




Grain Handling

CORNER AUGER GRAIN CART MODEL 1160

Serial Number B36620100 & Higher
D72360100 & Higher

Part No. 288496

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 the time of consumer delivery. Your local dealer will gladly assist you with any warranty questions.

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

Purchase Date _____ Model _____ Serial Number _____

Dealer _____ City _____

Dealer Contact _____ Phone _____



IMPORTANT

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

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FOR TRACK INFORMATION, PLEASE REFER TO YOUR TRACK MANUAL.
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FOR AUTO DOOR OPERATING INFORMATION, PLEASE REFER TO YOUR
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General Hazard Information

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

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

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

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



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

SIGNAL WORDS



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



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



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



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

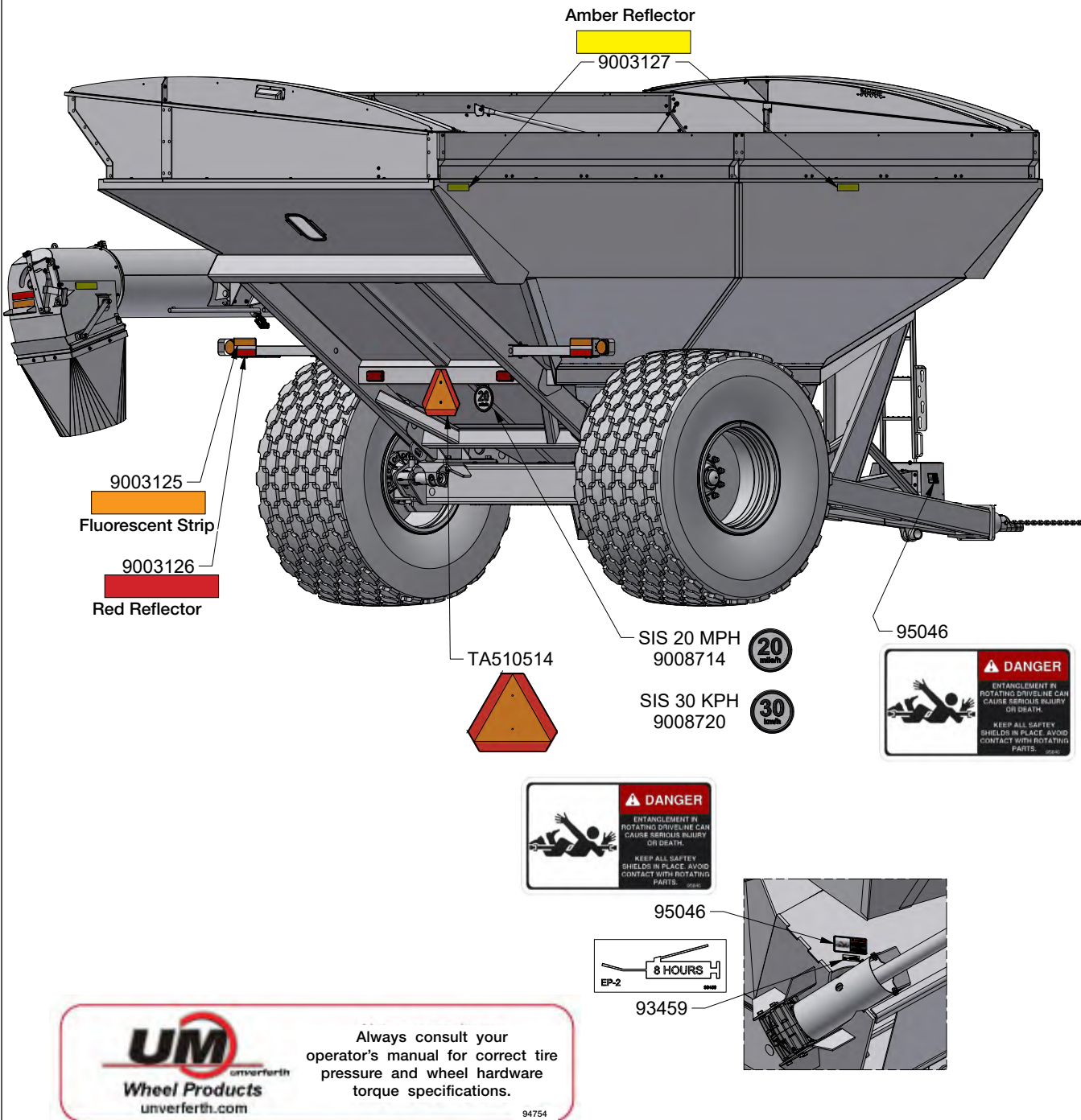
Safety Decals

⚠ WARNING

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



Safety Decals (continued)



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Always consult your operator's manual for correct tire pressure and wheel hardware torque specifications.

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Following Safety Instructions

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



- All machinery should be operated only by trained and authorized personnel.

- To prevent machine damage, use only attachments and service parts approved by the manufacturer.

- Always shut tractor engine off and remove key before servicing.



- Avoid personal attire such as loose fitting clothing, shoestrings, drawstrings, pants cuffs, long hair, etc., that may become entangled in moving parts.

- Do not allow anyone to ride on the implement. Make sure everyone is clear before operating machine or towing vehicle.





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


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



Before Servicing or Operating

- Avoid working under an implement; however, if it becomes absolutely unavoidable, make sure the implement is safely blocked. 
- Ensure that all applicable safety decals are installed and legible.
- When working around the implement, be careful not to be cut by sharp edges.
- To prevent personal injury or death, always ensure that there are people who remain outside the cart to assist the person working inside, and that all safe workplace practices are followed. There is restricted mobility and limited exit paths when working inside the implement.
- Secure drawbar pin with safety lock and lock tractor drawbar in fixed position.
- Explosive separation of a tire and rim can cause serious injury or death. Only properly trained personnel should attempt to service a tire and wheel assembly.
- Do not stand between towing vehicle and implement during hitching.
- Always make certain everyone and everything is clear of the machine before beginning operation.
- Verify that all safety shields are in place and properly secured. 

During Operation

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

Before Transporting

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

During Transport

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


Driveline Safety



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

Pressurized Oil

- Relieve the hydraulic system of all pressure before adjusting or servicing. See hydraulic power unit manual for procedure to relieve pressure.

- High-pressure fluids can penetrate the skin and cause serious injury or death. Leaks of high-pressure fluids may not be visible. Use cardboard or wood to detect leaks in the hydraulic system. Seek medical treatment immediately if injured by high-pressure fluids. 

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

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

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

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

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

Preparing for Emergencies

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



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



Wearing Protective Equipment

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



- Wear steel-toed shoes when operating.



- Wear hearing protection when exposed to loud noises.



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



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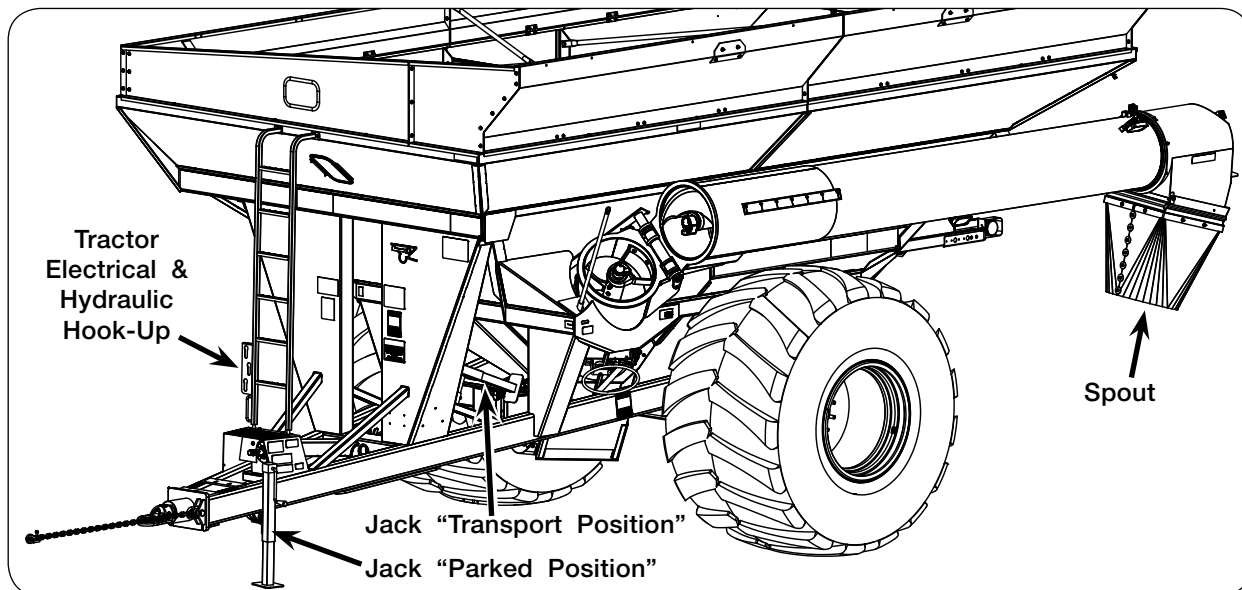
FOR HYDRAULIC DRIVE INFORMATION, PLEASE REFER TO YOUR HYDRAULIC DRIVE MANUAL.

Set Up Checklist

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

- Adjust axle from shipping position to desired operating position. (If applicable) Refer to “Adjustable Axle (Optional)”.
- Torque wheel nuts as specified in MAINTENANCE section.
- Inflate tires to specified air pressure. (If applicable)
- Wash the unit and remove road salt tag from ladder. (If applicable)
- Complete sideboard and tarp set up. Remove tarp/sideboard shipping brackets.
- Set or Calibrate tractor PTO control engagement to MINIMUM setting. Refer to tractor operator’s manual for setting information.
- Remove upper auger rest retainer.
- Verify track has been aligned and is properly conditioned. (If applicable)
- Lubricate all grease fittings and check gearbox oil level.
- Inspect cleanout door assembly for play or movement, refer to “Adjusting Cleanout Door” in the MAINTENANCE section.
- Verify all safety decals are correctly located and legible. Replace if damaged.
- Verify all reflective decals are correctly located.
- Check SMV decal and SIS decals are in place, clean and visible.
- Verify transport lights are working properly.
- Check driveline assembly phasing. See “Auger Driveline Replacement” in MAINTENANCE section.
- Verify PTO length, see “Verify Telescoping PTO Shaft Length” in MAINTENANCE section.
- Ensure screens over auger are in place and properly secured.
- Paint all parts scratched in shipment.
- Test run the augers. See “Auger Operation” in OPERATION section.
- Check hydraulics for leaks and check hose routing.

Basic Set Up



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

⚠ WARNING

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

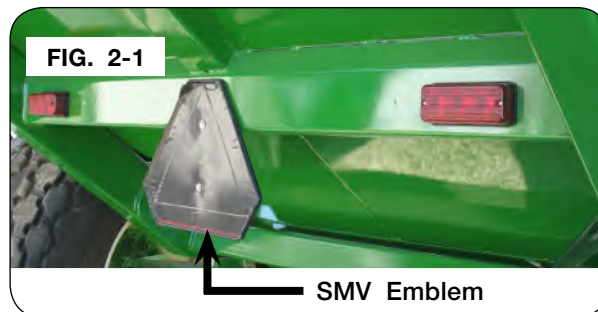
Basic Set Up

SMV Emblem & SIS Decals

The reflective surface of the SMV must face rearward. This may require removal of film protecting the reflective surface or removing and reinstallation of the SMV. (FIG. 2-1)

When reinstalling the SMV, make sure that it is mounted with the wide part of the SMV at the bottom and the reflective surface facing away from the cart. (FIG. 2-1)

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



Auger Rest Retainer Removal

IMPORTANT

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

1. Close the cleanout door.
2. Hitch cart to tractor. Refer to “Hitching to Tractor” in the OPERATION section.
3. Park the empty cart on a firm, level surface. Block tractor and cart to prevent movement. Set the tractor’s parking brake and remove the key from the ignition.
4. Remove the retainer located on the upper auger rest at the back of the cart, before raising the upper auger tube. (FIG. 2-3 & 2-4)



5. Use tractor SCV to raise the upper auger.
6. Cycle auger fold all the way up and down to ensure movement is free.
7. Check all hoses and cylinders for signs of leakage. Hoses should not be kinked, twisted or rubbing against sharp edges. Re-route or repair hoses as necessary. Refer to SAFETY section for additional information on safe repair and inspection of hydraulic components.

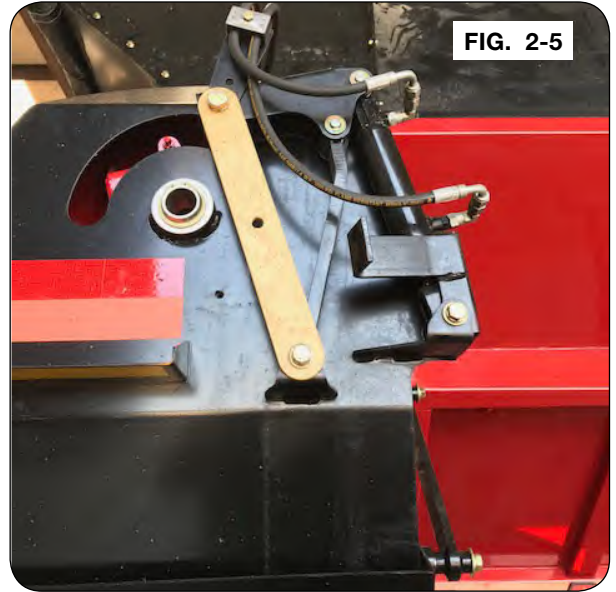
Basic Set Up (continued)

Auger Rotational Spout Stop Removal

Remove the stop on the rotational spout bracket at the rear of the cart, before operating the spout. (FIG. 2-5)

IMPORTANT

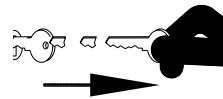
- *Shipping stop must be removed before operating the auger spout. Failure to remove stop will result in damage to the cylinder and spout.*



Basic Set Up (continued)

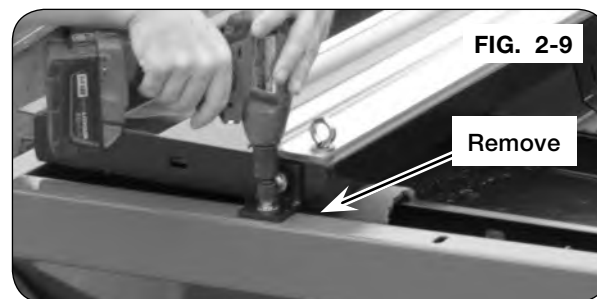
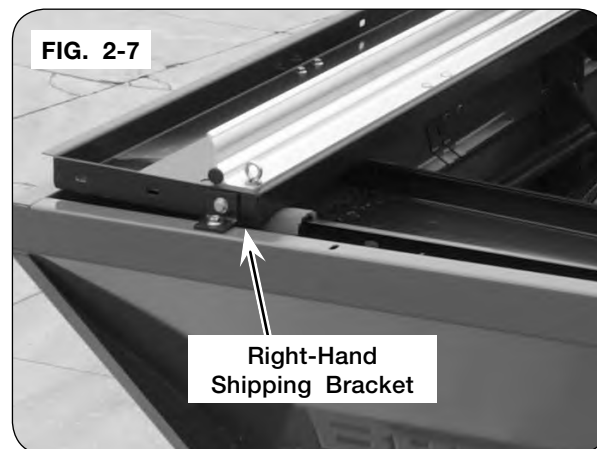
Sideboards and End Caps

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.



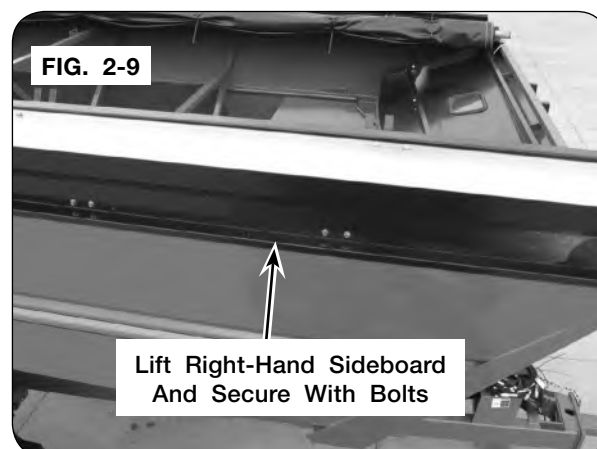
2. Remove the crank handle and the crank handle holder from inside the cart.

3. Remove and discard shipping bracket for right-hand sideboard, (FIG. 2-7 and 2-8)



4. Lift the right-hand sideboard up into position and loosely secure sideboard into place using 3/8" flange screws and flange nuts along sideboard bottom edge. See FIG. 2-9.

NOTE: Hinge brackets WILL support the sideboard.

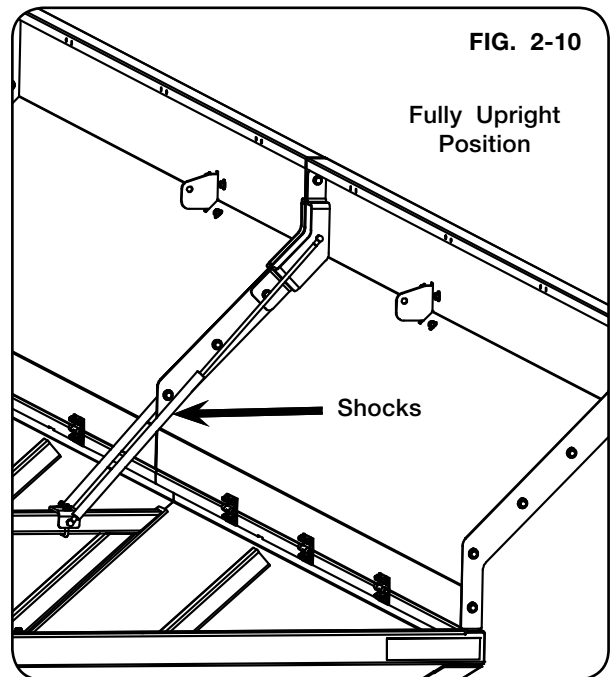


Basic Set Up (continued)

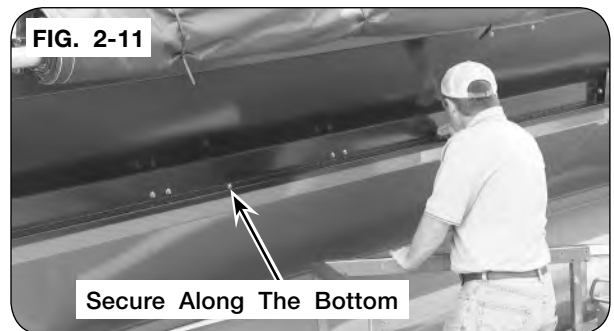
5. Lift the left-hand sideboard into position.

NOTE: Hinge brackets **WILL** support the sideboard and tarp if included.

NOTE: On some models, shocks are attached to the left-hand sideboard, FIG 2-10.



6. Loosely secure left-hand sideboard with 3/8" flange screws and flange nuts along the bottom. See FIG. 2-11.



Basic Set Up (continued)

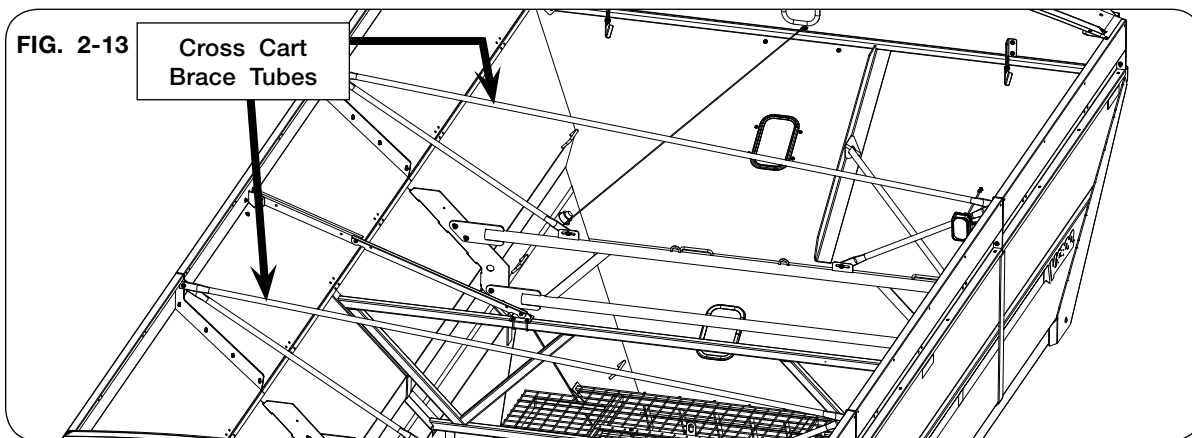
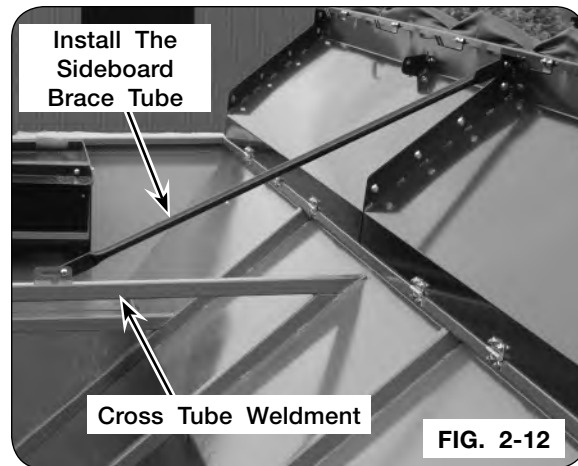
7. Install brace tubes.

ONE PIECE BRACE TUBE:

Install sideboard brace tubes on each cross tube weldment. Each weldment will have one left-hand and one right-hand sideboard brace tube. Loosely secure with 3/8" flange hardware. See FIG. 2-12.

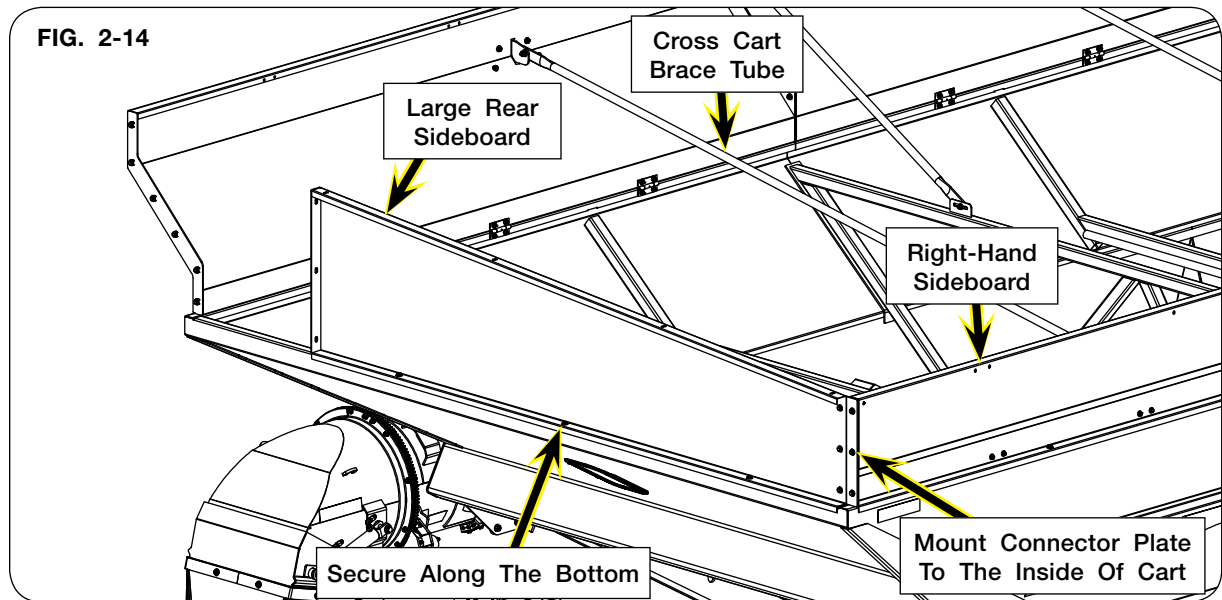
CROSS CART BRACE TUBES:

Install cross-cart, full-width brace tubes. Loosely affix with 3/8" flange hardware. See FIG. 2-13 and 2-14.



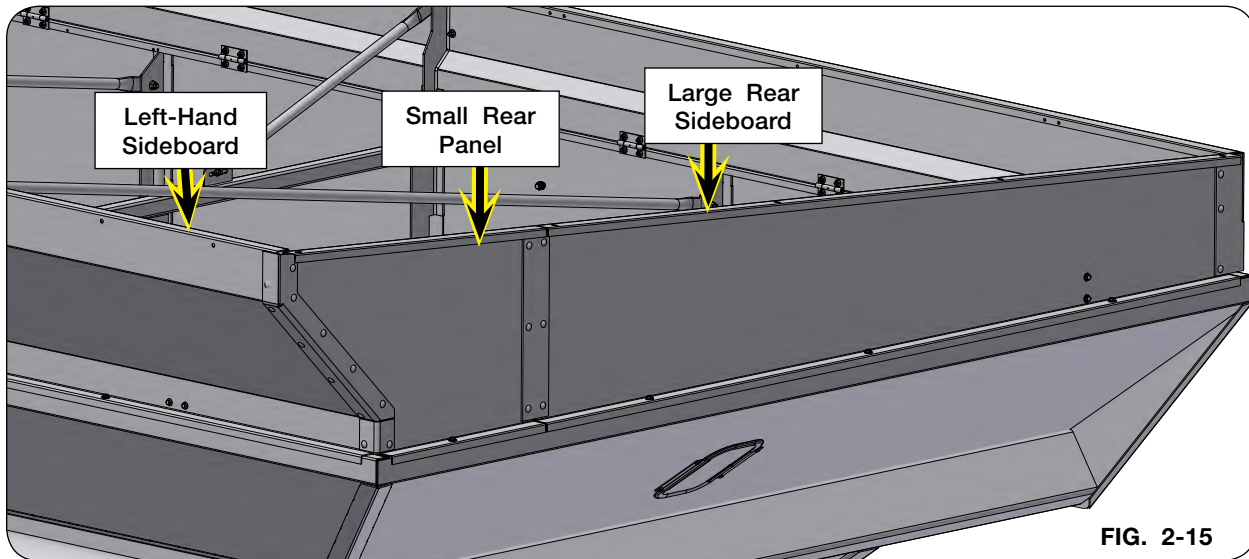
Basic Set Up (continued)

8. If included, remove and discard the shocks and associated brackets from the left-hand sideboard.
9. Lift the large rear sideboard up into position and loosely secure with 3/8" flange screws and flange nuts along the bottom. See FIG. 2-14.
10. Connect large rear sideboard to the right-hand sideboard using the connector plate. Loosely secure using 3/8" hardware. See FIG. 2-14.



Basic Set Up (continued)

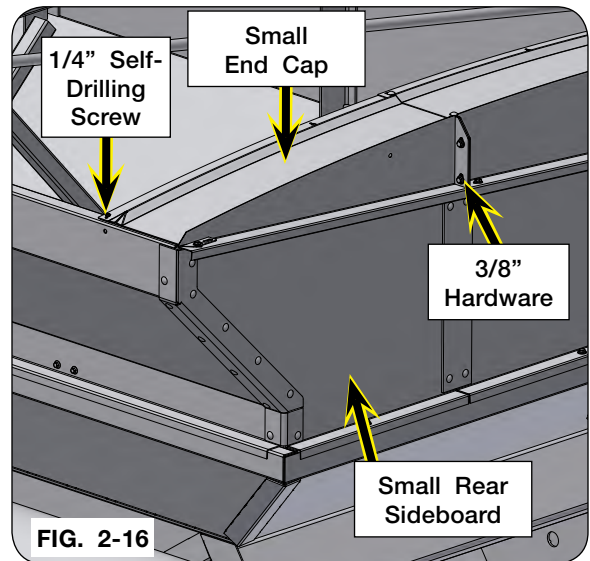
11. If included, remove and discard the shipping bracket from the small rear panel.
12. Connect the large rear sideboard to the left-hand sideboard using the small rear panel. Loosely secure using 3/8" hardware. See FIG. 2-15.



Basic Set Up (continued)

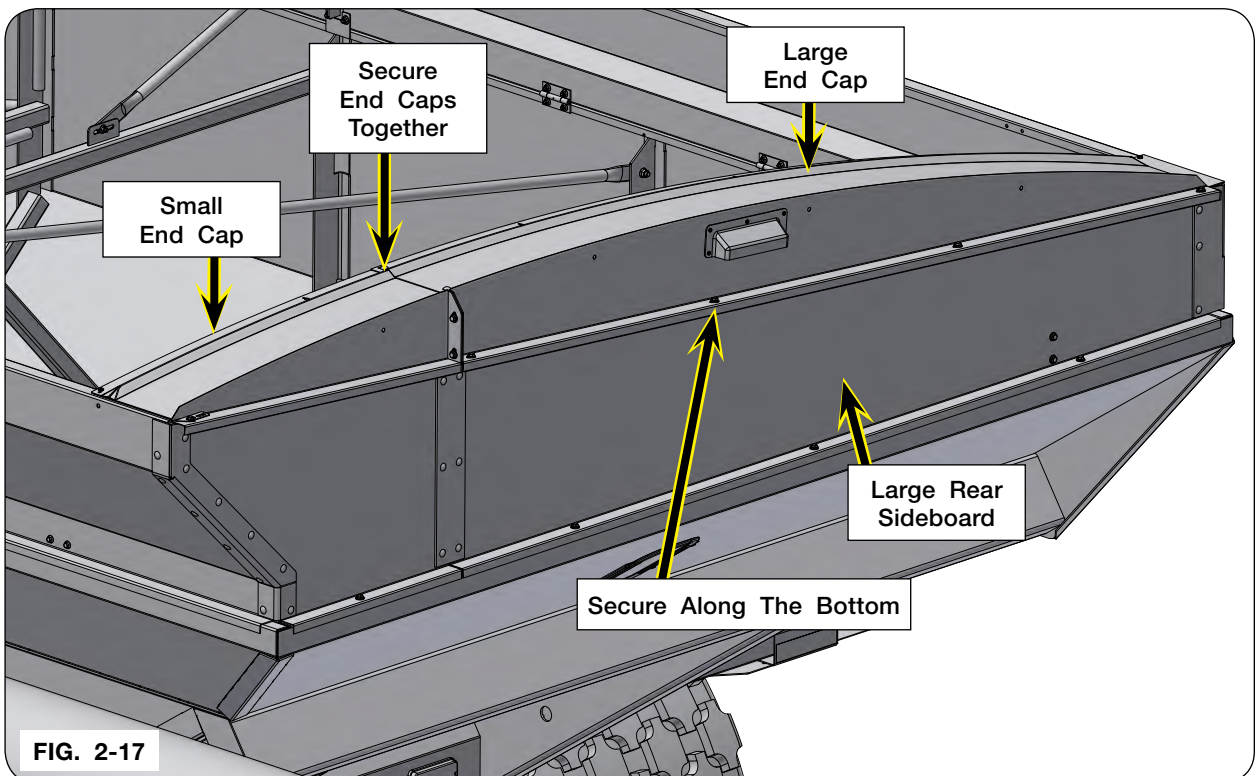
13. Attach smaller end cap on top of rear sideboards using 3/8" hardware and one 1/4" self-drilling screw. See FIG. 2-16.

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



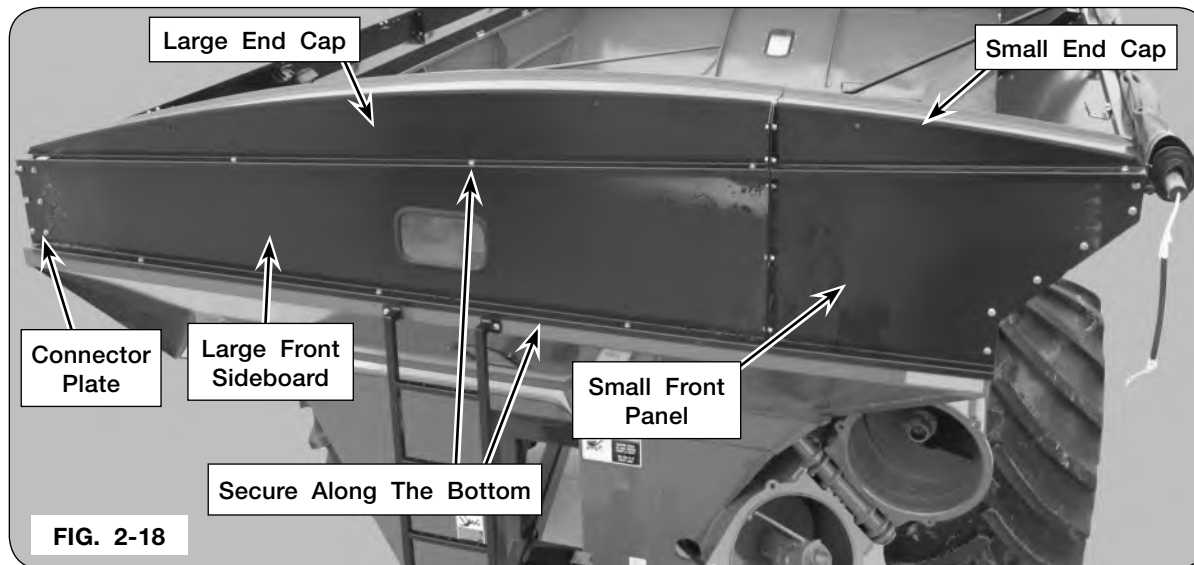
14. Attach larger end cap on top of rear sideboards using 3/8" hardware. See FIG. 2-17.

NOTE: Tabs on smaller end cap go UNDER the larger end cap.



Basic Set Up (continued)

15. Remove and discard the shipping bracket from the front sideboard.
16. Lift large front sideboard into position and loosely secure with 3/8" flange screws and flange nuts along the bottom. See FIG. 2-18.



17. Connect large front sideboard to the right-hand sideboard using the connector plate. Loosely secure using 3/8" hardware. See FIG. 2-18.
18. Connect large front sideboard to the left-hand sideboard using the small front panel. Loosely secure using 3/8" hardware. See FIG. 2-18.
19. Attach smaller, end cap on top of front sideboards. See FIG. 2-18.

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

20. Attach larger end cap on top of rear sideboards. Reference FIG. 2-18.

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

Basic Set Up (continued)

Tarp Installation

NOTE: For carts SN B41380099 & lower, skip to step 2 on next page.

NOTE: Ensure RH and LH doublers are inside the sideboard lip. See FIG. 2-20.

1. For carts SN B41380100 & Up/D72360100 & Up, install six long tarp bows (287400B) across top of the cart, using bracket (283425B), RH doubler (289986B), LH doubler (281936B), 3/8"-16UNC x 3" capscrew (902703-046), 3/8"-16UNC flange nut (91263), 3/8"-16UNC x 1" truss screw (9005312), 5/16"-18UNC x 1" flange screw (97604) and 5/16"-18UNC flange nut (91257). FIG. 2-19 and 2-20.

FIG. 2-19

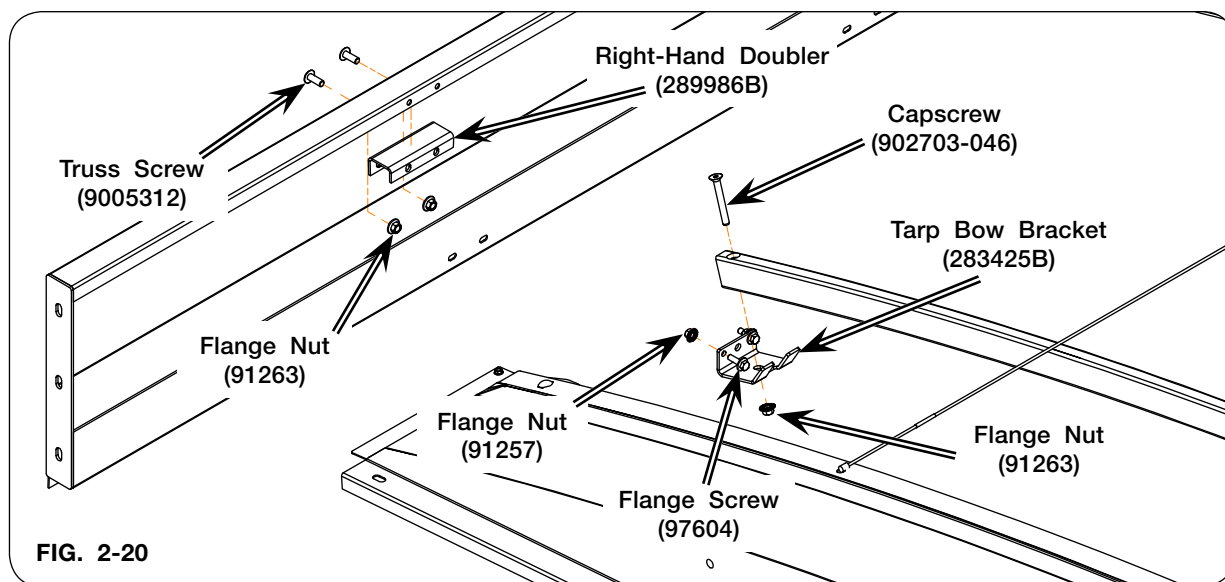
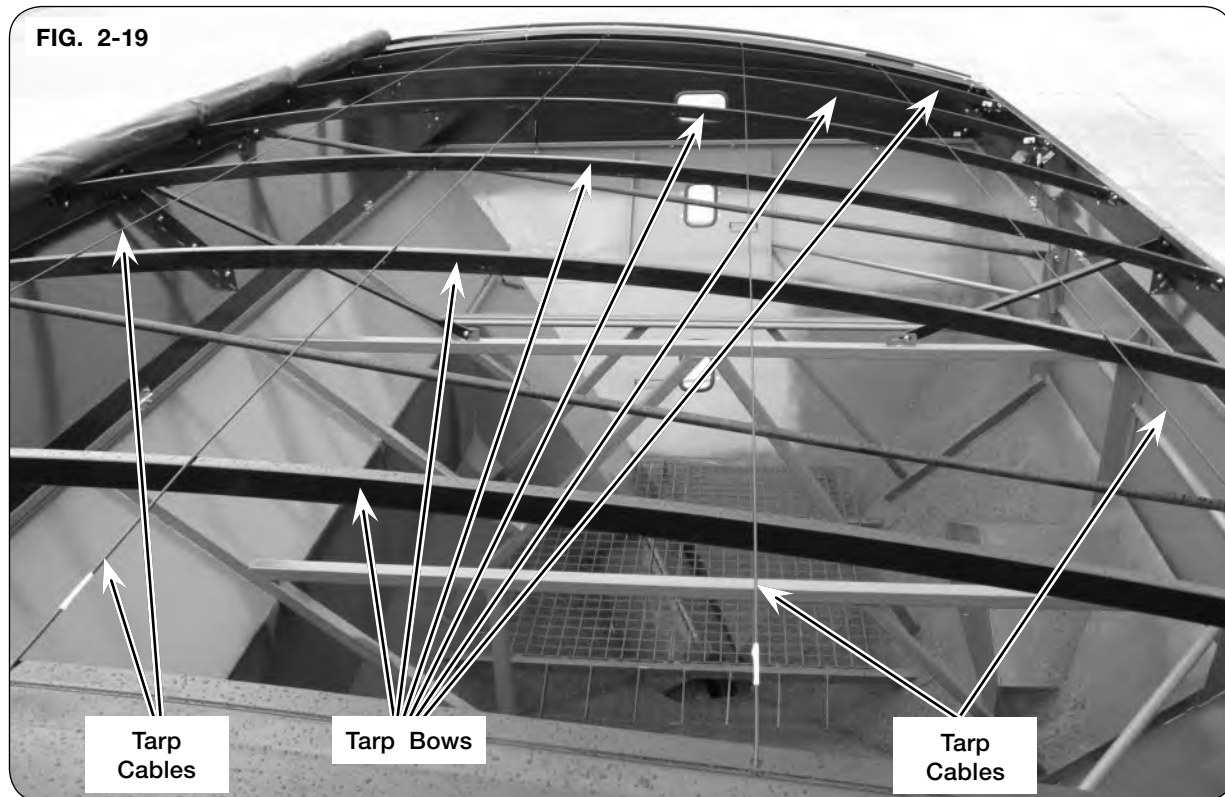
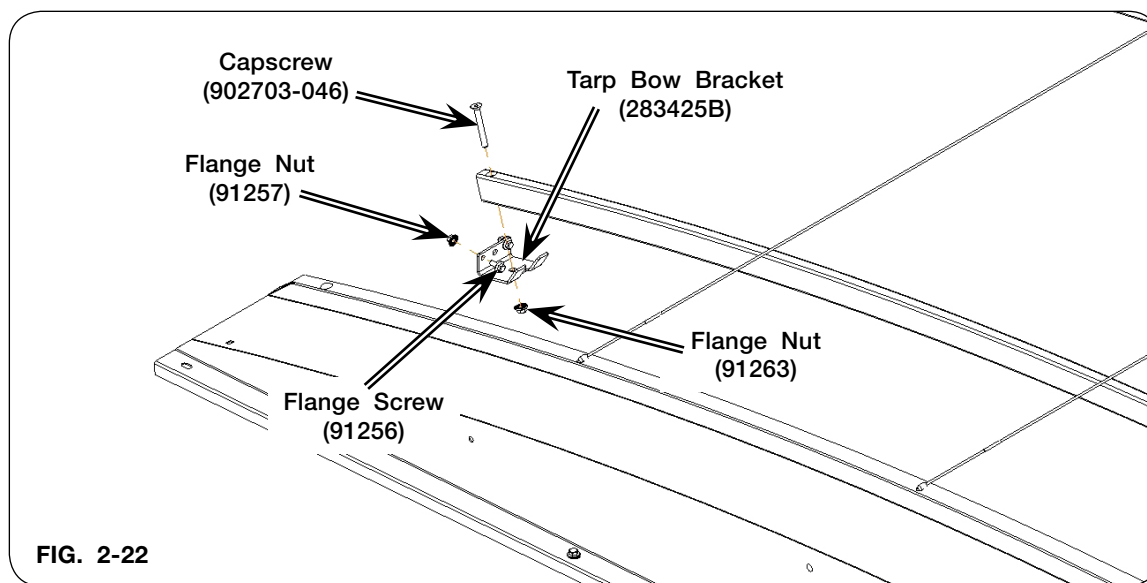
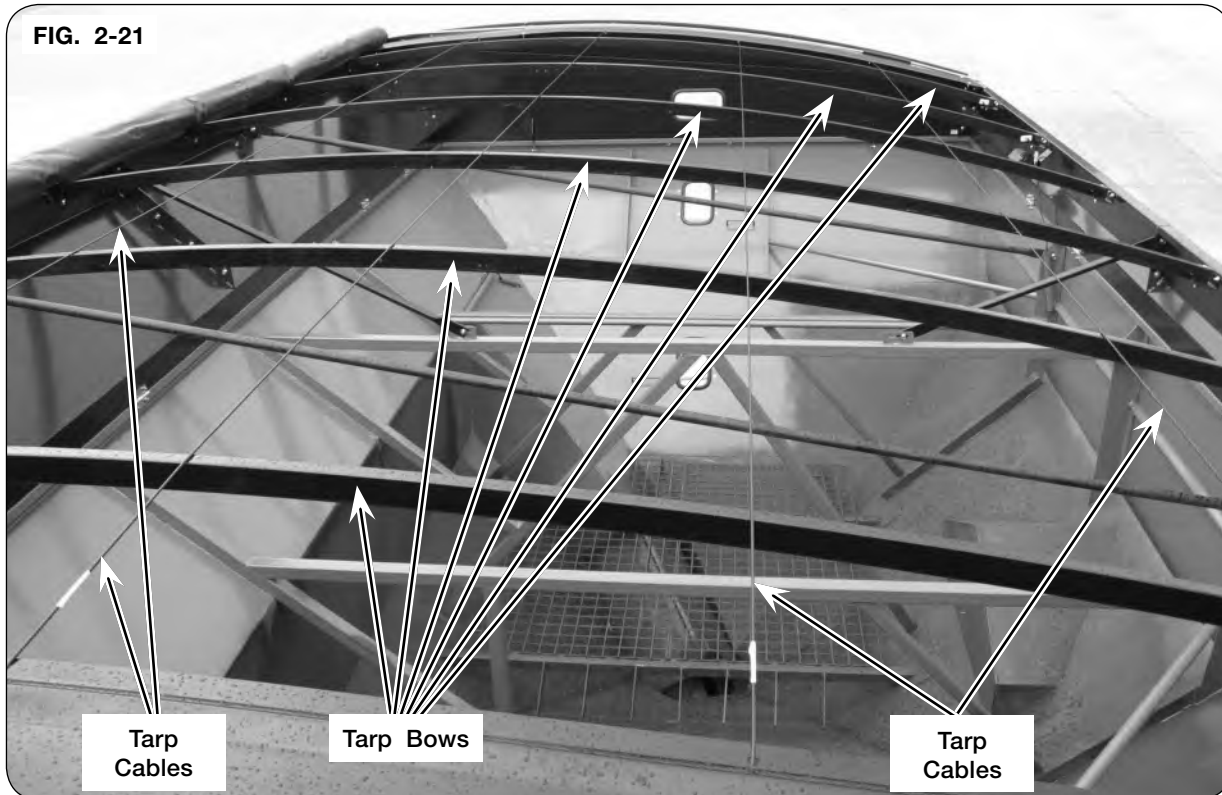


FIG. 2-20

Basic Set Up (continued)

2. Install six long tarp bows (287400B) across the top of the cart, using bracket (283425B), 3/8"-16UNC x 3" capscrew (902703-046), 3/8"-16UNC (91263), 5/16"-18UNC x 3/4" flange screw (91256) and 5/16"-18UNC flange nut (91257). See FIG. 2-21 and 2-22.

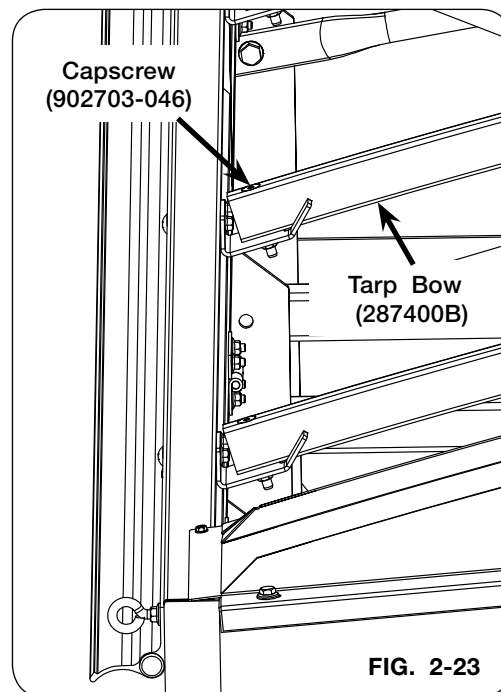
FIG. 2-21



Basic Set Up (continued)

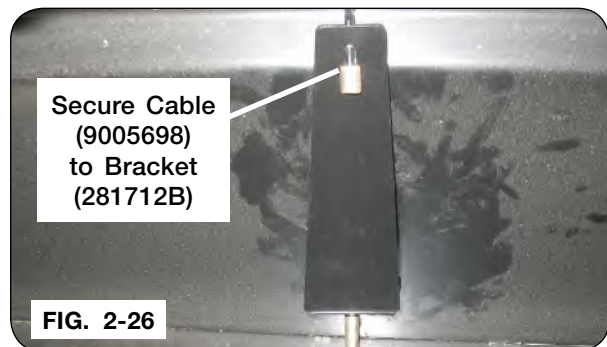
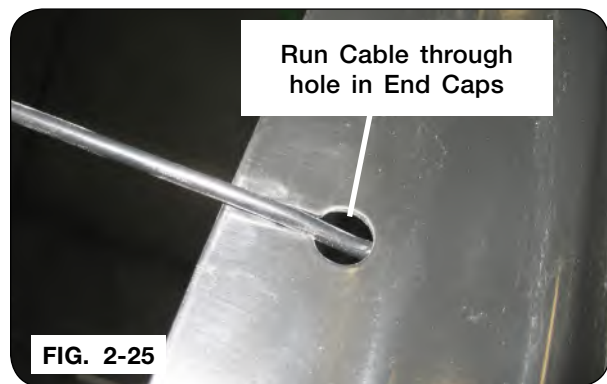
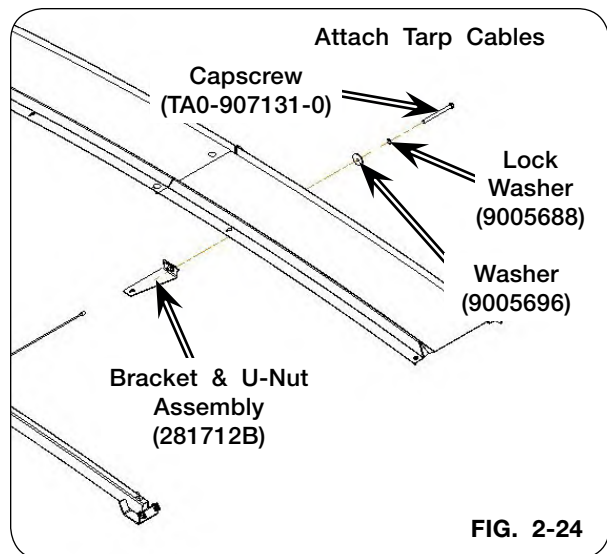
NOTE: Ensure capscrew head (902703-046) is flush with the top of bow weldment (287400B). See FIG. 2-23.

3. Tighten all hardware.



Basic Set Up (continued)

4. Install four tarp cables across the top using 3/8"-16UNC x 4 1/2" capscrew (TA0-907131-0), 3/8" lock washer (9005688), 3/8" fender washer (9005696) and bracket & U-nut assembly (281712B). See FIG. 2-24 through 2-27.
5. Assemble nylon coated cable through keyhole slot in front end cap and route over tarp bows. Assemble through keyhole slot in rear end cap and attach to adjusting bracket under end cap. See FIG. 2-25 and 2-26.



Basic Set Up (continued)

6. Install end cap extension (283431B) between the end cap and right-hand sideboard on both the front and rear of cart. Retain in place using two 3/8"-16 x 1" carriage bolts (9388-051), two 3/8"-16 flange nuts (91263) and one 1/4"-14 x 1" self-drilling screw (9512) per end. See FIG. 2-28 through 2-30.
7. Tighten cables until snug, without pulling front and rear board inward. Do not overtighten.



FIG. 2-28

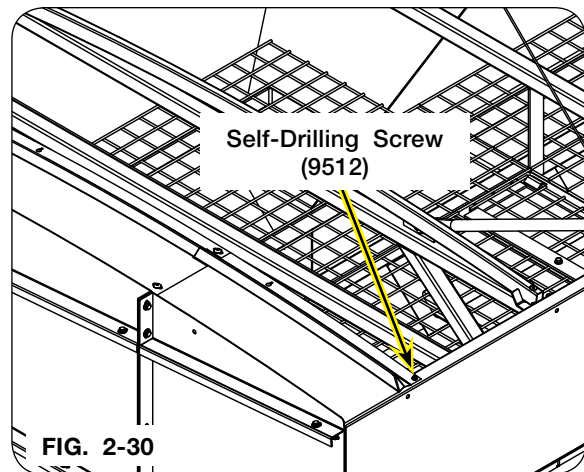
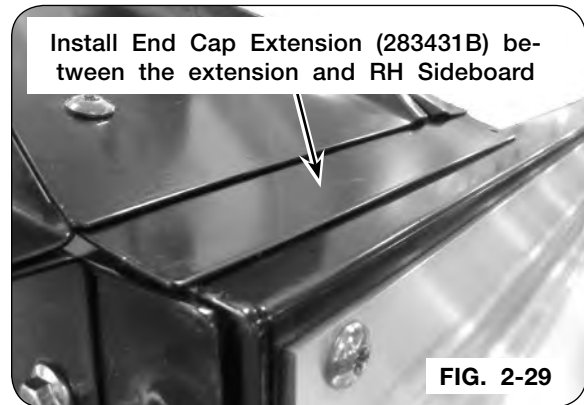
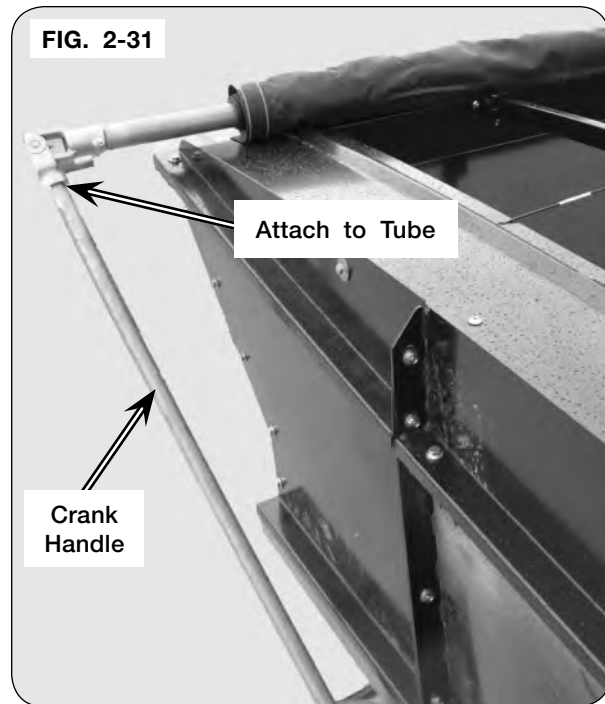


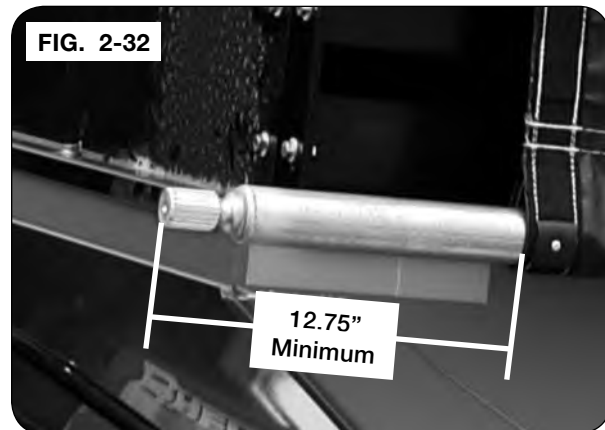
FIG. 2-30

Basic Set Up (continued)

8. Attach the crank handle to the tarp roll tube, FIG. 2-31. Once secure, roll tarp across the cart to the closed position.



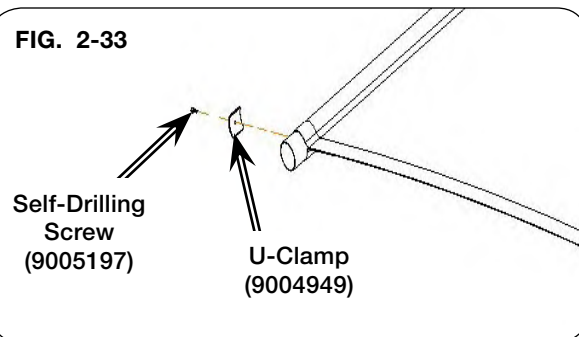
9. Confirm that the roll tube on the handle is at a minimum of 12.75" from the edge of tarp, FIG. 2-32.
10. Remove crank handle before securing roll tube.



Basic Set Up (continued)

11. Add #10-16 x 3/4" self-drilling screws (9005197) and U-clamps (9004949) to secure tarp in place on the roll tube side. Check that clips are located on the straps with an even height across, FIG. 2-33 and 2-34.
12. With the tarp in the closed position and the roll tube hanging over the right-hand side of the cart, remove the tarp handle from the roll tube. Reattach with the handle straight up and down.
13. If not already affixed, the crank handle holder attaches to brackets underneath on the rear of the cart.
14. With tarp rolled up under latch plate, assemble bungee cord end through the top of the eye bolt. Leave 2-3" of slack and knot off. Cut off excess bungee cord a couple of inches from end. Sear end with lighter to keep from fraying, FIG. 2-35A.
15. Test tarp for proper working motion. (FIG. 2-35B)

FIG. 2-33



U-Clamp and Screw Assembled

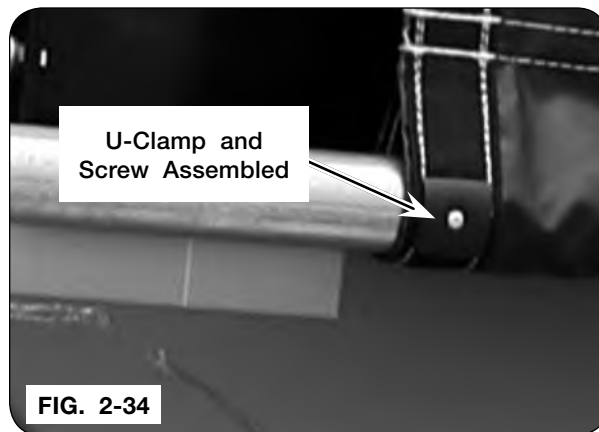


FIG. 2-34

FIG. 2-35A

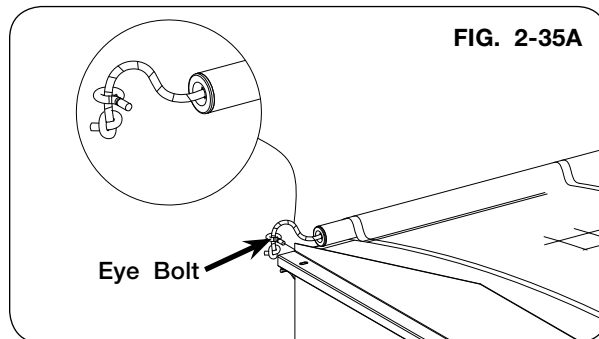
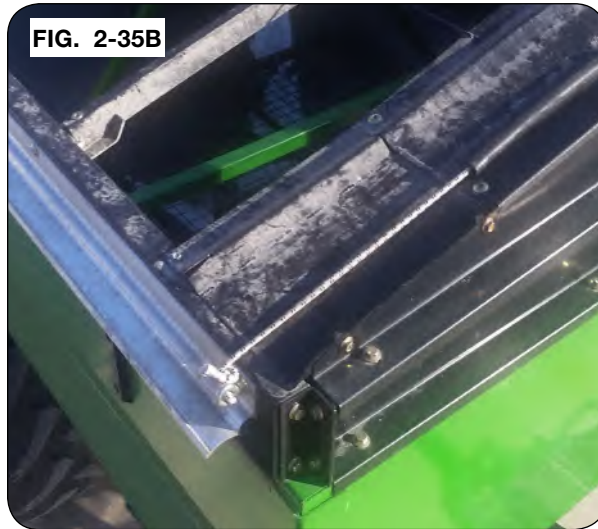


FIG. 2-35B



Basic Set Up (continued)

Warning Lamp Set Up

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

NOTE: The edge of the reflector (not lamp) must be within 16" of the outer edge of the tire. (FIG. 2-36)

3. Verify amber reflector is facing forwards. (FIG. 2-36 and 2-37)

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

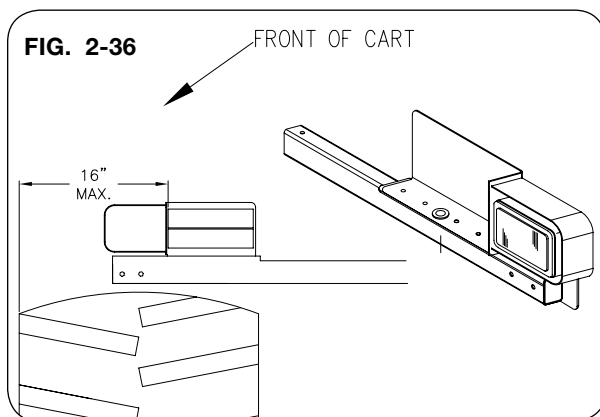
If the tractor field lights switch is on; the Side Marker lights and the amber turn signal lights are on solid and will not flash. Refer to tractor operator manual for details.

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

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

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

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



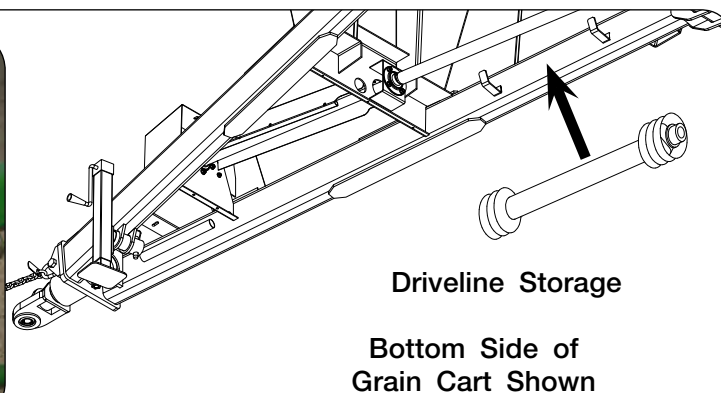
Basic Set Up (continued)

Driveline Storage

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

IMPORTANT

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



Basic Set Up (continued)

Wheel/Tire Set Up

Tire Pressure

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

Wheel Nuts

WARNING

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

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

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

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

CAUTION

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

IMPORTANT

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

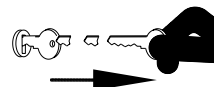
Basic Set Up (continued)

Adjustable Axle (Optional)

⚠ WARNING

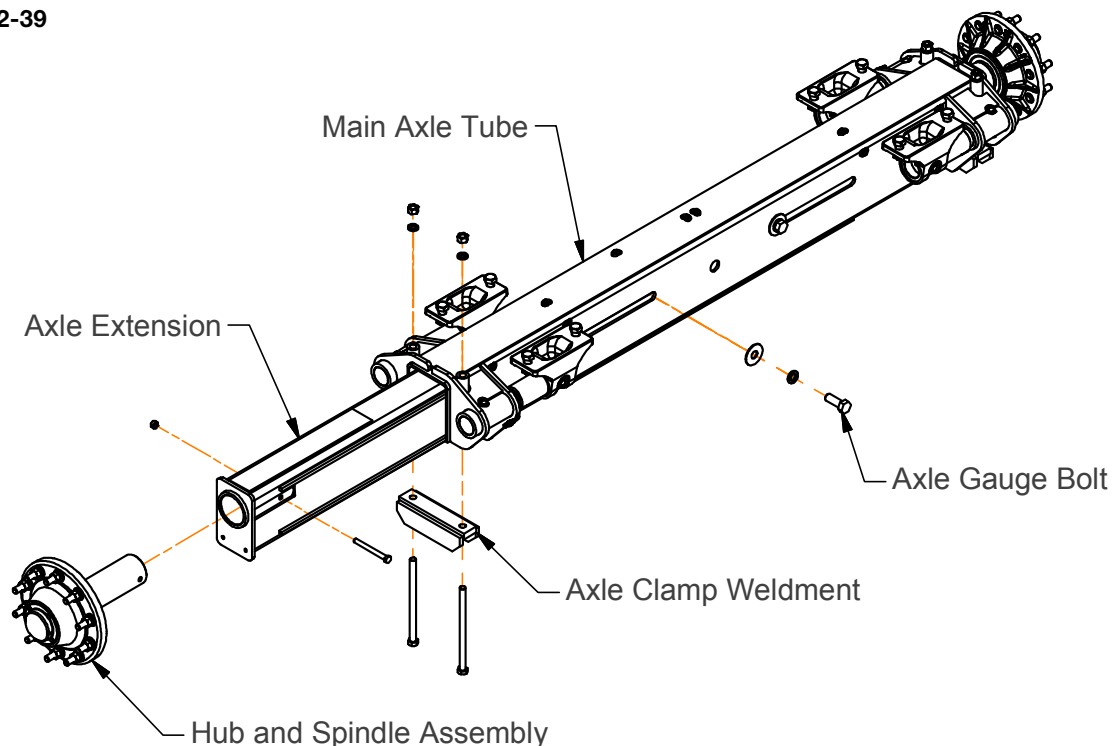
- **FALLING OBJECTS CAN CAUSE SERIOUS INJURY OR DEATH. DO NOT WORK UNDER THE MACHINE AT ANY TIME WHILE BEING HOISTED. BE SURE ALL LIFTING DEVICES AND SUPPORTS ARE RATED FOR THE LOADS BEING HOISTED. THESE ASSEMBLY INSTRUCTIONS WILL REQUIRE SAFE LIFTING DEVICES UP TO 16,000 LBS. SPECIFIC LOAD RATINGS FOR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

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



2. Using a safe lifting device rated for a minimum of 16,000 lbs. and supports rated at 8,000 lbs. minimum, raise the cart and place supports under the axle near the axle clamps.
3. Loosen axle extension clamp and axle gauge bolts (FIG. 2-39). Do not remove.

FIG. 2-39



Basic Set Up (continued)

Adjustable Axle (Optional) (continued)

- Slide extensions to desired tire gauge spacing. Axle extensions should be extended equally. Refer to chart below and FIG. 2-40.

Tire Size	Slide Out Distance (From end of the main axle tube to inside of the extension weldment end cap plate.)	Distance Hub Flange to Hub Flange	Distance End to End
900/65R32 (See FIG. 2-36)	4"	129"	139"
900/70R32	7"	135"	145"
1050/50R32	7"	135"	145"
1250/50R32	10 1/2"	142"	152"

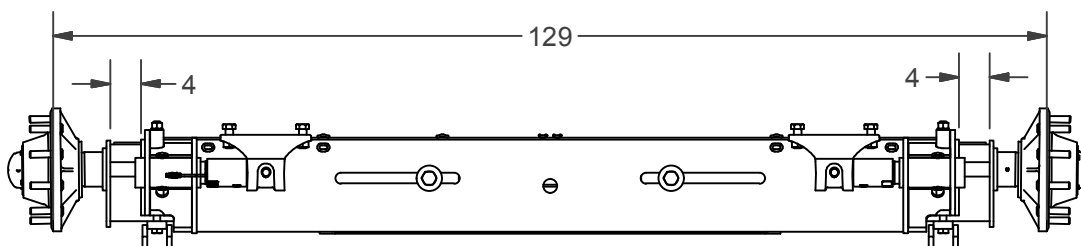
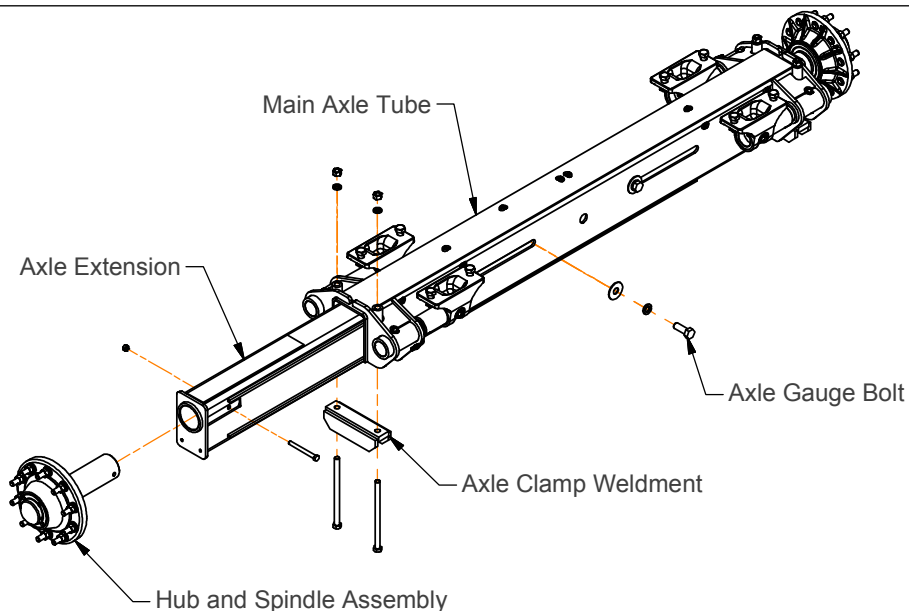


FIG. 2-40

- Tighten axle gauge bolts followed by axle clamp bolts. Refer to MAINTENANCE section for proper torque specifications. (FIG. 2-41)

FIG. 2-41



- Remove supports and lower cart to ground.

NOTE: If tires are positioned at a wider tread width, make sure lights are also moved out to within 16" of the outside of tires. Refer to "Warning Lamp Set Up" in this section.

Section III Operation

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FOR TRACK INFORMATION, PLEASE REFER TO YOUR TRACK MANUAL.
FOR SCALE INFORMATION, PLEASE REFER TO YOUR SCALE MANUAL.
FOR HYDRAULIC DRIVE INFORMATION, PLEASE REFER TO YOUR HYDRAULIC DRIVE MANUAL.
FOR AUTO DOOR OPERATING INFORMATION, PLEASE REFER TO YOUR
SCALE INDICATOR OPERATOR'S MANUAL.

Operating Checklist

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

Preparing Tractor

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

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

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

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

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

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

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

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

CAUTION

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

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

Preparing Cart

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

Hardware

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

Pivot Pins

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

Hitch

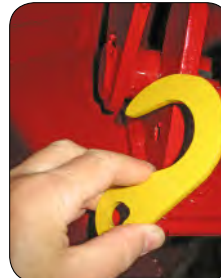
Check hitch wear plates for damage and wear. Be aware of the size of hitch adapter bushing that is being used. Select correct size for the hitch pin/draw bar you are using.

Auger

Inspect auger for damage and wear.

IMPORTANT

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



Preparing Cart (continued)

Auger Driveline Assembly

NOTE: Ends of driveshaft are symmetrical.

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

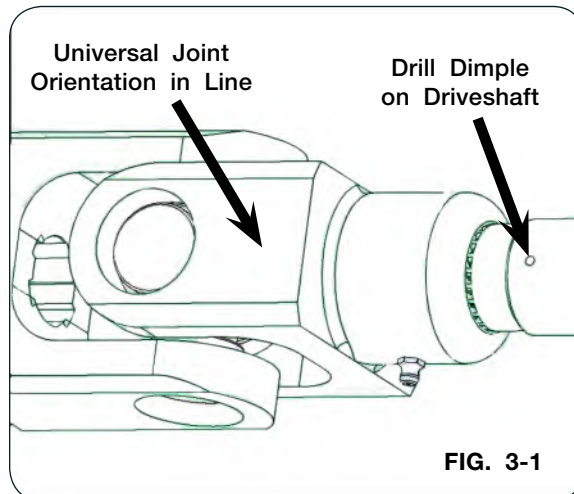


FIG. 3-1

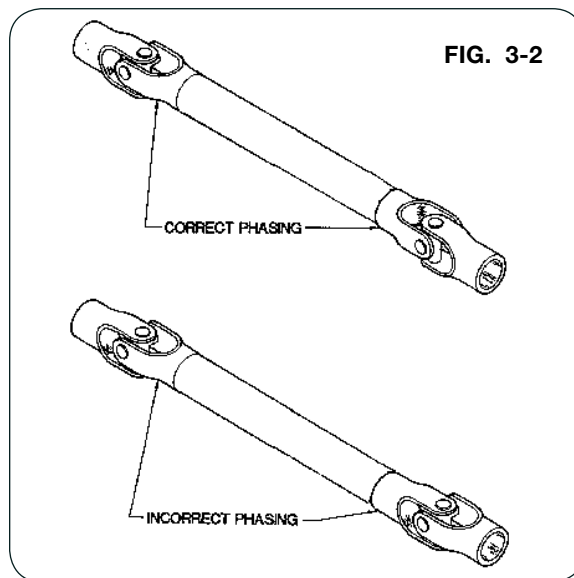


FIG. 3-2

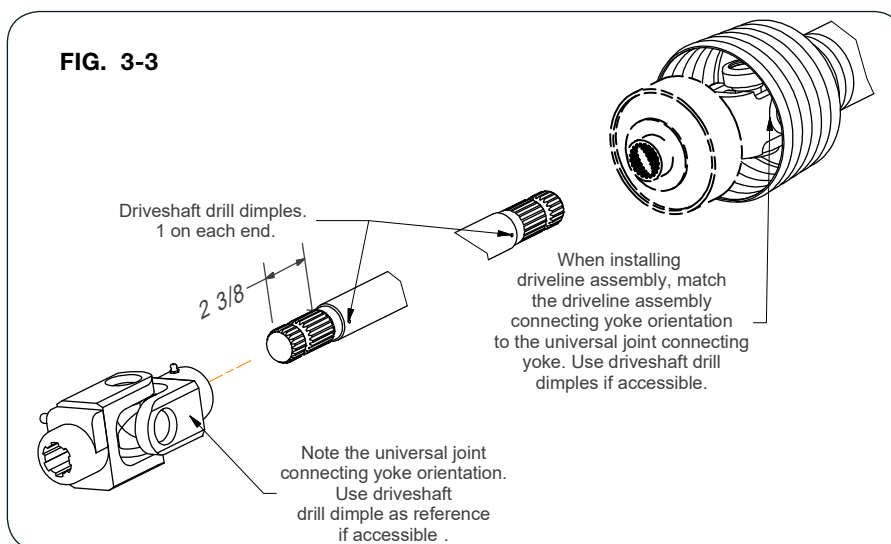


FIG. 3-3

Preparing Cart (continued)

Soft Start System

Check for wear or damage.

Hydraulic System

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

Tires/Wheels

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



CAUTION

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

IMPORTANT

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

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

Lubrication

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

Hitching to Tractor

Drawbar Connection

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

The cart is equipped standard with a single tang hitch. A hitch pin between 1 1/2" or 2" diameter must only be used with a clevis-type tractor drawbar. 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 wear, tractor and cart hitch wear, along with more pronounced jolting from the cart during transport operation.

WARNING

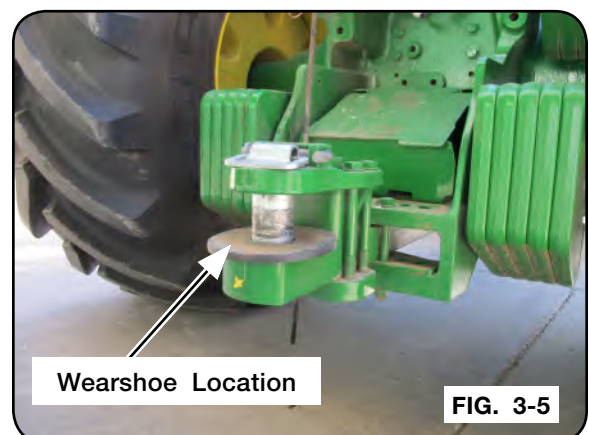
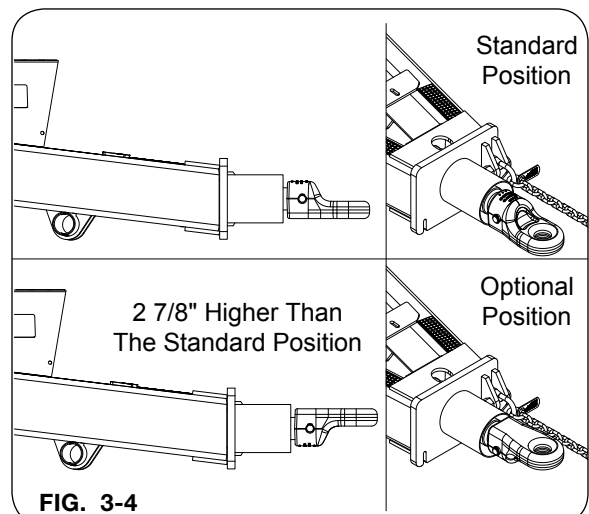
- **CRUSHING CAN CAUSE SERIOUS INJURY OR DEATH. DO NOT STAND BETWEEN THE MACHINE AND TRACTOR WHEN HITCHING. ALWAYS ENGAGE PARKING BRAKE AND STOP ENGINE BEFORE INSERTING HITCH PIN.**

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

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

NOTE: Cast hitch can be flipped providing a drawbar connection height difference of 2 7/8" (FIG. 3-4). Position the cast hitch to help assure a level cart when loaded, or the rear of the hopper slightly higher than the front, to maintain rear slope cleanout. Whenever the cast hitch is flipped, the driveline clearances needs to be reviewed.

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. Refer to "Verify Telescoping PTO Shaft Length" in the MAINTENANCE section for details.



Hitching to Tractor (continued)

Jack Usage

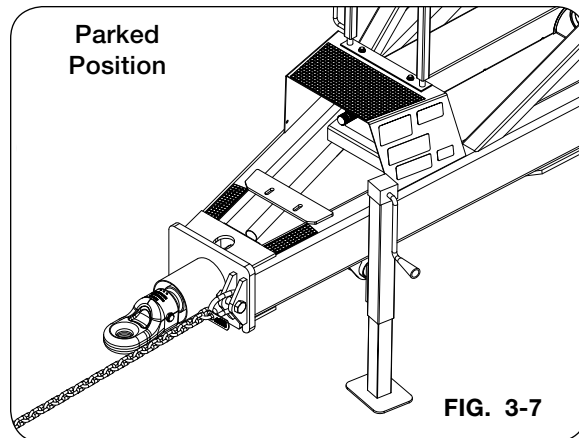
WARNING

- **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. Attach jack to left outside frame using pin and hair pin. Mount jack in storage position once cart is hitched to tractor. (FIG. 3-6 and 3-7)

IMPORTANT

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



Hitching to Tractor (continued)

Transport Chain Connection

CAUTION

- ALWAYS USE TRANSPORT CHAIN WHEN TRANSPORTING IMPLEMENTS. FAILURE TO USE A TRANSPORT CHAIN COULD CAUSE PERSONAL INJURY IF CART BECOMES DISENGAGED.
- REPLACE TRANSPORT CHAIN IF ANY LINK OR END FITTING IS BROKEN, STRETCHED, DAMAGED. DO NOT WELD TRANSPORT CHAIN.

Always use intermediate chain support when connecting the grain cart directly to a tractor. DO NOT use the intermediate chain support as the chain attaching point. See tractor operator's manual for proper chain attachment. FIG. 3-6 shows how the transport chain must be installed between the tractor and grain cart.

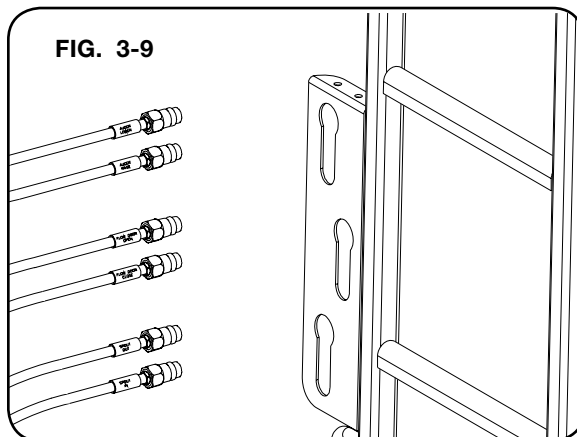
The transport chain is rated for towing the grain cart empty on public roads. Never tow a loaded grain cart on public roads.



Hydraulic Connections

IMPORTANT

- When coupling hydraulic hoses to ports on the tractor, be sure that the coupler ends are clean of dust, dirt and debris. Failure to do so could contaminate hydraulic system resulting in excessive wear and possible failure. (FIG. 3-9)



Hitching to Tractor (continued)

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

This unit is equipped with color bands attached to the hydraulic hoses. This will help in identifying the hose function and correct hook up.

Color	Hose Function
Red	Flow Door Open and Flow Door Close
Yellow	Spout In and Spout Out
Green	Auger Raise & Auger Lower

After initial set-up or replacement of any hydraulic component on the cart, air must be removed from the cart's hydraulic system. Reference "Hydraulic System - Purge Hydraulic System" section in the MAINTENANCE section.

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

Before disconnecting hoses from tractor, place tractor in Park and shut PTO off, operate auger fold to the lowest positions. Where possible, remove hydraulic pressure and avoid potential pressure buildup in the lines from long storage periods such as upper auger not in rest position. See tractor operator's manual for proper procedure to relieve pressure from the lines. After SCV pressures have been relieved and tractor engine is off, disconnect hoses from tractor. Install couplers into storage slots provided. (FIG. 3-7)

Hydraulic Connections for Hydraulic Drive

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

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

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

IMPORTANT

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

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

Hitching to Tractor (continued)

Electrical Connections

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

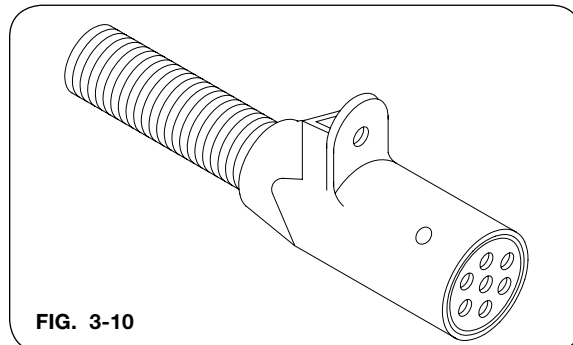


FIG. 3-10

Attach the 7-pin connector to tractor as shown in FIG. 3-11.

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

If equipped, check the tractor and cart electric tarp connection. Refer to electric roll tarp manual (26487) for details.

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

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

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

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

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

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

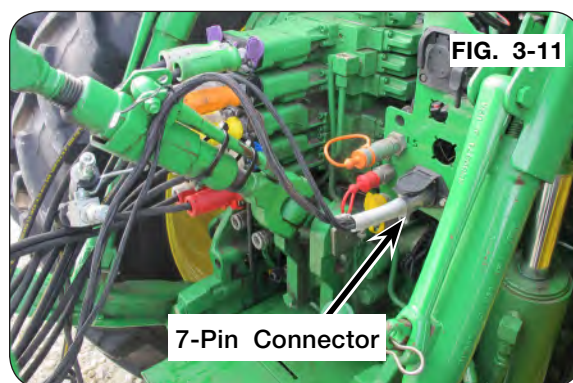


FIG. 3-11

7-Pin Connector

Hitching to Tractor (continued)

Towing

Ensure that the towing vehicle has adequate weight and braking capacity to tow this implement and all attachments. See your Unverferth dealer for more information. See towing vehicle's operators manual for towing capacity. Never tow a loaded grain cart over public roads.

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

Secure drawbar pin with a locking device and lock tractor drawbar in centered position.

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

Secure transport chain to tractor chain support before towing.



CAUTION

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

Regulate speed to road conditions and maintain complete control.

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

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

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

IMPORTANT

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

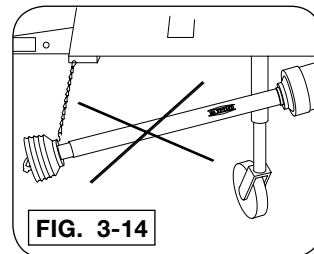
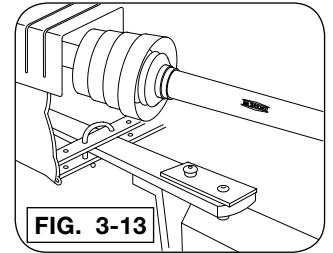
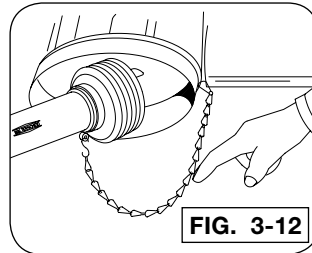
During transport, if the PTO shaft cannot be connected to the tractor, the PTO telescoping shaft must be removed and placed in the storage position. Damage to frame and driveline may result if PTO is not placed on storage brackets. To prevent damage during turning when using non-PTO equipped towing vehicles,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

Hitching to Tractor (continued)

PTO Chain

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

1. Chains must be fitted so as to allow sufficient articulation of the shaft in all working positions. (FIG. 3-12) Care must be taken to be sure that chain does not become entangled with draw-bar hitch or other restrictions during operation or transport of machine. (FIG. 3-13)
2. The PTO driveshaft must not be suspended from the chain. (FIG. 3-14)

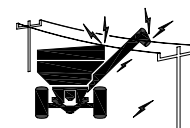


Auger Operation

PTO Driven Auger

DANGER

- **ELECTROCUTION WILL CAUSE SERIOUS INJURY OR DEATH. ELECTROCUTION CAN OCCUR WITHOUT DIRECT CONTACT. KEEP AWAY FROM ALL ELECTRICAL LINES AND DEVICES.**
- **ENTANGLEMENT WITH THE DRIVELINE WILL CAUSE SERIOUS INJURY OR DEATH. KEEP ALL GUARDS AND SHIELDS IN GOOD CONDITION AND PROPERLY INSTALLED AT ALL TIMES. AVOID PERSONAL ATTIRE SUCH AS LOOSE FITTING CLOTHING, SHOE STRINGS, DRAWSTRINGS, PANTS CUFFS, LONG HAIR, ETC. THAT CAN BECOME EN-TANGLED IN A ROTATING DRIVELINE.**



WARNING

- **NEVER ENTER CART WITH AUGER OR TRACTOR RUNNING. SERIOUS OR FATAL INJURY CAN OCCUR DUE TO ENTANGLEMENT WITH ROTATING COMPONENTS. ALWAYS STOP ENGINE AND REMOVE KEY BEFORE ENTERING CART.**
- **TO PREVENT PERSONAL INJURY OR DEATH, ALWAYS ENSURE THAT THERE ARE PEOPLE WHO REMAIN OUTSIDE THE CART TO ASSIST THE PERSON WORKING INSIDE THE CART, AND THAT ALL SAFE WORKPLACE PRACTICES ARE FOLLOWED. THERE IS RESTRICTED MOBILITY AND LIMITED EXIT PATHS WHEN WORKING INSIDE THE CART.**

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

1. Before loading cart or operating auger, verify that the flow control door is closed.
2. Choose an area free from obstructions and unfold auger into unloading position. Allow sufficient time for the cylinder to fully engage the two augers.
3. Engage tractor PTO at low engine RPM, then increase engine RPM until 1,000 PTO RPM is reached.
4. Open flow control door to desired unloading rate. Numbers on the auger tube provide a point of reference for operator convenience. (FIG. 3-15)



IMPORTANT

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

NOTE: If an overload occurs, (Shearbolt failure or excessive heat/smoke from friction clutch) shut off PTO immediately. Close flow control door and relieve auger grain pressure by opening cleanout door to remove some grain from auger before resuming. When resuming operation, allow clutch to cool, then engage tractor PTO at low engine RPM, and increase engine RPM until 1,000 PTO RPM is reached.

Auger Operation (continued)

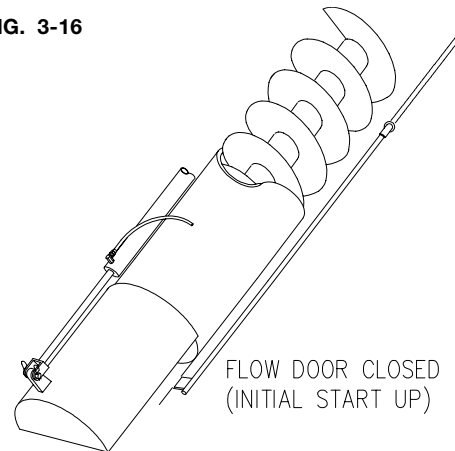
PTO Driven Auger (continued)

5. To slow or stop grain flow, close flow door, DO NOT reduce tractor/PTO RPM as a means to control grain flow. Close flow door fully when unloading is complete. (FIG. 3-16)

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

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

FIG. 3-16



Hydraulic Drive (Optional)

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

IMPORTANT

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

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

FIG. 3-17

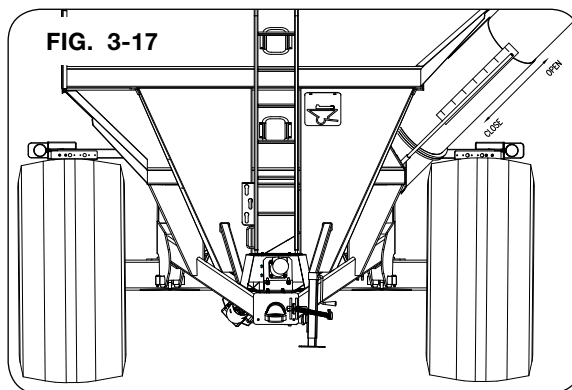
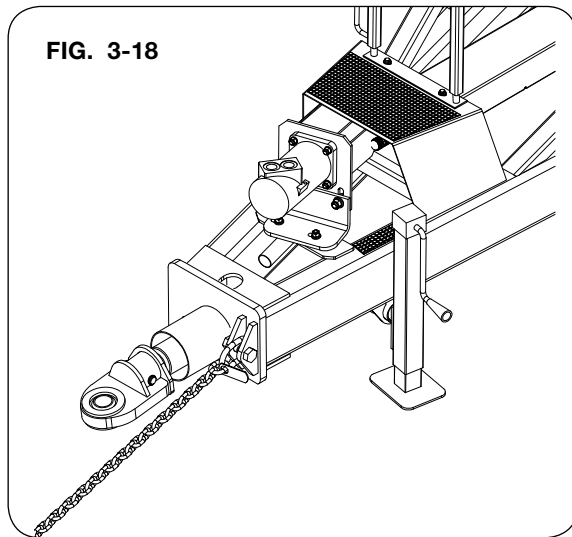


FIG. 3-18



Hydraulic Drive (Optional) (continued)

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

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

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

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

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

IMPORTANT

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

Weather Guard Tarp

WARNING

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

IMPORTANT

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

Always use adequate caution when operating tarp.

If equipped, refer to electric roll tarp manual (26487) for operation details.

Open and close the tarp evenly.

Make sure tarp is open before loading.

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

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

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

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

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

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

Weather Guard Tarp (continued)

Procedure

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

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

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

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

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

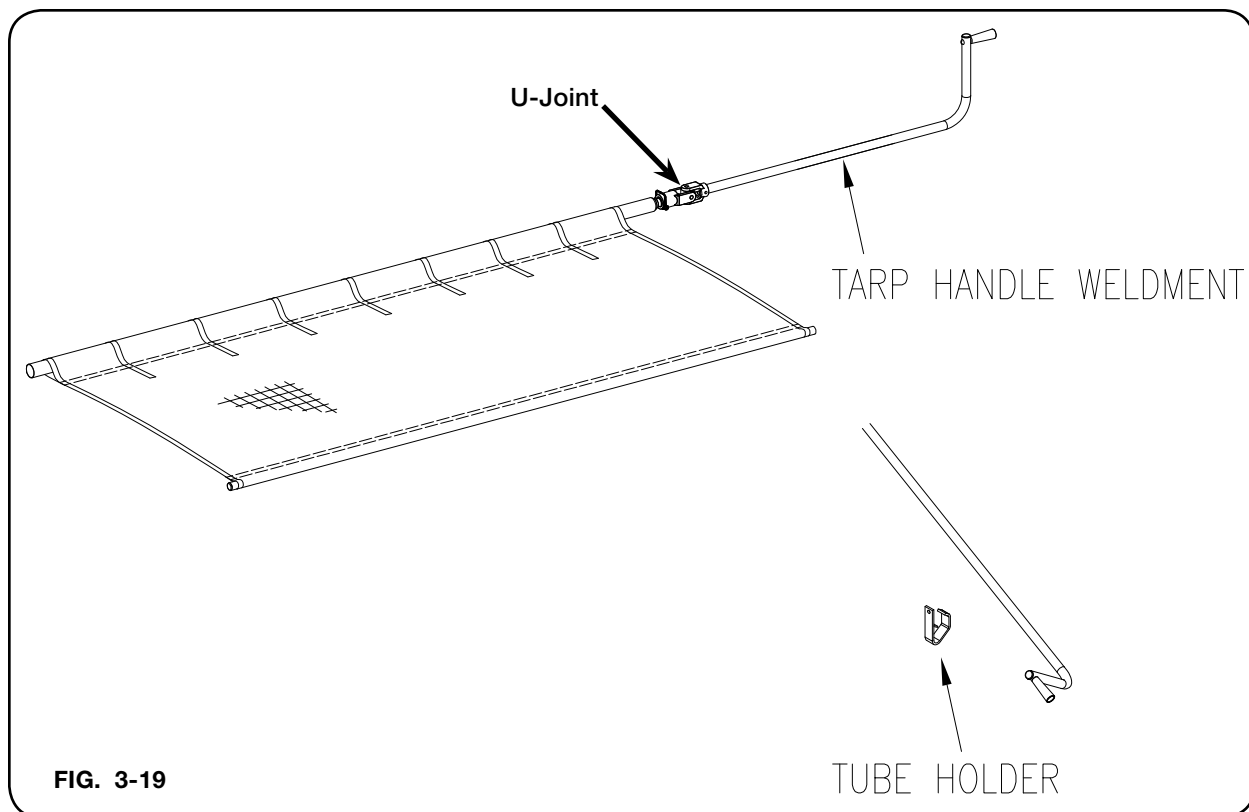


FIG. 3-19

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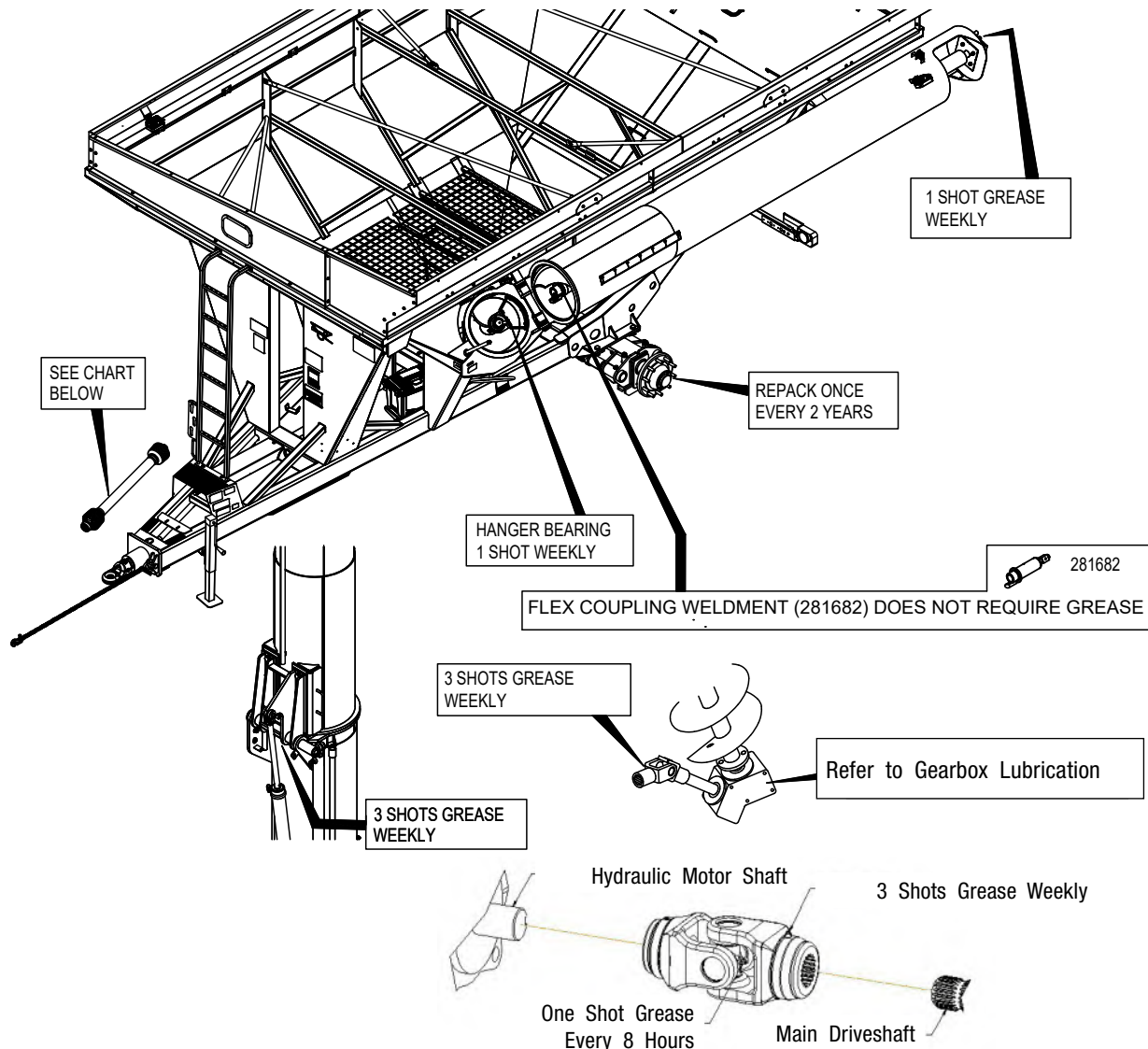
FOR TRACK INFORMATION, PLEASE REFER TO YOUR TRACK MANUAL.

FOR SCALE INFORMATION, PLEASE REFER TO YOUR SCALE MANUAL.

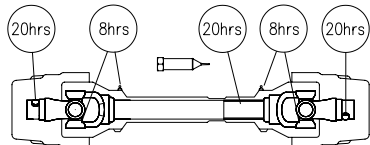
FOR HYDRAULIC DRIVE INFORMATION, PLEASE REFER TO YOUR HYDRAULIC DRIVE MANUAL.

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.

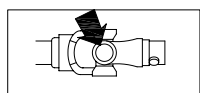


LUBRICATION INSTRUCTIONS FOR DRIVE LINE

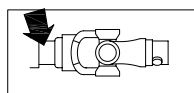


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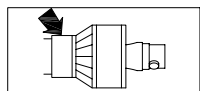
20hrs



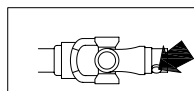
Cross journal



Inner tube



Shield retaining bearing



Push-pin set

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

Lubrication (continued)

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

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

The lubrication locations and recommended schedule are as follows:

DESCRIPTION	POINT	LUBRICANT	QTY.	HOURS
PTO Driveshaft	3	EP-2	1 Shot	See Chart
Gearbox -- Remove Cover - Check oil level every 2 weeks. Replace oil every season. Refer to Gearbox in MAINTENANCE section for instructions.	1	EP80W90	Approx. 55 oz.	Once Every Season
Hanger Bearing - Vertical Lower Auger *See note below.	1	EP-2	3 Shots	Daily
Auger Hanger Bearing - U-Joint Cross Bearing	1	EP-2	2 Shots	Weekly
Splined Yoke - Vertical Lower Auger	1	EP-2	1 Shot	Weekly
Top Bearing - Vertical Upper Auger	1	EP-2	1 Shot	Each Season
Auger Pivot Rings	2	EP-2	2 Shots	Weekly
Auger Pivot Pins	2	EP-2	3 Shots	Daily
Slide Plate	1	EP-2	1 Shot	Each Season
Drive Bearings	3	EP-2	1 Shot	Weekly

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

Gearbox Lubrication

The fill plug is located on the right-hand front side of the housing.

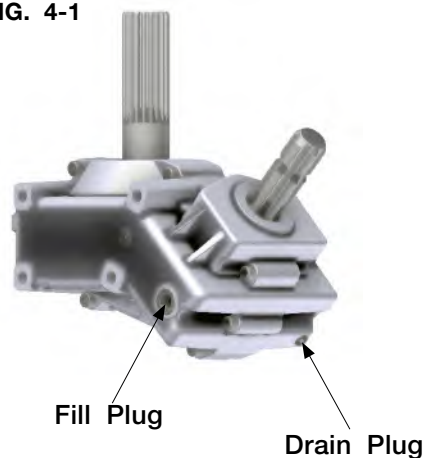
To check oil fluid level, place cart on a level surface with the tongue elevated to hitch height and remove the plug. Oil level should be at the bottom thread or approximately 5/8" below the outside gearbox surface.

For Maximum gearbox life:

Check oil level every 2 weeks.

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

FIG. 4-1



Hydraulic System

Refer to parts section for hydraulic component detail listing.

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


Replacing Hoses/Fittings/Cylinders:

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

Hydraulic System (continued)

Purge Hydraulic System

WARNING

- HYDRAULIC SYSTEM MUST BE PURGED OF AIR BEFORE OPERATING TO PREVENT SERIOUS INJURY OR DEATH.
- RELIEVE HYDRAULIC SYSTEM OF ALL PRESSURE BEFORE ADJUSTING OR SERVICING. SEE THE HYDRAULIC POWER UNIT OPERATOR'S MANUAL FOR PROPER PROCEDURES.
- HIGH-PRESSURE FLUIDS CAN PENETRATE THE SKIN AND CAUSE SERIOUS INJURY OR DEATH. LEAKS OF HIGH-PRESSURE FLUIDS MAY NOT BE VISIBLE. USE CARDBOARD OR WOOD TO DETECT LEAKS IN THE HYDRAULIC SYSTEM. SEEK MEDICAL TREATMENT IMMEDIATELY IF INJURED BY HIGH-PRESSURE FLUIDS.
- KEEP CLEAR OF PINCH POINT AREAS. 
- FALLING OR LOWERING EQUIPMENT CAN CAUSE SERIOUS INJURY OR DEATH. KEEP EVERYONE AWAY FROM EQUIPMENT WHEN SUSPENDED, RASING, OR LOWERING.

Purge air from hydraulic system as follows:

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

IMPORTANT

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

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

Hydraulic System (continued)

Relieving Hydraulic Pressure

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

Auger System

WARNING

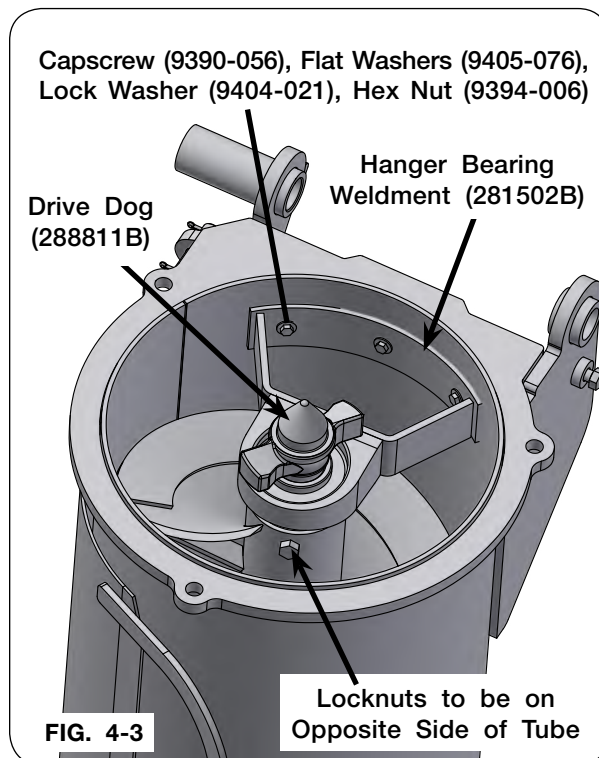
- TO PREVENT PERSONAL INJURY OR DEATH, ALWAYS ENSURE THAT THERE ARE PEOPLE WHO REMAIN OUTSIDE THE CART TO ASSIST THE PERSON WORKING INSIDE, AND THAT ALL SAFE WORKPLACE PRACTICES ARE FOLLOWED. THERE IS RESTRICTED MOBILITY AND LIMITED EXIT PATHS WHEN WORKING INSIDE THE IMPLEMENT.
- NEVER ENTER CART WITH AUGER OR TRACTOR RUNNING. SERIOUS OR FATAL INJURY CAN OCCUR DUE TO ENTANGLEMENT WITH ROTATING COMPONENTS. ALWAYS STOP ENGINE AND REMOVE KEY BEFORE ENTERING CART.
- KEEP HANDS CLEAR OF PINCH POINT AREAS.
- EYE PROTECTION AND OTHER APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT MUST BE WORN WHILE SERVICING IMPLEMENT.
- FALLING OBJECTS CAN CAUSE SERIOUS INJURY OR DEATH. DO NOT WORK UNDER THE MACHINE AT ANY TIME WHILE BEING HOISTED. BE SURE ALL LIFTING DEVICES AND SUPPORTS ARE RATED FOR THE LOADS BEING HOISTED. THESE ASSEMBLY INSTRUCTIONS WILL REQUIRE SAFE LIFTING DEVICES UP TO 4,000 LBS. SPECIFIC LOAD RATINGS FOR INDIVIDUAL LOADS WILL BE GIVEN AT THE APPROPRIATE TIME IN THE INSTRUCTIONS.
- MOVING OR ROTATING COMPONENTS CAN CAUSE SERIOUS INJURY OR DEATH. ALWAYS DISCONNECT POWER SOURCE BEFORE SERVICING. ENSURE SERVICE COVERS, CHAIN/BELT COVERS AND CLEAN-OUT DOOR(S) ARE IN PLACE AND SECURELY FASTENED BEFORE OPERATING MACHINE.
- WHEN WORKING AROUND THE IMPLEMENT, BE CAREFUL NOT TO BE CUT BY SHARP EDGES.



Auger System (continued)

Lower Auger Disassembly

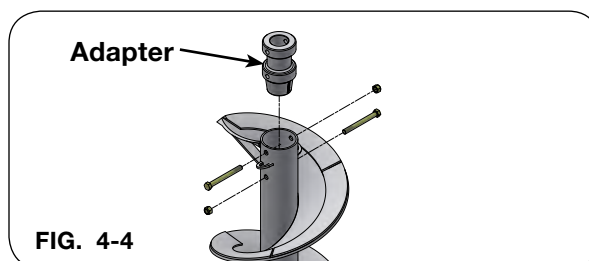
1. Park the empty cart on a firm, level surface. Block the wheels or tracks on the cart to keep it from moving. Set the tractor parking brake, shut off the engine, and remove the ignition key from the tractor before disconnecting driveline assembly and bearing hardware.
2. Remove the three 3/8"-16UNC x 1 1/4" cap-screws (9390-056), six flat washers 3/8" (9405-076), three lock washers 3/8" (9404-021) and hex nuts 3/8"-16UNC (9394-006) which secures the hanger bearing weldment (281502B) to the auger tube (FIG. 4-3).
3. Using a safe lifting device rated for a minimum of 700 lbs., remove auger from auger tube and perform required repair or replacement.
4. Remove the two 5/8"-11UNC x 6" capscrews (9390-136) and locknuts 5/8"-11UNC (9801) which secures the drive dog to the auger as shown in FIG. 4-3.



Lower Auger Replacement With Double Lobe Drive Dog

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

NOTE: Lower auger service kit (281578-SER), comes with an adapter to assure a better fitment between auger and adapter. (FIG. 4-4)

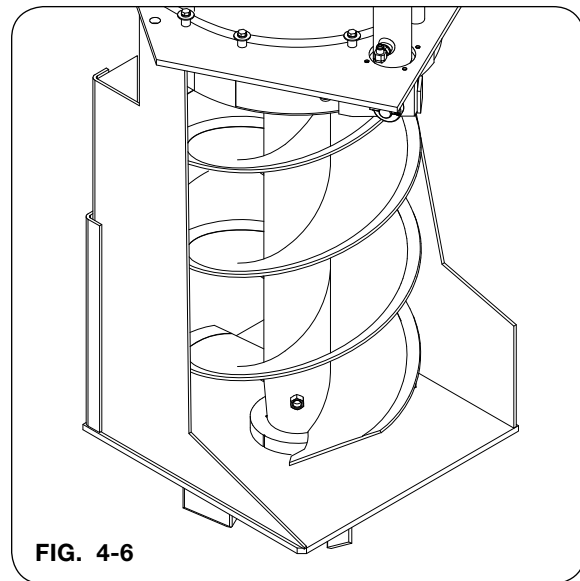
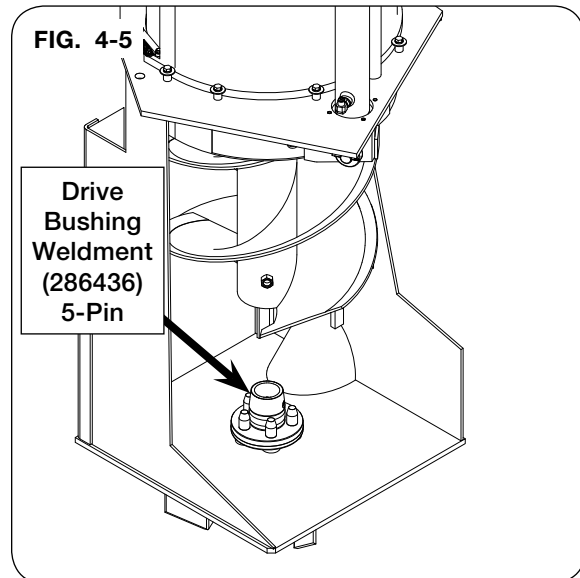


Auger System (continued)

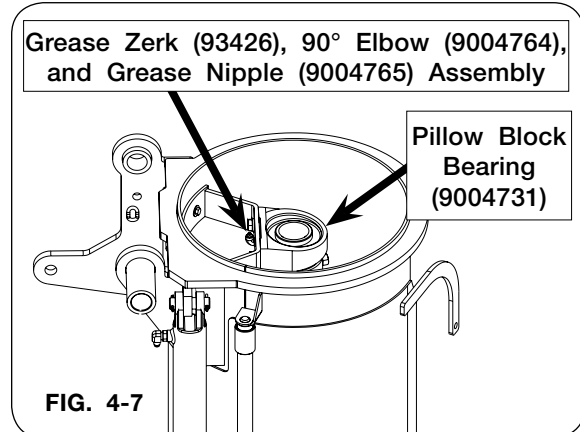
Lower Auger Replacement With Double Lobe Drive Dog (continued)

7. Align auger end with the five pin drive bushing and securely engage together, see FIG. 4-5 and 4-6. Secure hanger bearing to auger housing tube wall with original three 3/8"-16UNC x 1 1/2" capscrews and three 3/8"-16UNC flange nuts. Do not tighten.
8. Start tractor and slowly raise the upper auger tube into position and check for engagement between the upper auger drive dog with the lower auger drive dog as the auger rises.

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



9. Lower the upper auger assembly, turn off tractor and remove key. Slowly turn lower auger by hand while applying grease to the hanger bearing. Torque hanger bearing hardware. Grease until the grease purges out and around the drive dog housing. Apply a light coat of surface grease to drive dog conical shaft. Wipe off excess purged grease from hanger bearing top seal area. (FIG. 4-7)



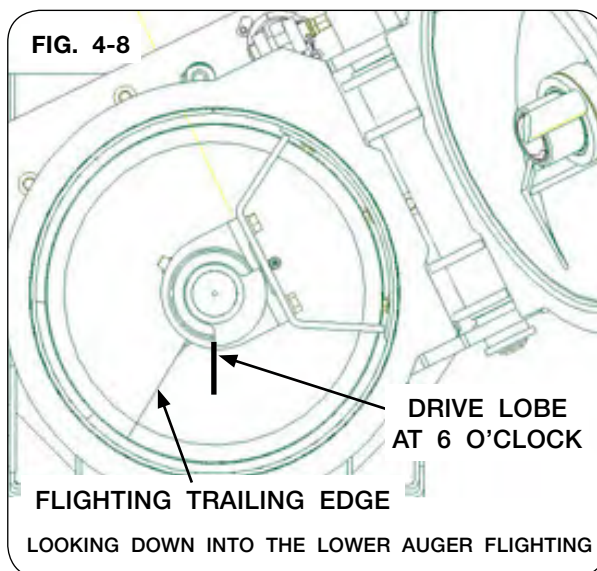
Auger System (continued)

Lower Auger Replacement With Double Lobe Drive Dog (continued)

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

Lower Auger Replacement With Single Lobe Drive Dog

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

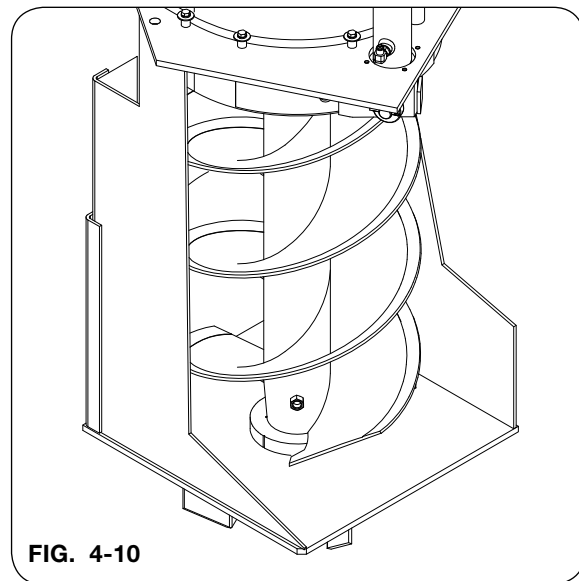
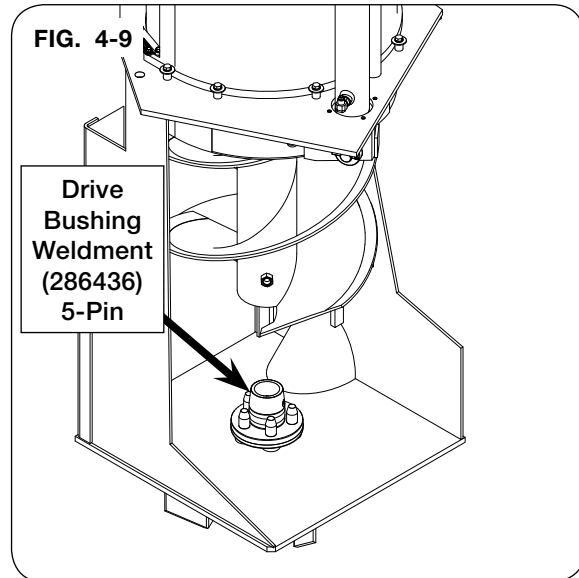


Auger System (continued)

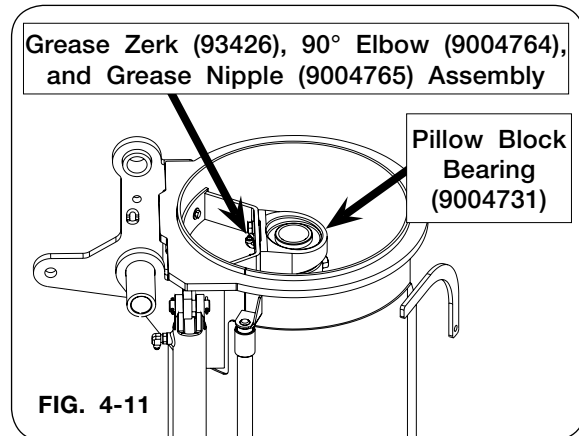
Lower Auger Replacement With Single Lobe Drive Dog (continued)

8. Align auger end with the five pin drive bushing and securely engage together, see FIG. 4-9 and 4-10. Secure hanger bearing to auger housing tube wall with original three 3/8"-16UNC x 1 1/2" capscrews and three 3/8"-16UNC flange nuts. Do not tighten.
9. Start tractor and slowly raise the upper auger tube into position and check for engagement between the upper auger drive dog with the lower auger drive dog as the auger rises.

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



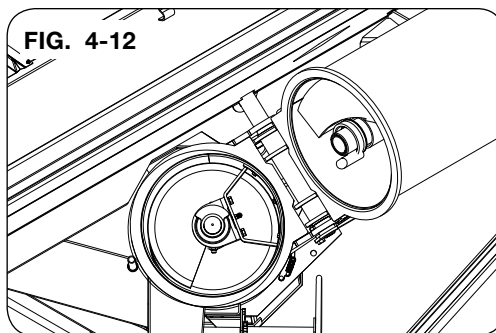
10. Lower the upper auger assembly, turn off tractor and remove key. Slowly turn lower auger by hand while applying grease to the hanger bearing. Torque hanger bearing hardware. Grease until the grease purges out and around the drive dog housing. Apply a light coat of surface grease to drive dog conical shaft. Wipe off excess purged grease from hanger bearing top seal area. (FIG. 4-11)



Auger System (continued)

Upper Auger Disassembly

1. Park the empty cart on a firm, level surface. Block the wheels or tracks on the cart to keep it from moving. Set the tractor parking brake, shut off the engine, and remove the ignition key from the tractor before disconnecting driveline assembly and bearing hardware.
2. Support the upper auger assembly using a 4,000 lbs. hoist and two straps rated for 2000 lbs.
3. Remove auger tube cylinder pin and carefully swing cylinder down without breaking hose connections.
4. Disconnect auger and chute light.
5. Remove chute assembly.
6. Remove auger indicator cable from the bolt on bracket. With auger tube fully supported, remove the 7/8"-9UNC x 2" capscrews (9390-164) and flat washers (97041) from the upper auger pivot bracket.
7. Lift upper auger assembly from unit. Repair or replace as required.
8. To remove auger from tube, loosen two bearing setscrews and remove 5/16" x 2" machine screw retainer.
9. Inspect upper auger bearing, springs and four 1/2" x 5 1/2" capscrews and locknuts. Replace if necessary.

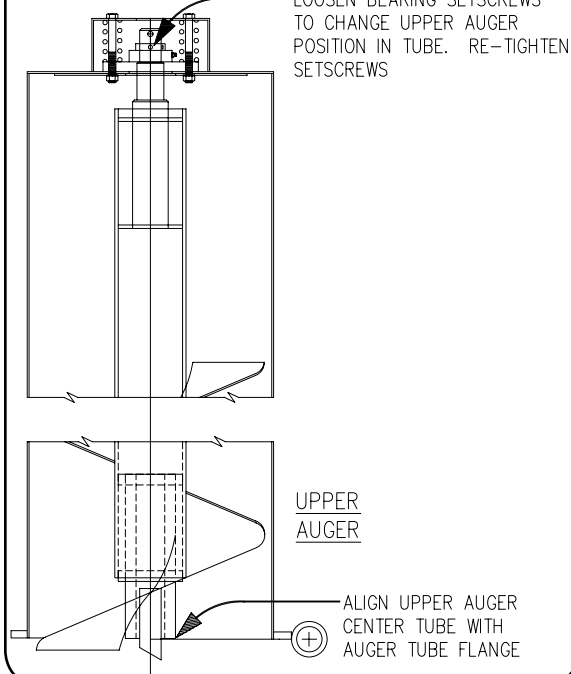


Auger System (continued)

Upper Auger Assembly

1. Install upper bearing and spring assembly if previously removed.
2. 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 an adequate hoist and slings with a minimum capacity of 600 lbs. to support the upper auger. Install pivot pin. Align retainer holes and install bolt and nut.
5. Install chute assembly.
6. Reattach indicator cable.
7. Connect auger and chute light.
8. Reinstall hydraulic cylinder and pivot pins. Clamp hoses into position and recheck connector tightness.

FIG. 4-13



Auger System (continued)


Auger Flow Door Cylinder Replacement


⚠ WARNING

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

- NEVER ENTER CART WITH AUGER OR TRACTOR RUNNING. SERIOUS OR FATAL INJURY CAN OCCUR DUE TO ENTANGLEMENT WITH ROTATING COMPONENTS. ALWAYS STOP ENGINE AND REMOVE KEY BEFORE ENTERING CART.

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

- KEEP HANDS CLEAR OF PINCH POINT AREA. 

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

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

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

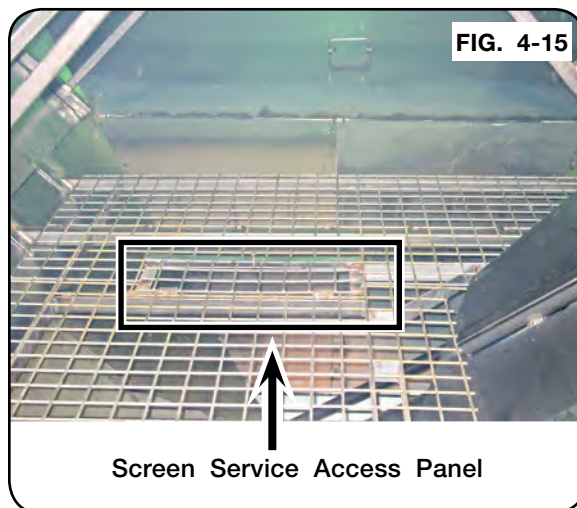
1. Park the empty grain cart on a firm, level surface and extend auger. Block the tires/tracks on the machine to keep it from moving. Unfold upper auger to make the flow door cylinder easier to access. If possible, close the flow door at least 8" from the fully open position. Relieve hydraulic pressure,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



Auger System (continued)

Auger Flow Door Cylinder Replacement (continued)

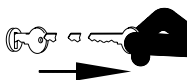
2. On the inside of the cart, open the screen service access panel shown in FIG. 4-15.



3. Remove the cotter pins from the lower cylinder pin then remove the pin. Then remove the four 3/8-1" flange bolts holding on the gasket and gasket plate, shown in FIG. 4-16.



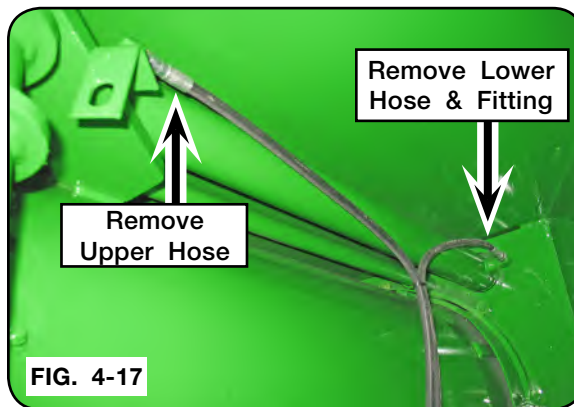
4. Remove all tools and extra hardware from the grain cart. Make sure all personnel are outside of the hopper. Then, retract the cylinder so that there is about 8" of clearance between the cylinder clevis and the lug.
5. Relieve hydraulic pressure, shut off the engine, remove the ignition key, and disconnect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



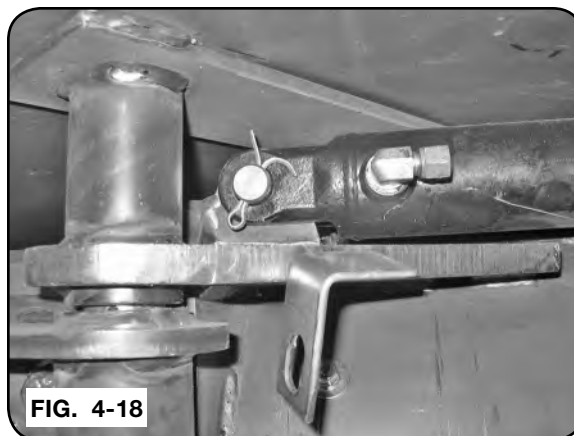
Auger System (continued)

Auger Flow Door Cylinder Replacement (continued)

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



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



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

Auger Driveline

Bearings

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

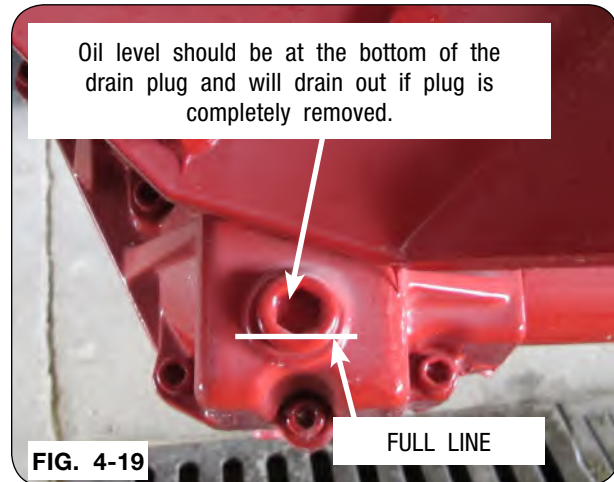
Gearbox

Fluid level/fill plug is in front of the axle on the right side of the gearbox (standing behind the grain cart looking toward the tractor). The oil fluid level should be at the bottom thread of plug hole. See photo.

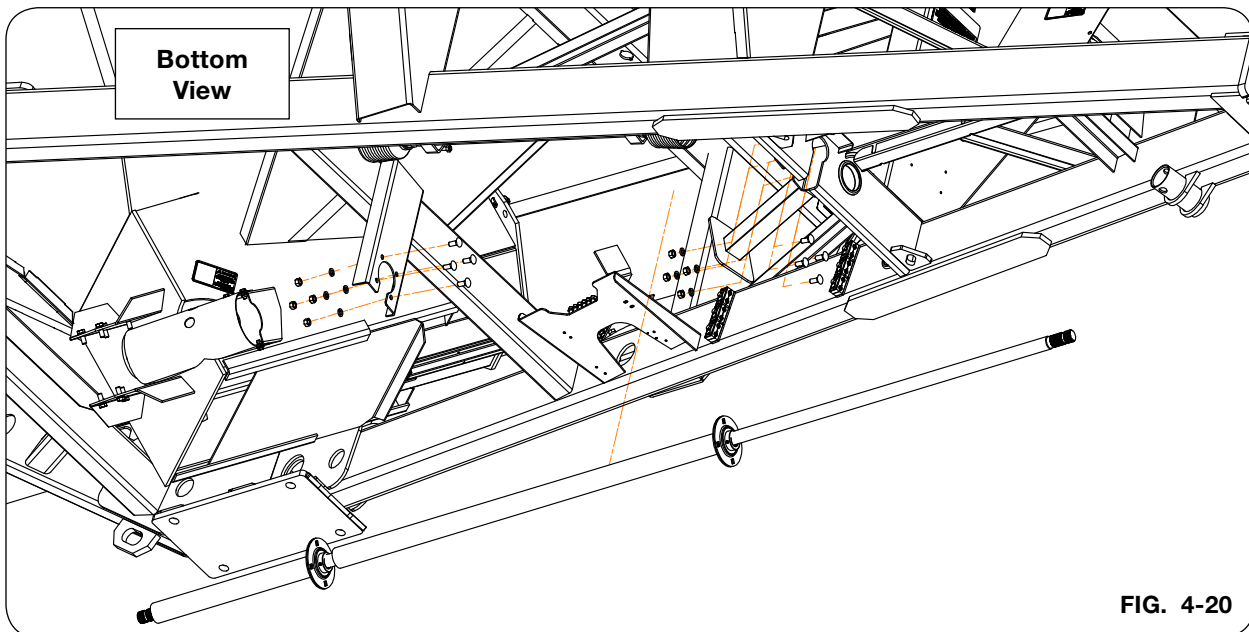
Maximum gearbox life:

Check oil level every 2 weeks.

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



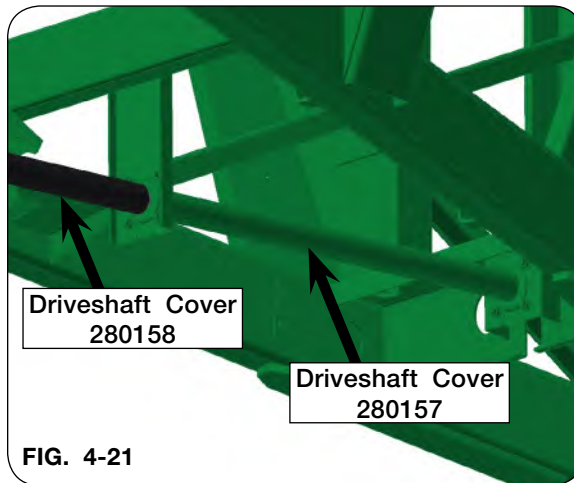
Driveline Replacement



1. Park the empty cart on a firm, level surface. Block the wheels or tracks on the cart to keep it from moving. Set the tractor parking brake, shut off the engine, and remove the ignition key from the tractor before disconnecting driveline assembly and bearing hardware.
2. Loosen the setscrews on the three flange bearings (9005061) (FIG. 4-20).
3. Remove the 1/2" carriage bolts (9388-103), flange nuts (9394-010), and lock washers (9404-025) holding the flange bearings. Keep hardware. (FIG. 4-20).

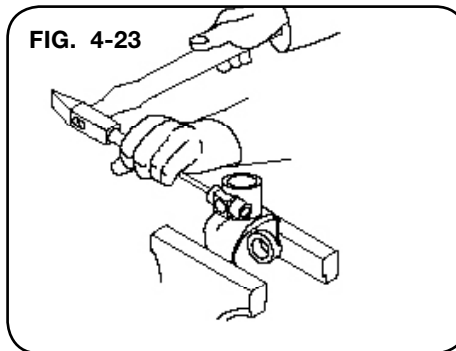
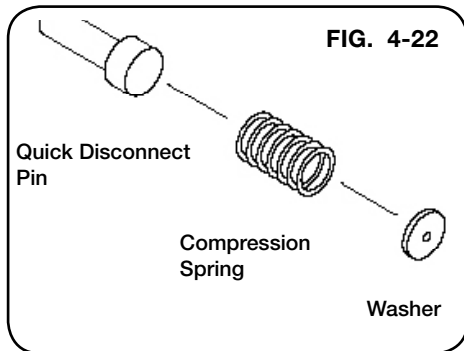
Auger Driveline (continued)

4. Remove paint on driveshaft to allow for easier movement. Slide driveshaft forward until the rear spline is out of the universal joint connected to the gearbox.
5. Drop the gearbox end of driveshaft down and slide driveshaft out of the flange bearing on the hitch end of the driveshaft.
6. Remove bearings, bearing mounts, universal joint cover, PVC driveshaft covers, driveshaft lock collars (if lock collars are attached to driveshaft), and hitch driveline cover off the current driveshaft.

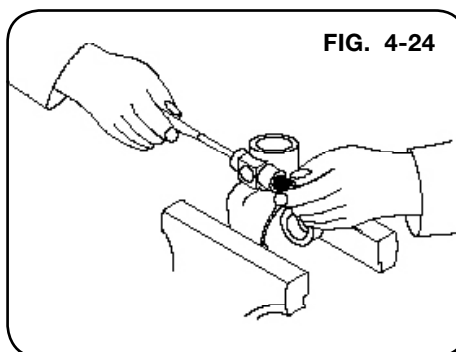


U-Joint Quick Disconnect Pin

7. Remove U-joint assembly (95012) on the gearbox by using a drift punch and hammer on the quick disconnect pin. (92362 - quick disconnect pin kit) (FIGS. 4-22 and 4-23)
8. Drive the pin towards the retaining washer to force the quick disconnect pin assembly out of the complete U-joint assembly. (FIG. 4-23)



9. 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. (FIG. 4-24)

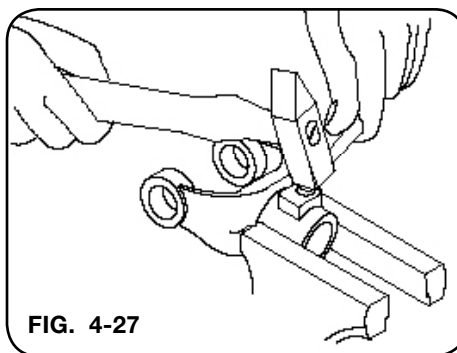
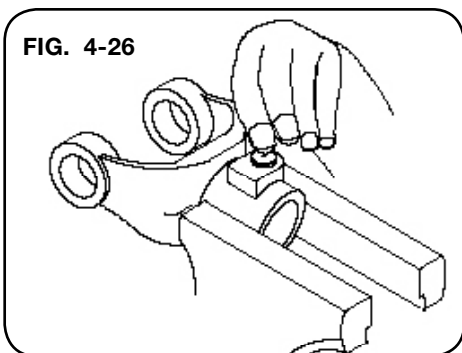
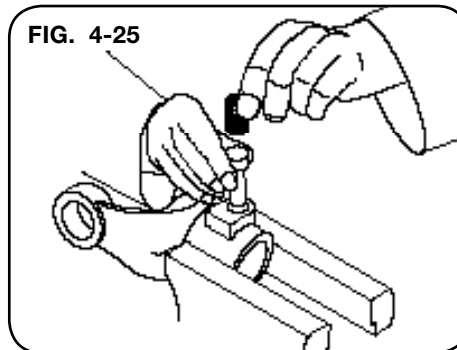


Auger Driveline (continued)

U-Joint Quick Disconnect Pin (continued)

10 Insert quick disconnect pin, compression spring and washer into U-joint pin hole. (FIG. 4-25)

11. Holding the washer in place, peen the edges of the bore seat to retain the washer, spring and pin. (FIGS. 4-26 and 4-27)



12. Clean and grease the gearbox splined shaft.

13. Attach the quick disconnect pin end of the U-joint assembly to the gearbox splined shaft.

14. Push/Pull U-joint assembly to verify quick disconnect pin is engaged on the gearbox splined shaft.

Auger Driveline (continued)

Driveline Replacement (continued)

15. Slide new two-piece 1 1/2" dia. shaft collars (9008671) to both sides of new bearing (9003920) closest to the U-Joint, when installing bearings onto new driveshaft (Kit 289771).
16. Assemble new PVC driveshaft cover (291558) behind new bearing (9003920) closest to the U-Joint. (FIG. 4-28)

NOTE: Ends of driveshaft are symmetrical.

17. Slide the hitch end of the driveshaft, bearing and hitch driveline cover into the bearing near hitch of the cart.
18. Raise the gearbox end of the driveshaft up and insert the original 1/2" carriage bolts, flange nuts, and lock washers into the mounting flanges making sure that the bearing flanges are both on the front side of the mounting brackets. Only loosely tighten the hardware.
19. Slide driveshaft down into the universal joint attached to the gearbox until the end of the shaft extends into the universal joint 2 3/8". Ensure universal joint and driveshaft splines completely engage. Verify the hitch end for adequate length for driveline assembly to connect. (FIG. 4-29)

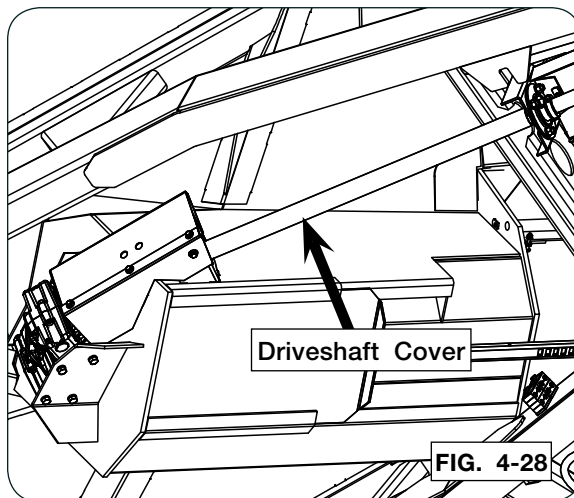


FIG. 4-28

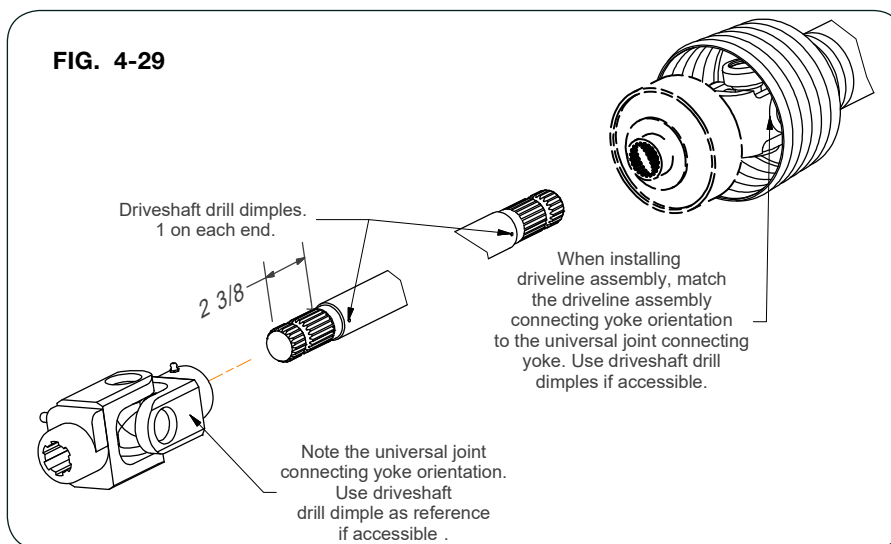


FIG. 4-29

Auger Driveline (continued)

Driveline Replacement (continued)

20. Tighten all flange mounting hardware.

NOTE: The driveshaft has a dimple to aid in aligning the yokes on both ends of the driveline. (FIG. 4-30 and 4-31)

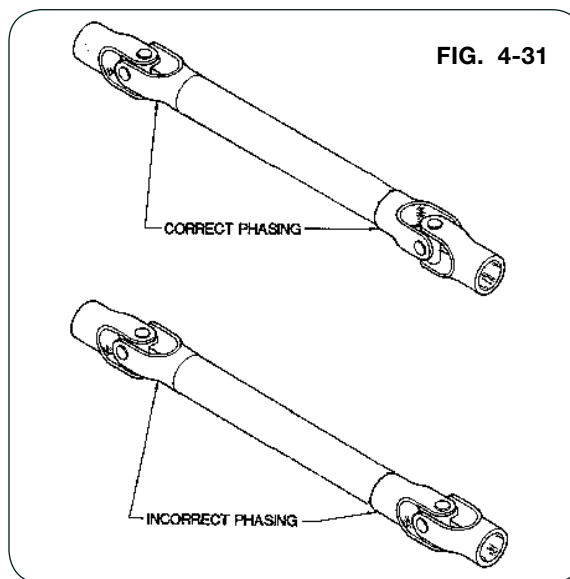
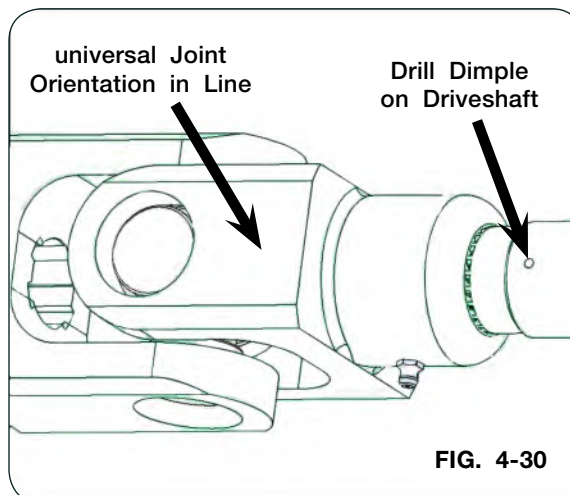
21. Apply blue thread lock on flange bearing setscrews and tighten.

22. Tighten shaft collars (9008671) to driveshaft. Torque shaft collar set screws to 170 inch-lbs.

NOTE: Check/fill gearbox and grease universal joint before installing universal joint cover assembly (296801B). See “Gearbox Lubrication” for oil specifications.

23. Attach universal joint cover assembly to the bearing mount in front of the gearbox using original 3/8”-16UNC capscrews and weld nuts, and 5/16” hardware to cover plates (296802B & 296803B). Review to ensure PVC driveshaft covers and driveline cover, located behind the ladder, are in place and hardware tightened prior to operation.

24. Test run driveline. Verify smooth driveline operation.



Wheel, Hub and Spindle Disassembly and Assembly

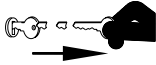
WARNING

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

CAUTION

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

IMPORTANT

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

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

WARNING

- INNER WHEEL AND TIRE MAY FALL FROM HUB CAUSING SERIOUS INJURY OR DEATH. ALWAYS SUPPORT INNER WHEEL WHEN REMOVING OUTER WHEEL.
4. If only changing wheel and tire, skip to Step 8; otherwise continue with Step 4.

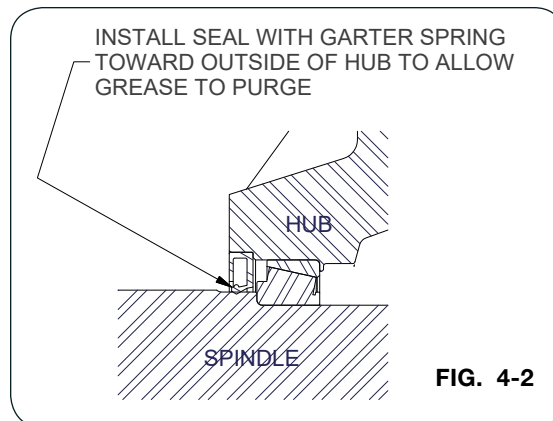
Remove the hardware retaining the hubcap. Next, remove the hubcap, gasket, cotter pin, castle nut and spindle washer. Remove hub with bearings from old spindle using a 200 lbs. safe lifting device.

Wheel, Hub and Spindle Disassembly and Assembly (continued)

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

Remove the bolt and lock nut that retains the spindle to the axle. Using a safe lifting device rated for 200 lbs, replace the old spindle with a new spindle. Coat axle contact length of spindle shaft (scale or non-scale) with anti-seize lubricant prior to installation. If installing scale spindle, install with 'top' decal facing upwards. Reuse bolt and lock nut to retain spindle to axle. Tighten as outlined in MAINTENANCE section.

6. Remove seal and inspect bearings, spindle washer, castle nut and cotter pin. Replace if necessary. Pack both bearings with approved grease and reinstall inner bearing. Install new seal in hub with garter spring facing the outside of hub by tapping on flat plate that completely covers seal while driving it square to hub. (FIG. 4-2) Install until flush with back face of hub. Using a safe lifting device rated for 200 lbs., install hub assembly onto spindle. Install outer bearing, spindle washer and castle nut.



7. Slowly tighten castle nut while spinning the hub until drag causes the hub to stop freely spinning. Do not use an impact! Turn castle nut counterclockwise until the hole in the spindle aligns with the next notch in castle nut. Hub should spin smoothly with little drag and no end play. If play exists, tighten to next notch of castle nut. If drag exists, then back castle nut to next notch of castle nut. Spin and check again. Install cotter pin. Clean face for hub cap gasket and install gasket, and retain hubcap with hardware removed. Tighten hubcap hardware in alternating pattern.
8. Attach the wheel(s) and tire(s) to the hub using the same rated safe lifting device for removal. Tighten wheel nuts to appropriate requirements and recheck as outlined in the Wheel and Tire section of this manual.
9. Raise cart, remove safe load holding devices and lower cart to the ground.

Wheels and Tires

Wheel Nut Torque Requirements

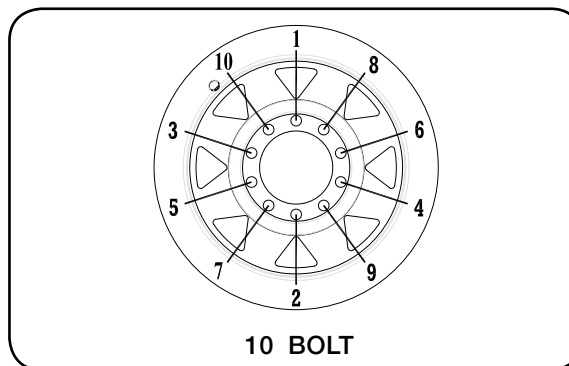
CAUTION

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

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

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

WHEEL HARDWARE	
SIZE	FOOT-POUNDS
M22x1.5	475 ft.-lbs.



10 BOLT

DIAGRAM 1

Wheels and Tires (continued)

Tire Pressure

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

Tire Pressure for Grain Carts

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

Wheels and Tires (continued)

Tire Pressure (continued)

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

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

Wheels and Tires (continued)

Tire Warranty

For questions regarding new tire warranty, please contact your local original equipment tire dealer. **USED TIRES CARRY NO WARRANTY.** Following are phone numbers and Websites for your convenience:

Firestone www.firestoneag.com
Phone 800-847-3364

Titan
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

Verify Telescoping PTO Shaft Length - GKN Walterscheid PTO

⚠ WARNING

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

IMPORTANT

- Check the length of the telescoping members to ensure the driveline will not bottom out or separate when turning and/or going over rough terrain.

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

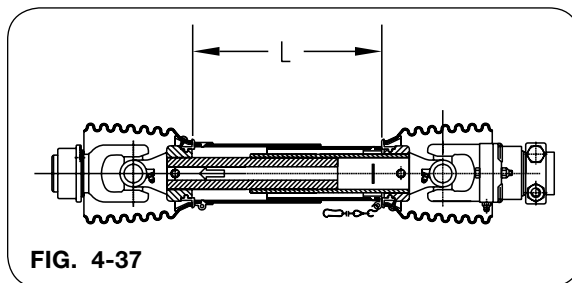
An excessive collapsed length can result in damage to the PTO driveline and attached components. This is most likely to occur during extreme turning angles and/or travel over rough terrain. Conditions are amplified on tractors with tracks operating in uneven terrain, particularly rice levies. Damaged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

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

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

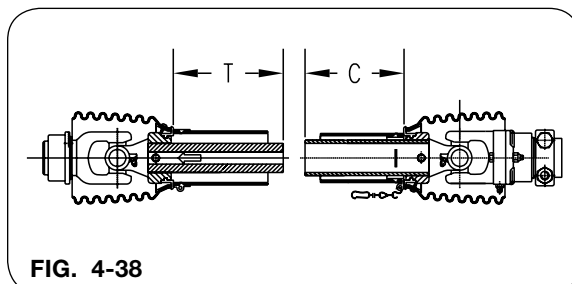
1. Fully collapse PTO shaft and measure length "L" (FIG. 4-37).

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



2. Pull apart PTO telescoping shaft ends and measure lengths "T" & "C" (FIG. 4-38).

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



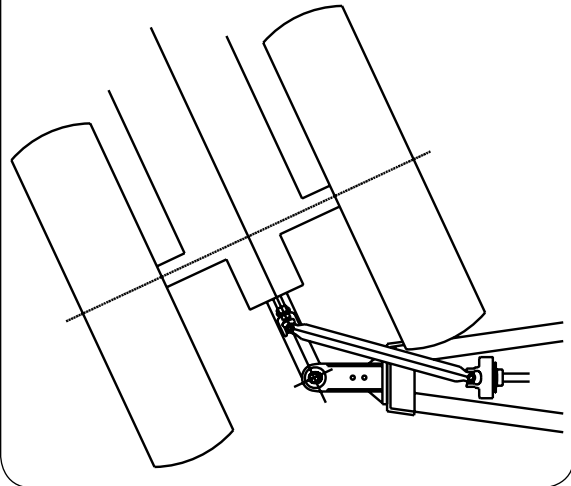
Verify Telescoping PTO Shaft Length - GKN Walterscheid PTO (continued)

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

This is the maximum recommended extended length (LB).

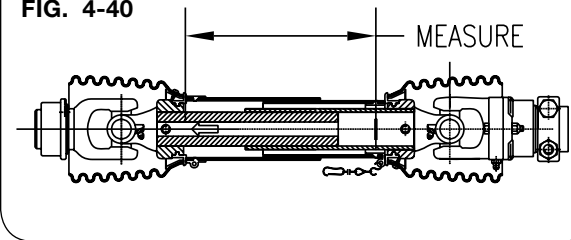
4. Hitch tractor drawbar to cart, ensuring that tractor and cart are on level ground and coupled as straight as practical.
5. Connect PTO shaft to tractor, and measure length “L” from same points as used in step 1. **Ensure that this measurement does not exceed the maximum recommended extended length calculated in step 3 above.** If necessary, choose a shorter drawbar position, or obtain a longer PTO shaft assembly before operating cart.
6. Position the tractor to obtain tightest turning angle, relative to the cart.

FIG. 4-39



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

FIG. 4-40

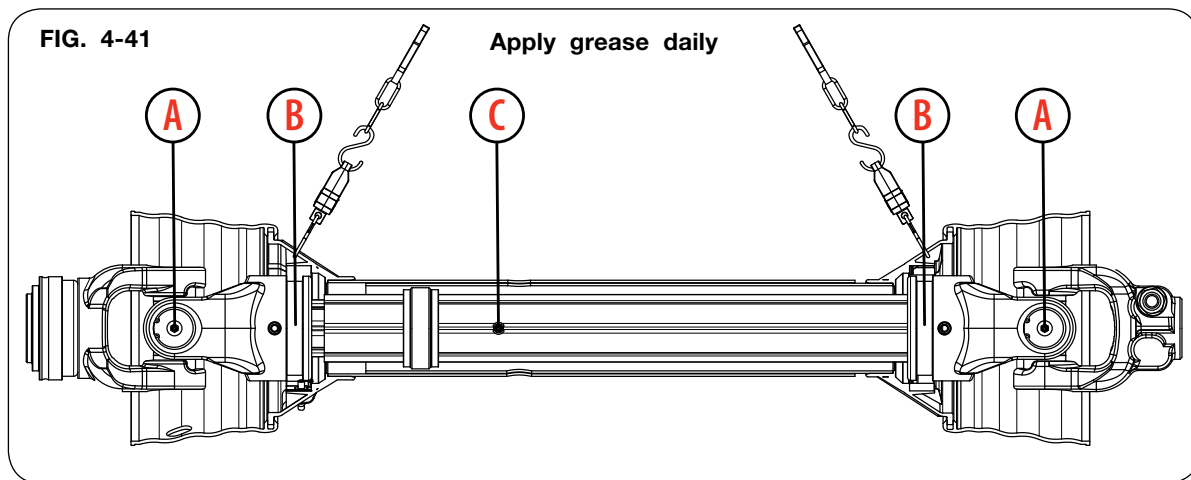


PTO Shaft and Clutch - Benzi PTO

Lubrication

Lubricate with NLGI grade 2 grease before starting work and every 8 operating hours. Clean and grease PTO drive shaft before each prolonged period of non-use. Molded nipples on the shield near each shield bearing are intended as grease fittings and should be lubricated every 8 hours of operation! Check and grease the guard tubes in winter to prevent freezing.

NOTE: Telescoping members must have lubrication to operate successfully regardless of whether a grease fitting is provided for that purpose! Telescoping members without fittings should be pulled apart and grease should be added manually.

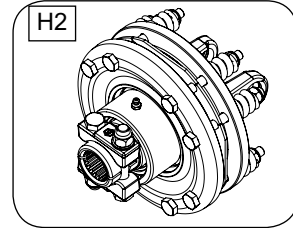
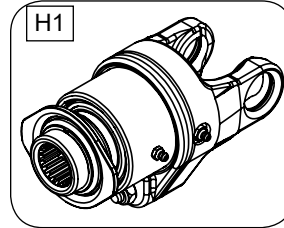


PTO Shaft and Clutch - Benzi PTO (continued)

Shear-Bolt and Friction Clutches (Figs. H1 - H3)

1. Shear bolt clutches:

When the set torque value is exceeded, power flow is interrupted due to the bolt shearing. The torque is re-established by replacing the broken shear bolt. Use only the bolt specified in the PARTS section for replacement. (FIG. H1)

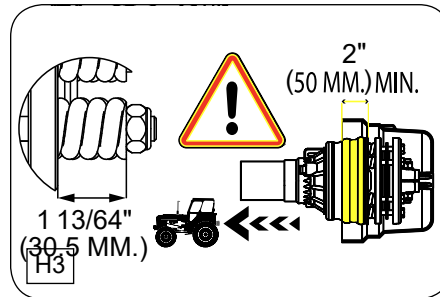


Friction clutches:

When overload occurs, the torque is limited and transmitted constantly during the period of slipping. Short-duration torque peaks are limited. (FIG. H2)

Verify the overlap between the implement guard cone and PTO driveshaft is at least 50 mm. (FIG. H3)

If friction disks need to be replaced, measure spring height "H" before unscrewing the spring nuts. When the friction disks have been replaced, screw the spring nuts to the spring height "H" value. See FIG. H3 shown.



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

- a. Loosen spring nuts by unscrewing in two complete turns. Rotate clutch fully to unlock device.
- b. Tighten nuts in two complete turns. Now the clutch is ready for use.

IMPORTANT

- Avoid extended and frequent slippage of over-load clutches.

PTO Shaft and Clutch - Benzi PTO (continued)

To Dismantle Guard (Figs. J1 - J3)

1. Pull the guard tube backwards and, using a screwdriver, disengage the three bearing ring tabs by pushing them inward. (FIG. J1)



2. Remove half-guard. (FIG. J2)



3. Open the bearing ring and remove from the yoke groove. (FIG. J3)



PTO Shaft and Clutch - Benzi PTO (continued)

To Assemble Guard (Figs. K1 - K3)

1. Clean and grease the bearing ring, yoke groove and inner profile tube. (FIG. K1)



2. Fit bearing ring in groove with three bearing ring tabs positioned as shown. (FIG. K2)



3. Slip on half-guard by aligning the holes on the cone with three bearing ring tabs and the cone inner key with the cut of the bearing ring. (FIG. K2)

4. Push half-guard and yoke together causing the half-guard to engage. (FIG. K3)

NOTE: Ensure the three bearing ring tabs are positioned inside the grooves.

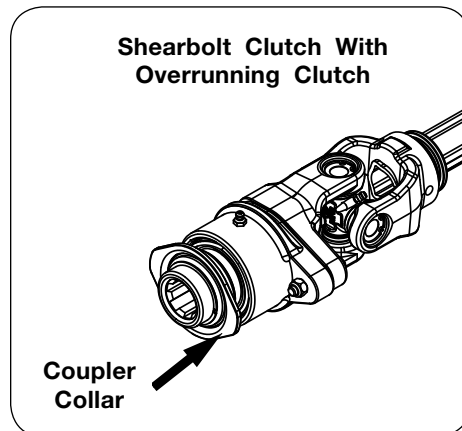
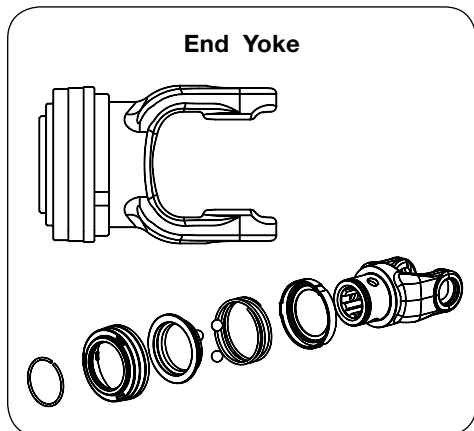
5. Confirm half-guard engagement by pulling backwards on the half-guard. (FIG. K3)



PTO Locking Systems - Benzi PTO

Ball-Type Collar Coupling

Slide clamp yoke or clutch onto connecting shaft. Pull in the coupler collar to release the balls and simultaneously push PTO driveshaft into the connecting shaft until the coupler collar locks onto the connecting shaft annular grooves. Slightly moving the clamp yoke or clutch to and from in the axial direction will help drive in the clamping cone. Check the clamp yoke or clutch for a tight and safe fit and continue to check at regular intervals.

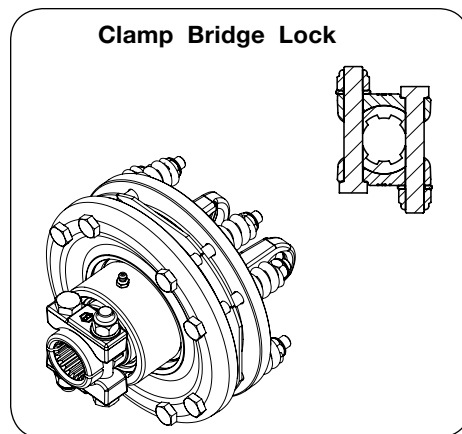


Clamp Bridge Coupling For Friction Clutch

Remove the bolts from the yoke hub. Insert the yoke hub onto the connecting shaft. Ensure the holes for the clamping bridge and hub are above the annular grooves of the connecting shaft. Insert the bolts, position the washers and tighten to recommended torque: M12 = 70 ft.-lbs.; M14 = 107 ft.-lbs.; M16 = 154 ft.-lbs.

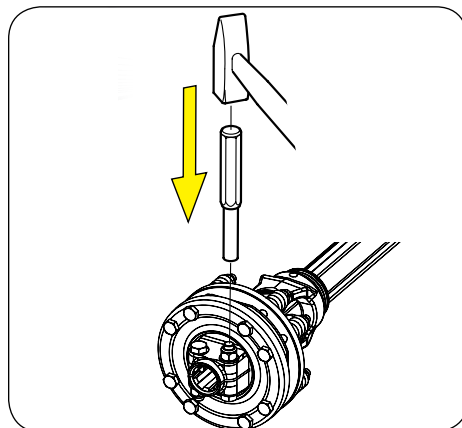
WARNING

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



Clamp Bridge Uncoupling

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

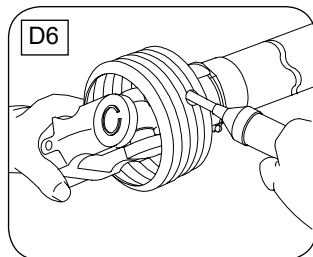
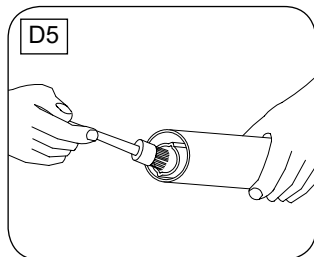
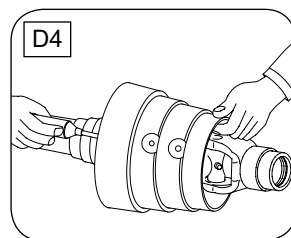
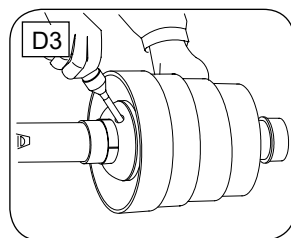
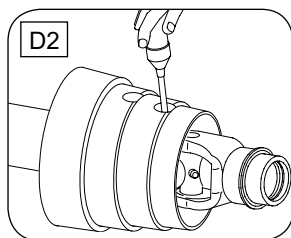
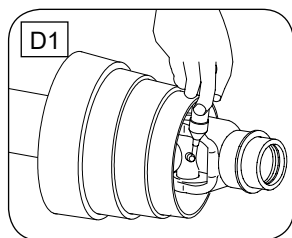
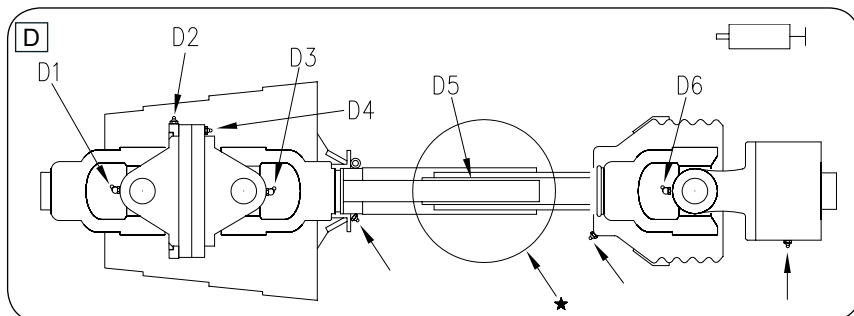


PTO Shaft and Clutch - GKN Walterscheid PTO

Lubrication (Figs. D1 - D6)

Lubricate with quality grease before starting work and 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! Check and grease the guard tubes in winter to prevent freezing.

NOTE: Telescoping members must have lubrication to operate successfully regardless of whether a grease fitting is provided for that purpose! Telescoping members without fittings should be pulled apart and grease should be added manually.



PTO Shaft and Clutch - GKN Walterscheid PTO (continued)

Coupling the PTO driveshaft (Figs. E1 - E2)

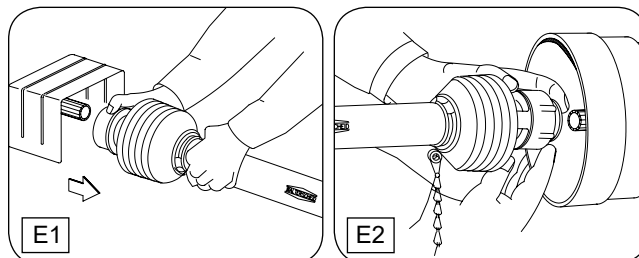
Clean and grease the PTO and implement input connection (IIC)

AS-Lock

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

Push-Pull Lock

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



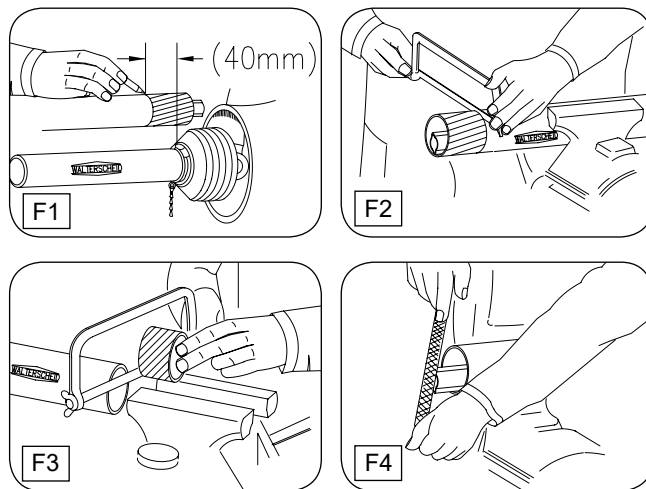
⚠ WARNING

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

Length Adjustment (Figs. F1 - F4)

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

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



⚠ WARNING

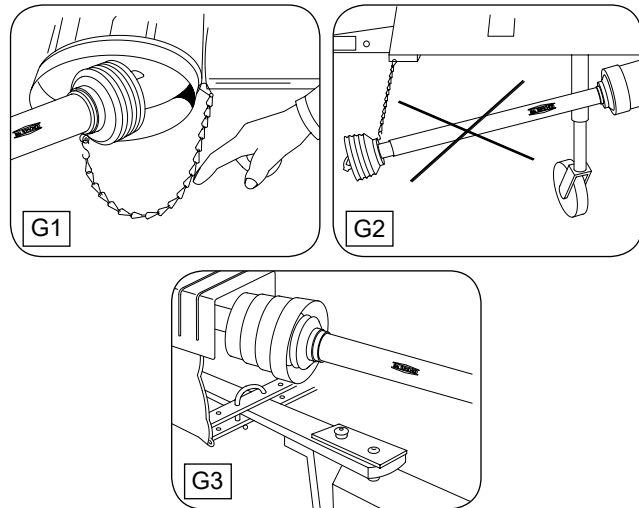
- CHECK THE LENGTH OF THE TELESCOPING MEMBERS TO ENSURE THE DRIVELINE WILL NOT BOTTOM OUT OR SEPARATE WHEN TURNING AND/OR GOING OVER ROUGH TERRAIN.

PTO Shaft and Clutch - GKN Walterscheid PTO (continued)

Chains (Figs. G1 - G3)

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

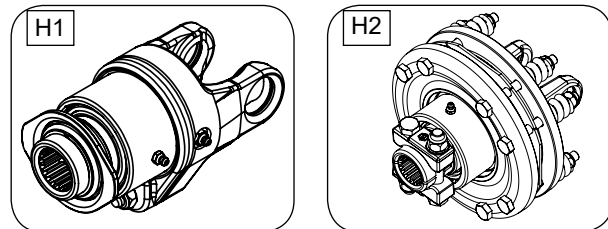
1. Chains must be fitted so as to allow sufficient articulation of the shaft in all working positions. Care must be taken to be sure that chain does not become entangled with drawbar hitch or other restrictions during operation or transport of machine.
2. The PTO driveshaft must not be suspended from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



Shear-Bolt and Friction Clutches (Figs. H1 - H3)

1. Shear bolt clutches:

When the set torque value is exceeded, power flow is interrupted due to the bolt shearing. The torque is re-established by replacing the broken shear bolt. Use only the bolt specified in the PARTS section for replacement. (FIG. H1)

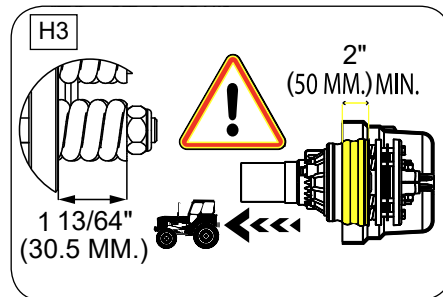


Friction clutches:

When overload occurs, the torque is limited and transmitted constantly during the period of slipping. Short-duration torque peaks are limited. (FIG. H2)

Verify the overlap between the implement guard cone and PTO driveshaft is at least 2" (50 mm). (FIG. H3)

When properly tightened, all springs will exert a total of 1210 NM on the disks, pressing them together. The nuts need to be tightened to the 1 13/64" or 30.5mm height only.



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

- a. Loosen spring nuts by unscrewing two complete turns. Rotate clutch fully to unlock device.
- b. Tighten nuts two complete turns. Now the clutch is ready for use.

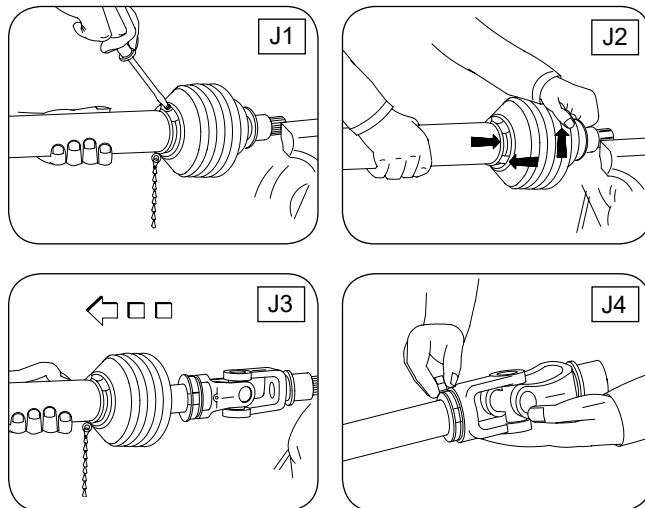
IMPORTANT

- Avoid extended and frequent slippage of over-load clutches.

PTO Shaft and Clutch - GKN Walterscheid PTO (continued)

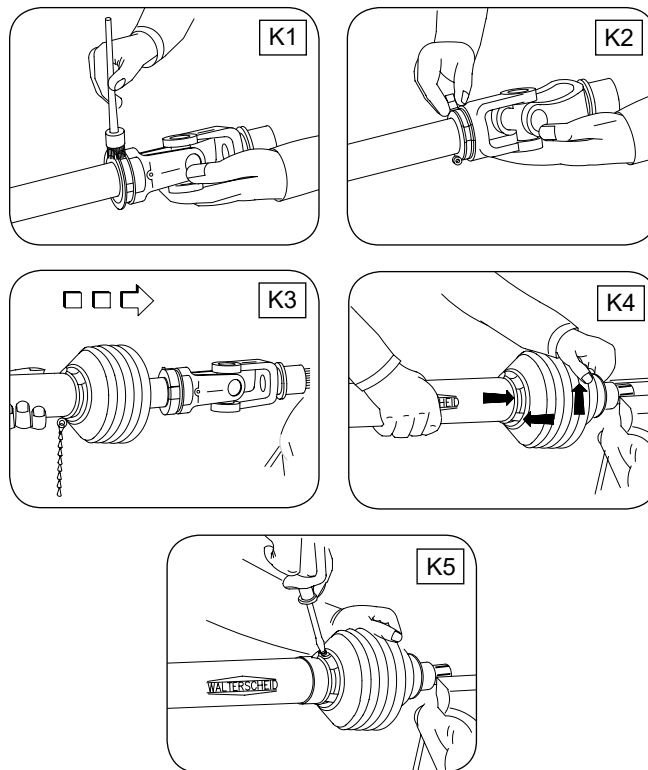
To Dismantle Guard (Figs. J1 - J4)

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)

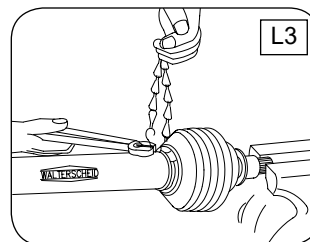
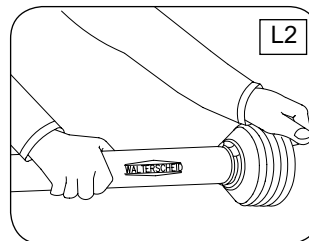
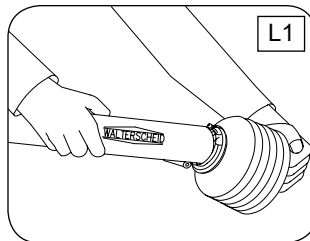
1. Grease yoke groove and inner profile tube.
2. Fit bearing ring in groove with recesses facing profile tube.
3. Slip on half-guard.
4. Turn cone until it engages correctly.
5. Install locking screw.



PTO Shaft and Clutch - GKN Walterscheid PTO (continued)

To Assemble Cone (Figs. L1 - L3)

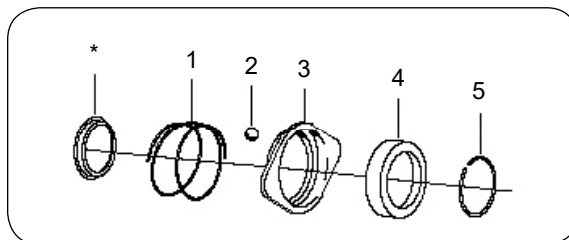
1. Dismantle guard (Figs. J1 - J3). Remove old cone (e.g. cut open with knife). Take off chain. Place neck of new cone in hot water (approx 80° C / 180° F) and pull onto bearing housing (FIG. L1).
2. Turn guard cone into assembly position (FIG. L2). Further assembly instructions for guard (Figs. K1 -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



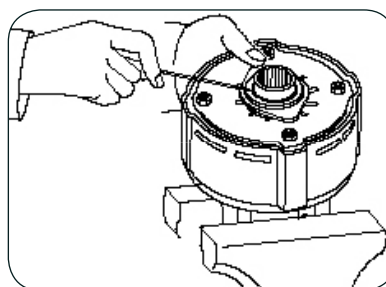
PTO Quick Disconnect - GKN Walterscheid PTO (continued)

Quick Disconnect Disassembly

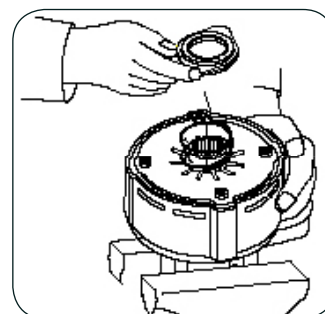
1. Compression Spring
2. Ball
3. Lock Collar
4. Back-up ring
5. Snap ring
 - * Back-up ring
 - * (For some clutch types, place additional back up ring first).



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

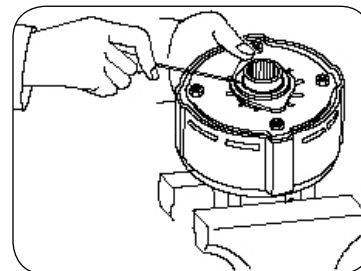
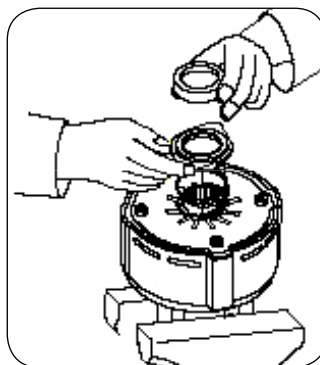
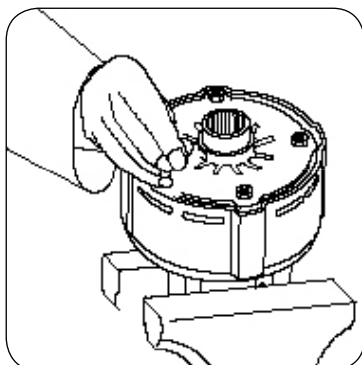


Remove back-up ring, lock collar, compression spring and balls.



Quick Disconnect Assembly

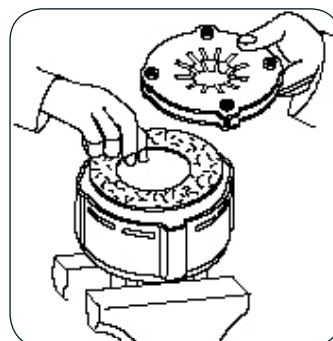
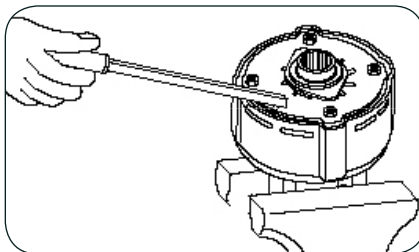
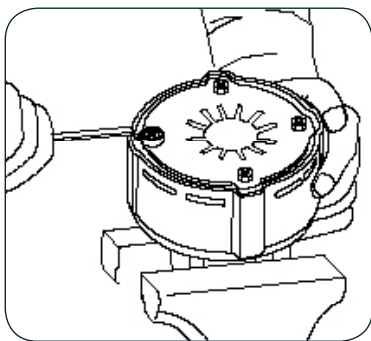
Insert balls. Place compression spring, lock collar and back-up ring onto the hub. Remove back-up ring, lock collar, compression spring and balls.



PTO Quick Disconnect - GKN Walterscheid PTO (continued)

Clutch Disassembly

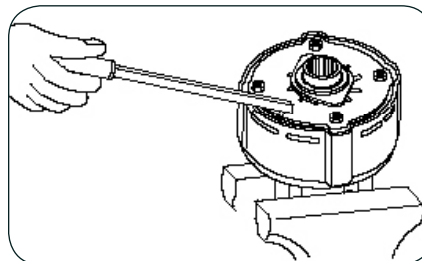
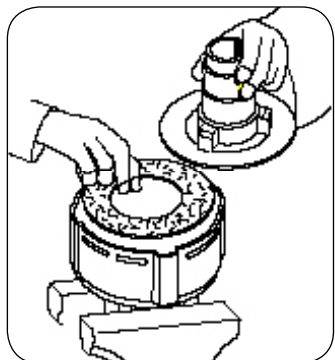
Tighten the four hex nuts (12) uniformly until the clutch pack and hub are loose. Use special tool 9002007 to bend all four retaining lugs back on the edge of the clutch housing. Remove the thrust plate with Belleville springs to get at the friction disks, drive plates and hub for inspection and service.



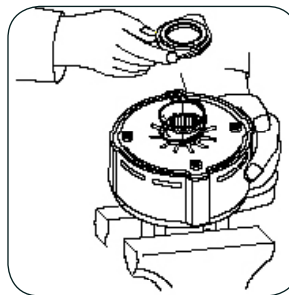
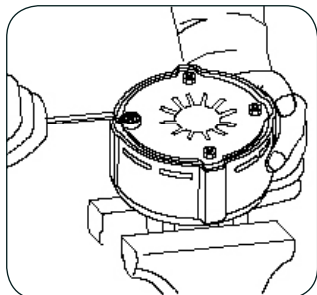
Clutch Assembly

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.



Seasonal Storage

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

Do the following before placing the cart in storage:

1. Remove dirt and trash which could cause rusting.
2. Repaint any chipped or scraped areas.
3. Lubricate points as shown on previous page.
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.
8. If equipped, close the tarp to keep debris out of the hopper.



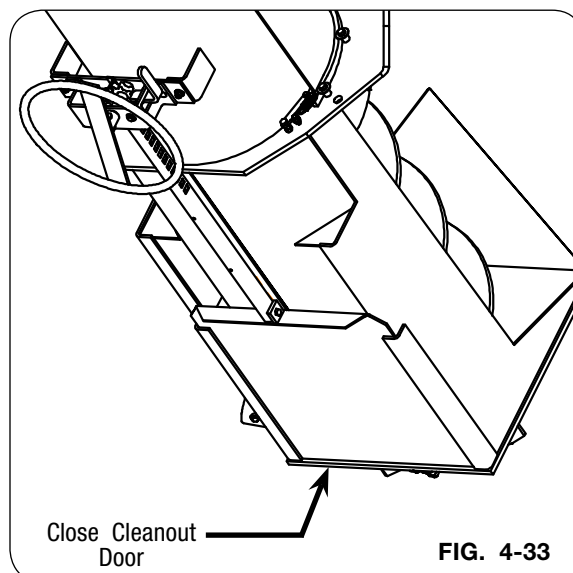
Adjusting Cleanout Door

⚠ WARNING

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

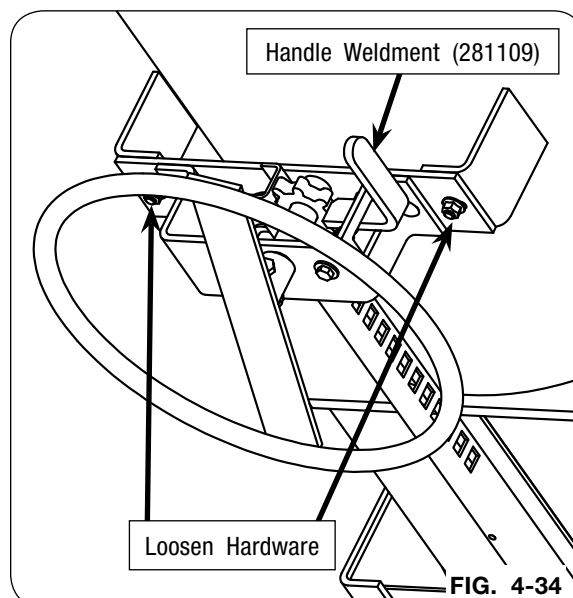
1. Park the empty grain cart on a firm and level surface. Block the tires/tracks on the machine to keep it from moving. Set the tractor's parking brake, shut-off the engine, remove the ignition key and disconnect the PTO shaft.

2. Completely close cleanout door. Inspect and verify that all the grain dust and filings that may prevent the door from shutting completely. (FIG. 4-33)



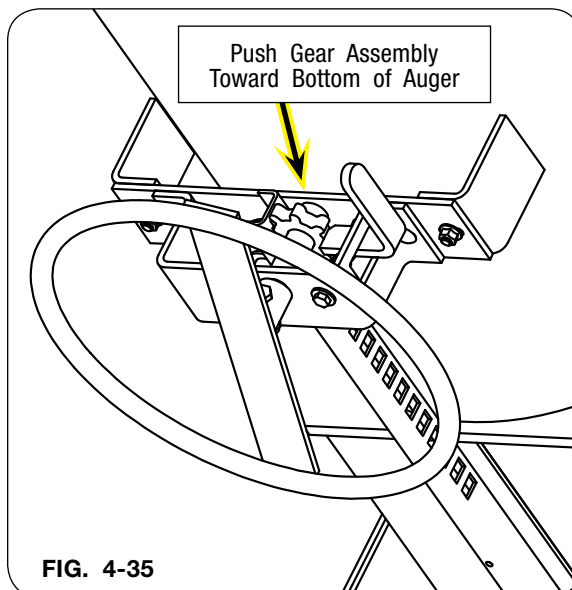
3. Move handle weldment (281109) to lock position. (FIG. 4-34)

4. Loosen mounting hardware. (FIG. 4-34)

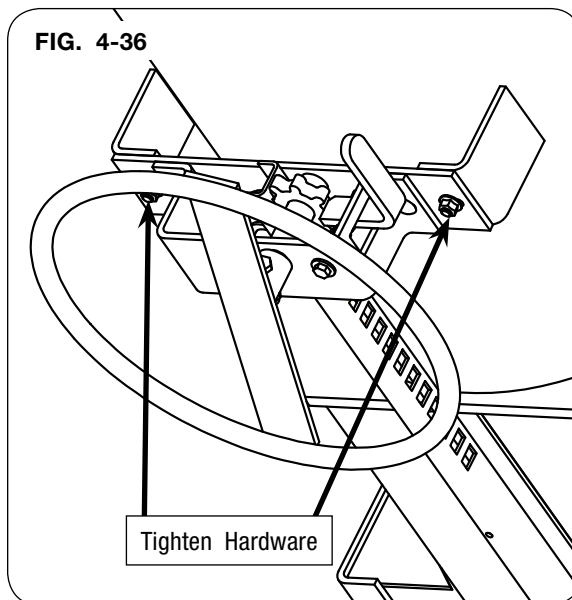


Adjusting Cleanout Door (continued)

5. Push the gear assembly toward bottom of auger to remove excess movement and prevent the door from moving upward when unloading the cart. (FIG. 4-35)



5. Tighten hardware loosened in step 4. (FIG. 4-36)
6. Check door operation. Lock the handle weldment into position. (FIG. 4-36)



Tarp Troubleshooting Inspection & Maintenance

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

Inspection and Maintenance

WARNING

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

IMPORTANT

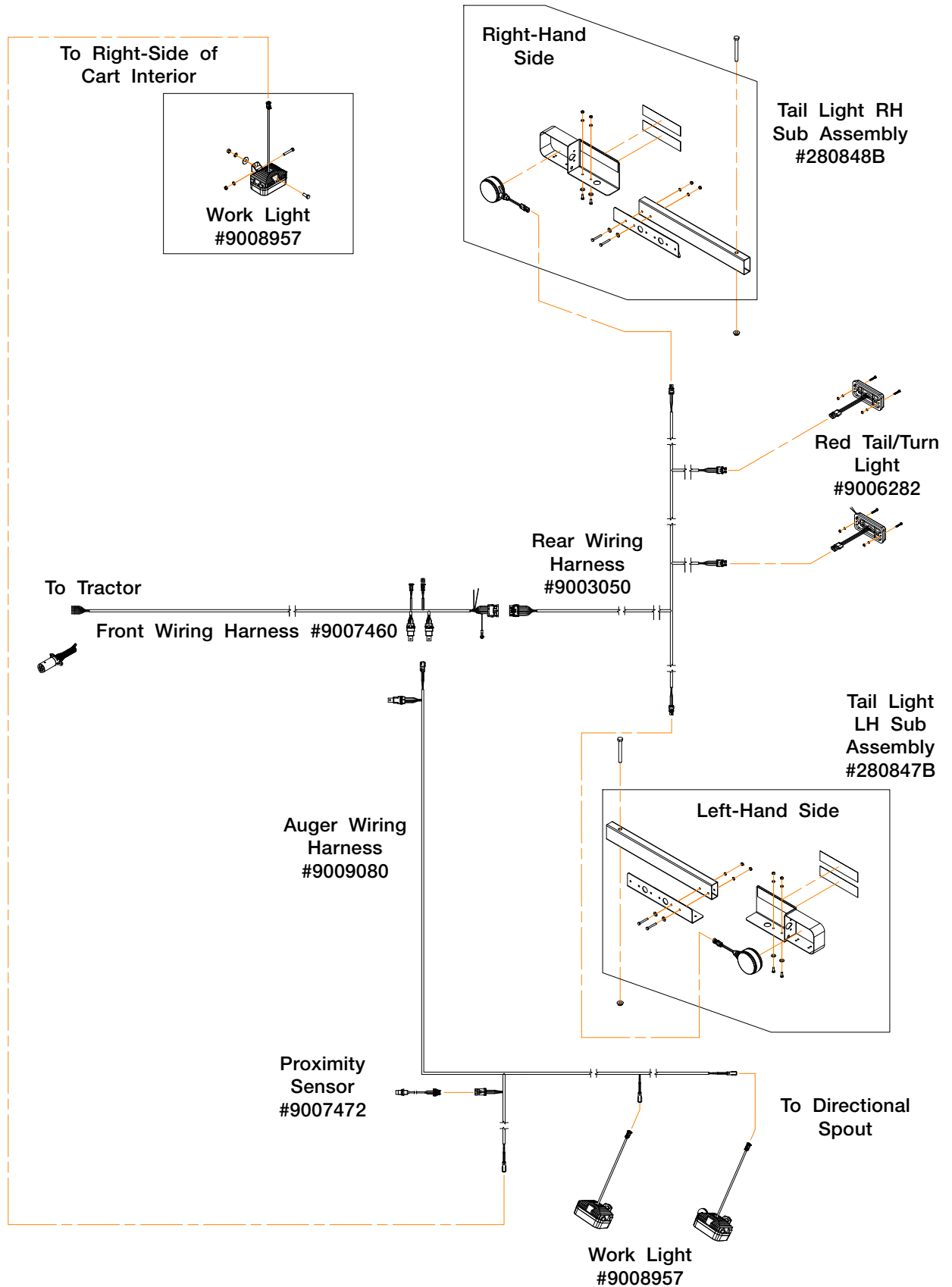
- *Do not open or close tarp while moving or in high wind conditions. Damage to the tarp may occur.*
- *Tarp should not be used if it is torn or the bungee cords are frayed or show damage. If water pools on the tarp adjust tension of tarp cables and/or arm springs as required.*

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

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

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

Electrical System Diagram — Overall

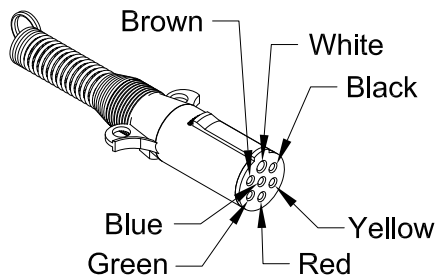


Electrical System Diagram — Plug #92450

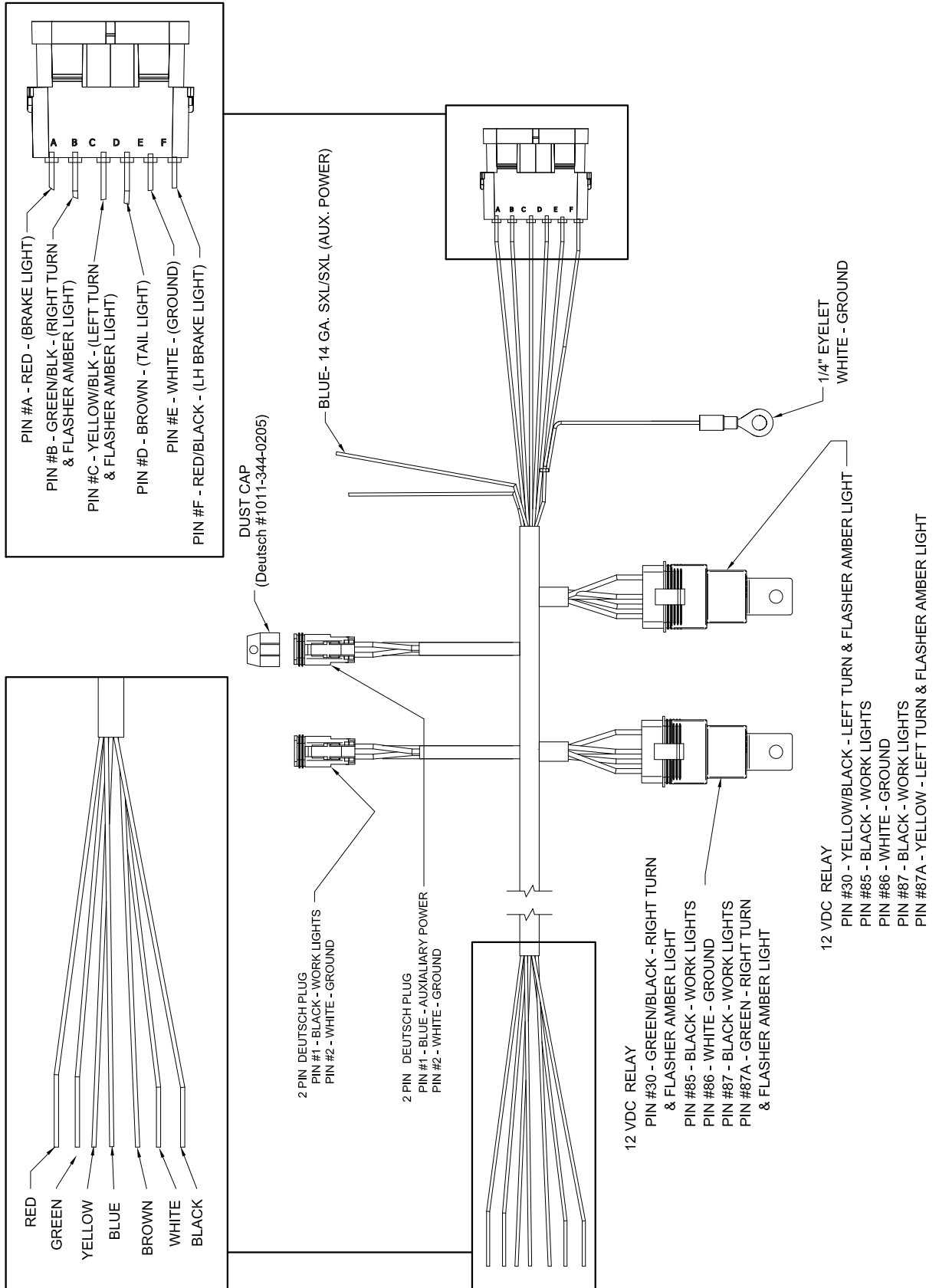
Black - Work Lights
Green - RH Turn
Yellow - LH Turn
Brown - Tail
White - Ground
Red - Brake

GRAIN CART WIRES

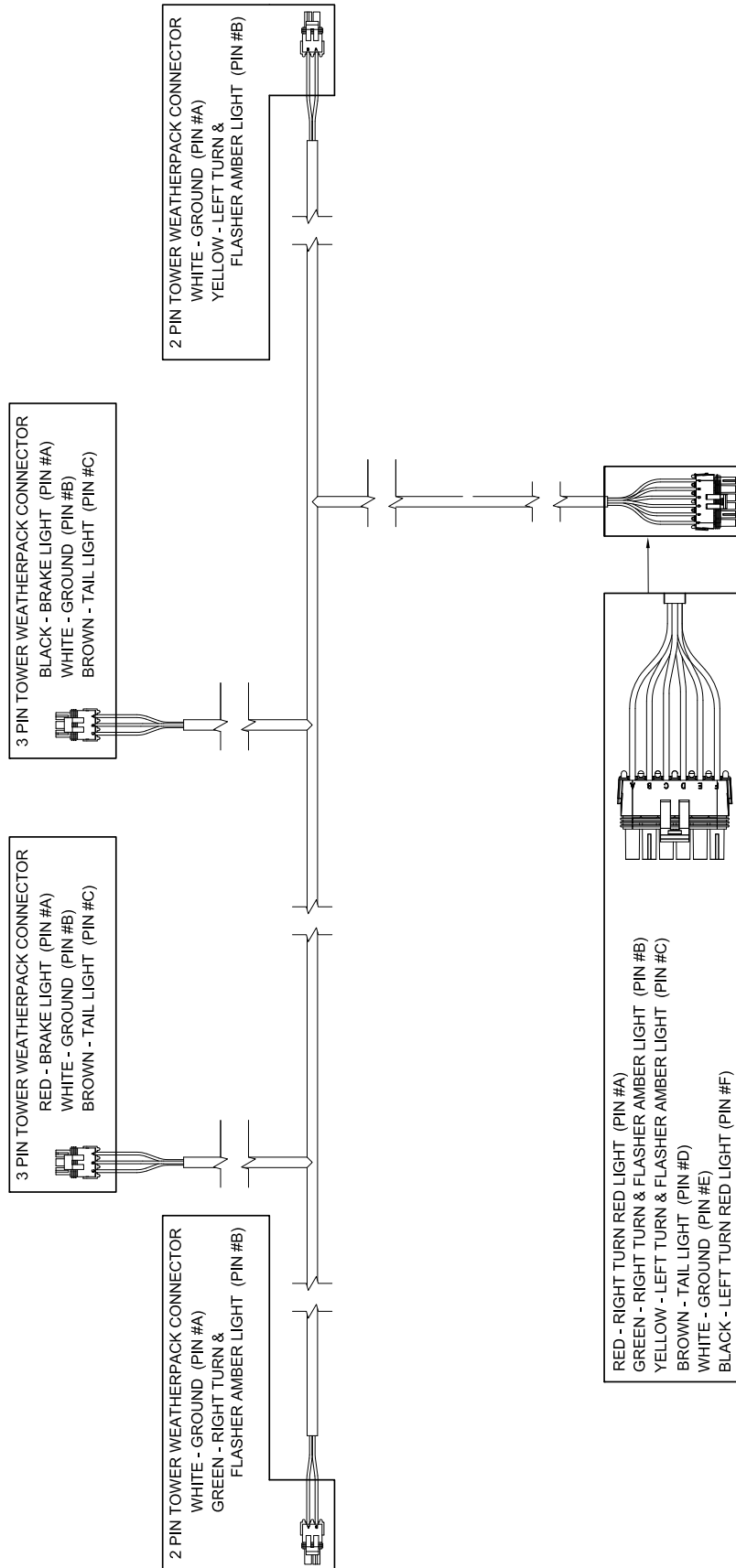
White -- Ground
Green -- Right amber flashing lamp
Yellow -- Left amber flashing lamp
Brown -- Tail light
Black -- Interior & Auger Lights
Red -- Brake Lights



Electrical Diagram — Front Wiring Harness #9007460



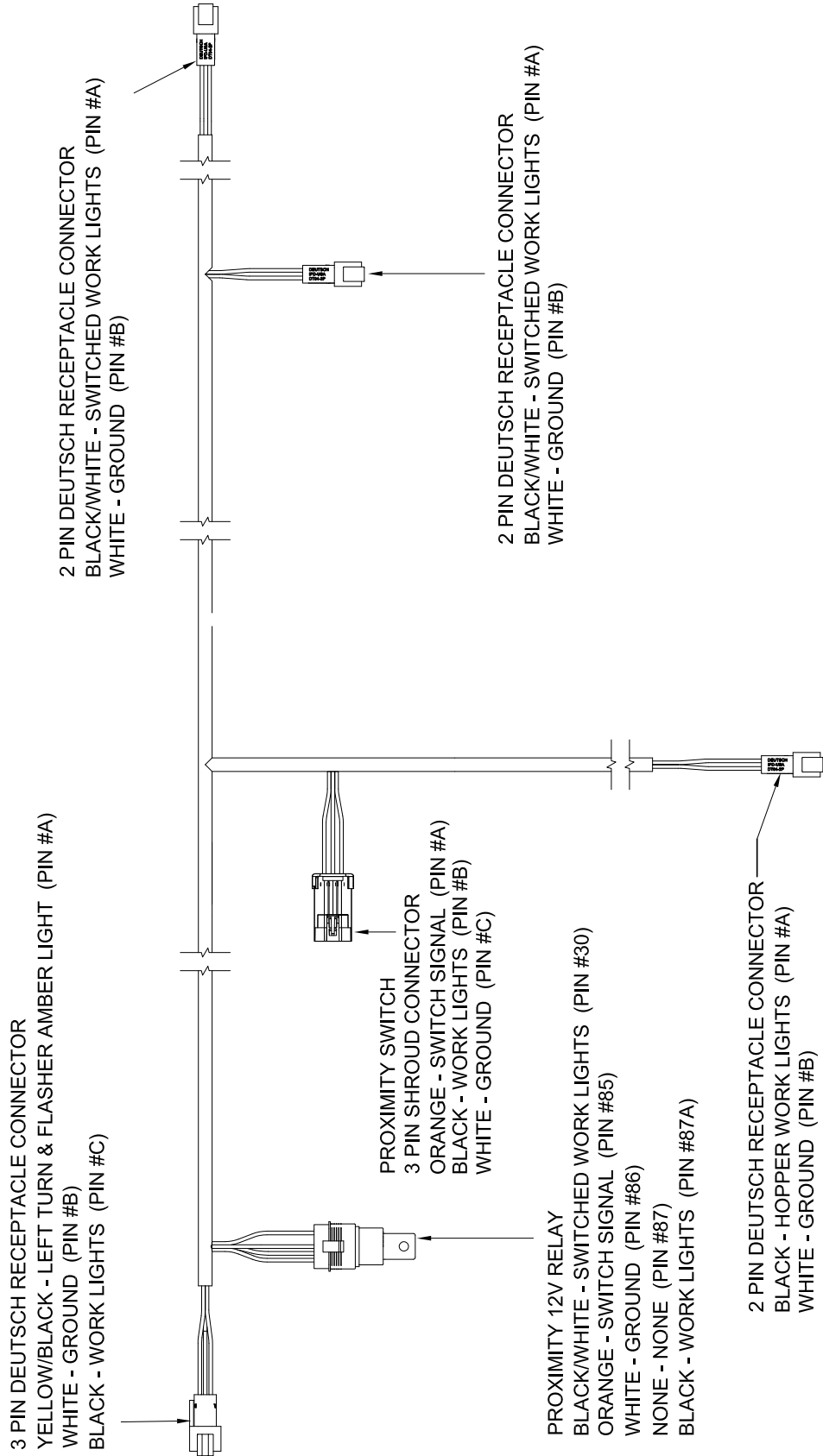
Electrical Diagram — Rear Wiring Harness #9003050



Electrical Diagram — Auger Wiring Harness

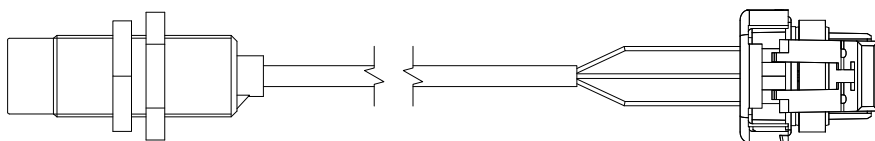
#9009080 - Serial Number B41380100 & Up

#9007461 - Serial Number B41380099 & Lower



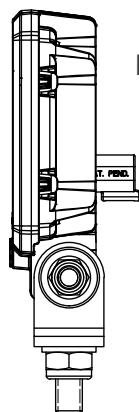
Electrical Diagram — Proximity Sensor #9007472

3 PIN FEMALE CONNECTOR



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

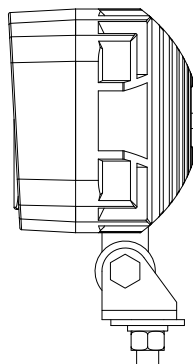
**Electrical Diagram — Work Light #9008957
Serial Number B41380100 & Up**



2 PIN INTEGRATED
DEUTSCH CONNECTOR

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

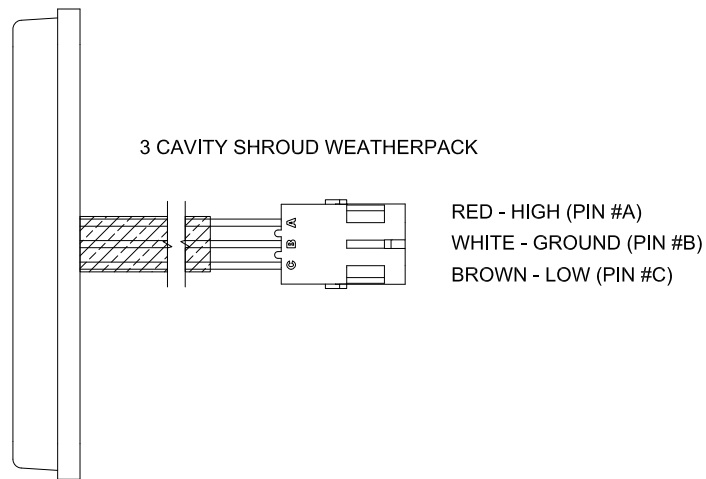
**Electrical Diagram — Work Light #9007186
Serial Number B41380099 & Lower**



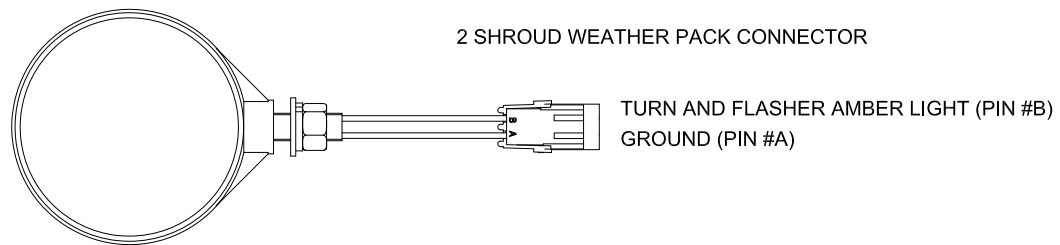
2 PIN DEUTSCH PLUG CONNECTOR

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

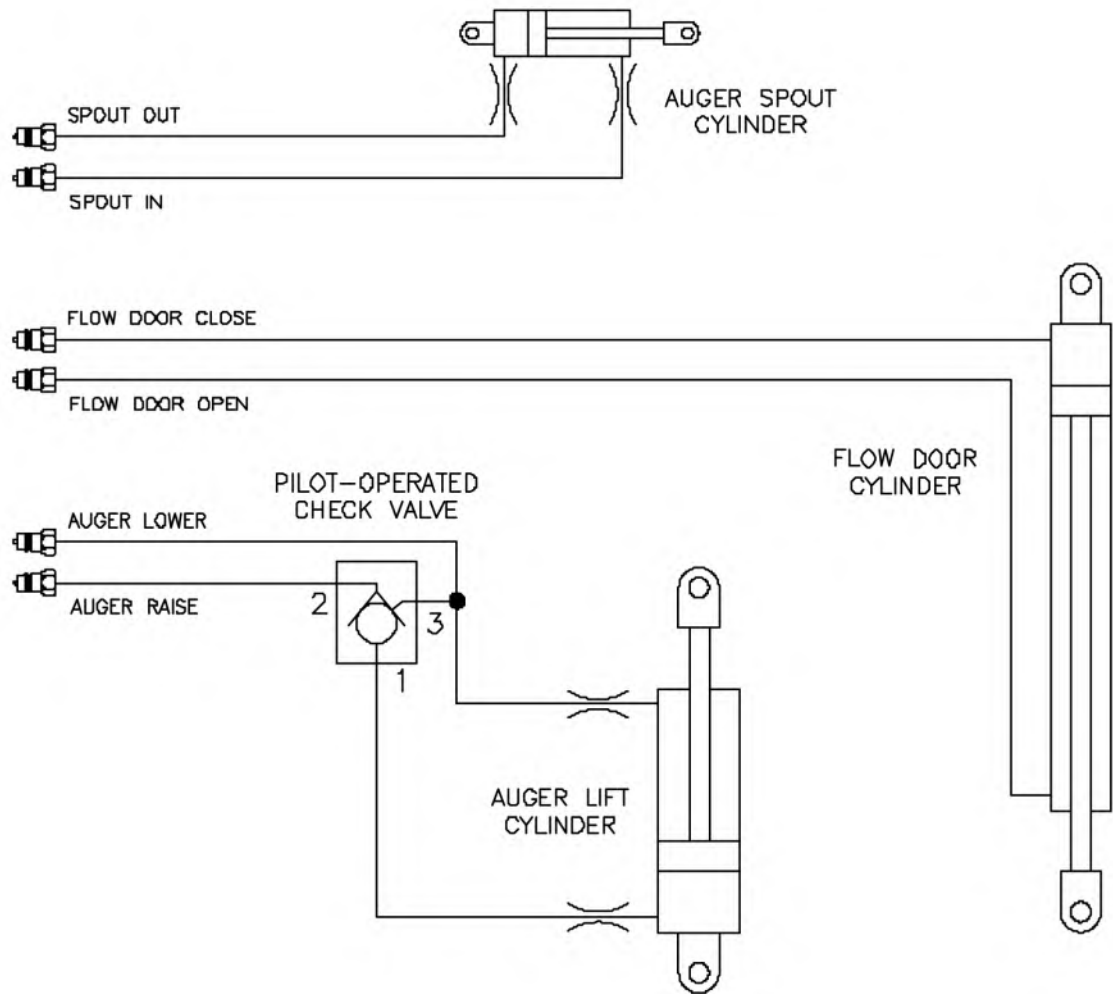
Electrical Diagram — Red Tail/Turn Light # 9006282



Electrical Diagram — Amber Lamp Double Face # 9005142



Hydraulic System Diagram



Complete Torque Chart

Capscrews - Grade 5

NOTE:

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



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

IMPORTANT

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

Complete Torque Chart

Capscrews - Grade 8

NOTE:

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



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

IMPORTANT

- Follow these torque recommendations except when specified in text.

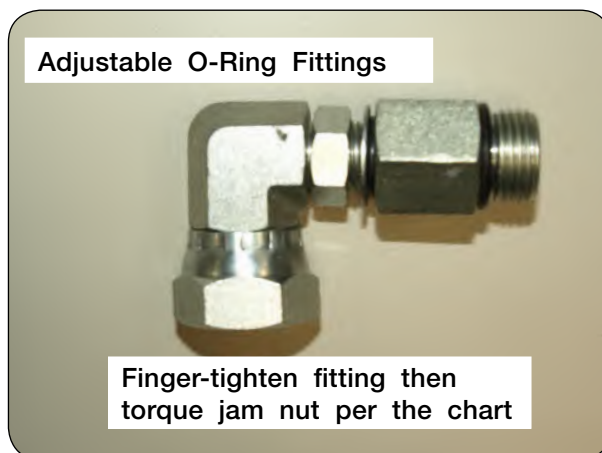
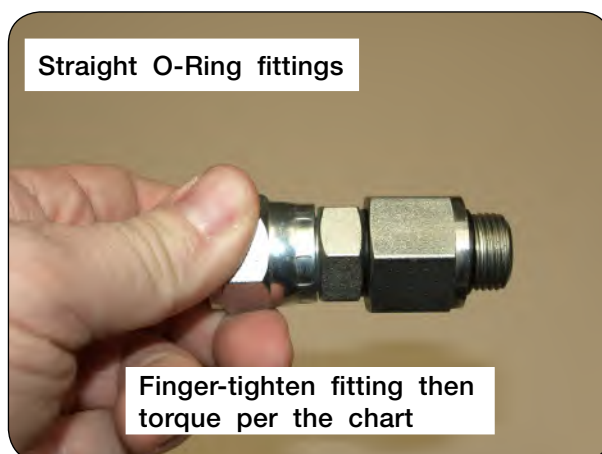
Hydraulic Fittings - Torque and Installation

Tightening O-Ring Fittings

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

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

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

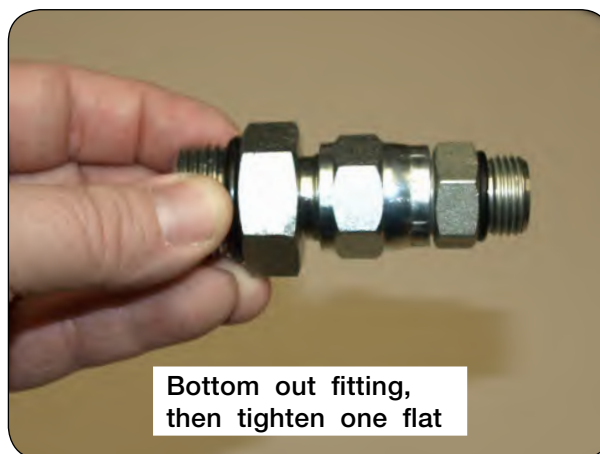


Hydraulic Fittings - Torque and Installation

Tightening JIC Fittings

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

NOTE: Never use a power tool to install a fitting



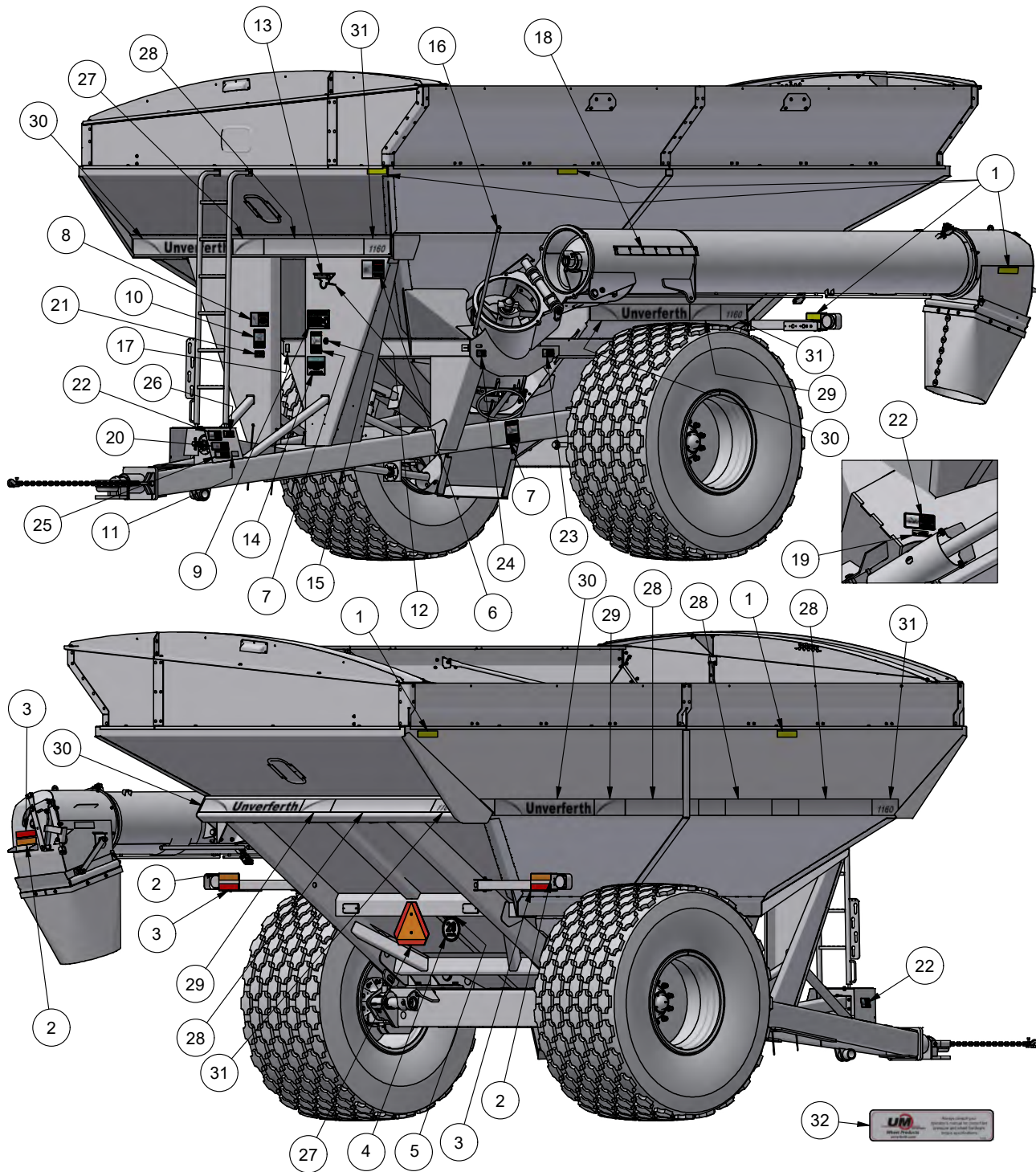
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FOR TRACK INFORMATION, PLEASE REFER TO YOUR TRACK MANUAL.
 FOR SCALE INFORMATION, PLEASE REFER TO YOUR SCALE MANUAL.
 FOR HYDRAULIC DRIVE INFORMATION, PLEASE REFER TO YOUR HYDRAULIC DRIVE MANUAL.

Decals

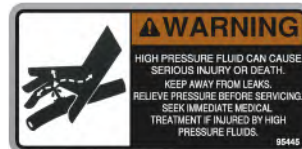
Please visit www.unverferth.com/parts/ for the most current parts listing.



94094



97961



95445

Decals

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

ITEM	DESCRIPTION	PART NO.	QTY.	NOTES
1	Amber Reflector	9003127	6	2 x 9"
2	Fluorescent Reflector	9003125	1	2 x 9"
3	Red Reflector	9003126	1	2 x 9"
4	Decal, Rear SIS 20 MPH	9008714	1	
	Decal, Rear SIS 30 KPH	9008720	1	
5	SIS Decal Mounting Bracket =Black=	276987B	1	
	Flange Screw 1/4"-20UNC x 3/4" G5	97420	2	
	Hex Nut 1/4"-20UNC	97189	2	
6	Decal, DANGER (Electrical Lines)	9003474	1	
7	Decal, DANGER (PTO Cut & Crush)	9003475	2	
8	Decal, WARNING (No Riders)	9003476	1	
9	Decal, IMPORTANT (Flow Control Gate)	9003477	1	
10	Decal, DANGER Just For Kids	9003478	1	
11	Decal, IMPORTANT (Shear-Bolts)	9003574	1	
12	Decal, Profile Cart	9004288	2	
13	Decal, Auger Indicator	9005335	1	
14	DECAL - WARNING (PTO Operation)	9008151	1	
15	Decal, Front SIS 20 MPH	9008715	1	
	Decal, Front SIS 30 KPH	9008721	1	
16	Decal, Yellow Relfective Tape	297599	1	
17	Decal, FEMA	91605	1	
18	Decal, Flow Control 3" x 38"	92563	1	
19	Decal, Grease 8 Hours	93459	1	
20	Decal, WARNING (Tongue Drop)	94094	1	
21	Decal, CAUTION (Slippery Surface)	95008	1	
22	Decal, DANGER (Driveshaft Entanglement)	95046	3	
23	Decal, WARNING (High Pressure)	95445	1	
24	Decal, WARNING (Pinch Point)	95839	1	
25	Decal, CAUTION (Transport Chain)	97575	1	
26	Decal, WARNING (Read & Understand)	97961	1	
27	SMV Sign	TA510514	1	
28	Decal, UM Stripe	9004035	7	
29	Decal, UM Logo Tail	9004213	4	
30	Decal, UM Logo	9004298	4	
31	Decal, 1160	9008008	4	
32	Decal, Wheel Products	94754	2	



9003476



95008



9003474



97575



9003475



9003478



95839



9003574



9008151



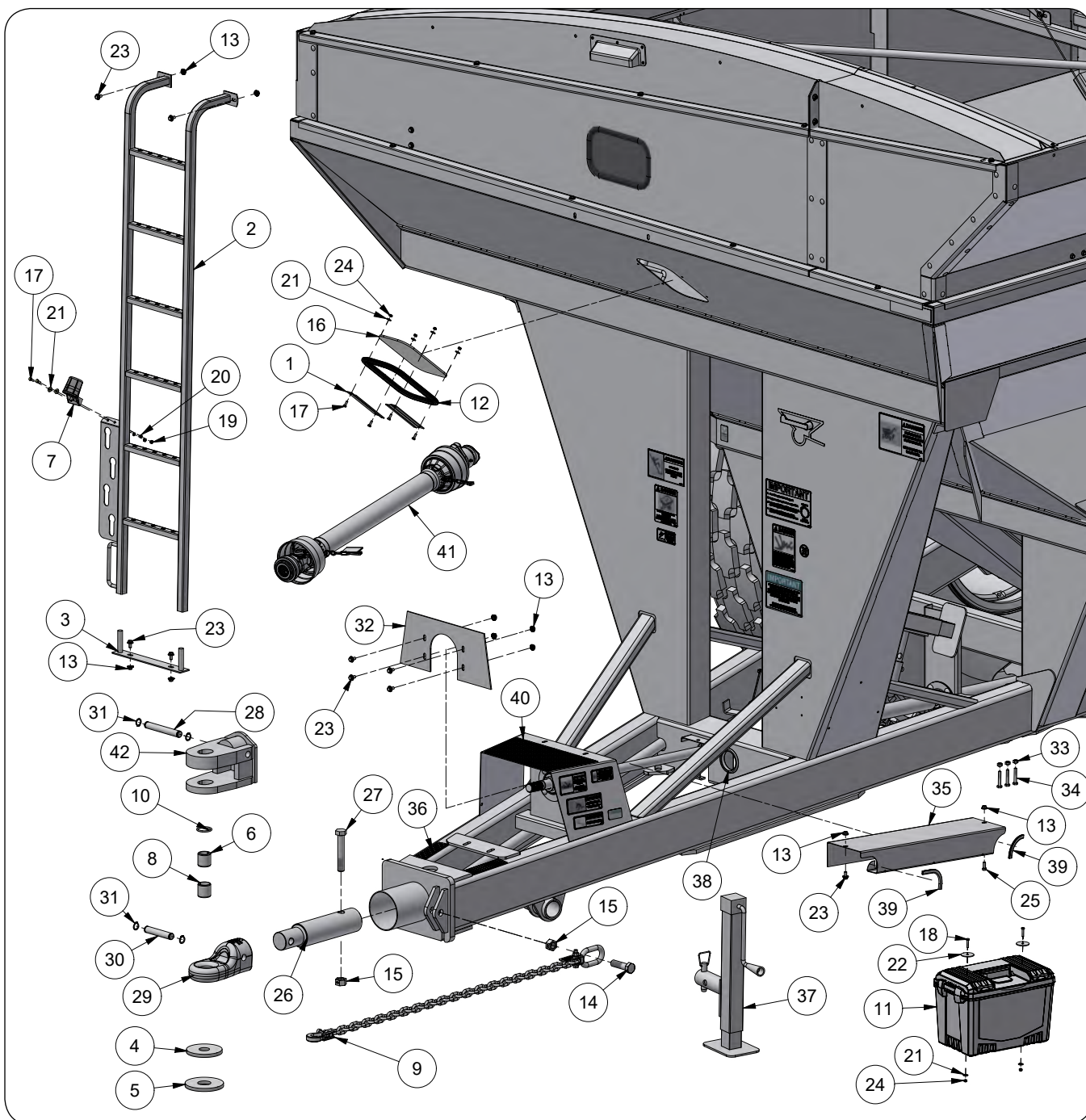
9003477



95046

Final Assembly

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



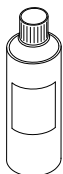
ITEM	DESCRIPTION	PART NO.	QTY.	NOTES
1	Bracket, Window Retainer	250461B	6	
2	Ladder Weldment	280600B	1	
3	Ladder Bracket Weldment	280603B	1	
4	Wearshoe - Hitch, CAT 3	281663	1	
5	Wearshoe - Hitch, CAT 4	281898	1	
6	Tension Bushing, 2" OD x 1.516" ID x 2"	9001917	1	
7	Connector Holder	9001968	1	

Final Assembly

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

ITEM	DESCRIPTION	PART NO.	QTY.	NOTES
8	Split Tension Bushing, 2" OD x 1 3/4" ID x 2"	9002130	1	
9	Transport Chain	9003278	1	
10	O-Ring	9005259	4	
11	Storage Box	9005850	1	
12	Window Molding	271951	3	
13	Nut/Large Flange, 3/8"-16UNC	91263	6	Grade 5
14	Capscrew, 1"-8UNC x 3 1/2"	91299-189	1	Grade 8
15	Locknut, 1"-8UNC	92199	1	
16	Window	92403	3	
17	Capscrew, 1/4"-20UNC x 3/4"	9390-003	2	Grade 5
18	Capscrew, 1/4"-20UNC x 1 1/4"	9390-006	2	Grade 5
19	Hex Nut, 1/4"-20UNC	9394-002	2	
20	Lock Washer, 1/4"	9404-017	2	
21	Flat Washer, 1/4"	9405-064	4	2
22	Fender Washer	94763	2	
23	Capscrew/Large Flange, 3/8"-16UNC x 3/4"	95585	6	Grade 5
24	Locknut, 1/4"-20UNC	9936	2	
25	Capscrew, 3/8"-16UNC x 1" G5	9390-055	1	Grade 5
26	Hitch Bar 3 3/4" Dia.	284780	1	
27	Capscrew, 1"-8UNC x 6"	91299-195	1	Grade 8
28	Pin, 1" Dia. x 7 1/2"	281691		
29	Hitch, Single Tang	282875B	1	
	Hitch Kit - Single Tang w/Hammer Strap	281690	1	NOT SHOWN
30	Pin, 1" Dia. x 5 1/2"	282876	1	
31	Retaining Ring 1"	91192	2	
32	Driveshaft Cover Plate	280554B	1	
33	Locknut, 10MM	9003645	7	
34	Capscrew, M10-1.5 x 60	94910-015	7	
35	Driveshaft Cover	280605B	1	
36	Runner Pad	9001498	2	
37	Jack Assembly w/Pin	9004156	1	
	Pin, 7/8" Dia.	9004171	-	
38	Rubber Grommet	9006780	2	
39	Trim Lock	9000787	A/R	Specify in Feet
40	Platform Rubber Pad	9004114	1	
41	PTO Assembly	-	1	Refer to "PTO Assembly"
42	Clevis Hitch Weldment	265205B		

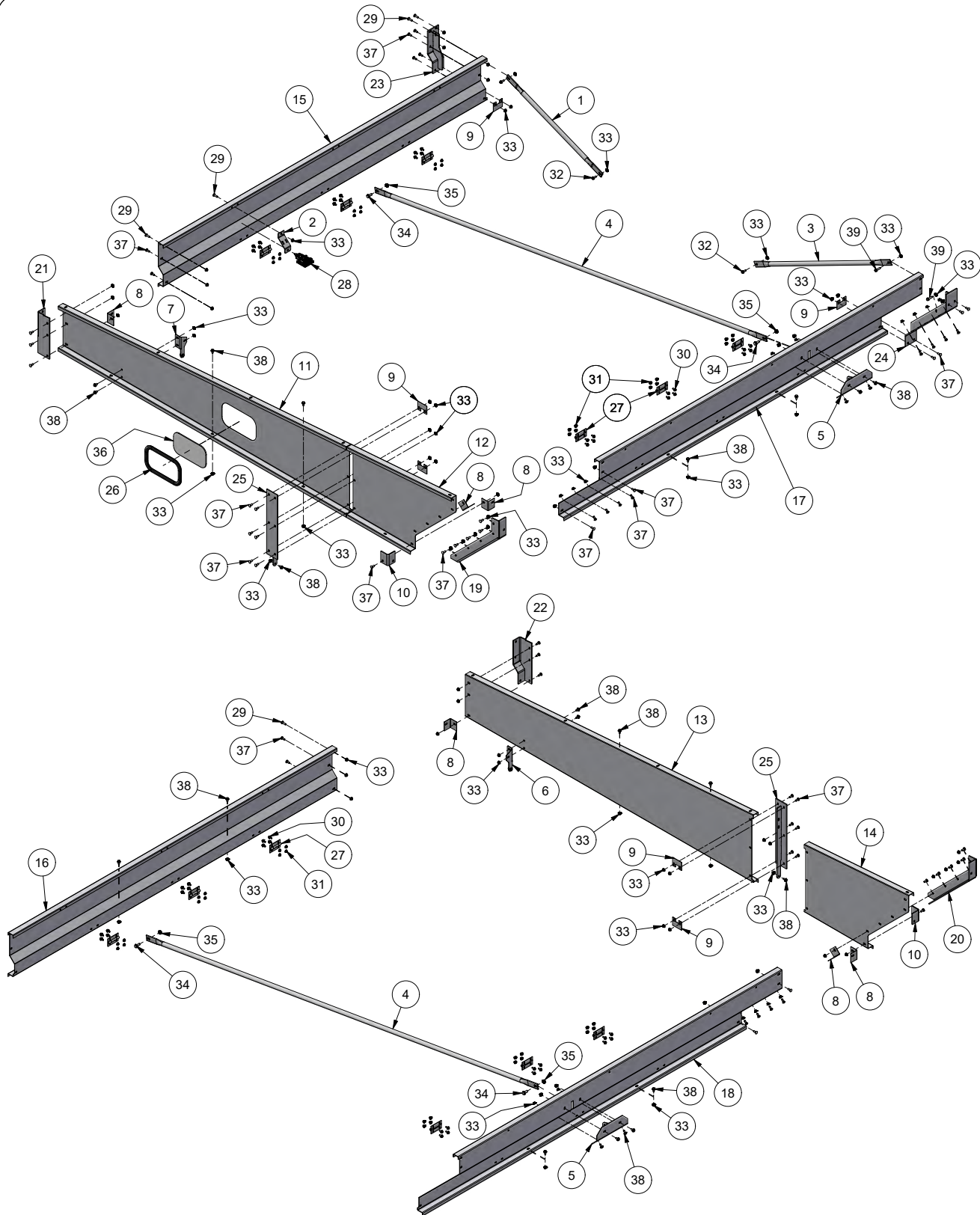
Touch-Up Paint



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

Sideboards - Serial Number B43450100 & Up

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



Unverferth 1160 — Parts

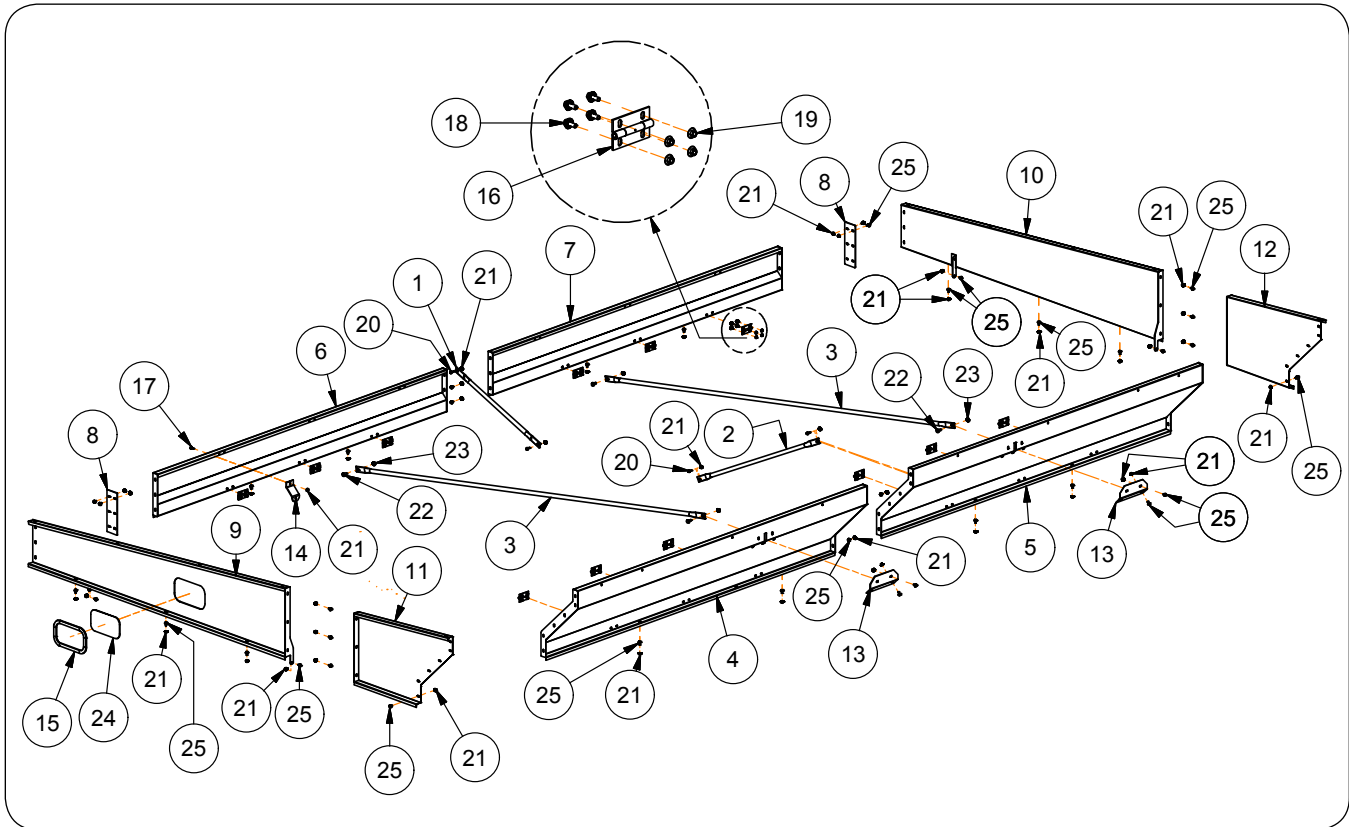
Sideboards - Serial Number B43450100 & Up

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

ITEM	DESCRIPTION	PART NO.	QTY	NOTES
1	Angle Tube Brace	220032B	1	
2	Lamp Mount Plate	271574B	1	
3	Tube Brace 59 1/2" Long	287524B	1	
4	Tube Brace 155" Long	287586B	2	
5	Brace Weldment	287792B	2	
6	Hinge Plate	288427B	1	
7	Hinge Plate	288428B	1	
8	Sideboard Cover Plate , 2 15/32" x 2 15/32" x 3"	295667B	6	
9	Sideboard Cover Plate, 2 3/4" x 3 1/2"	295691B	6	
10	Sideboard Corner Plate, 2 13/16" x 2 13/16" x 3 19/32"	296199B	2	
11	Sideboard Weldment-Front-Long	296251B	1	
12	Sideboard Weldment-Front-Short	296252B	1	
13	Sideboard Weldment-Rear-Long	296253B	1	
14	Sideboard Weldment-Rear-Short	296254B	1	
15	Sideboard Weldment-Front, RH	296255B	1	
16	Sideboard Weldment-Rear, RH	296256B	1	
17	Sideboard Weldment-Front, LH	296257B	1	
18	Sideboard Weldment-Rear, LH	296258B	1	
19	Sideboard Corner Plate-Front, LH	296259B	1	
20	Sideboard Corner Plate-Rear, LH	296260B	1	
21	Sideboard Corner Plate-Front, RH	296261B	1	
22	Sideboard Corner Plate-Rear, RH	296262B	1	
23	Sideboard Bracket Weldment, RH	296263B	1	
24	Sideboard Bracket Weldment, LH	296264B	1	
25	Sideboard Bracket Weldment, Front/Rear	296269B	2	
26	Moulding-Window 38"	271951	1	
27	Hinge	9004626	12	
28	Work Light, LED	9008957	1	
29	Truss Head Machine Screw, 3/8"-16UNC x 1 1/4"	9009089	5	
30	Flange Screw, 5/16"-18UNC x 3/4" G5	91256	48	
31	Hex Nut/Large Flange, 5/16"-18UNC	91257	48	
32	Flange Screw, 3/8"-16UNC x 1" G5	91262	3	
33	Nut/Large Flange, 3/8"-16UNC	91263	108	
34	Flange Screw, 1/2"-13UNC x 1 1/4" G5	91266	4	
35	Flange Nut, 1/2"-13UNC	91267	4	
36	Window, Glass	92403	1	
37	Carriage Bolt, 3/8"-16UNC x 1" G5	9388-051	62	
38	Capscrew/Large Flange, 3/8"-16UNC x 3/4 " G5	95585	36	
39	Flange Screw, 3/8"-16UNC x 1 1/2" G5	95785	2	

Sideboards - Serial Number B36620100 - B43450099

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



Unverferth 1160 — Parts

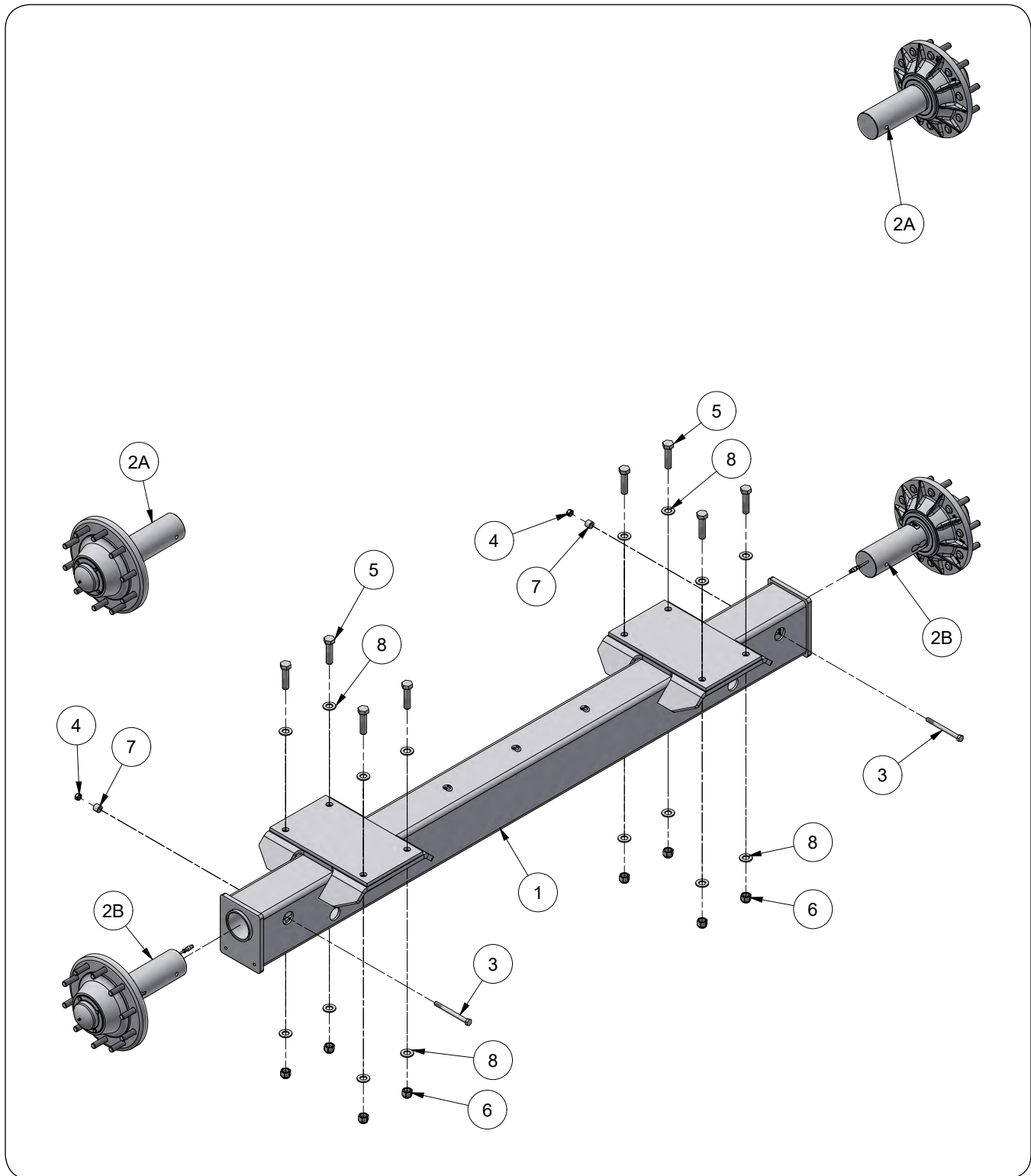
Sideboards - Serial Number B36620100 - B43450099

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

ITEM	DESCRIPTION	PART NO.	QTY	NOTES
1	Angle Tube Brace	220032B	1	
2	Board Tube Brace	287524B	1	
3	Tube Brace 155" Long	287586B	2	
4	Board Weldment-Front, LH	287759B	1	
5	Board Weldment-Rear, LH	287761B	1	
6	Board Weldment-Front, RH	287764B	1	
7	Board Weldment-Rear, RH	287766B	1	
8	Bolt Plate	287782B	2	
9	Board Weldment-Front-Long	287784B	1	
10	Board Weldment-Rear-Long	287785B	1	
11	Board Weldment-Front-Short	287789B	1	
12	Board Weldment-Rear-Short	287790B	1	
13	Brace Weldment	287792B	2	
14	Light Bracket	271574B	1	
15	Moulding-Window, 38"	271951	1	
16	Hinge	9004626	12	
17	Truss Head Machine Screw, 3/8"-16UNC x 1 1/4"	9009089	1	For SN B41380100 - B43450099
	Truss Head Machine Screw, 3/8"-16UNC x 1"	9005312		For SN B41380099 & Lower
18	Flange Screw, 5/16"-18UNC x 3/4"	91256	48	
19	Hex Nut/Large Flange, 5/16"-18UNC	91257	48	
20	Flange Screw, 3/8"-16UNC x 1"	91262	14	
21	Nut/Large Flange, 3/8"-16UNC	91263	82	
22	Flange Screw, 1/2"-13UNC x 1 1/4"	91266	4	
23	Flange Nut, 1/2"-13UNC	91267	4	
24	Window Glass	92403	1	
25	Capscrew/Large Flange, 3/8"-16UNC x 3/4"	95585	67	

Rigid Axle - Serial Number D72360100 & Up

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



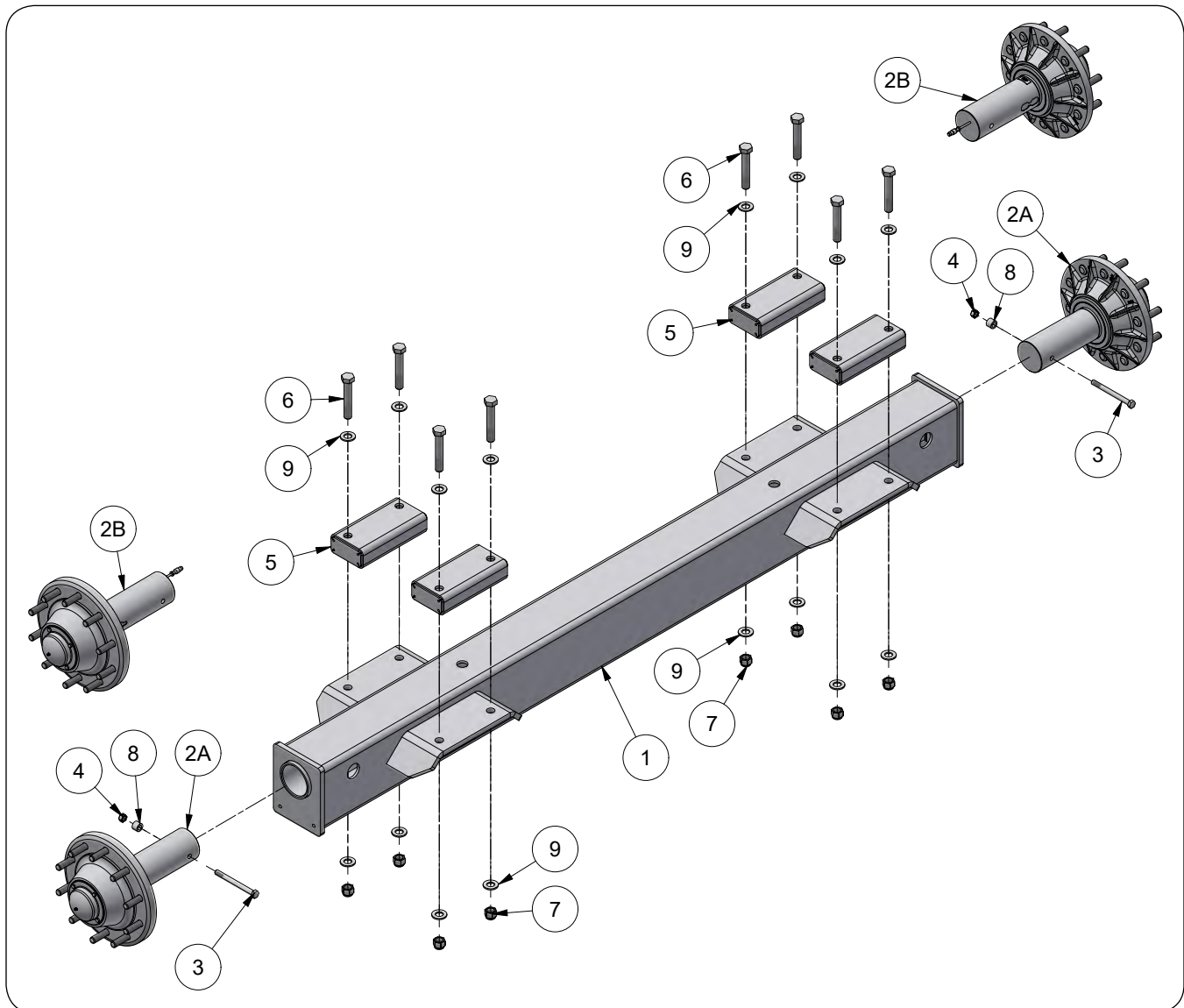
Rigid Axle - Serial Number D72360100 & Up

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

ITEM	DESCRIPTION	PART NO.	QTY	NOTES
	Axle Bundle, 134" Spindle Non-Scale =Black=	2006247B	-	Includes Items 1, 2A, 3-8
	Axle Bundle, 134" Spindle Scale =Black=	2006246B		Includes Items 1, 2B, 3-8
1	Axle Weldment, 134" Rigid =Black=	2006244B	1	
2A	Spindle Non-Scale & Hub Kit =Black=	267284B	2	Kit Includes Wheel Nuts
2B	Spindle Scale & Hub Kit =Black=	267280B		
3	Capscrew, 5/8"-11UNC x 7" G8	91299-138	2	
4	Locknut/Center, 5/8"-11UNC G8	9008440	2	
5	Capscrew, 1"-8UNC x 4" G8	91299-191	8	
6	Elastic Locknut, 1"-14UNS G8	9008441	8	
7	Spacer Bushing =Black=	288789B	2	
8	Washer, 2" OD	804685	16	

Rigid Axle - Serial Number B36620100 - D72360099

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



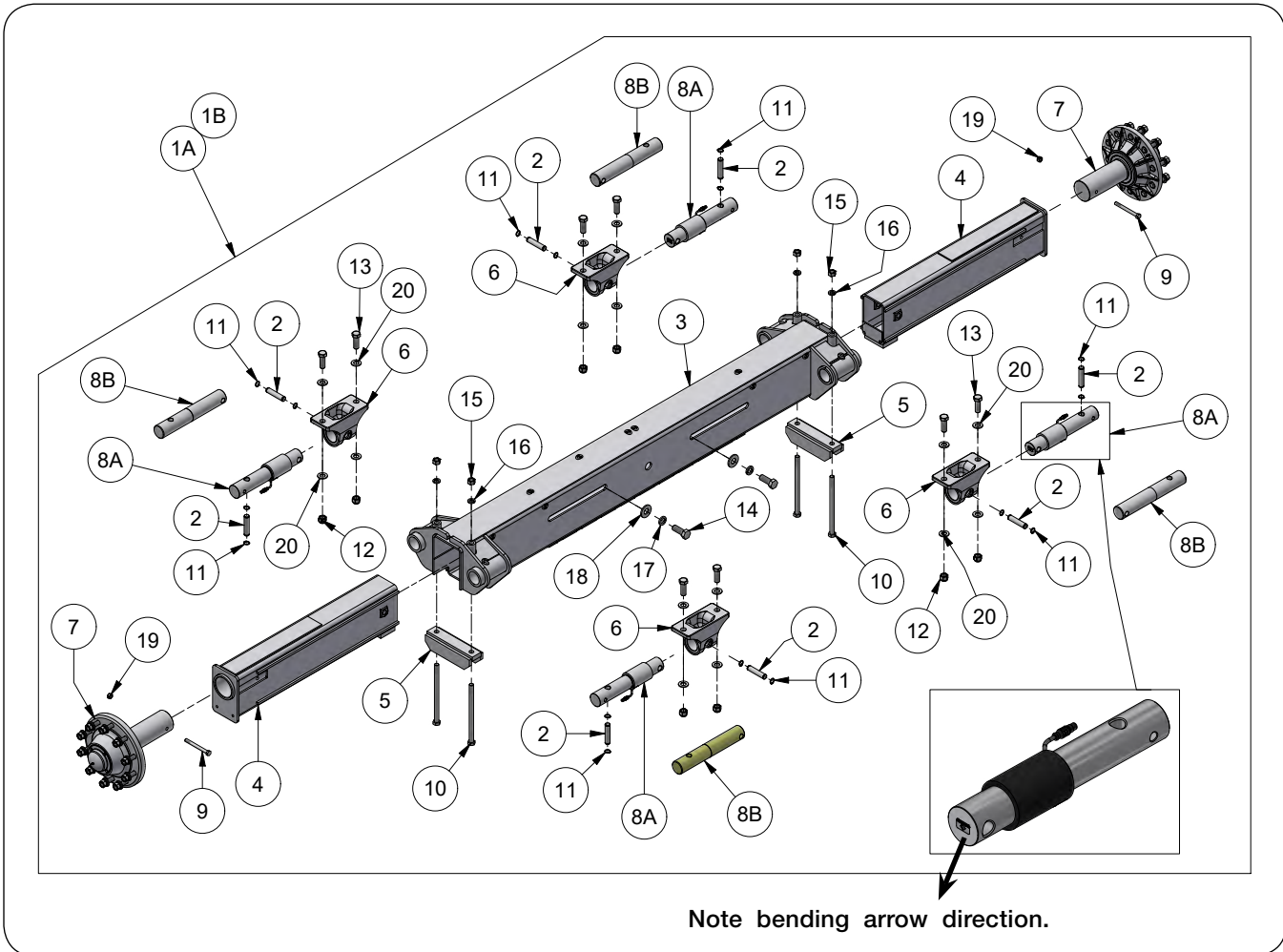
Rigid Axle - Serial Number B36620100 - D72360099

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

ITEM	DESCRIPTION	PART NO.	QTY	NOTES
	Axle Bundle, 134" Spindle Scale =Black=	287976B	-	Includes Items 1, 2A, 3-9
	Axle Bundle, 134" Spindle Non-Scale =Black=	287977B	-	Includes Items 1, 2B, 3-9
1	Axle Weldment, 134" Rigid =Black=	287996B	1	
2A	Spindle Non-Scale & Hub Kit =Black=	267284B	2	Kit Includes Wheel Nuts
2B	Spindle Scale & Hub Kit =Black=	267280B	2	Kit Includes Wheel Nuts
3	Capscrew, 5/8"-11UNC x 7" G8	91299-138	2	For SN B38740100 - D72360099
	Capscrew, 5/8"-11UNC x 6" G5	9390-136		For SN B36620100 - B38740099
4	Locknut/Center, 5/8"-11UNC G8	9008440	2	For SN B38740100 - D72360099
	Locknut/Center, 5/8"-11UNC	95905		For SN B36620100 - B38740099
5	Axle Riser Weldment =Black=	290198B	4	
6	Capscrew, 1"-14UNS x 6" G8	91299-1464	8	For SN B38740100 - D72360099
	Capscrew, 1"-8UNC x 5 1/2" G5	9390-194		For SN B36620100 - B38740099
7	Elastic Locknut, 1"-14UNS G8	9008441	8	For SN B38740100 - D72360099
	Locknut/Center, 1"-8UNC	92199		For SN B36620100 - B38740099
8	Spacer Bushing =Black=	288789B	2	For SN B38740100 - D72360099
9	Washer, 2" OD	804685	16	For SN B38740100 - D72360099

Adjustable Axle

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



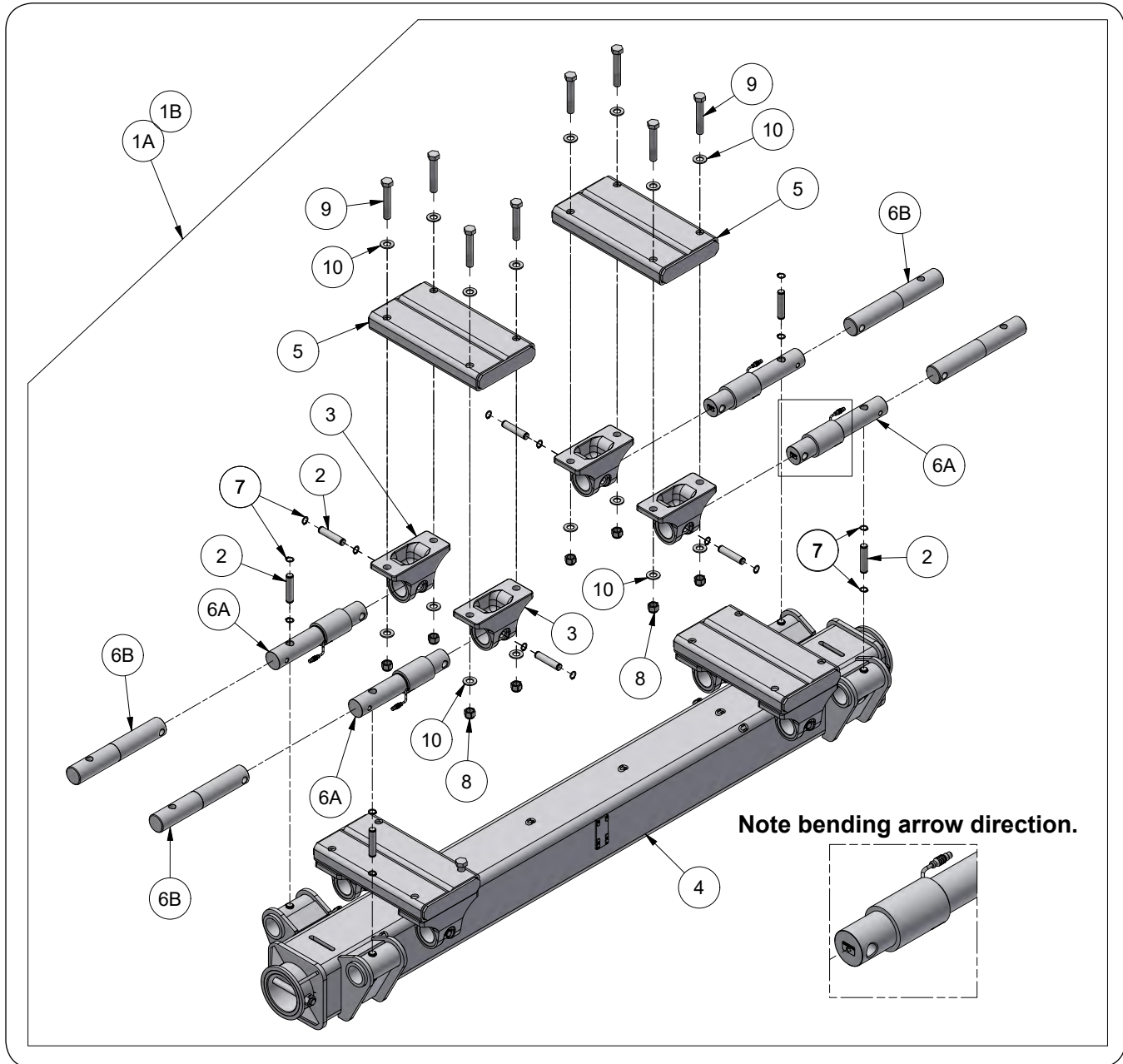
Adjustable Axle

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

ITEM	DESCRIPTION	PART NO.	QTY	NOTES
1A	Adjustable Axle Bundle, Scale =Black=	280489B		Includes Items 1-7, 8A, 9-20
1B	Adjustable Axle Bundle, Non-Scale =Black=	280576B	-	Includes Items 1-7, 8B, 9-20
2	Pin 1" Dia. x 4 9/16	250843	8	
3	Axle Weldment =Black=	280106B	1	
4	Axle Extension Tube Weldment =Black=	280135B	2	
5	Axle Clamp Weldment =Black=	280789B	2	
6	Axle Mount Casting =Black=	283855B	4	
7	Hub & Spindle Kit =Black=	267284B	2	Kit Includes Wheel Nuts
8A	Scale Load Bar, 2.875" Dia.	9004903	4	
8B	Bar, 2.875" Dia.	268289		
9	Capscrew, 5/8"-11UNC x 6 1/4" G8	9008439	2	For SN B38740100 & Up
	Capscrew, 5/8"-11UNC x 6 1/4" G5	9007387		For SN B38740099 & Lower
10	Capscrew, 7/8"-9UNC x 14"	9007566	4	Grade 5
11	Retaining Ring 1"	91192	16	
12	Elastic Locknut, 1"-14UNS G8	9008441	8	For SN B38740100 & Up
	Locknut/Center, 1"-8UNC	92199		For SN B38740099 & Lower
13	Capscrew, 1"-14UNS x 3" G8	91299-1456	8	For SN B38740100 & Up
	Capscrew, 1"-8UNC x 2 1/2" G5	9390-185		For SN B38740099 & Lower
14	Capscrew, 1 1/8"-7UNC x 3"	9390-200	2	Grade 5
15	Hex Nut, 7/8"-9UNC	9394-018	4	
16	Lock Washer 7/8"	9404-037	4	
17	Lock Washer, 1 1/8"	9404-045	2	
18	Flat Washer, 1 1/8"	289325	2	
19	Locknut/Center, 5/8"-11UNC Grade 8	9008440	2	For SN B38740100 & Up
	Locknut/Center, 5/8"-11UNC	95905		For SN B38740099 & Lower
20	Washer 2" OD	804685	16	For SN B38740100 & Up

Track Axle Components with 5 Point Scale System

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



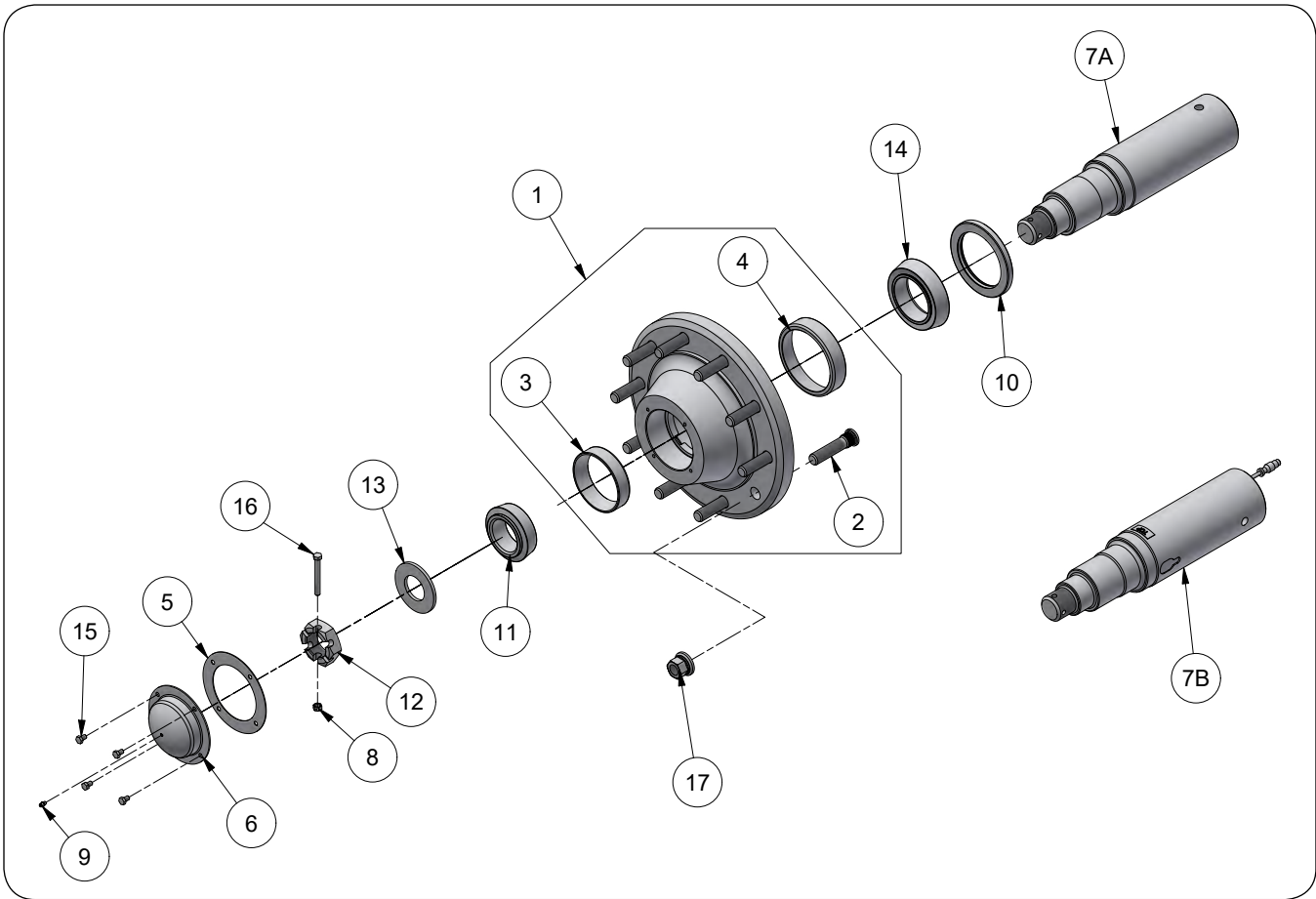
Track Axle Components with 5 Point Scale System

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

ITEM	DESCRIPTION	PART NO.	QTY	NOTES
1A	Track Axle Bundle, Scale =Black=	287906B		Includes Items 1-5, 6A, 7-10
1B	Track Axle Bundle, Non-Scale =Black=	287907B	-	Includes Items 1-5, 6B, 7-10
2	Pin, 1" Dia. x 4 9/16	250843	8	
3	Axle Mount Casting =Green=	283855G	4	
	Axle Mount Casting =Red=	283855R		
4	Axle Weldment =Green=	287936G	1	
	Axle Weldment =Red=	287936R		
5	Riser Weldment =Green=	287945G	2	
	Riser Weldment =Red=	287945R		
6A	Scale Load Bar, 2.875" Dia.	9004903	4	
6B	Bar, 2.875" Dia.	268289		
7	Retaining Ring 1"	91192	16	
8	Elastic Locknut, 1"-14UNS Gr. 8	9008441	8	For SN B38740100 & Up
	Locknut, 1"-8UNC	92199		For SN B38740099 & Lower
9	Capscrew, 1"-14UNS x 6" G8	91299-1464	8	For SN B38740100 & Up
	Capscrew, 1"-8UNC x 5 1/2" G5	9390-194		For SN B38740099 & Lower
10	Washer, 2" OD	804685	16	For SN B38740100 & Up

Hub Components

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



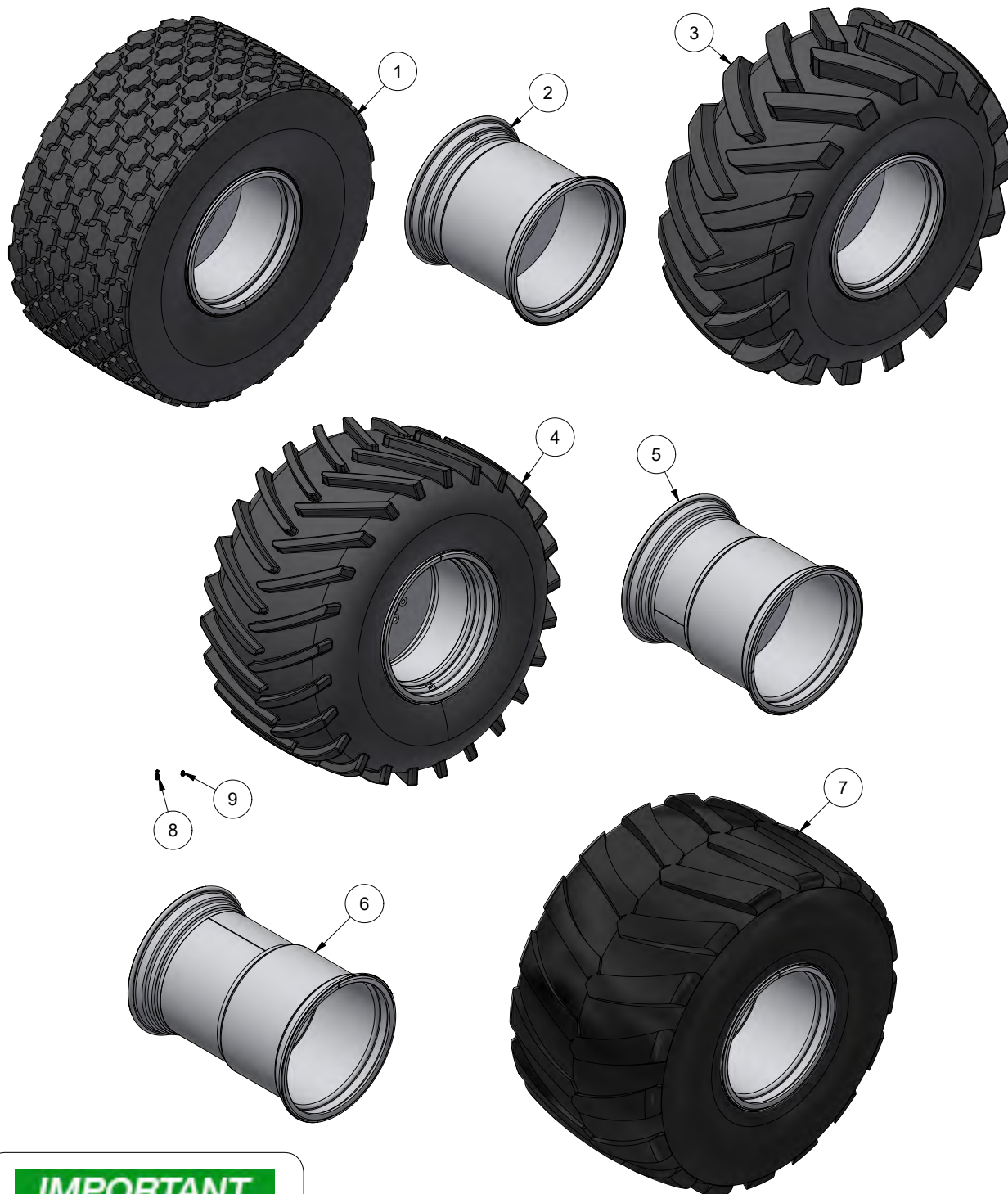
Hub Components

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

ITEM	DESCRIPTION	PART NO.	QTY	NOTES
	Spindle Scale & Hub Kit =Black=	267280B	-	Includes Items 1, 5, 6, 7B, 8-17
	Spindle Non-Scale & Hub Kit =Black=	267284B	-	Includes Items 1, 5, 6, 7A, 8-17
1	Hub Sub Assembly (Black)	265390B	1	Includes Items 2, 3, & 4
2	Stud & Flange Nut M22 Kit	267288	10	
	Stud, M22x1.5 x 4	9007001		
3	Bearing Cup, 4.8125" OD	92462	1	HM212011
4	Bearing Cup, 5.786" OD	92476	1	HM218210
5	Gasket, 6 1/2" OD x 4 1/2" ID	284230	1	
6	Hub Cap "Bolt-On Type" =Black=	286171B	1	
7A	Non-Scale Spindle, 4 1/2" Dia. x 19 7/8"	286172	1	
7B	Scale Spindle Load Bar, 4 1/2" Dia. x 20 1/4"	9006348		
8	Locknut/Center, 3/8"-16UNC	902875	1	
9	Grease Zerk	91160	1	
10	Seal, 4.375" Dia. Shaft	92455	1	75015411
11	Bearing Cone, 2.625" Bore	92464	1	HM212049
12	Castle Nut, 2"-12UNF G5	92470	1	
13	Washer/Spindle, 4" OD x 2.06" ID	92472	1	
14	Bearing Cone, 3.5423" Bore	92545	1	HM218248
15	Capscrew, 5/16"-18UNC x 1/2" G5	9390-026	4	
16	Capscrew, 3/8"-16UNC x 3 1/4" G5	9390-064	1	
17	Wheel Nut M22 Kit	267275	10	
	Flange Cap Nut, M22 x 1.5	97319		

Wheels & Tires

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



IMPORTANT

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

TIRES

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

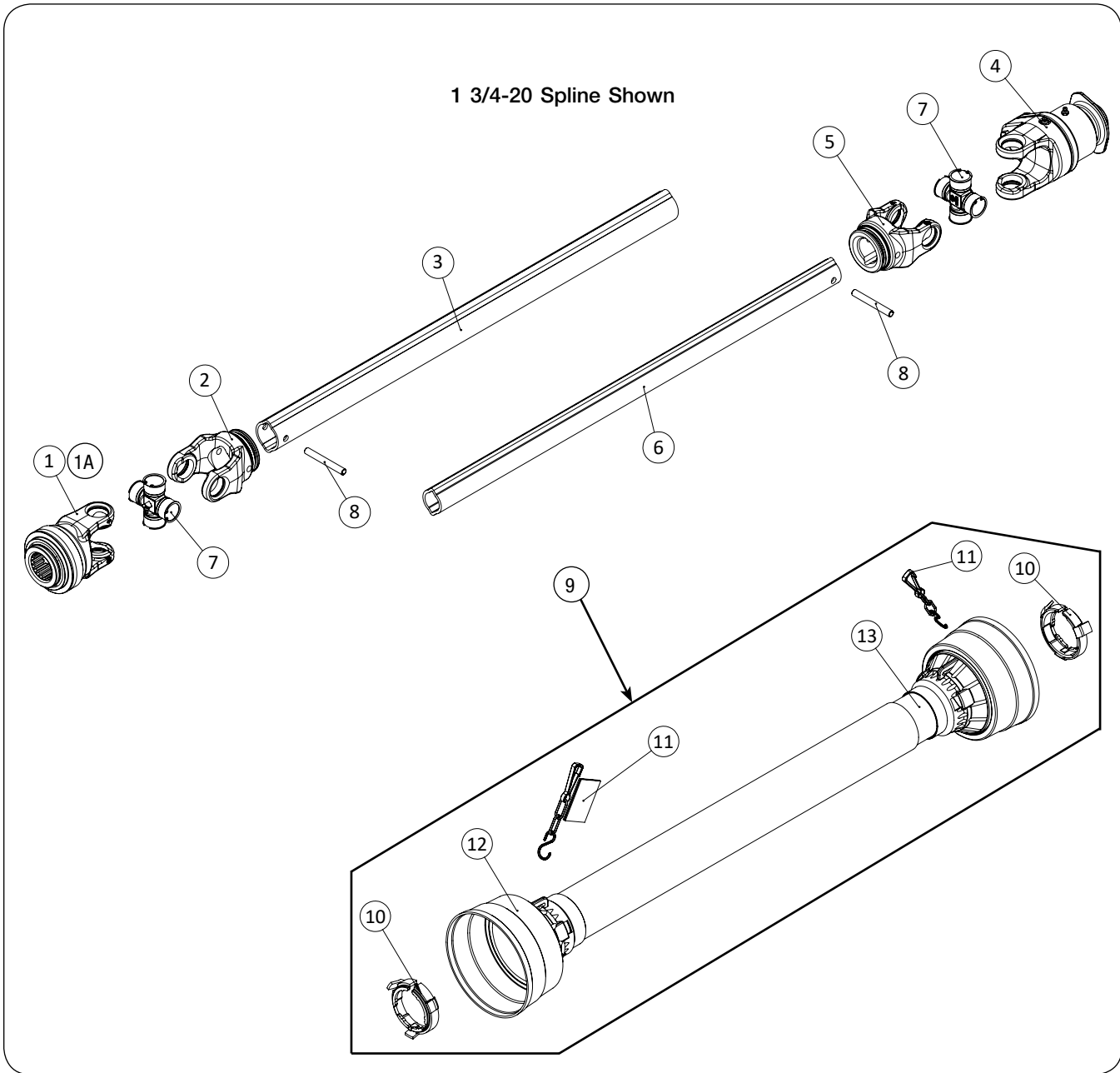
Wheels & Tires

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

STRAIGHT PLATE WHEELS				
ITEM	DESCRIPTION	PART NO.	QTY	NOTES
1	Wheel & Tire Assembly - Diamond Tread\ 30 x 32 / 900/65R32 R-3	17939SM/9500946	2	Includes Items 2, 8 & 9
2	Wheel Only - 30 x 32	17939SM	2	
3	Wheel & Tire Assembly - Diamond Tread\ 30 x 32 / 900/70R32 R-1	18904SM	2	Includes Items 2, 8 & 9
4	Wheel & Tire Assembly - Diamond Tread\ 36 x 32 / 1050/50R32 R-1W	110825SM/99478	2	Includes Items 5, 8 & 9
5	Wheel Only - 36 x 32	110825SM	2	
6	Wheel & Tire Assembly - Hi-Flotation\ 44 x 32 / 1250/50R32 R-1W	110803SM/9500992	2	Includes Items 7, 8 & 9
7	Wheel Only - 44 x 32	110803SM	2	
8	Valve Stem	93300	2	
9	Plug, Rim Hole	95365	2	

PTO Assembly Shearbolt Clutch - Serial Number B41380100 & Up

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



PTO Assembly Shearbolt Clutch - Serial Number B41380100 & Up

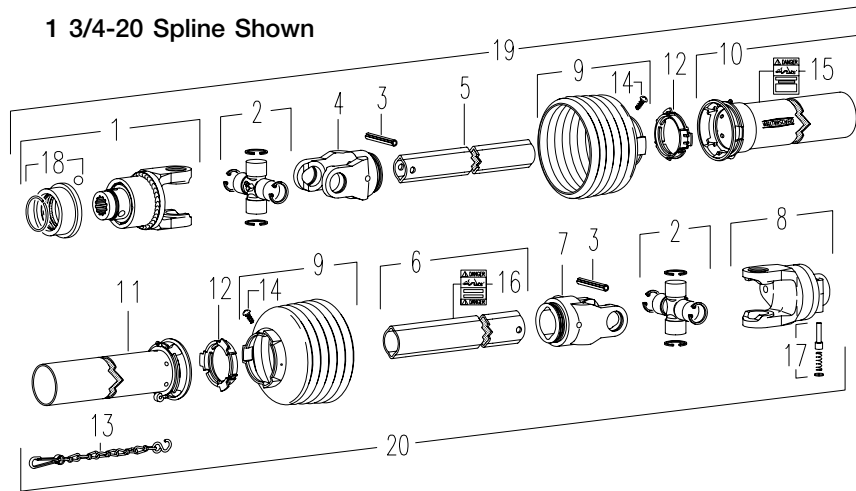
Please visit www.unverferth.com/parts/ for the most current parts listing.

ITEM	DESCRIPTION	PART NO.	QTY	NOTES
	PTO Assembly Complete	9008526	1	1 3/4"-20 Spline Includes Front and Rear Half Assemblies (Benzi America PTO)
	PTO Assembly Complete	9009253	1	1 3/8"-21 Spline (Optional) Includes Front and Rear Half Assemblies (Benzi America PTO)
	Driveline Front Half Assembly	9009248	1	1 3/4"-20 Spline Includes Items 1 - 3 and 7 - 13
		9009285	1	1 3/8"-21 Spline (Optional) Includes Items 1A - 3 and 7 - 13
	Driveline Rear Half Assembly	9009249	1	All Splines Includes Items 4 - 13
1	Yoke Assembly	9009033	1	1 3/4"-20 Spline
1A		9009254	1	1 3/8"-21 Spline
2	Outer Yoke	9009036	1	
3	Outer Profile Tube w/ Pin Hole	9009039	1	
4	End Yoke / Overrunning Clutch	9009034	1	
5	Inner Yoke	9009035	1	
6	Inner Profile Tube w/ Pin Hole	9009040	1	
7	U-Joint Cross Kit	9009037	1	
8	Tension Pin	9008794	1	
9	Safety Guard Assembly	9009041	1	Includes Items 10-13
10	Guarding Cone Retainer Clip Package	9009044	1	Package of 2
11	Chain	9009046	2	
12	Outer Guard Half	-	1	Not For Individual Sale. See Item 9
13	Inner Guard Half	-	1	Not For Individual Sale. See Item 9

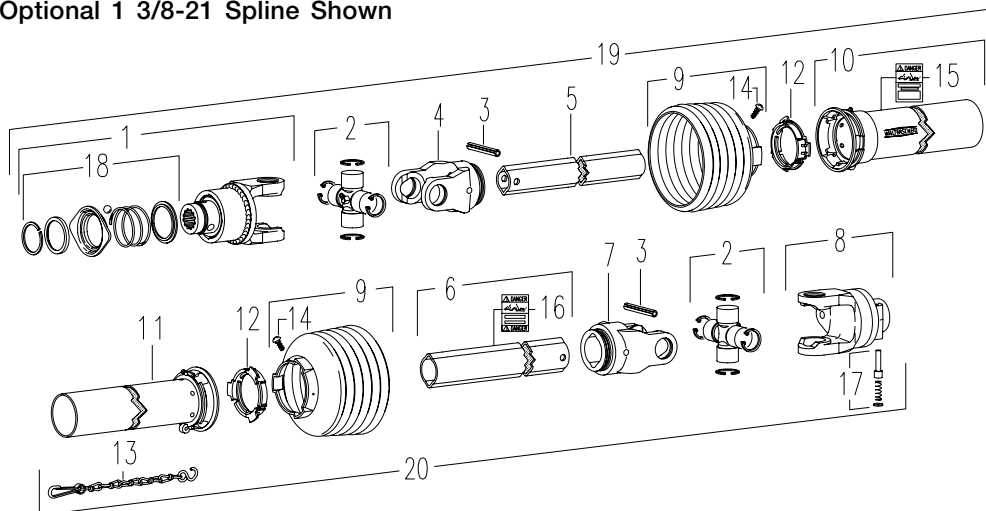
PTO Assembly Shearbolt Clutch - Serial Number B41380099 & Lower

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

1 3/4-20 Spline Shown



Optional 1 3/8-21 Spline Shown



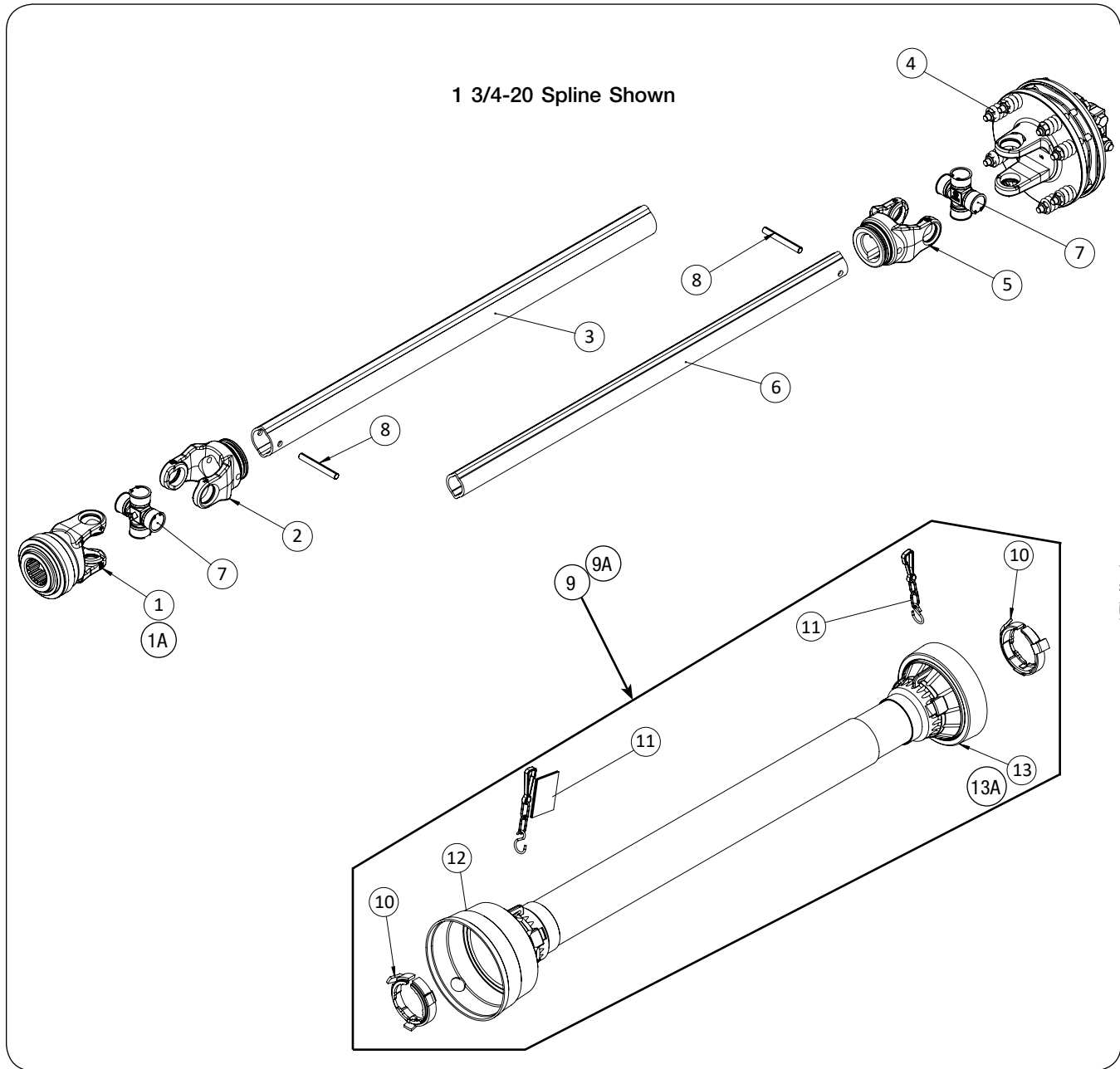
PTO Assembly Shearbolt Clutch - Serial Number B41380099 & Lower

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

ITEM	DESCRIPTION	PART NO.	QTY	NOTES
	PTO Assembly Complete	9004767	1	1 3/4-20 Spline (GKN Walterscheid PTO)
	PTO Assembly Complete	9004766	1	1 3/8-21 Spline (Optional) (GKN Walterscheid PTO)
1	End Yoke / Overrunning Clutch	9004778	1	1 3/4-20 Spline
	End Yoke / Overrunning Clutch	9004777	1	1 3/8-21 Spline (Optional)
2	Cross & Bearing Kit	93857	2	
3	Spring Pin	93859	2	
4	Front Inboard Yoke	93858	1	
5	Inner Profile	9004274	1	
6	Outer Profile	94837	1	
7	Rear Inboard Yoke	93862	1	
8	Shear Clutch Complete	9004170	1	1 3/8-21 Spline
9	Shield Cone, Black 6-Rib	93863	2	
10	Outer Shield Tube w/Cap	94839	1	
11	Inner Shield Tube w/Cap	94840	1	
12	Bearing Ring	92373	2	
13	Safety Chain	92374	1	
14	Screw	92372	2	
15	Decal, "Danger / Out"	92377	1	
16	Decal, "Danger / Inn"	92378	1	
17	Quick Disconnect Kit for Shear Clutch	92362	1	
18	Quick Disconnect Kit for Overrunning Clutch	93856	1	1 3/4-20 Spline
	Quick Disconnect Kit for Clutch	92393	1	1 3/8-21 Spline (Optional)
19	Front Half PTO for Shear Clutch	9004771	1	1 3/4-20 Spline
	Front Half PTO for Shear Clutch	9004770	1	1 3/8-21 Spline (Optional)
20	Rear Half PTO / Shear Clutch	9004136	1	

PTO Assembly Friction Clutch - Serial Number B41380100 & Up

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



PTO Assembly Friction Clutch - Serial Number B41380100 & Up

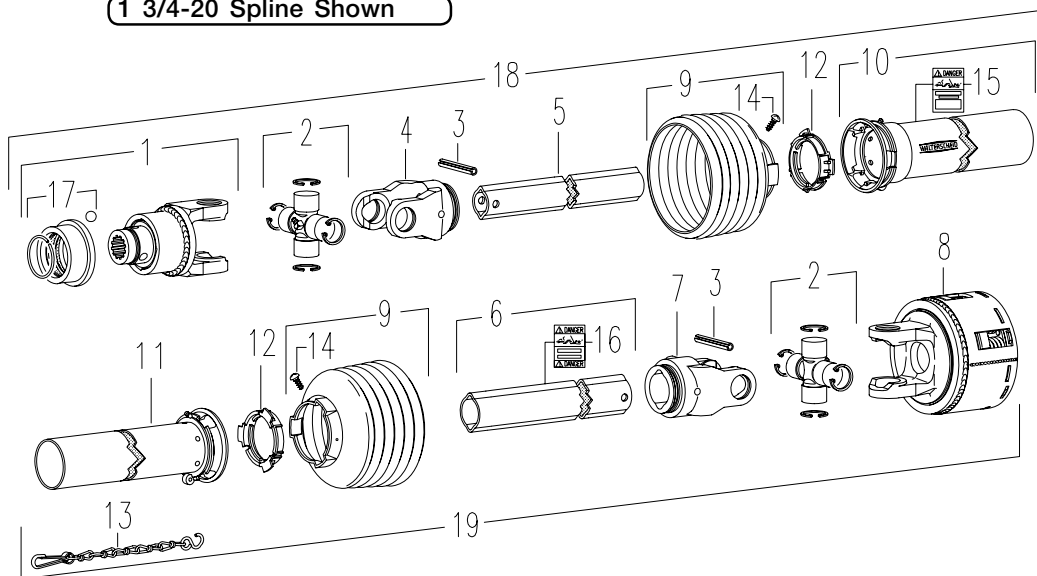
Please visit www.unverferth.com/parts/ for the most current parts listing.

ITEM	DESCRIPTION	PART NO.	QTY	NOTES
	PTO Assembly Complete	9009258	1	1 3/4"-20 Spline Includes Front and Rear Half Assemblies (Benzi America PTO)
	PTO Assembly Complete	9009257	1	1 3/8"-21 Spline Includes Front and Rear Half Assemblies (Benzi America PTO)
	Driveline Front Half Assembly	9009248	1	1 3/4"-20 Spline Includes Items 1 - 3 and 7 - 13
		9009285	1	1 3/8"-21 Spline (Optional) Includes Items 1A - 3 and 7 - 13
	Driveline Rear Half Assembly	9009287	1	All Splines Includes Items 4 - 9A, 10 - 12, & 13A
1	Yoke Assembly	9009033	1	1 3/4"-20 Spline
1A		9009254	1	1 3/8"-21 Spline
2	Outer Yoke	9009036	1	
3	Outer Profile Tube w/ Pin Hole	9009039	1	
4	Friction Clutch with Overrunning Clutch	9009256	1	For SN B41380100 & Up
5	Inner Yoke	9009035	1	
6	Inner Profile Tube w/ Pin Hole	9009040	1	
7	U-Joint Cross Kit	9009037	1	
8	Tension Pin	9008794	1	
9	Safety Guard Assembly	9009041	1	Includes Items 10-13
9A		9009286	1	Includes Items 10-13A
10	Guarding Cone Retainer Clip Package	9009044	1	Package of 2
11	Chain	9009046	2	
12	Outer Guard Half	-	1	Not For Individual Sale. See Item 9
13	Inner Guard Half	-	1	Not For Individual Sale. See Item 9
13A		9009288	1	

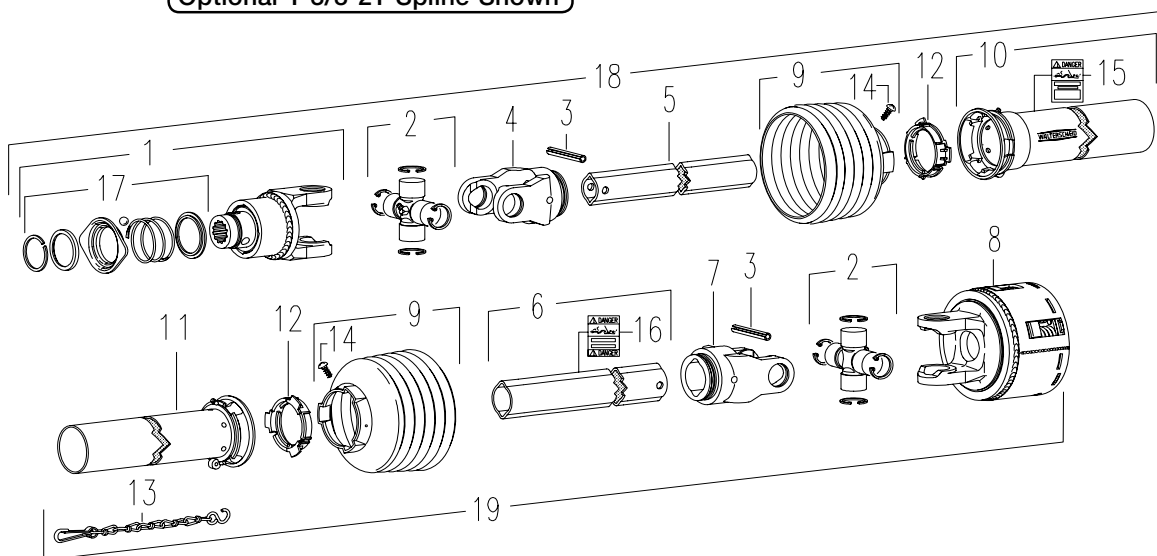
PTO Assembly Friction Clutch - Serial Number B41380099 & Lower

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

1 3/4-20 Spline Shown



Optional 1 3/8-21 Spline Shown



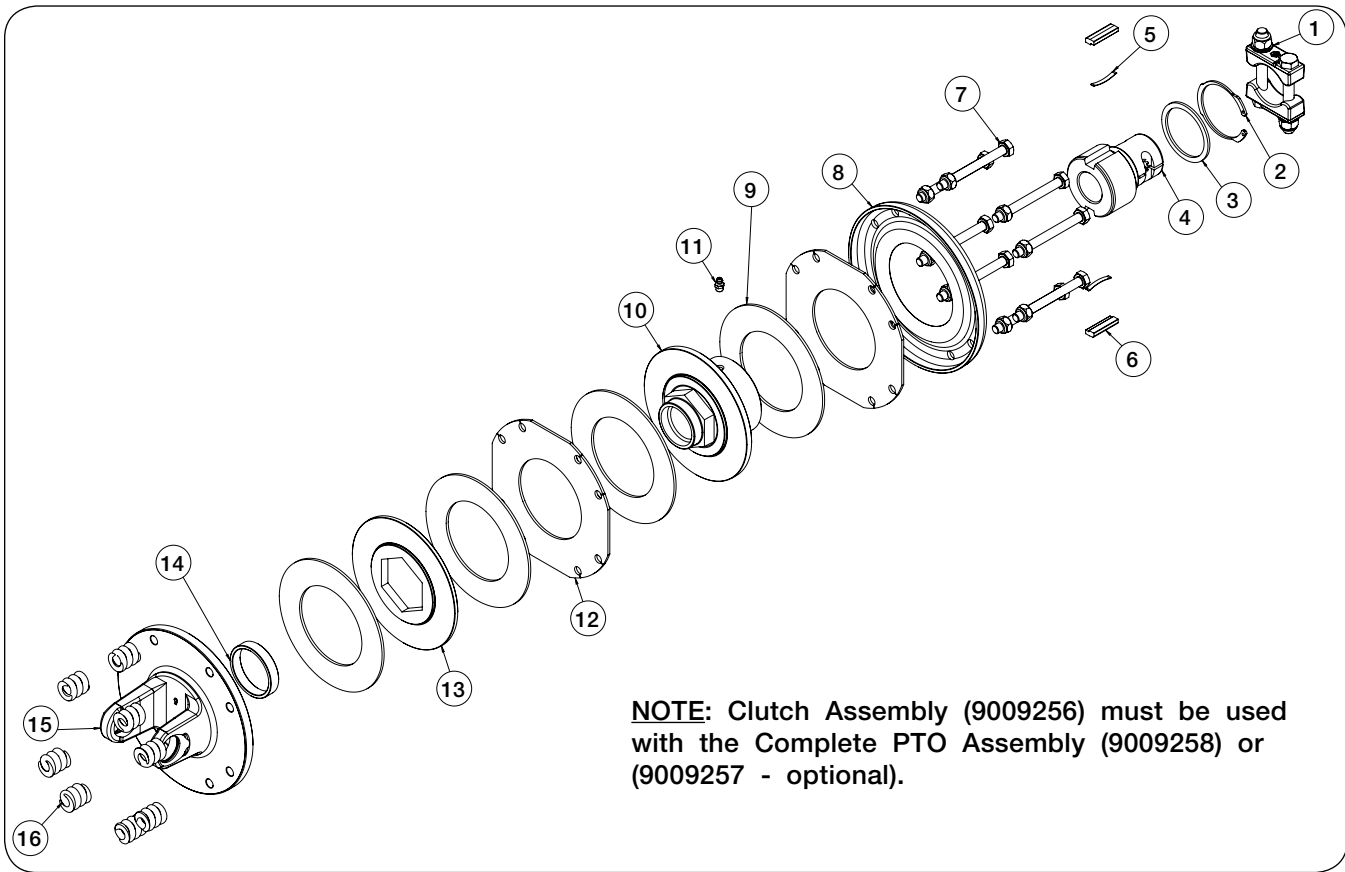
PTO Assembly Friction Clutch - Serial Number B41380099 & Lower

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

ITEM	DESCRIPTION	PART NO.	QTY	NOTES
	PTO Assembly Complete	9004769	1	1 3/4-20 Spline (GKN Walterscheid PTO)
	PTO Assembly Complete	9004768	1	1 3/8-21 Spline (Optional) (GKN Walterscheid PTO)
1	End Yoke / Overrunning Clutch	9004778	1	1 3/4-20 Spline
	End Yoke / Overrunning Clutch	9004777	1	1 3/8-21 Spline (Optional)
2	Cross & Bearing Kit	93857	2	
3	Spring Pin	93859	2	
4	Front Inboard Yoke	93858	1	
5	Inner Profile	9004274	1	
6	Outer Profile	94837	1	
7	Rear Inboard Yoke	93862	1	
8	Friction Clutch Complete	9004275	1	1 3/8-21 Spline
9	Shield Cone, Black 6-Rib	93863	2	
10	Outer Shield Tube w/Cap	94839	1	
11	Inner Shield Tube w/Cap	94840	1	
12	Bearing Ring	92373	2	
13	Safety Chain	92374	1	
14	Screw	92372	2	
15	Decal, "Danger / Out"	92377	1	
16	Decal, "Danger / Inn"	92378	1	
17	Quick Disconnect Kit for Overrunning Clutch	93856	1	1 3/4-20 Spline (ONLY)
	Quick Disconnect Kit for Clutch	92393	1	1 3/8-21 Spline (ALL)
18	Front Half PTO	9004771	1	1 3/4-20 Spline
	Front Half PTO	9004770	1	1 3/8-21 Spline (Optional)
19	Rear Half PTO / Friction	9004212	1	

Friction Clutch Assembly - Serial Number B41380100 & Up

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



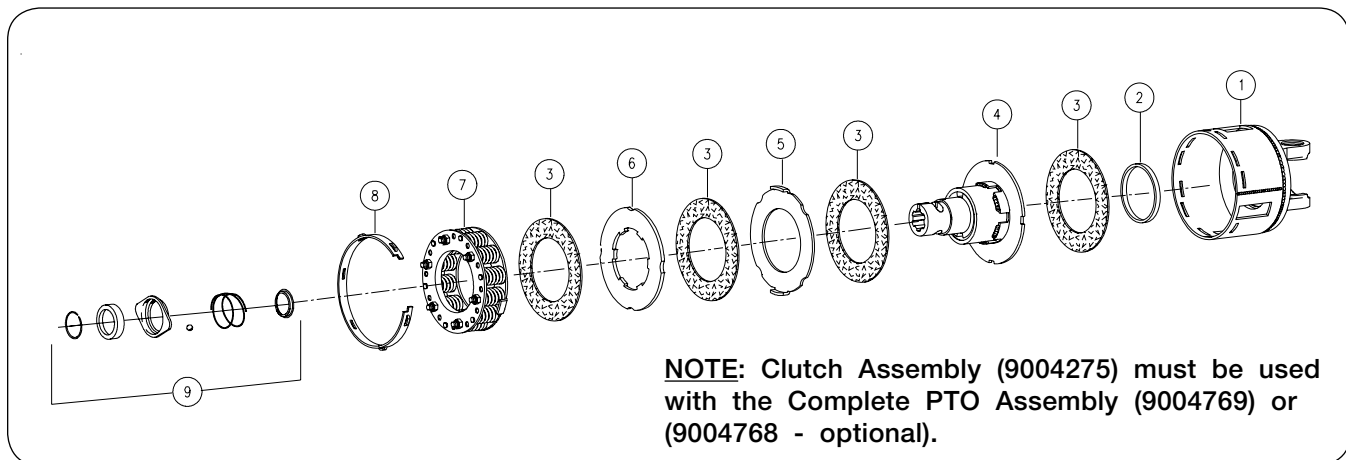
NOTE: Clutch Assembly (9009256) must be used with the Complete PTO Assembly (9009258) or (9009257 - optional).

NOTE: The clutch is preset at the factory and should not require adjustment. See "PTO Locking Systems" in the MAINTENANCE section for specific clutch information.

ITEM	DESCRIPTION	PART NO.	QTY	NOTES
	Friction Clutch with Overrunning Clutch	9009256	1	For SN B41380100 & Up Includes Items 1 - 16 (Benzi America PTO)
1	Clamp Bridge Kit	9009325	1	
2	Circlip	9009333	1	
3	Hub Washer	9009334	1	
4	Overrunning Clutch Hub	9009335	1	
5	Spring Assembly	9009330	1	Includes Leaf Springs and Torque Limiter Keys
6				
7	Bolt Set - M10 x 100 mm	9009338	8	
8	Friction Clutch Pressure Plate	9009339	1	
9	Friction Disk	9009340	4	
10	Hub Housing w/ Flange	9009349	1	
11	Grease Zerk, M8 x 1	9008788	1	
12	Friction Clutch Inner Plate	9009344	2	
13	Drive Plate w/ Hexagon	9009345	1	
14	Compression Spring Bushing	9009346	1	
15	Friction Clutch Flange Yoke	9009347	1	
16	Compression Spring	9009348	8	

Friction Clutch Assembly - Serial Number B41380099 & Lower

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

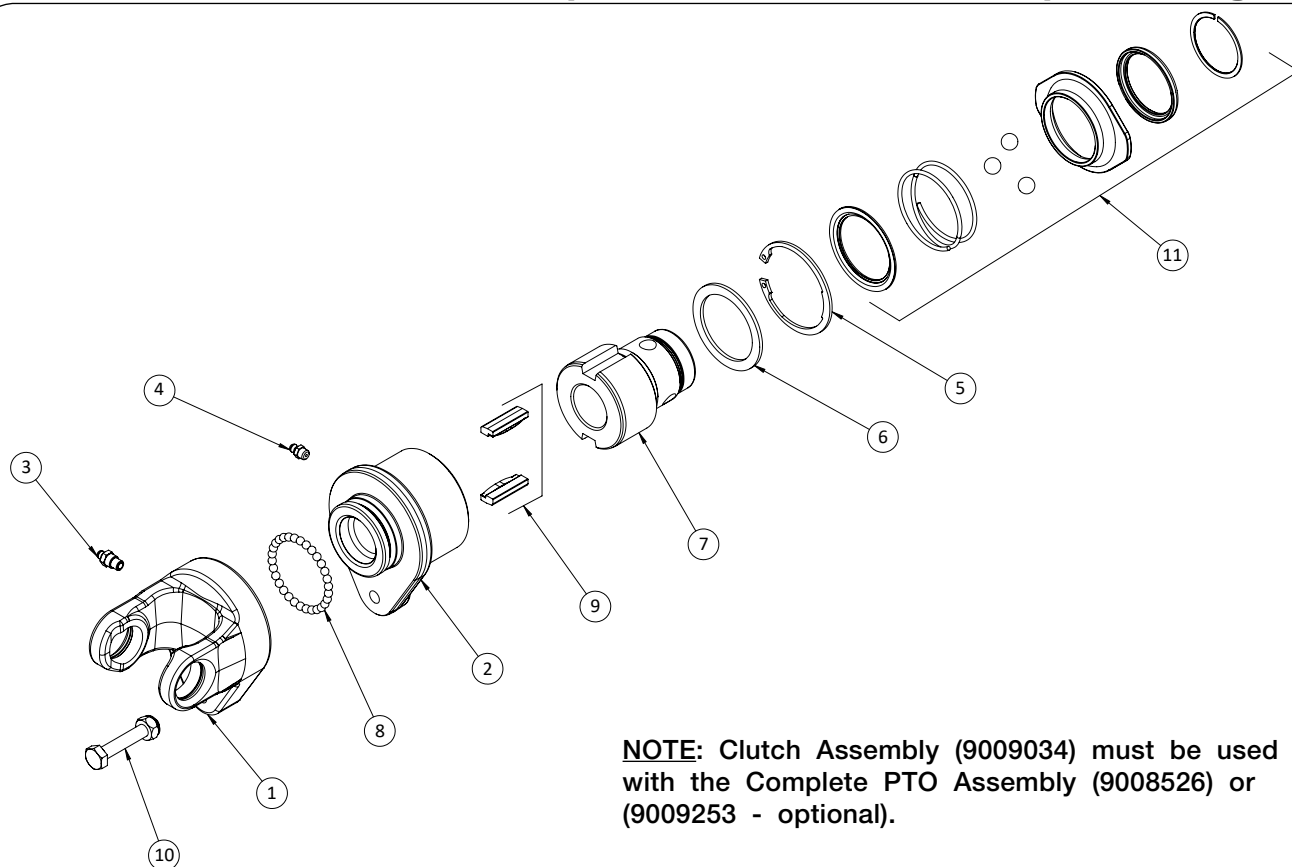


NOTE: The clutch is preset at the factory and should not require adjustment. See “PTO Quick Disconnect” in the MAIN-TENANCE section for specific clutch information.

ITEM	DESCRIPTION	PART NO.	QTY	NOTES
	Complete Clutch	9004275	1	For SN B41380099 & Lower Includes Items 1 - 9 (GKN Walterscheid Clutch)
1	Clutch Housing	9004276	1	
2	Ring	9002770	1	
3	Friction Disk	9002771	4	
4	Hub	9004277	1	
5	Drive Plate	9002780	1	
6	Drive Plate	9002781	1	
7	Spring Pack	9002782	1	
8	Setting Ring	9002783	1	
9	Quick Connect Flange Kit	92393	1	

Shear-Bolt Clutch - Serial Number B41380100 & Up

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



NOTE: Clutch Assembly (9009034) must be used with the Complete PTO Assembly (9008526) or (9009253 - optional).

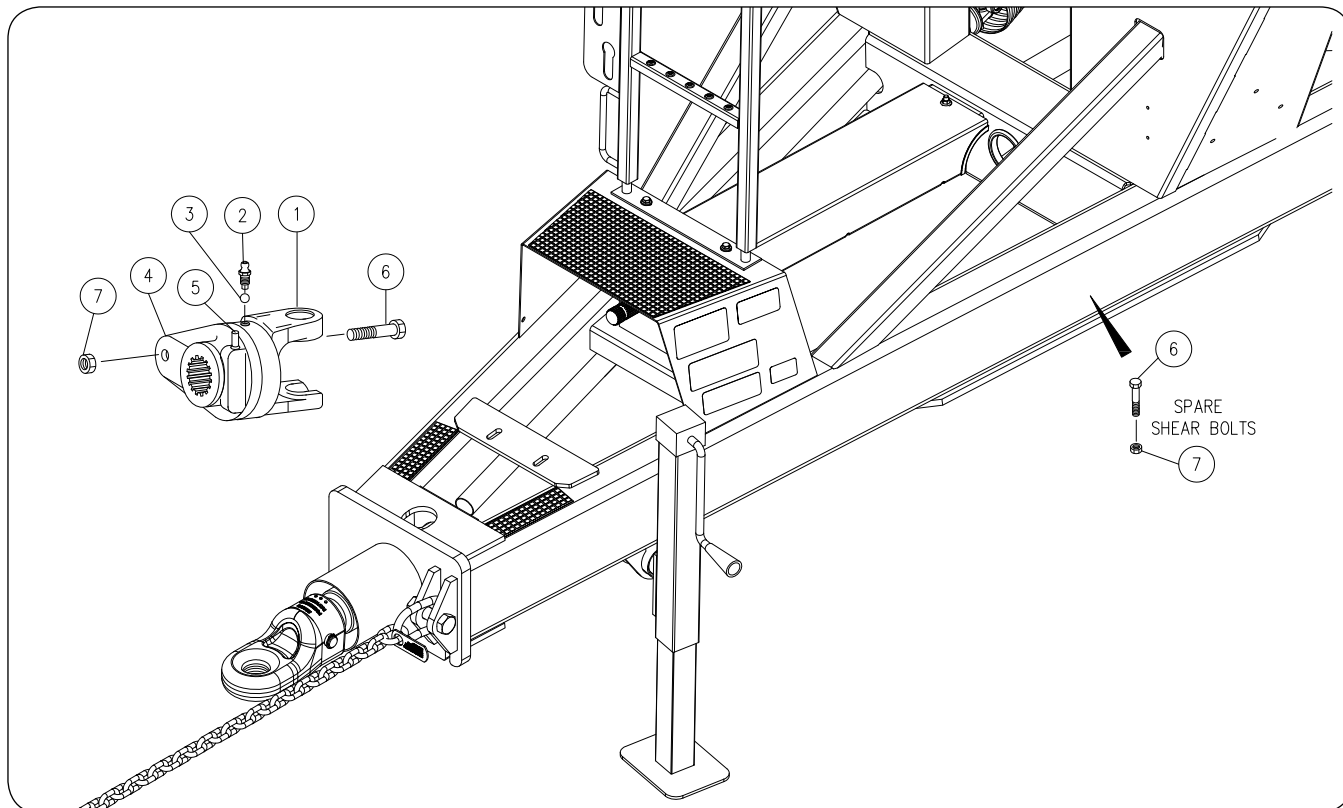
IMPORTANT

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

ITEM	DESCRIPTION	PART NO.	QTY	NOTES
	Shear-Bolt Clutch	9009034	1	For SN B41380100 & Up Includes Items 1 - 11 (Benzi America Clutch)
1	Flange Yoke - Shear Bolt	9009322	1	
2	Hub Housing with Welded Flange	N/A	1	
3	Grease Zerk, M10 x 1	9009324	1	
4	Grease Zerk, M8 x 1	9008788	1	
5	Circlip	9009326	1	
6	Shim	9009327	1	
7	Overrunning Clutch Hub	9009328	1	
8	Ball Bearing	9009329	30	
9	Spring Pack, Overrunning Clutch	9009330	1	
10	Capscrew, M10-1.5P x 60 mm C8.8	94916-061	1	
	Lock Nut, M10-1.5P	9003645	1	
11	Quick Disconnect Kit	9009332	1	

Shear-Bolt Clutch - Serial Number B41380099 & Lower

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



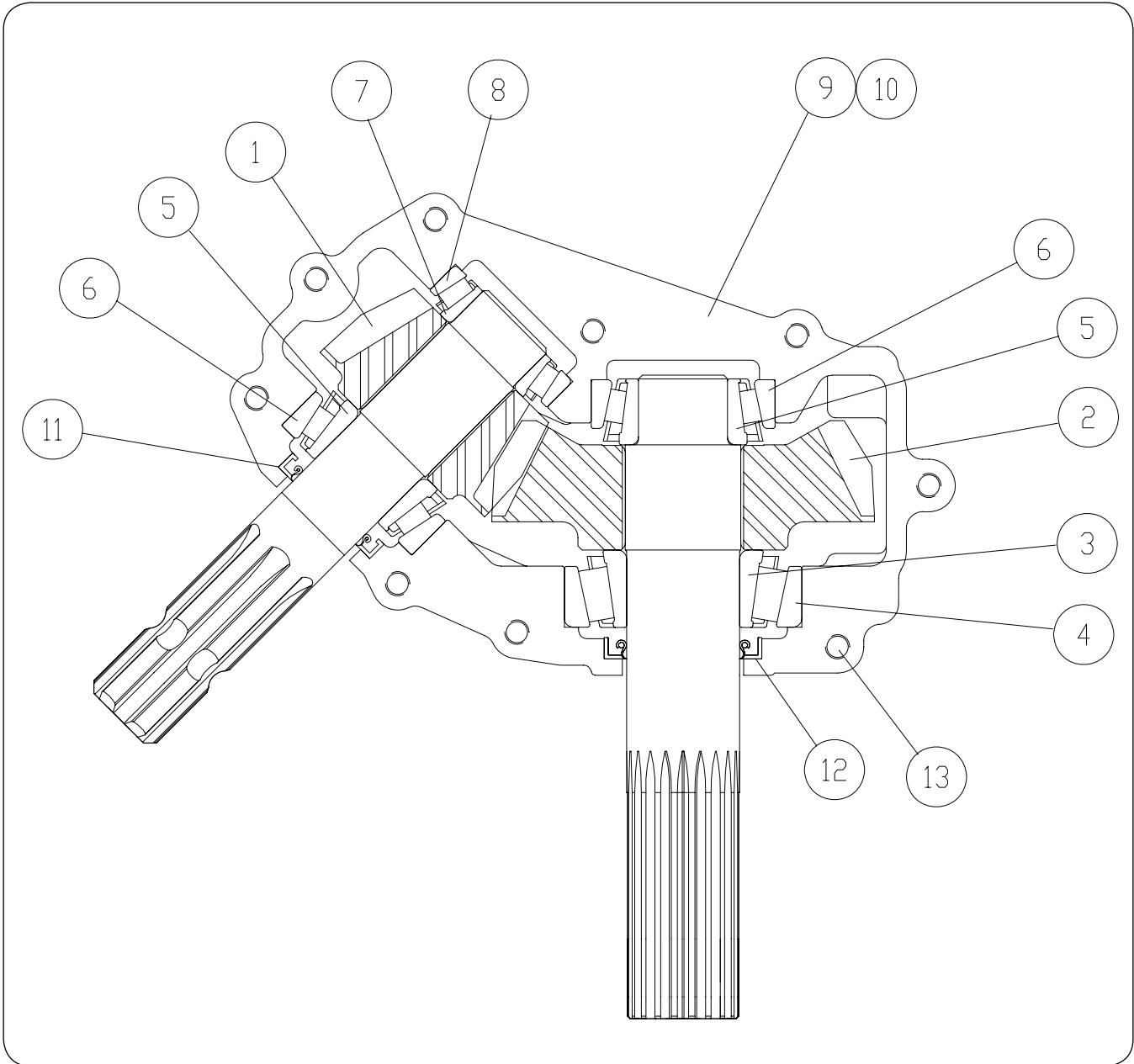
IMPORTANT

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

ITEM	DESCRIPTION	PART NO.	QTY	NOTES
	Shear-Bolt Clutch	9004170	1	For SN B41380099 & Lower Includes Items 1 - 7 (GKN Walterscheid Clutch)
1	Shear Yoke	9003710	1	
2	Grease Zerk	95256	1	
3	Ball	95257	24	
4	Housing, Splined	9003884	1	
5	Quick Disconnect Pin Kit	92362	1	
6	Bolt, M10 x 60 Gr. 10.9	94910-015	1	Qty. 6 in holder - See note*
7	Locknut, M10	9003645	1	Qty. 6 in holder - See note*

45 Degree Gearbox

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



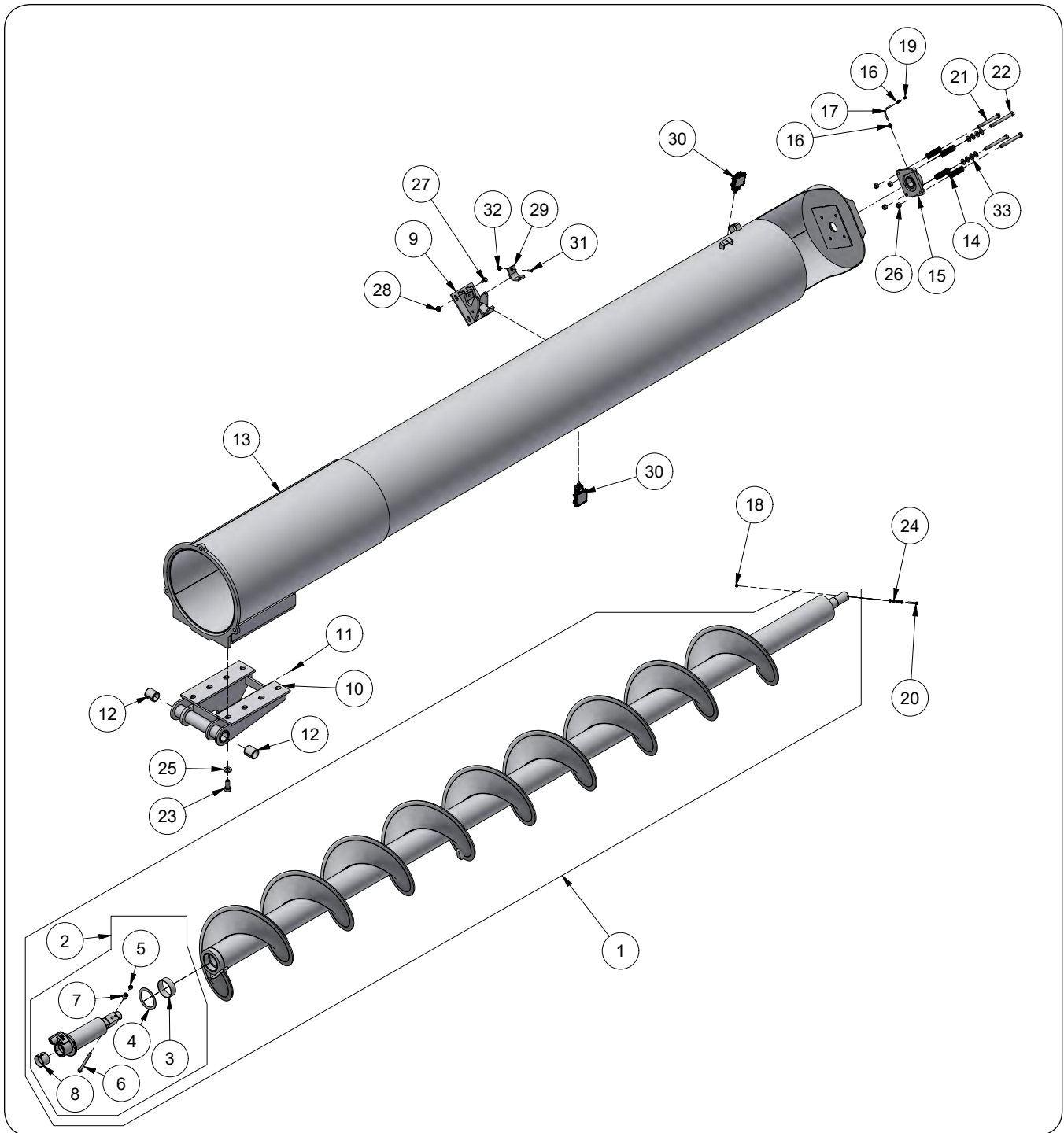
45 Degree Gearbox

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

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

Upper Auger Components

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



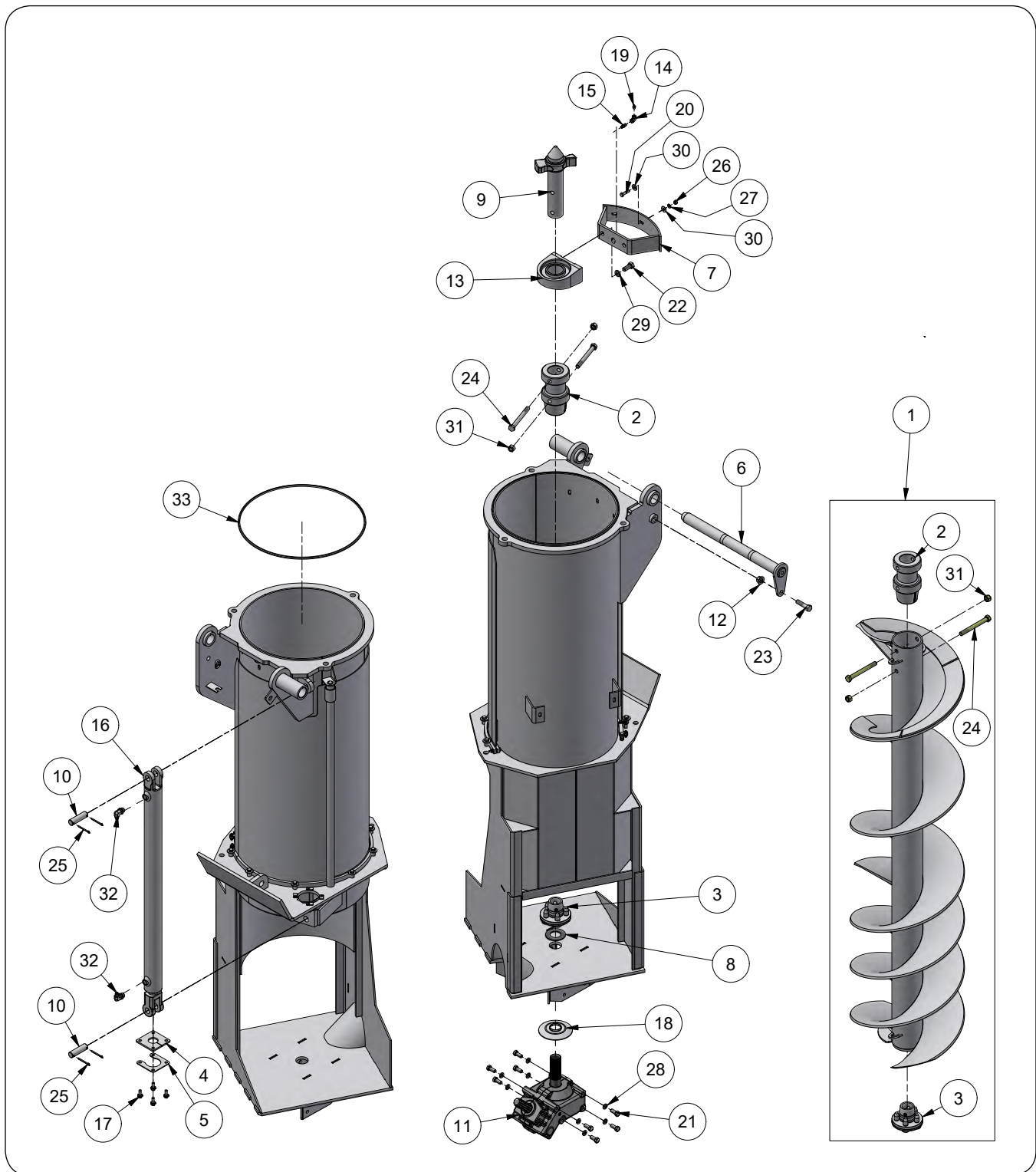
Upper Auger Components

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

ITEM	DESCRIPTION	PART NO.	QTY	NOTES
1	Upper Auger Weldment =Black=	281262	1	Includes Items 2-8
2	Soft-Start Kit	278086	1	Includes Items 3-8
	3 Self-Lubricating Bushing	9004877	1	
	4 Self-Lubricating Thrust Washer 5.25" Dia.	9004878	1	
	5 Capscrew, 1/2"-13UNC x 8" G5	9390-119	1	Replacement Kit #293428 Includes Items 5, 6, 7
	6 Locknut, 1/2"-13UNC	9800	1	
	7 Spacer Bushing	410511	1	
	8 Split Bushing, 2 3/4" OD x 2 1/2" ID x 2"	9003230	1	
	9	Auger Rest Weldment =Green=	268646G	1
Auger Rest Weldment =Red=		268646R		
10	Auger Pivot Assembly =Green=	2006282G	1	Includes Items 11 & 12
	Auger Pivot Assembly =Red=	2006282G		
11	Grease Zerk, 1/4-28	91160	1	
12	Bushing, 2.25" OD x 1.75" ID x 2 1/2"	9004980	2	
13	Upper Auger Tube Weldment =Green=	287962G	1	Beginning with Serial #B37320100
	Upper Auger Tube Weldment =Red=	287962R		
	Upper Auger Tube Weldment =Green=	287963G		Prior to Serial #B37320100
	Upper Auger Tube Weldment =Red=	287963R		
14	Compression Spring, 1.207 OD	9001812	4	
15	Flanged Bearing, 2" Dia. With Grease Zerk	9002492	1	
16	Quickline Fitting	9005073	2	
17	Nylon Tube, 1/4" OD	9005074	1	
18	Locknut, 5/16"-18UNC	901527	1	
19	Grease Zerk, 1/8 NPT	93426	2	
20	Capscrew, 5/16"-18UNC x 2 3/4" G5	9390-037	1	
21	Capscrew, 5/8"-11UNC x 6" G5	9390-136	4	
22	Capscrew, 5/8"-11UNC x 6 1/2" G5	9390-137	2	
23	Capscrew, 7/8"-9UNC x 2" G5	9390-164	8	
24	Flat Washer, 5/16" SAE	9405-068	4	
25	Flat Washer, 7/8" Nom.	97041	8	
26	Locknut, 5/8"-11UNC	9801	6	
27	Flange Screw, 1/2"-13UNC x 1 1/4" G5	91266	4	
28	Flange Nut, 1/2"-13UNC G5	91267	4	
29	Rubber Stop Pad, 3/8" x 2" x 5"	9004263	1	
30	Work Light, LED	9008957	2	
31	Flat Head, 5/16"-18UNC x 1 1/4" Phillips Machine Screw	903171-662	2	
32	Large Flange Hex Nut, 5/16"-18UNC G5	91257	4	
33	Flat Washer, 5/8" SAE	9405-098	8	

Lower Auger Components

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



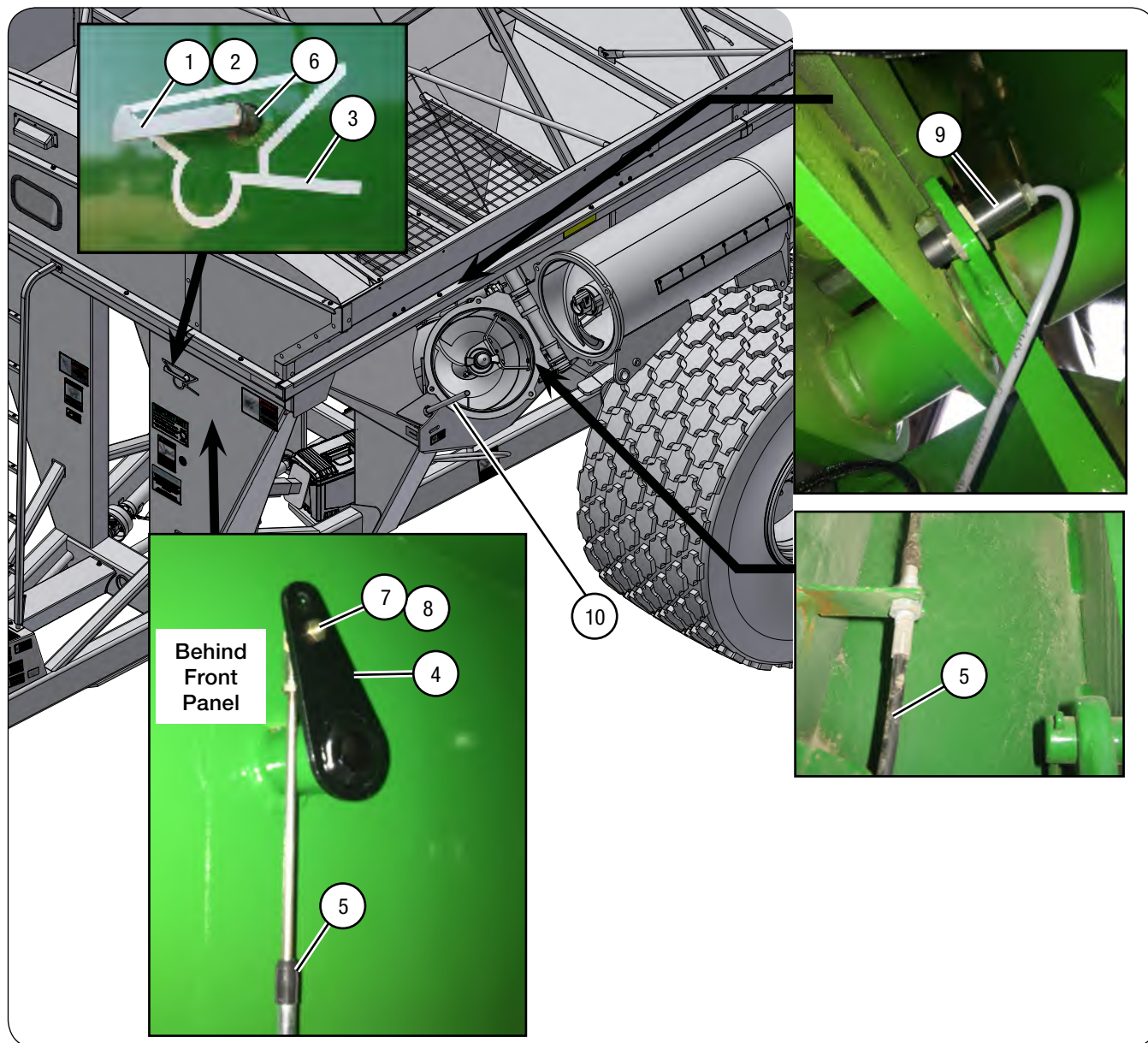
Lower Auger Components

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

ITEM	DESCRIPTION	PART NO.	QTY	NOTES
1	Lower Auger Kit	281578-SER	1	Includes Flighting & Items 2, 3, 24, 31
2	Adapter, 4.75" Dia. x 8"	281209B	1	
3	Drive Plate Assembly - 5 Pin	286436	1	
	Drive Pin, 0.763" Dia. x 2"	9007000	5	
	Spiral Pin, 1/2" Dia. x 2 1/4"	902614-236	1	
4	Rubber Gasket, 1/4" x 4" x 4"	268217	1	
5	Cover Plate	268218	1	
6	Shaft & Plate Weldment	268946	1	
7	Hanger Bearing Weldment	281502B	1	
8	Spacer Washer	286083	1	
9	Double Lobe Drive Dog Weldment	288811	1	
10	Pin, 1" Dia. x 3 1/2"	804572	6	
11	Gearbox 45°	9002812	1	
12	Locknut, 5/8"-11UNC	9003398	1	
13	Pillow Block Bearing, 2 1/2" Bore	9004731	1	
14	90° Elbow, 1/8" Female	9004764	1	
15	Nipple 1/8 NPTF Male x 1/8 NPTF Male Hex Pipe	9004765	1	
16	Flow Door Cylinder, 2 1/2" x 36" (3000 PSI)	9005363	1	
17	Screw/Large Flange, 3/8"-16UNC x 1" G5	91262	4	
18	Dust Cover for Gearbox	92805B	1	
19	Grease Zerk 1/8 NPT	93426	2	
20	Capscrew, 3/8"-16UNC x 1 1/2" G5	9390-057	3	
21	Capscrew, 1/2"-13UNC x 1 1/2" G5	9390-100	8	
22	Capscrew, 5/8"-11UNC x 1 1/2" G5	9390-122	2	
23	Capscrew, 5/8"-11UNC x 2 1/2" G5	9390-126	1	
24	Capscrew, 5/8"-11UNC x 6" G5	9390-136	4	
25	Cotter Pin, 3/16" Dia. x 2"	9391-046	4	
26	Hex Nut, 3/8"-16UNC	9394-006	4	
27	Lock Washer, 3/8"	9404-021	9	
28	Lock Washer, 1/2"	9404-025	8	
29	Lock Washer, 5/8"	9404-029	2	
30	Flat Washer, 3/8"	9405-076	6	
31	Locknut, 5/8"-11UNC	9801	6	
32	90° Elbow 9/16-18 JIC Male x 3/4-16 O-Ring Male	9874	2	
33	Lower Auger Seal	296290	1	

Auger Fold Indicator

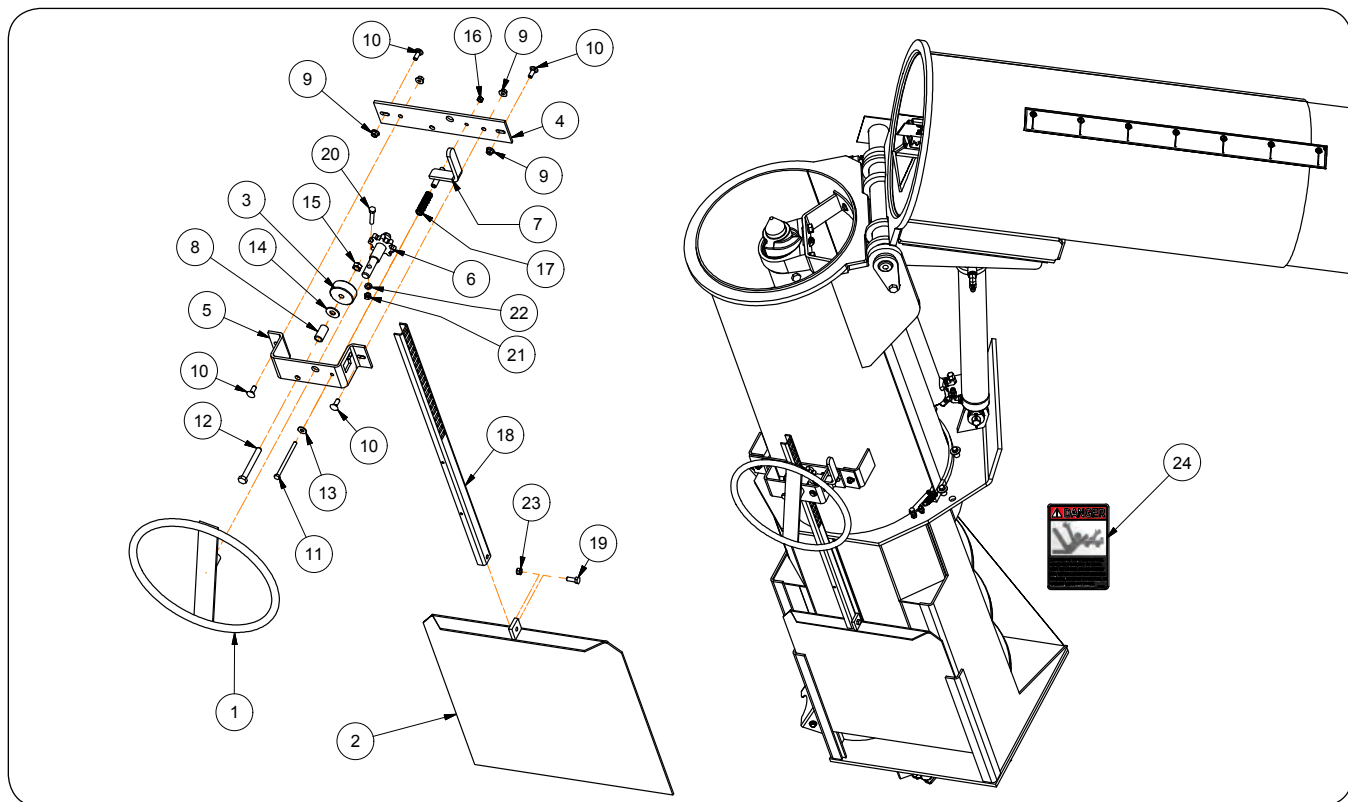
Please visit www.unverferth.com/parts/ for the most current parts listing.



ITEM	DESCRIPTION	PART NO.	QTY.	NOTES
1	Auger Indicator Weldment with Decal	280575	1	Includes Item #2
2	Decal, Auger Indicator	9005335	1	
3	Decal, Cart Profile	9004288	1	
4	Indicator Retainer Weldment	268671B	1	
5	Cable, Push/Pull 180"	9005382	1	
6	Set Screw, 5/16"-18UNC x 3/8"	9399-071	1	
7	Hex Nut, #10-32	9830-016	1	Grade 2
8	Lock Washer, #10	9404-013	1	
9	Proximity Switch	9007472	1	
10	Pipe Indicator	280606B	1	

Cleanout Door Assembly

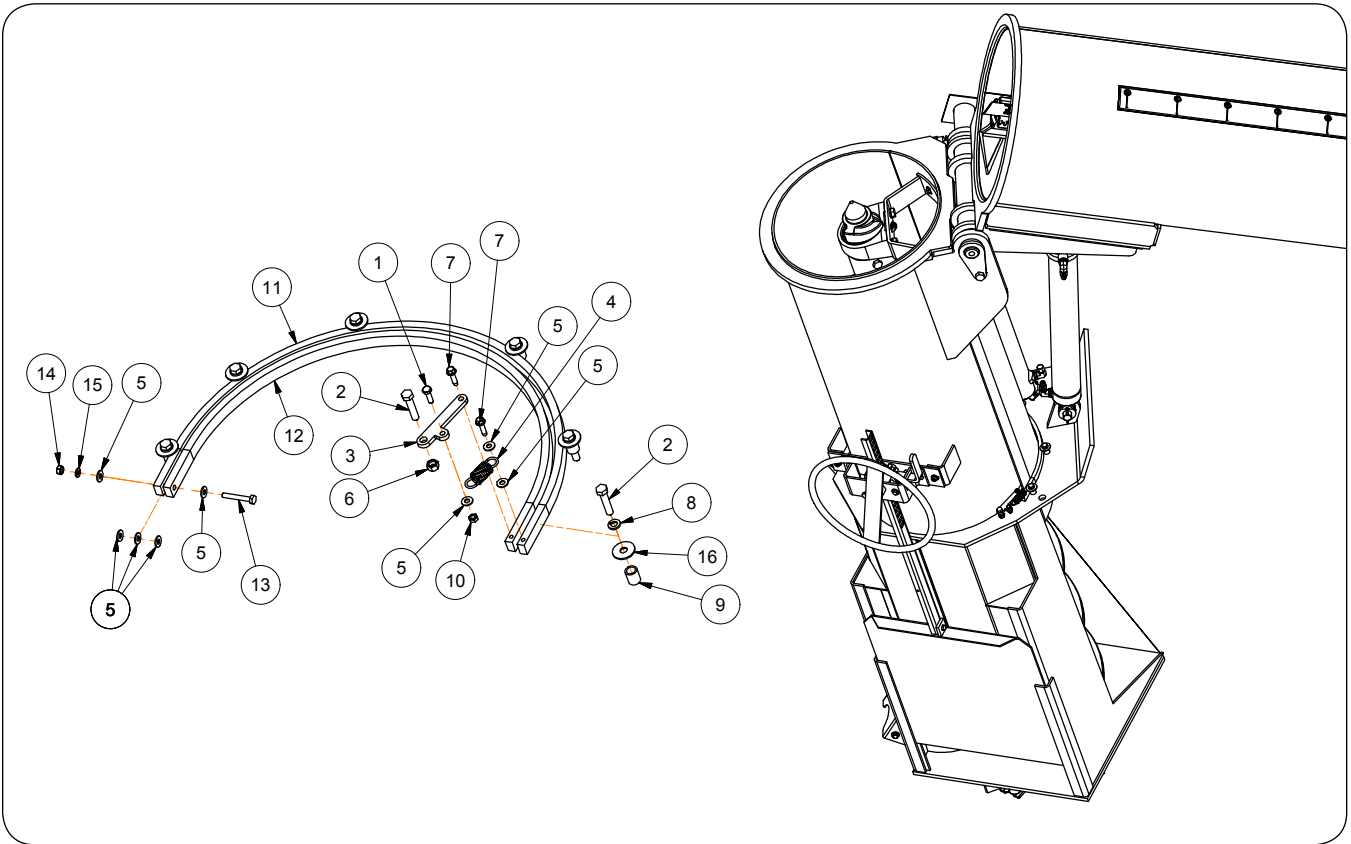
Please visit www.unverferth.com/parts/ for the most current parts listing.



ITEM	DESCRIPTION	PART NO.	QTY.	NOTES
1	Door Wheel Weldment	220060B	1	
2	Door Weldment	281015B	1	
3	Roller, Plastic	222118	1	
4	Plate, Back Door Lift	281059B	1	
5	Plate, Front Door Lift	281060B	1	
6	Shaft & Gear Weldment	281062	1	
7	Handle Weldment, Door	281109	1	
8	Bushing, Spacer	281145B	1	
9	Automation Locknut, 3/8"-16UNC	9003396	4	
10	Carriage Bolt, 3/8"-16UNC x 1" G5	9388-051	4	
11	Cap screw, 5/16"-18UNC x 4 1/2" G5	9390-043	1	
12	Cap screw, 1/2"-13UNC x 4" G5	9390-111	1	
13	Flat Washer, 5/16" USS	9405-070	1	
14	Flat Washer, 1/2"	9405-088	1	
15	Locknut, 1/2"-13UNC	94981	1	
16	Locknut, 5/16"-18UNC	9807	1	
17	Spring, Stop Pin	TA510035	1	
18	Rack	281105B	1	
19	Cap screw, 3/8"-16UNC x 1" G5	9390-055	1	
20	Cap screw, 3/8"-16UNC x 2" G5	9390-059	1	
21	Hex Nut, 3/8"-16UNC	9394-006	1	
22	Lock Washer, 3/8"	9404-021	1	
23	Locknut, 3/8"-16UNC	9928	1	
24	Decal, DANGER (Entanglement)	9003475	1	

Flow Door Seals

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



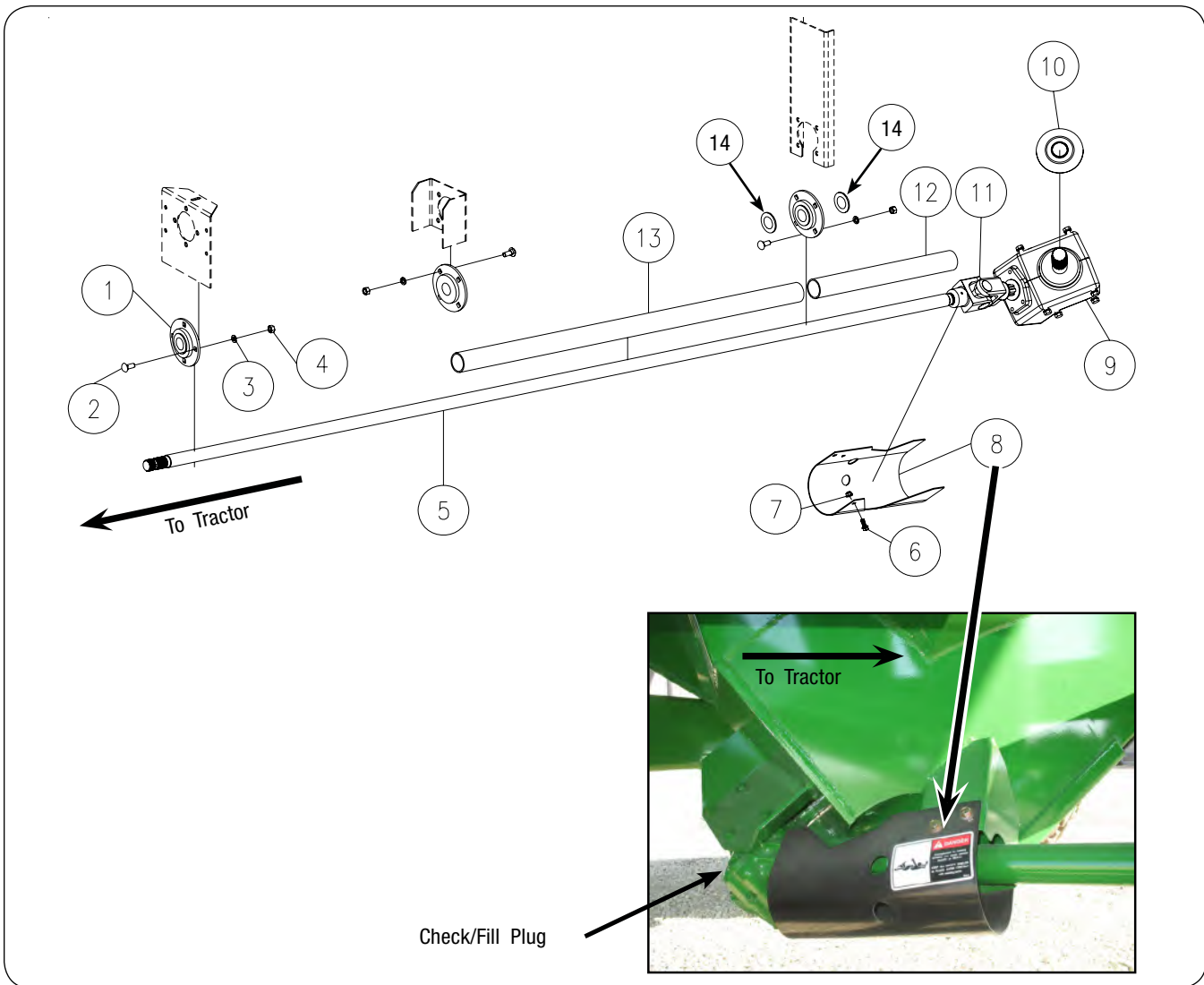
Flow Door Seals

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

ITEM	DESCRIPTION	PART NO.	QTY.	NOTES
1	Capscrew, 1/4"-20UNC x 7/8" G5	9390-004	1	
2	Capscrew, 3/8"-16UNC x 1 3/4" G5	9390-058	7	
3	Spring Bracket	281258	1	
4	Spring	9004375	1	
5	Flat Washer, 1/4"	9405-062	9	
6	Hex Nut, 3/8"-16UNC G5	9394-006	1	
7	Screw, 1/4"-20UNC x 1" (Self-Threading)	9004355	2	
8	Lock Washer, 3/8"	9404-021	6	
9	Spacer Bushing =Green=	281257G	6	
	Spacer Bushing =Red=	281257R		
10	Locknut/Top, 1/4"-20UNC	9936	1	
11	Seal - Poly	281256	1	
12	Seal - Poly	281255	1	
13	Capscrew, 1/4"-20UNC x 1 3/4" G5	9390-008	1	
14	Hex Nut, 1/4"-20UNC G5	9394-002	1	
15	Lock Washer, 1/4"	9404-017	1	
16	Flat Washer, 3/8"	9405-078	6	

Drive Components

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



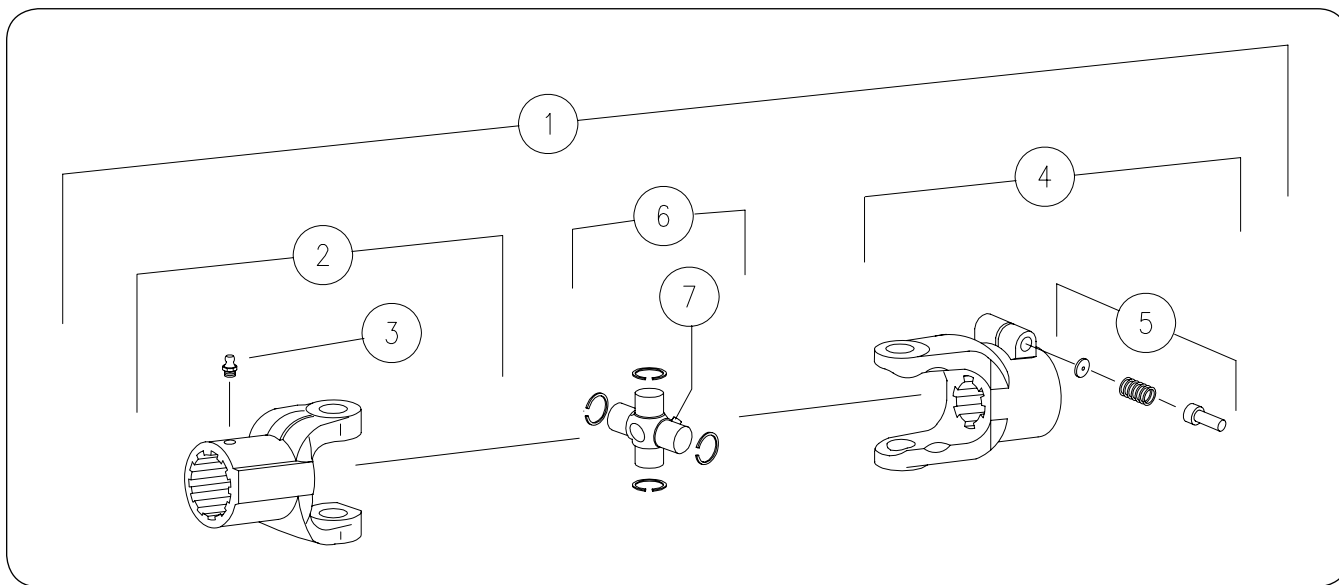
Drive Components

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

ITEM	DESCRIPTION	PART NO.	QTY.	NOTES
	Driveshaft Replacement Kit	289761	-	Includes Items: 1 - 5, 12, 13, & 9008676 One Piece Lock Collar
1	Flangette Bearing, 1 1/2"	9003920	3	
2	Carriage Bolt, 1/2"-13 x 1 1/4" G5	9388-103	12	
3	Lock Washer, 1/2"	9404-025	12	
4	Hex Nut, 1/2"-13UNC	9394-010	12	
5	Driveshaft Replacement Kit	289761	1	1 3/8-21 Splined
6	Screw/Large Flange, 3/8"-16 x 3/4"	95585	3	
7	Locknut, 3/8"-16UNC	9003396	3	Welded to Cover
8	U-Joint Cover	280160B	1	
9	Gearbox	9002812	1	Refer to "45 Degree Gearbox" in this Section for Parts Listing
10	Gearbox Dust Cover	92805B	1	
11	U-Joint Assy	95012	1	Refer to "Driveline U-Joint Assembly" in this Section for Parts Listing
12	Tube 2" SCH 40 x 21"	280158	1	
13	Tube 2" SCH 40 x 52"	280157	1	
14	Lock Collar, 1 1/2" Dia. One Piece Lock Collar	9008676	2	
	Lock Collar, 1 1/2" Dia. Two Piece Lock Collar	9008671		

Driveline U-Joint Assembly

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

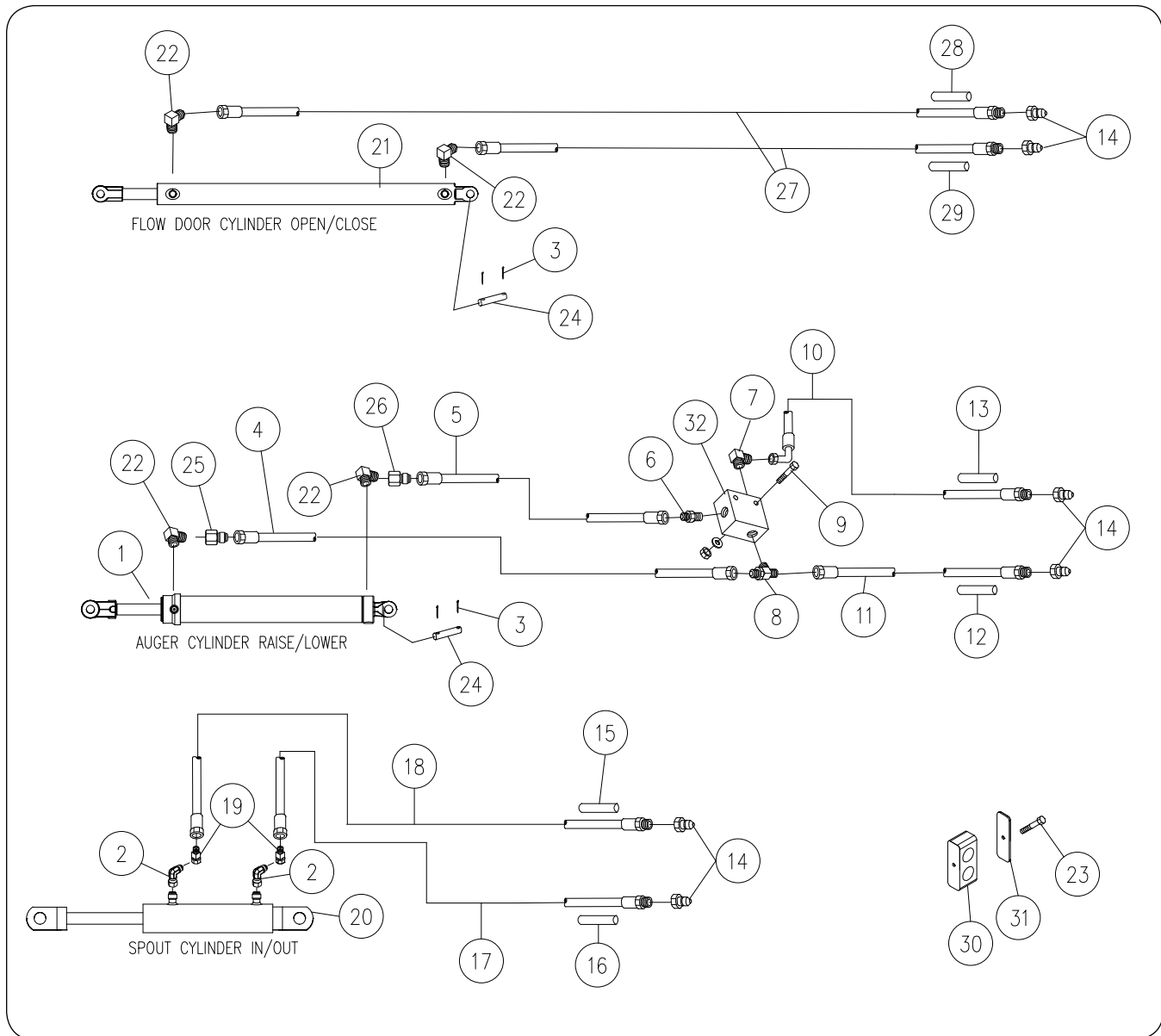


ITEM	DESCRIPTION	PART NO.	QTY.	NOTES
1	Complete U-Joint Assembly	95012	1	
2	Yoke	95010	1	
3	Grease Zerk, 1/4"-28 UNF	91160	1	
4	Yoke, 1 3/8-6 Spline	95011	1	
5	Quick Disconnect Pin Kit	92362	1	
6	Cross & Bearing Kit	93857	1	
7	Grease Zerk	92365	1	

Notes

Hydraulics

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



Unverferth 1160 — Parts

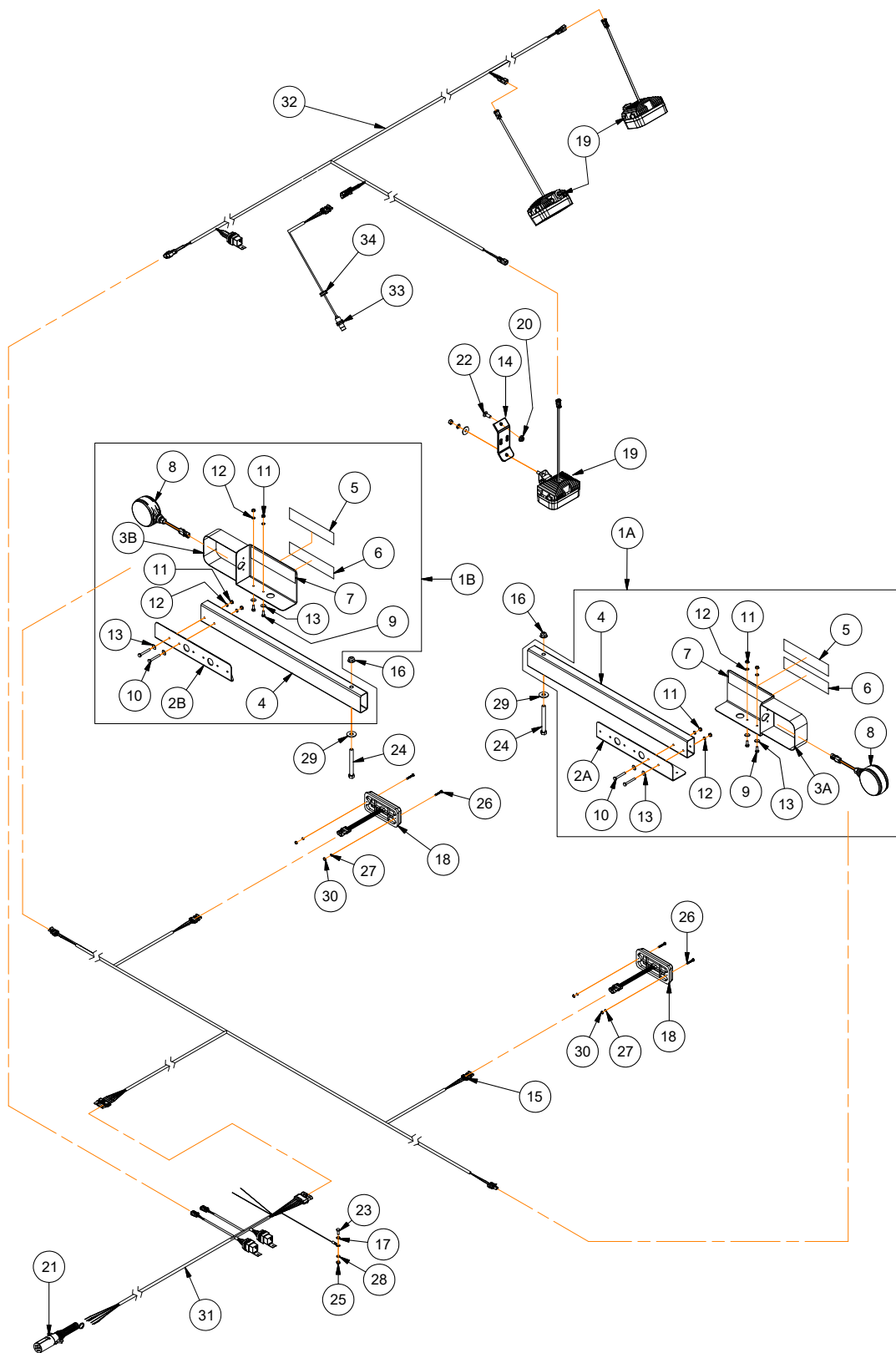
Hydraulics

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

ITEM	DESCRIPTION	PART NO.	QTY	NOTES
1	Cylinder, 3" x 22" (3000 PSI)	9004730	1	
	Auger Fold Seal Kit	9003772	-	
2	90° Elbow (9/16-18 JIC Female x 9/16-18 JIC Male)	9876	2	Beginning with Serial #B37320100 Prior to Serial #B37320100
	45° Elbow (9/16-18 JIC Female x 9/16-18 JIC Male)	9001041		
3	Cotter Pin, 3/16" Dia. x 2"	9391-046	4	
4	Hose, 1/4" x 94" (9/16-18 JIC Female x 9/16-18 JIC Female)	9003275	1	
5	Hose, 1/4" x 75" (9/16-18 JIC Female x 9/16-18 JIC Female)	9003343	1	
6	Adapter (9/16-18 JIC Male x 9/16-18 O-Ring Male)	9001495	1	
7	90° Elbow (9/16-18 JIC Male x 9/16-18 O-Ring Male)	97445	1	
8	Tee (9/16-18 JIC Male x 9/16-18 O-Ring Male x 9/16-18 JIC Male)	9001710	1	
9	Capscrew, 5/16"-18UNC x 2" G5	9390-034	4	Grade 5
	Lock Washer, 5/16"	9404-019	2	
	Hex Nut, 5/16"-18UNC	9394-004	4	
10	Hose, 1/4" x 238" (90° Elbow 9/16-18 JIC Female x 3/4-16 O-Ring Male)	9003144	1	
11	Hose, 1/4" x 239" (9/16-18 JIC Female x 3/4-16 O-Ring Male)	9003210	1	
12	Sleeve, Hose Marker (GREEN, Auger Lower)	9003998	1	
13	Sleeve, Hose Marker (GREEN, Auger Raise)	9003997	1	
14	Male Coupler 3/4-16 Female O-Ring	91383	6	
15	Sleeve, Hose Marker (YELLOW, Spout In)	9004000	1	
16	Sleeve, Hose Marker (YELLOW, Spout Out)	9003999	1	
17	Hose, 1/4" x 553" (9/16-18 JIC Female x 3/4-16 O-Ring Male)	9502174	1	Beginning with Serial #B37320100 Prior to Serial #B37320100
	Hose, 1/4" x 525" (90° Elbow 9/16-18 JIC Female x 3/4-16 O-Ring Male)	9007596		
18	Hose, 1/4" x 553" (9/16-18 JIC Female x 3/4-16 O-Ring Male)	9502174	1	Beginning with Serial #B37320100 Prior to Serial #B37320100
	Hose, 1/4" x 519" (90° Elbow 9/16-18 JIC Female x 3/4-16 O-Ring Male)	9007595		
19	Adapter (9/16-18 JIC Female x 9/16-18 JIC Male)	95193	2	w/.030 Restrictor
20	Spout Cylinder, 1 1/2" x 4"	9003789	1	
	Spout Cylinder Seal Kit	9005419	-	
21	Flow Door Cylinder, 2 1/2" x 36"	9005363	1	
	Flow Door Cylinder Seal Kit	9005409	-	
22	90° Elbow (9/16-18 JIC Female x 3/4-16 O-Ring Male)	9874	2	
23	Capscrew, 5/16"-18UNC x 1 1/4" G5	9390-031	6	Grade 5
24	Pin 1" Dia. x 3 1/2 (For Auger & Door Cylinders)	804572	2	
25	Reducer 9/16-18 JIC Female x 9/16-18 JIC Male w/Restrictor	9002199	1	w/.060 Restrictor
26	Adapter 9/16-18 JIC Female x 9/16-18 JIC Male w/Restrictor	95193	1	w/.030 Restrictor
27	Hose, 1/4" x 295" (9/16-18 JIC Female x 3/4-16 O-Ring Male)	9004121	2	
28	Sleeve, Hose Marker (RED, Flow Door Open)	9003995	1	
29	Sleeve, Hose Marker (RED, Flow Door Close)	9003996	1	
30	Clamp Pair	9003816	8	
31	Top Plate	9003814	6	
32	Pilot Operated Check Valve Block w/Check Valve	9003990	1	
	Check Valve	9004119	1	
	Seal Kit for Check Valve	9004120	-	
33	Hose Wrap	9004075	2	NOT SHOWN

Electrical

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



Unverferth 1160 — Parts

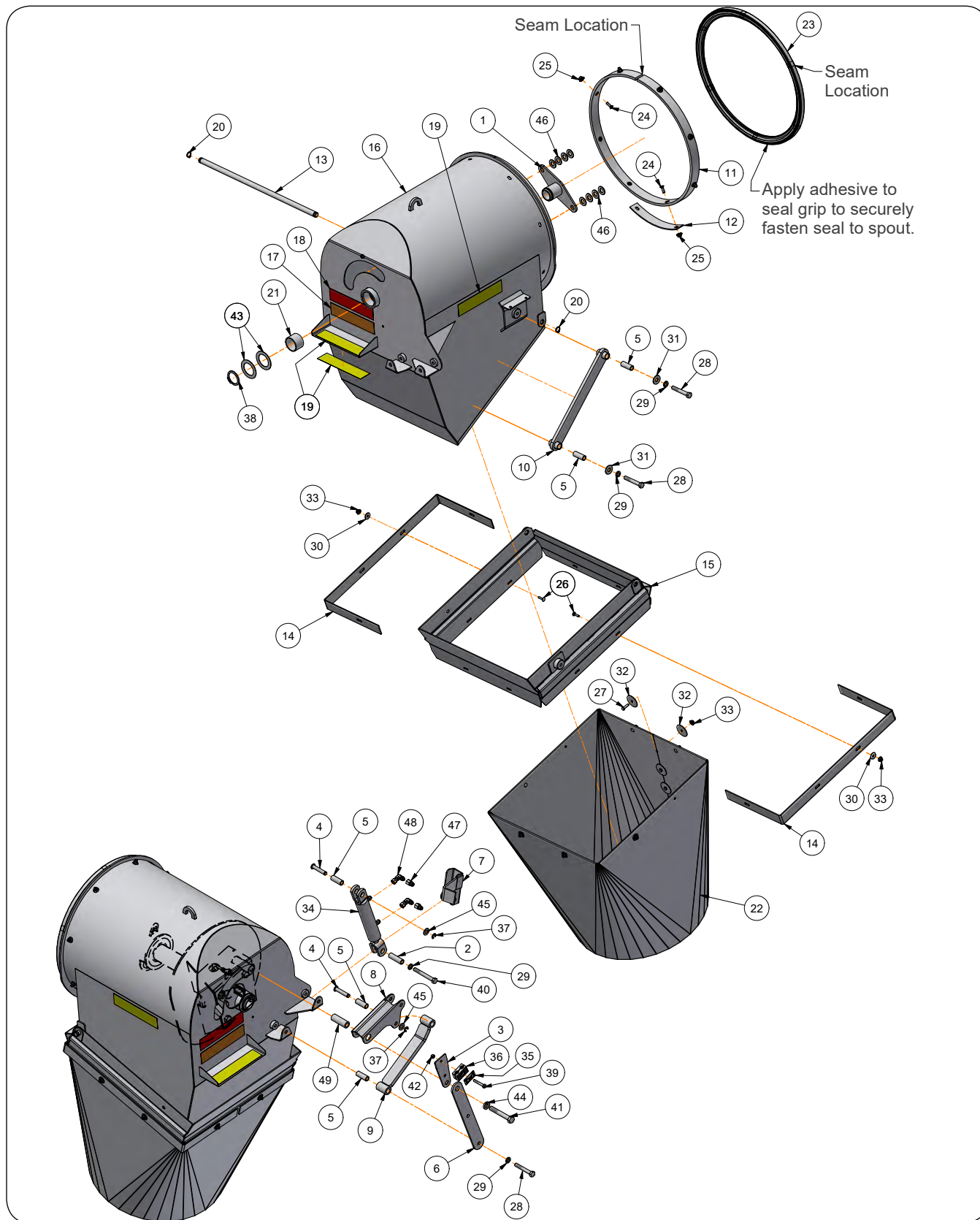
Electrical

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

ITEM	PART NUMBER	DESCRIPTION	QTY	NOTES
1A	280847	Tail Light Subassembly, Left-Hand	1	
1B	280848	Tail Light Subassembly, Right-Hand	1	
2A	251407B	Light Bracket	1	
2B	251406B	Light Bracket	1	
3A	251155B	Light Bracket Weldment Kit, Left-Hand	1	Includes Items 5, 6, 7
3B	251167B	Light Bracket Weldment Kit, Right-Hand	1	Includes Items 5, 6, 7
4	280370B	Lamp Tube Extension	2	
5	9003125	Fluorescent Strip 2" x 9"	2	
6	9003126	Reflector =RED= 2" x 9"	2	
7	9003127	Reflector =AMBER= 2" x 9"	2	
8	9005142	Lamp, AMBER (LED) Double Face	2	
9	9390-003	Capscrew, 1/4"-20UNC x 3/4" G5	4	
10	9390-009	Capscrew, 1/4"-20UNC x 2" G5	4	
11	9394-002	Hex Nut, 1/4"-20UNC	8	
12	9404-017	Lock Washer, 1/4"	8	
13	9405-064	Flat Washer, 1/4" USS	8	
14	271574B	Light Bracket	1	
15	9003050	Wiring Harness 190" (Rear)	1	
16	9003397	Locking Flange Nut, 1/2"-13UNC	2	
17	9004981	Lock Washer, 1/4"	1	
18	9006282	RED Light - Tail/Turn (LED)	2	
19	9008957	Work Light (LED)	3	For SN B41380100 & Up
	9007186			For SN B41380099 & Lower
20	91263	Large Flange Nut, 3/8"-16UNC	1	
21	92450	Plug 7-Way Single Grip	1	
22	9009089	Truss Head Machine Screw, 3/8"-16UNC x 1 1/4"	1	
23	9390-003	Capscrew, 1/4"-20UNC x 3/4" G5	1	
24	9390-112	Capscrew, 1/2"-13UNC x 4 1/2" G5	2	
25	9394-002	Hex Nut, 1/4"-20UNC	3	
26	903172-350	Pan Head Machine Screw, #10-32UNF x 1 1/4"	4	
27	9404-013	Lock Washer, #10	4	
28	9404-017	Lock Washer, 1/4"	3	
29	9405-088	Flat Washer, 1/2" USS	2	
30	9830-016	Hex Nut, #10-32	4	
31	9007460	Wiring Harness 232" (Front)	1	
32	9009080	Wiring Harness 286" (Auger)	1	For SN B41380100 & Up
	9007461	Wiring Harness 272" (Auger)		For SN B41380099 & Lower
33	9007472	Proximity Sensor w/Connector	1	
34	9007987	Grommet 3/4" Dia. Groove, 1" OD	1	

Directional Spout Components - Serial Number B37230100 & Up

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



Unverferth 1160 — Parts

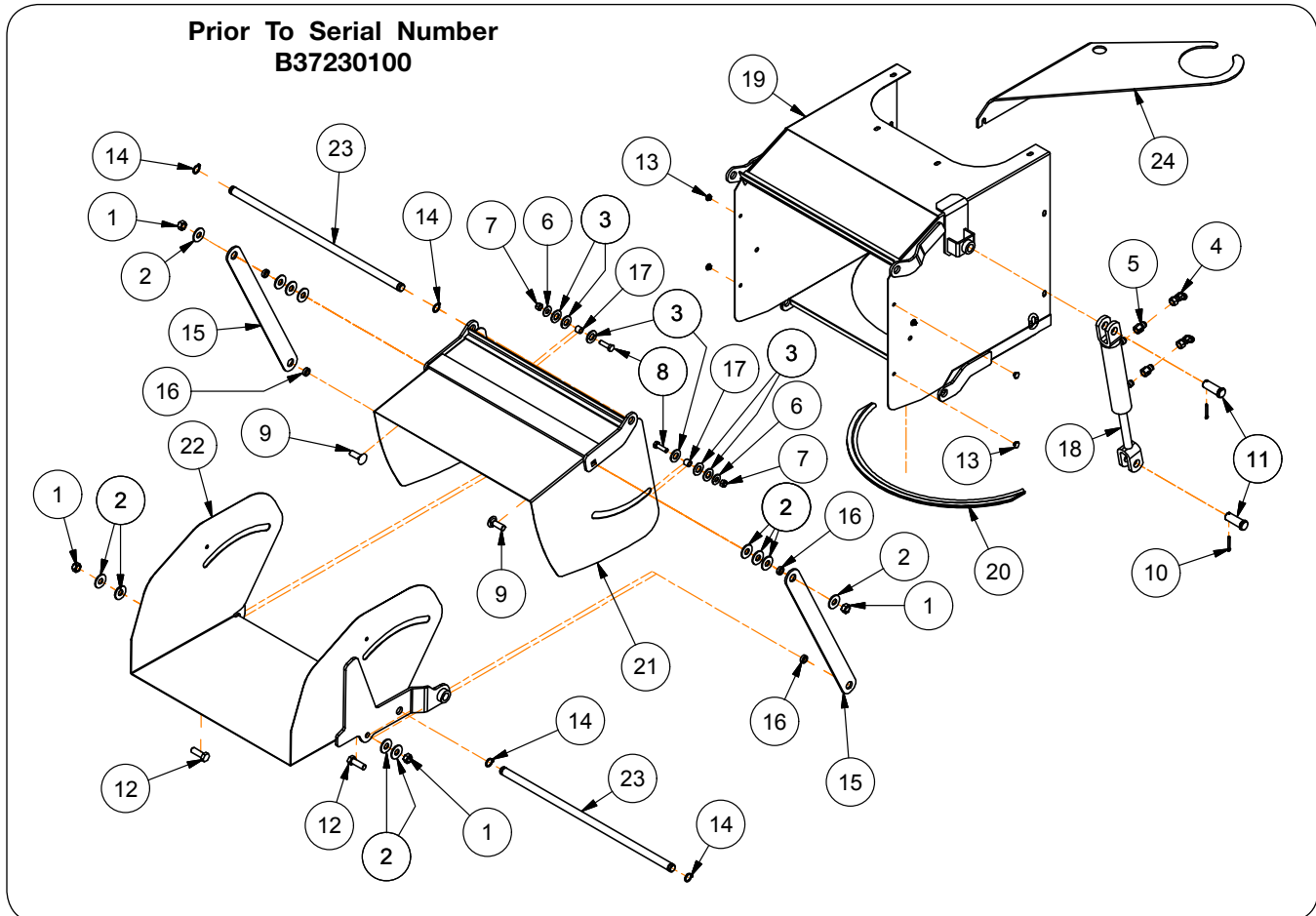
Directional Spout Components - Serial Number B37230100 & Up

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

ITEM	PART NO.	DESCRIPTION	QTY.	NOTES
1	268573	Hood Pivot Pin Weldment	1	
2	272571	Sleeve/Bushing, .75" OD x 2.438"	1	
3	272620B	Hose Bracket Plate =Black=	1	
4	285219	Pin Weldment	2	
5	285290	Sleeve/Bushing .75" OD x 1.938"	3	
6	-	Shipping Bracket Plate	1	Not Sellable
7	287648B	Cylinder Stop Weldment =Black=	1	
8	287694B	Linkage Bracket =Black=	1	
9	287695B	Linkage Weldment =Black=	1	
10	2007601B	Link Weldment =Black=	1	
11	268282	Pad - Wear Ring	1	
12	268972B	Hood Shim, 1 1/2" x 10"	1	
13	272596	Pivot Shaft, 3/4" Dia. x 24 1/4"	1	
14	286469B	Chute Strap =Black=	2	
15	287630B	Spout Weldment =Black=	1	
16	272942B	Spout Weldment Kit =Black=	1	Includes Spout & Items 17, 18, 19, 21
17	9003125	Decal, Fluorescent Orange	1	
18	9003126	Reflector, 2" x 9" =RED=	1	
19	9003127	Reflector, 2" x 9" =AMBER=	4	
20	9003810	External Retaining Ring, 3/4"	2	
21	9005085	Self Lubricating Bushing, 2.2535" OD x 1.5"	1	
22	9007250	Rubber Chute/Seal	1	
23	9008122	Trim Seal	6	
24	903171-660	Flat Countersunk Head, Phillips, 5/16"-18UNC x 1"	8	
25	91257	Large Flange Nut, 5/16"-18UNC	8	
26	9388-003	Carriage Bolt, 1/4"-20UNC x 1" G5	8	
27	9390-005	Capscrew, 1/4"-20UNC x 1" G5	7	
28	9390-108	Capscrew, 1/2"-13UNC x 3 1/4" G5	3	
29	9404-025	Lock Washer, 1/2"	4	
30	9405-066	Flat Washer, 1/4"	8	
31	9405-088	Flat Washer, 1/2" USS	2	
32	94763	Fender Washer, 2" OD x 5/16" ID	14	
33	97189	Large Flange Hex Nut, 1/4"-20UNC	15	
34	9003789	Hydraulic Cylinder, 1 1/2" x 4"	1	Seal Kit #9005419
35	9003814	Top Plate	8	
36	9003816	Poly Clamp (Pair)	10	
37	9005687	Snap Ring, 1/2" (E-Style)	2	
38	91178	Retaining Ring, 2"	1	
39	9390-034	Capscrew, 5/16"-18UNC x 2" G5	4	
40	9390-111	Capscrew, 1/2"-13UNC x 4" G5	1	
41	9390-132	Capscrew, 5/8"-11UNC x 4" G5	1	
42	9394-004	Hex Nut, 5/16"-18UNC	4	
43	93974	Flat Washer, 3" OD x 2.01" ID	4	
44	9404-030	Lock Washer, 5/8"	1	
45	9405-086	Flat Washer, 1/2" SAE	2	
46	9405-098	Flat Washer, 5/8" SAE	8	
47	95193	Adapter, 9/16-18 JIC Female x 9/16-18 JIC Male	3	with 0.030 Restrictor
48	9876	Elbow, 9/16-18 JIC Male x 9/16-18 JIC Female	2	
49	2009659	Sleeve/Bushing, 1" OD x 2.813"	1	

Directional Spout Components - Serial Number B37230099 & Lower

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



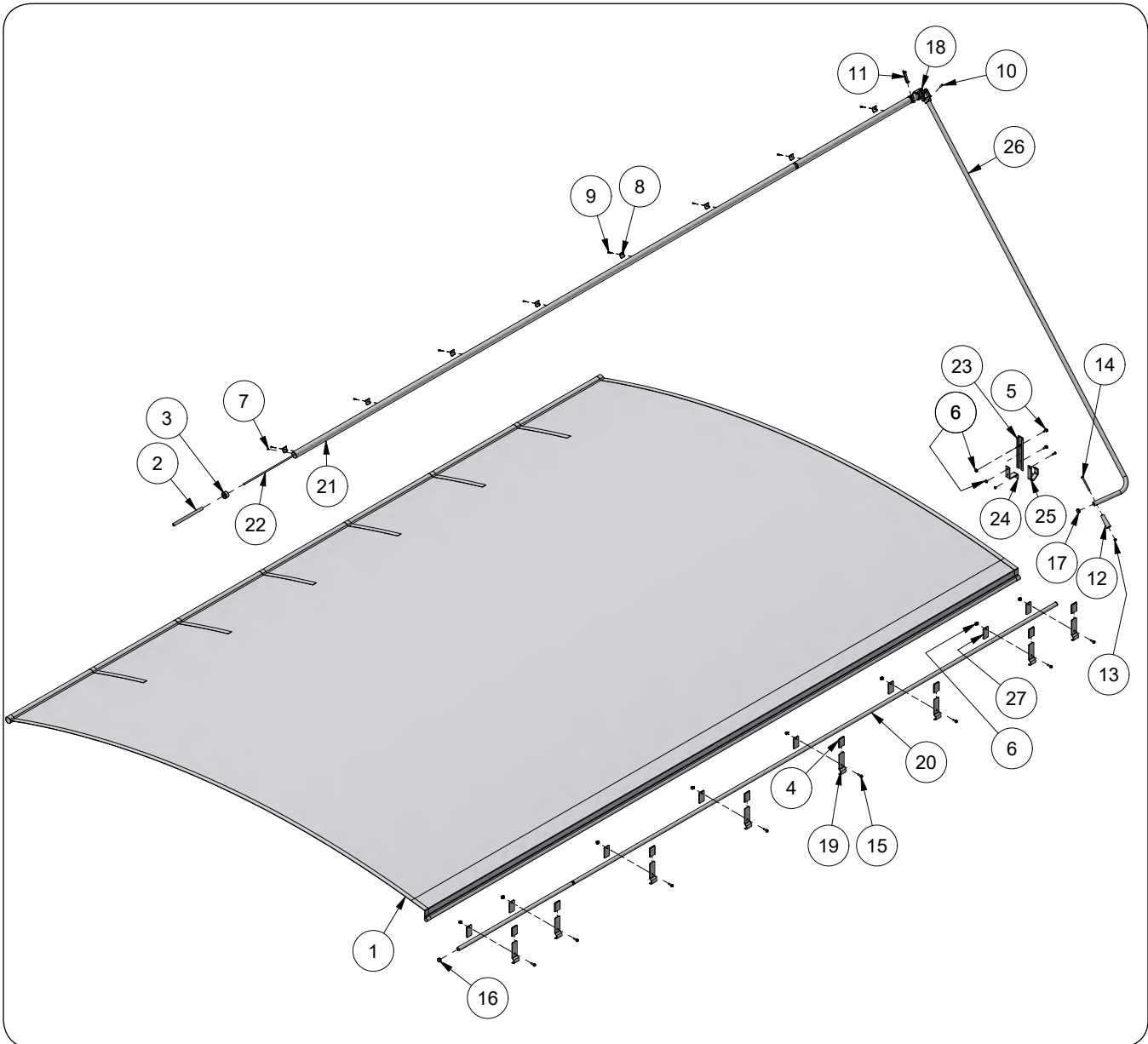
Directional Spout Components - Serial Number B37230099 & Lower

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

ITEM	PART NO.	DESCRIPTION	QTY.	NOTES
	287842B	Directional Downspout Kit	-	
1	94981	Locknut, 1/2-13UNC	4	
2	9405-088	Flat Washer, 1/2	12	
3	9004494	Nylon Washer	6	
4	9001041	45° Elbow	2	
5	95193	Tube Reducer	2	0.030 Restrictor
6	9405-076	Flat Washer, 3/8	2	
7	9928	Lock Nut, 3/8-16UNC	2	
8	9390-056	Capscrew, 3/8"-16UNC x 1 1/4" G5	2	
9	9388-104	Carriage Bolt, 1/2"-13UNC x 1 1/2"	2	
10	9391-034	Cotter Pin, 5/32" x 1 1/4"	2	
11	9002032	Clevis Pin, 3/4" x 2"	2	
12	9390-101	Capscrew, 1/2"-13UNC x 1 1/2" G5	2	
13	9004457	Plug, Plastic	6	
14	9003810	Retaining Ring	4	
15	284768	Arm Link	2	
16	281369	Bushing	4	
17	281372	Spacer	2	
18	9003789	Hydraulic Cylinder, 1 1/2" x 4"	1	
19	287843B	Hood Weldment	1	
20	92444	Trim Lock, 32"	1	
21	287883B	Deflector Weldment, Upper	1	
22	287887B	Deflector Weldment, Lower	1	
23	287886	Pivot Shaft	2	
24	287958B	Shipping Bracket	1	

Weather Guard Tarp Components

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



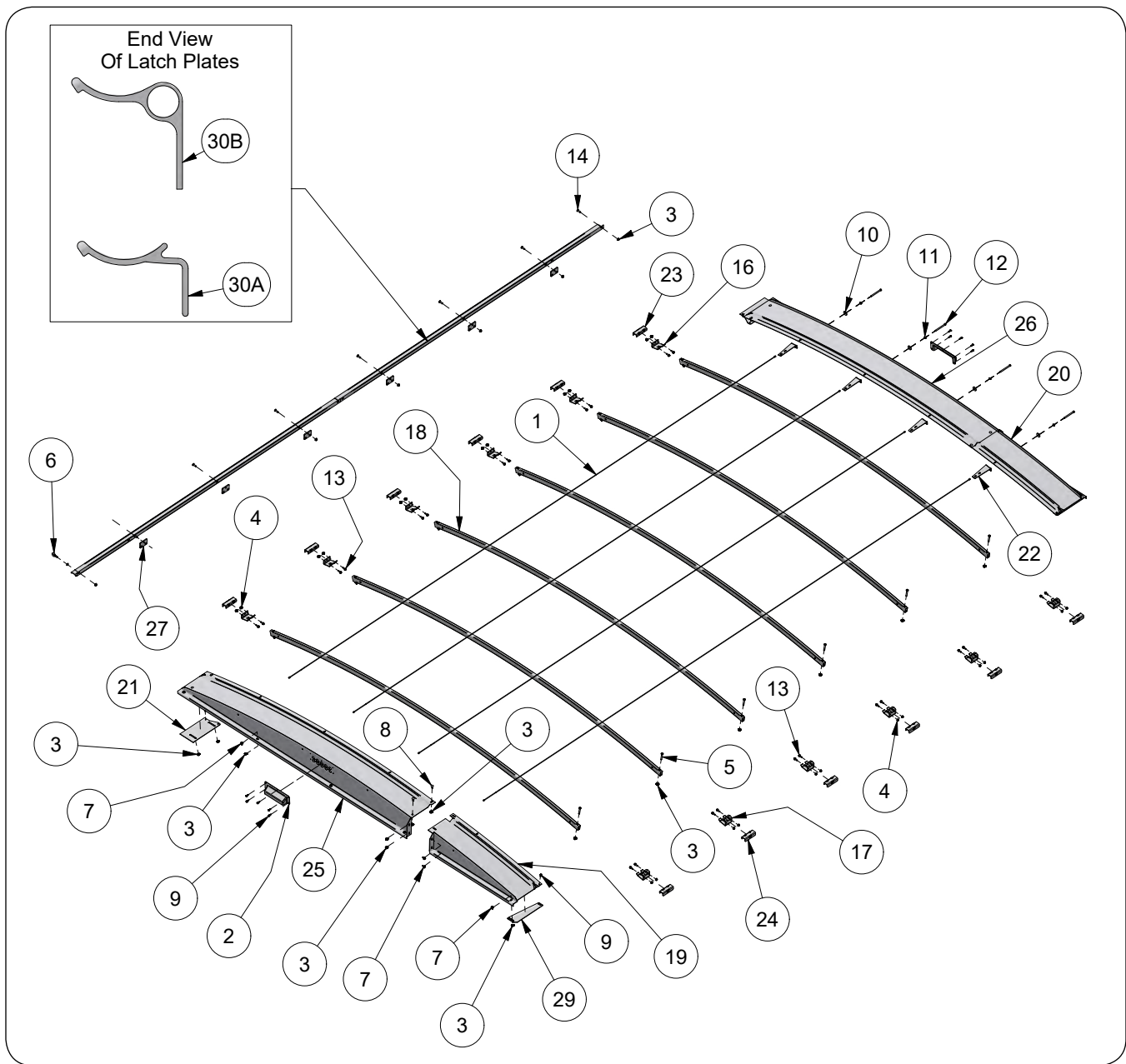
Weather Guard Tarp Components

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

ITEM	PART NO.	DESCRIPTION	QTY	NOTES
1	9007458	Tarp 181 x 247	1	
	9005581	Tarp Repair Kit	-	
2	TA806225	Hose 1/2" EPDM	1	
3	9004949	U-Clamp	8	
4	9003078	Plastic Cap	8	
5	91262	Flange Screw 3/8-16UNC x 1 (Grade 5)	4	For SN B41380100-Up
			10	For SN B41380099-Lower
6	91263	Nut/Large Flange 3/8-16UNC	56	
7	9001396	Self Drilling Screw #10-16 x 1/2"	1	
8	9004949	U-Clamp	8	
9	9005197	Self Drilling Screw #10-16 x 3/4"	10	
10	9392-180	Roll Pin 3/8" Dia x 2	1	
11	9005305	Lynch Pin 3/8" Dia. x 3	1	
12	9004969	Handle	1	
13	9398-012	Elastic Locknut 3/8-16UNC	1	
14	903172-450	Pan Head Phillips Machine Screw 3/8-16UNC x 4 1/2	1	
15	9003259	Flange Screw, 3/8"-16UNC x 1 1/4"	8	
16	9005088	Plastic Plug 1.125"	2	
17	9005089	Plug 1 1/4"	1	
18	9004977	U-Joint 1 3/8-21 Spline	1	
19	266689B	Stop - Tarp Short =Black=	8	
20	221610	Fixed Tube Weldment	1	
21	221604	Roll Tube Weldment	1	
22	221722	Cord - Bungee 3/8" Dia. x 204	1	
23	265743B	Crank Holder - Channel Extension =Black=	1	
24	221700B	Offset Bracket =Black=	1	
25	221770B	Handle Retainer Weldment =Black=	1	
26	287944	Tarp Handle Weldment	1	
27	295183B	Tarp Stop Spacer Plate =Black=	8	

Weather Guard Tarp Mounting Brackets & End Caps

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



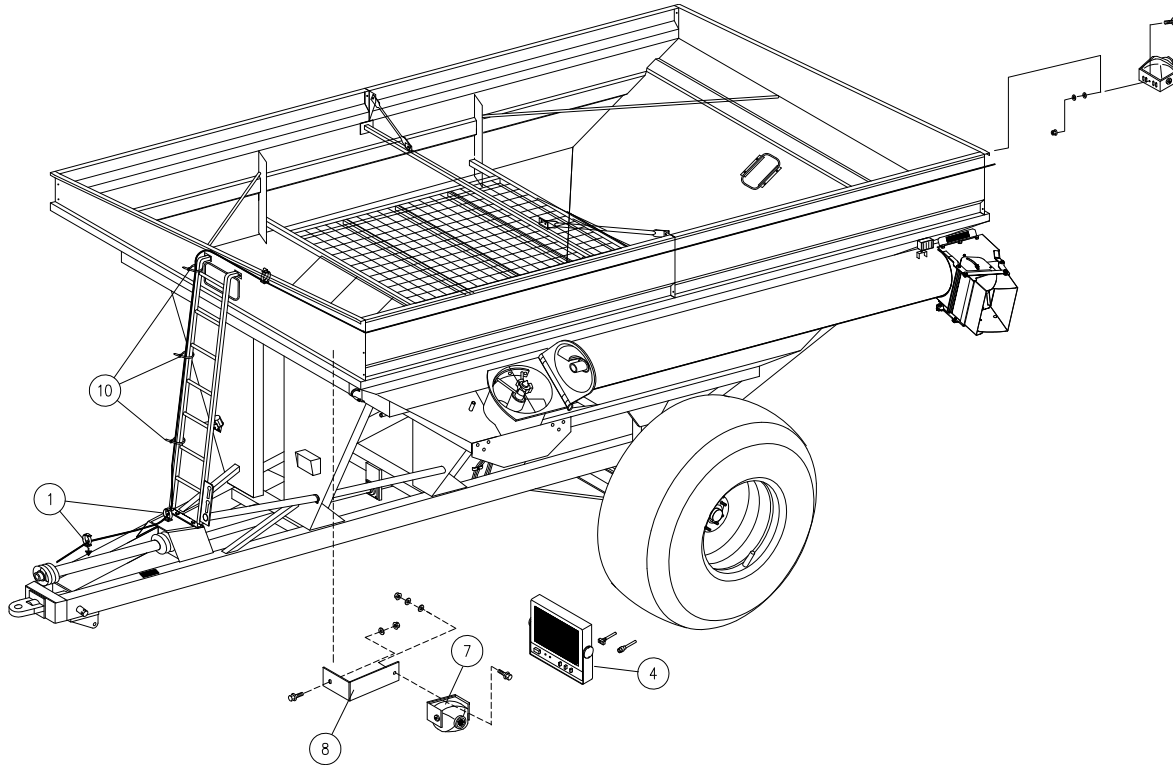
Weather Guard Tarp Mounting Brackets & End Caps

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

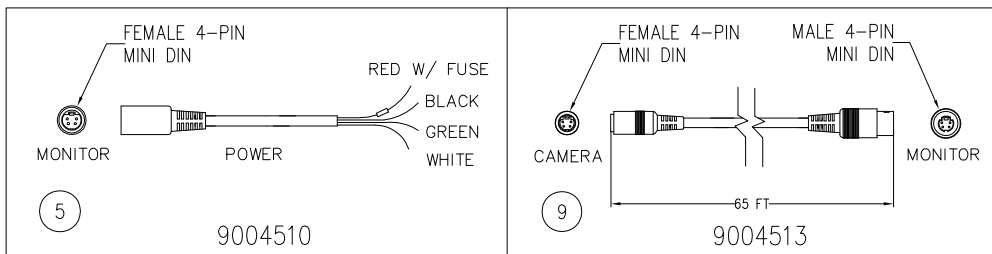
ITEM	PART NO.	DESCRIPTION	QTY	NOTES
	287908B	Tarp Kit with Arched End Caps	-	
1	9005698	Cable Assembly 234"	4	
2	9009504	End Cap Vent Cover	2	
3	91263	Nut/Large Flange 3/8-16UNC	53	
4	91257	Hex Nut/Large Flange 5/16-18UNC	24	
5	902703-046	Flat Socket Countersunk Capscrew 3/8-16UNC x 3 (RH Thread)	12	
6	9004548	Eye Bolt 3/8-16UNC x 1 3/4	1	
7	95585	Capscrew/Large Flange 3/8-16UNC x 3/4 (Grade 5)	14	
8	9388-051	Carriage Bolt 3/8-16UNC x 1 (Grade 5)	8	
9	9512	Self Drilling Screw 1/4-14 x 1	14	
10	9005696	Fender Washer 3/8"	4	
11	9005688	Lock Washer/External Tooth 3/8"	4	
12	TA0-907131-0	Capscrew 3/8-16UNC x 4 1/2 (Grade 5) Full Threaded	4	
13	97604	Flange Screw 5/16-18UNC x 1 (Grade 5)	24	For SN B41380100-Up
	91256	Flange Screw 5/16-18UNC x 3/4 (Grade 5)		For SN B41380099-Lower
14	9009089	Truss Head Machine Screw, 3/8"-16UNC x 1 1/4", Torx Head	9	
15	9005088	Plastic Plug 1.125"	2	
16	283425B	Tarp Bow Bracket =Black=	6	
17	283427B	Tarp Bow Bracket =Black=	6	
18	287400B	Tarp Bow Tube =Black=	6	
19	287357B	End Cap Weldment - Front - Short =Black=	1	
20	287356B	End Cap Weldment - Rear - Short =Black=	1	
21	283431B	End Cap Plate =Black=	2	
22	281711B	Tarp Bracket =Black=	4	
23	289986B	Doubler Plate, With 3 Slots (1/2" x 1"). Right-Hand =Black=	6	For SN B41380100-Up
24	294678B	Doubler Plate, With 1 Slots (1/2" x 1"). Left-Hand =Black=	6	For SN B41380100-Up
25	296121B	End Cap Weldment - Front - Long =Black=	1	
	296755B	End Cap Weldment - Front - Long - Service Kit	-	Includes End Cap and Items 2 & 9
26	296125B	End Cap Weldment - Rear - Long =Black=	1	
	296756B	End Cap Weldment - Rear - Long - Service Kit	-	Includes End Cap and Items 2 & 9
27	295259B	Spacer Plate, 2 3/8" x 3 1/4" =Black=	6	
28	295183B	Stop Spacer Plate, 2" x 2 3/4" =Black=	8	
29	295668B	Cover Plate, 4" x 13 5/16" =Black=	2	
30A	296830	Latch Plate - Front 126 1/2"	1	
	296831	Latch Plate - Rear 126 1/2"	1	
30B	297785	Latch Plate Replacement Service Kit	1	Includes Front & Rear Plates

Video System (Optional)

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



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



Video System (Optional)

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

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

