

Grain Handling

CORNER AUGER GRAIN CART MODEL 760/860

Serial Number D64610100 & Higher

Part No. 2006241

Foreword

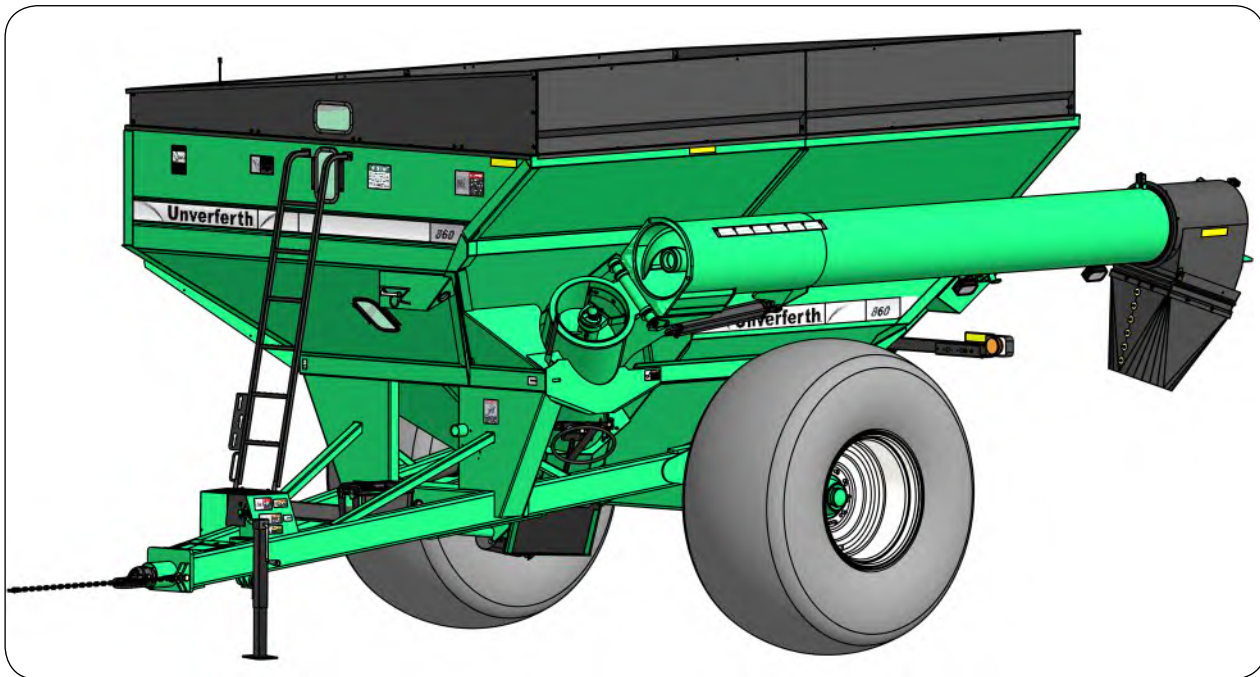


This symbol identifies important safety messages. When you see it, read the message that follows and be alert to the possibility of personal injury.

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

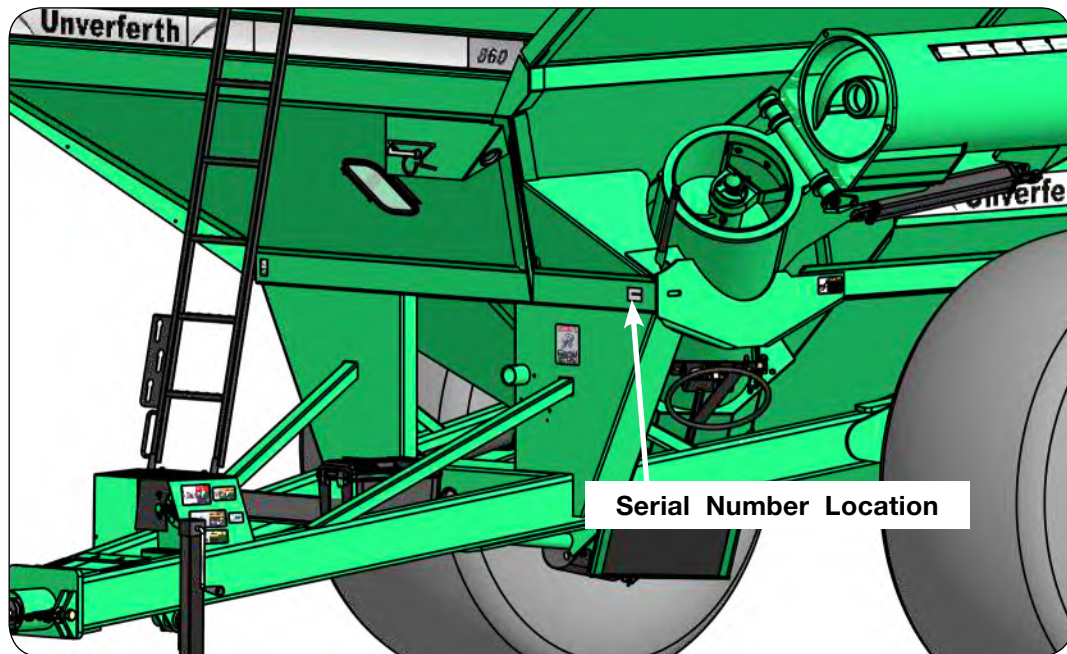
All products manufactured by Unverferth Mfg. Co., Inc. are warranted to be free from material and workmanship defects for one full year from time of consumer delivery. Your local dealer will gladly assist you with any warranty questions.

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 Number _____ 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 TARP INFORMATION, PLEASE REFER TO YOUR TARP 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

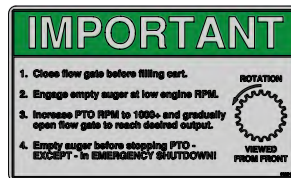
- REPLACE LOST, DAMAGED, PAINTED, OR UNREADABLE DECALS IMMEDIATELY. IF PARTS THAT HAVE DECALS ARE REPLACED, ALSO MAKE SURE TO INSTALL NEW DECALS. THESE DECALS INFORM AND REMIND THE OPERATOR WITH OPERATIONAL INFORMATION AND SAFETY MESSAGES.



PART NO. 9003475



PART NO. 9003476



PART NO. 9003477



PART NO. 9003474



PART NO. 95008



PART NO. 9008151



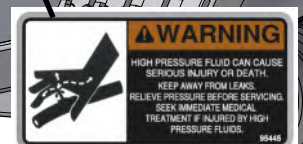
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PART NO. 95046



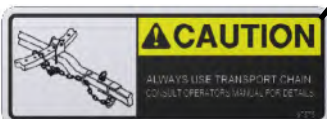
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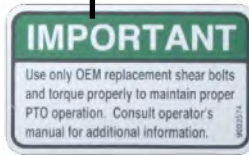
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PART NO. 94094



PART NO. 97575



PART NO. 9003574



PART NO. 9003478

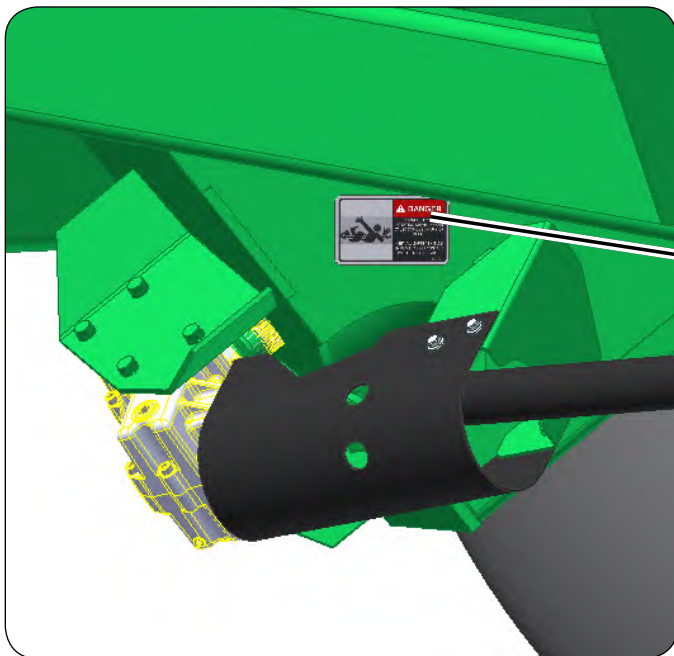
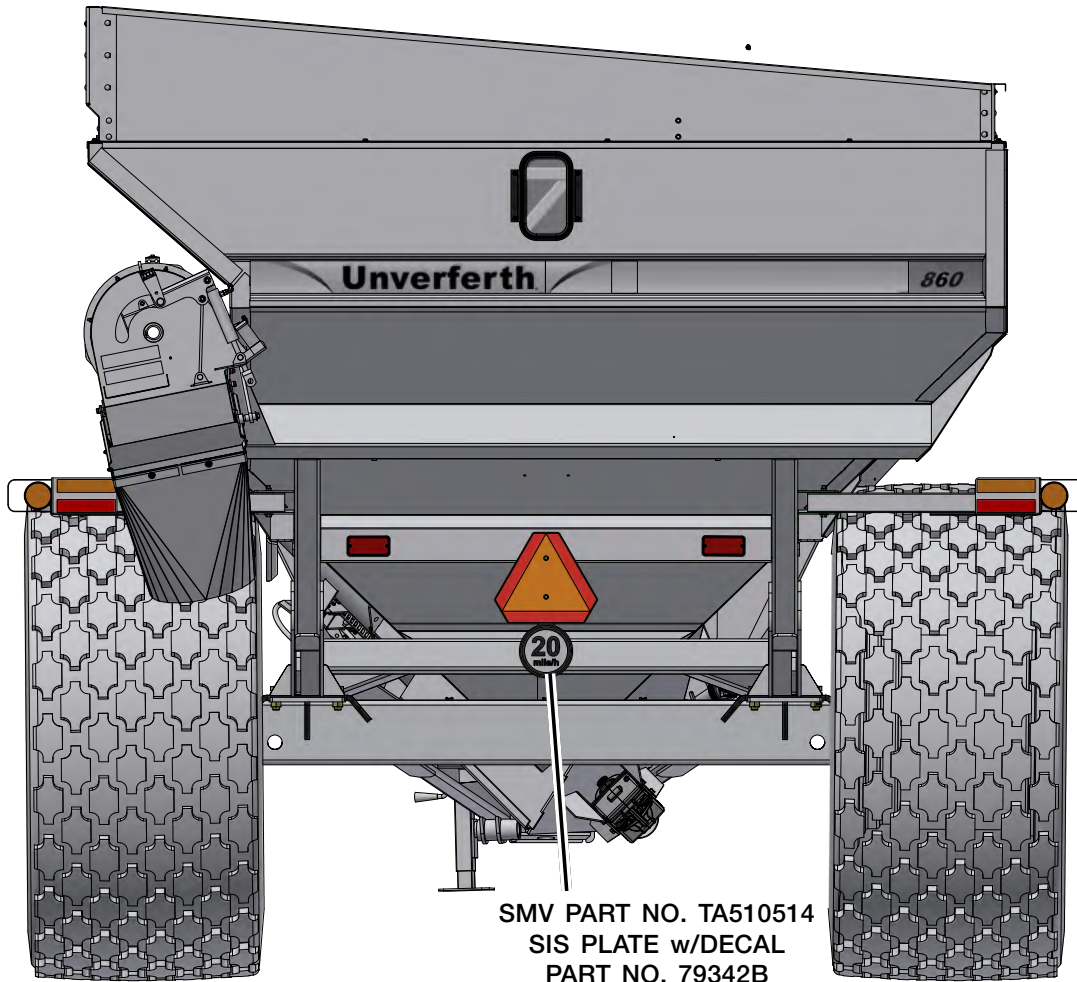


PART NO. 9008715



PART NO. 9003475

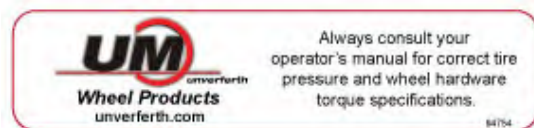
Safety Decals (continued)



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



PART NO. 95046



PART NO. 94754

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.
- When working around the implement, be careful not to be cut by sharp edges.
- To prevent personal injury or death, always ensure that there are people who remain outside the cart to assist the person working inside, and that all safe workplace practices are followed. There is 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.
- 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. 

During Operation

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


Before Transporting

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

During Transport


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

Driveline Safety

- Do not allow children near equipment that is running or engaged.

- Do not exceed 1000 rpm 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 recommended in tractor SET UP section.
- Use caution when turning to avoid contact between tractor tires and driveline.
- Check the length of the telescoping members to insure the driveline will not bottom out or separate when turning and/or going over rough terrain.
- Proper extended and collapsed lengths of the telescoping PTO shaft must be verified before first operation with each and every tractor. If the extended length of the PTO shaft is insufficient, it may become uncoupled or bottom out when turning and/or going over rough terrain which will 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/cut or wire reinforcing exposed.
 - Outer covering ballooning locally.
 - Evidence of kinking or crushing of the flexible part of a hose.

Preparing for Emergencies

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



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



Wearing Protective Equipment

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



- Wear steel-toed shoes when operating.



- Wear hearing protection when exposed to loud noises.



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



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Adjustable Axle (Optional)	2-12

FOR TARP INFORMATION, PLEASE REFER TO YOUR TARP MANUAL.
FOR SCALE INFORMATION, PLEASE REFER TO YOUR SCALE 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.

- Adjust axle from shipping position to desired operating position. (If applicable) Refer to “Adjustable Axle (Optional)”.
- Torque wheel nuts as specified in MAINTENANCE section.
- Inflate tires to specified air pressure. (if applicable)
- Wash the unit and remove road salt tag from ladder. (if applicable)
- Complete sideboard and tarp set up. Remove tarp/sideboard shipping brackets.
- Set or Calibrate tractor PTO control engagement to MINIMUM setting. Refer to tractor operator’s manual for setting information.
- Remove upper auger rest retainer.
- 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, refer to “Adjusting Cleanout Door” in the MAINTENANCE section.
- Verify all safety decals are correctly located and legible. Replace if damaged.
- Verify all reflective decals are correctly located.
- Check SMV decal and SIS decals are in place, clean and visible.
- Verify transport lights are working properly.
- 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.
- Paint all parts scratched in shipment.
- Test run the augers. See “Auger Operation” in OPERATION section.
- Check hydraulics for leaks and check hose routing.

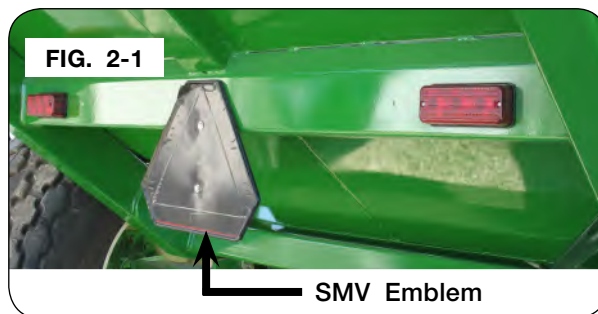
Basic Set Up

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. (FIG. 2-1)

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)



Auger Rest Retainer Removal

IMPORTANT

- Upper auger restainer must be removed before operating upper auger tube. Failure to remove restainer will result in damage to the upper auger tube.

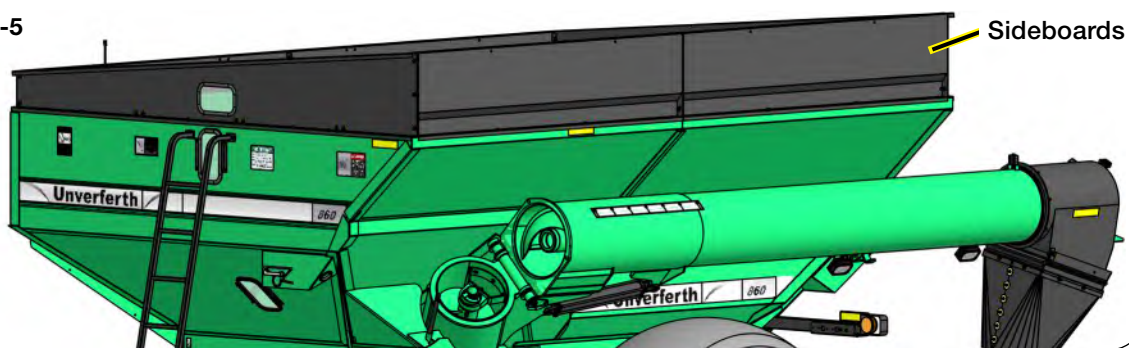
1. Close the cleanout door.
2. Hitch cart to tractor. Refer to “Hitching to Tractor” in the OPERATION section.
3. Park the empty cart on a firm, level surface. Block tractor and cart to prevent movement. Set the tractor’s parking brake and remove the key from the ignition.
4. Remove the retainer located on the upper auger rest at the back of the cart, before raising the upper auger tube. (FIG. 2-3 & 2-4)
5. Use tractor SCV to raise the upper auger.
6. Cycle auger fold all the way up and down to ensure movement is free.
7. 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.



Basic Set Up (continued)

Sideboards

Fig. 2-5



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.

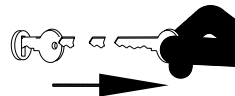
WARNING

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

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

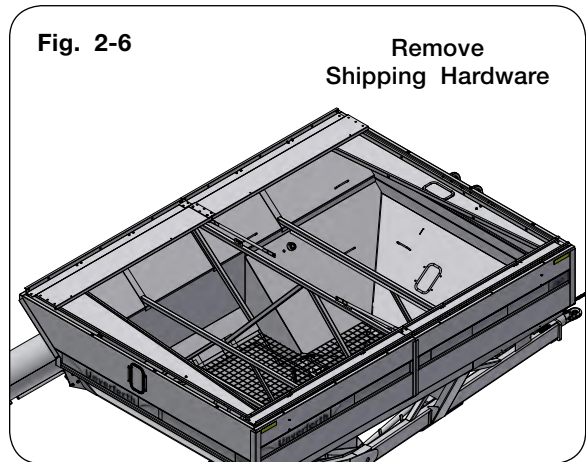
- KEEP HANDS CLEAR OF PINCH POINT AREAS.

1. Park the empty grain cart on a firm, 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.



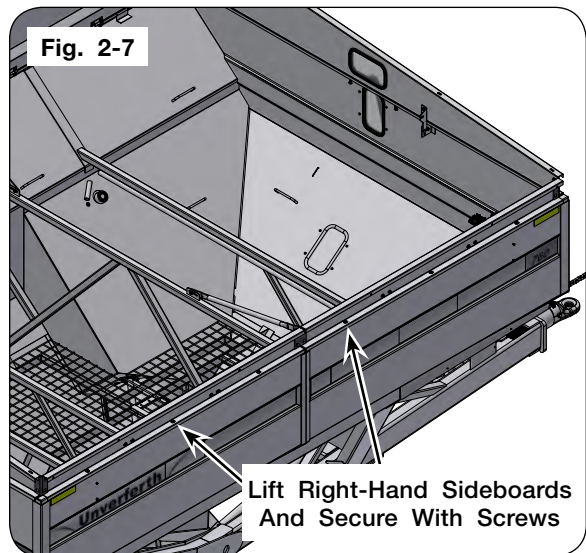
Basic Set Up (continued)

2. Remove and discard shipping hardware for right-hand sideboards. (Fig. 2-6)

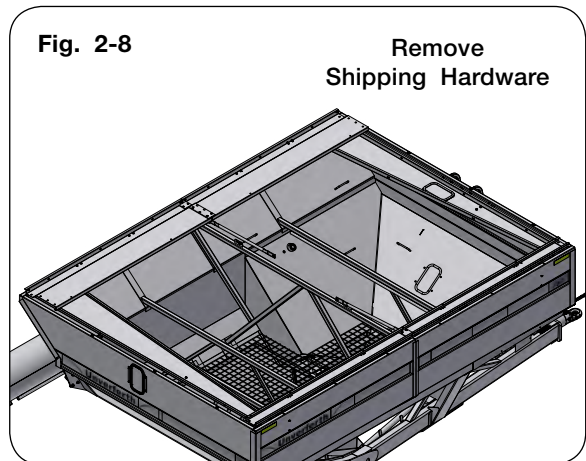


3. Lift the right-hand sideboards into position and loosely secure sideboard into place using 3/8"-16UNC flange screws and 3/8"-16UNC flange nuts along sideboard bottom edge. (Fig. 2-7)

NOTE: When moving sideboards into position, hinge brackets **WILL** support the sideboard. (Fig. 2-7)



4. Remove and discard shipping bracket for left-hand sideboard. (Fig. 2-8)

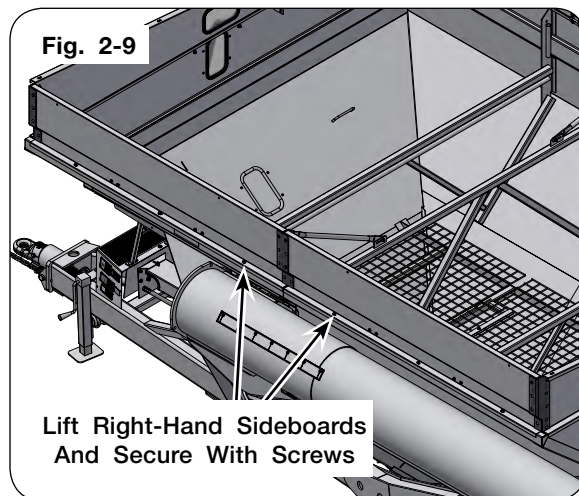


Basic Set Up (continued)

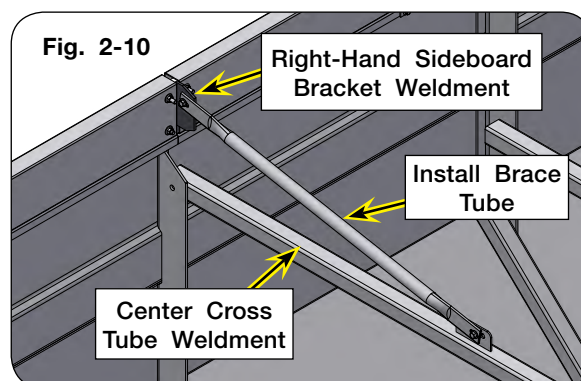
5. Lift the left-hand sideboards into position. (Fig. 2-9)

NOTE: When moving sideboards into position, hinge brackets **WILL** support the sideboard and tarp. (Fig. 2-9)

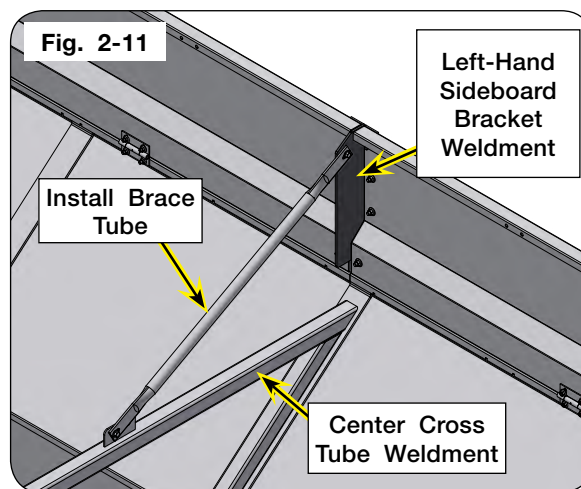
6. Loosely secure left-hand sideboard with 3/8" flange screws and flange nuts along the bottom. (Fig. 2-9)



7. **SIDEBOARD BRACE TUBES:** Loosely install sideboard brace tubes (220032B) to the center cross tube weldment with 3/8"-16UNC x 1" flange screws (91262) and 3/8"-16UNC flange nuts (91263). Repeat for opposite side. (Fig. 2-10)

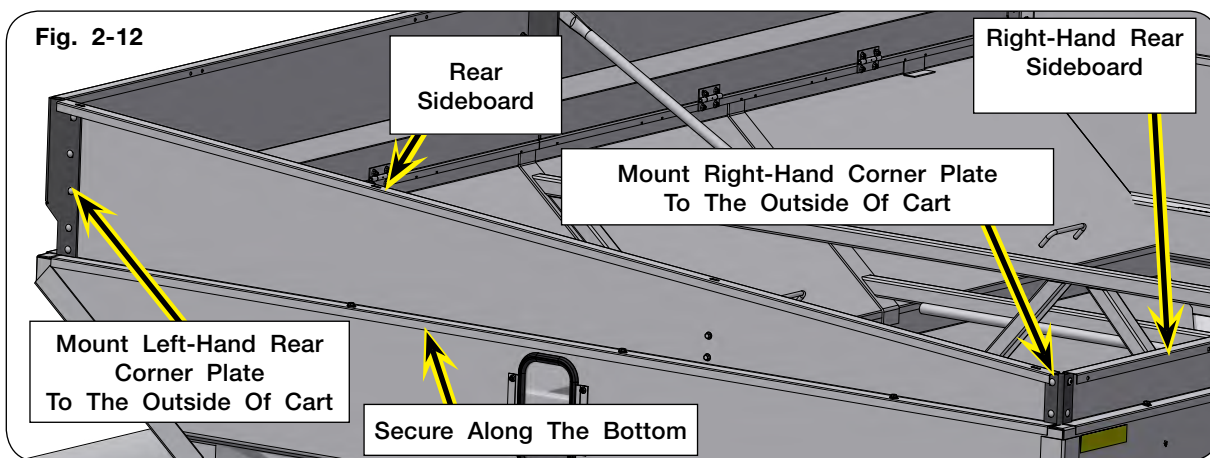


8. Straighten sideboards to vertical and lock the position. Torque hardware according to "Torque Chart" in MAINTENANCE section. (Fig. 2-11)

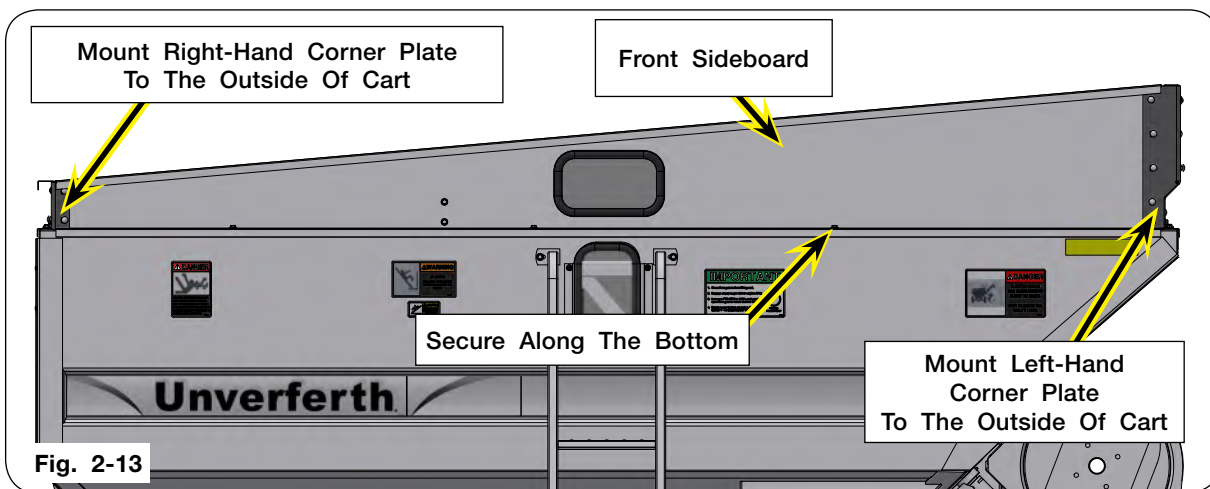


Basic Set Up (continued)

9. Lift the rear sideboard into position and loosely secure with 3/8"-16UNC x 3/4" capscrews/large flange (95585) and 3/8"-16UNC nuts/large flange (91263) along the bottom. (Fig. 2-12)
10. Connect rear sideboard to the right-hand rear sideboard and left-hand rear sideboard using the right-hand corner sideboard plate and left-hand rear corner sideboard plate. Loosely secure using 3/8"-16UNC x 1" carriage bolts (9388-051) and 3/8"-16UNC nuts/large flange (91263). (Fig. 2-12)



11. Lift front sideboard into position and loosely secure with 3/8"-16UNC x 3/4" capscrews/large flange (95585) and 3/8"-16UNC nuts/large flange (91263) along the bottom. (Fig. 2-13)



12. Connect front sideboard to the right-hand front sideboard and left-hand front sideboard using the right-hand corner sideboard plate and left-hand rear corner sideboard plate. Loosely secure using 3/8"-16UNC x 1" carriage bolts (9388-051) and 3/8"-16UNC nuts/large flange (91263). (Fig. 2-13)

NOTE: Torque all hardware according to specification in MAINTENANCE section.

NOTE: If installing a weather guard tarp, refer to separate weatherguard tarp manual for set up instructions.

Basic Set Up (continued)

Warning Lamp Set Up

1. Pivot warning lamp to widest setting.
2. Adjust warning lamp brackets so that the REFLECTORS are not more than 16" from the outer edge of the tire.

NOTE: The edge of the reflector (not lamp) must be within 16" of the outer edge of the tire. (FIG. 2-14)

3. Verify amber reflector is facing forwards. (FIG. 2-14 and 2-15)

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

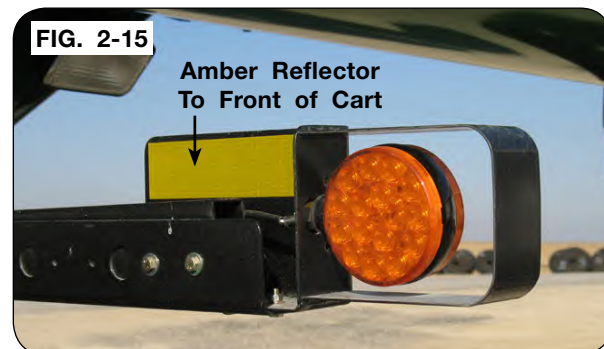
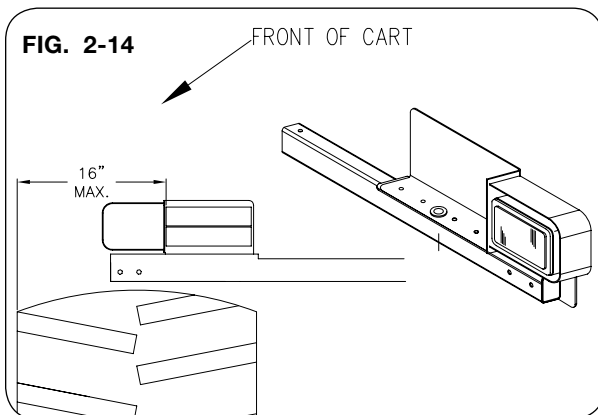
If the tractor field lights switch is on; the Side Marker lights and the amber turn signal lights are on solid and will not flash. Refer to tractor operator manual for details.

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



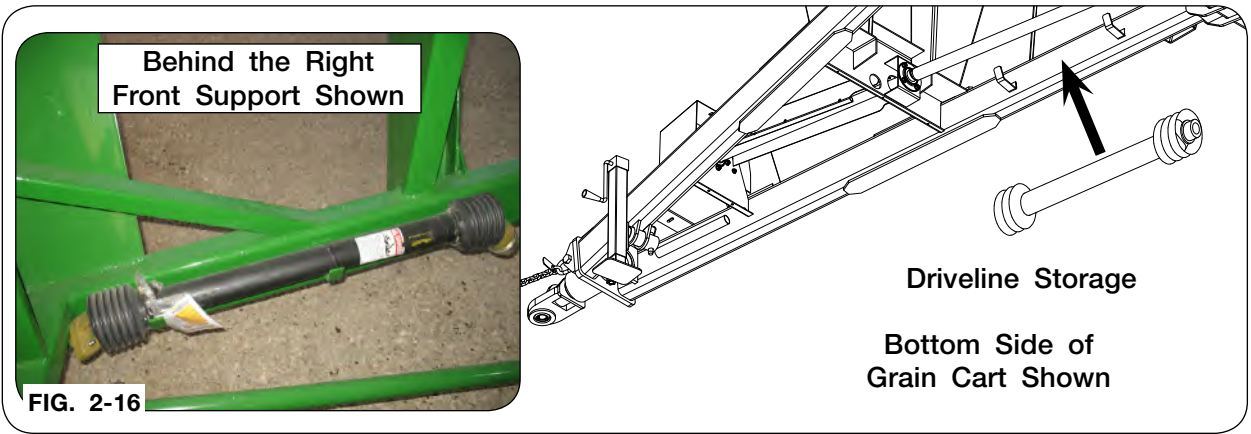
Basic Set Up (continued)

Driveline Storage

Storage brackets are located on the inside right frame rail. Secure the PTO shaft to these brackets for extended transporting or seasonal storage.

IMPORTANT

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



Basic Set Up (continued)

Wheel/Tire Set Up

Tire Pressure

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

Wheel Nuts

WARNING

- **FALLING OBJECTS CAN CAUSE SERIOUS INJURY OR DEATH. DO NOT WORK UNDER THE MACHINE AT ANY TIME WHILE BEING HOISTED. BE SURE ALL LIFTING DEVICES AND SUPPORTS ARE RATED FOR THE LOADS BEING HOISTED. THESE ASSEMBLY INSTRUCTIONS WILL REQUIRE SAFE LIFTING DEVICES UP TO 16,000 LBS. SPECIFIC LOAD RATINGS FOR INDIVIDUAL LOADS WILL BE GIVEN AT THE APPROPRIATE TIME IN THE INSTRUCTIONS.**

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

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

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

CAUTION

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

IMPORTANT

- *Installing wheels without the proper inset/offset could result in hub or spindle failure. This will cause substantial damage to cart and is not covered by warranty. Inset/offset will vary depending on tire size. Consult dealer for proper inset/offset.*

Basic Set Up (continued)

Dual Wheel Installation

1. Use a safe lifting device rated at a minimum of 16,000 lbs. and supports rated at 16,000 lbs. minimum during the wheel and tire attachment. Place supports under the axle near the axle clamps.
2. Insert the guide pins into the bolt holes on the hub. (FIG. 2-1).
3. Align and install the dual wheels and reinforcing ring over the guide pins (FIG. 2-2).
4. Secure the wheel and reinforcing ring with 8 flat washers and 8 bolts provided. (FIG. 2-3)
5. Remove the guide pins and install the 2 remaining flat washers and bolts. (FIG. 2-4).
6. Torque 7/8" wheel hardware to 440 ft.-lbs.

NOTE: Refer to "Wheels and Tires" in MAINTENANCE section for more details.

FIG. 2-1

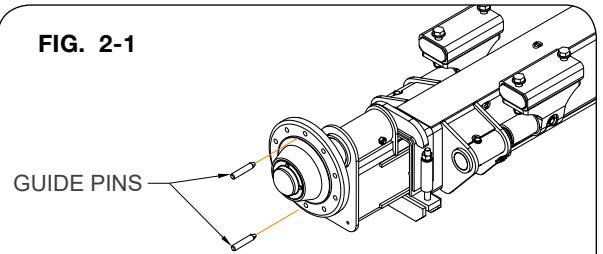


FIG. 2-2

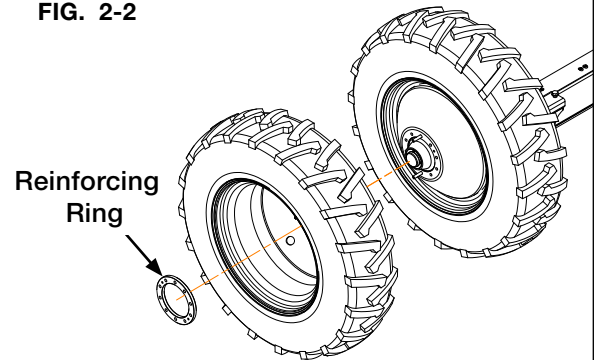


FIG. 2-3

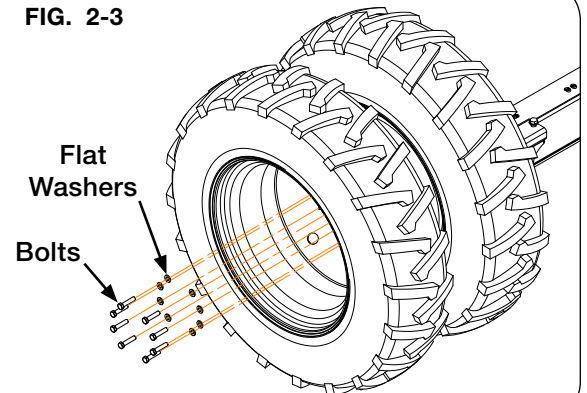
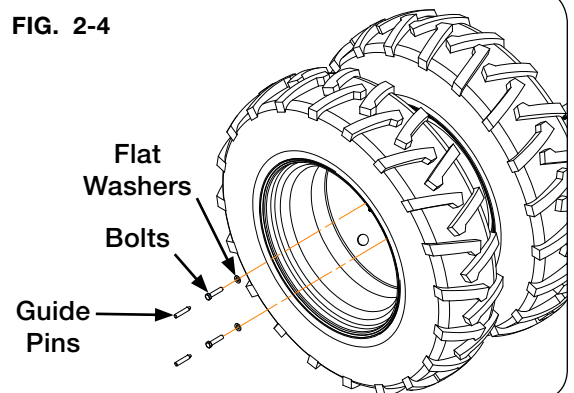


FIG. 2-4



Basic Set Up (continued)

Adjustable Axle (Optional)

1. Hitch cart to tractor. Park the empty unit on a firm, level surface. Set the tractor's parking brake, shut-off engine and remove the ignition key.
2. Using a safe lifting device and supports rated for a minimum 8 tons, raise cart and support under axle near axle clamps.
3. Loosen axle extension clamp and axle gauge bolts. Do not remove.
4. Slide extensions to desired tire gauge spacing. Axle extensions should be extended equally.
5. Tighten axle gauge bolts followed by axle clamp bolts, refer to MAINTENANCE section for proper torque specifications.
6. Remove supports and lower cart to ground.
7. Ensure warning lamp extensions are positioned so reflectors are within 16" of the outside of tires. Refer to "Warning Lamp Set Up" in this section for details.

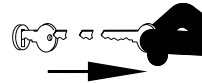
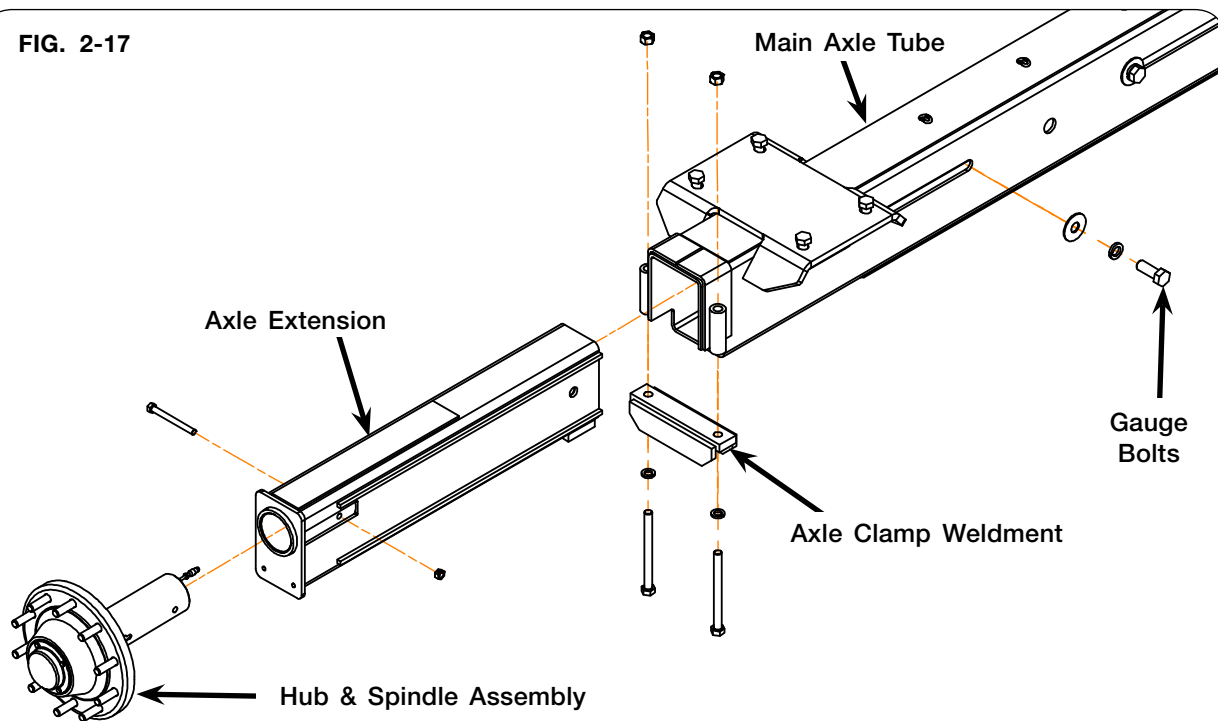


FIG. 2-17



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FOR TARP INFORMATION, PLEASE REFER TO YOUR TARP MANUAL.
FOR SCALE INFORMATION, PLEASE REFER TO YOUR SCALE MANUAL.

Operating Checklist

- Read and understand all safety precautions before operating cart.
- Check axle spacing to be sure axle is adjusted from shipping position to desired operating width. (If applicable)
- Set or Calibrate tractor PTO control engagement to MINIMUM setting. Refer to tractor operator's manual for setting information.
- Torque wheel nuts and check tire pressure as specified in MAINTENANCE section.
- Verify track has been aligned and is properly conditioned. (If applicable)
- Verify track grease pump reservoir is full. Refer to track auto grease pump instruction sheet (282986) for setting information. (If applicable)
- Inflate tires to specified air pressure. (if applicable)
- Lubricate all grease fittings and check gearbox oil level.
- Inspect cleanout door assembly for play or movement, refer to "Adjusting Cleanout Door" in the MAINTENANCE section.
- Test operation and functionality of work lights, flow door, flow door indicator, auger fold, spout rotate, spout tilt, tarp & if equipped, scale, hydraulic drive, electric tarp & video system.
- Verify all reflective decals are correctly located.
- Check SMV sign and SIS decals are clearly visible with the cart attached to the tractor.
- Verify transport lights are working properly. Check and follow all regulations before towing on a road or highway.
- Verify tractor drawbar height and length. See "Preparing Tractor" in this section.
- Verify PTO length, see "Verify Telescoping PTO Shaft Length" in MAINTENANCE section.
- Ensure transport chains are installed and properly secured. See "Transport Chain Connection" in OPERATION section.
- Ensure screens over the lower auger are in place and properly secured.
- 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.

Set tractor PTO modulation to **MINIMUM**. Check that your tractor has the latest PTO engagement software from the OEM. If unsure, contact your local dealer for tractor capabilities and recommended setting for grain cart operation.

Set tractor drawbar according to the tractor Operator's Manual.

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

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

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

NOTE: The grain cart comes with a CAT 4 hitch utilizing a 2" pin. Bushings are provided for other pin sizes. An optional clevis hitch is available if your tractor has a single-tang drawbar.

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.**

On tractors equipped with a 3-point hitch, raise and secure the linkage to prevent interference with the cart tongue, hydraulic hoses and the hydraulic drive option during turning. It may be necessary to remove 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/draw bar you are using.

Auger

Inspect auger for damage and wear.

IMPORTANT

- *Remove transport retainer located on auger rest, before folding out upper auger.*



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.

Preparing Cart (continued)

Soft Start System

Check the missile shaft wear. Make sure there is grease on the missile cone to prevent binding during the fold and unfold sequence. Inspect the split bushing in the soft start receiver for uneven wear.

Hydraulic System

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

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 is equipped standard with a single tang hitch. A hitch pin between 1 1/2" or 2" diameter must only be used with a hammer strap bolted to the tractor drawbar.

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 right-hand side of the cart.

Lock tractor drawbar in center position.

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

NOTE: A clevis drawbar is available from your dealer if you have a tang tractor drawbar.

WARNING

- **CRUSHING CAN CAUSE SERIOUS INJURY OR DEATH. DO NOT STAND BETWEEN THE MACHINE AND TRACTOR WHEN HITCHING. ALWAYS ENGAGE PARKING BRAKE AND STOP ENGINE BEFORE INSERTING HITCH PIN.**

Place wear shoe (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 cast hitch 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 cast hitch is flipped, the driveline clearances needs to be reviewed.

FIG. 3-1

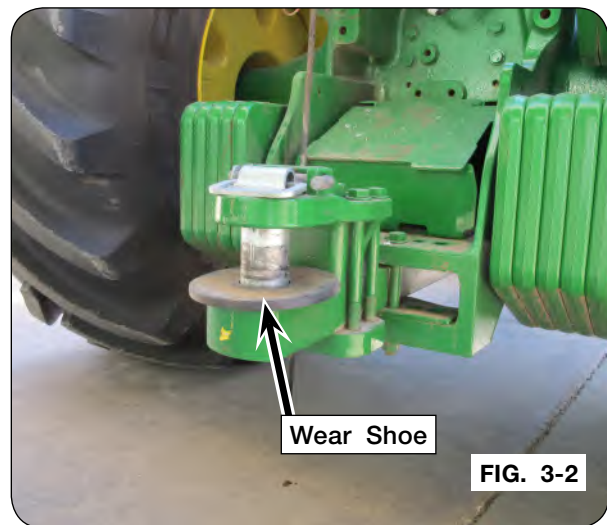
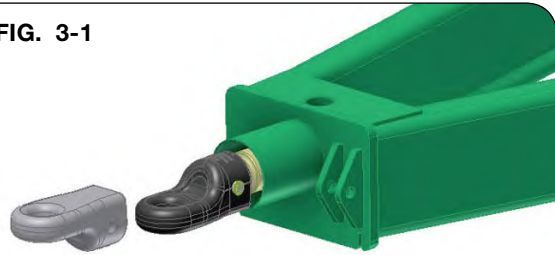


FIG. 3-2

2 7/8" Higher Than
The Standard Position

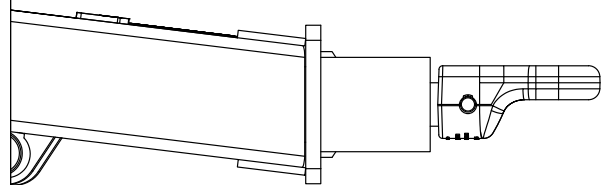


FIG. 3-3

Hitching to Tractor

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.**

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)

IMPORTANT

- *Failure to store the jack in storage position could result in damage to the jack, cart, or tractor tire. (FIG. 3-4)*



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. DO NOT WELD TRANSPORT CHAIN.

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. FIG. 3-6 shows how the transport chain must be installed between the tractor and grain cart.

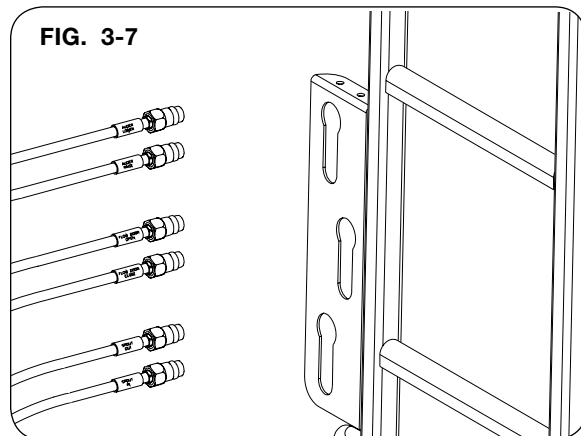
The transport chain is rated for towing the grain cart empty on public roads. Never tow a loaded grain cart on public roads.



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.



Hitching to Tractor (continued)

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

This unit is equipped with color bands attached to 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 Out and In
Green	Raise and Lower Auger

After initial set-up or replacement of any hydraulic component on the cart, air must be removed from the cart's hydraulic system. Reference "Hydraulic System - Purge Hydraulic System" section 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 to the lowest positions. Where possible, remove hydraulic pressure 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. (FIG. 3-7)

Hydraulic Connections for Hydraulic Drive

Refer to grain cart's Hydraulic Drive Manual for installation, operation and parts of the Hydraulic Drive.

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

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

IMPORTANT

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

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

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 newer tractors. If your tractor does not have this type of receptacle, an SAE J-560 seven-point socket can be purchased from your Unverferth dealer (Part number 92824). (FIG. 3-8)

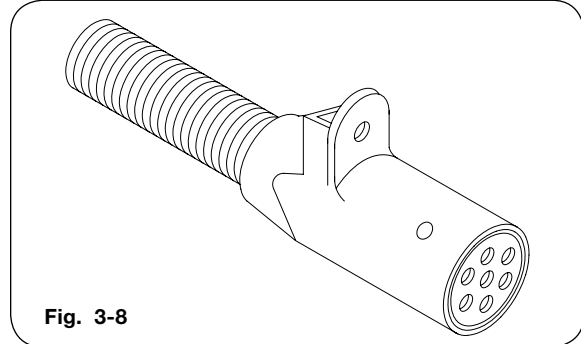
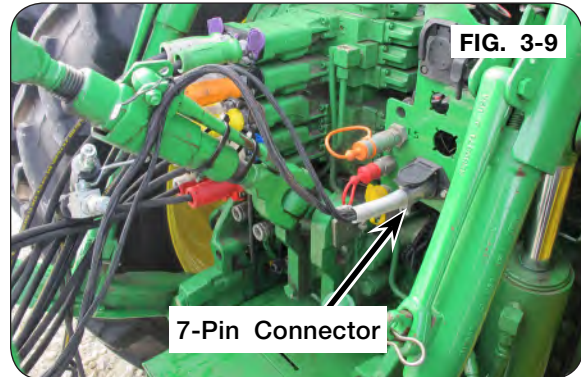


Fig. 3-8

Attach the 7-pin connector to tractor as shown in FIG. 3-9.

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

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



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

If the flashers and/or turn signal is on; the Side Marker lights flash in unison with their 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.

Hitching to Tractor (continued)

Towing

Ensure that the towing vehicle has adequate weight and braking capacity to tow this implement and all attachments. See your Unverferth dealer for more information. See towing vehicle's operators manual for towing capacity. 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 "PTO Shaft and Clutch" in MAINTENANCE section before connecting the PTO driveshaft to the tractor.

Secure transport chain to tractor chain support before towing.

CAUTION

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

Regulate speed to road conditions and maintain complete control.

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

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

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.*

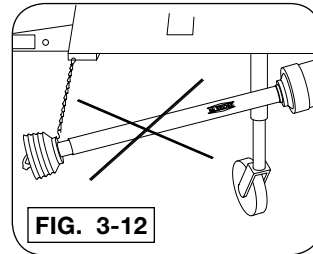
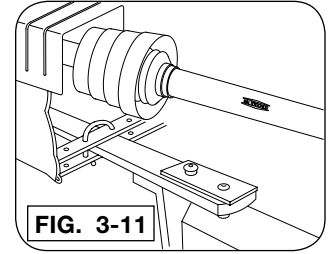
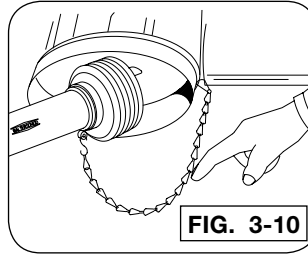
During transport, if the PTO shaft cannot be connected to the tractor, the PTO telescoping shaft must be removed and placed in the storage position. Damage to frame and driveline may result if PTO is not placed on storage brackets. To prevent damage during turning when using non-PTO equipped towing vehicles, store the PTO driveshaft in the brackets provided on the rear of the frame rail.

Hitching to Tractor (continued)

PTO Chain

NOTE: PTO 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. (FIG. 3-10) 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. (FIG. 3-11)
2. The PTO driveshaft must not be suspended from the chain. (FIG. 3-12)



Auger Operation

PTO Driven Auger

DANGER

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



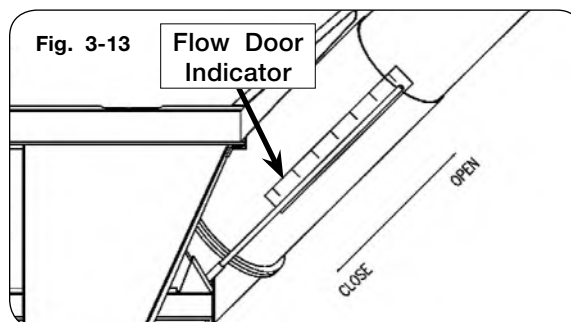
- ENTANGLEMENT WITH THE DRIVELINE WILL CAUSE SERIOUS INJURY OR DEATH. KEEP ALL GUARDS AND SHIELDS IN GOOD CONDITION AND PROPERLY INSTALLED AT ALL TIMES. AVOID PERSONAL ATTIRE SUCH AS LOOSE FITTING CLOTHING, SHOE STRINGS, DRAWSTRINGS, PANTS CUFFS, LONG HAIR, ETC. THAT CAN BECOME EN-TANGLED IN A ROTATING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

WARNING

- 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.
- 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.

NOTE: Set PTO engagement modulation to minimum. See tractor operator manual for procedure.

1. Before loading cart or operating auger, verify that the flow control door is closed.
2. Choose an area free from obstructions and unfold auger into unloading position. Allow sufficient time for the cylinder to fully engage the two augers.
3. Engage tractor PTO at low engine RPM, then increase engine RPM until 1,000 PTO RPM is reached.
4. Open flow control door to desired unloading rate. Numbers on the auger tube provide a point of reference for operator convenience. (FIG. 3-13)



IMPORTANT

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

NOTE: If an overload occurs, (Shearbolt failure or excessive heat/smoke from friction 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.

Auger Operation (continued)

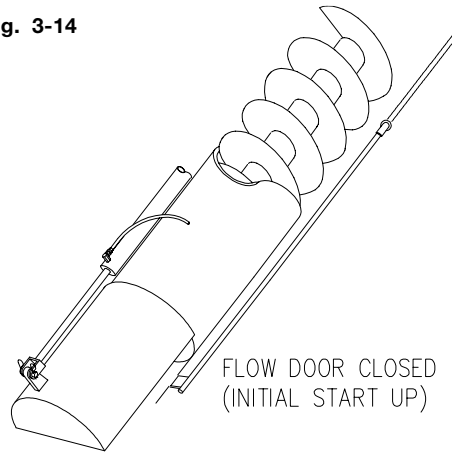
PTO Driven Auger (continued)

5. To slow or stop grain flow, close flow door, DO NOT reduce tractor/PTO RPM as a means to control grain flow. Close flow door fully when unloading is complete. (FIG. 3-14)

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.

6. When auger is empty, reduce tractor RPM to idle, then stop PTO.
7. After the PTO has come to a complete stop, fold auger to the transport position.

Fig. 3-14



Auger Operation (continued)

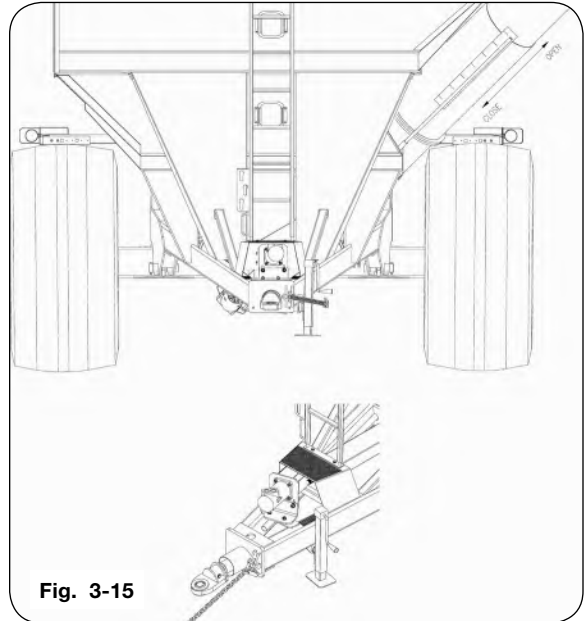
Hydraulic Driven Auger Option

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

IMPORTANT

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

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



Auger Operation (continued)

Hydraulic Driven Auger Option (continued)

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

1. Before loading cart or operating auger, verify that the flow control door is closed.
2. Choose an area free from obstructions and fully unfold auger to the unloading position.
3. Connect hydraulic hoses to tractor hydraulic circuits. Attach pump pressure hoses to RETRACT ports on tractor.

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

NOTE: The dual or triple connections help utilize full tractor hydraulic power at the cart hydraulic motor. For tractors that have more than 55 GPM or 100 GPM available pump output, use tractor flow controls to regulate total output to a maximum of 55 GPM or 100 GPM.

4. Engage hydraulic drive circuits at low engine RPM one at a time, then increase engine to full throttle. See hydraulic connections for hydraulic drive in previous "OPERATIONS" sections for cold starts.
5. While watching hydraulic pressure gauge, begin slowly opening flow control door. Stop opening flow control door when pressure (on hydraulic gauge by pump) climbs to within 200 psi less than maximum tractor hydraulic pressure. Ideally, maintaining maximum PTO RPM will optimize unloading performance.

IMPORTANT

- *If auger stalls during unloading, **immediately** place tractor hydraulic controls for motor functions in **FLOAT** to stop auger. Close flow control door, then move all hydraulic controls to **HOLD**. Relieve auger grain pressure by opening auger cleanout door to remove some grain before attempting to restart auger.*
6. To slow or stop grain flow, close flow door rather than reducing tractor RPM. Close flow door fully when unloading is complete.
 7. Stop auger by placing both auger hydraulic circuits in FLOAT. This reduces strain on driveline components and prolongs hydraulic motor life. Move controls to HOLD after auger has come to a complete stop.
 8. Choose an area free from obstructions and fully fold auger to the transport position.

Weather Guard Tarp

WARNING

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

IMPORTANT

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

Always use adequate caution when operating tarp.

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.

If tarp is covered with snow, remove snow before operating.

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

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

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

Weather Guard Tarp (continued)

Procedure

1. Using both hands, carefully remove tarp handle from the tube holder.
2. Roll tarp to the desired location, choosing either a fully open or fully closed position.
3. To close the tarp, rotate the roll tube clockwise up under the latch plate.
4. Make sure tarp is positioned evenly over latch plate length.

NOTE: Do not tighten if tarp overlaps end of the latch plate. Tearing of the tarp may occur. Reposition tarp, as necessary.

5. Bring the tarp handle down perpendicular to the ground. Continue by lifting it up into the tube holder.

NOTE: Tarp handle U-joint may need to be re-indexed on roll tube to achieve correct tension.

6. To open tarp, turn the roll tube counter clockwise until the tarp is fully open. Place tarp handle in tube holder.

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FOR TARP INFORMATION, PLEASE REFER TO YOUR TARP MANUAL.
FOR SCALE INFORMATION, PLEASE REFER TO YOUR SCALE MANUAL.

Lubrication

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

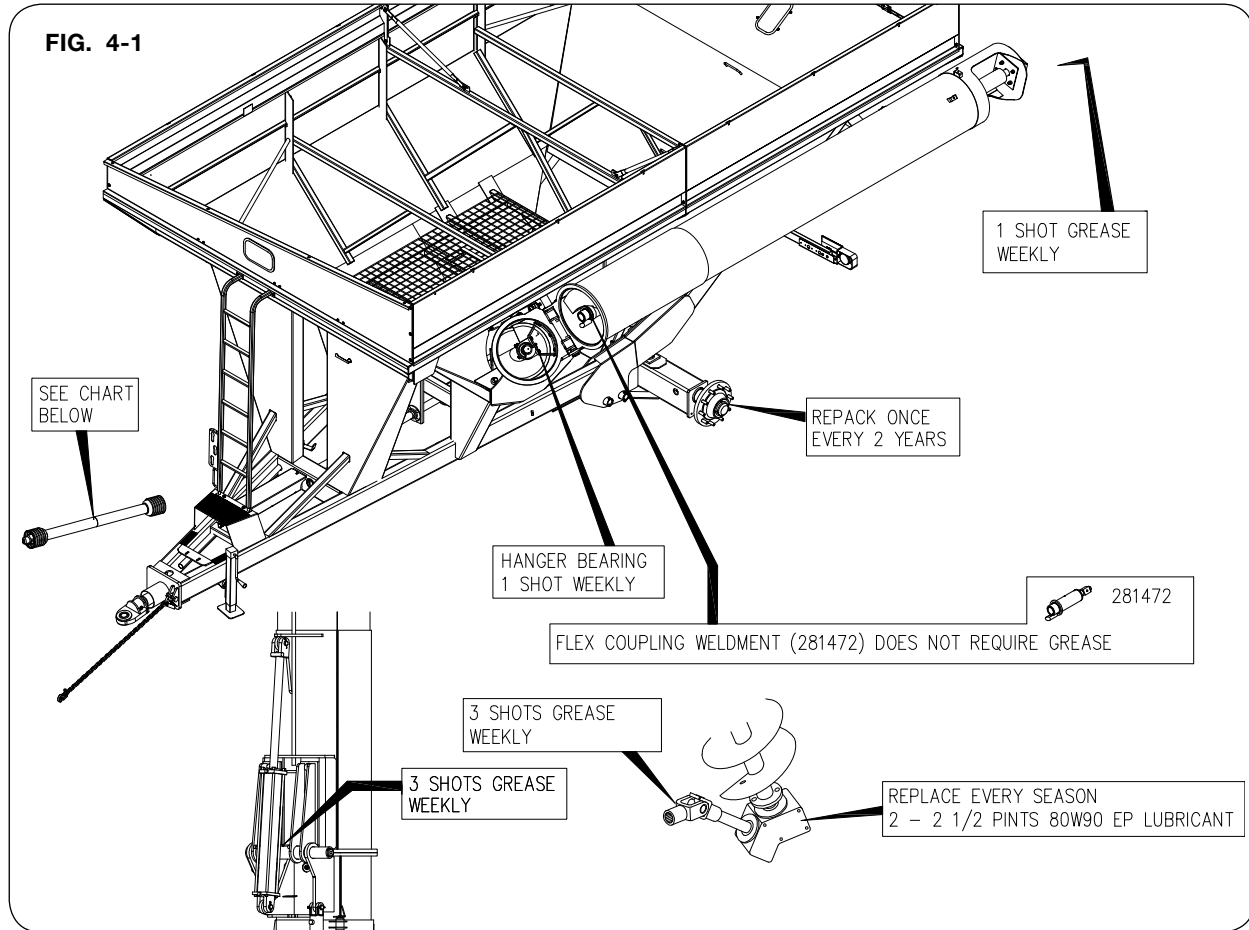
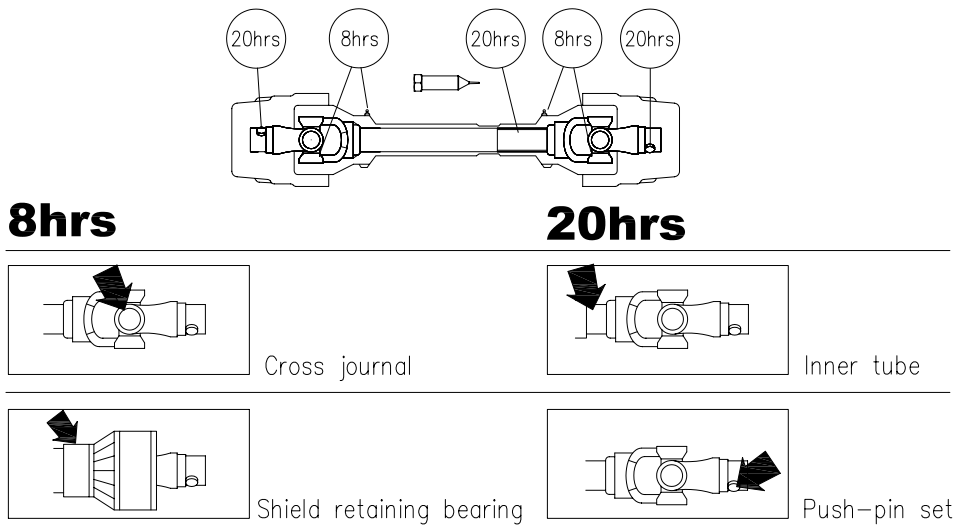


FIG. 4-2

LUBRICATION INSTRUCTIONS FOR DRIVE LINE



COAT INNER AND OUTER PROFILES AT BEGINNING AND END OF EACH SEASON

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 - Benzi	-	EP-2	1 Shot	See Next Pages
Gearbox -- Remove Cover - Check oil level every 2 weeks. Replace oil every season. Refer to Gearbox in MAINTENANCE section for instructions.	1	EP80W90	Approx 32-40 oz	Once Every Season
U-Joint Cross Bearing - Driveline	2	EP-2	1 Shot	8 Hours
Splined Yoke - Driveline U-Joint	1	EP-2	3 Shots	Weekly
Hanger Bearing - Lower Auger *See note below.	1	EP-2	3 Shots*	Daily
Upper Auger Top Bearing	1	EP-2	1 Shot	Each Season
Upper Auger Pivot Rings	4	EP-2	2 Shots	Weekly
Lower Auger Pivot Pins	1	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.

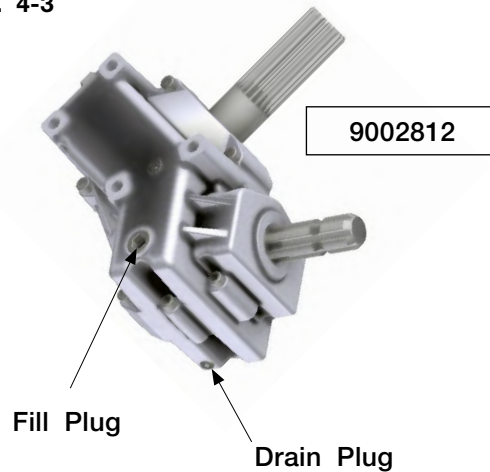
Gearbox Lubrication

The 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.

For Maximum gearbox life:
Check oil level every 2 weeks.
Replace oil every season with approx.
32 fl. oz. of 80W90 EP gear lubricant.

Fig. 4-3



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.


Hydraulic System (continued)


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.** 

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

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.
- B. Pressurize the system and maintain system at full pressure for at least 5 seconds after cylinder rods stop moving. Check that all cylinders have fully extended or retracted.
- C. Check oil reservoir in hydraulic power source and refill as needed.
- D. Pressurize system again to reverse the motion of step B. Maintain pressure on system for at least 5 seconds after cylinder rods stop moving. Check that all cylinders have fully extended or retracted.
- E. Check for hydraulic leaks using cardboard or wood. Tighten connections according to directions in "Torque Specifications" in the MAINTENANCE section.
- F. Repeat steps 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.

Hydraulic System (continued)

Relieving Hydraulic Pressure

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

Wheel, Hub and Spindle Disassembly and Assembly

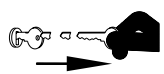
WARNING

- **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 16,000 LBS. SPECIFIC LOAD RATINGS FOR INDIVIDUAL LOADS WILL BE GIVEN AT THE APPROPRIATE TIME IN THE INSTRUCTIONS.**

CAUTION

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

IMPORTANT

- *Remove only one wheel and tire from a side at any given time in the following procedure.*
1. Hitch cart to tractor. Park the empty cart on a firm, level surface. Set the tractor's parking brake, shut off engine and remove key. 
 2. With cart empty, support the weight of your grain cart using a safe lifting and load holding devices rated at 16,000 lbs. Place the safe lifting device under the axle closest to the tire.
 3. Use a 3,000 lbs. safe lifting device to support the wheel and tire during removal.

NOTE: For straddle duals, first remove the outer wheel and tire.

WARNING

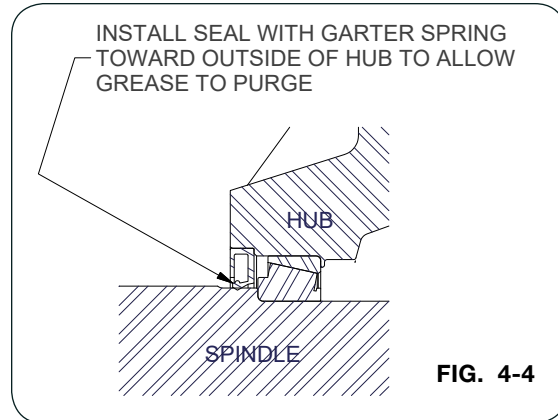
- **INNER WHEEL AND TIRE MAY FALL FROM HUB CAUSING SERIOUS INJURY OR DEATH. ALWAYS SUPPORT INNER WHEEL WHEN REMOVING OUTER WHEEL.**
4. If only changing wheel and tire, skip to Step 8; otherwise continue with Step 4.
- Remove the hardware retaining the hubcap. Next, remove the hubcap, gasket, cotter pin, castle nut and spindle washer. Remove hub with bearings from old spindle using a 200 lbs. safe lifting device.

Wheel, Hub and Spindle Disassembly and Assembly (continued)

5. Inspect the spindle and replace if necessary. If spindle does not need to be replaced, skip to Step 6; otherwise continue with Step 5.

Remove the bolt 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 bolt and lock nut to retain spindle to axle. Tighten as outlined in MAINTENANCE section.

6. 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 outside of hub by tapping on flat plate that completely covers seal while driving it square to hub. (FIG. 4-4) Install until flush with back face of hub. Using a safe lifting device rated for 200 lbs., install hub assembly onto spindle. Install outer bearing, spindle washer and castle nut.



7. 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, and retain hubcap with hardware removed. Tighten hubcap hardware in alternating pattern.
8. Attach the wheel(s) and tire(s) to the hub using the same rated safe lifting device for removal. Tighten wheel nuts to appropriate requirements and recheck as outlined in the Wheel and Tire section of this manual.
9. Raise cart, remove safe load holding devices and lower cart to the ground.

Wheels and Tires

Wheel Nut Torque Requirements

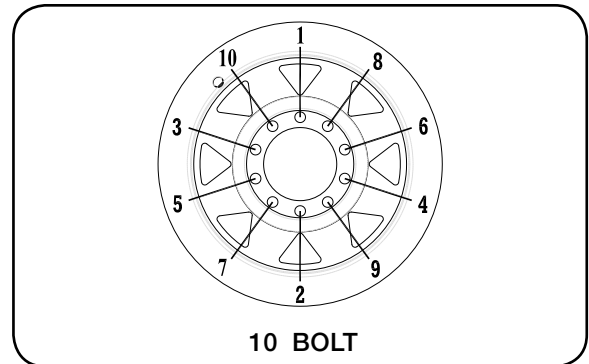
⚠ CAUTION

- 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.

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

WHEEL HARDWARE	
SIZE	FOOT-POUNDS
3/4-16 (UNF)	365 ft.-lbs.
7/8-14 (UNF)	440 ft.-lbs.
M22x1.5	475 ft.-lbs.



10 BOLT

DIAGRAM 1

Wheels and Tires (continued)

Tire Pressure

The following is to be used as a general guide for tire inflation and figures can vary depending on specific brand of tire used. **It is important that tires are inspected after unit is loaded.** Start with minimum pressure recommended by tire manufacturer. The tire should stand up with no side-wall buckling or distress as tire rolls. Record the pressure needed to support full load and maintain this pressure to achieve proper tire life. **Do not exceed maximum recommended tire pressure.** Each tire must be inflated to max PSI to seat the beads, deflated to 5-10 PSI, then reinflated 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
1100/45R46 F-1W	195D	35	
Mitas	650/75R32 R-1W	172A8	58
	650/75R32 R-1	176A8	41
	800/65R32 R-1W	172A8	46
	900/60x32 R-1W	176A8	41
	900/70R32 R-1W	188A8	53
	1050/50x32 R-1W	178A8	41
	1250/50R32 R-1W	188A8	41
	900/60x38 R-1W	181A8	44
	520/85x42 R-1W	162A8	44
650/65x42 R-1W	168A8	44	
Alliance	30.5B32	18-Ply	36
	35.5LR32	193A8	44
	900/60R32 R-1W	192D	46
	1050/50R32 R-1W	185A8	52
	1250/50R32 R-1W	201B	46
Trelleborg	VF1050/50R32 R-1	198D	52
	900/50R32 R-1W	181A8	55
	900/60x32	176LI	44
	850/55R42 R-1W	161A8	32

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

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

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 4,000 LBS. SPECIFIC LOAD RATINGS FOR INDIVIDUAL LOADS WILL BE GIVEN AT THE APPROPRIATE TIME IN THE INSTRUCTIONS.**

- **MOVING OR ROTATING COMPONENTS CAN CAUSE SERIOUS INJURY OR DEATH. ALWAYS DISCONNECT POWER SOURCE BEFORE SERVICING. ENSURE SERVICE COVERS, CHAIN/BELT COVERS AND CLEAN-OUT DOOR(S) ARE IN PLACE AND SECURELY FASTENED BEFORE OPERATING MACHINE.**

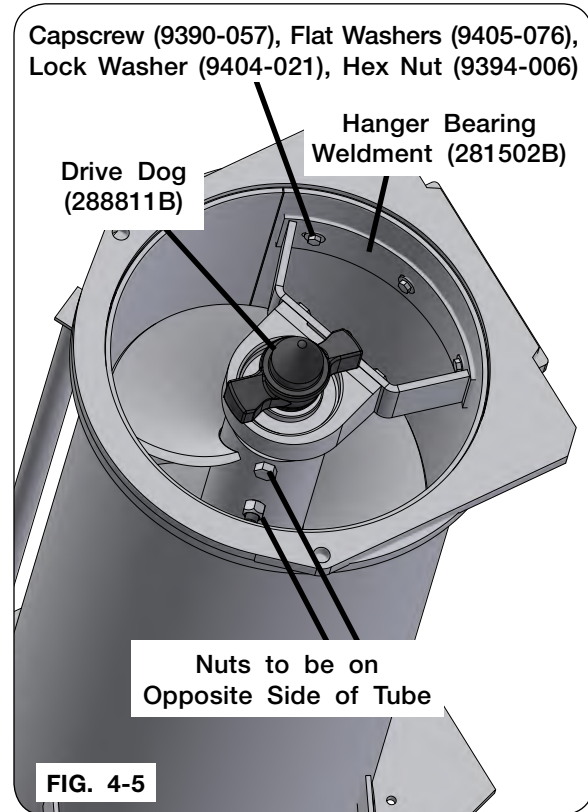
- **WHEN WORKING AROUND THE IMPLEMENT, BE CAREFUL NOT TO BE CUT BY SHARP EDGES.**



Auger System (continued)

Lower Auger Removal

1. Remove the three 3/8"-16UNC x 1 1/2" capscrews (9390-057), six flat washers 3/8" (9405-076), three lock washers 3/8" (9404-021) and hex nuts 3/8"-16UNC (9394-006) which secures the hanger bearing weldment (281502B) to the auger tube (FIG. 4-5).
2. Using a safe lifting device rated for a minimum of 700 lbs., remove auger from auger tube and perform required repair or replacement.
3. Remove the two 5/8"-11UNC x 6" capscrews (9390-136), lock washers 5/8" (9404-029) and hex nuts 5/8"-11UNC (9394-014) securing the drive dog to the auger as shown in FIG. 4-5.



Lower Auger Replacement With Double Lobe Drive Dog

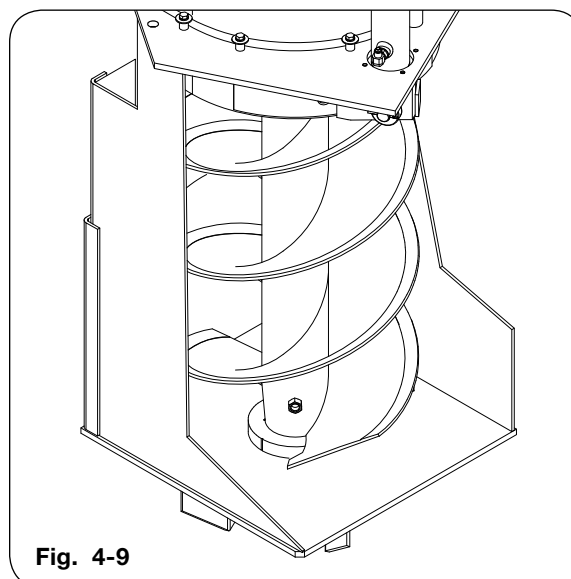
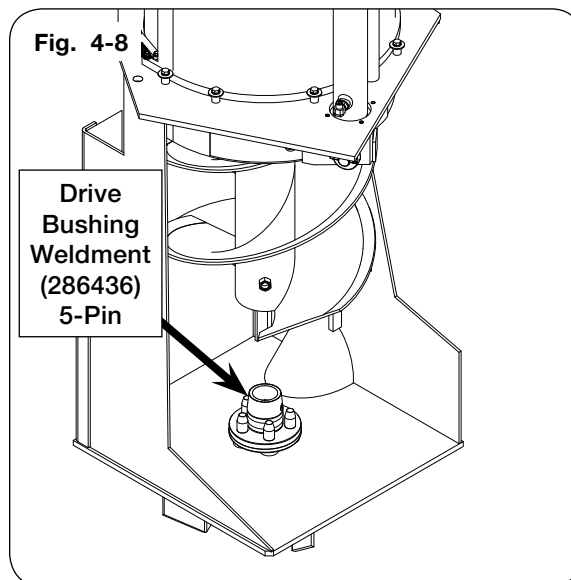
1. Slide drive dog assembly out of old flighting.
2. The replacement auger is factory balanced. Using a safe lifting device rated at least 700 lbs., remove entire auger from shipping crate and secure from rolling.
3. Coat the drive dog with anti-seize and slide into new auger flighting.
4. Insert 5/8"-11UNC hardware into hanger bearing assembly and the auger tube.
5. Torque 5/8"-11UNC hardware to 120 ft.-lbs.
6. Using a safe lifting device rated at least 700 lbs., lift the auger and hanger bearing assembly up. Slowly lower the auger down through the auger plate opening to intersect with the drive bushing.

Auger System (continued)

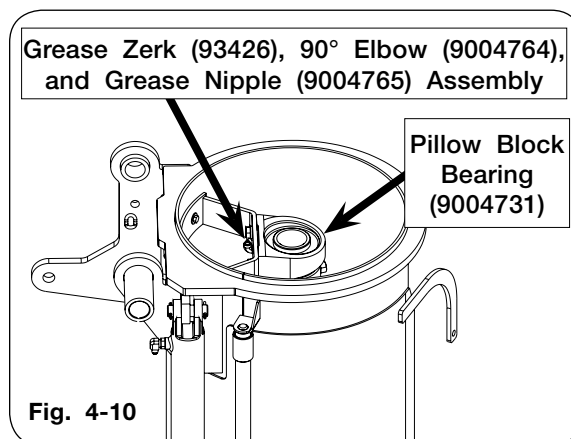
Lower Auger Replacement With Double Lobe Drive Dog (continued)

7. Align auger end with the five pin drive bushing and securely engage together, see FIG. 4-8 and 4-9. Secure hanger bearing to auger housing tube wall with original three 3/8"-16UNC x 1 1/2" capscrews and three 3/8"-16UNC flange nuts. Do not tighten.
8. Start tractor and slowly raise the upper auger tube into position and check for engagement between the upper auger drive dog with the lower auger drive dog as the auger rises.

NOTE: If the lower and upper auger are not properly positioned for full engagement, refer to "Upper Auger Replacement" section in MAINTENANCE for upper auger positioning and adjustment information.



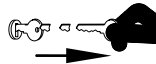
9. Lower the upper auger assembly, turn off tractor and remove key. Slowly turn lower auger by hand while applying grease to the hanger bearing. Torque hanger bearing hardware. Grease until the grease purges out and around the drive dog housing. Apply a light coat of surface grease to drive dog conical shaft. Wipe off excess purged grease from hanger bearing top seal area. (FIG. 4-10)



Auger System (continued)

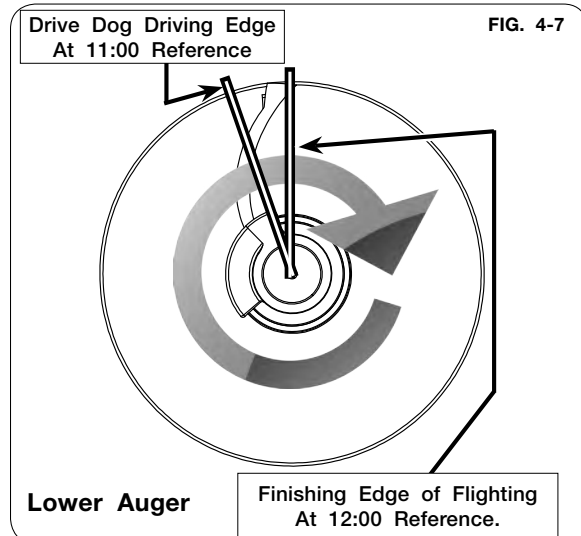
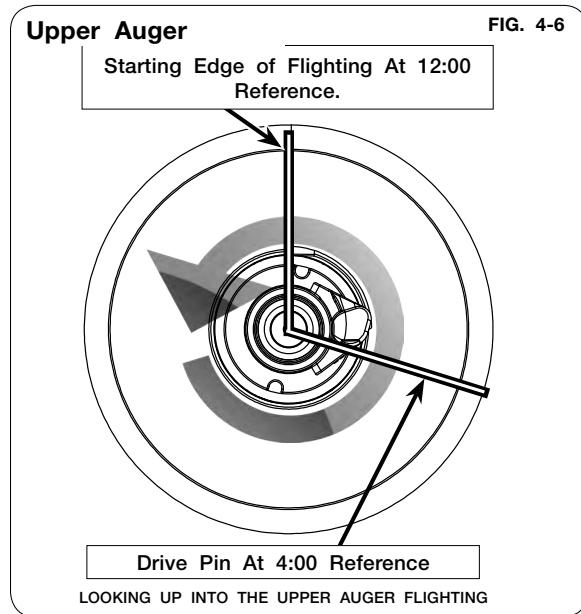
Lower Auger Replacement With Double Lobe Drive Dog (continued)

10. Perform a final inspection of auger and lower collector box to ensure all debris and tools have been removed. Close the clean-out door completely and lock the position. Connect PTO to tractor. Fully extend the upper auger assembly into full vertical locked position. Slowly engage PTO and rotate to ensure both lower and upper augers are engaged. Allow auger assembly to stop completely. Once stopped, lower the upper auger approximately 45 degrees, shut off tractor engine and remove keys. View the distance between the lower auger flighting trailing edge and upper auger flighting leading edge. Verify the upper auger flighting follows the lower auger flighting, then lower the upper auger assembly to the rest position. Shut off tractor engine and remove key.



Lower Auger Replacement With Single Lobe Drive Dog

1. Slide drive dog assembly out of old flighting.
2. The replacement auger is factory balanced. Using a safe lifting device rated at least 700 lbs., remove entire auger from shipping crate and secure from rolling.
3. Coat the drive dog with anti-seize and slide into new auger flighting.
4. Rotate the drive dog so the driving edge is at 11 o'clock position when the finishing edge of the flighting is at 12 o'clock position. See FIG. 4-6.
5. Insert 5/8"-11UNC hardware into hanger bearing assembly and the auger tube. (FIG. 4-6 and 4-7)
6. Torque 5/8"-11UNC hardware to 120 ft.-lbs.
7. Using a safe lifting device rated at least 700 lbs., lift the auger and hanger bearing assembly up. Slowly lower the auger down through the auger plate opening to intersect with the drive bushing.

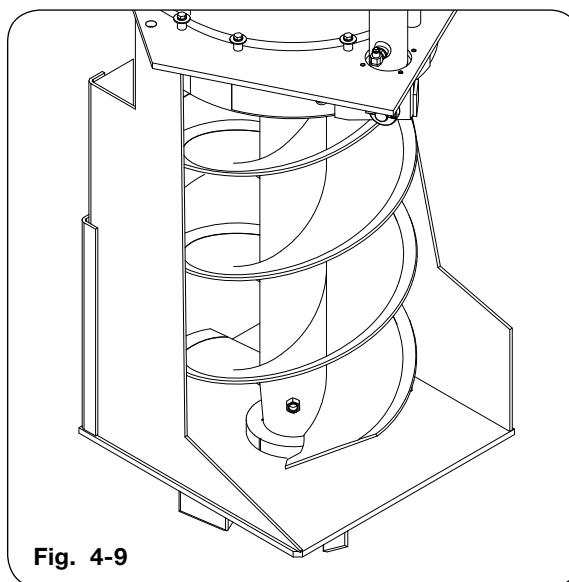
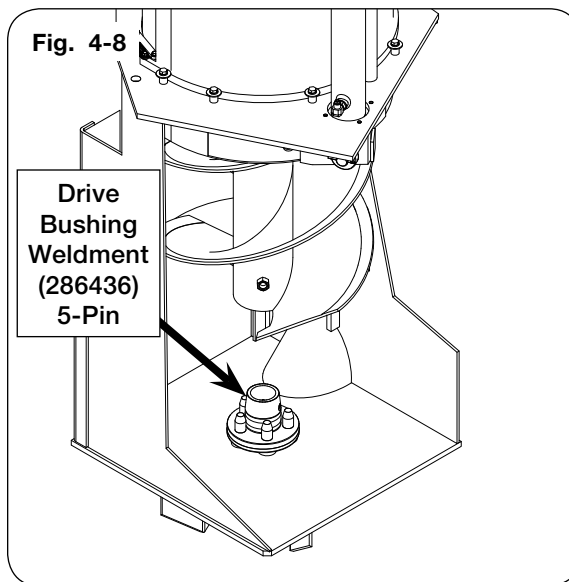


Auger System (continued)

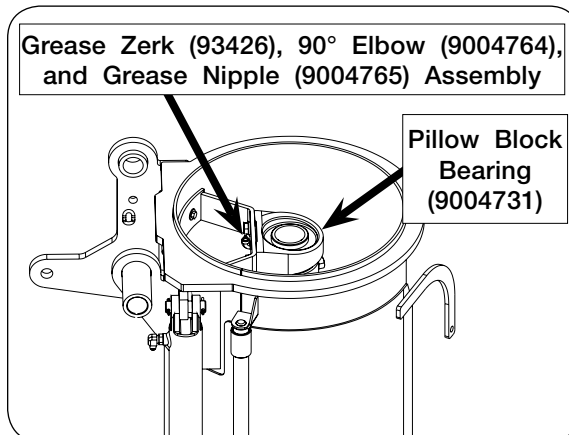
Lower Auger Replacement With Single Lobe Drive Dog (continued)

8. Align auger end with the five pin drive bushing and securely engage together, see FIG. 4-8 and 4-9. Secure hanger bearing to auger housing tube wall with original three 3/8"-16UNC x 1 1/2" capscrews and three 3/8"-16UNC flange nuts. Do not tighten.
9. Start tractor and slowly raise the upper auger tube into position and check for engagement between the upper auger drive dog with the lower auger drive dog as the auger rises.

NOTE: If the lower and upper auger are not properly positioned for full engagement, refer to "Upper Auger Replacement" section in MAINTENANCE for upper auger positioning and adjustment information.



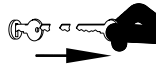
10. Lower the upper auger assembly, turn off tractor and remove key. Slowly turn lower auger by hand while applying grease to the hanger bearing. Torque hanger bearing hardware. Grease until the grease purges out and around the drive dog housing. Apply a light coat of surface grease to drive dog conical shaft. Wipe off excess purged grease from hanger bearing top seal area. (FIG. 4-10)



Auger System (continued)

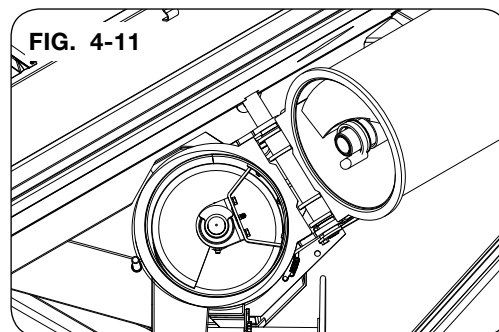
Lower Auger Replacement With Single Lobe Drive Dog (continued)

11. Perform a final inspection of auger and lower collector box to ensure all debris and tools have been removed. Close the clean-out door completely and lock the position. Connect PTO to tractor. Fully extend the upper auger assembly into full vertical locked position. Slowly engage PTO and rotate to ensure both lower and upper augers are engaged. Allow auger assembly to stop completely. Once stopped, lower the upper auger approximately 45 degrees, shut off tractor engine and remove keys. View the distance between the lower auger flighting trailing edge and upper auger flighting leading edge. Verify the upper auger flighting follows the lower auger flighting, then lower the upper auger assembly to the rest position. Shut off tractor engine and remove key.



Upper Auger Disassembly

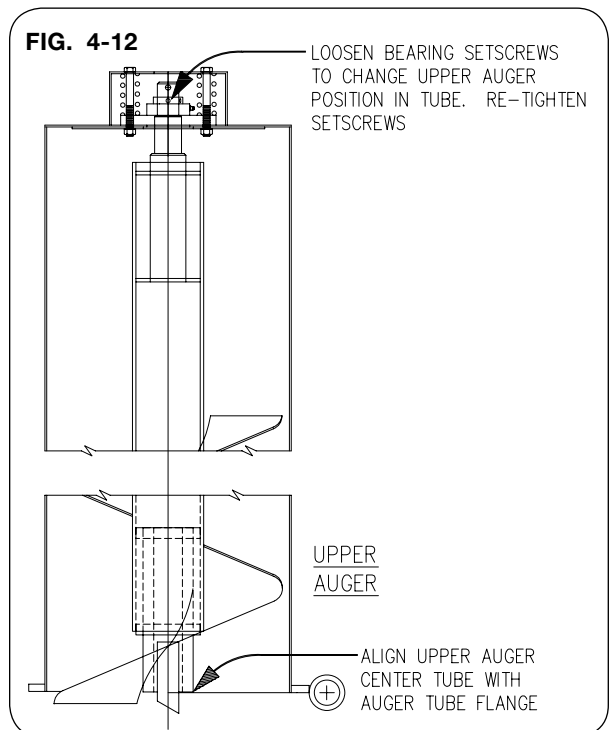
1. Using a safe lifting device rated at a minimum of 1 ton and two 1,000 lbs. straps, support the upper auger assembly.
2. Remove auger tube cylinder pin and carefully swing cylinder down without breaking hose connections.
3. Disconnect auger and chute light.
4. Remove chute assembly.
5. Remove auger indicator cable from the bolt on bracket. With auger tube fully supported, remove the 7/8"-9UNC x 2" capscrews (9390-164) and flat washers (97041) from the upper auger pivot bracket.
6. Lift upper auger assembly from unit. Repair or replace as required.
7. To remove auger from tube, loosen two bearing setscrews and remove 5/16" x 2" machine screw retainer.
8. Inspect upper auger bearing, springs and four 1/2" x 5 1/2" capscrews and locknuts. Replace if necessary.



Auger System (continued)

Upper Auger Assembly

1. Install upper bearing and spring assembly if previously removed.
2. Using a safe lifting device rated at a minimum of 1 ton and two 1,000 lbs. straps, insert auger in auger tube. Back out bearing setscrews and insert auger stub shaft through bearing. Retain auger with 5/16" x 2" machine screw and nut.
3. Position opposite auger end flush with auger tube flange. Tighten bearing setscrews and 5/16" x 2" machine screw
4. Lift upper auger assembly into position using a safe lifting device with a minimum capacity of 600 lbs. to support the upper auger. Install pivot pin. Align retainer holes and install bolt and nut.
5. Install chute assembly.
6. Reattach indicator cable.
7. Connect auger and chute light.
8. Reinstall hydraulic cylinder and pivot pins. Clamp hoses into position and recheck connector tightness.



Auger System (continued)

Upper Auger Assembly Timing For Single Lobe Drive Dog

Fully extend the upper auger and engage PTO to ensure both lower and upper augers are engaged. allow the auger assembly to stop completely, then lower the upper auger approximately 45 degrees, shut off the tractor, remove the keys from the ignition. View the positions of the lower auger flighting trailing edge and upper auger flighting leading edge. After noting each flighting position, lower the upper auger assembly to its rest position. Again, shut off the tractor and remove the keys from the ignition.

When the lower & upper augers are coupled together correctly, the leading edge of the upper auger flighting is to be indexed approximately 180 degrees from the trailing edge of the lower auger flighting. If these trailing/leading flighting edges are out of position then the lower auger drive dog must be indexed 180 degrees. Do not remove or index the hanger bearing or lower auger. Index only the drive dog in the lower auger by partially removing the two 5/8" capscrews from the drive dog shaft, turning the drive dog 180 degrees, and reassembling the capscrews. Partial removal of the capscrews will retain the drive collar from dropping down inside the auger tube.



Auger System (continued)

Auger Flow Door Cylinder Replacement

⚠ 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.**

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

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

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

- **HIGH-PRESSURE FLUIDS CAN PENETRATE THE SKIN AND CAUSE SERIOUS INJURY OR DEATH. LEAKS OF HIGH-PRESSURE FLUIDS MAY NOT BE VISIBLE. USE CARDBOARD OR WOOD TO DETECT LEAKS IN THE HYDRAULIC SYSTEM. SEEK MEDICAL TREATMENT IMMEDIATELY IF INJURED BY HIGH-PRESSURE FLUIDS.**

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

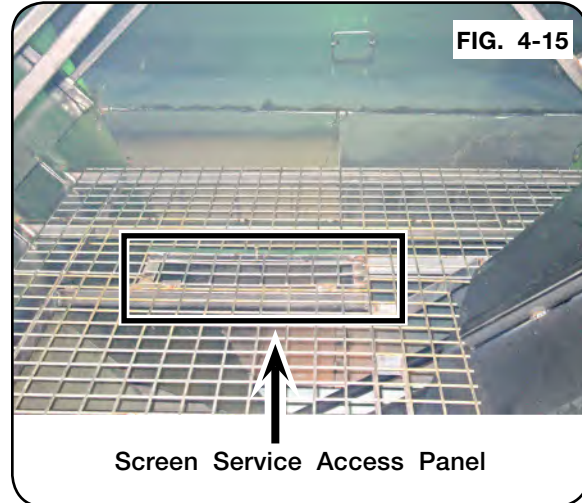
- 1. Park the empty grain cart on a firm, level surface and extend auger. Block the machine to keep it from moving. Unfold upper auger to make the flow door cylinder easier to access. If possible, close the flow door at least 8" from the fully open position. Relieve hydraulic pressure, see tractor operator's manual. Set the tractor's parking brake, shut-off the engine, remove the ignition key and disconnect the PTO shaft.



Auger System (continued)

Auger Flow Door Cylinder Replacement (continued)

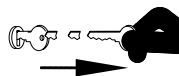
2. On the inside of the cart, open the screen service access panel shown in FIG. 415.



3. Remove the cotter pins from the lower cylinder pin then remove the pin. Remove the four 3/8" flange bolts holding on the gasket and gasket plate, shown in FIG. 4-16.



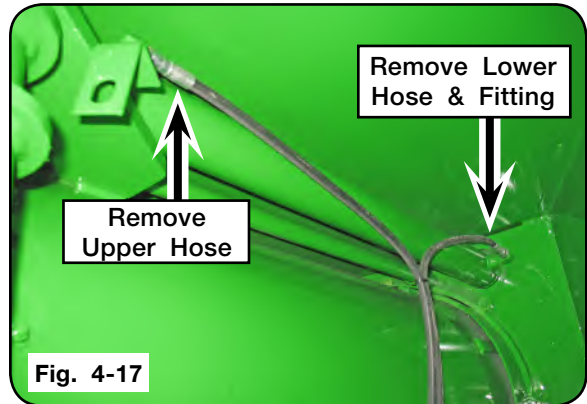
4. Remove all tools and extra hardware from the grain cart. Make sure all personnel are outside of the hopper. Then, retract the cylinder so that there is about 8" of clearance between the cylinder clevis and the lug.
5. Shut-off the engine, remove the ignition key, and relieve and disconnect the hydraulic hoses from the tractor and cart.



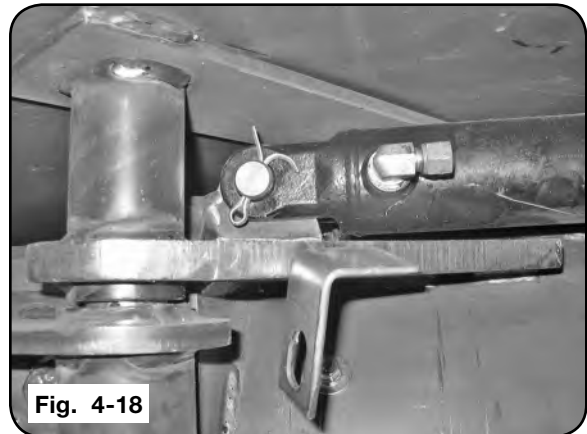
Auger System (continued)

Auger Flow Door Cylinder Replacement (continued)

6. Label the hydraulic hoses to indicate upper and lower. Disconnect them from the cylinder, along with the lower hydraulic fitting (Fig. 4-17).



7. Remove the cotter pins from the upper cylinder pin and remove pin (Fig. 4-18).



8. Slide the flow door cylinder through the hole in the junction box until the upper cylinder clevis clears the lug, then raise the top of the cylinder above the auger fold bushing and remove the cylinder.
9. Replace with the new cylinder and insert the upper cylinder pin. Remove the cylinder port plugs. Manually extend the cylinder until the lower clevis lines up with the door lug and assemble the pin and cotter pins. Assemble hydraulic fittings and attach hoses. Tighten hydraulic lines to specification. See torque chart in this section.
10. Replace rubber gasket and gasket plate with 3/8"-16UNC x 1" flange screws, shut and secure the screen service access panel.
11. Remove all tools and extra hardware from the grain cart. Make sure all personnel are outside of the hopper. Purge air from hydraulic system. Refer to "Purge Hydraulic System" in this section

Auger Driveline

Bearings

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

Gearbox

Gearbox 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.

For maximum gear box life:
Check oil level every 2 weeks.

Replace oil every season, using 32 oz. of 80W90 EP gear lubricant.

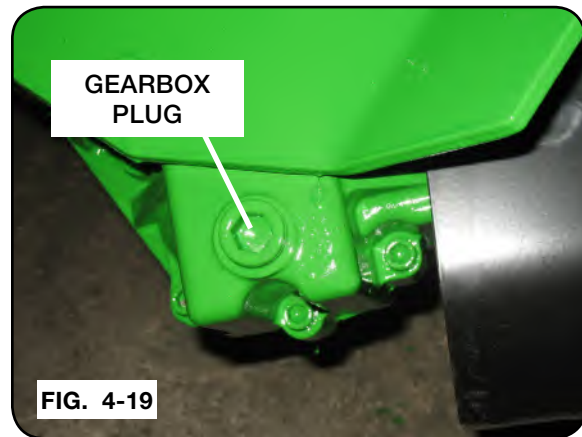


FIG. 4-19

Driveline Replacement

1. Park the empty cart on a firm, level surface. Block the wheels or tracks on the cart to keep it from moving. Set the tractor parking brake, shut off the engine, and remove the ignition key from the tractor before disconnecting driveline assembly and bearing hardware.
2. Loosen the setscrews (9399-071) on two flangette bearings (9003920) (Fig. 4-20).
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. 4-20).
4. Remove paint on driveshaft to allow for easier movement. Slide driveshaft forward until the rear spline is out of the universal joint connected to the gearbox.
5. Drop the gearbox end of driveshaft down and slide driveshaft out of the flangette bearing on the hitch end of the driveshaft.
6. Remove bearings, bearing mounts, universal joint cover, driveshaft lock collars (if lock collars are attached to driveshaft), PVC driveshaft covers, and driveline cover off the current driveshaft.

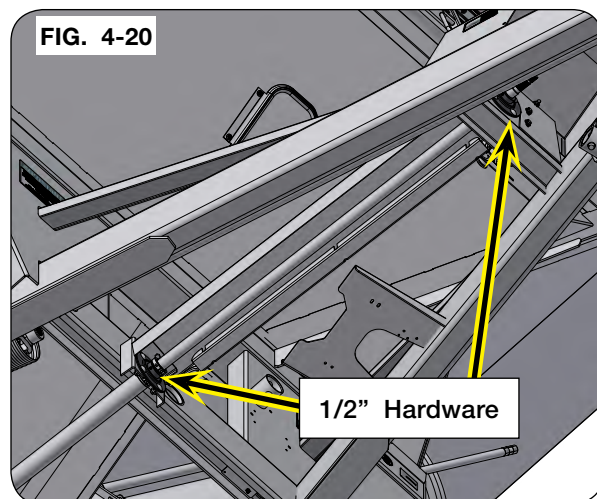


FIG. 4-20

Auger Driveline (continued)

Driveline Replacement (continued)

7. Slide new two-piece 1 1/2" dia. shaft collars (9008671) to both sides of new bearing (9003920) closest to the U-Joint, when installing bearings onto new driveshaft (Kit 289771).
8. Assemble new PVC driveshaft cover (291558) behind new bearing (9003920) closest to the U-Joint. (FIG. 4-27)

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.
10. Raise the gearbox end of the driveshaft up and insert the original 1/2" carriage bolts, flange nuts, and lock washers into the mounting flanges making sure that the bearing flanges are both on the front side of the mounting brackets. Only loosely tighten the hardware.
11. Slide driveshaft down into the universal joint attached to the gearbox until the end of the shaft extends into the universal joint 2 3/8". Ensure universal joint and driveshaft splines completely engage. Verify the hitch end for adequate length for driveline assembly to connect. (FIG. 4-28)

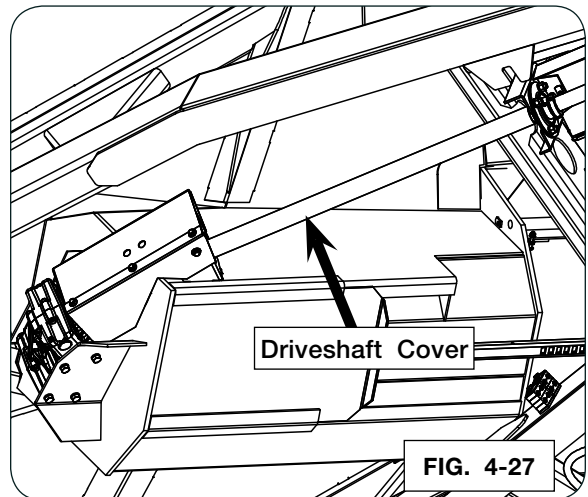
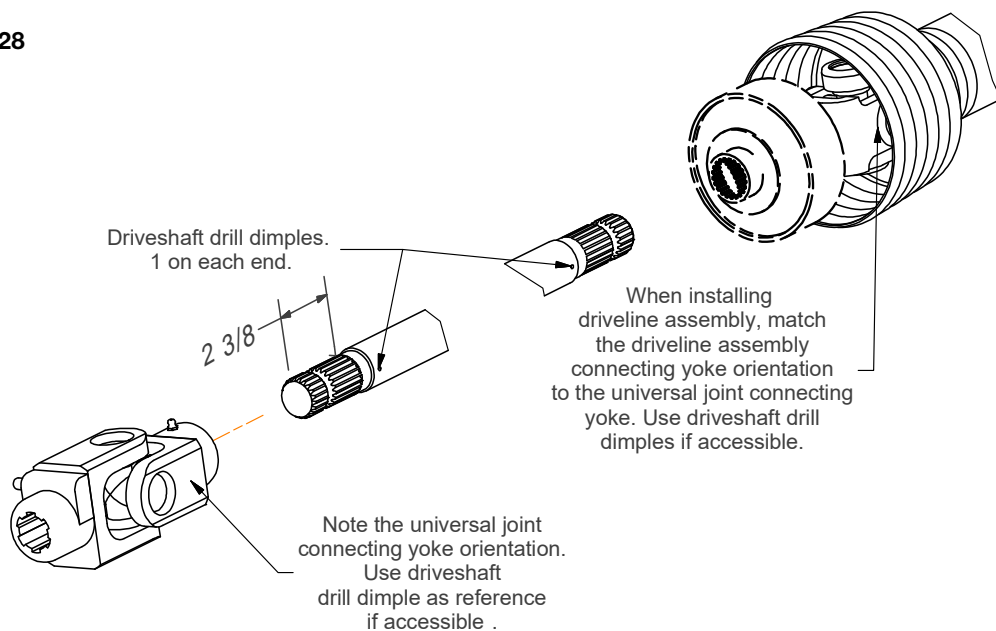


FIG. 4-28



Auger Driveline (continued)

Driveline Replacement (continued)

- 12. Tighten all flangette mounting hardware.
- 14. For alignment of the yoke, the orientation of the universal joint at the gearbox **MUST** be in line with the driveshaft drill dimple when the driveline assembly is attached. (Fig. 4-29, 4-30, and 4-31)
- 15. With bearing mounting hardware completely tightened, drill a setscrew dimple in the drive-shaft 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. 4-29)

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

- 16. Attach new universal joint cover to the bearing mount in front of the gearbox using original 3/8"-16UNC capscrews and 5/16"-18UNC weld nuts. Review to ensure PVC driveshaft covers and driveline cover, located behind the ladder, are in place and hardware tightened prior to operation.
- 17. Apply thread lock on bearing setscrews and tighten.
- 18. Test run driveline. Verify smooth driveline operation.

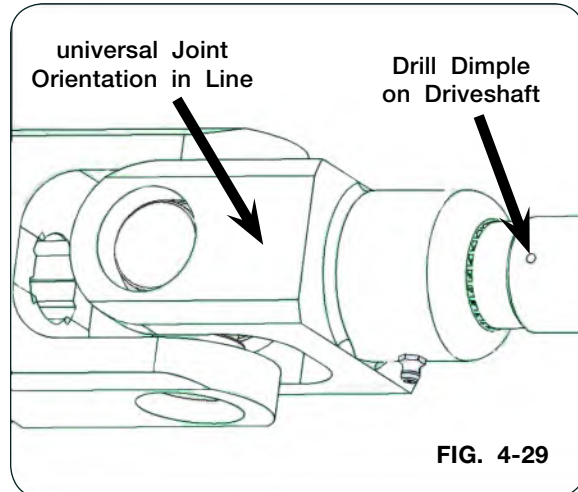


FIG. 4-29

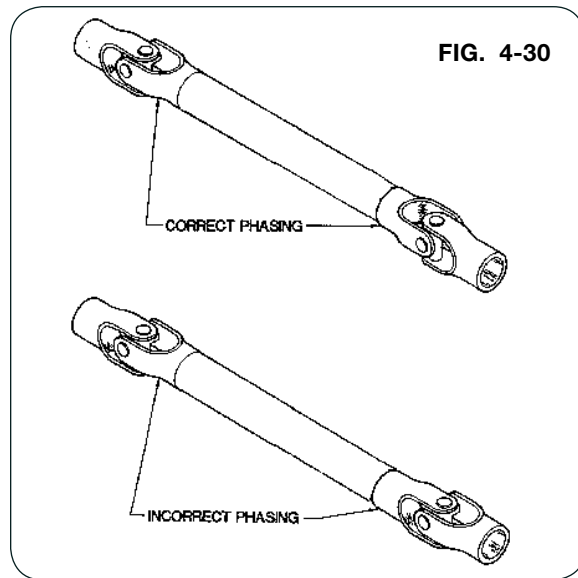


FIG. 4-30

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 to remove dirt and debris which could cause rusting. When using pressure washers, maintain an adequate distance so not to force water into bearings.
2. 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 machine for parts that may need to be replaced so they may be ordered in the offseason.
7. Replace all worn, torn or faded decals and reflectors.
8. Fully open and keep open the flow door and auger cleanout door to remove any remaining grain and to allow moisture to dry.
9. If unit is equipped with a scale indicator or electric hydraulic controls, store these indoors in a dry location.
10. Close the tarp to keep debris out of the hopper.

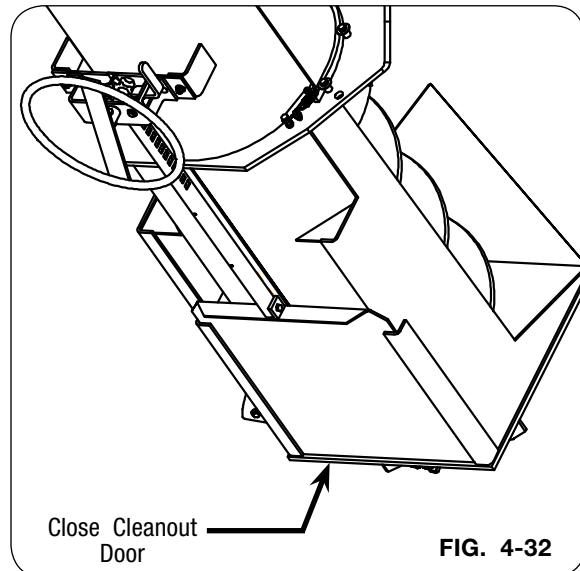


Adjusting Cleanout Door

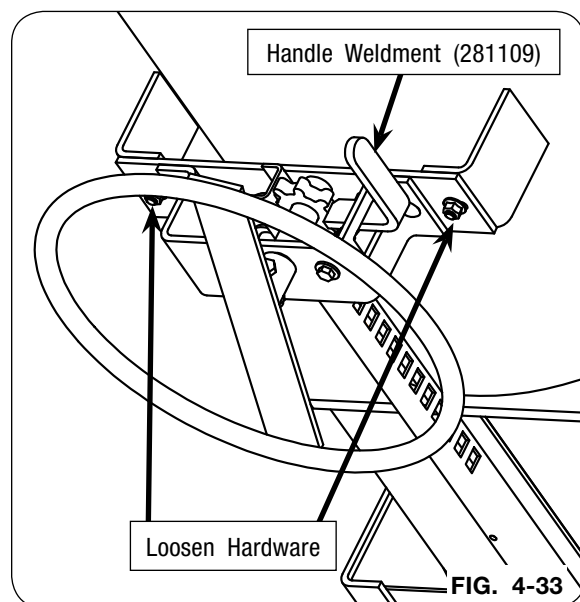
WARNING

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

1. Park the empty grain cart on a firm and level surface. Block the tires/tracks on the machine to keep it from moving. Set the tractor's parking brake, shut-off the engine, remove the ignition key and disconnect the PTO shaft.
2. Completely close cleanout door. Inspect and verify that all the grain dust and filings are removed that may prevent the door from shutting completely. (FIG. 4-32)

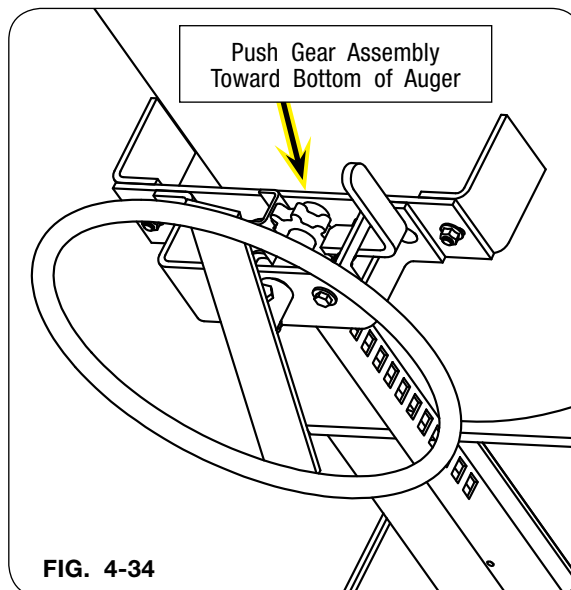


3. Engage the locking plate (268313B). (FIG. 4-33)
4. Loosen mounting hardware. (FIG. 4-33)

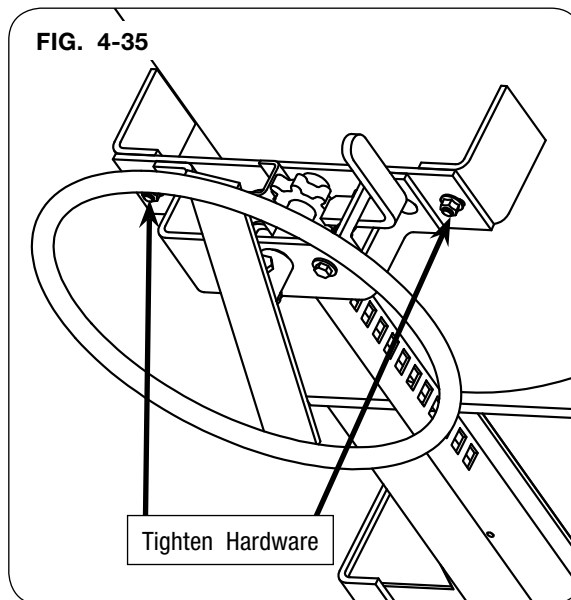


Adjusting Cleanout Door (continued)

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. 4-34)



6. Torque hardware loosened in step 4. (FIG. 4-35)
7. Check door operation. Lock the handle weldment into position. (FIG. 4-35)



Verify Telescoping PTO Shaft Length

⚠ WARNING

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

IMPORTANT

- 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.

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.

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.

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" (Figure 4-36).

Enter here: _____ (1)

(Verify that outer tube does not bottom out on surrounding plastic shield components).

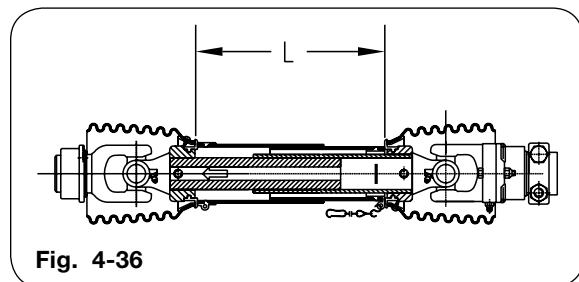


Fig. 4-36

2. Pull apart PTO telescoping shaft ends and measure lengths "T" & "C" (Figure 4-37)

Add "T" + "C" measurements together

Enter total here: _____ (2)

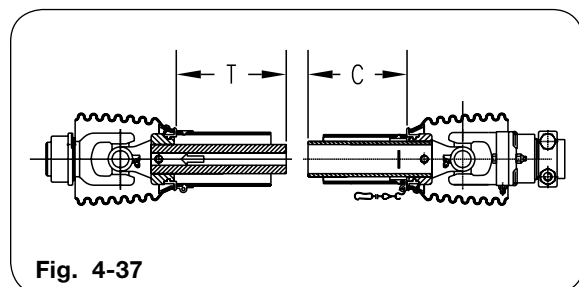


Fig. 4-37

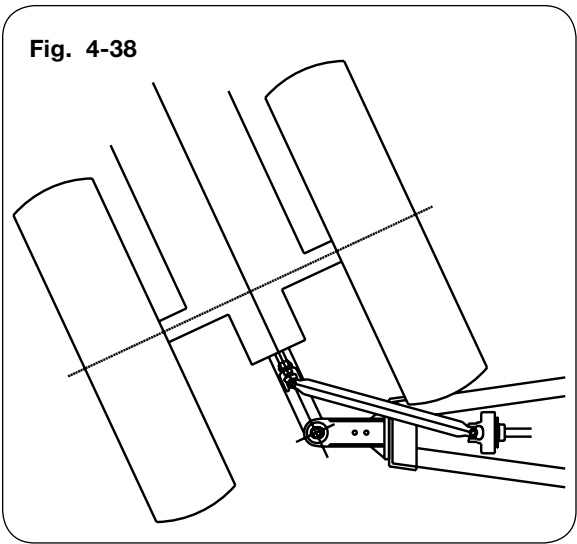
Verify Telescoping PTO Shaft Length (continued)

3. Calculate maximum recommended extended length:

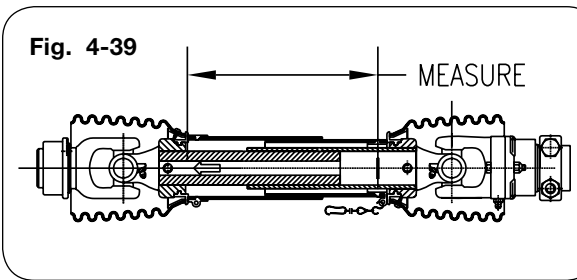
- a. Subtract line 1 from line 2
Enter here: _____ (a)
- b. Divide line (a) by 2
Enter here: _____ (b)
- c. Add line (b) to line 1.
Enter here: _____ (c)
- d. Subtract 3 inches from line (c)
Enter here: _____ (d)

This is the maximum recommended extended length.

- 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, obtain a longer PTO shaft assembly before operating cart.
- 6. Position the tractor to obtain tightest turning angle, relative to the cart. (Fig. 4-38)



- 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. 4-39)



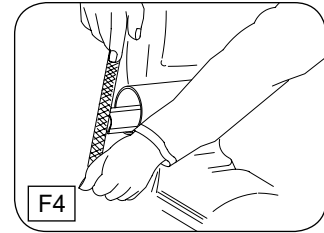
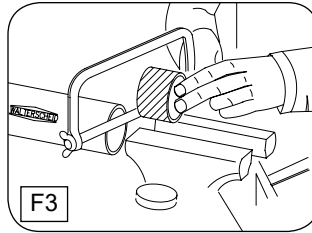
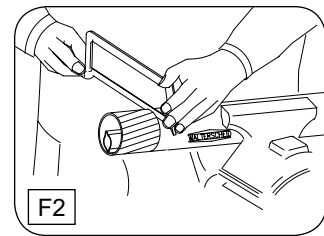
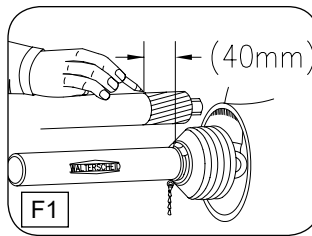
PTO Shaft Length Adjustment

WARNING

- 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.

NOTE: Maximum operating length LB. (Refer to “Verify Telescoping PTO Shaft Length” in this section for LB length.)

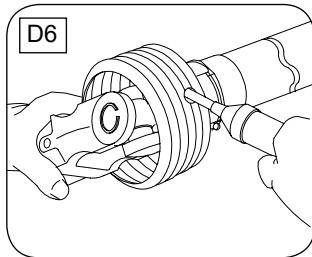
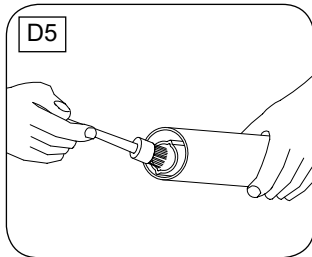
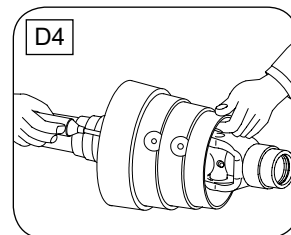
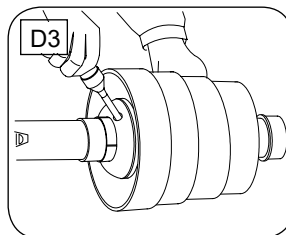
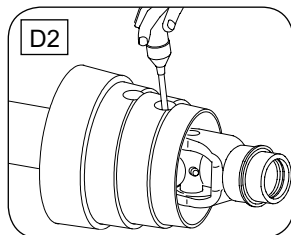
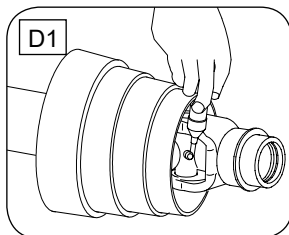
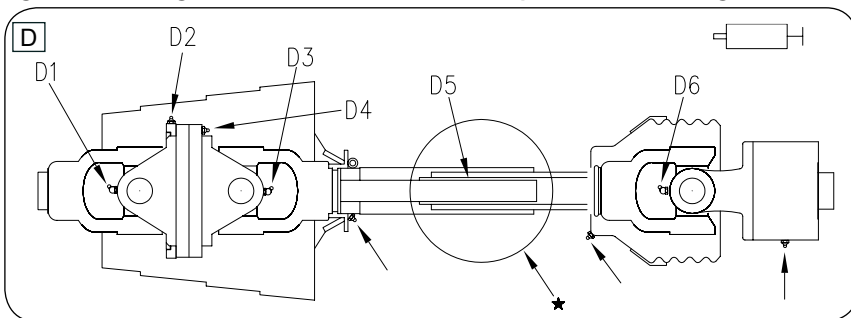
1. To adjust length, hold the half-shafts next to each other in the shortest working position and mark them.
2. Shorten inner and outer guard tubes equally.
3. Shorten inner and outer sliding profiles by the same length as the guard tubes.
4. Round off all sharp edges and remove burrs. Grease sliding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



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 freezing.



PTO Shaft and Clutch (continued)

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

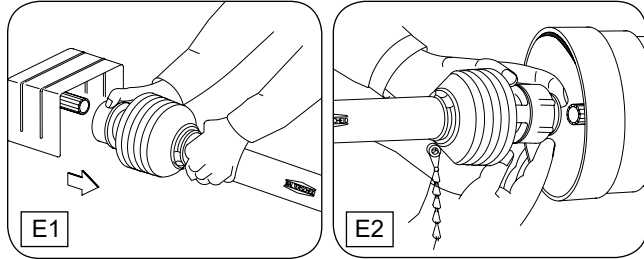
Clean and grease the PTO and implement input connection (IIC)

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.



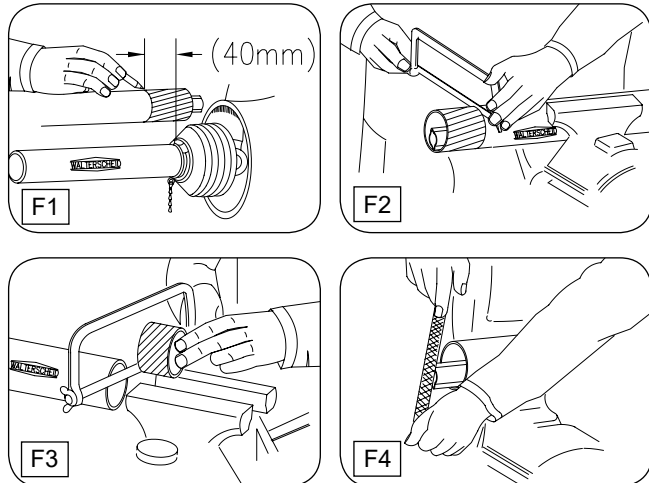
WARNING

- 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. (Refer to “Verify Telescoping PTO Shaft Length” for LB length.)

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

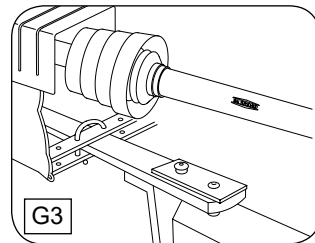
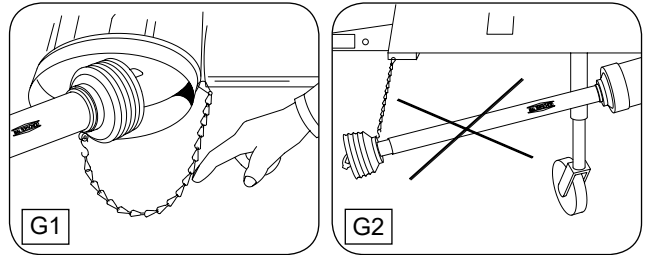
- CHECK THE LENGTH OF THE TELESCOPING MEMBERS TO INSURE THE DRIVELINE WILL NOT BOTTOM OUT OR SEPARATE WHEN TURNING AND/OR GOING OVER ROUGH TERRAIN.

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.

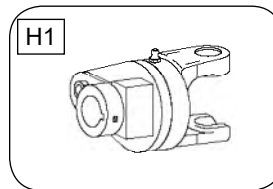
1. Chains must be fitted so as to allow sufficient articulation of the shaft in all working positions. Care must be taken to be sure that chain does not become entangled with drawbar hitch or other restrictions during operation or transport of machine.
2. The PTO drive shaft must not be suspended from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



Shear Bolt and Friction Clutches (Figs. H1 - H2)

1. Shear bolt clutches:

When the torque is exceeded, power flow is interrupted due to the bolt shearing. The torque is re-established by replacing the broken shear bolt. Use only the bolt specified in the Operator's Manual for replacement. Remove locking screw.

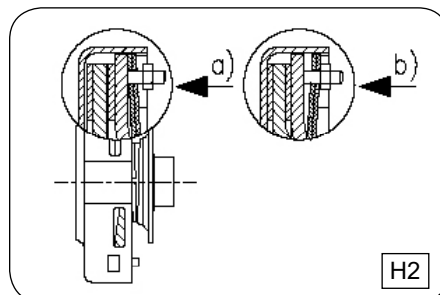


Friction clutches:

When overload occurs, the torque is limited and transmitted constantly during the period of slipping. Short-duration torque peaks are limited.

Prior to first utilization and after long periods out of use, check working of disk clutch.

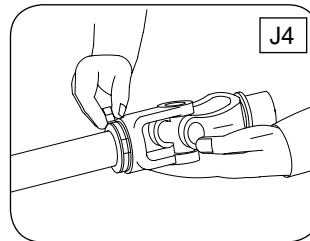
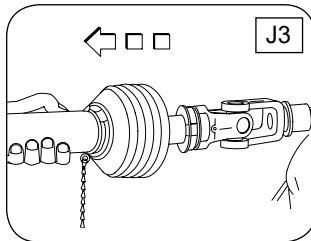
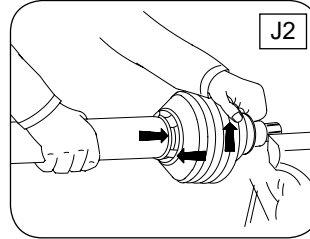
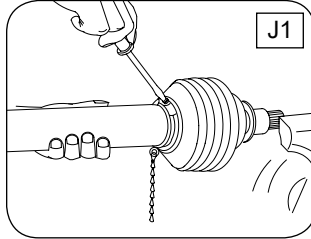
- a. Tighten nuts until friction disks are released. Rotate clutch fully.
- b. Turn nuts fully back. Now the clutch is ready for use. FIG. H2 shown.



PTO Shaft and Clutch (continued)

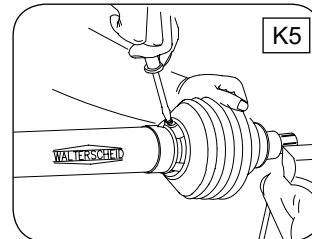
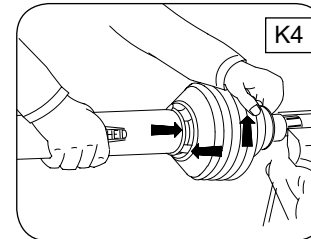
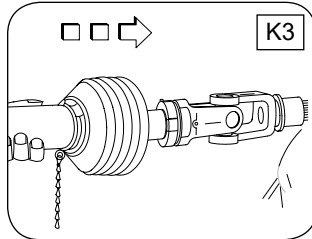
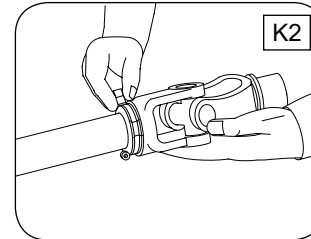
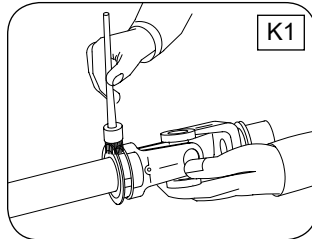
To Dismantle Guard (Figs. J1 - J4)

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



To Assemble Guard (Figs. K1 - K5)

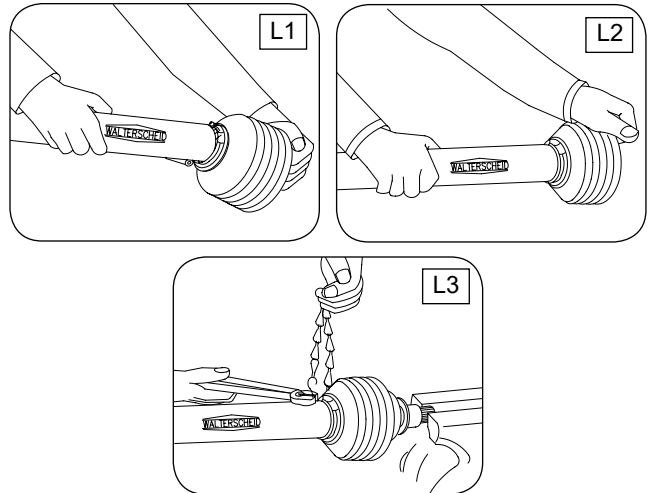
1. Grease yoke groove and inner profile tube.
2. Fit bearing ring in groove with recesses facing profile tube.
3. Slip on half-guard.
4. Turn cone until it engages correctly.
5. Install locking screw.



PTO Shaft and Clutch (continued)

To Assemble Cone (Figs. L1 - L3)

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).



Tarp Troubleshooting Inspection & Maintenance

PROBLEM	SOLUTION
TARP SAGS IN MIDDLE AREAS	<ol style="list-style-type: none"> 1. BOWS MAY BE BENT OR ADJUSTED TOO LOW 2. MISSING OR LOOSE RIDGE STRAP REPLACE OR RETIGHTEN 3. TENSION MAY BE TOO LOOSE. U-JOINT MAY NEED TO BE ADJUSTED ON SPLINED SHAFT TO PROVIDE MORE TENSION
HOLES OR TEARS IN TARP	<ol style="list-style-type: none"> 1. CONSULT YOUR LOCAL DEALER FOR REPAIRS 2. ORDER TARP REPAIR KIT FROM DEALER 3. WHEN NEW TARP OR PARTS ARE NEEDED ALWAYS REPLACE WITH ORIGINAL PARTS

Inspection and Maintenance

WARNING

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

IMPORTANT

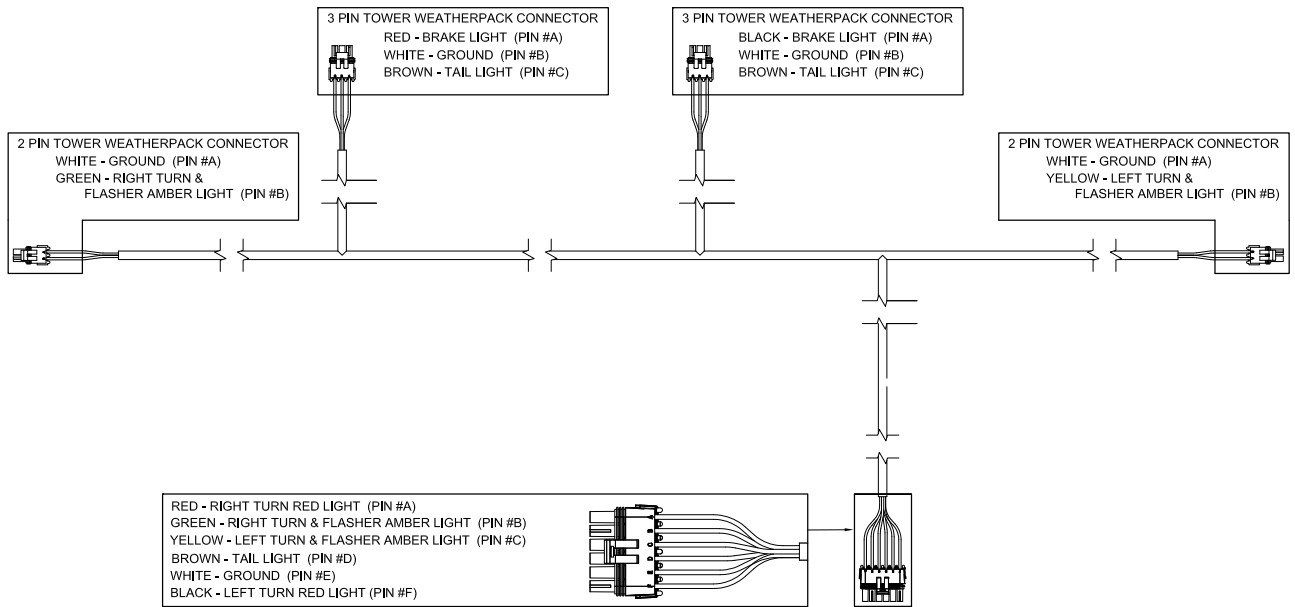
- *Do not open or close tarp while moving or in high wind conditions. Damage to the tarp may occur.*
- *Tarp should not be used if it is torn or the bungee cords are frayed or show damage. If water pools on the tarp, adjust tension of tarp cables or re-tension tarp with crank handle.*

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.

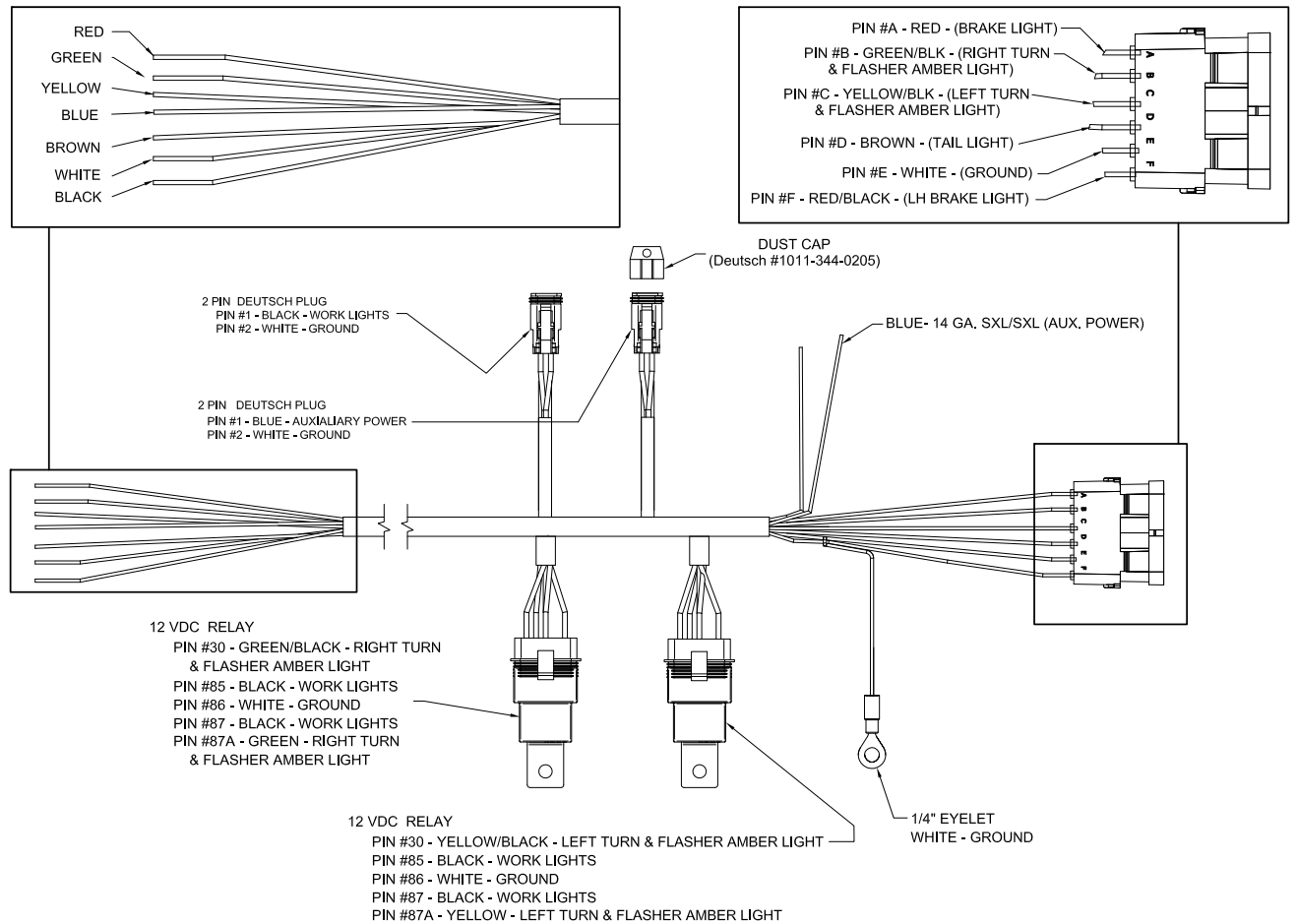
Tears in tarp should addressed before further tarp operation. If water pools on tarp, adjust tension of tarp cables and/or arm springs.

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 Schematic - Rear Wiring Harness #9003050



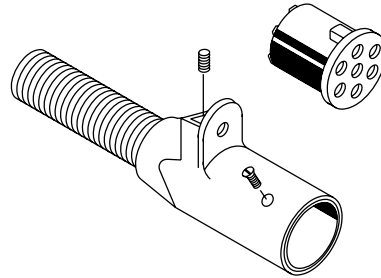
Electrical Schematic - Front Wiring Harness #9007460



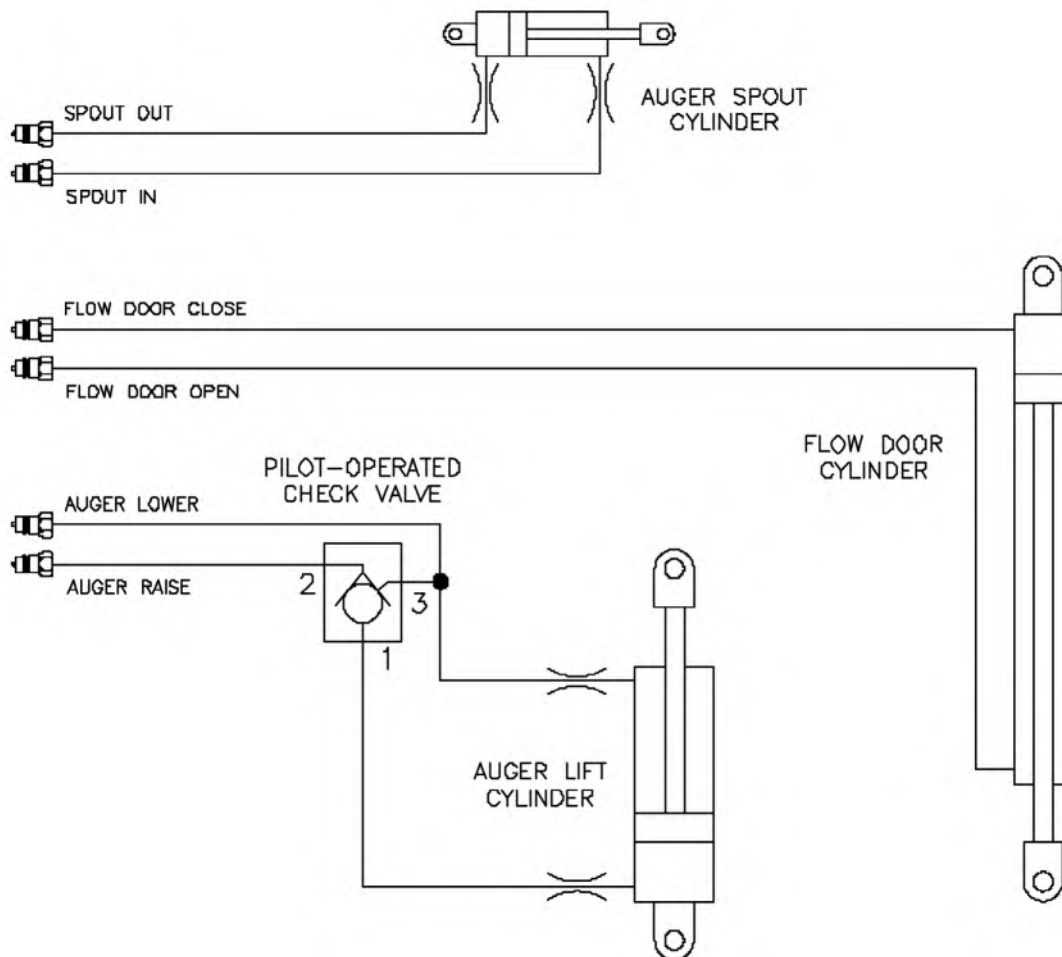
Electrical Schematic - Coupler #92450

GRAIN CART WIRES

- White -- Ground
- Green -- Right amber flashing lamp
- Yellow -- Left amber flashing lamp
- Brown -- Tail light
- Black -- Interior & Auger Lights
- Red -- Brake Lights



Hydraulic System Schematic



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

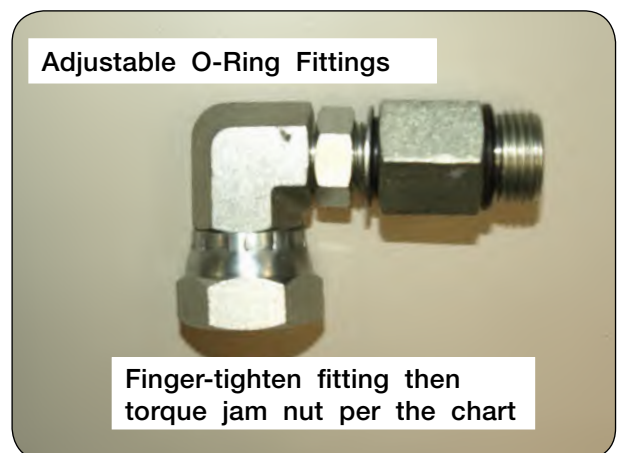
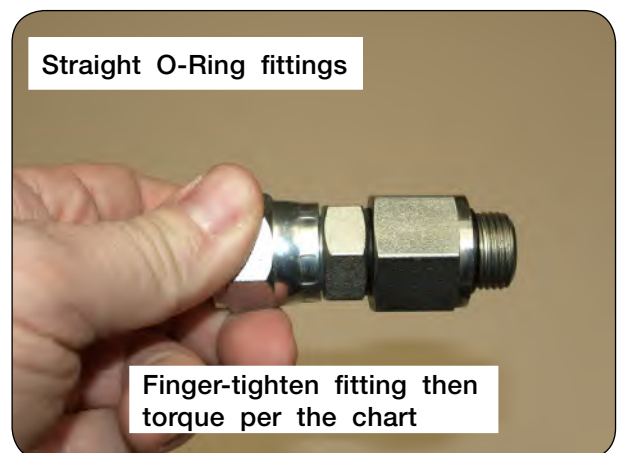
Hydraulic Fittings - Torque and Installation

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

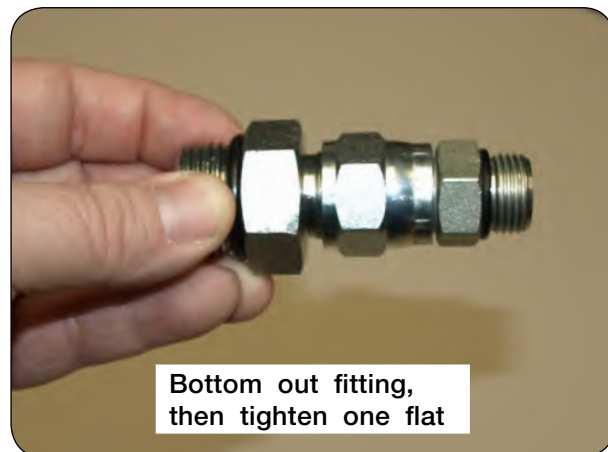


Hydraulic Fittings - Torque and Installation

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



Section V Parts

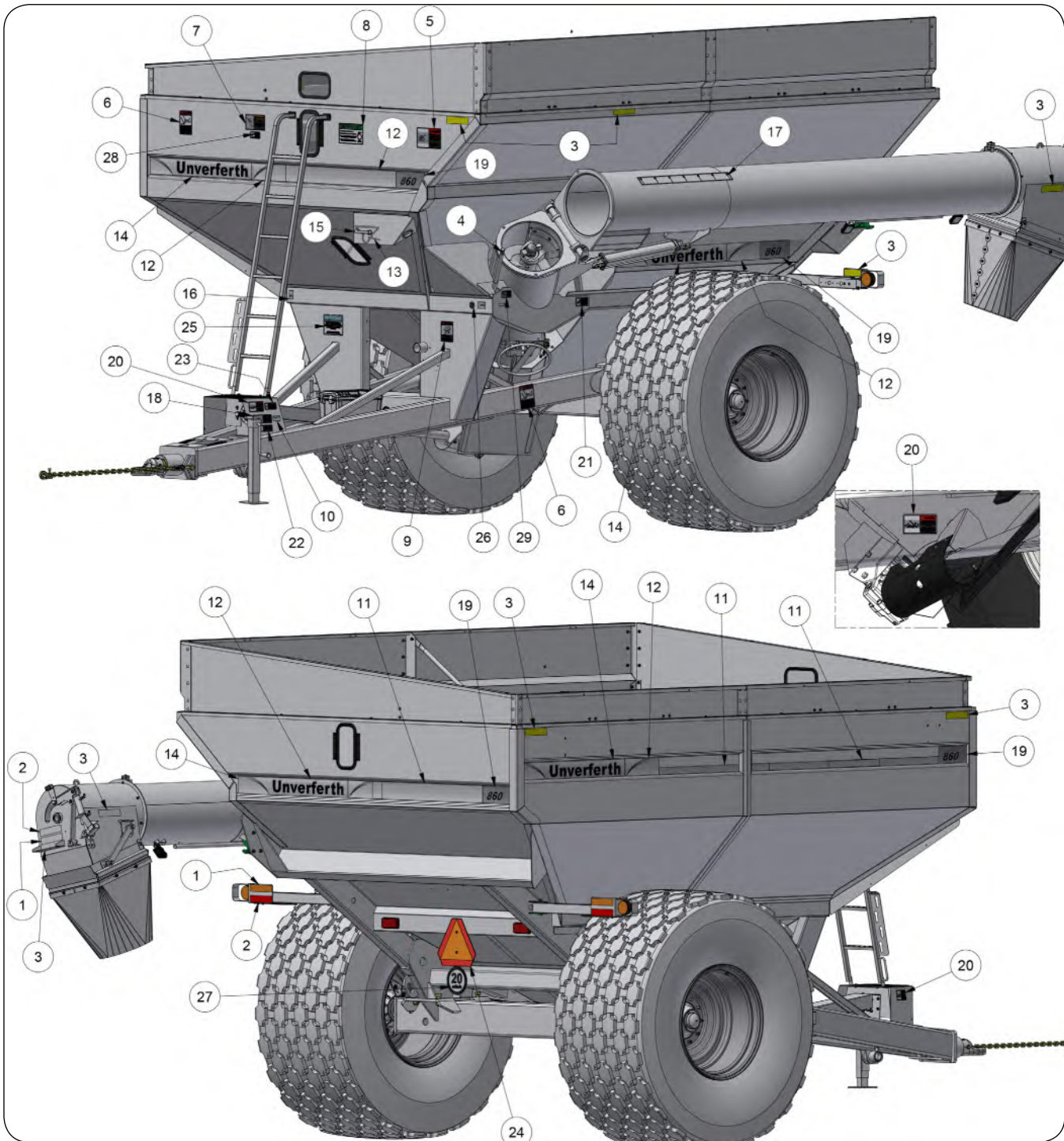
Please visit www.unverferth.com/parts/ for the most current parts listing.

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

Decals

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



_94094
5-2



97961



95445

Decals

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

ITEM	DESCRIPTION	PART NO.	QTY.	NOTES
1	Fluorescent Strip	9003125	2	2 x 9"
2	Red Reflector	9003126	2	2 x 9"
3	Amber Reflector	9003127	8	2 x 9"
4	Decal, Reflective Checker Tape	265384	1	
5	Decal, Danger, Electrical Lines	9003474	1	
6	Decal, Danger, PTO Cut & Crush	9003475	2	
7	Decal, Warning (No Riders)	9003476	1	
8	Decal, Flow Control Gate	9003477	1	
9	Decal, Danger Just For Kids	9003478	1	
10	Decal, Important (Shear-Bolts)	9003574	1	
11	Decal, Stripe (5 1/4" x 46")	9004035	6	
12	Decal, Stripe with Tail (5 1/4" x 14 1/4")	9004213	4	
13	Decal, Profile Cart	9004288	1	
14	Decal, Unverferth Logo (5 1/4" x 45 3/4")	9004298	4	
15	Decal, Auger Indicator	9005335	1	
16	Decal, FEMA	91605	1	
17	Decal, Flow Control 3" x 38"	92563	1	
18	Decal, Warning, Tongue Drop	94094	1	
19	Decal, 860	9501818	4	
	Decal, 760	9501823		
20	Decal, Danger, Drive Shaft Entanglement	95046	3	
21	Decal, Warning, High Pressure	95445	1	
22	Decal, Caution, Transport Chain	97575	1	
23	Decal, Warning (Read & Understand)	97961	1	
24	SMV Sign	TA510514	1	
25	Decal, IMPORTANT (PTO Engagement)	9008151	1	
26	SIS Decal, Front	9008715	1	
27	SIS Mounting Plate with Decal	79342B	1	
	SIS Decal, Rear	9008714	1	
28	Decal, CAUTION (Slippery Surface)	95008	1	
29	Decal, WARNING (Pinch Point)	95839	1	



95008



9003474



9003477



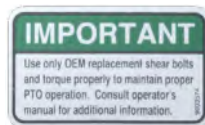
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9003478



9003476



9003574



9008151



95839



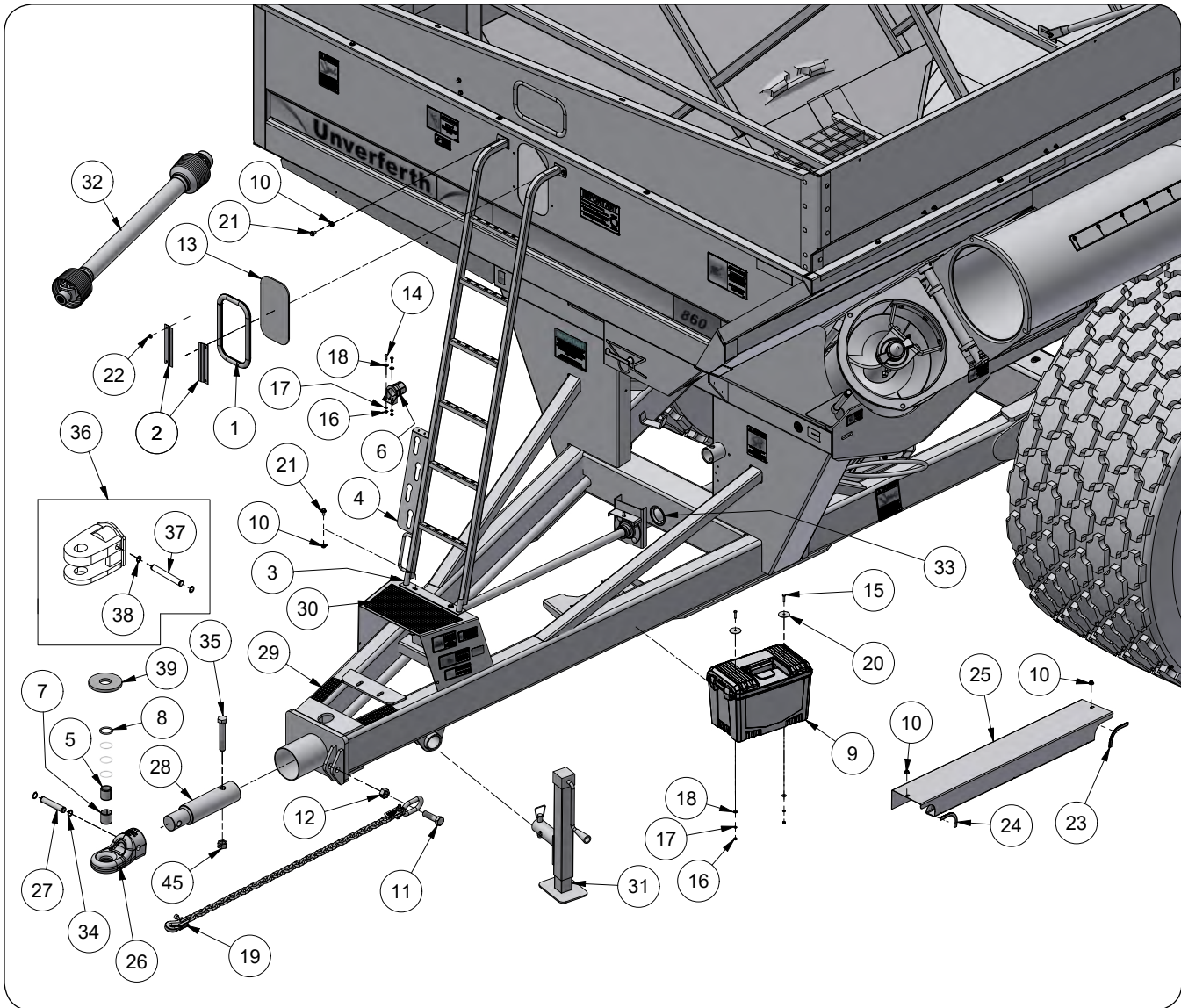
97575



95046

Final Assembly

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



ITEM	DESCRIPTION	PART NO.	QTY.	NOTES
1	Window Molding	250431	2	
2	Bracket, Window Retainer	250461B	4	
3	Ladder Bracket Weldment	251069B	1	
4	Ladder Weldment	280610B	1	
5	Tension Bushing 2" OD x 1.516" ID x 2"	9001917	1	
6	Connector Holder	9001968	1	
7	Split Tension Bushing 2" OD x 1 3/4" ID x 2"	9002130	1	
8	O-Ring	9005259	4	
9	Storage Box	9005850	1	
10	Nut/Large Flange 3/8"-16UNC	91263	6	Grade 5

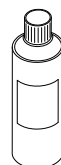
Final Assembly

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

ITEM	DESCRIPTION	PART NO.	QTY.	NOTES
11	Capscrew 1"-8UNC x 3 1/2"	91299-189	1	Grade 8
12	Locknut 1"-8UNC	92199	1	
13	Window	92403	2	
14	Capscrew 1/4"-20UNC x 3/4"	9390-003	2	Grade 5
15	Capscrew 1/4"-20UNC x 1 1/4"	9390-006	2	Grade 5
16	Hex Nut 1/4"-20UNC	9394-002	2	
17	Lock Washer 1/4"	9404-017	2	
18	Flat Washer 1/4"	9405-064	4	
19	Transport Chain	9003278	1	
20	Fender Washer	94763	2	
21	Capscrew/Large Flange 3/8"-16UNC x 3/4"	95585	6	Grade 5
22	Large Flange Hex Nut 1/4"-20UNC	97189	8	
23	Trim-Edge	2006214	1	
24	Trim-Edge	2006215	1	
25	Driveshaft Cover	280615B	1	
26	Hitch, Single Tang - CAT4	282875B	1	
27	Pin 1" Dia. x 5 1/2	282876	1	
28	Hitch Bar 3 3/4" Dia.	284780	1	
29	Runner Pad	9001498	2	
30	Platform Rubber Pad	9004114	1	
31	Jack Assembly w/Pin	9004156	1	
	Pin 7/8" Dia.	9004171	-	
32	PTO Assembly	-	1	Refer to "PTO Assembly" in Parts Section for Items
33	Rubber Grommet	9006780	2	
34	Retaining Ring 1"	91192	2	
35	Capscrew 1"-8UNC x 6" G8	91299-195	1	
36	Clevis Hitch Kit	281690	Opt.	Includes Items 37 & 38
37	Pin 1" Dia. x 7 3/8"	281691	1	
38	Retaining Ring 1"	91192	2	
39	Wear Shoe CAT 4	281898	1	

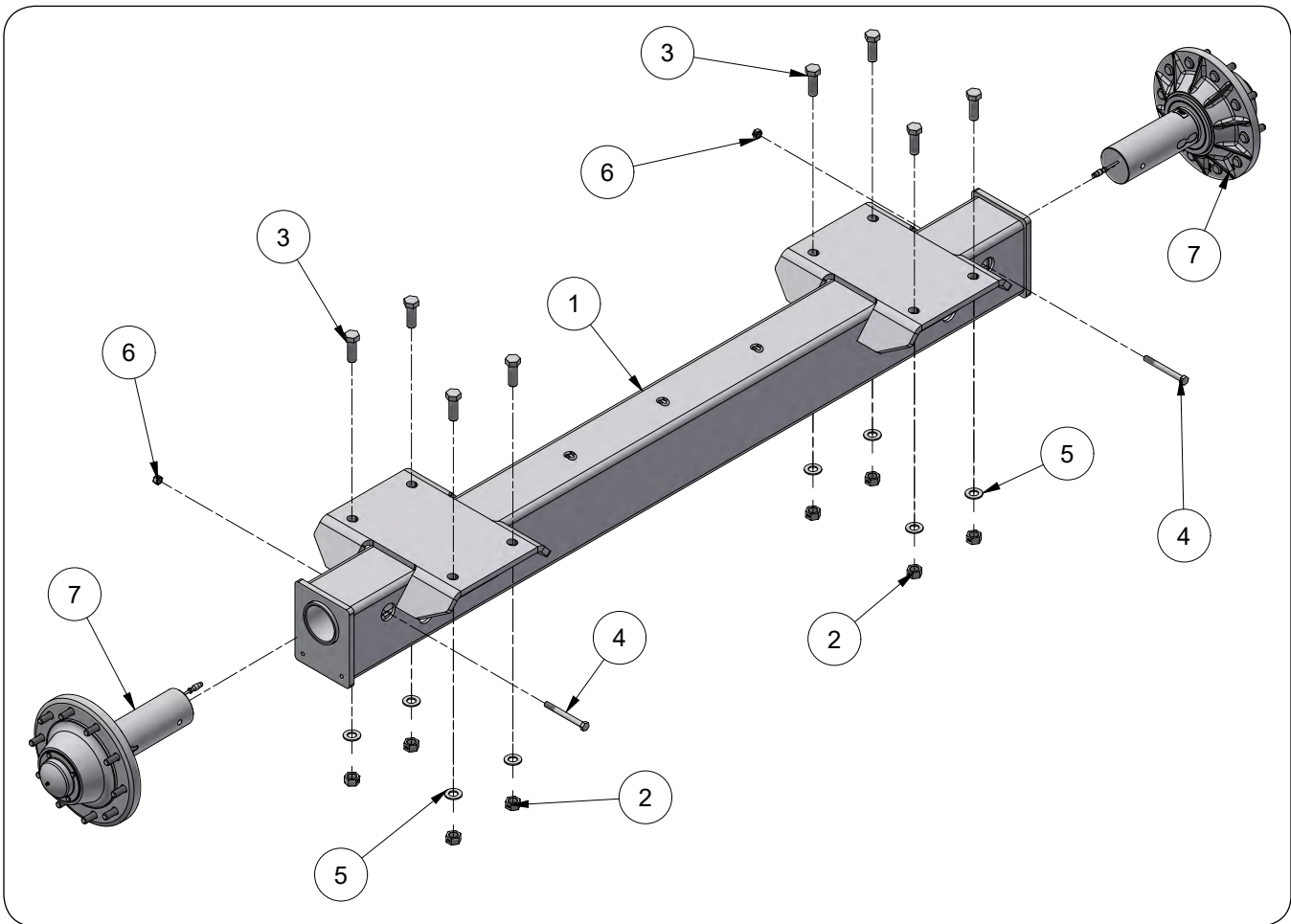
Touch-Up Paint

Paint	Spray
Black	97013
Green	97015
Red	97301
Primer, Gray	9500082
Silver Mist	97012



Rigid Axle — Single Wheel

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



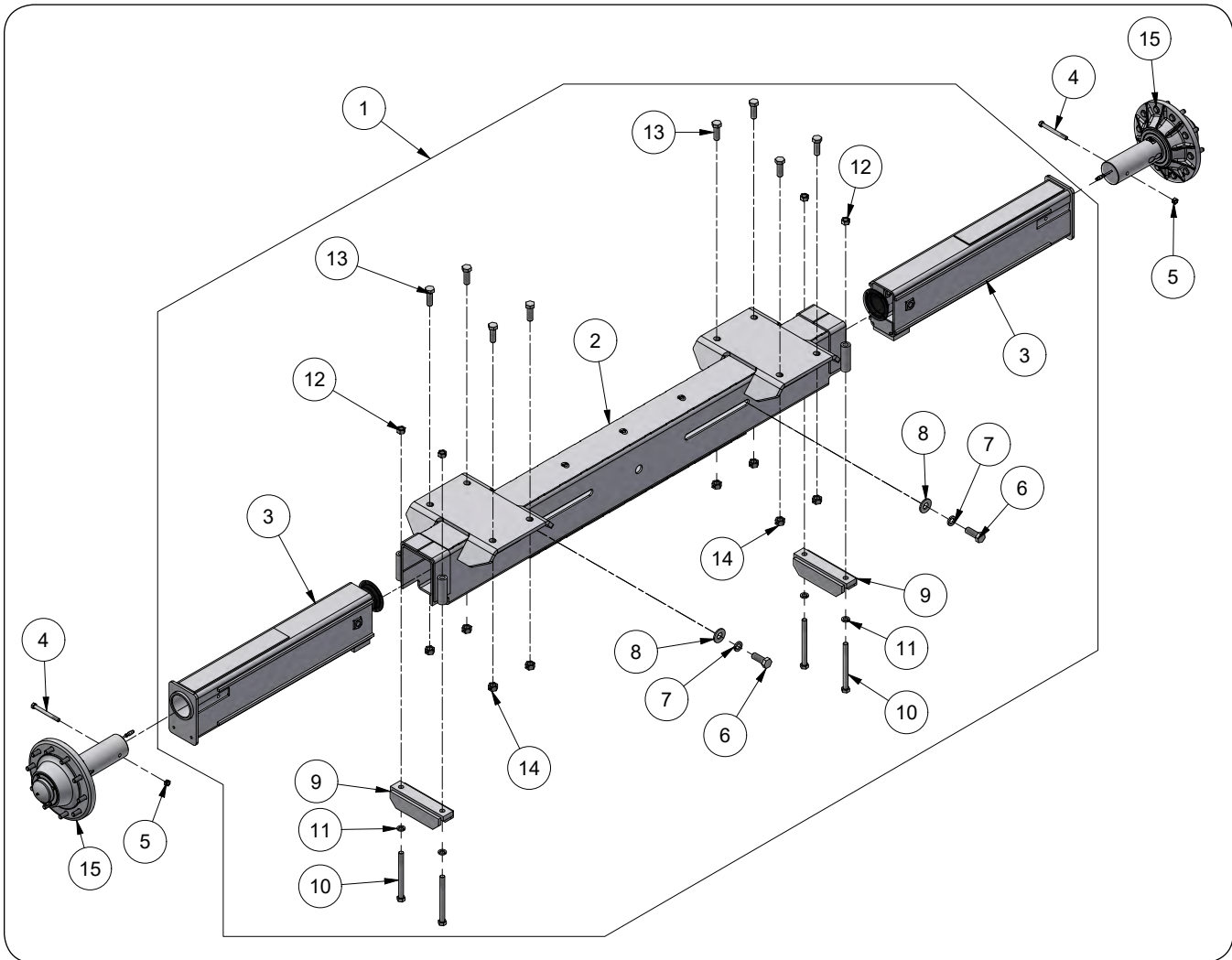
Rigid Axle — Single Wheel

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

ITEM	DESCRIPTION	PART NO.	QTY.	NOTES
	Rigid Axle Bundle, Scale =Black=	2006312B	1	Items 1-7
	Rigid Axle Bundle, Non-Scale =Black=	2006313B		
1	Axle Tube Weldment =Black=	2011884B	1	
2	Capscrew, 5/8"-11UNC x 6" G5	9390-136	2	
3	Locknut/Center, 5/8"-11UNC	95905	2	
4	Locknut/Center, 1"-8UNC	92199	8	
5	Flat Washer, 1" SAE	9405-116	8	
6	Capscrew, 1"-8UNC x 3" G5	9390-187	8	
7	Hub & Spindle Assembly, Scale =Black=	286954B	2	Shown
	Hub & Spindle Assembly, Non-Scale =Black=	280634B	2	

Adjustable Axle — Single Wheels

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



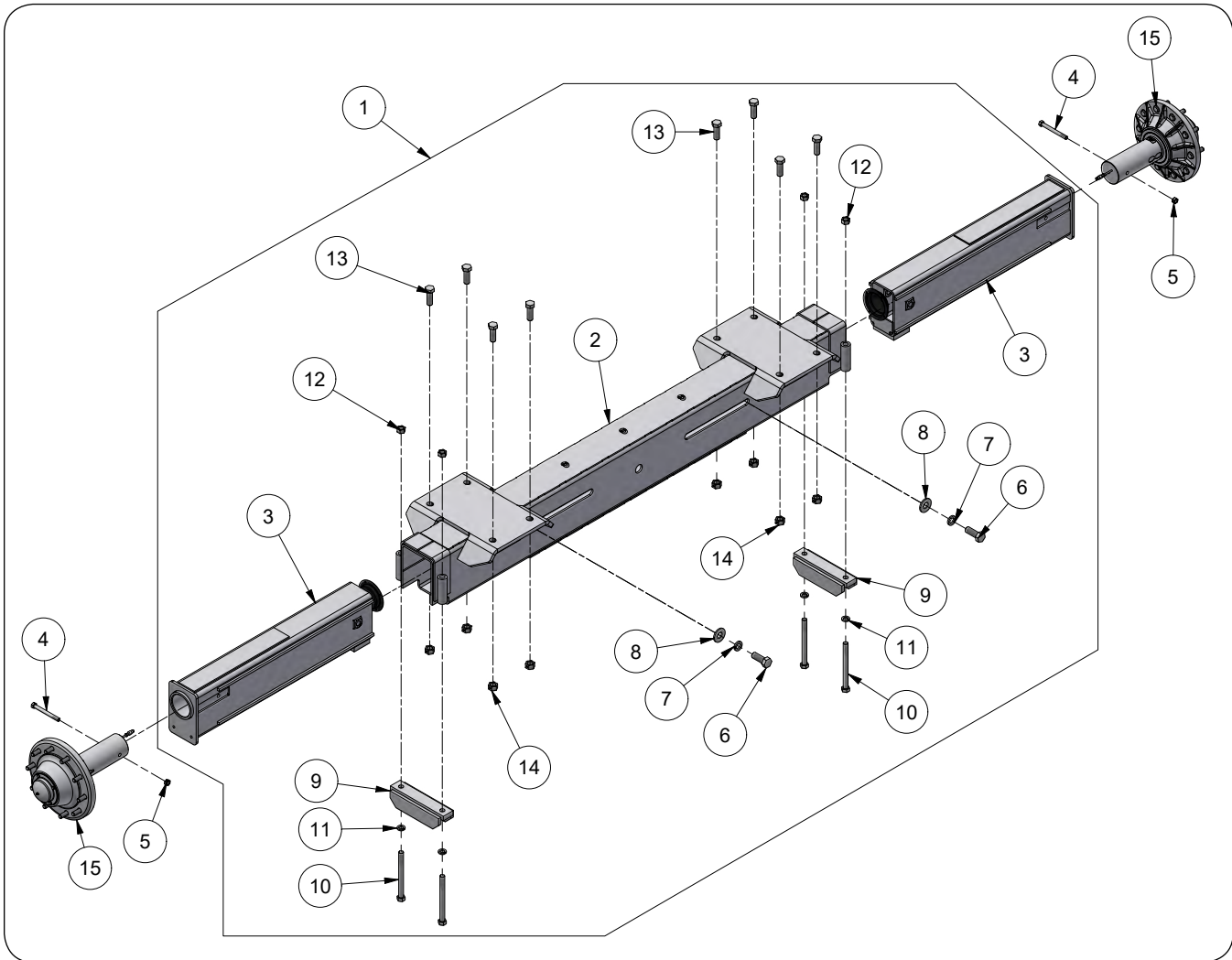
Adjustable Axle — Single Wheels

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

ITEM	DESCRIPTION	PART NO.		QTY	NOTES
		3/4" Stud 4.50" Spindle	M22 Stud 4.50" Spindle		
	Adjustable Axle Bundle, Scale =Black=	2007543B	2006348B	-	
	Adjustable Axle Bundle, Non-Scale =Black=	2007542B	2006347B	-	
1	Adjustable Axle Assembly =Black=	2006346B	>	1	Includes Items 2 through 14
2	Main Axle Adjustable Tube Weldment =Black=	2006343B	>	1	
3	Axle Extension Kit	280173	>	-	Includes Items 4, 5, & 6
	Axle Extension Weldment =Black=	280135B	>	2	
4	Capscrew, 5/8"-11UNC x 6 1/4" G5	9007387	>	2	
5	Locknut/Center, 5/8"-11UNC	95905	>	2	
6	Capscrew, 1 1/8"-7UNC x 3" G5	9390-200	>	2	
7	Lock Washer, 1 1/8"	9404-045	>	2	
8	Washer, 1 1/8" Heavy-Duty	289325	>	2	
9	Axle Clamp Weldment =Black=	280293B	>	2	
10	Capscrew, 7/8"-9UNC x 10" G5	9390-457	>	4	
11	Lock Washer, 7/8"	9404-037	>	4	
12	Hex Nut, 7/8"-9UNC	9394-018	>	4	
13	Capscrew, 1"-8UNC x 3" G5	9390-187	>	8	
14	Locknut/Center, 1"-8UNC	92199	>	8	
15	Hub & Spindle Assembly, Scale =Black=	286954B	267280B	2	
	Hub & Spindle Assembly, Non-Scale =Black=	280634B	267284B		

Adjustable Axle — Dual Wheels

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



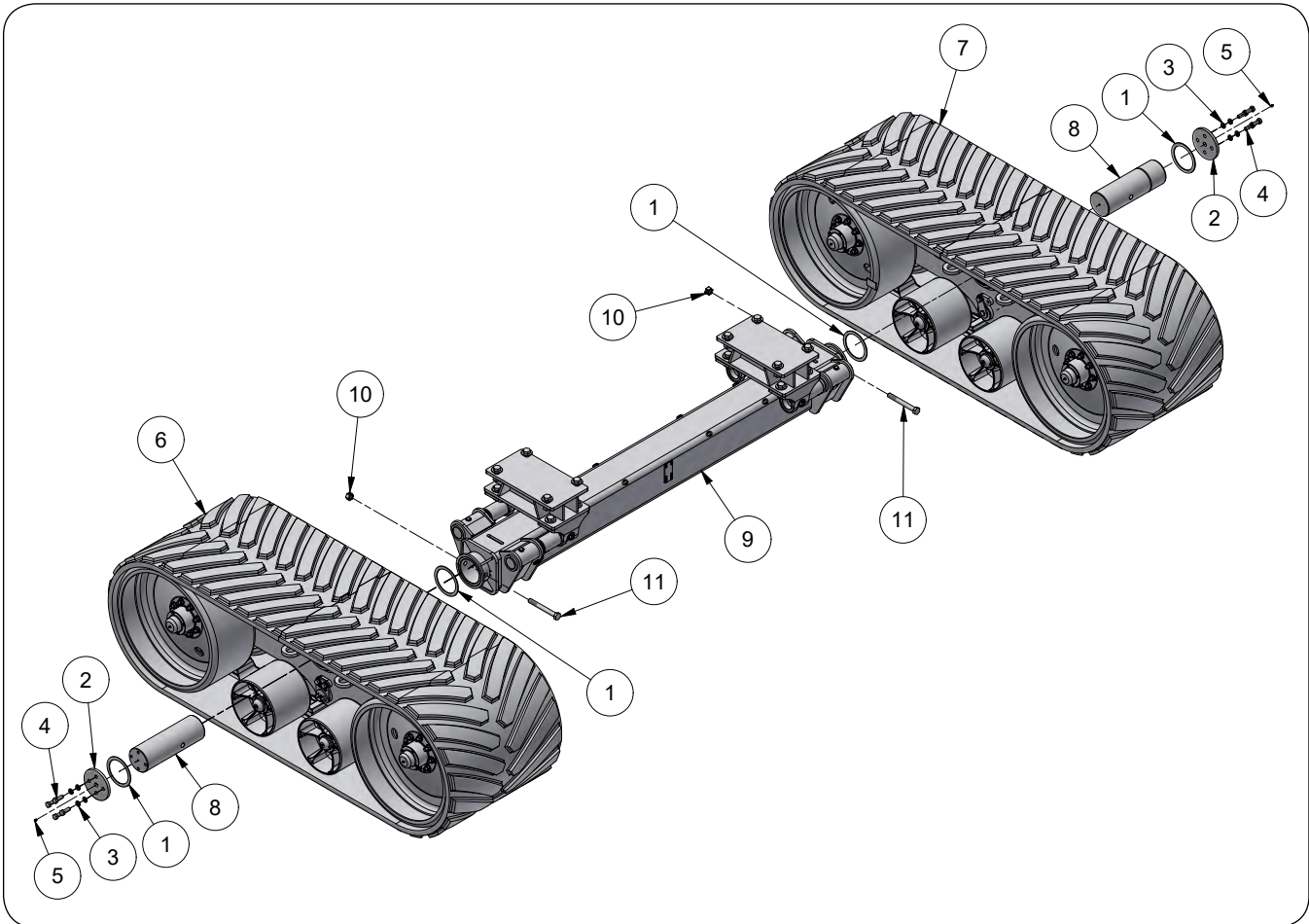
Adjustable Axle — Dual Wheels

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

ITEM	DESCRIPTION	PART NO.	QTY	NOTES
	Adjustable Axle Bundle, Scale =Black=	2006457B	-	
	Adjustable Axle Bundle, Non-Scale =Black=	2006456B	-	
1	Adjustable Axle Assembly =Black=	2006346B	1	Includes Items 2 through 14
2	Main Axle Adjustable Tube Weldment =Black=	2006343B	1	
3	Axle Extension Kit	280173	-	Includes Items 4, 5, & 6
	Axle Extension Tube Weldment =Black=	280135B	2	
4	Capscrew, 5/8"-11UNC x 6 1/4" G5	9007387	2	
5	Locknut/Center, 5/8"-11UNC	95905	2	
6	Capscrew, 1 1/8"-7UNC x 3" G5	9390-200	2	
7	Lock Washer, 1 1/8"	9404-045	2	
8	Washer, 1 1/8" Heavy-Duty	289325	2	
9	Axle Clamp Weldment =Black=	280293B	2	
10	Capscrew, 7/8"-9UNC x 10" G5	9390-457	4	
11	Lock Washer, 7/8"	9404-037	4	
12	Hex Nut, 7/8"-9UNC	9394-018	4	
13	Capscrew, 1"-8UNC x 3" G5	9390-187	8	
14	Locknut/Center, 1"-8UNC	92199	8	
15	Hub & Spindle Assembly, Scale =Black=	267210B	2	
	Hub & Spindle Assembly, Non-Scale =Black=	284269B		

Track Bundle Components — Model 860 ONLY

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

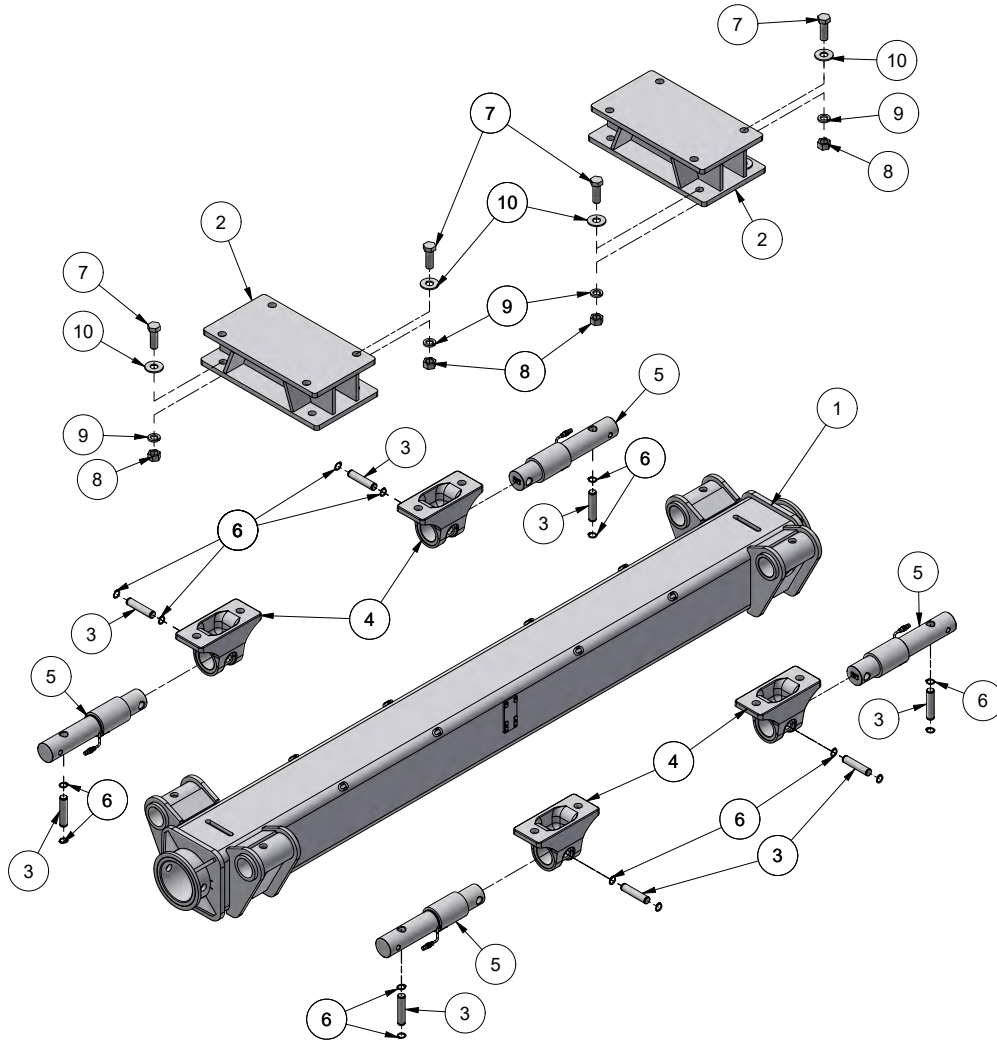


ITEM	DESCRIPTION	PART NO.	QTY.	NOTES
1	Washer, 7 1/2"	268619	4	
2	Cover Plate =Black=	268121B	2	
3	Lock Washer, 3/4"	9404-033	8	
4	Capscrew, 3/4"-10UNC x 2 " G5	9390-145	8	
5	Grease Zerk	93426	2	
6	Track Assembly, Left-Hand	267140B	1	
7	Track Assembly, Right-Hand	267141B	1	
8	Axle Pivot Shaft	267124	2	
9	Track Axle Bundle, Scale =Black=	2007755B	1	
	Track Axle Bundle, Non-Scale =Black=	2007764B		
10	Locknut/Center, 1"-8UNC	92199	2	
11	Capscrew, 1"-8UNC x 8 1/2" G5	9390-462	2	

FOR TRACK INFORMATION, PLEASE REFER TO YOUR TRACK MANUAL.

Track Axle Components — Model 860 ONLY

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

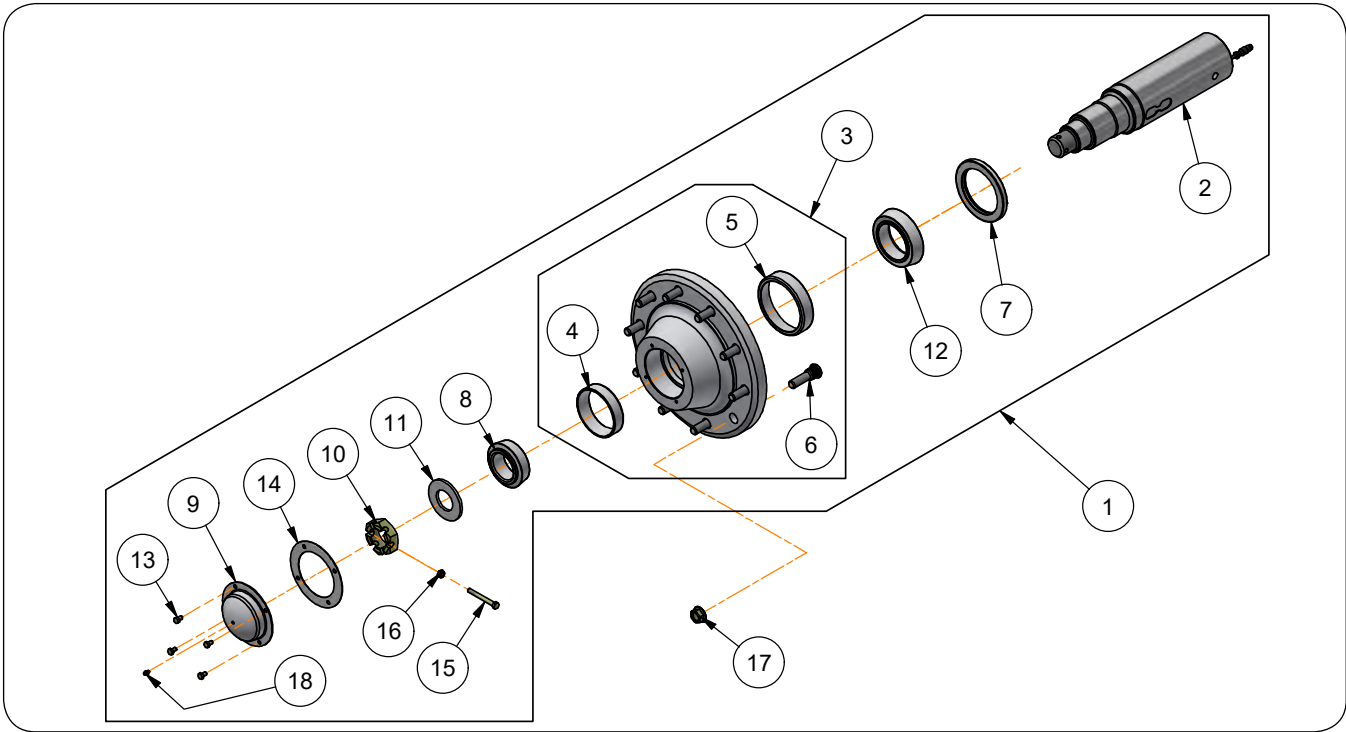


ITEM	DESCRIPTION	PART NO.	QTY.	NOTES
	Track Axle Bundle, Scale =Black=	2007755B	1	SHOWN
	Track Axle Bundle, Non-Scale =Black=	2007764B	1	
1	Track Axle Weldment =Black=	267292B	1	
2	Riser Weldment =Black=	287945B	2	
3	Hitch Pin, 1" Dia. x 4 9/16"	250843	8	
4	Axle Mount Casting =Black=	283855B	2	
5	Scale Load Cell, 2.875" Dia.	9004903	4	SHOWN
	Hitch Bar, 2 875" Dia.	268289	4	
6	Retaining Ring, 1"	91192	8	
7	Capscrew, 1"-8UNC x 3" G5	9390-187	16	
8	Hex Nut, 1"-8UNC	9394-020	16	
9	Lock Washer, 1"	9404-041	16	
10	Flat Washer, 1" USS	9405-118	16	

FOR TRACK INFORMATION, PLEASE REFER TO YOUR TRACK MANUAL.

Hub & Spindle — Single Wheels

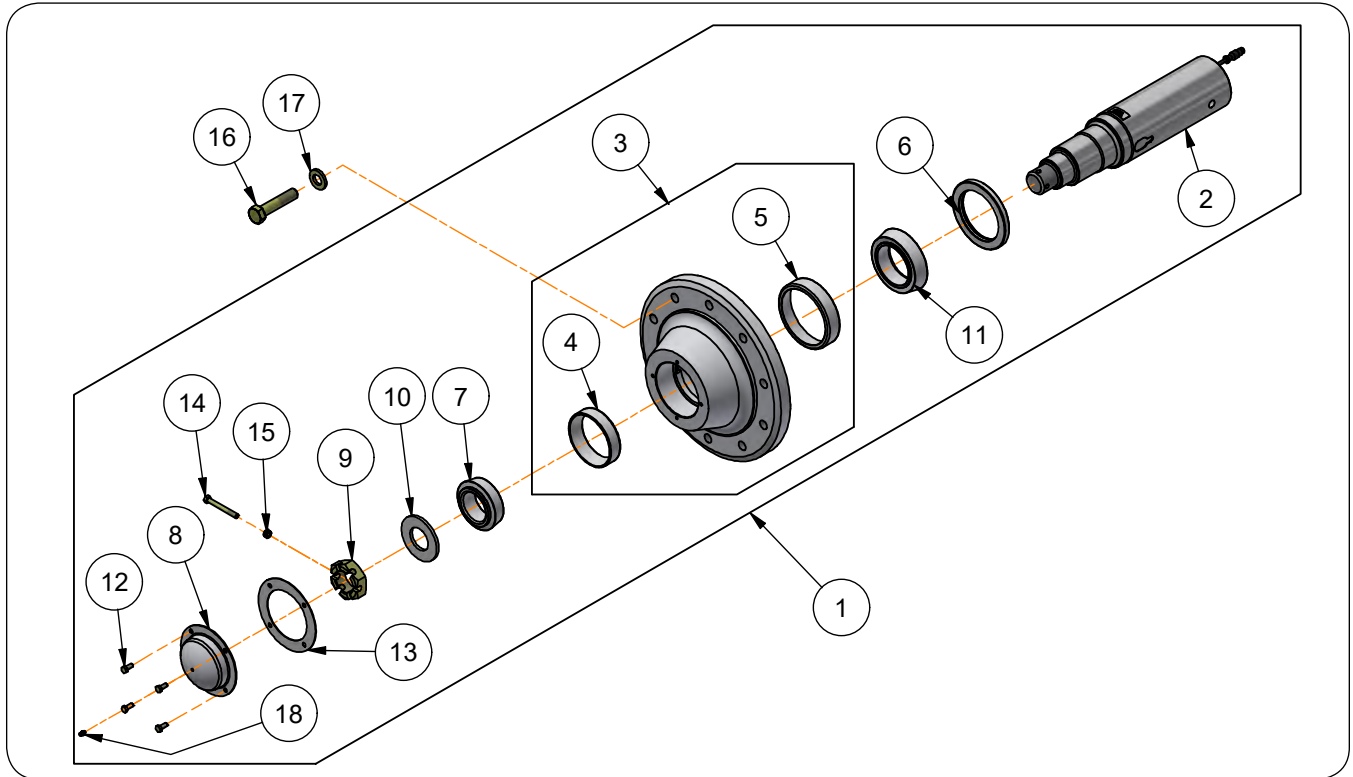
Please visit www.unverferth.com/parts/ for the most current parts listing.



ITEM	DESCRIPTION	PART NUMBER		QTY	NOTES
		3/4" Stud	M22 Stud		
1	Hub & Spindle Assembly w/out Scales (Black)	280634B	267284B	-	Includes 2 through 16 & 18
	Hub & Spindle Assembly w/Scales (Black)	286954B	267280B	-	Includes 2 through 16 & 18
2	Spindle Dia. 4.50" (For Units w/out Scales)	280240	>	1	
	Spindle Dia. 4.50" (For Units w/Scales)	9006348	>		
3	Hub Sub Assembly (Black)	200039B	265390B	1	Includes Items 4, 5, 6
4	Bearing Cup	92462	>	1	HM212011
5	Bearing Cup	92476	>	1	HM218210
6	Stud Bolt, 3/4"-16UNF x 3"	94794	-	10	Grade 8
	Stud Bolt, M22x1.5x4	-	9007001		
7	Seal, 4.375" I.D.	92455	>	1	43605SA
8	Outer Bearing Cone	92464	>	1	HM212049
9	Hub Cap (Black)	286171B	>	1	
10	Nut	92470	>	1	
11	Washer	92472	>	1	
12	Inner Bearing Cone	92545	>	1	HM218248
13	Capscrew, 5/16"-18UNC x 1/2"	9390-026	>	4	Grade 5
14	Gasket	284230	>	1	
15	Capscrew, 3/8"-16UNC x 3 1/4"	9390-064	>	1	Grade 5
16	Locknut, 3/8"-16UNC	902875	>	1	
	Wheel Nut, 3/4"-16UNF	92458	-		
17	Flanged Cap Nut, M22x1.5	-	97319	10	
	Grease Zerk	91160	>		

Hub & Spindle — Straddle Duals

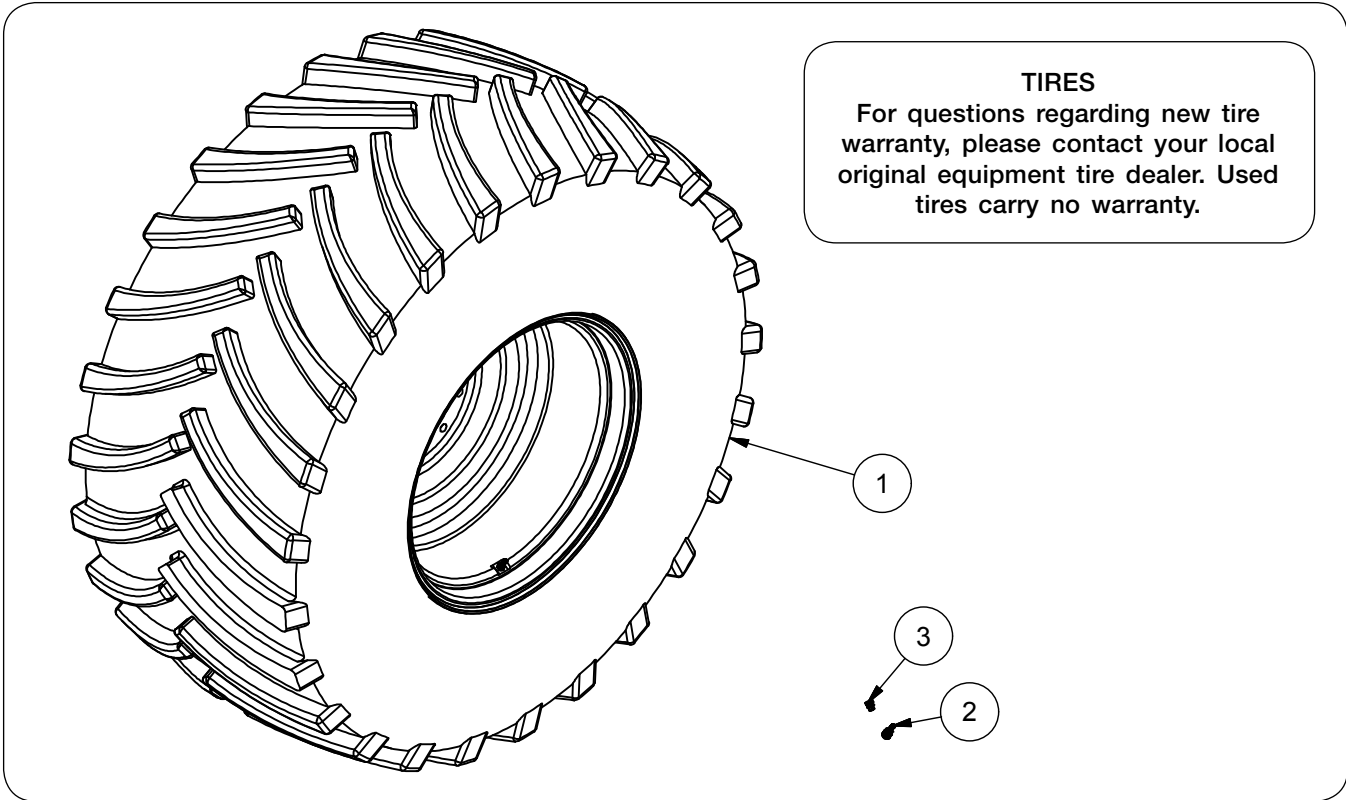
Please visit www.unverferth.com/parts/ for the most current parts listing.



ITEM	DESCRIPTION	PART NUMBER	QTY.	NOTES
1	Hub & Spindle Assembly w/out Scales (Black)	284269B	-	Includes 2 through 15 & 18
	Hub & Spindle Assembly w/Scales (Black)	267210B	-	Includes 2 through 15 & 18
2	Spindle Dia. 4.50" (For Units w/out Scales)	280240	1	
	Spindle Dia. 4.50" (For Units w/Scales)	9006348		
3	Hub Sub Assembly (Black)	266455B	1	Includes Items 4 & 5
4	Bearing Cup	92462	1	HM212011
5	Bearing Cup	92476	1	HM218210
6	Seal - 4.375" I.D.	92455	1	43605SA
7	Outer Bearing Cone	92464	1	HM212049
8	Hub Cap (Black)	286171B	1	
9	Nut	92470	1	
10	Washer	92472	1	
11	Inner Bearing Cone	92545	1	HM218248
12	Capscrew 5/16"-18UNC x 3/4"	9390-028	4	Grade 5
13	Gasket	284230	1	
14	Capscrew 3/8"-16UNC x 3 1/4"	9390-064	1	Grade 5
15	Locknut 3/8"-16UNC	902875	1	
16	Capscrew 7/8"-14UNF x 4"	97043	10	Grade 8
17	Flat Washer 7/8"	97041	10	
18	Grease Zerk	91160	1	

Single Wheels & Tires

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

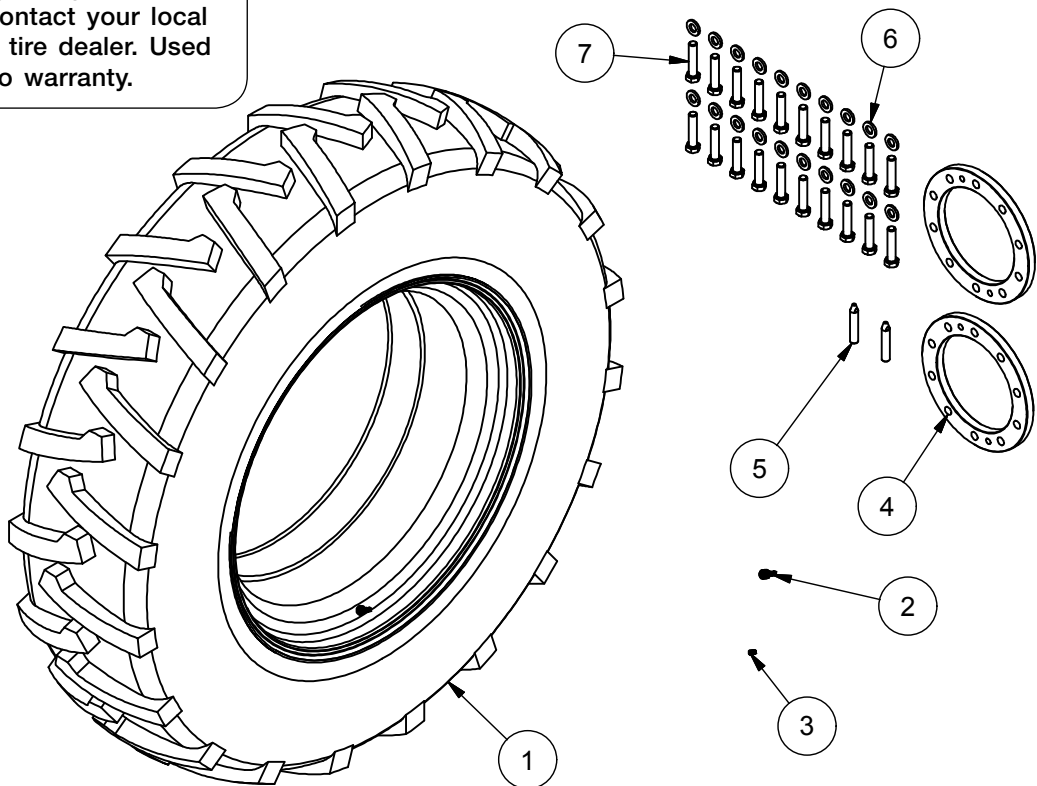


ITEM	DESCRIPTION	PART NUMBER		QTY.	NOTES
		Model 760	Model 860		
1	Wheel & Tire Assembly	18519SM	18519SM	2	30 x 32 / TL900/60R32 R-1W
	Wheel & Tire Assembly	110314SM	110314SM	2	30 x 32 / TL900/65R32 R-3W
	Wheel Only	903059SM	903059SM	2	30 x 32
1	Wheel & Tire Assembly	19976SM	19976SM	2	27 x 32 / TL800/65R32 R-1W
	Wheel & Tire Assembly	19977SM	19977SM	2	27 x 32 / TL800/60R32 R-3W
	Wheel Only	92417SM	92417SM	2	27 x 32
1	Wheel & Tire Assembly	92416SM/9501523	-	2	21 x 32 / TL650/75R32 R-1W
	Wheel Only	92416SM	92416SM	2	21 x 32
1	Wheel & Tire Assembly	16558SM	-	2	18 x 38 / TL520/85D38 R-1
	Wheel Only	17702SM	-	2	18 x 38
2	Valve Stem	93300	93300	2	
3	Plug, Rim Hole	95365	95365	2	

Dual Wheels & Tires

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

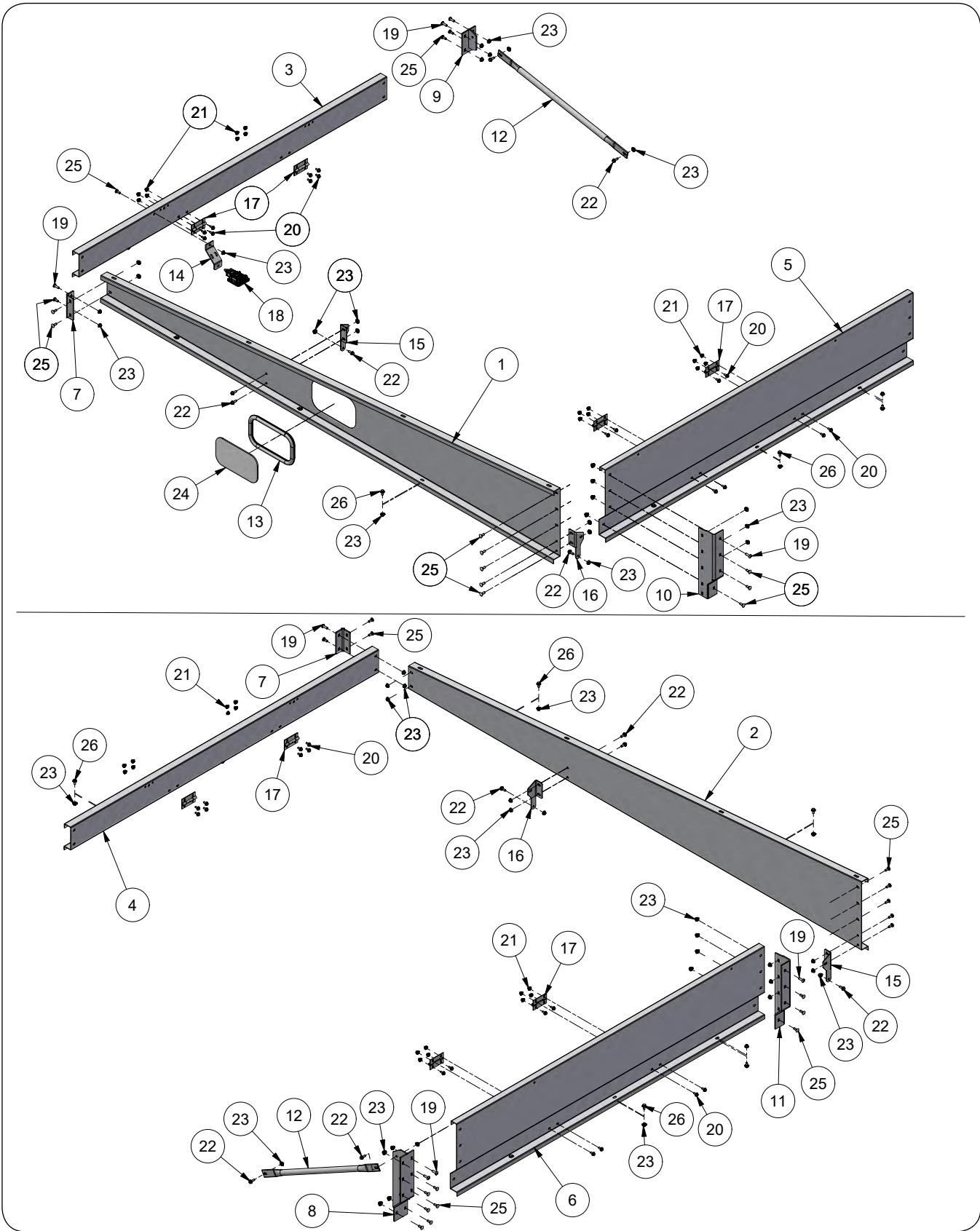
TIRES
 For questions regarding new tire warranty, please contact your local original equipment tire dealer. Used tires carry no warranty.



ITEM	DESCRIPTION	PART NUMBER	QTY.	NOTES
1	Wheel & Tire Assembly	15311SM	4	TL420/80R46F 3 Star R-1
	Wheel Only	15303SM	4	13 x 46 - 10 Hole
1	Wheel & Tire Assembly	14565SM	4	TL520/85R42F R-1
	Wheel Only	14562SM	4	18 x 42 - 10 Hole
1	Wheel & Tire Assembly	14564SM	4	TL480/80R42F R-1
	Wheel Only	14561SM	4	16 x 42 - 10 Hole
2	Valve Stem	93300	4	
3	Valve Stem Adapter	901207	4	
4	Reinforcing Ring	14442SM	2	
5	Guide Pin	266459	2	
6	Flat Washer 7/8"	97041	20	
7	Capscrew 7/8"-14UNF x 4"	97043	20	Grade 8

Sideboards — Model 760 - Serial Number D71480100 & Up

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



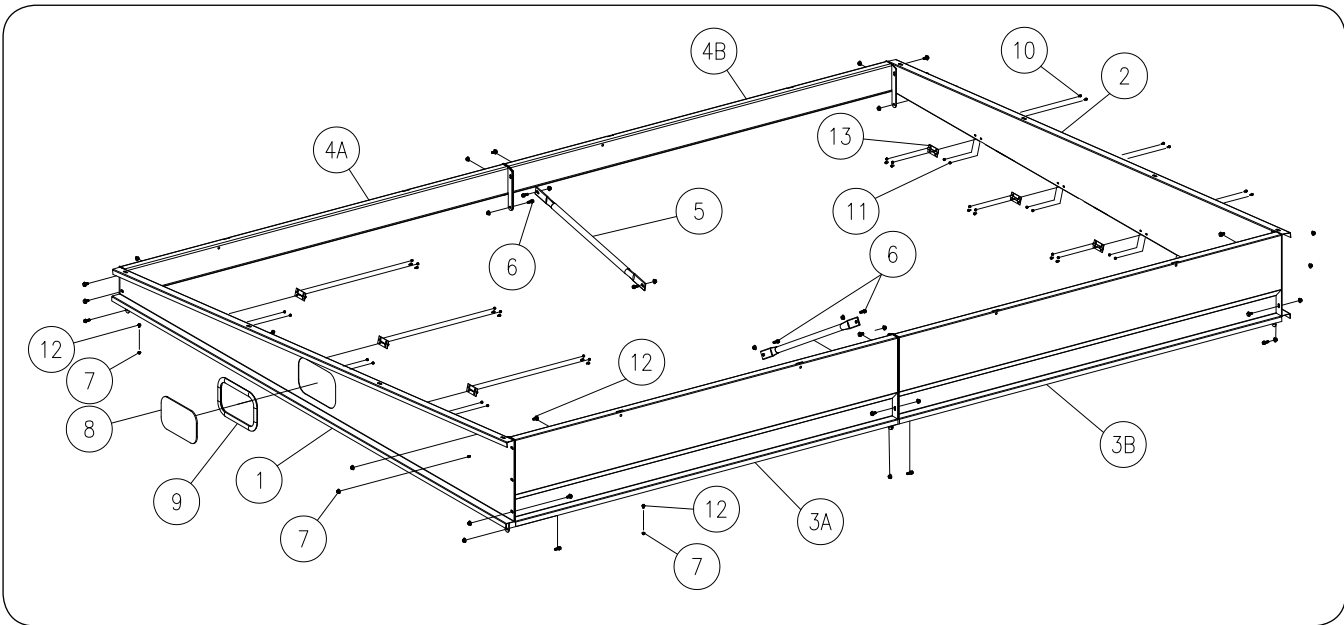
Sideboards — Model 760 - Serial Number D71480100 & Up

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

ITEM	DESCRIPTION	PART NO.	QTY.	NOTES
1	Board, Front	2012198B	1	
2	Board, Rear	2012199B	1	
3	Board, Right Front	2012200B	1	
4	Board, Right Rear	2012201B	1	
5	Board, Left Front	2012202B	1	
6	Board, Left Rear	2012203B	1	
7	Sideboard Corner, Right-Hand	2012204B	2	
8	Sideboard Splice, Left-Hand Center	2012216B	1	
9	Sideboard Splice, Right-Hand Center	2012217B	1	
10	Corner Brace, Left-Hand Front	2012218B	1	
11	Corner Plate, Left-Hand Rear	2012219B	1	
12	Tube, Brace	220032B	2	
13	Window Molding	250431	1	
14	Lamp Mount Plate	271574B	1	
15	Hinge Plate	288427B	2	
16	Hinge Plate	288428B	2	
17	Hinge	9004626	8	
18	Work Light, LED	9008957	1	
19	Truss Head, 3/8"-16UNC x 1 1/4" Torx Head Machine Screw	9009089	8	
20	Flange Screw, 5/16"-18UNC x 3/4"	91256	32	
21	Hex Nut/Large Flange, 5/16"-18UNC	91257	32	
22	Flange Screw, 3/8"-16UNC x 1"	91262	12	
23	Nut/Large Flange, 3/8"-16UNC	91263	73	
24	Window	92403	1	
25	Carriage Bolt, 3/8"-16UNC x 1" G5	9388-051	31	
26	Capscrew/Large Flange, 3/8"-16UNC x 3/4"	95585	22	

Sideboards — Model 760 - D64610100 - D71480099

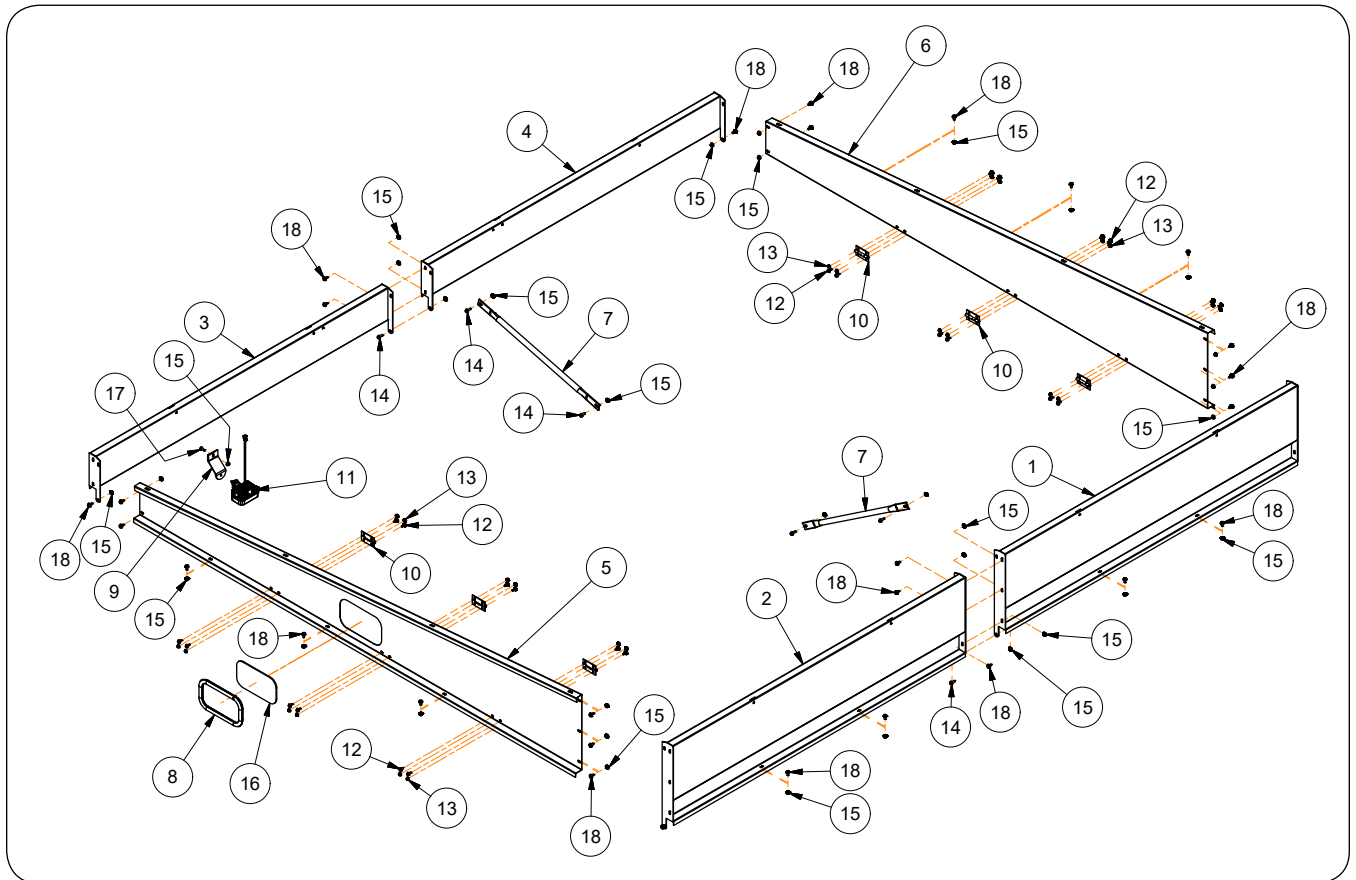
Please visit www.unverferth.com/parts/ for the most current parts listing.



ITEM	DESCRIPTION	PART NO.	QTY.	NOTES
1	Board, Front	280255B	1	
2	Board, Rear	280256B	1	
3A	Board, Left Front	251023B	1	
3B	Board, Left Rear	251024B	1	
4A	Board, Right Front	280448B	1	
4B	Board, Right Rear	280449B	1	
5	Tube, Brace	220032B	2	
6	Flange Screw, 3/8"-16UNC x 1"	91262	6	
7	Flange Nut, 3/8"-16UNC	91263	44	
8	Window	92403	1	
9	Window Molding	250431	1	
10	Flange Bolt, 5/16"-18UNC x 3/4"	91256	24	
11	Flange Nut, 5/16"-18UNC	91257	24	
12	Flange Screw, 3/8"-16UNC x 3/4"	95585	37	
13	Hinge	9004626	6	

Sideboards — Model 860 - D64610100 - D71480099

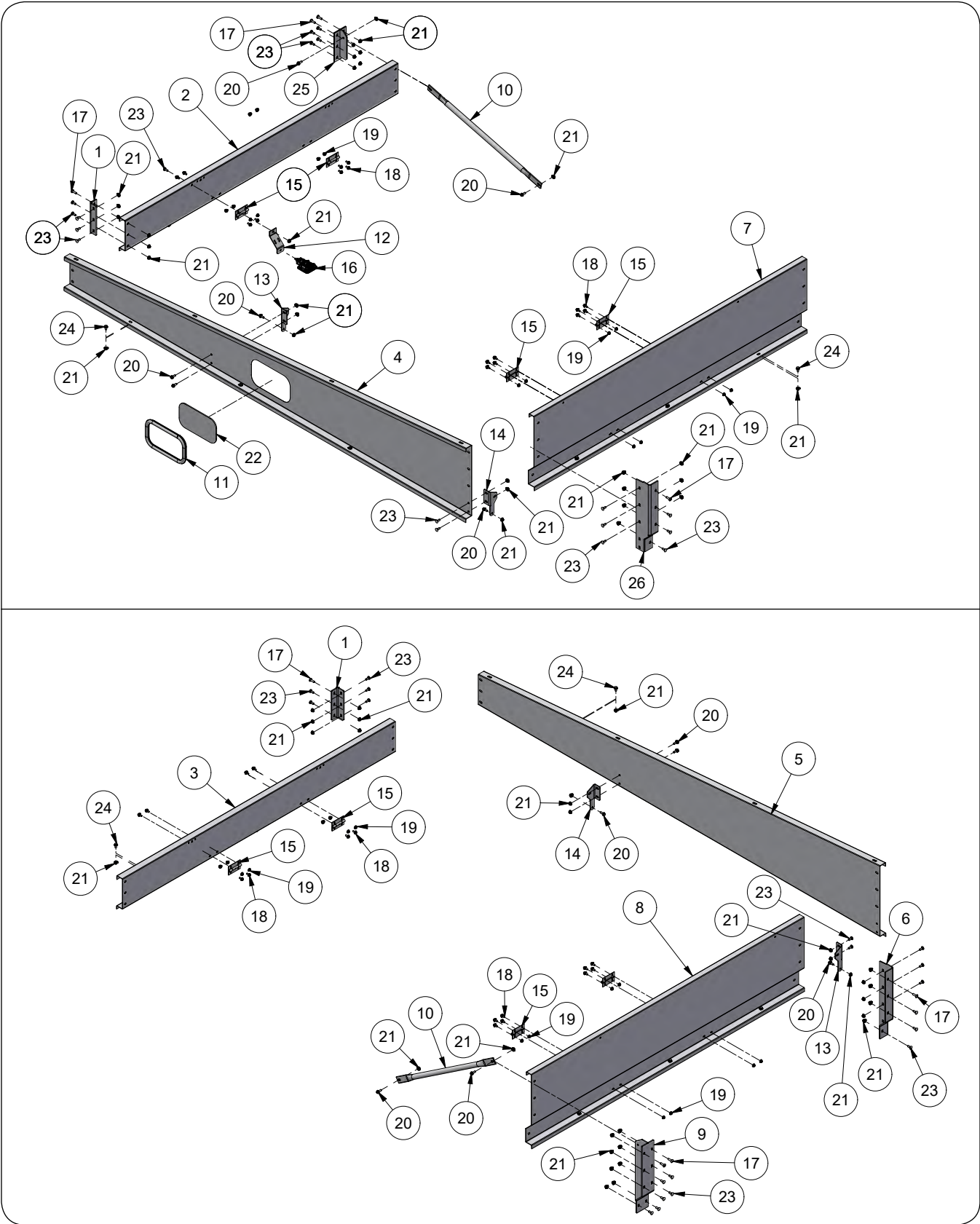
Please visit www.unverferth.com/parts/ for the most current parts listing.



ITEM	DESCRIPTION	PART NO.	QTY.	NOTES
1	Board, Left Rear	2007502B	1	
2	Board, Left Front	2007503B	1	
3	Board, Right Front	2007508B	1	
4	Board, Right Rear	2007509B	1	
5	Board, Front	2007510B	1	
6	Board, Rear	2007511B	1	
7	Tube, Brace	220032B	2	
8	Window Molding	250431	1	
9	Light Bracket	271574B	1	
10	Hinge	9004626	6	
11	Work Light, LED	9008957	1	
12	Flange Bolt, 5/16"-18UNC x 3/4"	91256	24	
13	Flange Nut, 5/16"-18UNC	91257	24	
14	Flange Screw, 3/8"-16UNC x 1"	91262	6	
15	Flange Nut, 3/8"-16UNC	91263	44	
16	Window	92403	1	
17	Carriage Bolt 3/8"-16UNC x 1"	9388-051	1	
18	Flange Screw, 3/8"-16UNC x 3/4"	95585	37	

Sideboards — Model 860 - Serial Number D71480100 & Up

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



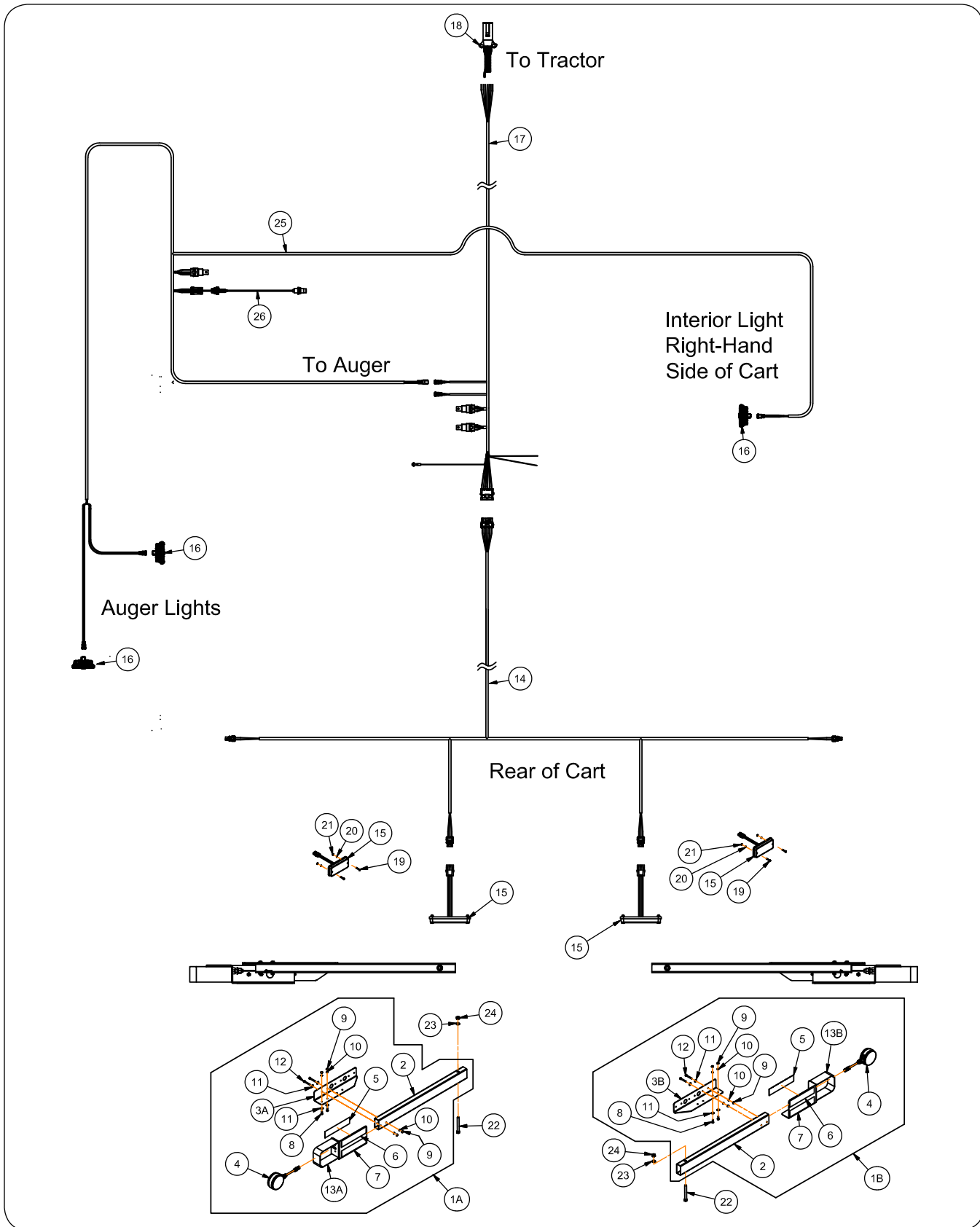
Sideboards — Model 860 - Serial Number D71480100 & Up

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

ITEM	DESCRIPTION	PART NO.	QTY.	NOTES
1	Sideboard Corner, Right-Hand	2012180B	2	
2	Board, Right Front	2012181B	1	
3	Board, Right Rear	2012182B	1	
4	Board, Front	2012186B	1	
5	Board, Rear	2012188B	1	
6	Corner Plate, Left-Hand Rear	2012189B	1	
7	Board, Left Front	2012190B	1	
8	Board, Left Rear	2012192B	1	
9	Sideboard Splice, Left-Hand Center	2012197B	1	
10	Tube, Brace	220032B	2	
11	Window Molding	250431	1	
12	Lamp Mount Plate	271574B	1	
13	Hinge Plate	288427B	2	
14	Hinge Plate	288428B	2	
15	Hinge	9004626	8	
16	Work Light, LED	9008957	1	
17	Truss Head, 3/8"-16UNC x 1 1/4" Torx Head Machine Screw	9009089	8	
18	Flange Screw, 5/16"-18UNC x 3/4"	91256	32	
19	Hex Nut/Large Flange, 5/16"-18UNC	91257	32	
20	Flange Screw, 3/8"-16UNC x 1"	91262	12	
21	Nut/Large Flange, 3/8"-16UNC	91263	79	
22	Window	92403	1	
23	Carriage Bolt, 3/8"-16UNC x 1" G5	9388-051	37	
24	Capscrew/Large Flange, 3/8"-16UNC x 3/4"	95585	22	
25	Sideboard Splice, Right-Hand Center	2012185B	1	
26	Corner Brace, Left-Hand Front	2012187B	1	

Electrical

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



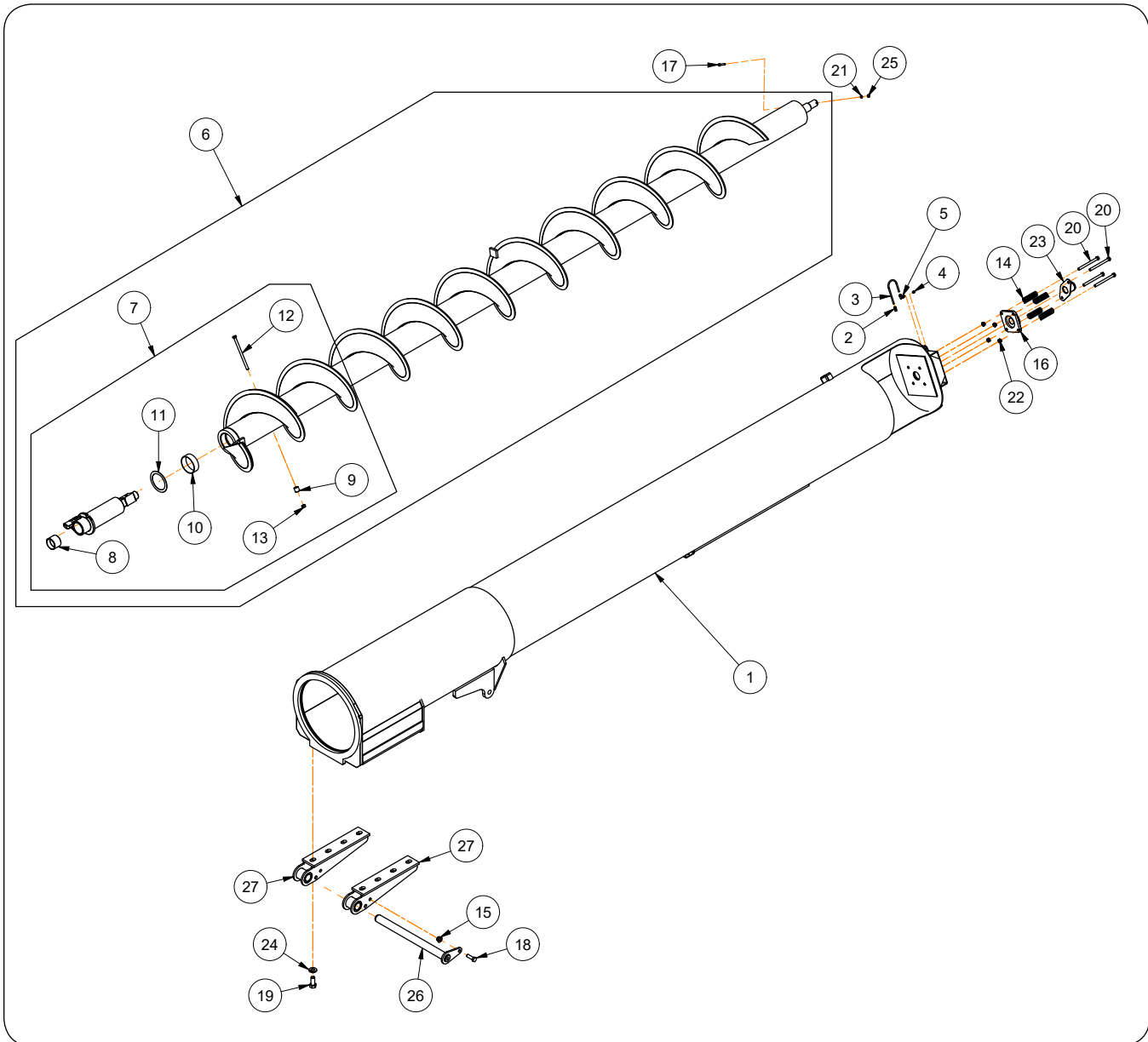
Electrical

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

ITEM	DESCRIPTION	PART NO.	QTY.	NOTES
1A	Tail Light Assembly, Left-Hand	2006223B	1	Includes Items 2, 3A, 4-12, 13A
1B	Tail Light Assembly, Right-Hand	2006224B	1	Includes Items 2, 3B, 4-12, 13B
2	Tube, Lamp Extension	280370B	2	
3A	Light Bracket Plate, Left-Hand	251407B	1	
3B	Light Bracket Plate, Right-Hand	251406B	1	
4	LED Light, Amber - Double Face	9005142	2	
5	Amber Reflector	9003127	7	2 x 9"
6	Fluorescent Strip, Red-Orange	9003125	2	2 x 9"
7	Red Reflector	9003126	2	2 x 9"
8	Capscrew, 1/4"-20UNC x 3/4"	9390-003	8	
9	Hex Nut, 1/4"-20UNC	9394-002	8	
10	Lock Washer, 1/4"	9404-017	8	
11	Flat Washer, 1/4" USS	9405-064	8	
12	Capscrew, 1/4-20 UNC x 2	9390-009	4	
13A	Light Bracket Weldment, Left-Hand	252302B	1	
13B	Light Bracket Weldment, Right-Hand	252301B	1	
14	Wiring Harness, Rear 190"	9003050	1	
15	Red Light- Tail/Turn (LED)	9006282	2	
16	Work Light, LED	9008957	2	
17	Wiring Harness, Front 232"	9007460	1	
18	Electrical Coupler	92450	1	
19	Pan Head Machine Screw #10-32UNF x 1 1/4	903172-350	4	
20	Split Lock Washer, #10	9404-013	4	
21	Hex Nut #10-32 Grade 2	9830-016	4	
22	Capscrew, 1/2-13UNCx4	9390-112	2	
23	Lock Washer, 1/2	9404-025	2	
24	Nut, 1/2-13UNC	9394-010	2	
25	Wiring Harness - Auger 272"	9009080	1	
26	Proximity Sensor with Connector	9007472	1	
27	Cable Tie, 6"	9000106	7	Not Shown
	Cable Tie, 15 1/2"	9000107	2	Not Shown

Upper Auger

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



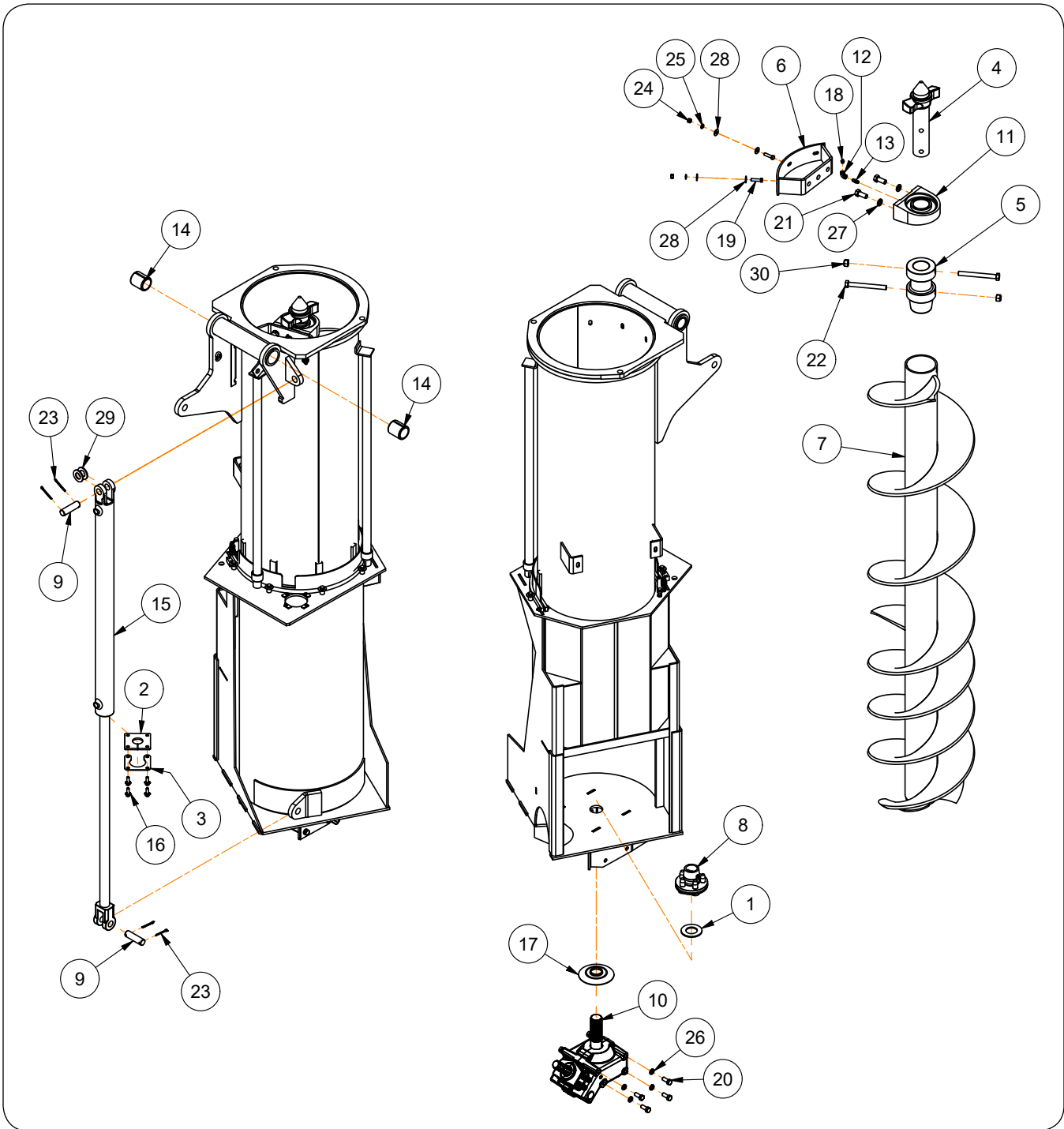
Upper Auger

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

ITEM	DESCRIPTION	PART NO.	QTY	NOTES
1	Upper Auger Tube Replacement =Green=	2006425G	1	
	Upper Auger Tube Replacement =Red=	2006425R		
2	Quicklinc Fitting	9005073	2	
3	Tube, Greased Nylon 1/4" OD	9005074	1	
4	Grease Zerk 1/8 NPT	93426	1	
5	Quicklinc Fitting	9005072	1	
6	Upper Auger Replacement Kit	2007715B	1	
7	Soft Start Assembly Kit	281682	1	
	8 Split Bushing, 2 3/4" OD x 2 1/2" OD x 2"	9003230	1	
	9 Spacer Bushing, 1" OD x 9/16" ID x 1"	410511	1	
	10 Self-Lubricating Bushing 4.25" OD x 4.011" ID x 1.375"	9004877	1	
	11 Self-Lubricating Thrust Washer 5.25" Dia.	9004878	1	
	12 Capscrew, 1/2"-13UNC x 8" G5	9390-119	1	
	13 Lock Nut 1/2"-13UNC	9800	1	
14	Compression Spring	9001812	4	
15	Locknut 5/8-11UNC	9003398	1	
16	Flanged Bearing 1 1/2" Dia. with Grease Zerk	92406	1	
	Grease Zerk 1/4-28	91160	1	
17	Capscrew 5/16"-18UNC x 2"	9390-034	1	Grade 5
18	Capscrew 5/8"-11UNC x 2"	9390-124	1	Grade 5
19	Capscrew 7/8-9UNC x 2	9390-164	8	Grade 5
20	Capscrew 1/2"-13UNC x 6" G5	9390-115	4	
21	Lock Washer, 5/16	9404-019	1	
22	Locknut 1/2-13UNC	94981	4	
23	Hood Pivot Pin Weldment	281635	1	
24	Flat Washer 7/8 Nom.	97041	8	
25	Hex Nut 5/16"-18UNC	9394-004	1	
26	Pivot Shaft Weldment	2012402	1	
27	Outer Pivot Bushing Weldment =Green=	281655G	2	
	Outer Pivot Bushing Weldment =Red=	281655R		

Lower Auger

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



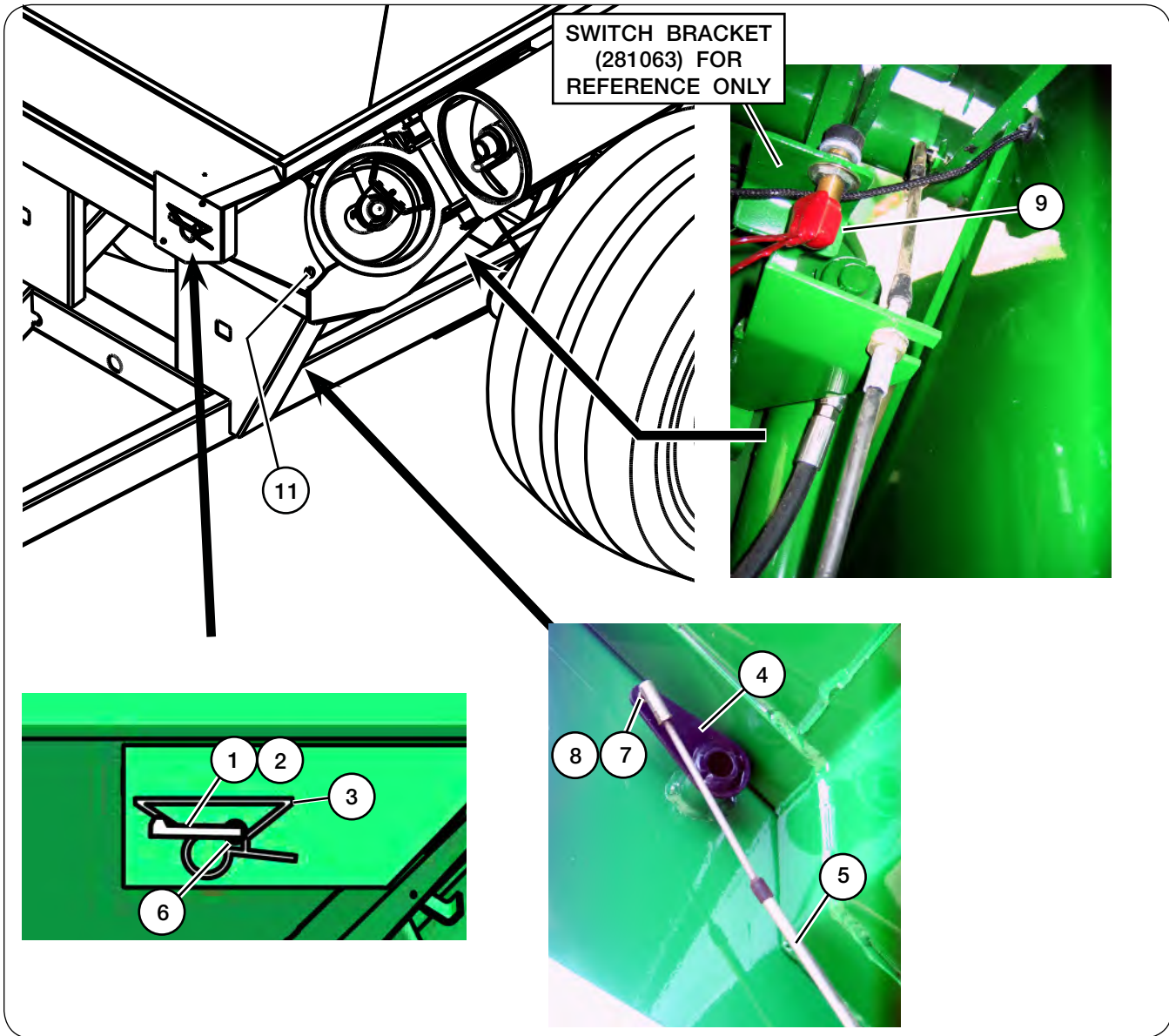
Lower Auger

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

ITEM	DESCRIPTION	PART NO.	QTY	NOTES
1	Spacer Washer 3.25" OD x 1.7813" ID	250393	1	
2	Rubber Gasket 1/4 x 4 x 4	268217	1	
3	Cover Plate	268218	1	
4	Drive Dog Weldment With Double Lobe	288811	1	Shown
5	Auger Tube Adapter	281209B	1	
6	Hanger Bearing Weldment	281620B	1	
7	Lower Auger Service Kit	281009-SER	1	Includes Items 5 & 8
8	Auger Drive Plate Assembly (5 Pin)	286436	1	
9	Pin 1" Dia. x 3 1/2"	804572	2	
10	Gearbox 45°	9002812	1	Refer to "45 Degree Gear Box" in this Section for Parts Listing
11	Pillow Block Bearing 2 1/2 Bore	9004731	1	
12	90° Elbow 1/8 NPTF Female x 1/8 NPTF Female	9004764	1	
13	Nipple 1/8 NPTF Male x 1/8 NPTF Male Hex Pipe	9004765	1	
14	Split Tension Bushing 2 1/4" OD x 1 3/4" ID	9004980	2	
15	Cylinder 2 1/2 x 36 (3000 PSI)	9005363	1	
16	Screw/Large Flange 3/8"-16UNC x 1"	91262	4	Grade 5
17	Dust Cover for Gearbox	92805B	1	
18	Grease Zerk 1/8 NPT	93426	2	
19	Capscrew 3/8"-16UNC x 1 1/2"	9390-057	3	Grade 5
20	Capscrew 1/2"-13UNC x 1 1/2"	9390-100	8	Grade 5
21	Capscrew 5/8"-11UNC x 1 1/2"	9390-122	2	Grade 5
22	Capscrew 5/8"-11UNC x 6"	9390-136	2	
23	Cotter Pin 3/16" Dia. x 2"	9391-046	4	
24	Hex Nut 3/8"-16UNC	9394-006	3	Grade 5
25	Lock Washer 3/8"	9404-021	3	
26	Lock Washer 1/2"	9404-025	8	
27	Lock Washer 5/8"	9404-029	2	
28	Flat Washer 3/8" USS	9405-076	6	
29	Flat Washer 1" SAE	9405-116	2	
30	Locknut 5/8"-11UNC	9801	2	
31	Indicator Pipe	280606B	1	NOT SHOWN See Auger Position Indicator Assembly

Auger Position Indicator Assembly

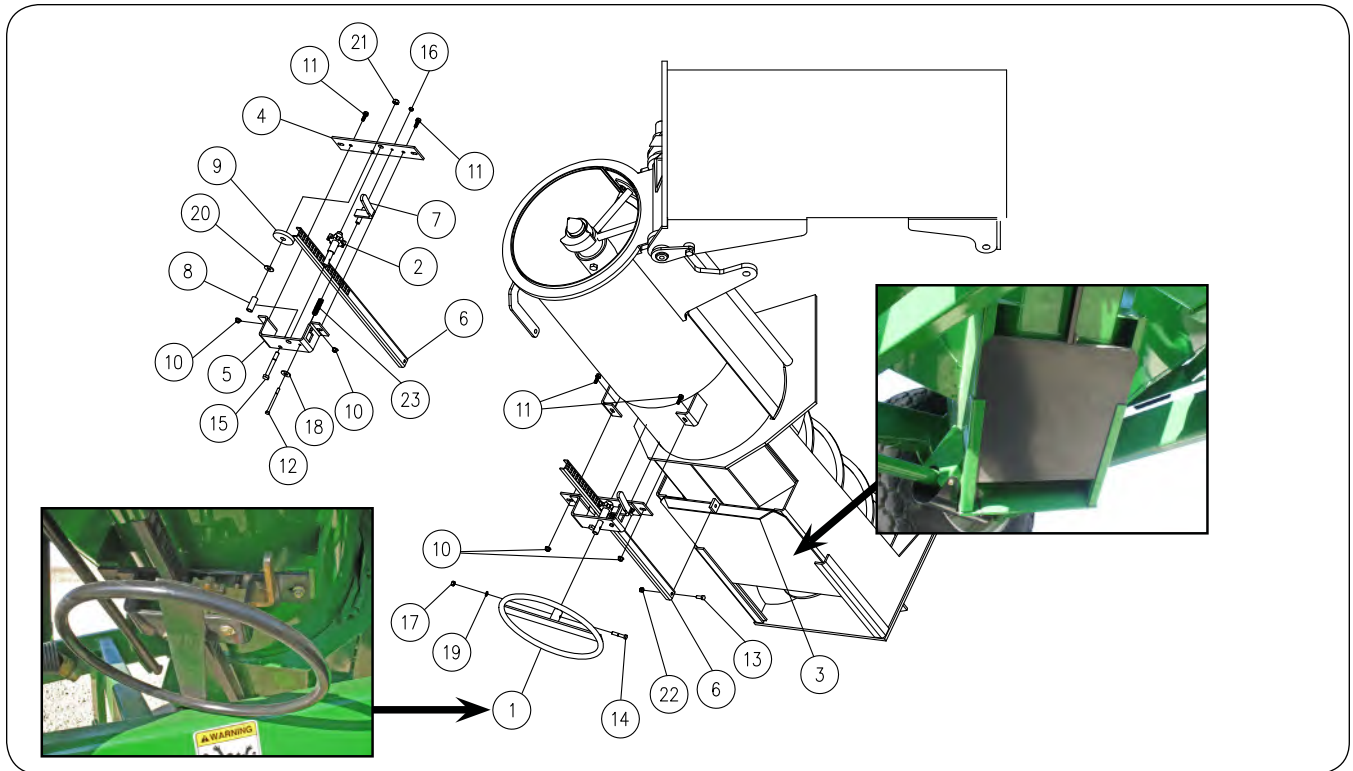
Please visit www.unverferth.com/parts/ for the most current parts listing.



ITEM	DESCRIPTION	PART NO.	QTY.	NOTES
1	Auger Indicator Kit	280575	1	Includes Item #2
2	Decal, Auger Indicator	9005335	1	
3	Decal, Cart Profile	9004288	1	
4	Indicator Retainer Weldment	281628B	1	
5	Cable, Push/Pull 132"	9005406	1	
6	Set Screw 5/16-18UNC x 3/8	9399-071	1	
7	Hex Nut #10-32	9830-016	1	Grade 2
8	Lock Washer #10	9404-013	1	
9	Momentary Switch	9003046	1	
10	Butt Connectors	9000166	2	Not Shown
11	Pipe Indicator =Black=	280606B	1	

Cleanout Door Assembly

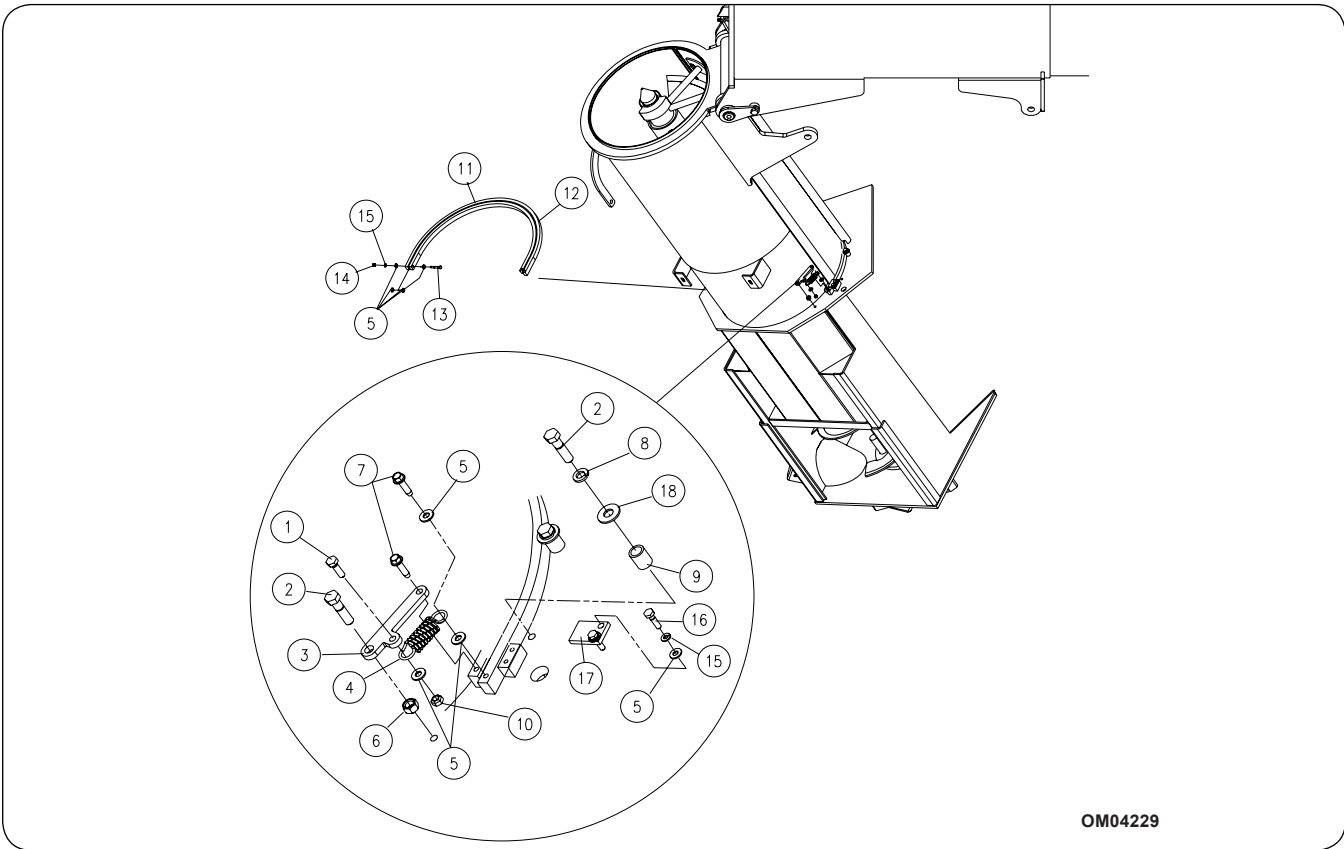
Please visit www.unverferth.com/parts/ for the most current parts listing.



ITEM	DESCRIPTION	PART NO.	QTY.	NOTES
1	Door Wheel Weldment	220060B	1	
2	Shaft & Gear Weldment	281062	1	
3	Door Weldment	281218B	1	
4	Plate, Back Door Lift	281059B	1	
5	Plate, Front Door Lift	281060B	1	
6	Rack	281105B	1	
7	Handle Weldment, Door	281109	1	
8	Bushing, Spacer	281145B	1	
9	Roller, Plastic	222118	1	
10	Locknut, 3/8-16UNC Auto.	9003396	4	
11	Carriage Bolt, 3/8-16UNC x 1	9388-051	4	
12	Capscrew, 5/16-18UNC x 4-1/2	9390-043	1	
13	Flange Head Screw, 3/8-16UNC x 1	91262	1	
14	Capscrew, 3/8-16UNC x 2	9390-059	1	
15	Capscrew, 1/2-13UNC x 4	9390-111	1	
16	Lock Nut, 5/16-18UNC	9807	1	
17	Hex Nut, 3/8-16UNC	9394-006	1	
18	Flat Washer 5/16	9405-070	1	
19	Lock Washer, 3/8	9404-021	1	
20	Flat Washer, 1/2	9405-088	1	
21	Lock Nut, 1/2-13UNC	94981	1	
22	Lock Nut/Top, 3/8-16UNC	9928	1	
23	Spring, Stop Pin	TA510035	1	

Flow Door Seals

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

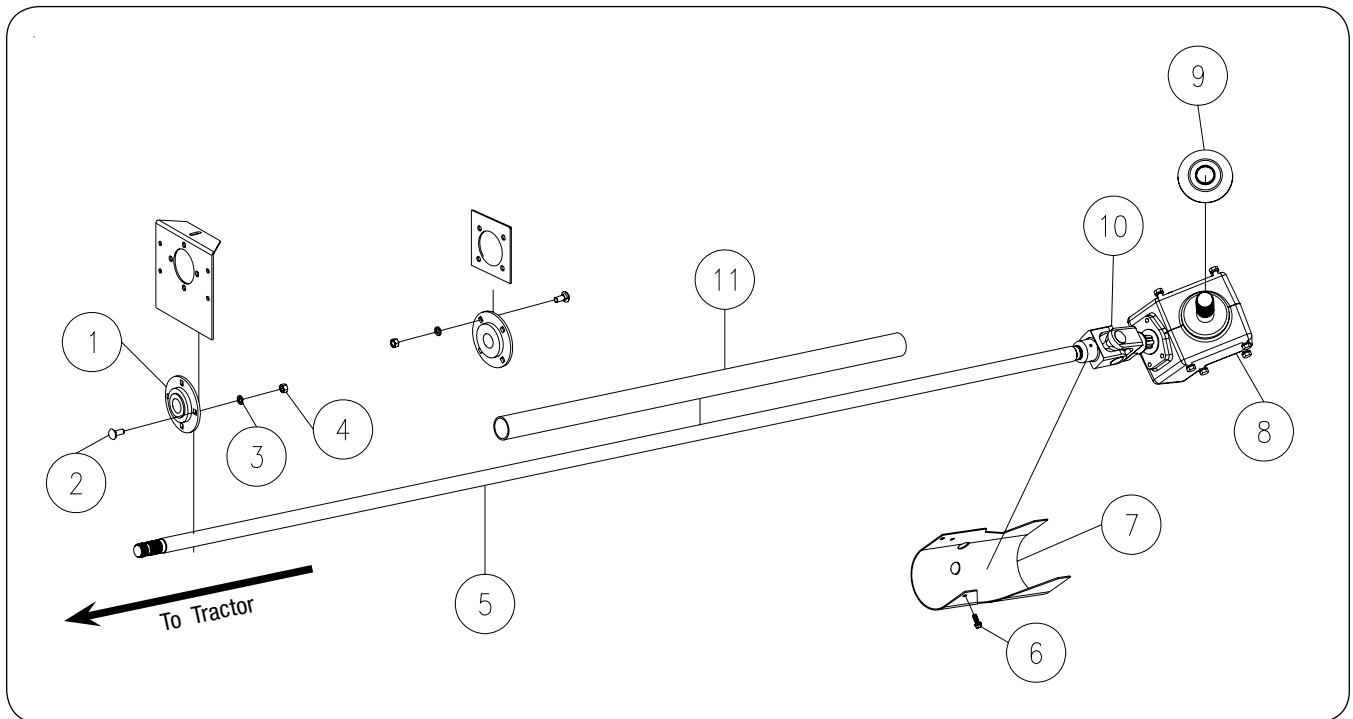


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ITEM	DESCRIPTION	PART NO.	QTY.	NOTES
1	Capscrew, 1/4-20UNCx7/8 G5	9390-004	1	
2	Capscrew, 3/8-16UNCx1 1/2 G5	9390-057	6	
3	Spring Bracket =Green=	281258G	1	
	Spring Bracket =Red=	281258R		
4	Spring	9004375	1	
5	Flat Washer 1/4	9405-062	7	
6	Hex Nut, 3/8-16UNC G5	9394-006	1	
7	Screw, 1/4-20UNCx1 (Self-Threading)	9004355	2	
8	Lock Washer, 3/8	9404-021	5	
9	Spacer Bushing =Green=	281257G	5	
	Spacer Bushing =Red=	281257R		
10	Lock Nut, 1/4-20UNC	9936	1	
11	Seal - Poly	281312	1	
12	Seal - Poly	281313	1	
13	Capscrew, 1/4-20UNCx1 3/4 G5	9390-008	1	
14	Hex Nut, 1/4-20UNC G5	9394-002	1	
15	Lock Washer, 1/4	9404-017	1	
16	Capscrew, 1/4-20UNCx1 G5	9390-005	1	
17	Rubber Flap	281315	1	
18	Flat Washer, 3/8"	9405-078	5	
19	Guide Pipe	281044	1	(not shown)

Drive Components

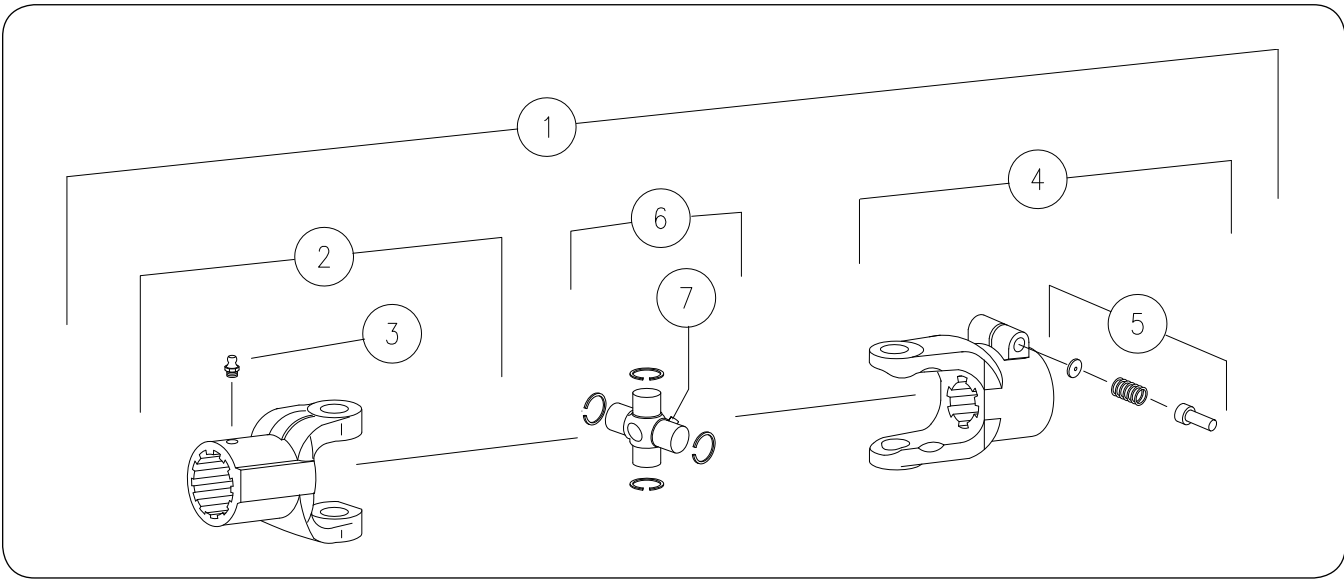
Please visit www.unverferth.com/parts/ for the most current parts listing.



ITEM	DESCRIPTION	PART NO.	QTY.	NOTES
1	1 1/2 Flangette Bearing	9003920	2	
2	Carriage Bolt 1/2-13 x 1 1/4	9388-103	8	
3	Lock Washer 1/2	9404-025	8	
4	Hex Nut 1/2-13UNC	9394-010	8	
5	Drive Shaft Replacement Kit	289764	1	Includes Items 1, 2, 3, 4, 11
6	Screw/Large Flange 3/8-16 x 1	91262	3	
7	U-Joint Cover	280161B	1	
8	Gearbox	9002812	1	
9	Gearbox Dust Cover	92805B	1	
10	U-Joint Assy	95012	1	Page 5-30
11	Tube 2" SCH 40 x 38 3/4"	280159	1	

Driveline U-Joint Assembly

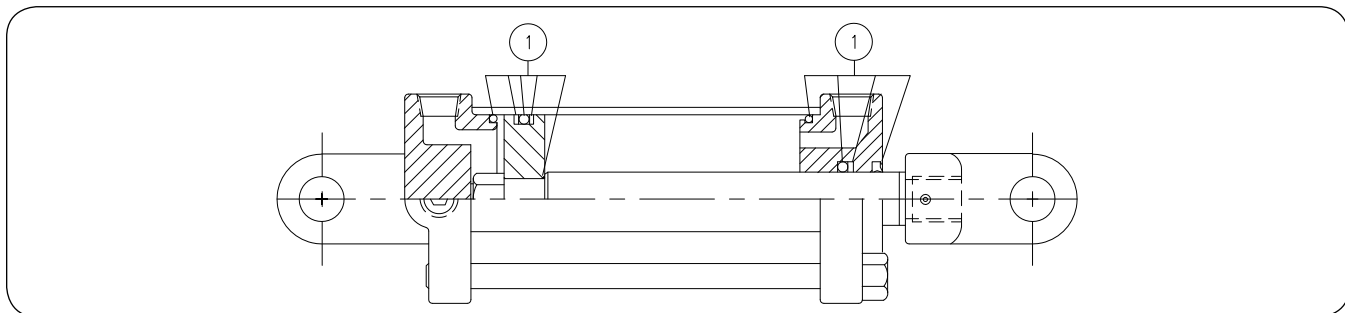
Please visit www.unverferth.com/parts/ for the most current parts listing.



ITEM	DESCRIPTION	PART NO.	QTY.	NOTES
1	Complete U-Joint Assembly	95012	1	
2	Yoke	95010	1	
3	Grease Zerk, 1/4-28 UNF	91160	1	
4	Yoke, 1-3/8-6 Spline	95011	1	
5	Quick Disconnect Pin Kit	92362	1	
6	Cross & Bearing Kit	93857	1	
7	Grease Zerk	92365	1	

Auger Fold Cylinder — 3" x 24"

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



ITEM	DESCRIPTION	PART NO.	QTY.	NOTES
		3" x 24"		
	Cylinder, Complete	280921	1	Tie Rod
1	Seal Kit	9004382	1	

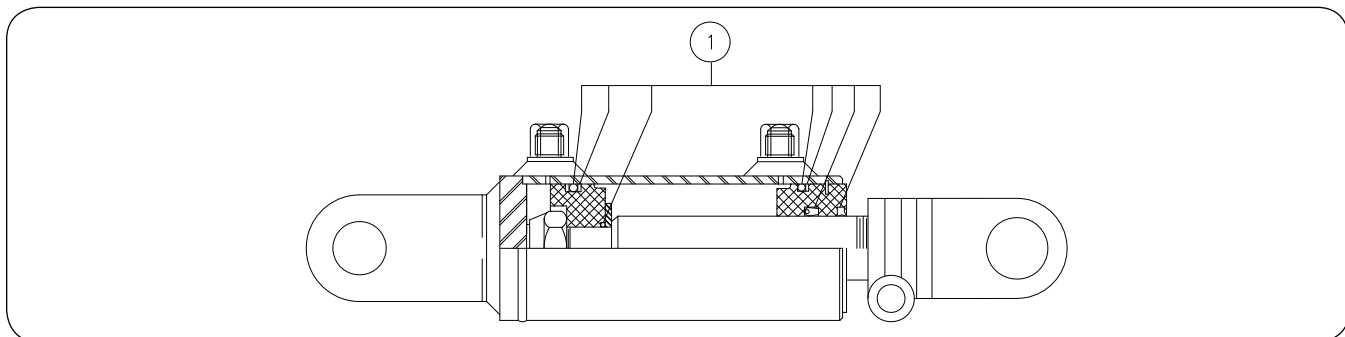
Flow Control Door Cylinder — 2 1/2" x 36"

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

ITEM	DESCRIPTION	PART NO.	QTY.	NOTES
		2 1/2" x 36"		
	Welded Cylinder	9005363	1	Tie Rod
1	Seal Kit	9005409	1	

Directional Spout Cylinder — 1 1/2" x 4"

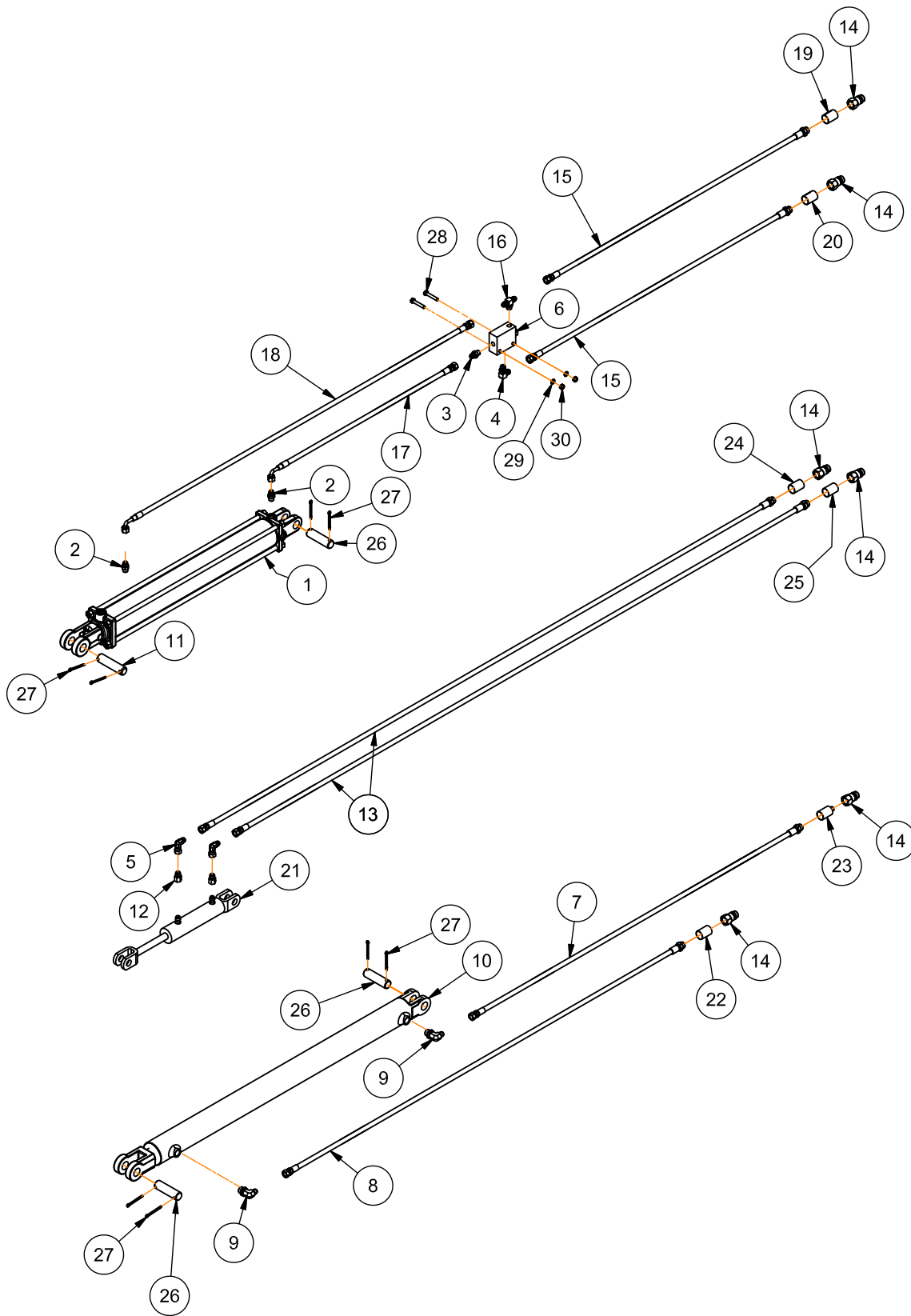
Please visit www.unverferth.com/parts/ for the most current parts listing.



ITEM	DESCRIPTION	PART NO.	QTY.	NOTES
		1 1/2" x 4"		
	Cylinder, Complete	9005135	1	
1	Seal Kit	9003845	1	

Hydraulics

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



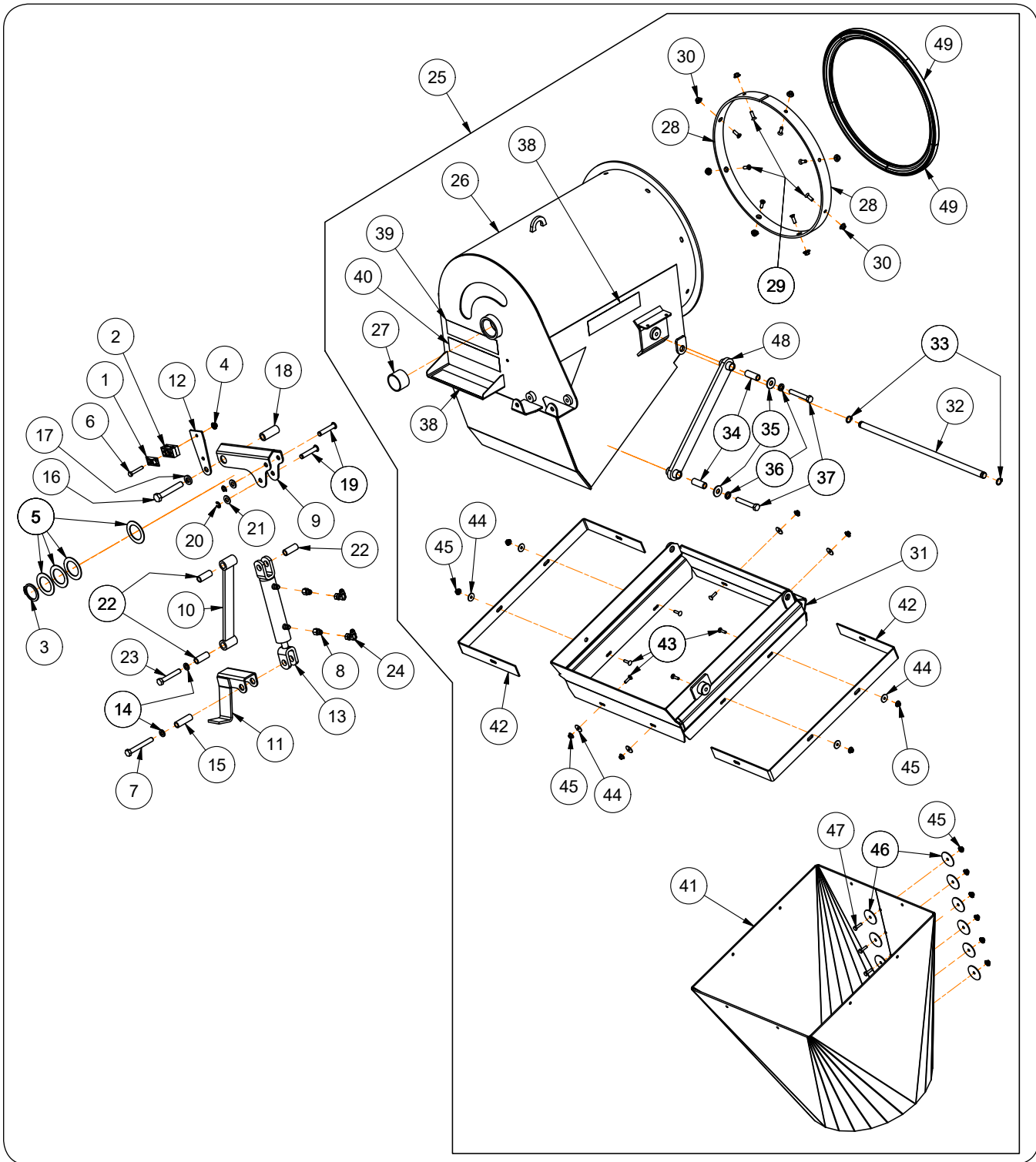
Hydraulics

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

ITEM	DESCRIPTION	PART NO.	QTY.	NOTES
1	Cylinder, 3 x 24"	280921	1	
2	Adapter, 9/16 JICF 3/4 M-O Ring	9004393	2	.055 Restrictor
3	Adapter, 9/16 JICM x 9/16 M-O Ring	9001495	1	
4	Elbow, 90° 9/16-18 JIC Male x 9/16-18 O-Ring Male	97445	1	
5	Elbow, 90° 9/16 JIC Male x 9/16-18 JIC Female	9876	2	
6	Pilot Operated Check Valve	9003990	1	
7	Hydraulic Hose, 1/4 x 275" - 3000 PSI	9004306	1	
8	Hydraulic Hose, 1/4 x 286" - 3000 PSI	9005300	1	
9	Elbow, 9/16 JICM x 3/4 M-O Ring	9874	2	
10	Cylinder, 2 1/2 x 36	9005363	1	
11	Pin, 1" Dia. x 4	250104	1	For Rod Eye - Auger Cylinder
12	Adapter, 9/16 JICF x 9/16 JICM	95193	2	0.030 Restrictor
13	Hydraulic Hose, 1/4 x 500" - 3000 PSI	9004540	2	
14	Male Coupler, 3/4-16	91383	6	
15	Hydraulic Hose, 1/4 x 216" - 3000 PSI	9004294	2	
16	Tee, 9/16 JICM x 9/16 M-O Ring	9001710	1	
17	Hose, 1/4 x 72"	9004309	1	9/16-18 JICF x 9/16-18 JIC 90°
18	Hose, 1/4 x 98"	9004310	1	9/16-18 JICF x 9/16-18 JIC 90°
19	Sleeve, Hose Marker	9003998	1	Green, Auger Lower
20	Sleeve, Hose Marker	9003997	1	Green, Auger Raise
21	Cylinder 1 1/2 x 4	9003789	1	
22	Sleeve, Hose Marker	9003995	1	Red, Flow Door Open
23	Sleeve, Hose Marker	9003996	1	Red, Flow Door Close
24	Sleeve, Hose Marker	9004000	1	Yellow, Spout In
25	Sleeve, Hose Marker	9003999	1	Yellow, Spout Out
26	Pin, 1 x 3 1/2"	804572	3	
27	Cotter Pin, 3/16 x 2"	9391-046	8	
28	Capscrew, 5/16-18UNC x 1 3/4 Gr.5	9390-033	2	
29	Lock Washer, 5/16	9404-019	2	
30	Hex Nut, 5/16-18UNC Gr.5	9394-004	2	

Directional Spout Components

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



ITEM	DESCRIPTION	PART NO.	QTY.	NOTES
1	Clamp Top Plate	9003814	1	
2	Poly Clamp Pair	9003816	1	
3	Retaining Ring 2"	91178	2	

Directional Spout Components

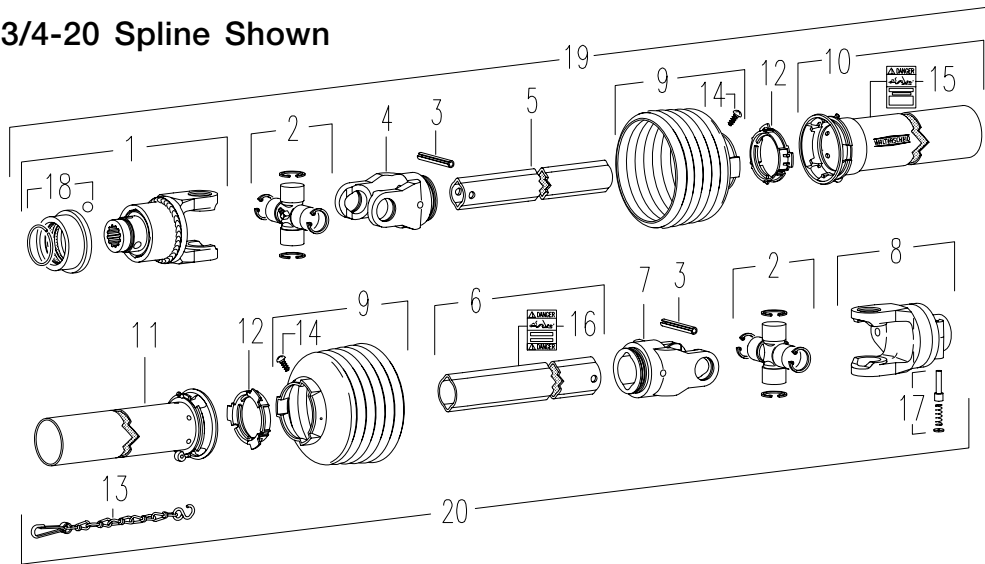
Please visit www.unverferth.com/parts/ for the most current parts listing.

ITEM	DESCRIPTION	PART NO.	QTY.	NOTES
4	Hex Nut/Large Flange 5/16-18UNC	91257	1	
5	Flat Washer 2"	93974	4	
6	Capscrew 5/16"-18UNC x 2" G5	9390-034	1	
7	Capscrew 1/2"-13UNC x 4" G5	9390-111	1	
8	Adapter 9/16-18 JIC Female Nut x 9/16-18 JIC Male	95193	2	with 0.030 Restrictor
9	Linkage Bracket	284691B	1	
10	Linkage Weldment	284699B	1	
11	Cylinder Stop Weldment	287648B	1	
12	Hose Bracket	272620B	1	
13	Cylinder 1 1/2" x 4"	9003789	1	
	Seal Kit	9005419	-	
14	Lock Washer 1/2	9404-025	2	
15	Sleeve Bushing 0.75" OD x 0.532" ID x 2.438"	272571	1	
16	Capscrew 5/8"-11UNC x 4" G5	9390-132	1	
17	Lock Washer 5/8"	9404-030	1	
18	Sleeve Bushing 1" OD x 0.640" ID x 2.438"	272619	1	
19	Pin Weldment 1/2" Dia. x 2 21/32"	285219	2	
20	Snap Ring 1/2"	9005687	2	
21	Flat Washer 1/2" SAE	9405-086	2	
22	Sleeve Bushing 0.75" OD x 0.532" ID x 1.938"	285290	3	
23	Capscrew 1/2"-13UNC x 3 1/4" G5	9390-108	1	
24	90° Elbow 9/16-18 JIC Male x 9/16-18 JIC Female Swivel Nut	9876	2	
25	Hood Assembly =Black=	2007435B	1	Includes Items 26 through 24
26	Hood Weldment =Black=	2007434B	1	For Service Use Hood Assembly
27	Self Lubricating Bushing 2.25 OD x 2.00 ID x 1.5	9005085	1	
28	Wear Ring Pad	281839	1	
29	Flat Countersunk Head 5/16"-18UNC x 1" Phillips Machine Screw	903171-660	8	
30	Hex Nut/Large Flange 5/16-18UNC	91257	8	Grade 5
31	Spout Weldment	2007433B	1	
32	Pivot Shaft 3/4" Dia. x 22"	2007436	1	
33	Snap ring 3/4"	9003810	2	
34	Sleeve Bushing .75" OD x .532" ID x 1.938"	285290	2	
35	Flat Washer 1/2" USS	9405-088	2	
36	Lock Washer 1/2	9404-025	2	
37	Capscrew 1/2"-13UNC x 3 1/4" G5	9390-108	2	
38	Reflector, 2 x 9 (Amber)	9003127	4	
39	Reflector, 2 x 9 (Red)	9003126	1	
40	Fluorescent Strip, 2 x 9 (Orange)	9003125	1	
41	Rubber Chute	9502205	1	
42	Chute Strap	2007432B	2	
43	Carriage Bolt 1/4"-20UNC x 1" G5	9388-003	8	
44	Fender/Flat Washer 1/4"	9405-066	8	
45	Hex Nut/Large Flange 1/4-20UNC	97189	14	Grade 5
46	Fender Washer 5/16"	94763	12	
47	Capscrew 1/4"-20UNC x 1" G5	9390-005	6	
48	Link Weldment	2007601B	1	
49	Flap Seal/Trim Lok	9008122	AR	Specify in Feet

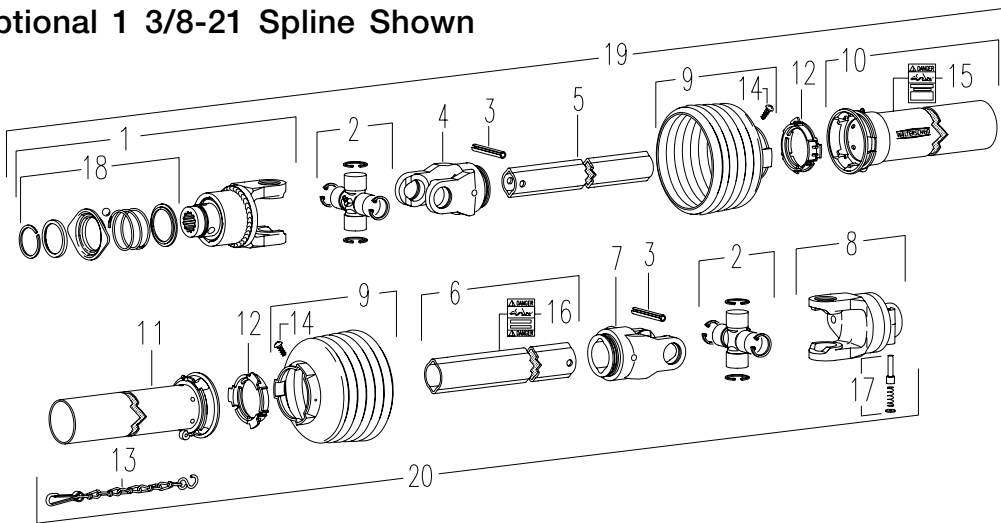
PTO Assembly Shearbolt Clutch

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

1 3/4-20 Spline Shown



Optional 1 3/8-21 Spline Shown



PTO Assembly Shearbolt Clutch

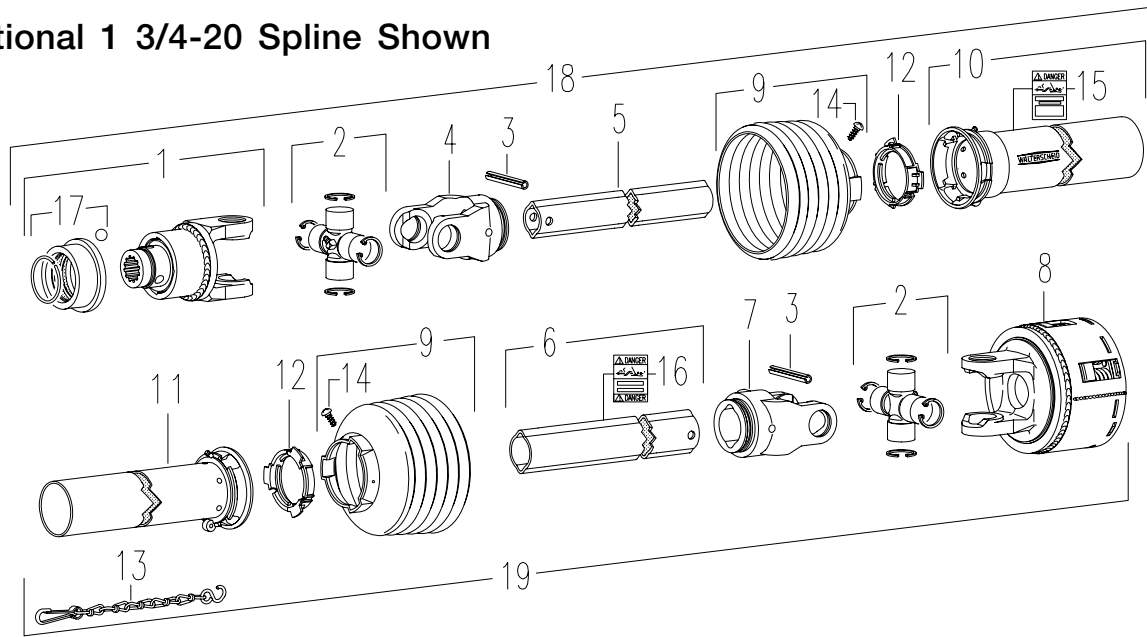
Please visit www.unverferth.com/parts/ for the most current parts listing.

ITEM	DESCRIPTION	PART NO.	QTY.	NOTES
	PTO Shaft w/Shielding / Shearbolt	9004767	1	1 3/4-20 Spline
	PTO Shaft w/Shielding / Shearbolt	9004766	1	1 3/8-21 Spline (Optional)
1	End Yoke / Overrunning Clutch	9004778	1	1 3/4-20 Spline
	End Yoke / Overrunning Clutch	9004777	1	1 3/8-21 Spline (Optional)
2	Cross & Bearing Kit	93857	2	
3	Spring Pin	93859	2	
4	Front Inboard Yoke	93858	1	
5	Inner Profile	9004274	1	
6	Outer Profile	94837	1	
7	Rear Inboard Yoke	93862	1	
8	Shear Clutch Complete	9004170	1	1 3/8-21 Spline
9	Shield Cone, Black 6-Rib	93863	2	
10	Outer Shield Tube w/Cap	94839	1	
11	Inner Shield Tube w/Cap	94840	1	
12	Bearing Ring	92373	2	
13	Safety Chain	92374	1	
14	Screw	92372	2	
15	Decal, "Danger - Shield"	92377	1	
16	Decal, "Danger - Steel"	95046	1	
17	Quick Disconnect Kit for Shear Clutch	92362	1	
18	Quick Disconnect Kit for Overrunning Clutch	93856	1	1 3/4-20 Spline
	Quick Disconnect Kit for Clutch	92393	1	1 3/8-21 Spline (Optional)
19	Front Half PTO	9004771	1	1 3/4-20 Spline
	Front Half PTO	9004770	1	1 3/8-21 Spline (Optional)
20	Rear Half PTO / Shearbolt	9004136	1	

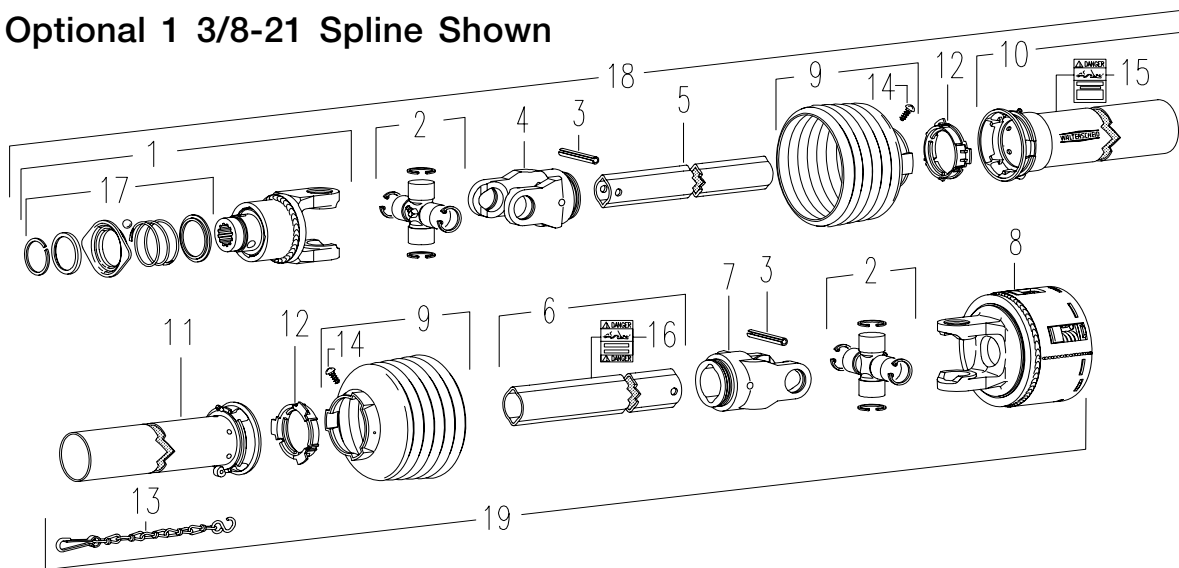
PTO Assembly Friction Clutch

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

Optional 1 3/4-20 Spline Shown



Optional 1 3/8-21 Spline Shown



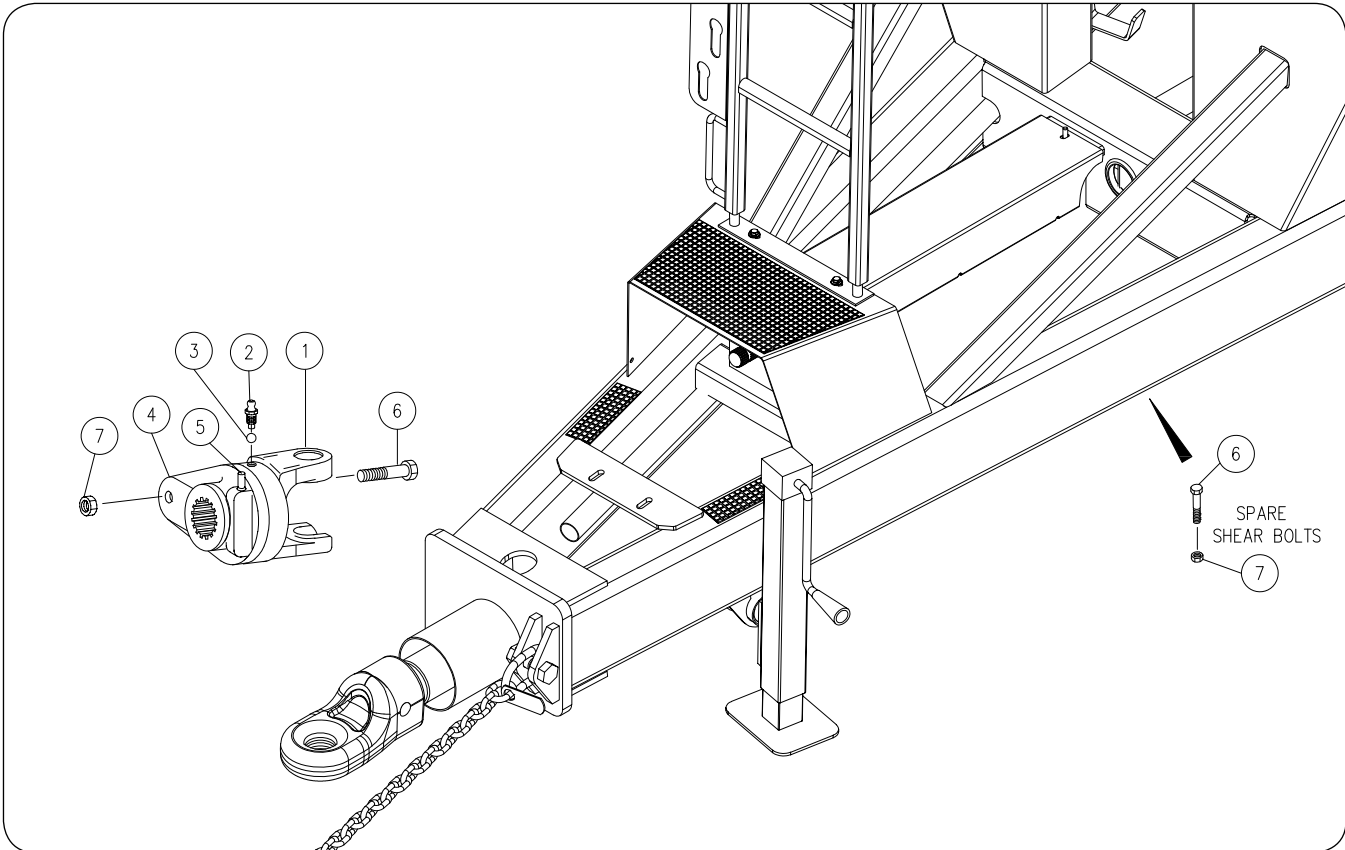
PTO Assembly Friction Clutch

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

ITEM	DESCRIPTION	PART NO.	QTY.	NOTES
	PTO Shaft w/Shielding / Friction	9004769	1	1 3/4-20 Spline
	PTO Shaft w/Shielding / Friction	9004768	1	1 3/8-21 Spline (Optional)
1	End Yoke / Overrunning Clutch	9004778	1	1 3/4-20 Spline
	End Yoke / Overrunning Clutch	9004777	1	1 3/8-21 Spline (Optional)
2	Cross & Bearing Kit	93857	2	
3	Spring Pin	93859	2	
4	Front Inboard Yoke	93858	1	
5	Inner Profile	9004274	1	
6	Outer Profile	94837	1	
7	Rear Inboard Yoke	93862	1	
8	Friction Clutch Complete	9004275	1	1 3/8-21 Spline
9	Shield Cone, Black 6-Rib	93863	2	
10	Outer Shield Tube w/Cap	94839	1	
11	Inner Shield Tube w/Cap	94840	1	
12	Bearing Ring	92373	2	
13	Safety Chain	92374	1	
14	Screw	92372	2	
15	Decal, "Danger - Shield"	92377	1	
16	Decal, "Danger - Steel"	95046	1	
17	Quick Disconnect Kit for Overrunning Clutch	93856	1	1 3/4-20 Spline (ONLY)
	Quick Disconnect Kit for Clutch	92393	1	1 3/8-21 Spline (ALL)
18	Front Half PTO	9004771	1	1 3/4-20 Spline
	Front Half PTO	9004770	1	1 3/8-21 Spline (Optional)
19	Rear Half PTO / Friction	9004212	1	

Shear Bolt Clutch

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



IMPORTANT

- *USE GENUINE OEM REPLACEMENT PART. Incorrect part may cause shear function to occur too soon causing inconvenience or too late resulting in damage to driveline and auger components. Tighten to specified torque value.*
- *Torque to 57 Ft.-Lbs.*

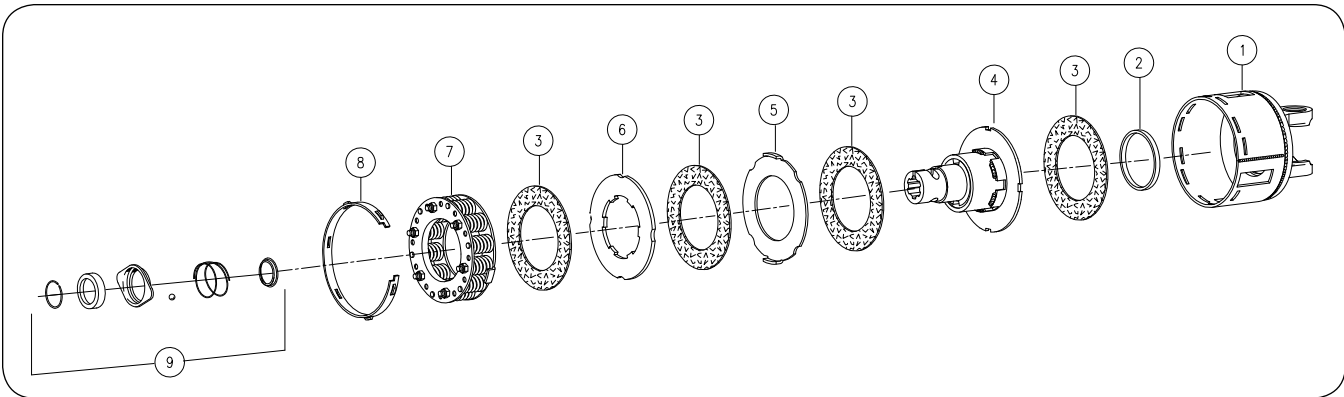
Shear Bolt Clutch

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

ITEM	DESCRIPTION	PART NO.	QTY	NOTES
	Shear-Bolt Clutch	9004170	1	
1	Shear Yoke	9003710	1	
2	Grease Zerk	95256	1	
3	Ball	95257	24	
4	Housing, Splined	9003884	1	
5	Quick Disconnect Pin Kit	92362	1	
6	Bolt, M10 x 60 Gr. 10.9	94910-015	1	Qty. 6 in Toolbox
7	Locknut, M10	9003645	1	Qty. 6 in Toolbox

Friction Clutch Assembly

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

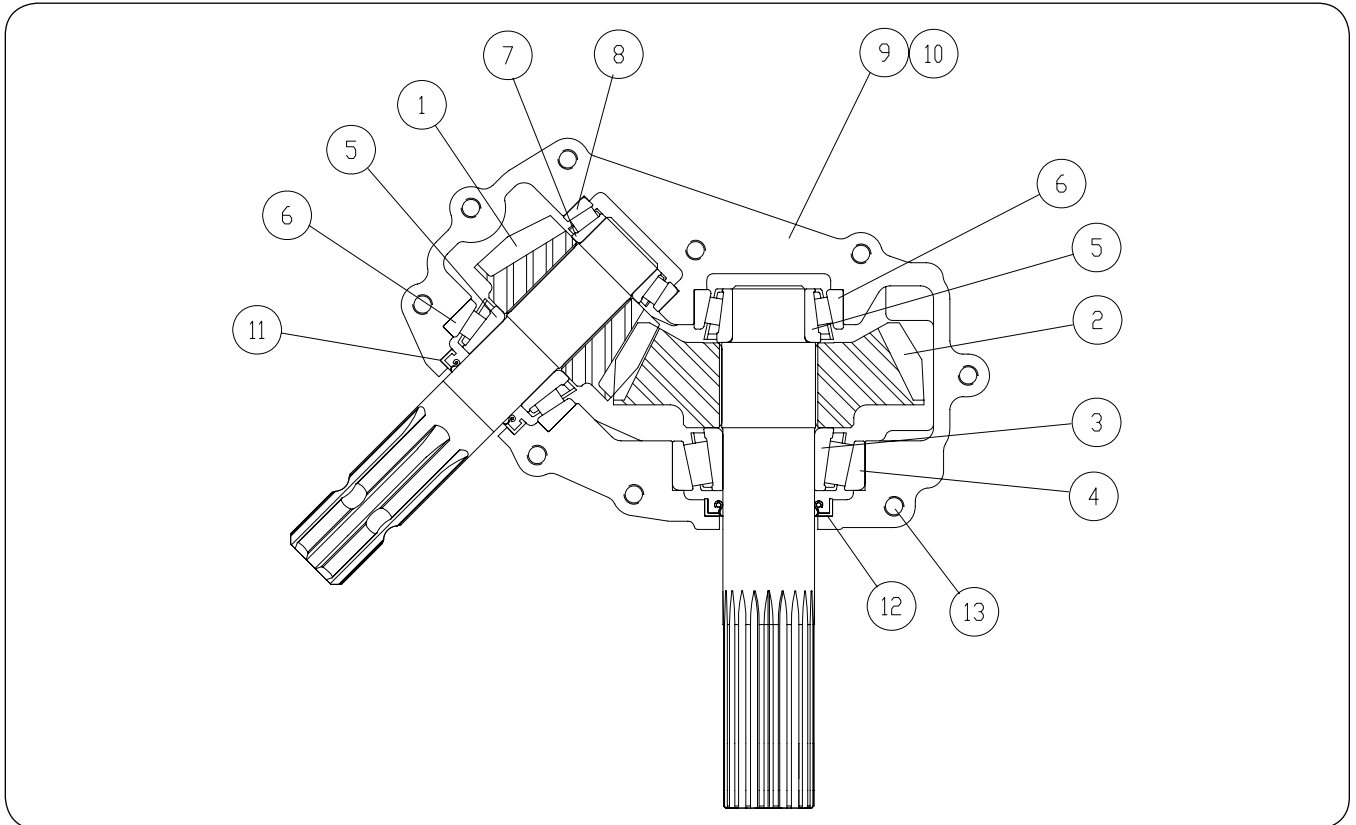


NOTE: The clutch is preset at the factory and should not require adjustment. See Maintenance section specific clutch information.

ITEM	DESCRIPTION	PART NO.	QTY	NOTES
	Complete Clutch	9004275	1	
1	Clutch Housing	9004276	1	
2	Ring	9002770	1	
3	Friction Disk	9002771	4	
4	Hub	9004277	1	
5	Drive Plate	9002780	1	
6	Drive Plate	9002781	1	
7	Spring Pack	9002782	1	
8	Setting Ring	9002783	1	
9	Quick Connect Flange Kit	92393	1	

45 Degree Gearbox

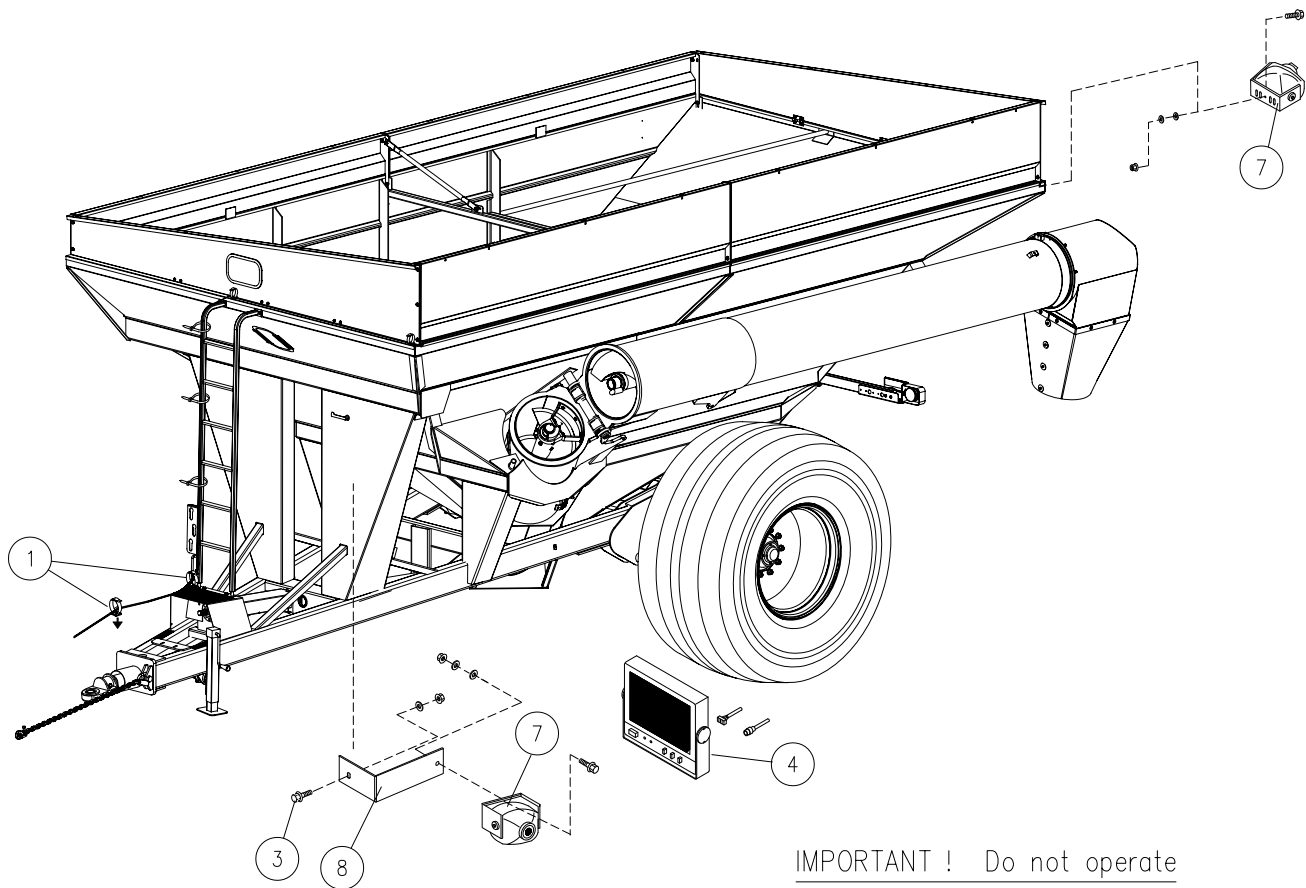
Please visit www.unverferth.com/parts/ for the most current parts listing.



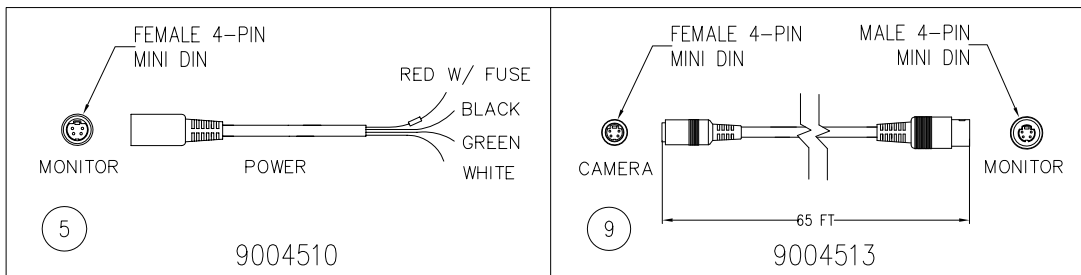
ITEM	DESCRIPTION	PART NO.	QTY.	NOTES
	Gearbox, Complete	9002812	1	Incl. Items 1-17
1	Shaft, Input	9001131	1	1.8:1 Gear
2	Shaft, Output	9001132	1	1.8:1 Gear
3	Bearing Cone	92697	1	Large
4	Bearing Cup	91151	1	Large
5	Bearing Cone	9001133	2	
6	Bearing Cup	9001134	2	
7	Bearing Cone	91816	1	Small
8	Bearing Cup	92896	1	Small
9	Casting w/Tapped Holes	9003447	1	Model Q81 Gearbox
	Gearbox Case Kit For Top & Bottom Halves	281885	-	
	Casting w/Tapped Holes	9007300	1	Model Q145 Gearbox
10	Casting w/Through Holes	9003448	1	Not Shown - Model Q81 Gearbox
	Gearbox Case Kit For Top & Bottom Halves	281885	-	
	Casting w/Through Holes	9007299	1	Not Shown - Model Q145 Gearbox
11	Seal	92688	1	Small
12	Seal	92702	1	Large
13	Capscrew, 3/8"-16UNC x 2 1/4"	95281	9	Not Shown
14	Hex Bushing Reducer	9003453	1	Not Shown
15	Pressure Relief, 5-PSI	92352	1	Not Shown
16	Plug, Plain	92350	3	Not Shown
17	Plug, 3/4" NPT	98523	1	Not Shown

Video System Option

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



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



Video System Option

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ITEM	DESCRIPTION	PART NO.	QTY	NOTES
	Video System Kit for Front View	265770	1	Includes Items 1,3,4,5,6,7,8
	Additional Camera for Rear View	9004506	1	Includes Items 6 & 7
1	Snap Clip, Adhesive	TAAU14007	10	
3	Self-Drilling Screw 1/4-14 x 1	9512	10	
4	Monitor, 7" LCD/LED	9006273	1	
5	Cable w/Fuse	9004510	1	
7	Camera	9006274	1	
8	Bracket	265771B	1	
9	Cable, 65'	9004513	1	
10	Cable Tie	9000106	AR	
11	Universal Virtual Terminal Camera Kit	284994	1	Not Shown
12	Camera Kit for Rear View with 65' Cable	9004506	1	Not Shown
13	John Deere 2630 Camera Harness	9006909	1	Not Shown
14	Camera Cable, 16 ft.	9007174	1	Not Shown



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