 PSI	1	
35	9392-140	Roll Pin, 1/4 Dia. x 2	2	
36	9003432	Hose 1/4 x 185 1/2 (9/16-18 JIC Swivel Female both Ends)	1	
37	9002199	Reducer, 9/16-18 JIC Female Nut x 9/16-18 JIC Male	2	
38	9007595	Hose 1/4 x 519 (9/16-18 JIC Swivel Female x 3/4-16 O-Ring Male)	1	
39	9007596	Hose 1/4 x 525 (9/16-18 JIC Swivel Female x 3/4-16 O-Ring Male)	1	
40	9390-031	Capscrew 5/16"-18UNC x 1 1/4" Grade 5	2	
41	9405-068	Flat Washer 5/16" SAE	2	
42	9404-019	Lock Washer 5/16"	2	
43	9394-004	Hex Nut 5/16"-18UNC	2	

1319/1519 GRAIN CARTS — Parts

Auger Fold Cylinder - 4" x 20"

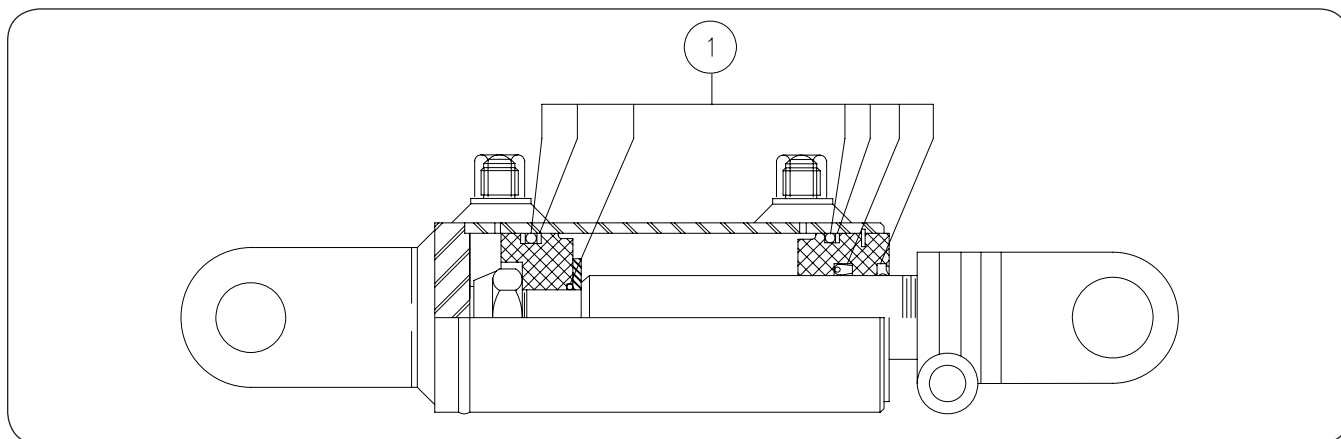
Please visit www.unverferth.com/parts/ for the most current parts listing.

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	

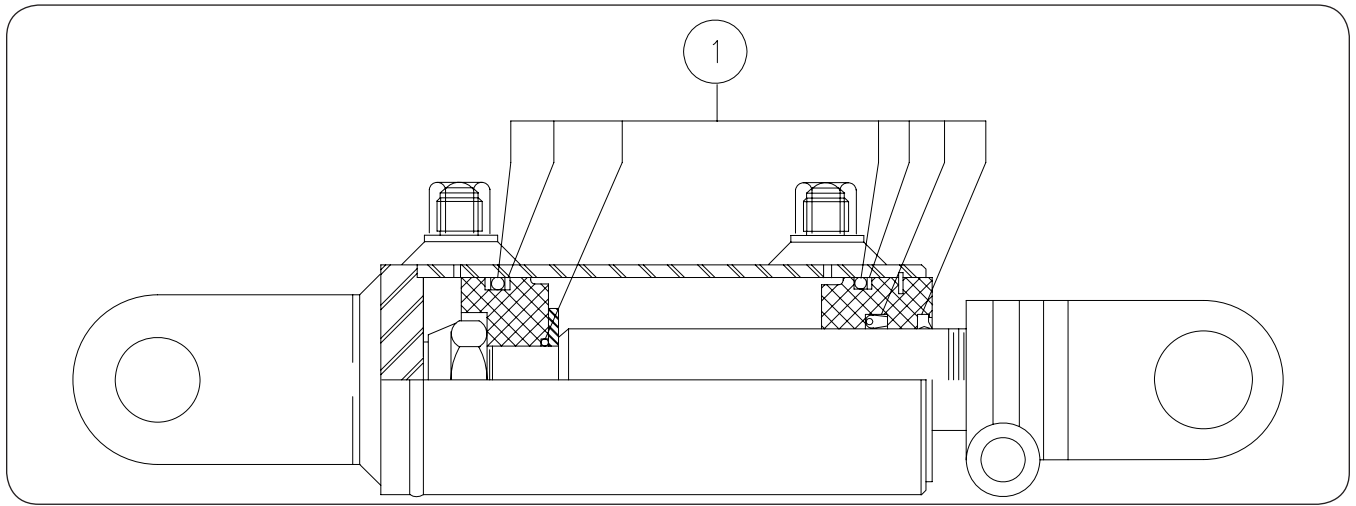
Directional Spout Cylinders - 1 1/2" x 6"



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

Cylinders — 3 1/2" x 8" (Optional Hydraulic Jack)

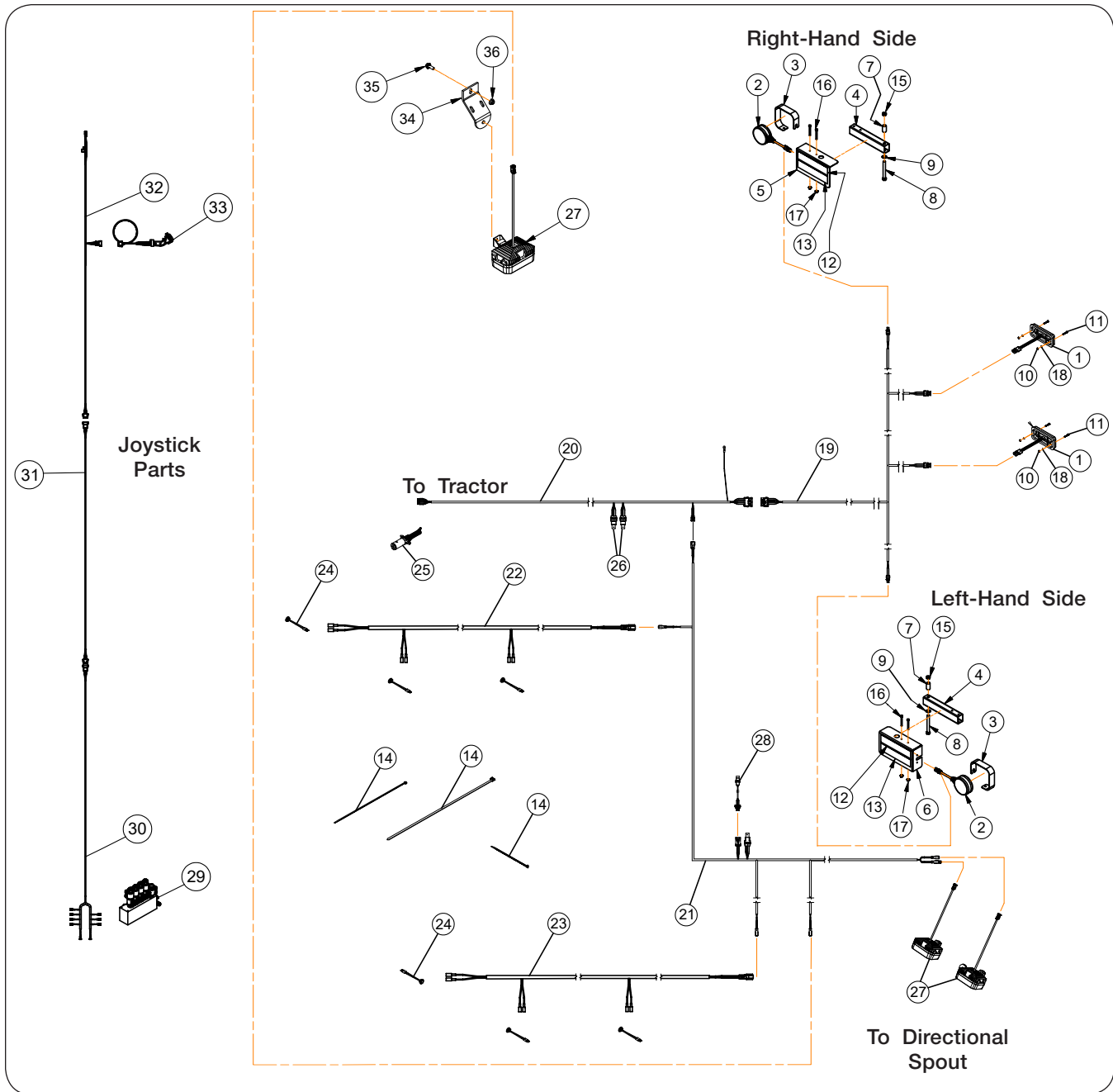
Please visit www.unverferth.com/parts/ for the most current parts listing.



ITEM	PART NUMBER	DESCRIPTION	QTY.	NOTES
	9009047	Welded Cylinder, Complete	1	
1	9007880	Seal Kit	1	

Electrical Components - Single Axle & Track Models

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



1319/1519 GRAIN CARTS — Parts

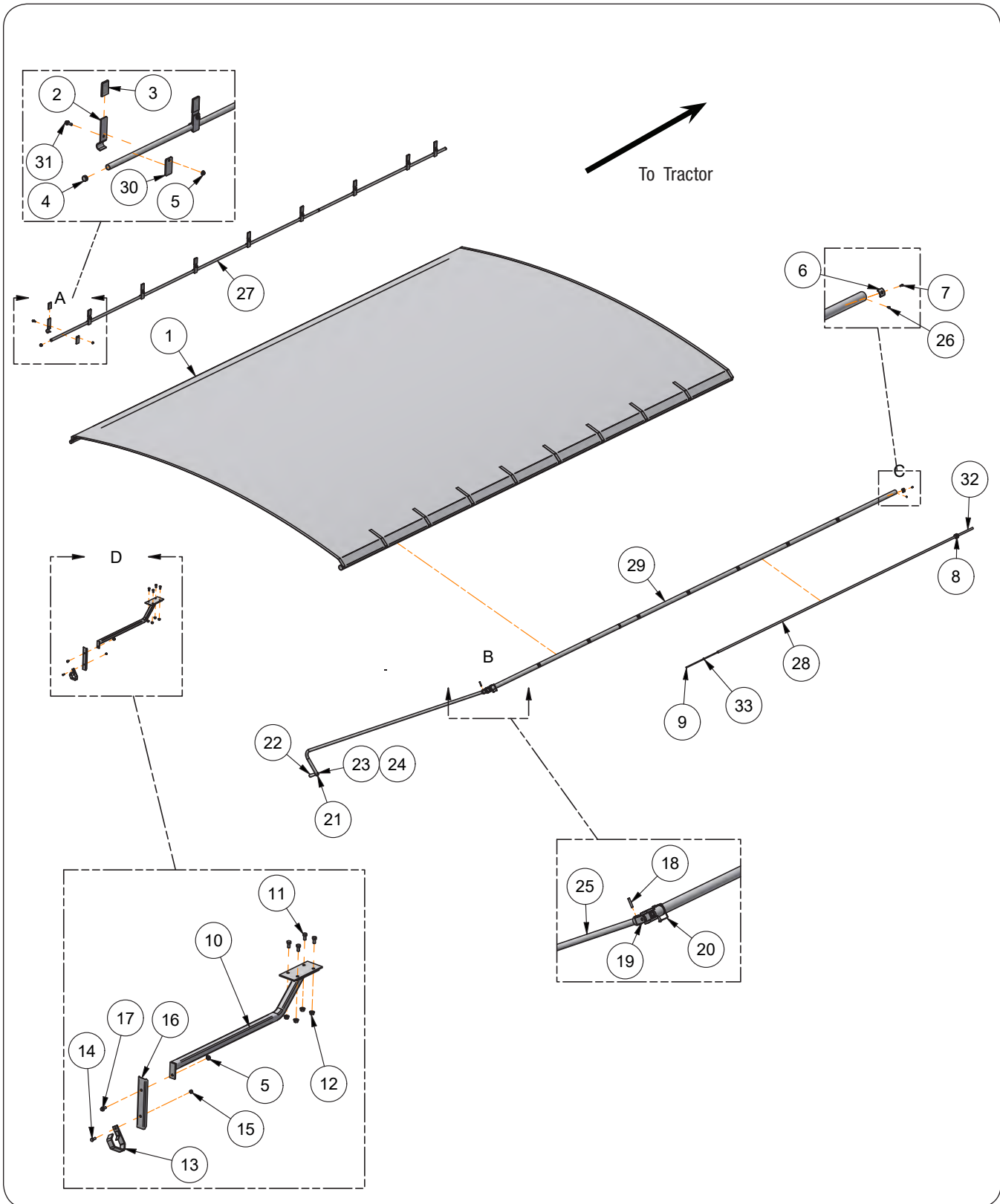
Electrical Components - Single Axle & Track Models

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

ITEM	PART NO.	DESCRIPTION	QTY	NOTES
1	9006345	Lamp - Red LED	2	
	232169	Lamp - Red LED Assembly with Mtg Hardware	2	Includes Items 10, 11 & 18
2	9005142	LED Light, Amber - Double Face	2	
3	268678B	Light Guard Plate =Black=	2	
4	285771B	Light Tube =Black=	2	
5	252303B	Light Bracket Plate Right-Hand =Black=	1	
6	252304B	Light Bracket Plate Left-Hand =Black=	1	
7	281145B	Spacer Bushing =Black=	2	
8	9390-112	Capscrew 1/2"-13UNC x 4 1/2" Grade 5	2	
9	9405-085	Flat Washer 1/2"	2	
10	9830-016	Hex Nut #10-32UNF	2	
11	903172-350	Phillips Head Screw #10-32UNF x 1 1/4"	2	
12	9003125	Fluorescent Strip, Red-Orange	2	2 x 9"
13	9003126	Reflector =RED=	2	2 x 9"
14	9000106	Cable Tie, 7 1/2"	8	
	9000107	Cable Tie, 14 1/2"	8	
	9000104	Cable Tie, 21 1/2"	15	
15	94981	Locknut 1/2"-13UNC	2	
16	9390-011	Capscrew, 1/4"-20UNC x 2 1/2" Grade 5	4	
17	97189	Hex Nut/Large Flange 1/4"-20UNC	4	
18	9404-013	Lock Washer #10	2	
19	9008237	Wiring Harness - Rear 230"	1	
20	9008236	Wiring Harness - Front 197"	1	
21	9009078	Wiring Harness - Auger	1	For SN B41010100 & Higher
	9008235		1	For SN B41010099 & Lower
22	9008233	Wiring Harness - Right-Hand Clearance	1	
23	9008234	Wiring Harness - Left-Hand Clearance	1	
24	9006107	Micro Dot Amber Light (LED)	6	
25	92450	7-Way Plug	1	
26	9005618	Relay for 12VDC, Type 101	2	Replacement Only
27	9008957	Work Light (LED)	3	For SN B41010100 & Higher
	9007186		2	For SN B41010099 & Lower
28	9007472	Proximity Sensor with Connector	1	
29	291585	Hydraulic Block Assembly 4 Spool	1	
30	9008403	Harness - Main	1	
31	9006233	Harness - Extension	1	
32	9008402	Harness - Power	1	
33	9008378	L-Series Control Grip - 4 Function	1	
34	271574B	Light Bracket =Black=	1	For SN B41010100 & Higher
35	9009729	Truss Head Machine Screw 3/8"-16UNC x 1 1/2"	1	For SN B41010100 & Higher
36	91263	Nut/Large Flange 3/8"-16UNC	1	For SN B41010100 & Higher

Weather Guard Tarp and Crank Handle Components

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



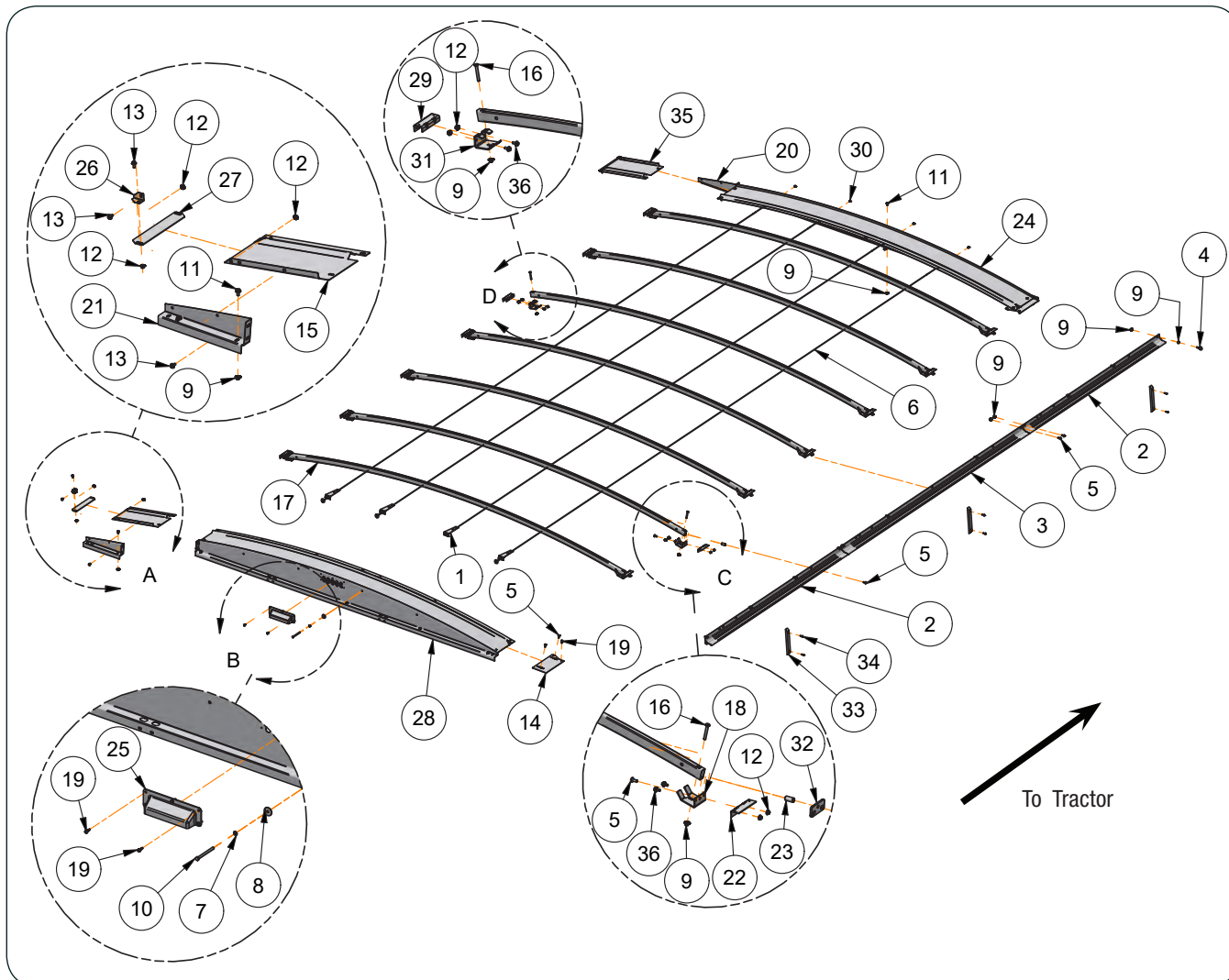
Weather Guard Tarp and Crank Handle Components

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

ITEM	PART NO.	DESCRIPTION	QTY	NOTES
1	9008231	Tarp 176" x 314"	1	
	9005581	Tarp Repair Kit	-	
2	266689	Tarp Stop Plate =Black=	9	
3	9003078	Plastic Cap	9	
4	9005088	Plug 1 1/8"	2	
5	91263	Flange Nut 3/8"-16UNC Grade 5	21	
6	9004949	U-Clamp	8	
7	9005197	Self Drilling Screw #10-16 x 3/4"	10	
8	9004947	Plug 1 7/8"	1	
9	221722	Bungee Cord 3/8" Dia. x 204"	1	
10	287394B	Crank Handle Holder Weldment =Black=	1	
11	9390-099	Capscrew 1/2"-13UNC x 1" Grade 5	4	
12	9002058	Flange Lock Nut 1/2"-13UNC	4	
13	221770B	Handle Retainer Weldment =Black=	1	
14	9390-055	Capscrew 3/8"-16UNC x 1" Grade 5	1	
15	9928	Lock Nut 3/8"-16UNC	1	
16	265743B	Extension Crank Holder =Black=	1	
17	91262	Flange Screw 3/8"-16UNC x 1" Grade 5	1	
18	9392-180	Roll Pin 3/8" Dia. x 2"	1	
19	9004977	U-Joint	1	
20	9005305	Lynch Pin 3/8" x 3"	1	
21	9005089	Plug 1 1/4"	1	
22	9004969	Handle	1	
23	903172-450	Pan Head Phillips Screw 3/8"-16 UNC x 4 1/2" Grade 5	1	
24	9398-012	Lock Nut 3/8"-16 UNC	1	
25	287944	Tarp Handle Weldment	1	
26	9001396	Self Drilling Screw #10-16 x 1/2"	1	
27	285896	Fixed Tube Weldment 201"	1	
28	221668	PVC Pipe 180"	1	
29	221789	Roll Tube Weldment 208"	1	
30	295183B	Tarp Stop Spacer Plate =Black=	9	
31	9003259	Flange Screw 3/8"-16UNC x 1 1/4" Grade 5	9	
32	TA806225	Hose 1/2" EPDM	1	
33	9405-074	Flat Washer 3/8"	1	

Weather Guard End Cap, Bracket, & Bow Components

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



1319/1519 GRAIN CARTS — Parts

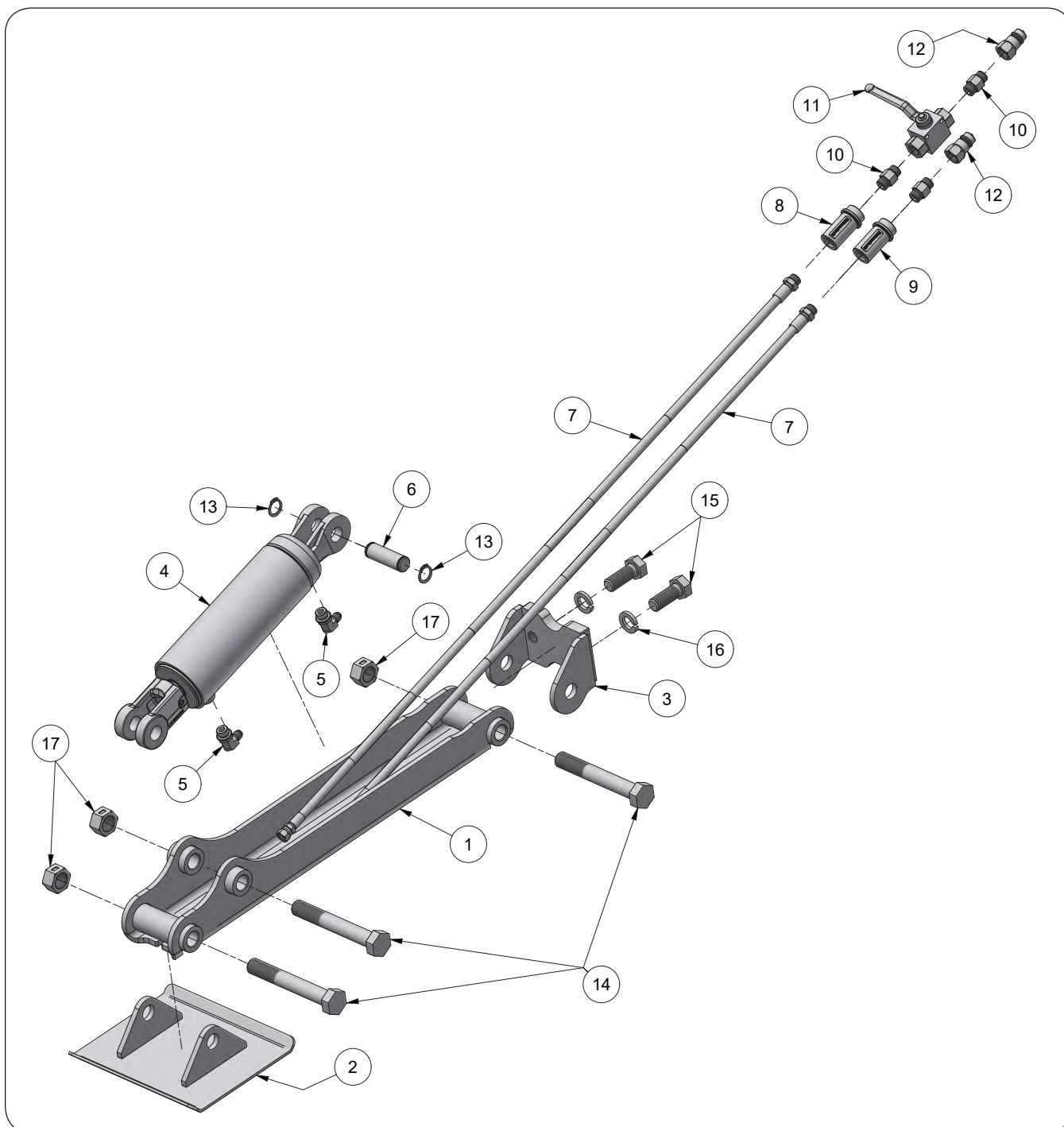
Weather Guard End Cap, Bracket, & Bow Components

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

ITEM	PART NO.	DESCRIPTION	QTY	NOTES
1	281712B	Bracket & U-Nut Assembly	4	
	281711B	Tarp Bracket =BLACK=	1	
	9005376	U-Nut, 3/8"-16UNC	1	
2	296853	Front and Rear Latch Plate 90"	2	Latch Plate Replacement Service Kit #297783 Includes Items 2 and 3
3	296854	Middle Latch Plate 119 1/2"	1	
4	9004548	Eye Bolt	1	
5	9005312	Truss Head Screw 3/8"-16UNC x 1"	46	
6	9005677	Cable Assembly 282"	4	
7	9005688	Lock Washer 3/8"	4	
8	9005696	Fender Washer 3/8"	4	
9	9008159	Locknut 3/8"-16UNC	154	
10	TA0-907131-0	Capscrew 3/8"-16UNC x 4 1/2" Full Thread Grade 5	4	
11	95585	Flange Screw 3/8"-16UNC x 3/4" Grade 5	50	
12	9010154	Locknut 5/16"-18UNC	108	
13	91256	Flange Screw 5/16"-18UNC x 3/4" Grade 5	80	
14	283431B	RH End Cap Plate =Black=	2	
15	292896B	LH Rear End Panel Cap =Black=	1	
16	902703-046	Socket Capscrew 3/8"-16UNC x 3"	14	
17	292883B	Tarp Bow Tube =Black=	7	
18	283425B	RH Tarp Bow Bracket =Black=	7	
19	9512	Self Drilling Screw 1/4"-14 x 1"	14	
20	292892B	Front End Cap - Short =Black=	1	
21	292888B	Rear End Cap - Short =Black=	1	
22	294635B	RH Doubler Plate =Black=	7	
23	294685	Bushing	7	For 1319 Only
24	296136B	Front End Cap - Long =Black=	1	Includes End Cap and Items 19 and 25
	296764B	Front End Cap - Long - Replacement Kit (Black)	-	
25	9009504	Vent Cover	2	
26	296249B	Sideboard Cover Plate =Black=	2	
27	296549B	Sideboard Cover =Black=	2	
28	296134B	Rear End Cap - Long =Black=	1	Includes End Cap and Items 19 and 25
	296763B	Rear End Cap - Long - Replacement Kit (Black)	-	
29	289986B	LH Doubler Plate =Black=	7	
30	9005727	Plug 7/16"	4	
31	283427B	LH Tarp Bow Bracket =Black=	7	
32	295259B	Tarp Spacer Plate =Black=	9	For 1519 Only
33	9007890	Deflector 11"	3	
34	9004355	Self-Tapping Screw, 1/4"-20UNC x 1"	6	
35	292897B	LH Front End Panel Cap =Black=	1	
36	97604	Flange Screw 5/16"-18UNC x 1" Grade 5	28	

Hydraulic Jack - Kit #294143B (Optional)
SN B40240100 & Higher

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



1319/1519 GRAIN CARTS — Parts

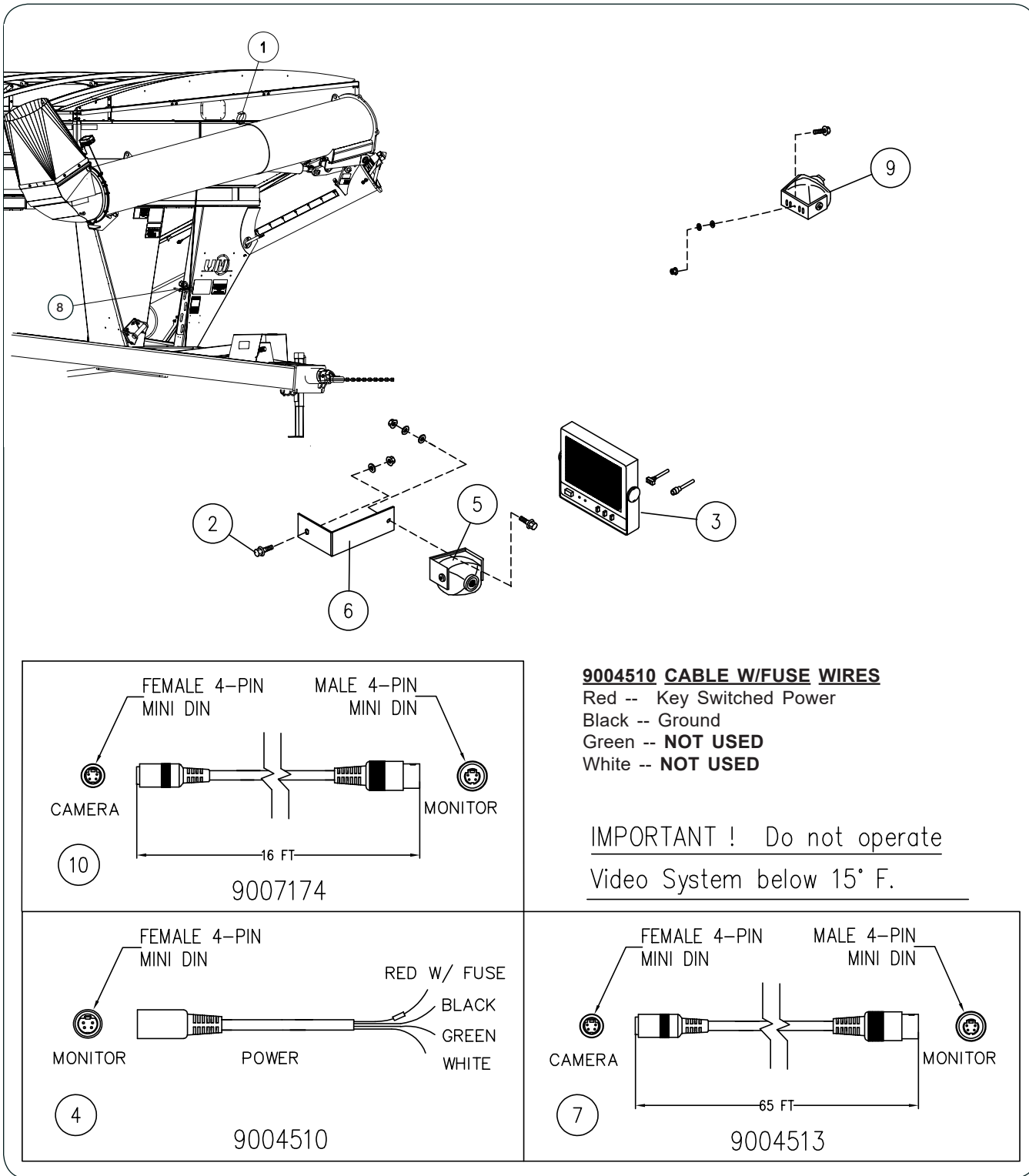
Hydraulic Jack - Kit #294143B (Optional) SN B40240100 & Higher

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

ITEM	PART NO.	DESCRIPTION	QTY	NOTES
1	271712B	Jack Weldment =Black=	1	
2	271723B	Jack Foot Weldment =Black=	1	
3	273808B	Jack Mount Weldment =Black=	1	
4	9009047	Hydraulic Cylinder 3 1/2" x 8"	1	
5	9006173	90° Elbow Fitting 9-16" FO x 3/4" O-Ring Male	2	
6	272587	Cylinder Pin 1" Dia. x 3 1/8"	1	
7	9006068	Hydraulic Hose 1/4" x 92" - 3000 PSI	2	
8	9009757	Hose Grip, Raise Jack (Black +)	1	Extend Cylinder
9	9009758	Hose Grip, Lower Jack (Black -)	1	Retract Cylinder
10	98508	Adapter 3/4"-16 Male O-Ring x 3/4"-16 Male O-Ring	3	
11	9005426	Ball Valve	1	
12	91383	Tip Coupling 3/4"-16 O-Ring Female Threads	2	
13	91192	Retaining Ring, 1"	2	
14	9390-197	Capscrew 1"-8UNC x 7" Grade 5	3	
15	9390-165	Capscrew 7/8"-9UNC x 2 1/4" Grade 5	2	
16	9404-037	Lock Washer 7/8"	2	
17	92199	Lock Nut 1"-8UNC	3	

Video System (Optional)

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



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	



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