



***BRENT* Grain Handling**

**AVALANCHE® DOUBLE-AUGER
GRAIN CARTS**

MODEL 1596

Serial Number B40240100 & Higher

Part No. 294096

Foreword



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

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

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

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



Product Information

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

- Machine name
- Model number
- Serial number

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

Please fill out and retain this portion for your records.

Purchase Date _____ Model _____ Serial No. _____

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 ELECTRIC TARP INFORMATION, PLEASE REFER TO YOUR ELECTRIC TARP MANUAL.

FOR WATER DELIVERY SYSTEM INFORMATION, PLEASE REFER TO YOUR WATER DELIVERY SYSTEM MANUAL.

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General Hazard Information

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

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

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

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



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

SIGNAL WORDS



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



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



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

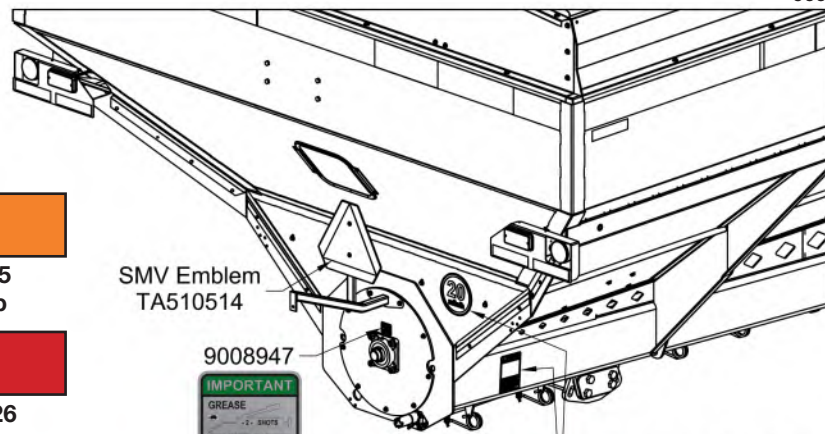
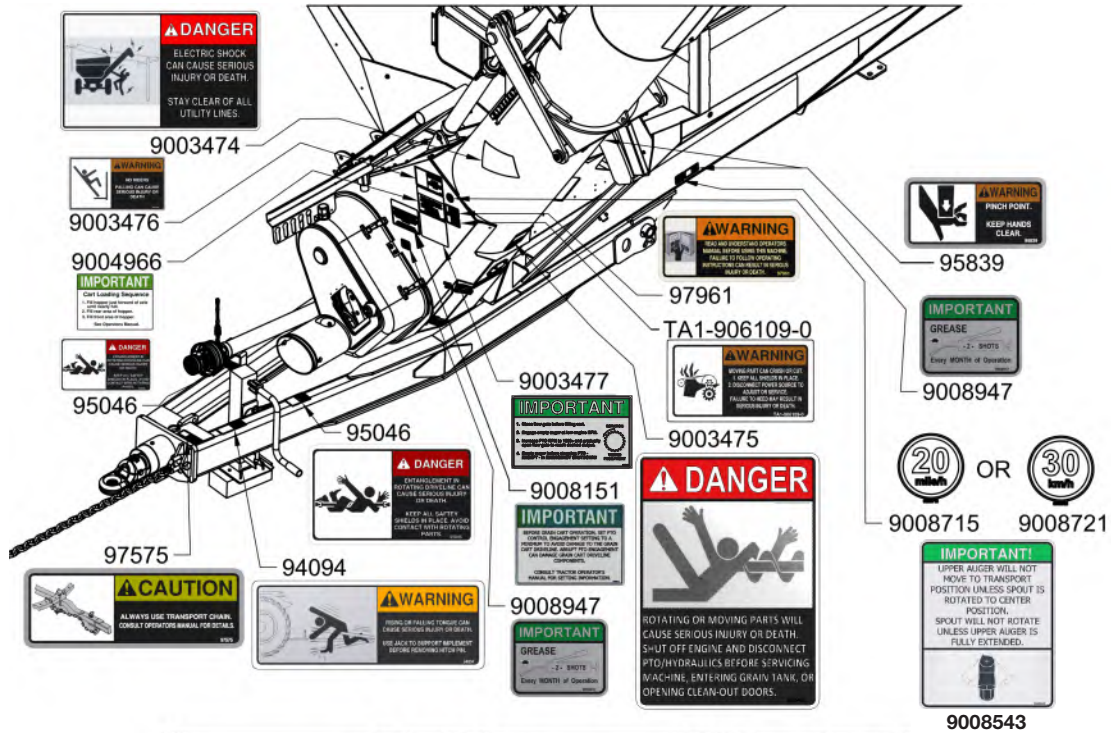


Is used for instruction on operating, adjusting, or servicing a machine.

Safety Decals

WARNING

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



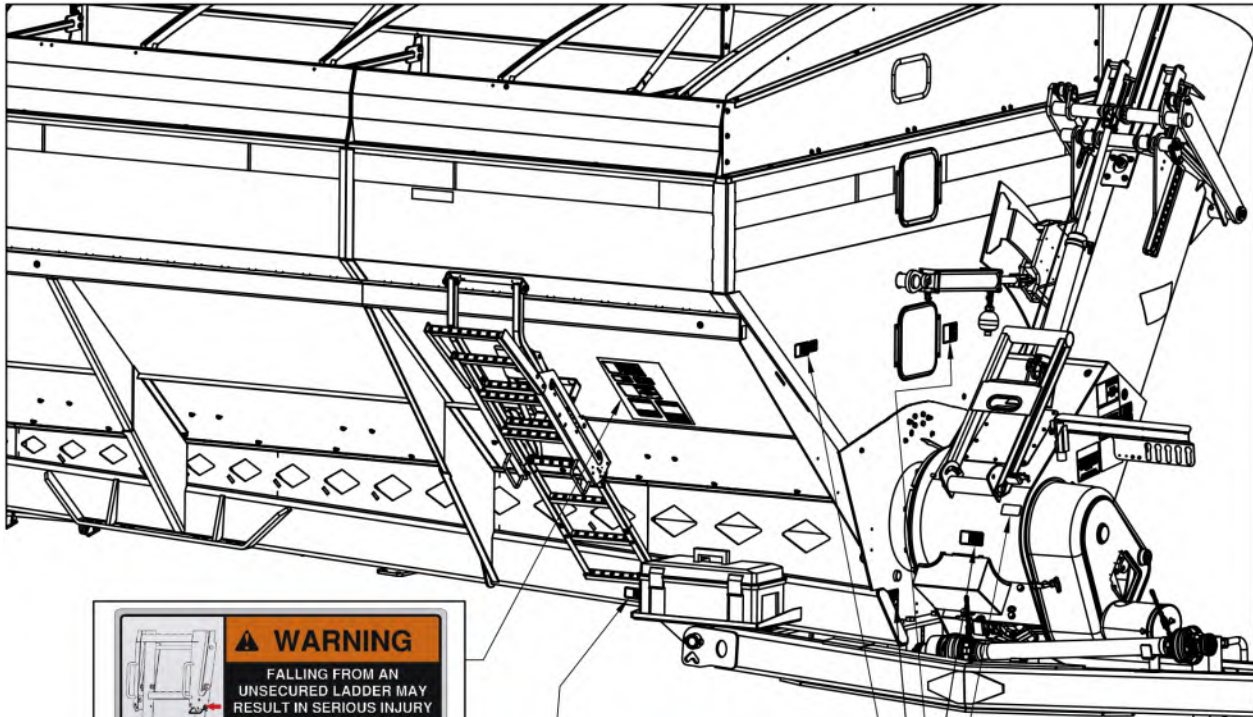
Part No. 9003125
Fluorescent Strip



Part No. 9003126
Reflector RED



Safety Decals (continued)



9009168

95839

95008

9003476

9003478

9003475

95839

9008947

95839

98229

9008947






95445

900024


9005971

Part No. 9003127
Reflector AMBER

Following Safety Instructions

- Read and understand this operator's manual before operating. 
- All machinery should be operated only by trained and authorized personnel.
- To prevent machine damage, use only attachments and service parts approved by the manufacturer.
- Always shut tractor engine off and remove key before servicing. 
- Avoid personal attire such as loose fitting clothing, shoestrings, drawstrings, pants cuffs, long hair, etc., that may become entangled in moving parts.
- Do not allow anyone to ride on the implement. Make sure everyone is clear before operating machine or towing vehicle. 
- Never attempt to operate implement unless you are in the driver's seat. 
- Never enter a cart containing grain. Flowing grain traps and suffocates victims in seconds. 

Before Servicing

- Avoid working under an implement; however, if it becomes absolutely unavoidable, make sure the implement is safely blocked. 
- Ensure that all applicable safety decals are installed and legible.
- When working around the implement, be careful not to be cut by sharp edges.
- To prevent personal injury or death, always ensure that there are people who remain outside the cart to assist the person working inside, and that all safe workplace practices are followed. There are restricted mobility and limited exit paths when working inside the implement.
- Secure drawbar pin with safety lock and lock tractor drawbar in fixed position.
- Explosive separation of a tire and rim can cause serious injury or death. Only properly trained personnel should attempt to service a tire and wheel assembly.
- Add sufficient ballast to tractor to maintain steering and braking control at all times. Do not exceed tractor's lift capacity or ballast capacity.

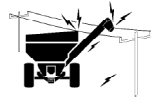
Before Operating

- Do not stand between towing vehicle and implement during hitching.
- Always make certain everyone and everything is clear of the machine before beginning operation.
- Verify that all safety shields are in place and properly secured.
- Ensure that all applicable safety decals are installed and legible.
- Secure drawbar pin with safety lock and lock tractor drawbar in fixed position.



During Operation

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



Before Transporting

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


During Transport

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

Pressurized Oil

- Relieve the hydraulic system of all pressure before adjusting or servicing. See hydraulic power unit manual for procedure to relieve pressure.
- High-pressure fluids can penetrate the skin and cause serious injury or death. Use cardboard or wood to detect leaks in the hydraulic system. Seek medical treatment immediately if injured by high-pressure fluids.
- Accumulators used in this hydraulic system can retain fluid under pressure even after tractor hydraulic valve is placed in FLOAT. See tractor operators manual for procedure to relieve pressure.
- 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.

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 and length recommended in OPERATION section.
- Use caution when turning to avoid contact between tractor tires and driveline.
- Check the length of the telescoping members to ensure the driveline will not bottom out or separate when turning and/or going over rough terrain.
- Proper extended and collapsed lengths of the telescoping PTO shaft must be verified before first operation with each and every tractor. If the extended length of the PTO shaft is insufficient, it may become uncoupled during operation and cause serious injury or death from contact with uncontrolled flailing of PTO shaft assembly components.

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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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.

- Set or Calibrate tractor PTO control engagement to MINIMUM setting. Refer to tractor operator's manual for setting information.
- Remove auger spout cylinder stop.
- Remove PTO brackets.
- Torque wheel nuts and check tire pressure as specified in MAINTENANCE section.
- Verify track has been aligned and is properly conditioned. (If applicable)
- Inflate tires to specified air pressure. (if applicable)
- Lubricate all grease fittings and check gearbox oil level.
- Inspect cleanout door assembly for play or movement, refer to "Vertical & Horizontal Clean-Out Door Operation" in the OPERATION 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.
- Verify PTO length, see "Verify Telescoping PTO Shaft Length" in MAINTENANCE section.
- Align and properly tension belts/chains. See "Belt Tightener Adjustment" and "V-Belt Alignment" in MAINTENANCE section.
- Ensure safety screens over horizontal auger are in place and properly secured.
- Install transport chains and torque hardware to specification. See "Transport Chain Connection" in OPERATION section.
- Paint all parts scratched in shipment.
- Test run the augers. See "Auger Operation" in OPERATION section.

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.

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.

Wheel/Tire Set Up

Tire Pressure

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

Wheel Nuts

CAUTION

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

IMPORTANT

- *Installing wheels without the proper inset/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)

Auger Spout Cylinder Stop Removal

Remove the stop on the spout tilt cylinder at the front of the cart, before operating the spout.

IMPORTANT

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

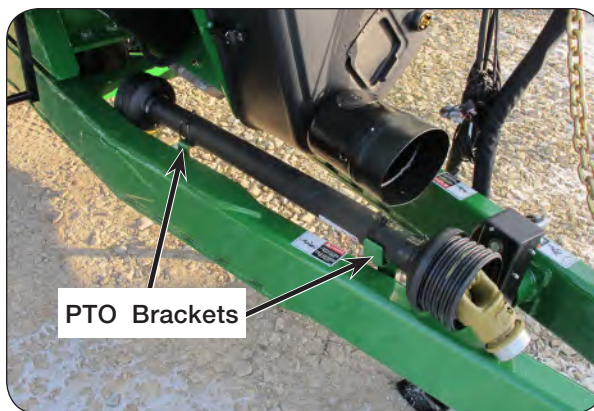


PTO Brackets Removal

Remove the PTO assembly and PTO brackets on the tongue, before operating the auger tilt or when connecting the driveline assembly to the tractor. Keep PTO brackets for seasonal storage. Refer to “Seasonal Storage” in MAINTENANCE section.

IMPORTANT

- *PTO assembly and PTO brackets must be removed before operating the auger tilt or when connecting the driveline assembly to the tractor. Failure to remove PTO assembly and PTO brackets will result in damage to the PTO assembly, tongue, auger and tractor.*



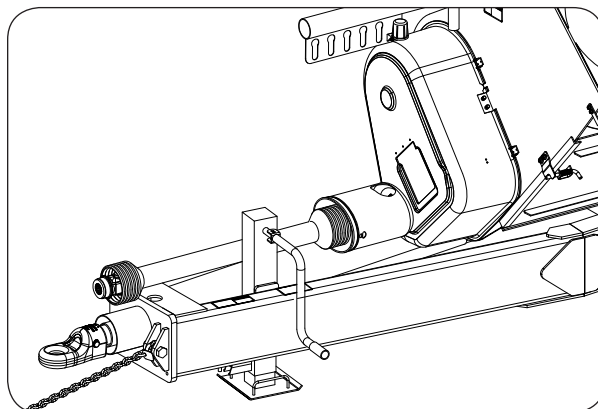
Basic Set Up (continued)

Jack

WARNING

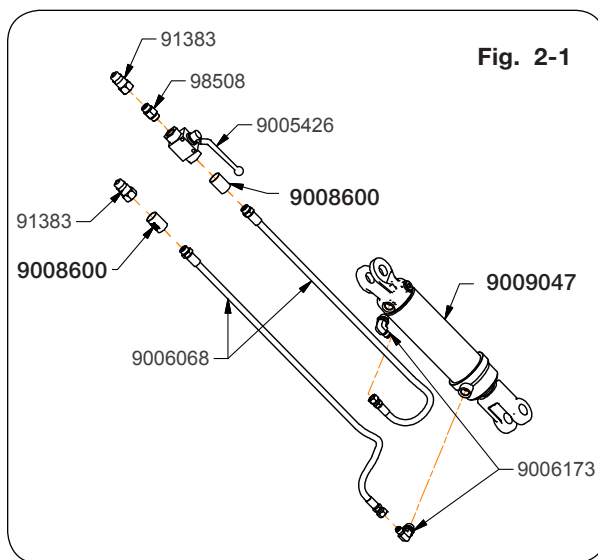
- UNHITCHING A LOADED CART CAN CAUSE SERIOUS INJURY OR DEATH DUE TO TONGUE RISING OR FALLING. ALWAYS HAVE A LOADED CART ATTACHED TO A TRACTOR. THE JACK IS INTENDED TO SUPPORT AN EMPTY CART ONLY.

Attach jack to left-inside frame using pin and hair pin. Pivot the jack 90 degrees and reinstall pin for field use.



Optional Hydraulic Jack

1. Assemble hoses (9006068) and fittings to cylinder (9009047) as shown in figure 2-1. The valve needs to be assembled to the hose on the base end of the cylinder. Assemble the fittings on the cylinder so they face each other, then store the hydraulic hoses on the hose caddy.



Basic Set Up (continued)

Optional Hydraulic Jack

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

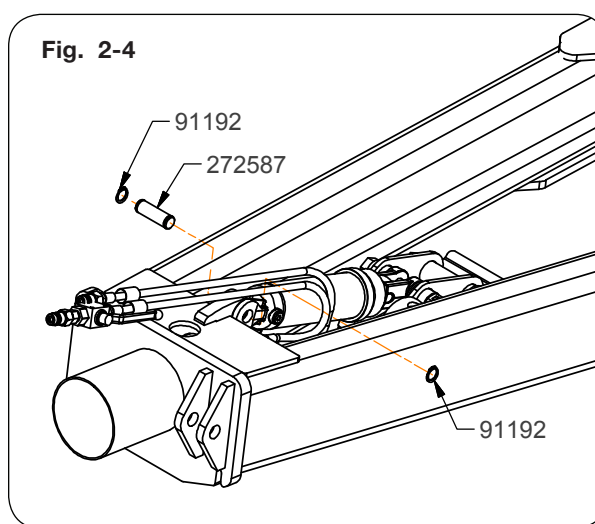
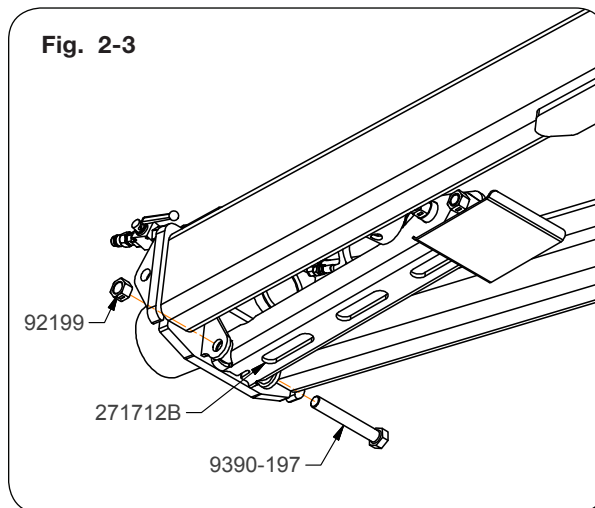
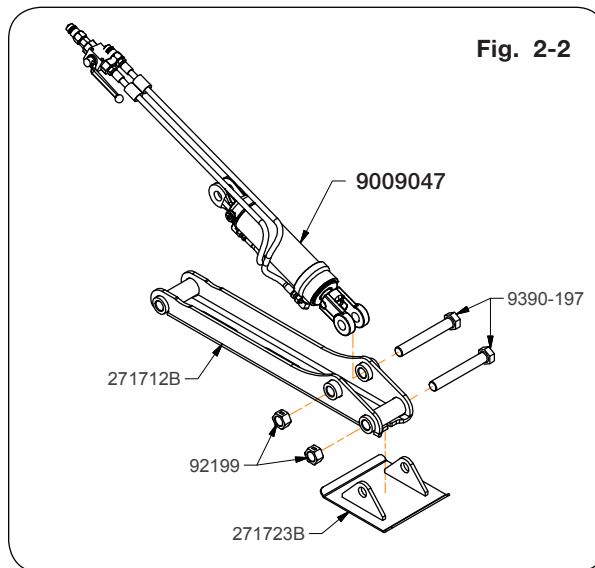
NOTE: Ensure all jack leg weldment (271712B) joints can pivot freely, especially jack foot (271723B).

3. Tighten 1" hardware to jack leg weldment. (FIG. 2-2)

4. Attach the jack weldment (271712B) to the lower tabs behind the hitch plate on the tongue, shown in figure 2-3 using 1"-8UNC x 7" capscrews (9390-197) and 1"-8UNC locknuts (92199).

5. Tighten 1" hardware to jack leg weldment and allow the joint to pivot. (FIG. 2-3)

6. Align the base end of the cylinder with the lug on the top of the tongue and assemble the cylinder pin (272587) and snap rings (91192) shown in figure 2-4.



Basic Set Up (continued)

Steering Tandem Switch Box Connection

Connect the steering tandem “ON/OFF” switch box to the two pin weather pack connector located just behind grain cart 7-pin male receptacle. (Fig. 2-5)

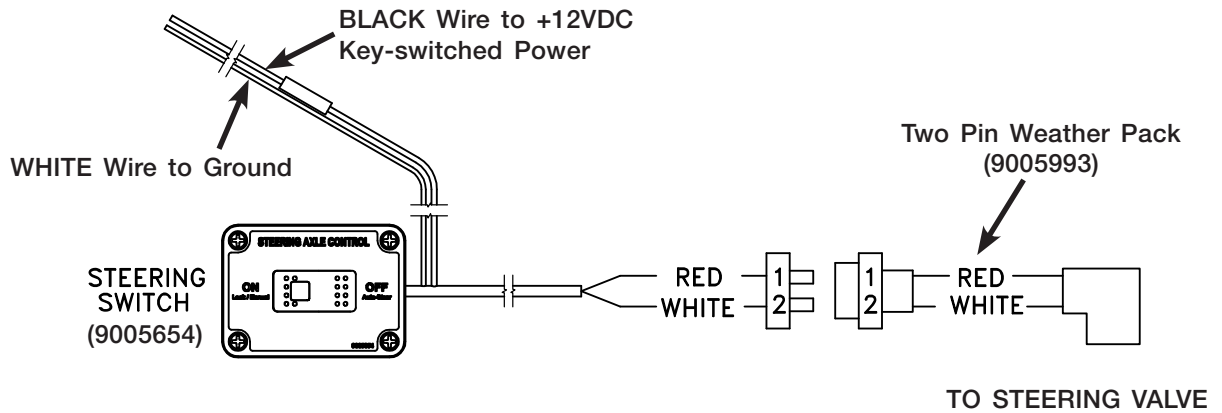
NOTE: If a two pin extension is needed for the two pin weather pack, see “Electrical Components” in the PARTS section of manual.

Route switch and harness into tractor cab. From the switch box harness, connect the WHITE wire to ground and BLACK wire to +12VDC key-switched power source inside the tractor cab. Ensure “ON/OFF switch is “ON”. (Fig. 2-5)

Fig. 2-5

TO TRACTOR CAB
AUXILIARY POWER SOURCE

NOTE: Consult the tractor’s operators manual for proper connection to the auxiliary power outlet in the tractor cab.



Basic Set Up (continued)

Driveline Set Up

Clean and grease the Implement Gearbox splined shaft. Gearbox shaft guard has access doors for installing and removing of driveline.

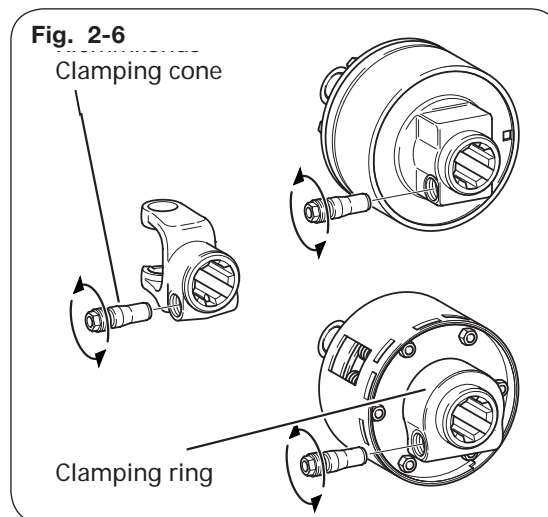
⚠ DANGER

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

Coupling The Cut-Out Clutch

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

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



Basic Set Up (continued)

SMV Emblem & SIS Decal

The reflective surface of the SMV must face rearward. This may require removal of film protecting the reflective surface or removing and reinstallation of the SMV. (Fig. 2-7)

When reinstalling the SMV make sure that it is mounted with the wide part of the SMV at the bottom.

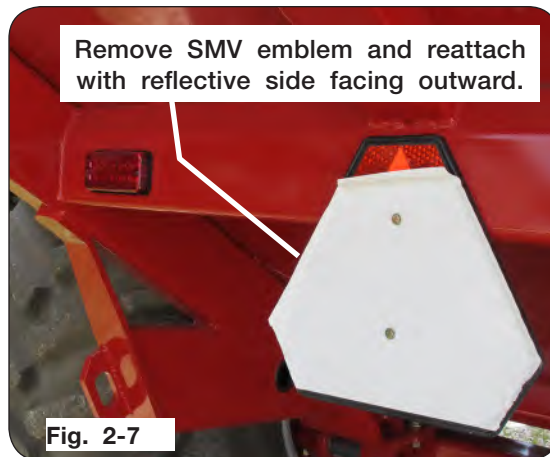


Fig. 2-7

Ensure the SIS decals (one on the front and one on the rear of the cart) are clean and visible. (Fig. 2-8)

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

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



Fig. 2-8

Video System (Optional)

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

Basic Cart Set Up (continued)

Upper Ladder Extension to Operating Position

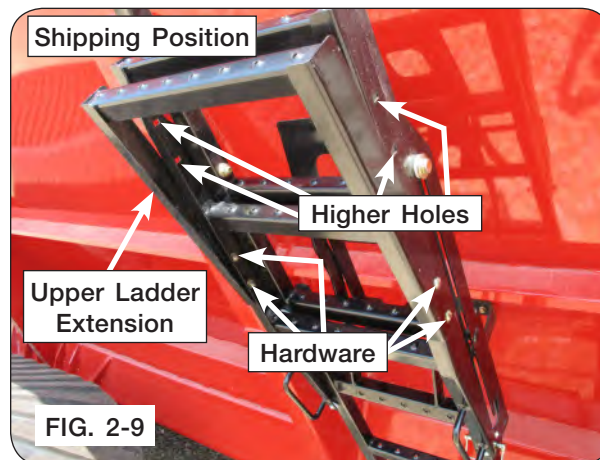
⚠ WARNING

- FALLING OR LOWERING EQUIPMENT CAN CAUSE SERIOUS INJURY OR DEATH. KEEP EVERYONE AWAY FROM EQUIPMENT WHEN SUSPENDED, RAISING, OR LOWERING.
- KEEP HANDS CLEAR OF PINCH POINT AREAS.
- DO NOT ALLOW ANYONE TO RIDE ON THE LADDER. MAKE SURE EVERYONE IS CLEAR BEFORE OPERATING MACHINE OR TOWING VEHICLE.
- 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 A CART CONTAINING GRAIN. FLOWING GRAIN TRAPS AND SUFFOCATES VICTIMS IN SECONDS.

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

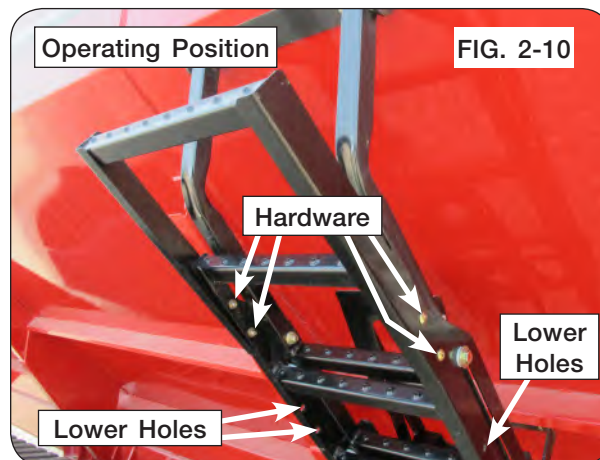
NOTE: To change ladder assembly positions, refer to “Ladder Operation” in the OPERATION section.

1. Move the upper ladder extension (289707B) from shipping position by removing the 5/16”-18UNC x 3/4” carriage bolts (9388-024), 5/16” flat washers (9405-064) and 5/16”-18UNC lock nuts (9008441). Keep hardware for next step. (FIG. 2-9)



2. Using hardware from step 1, attach upper ladder extension to the higher set of holes to be in operating position. (FIG. 2-9 & FIG. 2-10)

3. Torque hardware to 17 ft.-lbs.



Basic Cart Set Up (continued)

Horizontal Cleanout Door Inspection

WARNING

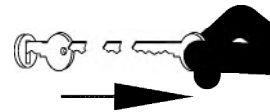
- MOVING OR ROTATING COMPONENTS CAN CAUSE SERIOUS INJURY OR DEATH. ENSURE SERVICE COVERS, CHAIN/BELT COVERS AND CLEANOUT DOORS ARE IN PLACE AND SECURELY FASTENED BEFORE OPERATING UNIT.
- KEEP HANDS CLEAR OF PINCH POINT AREAS.
- TIPPING OR MOVEMENT OF THE MACHINE CAN CAUSE SERIOUS INJURY OR DEATH. BE SURE THE MACHINE IS SECURELY BLOCKED.
- EYE PROTECTION AND OTHER APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT MUST BE WORN WHILE SERVICING THE IMPLEMENT.

NOTE: For cleanout door assembly operation, refer to “Vertical & Horizontal Cleanout Door Operation” in the OPERATION section.

NOTE: This procedure is a two-person process. One person operates the tensioner handle while the second person inspects the horizontal cleanout doors.

1. Park the unit on a firm, level surface. Block the wheels/tracks on the machine to keep the unit from moving. Set the vehicle parking brake, shut off the engine and remove the ignition key.
2. Use the tensioner handle, located on the left-hand side of the grain cart, behind the first panel to open and close the horizontal cleanout doors.
3. Insert tensioner handle into cleanout door receiver coupler on the rear panel, and remove lynch pin from rockshaft. Keep lynch pin.
4. Rotate tensioner handle clockwise to open the doors. (Fig. 2-11 & 2-12)
5. Clean the door area of debris that may prevent the door from shutting completely. (Fig. 2-11 & 2-12)
6. Inspect the cleanout door and rockshaft for loose hardware. Do not torque hardware. (Fig. 2-11 & 2-12)

(Continued on next page.)



Basic Cart Set Up (continued)

Horizontal Cleanout Door Inspection

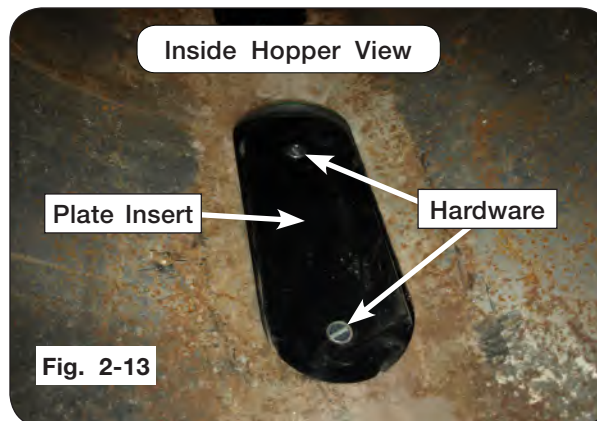
7. If plate insert needs adjustment, loosen the two flat head machine screws holding the plate in position. (Fig. 2-13)
8. Ensure the plate inserts are aligned and fit into the belly pan cut-outs. (Fig. 2-13)

NOTE: As the tensioner handle is rotated counter-clockwise near the end of the close position, the coiled springs will extend to apply pressure to cleanout doors. If the doors do not close or visual door perimeter gaps are present, adjust the front to rear rockshaft starting at step 9. If doors close, go to step 13.

9. Loosen all the hardware in the slotted brackets connecting the cleanout door rockshaft to the grain cart tube. (Fig. 2-14)
10. Starting at the front of the cart, using a jack, push the rockshaft up and toward the runner tube. (Fig. 2-14)

NOTE: Ideal distance between the runner tube and rockshaft is 3 1/4".

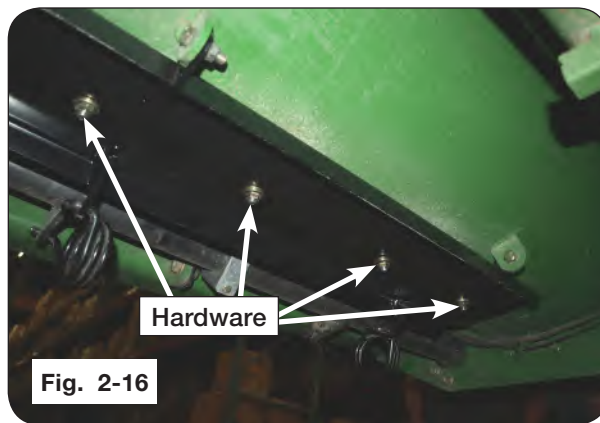
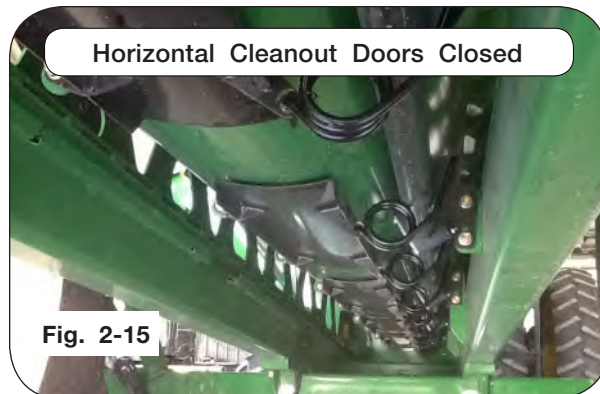
11. When the rockshaft is in position, torque the hardware previously loosened to 28 ft.-lbs.
12. Continue repositioning the rockshaft moving toward the back of the cart.



Basic Cart Set Up (continued)

Horizontal Cleanout Door Inspection

- 13. Rotate the tensioner handle counter-clockwise to close the doors allowing the plate to fit and seal into the belly pan opening. (Fig. 2-15 & 2-16)
- 14. Open the doors and torque plate hardware to 17 ft.-lbs. (Fig. 2-16)
- 15. Close the doors and ensure all doors seal. (Fig. 2-16)
- 16. Insert lynch pin into rockshaft and return handle to storage location.



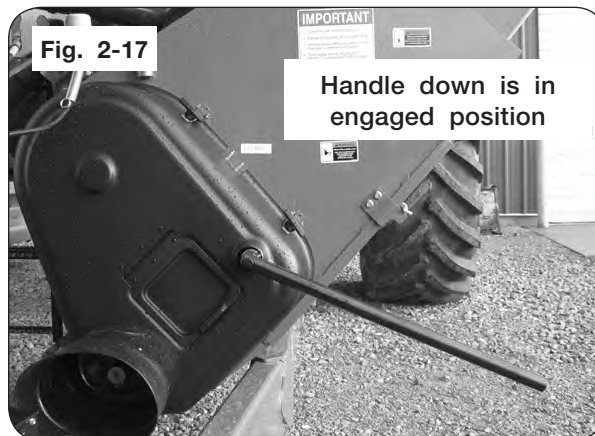
Basic Set Up (continued)

Belt Engagement

WARNING

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

The unit is shipped without the tension applied to the belts. To engage the tensioner use the belt tensioner handle, located on the left-hand side of the grain cart, behind the first panel. (Fig. 2-17 and 2-18)



Basic Set Up (continued)

Operational Check

⚠ WARNING

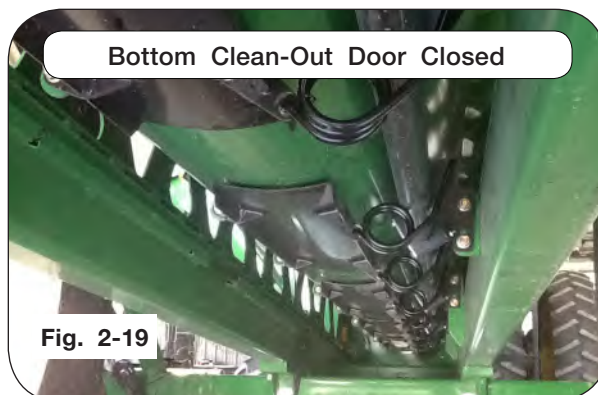
- **MOVING OR ROTATING COMPONENTS CAN CAUSE SERIOUS INJURY OR DEATH. ENSURE SERVICE COVERS, CHAIN/BELT COVERS AND CLEAN-OUT DOOR ARE IN PLACE AND SECURELY FASTENED BEFORE OPERATING UNIT.**

IMPORTANT

- Before running the auger pivot, the vertical auger clean-out door must be closed to prevent machine damage.

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

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



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FOR SCALE INFORMATION, PLEASE REFER TO YOUR SCALE MANUAL.

FOR TRACK INFORMATION, PLEASE REFER TO YOUR TRACK MANUAL.

FOR UHARVEST INFORMATION, PLEASE REFER TO YOUR UHARVEST MANUAL.

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

FOR WATER DELIVERY SYSTEM INFORMATION, PLEASE REFER TO YOUR WATER DELIVERY SYSTEM MANUAL.

Operating Checklist

- Read and understand all safety precautions before operating cart.
- R.V. antifreeze needs to be completely flushed from the Water Delivery System and disposed of properly. Make certain the Water Delivery System only contains water before placing the Water Delivery System in service. (If applicable)
- Set or Calibrate tractor PTO control engagement to MINIMUM setting. Refer to tractor operator's manual for setting information.
- Torque wheel nuts and check tire pressure as specified in MAINTENANCE section.
- Verify track has been aligned and is properly conditioned. (If applicable)
- Inflate tires to specified air pressure. (if applicable)
- Lubricate all grease fittings and check gearbox oil level.
- Inspect cleanout door assembly for play or movement, refer to "Vertical & Horizontal Clean-Out Door Operation" in the OPERATION section.
- Test operation and functionality of flow door indicator, auger fold, auger pivot, spout rotate, and spout tilt.
- 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 that hitch height and length when attached to the tractor are sufficient to prevent severe bends in PTO U-joint angles.
- Verify PTO length, see "Verify Telescoping PTO Shaft Length" in MAINTENANCE section.
- Align and properly tension belts/chains. See "Belt Tightener Adjustment" and "V-Belt Alignment" in MAINTENANCE section.
- Ensure safety screens over horizontal auger are in place and properly secured.
- Install transport chains and torque hardware to specification. See "Transport Chain Connection" in OPERATION section.
- Test run the augers. See "Auger Operation" in OPERATION section.

Preparing Tractor

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

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

On carts equipped with optional hydraulic brake system, make sure the tractor is equipped with the components necessary for operating the cart's hydraulic brakes. Consult your tractor's Operator's Manual or your tractor dealer for the appropriate brake control system.

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

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

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

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

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

Preparing Cart

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

Hardware

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

Pivot Pins

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

Hitch

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

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

Preparing Cart (continued)

Auger

Inspect auger for damage and wear.

Hydraulic System

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

Optional Hydraulic Brake System

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

Tires/Wheels

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



CAUTION

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

IMPORTANT

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

For questions regarding new tire warranty, please contact your local original equipment tire dealer. **USED TIRES CARRY NO WARRANTY.** Tire manufacturers' phone numbers and web sites are listed in the MAINTENANCE section of this manual for your convenience.

Lubrication

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

Video System (Optional)

IMPORTANT

- *Do not operate video system below 15°F. Damage to video system can occur.*
- The video system kit includes its own operation instruction sheet.

Hitching to Tractor

Drawbar Connection

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

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

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

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

Lock tractor drawbar in center position.

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

WARNING

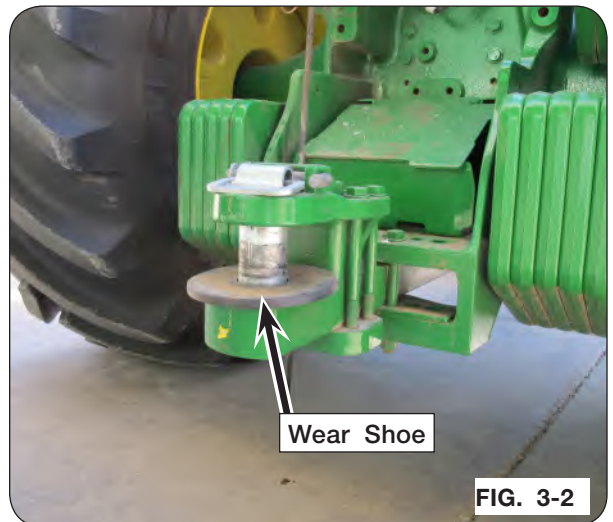
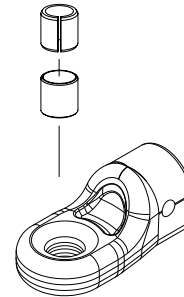
- **DO NOT STAND BETWEEN THE CART AND TRACTOR WHEN HITCHING. ALWAYS ENGAGE PARKING BRAKE AND STOP ENGINE BEFORE INSERTING HITCH PIN.**

Place wear shoe (281663-CAT 3; 281898-CAT 4; 281899-CAT 5) between tractor hitch and grain cart hitch. (Figure 3-2)

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

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

FIG. 3-1



2 7/8" Higher Than
The Standard Position

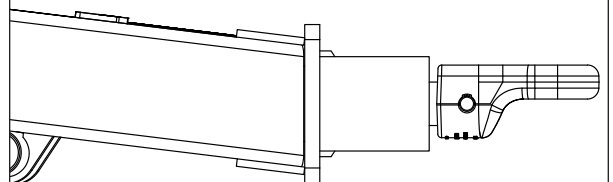


FIG. 3-3

Hitching to Tractor (continued)

WARNING

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

Jack Usage

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 inside frame using pin and hair pin. Pivot the jack 90 degrees and reinstall pin for field use. (Fig. 3-4)

IMPORTANT

- After cart is hitched to tractor, pivot jack to storage location shown in Fig. 3-5.

Fig. 3-4

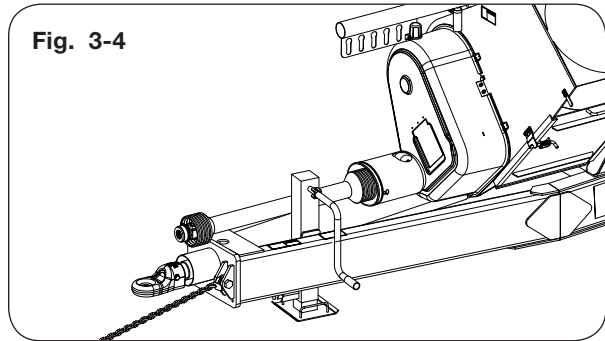


Fig. 3-5



Hitching to Tractor (continued)

Optional Hydraulic Jack Usage

WARNING

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

IMPORTANT

- After cart is hitched to tractor, attach hydraulic hoses to tractor and retract hydraulic cylinder to store hydraulic jack between the frame rails.

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

Always close the manual valve for the hydraulic jack for in-field use and when unhitched from the tractor.

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

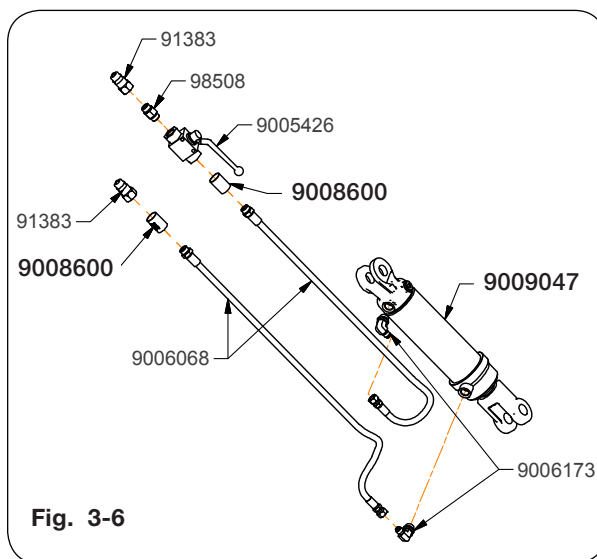


Fig. 3-6

Hitching to Tractor (continued)

Transport Chain Connection



CAUTION

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

Tractor must be equipped with a transport chain support. Always use intermediate support when connecting cart directly to a tractor. DO NOT use the intermediate chain support as the chain attaching point. Fig. 3-7 shows how the transport chain must be installed between cart and tractor.

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



Hitching to Tractor (continued)

Hydraulic Connections

Clean hydraulic hose couplers before connecting to the tractor. For convenience, this unit is equipped with color hose grips attached to the hydraulic hoses. This will help in identifying the hose function and correct hook up. (FIG. 3-8)

For steering tandem, attach hydraulic hoses labeled “TURN LEFT” and “TURN RIGHT” into tractor hydraulic remote. Connect hydraulic hose “TURN LEFT” to extend port, and “TURN RIGHT” to retract port.

Color	Function
Red	Flow Door Open and Close
Yellow	Spout Tilt In and Out
Tan	Joystick or Spout Rotate
Green	Auger Fold and Unfold
Blue	Auger Pivot Up and Down
Black	Jack Raise and Lower
Orange	Water Pump
Optional	Hydraulic Pressure and Return
Optional	Steering Tandem
Optional	Brakes

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.

(Continued on next page)

Hitching to Tractor (continued)

Hydraulic Connections

Before disconnecting hoses from tractor, place tractor in Park and shut PTO off, operate auger fold and tilt to the lowest positions. Where possible, remove hydraulic pressure loads and avoid potential pressure buildup in the lines from long storage periods such as upper auger not in rest position. If equipped with hydraulic jack, extend jack to desired position, turn valve to closed 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. 3-8



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. 3-9)

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

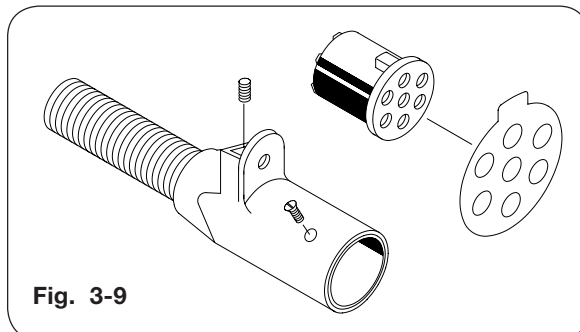


Fig. 3-9

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

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

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

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

Optional Implement Brake Connection

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

Towing

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

IMPORTANT

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

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

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

The PTO drive shaft needs to be placed in the storage position on the tongue or properly attached to the tractor. See “Coupling The Cut-Out Clutch” in SET UP section and “PTO Shaft and Clutch” in MAINTENANCE section before connecting the PTO drive shaft to the tractor.

Secure transport chain to tractor chain support before towing.



CAUTION

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

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.

Verify brake operation/release before towing.

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

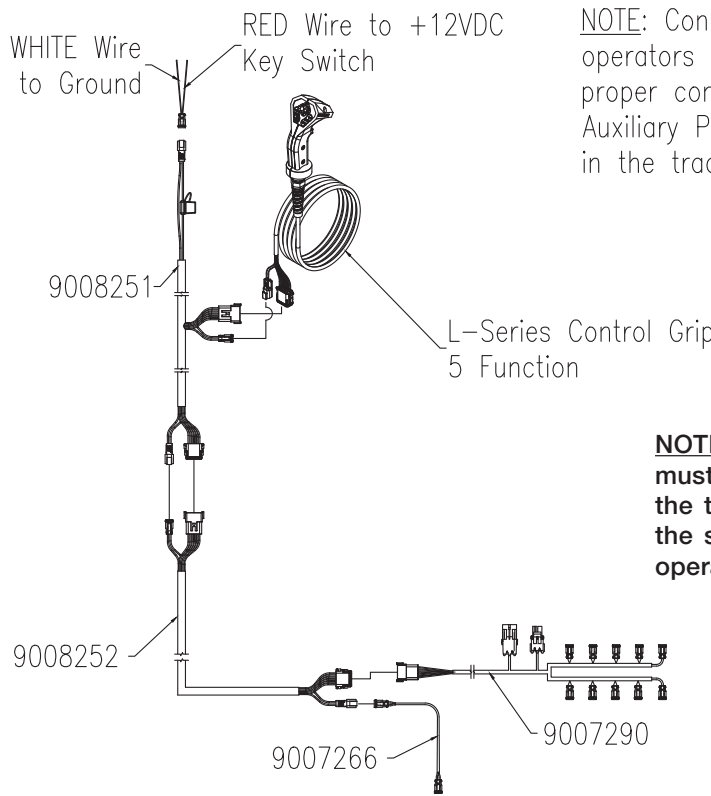
Electric Over Hydraulic Operation (Optional)

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

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

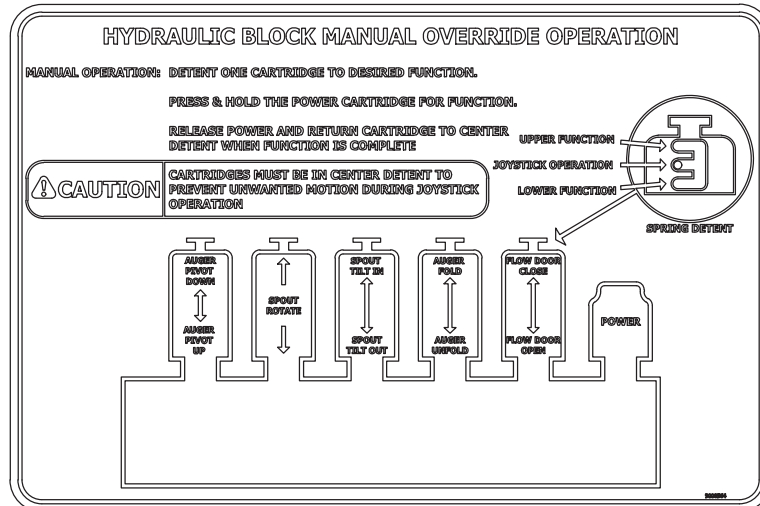
1. Connect the red wire from power harness (9008251) to a key-switched +12VDC power supply. (Fig. 3-10)
2. Connect the white wire from power harness (9008251) to ground. (Fig. 3-10)

Fig. 3-10



NOTE: Consult the tractor's operators manual for proper connection to the Auxiliary Power Outlet in the tractor cab.

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



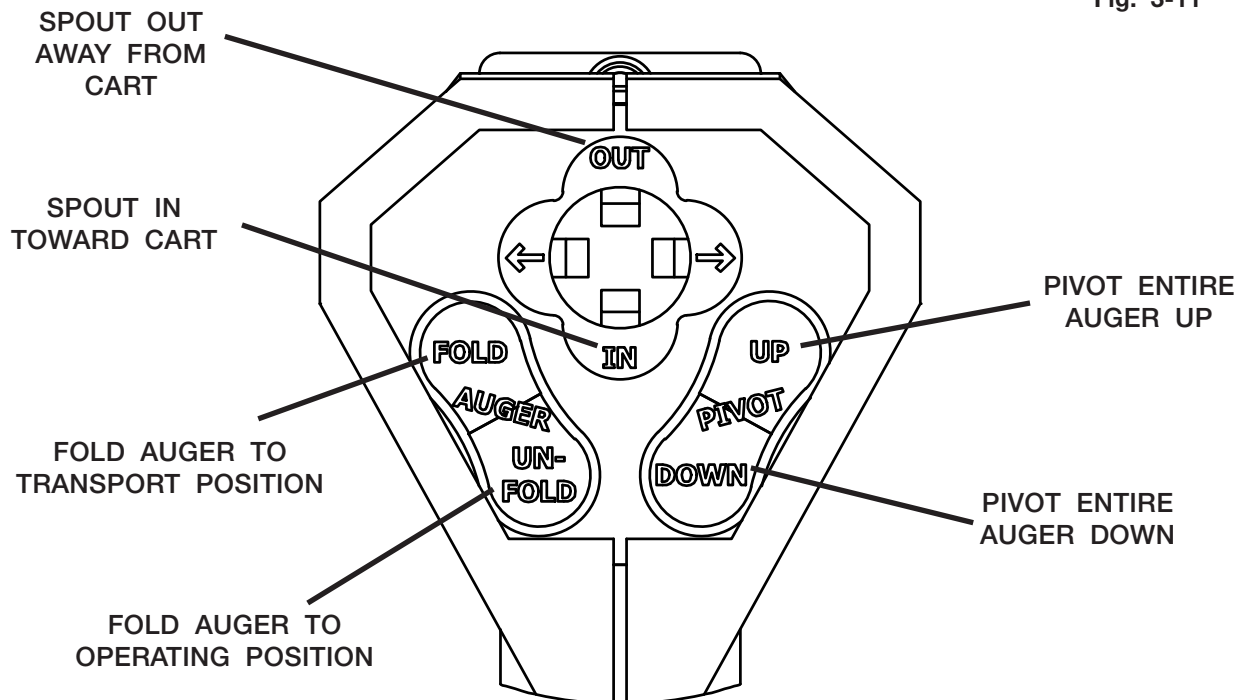
Electric Over Hydraulic Operation (Optional) (continued)

3. Connect the Hydraulic Pressure and Return hoses to the tractor SCV remote so that the Pressure line is able to be put in continuous detent.
4. Place the remote in continuous detent so that the Hydraulic Pressure hose is pressurized and set the hydraulic flow to a maximum 6 gal/min to minimum 4 gal/min.
5. To fold auger out from transport to operating position, push down the auger unfold button on joystick face until the upper and lower auger are engaged and fold linkage is over center. See Fig. 3-11.

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

6. To pivot spout OUT away from cart, push hat switch toward OUT. Hold the switch until desired position is achieved. See Fig. 3-11.
7. To pivot spout IN toward cart, push hat switch toward IN. Hold the switch until desired position is achieved. See Fig. 3-11.
8. To pivot the entire auger UP, press and hold the auger pivot UP button until the desired height is achieved. See Fig. 3-11.
9. To pivot the entire auger DOWN, press and hold the auger pivot DOWN button until the desired height is achieved. See Fig. 3-11.

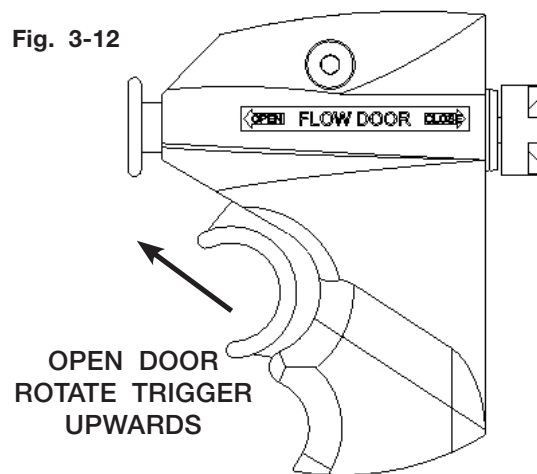
Fig. 3-11



Electric Over Hydraulic Operation (Optional) (continued)

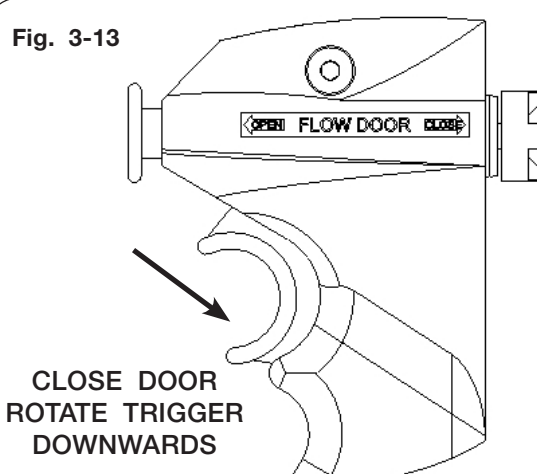
10. To open flow door, rotate the switch upwards. Observe flow door indicator to determine when to release trigger and stop flow door movement. See Fig. 3-12.

Fig. 3-12



11. To close flow door, rotate the switch downwards. Observe the flow door indicator and release trigger when door is closed to desired position. See Fig. 3-13.

Fig. 3-13

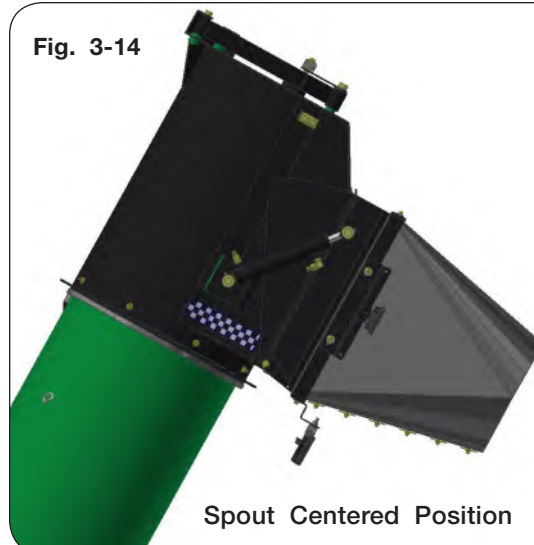


12. To fold auger from operating position to transport position:

- A. Rotate spout to centered position. Align the checker flag with the upper auger to locate center as shown in Fig. 3-14.
- B. Press auger FOLD button on joystick.
- C. Hold FOLD button until upper auger is on field rest or in transport position.

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

Fig. 3-14



Manual Override for Optional Electric Over Hydraulic System

⚠ WARNING

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

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

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

1. Park the empty grain cart on a firm and level surface. Block the tires/tracks on the machine to keep it from moving. Set the tractor's parking brake.
2. Connect the Hydraulic Pressure and Return hoses to the tractor SCV remote so that the Pressure line is able to be put in continuous detent.

NOTE: Center rotating spout before activating auger fold.

3. To operate the manual override functions, place the tractor SCV remote in continuous detent so that the Hydraulic Pressure hose is pressurized.
4. Remove cover plate (272606B) from the bottom of the lower auger housing to access the EOH block assembly.

NOTE: Only one cartridge valve (9008416 & 9008463) must be in the top or bottom detent position at a time to function properly. All other valves must be in the middle detent position. (FIG 3-15 & 3-16)

5. Operate the desired function on valve (9008416 & 9008463) by rotating the manual override knurled knob from the locked neutral position. (FIG. 3-15 & 3-16)

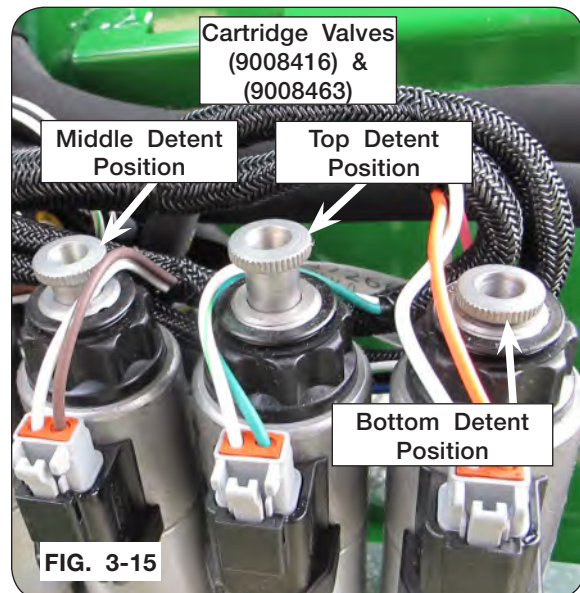


FIG. 3-15

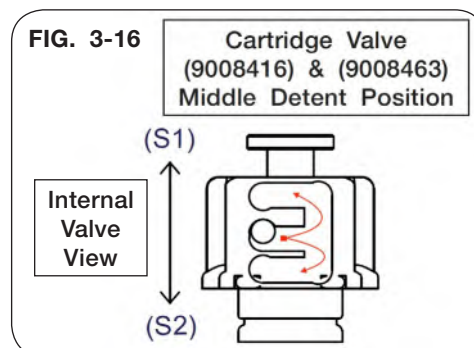


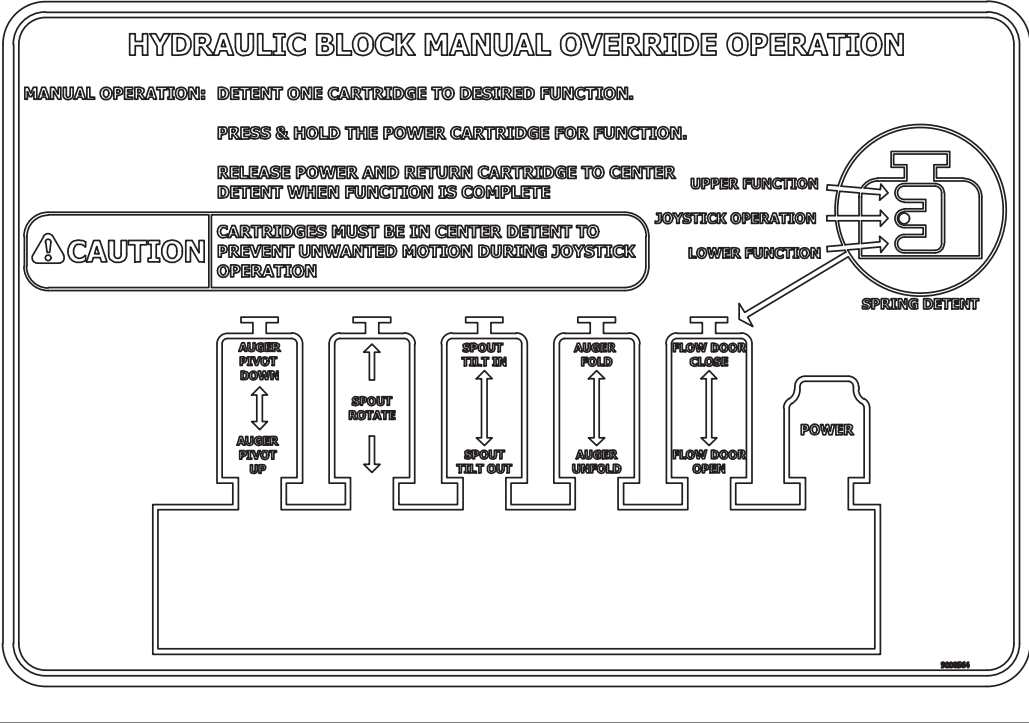
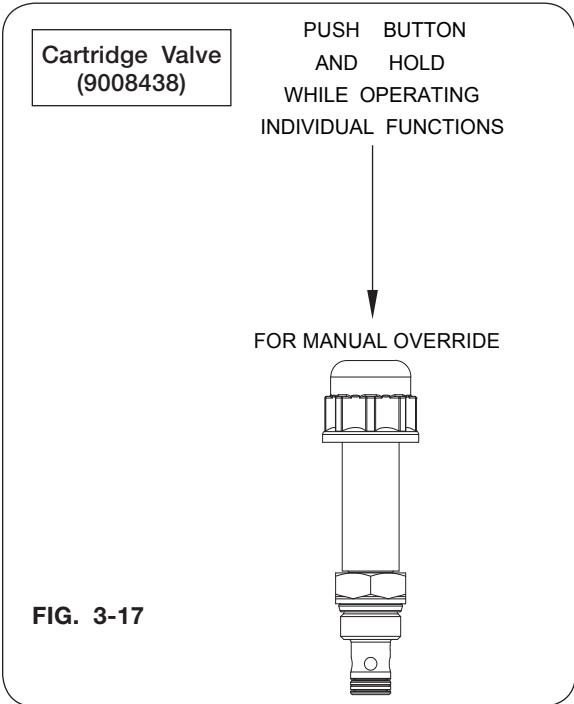
FIG. 3-16

Manual Override for Optional Electric Over Hydraulic System
(continued)

6. Push and hold the manual override button on valve (9008438). (FIG. 3-17)
7. Once the desired position is reached, release manual override button on valve (9008438).
8. Return knurled knob to center and lock valve (9008416) & (9008463) in position. (FIG. 3-15 & 3-16)

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

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



Vertical & Horizontal Cleanout Door Operation

⚠ WARNING

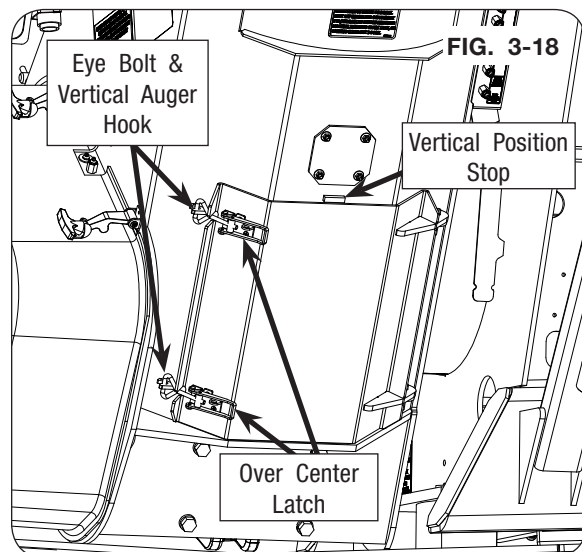
- MOVING OR ROTATING COMPONENTS CAN CAUSE SERIOUS INJURY OR DEATH. ENSURE SERVICE COVERS, CHAIN/BELT COVERS AND CLEANOUT DOORS ARE IN PLACE AND SECURELY FASTENED BEFORE OPERATING UNIT.
- KEEP HANDS CLEAR OF PINCH POINT AREAS.
- TIPPING OR MOVEMENT OF THE MACHINE CAN CAUSE SERIOUS INJURY OR DEATH. BE SURE THE MACHINE IS SECURELY BLOCKED.
- EYE PROTECTION AND OTHER APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT MUST BE WORN WHILE SERVICING THE IMPLEMENT.

NOTE: Raise the vertical auger to ensure clearance between cleanout door and tongue to open and remove the cleanout door from the vertical lower auger.

Vertical Cleanout Door

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. To completely close cleanout door, ensure the vertical auger cleanout door top edge clears the vertical position stop (key stop). (FIG. 3-18)
3. Attach eye bolt ends of over center latches to the hooks on the vertical auger. (FIG. 3-18)
4. Clasp the over center latch handles to lock the door in the closed position. (FIG. 3-18)
5. Inspect and verify cleanout door perimeter for gaps. Ensure all grain dust and filings are removed that may prevent the door from shutting completely.
6. If gaps are present, unclasp the over center latch and tighten eye bolt to improve door seal contact on the vertical auger.
7. Rehook eye bolt to vertical auger and clasp the over center latch.

NOTE: Repeat closing the door and inspection, as necessary.

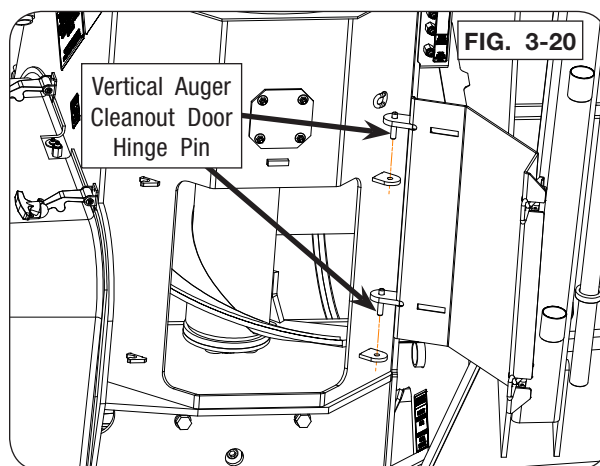
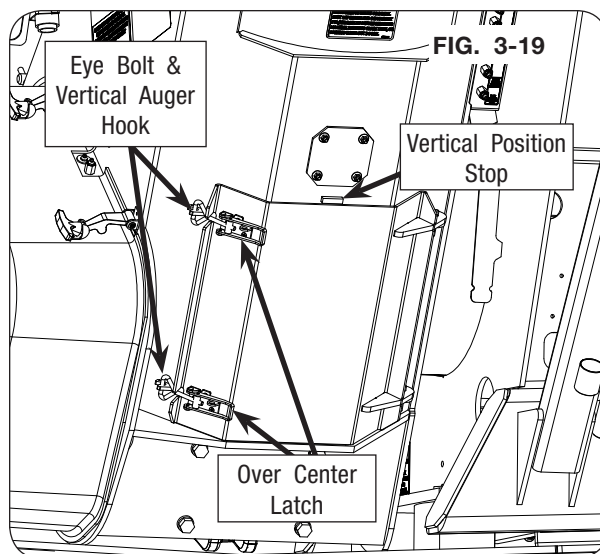


Vertical & Horizontal Cleanout Door Operation (continued)

Vertical Cleanout Door

NOTE: Remove the vertical auger cleanout door to improve vertical auger cleaning.

8. To open and remove the vertical auger cleanout door, unclasp the over center latch. (FIG. 3-19)
9. Unhook the eye bolt from the vertical auger and open the cleanout door. (FIG. 3-19)
10. The hinge on the vertical auger cleanout door is set on a pin. Lift and remove the cleanout door from the vertical auger. Keep vertical auger cleanout door. (FIG. 3-20)
11. Inspect and verify all debris is removed from inside the vertical auger housing.
12. Reattach the vertical cleanout door to the vertical auger.

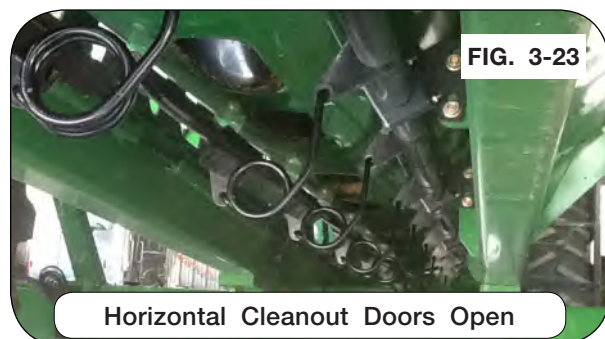
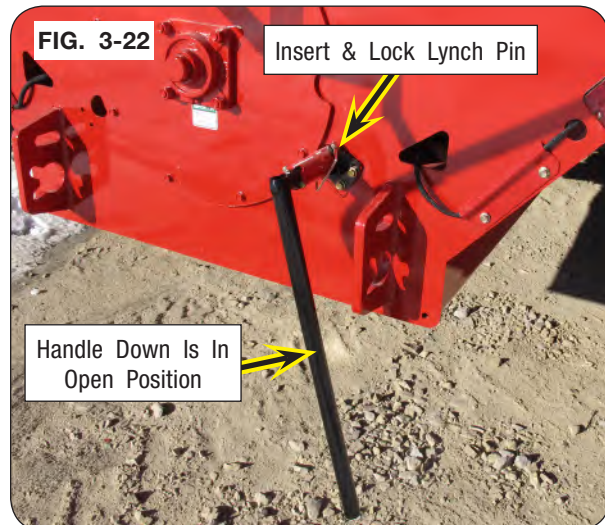
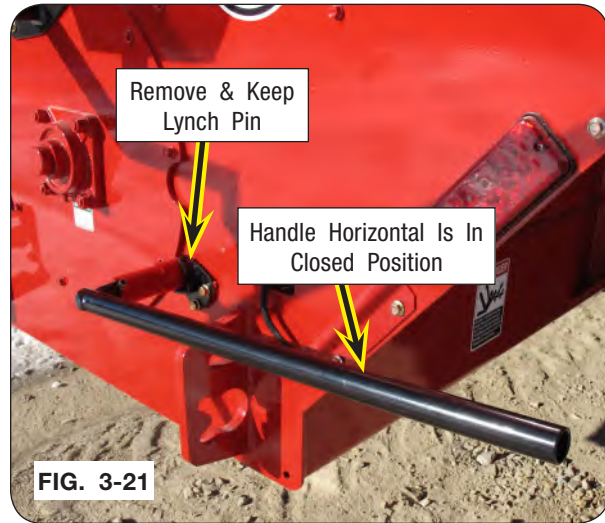


Vertical & Horizontal Cleanout Door Operation (continued)

Horizontal Cleanout Door

Use the tensioner handle, located on the left-hand side of the grain cart, behind the first panel to open and close the horizontal cleanout doors.

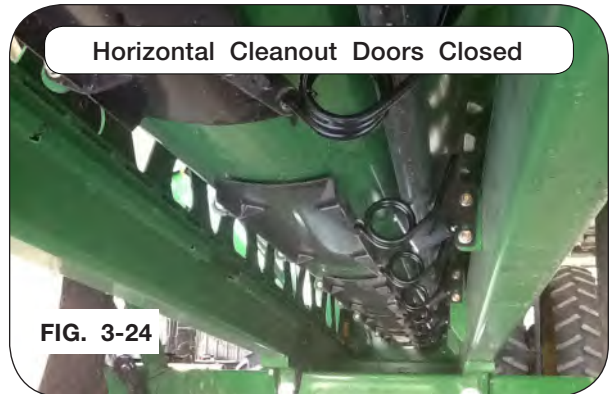
1. Insert tensioner handle into the cleanout door receiver coupler on the rear panel, and remove lynch pin from rockshaft. Keep lynch pin. (FIG. 3-21)
 2. Rotate the tensioner handle clockwise to open the cleanout doors. (FIG. 3-22)
 3. Insert and lock lynch pin into rockshaft. (FIG. 3-22)
 4. Inspect and verify all debris is removed that may prevent the doors from shutting completely. (FIG. 3-23)
- NOTE:** If cleanout doors do not function properly, refer to “Horizontal Cleanout Door Inspection” in SET UP section for more information.
5. Remove lynch pin from rockshaft and rotate handle counter-clockwise and clockwise to check for smooth door operation.



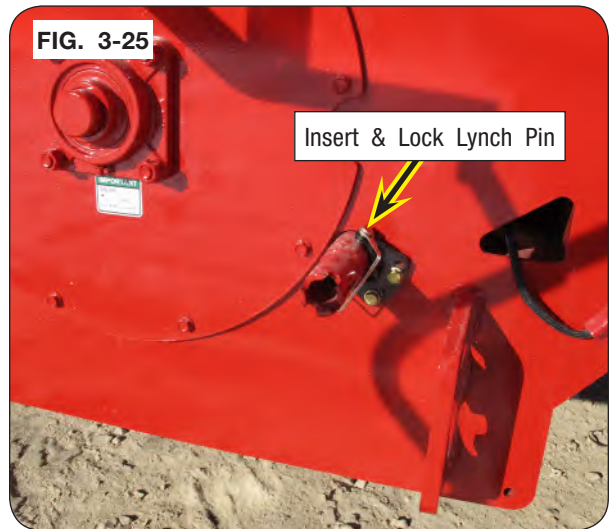
Vertical & Horizontal Cleanout Door Operation (continued)

Horizontal Cleanout Door

6. Rotate handle counter-clockwise to close doors and ensure all doors seal. (FIG. 3-24)



7. Insert and lock lynch pin into rockshaft and return handle to storage location. (FIG. 3-25)



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.



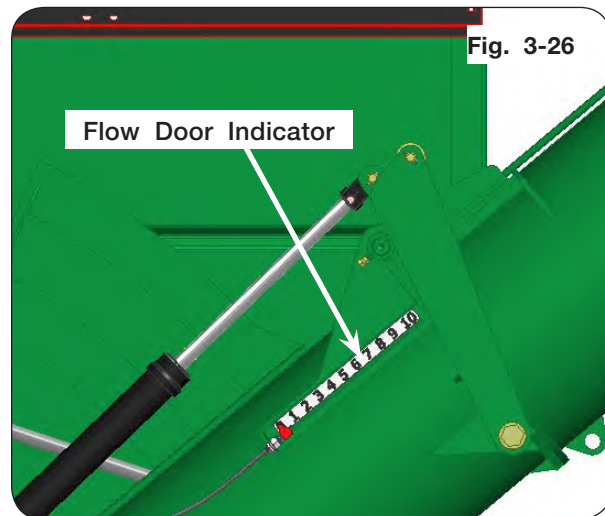
WARNING

- 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 ARE RESTRICTED MOBILITY AND LIMITED EXIT PATHS WHEN WORKING INSIDE THE CART.

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

NOTE: If spout rotate moves out of center, the auger will not unfold to unloading position. The spout must be manually rotated to center position. See “Manual Override for Optional Electric Over Hydraulic System” in the OPERATION section.

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 and over-center latch to fully engage.
4. Engage PTO at low engine RPM, then increase engine RPM until 1000 PTO RPM is reached.



5. Open flow control door to desired unloading rate. Numbers on the auger tube provide a point of reference for operator convenience. (FIG. 3-26)
6. To slow or stop grain flow, close flow door, rather than reducing tractor RPM. Close flow door fully when unloading is complete.

NOTE: If an overload occurs, see “Auger Overload Procedure.”

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.

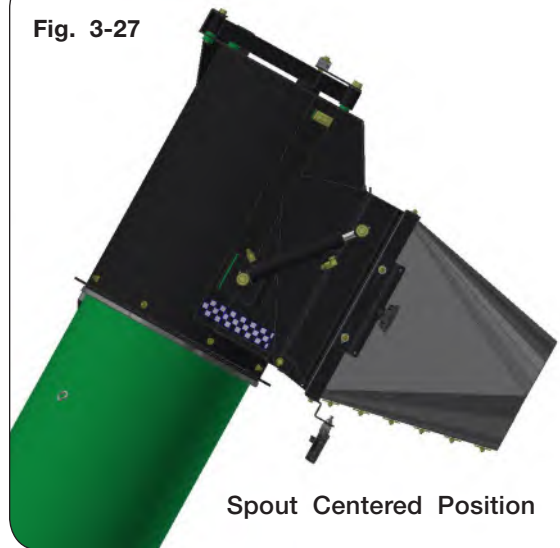
Cart is equipped with baffles that can be adjusted to accommodate the flow of different materials and/or torque demands associated with different materials. See the MAINTENANCE section for the procedure.

Auger Operation (continued)

7. When auger is empty, reduce PTO rpm to idle, and stop PTO.
8. After PTO has come to a complete stop, the checker flag needs to align with the upper auger to center spout as shown in FIG. 3-27.
9. Once spout is centered, fold auger to the transport position or field position.

NOTE: Spout can be TILTED to any position, but must be ROTATED to center for auger to fold.

Fig. 3-27



Auger Operation (continued)

Auger Overload Procedure

IMPORTANT

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

NOTE: When over loading occurs, drivelines equipped with cut-out clutch will make a “clicking” noise when torque has been exceeded. Immediately shut off PTO and shut the flow door.

NOTE: Once PTO RPM has significantly decreased, cut-out clutch will automatically reset.

1. Close flow door.
2. With the PTO off and driveline stopped, disengage the belt tensioner using the belt tensioner handle, this disengages the horizontal auger from the drivetrain. (FIG. 3-28)
3. Restart and engage the tractor PTO at low engine RPM.
4. Increase engine RPM until 850 to 1,000 PTO RPM is reached to empty the vertical auger.
5. Once vertical auger is empty, stop PTO.
6. With the tractor PTO off and driveline stopped, reengage the belt tensioner using the belt tensioner handle. Return handle to storage. (FIG. 3-29)
7. Restart and engage the tractor PTO at low engine RPM.
8. Increase engine RPM until 850 to 1,000 PTO RPM is reached to empty the drag auger.

NOTE: If the grain cannot be relieved by above method, open bottom clean out doors (see “Vertical & Horizontal Clean-Out Door Operation” in this section) to remove grain from auger before repeating these steps to clean out auger.



Auger Operation (continued)

Vertical Auger Fold

⚠ WARNING

- DO NOT STAND ON LADDER OR FRAME UNLESS TRACTOR ENGINE IS TURNED OFF AND KEYS ARE REMOVED FROM THE IGNITION.

Actuate hydraulic auger fold circuit to pivot vertical auger between transport and operating positions. When unfolding auger, allow sufficient time for cylinder to rotate the outside fold link into an over-center position. (FIG. 3-30)

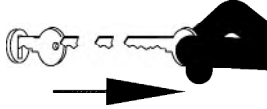
NOTE: Auger spout will not rotate until auger is fully extended and auger will not fold until the spout is centered.



Auger Operation (continued)

Auger Field Rest Position

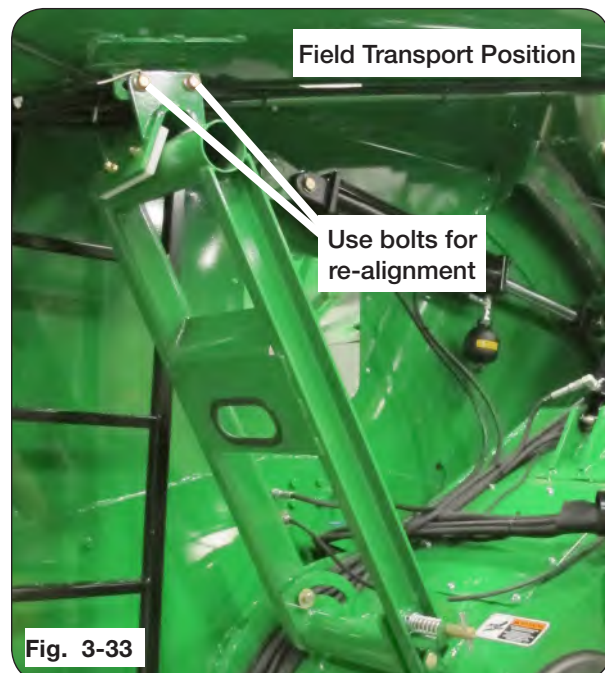
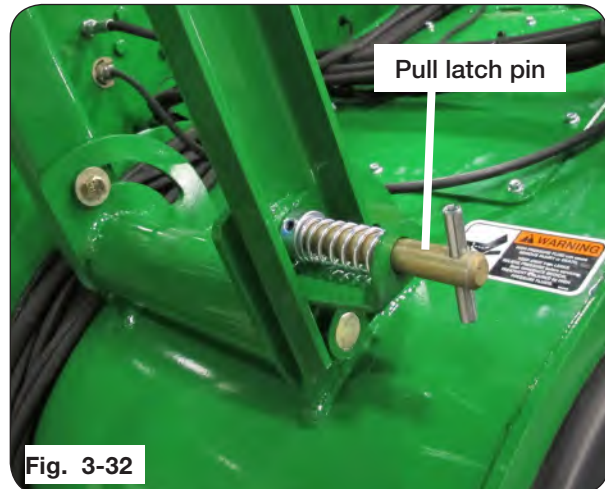
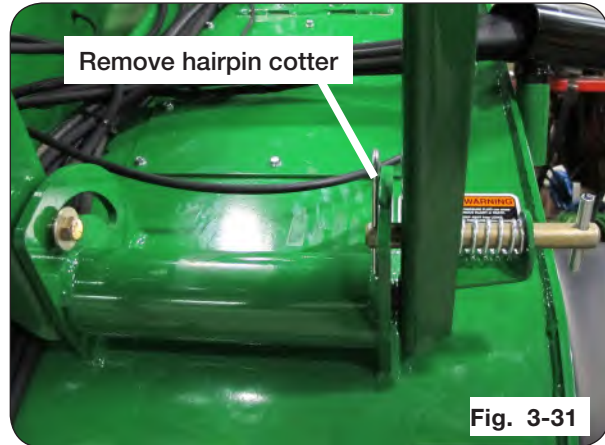
1. Extend auger to the unload position. Shut-off tractor's engine and remove the ignition key.



2. Remove hairpin cotter from latch pin (Figure 3-31) and pull latch pin towards you to disengage (Figure 3-32). Raise auger rest stand up to field transport position and release latch pin. Make sure the pin is engaged in the field transport position hole and re-install hairpin removed earlier in this step.

3. Fold auger back to field transport position (Figure 3-33), making sure bracket engages the auger rest tube and activates the auger switch.

NOTE: Auger rest bracket is factory adjusted. Bolts can be used for re-alignment of bracket.



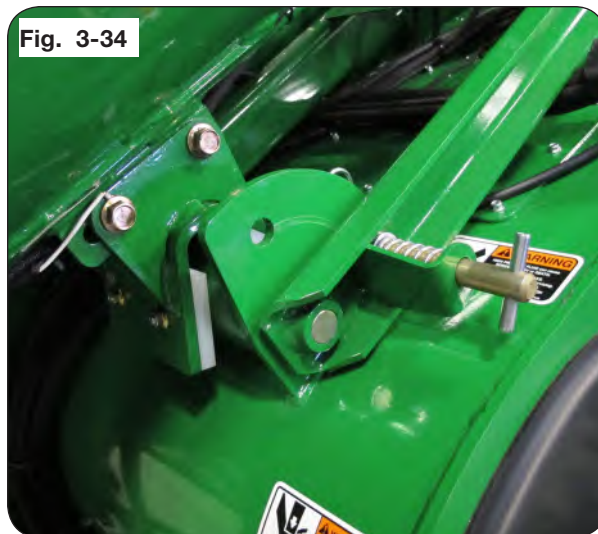
Auger Operation (continued)

Auger Field Rest Position (continued)

- 4. Extend auger to the unload position. Shut-off tractor's engine and remove the ignition key.



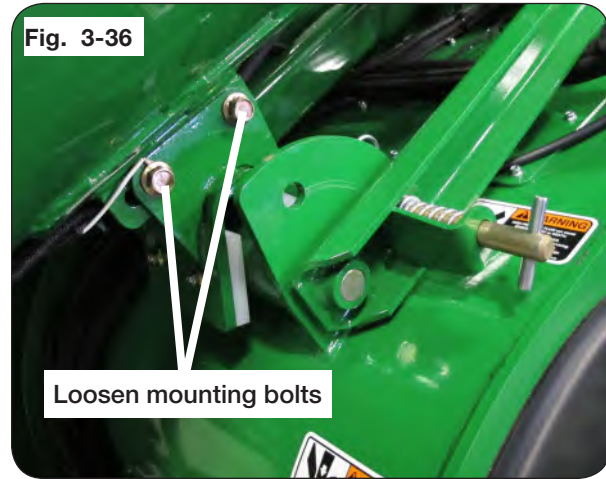
- 5. Remove hairpin and pull latch pin towards you to disengage. Lower auger rest stand to the transport position and release the latch pin (Figure 3-34). Make sure the pin is engaged in the transport position hole and re-install hairpin removed earlier in this step.
- 6. Move auger down to road transport position. (Figure 3-35)



Auger Operation (continued)

Upper Auger Rest Adjustments

1. Loosen mounting bolts of auger rest bracket. (Figure 3-36)
2. Raise auger approximately 6" out of the lower rest and install cylinder stops on the fold cylinder to prevent the auger from lowering unexpectedly.
3. Position upper auger rest as needed so that it appears to be centered over the lower auger rest tube.
4. Hand tighten the mounting bolts of the auger rest bracket.
5. Remove the cylinder stops installed in step 2, and lower the auger down into the lower rest.
6. Make sure the upper auger rest contacts the lower tube evenly. Finish tightening mounting bolts.



Steering Tandem

Steering Tandem Indicator

Steering Tandem Tire position can be determined by observing indicator arrow located on the lower right portion of front panel.

NOTE: Indicator is best observed when auger is in field transport position.

Steering Tandem Operation

The steerable tandem has three different settings: Auto-Steer, Lock and Manual.

The defaulted function of the steering tandem is **Auto-Steer**. **Auto-Steer** is achieved when switch is in “OFF” position. (Regardless of tractor hydraulic lever position) This function allows grain cart tires to steer freely and to trail tractor.

To lock current steering position of tandem:

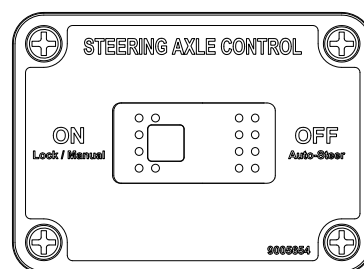
Turn “ON/OFF” switch to “ON” and have tractor hydraulic remote lever in neutral position. This function may be used to hold steering position when moving back and forth along side of semi trailer.

To Manual steer tandem:

Turn “ON/OFF” switch to “ON” and move tractor hydraulic remote lever to extend or retract depending on steering direction and hydraulic connections noted earlier. This function may be used when backing unit into shed, or to make a reverse travel turn in opposite direction of forward turn.

NOTE: It is important to keep cylinders correctly phased. See “Steering Cylinder Rephasing” in the MAINTENANCE section.

NOTE: It is recommended to take scale readings with the wheels inline and vehicle stopped for maximum accuracy. See scale manual for more information.



Optional Implement Brake System for Steering Tandem

This system is for tractors with hydraulic trailer brake option. Once connected and properly bled, this system sends pressure to the implement’s brakes when the brake pedal is used. After the brake pedal is released, pressure is removed from the implement calipers. Always check brake operation with an empty cart and familiarize the effectiveness as the load increases in the cart.

Troubleshooting

Problem	Possible Cause	Corrective Action
No Electric Over Hydraulic (EOH) Functions work	Not getting 12 Volt power supply to the power harness in the tractor	Check the connections to the main power harness in the tractor cab, and check the 5 AMP fuse in the fuse holder of the main power harness. Replace fuse if necessary.
	Not getting good connection at Deutch connectors in the harnesses	Unplug the Deutsch connectors at the hitch point and in the extension harness (if used). Clean up the connectors with electrical contact cleaner. Make sure the connectors are aligned correctly and re-connect them.
	Not pressurizing the correct hydraulic hose	Make sure the quick couplers are properly connected to the tractor SCV and the Hydraulic Pressure line is being pressurized when engaging the tractor SCV.
Auger unfolds, but won't fold back in to transport position	Rotating Spout is not in the folding position	Rotate the spout so it is positioned straight down or forward in order to fold the auger into transport position.
	Rotating spout switch is faulty or out of adjustment	Make sure the spout is in the centered position. Press and hold the manual override button on the electric over hydraulic (EOH) valve on the auger fold cylinder while someone operates the hydraulic remote to fold the auger back to the transport position. Inspect the switch assembly near the rotating spout cylinder. The clearance between the end of the proximity switch and the barrel of the rotating spout cylinder must not exceed 1/4".
Auger unfolds part way and stops	Debris in the EOH block on the auger fold cylinder	Fold auger, remove hydraulic pressure, and remove the Coil and the cartridge valve on the EOH valve block. Remove any debris and reinstall cartridge and coil.
	Rotating Spout switch is out of adjustment or has been activated.	With the auger folded in to the lower transport rest, have someone depress and hold the switch at the vertical auger hinge plate. Use any means necessary to depress the switch without placing your hands or other body parts near the pinch points. With the switch depressed, rotate the spout to the folding position.

Troubleshooting (continued)

Problem	Possible Cause	Corrective Action
Spout rotate does not operate	7 pin connector is not plugged into tractor.	Plug in 7 pin connector to same power source as the 5 function controller.
	Proximity Switch at the auger hinge is not getting Power or Ground.	Check power and ground to the proximity switch harness on the vertical auger.
Rotating spout will not function	Proximity Switch at the hinge plate is not adjusted correctly	This proximity switch has a 1/4" effective operating range. The upper auger hinge plate needs to be within that range when it is unfolded in to the operating position. Adjust the proximity switch in or out in order for the sensor to activate when it is in the operating position.
	Switch located at the hinge plate of the vertical auger is not getting power, ground or is defective	Check the ground wire on the top plate of the lower vertical auger and on the left hand standard just behind the front plate of the harness. Unplug the 3 pin connector on the hinge plate proximity switch. With a multi-meter or test light, confirm that the pin in socket B has +12V constant power and socket A has +12V when the sensor is activated.
One single function will not work	Defective coil on the EOH valve for that function	Loosen the cap for the coils associated with that function on the EOH valve. Depress the button on the remote, and determine if the coils are getting magnetized. Inspect the wiring connectors to these coils, and replace the coil if necessary.
	Defective valve on the EOH valve for that function	Remove the coil and the cartridge valve on the EOH valve block for that function. Replace the valve if it doesn't operate when the coil is magnetized.
	Debris in the EOH block at the base of the vertical auger	Remove the coil and the cartridge valve on the EOH valve block. Remove any debris and reinstall cartridge and coil.
Functions continue to operate after the button on the remote is released	Tractor hydraulic flow is set too high	Turn tractor hydraulic flow down so that flow doesn't exceed 6 gallons per minute.
	Defective valve on the EOH valve for that function	Remove the coil and the cartridge valve on the EOH valve block for that function, and replace the cartridge.

Ladder Operation

WARNING

- **FALLING OR LOWERING EQUIPMENT CAN CAUSE SERIOUS INJURY OR DEATH. KEEP EVERYONE AWAY FROM EQUIPMENT WHEN SUSPENDED, RAISING, OR LOWERING.**
- **KEEP HANDS CLEAR OF PINCH POINT AREAS.**
- **DO NOT ALLOW ANYONE TO RIDE ON THE LADDER. MAKE SURE EVERYONE IS CLEAR BEFORE OPERATING MACHINE OR TOWING VEHICLE.**
- **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 A CART CONTAINING GRAIN. FLOWING GRAIN TRAPS AND SUFFOCATES VICTIMS IN SECONDS.**

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

NOTE: Ensure upper ladder extension is attached to higher holes on the ladder. Reference “Upper Ladder Extension to Operating Position” section in the SET UP section.

NOTE: Always use lock pin in the working and storage position to lock the ladder extension. The lock pin can be inserted in either left-hand or right-hand ladder hole. (FIGS. 3-37 & 3-38)



Ladder Operation (continued)

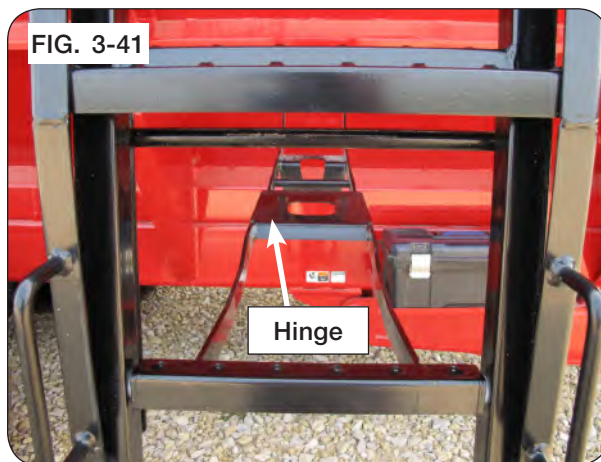
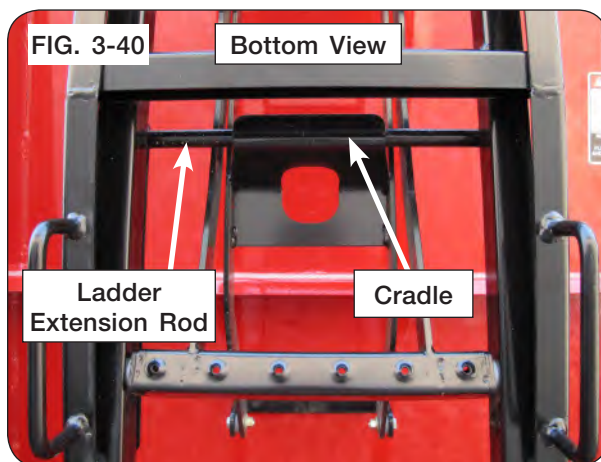
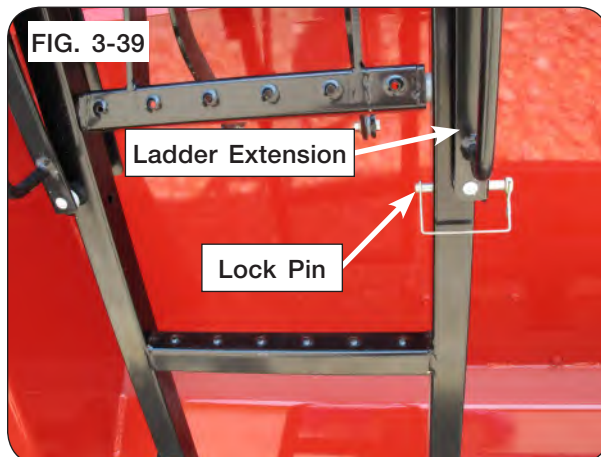
Storage to Working Position

1. Standing in front of ladder, place hands on outside ladder handles.
2. Keep one hand on ladder handle and with opposite hand, remove lock pin from ladder extension. Retain for future use. (FIG. 3-39)
3. With hands back on ladder handles, push ladder towards hopper bin and lift ladder extension to unseat ladder extension rod from the cradle. (FIG. 3-40)

CAUTION

- THE LADDER IS NOW FREE TO PIVOT.

4. Slowly swing ladder outward until hinge is fully extended and locks in the working position. (FIG. 3-41)



Ladder Operation (continued)

Storage to Working Position

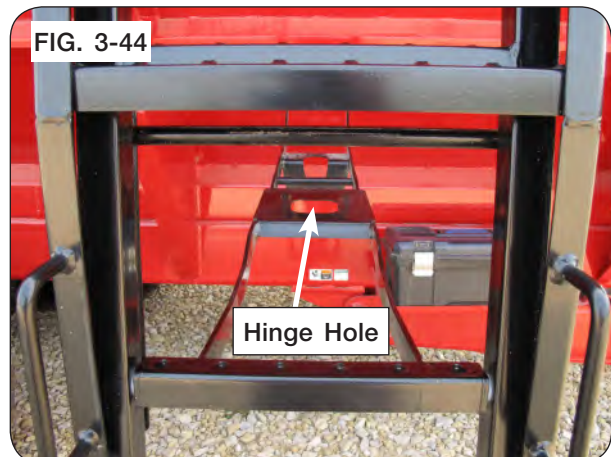
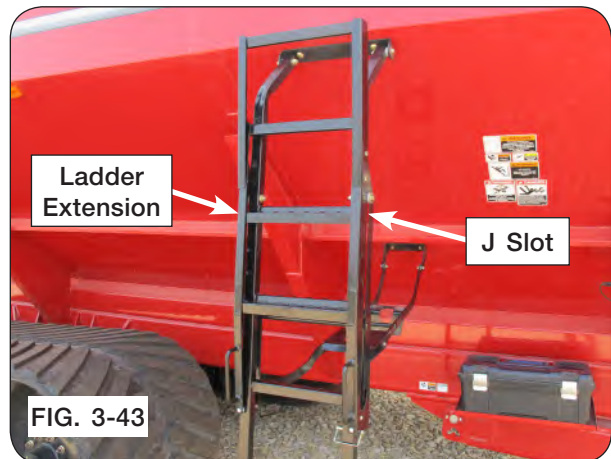
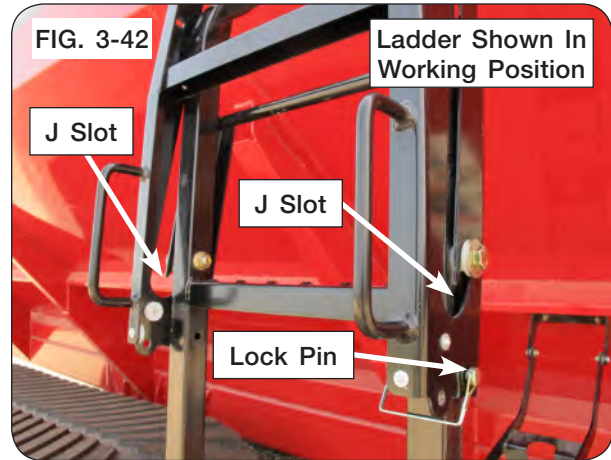
5. Lift and seat ladder extension into shorter leg of “J slot”. (FIG. 3-42)
6. Using lock pin from step 2, insert lock pin into ladder extension and ladder. (FIG. 3-6)

⚠ WARNING

- **FALLING FROM AN UNSECURED LADDER MAY CAUSE SERIOUS INJURY OR DEATH. ALWAYS INSERT LOCK PIN BEFORE CLIMBING.**

Working to Storage Position

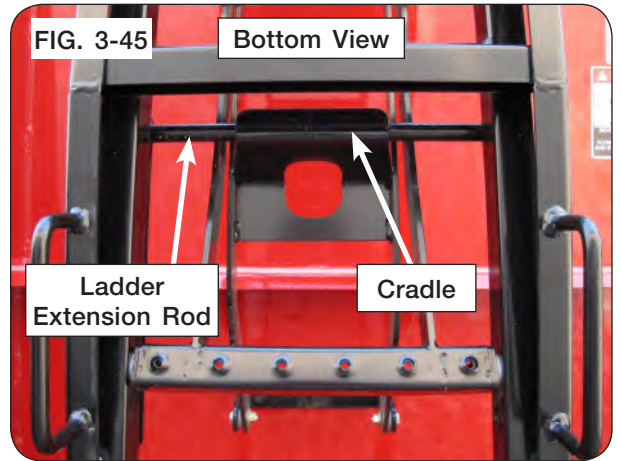
7. Standing in front of ladder, place hands on outside ladder handles.
8. Keep one hand on ladder handle and with opposite hand, remove lock pin from ladder extension. Retain for future use. (FIG. 3-42)
9. With hands back on ladder handles, lift and unseat ladder extension from shorter leg of “J slot”. (FIG. 3-42)
10. Lower ladder extension until fully seated in longer leg of “J slot”. (FIG. 3-43)
11. Keep one hand on ladder handle and with opposite hand, reach between ladder rungs and grab the ladder hinge hole. (FIG. 3-44)
12. Slowly lift ladder hinge until the ladder starts folding.
13. Remove hand from ladder hinge hole and place onto ladder handle.
14. Slowly push ladder towards hopper bin.



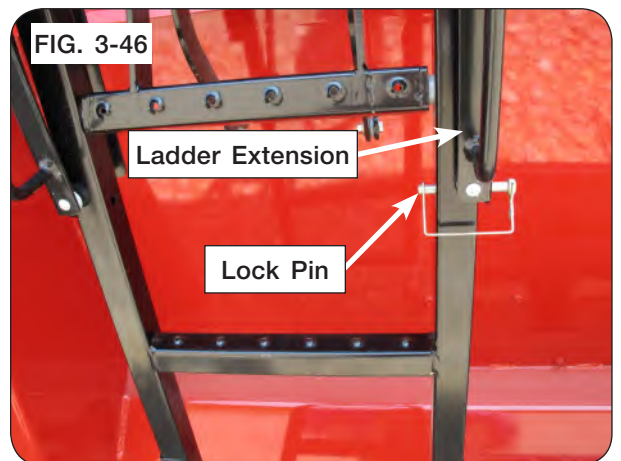
Ladder Operation (continued)

Working to Storage Position

15. Lower ladder extension and seat ladder extension rod onto the cradle. (FIG. 3-45)



16. Using lock pin from step 8, insert lock pin into ladder extension and ladder. (FIG. 3-46)



Weather Guard Tarp

WARNING

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

IMPORTANT

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

Always use adequate caution when operating tarp.

Make sure tarp is open before unloading or loading.

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

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

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

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

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

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

Weather Guard Tarp (continued)

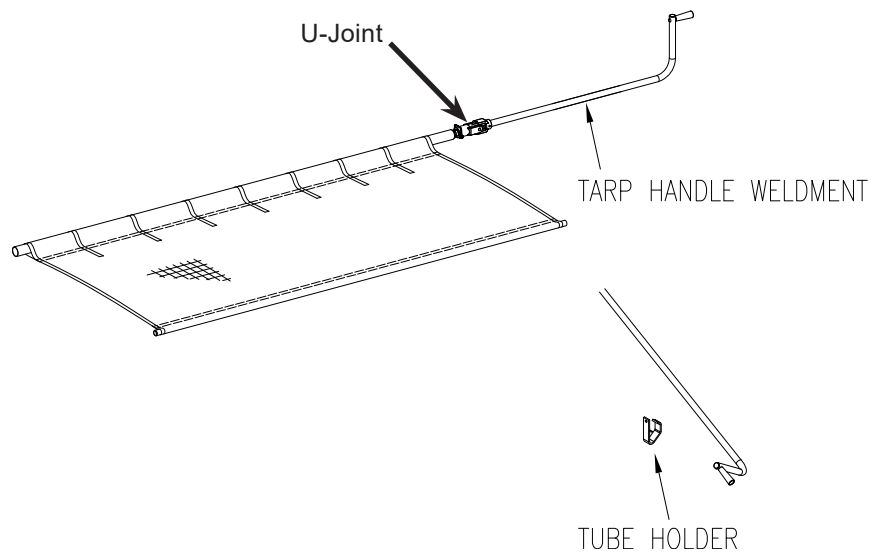
Procedure

1. Using both hands, carefully remove crank handle from holder. (FIG. 3-47)
2. Roll tarp to the desired location, choosing either a fully open or fully closed position.
3. To close the tarp, roll the main tarp tube clockwise up under the latch plate. Next, bring the crank handle down perpendicular to the ground. Continue by lifting it up into the crank retainer.

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

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

FIG. 3-47



Notes

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FOR SCALE INFORMATION, PLEASE REFER TO YOUR SCALE MANUAL.

FOR TRACK INFORMATION, PLEASE REFER TO YOUR TRACK MANUAL.

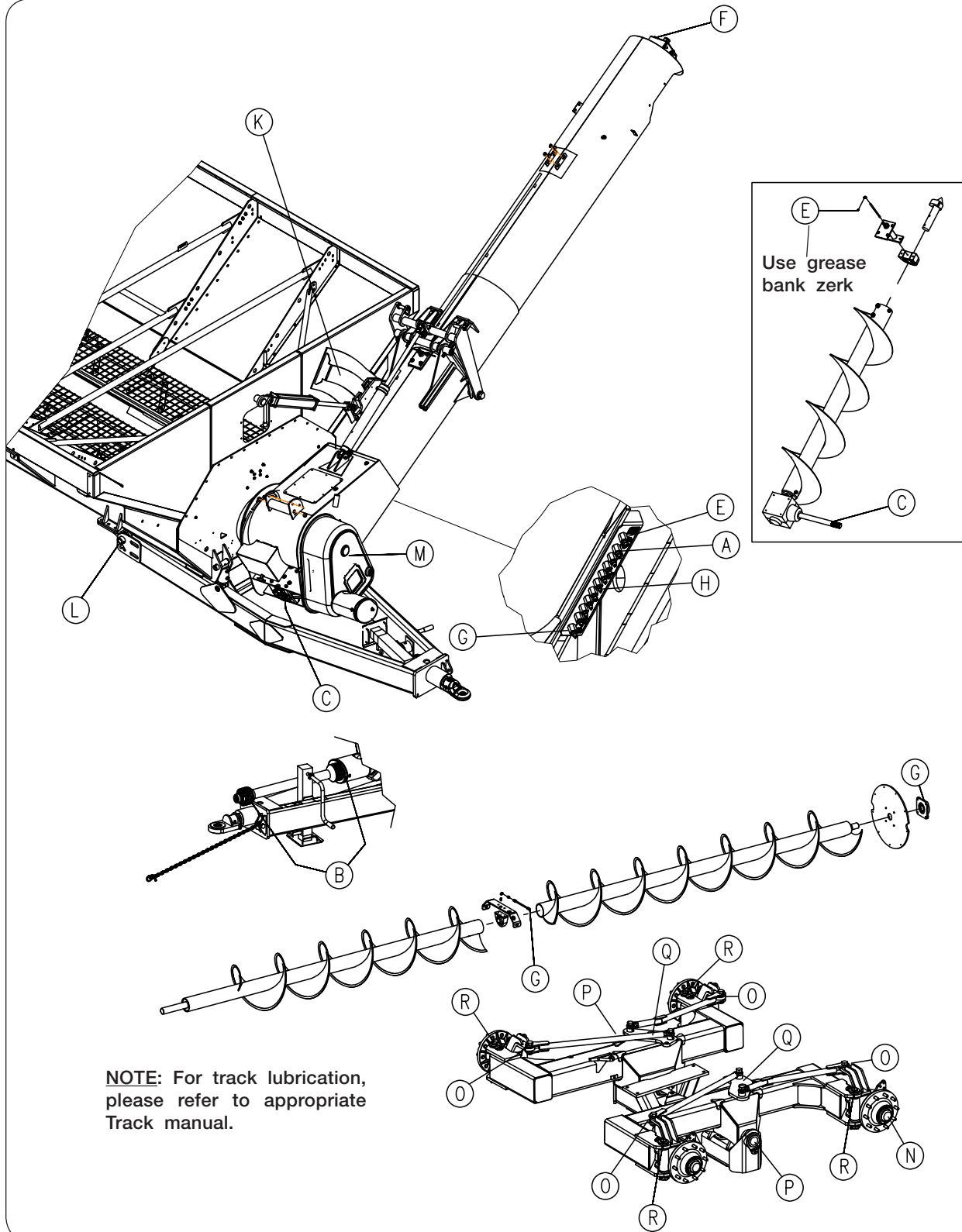
FOR UHARVEST INFORMATION, PLEASE REFER TO YOUR UHARVEST MANUAL.

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

FOR WATER DELIVERY SYSTEM INFORMATION, PLEASE REFER TO YOUR WATER DELIVERY
SYSTEM MANUAL.

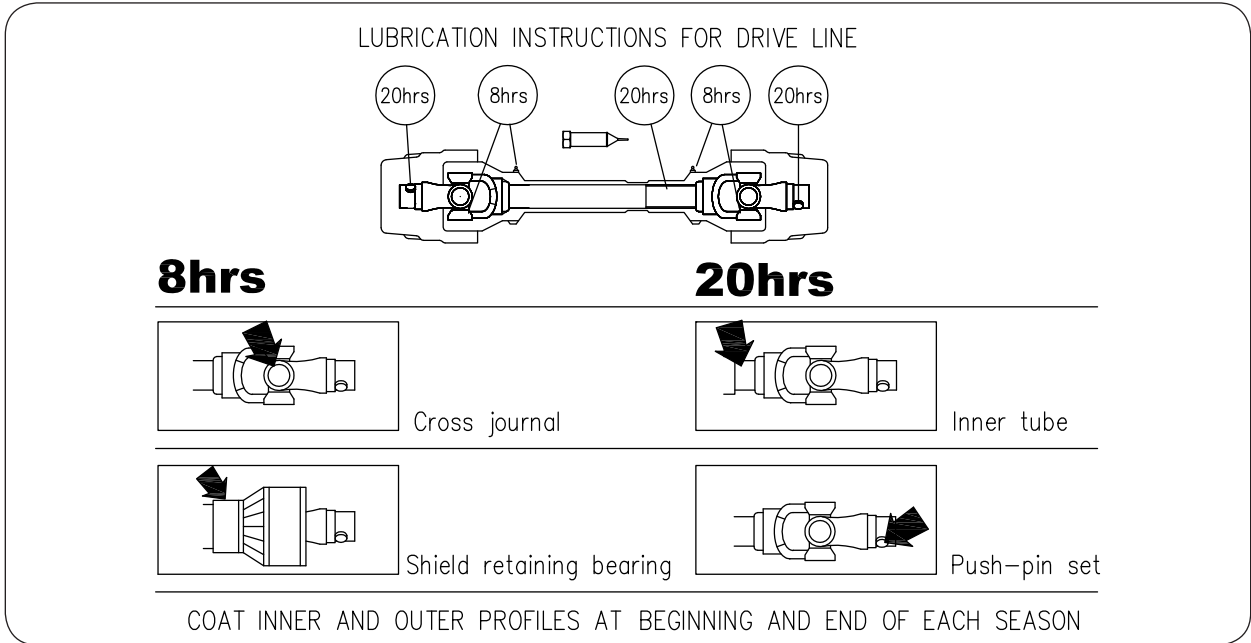
Lubrication

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



NOTE: For track lubrication, please refer to appropriate Track manual.

Lubrication (continued)



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

The lubrication locations and recommended schedule are as follows:

ITEM	DESCRIPTION	POINT	LUBRICANT	QTY.	HOURS
A	Grease Bank for Auger Pivot Pin - Vertical Upper Auger Hinge	2	EP-2	2 Shots	Daily
B	PTO Driveshaft	3	EP-2	1 Shot	See Chart Above
C	Gearbox -- Remove Cover - Check oil level every 2 weeks. Replace oil every season. Refer to Gearbox in MAINTENANCE section for instructions.	1	EP80W90	Approx 85 oz.	Once Every Season
E*	Grease Bank for Hanger Bearing - Vertical Lower Auger See note below*	1	EP-2	2 Shots*	Monthly
F	Top Bearing - Vertical Upper Auger	1	EP-2	1 Shot	Each Season
G	Grease Bank for Horizontal Auger End & Center Bearings	2	EP-2	2 Shots	Monthly
H	Grease Bank for Auger Pivot Rings - Front & Rear Auger Hinge	7	EP-2	2 Shots	Daily
K	Grease Slide Plate	1	EP-2	1 Shot	Each Season
L	Tongue Pivot Bushing	2 (one per side)	EP-2	2 Shots	Daily
M	Front Horizontal Auger Bearing & Gearbox Support Bearing	2	EP-2	1 Shot	Weekly
N	Hubs	4	EP-2	Repack	2 Years
O	Rod Ends of Steering Linkage	4	EP-2	2 Shots	Weekly
P	Tandem Pivot	4	EP-2	3 Shots	Daily
Q	Steering Pivot Pin	2	EP-2	3 Shots	Weekly
R	Spindle Retainer Pivot Pin	4	EP-2	2 Shots	Monthly

*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.

Hydraulic System

Refer to parts section for hydraulic component detail listing.

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

Replacing Hoses/Fittings/Cylinders:

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

Purge Hydraulic System

WARNING

- **HYDRAULIC SYSTEM MUST BE PURGED OF AIR BEFORE OPERATING TO PREVENT SERIOUS INJURY OR DEATH.**
- **RELIEVE HYDRAULIC SYSTEM OF ALL PRESSURE BEFORE ADJUSTING OR SERVICING. SEE THE HYDRAULIC POWER UNIT OPERATOR’S MANUAL FOR PROPER PROCEDURES.**
- **HIGH-PRESSURE FLUIDS CAN PENETRATE THE SKIN AND CAUSE SERIOUS INJURY OR DEATH. USE CARDBOARD OR WOOD TO DETECT LEAKS IN THE HYDRAULIC SYSTEM. SEEK MEDICAL TREATMENT IMMEDIATELY IF INJURED BY HIGH-PRESSURE FLUIDS.**
- **KEEP CLEAR OF PINCH POINT AREAS.**



Purge air from system as follows:

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

IMPORTANT

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

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

Hydraulic System (continued)

Relieving Hydraulic Pressure

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

Bleeding Procedure For EOH System

WARNING

- RELIEVE THE HYDRAULIC SYSTEM OF ALL PRESSURE BEFORE ADJUSTING OR SERVICING. SEE THE HYDRAULIC POWER UNIT OPERATOR'S MANUAL FOR PROPER PROCEDURES.
- HIGH-PRESSURE FLUIDS CAN PENETRATE THE SKIN AND CAUSE SERIOUS INJURY OR DEATH. USE CARDBOARD OR WOOD TO DETECT LEAKS IN THE HYDRAULIC SYSTEM. SEEK MEDICAL TREATMENT IMMEDIATELY IF INJURED BY HIGH-PRESSURE FLUIDS.
- EYE PROTECTION AND OTHER APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT MUST BE WORN WHILE SERVICING IMPLEMENT.

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

Bleeding Procedure For Braking System

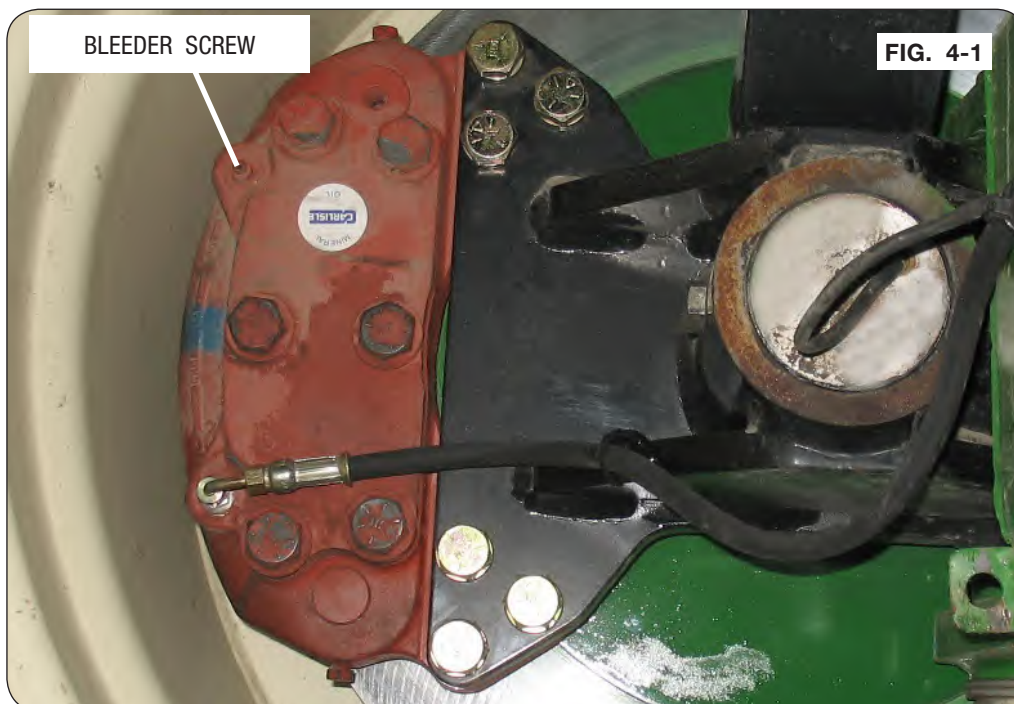
⚠ WARNING

- RELIEVE THE HYDRAULIC SYSTEM OF ALL PRESSURE BEFORE ADJUSTING OR SERVICING. SEE THE HYDRAULIC POWER UNIT OPERATOR'S MANUAL FOR PROPER PROCEDURES.
- HIGH-PRESSURE FLUIDS CAN PENETRATE THE SKIN AND CAUSE SERIOUS INJURY OR DEATH. USE CARDBOARD OR WOOD TO DETECT LEAKS IN THE HYDRAULIC SYSTEM. SEEK MEDICAL TREATMENT IMMEDIATELY IF INJURED BY HIGH-PRESSURE FLUIDS.
- EYE PROTECTION AND OTHER APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT MUST BE WORN WHILE SERVICING IMPLEMENT.

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

NOTE: This procedure is a two-person process. One person operates the brake pedal while the second person loosens the bleeder screw on the brake caliper.

1. If using a tractor, set the tractor parking brake, but leave tractor engine on throughout the procedure. Brakes can be attached to either the front or rear set of wheels. Attach hydraulic brake coupler on the cart to the implement brake port at the rear of the tractor.
2. Apply and hold pressure to brake pedal.
3. Attach 1/4" hose to fitting. Put hose in an approved container. Loosen the bleeder screw, at the top of the brake caliper, on caliper of the closest wheel located in the hydraulic circuit. If necessary, pump the brake pedal to extract all air from the system. Once air bubbles are no longer present, tighten the bleeder screw. (Fig. 4-1)
4. Repeat steps 2 and 3 to the next brake caliper in the brake circuit. Repeat until all brakes are bled.
5. Do a final tightness check of all caliper bleed screws before beginning cart operation. Check that brakes actuate and release properly with tractor brake pedal.



Steering Tandem Maintenance

Periodically check tire alignment and linkages for damage. Remove trash and/or dirt that may have accumulated and possibly interfere with steering performance.

Alignment of tires can be changed by adjustment of linkage(s). See “Steering Tandem Linkage Adjustment Procedures” in this section.

Steering Tandem Troubleshooting

NOTE: Always perform the below steps with an empty cart.

Tire Misalignment:

1. First, rephase the steering cylinders by using the “Steering Cylinder Rephasing” procedure in this section.
2. Steer the left set of tires until all tire edges are inline and straight forward. Check the opposite side. If both tire edges are equally out of alignment, then the center linkage needs adjustment. See “Steering Tandem Linkage Adjustment Procedures” in this section.
3. If only one tire on the opposite side is not straight, then that tire linkage needs adjustment. See “Steering Tandem Linkage Adjustment Procedures” in this section.

Failure to Auto-Steer:

1. If the cylinders get out of phase with the linkages, the steering tandem will not auto-steer. See “Steering Cylinder Rephasing” procedure in this section.
2. If grease zerks are present, heavily grease the 4 spindle retainer pivot pins and 2 steering pivot pins. For grease zerk locations, see “Lubrication” in this section. After long periods of inactivity, the pins can seize in the bushing. Once the pins are greased, manual steer the wheels in both directions using the “Steering Cylinder Rephasing” procedure. If wheel assemblies do not rotate freely, grease again and repeat cylinder rephasing procedure.
3. Make sure the steering axle control switch is in the OFF/Auto-Steer position. (Fig. 4-2)
4. Check for debris that may be obstructing tie-rod movement.

(Continued on next page)

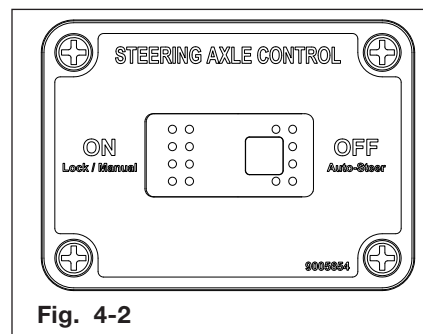


Fig. 4-2

Steering Tandem Maintenance (continued)

Steering Tandem Troubleshooting

NOTE: Always perform the below steps with an empty cart.

Failure to Manual-Steer:

1. Make sure the steering axle control switch is in the ON position. (Fig. 4-3)
2. Make sure the hydraulic hoses are attached properly.
3. Make sure hydraulic circuit is on.

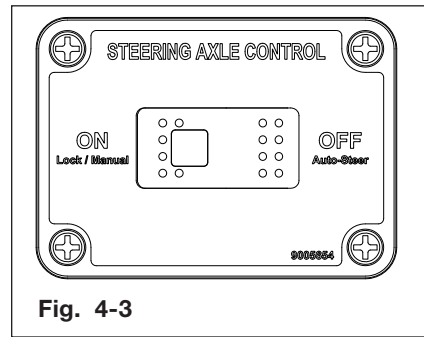


Fig. 4-3

4. Check harness connection on the steering valve located on the cross axle, make sure there is 12-Volts to the solenoid on the valve attached to the cross axle. (Fig. 4-4)

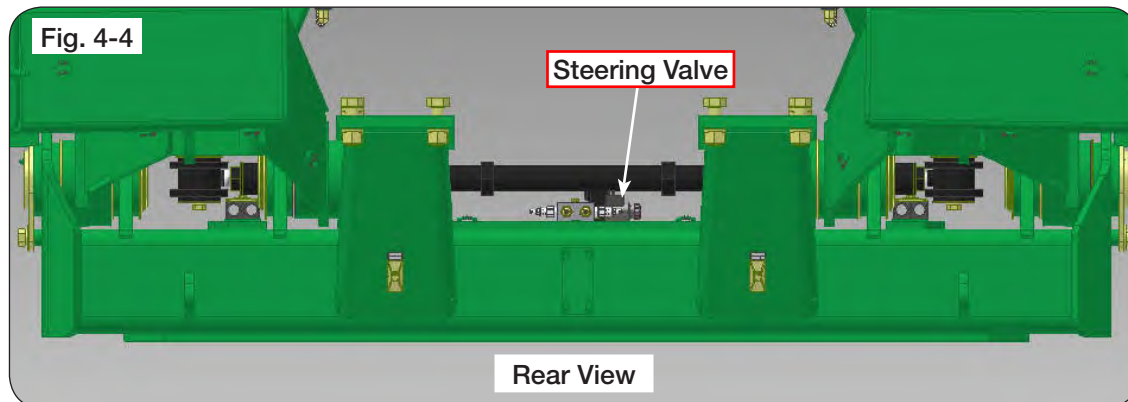


Fig. 4-4

Steering Indicator Misalignment:

1. Straighten the wheels, if the steering indicator is not centered, follow "Steering Indicator Adjustment Procedure" in this section.

Steering Tandem Maintenance (continued)

Steering Cylinder Rephasing

WARNING

- UNEXPECTED IMPLEMENT MOVEMENT CAN CAUSE SERIOUS INJURY OR DEATH. DO NOT SERVICE OR MAKE ADJUSTMENTS TO IMPLEMENT WHILE THE TOWING VEHICLE IS RUNNING.
- EYE PROTECTION AND OTHER APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT MUST BE WORN WHILE SERVICING IMPLEMENT.
- KEEP HANDS CLEAR OF PINCH POINT AREAS.



NOTE: It is recommended to rephase the cylinders at the start of each day, with an empty cart. Doing this operation helps keep alignment.

NOTE: Do not block tires since they are being manually steered.

1. Park the empty unit on a firm, level surface. Set the towing vehicle's parking brake. Tractor hydraulics are required for some steps, shut off engine and remove ignition key when hydraulic functions are complete.
2. Turn the steering axle control switch to the "ON/Manual-Steer" position, and ensure the hydraulic lever is in float. (Fig. 4-5)
3. Manually steer the tires with the tractor hydraulics completely in one direction and hold hydraulic lever for 5 seconds.
4. Turn the tires completely in the opposite direction and hold the hydraulic lever for 5 seconds.
5. Repeat the process in steps 3 & 4 if the cylinders are not fully extending.

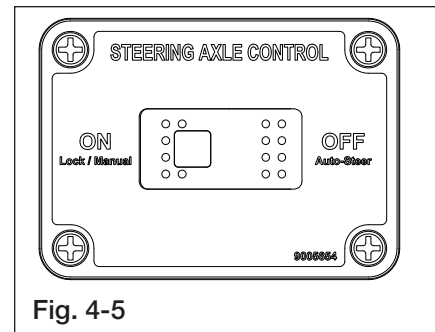


Fig. 4-5

NOTE: Fully extended cylinder should measure 28.25" center-of-pin to center-of-pin.

6. If a cylinder does not fully extend after repeating steps 3 & 4, remove cotter pin and pin from the rod end of the steering cylinder. (Fig. 4-6)
7. Position the rod end so it will not contact anything as it extends and retracts.
8. Rephase the cylinder as described in steps 3 & 4.
9. Reattach the rod end of the cylinder to the steering turntable once the cylinders are rephased. (Fig. 4-6)

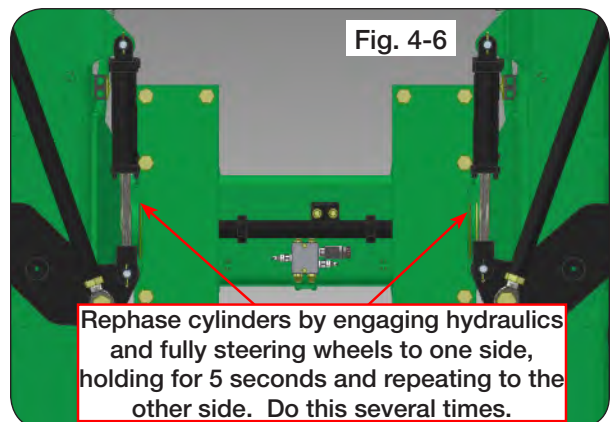



Fig. 4-6

Steering Tandem Linkage Adjustment Procedures

⚠ WARNING

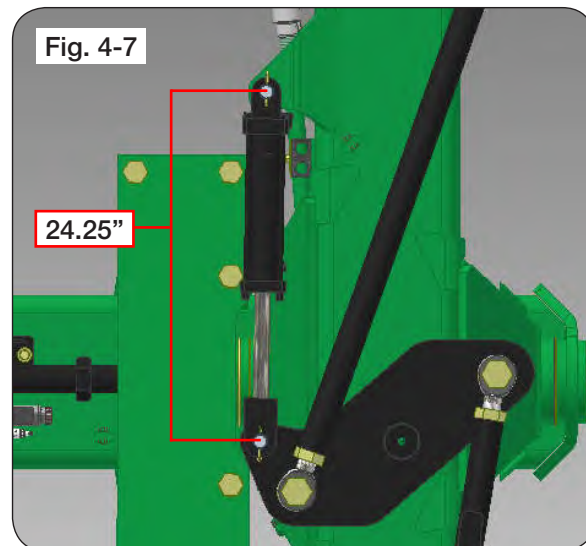
- UNEXPECTED IMPLEMENT MOVEMENT CAN CAUSE SERIOUS INJURY OR DEATH. DO NOT SERVICE OR MAKE ADJUSTMENTS TO IMPLEMENT WHILE THE TOWING VEHICLE IS RUNNING.
- EYE PROTECTION AND OTHER APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT MUST BE WORN WHILE SERVICING IMPLEMENT.
- KEEP HANDS CLEAR OF PINCH POINT AREAS. 
- 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 16,000 LBS. SPECIFIC LOAD RATINGS FOR INDIVIDUAL LOADS WILL BE GIVEN AT THE APPROPRIATE TIME IN THE INSTRUCTIONS.

NOTE: Before adjusting linkages, perform “Steering Cylinder Rephasing” procedure in the MAINTENANCE section.

NOTE: Do not block tires since they are being manually steered.

Outer Linkage

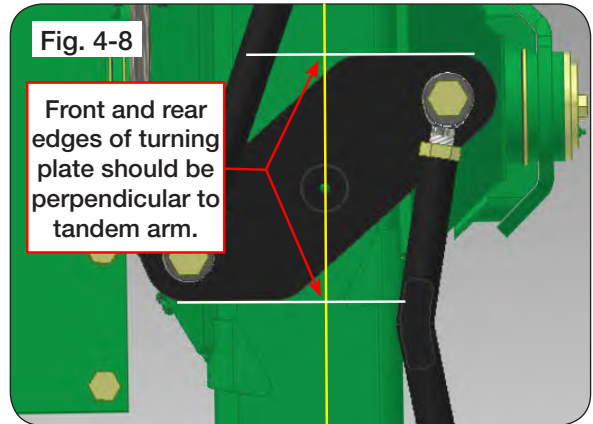
1. Park the empty unit on a firm, level surface. Set the towing vehicle’s parking brake. Tractor hydraulics are required for some steps, shut off engine and remove ignition key when hydraulic functions are complete. Turn the Steering Tandem switch to the “ON” position, and ensure the hydraulic lever is in float.
2. Remove weight from the tires by using a safe lifting device rated for a minimum of 16,000 lbs.
3. Adjust the cylinder on the RIGHT-HAND side of the cart until the center-of-pin to center-of-pin measurement on the cylinder attaching pins is 24.25”. This measurement is the center point of the cylinder stroke. (Fig. 4-7)



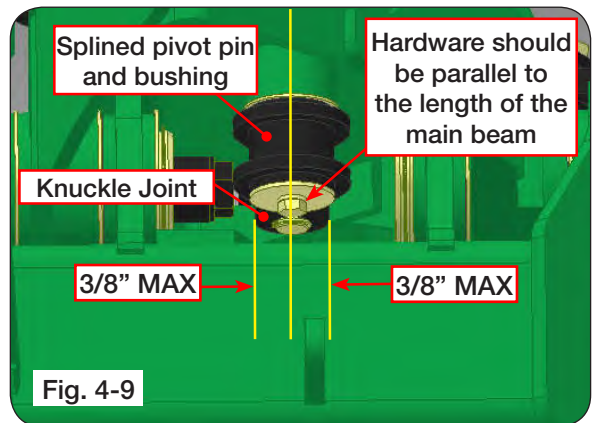
Steering Tandem Linkage Adjustment Procedures (continued)

Outer Linkage

4. Inspect the turntable plate on top of the tandem arm. With the cylinder pin-to-pin measurement at 24.25", the furthest front and furthest rear edges of the plate should be perpendicular to the tandem arm. If it is not, check the fit of the cylinder base end and rod end pins with both the cylinder and mating bushings for wear or deformation. Replace worn or damaged parts, if necessary. (Fig. 4-8)



5. Inspect the bushing underneath the tandem arm. With the cylinder pin-to-pin measurement at 24.25", the head of the pin going through the knuckle joint and the head of the bolt going into the splined pivot pin and bushing should be within 3/8" of a straight line with the tandem arm. (Fig. 4-9)



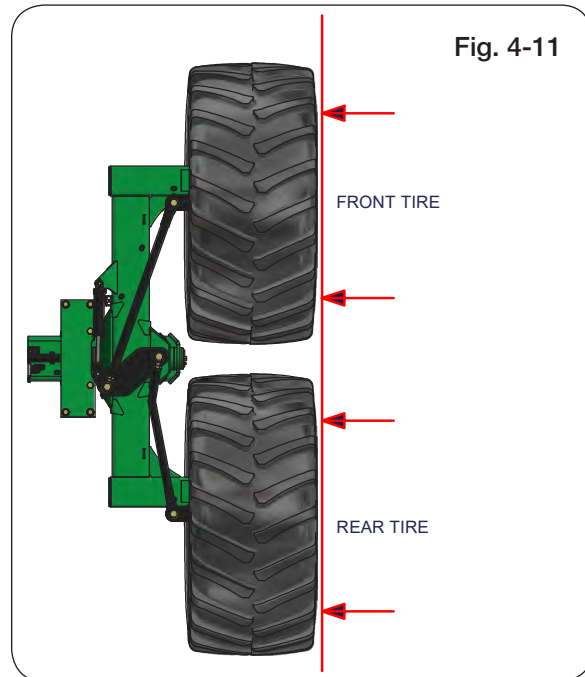
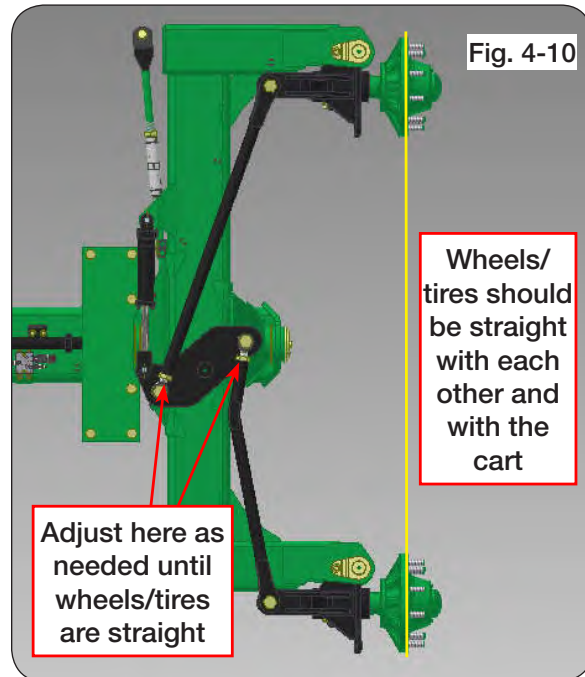
NOTE: If the linkage pin is more than 1" out of alignment, remove the splined bushing and rotate to align the linkage pin.

NOTE: If the linkage pin is between 3/8" to 1" out of alignment, there may be an issue with the spline position on either the pivot weldment (283651B - left-hand / 283652B - right-hand) or bushing weldment (283648) and may require the replacement of one or more of these parts.

Steering Tandem Linkage Adjustment Procedures (continued)

Outer Linkage

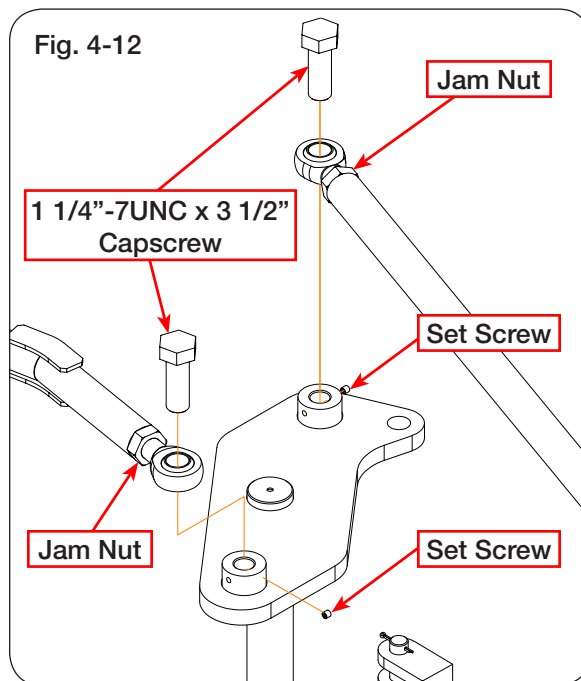
6. With the cylinder pin-to-pin measurement at 24.25", ensure the wheels on the right-hand side are straight. If they are not, adjust the outer linkages until the wheels are straight. (Fig. 4-10 & 4-11)
7. If the tires are removed, use the hub face to align as shown in Fig. 4-10.
8. If the tires are assembled, check alignment across the outside center of the tires. Due to variation in rubber tire profile, adjust the alignment until the front and rear of both tires are within 1/2" of being inline. (Fig. 4-11)



Steering Tandem Linkage Adjustment Procedures (continued)

Outer Linkage

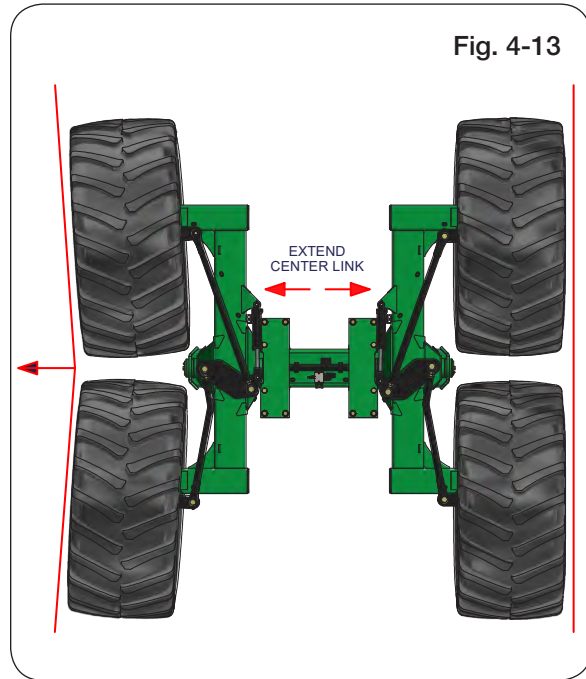
9. For outer linkage adjustment, remove the set screws on the turntable for the link being adjusted, and remove the 1 1/4"-7UNC x 3 1/2" capscrews assembled through the tie rod end. Keep hardware for reassembly. (Fig. 4-12)
10. Loosen jam nuts at the tie rod end. (Fig. 4-12)
11. Adjust tie rod in 1/2 turn increments while checking wheel alignment between adjustments. (Fig. 4-12)
12. Once the wheels are aligned, tighten jam nuts on tie rod ends. (Fig. 4-12)
13. Reassemble the 1 1/4"-7UNC x 3 1/2" capscrews and set screws.
14. Repeat steps 3 through 13 on the left-hand side, if necessary. Otherwise, continue to center linkage adjustment.



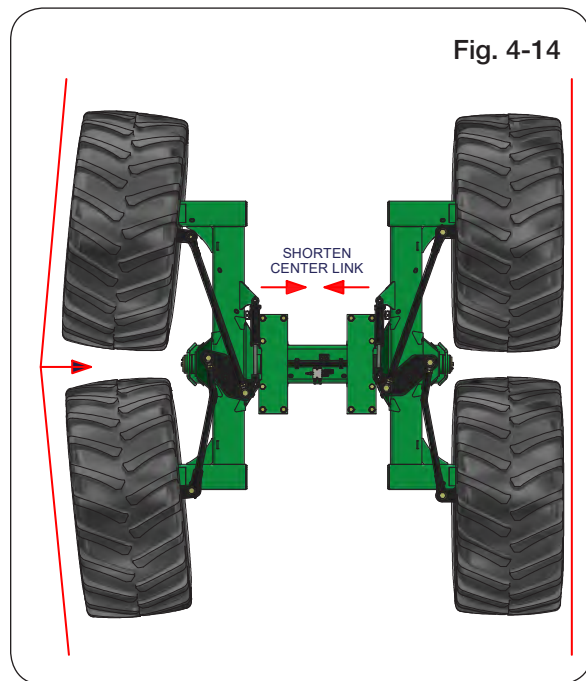
Steering Tandem Linkage Adjustment Procedures (continued)

Center Linkage

1. Reset the right-hand cylinder pin-to-pin to 24.25" and check alignment of the wheels on the left-hand side of the cart.
2. If the center of both wheels is too far IN, the center linkage needs to be EXTENDED. (Fig. 4-13)



3. If the center of both wheels is too far OUT, the center linkage needs to be SHORTENED. (Fig. 4-14)

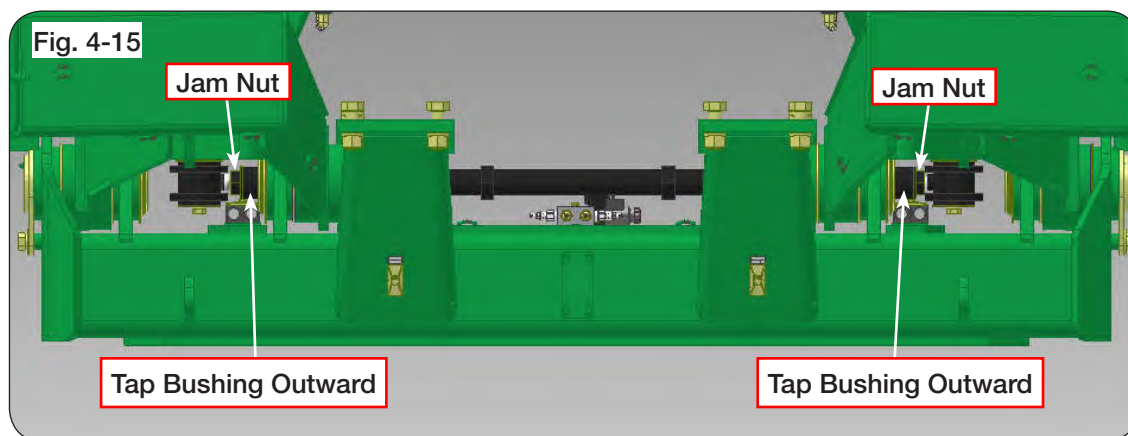


Steering Tandem Linkage Adjustment Procedures (continued)

Center Linkage

NOTE: One end of the center linkage has a left-hand thread jam nut. Identify the left-hand thread prior to adjusting to prevent over tightening the jam nut.

4. For center linkage adjustment, loosen the jam nut on both ends. (Fig. 4-15)
5. Loosen the tapered bushing on each end by tapping it outward. (Fig. 4-15)
6. When the tapered bushings have been loosened, the center linkage can be rotated to shorten or extend.
7. Adjust the center linkage until the wheels are inline.
8. Once the wheels are aligned, retighten the jam nuts on both ends.



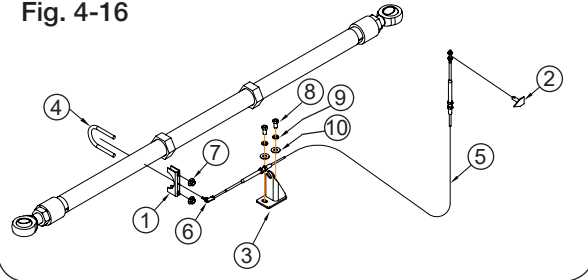
Steering Indicator Adjustment Procedures

Use this procedure:

* To center indicator when tires are straight forward.

1. Straighten the wheels, and loosen the hex nuts (91263) on the u-bolt (9004865) attached to the center tie-rod. (FIG. 4-16)
2. Adjust the u-bolt (9004865) to center the red indicator (283749R) on the front of the cart, and retighten the hex nuts (91263).

Fig. 4-16



ITEM	PART NO.	DESCRIPTION
1	283742	Saddle Clamp
2	283749R	Indicator Weldment =Red=
3	283744	Plate
4	9004865	U-Bolt 3/8-16 x 3 5/8
5	9004866	Push / Pull Cable (Includes 9005109)
6	9005109	Rod End
7	91263	Flange Nut 3/8-16
8	9390-053	Capscrew, 3/8-16 UNC x 3/4
9	9404-021	Lock Washer 3/8
10	9405-076	Flat Washer 3/8

Seasonal Storage

Always open flow door, horizontal and vertical auger cleanout doors to remove any remaining grain and to allow moisture to dry.

Wash machine inside and out before storing to remove dirt and debris that can draw and collect moisture. When using pressure washers maintain an adequate distance so not to force water into bearings.

Reattach PTO brackets (291974G or 291974R) to the inside right hand side of the tongue and place PTO assembly on brackets

Lubricate machine at all points outlined.

Repaint all areas where paint has been removed to keep rust from developing. Rust will affect grain flow.

Coat exposed cylinder piston rods with rust preventative material if applicable.

Inspect machine for parts that may need to be replaced so they may be ordered in the off season.

If unit is equipped with a scale indicator, electric hydraulic controls or steering controls, store these indoors in a dry location.

Close the tarp to keep debris out of the hopper.

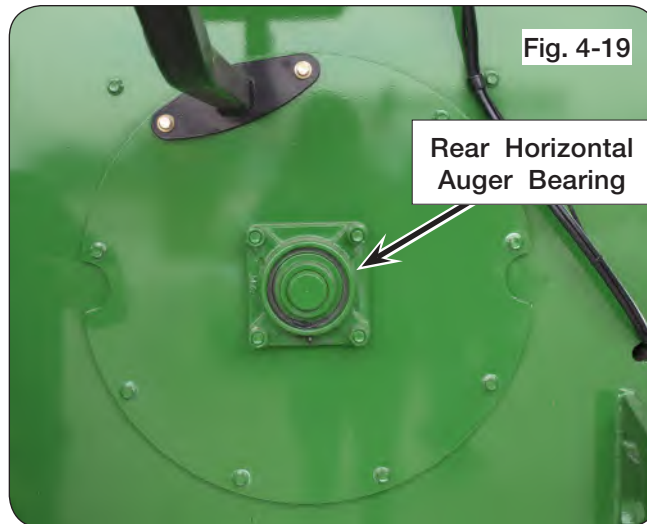
Fig. 4-17



Auger Driveline Bearings

IMPORTANT

- Periodically check set screws in all bearings at either end of the driveline for tightness.



Gearbox with Sight Glass

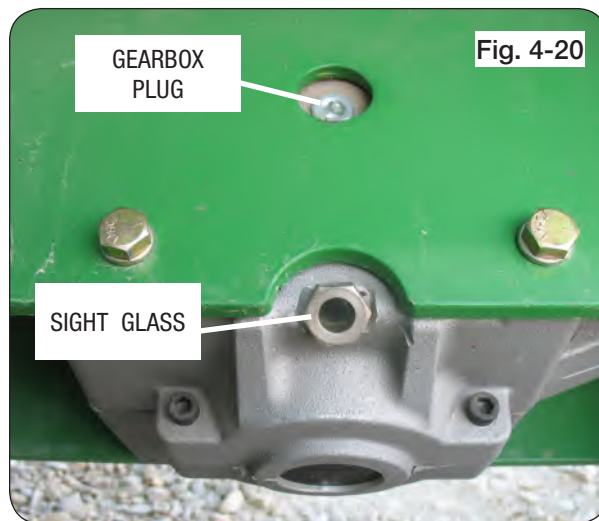
When checking the oil level of the gearbox, the vertical auger should be tilted all the way down.

For adequate lubrication, the oil should be visible in the sight glass. Fill with oil to the sight glass only. (Fig. 4-20)

Maximum gearbox life:

Check oil level every 2 weeks.

Replace oil every season with approximately 85 oz. 80W90 EP lubricant.



Driveline Removal

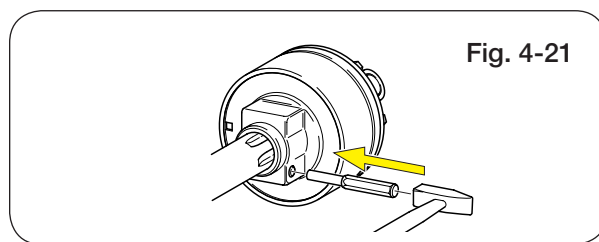
⚠ WARNING

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

Gearbox shaft guard has access doors for installing and removing of driveline.

Clamping Cone Assembly

Use a hammer and punch and moderately hit the end of clamping cone, as shown. Back off the clamping cone 1/2 turn. Continue alternating punch and unscrewing clamping cone until clamping cone can be removed by hand. (FIG. 4-21)



Auger System

Vertical Auger

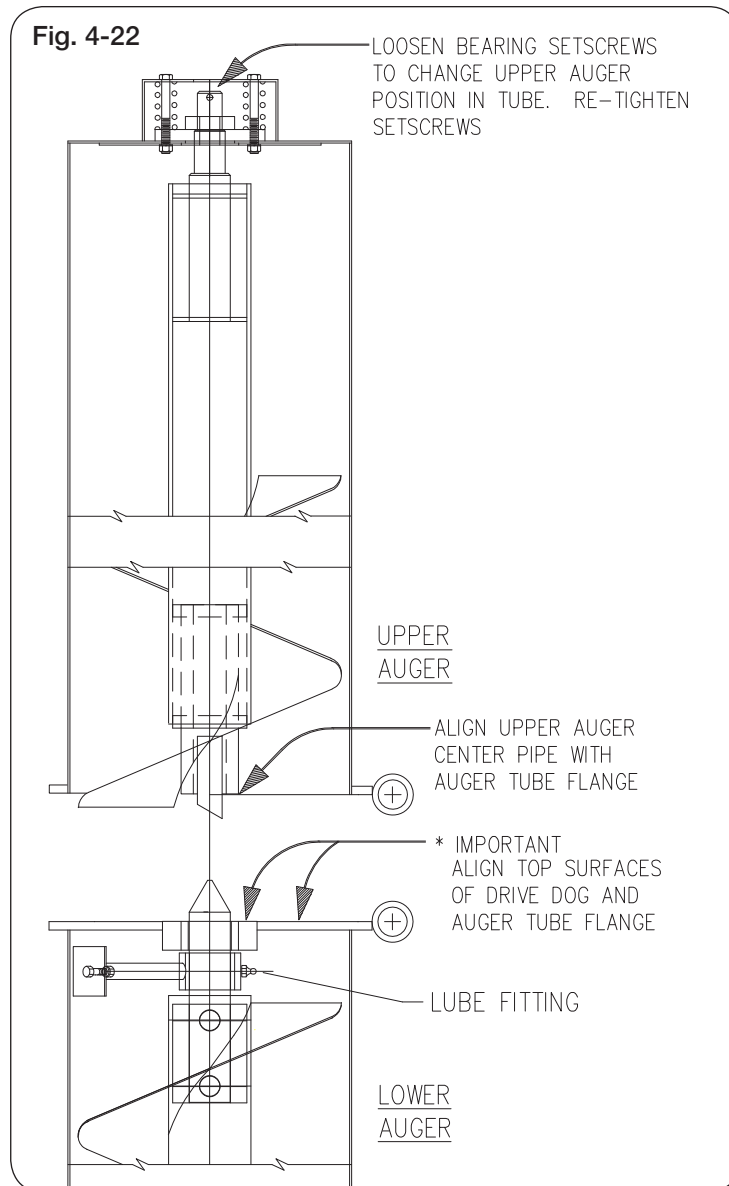
Annually check all bolts, nuts, and set screws. Perform lubrication as specified.

Before servicing the vertical auger, park the unit on a firm, level surface. Block the wheels/tracks to keep the machine from moving. Raise vertical auger to discharge position and close horizontal auger flow door. Set the tractor parking brake, turn off tractor engine, remove ignition key, and disconnect PTO shaft and hydraulic lines from tractor.

NOTE: The lower auger position is indexed from the drive dog / tube flange hinge surface as shown. (Fig. 4-22)

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

NOTE: The starting distance for the folding linkage pin center-to-center is 13 3/4".

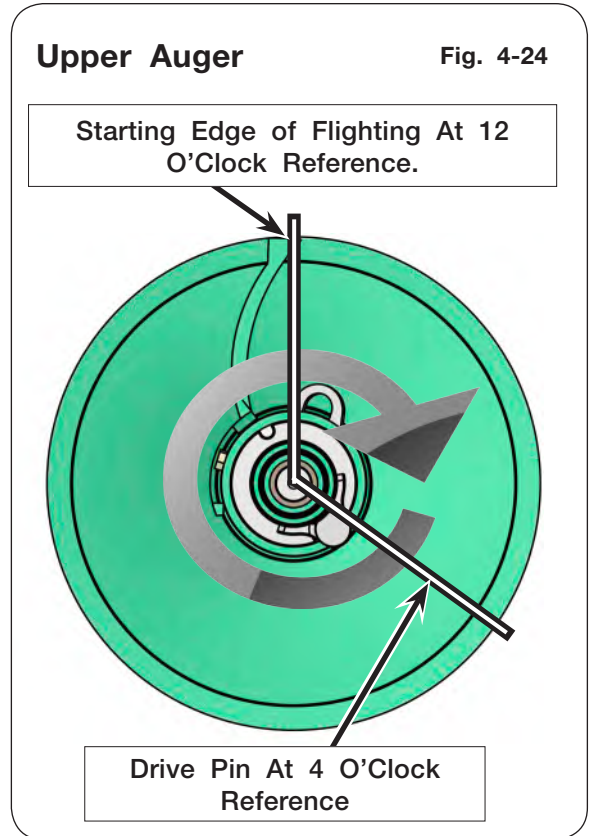
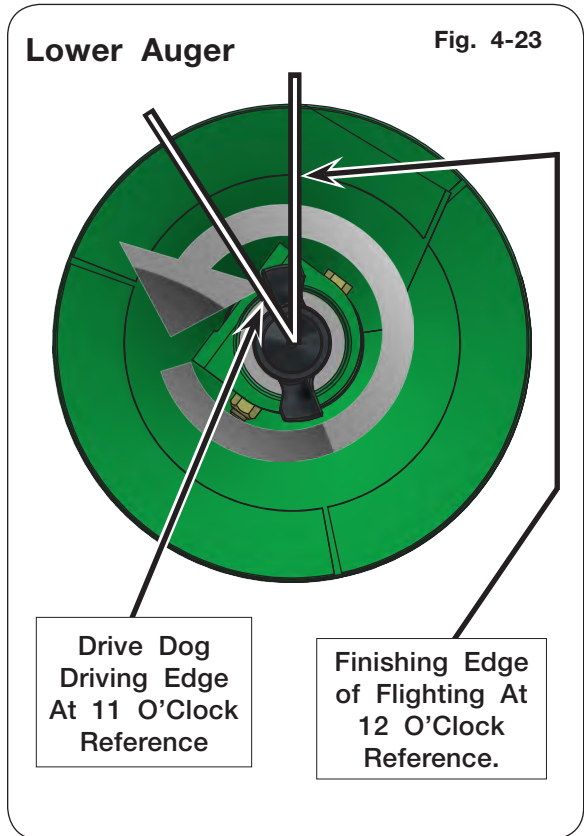


Auger System (continued)

Vertical Auger Timing

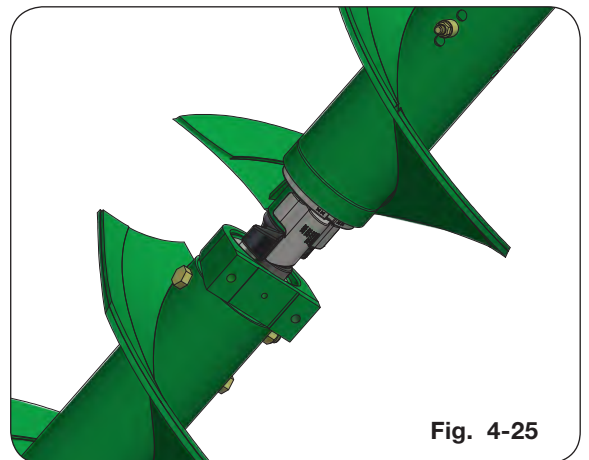
1. For the lower vertical auger, use the finishing edge of the flighting as a 12 o'clock reference. Position the drive dog so the driving edge is at the 11 o'clock position. (FIG. 4-23)

NOTE: Looking down at the lower flighting (FIG. 4-23) the auger rotation will be counter-clockwise. When looking up at the upper flighting (FIG. 4-24) the auger rotation will be clockwise.



2. For the upper auger, use the starting edge of the flighting as a 12 o'clock reference. Position the driven edge of the drive pin at the 4 o'clock position. (FIG. 4-24)
3. When engaged, the upper flighting should follow the lower flighting. (FIG. 4-25)

NOTE: Upper flighting should trail the lower flighting from minimum of 10 degrees to a maximum of 90 degrees.



Auger System (continued)

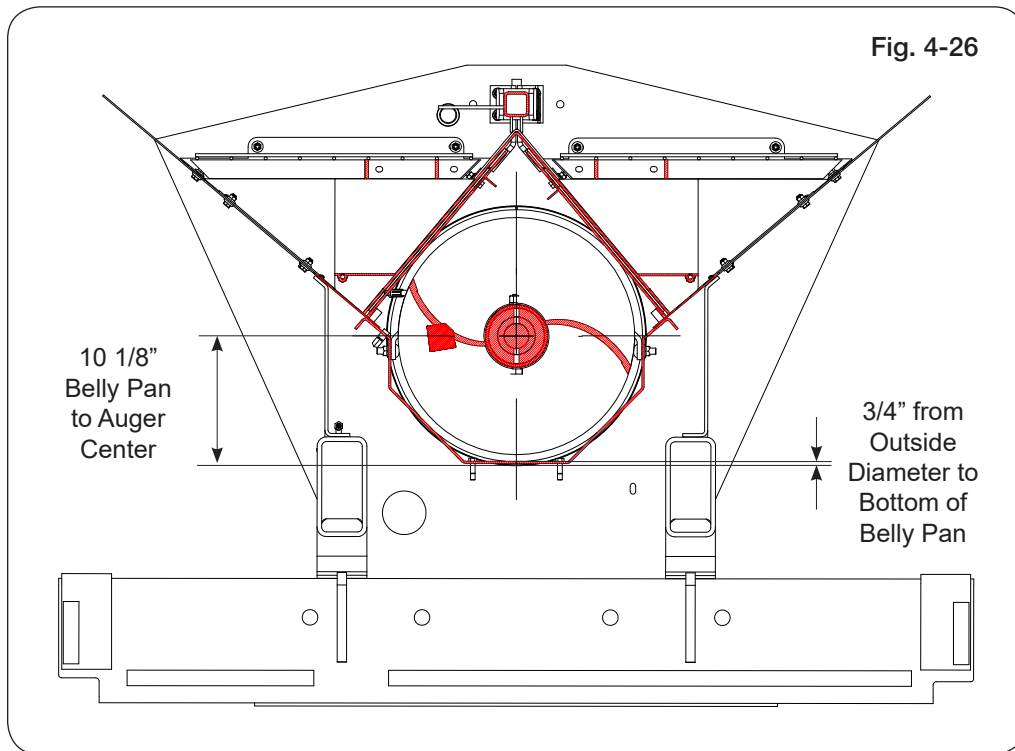
Horizontal Auger

Annually check all bolts, nuts, and set screws. Perform lubrication as specified.

NOTE: With new flighting, the outside diameter is about 3/4" from the bottom belly pan. Always set bearing height using the flighting centerline measurement. See FIG. 4-26.

NOTE: Shims are available from your Brent dealer to achieve 10 1/8" measurement.

To adjust the bearing height down, shim with washers between the bearing and the hanger bracket. To adjust the bearing height up, shim with washers between the bearing bracket and the sides of the cart. When adjusting the height up, washers will need to be placed with one on each side so the bearing stays centered.



Baffle Adjustment

WARNING

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

Refer to the following reasons for baffle adjustment:

NOTE: To unload the cart evenly from front to back the openings should increase in height from back to front.

1. If higher flow is desired and torque is not the limiting factor, raise each baffle to an incremental amount and rerun.
2. If more material remains at the back of the cart towards the end of the unloading cycle, the back baffles should be adjusted upward in incremental amounts and rerun.
3. If more material remains at the front of the cart towards the end of the unloading cycle, the back baffles should be adjusted downward in incremental amounts and rerun.
4. If the cart requires more torque than what is available at times during the unloading cycle, then all baffles should be adjusted downward in incremental amounts.

Baffle Adjustment (continued)

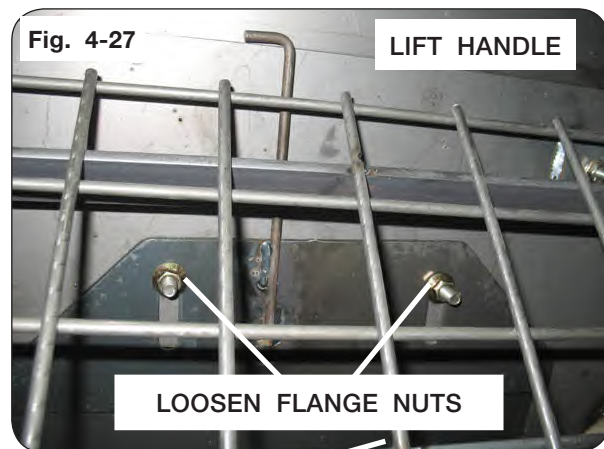
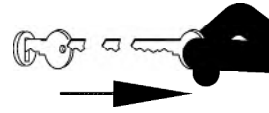
The horizontal auger baffles are factory-set at the lowest position. This position results in the lowest power requirements and longest flighting life. Once grain has been run through the unit, adjustments can be made to achieve the ideal unloading performance.

Before making any baffle adjustments, close horizontal auger flow door. Securely block the grain cart, set the tractor parking brake, turn off tractor engine and remove ignition key.

If a higher flow is desired and torque is not a factor, loosen the (2) flange nuts on each baffle, see figure 4-9. Use the lift handle to raise each baffle to the desired position, retighten both flange nuts, see figures 4-27 & 4-28.

NOTE: DO NOT REMOVE ANY SCREEN PANELS. The flange nuts are best accessed using an extended socket wrench and 9/16" socket through the screen panel openings.

NOTE: Screen removed in figure 4-28 for illustration only.



5-Pin Driver 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 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 1,000 LBS. SPECIFIC LOAD RATINGS FOR INDIVIDUAL LOADS WILL BE GIVEN AT THE APPROPRIATE TIME IN THE INSTRUCTIONS.

NOTE: Open the flow gates all the way.

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



2. Remove the bolts in both middle grates inside the cart. Remove the grates. (Figure 4-29)

NOTE: Retain all hardware for reassembly.

3. Disconnect grease line. (Figure 4-30)
4. Remove the hanger bearing bolts on each side of the auger.
5. Remove capscrews and lock washers holding bearing onto the hanger bearing plate.

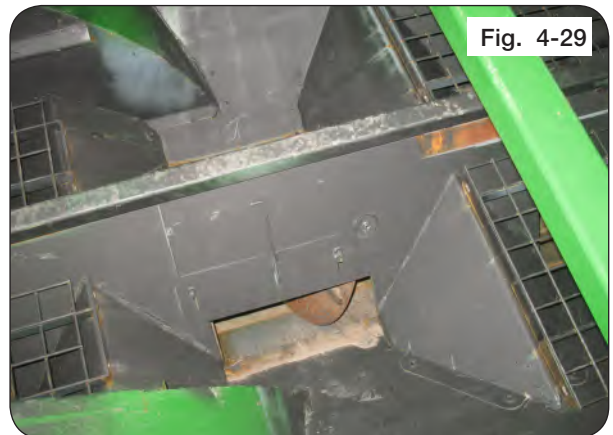


Fig. 4-29

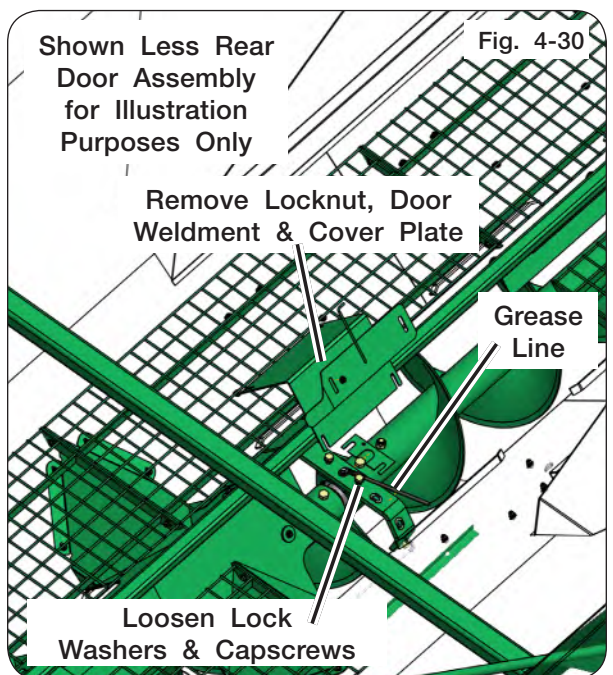
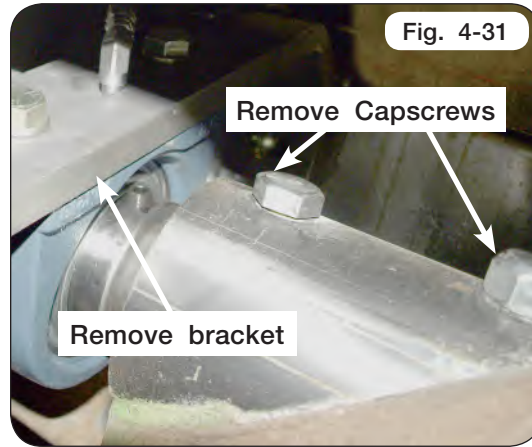


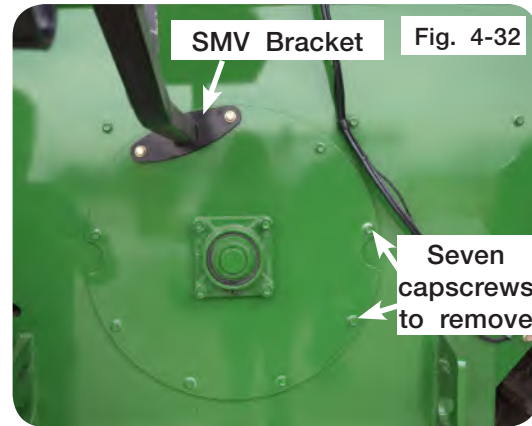
Fig. 4-30

5-Pin Driver Replacement (continued)

6. Remove the hanger bearing bracket to allow access to work on the bearing and shaft. Remove two center tube connecting capscrews in the horizontal auger. (Figure 4-31)

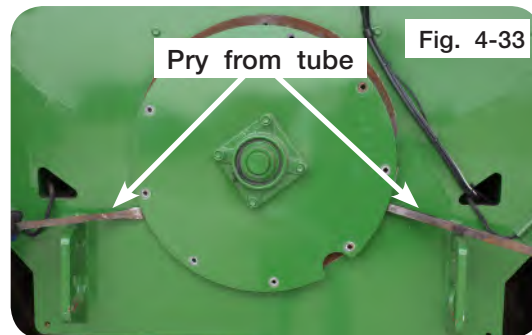


7. Remove the SMV bracket located on the rear auger cover. (Figure 4-32)



8. Remove the capscrews from the auger cover. (Figure 4-32)

9. Pry the auger from the auger tube. (Figure 4-33)



10. Using a safe lifting device rated for a minimum 1,000 lbs., pull the rear auger out 3 feet using a strap. (Figure 4-34)



5-Pin Driver Replacement (continued)

11. Remove the original 5-pin driver, bearing and the bushing insert. (Figure 4-35 & Figure 4-36)
12. Discard 5-pin driver.



Fig. 4-35

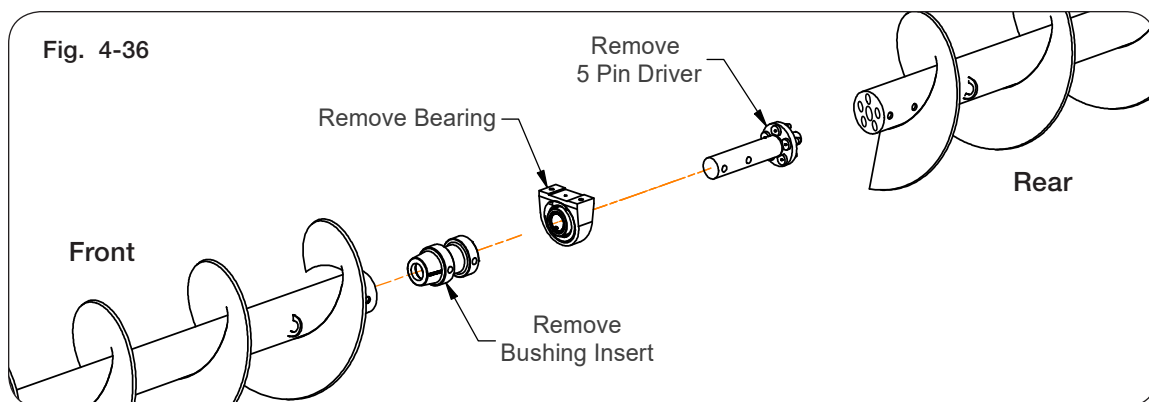


Fig. 4-36

13. Substantially coat bushing insert with anti-seize.
14. Slide bushing insert into front auger and ensure tube holes are aligned. (Figure 4-36 & Figure 4-37)



Fig. 4-37

NOTE: Make sure the set screws on bearing are towards the front of the cart. (Figure 4-38)

15. Slide bearing onto 5-pin driver. (Figure 4-38)
16. Insert new 5-pin driver into front auger and ensure tube holes are aligned.
17. Install front capscrews, spacer bushings and locknuts 180 degrees from each other and assemble spacer bushings on threaded side of capscrews. Hand tighten hardware. (Figure 4-38)

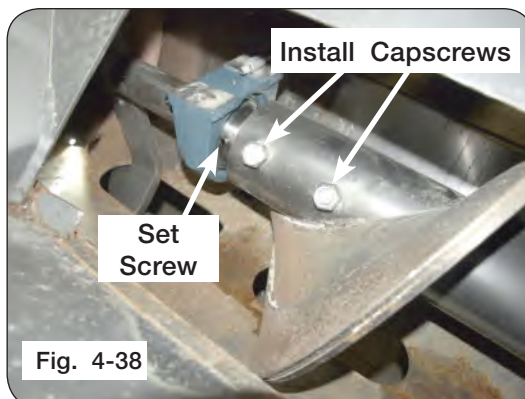
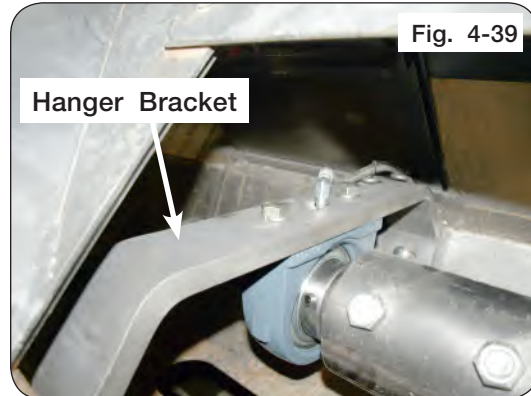


Fig. 4-38

5-Pin Driver Replacement (continued)

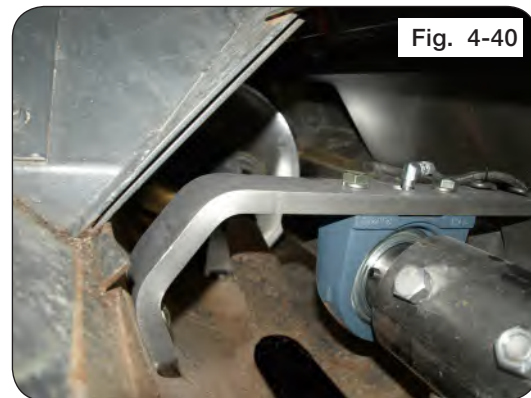
18. Install hanger bracket. Leave the capscrews loose attaching hanger bracket to the cart. Attach hanger bracket to the bearing. (Figure 4-39)

19. Reattach grease line components. (Figure 4-39)

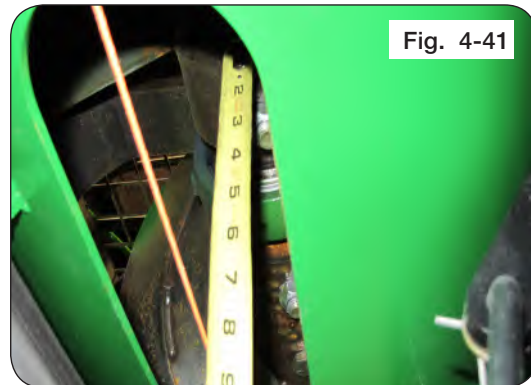


NOTE: Rear auger flighting should lead the front auger flighting.

20. Slide the rear auger forward. Align the pins and holes with the rear auger pipe. (Figure 4-40)



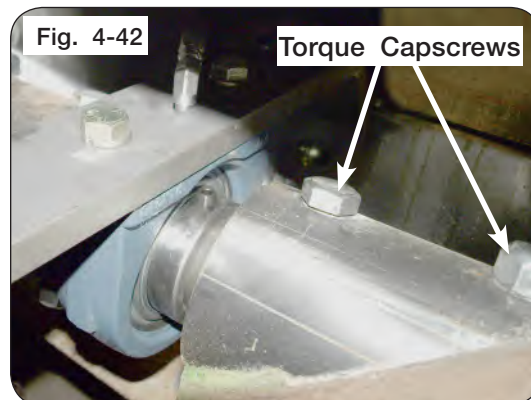
21. Extend a string tightly from front to rear to check horizontal auger alignment. Measure the string to the auger tube either in front or behind the hanger bearing. If this dimension is 1/8" greater than the measurement taken in the front and rear, shims (8GA - 286419B or 12GA - 286424B) are required on top of the center hanger bearing. Ideally the center measurement should be equal to or 1/8" lower than the measurements on the ends of the augers. (Figure 4-41)



NOTE: The shims are 1/8" thick each. Add as needed. See "Auger System - Horizontal Auger" in MAINTENANCE section for more details.

22. Torque hanger bracket capscrews to 130 ft.-lbs. See Figure 4-39.

23. Torque auger capscrews to 200 ft.-lbs. (Figure 4-42)



5-Pin Driver Replacement (continued)

24. Torque hardware for the rear auger cover and SMV bracket back onto the cart. (Figure 4-43)
25. Reinstall ALL the grates.

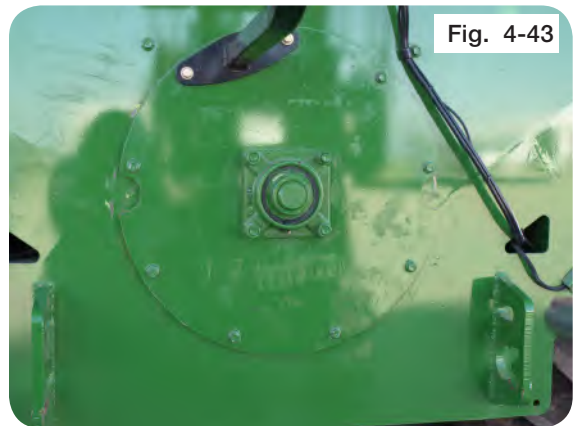


Fig. 4-43

Belt Tightener Adjustment

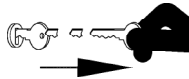
IMPORTANT

- Do not use belt dressing.
- Keep grease and oil off of belt and pulleys.

NOTE: Pulleys do not need to be removed to remove/replace belt.

Due to prolonged use, belt wear may be evident causing slack. To correct this, follow these steps.

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



WARNING

- 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 UNIT.

2. Remove PTO assembly from gearbox input shaft.
3. Detension the belt as outlined in OPERATION section. Remove belt tensioner handle.
4. Remove cover and inspect belts for misalignment, loose parts and cracks. Replace if necessary with a matched set. See Fig. 4-46.



Belt Tightener Adjustment (continued)

5. Belt tension is adjusted with hex nuts below the spring. All belt tension **MUST** be released from linkage. Loosen outer hex nut and adjust inner nut to establish a 3 1/16" pre-load dimension between the heavy washers. Tighten the outer hex nut against inner nut to lock position. (Fig. 4-47)
6. Check the lower belt pulley to ensure belt is aligned in their grooves and with the belt tensioner handle, engage the roller/idler linkage against the belt and over-center stop. The compressed spring should now be approximately 1 3/4" between the washers and generating a force of approximately 480 lbs. against the belt. (Fig. 4-48)
7. Release and tighten belt multiple times to confirm positions and final adjustments. See Fig. 4-48 and Fig. 4-49.
8. Tighten belt to retain them into the lower pulley for cover guard assembly. Reinstall the cover guard and the PTO shaft to the gearbox input shaft. Clear work area and test run drivetrain for 3 minutes at no greater than 1000 RPM.

WARNING

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

9. Disengage PTO and turn off tractor. Through the cover access door, check the compressed spring length is approximately 1 3/4" between the washers and check each belt for uniform tension. If more adjustment is needed, refer to Steps 5 through 7. If no additional spring adjustment is available, then both belts must be replaced with a new matched set.

NOTE: Always replace belts in matched sets.

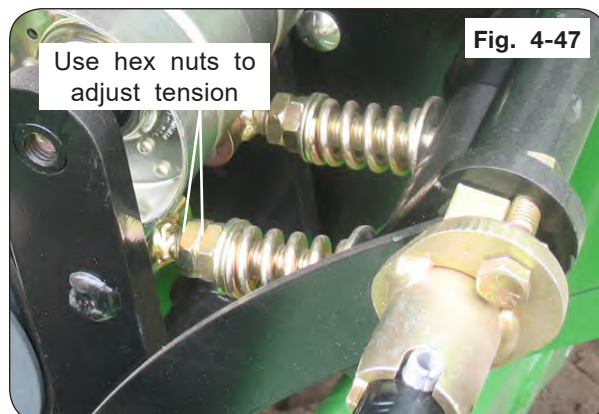


Fig. 4-47



Fig. 4-48

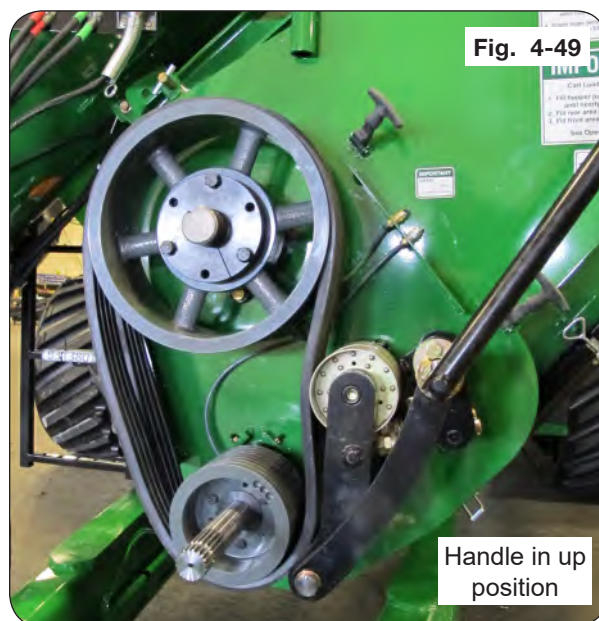


Fig. 4-49

V-Belt Alignment

1. Pulleys must be aligned with the fixed idler. Belts should be centered on idler for longest belt life. (Fig. 4-50)
2. After tightening taper-lock bushing hardware, lay a straight edge across face of the drive and driven belt pulleys to ensure alignment between the grooves on the pulleys.

Split Tapered Bushings

Check annually for tight engagement to drive-shaft. Torque three bolts progressively to values shown:

- 1 3/4" Bore (Gearbox) - 30 ft.-lbs.
- 2 1/4" Bore (Horizontal Auger) - 75 ft.-lbs.

Some gap must remain between flange & hub when bushing is properly tightened.

To remove from shaft, remove capscrews and insert them in tapped holes in bushing flange. Tighten progressively until bushing disengages.



Verify Telescoping PTO Shaft Length

WARNING

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

IMPORTANT

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

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

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

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

NOTE: Do not exceed 10 degrees beyond a straight pull line while operating the PTO. To verify proper extended and collapsed lengths, use the following procedure:

1. Fully collapse PTO shaft and measure length “L” (Fig. 4-51).

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. 4-52)

Add “T” + “C” measurements together

Enter total here: _____ (2)

3. Calculate maximum recommended extended length:

- a. Subtract line 1 from line 2

Enter here: _____ (a)

- b. Divide line (a) by 2

Enter here: _____ (b)

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

Enter here: _____ (c)

- d. Subtract 3 inches from line (c)

Enter here: _____ (d)

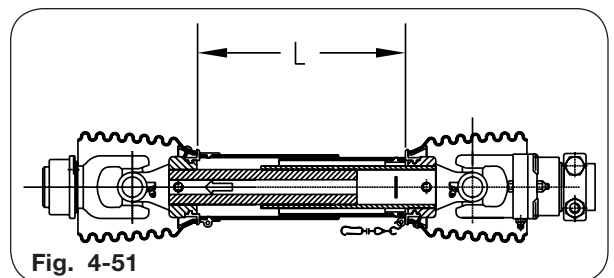


Fig. 4-51

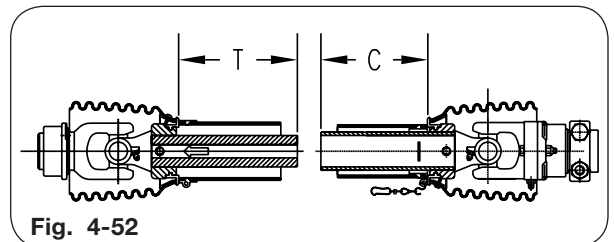


Fig. 4-52

This is the maximum recommended extended length.

Verify Telescoping PTO Shaft Length (continued)

4. Hitch tractor drawbar to cart, ensuring that tractor and cart are on level ground and coupled as straight as practical.
5. Connect PTO shaft to tractor, and measure length “L” from same points as used in step 1. Ensure that this measurement does not exceed the maximum recommended extended length calculated in step 3 above. If necessary, choose a shorter drawbar position, or obtain a longer PTO shaft assembly before operating cart.
6. Position the tractor to obtain the tightest turning angle, relative to the cart (Fig. 4-53).
7. Measure the length “L” from the 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 the length of the PTO shaft by cutting the 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.

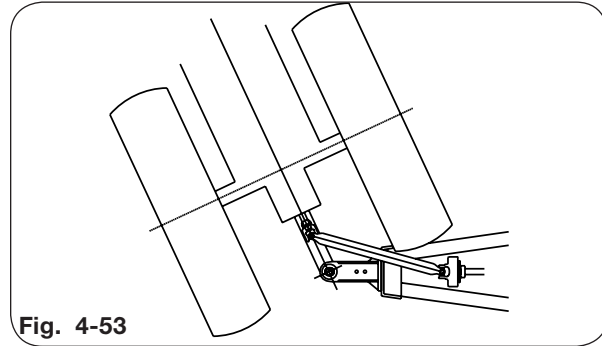


Fig. 4-53

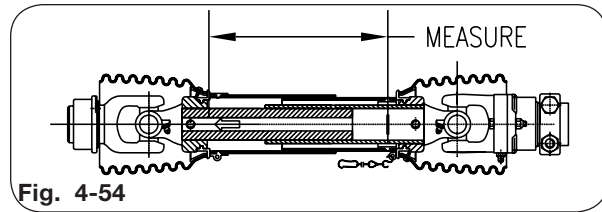


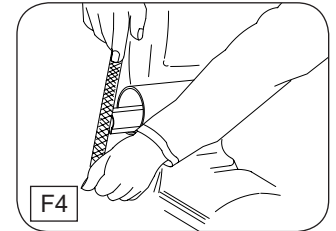
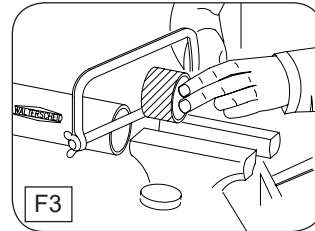
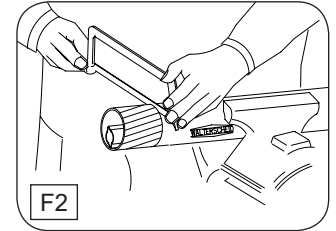
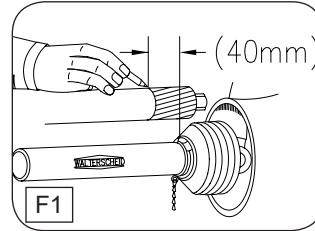
Fig. 4-54

PTO Shaft and Clutch

Length Adjustment (Figs. F1 - F4)

NOTE: Maximum operating length, see step 3d on page 4-33.

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

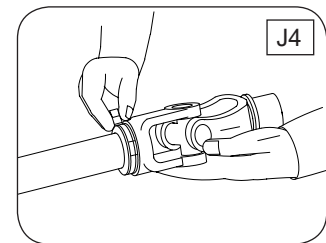
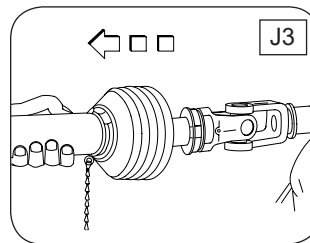
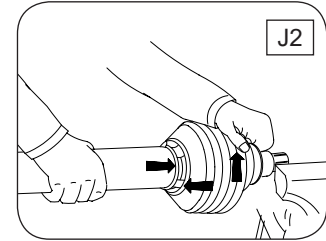
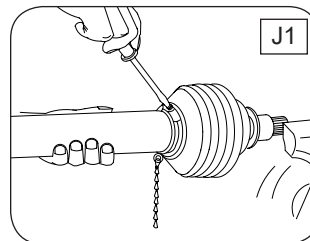


⚠ WARNING

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

To Dismantle Guard (Figs. J1 - J4)

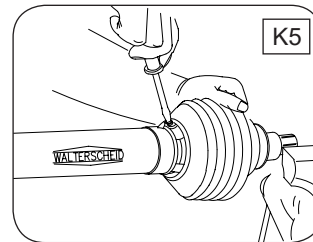
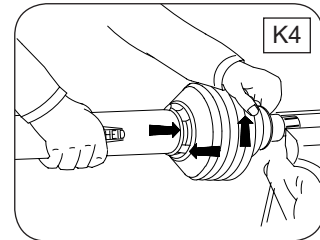
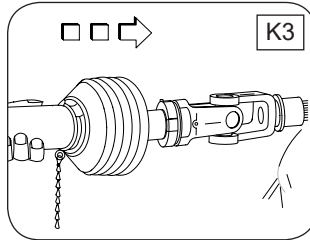
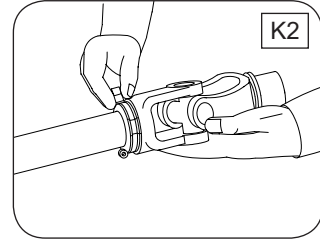
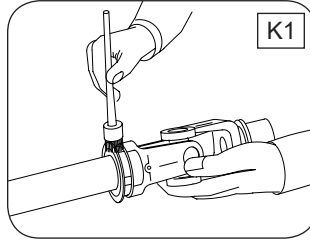
1. Remove locking screw.
2. Align bearing tabs with cone pockets.
3. Remove half-guard.
4. Remove bearing ring.



PTO Shaft and Clutch (continued)

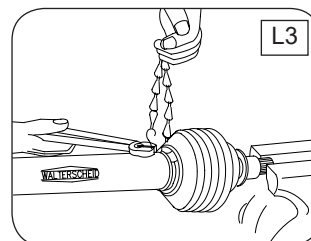
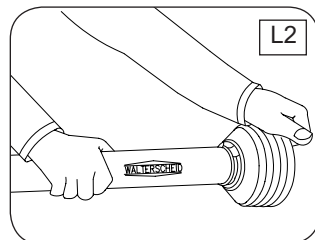
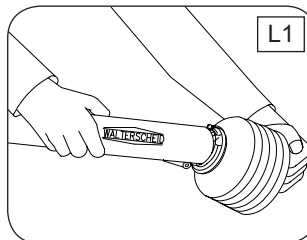
To Assemble Guard (Figs. K1 - K5)

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



To Assemble Cone (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).

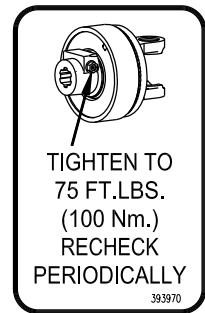
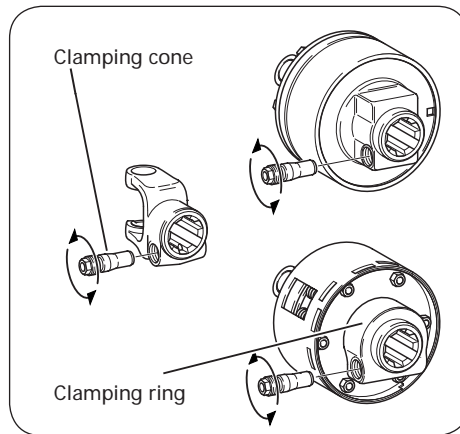
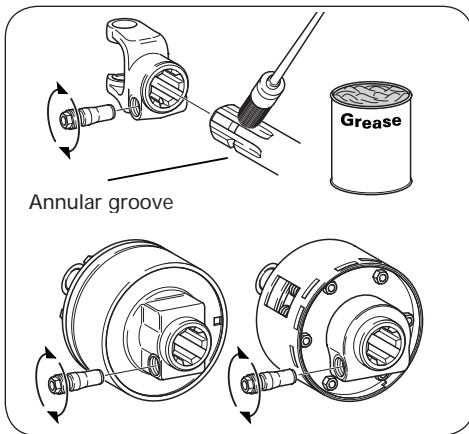


PTO Quick Disconnect

Coupling

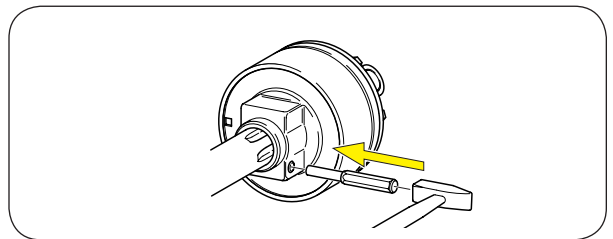
Slide clamp yoke or cut-out clutch onto connecting shaft. Make sure the location hole for the clamping cone is positioned above the annular groove of the connecting shaft. Screw appropriate clamping cone into the location hole. Slightly moving the clamp yoke or clutch to and from in the axial direction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

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



Uncoupling

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



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

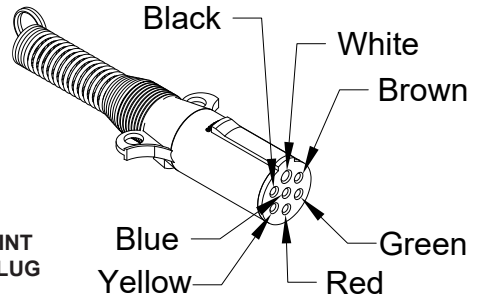
If installed correctly, tarp should always operate as well as when first installed. If tarp does not pass this simple inspection, make all appropriate repairs or adjustments immediately before serious damage occurs.

Electrical System Schematic

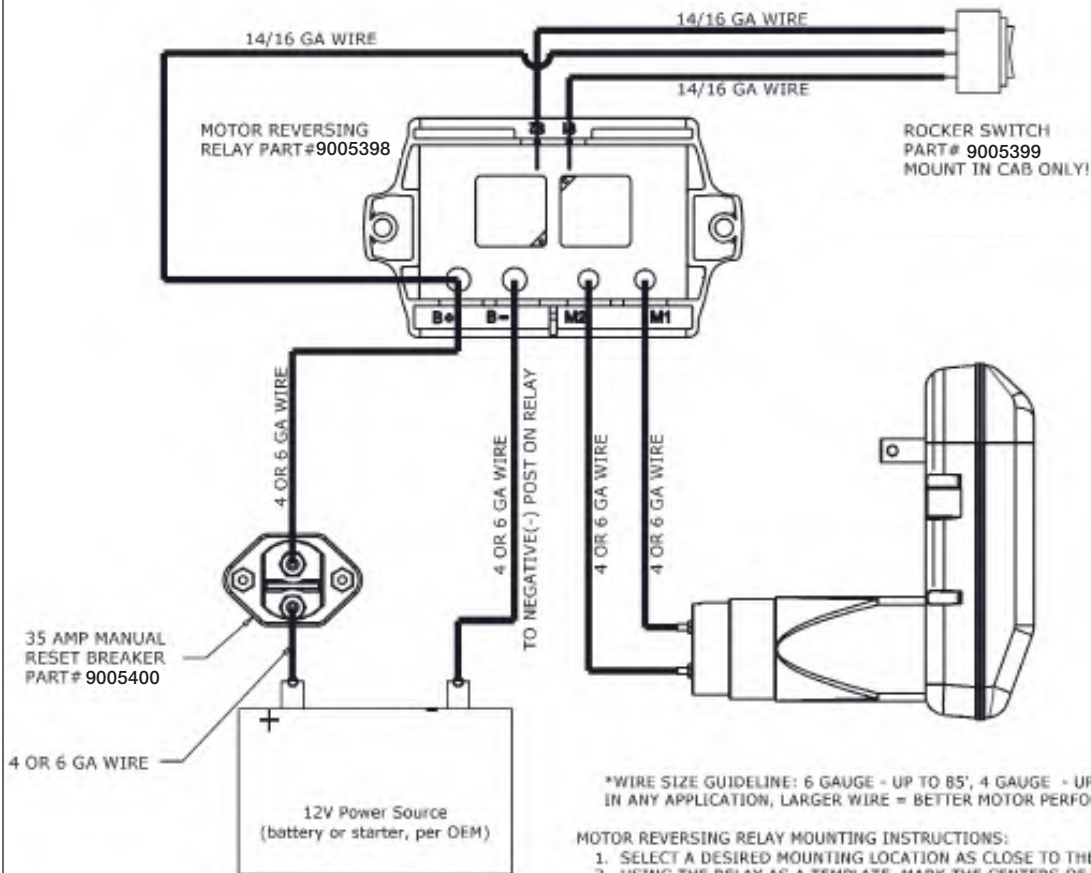
GRAIN CART WIRES

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

SAE SEVEN-POINT CONNECTOR PLUG



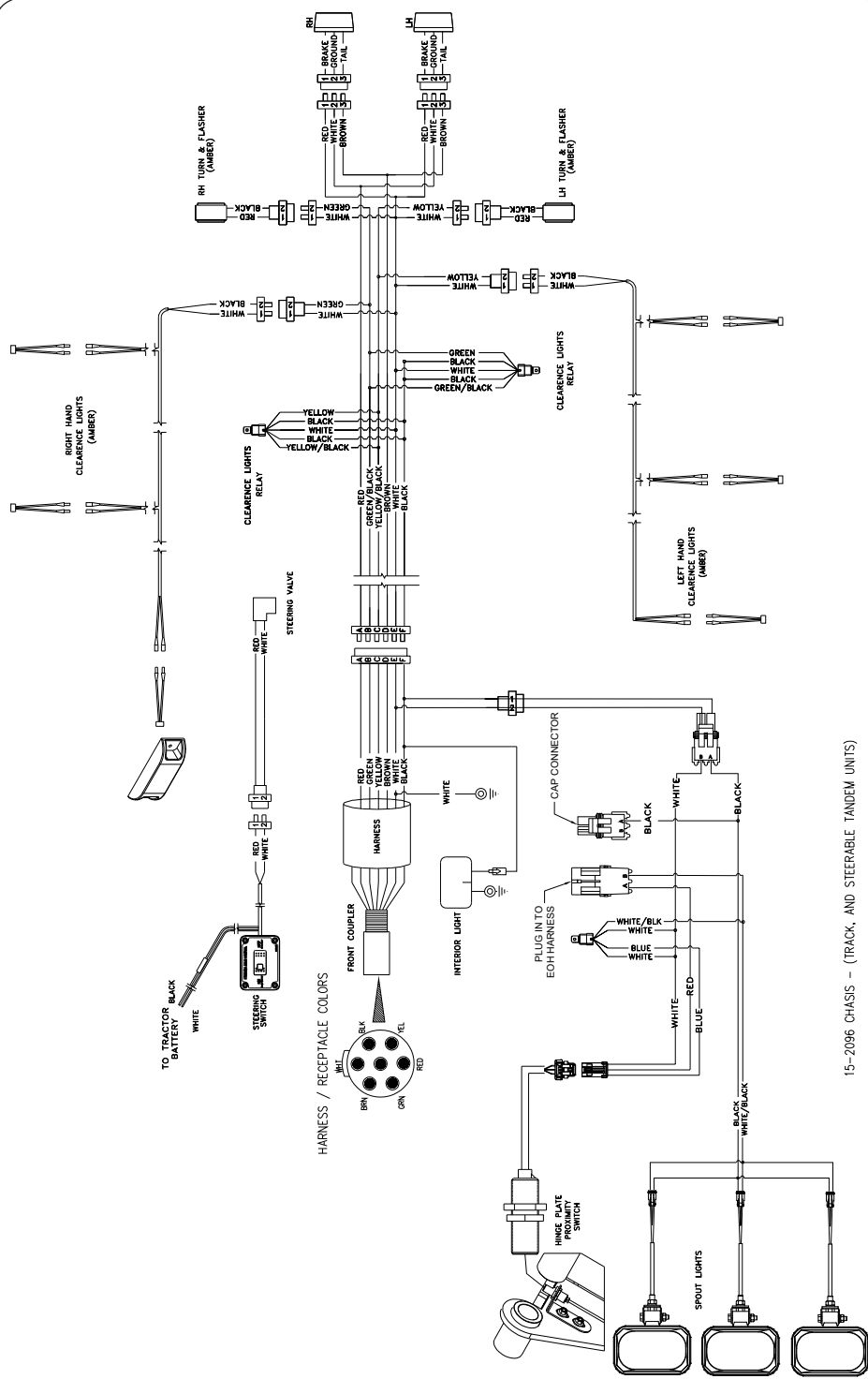
ELECTRIC TARP



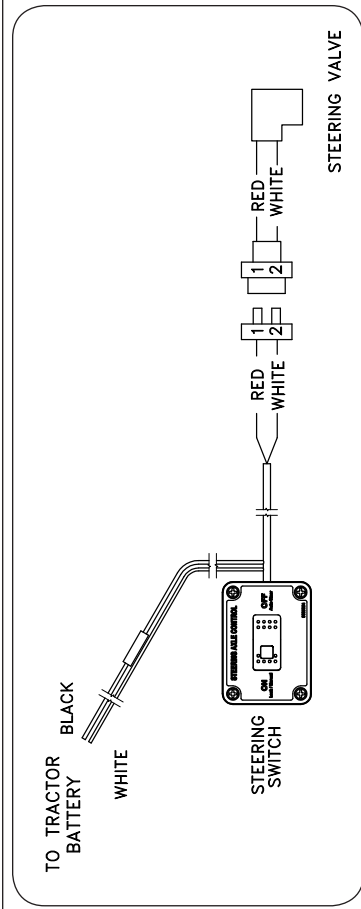
NOTE: See separate electric tarp manual for additional information.

- MOTOR REVERSING RELAY MOUNTING INSTRUCTIONS:**
1. SELECT A DESIRED MOUNTING LOCATION AS CLOSE TO THE BATTERY AS POSSIBLE.
 2. USING THE RELAY AS A TEMPLATE, MARK THE CENTERS OF THE MOUNTING HOLES.
 3. USING A 1/4" DRILL BIT, DRILL THE HOLES MARKED IN THE PREVIOUS STEP.
 4. MOUNT THE RELAY USING THE PROVIDED BOLTS AND NUTS.
 5. WIRE THE RELAY ACCORDING TO THE WIRING DIAGRAM.
 6. APPLY DIELECTRIC GREASE TO ALL ELECTRICAL CONNECTIONS.

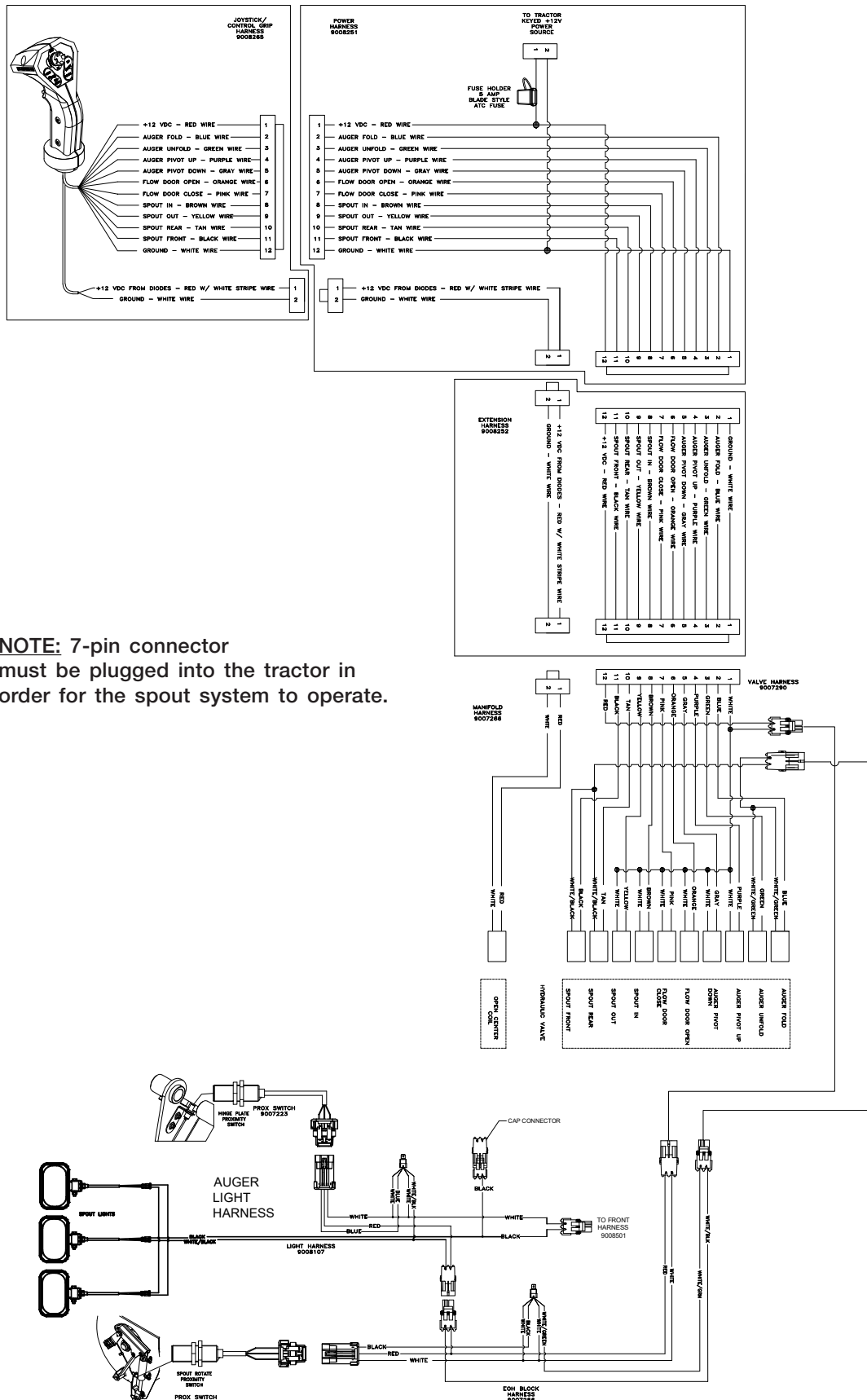
Electrical System Schematic



15-2096 CHASIS - (TRACK, AND STEERABLE TANDEM UNITS)

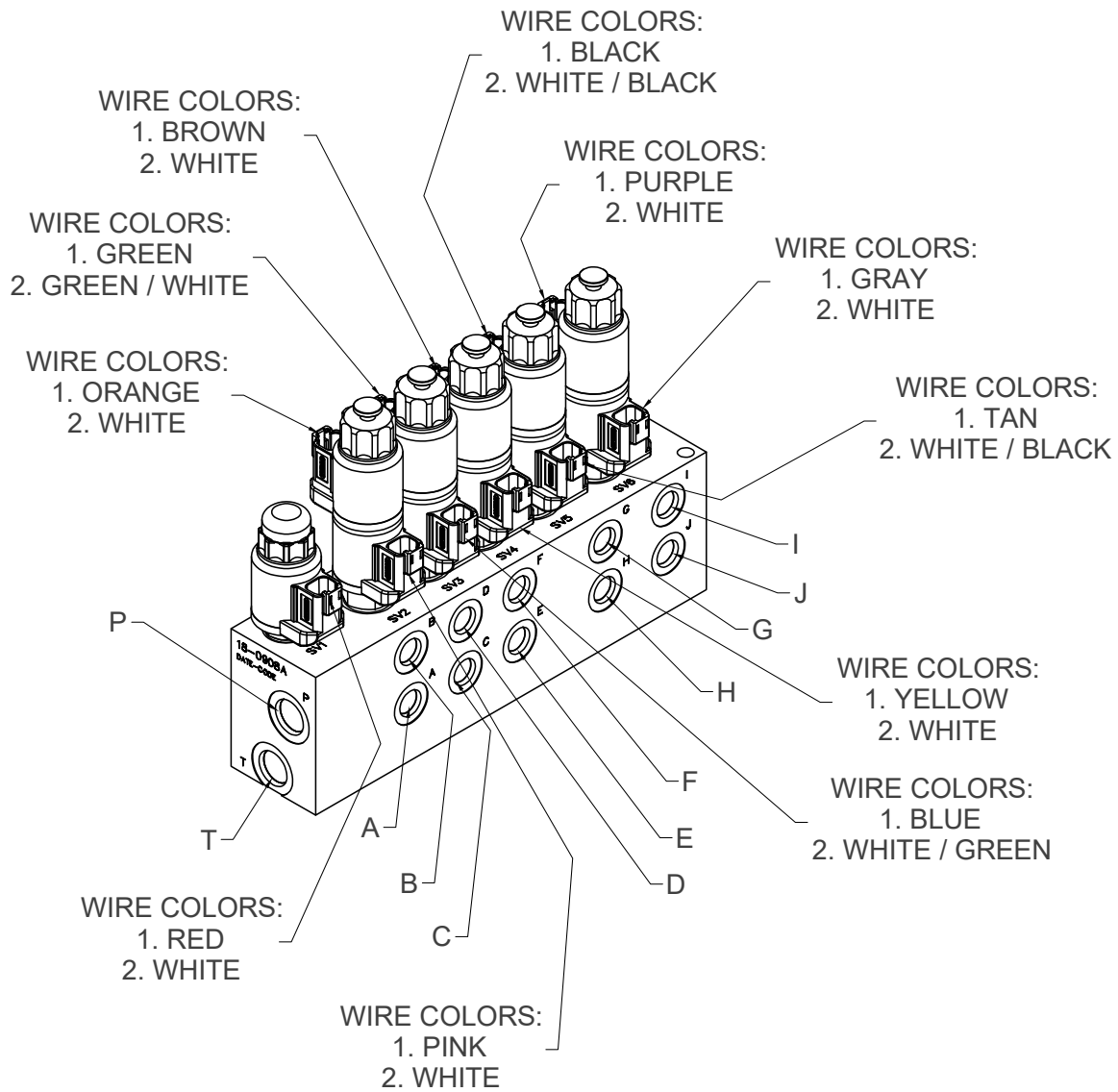


Electrical Over Hydraulic (EOH) System Schematic (Optional)



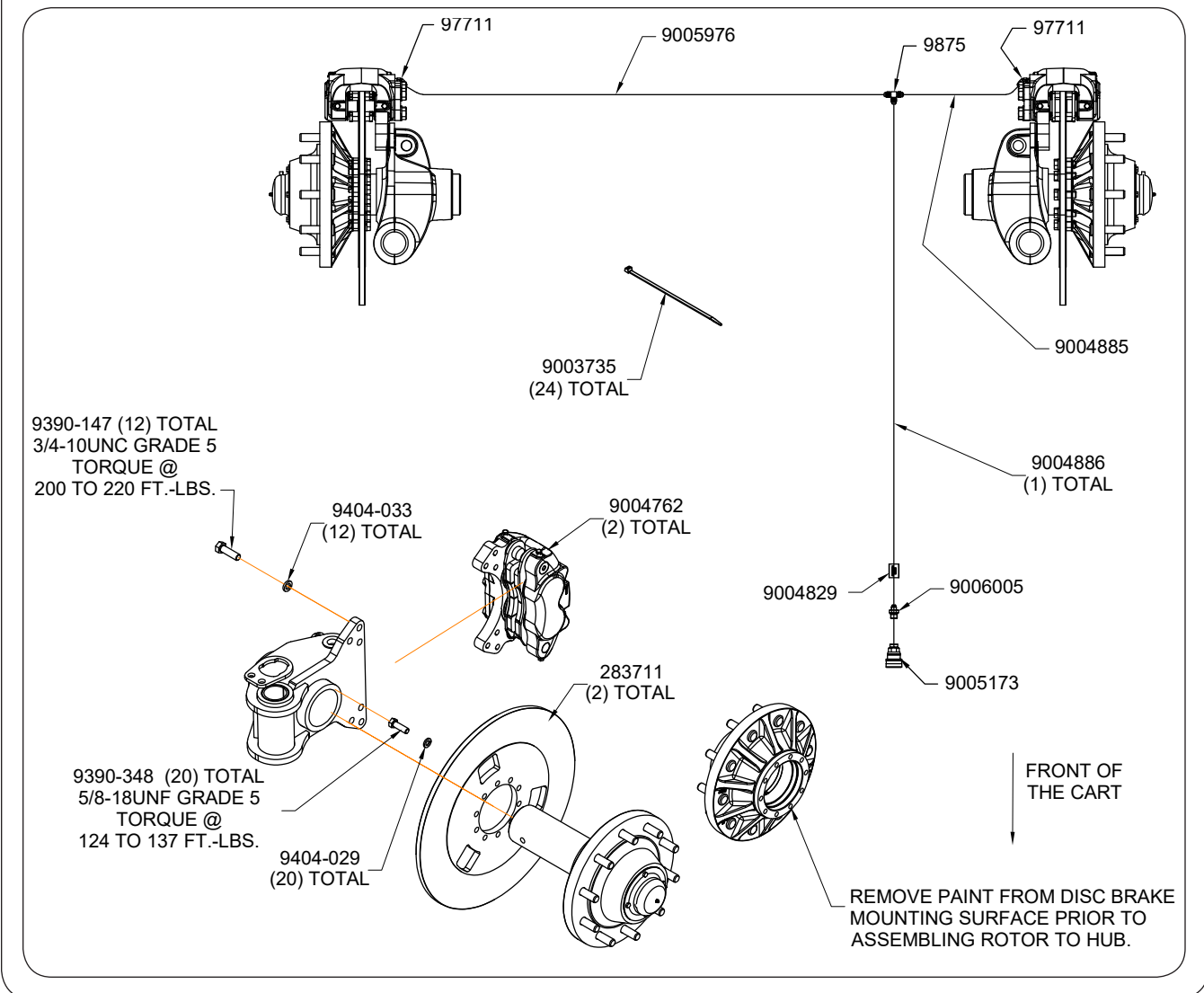
NOTE: 7-pin connector must be plugged into the tractor in order for the spout system to operate.

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



PORT	END OF CYLINDER	FUNCTION
A	BUTT END	FLOW DOOR
B	RAM END	FLOW DOOR
C	RAM END	AUGER FOLD
D	BUTT END	AUGER FOLD
E	RAM END	SPOUT TILT
F	BUTT END	SPOUT TILT
G	RAM END	SPOUT ROTATE
H	BUTT END	SPOUT ROTATE
I	BUTT END	AUGER TILT
J	RAM END	AUGER TILT
P		TRACTOR PRESSURE
T		TRACTOR RETURN

Braking System Schematic



Wheels and Tires

Wheel Nut Torque Requirements

CAUTION

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

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

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

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

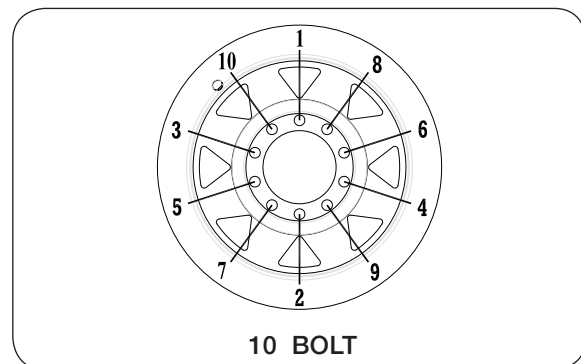


DIAGRAM 1

Wheels and Tires (continued)

Tire Pressure

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

Tire Pressure for Grain Carts

Tire Make	Tire Size	Load Index / Ply	
		Rating	Max. PSI
Firestone	23.1x26 R-3	12	32
	23.1x26 R-1	12	32
	28Lx26 R-3	12	26
	24.5x32 R-3	12	32
	24.5x32 R-1	12	32
	30.5x32 R-1	14	28
	30.5x32 R-3	14	28
	30.5x32 R-3	16	34
	30.5x32 R-1	16	26
	35.5x32 R-3	20	36
	76x50.00x32 HF-3	16	40
	76x50.00x32 HF-3	20	50
	800/65R32 R-1W	172A8	44
	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
	520/85R42 R-1W	169B	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
	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	35.5LR32	193A8	44
	900/60R32 R-1W	192D	46
	1050/50R32 R-1W	185A8	63
	1250/50R32 R-1W	201B	46
Trelleborg	VF1050/50R32 R-1	198D	52
	900/50R32 R-1W	181A8	55
	900/60x32	176LI	44
	850/55R42 R-1W	161A8	32

Wheels and Tires (continued)

Tire Warranty

For questions regarding new tire warranty, please contact your local original equipment tire dealer. Used tires carry no warranty. Following are phone numbers and Websites for your convenience:

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

Complete Torque Chart

Capscrews - Grade 5

NOTE:

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



SIZE	FOOT POUNDS	NEWTON METERS
1/4-20	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

Cap screws - Grade 8



NOTE:

- Grade 8 cap screws 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

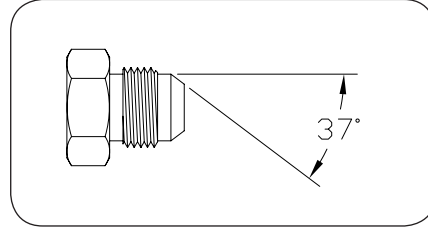
IMPORTANT

- Follow these torque recommendations except when specified in text.

Hydraulic Fittings - Torque and Installation

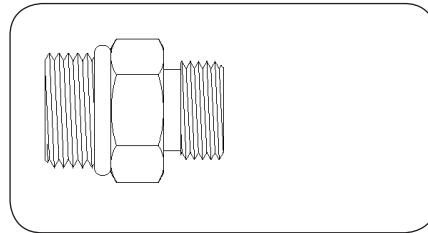
SAE Flare Connection (J. I. C.)

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



SAE Straight Thread O-Ring Seal

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



Section V Parts

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

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Touch-Up Paint.....	5-5
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FOR SCALE INFORMATION, PLEASE REFER TO YOUR SCALE MANUAL.

FOR TRACK INFORMATION, PLEASE REFER TO YOUR TRACK MANUAL.

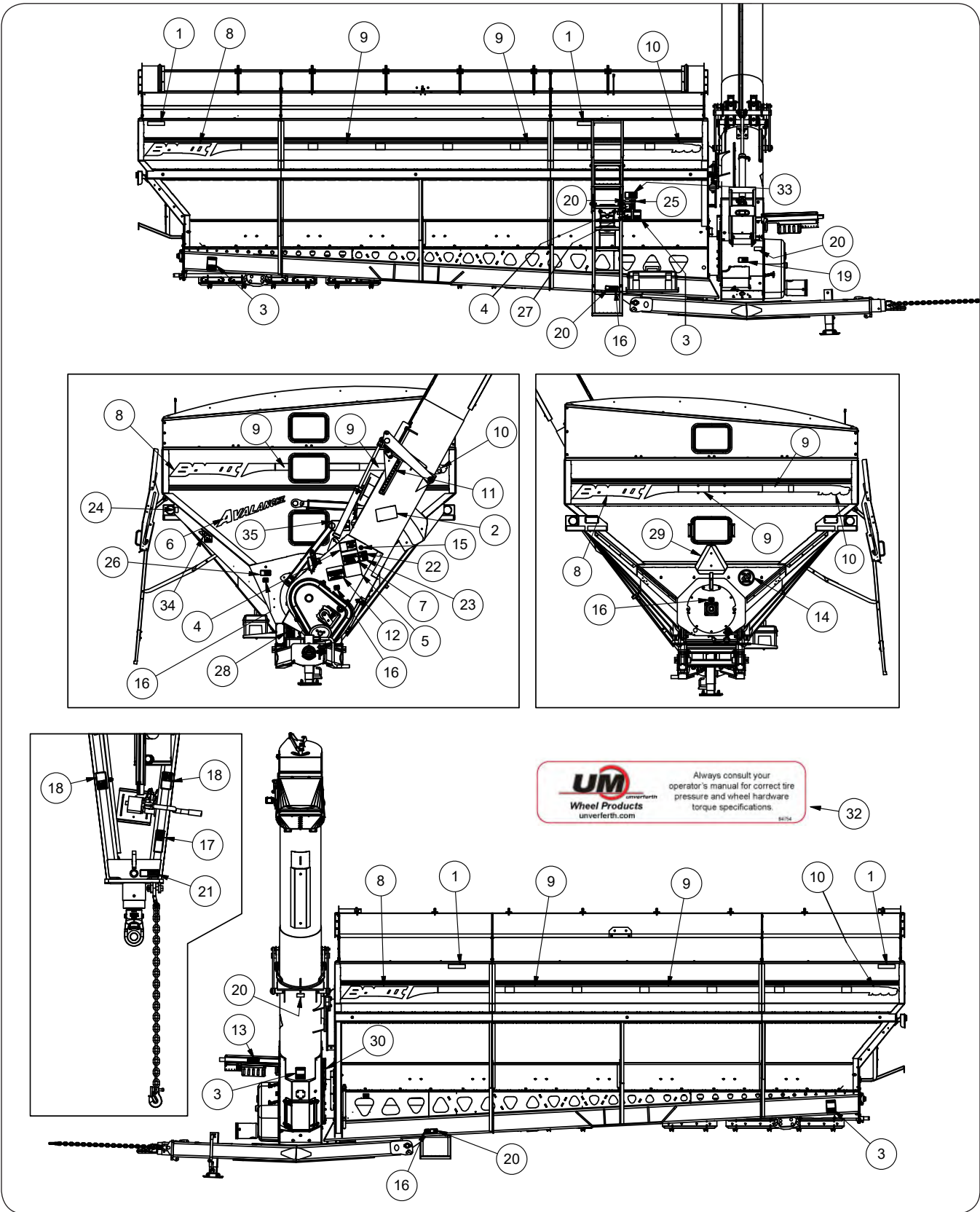
FOR UHARVEST INFORMATION, PLEASE REFER TO YOUR UHARVEST MANUAL.

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

FOR WATER DELIVERY SYSTEM INFORMATION, PLEASE REFER TO YOUR WATER DELIVERY
SYSTEM MANUAL.

Decals

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



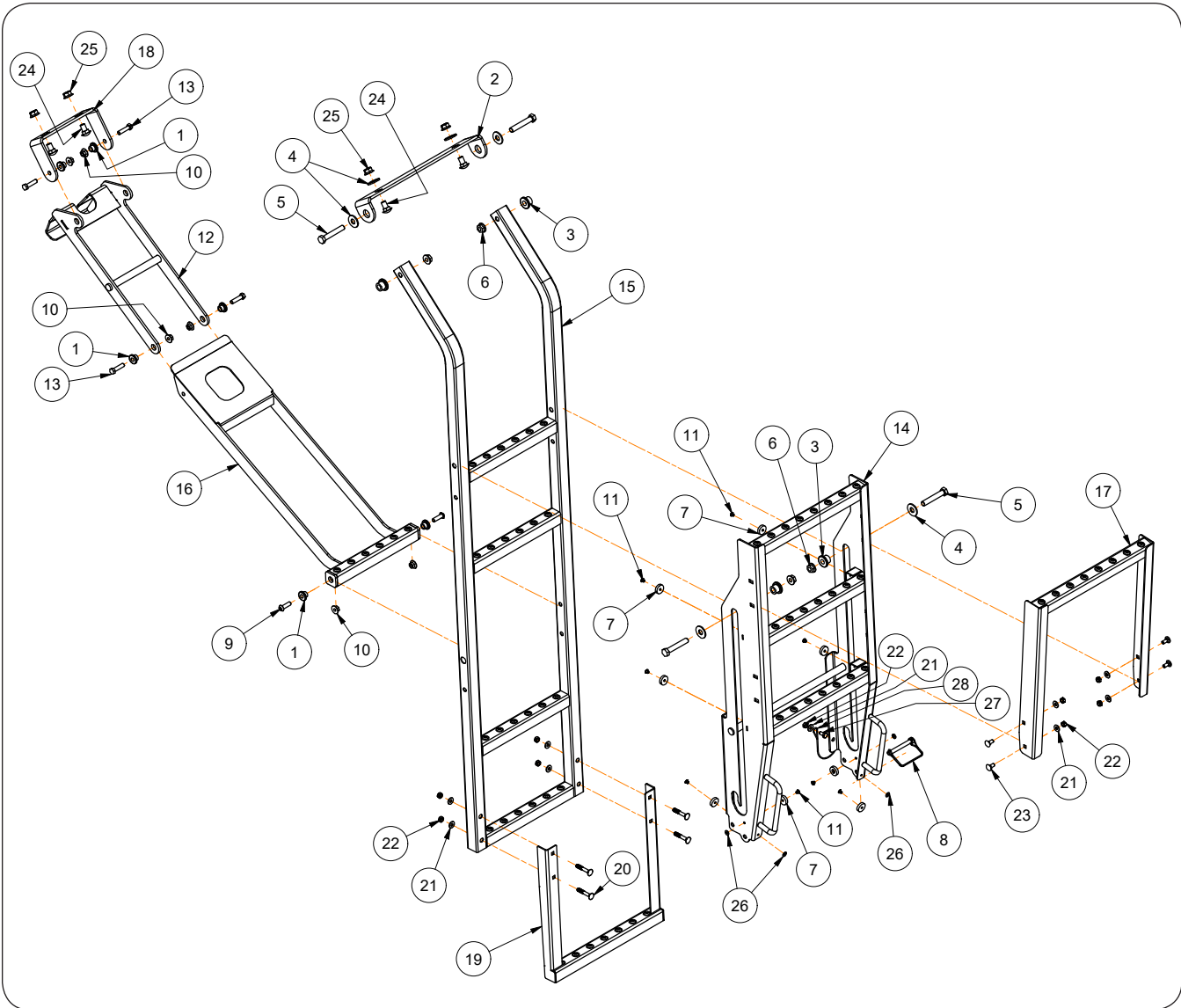
Decals (continued)

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

ITEM	PART NO.	DESCRIPTION	QTY	NOTES
1	9003127	Reflector 2x9 =AMBER=	9	
2	9003474	Decal, DANGER (Electrical Lines)	1	
3	9003475	Decal, WARNING (Cut & Crush)	4	
4	9003476	Decal, WARNING (No Riders)	2	
5	9003477	Decal, IMPORTANT (Operation)	1	
6	9004271	Decal, Avalanche	1	
7	9004966	Decal, IMPORTANT (Cart Loading)	1	
8	9006588	Decal, Brent Logo	4	
9	9006589	Decal, Stripe	15	
10	9006592	Decal, 1596	4	
11	9006601	Decal, Flow Control Indicator	1	
12	9008151	Decal, IMPORTANT (PTO Engagement)	1	
13	9008594	Decal, Hose Legend	1	
14	9008714	Decal, Rear SIS 20 MPH	1	
	9008720	Decal, Rear SIS 30 KPH	1	
15	9008715	Decal, Front SIS 20 MPH	1	
	9008721	Decal, Front SIS 30 KPH	1	
16	9008947	Decal, Grease	4	
17	94094	Decal, WARNING (Tongue Rise)	2	
18	95046	Decal, DANGER (Entanglement)	2	
19	95445	Decal, DANGER (Do Not Use Hands)	1	
20	95839	Decal, WARNING (Pinch Point)	5	
21	97575	Decal, CAUTION (Transport Chain)	1	
22	97961	Decal, WARNING (Read Manual)	1	
23	TA1-906109-0	Decal, WARNING (Moving Parts Crush/Cut)	1	
24	91605	Decal, FEMA	1	
25	95008	Decal, CAUTION (Slippery Surface)	1	
26	98229	Decal, WARNING (Falling Equipment)	1	
27	9003478	Decal, DANGER Never Play	1	
28	9005971	Decal, WARNING (Suspension)	1	
29	TA510514	SMV Emblem	1	
30	9008925	Decal, Grease Bank	1	
31	93705	Caulk, for Seams (Clear)	1	Not Shown
32	94754	Decal, UM Wheel Systems	1	
33	9009168	Decal, WARNING (Ladder Lock Pin)	1	
34	9004864	Decal, Steering Indicator	1	Steering Tandem Only
35	900024	Decal, WARNING (High Pressure Oil)	1	

Ladder Components

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

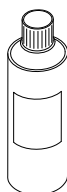


Ladder Components

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

ITEM	PART NO.	DESCRIPTION	QTY	NOTES
1	2003029	Nylon Bushing, .625" OD x .406" ID x .380"	6	
2	289294B	Plate-Bracket, Ladder =Black=	1	
3	2003030	Nylon Bushing, .875" OD x .531" ID x .563"	4	
4	9405-088	Flat Washer, 1/2" USS	6	
5	9390-107	Capscrew, 1/2"-13UNC x 3" G5	4	
6	9003397	Lock Nut/Top, 1/2"-13UNC	4	
7	TA620384	Plastic Stop, 1" Dia. x .250"	8	
8	9005305	Lynch Pin 3/8" Dia. x 3"	1	
9	99985	Button Head Socket, 3/8"-16UNC x 1 1/4"	2	
10	9008159	Lock Nut/Top, 3/8"-16UNC	6	
11	9003503	Rivet 3/16 X 1/4	8	
12	289284B	Ladder Link Weldment =Black=	1	
13	9390-057	Capscrew, 3/8"-16UNC x 1 1/2" G5	4	
14	289328B	Ladder Extension Weldment =Black=	1	
15	289326B	Ladder Weldment =Black=	1	
16	289715B	Step Weldment =Black=	1	
17	289707B	Ladder Extension Weldment =Black=	1	
18	289840B	Ladder Bracket =Black=	1	
19	289844B	Ladder Weldment =Black=	1	
20	9388-029	Carriage Bolt, 5/16"-18UNC x 2" G5	4	
21	9405-064	Flat Washer, 5/16" ID (1/4" Nominal) USS	9	
22	901527	Lock Nut/Center, 5/16"-18UNC	9	
23	9388-024	Carriage Bolt, 5/16"-18UNC x 3/4" G5	4	
24	9388-102	Carriage Bolt, 1/2"-13UNC x 1" G5	4	
25	91267	Flange Nut 1/2-13 UNC G5	4	
26	9004998	Rivet Burr, 3/16"	4	
27	9390-027	Capscrew, 5/16"-18UNC x 5/8" G5	1	
28	97879	Nylon Lanyard	1	

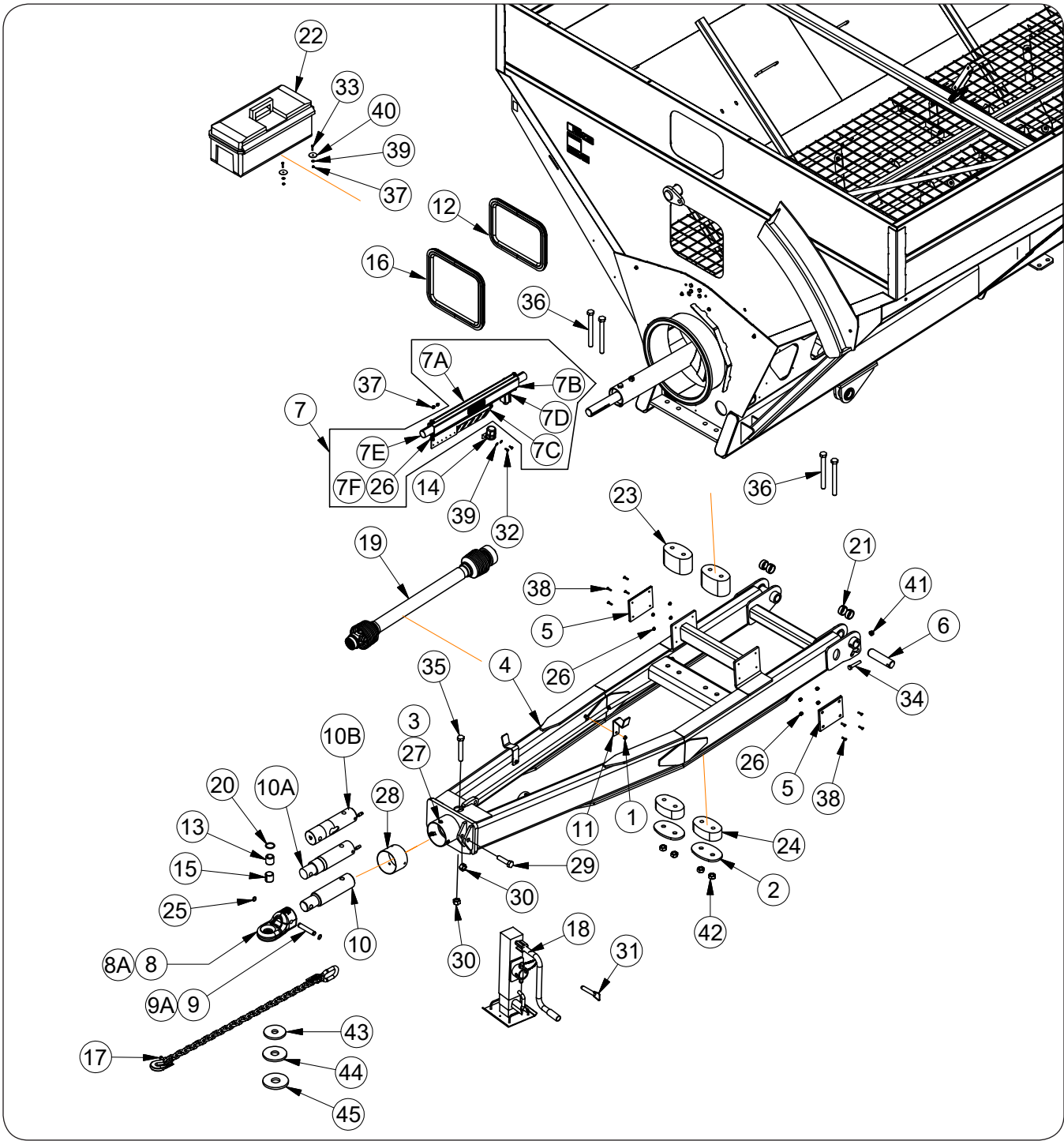
Touch-Up Paint



PAINT	SPRAY
Black	97013
Green	97015
Red	97301
Primer, Gray	9500082
Off White	97016
Silver Mist	97012

Hitch, Jack, & Toolbox Components

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



ITEM	PART NO.	DESCRIPTION	QTY	NOTES
1	91267	Flange Nut, 1/2-13UNC Grade 5	2	
2	271687B	Spring Retainer Plate =Black=	2	
3	9390-053	Capscrew, 3/8-16UNC x 3/4 Grade 5	3	
4	271800G	Tongue Weldment =Green=	1	
	271800R	Tongue Weldment =Red=		
5	273237	Nylon Pad	2	

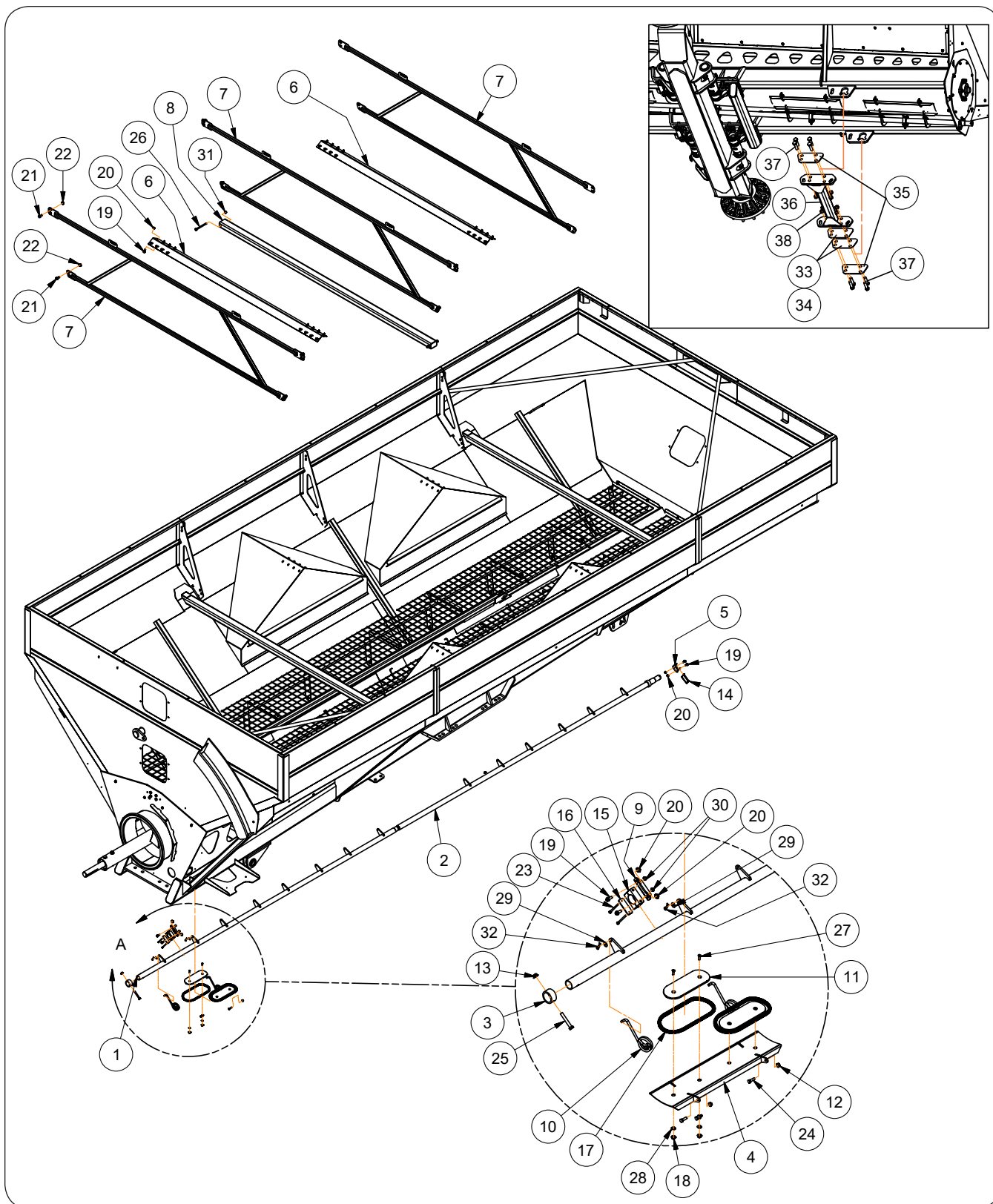
Hitch, Jack, & Toolbox Components

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

ITEM	PART NO.	DESCRIPTION	QTY	NOTES
6	273368	Pin, 2 Dia. x 7 3/4	2	
7	294128B	Hose Caddy Replacement Kit	1	
	7A 294083B	Hose Caddy Weldment =Black=	1	
	7B 294085B	Hose Caddy Cover =Black=	1	
	7C 294086	Hose Retainer	1	
	7D 9000787	Trim - Edge	1/2	Specify in Feet
	7E 9003848	Hose Wrap	3	Specify in Feet
	7F 91256	Large Flange Capscrew 5/16-18UNC x 3/4 Grade 5	6	
8	282875B	CAT 4 Hitch =Black=	1	
8A	282329B	CAT 5 Hitch =Black=	1	
9	282876	CAT 4 Hitch Pin, 1 Dia. x 5 1/2	1	
9A	281691	CAT 5 Hitch Pin, 1 Dia. x 7 3/8	1	
10	284780	Hitch Bar	1	Non-Scale
10A	9004913	Scale Hitch Bar 3 3/4" Dia. with 16 ft. Cable CAT 4	1	
10B	9008135	Scale Hitch Bar 3 3/4" Dia. with 16 ft. Cable CAT 5	1	
11	291974G	PTO Bracket =Green=	2	
	291974R	PTO Bracket =Red=		
12	9008857	Window & Trim Assembly 14 15/32" x 19 21/32"	1	
13	9001917	Tension Bushing, 1 1/2" ID	1	
14	9001968	Trailer Connector Holder	1	
15	9002130	Split Tension Bushing, 1 3/4" ID	1	
16	9008680	Window & Trim Assembly 17 7/32" x 19 21/32"	2	
17	9004898	Chain	1	
18	9005011	Jack	1	
19	9005230	PTO Assembly Complete	1	
20	9005259	O-Ring	4	
21	9005473	Split Tension Bushing, 2 3/8 Dia.	4	
22	9008634	Box Storage	1	
23	9006456	Spring, 4.75 Thick	2	
24	9006457	Spring, 2.50 Thick	2	
25	91192	Retaining Ring, 1"	2	
26	91257	Large Flange Hex Nut, 5/16-18UNC Grade 5	8	
27	9005376	U-Nut	3	
28	271891B	Shield Tube =Black=	1	
29	91299-191	Capscrew, 1-8UNC x 4 Grade 8	1	
30	92199	Center Locknut, 1-8UNC	2	
31	9007632	Jack Pin, 7/8 Dia. x 4 7/8 with Chain	1	
32	9390-003	Capscrew, 1/4-20UNC x 3/4 Grade 5	14	
33	9390-006	Capscrew, 1/4-20UNC x 1 1/4 Grade 5	2	
34	9390-130	Capscrew, 5/8-11UNC x 3 1/2 Grade 5	2	
35	91299-195	Capscrew, 1-8UNC x 6 Grade 8	1	
36	9390-464	Capscrew, 1-8UNC x 10 Grade 5	4	
37	9936	Locknut, 1/4-20UNC Grade 5	2	
38	903171-663	Phillips Head Machine Screw, 5/16-18UNC x 1 1/2	8	
39	9405-064	Flat Washer, 1/4	4	
40	94763	Fender Washer, 2" Dia.	2	
41	95905	Center Locknut, 5/8-11UNC	2	
42	9663	Locknut, 1-8UNC Grade 5	4	
43	281663	Poly Wear Shoe For CAT 3	1	
44	281898	Poly Wear Shoe For CAT 4	1	
45	281899	Poly Wear Shoe For CAT 5	1	

Axle & Hopper Components

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



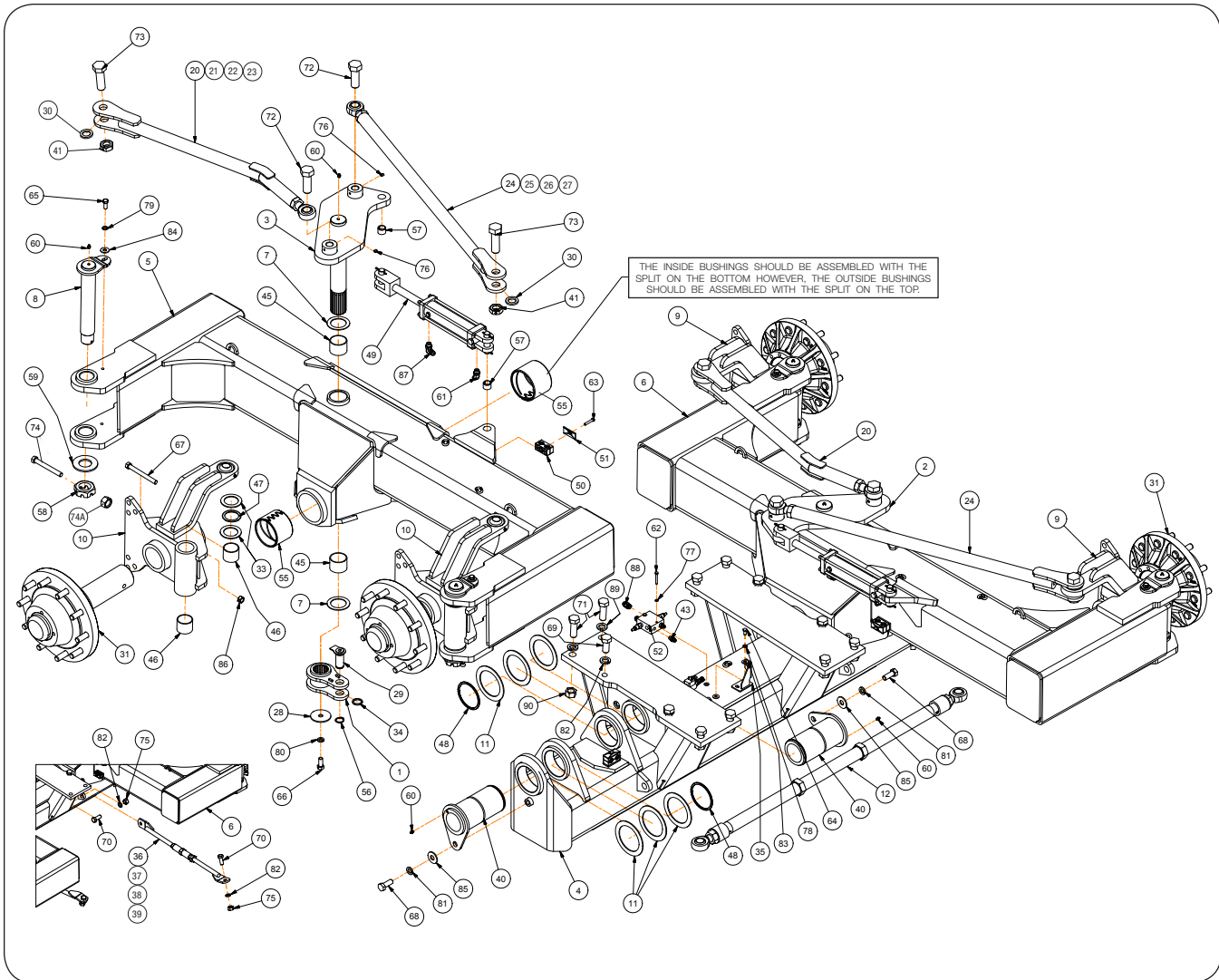
Axle & Hopper Components

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

ITEM	PART NO.	DESCRIPTION	QTY	NOTES
1	271562B	Front Link Arm Weldment =Black=	1	
2	271563B	Rear Link Arm Weldment =Black=	1	
3	271566B	Stop Bushing =Black=	1	
4	271664B	Cleanout Door Weldment W/Holes =Black=	7	
5	273753B	Door Latch Weldment =Black=	1	
6	282414B	Wheel Well Brace =Black=	2	
7	282416B	Cross Tube Weldment =Black=	3	
8	295875B	Cross Tube Weldment =Black=	1	For SN B42340100 & Higher (Tracks Only)
	284945B			For SN B42340099 & Lower (Tracks Only)
9	286414B	Door Pivot Bracket =Black=	7	
10	286417	Door Linkage Spring	14	
11	286418B	Cleanout Door Doubler Plate =Black=	14	
12	9003396	Locknut, 3/8-16UNC Grade 5	14	
13	9003397	Locking Flange Nut, 1/2-13UNC	1	
14	9005305	Lynch Pin, 3/8 Dia. x 3	1	
15	9006351	Clamp	7	
16	9006352	Top Plate	7	
17	9007108	Rubber Gasket	14	
18	91257	Large Flange Hex Nut, 5/16-18UNC Grade 5	28	
19	91262	Large Flange Screw, 3/8-16UNC x 1 Grade 5	48	
20	91263	Large Flange Nut, 3/8-16UNC Grade 5	48	
21	91266	Flange Screw, 1/2-13UNC x 1 1/4 Grade 5	16	
22	91267	Flange Nut, 1/2-13UNC Grade 5	16	
23	9390-015	Capscrew, 1/4-20UNC x 3 1/2 Grade 5	14	
24	9390-056	Capscrew, 3/8-16UNC x 1 1/4 Grade 5	14	
25	9390-108	Capscrew, 1/2-13UNC x 3 1/4 Grade 5	1	
26	9390-113	Capscrew, 1/2-13UNC x 5 Grade 5	2	For SN B42340100 & Higher
	9390-114	Capscrew, 1/2-13UNC x 5 1/2 Grade 5		For SN B42340099 & Lower
27	903171-660	Flat Head Machine Screw, 5/16-18UNC x 1	28	
28	9405-070	Flat Washer, 5/16 USS	28	
29	9405-076	Flat Washer, 3/8 USS	14	
30	97189	Large Flange Hex Nut, 1/4-20UNC	15	
31	9800	Locknut, 1/2-13UNC Grade 5	2	
32	TA8B95	Hairpin Cotter, 1/8 Dia. x 1 15/16	14	
33	272740G	Shim Plate, 8GA =Green=	2	
	272740R	Shim Plate, 8GA =Red=		
34	272741G	Shim Plate, 14GA =Green=	1	
	272741R	Shim Plate, 14GA =Red=		
35	272745G	Outer Cap Bolt Plate, 3/8" =Green=	2	
	272745R	Outer Cap Bolt Plate, 3/8" =Red=		
36	272814G	Rear Runner Brace Weldment =Green=	1	
	272814R	Rear Runner Brace Weldment =Red=		
37	9390-170	Capscrew, 7/8-9UNC x 3 1/2 Gr.5	8	
38	98420	Locknut, 7/8-9UNC Gr.8	8	

Steering Tandem Assembly Components

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



ITEM	PART NO.	DESCRIPTION	QTY.	NOTES
1	283648B	Steering Retainer Weldment =Black=	2	
2	283651B	Pivot Weldment LH =Black=	1	
3	283652B	Pivot Weldment RH =Black=	1	
4	283653B	Axle Weldment =Black=	1	
5	283657B	Tandem Weldment RH =Black=	1	
6	283658B	Tandem Weldment LH =Black=	1	
7	283679	Washer 3 5/8" Dia.	4	
8	283694	Kingpin Weldment	4	
9	283696B	Spindle Retainer Weldment LH =Black=	2	For Models with 35.5x32 & 900/60x32 Tires
	283755B	Spindle Retainer Weldment LH =Black=	2	For Models with 24.5x32 & 30.5x32 Tires
10	283697B	Spindle Retainer Weldment RH =Black=	2	For Models with 35.5x32 & 900/60x32 Tires
	283756B	Spindle Retainer Weldment RH =Black=	2	For Models with 24.5x32 & 30.5x32 Tires
11	283698	Washer 5 3/4" Dia.	12	

Steering Tandem Assembly Components

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

ITEM	PART NO.	DESCRIPTION	QTY.	NOTES
12	283712B	Tie Rod Assembly - Center =Black=	1	Includes Items 13 - 19
13	283761	Bushing, 2 1/2" Dia. x 1 1/2" Dia. x 2 5/16	2	
14	283766B	Center Tie Rod Weldment =Black=	1	
15	9004743	Male Rod End Bearing, 1 1/4-12UNF	1	Right-Hand Threaded
16	9004744	Male Rod End Bearing, 1 1/4-12UNF	1	Left-Hand Threaded
17	9004827	Hex Jam Nut 1 1/4-12UNF	1	Left-Hand Threaded
18	9005263	Belleville Washer	2	
19	9395-023	Hex Jam Nut 1 1/4-12UNF	2	Right-Hand Threaded
20	283713B	Tie Rod Assembly - Rear =Black=	2	Includes Items 21 - 23
21	283709B	Rear Tie Rod Weldment =Black=	2	
22	9004743	Male Rod End Bearing, 1 1/4-12UNF	2	Right-Hand Threaded
23	9395-023	Hex Jam Nut 1 1/4-12UNF Grade 5	2	
24	283714B	Tie Rod Assembly - Front =Black=	2	Includes Items 25 - 27
25	283704B	Front Tie Rod Weldment =Black=	2	
26	9004743	Male Rod End Bearing, 1 1/4-12UNF	2	Right-Hand Threaded
27	9395-023	Hex Jam Nut 1 1/4-12UNF	2	
28	283715	Washer 3 1/4" Dia.	2	
29	283725	Pin Weldment	2	
30	283731	Washer 2" Dia.	4	
31	267200B	Hub & Spindle Asy For M22 Studs =Black=	4	
	267201B	Hub & Spindle Asy For 3/4" Studs =Black=	4	
33	283760	Washer 3 3/8" Dia. (Hardened)	8	
34	283770	Spacer Bushing	2	
35	283774B	Indicator Weldment =Black=	1	
36	283782B	Axle Brace Assembly =Black=	2	Includes Items 37 - 39
37	283779B	Axle Brace Weldment - Left Hand =Black=	2	
38	283781B	Axle Brace Weldment - Right Hand =Black=	2	
39	9395-041	Hex Jam Nut, 1 1/4-7UNC Grade 5	2	
40	283787	Pivot Bushing Weldment	4	
41	808254	Adjusting Nut 1 1/4-7UNC Grade 5	4	
42	9000106	Cable Tie, 6"	A/R	Not Shown
43	9001495	Adapter, 9/16-18 JIC Male x 9/16-18 OR Male	2	
44	9004130	Spiral Hose Wrap	4	Not Shown
45	9003749	Self Lubricating Bearing	4	
46	9004738	Self Lubricating Bushing	8	
47	9004746	Self Lubricating Thrust Bearing	4	
48	9004752	Retaining Ring, 4 1/2" Dia.	4	
49	9004854	Hydraulic Cylinder, 2 1/2 x 8" - 3000 PSI	2	
50	9004856	Hose Clamp	6	
51	9004857	Top Plate Hose Clamp	6	
52	9008730	Steering Valve	1	
53	9004881	Hydraulic Hose, 1/2 x 153" - 3000 PSI	1	Not Shown
54	9004882	Hydraulic Hose, 1/2 x 73" - 3000 PSI	2	Not Shown
55	9006623	Split Bushing	4	
56	91177	Retaining Ring 1 1/4"	4	
57	91268	Tension Bushing 1 1/4 OD x 1 ID x 1	4	
58	92470	Castle Nut 2-12UNF Grade 5	4	
59	92472	Spindle Washer (Hardened)	4	

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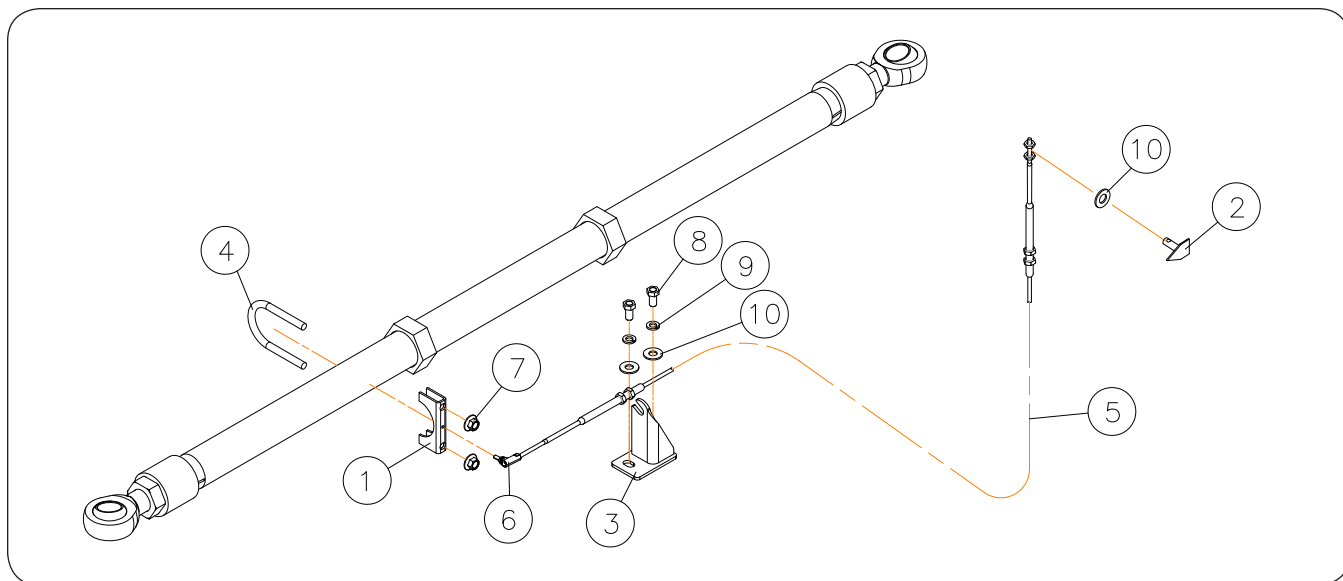
Steering Tandem Assembly Components (continued)

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

ITEM	PART NO.	DESCRIPTION	QTY.	NOTES
60	93426	Grease Zerk	10	
61	93586	45° Elbow 3/4-16 JIC Male x 3/4-16 OR Male	2	
62	9390-009	Capscrew 1/4-20UNC x 2 Grade 5	2	
63	9390-033	Capscrew 5/16-18UNC x 1 3/4 Grade 5	4	
64	9390-053	Capscrew 3/8-16UNC x 3/4 Grade 5	4	
65	9390-100	Capscrew 1/2-13UNC x 1 1/4 Grade 5	4	
66	9390-122	Capscrew 5/8-11UNC x 1 1/2 Grade 5	4	
67	9390-136	Capscrew 5/8-11UNC x 6 Grade 5	4	
68	9390-145	Capscrew, 3/4-10UNC x 2	4	
69	9390-184	Capscrew 1-8UNC x 2 1/4	4	
70	9390-185	Capscrew 1-8UNC x 2 1/2	4	
71	91299-1458	Capscrew 1 x 3 1/2 UNS Grade 8	4	
72	9390-215	Capscrew 1 1/4-7UNC x 3 1/2 Grade 5	4	
73	9390-217	Capscrew 1 1/4-7UNC x 4 Grade 5	4	
74	9390-065	Capscrew 3/8-16UNC x 3 1/2 Grade 5	4	
74A	902875	Locknut 3/8-16UNC	4	
75	9394-020	Hex Nut, 1-8UNC Grade 5	2	
76	9399-084	Set Screw 3/8-16UNC x 3/8	4	Cup Point/Hex Socket
77	9404-017	Lock Washer 1/4	4	
78	9404-021	Lock Washer 3/8	4	
79	9404-025	Lock Washer 1/2	4	
80	9404-029	Lock Washer 5/8	4	
81	9404-033	Lock Washer, 3/4	4	
82	9404-041	Lock Washer, 1	4	
83	9405-076	Flat Washer 3/8 (USS)	4	
84	9405-088	Flat Washer 1/2 (USS)	4	
85	9405-106	Flat Washer, 3/4	4	
86	95905	Center Locknut, 5/8-11UNC	2	
87	9863	90° Elbow 3/4-16 JIC Male x 3/4-16 OR Male	2	
88	9864	Adapter, 3/4-16 JIC Male x 3/4-16 OR Male	2	
89	804685	Hardened Washer	8	
90	9008441	Elastic Lock Nut 1" UNS Grade 8	8	

Steering Tandem Indicator Components

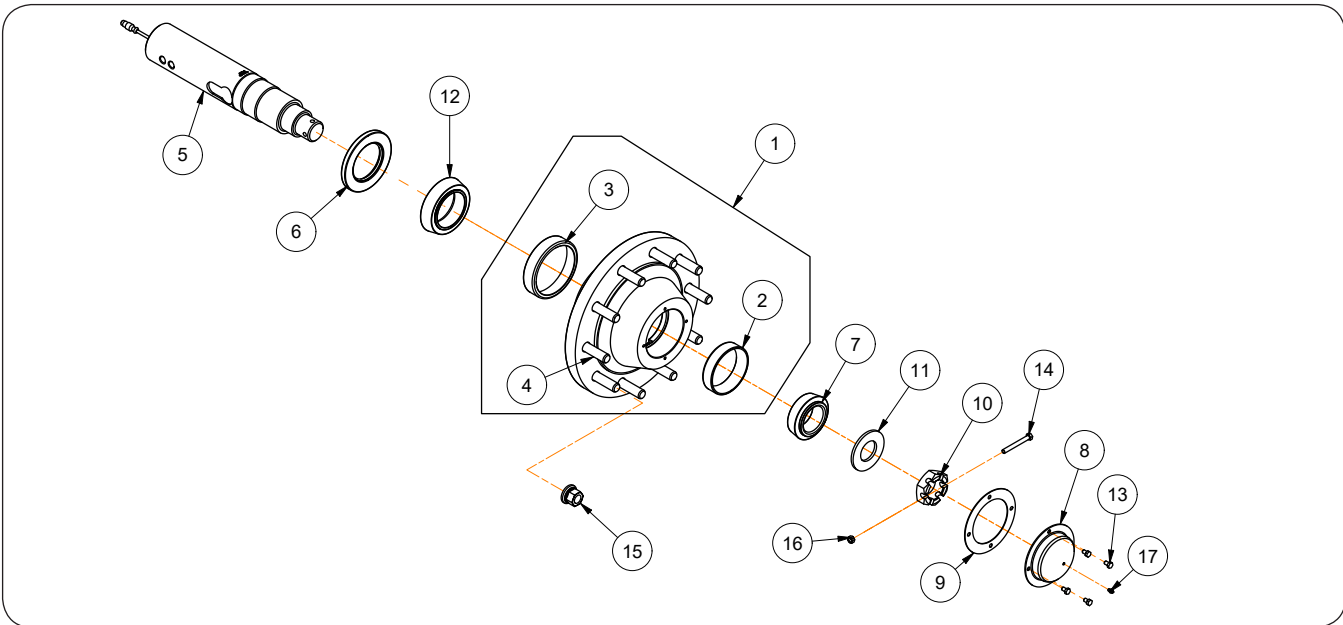
Please visit www.unverferth.com/parts/ for the most current parts listing.



ITEM	PART NO.	DESCRIPTION	QTY	NOTES
1	283742	Saddle Clamp	1	
2	283749R	Indicator Weldment =Red=	1	
3	283774B	Indicator Weldment =Black=	1	
4	9004865	U-Bolt 3/8-16 x 3 5/8	1	
5	9005168	Push / Pull Cable 264"	1	
6	9005109	Rod End	1	
7	91263	Flange Nut 3/8-16	2	
8	9390-053	Capscrew, 3/8-16 UNC x 3/4	2	
9	9404-021	Lock Washer 3/8	2	
10	9405-076	Flat Washer 3/8	3	

Steering Tandem Hub Components

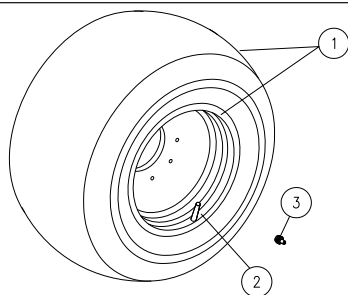
Please visit www.unverferth.com/parts/ for the most current parts listing.



ITEM	PART NO.	DESCRIPTION	QTY	NOTES
1	283739B	Hub Sub-Asy with M22 x 1.5 Hdw =Black=	2	Includes Items 3-5 - For Models with 35.5x32 & 900/60x32 Tires
	283739G	Hub Sub-Asy with M22 x 1.5 Hdw =Green=		
	283739R	Hub Sub-Asy with M22 x 1.5 Hdw =Red=		
	283763B	Hub Sub-Asy with 3/4-16UNF Hdw =Black=		Includes Items 3-5 - For Models with 24.5x32 & 30.5x32 Tires
	283763G	Hub Sub-Asy with 3/4-16UNF Hdw =Green=		
	283763R	Hub Sub-Asy with 3/4-16UNF Hdw =Red=		
2	92462	Outer Bearing Cup	2	HM212011
3	92476	Inner Bearing Cup	2	HM218210
4	267288	Stud & Nut Kit M22 x 1.5	20	For Models with 35.5x32 & 900/60x32 Tires
	9007001	Stud Bolt M22 x 1.5 x 4		
	94794	Stud Bolt 3/4-16UNF x 3 Grade 8		For Models with 24.5x32 & 30.5x32 Tires
5	9006347	Scale Spindle, 3 3/4" Dia.	4	
6	92565	Seal	2	37605SA
7	92464	Outer Bearing Cone	2	HM212049
8	286171B	Hub Cap "Bolt-On Type" =Black=	2	
	286171G	Hub Cap "Bolt-On Type" =Green=		
	286171R	Hub Cap "Bolt-On Type" =Red=		
9	284230	Gasket	2	
10	92470	Castle Nut, 2-12UNF Grade 5	2	
11	92472	Spindle Washer (Hardened)	2	
12	92545	Inner Bearing Cone	2	HM218248
13	9390-026	Capscrew 5/16-18UNC x 1/2 Grade 5	8	
14	9390-064	Capscrew 3/8-16UNC x 3 1/4 Grade 5	2	
15	267288	Stud & Nut Kit M22 x 1.5	20	For Models with 35.5x32 & 900/60x32 Tires
	97319	Flange Cap Nut M22 x 1.5		
	92458	Wheel Nut 3/4-16UNF Grade 8		For Models with 24.5x32 & 30.5x32 Tires
16	902875	Locknut, 3/8-16UNC	2	
17	91160	Grease Zerk	2	

Steering Tandem Wheels & Tires

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



TIRES

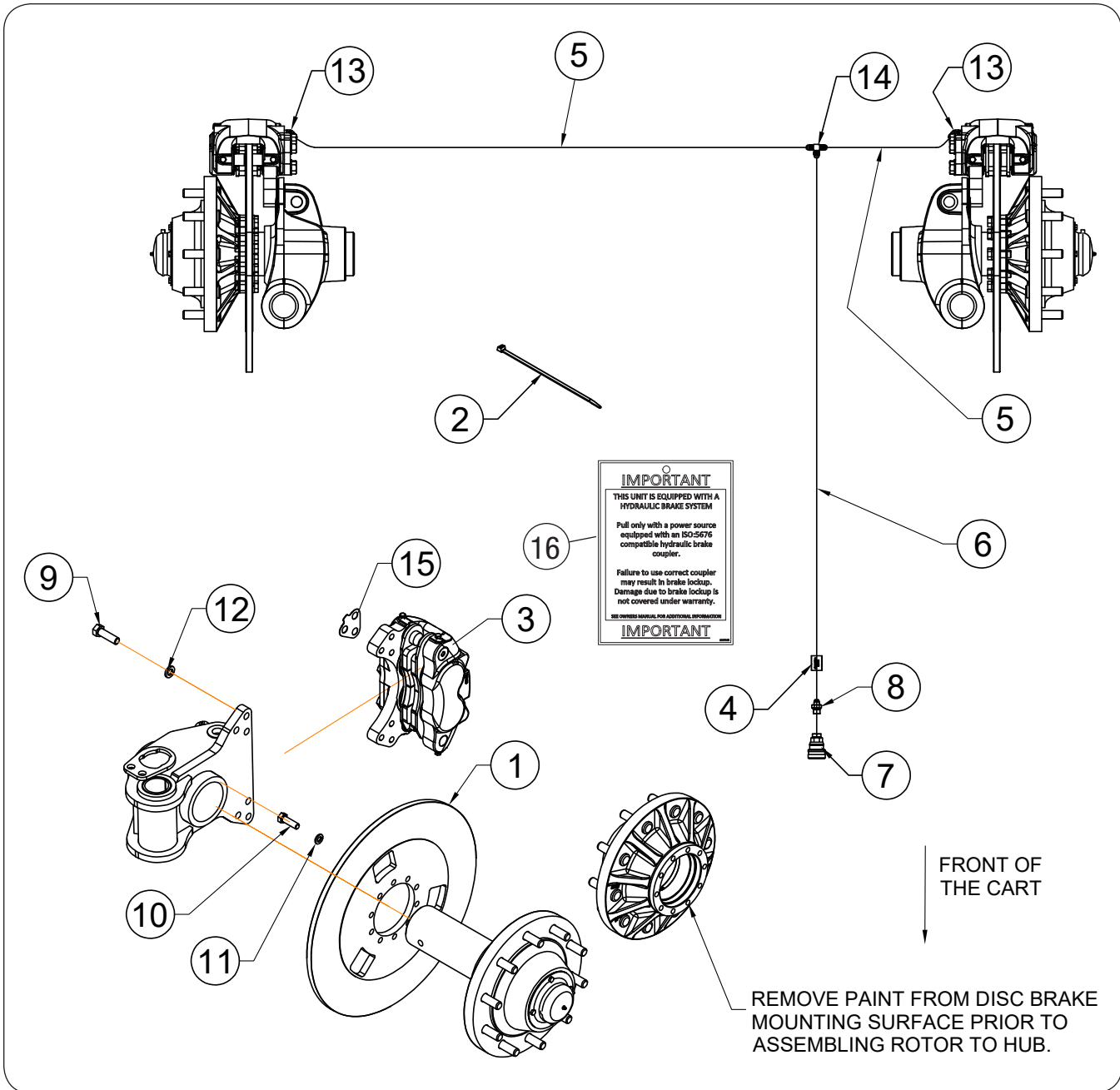
For questions regarding new tire warranty, please contact your local original equipment tire dealer. Used tires carry no warranty. Tire manufacturers' phone numbers and websites are listed in Maintenance Section for your convenience.

ITEM	PART NO.	DESCRIPTION	QTY	NOTES
1	14316	Wheel & Tire Assembly	4	27x32 / 30.5B32 R-3
	92417	Wheel Only	4	27x32
1	17404	Wheel & Tire Assembly	4	31x32 / 35.5LB32 R-3 (Off-White)
	17275	Wheel Only	4	31x32
1	17404SM	Wheel & Tire Assembly	4	31x32 / 35.5LB32 R-3 (Silver Mist)
	17274SM	Wheel Only	4	31x32
1	17627	Wheel & Tire Assembly	4	27x32 / 900/60-32 R-1W
	17273W0	Wheel Only	4	27x32
1	19976	Wheel & Tire Assembly	4	27 x 32 / TLIF800/65R32 R-1W (Off-White)
	19976SM			27 x 32 / TLIF800/65R32 R-1W (Silver Mist)
	92417	Wheel Only	4	27 x 32 (Off-White)
	92417SM			27 x 32 (Silver Mist)
1	17944	Wheel & Tire Assembly	4	30 x 32 / 900/60R32 R-1 (Off-White)
	17944SM			30 x 32 / 900/60R32 R-1 (Silver Mist)
	17943W0	Wheel Only	4	30 x 32 (Off-White)
	17943SM			30 x 32 (Silver Mist)
2	93300	Valve Stem	4	
3	901207	Valve Stem Adapter	-	

Brake Components (Optional)

(Requires tractor with Implement Braking)

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



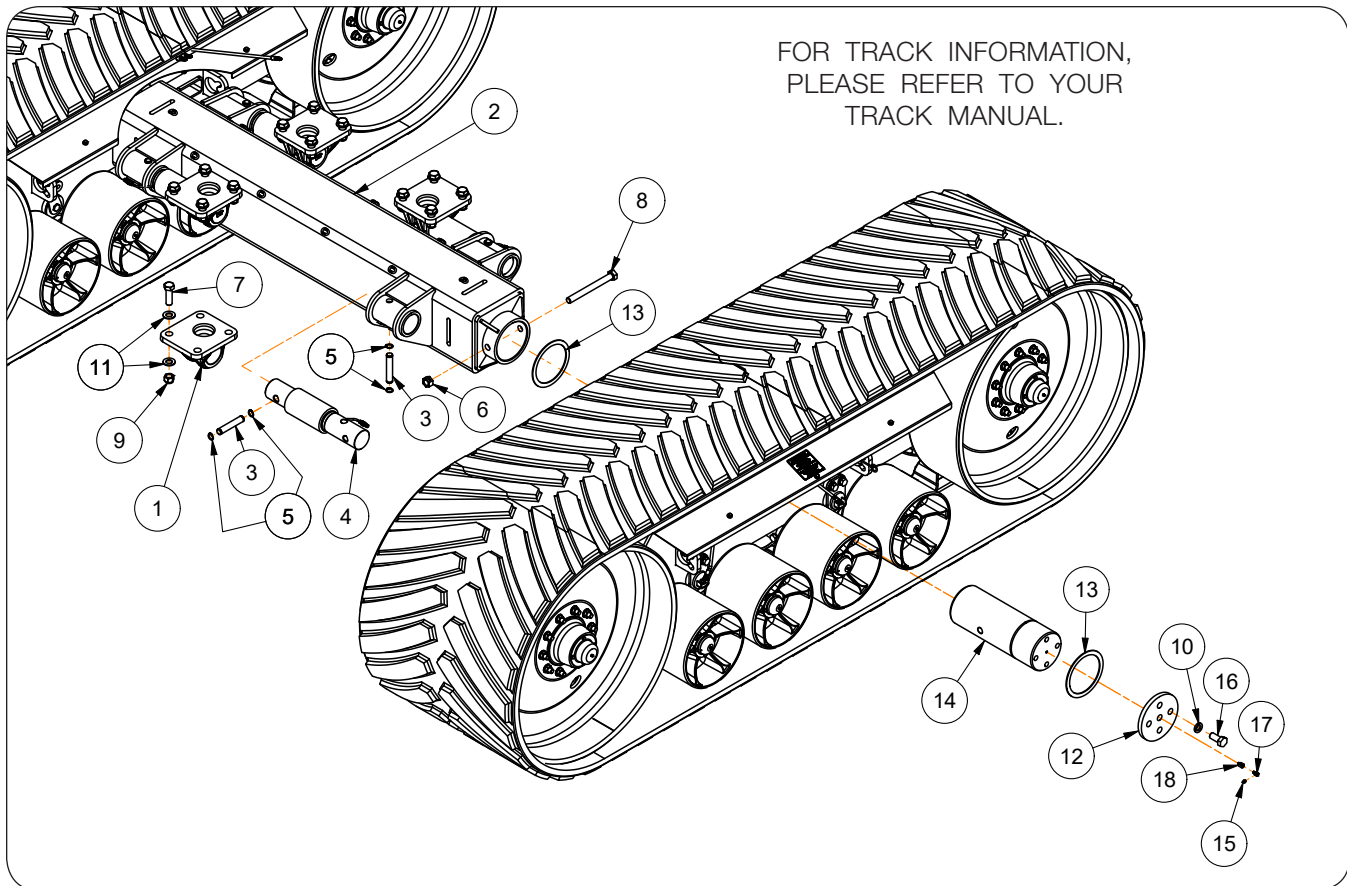
Brake Components (Optional)
(Requires tractor with Implement Braking)

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

ITEM	PART NO.	DESCRIPTION	QTY	NOTES	
1	283711	Brake Rotor Plate	2		
2	9003735	Cable Tie, 11" Long	24		
3	9004762	Brake Assembly	2	Quantity Per Brake Caliper (Not Shown)	
	3A	9007135	Brake Pad - Outer		1
	3B	9007136	Brake Pad - Inner		1
	3C	9007137	Seal Kit		1
4	9004829	Hose Marker Sleeve = Brake Pressure	1		
5	9004885	Hose, 1/4 x 148 (3000 PSI)	2		
6	9004886	Hose, 1/4 x 408 (3000 PSI)	1		
7	9005173	Quick Coupler	1		
8	9006005	Adapter, 9/16-18 JIC M x 18x1.5 M	1		
9	9390-147	Capscrew, 3/4-10 UNC x 2 1/2 Grade 5	12		
10	9390-348	Capscrew, 5/8-18 UNF x 2 Grade 5	20		
11	9404-029	Lock Washer, 5/8	20		
12	9404-033	Lock Washer, 3/4	12		
13	97711	Adapter, 9/16-18 JIC M x 7/16-20 O-R M	2		
14	9875	Tee, 9/16-18 JIC M	1		
15	286237	Shim	16	Use as Needed	
16	9007162	Brakes Information Tag	1		

Track Axle Components

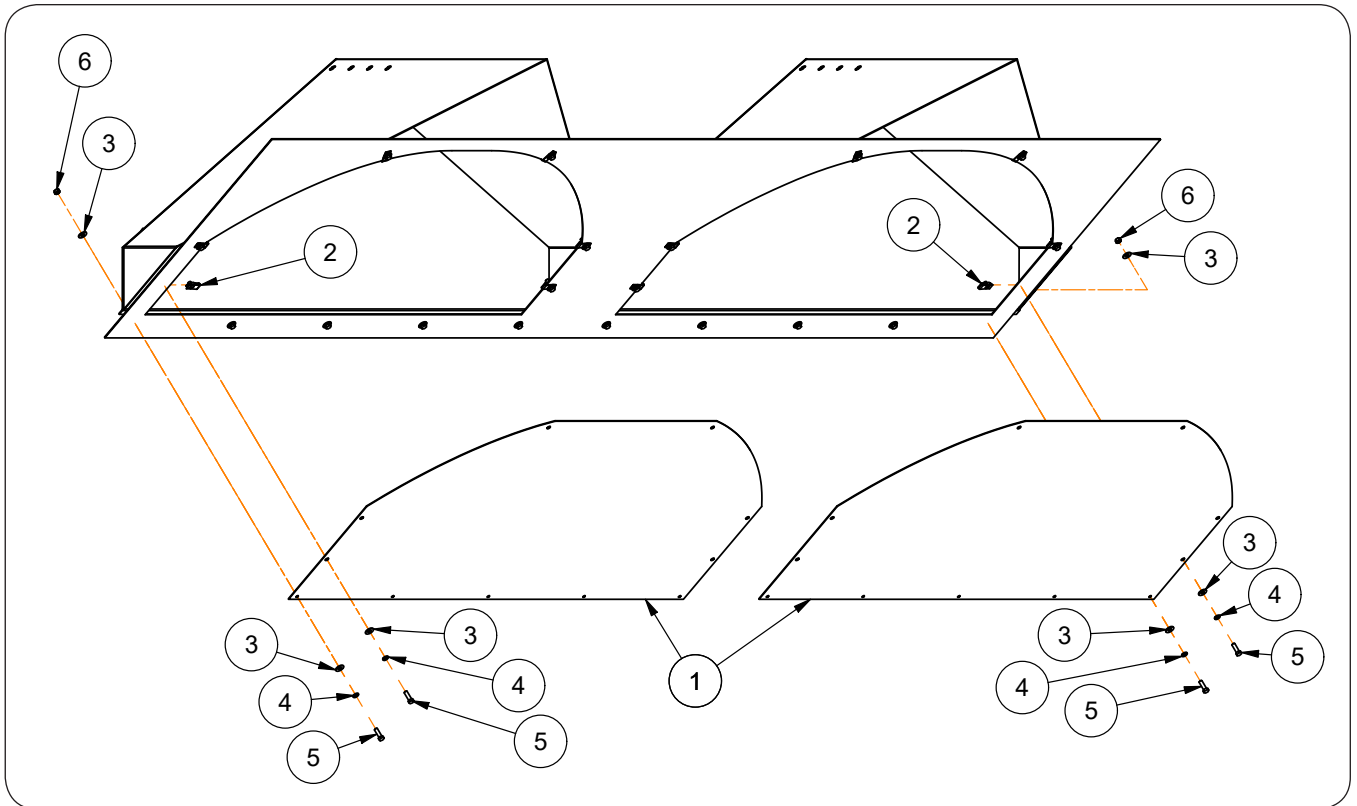
Please visit www.unverferth.com/parts/ for the most current parts listing.



ITEM	PART NO.	DESCRIPTION	QTY	NOTES
1	268838B	Axle Mount =Black=	4	
2	282035B	Axle Weldment =Black=	1	Equalizer Tracks
	282744B	Axle Weldment =Black=	1	Standard Tracks & Optional Long axle for Equalizer tracks
3	282876	Hitch Pin, 1" Dia. x 5 1/2	8	
4	9005811	Scale Bar, 3.50" (SHOWN)	4	
	282745	Load Bar, 3.50" - Non-Scale	4	
5	91192	Retaining Ring 1"	16	
6	92199	Locknut, 1-8UNC	2	
7	91299-1457	Capscrew 1-14UNS x 3 1/4 Grade 8	16	
8	9390-464	Capscrew 1-8UNC x 10 Grade 5	2	
9	9008441	Elastic Lock Nut 1-14UNS Grade 8	16	
10	9404-041	Lock Washer, 1	8	
11	804685	Washer, 1 1/16" ID	32	
12	282689B	Cover Plate =Black=	2	
13	282690	Washer 8 1/2" OD	4	
14	282102	Track Pivot Shaft, 7" Dia. x 19 1/8	2	Equalizer Tracks
	282742	Track Pivot Shaft 7" Dia. x 19 3/16	2	Standard Tracks
15	93426	Grease Zerk	2	Standard Tracks
16	9390-184	Capscrew 1-8UNC x 2 1/4 Grade 5	8	
17	9006785	90° Adapter 1/8"NPT	2	Equalizer Tracks
18	9006816	Adapter 1/8"NPT	2	Equalizer Tracks

Track Panel Kit Components

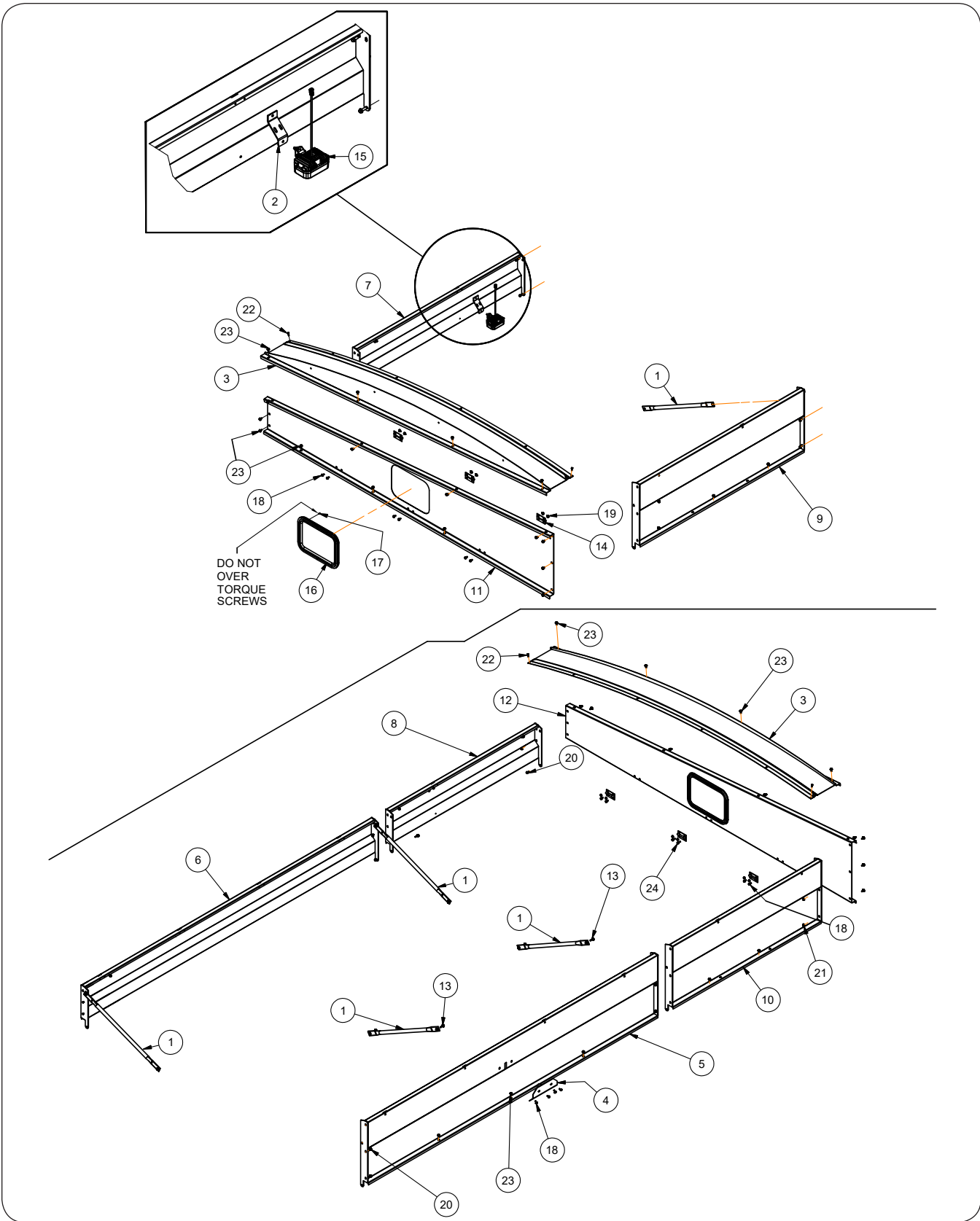
Please visit www.unverferth.com/parts/ for the most current parts listing.



ITEM	PART NO.	DESCRIPTION	QTY	NOTES
	284213G	Track Panel Kit =Green=	-	Includes Items 1 through 6
	284213R	Track Panel Kit =Red=	-	
1	284212G	Track Panel Plate =Green=	4	
	284212R	Track Panel Plate =Red=		
2	9005376	U-nut, 3/8-16UNC	24	
3	9405-076	Flat Washer, 3/8" USS	64	
4	9404-021	Lock Washer, 3/8"	44	
5	9390-056	Capscrew, 3/8"-16UNC x 1 1/4" G5	44	
6	9394-006	Hex Nut, 3/8"-16UNC	20	

Sideboards

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



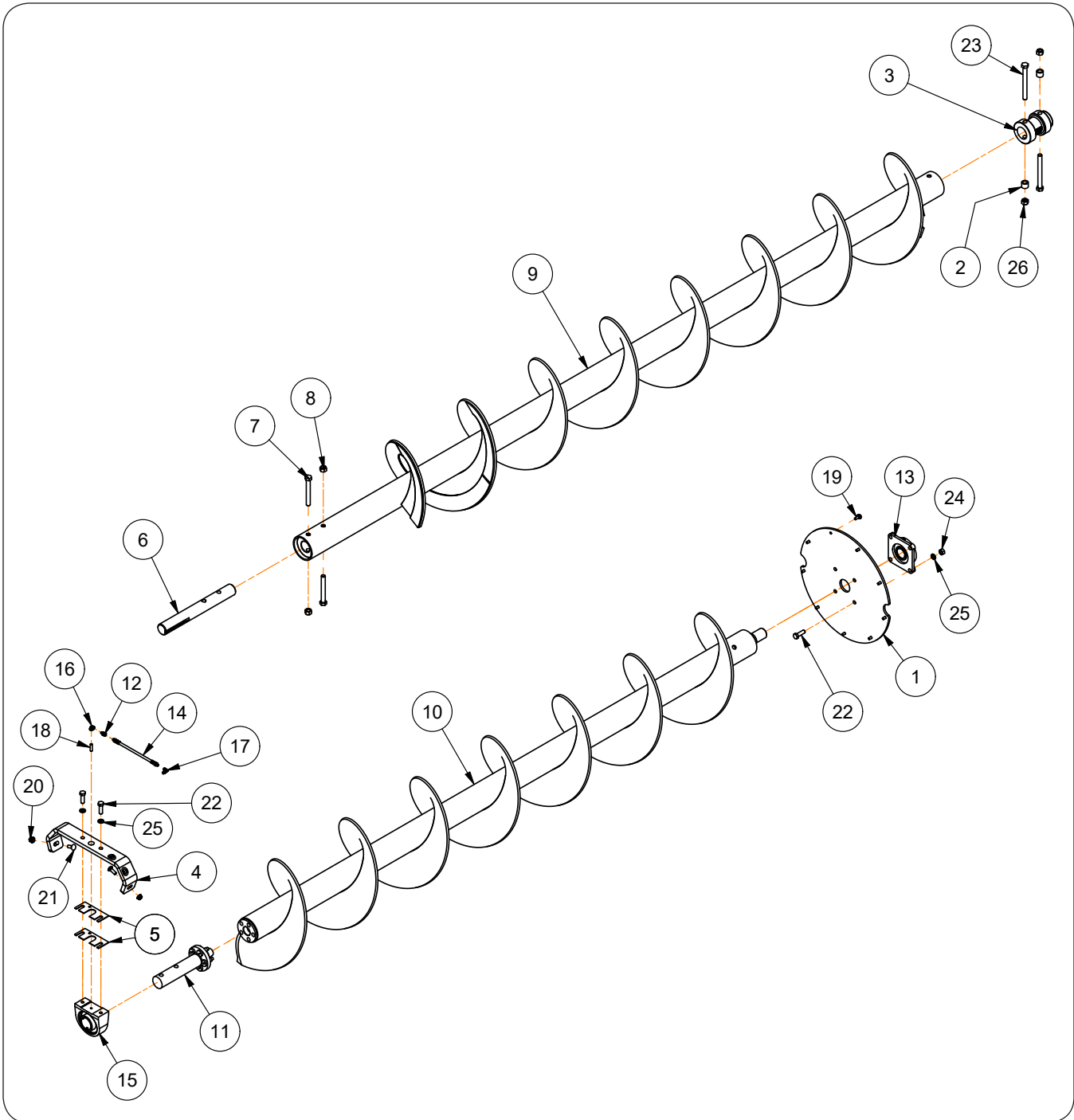
Sideboards

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

ITEM	PART NO.	DESCRIPTION	QTY	NOTES
1	220032B	Angle Brace Tube =Black=	5	
2	271574B	Lamp Mount Bracket =Black=	1	
3	281713B	End Cap Weldment =Black=	2	
4	282319B	Cross Brace Bracket Weldment =Black=	1	
5	282321B	Board Weldment Center LH =Black=	1	
6	282553B	Board Weldment Center RH =Black=	1	
7	282554B	Board Weldment Front RH =Black=	1	
8	282555B	Board Weldment Rear RH =Black=	1	
9	282562B	Board Weldment Front LH =Black=	1	
10	282563B	Board Weldment Rear LH =Black=	1	
11	294100B	Board Front =Black=	1	
12	294101B	Board Rear =Black=	1	
13	9003259	Flange Screw, 3/8"-16UNC x 1 1/4" G5	11	
14	9004626	Hinge	6	
15	9008957	LED Work Light	1	
16	9008857	Window & Trim Assembly 14 15/32" x 19 21/32"	2	
17	9008933	Pan Head Screw #8-18UNC x 1/2"	24	
18	91256	Screw/Large Flange, 5/16"-18UNC x 3/4" G5	26	
19	91257	Hex Nut/Large Flange, 5/16"-18UNC G5	28	
20	91262	Screw/Large Flange, 3/8"-16UNC x 1	22	
21	91263	Hex Nut/Large Flange, 3/8"-16UNC G5	72	
22	9512	Self-Drilling Screw, 1/4"-14 x 1"	4	
23	95585	Capscrew/Large Flange, 3/8"-16UNC x 3/4" G5	40	
24	97604	Flange Screw, 5/16"-18UNC x 1" G5	2	

Horizontal Auger Components

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



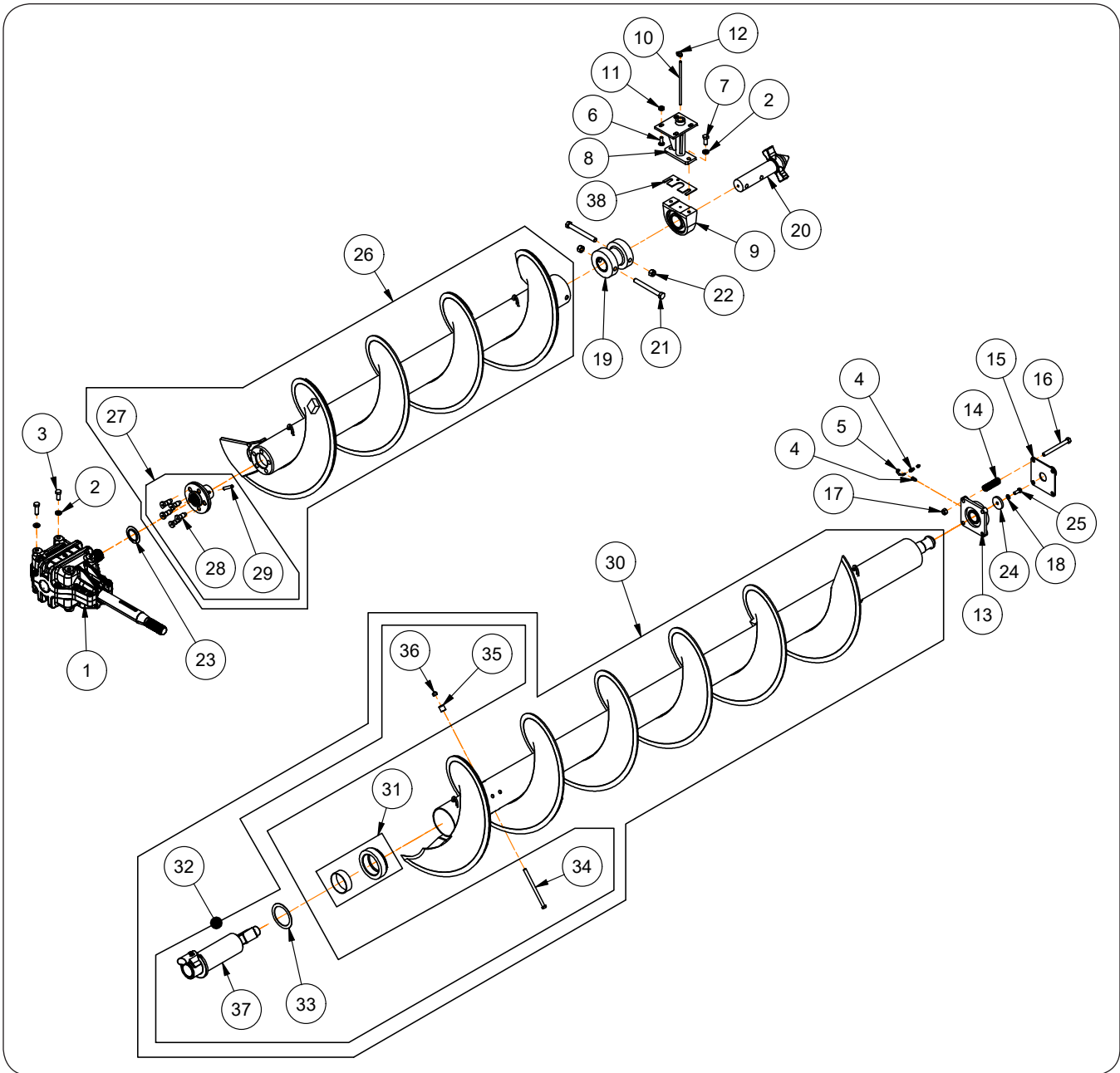
Horizontal Auger Components

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

ITEM	PART NO.	DESCRIPTION	QTY	NOTES
1	283097G	Cover Plate =Green=	1	
	283097R	Cover Plate =Red=		
2	283895	Spacer Bushing, 1 1/4" OD x 0.813" ID x 1 1/8"	2	
3	286282	Adapter/Shaft Bushing Weldment =Primed=	1	
4	286381B	Bearing Mounting Bar =Black=	1	
5	286424B	Bearing Shim Plate =Black=	2	As Required
6	283537	Auger Shaft 2.25" Dia.	1	
7	91299-157	Capscrew, 3/4"-10UNC x 6" Grade 8	2	
8	9802	Lock Nut, 3/4"-10UNC	2	
9	294130B	Front Auger Weldment =Black=	1	
10	293954B	Rear Auger Weldment =Black=	1	
11	293957	Auger Coupler Shaft Weldment	1	
12	9002479	Adapter 1/8"-27 NPTF Male x 1/8"-27 NPSM Female Swivel Nut	1	
13	9002492	Bearing/Flanged 2" Dia.	1	
14	9002689	Hose 1/8" x 12", 3000 PSI	1	
15	9004731	Pillow Block Bearing with 2 1/2" Bore	1	
16	9004764	90° Elbow 1/8" Female NPTF x 1/8" Female NPTF	1	
17	9005072	90° Elbow 1/4" Tube x 1/8"-27 NPTF Swivel Nut	1	
18	9006964	Nipple 1/8" NPT Male x 1/8" NPT Male	1	
19	91262	Capscrew, 3/8"-16UNC x 1" G5	21	
20	91267	Lock Nut, 1/2"-13UNC	2	
21	9388-104	Carriage Bolt, 1/2"-13UNC x 1 1/2" G5	2	
22	9390-124	Capscrew, 5/8"-11UNC x 2" G5	4	
23	9390-160	Capscrew, 3/4"-10UNC x 7 1/2" G5	2	
24	9394-014	Hex Nut, 5/8"-11UNC Grade 5	4	
25	9404-029	Lock Washer, 5/8"	6	
26	9802	Lock Nut, 3/4"-10UNC	2	

Vertical Auger Flighting Components

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



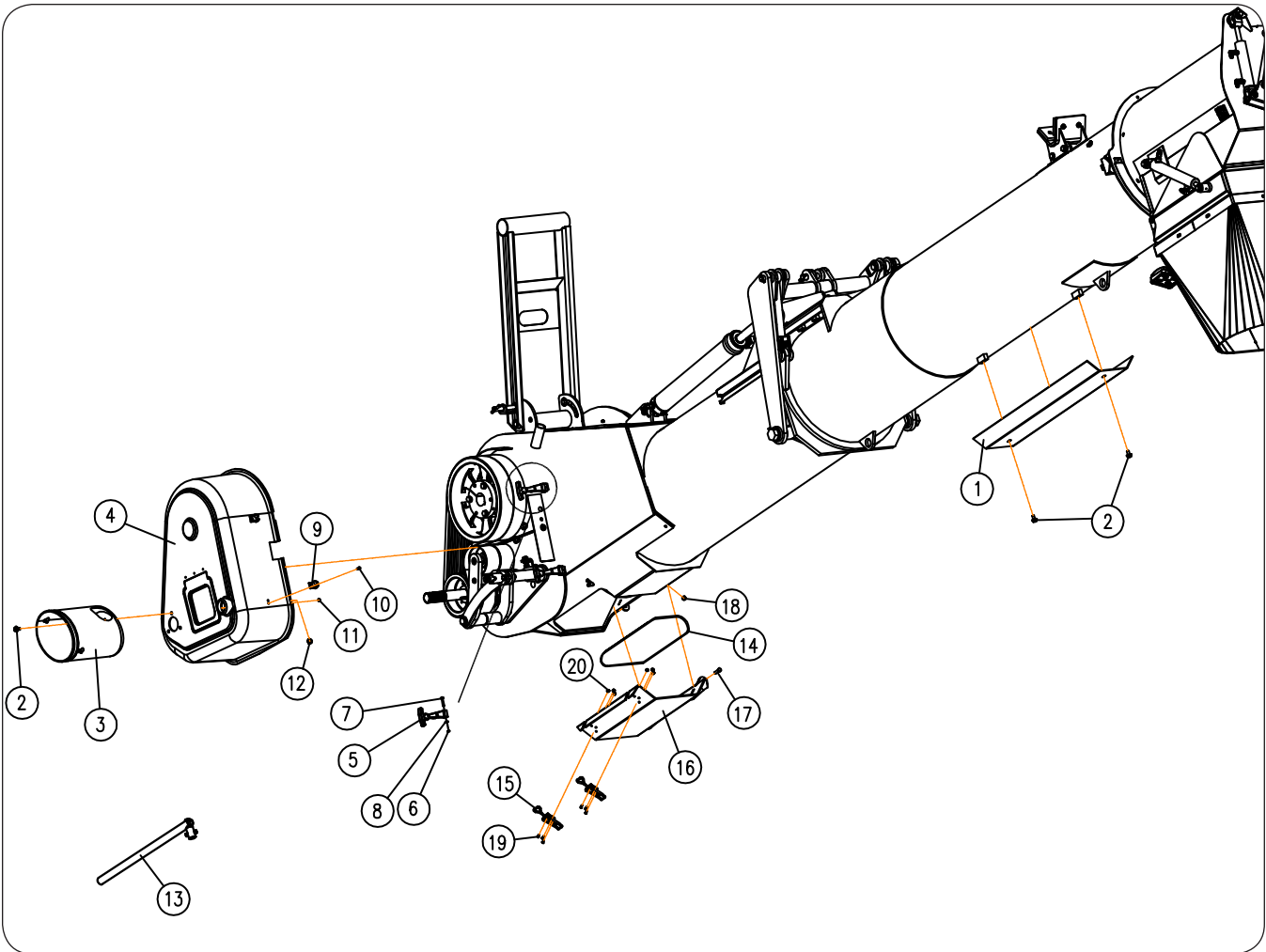
Vertical Auger Fighting Components

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

ITEM	PART NO.	DESCRIPTION	QTY	NOTES
1	9007366	Gearbox Assembly, 800 Series	1	
2	9404-030	Lock Washer, 5/8"	10	
3	9390-124	Capscrew, 5/8"-11UNC x 2" G5	8	
4	9005073	Quickline Fitting 1/4" Tube x 1/8" NPT	2	
5	9005074	Tube 1/4" OD	1	
6	9388-104	Carriage Bolt, 1/2"-13UNC x 1 1/2" G5	5	
7	9390-122	Capscrew, 5/8"-11UNC x 1 1/2" G5	12	
8	293420B	Bearing Bracket Weldment =Black=	1	
9	9004731	Pillow Block Bearing, 2 1/2" Bore	1	
10	284636	Grease Pipe	1	
11	9003397	Lock Nut/Top, 1/2"-13UNC	4	
12	9004764	90° Elbow, 1/8" NPTF Female	1	
13	9002492	Bearing 2" Dia. Flanged	1	
14	9004899	Spring - 10 Coils	4	
15	284986	Hood Pivot Pin Weldment	1	
16	9390-137	Capscrew, 5/8"-11UNC x 6 1/2" G5	4	
17	9801	Lock Nut, 5/8"-11UNC	4	
18	9404-025	Lock Washer, 1/2"	6	
19	283515	Auger Tube Adapter	1	
20	288813	Drive Dog, Double Lobe	1	
21	9390-159	Capscrew, 3/4"-10UNC x 7" G5	2	
22	9802	Lock Nut, 3/4"-10UNC	2	
23	9007377B	Dust Cover =Black=	1	
24	407699	Washer Plate, 2 1/2" Dia.	1	
25	9390-100	Capscrew, 1/2"-13UNC x 1 1/4" G5	5	
26	294131B	Lower Auger Replacement Kit (Black)	1	Includes Items 27-29
27	287802	Auger Drive Plate Assembly	1	Includes Items 28-29
28	9007000	Drive Head Pin	5	
29	902614-238	Spiral Pin, 1/2" Dia. x 2 3/4"	1	
30	289850B	Upper Auger Weldment =Black=	1	Includes Items 31-37
31	284626	Flex Coupler Bushing Assembly	1	
32	281912	Soft Start Kit	1	Includes items 33-37
33	9004878	Self Lubricating Washer	1	
34	9390-119	Capscrew, 1/2"-13UNC x 8" G5	1	
35	410511	Spacer Bushing	1	
36	9800	Locknut, 1/2"-13UNC	1	
37	281283	Soft Start Assembly	1	
38	286419B	Bearing Shim Plate =Black=	1	

Lower Auger Door & Cover Components

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



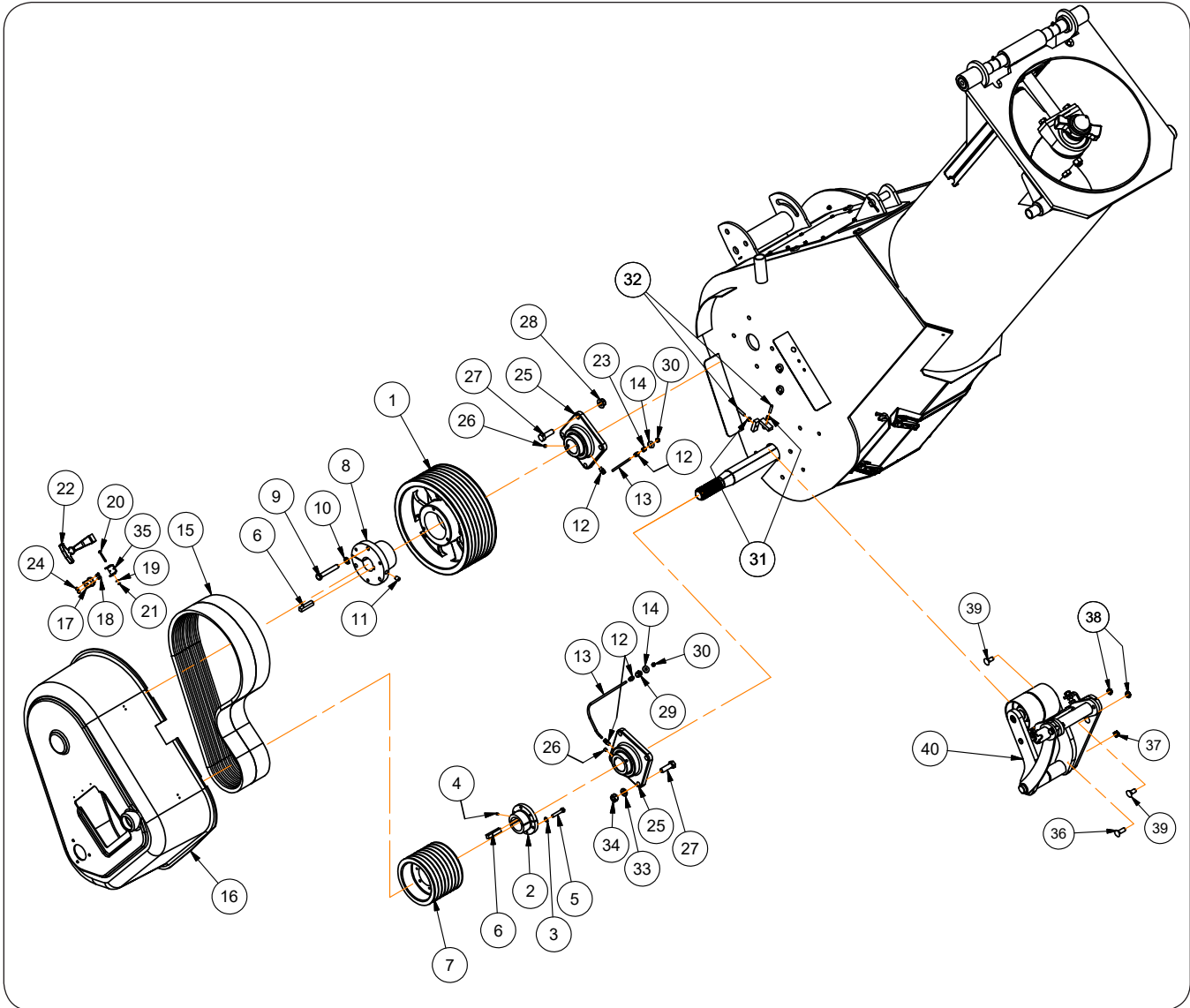
Lower Auger Door & Cover Components

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

ITEM	PART NO.	DESCRIPTION	QTY	NOTES
1	284141G	Strike Plate =Green=	1	
	284141R	Strike Plate =Red=		
2	95585	Capscrew/Large Flange 3/8-16UNC x 3/4	5	Grade 5
3	9004918	PTO Bell Cover	1	
4	9004729	Belt Cover/Shield	3	
5	900060	Handle for Draw Latch	3	
6	900068	Retainer for Draw Latch	3	
7	900066	Stud Pin for Draw Latch	3	
8	900067	Washer for Draw Latch	3	
9	900059	Flexible Draw Latch Asy w/Style R Keeper	3	
10	9004940	Pop Rivet	6	
11	9004998	Rivet Washer/Burr 3/16"	6	
12	91263	Large Flange Nut 3/8-16 UNC	2	Grade 5
13	284714B	Locking Pipe Weldment with Roll Pin	1	
	9392-208	Roll Pin 1/2" Dia. x 2	-	
14	9007108	Gasket w/Adhesive Backing for Clean-Out Door	A/R	Specify in Feet
15	9006497	Plate - Latch	2	
16	289854B	Cleanout Door Weldment =Black=	1	
17	9390-056	Capscrew 3/8-16UNC x 1 1/4	2	Grade 5
18	9928	Locknut 3/8-16UNC	2	Grade 5
19	903171-574	Countersunk Screw #10-24 UNC	4	
20	902331	Flange Hex Nut #10-24 (Serrated)	4	

Lower Auger Linkage Components

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



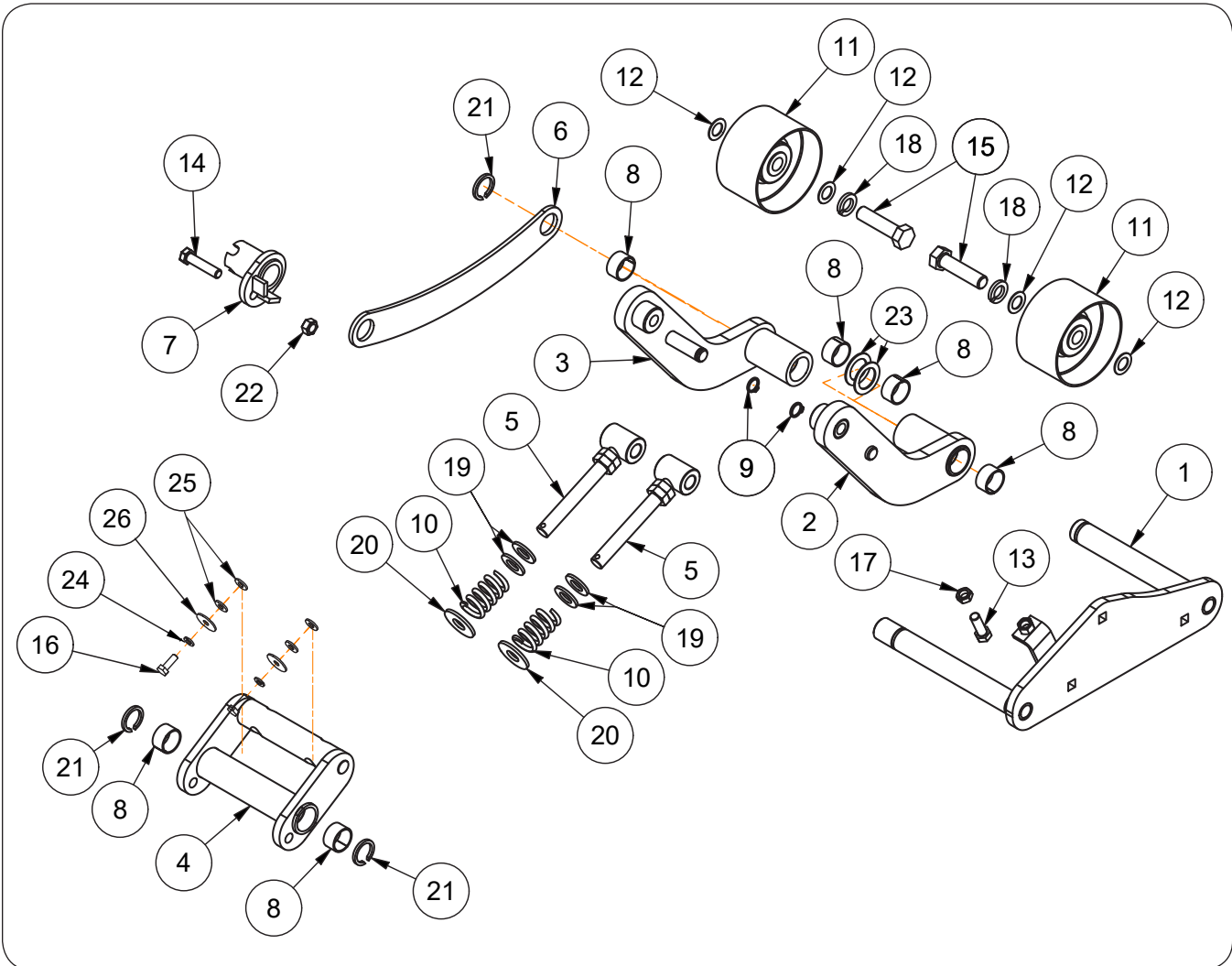
Lower Auger Linkage Components

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

ITEM	PART NO.	DESCRIPTION	QTY	NOTES
1	9004590	Pulley, 15" Dia. x 5 13/16"	1	
2	9007376	Bushing, 4 5/8" OD x 2 1/4" ID x 2 1/16" With 1/2" Keyway & Includes Capscrews	1	Includes Items 3, 4, 5
3	9404-021	Lock Washer, 3/8"	3	
4	9399-059	Set Screw, 1/4"-20UNC x 3/8"	1	
5	284262	Split Bushing Hardware Kit	1	Includes Capscrews & Items 3 & 4
6	9002562	Keystock, 1/2" x 1/2" x 2 1/2"	2	
7	9004591	Pulley, 7 1/2" Dia. x 5 13/16"	1	
8	9004813	Bushing, 6 5/8" OD x 2 1/4 ID" x 3 3/4" With 1/2" Keyway & Includes Capscrews	1	Includes Items 9, 10, 11
9	9006263	Bolt, 9/16"-12UNC x 3 5/8"	3	Grade 5
10	9404-027	Lock Washer, 9/16"	3	
11	9399-107	Set Screw, 1/2"-13UNC x 5/8"	1	
12	9005073	Quickline Fitting	4	
13	9005074	Hose/Type Nylon, 1/4" OD	2	(Specify in Feet)
14	9405-076	Flat Washer, 3/8"	2	
15	281675	Drive Belt Set, 4 Strand (5V750)	1	
16	9004729	Belt Cover	1	
17	900059	Flexible Draw Latch Asy w/Style R Keeper	3	
18	9004940	Pop Rivet	6	
19	900067	Washer for Draw Latch	3	
20	900066	Stud Pin for Draw Latch	3	
21	900068	"E" Retainer for Draw Latch	3	
22	900060	Handle for Draw Latch	3	
23	9003690	Hex Pipe Coupling	1	
24	9004998	Rivet Washer/Burr 3/16"	6	
25	9005565	Flange Bearing 2 1/4" ID - 4 Bolt	2	
26	9399-084	Set Screw 3/8"-16UNC x 3/8"	4	
27	9390-124	Capscrew, 5/8"-11UNC x 2"	8	Grade 5
28	9003398	Lock Nut/Top, 5/8"-11UNC	4	
29	9003949	Hex Pipe Coupling 1/8" NPT Female	1	
30	93426	Grease Zerk, 1/8" NPT	2	
31	9394-004	Hex Nut, 5/16"-18UNC	2	Grade 5
32	9399-079	Set Screw, 5/16"-18UNC x 1 1/2" Cup Point/Hex Socket	2	
33	9404-030	Lock Washer, 5/8"	4	
34	9394-014	Hex Nut, 5/8"-11UNC	4	Grade 5
35	900058	Draw Latch Base	3	
36	9388-104	Carriage Bolt, 1/2"-13UNC x 1 1/2"	3	Grade 5
37	94981	Locknut, 1/2"-13UNC	3	
38	9008466	Lock Nut/Center Jam, 1/2"-13UNC	2	
39	9388-103	Carriage Bolt, 1/2"-13UNC x 1 1/4" G5	2	
40	283600B	Idler Assembly	1	Refer to "Idler Assembly Components" for parts list.

Idler Assembly Components

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



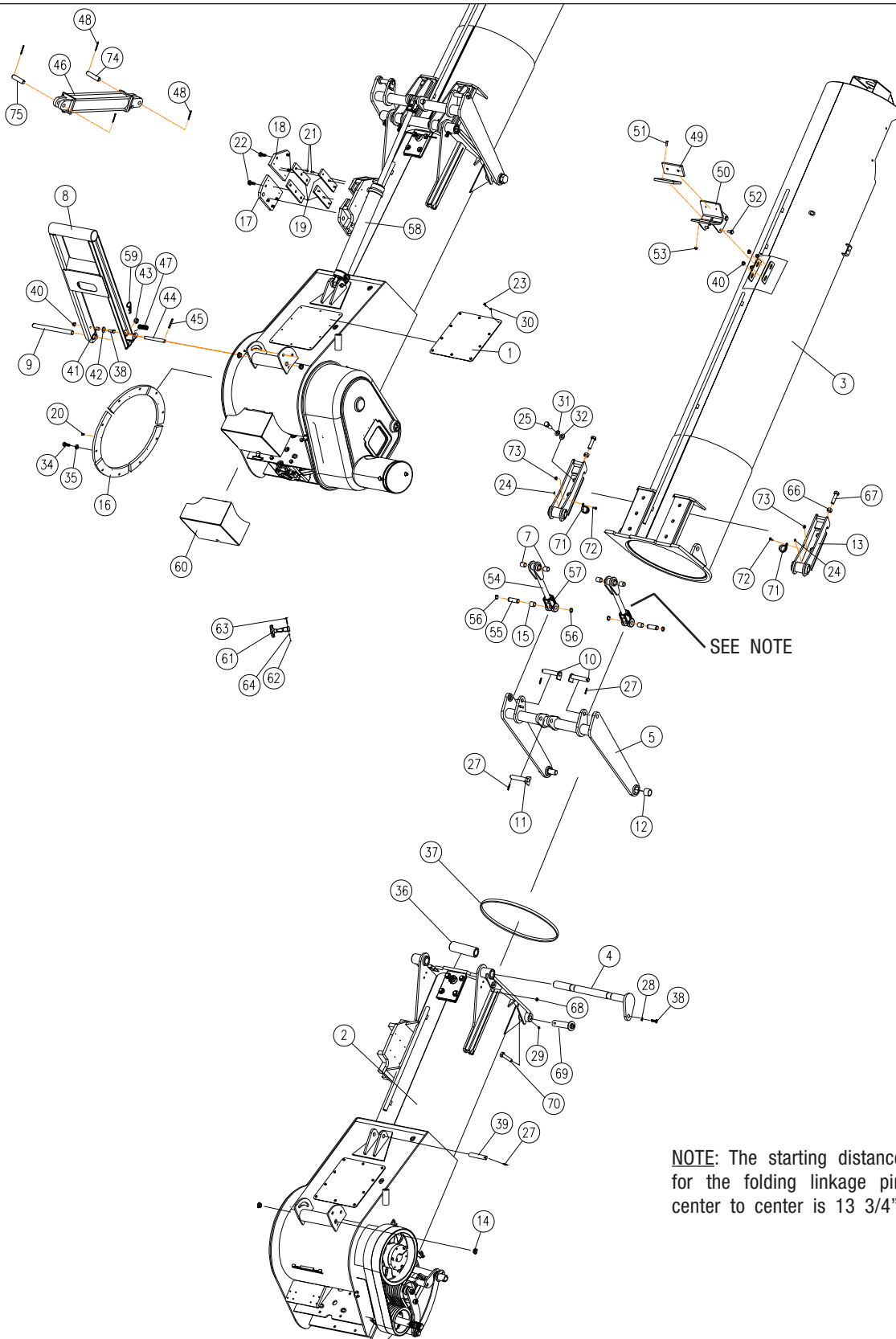
Idler Assembly Components

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

ITEM	PART NO.	DESCRIPTION	QTY	NOTES
	283600B	Idler Assembly	1	Includes Items 1-26
1	283601B	Idler Mount Weldment	1	
2	283602B	Idler Arm Weldment	1	
3	283603B	Idler Arm Weldment	1	
4	283604B	Tensioner Weldment	1	
5	283605	Tensioner Rod Weldment	2	
6	283619B	Idler Brace Plate	1	
7	284703	Tensioner Bushing Weldment	1	
8	9003635	Self-Lubricating Bushing, 1.4" OD x 1.25" ID x 3/4"	6	
9	9003810	Snap Ring, 3/4"	2	
10	9005447	Spring, 1.415" Dia. x 2 1/2"	2	
11	9005684	Idler Sub Assembly	2	
12	9005685	Machine Washer, 3/4"	4	
13	9390-101	Capscrew 1/2"-13UNC x 1 1/2"	1	Grade 5
14	9390-104	Capscrew, 1/2"-13UNC x 2 1/4"	1	Grade 5
15	9390-149	Capscrew, 3/4"-10UNC x 3"	2	Grade 5
16	9390-003	Capscrew, 1/4"-20UNC x 3/4"	2	Grade 5
17	9395-010	Hex Jam Nut, 1/2-13UNC	1	Grade 5
18	9404-033	Lock Washer, 3/4"	2	
19	9405-104	Flat Washer, 3/4"	4	
20	9405-106	Flat Washer, 3/4"	2	
21	94144	Retaining Ring, 1 1/4"	4	
22	94981	Locknut, 1/2"-13UNC	1	
23	TA500397	Bushing, 1.875"D x .074"	2	
24	9404-017	Lock Washer, 1/4"	2	
25	9405-062	Flat Washer, 1/4" SAE	4	
26	9405-066	Flat Fender Washer, 1/4"	2	

Auger Tube Components

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



Auger Tube Components

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

ITEM	PART NO.	DESCRIPTION	QTY	NOTES
1	283518G	Cover Plate =Green=	1	
	283518R	Cover Plate =Red=		
2	294132G	Lower Auger Housing Replacement Kit =Green=	1	
	294132R	Lower Auger Housing Replacement Kit =Red=		
3	284438G	Upper Auger Housing Weldment =Green=	1	
	284438R	Upper Auger Housing Weldment =Red=		
4	289842	Auger Hinge Pin	1	
5	293960G	Auger Fold Linkage Weldment =Green=	1	
	293960R	Auger Fold Linkage Weldment =Red=		
7	9003440	Self Lube Bushing	4	
8	272579G	Auger Support Weldment =Green=	1	
	272579R	Auger Support Weldment =Red=		
9	284549	Pivot Pin, 1" Dia. x 13 1/16	1	
10	284555	Pin Weldment, 1" Dia. (5 1/8)	2	
11	284557	Pin Weldment, 1" Dia. (4 7/8)	1	
12	9004741	Self Lubricating Bushing, 1.75 OD x 1.50 ID x 1 1/2	2	
13	289857G	Pivot Weldment =Green=	2	
	289857R	Pivot Weldment =Red=		
14	9003412	Split Output Bushing (1" ID)	2	
15	9003636	Self Lube Bushing (1" ID)	2	
16	284464B	Pivot Flange, Retainer Plate =Black=	5	
17	284518B	Fold Plate, 6 x 8 =Black=	1	
18	271119B	Fold Plate, 6 1/2 x 8 =Black=	1	
19	271124	Nylon Fold Slide, 2 x 8	4	
20	93415	Zerk, 90° 1/4-28 Thread	5	
21	9001688	Flat Head Capscrew, 5/16-18UNC x 3/4	12	
22	9390-123	Capscrew, 5/8-11UNC x 1 3/4 Grade 5	7	
23	9390-003	Capscrew, 1/4-20UNC x 3/4 Grade 5	10	
24	91160	Grease Zerk	10	
25	91299-146	Capscrew, 3/4-10UNC x 2 1/4 Grade 8	8	
27	9392-136	Roll Pin, 1/4" Dia. x 1 1/2	5	
28	9405-098	Flat Washer, 5/8"	2	Grade 5
29	902875	Center Lock Nut, 3/8"-16UNC	2	
30	9404-017	Lock Washer, 1/4	10	
31	9404-034	Lock Washer, 3/4	8	
32	9234PL	Flat Washer, 13/16 (Hardened)	8	
34	9390-122	Capscrew, 5/8-11UNC x 1 1/2 Grade 5	12	
35	9404-030	Lock Washer, 5/8	19	
36	284493G	Middle Pivot Tube, 2 1/2 OD x 7 5/8 =Green=	1	
	284493R	Middle Pivot Tube, 2 1/2 OD x 7 5/8 =Red=		
37	9003757	Gasket, 1/4 x 1/2	1	
38	9390-124	Capscrew, 5/8-11UNC x 2 Grade 5	2	

(Continued on next page)

Auger Tube Components (continued)

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

ITEM	PART NO.	DESCRIPTION	QTY	NOTES
39	266285	Cylinder Pin, 1" Dia. x 4 1/2	1	
40	9003397	Locking Flange Nut, 1/2-13UNC Grade 5	4	
41	272583	Stop Bushing, 3/4 Dia. x 7/8	1	
42	9405-088	Flat Washer, 1/2 USS	2	
43	9001868	Locking Collar, 3/4"	1	
44	272376	Lock Pin, 3/4 Dia. x 6 3/4	1	
45	9392-182	Roll Pin, 3/8 Dia. x 2 1/2	2	
46	9000933	Auger Tilt Hydraulic Cylinder, 3 x 22" 3000 PSI	1	
47	9004772	Spring	1	
48	9391-046	Cotter Pin, 3/16 Dia. x 2	4	
49	272574	Pad, 1/2 x 3 x 6 1/2	2	
50	272553G	Auger Rest Weldment =Green=	1	
	272553R	Auger Rest Weldment =Red=		
51	903171-662	Flat Head Machine Screw, 5/16-18UNC x 1 1/4	4	
52	91266	Flange Screw, 1/2-13UNC x 1 1/4 Grade 5	4	
53	91257	Large Hex Flange Nut, 5/16-18UNC Grade 5	4	
54	284687	Fold Linkage Weldment	2	
55	272587	Pin, 1 Dia. x 3 1/8	2	
56	91192	Retaining Ring, 1"	4	
57	9006491	Clevis	2	
58	9004730	Hydraulic Cylinder, 3 x 22" - 3000 PSI	1	
59	92424	Hairpin Cotter	1	
60	272606B	Cover Plate	1	
61	900060	Handle for Draw Latch	3	
62	900068	Retainer for Draw Latch	3	
63	900066	Stud Pin for Draw Latch	3	
64	900067	Washer for Draw Latch	3	
66	9394-016	Hex Nut 3/4-10UNC	2	
67	94733	Capscrew 3/4-10UNC x 3 Full Threaded	2	
68	9003398	Locknut 5/8"-11UNC	1	
69	293385	Auger Linkage Pin Weldment	2	
70	9390-005	Capscrew, 1/4"-20UNC x 1" Grade 5	2	
71	9008559	Cable Clamp, 1 1/2" Dia. x 3/4" (SS)	2	
72	91262	Flange Screw, 3/8-16UNC x 1 Grade 5	2	
73	91263	Flange Nut, 3/8-16UNC	2	
74	250104	Pin 1" Dia. x 4	1	
75	804572	Pin 1" Dia. x 3 1/2	1	

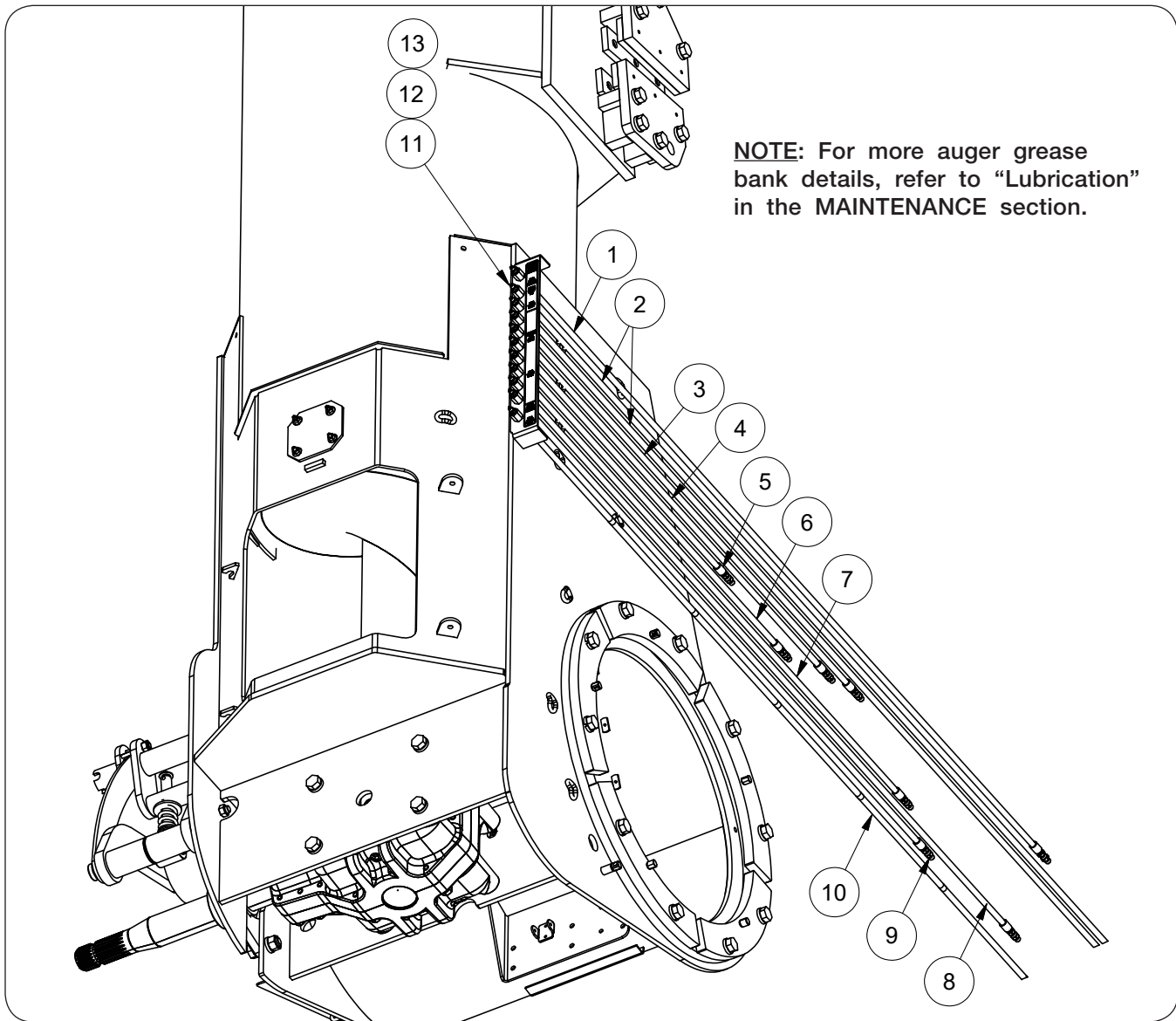
Notes

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

A large, empty rectangular box with rounded corners, intended for handwritten notes.

Auger Grease Bank Components

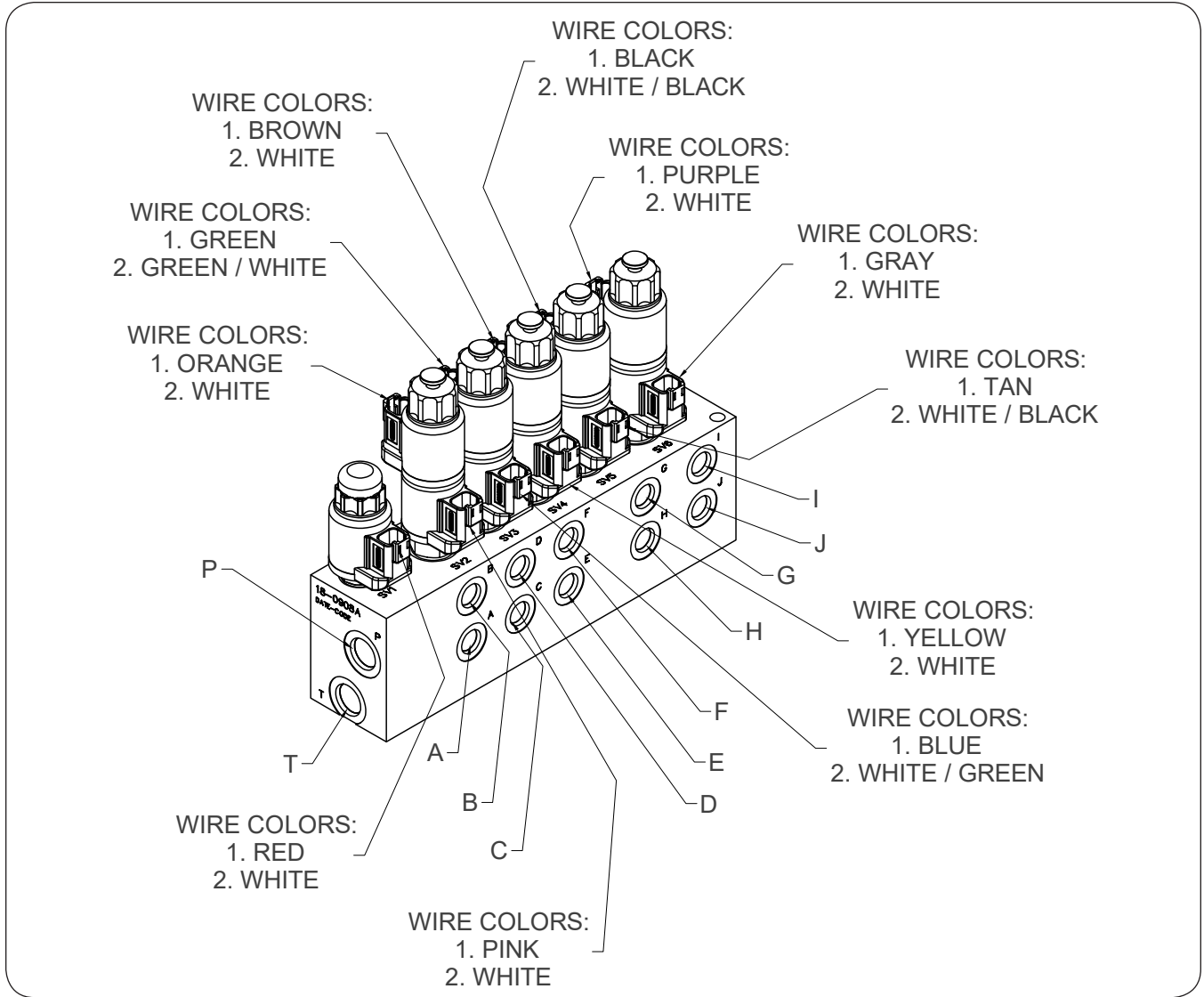
Please visit www.unverferth.com/parts/ for the most current parts listing.



ITEM	PART NO.	DESCRIPTION	QTY	NOTES
1	9008965	Grease Hose 3/16" x 74" (1/8" NPT)	1	Lower Vertical Auger Hanger Bearing
2	9008967	Grease Hose 3/16" x 126" (1/8" NPT)	2	Upper Auger Pivot Pin
3	9008961	Grease Hose 3/16" x 48" (1/8" NPT)	1	Vertical Auger Tilt Pivot Rings
4	9008960	Grease Hose 3/16" x 44" (1/8" NPT)	1	
5	9008958	Grease Hose 3/16" x 30" (1/8" NPT)	1	
6	9008959	Grease Hose 3/16" x 38" (1/8" NPT)	1	
7	9008962	Grease Hose 3/16" x 55" (1/8" NPT)	1	
8	9008964	Grease Hose 3/16" x 70" (1/8" NPT)	1	
9	9008963	Grease Hose 3/16" x 58" (1/8" NPT)	1	
10	9008968	Grease Hose 3/16" x 134" (1/8" NPT)	1	Drag Auger Center Bearing
11	9003949	Coupler 1/8" NPT	11	
12	93426	Grease Zerk	11	
13	9006849	Grease Zerk Cap	11	

EOH Valve Functions and Wire Locations Optional

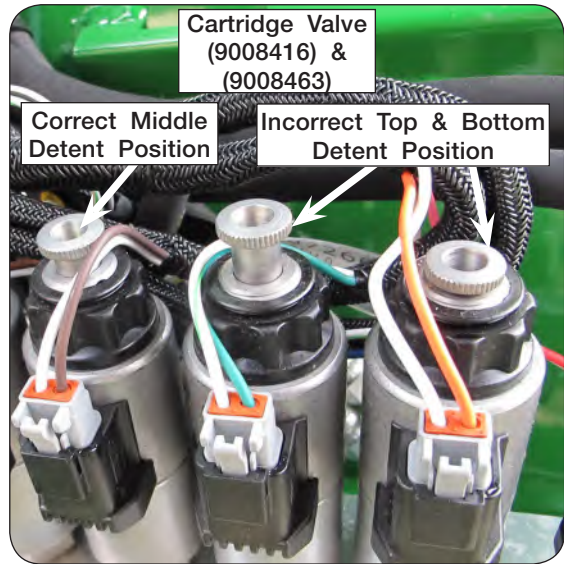
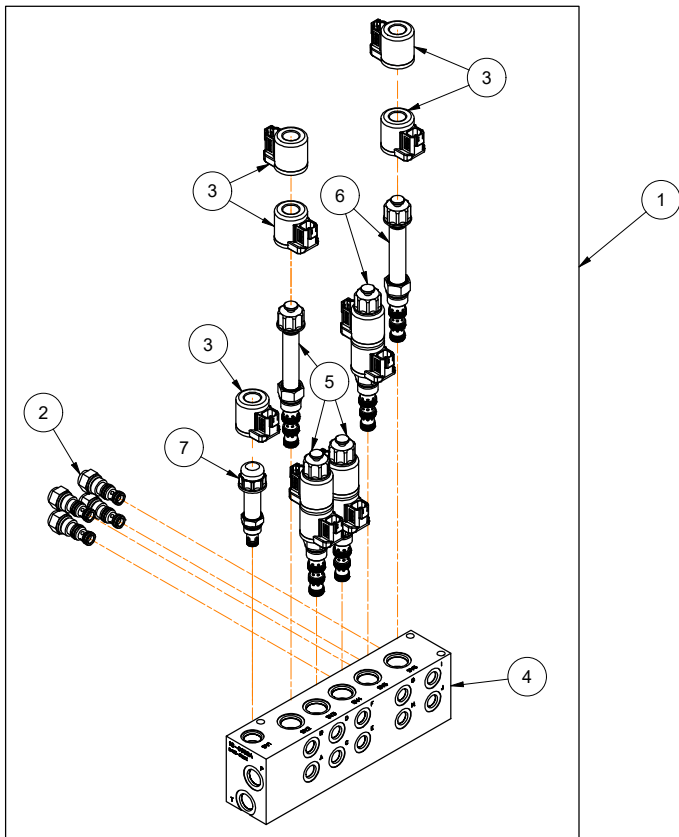
Please visit www.unverferth.com/parts/ for the most current parts listing.



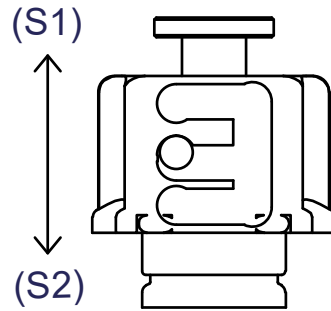
PORT	END OF CYLINDER	FUNCTION
A	BUTT END	Flow Door
B	RAM END	Flow Door
C	RAM END	Auger Fold
D	BUTT END	Auger Fold
E	RAM END	Spout Tilt Out
F	BUTT END	Spout Tilt In
G	RAM END	Spout Rotate Back
H	BUTT END	Spout Rotate Front
I	BUTT END	Auger Tilt Down
J	RAM END	Auger Tilt Up
P		Tractor Pressure
T		Tractor Return

EOH Valve Assembly Components Optional

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



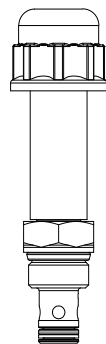
Cartridge Valve
(9008416) & (9008463)
Middle Detent Position



PUSH BUTTON
AND HOLD
WHILE OPERATING
INDIVIDUAL FUNCTIONS

Cartridge Valve
(9008438)

FOR MANUAL OVERRIDE



NOTE: Refer to “Manual Override for Optional Electric Over Hydraulic System” in OPERATION section.

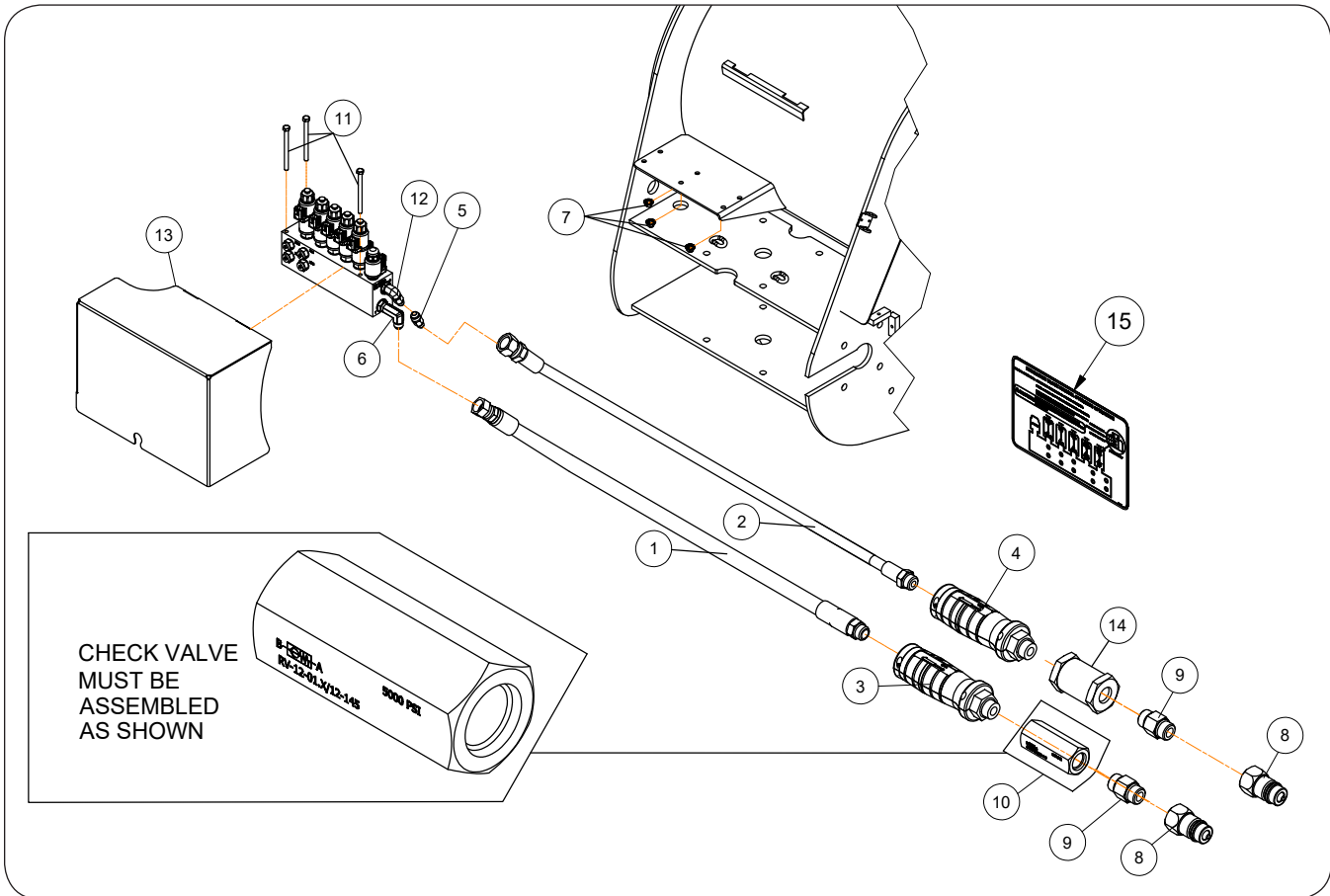
EOH Valve Assembly Components Optional

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

ITEM	PART NO.	DESCRIPTION	QTY.	NOTES
1	293416	EOH Block Assembly - 5 Spool Replacement Kit	1	Includes Items 2-7 and Instruction Sheet
2	9003856	Pilot Check Valve	4	
3	9005769	Coil - 12 VDC DN-40	11	
4	9008667	Manifold Block - 5 Spool	1	
5	9008416	Cartridge Valve - 4 Way, 3 Position - Closed Center w/Detented Manual Override	3	Includes Retaining Cap
	9003906	Seal Kit	-	
6	9008463	Cartridge Valve - 4 Way, 3 Position - Open Center w/Detented Manual Override	2	Includes Retaining Cap
	9003906	Seal Kit	-	
7	9008438	Cartridge Valve - 2 Way, 2 Position w/Push Type Manual Override	1	
	9003904	Seal Kit	-	

EOH Tractor Circuit Hydraulic Components (Optional)

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



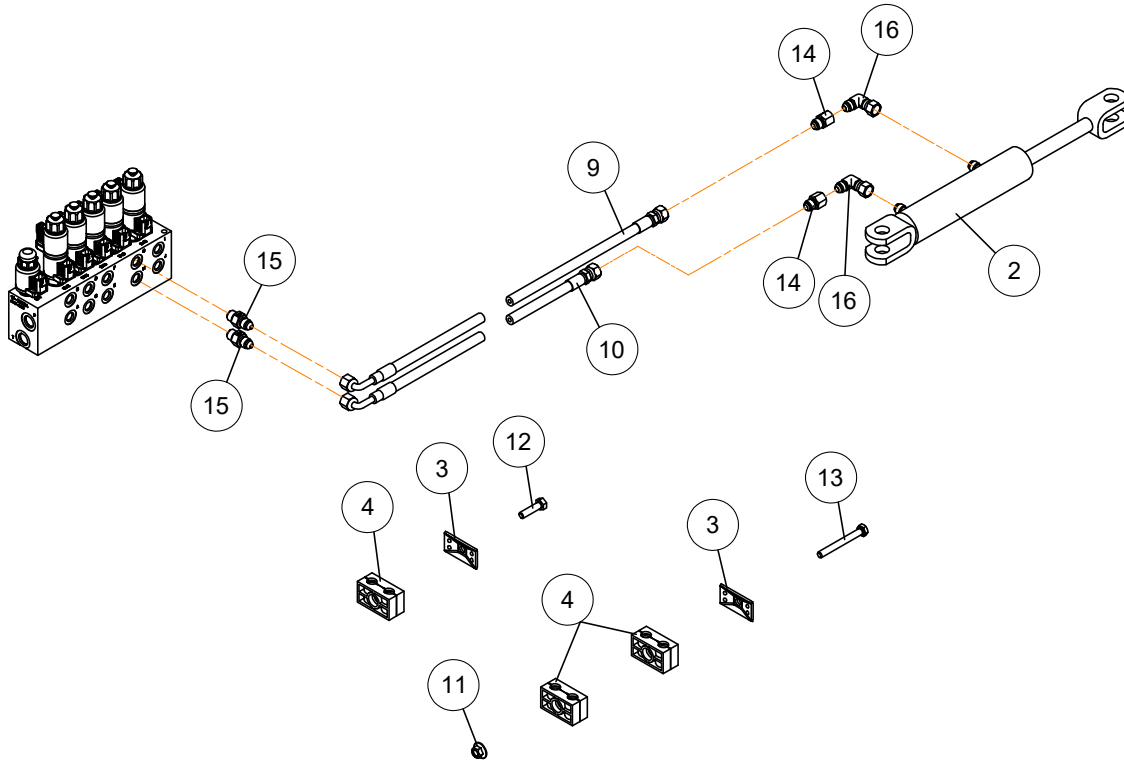
EOH Tractor Circuit Hydraulic Components (Optional)

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

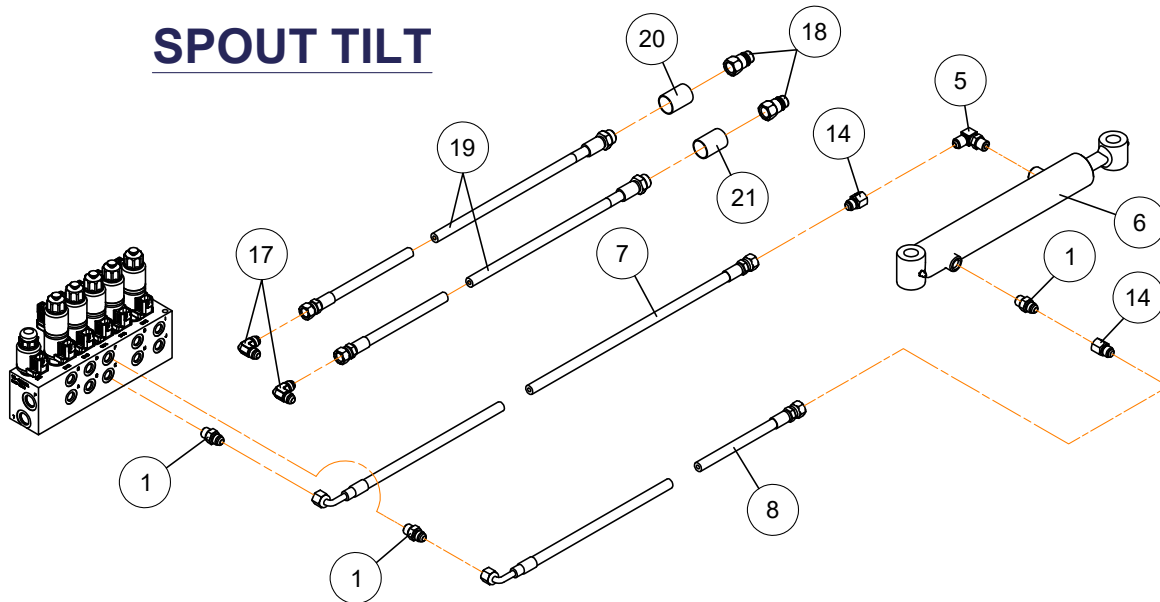
ITEM	PART NO.	DESCRIPTION	QTY.	NOTES
1	95802	Hydraulic Hose, 1/2 x 205" - 3000 PSI	1	
2	9005574	Hydraulic Hose, 1/4 x 208" - 3000 PSI	1	
3	9008601	Hose Grips - Tan (Pair) - Hydraulic Return	1	Half Tan/Half Gray - Cylinder Retracted
4	9008601	Hose Grips - Tan (Pair) - Hydraulic Pressure	1	Solid Tan - Cylinder Extended
5	9006527	JIC Tube Reducer 9/16-18 UNF Male x 9/16-UNF Female	1	
6	901568	Elbow, 90° Extra Long 3/4-16 JIC x 3/4-16 Male O-Ring	1	
7	91257	Large Flange Hex Nut, 5/16-18UNC Gr.5	3	
8	91383	Male Tip Coupling, 3/4-16	2	
9	98508	Adapter 3/4-16 O-Ring Male x 3/4-16 O-Ring Male	2	
10	9006994	Check Line Valve 145 PSI	1	
11	9390-042	Capscrew, 5/16-18UNC x 4 Gr.5	3	
12	9874	Elbow, 90° 9/16-18 JIC Male x 3/4-16 OR ADJ Male	1	
13	272606B	Valve Cover Plate	1	Also Order Item #15
14	9005403	120 Micron Hydraulic Filter	1	
15	9008564	Decal, CAUTION (Valve Block)	1	Add To Inside Cover Plate #13

Spout Rotate and Tilt Hydraulic Components

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



SPOUT TILT



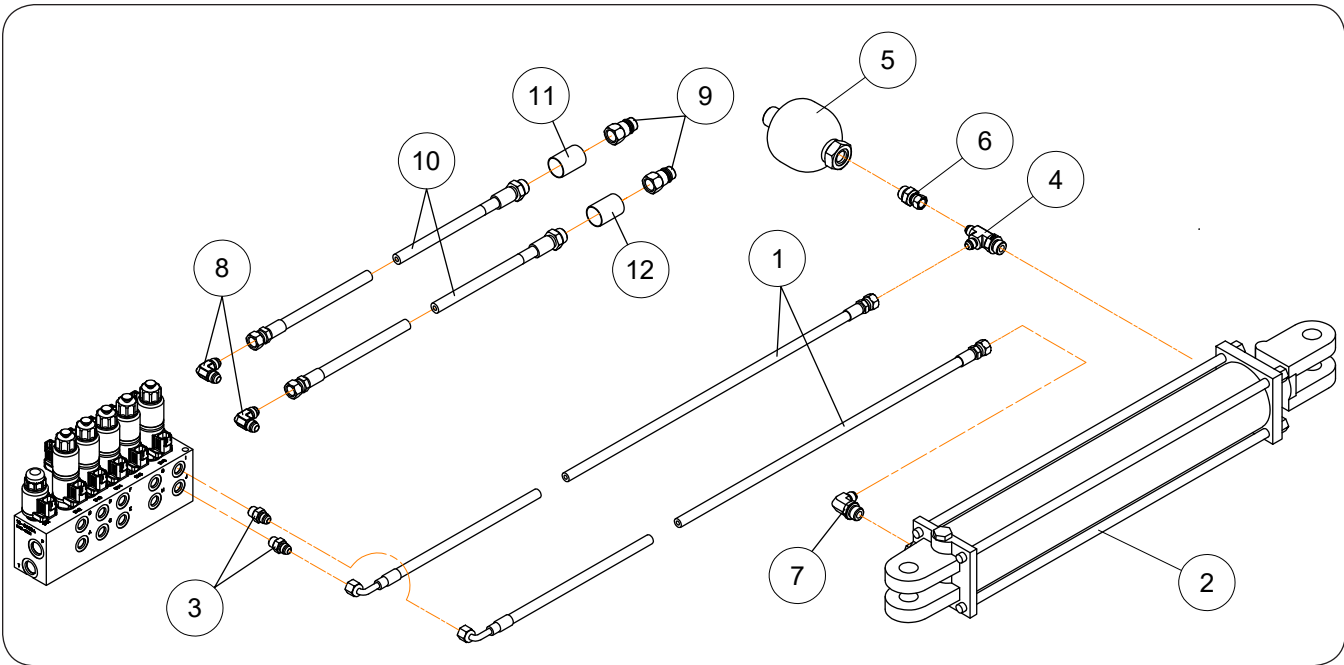
Spout Rotate and Tilt Hydraulic Components

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

ITEM	PART NO.	DESCRIPTION	QTY.	NOTES
1	9001495	Adapter, 9/16-18 JIC Male x 9/16-18 OR Male	9	For EOH Option (Optional)
2	9007124	Hydraulic Cylinder, 1 1/2 x 3 - 3000 PSI	1	
3	9003814	Clamp Top Plate, 1/4 x 1 1/8 x 2 1/16	2	
4	9003816	Clamp, Polypropylene	3	
5	9004379	Elbow, 90° 9/16-18 JIC Male x 9/16-18 OR ADJ Male	1	
6	9005135	Hydraulic Cylinder, 1 1/2 x 8 - 3000 PSI	1	
7	9006579	Hydraulic Hose, 1/4 x 321" - 3000 PSI	2	
8	9006580	Hydraulic Hose, 1/4 x 312" - 3000 PSI	2	
9	9006581	Hydraulic Hose, 1/4 x 295" - 3000 PSI	1	
10	9006582	Hydraulic Hose, 1/4 x 290" - 3000 PSI	1	
11	91257	Large Flange Hex Nut, 5/16-18UNC Grade 5	1	
12	9390-031	Capscrew, 5/16-18UNC x 1 1/4 Grade 5	1	
13	9390-037	Capscrew, 5/16-18UNC x 2 3/4 Grade 5	1	
14	95193	Adapter, 9/16-18 JIC Female x 9/16-18 JIC Male	5	
15	98435	Adapter, 9/16-18 JIC Male x 9/16-18 OR Male	4	
16	9876	Elbow, 90° 9/16-18 JIC Male x 9/16-18 JIC Female	1	
17	9897	Elbow, 90° 9/16-18 JIC Male x 9/16-18 JIC Male	2	
18	91383	Male Tip Coupling, 3/4-16	2	
19	9005574	Hydraulic Hose, 1/4 x 208" - 3000 PSI	2	
20	9008598	Hose Grips - Yellow (Pair) - Spout Out	1	Solid Yellow - Cylinder Extended
21	9008598	Hose Grips - Yellow (Pair) - Spout In	1	Half Yellow/Half Gray - Cylinder Retracted

Auger Tilt Hydraulic Components

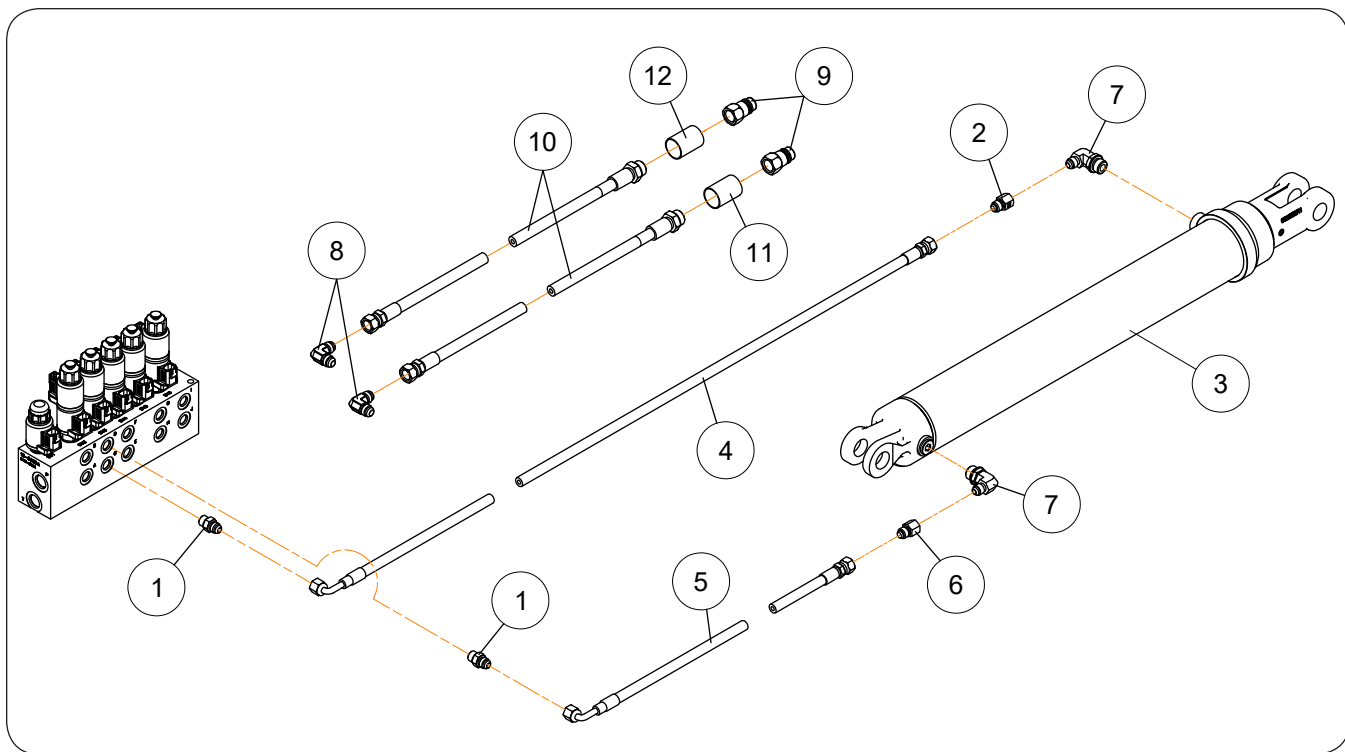
Please visit www.unverferth.com/parts/ for the most current parts listing.



ITEM	PART NO.	DESCRIPTION	QTY.	NOTES
1	9000925	Hydraulic Hose, 1/4 x 78" - 3000 PSI	2	
2	9000933	Hydraulic Cylinder, 3 1/2 x 20 - 3000 PSI	1	
3	9001495	Adapter, 9/16-18 JIC Male x 9/16-18 OR Male	9	Optional
4	9002155	Tee, 9/16-18 JIC Male x 3/4-16 OR ADJ Male	1	
5	9002719	Accumulator - 1800 PSI	1	
6	9002720	Adapter, 3/4-16 OR Male x 9/16-18 JIC Female	1	
7	9874	Elbow, 90° 9/16-18 JIC Male x 3/4-16 OR ADJ Male	6	
8	9897	Elbow, 90° 9/16-18 JIC Male x 9/16-18 JIC Male	2	
9	91383	Male Tip Coupling, 3/4-16	2	
10	9005574	Hydraulic Hose, 1/4 x 208" - 3000 PSI	2	
11	9008599	Hose Grips - Blue (Pair) - Auger Pivot Up	1	Half Blue/Half Gray - Cylinder Retracted
12	9008599	Hose Grips - Blue (Pair) - Auger Pivot Down	1	Solid Blue - Cylinder Extended

Auger Fold Hydraulic Components

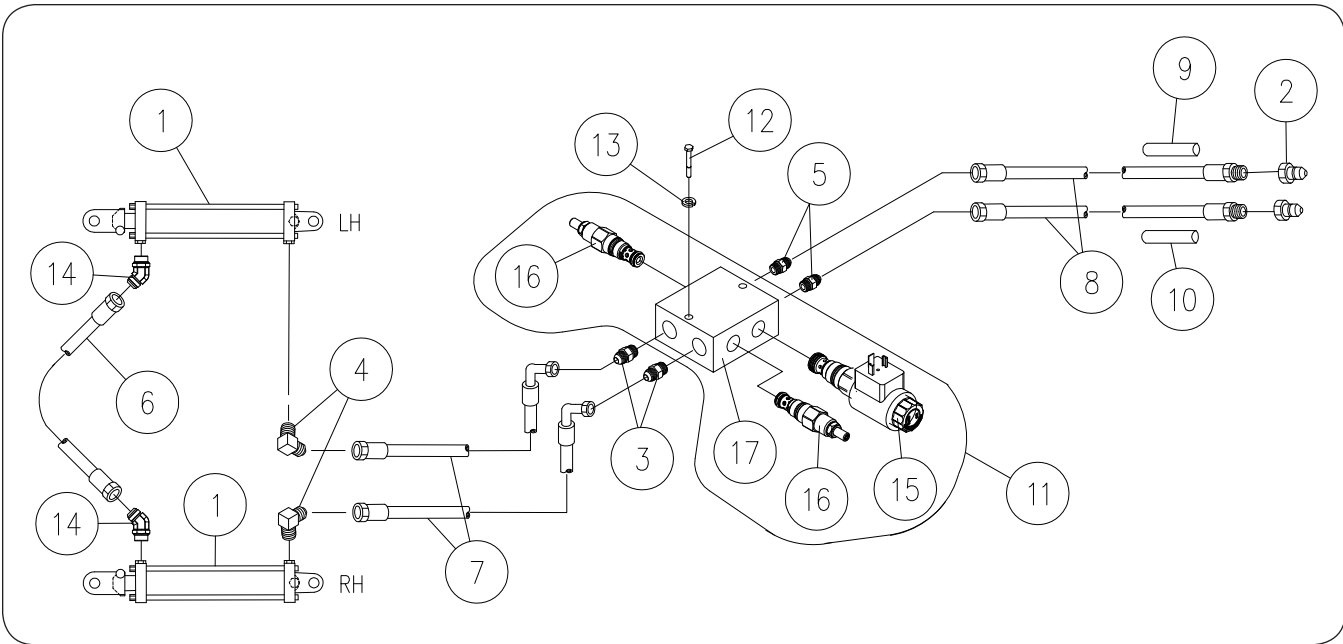
Please visit www.unverferth.com/parts/ for the most current parts listing.



ITEM	PART NO.	DESCRIPTION	QTY.	NOTES
1	9001495	Adapter, 9/16-18 JIC Male x 9/16-18 OR Male	9	Optional
2	9002199	Reducer, 9/16-18 JIC Female x 9/16-18 JIC Male	1	0.060 Restrictor
3	9004730	Hydraulic Cylinder, 3 x 22" - 3000 PSI	1	
4	9006608	Hydraulic Hose, 1/4 x 84" - 3000 PSI	1	
5	93594	Hydraulic Hose, 1/4 x 59" - 3000 PSI	1	
6	9003303	Adapter, 9/16-18 JIC Female x 9/16-18 JIC Male	1	0.045 (Blue) Restrictor
7	9874	Elbow, 90° 9/16-18 JIC Male x 3/4-16 OR ADJ Male	6	
8	9897	Elbow, 90° 9/16-18 JIC Male x 9/16-18 JIC Male	2	
9	91383	Male Tip Coupling, 3/4-16	2	
10	9005574	Hydraulic Hose, 1/4 x 208" - 3000 PSI	2	
11	9008597	Hose Grips - Green (Pair) - Auger Raise	1	Solid Green - Cylinder Extended
12	9008597	Hose Grips - Green (Pair) - Auger Lower	1	Half Green/Half Gray - Cylinder Retracted

Steering Tandem Valve Hydraulic Components

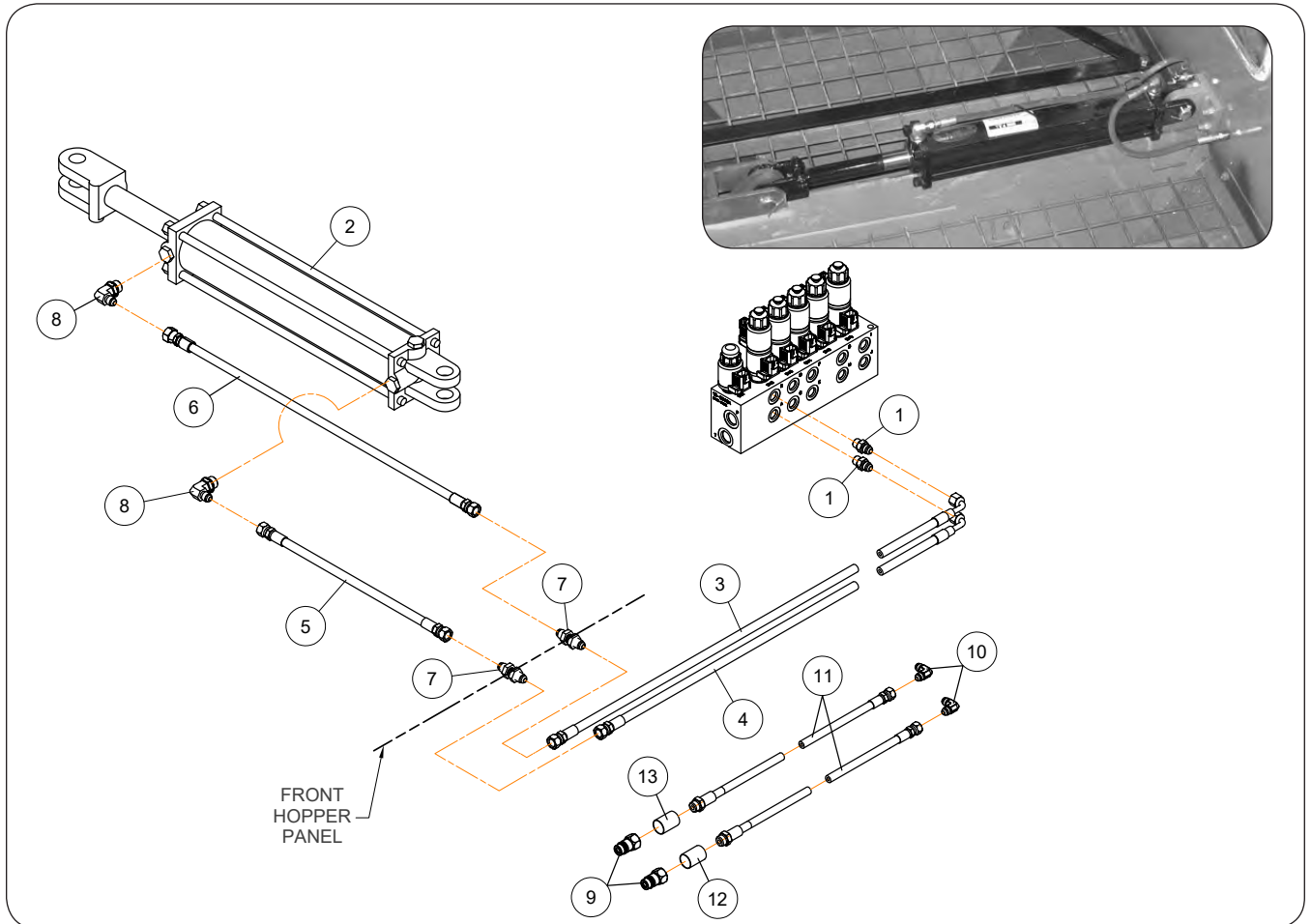
Please visit www.unverferth.com/parts/ for the most current parts listing.



ITEM	PART NO.	DESCRIPTION	QTY	NOTES
1	9004854	Cylinder, 2 1/2 x 8	2	
2	91383	Male Coupler	8	3/4-16 F O-Ring
3	9864	Adapter	2	3/4-16 JIC M x 3/4-16 M O-Ring
4	9863	90° Elbow	2	3/4-16 JIC M x 3/4-16 M O-Ring
5	9001495	Adapter	2	9/16-18 JIC M x 9/16-18 M O-Ring
6	9004881	Hose, 1/2 x 153"	1	3/4-16 JIC F x 3/4-16 JIC F
7	9004882	Hose, 1/2 x 73"	2	3/4-16 JIC F 90° Elbow x 3/4-16 JIC F
8	98057	Hose, 1/4 x 372"	2	9/16-18 JIC F x 3/4-16 M O-Ring
9	9004831	Sleeve, Hose Marker	1	Grey, Turn Left
10	9004832	Sleeve, Hose Marker	1	Grey, Turn Right
11	9008730	Steering Valve, 2800 PSI	1	Includes Items 15, 16, 17
12	9390-009	Capscrew, 1/4-20UNC x 2	2	Grade 5
13	9404-017	Lock Washer, 1/4	2	
14	93586	45° Elbow	2	
15	9008731	Valve, 2-Position, 2-Way with Coil, 12V DC	1	
16	9005664	Pressure Relief Valve	2	
17	9005665	Valve Block	1	

Flow Door Circuit Hydraulic Components

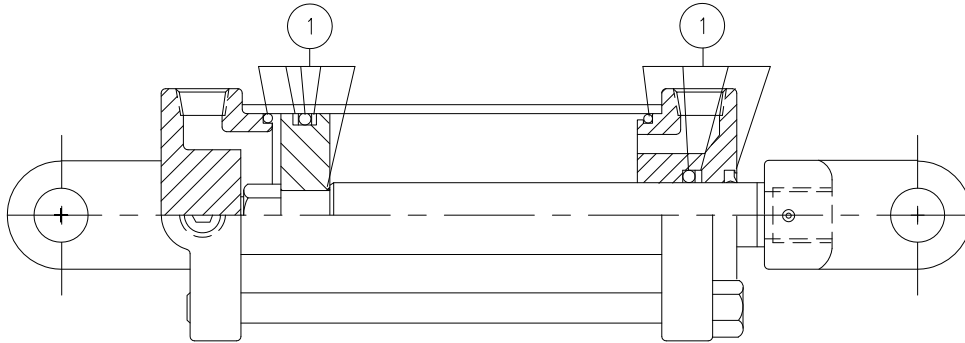
Please visit www.unverferth.com/parts/ for the most current parts listing.



ITEM	PART NO.	DESCRIPTION	QTY.	NOTES
1	9001495	Adapter, 9/16-18 JIC Male x 9/16-18 OR Male	9	Optional
2	9002575	Hydraulic Cylinder, 3 x 16" - 3000 PSI	1	
3	9004442	Hydraulic Hose, 1/4 x 54" - 3000 PSI	1	
4	9006607	Hydraulic Hose, 1/4 x 50" - 3000 PSI	1	
5	93472	Hydraulic Hose, 1/4 x 16" - 3000 PSI	1	
6	9002888	Hydraulic Hose, 1/4 x 27" - 3000 PSI	1	
7	95192	Bulkhead Union	2	9/16-18 JIC Male x 9/16-18 JIC Male
8	9874	Elbow, 90°	6	9/16-18 JIC Male x 3/4-16 OR ADJ Male
9	91383	Male Tip Coupling, 3/4-16	2	
10	9897	Elbow, 90°	2	9/16-18 JIC Male x 9/16-18 JIC Male
11	9005574	Hydraulic Hose, 1/4 x 208" - 3000 PSI	2	
12	9008596	Hose Grips - Red (Pair) - Flow Door Open	1	Solid Red - Cylinder Extended
13	9008596	Hose Grips - Red (Pair) - Flow Door Close	1	Half Red/Half Gray - Cylinder Retracted

Cylinders

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



Auger Fold Cylinder - 3" x 22"

ITEM	PART NO.	DESCRIPTION	QTY.	NOTES
	9004730	Cylinder, Complete	1	
1	9003772	Seal Kit	1	

Auger Flow Door Cylinder - 3" x 16"

ITEM	PART NO.	DESCRIPTION	QTY.	NOTES
	9002575	Cylinder, Complete	1	
1	9003772	Seal Kit	1	

Auger Tilt Cylinder - 3 1/2" x 20"

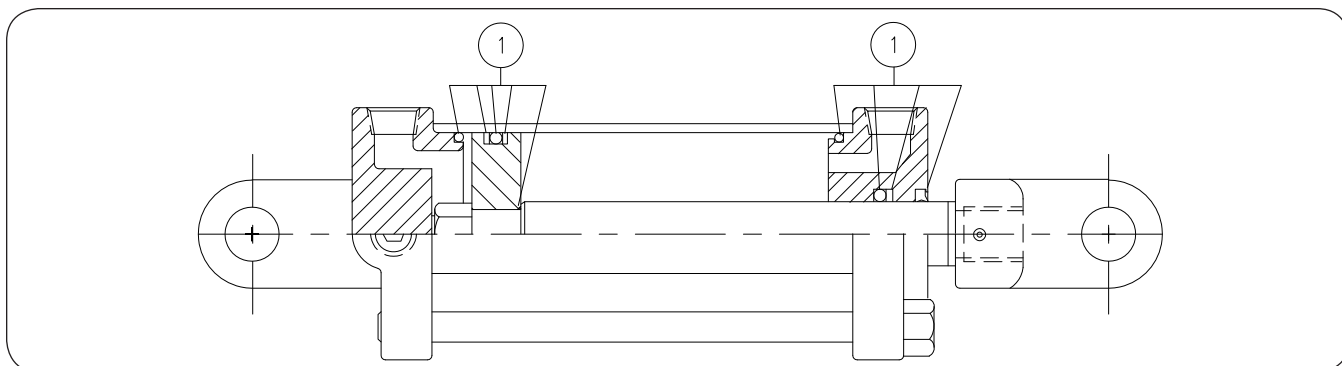
ITEM	PART NO.	DESCRIPTION	QTY.	NOTES
	9000933	Cylinder, Complete	1	
1	9001081	Seal Kit	1	

Auger Spout Tilt Cylinder - 1 1/2" x 8"

ITEM	PART NO.	DESCRIPTION	QTY.	NOTES
	9005135	Cylinder, Complete	1	#6 9/16-18 O-Ring Ports (3000 PSI)
1	9005419	Seal Kit	1	

Cylinders (continued)

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



Optional Spout Rotate Cylinder - 1 1/2" x 4"

ITEM	PART NO.	DESCRIPTION	QTY.	NOTES
	9007124	Cylinder, Complete	1	

Steering Tandem Cylinder - 2 1/2" x 8"

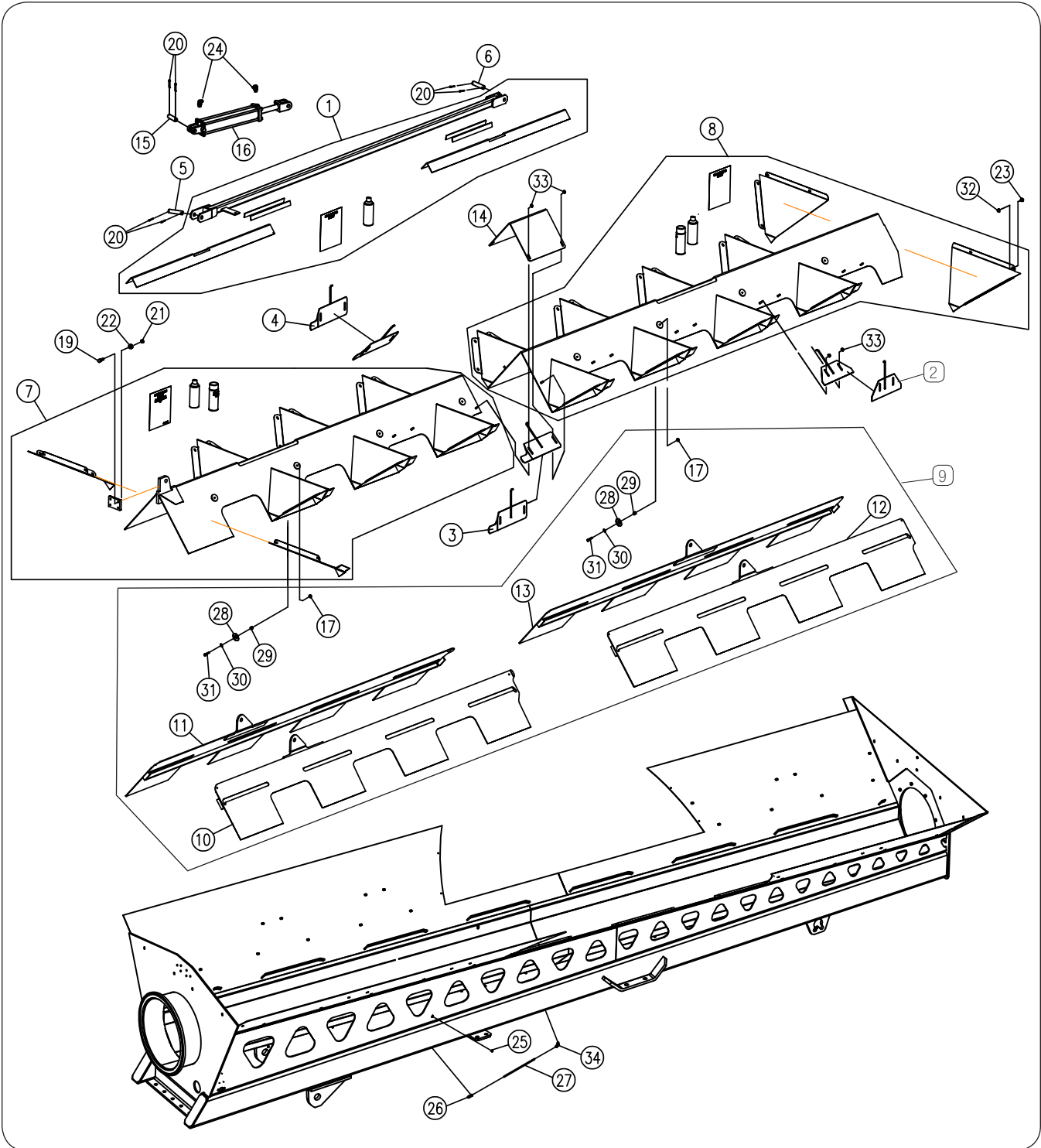
ITEM	PART NO.	DESCRIPTION	QTY.	NOTES
	9004854	Cylinder, Complete	2	
1	91387	Seal Kit	2	

Optional Jack Cylinder - 3 1/2" x 8"

ITEM	PART NO.	DESCRIPTION	QTY.	NOTES
	9009047	Cylinder, Complete	1	
1	9007880	Seal Kit	1	

Hopper Flow Door Components

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



Hopper Flow Door Components

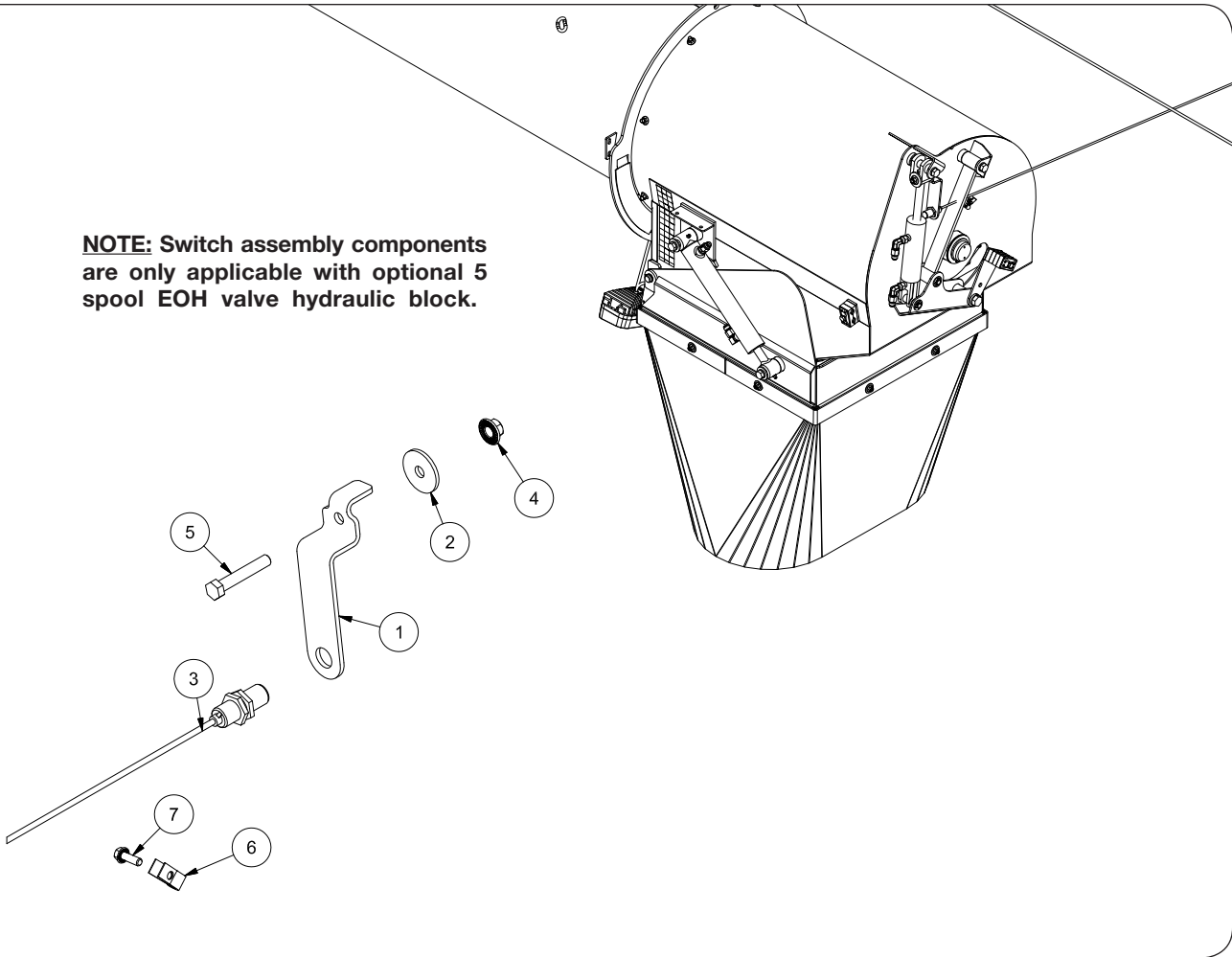
Please visit www.unverferth.com/parts/ for the most current parts listing.

ITEM	PART NO.	DESCRIPTION	QTY	NOTES
1	294156B	Flow Door Linkage Kit =Black=	1	For SN B40240100 & Higher
	255186B	Flow Door Linkage Weldment =Black=		For SN B40240099 & Lower
2	284721B	Restrictor Weldment	8	
3	284723B	Center Door Weldment Left-Hand	1	
4	284724B	Center Door Weldment Right-Hand	1	
5	266285	Idler Pin 1" Dia. x 4 1/2	1	
6	271112	Idler Pin 1" Dia. x 4	1	
7	294072B	Front Tent Service Kit =Black=	1	Includes: Front Tent Weldment, Baffle Plates, Spray Paint & Instruction Sheet
8	294073B	Rear Tent Service Kit =Black=	1	Includes: Rear Tent Weldment, Baffle Plates, Spray Paint & Instruction Sheet
9	284889B	Flow Door Service Kit (Black)	1	Includes Items: 10, 11, 12, 13, 17, 28, 29, 30, 31
10	284855B	Front Door Weldment Left-Hand =Black=	1	
11	284854B	Front Door Weldment Right-Hand =Black=	1	
12	284850B	Rear Door Weldment Left-Hand =Black=	1	
13	284849B	Rear Door Weldment Right-Hand =Black=	1	
14	282488B	Cover Plate =Black=	1	
15	804572	Pin 1" Dia. x 3 1/2	1	
16	9002575	Cylinder 3x16	1	
17	9003396	Locknut 3/8-16UNC	16	
19	9390-103	Capscrew 1/2-13UNC x 2 Grade 5	4	
20	9391-046	Cotter Pin 3/16" Dia. x 2	6	
21	9394-010	Hex Nut 1/2-13UNC Grade 5	4	
22	9404-025	Lock Washer 1/2"	4	
23	95585	Capscrew/Large Flange 3/8-16UNC x 3/4	68	Grade 5
24	9874	90° Elbow 9/16-18 JIC Male x 3/4-16 O-Ring Adj Male Boss	2	
25	93426	Grease Zerk	1	
26	9005073	Quicklinc Fitting 1/4 Tube x 1/8 NPT Straight	1	For SN B40240100 & Higher
	9005072	Quicklinc Fitting 1/4 Tube x 1/8 NPT Elbow		For SN B40240099 & Lower
27	9005074	Tube, Nylon 1/4" OD	1	
28	284168	Spacer Bushing, 2 1/4 OD x 1/2	16	
29	284169	Roller Bushing	16	
30	9005471	Flat Washer, 3/8	16	
31	91299-057	Capscrew, 3/8-16UNC x 1 1/2	16	
32	9008159	Automation Lock Nut/Top 3/8"-16UNC	68	Grade F
33	91263	Nut/Large Flange 3/8"-16UNC Grade 5	24	
34	9005072	Quicklinc Fitting 1/4 Tube x 1/8 NPT Elbow	1	

Optional Spout Rotate Switch Assembly Components

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

NOTE: Switch assembly components are only applicable with optional 5 spool EOH valve hydraulic block.



ITEM	PART NO.	DESCRIPTION	QTY	NOTES
1	273876B	Switch Plate Bracket =Black=	1	
2	9005696	Fender Washer, 3/8	1	
3	9007223	Proximity Sensor with Connector	1	
4	91263	Large Flange Nut, 3/8-16UNC Gr.5	1	
5	9390-060	Capscrew, 3/8-16UNC x 2 1/4 Gr.5	1	
6	96728	Brake Line Clip	1	
7	97420	Flange Screw, 1/4-20UNC x 3/4 Gr.5	1	

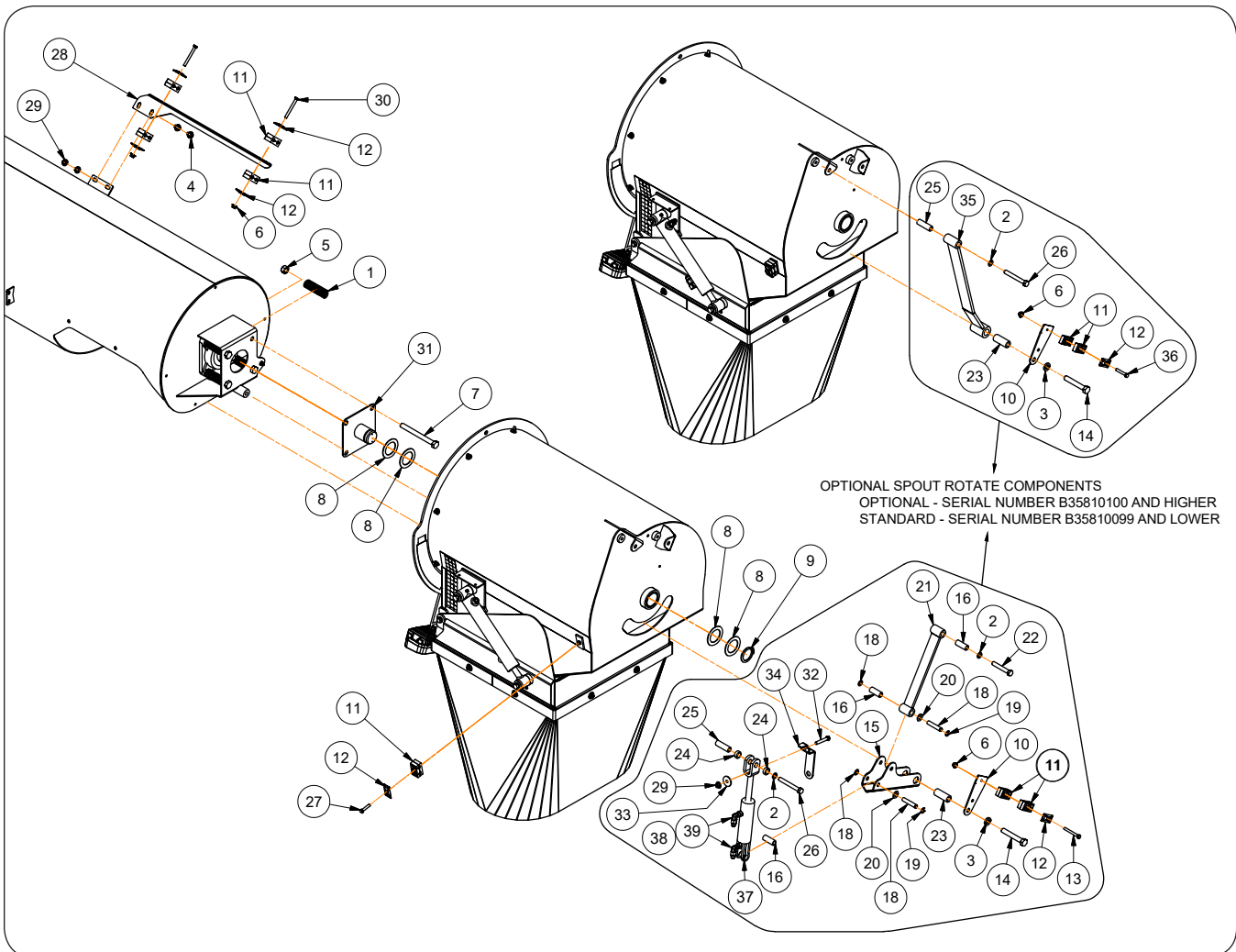
Notes

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

Empty rounded rectangular box for notes.

Downspout Components

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



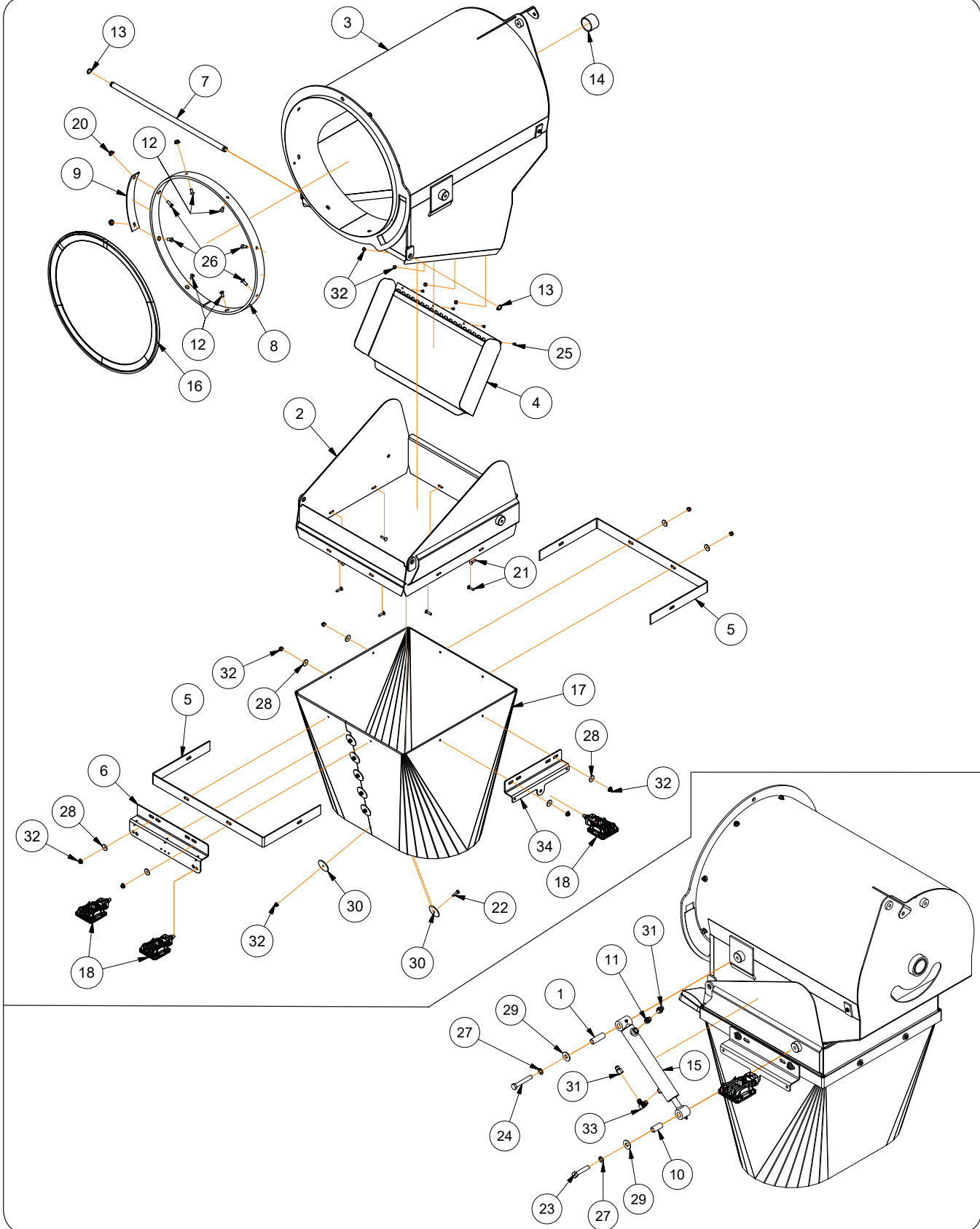
Downspout Components

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

ITEM	PART NO.	DESCRIPTION	QTY	NOTES
1	9004899	Spring-Compression	4	
2	9404-025	Lock Washer, 1/2	15	
3	9404-030	Lock Washer, 5/8 EXTRA	20	
4	95585	Capscrew/Lrg Flg, 3/8-16UNC x 3/4 Gr.5	4	
5	9801	Locknut/Top, 5/8-11UNC	4	
6	91257	Flange Nut, 5/16-18UNC	10	
7	9390-137	Capscrew, 5/8-11UNC x 6 1/2 Gr.5	4	
8	93974	Washer, 3 x 2	4	
9	91178	Retaining Ring	1	
10	272620B	Plate-Hose Bracket	1	
11	9003816	Poly Clamp Pair (0.54)	7	
12	9003814	Top Plate	6	
13	9390-037	Capscrew, 5/16-18UNC x 2 3/4 Gr.5	1	
14	9390-132	Capscrew, 5/8-11UNC x 4 Gr.5	1	
15	284691B	Bracket-Linkage	1	
16	285290	Bushing-Sleeve	3	
17	9876	Elbow, 9/16-18 JIC M/F	2	
18	285219	Pin Weldment	2	
19	9005687	Snap Ring, 1/2"	2	
20	9405-086	Flat Washer, 1/2 SAE	2	
21	284699B	Linkage Weldment	1	
22	9390-108	Capscrew, 1/2-13UNC x 3 1/4 Gr.5	1	
23	272619	Bushing-Sleeve	1	
24	268905	Bushing Spacer	2	
25	272571	Bushing-Sleeve	1	
26	9390-111	Capscrew, 1/2-13UNC x 4 Gr.5	1	
27	9390-032	Capscrew, 5/16-18UNC x 1 1/2 Gr.5	1	
28	272570B	Plate-Hose Bracket	1	
29	91263	Large Flange Nut, 3/8-16UNC	5	
30	9390-038	Capscrew, 5/16-18UNC x 3 Gr.5	2	
31	284986	Pin Weldment-Pivot, Hood	1	
32	9390-060	Capscrew, 3/8-16UNC x 2 1/4 Gr.5	1	
33	9005696	Washer-Fender, 3/8	1	
34	273876B	Plate-Switch Bracket	1	
35	271338B	Linkage Weldment =Black=	1	
36	9390-034	Capscrew, 5/16-18UNC x 2 Gr.5	3	
37	9007124	1 1/2" x 3" Hydraulic Cylinder	1	
38	9876	90° Elbow 9/16"-18 JICF x 9/16"-18 JICM	2	
39	95193	Adapter 9/16"-18 JICF x 9/16"-18 JICM	2	0.030 Restrictor

Rotating Spout Components

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



Rotating Spout Components

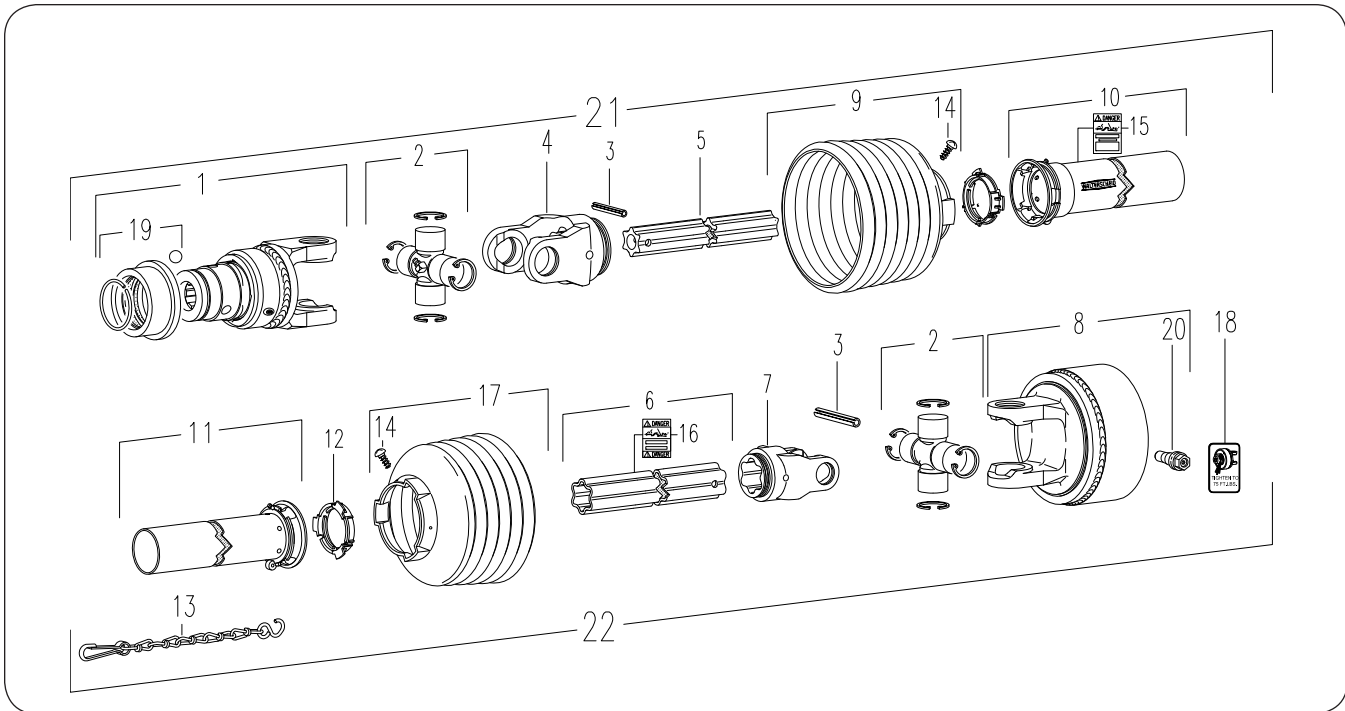
Please visit www.unverferth.com/parts/ for the most current parts listing.

ITEM	PART NO.	DESCRIPTION	QTY	NOTES
	289863B	Rotating Spout Assembly Less Rotating Cylinder	-	Includes Items 1 through 34
1	268571	Sleeve Bushing 3/4 Dia. x 0.532 Dia. x 2 3/8	1	
2	272535B	Spout Weldment =Black=	1	
3	272542B	Hood Weldment =Black=	1	
4	272562B	Deflector Weldment =Black=	1	
5	272565B	Strap Chute Plate =Black=	2	
6	272646B	Light Bracket =Black=	1	
7	272596	Pivot Shaft	1	
8	272599	Wear Ring	1	
9	272600B	Hood Shim Plate =Black=	1	
10	273656	Sleeve Bushing 3/4 Dia. x 0.532 Dia. x 1 11/16	1	
11	9001495	Adapter 9/16-18 JIC Male x 9/16-18 OR Male	1	
12	903171-660	Flat Countersunk Head Machine Screw 5/16"-18UNC x 1"	4	
13	9003810	External Retaining Ring 3/4"	2	
14	9005085	Self Lubricating Bushing	1	
15	9005135	Cylinder 1 1/2 x 8	1	
	9005419	Seal Kit	1	
16	9008122	Trim-Lok	7	
17	9006421	Auger Hood 22"	1	
18	9008957	Work Light LED	3	
20	91257	Hex Flange Nut 5/16-18 Grade 5	8	
21	9388-003	Carriage Bolt 1/4-20 x 1 Grade 5	8	
22	9390-005	Capscrew 1/4-20 UNC x 1 Grade 5	6	
23	9390-105	Capscrew 1/2-13 UNC x 2 1/2 Grade 5	1	
24	9390-108	Capscrew 1/2-13 UNC x 3 1/4 Grade 5	1	
25	97420	Flange Screw, 1/4-20 x 3/4 Grade 5	4	
26	903171-660	Flat Head Machine Screw 5/16-18 UNC x 1	4	
27	9404-025	Split Lock Washer, 1/2	2	
28	9405-066	Fender Washer 1/4"	8	
29	9405-088	Flat Washer 1/2 USS	2	
30	94763	Fender Washer, 2" OD x 5/16 ID	12	
31	95193	Adapter 9/16-18 JIC Female x 9/16-18 JIC Male	2	
32	97189	Large Hex Flange Nut 1/4-20 UNC Grade 5	18	
33	97445	Elbow 90° 9/16-18 JIC Male x 9/16-18 OR ADJ Male	1	
34	272841B	Light Bracket	1	

NOTE: If installing UHarvest centering sensors on an older unit, the hood 273635B and pivot pin 284986 needs replaced.

Cut Out Clutch PTO Assembly

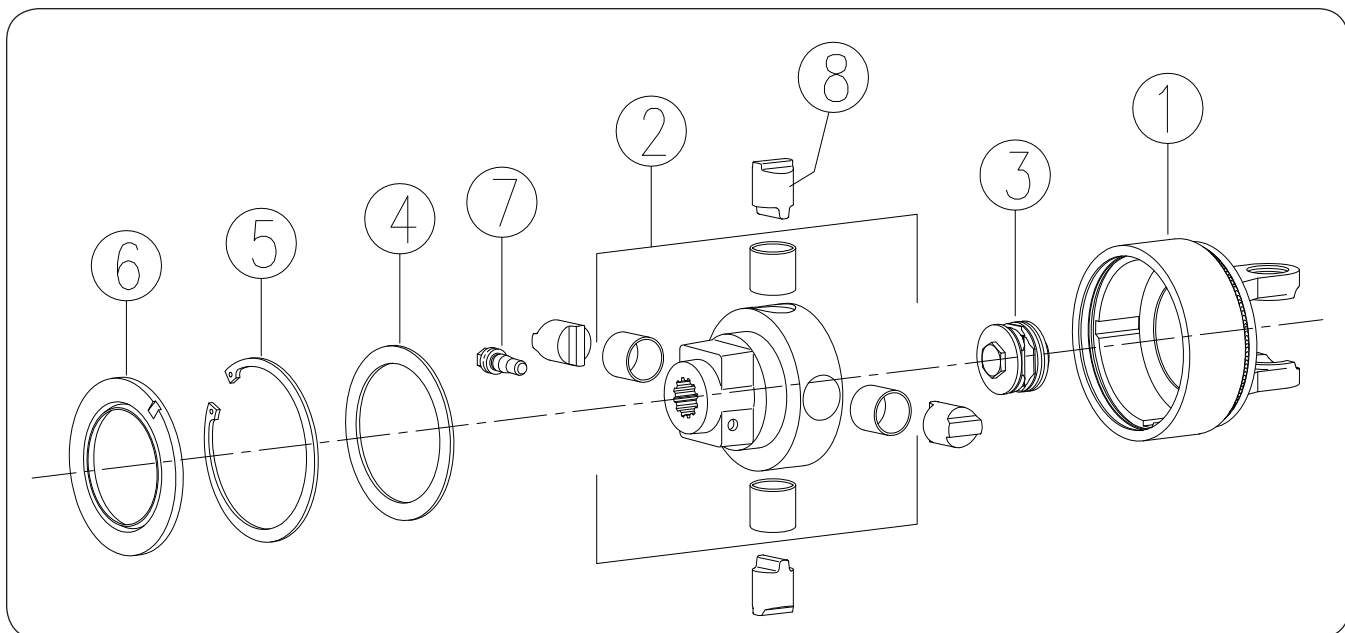
Please visit www.unverferth.com/parts/ for the most current parts listing.



ITEM	PART NO.	DESCRIPTION	QTY	NOTES
	9005230	PTO Assembly Complete		Includes Items 19 & 20
1	9005234	Over-Running PTO Clutch Assembly	1	1 3/4-20 Spline 1000RPM
2	92529	Cross & Bearing Kit	2	
3	9002609	Spring Pin 10x90	2	
4	9002610	Inboard Yoke S4	1	
5	9004840	Inner Profile	1	
6	9004841	Outer Profile	1	
7	9002613	Inboard Yoke S5	1	
8	9005235	Cut Out Clutch (3200 N-m Setting)	1	1 3/4-20 Spline 1000RPM
9	9002615	Shield Cone 7 Rib	1	
10	9004843	Outer Shield Tube Oval	1	
11	9004844	Inner Shield Tube Oval	1	
12	92373	Bearing Ring	2	
13	92374	Safety Chain	1	
14	92372	Screw	2	
15	92377	Decal Out	1	
16	92378	Decal In	1	
17	93866	Shield Cone 6 Rib	1	
18	9005233	Decal K64	1	"Tighten to 75 Ft.-Lbs."
19	93856	Quick-Disconnect Kit	1	1 3/4-20 Spline w/Metal Collar
20	9005253	Clutch Clamp Cone Assembly	1	
21	9005231	PTO Front Half Assembly 1 3/4-20 Spline	1	
22	9005232	PTO Rear Half Assembly 1 3/4-20 Spline	1	
23	9002513	Reinforcing Collar	1	NOT SHOWN

Cut Out Clutch Components

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

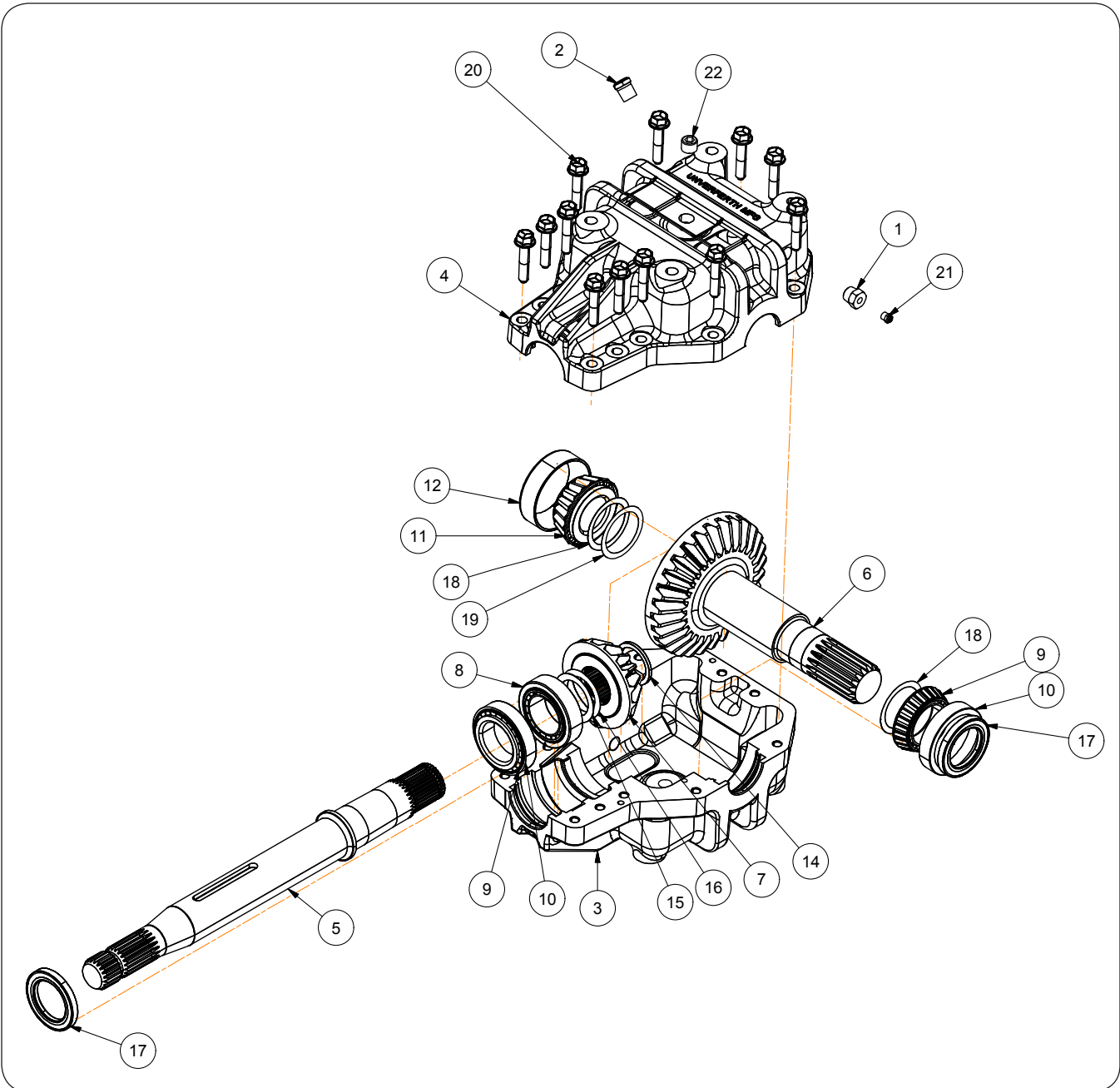


NOTE: Cut Out Clutch (9005235) must be used with the Complete PTO Assembly (9005230). This will not work with the Standard PTO Assembly (9005245).

ITEM	PART NO.	DESCRIPTION	QTY	NOTES
	9005235	Cut Out Clutch (3500 N*m Setting)		Includes Items 1-8
1	9005247	Clutch Housing	1	
2	9005248	Clutch Hub 1 3/4-20 Spline	1	
3	9005249	Spring Pack	1	
4	9005250	Washer	1	
5	9005251	Retaining Ring	1	
6	9005252	Sealing Ring	1	
7	9005253	Clutch Clamp Cone Assembly	1	
8	9005254	Clutch Cam	4	

Gearbox Components

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



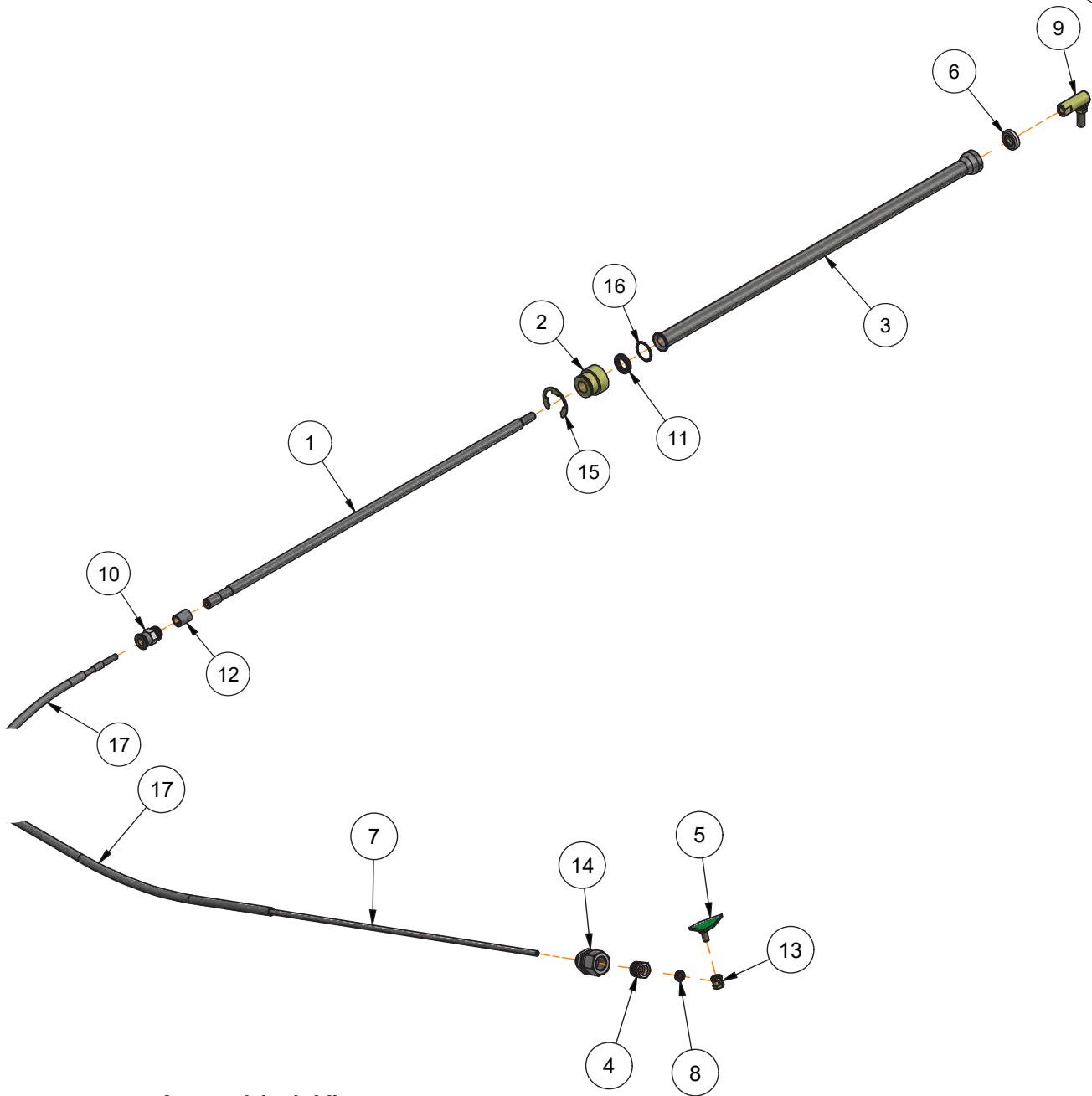
Gearbox Components

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

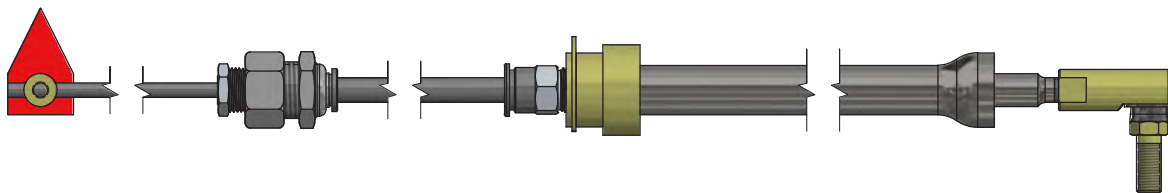
ITEM	PART NO.	DESCRIPTION	QTY	NOTES
	9007366	Gearbox Complete	1	Includes Items 1 through 22
1	9003453	Reducer Bushing, 1/2-14 NPTF M x 1/8-27 NPTF F	1	
2	9006381	Glass Sight Plug	1	
3	9007492	Gearbox Housing Q800 w/Taped Holes	1	
4	9007493	Gearbox Housing Q800 w/Through Holes	1	
5	9007494	Gearbox Shaft 2 1/4" Dia.	1	
6	9007495	Gear Shaft Assembly 29 Tooth, 2 1/4-17 Spline	1	
7	9007496	Gear 16 Tooth Splined	1	
8	9007497	Bearing Cup & Cone Set, 3.740 OD x 1 1/4	1	
9	9007498	Bearing Cone 2 1/4 ID x 1	2	
10	9007499	Bearing Cup 3.8437 OD x 0.7812	2	
11	9007500	Bearing Cone 2 ID x 1.5312	1	
12	9007501	Bearing Cup 4.125 OD	1	
13	9007502	End Cap	1	
14	9007503	Retaining Ring - External 2" Nominal Shaft Dia.	1	
15	9007504	Shim - 0.025	1	
16	9007505	Shim - 0.030	1	
17	9007508	Shaft Seal	2	
18	9007511	Shim - 0.005	2	
19	9007512	Shim - 0.003	1	
20	903161-060	Flange Screw 1/2-13UNC x 2 1/2	12	
21	92352	Pressure Relief	1	
22	95283	Plug	3	

Indicator Assembly

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



Assembled View



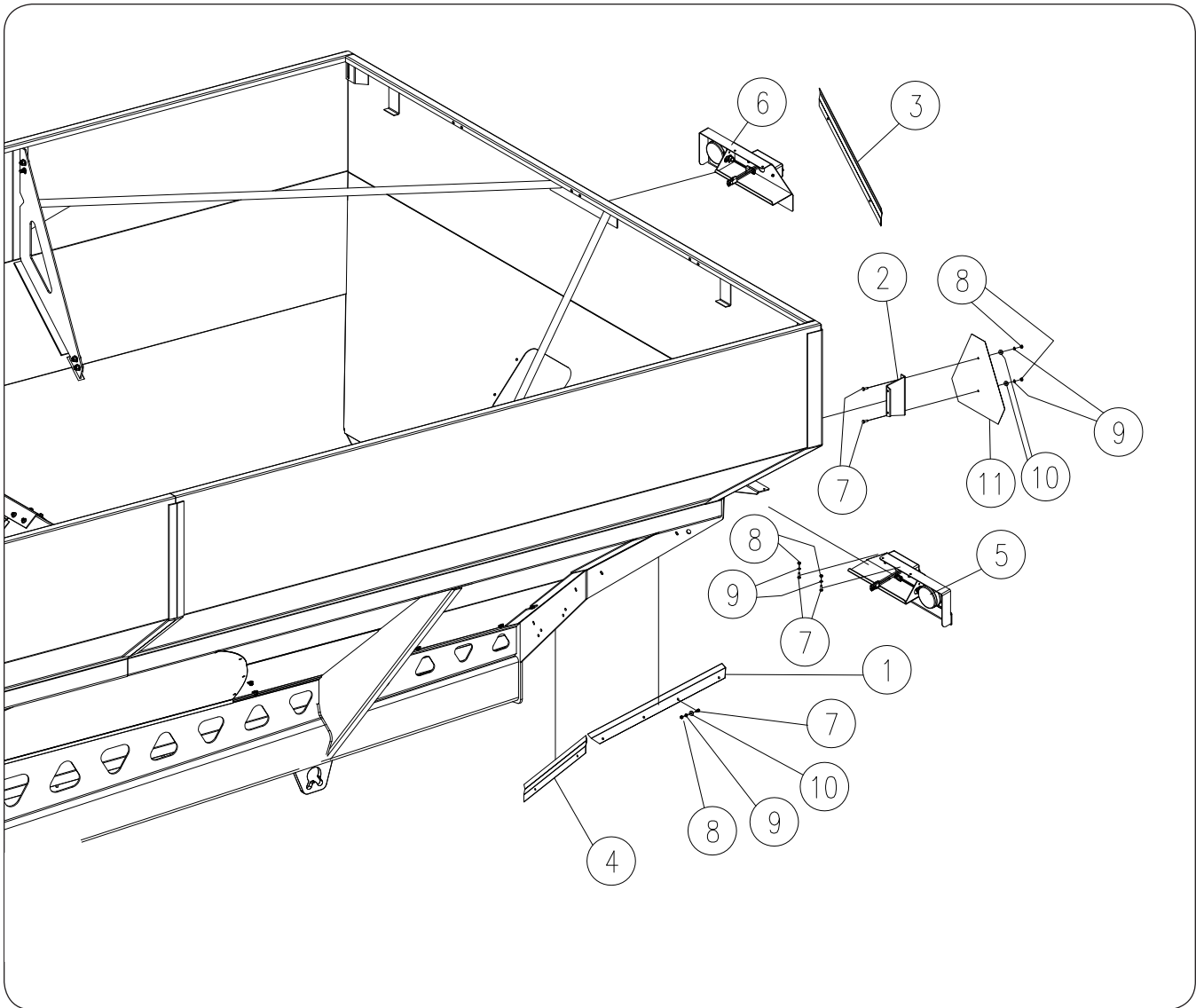
Indicator Assembly

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

ITEM	PART NO.	DESCRIPTION	QTY	NOTES
	271584	Complete Indicator Assembly	1	Includes Items 1 through 17
1	271582	Push Rod Indicator	1	
2	271585	Bushing - Coupler	1	
3	271589	Cable Tube (Push Rod)	1	
4	271593	Reducer Bushing	1	
5	271595R	Flow Door Indicator =Red=	1	
6	9006610	Seal (Wiper)	1	
7	9006611	Inner Cable (Conduit) - 3/16	1	
8	9008612	Seal (Shaft)	1	
9	9006630	Rod End, 3/8"	1	
10	9006634	Connector Fitting	1	
11	9006635	Quad Ring	1	
12	9006636	Wear Ring	1	
13	271597	Wire Stop	1	
14	9006640	Hose Fitting	1	
15	9006641	Snap Ring	1	
16	9006644	Retaining Ring - Internal	1	
17	271586	Plastic Tubing - 81"	1	

Hopper Rear Electrical Components

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



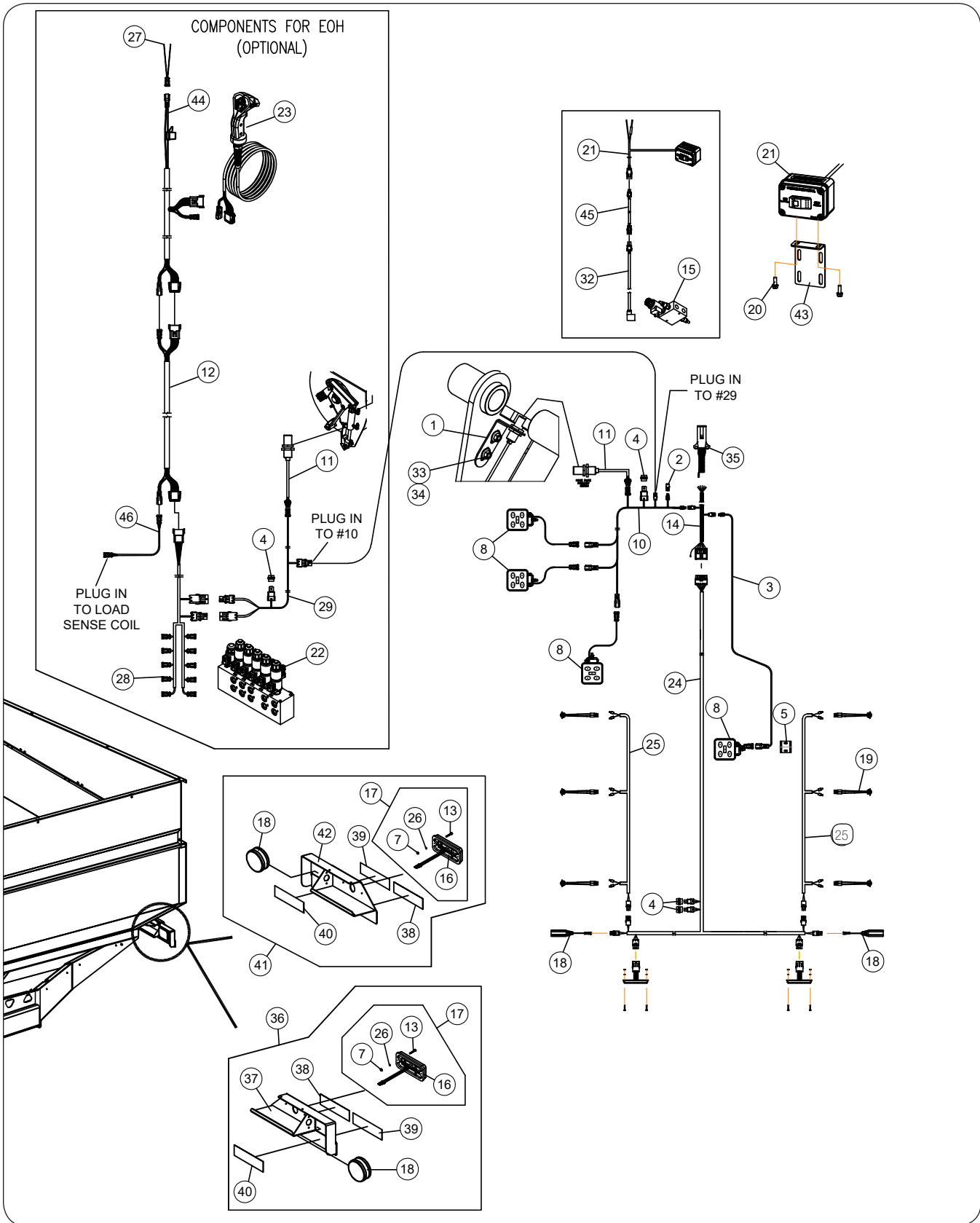
Hopper Rear Electrical Components

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

ITEM	PART NO.	DESCRIPTION	QTY	NOTES
1	282305G	Upper Harness Cover =Green=	2	
	282305R	Upper Harness Cover =Red=		
2	282307B	SMV Bracket	1	
3	282308G	Harness Cover Plate RH =Green=	1	
	282308R	Harness Cover Plate RH =Red=		
4	282309G	Harness Cover Plate LH =Green=	1	
	282309R	Harness Cover Plate LH =Red=		
5	284358B	Lamp Assembly LH	1	
6	284359B	Lamp Assembly RH	1	
7	9390-003	Capscrew 1/4-20UNC x 3/4 Grade 5	14	
8	9394-002	Hex Nut 1/4-20UNC Grade 5	14	
9	9404-017	Lock Washer 1/4"	14	
10	9405-064	Flat Washer 1/4"	10	
11	9829	SMV Emblem	1	

Electrical Components

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



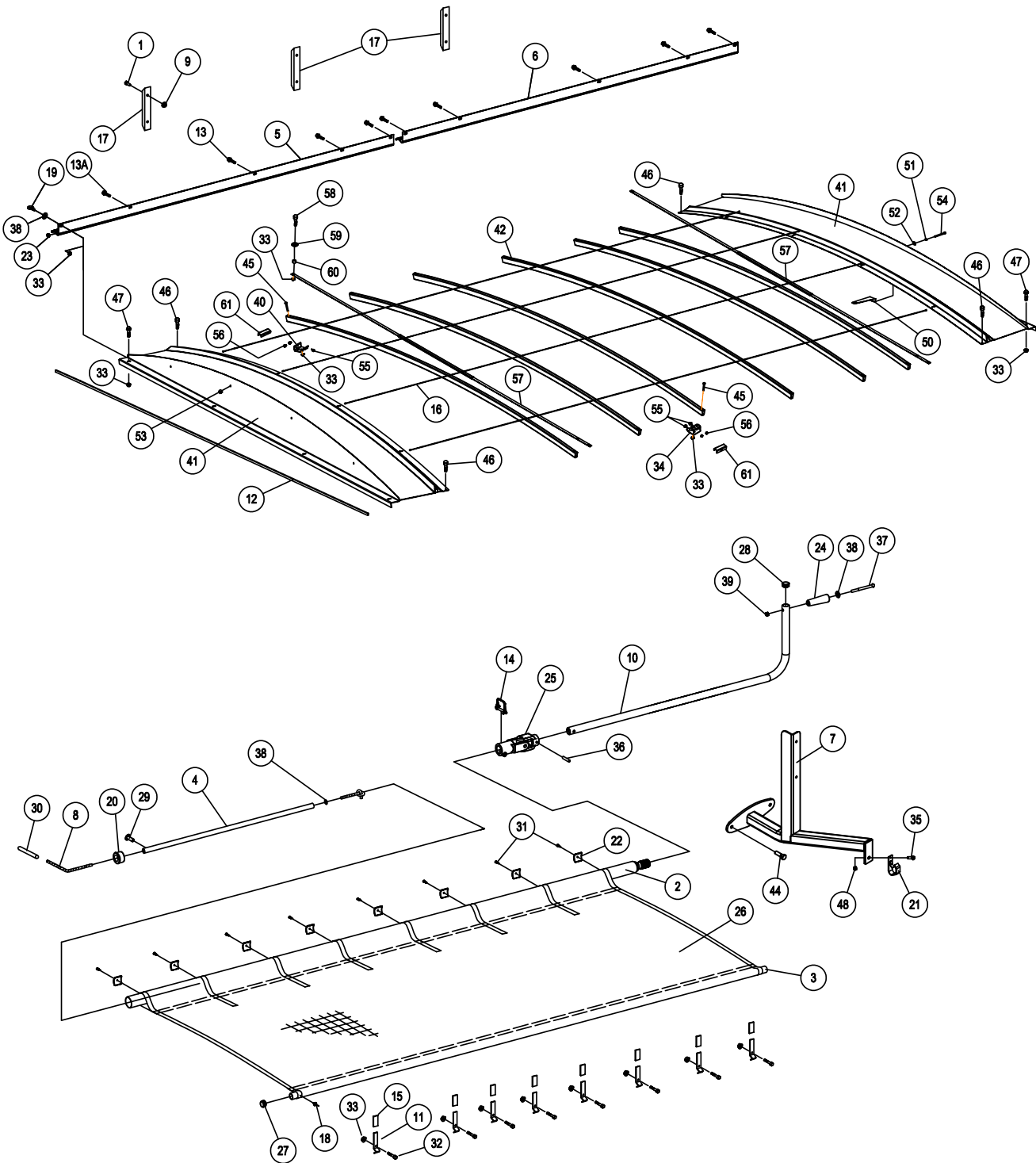
Electrical Components

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

ITEM	PART NO.	DESCRIPTION	QTY	NOTES
1	272645B	Switch Plate Bracket =Black=	1	
2	252386	Plug Assembly, 2 Pin Shroud	1	
3	9008969	Wiring Harness - 226" (w/2-Pin Connectors)	1	
4	9005618	Relay - 12VDC	4	
5	271574B	Lamp Mount Plate =Black=	1	
7	9830-016	Hex Nut, #10-32	4	Grade 2
8	9008957	Work Light (LED) (w/2-Pin Connector)	4	
10	9008956	Switch Wiring Harness (w/2-Pin Shroud Connectors)	1	
11	9007223	Proximity Switch	2	
12	9008252	Joystick Controller Extension Harness	1	
13	903172-350	Phillips Pan Head Screw, #10-32UNF x 1-1/4"	4	
14	9008501	Front Harness - 296" (w/2 Pin Shroud Connectors)	1	
15	9008730	Steering Valve	1	
16	9006282	LED Lamp - Red	2	
17	232170	LED Lamp - Red - Replacement Kit	2	Includes Lamp, & Items 7, 13, 16 & 26
18	9005142	LED Lamp - Amber	2	
19	9006107	Micro Dot, LED Amber Light	6	
20	97420	Flange Screw, 1/4-20 x 3/4	2	Grade 5
21	9005654	Rocker Switch Assembly	1	
22	293416	EOH Block Assembly - 5 Spool Replacement Kit	1	
23	9008265	L-Series Control Grip - 5 Function	1	
24	9006480	Rear Harness	1	
25	9006520	Clearance Harness	2	
26	9404-013	Lock Washer, #10	4	
27	9006907	Power Harness, 2-Pin	1	
28	9007290	"T" Main Wiring Harness - 189"	1	
29	9007286	Wiring Harness - 205" EOH for Proximity Switch	1	
32	9005993	Wiring Harness - 588"	1	
33	91262	Large Flange Screw, 3/8-16 x 1	2	Grade 5
34	91263	Large Flange Nut, 3/8-16UNC	2	Grade 5
35	92450	7-Way Plug	1	
36	284358B	Lamp Assembly Left-Hand	1	
37	284370B	Lamp Mount Weldment Left-Hand	1	
38	9003125	Reflector 2 x 9 Fluorescent - Red / Orange	2	
39	9003126	Reflector 2 x 9 =Red=	2	
40	9003127	Reflector 2 x 9 = Amber=	2	
41	284359B	Lamp Assembly Right-Hand	1	
42	284371B	Lamp Mount Weldment Right-Hand	1	
43	283788B	Mounting Bracket =Black=	1	
44	9008251	Harness - Joystick Power	1	
45	86700	Wiring Extension 120" (2 Pin)	1	
46	9007266	Wire Harness, 218 5/16" (2 Pin Diverter)	1	

Weather Guard Tarp

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



ITEM	PART NO.	DESCRIPTION	QTY	NOTES
	221653	Tarp Kit with Arched End Caps	-	
1	9004355	Screw 1/4-20UNC x 1 Self-Threading	6	
2	221789	Roll Tube Weldment	1	
3	221615	Fixed Tube Weldment	1	
4	221668	Pipe - 180"	1	

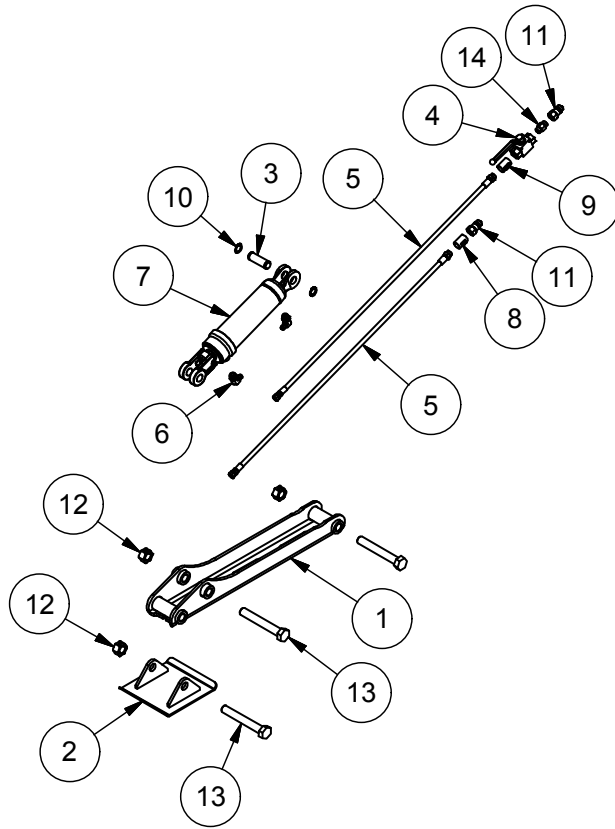
Weather Guard Tarp

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

ITEM	PART NO.	DESCRIPTION	QTY	NOTES
5	221680	Plate - Latch 149 1/2" (Front)	1	
6	221681	Plate - Latch 149 1/2" (Rear)	1	
7	221696B	Handle Bracket Weldment	1	
8	221722	Bungee 3/8" Dia. x 204"	1	
9	97189	Hex Nut/Large Flange 1/4-20UNC	6	
10	221749	Tarp Handle Weldment	1	
11	266689B	Tarp Short Stop Plate	6	
12	9000787	Trim-lok	A/R	
13	9005312	Torx Head Machine Screw 3/8-16UNC x 1 Grade 5	8	For SN B41690100 & Higher
			9	For SN B41690099 & Lower
13A	9009089	Torx Head Machine Screw 3/8-16UNC x 1 1/4 Grade 5	1	For SN B41690100 & Higher
14	9005305	Lynch Pin 3/8" x 3"	1	
15	9003078	Cap - Plastic (2 x 3)	6	
16	9005677	Cable Assembly	4	
17	9005307	Poly Deflector 8"	3	
18	9003378	Rivet/Pop 3/16"	2	
19	9004548	Eye Bolt 3/8-16UNC x 1 3/4	1	
20	9004947	Plug 2"	1	
21	221770B	Handle Retainer Weldment	1	
22	9004949	U-Clamp	9	
23	9004968	Plug 1"	2	
24	9004969	Handle	1	
25	9004977	U-Joint w/ 1 3/8-21 Spline	1	
26	9005046	Tarp 166 x 293	1	
27	9005088	Plug 1 1/8	2	
28	9005089	Plug 1 1/4	1	
29	9001396	Pan Head Screw #10-16 x 1/2"	1	
30	TA806225	Hose 1/2 EPDM	1	
31	9005197	Screw/Self Drilling #10-16 x 3/4 Pan Head	9	
32	91262	Screw/Large Flange 3/8-16UNC x 1 Grade 5	8	
33	91263	Nut/Large Flange 3/8-16UNC Grade 5	33	
34	283427B	Tarp Bow Bracket =Black= (Left Hand Side)	6	
35	9390-055	Capscrew 3/8-16UNC x 1 Grade 5	1	
36	9392-180	Roll Pin 3/8" Dia. x 2"	1	
37	903172-450	Phillips Pan Head Screw 3/8"-16UNC x 4-1/2"	1	
38	9405-074	Flat Washer 3/8	3	
39	9398-012	Elastic Stop Nut 3/8-16UNC	1	
40	283425B	Tarp Bow Bracket =Black= (Right Hand Side)	6	
41	281713B	End Cap Weldment	2	
42	283424B	Tarp Bow Weldment	6	
44	9390-056	Capscrew 3/8-16UNC x 1 1/4 Grade 5	2	
45	902703-046	Flat Socket Countersunk Capscrew 3/8"-16UNC x 3" (RH Thread)	12	
46	9512	Screw/Self Drilling 1/4-14 x 1	4	
47	95585	Capscrew/Large Flange 3/8-16UNC x 3/4 Grade 5	8	
48	9928	Locknut 3/8-16UNC	1	
49	9005581	Tarp Patch Kit	1	Not Shown
50	281712B	Bracket and U-Nut Asy	4	
51	9005688	Star Washer	4	
52	9005696	Fender Washer	4	
53	9005727	Plug	4	
54	TA0-907131-0	Capscrew 3/8-16UNC x 4 1/2 (Full Threaded)	4	
55	97604	Flange Screw 5/16"-18UNC x 1" Grade 5	24	For SN B41690100 & Higher
	91256	Flange Screw 5/16"-18UNC x 3/4" Grade 5		For SN B41690099 & Lower
56	91257	Hex Nut/Large Flange 5/16"-18UNC	24	
57	9008948	Hurricane Strap For 12 FT Wide Hopper	2	
58	96972	Screw/Self Tapping 3/8"-16UNC x 1"	2	
59	9008972	Flat Washer, 3/8" Aluminum	4	
60	9008949	Tarp Strap Spacer Bushing	4	
61	294660B	Sideboard Doubler =Black=	12	For SN B41690100 & Higher

Hydraulic Jack - Kit #294142B (Optional)

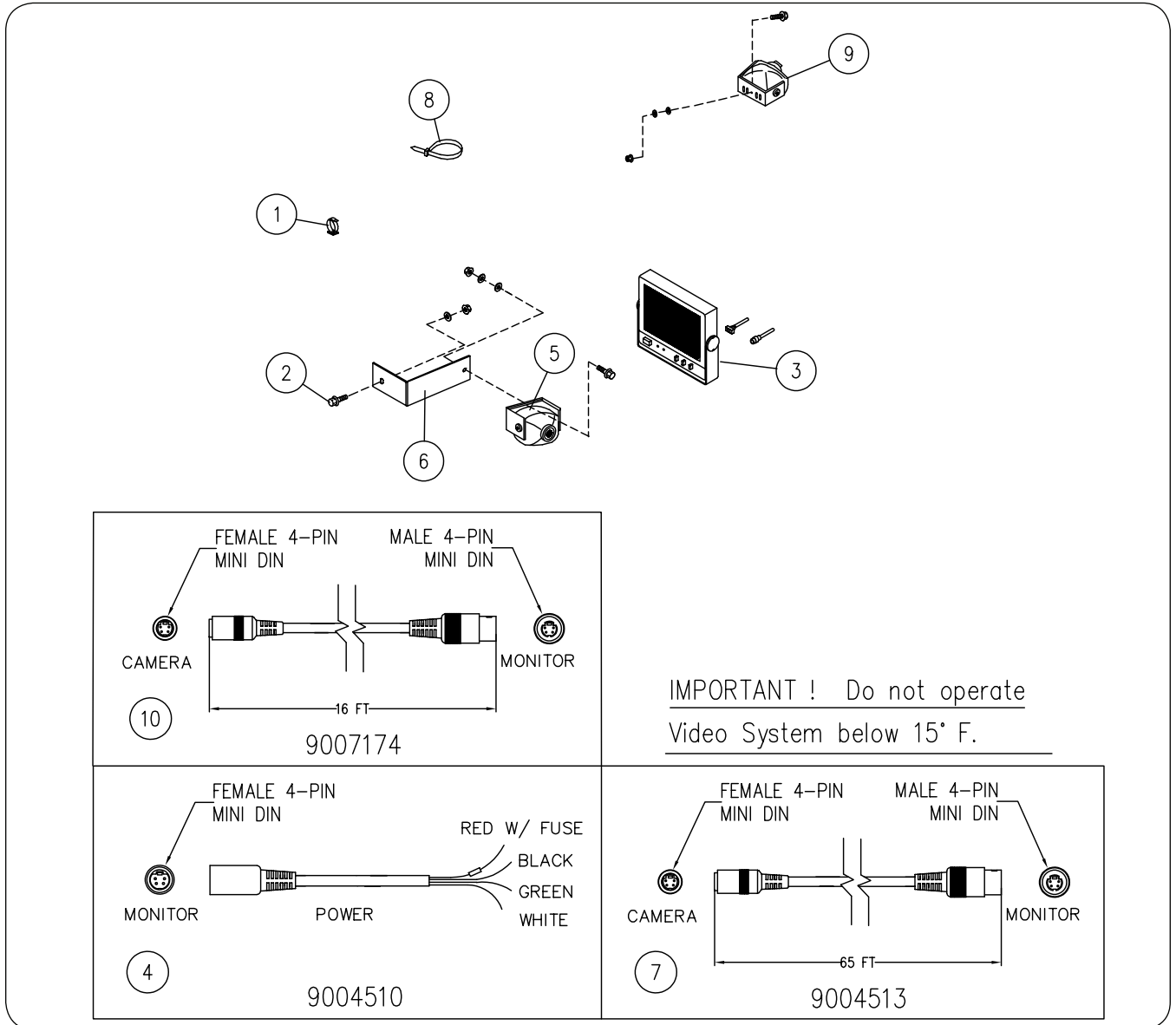
Please visit www.unverferth.com/parts/ for the most current parts listing.



ITEM	PART NO.	DESCRIPTION	QTY	NOTES
1	271712B	Jack Weldment =Black=	1	
2	271723B	Jack Foot Weldment =Black=	1	
3	272587	Pin, 1" Dia. x 3 1/8	1	
4	9005426	High Pressure Ball Valve	1	
5	9006068	Hydraulic Hose, 1/4 x 92" - 3000 PSI	2	
6	9006173	Elbow, 90°	2	
7	9009047	Hydraulic Cylinder, 3 x 8 - 3000 PSI	1	
8	9008600	Hose Grips - Black (Pair) - Raise Jack	1	Half Black/Half Gray - Cylinder Retracted
9	9008600	Hose Grips - Black (Pair) - Lower Jack	1	Solid Black - Cylinder Extended
10	91192	Retaining Ring, 1"	2	
11	91383	Male Tip Coupling	2	
12	92199	Center Locknut, 1-8UNC	3	
13	9390-197	Capscrew, 1-8UNC x 7 Grade 5	3	
14	98508	Adapter, 3/4-16 OR Male x 3/4-16 OR Male	1	

Video System (Optional)

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



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

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

