CORNER AUGER GRAIN CART
MODELS 660

Beginning With Serial Number D72760100

Part No. 2012584

Foreword

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

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

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

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

Product Information

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

- Machine name
- Model number
- Serial number

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

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

Purchase Date _____Model _____Serial Number _____

Dealer _____ City _____

Dealer Contact _____ Phone _____

IMPORTANT

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

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Section I
Safety

General Hazard Information

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

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

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

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

REMEMBER:

THINK SAFETY

A CAREFUL OPERATOR IS THE BEST INSURANCE AGAINST AN ACCIDENT!

SIGNAL WORDS

DANGER

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

WARNING

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

CAUTION

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

IMPORTANT

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

Safety Decals

WARNING

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

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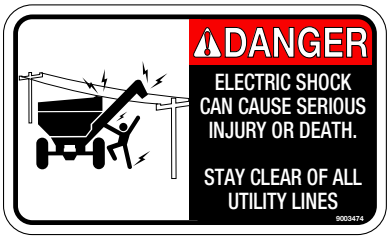

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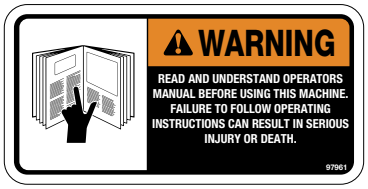

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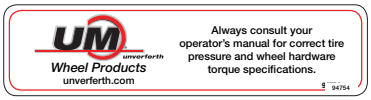

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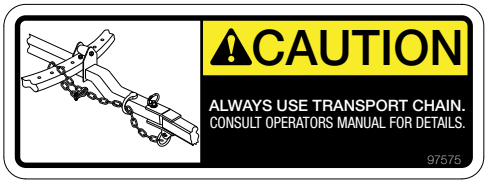

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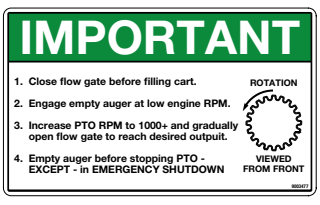

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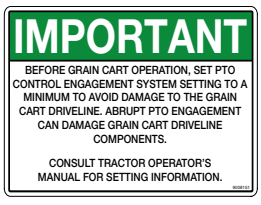
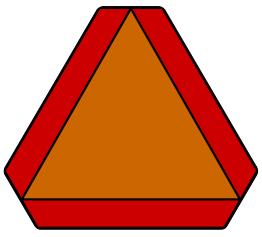




Part No. TA510514
SMV Emblem

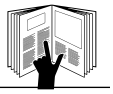
Part No. 9003125
Fluorescent Strip

Part No. 9003126
Reflector RED

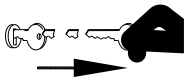
Part No. 9003127
Reflector AMBER

Following Safety Instructions

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



- All machinery should be operated only by trained and authorized personnel.
- To prevent machine damage, use only attachments and service parts approved by the manufacturer.
- Always shut tractor engine off and remove key before servicing.



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

- Never attempt to operate implement unless you are in driver's seat.
- Never enter a cart containing grain. Flowing grain traps and suffocates victims in seconds.

Before Servicing

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

- Ensure that all applicable safety decals are installed and legible.
- 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.

Before Operating

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

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

- Ensure that all applicable safety decals are installed and legible.
- Secure drawbar pin with safety lock and lock tractor drawbar in fixed position.

During Operation

- Regulate speed to field conditions. Maintain complete control at all times.
- Never service or lubricate equipment when in operation.
- Keep away from overhead power lines. Electrical shock can cause serious injury or death.

- Use extreme care when operating close to ditches, fences, or on hillsides.
- Do not leave towing vehicle unattended with engine running.

Before Transporting

- Secure transport chain to towing vehicle before transporting. DO NOT transport without chain.
- Install transport locks before transporting.
- Check for proper function of all available transport lights. Make sure that all reflectors are clean and in place on machine. Make sure the SMV emblem is 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.
- Use good judgment when transporting equipment on highways. Regulate speed to road conditions and maintain complete control.
- Maximum speed of implement should never exceed 20 mph. 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.
- Be careful not to hit the driveline with tractor tires when turning.
- Check the length of the telescoping members to insure the driveline will not bottom out or separate when turning and/or going over rough terrain.
- Proper extended and collapsed lengths of the telescoping PTO shaft must be verified before first operation with each and every tractor. If the extended length of the PTO shaft is insufficient, it may become uncoupled during operation and cause serious injury or death from contact with uncontrolled flailing of PTO shaft assembly components.

Pressurized Oil

- Relieve pressure before disconnecting hydraulic lines from tractor, loosening any hydraulic fittings or servicing hydraulic system. See hydraulic power unit manual for procedure to relieve pressure.

- High-pressure fluids can penetrate the skin and cause serious injury or death. Use cardboard or wood to detect leaks in the hydraulic system. Seek medical treatment immediately if injured by high-pressure fluids.

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

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

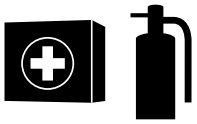
- Repair all oil leaks. Leaks can cause fires, personal injury, and environmental damage.

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

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

Preparing for Emergencies

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



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

Wearing Protective Equipment

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

- Wear steel-toed shoes when operating.

- Wear hearing protection when exposed to loud noises.

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

Section II
Set Up

FOR TORQUE INFORMATION, PLEASE REFER TO THE MAINTENANCE SECTION.
FOR SCALE, HYDRAULIC DRIVE OR WEATHER GUARD TARP INFORMATION,
PLEASE REFER TO THAT SPECIFIC MANUAL.

Pre-Delivery 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.

- ☐ Torque wheel nuts as specified in MAINTENANCE section.
- ☐ Axles are adjusted from shipping position to desired operating position. (If Applicable)
- ☐ Tires are inflated to specified air pressure. (If Applicable)
- ☐ All grease fittings have been lubricated and gearbox oil level checked.
- ☐ Check to be sure all safety decals are correctly located and legible. Replace if damaged.
- ☐ Check to be sure all reflective decals are correctly located.
- ☐ Check to be sure SMV decal is in place and shipping cover removed.
- ☐ Check to be sure transport lights are working properly.
- ☐ Check PTO. See “Verify Telescoping PTO Shaft Length” in MAINTENANCE section.
- ☐ Belts/Chains are aligned and properly tensioned.
- ☐ Check to be sure screens over auger are in place and properly secured.
- ☐ Transport chains are properly installed and hardware is torqued to specification. See “Transport Chain Connection” in OPERATION section.
- ☐ Paint all parts scratched in shipment.
- ☐ Test run the augers. See “Auger Operation” in OPERATION section.
- ☐ Check cleanout door assembly play or movement. See MAINTENANCE section for adjustment procedure.

General Set Up Information

⚠ WARNING

- **FALLING OBJECTS CAN CAUSE SERIOUS INJURY OR DEATH. DO NOT WORK UNDER THE MACHINE AT ANY TIME WHILE BEING HOISTED. BE SURE ALL LIFTING DEVICES AND SUPPORTS ARE RATED FOR THE LOADS BEING HOISTED. THESE ASSEMBLY INSTRUCTIONS WILL REQUIRE SAFE LIFTING DEVICES UP TO 10,000 LBS. SPECIFIC LOAD RATING FOR INDIVIDUAL LOADS WILL BE GIVEN AT THE APPROPRIATE TIME IN THE INSTRUCTIONS.**

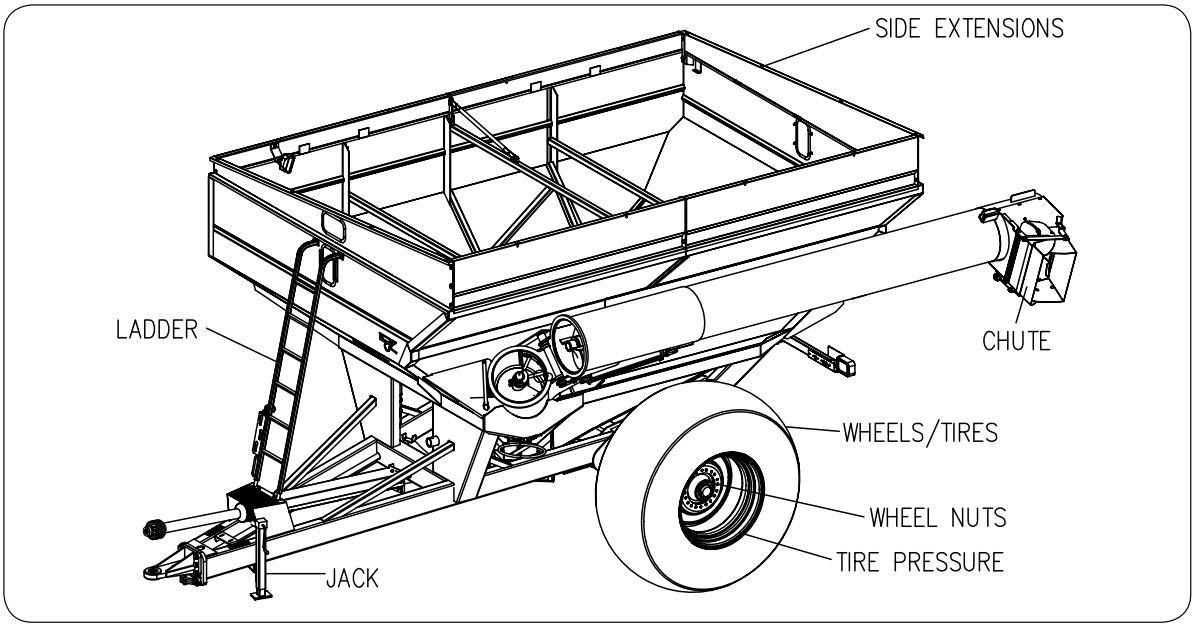
- **TO PREVENT PERSONAL INJURY OR DEATH, ALWAYS ENSURE THAT THERE ARE PEOPLE WHO REMAIN OUTSIDE THE CART TO ASSIST THE PERSON WORKING INSIDE THE CART, AND THAT ALL SAFE WORKPLACE PRACTICES ARE FOLLOWED. THERE IS RESTRICTED MOBILITY AND LIMITED EXIT PATHS WHEN WORKING INSIDE THE CART.**

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

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

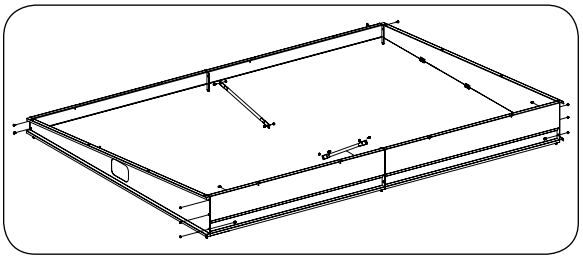
Basic Set Up

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



Folding Side Extensions

1. Rotate extensions up into position and secure at corner holes.
2. Attach center support hardware.
3. Tighten all hardware, including hinge bolts.
4. Install hopper light in front right corner.



Basic Set Up (continued)

Transport Lighting and Markings

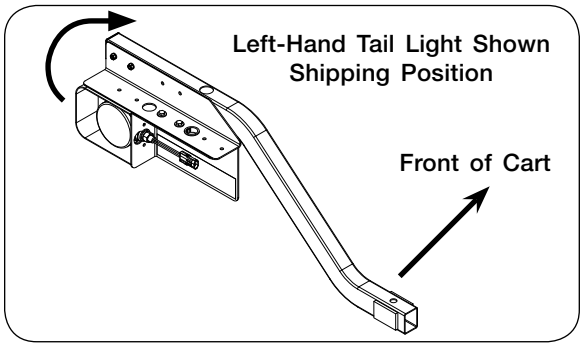
Compliance with all lighting and marking laws is the responsibility of the operator at the time of travel.

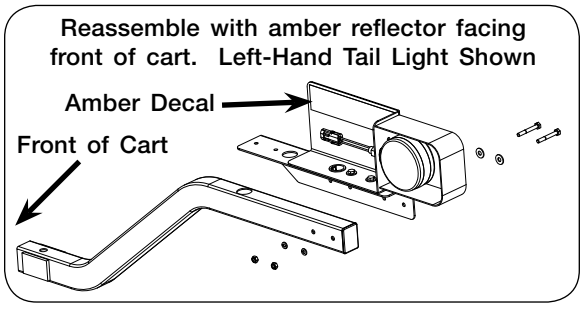
Please see federal regulation 49 CFR 562; available at www.govinfo.gov for US federal law requirements.

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

Lamp Set Up

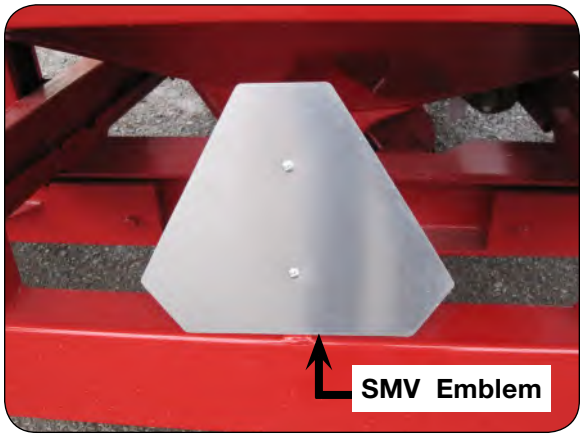
Pivot lamp extension arms into position at sides of cart. The lamp bracket width is adjustable, if necessary, adjust lamp mount position to achieve dimension shown. Ensure that the brackets are adjusted such that the reflectors are no more than 16" from outer edge of the tires. Be sure that amber reflector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





SMV Emblem

Before the cart is used the reflective surface of the SMV must face rearward. This may require removal of film protecting the reflective surface or removing and reinstallation of the SMV. When reinstalling the SMV make sure that it is mounted with the wide part of the SMV at the bottom.



Basic Set Up (continued)

Auger Rest Retainer Removal

Remove the retainer located on the upper auger rest at the back of the cart, before folding out the upper auger tube.

IMPORTANT

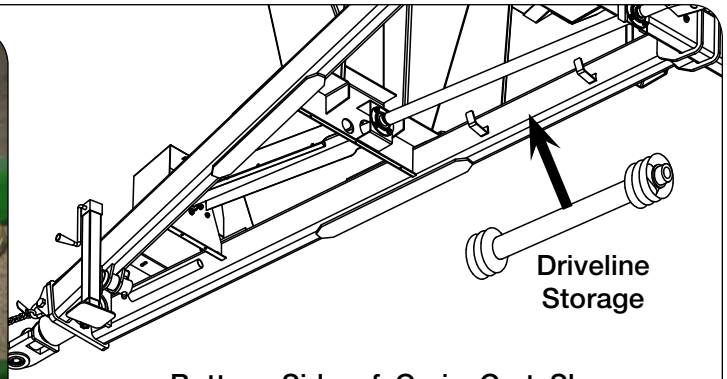
- *Upper auger retainer must be removed before operating upper auger tube. Failure to remove retainer will result in damage to the upper auger tube.*

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 behind a delivery truck. Interference could occur when turning resulting in damage to PTO and cart.*



Bottom Side of Grain Cart Shown

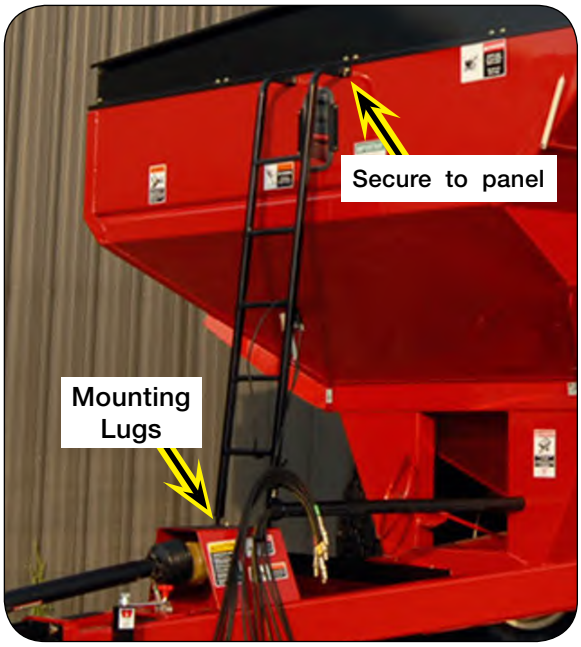
Basic Set Up (continued)

Ladder Installation

Ladder can be found inside the grain cart. Set ladder over mounting lugs on PTO shield and secure to front panel of cart using 3/8"-16x3/4" flange screws (95585) and 3/8" flange nuts (91263).

⚠ WARNING

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

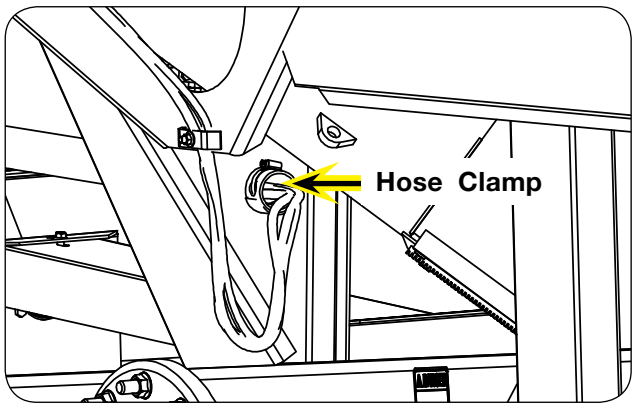


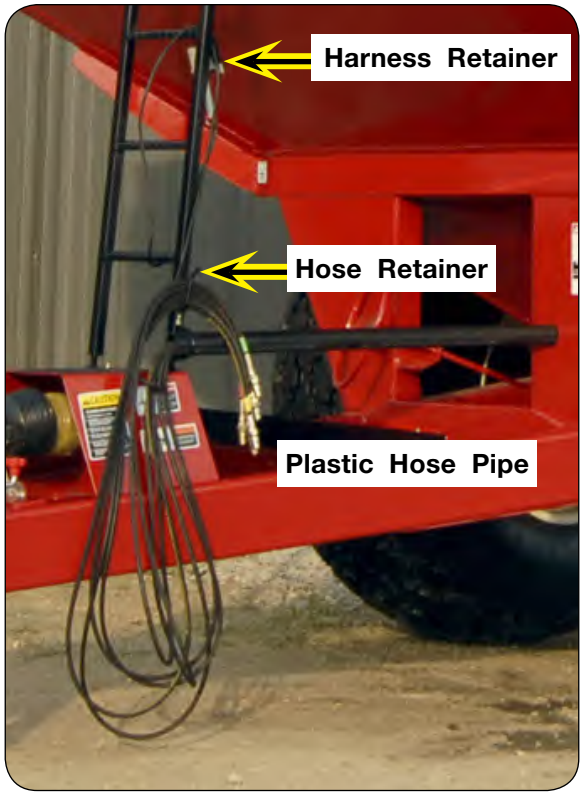
Plastic Hose Pipe

Place plastic hose pipe through the front standard and hose retainer on ladder. Slide the hoses through the plastic hose pipe. Set a desired hose length. Fasten the hoses and plastic hose pipe with the hose clamp behind the front standard.

The wiring harness will also be run through the plastic hose pipe. Fasten harness to the hoses with tie straps.

It is recommended that any excess hose or wiring harness be contained at the rear of the hose pipe.





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

⚠ 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 could result in hub or spindle failure. This will cause substantial damage to cart.*

Dual Wheel Installation

Align the dual wheels on the one side of the cart. Place the guide pin in the guide hole. Then, using the guide pin, seat the outer reinforcing ring into position. Secure the wheel and reinforcing ring with the lock washers and bolts provided. Refer to the "MAINTENANCE" section for proper torque requirements.

Basic Set Up (continued)

Directional Spout Installation

1. Remove the four 1/4" bolts as shown in Fig. 1. This should allow the chute weldment to pivot on the shipping bracket.

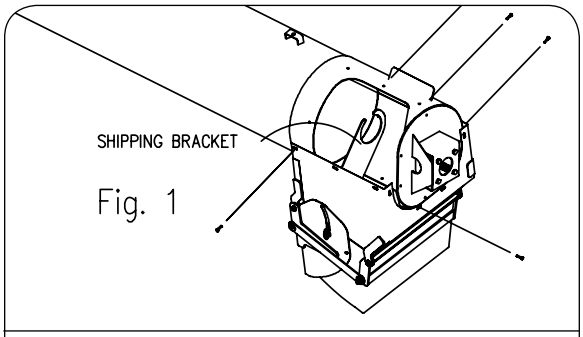


Fig. 1

2. Rotate the chute weldment up and align the holes in the chute with the holes on the top of the auger tube. Hold the chute in place and loosely assemble the three attaching bolts and nuts to hold the chute in place. Do not tighten the hardware at this time. See Fig. 2.

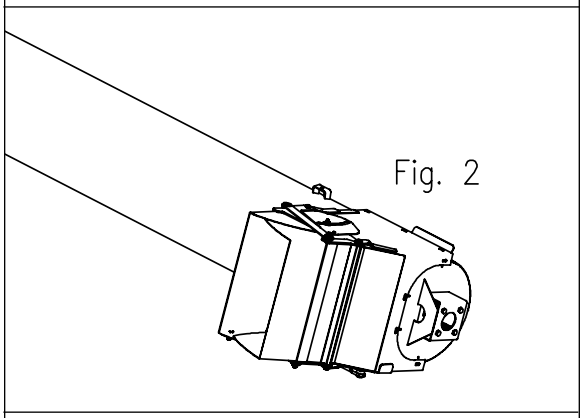


Fig. 2

3. Locate the shipping bracket inside of the chute assembly. Loosen the 3/8" bolt on the slotted end of the shipping bracket, but DO NOT REMOVE. Remove the two 5/16" bolts holding the shipping bracket in place. See Fig. 3.

4. Using a lifting device rated for 1,200 lbs., support the weight of the auger chute, slide the shipping bracket to the end of the auger pipe and remove. See Fig. 3.

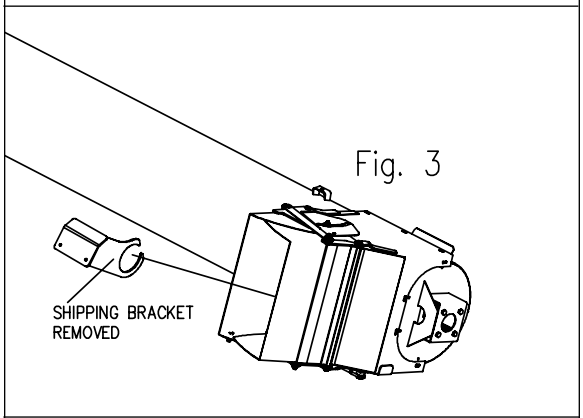


Fig. 3

5. Rotate the chute down and align the remaining holes in the auger tube and end plate. Insert the remaining bolts, washers and nuts. Tighten all of the hardware.

6. Install (3) nylon plugs into the holes in the auger tube and (1) into the deflector spout to prevent grain leakage through the exposed mounting holes. The nylon plugs need to be installed to the interior surfaces of the auger tube and shroud. See Fig. 4. Reinstall the 5/16" hardware in the chute and the 1/4" hardware in the auger tube to prevent grain leakage through the exposed mounting holes.

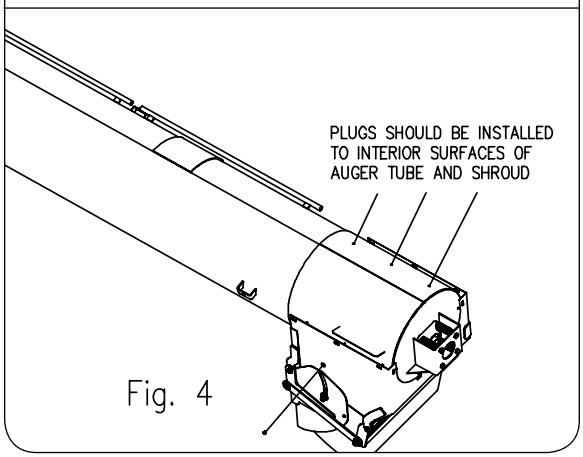


Fig. 4

Basic Set Up (continued)

Optional Adjustable Axle

⚠ WARNING

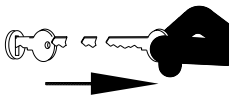
- **TIPPING OR MOVEMENT OF THE MACHINE CAN CAUSE SERIOUS INJURY OR DEATH. BE SURE THE MACHINE IS SECURELY BLOCKED.**

- **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.**

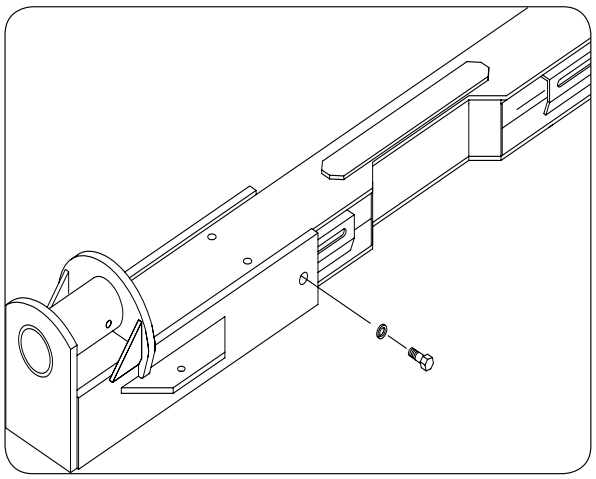
- **EYE PROTECTION AND OTHER APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT MUST BE WORN WHILE SERVICING IMPLEMENT.**

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

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 16,000 lbs., 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.
6. Remove supports and lower cart to ground.



Optional Weather Guard Tarp Installation

⚠ 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 250 LBS. SPECIFIC LOAD RATINGS FOR INDIVIDUAL LOADS WILL BE GIVEN AT THE APPROPRIATE TIME IN THE INSTRUCTIONS.**

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

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

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

- **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.**

- **TO PREVENT PERSONAL INJURY OR DEATH, DO NOT ALLOW ANYONE ON A CLOSED TARP. TARP SYSTEM IS NOT DESIGNED TO SUPPORT A PERSON.**

- **FALLING OBJECTS CAN CAUSE SERIOUS INJURY OR DEATH. REMOVE ACCUMULATED WATER/SNOW/ICE OR ANY OTHER OBJECTS FROM TARP BEFORE OPENING TARP.**

IMPORTANT

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

Optional Weather Guard Tarp Installation (continued)

End Caps, Bows

1. Install the side board extensions to the box.

2. Assemble the end caps (40) to the front and rear side boards with carriage bolts (43) and nuts (32). Fasten to right and left side boards with self-threading screws (44) See Fig. 2.

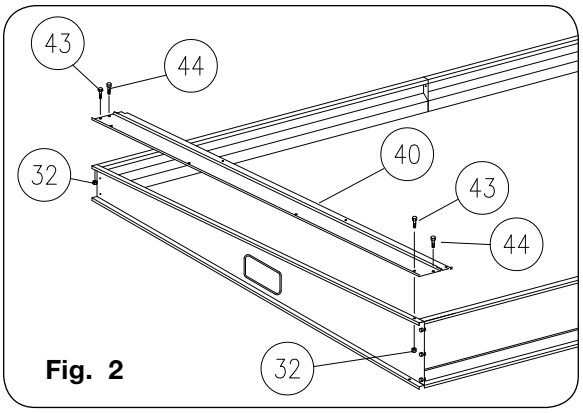


Fig. 2

3. Assemble the bow brackets (39) and latch plates (2006091 & 2006092) to the right side panel or side board with torx screw (46) and flange nuts (30) Secure front latch plate (2006092) to front panel with eyebolt (3) and two flange nuts (32). See Fig. 3.

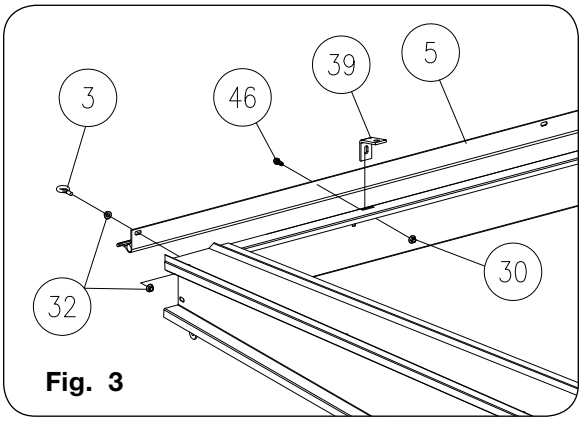
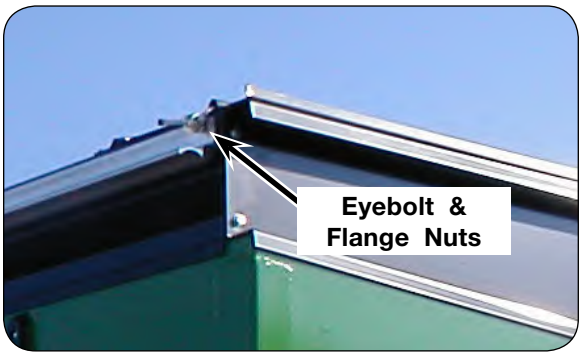


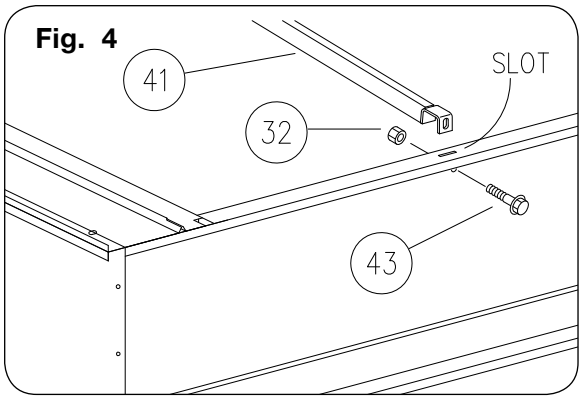
Fig. 3

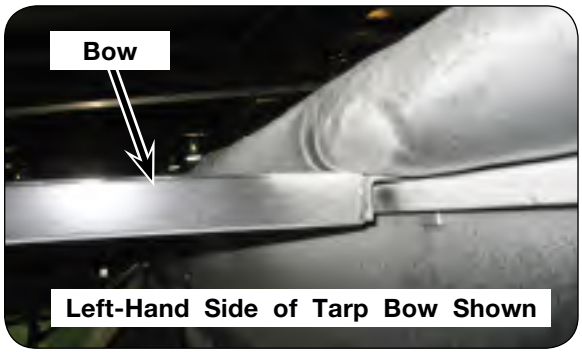


Optional Weather Guard Tarp Installation (continued)

4. Insert the bows (41) into the slots in the left side board. Retain with carriage bolt (43) and flange nut (30). See Fig. 4.

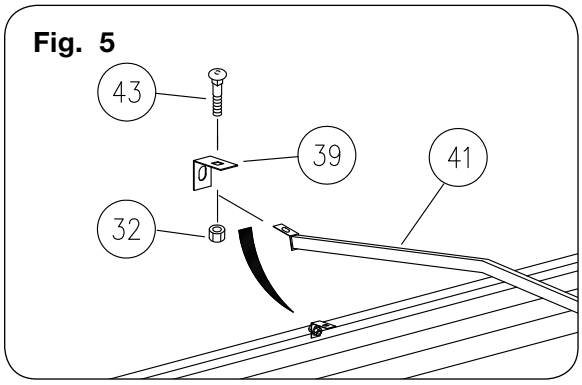
Fig. 4

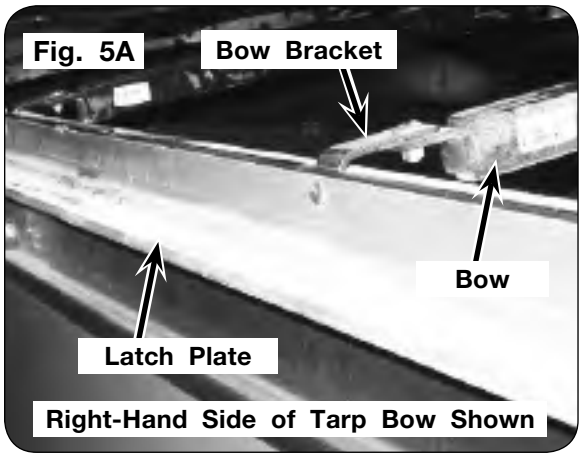




5. Position the bows under the right side brackets (39) and retain with carriage bolts (43) and nuts (32). See Fig. 5.

Fig. 5





Optional Weather Guard Tarp Installation (continued)

Cables, Tarp, Tubes

6. Attach the cable assemblies (902612) to the front end cap (250880B) holes, see Fig. 6. Run cables over the top of the bows (251211B). If applicable, drill holes into the rear sideboard for the cable brackets (281712B) (Fig. 6B). Secure the cable brackets (281712B) to the rear sideboard. Route cables through the holes in the rear end caps (250880B), see Fig. 6B. Secure cables to the slot in bracket (281712B), see Fig. 6B and Fig. 6C. To tighten cables, tighten capscrew (TA0-907131-0) on outside of cart until bracket makes cables snug tight, see Fig. 6C. **Do not overtighten.**

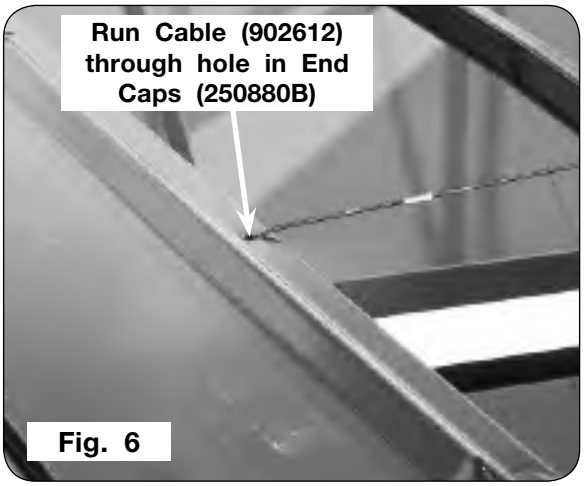


Fig. 6

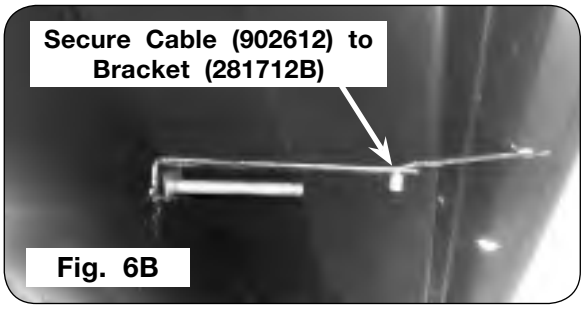


Fig. 6B

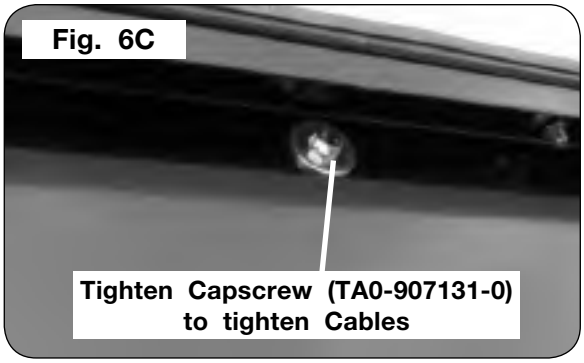


Fig. 6C

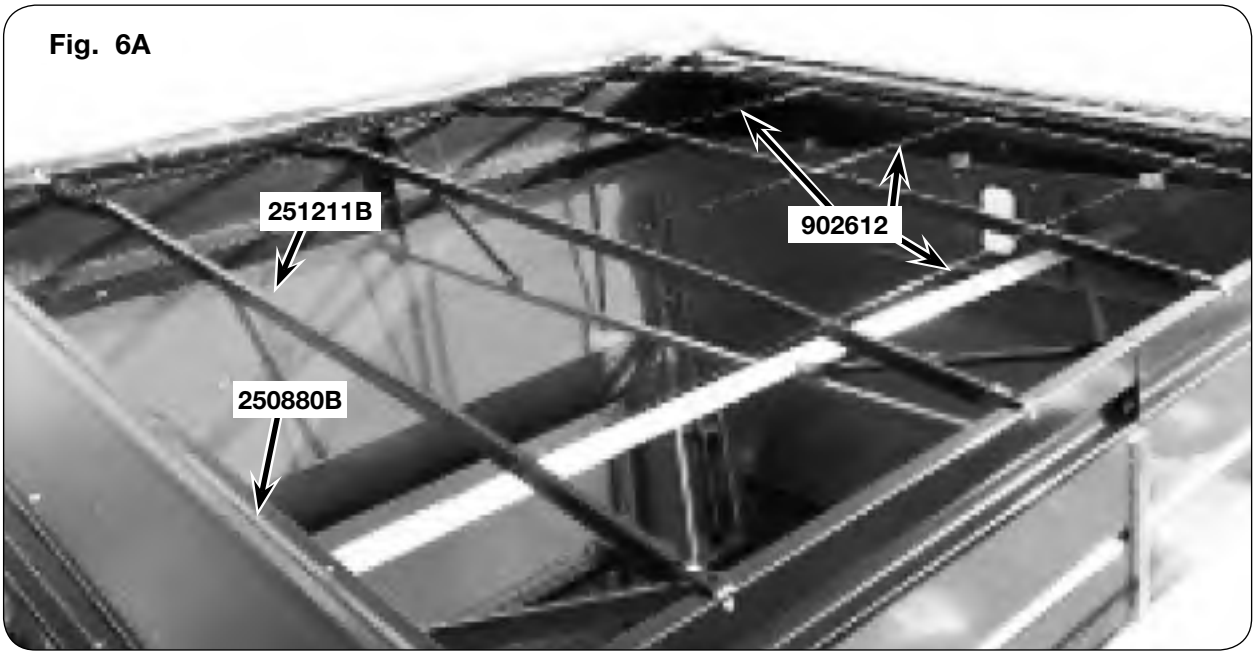


Fig. 6A

Optional Weather Guard Tarp Installation (continued)

7. **(2-person operation)** On a clean floor, lay the tarp out flat with the raw edge of the hems and pockets down and the exterior side facing up.

8. Insert the small 1 1/8" tube (23) by sliding it into the small pocket of the tarp. Leave 1" of the tube sticking out one end and drill a 3/16" hole through the center of the outer reinforcement strap and tube. Fasten with a rivet (17). At the other end, pull on the tarp by hand to stretch it until there is 1" of tube sticking out. Drill hole and install rivet. Press the 1 1/8" plugs (26) into each end of the tube. See Fig. 7.

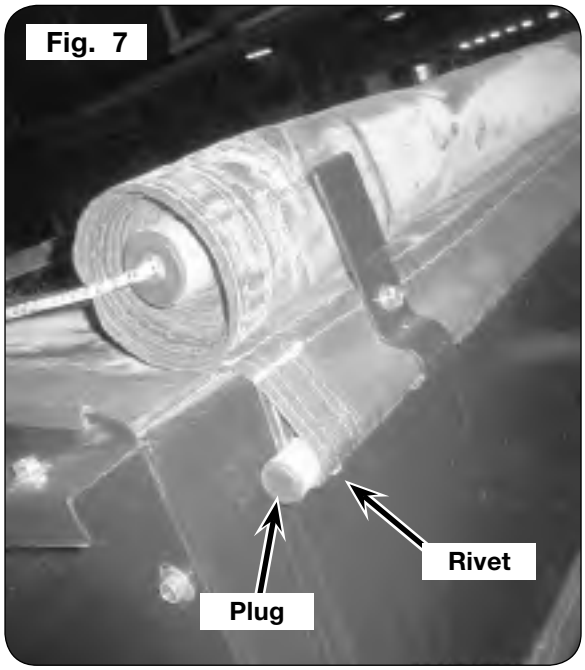


Fig. 7

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

9. Insert the 2" roll tube into the large pocket, with the splined shaft to the rear. Measure 10 1/2" from the end of the spline to the start of the tarp. Install the first U-clamp (21) and self-drilling screws (30) to the first reinforcement strap, to secure the tarp to the tube. Work down the roll tube putting the U-clamps and self-drilling screws on each reinforcement strap. Make sure to keep the tarp pulled tight to reduce wrinkling. See Fig. 7A.

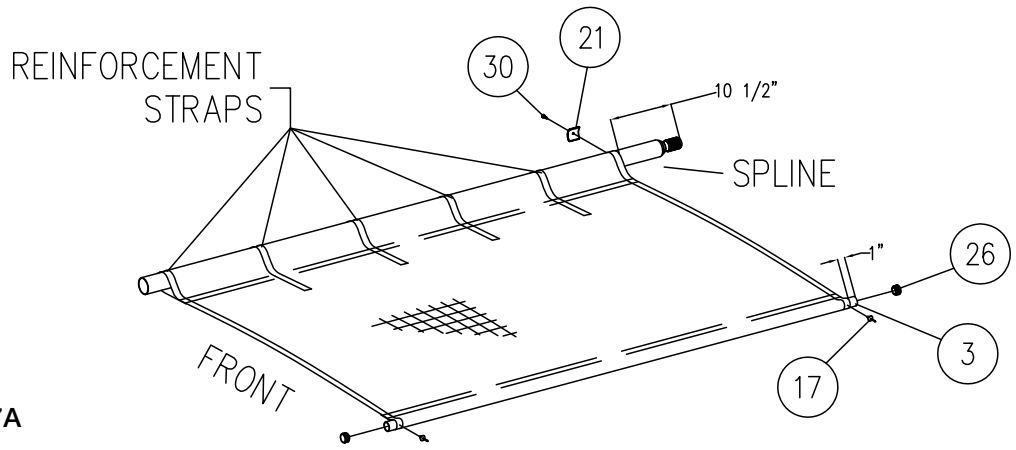
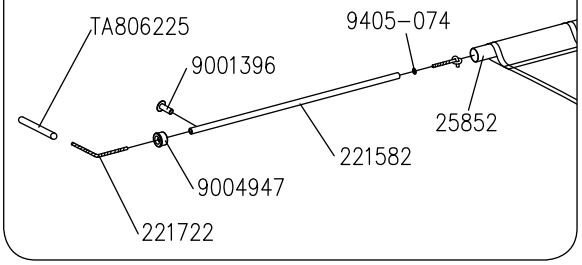


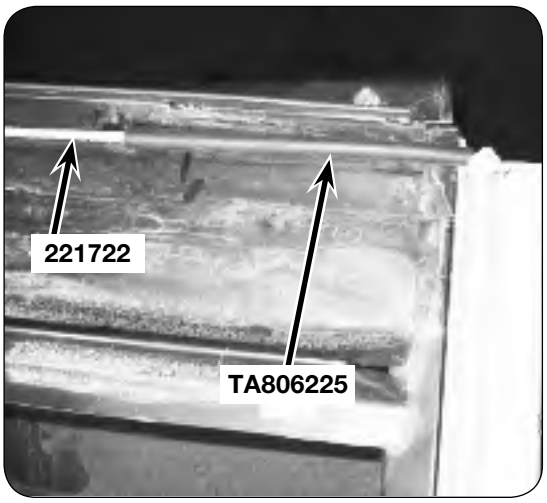
Fig. 7A

Optional Weather Guard Tarp Installation (continued)

10. Insert knotted stretch rope (221722) through flat washer (9405-074), plastic tube (221582) and end plug (9004947). Place these items as an assembly into front end of 2" tube (221576) and press the end plug into the end of the tube. Screw self-drilling screw (9001396) through the side of roll tube, into end plug (9004947) to retain plug into tube. Slide hose (TA806225) over bungee. See Fig. 8.

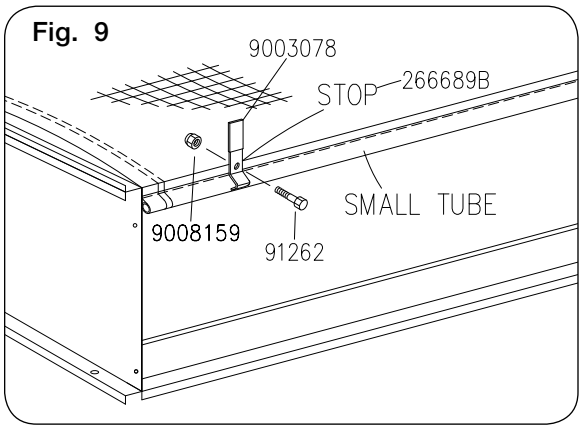
Fig. 8

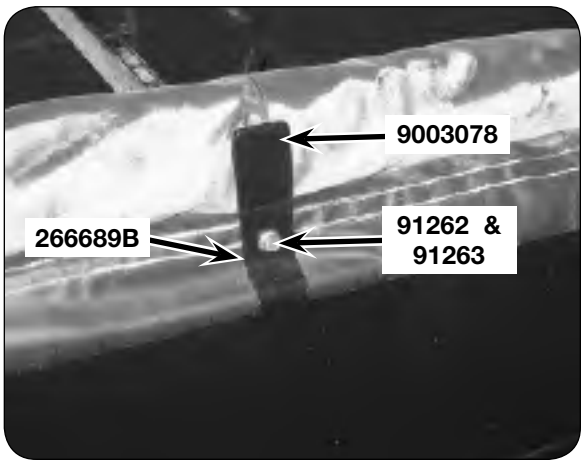




11. Using an appropriate lifting device rated for a minimum of 250 lbs., position the tarp on top of the left hand side of the cart. Place the 1 1/8" stationary tube side of the tarp on top of the left side of the box, centered from front to back of box. BE CAREFUL NOT TO LET THE TARP ROLL OFF OF THE BOX. Assemble the tarp and stops (266689B) (with caps) to the left side boards by poking a hole through the tarp and using flange screws (91262) and flange nuts (91263). Assemble the center stop through the bow weldment, the front and rear stops should be 1 foot in from the ends of the cart. See Fig. 9.

Fig. 9





Optional Weather Guard Tarp Installation (continued)

12. Unroll the tarp and insert stretch cord through the top of the eye bolt (9004548). With the tarp rolled up under the latch plate, leave 2 or 3 inches of slack in the stretch cord and knot below the eyebolt. Cut off additional cord a couple inches below the knot. To keep cord from fraying, use a lighter to heat and sear loose strands. See Fig. 10.

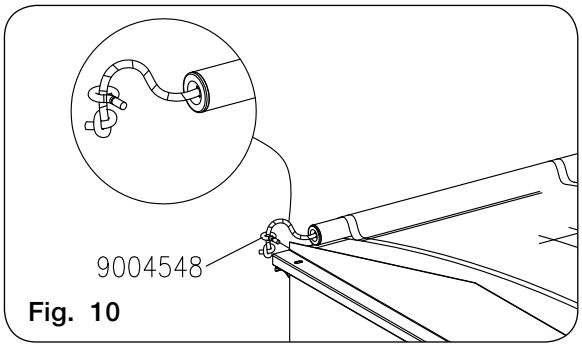
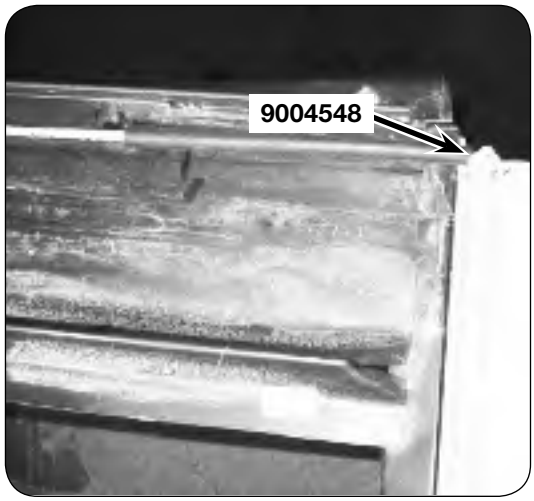
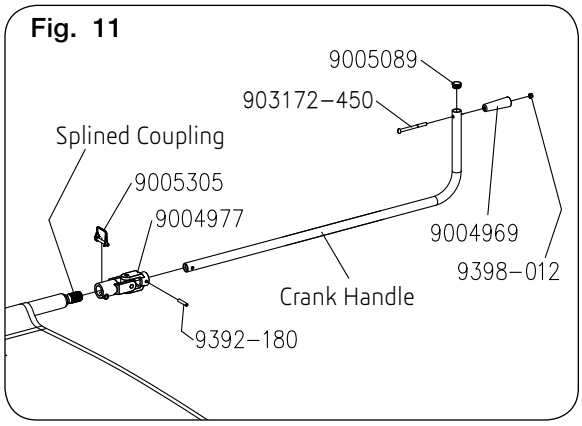


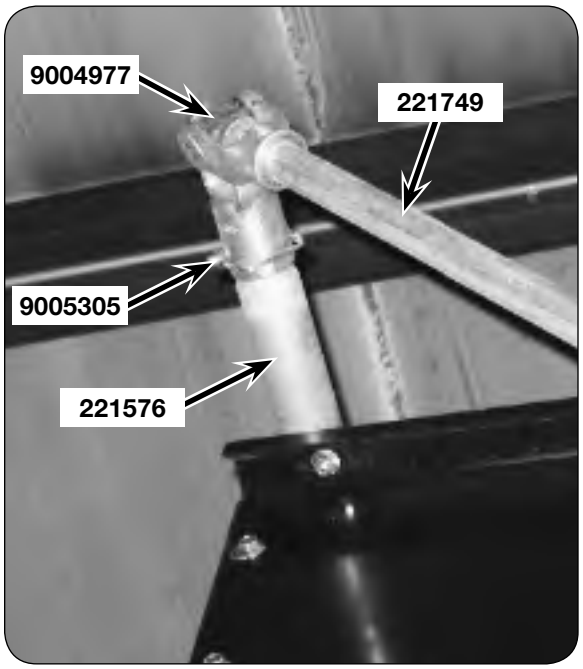
Fig. 10



13. Insert U-joint (9004977) over splined coupling (221603) and secure with wire lynch pin (9005305). Insert crank handle (221749) into U-joint and secure with roll pin (9392-180). Insert round head bolt (903172-450) into bottom hole of crank handle (221749) and slide plastic handle (9004969) onto bolt securing with locknut (9398-012). Insert 1 1/4" plug (9005089) into end of handle. See Fig. 11.

Fig. 11





Optional Weather Guard Tarp Installation (continued)

Hand Crank

1. Locate the channel bracket holes just above the box fold line, centered on the box. Drill two 5/16" holes as shown in Fig. 12.

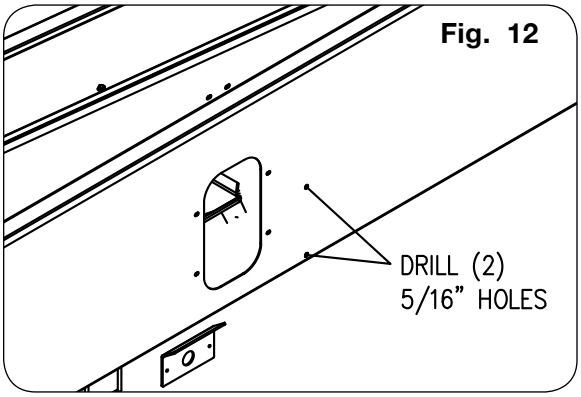


Fig. 12

2. Attach channel bracket (251132B) using two 3/8" self tapping screws (96972). See Fig. 12. Attach bracket (221700B) to the bottom hole with capscrew (95585) and locknut (91263). Secure tube holder (221770B) to bracket using capscrew (9390-055) and locknut (9928). See Fig. 13.

3. Locate the operating decal near the handle. Clean the surface and apply the decal permanently.

4. Tighten tarp by holding the crank firmly with both hands and roll the main tarp tube counter-clockwise up under the latch plate. Next, bring the crank handle down perpendicular to the ground. Continue by lifting it up into the crank retainer.

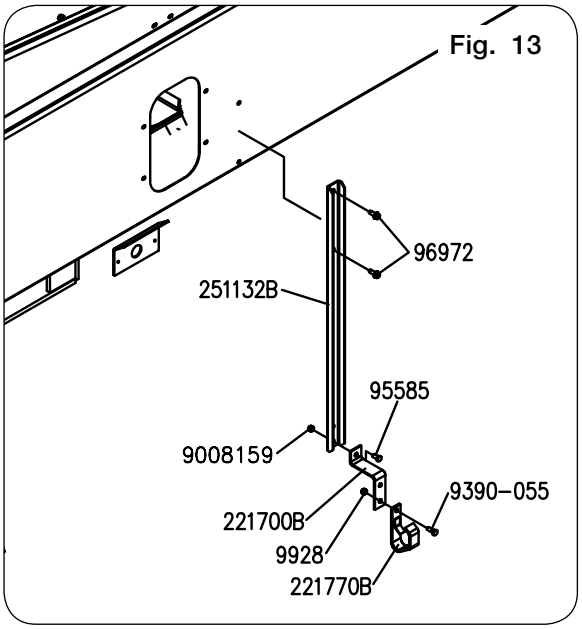


Fig. 13

<u>NOTE</u>: A slight bow in crank tube should indicate adequate tension.

<u>NOTE</u>: U-joint may need to be re-indexed on the splined shaft of the roll tube to achieve an ideal tarp tension and over time it may need to be readjusted.

Notes

Section III
Operation

FOR TORQUE INFORMATION, PLEASE REFER TO THE MAINTENANCE SECTION. FOR SCALE, HYDRAULIC DRIVE OR WEATHER GUARD TARP INFORMATION, PLEASE REFER TO THAT SPECIFIC 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)
- ❑ Check to be sure all the reflective decals and the SMV sign are clearly visible with the cart attached to the tractor. Check to be sure the transport lights are in working condition. Check and follow federal, state/provincial and local regulations before towing on a road or highway.
- ❑ Check to be sure the hitch height when attached to the tractor is sufficient to prevent severe bends in PTO U-joint angles.
- ❑ Check to be sure PTO is correct length for making turns and operating on uneven terrain. See “Verify Telescoping PTO Shaft Length” in MAINTENANCE section.
- ❑ Torque wheel nuts according to “Wheel Torque Chart” in MAINTENANCE section.
- ❑ Transport chains are properly installed and hardware is torqued to specification. See “Transport Chain Connection” in OPERATION section.
- ❑ Check to be sure all screens and safety shields are in place.
- ❑ Check to be sure recommended lubrication procedures are being followed.
- ❑ Check operation and functionality of flow door, flow door indicator, auger fold, and auger pivot.
- ❑ Set tractor PTO control engagement setting to a minimum, refer to tractor operators manual for setting information.
- ❑ Test run the augers. See “Auger Operation” in OPERATION section.

Preparing Tractor

Before operating cart, read the tractor Operator’s Manual and gain an understanding of its safe methods of operation.

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

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

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.

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.*

Preparing Cart (continued)

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.**

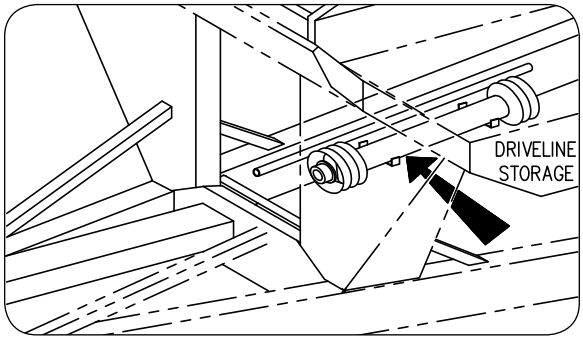
IMPORTANT

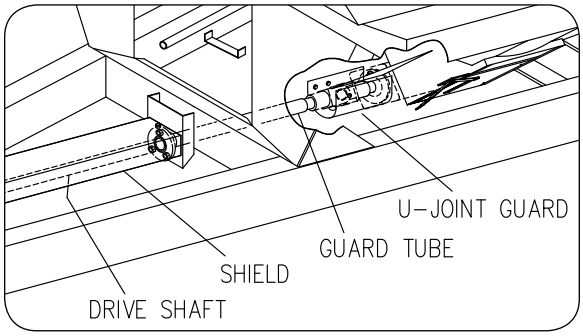
- *Installing wheels without the proper inset could result in hub or spindle failure. This will cause substantial damage to cart.*

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.

Drive Shaft Guards

The PTO driveshaft shield, floating guard tube and U-joint guard are factory installed. Make sure they are in place before operating the auger.





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" and 2" diameter must only be used with a clevis-type tractor drawbar. Use bushings supplied to properly adapt to the hitch pin. An optional hammer strap is available if your tractor has a single tang drawbar.

NOTE: The use of a smaller diameter hitch pin will result in additional clearance between the hitch and pin. This additional clearance may cause accelerated pin, tractor and cart hitch wear, along with more pronounced jolting from the cart during transport operation.

⚠ WARNING

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

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

Hitching to Tractor (continued)

Jack Usage

WARNING

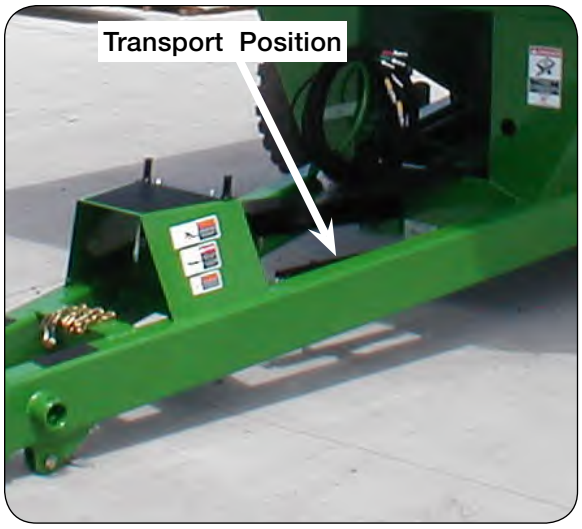
- **UNHITCHING A LOADED CART CAN CAUSE SERIOUS INJURY OR DEATH DUE TO THE TONGUE RISING OR FALLING. ALWAYS HAVE A LOADED CART ATTACHED TO A TRACTOR. THE JACK IS INTENDED TO SUPPORT AN EMPTY CART ONLY.**

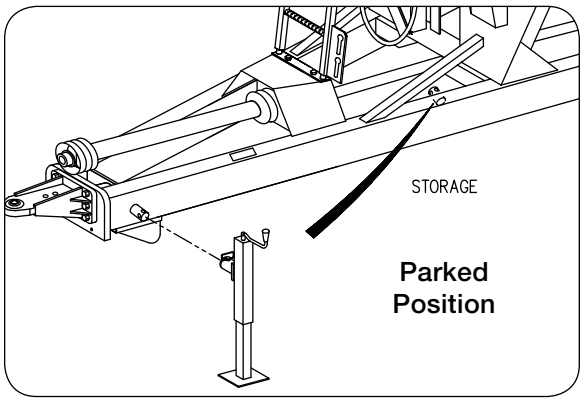
Use jack to support an empty grain cart, never a loaded grain cart. Always have a loaded grain cart hooked to tractor.

IMPORTANT

- *Mount jack in storage location indicated after cart is hitched to tractor.*

Remove jack from storage on inside of left frame and install on mounting spud behind hitch.





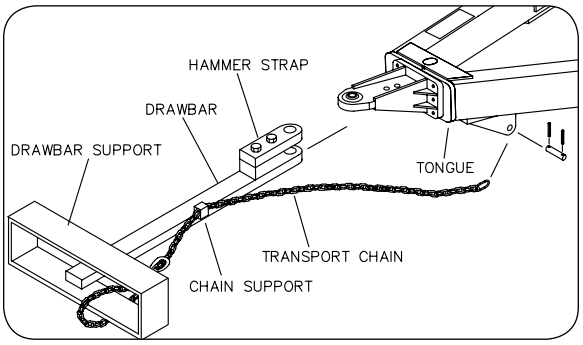
Hitching to Tractor (continued)

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.**

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. Fig. 3 shows how the transport chain must be installed between the tractor and grain cart.



Transport chain should have a minimum rating equal to the gross weight of the implement and all attachments. Use only ASABE approved chains. Allow no more slack in the chain than necessary to permit turning.

CAUTION

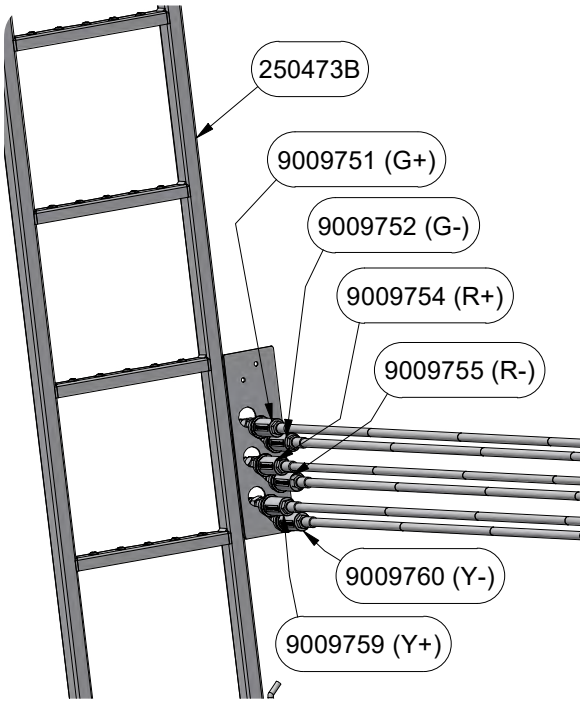
- **REPLACE TRANSPORT CHAIN IF ANY LINK OR END FITTING IS BROKEN, STRETCHED OR DAMAGED. DO NOT WELD TRANSPORT CHAIN.**

Hitching to Tractor (continued)

Hydraulic Connections

IMPORTANT

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



This unit is equipped with colored hydraulic hose grips that will help in identifying the hose function and correct hook up:

Green: Raise and Lower Auger
Red: Flow Door Open and Close
Yellow: Spout In and Out

After initial Setup or replacement of any hydraulic component on the cart, air must be purged from the cart's hydraulic system.

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

Before disconnecting hoses from the tractor, relieve pressure in the system. See the tractor's Operator's Manual for the proper procedure. Shut off engine and apply parking brake before disconnecting hoses. Install couplers into storage slots provided.

Clean hydraulic hose couplers before connecting to the tractor.

Hydraulic Connections for Hydraulic Drive

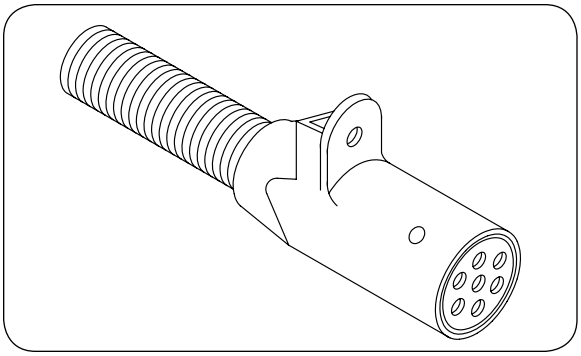
It is possible that the tractor utilizes more than one pump to achieve higher hydraulic flow rates. To maximize hydraulic flow to auger hydraulic drive motor, refer to tractor's Operator's Manual to determine which couplers should be used to achieve maximum flow. A flow test by your dealer's tractor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

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).



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

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

Please 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.

Towing

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

Do not exceed 10 mph during off-highway travel. Do not exceed 8 mph when cart is fully loaded.

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

Secure transport chain to tractor chain support before towing.

⚠ CAUTION

- **THE STANDARD TRANSPORT CHAIN PROVIDED IS FOR THE BASIC CART WHEN TOWED EMPTY FOR ROAD TRAVEL.**

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.

Always have auger folded back into storage position when auger is not in use.

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

Auger Operation

PTO Driven Auger

DANGER

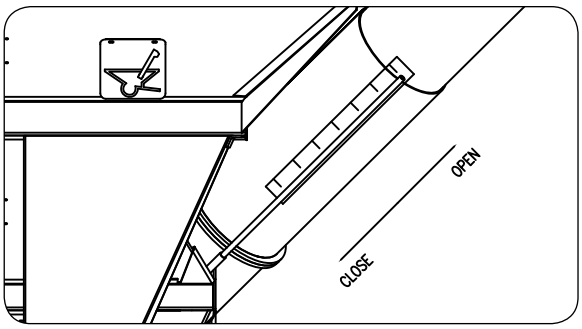
- **ELECTROCUTION WILL CAUSE SERIOUS INJURY OR DEATH. THE GRAIN CART IS NOT INSULATED. KEEP AWAY FROM ALL ELECTRICAL LINES AND DEVICES. ELECTROCUTION CAN OCCUR WITHOUT DIRECT CONTACT.**

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

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

2. Choose an area free from obstructions and unfold auger into unloading position. Allow sufficient time for the cylinder to fully engage the two augers.

3. Engage PTO at low RPM, then increase the tractor RPM to about 1000 rpm.



4. Open flow control door to desired unloading rate. Numbers on the auger tube provide a point of reference for operator convenience.

NOTE: If an overload occurs, (Shear-bolt failure or excessive heat/smoke from friction clutch) stop auger immediately. Close flow control door and relieve auger grain pressure by opening bottom door to remove some grain from auger before resuming.

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

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. Stop PTO. After PTO has come to a complete stop, fold auger to the transport position.

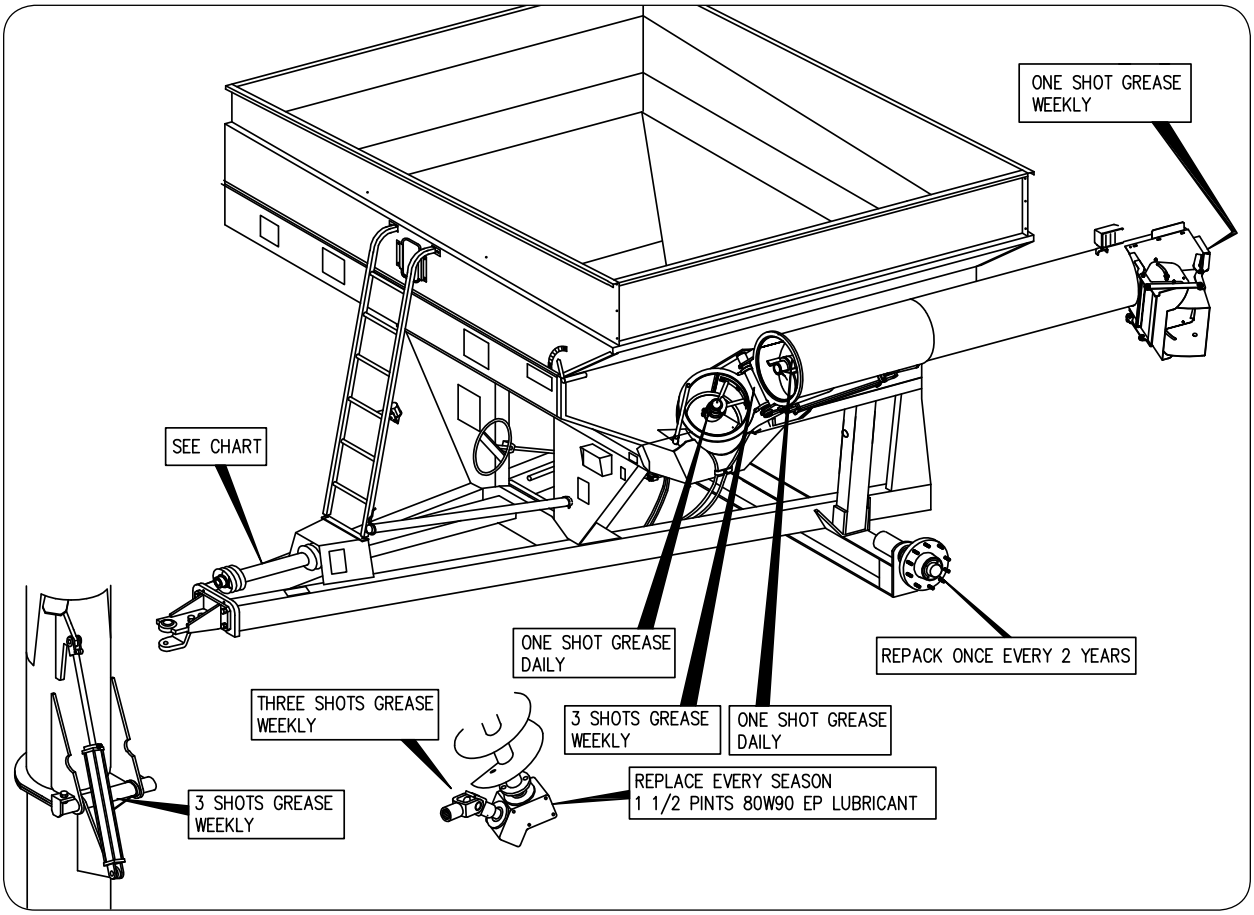
Notes

Section IV
Maintenance

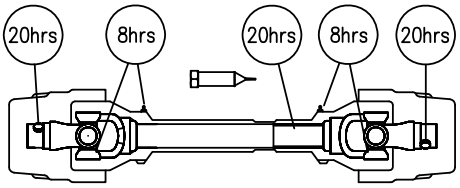
FOR TORQUE INFORMATION, PLEASE REFER TO THE MAINTENANCE SECTION. FOR SCALE, HYDRAULIC DRIVE OR WEATHER GUARD TARP INFORMATION, PLEASE REFER TO THAT SPECIFIC MANUAL.

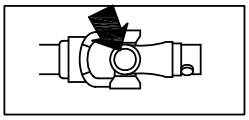
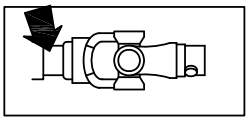
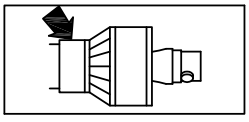
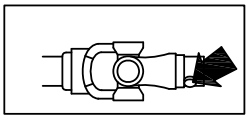
Lubrication

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.



LUBRICATION INSTRUCTIONS FOR DRIVE LINE



8hrs		20hrs	
	Cross journal		Inner tube
	Shield retaining bearing		Push–pin set

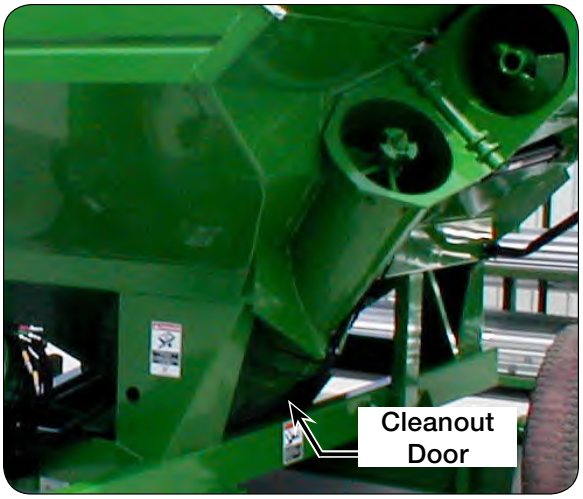
COAT INNER AND OUTER PROFILES AT BEGINNING AND END OF EACH SEASON

Seasonal Storage

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

Do the following before placing the cart in storage:

1. Remove dirt and trash which could cause corrosion.
2. Repaint any chipped or scraped areas.
3. Lubricate points on pages 4-2.
4. Inspect for damage or worn parts, replace before next season.
5. Store cart inside, away from livestock.
6. Replace all worn, torn or faded decals and reflectors.
7. Fully open flow door and auger cleanout door to remove any remaining grain and to allow moisture to drain.



Hub Assembly

1. Pack the bearings with approved grease and assemble the inner bearing into the hub. Install the seal. Garter spring to the inside.
2. Assemble the hub on the spindle, install the outer bearing and retain using the spindle washer and nut.
3. Tighten the spindle nut with a wrench to remove any play between the bearing cone and cups. Do not use an impact!
4. Back off the castle nut and then hand tighten without a wrench.
5. Spin the hub and tighten the spindle nut slowly by wrench until the tightening of the spindle nut stops the rotation.
6. Back off the spindle nut to the closest next slot of the nut that aligns with the cross hole in the spindle. Install the cotter pin. Do not bend the ends.
7. Spin the hub while checking for drag and/or play. If play exists, tighten the castle nut. Back off and then repeat the above steps. If drag exists, back off the spindle nut to the next hole. Spin and check again.
8. Once set, bend the cotter pin ends around the nut and fill the hub cap with approved grease. Attach the new gasket maker to the bottom of the hub cap and attach with hardware. Tighten in an alternating manner.

Auger System

WARNING

- **TURNING AUGER AND OTHER MOVING PARTS CAN CRUSH AND CUT. DISENGAGE PTO AND SHUT-OFF ENGINE BEFORE SERVICING MACHINE OR ENTERING GRAIN TANK, OR OPENING CLEAN-OUT DOOR(S).**

- **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 1,600 LBS. SPECIFIC LOAD RATINGS FOR INDIVIDUAL LOADS WILL BE GIVEN AT THE APPROPRIATE TIME IN THE INSTRUCTIONS.**

- **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.**

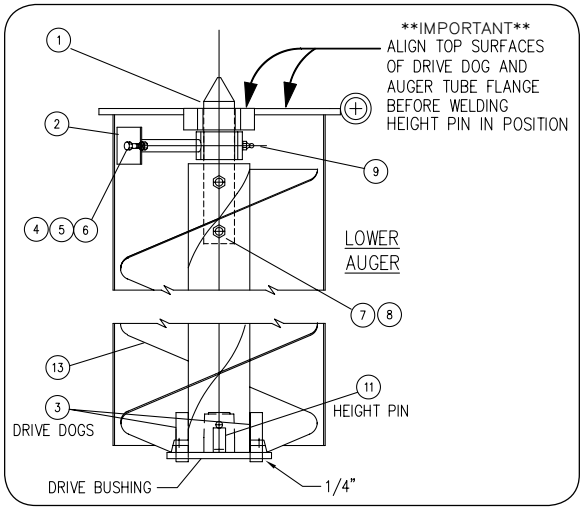
- **TO PREVENT PERSONAL INJURY OR DEATH, ALWAYS ENSURE THAT THERE ARE PEOPLE WHO REMAIN OUTSIDE THE CART TO ASSIST THE PERSON WORKING INSIDE THE CART, AND THAT ALL SAFE WORKPLACE PRACTICES ARE FOLLOWED. THERE IS RESTRICTED MOBILITY AND LIMITED EXIT PATHS WHEN WORKING INSIDE THE CART.**

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

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

Lower Auger Disassembly

1. Remove three 3/8" x 1 1/4" capscrews (4), lock washers (5) and nuts (6) which secure hanger bearing to auger tube.
2. Using a safe lifting device rated for 500 lbs., remove auger from auger tube and perform required repair or replacement.
3. Remove two 5/8" x 6" capscrews (7) and locknuts (8) which trap hanger bearing and secure drive dog to auger. Missile shaft/coupler sleeve bolt and nut should be at 180° apart from opposite bolt to neutralize their effect on auger balance.



Auger System (continued)

Lower Auger Assembly

1. Assemble drive dog (1) and hanger bearing (2) to auger and secure with two 5/8" x 6" capscrews (7), lock washers and nuts (8).

2. Install auger, drive dog, and hanger bearing into lower housing and secure with three 3/8" x 1 1/4" capscrews (4), lock washers (5) and nuts (6). Do not tighten.

3. Align the top surfaces of drive dog and auger tube flange. Do not align with tube sleeve. Tighten hanger bearing fasteners (4, 5 & 6).

4. Rotate and align center auger tube until drive plate holes are centered between flightings.

IMPORTANT

- *Disconnect the cart completely from the tractor before welding on the equipment. Damage may occur to the electrical system.*

5. Position height pin against top of drive plate and weld to auger tube.

NOTE: Height pin can be located adjacent to one of drive pins and both pins welded together in Step 6.

6. Insert two lower drive dogs 1/4" through drive bushing and weld to auger center tube (and to height pin if applicable).

7. Using a safe lifting device rated for 1,200 lbs., raise upper auger into position, checking upper drive dog engagement with lower auger drive dog.

8. Lower upper auger. Lubricate hanger bearing. Check and remove any loose parts in auger tube interior prior to start-up.

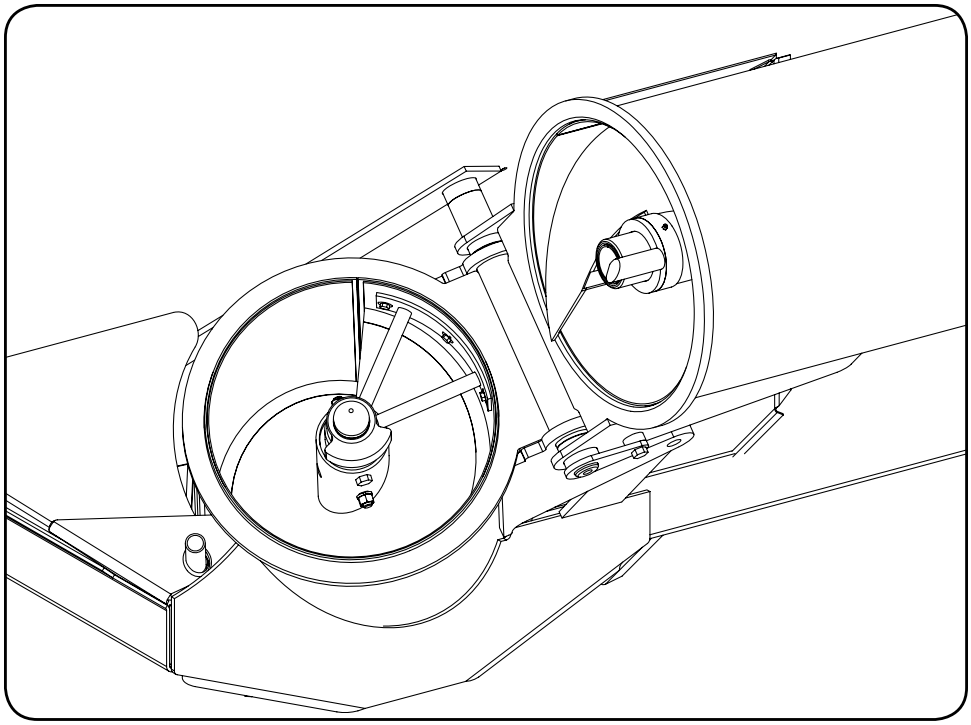
NOTE: If replacing lower auger, rotate flighting 360°, checking for interference or binding. A portion of flighting may have to be removed from the lower end of auger.

9. Re-attach PTO to tractor and slowly rotate auger to ensure engagement and operation.

Auger System (continued)

Upper Auger Disassembly

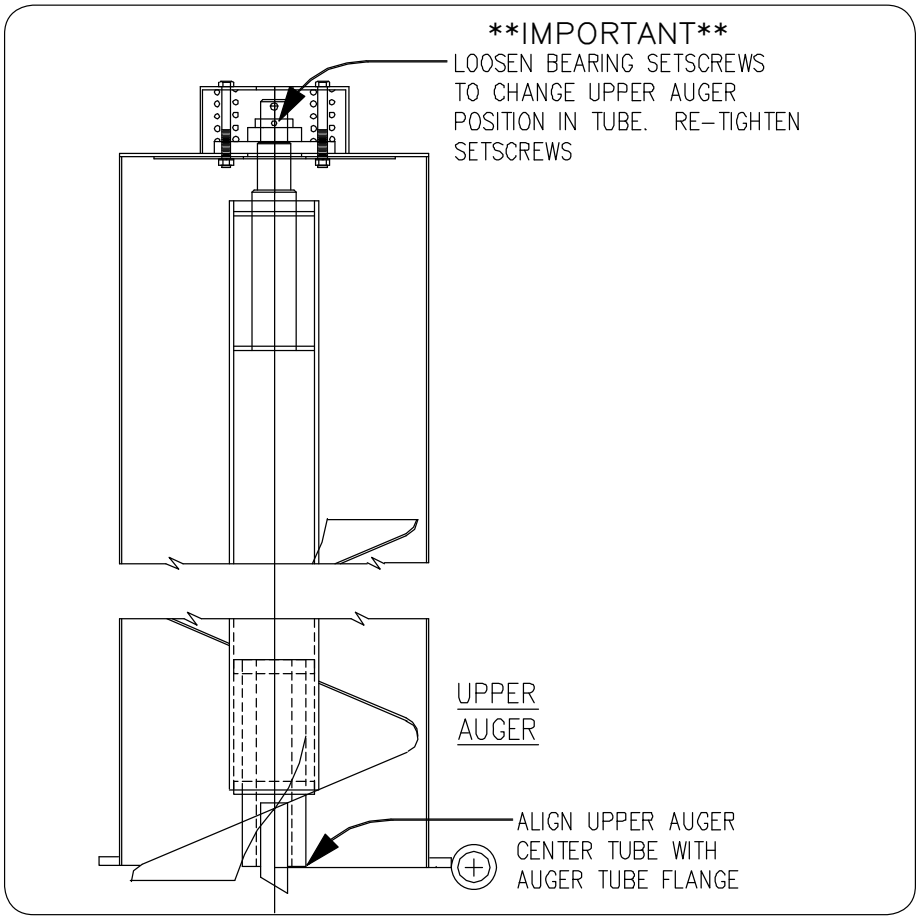
1. Support the upper auger assembly with a 2 ton hoist and two 1000 lb. straps.
2. Remove auger tube cylinder pin and carefully swing cylinder down without breaking hose connections.
3. Disconnect auger and chute light.
4. Remove chute assembly.
5. Remove auger indicator hose and extension shaft from pivot pin, located on inside of cart. With auger tube fully supported, remove pivot pin, retainer bolt\nut and hinge pin. Hinge pin end is center threaded to allow attachment of removal tool (ie: slide hammer).
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 for 600 lbs., 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 and tighten bearing setscrews and 5/16" x 2" machine screw
4. Lift upper auger assembly into position using a 2 ton hoist and two 1000 lb. straps to support the upper auger. Install pivot pin. Align retainer holes and install bolt and nut.
5. Install chute assembly.
6. Reattach indicator hose and extension shaft.
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

Fully extend the upper auger and rotate the auger assembly to ensure both lower & 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

- **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, 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.**

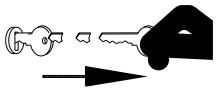
- **KEEP HANDS CLEAR OF PINCH POINT AREAS.**

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

- **HIGH-PRESSURE FLUIDS CAN PENETRATE THE SKIN AND CAUSE SERIOUS INJURY OR DEATH. USE CARDBOARD OR WOOD TO DETECT LEAKS IN THE HYDRAULIC SYSTEM. SEEK MEDICAL TREATMENT IMMEDIATELY IF INJURED BY HIGH-PRESSURE FLUIDS.**

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

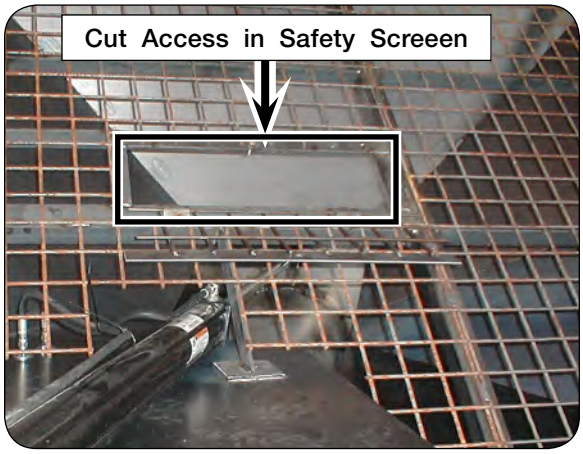
1. Park the empty grain cart on a firm, level surface and extend auger. Block the tires on the machine to keep it from moving. Unfold upper auger to make the flow door cylinder easier to access. If possible, close the flow door at least 8" from the fully open position. Set the tractor's parking brake,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



Auger System (continued)

Auger Flow Door Cylinder Replacement (continued)

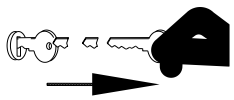
2. On the inside of the cart, the safety screen will need to be cut in order to access flow door/cylinder lug



3. Remove the cotter pins from the lower cylinder pin, then remove cylinder pin.

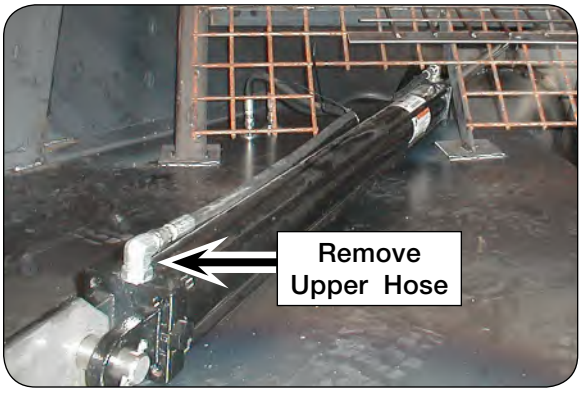
4. Remove all tools and hardware from grain cart. Make sure all personnel are outside of the hopper. Then, retract the cylinder so that there is about 8” of clearance between the cylinder clevis and the lug.

5. Shut-off the engine, remove the ignition key, relieve and disconnect the hydraulic hoses from the tractor and cart.

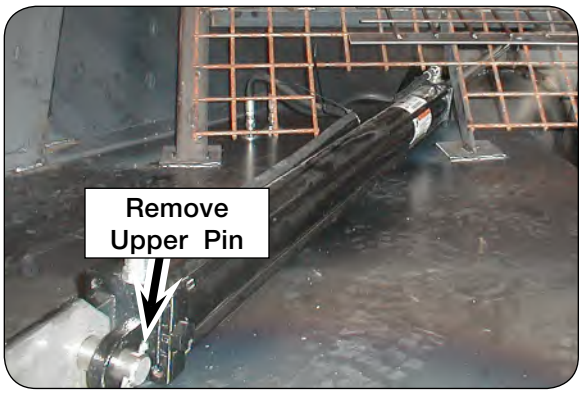


Auger System (continued)

6. Label the hydraulic hoses to indicate upper and lower. Disconnect them from the cylinder.



7. Remove the cotter pins from the upper cylinder pin and remove pin.



8. 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 connections according to directions in the Torque Specifications at the end of the maintenance section.

10. Re-secure the safety screen and weld back into place.

11. Remove all tools and extra hardware from the grain cart. Make sure all personnel are outside of the hopper. **After the hydraulic components have been tightened,** purge air from system as follows:

    A. 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.

    B. Check oil reservoir in hydraulic power source and re-fill as needed.

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

    D. Check for hydraulic leaks using cardboard or wood. Tighten connections according to directions in the Torque Specifications in at the end of the MAINTENANCE section.

    E. Repeat process three or four times.

Verify Telescoping PTO Shaft Length

⚠ WARNING

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

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

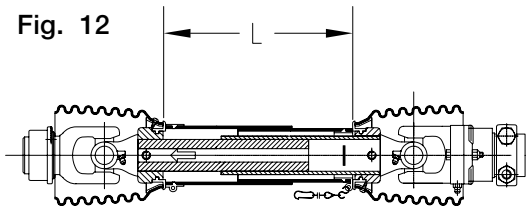
NOTE: Do not exceed 10 degrees beyond a straight pull line while operating the PTO.

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

1. Fully collapse PTO shaft and measure length "L" (Fig. 12).

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

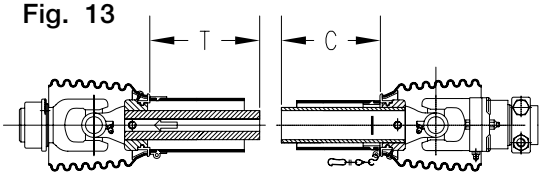
Fig. 12



2. Pull apart PTO telescoping shaft ends and measure lengths "T" & "C" (Fig. 13).

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

Fig. 13



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

This is the maximum recommended extended length (LB).

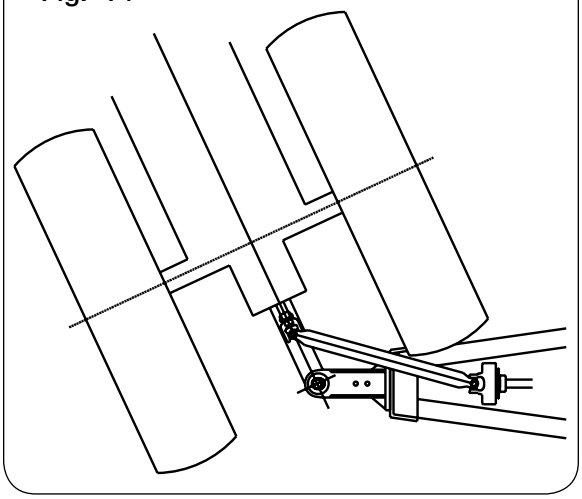
Verify Telescoping PTO Shaft Length (continued)

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

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

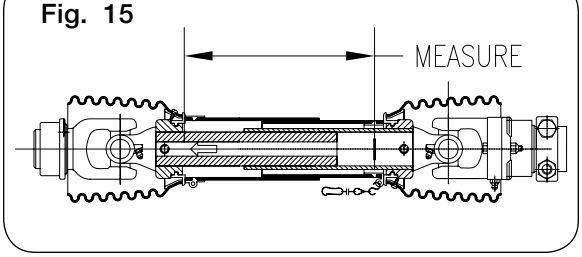
6. Position the tractor to obtain tightest turning angle, relative to the cart.

Fig. 14



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. 15



PTO Shaft and Clutch

Lubrication (Figs. D1 - D6)

Lubricate with quality grease before starting work and after every 8 operating hours.

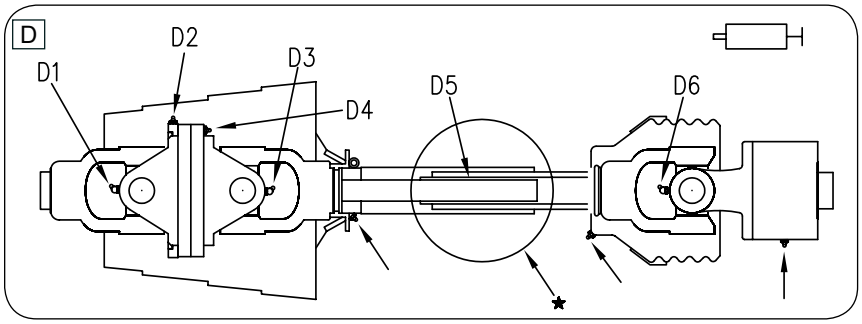
Clean and grease PTO driveshaft before each prolonged period of non-use.

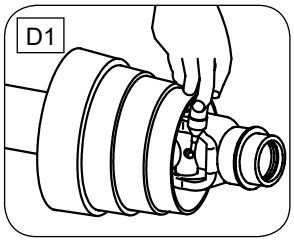
Molded nipples on the shield near each shield bearing are intended as grease fittings and should be lubricated every 8 hours of operation!

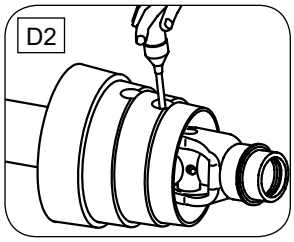
Telescoping members must have lubrication to operate successfully regardless if a grease fitting is provided for that purpose!

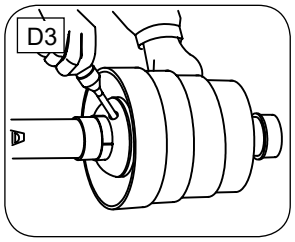
Telescoping members without fittings should be pulled apart and grease should be added manually.

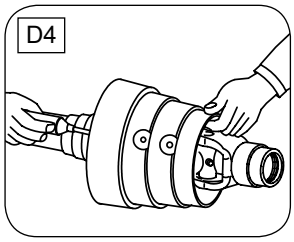
Check and grease the guard tubes in winter to prevent freezing.

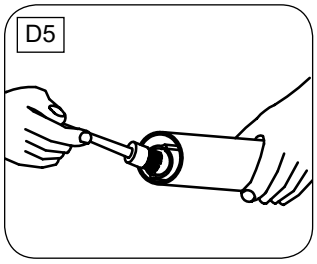


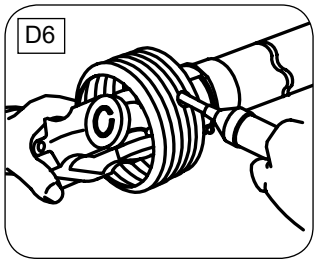










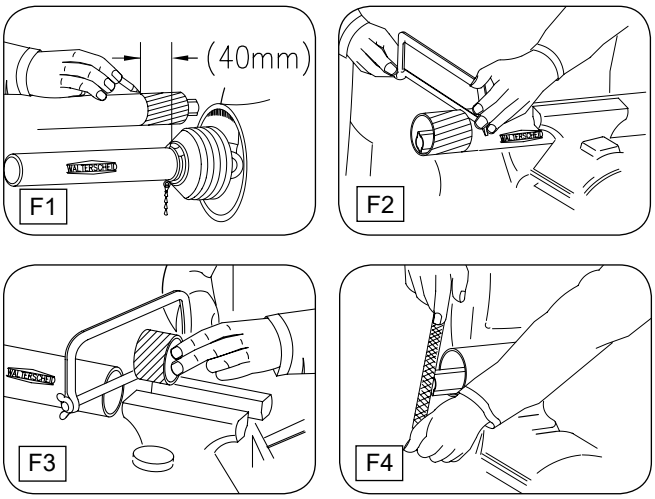


PTO Shaft and Clutch (continued)

Length Adjustment (Figs. F1 - F4)

NOTE: Maximum operating length LB.

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



⚠ WARNING

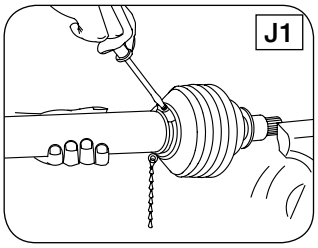
- **CHECK THE LENGTH OF THE TELESCOPING MEMBERS TO INSURE THE DRIVELINE WILL NOT BOTTOM OUT OR SEPARATE WHEN TURNING AND/OR GOING OVER ROUGH TERRAIN.**

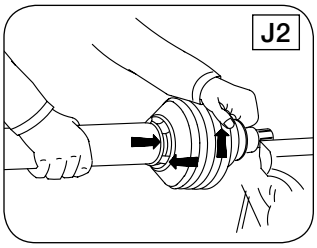
- **PROPER EXTENDED AND COLLAPSED LENGTHS OF THE TELESCOPING PTO SHAFT MUST BE VERIFIED BEFORE THE FIRST OPERATION WITH EACH AND EVERY TRACTOR. IF THE EXTENDED LENGTH OF THE PTO SHAFT IS INSUFFICIENT, IT MAY BECOME UNCOUPLED DURING OPERATION AND CAUSE SERIOUS INJURY OR DEATH FROM CONTACT WITH UNCONTROLLED FLAILING OF THE PTO SHAFT ASSEMBLY COMPONENTS.**

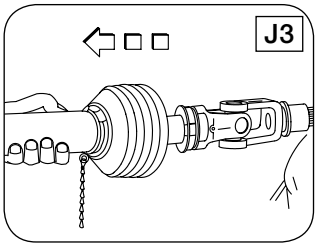
PTO Shaft and Clutch (continued)

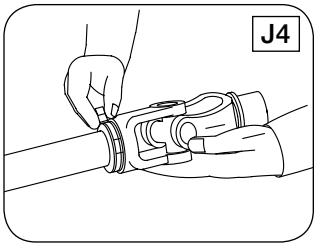
To Dismantle Guard (Figs. J1 - J4)

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



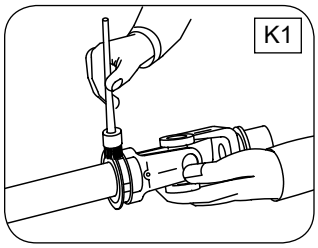


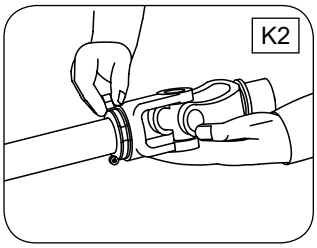


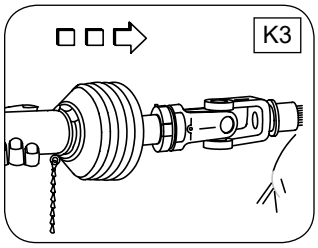


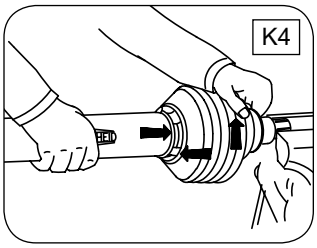
To Assemble Guard (Figs. K1 - K5)

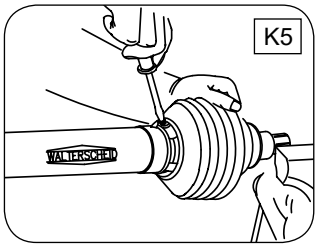
1. Grease yoke groove and inner profile tube.
2. Fit bearing ring in groove with recesses facing profile tube.
3. Slip on half-guard.
4. Turn cone until it engages correctly.
5. Install locking screw.











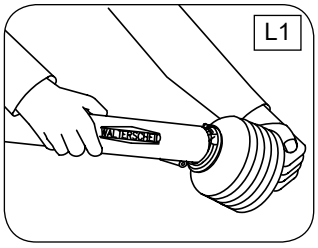
PTO Shaft and Clutch (continued)

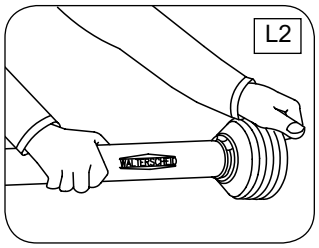
To Assemble Cone (Figs. L1 - L3)

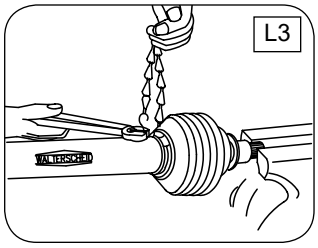
1. Dismantle guard (Fig. L1 - L3). Remove the old cone (e.g. cut open with knife). Take off chain. Place the neck of the new cone in hot water (approx. 80°C/180°F) and pull onto the bearing housing (Fig. L1).

2. Turn guard cone into assembly position (Fig. L2). Further assembly instructions for guard (Figs. K1 - K5).

3. Reconnect chain if required (Fig. L3).



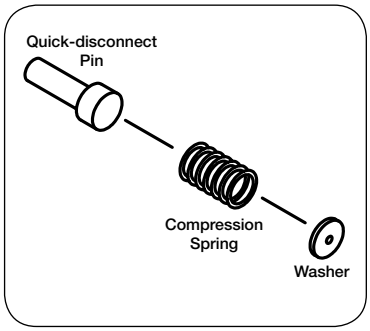


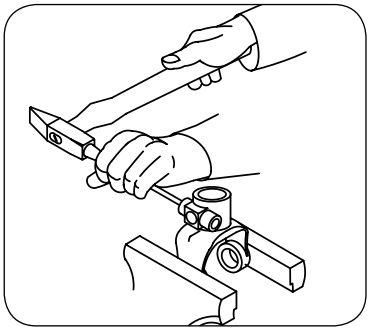


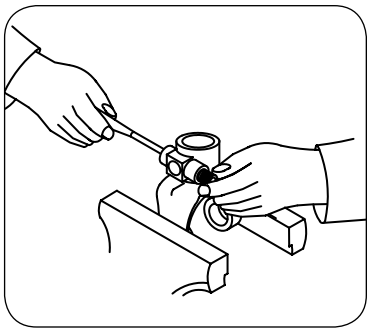
PTO Quick Disconnect

Quick Disconnect Pin

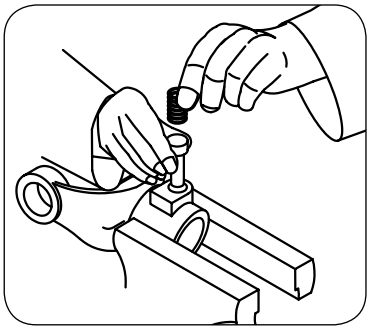
Using a drift punch and hammer, drive the pin towards the retaining washer to force the complete assembly out. Clear the edges of the retaining washer bore to accept the new one by removing the deformed metal from the last peening operation to hold the washer in place.

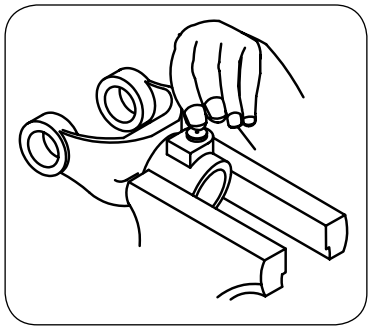


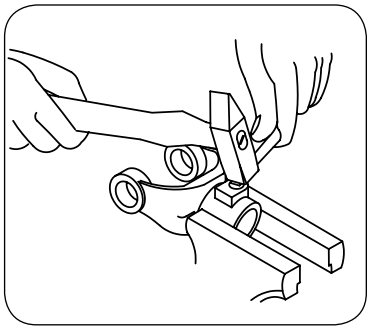




Insert quick-disconnect pin, compression spring and washer into hole, Holding the washer in place, peen the edges of the pore seat to retain the washer, spring and pin.







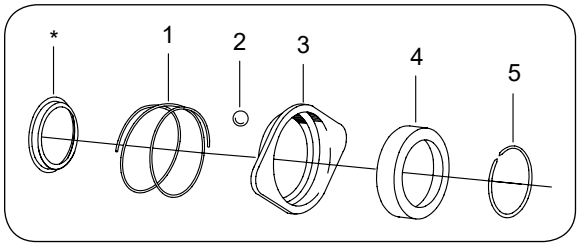
PTO Quick Disconnect (continued)

Quick Disconnect Disassembly

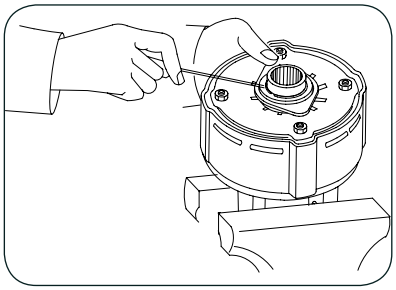
1. Compression Spring
2. Ball
3. Lock Collar
4. Back-up ring
5. Snap ring

* Back-up ring

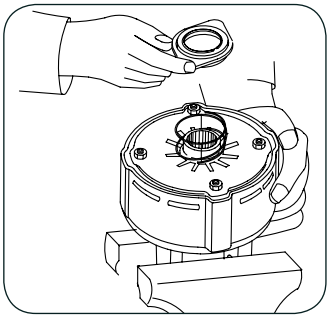
* For some clutch types, place additional back up ring first.



Compress lock collar (#3) and remove snap ring (#5).

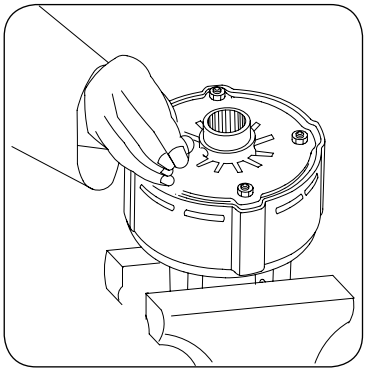


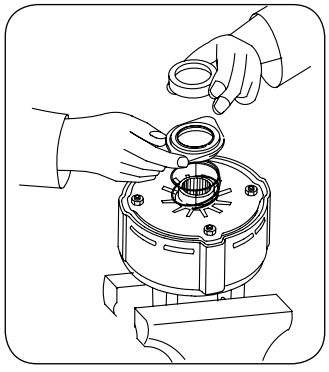
Remove back-up ring, lock collar, compression spring and balls.

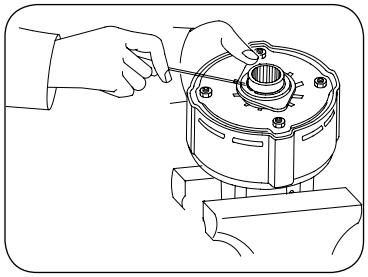


Quick Disconnect Assembly

Insert balls. Place compression spring, lock collar and back-up ring onto the hub. Remove back-up ring, lock collar, compression spring and balls.



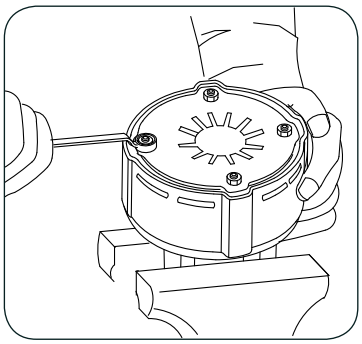
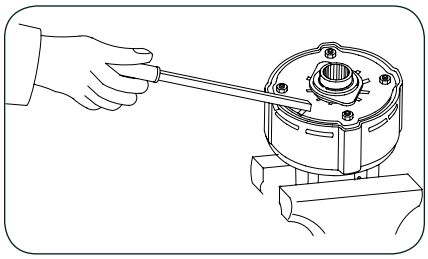
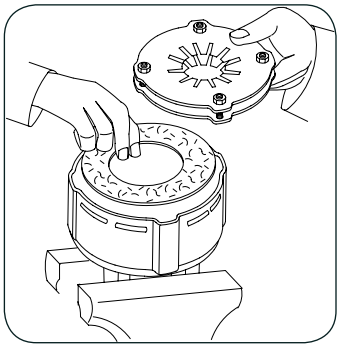




PTO Quick Disconnect (continued)

Clutch Disassembly

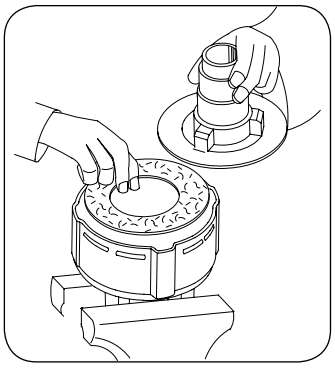
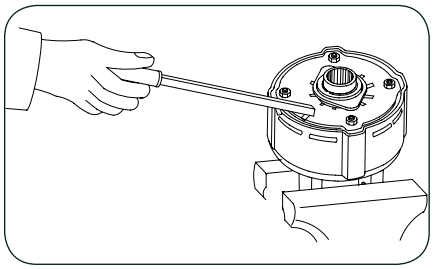
Tighten the four hex nuts (12) uniformly until the clutch pack and hub are loose. Use special tool 9002007 to bend all four retaining lugs back on the edge of the clutch housing. Remove the thrust plate with Belleville springs to get at the friction disks, drive plates and hub for inspection and service.

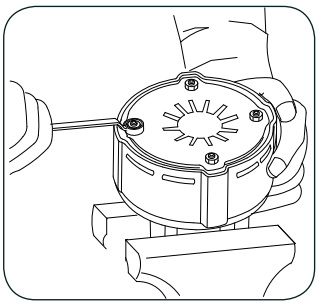
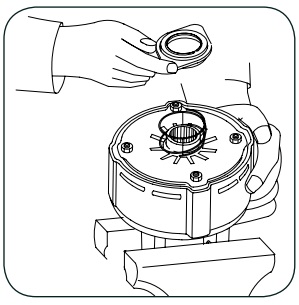
Clutch Assembly

Place hub and friction disks into the clutch housing. Note that items #8 and (are only used in the four plate clutch. Next, compress the Belleville spring(s) to the pressure plate by tightening the four hex nuts and placing them into the clutch housing as illustrated.

Use special tool #9002007 to bend the retaining lugs inward over the Belleville spring edges to secure the springs when you back the four hex nuts off. (Note: Wide lugs for one (1) Belleville spring, narrow lugs for two (2) Belleville springs).

With the lugs in place, loosen the four hex nuts completely to the end of the threaded studs. Replace the quick-disconnect assembly.

Weather Guard Tarp Troubleshooting

PROBABLE CAUSE	CORRECTION
Tarp sags in middle areas	1. Bows may be bent or adjusted too low.
	2. Missing or loose ridge strap. Replace or retighten.
	3. U-joint may need to be adjusted on spindle shaft to provide more tension.
Holes or tears in tarp	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 and/or arm springs as required.*

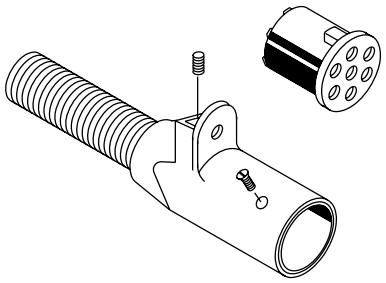
Periodic preventive maintenance should be practiced. Inspect tarp and hardware often for abrasions or loosened bolts that may need adjustment and/or repair. Check bungee cords for wear and adjust tension at the beginning of the season and again half way through the season.

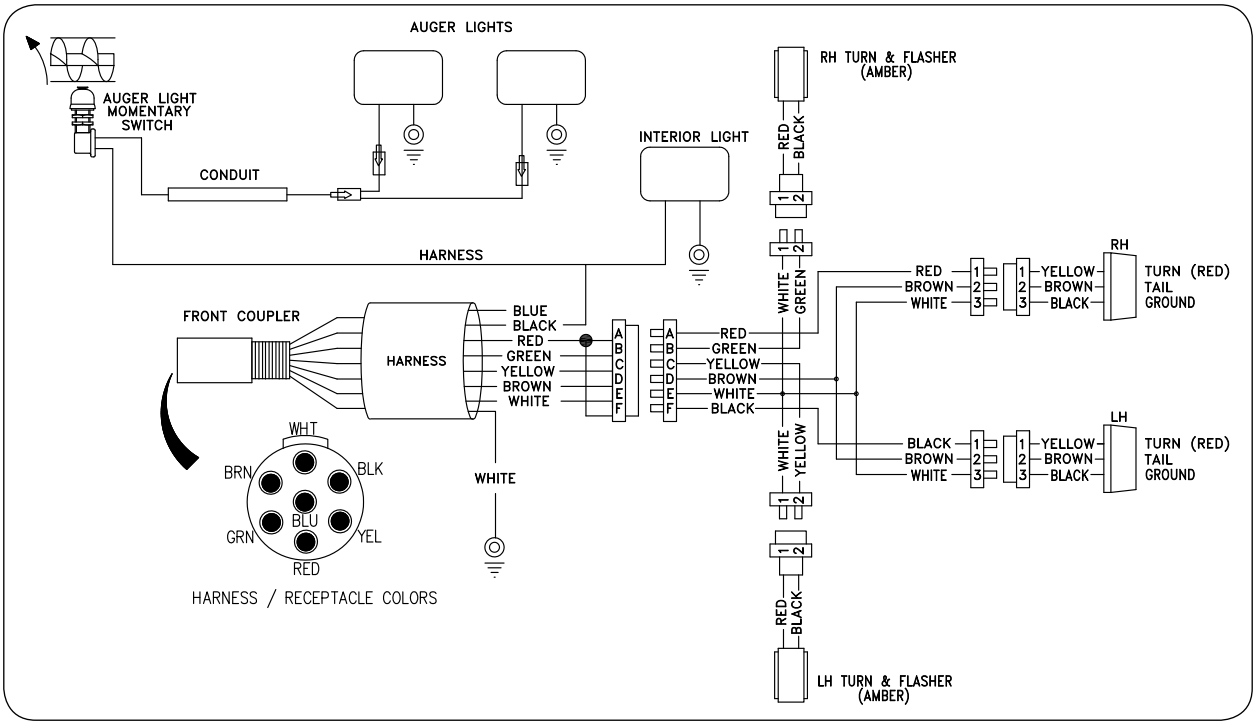
Tears in tarp should addressed before further tarp operation. If water pools on tarp, adjust tension of tarp cables and/or arm springs.

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

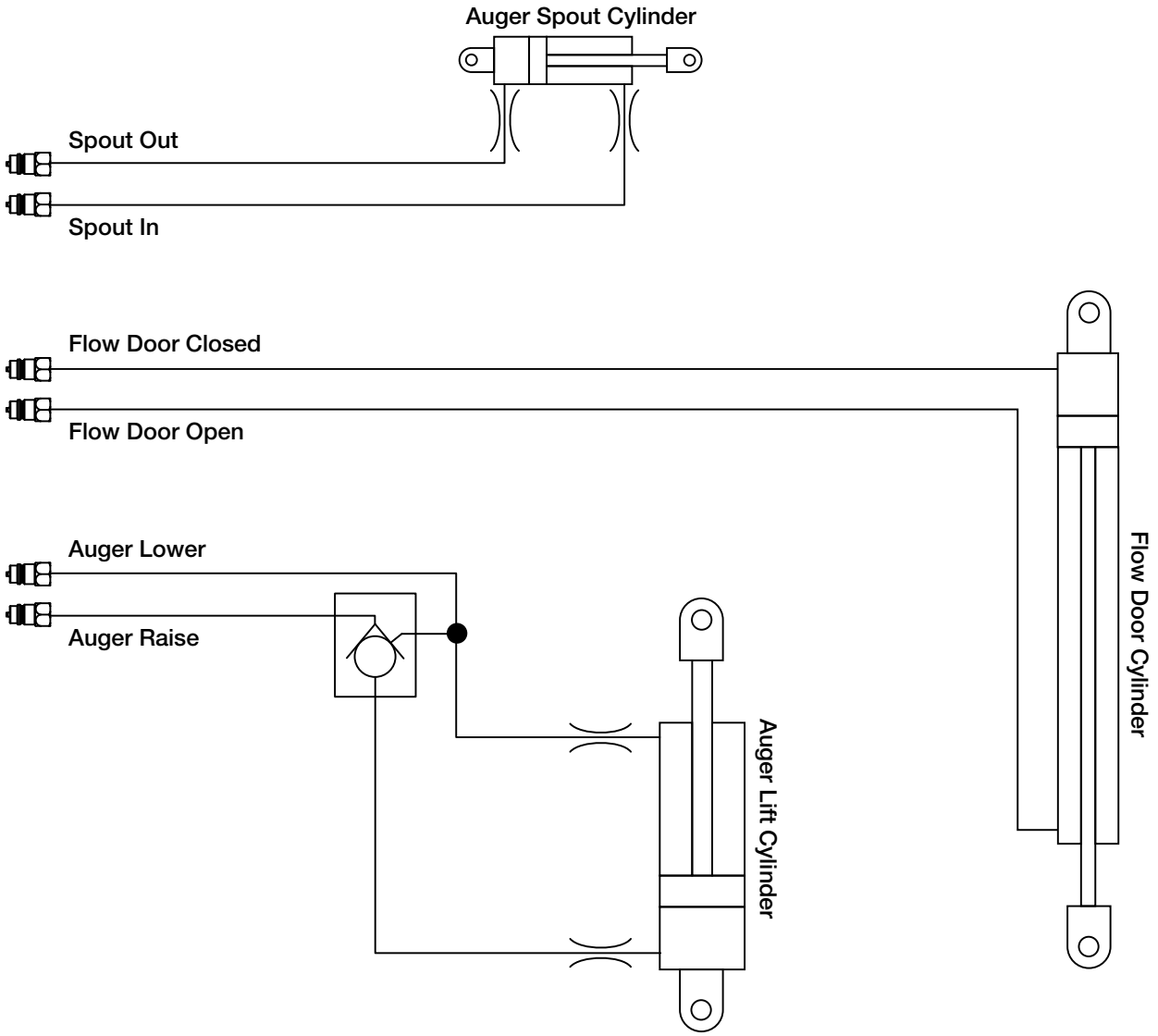
Electrical System Schematic

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



Wheels and Tires

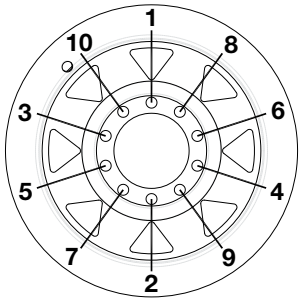
Wheel Nut Torque Requirements

⚠ CAUTION

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

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

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



10 BOLT

DIAGRAM 1

Nut/Bolt Location:	
3/4”-16 (UNF)	Single Wheels
7/8”-14 (UNF)	Dual Wheels

Wheels and Tires (continued)

Tire Pressure

The following is to be used as a general guide for tire inflation and figures can vary depending on specific brand of tire used. It is important that tires are inspected after unit is loaded. Start with minimum pressure indicated. The tire should stand up with no side-wall buckling or distress as tire rolls. Record the pressure needed to support the full load and maintain this pressure to achieve proper tire life. Do not exceed maximum recommended tire pressure. Each tire must be inflated to 35 PSI max to seat the beads, deflated to 5-10 PSI, then reinflated to the tire's max PSI when mounting.

Tire Pressure for Grain Carts

Tire Make	Tire Size	Load Index / Ply Rating	Max. PSI
Firestone	23.1x26 R-3	12	32
	23.1x26 R-1	12	32
	28Lx26 R-3	12	26
	24.5x32 R-3	12	32
	24.5x32 R-1	12	32
	30.5x32 R-1	14	28
	30.5x32 R-3	14	28
	30.5x32 R-3	16	34
	30.5x32 R-1	16	26
	35.5x32 R-3	20	36
	76x50.00x32 HF-3	16	40
	76x50.00x32 HF-3	20	50
	800/65R32 R-1W	172D	41
	800/60R32 R-3	181B	46
	900/65R32 R-3	191B	46
	900/60R32 R-1	176A8	44
	1250/50R32F IF/CFO R-1WNP	201D	46
	1250/50R32F IF/CFO R-1W	188B	30
	520/85R38 R-1	155A8	29
	520/85R38 R-1	173A8	64
	480/80R42 R-1	151A8	36
	520/85R42 R-1	157A8	29
	520/85R42 R-1	165A8	51
	520/85R42 IF/CFO R-1	169A8/B	35
	IF520/85R42 R-1W	169B	35
	VF520/85R42 R-1W	177B	35
	IF1100/50R42 CFO R-1W	197B	46
	420/80R46 R-1	151A8	44
	480/80R46 R-1	158A8	44
	380/90R46 R-1	152B	51

Wheels and Tires (continued)

Tire Pressure (continued)

Tire Pressure for Grain Carts

Tire Make	Tire Size	Load Index / Ply Rating	Max. PSI
Titan/Goodyear	23.1x26 R-3	10	26
	23.1x26 R-1	10	26
	24.5R32 R-1	169A8/B (5-Star)	48
	24.5x32 R-3	12	32
	24.5x32 R-1	12	32
	30.5x32 R-3	16	26
	30.5x32 R-3	14	22
	30.5x32 R-1	14	22
	480/80x42 R-1	166A8	23
	800/65R32 R-1W	172D	34
	900/60R32 R-1W	185A	49
	1050/50R32 R-1	196D	52
	1100/45R46 R-1W	195D	35
	IF1250/50R32 R-1W	201D	46
Mitas	650/75R32 R-1W	172A8	58
	650/75R32 R-1	176A8	41
	800/65R32 R-1W	172A8	46
	900/60x32 R-1W	181A8	58
	900/60x32 CHO R-1W	181A8	46
	900/70R32 R-1W	188A8	53
	1050/50x32 R-1W	178A8	41
	1250/50R32 R-1W	188A8	41
	900/60x38 R-1W	181A8	44
	520/85x42 R-1W	162A8	44
	650/65x42 R-1W	168A8	44
Alliance	30.5B32	18-Ply	36
	35.5LR32	193A8	44
	900/60R32 R-1W	192D	46
	1050/50R32 R-1W	185A8	52
	1250/50R32 R-1W	201B	46
Trelleborg	VF1050/50R32 R-1	198D	52
	900/50R32 R-1W	181A8	55
	900/60x32	176LI	44
	850/55R42 R-1W	161A8	32

****All tire pressures are listed in psi****

Wheels and Tires (continued)

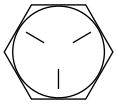
Tire Warranty

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

Complete Torque Chart

Capscrews - Grade 5



NOTE:

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

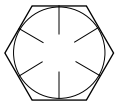
SIZE	FOOT POUNDS	NEWTON METERS
1/4-20 1/4-28	8-10 9-11	11-13 12-15
5/16-18 5/16-24	15-17 17-19	20-23 23-26
3/8-16 3/8-24	25-28 28-31	34-38 38-42
7/16-14 7/16-20	40-45 45-50	54-61 61-68
1/2-13 1/2-20	62-68 68-75	84-92 92-102
9/16-12 9/16-18	90-98 100-110	122-133 134-148
5/8-11 5/8-18	120-135 124-137	162-183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

IMPORTANT

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

Complete Torque Chart (continued)

Capscrews - Grade 8



NOTE:

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

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

IMPORTANT

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

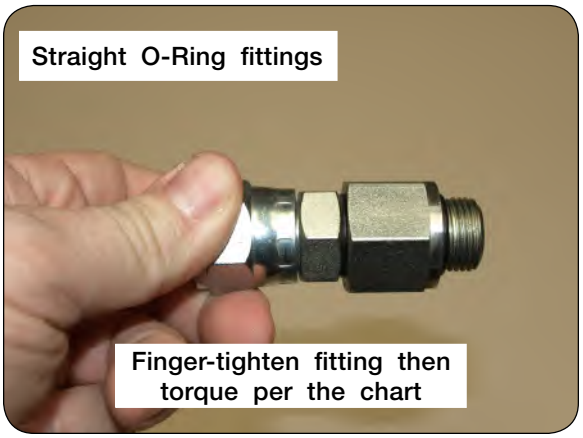
Hydraulic Fittings

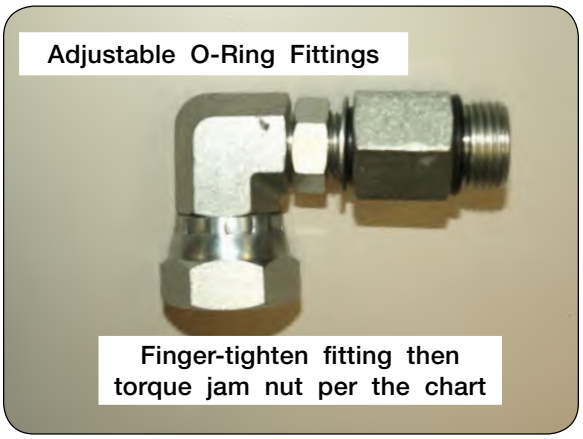
Tightening O-Ring Fittings

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

Tightening JIC Fittings

1. Inspect all components for damage or contamination. Do not connect any other type of fitting to a JIC fitting.

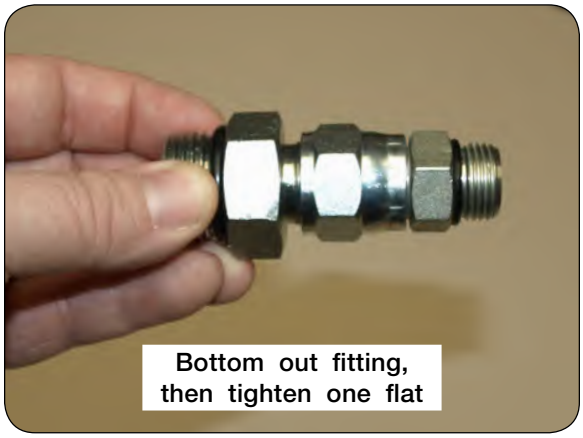
2. Lubricate the threads.

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.

JIC fittings



Bottom out fitting, then tighten one flat

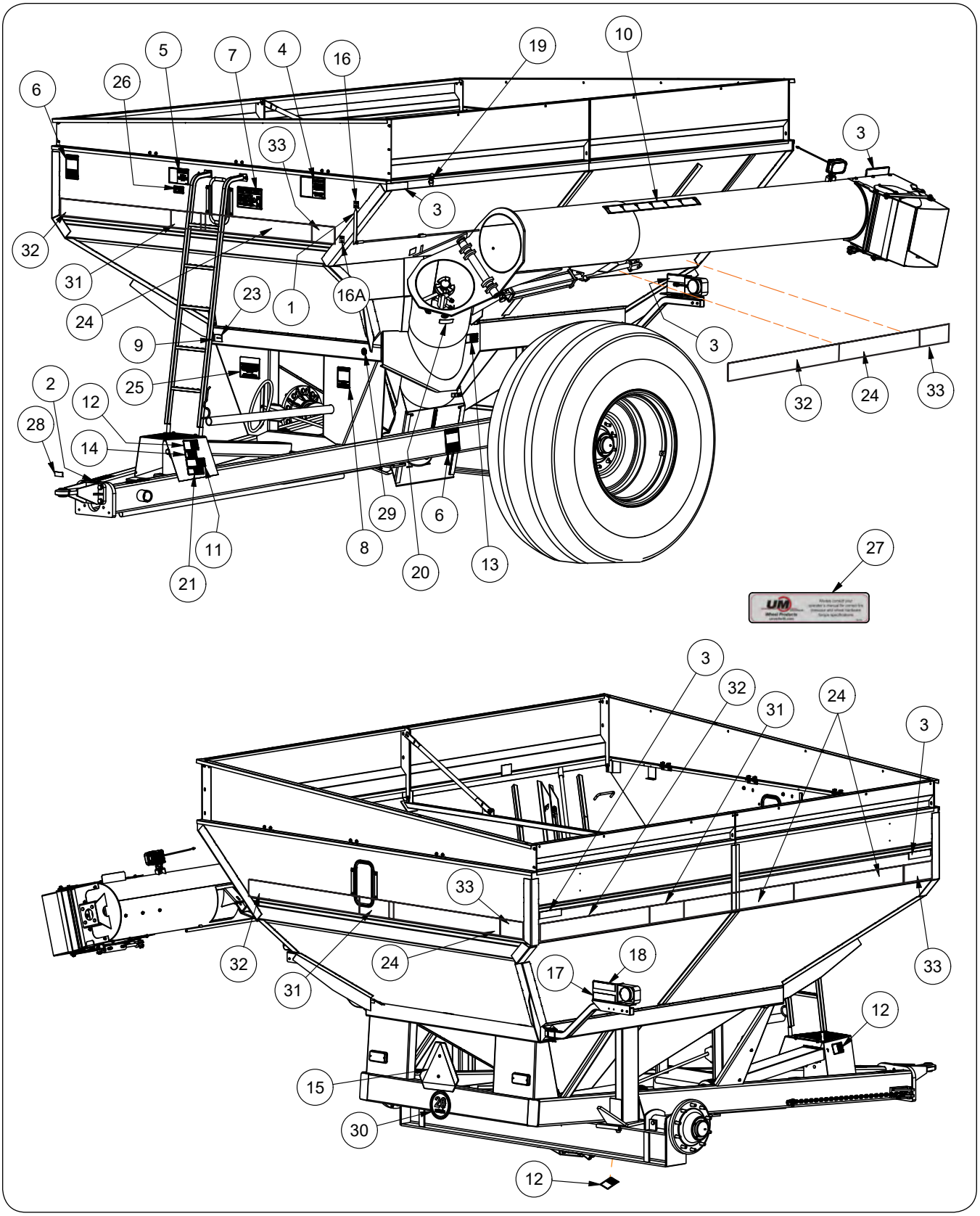
Notes

Section V
Parts

FOR SCALE, HYDRAULIC DRIVE OR WEATHER GUARD TARP INFORMATION, PLEASE REFER TO THAT SPECIFIC MANUAL.

Decals

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



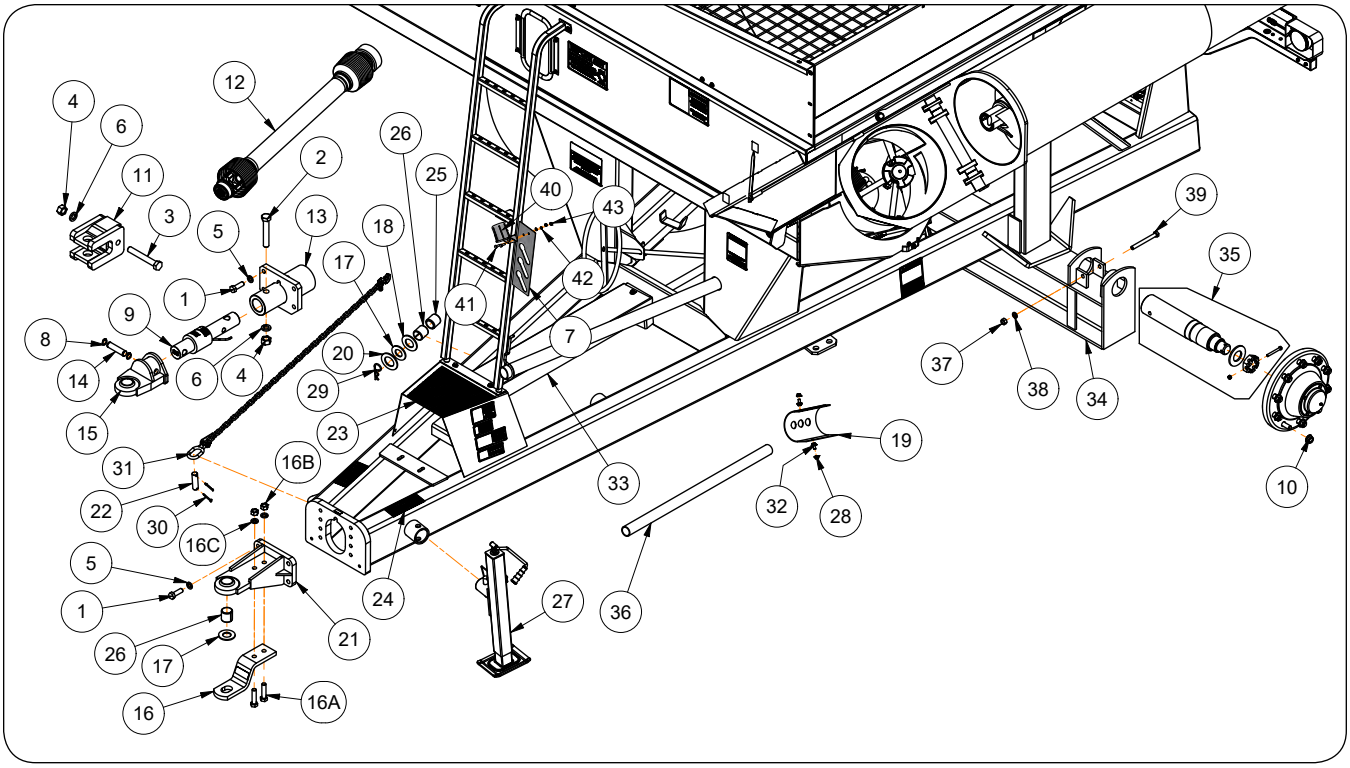
Decals

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

ITEM	PART #	DESCRIPTION	Qty	NOTES
1	2012515B	Indicator Needle =Black=	1	
2	9001708	Decal, Hitch Torque	1	
3	9003127	Reflector =Amber=	6	
4	9003474	Decal, DANGER “Electrical”	1	
5	9003476	Decal, WARNING “No Riders”	1	
6	9003475	Decal, DANGER “Rotating or Moving Parts”	2	
7	9003477	Decal, IMPORTANT “Flow Gates”	1	
8	9003478	Decal, DANGER “Never Play In Or On The Grain”	1	
9	91605	Decal, FEMA	1	
10	92563	Decal, Flow Control	1	
11	94094	Decal, WARNING “Tongue”	1	
12	95046	Decal, DANGER “Entanglement”	3	
13	95445	Decal, WARNING “High-Pressure Fluid”	1	
14	97961	Decal, WARNING “Read & Understand Operator Manual”	1	
15	TA510514	SMV Emblem	1	
16	9505128	Decal, Auger Down Indicator	1	
16A	9505127	Decal, Auger Up Indicator	1	
17	9003125	Fluorescent Strip =Orange=	1	
18	9003126	Reflector =Red=	1	
19	265384	Decal, Reflective Checker Tape	1	
20	95839	Decal, WARNING “Pinch Point”	1	
21	97575	Decal, CAUTION “Transport Chain”	1	
23	2012582	Serial Number Decal	1	
24	9004035	Decal, UM Stripe, 5 1/4”x46”	5	
25	9008151	Decal, IMPORTANT “PTO Engagement”	1	
26	95008	Decal, CAUTION “Slippery Surface”	1	
27	94754	Decal, Wheel Products	2	
28	9001663	Decal, Hammerstrap	1	Hitch Option
29	9008715	Decal, SIS 20MPH (Front)	1	
30	79342B	Plate with Decal, SIS 20MPH (Rear)	1	
31	9004213	Decal, UM Stripe 5 1/4”x14 1/4”	3	
32	9004289	Decal, UM Logo Stripe 5 1/4”x45 3/4”	4	
33	9504920	Decal, 660, 5 1/4”x12”	4	

Undercarriage

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



ITEM	PART #	DESCRIPTION	QTY	NOTES
1	9390-146	Capscrew, 3/4”-10UNC x 2 1/4” G5	4	
2	9390-195	Capscrew, 1”-8UNC x 6” G5	1	
3	9390-197	Capscrew, 1”-8UNC x 7” G5	1	
4	9394-020	Hex Nut, 1”-8UNC	1	
5	9404-033	Lock Washer, 3/4"	4	
6	9404-041	Lock Washer, 1"	1	
7	250473	Ladder Weldment	1	
8	91192	Retaining Ring, 1”	2	
9	9004902	Weigh Bar - 2 1/2" Dia.	1	
10	92458	Wheel Nut, 3/4”-16UNF G8	20	
11	200004B	Scale Hitch, Clevis	1	Scale Unit Only
12	94868	PTO Complete, 1 3/4-20 Spline	1	
13	250487B	Scale Hitch Bushing	1	
14	250844	Pin, 1” Dia. x 4 1/4”	1	
15	265637B	Scale Hitch, Single Tang - 2"	1	
16	265639	Hammer Strap Kit	1	
	9001663	Decal, Hammer Strap	1	
16A	9390-149	Capscrew, 3/4”-10UNC x 3” G5	2	
16B	9394-016	Hex Nut, 3/4”-10UNC	2	
16C	9404-033	Lock Washer, 3/4"	2	
17	250392	Spacer Washer, .180” x 1.52” x 3.00”	1	1 1/2" Hitch Pin - Standard
18	250393	Spacer Washer, .180” x 1.78” x 3.25”	1	1 3/4" Hitch Pin - Optional
19	2009371B	Guard, PTO Shaft with Decal	1	
	95046	Decal, DANGER “Driveline”	1	
20	265389	Spacer Washer, .180” x 2.019” x 3.50”	1	2" Hitch Pin - Optional

Undercarriage

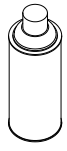
Please visit www.unverferth.com/parts/ for the most current parts listing.

ITEM	PART #	DESCRIPTION	QTY	NOTES
21	265636B	Hitch	1	
22	804572	Pin, Transport Chain 1” Dia. x 3 1/2"	1	
23	9001496	Pad, PTO Shield, 11” x 13 3/4”	1	
24	9001497	Pad, Runner, 2 7/8” x 7”	2	
25	9001917	Split Tension Bushing, 2” OD, 1 1/2” ID x 2”	1	Optional for 1 1/2" Hitch Pin
26	9002130	Split Tension Bushing, 2” OD, 1 3/4” ID x 2”	1	Optional for 1 3/4" Hitch Pin
27	9003295	Jack, Swivel Mount - Top Wind	1	
28	91263	Large Flange Nut, 3/8”-16UNC	33	
29	92424	Hairpin Cotter, .177” Dia. x 3.68”	1	
30	9391-046	Cotter Pin, 3/16” Dia. x 2"	2	
31	94098	Transport Chain, 10,100#	1	
32	95585	Capscrew/Large Flange, 3/8”-16UNC x 3/4” G5	25	
33	250798B	PTO Shield	1	
34	250861G	Axle, 120" Rigid =Green=	1	
	250861R	Axle, 120" Rigid =Red=	1	
	Page 5-20	Axle, Adjustable	-	
35	250605	Spindle Assembly, 3 3/4" Dia.	2	Includes Spindle, Nuts, Washer, Capscrew
	9006347	Spindle, 3 3/4" Dia. - Scale	2	Optional - See Page 5-20
36	251285	Guard, Pipe PTO	1	42" Long
37	9394-014	Hex Nut, 5/8”-11UNC	2	
38	9404-029	Lock Washer, 5/8”	2	
39	9390-136	Capscrew, 5/8”-11UNC x 6” G5	2	
40	9001968	Connector Holder	1	
41	9390-003	Capscrew 1/4”-20UNCx3/4” G5	2	
42	9404-017	Lock Washer 1/4”	2	
43	9394-002	Hex Nut 1/4”-20UNC G5	2	

Touch-Up Paint

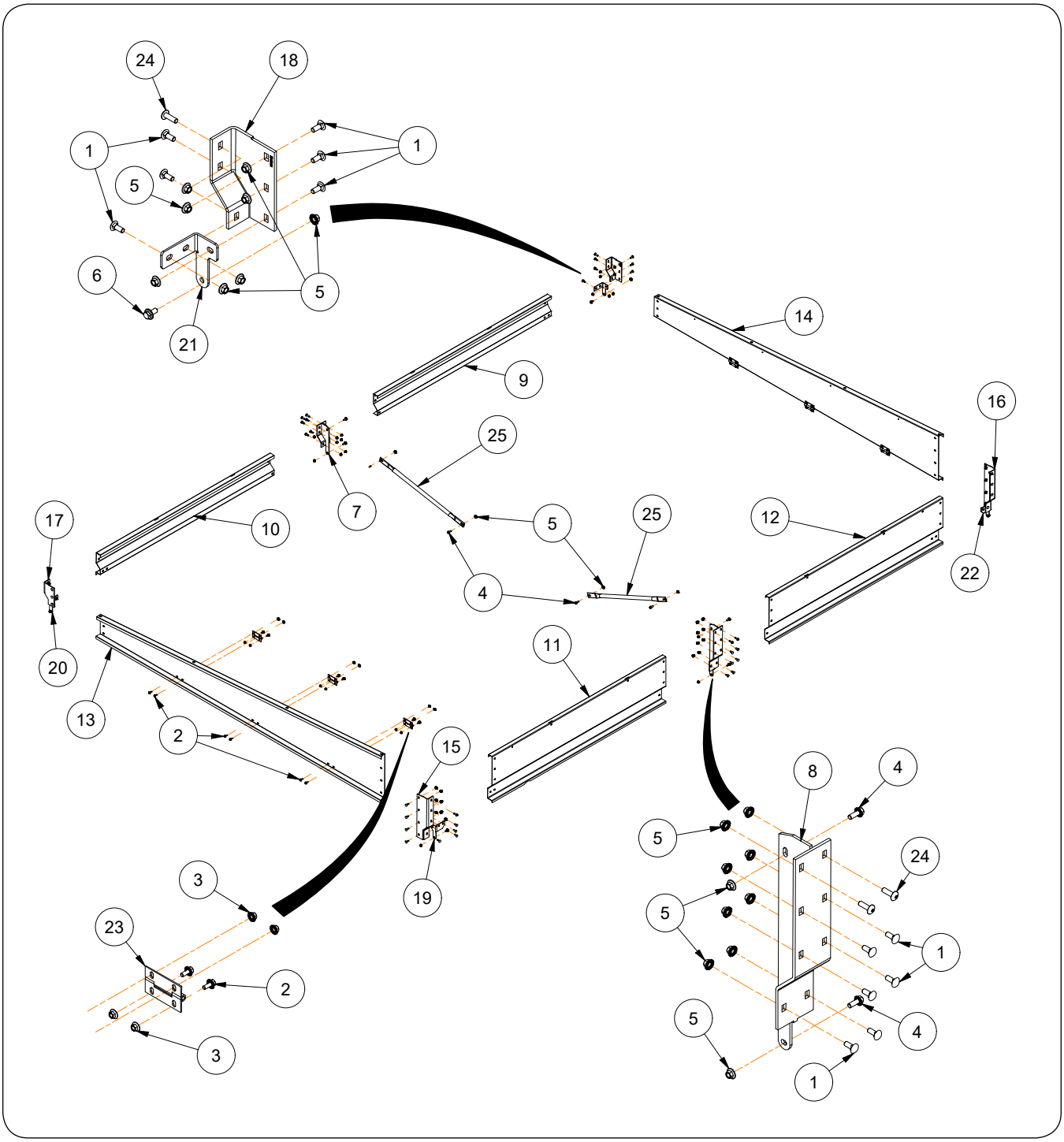
Please visit www.unverferth.com/parts/ for the most current parts listing.

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



Side Boards

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



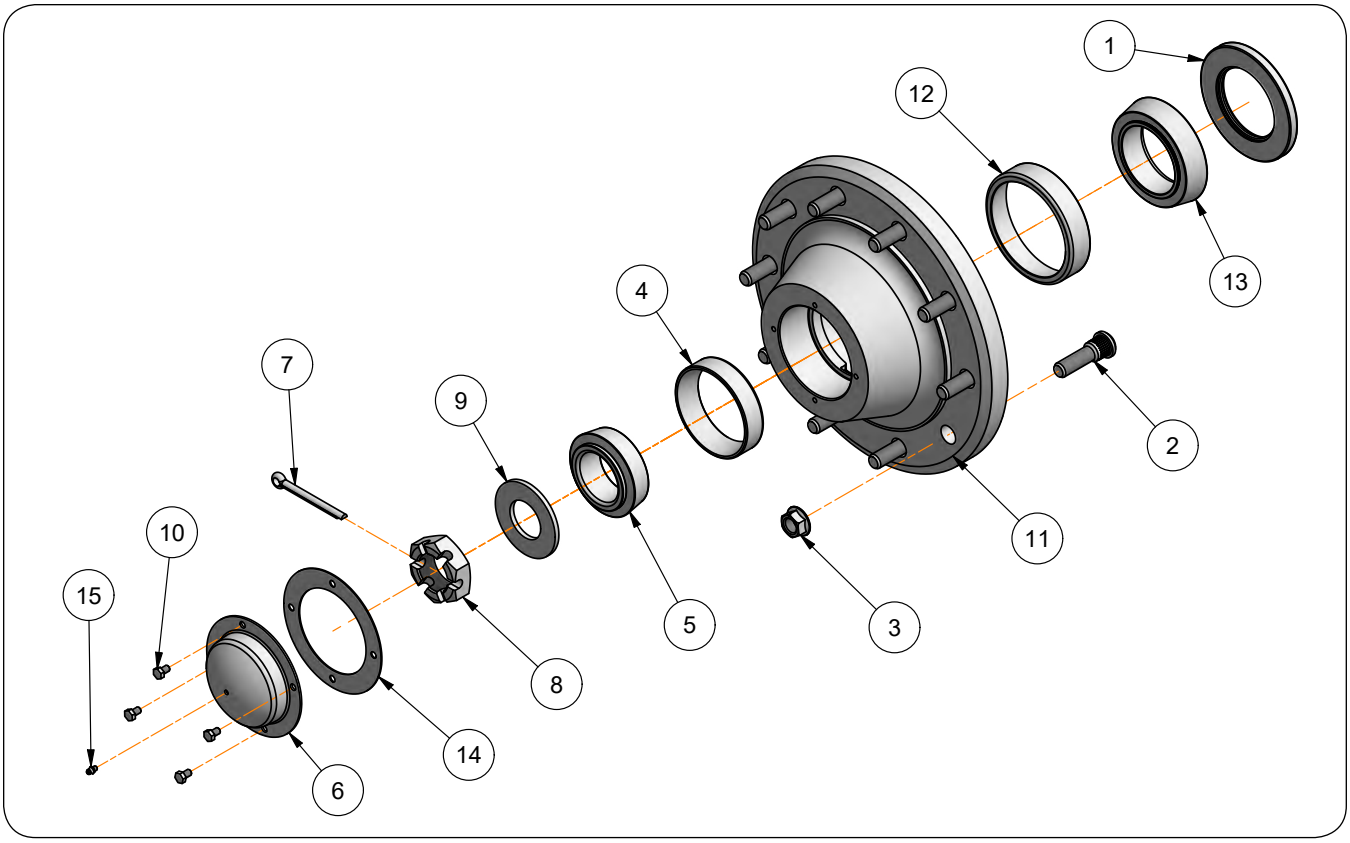
Side Boards

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

ITEM	PART #	DESCRIPTION	QTY	NOTES
1	9388-051	Carriage Bolt 3/8"X1" Unc Gr5	38	
2	91256	Flange Screw 5/16"-18X3/4"	24	
3	91257	Flange Nut 5/16"-18	24	
4	91262	Flange Screw 3/8"X1"	6	
5	91263	Flange Nut 3/8"-16	56	
6	95585	Flange Screw 3/8"-16X3/4" G5	4	
7	2012435B	Panel Splice Weldment	1	
8	2012436B	Panel Splice Weldment	1	
9	2012437B	Board-Right Rear - 14 1/4"x81 11/16"	1	
10	2012438B	Board-Right Front - 14 1/4"x81 11/16"	1	
11	2012442B	Board-Left Front Side - 23 3/4"x81 11/16"	1	
12	2012443B	Board-Left Rear Side - 23 3/4"x81 11/16"	1	
13	2012444B	Front Sideboard - 23 5/8"x133 5/8"	1	
14	2012447B	Rear Sideboard - 23 5/8"x133 5/8"	1	
15	2012448B	Corner Brace, Left Front	1	
16	2012449B	Corner Brace, Left Rear	1	
17	2012450B	Corner Brace, Right Front	1	
18	2012451B	Corner Brace, Right Rear	1	
19	2012456B	Bracket-Hinge, Left Front	1	
20	2012457B	Bracket-Hinge, Right Front	1	
21	2012458B	Bracket-Hinge, Right Rear	1	
22	2012459B	Bracket-Hinge, Left Rear	1	
23	9004626	Hinge - .12"x2 1/2"x4"	6	
24	9009089	Machine Screw, 3/8"-16x1 1/4" Torx	8	
25	220032B	Tube 1.250"Dx12GAx39 7/8"- Angle Brace =Black=`	2	

Hub

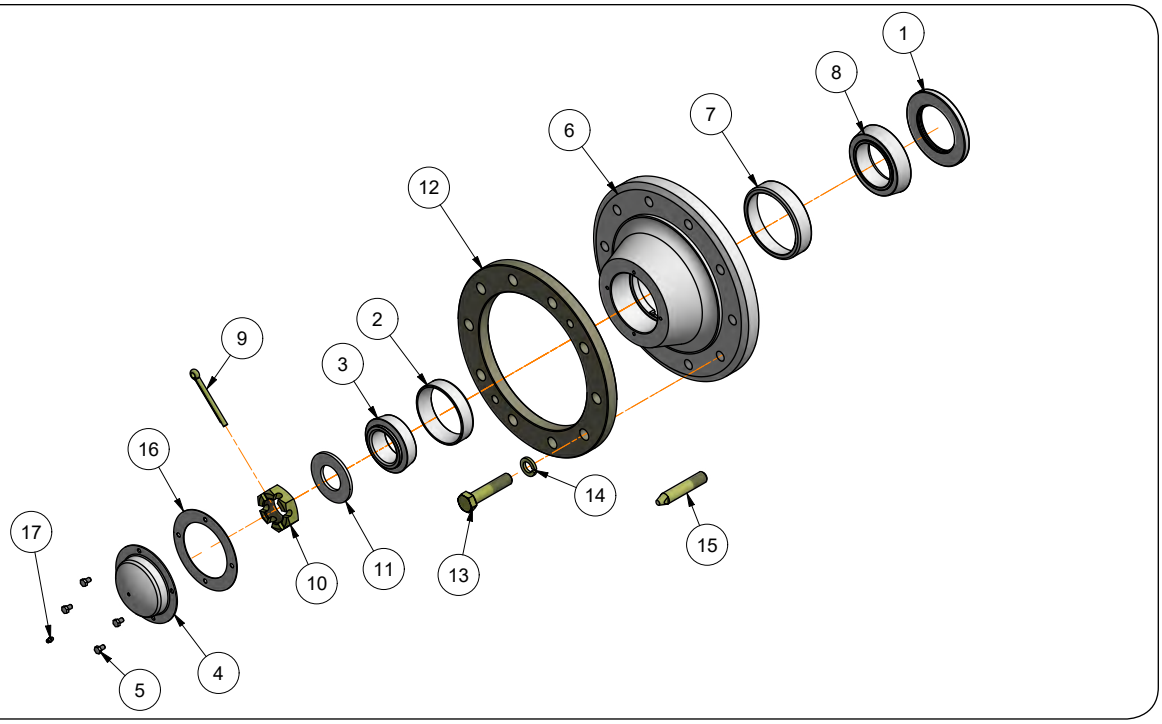
Please visit www.unverferth.com/parts/ for the most current parts listing.



ITEM	PART #	DESCRIPTION	QTY	NOTES
	200079G	Complete Hub Assembly =Green=		Includes Items 1-6 & 10-14
	200079R	Complete Hub Assembly =Red=		Includes Items 1-6 & 10-14
1	92565	Seal, 3 11/16" ID	1	37605SA
2	94794	Stud, 3/4-16 UNF x 3	10	Grade 8
3	92458	Wheel Nut, 3/14-16 UNF	10	Grade 8
4	92462	Outer Bearing Cup	1	HM212011
5	92464	Outer Bearing Cone	1	HM212049
6	286171G	Hub Cap =Green=	1	
	286171R	Hub Cap =Red=		
7	9391-090	Cotter Pin, 3/8 Dia. x 4	1	
8	92470	Castle Nut, 2-12 UNF	1	Grade 5
9	92472	Spindle Washer	1	
10	9390-026	Capscrew 5/16-18 UNC x 1/2	4	Grade 5
11	200039G	Hub =Green=	1	Includes Items 2, 4, & 12
	200039R	Hub =Red=	1	Includes Items 2, 4, & 12
12	92476	Inner Bearing Cup	1	HM218210
13	92545	Inner Bearing Cone	1	HM218248
14	284230	Gasket	1	
15	91160	Grease Zerk	1	

Hub - Dual Wheels

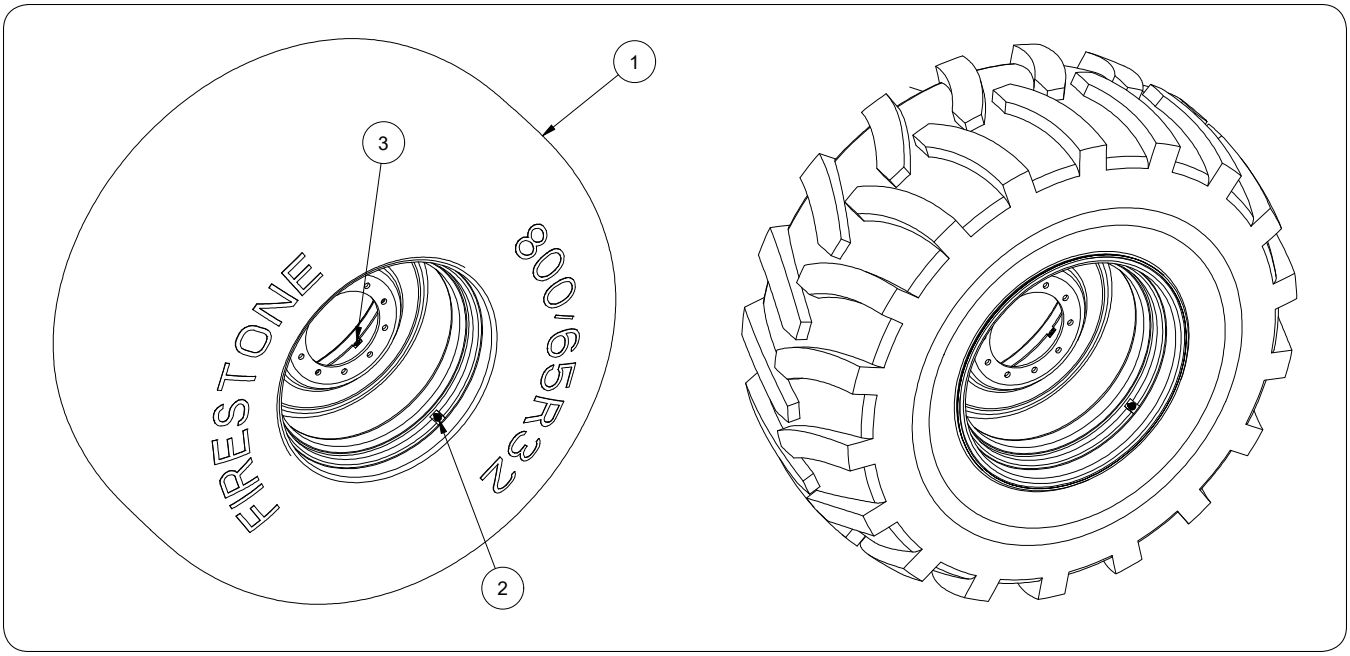
Please visit www.unverferth.com/parts/ for the most current parts listing.



ITEM	PART #	DESCRIPTION	QTY	NOTES
	266456G	Complete Hub Assembly =Green=		Includes Items 1-8 & 16
	266456R	Complete Hub Assembly =Red=		Includes Items 1-8 & 16
1	92565	Seal, 3 11/16" ID	1	37605SA
2	92462	Outer Bearing Cup	1	HM212011
3	92464	Outer Bearing Cone	1	HM212049
4	286171G	Hub Cap =Green=	1	
	286171R	Hub Cap =Red=		
5	9390-026	Capscrew, 5/16”-18UNC x 1/2”	4	Grade 5
6	266455G	Hub =Green=	1	Includes Items 2 & 7
	266455R	Hub =Red=	1	Includes Items 2 & 7
7	92476	Inner Bearing Cup	1	HM218210
8	92545	Inner Bearing Cone	1	HM218248
9	9391-090	Cotter Pin, 3/8” Dia. x 4”	1	
10	92470	Castle Nut, 2”-12UNF	1	Grade 5
11	92472	Spindle Washer	1	
12	14442	Reinforcing Ring	1	
13	97043	Capscrew, 7/8”-14UNF x 4”	10	Grade 8
14	9404-037	Lock Washer, 7/8”	10	
15	266459	Guide Pin	1	
16	284230	Gasket	1	
17	91160	Grease Zerk	1	

Tires and Wheels

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

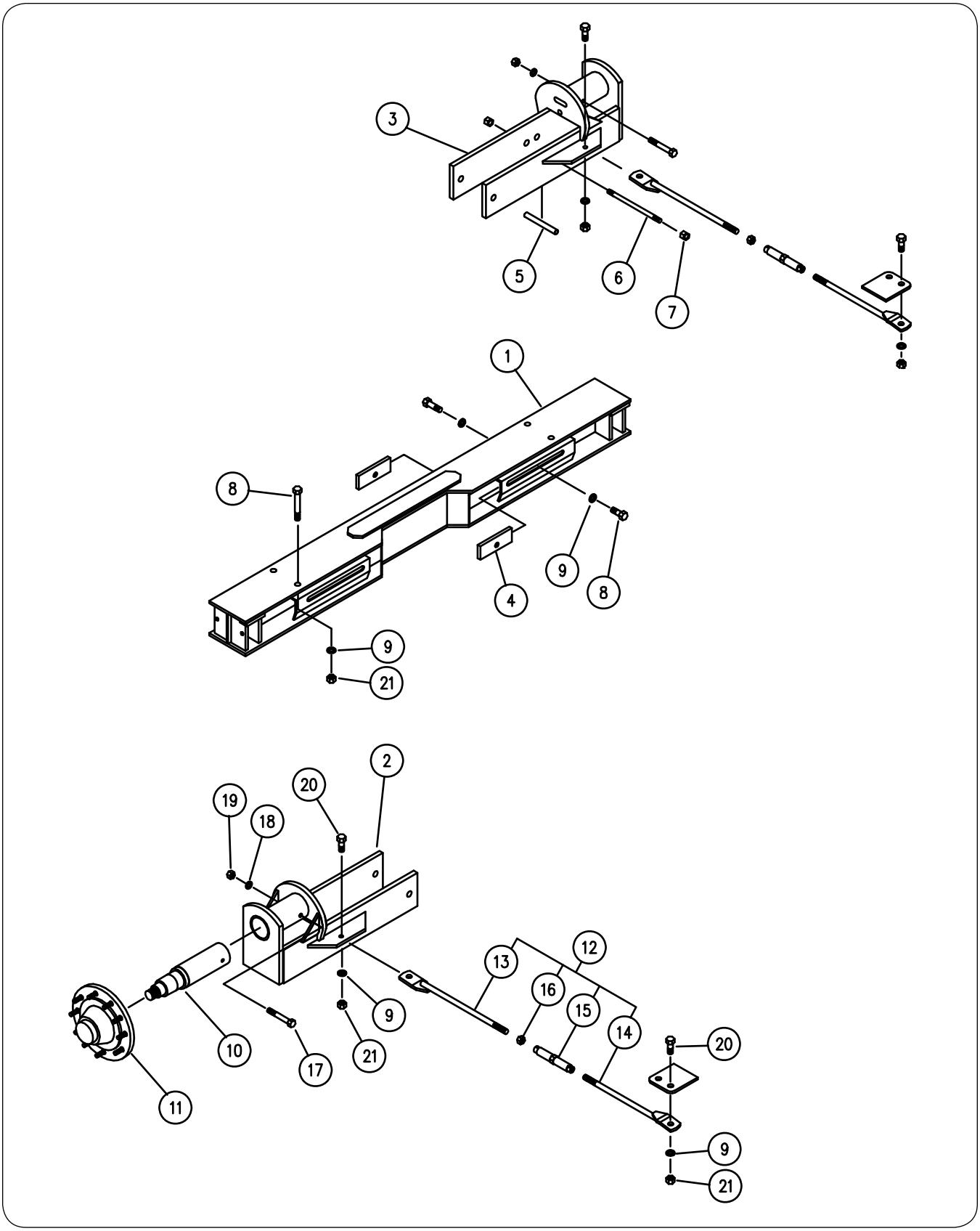


ITEM	PART #	DESCRIPTION	QTY.	NOTES
1	14317SM	Wheel & Tire 21 x 32, 24.5B32 R1	2	24.5 x 32 R1 Tire/Wheel
	14315SM	Wheel & Tire 21 x 32, 24.5B32 R3	2	24.5 x 32 R3 Tire/Wheel
	110146SM	Wheel & Tire 27 x 32, 30.5B32 R1	2	30.5 x 32 R1 Tire/Wheel
	14561SM	Wheel, 16 x 42 with 15” Outset	4	16 x 42 Wheels Only Duals
	14564SM	Wheel & Tire 16 x 42, 480/80R42 R1	4	480/80R42 R1 Straddle Duals
	92416SM	Wheel, 21 x 32	2	21 x 32 Wheels Only
	92417SM	Wheel, 27 x 32	2	27 x 32 Wheels Only
	19976SM	Wheel & Tire, 27 x 32, 800/65R32 R-1W	2	800/65R32 R-1W
2	93300	Valve Stem	2	
3	95365	Valve Plug	2	

Notes

Adjustable Axle — 120”

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



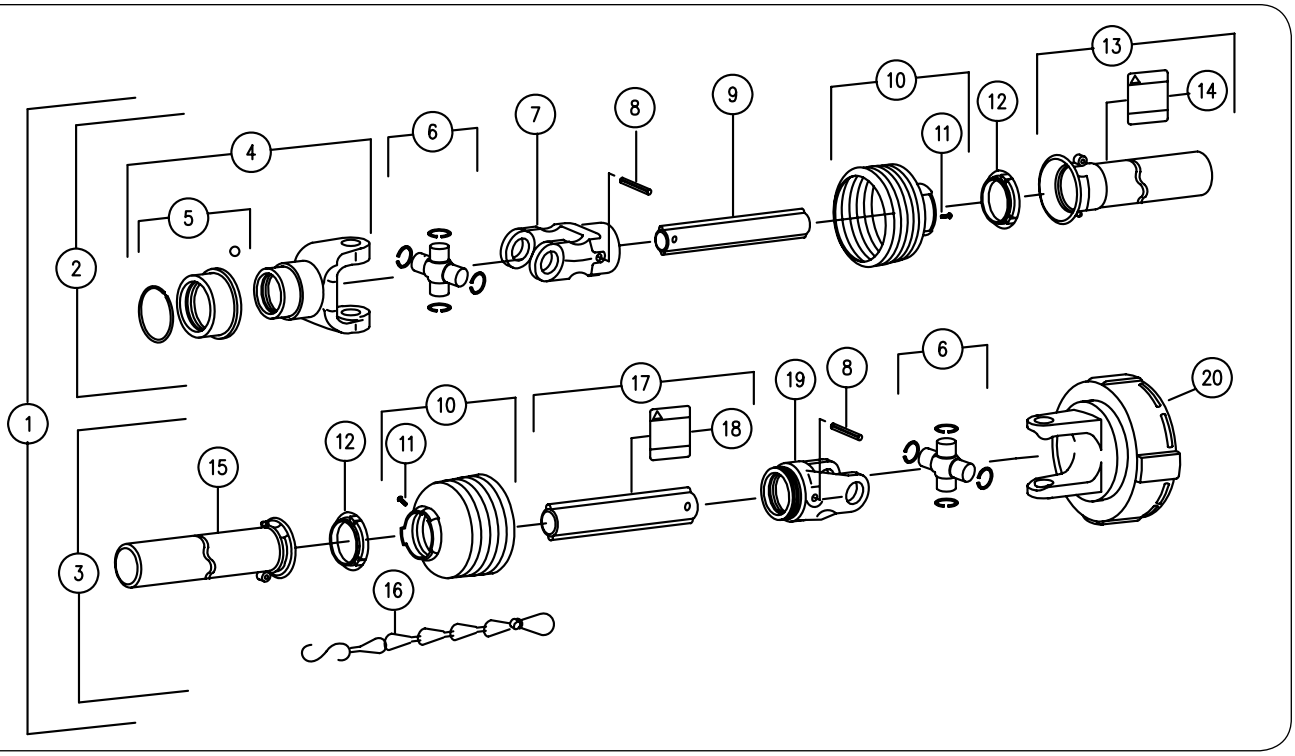
Adjustable Axle — 120”

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

ITEM	PART #	DESCRIPTION	QTY	NOTES
	250640G	Adjustable Axle Assembly =Green=		Includes Items 1 thru 9
	250640R	Adjustable Axle Assembly =Red=		
1	265627G	Axle Weldment =Green=	1	
	265627R	Axle Weldment =Red=	1	
2	250670G	Axle End Weldment =Green=	1	
	250670R	Axle End Weldment =Red=		
3	250670G	Axle End Weldment =Green=	1	
	250670R	Axle End Weldment =Red=		
4	265539B	Clamp Plate, 3” x 6”	4	
5	250634B	Axle Spacer Pipe, 3/4 SCH40 x 7”	2	
6	250635	Axle Stud, 3/4” Dia. x 10 1/8”	2	
7	96732	Lock Nut/Center, 3/4”-10UNC	4	
8	9390-187	Capscrew, 1”-8UNC x 3”	8	
9	9404-041	Lock Washer, 1"	8	
10	250605	Spindle Assembly, 3 3/4" Dia.	2	Incl. Spindle, Nuts, Washer, Capscrew
	9006347	Spindle, Scale, 3 3/4" Dia.	2	
11	200079G	Complete Hub Assembly =Green=	2	See Page 5-7 & 5-8
	200079R	Complete Hub Assembly =Red=		
12	250666	Axle Brace Assembly	1	Incl. Items 9, 13-16, 20-21
	250608B	Axle Brace Sub-Assembly	2	Includes Items 13 - 16
13	250636B	Axle Brace Weldment, RH Thread	2	23 1/8"
14	250637B	Axle Brace Weldment, LH Thread	2	22 1/8"
15	62324	Center Turnbuckle	2	
16	9395-041	Jam Nut, 1 1/4”-7UNC	2	
17	9390-136	Capscrew, 5/8”-11UNC x 6”	2	
18	9404-029	Lock Washer, 5/8"	2	
19	9394-014	Nut, 5/8”-11UNC	2	
20	9390-185	Capscrew, 1”-8UNC x 2 1/2”	4	
21	9394-020	Hex Nut, 1”-8UNC	8	

PTO Assembly Friction Clutch

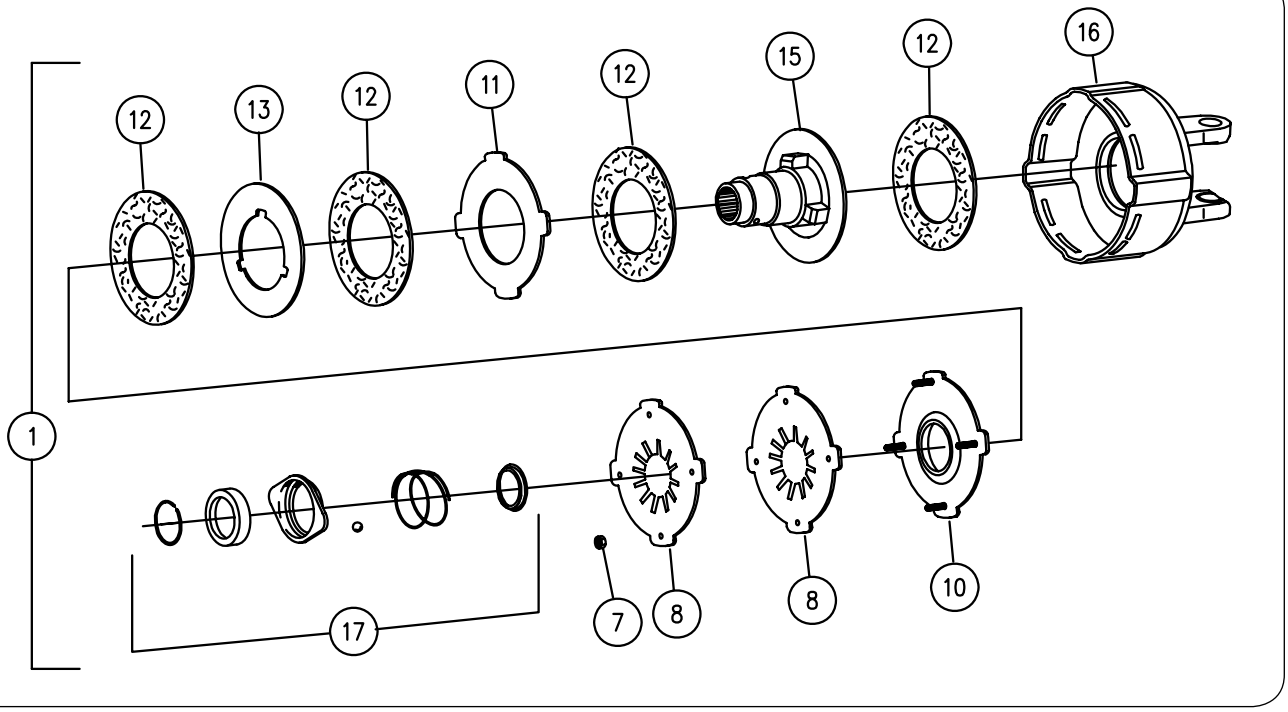
Please visit www.unverferth.com/parts/ for the most current parts listing.



ITEM	PART #	DESCRIPTION	QTY	NOTES
1	94868	PTO Shaft w/ Shielding	1	1 3/4-20 Spline
	95214	PTO Shaft w/ Shielding	1	1 3/8-21 Spline
2	94841	Front Half PTO	1	1 3/4-20 Spline
	95215	Front Half PTO	1	1 3/8-21 Spline
3	94842	Rear Half PTO / Friction		
4	93855	End Yoke	1	1 3/4-20 Spline
	95216	End Yoke	1	1 3/8-21 Spline
5	93856	Quick Disconnect Kit	1	1 3/4-20 Spline
	95217	Quick Disconnect Kit	1	1 3/8-21 Spline
6	93857	Cross & Bearing Kit	2	
7	93858	Front Inboard Yoke	1	
8	93859	Spring Pin	2	
9	265750	Inner Profile	1	
10	93863	Front Shield Cone, Black 6-Rib	1	
	93866	Rear Shield Cone, Black 6-Rib	1	
11	92372	Screw	2	
12	92373	Bearing Ring	2	
13	94839	Outer Shield Tube w/Cap	1	
14	92377	Danger Decal-Shield	1	
15	94840	Inner Shield Tube w/Cap	1	
16	92374	Safety Chain	1	
17	94837	Outer Profile	1	
18	92378	Danger Decal-Steel	1	
19	93862	Rear Inboard Yoke	1	
20	94838	Friction Clutch Complete	1	4-Plate Clutch

PTO Clutch

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

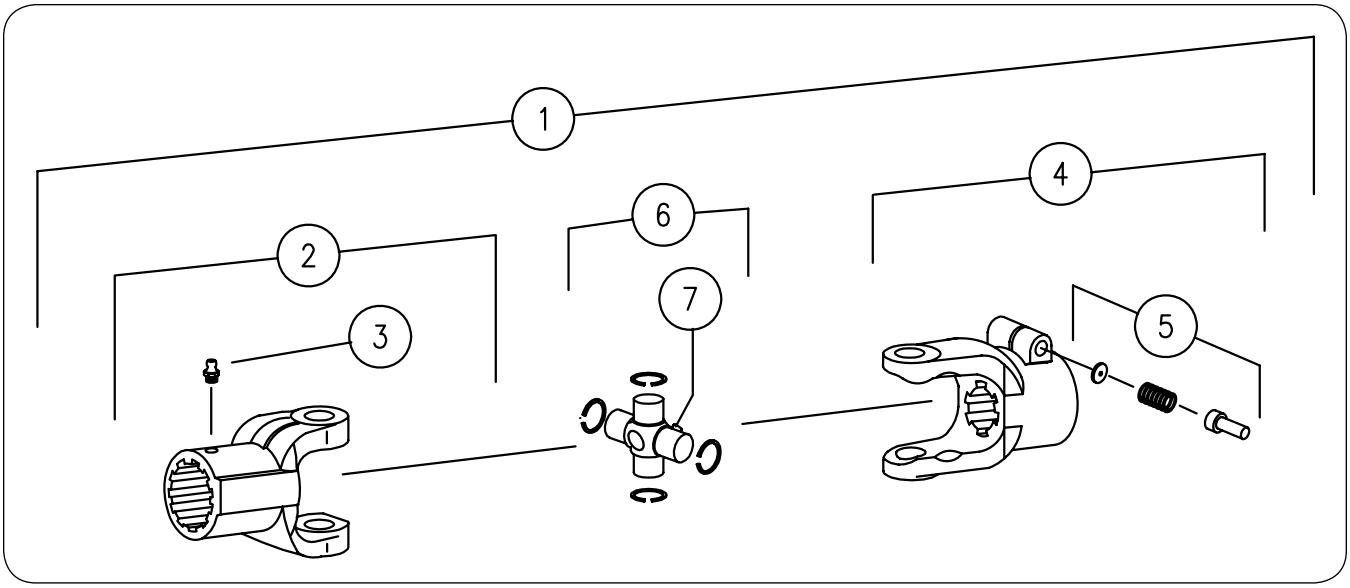


ITEM	PART #	DESCRIPTION	QTY	NOTES
1	94838	Clutch Complete	1	Includes Items 7-17
7	92386	Nut, M8 DIN 6330 Hex	4	
8	93815	Belleville Spring (Red dot)	2	
10	92384	Thrust Plate	1	
11	92850	Drive Plate	1	
12	92382	Clutch Lining	4	
13	92851	Drive Plate	1	
15	94982	Hub	1	1 3/8-21 Spline
16	93805	Clutch Housing	1	
17	92393	Quick Disconnect Flange Kit	1	

NOTE: The clutch is preset at the factory and should not require adjustment. See MAINTENANCE Section for specific clutch information.

Driveline U-Joint Assembly

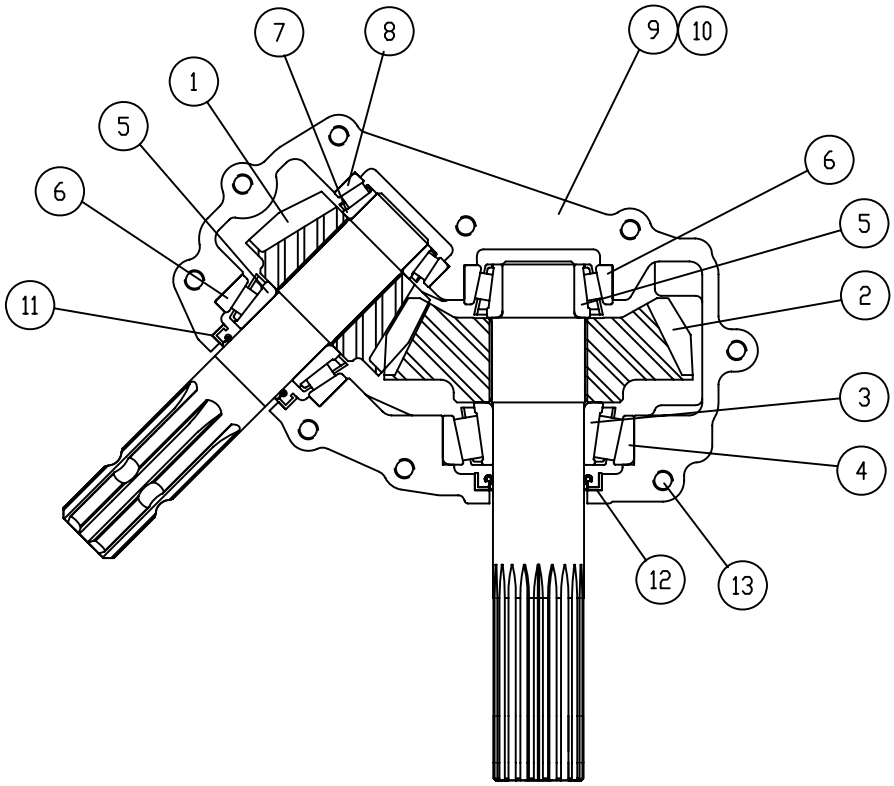
Please visit www.unverferth.com/parts/ for the most current parts listing.



ITEM	PART #	DESCRIPTION	QTY	NOTES
1	95012	Complete U-Joint Assembly	1	
2	95010	Yoke	1	
3	91160	Grease Zerk, 1/4-28UNF	1	
4	95011	Yoke, 1 3/8-6 Spline	1	
5	92362	Quick-Disconnect Pin Kit	1	
6	93857	Cross & Bearing Kit	1	
7	92365	Grease Zerk	1	

45° Gearbox

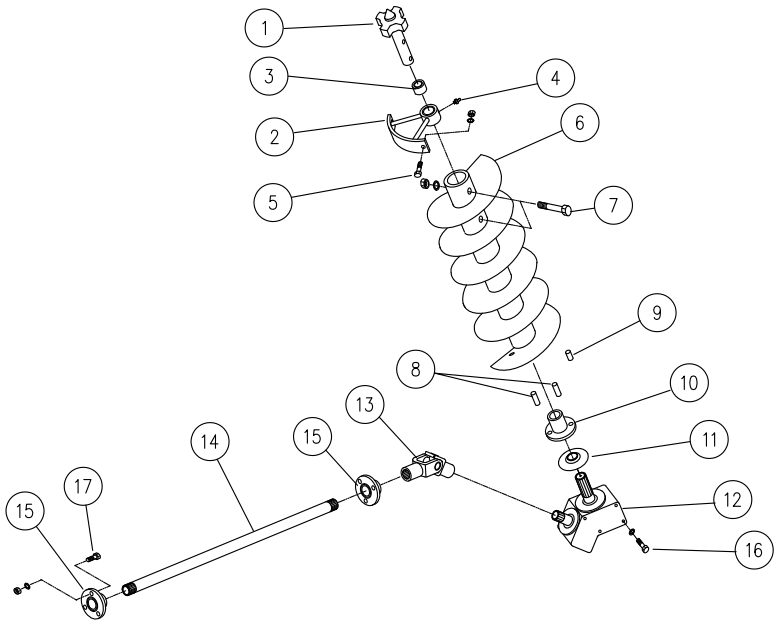
Please visit www.unverferth.com/parts/ for the most current parts listing.



ITEM	PART #	DESCRIPTION	QTY	NOTES
	9002812	Gearbox, Complete	1	Incl. Items 1-17
1	9001131	Shaft, Input	1	1.8:1 Gear
2	9001132	Shaft, Output	1	1.8:1 Gear
3	92697	Bearing Cone	1	Large
4	91151	Bearing Cup	1	Large
5	9001133	Bearing Cone	2	
6	9001134	Bearing Cup	2	
7	91816	Bearing Cone	1	Small
8	92896	Bearing Cup	1	Small
9	9003447	Casting w/Tapped Holes	1	Model Q81 Gearbox
	281885	Gearbox Case Kit For Top & Bottom Halves	-	
	9007300	Casting w/Tapped Holes	1	Model Q145 Gearbox
10	9003448	Casting w/Through Holes	1	Not Shown - Model Q81 Gearbox
	281885	Gearbox Case Kit For Top & Bottom Halves	-	
	9007299	Casting w/Through Holes	1	Not Shown - Model Q145 Gearbox
11	92688	Seal	1	Small
12	92702	Seal	1	Large
13	95281	Capscrew, 3/8"-16UNC x 2 1/4"	9	Not Shown
14	95282	Bushing, Vented	1	Not Shown
15	92352	Pressure Relief, 5-PSI	1	Not Shown
16	92350	Plug, Plain	3	Not Shown
17	98523	Plug, 3/4" NPT	1	Not Shown

Lower Auger and Driveline

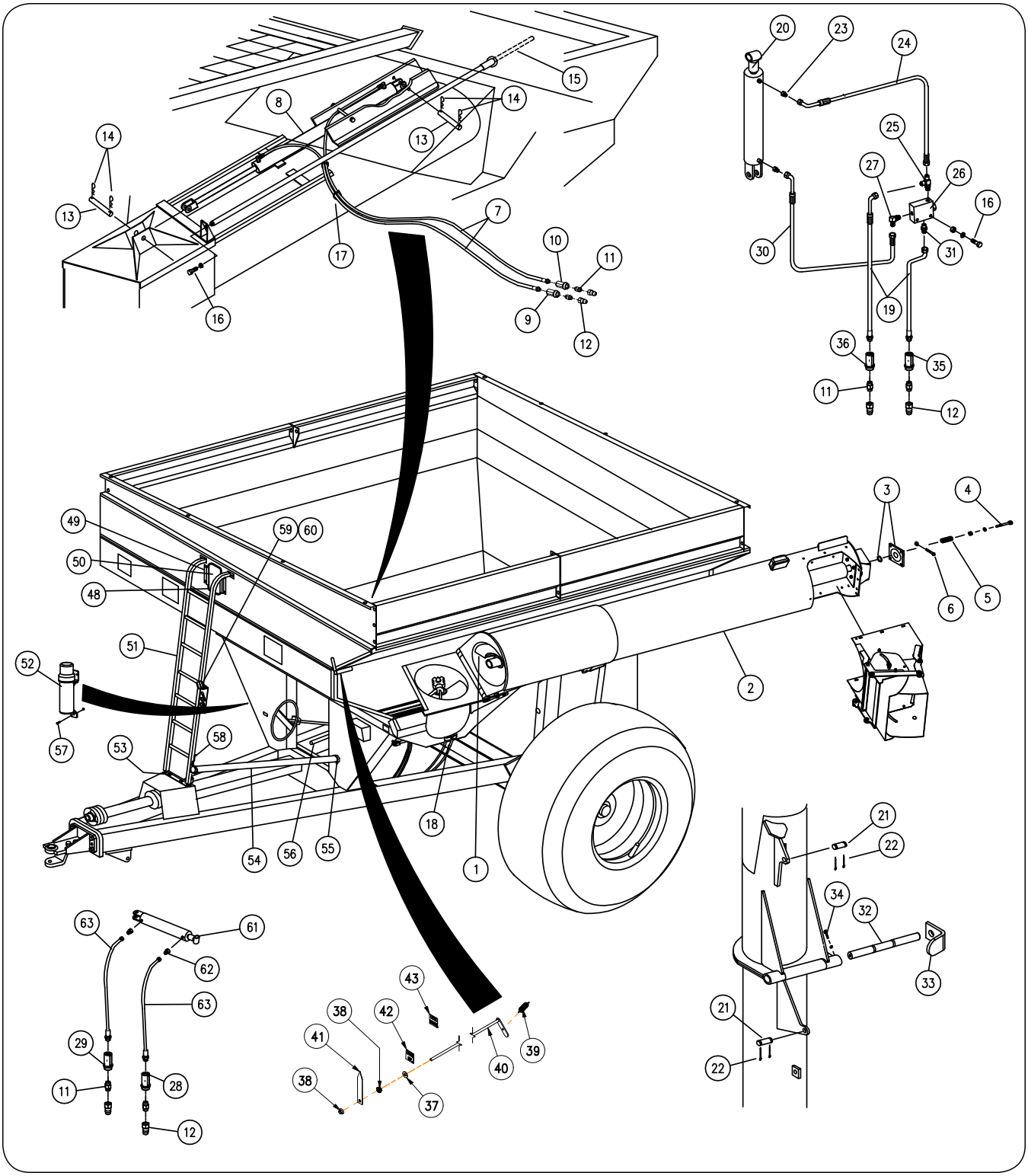
Please visit www.unverferth.com/parts/ for the most current parts listing.



ITEM	PART #	DESCRIPTION	QTY	NOTES
1	28977	Drive Dog Weldment	1	
2	265132B	Auger Bushing Assembly	1	
3	9001198	Bronze Bearing 2.515 ID	1	
4	9000875	Grease Zerk, 90°	1	1/8 NPT
5	9390-056	Capscrew, 3/8-16 UNC x 1 1/4	3	Grade 5
	9404-021	Lock Washer, 3/8	3	
	9394-006	Hex Nut, 3/8-16 UNC	3	Grade 5
6	250273-SER	Lower Auger Replacement Kit	1	Includes Items 9 & 10
7	9390-136	Capscrew, 5/8-11 UNC x 6	2	Grade 5
	9404-029	Lock Washer, 5/8	2	
	9394-014	Hex Nut, 5/8-11 UNC	2	Grade 5
8	250005	Lower Drive Dog Pin 1 Dia. x 4	2	
9	250004	Auger pin 1 Dia. x 2	1	
10	250018B	Lower Drive Bushing Weldment	1	
11	92805B	Gearbox Dust Cover	1	
12	9002812	45° Gearbox	1	See page 5-22
13	95012	U-Joint Assembly	1	See page 5-17
14	250021	Drive Shaft 1 3/8 Dia. x 98	1	
15	92916	Flange Bearing	2	
16	9390-100	Capscrew, 1/2-13 UNC x 1 1/4	8	Grade 5
	9404-025	Lock Washer, 1/2	8	
17	9390-055	Capscrew, 3/8-16 UNC x 1	6	Grade 5
	9404-021	Lock Washer, 3/8	6	
	9394-006	Hex Nut, 3/8-16 UNC	6	Grade 5

Auger and Box Components

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



Auger and Box Components

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

ITEM	PART #	DESCRIPTION	QTY	NOTES
1	2005411B	Upper Auger Flighting	1	
2	2005408G	Upper Auger Tube =Green=	1	
	2005408R	Upper Auger Tube =Red=		
3	92406	Flanged Bearing, 1 1/2" Dia.	1	
	9001197	Washer, 1.554" ID	A/R	
4	9390-114	Capscrew, 1/2"-13UNC x 5 1/2"	4	
	94981	Locknut, 1/2"-13UNC		
5	9001812	Spring, 4" Long	4	
6	95572	Machine Screw, 5/16"-18UNC x 2"	1	
	9394-004	Hex Nut, 5/16"-18UNC		
7	9002215	Hose, 1/4" x 228" (3000 PSI) 3/4"-16x9/16"-18JIC 90°	2	
8	9001092	Hydraulic Cylinder, 2" x 36"	1	
9	9009754	Hose Grip - Red (+)	1	
10	9009755	Hose Grip - Red (-)	1	
11	98508	Adapter O-R Union 3/4"-16 Male O-Rx	6	
12	91383	Disconnect Tip, 3/4-16 O-R Female Threaded	6	
13	250104	Pin, 1" Dia. x 4"	2	
14	92424	Hairpin Cotter, .177" Dia. x 3.68"	4	
15	250590	Pipe Indicator Weldment	1	
16	9390-034	Capscrew, 5/16"-18UNC x 2" Grade 5	2	
	9404-019	Lock Washer, 5/16"	2	
17	9000107	Cable Ties, 15 1/2" Long	6	
18	7-0043B	Hose Bracket	1	
19	9004869	Hose, 1/4" x 168" (3000 PSI)	2	
20	9003103	Hydraulic Cylinder, 3" x 20"	1	
21	804572	Pin, 1" Dia. x 3 1/2"	2	
22	9391-046	Cotter Pin, 3/16" Dia. x 2"	4	
23	91608	Adapter w/.055 Restrictor	2	
24	9004718	Hose, 1/4" x 110" (3000 PSI)	1	
25	9004064	Tee, Straight Run	1	
26	9003990	Check Valve	1	
27	97445	Elbow, 90°, 9/16-18 JIC Male x 9/16-18 O-Ring Male	1	
28	9009759	Hose Grip - Yellow (+)	1	
29	9009760	Hose Grip - Yellow (-)	1	
30	9004448	Hose, 1/4" x 90" (3000 PSI)	1	
31	9001495	Adapter, 9/16-18 JIC Male x 9/16-18 O-Ring Male	1	
32	233648	Pivot Pin, 21" Long	1	
33	233649	Keeper Plate 1/4"x1" x 1/2"x3 7/8"	1	
34	9390-100	Capscrew, 1/2"-13UNC x 1 1/4"	1	
	9404-025	Lock Washer, 1/2"	1	
35	9009751	Hose Grip - Green (+)	1	
36	9009752	Hose Grip - Green (-)	1	
37	9405-076	3/8" Flat Washer	1	
38	91263	3/8"-16 Flange Nut	2	
39	92971	Extension Spring	1	
40	2012512	Rod Indicator	1	
41	2012515	Needle Indaicator	1	
42	9505127	Decal, Lock Up	1	
43	9509218	Decal. lock Up	1	

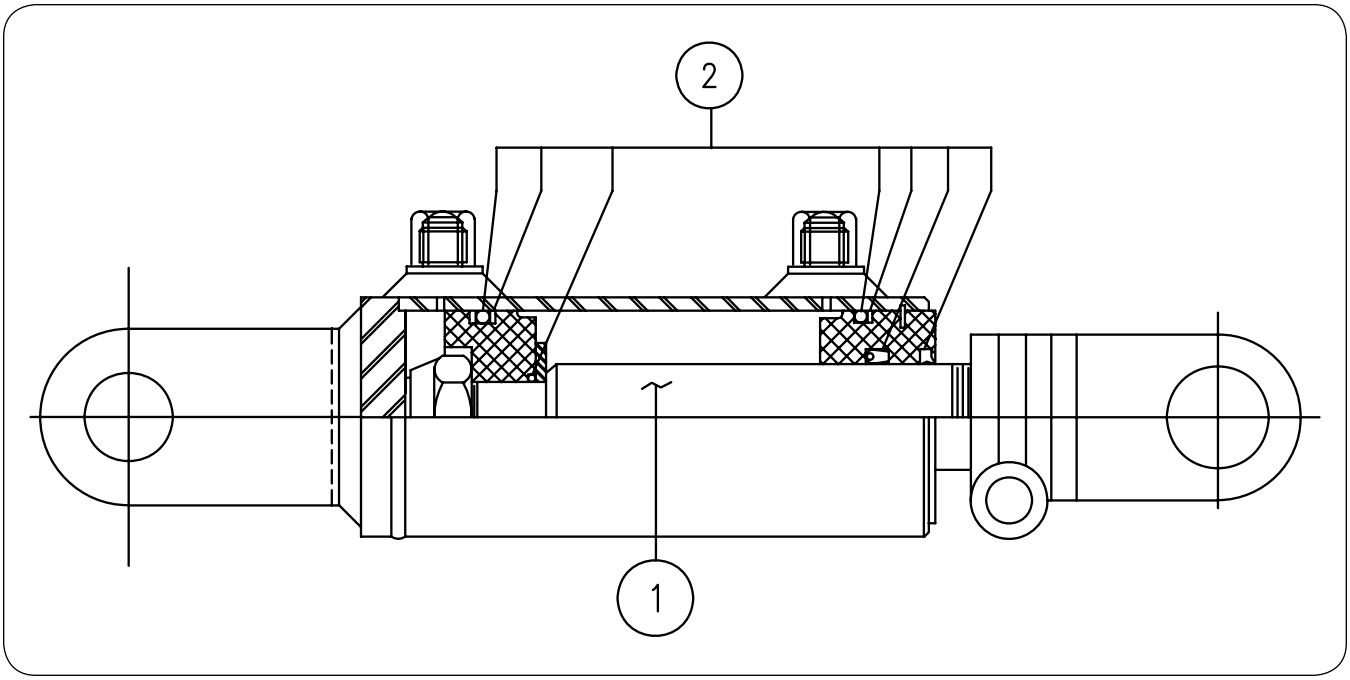
Auger and Box Components

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

ITEM	PART #	DESCRIPTION	QTY	NOTES
44	9003789	Hydraulic Cylinder, 1 1/2 x 4"	1	
45	95193	Adapter w/.030 Restrictor 9/16-18 JIC Female Nut x 9/16-18 JIC Male	2	
46	97986	Hose, 1/4 x 444 (3000 PSI) 9/16-18 JIC Female x 3/4-10 O-Ring Male	2	
47	N/A			
48	250431	Window Molding	2	
49	250461B	Bracket, Window Retainer	4	
	9390-005	Capscrew, 1/4-20UNC x 1	8	
	9936	Locknut, 1/4-20UNC	8	
50	92403	Window	2	
51	250473B	Ladder	1	
52	900552	Manual Tube	1	
53	250480B	Bracket Ladder	1	
	9390-053	Capscrew, 3/8-16UNC x 3/4	2	
	9928	Locknut, 3/8-16UNC	2	
54	250463	Hose Tube, Plastic	1	
55	9000392	Hose Clamp, 2"	1	
57	903174-535	Truss Head, 1/4-20UNC x 3/4	2	
	97189	Flange Nut, 1/4-20UNC	2	
58	9001803	Cap Plug, Hose Bracket	1	
59	9001968	Connector Holder	1	
60	9390-003	Capscrew, 1/4-20UNC x 3/4	2	
	9404-017	Lock Washer, 1/4	2	
	9394-002	Hex Nut, 1/4-20UNC	1	

Hydraulic Cylinders

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



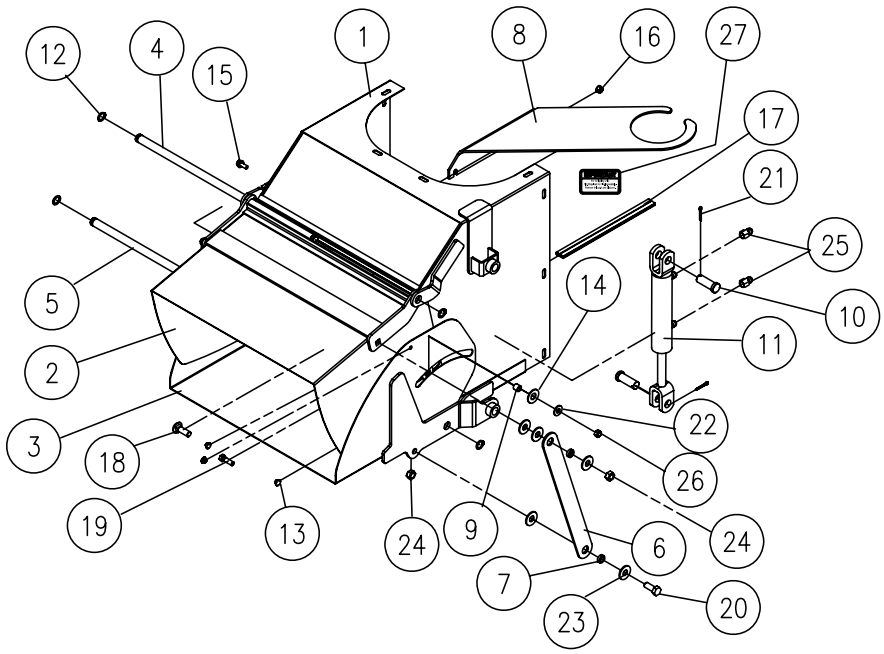
ITEM	PART #	DESCRIPTION	QTY	NOTES
1	9001092	Cylinder, Complete 2 x 36”	1	Flow Control Door
2	95289	Seal Kit	1	

ITEM	PART #	DESCRIPTION	QTY	NOTES
1	9003103	Cylinder, Complete 3 x 20”	1	Auger
2	9003772	Seal Kit	1	

ITEM	PART #	DESCRIPTION	QTY	NOTES
1	9003789	Hydraulic Cylinder, 1 1/2 x 4"	1	Directional Spout
2	9005419	Seal Kit	1	

Directional Spout

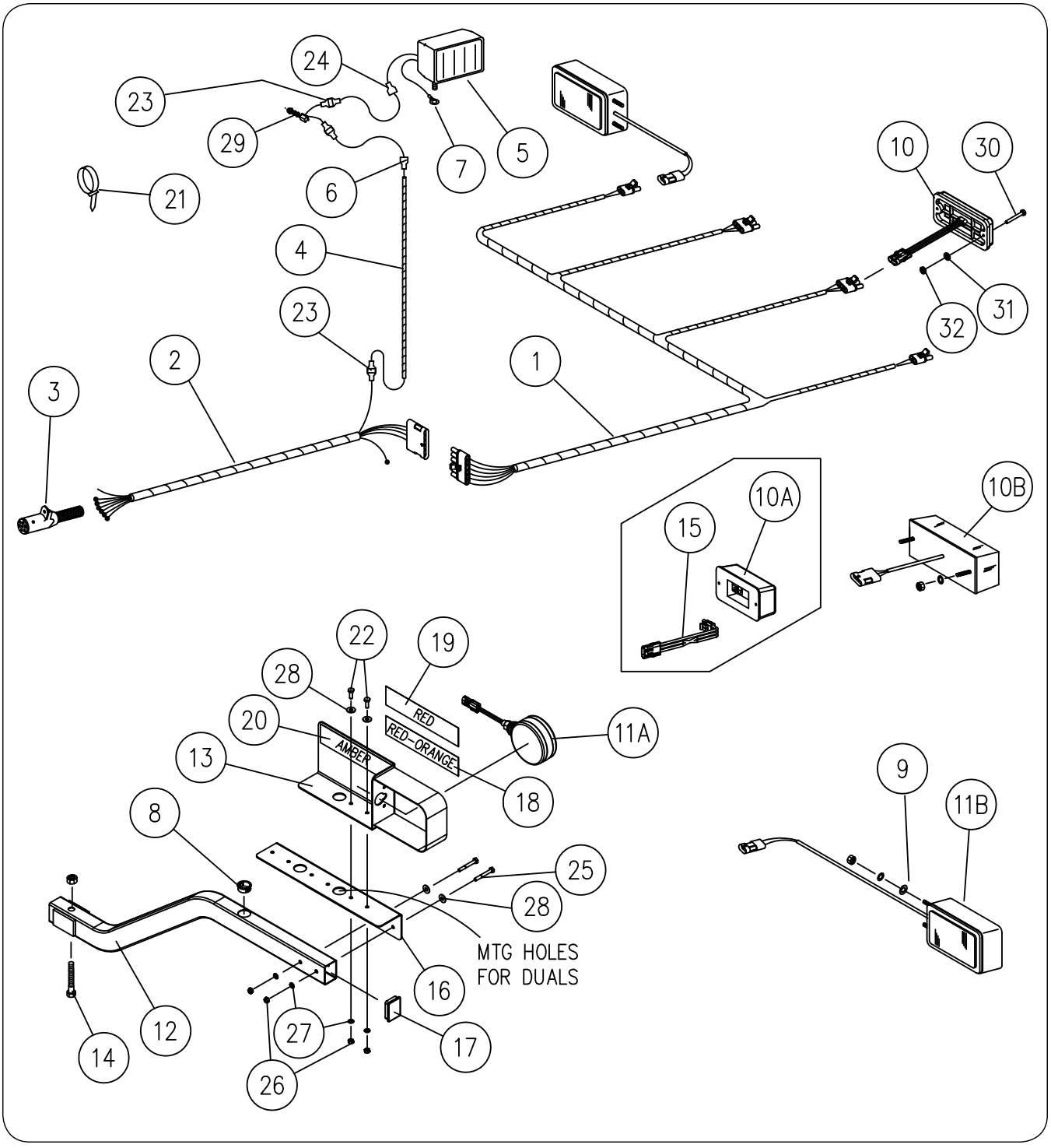
Please visit www.unverferth.com/parts/ for the most current parts listing.



ITEM	PART #	DESCRIPTION	QTY	NOTES
	281375	Hood Assembly		
1	281376B	Hood	1	
2	281377B	Upper Deflector	1	
3	281378B	Lower Deflector	1	
4	281390	Pivot Shaft	1	
5	281389	Pivot Shaft	1	
6	281368	Arm	2	
7	281369	Bushing	4	
8	281391B	Bracket, Shipping	1	
9	281372	Spacer	2	
10	9002032	Clevis Pin, 3/4x2	2	
11	9003789	Cylinder, 1 1/2 x 4	1	
12	9003810	Retaining Ring	4	
13	9004457	Plug, Plastic	6	
14	9004494	Washer, Nylon	6	
15	91256	Flange Screw, 5/16-18UNCx3/4	1	
16	91257	Flange Nut, 5/16-18UNC	1	
17	92444	Trim Lock	3	
18	9388-104	Carriage Bolt, 1/2-13UNCx 1 1/2	2	
19	9390-056	Capscrew, 3/8-16UNCx1 1/4	2	
20	9390-100	Capscrew, 1/2-13UNCx1 1/4	2	
21	9391-034	Cotter Pin, 5/32x1 1/4	2	
22	9405-076	Flat Washer, 3/8	2	
23	9405-088	Flat Washer, 1/2	10	
24	94981	Lock Nut, 1/2-13UNC	4	
25	95193	Tube Reducer - .030 Restrictor	2	
26	9928	Lock Nut, 3/8-16UNC	2	
27	9004715	Decal, Shipping	1	

Electrical Components

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



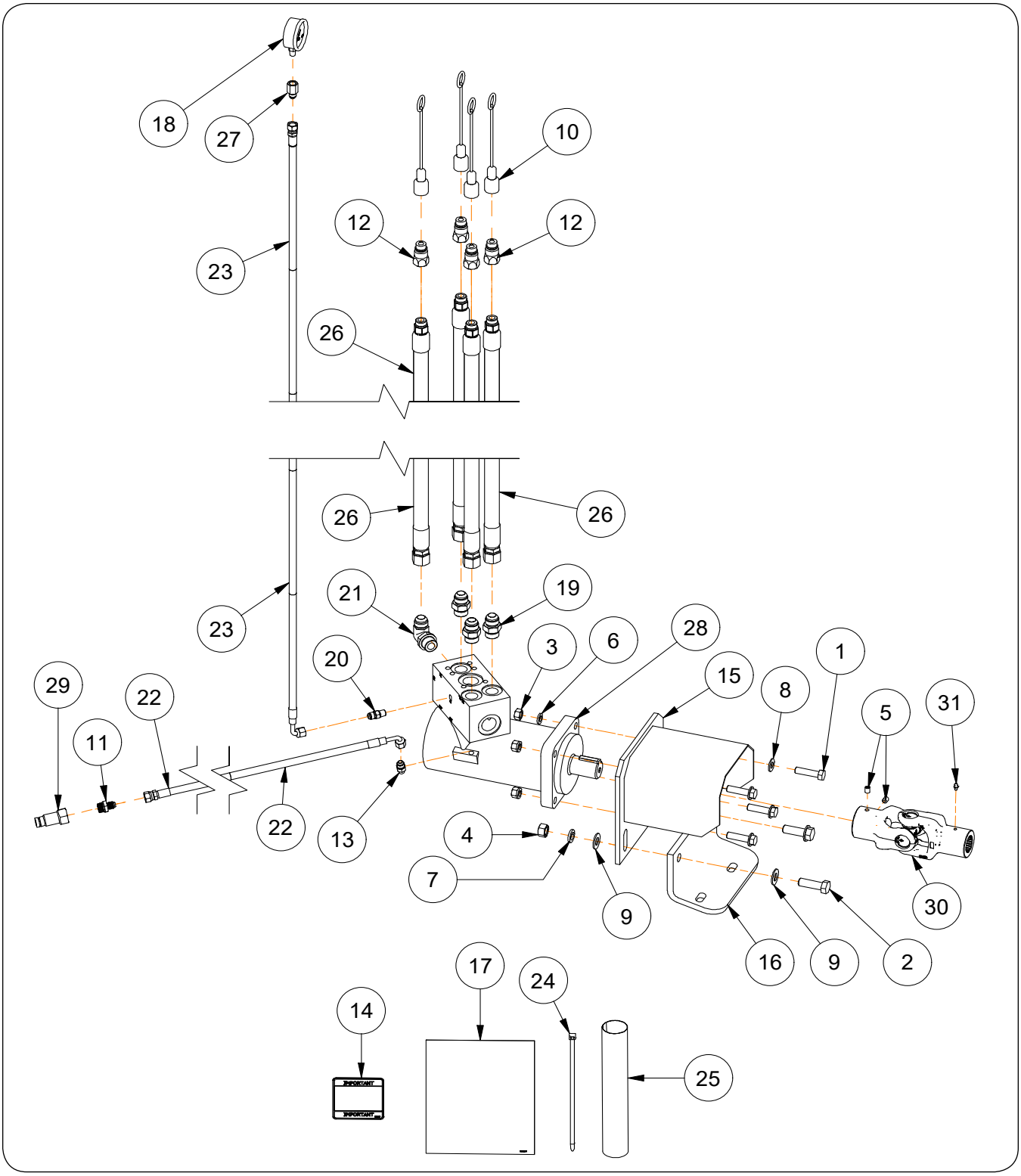
Electrical Components

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

QTY	PART #	DESCRIPTION	QTY	NOTES
1	9003510	Wiring Harness, Rear	1	
2	9003509	Wiring Harness, Front	1	
3	92450	Electrical Coupler	1	
4	9004350	Wiring Harness, Auger	1	
5	9500807	Auger Light	1	
6	9004140	Connector, Male	2	
7	9002127	Connector 1/2" Eyelet	1	
8	9001816	Grommet	4	
9	9405-052	Flat Washer, 3/16"	4	
10A	9005100	Lamp - Red, LED	2	No Lens
10B	9003136	Red Light w/Lead, Plug Connector & Double Circuit Lamp	2	Includes Wiring Harness
	9003384	Replacement Lens - Red	-	
11A	9005142	Lamp - Amber w/LED Double-Face	2	
11B	9003048	Light, Amber - Turn/Flasher	2	
	9004017	Replacement Lens - Amber	-	
12	251398B	Light, Tube Weldment	2	
13	272948B	LH Light Bracket Weldment (Shown)	1	Includes 18, 19 & 20
	272947B	RH Light Bracket Weldment	1	Includes 18, 19 & 20
14	9390-108	Capscrew 1/2"-13UNC x 3 1/4"	2	
	9003397	Locknut, 1/2"-13UNC	2	
15	9005097	Wiring Harness 10"	2	For LED Lights Only
16	251406B	LH Plate	1	
	251407B	RH Plate	1	
17	9003515	Tube Plug	2	
18	9003125	Reflector, Fluorescent "Red-Orange"	2	2" x 9"
19	9003126	Reflector, "Red"	2	2" x 9"
20	9003127	Reflector, "Amber"	2	2" x 9"
21	9000106	Cable Tie, 6"	A/R	
	9000107	Cable Tie, 15 1/2"		
22	9390-003	Capscrew, 1/4"-20UNC x 3/4"	4	
23	9000166	Butt Connector	1	
24	TAB65407	Female Connector	1	
25	9390-009	Capscrew, 1/4"-20UNC x 2"	4	
26	9394-002	Hex Nut, 1/4"-20UNC	8	
27	9404-017	Lock Washer, 1/4"	8	
28	9405-064	Flat Washer, 1/4"	8	
29	9003046	Switch, Momentary	1	
30	903172-350	Pan Head Machine Screw, #10-32UNF x 1 1/4"	4	
31	9404-013	Split Lock Washer, #10	4	
32	9830-016	Hex Nut, #10-32 Grade 2	4	

Optional Hydraulic PTO Drive Kit #280207 (Up To 55GPM)

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



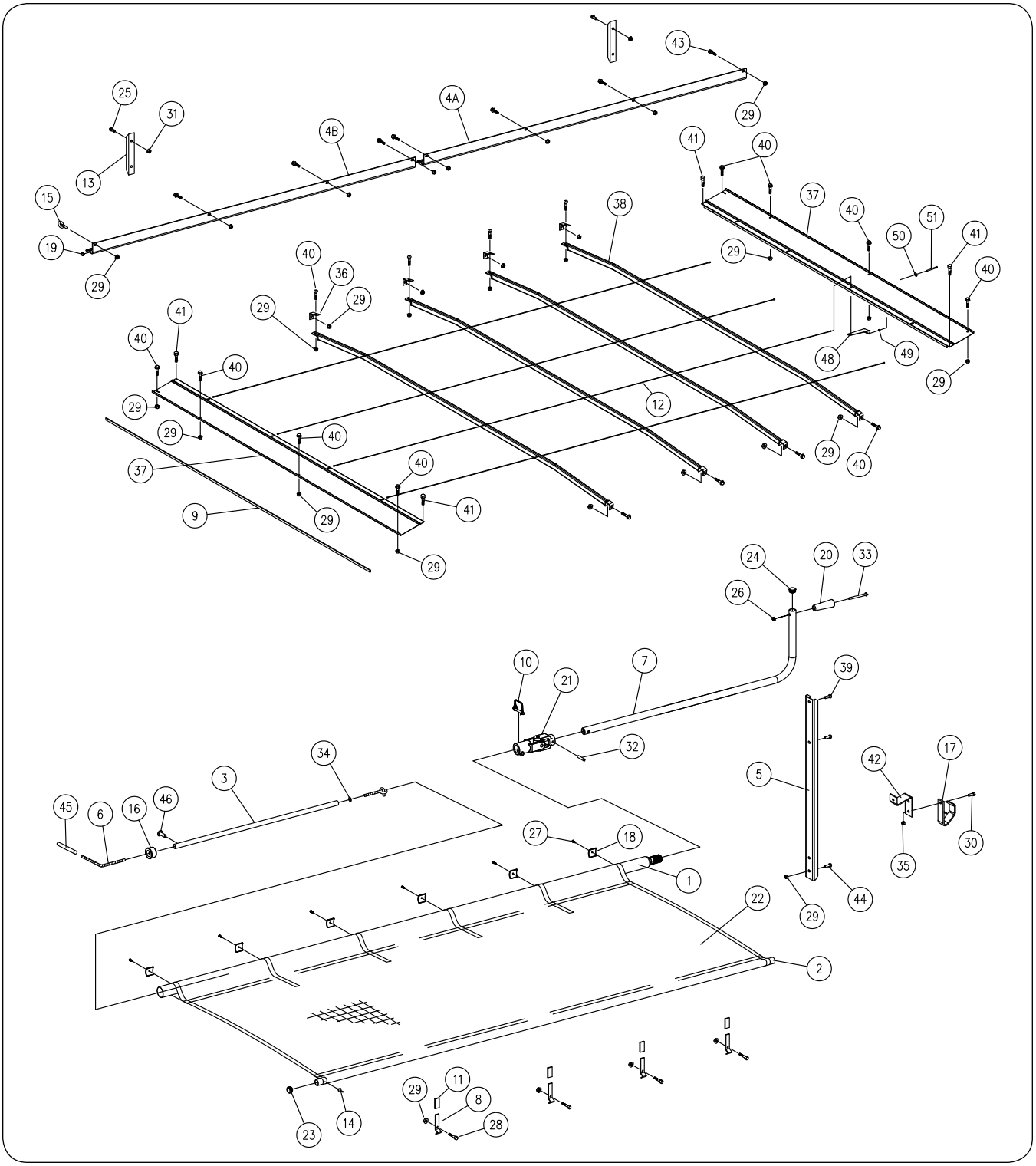
Optional Hydraulic PTO Drive Kit #280207 (Up To 55GPM)

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

ITEM	PART #	DESCRIPTION	QTY	NOTES
1	9390-103	Capscrew 1/2"X2" UNC GR5	4	
2	9390-124	Capscrew 5/8"X2" UNC GR5	2	
3	9394-010	Hex Nut 1/2"-13UNC GR5	4	
4	9394-014	Hex Nut 5/8"-11UNC GR5	2	
5	9399-086	Set Screw 3/8"X1/2" UNC	2	
6	9404-025	Lock Washer 1/2"	4	
7	9404-029	Lock Washer 5/8"	2	
8	9405-086	Flat Washer 1/2" SAE	4	
9	9405-098	Flat Washer 5/8" SAE	4	
10	91511	Dust Cap/Iso Coupler	4	
11	92927	Adapter 9/16"-18 JIC Male x 3/4"-16 ORB	1	
12	95477	Hydraulic Coupler 7/8"-14 UNF	4	
13	97711	Adapter 9/16"-18 JIC Male x 7/16"-20 O-R Male	1	
14	251027	Decal-Important	1	
15	280066B	Motor Mount Weldment	1	
16	280069	Plate	1	
17	282894	Operator's Manual-Hydraulic Drive	1	
18	9001039	Hydraulic Gauge - 3000 Psi	1	
19	9001068	Adapter 1 1/16"-12 JIC	3	
20	9001418	Adapter 9/16"-18 JIC Male x 1/4"-18 NPTF Male	1	
21	9002442	Elbow 90° 1 1/16"-12 JIC Male x 1 1/16"-12 Male	1	
22	9002873	Hydraulic Hose 1/4" - 9/16"JICF x 9/16"JICF x 95"	1	
23	9003117	Hyd Hose 1/4" - 9/16"JICF x 9/16"JICF x 151"	1	
24	9003735	Cable Tie 11" X 0.30"	1	
25	9003848	Hose Wrap-2"	1	
26	9005849	Hydraulic Hose 3/4" - 1 1/16JICF x 7/8" x 88"	4	
27	9005865	Adapter - 9/16"-18 JIC X 1/4"-18 NPTF	1	
28	9005913	Motor & Manifold Assembly	1	
29	9006048	Coupler Tip 3/4"-16 Male	1	
30	9006668	U-Joint Assembly	1	
31	91160	Grease Zerk - 1/4"-28 (Taper)	1	

Optional Weather Guard Tarp Kit #221642

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



ITEM	PART #	DESCRIPTION	QTY	NOTES
1	221576	Roll Tube Weldment	1	
2	221579	Fixed Tube Weldment	1	
3	221582	Pipe - 132”	1	

Optional Weather Guard Tarp Kit #221642

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

ITEM	PART #	DESCRIPTION	QTY	NOTES
4A	2006091	Rear Plate - Latch 81 1/2”	1	
4B	2006092	Front Plate - Latch 81 1/2”	1	
5	251132B	Channel Bracket 35 3/4" Long	1	
6	221721	Bungee 3/8” Dia. x 156”	1	
7	221749	Tarp Handle Weldment	1	
8	266689B	Tarp Short Stop Plate	4	
9	9000787	Trim-lok	2	
10	9005305	Lynch Pin 3/8” x 3”	1	
11	9003078	Cap - Plastic (2 x 3)	4	
12	902612	Cable Assembly 147"	4	
13	9005307	Deflector	2	
14	9003378	Rivet/Pop 3/16”	2	
15	9004548	Eye Bolt, 3/8”-16UNC x 1 3/4”	1	
16	9004947	Plug 2”	1	
17	221770B	Tube Holder (Metal) - Pinless	1	
18	9004949	U-Clamp	6	
19	9004968	Plug 1”	2	
20	9004969	Handle	1	
21	9004977	U-Joint w/ 1 3/8-21 Spline	1	
22	9005038	Tarp 158” x 159”	1	
23	9005088	Plug 1 1/8”	2	
24	9005089	Plug 1 1/4”	1	
25	9004355	Self-Threading Screw 1/4”-20UNC x 1”	4	
26	9398-012	Elastic Stop Nut, 3/8”-16UNC	1	
27	9005197	Screw/Self Drilling, #10-16 x 3/4” Pan Head	6	
28	91262	Screw/Large Flange, 3/8”-16UNC x 1”	4	Grade 5
29	91263	Nut/Large Flange, 3/8”-16UNC	29	Grade 5
30	9390-055	Capscrew, 3/8”-16UNC x 1”	1	Grade 5
31	97189	Flange Nut, 1/4”-20UNC	4	
32	9392-180	Roll Pin, 3/8” Dia. x 2”	1	
33	903172-450	Machine Screw, 3/8”-16UNC x 4 1/2”	1	
34	9405-074	Flat Washer, 3/8”	1	
35	9928	Locknut, 3/8”-16UNC	1	
36	250881B	Bracket - Side Boards/Tarp Bow Weldment	4	
37	250880B	End Cap Weldment	2	
38	251211B	Tarp Bow Weldment	4	
39	96972	Screw 3/8”-16UNC x 1” Self-Tapping	2	
40	9388-051	Carriage Bolt 3/8”-16UNC x 1”	14	Grade 5
41	9512	Screw/Self Drilling 1/4”-14 x 1” Hex Washer Head	4	
42	221700B	Offset Bracket	1	
43	9005312	Machine Screw, 3/8”-16UNC x 1"	5	
44	95585	Flange Screw, 3/8”-16UNC x 3/4"	2	
45	TA806225	Hose, 1/2"	1	
46	9001396	Self Drilling Screw #10-16 x 1/2"	1	
47	9005581	Tarp Repair Kit (Not Shown)	1	
48	281712B	Bracket & Nut Assembly	4	
49	9005688	Lock Washer 3/8" External Tooth	4	
50	9005696	Fender Washer, 3/8"	4	
51	TA0-907131-0	Capscrew 3/8”-16UNC x 4 1/2”	4	Grade 5

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