

***BRENT* Grain Handling**

**AVALANCHE® DOUBLE-AUGER
GRAIN CART
MODEL 3298**

Serial Number B47360100 & Higher

Part No. 298875

Foreword

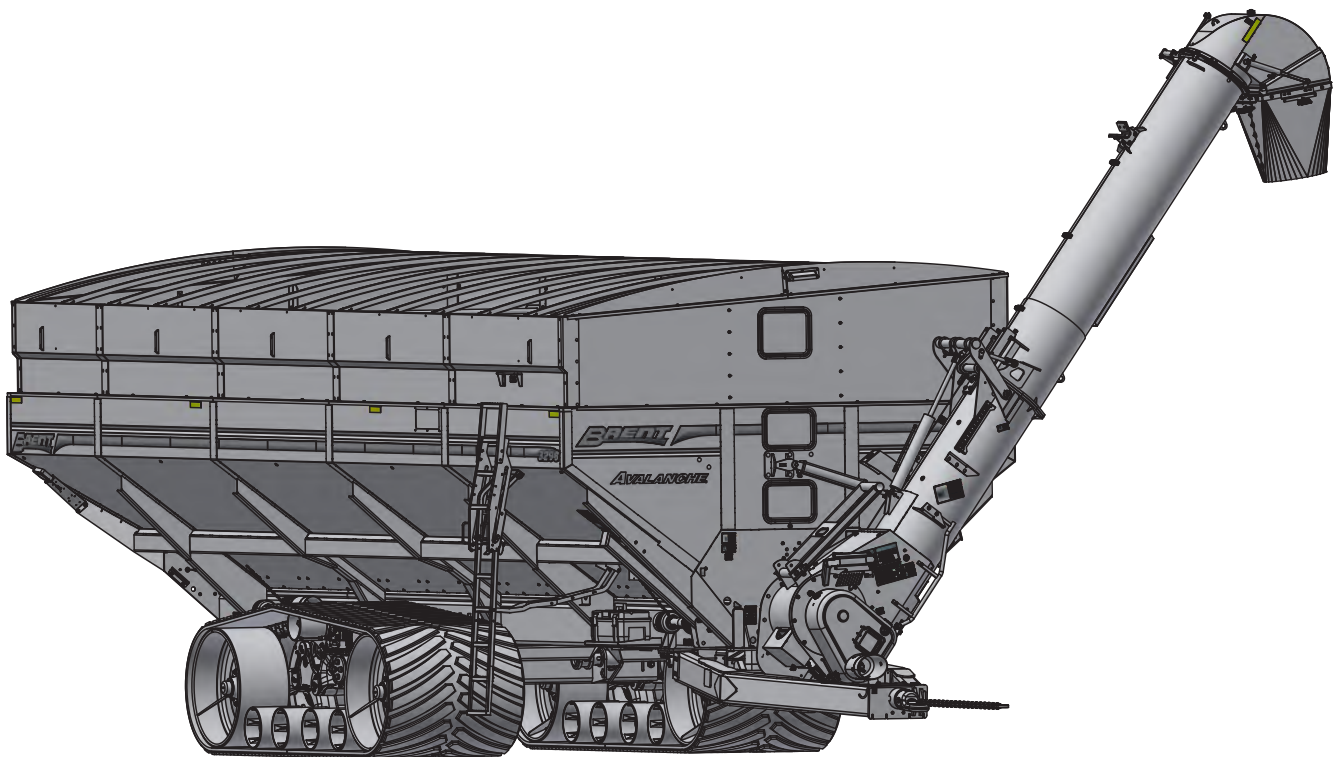
 This symbol identifies important safety messages. When you see it, read the message that follows and be alert to the possibility of personal injury.

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.

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



Product Information

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

- Machine name
- Model number
- Serial number

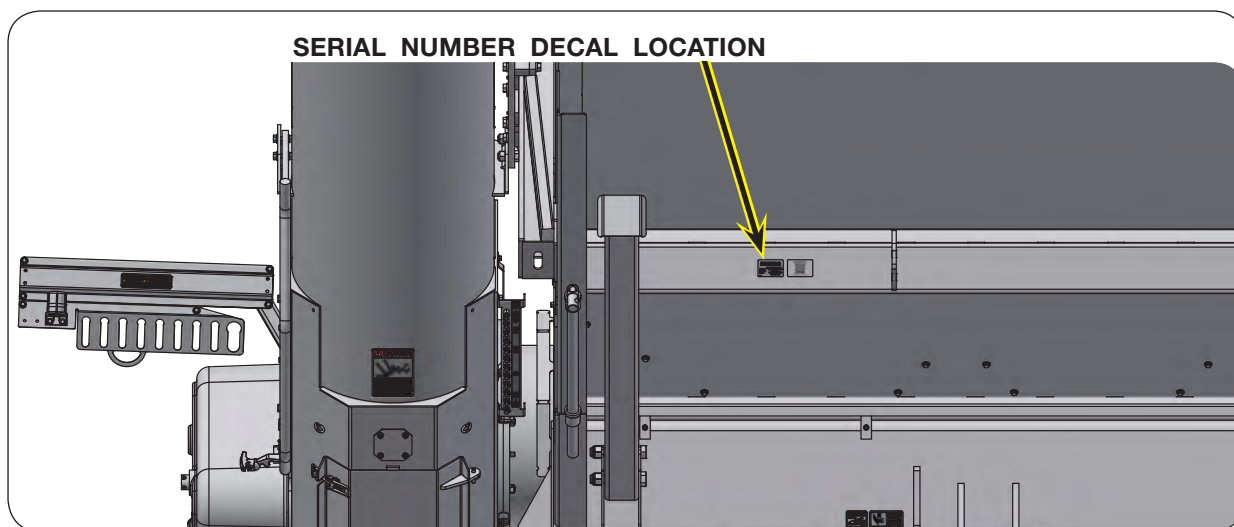
All products manufactured by Unverferth Mfg. Co., Inc. are warranted to be free from material and workmanship defects for one full year from time of consumer delivery. Your local dealer will gladly assist you with any warranty questions.

Please fill out and retain this portion for your records. The serial number decal is located at the left-front corner of your grain cart.

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 SCALE, TRACK, UHARVEST, ELECTRIC TARP, AND / OR WATER DELIVERY SYSTEM INFORMATION, PLEASE REFER TO THE INDIVIDUAL MANUALS.

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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.

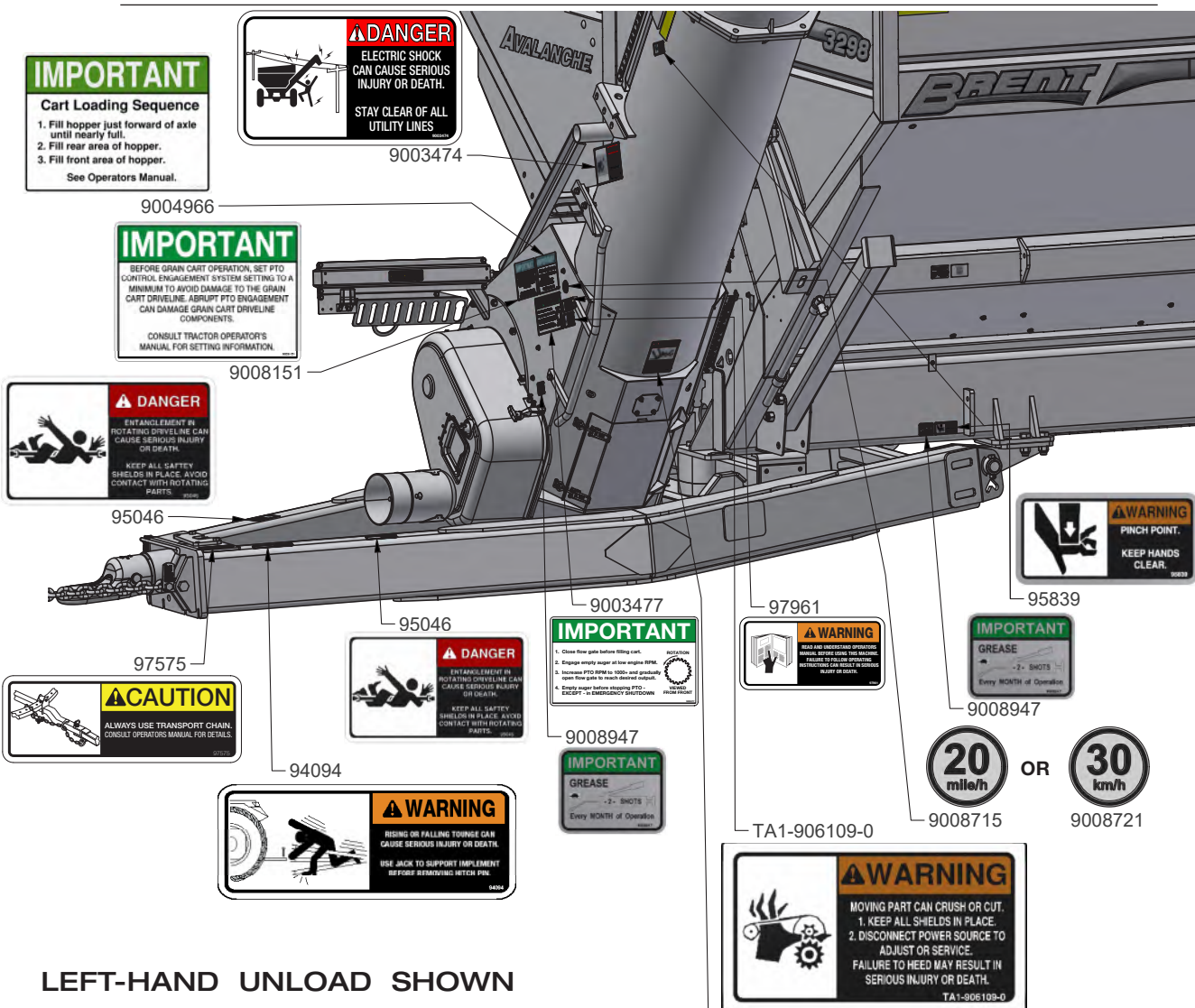


Is used for instruction on operating, adjusting, or servicing a machine.

Safety Decals

WARNING

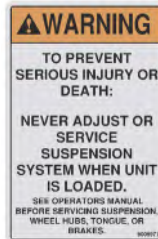
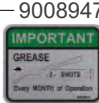
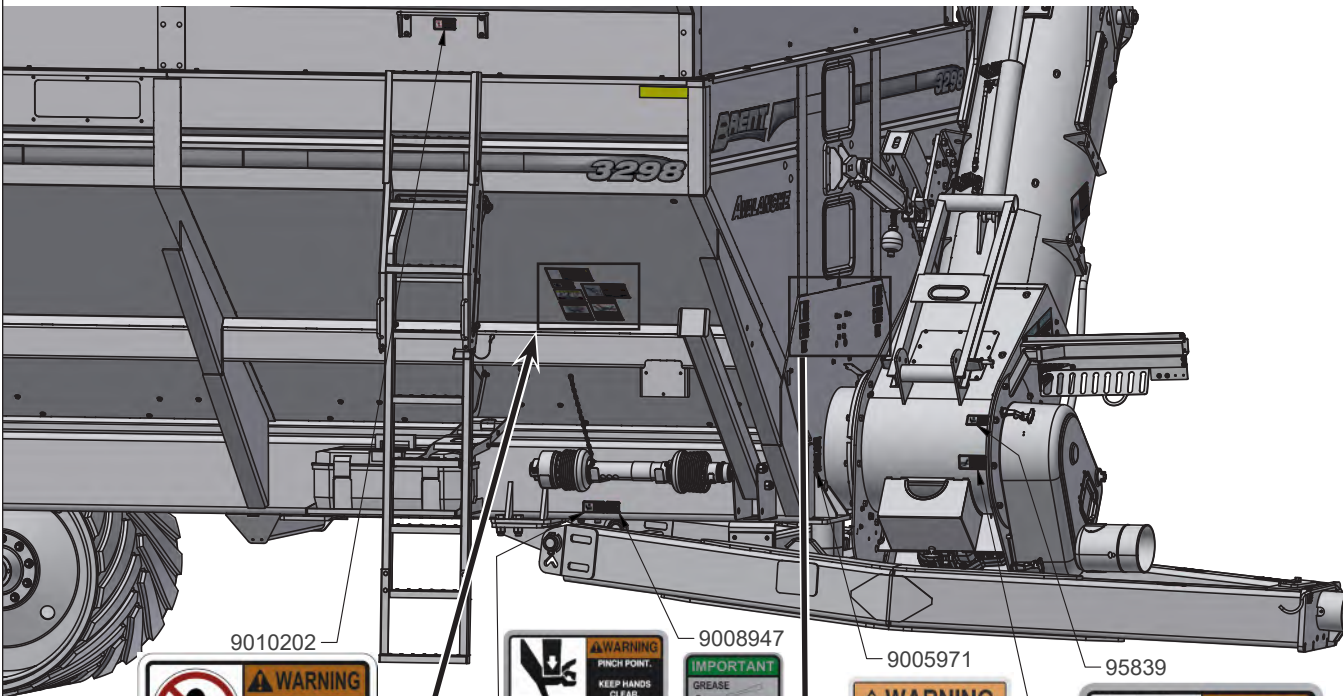
- REPLACE LOST, DAMAGED, PAINTED, OR UNREADABLE DECALS IMMEDIATELY. IF PARTS THAT HAVE DECALS ARE REPLACED, ALSO MAKE SURE TO INSTALL NEW DECALS. THESE DECALS INFORM AND REMIND THE OPERATOR WITH OPERATIONAL INFORMATION AND SAFETY MESSAGES.



LEFT-HAND UNLOAD SHOWN
RIGHT-HAND UNLOAD SIMILAR



Safety Decals (continued)



9009168



95839



9010442



9003476



9003478



9003475



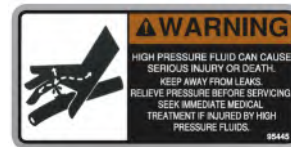
900024



98229



9008447



95445



Part No. 9003127
Reflector AMBER

LEFT-HAND UNLOAD SHOWN

RIGHT-HAND UNLOAD SIMILAR



Following Safety Instructions

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

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

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

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


Before Servicing or Operating

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

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

- Ensure that all applicable safety decals are installed and legible.
- Hot parts can cause severe burns. Use caution when working around power system/ground engaging components. Allow parts to cool before servicing.

Before Servicing or Operating

- Avoid working under an implement; however, if it becomes absolutely unavoidable, make sure the implement is safely blocked. 
- Sharp edges on the machine can cause injury. Be careful when working around the machine.
- To prevent personal injury or death, always ensure that there are people who remain outside the cart to assist the person working inside, and that all safe workplace practices are followed. There is restricted mobility and limited exit paths when working inside the implement.
- Secure drawbar pin with safety lock and lock tractor drawbar in fixed position.
- Add sufficient ballast to tractor to maintain steering and braking control at all times. Do not exceed tractor's lift capacity or ballast capacity.

During Operation

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

Before Transporting

- Secure transport chain to towing vehicle before transporting. **DO NOT** transport without 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.
- Make sure auger is folded and vertical auger assembly is positioned in its narrowest configuration.
- This implement is not equipped with brakes. Ensure that the towing vehicle has adequate weight and braking capacity to tow this unit.

During Transport

- Comply with all laws governing highway safety when moving machinery.
- Use transport lights as required by all laws to adequately warn operators of other vehicles.
- Regulate speed to road conditions and maintain complete control.
- Maximum transport speed of this implement should never exceed 20 m.p.h. as indicated on the machine. Maximum transport speed of any combination of implements must not exceed the lowest specified speed of the implements in combination. Do not exceed 10 m.p.h. during off-highway travel.
- Slow down before making sharp turns to avoid tipping. Drive slowly over rough ground and side slopes.
- Do not transport a loaded grain cart on roads.
- 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. Leaks of high-pressure fluids may not be visible. Use cardboard or wood to detect leaks in the hydraulic system. Seek medical treatment immediately if injured by high-pressure fluids.
- 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:
 - o End fittings damaged, displaced, or leaking.
 - o Outer covering chafed/cut or wire reinforcing exposed.
 - o Outer covering ballooning locally.
 - o 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 r.p.m. PTO speed.
- Disengage the PTO, stop the tractor engine, and remove key from ignition before making inspections, or performing maintenance and repairs.
- Inspect the driveline, quick disconnect, overload shear-bolt limiter or clutch, and shielding often. Repair immediately. Use replacement parts and attaching hardware equivalent to the original equipment. Any 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 the OPERATION section.
- Use caution when turning to avoid contact between tractor tires and driveline.

Preparing for Emergencies

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



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



Wearing Protective Equipment

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



- Wear steel-toed shoes when operating.



- Wear hearing protection when exposed to loud noises.



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



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FOR SCALE, TRACK, UHARVEST, ELECTRIC TARP, AND / OR WATER DELIVERY SYSTEM
INFORMATION, PLEASE REFER TO THE INDIVIDUAL MANUALS.

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.
- ☐ Install two PTO shafts as specified in “Driveline Installation - Driveline Set Up” in this section.
- ☐ Move upper ladder extension from shipping to operating position. See “Upper Side Ladder Extension” in this section.
- ☐ Torque track idler wheel nuts as specified in Equalizer® SP track manual (297550).
- ☐ Verify track has been aligned and is properly conditioned. (If applicable)
- ☐ Lubricate all grease fittings and check gearbox oil level.
- ☐ Inspect cleanout door assembly for proper adjustment, 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.
- ☐ Align and properly tension belts. See “Belt Tightener Adjustment” and “V-Belt Alignment” in MAINTENANCE section.
- ☐ Ensure screens over horizontal auger are in place and properly secured.
- ☐ Install transport chain and torque hardware to specification. See “Transport Chain Connection” in OPERATION section.
- ☐ Ensure transport chain on the grain cart is sized according to the weight that is being towed. Refer to “Transport Chain Connection” in OPERATION section for complete transport chain instructions.
- ☐ Paint all parts scratched in shipment.
- ☐ Test run the augers. See “Auger Operation” in OPERATION section.
- ☐ Check hydraulics for leaks and check hose routing.

Cart Unload Procedure

WARNING

- TO PREVENT PERSONAL INJURY OR DEATH, ALWAYS ENSURE THAT THERE ARE PEOPLE WHO REMAIN OUTSIDE THE CART TO ASSIST THE PERSON WORKING INSIDE, AND THAT ALL SAFE WORKPLACE PRACTICES ARE FOLLOWED. THERE IS RESTRICTED MOBILITY AND LIMITED EXIT PATHS WHEN WORKING INSIDE THE IMPLEMENT.
- HIGH-PRESSURE FLUIDS CAN PENETRATE THE SKIN AND CAUSE SERIOUS INJURY OR DEATH. LEAKS OF HIGH-PRESSURE FLUIDS MAY NOT BE VISIBLE. USE CARDBOARD OR WOOD TO DETECT LEAKS IN THE HYDRAULIC SYSTEM. SEEK MEDICAL TREATMENT IMMEDIATELY IF INJURED BY HIGH-PRESSURE FLUIDS.
- RELIEVE THE HYDRAULIC SYSTEM OF ALL PRESSURE BEFORE ADJUSTING OR SERVICING. SEE THE HYDRAULIC POWER UNIT OPERATOR'S MANUAL FOR PROPER PROCEDURES.
- HYDRAULIC SYSTEM MUST BE PURGED OF AIR BEFORE OPERATING TO PREVENT SERIOUS INJURY OR DEATH.
- MOVING OR ROTATING COMPONENTS CAN CAUSE SERIOUS INJURY OR DEATH. ENSURE SERVICE COVERS, CHAIN/BELT COVERS AND CLEAN-OUT DOOR ARE IN PLACE AND SECURELY FASTENED BEFORE OPERATING UNIT.
- UNHITCHING A LOADED CART CAN CAUSE SERIOUS INJURY OR DEATH DUE TO THE TONGUE RISING OR FALLING. ALWAYS HAVE A LOADED CART ATTACHED TO A TRACTOR. THE JACK IS INTENDED TO SUPPORT AN EMPTY CART ONLY.
- 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 36,000 LBS. SPECIFIC LOAD RATINGS FOR INDIVIDUAL LOADS WILL BE GIVEN AT THE APPROPRIATE TIME IN THE INSTRUCTIONS.

Cart Unload Procedure

1. Park the trailer on a firm level surface. Block the trailer and set the vehicle parking brake.
2. Leaving the shipping tiedowns holding the cart to the trailer, place the trailer rear deck on the ground and detach the front trailer.
3. Securely hitch cart to a towing vehicle capable of supporting 8,000 lbs of vertical load at the hitch.
4. Loosen the shipping tiedowns holding cart to the trailer. The tongue fastener should remain as tight as possible without interfering with lifting the cart. The other tiedowns need to be loosened to allow raising the cart to install the shipping tires. Shipping blocks and loosened tiedowns must remain in position until both wheels are installed and tires are lowered down to the ground.
5. Using two safe lifting devices each rated for 16,000 lbs., lift both sides of the cart under each side of the axle. Lift the cart evenly and only enough to install shipping tires.
6. Using a safe lifting device rated for 800 lbs., mount 299166SM tires or equivalent 380/90R46 R1 159A8 or higher load rating radial tire mounted on a 13.189 diameter bolt circle, 11.060 diameter pilot hole rim with a 0-6 inch offset wheel for 10-bolt M22 stud hub to the narrowest track spacing. Install the M22 lug nuts and torque to 675 ft-lbs. (Fig. 2-1)

CAUTION

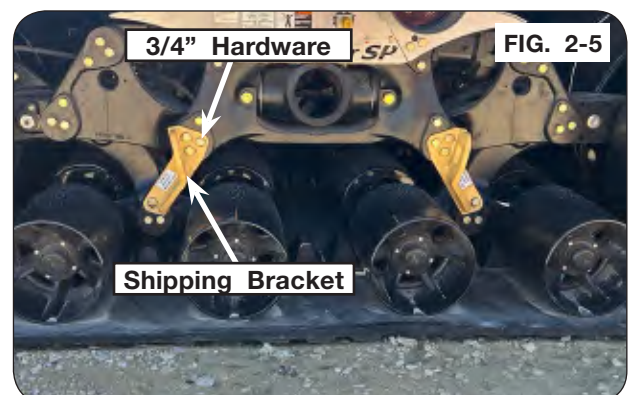
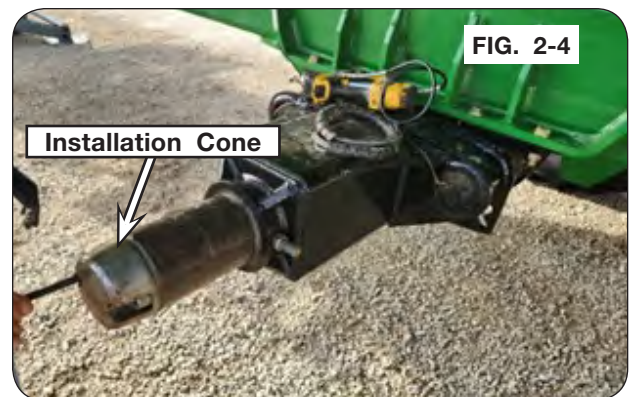
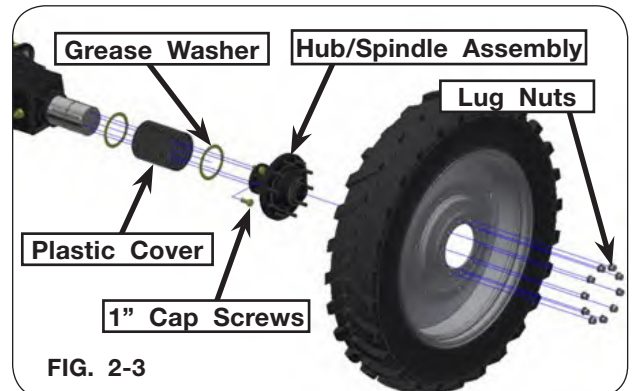
- **FAILURE TO USE PROPER TIRE AND/OR FAILURE TO MOUNT TIRE AS INSTRUCTED MAY RESULT IN DAMAGE TO COMPONENTS AND/OR UNIT.**

7. Use a suitable block between the tire and ground on each side of the cart to provide enough clearance to pull the cart away from the trailer. Lower the unit until the tires are on the blocks and remove the safe lifting devices. (Fig. 2-1)



Cart Unload Procedure

8. Remove all shipping tiedowns.
9. Tow the grain cart away from the trailer ensuring adequate clearance between the grain cart frame and the trailer is maintained. (Fig. 2-2)
10. Using a safe lifting device rated for 36,000 lbs, lift and support one side of the grain cart to remove the shipping tires.
11. Using a safe lifting device rated for 800 lbs., support the wheel and tire. Remove the ten M22x1.5 lug nuts (97319) and remove shipping tire assembly. (Fig. 2-3)
12. Use a safe lifting device rated for 200 lbs. to support the hub and spindle assembly. Remove and retain the four 1"-8UNC x 2 1/4" capscrews (9390-184) to remove the hub and spindle assembly from the track axle pivot pin. (Fig 2-3)
13. Remove outer grease washer and remove and discard the plastic cover on the track axle pivot pin. (Fig 2-3)
14. Thoroughly clean the axle shaft and apply a liberal amount of grease to the axle shaft. (Fig. 2-4)
15. Install track installation cone and socket head cap screws to the end of the axle shaft. These can be found in the tool box. (Fig. 2-4)
16. Refer to instruction sheet 267954 for installation cone and track assembly installation.
17. Repeat steps 10–16 on opposite side of the cart.
18. Remove and retain 3/4"-10UNC x 2" capscrews to remove two track shipping brackets from the track assembly after installing the track assemblies. (Fig. 2-5)
19. Reattach all 3/4" capscrews that were removed in the prior step and torque to 220 ft.-lbs. (Fig. 2-5)
20. Repeat steps 18 and 19 on opposite side track assembly.



Repositioning Tongue

WARNING

- TO PREVENT PERSONAL INJURY OR DEATH, ALWAYS ENSURE THAT THERE ARE PEOPLE WHO REMAIN OUTSIDE THE CART TO ASSIST THE PERSON WORKING INSIDE, AND THAT ALL SAFE WORKPLACE PRACTICES ARE FOLLOWED. THERE IS RESTRICTED MOBILITY AND LIMITED EXIT PATHS WHEN WORKING INSIDE THE IMPLEMENT.
- HYDRAULIC SYSTEM MUST BE PURGED OF AIR BEFORE OPERATING TO PREVENT SERIOUS INJURY OR DEATH.
- MOVING OR ROTATING COMPONENTS CAN CAUSE SERIOUS INJURY OR DEATH. ENSURE SERVICE COVERS, CHAIN/BELT COVERS AND CLEAN-OUT DOOR ARE IN PLACE AND SECURELY FASTENED BEFORE OPERATING UNIT.
- UNHITCHING A LOADED CART CAN CAUSE SERIOUS INJURY OR DEATH DUE TO THE TONGUE RISING OR FALLING. ALWAYS HAVE A LOADED CART ATTACHED TO A TRACTOR. THE JACK IS INTENDED TO SUPPORT AN EMPTY CART ONLY.
- 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 8,000 LBS. SPECIFIC LOAD RATINGS FOR INDIVIDUAL LOADS WILL BE GIVEN AT THE APPROPRIATE TIME IN THE INSTRUCTIONS.

Repositioning Tongue

IMPORTANT

- Prior to adjusting tongue position, ensure horizontal cleanout doors are CLOSED. Do not attempt to close horizontal cleanout doors with tongue in shipping position. Damage to cleanout doors and components will result. Reference steps 8 through 10 for tongue reposition and closing the cleanout door procedure.

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



2. Using a safe lifting device rated for 8,000 lbs., raise the front of the cart.

3. Remove and save the 1"-8UNC x 6" capscrew (9390-195) and 1"-8UNC elastic locknut (9398-026) (FIG. 2-6). Rotate the support stands (299580B) downward. Reinstall the 1"-8UNC x 6" capscrew (9390-195) and 1"-8UNC elastic locknut (9398-026) (FIG. 2-7). Repeat process on the opposite side of the grain cart.

4. Torque 1" hardware to 500 ft.-lbs. (FIG. 2-7)

5. Lower the front of the cart so it is resting on the support stands.

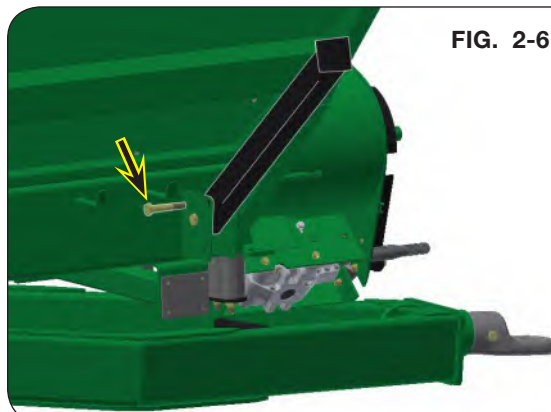


FIG. 2-6

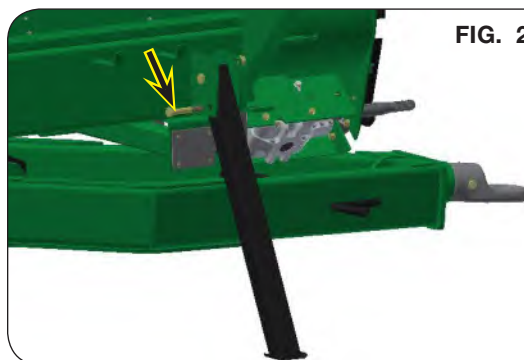


FIG. 2-7

Repositioning Tongue

6. Remove and save the 1"-8UNC x 10 1/2" capscrews (9390-465), spring retainer plates (271687B), both urethane springs (9006456 and 9006457), and 1"-8UNC elastic lock nuts (9398-026). (FIG. 2-8)



FIG. 2-8

7. Support the tongue with safe lifting devices rated for 2,000 lbs.
8. Remove and save the 1"-14UNS elastic locknuts (9008441), 1" SAE flat washers (9405-116), and 1"-14UNS x 3" capscrews (9390-409) from the tongue. (FIG. 2-9)
9. Remove and discard the spacer weldments (left-hand 298191B and right-hand 298193B) from the tongue. (FIG. 2-9)

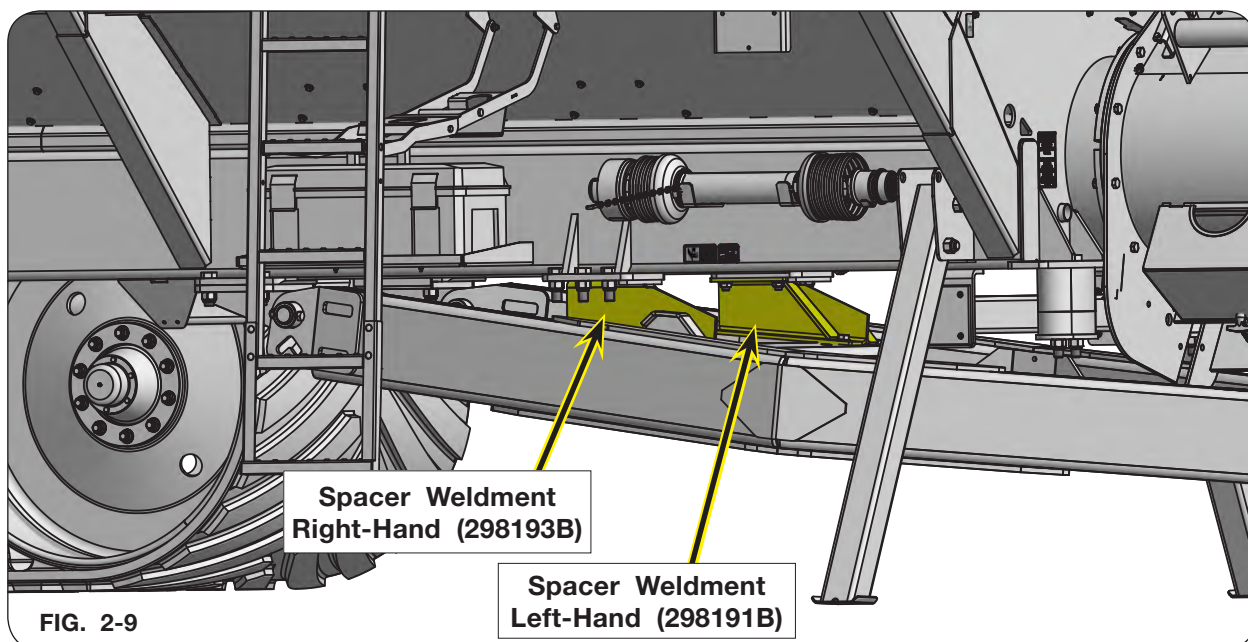


FIG. 2-9

Repositioning Tongue (continued)

10. Remove and save the 1"-14UNS x 3" capscrews (9390-409) and 1"-14UNS elastic lock nuts (9008441) from the tongue pivot weldments (left-hand 274818G/R/BM; right-hand 274819G/R/BM). (FIG. 2-10)

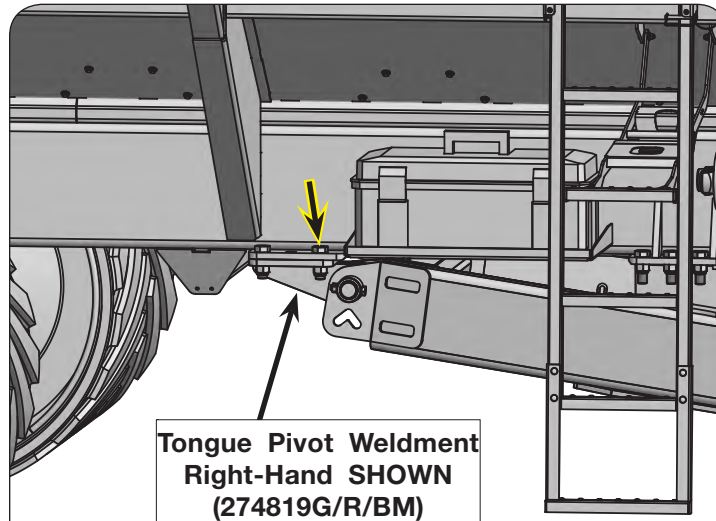


FIG. 2-10

Repositioning Tongue (continued)

IMPORTANT

- Prior to adjusting tongue position, ensure horizontal cleanout doors are **CLOSED**. Do not attempt to close horizontal cleanout doors with tongue in shipping position. Damage to cleanout doors and components will result.

11. Using a safe lifting device rated for 2,000 lbs., lower the tongue. (FIG. 2-11)

NOTE: Before closing cleanout doors, check to ensure the wiring harnesses are secured and not in the cleanout door swing path.

12. Close horizontal cleanout doors.

13. Slide the tongue forward until the tongue pivots align with the forward mounting plate. (FIG. 2-11)

NOTE: Do not mix the 1" UNS hardware for the tongue pivot and the 1" UNC hardware for the urethane springs.

14. Secure the tongue pivot weldment to the cart with 1"-14UNS x 3" capscrews (9390-409) and 1"-14UNS elastic lock nuts (9008441). (FIG. 2-11)

15. Torque 1" UNS hardware to 550 ft.-lbs. (FIG. 2-11)

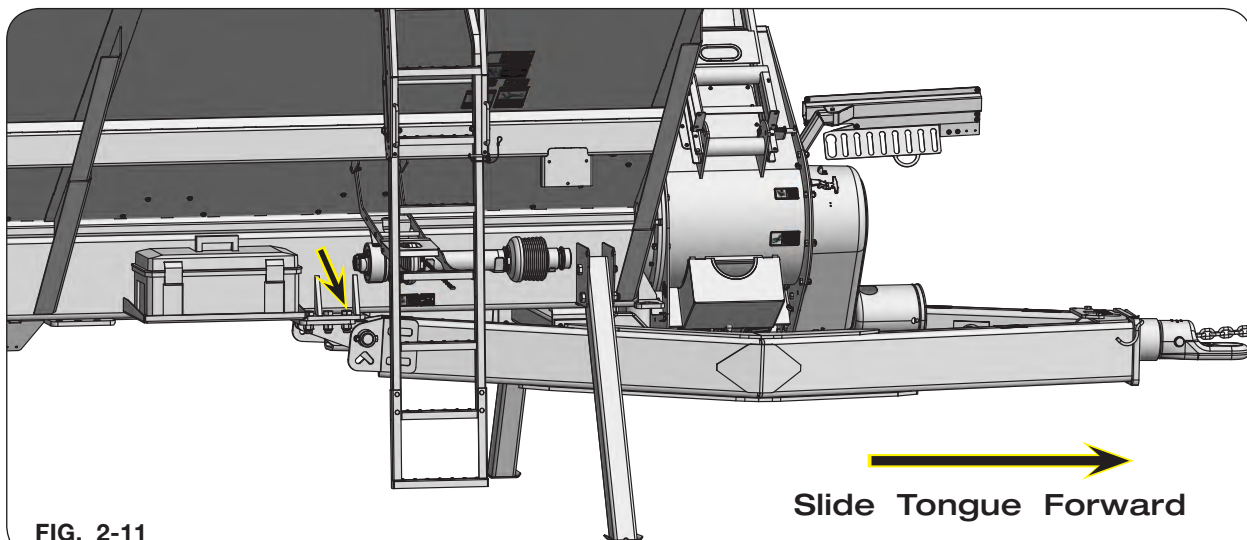
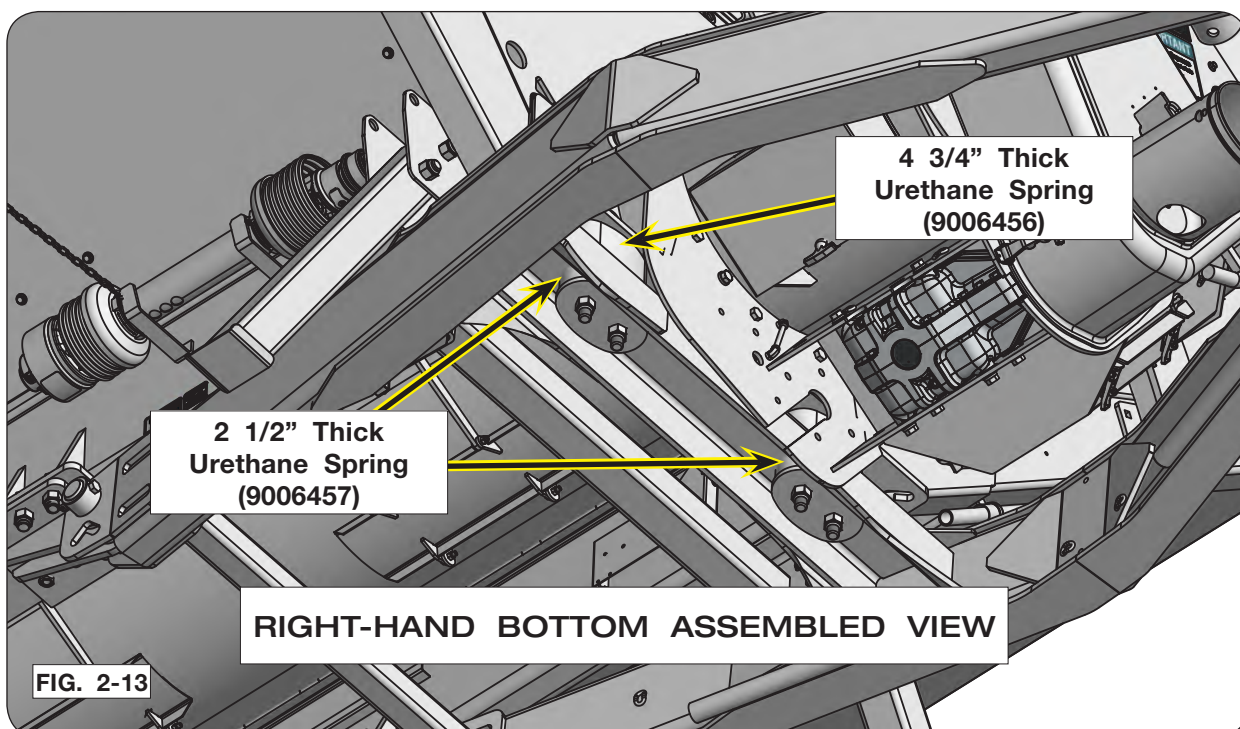
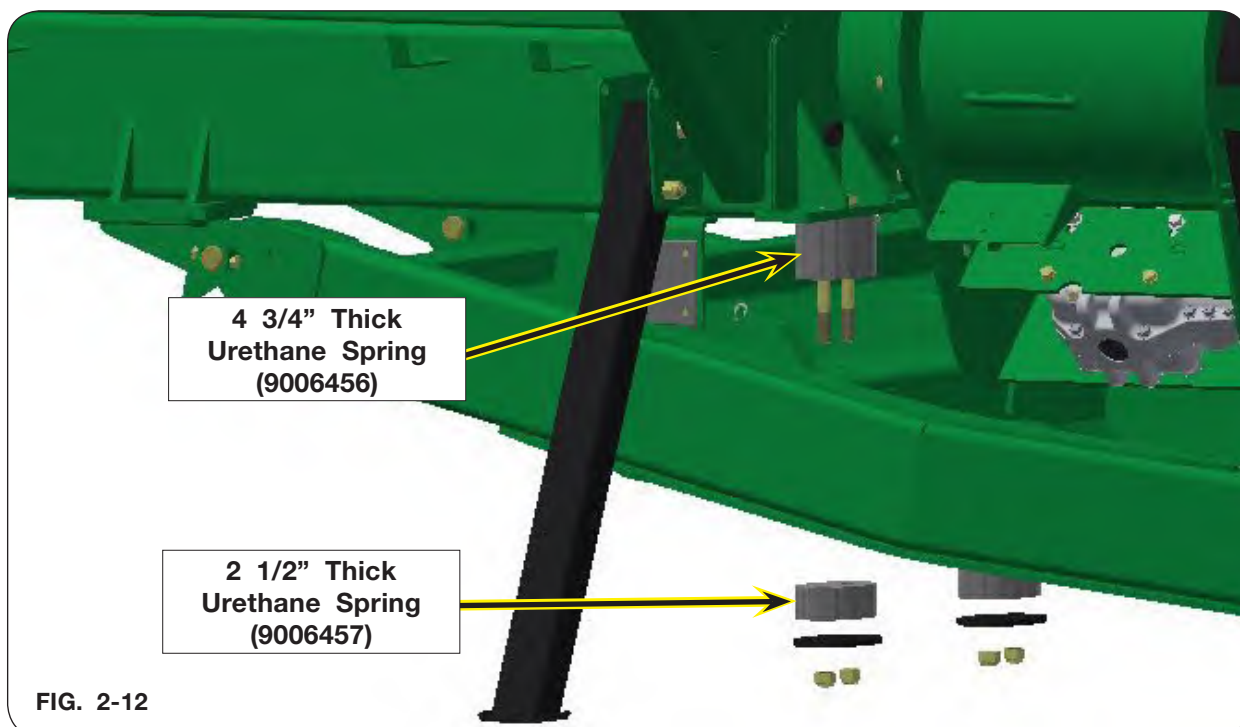


FIG. 2-11

Repositioning Tongue (continued)

16. Attach 4 3/4" thick urethane springs (9006456) between tongue and frame, 2 1/2" thick urethane springs (9006457) under the tongue, followed by retainer plates (271687B). Secure to grain cart with, 1"-8UNC x 10 1/2" capscrews (9390-465) and 1"-8UNC elastic lock nuts (9398-026) (FIGS. 2-12 & 2-13).

17. Tighten the 1" UNC hardware to compress the upper bumpers 1/4". (FIGS. 2-12 & 2-13)



Repositioning Tongue (continued)

18. HYDRAULIC JACK

Use the tractor hydraulics to lower the jackstand and lift the support stands. (FIG. 2-14)

19. Close valve on hydraulic jack.

NOTE: Refer to “Hydraulic Jack Usage” in the OPERATION section for procedure.



FIG. 2-14

20. Remove the 1"-8UNC x 6" capscrew (9390-195) and 1"-8UNC elastic locknut (9398-026). Rotate the support stands (299580B) upwards. Reinstall the 1"-8UNC x 6" capscrew (9390-195) and 1"-8UNC elastic locknut (9398-026). Repeat process on the opposite side of the grain cart. (FIG. 2-15)

21. Torque 1" hardware to 500 ft.-lbs. (FIG. 2-15)

22. Remove the safe lifting devices under the tongue and front of the cart.

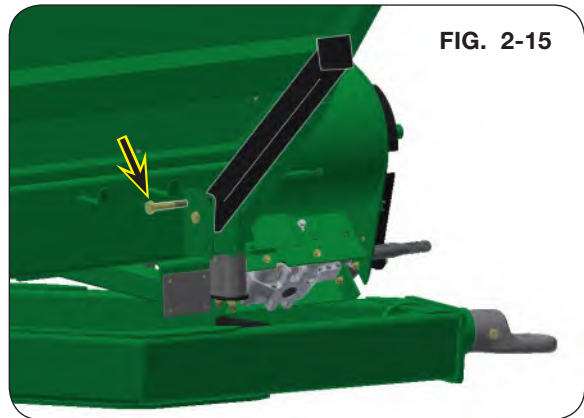


FIG. 2-15

Rear Runner Cross Brace Installation

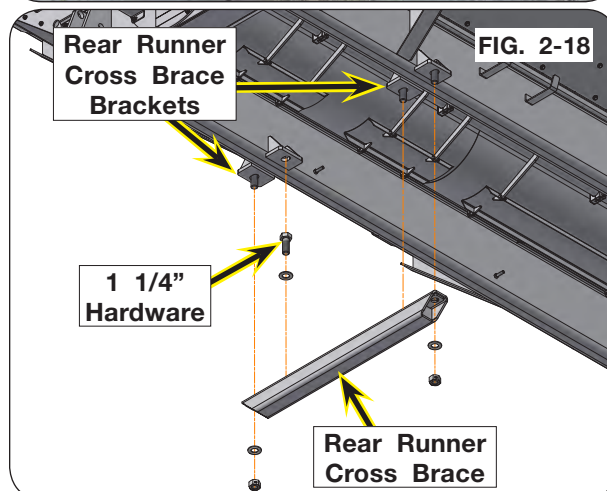
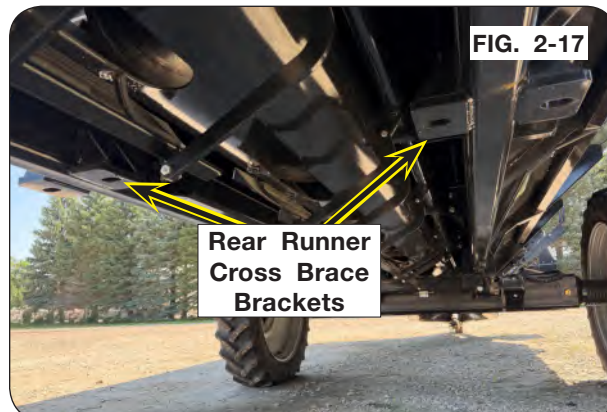
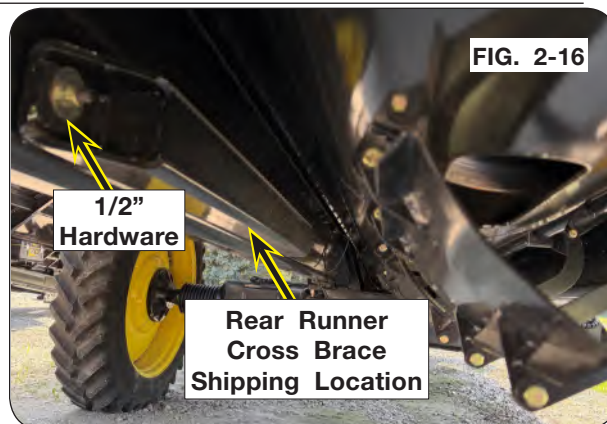
WARNING

- FALLING OR LOWERING EQUIPMENT CAN CAUSE SERIOUS INJURY OR DEATH. KEEP EVERYONE AWAY FROM EQUIPMENT WHEN SUSPENDED, RAISING, OR LOWERING.
- 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 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 100 LBS. SPECIFIC LOAD RATINGS FOR INDIVIDUAL LOADS WILL BE GIVEN AT THE APPROPRIATE TIME IN THE INSTRUCTIONS.

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



2. On the left-hand rear of the cart, support rear runner cross brace weldment (298198G/R/BM) with a safe lifting device rated for 100 lbs. (FIG. 2-16)
3. Remove and discard 1/2"-13UNC locknuts (94981) and 1/2" fender washers (94005) from the runner cross brace (FIG. 2-16)
4. Retrieve 1 1/4"-7UNC x 3 1/4" capscrews (9390-214), 1 1/4" flat washers (9405-128), and 1 1/4"-7UNC locknuts (93476) from toolbox. (FIGS. 2-17 & 2-18)
5. Lift cross brace into place with a safe lifting device rated for 100 lbs. (FIGS. 2-17 & 2-18)
6. Attach runner cross brace to rear cross brace brackets using 1 1/4" hardware. (FIG. 2-18)
7. Torque 1 1/4" hardware to 850 ft.-lbs.



Driveline Installation

Driveline Storage

Storage brackets are located on the right-hand side of the cart.

1. Using a safe lifting device rated for 100 lbs., secure the PTO and bracket assembly (276629B) to the right-hand rear brackets as shown in figure 2-19 for extended transporting or seasonal storage.
2. Using a safe lifting device rated for 100 lbs., secure the driveline assembly (9010203 OR 9010206) to the right-hand front brackets for extended transporting or seasonal storage. (FIG. 2-20)

Fig. 2-19

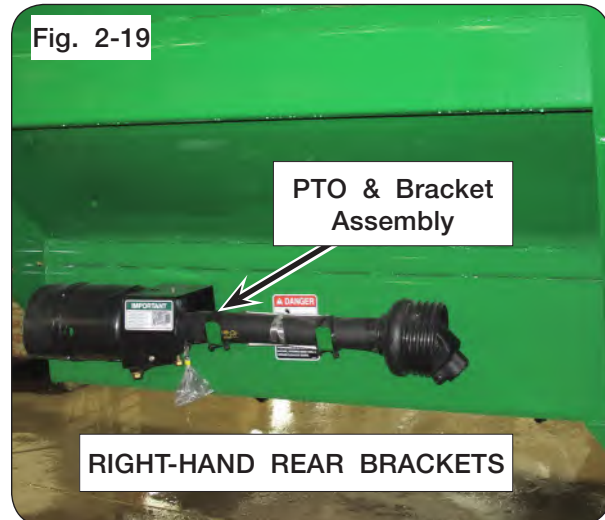
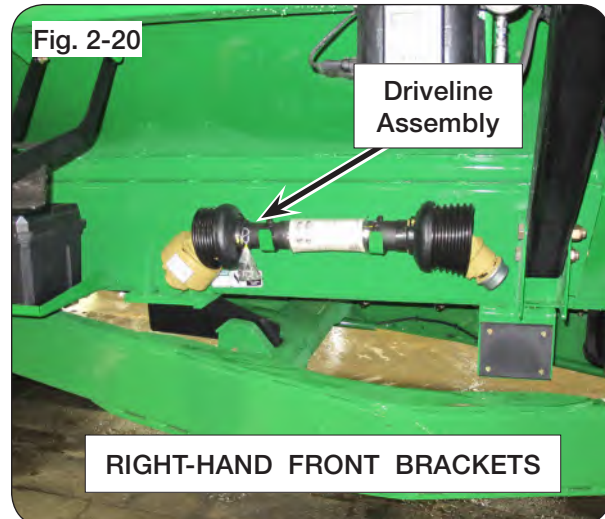


Fig. 2-20



Driveline Installation

Driveline Set Up



- **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 ENTANGLED IN A ROTATING DRIVELINE.**

IMPORTANT

- *Prior to hitching grain cart to tractor drawbar, drawbar MUST be set at 20" from end of PTO shaft to center of hitch pin. Dimension (A) in picture. Failure to do so will result in driveline damage. (FIG. 2-21)*
1. Clean and grease the implement gearbox splined shaft. Gearbox shaft guard has access doors for greasing, installing and removing of driveline.
(Continued on next page)

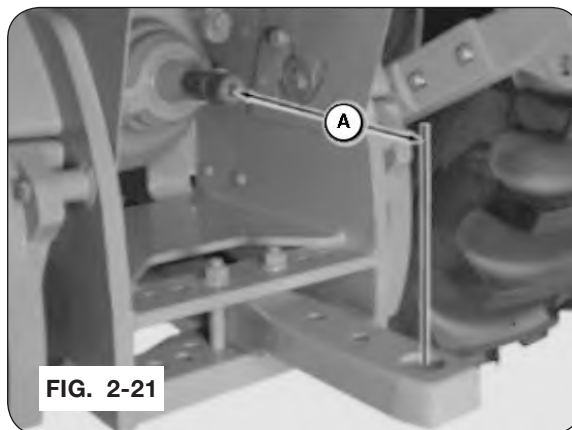


FIG. 2-21

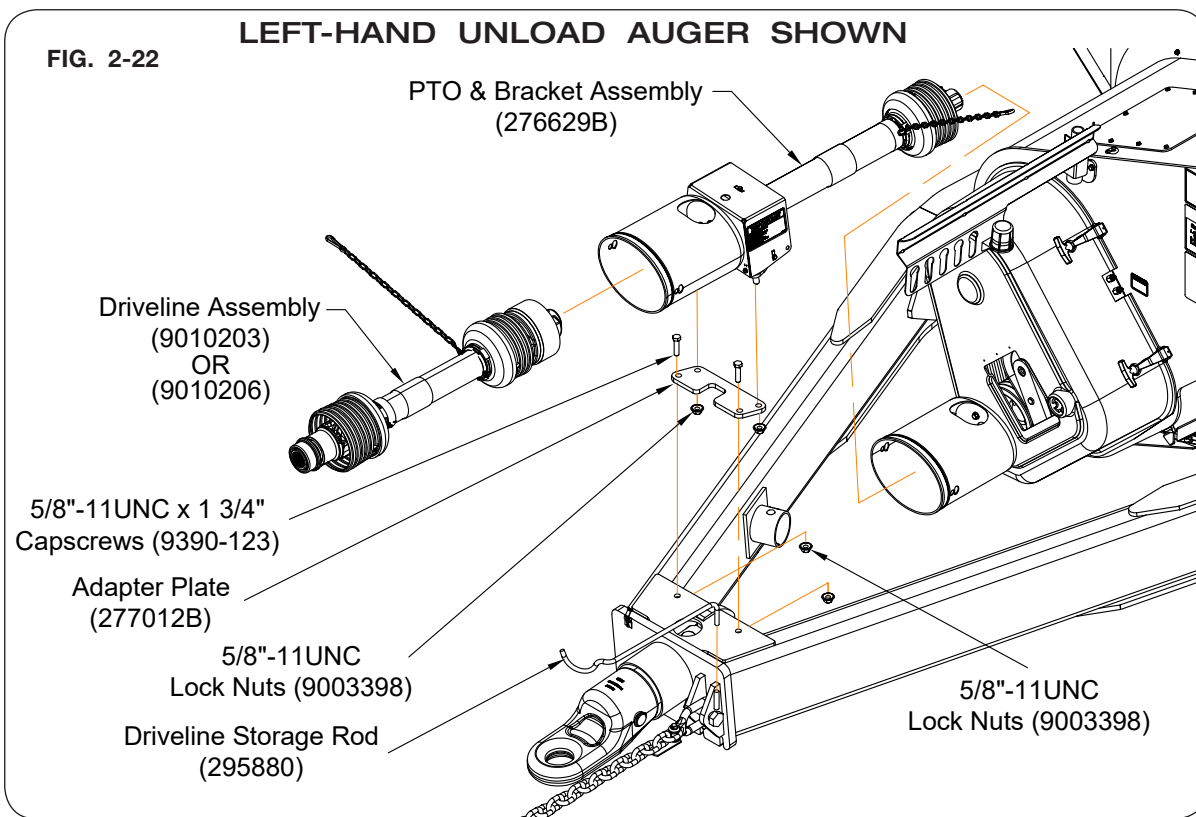
Driveline Installation (continued)

Driveline Set Up (continued)

2. Attach the adapter plate (277012B) to the tongue with 5/8"-11UNC x 1 3/4" capscrews (9390-123) and 5/8"-11UNC lock nuts (9003398). (FIG. 2-22)
3. Torque 5/8" hardware to 125 ft.-lbs. (FIG. 2-22)

NOTE: Adapter plate offset needs to match auger discharge. Flip adapter plate for Right-Hand unload versus Left-Hand unload. (FIG. 2-22)

4. Using a safe lifting device rated for 100 lbs., attach the PTO and bracket assembly (276629B) to the auger gearbox splined shaft. (FIG. 2-22)
5. Attach bracket assembly to adapter plate with 5/8"-11UNC x 1 3/4" capscrews (9390-123) and 5/8"-11UNC lock nuts (9003398). (FIG. 2-22)
6. Torque 5/8" hardware to 125 ft.-lbs. (FIG. 2-22)
7. Pivot driveline storage rod (295880) 90° forward from the tongue. (FIG. 2-22)
8. Using a safe lifting device rated for 100 lbs., slide the driveline assembly (9010203 OR 9010206) cut-out clutch end onto the PTO and bracket assembly (276629B) splined shaft end until retaining groove of PTO shaft aligns with hole in PTO yolk. (FIG. 2-22)



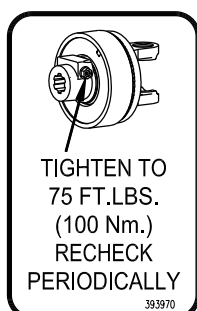
Driveline Installation (continued)

Driveline Set Up (continued)

9. For GKN Walterscheid cut out clutch, insert clamping cone into threaded hole, hand tighten. (FIG. 2-23)

For Benzi cut out clutch, insert socket head bolt into lock washer, collar threaded hole, and threaded insert, hand tighten. (FIGS. 2-24 and 2-25)

10. Torque clamping cone/socket head bolt to 75 ft.-lb. (FIGS. 2-23 and 2-24)



NOTE: See MAINTENANCE section - PTO Shaft and Clutch - for further instructions.

11. Attach the anti-rotation chains on each driveline and verify that each of the shields can turn one revolution. (FIG. 2-22)
12. Place the driveline assembly onto the drive-line storage rod.

Fig. 2-23 Walterscheid Cut Out Clutch

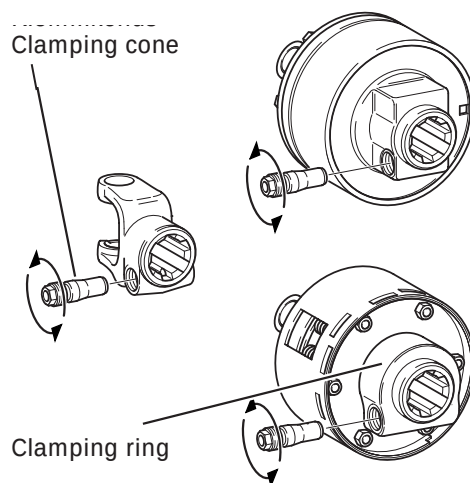


Fig. 2-24 Benzi Cut Out Clutch

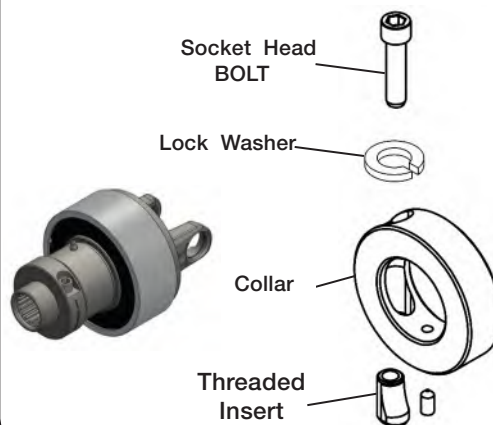
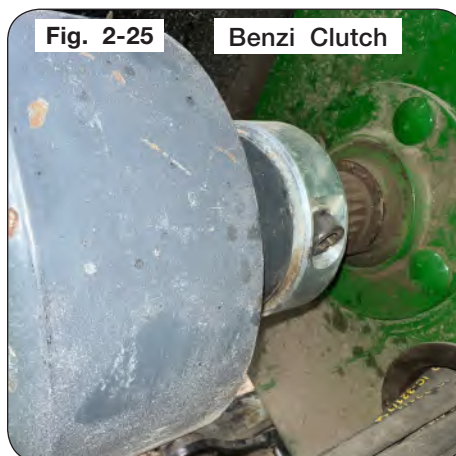


Fig. 2-25 Benzi Clutch



Auger Set Up

WARNING

- HIGH-PRESSURE FLUIDS CAN PENETRATE THE SKIN AND CAUSE SERIOUS INJURY OR DEATH. LEAKS OF HIGH-PRESSURE FLUIDS MAY NOT BE VISIBLE. USE CARDBOARD OR WOOD TO DETECT LEAKS IN THE HYDRAULIC SYSTEM. SEEK MEDICAL TREATMENT IMMEDIATELY IF INJURED BY HIGH-PRESSURE FLUIDS.
- RELIEVE THE HYDRAULIC SYSTEM OF ALL PRESSURE BEFORE ADJUSTING OR SERVICING. SEE THE HYDRAULIC POWER UNIT OPERATOR'S MANUAL FOR PROPER PROCEDURES.
- HYDRAULIC SYSTEM MUST BE PURGED OF AIR BEFORE OPERATING TO PREVENT SERIOUS INJURY OR DEATH.
- EYE PROTECTION AND OTHER APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT MUST BE WORN WHILE SERVICING IMPLEMENT.
- KEEP HANDS CLEAR OF PINCH POINT AREAS.
- MOVING PARTS CAN CRUSH AND CUT. KEEP AWAY FROM MOVING PARTS.

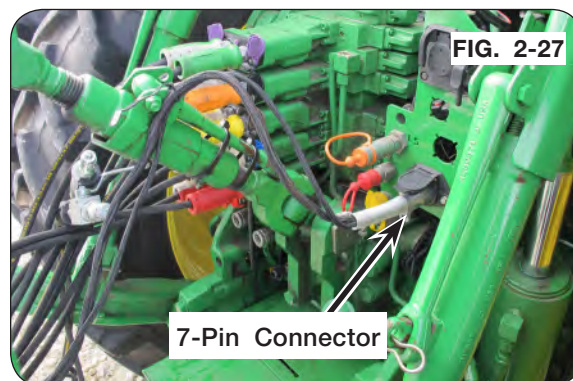
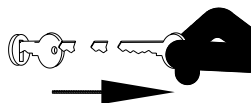
Auger Shipping Stop Removal

1. Park the empty unit on a firm, level surface. Block the machine to keep it from moving. Set the tractor's parking brake.

2. Close the vertical cleanout door. (FIG. 2-26)

NOTE: Auger hydraulic functions will not operate without power and ground via the 7-pin connector. (FIG. 2-27)

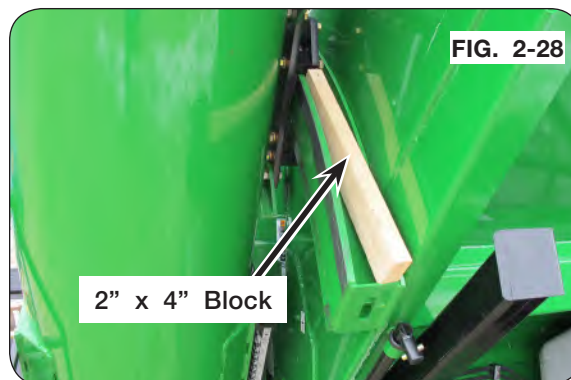
3. Use tractor SCV to pivot auger up.
4. Shut-off the engine and remove the ignition key.



Auger Set Up (continued)

Auger Shipping Stop Removal (continued)

5. Remove and discard the wood block from the auger pivot. (FIG. 2-28)



6. Extend spout cylinder before removing the shipping stop. (Figs. 2-29 and 2-30)
7. Support spout to prevent movement while removing the shipping stop from the spout tilt cylinder. (Figs. 2-29 and 2-30)

IMPORTANT

- *Cylinder stop must be removed before operating the auger spout. Failure to remove stop will result in damage to the cylinder and spout.*
8. Restart engine and cycle auger pivot all the way up and down to ensure movement is free.
 9. 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.



Auger Set Up (continued)

Auger Transport Positions

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.
- TIPPING OR MOVEMENT OF THE MACHINE CAN CAUSE SERIOUS INJURY OR DEATH. BE SURE THE MACHINE IS SECURELY BLOCKED.
- KEEP HANDS CLEAR OF PINCH POINT AREAS.
- EYE PROTECTION AND OTHER APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT MUST BE WORN WHILE SERVICING IMPLEMENT.
- FALLING OR LOWERING EQUIPMENT CAN CAUSE SERIOUS INJURY OR DEATH. KEEP EVERYONE AWAY FROM EQUIPMENT WHEN SUSPENDED, RASING, OR LOWERING.
- SHARP EDGES ON THE MACHINE CAN CAUSE INJURY. BE CAREFUL WHEN WORKING AROUND THE MACHINE.

IMPORTANT

- Upper auger must be in Road Transport Position for public road travel.
- Position vertical auger and spout within hopper width for public road travel.

NOTE: For Road Transport and Field Rest Position operation procedure, see “Auger Field Rest & Road Transport Position” in OPERATION section.

Auger transport rest bracket can be adjusted in two positions:

Road Transport
Position



Field Rest
Position



Upper Side Ladder Extension

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 IS RESTRICTED MOBILITY AND LIMITED EXIT PATHS WHEN WORKING INSIDE THE IMPLEMENT.
- NEVER ENTER A CART CONTAINING GRAIN. FLOWING GRAIN TRAPS AND SUFFOCATES VICTIMS IN SECONDS.
- DO NOT STAND ON LADDER OR FRAME UNLESS TRACTOR ENGINE IS TURNED OFF AND KEYS ARE REMOVED FROM THE IGNITION.

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

NOTE: Side ladder is a viewing ladder only and should not be used to enter the cart.

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. 2-35)
2. Using hardware from step 1, attach upper ladder extension to the higher set of holes to be in operating position. (FIG. 2-35, FIG. 2-36 & FIG. 2-37)
3. Torque hardware to 17 ft.-lbs.

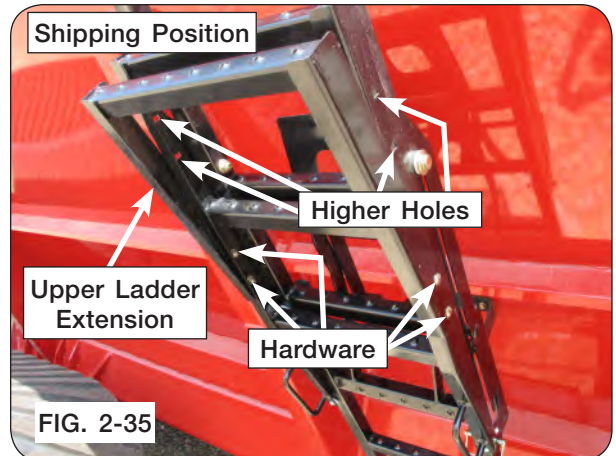
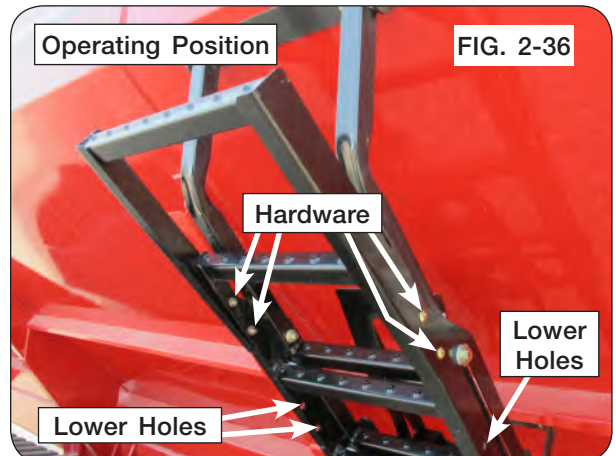
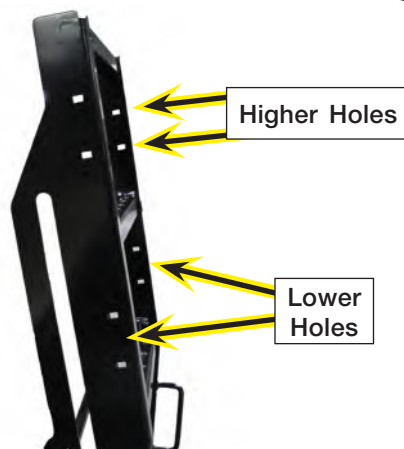


FIG. 2-37

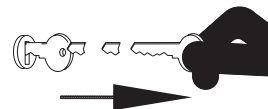


Move Lights to Operating Position

WARNING

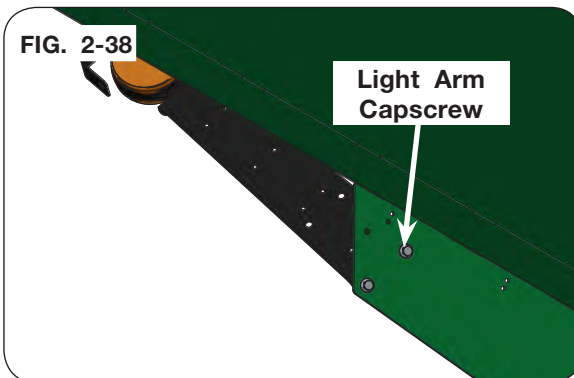
- FALLING OR LOWERING EQUIPMENT CAN CAUSE SERIOUS INJURY OR DEATH. KEEP EVERYONE AWAY FROM EQUIPMENT WHEN SUSPENDED, RAISING, OR LOWERING.
- KEEP HANDS CLEAR OF PINCH POINT AREAS.
- EYE PROTECTION AND OTHER APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT MUST BE WORN WHILE SERVICING IMPLEMENT.

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



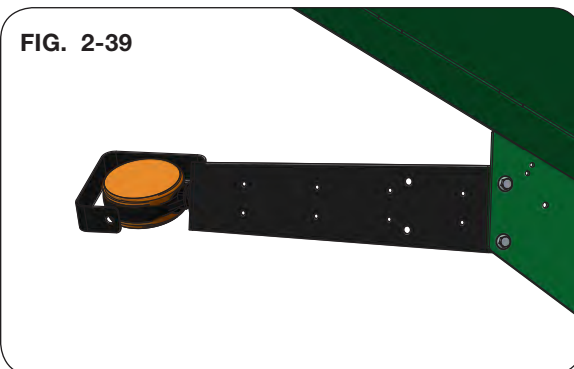
2. Remove upper light arm capscrew. (FIG. 2-38)

FIG. 2-38



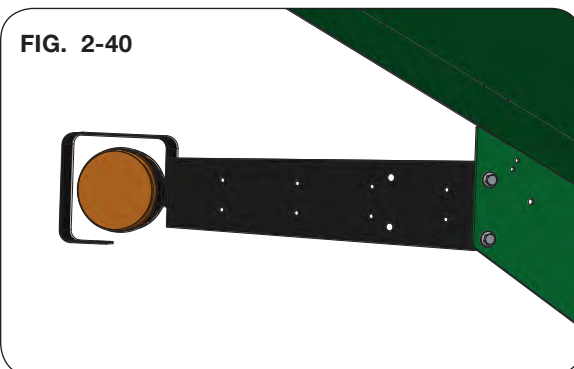
3. Loosen lower light arm capscrew and rotate the light arm downward. (FIG. 2-39)
4. Reinstall the upper light arm capscrew. (FIG. 2-39)
5. Torque both the upper and lower light arm capscrews to 17 ft.-lbs. (FIG. 2-39)

FIG. 2-39



6. Loosen amber light and light guard nut and rotate to vertical. Torque light guard nut to 17 ft.-lbs. (FIGS. 2-39 and 2-40)
7. Repeat process for the opposite side of the grain cart.

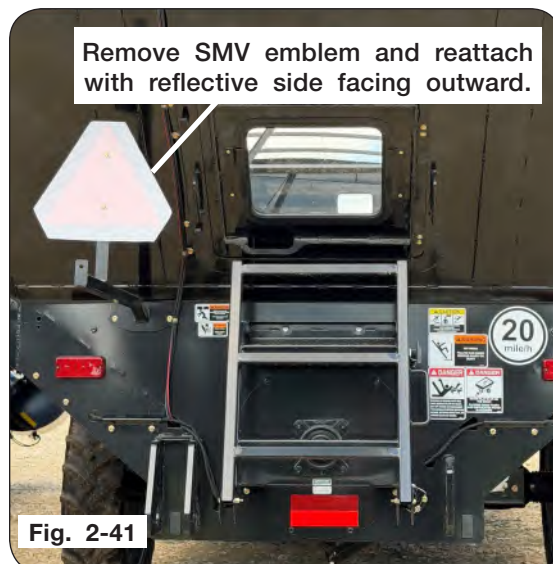
FIG. 2-40



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. 2-41)

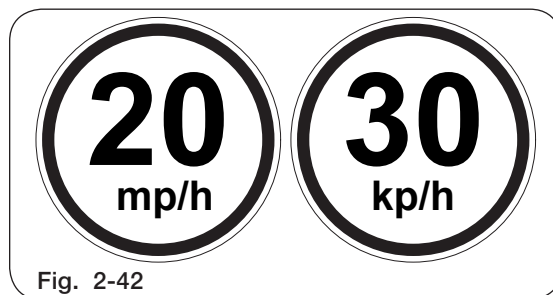
When reinstalling the SMV make sure that it is mounted with the wide part of the SMV at the bottom.



Ensure the front and rear SIS decals are clean and visible after shipping. (FIG. 2-42)

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

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



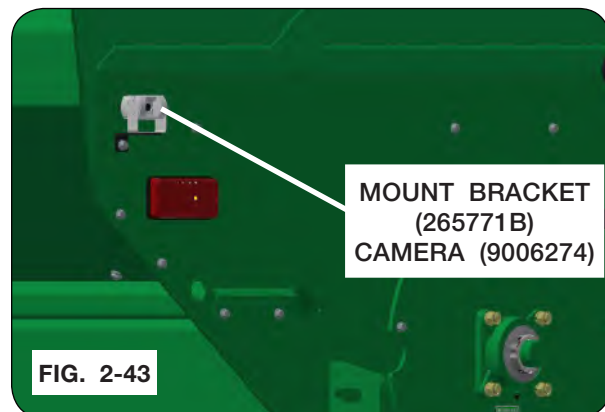
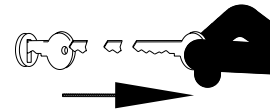
Video System Set-Up (Optional)

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

Rear Bracket Location

1. Park the unit on a firm, level surface. Block the machine to keep it from moving. Set the vehicle parking brake, shut off the engine and remove the ignition key.
2. Attach mount bracket (265771B) to the rear undercarriage plate, as shown in FIG. 2-43.
3. Assemble camera (9006274) to the camera mount bracket.
4. Connect the 65' cable wire (9004513) to the camera.
5. Route the cable down to the left-hand side of the runner and out the front of the cart. ENSURE THERE IS ENOUGH SLACK AT THE JOINTS TO PREVENT OVEREXTENDING THE WIRE WHEN FOLDING. Use zip ties (9000107) to attach the cable to the runner as necessary. (FIG. 2-43)



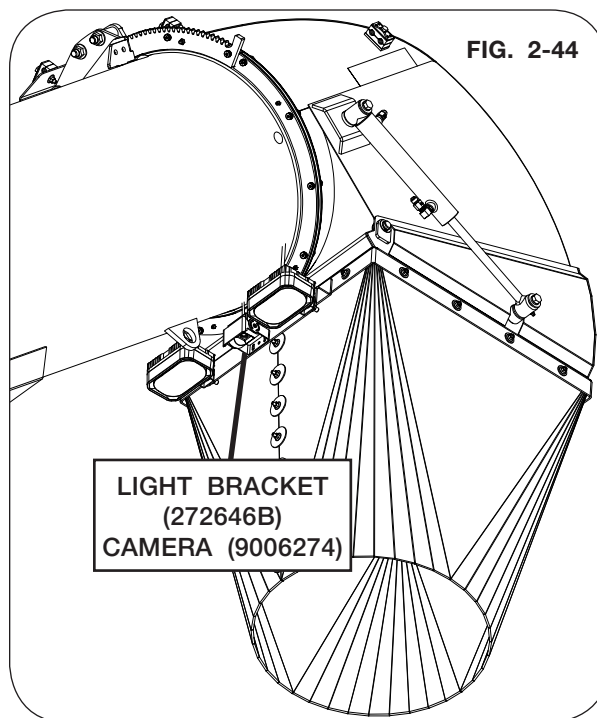
NOTE: If more cable length is needed, connect 16' camera cable (9007174).

Video System Set-Up (Optional)

Vertical Auger Work Light Location

1. Park the unit on a firm, level surface. Block the machine to keep it from moving. Set the vehicle parking brake, shut off the engine and remove the ignition key.
2. Assemble camera (9006274) to the light bracket (272646B), as shown in FIG. 2-44.
2. Connect the 65' cable wire (9004513) to the camera.
3. Route the cable down along the vertical auger the front of the cart. **ENSURE THERE IS ENOUGH SLACK AT THE JOINTS TO PREVENT OVEREXTENDING THE WIRE WHEN FOLDING.** Use zip ties (9000107) to attach the cable to the vertical auger tube as necessary. (FIG. 2-44)

NOTE: If more cable length is needed, connect 16' camera cable (9007174).



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 tension applied to the belts. To engage the tensioner use the belt tensioner handle, located on the front left-hand side of the grain cart, behind the first panel. Verify the belts are correctly aligned and are seated in both sheaves. If belt hangs over edge of sheave, detention idler, adjust and retention idler. (Fig. 2-45 and 2-46)

Rotate the handle downwards to engage tensioner. (Fig. 2-46)

NOTE: See MAINTENANCE section - V-Belt Alignment - for more details.



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

IMPORTANT

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

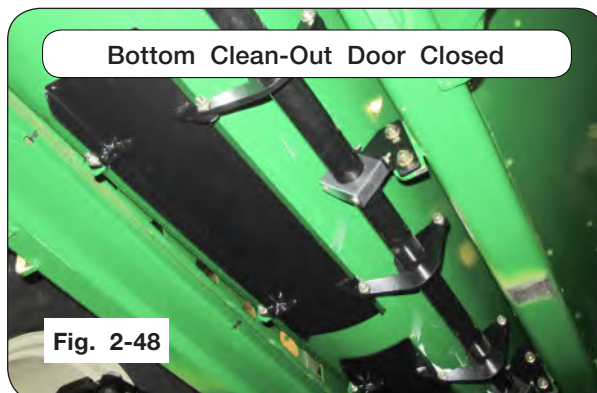
NOTE: The grain cart must have 12V power (blue wire) on the 7-pin plug. Without 12VDC, the auger fold and spout rotate will not operate.

Perform the clean-out door steps to prepare the cart for operation:

1. Close the vertical clean-out door. (Fig. 2-49)
2. Retrieve lynch pin (9005305) from toolbox for the horizontal clean-out doors and close clean-out doors. Refer to “Vertical & Horizontal Clean-Out Door Operation” in the OPERATION section. (Figs. 2-47 & 2-48)

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
7. Spout Tilt
8. Auger Startup & Shut-down
9. Tarp
10. Video System Camera (if applicable)
11. Scale (if applicable)



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FOR SCALE, TRACK, UHARVEST, ELECTRIC TARP, AND / OR WATER DELIVERY SYSTEM INFORMATION, PLEASE REFER TO THE INDIVIDUAL MANUALS.

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 track idler wheel nuts as specified in Equalizer® SP track manual (297550).
- ☐ Verify track has been aligned and is properly conditioned. (If applicable)
- ☐ Verify track grease pump reservoir is full. Refer to track auto grease pump instruction sheet (282986) for setting information.
- ☐ Lubricate all grease fittings and check gearbox oil level.
- ☐ Inspect cleanout door assembly for proper adjustment, refer to “Vertical & Horizontal Clean-Out Door Operation” in the OPERATION section.
- ☐ Test operation and functionality of work lights, flow door, flow door indicator, auger fold, auger pivot, spout rotate, spout tilt, tarp, rear access door, hydraulic jack stand and if equipped, rear drop hitch, scale, joystick, scale remote display, video system, and water delivery system.
- ☐ Verify all reflective decals are correctly located.
- ☐ Check SMV sign and SIS decals are clearly visible with the cart attached to the tractor and implement grain cart optional rear hitch.
- ☐ Verify transport lights are working properly. Check and follow all regulations before towing on a road or highway.
- ☐ Verify tractor drawbar height and length. See “Preparing Tractor” in this section.
- ☐ Verify rear drop hitch height. See “Rear Drop Hitch (Optional)” in this section.
- ☐ Verify PTO length, see “PTO Shaft Length” in MAINTENANCE section.
- ☐ Align and properly tension belts. See “Belt Tightener Adjustment” and “V-Belt Alignment” in MAINTENANCE section.
- ☐ Ensure screens over horizontal auger are in place and properly secured.
- ☐ Ensure all cleanout doors and rear access door are closed and latched.
- ☐ Ensure side and rear ladders are in storage position.
- ☐ Ensure transport chain is properly sized, installed and attached. See “Transport Chain Connection” in OPERATION section.
- ☐ Test run the augers. See “Auger Operation” in OPERATION section.

Preparing Tractor

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

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

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

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

The cart driveline is designed to attach to a tractor drawbar set to 20" from the end of PTO to center of drawbar hitch pin (per ASABE standard AD6489-3). See your tractor's operator manual for drawbar position when operating PTO and drawbar position adjustment procedure. If this is not done, the driveline on the cart will be damaged.

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.

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.

NOTE: The grain cart comes with a CAT 5 hitch. The tractor drawbar must also be a CAT 5 with a 2 3/4" diameter hitch pin.

CAUTION

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

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

Preparing Cart

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

Hardware

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

Pivot Pins

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

Hitch

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

Rear Drop Hitch (Optional)

Check rear drop hitch wear plates for damage and wear. Check that the hitch pin is in place and in good condition. Replace any worn, damaged or missing hitch pin.

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.

Hitching to Tractor

Drawbar Connection

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

The cart is equipped standard with a single tang hitch. A 2 3/4" hitch pin (CAT 5) diameter must only be used with a clevis-type (hammer strap) tractor drawbar.

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

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.

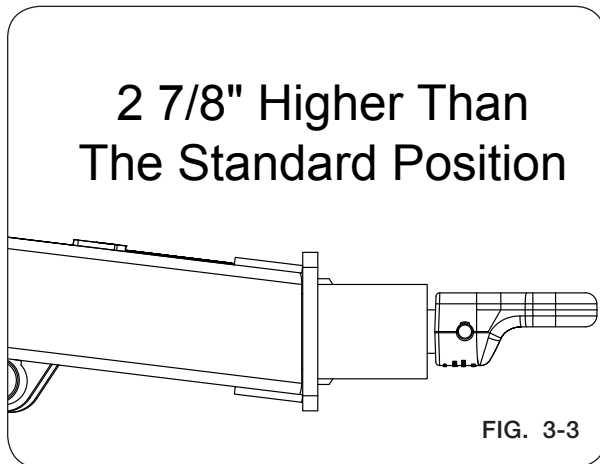
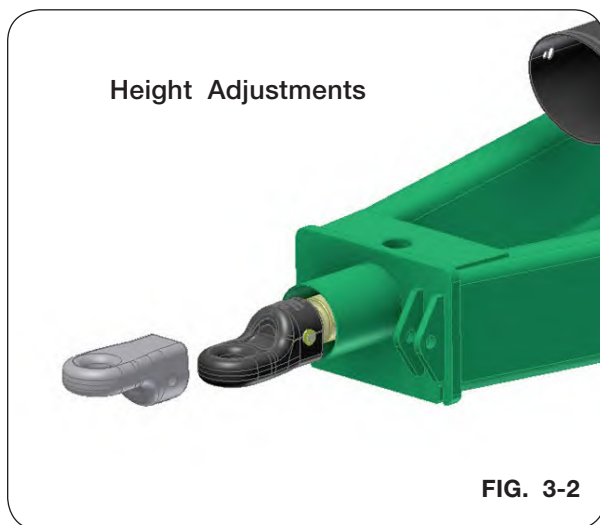
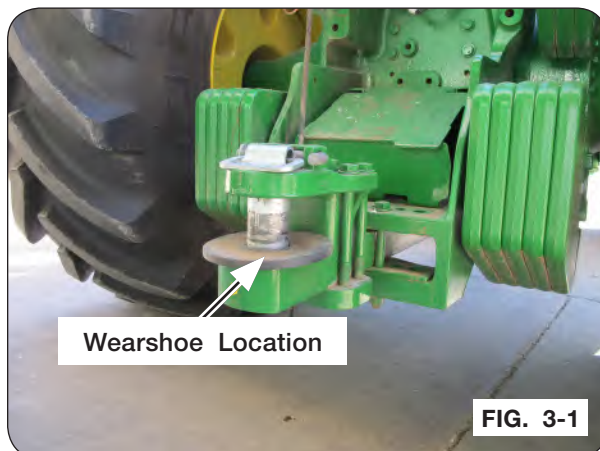
Before inserting hitch pin, apply wearshoe (281899 - CAT 5) between tractor hitch and grain cart hitch (Figure 3-1).

WARNING

- CRUSHING CAN CAUSE SERIOUS INJURY OR DEATH. DO NOT STAND BETWEEN TOWING VEHICLE AND IMPLEMENT WHEN HITCHING. ALWAYS ENGAGE PARKING BRAKE AND STOP ENGINE BEFORE INSERTING HITCH PINS OR SECURING LATCHES.

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

NOTE: Hitch tang can be flipped providing a drawbar connection height difference of 2 7/8" (Figure 3-2 & 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.



Hitching to Tractor (continued)

Hydraulic Jack Usage

WARNING

- HIGH-PRESSURE FLUIDS CAN PENETRATE THE SKIN AND CAUSE SERIOUS INJURY OR DEATH. LEAKS OF HIGH-PRESSURE FLUIDS MAY NOT BE VISIBLE. USE CARDBOARD OR WOOD TO DETECT LEAKS IN THE HYDRAULIC SYSTEM. SEEK MEDICAL TREATMENT IMMEDIATELY IF INJURED BY HIGH-PRESSURE FLUIDS.
- TIPPING OR MOVEMENT OF THE MACHINE CAN CAUSE SERIOUS INJURY OR DEATH. BE SURE MACHINE IS SECURELY BLOCKED.
- MOVING PARTS CAN CRUSH AND CUT. KEEP AWAY FROM MOVING PARTS.

IMPORTANT

- *After cart is hitched to tractor, attach hydraulic hoses to tractor and retract hydraulic cylinder to store hydraulic jack between the frame rails. (FIG. 3-4)*

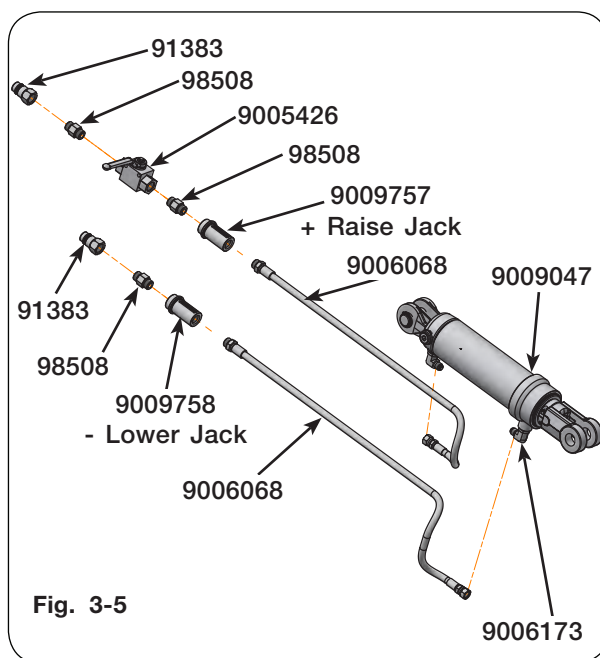


Use hydraulic jack to support an empty grain cart, never a loaded grain cart. Always have a loaded grain cart hooked to tractor.

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

Hitching to Tractor (continued)

1. Remove hoses from storage slots.
2. Attach (+) black hose coupler to the extend SCV port and the (-) black hose coupler to the retract SCV port on the tractor.
3. Open valve to allow hydraulic flow.
4. Use tractor hydraulic SCV 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, relieve pressure on couplers (see tractor operators manual for procedure) and then disconnect hose couplers from tractor.
7. Place hose couplers into storage caddy. Be sure to route hoses clear of PTO driveline during operation.
8. Check for leaks.



Hitching to Tractor (continued)

Transport Chain Connection



CAUTION

- ALWAYS USE TRANSPORT CHAIN WHEN TRANSPORTING IMPLEMENTS. FAILURE TO USE A TRANSPORT CHAIN COULD CAUSE PERSONAL INJURY IF CART BECOMES DISENGAGED.
- REPLACE TRANSPORT CHAIN IF ANY LINK OR END FITTING IS BROKEN, STRETCHED, DAMAGED OR NOT FUNCTIONING. DO NOT WELD TRANSPORT CHAIN.
- THE STANDARD TRANSPORT CHAIN IS DESIGNED ONLY FOR AN EMPTY GRAIN CART DURING ROAD TRAVEL.
- USE ONLY AN UNVERFERTH ASABE TRANSPORT CHAIN WITH A WEIGHT RATING EXCEEDING THE GROSS COMBINED WEIGHT OF ALL TOWED IMPLEMENTS. CONTACT YOUR UNVERFERTH DEALER FOR ADDITIONAL INFORMATION.

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

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

If the grain cart has the rear hitch installed, the standard transport chain must be replaced with (9010398) 80,000 LBS. transport chain. Also, spacer bushing (299224) must be installed between the two tongue plates and through the (9010398) transport chain. (FIG. 3-6)

The 80,000 LBS. transport chain is rated for the empty grain cart plus the rear hitch capacity of 20,000 LBS.

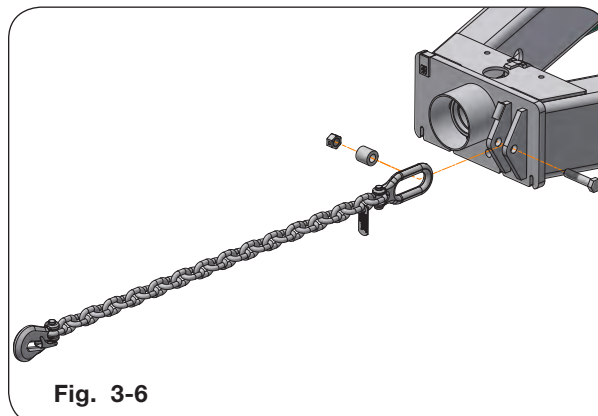


Fig. 3-6

Hitching to Tractor (continued)

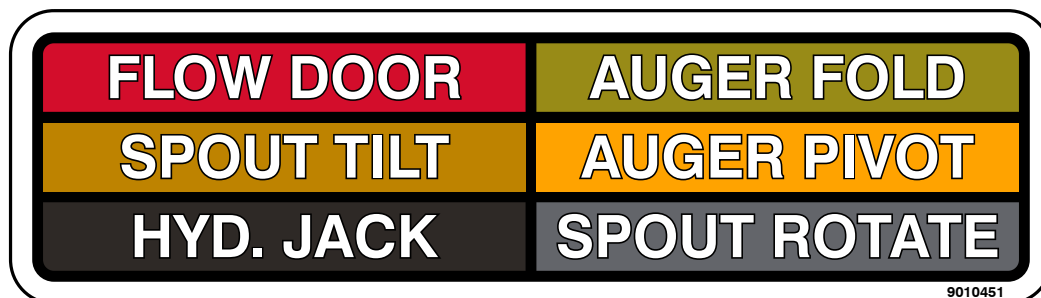
Hydraulic Connections

Clean hydraulic hose couplers before connecting to the tractor. For convenience, this unit is equipped with color-coded hose grips attached to the hydraulic hoses. This will help in identifying the hose function and correct hook up. (FIGS. 3-7 & 3-8)

(+ extend port) and (- retract port) is indicated on the hose grip.

NOTE: Hydraulic hose grip color may not match the tractor SCV color.

Hose Grip Color	 Function	 Function
Red	Flow Door Open	Flow Door Close
Yellow	Spout Tilt Out	Spout Tilt In
Gray Joystick (Optional)	Spout Rotate Rearward or EOH Block Pressure	Spout Rotate Forward or EOH Block Return
Green	Auger Unfold	Auger Fold
Orange	Auger Pivot Up	Auger Pivot Down
Black	Jack Raise	Jack Lower
Blue (Optional)	Water Pump Pressure	Water Pump Return



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 pivot 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. Extend hydraulic 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. 3-7)

Fig. 3-7

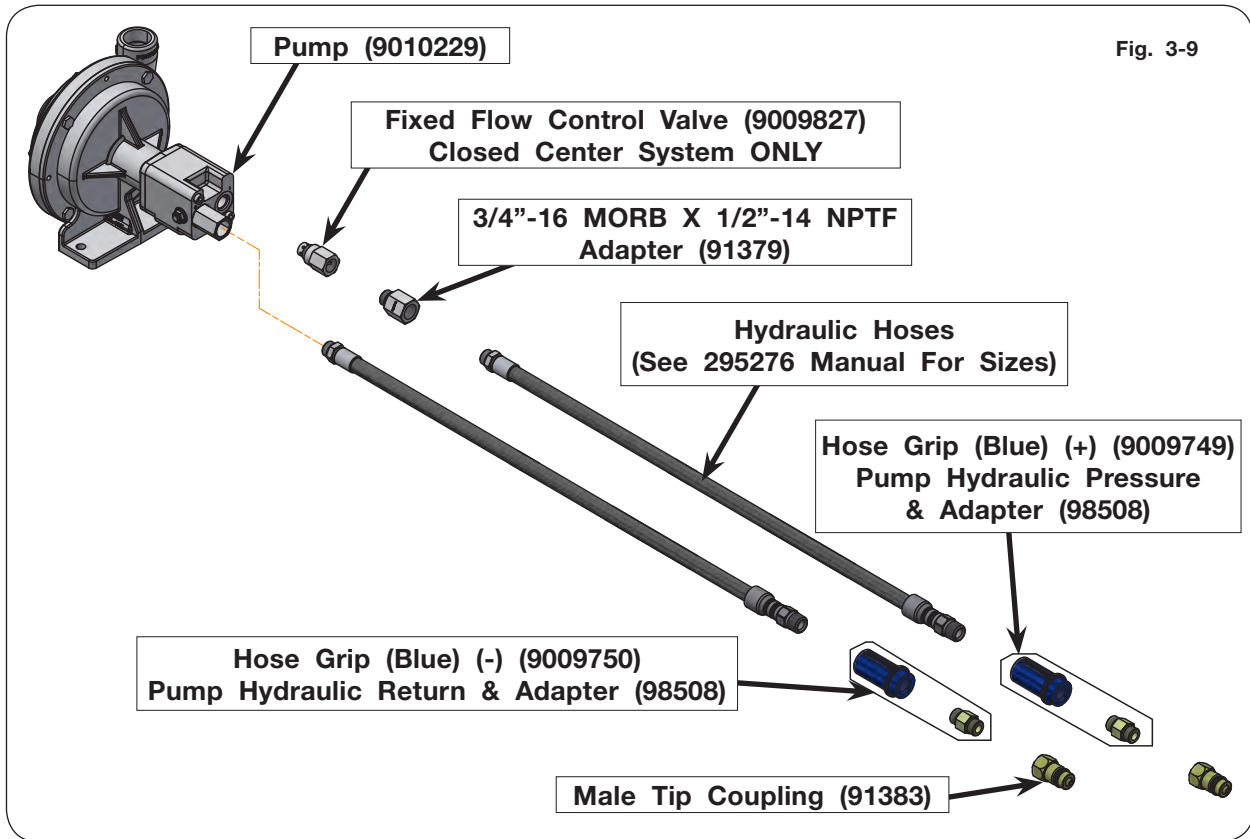


Fig. 3-8



Hitching to Tractor (continued)

Hydraulic Connections For Optional Water Delivery System



Hitching to Tractor (continued)

Electrical Connections

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

NOTE: 7-pin connector must be plugged into the tractor with power to the center pin for the spout system to operate.

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

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

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

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

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

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

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

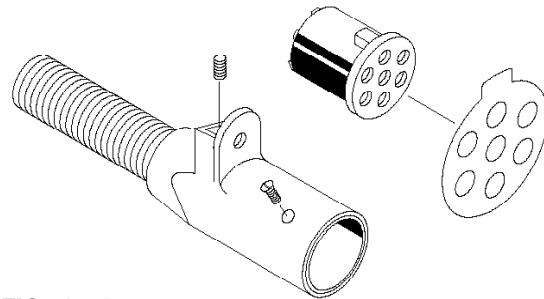


FIG. 3-10

Hitching to Tractor (continued)

Towing

Ensure that the towing vehicle has adequate weight and braking capacity to tow this implement. See the towing vehicle manual for towing capacity. Never tow a loaded grain cart over public roads.

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

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

The PTO drive shaft must be properly attached to the tractor during transport. See “Driveline Installation” in SET UP section and “PTO Shaft and Clutch” in MAINTENANCE section before connecting the PTO drive shaft to the tractor. If PTO cannot be connected, see MAINTENANCE section for proper procedure to store the PTO.

The driveline storage rod must not be used for PTO transport.

Secure transport chain to tractor before towing.

CAUTION

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

IMPORTANT

- Upper auger must be in Road Transport Position for public road travel.
- Position vertical auger and spout within hopper width for public road travel.
- Remove and store the complete PTO before towing grain cart behind a delivery truck. Interference could occur when turning resulting in damage to PTO and cart.

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.

During transport, if the PTO shaft cannot be connected to the tractor, use safe lifting device rated for 100 lbs. to remove the PTO telescoping shaft and place in storage position. Damage to frame and driveline if PTO is not placed on storage brackets.



FIG. 3-11

Road Transport
Position Shown

Auger Operation



DANGER

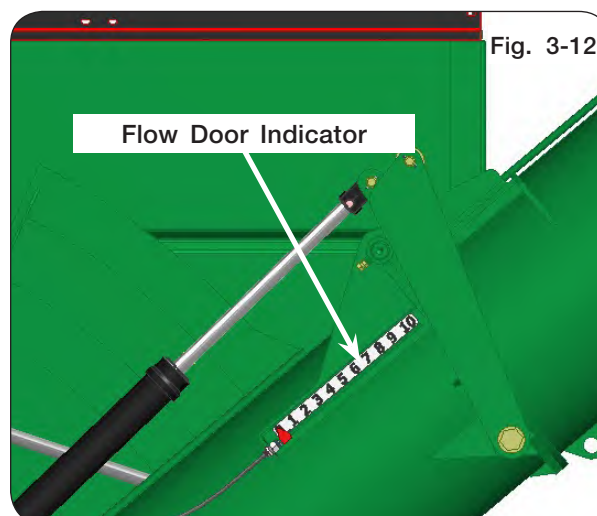
- ELECTROCUTION WILL CAUSE SERIOUS INJURY OR DEATH. ELECTROCUTION CAN OCCUR WITHOUT DIRECT CONTACT. KEEP AWAY FROM ALL ELECTRICAL LINES AND DEVICES.



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, AND THAT ALL SAFE WORKPLACE PRACTICES ARE FOLLOWED. THERE IS RESTRICTED MOBILITY AND LIMITED EXIT PATHS WHEN WORKING INSIDE THE IMPLEMENT.

1. Before loading cart or operating auger, verify that the flow control door is closed.
2. Choose an area free from obstructions and unfold auger into unloading position. Allow sufficient time for the cylinder to fully engage the two augers and over-center latch to fully engage.
3. Engage PTO at low engine RPM, then increase engine RPM until 1000 PTO RPM is reached.



IMPORTANT

- Operating the PTO at less than 1000 RPM can result in damage to the PTO and driveline components in addition to excessive auger wear and cart vibration.
4. Open flow control door to desired unloading rate. Numbers on the auger tube provide a point of reference for operator convenience. (FIG. 3-12)

Auger Operation (continued)

5. To slow or stop grain flow, close flow door, do not reduce tractor RPM. Close flow door fully when unloading is complete.

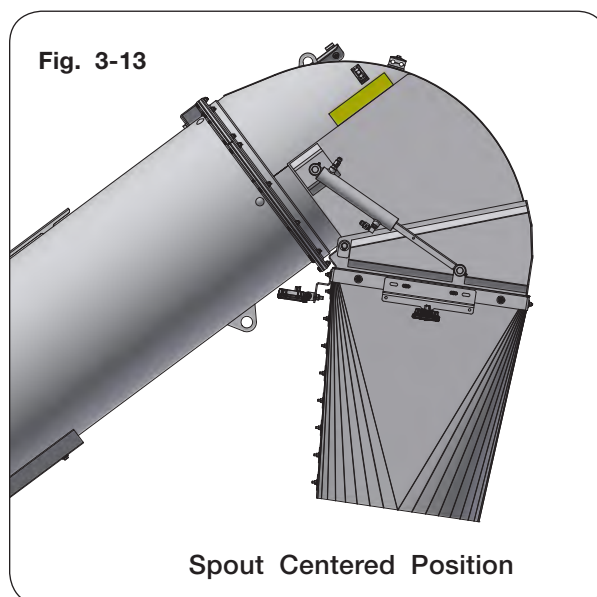
NOTE: If an overload occurs, see “Auger Overload Procedure.”

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.

6. When auger is empty, reduce PTO rpm to idle, and stop PTO.
7. After PTO has come to a complete stop, completely extend rotate spout cylinder as shown in FIG. 3-13.

NOTE: Auger can fold regardless of spout location.



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.

Do not operate the PTO with the auger folded.

Actuate the auger fold circuit to fully unfold / fold the auger. When unfolding auger, ensure the circuit is actuated long enough for the over-center link to fully engage. (FIG. 3-14)

Always fold auger into road transport position or field rest position when auger is not in use. (FIG. 3-14)

NOTE: Optional joystick has a double tap feature, which allows the operator to quickly double tap auger unfold or auger fold buttons to automatically operate it for a set time. If the unfold / fold 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.



Auger Operation (continued)

Auger Field Rest & Road Transport Position

WARNING

- TIPPING OR MOVEMENT OF THE MACHINE CAN CAUSE SERIOUS INJURY OR DEATH. BE SURE THE MACHINE IS SECURELY BLOCKED.
- KEEP HANDS CLEAR OF PINCH POINT AREAS.
- EYE PROTECTION AND OTHER APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT MUST BE WORN WHILE SERVICING IMPLEMENT.
- FALLING OR LOWERING EQUIPMENT CAN CAUSE SERIOUS INJURY OR DEATH. KEEP EVERYONE AWAY FROM EQUIPMENT WHEN SUSPENDED, RASING, OR LOWERING.
- MOVING OR ROTATING COMPONENTS CAN CAUSE SERIOUS INJURY OR DEATH. ALWAYS DISCONNECT POWER SOURCE BEFORE SERVICING. ENSURE SERVICE COVERS, CHAIN/BELT COVERS AND CLEAN-OUT DOOR(S) ARE IN PLACE AND SECURELY FASTENED BEFORE OPERATING MACHINE.
- SHARP EDGES ON THE MACHINE CAN CAUSE INJURY. BE CAREFUL WHEN WORKING AROUND THE MACHINE.

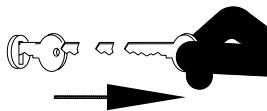


Auger Operation (continued)

Auger Field Rest & Road Transport Position (continued)

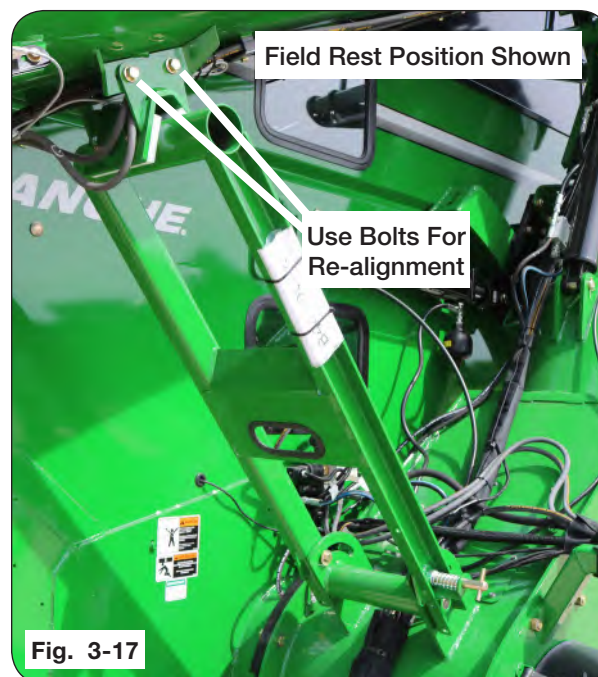
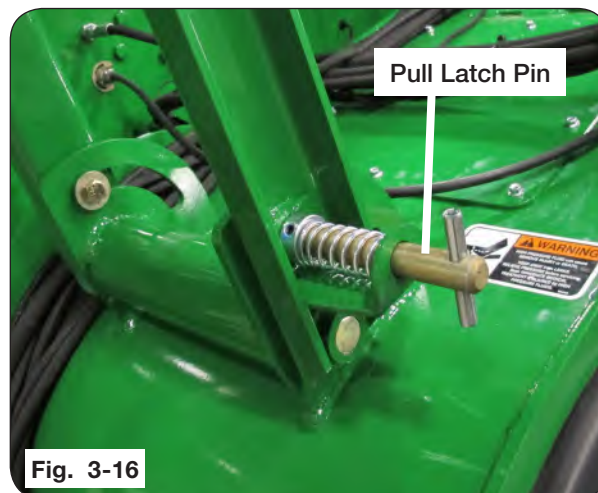
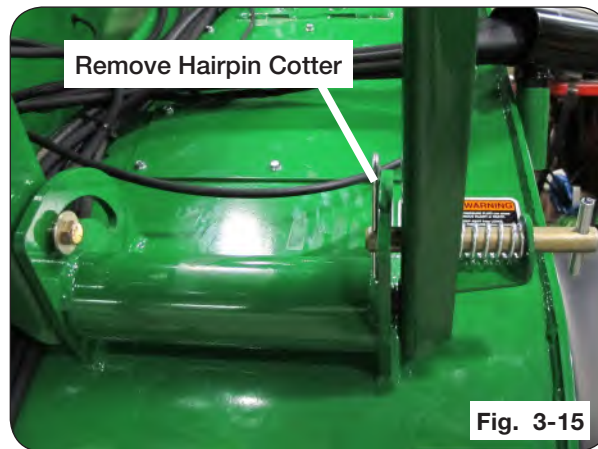
IMPORTANT

- Auger field rest is **ONLY** for use in the field. Auger must be folded to road transport position during road transport.
1. Park the empty unit on a firm, level surface. Block the machine to keep it from moving. Set the tractor's parking brake.
 2. Extend auger to the unload position. Shut-off tractor's engine and remove the ignition key.



2. Remove hairpin cotter from latch pin (Figure 3-15) and pull latch pin to disengage (Figure 3-16). Raise auger rest stand up to field position and release latch pin. Make sure the pin is engaged in the field position hole and re-install hairpin removed earlier in this step.
3. Fold auger back into position (Figures 3-17 and 3-18), making sure upper auger rest engages the rest tube.

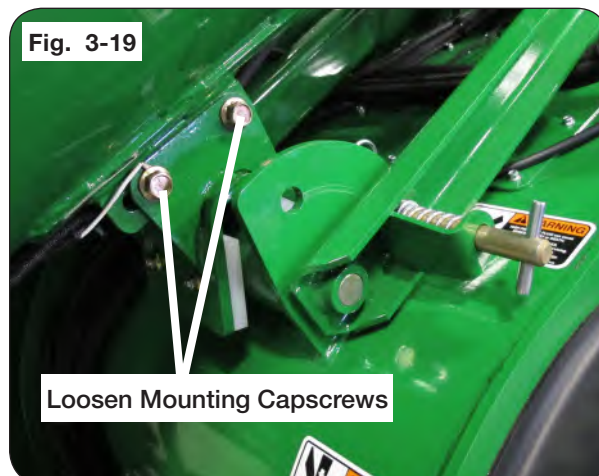
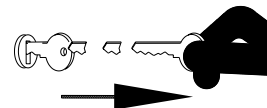
NOTE: Upper auger rest is factory adjusted. Bolts can be used for re-alignment of upper auger rest. See "Upper Auger Rest Adjustments" in this section.



Auger Operation (continued)

Upper Auger Rest Adjustments

1. Park the empty unit on a firm, level surface. Block the machine to keep it from moving. Set the tractor's parking brake, shut-off the engine, remove the ignition key and disconnect the PTO shaft.
2. Loosen mounting capscrews of upper auger rest. (FIG. 3-19)
3. Raise auger approximately 6" out of the lower auger rest and install cylinder stops on the fold cylinder to prevent the auger from lowering unexpectedly.
4. Position upper auger rest as needed so that it appears to be centered over the lower auger rest tube.
5. Hand tighten the mounting capscrews of the upper auger rest bracket.
6. Remove the cylinder stops installed in step 2, and lower the auger down into the lower rest.
7. Ensure the upper auger rest contacts the lower tube evenly.
8. Torque mounting capscrews to specification. See "Torque Chart" in MAINTENANCE section.



Auger Operation (continued)

Auger Overload Procedure

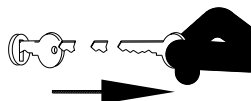
IMPORTANT

- 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. Shut-off the engine and remove the ignition key.

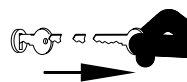


3. With the PTO off and driveline stopped, disengage the belt tensioner using the belt tensioner handle, this disengages the horizontal auger from the drivetrain. (FIG. 3-20)
4. Restart and engage the tractor PTO at low engine RPM.
5. Increase engine RPM until 1,000 PTO RPM is reached to empty the vertical auger.

IMPORTANT

- Operating the PTO at less than 1000 RPM can result in damage to the PTO and driveline components in addition to excessive auger wear and cart vibration.
6. Once vertical auger is empty, stop PTO.
 7. Shut-off the engine and remove the ignition key.
 8. With the tractor PTO off and driveline stopped, reengage the belt tensioner using the belt tensioner handle. Return handle to storage. (FIG. 3-21)
 9. Restart and engage the tractor PTO at low engine RPM.
 10. Increase engine RPM until 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.



Electric Over Hydraulic Operation (Optional)

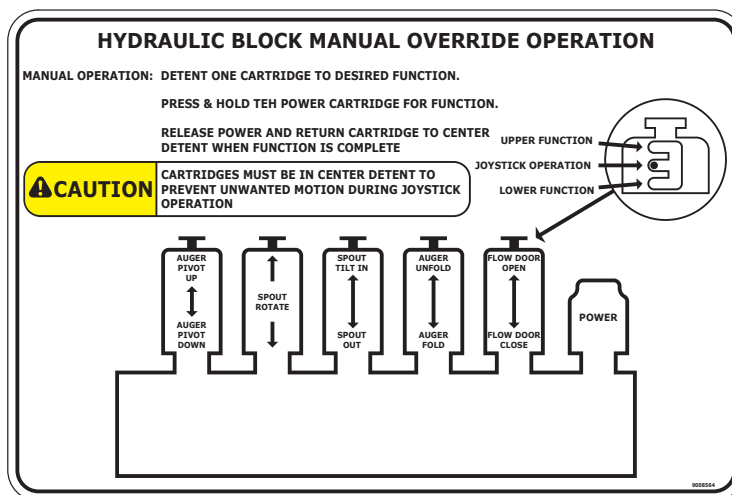
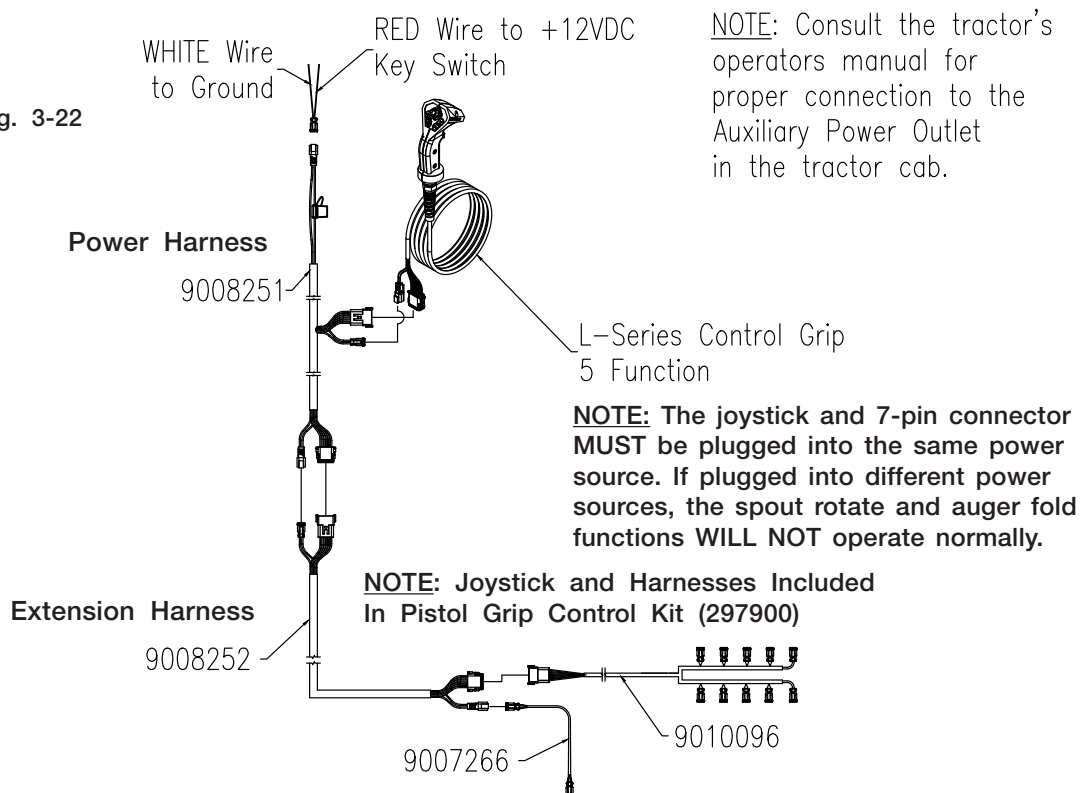
Electric/Hydraulic Connection

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. 3-22)
2. Connect the white wire from power harness (9008251) to ground. (Fig. 3-22)

Fig. 3-22



Electric Over Hydraulic Operation (Optional) (continued)

Auger Fold & Spout Operation

NOTE: Cartridge valves (9008416 and 9008463) must be locked in center position for joystick to function properly. Refer to “Manual Override for Opt. Electric Over Hydraulic System” in MAINTENANCE section.

1. 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.
2. 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.
3. 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. 3-23.

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.

4. To pivot spout OUT away from cart, push hat switch toward OUT. Hold the switch until desired position is achieved. See Fig. 3-23.
5. To pivot spout IN toward cart, push hat switch toward IN. Hold the switch until desired position is achieved. See Fig. 3-23.
6. To pivot the entire auger UP, press and hold the auger pivot UP button until the desired height is achieved. See Fig. 3-23.
7. To pivot the entire auger DOWN, press and hold the auger pivot DOWN button until the desired height is achieved. See Fig. 3-23.

NOTE: For steps 8 and 9, the directions are reversed for a right-hand unload cart.

8. To pivot the spout FORWARD, push hat switch RIGHT. Hold the switch until desired position is achieved. See Fig. 3-23.
9. To pivot the spout REARWARD, push hat switch LEFT. Hold the switch until desired position is achieved. See Fig. 3-23.

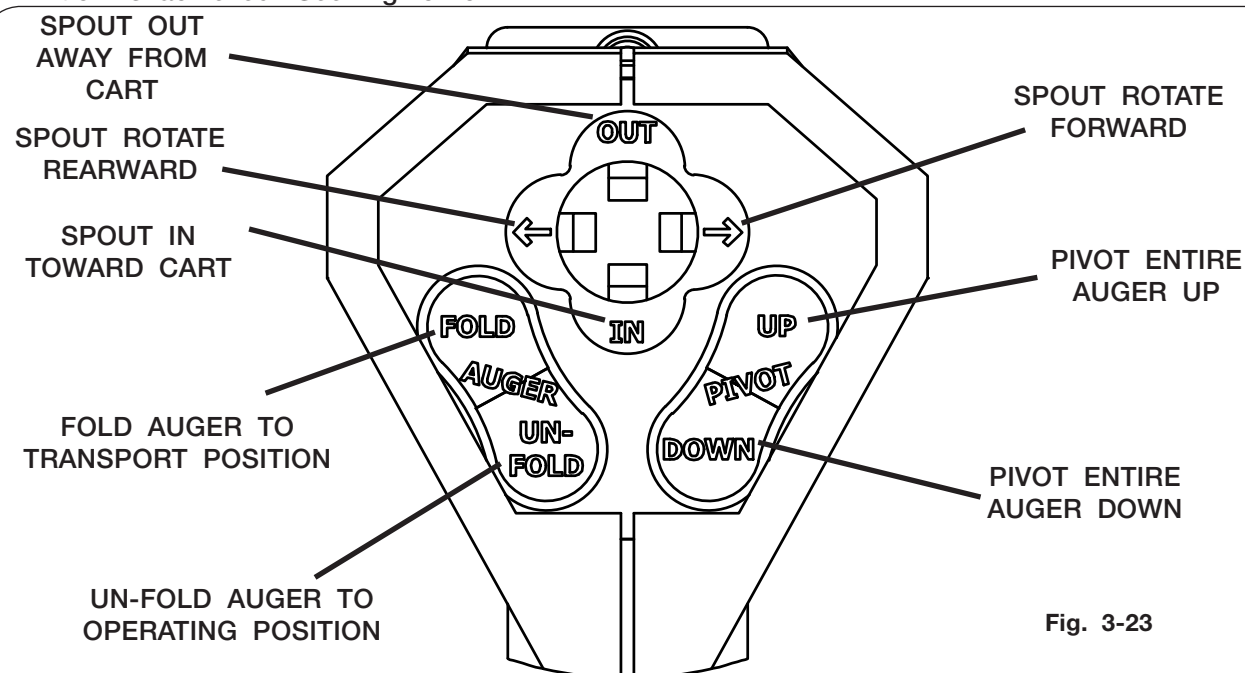


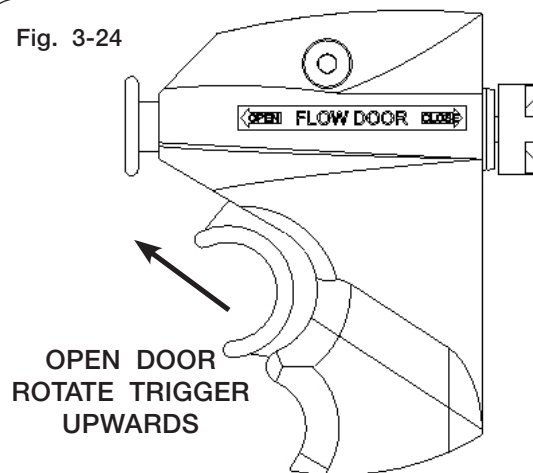
Fig. 3-23

Electric Over Hydraulic Operation (Optional) (continued)

Flow Door Operation

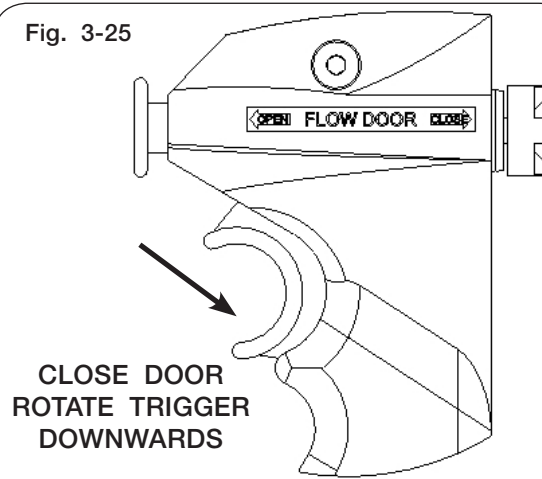
1. To open flow door, rotate the switch upwards. Observe flow door indicator to determine when to release trigger and stop flow door movement. See Fig. 3-24.

Fig. 3-24



2. 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. 3-25.

Fig. 3-25

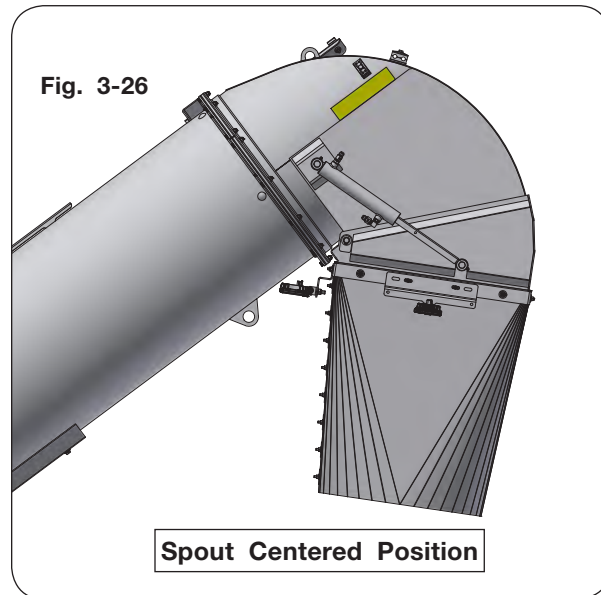


Electric Over Hydraulic Operation (Optional) (continued)

Auger Fold to Transport

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

1. To fold auger from operating position to transport position:
 - A. Press auger FOLD button on joystick.
 - B. Double tap FOLD button until upper auger is on field rest or in transport position.
2. Once unloading is complete, stop hydraulic flow. **ALWAYS** stop continuous detent when auger functions are not required or active.



Cart Loading Sequence

WARNING

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

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

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

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

Vertical & Horizontal Cleanout Door Operation

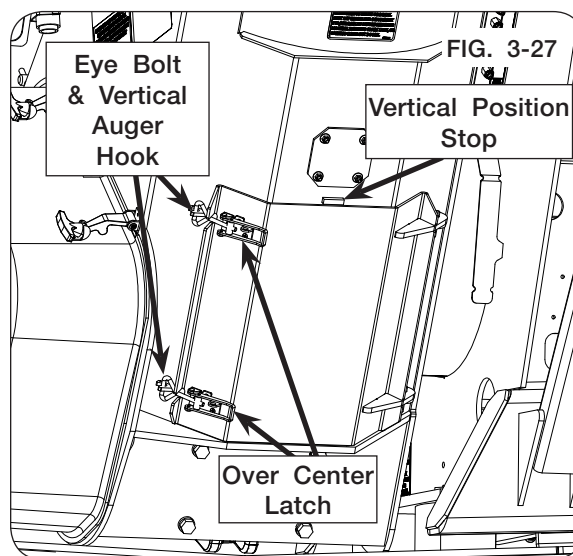
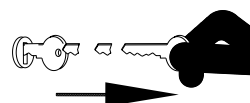
WARNING

- 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.
- SHARP EDGES ON THE MACHINE CAN CAUSE INJURY. BE CAREFUL WHEN WORKING AROUND THE MACHINE.

Closing Vertical Cleanout Door

1. Raise the vertical auger to highest position.
2. Park the empty unit on a firm, level surface. Block the machine to keep it from moving. Set the tractor's parking brake, shut-off the engine, remove the ignition key and disconnect the PTO shaft.
3. To completely close cleanout door, ensure the vertical auger cleanout door top edge clears the vertical position stop (key stop). (FIG. 3-27)
4. Attach eye bolt ends of over center latches to the hooks on the vertical auger. (FIG. 3-27)
5. Clasp the over center latch handles to lock the door in the closed position. (FIG. 3-27)
6. Inspect and verify cleanout door perimeter for gaps. Ensure all grain dust and filings are removed that may prevent the door from shutting completely.
7. If gaps are present, unclasp the over center latch and tighten eye bolt to improve door seal contact on the vertical auger.
8. Rehook eye bolt to vertical auger and clasp the over center latch.

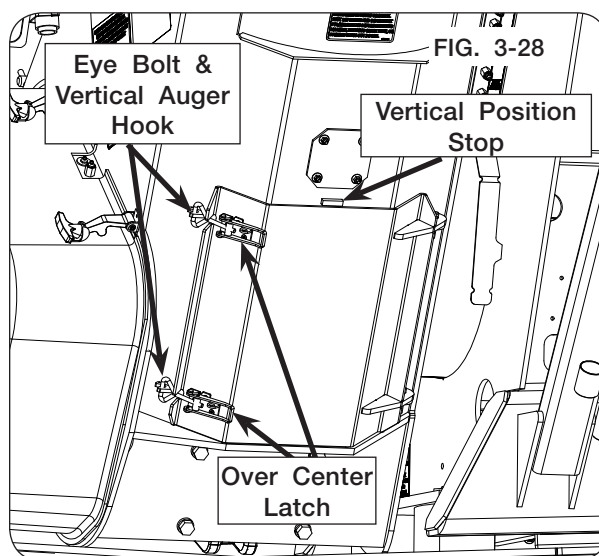
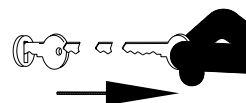
NOTE: Repeat steps 4 – 8, as necessary.



Vertical & Horizontal Cleanout Door Operation (continued)

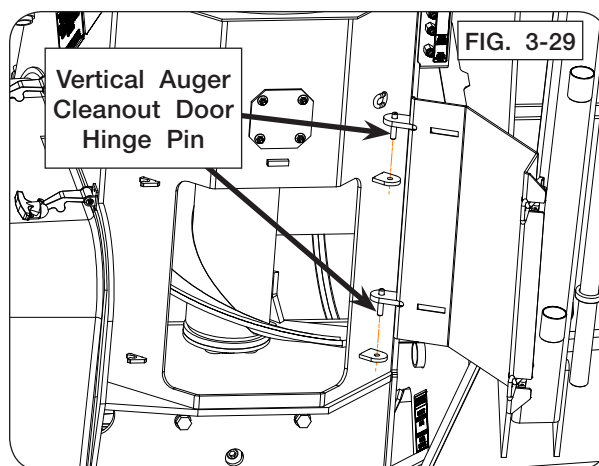
Opening Vertical Cleanout Door

1. Raise the vertical auger to highest position.
2. Park the empty unit on a firm, level surface. Block the machine to keep it from moving. Set the tractor's parking brake, shut-off the engine, remove the ignition key and disconnect the PTO shaft.
3. To open and remove the vertical auger cleanout door, unclasp the over center latch. (FIG. 3-28)
4. Unhook the eye bolt from the vertical auger and open the cleanout door. (FIG. 3-28)



NOTE: To improve access, vertical auger cleanout door can be removed. (FIG. 3-29)

5. 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. 3-29)
6. Inspect and verify all debris is removed from inside the vertical auger housing.
7. Reattach the vertical cleanout door to the vertical auger.

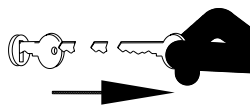


Vertical & Horizontal Cleanout Door Operation (continued)

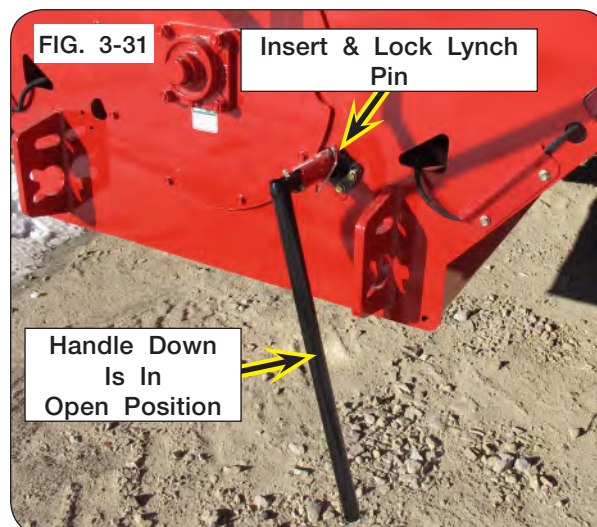
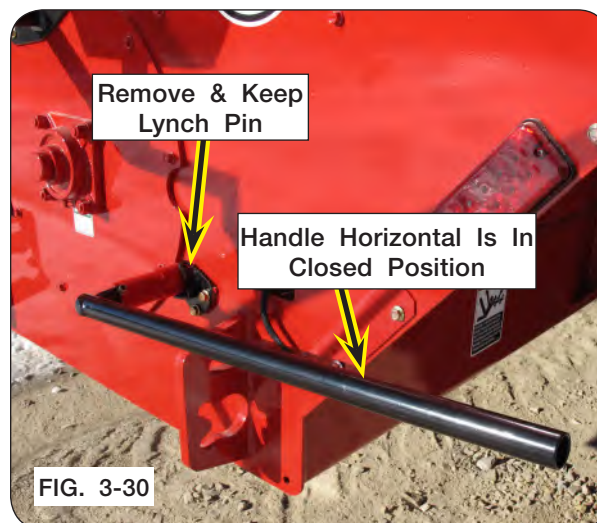
Horizontal Cleanout Door

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



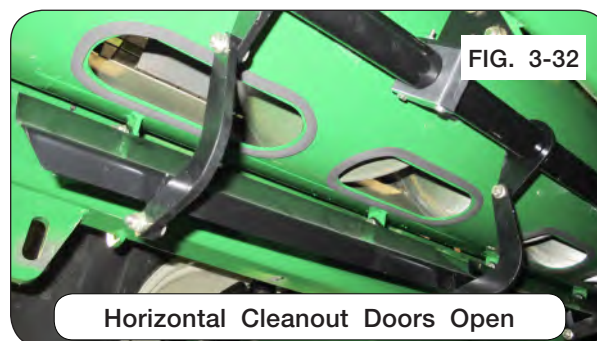
2. Insert tensioner handle into the cleanout door receiver coupler on the rear panel, and remove lynch pin from rockshaft. Keep lynch pin. (FIG. 3-30)
3. Rotate the tensioner handle clockwise to open the cleanout doors. (FIG. 3-31)
4. Insert and lock lynch pin into rockshaft. (FIG. 3-31)



5. Inspect and verify all debris is removed that may prevent the doors from shutting completely. (FIG. 3-32)

NOTE: If the doors do not close or visible door perimeter gaps are present, adjust the rockshaft. See "Horizontal Cleanout Door Adjustment" in the MAINTENANCE section.

6. Remove lynch pin from rockshaft and rotate handle counter-clockwise and clockwise to check for smooth door operation.

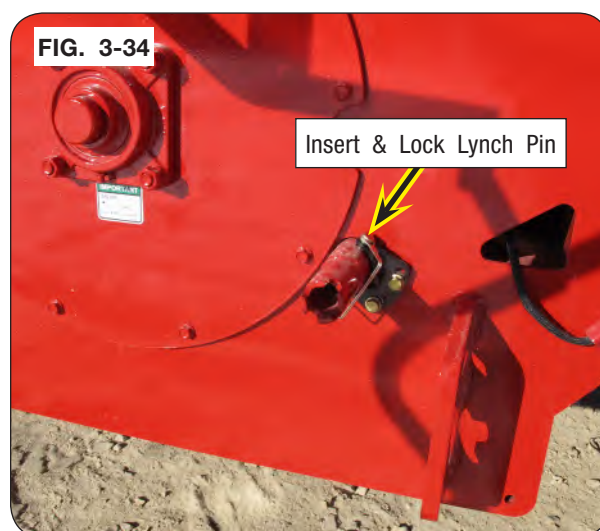
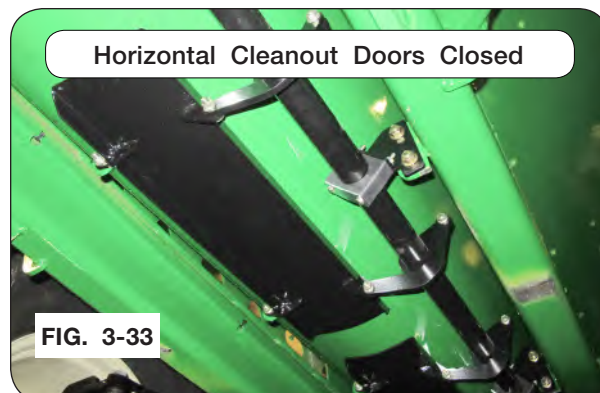


Vertical & Horizontal Cleanout Door Operation (continued)

Horizontal Cleanout Door

7. Rotate handle counter-clockwise to close doors and ensure all doors seal. (FIG. 3-33)

8. Insert and lock lynch pin into rockshaft and return handle to storage location. (FIG. 3-34)



Ladder Operation

Side 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.
- DO NOT STAND ON LADDER OR FRAME UNLESS TRACTOR ENGINE IS TURNED OFF AND KEYS ARE REMOVED FROM THE IGNITION.
- TO PREVENT PERSONAL INJURY OR DEATH, ALWAYS ENSURE THAT THERE ARE PEOPLE WHO REMAIN OUTSIDE THE CART TO ASSIST THE PERSON WORKING INSIDE, AND THAT ALL SAFE WORKPLACE PRACTICES ARE FOLLOWED. THERE IS RESTRICTED MOBILITY AND LIMITED EXIT PATHS WHEN WORKING INSIDE THE IMPLEMENT.
- NEVER ENTER A CART CONTAINING GRAIN. FLOWING GRAIN TRAPS AND SUFFOCATES VICTIMS IN SECONDS.

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

NOTE: Side ladder is a viewing ladder only and should not be used to enter the cart.

NOTE: Ensure upper ladder extension is attached to higher holes on the ladder. Reference “Upper Side Ladder Extension” 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. 3-35 & 3-36)



Ladder Operation (continued)

Storage to Working Position

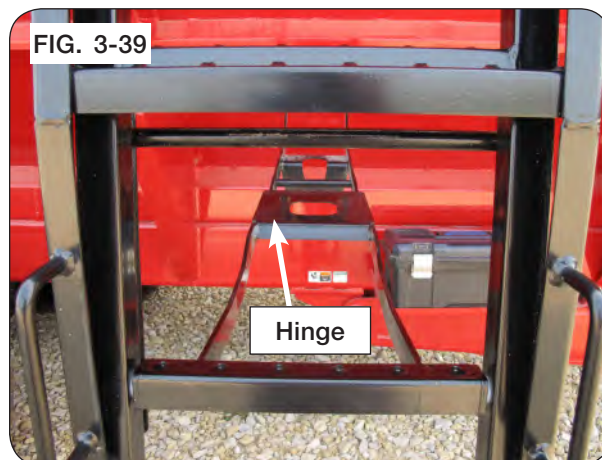
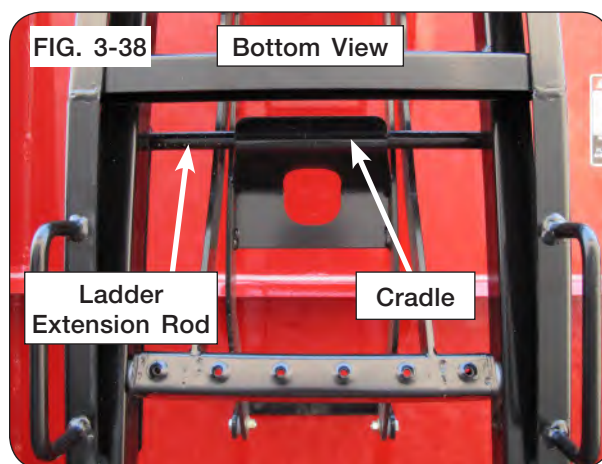
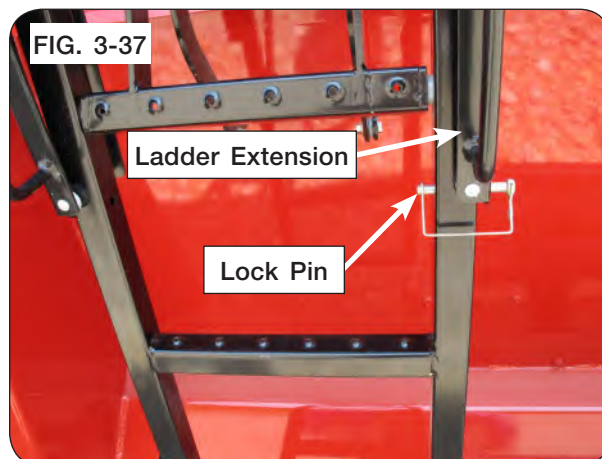
1. Standing in front of ladder, place hands on outside ladder handles.
2. Keep one hand on ladder handle and with opposite hand, remove lock pin from ladder extension. Retain for future use. (FIG. 3-37)
3. With hands back on ladder handles, push ladder towards hopper bin and lift ladder extension to unseat ladder extension rod from the cradle. (FIG. 3-38)



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. 3-39)



Ladder Operation (continued)

Storage to Working Position (continued)

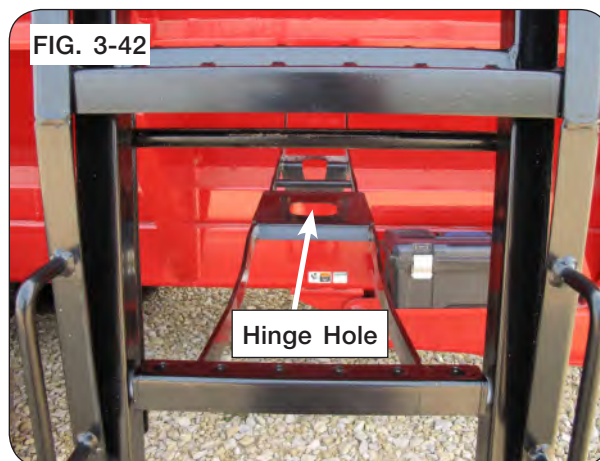
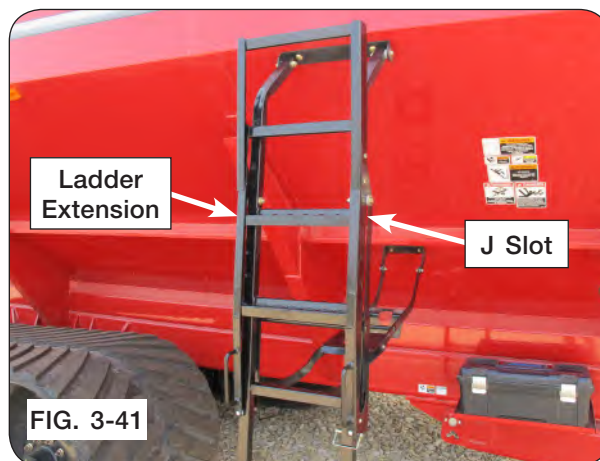
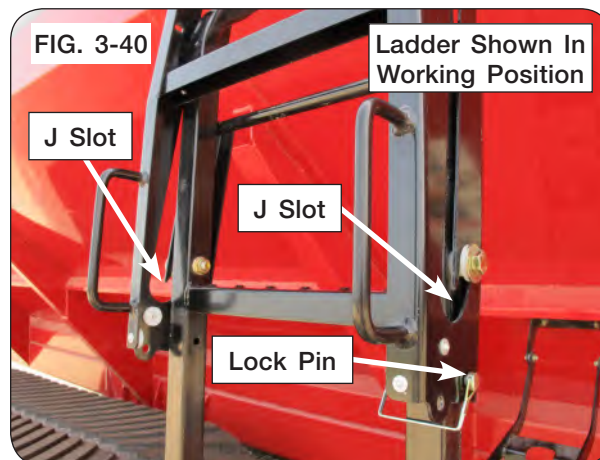
5. Lift and seat ladder extension into shorter leg of “J slot”. (FIG. 3-40)
6. Using lock pin from step 2, insert lock pin into ladder extension and ladder. (FIG. 3-40)

WARNING

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

Working to Storage Position

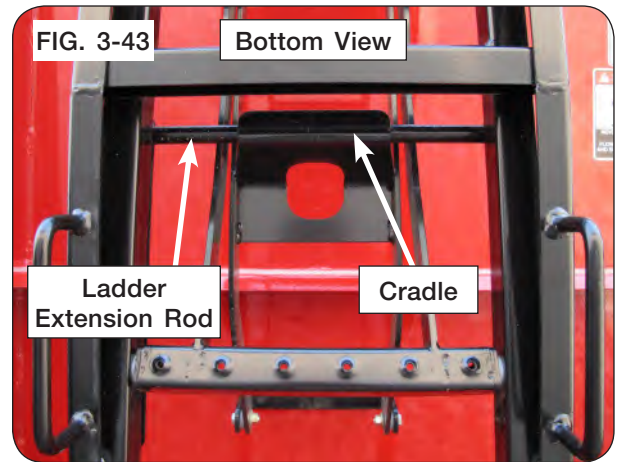
1. Standing in front of ladder, place hands on outside ladder handles.
2. Keep one hand on ladder handle and with opposite hand, remove lock pin from ladder extension. Retain for future use. (FIG. 3-40)
3. With hands back on ladder handles, lift and unseat ladder extension from shorter leg of “J slot”. (FIG. 3-40)
4. Lower ladder extension until fully seated in longer leg of “J slot”. (FIG. 3-41)
5. Keep one hand on ladder handle and with opposite hand, reach between ladder rungs and grab the ladder hinge hole. (FIG. 3-42)
6. Slowly lift ladder hinge until the ladder starts folding.
7. Remove hand from ladder hinge hole and place onto ladder handle.
8. Slowly push ladder towards hopper bin.



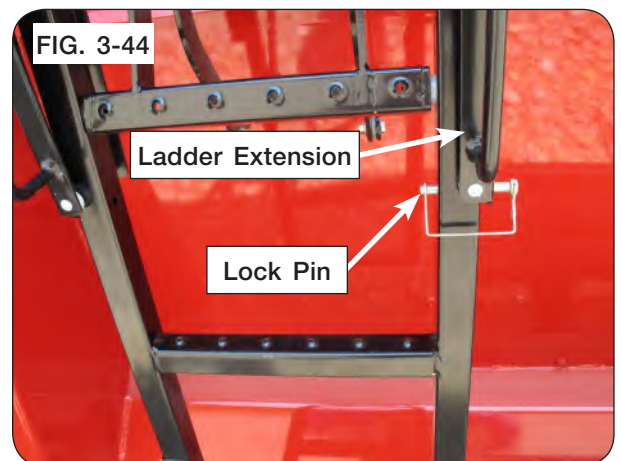
Ladder Operation (continued)

Working to Storage Position (continued)

9. Lower ladder extension and seat ladder extension rod onto the cradle. (FIG. 3-43)



10. Using lock pin from step 8, insert lock pin into ladder extension and ladder. (FIG. 3-44)



Ladder Operation (continued)

Rear Ladder and Rear Access Door Operation

WARNING

- FALLING OR LOWERING EQUIPMENT CAN CAUSE SERIOUS INJURY OR DEATH. KEEP EVERYONE AWAY FROM EQUIPMENT WHEN SUSPENDED, RAISING, OR LOWERING.
- TIPPING OR MOVEMENT OF THE MACHINE CAN CAUSE SERIOUS INJURY OR DEATH. BE SURE THE MACHINE IS SECURELY BLOCKED.
- DO NOT ALLOW ANYONE TO RIDE ON THE LADDER. MAKE SURE EVERYONE IS CLEAR BEFORE OPERATING MACHINE OR TOWING VEHICLE.
- DO NOT STAND ON LADDER OR FRAME UNLESS TRACTOR ENGINE IS TURNED OFF AND KEYS ARE REMOVED FROM THE IGNITION.
- KEEP HANDS CLEAR OF PINCH POINT AREAS.
- EYE PROTECTION AND OTHER APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT MUST BE WORN WHILE SERVICING THE IMPLEMENT.
- TO PREVENT PERSONAL INJURY OR DEATH, ALWAYS ENSURE THAT THERE ARE PEOPLE WHO REMAIN OUTSIDE THE CART TO ASSIST THE PERSON WORKING INSIDE, AND THAT ALL SAFE WORKPLACE PRACTICES ARE FOLLOWED. THERE IS RESTRICTED MOBILITY AND LIMITED EXIT PATHS WHEN WORKING INSIDE THE IMPLEMENT.
- NEVER ENTER A CART CONTAINING GRAIN. FLOWING GRAIN TRAPS AND SUFFOCATES VICTIMS IN SECONDS.
- ENSURE SCREENS OVER HORIZONTAL AUGERS ARE IN PLACE AND PROPERLY SECURED.
- 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.

Ladder Operation (continued)

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

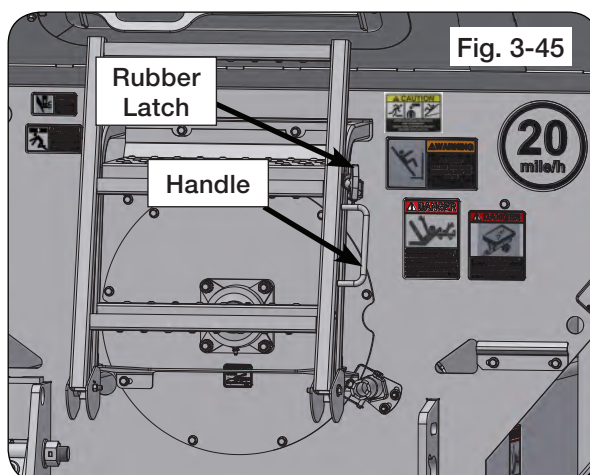
NOTE: The lower ladder section must be raised and locked in the storage position when not used.

Storage to Working Position

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

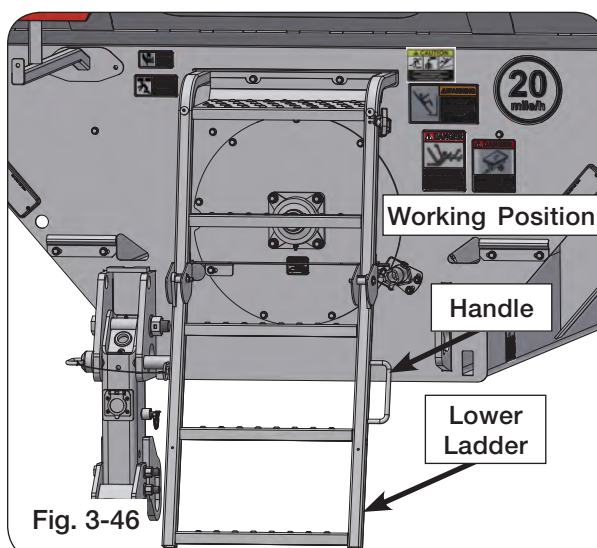


2. While holding ladder handle, remove rubber latch from holder. (FIG. 3-45)



3. Slowly swing the lower ladder section completely down to working position. (FIG. 3-46)

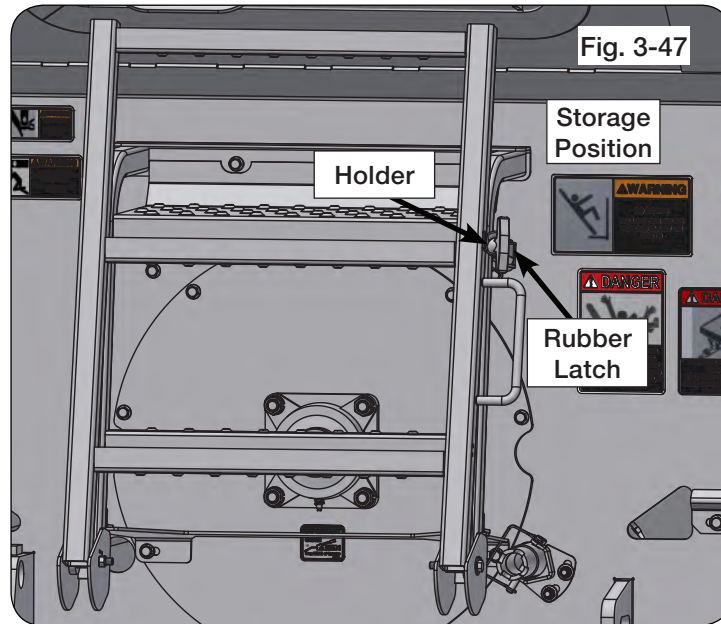
(Continued on next page)



Ladder Operation (continued)

Working to Storage Position

1. Slowly lift and swing the lower ladder section up to storage position. (FIG. 3-46 and 3-47)
2. While holding ladder handle, attach rubber latch into holder to lock ladder in storage position. (FIG. 3-47)



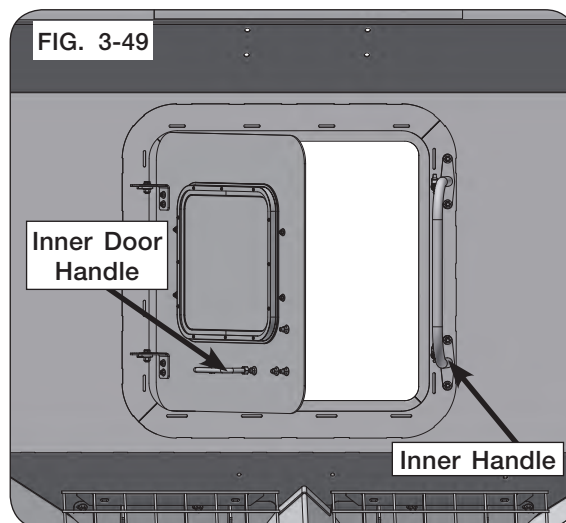
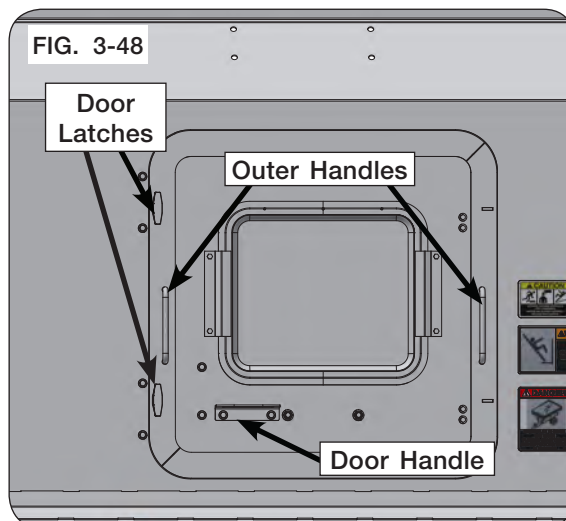
Ladder Operation (continued)

Rear Access Door Operation

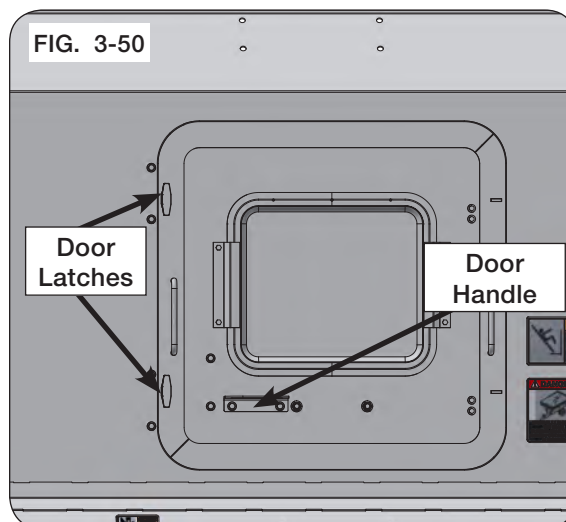
1. Park the empty unit on a firm, level surface. Block the machine to keep it from moving. Set the tractor's parking brake, shut-off the engine, remove the ignition key and disconnect the PTO shaft.



2. Turn both door latches 90 degrees counter clockwise. (Fig. 3-48)
3. Use bottom door handle to open door by pushing in. (Fig. 3-48)
4. Push door until it stops. While maintaining contact with the outer handles, enter the grain cart. (Fig. 3-48)
5. To exit, use inner door handle to open the rear access door. Place hand on inner handle and exit grain cart. (Fig. 3-49)



6. While maintaining contact with outer handles, use outer door handle to close the rear access door. (Fig. 3-50)
7. Turn both door latches 90 degrees clockwise to lock the rear access door. (Fig. 3-50)



Rear Drop Hitch Operation (Optional)

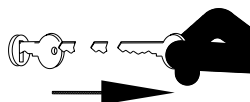
WARNING

- 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.
- 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 50 LBS. SPECIFIC LOAD RATINGS FOR INDIVIDUAL LOADS WILL BE GIVEN AT THE APPROPRIATE TIME IN THE INSTRUCTIONS.

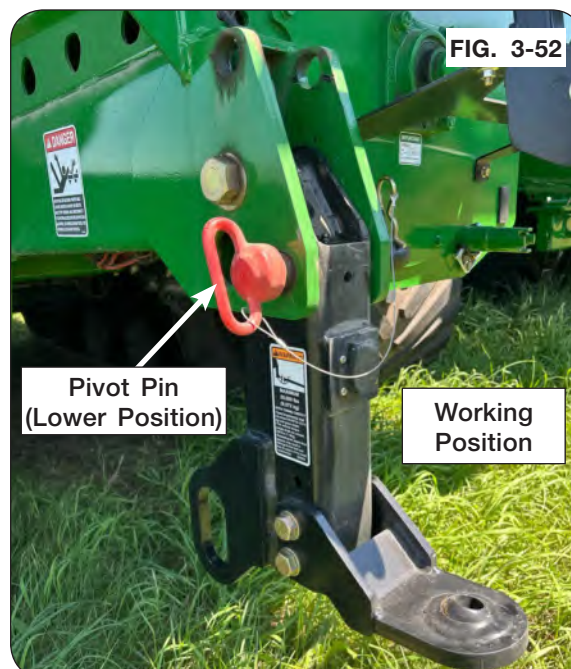
Storage to Working Position

NOTE: Keep rear drop hitch in storage position when not in use.

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



2. Attach a safe lifting device rated for a minimum of 50 lbs. to the rear drop hitch.
3. Remove the keeper from the pivot pin, then remove the pivot pin from the rear drop hitch. (Fig. 3-51)
4. Slowly pivot rear drop hitch to desired position. (Fig. 3-52)
5. Reinstall pivot pin and keeper into rear drop hitch. (Fig. 3-52)



Rear Drop Hitch Operation (Optional) (continued)

Rear Hitch Connection

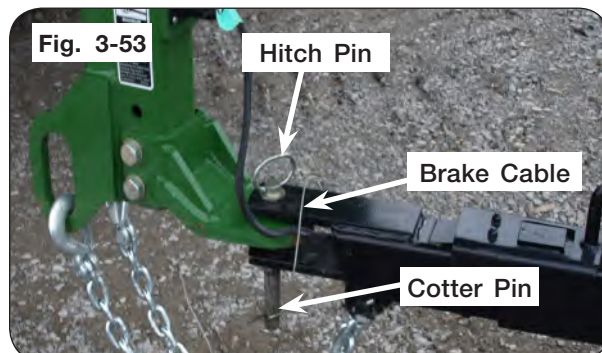
IMPORTANT

- The rear ladder **MUST** be folded into storage position to prevent damage when towing with the rear drop hitch.

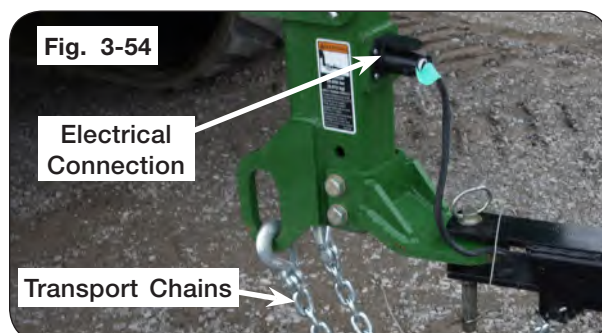
The transport chain on the grain cart must be sized according to the weight that is being towed. Refer to “Transport Chain” in OPERATION section for complete transport chain instructions.

NOTE: Keep rear drop hitch in storage position when not in use.

1. With hitch in operating position, connect the tongue of the header transport to the rear drop hitch. (Fig. 3-53)
2. If header transport has brakes, attach the brake cable to the rear drop hitch. (Fig. 3-53)



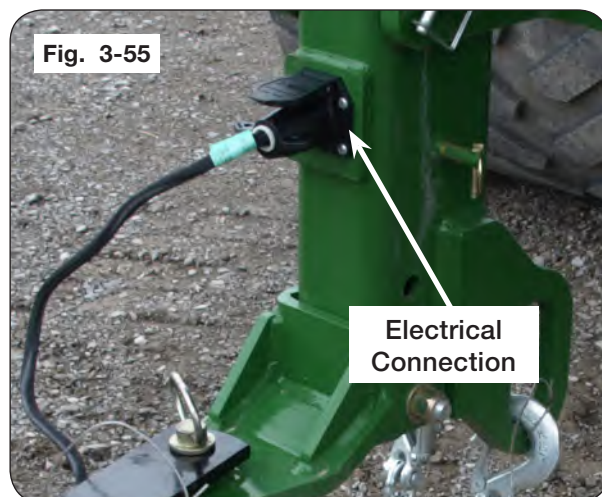
3. Connect transport chains and electrical connection of the header transport to the rear drop hitch. See implement operator's manual for proper transport chain instructions. (Fig. 3-54)



4. The rear drop hitch is equipped with a 7-blade connector which will connect to the plug on most newer header transports to be towed behind the cart. (Fig. 3-55)

The wiring schematic for this connector is shown in the MAINTENANCE section. Verify correct electrical function before using this connector.

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



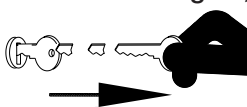
Rear Drop Hitch Operation (Optional) (continued)

WARNING

- MOVING PARTS CAN CRUSH AND CUT. KEEP AWAY FROM MOVING PARTS.
- 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.

Rear Drop Hitch Adjustment

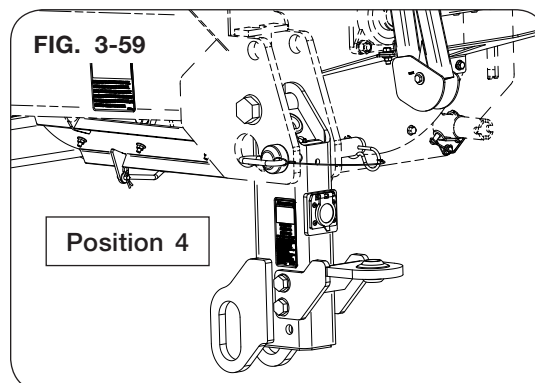
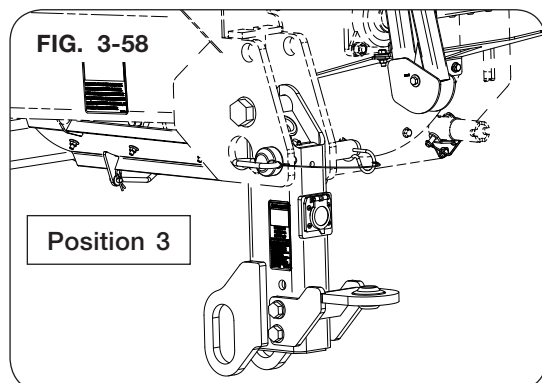
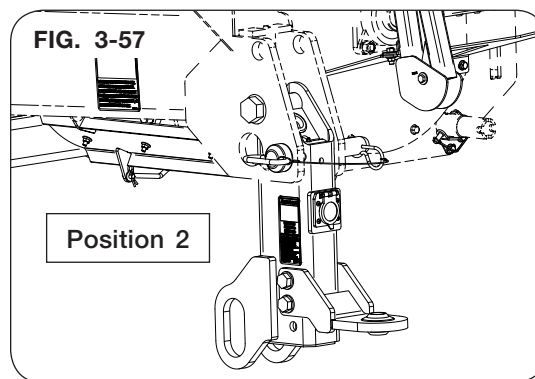
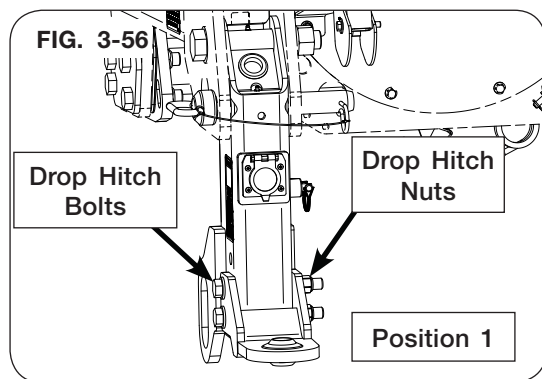
1. Park the empty unit on a firm, level surface. Block the machine to keep it from moving. Set the tractor's parking brake, shut-off the engine, remove the ignition key.



2. Remove the 3/4" locknuts, washers, and capscrews from the rear drop hitch.
3. Remove hitch tang and re-install in one of the four positions depending on the height that is needed to maintain a level trailer tongue. There will be a difference of 6 3/4" from position 1 to position 4. (Figs. 3-56 through 3-59)

NOTE: Hitch tang can be flipped. (Figs. 3-56 through 3-59)

4. Reinstall the locknuts, washers, and capscrews to the rear drop hitch and torque to specification.



Video System (Optional)

IMPORTANT

- *Do not operate video system below 15°F. Damage to video system can occur.*

The video system includes its own operation instruction sheet.

Weather Guard Tarp

WARNING

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

IMPORTANT

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

Always use adequate caution when operating tarp.

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

Open and close the tarp evenly.

Make sure tarp is open before loading.

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

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

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

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

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

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

Weather Guard Tarp (continued)

NOTE: If equipped with wireless electric roll tarp, see “Wireless Receiver and Control Box Location” on next page. For weather guard tarp, continue to step 1.

1. Using both hands, carefully remove tarp handle weldment from tube holder. (FIG. 3-60)
2. Roll tarp to the desired location, choosing either a fully open or fully closed position.
3. To close the tarp, rotate the roll tube clockwise up under the latch plate.
4. Make sure tarp is positioned evenly over latch plate length.

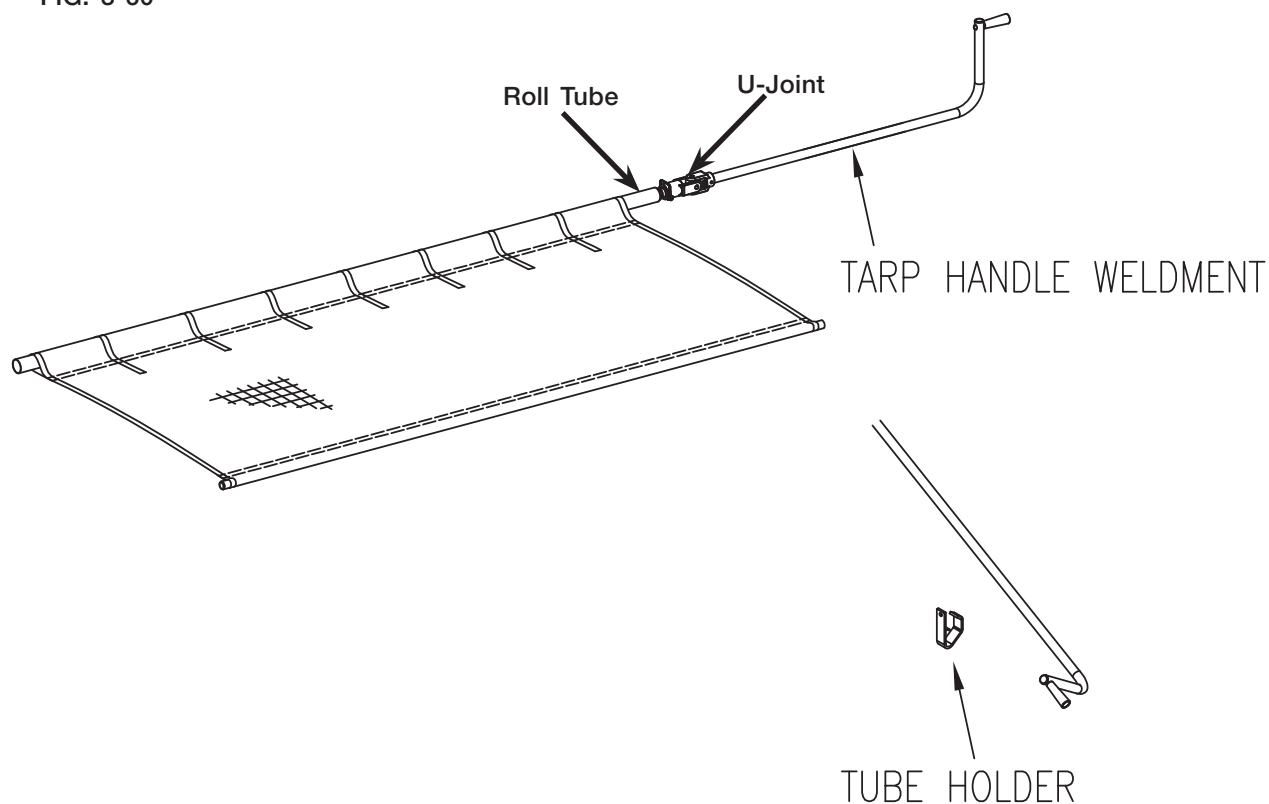
NOTE: Do not tighten if tarp overlaps end of the latch plate. Tearing of the tarp may occur. Reposition tarp, as necessary.

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

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

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

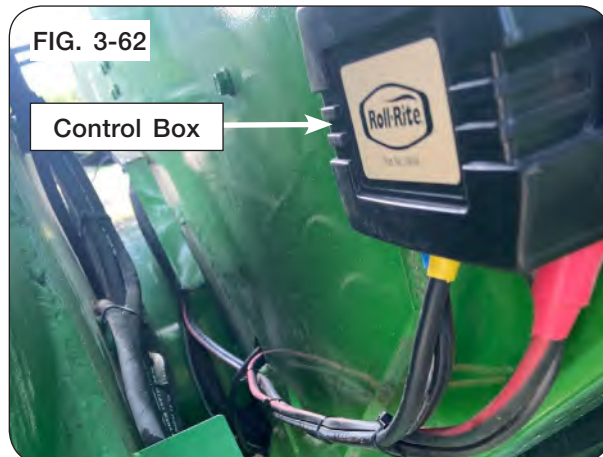
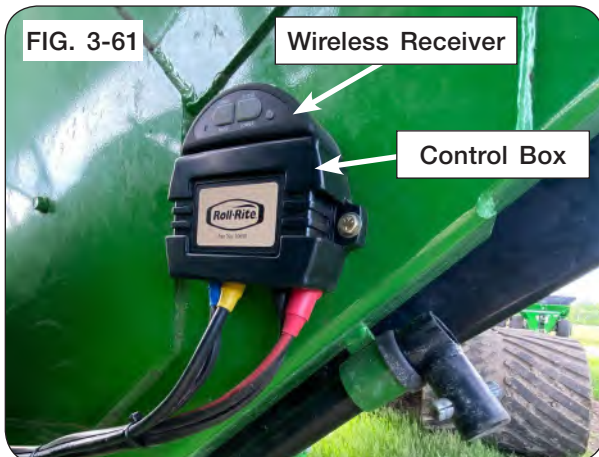
FIG. 3-60



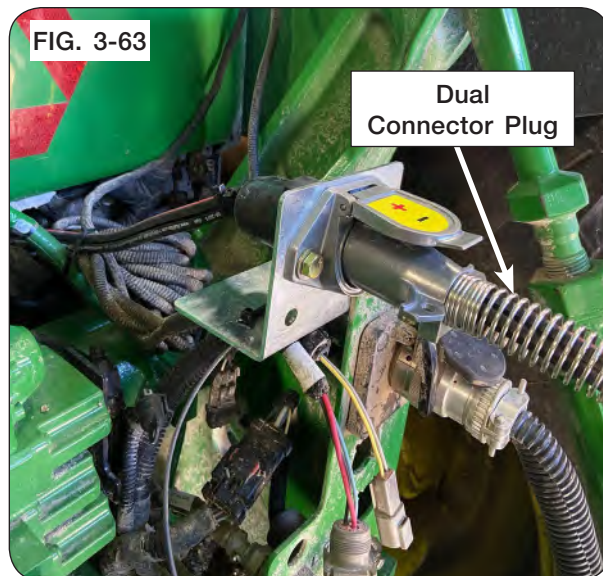
Wireless Receiver and Control Box Location

NOTE: Refer to electric roll tarp manual (26487) for wireless operation details.

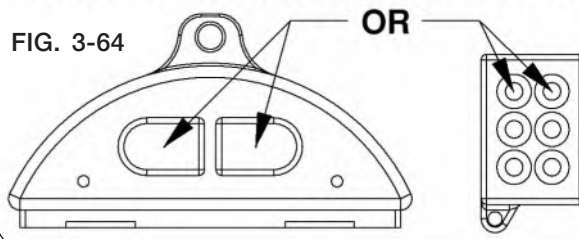
1. Wireless receiver (9009632) and control box (9005398) mount to the left-hand standard behind the vertical auger as shown. (FIGS. 3-61 & 3-62)



2. Control box wires route along the front of the cart following the isobus harness.
3. Attach dual connector plug (9005327) to the socket on the back of the tractor as shown. (FIG. 3-63)
4. When electric tarp is not in use, place connector plug into storage caddy. Be sure to route connector plug harness to clear PTO driveline during operation.
5. Press and hold both wireless receiver buttons for 3 seconds OR both key fob remote (9010107) buttons to turn electric tarp module ON/OFF. See FIG. 3-61 and 3-64.



TO TURN ELECTRIC TARP MODULE ON/OFF, PRESS AND HOLD BOTH LARGE BUTTONS FOR 3 SECONDS. THIS CAN ALSO BE DONE USING TWO BUTTONS ON THE REMOTE.



Notes

Section IV

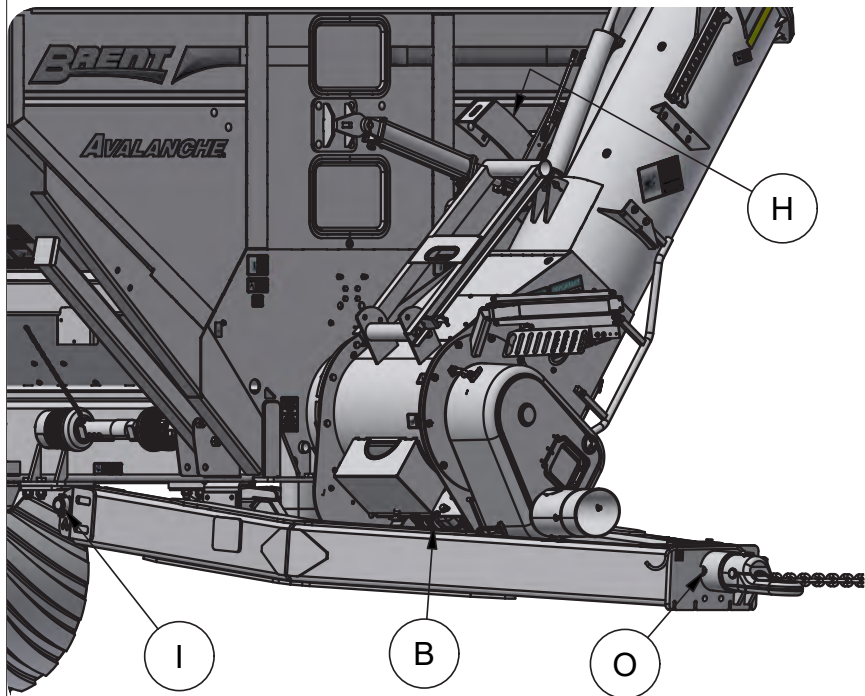
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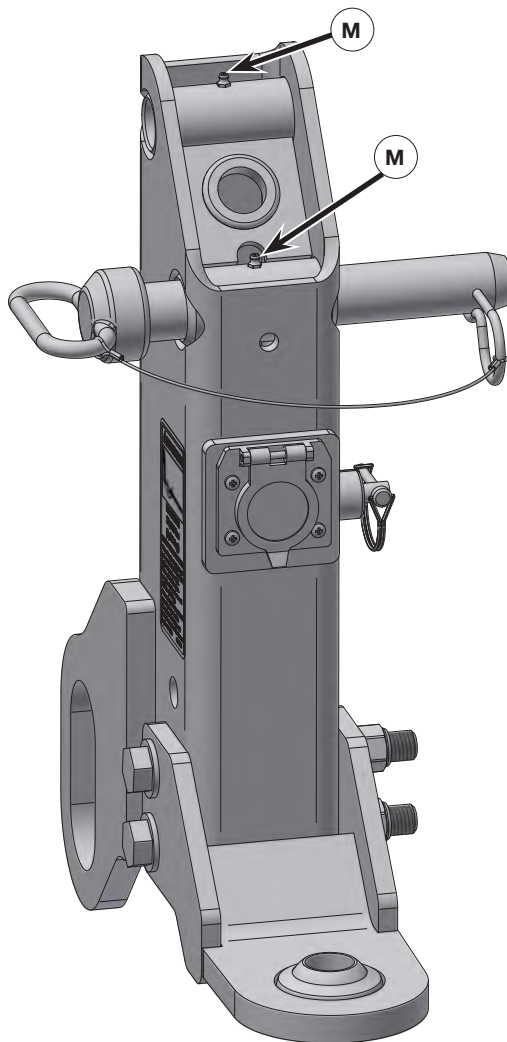
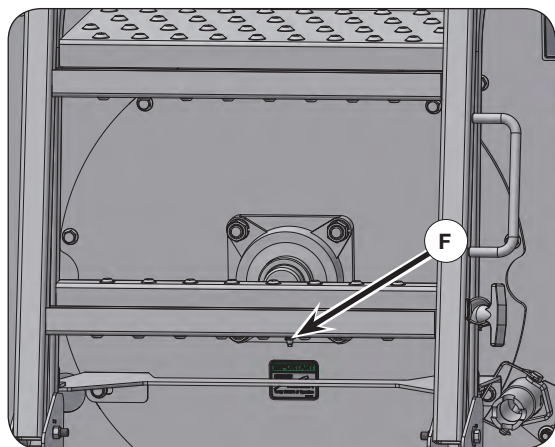
FOR SCALE, TRACK, UHARVEST, ELECTRIC TARP, AND / OR WATER DELIVERY SYSTEM INFORMATION, PLEASE REFER TO THE INDIVIDUAL MANUALS.

Lubrication

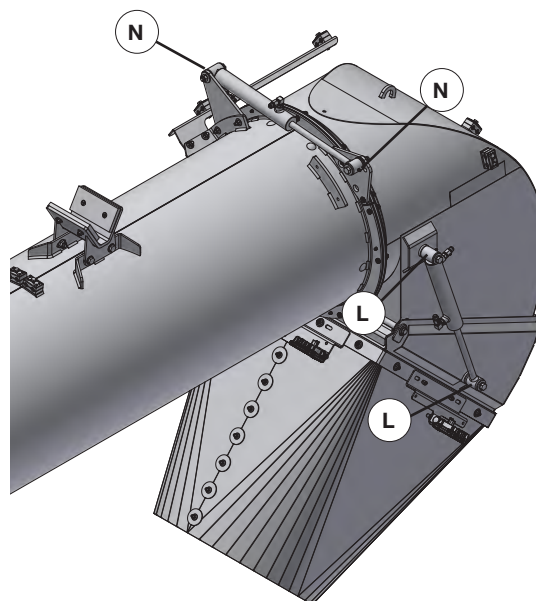
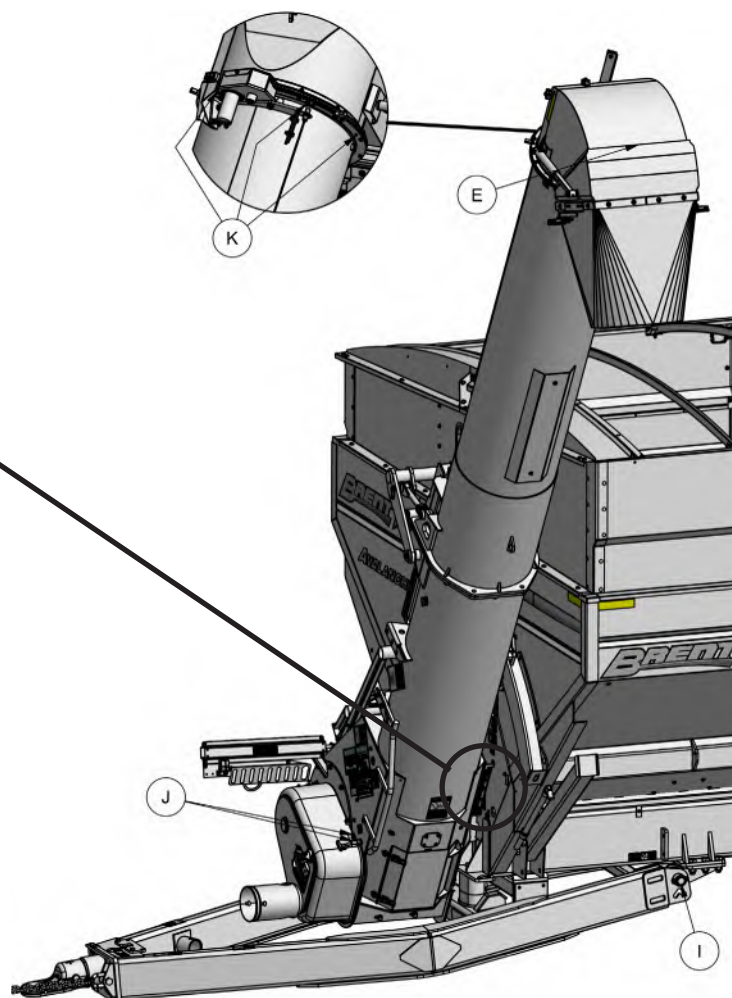
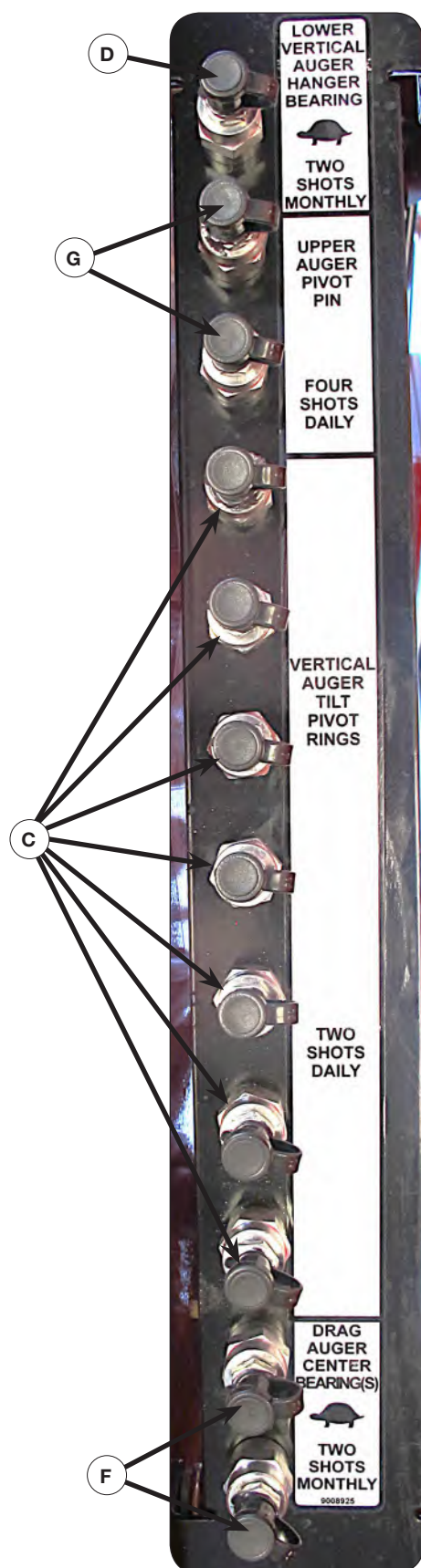
To keep your grain cart in top operating condition and to assure its proper performance and reliability for a long period of time, periodic inspection and lubrication is a must.



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



Lubrication (continued)



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	PTO Drivelines: - Driveline Assembly - 2 Grease Points - PTO & Bracket Assembly - 1 Grease Point	3	EP-2	1 Shot	See Next Pages
B	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
C	Grease Bank for Auger Pivot Rings - Front & Rear Auger Hinge	7	EP-2	2 Shots	Daily
D*	Grease Bank for Hanger Bearing - Lower Vertical Auger Hanger Bearing *See note below	1	EP-2	2 Shots*	Monthly
E	Top Bearing - Vertical Upper Auger	1	EP-2	1 Shot	Each Season
F	Grease Bank for Horizontal Auger End & Center Bearings	3	EP-2	2 Shots	Monthly
G	Grease Bank for Auger Pivot Pin - Upper Vertical Auger Hinge	2	EP-2	4 Shots	Daily
H	Grease Slide Plate	1	EP-2	1 Shot	Each Season
I	Tongue Pivot Bushing	2 (one per side)	EP-2	2 Shots	Daily
J	Drive Bearings	2	EP-2	1 Shot	Weekly
K	Discharge Spout Pivot Grease Points	6	EP-2	1 Shot	Monthly
L	Spout Tilt Cylinder	2	EP-2	3 Shots	Weekly
M	Rear Drop Hitch Pivot Pin	2	EP-2	2 Shots	Monthly
N	Spout Rotate Cylinder	2	EP-2	3 Shots	Weekly
O	Hitch Bar	1	EP-2	5 Shots	Once Every Season

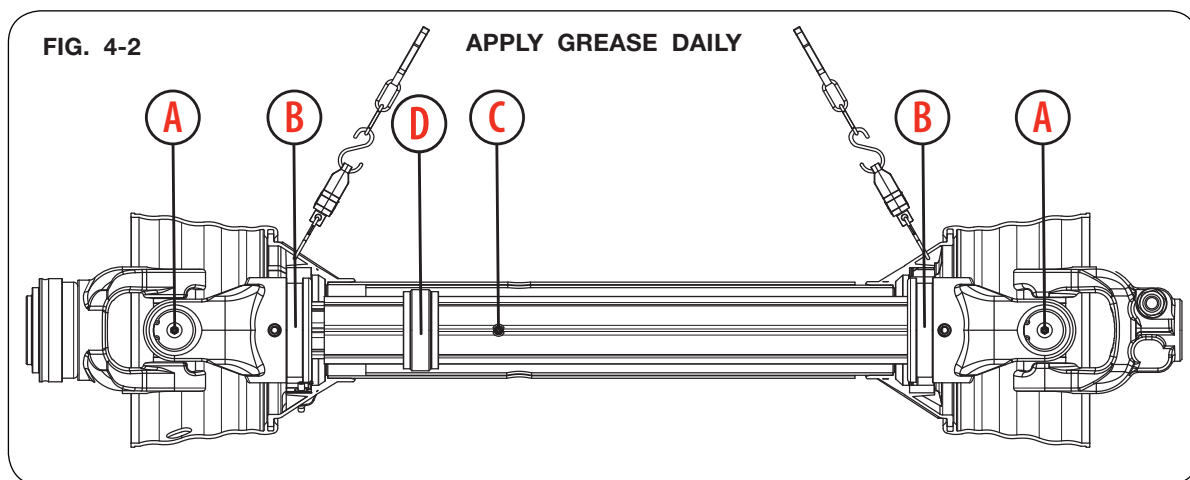
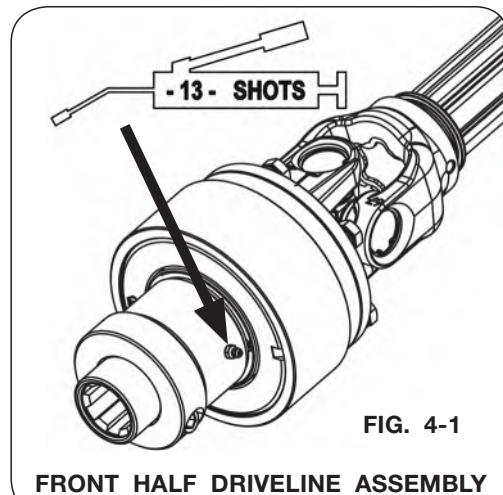
***NOTE:** Hanger bearing contains hydraulic shut-off grease zerk (9005240) with pressure relief to prevent over-greasing that could push bearing seals out. If grease is coming out of the relief on the zerk, this is normal and the bearing contains enough grease.

PTO Driveshaft Lubrication - Benzi PTO

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

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

- For front half driveline assembly, grease the overrunning clutch on the CAM Cut Out assembly with 13 shots every month. (50 operating hours) (FIG. 4-1)
- The CAM Cut Out clutch on rear half driveline assembly is pre-greased for 500 operating hours. Contact your dealer for more greasing information.



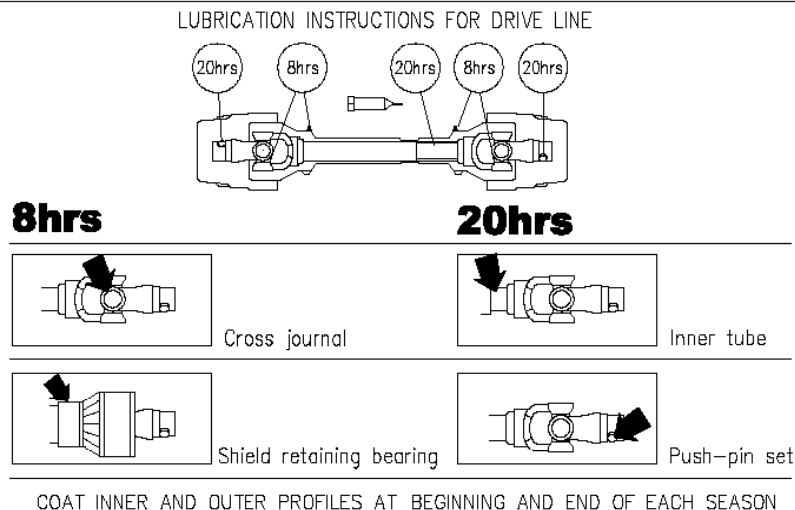
ITEM	DESCRIPTION	POINT	LUBRICANT	QTY.	HOURS
A	U-Joint Cross Kit	1	EP-2	2 Shots	8 Hours
B	Inner & Outer Yoke Groove	1	EP-2	1 Shot	8 Hours
C	Inner & Outer Profile Tube	1	EP-2	26 Shots	Start and End of Each Season 50 Hours
D	Anti-Vibration Bushing	1	EP-2	5 Shots	Start and End of Each Season 50 Hours

PTO Driveshaft Lubrication - Walterscheid PTO

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

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

FIG. 4-3



Hydraulic System

Refer to parts section for hydraulic component detail listing.

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

Replacing Hoses/Fittings/Cylinders:

1. Use replacement hoses, fittings, and cylinders from your Unverferth Manufacturing dealer which are rated for 3,000 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. LEAKS OF HIGH-PRESSURE FLUIDS MAY NOT BE VISIBLE. USE CARDBOARD OR WOOD TO DETECT LEAKS IN THE HYDRAULIC SYSTEM. SEEK MEDICAL TREATMENT IMMEDIATELY IF INJURED BY HIGH-PRESSURE FLUIDS.**
- **KEEP CLEAR OF PINCH POINT AREAS.**
- **FALLING OR LOWERING EQUIPMENT CAN CAUSE SERIOUS INJURY OR DEATH. KEEP EVERYONE AWAY FROM EQUIPMENT WHEN SUSPENDED, RASING, OR LOWERING.**



Purge air from system as follows:

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

IMPORTANT

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

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

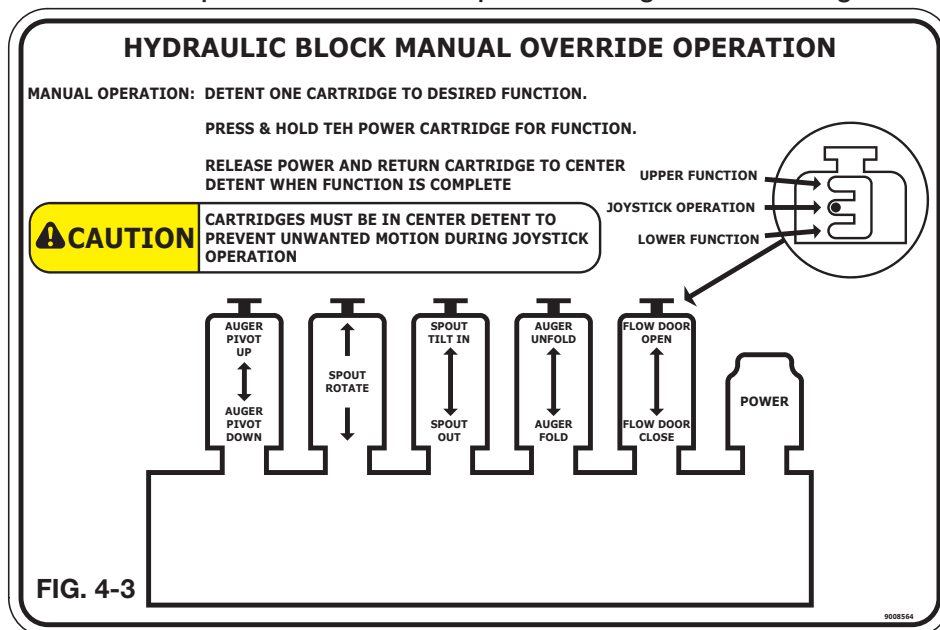
Manual Override for Optional Electric Over Hydraulic System

WARNING

- MOVING OR ROTATING AUGER COMPONENTS CAN CAUSE SERIOUS INJURY OR MACHINE DAMAGE. BEFORE OPERATING MANUAL OVERRIDE(S), ENSURE EVERYONE IS AWAY FROM THE SPOUT AND THAT THE SPOUT WILL NOT CONTACT ANY OTHER PARTS OF THE GRAIN CART. 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).
- FALLING OR LOWERING EQUIPMENT CAN CAUSE SERIOUS INJURY OR DEATH. KEEP EVERYONE AWAY FROM EQUIPMENT WHEN SUSPENDED, RASING, OR LOWERING.

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

NOTE: Manual override operation allows the spout and auger to move regardless of location.



1. Park the empty unit on a firm, level surface. Block the machine to keep it from moving. Set the tractor's parking brake. Keep engine running.

Manual Override for Optional Electric Over Hydraulic System (continued)

2. Remove cover plate (295569B) from the bottom of the lower auger housing to access the EOH block assembly. Keep cover plate. (FIG. 4-4)
3. Connect the desired Hydraulic Pressure and Return hoses to the tractor SCV remote so that the Pressure line is able to be put in continuous detent.
4. To operate the manual override function, place the tractor SCV remote in continuous detent so that the Hydraulic Pressure hose is pressurized.



Manual Override for Optional Electric Over Hydraulic System (continued)

NOTE: Only one cartridge valve (9008416 & 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. 4-5 & 4-6)

5. Operate the desired function on valve (9008416 & 9008463) by rotating the manual override knurled knob from the locked neutral position. (FIG. 4-5, 4-6, & 4-8)
6. Push and hold the manual override button on valve (9008438). (FIG. 4-7)
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 4-5, 4-6 & 4-8)

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

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

10. Replace cover plate (295569B) from step 2 to the bottom of the lower auger housing

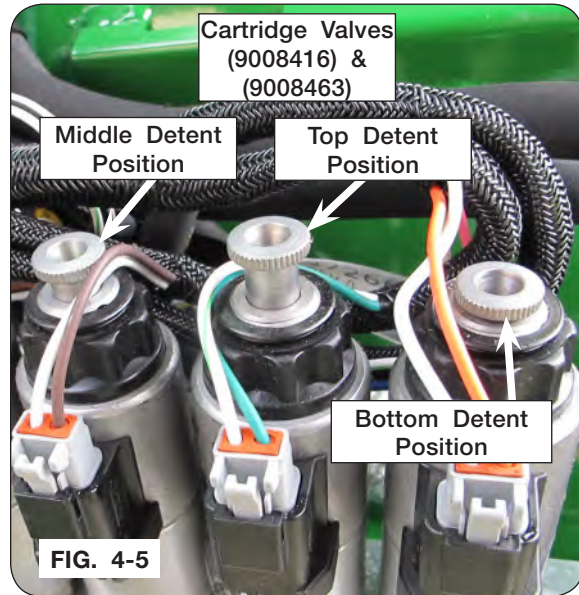
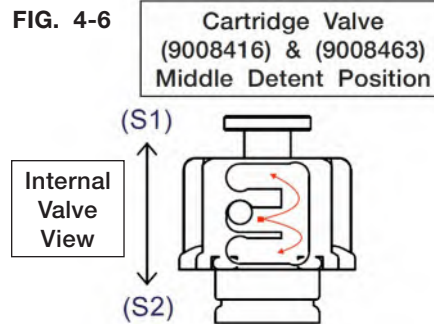


FIG. 4-5

FIG. 4-6



Electric Over Hydraulic Block (9008487)
Valve Locked Neutral Position Shown

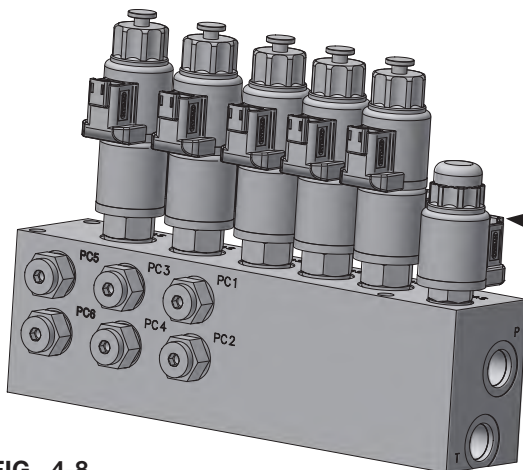


FIG. 4-8

Cartridge Valve
(9008438)

PUSH BUTTON
AND HOLD
WHILE OPERATING
INDIVIDUAL FUNCTIONS

FOR MANUAL OVERRIDE

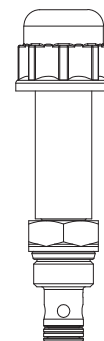


FIG. 4-7

Auger System

WARNING

- TO PREVENT PERSONAL INJURY OR DEATH, ALWAYS ENSURE THAT THERE ARE PEOPLE WHO REMAIN OUTSIDE THE CART TO ASSIST THE PERSON WORKING INSIDE, AND THAT ALL SAFE WORKPLACE PRACTICES ARE FOLLOWED. THERE IS RESTRICTED MOBILITY AND LIMITED EXIT PATHS WHEN WORKING INSIDE THE IMPLEMENT.
- NEVER ENTER CART WITH AUGER OR TRACTOR RUNNING. SERIOUS OR FATAL INJURY CAN OCCUR DUE TO ENTANGLEMENT WITH ROTATING COMPONENTS. ALWAYS STOP ENGINE AND REMOVE KEY BEFORE ENTERING CART.
- KEEP HANDS CLEAR OF PINCH POINT AREAS.
- EYE PROTECTION AND OTHER APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT MUST BE WORN WHILE SERVICING IMPLEMENT.
- FALLING OBJECTS CAN CAUSE SERIOUS INJURY OR DEATH. DO NOT WORK UNDER THE MACHINE AT ANY TIME WHILE BEING HOISTED. BE SURE ALL LIFTING DEVICES AND SUPPORTS ARE RATED FOR THE LOADS BEING HOISTED. THESE ASSEMBLY INSTRUCTIONS WILL REQUIRE SAFE LIFTING DEVICES UP TO 2,000 LBS. SPECIFIC LOAD RATINGS FOR INDIVIDUAL LOADS WILL BE GIVEN AT THE APPROPRIATE TIME IN THE INSTRUCTIONS.
- MOVING OR ROTATING COMPONENTS CAN CAUSE SERIOUS INJURY OR DEATH. ALWAYS DISCONNECT POWER SOURCE BEFORE SERVICING. ENSURE SERVICE COVERS, CHAIN/BELT COVERS AND CLEAN-OUT DOOR(S) ARE IN PLACE AND SECURELY FASTENED BEFORE OPERATING MACHINE.
- SHARP EDGES ON THE MACHINE CAN CAUSE INJURY. BE CAREFUL WHEN WORKING AROUND THE MACHINE.

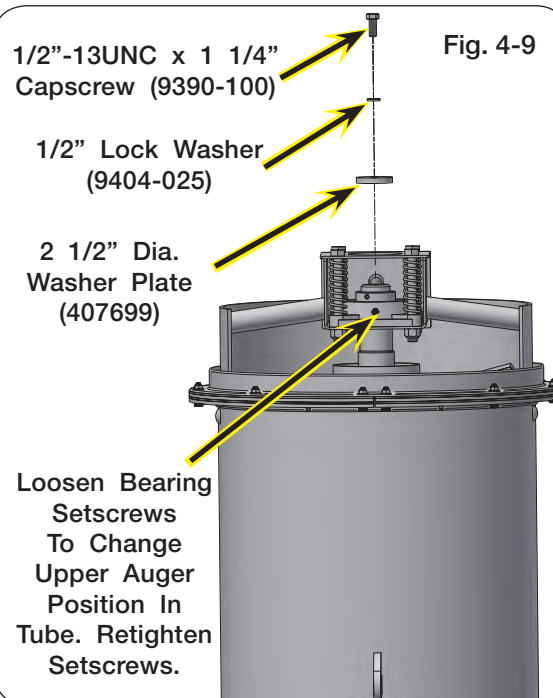


Vertical Auger Height Check

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



4. Annually check all bolts, nuts, and set screws for tightness. Replace the vertical auger top bearing hardware, as necessary. (FIG. 4-9)
5. Position the vertical auger as shown in FIGS. 4-10, 4-11, and 4-12 on next page.



Auger System (continued)

Vertical Auger Height Check (continued)

NOTE: The lower auger position is indexed from the drive dog / tube flange hinge surface as shown. (Figs. 4-10 & 4-11)

Fig. 4-12

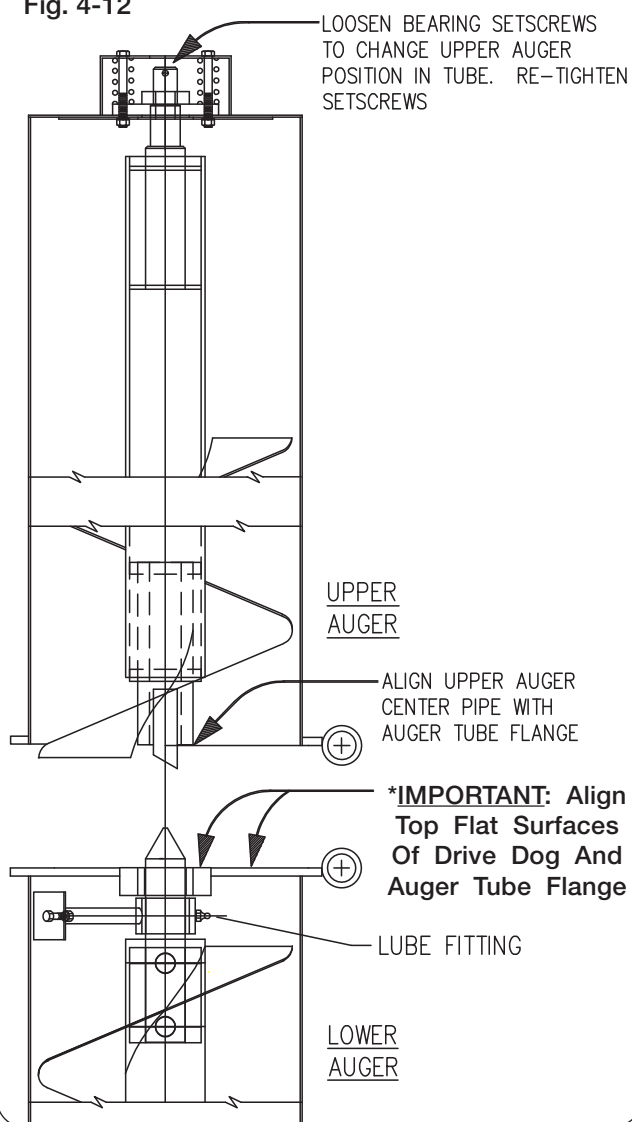


Fig. 4-10

Position Upper Auger Center Pipe Flush With Auger Tube Flange

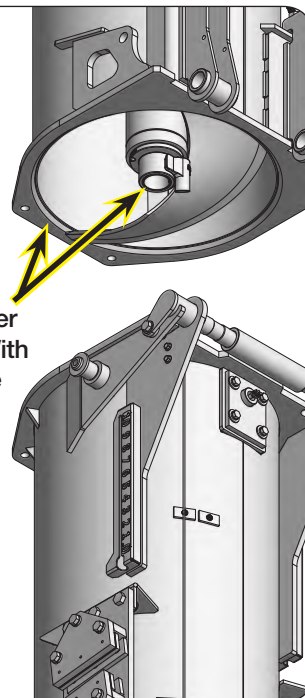
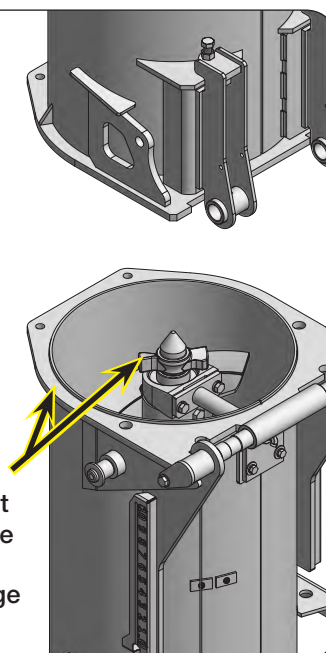


Fig. 4-11

***IMPORTANT:** Position Top Flat Surfaces Of Drive Dog Flush With Auger Tube Flange



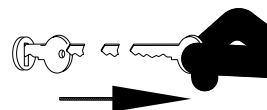
Auger System (continued)

Vertical Auger Folding Linkage Adjustment

1. Fold auger from operating position to transport position.

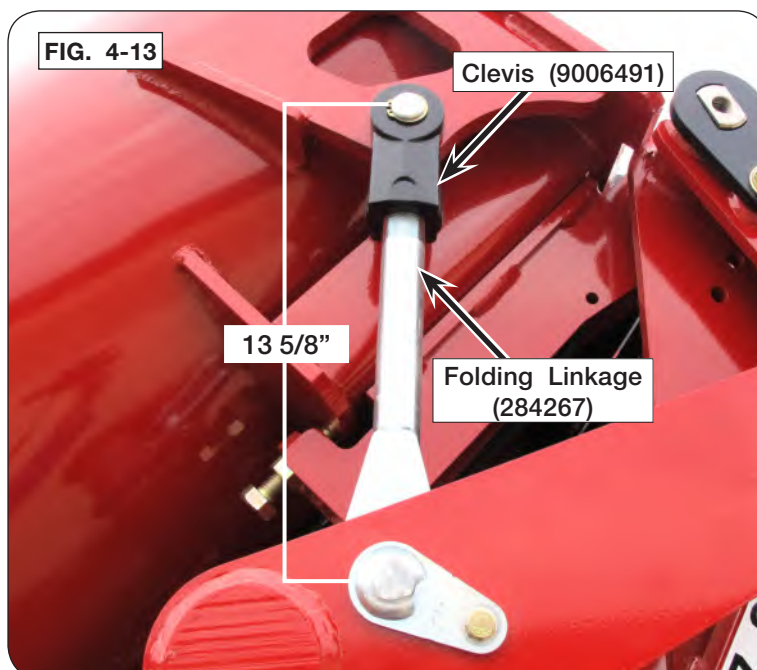
NOTE: To fold auger from operating position to transport position, refer to “Electric Over Hydraulic Operation (Optional)” in the OPERATION section.

2. Before adjusting the vertical auger folding linkage, park the empty unit on a firm, level surface. Block the machine to keep it from moving. Set the tractor parking brake, turn off tractor engine, and remove ignition key.



NOTE: The starting distance for the folding linkage pin center-to-center is 13 5/8". (FIG. 4-13)

3. Use a safe lifting device rated for 2,000 lbs. to support the upper auger during adjustment.
4. At the FRONT of the auger, remove retaining rings (91192) from the pin (272587) on clevis (9006491). Keep retaining rings and pin. (FIG. 4-13)
5. Adjust folding linkage (284267) by turning the clevis in or out one full turn. (FIG. 4-13)
6. Reinsert pin into clevis and attach retaining rings to pin.
7. Repeat procedure for the folding linkage on the BACK of the auger.
8. Restart engine, unfold auger, and inspect hinge area. Allow sufficient time for the cylinder to fully engage the two augers and over-center latch to fully engage.
9. If additional length is needed, repeat steps 4-7 until the upper and lower auger firmly seal.



Auger System (continued)

Vertical Auger Timing

1. For the lower vertical auger, use the top 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. 4-14)

NOTE: Looking down at the lower flighting (FIG. 4-14) the auger rotation will be counter-clockwise. When looking up at the upper flighting (FIG. 4-15) the auger rotation will be clockwise.

2. For the upper auger, use the outer 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. 4-15)
3. When engaged, the upper flighting should follow the lower flighting. (FIG. 4-16)

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

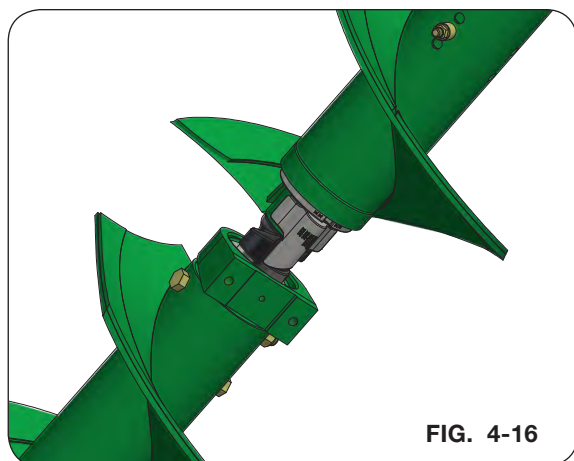
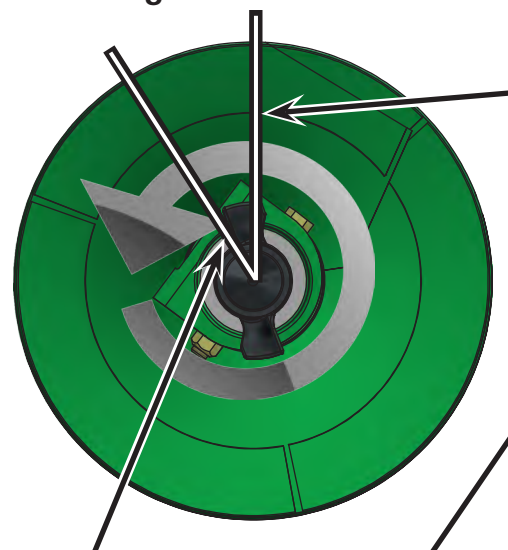


FIG. 4-16

Lower Auger

FIG. 4-14



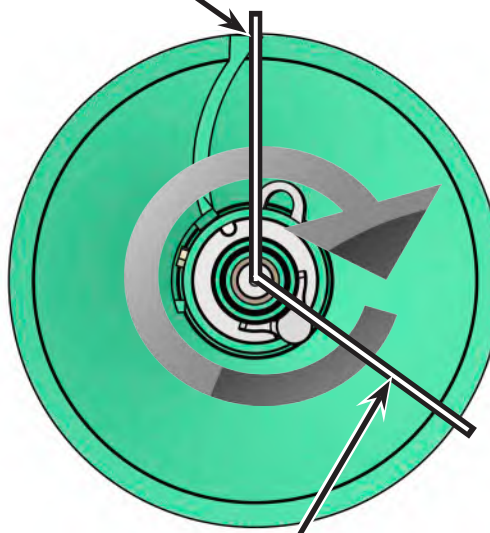
Drive Dog
Driving Edge
At 11 O'Clock
Reference

Top Edge of
Flighting At 12
O'Clock
Reference.

Upper Auger

FIG. 4-15

Outer Edge of Flighting At 12
O'Clock Reference.



Drive Pin At 4 O'Clock
Reference

Auger System (continued)

Horizontal Auger

Annually check all bolts, nuts, and set screws. Perform lubrication as specified in “Lubrication” section.

Horizontal Auger Height Measurement

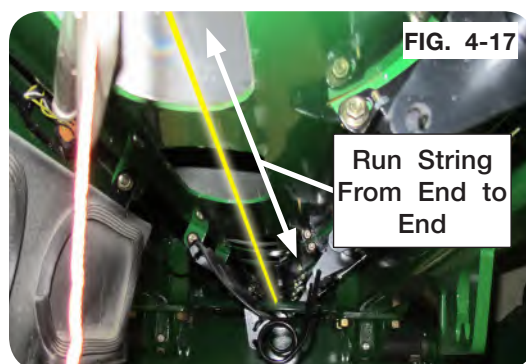
IMPORTANT

- The grain cart is designed for the horizontal auger to be up to 1/8" lower in the middle than on the ends. Use the following procedure to measure and adjust horizontal auger height.

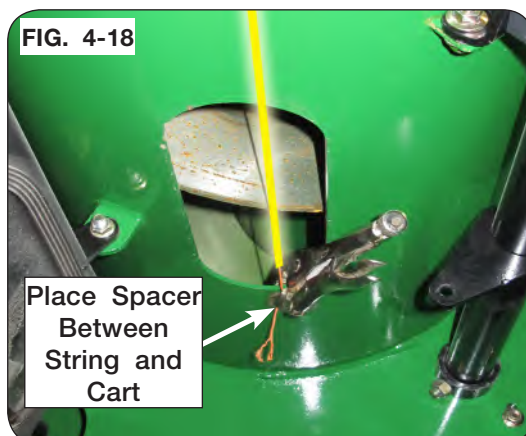
1. Park the empty unit on a firm, level surface. Block the machine to keep it from moving. Set the vehicle parking brake, shut off the engine and remove the ignition key and disconnect the PTO shaft from the tractor.



2. Run a string from the front of the cart to the back, above the cleanout doors and linkages as shown in FIG. 4-17.



3. Attach the string to the bottom of the belly pan in the front side of the front opening. Place a 3/8"-1/2" spacer under the belly pan and clamp the string to the center of the opening as shown in FIG. 4-18.



4. Attach the opposite end of the string to the back side of the rear belly pan opening. Place the same thickness of spacer as was used on the front in between the string and the belly pan. Pull the string tight and clamp to the center of the opening. (FIG. 4-19)

5. Measure the distance from the string to the bottom of the flighting center pipe in between the flighting pitch. Take a measurement through the front opening and the rear opening. If the measurement in the front and rear is different, add a shim under the smaller dimensioned end between the string and the belly pan so the measurements are the same.



(Continued on next page)

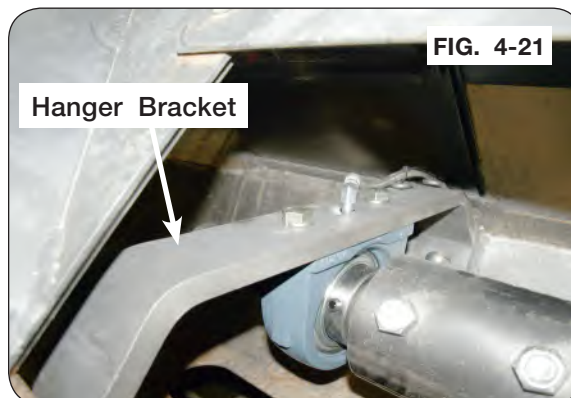
Auger System (continued)

Horizontal Auger Height Measurement (continued)

6. Measure the string to the auger tube at each 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. (FIG. 4-20)

NOTE: The shims are 1/8" thick each. Add as needed. Shims are available from your Brent dealer.

7. To adjust the bearing height down, shim between the bearing and the hanger bracket.
8. 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.
9. If hanger bracket was adjusted up, torque hanger bracket capscrews to 130 ft.-lbs. (Fig. 4-21)



Auger System (continued)

Hanger Bearing Height Adjustment

1. Remove the 3/8" hardware retaining the second and fourth grates inside the hopper. (FIG. 4-22)
2. Using a safe lifting device rated for 100 lbs., remove the grates out of the hopper.
3. Remove the baffle weldment on the auger tent at the opening above the hanger bearing. (FIG. 4-23)
4. Loosen the two 5/8" x 1 3/4" capscrews. It is not necessary to remove this hardware if two or fewer shims are being installed. Install the shims from the backside between the bearing and the bracket as shown in FIG. 4-23.

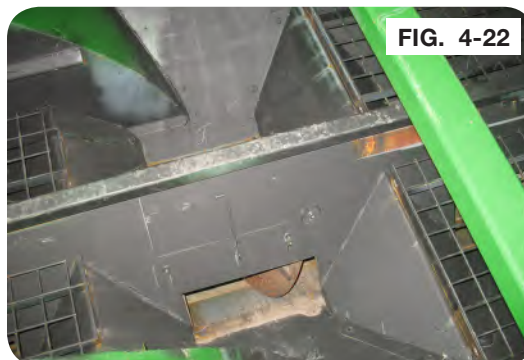


FIG. 4-22

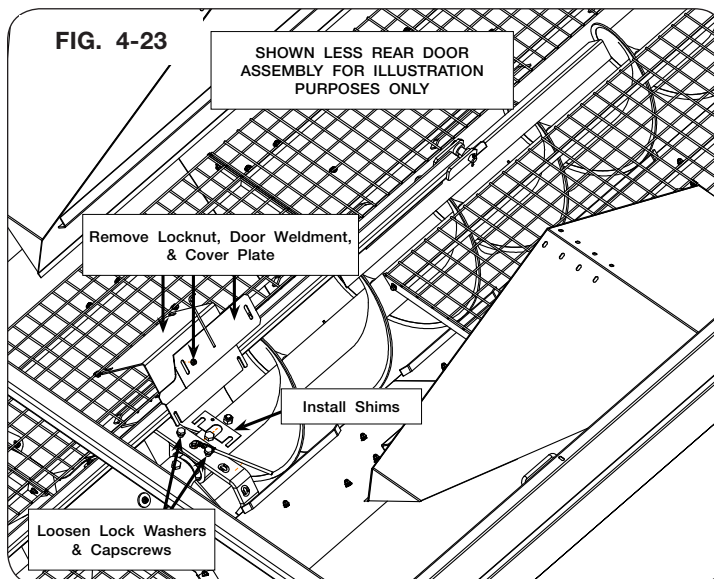


FIG. 4-23

5. If more than two shims are necessary to set the bearing height, replace the 5/8" x 1 3/4" capscrews with 5/8" x 2" capscrews.
6. Re-measure the distance from the flighting tube to the string making sure the string is pulled tight. If the measurements are all within 1/8", the string can be removed.
7. Reassemble the baffle weldment and the second and fourth grates inside hopper.
8. Using a safe lifting device rated for 100 lbs., reattach grates inside hopper. Loosely tighten hardware.
9. Torque all hardware to specification. See "Torque Chart" in this section. (FIGS. 4-22 and 4-23)
10. Reassemble the cleanout door linkages on the front and rear doors.
11. Close cleanout doors and reassemble the cleanout door lock pin.
12. Ensure all personnel and tools are removed from the cart and reconnect the cart to tractor.
13. Run the auger starting at a low RPM and increase speed to max RPM to make sure the auger flighting does not make contact with the belly pan or flow doors.

Auger System (continued)

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 empty unit on a firm, level surface. Block the machine to keep it from moving. Set the vehicle parking brake, shut off the engine and remove the ignition key 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. 4-26.



Auger System (continued)

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 $3 \frac{1}{16}$ " pre-load dimension between the heavy washers. Tighten the outer hex nut against inner nut to lock position. (Fig. 4-27)
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 $1 \frac{3}{4}$ " between the washers and generating a force of approximately 480 lbs. against the belt. (Fig. 4-28)
7. Release and tighten belt multiple times to confirm positions and final adjustments. See Fig. 4-28 and Fig. 4-29.
8. Tighten belt. Install the cover guard and reattach the PTO shaft to the gearbox input shaft. Clear work area and test run drivetrain for 3 minutes at 1000 PTO 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 $1 \frac{3}{4}$ " 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.

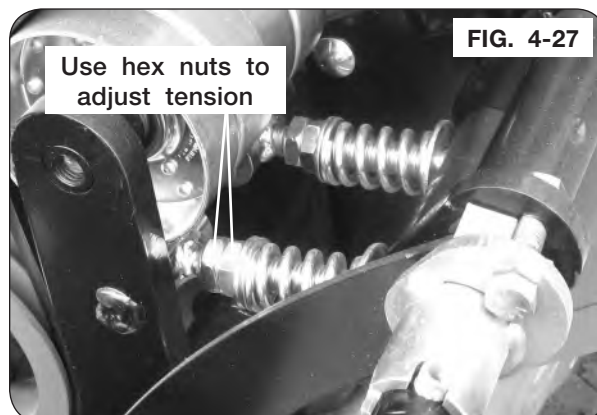


FIG. 4-27



FIG. 4-28

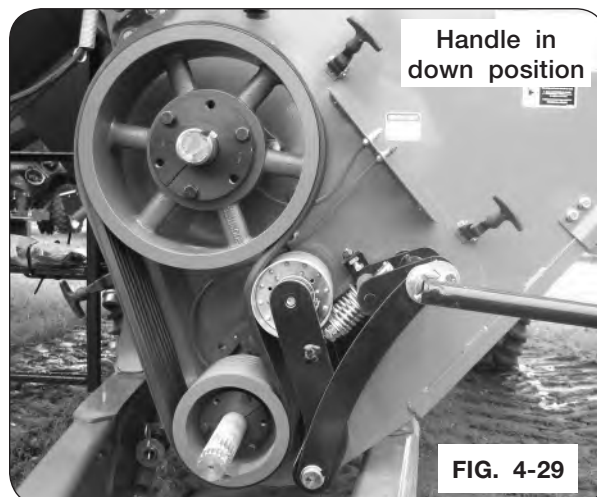
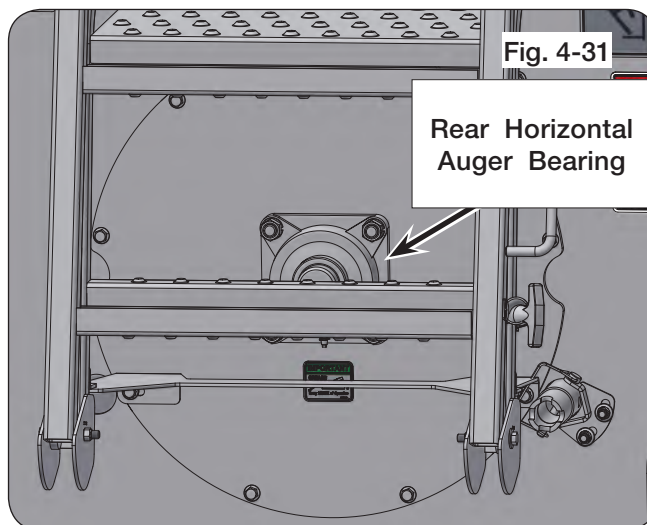


FIG. 4-29

Auger Driveline Bearings

IMPORTANT

- Periodically check set screws in all bearings at both ends of the driveline for tightness. (Figs. 4-30 and 4-31)

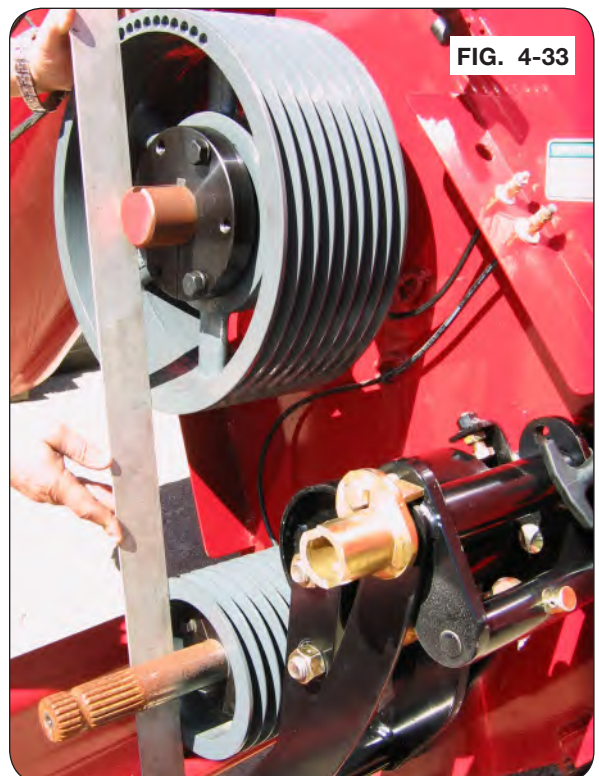


V-Belt Alignment

1. Pulleys must be aligned with the fixed idler. Belts should be centered on idler for longest belt life. (Fig. 4-32)



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. (FIG. 4-33)



V-Belt Alignment (continued)

Split Tapered Bushings

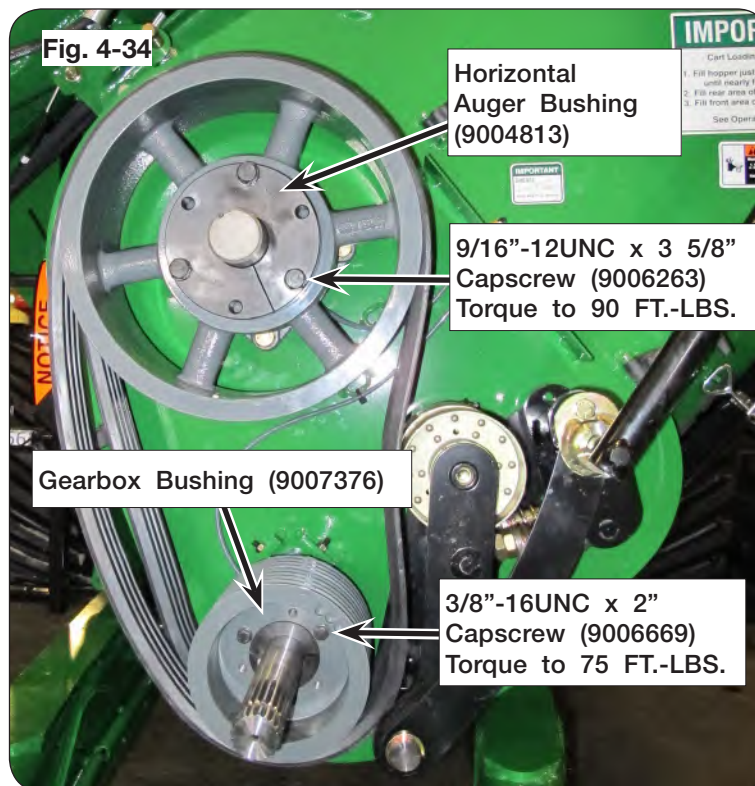
Check annually for tight engagement to driveshaft. Torque three bolts progressively to the following values:

For the smaller gearbox bushing (9007376): 3/8"-16UNC hardware. Torque to 75 ft.-lbs.

For the larger horizontal auger bushing (9004813): 9/16"-12UNC hardware. Torque to 90 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.



Horizontal Auger Removal and Replacement

WARNING

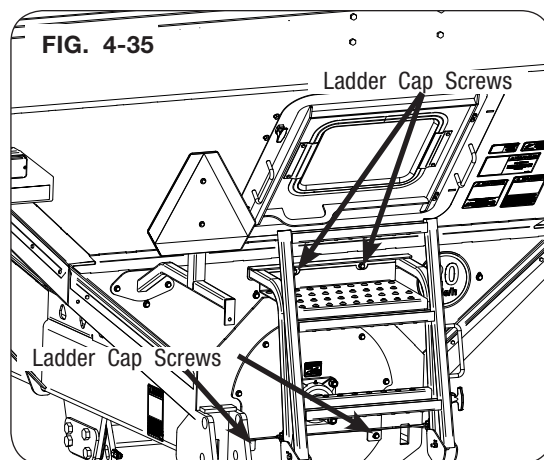
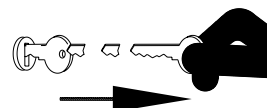
- TO PREVENT PERSONAL INJURY OR DEATH, ALWAYS ENSURE THAT THERE ARE PEOPLE WHO REMAIN OUTSIDE THE CART TO ASSIST THE PERSON WORKING INSIDE, AND THAT ALL SAFE WORKPLACE PRACTICES ARE FOLLOWED. THERE ARE RESTRICTED MOBILITY AND LIMITED EXIT PATHS WHEN WORKING INSIDE THE IMPLEMENT.
- NEVER ENTER CART WITH 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 empty unit on a firm, level surface. Block the machine to keep it from moving. Set the vehicle parking brake, shut off the engine and remove the ignition key and disconnect the PTO shaft from the tractor.
2. Use a safe lifting device rated for 100 lbs. to support the rear ladder during removal.
3. Remove 4 rear ladder cap screws attached to the cart. (FIG. 4-35)

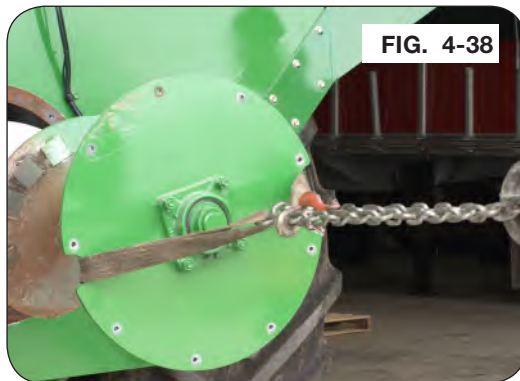
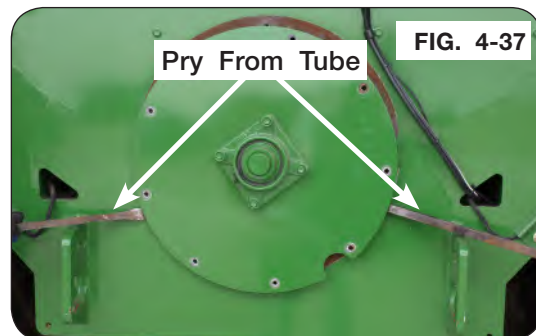
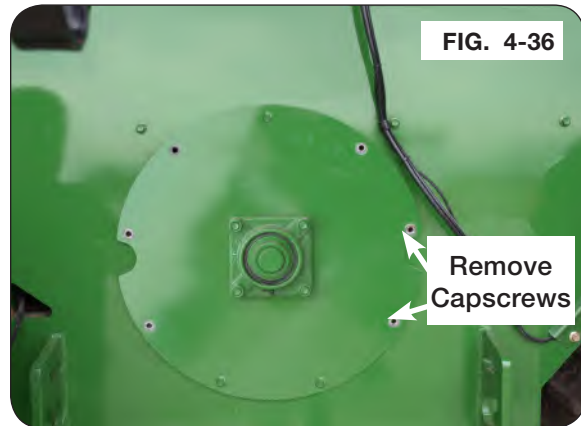
NOTE: Keep all hardware for re-assembly.

4. Remove rear ladder from the cart. (FIG. 4-35)



Horizontal Auger Removal and Replacement (continued)

5. Remove capscrews from the auger cover. (Fig. 4-36)
6. Pry the auger from the auger tube. (Fig. 4-37)
7. Using a safe lifting device rated for 1,000 lbs., pull the rear auger out of the cart. (Fig. 4-38)

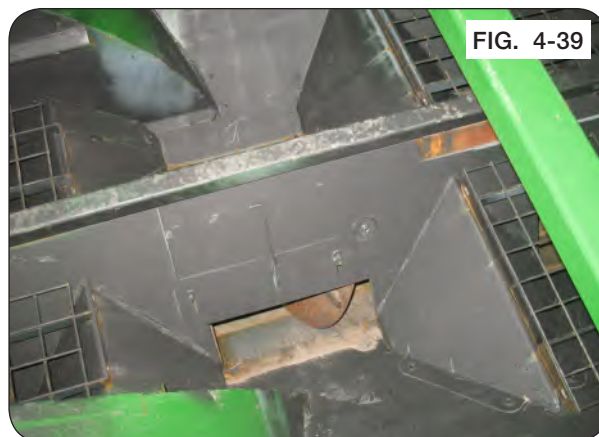


Horizontal Auger Removal and Replacement (continued)

NOTE: If only servicing rear auger, skip to step 28. For 5-pin driver replacement or front auger service, continue to step 8.

8. There are two horizontal auger hanger bearings. Remove the flange screws in the second and fourth grates inside the cart. (Fig. 4-39)

9. Using a safe lifting device rated for 100 lbs., remove the grates. (Fig. 4-39)



10. Remove locknuts, baffle weldments and cover plates from the middle tent. (Fig. 4-40)

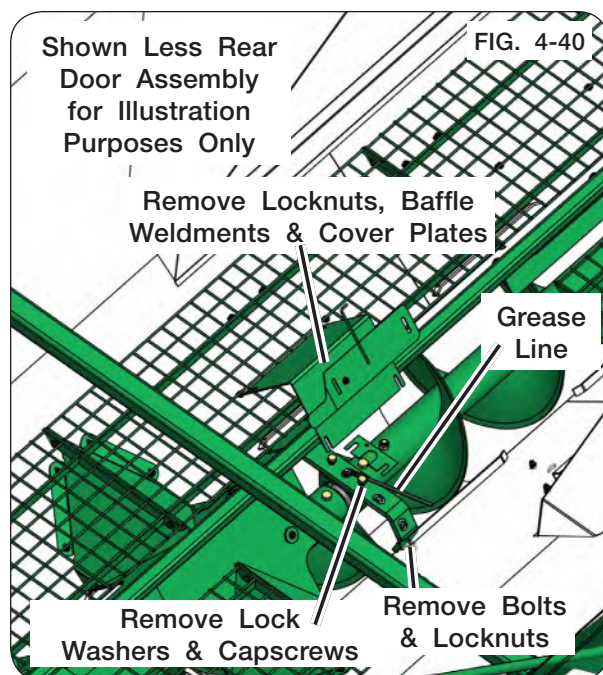
11. Disconnect grease line. (Fig. 4-40)

12. If required, block between the horizontal auger and belly pan with blocking rated for 1,000 lbs.

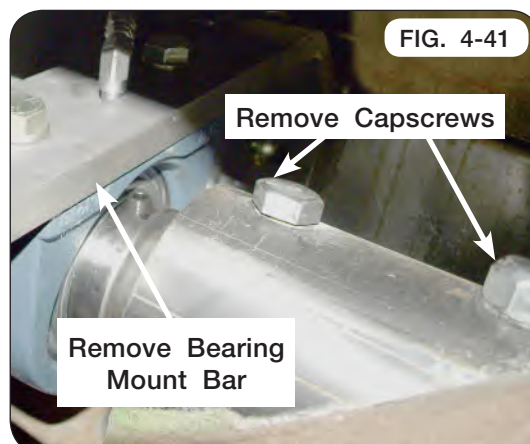
13. Loosen the pillow block bearing hardware evenly to lower horizontal auger onto the block or belly pan. (Fig. 4-40)

14. Remove capscrews and lock washers holding bearing onto the bearing mount bar. (Fig. 4-40)

15. Remove the bearing mount bar bolts and locknuts on each side of the auger. (Fig. 4-40)



16. Remove bearing mount bar to allow access to work on the bearing and shaft. Remove two center tube connecting capscrews, spacer bushings (283895B) and locknuts from the horizontal auger. (Fig. 4-41)

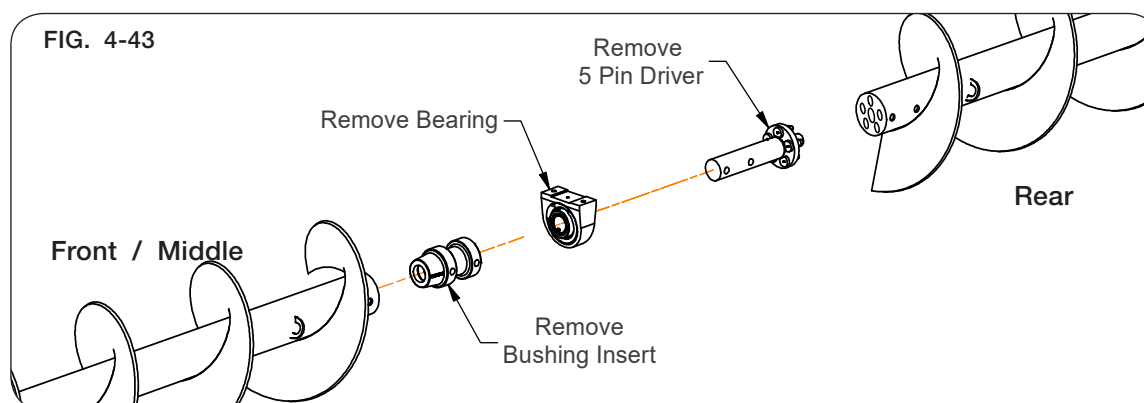


Horizontal Auger Removal and Replacement (continued)

17. Remove the original 5-pin driver, bearing and the bushing insert. (Figs. 4-42 & 4-43)
18. Replace 5-pin driver and bushing insert, if needed.
19. Slide middle auger out if servicing it or front auger. Otherwise, skip to step 21.
20. Repeat steps 8–20 on front hanger bearing.



FIG. 4-42



21. Substantially coat bushing insert with anti-seize.
22. Slide bushing insert into front auger and ensure tube holes are aligned. (Figs. 4-44 & 4-45)

NOTE: Use bushing insert provided with the auger flighting service kit to assure best fitment.

NOTE: Make sure the set screws on bearing are towards the front of the cart. (Fig. 4-45)

23. Slide bearing onto 5-pin driver. Hand tighten set screw. (Fig. 4-45)
24. Insert 5-pin driver into front auger and ensure tube holes are aligned.
25. Install front capscrews, spacer bushings and locknuts 180 degrees from each other and assemble spacer bushings on threaded side of capscrews. Hand tighten hardware at this time. (Fig. 4-45)



FIG. 4-44

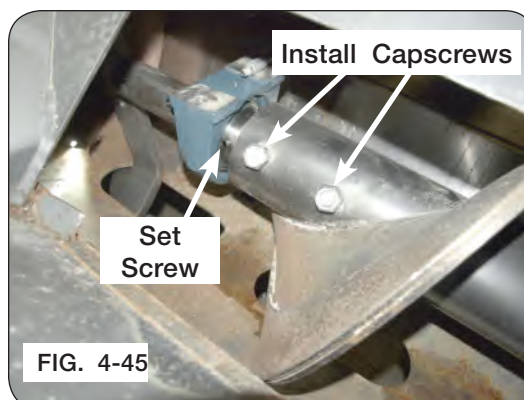


FIG. 4-45

Horizontal Auger Removal and Replacement (continued)

26. Install hanger bracket. Raise hanger bracket as high as possible. (Figs. 4-46 & 4-47)

27. Torque hanger bracket capscrews to 130 ft.-lbs. attaching hanger bracket to the cart. (Figs. 4-46 & 4-47)

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

NOTE: When installing rear auger, use blocking rated for 1,000 lbs., as required.

28. Using a safe lifting device rated for 1,000 lbs., slide the middle / rear auger forward and fully engage auger drive plate holes with the 5-pin driver. Align the pins and holes with the rear auger pipe. (Fig. 4-47)

NOTE: There must be no space between the 5-pin driver and the mating auger. This applies to both locations of installing the auger on a 5-pin driver.

29. Attach bearing to the hanger bracket. Raise horizontal auger and 5-pin driver into position by tightening the bearing hardware. (Figs. 4-46 & 4-47)

30. If used, remove blocking from between horizontal auger and belly pan.

31. Reattach grease line components. (Figs. 4-46 & 4-47)

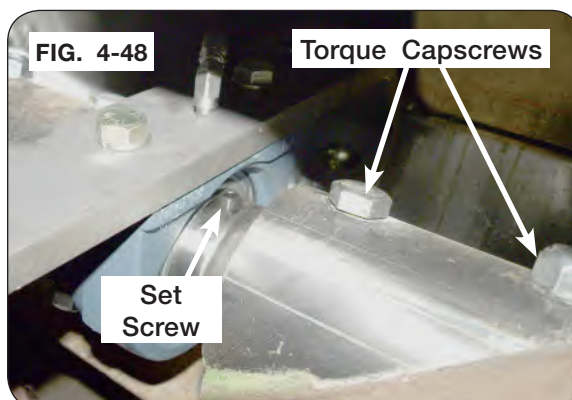
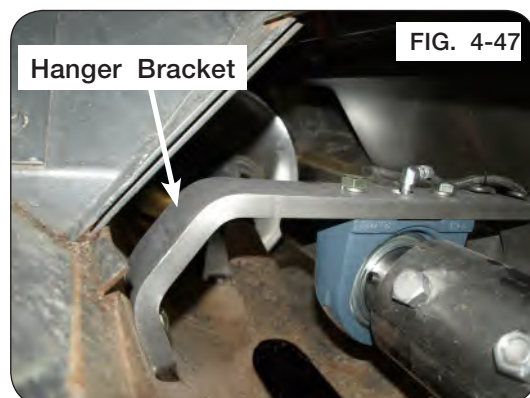
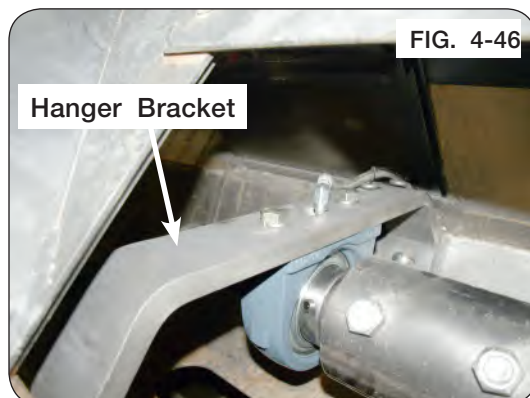
NOTE: Repeat steps 23–31 for rear auger if removed.

32. Adjust auger height. See "Horizontal Auger Height Measurement" in this section for details.

33. Torque auger capscrews to 200 ft.-lbs. (Fig. 4-48)

34. Tighten bearing set screw. (Fig. 4-48)

(Continued on next page)



Horizontal Auger Removal and Replacement (continued)

35. Insert hardware for rear auger cover, and rear ladder, if equipped. (Figs. 4-49 & 4-50)
36. Using a safe lifting device rated for 100 lbs., reposition rear ladder, if equipped. (Fig. 4-50)
37. Torque all hardware to specification. See “Torque Chart” in this section. (Figs. 4-49 & 4-50)
38. Reinstall ALL baffle weldments and cover plates.
39. Using a safe lifting device rated for 100 lbs., reinstall ALL the grates.
40. Ensure all personnel and tools are removed from the cart and reconnect PTO shaft to the tractor.
41. Run the auger starting at a low RPM and increase speed to max RPM to ensure the auger flighting does not make contact with the belly pan or flow doors.

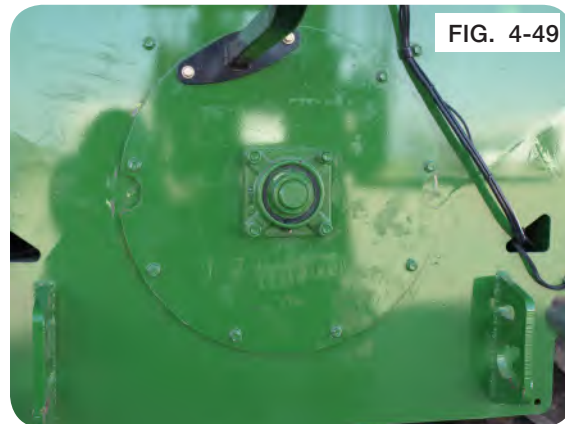


FIG. 4-49

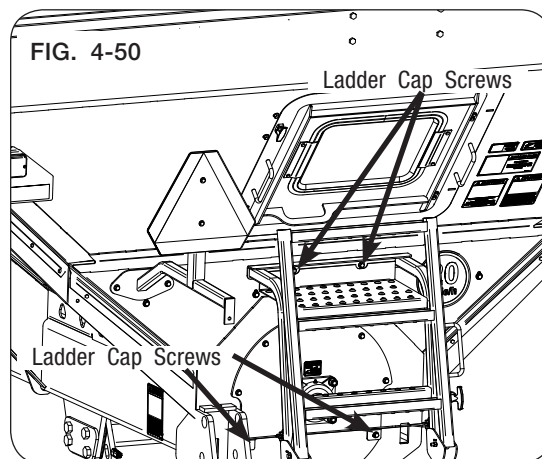


FIG. 4-50

Ladder Cap Screws

Ladder Cap Screws

Driveline Removal

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 ENTANGLED IN A ROTATING DRIVELINE.**

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.

1. Remove clamping cone/retaining bolt.
2. Use a hammer and punch, if needed, to moderately hit the end of clamping cone/retaining bolt, as shown. (FIG. 4-51)
3. Once clamping cone/retaining bolt is removed, slide torque limiter off gearbox splined input shaft.

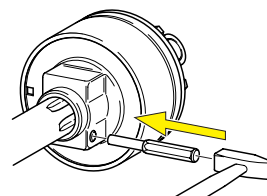


Fig. 4-51

Gearbox

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. 4-52)

Maximum gearbox life:

Check oil level every 2 weeks.

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

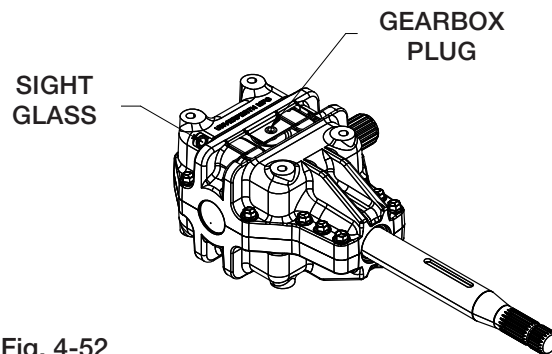


Fig. 4-52

PTO Shaft Length

WARNING

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

IMPORTANT

- The driveline is designed to operate with the tractor drawbar set to 20" behind the rear end of the PTO shaft to center of hitch pin. Dimension (A) in picture. Failure to do so will result in driveline damage. DO NOT modify the PTO. (FIG. 4-53)

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

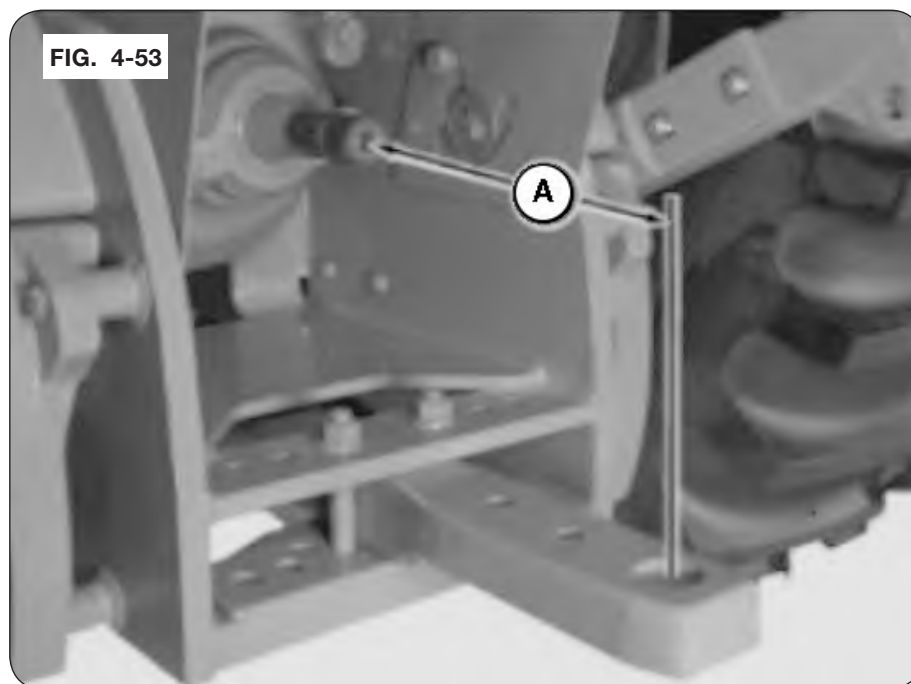


FIG. 4-53

PTO Shaft and Clutch - Benzi PTO

To Dismantle Guard (Figs. J1 - J3)

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



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



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



PTO Shaft and Clutch - Benzi PTO (continued)

To Assemble Guard (Figs. K1 - K3)

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



2. Fit bearing ring in groove with three bearing ring tabs positioned as shown. (FIG. K2)
3. Slip on half-guard by aligning the holes on the cone with three bearing ring tabs and the cone inner key with the cut of the bearing ring. (FIG. K2)



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

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

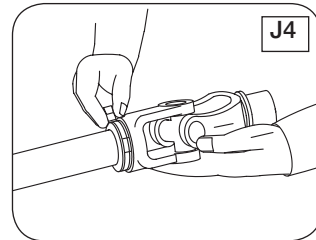
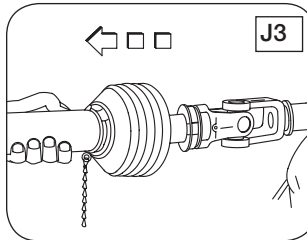
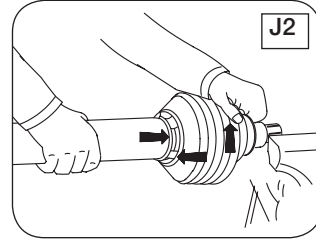
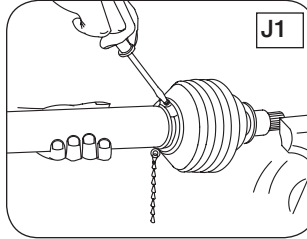
5. Confirm half-guard engagement by pulling backwards on the half-guard. (FIG. K3)



PTO Shaft and Clutch - Walterscheid PTO

To Dismantle Guard (Figs. J1 - J4)

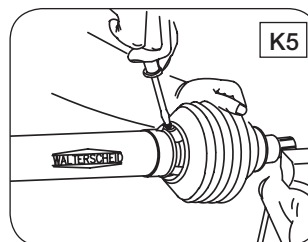
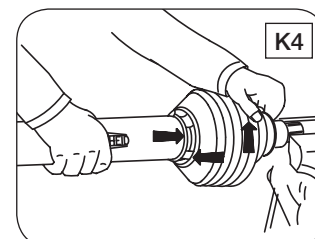
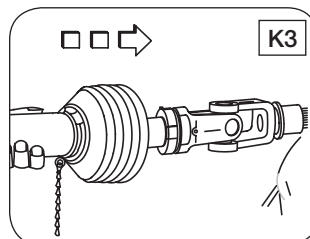
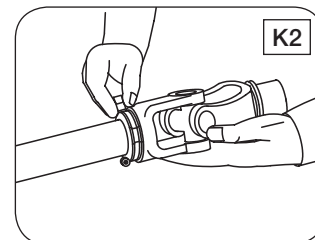
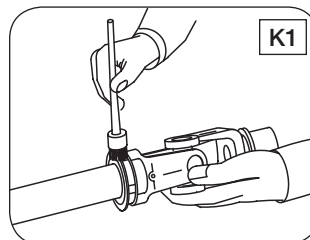
1. Remove locking screw.
2. Align bearing tabs with cone pockets.
3. Remove half-guard.
4. Remove bearing ring.



PTO Shaft and Clutch - Walterscheid PTO (continued)

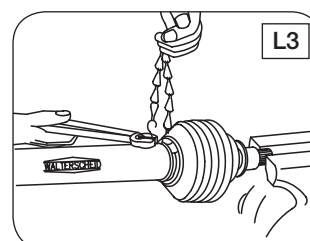
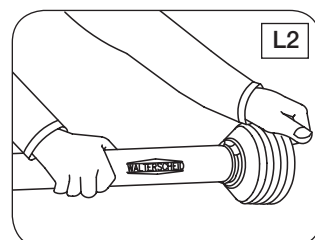
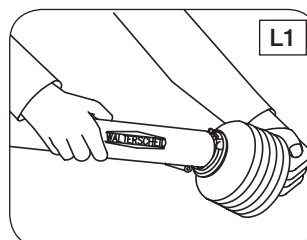
To Assemble Guard (Figs. K1 - K5)

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).



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 IS 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.
- THE REAR HOPPER AREA OF THE CART SHOULD ALWAYS BE EMPTIED FIRST. THIS WILL MAINTAIN WEIGHT ON THE HITCH OF THE TOWING VEHICLE. EMPTYING THE FRONT HOPPER AREA FIRST WITH THE REAR HOPPER AREA FULL COULD RESULT IN NEGATIVE TONGUE WEIGHT ON THE UNDERCARRIAGE AND REDUCED CONTROL OF THE UNDERCARRIAGE WHEN TOWING.

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.

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.

- If higher flow is desired and torque is not the limiting factor, raise each baffle to an incremental amount and rerun.
- 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.
- 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.
- 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)

1. Park the empty unit on a firm, level surface. Before making any baffle adjustments, close horizontal auger flow door. Block the machine to keep it from moving. Set the tractor parking brake, turn off tractor engine, remove ignition key, and disconnect PTO.
2. If a higher flow is desired and torque is not a factor, loosen the (2) flange nuts on each baffle, see figure 4-54.
3. Use the lift handle to raise each baffle to the desired position. See figures 4-54 & 4-55.
4. Torque all hardware to specification. See "Torque Chart" in this section. See figures 4-54 & 4-55.

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 4-55 for illustration only.

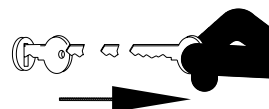


FIG. 4-54

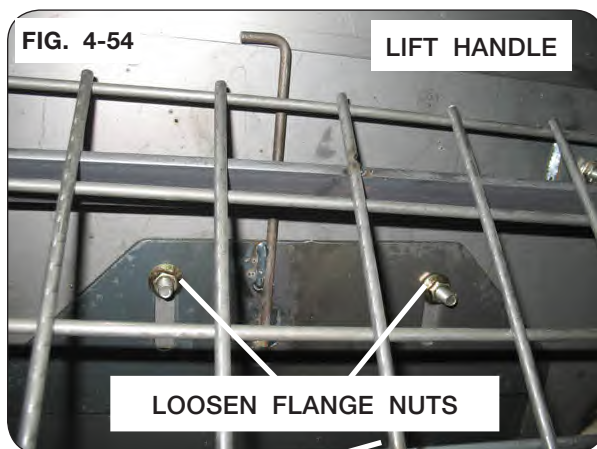


FIG. 4-55



Horizontal Cleanout Door Adjustment

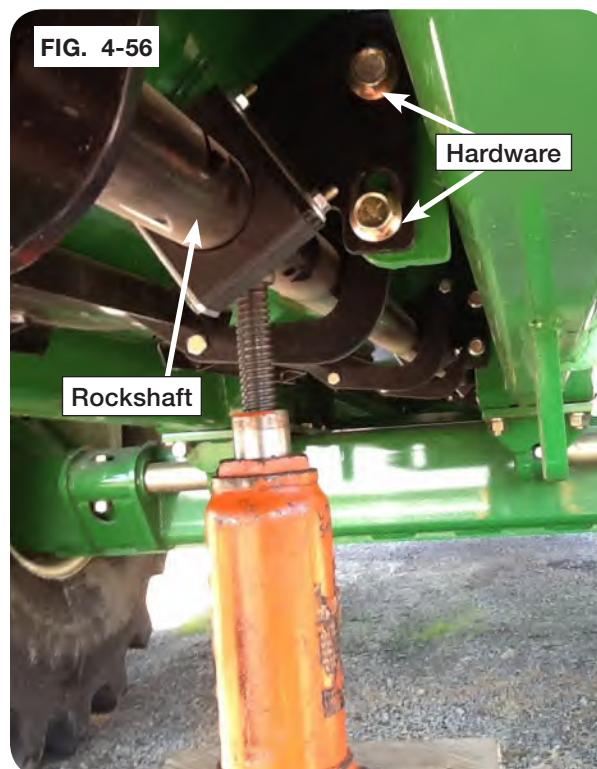
WARNING

- 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.

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

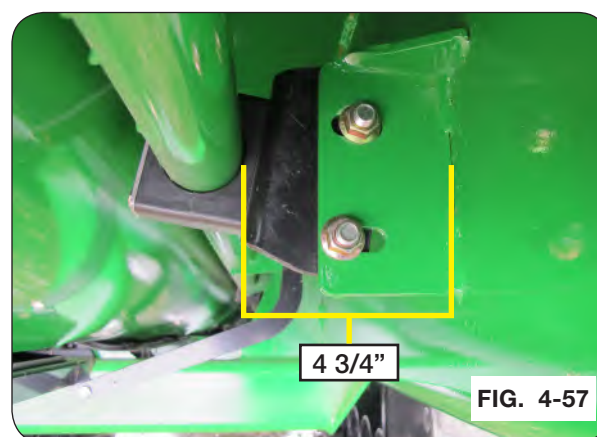


2. Loosen all the hardware in the slotted brackets connecting the cleanout door rockshaft to the grain cart tube. (Fig. 4-56)
3. Starting at the front of the cart, using a jack, push the rockshaft up and toward the runner tube. (Fig. 4-56)



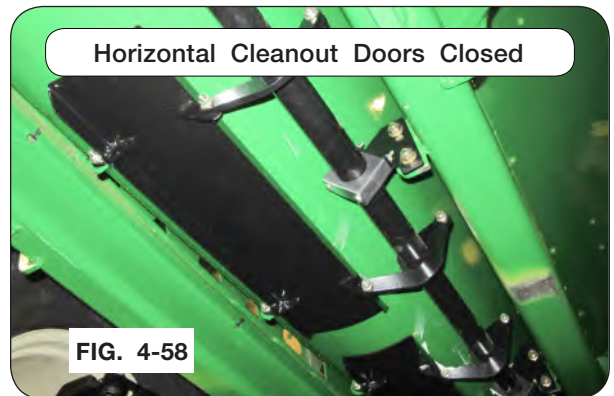
NOTE: Ideal distance between the runner tube and rockshaft is 4 3/4". (FIG. 4-57)

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



Horizontal Cleanout Door Adjustment

6. Rotate the tensioner handle counter-clockwise to close the doors allowing the plate to fit and seal into the belly pan opening. (Fig. 4-58)
7. Close the doors and ensure all doors seal. (Fig. 4-58)
8. Insert lynch pin into rockshaft and return handle to storage location.



Hydraulic Jack Service

WARNING

- HIGH-PRESSURE FLUIDS CAN PENETRATE THE SKIN AND CAUSE SERIOUS INJURY OR DEATH. LEAKS OF HIGH-PRESSURE FLUIDS MAY NOT BE VISIBLE. USE CARD-BOARD OR WOOD TO DETECT LEAKS IN THE HYDRAULIC SYSTEM. SEEK MEDICAL TREATMENT IMMEDIATELY IF INJURED BY HIGH-PRESSURE FLUIDS.
 - RELIEVE THE HYDRAULIC SYSTEM OF ALL PRESSURE BEFORE ADJUSTING OR SERVICING. SEE THE HYDRAULIC POWER UNIT OPERATOR'S MANUAL FOR PROPER PROCEDURES.
 - HYDRAULIC SYSTEM MUST BE PURGED OF AIR BEFORE OPERATING TO PREVENT SERIOUS INJURY OR DEATH.
 - MOVING OR ROTATING COMPONENTS CAN CAUSE SERIOUS INJURY OR DEATH. ENSURE SERVICE COVERS, CHAIN/BELT COVERS AND CLEAN-OUT DOOR ARE IN PLACE AND SECURELY FASTENED BEFORE OPERATING UNIT.
 - UNHITCHING A LOADED CART CAN CAUSE SERIOUS INJURY OR DEATH DUE TO TONGUE RISING OR FALLING. ALWAYS HAVE A LOADED CART ATTACHED TO A TRACTOR. THE JACK IS INTENDED TO SUPPORT AN EMPTY CART ONLY.
 - FALLING OBJECTS CAN CAUSE SERIOUS INJURY OR DEATH. DO NOT WORK UNDER THE MACHINE AT ANY TIME WHILE BEING HOISTED. BE SURE ALL LIFTING DEVICES AND SUPPORTS ARE RATED FOR THE LOADS BEING HOISTED. THESE ASSEMBLY INSTRUCTIONS WILL REQUIRE SAFE LIFTING DEVICES UP TO 100 LBS. SPECIFIC LOAD RATINGS FOR INDIVIDUAL LOADS WILL BE GIVEN AT THE APPROPRIATE TIME IN THE INSTRUCTIONS.
1. Park the empty unit on a firm, level surface. Block tractor and machine to keep it from moving. Set the tractor parking brake, shut off the engine and remove the ignition key. Completely disconnect the PTO from the cart and tractor.
 2. Attach hydraulic jack hoses to tractor SCV.
 3. Open valve and lower jack leg to ground.
DO NOT raise tongue.
 4. Relieve pressure on hydraulic jack circuit. See tractor operator manual for procedure.
 5. Close valve.
 6. Support the hydraulic jack assembly with a safe lifting device rated for 100 lbs.
 7. Remove hydraulic jack hoses from tractor SCV.
 8. Remove cylinder pin (272587) and snap rings (91192) from the base end of the cylinder at the lug on top of the tongue. (FIG. 4-59)

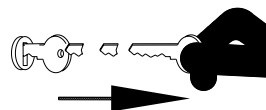
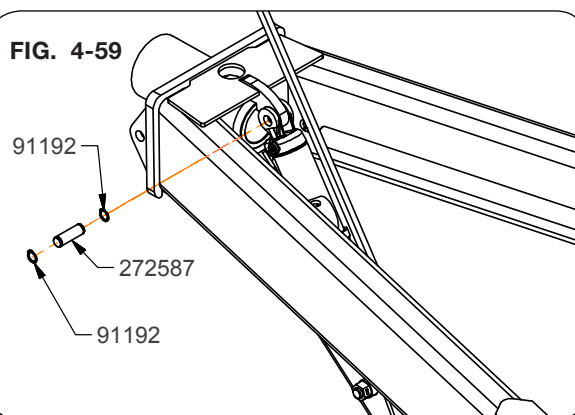


FIG. 4-59



Hydraulic Jack Service (continued)

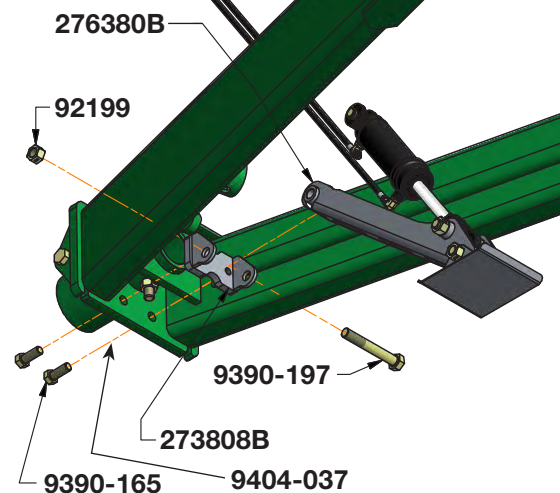
WARNING

- KEEP HANDS CLEAR OF PINCH POINT AREAS.

9. Remove two 7/8"-9UNC x 2 1/4" capscrews (9390-165) and 7/8" lock washers (9404-037) from mounting bracket (273808B). (FIG. 4-60)

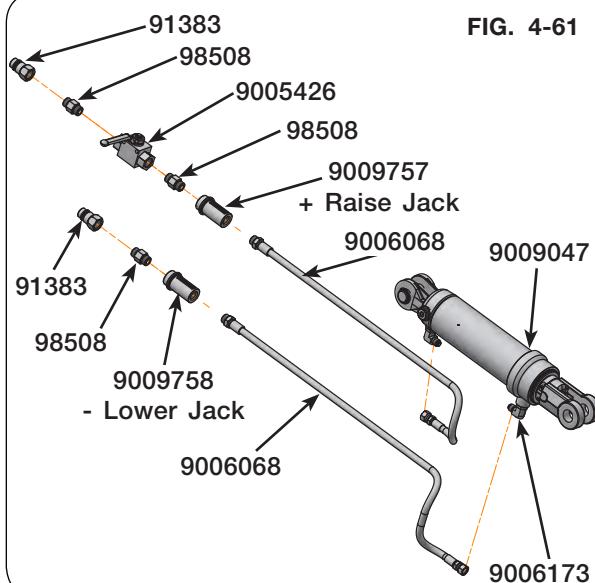
10. Remove hydraulic jack assembly from the tongue. (FIG. 4-60)

FIG. 4-60



11. On new hydraulic assembly, attach hoses (9006068) and fittings to cylinder (9009047) as shown in FIG. 4-61. 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.

FIG. 4-61



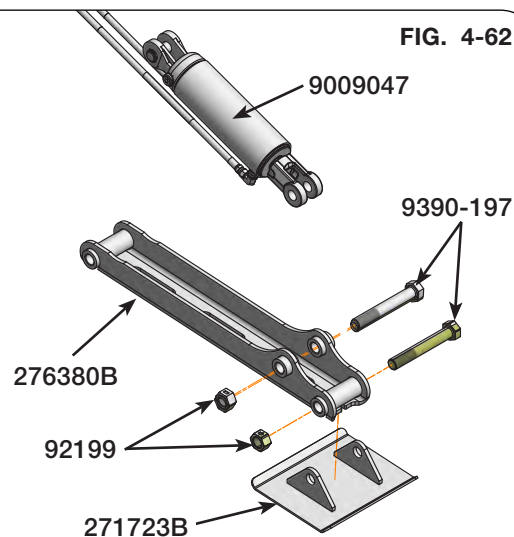
12. Assemble the cylinder (9009047) and jack foot (271723B) to the jack leg weldment (276380B) as shown in figure 4-62 using 1"-8UNC x 7" capscrews (9390-197) and 1"-8UNC locknuts (92199).

NOTE: Ensure all jack leg weldment (276380B) joints can pivot freely, including jack foot (271723B).

13. Tighten 1" hardware on jack leg weldment and allow the cylinder and jack foot to freely pivot. (Fig. 4-62)

(Continued on next page)

FIG. 4-62



Hydraulic Jack Service (continued)

WARNING

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

14. Attach mounting bracket (273808B) to jack leg weldment (276380B) using 1"-8UNC x 7" capscrew (9390-197) and 1"-8UNC locknut (92199), before mounting to the tongue. (Fig. 4-63)
15. Tighten 1" hardware on jack leg weldment and allow the joint to pivot. (Fig. 4-63)
16. Using a safe lifting device rated for 100 lbs., attach the mounting bracket (273808B) to the back side of the front hitch plate with two 7/8"-9UNC x 2 1/4" capscrews (9390-165) and 7/8" lock washers (9404-037). (Fig. 4-63)
17. Torque 7/8" hardware to 330 ft.-lbs. (Fig. 4-63)
18. Align the base end of the cylinder with the lug on the top of the tongue and assemble the cylinder pin (272587) and snap rings (91192) shown in Fig. 6-64.

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

19. Purge air from system. See "Purge Hydraulic System" in this section for procedure.

FIG. 4-63

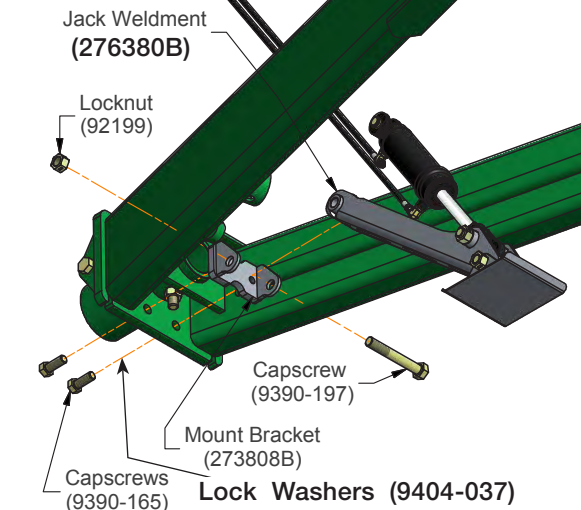
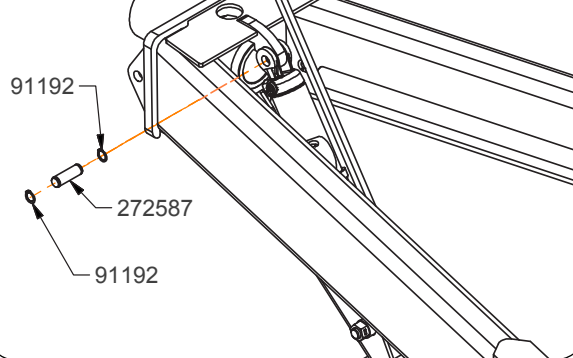


FIG. 4-64



Seasonal Storage

Always open and keep open the 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.

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 or electric hydraulic controls, store these indoors in a dry location.

Close the tarp to keep debris out of the hopper.

Ensure rear access door is closed and latched and that all ladders are in storage position.



Troubleshooting

Problem	Possible Cause	Corrective Action
No Manual Override functions work (Electric Over Hydraulic)	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 Deutsch connectors in the harnesses	Unplug the Deutsch connectors at the hitch point and in the extension harness (if used). Clean up the connectors with electrical contact cleaner. Make sure the connectors are aligned correctly and re-connect them.
	Not pressurizing the correct hydraulic hose	Make sure the quick couplers are properly connected to the tractor SCV and the Hydraulic Pressure line is being pressurized when engaging the tractor SCV.
Auger unfolds part way and stops	Debris in the EOH block on the auger fold cylinder	Fold auger, remove the Coil and the cartridge valve on the EOH valve block. Remove any debris and reinstall cartridge and coil.

Troubleshooting (continued)

Problem	Possible Cause	Corrective Action
Auger lights will not function	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. Make sure the center pin on the 7 pin plug has +12V key switch power.
	Proximity switch located 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.
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.

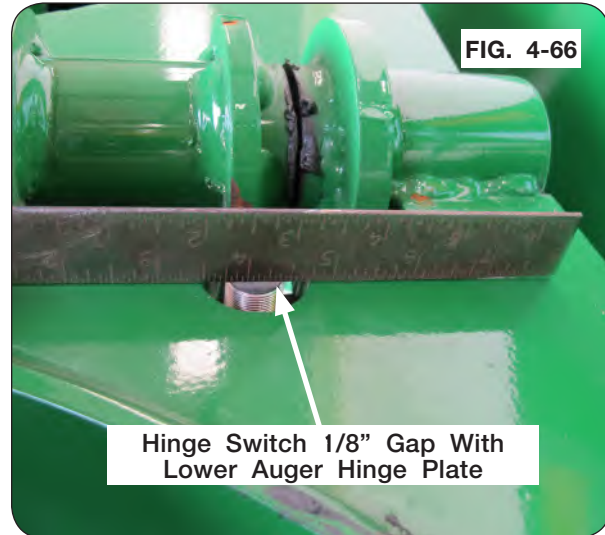
Auger Switch Troubleshooting

Check continuity between the switch wires to determine if the switches are out of adjustment. Adjust accordingly if needed.

Auger Fold, Unfold & Auger Lights Switch

NOTE: The switch near the auger hinge pin controls the power and ground for the auger lights.

The switch at the hinge pin should be adjusted so there is 1/8" gap below the lower auger hinge plate. To maintain the 1/8" gap, adjust the hinges on the upper auger or by turning the switch in or out until the 1/8" gap is achieved. (Fig. 4-66)



Tarp Troubleshooting Inspection & Maintenance

PROBLEM	SOLUTION
TARP SAGS IN MIDDLE AREAS	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	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. Fully close tarp with tension on the latch plate to prevent water from pooling.*

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

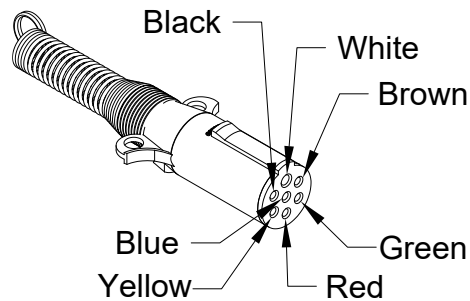
Tears in tarp should be addressed before further tarp operation. If water pools on tarp, adjust tension of tarp cables and/or arm springs.

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

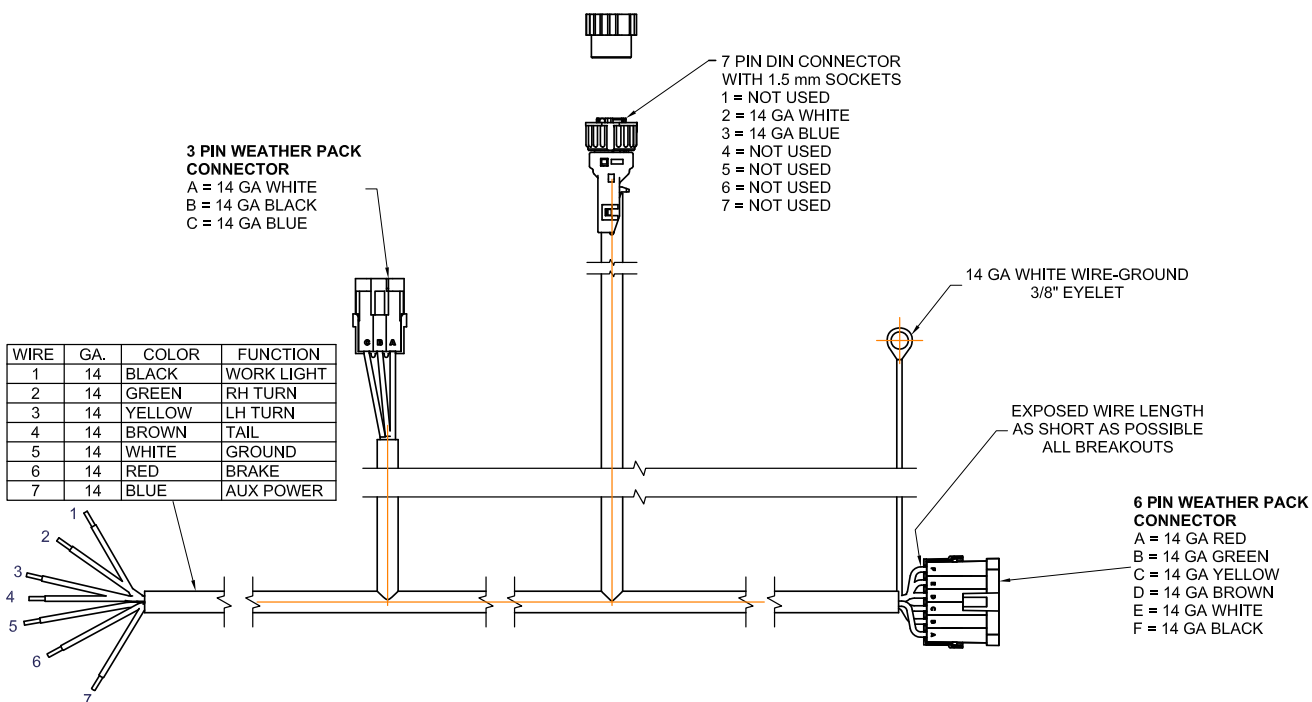
- White -- Ground
- Green -- Right Amber Flashing Lamp
- Yellow -- Left Amber Flashing Lamp
- Brown -- Amber Clearance and
Red Tail Lights (Low Filament)
- Red -- Red Brake Lights (High Filament)
- Black -- Work Lights
- Blue -- 12V Key Switch Power



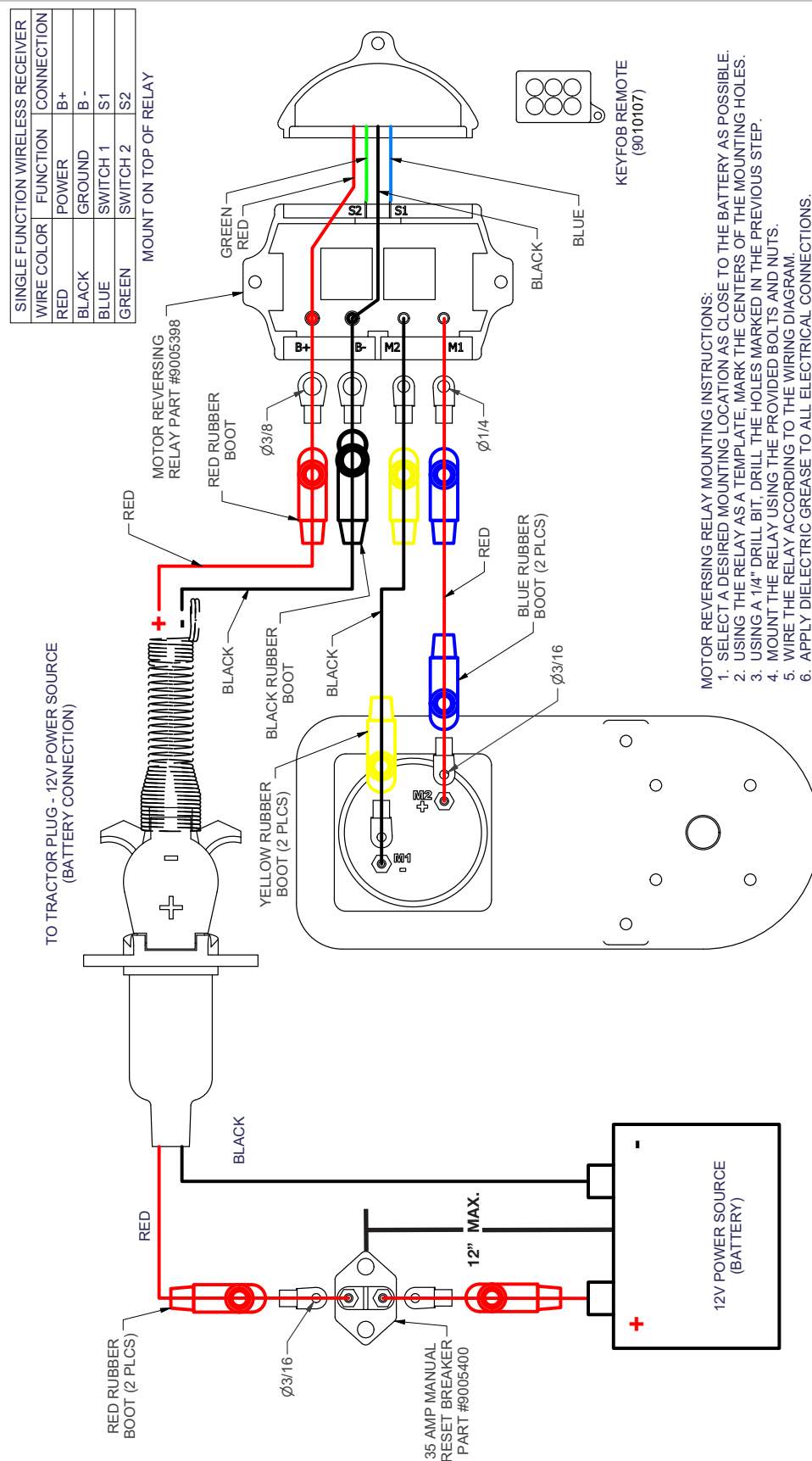
SAE SEVEN-POINT
CONNECTOR PLUG

92450

Electrical System Schematic - Front Harness #9009540



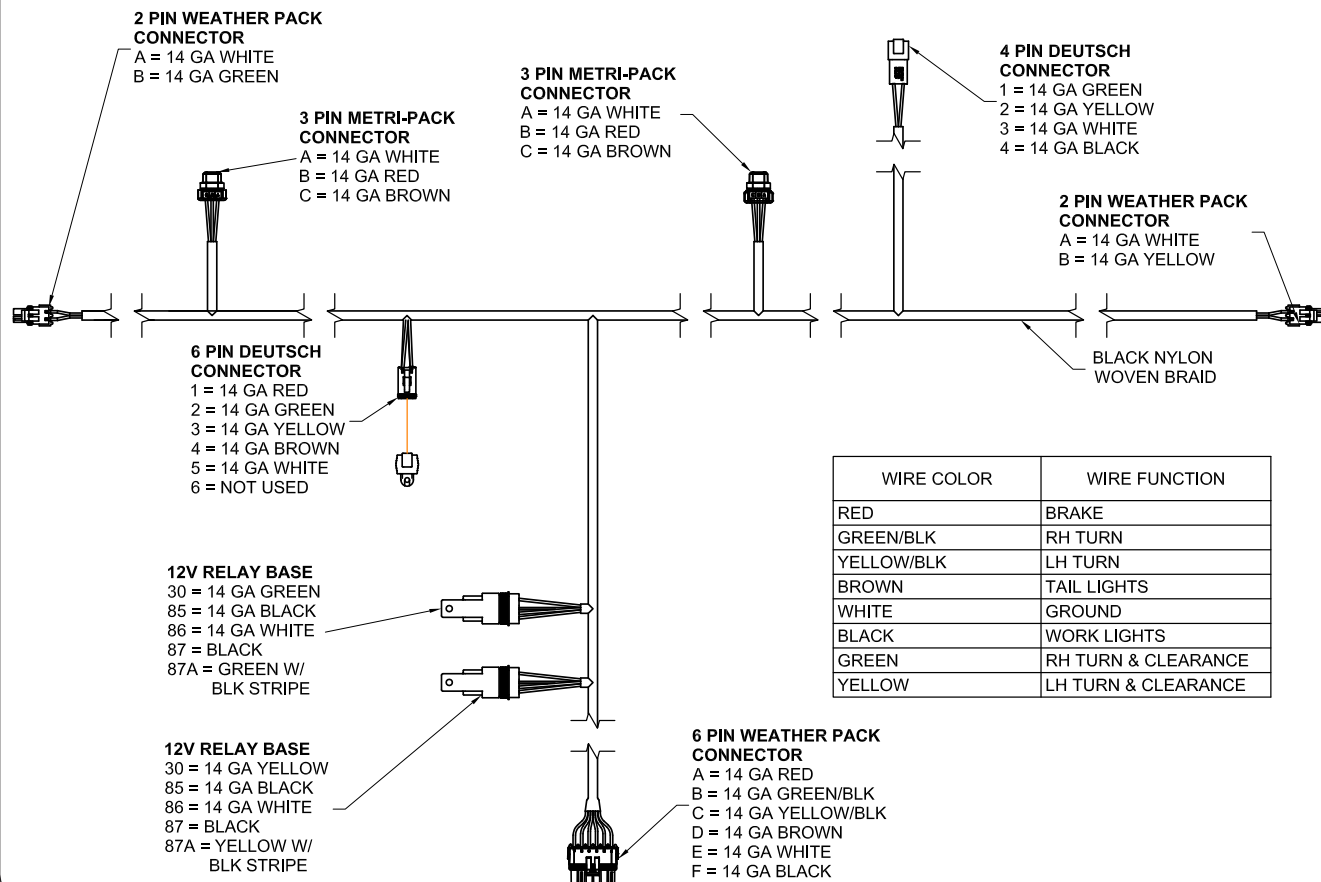
Electric Tarp System Schematic



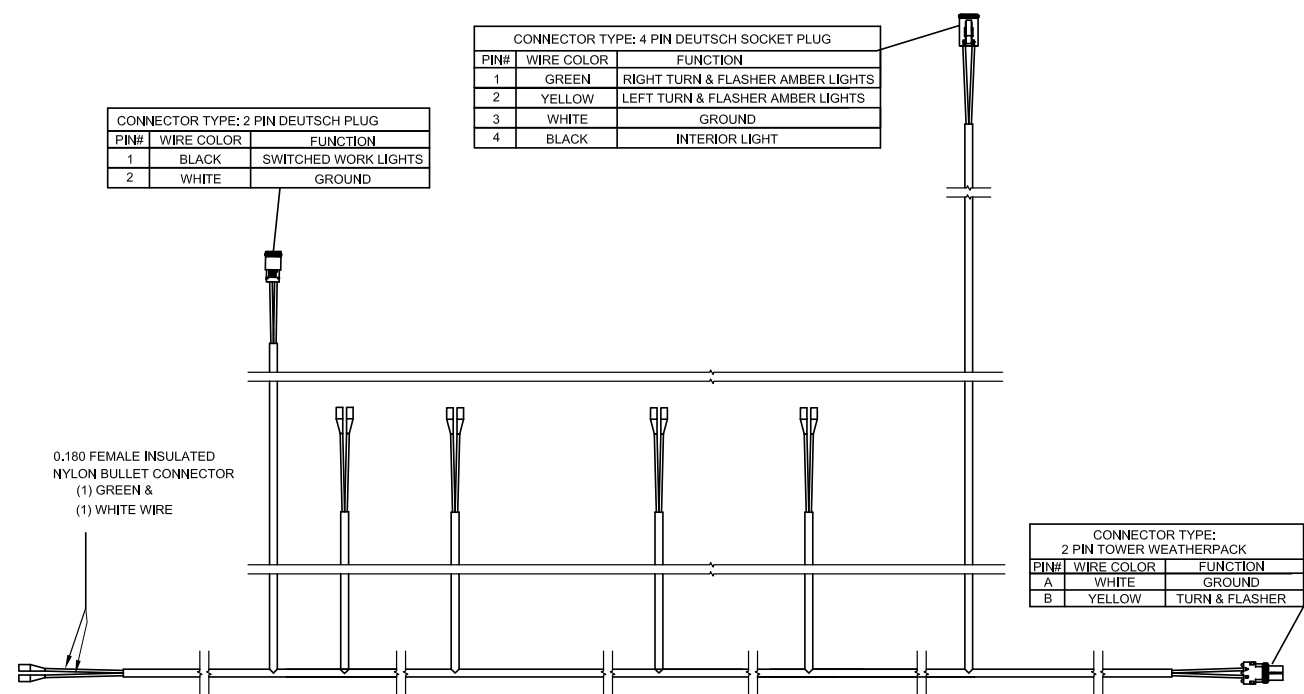
NOTE: See separate electric tarp manual for additional information.

ELECTRIC TARP SCHEMATIC

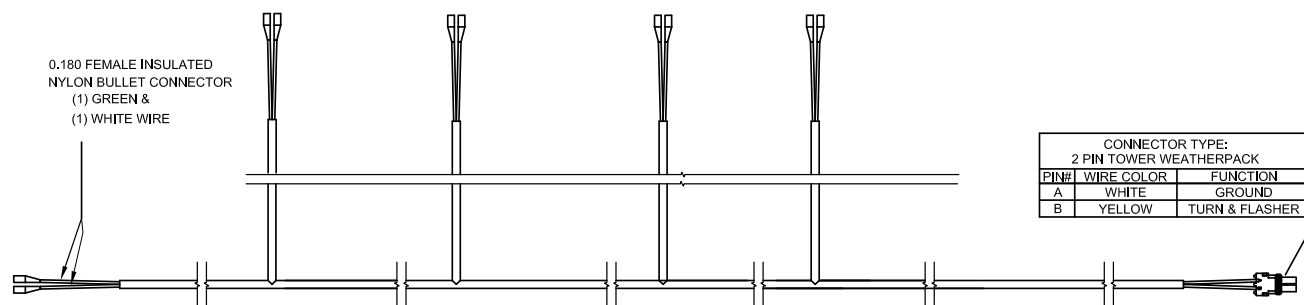
Electrical System Schematic - Rear Harness #9009861



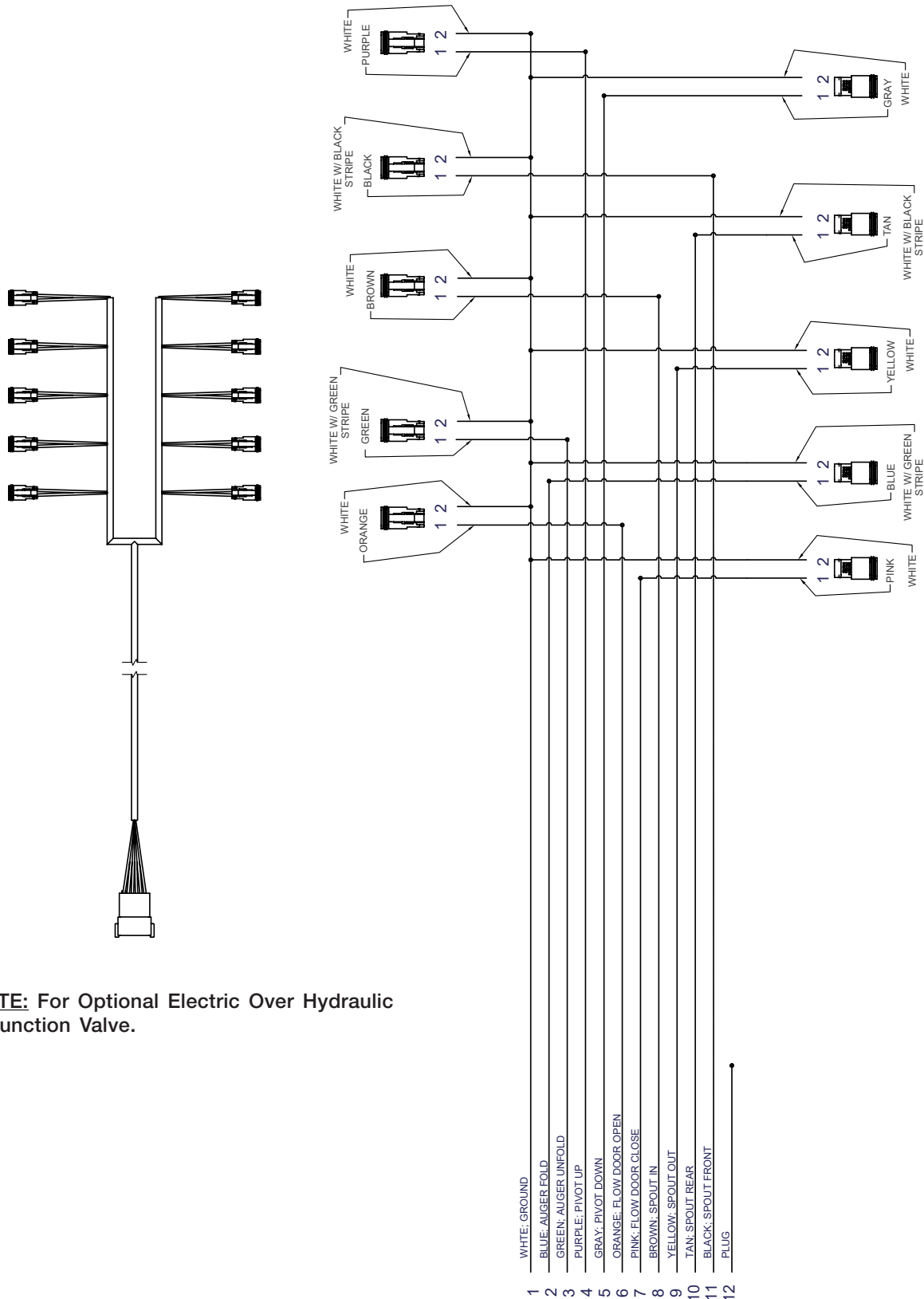
Electrical System Schematic
RH Clearance Light Harness #9009863



Electrical System Schematic
LH Clearance Light Harness #9009862

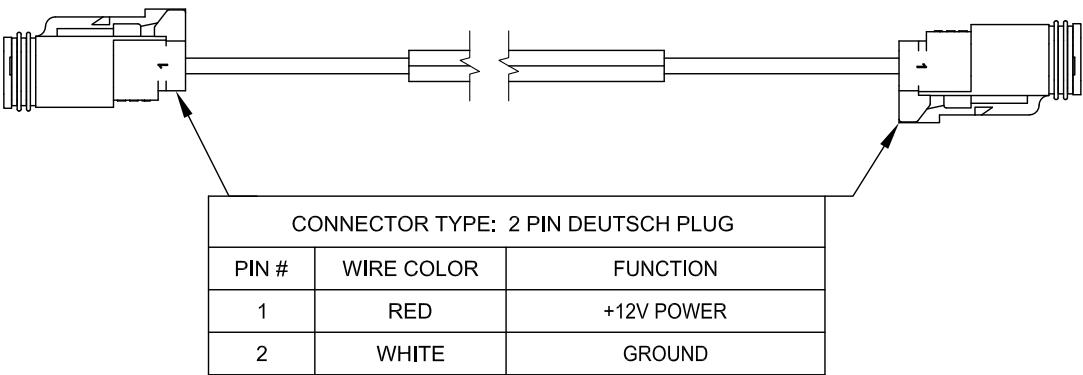


Electrical System Schematic - Main Harness #9010096 (Opt.)

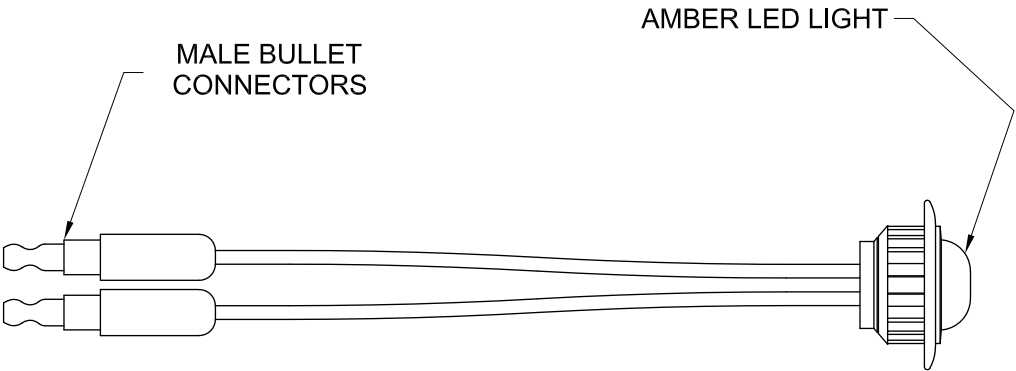


NOTE: For Optional Electric Over Hydraulic 5 Function Valve.

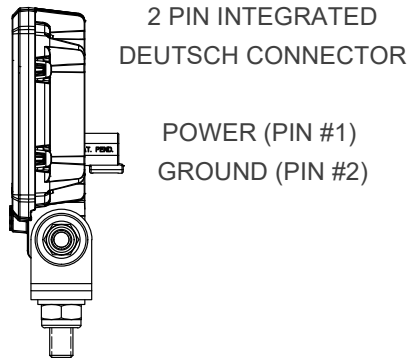
Electrical System Schematic - Diverter Harness #9007266



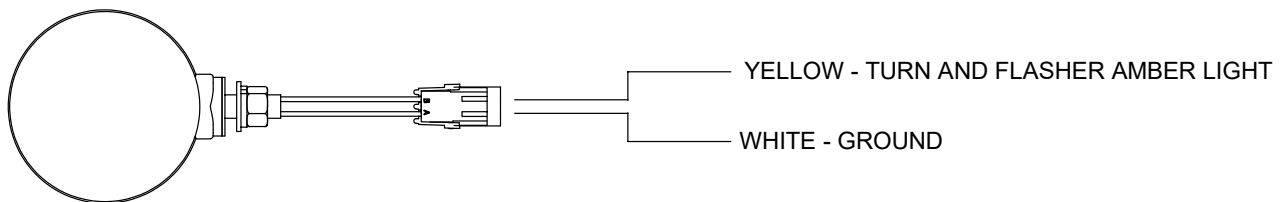
Electrical System Schematic - Micro Dot, LED Light #9006107



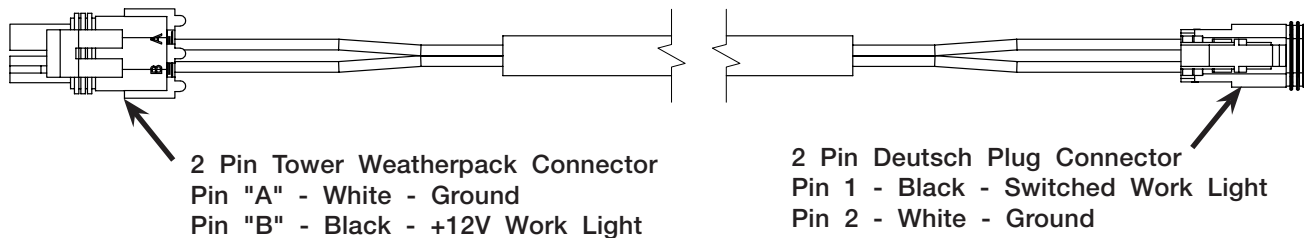
Electrical System Schematic - Work Flood Lamp #9008957



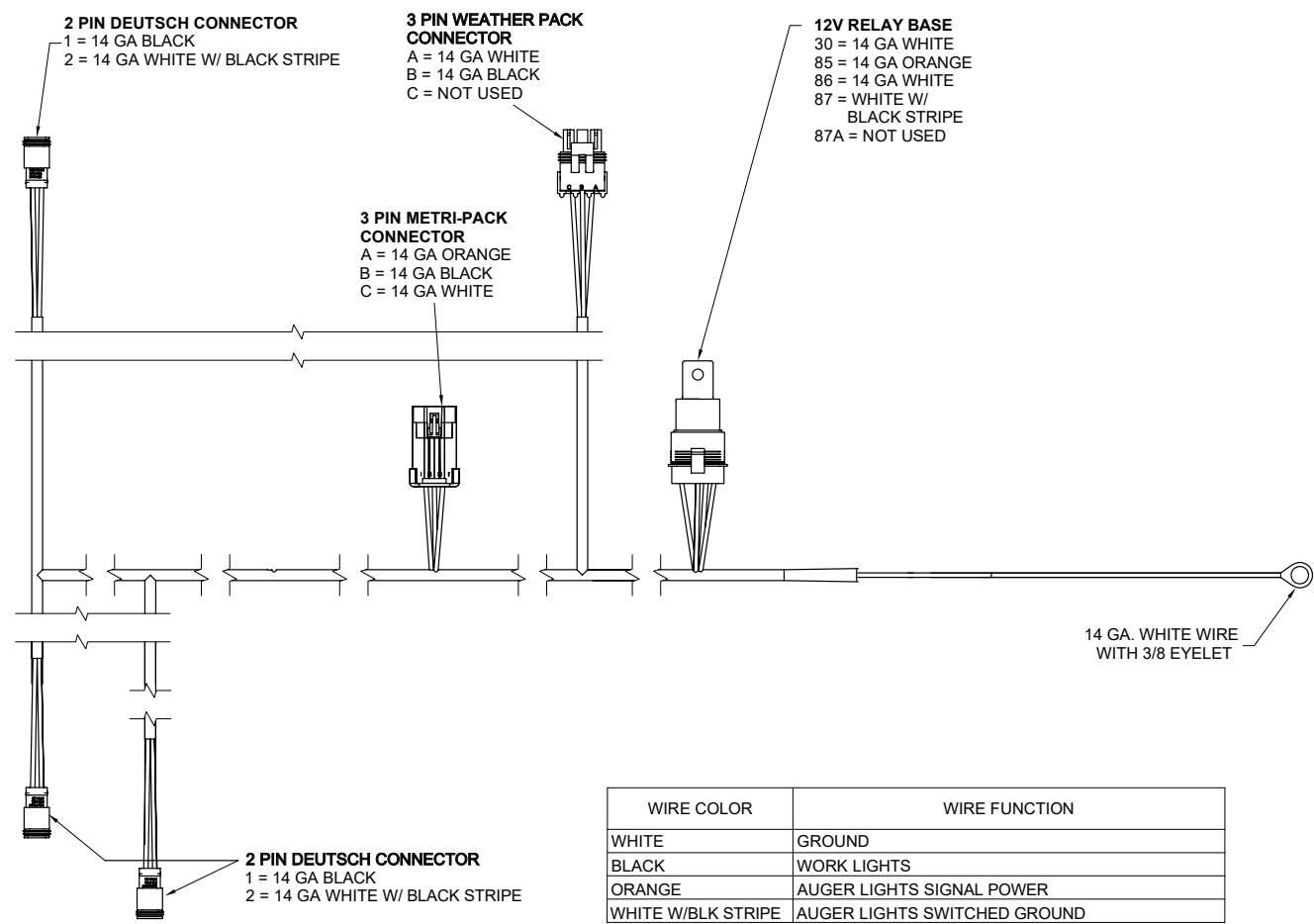
Electrical System Schematic - Amber Lamp #9005142



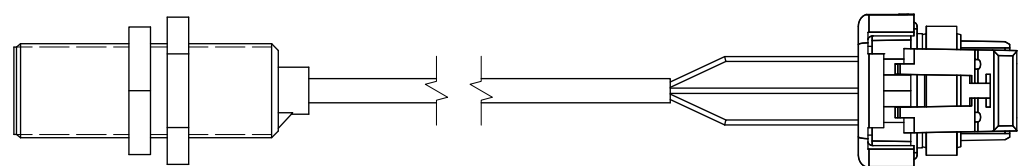
Electrical Diagram — Work Light Wiring Harness #9008969



Electrical System Schematic - Auger Harness #9010101

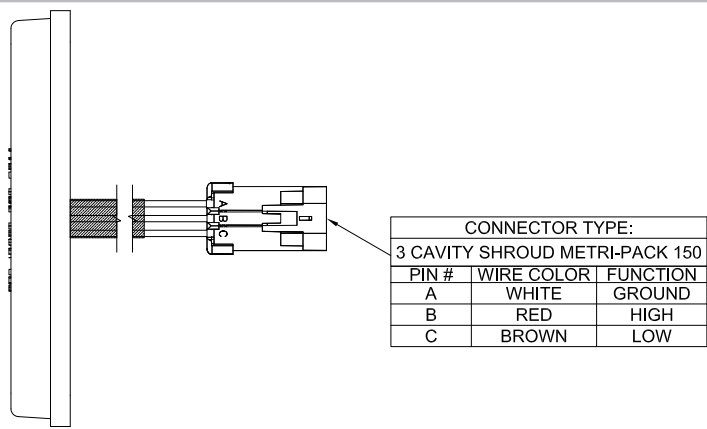


Electrical System Schematic - Proximity Switch #9007223

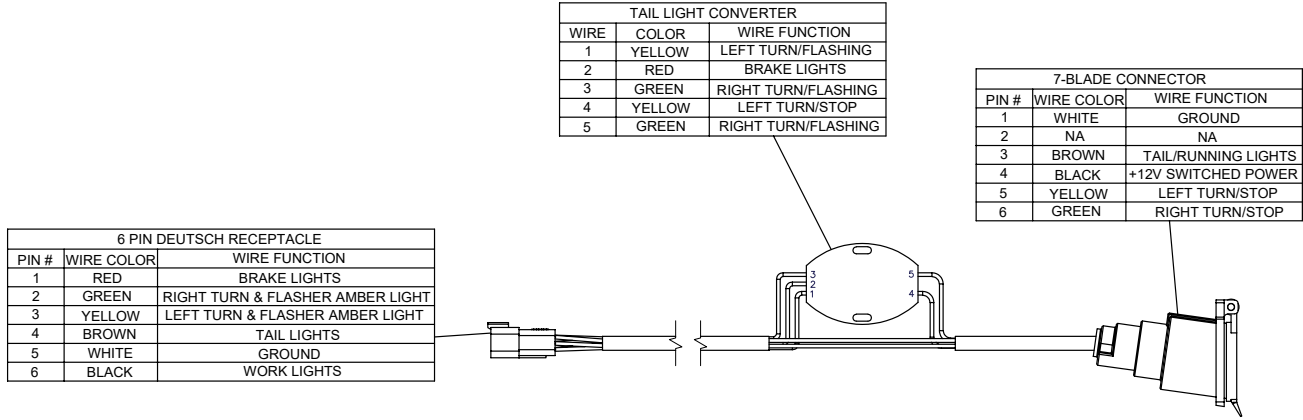


METRI-PACK 150 WIRING CHART		
WIRE COLOR	PIN NO.	FUNCTION
BLACK	A	SIGNAL
BROWN	B	+12 V DC
BLUE	C	GROUND

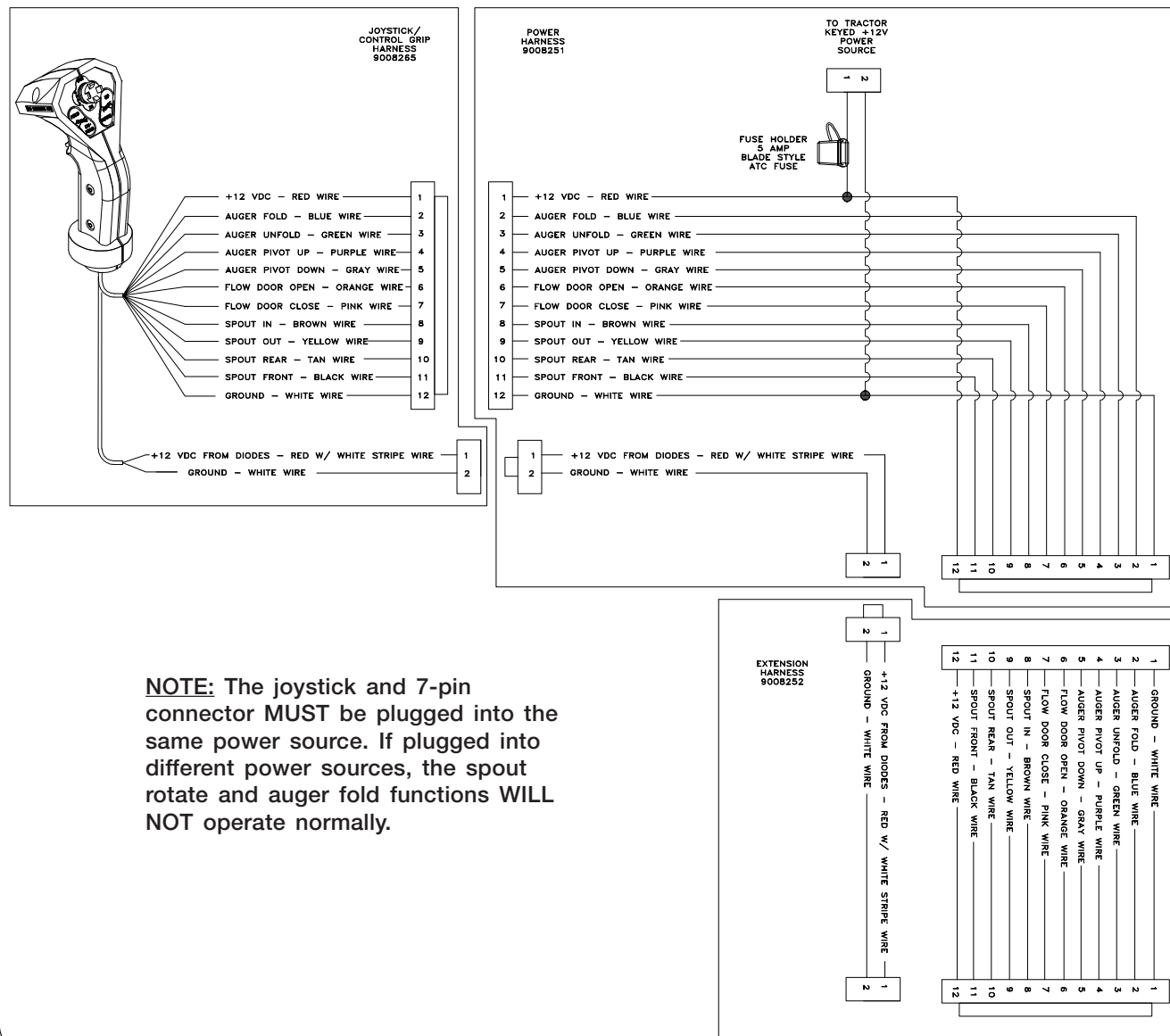
Electrical System Schematic - Red Lamp #9006345



Electrical System Schematic - Adapter Harness, AG to 7-Blade #9009843 (Optional)

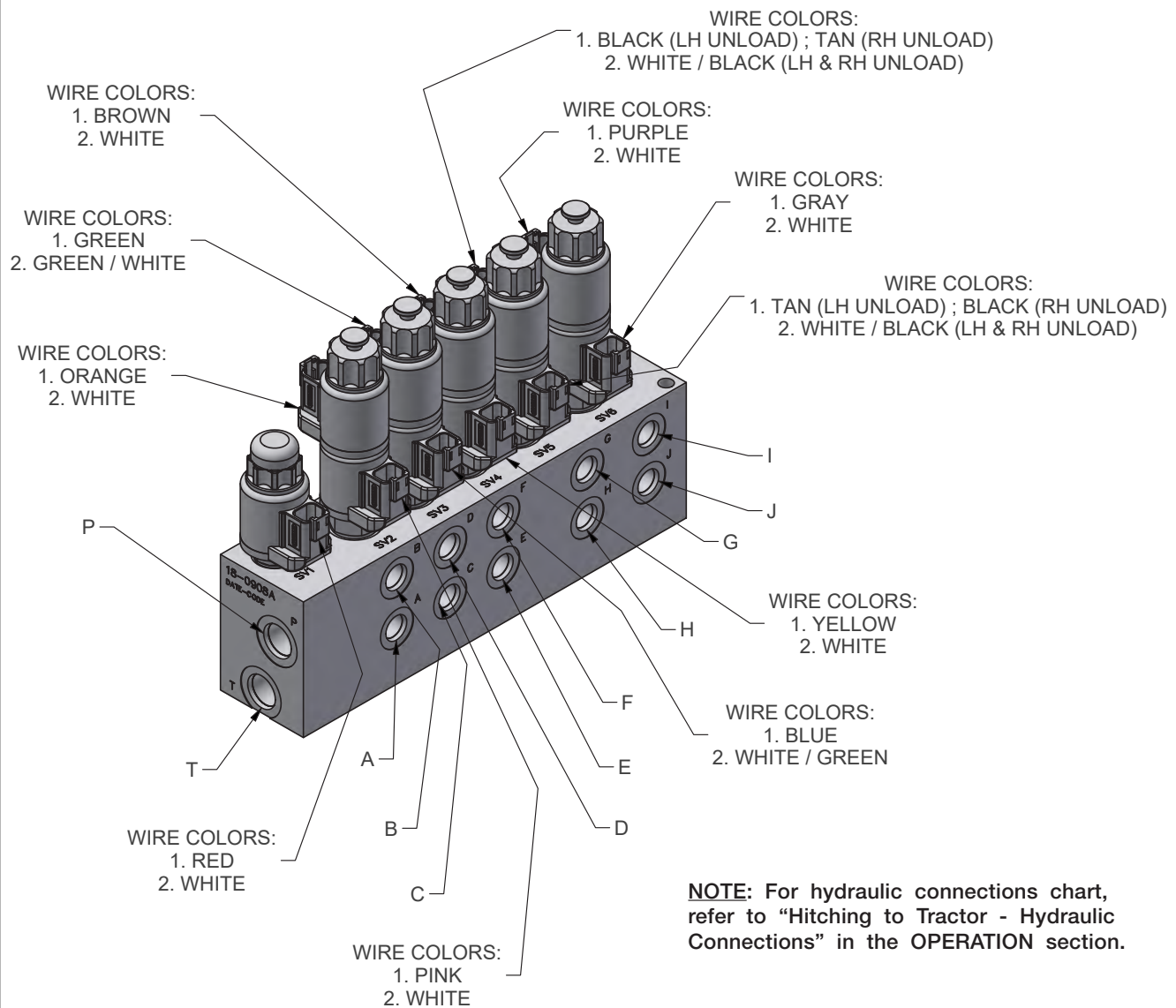


Electrical Over Hydraulic (EOH) System Schematic 5 Function Optional



NOTE: The joystick and 7-pin connector **MUST** be plugged into the same power source. If plugged into different power sources, the spout rotate and auger fold functions **WILL NOT** operate normally.

Optional Electric Over Hydraulic Valve Electric Schematic 5 Function



PORT	END OF CYLINDER	FUNCTION
A	BUTT END	FLOW DOOR OPEN
B	RAM END	FLOW DOOR CLOSE
C	RAM END	AUGER UNFOLD
D	BUTT END	AUGER FOLD
E	RAM END	SPOUT TILT OUT
F	BUTT END	SPOUT TILT IN
G	BUTT END	JOYSTICK / SPOUT ROTATE
H	RAM END	JOYSTICK / SPOUT ROTATE
I	BUTT END	AUGER PIVOT DOWN
J	RAM END	AUGER PIVOT UP
P		JOYSTICK / TRACTOR PRESSURE
T		JOYSTICK / TRACTOR RETURN

Complete Torque Chart

Capscrews - Grade 5

NOTE:

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



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

IMPORTANT

- Follow these torque recommendations except when specified in text.

Complete Torque Chart

Capscrews - Grade 8

NOTE:

- Grade 8 capscrews can be identified by six radial dashes on the head.
- For track wheel torque requirements, refer to Track Wheels.
- 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

WARNING

- EYE PROTECTION AND OTHER APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT MUST BE WORN WHILE SERVICING THE IMPLEMENT.
- HIGH-PRESSURE FLUIDS CAN PENETRATE THE SKIN AND CAUSE SERIOUS INJURY OR DEATH. LEAKS OF HIGH-PRESSURE FLUIDS MAY NOT BE VISIBLE. USE CARDBOARD OR WOOD TO DETECT LEAKS IN THE HYDRAULIC SYSTEM. SEEK MEDICAL TREATMENT IMMEDIATELY IF INJURED BY HIGH-PRESSURE FLUIDS.
- HYDRAULIC SYSTEM MUST BE PURGED OF AIR BEFORE OPERATING TO PREVENT SERIOUS INJURY OR DEATH.
- RELIEVE HYDRAULIC SYSTEM OF ALL PRESSURE BEFORE ADJUSTING OR SERVICING. SEE TRACTOR OPERATOR'S MANUAL FOR PROPER PROCEDURES.

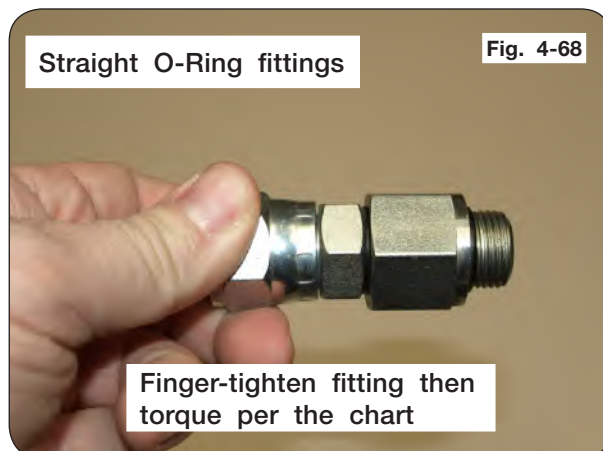


Tightening O-Ring Fittings

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

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

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

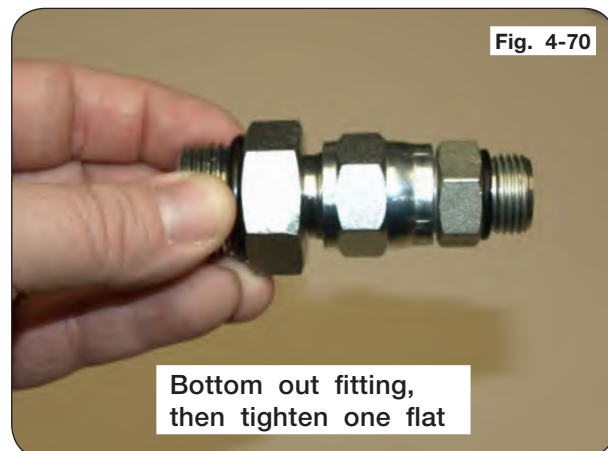


Hydraulic Fittings – Torque and Installation (continued)

Tightening JIC Fittings

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

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



Section V

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

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FOR SCALE, TRACK, UHARVEST, ELECTRIC TARP, AND / OR WATER DELIVERY SYSTEM INFORMATION, PLEASE REFER TO THE INDIVIDUAL MANUALS.

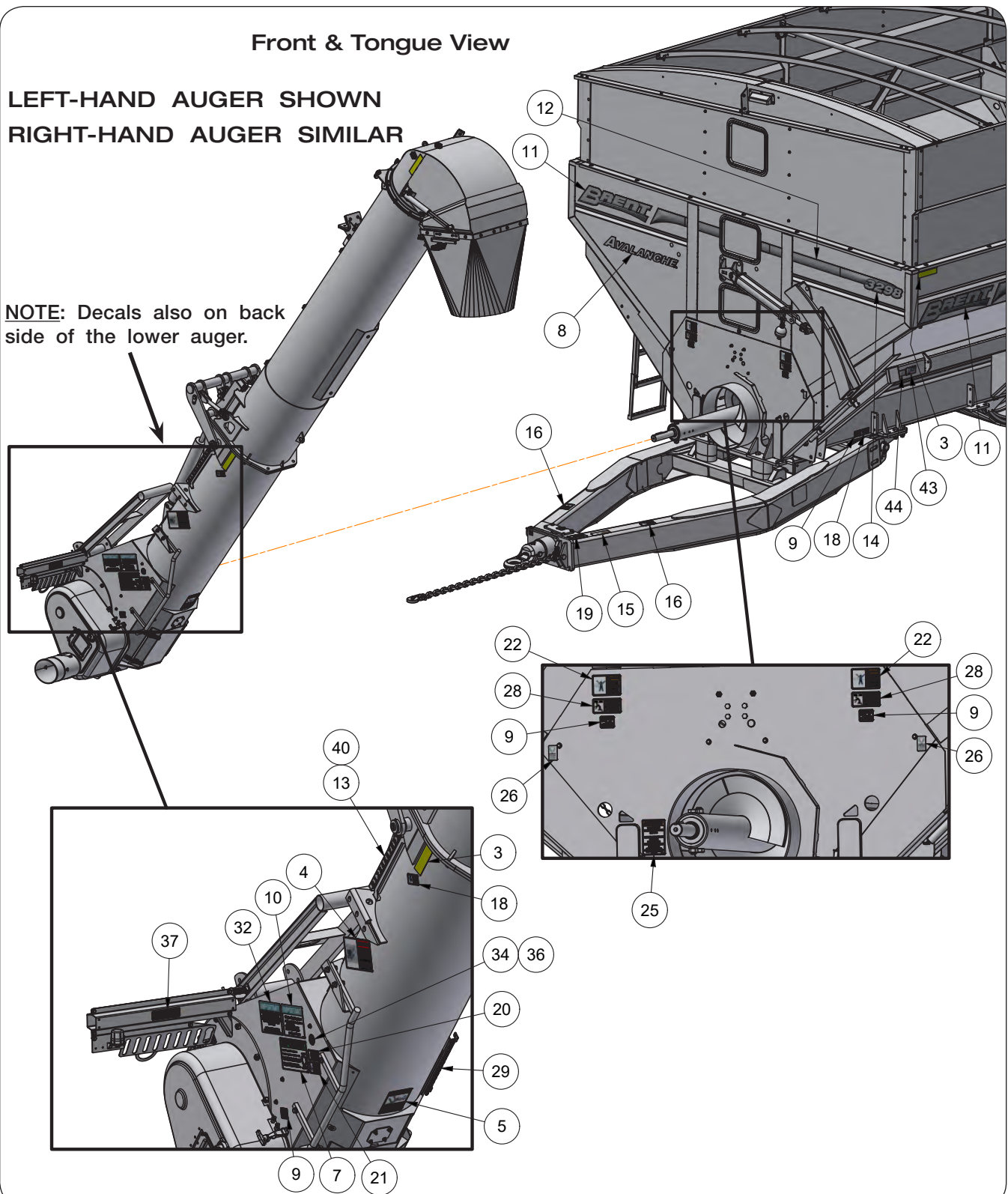
Decals

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

Front & Tongue View

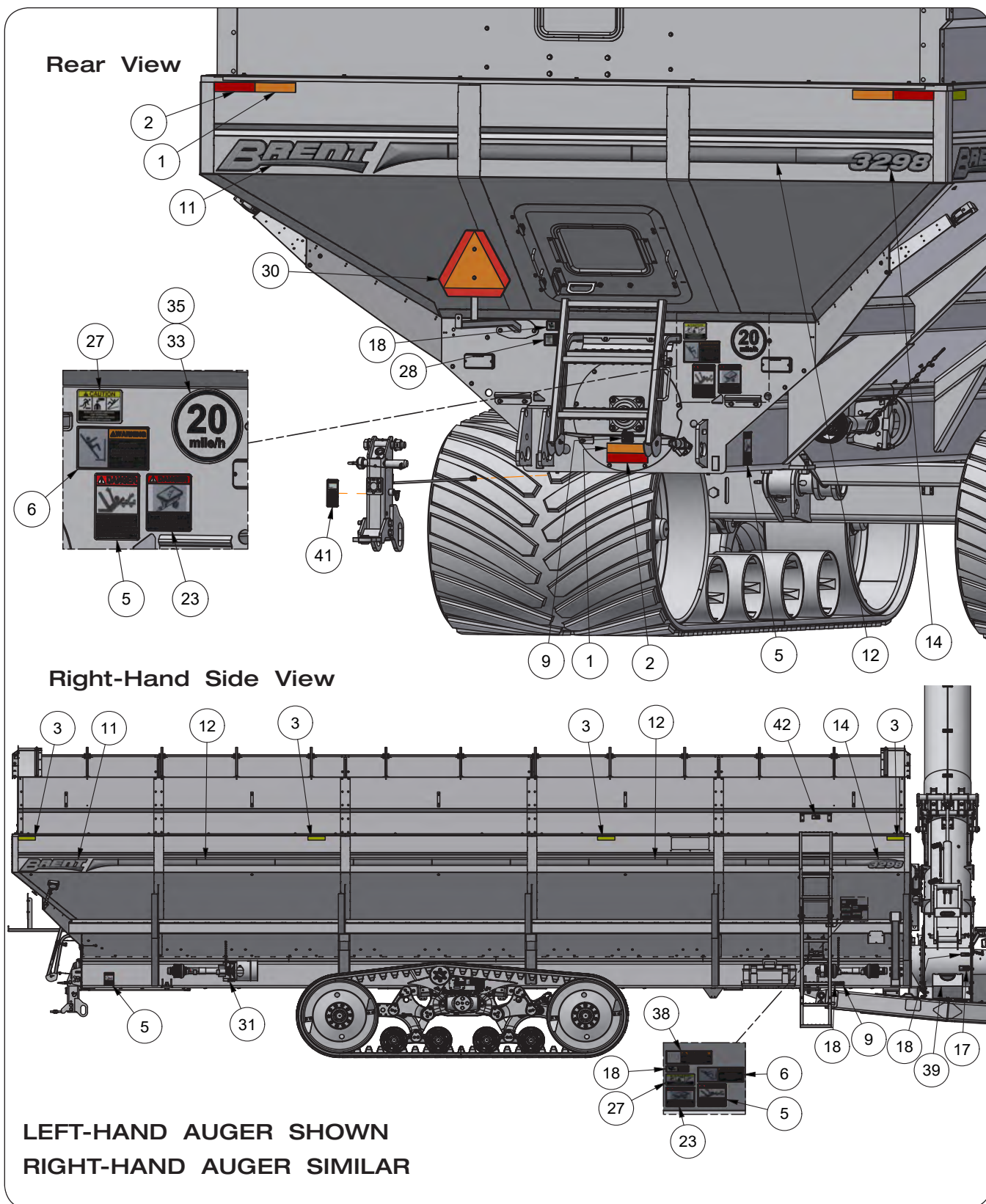
LEFT-HAND AUGER SHOWN
RIGHT-HAND AUGER SIMILAR

NOTE: Decals also on back side of the lower auger.



Decals (continued)

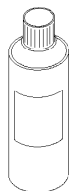
Please visit www.unverferth.com/parts/ for the most current parts listing.



Decals (continued)

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

ITEM	PART NO.	DESCRIPTION	QTY	NOTES
1	9003125	Reflector 2x9 =FLUORESCENT=	3	
2	9003126	Reflector 2x9 =RED=	3	
3	9003127	Reflector 2x9 =AMBER=	12	
4	9003474	Decal, DANGER (Electrical Lines)	1	
5	9003475	Decal, DANGER (Rotating or Moving Parts)	5	
6	9003476	Decal, WARNING (No Riders)	2	
7	9003477	Decal, IMPORTANT (Operation)	1	
8	9009631	Decal, Avalanche	1	
9	9008947	Decal, IMPORTANT (Grease Monthly)	7	
10	9004966	Decal, IMPORTANT (Cart Loading Sequence)	1	
11	9006588	Decal, Brent Logo	4	
12	9006589	Decal, Stripe	24	
13	9006601	Decal, Flow Door LH	1	For Left-Hand Unload
14	9009858	Decal, 3298	4	
15	94094	Decal, WARNING (Tongue Rise or Fall)	1	
16	95046	Decal, DANGER (Entanglement)	2	
17	95445	Decal, WARNING (High Pressure)	1	
18	95839	Decal, WARNING (Pinch Point)	6	
19	97575	Decal, CAUTION (Transport Chains)	1	
20	97961	Decal, WARNING (Read Manual)	1	
21	TA1-906109-0	Decal, WARNING (Moving Parts Crush/Cut)	1	
22	900024	Decal, WARNING (High-Pressure Oil)	2	
23	9003478	Decal, DANGER (Never Play In Or On The Grain)	2	
25	9005971	Decal, WARNING (Suspension System)	1	
26	91605	Decal, FEMA	2	
27	9010442	Decal, CAUTION (Obstacles-Uneven Slippery Surface)	2	
28	98229	Decal, WARNING (Falling or Lowering Equipment)	3	
29	9008925	Decal, Grease Bank	1	
30	TA510514	SMV Emblem	1	
31	9008470	Decal, IMPORTANT (Hitching Grain Cart to Tractor)	1	
32	9008151	Decal, IMPORTANT (PTO Engagement)	1	
33	9008714	Decal, Rear SIS 20MPH	1	
34	9008715	Decal, Front SIS 20MPH	1	
35	9008720	Decal, Rear SIS 30KPH	1	
36	9008721	Decal, Front SIS 30KPH	1	
37	9010451	Decal, Hose Legend	1	
38	9009168	Decal, WARNING (Ladder Lock Pin)	1	
39	9008564	Decal, CAUTION (Valve Block)	1	Located Inside Lower Auger Cover Plate
40	9008626	Decal, Flow Door RH	1	For Right-Hand Unload
41	9009646	Decal, CAUTION (Towing Capacity)	1	
42	9010202	Decal, WARNING (Not A Step)	1	
43	TA510031	Decal, USA (Made In The USA)	1	
44	9505545	QR Code Decal - Product Resources	1	

Touch-Up Paint


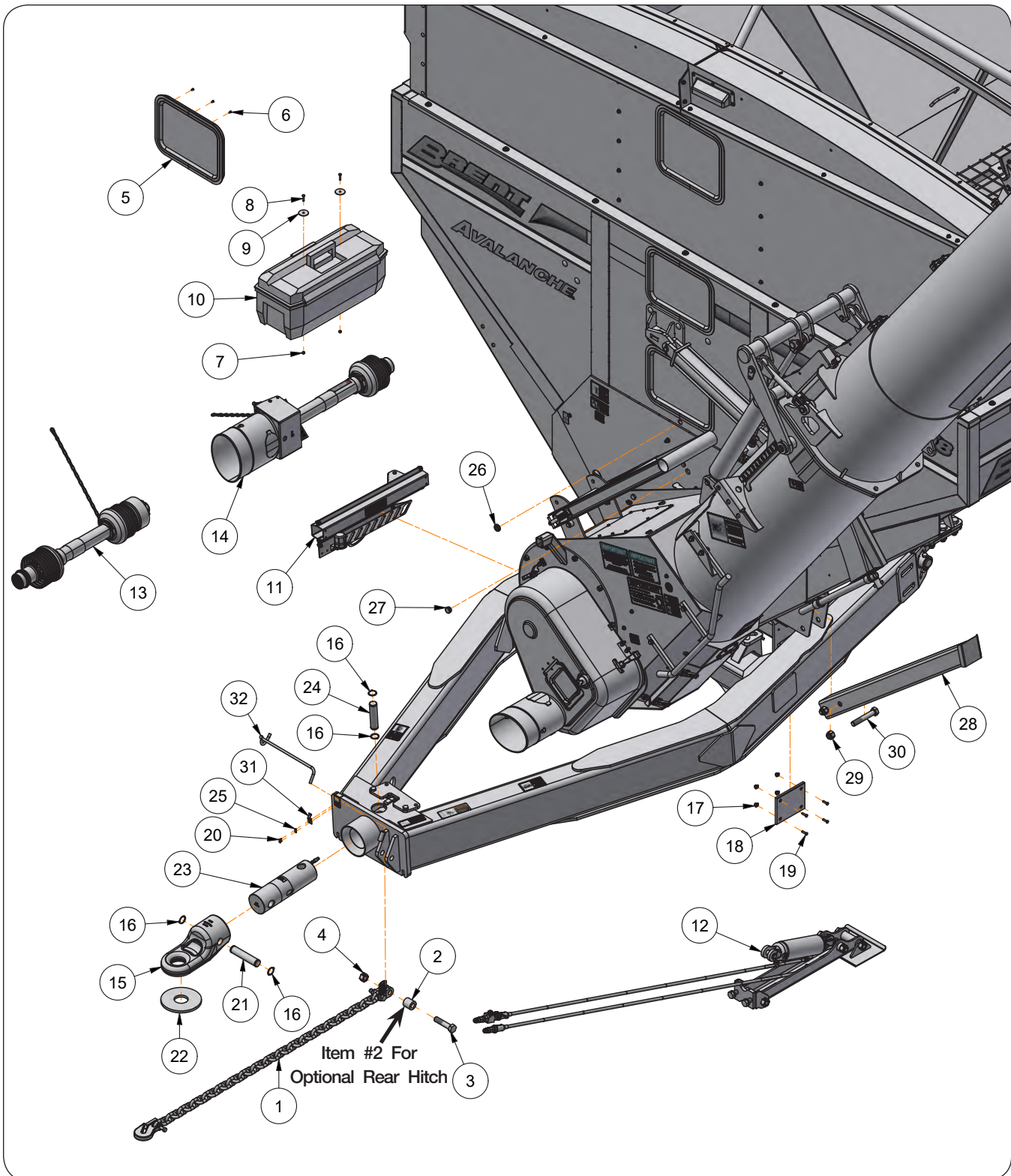
PAINT	SPRAY
Black	97013
Green	97015
Red	97301
Primer, Gray	9500082
Black Metallic	2012467

Notes

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

Front End Components

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



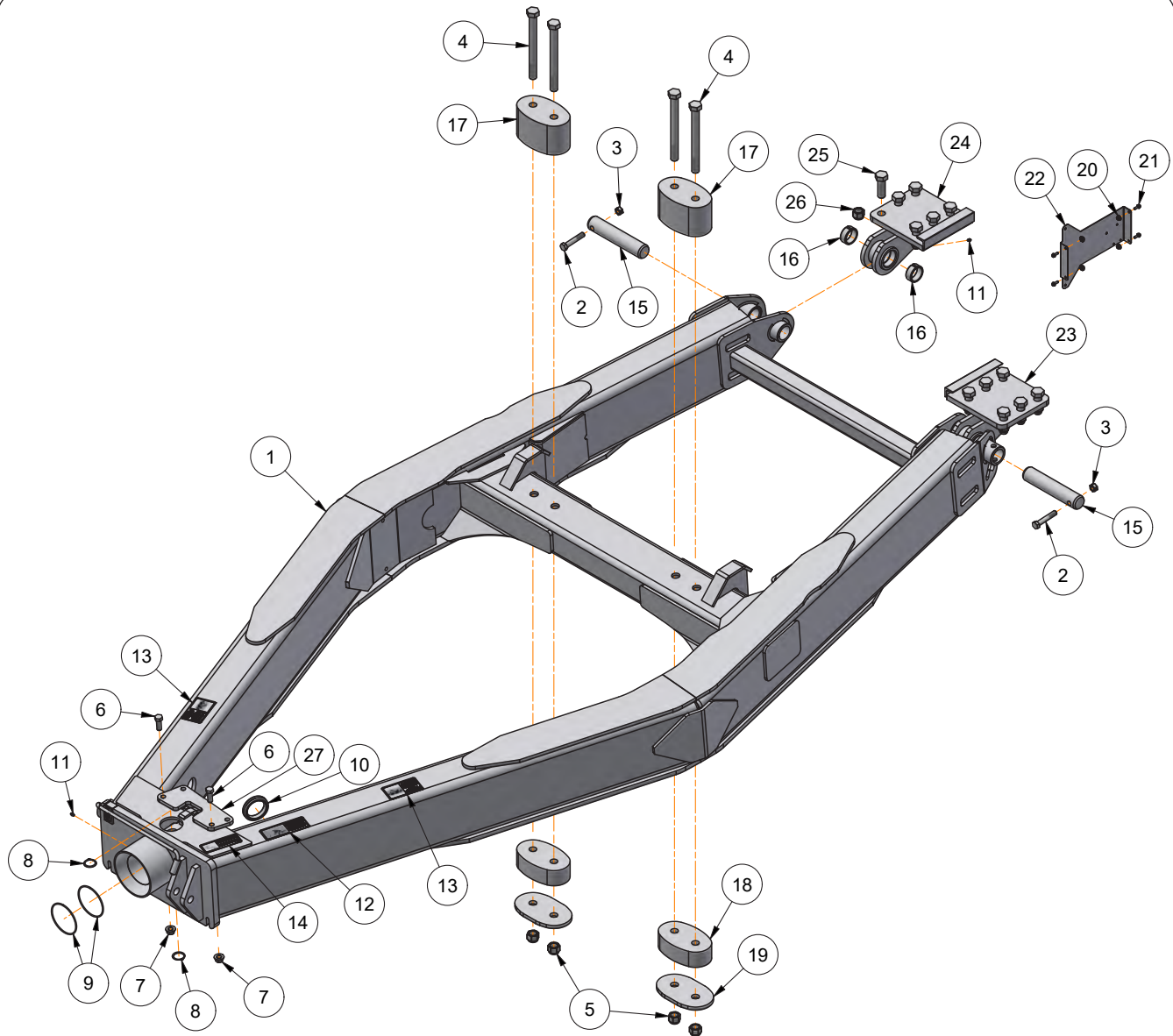
Front End Components

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

ITEM	PART NO.	DESCRIPTION	QTY	NOTES
1	PF1238-19	Transport Chain 61.000#	1	Standard
	9010398	Transport Chain 80.000#	1	Replaces Standard Grain Cart Transport Chain If Equipped With Optional Rear Hitch
2	299224	Spacer Bushing, 1 7/8"	1	For Optional Rear Hitch
3	91299-192	Capscrew 1"-8UNC x 4 1/2" Grade 8	1	
4	92199	Locknut 1"-8UNC	1	
5	9008857	Front Window & Trim Assembly 14 15/32" x 19 21/32"	2	
6	9008933	Pan Head Phillips Screw 8"-18UNC x 1/2"	24	
7	9936	Locknut 1/4"-20UNC	2	
8	9390-006	Capscrew 1/4"-20UNC x 1 1/4" Grade 5	2	
9	94763	Fender Washer 2"	2	
10	9008634	Toolbox - 26"	1	
11	N/A	Hose Caddy	1	See "Hose Caddy Components" In This Section For Parts
12	276645B	Hydraulic Jack Kit (Black)	1	See "Hydraulic Jack" In This Section For Parts
13	9010206	Driveline Assembly Complete (Benzi) With 1 3/4"-20 Spline	1	U-Joint Color is Gray See "PTO Assembly Cut Out Clutch - Benzi"
	9010203	Driveline Assembly Complete (Walterscheid) With 1 3/4"-20 Spline	1	U-Joint Color is Yellow See "PTO Assembly Cut Out Clutch - Walterscheid"
14	276629B	PTO & Bracket Assembly (Black)	1	See "PTO & Bracket Assembly" In This Section For Parts
15	282337B	Cast Hitch 4.5" Load Bar =Black= CAT 5	1	
16	97289	Retaining Ring 1 1/2"	4	
17	91257	Flange Nut 5/16"-18UNC	8	
18	273237	Nylon Wear Pad	2	
19	903171-662	Screw Flat Screw Head Phillips 5/16"-18UNC x 1 1/4"	8	
20	903172-131	Pan Head Phillips Machine Screw #10-24UNC x 3/8"	2	
21	274864	Hitch Pin 1 1/2" Dia. x 7 3/8"	1	
22	281899	Wearshoe - Hitch, CAT 5	1	
23	9008023	Load Bar 4 1/2" Dia. with 16 ft. Cable CAT 5	1	
24	297268	Hitch Pin 1 1/2" Dia. x 6 1/4"	1	
25	91004	Star Washer #10-3/16" Dia.	2	
26	9009602	Rubber Grommet, 1 3/8" OD x 3/4" ID	1	
27	PF1218-05	Plug 1 1/4" Dia.	1	
28	299578B	Stand Weldment Replacement Kit =Black=	2	Includes Stand Weldment QTY 2 And Instruction Sheet
29	9398-026	Locknut 1"-8UNC	4	
30	9390-195	Capscrew 1"-8UNC x 6" Grade 5	4	
31	9009652	Snap Down Latch (SS)	1	
32	295880	Driveline Storage Rod	1	

Tongue Components

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



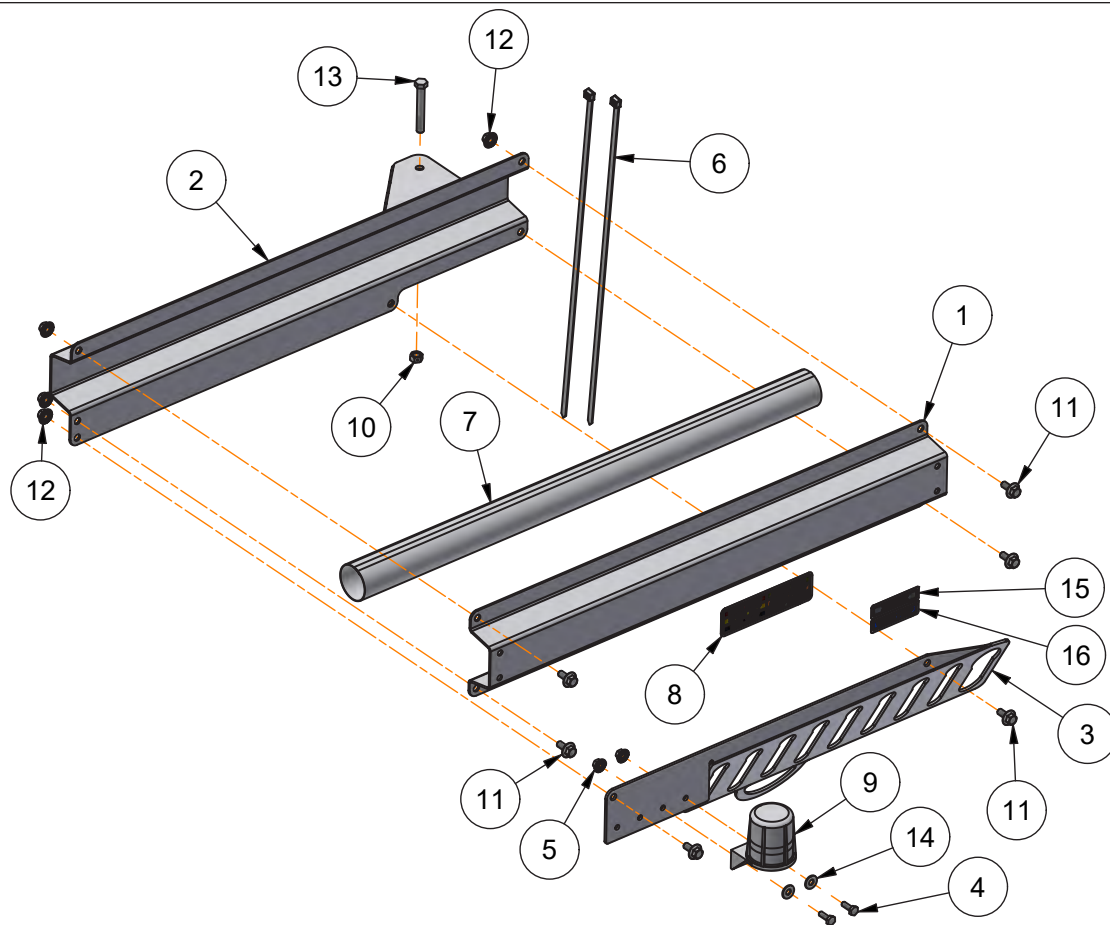
Tongue Components

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

ITEM	PART NO.	DESCRIPTION	QTY	NOTES
	299402G	Tongue Weldment Replacement Kit (Green)	1	Includes Items 1-14 And Instruction Sheet
	299402R	Tongue Weldment Replacement Kit (Red)		
	299402BM	Tongue Weldment Replacement Kit (Black Metallic)		
1	N/A*	Tongue Weldment =Green=	1	*Not For Individual Sale, See Tongue Weldment Replacement Kit
	N/A*	Tongue Weldment =Red=	1	*Not For Individual Sale, See Tongue Weldment Replacement Kit
	N/A*	Tongue Weldment =Black Metallic=	1	*Not For Individual Sale, See Tongue Weldment Replacement Kit
2	9390-130	Capscrew, 5/8"-11UNC x 3 1/2" Grade 5	2	
3	95905	Center Locknut, 5/8"-11UNC	2	
4	9390-465	Capscrew, 1"-8UNC x 10 1/2" Grade 5	4	
5	9398-026	Elastic Locknut, 1"-8UNC Grade 5	4	
6	9390-123	Capscrew 5/8"-11UNC x 3/4" Grade 5	2	
7	9003398	Top Lock Flange Nut, 5/8"-11UNC	2	
8	97289	External Retaining Ring, 1 1/2" Dia.	2	
9	9010400	O-Ring, 4 1/2" I.D.	2	
10	9007173	Grommet, 3 5/8" O.D. x 2 5/8" I.D.	1	
11	91160	Grease Zerk 1/4"-28 SST	3	
12	94094	Decal, WARNING (Tongue Rise or Fall)	1	
13	95046	Decal, DANGER (Entanglement)	2	
14	97575	Decal, CAUTION (Transport Chains)	1	
15	297164	Tongue Pin, 2" Dia. x 10"	2	
16	9005473	Split Tension Bushing, 2 3/8" Dia.	4	
17	9006456	Spring, 4.75" Thick	2	
18	9006457	Spring, 2.50" Thick	2	
19	271687B	Spring Retainer Plate =Black=	2	
20	97189	Large Flange Hex Nut, 1/4"-20UNC Grade 5	4	
21	97420	Flange Screw 1/4"-20UNC x 3/4" Grade 5	4	
22	289382B	GCM Mount Bracket =Black=	1	
23	274818G	Tongue Pivot Weldment Left-Hand =Green=	1	
	274818R	Tongue Pivot Weldment Left-Hand =Red=	1	
	274818BM	Tongue Pivot Weldment Left-Hand =Black Metallic=	1	
24	274819G	Tongue Pivot Weldment Right-Hand =Green=	1	
	274819R	Tongue Pivot Weldment Right-Hand =Red=	1	
	274819BM	Tongue Pivot Weldment Right-Hand =Black Metallic=	1	
25	9390-409	Capscrew 1"-14UNS x 3" G5	12	
26	9008441	Elastic Locknut 1"-14UNS	12	
27	277012B	Adapter Plate =Black=	1	

Hose Caddy Components

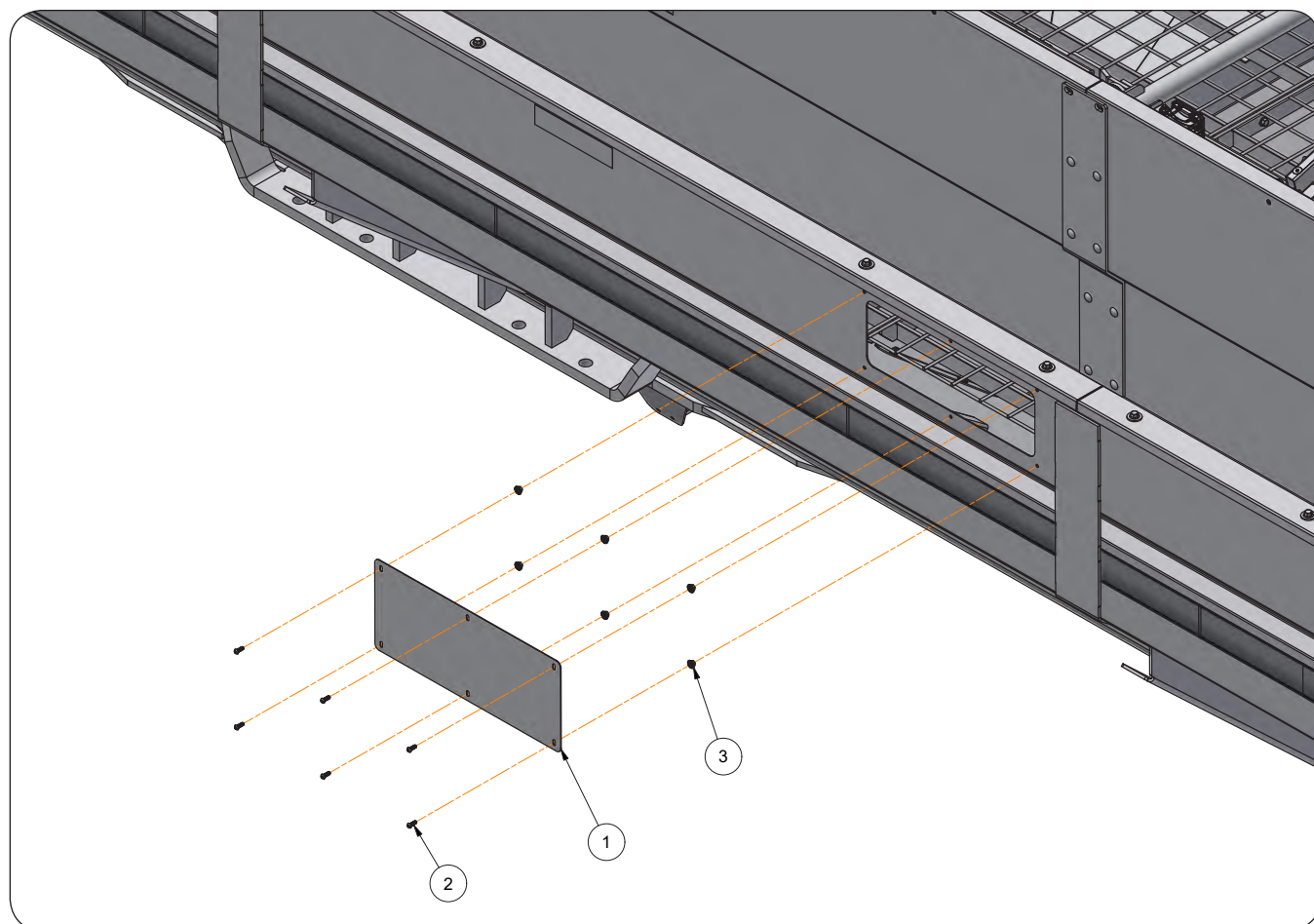
Please visit www.unverferth.com/parts/ for the most current parts listing.



ITEM	PART NO.	DESCRIPTION	QTY	NOTES
1	294085B	Hose Caddy Cover =Black=	1	
2	295799B	Hose Caddy Weldment =Black=	1	
3	296159	Hose Retainer Plate	1	
4	9390-003	Capscrew 1/4"-20UNC x 3/4" Grade 5	2	
5	97189	Flange Hex Nut 1/4"-20UNC	2	
6	9000104	Cable Tie, 21 1/2"	2	
7	9003848	Hose Wrap 2" Dia.	1 Ft.	
8	9010451	Decal, Hose Legend	1	
9	9001968	Trailer Connector Holder	1	
10	902875	Locknut/Center, 3/8"-16UNC	1	
11	91256	Flange Screw, 5/16"-18UNC x 3/4" G5	6	
12	91257	Hex Nut/Large Flange, 5/16"-18UNC	6	
13	9390-062	Capscrew, 3/8"-16UNC x 2 3/4" G5	1	
14	9405-064	Flat Washer 1/4"	2	
15	9010029	Decal, Hose Legend (Joystick)	1	Optional
16	9009867	Decal, Hose Legend (Water Pump)	1	Optional

Remote Scale Display Cover Components

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

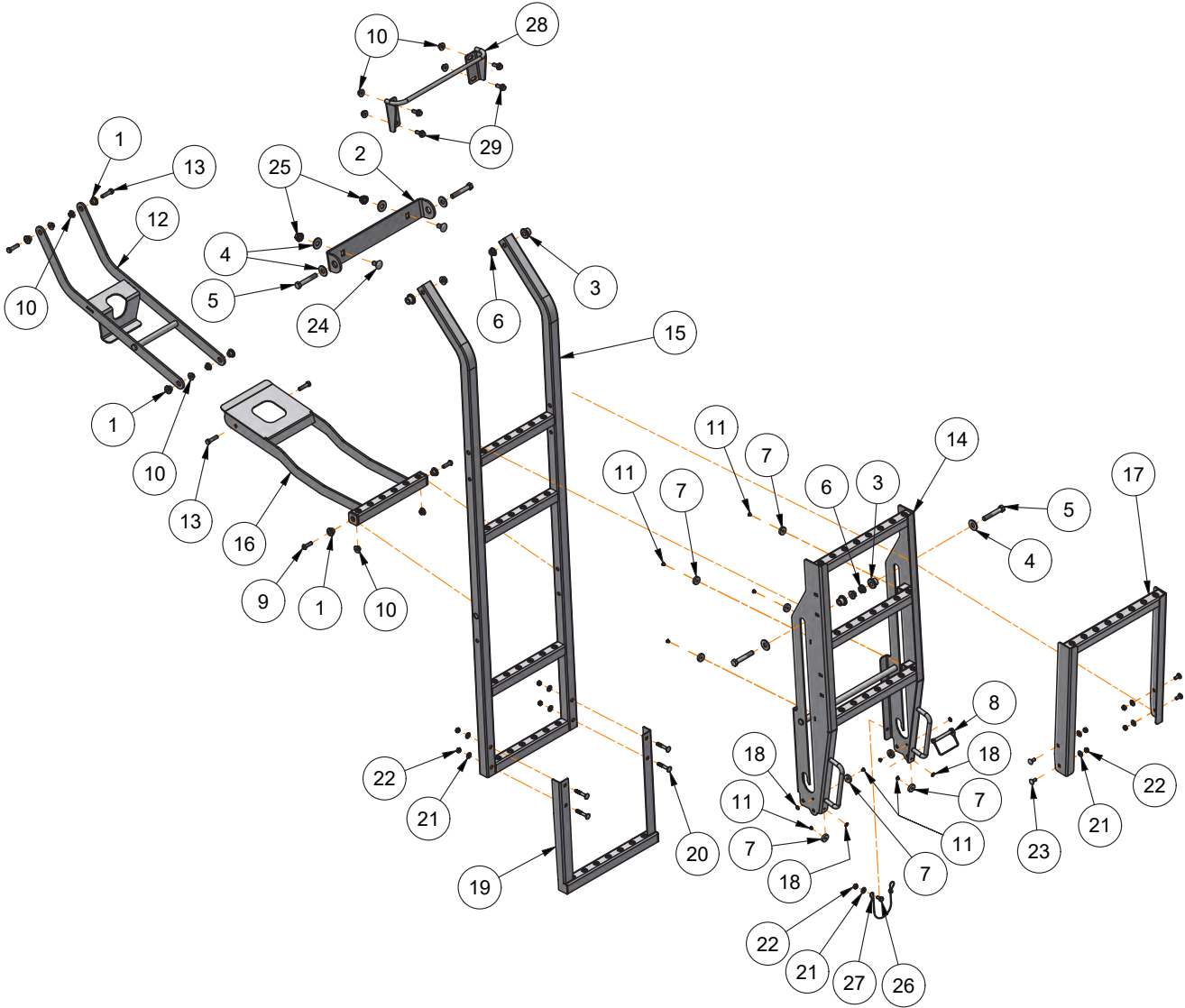


ITEM	PART NO.	DESCRIPTION	QTY	NOTES
1	295491G	Remote Scale Display Cover Plate =Green=	1	
	295491R	Remote Scale Display Cover Plate =Red=		
	295491BM	Remote Scale Display Cover Plate =Black Metallic=		
2	9003829	Button Head Socket Capscrew, 1/4"-20UNC x 3/4" G5	6	
3	97189	Flange Nut, 1/4"-20UNC	6	

Side Ladder Components

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

NOTE: Side Ladder Is A Viewing Ladder Only And Should Not Be Used To Enter The Cart.
Use Rear Ladder If Entering The Cart.



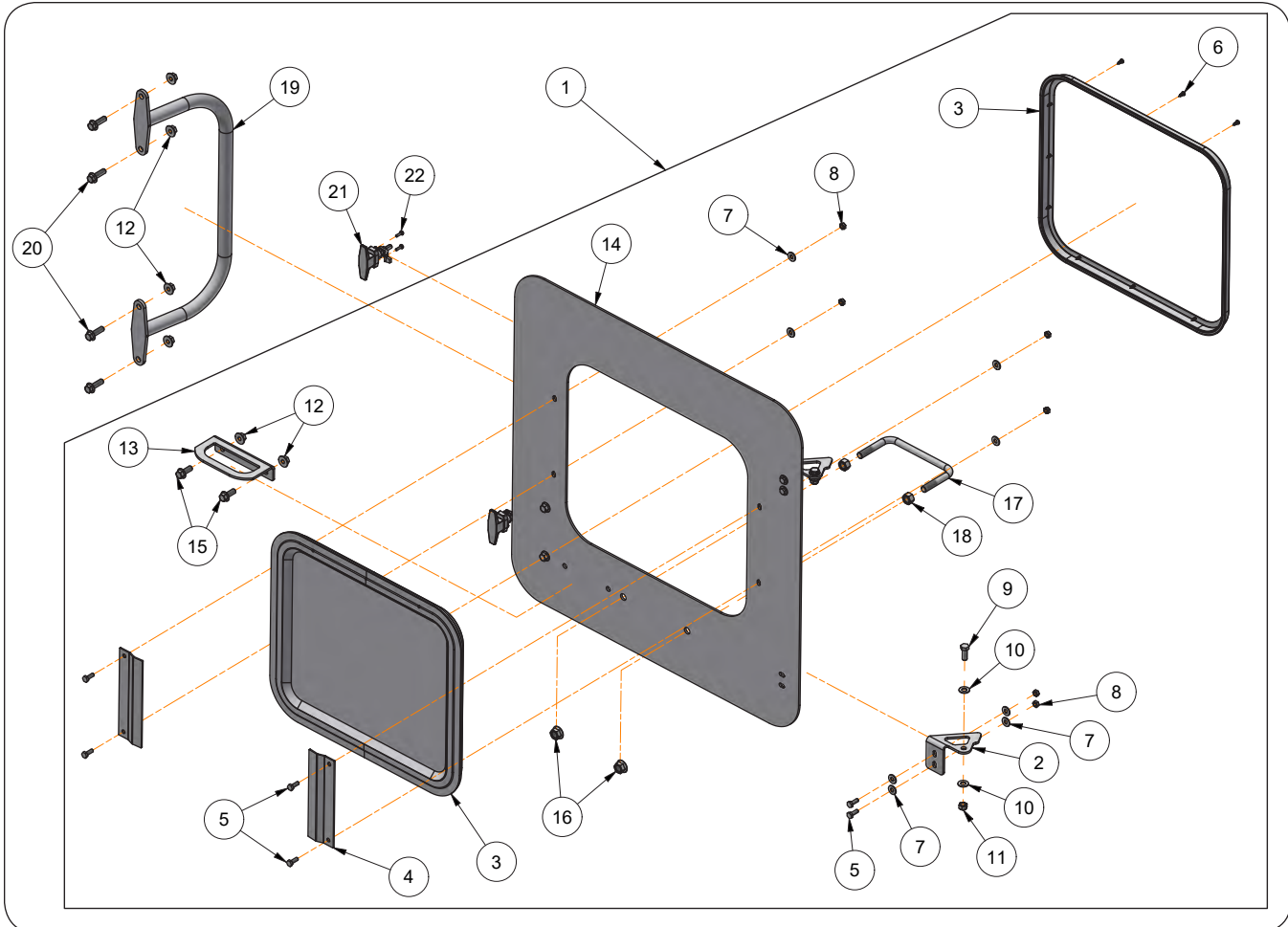
Side Ladder Components

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	10	
11	9003503	Rivet 3/16 X 1/4	8	
12	289717B	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	289280B	Step Weldment =Black=	1	
17	289707B	Ladder Extension Weldment =Black=	1	
18	9004998	Rivet Burr 3/16"	4	
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 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"	2	
25	91267	Flange Nut, 1/2"-13UNC	2	
26	9390-027	Capscrew, 5/16"-18UNC x 5/8" G5	1	
27	97879	Nylon Lanyard	1	
28	298290B	Ladder Handle Weldment =Black=	1	
29	91262	Flange Screw, 3/8"-16UNC x 1" G5	4	

Rear Access Door Components

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



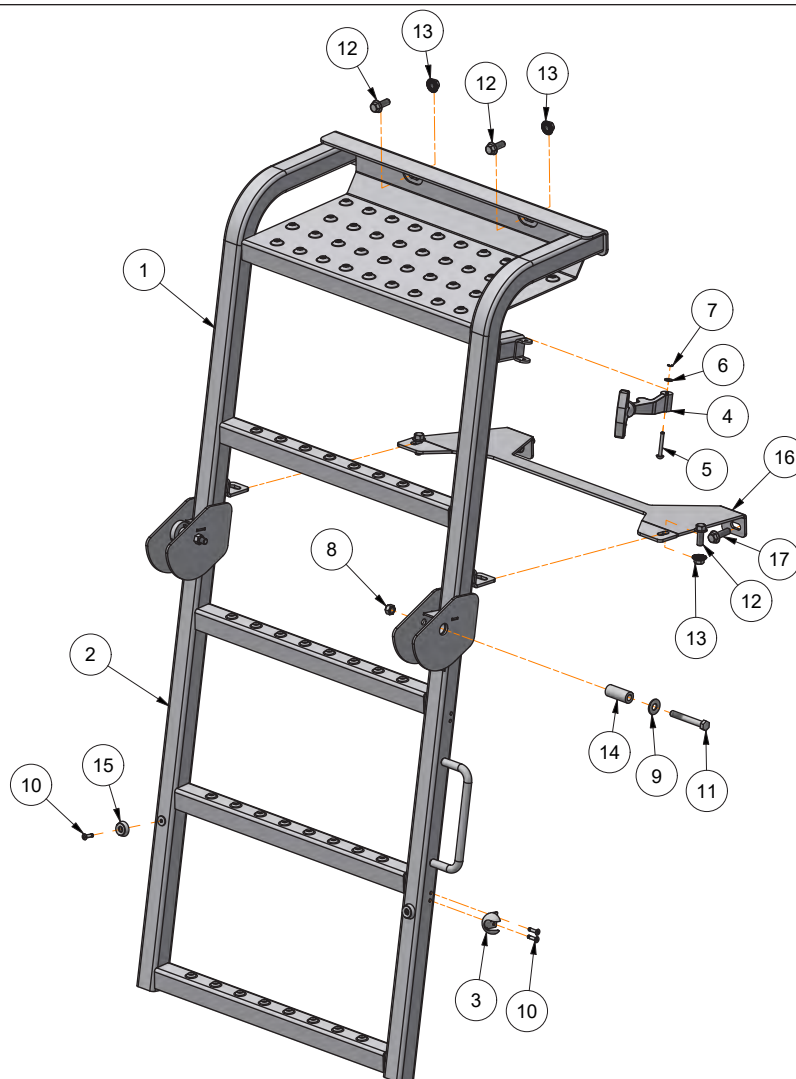
Rear Access Door Components

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

ITEM	PART NO.	DESCRIPTION	QTY	NOTES
1	299450R	Rear Access Door Replacement Kit =Red=	1	Includes Items 2-18 And Instruction Sheet
	299450G	Rear Access Door Replacement Kit =Green=		
	299450BM	Rear Access Door Replacement Kit =Black Metallic=		
2	299059B	Rear Access Door Hinge =Black=	2	
3	9008680	Window and Trim Assembly	1	
4	294121B	Window Bracket =Black=	2	
5	9390-003	Capscrew 1/4"-20UNC x 3/4" Grade 5	8	
6	9008933	Phillips Head Screw #8-18 x 1/2" (Self Threading)	12	Sheet Metal Screw
7	9405-064	Flat Washer 1/4" USS	12	
8	9936	Locknut 1/4"-20UNC	8	
9	9390-055	Capscrew 3/8"-16UNC x 1" Grade 5	2	
10	9405-074	Flat Washer 3/8"	4	
11	9928	Top Locknut 3/8"-16UNC	2	
12	9008159	Locknut 3/8"-16UNC	8	
13	298831B	Rear Access Door Handle =Black=	1	
14	298832G	Rear Access Door Plate =Green=	1	
	298832R	Rear Access Door Plate =Red=	1	
	298832BM	Rear Access Door Plate =Black Metallic=	1	
15	91262	Flange Screw, 3/8"-16UNC x 1" Grade 5	4	
16	91267	Flange Nut, 1/2"-13UNC	2	
17	97235	U-Bolt, 1/2"-13UNC x 3 1/8" x 6 5/8" C/C Grade 5	1	
18	9394-010	Hex Nut, 1/2"-13UNC	2	
19	296534B	Handle Weldment =Black=	1	
20	9003259	Flange Screw 3/8"-16UNC x 1 1/4" Grade 5	4	
21	9009768	Draw Latch	2	
22	9010397	Capscrew M4-0.7 x 14 mm	4	

Rear Ladder Components

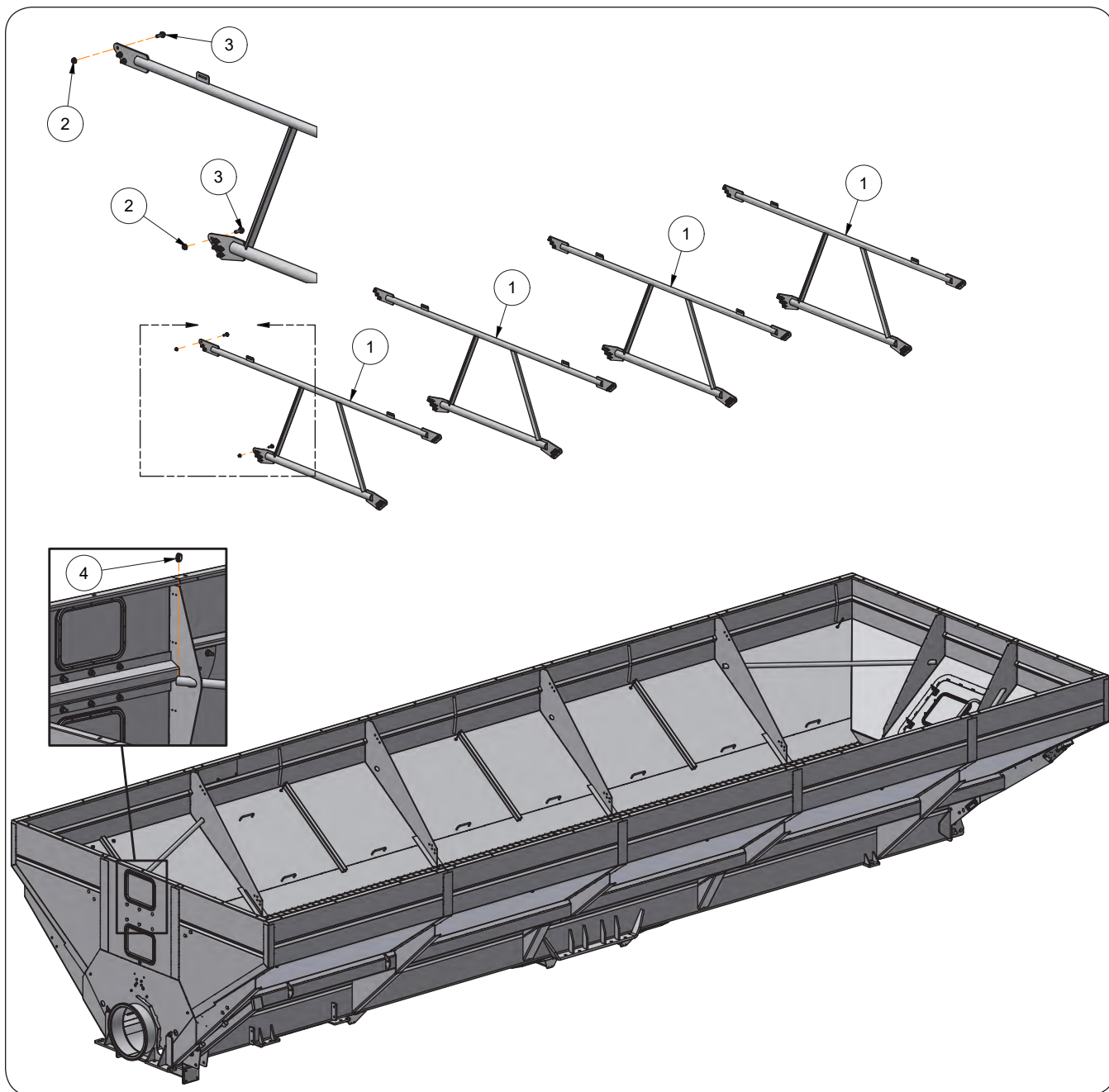
Please visit www.unverferth.com/parts/ for the most current parts listing.



ITEM	PART NO.	DESCRIPTION	QTY	NOTES
1	297804B	Upper Ladder Replacement Kit (Black)	1	Includes Instruction Sheet
2	297805B	Lower Ladder Replacement Kit (Black)	1	
3	900059	Draw Latch Keeper	1	
4	900060	Draw Latch Handle	1	
5	900066	Pin 3/16" x 1 1/2"	1	
6	900067	Washer 1/2"	1	
7	900068	E-Ring	1	
8	9928	Lock Nut 3/8-16UNC"	2	
9	9405-076	Flat Washer 3/8" USS	2	
10	TA0-908386-0	3/16" Stainless Rivet	4	
11	9390-062	Capscrew 3/8"-16UNC x 2 3/4" Grade 5	2	
12	91262	Flange Screw 3/8"-16UNC x 1" Grade 5	4	
13	91263	Flange Nut 3/8"-16UNC	4	
14	295137	Pivot Bushing	2	
15	9003850	Bumper	2	
16	296586B	Ladder Bolt Plate =Black=	1	
17	9003259	Flange Screw 3/8"-16UNC x 1 1/4" Grade 5	2	

Hopper Cross Brace Components

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

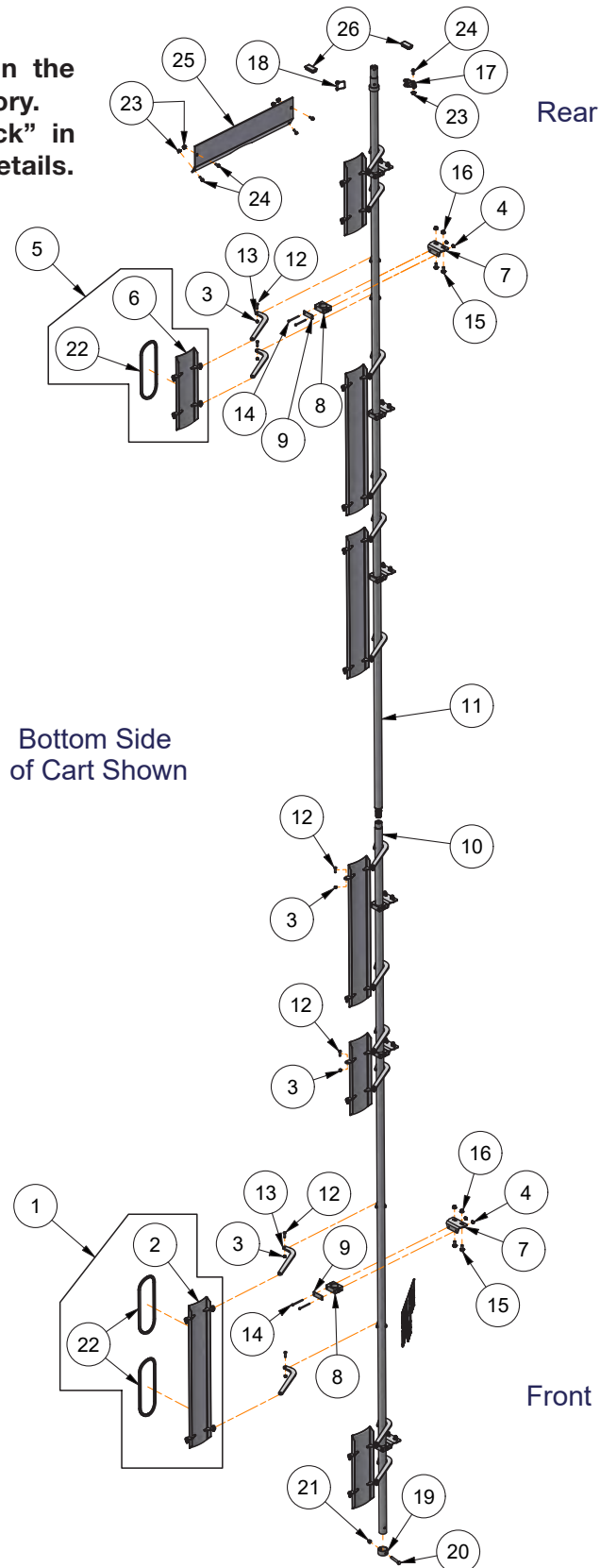


ITEM	PART NO.	DESCRIPTION	QTY	NOTES
1	294359B	Hopper Cross Brace Weldment =Black=	4	
2	9003398	Top Lock Flange Nut 5/8"-11UNC	64	
3	903161-065	Flange Screw 5/8"-11UNC x 1 3/4"	64	
4	9008544	Plug, 1 3/4" Dia.	8	

Clean Out Door Components

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

NOTE: Item #18
lynch pin 9005305 is in the
toolbox from the factory.
See “Operational Check” in
SET UP section for details.



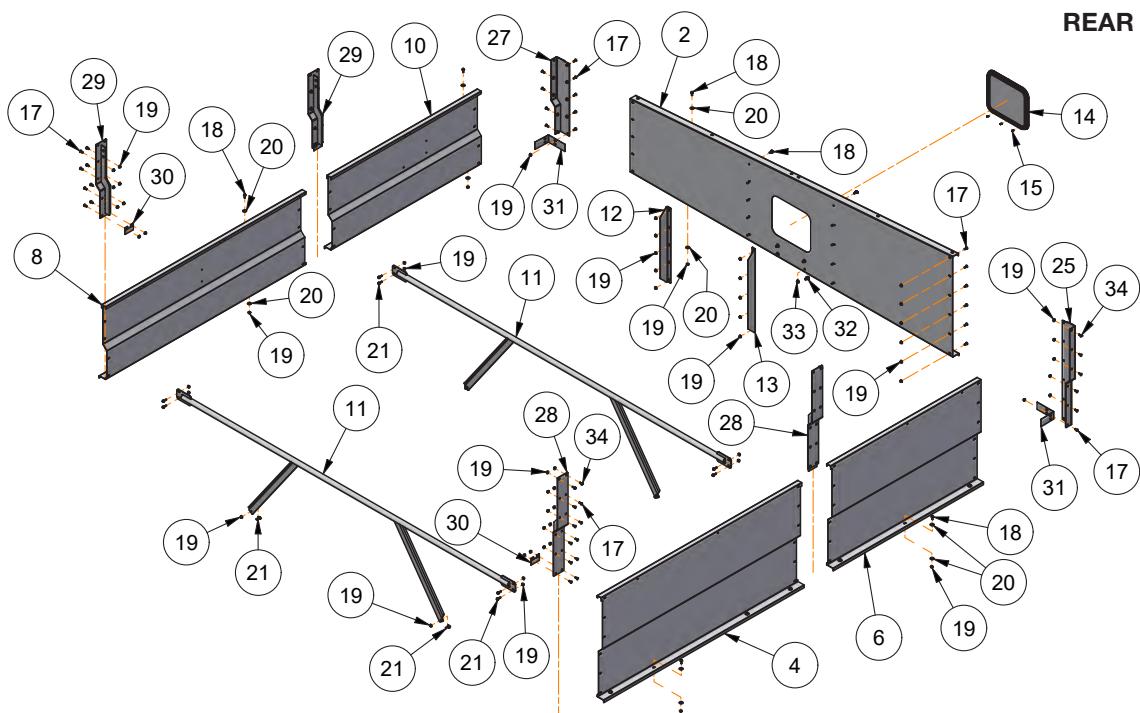
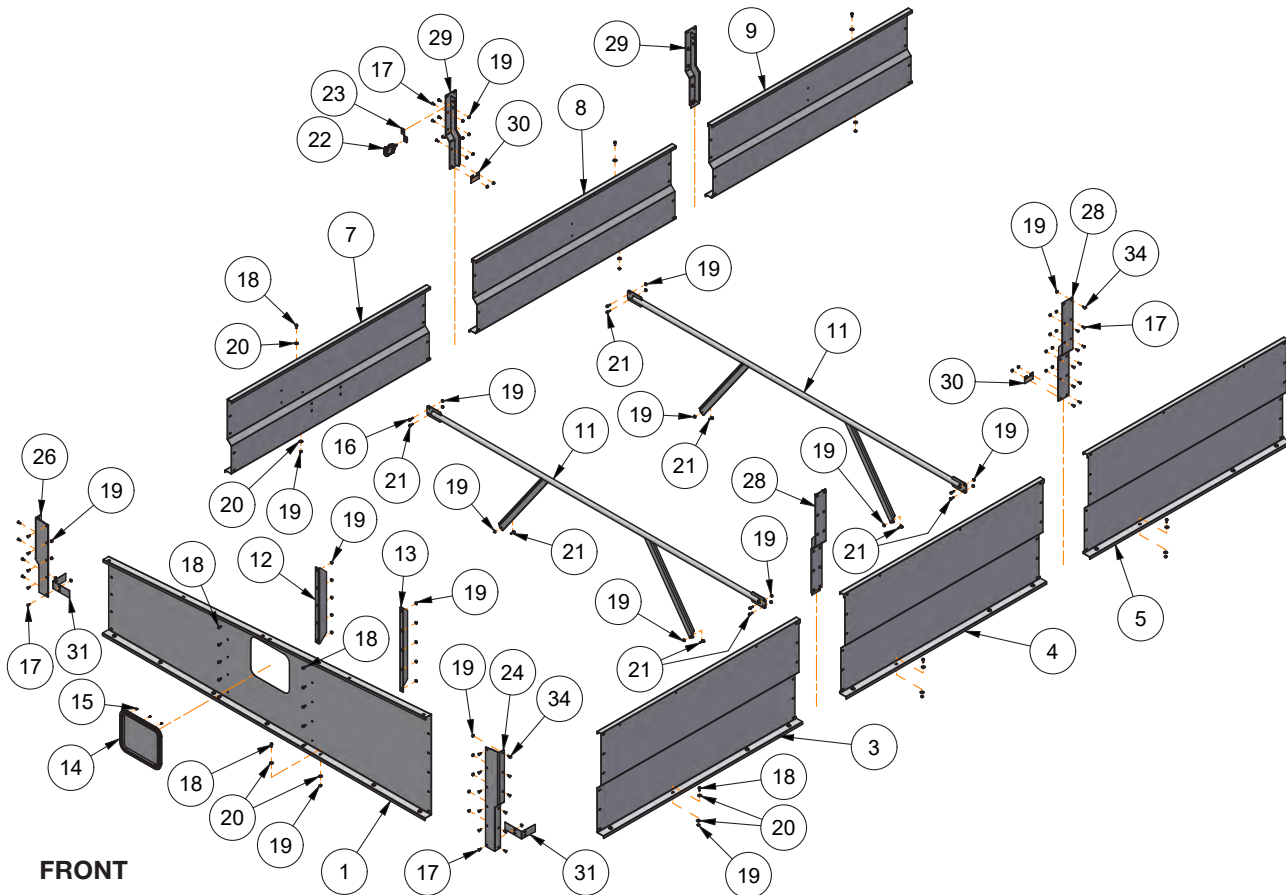
Clean Out Door Components

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

ITEM	PART NO.	DESCRIPTION	QTY	NOTES
1	298481B	Large Cleanout Door Assembly, 42 3/4" (Black)	4	Includes Items 2 & 22
2	273730B	Large Cleanout Door Weldment, 42 3/4" =Black=	4	
3	9928	Locknut 3/8"-16UNC	48	
4	97189	Flange Hex Nut 1/4"-20UNC	16	
5	298483B	Small Cleanout Door Assembly, 22" (Black)	4	Includes Items 6 & 22
6	273748B	Small Cleanout Door Weldment, 22" =Black=	4	
7	273741B	Door Pivot Plate =Black=	8	
8	9006351	Clamp Pair	8	
9	9006352	Top Plate	8	
10	297111B	Front Link Arm Weldment, 213 9/16" =Black=	1	
11	297112B	Rear Link Arm Weldment, 225 9/16" =Black=	1	
12	9390-056	Capscrew 3/8"-16UNC x 1 1/4" Grade 5	48	
13	273734B	Door Linkage =Black=	16	
14	9390-015	Capscrew 1/4"-20UNC x 3 1/2" Grade 5	16	
15	91266	Flange Screw 1/2"-13UNC x 1 1/4" Grade 5	16	
16	91267	Flange Nut 1/2"-13UNC	16	
17	273753B	Door Latch Weldment =Black=	1	
18	9005305	Lynch Pin 3/8" Dia. x 3"	1	
19	271566B	Stop Bushing =Black=	1	
20	9390-108	Capscrew 1/2"-13UNC x 3 1/4" Grade 5	1	
21	94981	Locknut 1/2"-13UNC	1	
22	9007108	Gasket w/Adhesive Backing for Clean-Out Door	AR	Specify in Feet
23	91263	Flange Nut 3/8"-16UNC	6	
24	91262	Flange Screw 3/8"-16UNC x 1" G5	6	
25	276349B	Support Plate =Black=	1	
26	9009931	Plug, 1 1/2" x 3"	2	

Sideboard Components

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



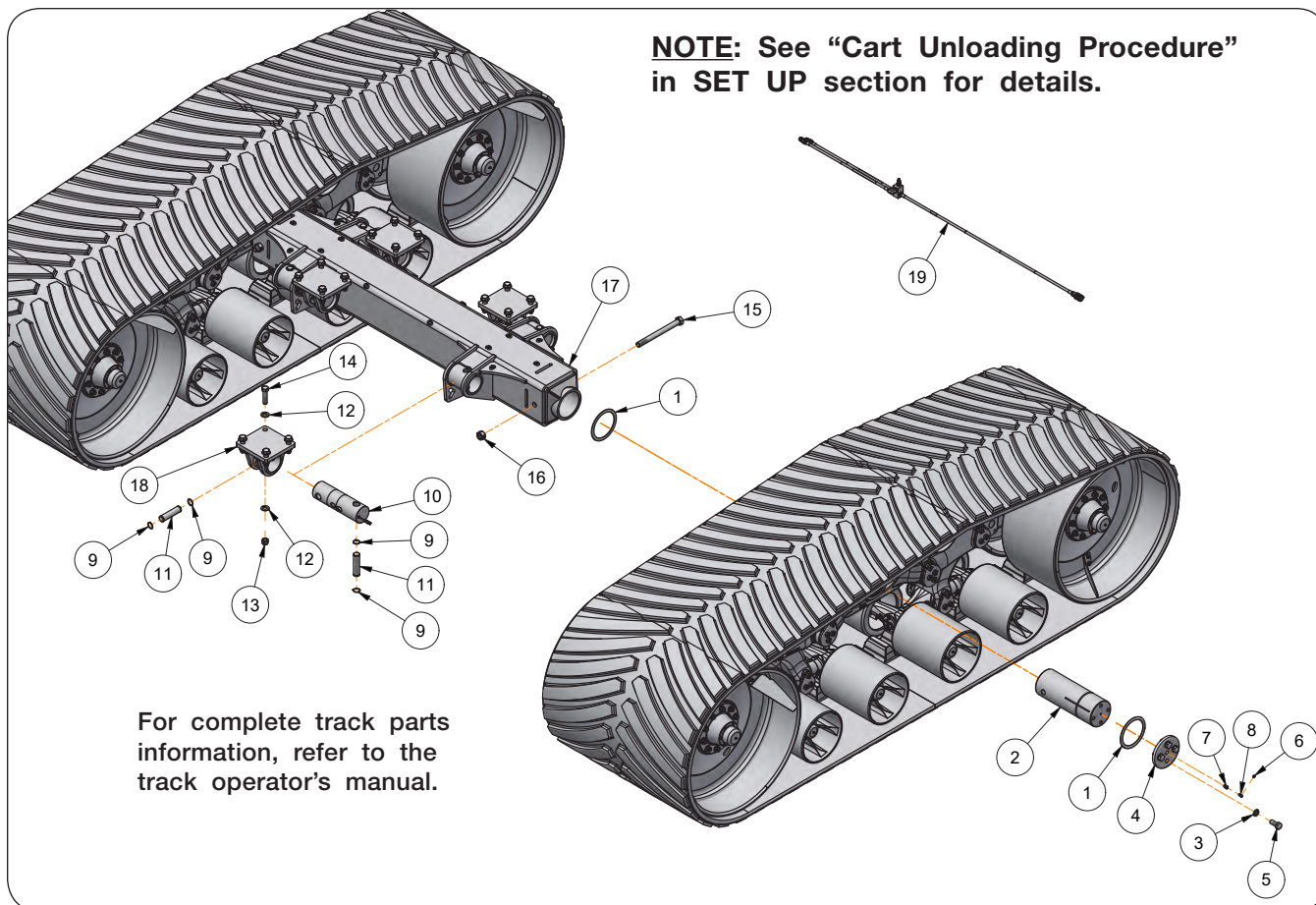
Sideboard Components

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

ITEM	PART NO.	DESCRIPTION	QTY.	NOTES
1	299400B	Front Board Replacement Kit =Black=	1	Includes Items 14 & 15
2	299401B	Rear Board Replacement Kit =Black=	1	
3	298248B	Front LH Board =Black=	1	
4	298249B	2nd / 4th LH Board =Black=	2	
5	298250B	3rd LH Board =Black=	1	
6	298251B	Rear LH Board =Black=	1	
7	298252B	Front RH Board =Black=	1	
8	298253B	2nd / 4th RH Board =Black=	2	
9	298254B	3rd RH Board =Black=	1	
10	298255B	Rear RH Board =Black=	1	
11	274798B	Sideboard Brace Weldment =Black=	4	
12	276378B	Plate - Sideboard Brace 31 1/2" =Black=	2	
13	276379B	Plate - Sideboard Brace 34 13/16" =Black=	2	
14	9008680	Window and Trim Assembly	2	
15	9008933	Pan Head Phillips Screw 8"-18UNC x 1/2"	24	
16	95785	Flange Screw, 3/8"-16UNC x 1 1/2"	1	
17	9388-051	Carriage Bolt, 3/8"-16UNC x 1" Grade 5	112	
18	91262	Flange Screw, 3/8"-16UNC x 1" Grade 5	72	
19	9008159	Lock Nut, 3/8"-16UNC	216	
20	9405-078	Flat Washer 3/8"	104	
21	9003259	Flange Screw, 3/8"-16UNC x 1 1/4" Grade 5	29	
22	9008957	LED Work Light	1	
23	271574B	Lamp Mount =Black=	1	
24	298258B	LH Front Sideboard Corner Plate =Black=	1	
25	298259B	LH Rear Sideboard Corner Plate =Black=	1	
26	298260B	RH Front Sideboard Corner Plate =Black=	1	
27	298261B	RH Rear Sideboard Corner Plate =Black=	1	
28	298264B	LH Sideboard Bracket =Black=	4	
29	298265B	RH Sideboard Bracket =Black=	4	
30	295124B	Sideboard Cover Plate =Black=	8	
31	295125B	Sideboard Cover Bracket =Black=	4	
32	9001529	Flange Screw, 1/2"-13UNC x 1" Grade 5	4	
33	9003397	Locking Flange Nut, 1/2"-13UNC	4	
34	9005312	Torx Head Machine Screw, 3/8"16 x 1"	8	

Equalizer® SP Track Axle Mounting & Bundle Components

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



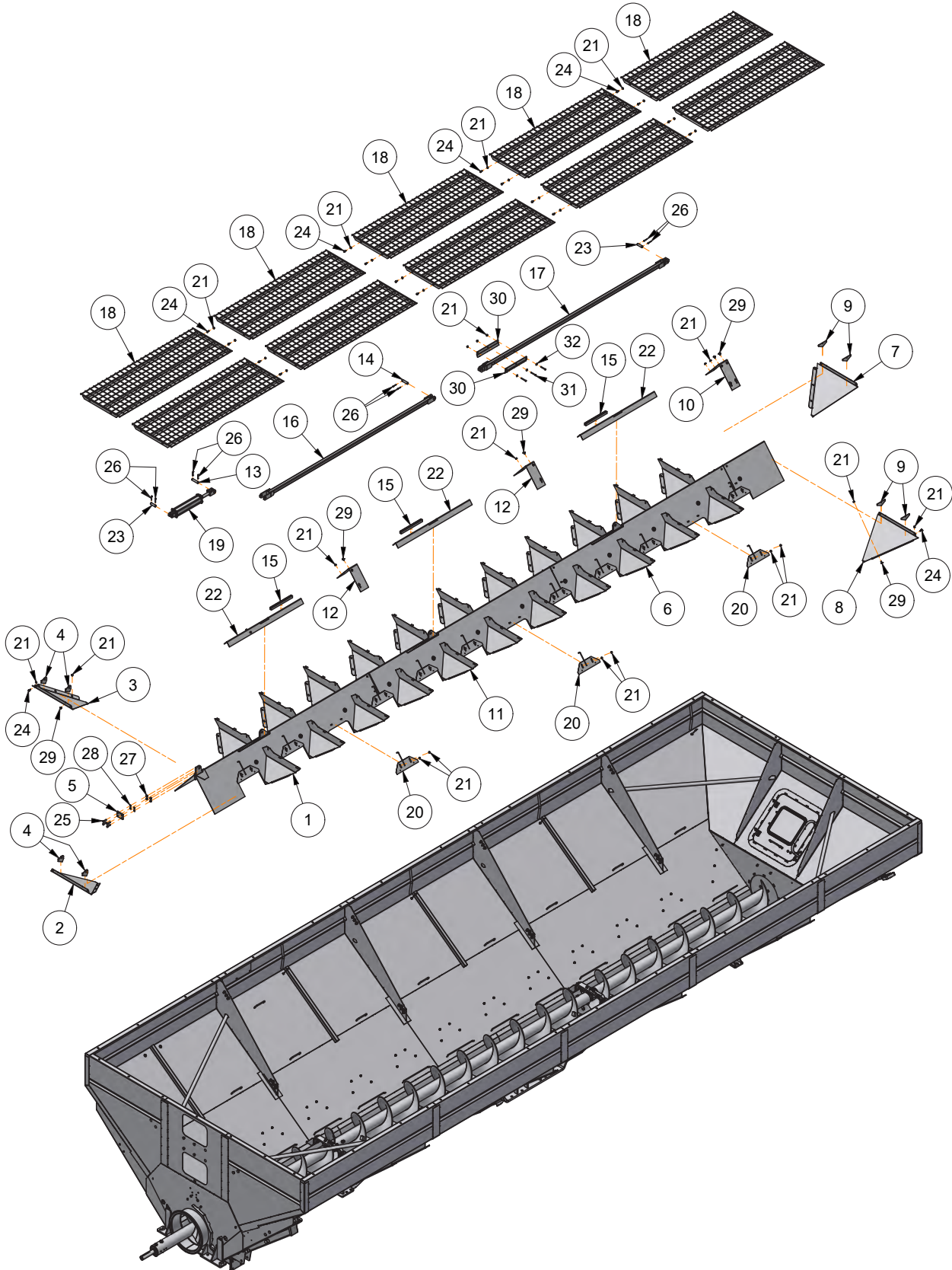
ITEM	PART NO.	DESCRIPTION	QTY	NOTES
1	282690	Washer 8 1/2" OD	4	
2	298644	Track Pivot Shaft 7" Dia.	2	
3	9404-041	Lock Washer 1"	8	
4	282689B	Cover Plate =Black=	2	
5	9390-184	Capscrew 1"-8UNC x 2 1/4" Grade 5	8	
6	93426	Grease Zerk	2	
7	9006816	Adapter 1/8"NPT	2	
8	9006785	90° Adapter	2	
9	97289	Retaining Ring 1 1/2"	16	
10	9008023	Load Bar 4 1/2" Dia. with 16 ft. Cable CAT 5	4	
11	297268	Pin 1 1/2" Dia. x 6 1/4"	8	
12	804685	Hardened Flat Washer 1"	32	
13	9008441	Elastic Lock Nut 1"-14UNS	16	
14	91299-1460	Capscrew 1"-14UNS x 4" Grade 8	16	
15	9010361	Capscrew 1 1/4"-7UNC x 14" Grade 5	2	
16	93476	Lock Nut 1 1/4"-7UNC	2	
17	297193B	Axle Weldment =Black=	1	
18	297202B	Axle Mount Weldment =Black=	4	
19	268063	Tensioner Hose Assembly	1	

Notes

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.



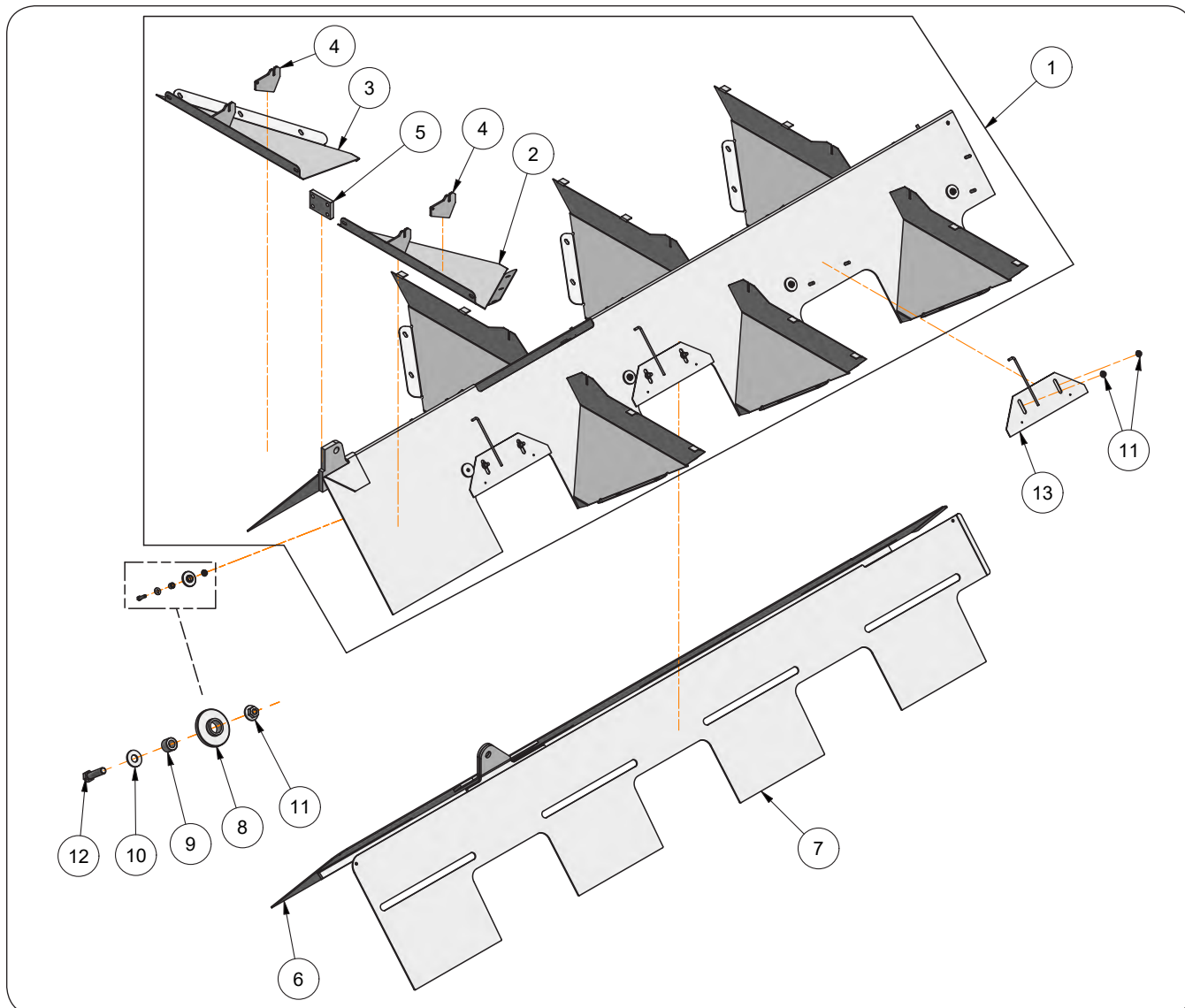
Hopper Flow Door Components

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

ITEM	PART NO.	DESCRIPTION	QTY	NOTES
1	299403B	Front Tent Service Kit (Black)	1	Includes Items 2 - 5 & Front Tent Weldment
2	294753B	Front LH / Rear RH Baffle =Black=	1	
3	294754B	Front RH / Rear LH Baffle =Black=	1	
4	297055B	Front Screen Mount Plate =Black=	4	
5	N/A*	Cylinder Mount Plate	-	*Not For Individual Sale, See Item 1
6	299405B	Rear Tent Service Kit (Black)	1	Includes Items 7-9 & Rear Tent Weldment
7	294754B	Front RH / Rear LH Baffle =Black=	1	
8	294753B	Front LH / Rear RH Baffle =Black=	1	
9	294376B	Rear Screen Mount Plate =Black=	4	
10	298332B	Rear Tent Cover Plate =Black=	1	
11	299404B	Middle Tent Service Kit (Black)	1	Includes Item 11 & Middle Tent Weldment
12	298519B	Middle Tent Cover Plate =Black=	2	
13	266285	Idler Pin 1" Dia. x 4 1/2"	1	
14	271112	Idler Pin 1" Dia. x 4"	1	
15	N/A*	Seal Plate	6	*Not For Individual Sale, See Items 15, 16
16	274675B	Front Flow Door Linkage Weld't =Black=	1	
17	297083B	Rear Flow Door Linkage Weld't =Black=	1	
18	297053B	Screen Weldment =Black=	10	
19	9002575	Hydraulic Cylinder 3" x 16" (3000PSI)	1	3/4"-16 SAE O-Ring Ports
	9003772	Seal Kit	-	
20	284721B	Baffle Weldment =Black=	24	
21	9008159	Locknut, 3/8"-16UNC	211	
22	282187B	Tent Hole Cover Plate =Black=	3	
23	804572	Hydraulic Cylinder Pin 1" Dia. x 3 1/2"	2	
24	91262	Flange Screw 3/8"-16UNC x 1" Gr.5	24	
25	9390-103	Capscrew 1/2"-13UNC x 2" Gr.5	4	
26	9391-046	Cotter Pin 3/16" Dia. x 2"	8	
27	9394-010	Hex Nut 1/2"-13UNC Gr.5	4	
28	9404-025	Lock Washer 1/2"	4	
29	95585	Large Flange Screw 3/8"-16UNC x 3/4" Gr.5	108	
30	299299B	Tube Support Plate =Black=	2	
31	9390-064	Capscrew, 3/8"-16UNC x 3 1/4" Gr.5	3	
32	9405-076	Flat Washer, 3/8" USS	3	

Flow Door Components — Front Flow Door

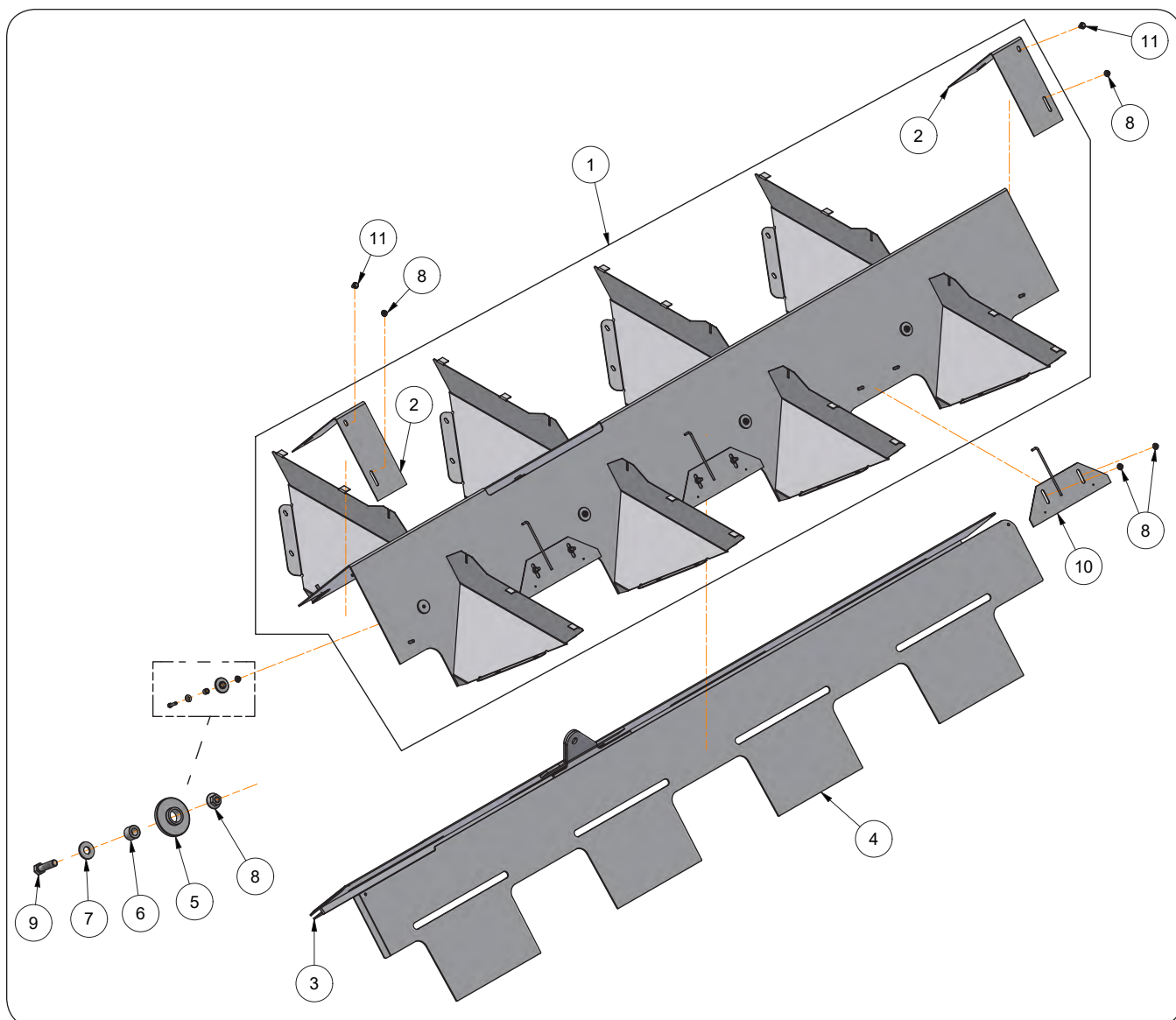
Please visit www.unverferth.com/parts/ for the most current parts listing.



ITEM	PART NO.	DESCRIPTION	QTY	NOTES
1	299403B	Front Tent Service Kit (Black)	1	Includes Items 2-5 & Front Tent Weldment
2	294753B	Front LH Baffle =Black=	1	
3	294754B	Front RH Baffle =Black=	1	
4	297055B	Front Screen Mount Plate =Black=	4	
5	N/A*	Cylinder Mount Plate	-	*Not For Individual Sale, See Item 1
6	297064B	Front RH Door Weldment =Black=	1	
7	297066B	Front LH Door Weldment =Black=	1	
8	284168	Bushing 2 1/4" OD x 49/64" ID x 0.500"	6	
9	284169	Bushing 3/4" OD x 7/16" ID x 0.531"	6	
10	9005471	Flat Washer 3/8" (Hardened)	6	
11	9008159	Lock Nut 3/8"-16UNC	20	
12	91299-057	Capscrew 3/8"-16UNC x 1 1/2" Gr.8	6	
13	284721B	Baffle Weldment =Black=	6	

Flow Door Components — Middle Flow Door

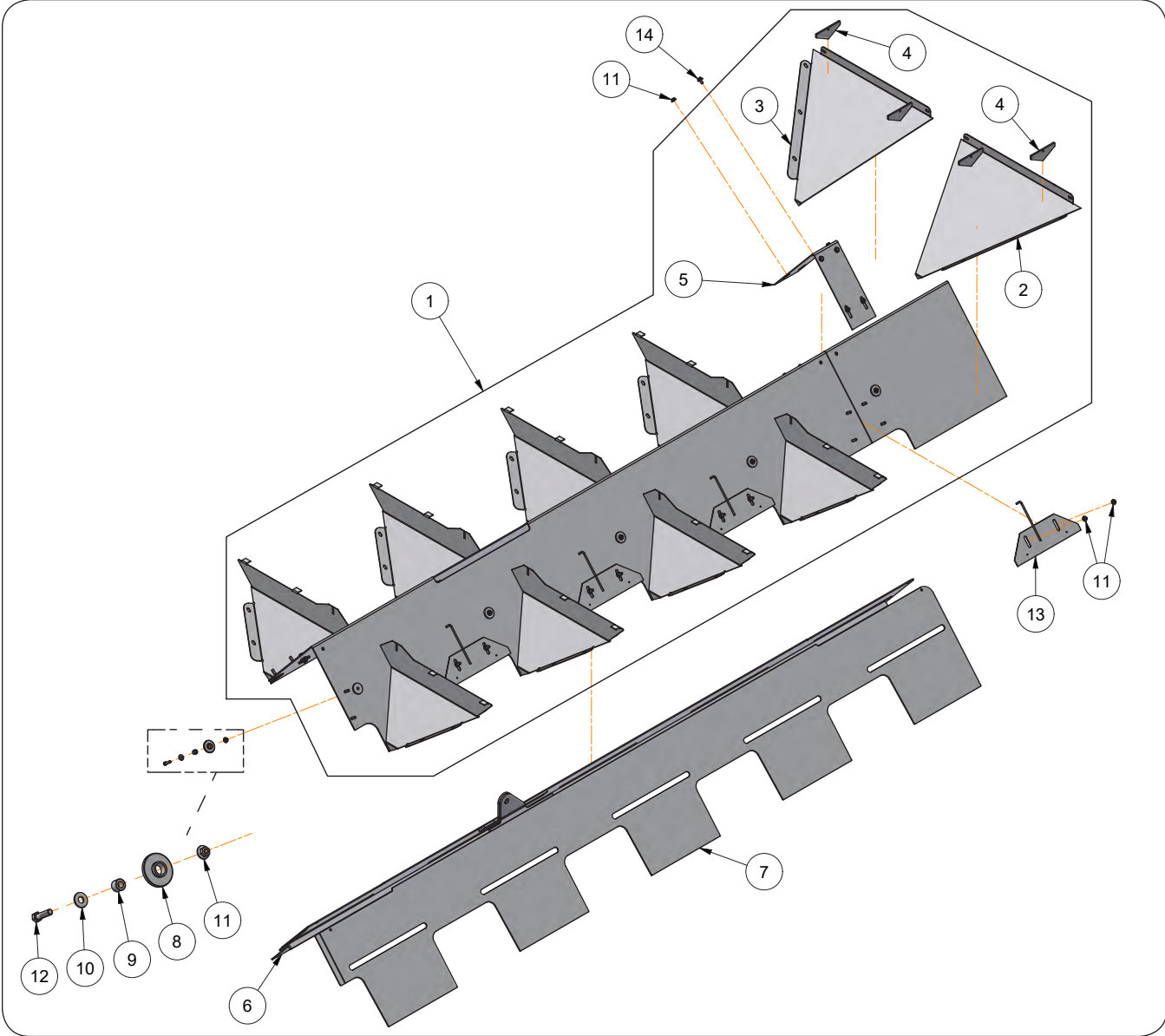
Please visit www.unverferth.com/parts/ for the most current parts listing.



ITEM	PART NO.	DESCRIPTION	QTY	NOTES
1	299404B	Middle Tent Service Kit (Black)	1	Includes Item 2 & Middle Tent Weldment
2	298519B	Cover Plate =Black=	2	
3	297071B	Middle RH Door Weldment =Black=	1	
4	297074B	Middle LH Door Weldment =Black=	1	
5	284168	Bushing 2 1/4" OD x 49/64" ID x 0.500"	8	
6	284169	Bushing 3/4" OD x 7/16" ID x 0.531"	8	
7	9005471	Flat Washer 3/8" (Hardened)	8	
8	9008159	Lock Nut 3/8"-16UNC	24	
9	91299-057	Capscrew 3/8"-16UNC x 1 1/2" Gr.8	8	
10	284721B	Baffle Weldment =Black=	6	
11	95585	Flange Screw 3/8"-16UNC x 3/4"	4	

Flow Door Components – Rear Flow Door

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



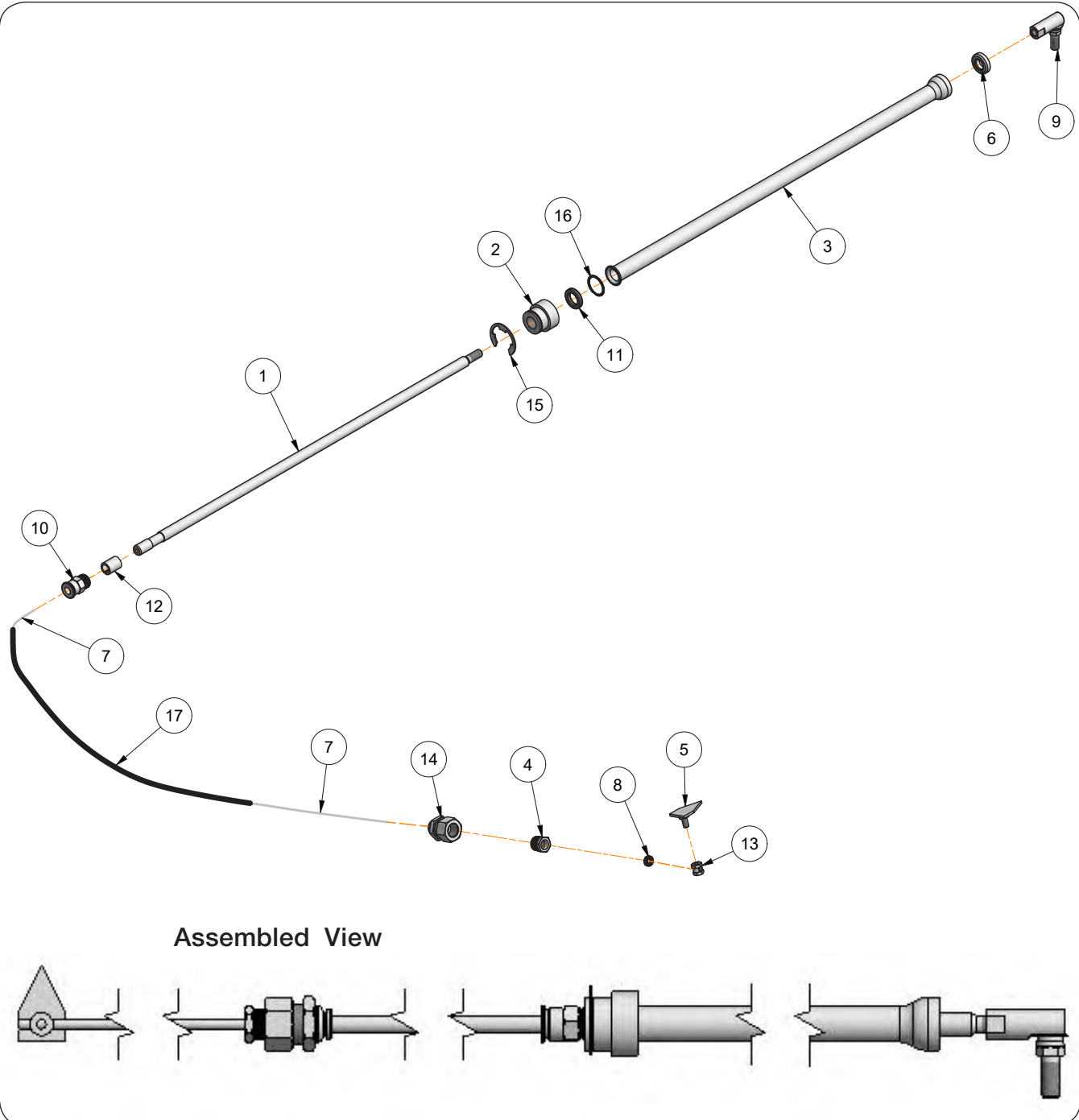
ITEM	PART NO.	DESCRIPTION	QTY	NOTES	
1	299405B	Rear Tent Service Kit (Black)	1	Includes Items 2-5 & Rear Tent Weldment	
	2	294754B	Front RH / Rear LH Baffle =Black=	1	
	3	294753B	Front LH / Rear RH Baffle =Black=	1	
	4	294376B	Rear Screen Mount Plate =Black=	4	
	5	298332B	Rear Tent Cover Plate =Black=	1	
6	297079B	Rear RH Door Weldment =Black=	1		
7	297082B	Rear LH Door Weldment =Black=	1		
8	284168	Bushing 2 1/4" OD x 49/64" ID x 0.500"	10		
9	284169	Bushing 3/4" OD x 7/16" ID x 0.531"	10		
10	9005471	Flat Washer 3/8" (Hardened)	10		
11	9008159	Lock Nut 3/8"-16UNC	30		
12	91299-057	Capscrew 3/8"-16UNC x 1 1/2" G8	10		
13	284721B	Baffle Weldment =Black=	8		
14	95585	Flange Screw 3/8"-16UNC x 3/4"	4		

Notes

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

Flow Door Indicator Assembly

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



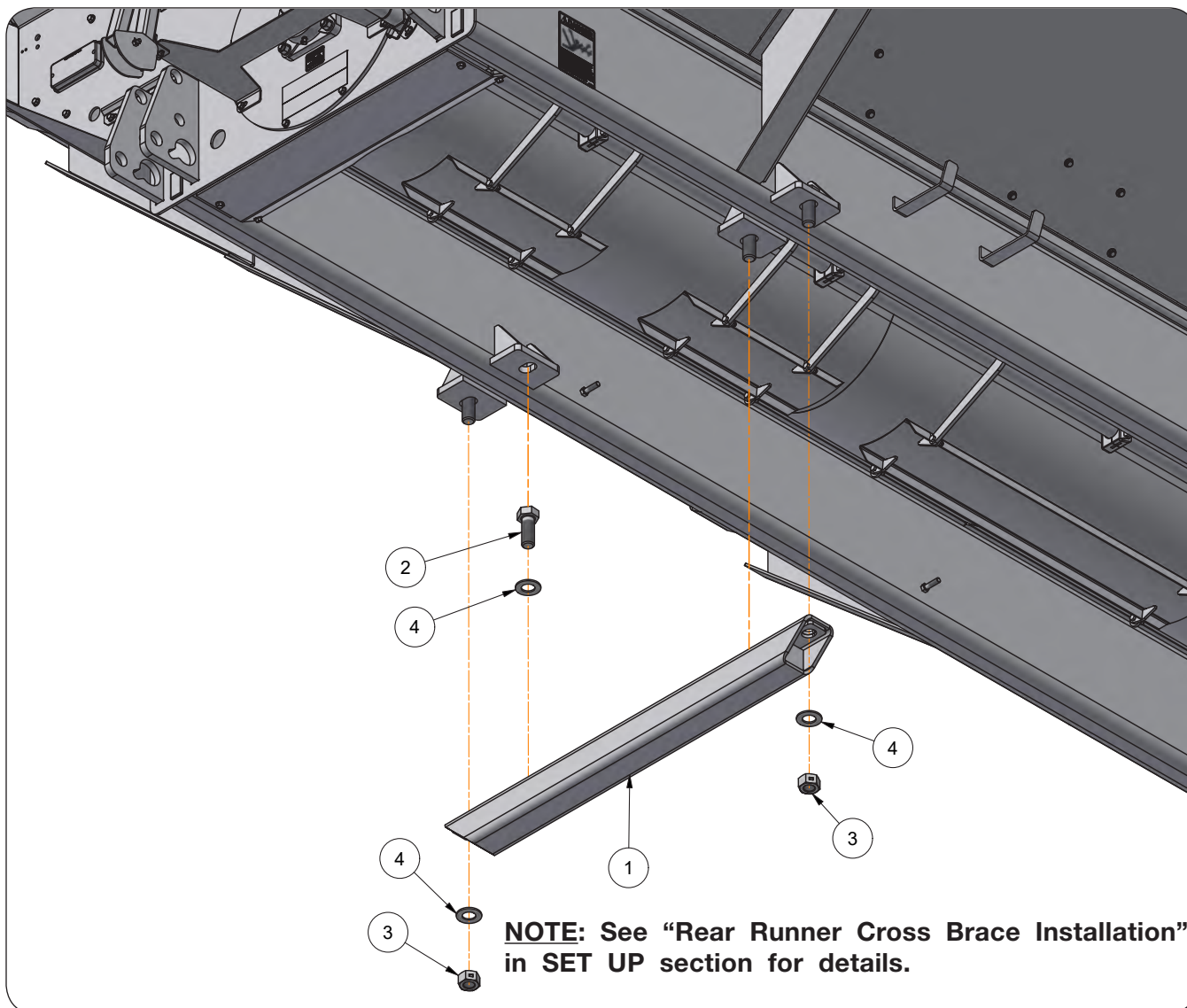
Flow Door Indicator Assembly

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

ITEM	PART NO.	DESCRIPTION	QTY	NOTES
	299305R	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	9010430	Inner Cable (Conduit) - 3/16" Dia. x 160 1/2"	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	299304	Plastic Tubing - 140"	1	

Rear Runner Cross Brace Components

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



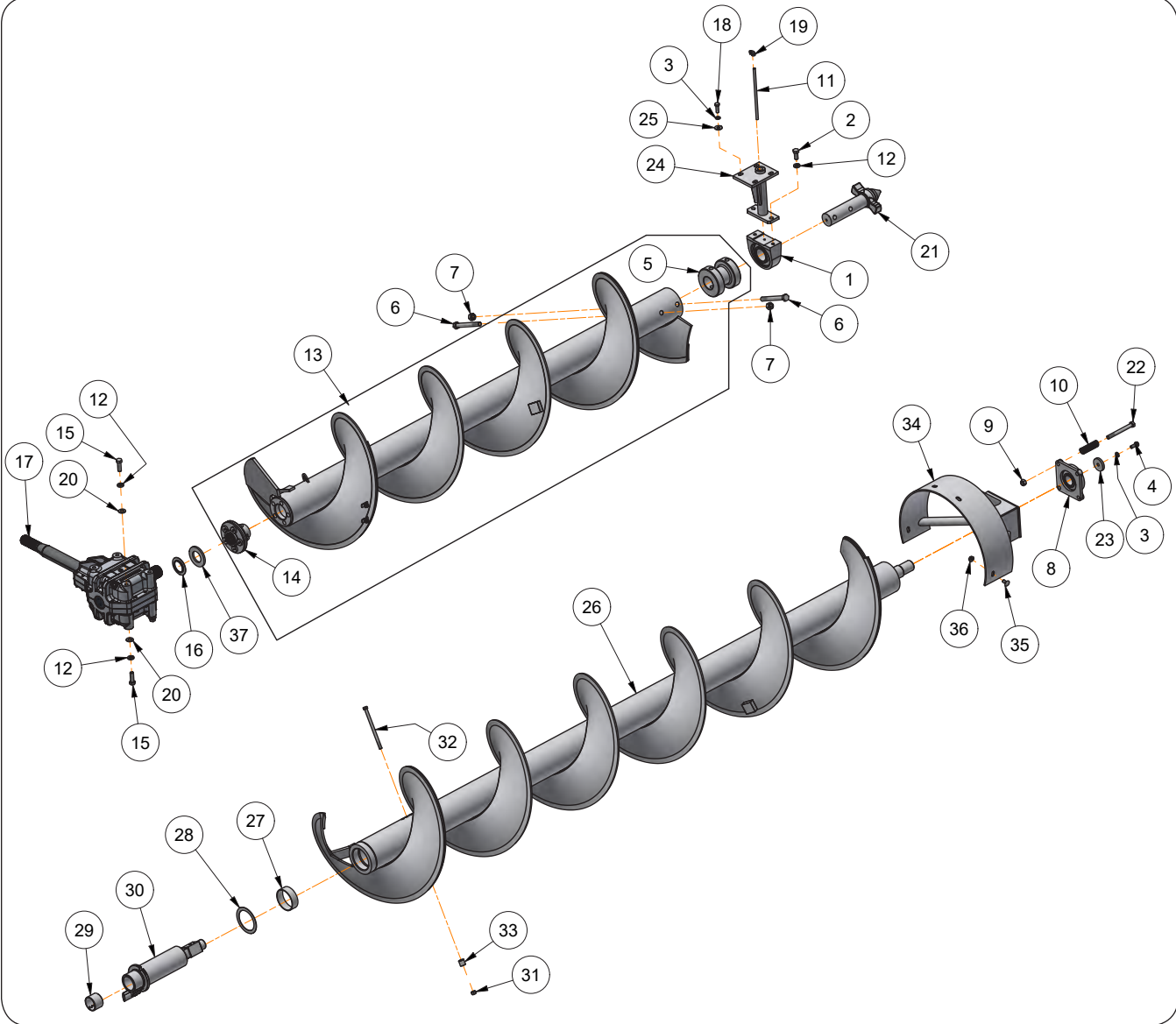
ITEM	PART NO.	DESCRIPTION	QTY	NOTES
1	298198G	Runner Cross Brace Weldment =Green=	1	
	298198R	Runner Cross Brace Weldment =Red=		
	298198BM	Runner Cross Brace Weldment =Black Metallic=		
2	9390-214	Capscrew, 1 1/4"-7UNC x 3 1/4" Gr.5	4	
3	93476	Locknut, 1 1/4"-7UNC	2	
4	9405-128	Flat Washer 1 1/4" SAE	6	

Notes

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

Vertical Auger Flighting Components

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



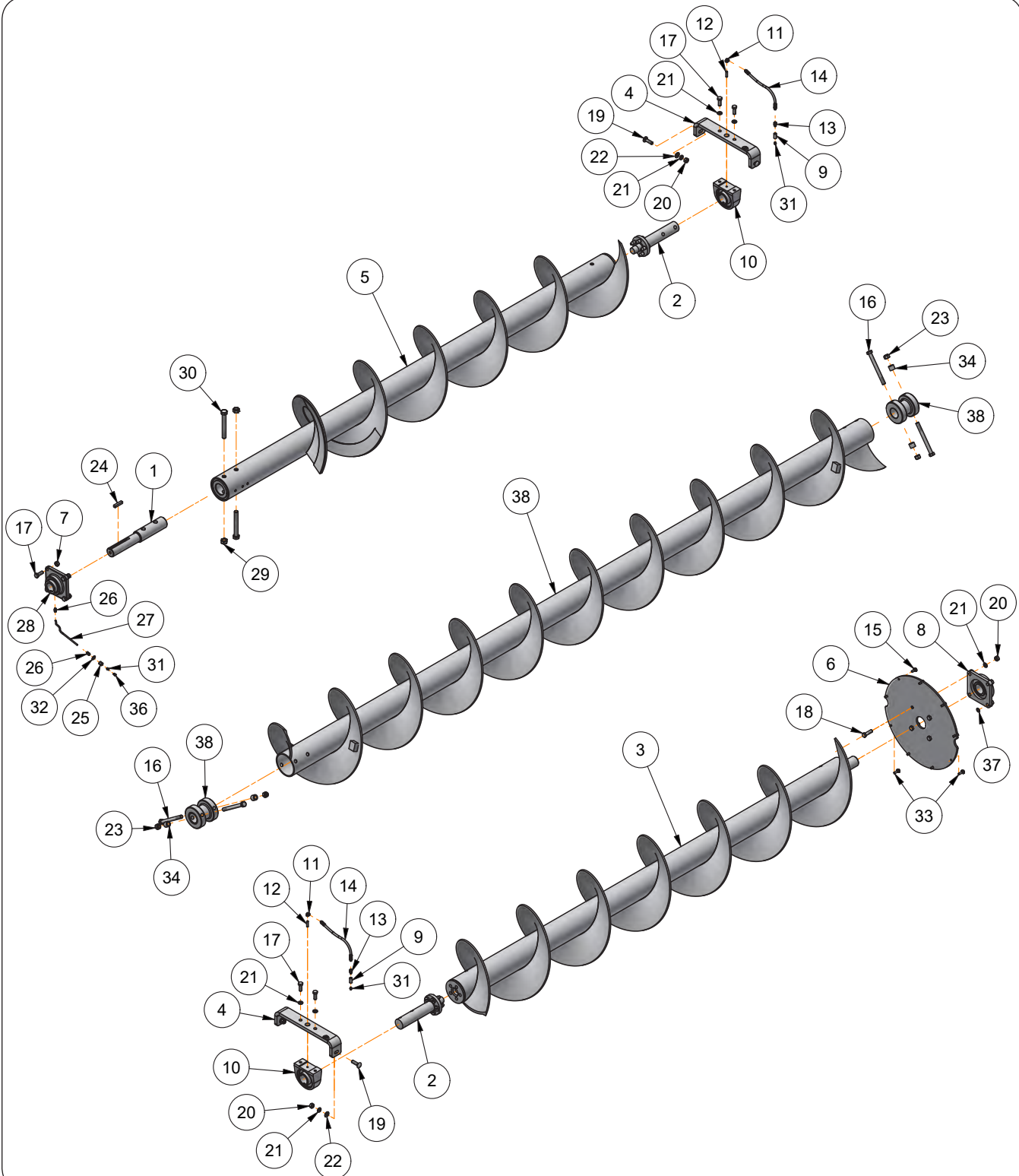
Vertical Auger Flighting Components

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

ITEM	PART NO.	DESCRIPTION	QTY	NOTES
1	9004731	Pillow Block Bearing	1	
2	9390-122	Capscrew 5/8"-11UNC x 1 1/2" Grade 5	2	
3	9404-025	Lock Washer 1/2"	1	
4	9390-100	Capscrew 1/2"-13UNC x 1 1/4" Grade 5	1	
5	283515	Auger Tube Adapter	1	
6	9390-159	Capscrew 3/4"-10UNC x 7" Grade 5	2	
7	9802	Lock Nut 3/4"-10UNC	2	
8	9002492	Pillow Block Bearing, 2" Bore	1	Includes Grease Zerk Cap
9	9801	Lock Nut 5/8"-11UNC	4	
10	9004899	Compression Spring	4	
11	9005793	Grease Pipe	1	
12	9404-030	Lock Washer 5/8"	2	
13	296317B	Lower Auger Replacement Kit (Black)	1	Includes Item 5 and 14 Fits 2 1/4"-20 Spline Gearbox Shaft
14	287802	Drive Plate Assembly (5-Pin)	1	
15	9390-124	Capscrew 5/8"-11UNC x 2" Grade 5	4	
16	9007377B	Dust Cover =Black=	1	
17	9007366	Gear Box	1	See "Gearbox" In This Section For Parts
18	9390-101	Capscrew 1/2"-13UNC x 1 1/2" Grade 5	4	
19	9004764	Pipe Elbow	1	
20	9405-098	Flat Washer 5/8"	4	
21	288813	Drive Dog, Double Lobe	1	
22	9390-136	Capscrew 5/8"-11UNC x 6" Grade 5	4	
23	407699	Washer Plate	1	
24	273124	Bearing Bracket Weldment	1	
25	9405-088	Flat Washer 1/2" USS	4	
26	297318B	Upper Auger Weldment =Black=	1	Includes Item 30 and 34
27	9004877	Self Lubricating Bushing	1	
28	9004878	Thrust Washer	1	
29	9003230	Split Bushing	1	
30	281283	Soft Start Assembly	1	Includes Item 29
31	9800	Lock Nut 1/2"-13UNC	1	
32	9390-119	Capscrew 1/2"-13UNC x 8" Grade 5	1	
33	410511	Spacer Bushing	1	
34	297216B	Hanger Bearing Weldment =Black=	1	
35	9388-102	Carriage Bolt, 1/2"-13UNC x 1" Grade 5	4	
36	9003397	Locking Flange Nut, 1/2"-13UNC	4	
37	297008	Washer, 4" OD x 2.265 ID x .3125"	1	UHMW Material

Horizontal Auger Components

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



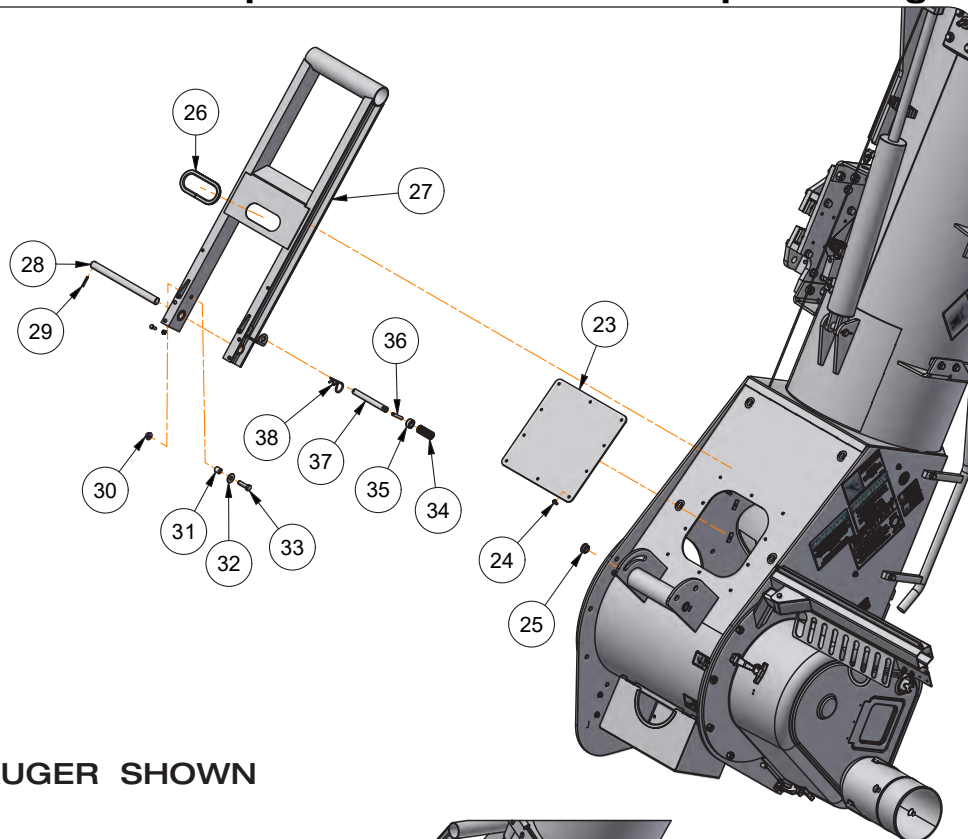
Horizontal Auger Components

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

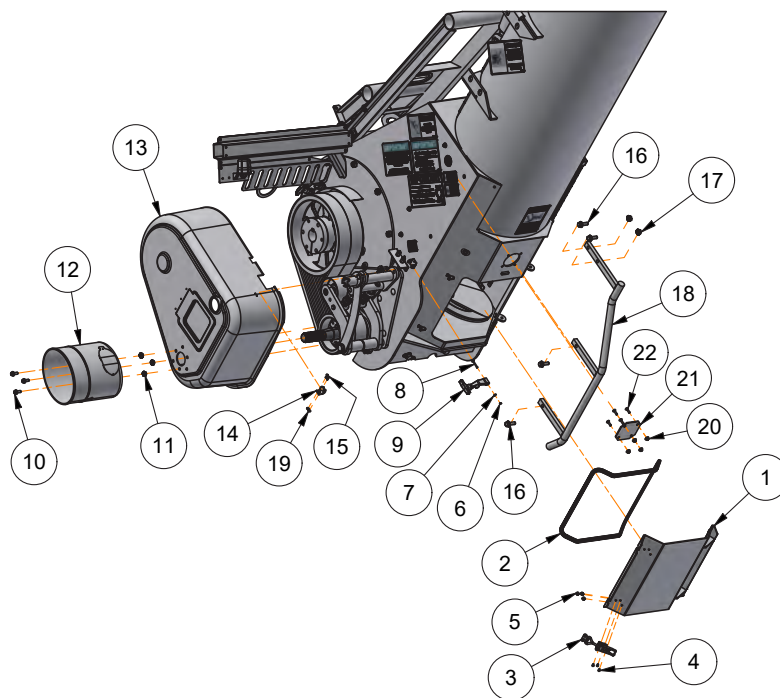
ITEM	PART NO.	DESCRIPTION	QTY	NOTES
1	273779	Auger Shaft 2 3/4" Dia. x 17 5/8"	1	
2	293957	Auger Coupler Shaft Weldment	2	
3	299399B	Rear Drag Auger Replacement Kit (Black)	1	
4	286382B	Bearing Mount Bar =Black=	2	
5	299397B	Front Drag Auger Replacement Kit (Black)	1	Includes Items 5, 29 & 30
6	297122G	Cover Plate =Green=	1	
	297122R	Cover Plate =Red=		
	297122BM	Cover Plate =Black Metallic=		
7	95905	Lock Nut/Center, 5/8"-11UNC Grade 5	4	
8	9009874	Bearing 2 1/2" Dia. Flanged W/Grease Zerk	1	Includes Grease Zerk Cap
9	9009171	Coupling Pipe 1/8NPT	2	
10	9004731	Bearing - Pillow Block	2	
11	9004764	90° Elbow Pipe	2	
12	9006964	Hex Pipe Nipple	2	
13	9002479	Adapter Pipe Union Swivel	2	
14	9006965	Grease Hose 1/8" x 15" (3000 PSI)	2	
15	91262	Flange Screw 3/8"-16UNC x 1" Grade 5	7	
16	91299-161	Capscrew, 3/4"-10UNC x 8" Grade 8	4	
17	9390-123	Capscrew 5/8"-11UNC x 1 3/4" Grade 5	8	
18	9390-125	Capscrew 5/8"-11UNC x 2 1/4" Grade 5	4	
19	9388-136	Carriage Bolt, 5/8"-11UNC x 2 1/4" Grade 5	4	
20	9394-014	Hex Nut, 5/8"-11UNC Grade 5	8	
21	9404-029	Lock Washer 5/8"	12	
22	9405-098	Flat Washer 5/8" SAE	4	
23	9802	Lock Nut/Top, 3/4"-10UNC	4	
24	9002562	Key 1/2" x 1/2" x 2 1/2"	1	
25	9003949	Pipe Coupling	1	
26	9005073	Quicklinc Fitting 1/4" Tube x 1/8NPT Straight	2	
27	9005074	Grease Hose 1/4" OD	1	
28	9005565	Flange Bearing 4-Bolt, 2 1/4" ID	1	
29	91141	Locknut 7/8"-9UNC	2	
30	91299-178	Capscrew 7/8"-9UNC x 7" Grade 8	2	
31	93426	Grease Zerk	3	
32	9405-076	Flat Washer 3/8" USS	1	
33	9003259	Flange Screw 3/8"-16UNC x 1 1/4" Grade 5	2	
34	283895B	Spacer Bushing =Black=	4	
35	295031	Bushing Insert Casting	2	
36	9006849	Grease Zerk Cap	1	
37	9501279	Washer, 5/8" (18 Ga.)	4	
38	299398B	Center Drag Auger Replacement Kit (Black)	1	Includes Items 16, 23, 34, 35 & 38

Lower Auger Cleanout Door, Covers & Rest Components

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



LEFT-HAND AUGER SHOWN



ITEM	PART NO.	DESCRIPTION	QTY	NOTES
1	298477B	Cleanout Door Assembly (Black)	1	Includes Cleanout Door Weldment 276557B And Items 3 - 5
2	9007108	Gasket w/Adhesive Backing for Clean-Out Door	A/R	Specify in Feet
3	9006497	Draw Latch	2	
4	903171-574	Flat Countersunk Screw #10-24UNC Phillips Machine Screw	6	

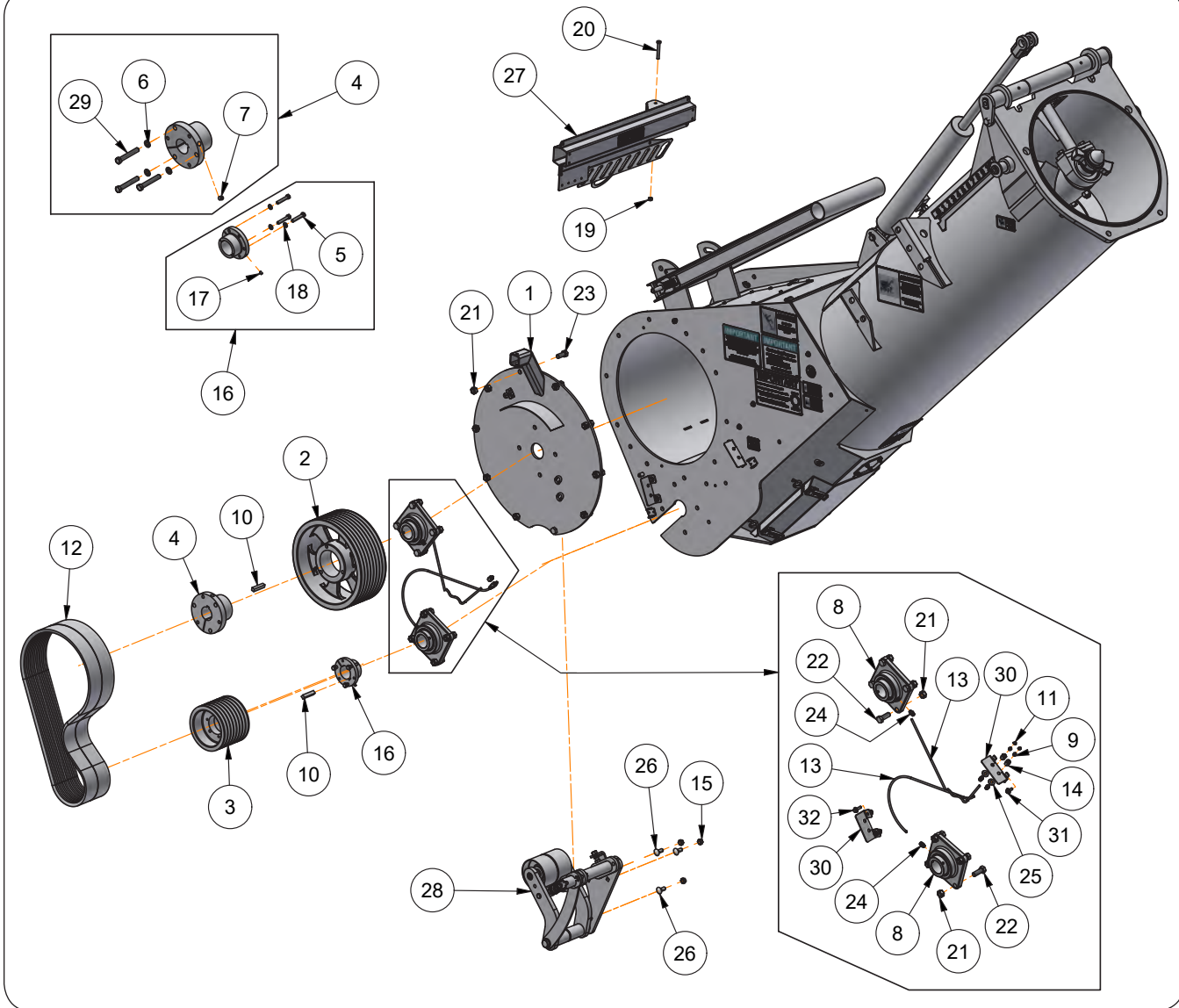
Lower Auger Cleanout Door, Covers & Rest Components

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

ITEM	PART NO.	DESCRIPTION	QTY	NOTES
5	902331	Serrated Flange Hex Nut #10-24UNC	6	
6	900068	Retainer for Draw Latch	3	
7	900067	Washer	3	
8	900066	Stud Pin	3	
9	900060	Handle for Draw Latch	3	
10	91262	Flange Screw 3/8"-16UNC x 1" G5	3	
11	91263	Flange Nut 3/8"-16UNC G5	3	
12	9010251	PTO Bell Cover	1	
13	9008700	Belt Cover/Shield	1	
14	900059	Flexible Draw Latch Asy w/Style R Keeper	3	
15	9004940	Pop Rivet	6	
16	9005705	Flange Screw 1/2"-13UNC x 1 1/2" Grade 5	4	
17	91267	Flange Nut 1/2"-13UNC	2	
18	295991B	Auger Tire Guard Weldment =Black=	1	
19	9004998	Rivet Burr 3/16"	8	
20	97189	Flange Nut, 1/4"-20UNC	4	
21	2001446B	Cover Plate =Black=	1	
22	9388-003	Carriage Bolt, 1/4"-20UNC x 1" G5	4	
23	283518G	Cover Plate 14 1/4" x 15" =Green=	1	
	283518R	Cover Plate 14 1/4" x 15" =Red=		
	283518BM	Cover Plate 14 1/4" x 15" =Black Metallic=		
24	97420	Flange Screw 1/4"-20UNC x 3/4" G5	10	
25	9003412	Split Output Bushing 1" ID	2	
26	9000787	Trim Lock	1.25	Specify in Feet
27	299157G	Field Rest Weldment =Green=	1	
	299157R	Field Rest Weldment =Red=		
	299157BM	Field Rest Weldment =Black Metallic=		
28	284549	Pivot Pin, 13 1/16"	1	
29	9392-136	Roll Pin, 1/4" Dia. x 1 1/2"	1	
30	9003397	Locking Flange Nut 1/2"-13UNC	1	
31	272583	Bushing, 3/4" Dia. x 7/8"	1	
32	9405-088	Flat Washer 1/2"	1	
33	9390-102	Capscrew, 1/2-13UNC x 1 3/4" G5	1	
34	9004772	Spring 2 1/2"	1	
35	9001868	Locking Collar W/Set Screw 3/4"	1	
36	9392-182	Roll Pin, 3/8" Dia. x 2 1/2"	1	
37	272376	Lock Pin 6 3/4"	1	
38	92424	Hairpin Cotter	1	

Lower Auger Linkage Components

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



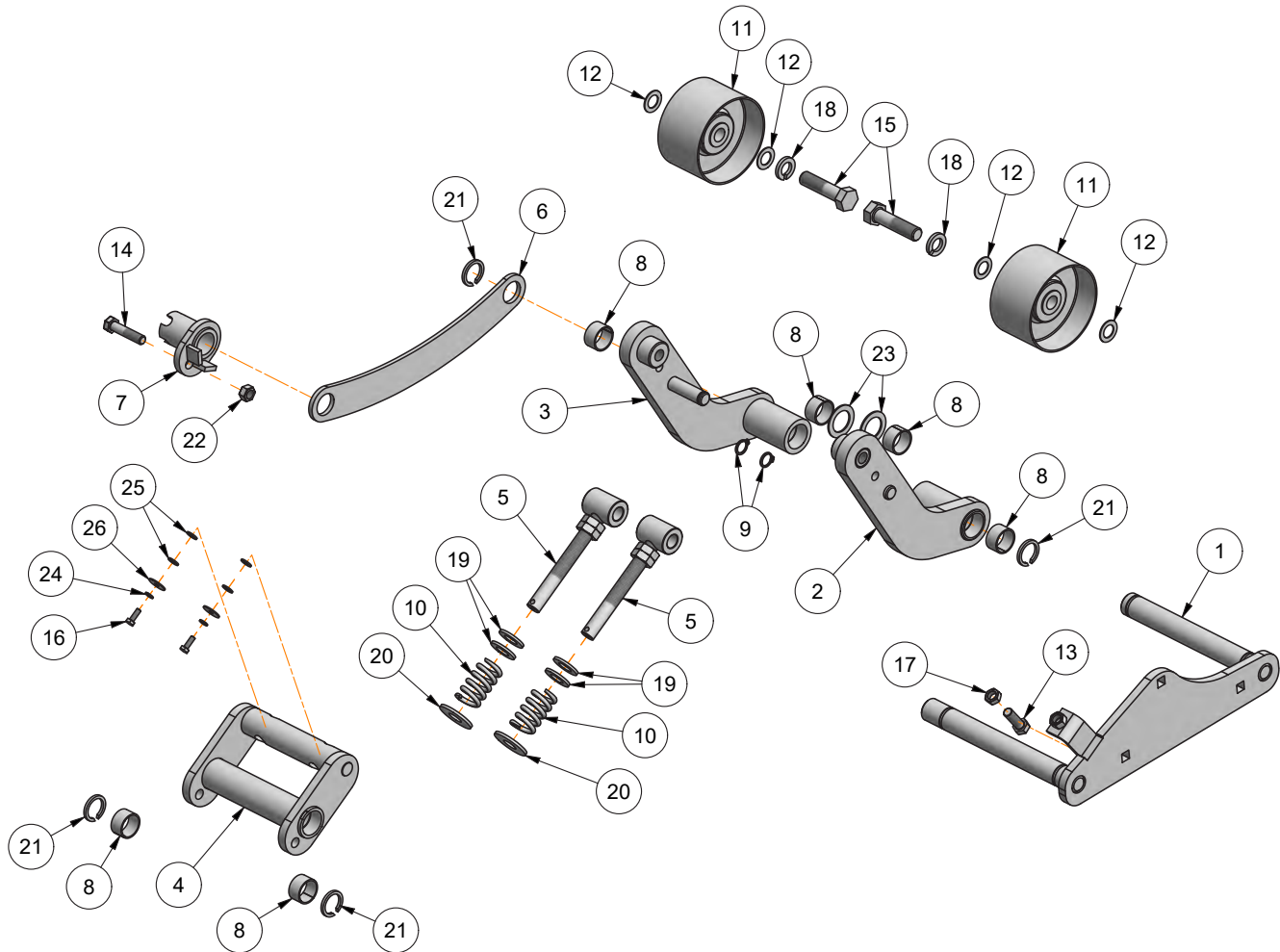
Lower Auger Linkage Components

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

ITEM	PART NO.	DESCRIPTION	QTY	NOTES
1	295783G	Front Cover Junction Box Weldment =Green=	1	
	295783R	Front Cover Junction Box Weldment =Red=		
	295783BM	Front Cover Junction Box Weldment =Black Metallic=		
2	9004590	Pulley, 15" Dia. x 5 13/16"	1	
3	9004591	Pulley, 7 1/2" Dia. x 5 13/16"	1	
4	9004813	Split Bushing Hardware Kit	1	Includes Items: 6, 7 & 29
5	9006669	Capscrew, 3/8"-16UNC x 2" Grade 5	1	
6	9404-027	Lock Washer, 9/16"	3	
7	9399-107	Set Screw, 1/2"-13UNC x 5/8"	1	
8	9005565	Flanged Bearing 2 1/4" ID	2	Includes Set Screw & Zerk
9	93426	Grease Zerk	2	
10	9002562	Keystock 1/2" x 1/2" x 2 1/2"	2	
11	9006849	Grease Zerk Cap	4	
12	281675	Drive Belt Set, 4 Strand (5V750)	1	Included As Matched Pair
13	9005074	Grease Hose, 1/4" OD	2.5	Specify in Feet
14	9003949	Hex Pipe Coupling	2	
15	9008466	Jam Locknut 1/2"-13UNC	3	
16	9007376	Bushing, 4 5/8" OD x 2 1/4" ID x 2 1/16" w/ 1/2" Keyway & Capscrews	1	Includes Items: 5, 17 & 18
17	9399-059	Set Screw, 1/4"-20UNC x 3/8"	1	
18	9404-021	Lockwasher, 3/8"	3	
19	902875	Center Locknut 3/8"-16UNC	1	
20	9390-062	Capscrew, 3/8"-16UNC x 2 3/4" Grade 5	1	
21	95905	Center Locknut 5/8"-11UNC	18	
22	9390-123	Capscrew, 5/8"-16UNC x 3/4"	8	
23	9390-122	Capscrew, 5/8"-11UNC x 1 1/2"	10	
24	9005073	Quickline Fitting	4	
25	9405-076	Flat Washer 3/8" USS	2	
26	9388-103	Carriage Bolt, 1/2"-13UNC x 1 1/4"	2	
27	-	Hose Caddy	1	Refer to "Hose Caddy Components" Section
28	295565B	Idler Assembly (Black)	1	Refer to "Idler Assembly Components" Section
29	9006263	Bolt, 9/16"-12UNC x 3 5/8" Grade 5	3	
30	296738B	Belt Cover Bracket =Black=	2	
31	91256	Flange Screw, 5/16"-18UNC x 3/4" Grade 5	2	
32	97604	Flange Screw, 5/16"-18UNC x 1" Grade 5	2	

Idler Assembly Components

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



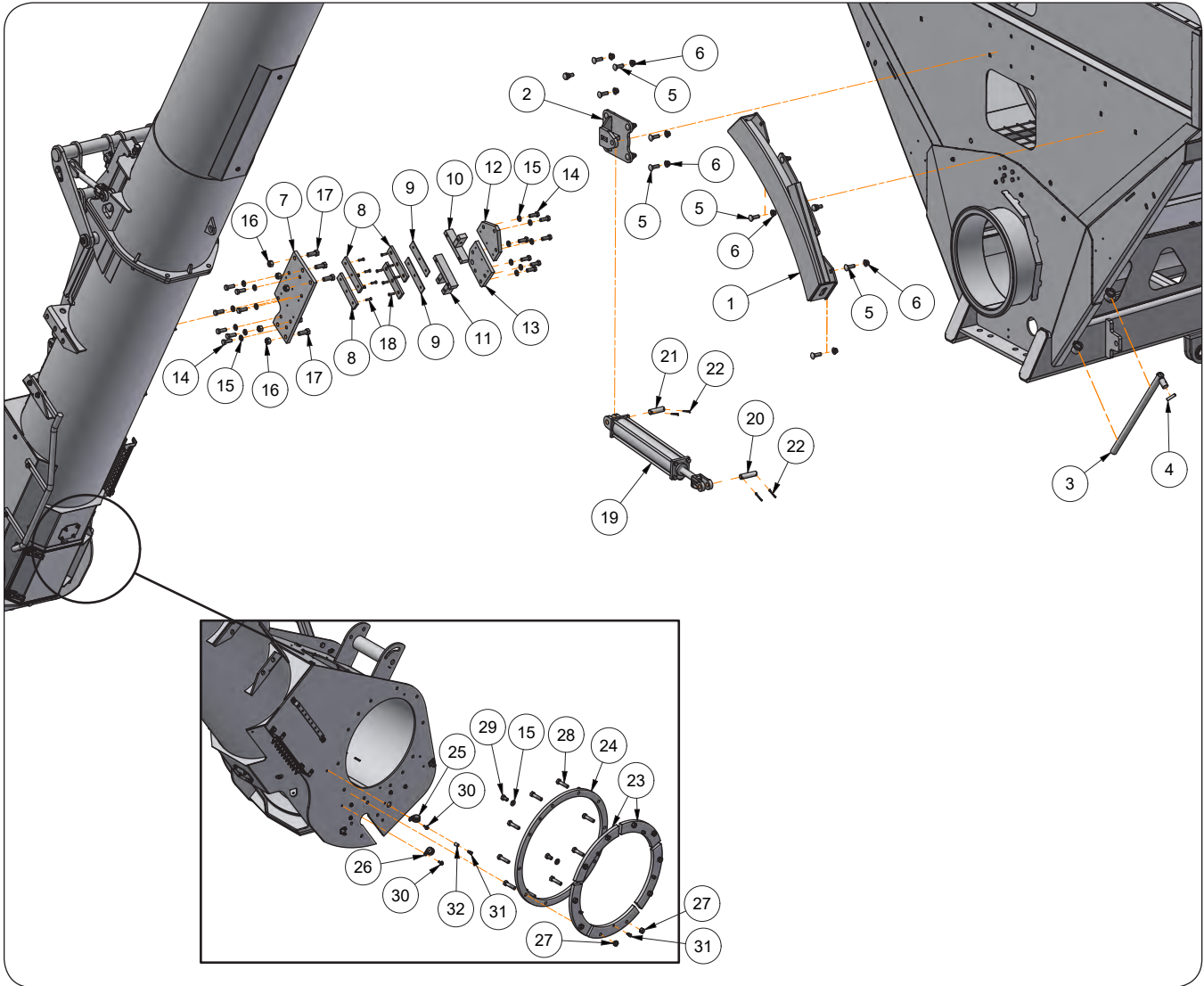
Idler Assembly Components

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

ITEM	PART NO.	DESCRIPTION	QTY	NOTES
	295565B	Idler Assembly (Black)	1	Includes Items 1-26
1	295566B	Idler Mount Weldment =Black=	1	
2	283602B	Idler Arm Weldment =Black=	1	
3	283603B	Idler Arm Weldment =Black=	1	
4	283604B	Tensioner Weldment =Black=	1	
5	283605	Tensioner Rod Weldment	2	
6	283619B	Idler Brace Plate =Black=	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 Pulley	2	
12	9005685	Machine Washer, 3/4"	4	
13	9390-101	Capscrew 1/2"-13UNC x 1 1/2" Grade 5	1	
14	9390-104	Capscrew, 1/2"-13UNC x 2 1/4" Grade 5	1	
15	9390-149	Capscrew, 3/4"-10UNC x 3" Grade 5	2	
16	9390-003	Capscrew, 1/4"-20UNC x 3/4" Grade 5	2	
17	9395-010	Hex Jam Nut, 1/2-13UNC Grade 5	1	
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	

Lower Auger Retaining Components

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



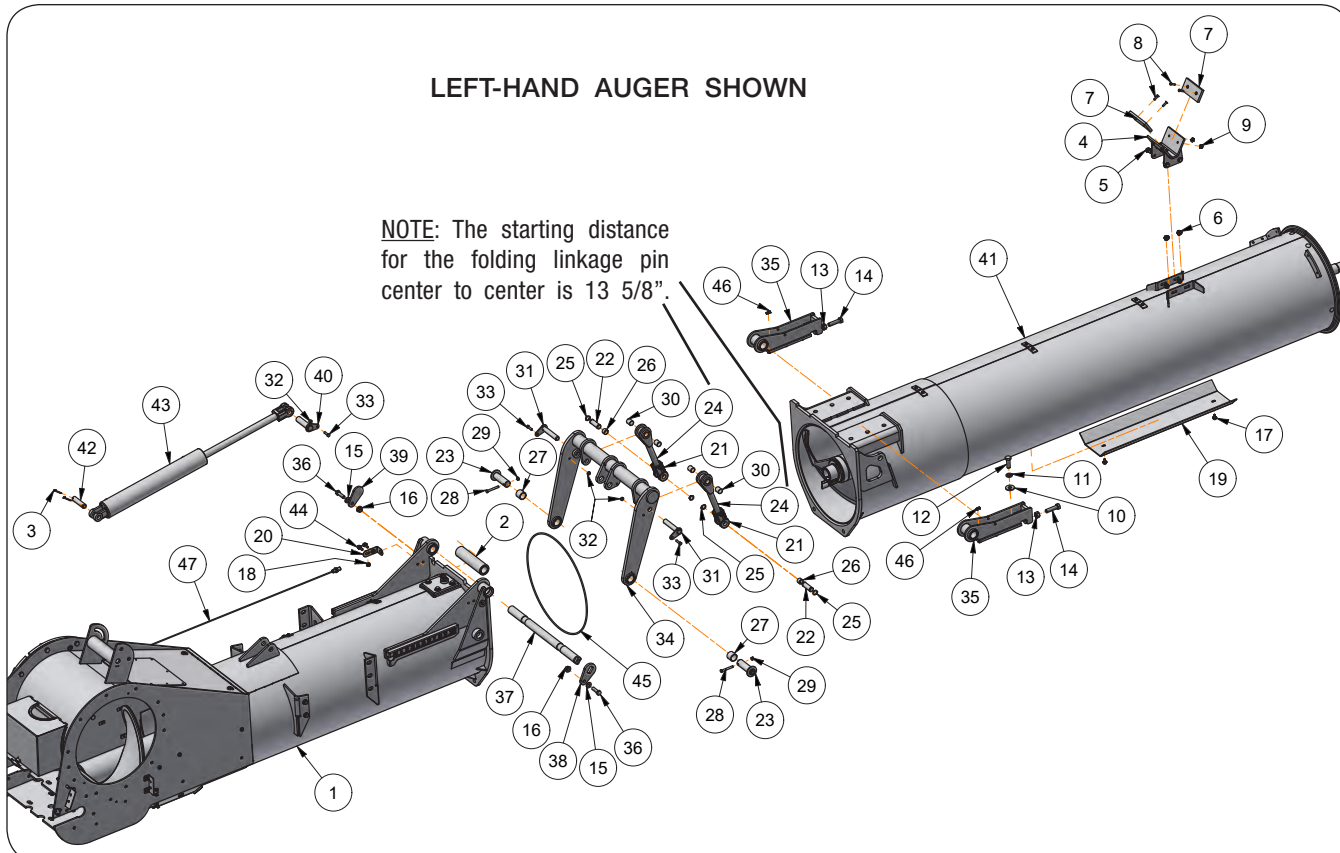
Lower Auger Retaining Components

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

ITEM	PART NO.	DESCRIPTION	QTY	NOTES
1	278019G	Slide Plate Weldment =Green=	1	
	278019R	Slide Plate Weldment =Red=		
	278019BM	Slide Plate Weldment =Black Metallic=		
2	278088G	Cylinder Lug Weldment =Green=	1	
	278088R	Cylinder Lug Weldment =Red=		
	278088BM	Cylinder Lug Weldment =Black Metallic=		
3	284714B	Locking Pipe Assembly =Black=	1	Includes Item 4
4	9392-208	Roll Pin 1/2" Dia. x 2"	1	
5	9388-135	Carriage Bolt, 5/8"-11UNC x 2" Grade 5	12	
6	9003398	Locknut 5/8"-11UNC	12	
7	295605B	Auger Slide Mount =Black=	1	
8	271124	Nylon Fold Slide 2" x 8"	4	
9	295962B	Slide Shim Plate =Black=	2	
10	295642B	Upper Bolt Plate Weldment =Black=	1	
11	295643B	Lower Bolt Plate Weldment =Black=	1	
12	271119B	Fold Plate 6 1/2" x 8" =Black=	1	
13	284518B	Fold Plate 6" x 8" =Black=	1	
14	9390-123	Capscrew, 5/8"-11UNC x 1 3/4" G5	14	
15	9404-030	Lock Washer, 5/8"	16	
16	9802	Top Locknut 3/4"-10UNC	5	
17	9390-145	Capscrew, 3/4"-10UNC x 2" G5	5	
18	903171-662	Flat Head Phillips Screw, 5/16"-18UNC x 1 1/4"	12	
19	9000933	Hydraulic Cylinder, 3 1/2" x 20" - 3000 PSI	1	
	9001081	Seal Kit	-	
20	250104	Cylinder Pin W/Holes, 1" Dia. x 4"	1	
21	804572	Pin, 1" Dia. x 3 1/2"	1	
22	9391-046	Cotter Pin, 3/16" Dia. x 2"	4	
23	295788B	Pivot Retainer Plate, 4 3/8" x 15 9/16"	5	
24	295780B	Junction Box Mount =Black=	1	
25	9008246	Clamp 1 1/4" (Plated Steel)	1	
26	9007556	Cable Clamp 1 1/8"	1	
27	95905	Center Locknut 5/8"-11UNC	10	
28	9390-126	Capscrew, 5/8"-11UNC x 2 1/2" G5	10	
29	9390-120	Capscrew, 5/8"-11UNC x 1" G5	2	
30	91256	Flange Screw, 5/16"-18UNC x 3/4" G5	2	
31	9006785	90° Adapter 1/8" NPT	6	
32	9002538	Pipe Coupling, 1/8" NPT	1	

Auger Fold Linkage Components

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



ITEM	PART NO.	DESCRIPTION	QTY	NOTES
1	296314G	Lower Auger Housing Replacement Kit =Green=	1	Kit Also Includes Field Rest Weldment, Pivot Pin, Roll Pin, & Split Output Bushing. See "Lower Auger Cleanout Door, Covers, & Rest Comp." For Parts List
	296314R	Lower Auger Housing Replacement Kit =Red=		
	296314BM	Lower Auger Housing Replacement Kit =Black Metallic=		
2	273374G	Spacer/Bushing 2.5" OD x 1.75" ID x 9.9375" =Green=	1	
	273374R	Spacer/Bushing 2.5" OD x 1.75" ID x 9.9375" =Red=		
	273374BM	Spacer/Bushing 2.5" OD x 1.75" ID x 9.9375" =Black Metallic=		
3	9391-046	Cotter Pin, 3/16" Dia. x 2"	2	
4	272553G	Auger Rest Weldment =Green=	1	
	272553R	Auger Rest Weldment =Red=		
	272553BM	Auger Rest Weldment =Black Metallic=		
5	91266	Flange Screw, 1/2"-13UNC x 1 1/4" Grade 5	4	
6	91267	Flange Nut, 1/2"-13UNC	4	
7	272574	Pad, 1/2" x 3" x 6 1/2"	2	
8	903171-662	Flat Head Machine Screw, 5/16"-18UNC x 1 1/4"	4	
9	91257	Flange Nut, 5/16"-18UNC Grade 5	4	
10	9234PL	Flat Washer, 13/16" (Hardened)	6	
11	9404-034	Lock Washer, 3/4"	6	
12	91299-146	Capscrew, 3/4"-10UNC x 2 1/4" Grade 8	6	
13	9394-016	Hex Nut 3/4"-10UNC	2	
14	94733	Capscrew 3/4"-10UNC x 3" Full Threaded	2	
15	9405-098	Flat Washer 5/8" SAE	2	

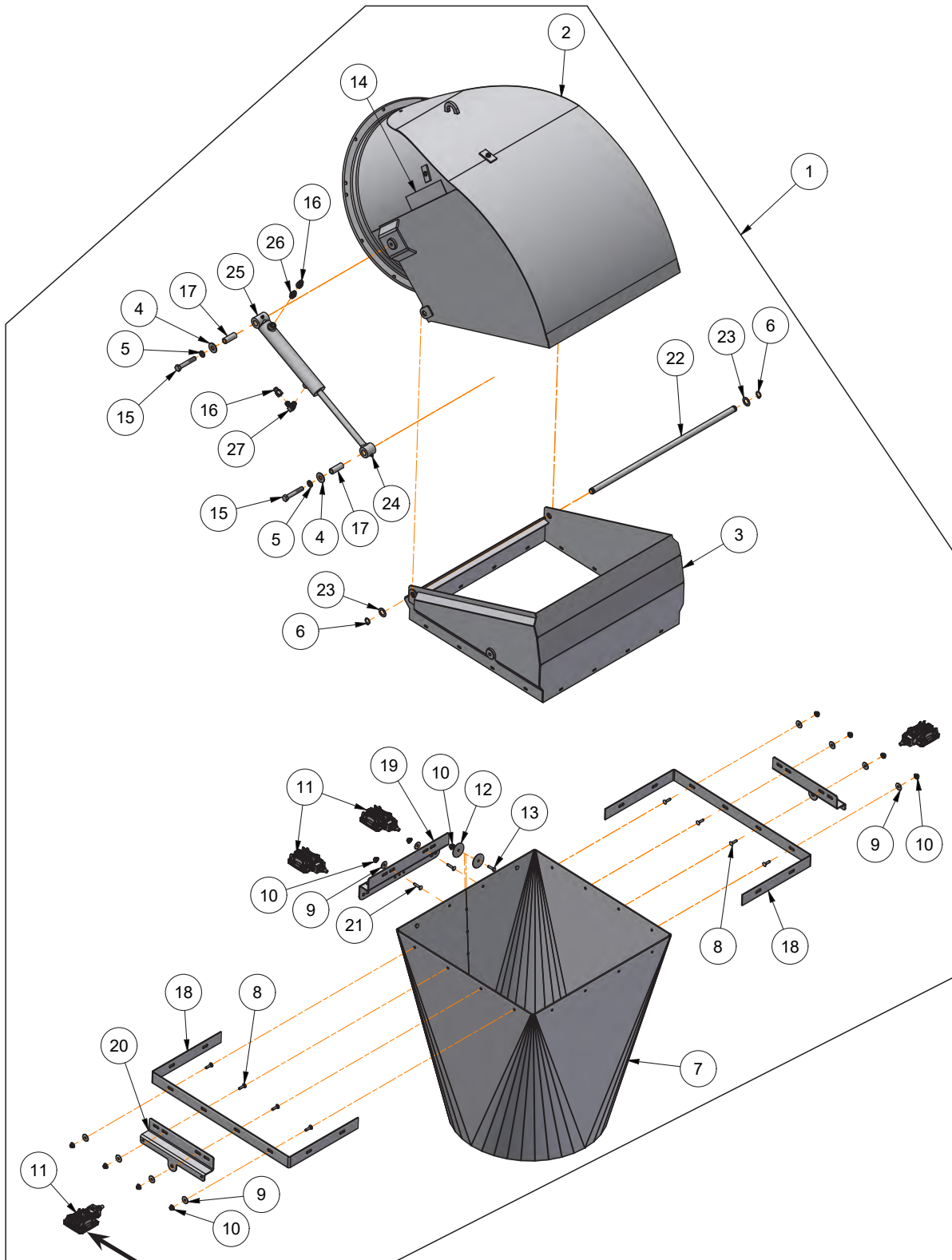
Auger Fold Linkage Components

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

ITEM	PART NO.	DESCRIPTION	QTY	NOTES
16	9003398	Lock Nut/Top 5/8"-11UNC	2	
17	95585	Capscrew 3/8"-16UNC x 3/4" (Grade 5)	2	
18	91263	Flange Nut, 3/8"-16UNC	2	
19	284141G	Strike Plate =Green=	1	
	284141R	Strike Plate =Red=		
	284141BM	Strike Plate =Black Metallic=		
20	272645B	Switch Plate Bracket =Black=	1	
21	9006491	Clevis	2	
22	272587	Pin, 1" Dia. x 3 1/8"	2	
23	295549	Auger Linkage Pin Weldment, 2 1/2" Washer OD x 5 13/32"	2	
24	284687	Fold Linkage Weldment	2	
25	91192	Retaining Ring, 1" Dia.	4	
26	9003636	Self Lube Bushing 1 1/8" OD x 1" ID x 3/4"	2	
27	9004741	Self Lubricating Bushing, 1 3/4" OD x 1 1/2" ID x 1 1/2"	2	
28	9390-063	Capscrew, 3/8"-16UNC x 3" G5	2	
29	902875	Center Locknut 3/8"-16UNC	2	
30	9003440	Self Lube Bushing 1.1275" OD x 1" ID x 1.25"	4	
31	295559	Linkage Pin Weldment, 1" Dia. x 6"	2	
32	9003396	Lock Nut/Top 3/8"-16UNC	3	
33	9390-057	Capscrew, 3/8"-16UNC x 1 1/2" Grade 5	3	
34	295744G	Auger Fold Linkage Weldment =Green=	1	
	295744R	Auger Fold Linkage Weldment =Red=		
	295744BM	Auger Fold Linkage Weldment =Black Metallic=		
35	289857G	Auger Hinge Weldment =Green=	2	
	289857R	Auger Hinge Weldment =Red=		
	289857BM	Auger Hinge Weldment =Black Metallic=		
36	9390-125	Capscrew, 5/8"-11UNC x 2 1/4" G5	2	
37	299229B	Auger Pivot Shaft Replacement Kit (Black)	1	Kit Includes Auger Pivot Pin 295956, Item 38, And Instruction Sheet
38	293663B	Pin Retainer Plate, 3" x 5 11/32" =Black=	1	
39	295957B	Pin Retainer Plate, 2 5/8" x 5 5/32" =Black=	1	
40	295793	Cylinder Pin Weldment, 1 1/4" Dia. x 5 1/8"	1	
41	298170G	Upper Auger Housing Replacement Kit =Green=	1	
	298170R	Upper Auger Housing Replacement Kit =Red=		
	298170BM	Upper Auger Housing Replacement Kit =Black Metallic=		
42	266285	Cylinder Pin 1" Dia. x 4 1/2"	1	
43	9009659	Hydraulic Cylinder 3 1/2" x 20" (3000 PSI)	1	
	9006942	Seal Kit	-	
44	9003259	Flange Screw, 3/8"-16UNC x 1 1/4" Grade 5	2	
45	296290	Lower Auger Seal Kit	1	
46	9006785	90° Adapter 1/8" NPT	2	
47	9007223	Proximity Sensor with Connector	1	

Spout Assembly

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



NOTE: For Right-Hand auger, LED work light is on Left-Hand side of the spout.

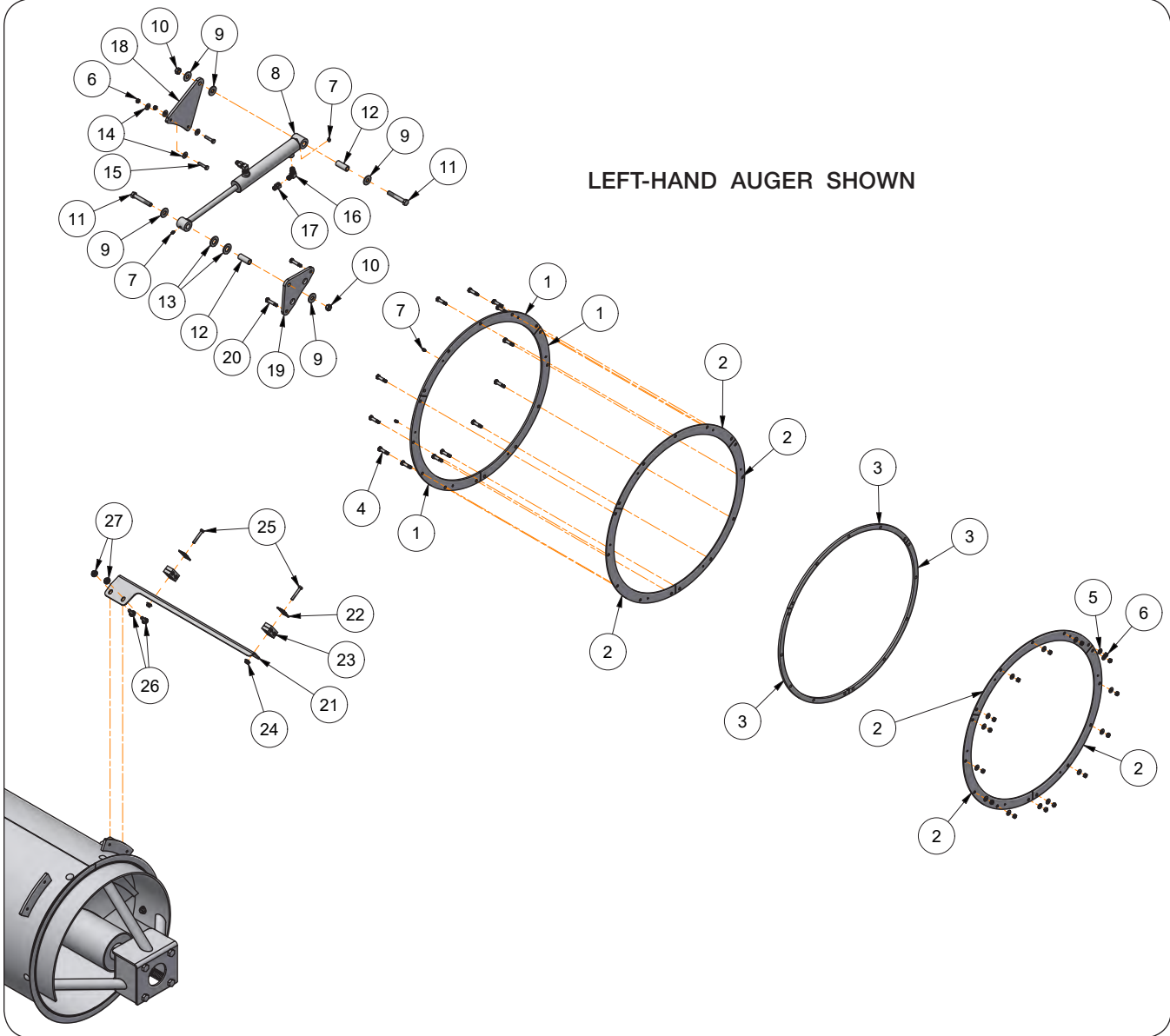
Spout Assembly

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

ITEM	PART NO.	DESCRIPTION	QTY.	NOTES
1	276999B	Spout Assembly (Black)	1	
2	276515B	Upper Spout Weldment =Black=	1	
3	276526B	Lower Spout Weldment =Black=	1	
4	9405-088	Flat Washer 1/2" USS	2	
5	9404-025	Lock Washer 1/2"	2	
6	9003810	Snap Ring 3/4"	2	
7	9008318	Rubber Chute	1	
8	9388-003	Carriage Bolt 1/4"-20UNC x 1" G5	14	
9	9405-066	Flat Washer 1/4"	16	
10	97189	Flange Hex Nut 1/4"-20UNC	24	
11	9008957	LED Work Light	3	
12	94763	Fender Washer, 2" OD x 5/16" ID x .08"	16	
13	9390-005	Capscrew 1/4"-20UNC x 1" G5	8	
14	9003127	Reflector 2" x 9" =AMBER=	2	
15	9390-107	Capscrew 1/2"-13UNC x 3" G5	2	
16	95193	Adapter 9/16"-18 JIC Female x 9/16"-18 JIC Male	2	0.030" Red Restrictor
17	285290	Sleeve Bushing .75" OD x .532" ID x 1.938"	2	
18	276531B	Chute Strap =Black=	2	
19	272646B	Rear Light Bracket =Black=	1	
20	272841B	Side Light Bracket =Black=	1	
21	9388-004	Carriage Bolt 1/4"-20UNC x 1 1/4" G5	2	
22	276530	Pivot Shaft 3/4" Dia. x 27"	1	
23	9005685	Washer 3/4" Dia.	2	
24	91160	Zerk 1/4-28 STT	4	
25	9005135	Cylinder 1 1/2" x 8"	1	
26	9001495	Adapter 9/16"-18 JIC Male x 9/16"-18 O-Ring	1	
27	97445	Elbow, 90° 9/16"-18 JIC Male x 9/16"-18 O-Ring ADJ Male	1	

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.

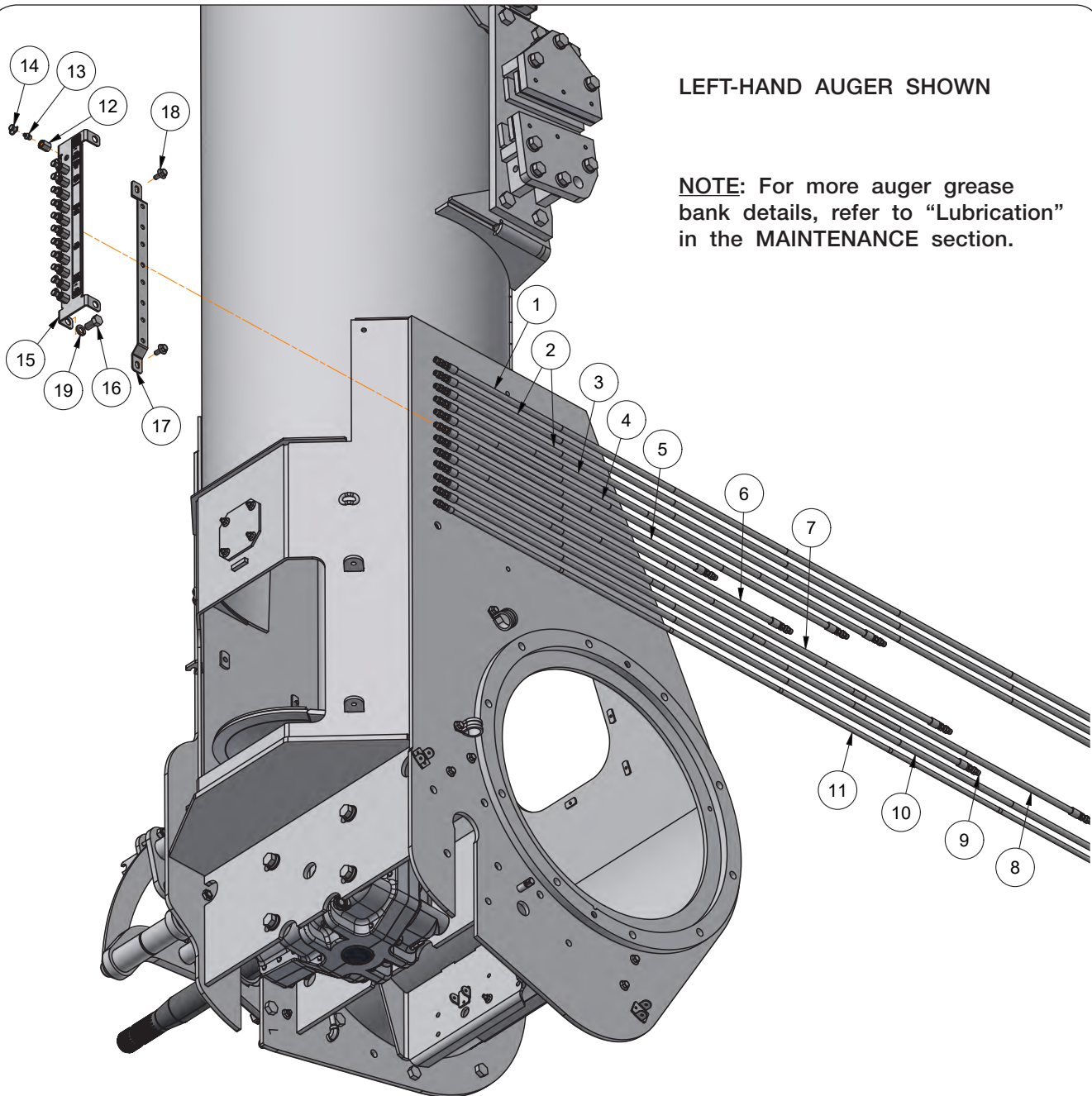
ITEM	PART NO.	DESCRIPTION	QTY.	NOTES
1	276513B	Spout Pivot Plate =Black=	3	
2	276512	Pivot Pad	6	
3	276550B	Spacer Pivot Plate =Black=	3	
4	9007843	Shoulder Bolt 3/8" Dia. Socket Head, 5/16"-18UNC x 1"	13	
5	9405-064	Flat Washer 1/4" USS	15	
6	9807	Lock Nut/Top 5/16"-18UNC	17	
7	91160	Zerk 1/4-28 STT	8	
8	9005135	Cylinder 1 1/2" x 8" (3000 PSI)	1	
	9005419	Seal Kit	-	
9	9405-088	Flat Washer 1/2" USS	5	
10	94981	Locknut 1/2"-13UNC	2	
11	9390-108	Capscrew 1/2"-13UNC x 3 1/4" G5	2	
12	285290	Sleeve Bushing .75" OD x .532" ID x 1.938"	2	
13	9405-104	Flat Washer 3/4" SAE	2	
14	9405-070	Flat Washer 5/16" USS	4	
15	9390-032	Capscrew 5/16"-18UNC x 1 1/2" G5	2	
16	97445	90° Elbow 9/16"-18 JICM x 9/16"-18 O-Ring Male	2	
17	9003303	Adapter 9/16"-18 JICF x 9/16"-18 JICM	2	0.045" Blue Restrictor
18	297432B	Lug Plate =Black=	1	
19	297430B	Spout Lug Plate =Black=	1	
20	9007837	Shoulder Bolt 3/8" Dia. Socket Head, 5/16"-18UNC x 1 1/4"	2	
21	297375B	Hose Bracket =Black=	1	
22	9003814	Clamp Top Plate	4	
23	9003816	Double Hose Clamp (Pair)	4	
24	91257	Hex Nut/Large Flange 5/16"-18UNC	4	
25	9390-034	Capscrew 5/16"-18UNC x 2" G5	2	
26	91262	Flange Screw 3/8"-16UNC x 1"	2	
27	91263	Flange Nut 3/8"-16UNC	8	

Auger Grease Bank Components

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

LEFT-HAND AUGER SHOWN

NOTE: For more auger grease bank details, refer to “Lubrication” in the MAINTENANCE section.



Auger Grease Bank Components

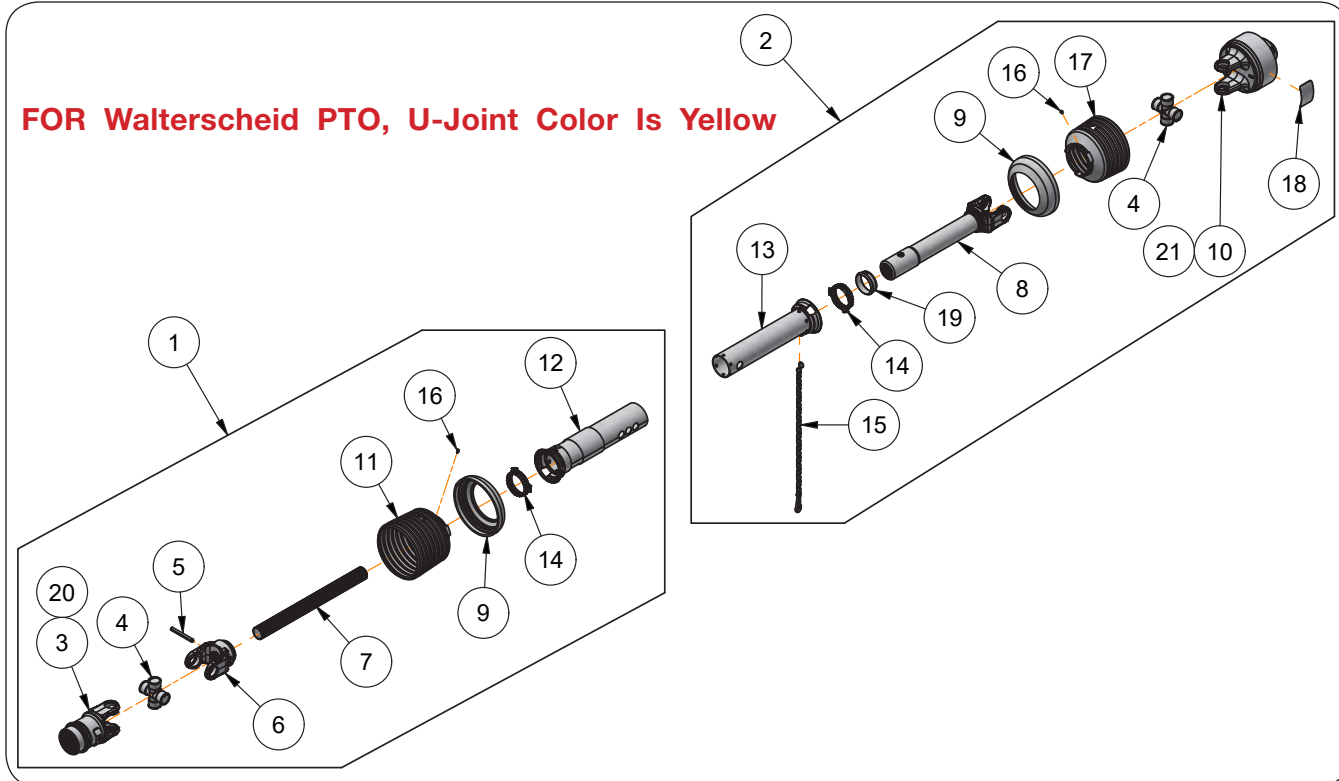
Please visit www.unverferth.com/parts/ for the most current parts listing.

ITEM	PART NO.	DESCRIPTION	QTY	NOTES
1	9009493	Grease Hose 3/16" x 94" (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	Drag Auger Center Bearings
10	9008184	Grease Hose 3/16" x 166" (1/8" NPT)	1	
11	9009878	Grease Hose 3/16" x 366" (1/8" NPT)	1	
12	9003949	Coupler 1/8" NPT	12	
13	93426	Grease Zerk	12	
14	9006849	Grease Zerk Cap	12	
15	295596B	Grease Bank Plate =Black=	1	
16	9390-099	Capscrew, 1/2"-13UNC x 1" Grade 5	2	
17	295645B	Hose Bracket Plate =Black=	1	
18	91256	Flange Screw 5/16"-18UNC x 3/4" Grade 5	2	
19	9404-025	Lock Washer, 1/2" Dia.	2	

PTO Assembly Cut Out Clutch - Walterscheid

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

FOR Walterscheid PTO, U-Joint Color Is Yellow

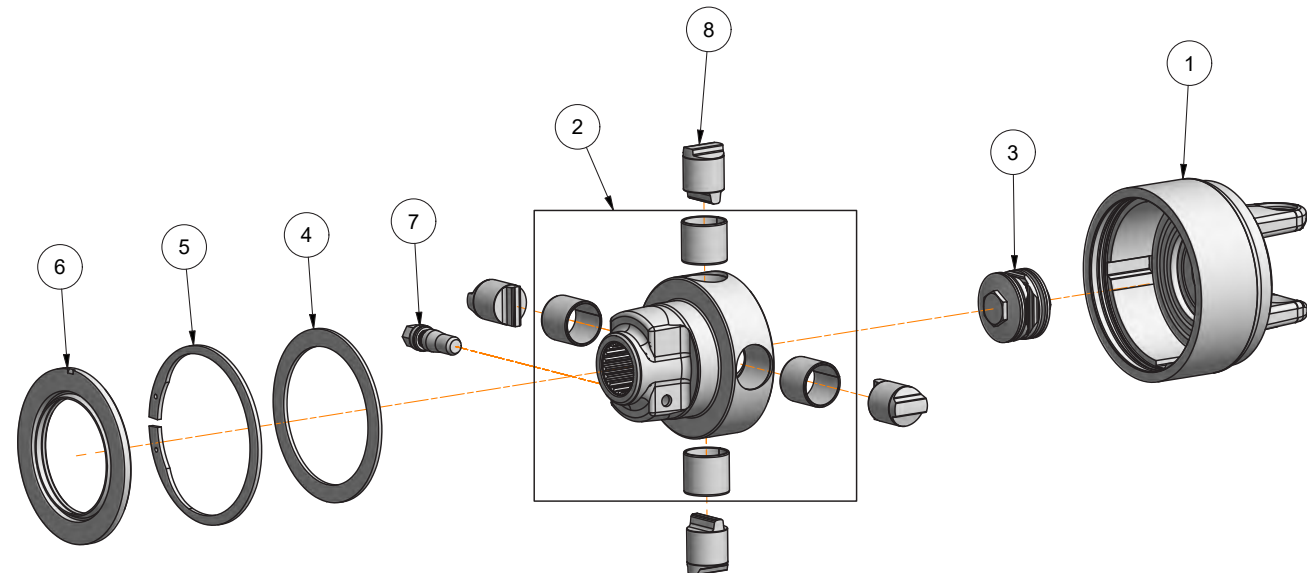


ITEM	PART NO.	DESCRIPTION	QTY	NOTES
	9010203	PTO Assembly Complete, Front & Rear Half Assembly 1 3/4"-20 Spline (3500 N*m Setting)	-	Includes Items 1-21
1	9010056	PTO Assembly Front Half W/Over-Running Clutch	1	Includes Items 3-7, 9, 11, 12, 16, 20
2	9010204	PTO Assembly Rear Half W/Cut Out Clutch (3500 N*m Setting)	1	Includes Items 4, 8-10, 13-19, 21
3	9005234	Over-Running PTO Clutch Assembly	1	
4	92529	Cross & Bearing Kit	2	
5	9002609	Spring Pin 10x90	1	
6	9008478	Inboard Yoke S4	1	
7	9008479	Inner Profile	1	
8	9008482	Inboard Yoke, Tube, & Sleeve	1	
9	9002513	Reinforcing Collar	2	
10	9010199	Cut Out Clutch (3500 N*m Setting)	1	1 3/4"-20 Spline 1000RPM
11	9008481	Shield Cone 8 Rib	1	
12	9008480	Outer Shield Tube Oval	1	
13	9008483	Inner Shield Tube Oval	1	
14	92373	Bearing Ring	2	
15	92374	Safety Chain	1	
16	92372	Screw	2	
17	93866	Shield Cone 6 Rib	1	
18	9005233	Decal K64	1	"Tighten to 75 Ft.-Lbs."
19	9008484	Support Bearing, 2 15/32" I.D.	1	
20	93856	Quick-Disconnect Kit	1	1 3/4"-20 Spline w/Metal Collar
21	9005253	Cut Out Clutch Clamp Cone Lock Assembly	1	

Cut Out Clutch Components - Walterscheid

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

FOR Walterscheid PTO, U-Joint Color Is Yellow



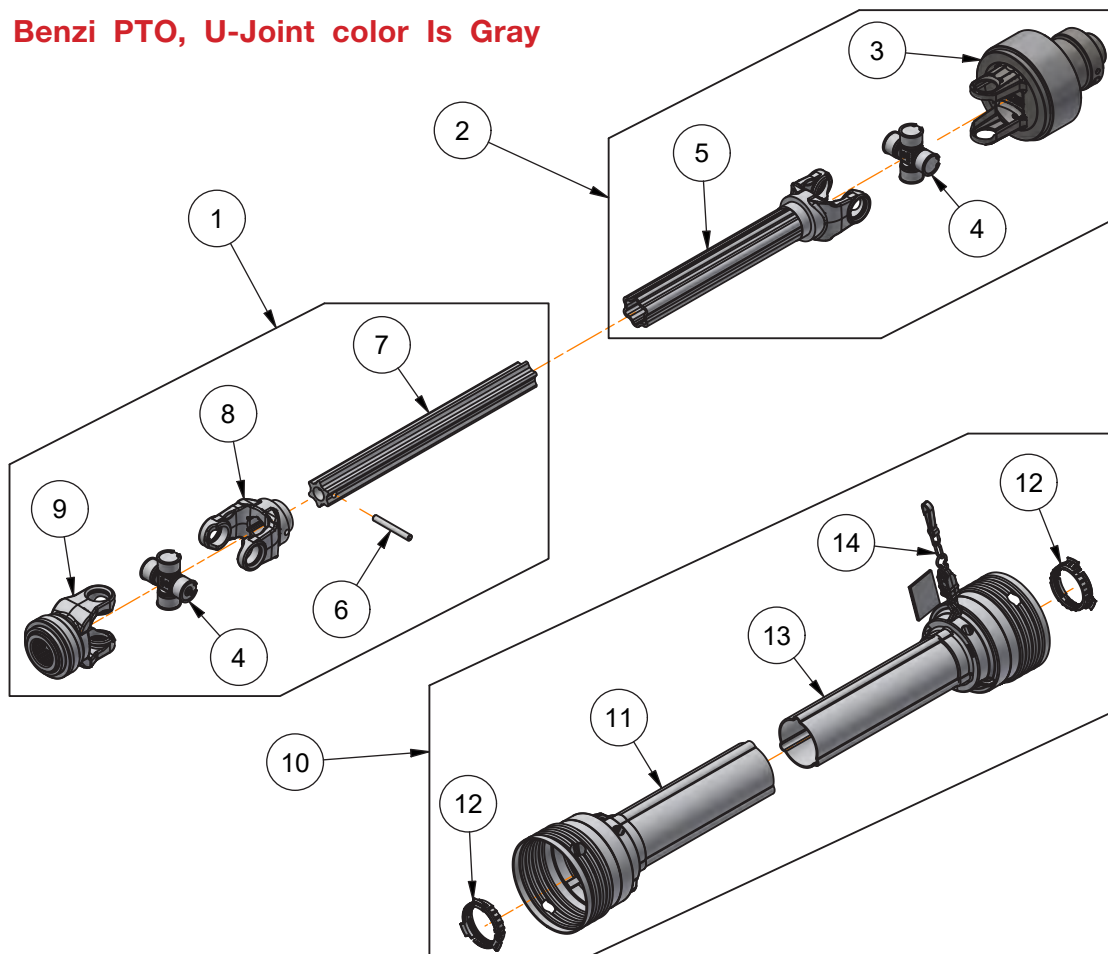
NOTE: Cut Out Clutch (9010199) must be used with the Complete PTO Assembly (9010203).

ITEM	PART NO.	DESCRIPTION	QTY	NOTES
	9010199	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	9010201	Spring Pack	1	
4	9005250	Washer	1	
5	9005251	Retaining Ring	1	
6	9005252	Sealing Ring	1	
7	9005253	Clutch Clamp Cone Lock Assembly	1	
8	9005254	Clutch Cam	4	

PTO Assembly Cut Out Clutch - Benzi

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

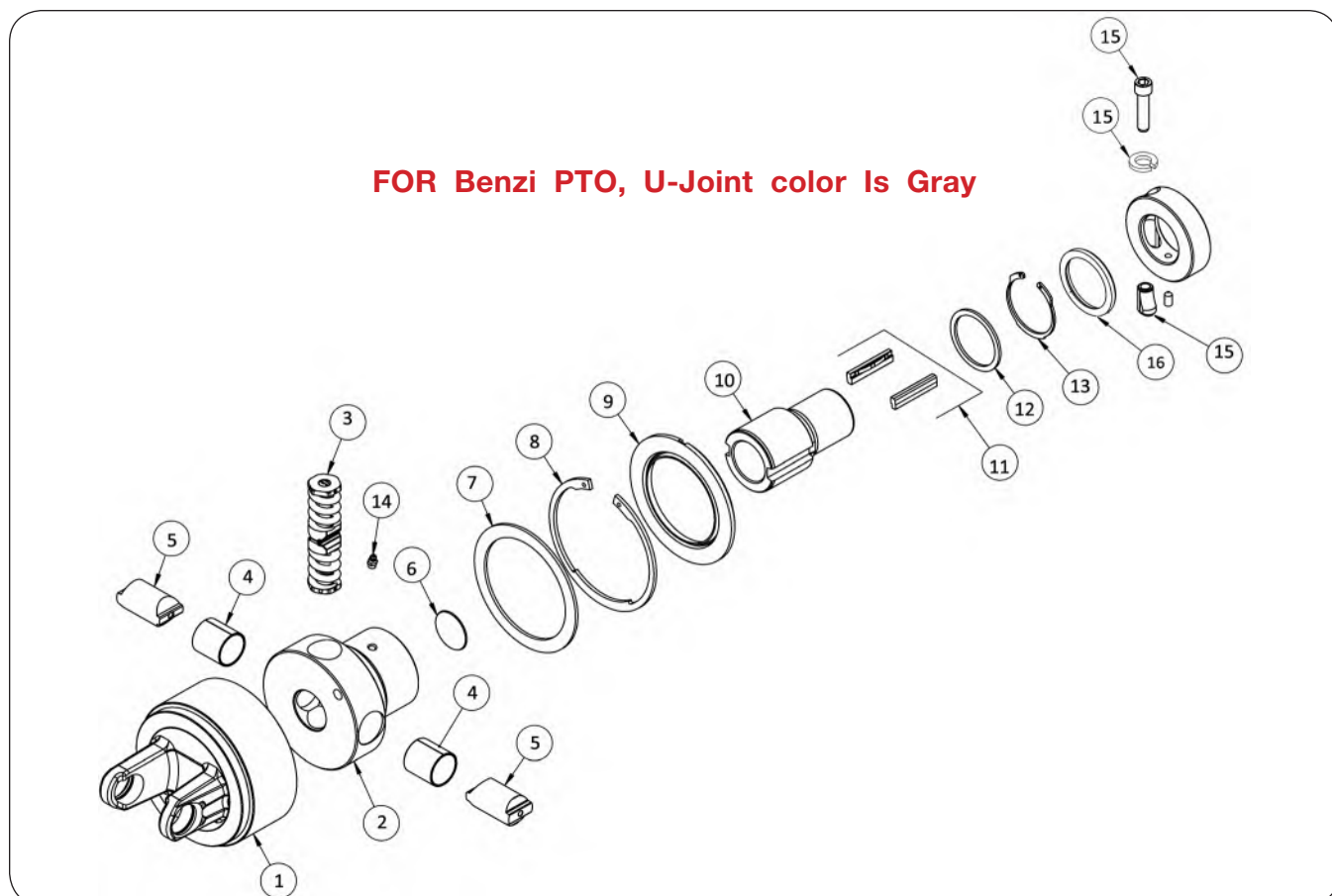
FOR Benzi PTO, U-Joint color Is Gray



ITEM	PART NO.	DESCRIPTION	QTY	NOTES
	9010206	PTO Assembly Complete Front & Rear Half Assembly 1 3/4"-20 Spline (3500 N*m Setting)	1	Includes Items 1-10
1	9010283	PTO Assembly Front Half W/Quick Lock Collar 1 3/4"-20 Spline	1	Includes Items 4 & 6-10
2	9010284	PTO Assembly Rear Half W/CAM Cut Out Clutch 1 3/4"-20 Spline	1	Includes Items 3-5 & 10
3	9010279	CAM Cut Out Clutch (3500 N*m Setting)	1	1 3/4"-20 Spline 1000RPM
4	9008792	Cross Kit Assembly	2	
5	9010455	Outer Yoke w/ Welded Tube	1	
6	9008794	Tension Pin	1	
7	9010282	Inner Profile Tube w/ Cap	1	
8	9008797	Inner Yoke W/ Outer Star Profile Collar	1	
9	9008798	Yoke Assembly 1 3/4"-20 Spline	1	
10	9010291	Safety Guard Assembly	1	Includes Items 11 - 14
11	N/A	Outer Guard Half	1	Not For Individual Sale. See Item 10
12	9010456	Guarding Cone Retainer Clip	2	
13	N/A	Inner Guard Half	1	Not For Individual Sale. See Item 10
14	9008804	Chain	1	

Cut Out Clutch Components - Benzi

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



NOTE: Cut Out Clutch (9010279) must be used with the Complete PTO Assembly (9010206).

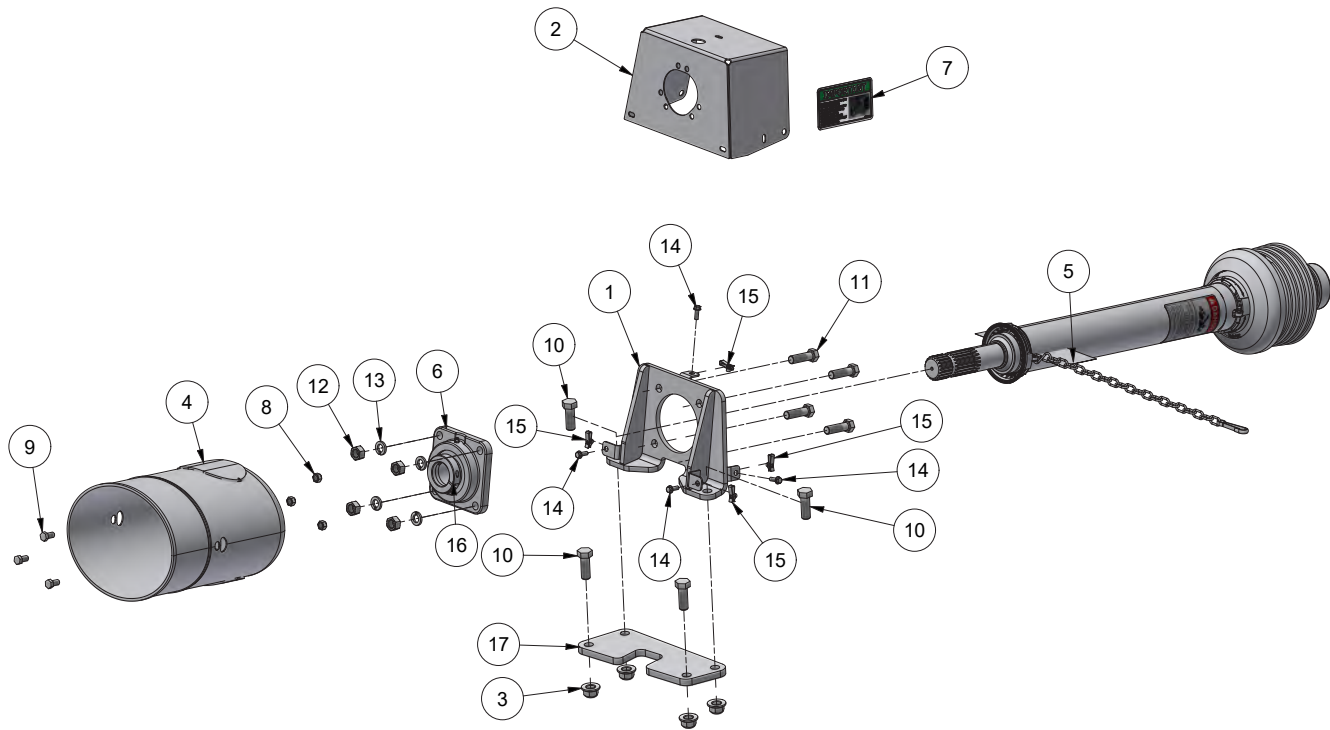
ITEM	PART NO.	DESCRIPTION	QTY	NOTES
	9010279	CAM Cut Out Clutch (3500 N*m Setting)	-	Includes Items 1-16
1	9008775	Housing Weld	1	
2	9008776	Cam Clutch Hub 1 3/4"-20 Spline	1	Includes Item 14
3	9010424	Automatic Cam Clutch Spring Assembly	1	
4	9008778	Bushing	2	
5	9008779	Pusher Rod	2	
6	9008780	Closer Ring	1	
7	9008781	Washer 6 5/8" Dia.	1	
8	9008782	Circlip 6 5/8" Dia.	1	
9	9008783	Seal Ring	1	
10	9008784	Overrunning Clutch Hub	1	Includes Collar With Set Screw
11	9008785	Overrunning Clutch Spring Pack	1	
12	9008786	Washer	1	
13	9008787	Circlip	1	
14	9008788	Grease Zerk (M8)	1	
15	9008789	Conic Bolt Set	1	Includes Socket Head Bolt, Lock Washer, and Threaded Insert
16	9009789	Clutch Hub Ring	1	

PTO & Bracket Assembly

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

FOR Walterscheid PTO Drive Shaft, U-Joint color is Black

FOR Benzi PTO Drive Shaft, U-Joint color is Gray



PTO & Bracket Assembly

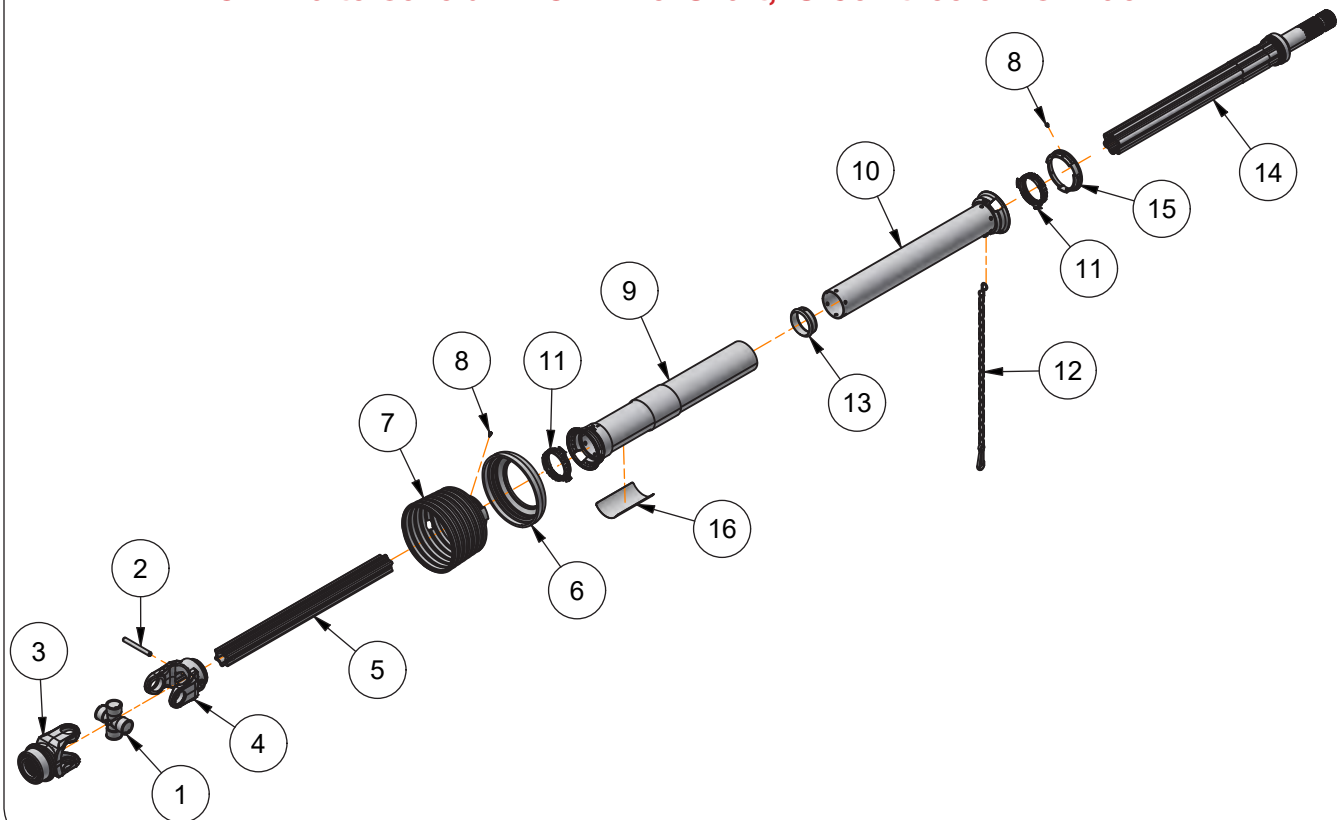
Please visit www.unverferth.com/parts/ for the most current parts listing.

ITEM	PART NO.	DESCRIPTION	QTY	NOTES
	276629B	PTO & Bracket Assembly (Black)	-	Includes Items 1-16
1	276401B	Bearing Bracket Weldment =Black=	1	
2	276409B	Bearing Cover Plate =Black=	1	
3	9003398	Lock Nut/Top 5/8"-11UNC	4	Only 2 Locknuts Included With PTO & Bracket Assembly
4	9004918	PTO Bell Cover	1	
5	9008362	Drive Shaft 1 3/4"-20 Splined Shaft, 1 3/4"-20 Female Splined U-Joint (Walterscheid)	1	Drive Shaft U-Joint Color is Black (Walterscheid)
	9010207	Drive Shaft 1 3/4"-20 Splined Shaft, 1 3/4"-20 Female Splined U-Joint (Benzi)	1	Drive Shaft U-Joint Color is Gray (Benzi)
6	9008455	Bearing 5 3/8" Square x 2 1/16" - 4 Bolt	1	
7	9008470	Decal, IMPORTANT (Hitching Cart to Tractor)	1	
8	9928	Lock Nut, 3/8"-16UNC	3	
9	9390-053	Capscrew, 3/8"-16UNC x 3/4" G5	3	
10	9390-123	Capscrew, 5/8"-11UNC x 1 3/4" G5	4	Only 2 Capscrews Included With PTO & Bracket Assembly
11	9390-494	Capscrew, 9/16-12UNC x 2" G5	4	
12	9394-012	Hex Nut, 9/16"-12UNC	4	
13	9404-027	Lock Washer, 9/16"	4	
14	97420	Flange Screw, 1/4"-20UNC x 3/4" G5	5	
15	TA500592	Cage Nut-Clip On	5	
16	9008677	Lock Collar 1.75" Bore	1	
17	277012B	Adapter Plate =Black=	1	Not Included With PTO & Bracket Assembly

PTO Drive Shaft Assembly - Walterscheid

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

FOR Walterscheid PTO Drive Shaft, U-Joint color is Black

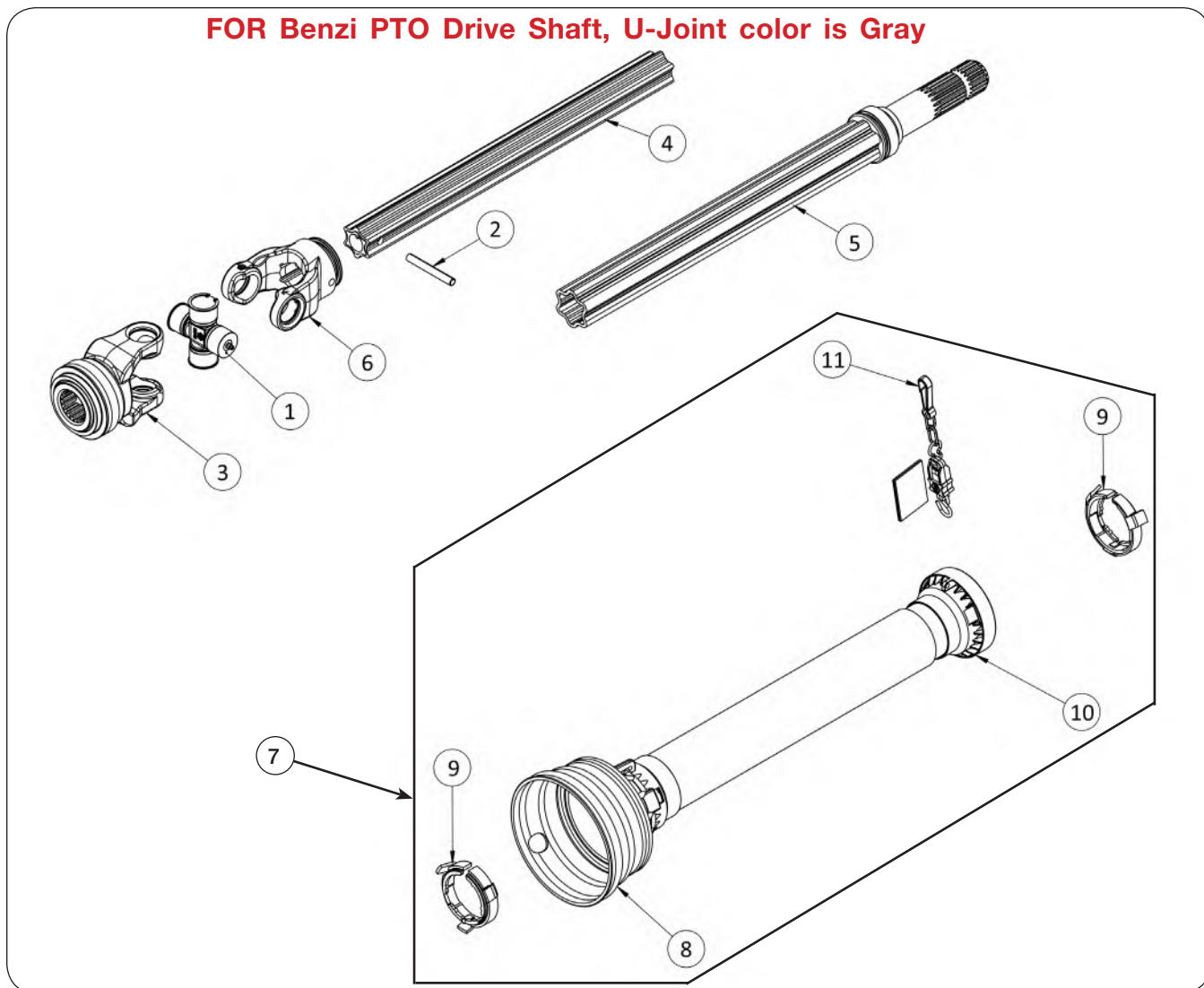


ITEM	PART NO.	DESCRIPTION	QTY	NOTES
	9008362	Drive Shaft 1 3/4"-20 Splined Shaft, 1 3/4"-20 Female Splined U-Joint	-	Includes Items 1-16
1	92529	Cross & Bearing Kit	1	
2	9002609	Spring Pin 10x90	1	
3	9002608	Yoke Assembly 1 3/4"-20 Spline	1	
4	9002610	Inboard Yoke S4 W/ Inner Star Profile Collar	1	
5	9008471	Inner Star Profile Shaft	1	
6	9002513	Reinforcing Collar	1	
7	9002615	Shield Cone 7 Rib	1	Includes Item 8 (QTY 1)
8	92372	Screw	2	
9	9008473	Outer Shield Tube Oval, 21 23/32"	1	
10	9008475	Inner Shield Tube Oval, 21 1/2"	1	
11	92373	Bearing Ring	2	
12	92374	Safety Chain	1	
13	9008476	Support Bearing, 2 7/16" I.D.	1	
14	9008472	Outer Profile Welded Tube & Stub Shaft, 1 3/4"-20 Spline	1	
15	9008477	Guard Ring	1	
16	92377	Decal, DANGER (Rotating Driveline)	1	

PTO Drive Shaft Assembly - Benzi

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

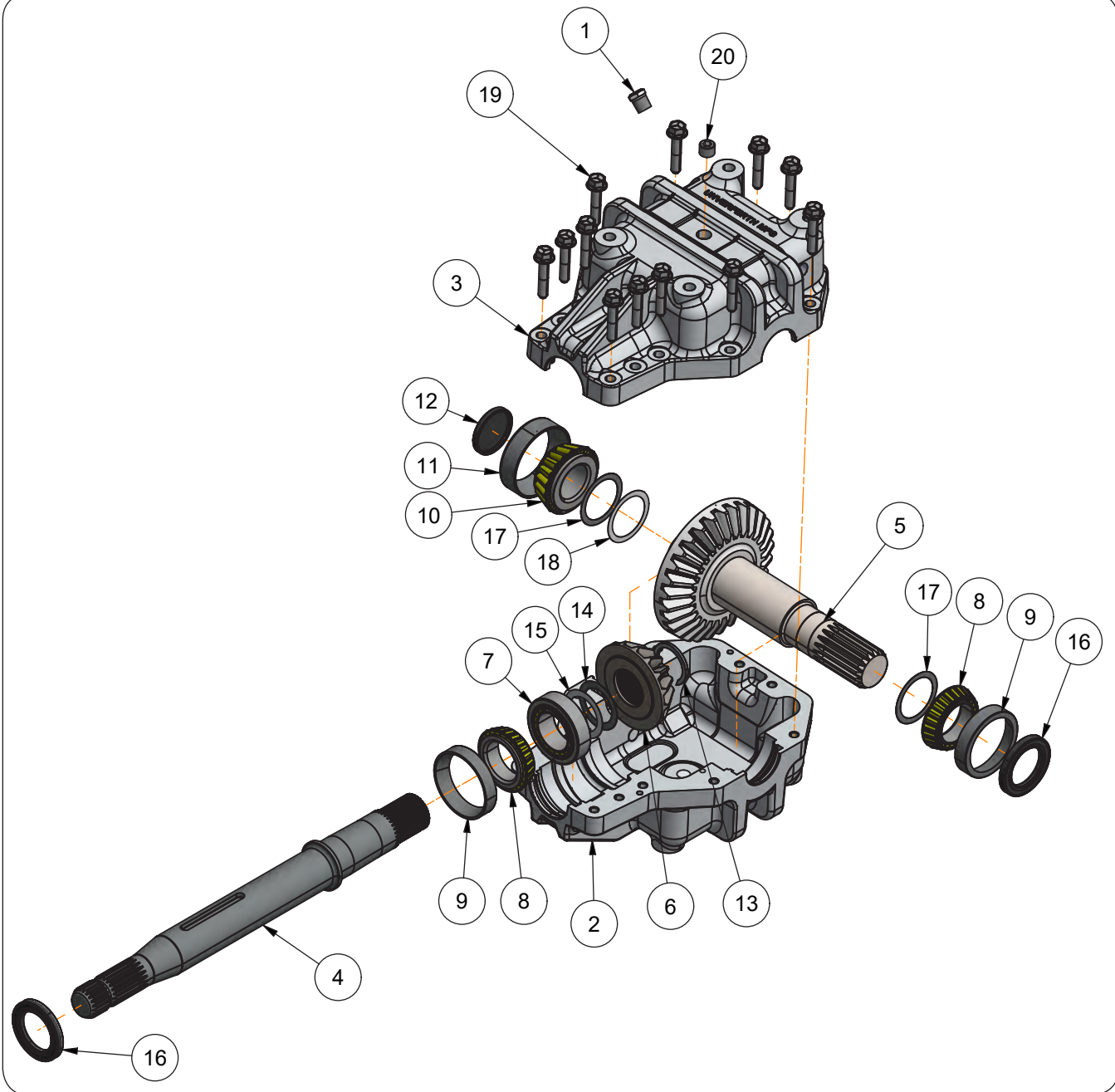
FOR Benzi PTO Drive Shaft, U-Joint color is Gray



ITEM	PART NO.	DESCRIPTION	QTY	NOTES
	9010207	Drive Shaft 1 3/4"-20 Splined Shaft, 1 3/4"-20 Female Splined U-Joint	1	Includes Items 1-7
1	9008792	Cross Kit Assembly	1	
2	9008794	Tension Pin	1	
3	9008798	Yoke Assembly 1 3/4"-20 Spline	1	
4	9010267	Inner Profile Tube W/ Cap, 21.85"	1	
5	9010268	Outer Profile Welded Tube W/ Pivot, 1 3/4"-20 Spline	1	
6	9010271	Inner Yoke W/ Inner Star Profile Collar	1	
7	9010270	Safety Guard Assembly	1	Includes Items 8 - 11
8	N/A	Outer Guard Half	1	Not For Individual Sale. See Item 7
9	9008801	Guarding Cone Retainer Clip Package	1	Package of 2
10	N/A	Inner Guard Half	1	Not For Individual Sale. See Item 7
11	9008804	Chain	2	

Gearbox Components

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



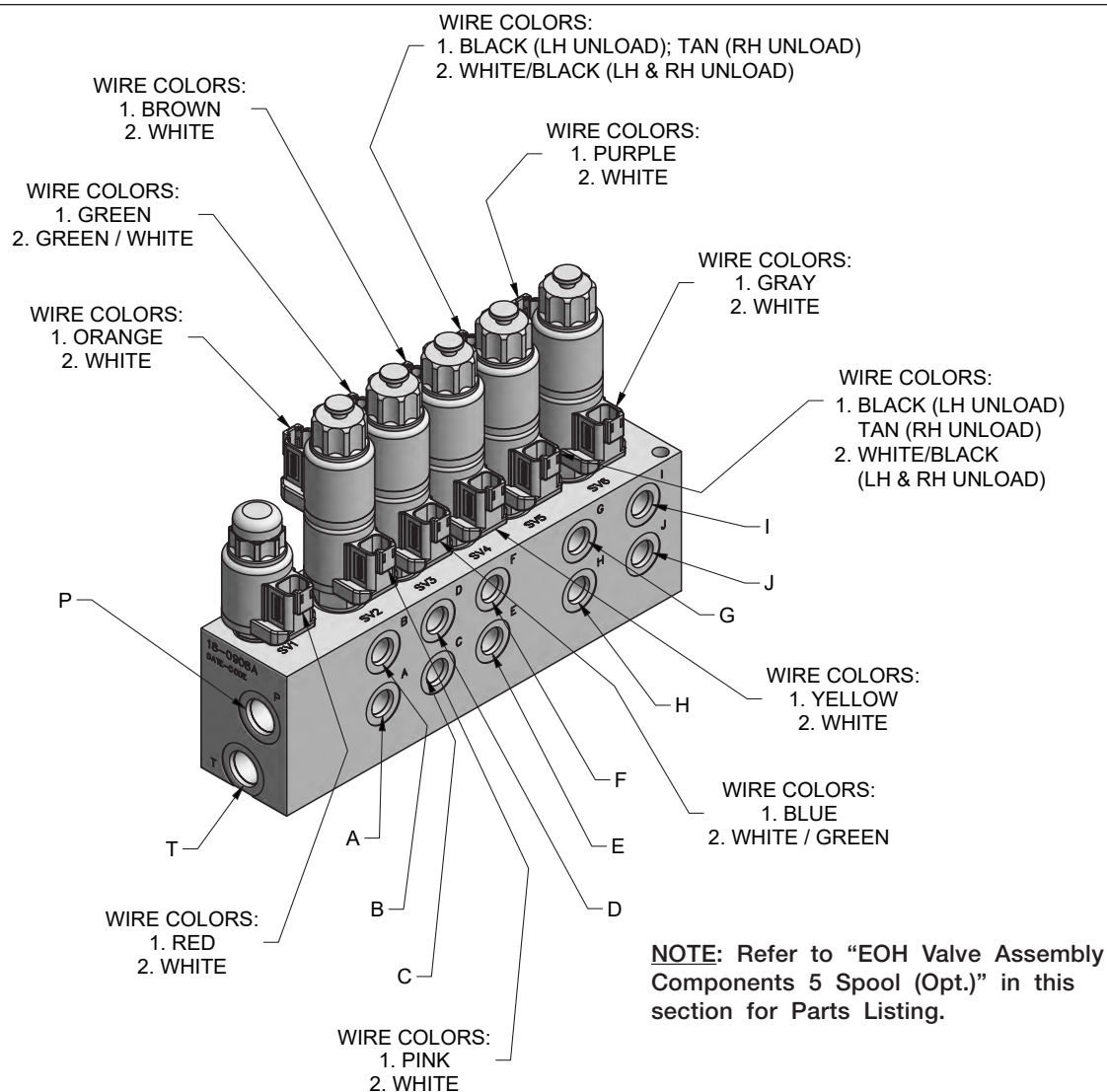
Gearbox Components

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 21
1	9006381	Glass Sight Plug	2	
2	9007492	Gearbox Housing Q800 w/Taped Holes	1	
3	9007493	Gearbox Housing Q800 w/Through Holes	1	
4	9007494	Gearbox Shaft 2 1/4" Dia.	1	
5	9007495	Gear Shaft Assembly 29 Tooth, 2 1/4"-17 Spline	1	
6	9007496	Gear 16 Tooth Splined	1	
7	9007497	Bearing Cup & Cone Set, 3.740" OD x 1 1/4"	1	
8	9007498	Bearing Cone 2 1/4" ID x 1"	2	
9	9007499	Bearing Cup 3.8437" OD x 0.7812"	2	
10	9007500	Bearing Cone 2" ID x 1.5312"	1	
11	9007501	Bearing Cup 4.125" OD	1	
12	9007502	End Cap	1	
13	9007503	Retaining Ring - External 2" Nominal Shaft Dia.	1	
14	9007504	Shim - 0.025"	1	
15	9007505	Shim - 0.030"	1	
16	9007508	Shaft Seal	2	
17	9007511	Shim - 0.005"	2	
18	9007512	Shim - 0.003"	1	
19	903161-060	Flange Screw 1/2"-13UNC x 2 1/2"	12	
20	95283	Plug	3	

Electric Over Hydraulic (EOH) Valve Functions and Wire Locations 5 Spool (Optional)

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



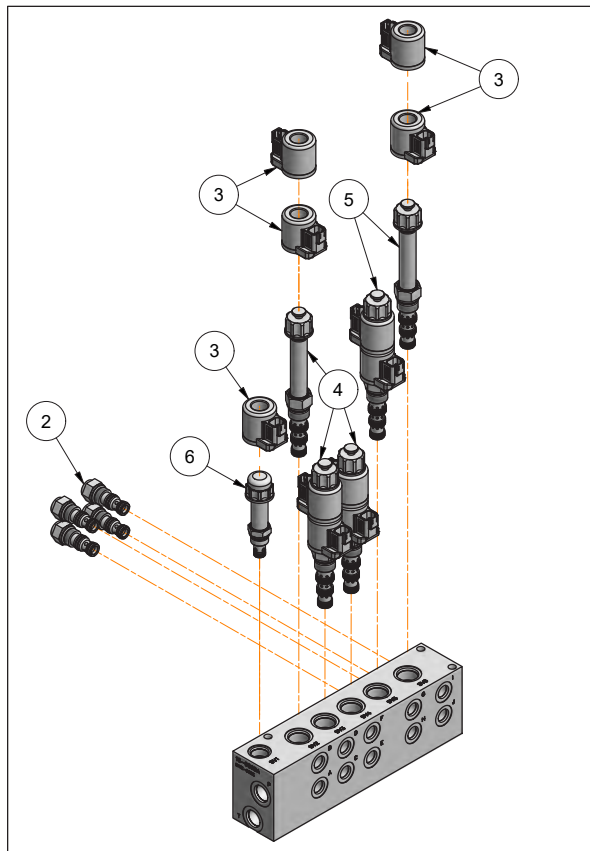
PORT	END OF CYLINDER	FUNCTION
A	BUTT END	Flow Door Open
B	RAM END	Flow Door Close
C	RAM END	Auger Unfold
D	BUTT END	Auger Fold
E	RAM END	Spout Tilt Out
F	BUTT END	Spout Tilt In
G	BUTT END	Joystick / Spout Rotate
H	RAM END	Joystick / Spout Rotate
I	BUTT END	Auger Pivot Down
J	RAM END	Auger Pivot Up
P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

Notes

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

EOH Valve Assembly Components 5 Spool (Optional)

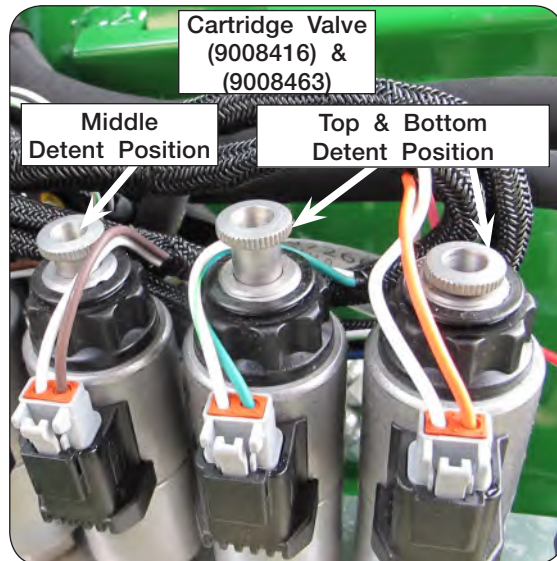
Please visit www.unverferth.com/parts/ for the most current parts listing.



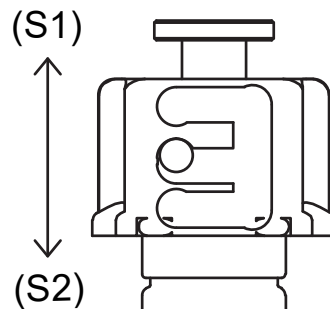
PUSH BUTTON
AND HOLD
WHILE OPERATING
INDIVIDUAL FUNCTIONS

Cartridge Valve
(9008438)

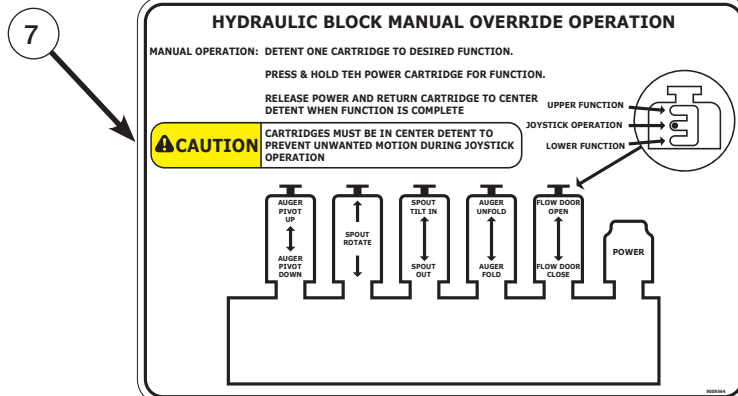
FOR MANUAL OVERRIDE



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



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



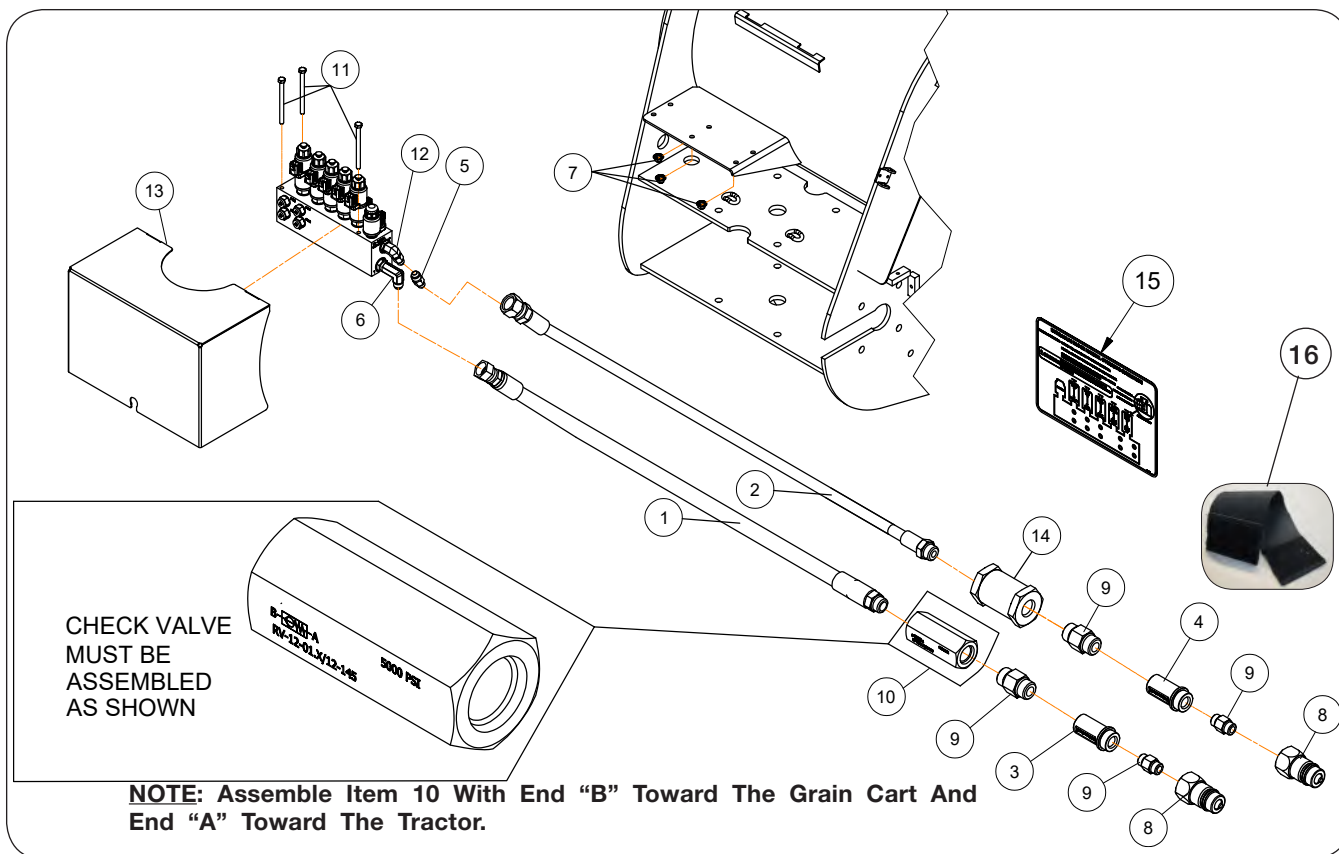
EOH Valve Assembly Components 5 Spool (Optional)

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 2-6 and Instruction Sheet
2	9003856	Pilot Check Valve	6	
3	9005769	Coil - 12 VDC DN-40	11	
4	9008416	Cartridge Valve - 4 Way, 3 Position - Closed Center w/Detented Manual Override	2	Includes Retaining Cap
	9003906	Seal Kit	-	
5	9008463	Cartridge Valve - 4 Way, 3 Position - Open Center w/Detented Manual Override	3	Includes Retaining Cap
	9003906	Seal Kit	-	
6	9008438	Cartridge Valve - 2 Way, 2 Position w/Push Type Manual Override	1	
	9003904	Seal Kit	-	
7	9008564	Decal, CAUTION (Valve Block)	1	Located Inside Lower Auger Cover Plate

EOH Tractor Circuit Hydraulic Components (Optional)

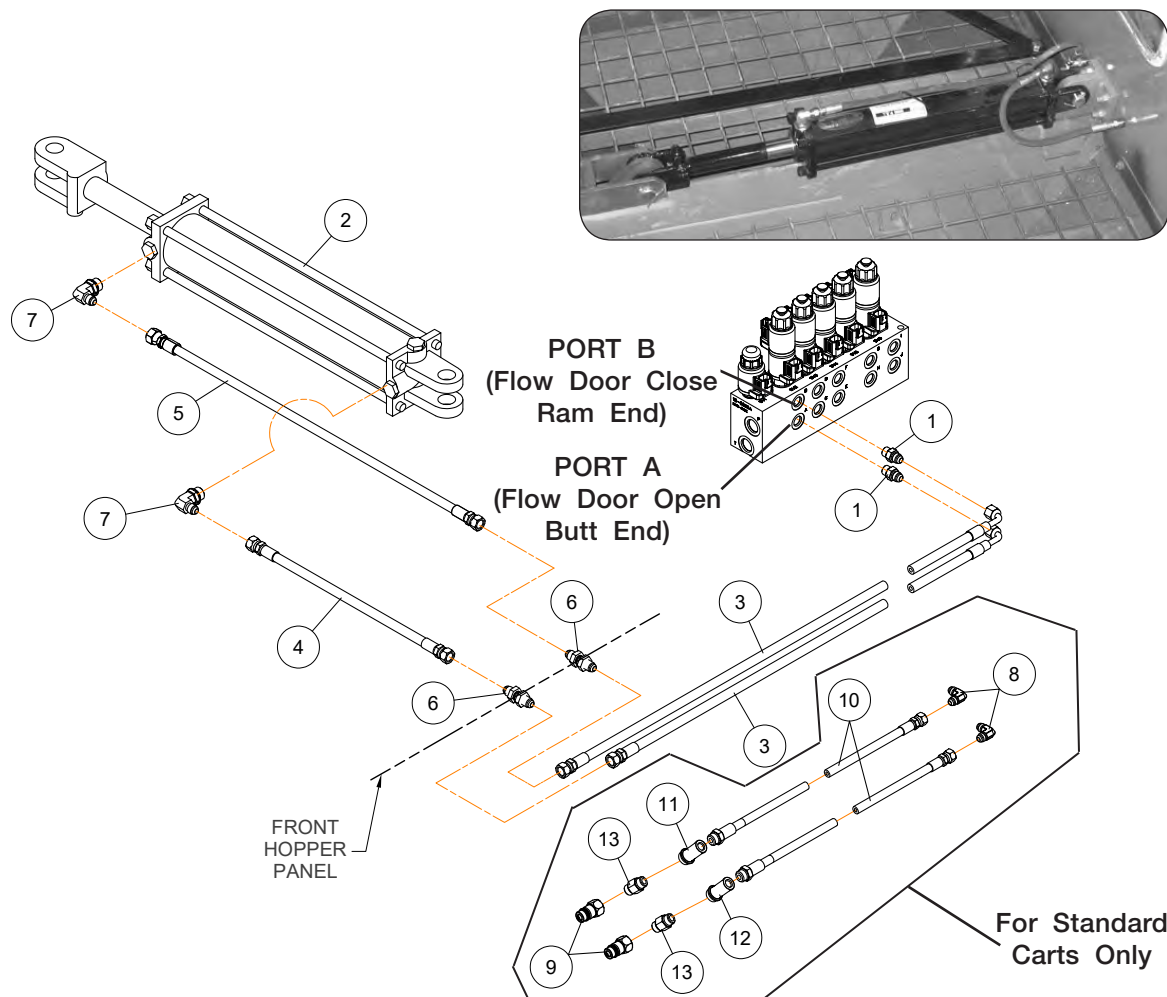
Please visit www.unverferth.com/parts/ for the most current parts listing.



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	9009766	Hose Grips - Gray (- Cylinder Retract)	1	Spout Rotate (Joystick)
4	9009765	Hose Grips - Gray (+ Cylinder Extend)	1	Spout Rotate (Joystick)
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	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	4	
10	9006994	Check Line Valve 145 PSI	1	
11	9390-043	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	295569B	Valve Cover Plate =Black=	1	Also Order Item #15
14	9005403	120 Micron Hydraulic Filter	1	
15	9008564	Decal, CAUTION (Valve Block)	1	Located Inside Cover Plate #13
16	9003848	Velcro Hose Wrap, 2" ID x 127"	1	

Flow Door Circuit Hydraulic Components

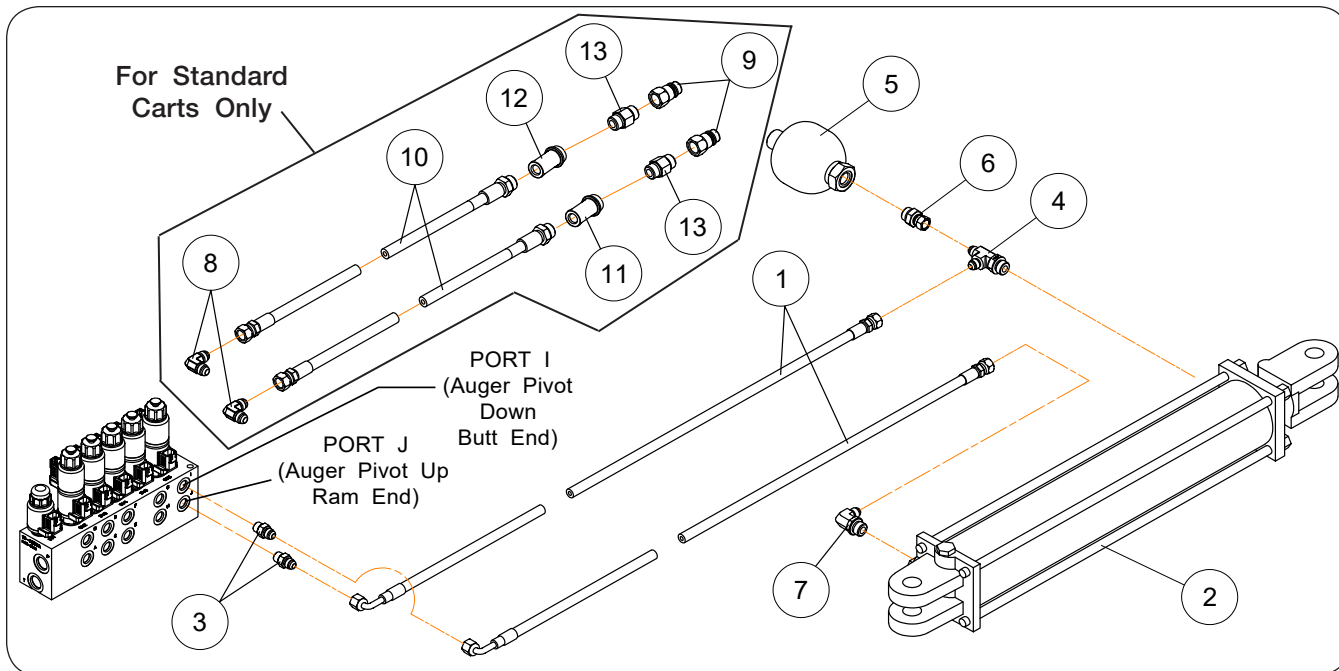
Please visit www.unverferth.com/parts/ for the most current parts listing.



ITEM	PART NO.	DESCRIPTION	QTY.	NOTES
1	9001495	Adapter, 9/16"-18 JIC Male x 9/16"-18 OR Male	2	Optional
2	9002575	Hydraulic Cylinder, 3" x 16" - 3000 PSI	1	
	9003772	Seal Kit	-	
3	9004442	Hydraulic Hose, 1/4" x 54" - 3000 PSI	2	
4	93472	Hydraulic Hose, 1/4" x 16" - 3000 PSI	1	
5	9002888	Hydraulic Hose, 1/4" x 27" - 3000 PSI	1	
6	95192	Bulkhead Union, 9/16"-18 JIC Male x 9/16"-18 JIC Male	2	
7	9874	Elbow, 90° 9/16"-18 JIC Male x 3/4"-16 OR ADJ Male	2	
8	9897	Elbow, 90° 9/16"-18 JIC Male x 9/16"-18 JIC Male	2	
9	91383	Male Tip Coupling, 3/4"-16 OR Female	2	
10	9006587	Hydraulic Hose, 1/4" x 186" - 3000 PSI	2	
11	9009754	Hose Grips - Red (+ Cylinder Extend)	1	Flow Door Open
12	9009755	Hose Grips - Red (- Cylinder Retract)	1	Flow Door Close
13	98508	Adapter, 3/4"-16 OR Male x 3/4"-16 OR Male	2	

Auger Pivot Hydraulic Components

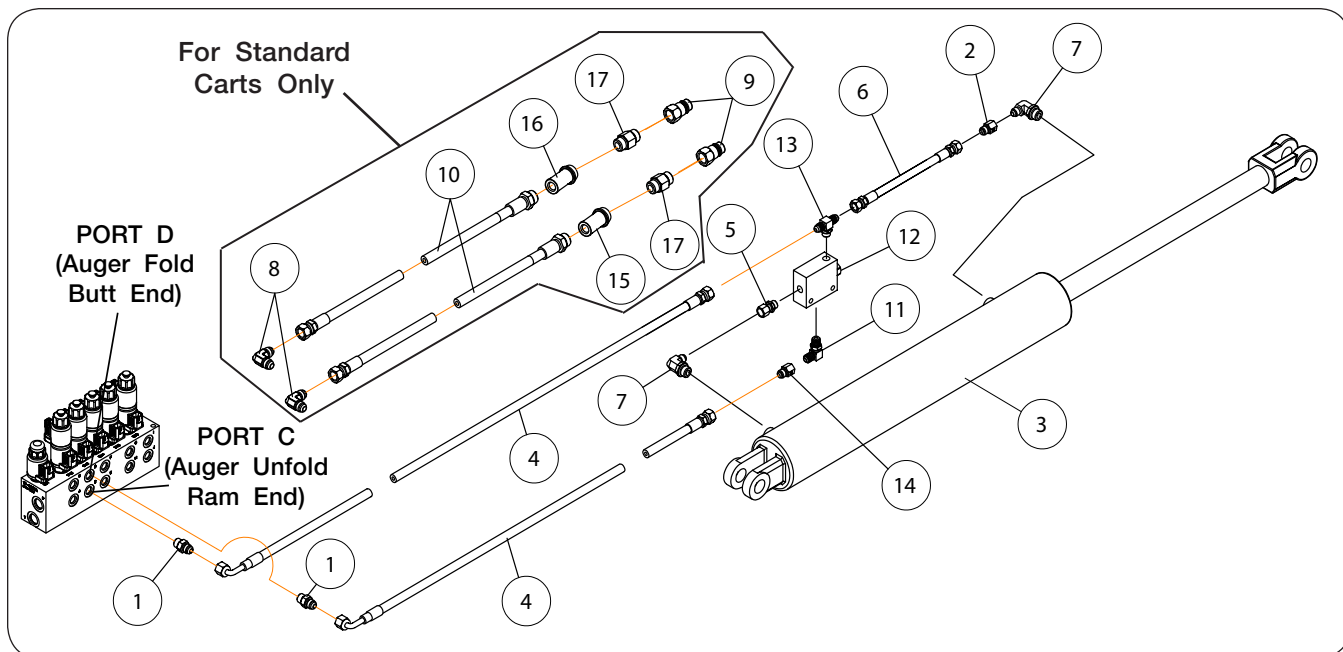
Please visit www.unverferth.com/parts/ for the most current parts listing.



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	
	9001081	Seal Kit	-	
3	98435	Adapter, 9/16"-18 JIC Male x 9/16"-18 OR Male	2	Optional (Includes 0.030" Red Restrictor)
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	1	
8	9897	Elbow, 90° 9/16"-18 JIC Male x 9/16"-18 JIC Male	2	
9	91383	Male Tip Coupling, 3/4"-16 OR Female	2	
10	9006587	Hydraulic Hose, 1/4" x 186" - 3000 PSI	2	
11	9009761	Hose Grips - Orange (+ Cylinder Extend)	1	Auger Pivot Up
12	9009762	Hose Grips - Orange (- Cylinder Retract)	1	Auger Pivot Down
13	98508	Adapter, 3/4"-16 OR Male x 3/4"-16 OR Male	2	

Auger Fold Hydraulic Components

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

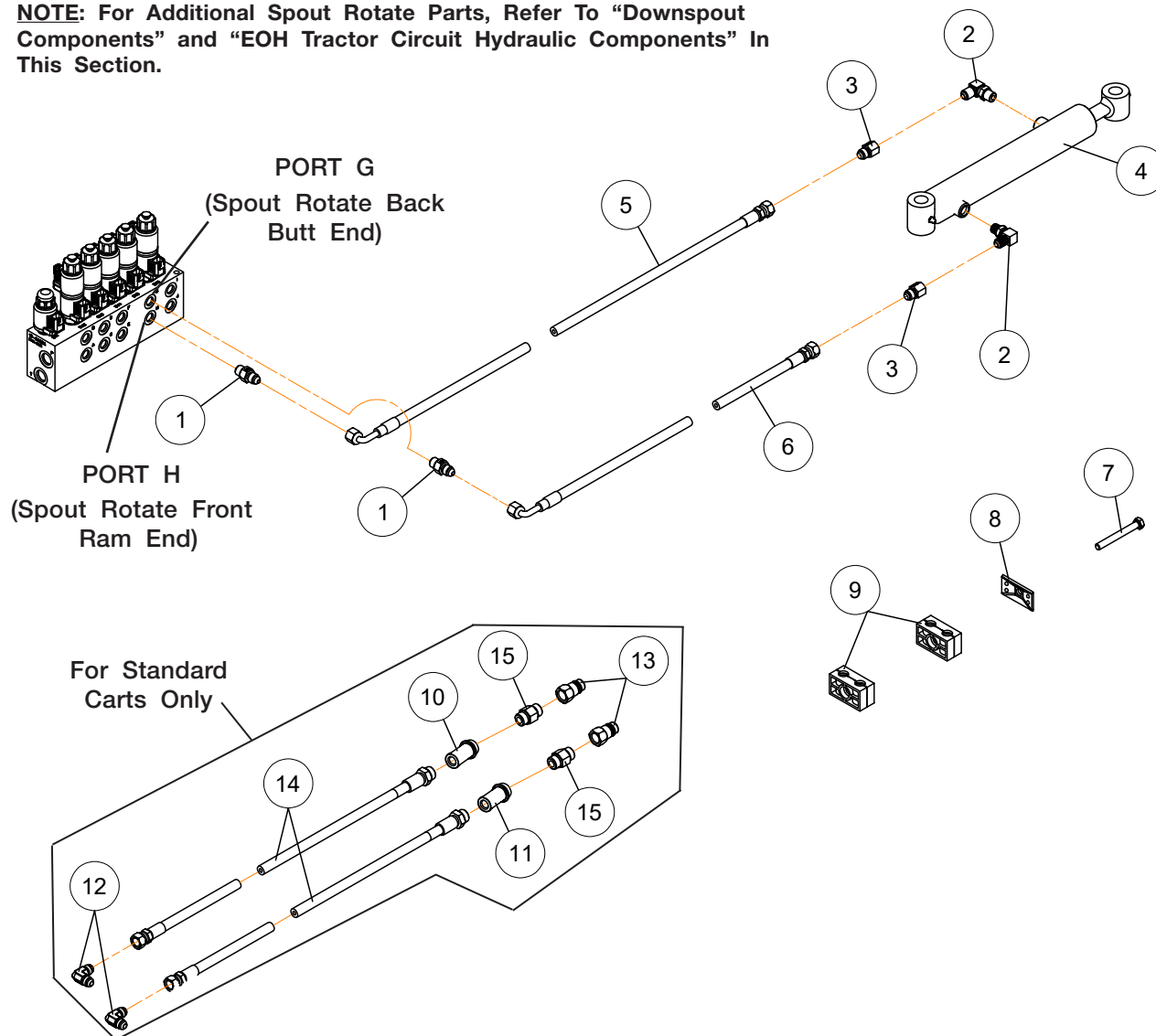


ITEM	PART NO.	DESCRIPTION	QTY.	NOTES
1	9001495	Adapter, 9/16"-18 JIC Male x 9/16"-18 OR Male	2	Optional
2	9002199	Reducer, 9/16"-18 JIC Female x 9/16"-18 JIC Male	1	0.060" Yellow Restrictor
3	9009659	Hydraulic Cylinder, 3 1/2" x 20" - 3000 PSI	1	
	9006942	Seal Kit	-	
4	9006608	Hydraulic Hose, 1/4" x 84" - 3000 PSI	2	
5	9002446	Adapter, 9/16"-18 Male O-Ring x 9/16"-18 JIC Female	1	
6	93472	Hydraulic Hose, 1/4" x 16" - 3000 PSI	1	
7	9874	Elbow, 90° 9/16"-18 JIC Male x 3/4"-16 OR ADJ Male	2	
8	9897	Elbow, 90° 9/16"-18 JIC Male x 9/16"-18 JIC Male	2	
9	91383	Male Tip Coupling, 3/4"-16 OR Female	2	
10	9006587	Hydraulic Hose, 1/4" x 186" - 3000 PSI	2	
11	97445	Elbow, 90° 9/16"-18 JIC Male x 9/16"-18 O-Ring ADJ Male	1	
12	9003990	Pilot Operated Check Valve with 3 Ports	1	
13	9001710	Tee 9/16"-18 JIC Male x 9/16"-18 JIC Male x 9/16"-18 O-Ring Male	1	
14	9006166	Reducer, 9/16"-18 JIC Female x 9/16"-18 JIC Male	1	0.090" Green Restrictor
15	9009751	Hose Grips - Green (+ Cylinder Extend)	1	Auger Unfold
16	9009752	Hose Grips - Green (- Cylinder Retract)	1	Auger Fold
17	98508	Adapter, 3/4"-16 OR Male x 3/4"-16 OR Male	2	

EOH Spout Rotate Hydraulic Components (Optional)

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

NOTE: For Additional Spout Rotate Parts, Refer To “Downspout Components” and “EOH Tractor Circuit Hydraulic Components” In This Section.



EOH Spout Rotate Hydraulic Components (Optional)

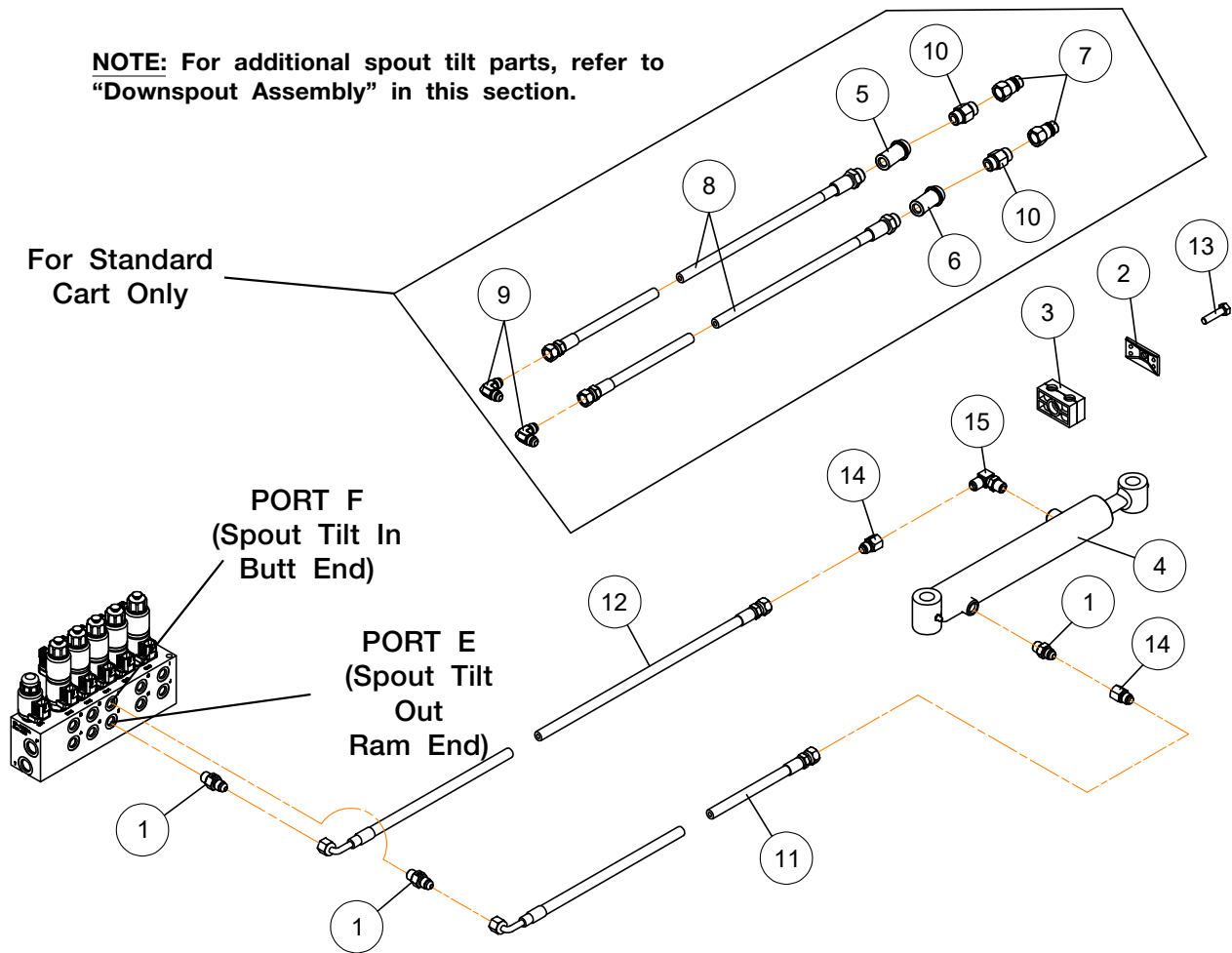
Please visit www.unverferth.com/parts/ for the most current parts listing.

ITEM	PART NO.	DESCRIPTION	QTY.	NOTES
1	98435	Adapter, 9/16"-18 JIC Male x 9/16"-18 O-Ring Male	2	Optional (Includes 0.030" Red Restrictor)
2	97445	Elbow, 90° 9/16"-18 JIC Male x 9/16"-18 O-Ring ADJ Male	2	
3	9003303	Adapter 9/16"-18 JICF x 9/16"-18 JICM	2	
4	9005135	Cylinder 1 1/2" x 8" (3000 PSI)	1	
	9005419	Seal Kit	-	
5	9004775	Hydraulic Hose, 1/4" x 268" - 3000 PSI	1	
6	9006245	Hydraulic Hose, 1/4" x 275" - 3000 PSI	1	
7	9390-034	Capscrew, 5/16"-18UNC x 2" G5	2	
8	9003814	Clamp Top Plate, 1/4" x 1 1/8" x 2 1/16"	2	
9	9003816	Clamp, Polypropylene	2	
10	9009766	Hose Grips - Gray (- Cylinder Retract)	1	Spout Rotate Front (Joystick)
11	9009765	Hose Grips - Gray (+ Cylinder Extend)	1	Spout Rotate Back (Joystick)
12	9897	Elbow, 90° 9/16"-18 JIC Male x 9/16"-18 JIC Male	2	
13	91383	Male Tip Coupling, 3/4"-16 O-Ring Female	2	
14	9006587	Hydraulic Hose, 1/4" x 186" - 3000 PSI	2	
15	98508	Adapter, 3/4"-16 OR Male x 3/4"-16 OR Male	2	

EOH Spout Tilt Hydraulic Components (Optional)

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

NOTE: For additional spout tilt parts, refer to “Downspout Assembly” in this section.



EOH Spout Tilt Hydraulic Components (Optional)

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 O-Ring Male	3	
2	9003814	Clamp Top Plate, 1/4" x 1 1/8" x 2 1/16"	2	
3	9003816	Clamp, Polypropylene	2	
4	9005135	Cylinder 1 1/2" x 8" (3000 PSI)	1	
	9005419	Seal Kit	-	
5	9009759	Hose Grips - Yellow (+ Cylinder Extend)	1	Spout Out
6	9009760	Hose Grips - Yellow (- Cylinder Retract)	1	Spout In
7	91383	Male Tip Coupling, 3/4"-16 O-Ring Female	2	
8	9006587	Hydraulic Hose, 1/4" x 186" - 3000 PSI	2	
9	9897	Elbow, 90° 9/16"-18 JIC Male x 9/16"-18 JIC Male	2	
10	98508	Adapter, 3/4"-16 OR Male x 3/4"-16 OR Male	2	
11	9006695	Hydraulic Hose, 1/4" x 324 1/2" - 3000 PSI	1	
12	9009489	Hydraulic Hose, 1/4" x 334" - 3000 PSI	1	
13	9390-031	Capscrew, 5/16"-18UNC x 1 1/4" G5	2	
14	95193	Adapter, 9/16"-18 JIC Female x 9/16"-18 JIC Male	2	
15	97445	90° Elbow 9/16"-18 JIC Male x 9/16"-18 O-Ring Male	1	

Cylinders

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

Auger Flow Door Cylinder - 3" x 16"

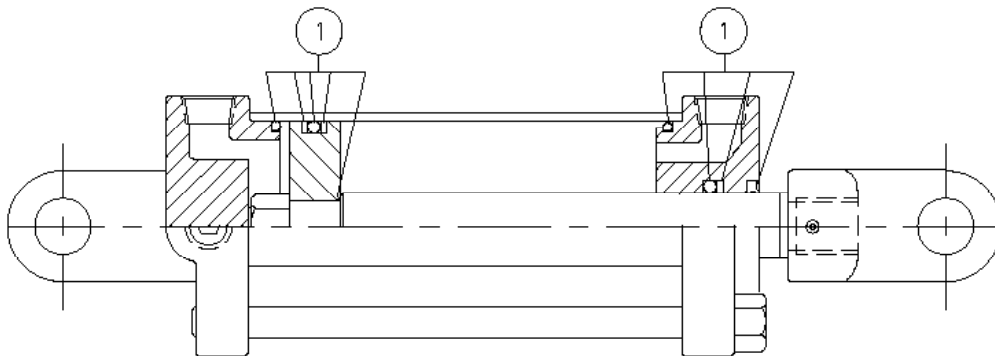
ITEM	PART NO.	DESCRIPTION	QTY	NOTES
	9002575	Cylinder 3" x 16"	1	3/4-16 O-Ring Ports (3000 PSI)
1	9003772	Seal Kit	1	

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

ITEM	PART NO.	DESCRIPTION	QTY	NOTES
	9009659	Cylinder 3 1/2" x 20"	1	3/4-16 O-Ring Ports (3000 PSI)
1	9006942	Seal Kit	1	

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

ITEM	PART NO.	DESCRIPTION	QTY	NOTES
	9000933	Cylinder 3 1/2" x 20"	1	3/4-16 O-Ring Ports (3000 PSI)
1	9001081	Seal Kit	1	



Cylinders

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

Spout Tilt Cylinder

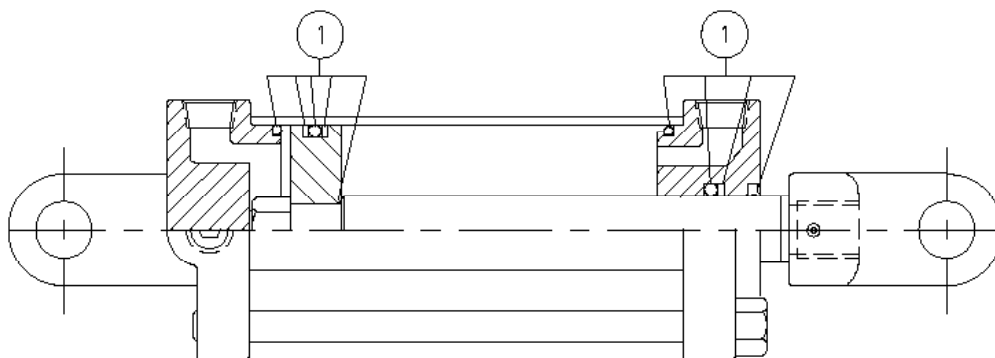
ITEM	PART NO.	DESCRIPTION	QTY	NOTES
	9005135	Cylinder 1 1/2" x 8"	1	#6 9/16-18 O-Ring Ports (3000 PSI)
1	9005419	Seal Kit	1	

Spout Rotate Cylinder - 1 1/2" x 8"

ITEM	PART NO.	DESCRIPTION	QTY	NOTES
	9005135	Cylinder 1 1/2" x 8"	1	#6 9/16-18 O-Ring Ports (3000 PSI)
1	9005419	Seal Kit	1	

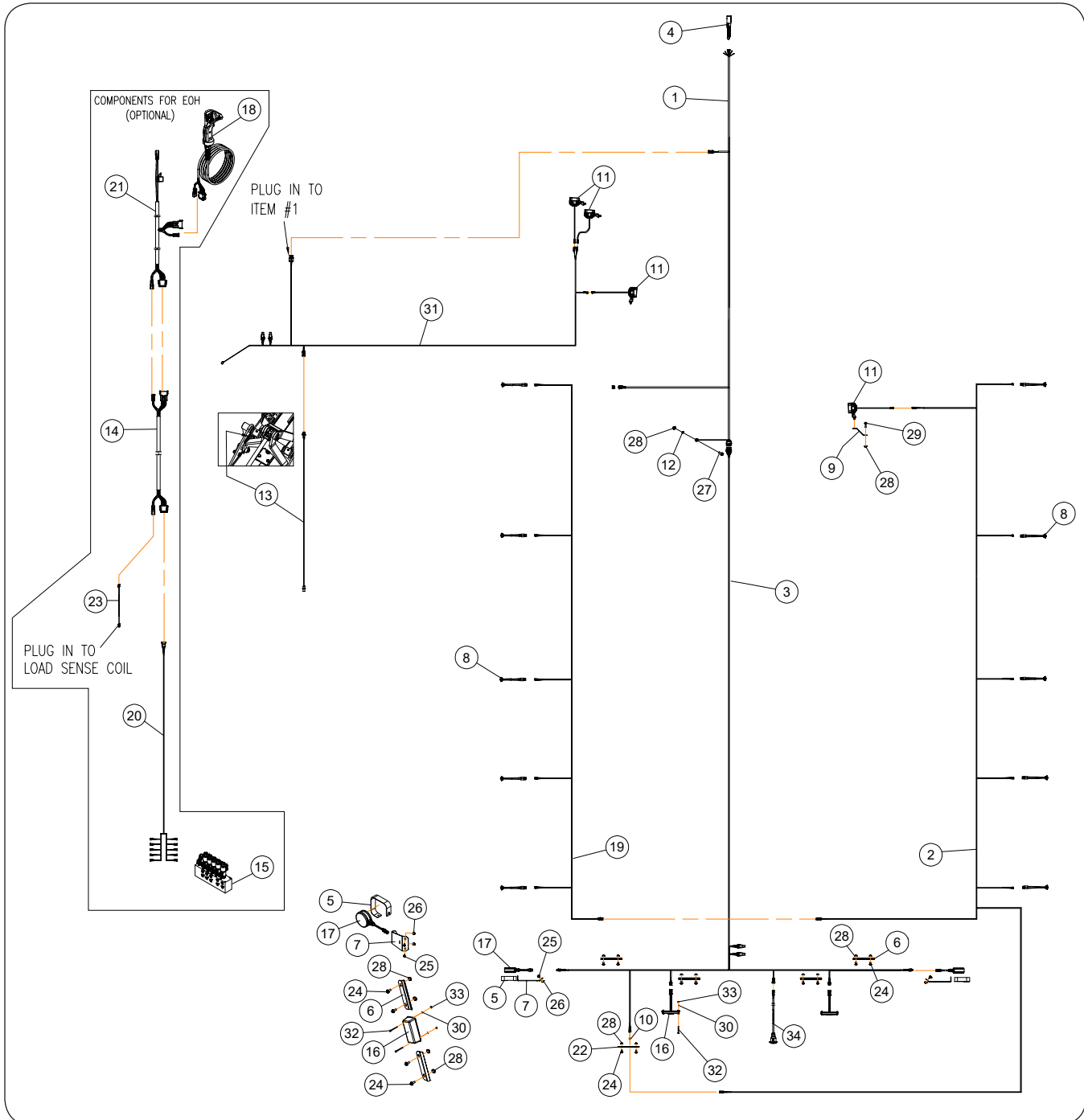
Jack Cylinder - 3 1/2" x 8"

ITEM	PART NO.	DESCRIPTION	QTY	NOTES
	9009047	Cylinder, Complete 3 1/2" x 8"	1	
1	9007880	Seal Kit	1	



Electrical Components

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



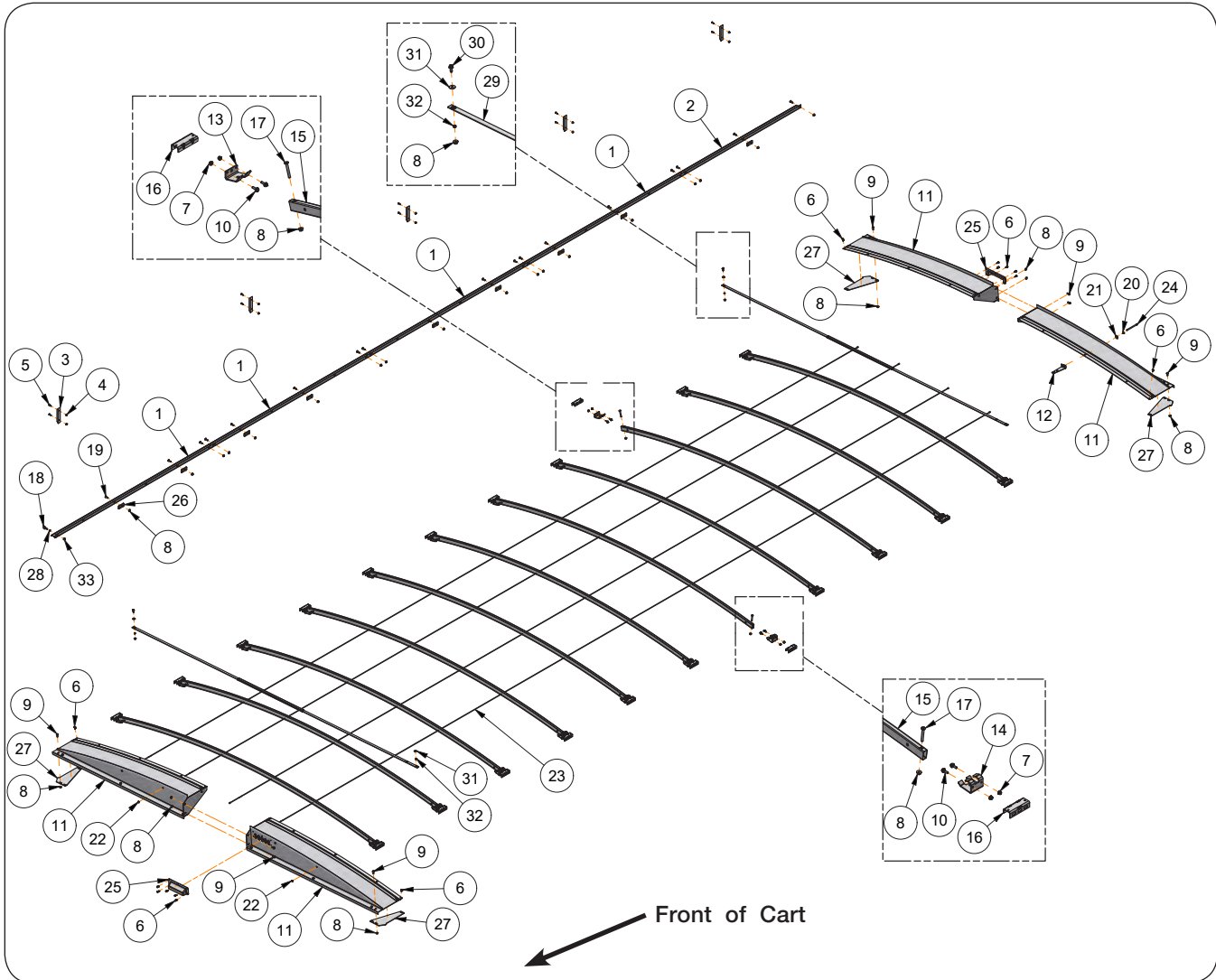
Electrical Components

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

ITEM	PART NO.	DESCRIPTION	QTY	NOTES
1	9009540	Front Harness - 262"	1	
2	9009863	RH Clearance Light Harness	1	
3	9009861	Rear Harness	1	
4	92450	7-Way Plug	1	
5	268678B	Light Guard Plate =Black=	2	
6	273371G	Harness Cover =Green=	4	
	273371R	Harness Cover =Red=		
	273371BM	Harness Cover =Black Metallic=		
7	296726B	Light Bracket =Black=	2	
8	9006107	Micro Dot, LED Amber Light	10	
9	271574B	Lamp Mount Plate =Black=	1	
10	9001005	Rubber Grommet	1	
11	9008957	Work Flood Lamp (LED)	4	
12	9005688	External Tooth Lock Washer	1	
13	9007223	Proximity Switch	1	
14	9008252	Joystick Controller Extension Harness	1	
15	293416	EOH Block Assembly - 5 Spool Replacement Kit	1	
16	9006345	LED Lamp - Red	2	Includes Lamp, & Items 32, 34 & 35
	232169	LED Lamp - Red - Replacement Kit		
17	9005142	LED Lamp - Amber	2	
18	9008265	L-Series Control Grip - 5 Function	1	
19	9009862	LH Clearance Light Harness	1	
20	9010096	"T" Main Wiring Harness - 189"	1	
21	9008251	Harness - Joystick Power	1	
22	276400G	Rear Trim =Green=	1	
	276400R	Rear Trim =Red=		
	276400BM	Rear Trim =Black Metallic=		
23	9007266	Wire Harness, 218 5/16" (2 Pin Diverter)	1	
24	95585	Flange Screw 3/8"-16UNC x 3/4" Grade 5	10	
25	91256	Flange Screw 5/16"-18UNC x 3/4"	4	
26	91257	Flange Nut 5/16"-18UNC	4	
27	91262	Flange Screw 3/8"-16UNC x 1" Grade 5	1	
28	91263	Flange Nut, 3/8"-16UNC Grade 5	12	
29	9003259	Flange Screw 3/8"-16UNC x 1 1/4"	1	
30	9404-013	Lock Washer, #10	4	
31	9010101	Auger Harness	1	
32	903172-350	Pan Head Phillips Screw, #10-32UNF x 1 1/4"	4	
33	9830-016	Hex Nut, #10-32	4	
34	9009843	7-Blade Connector	1	

Weather Guard End Caps, Tarp Bows, & Brackets

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



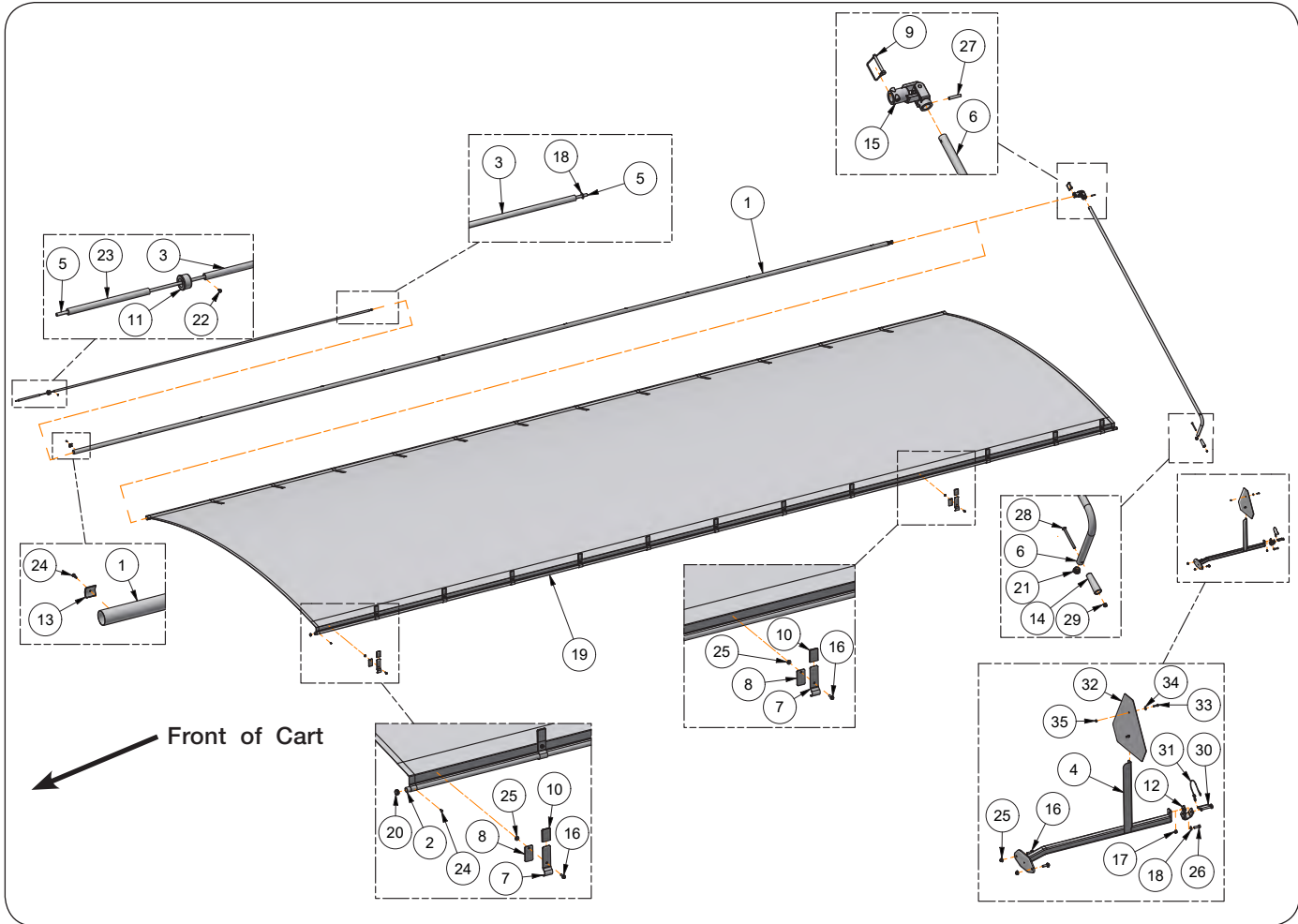
Weather Guard End Caps, Tarp Bows, & Brackets

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

ITEM	PART NO.	DESCRIPTION	QTY	NOTES
1	298272	Plate - Latch 97"	4	
2	298271	Plate - Latch 71 7/8"	1	
3	9005307	Poly Deflector 8"	5	
4	97189	Flange Hex Nut, 1/4"-20UNC	10	
5	9004355	Self-Threading Screw, 1/4"-20UNC x 1"	10	
6	9505717	Torx Head Screw/Self Drilling, 1/4"-14 x 1"	14	
7	9010154	Top Lock Flange Nut, 5/16"-18UNC	44	
8	9008159	Flange Nut 3/8"-16UNC Grade 5	62	
9	91262	Flange Screw, 3/8"-16UNC x 1"	20	
10	97604	Flange Screw, 5/16"-18UNC x 1" G5	44	
11	276745B	End Cap Replacement (Black)	2	Includes End Caps & Items 5, 11, 19, 20, 23, 24
12	281712B	Bracket Assembly =Black=	4	
13	283425B	Tarp Bow Bracket Right-Hand =Black=	11	
14	283427B	Tarp Bow Bracket Left-Hand =Black=	11	
15	291289B	Tarp Bow =Black=	11	
16	289986B	Sideboard Doubler =Black=	22	
17	902703-046	Pan Head Hex Socket Capscrew, 3/8"-16UNC x 3" G5	22	
18	9004548	Eye Bolt, 3/8"-16UNC x 1 3/4"	1	
19	9009089	Torx Head Machine Screw 3/8"-16UNC x 1 1/4" G5	18	
20	9005688	Star Washer 3/8"	4	
21	9005696	Fender Washer 3/8"	4	
22	9005727	Plug 7/16"	4	
23	9009865	Cable Assembly 444"	4	
24	9008315	Capscrew, 3/8"-16UNC x 6" (Full Threaded) G5	4	
25	9009504	Endcap Vent Cover	2	
26	295259B	Tarp Spacer Plate =Black=	9	
27	295284B	Sideboard Cover Plate =Black=	4	
28	9405-074	Flat Washer 3/8"	1	
29	9008952	Hurricane Strap For 14 FT Wide Hopper	2	
30	96972	Screw/Self Tapping 3/8"-16UNC x 1"	2	
31	9008972	Flat Washer, 3/8" Aluminum	4	
32	9008949	Tarp Strap Spacer Bushing	4	
33	91263	Flange Nut, 3/8"-16UNC	1	

Weather Guard Tarp, Handle, Tubes, & Stop Plate Components

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



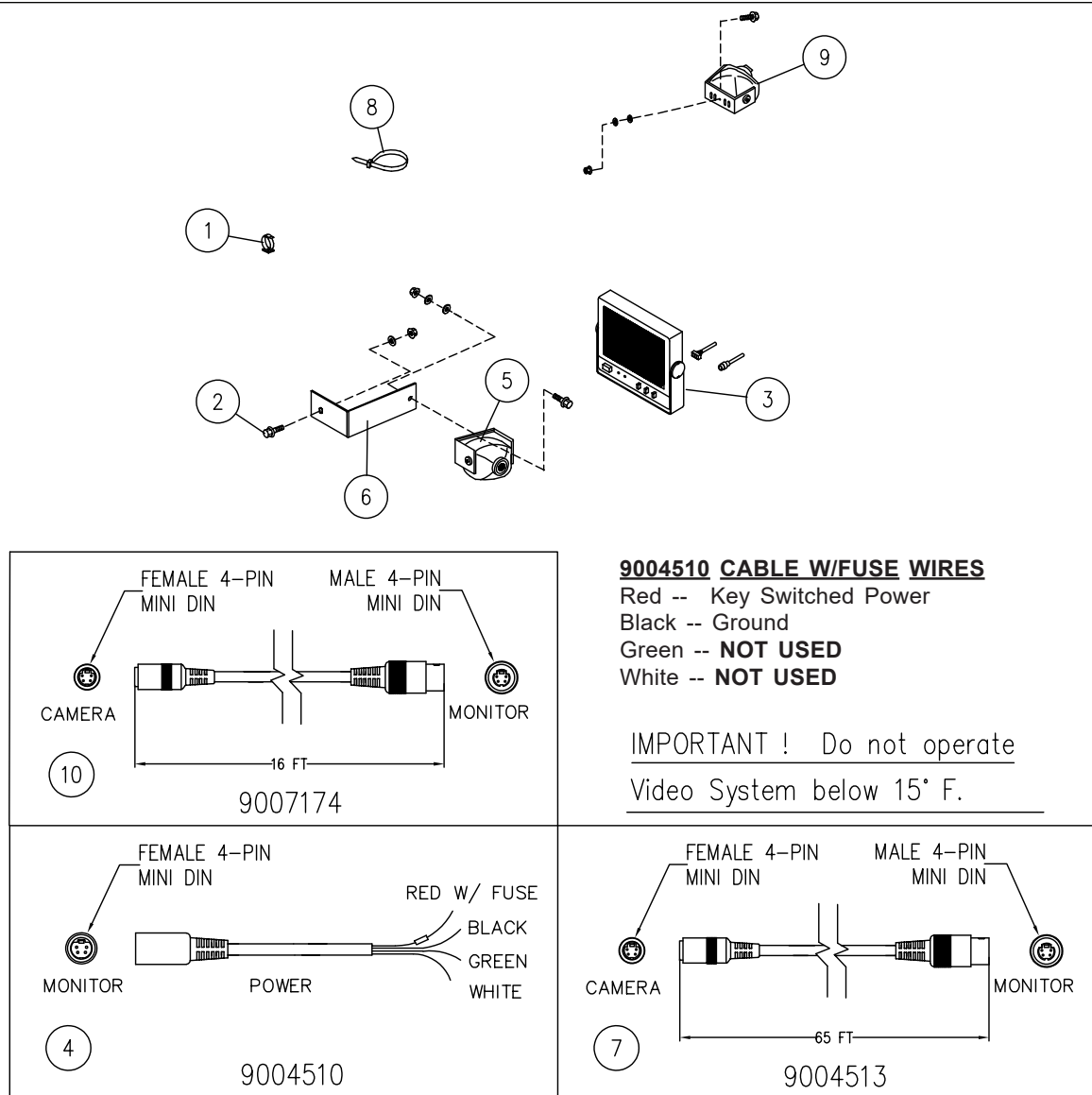
Weather Guard Tarp, Handle, Tubes, & Stop Plate Components

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

ITEM	PART NO.	DESCRIPTION	QTY	NOTES
1	298378	Roll Tube Weldment	1	
2	298375	Fixed Tube Weldment	1	
3	221668	Pipe - 180"	1	
4	296594B	Handle Bracket Weldment =Black=	1	
5	221722	Bungee 3/8" Dia. x 204"	1	
6	299024	Tarp Handle Weldment	1	
7	266689B	Tarp Short Stop Plate =Black=	13	
8	299318	Tarp Stop Spacer	11	Black HMWPE Material
9	9005305	Lynch Pin 3/8" x 3"	1	
10	9003078	Cap - Plastic (2" x 3")	13	
11	9004947	Plug 1 7/8"	1	
12	299302B	Handle Retainer Weldment =Black=	1	
13	9004949	U-Clamp	14	
14	9004969	Handle	1	
15	9004977	U-Joint w/ 1 3/8"-21 Spline	1	
16	9003259	Flange Screw 3/8"-16UNC x 1 1/4" Grade 5	15	
17	9928	Locknut 3/8"-16UNC	1	
18	9405-074	Flat Washer 3/8"	3	
19	9009864	Tarp 188" x 456"	1	
	9005581	Tarp Repair Kit	-	
20	9005088	Plug 1 1/8"	2	
21	9005089	Plug 1 1/4"	1	
22	9001396	Pan Head Screw #10-16 x 1/2"	1	
23	TA806225	Hose 1/2" EPDM	1	
24	9005197	Screw/Self Drilling #10-16 x 3/4" Pan Head	16	
25	9008159	Flange Nut 3/8"-16UNC Grade 5	15	
26	9390-056	Capscrew 3/8"-16UNC x 1 1/4" Grade 5	1	
27	9392-180	Roll Pin 3/8" Dia. x 2"	1	
28	903172-450	Pan Head 3/8"-16UNC x 4 1/2" Phillips	1	
29	9398-012	Elastic Stop Nut 3/8"-16UNC	1	
30	96571	Lynch Pin 3/8" x 2 1/2"	1	
31	97879	Nylon Lanyard	1	
32	TA510514	SMV Emblem	1	
33	9390-005	Capscrew, 1/4"-20UNC x 1" Grade 5	2	
34	9405-064	Flat Washer 1/4" USS	2	
35	9936	Locknut 1/4"-20UNC	2	

Video System (Optional)

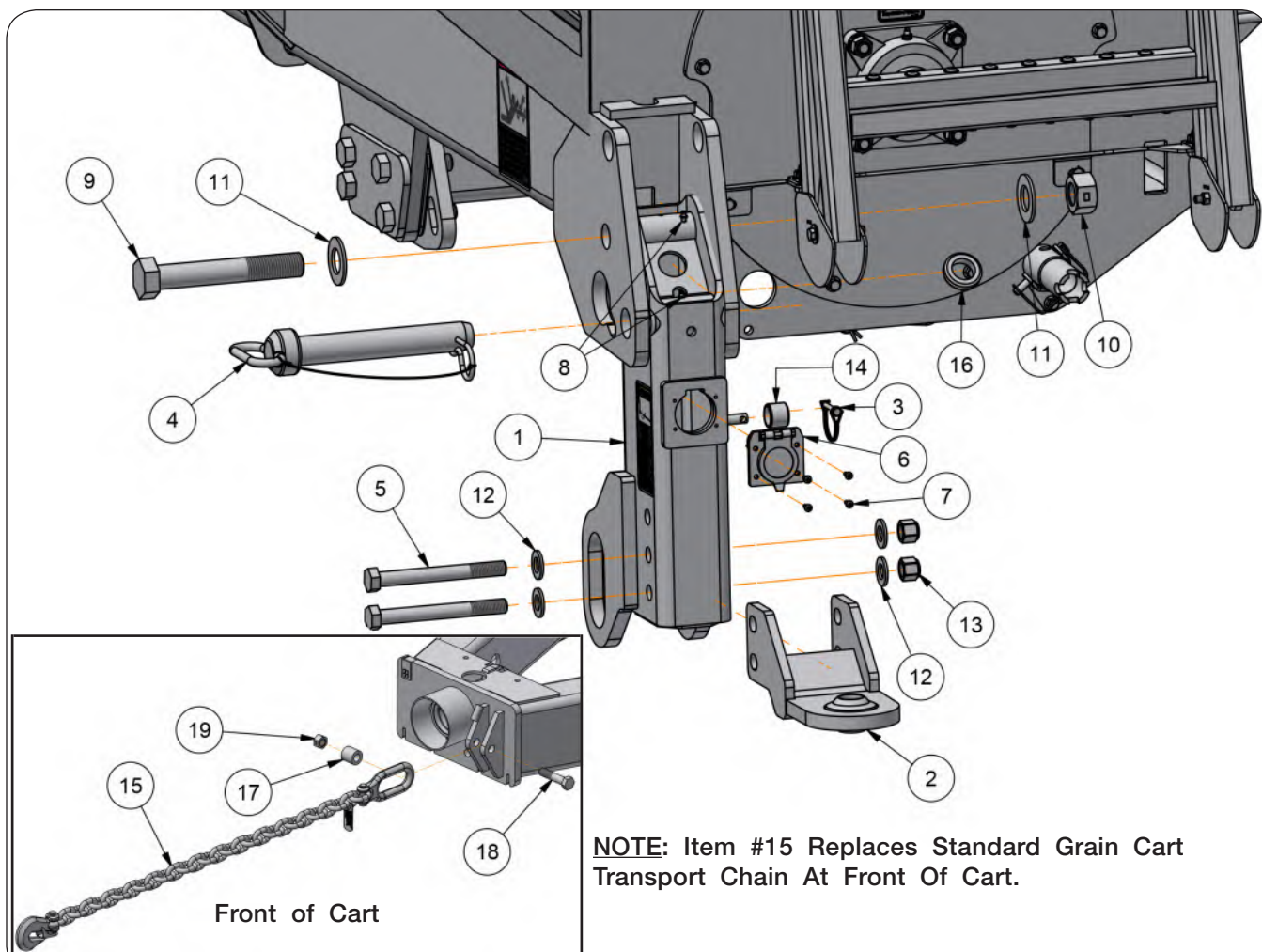
Please visit www.unverferth.com/parts/ for the most current parts listing.



ITEM	PART NO.	DESCRIPTION	QTY	NOTES
	265770	Video System Kit for Front View	1	Includes Items 1 - 8 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 =Black=	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	

Rear Drop Hitch Components (Optional)

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

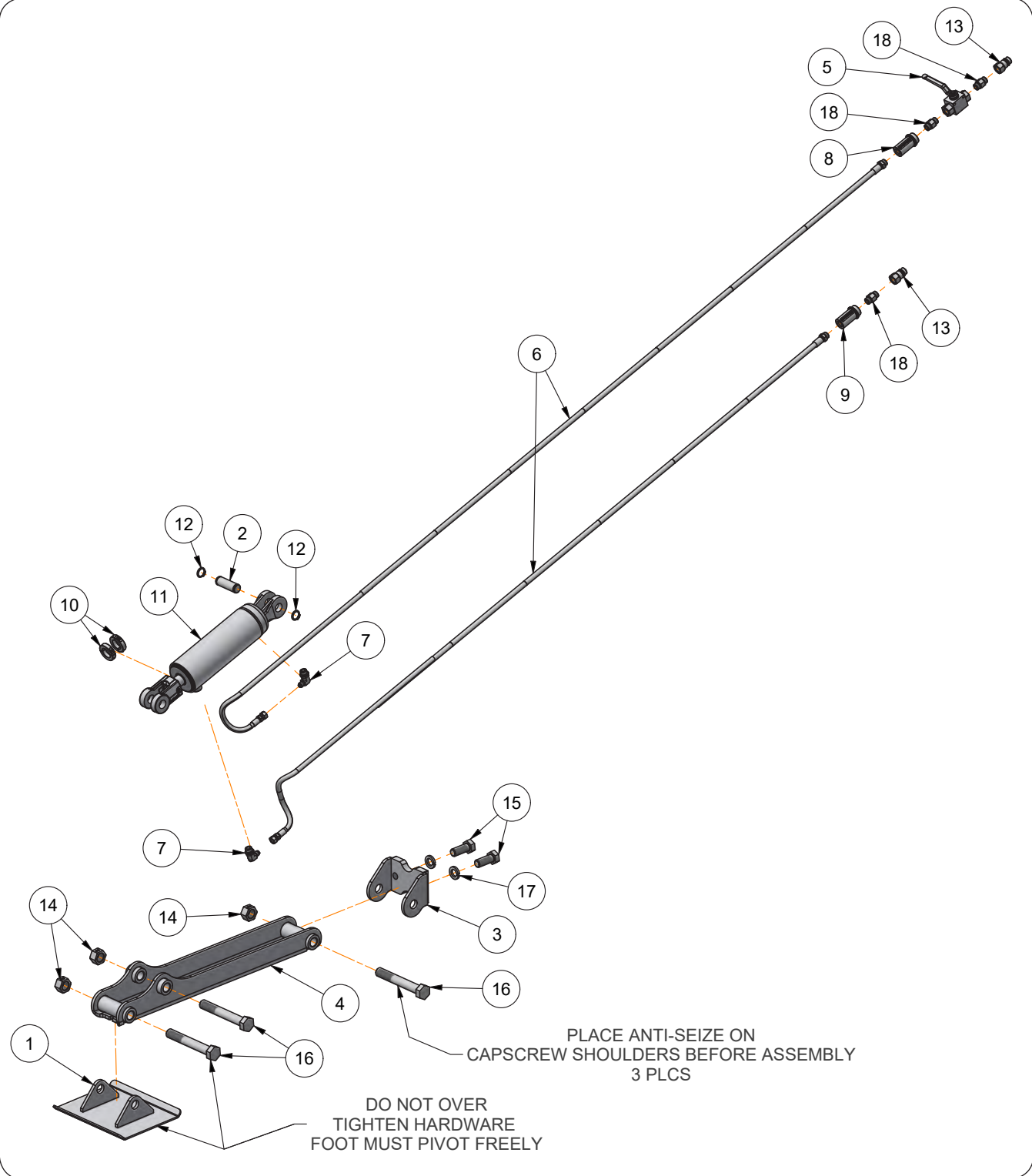


NOTE: Item #15 Replaces Standard Grain Cart Transport Chain At Front Of Cart.

ITEM	PART NO.	DESCRIPTION	QTY	NOTES
	299300B	Rear Drop Hitch Kit (Black)	-	Includes Items 1-16 And Instruction Sheet. See "Front End Components" For Additional Details.
1	297128B	Rear Drop Hitch Assembly (Black)	1	Includes Decal, CAUTION (Towing Capacity) 9009646
2	295978B	Rear Hitch Weldment =Black=	1	
3	9000936	Lynch Pin	1	
4	9009656	Pivot Pin	1	1 1/2" Dia. x 8 1/2" Usable Length
5	9390-159	Capscrew 3/4"-10UNC x 7" Grade 5	2	
6	9009843	7-Blade Connector	1	Adapter: AG to 7-Blade
7	903172-133	Phillips Head Screw #10-24 x 1/2"	4	
8	91160	Grease Zerk	2	
9	9390-225	Capscrew 1 1/4"-7UNC x 8" Grade 5	1	
10	93476	Lock Nut 1 1/4"-7UNC Grade 5	1	
11	9405-128	Flat Washer 1 1/4" SAE	2	
12	9405-104	Flat Washer 3/4" SAE	4	
13	9398-021	Lock Nut 3/4"-10UNC	2	
14	91268	Tension Bushing	1	
15	9010398	Transport Chain #80,000	1	Replaces Standard Grain Cart Transport Chain If Equipped With Optional Rear Hitch
16	97840	Grommet, 1 1/2" OD x 1 1/4" ID	1	
17	299224	Spacer Bushing 1 7/8" Dia.	1	
18	91299-192	Capscrew 1"-8UNC x 4 1/2" Grade 8	1	
19	92199	Locknut 1"-8UNC	1	

Hydraulic Jack

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



Hydraulic Jack

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

ITEM	PART NO.	DESCRIPTION	QTY	NOTES
1	271723B	Jack Foot Weldment =Black=	1	
2	272587	Pin, 1" Dia. x 3 1/8"	1	
3	273808B	Jack Mount Weldment =Black=	1	
4	276380B	Jack Leg Weldment =Black=	1	
5	9005426	High Pressure Ball Valve	1	
6	9006068	Hydraulic Hose, 1/4" x 92" - 3000 PSI	2	
7	9006173	Elbow, 90°, 9/16" MFO x 3/4" MORB	2	
8	9009757	Hose Grips - Black (+ Cylinder Extend)	1	Raise Jack
9	9009758	Hose Grips - Black (- Cylinder Retract)	1	Lower Jack
10	9007301	Shaft Collar - 1.25" Bore	2	
11	9009047	Hydraulic Cylinder, 3 1/2" x 8" - 3000 PSI	1	
	9007880	Seal Kit	-	
12	91192	Retaining Ring, 1"	2	
13	91383	Male Tip Coupling, 3/4"-16	2	
14	92199	Center Locknut, 1"-8UNC	3	
15	9390-165	Capscrew, 7/8"-9UNC x 2 1/4" Grade 5	2	
16	9390-197	Capscrew, 1"-8UNC x 7" Grade 5	3	
17	9404-037	Split Lock Washer, 7/8"	2	
18	98508	Adapter, 3/4"-16 OR Male x 3/4"-16 OR Male	3	



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