Grain Handling

AVALANCHE® DOUBLE AUGER GRAIN CART MODEL 2098

Serial Number B42850100 & Higher

Part No. 296162

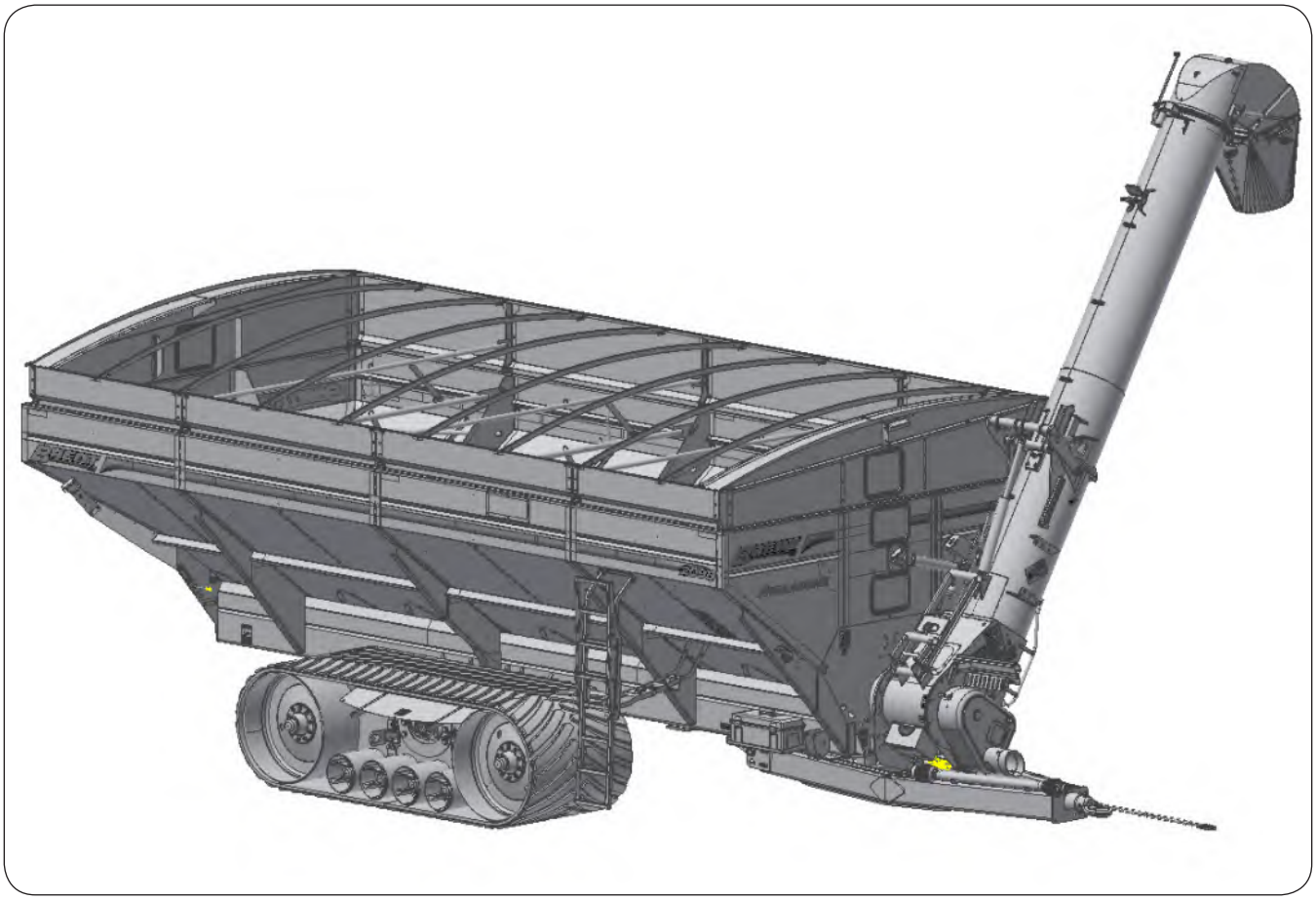
Foreword

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

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

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

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



Product Information

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

- Machine name
- Model number
- Serial number

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

Please fill out and retain this portion for your records. The serial number 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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Please visit www.unverferth.com/parts/ for the most current parts listing.

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Section I
Safety

General Hazard Information

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

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

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

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

REMEMBER:

THINK SAFETY

A CAREFUL OPERATOR IS THE BEST INSURANCE AGAINST AN ACCIDENT!

SIGNAL WORDS

DANGER

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

WARNING

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

CAUTION

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

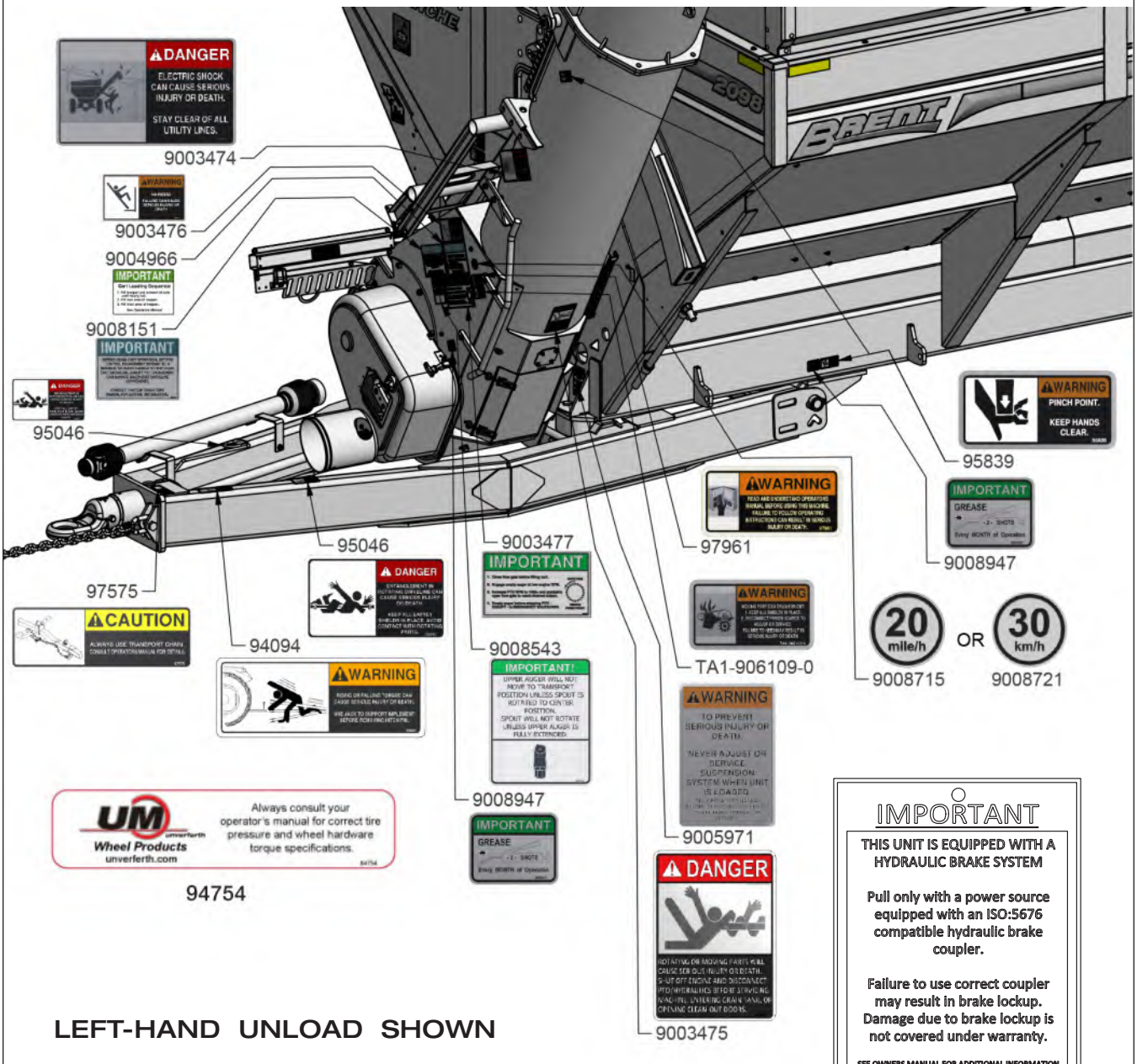
IMPORTANT

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

Safety Decals

⚠ WARNING

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

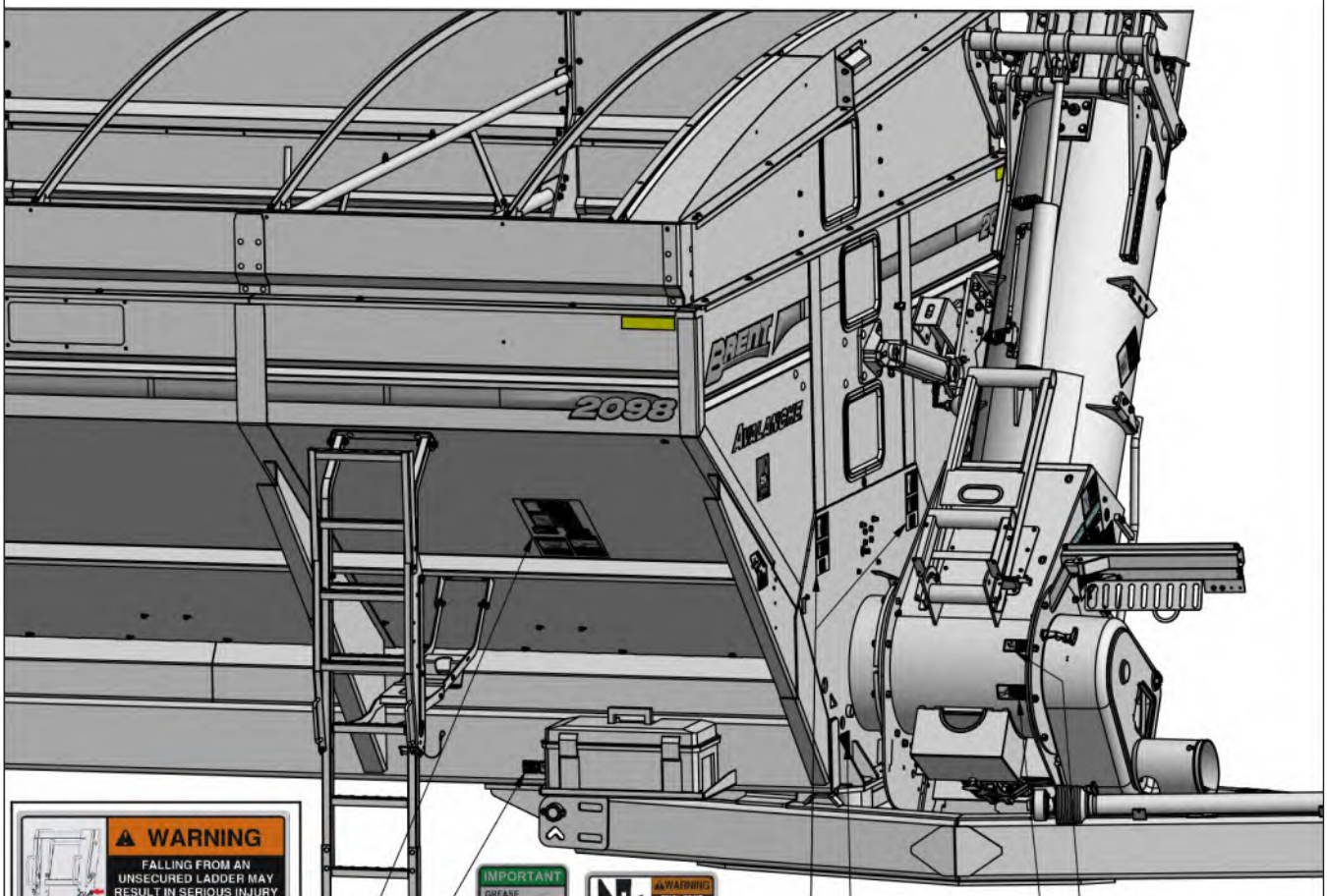


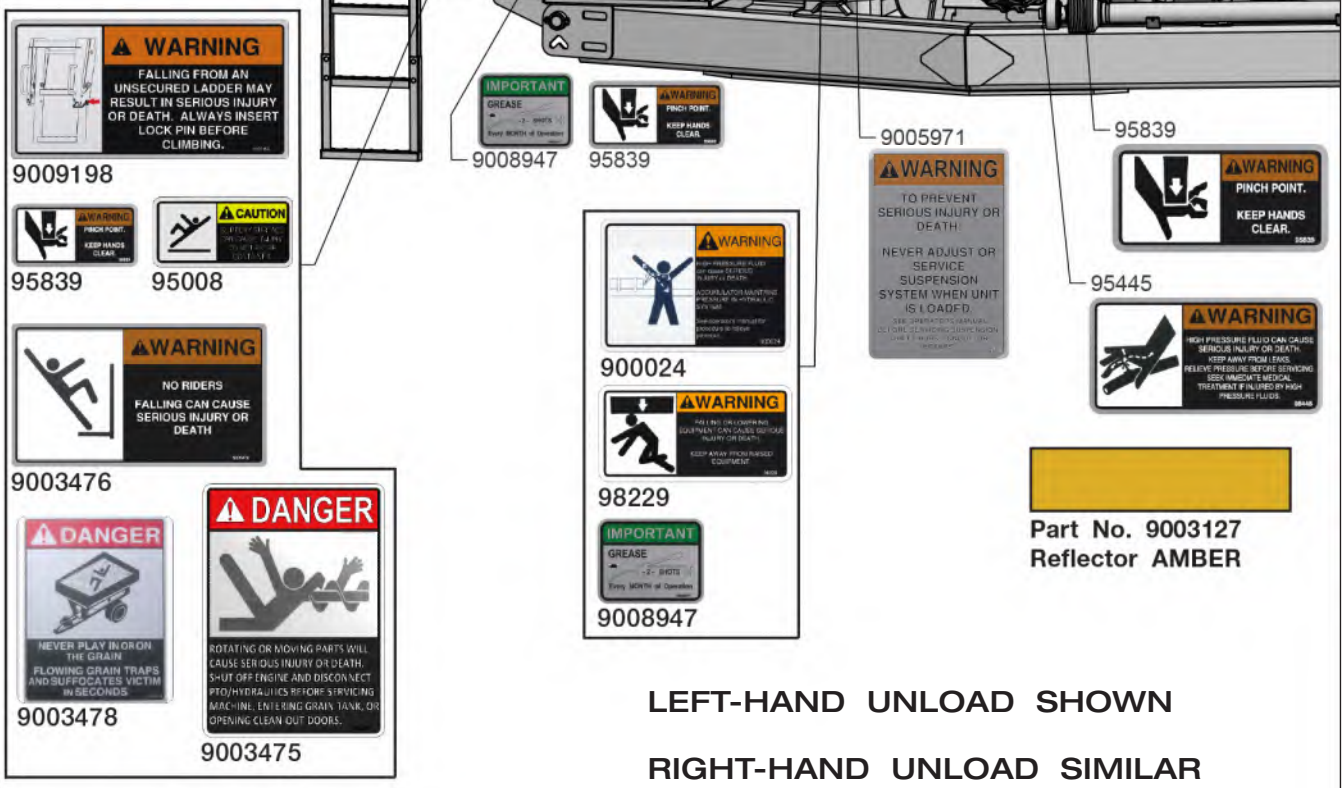
LEFT-HAND UNLOAD SHOWN

RIGHT-HAND UNLOAD SIMILAR

(Units with Brake Option)
9007162

Safety Decals (continued)

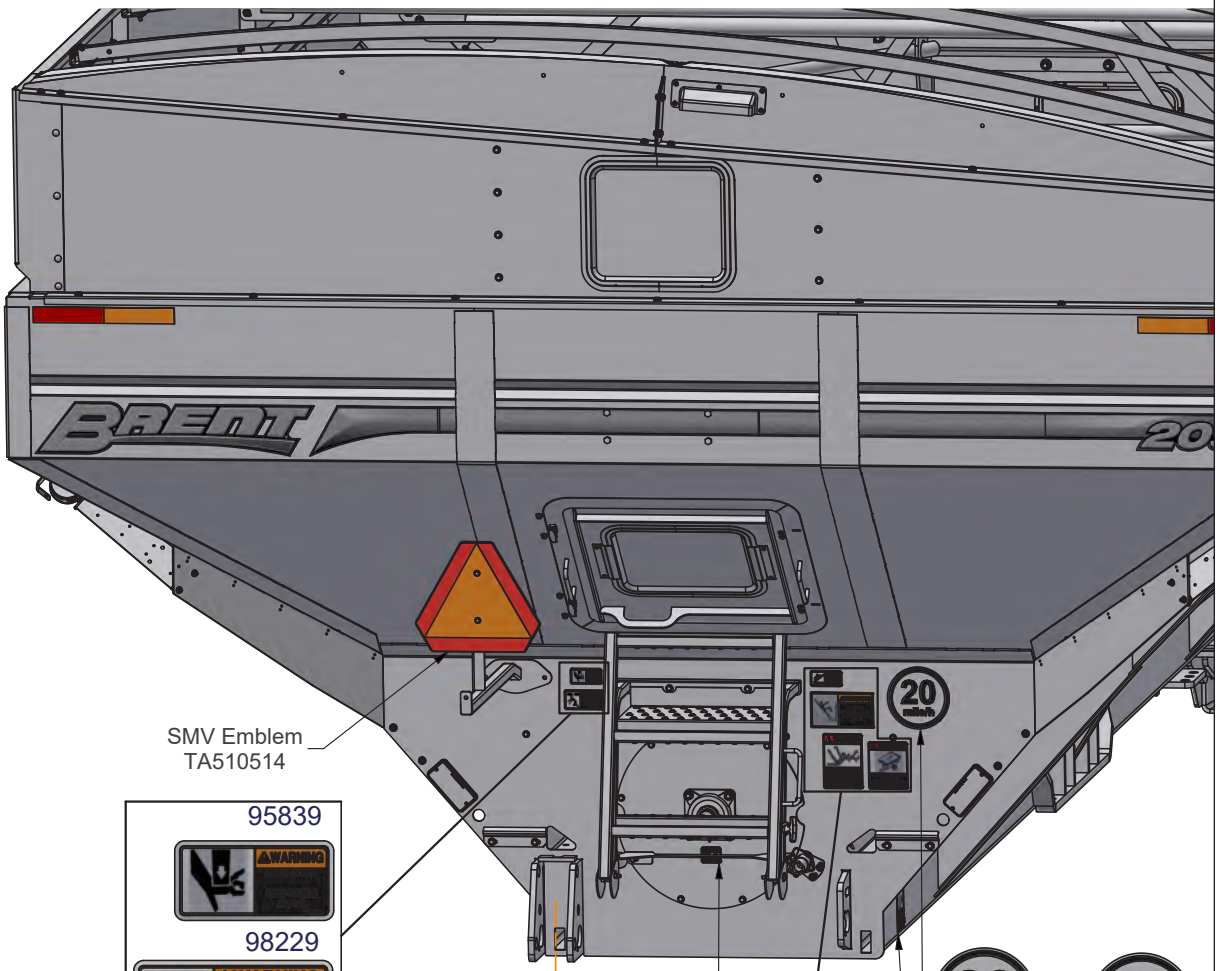




LEFT-HAND UNLOAD SHOWN

RIGHT-HAND UNLOAD SIMILAR

Safety Decals



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.

- This unit may be equipped with a hydraulic brake system. Pull only with a power source equipped with an ISO:5676 compatible hydraulic brake coupler. Failure to use correct coupler may result in brake lockup. Damage due to brake lockup is not covered under warranty.

Before Servicing or Operating

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

- Ensure that all applicable safety decals are installed and legible.
- When working around the implement, be careful not to be cut by sharp edges.
- To prevent personal injury or death while servicing, always ensure that there are people who remain outside the cart to assist the person working inside, and that all safe work-place practices are followed. There are restricted mobility and limited exit paths when working inside the implement.
- Secure drawbar pin with safety lock and lock tractor drawbar in fixed position.
- Explosive separation of a tire and rim can cause serious injury or death. Only properly trained personnel should attempt to service a tire and wheel assembly.
- Add sufficient ballast to tractor to maintain steering and braking control at all times. Do not exceed tractor's lift capacity or ballast capacity.
- Do not stand between towing vehicle and implement during hitching.

- Verify that all safety shields are in place and properly secured.

- Always make certain everyone and everything is clear of the machine before beginning operation.

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

- Verify transport chain capacity meets or exceeds weight capacity of all towed implements. 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 may not be equipped with brakes. Ensure that the towing vehicle has adequate weight and braking capacity to tow this unit.

During Transport

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

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. Only alterations described in this manual for overall length adjustment are allowed. Any other alteration is prohibited.
- Avoid excessively long hardware or exposed and protruding parts which can snag and cause entanglement.
- Lubricate the driveline as recommended in the MAINTENANCE section.
- Keep hoses, wiring, ropes, etc. from dangling too close to the driveline.
- Install driveline and shields according to recommended lengths and attaching methods with recommended hardware. The driveline shield should rotate independently a full rotation and telescope freely. The retaining chain must be secured to the implement safety shield.
- Adjust drawbar to height and length recommended in OPERATION section.
- Use caution when turning to avoid contact between tractor tires and driveline.
- Check the length of the telescoping members to insure the driveline will not bottom out or separate when turning and/or going over rough terrain. Refer to “PTO Shaft Length Adjustment” in MAINTENANCE section.
- Proper extended and collapsed lengths of the telescoping PTO shaft must be verified before first operation with each and every tractor. If the extended length of the PTO shaft is insufficient, it may become uncoupled during operation and cause serious injury or death from contact with uncontrolled flailing of PTO shaft assembly components. Refer to “PTO Shaft Length Adjustment” in MAINTENANCE section.

Pressurized Oil

- Relieve the hydraulic system of all pressure before adjusting or servicing. See tractor operator's 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.

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.

Notes

Section II
Set Up

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.
- ☐ Remove auger spout rotate shipping bracket.
- ☐ Remove PTO from shipping brackets, install onto gearbox input shaft and set in PTO holder. Remove PTO shipping brackets.
- ☐ For Right-Hand unload with water delivery, install transport rest (296086G/R/BM). See "Auger Transport Rest Set Up" in this section.
- ☐ Move upper ladder extension from shipping to operating position. See "Upper Ladder Extension" in this section.
- ☐ Move rear left-hand and right-hand light brackets from shipping to operating position. See "Move Lights to Operating Position" in this section.
- ☐ Torque wheel nuts as specified in MAINTENANCE section.
- ☐ Verify track has been aligned and is properly conditioned. (If applicable)
- ☐ Inflate tires to specified air pressure. (if applicable)
- ☐ Lubricate all grease fittings and check gearbox oil level.
- ☐ Inspect cleanout door assembly for 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.
- ☐ Verify PTO length, see "Verify Telescoping 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.
- ☐ If a rear drop hitch is used, ensure grain cart transport chain rating exceeds the total gross weight of all towed implements and attachments.
- ☐ If equipped with rear drop hitch and when multiple implements are in tow, install transport chain to header transport and torque hardware to specification. See "Transport Chain Connection" in OPERATION section.
- ☐ Paint all parts scratched in shipment.
- ☐ Test run the augers. See "Auger Operation" in OPERATION section.
- ☐ Check hydraulics for leaks and check hose routing.

Repositioning Tongue If Equipped With Optional Equalizer SP Tracks

⚠ WARNING

- **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 7,000 LBS. SPECIFIC LOAD RATINGS FOR INDIVIDUAL LOADS WILL BE GIVEN AT THE APPROPRIATE TIME IN THE INSTRUCTIONS.**

NOTE: If equipped with 50” x 172” Equalizer SP tracks, the tongue must be relocated from shipping position to operating position. Refer to this section for procedure.

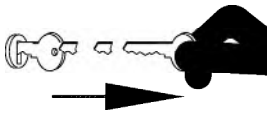
If your 2098 is not equipped with 50” x 172” Equalizer SP tracks, skip to “Driveline Install” in this section.

Repositioning Tongue (continued)
If Equipped With Optional Equalizer SP Tracks

IMPORTANT

- *Do not attempt to close horizontal cleanout doors with tongue in shipping position. Closing cleanout doors with tongue in shipping position will damage cleanout doors and components.*

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. Using a safe lifting device rated at a minimum of 7,000 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. 2-1). Rotate the support stands (276748B) downward. Reinstall the 1”-8UNC x 6” capscrew (9390-195) and 1”-8UNC elastic locknut (9398-026) (FIG. 2-2). Repeat process on the opposite side of the grain cart.

4. Remove and save the 1”-8UNC x 10” capscrews (9390-464), spring retainer plates (271687B), both urethane springs (9006456 and 9006457), and 1”-8UNC lock nuts (92199). (FIG. 2-3)

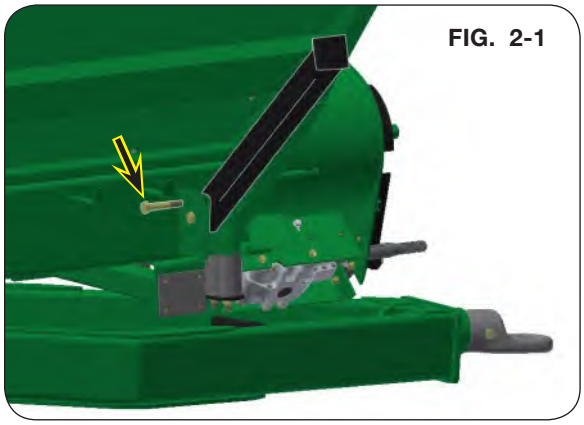


FIG. 2-1

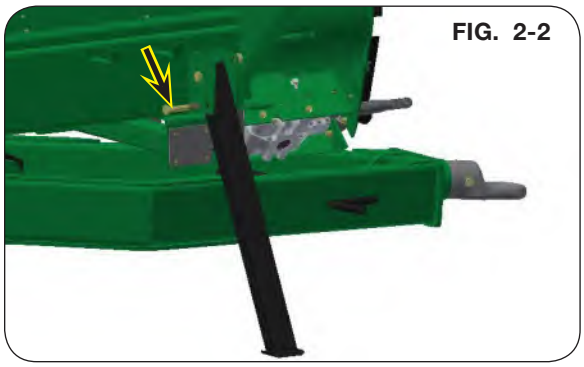


FIG. 2-2

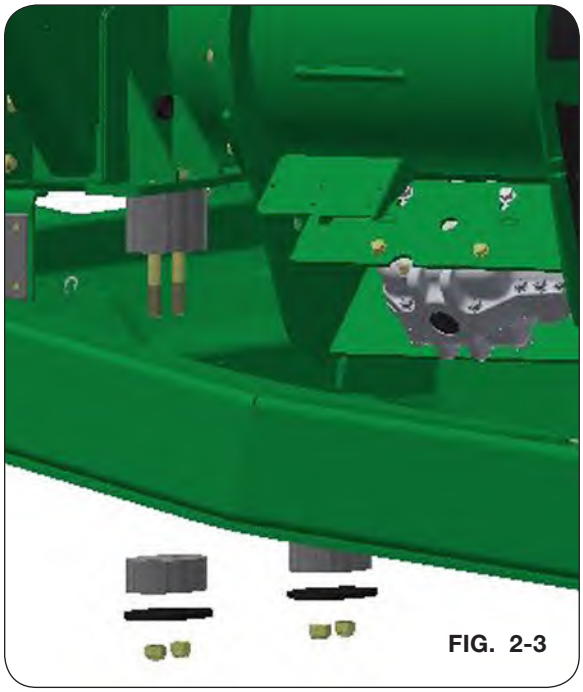


FIG. 2-3

Repositioning Tongue (continued)
If Equipped With Optional Equalizer SP Tracks

5. Support the tongue with safe lifting devices rated for a minimum of 2,000 lbs.

6. Remove and discard the 5/8”-11UNC serrated flange nuts (9502324), 5/8”-11UNC x 1 1/2” capscrews (9390-122), 5/8”-11UNC x 5” capscrews (9390-134), and spacer tube weldments (297261Y) from the tongue. (FIG. 2-4)

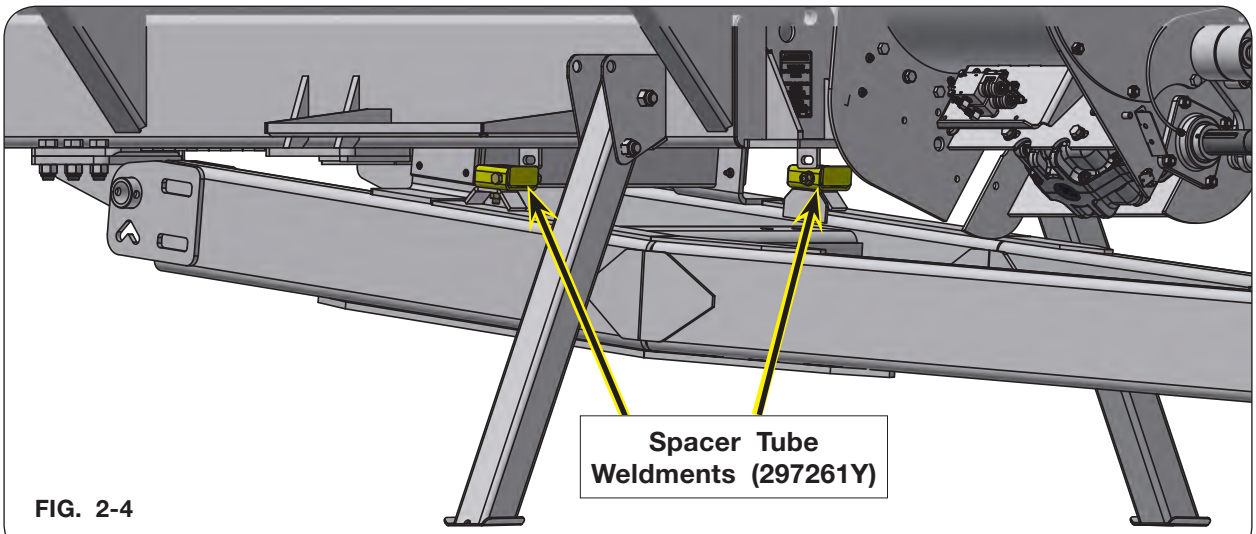


FIG. 2-4

7. 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. 2-5)

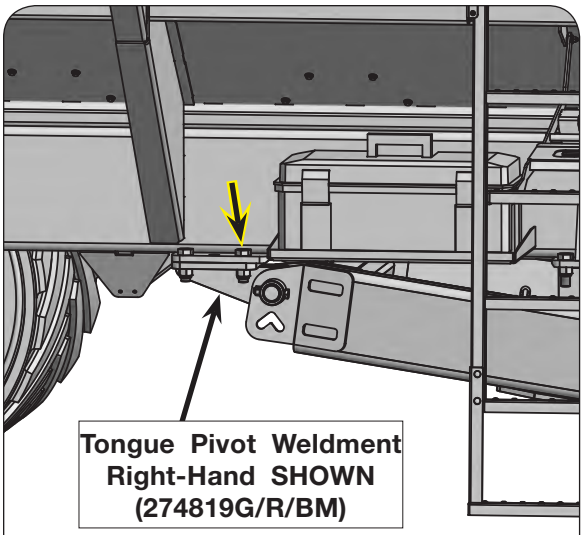


FIG. 2-5

Repositioning Tongue (continued)
If Equipped With Optional Equalizer SP Tracks

8. Using a safe lifting device rated at a minimum of 2,000 lbs., lower hitch side of the tongue so it clears the auger assembly. (FIG. 2-6)

9. Slide the tongue forward until the tongue pivots align with the forward mounting plate. (FIG. 2-6)

NOTE: Use only 1”-14UNS hardware on the tongue pivot and 1”-8UNC hardware on the urethane springs. Do not mix UNS hardware and UNC hardware.

10. Secure the tongue pivot weldment to the cart with 1”-14UNS x 3” capscrews (9390-409) and 1”-14UNS elastic lock nuts (9008441). (FIG. 2-6)

11. Torque 1” UNS hardware to 550 ft.-lbs. (FIG. 2-6)

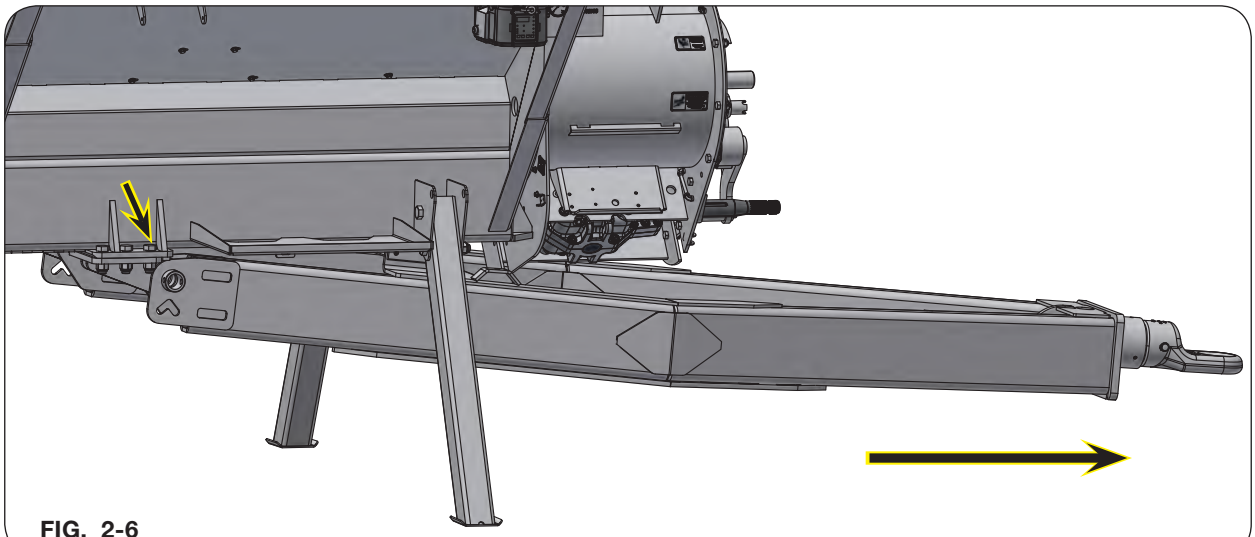


FIG. 2-6

Repositioning Tongue (continued)
If Equipped With Optional Equalizer SP Tracks

12. 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) (FIG. 2-7 & 2-8).

13. Tighten the 1" UNC hardware compresses the upper bumpers 1/4". (FIG. 2-7 & 2-8)

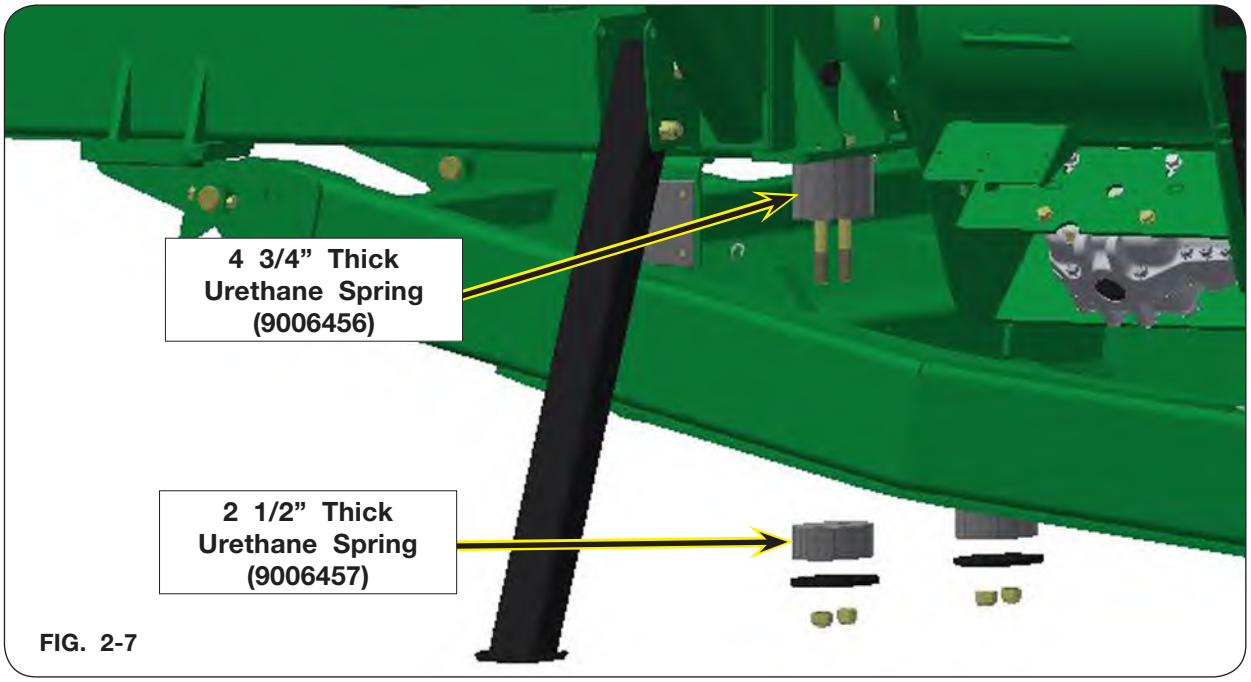


FIG. 2-7

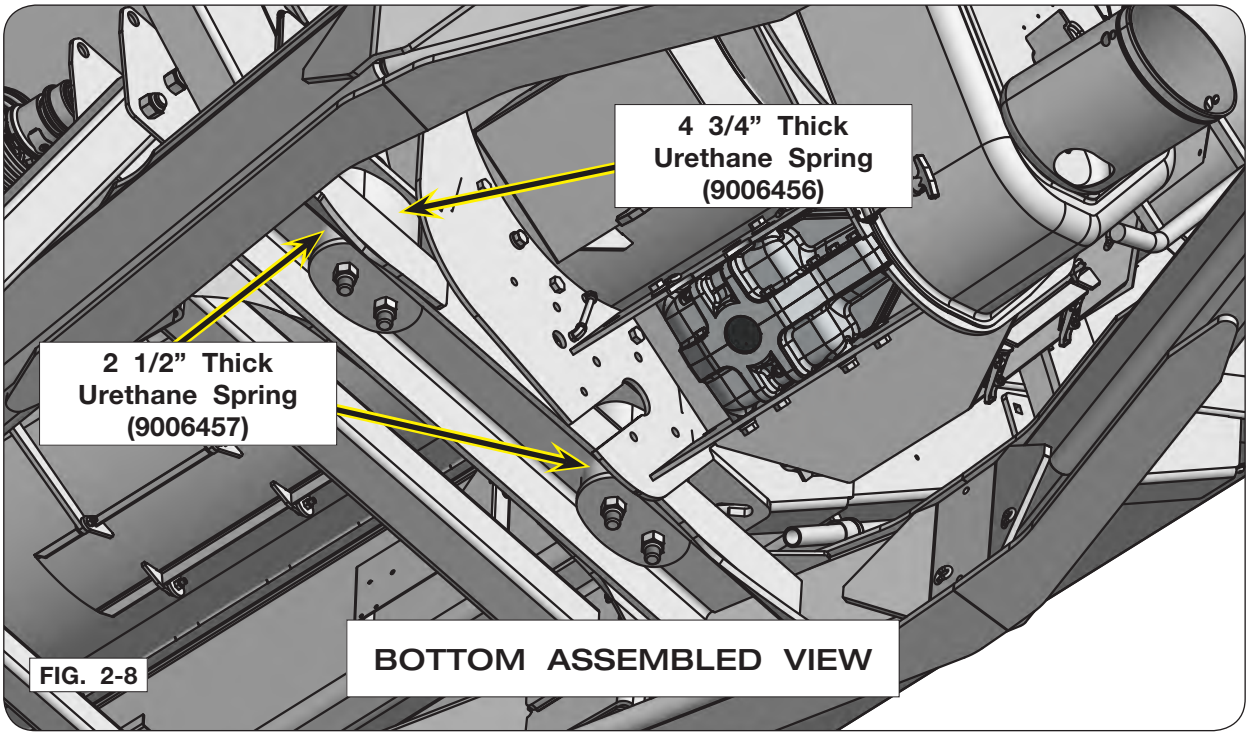


FIG. 2-8

Repositioning Tongue (continued)
If Equipped With Optional Equalizer SP Tracks

14. Use the tractor hydraulics to lower the jackstand and lift the support stands. (FIG. 2-9)

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

FIG. 2-9

15. Remove the 1”-8UNC x 6” capscrew (9390-195) and 1”-8UNC elastic locknut (9398-026). Rotate the support stands (276748B) 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. 2-10)

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

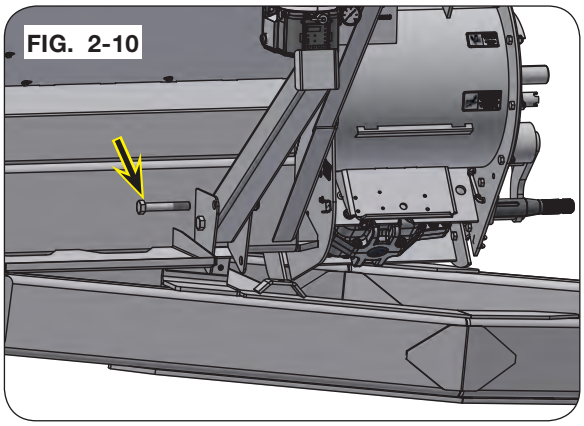


FIG. 2-10

Driveline Installation

Driveline Set Up

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

- **TO PREVENT PERSONAL INJURY OR DEATH WHILE SERVICING, 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.**
- **TIPPING OR MOVEMENT OF THE MACHINE CAN CAUSE SERIOUS INJURY OR DEATH. BE SURE 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 40,000 LBS. SPECIFIC LOAD RATINGS FOR INDIVIDUAL LOADS WILL BE GIVEN AT THE APPROPRIATE TIME IN THE INSTRUCTIONS.**

1. Remove PTO assembly from the tongue.
2. Attach PTO onto the gearbox input splined shaft and use the PTO holder as shown below. (FIG. 2-11)
3. Clean and grease the Implement Gearbox splined shaft. Gearbox shaft guard has access doors for installing and removing of driveline.

FIG. 2-11

Driveline Installation (continued)

Driveline Set Up (continued)

4. Remove the PTO brackets on the tongue before operating the auger pivot or when connecting the driveline assembly to the tractor. Keep PTO brackets for seasonal storage. Refer to "Seasonal Storage" in MAINTENANCE section. (FIG. 2-12)

IMPORTANT

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

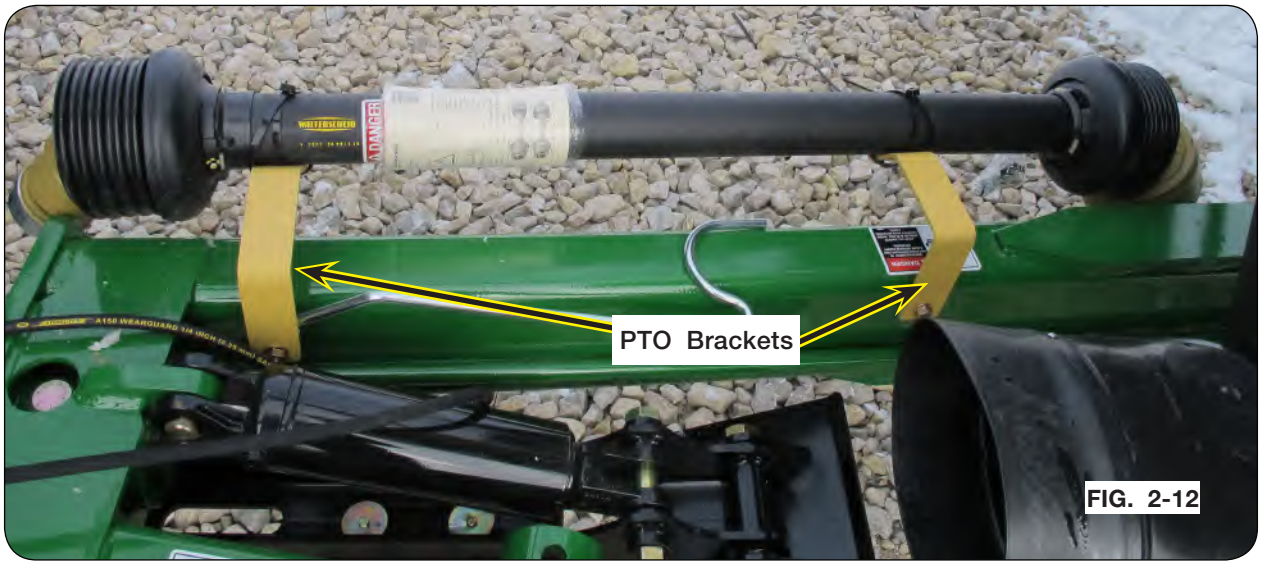
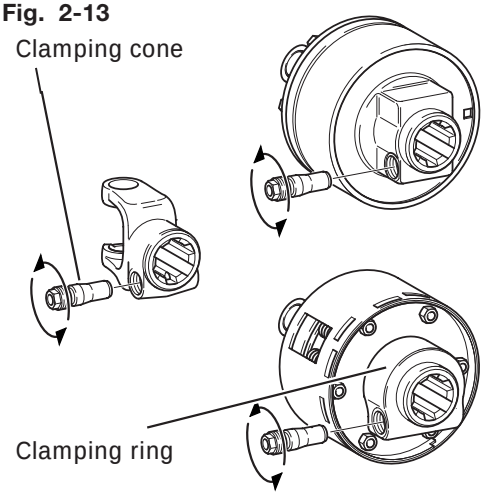


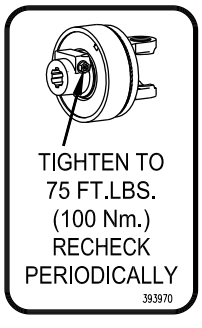
FIG. 2-12

5. Engage PTO drive shaft onto implement PTO shaft until retaining groove of implement PTO shaft aligns with clamping cone hole. Insert clamping cone into threaded hole, hand tighten. Torque cone to 75 ft.-lb. (Fig. 2-13)

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

Fig. 2-13





Transport Chain - For SN B44430100 & Higher

⚠ CAUTION

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

The standard transport chain is sized for towing an empty grain cart only. If the grain cart has the rear hitch installed, the grain cart must be equipped with the PF1238-19 61,000 LBS. chain. (FIG. 2-14)

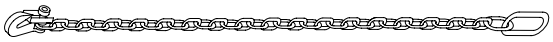


FIG. 2-14

When an implement is towed behind a grain cart, the transport chain on the grain cart must be sized accordingly. See tractor operator's manual for proper attachment and contact your Unverferth dealer for more information.

The rear hitch is rated to tow an implement weighing no more than 20,000 lbs.

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.**

7-Pin Connection & Auger Pivot Slide Wood Removal

1. Close the vertical cleanout door.
2. Remove the PTO assembly from the tongue. Refer to "Driveline Install" in this section.
3. Hitch cart to tractor. Refer to "Hitching to Tractor" in the OPERATION section.
4. Park the empty cart on a firm, level surface. Block the machine to keep it from moving. Set the tractor's parking brake. Leave tractor on throughout procedure.
5. Attach the 7-pin connector to tractor. (FIG. 2-15)

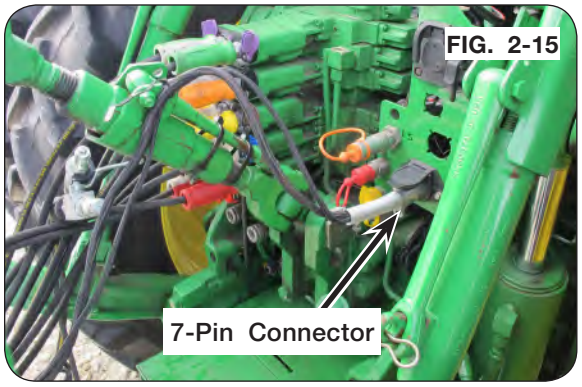
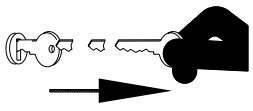


FIG. 2-15

NOTE: Auger hydraulic functions will not operate without power and ground via the 7-pin connector.

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



8. Remove and discard the wood block from the auger pivot. (FIG. 2-16)
9. Restart engine and cycle auger pivot all the way up and down to ensure movement is free.
10. Check all hoses and cylinders for signs of leakage. Hoses should not be kinked, twisted or rubbing against sharp edges. Re-route hoses as necessary. Refer to SAFETY section for additional information.

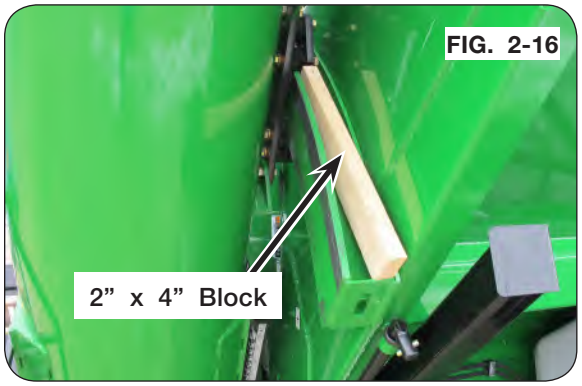


FIG. 2-16

Auger Set Up (continued)

Auger Spout Cylinder Stop Removal

1. Extend spout cylinder before removing the shipping stop. (Figs. 2-17 and 2-18)

2. Support spout to prevent movement while removing the shipping stop from the spout tilt cylinder. (Figs. 2-17 and 2-18)

IMPORTANT

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

Fig. 2-17

Fig. 2-18

Auger Spout Rotate Shipping Bracket Removal

Support spout to prevent movement while removing the auger spout rotate shipping bracket, before operating the spout. (Fig. 2-19)

IMPORTANT

- *Shipping bracket must be removed before operating the auger spout rotate. Failure to remove bracket will result in damage to the hydraulic motor and spout.*

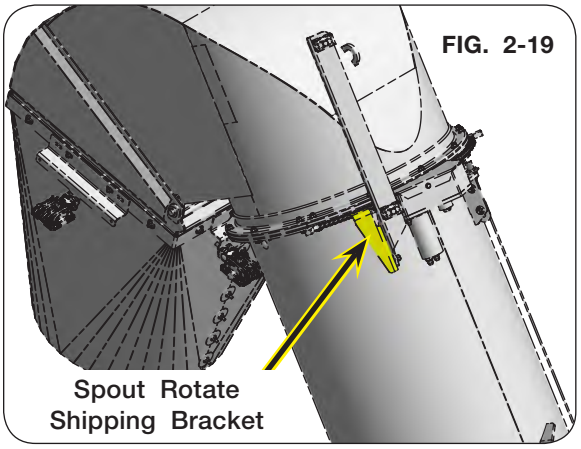


FIG. 2-19

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.**

IMPORTANT

- *Upper auger must be in Road Transport Position for public road travel.*
- *Position vertical auger with discharge hood within hopper width for public road travel.*

Auger transport rest bracket can be adjusted in multiple positions:

Shipping Position


FIG. 2-20


FIG. 2-21

Road Transport Position


FIG. 2-22


FIG. 2-23

Field Rest Position


FIG. 2-24


FIG. 2-25

Auger Set Up (continued)

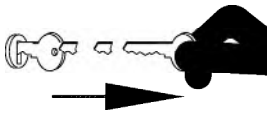
Auger Transport Rest Set Up

IMPORTANT

- *For Right-Hand unload with water delivery, do not fold auger to shipping position. Folding auger to shipping position may damage auger, spout and water delivery. Transport rest is ONLY for use on the road.*

1. Hitch cart to tractor. Refer to "Hitching to Tractor" in the OPERATION section.

2. Park the empty cart on a firm, level surface. Block the machine to keep it from moving. Set the tractor's parking brake. Unfold auger to the unload position. Shut-off tractor's engine and remove the ignition key.



3. Remove 5/16"-18UNC x 1" capscrews (9390-030) and 5/16"-18UNC locknuts (901527) from transport rest (296086G/R/BM) and field rest (295556G/R/BM). Keep 5/16" hardware. (FIG. 2-26)

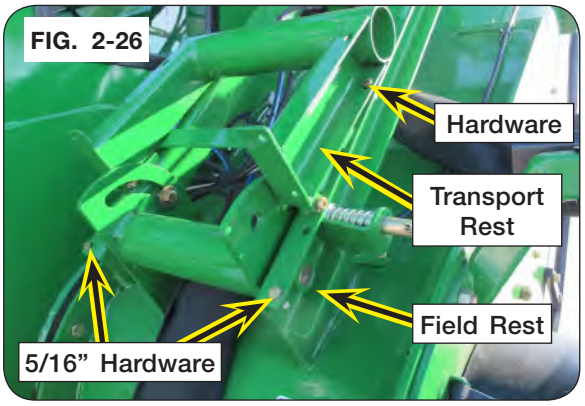
4. Pivot transport rest 90° from field rest. (FIG. 2-27)

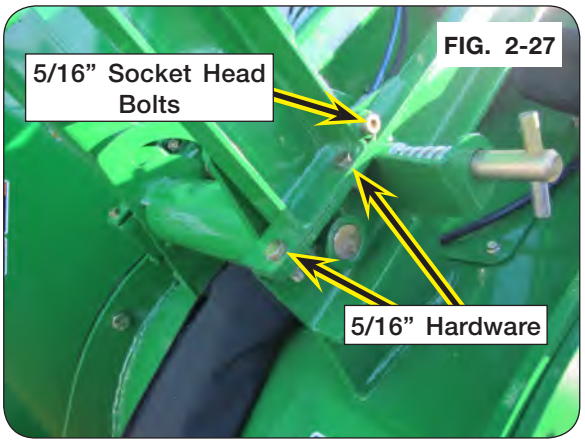
5. Using previously removed 5/16" hardware and 5/16"-18UNC x 1" socket head bolts (9007843) and 5/16"-18UNC locknuts (901527), attach transport rest to field rest. (FIG. 2-27)

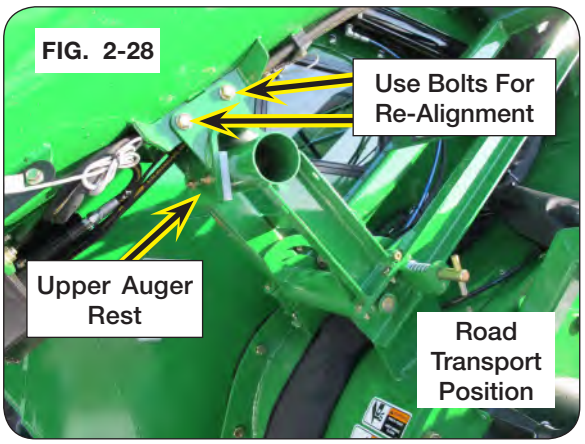
6. Torque 5/16" hardware to 17 ft.-lbs.

NOTE: To change transport positions, refer to "Auger Operation" in the OPERATION section.

7. Slowly fold auger to test alignment of field and transport rest brackets. Adjust alignment bolts as needed. Fig 2-28







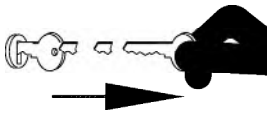
Hydraulic Jack Set Up

Install Hydraulic Jack

WARNING

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

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 and disconnect the PTO shaft from the tractor.



2. Assemble hoses (9006068) and fittings to cylinder (9009047) as shown in figures 2-29 and 2-30. 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.

For SN B44430100 & Higher

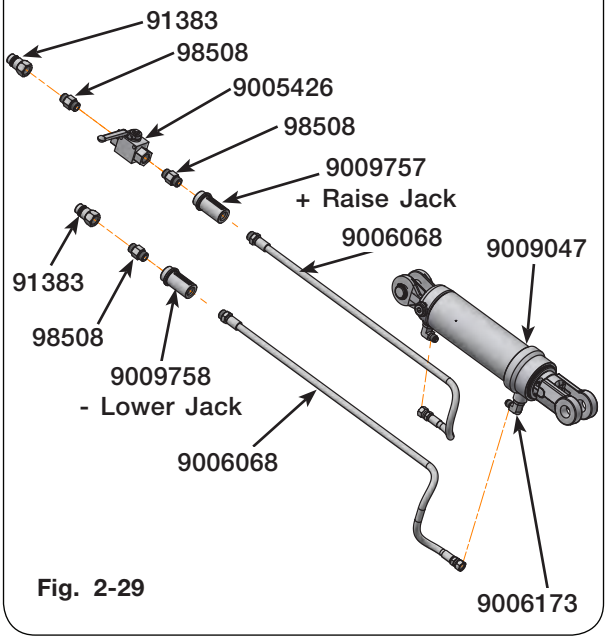


Fig. 2-29

For SN B44430099 & Lower

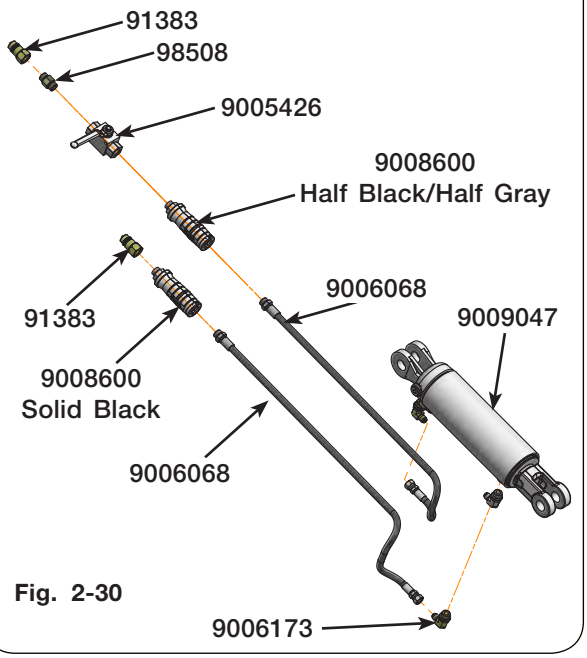


Fig. 2-30

Hydraulic Jack Set Up (continued)

Install Hydraulic Jack (continued)

⚠ WARNING

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

3. Assemble the cylinder (9009047) and jack foot (271723B) to the jack weldment (271712B) as shown in figure 2-31 using 1”-8UNC x 7” capscrews (9390-197) and 1”-8UNC locknuts (92199).

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

4. Tighten 1” hardware on jack leg weldment and allow the cylinder and jack foot to freely pivot. (Fig. 2-31)

5. Attach mounting bracket (273808B) to jack leg weldment (271712B) using 1”-8UNC x 7” capscrew (9390-197) and 1”-8UNC locknut (92199), before mounting to the tongue. (Fig. 2-32)

6. Tighten 1” hardware on jack leg weldment and allow the joint to pivot. (Fig. 2-32)

7. 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. 2-32)

8. Torque 7/8” hardware to 330 ft.-lbs. (Fig. 2-32)

9. 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. 2-33.

NOTE: Refer to “Optional Hydraulic Jack Usage” in the OPERATION section for additional information.

10. Purge air from system. See “Purge Hydraulic System” in the MAINTENANCE section for procedure.

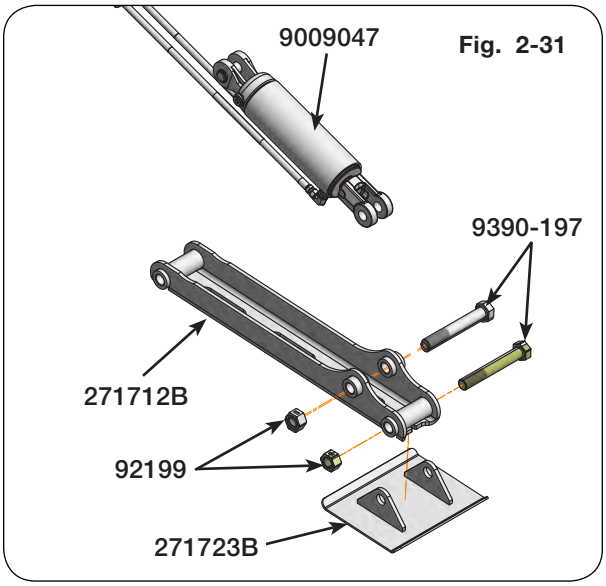


Fig. 2-31

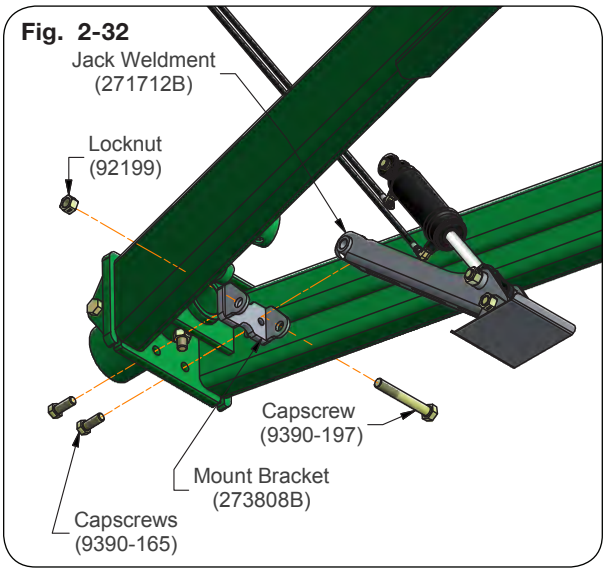


Fig. 2-32

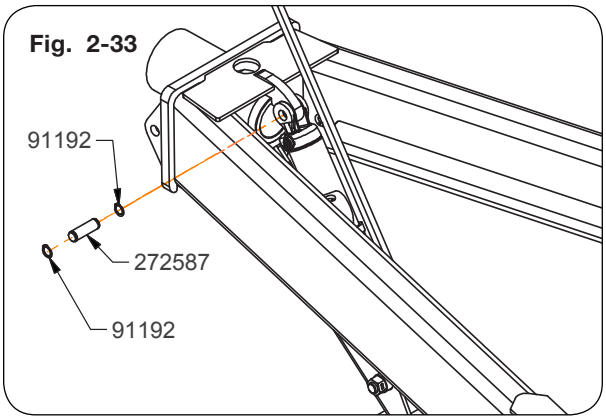


Fig. 2-33

Upper Ladder Extension

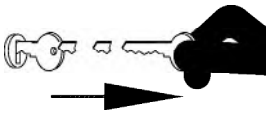
⚠ WARNING

- **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 WHILE SERVCING, ALWAYS ENSURE THAT THERE ARE PEOPLE WHO REMAIN OUTSIDE THE CART TO ASSIST THE PERSON WORKING INSIDE, AND THAT ALL SAFE WORKPLACE PRACTICES ARE FOLLOWED. THERE ARE RESTRICTED MOBILITY AND LIMITED EXIT PATHS WHEN WORKING INSIDE THE IMPLEMENT.**
- **NEVER ENTER A CART CONTAINING GRAIN. FLOWING GRAIN TRAPS AND SUFFOCATES VICTIMS IN SECONDS.**

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

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

1. 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 and disconnect the PTO shaft from the tractor.
2. 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. 2-34)
3. Using hardware from step 2, attach upper ladder extension to the higher set of holes to be in operating position. (Fig. 2-34, Fig. 2-35 and 2-36)
4. Torque hardware to 17 ft.-lbs.



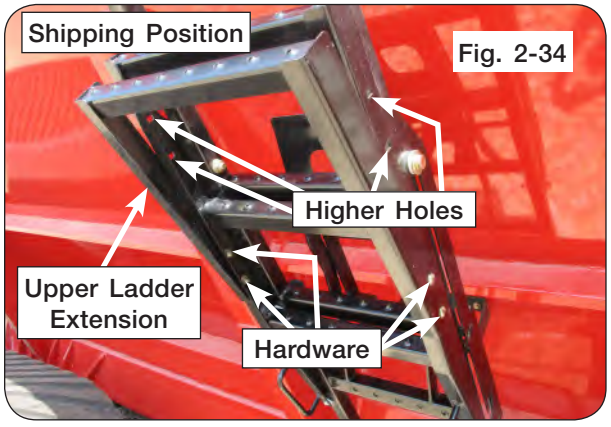


Fig. 2-34

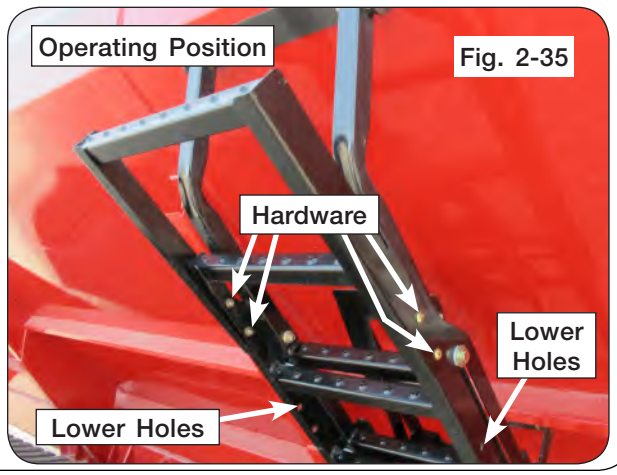


Fig. 2-35

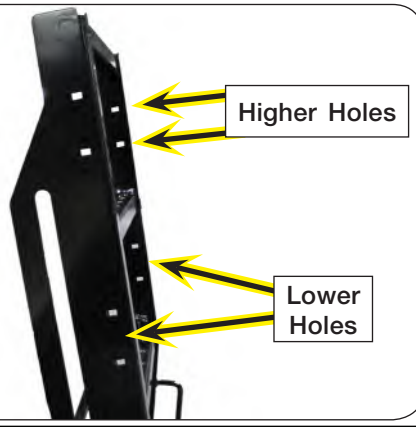


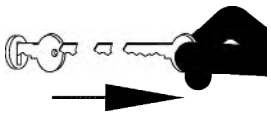
FIG. 2-36

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 and disconnect the PTO shaft from the tractor.



2. Remove upper light arm capscrew. (Fig 2-37)
3. Loosen upper light arm capscrew and rotate the light arm downward.
4. Reinstall the upper light arm capscrew.
5. Torque both the upper and lower light arm capscrews to 17 ft.-lbs. (FIG. 2-38)
6. Repeat process for the opposite side of the grain cart.

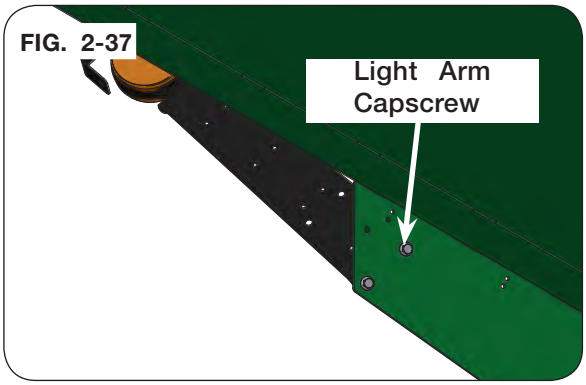


FIG. 2-37

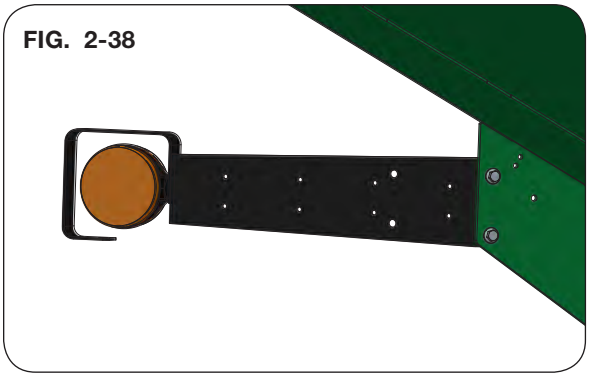


FIG. 2-38

Wheel & Tire Set Up

Tire Pressure

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

Wheel Nuts

⚠ WARNING

- **FALLING OBJECTS CAN CAUSE SERIOUS INJURY OR DEATH. DO NOT WORK UNDER THE MACHINE AT ANY TIME WHILE BEING HOISTED. BE SURE ALL LIFTING DEVICES AND SUPPORTS ARE RATED FOR THE LOADS BEING HOISTED. THESE ASSEMBLY INSTRUCTIONS WILL REQUIRE SAFE LIFTING DEVICES UP TO 40,000 LBS. SPECIFIC LOAD RATINGS FOR INDIVIDUAL LOADS WILL BE GIVEN AT THE APPROPRIATE TIME IN THE INSTRUCTIONS.**
- **EYE PROTECTION AND OTHER APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT MUST BE WORN WHILE SERVICING IMPLEMENT.**
- **KEEP HANDS CLEAR OF PINCH POINT AREAS.**
- **TIPPING OR MOVEMENT OF THE MACHINE CAN CAUSE SERIOUS INJURY OR DEATH. BE SURE MACHINE IS SECURELY BLOCKED.**

⚠ CAUTION

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

IMPORTANT

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

Wheel nuts must be torqued to specification. Refer to MAINTENANCE section for proper wheel nut torque.

The wheel dish will put the tires to the narrowest or widest position.

Steering Tandem Switch Box Connection

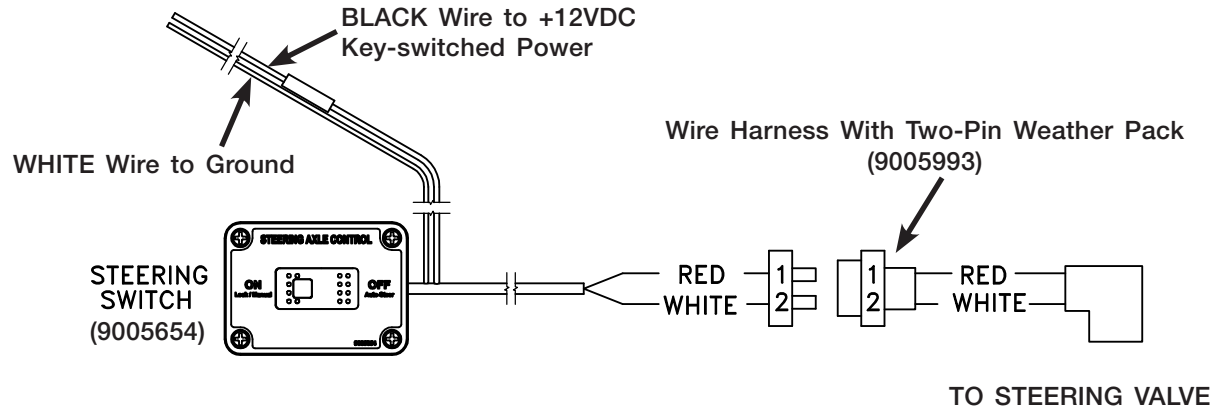
Connect the steering tandem "ON/OFF" switch box to the wire harness with two-pin weather pack connector located just behind grain cart 7-pin male receptacle. (Fig. 2-39)

NOTE: If an extension is needed for wire harness with two-pin weather pack (9005993), see "Electrical Components" in the PARTS section of manual.

Route switch and harness into tractor cab. From the switch box harness, connect the WHITE wire to ground and BLACK wire to +12VDC key-switched power source inside the tractor cab. Ensure "ON/OFF switch is "ON". (Fig. 2-39)

Fig. 2-39

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



Steering Tandem Set Up

The unit may have been shipped with axle suspension lowered to decrease shipping height. The unit will need to have hydraulic fluid added to raise the unit to operating height. Measure suspension to set cart height. If using tractor for filling or removing fluid from the suspension, always monitor supply fluid level before, at intervals during and after the procedure. Only adjust or service suspension system with empty cart.

Axle Suspension System Set Up

IMPORTANT

- *The following procedure is only to be performed when the cart is empty.*

1. Park the unit on a firm, level surface. Block the machine to keep it from moving. Set the vehicle parking brake.
2. Make sure the auger is folded in the transport position and the grain cart is empty.
3. Attach the tensioner hose assembly to the tractor couplers. Next, attach the single end to the valve on top of the left hand front suspension cylinder. (Fig. 2-40)
4. Open valve atop of the front suspension cylinders. (Fig. 2-40)

NOTE: Handle 90° to valve is closed.

5. Use the tractor valve to raise the left front and left rear cylinders. Cycle through to remove air out of the system.
6. Adjust stroke until the average distance between the front and back cylinders is 7 3/16 inches. Measuring from gland of cylinder body to rod end plate edge. (Fig. 2-41)
7. Close valve on left, front cylinder by turning the handle 90° to the valve.
8. Move single end of hose assembly from left front cylinder valve to right front cylinder valve.
9. Repeat steps 4 through 7 for right side of axle suspension.

Fig. 2-40

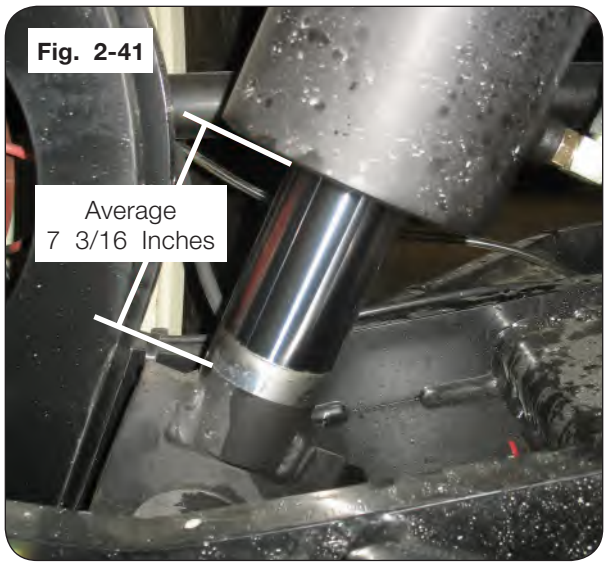


Fig. 2-41

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. 2-42)

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

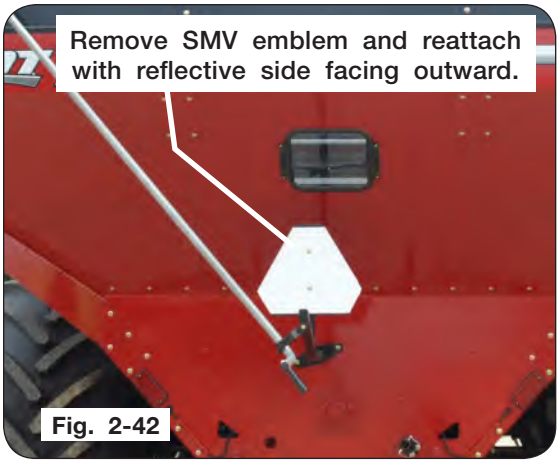


Fig. 2-42

Ensure the front and rear SIS decals are clean and visible after shipping. (FIG. 2-43)

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.

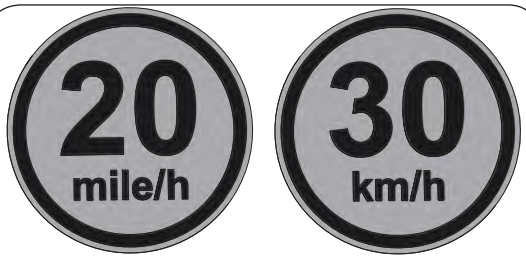


Fig. 2-43

Video System (Optional)

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

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. 2-44 and 2-45)

Rotate the handle downwards to engage tensioner. (Fig. 2-45)

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

Fig. 2-44

Handle up is in disengaged position.

Fig. 2-45

Handle down is in engaged position.

Operational Check

⚠ WARNING

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

IMPORTANT

- *Before running the auger pivot, the vertical auger 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. Retrieve lynch pin from toolbox for the horizontal clean-out doors.
2. Close clean-out doors. Refer to "Vertical & Horizontal Clean-Out Door Operation" in the OPERATION section.

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. Steering (if applicable)
11. Brakes (if applicable)
12. Video System Camera (if applicable)
13. Scale (if applicable)

Fig. 2-46

Fig. 2-47

Fig. 2-48

Notes

Section III
Operation

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 wheel nuts and check tire pressure as specified in MAINTENANCE section.
- ❑ Verify track has been aligned and is properly conditioned. (If applicable)
- ❑ Verify track grease pump reservoir is full. Refer to track auto grease pump instruction sheet (282986) for setting information.
- ❑ Inflate tires to specified air pressure. (if applicable)
- ❑ Lubricate all grease fittings and check gearbox oil level.
- ❑ Inspect cleanout door assembly for play or movement, refer to "Vertical & Horizontal Clean-Out Door Operation" in the OPERATION section.
- ❑ Test operation and functionality of work lights, flow door, flow door indicator, auger fold, auger pivot, spout rotate, spout tilt, hydraulic jack stand, tarp, rear access door, 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 all 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 and length. See "Rear Drop Hitch (Optional)" in this section.
- ❑ Verify PTO length, see "Verify Telescoping 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.

On carts equipped with optional hydraulic brake system, make sure the tractor is equipped with components necessary for operating the cart's hydraulic brakes. This cart is compatible with ISO:5676 brake systems. Consult your tractors Operator's Manual or your tractor dealer for appropriate brake control system.

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.

Read the tractor Operator's Manual for more information on tractor drawbar distance.

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

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

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

NOTE: The grain cart comes with a CAT 5 hitch utilizing a 2 3/4" dia. pin. A CAT 4 tongue is available for a 2" dia. pin. Bushings are not recommended for this cart.

⚠ 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.**

Hitch pin sizes for each Category to properly identify drawbar category.

Category 4	2" Dia. (50 mm)
Category 5	2-3/4 Dia. (70 mm)

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

Preparing Cart

Perform the service checks 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) - For SN B44430100 & Higher

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

Preparing Cart (continued)

Auger

Inspect auger for damage and wear.

Hydraulic System

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

Optional Hydraulic Brake System

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

Ensure brakes are bled before use. See "Bleeding Procedure For Braking System (Optional)" in the MAINTENANCE section for additional information.

The optional hydraulic brake system is designed to comply with ISO:5676 compatible hydraulic brake coupler.

IMPORTANT

- *Failure to use correct coupler or incorrect plumbing may result in brake lockup. Damage due to brake lockup is not covered under warranty.*

Tires/Wheels

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

⚠ CAUTION

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

IMPORTANT

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

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

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" diameter hitch pin (CAT 5) must only be used with a clevis-type tractor drawbar.

NOTE: CAT 4 tongue is available for a 2" dia. pin. Contact your dealer for a CAT 4 tongue/ hitch, if required.

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

NOTE: Bushings are not recommended for this cart.

- Lock tractor drawbar in center position.
- Refer to the tractor Operator's Manual for information on tractor drawbar length.

⚠ WARNING

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

- Place wear shoe (281898-CAT 4; 281899-CAT 5) between tractor hitch and grain cart hitch. (Figure 3-2)
- After inserting drawbar pin, secure drawbar pin with a locking device to prevent uncoupling during use.

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

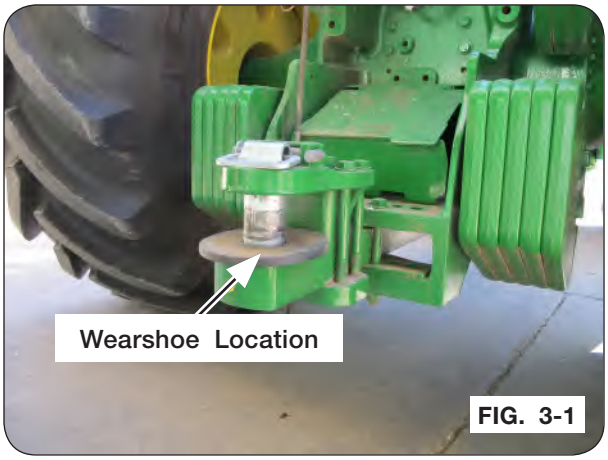


FIG. 3-1

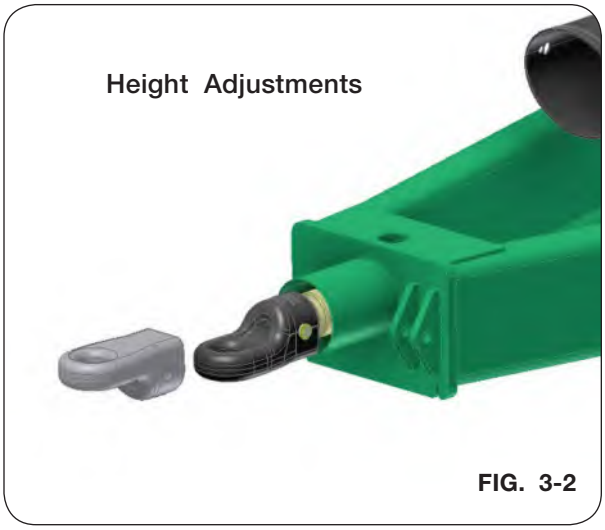


FIG. 3-2

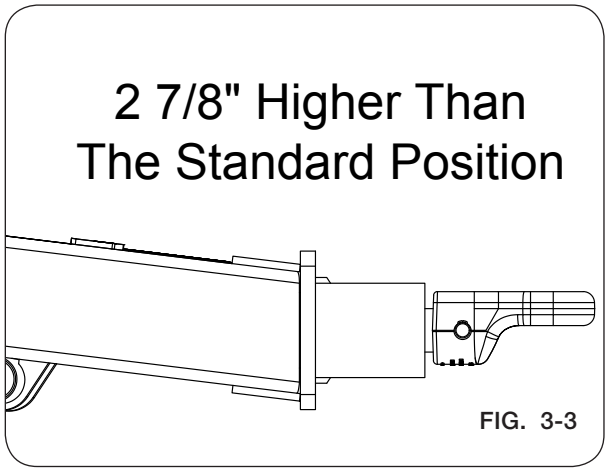


FIG. 3-3

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.**
- **OPENING OF HYDRAULIC VALVE CAN CAUSE SUDDEN MACHINE MOVEMENT. KEEP CLEAR OF MACHINE WHEN OPENING VALVE.**

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)*

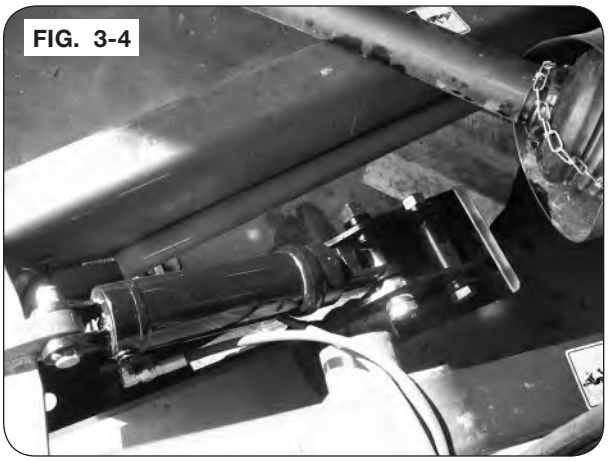


FIG. 3-4

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.

(Continued on next page)

Hitching to Tractor (continued)

1. Remove hoses from storage slots.
2. Attach jack cylinder hose couplers to tractor.
3. Open valve to allow hydraulic flow.
4. Use tractor hydraulic 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.

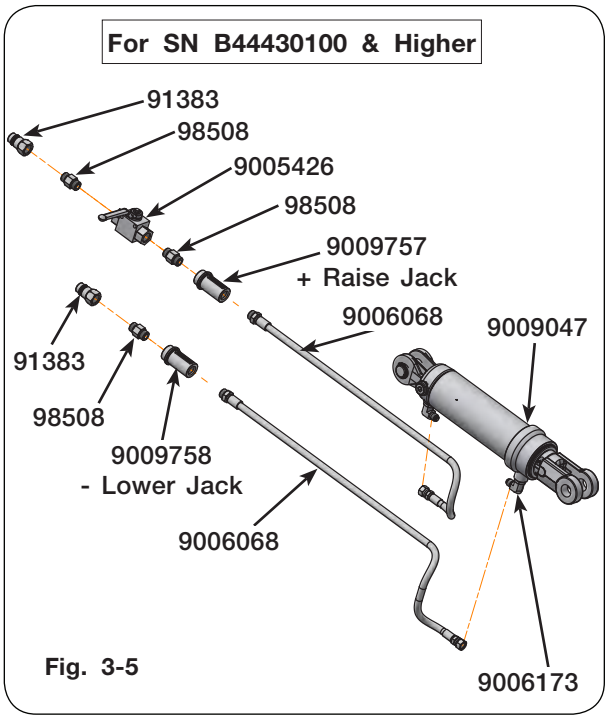


Fig. 3-5

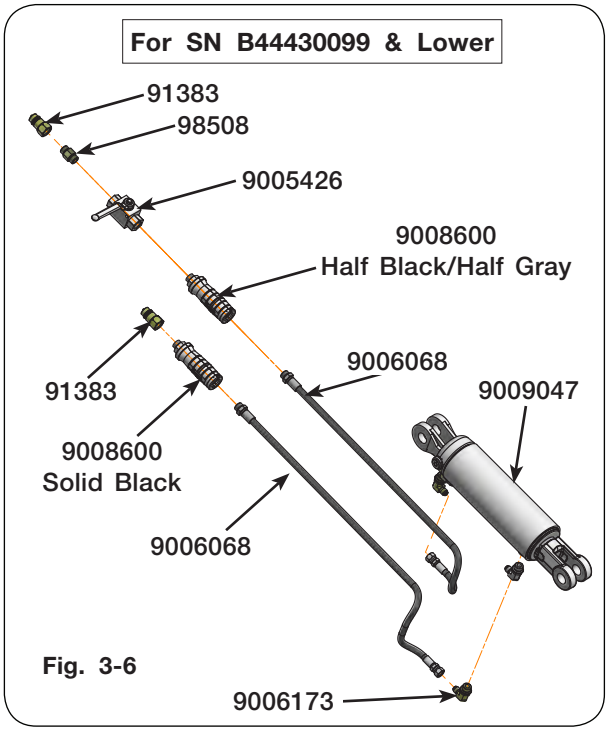


Fig. 3-6

Hitching to Tractor (continued)

Transport Chain Connection

⚠ CAUTION

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

The standard transport chain is sized for towing an empty grain cart only. If the grain cart has the rear hitch installed, the grain cart must be equipped with the PF1238-19 61,000 LBS. chain.

See tractor operator's manual for proper chain attachment. Fig. 3-7 shows how the transport chain must be installed between the implement and towing vehicle.

Fig. 3-7

Hitching to Tractor (continued)

Hydraulic Connections

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

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

NOTE: For SN B44430100 & higher, the (+ extend port) and (- retract port) is indicated on the hose grip. For SN B44430099 & lower, the half gray color hose grip is for the retract port.

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

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

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

Optional Implement Brake Connection

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

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. (FIGS. 3-8 & 3-9)

Fig. 3-8

For SN B44430100 & Higher

Fig. 3-9

For SN B44430099 & Lower

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 Brent dealer (Part number 92824). (FIG. 3-10)

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

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

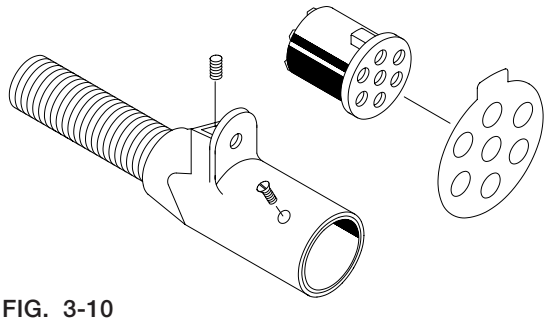


FIG. 3-10

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

Hitching to Tractor (continued)

Towing

Even if the cart is equipped with brakes, ensure that the towing vehicle has adequate weight and braking capacity to tow this grain cart and up to 20,000 lbs. on the optional towed header transport. See the towing vehicle manual for towing capacity. Never tow a loaded grain cart over public roads.

IMPORTANT

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

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

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

The PTO drive shaft must be properly attached to the tractor during transport. See "Coupling The Cut-Out Clutch" in SET UP section and "PTO Shaft and Clutch" in MAINTENANCE section before connecting the PTO drive shaft to the tractor.

If equipped with Equalizer SP tracks, support stand must not be used for transport.

Secure transport chain to tractor before towing.

Carts equipped with brakes require a tractor with rear hydraulic brake ports. If your tractor is not equipped with rear hydraulic brake ports, consult your dealer.

Verify brake operation/release 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 with discharge hood within hopper width for public road travel.*

Regulate speed to road conditions and maintain complete control.

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

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

Always have auger folded into road transport position when auger is not in use. (Fig. 3-11)

FIG. 3-11 Road Transport Position Shown

Rear Drop Hitch (Optional) For SN ~~B44410100~~ & Higher

Rear Hitch Connection

IMPORTANT

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

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

1. Verify the grain cart transport chain capacity is sized for both an empty grain cart and the rear hitch capacity of 20,000 lbs. Do not proceed until the grain cart transport chain meets or exceeds the combined implement road transport weight.

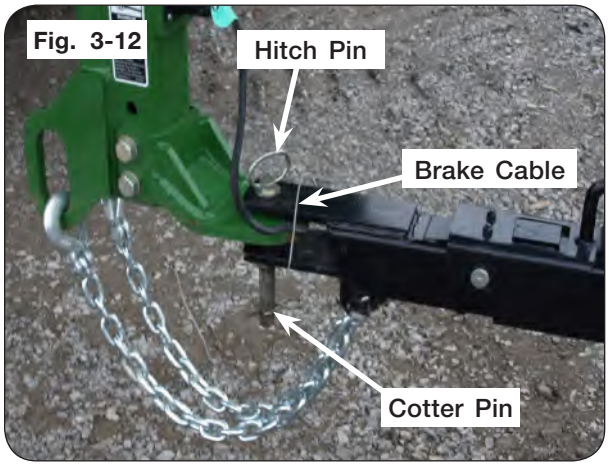
NOTE: Refer to "Front End Components" in PARTS section for transport chain part number and/or weight capacity.

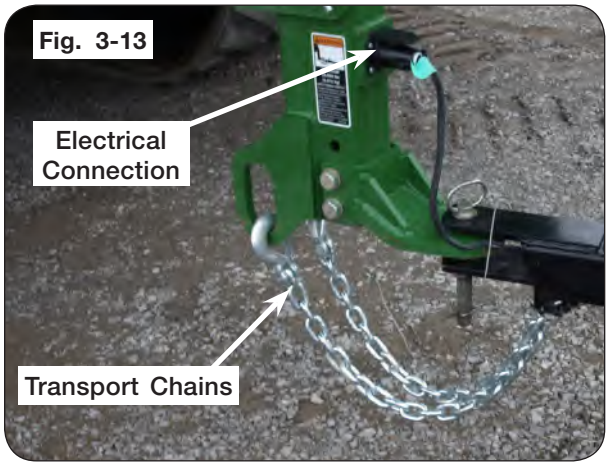
2. Move rear drop hitch to the operation position, then connect the tongue of the header transport to the rear drop hitch. (Fig. 3-12)

3. Using 1 1/2" dia. pivot pin (9009656), insert the hitch pin and cotter pin. (Fig. 3-12)

4. If header transport has brakes, attach the brake cable to the rear drop hitch. (Fig. 3-12)

5. Connect transport chains and electrical connection of the header transport to the rear drop hitch. (Fig. 3-13)





Rear Drop Hitch (Optional) (continued)
For SN B44410100 & Higher

Transport Chain Connection

CAUTION

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

The standard transport chain is sized for towing an empty grain cart only. If the grain cart has the rear hitch installed, the grain cart must be equipped with the PF1238-19 61,000 LBS. chain.

Fig. 3-14 shows how the transport chain must be installed between header transport and rear drop hitch.

NOTE: The optional rear grain cart hitch includes a transport chain intended to replace the original grain cart transport chain, rated for the empty grain cart and loaded header transport with head.

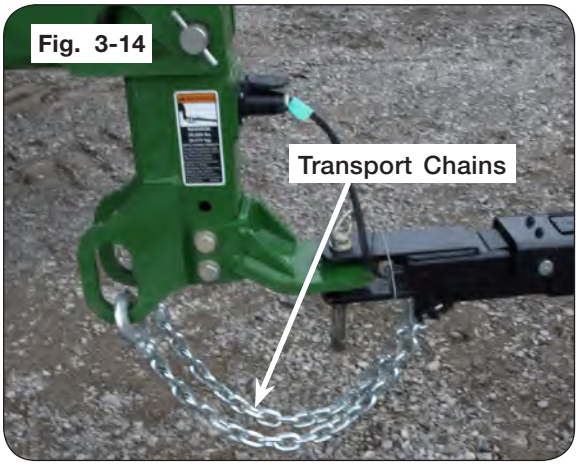


Fig. 3-14

Hitching to Cart (Optional) (continued)

Electrical Connection

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. 3-15)

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.

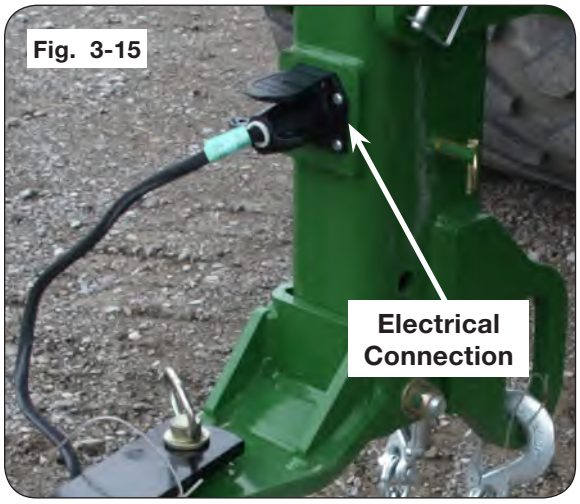


Fig. 3-15

Auger Operation

PTO Driven Auger

DANGER

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

WARNING

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

- **TO PREVENT PERSONAL INJURY OR DEATH WHILE SERVICING, 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.**

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

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

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

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.*

(Continued on next page.)

Auger Operation (continued)

4. Open flow control door to desired unloading rate. Numbers on the auger tube provide a point of reference for operator convenience. (FIG. 3-16)

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.

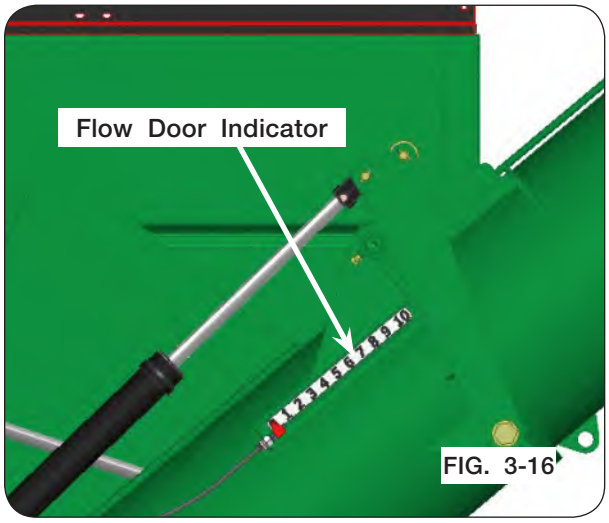


FIG. 3-16

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, align the checkered flag decals to locate center as shown in FIG. 3-17.

8. Once spout is centered, fold auger to the transport position or field position.

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

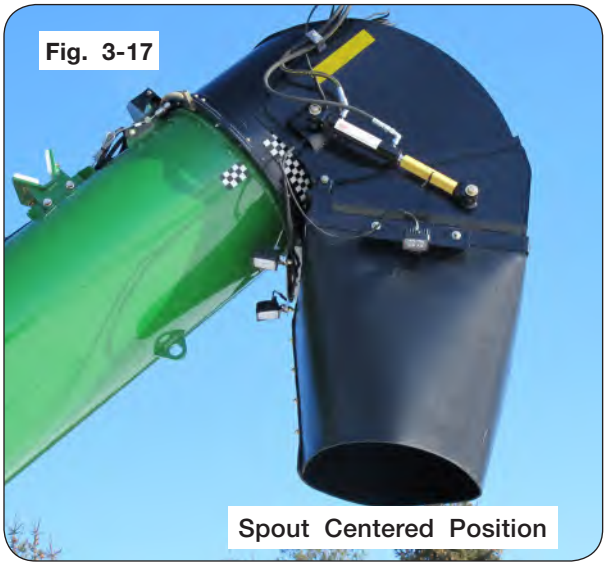


Fig. 3-17

Spout Centered Position

Auger Operation (continued)

Vertical Auger Fold

WARNING

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

Actuate hydraulic auger fold circuit to pivot vertical auger between transport and operating positions. When unfolding auger, allow sufficient time for cylinder to rotate the outside fold link into an over-center position. (Fig. 3-18)

NOTE: Auger spout will not rotate until auger is fully extended and auger will not fold until the spout is centered. It may be necessary to manually rotate auger spout in order to unfold the auger. See “Manual Override for Optional Electric Over Hydraulic System” in the MAINTENANCE section for details.

FIG. 3-18 Road Transport Position Shown

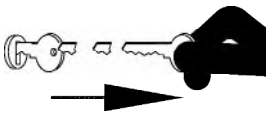
Auger Operation (continued)

Auger Field Rest & Road Transport Position

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 cart on a firm level surface, then extend auger to the unload position. Shut-off tractor's engine and remove the ignition key.



2. Remove hairpin cotter from latch pin (Figure 3-19) and pull latch pin to disengage (Figure 3-20). Adjust rest to desired position. Make sure the pin is engaged in the field position hole and re-install hairpin removed earlier in this step.

3. Fold auger back onto position (Figures 3-21 and 3-22), 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 Adjustment" on the following page.

Fig. 3-19

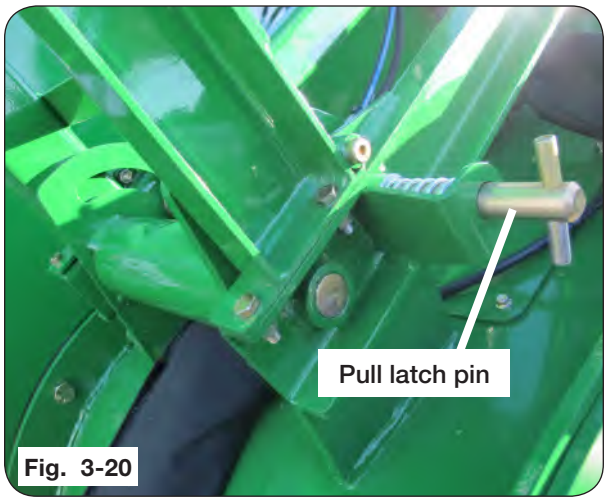


Fig. 3-20

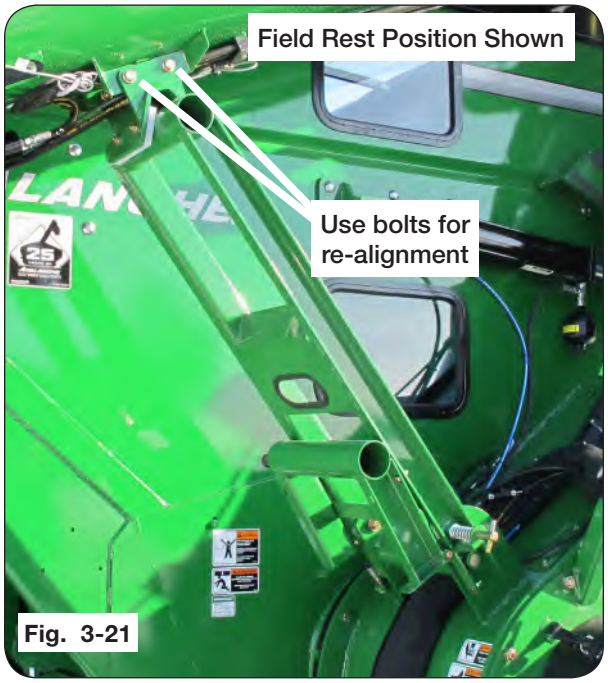


Fig. 3-21

Fig. 3-22

Auger Operation (continued)

Upper Auger Rest Adjustment

1. Loosen mounting capscrews of upper auger rest. (FIG. 3-23)
2. Raise auger approximately 6” out of the transport rest and install cylinder stops on the fold cylinder to prevent the auger from lowering unexpectedly.
3. Position upper auger rest as needed so that it appears to be centered over the transport rest tube.
4. Hand tighten the mounting capscrews of the upper auger rest.
5. Remove the cylinder stops installed in step 2, and lower the auger down into the transport rest.
6. Ensure the upper auger rest contacts the lower tube evenly.
7. Torque mounting capscrews to 65 ft.-lbs.

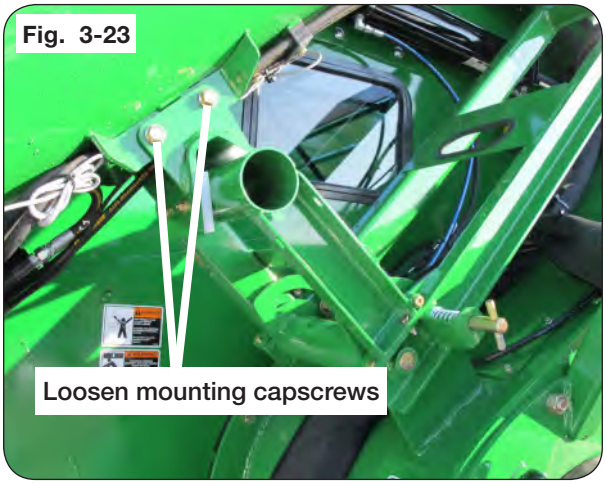


Fig. 3-23

Auger Operation (continued)

Auger Overload Procedure

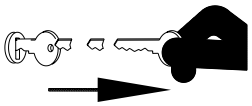
IMPORTANT

- *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. 3-24)
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.

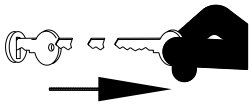
Fig. 3-24

Fig. 3-25

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. 3-25)
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

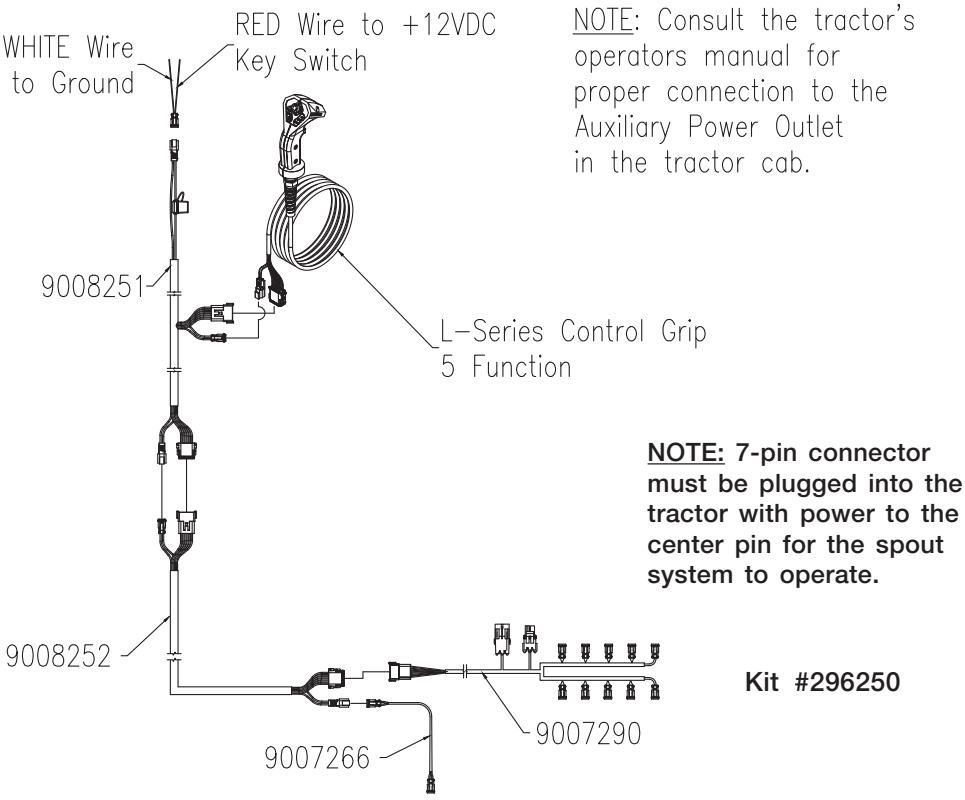
Before operating cart, familarize yourself with the functions associated with the joystick controller by operating with an empty cart.

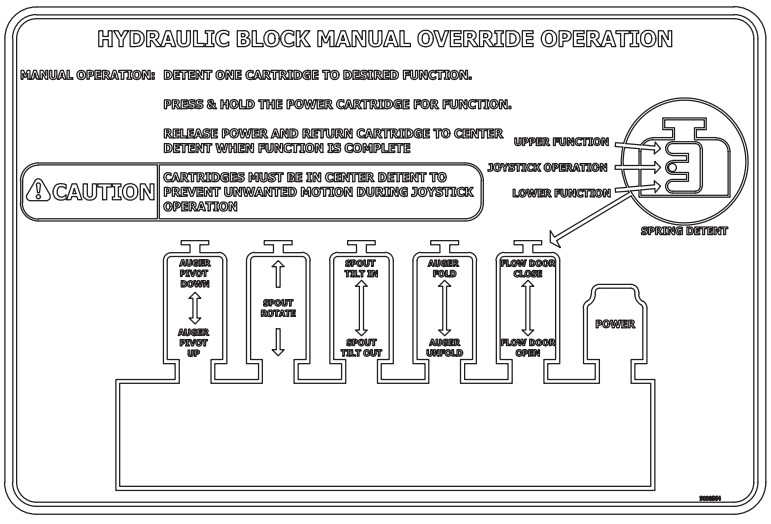
The joystick comes with a mounting pin allowing storage inside the tractor cab when not in use.

1. Connect the red wire from power harness (9008251) to a key-switched +12VDC power supply. (Fig. 3-26)

2. Connect the white wire from power harness (9008251) to ground. (Fig. 3-26)

Fig. 3-26





Electric Over Hydraulic Operation (Optional) (continued)

Auger Fold & Spout Operation

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. 3-27.

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. 3-27.
5. To pivot spout IN toward cart, push hat switch toward IN. Hold the switch until desired position is achieved. See Fig. 3-27.
6. To pivot the entire auger UP, press and hold the auger pivot UP button until the desired height is achieved. See Fig. 3-27.
7. To pivot the entire auger DOWN, press and hold the auger pivot DOWN button until the desired height is achieved. See Fig. 3-27.

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. 3-27.
9. To pivot the spout REARWARD, push hat switch LEFT. Hold the switch until desired position is achieved. See Fig. 3-27.

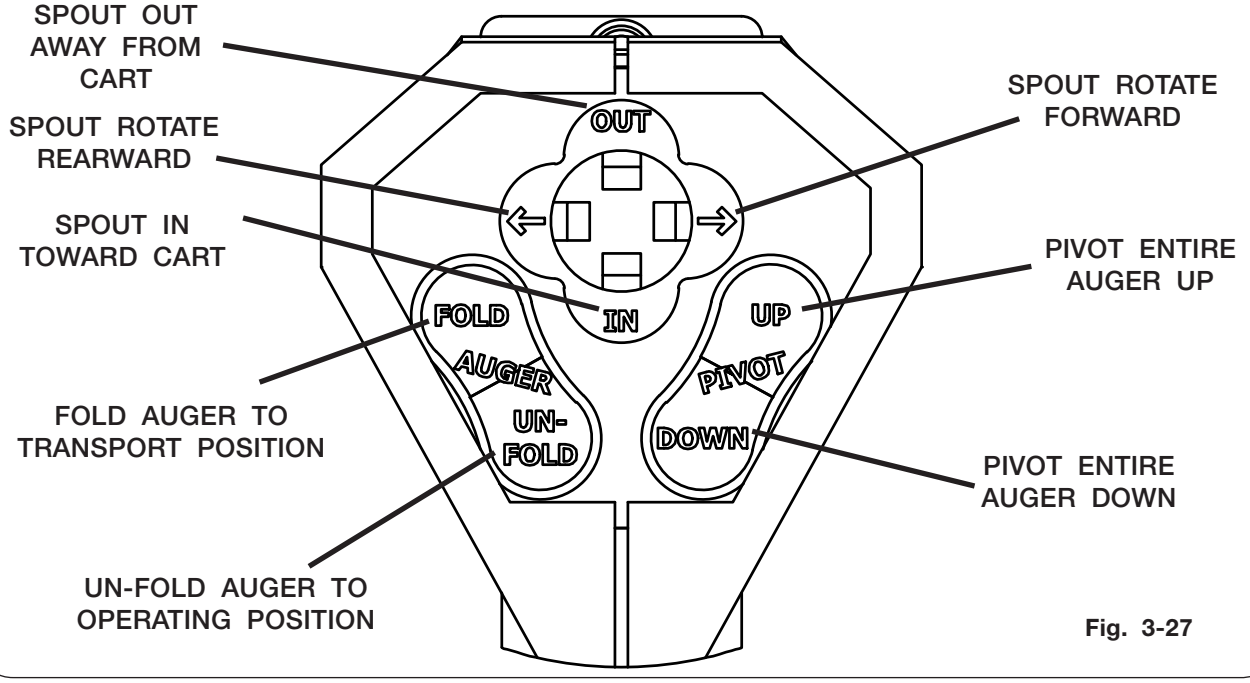


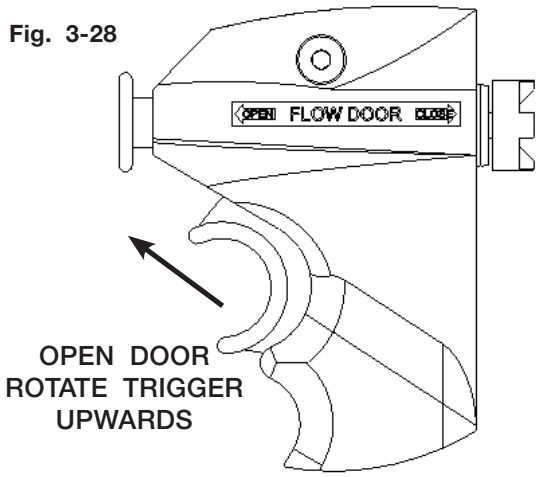
Fig. 3-27

Electric Over Hydraulic Operation (Optional) (continued)

Flow Door Operation

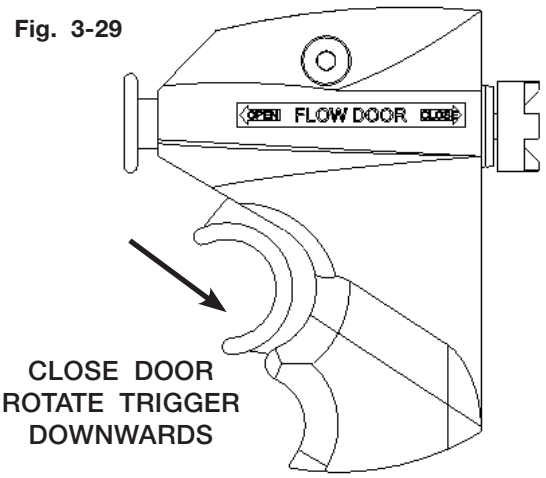
1. To open flow door, rotate the switch upwards. Observe flow door indicator to determine when to release trigger and stop flow door movement. See Fig. 3-28.

Fig. 3-28



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. 3-29.

Fig. 3-29



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:

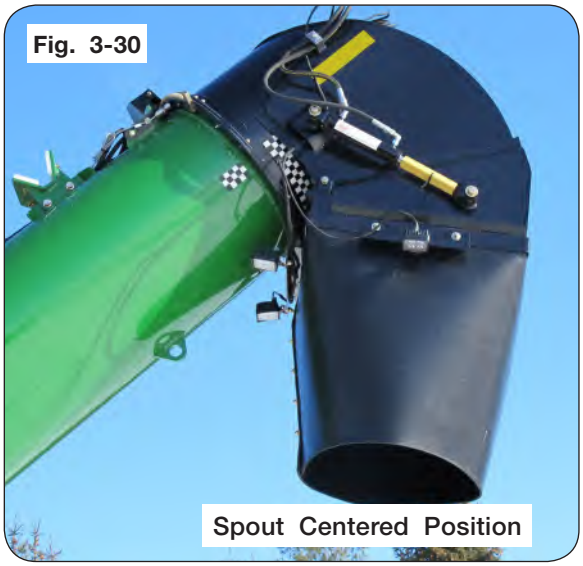
A. Rotate spout to centered position. Align the checkered flag decals to locate center as shown in Fig. 3-30.

B. Press auger FOLD button on joystick.

C. 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.

Fig. 3-30



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.

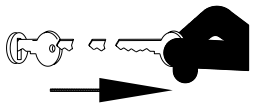
Vertical & Horizontal Cleanout Door Operation

⚠ 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.**

Closing Vertical Cleanout Door

1. Raise the vertical auger to highest position.



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

3. To completely close cleanout door, ensure the vertical auger cleanout door top edge clears the vertical position stop (key stop). (FIG. 3-31)

4. Attach eye bolt ends of over center latches to the hooks on the vertical auger. (FIG. 3-31)

5. Clasp the over center latch handles to lock the door in the closed position. (FIG. 3-31)

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.

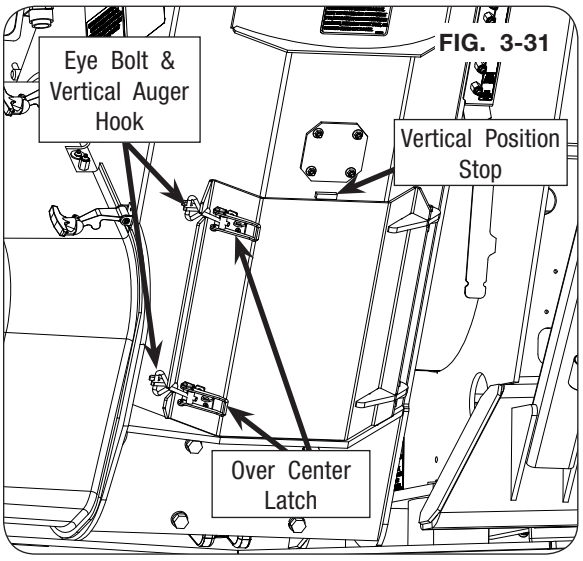


FIG. 3-31

8. Rehook eye bolt to vertical auger and clasp the over center latch.

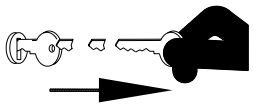
NOTE: Repeat steps 4 - 8, as necessary.

Vertical & Horizontal Cleanout Door Operation (continued)

Opening Vertical Cleanout Door

1. Raise the vertical auger to highest position.

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



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

3. To open and remove the vertical auger cleanout door, unclasp the over center latch. (FIG. 3-32)

4. Unhook the eye bolt from the vertical auger and open the cleanout door. (FIG. 3-32)

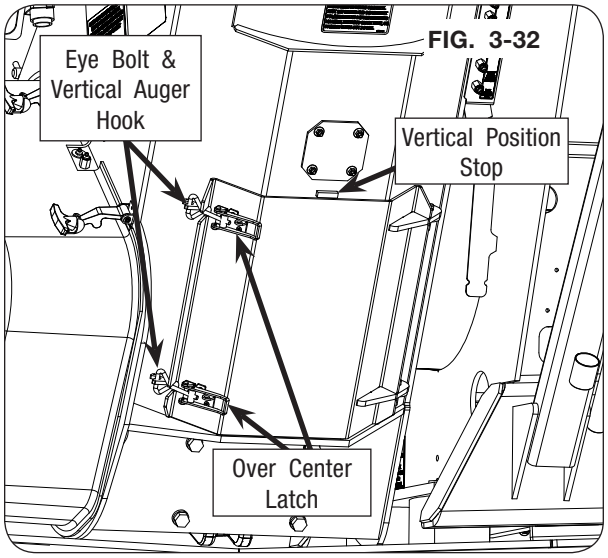


FIG. 3-32

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. 3-33)

6. Inspect and verify all debris is removed from inside the vertical auger housing.

7. Reattach the vertical cleanout door to the vertical auger.

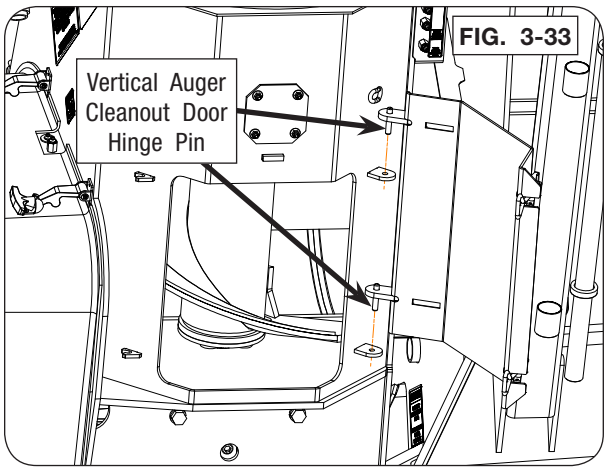


FIG. 3-33

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

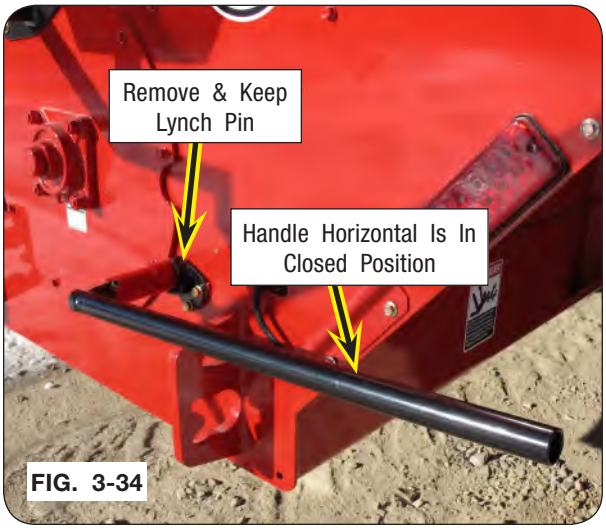


FIG. 3-34

2. Insert tensioner handle into the cleanout door receiver coupler on the rear panel, and remove lynch pin from rockshaft. Keep lynch pin. (FIG. 3-34)

3. Rotate the tensioner handle clockwise to open the cleanout doors. (FIG. 3-35)

4. Insert and lock lynch pin into rockshaft. (FIG. 3-35)

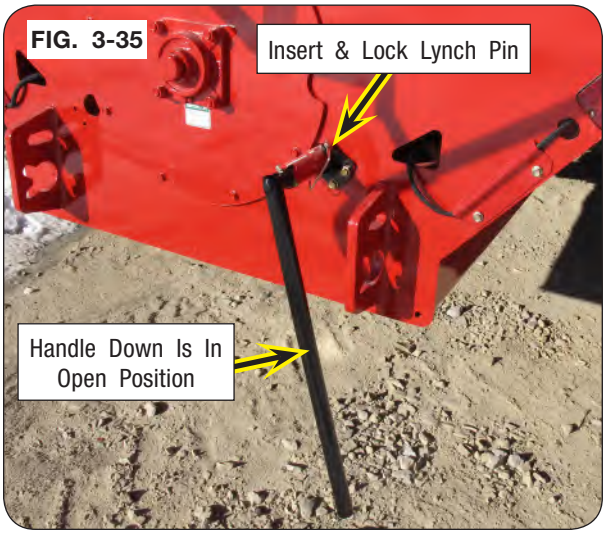


FIG. 3-35

5. Inspect and verify all debris is removed that may prevent the doors from shutting completely. (FIG. 3-36)

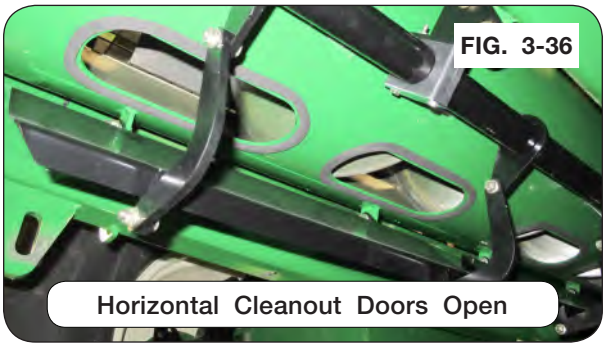


FIG. 3-36
Horizontal Cleanout Doors Open

NOTE: As the tensioner handle is rotated counter-clockwise near the end of the close position, the coiled springs will extend to apply pressure to cleanout doors. If the doors do not close or 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. 3-37)

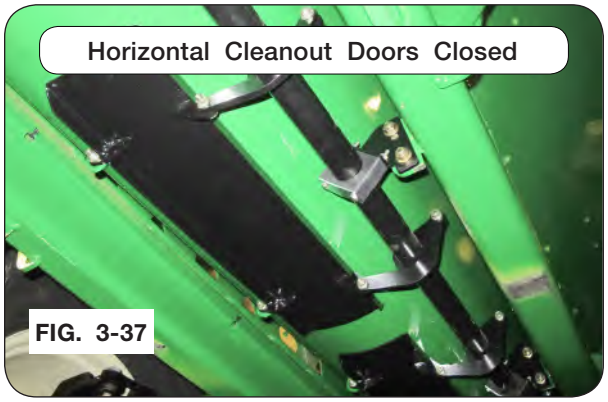


FIG. 3-37

8. Insert and lock lynch pin into rockshaft and return handle to storage location. (FIG. 3-38)

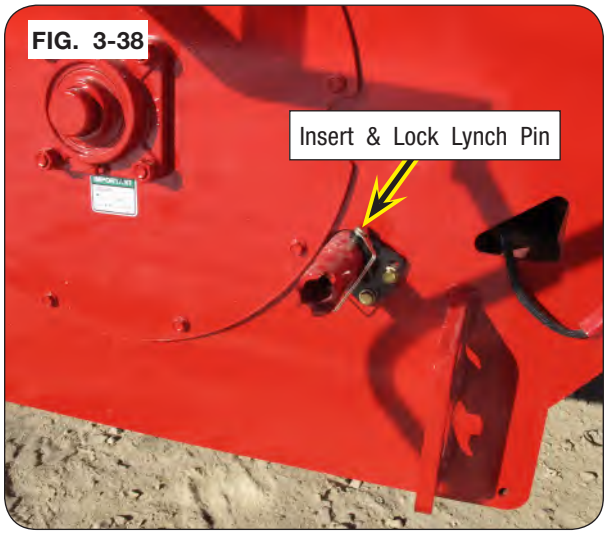


FIG. 3-38

Steering Tandem

Steering Tandem Indicator

Steering Tandem Tire position can be determined by observing indicator arrow. For Left-Hand unload, the location is the lower right front panel, and for Right-Hand unload, the location is the lower right portion of front panel.

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

Steering Tandem Operation

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

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

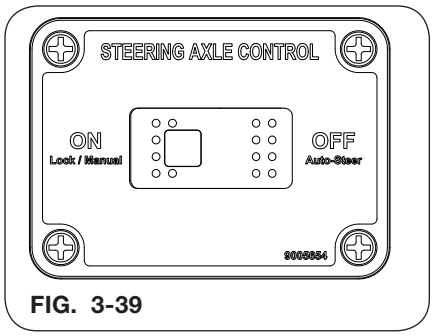


FIG. 3-39

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

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

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

Optional Implement Brake System for Steering Tandem

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

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.**
- **TO PREVENT PERSONAL INJURY OR DEATH WHILE SERVICING, 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: Ensure upper ladder extension is attached to higher holes on the ladder. Reference “Upper 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. 3-40 & 3-41)

FIG. 3-40

FIG. 3-41

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. 3-42)

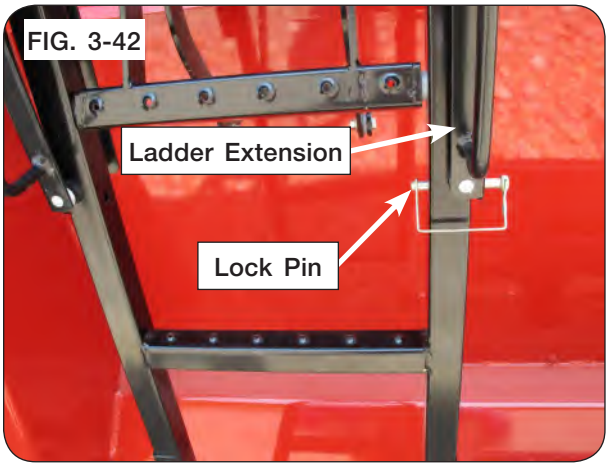


FIG. 3-42

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. 3-43)

⚠ CAUTION

- **THE LADDER IS NOW FREE TO PIVOT.**

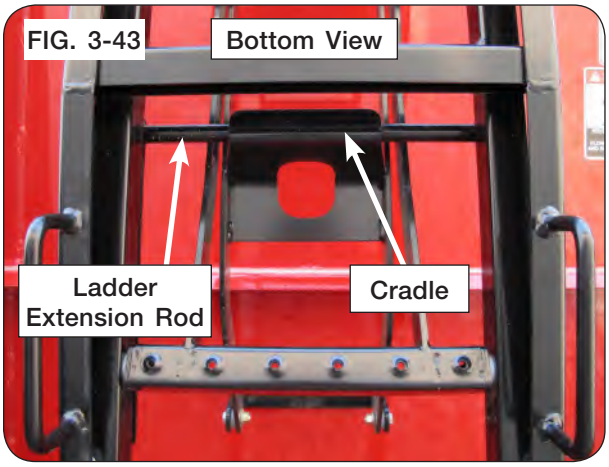


FIG. 3-43

4. Slowly swing ladder outward until hinge is fully extended and locks in the working position. (FIG. 3-44)

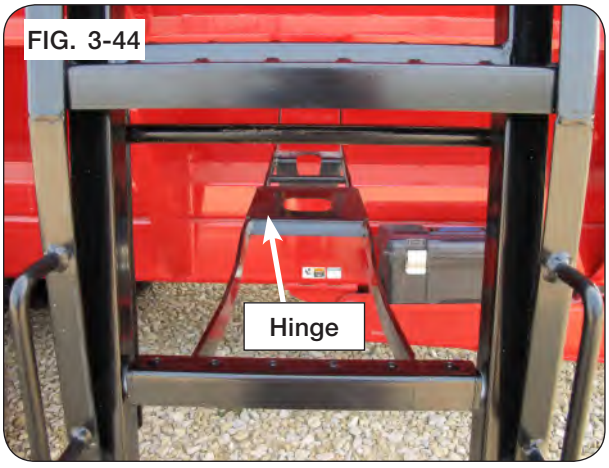


FIG. 3-44

Ladder Operation (continued)

Storage to Working Position

5. Lift and seat ladder extension into shorter leg of “J slot”. (FIG. 3-45)

6. Using lock pin from step 2, insert lock pin into ladder extension and ladder. (FIG. 3-45)

⚠ WARNING

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

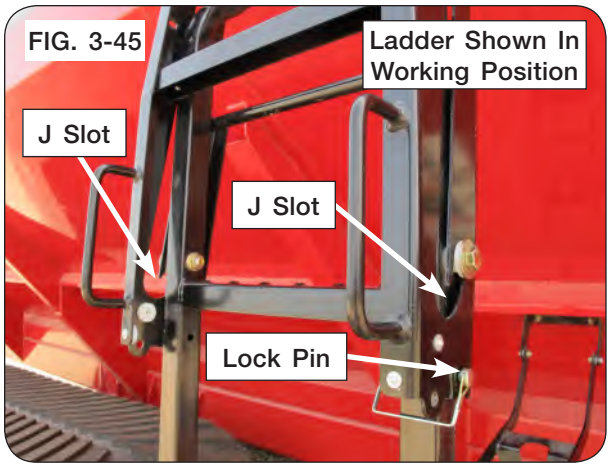


FIG. 3-45

Working to Storage Position

7. Standing in front of ladder, place hands on outside ladder handles.

8. Keep one hand on ladder handle and with opposite hand, remove lock pin from ladder extension. Retain for future use. (FIG. 3-45)

9. With hands back on ladder handles, lift and unseat ladder extension from shorter leg of “J slot”. (FIG. 3-45)

10. Lower ladder extension until fully seated in longer leg of “J slot”. (FIG. 3-46)

FIG. 3-46

11. Keep one hand on ladder handle and with opposite hand, reach between ladder rungs and grab the ladder hinge hole. (FIG. 3-47)

12. Slowly lift ladder hinge until the ladder starts folding.

13. Remove hand from ladder hinge hole and place onto ladder handle.

14. Slowly push ladder towards hopper bin.

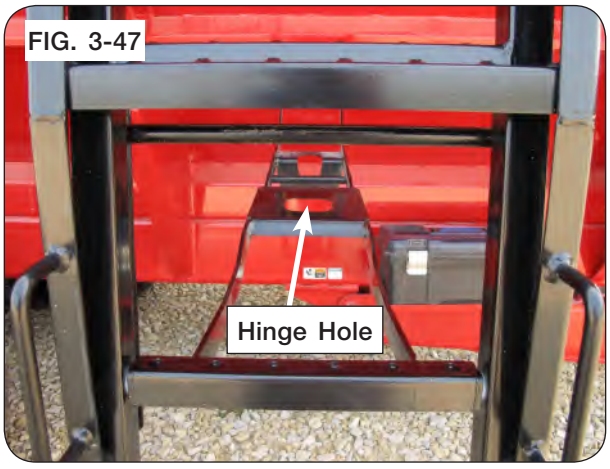
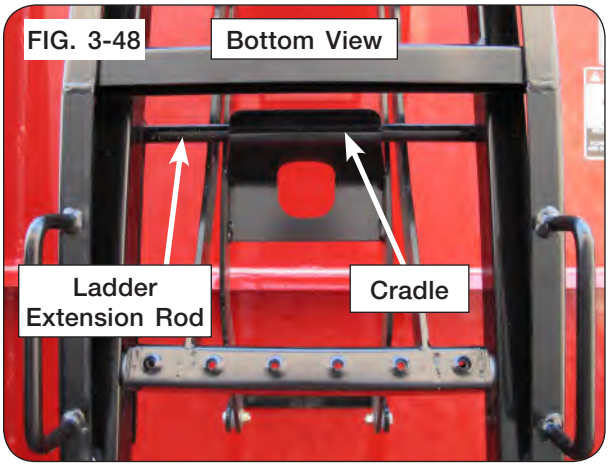


FIG. 3-47

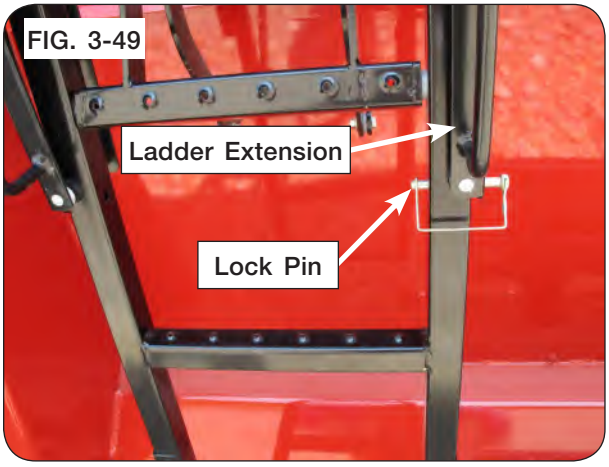
Ladder Operation (continued)

Working to Storage Position

15. Lower ladder extension and seat ladder extension rod onto the cradle. (FIG. 3-48)



16. Using lock pin from step 8, insert lock pin into ladder extension and ladder. (FIG. 3-49)



Ladder Operation (continued)

Rear Ladder Operation - For SN B44430100 & Higher

⚠ WARNING

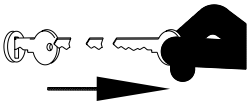
- **FALLING OR LOWERING EQUIPMENT CAN CAUSE SERIOUS INJURY OR DEATH. KEEP EVERYONE AWAY FROM EQUIPMENT WHEN SUSPENDED, RAISING, OR LOWERING.**
- **DO NOT ALLOW ANYONE TO RIDE ON THE LADDER. MAKE SURE EVERYONE IS CLEAR BEFORE OPERATING MACHINE OR TOWING VEHICLE.**
- **KEEP HANDS CLEAR OF PINCH POINT AREAS.**
- **TO PREVENT PERSONAL INJURY OR DEATH WHILE SERVICING, 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: The lower ladder section must be raised and locked in the storage position when not used.

Storage to Working Position

1. Park the empty grain cart on a firm and 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. 3-50 and 3-51)

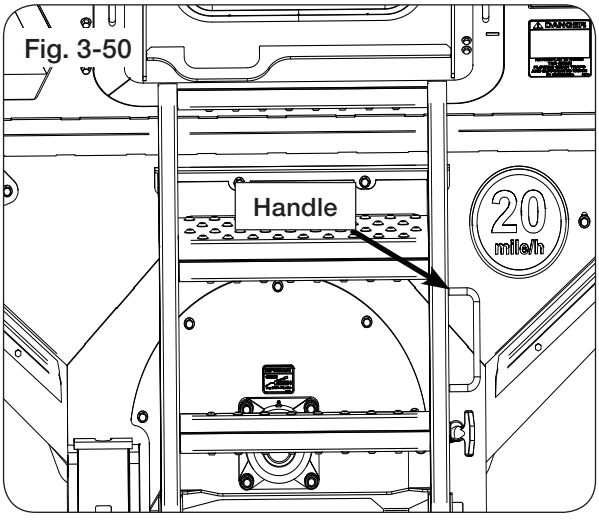


Fig. 3-50

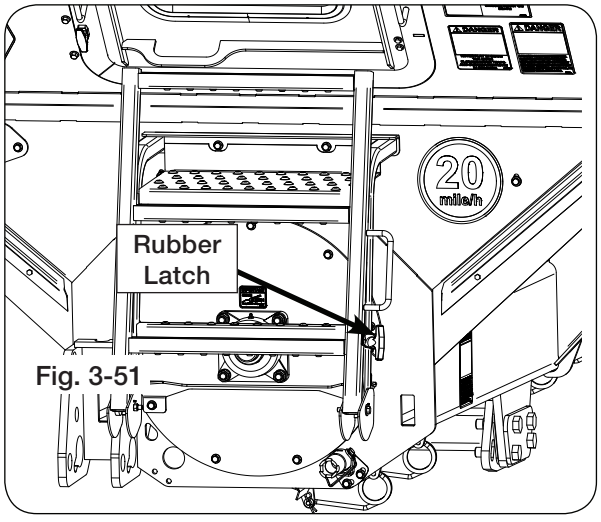


Fig. 3-51

Ladder Operation (continued)

3. While holding ladder handle, slowly swing the lower ladder section completely down to working position. (FIG. 3-52)

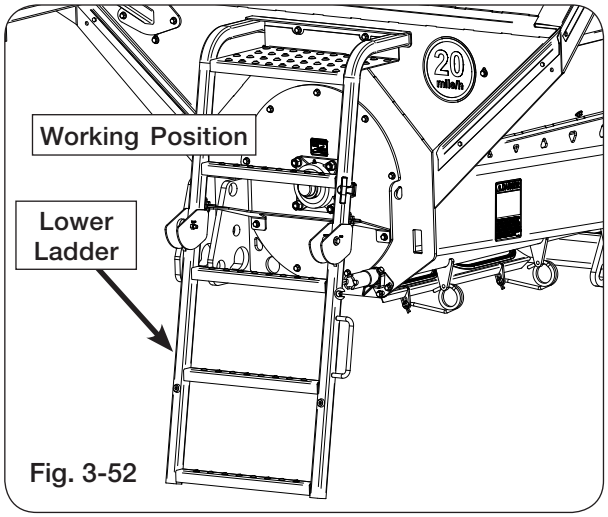


Fig. 3-52

Working to Storage Position

1. Slowly lift and swing the lower ladder section up to storage position. (FIG. 3-53)

2. While holding ladder handle, attach rubber latch into holder to lock ladder in storage position. (FIG. 3-54 and 3-55)

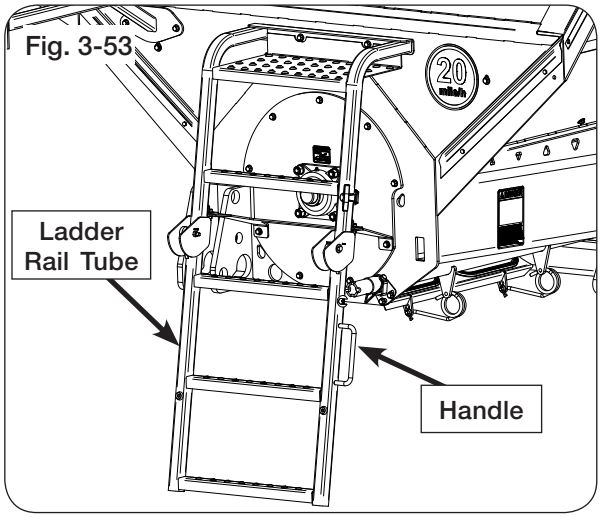


Fig. 3-53

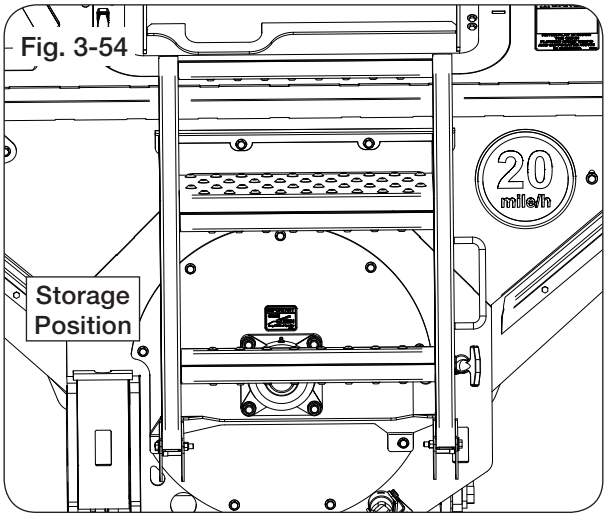


Fig. 3-54

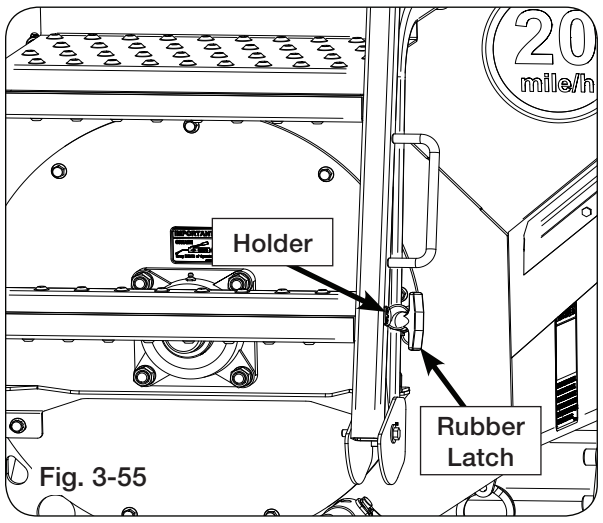


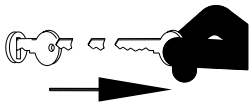
Fig. 3-55

Rear Access Door Operation - For SN B44430100 & Higher

⚠ WARNING

- **ENSURE SCREENS OVER HORIZONTAL AUGERS ARE IN PLACE AND PROPERLY SECURED.**
- **TO PREVENT PERSONAL INJURY OR DEATH WHILE SERVICING, ALWAYS ENSURE THAT THERE ARE PEOPLE WHO REMAIN OUTSIDE THE CART TO ASSIST THE PERSON WORKING INSIDE, AND THAT ALL SAFE WORKPLACE PRACTICES ARE FOLLOWED. THERE IS RESTRICTED MOBILITY AND LIMITED EXIT PATHS WHEN WORKING INSIDE THE IMPLEMENT.**
- **EYE PROTECTION AND OTHER APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT MUST BE WORN WHILE SERVICING THE IMPLEMENT.**
- **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.**
- **NEVER ENTER A CART CONTAINING GRAIN. FLOWING GRAIN TRAPS AND SUFFOCATES VICTIMS IN SECONDS.**

1. Park the empty grain cart on a firm and 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 180 degrees counter clockwise. (Fig. 3-56)
3. Use bottom door handle to open door by pushing in. (Fig. 3-56)
4. Push rear access door inward until it stops. While maintaining contact with the outer handles, enter the grain cart.

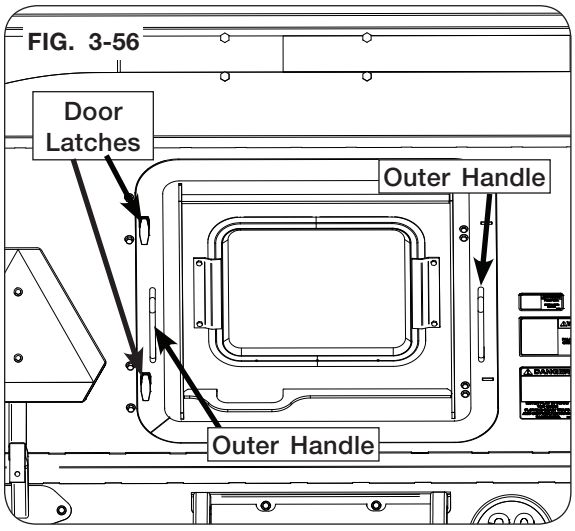
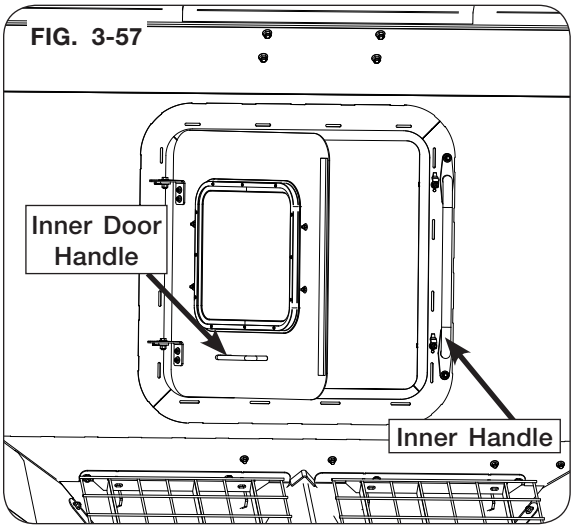


FIG. 3-56

Rear Access Door Operation - For SN B44430100 & Higher

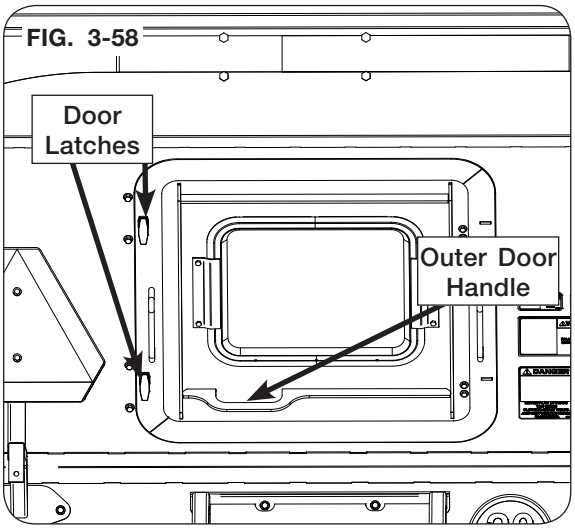
5. To exit, use inner door handle to open the rear access door, place hand on inner handle and exit grain cart. (Fig. 3-57)

FIG. 3-57



6. While maintaining contact with outer handles, use outer door handle to close the rear access door. (Fig. 3-58)
7. Turn both door latches 180 degrees to lock the rear access door. (Fig. 3-58)

FIG. 3-58



Rear Drop Hitch Operation (Optional) For SN B44430100 & Higher

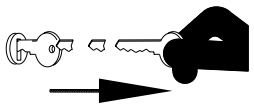
⚠ WARNING

- **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.**

Storage to Working Position

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

1. Park the empty grain cart on a firm and 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. Attach a safe lifting device rated for a minimum of 150 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. 3-59)
4. Slowly pivot rear drop hitch to desired position. (Fig. 3-60)
5. Reinstall pivot pin and keeper into rear drop hitch. (Fig. 3-60)

FIG. 3-59

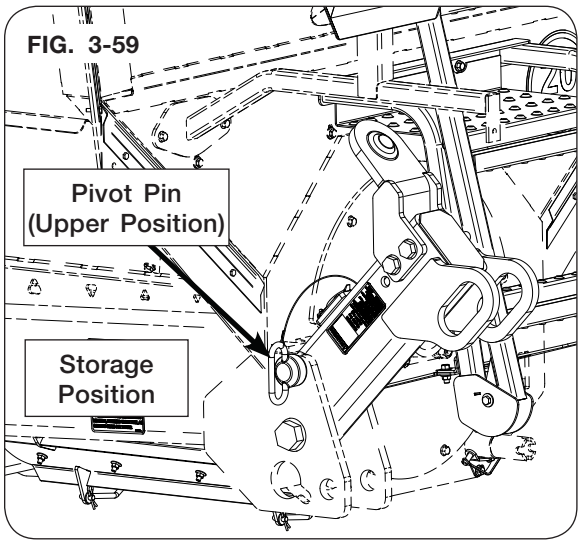
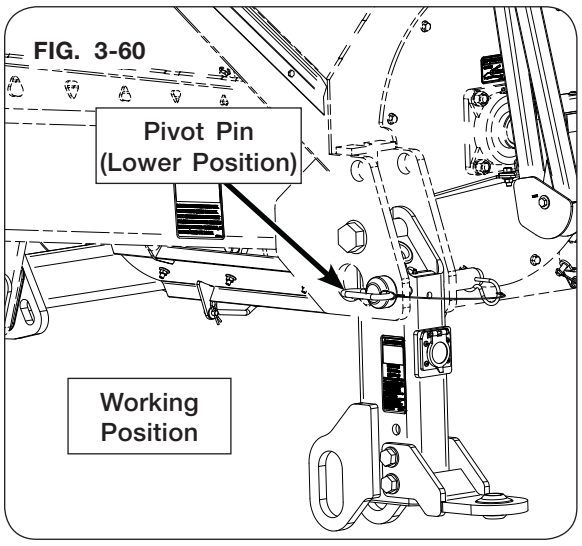


FIG. 3-60



Rear Drop Hitch Operation (Optional) For SN B44430100 & Higher (continued)

⚠ 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.**

Rear Drop Hitch Adjustment

1. Park the empty grain cart on a firm and 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. Remove the nuts, washers, and bolts 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 differance of 6 3/4" from position 1 to position 4. (Fig. 3-61 through 3-64)
4. Reinstall the nuts, washers, and bolts to the rear drop hitch and torque to specification.

FIG. 3-61

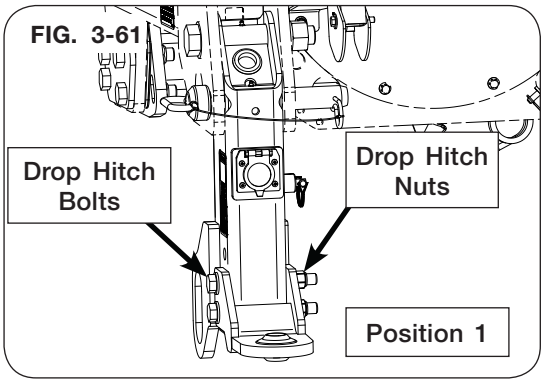


FIG. 3-62

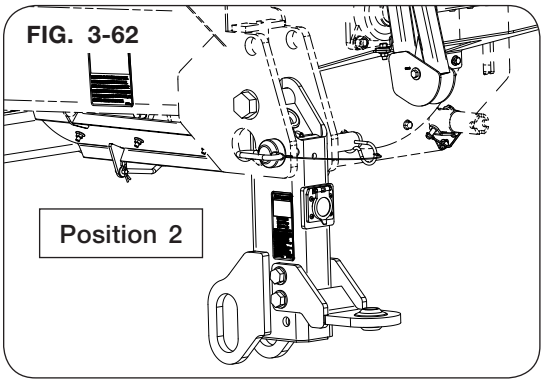


FIG. 3-63

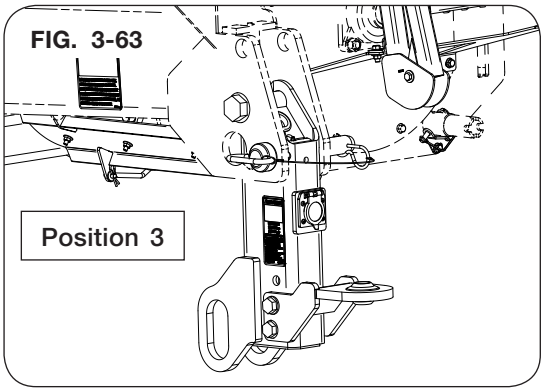
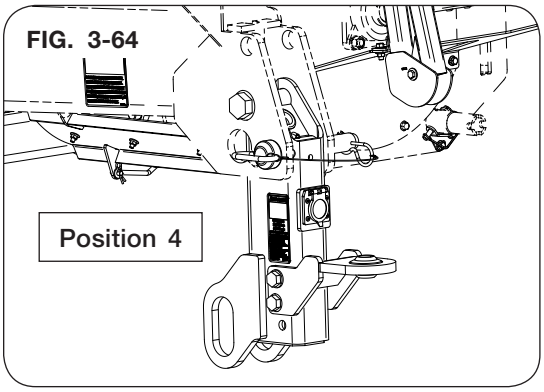


FIG. 3-64



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, it is important to remove snow before operating.

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

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

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

Weather Guard Tarp (continued)

NOTE: If equipped with wireless electric roll tarp, skip to step 7 on next page. For weather guard tarp, continue to step 1.

1. Using both hands, carefully remove tarp handle weldment from tube holder. (FIG. 3-65)
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.

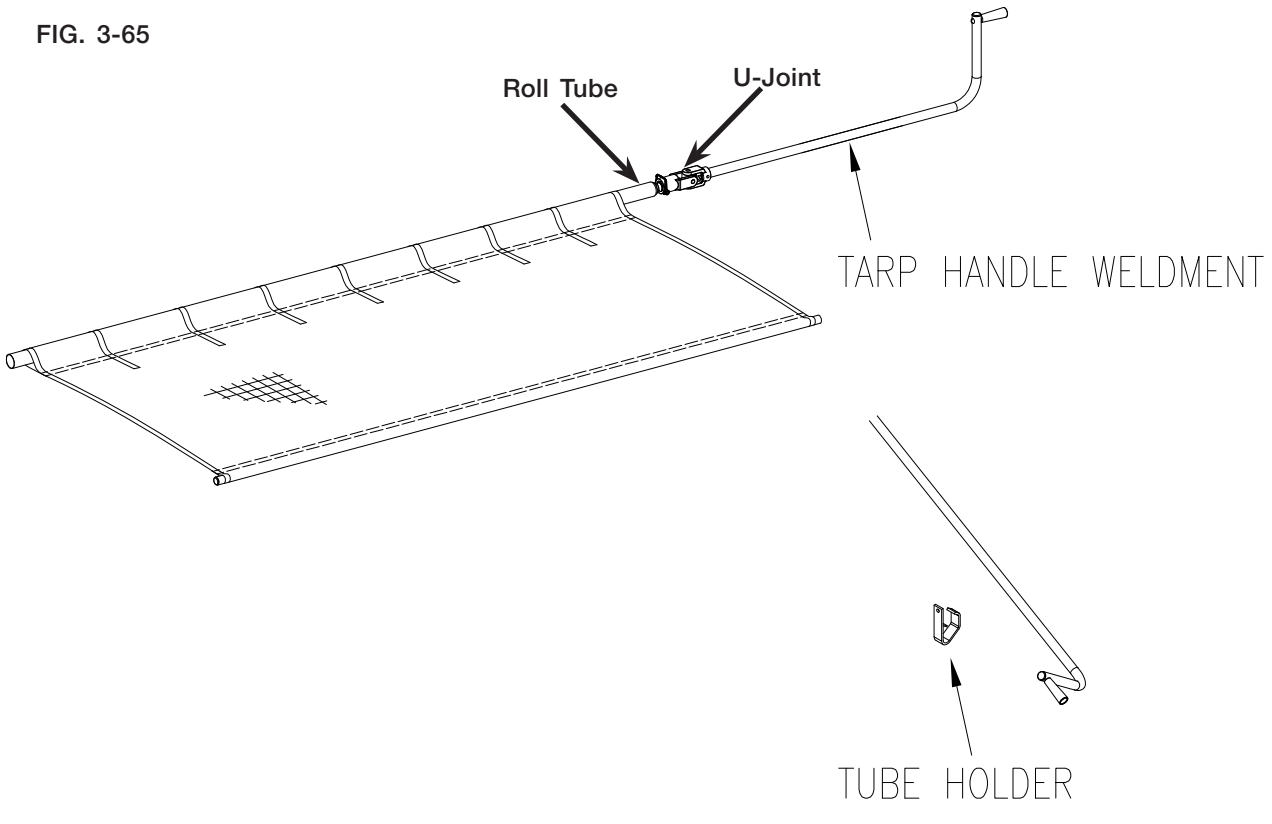
NOTE: Do not tighten if tarp overlaps end of the latch plate. Tearing of the tarp may occur. Reposition tarp, as necessary.

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. 3-65

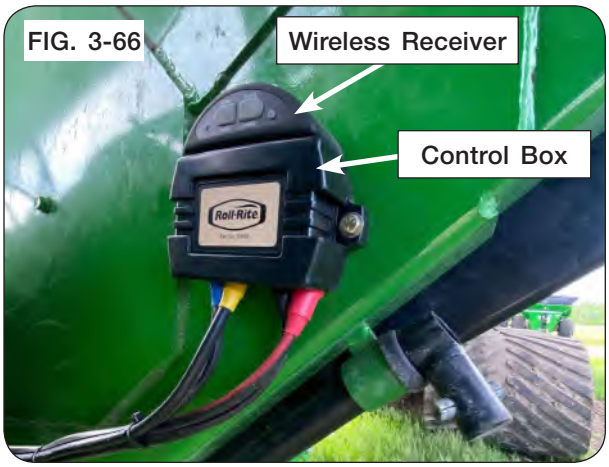


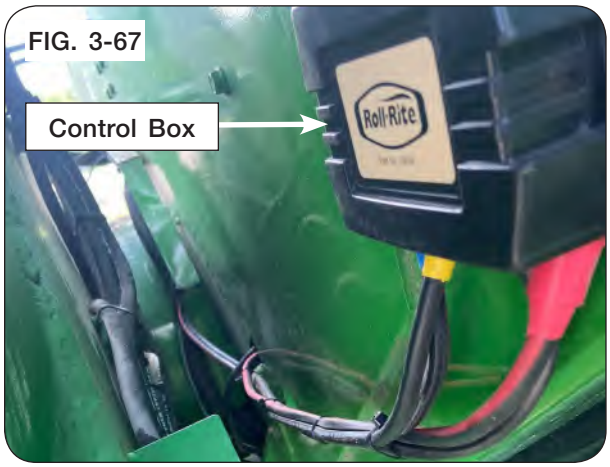
Weather Guard Tarp (continued)

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. 3-66 & 3-67)

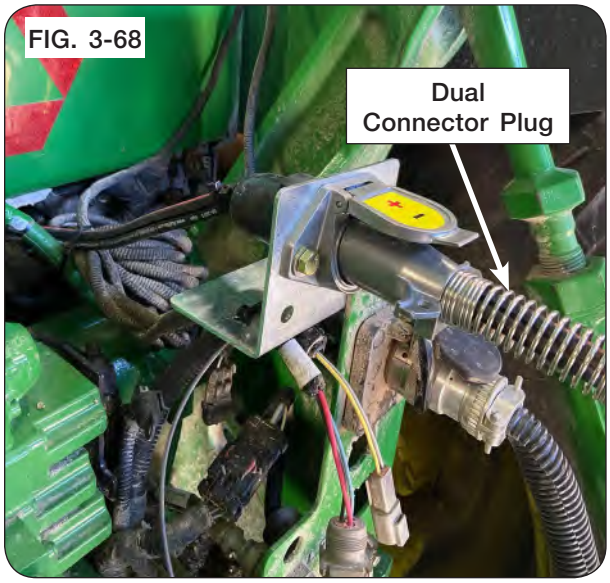




2. Control box wires route along the front of the cart following the isobus harness.

3. Dual connector plug (9005327) attaches to the socket on the back of the tractor as shown. (FIG. 3-68)

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.

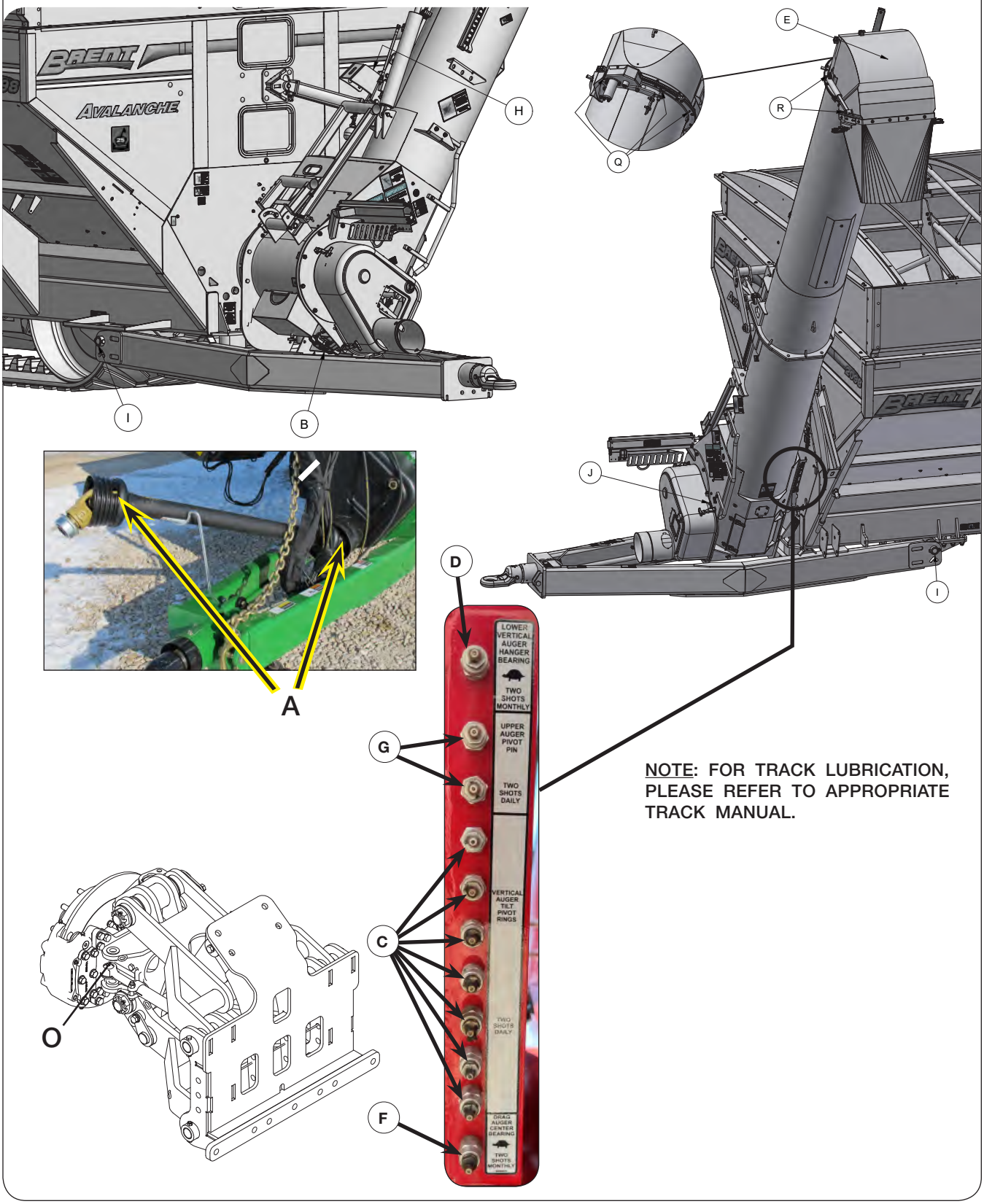


Section IV
Maintenance

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

Lubrication

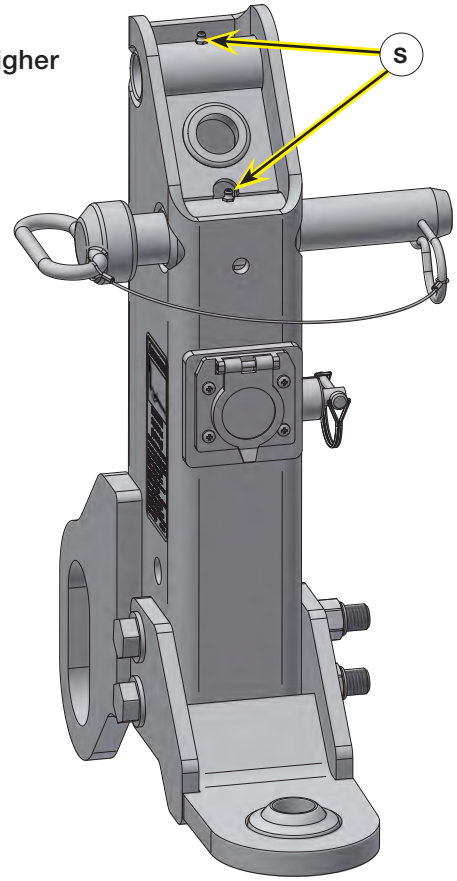
To keep your grain cart in top operating condition and to assure its proper performance and reliability for a long period of time, periodic inspection and lubrication is a must.



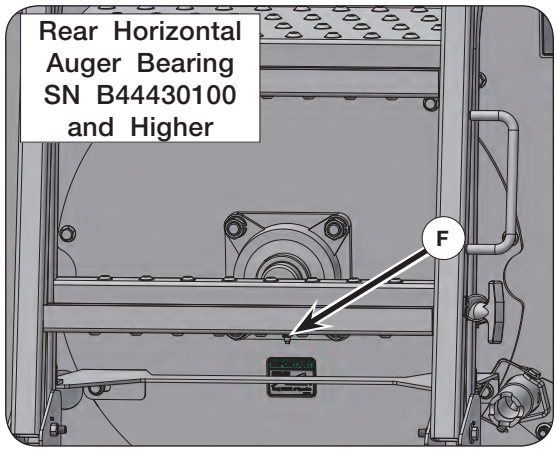
NOTE: FOR TRACK LUBRICATION, PLEASE REFER TO APPROPRIATE TRACK MANUAL.

Lubrication (continued)

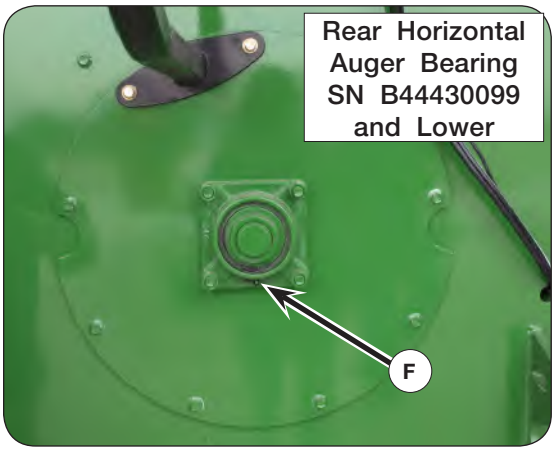
Optional Rear Hitch
For SN B44430100 & Higher



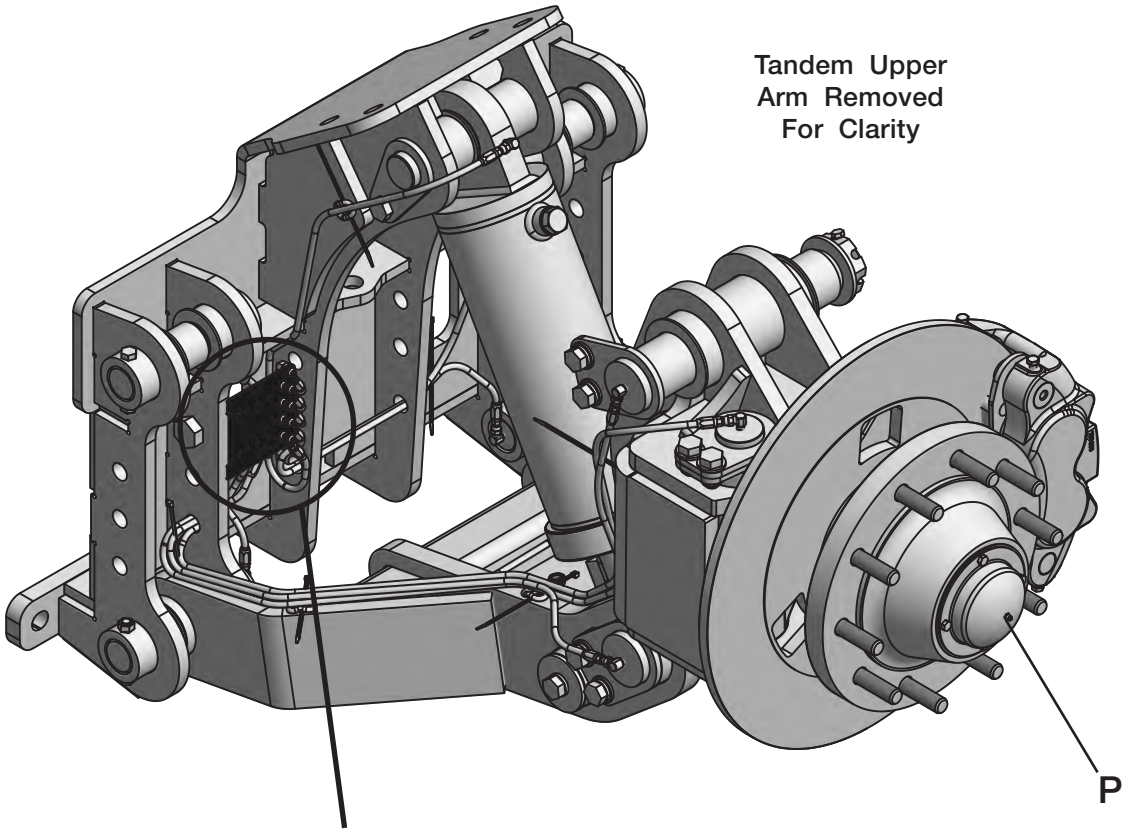
Rear Horizontal Auger Bearing SN B44430100 and Higher

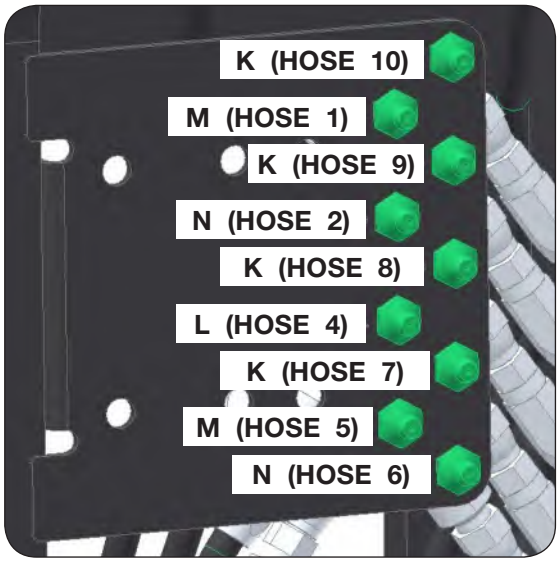


Rear Horizontal Auger Bearing SN B44430099 and Lower



Lubrication (continued)





GREASE BANK HOSE #	GREASE FITTING LOCATION
1	Upper Clevis Pin
2	Lower Suspension Cylinder Pin
3	-
4	Steering King Pin
5	Lower Clevis Pin
6	Upper Suspension Cylinder Pin
7	Upper Parallel Link Arm Pin
8	Upper Parallel Link Arm Pin
9	Lower Parallel Link Arm Pin
10	Lower Parallel Link Arm Pin

Lubrication (continued)

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

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

The lubrication locations and recommended schedule are as follows:

ITEM	DESCRIPTION	POINT	LUBRICANT	QTY.	HOURS
A	PTO Driveshaft	3	EP-2	1 Shot	See Next Page
B	Gearbox -- Remove Cover - Check oil level every 2 weeks. Replace oil every season. Refer to Gearbox in MAINTENANCE section.	1	EP80W90	Approx 85 oz.	Once Every Season
C	Auger Pivot Rings - Front & Rear Auger Hinge	7	EP-2	2 Shots	Daily
D*	Hanger Bearing - Vertical Lower Auger *See note below.	1	EP-2	2 Shots*	Monthly
E	Top Bearing - Vertical Upper Auger	1	EP-2	1 Shot	Each Season
F	Horizontal Auger End & Center Bearings	2	EP-2	2 Shots	Monthly
G	Auger Pivot Pin - Vertical Upper Auger Hinge	2	EP-2	2 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	Front Horizontal Auger Bearing & Gearbox Support Bearing	2	EP-2	1 Shot	Weekly
K	Grease Bank for Parallel Link Arm Pins (Hoses 7, 8, 9 & 10)	4 (per wheel)	EP-2	6 Shots	Daily
L	Grease Bank for Steering King Pin (Hose 4)	1 (per wheel)	EP-2	6 Shots	Daily
M	Grease Bank for Clevis Pivot Pins (Hoses 1 & 5)	2 (per wheel)	EP-2	6 Shots	Daily
N	Grease Bank for Suspension Cylinder Pin (Hoses 2 & 6)	2 (per wheel)	EP-2	6 Shots	Daily
O	Tie Rod End on Steering Linkage	4	EP-2	2 Shots	Every 40 hours of usage
P	Hubs	4	EP-2	Repack	Annually
Q	Discharge Spout Pivot Grease Points	6	EP-2	1 Shot	Monthly
R	Spout Tilt Cylinder Pin	2	EP-2	3 Shots	Weekly
S	Rear Hitch Pivot Pin (Optional)	2	EP-2	2 Shots	Monthly

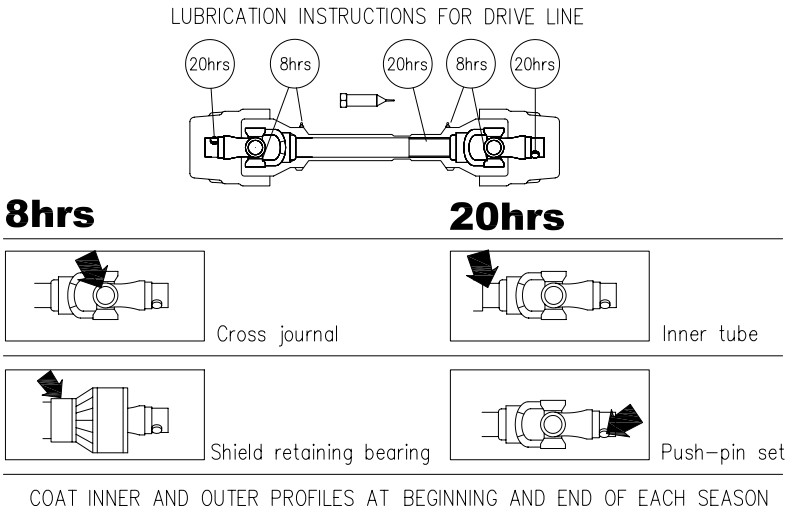
*NOTE: Hanger bearing contains hydraulic shut-off grease zerk (9005240) with pressure relief to prevent over-greasing that could push bearing seals out. If grease is coming out of the relief on the zerk this is normal and the bearing contains enough grease.

PTO Driveshaft Lubrication

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. 4-1



Hydraulic System

Refer to parts section for hydraulic component detail listing.

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

Replacing Hoses/Fittings/Cylinders:

1. Use replacement hoses, fittings, and cylinders from your Unverferth Manufacturing dealer which are rated for 3000 psi.
2. Do not use hoses, fittings and cylinders that have pipe threads.
3. Do not use Teflon tape or thread sealant on JIC or O-ring fittings. Tighten fittings according to "Torque Chart" 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.

Bleeding Procedure For Braking System

⚠ WARNING

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

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

NOTE: This procedure is a **two-person** process. With responsible operator behind controls, one person operates the brake pedal while the second person loosens the bleeder screw on the brake caliper.

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

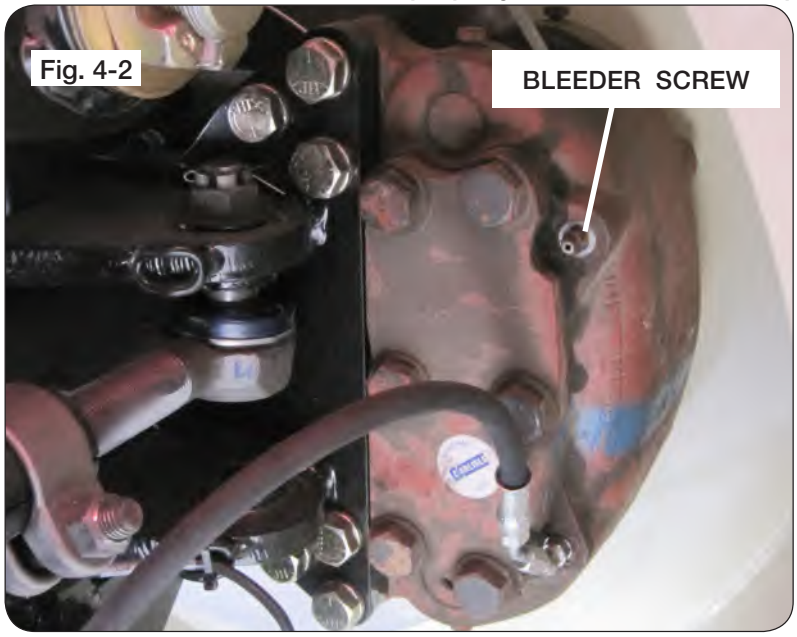


Fig. 4-2

Wheel, Hub and Spindle Disassembly and Assembly

⚠ WARNING

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

- **FALLING OBJECTS CAN CAUSE SERIOUS INJURY OR DEATH. DO NOT WORK UNDER THE MACHINE AT ANY TIME WHILE BEING HOISTED. BE SURE ALL LIFTING DEVICES AND SUPPORTS ARE RATED FOR THE LOADS BEING HOISTED. THESE ASSEMBLY INSTRUCTIONS WILL REQUIRE SAFE LIFTING DEVICES UP TO 40,000 LBS. SPECIFIC LOAD RATINGS FOR INDIVIDUAL LOADS WILL BE GIVEN AT THE APPROPRIATE TIME IN THE INSTRUCTIONS.**

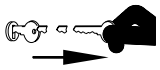
⚠ CAUTION

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

IMPORTANT

- *Remove only one wheel and tire from a side at any given time in the following procedure.*

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



2. With cart empty, use safe lifting and load holding devices rated at 40,000 lbs. to support the weight of your grain cart. Place the safe lifting device under the axle closest to the tire.

3. Use a 3,000 lbs. safe lifting device to support the wheel and tire. Remove the wheel and tire from the hub.

4. If only changing wheel and tire, skip to Step 8; otherwise continue with Step 4.

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

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

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

Wheel, Hub and Spindle Disassembly and Assembly (continued)

6. Remove seal and inspect bearings, spindle washer, castle nut and cotter pin. Replace if necessary. Pack both bearings with approved grease and reinstall inner bearing. Install new seal in hub with garter spring facing the outside of hub by tapping on flat plate that completely covers seal while driving it square to hub. (FIG. 4-3) Install until flush with back face of hub. Using a safe lifting device rated for 200 lbs., install hub assembly onto spindle. Install outer bearing, spindle washer and castle nut.

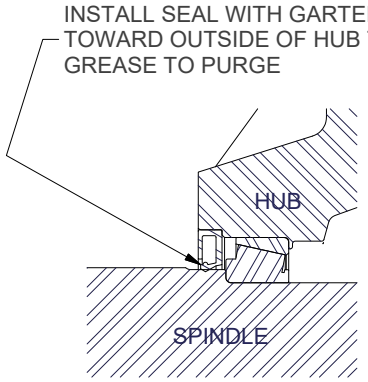


FIG. 4-3

7. Slowly tighten castle nut while spinning the hub until drag causes the hub to stop freely spinning. Do not use an impact! Turn castle nut counterclockwise until the hole in the spindle aligns with the next notch in castle nut. Hub should spin smoothly with little drag and no end play. If play exists, tighten to next notch of castle nut. If drag exists, then back castle nut to next notch of castle nut. Spin and check again. Install cotter pin. Clean face for hub cap gasket and install gasket, grease- filled hub cap and retain hubcap with hardware removed. Tighten hubcap hardware in alternating pattern.

8. Attach the wheel(s) and tire(s) to the hub using the same rated safe lifting device for removal. Tighten wheel nuts to appropriate requirements and recheck as outlined in the Wheel and Tire section of this manual.

9. Raise cart, remove safe load holding devices and lower tire to the ground.

Wheels and Tires

Wheel Nut Torque Requirements

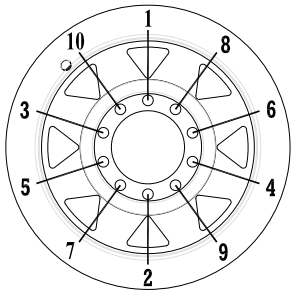
⚠ CAUTION

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

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

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

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



10 BOLT

DIAGRAM 1

Wheels and Tires (continued)

Tire Pressure

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

Tire Pressure for Grain Carts

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

Wheels and Tires (continued)

Tire Pressure (continued)

Tire Pressure for Grain Carts

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

Wheels and Tires (continued)

Tire Warranty

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

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

Gearbox

When checking the oil level of the gearbox, the vertical auger should be pivoted 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. 4-4)

For Maximum gearbox life:
Check oil level every 2 weeks.

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

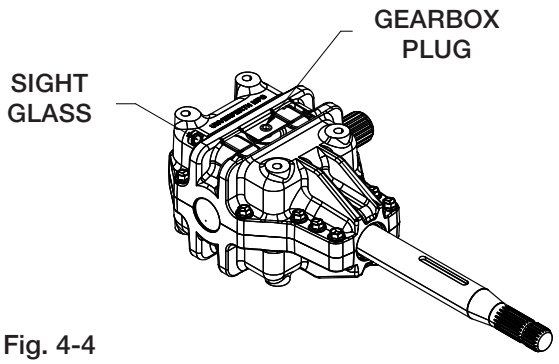


Fig. 4-4

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.**

IMPORTANT

- *Spout must be centered before operating the auger fold. Align checker flag decals to ensure spout rotate is centered.*

NOTE: Manual override operation is intended for emergency use ONLY and is not intended for continuous operation. Spout may rotate into cart causing damage.

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

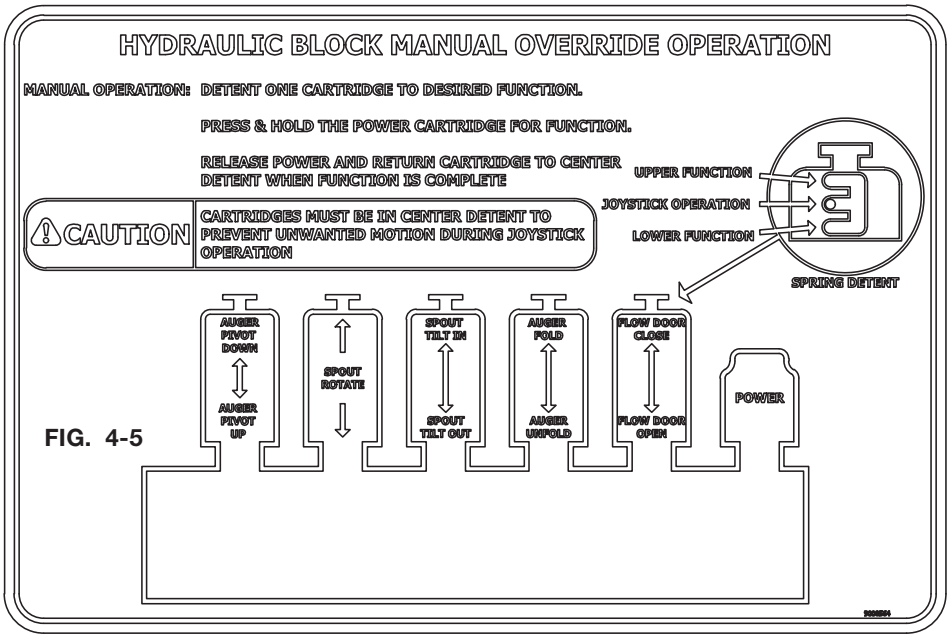


FIG. 4-5

1. Park the empty grain cart on a firm and 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. 4-6)

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.

(continued on next page.)

FIG. 4-6

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 postion. (FIG. 4-7 & 4-8)

5. Operate the desired function on valve (9008416 & 9008463) by rotating the manual override knurled knob from the locked neutral position. (FIG. 4-7, 4-8, & 4-10)

6. Push and hold the manual override button on valve (9008438). (FIG. 4-9)

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 4-7, 4-8 & 4-10)

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 (272606B) from step 2 to the bottom of the lower auger housing.

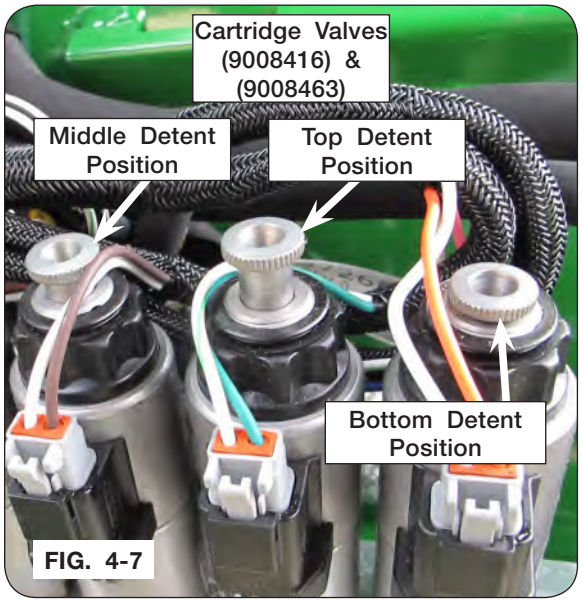


FIG. 4-7

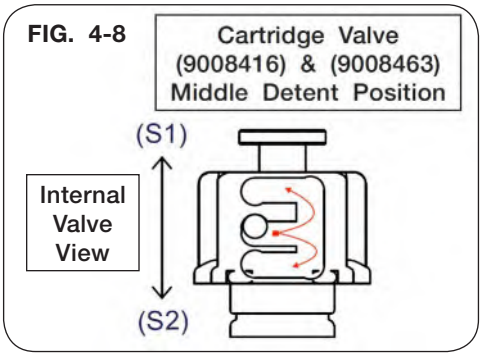


FIG. 4-8

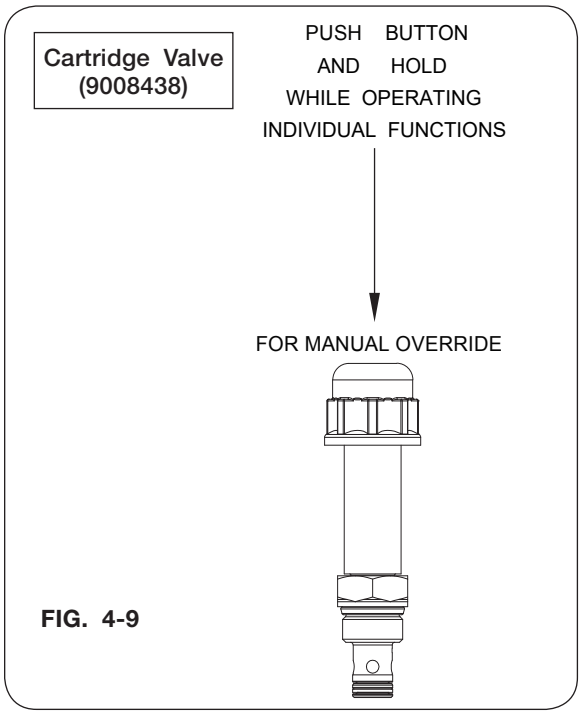


FIG. 4-9

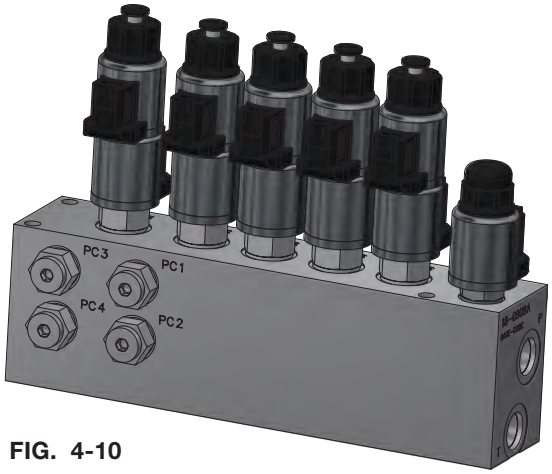


FIG. 4-10

Manual Override for SCV Controlled Spout Rotate & Auger Fold

⚠ 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.**

IMPORTANT

- *Spout must be centered before operating the auger fold. Align checkered flag decals to ensure spout rotate is centered.*

NOTE: Manual override operation is intended for emergency use ONLY and is not intended for continuous operation. Spout may rotate into the cart causing damage.

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

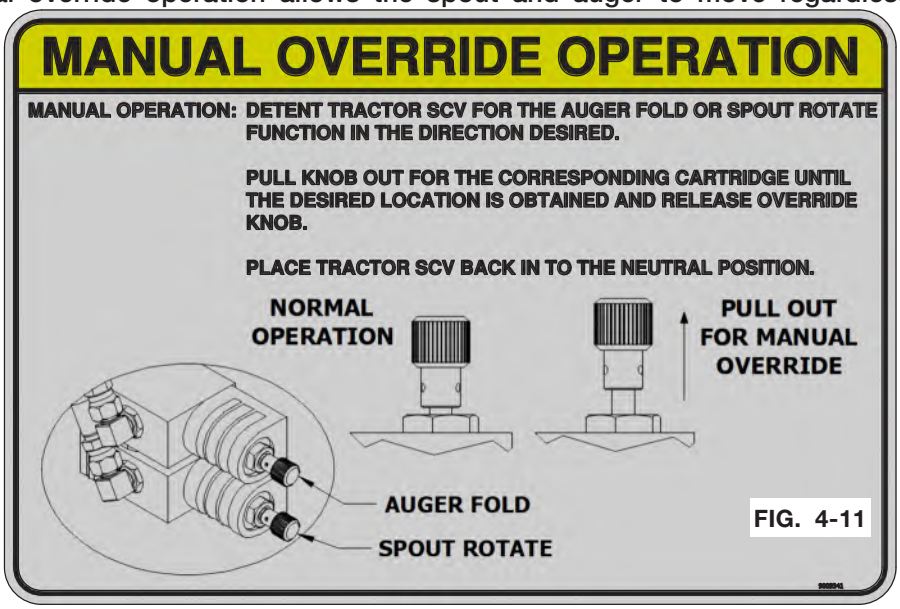


FIG. 4-11

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

2. Remove cover plate (295569B) from the bottom of the lower auger housing to access the auger fold / spout rotate interlock valve assemblies. Keep cover plate.

3. To operate the manual override function, set tractor SCV to a maximum of 4 gpm and place the tractor SCV for the desired function in continuous detent in the direction of flow that operates the spout rotate or auger fold direction desired.

Manual Override for SCV Controlled Spout Rotate & Auger Fold (continued)

NOTE: Operate one cartridge valve (9009186) at a time. Keep other valve in normal position. (FIG. 4-12 & 4-14)

4. Locate the desired valve (9009186). (FIG 4-12)

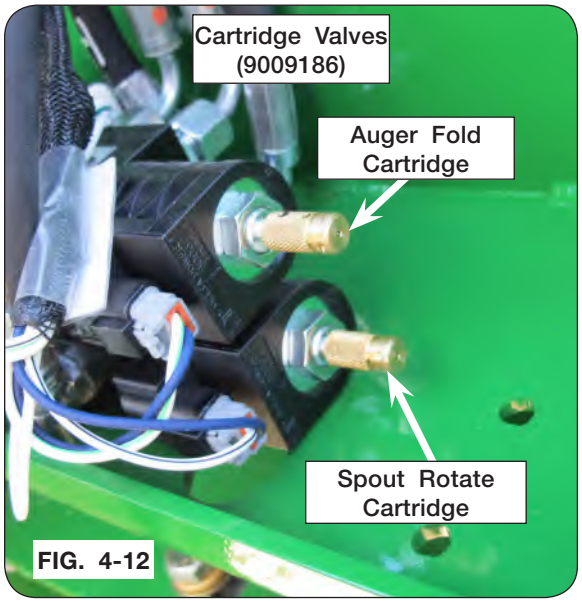


FIG. 4-12

5. Pull and hold the knob out on valve from normal position to manual override position. (FIG. 4-13)

6. Once the desired position is reached, release knob on valve from manual override back to normal position.

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

NOTE: Refer to "Troubleshooting" and for inline valve, vertical auger and/or rotating spout issues in the MAINTENANCE section.

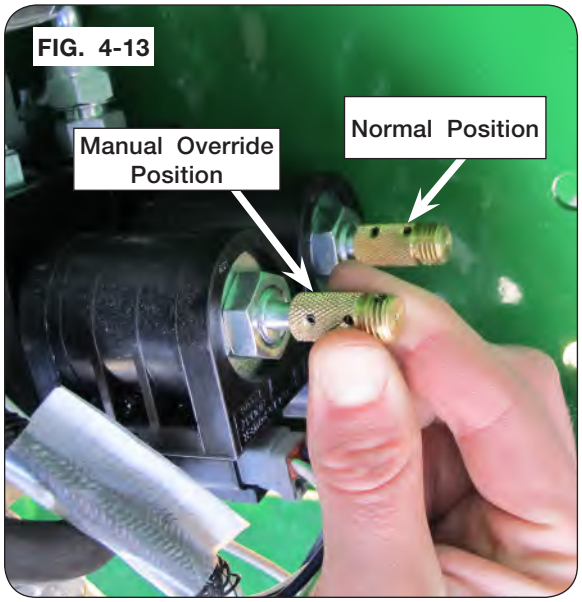


FIG. 4-13

8. Replace cover plate (295569B) from step 2 to the bottom of the lower auger housing. (FIG. 4-14)

FIG. 4-14

Auger System

WARNING

- **TO PREVENT PERSONAL INJURY OR DEATH WHILE SERVICING, 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.**
- **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.**

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

Vertical Auger Height Check

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

Annually check all bolts, nuts, and set screws for tightness. Replace the vertical auger top bearing hardware, as necessary. (FIG. 4-15)

(Continued on next page)

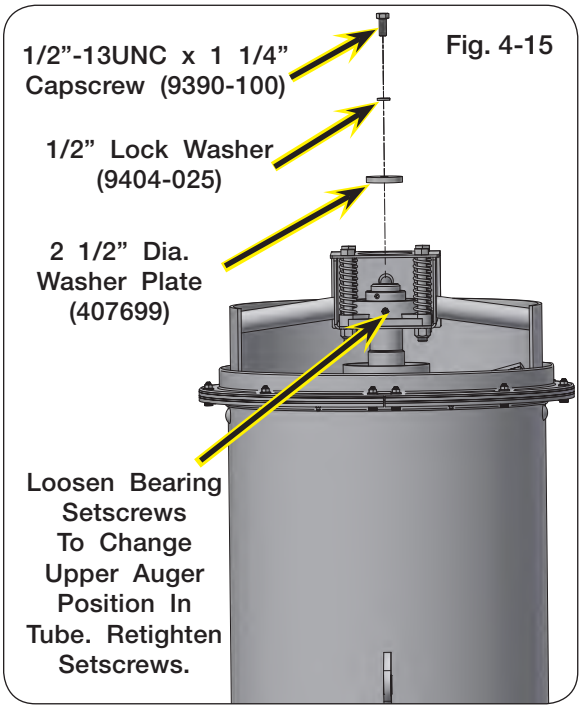


Fig. 4-15

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. 4-17 & 4-18)

Fig. 4-18

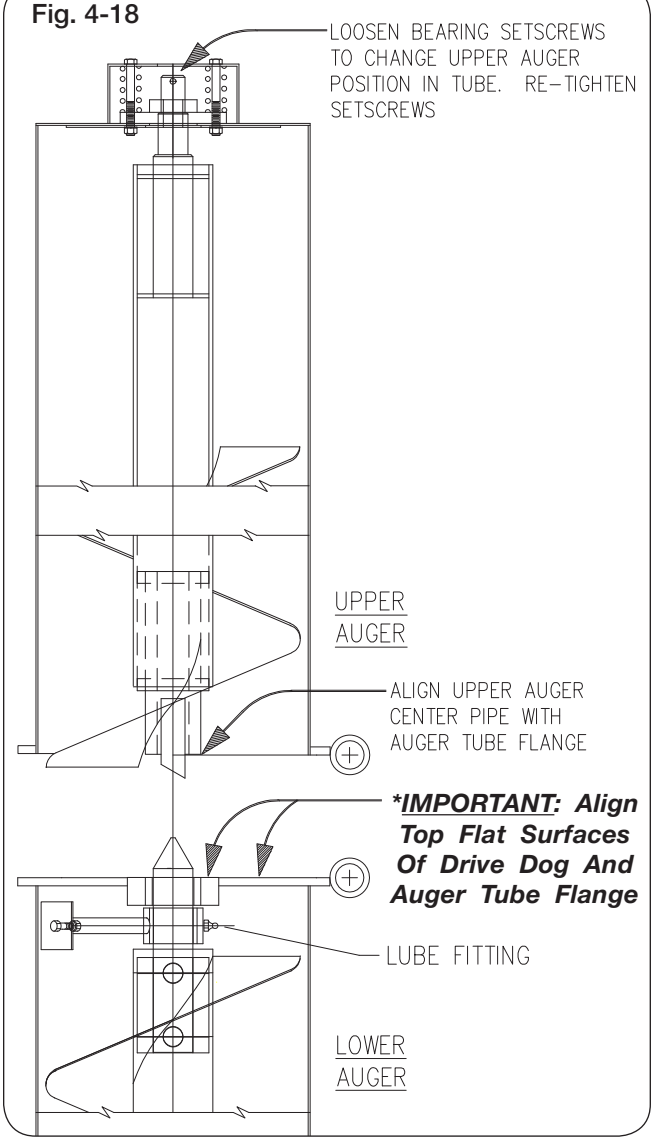


Fig. 4-16

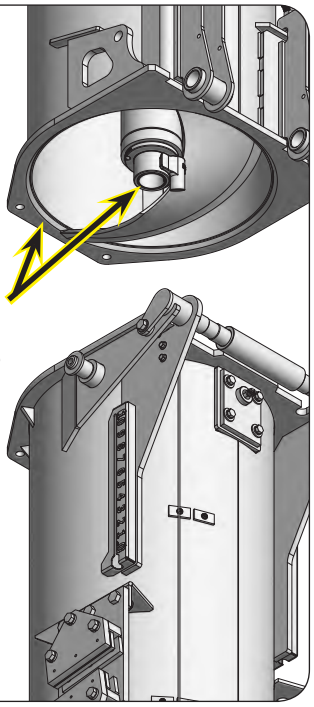
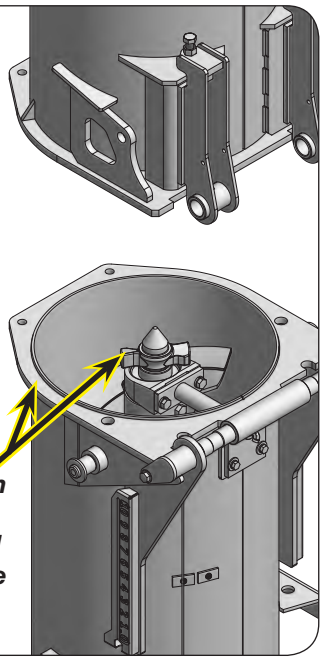


Fig. 4-17



Auger System (continued)

Vertical Auger Timing

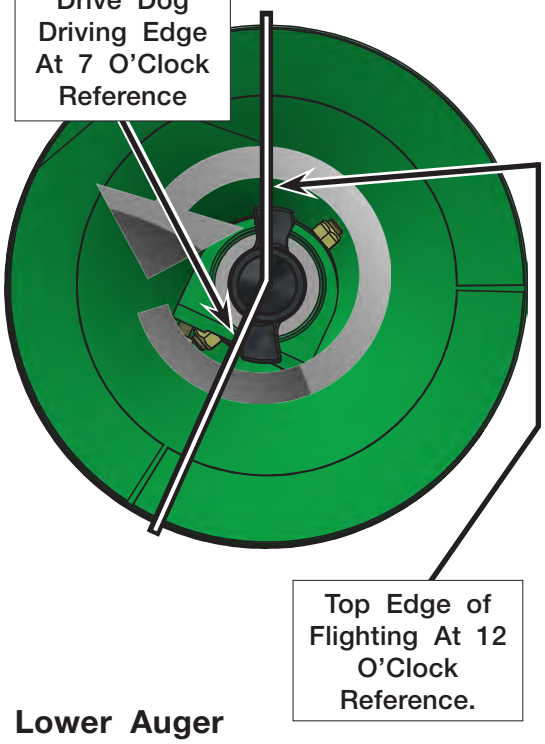
1. For the lower vertical auger, use the top edge of the flighting as a 12 o'clock reference. Position the drive dog so the driving edge is at the 7 o'clock position.

NOTE: Looking down at the lower flighting (FIG. 4-19) the auger rotation will be counter-clockwise. When looking up at the upper flighting (FIG. 4-20) the auger rotation will be clockwise.

2. For the upper auger, use the outer edge of the flighting as a 12 o'clock reference. Postion the driven edge of the drive pin at the 8 o'clock position. See Fig. 4-20.

3. When engaged, the upper flighting should immediately follow the lower flighting.

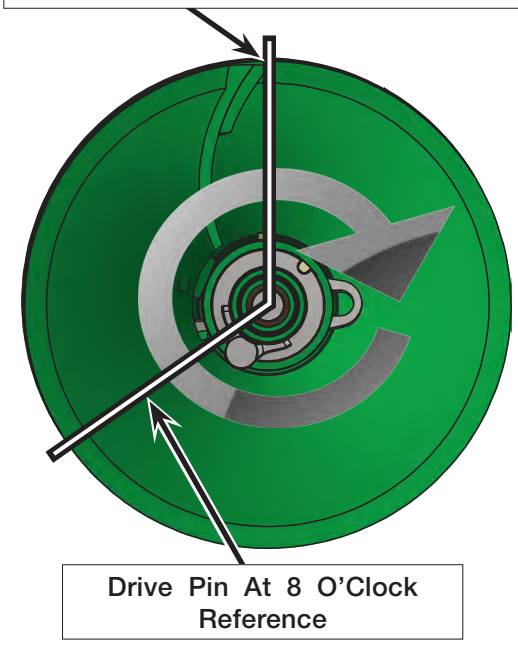
FIG. 4-19



Lower Auger

Upper Auger

FIG. 4-20



Auger System (continued)

Horizontal Auger

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

Horizontal Auger Height Measurement

4. Run a string from the front of the cart to the back, above the cleanout doors and linkages as shown in FIG. 4-21.

5. 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. 4-22.

6. 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. 4-23)

7. 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.

8. Measure the string to the auger tube either in front or behind the hanger bearing. If this dimension is 1/8” greater than the measurement taken in the front and rear, shims are required on top of the center hanger bearing. (FIG. 4-24)

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

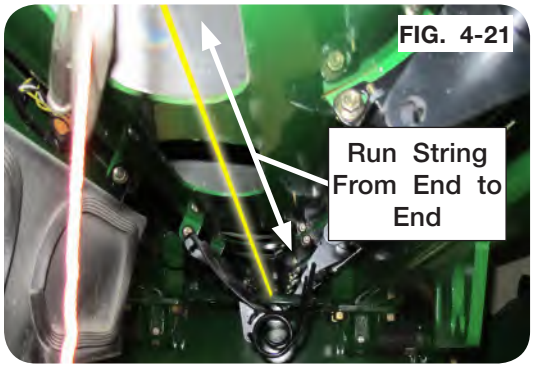


FIG. 4-21

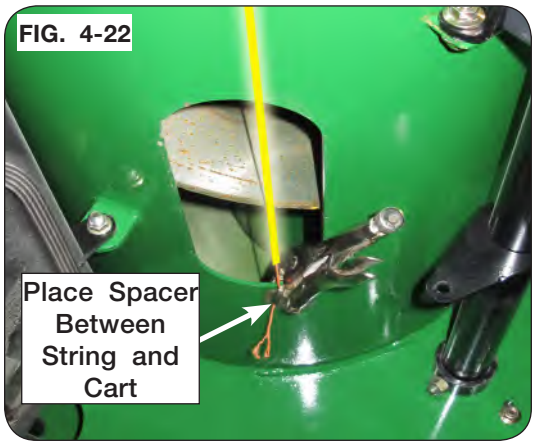


FIG. 4-22


FIG. 4-23

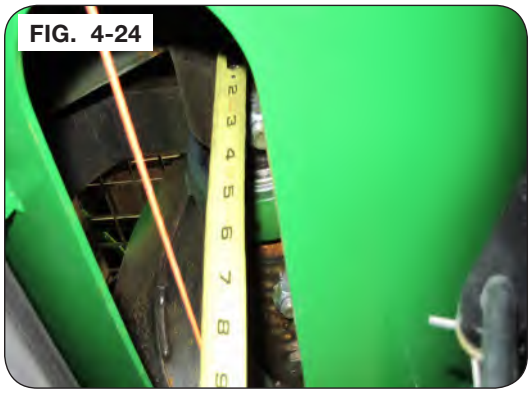


FIG. 4-24

Auger System (continued)

Hanger Bearing Height Adjustment

9. Remove the center screens inside the hopper by removing the 3/8" hardware holding them in place. (FIG. 4-25)

FIG. 4-25

10. Remove the restrictor weldment on the auger tent at the opening above the hanger bearing. (FIG. 4-26)

11. Loosen the two 5/8"x2" 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. 4-26.

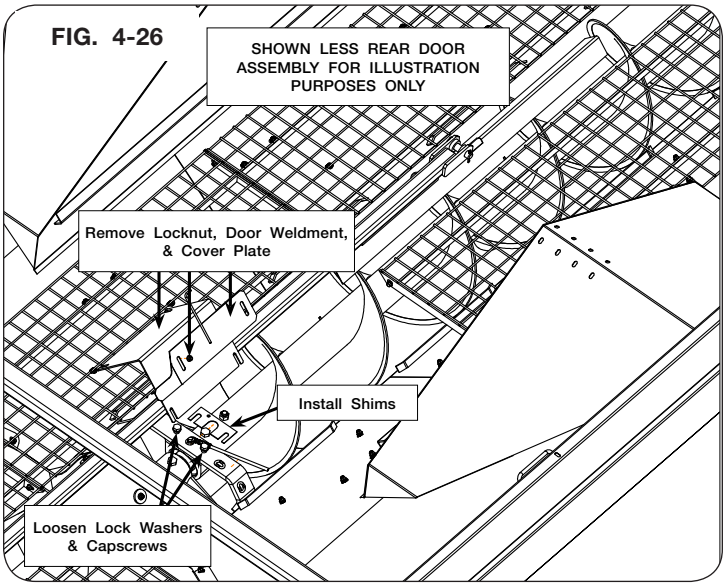


FIG. 4-26

12. If more than two shims are necessary to set the bearing height, replace the 5/8"x1 3/4" capscrews with the 5/8"x2" capscrews supplied in the kit.

13. 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.

14. Reassemble the restrictor weldment and screens on the inside of the cart.

15. Reassemble the cleanout door linkages on the front and rear doors.

16. Close cleanout doors and reassemble the cleanout door lock pin.

17. Ensure all personnel and tools are removed from the cart and reconnect the cart to the tractor.

18. 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 Driveline Bearings

IMPORTANT

- *Periodically check set screws in all bearings at either end of the driveline for tightness. (Fig. 4-27, 4-28 and 4-29)*

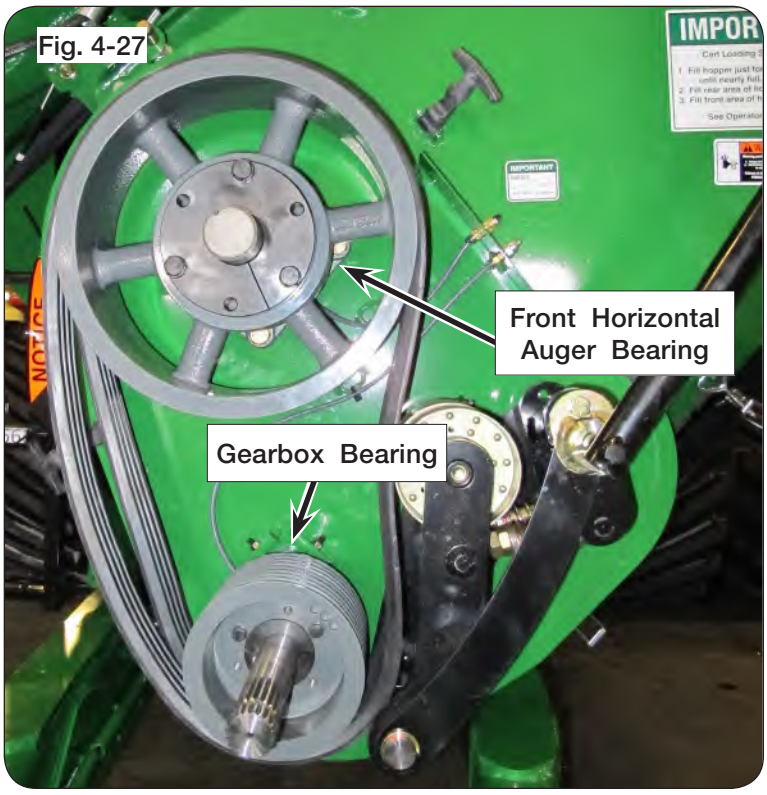


Fig. 4-27

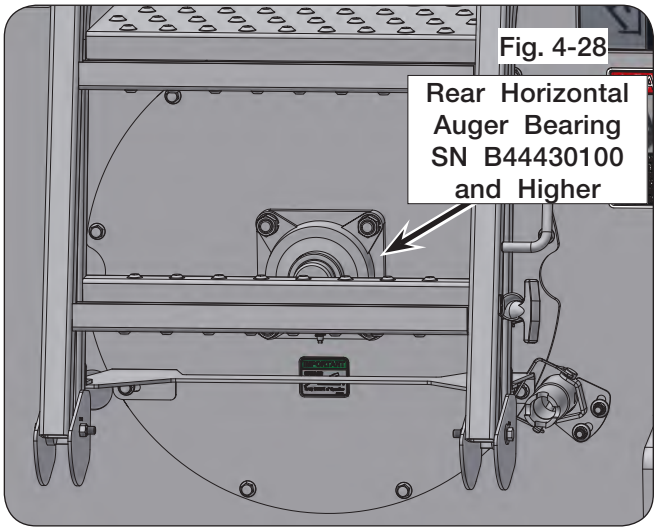


Fig. 4-28

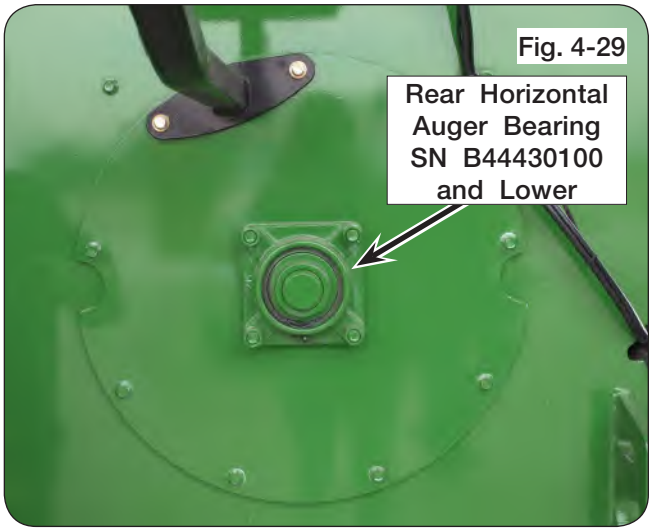


Fig. 4-29

Belt Tightener Adjustment

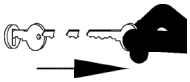
IMPORTANT

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

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

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

1. Park the unit on a firm, level surface. Block the 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. 4-32.

FIG. 4-30

FIG. 4-31


FIG. 4-32

Belt Tightener Adjustment (continued)

5. Belt tension is adjusted with hex nuts below the spring. All belt tension MUST be released from linkage. Loosen outer hex nut and adjust inner nut to establish a 3 1/16" pre-load dimension between the heavy washers. Tighten the outer hex nut against inner nut to lock position. (Fig. 4-33)

6. Check the lower belt pulley to ensure belt is aligned in their grooves. Using the belt tensioner handle, engage the roller/idler linkage against the belt and over-center stop. The compressed spring should now be approximately 1 3/4" between the washers and generating a force of approximately 480 lbs. against the belt. (Fig. 4-34)

7. Release and tighten belt multiple times to confirm positions and final adjustments. See Fig. 4-34 and Fig. 4-35.

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

NOTE: Always replace belts in matched sets.

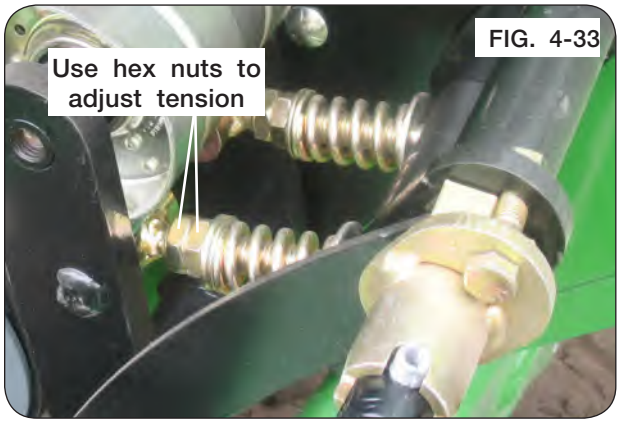


FIG. 4-33

FIG. 4-34

FIG. 4-35

V-Belt Alignment

1. Pulleys must be aligned with the fixed idler. Belts should be centered on idler for longest belt life. (Fig. 4-36)


FIG. 4-36

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. 4-37)

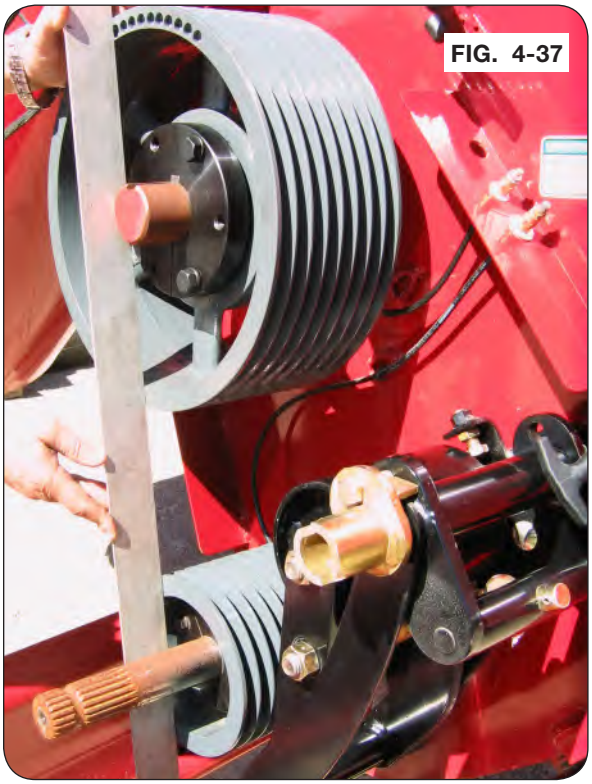


FIG. 4-37

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.

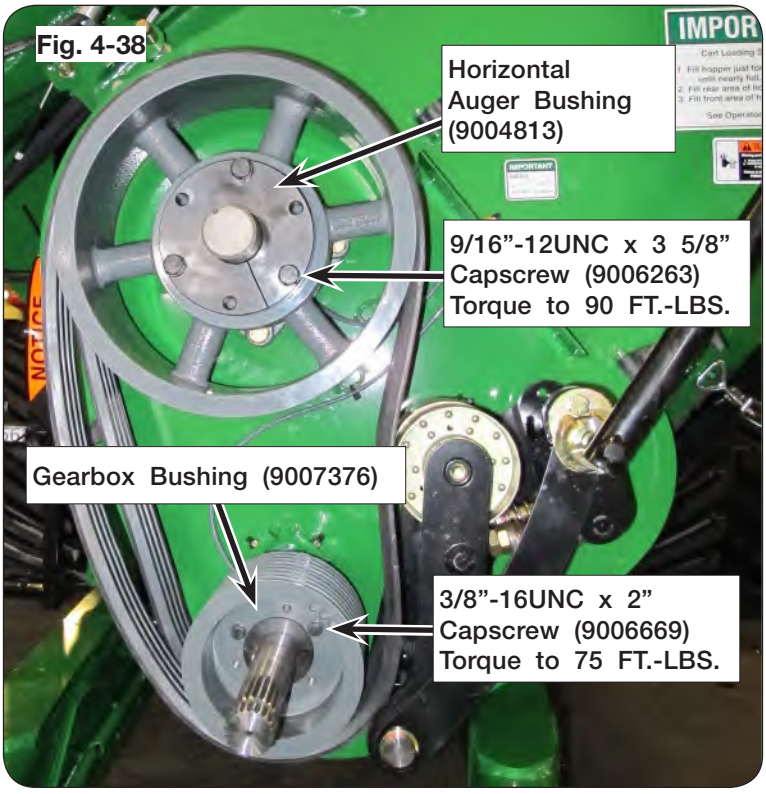


Fig. 4-38

Steering Tandem Maintenance

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

Alignment of tires can be changed by adjustment of linkage(s). See "Steering Tandem Linkage Adjustment Procedures".

Steering Tandem Troubleshooting

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

Tire Misalignment:

1. Steer the left set of tires until all tire edges are inline and straight forward. Check the opposite side. If both tire edges are equally out of alignment, then the center linkage needs adjustment. See "Steering Tandem Center Linkage Adjustment Procedure" in this section.

2. If only one tire on the opposite side is not straight, then that tire linkage needs to be adjusted. See "Steering Tandem Side Linkage Adjustment Procedure" in this section.

Failure to Auto-Steer:

1. If grease zerks are present, heavily grease the 4 steering kingpins and 8 clevis pivot pins. For grease zerk locations, see “Lubrication” in this section. After long periods of inactivity, the pins can seize in the bushing. Once the pins are greased, manual steer the wheels in both directions. If wheel assemblies to not rotate freely, grease again and repeat manually steering the wheels.

2. Make sure the steering axle control switch is in the OFF/Auto-Steer position. (Fig. 4-39)

3. Check for debris that may be obstructing tie-rod movement.

(Continued on next page)

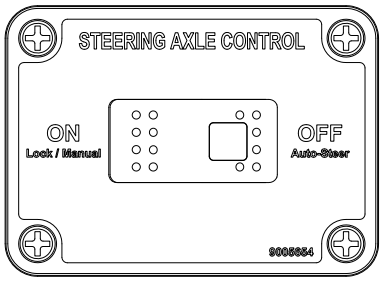


FIG. 4-39

Steering Tandem Maintenance (continued)

Steering Tandem Troubleshooting

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

Failure to Manual-Steer:

1. Make sure the steering axle control switch is in the ON position. (Fig. 4-40)
2. Make sure the hydraulic hoses are attached properly.
3. Make sure hydraulic circuit is on.

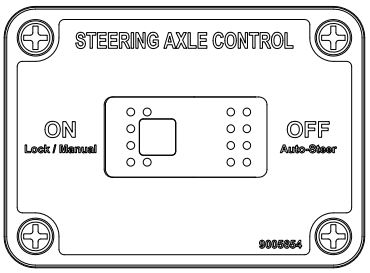
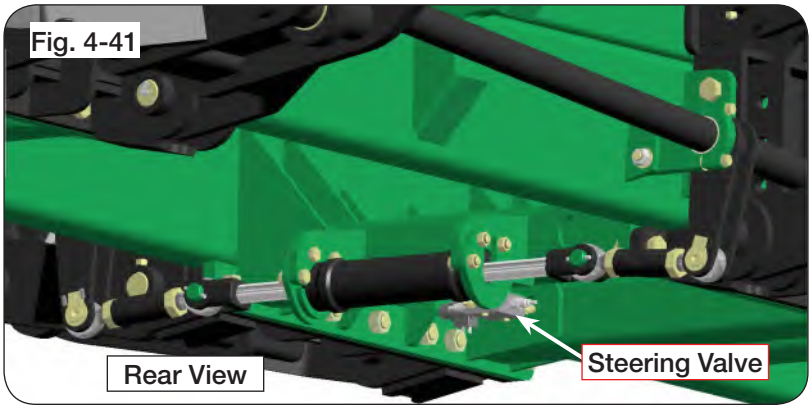


FIG. 4-40

4. Check the harness connection on the steering valve located on the cross axle, make sure there is 12-Volt to the solenoid on the valve attached to the cross axle. (Fig. 4-41)



Steering Indicator Misalignment:

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

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 CLOTHES, 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. 4-42)
3. Once clamping cone/retaining bolt is removed, slide torque limiter off gearbox splined input shaft.

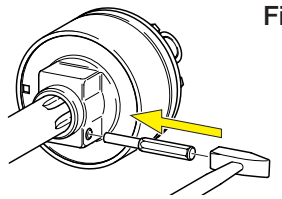


Fig. 4-42

Seasonal Storage

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

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

Reattach PTO brackets (296155Y) to the inside right hand side of the tongue and place PTO assembly on brackets.

Lubricate machine at all points outlined.

Repaint all areas where paint has been removed to keep from rust 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.

Fig. 4-43

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

Close the tarp to keep debris out of the hopper.

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

Baffle Adjustment

WARNING

- **TO PREVENT PERSONAL INJURY OR DEATH WHILE SERVICING, 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 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.

(Continued on next page.)

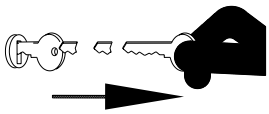
Baffle Adjustment (continued)

Before making any baffle adjustments, close horizontal auger flow door. Park the unit on a firm, level surface. Block the machine to keep it from moving. Set the tractor parking brake, turn off tractor engine, remove ignition key, and disconnect PTO shaft.

If a higher flow is desired and torque is not a factor, loosen the (2) flange nuts on each baffle, see figure 4-39. Use the lift handle to raise each baffle to the desired position, retighten both flange nuts, see figures 4-44 & 4-45.

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 4-45 for illustration only.



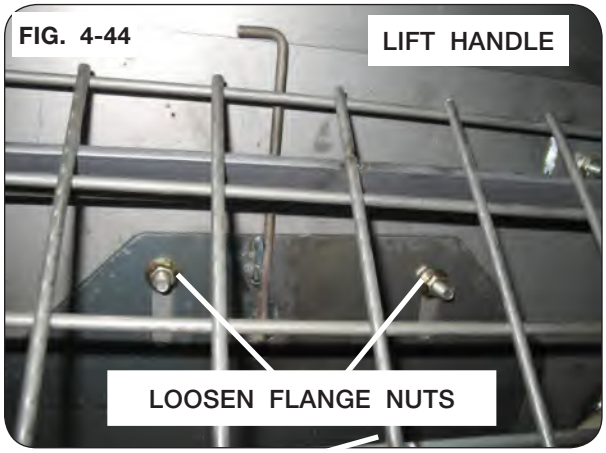


FIG. 4-44

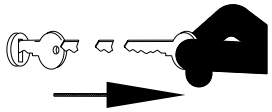
FIG. 4-45

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 unit on a firm, level surface. Block the machine to keep it 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. 4-46)

3. Starting at the front of the cart, using a jack, push the rockshaft up and toward the runner tube. (Fig. 4-46)

FIG. 4-46

NOTE: Ideal distance between the runner tube and rockshaft is 3 1/4". (FIG. 4-47)

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.

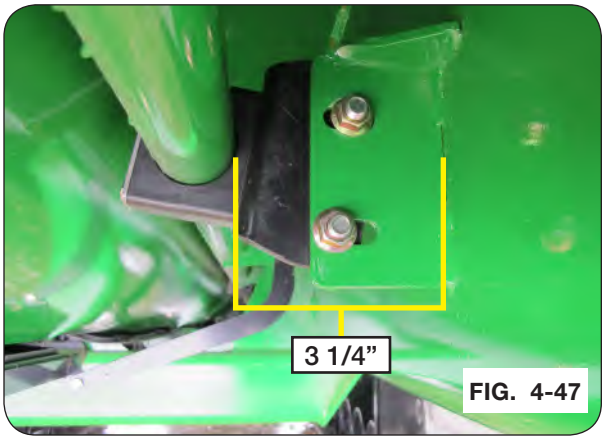


FIG. 4-47

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. 4-48)

7. Close the doors and ensure all doors seal. (Fig. 4-48)

8. Insert lynch pin into rockshaft and return handle to storage location.

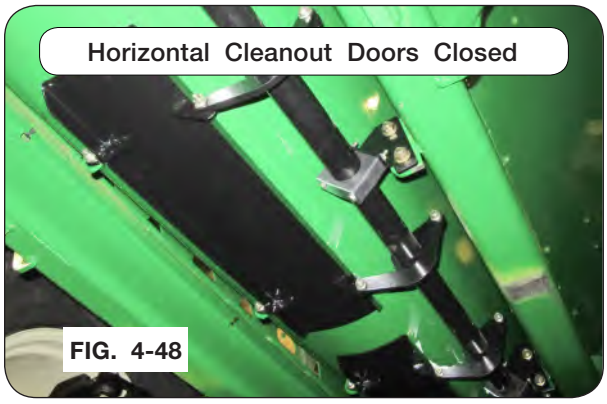


FIG. 4-48

Steering Tandem Linkage Adjustment Procedures

WARNING

- **UNEXPECTED IMPLEMENT MOVEMENT CAN CAUSE SERIOUS INJURY OR DEATH. DO NOT SERVICE OR MAKE ADJUSTMENTS TO IMPLEMENT WHILE THE TOWING VEHICLE IS RUNNING.**
- **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 9,000 LBS. SPECIFIC LOAD RATINGS FOR INDIVIDUAL LOADS WILL BE GIVEN AT THE APPROPRIATE TIME IN THE INSTRUCTIONS.**
- **EYE PROTECTION AND OTHER APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT MUST BE WORN WHILE SERVICING IMPLEMENT.**
- **KEEP HANDS CLEAR OF PINCH POINT AREAS.**

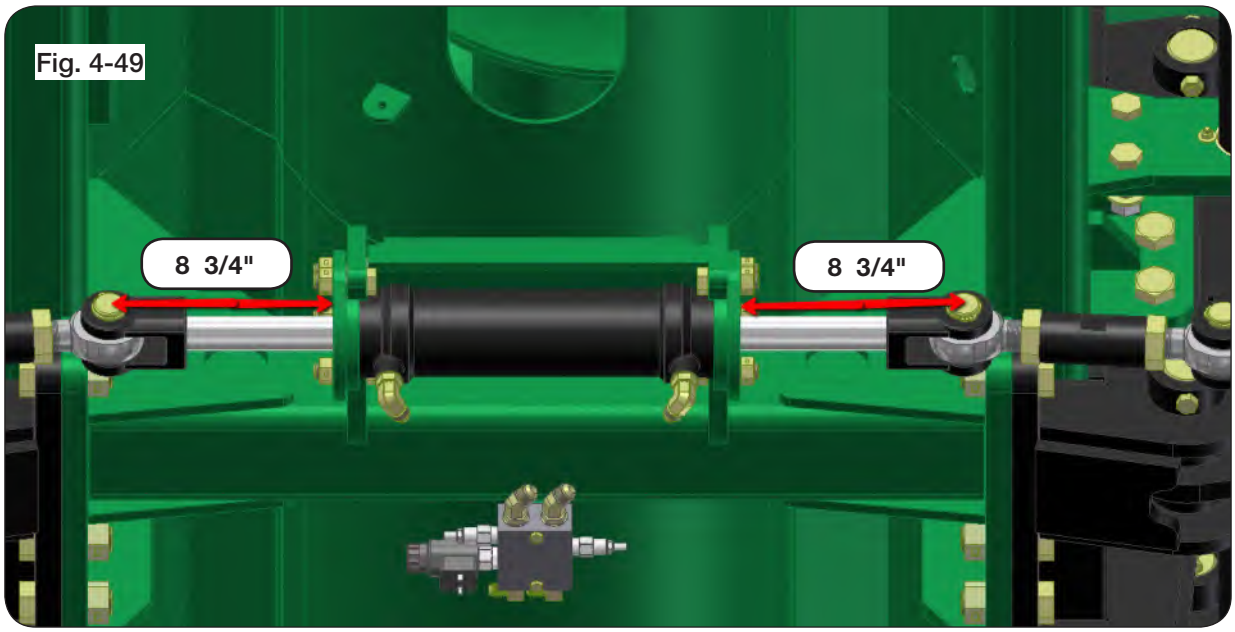
NOTE: Do not block tires since they are being manually steered.

Center Linkage & Rockshaft Adjustment:

Use this procedure if:
* Both tires on both sides are equally out of alignment.
* Or both tires on one side are out of alignment.

1. Park the empty unit on a firm, level surface. Set the towing vehicle's parking brake. Tractor hydraulics are required for some steps, shut off engine and remove ignition key when hydraulic functions are complete. Turn the Steering Tandem switch to the "ON" position, and ensure the hydraulic lever is in float.
2. Manually steer until equal stroke is measured on both ends of cylinder. Measuring from the center of the cylinder pin to the edge of the mount bracket, it should be around 8 3/4" on both sides. Check tire alignment. Verify suspension height is correct. (Fig. 4-49)

Fig. 4-49



Steering Tandem Linkage Adjustment Procedures (continued)

3. With the center of the cylinder pin to the edge of the mount bracket around 8 3/4", adjust the short tie-rod only on the side of the cylinder that needs adjustment. Loosen the jam nuts on each end of the short tie-rod. (Fig. 4-50)

4. Extend or shorten tie-rod by turning jam nuts with 1/2" turn increments while checking wheel alignment between adjustments. Recenter the steering cylinder and check tire alignment. Continue to make adjustments until wheels are straight. (Fig. 4-50)

5. If the tires are removed, use the hub face to align.

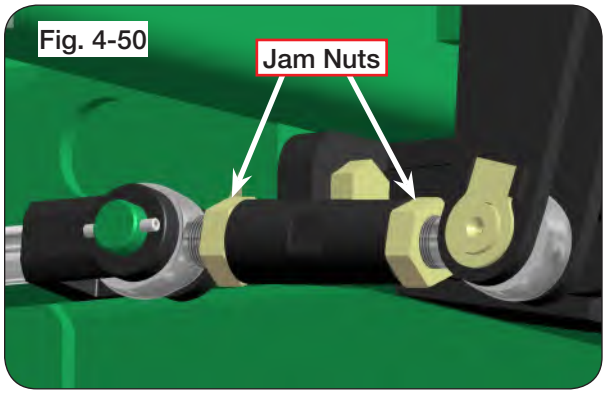
6. If the tires are assembled, check alignment across the outside center of the tires. Due to variation in rubber tire profile, adjust the alignment until the front and rear of both tires are within 1/2” of being inline.

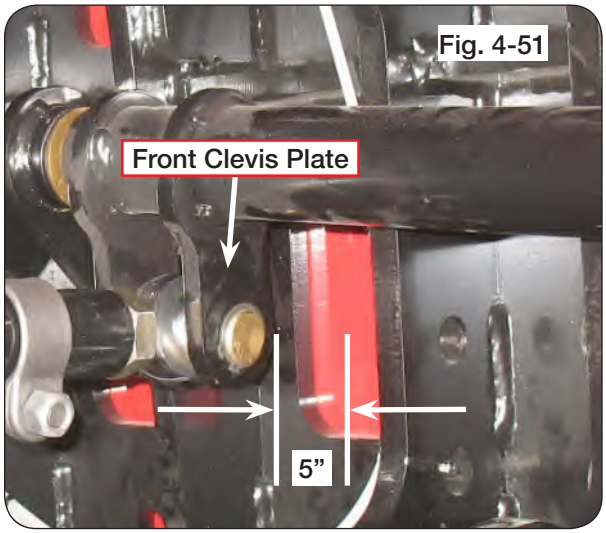
7. To keep the rockshaft aligned, measure the distance between the cart runner tube and edge of the front clevis plate as shown in figure 4-51. This measurement should be 5" on both the LH and RH sides.

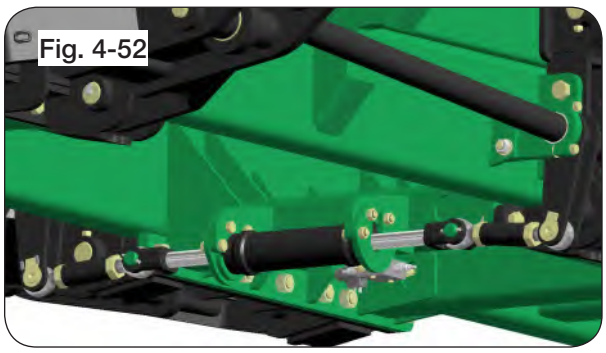
8. Adjust short tie-rod between the steering cylinder and rockshaft, if needed, to maintain 5" dimension before making adjustments to the side linkage tie-rods in the next section.

9. Once wheels are aligned, tighten jam nuts located on the ends of the short tie-rod. (Fig. 4-52)

10. Check alignment of the indicator, if it is misaligned follow "Steering Indicator Adjustment Procedures" in this section.







Steering Tandem Linkage Adjustment Procedures (continued)

Side Linkage Adjustment:

Use this procedure if:
* One or both front tires are out of alignment.
* Or one or both back tires are out of alignment.

1. Remove the weight from the tire by using a safe lifting device rated for a minimum of 9,000 lbs., and support the lower para-link arm of the tandem. (Fig. 4-53)


Fig. 4-53

2. Loosen the jam nut on the rod end, and loosen the clamp and hardware on the tie-rod end. (Fig. 4-54 & 4-55)

3. Adjust rod end jam nut with 1/4” to 1/2” turn increments while checking wheel alignment between adjustments. (Fig. 4-54)

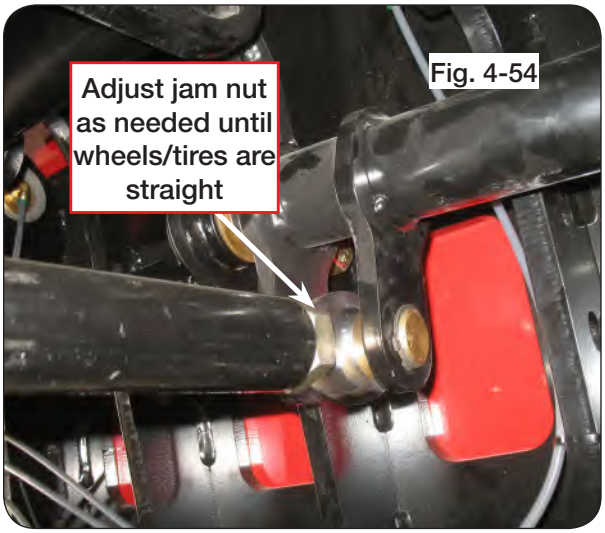


Fig. 4-54

NOTE: Make sure the capscrew on the clamp is facing away from the clevis and spindle to prevent interference when steering. (Fig. 4-55)

4. Once wheels are aligned, tighten the jam nut and the tie-rod clamp. (Fig. 4-54 & 4-55)

5. Lower tire to ground and check alignment.

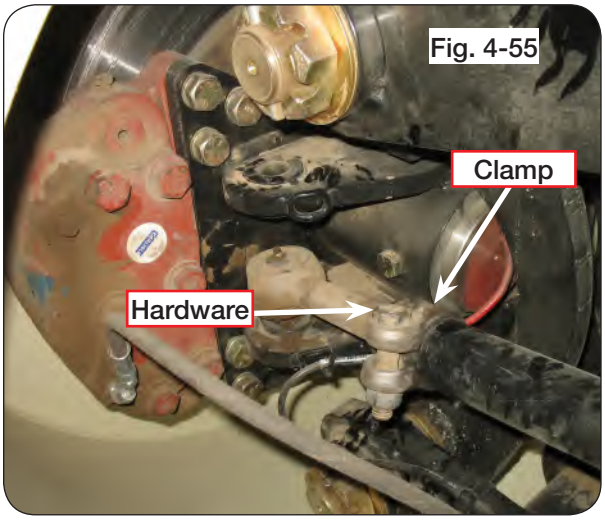


Fig. 4-55

Steering Indicator Adjustment Procedures

NOTE: Steering Tandem Tire position can be determined by observing indicator arrow. For Left-Hand unload, the location is the lower right front panel, and for Right-Hand unload, the location is the lower right portion of front panel.

Use this procedure if:

* To center indicator when tires are straight forward.

1. Straighten the wheels, and loosen the hex nuts (97189) on the u-bolt (9001114). (Fig. 4-56)

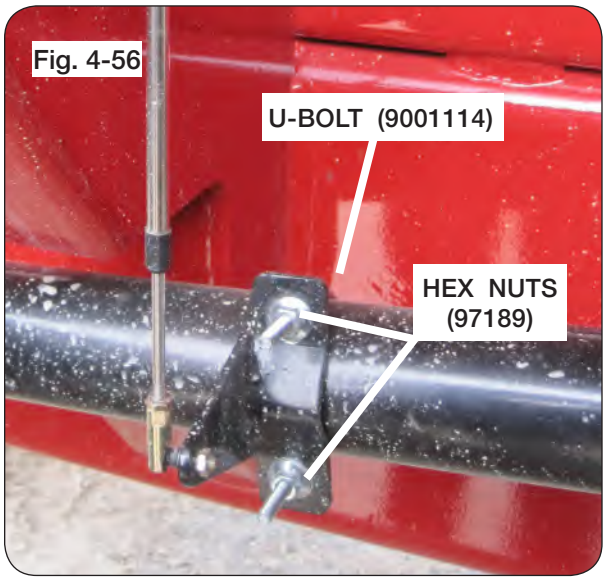


Fig. 4-56

2. Adjust the u-bolt (9001114) to center the red indicator (283749R) on the front of the cart, and retighten the hex nuts (97189). (Fig. 4-56 & 4-57)

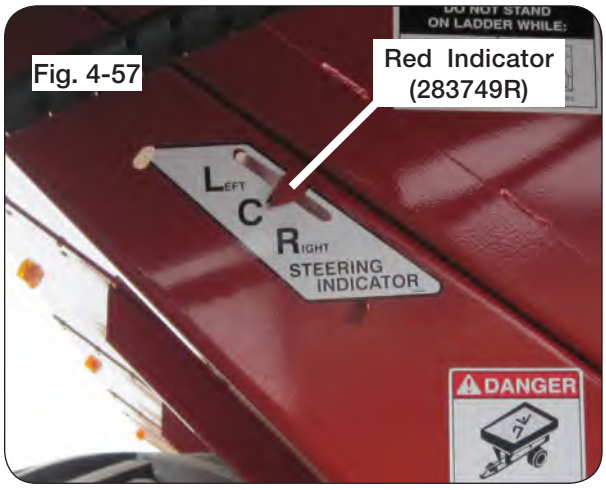


Fig. 4-57

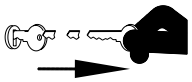
Steering Tandem Rockshaft Replacement

WARNING

- **FALLING OBJECTS CAN CAUSE SERIOUS INJURY OR DEATH. DO NOT WORK UNDER THE MACHINE AT ANY TIME WHILE BEING HOISTED. BE SURE ALL LIFTING DEVICES AND SUPPORTS ARE RATED FOR THE LOADS BEING HOISTED. THESE ASSEMBLY INSTRUCTIONS WILL REQUIRE SAFE LIFTING DEVICES UP TO 9,000 LBS. SPECIFIC LOAD RATINGS FOR INDIVIDUAL LOADS WILL BE GIVEN AT THE APPROPRIATE TIME IN THE INSTRUCTIONS.**
- **EYE PROTECTION AND OTHER APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT MUST BE WORN WHILE SERVICING IMPLEMENT.**
- **KEEP HANDS CLEAR OF PINCH POINT AREAS.**

NOTE: Removing and assembling rockshaft takes **two people**: one at the front and rear.

1. Park the empty grain cart on a firm, level surface. Block the machine to keep it from moving. Relieve hydraulic pressure, see tractor operator's manual. Set the tractor's parking brake, shut-off the engine, and remove the ignition key. Completely disconnect the tractor from the grain cart.



2. Remove the weight from the tire by using a safe lifting device rated for a minimum of 9,000 lbs., and support the lower para-link arm of the tandem. (Fig. 4-58)

FIG. 4-58

Steering Tandem Rockshaft Replacement (continued)

3. Disconnect the lower tie-rod only on the side of the cylinder that needs rockshaft replacement. (Fig. 4-59)

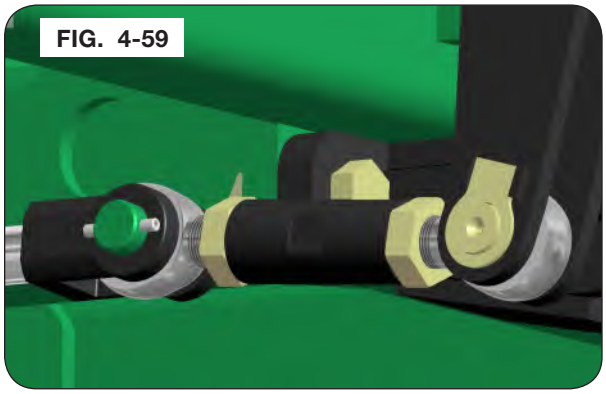


FIG. 4-59

4. Remove the pin on the end of the short tie-rod as shown. Keep pin. (Fig. 4-60)


FIG. 4-60

5. At the rear of the rockshaft, remove the retaining ring on the end of the pin. Keep retaining ring. (Fig. 4-61)

6. Slide the pin from the rockshaft, spacer bushings and tie-rod. Keep pin and spacer bushings. (Fig. 4-61).

7. Repeat steps 5 and 6 for the front of the rockshaft.

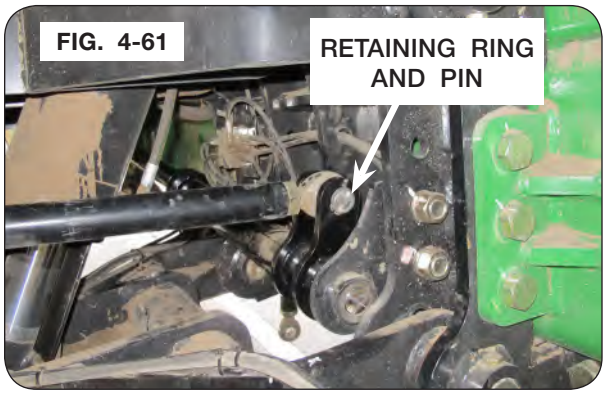


FIG. 4-61

8. Remove the 3/4" capscrews, 3/4" flat washers and 3/4" lock nuts (all hardware qty. 2) attached to the bearing retainer and grain cart as shown. Keep 3/4" hardware. (Fig. 4-62)

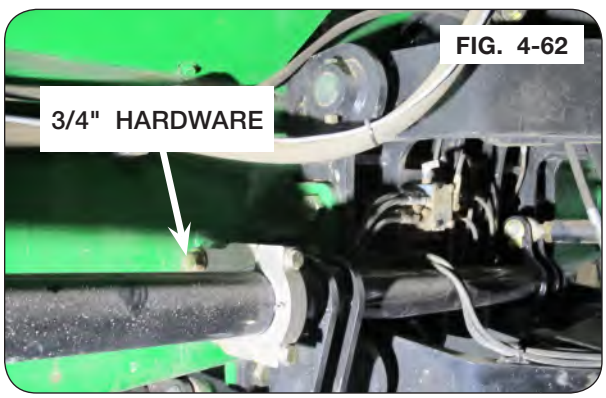


FIG. 4-62

Steering Tandem Rockshaft Replacement (continued)

NOTE: Removing and assembling rockshaft takes two people: one at the front and rear.

9. Slide the rockshaft forward to remove from the rear pivot bushing. (Fig. 4-63)

10. Slide the rockshaft rearward to remove from the front pivot bushing.

11. Lower the rear end of the rockshaft, and slide the rockshaft rearward to remove from grain cart. Discard rockshaft.

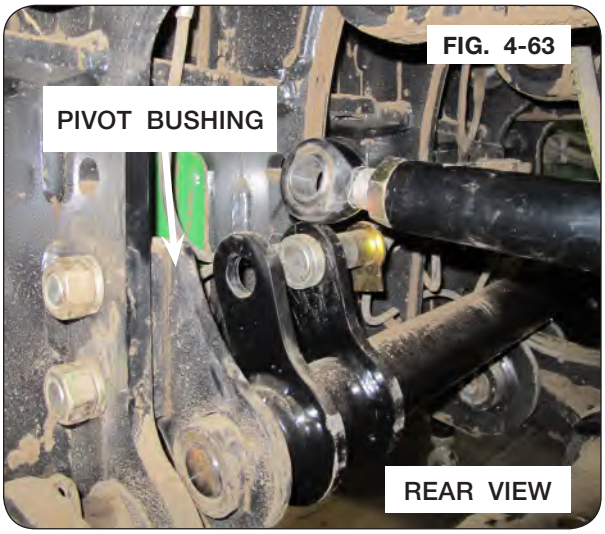


FIG. 4-63

12. Remove and discard self lubricating bushings and washers from the front and rear of the rockshaft. (Fig. 4-64)

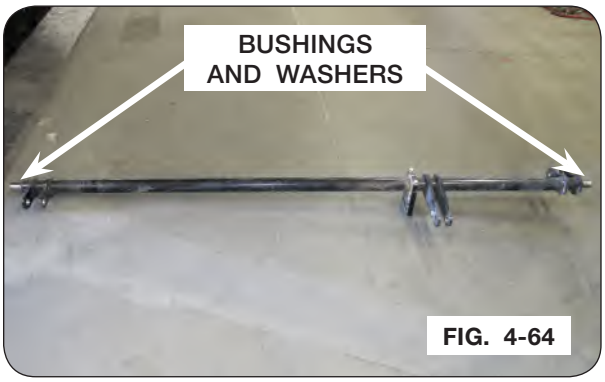


FIG. 4-64

13. Slide new washer and self lubricating bushing to the front end of the new rockshaft.

14. Assemble rockshaft by raising the front end and inserting into the front pivot bushing.

15. Slide new washer and self lubricating bushing to the rear end of the rockshaft.

16. Insert rockshaft into the rear pivot bushing.

17. Reusing 3/4" hardware from step 8, reattach the hardware to the bearing retainer and grain cart. Loosely tighten hardware. (FIG. 4-65)

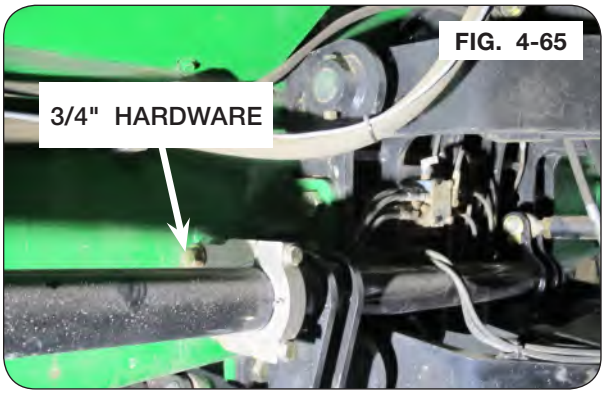


FIG. 4-65

Steering Tandem Rockshaft Replacement (continued)

18. At the rear of the rockshaft and using parts from step 6, insert the pin into the rockshaft, spacer bushings and tie-rod.

19. Reusing retaining ring, attach to the end of the pin.

20. Repeat steps 18 and 19 for the front of the rockshaft.

21. Reusing pin from step 4, attach to the end of the short tie-rod and rockshaft bracket.

22. Tighten all hardware.

23. Lower tire to ground, remove safe lifting devices and check alignment of the rockshaft & tires in "Steering Tandem Linkage Adjustment Procedures" in MAINTENANCE section.

24. Tighten the jam nuts located on the ends of the short tie-rods. Check the alignment of the indicator, if it is misaligned "Steering Indicator Misalignment" in the previous section. (Fig. 4-66)

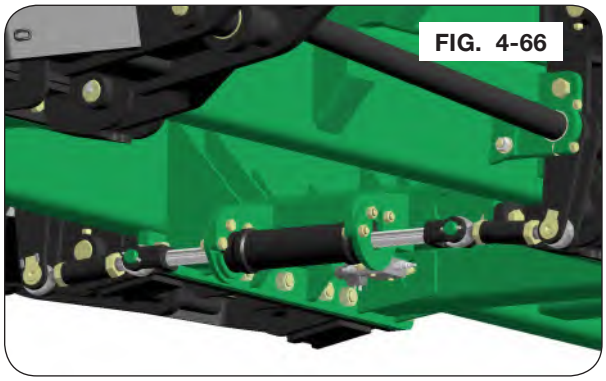


FIG. 4-66

Verify Telescoping 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

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

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

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

1. Fully collapse PTO shaft and measure length "L" (Fig. 4-67).

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

2. Pull apart PTO telescoping shaft ends and measure lengths "T" & "C" (Fig. 4-68)

   Add "T" + "C" measurments together
   Enter total here:_____(2)

3. Calculate maximum recommended extended length:

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

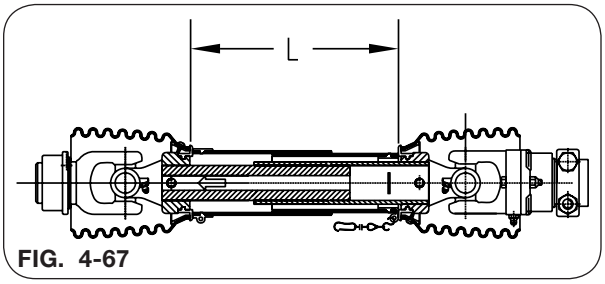


FIG. 4-67

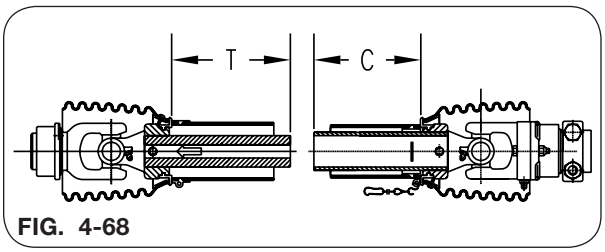


FIG. 4-68

This is the maximum recommended extended length.

Verify Telescoping PTO Shaft Length (continued)

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

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

6. Position the tractor to obtain the tightest turning angle, relative to the cart. (Fig. 4-69)

7. Measure the length "L" from the same points as used in step 1. **This distance must be at least 1.5 inches greater than the distance measured in step 1.** If necessary, adjust the length of the PTO shaft by cutting the inner and outer plastic guard tubes and inner and outer sliding profiles by the same length. Round off all sharp edges and remove burrs before greasing and reassembling shaft halves. (Fig. 4-70)

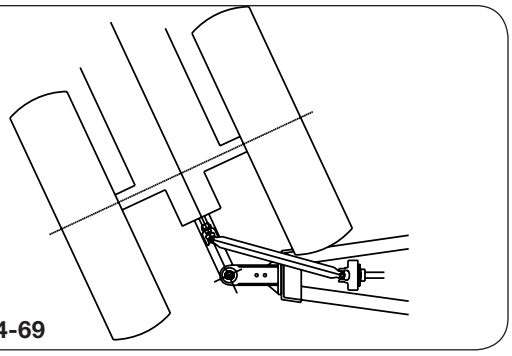


FIG. 4-69

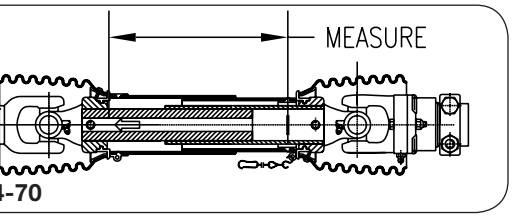


FIG. 4-70

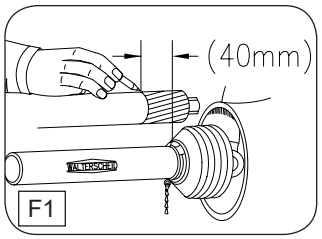
PTO Shaft Length Adjustment

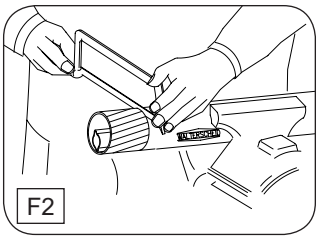
WARNING

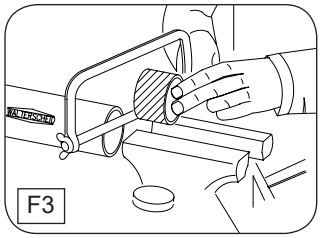
- **CHECK THE LENGTH OF THE TELESCOPING MEMBERS TO ENSURE THE DRIVELINE WILL NOT BOTTOM OUT OR SEPARATE WHEN TURNING AND/OR GOING OVER ROUGH TERRAIN.**

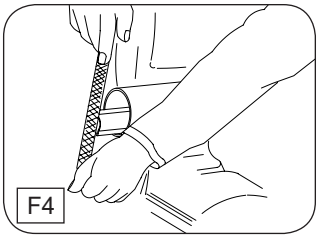
NOTE: Maximum operating length LB. (Refer to "Verify Telescoping PTO Shaft Length" in this section for LB length.)

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





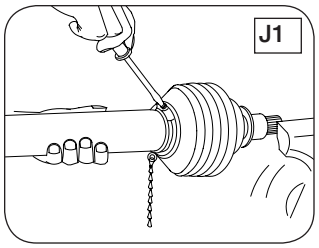


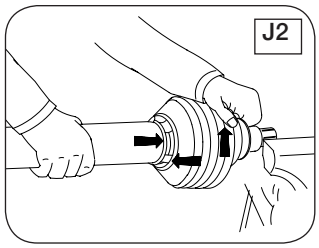


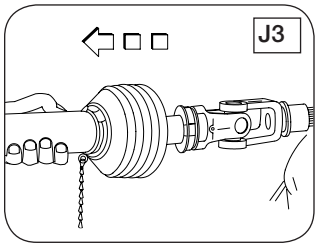
PTO Shaft and Clutch

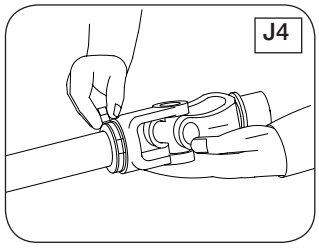
To Dismantle Guard (Figs. J1 - J4)

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





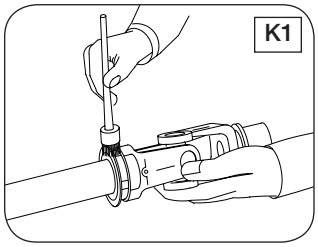


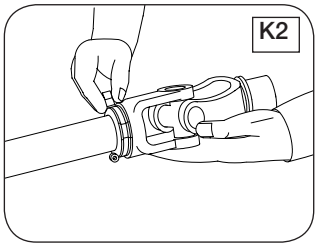


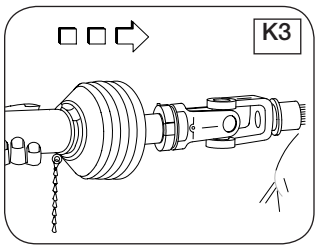
PTO Shaft and Clutch (continued)

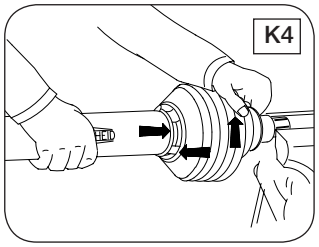
To Assemble Guard (Figs. K1 - K5)

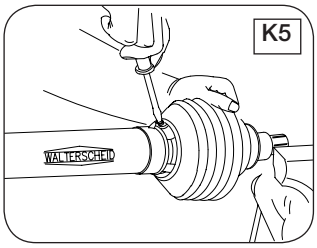
1. Grease yoke groove and inner profile tube.
2. Fit bearing ring in groove with recesses facing profile tube.
3. Slip on half-guard.
4. Turn cone until it engages correctly.
5. Install locking screw.





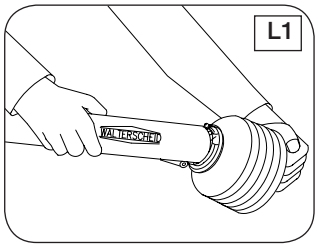


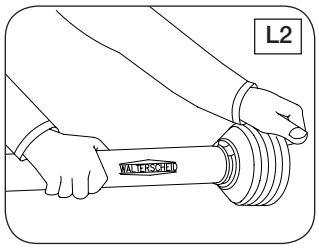


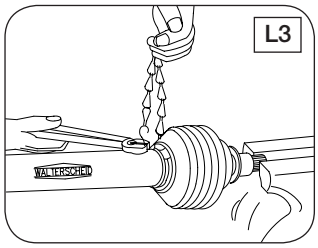


To Assemble Cone (Figs. L1 - L3)

1. Dismantle guard (Figs. J1 - J3). Remove old cone (e.g. cut open with knife). Take off chain. Place neck of new cone in hot water (approx 80o C / 180o 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).





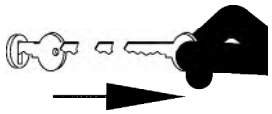


Hydraulic Jack Cylinder Replacement

⚠ 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.**
- **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 2,000 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 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 a minimum of 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. 4-70)

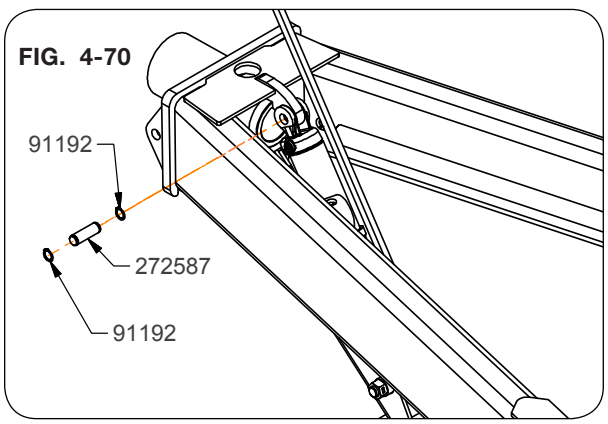


FIG. 4-70

Hydraulic Jack Cylinder Replacement (continued)

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. 4-71)

10. Remove hydraulic jack assembly from the tongue. (FIG. 4-71)

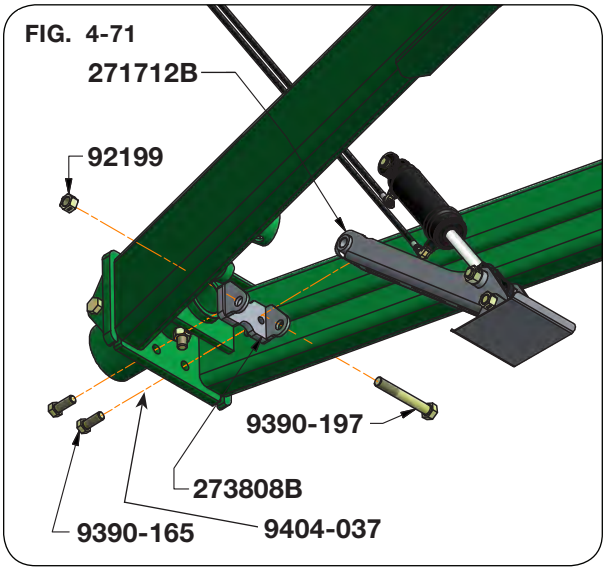


FIG. 4-71

11. On new hydraulic assembly (294143B), attach hoses (9006068) and fittings to cylinder (9009047) as shown in FIG. 4-72 and 4-73. 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.

12. To reassemble hydraulic jack, see "Optional Hydraulic Jack" in SET UP section.

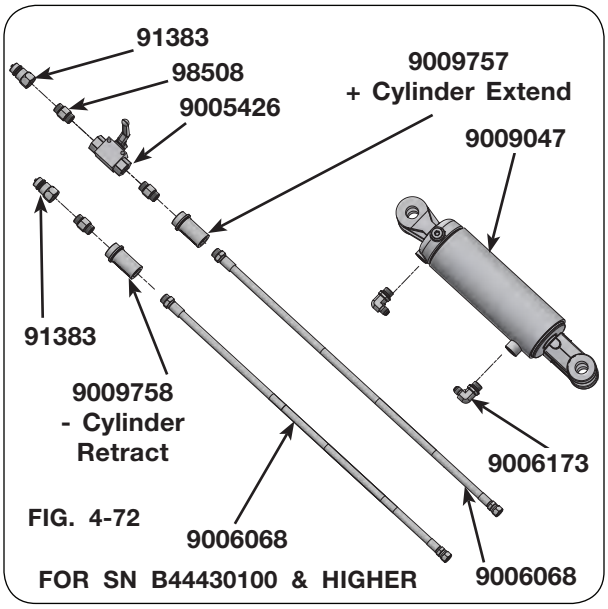


FIG. 4-72

FOR SN B44430100 & HIGHER

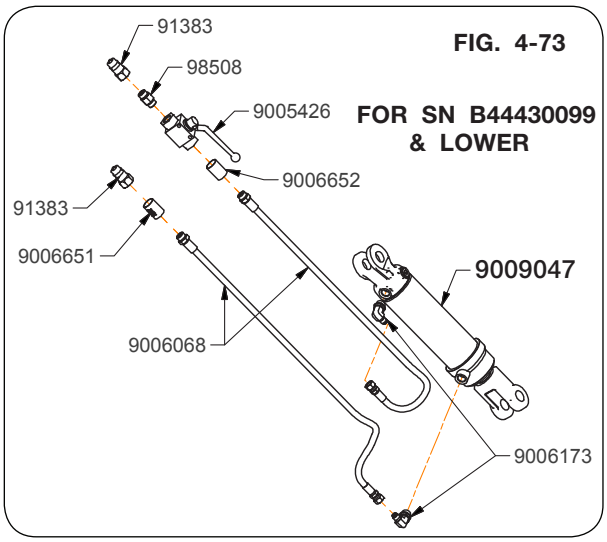


FIG. 4-73

FOR SN B44430099 & LOWER

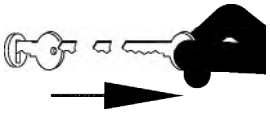
Horizontal Auger Removal and Replacement

⚠ WARNING

- **TO PREVENT PERSONAL INJURY OR DEATH WHILE SERVICING, ALWAYS ENSURE THAT THERE ARE PEOPLE WHO REMAIN OUTSIDE THE CART TO ASSIST THE PERSON WORKING INSIDE, AND THAT ALL SAFE WORKPLACE PRACTICES ARE FOLLOWED. THERE ARE RESTRICTED MOBILITY AND LIMITED EXIT PATHS WHEN WORKING INSIDE THE IMPLEMENT.**
- **NEVER ENTER CART WITH AUGER OR TRACTOR RUNNING. SERIOUS OR FATAL INJURY CAN OCCUR DUE TO ENTANGLEMENT WITH ROTATING COMPONENTS. ALWAYS STOP ENGINE AND REMOVE KEY BEFORE ENTERING CART.**
- **EYE PROTECTION AND OTHER APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT MUST BE WORN WHILE SERVICING IMPLEMENT.**
- **KEEP HANDS CLEAR OF PINCH POINT AREAS.**
- **FALLING OBJECTS CAN CAUSE SERIOUS INJURY OR DEATH. DO NOT WORK UNDER THE MACHINE AT ANY TIME WHILE BEING HOISTED. BE SURE ALL LIFTING DEVICES AND SUPPORTS ARE RATED FOR THE LOADS BEING HOISTED. THESE ASSEMBLY INSTRUCTIONS WILL REQUIRE SAFE LIFTING DEVICES UP TO 1,000 LBS. SPECIFIC LOAD RATINGS FOR INDIVIDUAL LOADS WILL BE GIVEN AT THE APPROPRIATE TIME IN THE INSTRUCTIONS.**

NOTE: Open the flow gates all the way.

1. Park the unit on a firm, level surface. Block the 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.



NOTE: For SN B44430099 & lower, skip to step 4.

2. Remove 4 rear ladder capscrews attached to the cart. (FIG. 4-74)

NOTE: Keep all hardware for re-assembly.

3. Remove rear ladder from the cart. (FIG. 4-74)

NOTE: For SN B44430100 & higher, continue to step 5.

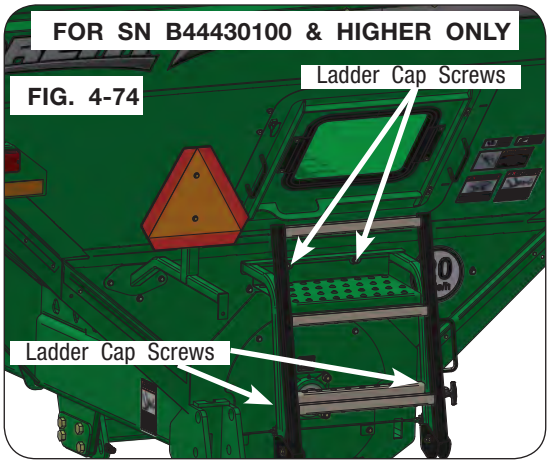


FIG. 4-74

Horizontal Auger Removal and Replacement (continued)

4. For SN B44430099 & lower, remove the SMV bracket located on the rear auger cover. (Fig. 4-75)
5. Remove the capscrews from the auger cover. (Fig. 4-75)
6. Pry the auger from the auger tube. (Fig. 4-76)
7. Using a safe lifting device rated for a minimum 1,000 lbs., pull the rear auger out of the cart. (Fig. 4-77)

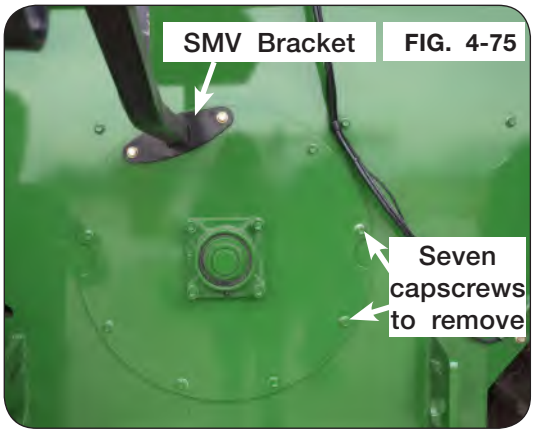


FIG. 4-75

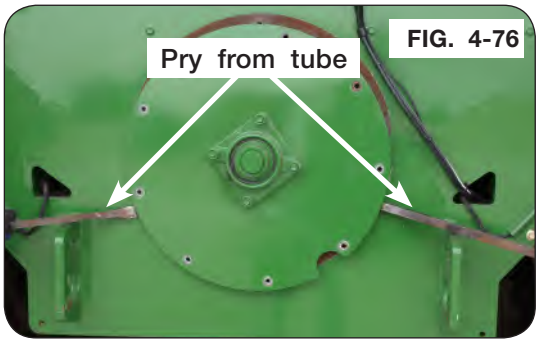


FIG. 4-76

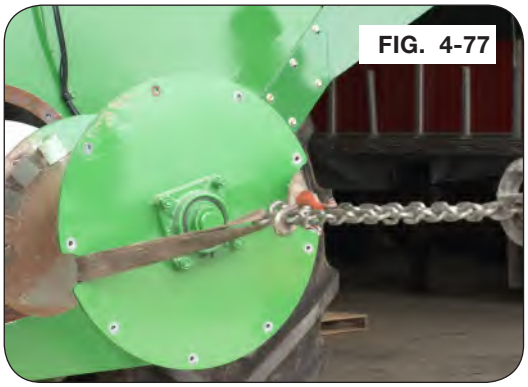


FIG. 4-77

Horizontal Auger Removal and Replacement (continued)

NOTE: If only servicing rear auger, skip to step 23. For 5-pin driver replacement, continue to step 8.

8. Remove the flange screws in both middle grates inside the cart. Remove the grates. (Fig. 4-78)

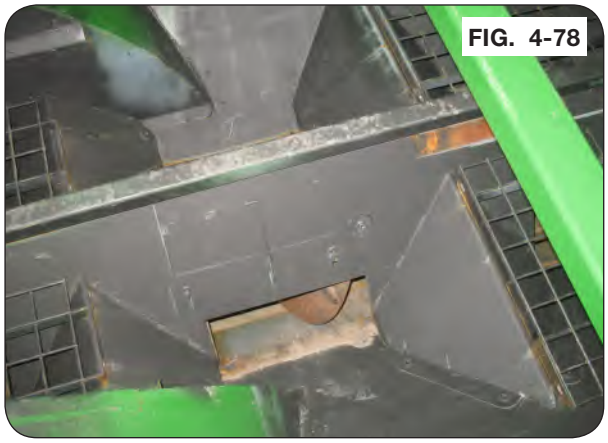


FIG. 4-78

9. Remove locknuts, baffle weldments and cover plates from the middle tent. (Fig. 4-79)

10. Disconnect grease line. (Fig. 4-79)

11. Remove the bearing mount bar bolts on each side of the auger.

12. Remove capscrews and lock washers holding bearing onto the bearing mount bar.

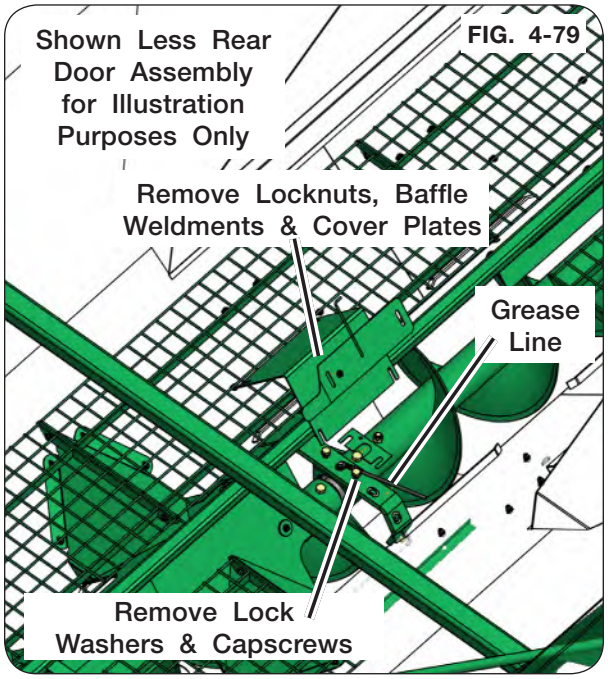


FIG. 4-79

13. 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. 4-80)

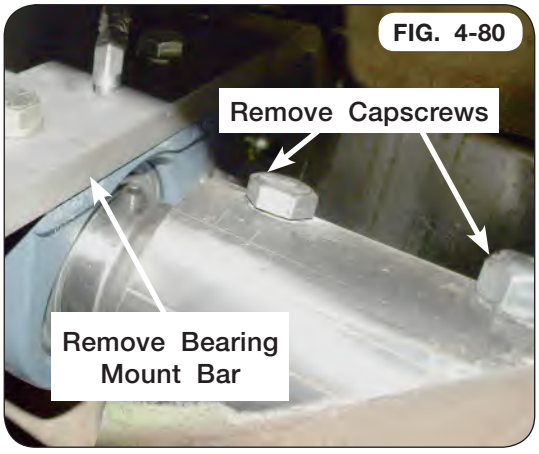


FIG. 4-80

Horizontal Auger Removal and Replacement (continued)

14. Remove the original 5-pin driver, bearing and the bushing insert. (Figure 4-81 & Figure 4-82)

15. Discard 5-pin driver.

FIG. 4-81

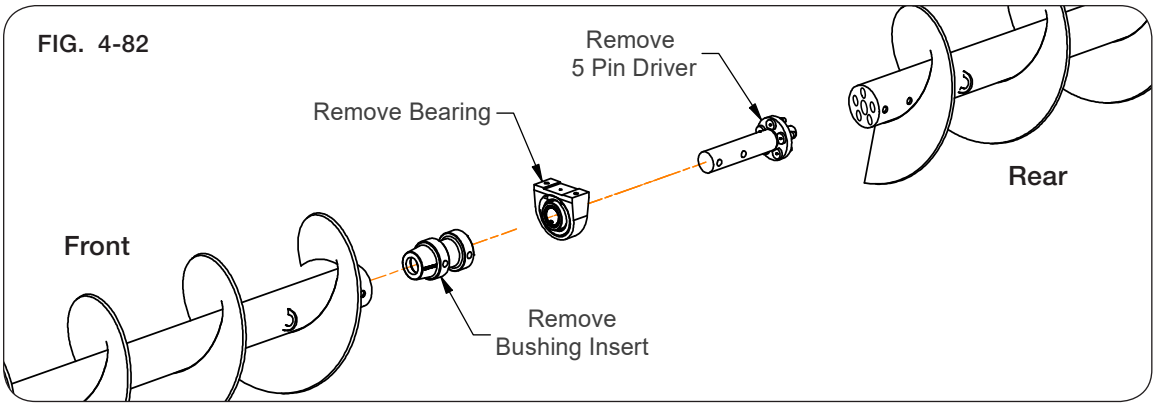


FIG. 4-82

16. Substantially coat bushing insert with anti-seize.

17. Slide bushing insert into front auger and ensure tube holes are aligned. (Figure 4-82 & Figure 4-83)

FIG. 4-83

NOTE: Make sure the set screws on bearing are towards the front of the cart. (Figure 4-84)

18. Slide bearing onto 5-pin driver. (Figure 4-84)

19. Insert new 5-pin driver into front auger and ensure tube holes are aligned.

20. Install front capscrews, spacer bushings and locknuts 180 degrees from each other and assemble spacer bushings on threaded side of capscrews. Hand tighten hardware. (Figure 4-84)

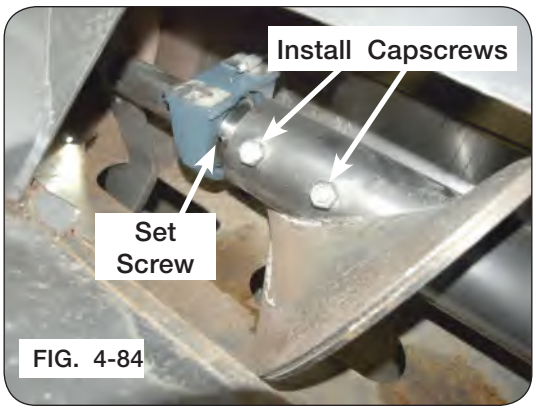


FIG. 4-84

Horizontal Auger Removal and Replacement (continued)

21. Install hanger bracket. Leave the capscrews loose attaching hanger bracket to the cart. Attach hanger bracket to the bearing. (Figure 4-85)

22. Reattach grease line components. (Figure 4-85)

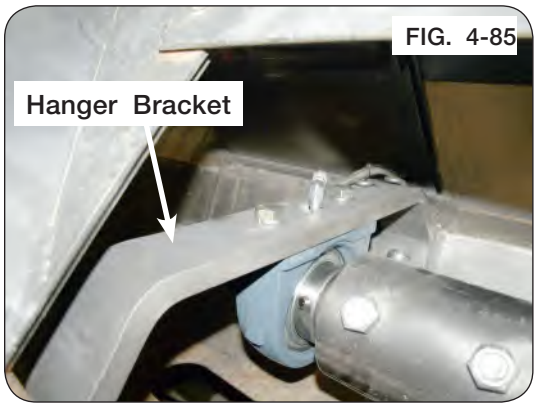


FIG. 4-85

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

23. Slide the rear auger forward. Align the pins and holes with the rear auger pipe. (Figure 4-86)

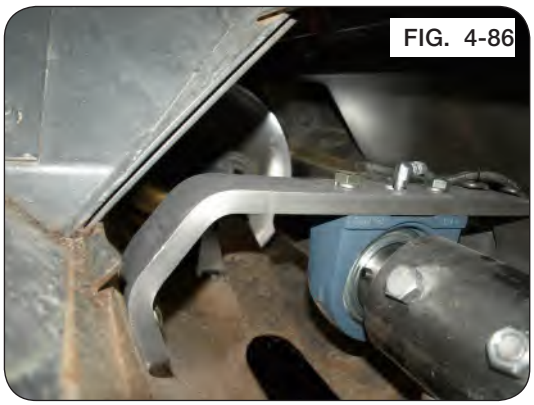


FIG. 4-86

24. Extend a string tightly from front to rear to check horizontal auger alignment. Measure the string to the auger tube either in front or behind the hanger bearing. If this dimension is 1/8" greater than the measurement taken in the front and rear, shims (8GA - 286419B or 12GA - 286424B) are required on top of the center hanger bearing. Ideally the center measurement should be equal to or 1/8" lower than the measurements on the ends of the augers. (Figure 4-87)

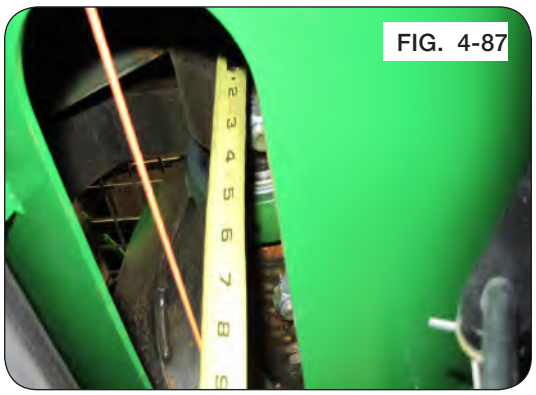


FIG. 4-87

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

25. Torque hanger bracket capscrews to 130 ft.-lbs. See Figure 4-85.

26. Torque auger capscrews to 200 ft.-lbs. (Figure 4-88)

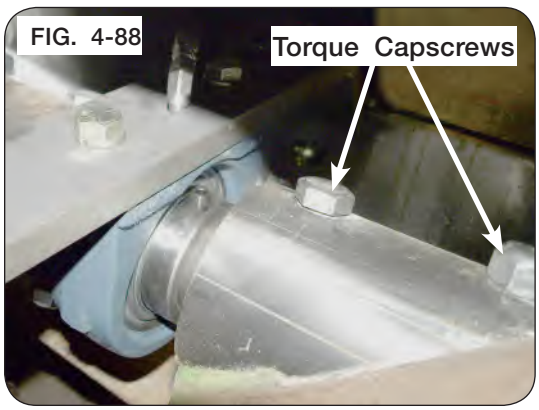


FIG. 4-88

Horizontal Auger Removal and Replacement (continued)

27. Insert hardware for rear auger cover, SMV bracket, and rear ladder, if equipped. (Figs. 4-89 and 4-90)

28. Torque all hardware to specification. See "Torque Chart" in this section. (Figs. 4-64 and 4-90)

29. Reinstall ALL the grates.

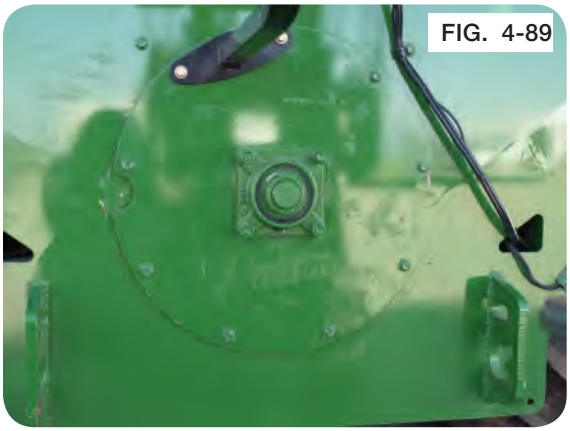


FIG. 4-89

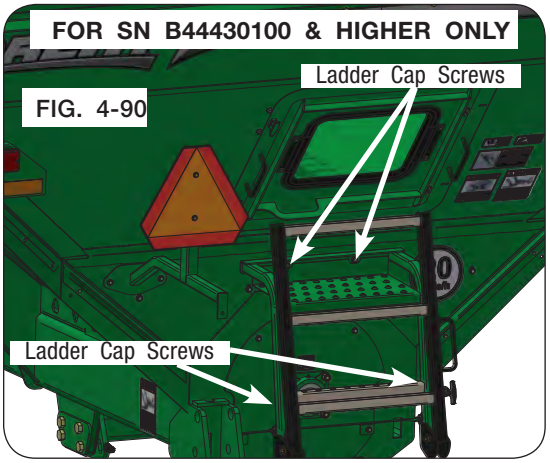


FIG. 4-90

Troubleshooting

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

Troubleshooting (continued)

Problem	Possible Cause	Corrective Action
Rotating spout 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.
	Switch located at the hinge plate of the vertical auger is not getting power, ground or is defective	Check the ground wire located near the hydraulic valve at the base of the vertical auger and on the left hand standard just behind the front plate of the harness. Unplug the 3 pin connector on the hinge plate proximity switch. With a multi-meter or test light, confirm that the pin in socket B has +12V constant power and socket A has +12V when the sensor is activated.
One single function will not work	Defective coil on the EOH valve for that function	Loosen the cap for the coils associated with that function on the EOH valve. Depress the button on the remote, and determine if the coils are getting magnetized. Inspect the wiring connectors to these coils, and replace the coil if necessary.
	Defective valve on the EOH valve for that function	Remove the coil and the cartridge valve on the EOH valve block for that function. Replace the valve if it doesn't operate when the coil is magnetized.
	Debris in the EOH block at the base of the vertical auger	Remove the coil and the cartridge valve on the EOH valve block. Remove any debris and reinstall cartridge and coil.
Functions continue to operate after the button on the remote is released	Tractor hydraulic flow is set too high	Turn tractor hydraulic flow down so that flow doesn't exceed 6 gallons per minute.
	Defective valve on the EOH valve for that function	Remove the Coil and the cartridge valve on the EOH valve block for that function, and replace the cartridge.

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.*

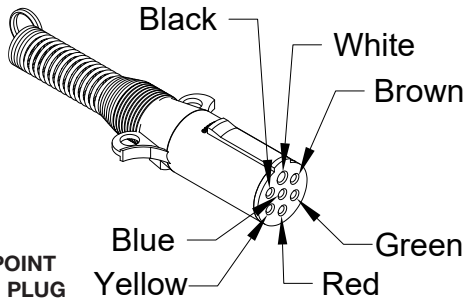
Periodic preventive maintenance should be practiced. Inspect tarp and hardware often for abrasions or loosened bolts that may need adjustment and/or repair. Check bungee cords for wear and adjust tension at the beginning of the season and again half way through the season.

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.

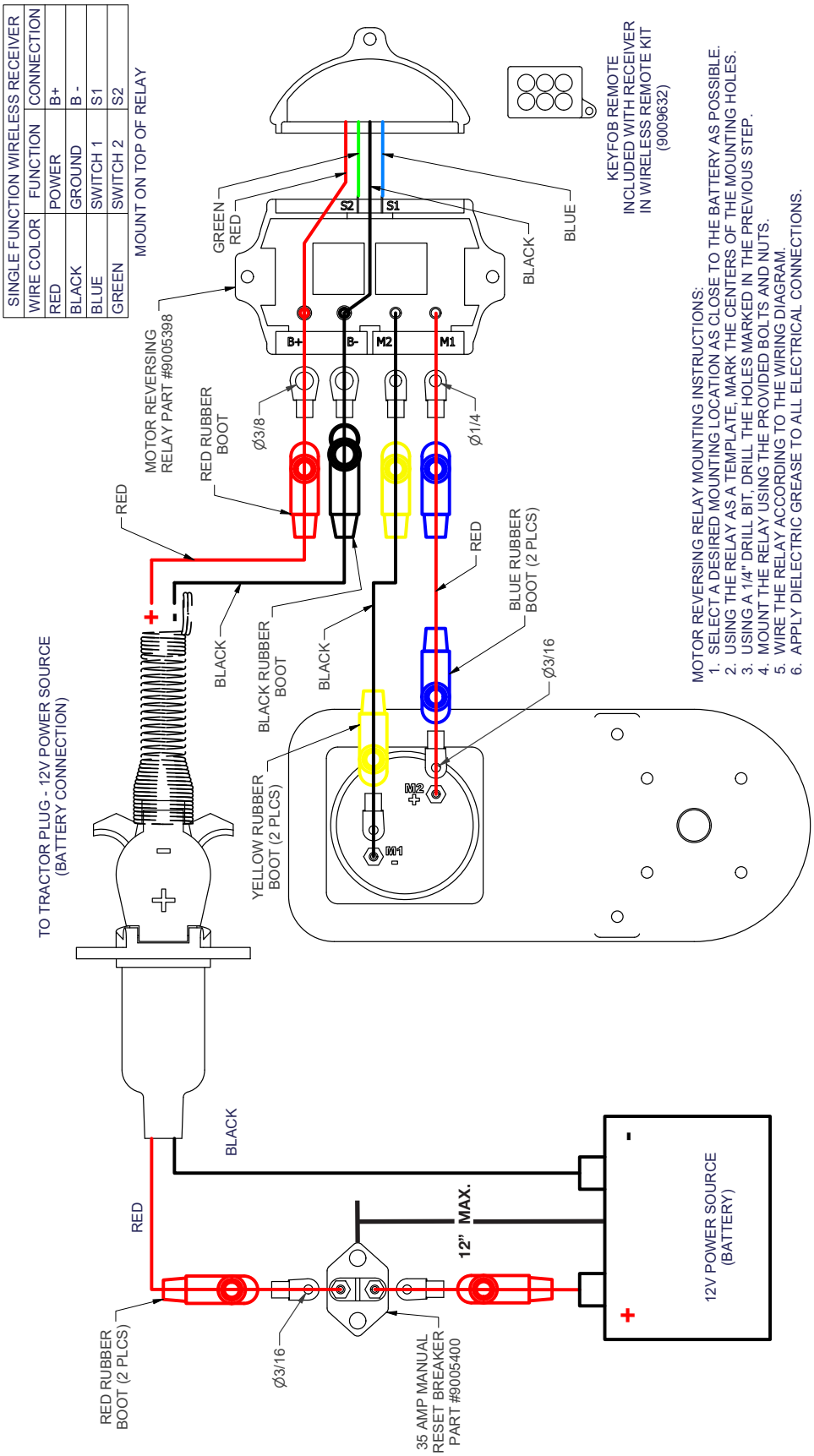
Electrical System Schematic

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

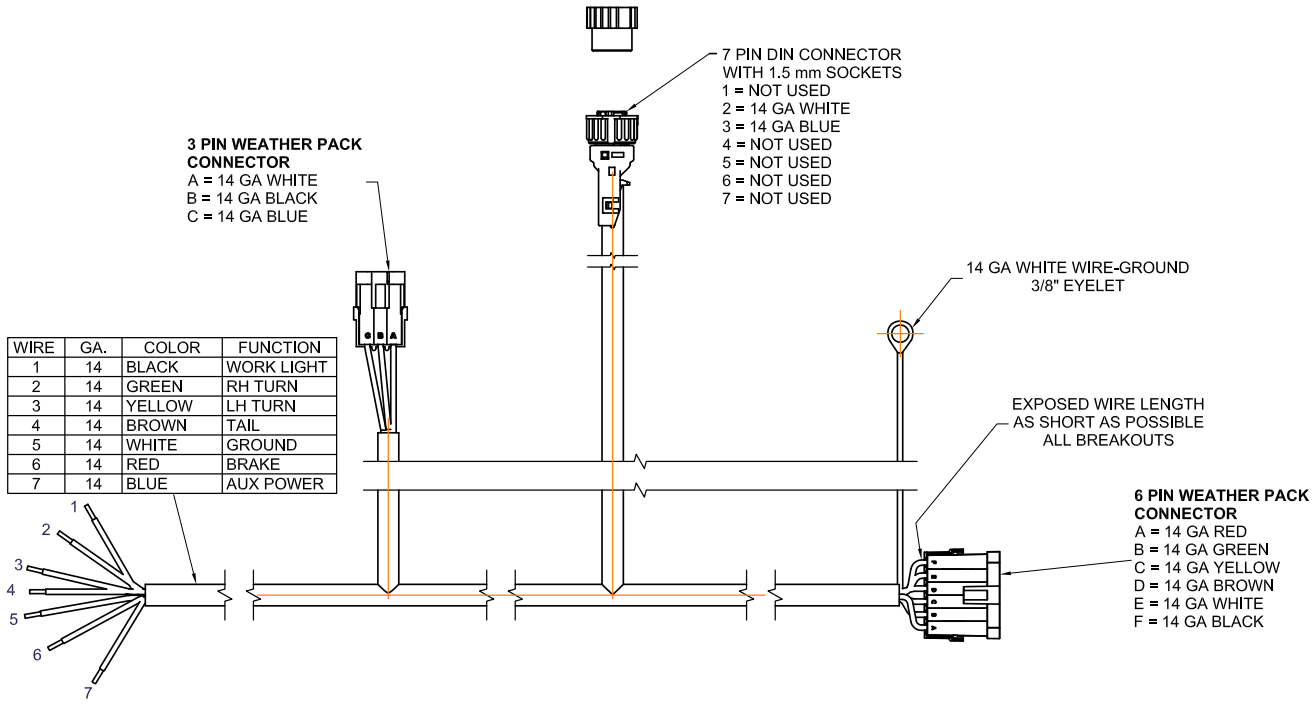


SAE SEVEN-POINT
CONNECTOR PLUG

Electrical System Schematic

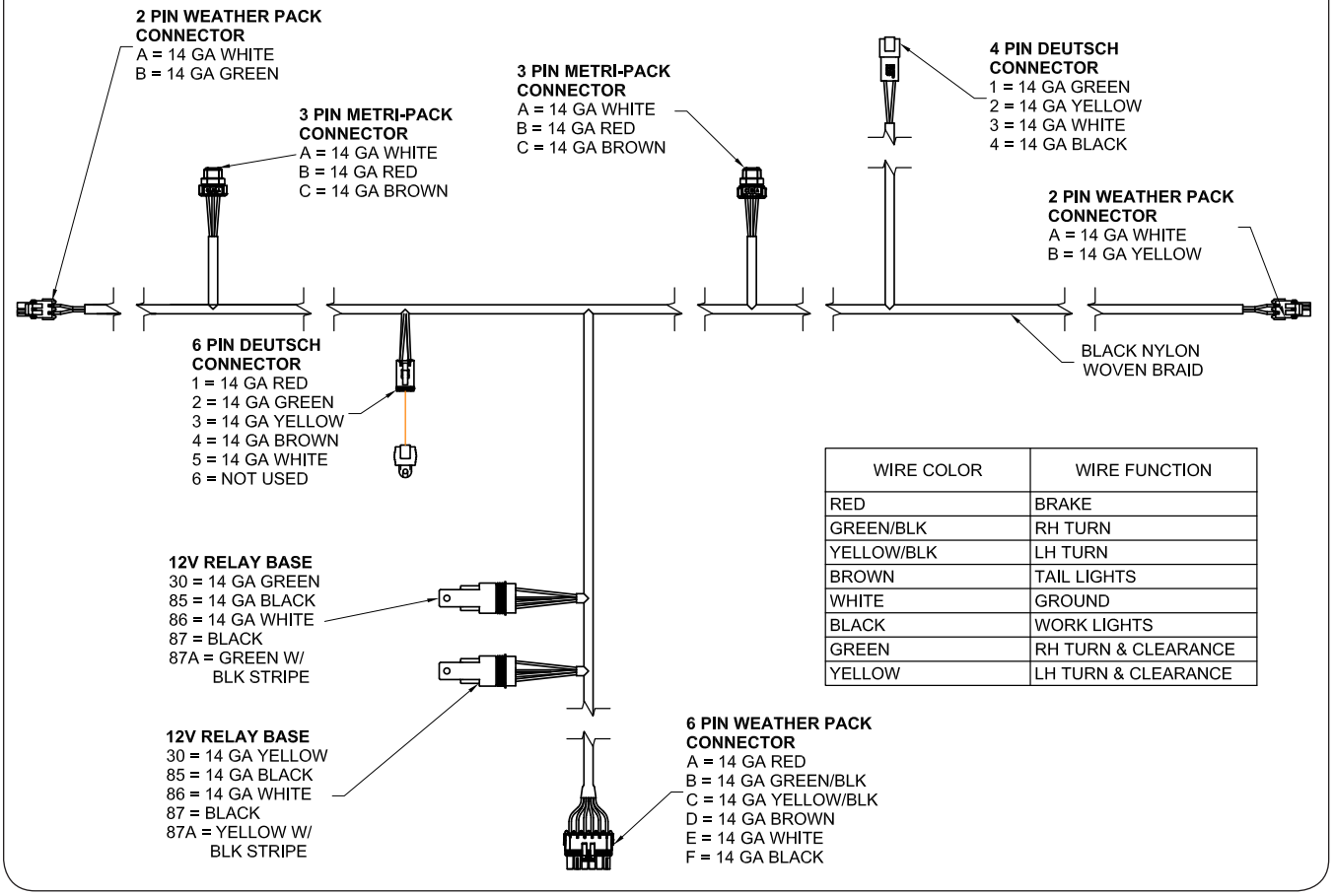


Electrical System Schematic - Front Harness #9009540



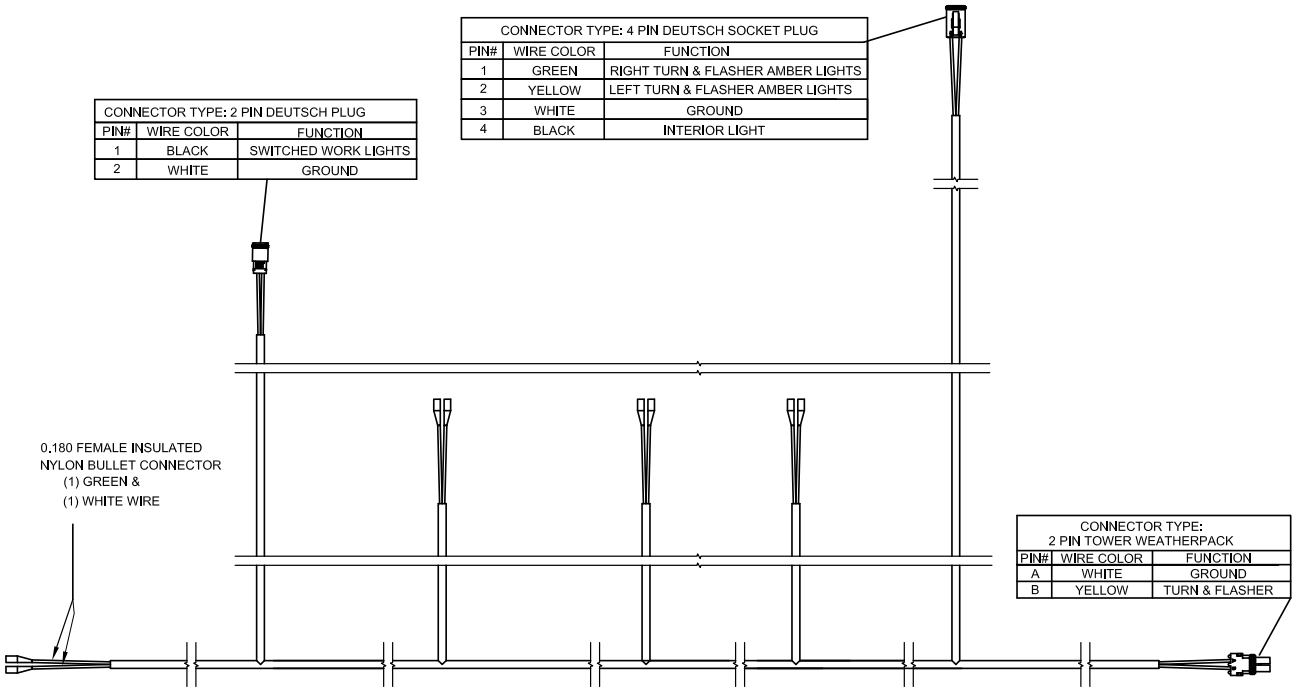
WIRE	GA.	COLOR	FUNCTION
1	14	BLACK	WORK LIGHT
2	14	GREEN	RH TURN
3	14	YELLOW	LH TURN
4	14	BROWN	TAIL
5	14	WHITE	GROUND
6	14	RED	BRAKE
7	14	BLUE	AUX POWER

Electrical System Schematic - Rear Harness #9009574

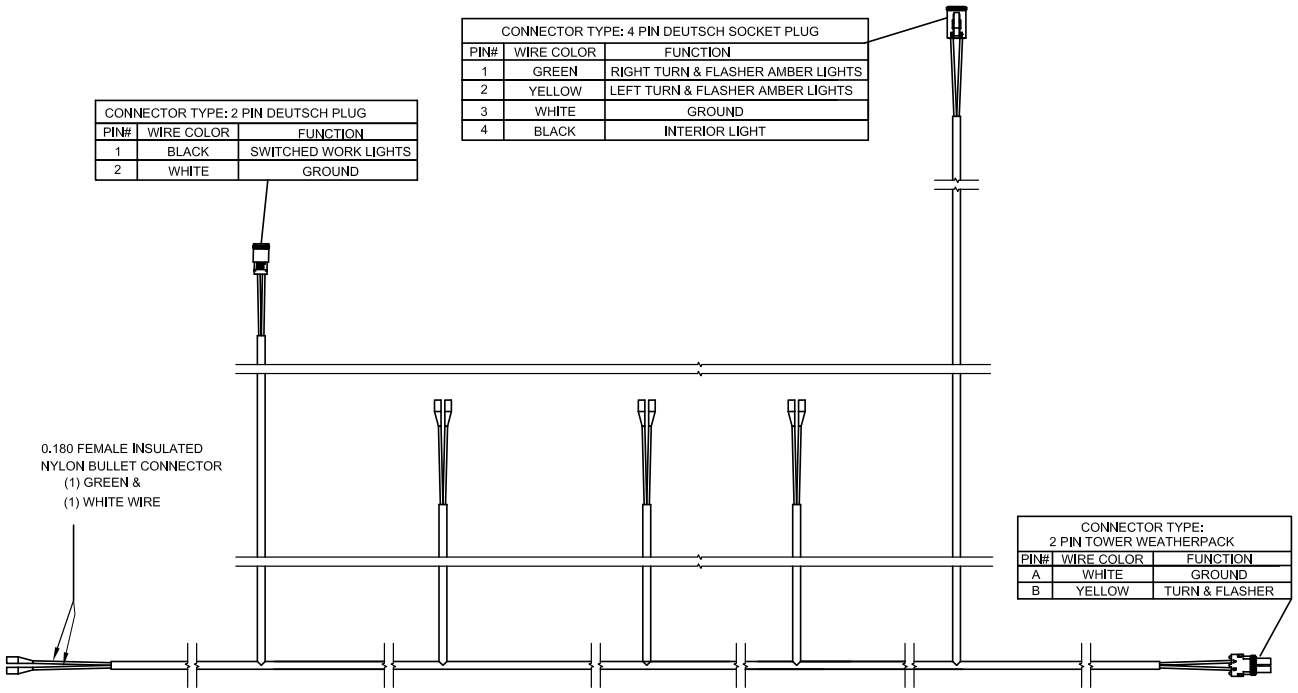


WIRE COLOR	WIRE FUNCTION
RED	BRAKE
GREEN/BLK	RH TURN
YELLOW/BLK	LH TURN
BROWN	TAIL LIGHTS
WHITE	GROUND
BLACK	WORK LIGHTS
GREEN	RH TURN & CLEARANCE
YELLOW	LH TURN & CLEARANCE

Electrical System Schematic
RH Clearance Light Harness #9009030

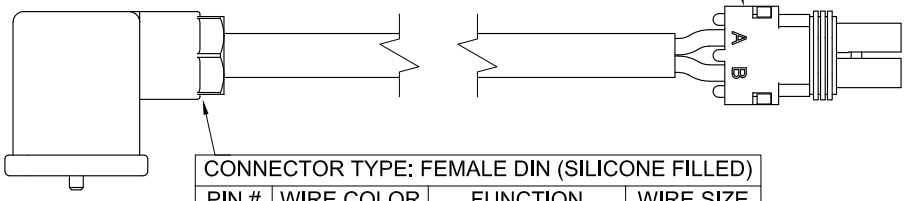


Electrical System Schematic
LH Clearance Light Harness #9009069



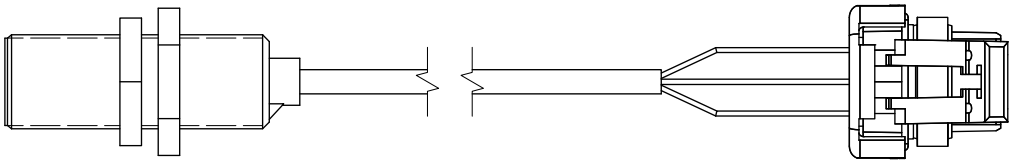
Electrical System Schematic - Harness #9005993

2 PIN TOWER WEATHERPACK		
PIN #	WIRE	FUNCTION
A	14 GA. RED	STEERING LOCK
B	14 GA. WHITE	GROUND



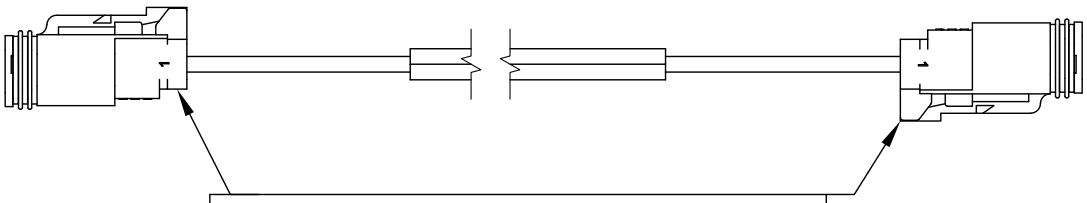
CONNECTOR TYPE: FEMALE DIN (SILICONE FILLED)			
PIN #	WIRE COLOR	FUNCTION	WIRE SIZE
1	RED	STEERING LOCK	14 GA.
2	WHITE	GROUND	14 GA.

Electrical System Schematic - Proximity Switch #9007223



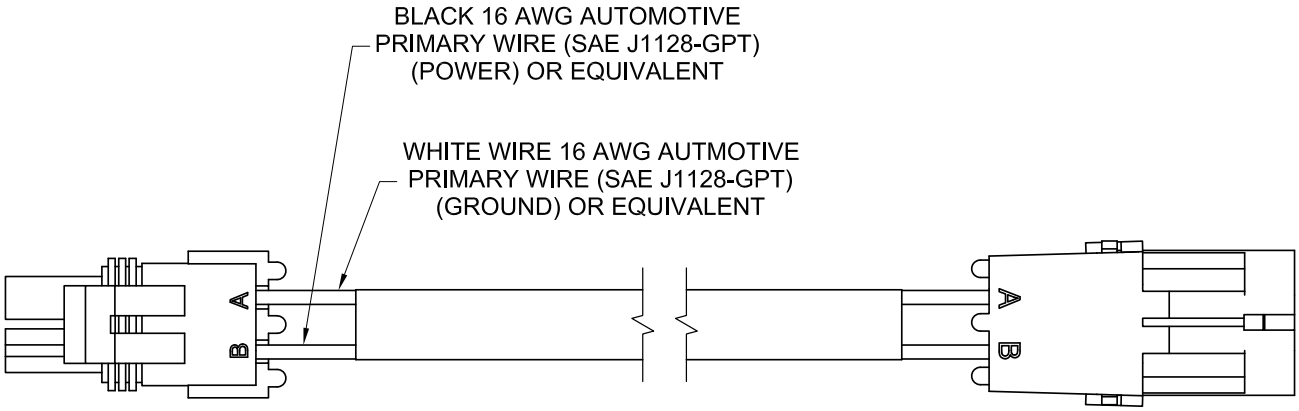
METRI-PACK 150 WIRING CHART		
WIRE COLOR	PIN NO.	FUNCTION
BLACK	A	SIGNAL
BROWN	B	+12 V DC
BLUE	C	GROUND

Electrical System Schematic - Diverter Harness #9007266

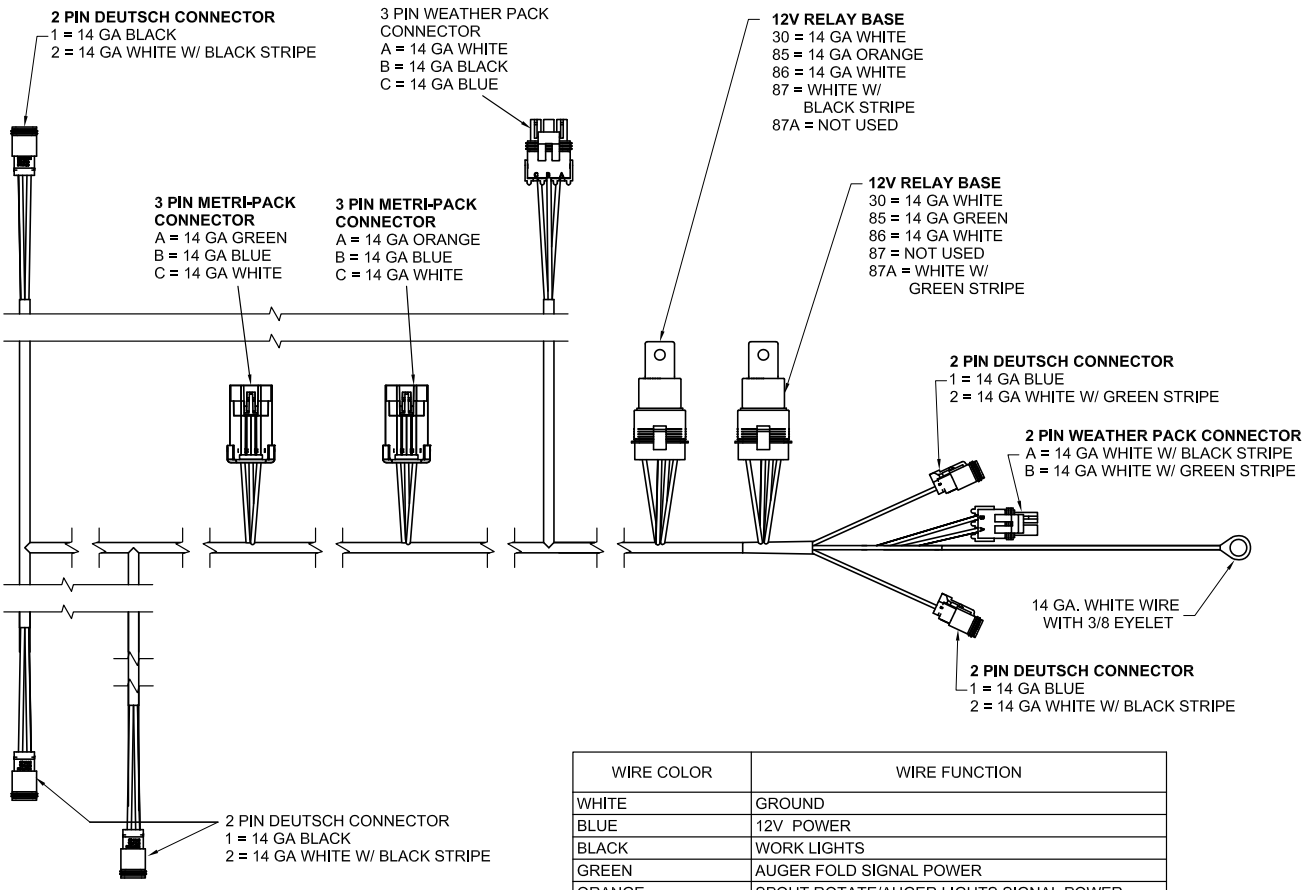


CONNECTOR TYPE: 2 PIN DEUTSCH PLUG		
PIN #	WIRE COLOR	FUNCTION
1	RED	+12V POWER
2	WHITE	GROUND

Electrical System Schematic - Extension Harness #86700

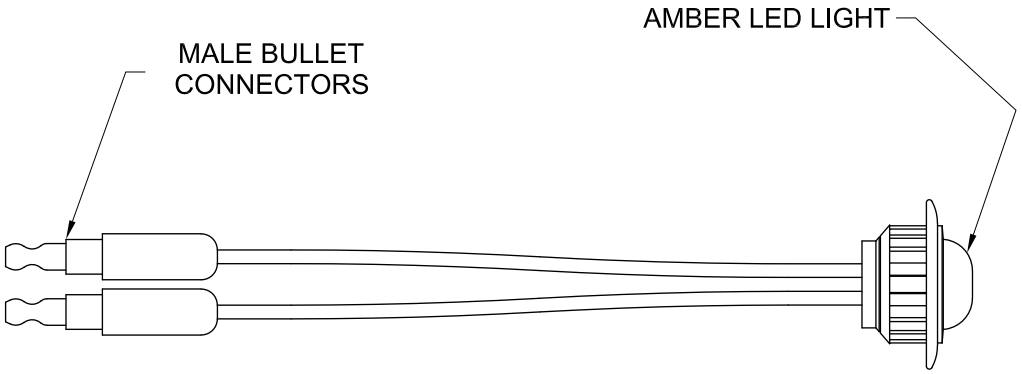


Electrical System Schematic - Auger Harness #9009531



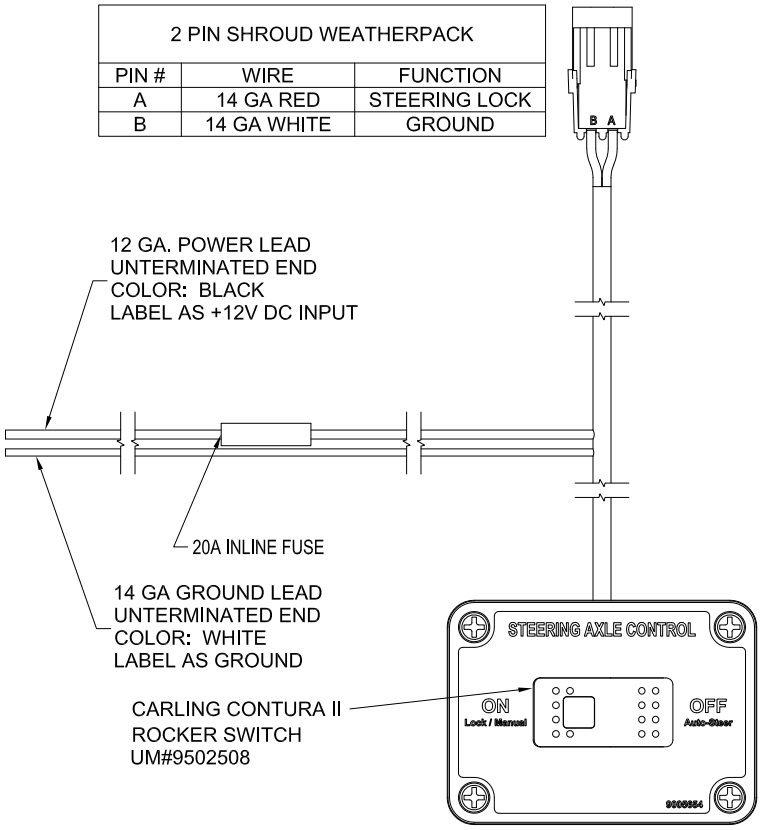
WIRE COLOR	WIRE FUNCTION
WHITE	GROUND
BLUE	12V POWER
BLACK	WORK LIGHTS
GREEN	AUGER FOLD SIGNAL POWER
ORANGE	SPOUT ROTATE/AUGER LIGHTS SIGNAL POWER
WHITE W/GRN STRIPE	AUGER FOLD SWITCHED GROUND
WHITE W/BLK STRIPE	SPOUT ROTATE/AUGER LIGHTS SWITCHED GROUND

Electrical System Schematic - Micro Dot, LED Light #9006107

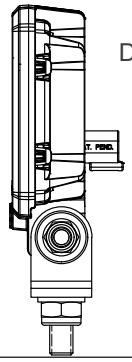


Electrical System Schematic - Rocker Switch Asy #9005654

2 PIN SHROUD WEATHERPACK		
PIN #	WIRE	FUNCTION
A	14 GA RED	STEERING LOCK
B	14 GA WHITE	GROUND



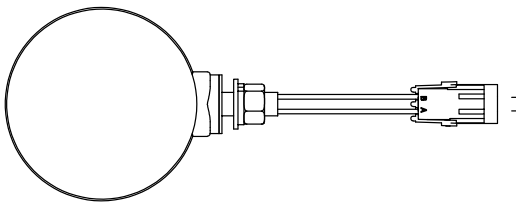
Electrical System Schematic - Work Flood Lamp #9008957



2 PIN INTEGRATED
DEUTSCH CONNECTOR

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

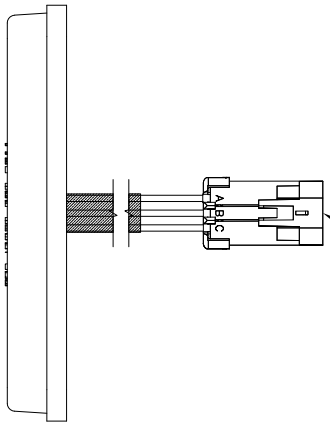
Electrical System Schematic - Amber Lamp #9005142



YELLOW - TURN AND FLASHER AMBER LIGHT

WHITE - GROUND

Electrical System Schematic - Red Lamp #9006345



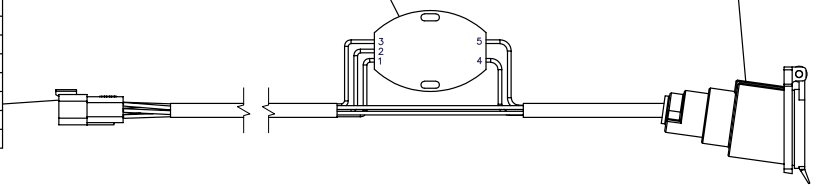
CONNECTOR TYPE:		
3 CAVITY SHROUD METRI-PACK 150		
PIN #	WIRE COLOR	FUNCTION
A	WHITE	GROUND
B	RED	HIGH
C	BROWN	LOW

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

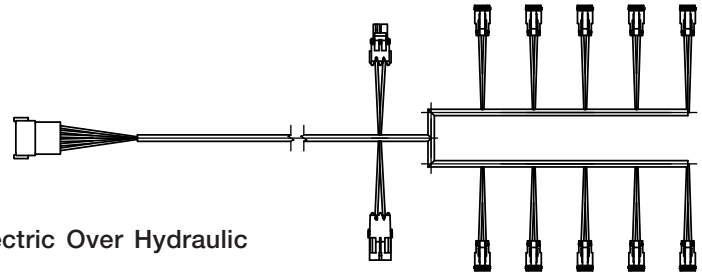
TAIL LIGHT CONVERTER		
WIRE	COLOR	WIRE FUNCTION
1	YELLOW	LEFT TURN/FLASHING
2	RED	BRAKE LIGHTS
3	GREEN	RIGHT TURN/FLASHING
4	YELLOW	LEFT TURN/STOP
5	GREEN	RIGHT TURN/FLASHING

7-BLADE CONNECTOR		
PIN #	WIRE COLOR	WIRE FUNCTION
1	WHITE	GROUND
2	NA	NA
3	BROWN	TAIL/RUNNING LIGHTS
4	BLACK	+12V SWITCHED POWER
5	YELLOW	LEFT TURN/STOP
6	GREEN	RIGHT TURN/STOP

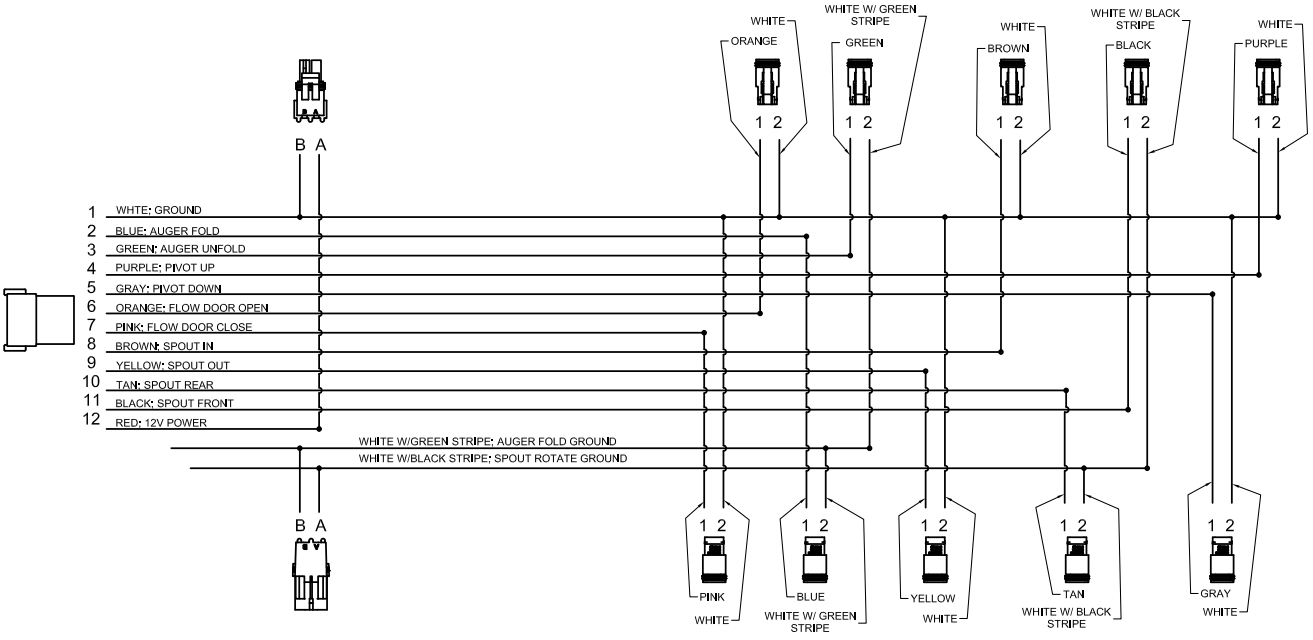
6 PIN DEUTSCH RECEPTACLE		
PIN #	WIRE COLOR	WIRE FUNCTION
1	RED	BRAKE LIGHTS
2	GREEN	RIGHT TURN & FLASHER AMBER LIGHT
3	YELLOW	LEFT TURN & FLASHER AMBER LIGHT
4	BROWN	TAIL LIGHTS
5	WHITE	GROUND
6	BLACK	WORK LIGHTS



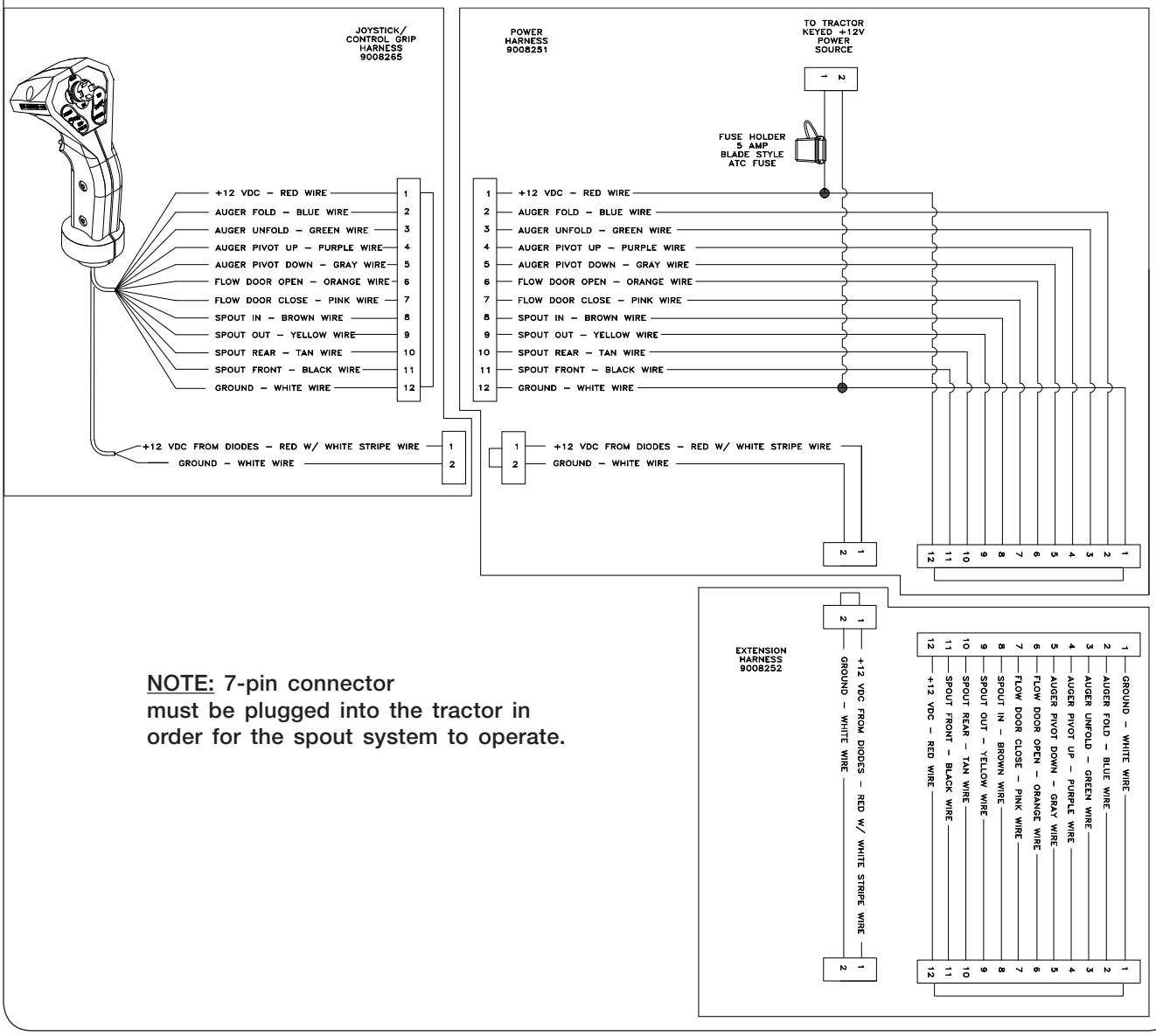
Electrical System Schematic - Main Harness #9007290 (Opt.)



NOTE: For Optional Electric Over Hydraulic 5 Function Valve.

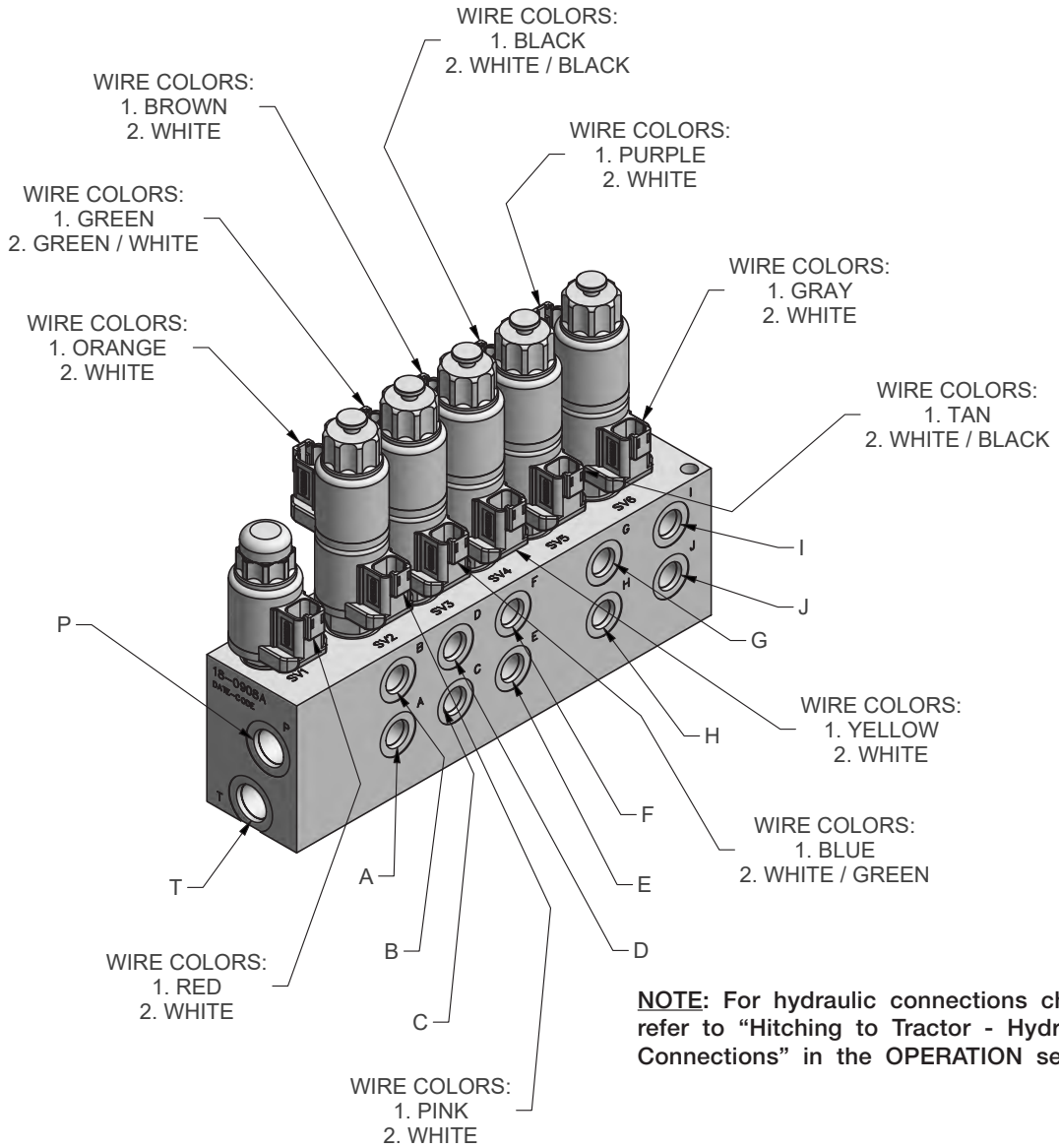


Electrical Over Hydraulic (EOH) System Schematic 5 Function Optional



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

Optional Electric Over Hydraulic Valve Electric Schematic 5 Function

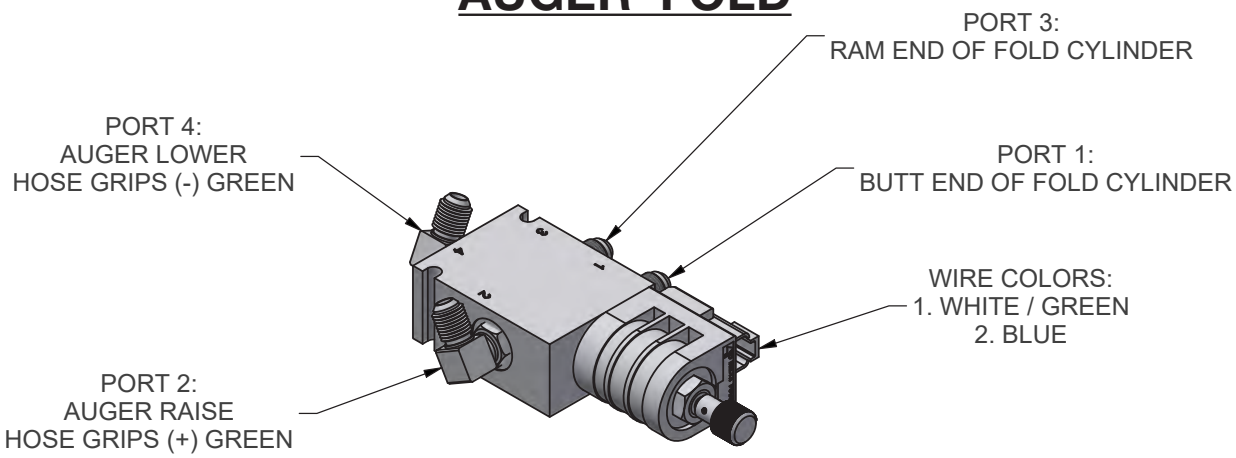


NOTE: For hydraulic connections chart, refer to "Hitching to Tractor - Hydraulic Connections" in the OPERATION section.

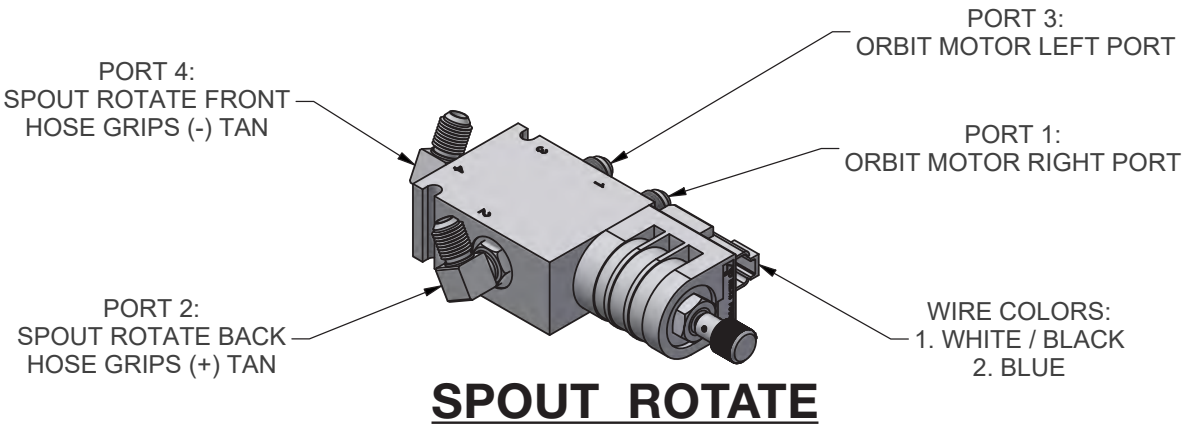
PORT	END OF CYLINDER	FUNCTION
A	BUTT END	FLOW DOOR
B	RAM END	FLOW DOOR
C	RAM END	AUGER FOLD
D	BUTT END	AUGER FOLD
E	RAM END	SPOUT TILT
F	BUTT END	SPOUT TILT
G	ORBIT MOTOR LEFT-HAND PORT	JOYSTICK / SPOUT ROTATE
H	ORBIT MOTOR RIGHT-HAND PORT	JOYSTICK / SPOUT ROTATE
I	BUTT END	AUGER PIVOT
J	RAM END	AUGER PIVOT
P		JOYSTICK / TRACTOR PRESSURE
T		JOYSTICK / TRACTOR RETURN

SCV Controlled Inline Valve Assemblies - Electric Schematic

AUGER FOLD

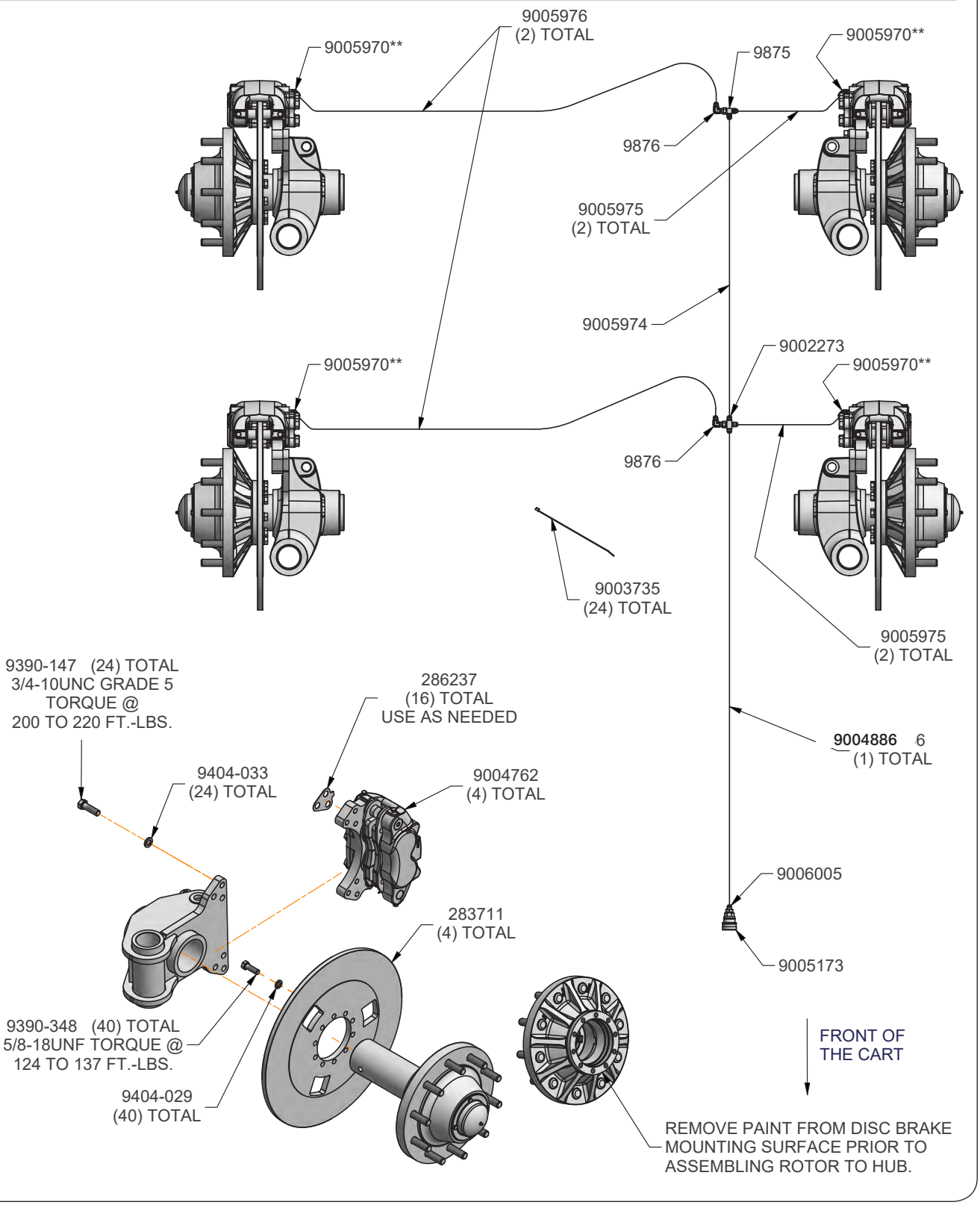


SPOUT ROTATE



NOTE: For hydraulic connections chart, refer to "Hitching to Tractor - Hydraulic Connections" in the OPERATION section.

Braking System Schematic



**LOCATE/REPLACE IN LOWEST BLEEDER PORT OF EACH CALIPER.

Complete Torque Chart

Capscrews - Grade 5

NOTE:

- Grade 5 capscrews can be identified by three radial dashes on the head.

- For wheel torque requirements, refer to Wheels and Tires.
- Tighten U-bolts evenly and equally to have the same number of threads exposed on each end.

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

IMPORTANT

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

Complete Torque Chart

Capscrews - Grade 8

NOTE:

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

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

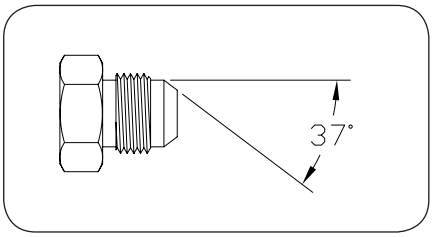
IMPORTANT

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

Hydraulic Fittings – Torque and Installation

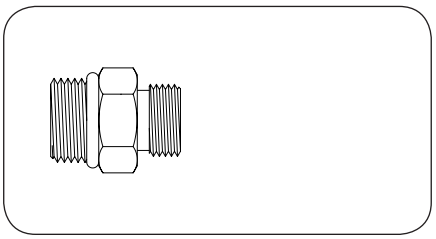
SAE Flare Connection (J. I. C.)

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



SAE Straight Thread O-Ring Seal

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



Notes

Section V
Parts

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

(Continued on next page)

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

Section V

Parts (Continued)

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

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

Notes

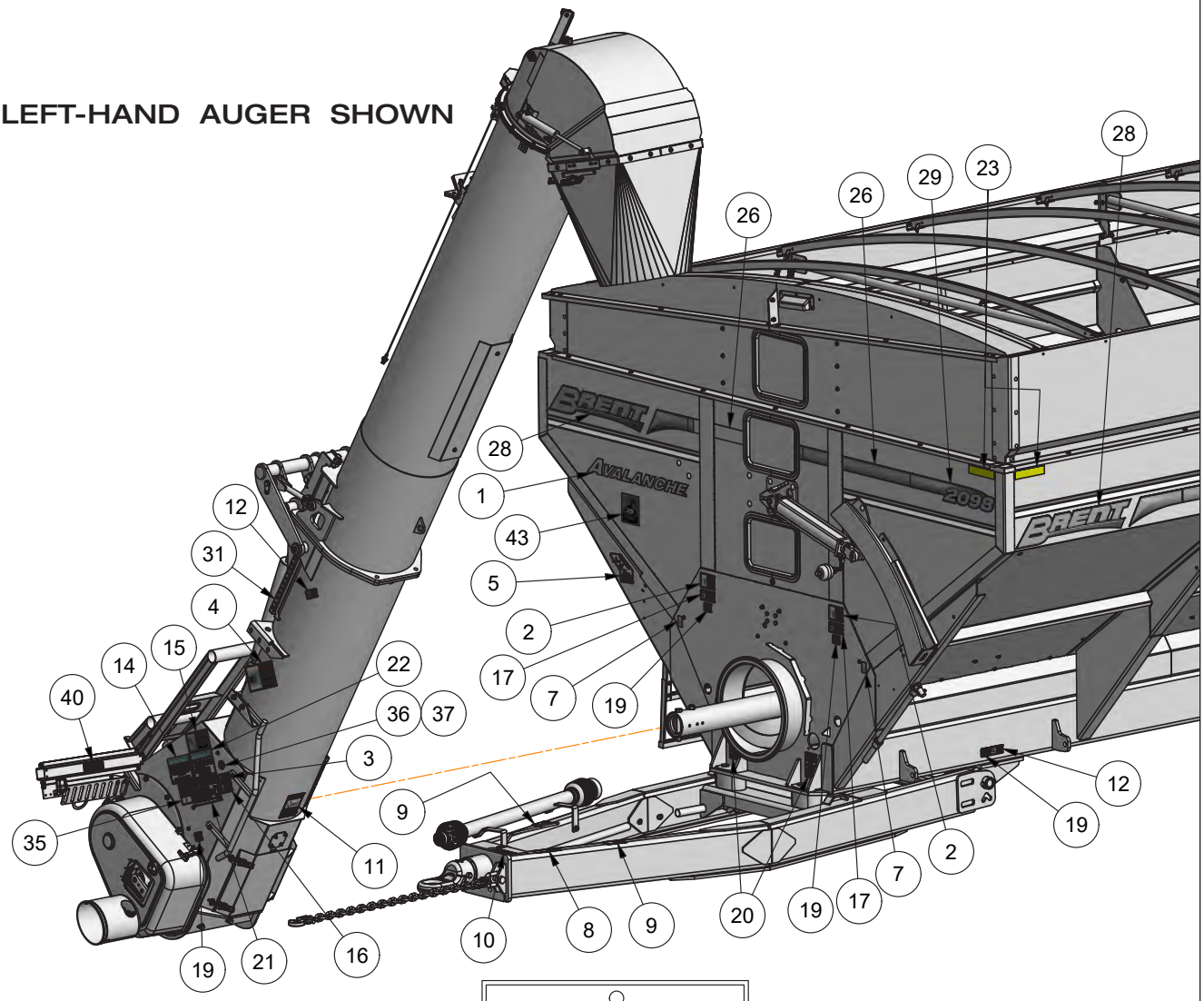
Please visit www.unverferth.com/parts/ for the most current parts listing.

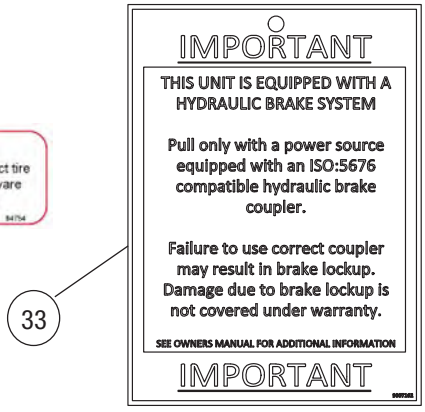
Decals

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

Front & Tongue View

LEFT-HAND AUGER SHOWN

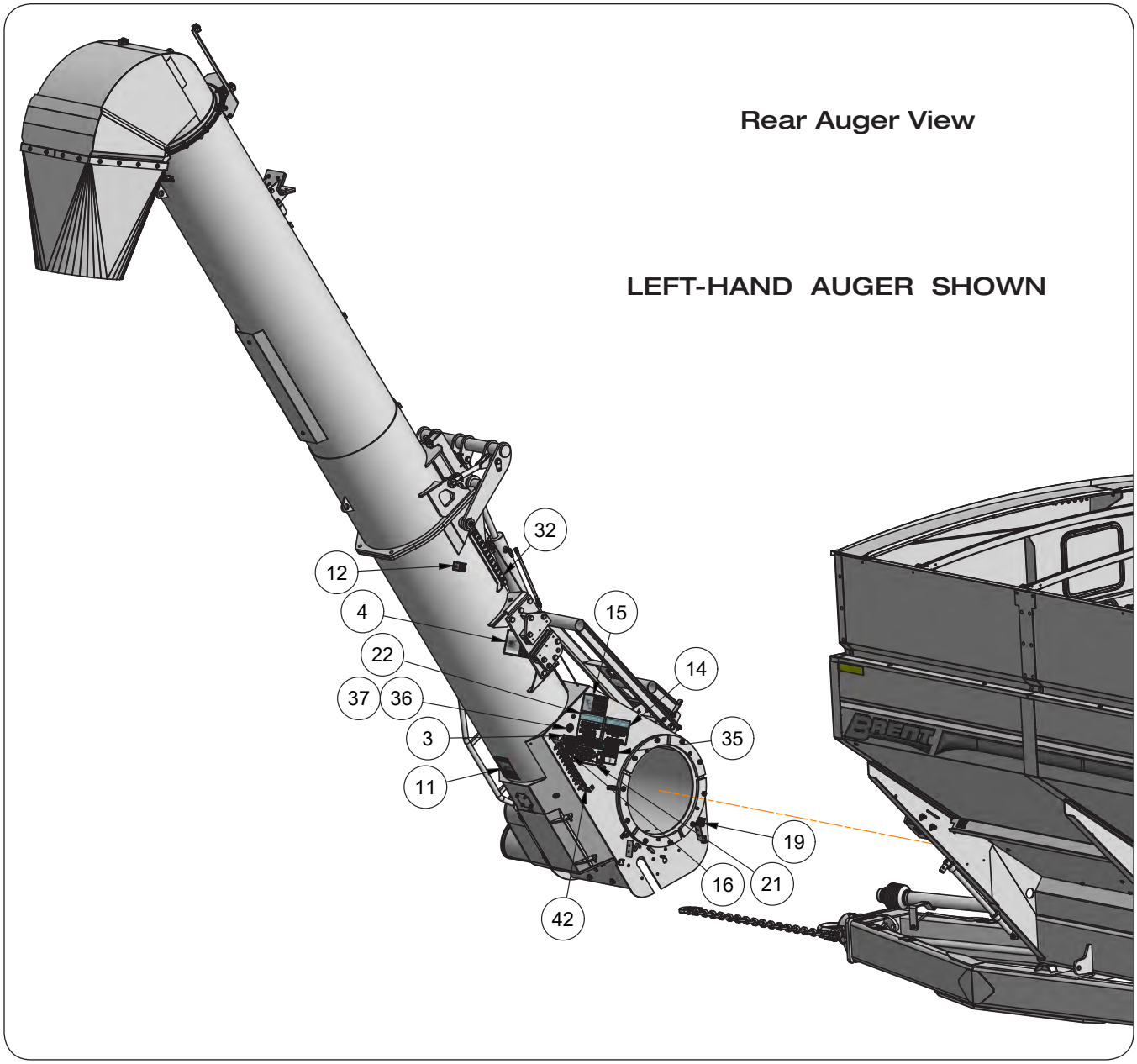




(Units with Brake Option)

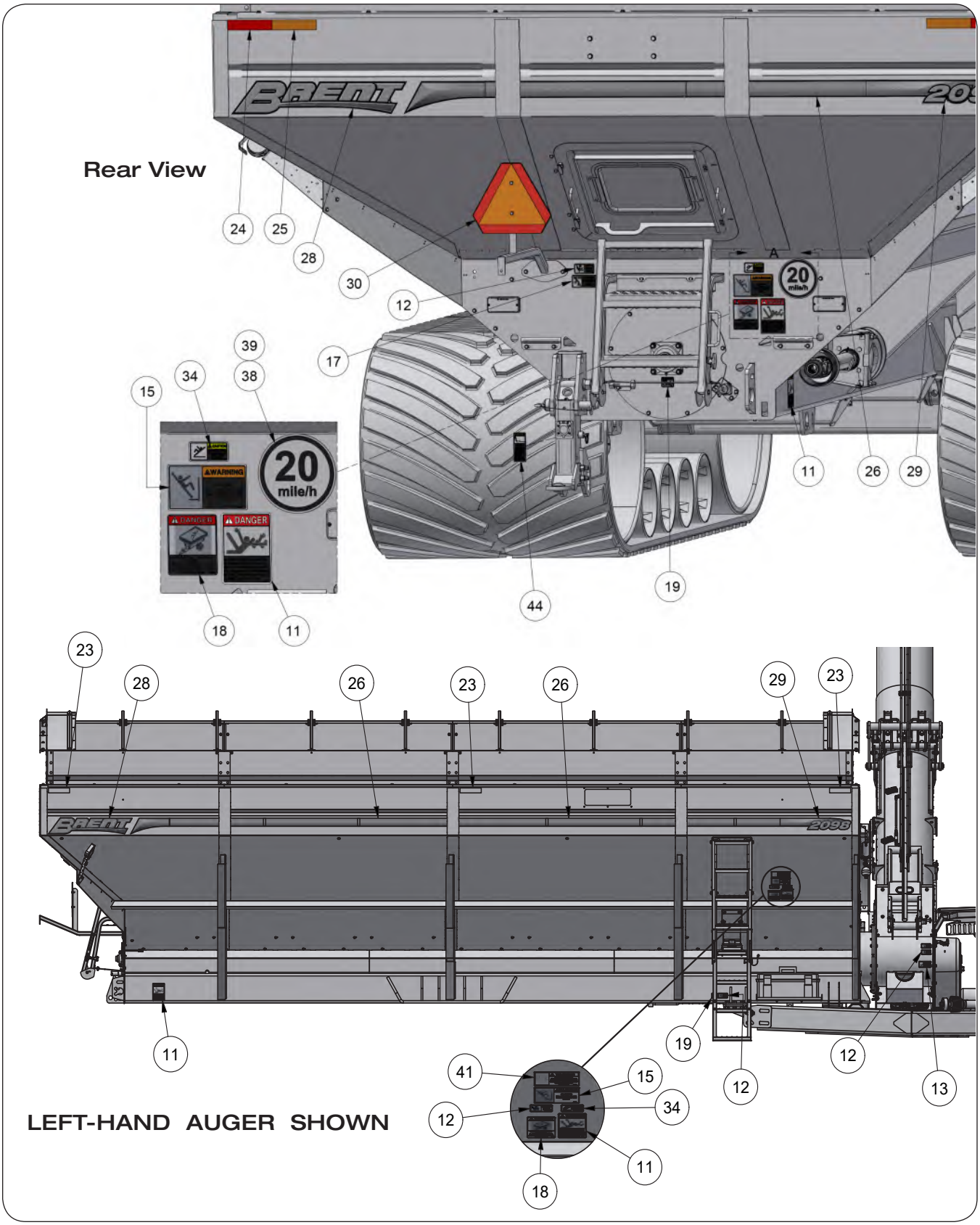
Decals (continued)

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.

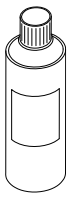


Decals (continued)

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

ITEM	PART NO.	DESCRIPTION	QTY	NOTES
1	9009631	Decal, Avalanche	1	
2	900024	Decal, WARNING (High Pressure Oil)	2	
3	97961	Decal, WARNING (Read Manual)	2	
4	9003474	Decal, DANGER (Electrical Lines)	2	
5	9004864	Decal, Steering Indicator	1	Left-Hand Unload Steering Tandem
6	9009447	Decal, Steering Indicator	1	Right-Hand Unload Steering Tandem
7	91605	Decal, FEMA	2	
8	94094	Decal, WARNING (Tongue Rise)	1	
9	95046	Decal, DANGER (Entanglement)	2	
10	97575	Decal, CAUTION (Transport Chains)	1	
11	9003475	Decal, DANGER (Cut & Crush)	4	
12	95839	Decal, WARNING (Pinch Point)	6	
13	95445	Decal, WARNING (High Pressure Fluid)	1	
14	9008151	Decal, IMPORTANT (PTO Engagement)	2	
15	9003476	Decal, WARNING (No Riders)	3	
16	TA1-906109-0	Decal, WARNING (Moving Parts Crush/Cut)	2	
17	98229	Decal, WARNING (Falling Equipment)	3	
18	9003478	Decal, DANGER (Never Play)	1	
19	9008947	Decal, IMPORTANT (Grease)	7	
20	9005971	Decal, WARNING (Suspension)	2	
21	9003477	Decal, IMPORTANT (Operation)	2	
22	9004966	Decal, IMPORTANT (Cart Loading)	2	
23	9003127	Reflector 2x9 =AMBER=	7	
24	9003126	Reflector 2x9 =RED=	2	
25	9003125	Decal, 2x9 =FLUORESCENT=	2	
26	9006589	Decal, Stripe	18	
27	94754	Decal, UM Wheel Systems	1	
28	9006588	Decal, Brent Logo	4	
29	9009502	Decal, 2098	4	
30	TA510514	SMV Emblem	1	
31	9006601	Decal, Flow Control Indicator LH	1	Left-Hand Unload
32	9008626	Decal, Flow Control Indicator RH	1	Right-Hand Unload
33	9007162	Information Tag Brakes Option	1	
34	95008	Decal, CAUTION (Slippery Surface)	1	
35	9008543	Decal, IMPORTANT (Spout Rotate)	2	
36	9008715	Decal, Front SIS 20 MPH	2	
37	9008721	Decal, Front SIS 30 KPH	2	
38	9008714	Decal, Rear SIS 20 MPH	2	
39	9008720	Decal, Rear SIS 30 KPH	2	
40	9009650	Decal, Hose Legend	1	
41	9009168	Decal, WARNING (Ladder Lock Pin)	1	
42	9008925	Decal, Grease Bank	1	
43	9009653	Decal, Avalanche 25th Anniversary	2	
44	9009646	Decal, WARNING (Towing Capacity)	1	

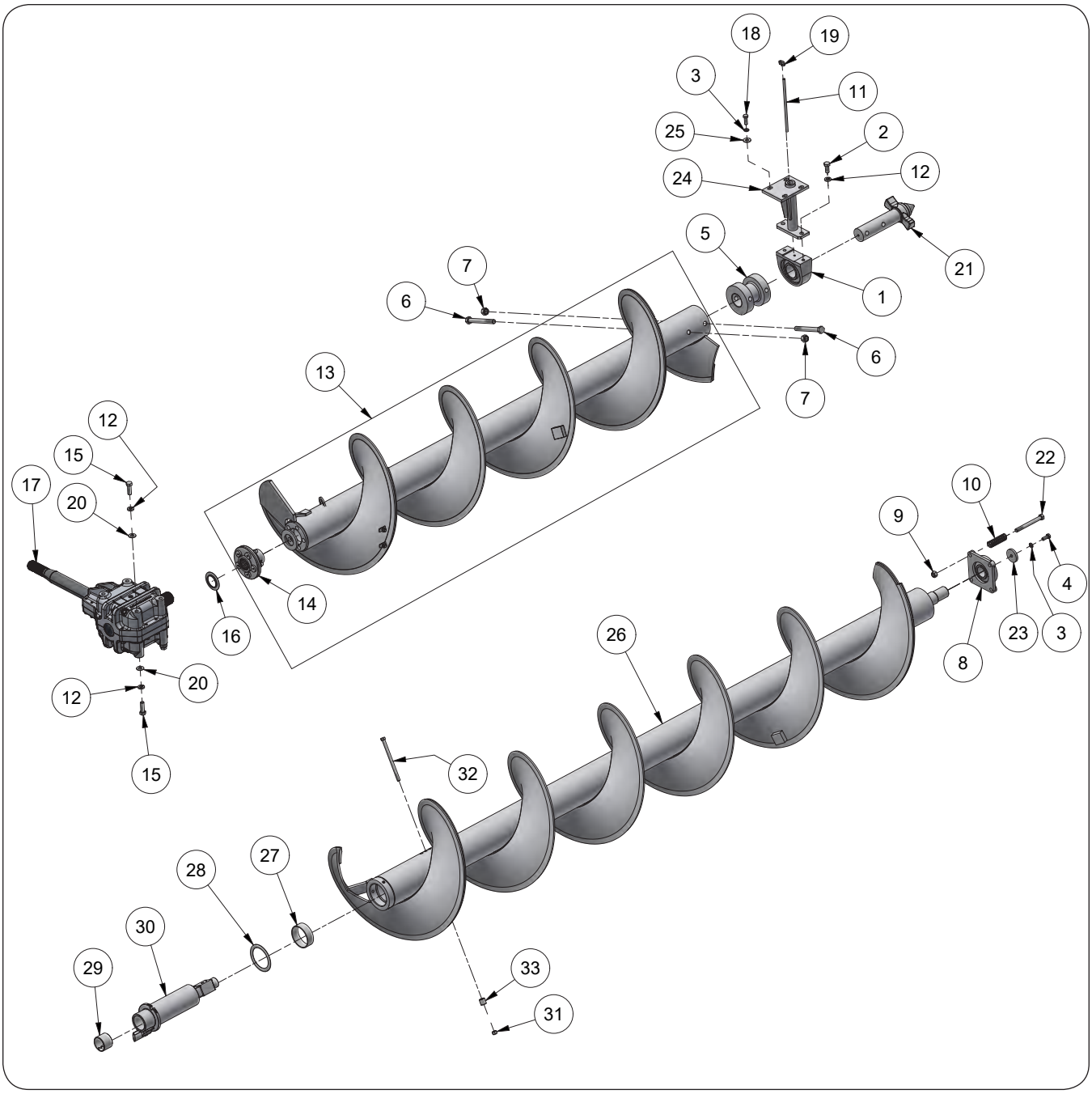
Touch-Up Paint



PAINT	SPRAY
Black	97013
Green	97015
Red	97301
Primer, Gray	9500082
Off White	97016
Silver Mist	97012
Black Metallic	9504382

Vertical Auger Flighting Components

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



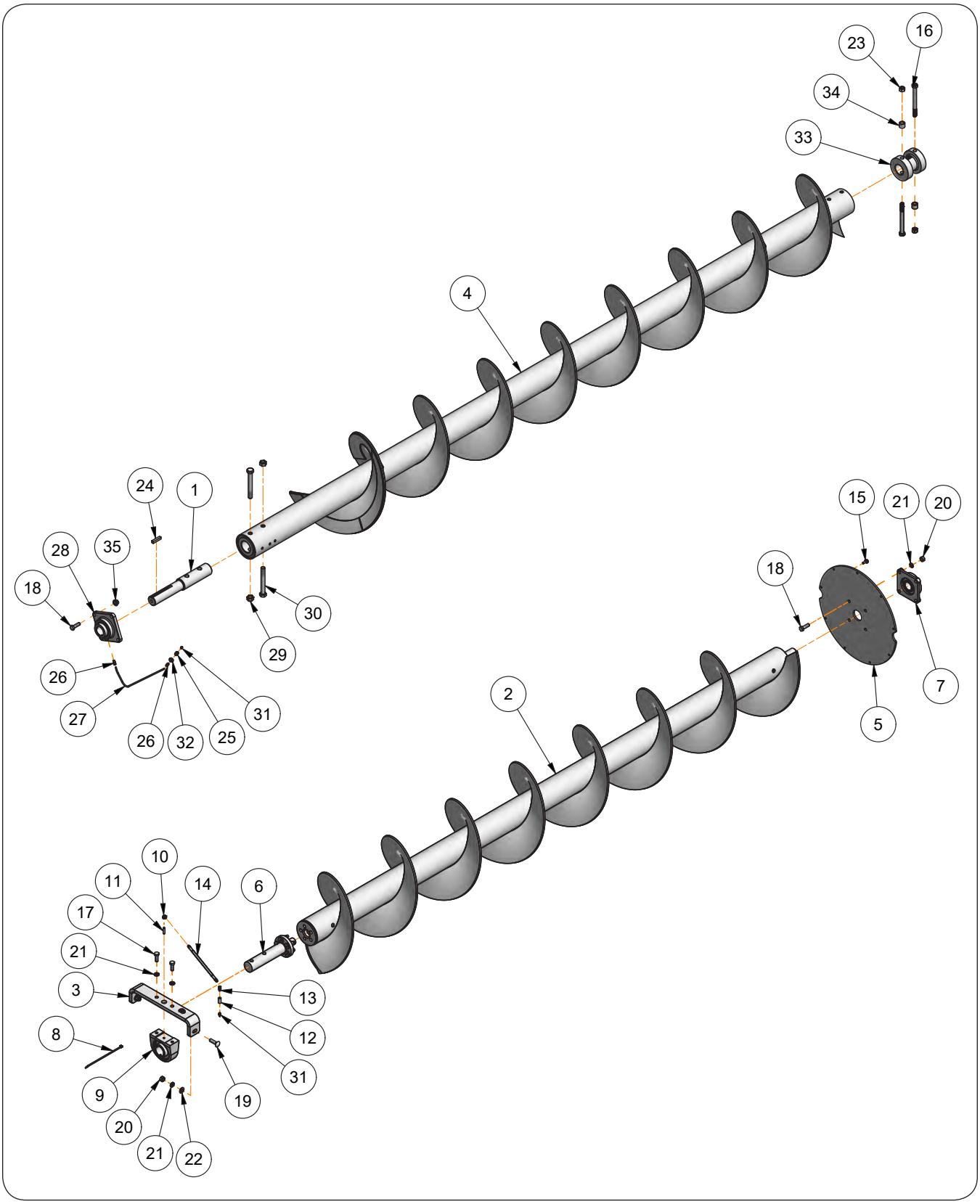
Vertical Auger Flighting Components

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

ITEM	PART NO.	DESCRIPTION	QTY	NOTES
1	9004731	Pillow Block Bearing, 2 1/2" Bore	1	
2	9390-122	Capscrew 5/8"-11UNC x 1 1/2" Grade 5	2	
3	9404-025	Lock Washer 1/2"	5	
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 Grade 5	2	
8	9002492	Bearing 2" Dia. Flanged	1	
9	9801	Lock Nut 5/8"-11UNC Grade 5	4	
10	9004899	Spring - 10 Coils	4	
11	9005793	Grease Pipe	1	
12	9404-030	Lock Washer 5/8"	10	
13	296317B	Lower Auger Replacement Kit (Black)	1	Includes Item 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	6	
16	9007377B	Dust Cover =Black=	1	
17	9007366	Gearbox 1 3/4"-20 Spline Input Shaft 2 1/4"-17 Spline Output Shaft	1	See "Gearbox" in this section for parts
18	9390-101	Capscrew 1/2"-13UNC x 1 1/2" Grade 5	4	
19	9004764	90° Elbow Pipe	1	
20	9405-098	Flat Washer 5/8" SAE	6	
21	288813	Drive Dog Machined	1	
22	9390-136	Capscrew 5/8"-11UNC x 6" Grade 5	4	
23	407699	Washer Plate, 2 1/2" Dia.	1	
24	289932B	Bearing Bracket Replacement Kit (Black)	1	Includes Items 18 & 25
25	9405-088	Flat Washer 1/2" USS	4	
26	297318B	Upper Auger Weldment =Black=	1	SN B44150099 and Lower Includes Items 27 - 33 & Hanger Bearing 297216B
	297220B			SN B44150100 and Higher Includes Item 30
27	9004877	Self Lubricating Bushing 4.25" OD x 4.011" ID	1	
28	9004878	Self Lubricating Washer	1	
29	9003230	Split Bushing 2 3/4" OD x 2 1/2" ID x 2"	1	
30	281283	Soft Start Assembly	1	Includes Item 29
31	9800	Lock Nut 1/2"-13UNC Grade 5	1	
32	9390-119	Capscrew 1/2"-13UNC x 8" Grade 5	1	
33	410511	Spacer Bushing	1	

Horizontal Auger Components

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



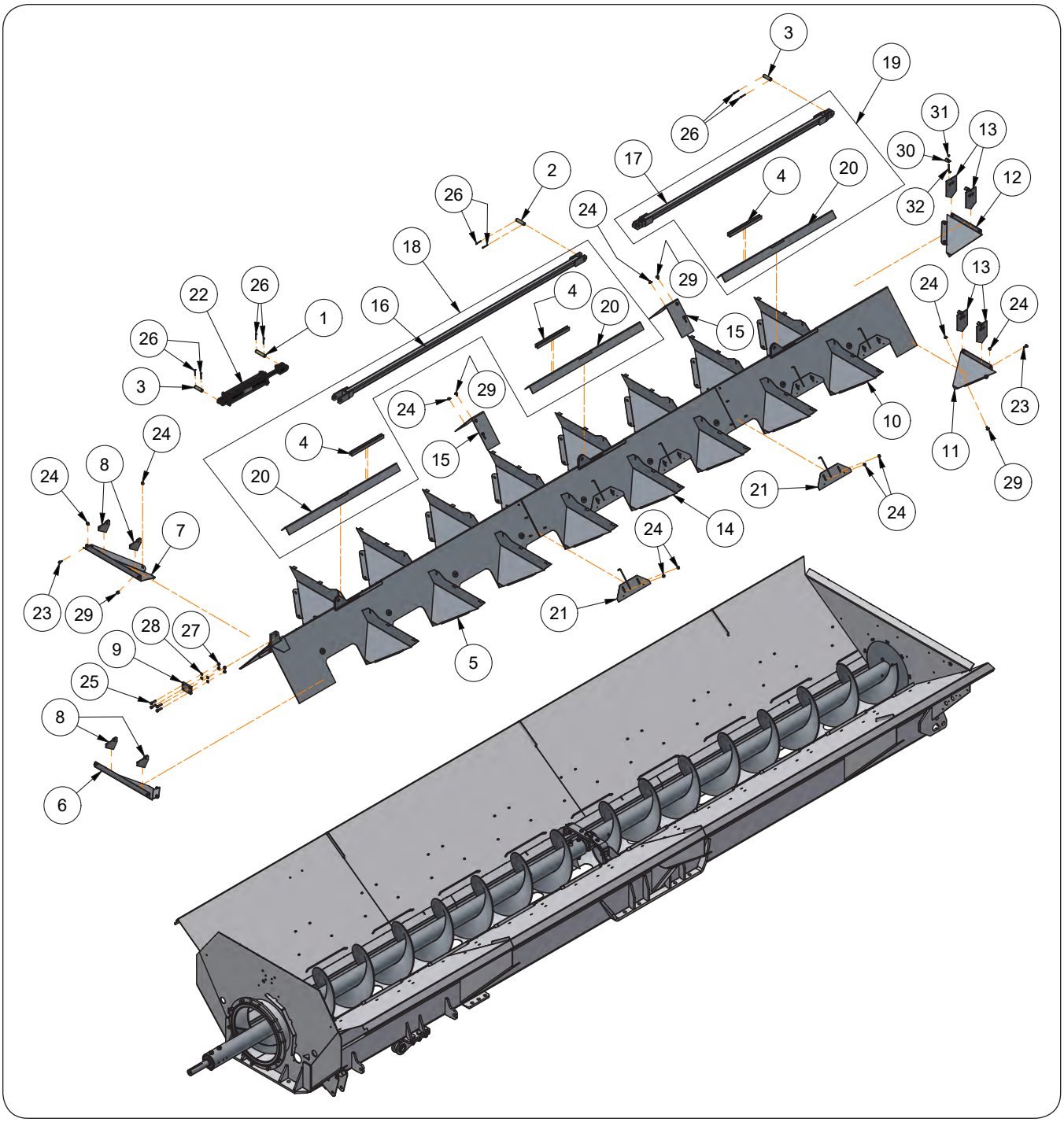
Horizontal Auger Components

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	295611B	Rear Drag Auger Weldment =Black=	1	
3	286382B	Bearing Mount Bar =Black=	1	
4	296300B	Front Drag Auger Replacement Kit (Black)	1	Includes Items 16, 23, 29, 30, 33, 34
5	295926G	Cover Plate =Green=	1	
	295926R	Cover Plate =Red=		
	295926BM	Cover Plate =Black Metallic=		
6	293957	Auger Coupler Shaft Weldment	1	
7	9002492	Bearing 2" Dia. Flanged	1	
8	9003735	Cable Tie 11" Long	1	
9	9004731	Pillow Block Bearing, 2 1/2" Bore	1	
10	9004764	90° Elbow Pipe	1	
11	9006964	Hex Pipe Nipple	1	
12	9009171	Pipe Coupling 1/8"-27 NPT	1	
13	9002479	Pipe Swivel Adapter 1/8"-27 NPT	1	
14	9006965	Grease Hose 3/16" x 15" (3000 PSI)	1	
15	91262	Flange Screw 3/8"-16UNC x 1"	9	Grade 5
16	91299-161	Capscrew, 3/4"-10UNC x 8"	2	Grade 8
17	9390-123	Capscrew 5/8"-11UNC x 1 3/4"	2	Grade 5
18	9390-124	Capscrew 5/8"-11UNC x 2"	8	Grade 5
19	9388-136	Carriage Bolt 5/8"-11UNC x 2 1/4"	2	Grade 5
20	9394-014	Hex Nut, 5/8"-11UNC	6	Grade 5
21	9404-029	Lock Washer 5/8"	8	
22	9405-098	Flat Washer 5/8" SAE	2	
23	9802	Lock Nut/Top, 3/4"-10UNC	2	Grade B
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 Tube 1/4" OD	1	Specify Length In Feet
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"	2	Grade 8
31	93426	Grease Zerk	2	
32	9405-076	Flat Washer 3/8" USS	1	
33	295031	Auger Tube Adapter 5 7/8" Dia. x 5 5/8"	1	
34	283895B	Spacer Bushing	2	
35	9003398	Lock Nut/Top, 5/8-11UNC	4	Grade F

Hopper Flow Door Components

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



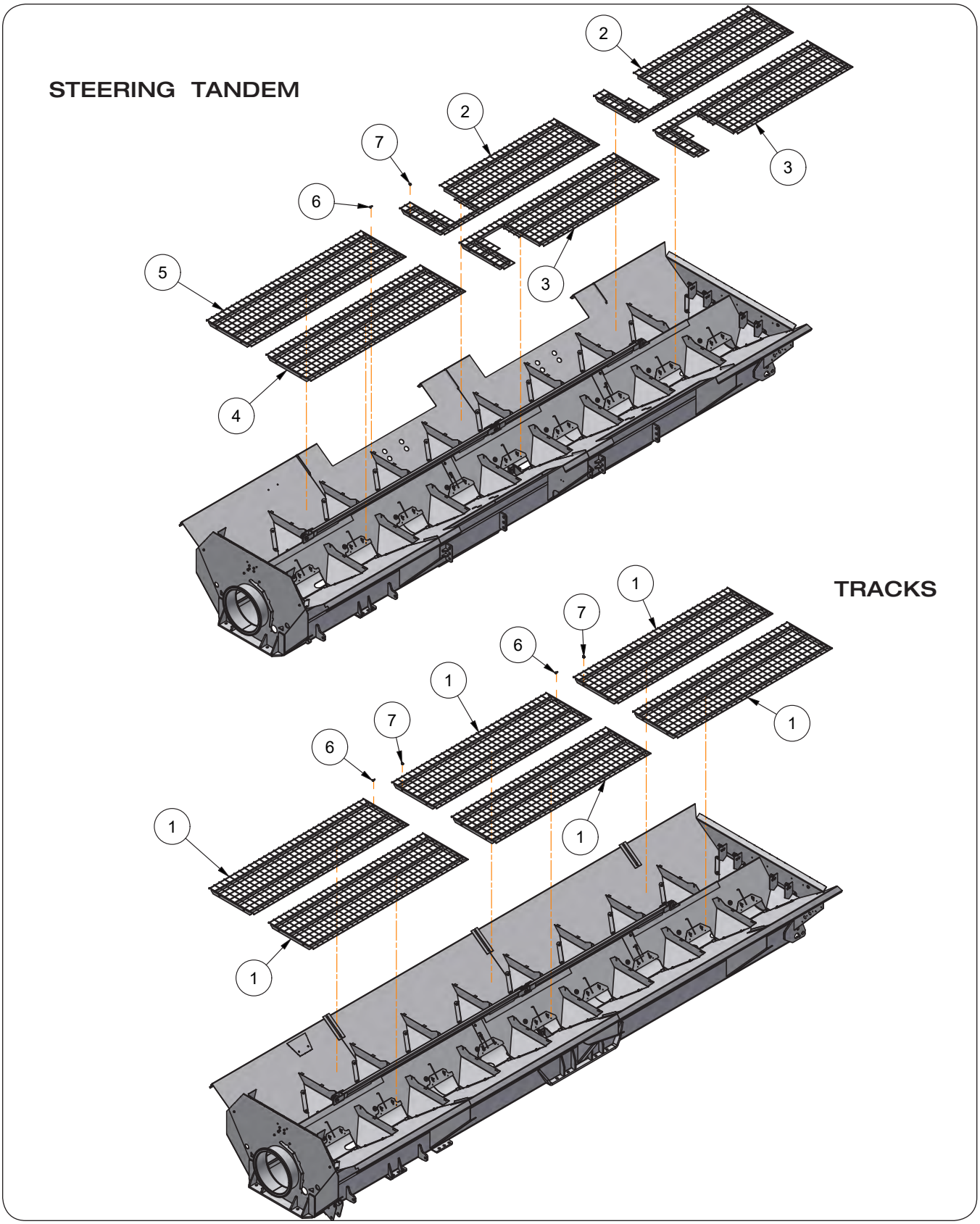
Hopper Flow Door Components

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

ITEM	PART NO.	DESCRIPTION	QTY	NOTES
1	266285	Idler Pin 1" Dia. x 4 1/2"	1	
2	271112	Idler Pin 1" Dia. x 4"	1	
3	804572	Axle Lift Pin 1" Dia. x 3 1/2"	2	
4	N/A*	Seal Plate =Black=	-	*Not for individual sale, see Items 20, 21
5	296303B	Front Tent Service Kit (Black)	1	Includes Items 6 - 9 & Front Tent Weldment
6	295484B	Front LH Baffle =Black=	1	
7	295485B	Front RH Baffle =Black=	1	
8	294288B	Front Screen Mount Plate =Black=	4	
9	N/A*	Cylinder Mount Plate	-	*Not for individual sale, see Item 5
10	296307B	Rear Tent Service Kit (Black)	1	Includes Items 11 - 13 & Rear Tent Weldment
11	295486B	Rear LH Baffle =Black=	1	
12	295487B	Rear RH Baffle =Black=	1	
13	294289B	Rear Screen Mount Plate =Black=	4	
14	296304B	Middle Tent Service Kit (Black)	1	Includes Item 15 & Middle Tent Weldment
15	272141B	Cover Plate =Black=	2	
16	294240B	Front Flow Door Linkage Weld't =Black=	1	
17	273314B	Rear Flow Door Linkage Weld't =Black=	1	
18	273510B	Front Flow Door Linkage Kit =Black=	1	Includes Items 4, 16, 20
19	273511B	Rear Flow Door Linkage Kit =Black=	1	Includes Items 4, 17, 20
20	282187B	Tent Hole Cover Plate =Black=	3	
21	284721B	Baffle Weldment =Black=	12	
22	9002575	Hydraulic Cylinder 3" x 16" (3000PSI)	1	3/4"-16 SAE O-Ring Ports
23	91262	Flange Screw 3/8"-16UNC x 1" Grade 5	8	
24	91263	Locknut, 3/8"-16UNC Grade 5	92	
25	9390-103	Capscrew 1/2"-13UNC x 2" Grade 5	4	
26	9391-046	Cotter Pin 3/16" Dia. x 2"	8	
27	9394-010	Hex Nut 1/2"-13UNC Grade 5	4	
28	9404-025	Lock Washer 1/2"	4	
29	95585	Large Flange Screw 3/8"-16UNC x 3/4" Gr.5	76	
30	297057B	Rear Screen Fastener Plate =Black=	4	
31	9398-010	Elastic Locknut, 5/16"-18UNC	4	
32	9504577	J-Bolt, 5/16"-18UNC x 2" Thread	4	

Steering Tandem & Track Screen Components

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



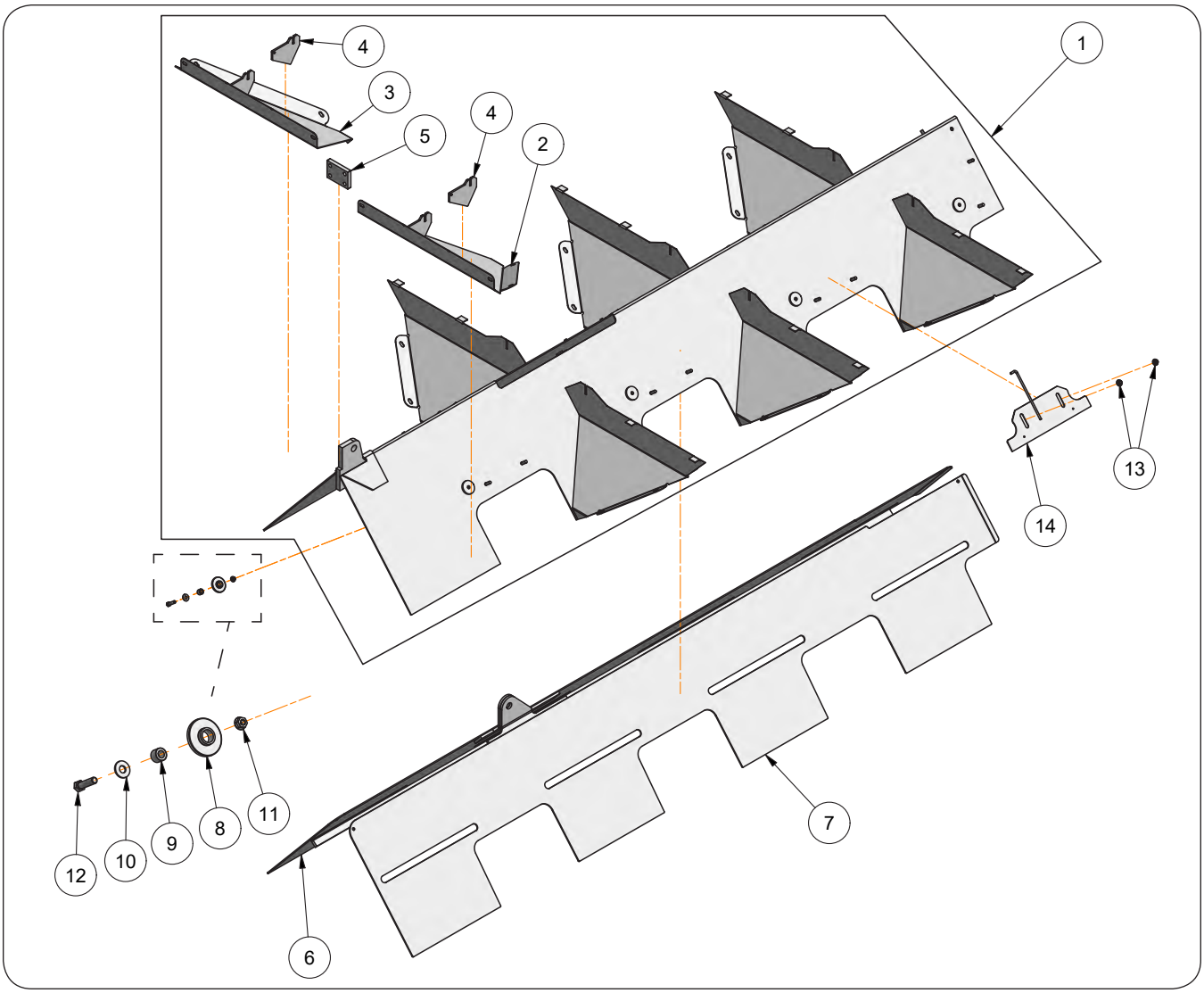
Steering Tandem & Track Screen Components

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

ITEM	PART NO.	DESCRIPTION	QTY	NOTES
1	294286B	Screen Weldment =Black=	6	For All Track Screens
2	294449B	RH Screen Weldment =Black=	2	For Steerable Tandem
3	294448B	LH Screen Weldment =Black=	2	For Steerable Tandem
4	294286B	Front LH Screen Weldment =Black=	1	For Steerable Tandem
5	294286B	Front RH Screen Weldement =Black=	1	For Steerable Tandem
6	91262	Flange Screw 3/8”-16UNC x 1” Grade 5	8	
7	91263	Locknut, 3/8”-16UNC Grade 5	8	

Flow Door Components — Front Flow Door

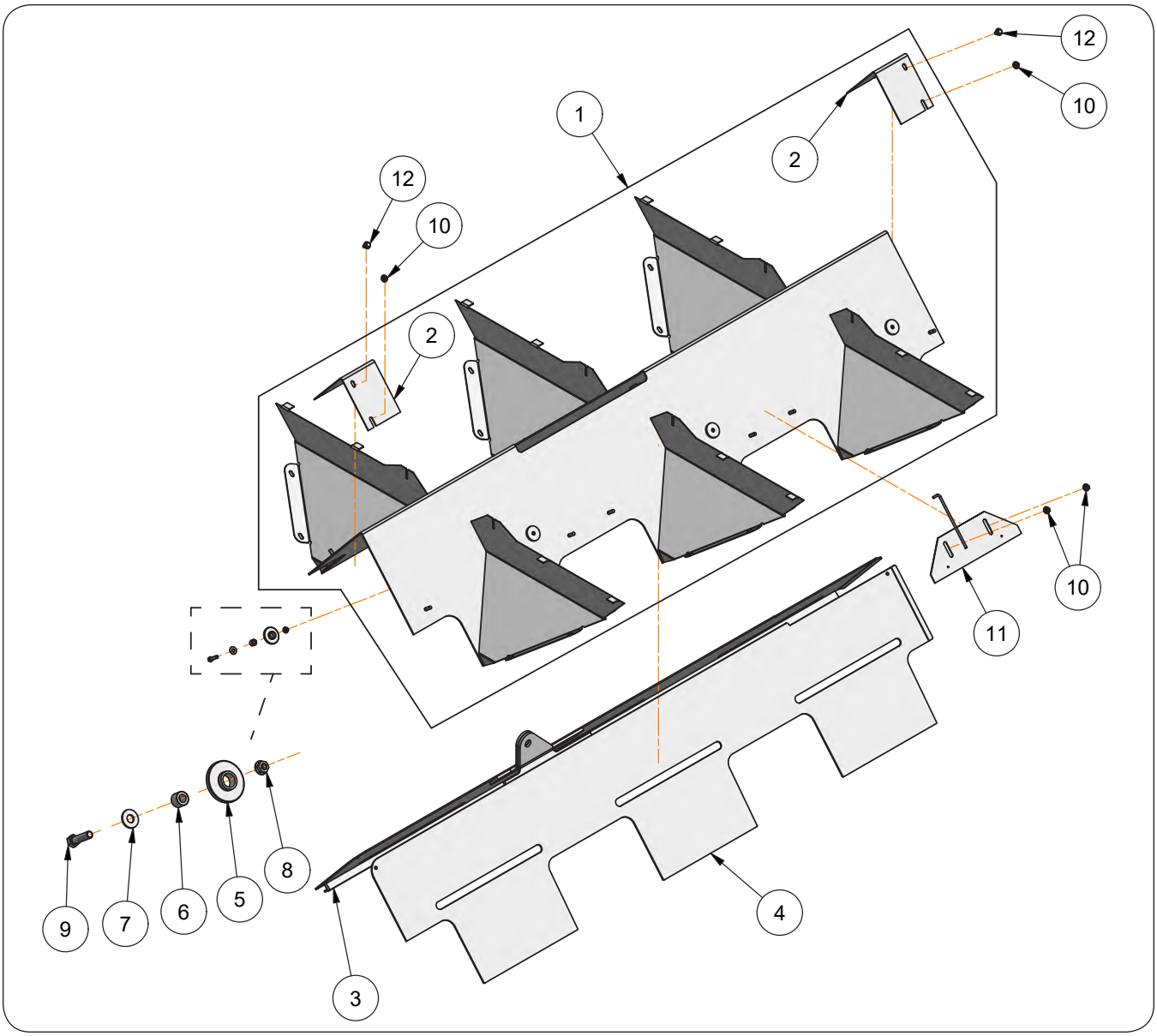
Please visit www.unverferth.com/parts/ for the most current parts listing.



ITEM	PART NO.	DESCRIPTION	QTY	NOTES
1	296303B	Front Tent Service Kit (Black)	1	Includes Items 2-5 & Front Tent Weldment
2	295484B	Front LH Baffle =Black=	1	
3	295485B	Front RH Baffle =Black=	1	
4	294288B	Front Screen Mount Plate =Black=	4	
5	271054*	Cylinder Mount Plate	-	*Not for individual sale, see Item 1
6	295467B	Front RH Door Weldment =Black=	1	
7	295469B	Front LH Door Weldment =Black=	1	
8	284168	Bushing 2 1/4 OD x 49/64 ID x 0.500	8	
9	284169	Bushing 3/4 OD x 7/16 ID x 0.531	8	
10	9005471	Flat Washer 3/8 (Hardened)	8	
11	9003396	Flange Lock Nut 3/8-16 UNC Gr.5	8	
12	91299-057	Capscrew 3/8-16UNC x 1 1/2 Gr.8	8	
13	91263	Locknut, 3/8-16UNC Gr.5	12	
14	291313B	Restrictor Weldment =Black=	6	

Flow Door Components — Middle Flow Door

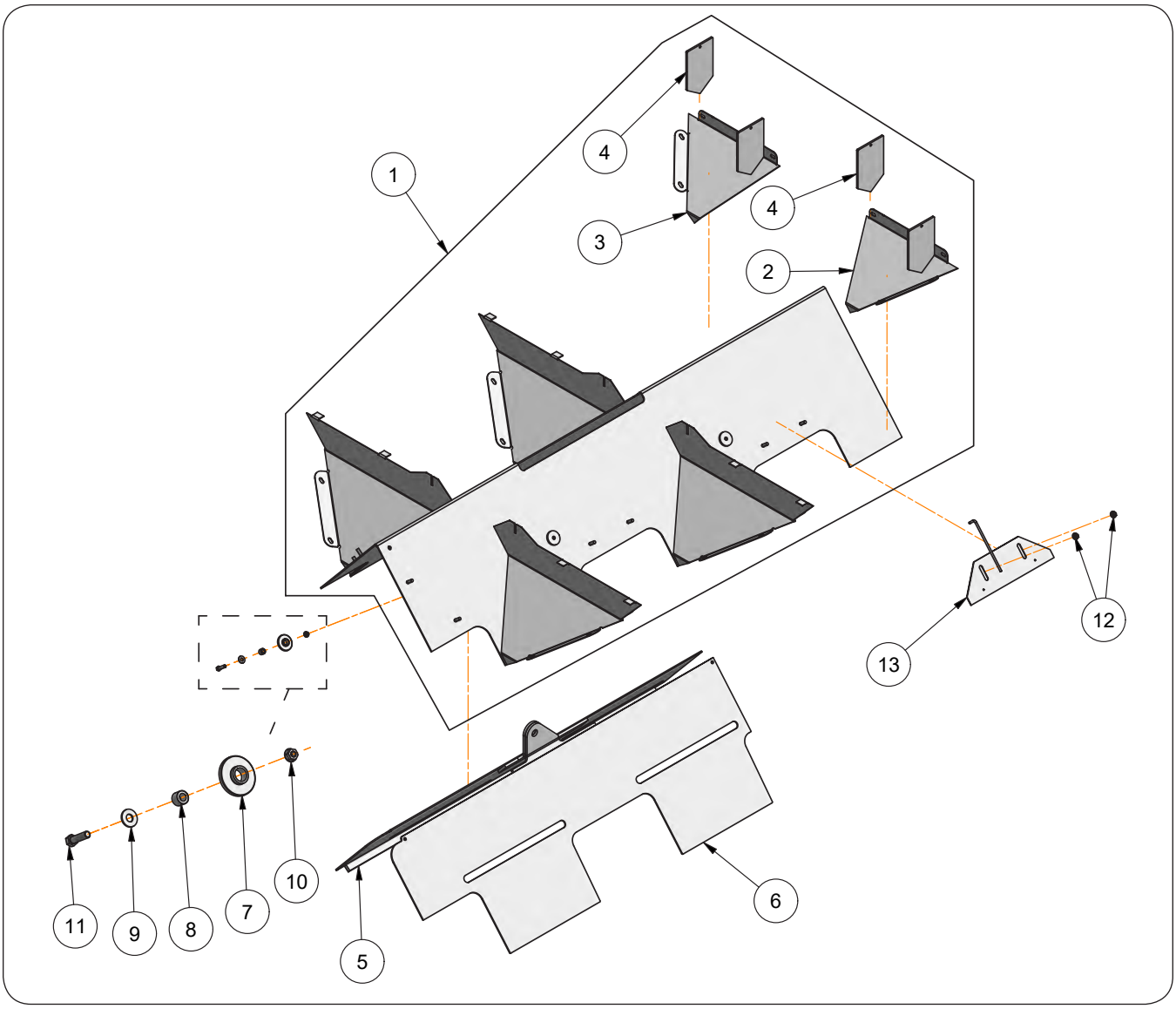
Please visit www.unverferth.com/parts/ for the most current parts listing.



ITEM	PART NO.	DESCRIPTION	QTY	NOTES
1	296304B	Middle Tent Service Kit (Black)	1	Includes Item 2 & Middle Tent Weldment
2	272141B	Cover Plate =Black=	2	
3	295474B	Middle RH Door Weldment =Black=	1	
4	295476B	Middle LH Door Weldment =Black=	1	
5	284168	Bushing 2 1/4 OD x 49/64 ID x 0.500	6	
6	284169	Bushing 3/4 OD x 7/16 ID x 0.531	6	
7	9005471	Flat Washer 3/8 (Hardened)	6	
8	9003396	Flange Lock Nut 3/8-16 UNC Gr.5	6	
9	91299-057	Capscrew 3/8-16UNC x 1 1/2 Gr.8	6	
10	91263	Locknut, 3/8-16UNC Gr.5	12	
11	284721B	Restrictor Weldment =Black=	4	
12	95585	Large Flange Screw 3/8-16 UNC x 3/4	4	Grade 5

Flow Door Components — Rear Flow Door

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



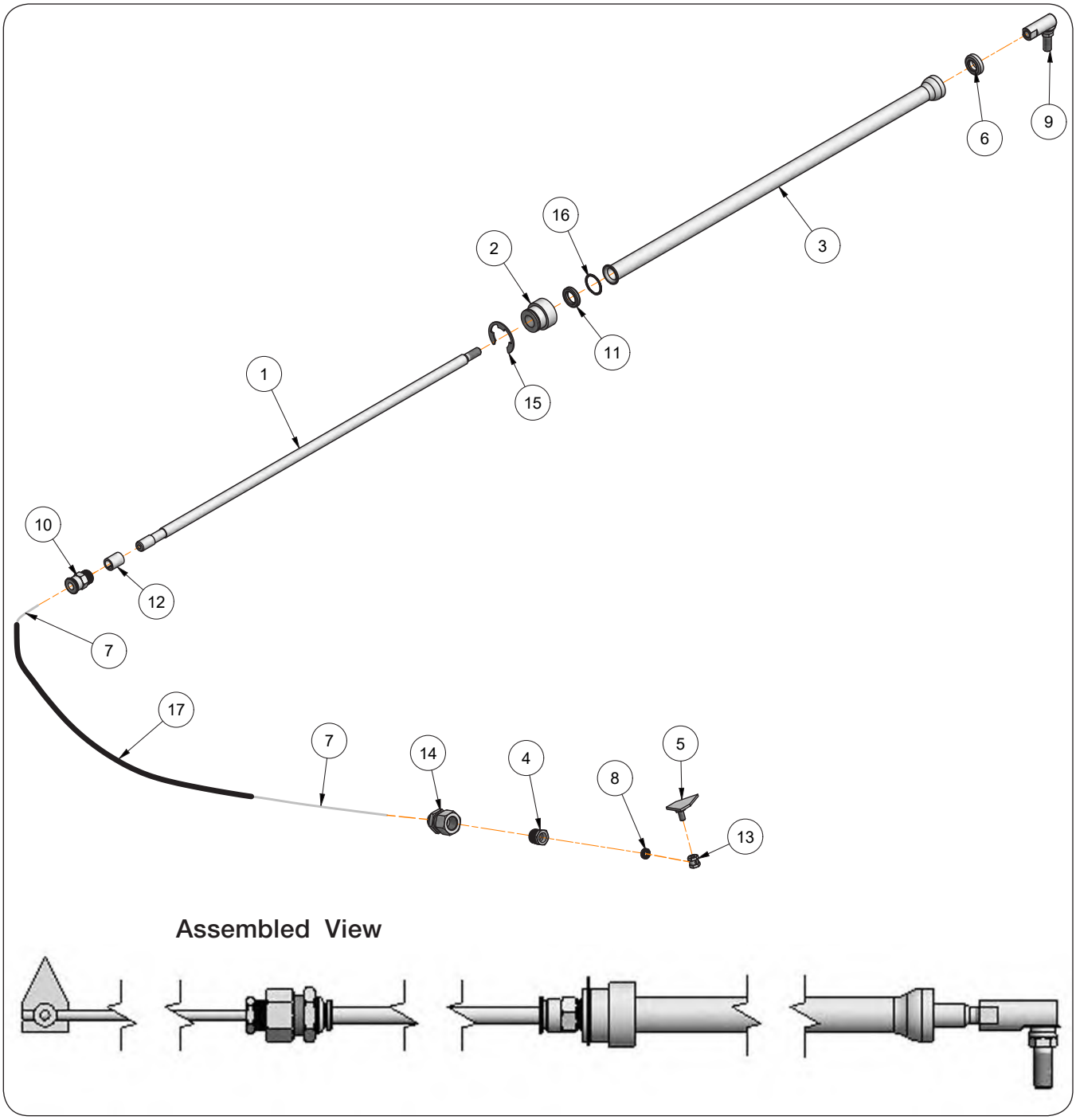
ITEM	PART NO.	DESCRIPTION	QTY	NOTES
1	296307B	Rear Tent Service Kit (Black)	1	Includes Items 2-4 & Rear Tent Weldment
2	295486B	Rear LH Baffle =Black=	1	
3	295487B	Rear RH Baffle =Black=	1	
4	294289B	Rear Screen Mount Plate =Black=	4	
5	295481B	Rear RH Door Weldment =Black=	1	
6	295483B	Rear LH Door Weldment =Black=	1	
7	284168	Bushing 2 1/4 OD x 49/64 ID x 0.500	4	
8	284169	Bushing 3/4 OD x 7/16 ID x 0.531	4	
9	9005471	Flat Washer 3/8 (Hardened)	4	
10	9003396	Flange Lock Nut 3/8-16 UNC Gr.5	4	
11	91299-057	Capscrew 3/8-16UNC x 1 1/2 G8	4	
12	91263	Locknut, 3/8-16UNC Gr.5	8	
13	284721B	Restrictor Weldment =Black=	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.



Assembled View

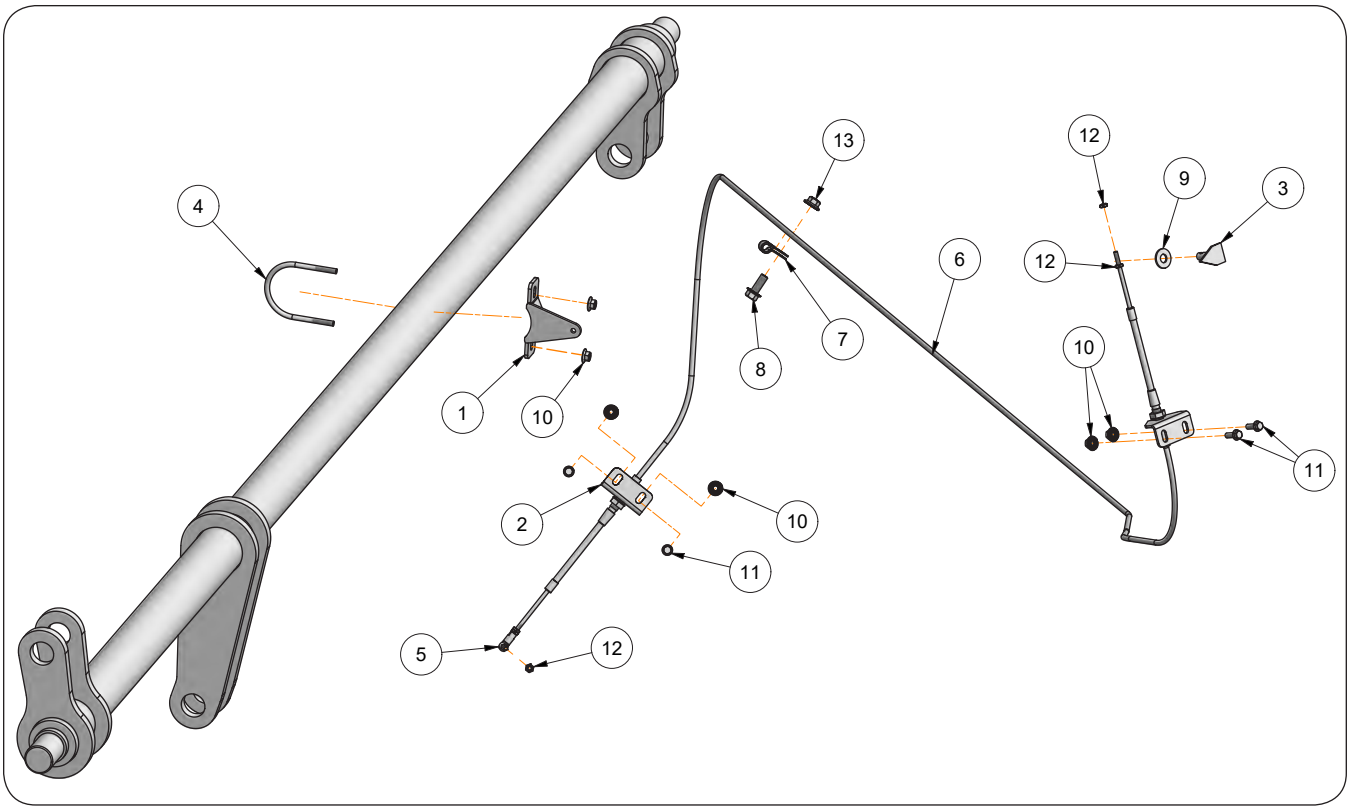
Flow Door Indicator Assembly

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

ITEM	PART NO.	DESCRIPTION	QTY	NOTES
	293760R	Complete Indicator Assembly =Red=	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	9008593	Inner Cable (Conduit) - 3/16 Dia. x 112 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	293759	Plastic Tubing - 92”	1	

Steering Tandem Indicator Components

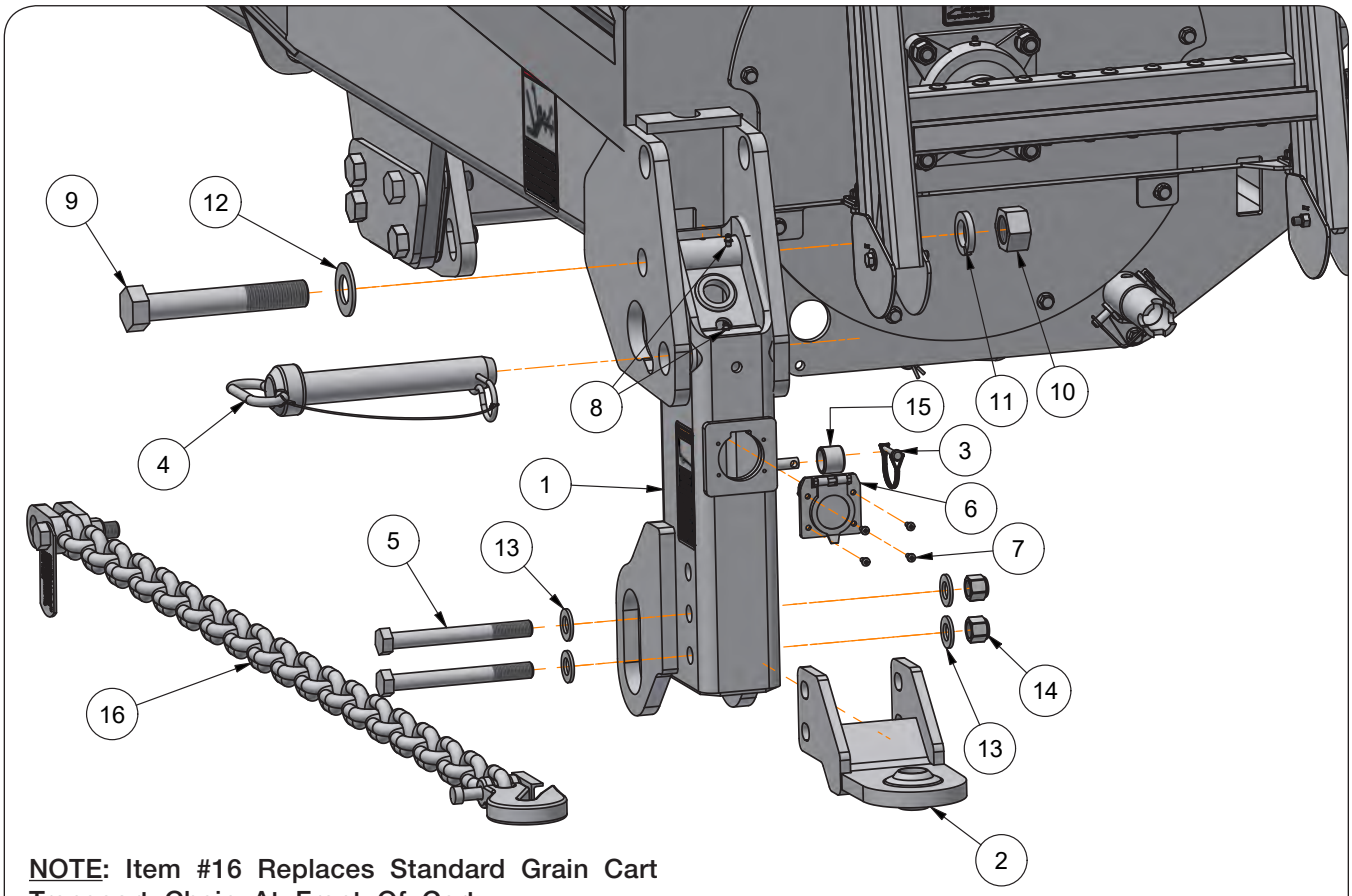
Please visit www.unverferth.com/parts/ for the most current parts listing.



ITEM	PART NO.	DESCRIPTION	QTY	NOTES
1	273524B	Indicator Clamp Weldment =Black=	1	
2	273525B	Indicator Bolt Plate =Black=	2	
3	283749R	Indicator Weldment =Red=	1	
4	9001114	U-Bolt 1/4-20UNC	1	
5	9005109	Rod End #10-32	1	
6	9005127	Push/Pull Cable 204" with Rod Ends	1	Includes Item #5
7	9006037	Cable Clamp 3/8"	7	
8	91262	Flange Screw 3/8"-16UNC x 1"	7	Grade 5
9	9405-076	Flat Washer 3/8" USS	1	
10	97189	Hex Nut/Large Flange 1/4"-20UNC	6	Grade 5
11	97420	Flange Screw 1/4"-20UNC x 3/4"	4	Grade 5
12	9830-016	Hex Nut #10-32	3	Grade 2
13	91263	Locknut, 3/8"-16UNC	7	Grade 5

Rear Drop Hitch Components For SN B44430100 and Higher

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

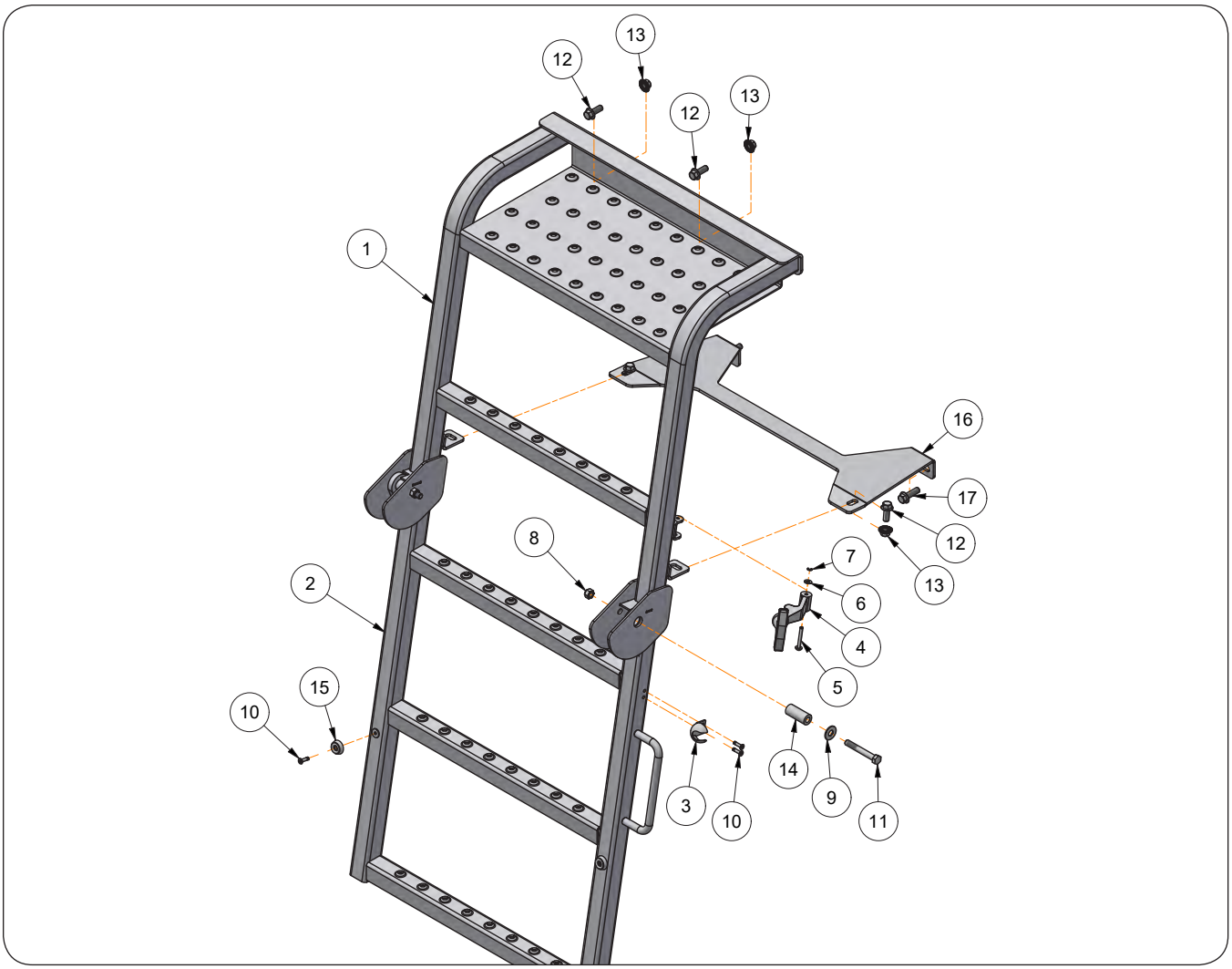


NOTE: Item #16 Replaces Standard Grain Cart Transport Chain At Front Of Cart.

ITEM	PART NO.	DESCRIPTION	QTY	NOTES
	296960B	Rear Drop Hitch Kit (Black)	-	Includes Items 1-16. See "Front End Components" For Additional Details.
1	297128B	Rear Drop Hitch Assembly (Black)	1	Includes Decal, WARNING (Towing Capacity) 9009646
2	295978B	Rear Hitch Weldment =Black=	1	
3	9000936	Lynch Pin	1	
4	9009656	Pivot Pin	1	
5	9390-159	Capscrew 3/4"-10UNC x 7" Grade 5	2	
6	9009843	7-Blade Connector	1	
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	9394-024	Hex Nut 1 1/4"-7UNC Grade 5	1	
11	9404-049	Lock Washer 1 1/4"	1	
12	9405-128	Flat Washer 1 1/4" SAE	2	
13	9405-104	Flat Washer 3/4" SAE	4	
14	9398-021	Lock Nut 3/4"-10UNC	2	
15	91268	Tension Bushing	1	
16	PF1238-19	Transport Chain #61,000	1	Replaces Standard Grain Cart Transport Chain If Equipped With Optional Rear Hitch

Rear Ladder Components For SN B44430100 and Higher

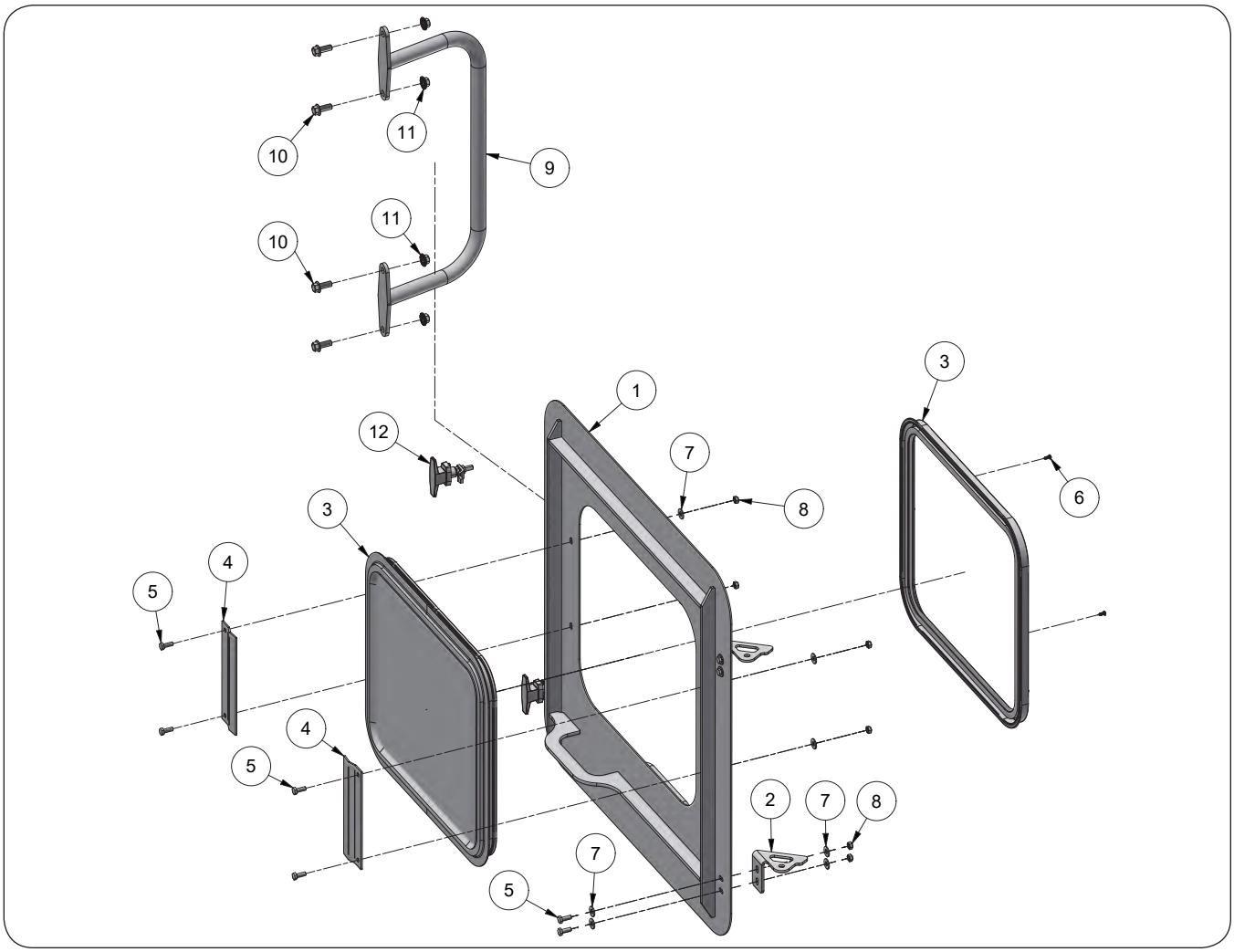
Please visit www.unverferth.com/parts/ for the most current parts listing.



ITEM	PART NO.	DESCRIPTION	QTY	NOTES
1	296417B	Upper Ladder Weldment =Black=	1	
2	296429B	Lower Ladder Weldment =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	

Rear Access Door Components For SN B44430100 and Higher

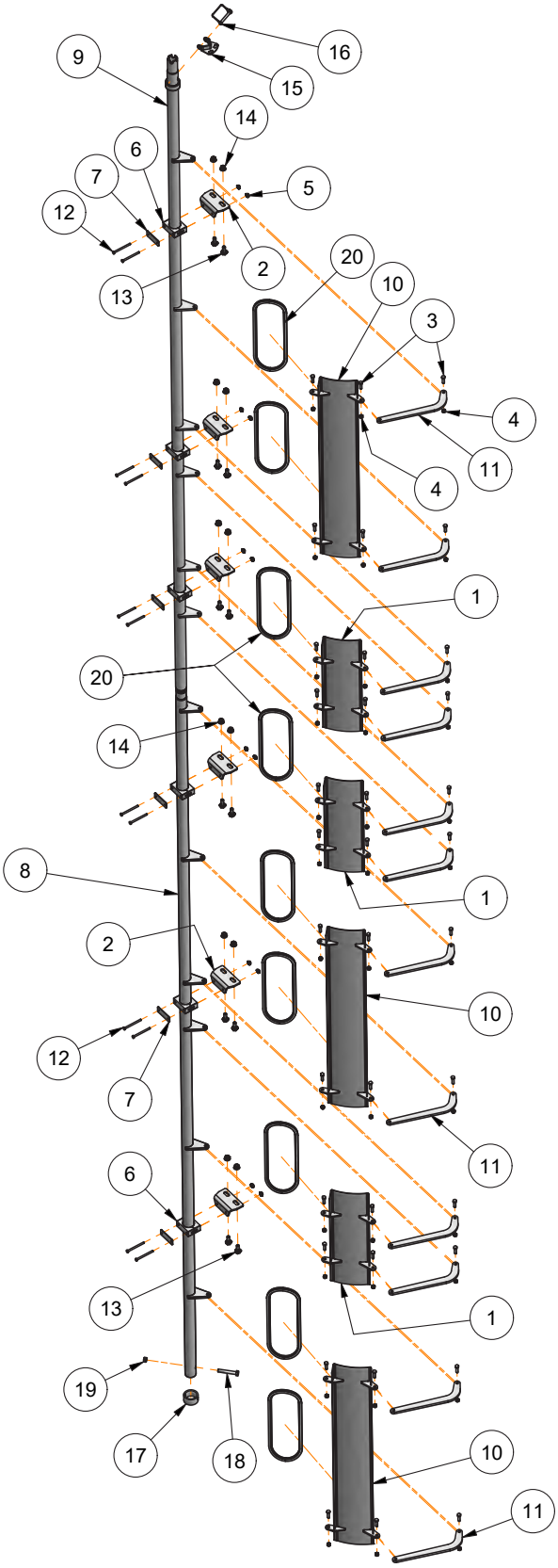
Please visit www.unverferth.com/parts/ for the most current parts listing.



ITEM	PART NO.	DESCRIPTION	QTY	NOTES
1	256527R	Rear Access Door Weldment =Red=	1	
	256527G	Rear Access Door Weldment =Green=		
	256527BM	Rear Access Door Weldment =Black Metallic=		
2	256670	Rear Access Door Hinge	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"	10	
7	9405-064	Flat Washer 1/4"USS	8	
8	9936	Locknut 1/4"-20UNC	8	
9	296534B	Access Door Handle Weldment =Black=	1	
10	91262	Flange Screw 3/8"-16UNC x 1" Grade 5	4	
11	91263	Flange Nut 3/8"-16UNC	4	
12	9009768	Compression Draw Latch	2	

Clean Out Door Components

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



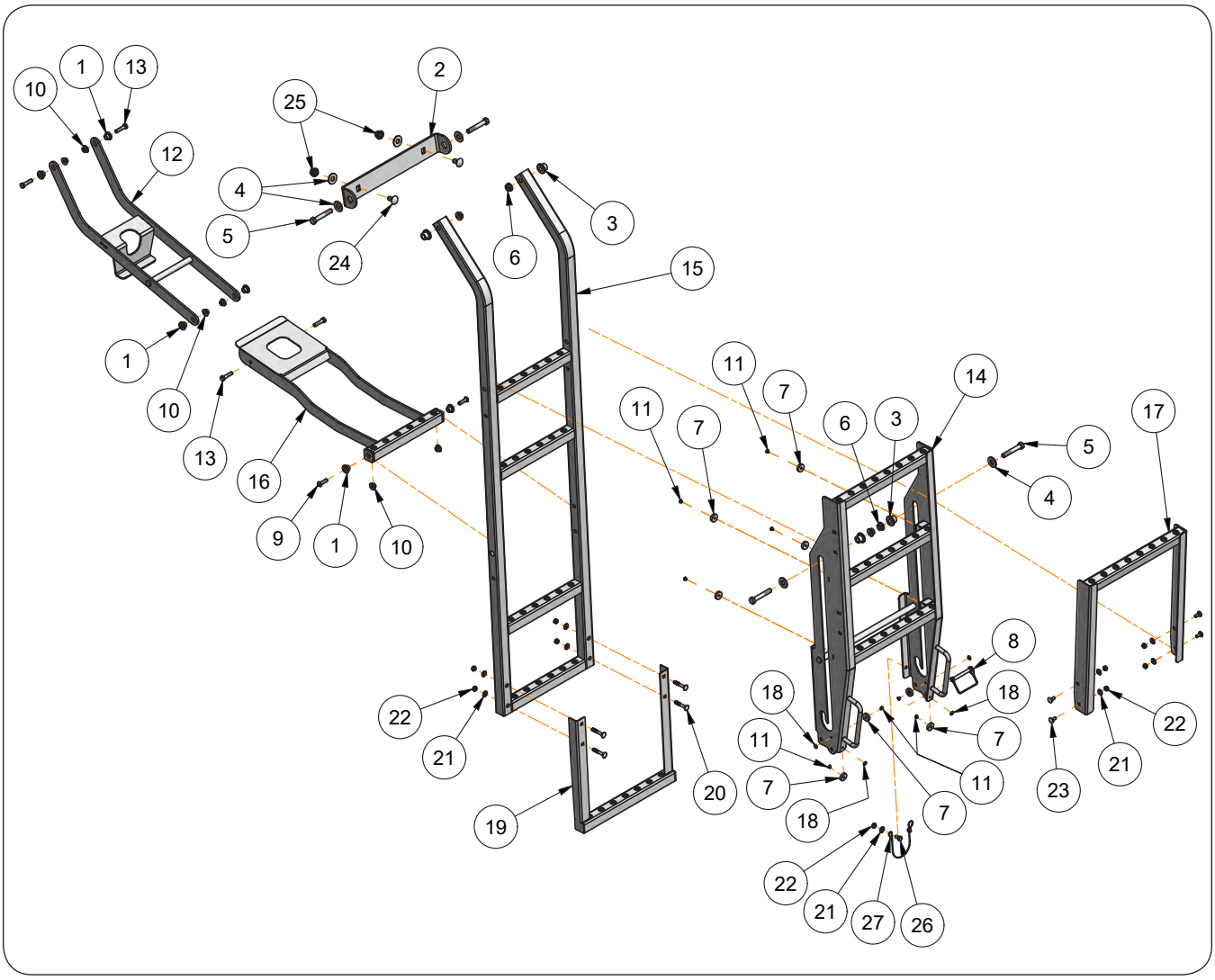
Clean Out Door Components

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

ITEM	PART NO.	DESCRIPTION	QTY	NOTES
1	273748B	Cleanout Door Weldment 22" Long =Black=	3	
2	273741B	Door Pivot Plate =Black=	6	
3	9390-056	Capscrew 3/8-16UNC x 1 1/4	36	Grade 5
4	9928	Locknut 3/8-16UNC	36	
5	97189	Large Flange Hex Nut 1/4-20UNC	12	
6	9006351	Clamp Pair	6	
7	9006352	Top Plate	6	
8	273739B	Front Link Arm Weldment =Black=	1	For Tracks
	273827B	Front Link Arm Weldment =Black=	1	For Steerable Tandem
9	273743B	Rear Link Arm Weldment =Black=	1	For Tracks
	273828B	Rear Link Arm Weldment =Black=	1	For Steerable Tandem
10	273730B	Cleanout Door Weldment 42 3/4" Long =Black=	3	
11	273734B	Door Linkage =Black=	12	
12	9390-015	Capscrew 1/4-20UNC x 3 1/2	12	Grade 5
13	91266	Flange Screw 1/2-13UNC x 1 1/4	12	Grade 5
14	91267	Flange Nut 1/2-13UNC	12	
15	273753B	Door Latch Weldment =Black=	1	
16	9005305	Lynch Pin 3/8" Dia. x 3"	1	
17	271566B	Stop Bushing =Black=	1	
18	9390-108	Capscrew 1/2"-13UNC x 3 1/4"	1	Grade 5
19	94981	Locknut 1/2"-13UNC	1	
20	9007108	Gasket w/Adhesive Backing for Clean-Out Door	AR	Specify in Feet

Side Ladder Components

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



Side Ladder Components

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

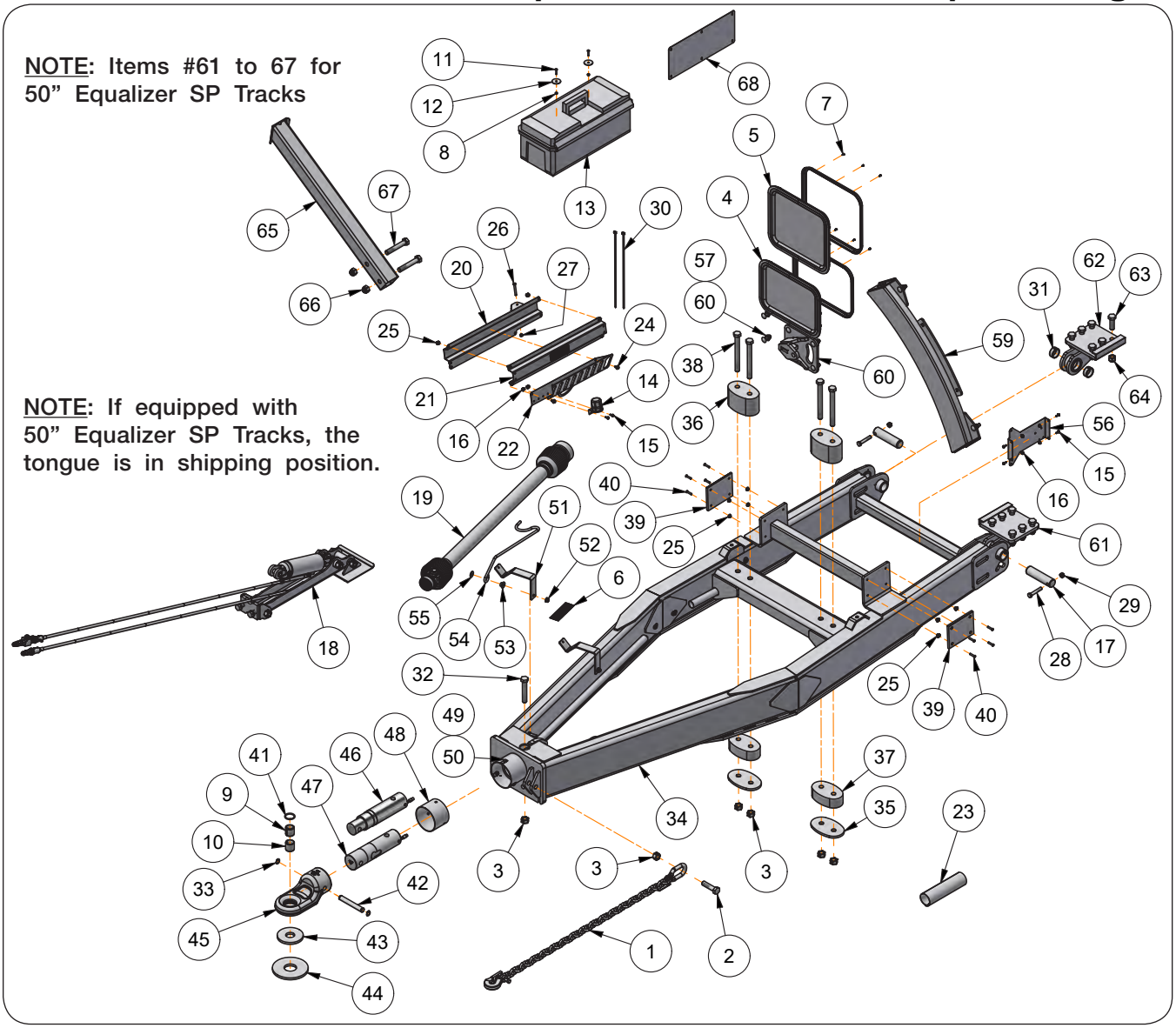
ITEM	PART NO.	DESCRIPTION	QTY	NOTES
1	2003029	Nylon Bushing, .625" OD x .406" ID x .380"	6	
2	289294B	Plate-Bracket, Ladder =Black=	1	
3	2003030	Nylon Bushing, .875" OD x .531" ID x .563"	4	
4	9405-088	Flat Washer, 1/2" USS	6	
5	9390-107	Capscrew, 1/2"-13UNC x 3" G5	4	
6	9003397	Lock Nut/Top, 1/2"-13UNC	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	6	
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 (1/4” Nominal) USS	9	
22	901527	Lock Nut/Center, 5/16"-18UNC	9	
23	9388-024	Carriage Bolt, 5/16"-18UNC x 3/4" G5	4	
24	9388-102	Carriage Bolt, 1/2”-13UNC x 1”	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	

Front End Components

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

NOTE: Items #61 to 67 for 50” Equalizer SP Tracks

NOTE: If equipped with 50” Equalizer SP Tracks, the tongue is in shipping position.



ITEM	PART NO.	DESCRIPTION	QTY	NOTES
1	9004898	Transport Chain 41,000#	1	Standard
	PF1238-19	Transport Chain 61,000#	1	Replaces Standard Grain Cart Transport Chain If Equipped With Optional Rear Hitch
2	91299-191	Capscrew 1”-8UNC x 4” Grade 8	1	
3	92199	Locknut 1”-8UNC	6	
4	9008857	Front Window & Trim Assembly 14 15/32” x 19 21/32”	2	
5	9008680	Window & Trim Assembly 17 7/32” x 19 21/32”	2	Front and Rear Sideboards
6	9001498	Rubber Pad	1	
7	9008933	Pan Head Screw 8”-18UNC x 1/2”	24	
8	9936	Locknut 1/4-20UNC	2	
9	9001917	Tension Bushing, 1 1/2” ID	1	
10	9002130	Split Tension Bushing, 1 3/4” ID	1	
11	9390-006	Capscrew 1/4”-20UNC x 1 1/4” Grade 5	2	
12	94763	Fender Washer 2”	2	
13	9008634	Toolbox	1	
14	9001968	Trailer Connector Holder	1	
15	97420	Flange Screw 1/4”-20UNC x 3/4” Grade 5	6	
16	97189	Large Flange Hex Nut 1/4”-20UNC	6	
17	273368	Tongue Pin 2” Dia. x 7 13/16”	2	
18	294143B	Hydraulic Jack Kit (Black)	1	Standard

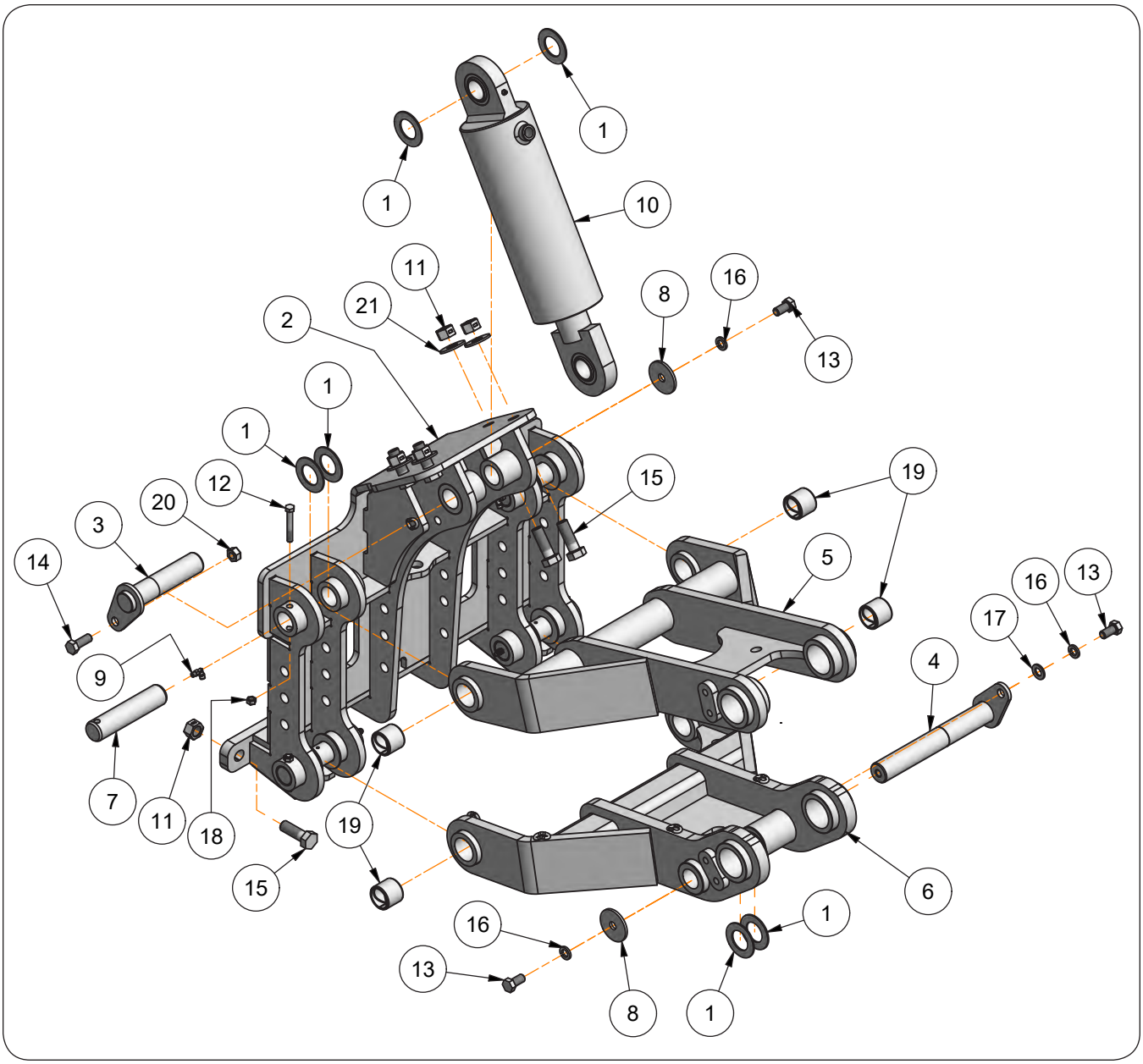
Front End Components

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

ITEM	PART NO.	DESCRIPTION	QTY	NOTES
19	9005230	PTO Assembly Complete	1	1 3/4"-20 Spline, W2500
20	295799B	Hose Caddy Weldment =Black=	1	
21	294085B	Hose Caddy Cover =Black=	1	
22	296159	Hose Retainer	1	
23	9003849	Hose Wrap	1	Specify in Feet
24	91256	Large Flange Capscrew 5/16"-18UNC x 3/4" Grade 5	6	
25	91257	Flange Nut, 5/16"-18UNC Grade 5	14	
26	9390-062	Capscrew 3/8"-16UNC x 2 3/4"	1	
27	902875	Lock Nut/Ctr 3/8"-16UNC	1	
28	9390-130	Capscrew 5/8"-11UNC x 3 1/2"	2	Grade 5
29	95905	Lock Nut/Ctr 5/8"-11UNC	2	
30	9000104	Cable Tie, 21 1/2" Lg	2	
31	9005473	Split Tension Bushing 2 3/8" OD x 2" ID x 1"	4	
32	91299-195	Capscrew 1"-8UNC x 6"	1	Grade 8
33	91192	Retaining Ring 1"	2	
34	273780G	Tongue Weldment =Green=	1	
	273780R	Tongue Weldment =Red=	1	
	273780BM	Tongue Weldment =Black Metallic=	1	
35	271687B	Spring Retainer Plate	2	
36	9006456	Polyurethane Spring 4 3/4" Thick	2	
37	9006457	Polyurethane Spring 2 1/2" Thick	2	
38	9390-464	Capscrew 1"-8UNC x 10"	4	Grade 5
39	273237	Nylon Wear Pad	2	
40	903171-663	Screw Flat Countersunk Head Phillips 5/16"-18UNC x 1 1/2"	8	
41	9005259	O-Ring	4	
42	282876	Hitch Pin 1" Dia. x 5 1/2" CAT 4	1	Optional
	281691	Hitch Pin 1" Dia. x 7 3/8" CAT 5	1	Standard
43	281898	Wearshoe - Hitch, CAT 4	1	Optional
44	281899	Wearshoe - Hitch, CAT 5	1	Standard
45	282875B	Cast Hitch 3.75" Load Bar =Black= CAT 4	1	Optional
	282329B	Cast Hitch 3.75" Load Bar =Black= CAT 5	1	Standard
46	9004913	Load Bar 3 3/4" Dia. with 16 ft. Cable CAT 4	1	For Steer Axle (Optional)
	9004910		1	For Tracks (Optional)
47	9008135	Load Bar 3 3/4" Dia. with 16 ft. Cable CAT 5	1	For Steer Axle (Standard)
	9008119		1	For Tracks (Standard)
48	271891B	Shield Tube =Black=	1	
49	9005376	U-Nut 3/8"-16UNC	3	
50	9390-053	Capscrew, 3/8-16UNC x 3/4 Grade 5	3	
51	296155Y	PTO Bracket =Yellow=	2	
52	91267	Flange Nut, 1/2-13UNC Grade 5	2	
53	296156	PTO Holder Bushing, 1 3/8" ID	1	
54	295840	Driveline Storage Rod	1	
55	9405-088	Flat Washer 1/2"	1	
56	289382B	GCM Mounting Bracket =Black=	1	
57	9003398	Locknut 5/8"-11UNC	10	
58	9388-135	Carriage Bolt, 5/8"-11UNC x 2 Grade 5	10	
59	278019G	Slide Plate Weldment =Green=	1	
	278019R	Slide Plate Weldment =Red=		
	278019BM	Slide Plate Weldment =Black Metallic=		
60	295934G	Cylinder Lug Weldment =Green=	1	
	295934R	Cylinder Lug Weldment =Red=		
	295934BM	Cylinder Lug Weldment =Black Metallic=		
61	274818G	Tongue Pivot Weldment Left-Hand =Green=	1	For 50" Equalizer SP Tracks
	274818R	Tongue Pivot Weldment Left-Hand =Red=		
	274818BM	Tongue Pivot Weldment Left-Hand =Black Metallic=		
62	274819G	Tongue Pivot Weldment Right-Hand =Green=	1	
	274819R	Tongue Pivot Weldment Right-Hand =Red=		
	274819BM	Tongue Pivot Weldment Right-Hand =Black Metallic=		
63	9390-409	Capscrew 1"-14UNS x 3" Grade 5	12	
64	9008441	Elastic Lock Nut 1"-14UNS	12	
65	297263B	Stand Weldment =Black=	2	
66	9398-026	Locknut 1-8UNC	8	
67	9390-195	Capscrew 1"-8UNC x 6" Grade 5	4	
68	295491G	Scale Display Cover Plate =Green=	1	
	295491R	Scale Display Cover Plate =Red=		
	295491BM	Scale Display Cover Plate =Black Metallic=		

Suspension Link Components

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



Suspension Link Components

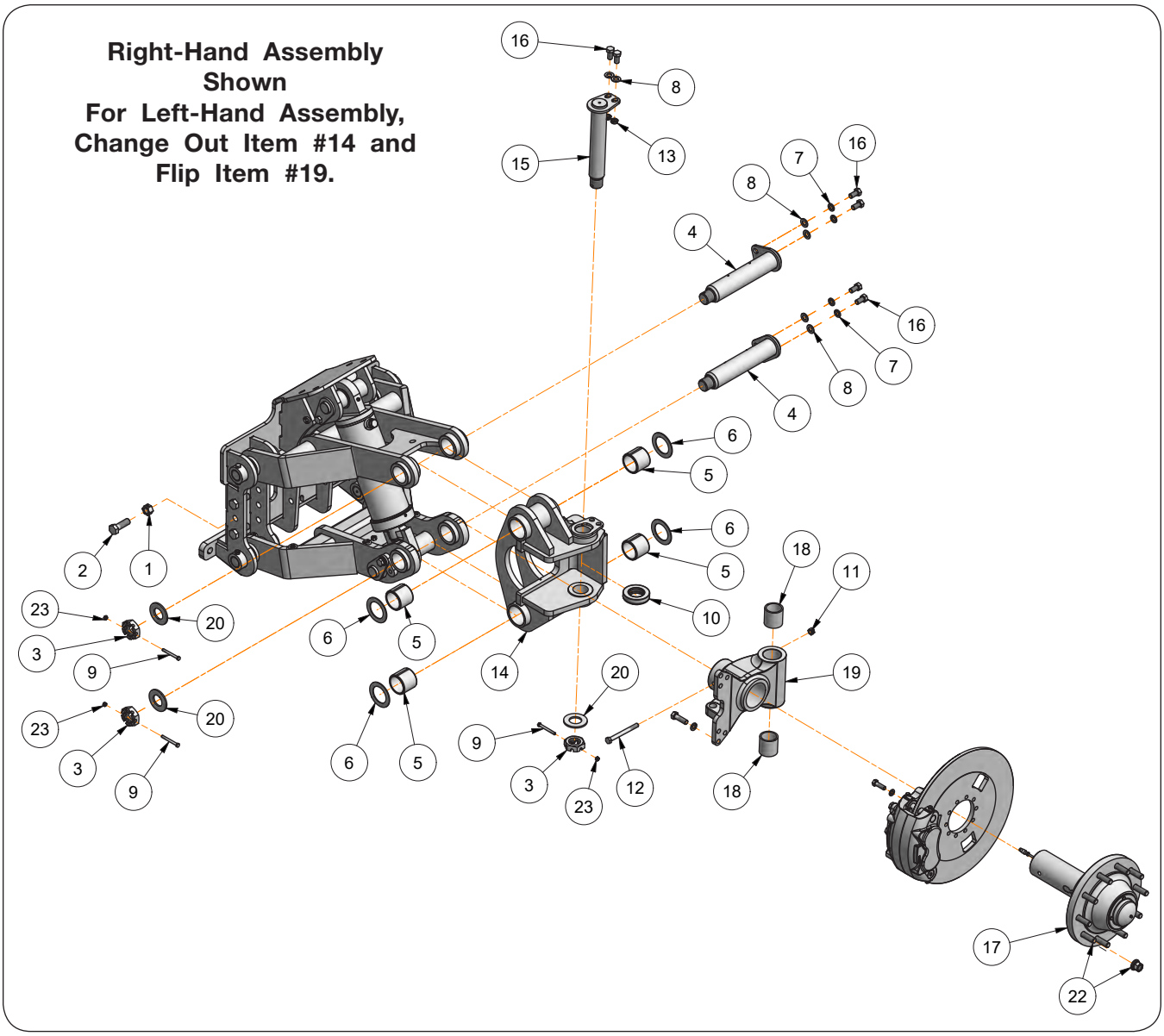
Please visit www.unverferth.com/parts/ for the most current parts listing.

ITEM	PART NO.	DESCRIPTION	QTY	NOTES
1	268542	Flat Washer 2" (3 1/2" OD)	12	
2	273407B	Suspension Frame Weld =Black=	1	
3	286103	Upper Cylinder Pin Weldment	1	
4	286139	Lower Cylinder Pin Weldment	1	
5	286140B	Upper Arm Weldment =Black=	1	
6	286148B	Lower Arm Weldment =Black=	1	
7	286167	Pin 2" x 8 3/4"	4	
8	286168B	Flat Washer 3/4" (3 1/4" OD) =Black=	2	
9	9006785	Adapter, 90° 1/8" NPTM x 1/8" NPTF	4	
10	9007090	Cylinder 6" x 12" (3000 PSI)	1	3/4"-16 & 1 1/16"-12 Ports
11	92199	Locknut/Ctr 1"-8UNC	11	
12	9390-109	Capscrew 1/2"-13UNC x 3 1/2" Grade 5	4	
13	9390-143	Capscrew 3/4"-10UNC x 1 1/2" Grade 5	3	
14	9390-145	Capscrew 3/4"-10UNC x 2" Grade 5	1	
15	9390-187	Capscrew 1"-8UNC x 3" Grade 5	11	
16	9404-033	Lock Washer 3/4" #10	3	
17	9405-104	Flat Washer 3/4"	1	
18	94981	Locknut/Ctr 1/2"-13UNC	4	
19	95123	Tension Bushing 2 3/8" OD x 2" ID x 2"	4	
20	96732	Locknut/Ctr 3/4"-10UNC	1	
21	9405-118	Flat Washer 1" (2 1/2" OD) USS	4	

Suspension Link To Hub Components

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

Right-Hand Assembly Shown
For Left-Hand Assembly, Change Out Item #14 and Flip Item #19.



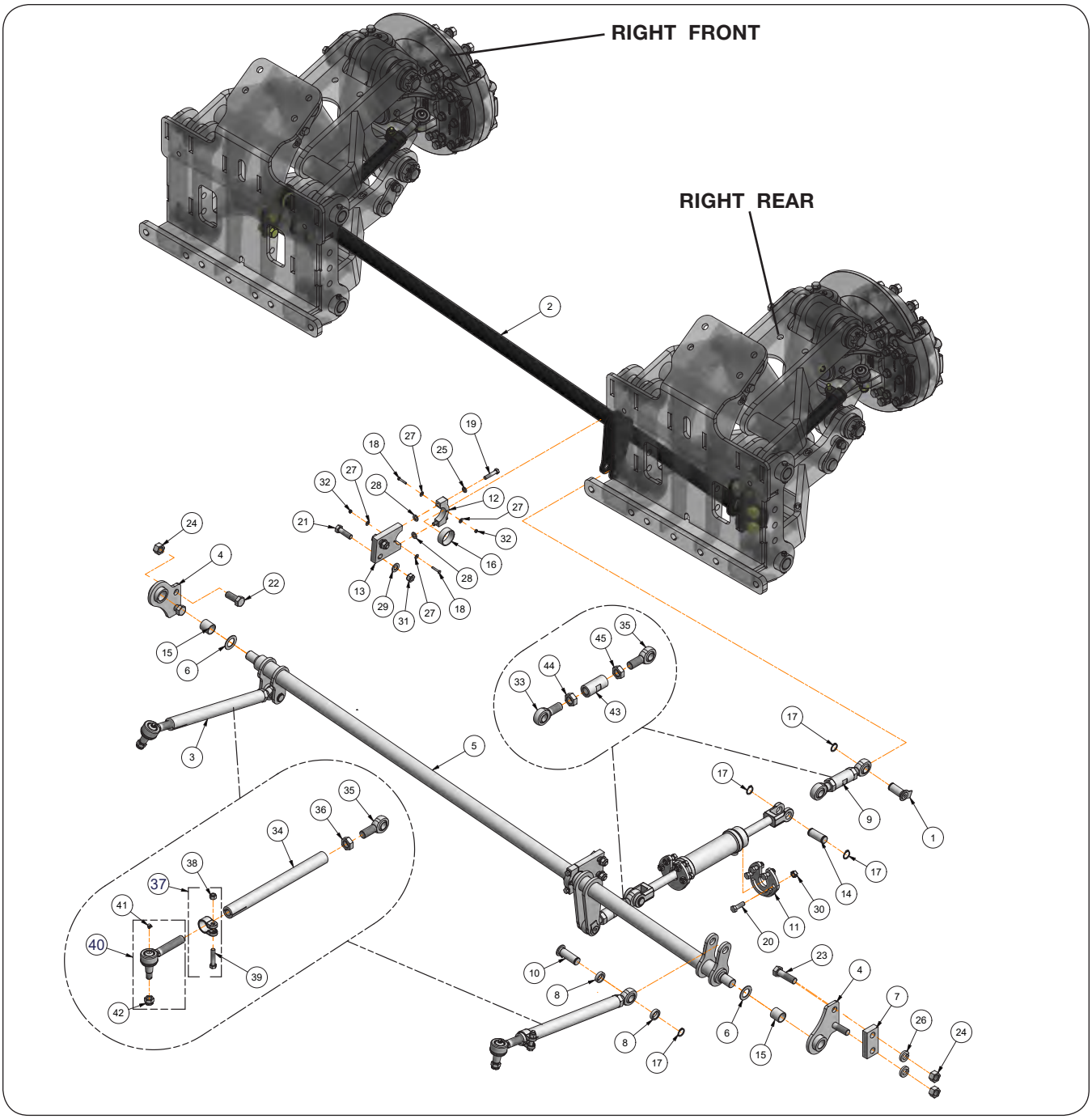
Suspension Link To Hub Components

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

ITEM	PART NO.	DESCRIPTION	QTY	NOTES
1	92199	Locknut/Ctr 1”-8UNC	6	
2	9390-187	Capscrew 1”-8UNC x 3” Grade 5	6	
3	92470	Castle Nut 2”-12UNF Grade 5	3	
4	286120	Suspension Pin Weldment 3” OD	2	
5	9005474	Tension Bushing 3 1/2” OD x 3” ID x 3”	4	
6	282377	Flat Washer 3” (4 1/2” OD)	4	
7	9404-033	Lock Washer 3/4”	4	
8	9405-104	Flat Washer 3/4”	6	
9	9390-065	Capscrew, 3/8”-16UNC x 3 1/2” Grade 5	3	
10	9005934	Tapered Thrust Bearing 2.51” OD x 4.375” ID x 1.063”	1	
11	95905	Locknut/Ctr 5/8”-11UNC Grade 5	1	
12	9390-137	Capscrew 5/8”-11UNC x 6 1/2” Grade 5	1	
13	9009231	Jam Nut 3/4”-10UNC Grade A	2	
14	286109B	Clevis Weldment-RH =Black=	1	
	286115B	Clevis Weldment-LH =Black=	1	
15	286216	King Pin Weldment 2 1/2” OD	1	
16	9390-143	Capscrew 3/4”-10UNC x 1 1/2” Grade 5	6	
17	267283B	Hub & Spindle Assembly Replacement Kit - M22 Hardware (Black)	1	Refer to “Steering Tandem Hub Components” Section
18	9006046	Self Lube Bushing 3” OD x 2 1/2” ID x 3”	2	
19	286194B	Spindle Retainer Casting =Black=	1	
20	286233B	Washer 3 7/8” OD x 2.060” ID =Black=	3	
21	286100	Brake Kit	1	(Not Shown) Refer to “Optional Brake Components” Section
22	267288	Stud & Nut Kit M22 x 1.5	1	Refer to “Steering Tandem Hub Components” Section
	9007001	Stud Bolt, M22 x 1.5 x 4	10	
	97319	Flanged Cap Nut, M22 x 1.5	10	
23	902875	Locknut, 3/8”-16UNC	3	

Suspension Linkage Components

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



ITEM	PART NO.	DESCRIPTION	QTY	NOTES
1	283725	Pin Weldment	2	
2	286131B	Link - Rocker, RH Painted =Black=	1	
3	286150B	Tie - Rod Assembly =Black=	4	Includes Items 34-42
4	286174B	Pivot Bushing, LH =Black=	2	
	286175B	Pivot Bushing, RH =Black=	2	

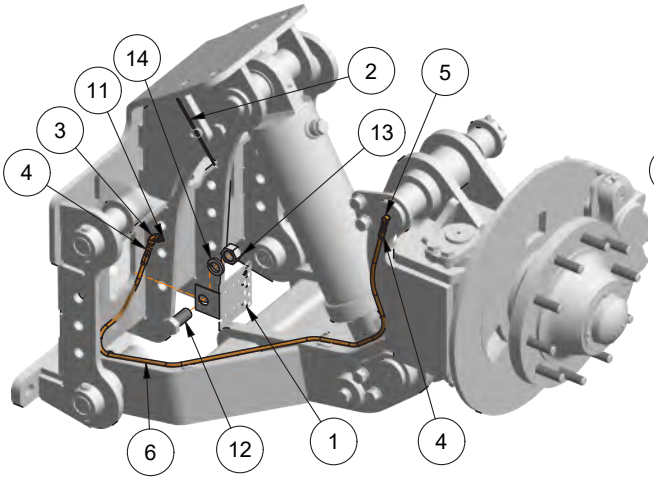
Suspension Linkage Components

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

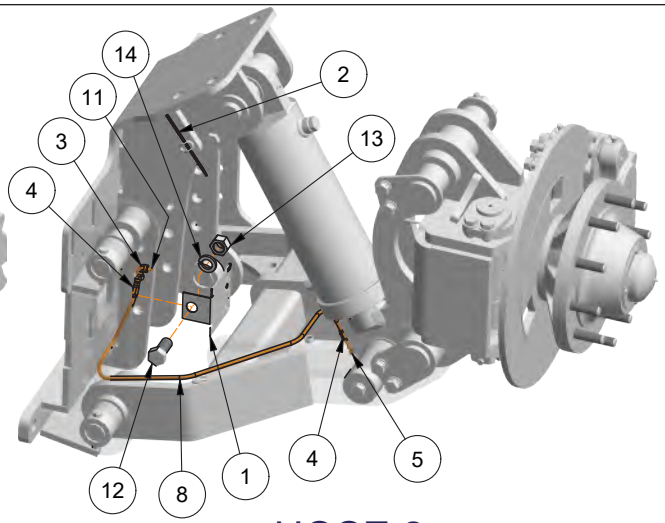
ITEM	PART NO.	DESCRIPTION	QTY	NOTES
5	286181B	Link Weldment, Rocker =Black=	1	
6	286182	Washer	4	
7	286183B	Bar - Spacer =Black=	2	
8	286185	Bushing - Spacer	8	
9	286204B	Tie - Rod, Steering Link =Black=	2	Includes Items 33, 35, 43-45
10	286238	Pin Replacement Kit	4	Includes Item 17
11	286223B	Cylinder Clamp =Black=	2	
12	286228B	Rock Shaft Bushing Retainer 2 1/6" Lg. =Black=	2	
13	286229B	Rock Shaft Bushing Retainer 5 11/16" Lg. =Black=	2	
14	286235	Pin - Cylinder	2	
15	9004613	Bushing - Self Lubricating 1 3/4" OD	4	
16	9006055	Bushing - Self Lubricating 2 3/4" OD	2	
17	91177	Retaining Ring	10	
18	9390-007	Capscrew 1/4"-20UNC x 1 1/2"	16	Grade 5
19	9390-105	Capscrew 1/2"-13UNC x 2 /12"	4	Grade 5
20	9390-124	Capscrew 5/8"-11UNC x 2"	8	Grade 5
21	9390-147	Capscrew 3/4"-10UNC x 2 1/2"	4	Grade 5
22	9390-187	Capscrew 1"-8UNC x 3"	44	Grade 5
23	9390-189	Capscrew 1"-8UNC x 3 1/2"	4	Grade 5
24	9394-020	Hex Nut 1"-8UNC	8	Grade 5
25	9404-025	Lock Washer 1/2"	4	
26	9404-042	Lock Washer 1" EXTRA	8	
27	9405-064	Flat Washer 1/4" USS	8	
28	9405-086	Flat Washer 1/2" SAE	4	
29	9405-104	Flat Washer 3/4" SAE	4	
30	95905	Locknut/CTR 5/8"-11UNC	8	
31	96732	Locknut/CTR 3/4"-10UNC	4	
32	9936	Locknut 1/4"-20UNC	4	
33	9004743	Male Rod End, 1 1/4"-12	2	
34	286152B	Tube - Tie Rod =Black=	1	
35	9004744	Male Rod End, 1 1/4"-12 LH Thread	4	
36	9004827	Hex Jam Nut 1 1/2"-12UNF LH Thread	1	
37	9004928	Tie Rod Clamp - 2"	1	Includes Items 38 & 39
38	9801	Locknut/Top 5/8"-11UNC	1	
39	9390-128	Capscrew 5/8"-11UNC x 3"	1	Grade 5
40	9005945	RH Thread Tie Rod End	1	Includes Items 41 & 42
41	9000875	Zerk 90°	1	
42	9393-018	Slotted Nut 7/8" UNF G2	1	
43	286203B	Tie Rod Tube =Black=	1	
44	9395-023	Hex Jam Nut 1 1/4" UNF G5	1	
45	9004827	Hex Jam Nut 1 1/2"-12UNF LH Thread	1	

Suspension Link Grease Bank Components

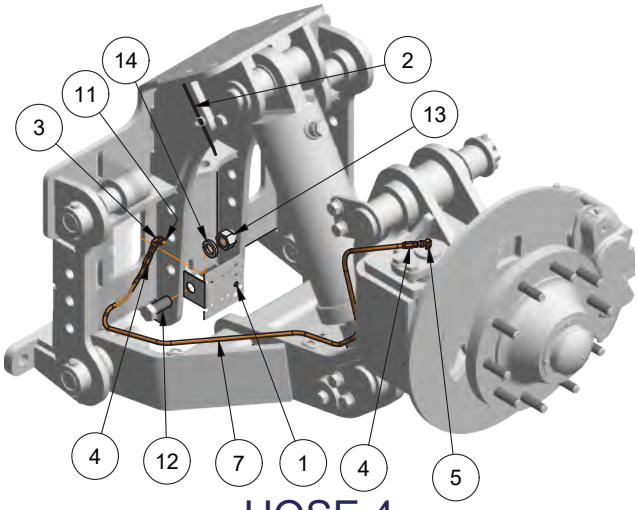
Please visit www.unverferth.com/parts/ for the most current parts listing.



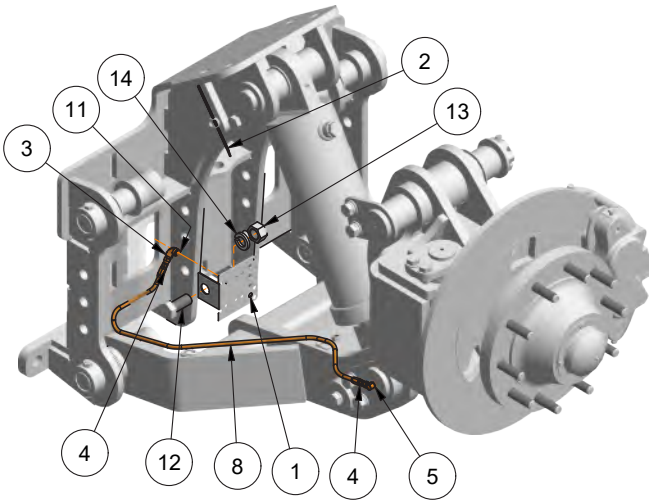
HOSE 1



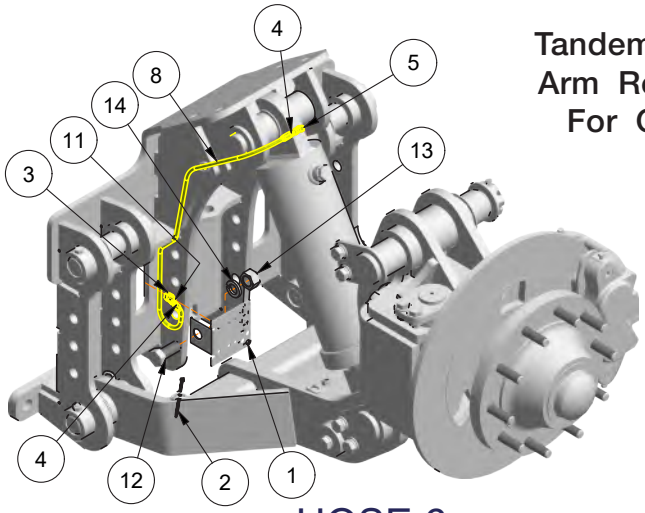
HOSE 2



HOSE 4



HOSE 5



HOSE 6

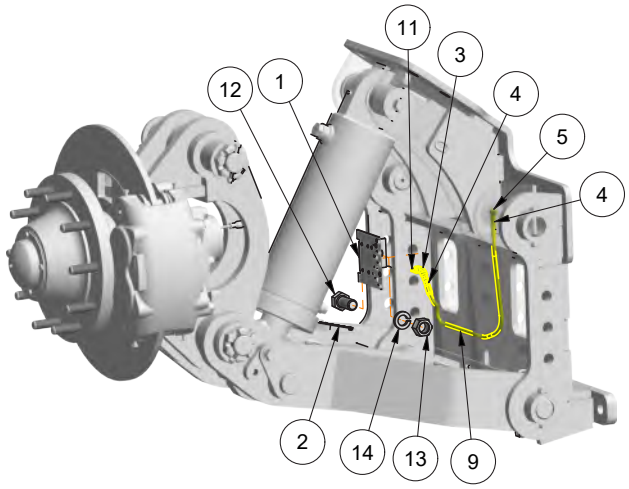
Tandem Upper Arm Removed For Clarity

Left-Hand Tandem Assembly Shown

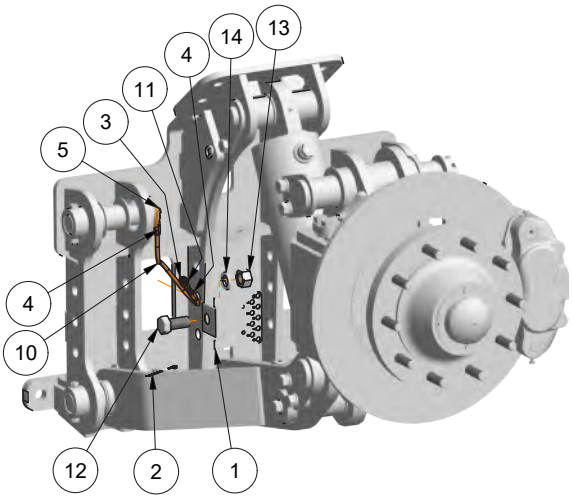
HOSE #	GREASE FITTING LOCATION
1	Upper Clevis Pin
2	Lower Cylinder Pin
3	-
4	King Pin
5	Lower Clevis Pin
6	Upper Cylinder Pin

Suspension Link Grease Bank Components

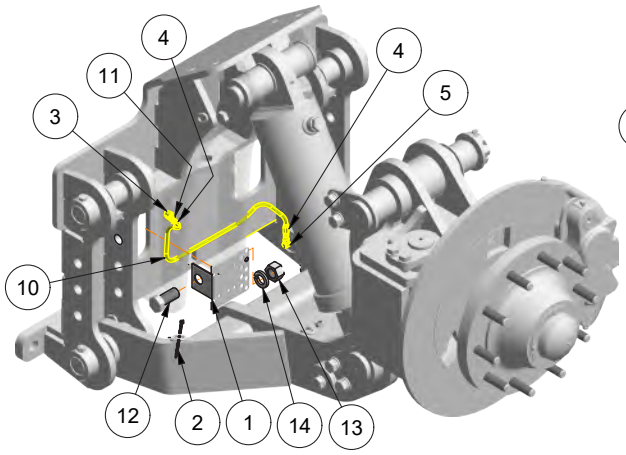
Please visit www.unverferth.com/parts/ for the most current parts listing.



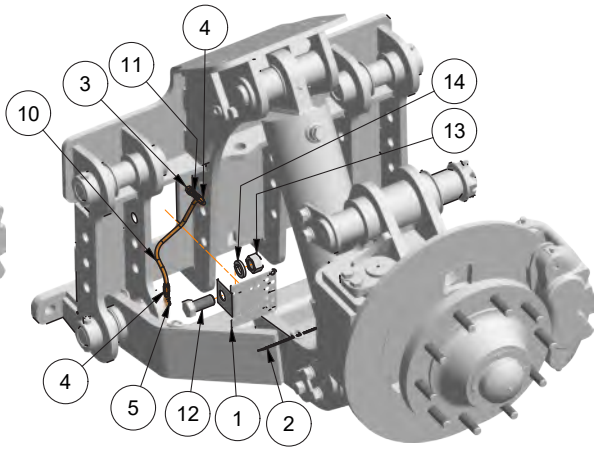
HOSE 7



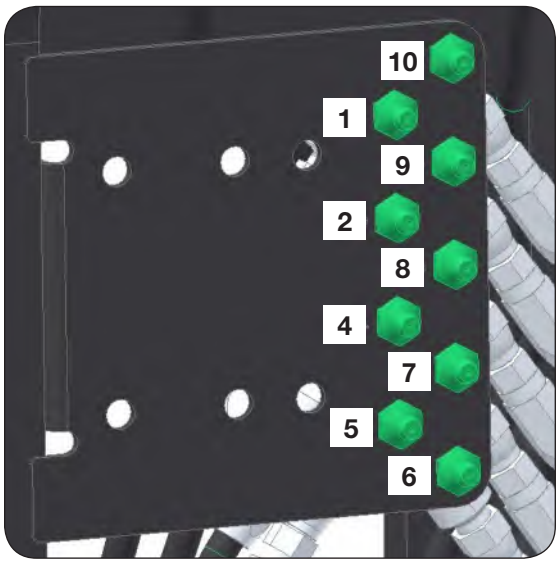
HOSE 8



HOSE 9



HOSE 10



Tandem Upper Arm Removed For Clarity

Left-Hand Tandem Assembly Shown

HOSE #	GREASE FITTING LOCATION
7	Upper Link Arm Pin
8	Upper Link Arm Pin
9	Lower Link Arm Pin
10	Lower Link Arm Pin

Suspension Link Grease Bank Components

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

ITEM	PART NO.	DESCRIPTION	QTY	NOTES
1	282696B	GREASE VALVE BRACKET =Black=	1	
2	9000106	CABLE TIE 7 1/2"	6	
3	9004764	ELBOW 90° 1/8 NPTF x 1/8 NPTF	9	
4	9006753	HOSE COUPLING 1/8" NPTM SWIVEL (2 PIECE)	18	
5	9006785	ADAPTER-90° 1/8" NPTM X 1/8" NPTF	9	
6	9006876	HIGH PRESSURE GREASE HOSE 61"	1	Upper Clevis Pin
7	9006877	HIGH PRESSURE GREASE HOSE 68"	1	King Pin
8	9006878	HIGH PRESSURE GREASE HOSE 46"	3	Lower Cylinder Pin Lower Clevis Pin Upper Cylinder Pin
9	9006879	HIGH PRESSURE GREASE HOSE 36"	1	Upper Link Arm Pin
10	9006880	HIGH PRESSURE GREASE HOSE 26"	3	Upper Link Arm Pin (2 Places) Lower Link Arm Pin
11	93426	GREASE ZERK	9	
12	9390-184	CAPSCREW 1"-8UNC X 2 1/4" GR5	1	
13	9394-020	HEX NUT 1"-8UNC GR5	1	
14	9404-041	LOCK WASHER 1"	1	

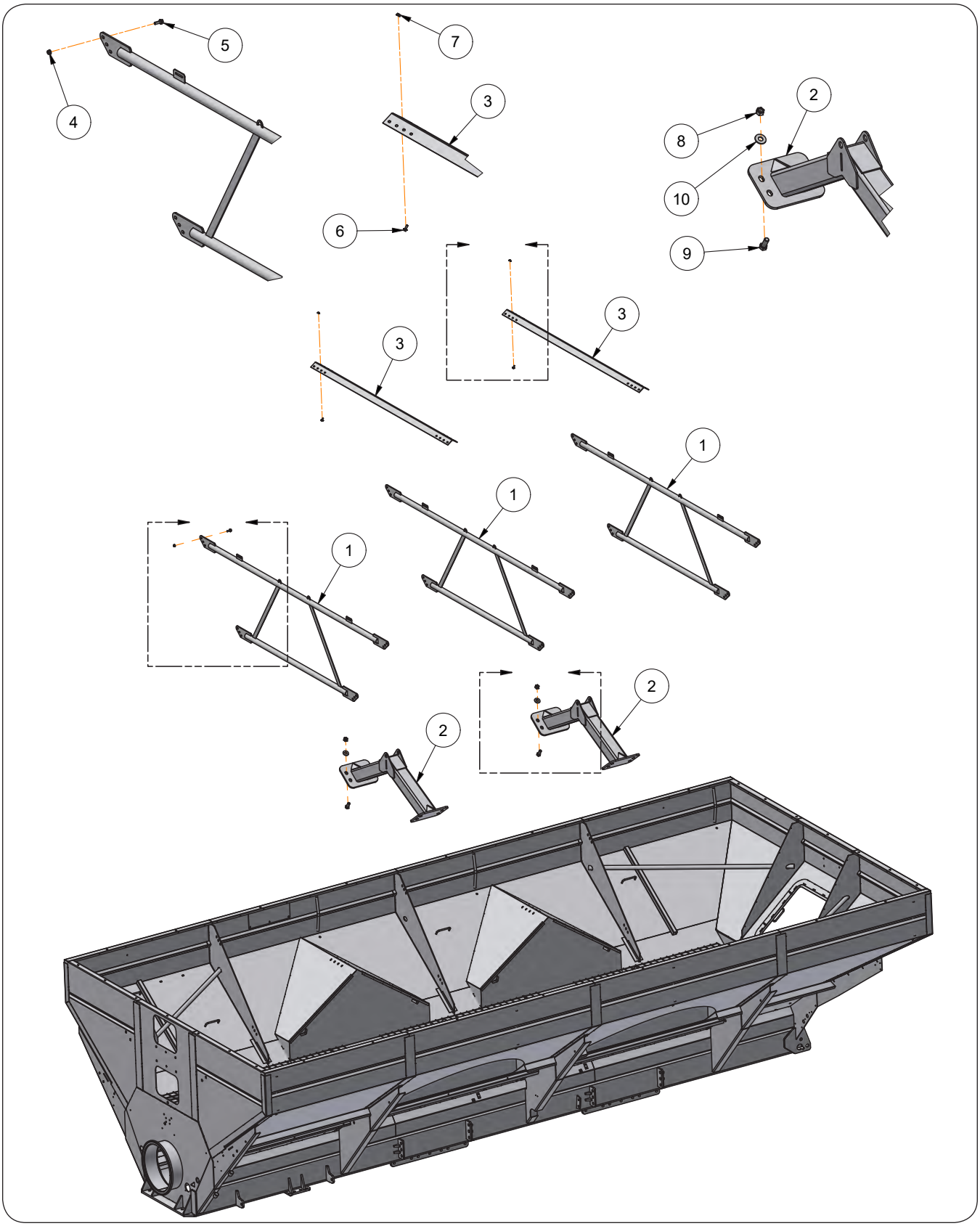
NOTE: For more suspension link grease bank details, refer to "Lubrication" in the MAINTENANCE section.

Notes

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

Steering Tandem Internal Bracing Components

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



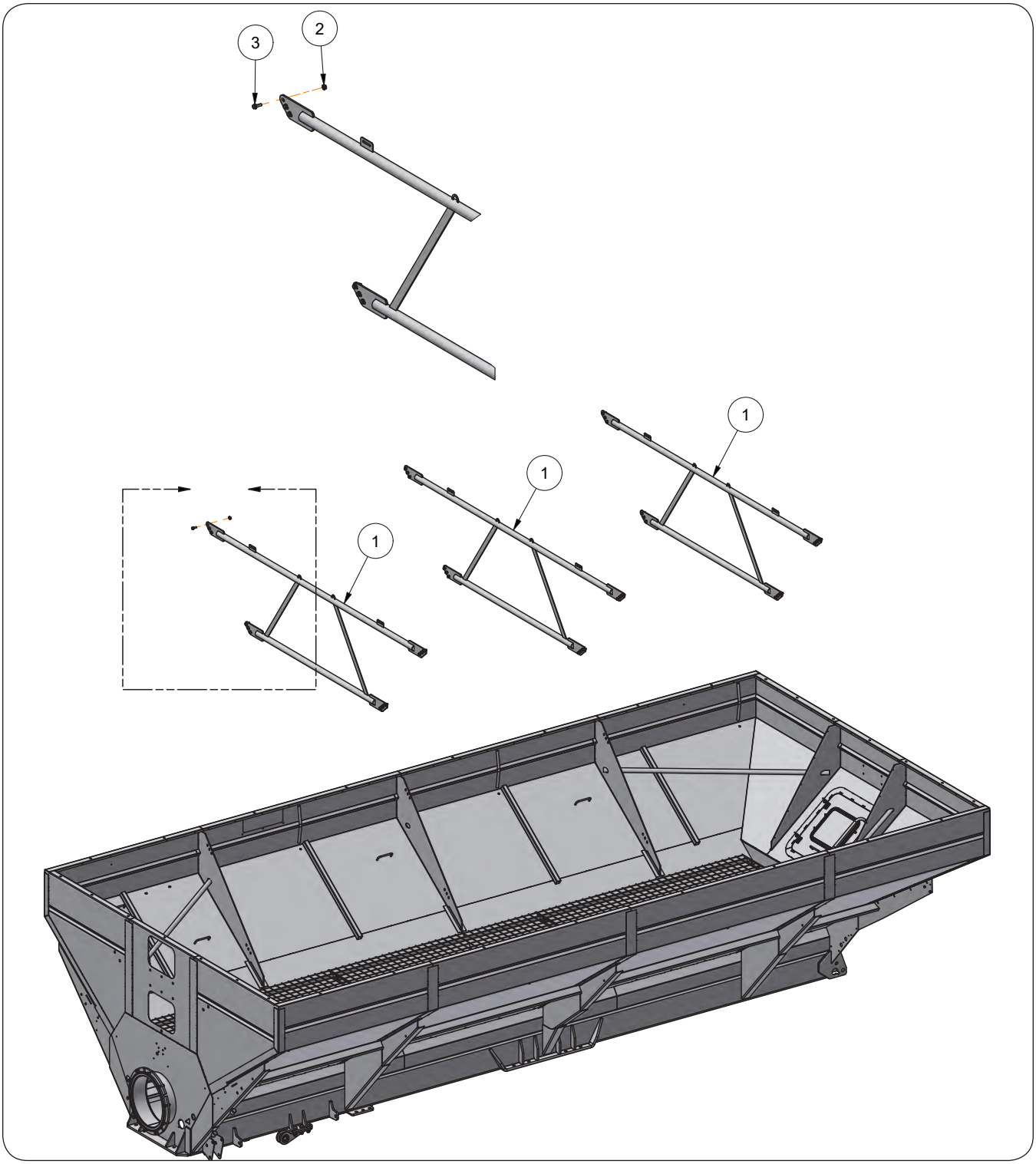
Steering Tandem Internal Bracing Components

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

ITEM	PART NO.	DESCRIPTION	QTY	NOTES
1	294409B	Cross Brace Weldment =Black=	3	
2	273415B	Axle Truss Weldment =Black=	2	
3	273491B	Wheel Well Brace =Black=	2	
4	91267	Flange Nut 1/2"-13UNC Grade 5	36	
5	9005705	Flange Screw 1/2"-13UNC x 1 1/2" Grade 5	36	
6	91262	Flange Screw 3/8"-16UNC x 1" Grade 5	32	
7	91263	Nut/Large Flange 3/8"-16UNC Grade 5	32	
8	92199	Locknut 1"-8UNC Grade 5	16	
9	9390-185	Capscrew 1"-8UNC x 3" Grade 5	16	
10	9405-118	Flat Washer 1" USS	16	

Track Internal Bracing Components

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



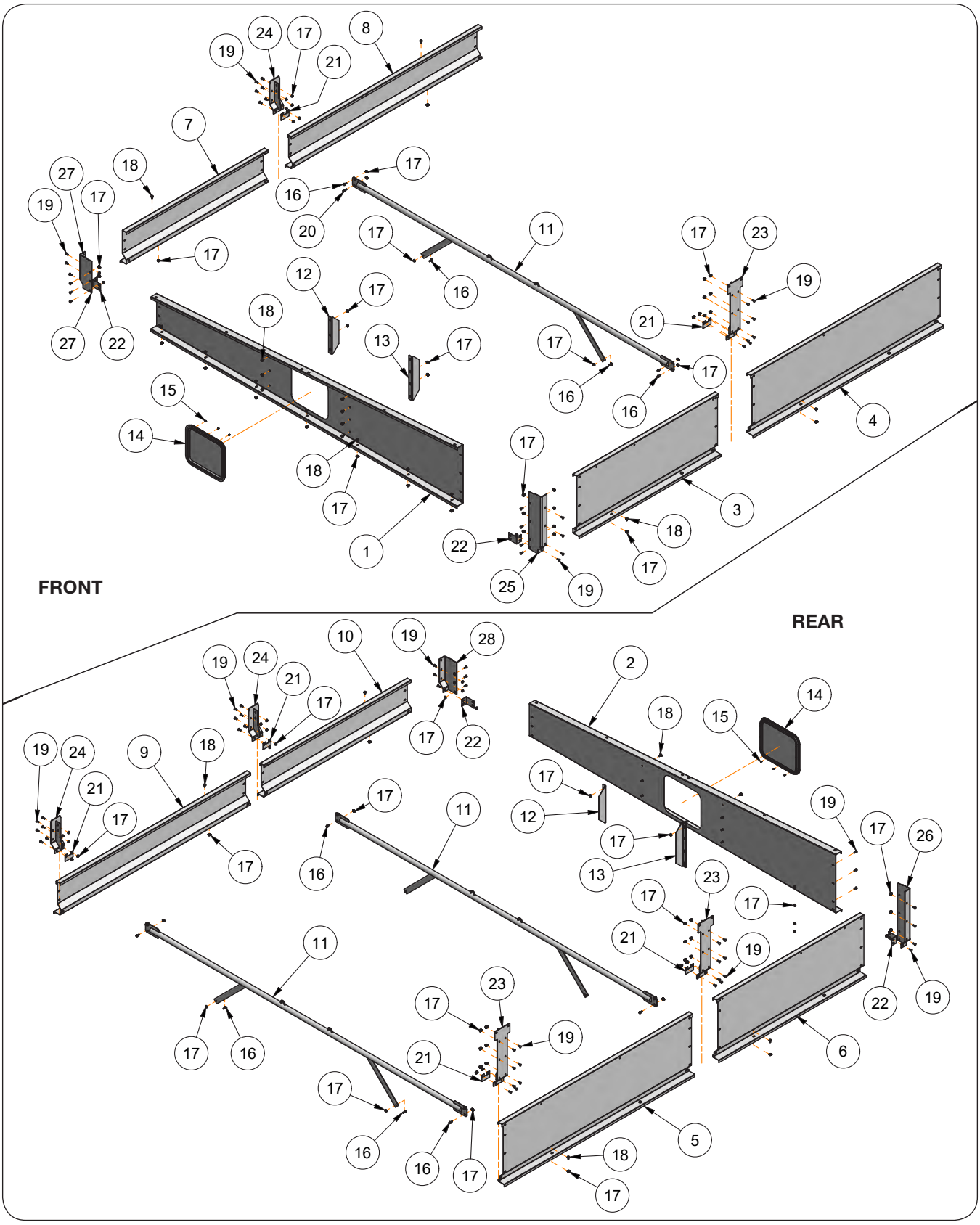
ITEM	PART NO.	DESCRIPTION	QTY	NOTES
1	294409B	Cross Brace Weldment =Black=	3	
2	91267	Flange Nut 1/2"-13UNC Grade 5	36	
3	9005705	Flange Screw 1/2"-13UNC x 1 1/2" Grade 5	36	

Notes

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.



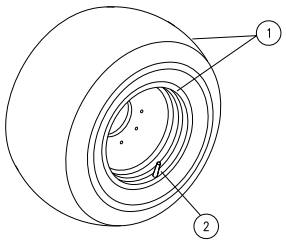
Sideboard Components

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

ITEM	PART NO.	DESCRIPTION	QTY.	NOTES
1	295949B	Front Board Replacement Kit (Black)	1	Includes Items 14 & 15
2	295950B	Rear Board Replacement Kit (Black)	1	Includes Items 14 & 15
3	295818B	Front LH Board Weldment =Black=	1	
4	295819B	2nd LH Board Weldment =Black=	1	
5	295820B	3rd LH Board Weldment =Black=	1	
6	295821B	Rear LH Board Weldment =Black=	1	
7	295822B	Front RH Board Weldment =Black=	1	
8	295823B	2nd RH Board Weldment =Black=	1	
9	295824B	3rd RH Board Weldment =Black=	1	
10	295825B	Rear RH Board Weldment =Black=	1	
11	294441B	Sideboard Brace Weldment =Black=	3	
12	294439B	Plate - Side Board Brace 16" =Black=	2	
13	294440B	Plate - Side Board Brace 19 1/4" =Black=	2	
14	9008680	Window and Trim Assembly	2	
15	9008933	Pan Head Phillips Screw 8"-18UNC x 1/2"	24	
16	91262	Flang Screw, 3/8"-16UNC x 1" Grade 5	17	
17	91263	Hex Nut/Large Flange, 3/8"-16UNC Grade 5	134	
18	95585	Capscrew/Large Flange 3/8"-16UNC x 3/4" Grade 5	44	
19	9388-051	Carriage Bolt 3/8"-16UNC x 1" Grade 5	70	
20	9003259	Flange Screw 3/8"-16UNC x 1 1/4" Grade 5	1	
21	295124B	Sideboard Cover Plate =Black=	6	
22	295125B	Sideboard Cover Bracket =Black=	4	
23	295833B	LH Sideboard Bracket =Black=	3	
24	295832B	RH Sideboard Bracket =Black=	3	
25	295828B	LH Front Sideboard Corner Plate =Black=	1	
26	295829B	LH Rear Sideboard Corner Plate =Black=	1	
27	295830B	RH Front Sideboard Corner Plate =Black=	1	
28	295831B	RH Rear Sideboard Corner Plate =Black=	1	

Steering Tandem Wheels & Tires

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



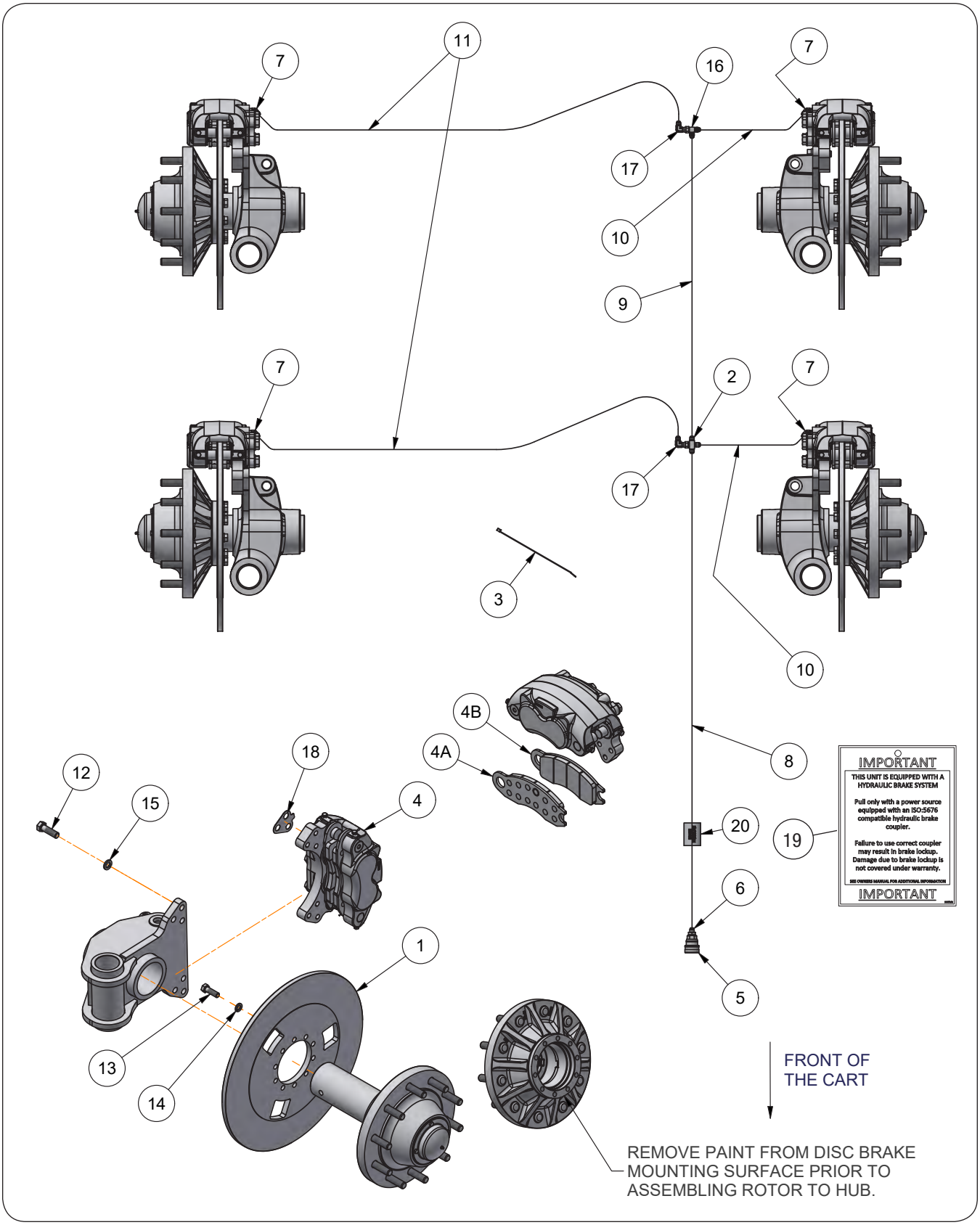
TIRES

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

ITEM	PART NO.	DESCRIPTION	QTY	NOTES
1	18009	Wheel & Tire Assembly	4	30 x 38 / 900/60R38 R1W (Off-White)
	18009SM		4	30 x 38 / 900/60R38 R1W (Silver Mist)
	9500845	Wheel Only	4	30 x 38 (Off-White)
	9500845SM		4	30 x 38 (Silver Mist)
2	93300	Valve Stem	4	
	95365	Plug	4	

Optional Brake Components

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



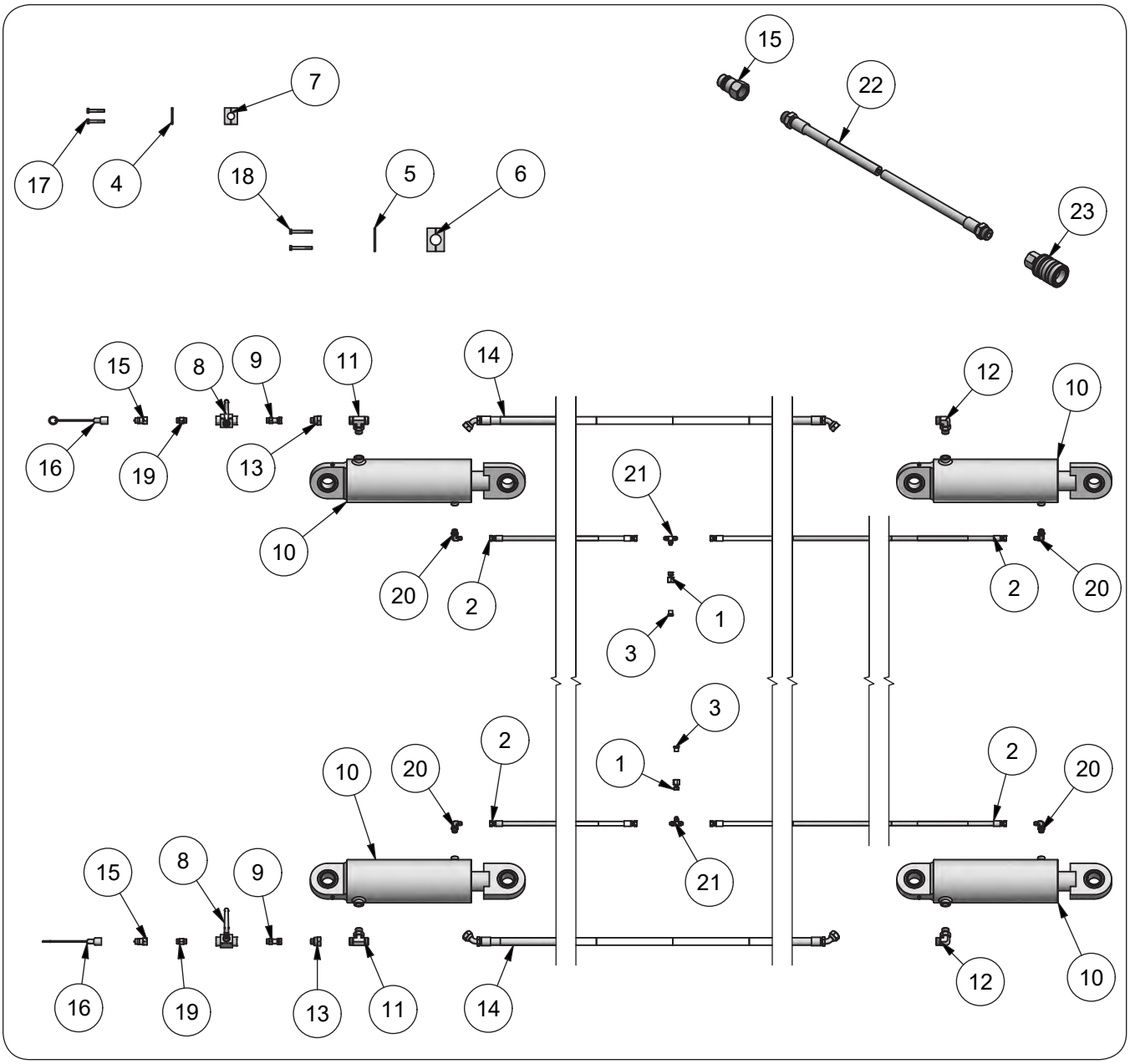
Optional Brake Components

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

ITEM	PART NO.	DESCRIPTION	QTY	NOTES
1	283711	Brake Rotor Plate	4	
2	9002273	Cross, 9/16"-18 JICM	1	
3	9003735	Cable Tie, 11"	24	
4	9004762	Brake Assembly	1	Includes Items 4A, 4B, 4C
4A	9007135	Brake Pad - Outer	1	
4B	9007136	Brake Pad - Inner	1	
4C	9007137	Brake Assembly Seal Kit	1	Not Shown
5	9005173	Quick Coupler	1	
6	9006005	Adapter, 9/16"-18 JICM x M18x1.5"	1	
7	9005970	Hydraulic Fitting, 7/16"-20 UNF ORB x 45° 9/16" UNF JIC	4	Locate/Replace in lowest bleeder port of each caliper.
8	9004886	Hose, 1/4" x 408" (3000 PSI)	1	
9	9005974	Hose, 1/4" x 97" (3000 PSI)	1	
10	9005975	Hose, 1/4" x 70" (3000 PSI)	2	
11	9005976	Hose, 1/4" x 99" (3000 PSI)	2	
12	9390-147	Capscrew, 3/4"-10UNC x 2 1/2"	24	Grade 5 - Torque @ 200 to 220 Ft.-Lbs.
13	9390-348	Capscrew, 5/8"-18UNF x 2"	40	Grade 5 - Torque @ 124 to 137 Ft.-Lbs.
14	9404-029	Lock Washer, 5/8"	40	
15	9404-033	Lock Washer, 3/4"	24	
16	9875	Tee, 9/16"-18 JIC M	1	
17	9876	Elbow, 90° 9/16"-18 JICM x 9/16"-18 JICF	2	
18	286237	Shim - Brake Caliper	16	Use As Needed
19	9007162	Brakes Information Tag	1	
20	9004829	Hose Marker Sleeve = Brake Pressure	1	

Steering Tandem Hydraulic Suspension Components

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



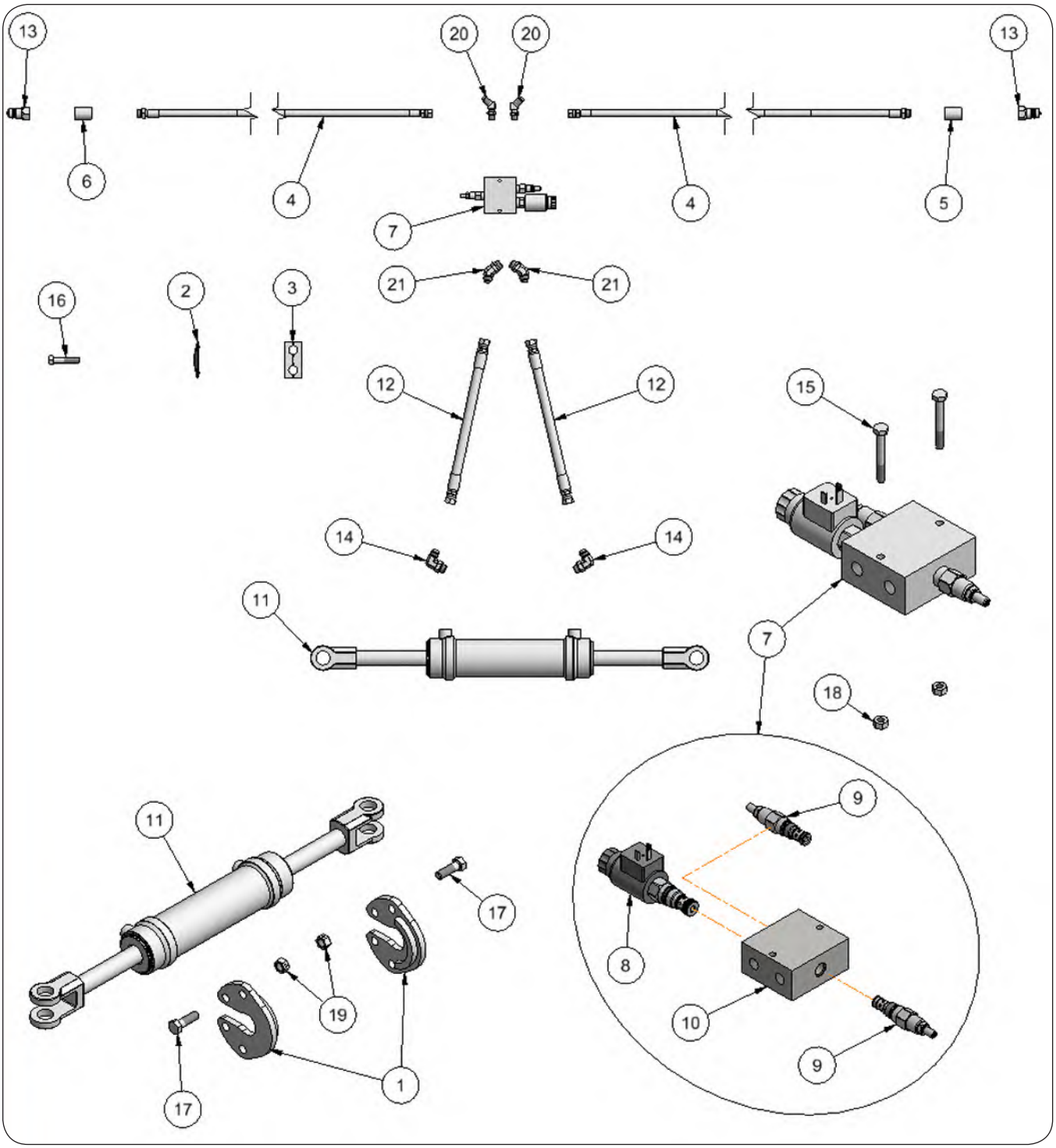
Steering Tandem Hydraulic Suspension Components

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

ITEM	PART NO.	DESCRIPTION	QTY	NOTES
1	9000299	Hydraulic Adapter Fitting	2	9/16"-18 JIC Female Swivel Nut x 3/8"-18 NPTF Female
2	9501684	Hydraulic Hose 3/8" x 68"	4	(3000 PSI) 9/16"-18 JIC Female Swivel Nut Both Ends
3	9003736	Breather 3/8" NPT	2	
4	9003813	Top Plate	6	
5	9003818	Top Plate	6	
6	9003819	Single Clamp Pair (1.05")	6	
7	9004652	Single Clamp Pair (0.67")	6	
8	9005426	Ball Valve (7250 PSI)	2	3/4"-16 O-R Female Ports
9	9005428	Hydraulic Fitting	2	3/4"-16 Male ORB x 13/16"-16 Female ORFS
10	9007090	Hydraulic Cylinder 6" x 12"	4	(3000 PSI) 3/4"-16 and 1 1/16"-12 Ports
11	9005947	Hyd. Fitting - Branch Tee	2	1 3/16"-12 ORFS x 1 3/16"-12 ORFS Run x 1 1/16"-12 ORB
12	9005948	Hyd. Fitting - 90° Elbow	2	1 1/16-12 ORB x 1 3/16-12 ORFS
13	9005949	Hydraulic Fitting	2	1 3/16"-12 ORFS Female x 13/16"-16 ORFS Male
14	9005987	Hydraulic Hose 3/4" x 116"	2	(3000 PSI) 1 3/16-12 Swivel 45° Fml ORFS Both Ends
15	91383	Male Tip Coupling	3	3/4"-16 Female O-Ring (3000PSI)
16	91511	Dust Cap/Iso Coupler	2	
17	9390-007	Hex Capscrew	12	1/4"-20UNC x 1 1/2" Grade 5
18	9390-009	Hex Capscrew	12	1/4"-20UNC x 2" Grade 5
19	98508	Hydraulic Fitting - Union	2	3/4"-16 O-R Male x 3/4-16 O-R Male
20	9874	Hyd. Fitting - 90° Elbow	4	9/16"-18 JIC Male x 3/4-16 O-R Male
21	9875	Hydraulic Tee Fitting	2	9/16"-18 JIC Male All 3 Branches
22	9005564	Hydraulic Hose 1/4" x 305"- Suspension Charge	1	(3000 PSI) 3/4"-16 UNF-1A x O-R Male Solid Straight Both Ends
23	97286	Pioneer Coupler	1	SAE 3/4"-16 O-R Female 2-Way Sleeve

Steering Hydraulic Plumbing Components

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



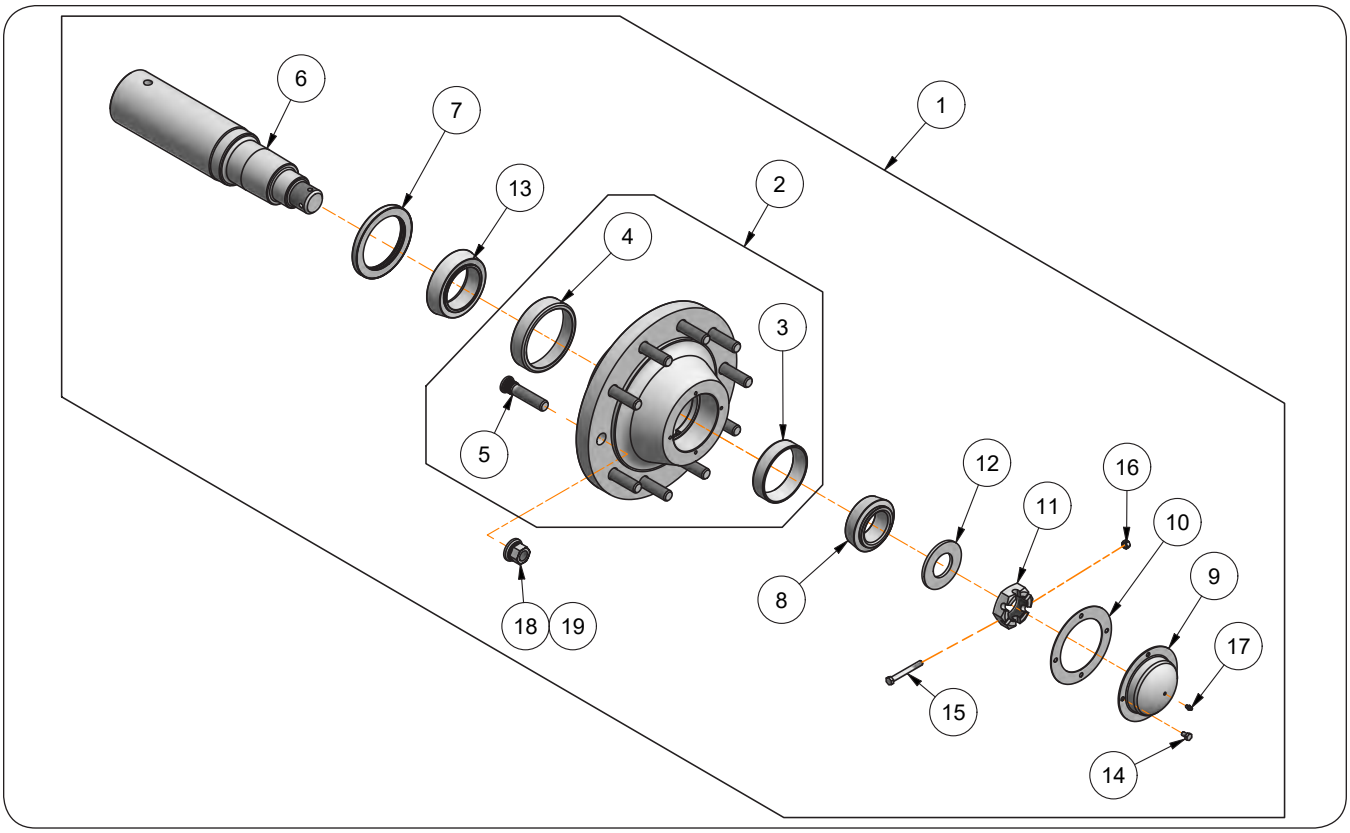
Steering Hydraulic Plumbing Components

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

ITEM	PART NO.	DESCRIPTION	QTY	NOTES
1	286223B	Cylinder Clamp =Black=	2	
2	9003814	Top Plate	6	
3	9003816	Poly Clamp Pair (0.54)	6	
4	9004637	Hydraulic Hose 1/4" x 430"	2	(3000 PSI) 9/16"-18 JICF Swivel x 3/4"-16 Male O-R
5	9004831	Hose Marker Sleeve	1	1"Dia. x 1 1/2" (Turn Left - Gray Sleeve)
6	9004832	Hose Marker Sleeve	1	1"Dia. x 1 1/2" (Turn Right - Gray Sleeve)
7	9008730	Steering Valve - Directional	1	Includes Items 8-10 2800 PSI Relief Setting
8	9008731	Solenoid Valve Cartridge	1	2 Position, 2 Way w/ Coil
9	9005664	Valve - Directional	2	3/4" Dia. x 3 11/32" (2800 PSI), 12 GPM
10	9005665	Valve Block	1	
11	9005991	Cylinder-Welded, Dbl Ended	1	3" x 10" w/ 3/4" ORB Ports (3000 PSI)
12	9005992	Hydraulic Hose 1/2" x 15"	2	(3000 PSI) 3/4"-16 JIC Swivel Female Both Ends
13	91383	Male Tip Coupling	2	3/4"-16 Female O-Ring (3000PSI)
14	9863	Hyd. Fitting - 90° Elbow	2	3/4"-16 JIC Male x 3/4"-16 ORB Male
15	9390-009	Hex Capscrew	2	1/4"-20 UNC x 2" Grade 5
16	9390-032	Hex Capscrew	6	5/16"-18 UNC x 1 1/2" Grade 5
17	9390-124	Hex Capscrew	8	5/8"-11 UNC x 2" Grade 5
18	9936	Locknut/Ctr 1/4"-20 UNC	2	
19	95905	Locknut/Ctr 5/8"-11 UNC	8	
20	96842	Hyd. Fitting - 45° Elbow	2	9/16"-18 JIC Male x 9/16"-18 ORB Male
21	93586	Hydraulic Fitting - 45° Elbow	2	3/4"-16 JIC Male x 3/4"-16 ORB Male

Steering Tandem Hub Components

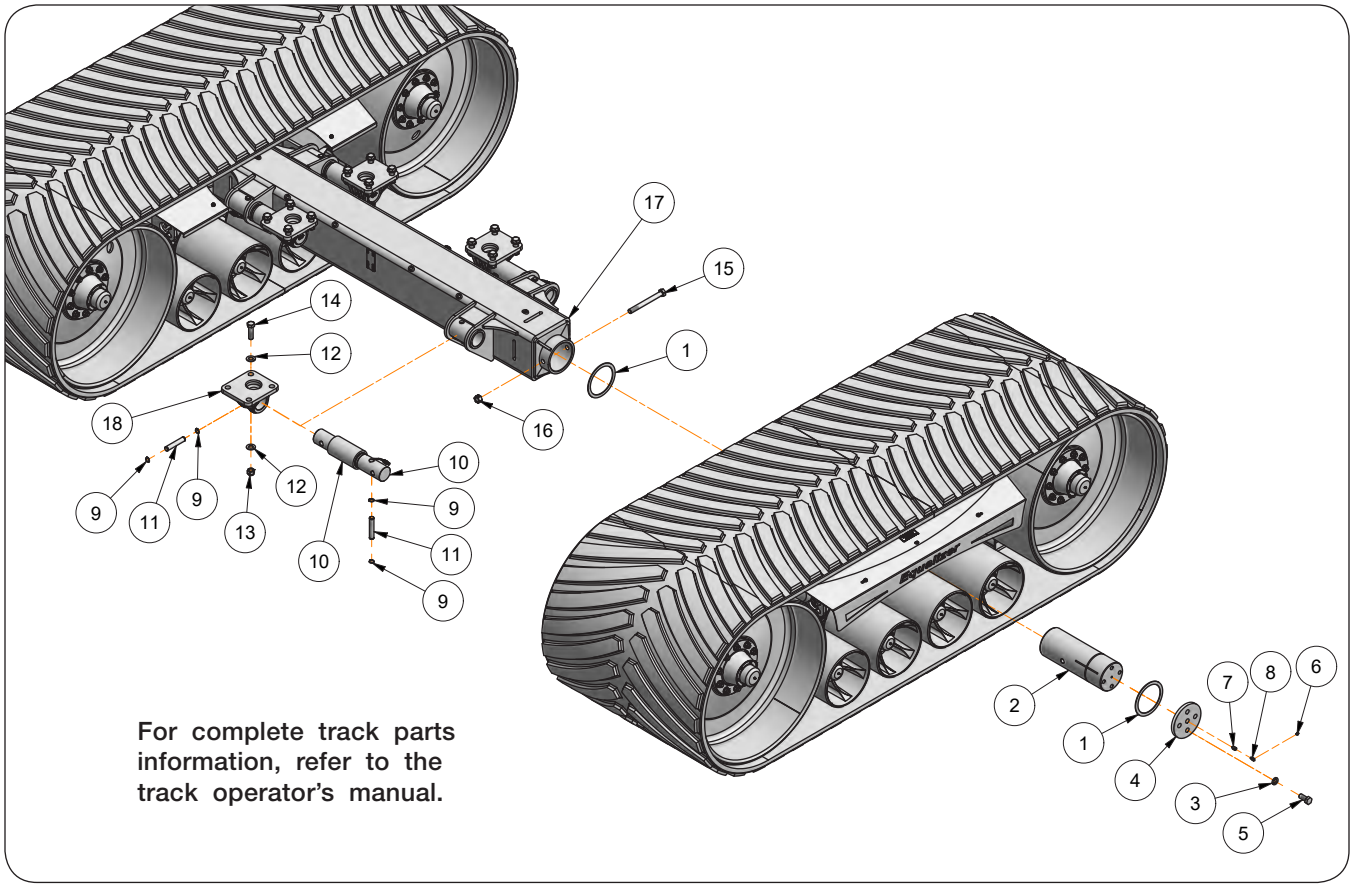
Please visit www.unverferth.com/parts/ for the most current parts listing.



ITEM	PART NO.	DESCRIPTION	QTY	NOTES
1	267283B	Hub & Spindle Assembly with M22 x 1.5 Hdw =Black=	1	Includes Items 2-19
2	283739B	Hub Sub-Asy with M22 x 1.5 Hdw =Black=	1	Includes Items 3-5
3	92462	Outer Bearing Cup	1	
4	92476	Inner Bearing Cup	1	
5	9007001	Stud Bolt, M22 x 1.5 x 4	10	
6	9006348	Scale Spindle 4 1/2" Dia. with 21 Ft. Cable	1	With Scales
7	92455	Seal	1	
8	92464	Outer Bearing Cone	1	
9	286171B	Hub Cap "Bolt-On Type" =Black=	1	
10	284230	Gasket	1	
11	92470	Castle Nut, 2"-12UNF Grade 5	1	
12	92472	Spindle Washer (Hardened)	1	
13	92545	Inner Bearing Cone	1	
14	9390-026	Capscrew, 5/16"-18UNC x 1/2" Grade 5	4	
15	9390-064	Capscrew, 3/8"-16UNC x 3 1/4" Grade 5	1	
16	902875	Locknut, 3/8"-16UNC	1	
17	91160	Grease Zerk	1	
18	267275	Wheel Nut Kit	1	Use with Item 5
19	97319	Flanged Cap Nut, M22 x 1.5	10	

Track Axle Mounting Components

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

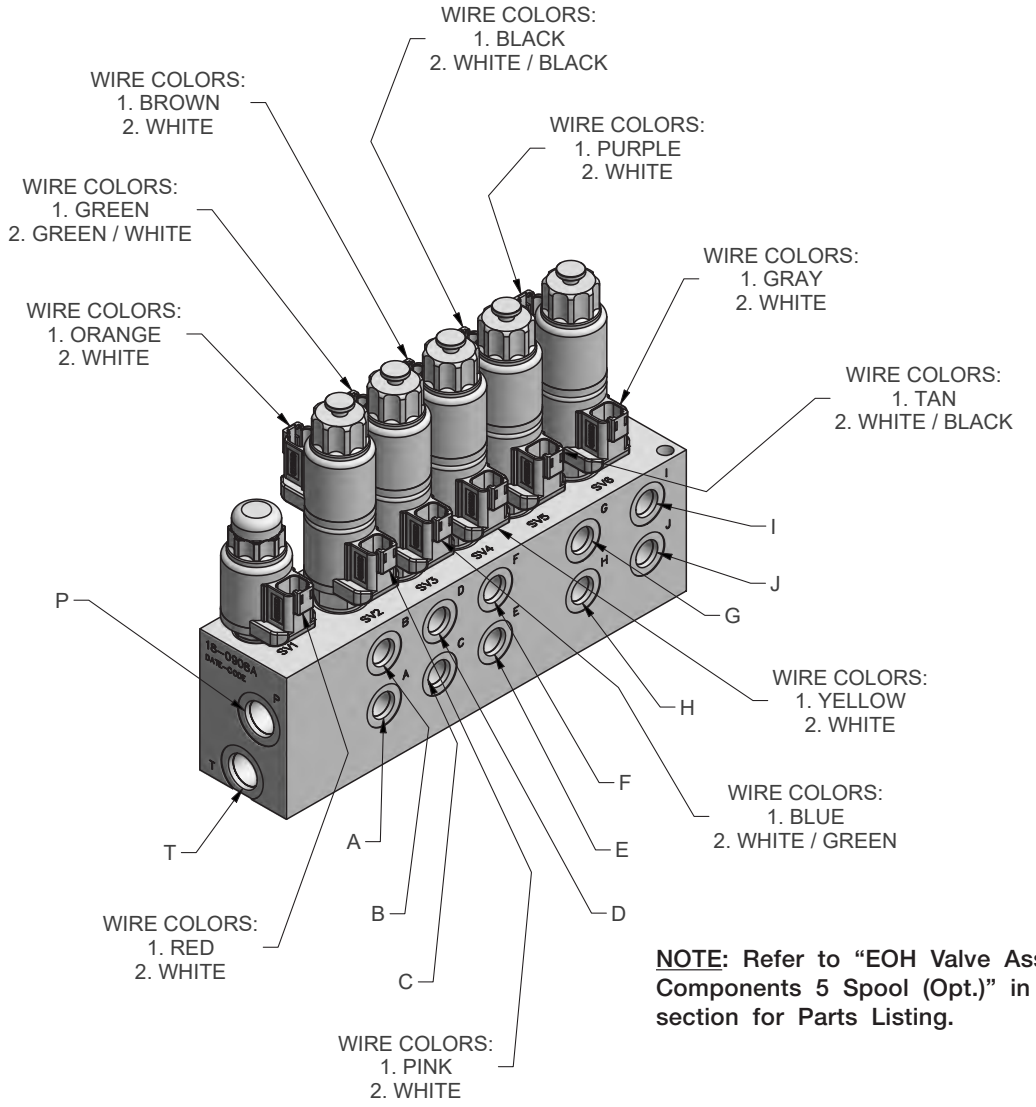


For complete track parts information, refer to the track operator's manual.

ITEM	PART NO.	DESCRIPTION	QTY	NOTES
1	282690	Washer 8 1/2" OD	4	
2	282102	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	91192	Retaining Ring 1"	16	
10	9005811	Load Bar 3 1/2" Dia. w/ 30 Ft. Cable	4	
11	282876	Pin 1" Dia. x 5 1/2"	8	
12	804685	Flat Washer 2"	32	
13	9008441	Elastic Locknut 1"-14UNS Grade 8	16	
14	91299-1458	Capscrew 1"-14UNS x 3 1/2" Grade 8	16	
15	9390-464	Capscrew 1"-8UNC x 10" Grade 5	2	
16	92199	Lock Nut 1-8UNC	2	
17	282069B	Axle Weldment =Black=	1	42" Equalizer Tracks And 50" Equalizer SP Tracks Axle
	267797B			50" Equalizer Tracks Axle
18	268838B	Axle Mount Casting =Black=	4	

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

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



NOTE: Refer to "EOH Valve Assembly Components 5 Spool (Opt.)" in this section for Parts Listing.

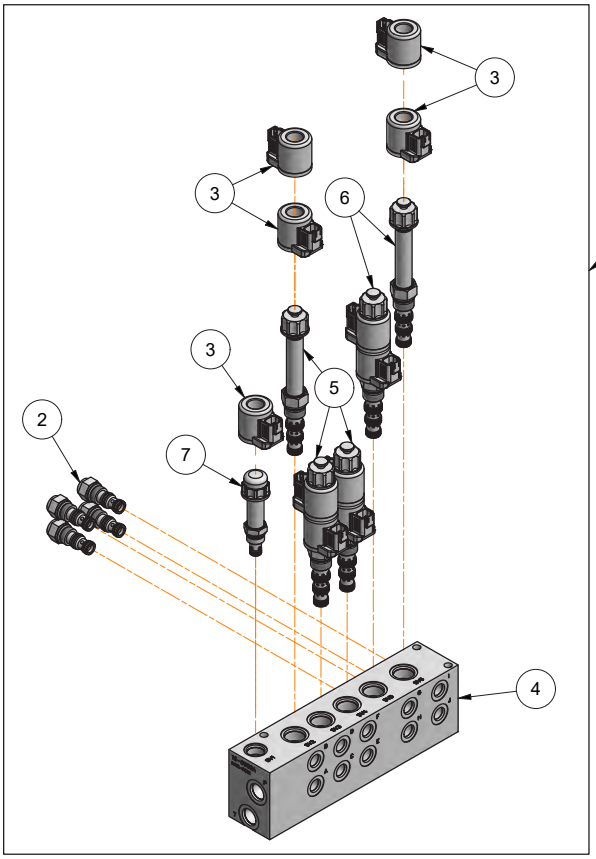
PORT	END OF CYLINDER	FUNCTION
A	BUTT END	Flow Door
B	RAM END	Flow Door
C	RAM END	Auger Fold
D	BUTT END	Auger Fold
E	RAM END	Spout Tilt Out
F	BUTT END	Spout Tilt In
G	ORBIT MOTOR LEFT-HAND PORT	Joystick / Spout Rotate
H	ORBIT MOTOR RIGHT-HAND PORT	Joystick / Spout Rotate
I	BUTT END	Auger Pivot Down
J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

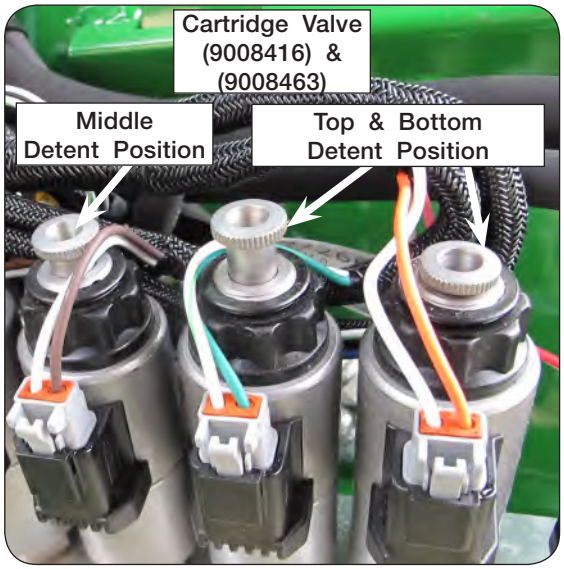
Notes

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

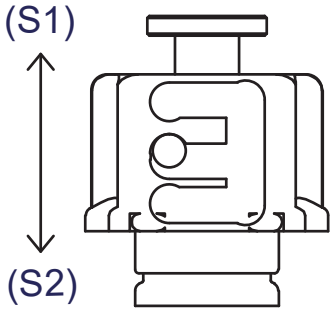
Electric Over Hydraulic (EOH) Valve Assembly Components 5 Spool (Optional)

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





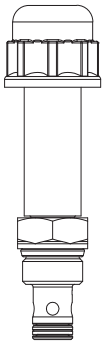
Cartridge Valve (9008416) & (9008463) Middle Detent Position



PUSH BUTTON AND HOLD WHILE OPERATING INDIVIDUAL FUNCTIONS

Cartridge Valve (9008438)

FOR MANUAL OVERRIDE



NOTE: Refer to "Manual Override for Optional Electric Over Hydraulic System" in MAINTENANCE section.

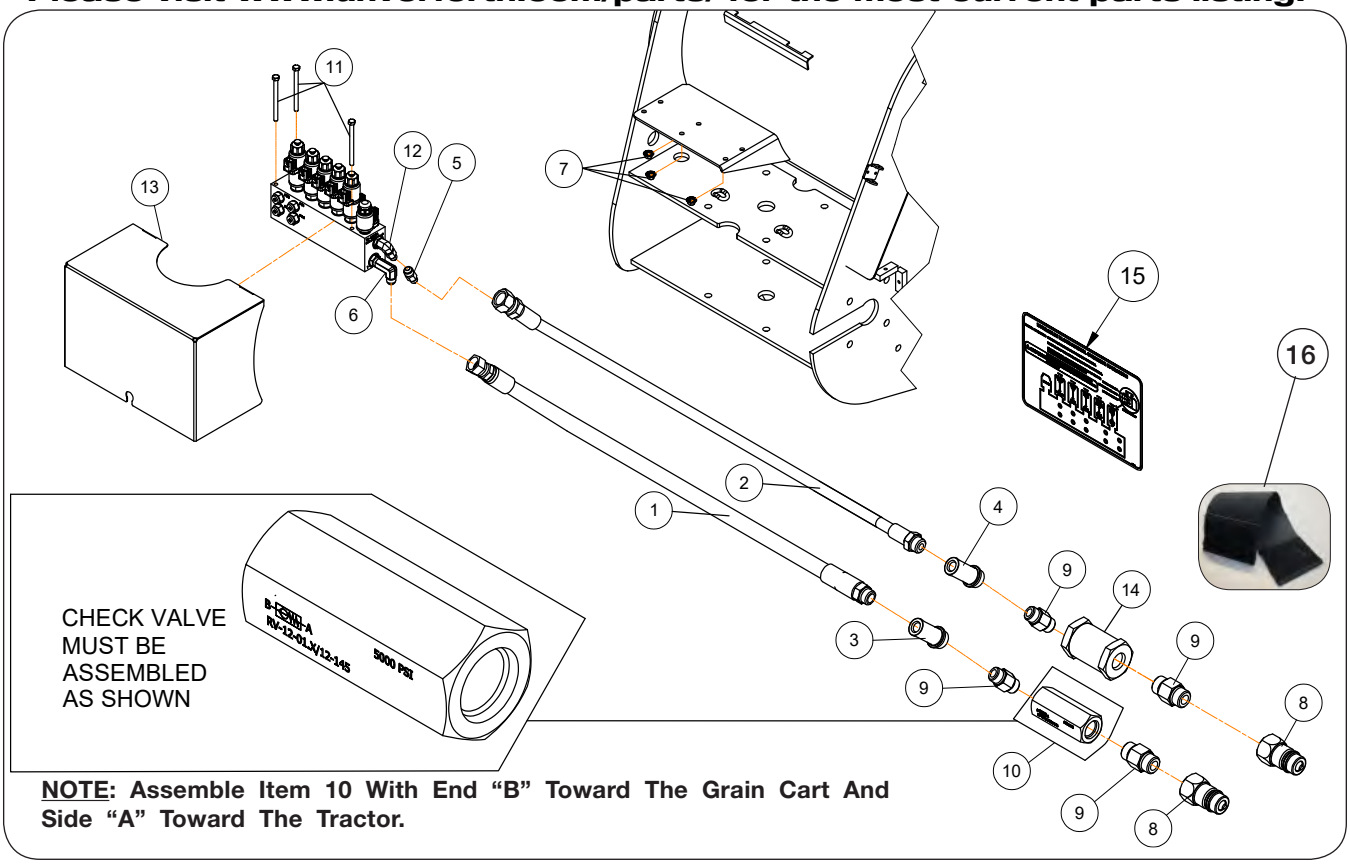
Electric Over Hydraulic (EOH) Valve Assembly Components 5 Spool (Optional)

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 2-7 and Instruction Sheet
2	9003856	Pilot Check Valve	4	
3	9005769	Coil - 12 VDC DN-40	11	
4	9008667	Manifold Block - 5 Spool	1	
5	9008416	Cartridge Valve - 4 Way, 3 Position - Closed Center w/Detented Manual Override	3	Includes Retaining Cap
	9003906	Seal Kit	-	
6	9008463	Cartridge Valve - 4 Way, 3 Position - Open Center w/Detented Manual Override	2	Includes Retaining Cap
	9003906	Seal Kit	-	
7	9008438	Cartridge Valve - 2 Way, 2 Position w/Push Type Manual Overide	1	
	9003904	Seal Kit	-	

EOH Tractor Circuit Hydraulic Components (Optional)

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

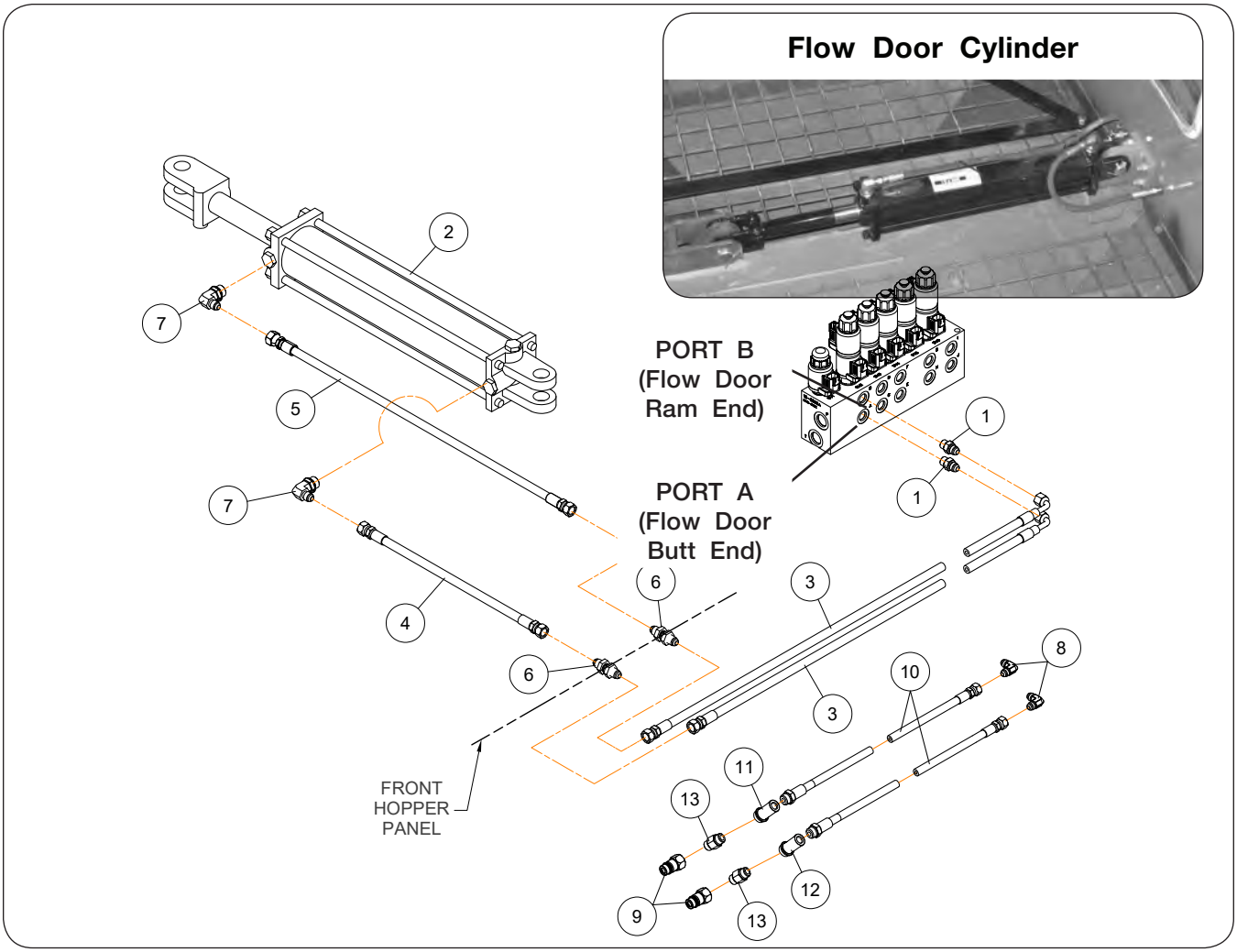


NOTE: Assemble Item 10 With End "B" Toward The Grain Cart And Side "A" Toward The Tractor.

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 - Tan (- Spout Rotate Front (Joystick))	1	
4	9009765	Hose Grips - Tan (+ Spout Rotate Back (Joystick))	1	
5	9006527	JIC Tube Reducer 9/16-18 UNF Male x 9/16-UNF Female	1	
6	901568	Elbow, 90° Extra Long 3/4-16 JIC x 3/4-16 Male O-Ring	1	
7	91257	Large Flange Hex Nut, 5/16-18UNC Gr.5	3	
8	91383	Male Tip Coupling, 3/4-16	2	
9	98508	Adapter 3/4-16 O-Ring Male x 3/4-16 O-Ring Male	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

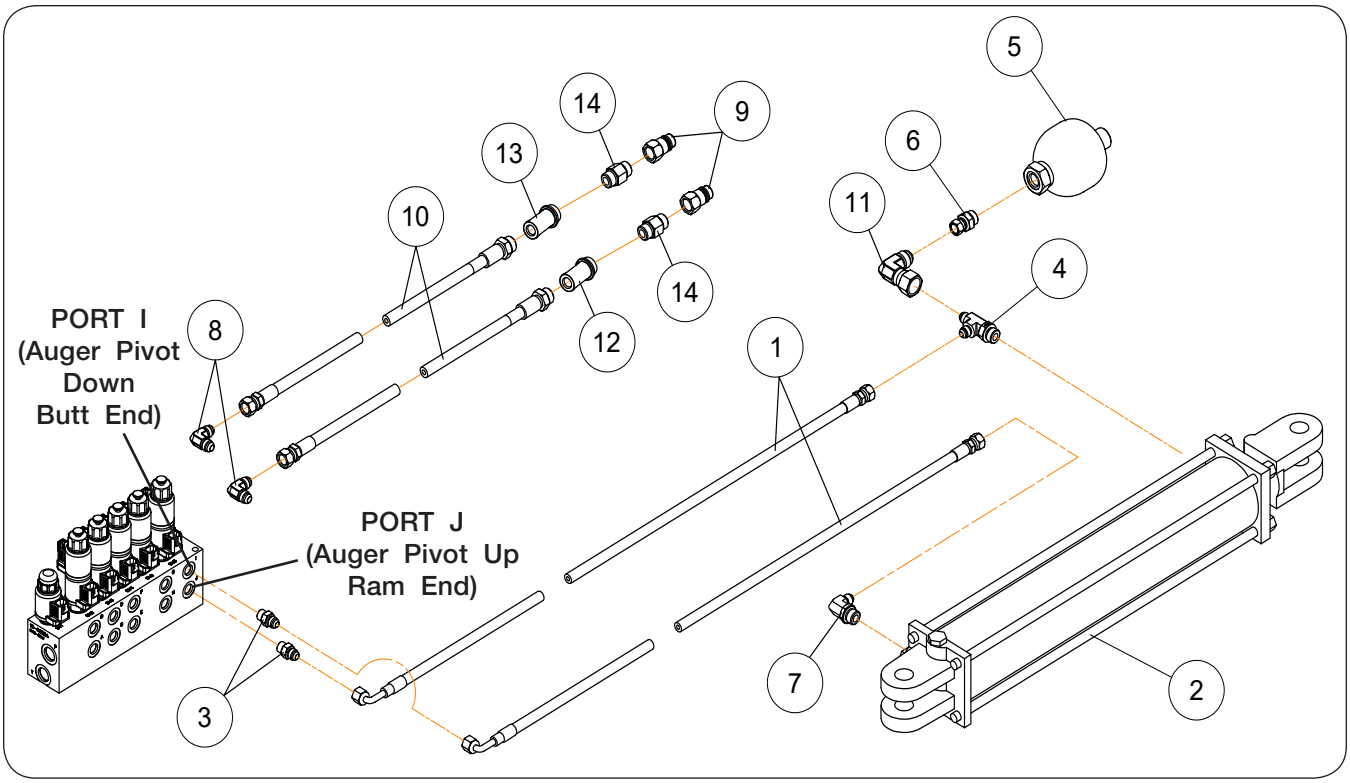
Please visit www.unverferth.com/parts/ for the most current parts listing.



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	
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 (+ Flow Door Open)	1	
12	9009755	Hose Grips - Red (- Flow Door Close)	1	
13	98508	Adapter, 3/4”-16 OR Male x 3/4”-16 OR Male	2	

Auger Pivot Hydraulic Components

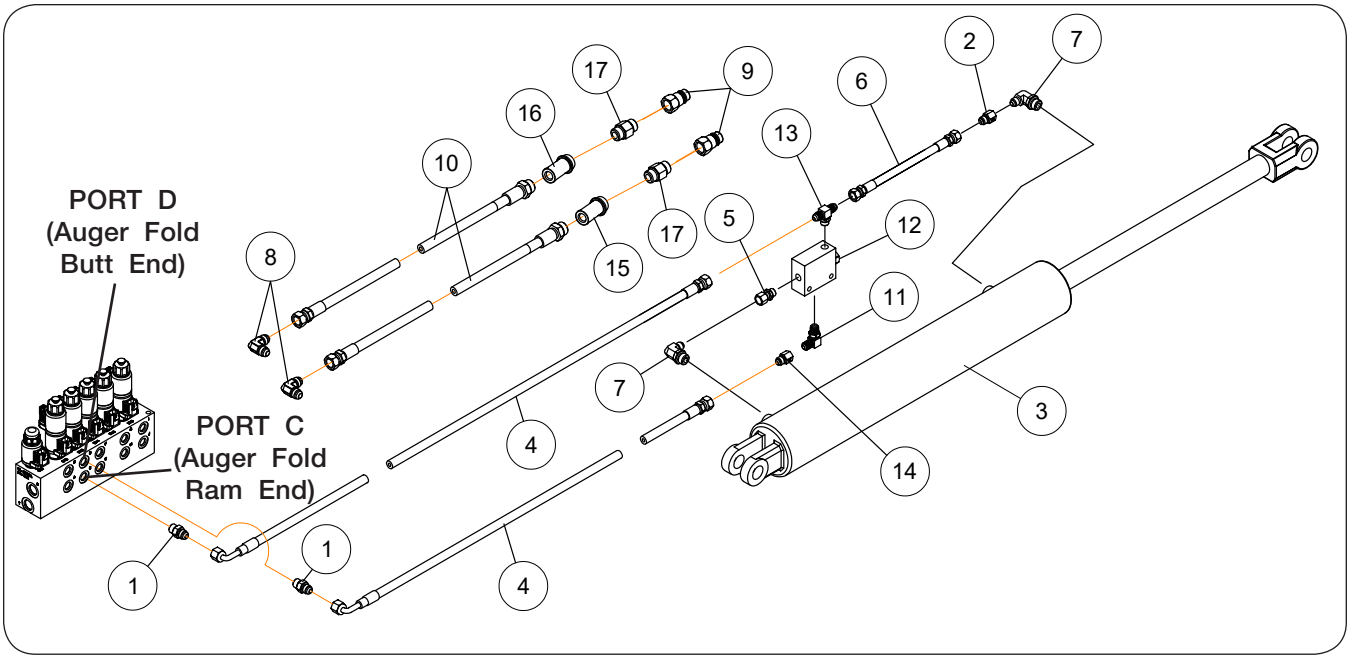
Please visit www.unverferth.com/parts/ for the most current parts listing.



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	
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	2	
10	9006587	Hydraulic Hose, 1/4 x 186" - 3000 PSI	2	
11	9876	Elbow, 90° 9/16-18 JIC Male x 9/16-18 JIC Female	1	
12	9009761	Hose Grips - Orange (+ Auger Pivot Up)	1	
13	9009762	Hose Grips - Orange (- Auger Pivot Down)	1	
14	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.

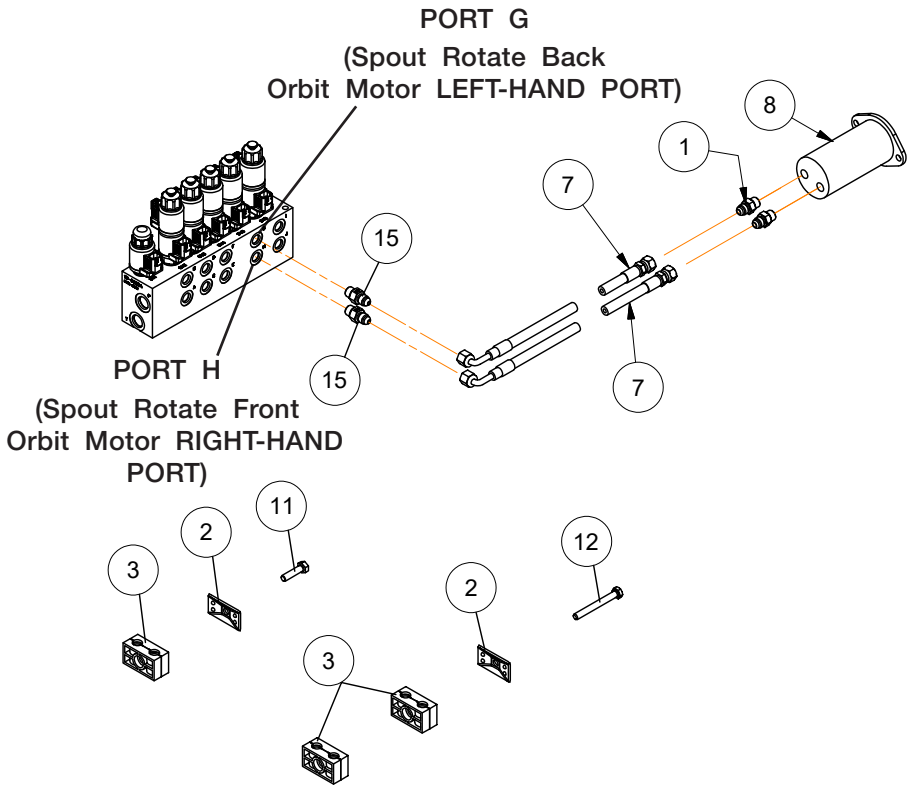


ITEM	PART NO.	DESCRIPTION	QTY.	NOTES
1	9001495	Adapter, 9/16”-18 JIC Male x 9/16”-18 OR Male	2	Optional
2	9002199	Reducer, 9/16”-18 JIC Female x 9/16”-18 JIC Male	1	0.060” Yellow Restrictor
3	9009659	Hydraulic Cylinder, 3 1/2” x 20” - 3000 PSI	1	
	9006942	Seal Kit	-	
4	9006608	Hydraulic Hose, 1/4” x 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	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 (+ Auger Raise)	1	
16	9009752	Hose Grips - Green (- Auger Lower)	1	
17	98508	Adapter, 3/4”-16 OR Male x 3/4”-16 OR Male	2	

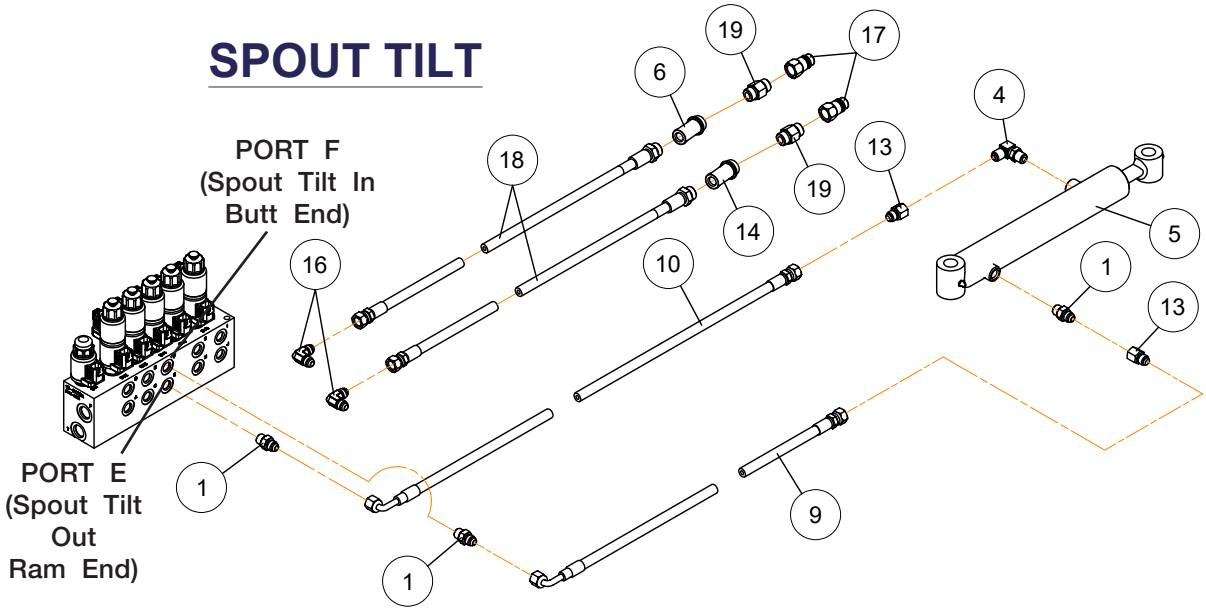
EOH Spout Rotate & Tilt Hydraulic Components (Optional)

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

SPOUT ROTATE



SPOUT TILT



EOH Spout Rotate & Tilt Hydraulic Components (Optional)

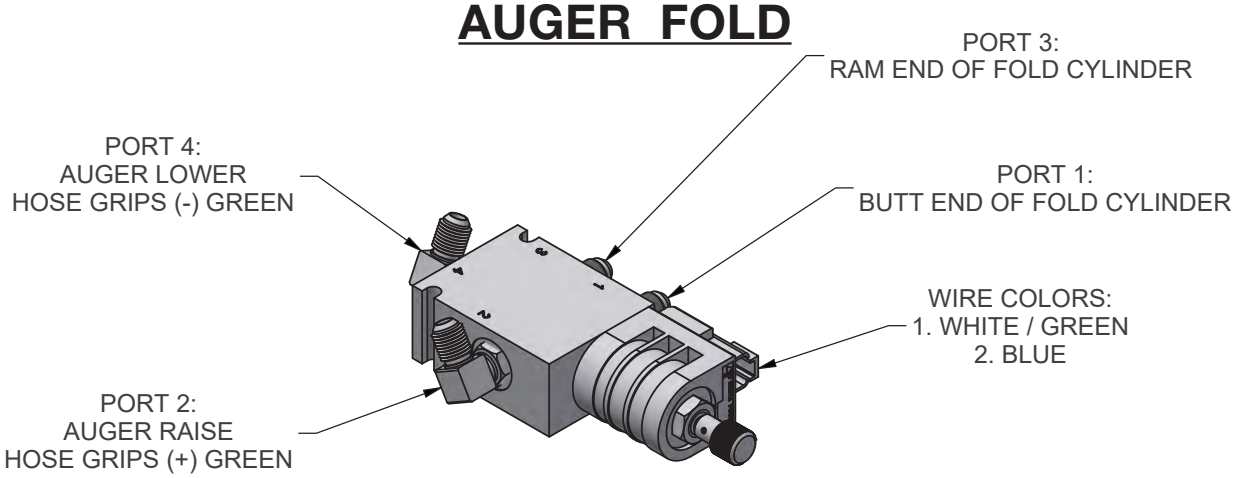
Please visit www.unverferth.com/parts/ for the most current parts listing.

ITEM	PART NO.	DESCRIPTION	QTY.	NOTES
1	9001495	Adapter, 9/16”-18 JIC Male x 9/16”-18 OR Male	3	
2	9003814	Clamp Top Plate, 1/4” x 1 1/8” x 2 1/16”	10	
3	9003816	Clamp, Polypropylene	18	
4	97445	Elbow, 90° 9/16”-18 JICM x 9/16”-18 O-Ring ADJ M	1	
5	9005135	Hydraulic Cylinder, 1 1/2” x 8” - 3000 PSI	1	
6	9009759	Hose Grips - Yellow (+ Spout Out)	1	
7	9009603	Hydraulic Hose, 1/4” x 260” - 3000 PSI	2	
8	9007626	Hydraulic Motor	1	
9	9009546	Hydraulic Hose, 1/4” x 350” - 3000 PSI	1	
10	9009550	Hydraulic Hose, 1/4” x 360” - 3000 PSI	1	
11	9390-031	Capscrew, 5/16”-18UNC x 1 1/4” G5	6	
12	9390-035	Capscrew, 5/16”-18UNC x 2 1/4” G5	4	
13	95193	Adapter, 9/16”-18 JIC Female x 9/16”-18 JIC Male	2	
14	9009760	Hose Grips - Yellow (- Spout In)	1	
15	98435	Adapter, 9/16-18 JIC Male x 9/16-18 O-Ring Male	2	Optional (Includes 0.030” Red Restrictor)
16	9897	Elbow, 90° 9/16”-18 JIC Male x 9/16”-18 JIC Male	2	
17	91383	Male Tip Coupling, 3/4”-16	2	
18	9006587	Hydraulic Hose, 1/4” x 186” - 3000 PSI	2	
19	98508	Adapter, 3/4”-16 OR Male x 3/4”-16 OR Male	2	

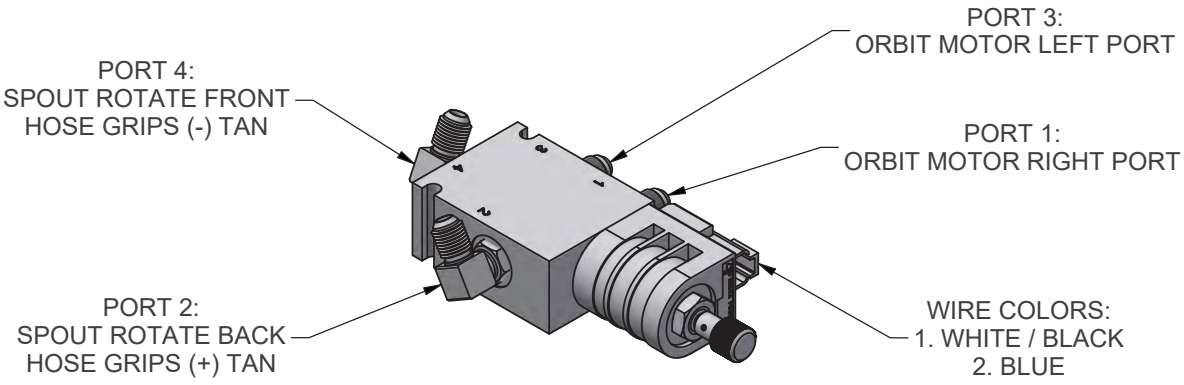
SCV Controlled Inline Valve Assemblies - Valve Functions and Wire Locations

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

AUGER FOLD



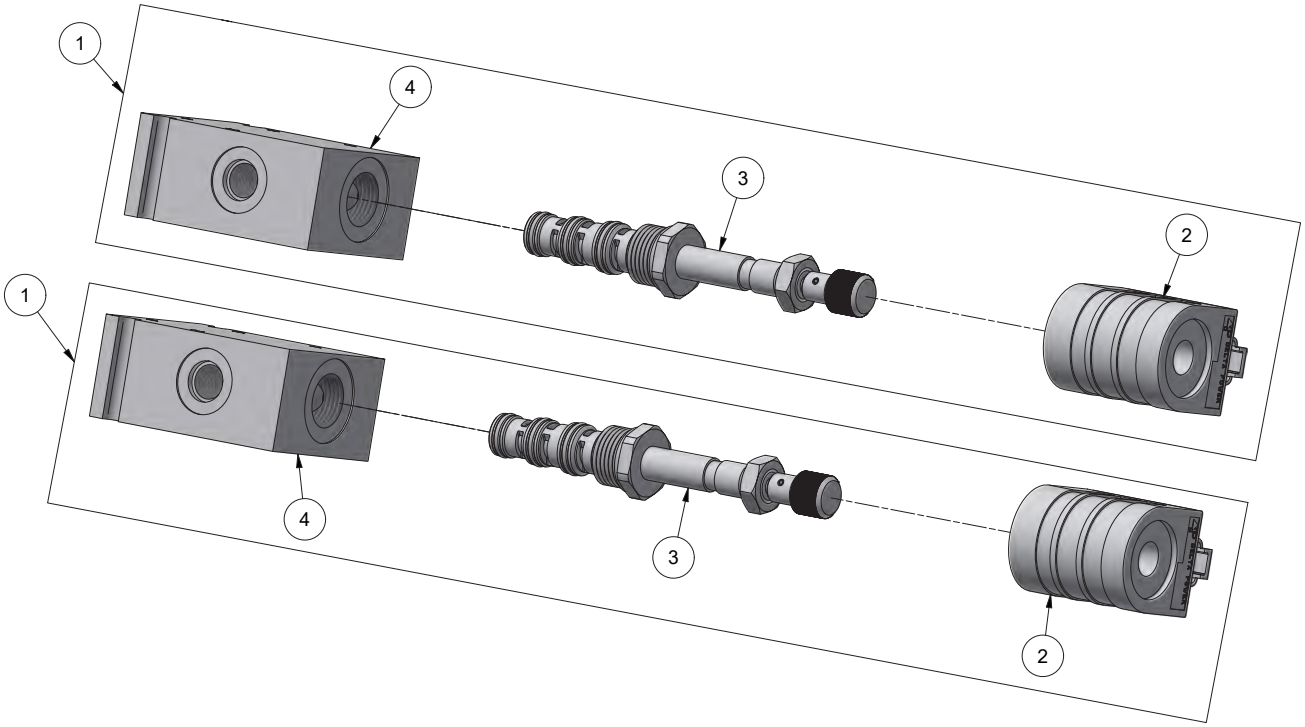
SPOUT ROTATE



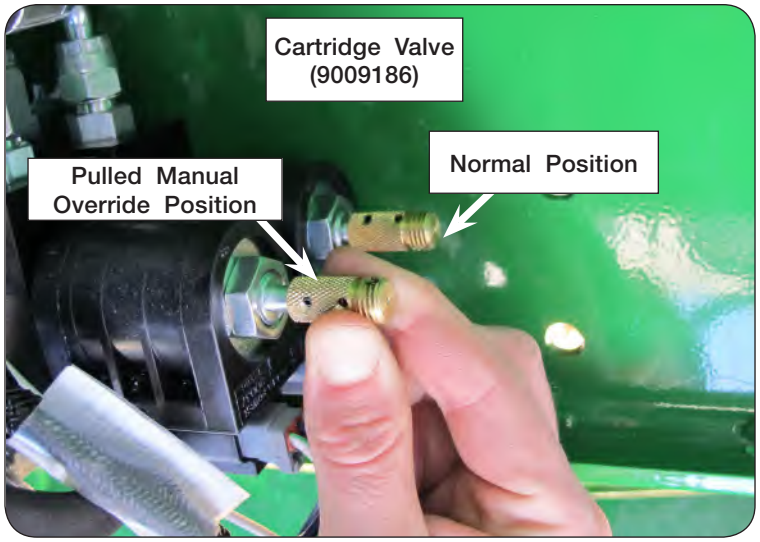
NOTE: Refer to "SCV Controlled Inline Valve Assembly Components " in the next section for Parts Listing.

SCV Controlled Inline Valve Assembly Components

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



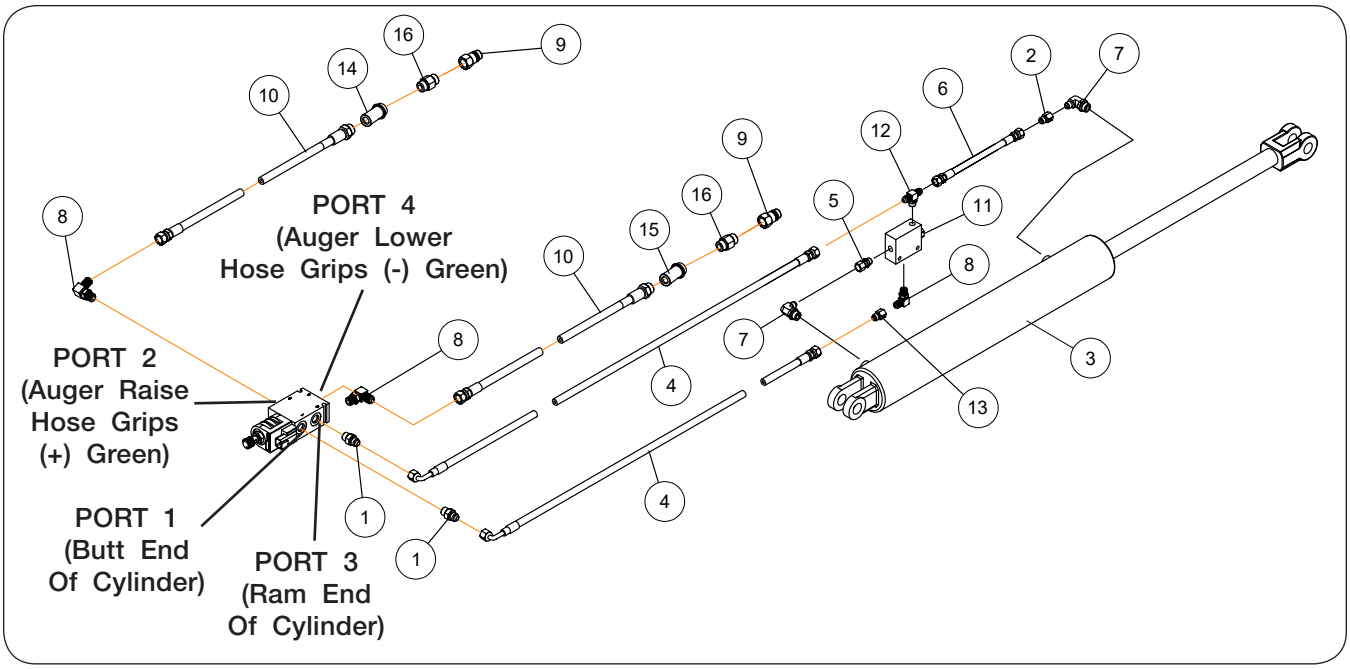
NOTE: Refer to "Manual Override for SCV Controlled Spout Rotate & Auger Fold" in MAINTENANCE section.



ITEM	PART NO.	DESCRIPTION	QTY.	NOTES
1	9009184	Inline Valve Assembly	2	Includes Items 2-4
2	9009185	Coil - 12 VDC, w/ DT04-2P Connector	1	
3	9009186	Cartridge Valve - 4 Way, 2 Position - Normally Closed w/Pull Type Manual Override	1	
4	9009187	Inline Valve Block - 4 Port	1	

SCV Controlled Inline Valve - Auger Fold Hydraulic Components

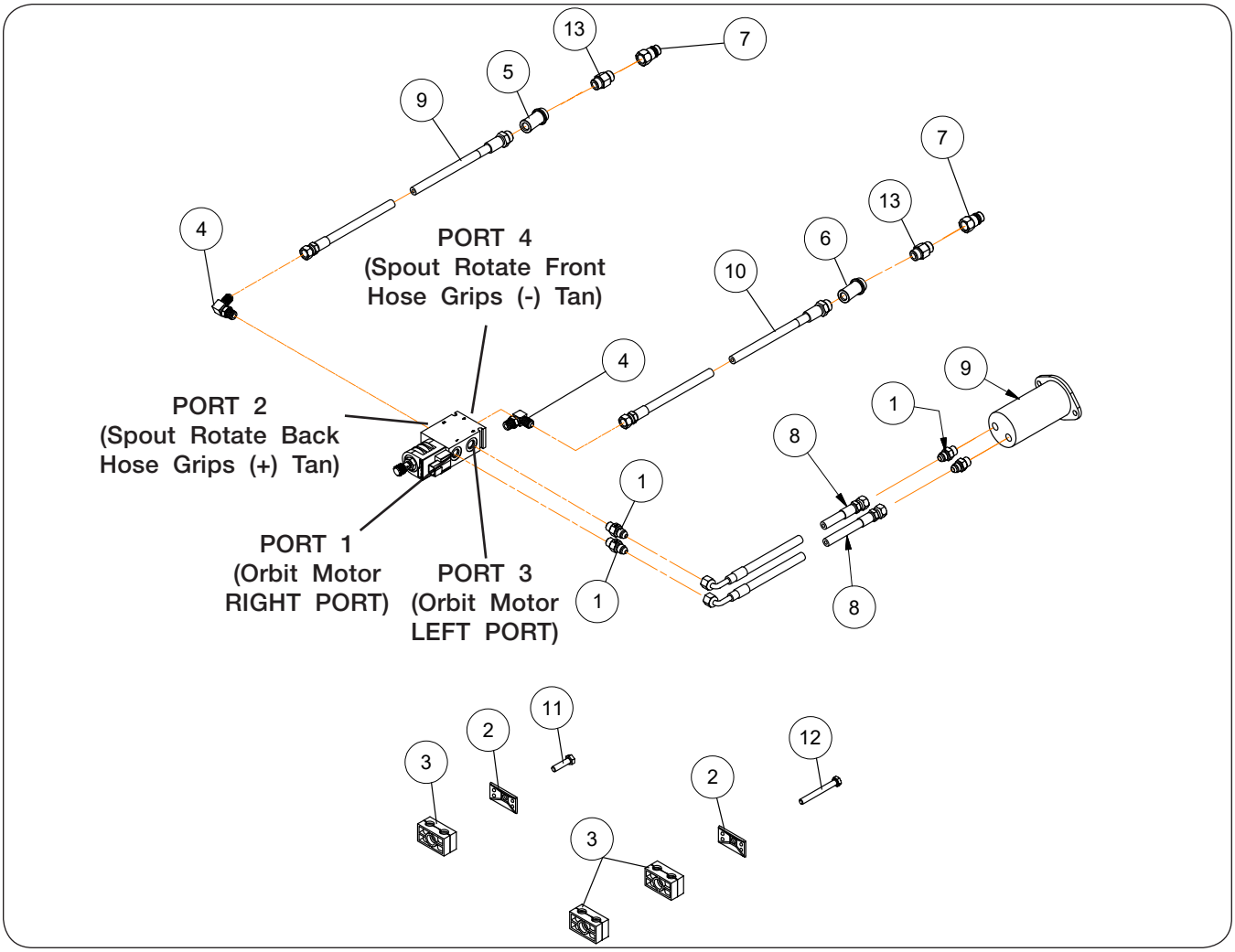
Please visit www.unverferth.com/parts/ for the most current parts listing.



ITEM	PART NO.	DESCRIPTION	QTY.	NOTES
1	9001495	Adapter, 9/16”-18 JIC Male x 9/16”-18 OR Male	2	
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	97445	Elbow, 90° 9/16-18 JIC Male x 9/16-18 O-Ring ADJ Male	3	
9	91383	Male Tip Coupling, 3/4”-16	2	
10	9006587	Hydraulic Hose, 1/4 x 186” - 3000 PSI	2	
11	9003990	Pilot Operated Check Valve with 3 Ports	1	
12	9001710	Tee 9/16”-18 JIC Male x 9/16”-18 JIC Male x 9/16”-18 O-Ring Male	1	
13	9006166	Reducer, 9/16”-18 JIC Female x 9/16”-18 JIC Male	1	0.090” Green Restrictor
14	9009751	Hose Grips - Green (+ Auger Raise)	1	
15	9009752	Hose Grips - Green (- Auger Lower)	1	
16	98508	Adapter, 3/4”-16 OR Male x 3/4”-16 OR Male	2	

SCV Controlled Inline Valve - Spout Rotate 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	4	
2	9003814	Clamp Top Plate, 1/4” x 1 1/8” x 2 1/16”	10	
3	9003816	Clamp, Polypropylene	18	
4	97445	Elbow, 90° 9/16”-18 JICM x 9/16”-18 O-Ring M	2	
5	9009765	Hose Grips - Tan (+ Spout Rotate Back)	1	
6	9009766	Hose Grips - Tan (- Spout Rotate Front)	1	
7	91383	Male Tip Coupling, 3/4”-16	2	
8	9009603	Hydraulic Hose, 1/4” x 260” - 3000 PSI	2	
9	9007626	Hydraulic Motor	1	
10	9006587	Hydraulic Hose, 1/4” x 186” - 3000 PSI	2	
11	9390-031	Capscrew, 5/16”-18UNC x 1 1/4” G5	6	
12	9390-035	Capscrew, 5/16”-18UNC x 2 1/4” G5	4	
13	98508	Adapter, 3/4”-16 OR Male x 3/4”-16 OR Male	2	

Cylinders

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

Auger Flow Door Cylinder

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

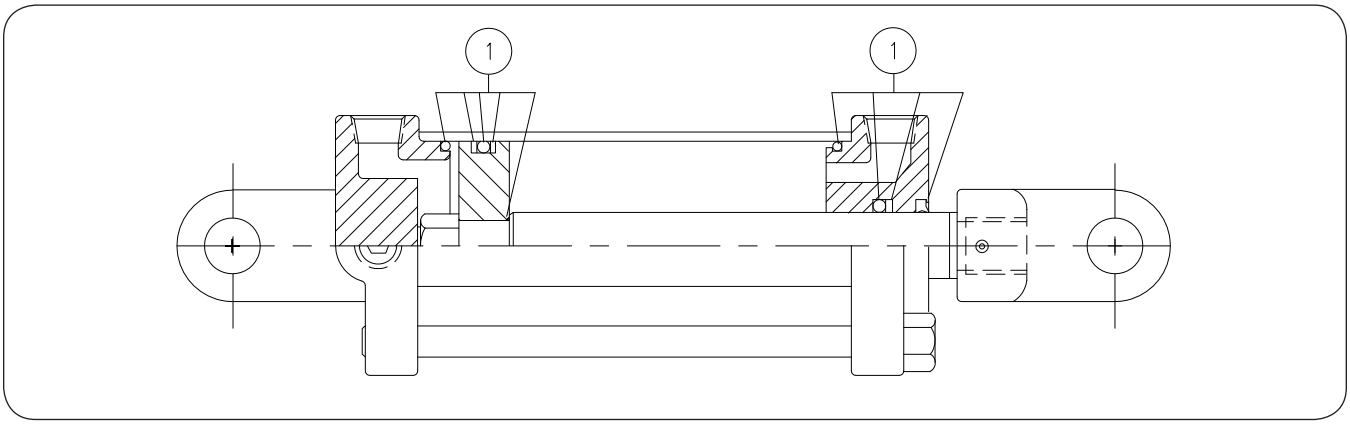
ITEM	PART NO.	DESCRIPTION	QTY	NOTES
	9009659	Hydraulic Cylinder, 3 1/2" x 20"	1	3/4"-16 O-Ring Ports (3000 PSI)
1	9006942	Seal Kit	1	

Auger Pivot Cylinder

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	

Steering Cylinder

ITEM	PART NO.	DESCRIPTION	QTY	NOTES
	9005991	Cylinder 3" x 10", Welded-Dbl Ended	1	3/4"-16 O-Ring Ports (3000 PSI)
1	9006027	Seal Kit	1	



Cylinders

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

Suspension Cylinder

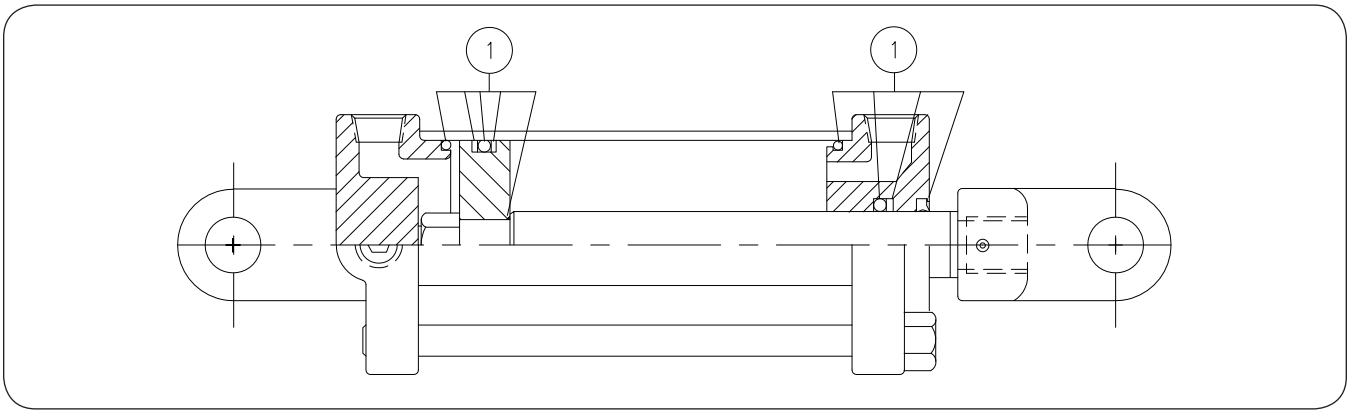
ITEM	PART NO.	DESCRIPTION	QTY	NOTES
	9007090	Cylinder 6" x 12" (3000 PSI)	4	3/4"-16 & 1 1/16"-12 O-Ring Ports
1	9007091	Seal Kit	1	

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	

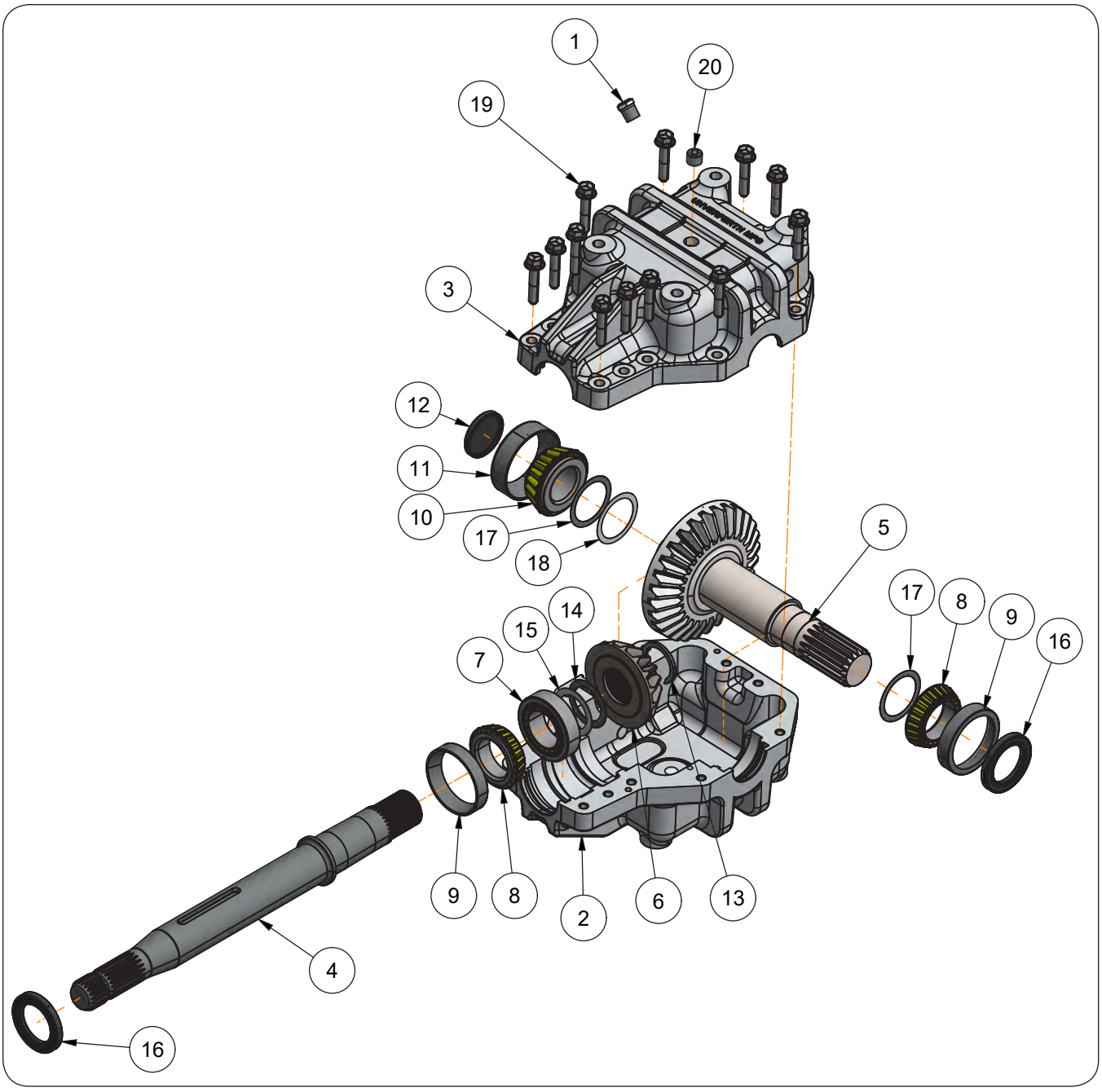
Jack Cylinder - 3 1/2" x 8"

ITEM	PART NO.	DESCRIPTION	QTY	NOTES
	9009047	Cylinder, Complete	1	3/4"-16 O-Ring Ports (3000 PSI)
1	9007880	Seal Kit	1	



Gearbox Components

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



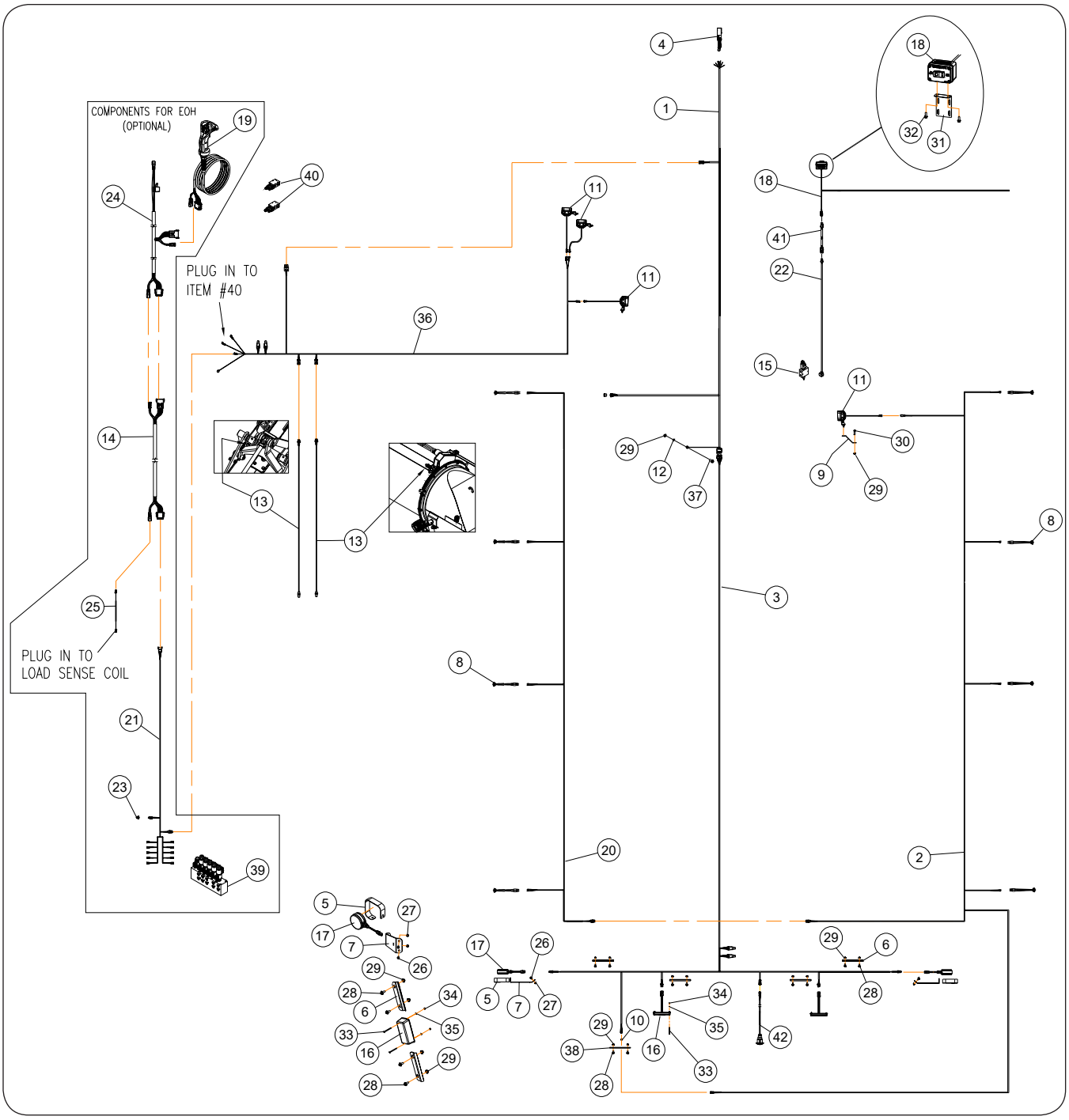
Gearbox Components

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 20
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	

Electrical Components

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



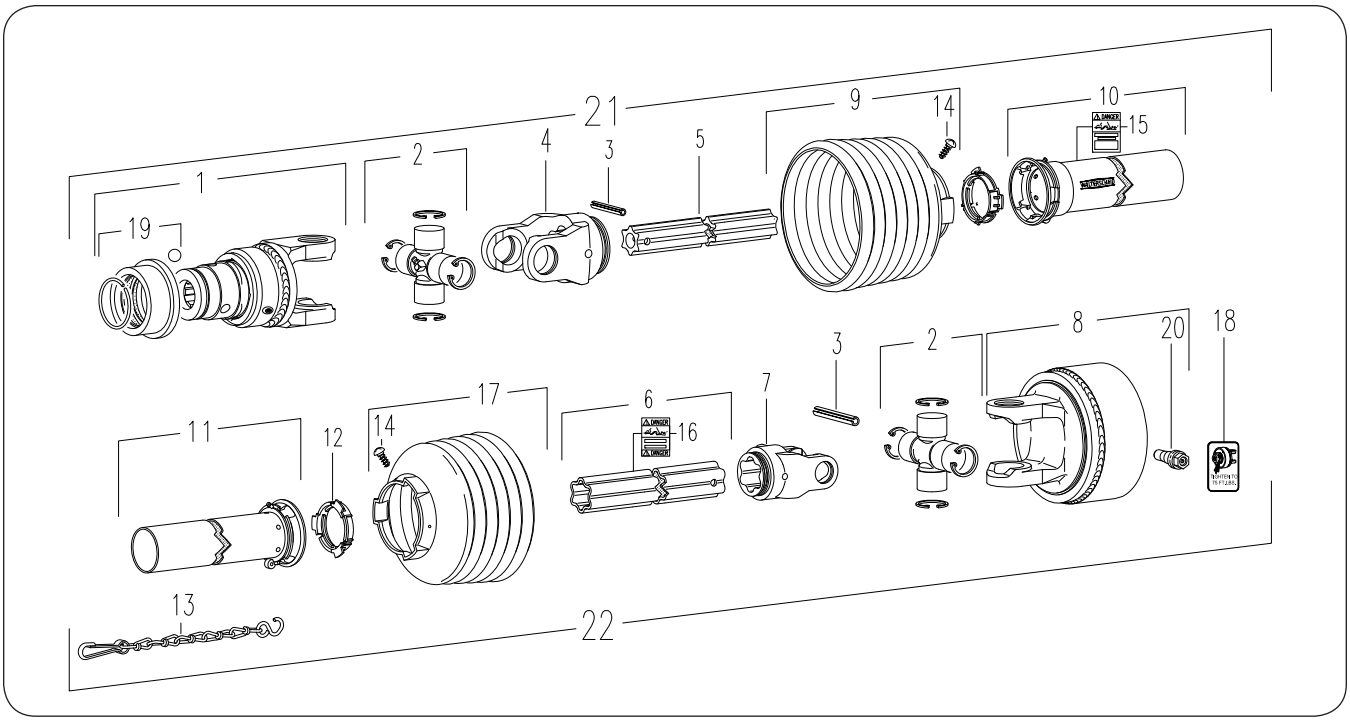
Electrical Components

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	9009030	RH Clearance Light Harness	1	
3	9009574	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	For SN B43520100 & Higher
	273894B		2	For SN B43520099 & Lower
8	9006107	Micro Dot, LED Amber Light	8	
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	2	
14	9008252	Joystick Controller Extension Harness	1	
15	9008730	Steering Valve	1	
16	9006345	LED Lamp - Red	2	
	232169	LED Lamp - Red - Replacement Kit		Includes Lamp, & Items 28, 29 & 38
17	9005142	LED Lamp - Amber	2	
18	9005654	Rocker Switch Assembly	1	
19	9008265	L-Series Control Grip - 5 Function	1	
20	9009069	LH Clearance Light Harness	1	
21	9007290	“T” Main Wiring Harness - 189”	1	
22	9005993	Wiring Harness - 588”	1	
23	252386	Plug Assembly, 2 Pin Shroud	1	
24	9008251	Harness - Joystick Power	1	
25	9007266	Wire Harness, 218 5/16” (2 Pin Diverter)	1	
26	91256	Large Flange Screw 5/16”-18UNC x 3/4”	4	
27	91257	Flange Nut 5/16”-18UNC	4	
28	95585	Large Flange Screw 3/8”-16UNC x 3/4” G5	10	
29	91263	Large Flange Nut, 3/8”-16UNC	12	Grade 5
30	9003259	Flange Screw 3/8”-16UNC x 1 1/4”	1	
31	283788B	Mounting Bracket =Black=	1	
32	97420	Flange Screw, 1/4”-20UNC x 3/4”	2	Grade 5
33	903172-350	Pan Head Phillips Screw, #10-32UNF x 1 1/4”	4	
34	9830-016	Hex Nut, #10-32	4	Grade 2
35	9404-013	Lock Washer, #10	4	
36	9009531	Auger Harness	1	
37	91262	Flange Screw, 3/8”-16UNC x 1”	1	Grade 5
38	291169G	Rear Trim =Green=	1	
	291169R	Rear Trim =Red=		
	291169BM	Rear Trim =Black Metallic=		
39	293416	EOH Block Assembly - 5 Spool Replacement Kit	1	
40	9009184	Inline Valve Assembly	2	
41	86700	Wiring Extension 120” (2 Pin)	1	Optional
42	9009843	7-Blade Connector	1	Optional Rear Hitch For SN B44430100 & Higher

Cut Out Clutch PTO Assembly

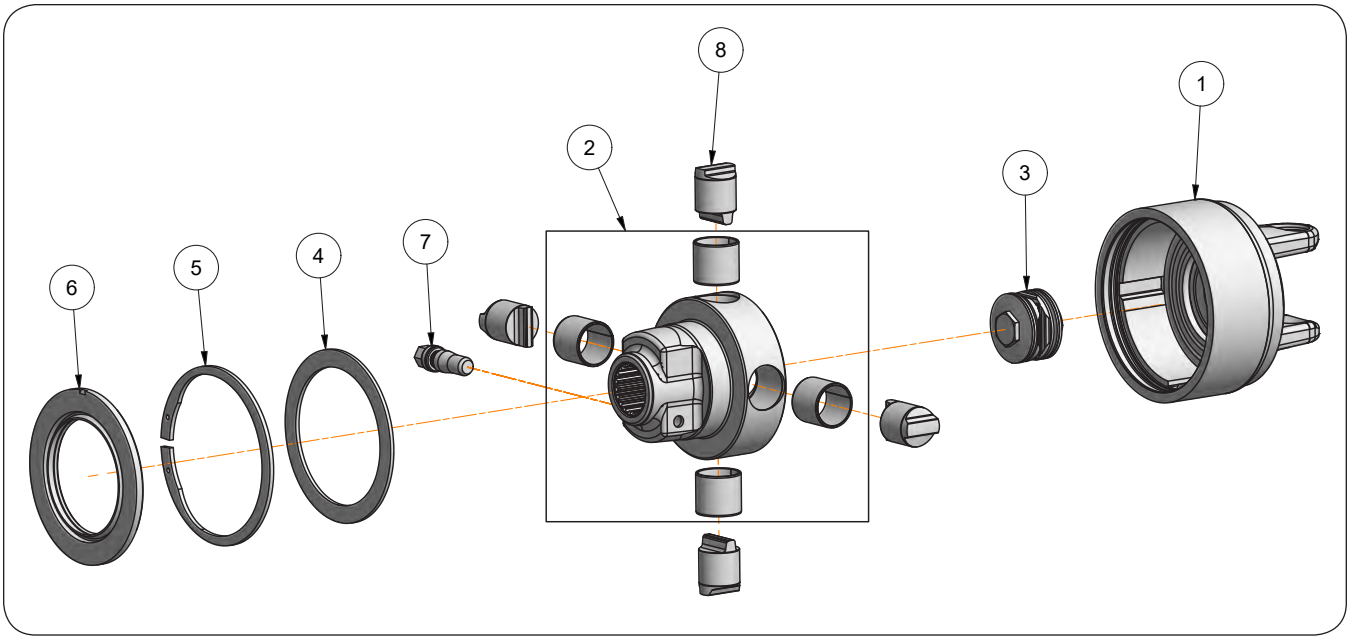
Please visit www.unverferth.com/parts/ for the most current parts listing.



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

Cut Out Clutch Components

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

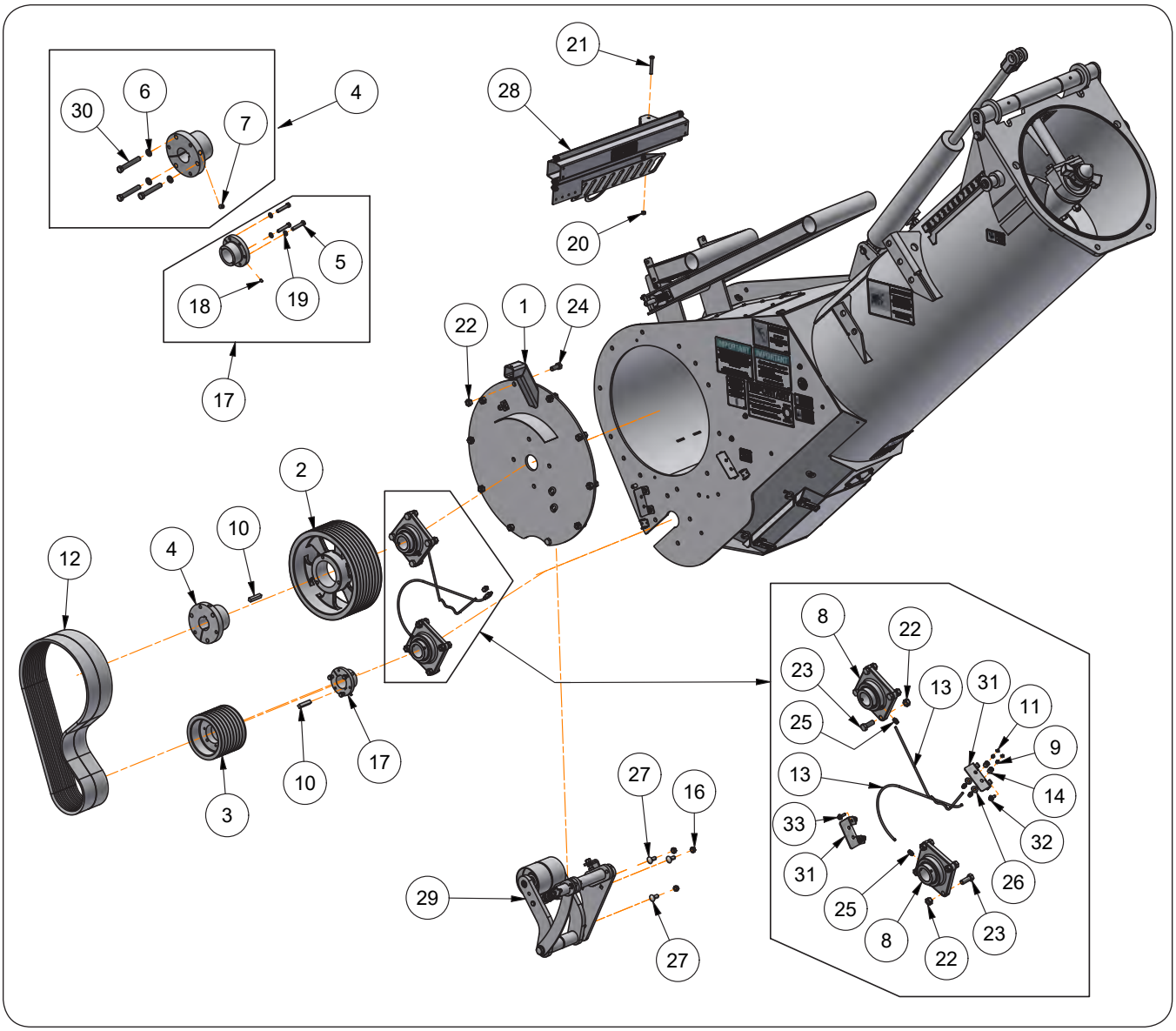


NOTE: Cut Out Clutch (9005235) must be used with the Complete PTO Assembly (9005230). This will not work with the Standard PTO Assembly (9005245).

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

Lower Auger Linkage Components

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



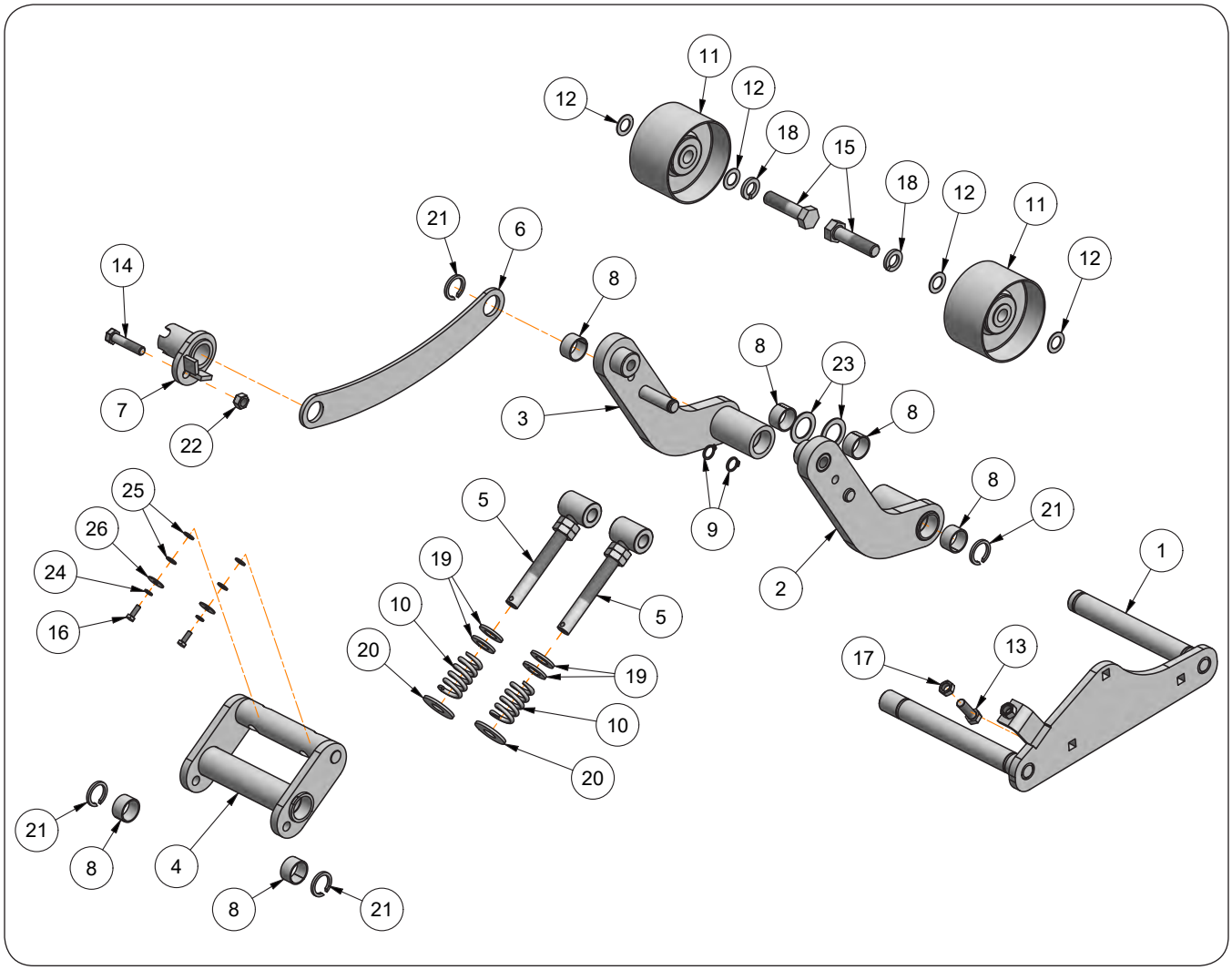
Lower Auger Linkage Components

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 & 30
5	9006669	Capscrew, 3/8"-16UNC x 2"	1	Grade 5
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	1	
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)	2	
13	9005074	Grease Hose, 1/4" OD	2.5	Specify in Feet
14	9003949	Hex Pipe Coupling	2	
15	93426	Grease Zerk 1/8" NPT	2	
16	94981	Locknut 1/2"-13UNC	3	
17	9007376	Bushing, 4 5/8" OD x 2 1/4" ID x 2 1/16" w/ 1/2" Keyway & Capscrews	1	Includes Items: 5, 18 & 19
18	9399-059	Set Screw, 1/4"-20UNC x 3/8"	1	
19	9404-021	Lockwasher, 3/8"	3	
20	902875	Center Locknut 3/8"-16UNC	1	
21	9390-062	Capscrew, 3/8"-16UNC x 2 3/4"	1	Grade 5
22	95905	Center Locknut 5/8"-11UNC	18	
23	9390-123	Capscrew, 5/8"-16UNC x 3/4"	8	
24	9390-122	Capscrew, 5/8"-11UNC x 1 1/2"	10	
25	9005073	Quicklinc Fitting	4	
26	9405-076	Flat Washer 3/8" USS	2	
27	9388-103	Carriage Bolt, 1/2"-13UNC x 1 1/4"	2	
28	-	Hose Caddy	1	Refer to "Hitch & Tongue Components" Section
29	295565B	Idler Assembly (Black)	1	Refer to "Idler Assembly Components" Section
30	9006263	Bolt, 9/16"-12UNC x 3 5/8"	3	Grade 5
31	296738B	Belt Cover Bracket =Black=	2	
32	91256	Flange Screw, 5/16"-18UNC x 3/4" Grade 5	2	
33	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.



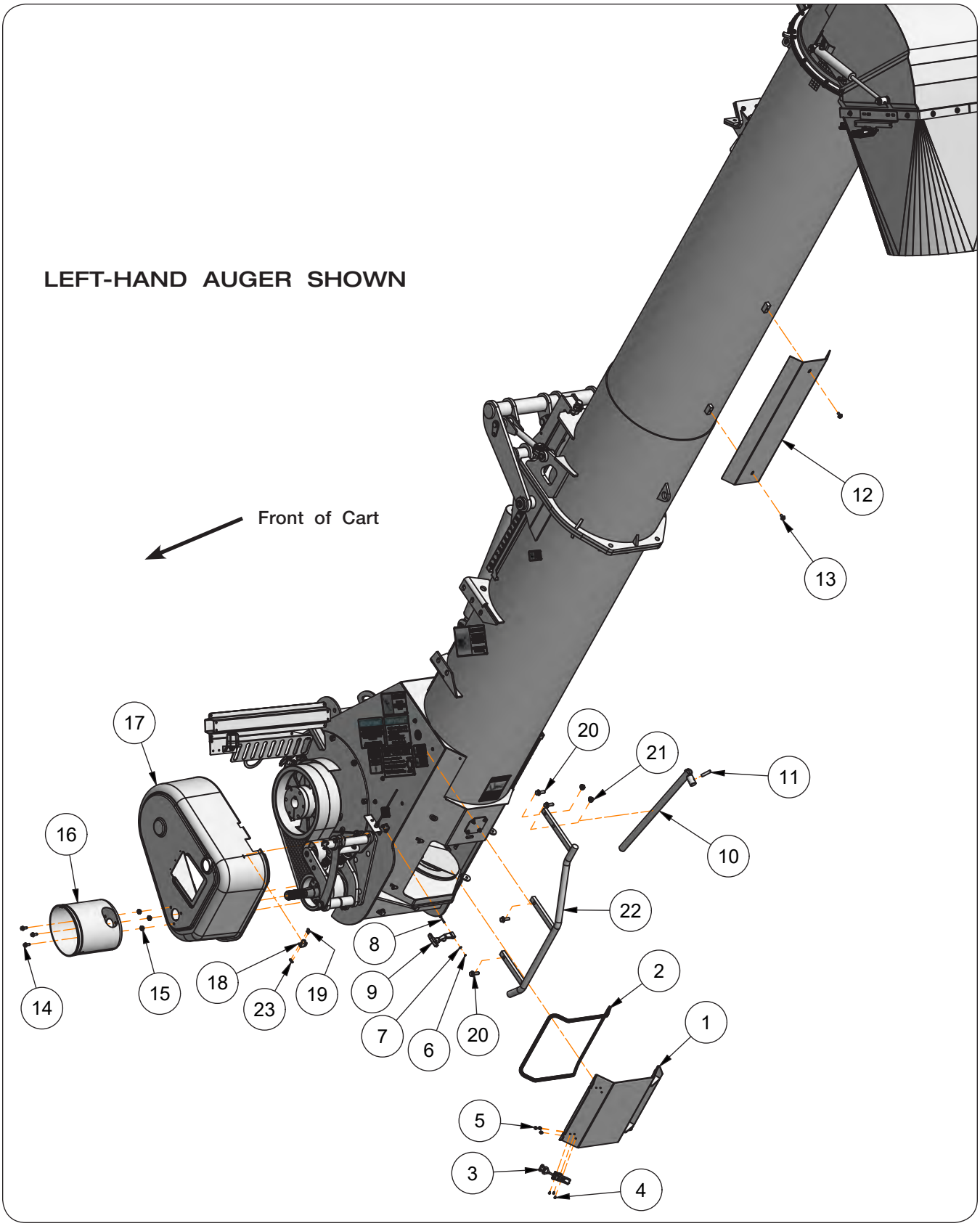
Idler Assembly Components

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 Sub Assembly	2	Single Piece Item
	296744B	Idler Sub Assembly =Black=		Includes Ball Bearing W/Retaining Ring 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 Door & Cover Components

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



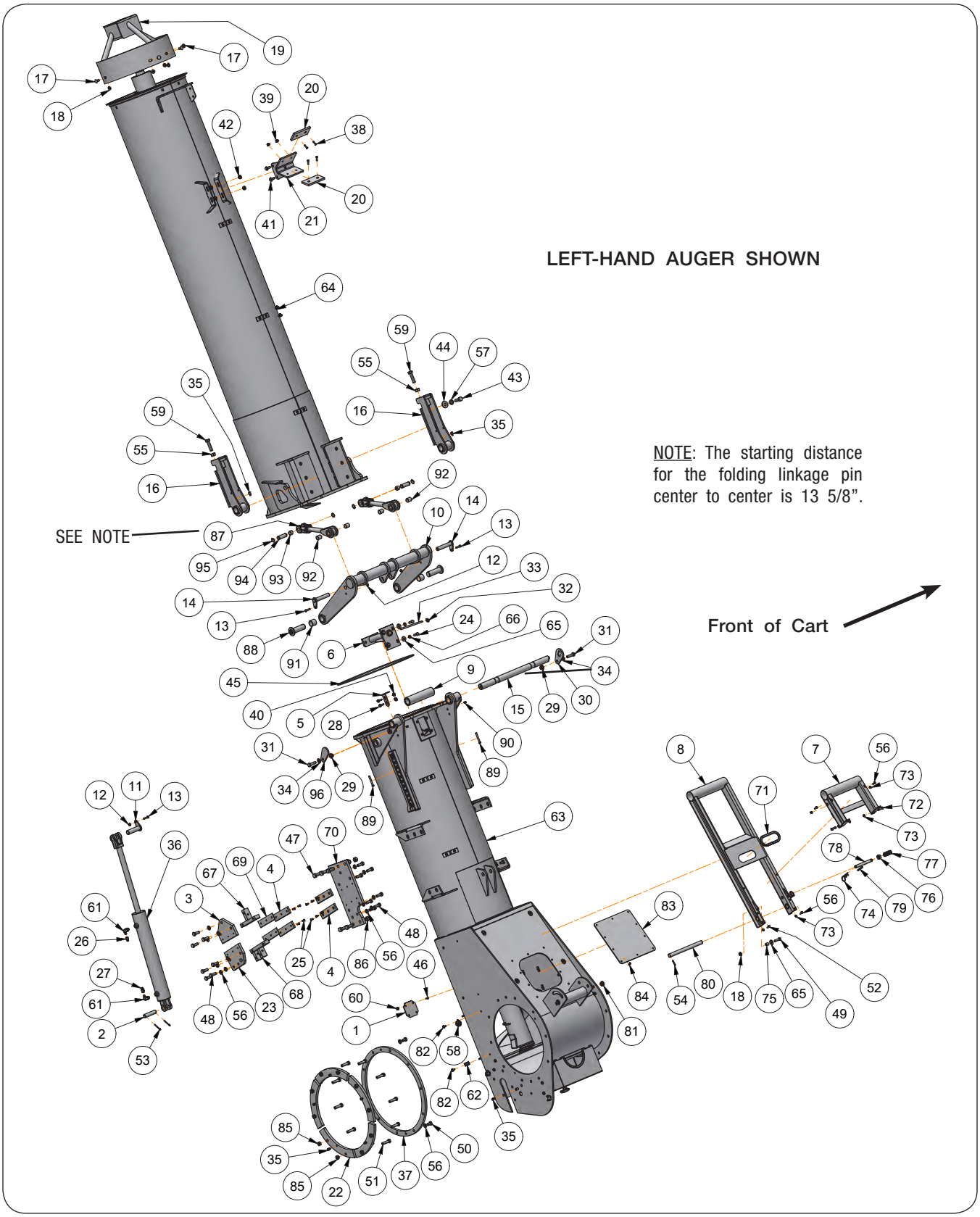
Lower Auger Door & Cover Components

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

ITEM	PART NO.	DESCRIPTION	QTY	NOTES
1	276557B	Cleanout Door Weldment =Black=	1	
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	
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	284714B	Locking Pipe Weldment with Roll Pin =Black=	1	
11	9392-208	Roll Pin 1/2" Dia. x 2	1	
12	284141G	Strike Plate =Green=	1	
	284141R	Strike Plate =Red=		
	284141BM	Strike Plate =Black Metallic=		
13	95585	Capscrew/Large Flange 3/8"-16UNC x 3/4" G5	2	
14	91262	Flange Screw 3/8"-16UNC x 1" G5	3	
15	91263	Nut/Large Flange 3/8-16UNC G5	3	
16	9004918	PTO Bell Cover	1	
17	9008700	Belt Cover/Shield	1	
18	900059	Flexible Draw Latch Asy w/Style R Keeper	3	
19	9004940	Pop Rivet	6	
20	9005705	Flange Screw 1/2"-13UNC x 1 1/2" Grade 5	4	
21	91267	Flange Nut 1/2"-13UNC	2	
22	295991B	Auger Tire Guard Weldment =Black=	1	
23	9004998	Rivet Burr 3/16"	8	

Auger Tube Components

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



Auger Tube Components

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

ITEM	PART NO.	DESCRIPTION	QTY	NOTES
1	2001446B	Cover Plate =Black=	1	
2	266285	Cylinder Pin 1" Dia. x 4 1/2	1	
3	271119B	Fold Plate 6 1/2 x 8 =Black=	1	
4	271124	Nylon Fold Slide 2 x 8	4	
5	272645B	Switch Bracket =Black=	1	
6	289932B	Bearing Bracket Replacement Kit (Black)	1	Includes hardware
7	296086G	Auger Rest Extension Weld't =Green=	1	
	296086R	Auger Rest Extension Weld't =Red=		
	296086BM	Auger Rest Extension Weld't =Black Metallic=		
8	295556G	Field Rest Weld't =Green=	1	
	295556R	Field Rest Weld't =Red=		
	295556BM	Field Rest Weld't =Black Metallic=		
9	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=		
10	295744G	Fold Linkage Weldment =Green=	1	
	295744R	Fold Linkage Weldment =Red=		
	295744BM	Fold Linkage Weldment =Black Metallic=		
11	295793	Cylinder Pin Weldment	1	
12	9003396	Lock Nut/Top 3/8"-16UNC	3	
13	9390-057	Capscrew 3/8"-16UNC x 1 1/2" G5	3	
14	295559	Linkage Pin Weldment	2	
15	295956	Auger Pivot Pin	1	
16	289857G	Auger Hinge Weldment =Green=	2	
	289857R	Auger Hinge Weldment =Red=		
	289857BM	Auger Hinge Weldment =Black Metallic=		
17	9388-102	Carriage Bolt, 1/2"-13UNC x 1" G5	4	
18	9003397	Locking Flange Nut 1/2"-13UNC	5	
19	297216B	Hanger Bearing Weldment =Black=	1	SN B44150100 & Higher
	276507B			SN B44150099 & Lower
20	272574	Poly Auger Stop Pad	2	
21	272553G	Auger Rest Weldment =Green=	1	
	272553R	Auger Rest Weldment =Red=		
	272553BM	Auger Rest Weldment =Black Metallic=		
22	295788B	Pivot Flange, Retainer Plate =Black=	5	
23	284518B	Fold Plate 6" x 8" =Black=	1	
24	9390-101	Capscrew 1/2"-13UNC x 1 1/2" G5	4	
25	9001688	Capscrew/Flat Head, 5/16"-18UNC x 3/4"	12	
26	9002199	Reducer w/.060 Restrictor	1	
27	9002446	Adapter 9/16-18 O-Ring Male x 9/16-18 JIC Female	1	
28	9003259	Flange Screw 3/8"-16UNC x 1 1/4" G5	2	
29	9003398	Lock Nut/Top 5/8"-11UNC	2	
30	293663B	Pin Retainer Plate =Black=	1	

(Continued on next page)

Auger Tube Components (continued)

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

ITEM	PART NO.	DESCRIPTION	QTY	NOTES
31	9390-125	Capscrew, 5/8"-11UNC x 2 1/4" G5	2	
32	9004764	90° Elbow 1/8" NPTF Female	1	
33	9005793	Grease Pipe 1/8" SCH40 x 11"	1	
34	9405-098	Flat Washer 5/8" SAE	2	
35	9006785	90° Adapter 1/8" NPT	8	
36	9009659	Hydraulic Cylinder 3 1/2 x 20 (3000 PSI)	1	
37	295780B	Junction Box Mount =Black=	1	
38	903171-662	Flat Countersunk Machine Screw, 5/16"-18UNC x 1 1/4"	4	
39	91257	Large Flange Hex Nut, 5/16"-18UNC	4	
40	91263	Nut/Large Flange 3/8"-16UNC	2	
41	91266	Flange Capscrew, 1/2"-13UNC x 1 1/4"	4	
42	91267	Nut / Flange, 1/2-13UNC	4	
43	91299-146	Capscrew, 3/4"-10UNC x 2 1/4"	6	
44	9234PL	Flat Washer, 13/16" (Hardened)	6	
45	296290	Lower Auger Seal Kit	1	Includes Instruction Sheet
46	9388-003	Carriage Bolt, 1/4"-20UNC x 1" G5	4	
47	9390-145	Capscrew, 3/4"-10UNC x 2" G5	5	
48	9390-123	Capscrew, 5/8"-11UNC x 1 3/4" G5	14	
49	9390-102	Capscrew, 1/2-13UNC x 1 3/4" G5	1	
50	9390-120	Capscrew, 5/8"-11UNC x 1" G5	2	
51	9390-126	Capscrew, 5/8"-11UNC x 2 1/2" G5	10	
52	9390-030	Capscrew, 5/16"-118UNC x 1" G5	4	
53	9391-046	Cotter Pin, 3/16" Dia. x 2"	2	
54	9392-136	Roll Pin, 1/4" Dia. x 1 1/2"	1	
55	9394-016	Hex Nut, 3/4-10UNC G5	2	
56	9404-030	Lock Washer, 5/8"	16	
57	9404-034	Lock Washer, 3/4	6	
58	9009518	Cable Clamp 1 1/4"	1	
59	94733	Capscrew, 3/4"-10UNC x 3" G5 Full Threaded	2	
60	97189	Hex Nut/Large Flange 1/4"-20UNC	4	
61	9874	90° Elbow 9/16-18 JIC Male x 3/4-16 O-Ring Male	2	
62	9007556	Cable Clamp 1 1/8"	1	
63	296314G	Lower Auger Housing Replacement Kit =Green=	1	
	296314R	Lower Auger Housing Replacement Kit =Red=		
	296314BM	Lower Auger Housing Replacement Kit =Black Metallic=		
64	296407G	Upper Auger Housing Replacement Kit =Green=	1	
	296407R	Upper Auger Housing Replacement Kit =Red=		
	296407BM	Upper Auger Housing Replacement Kit =Black Metallic=		
65	9405-088	Flat Washer 1/2"	5	
66	9404-025	Lock Washer 1/2"	4	
67	295642B	Upper Bolt Plate Weldment =Black=	1	
68	295643B	Lower Bolt Plate Weldment =Black=	1	
69	295962B	Slide Shim Plate =Black=	2	
70	295605B	Auger Slide Mount =Black=	1	

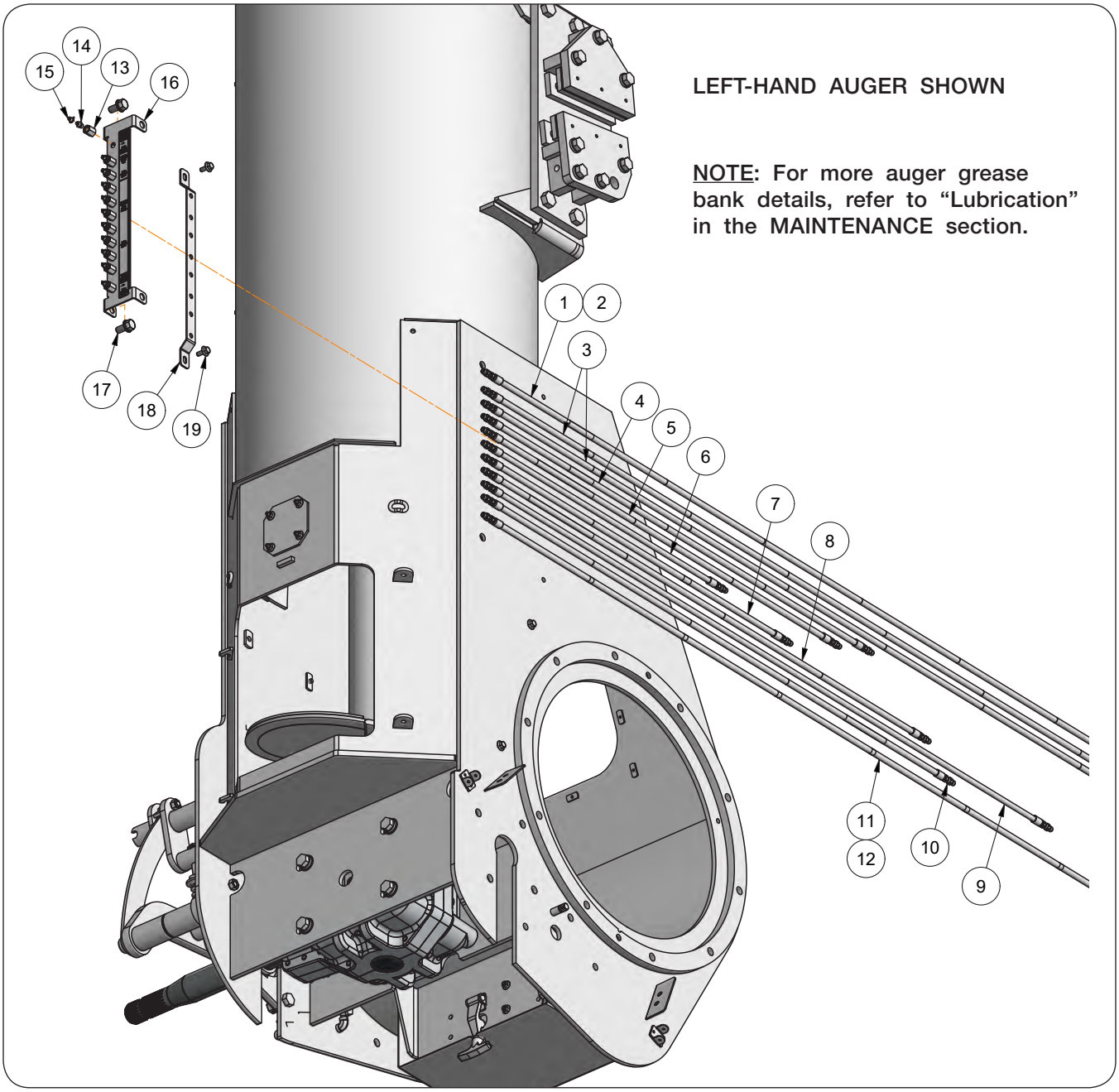
Auger Tube Components

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

ITEM	PART NO.	DESCRIPTION		NOTES
71	9000787	Trim Lock	1.25	Specify in Feet
72	9007843	Socket Head Bolt, 5/16"-18UNC x 1" (3/8" Dia.)	2	
73	901527	Locknut 5/16"-18UNC	6	
74	92424	Hairpin Cotter	1	
75	272583	Bushing, 3/4" Dia. x 7/8"	1	
76	9001868	Locking Collar 3/4"	1	Includes Set Screw
77	9004772	Spring 2 1/2"	1	
78	272376	Lock Pin 6 3/4"	1	
79	9392-182	Roll Pin, 3/8" Dia. x 2 1/2"	1	
80	284549	Pivot Pin, 13 1/16"	1	
81	9003412	Split Output Bushing 1" ID	2	
82	91256	Flange Screw, 5/16"-18UNC x 3/4" G5	2	
83	283518G	Cover Plate =Green=	1	
	283518R	Cover Plate =Red=		
	283518BM	Cover Plate =Black Metallic=		
84	97420	Flange Screw 1/4"-20UNC x 3/4" G5	10	
85	95905	Center Locknut 5/8"-11UNC	16	
86	9802	Top Locknut 3/4"-10UNC	5	
87	9006491	Clevis	2	
88	295549	Auger Linkage Pin Weldment	2	
89	9390-063	Capscrew, 3/8"-16UNC x 3" G5	2	
90	902875	Center Locknut 3/8"-16UNC	2	
91	9004741	Self Lube Bushing (1 1/2" ID)	2	
92	9003440	Self Lube Bushing (1" ID)	4	
93	9003636	Self Lube Bushing (1" ID)	2	
94	272587	Pin, 1 Dia. x 3 1/8	2	
95	91192	Retaining Ring, 1"	4	
96	295957B	Retainer Pin Plate =Black=	1	

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.

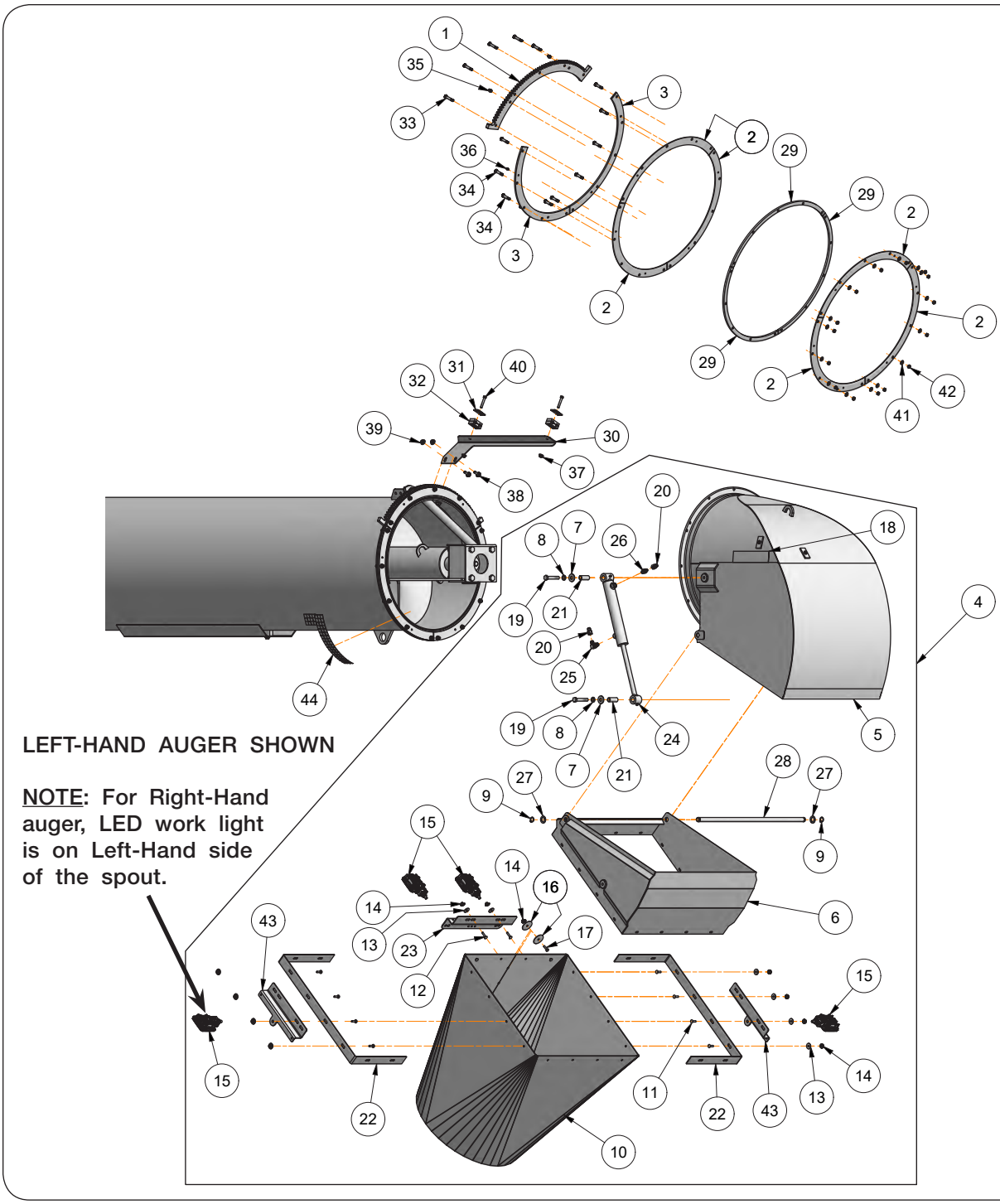
Auger Grease Bank Components

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

ITEM	PART NO.	DESCRIPTION	QTY	NOTES
1	9008186	Grease Hose 3/16" x 84" (1/8" NPT) (LEFT-HAND)	1	Lower Vertical Auger Hanger Bearing
2	9008485	Grease Hose 3/16" x 110" (1/8" NPT) (RIGHT-HAND)		
3	9008967	Grease Hose 3/16" x 126" (1/8" NPT)	2	Upper Auger Pivot Pin
4	9008961	Grease Hose 3/16" x 48" (1/8" NPT)	1	Vertical Auger Tilt Pivot Rings
5	9008960	Grease Hose 3/16" x 44" (1/8" NPT)	1	
6	9008958	Grease Hose 3/16" x 30" (1/8" NPT)	1	
7	9008959	Grease Hose 3/16" x 38" (1/8" NPT)	1	
8	9008962	Grease Hose 3/16" x 55" (1/8" NPT)	1	
9	9008964	Grease Hose 3/16" x 70" (1/8" NPT)	1	
10	9008963	Grease Hose 3/16" x 58" (1/8" NPT)	1	
11	9009052	Grease Hose 3/16" x 200" (1/8" NPT) (LEFT-HAND)	1	Drag Auger Center Bearing
12	9009364	Grease Hose 3/16" x 230" (1/8" NPT) (RIGHT-HAND)		
13	9003949	Coupler 1/8" NPT	11	
14	93426	Grease Zerk	11	
15	9006849	Grease Zerk Cap	11	
16	295596B	Grease Bank Plate =Black=	1	
17	9001529	Flange Screw 1/2"-13UNC x 1 Grade 5	2	
18	295645B	Hose Bracket Plate =Black=	1	
19	91256	Flange Screw 5/16"-18UNC x 3/4" Grade 5	2	

Downspout Components

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



ITEM	PART NO.	DESCRIPTION	QTY.	NOTES
1	276511	Rack Plate	1	
2	276512	Pivot Pad	6	
3	276513B	Spout Pivot Plate =Black=	2	
4	276999B	Spout Assembly (Black)	1	
5	276515B	Upper Spout Weldment =Black=	1	
6	276526B	Lower Spout Weldment =Black=	1	
7	9405-088	Flat Washer 1/2" USS	2	

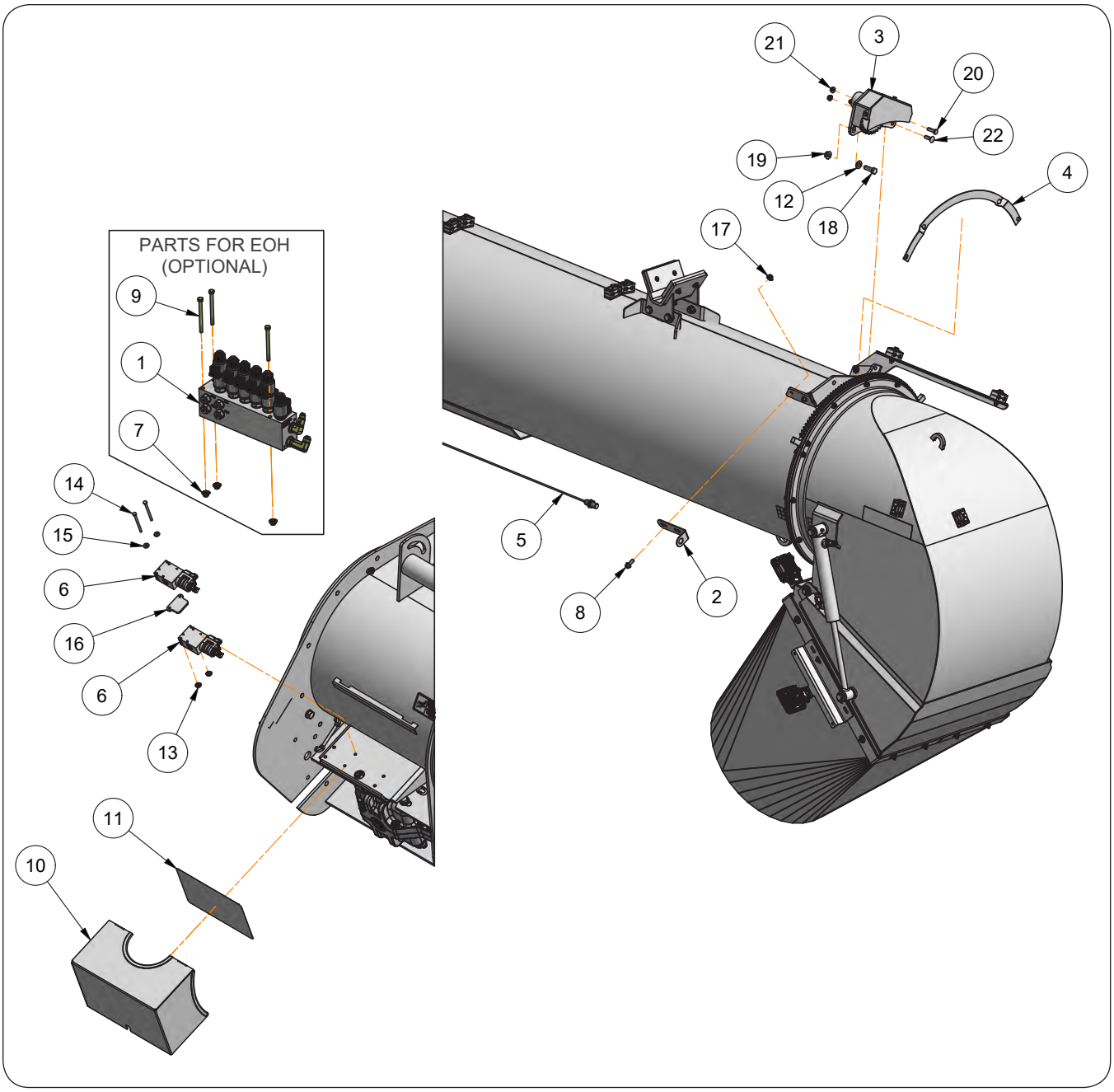
Downspout Components

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

ITEM	PART NO.	DESCRIPTION	QTY.	NOTES
8	9404-025	Lock Washer 1/2"	2	
9	9003810	Snap Ring 3/4"	2	
10	9008318	Rubber Chute	1	
11	9388-003	Carriage Bolt 1/4"-20UNC x 1" G5	14	
12	9388-004	Carriage Bolt 1/4"-20UNC x 1 1/4" G5	2	
13	9405-066	Flat Washer 1/4"	16	
14	97189	Hex Nut/Large Flange 1/4"-20UNC	24	
15	9008957	LED Work Light	3	
16	94763	Fender Washer 5/16" Dia.	16	
17	9390-005	Capscrew 1/4"-20UNC x 1" G5	8	
18	9003127	Reflector 2" x 9" =AMBER=	2	
19	9390-107	Capscrew 1/2"-13UNC x 3" G5	2	
20	95193	Adapter with 0.030" Restrictor	2	
21	285290	Sleeve Bushing .75" OD x .532" ID x 1.938"	2	
22	276531B	Chute Strap =Black=	2	
23	272646B	Light Bracket =Black=	1	
24	9005135	Cylinder 1 1/2" x 8"	1	
25	97445	Elbow, 90° 9/16"-18 JIC M x 9/16-18 O-Ring ADJ M	1	
26	9001495	Adapter 9/16"-18 JIC M x 9/16"-18 O-Ring	1	
27	9005685	Washer 3/4" Dia.	2	
28	276530	Pivot Shaft 3/4" Dia. x 27"	1	
29	276550B	Spacer Plate =Black=	3	
30	276577B	Hose Bracket =Black=	1	
31	9003814	Clamp Top Plate	4	
32	9003816	Double Hose Clamp (Pair)	4	
33	9007837	Shoulder Bolt 3/8" Dia. Socket Head, 5/16"-18UNC x 1 1/4"	5	
34	9007843	Shoulder Bolt 3/8" Dia. Socket Head, 5/16"-18UNC x 1"	10	
35	9008110	Zerk 1/8"-27 with Cap	4	
36	91160	Zerk 1/4"-28 STT	4	
37	91257	Hex Nut/Large Flange 5/16"-18UNC	4	
38	91262	Flange Screw 3/8"-16UNC x 1"	2	
39	91263	Nut/Large Flange 3/8"-16UNC	8	
40	9390-034	Capscrew 5/16"-18UNC x 2" G5	2	
41	9405-064	Flat Washer 1/4" USS	15	
42	9807	Lock Nut/Top 5/16"-18UNC	15	
43	272841B	Light Bracket =Black=	1	
44	265384	Checker Decal	4	

Switch Assembly Components for Rotating Spout

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



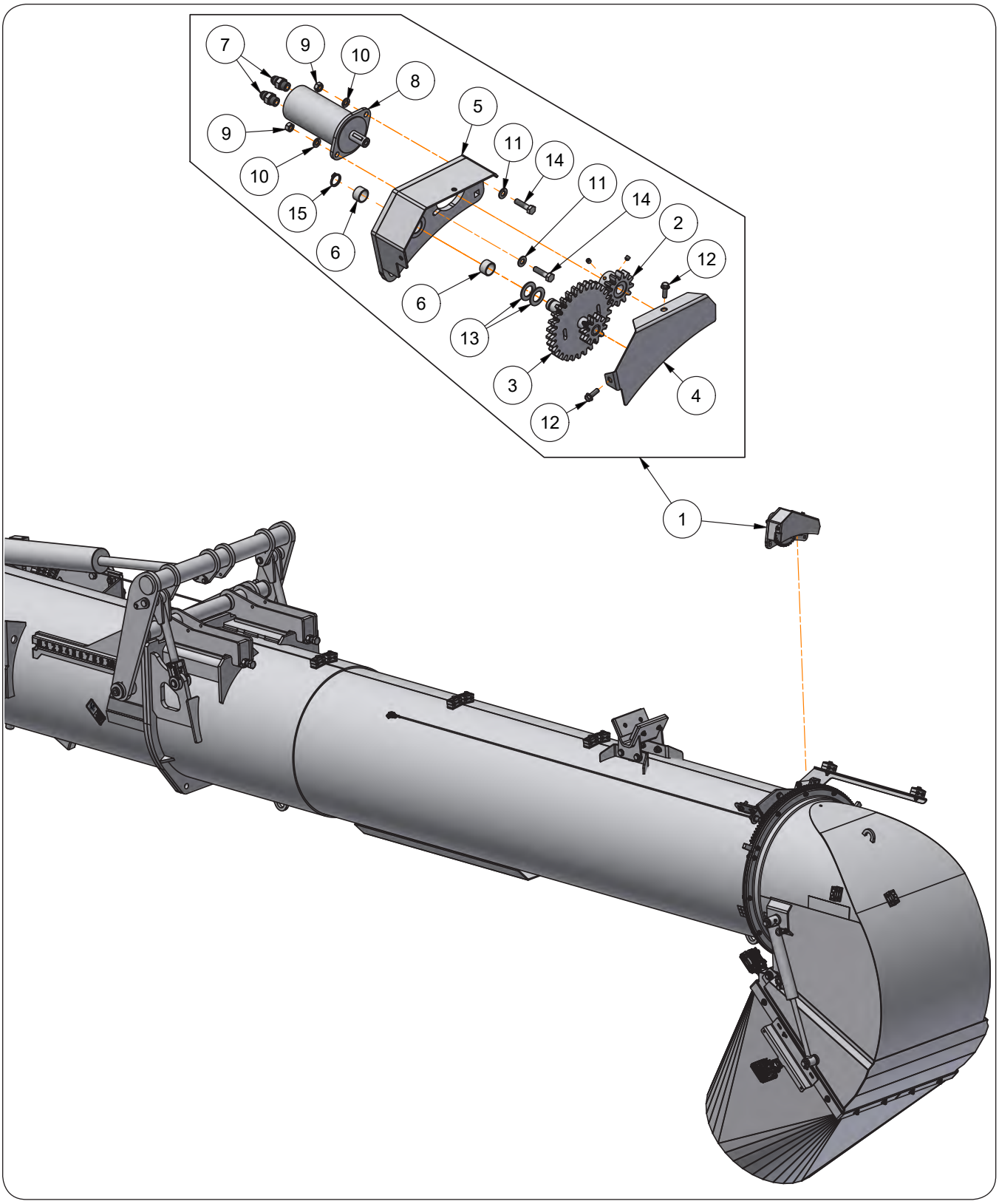
Switch Assembly Components for Rotating Spout

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

ITEM	PART NO.	DESCRIPTION	QTY	NOTES
1	272618	Hydraulic Valve Assembly	1	Optional
2	295720B	Sensor Mount Plate =Black=	1	
3	276457B	Spout Motor Assembly (Black)	1	Refer to "Spout Motor Assembly" Section
4	295798B	Sensor Plate =Black=	1	
5	9007223	Proximity Sensor with Connector	1	
6	9009184	Inline Valve Assembly	2	
7	91257	Hex Nut/Large Flange 5/16"-18UNC	3	Optional
8	91262	Flange Screw 3/8"-16UNC x 1" G5	2	
9	9390-043	Capscrew, 5/16"-18UNC x 4 1/2" G5	3	Optional
10	295569B	Valve Cover Plate =Black=	1	Also Order Item #11
11	9009341	Decal, CAUTION (Valve Block)	1	Located Inside Cover Plate #10
12	9405-086	Flat Washer 1/2" SAE	1	
13	97189	Hex Nut/Large Flange 1/4"-20UNC	3	
14	9390-017	Capscrew, 5/16"-18UNC x 4 1/2" G5	2	
15	9405-064	Flat Washer 1/4"	2	
16	294614B	Spacer Plate =Black=	1	
17	91263	Nut/Large Flange 3/8"-16UNC	2	
18	9390-101	Capscrew 1/2"-13UNC x 1 1/2" G5	1	
19	9003397	Locknut/Top 1/2"-13UNC	1	
20	9390-056	Capscrew 3/8"-16UNC x 1 1/4" G5	1	
21	9003396	Locknut/Top 3/8"-16UNC	2	
22	9388-052	Carriage Bolt 3/8"-16UNC x 1 1/4" G5	1	

Spout Motor Assembly

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



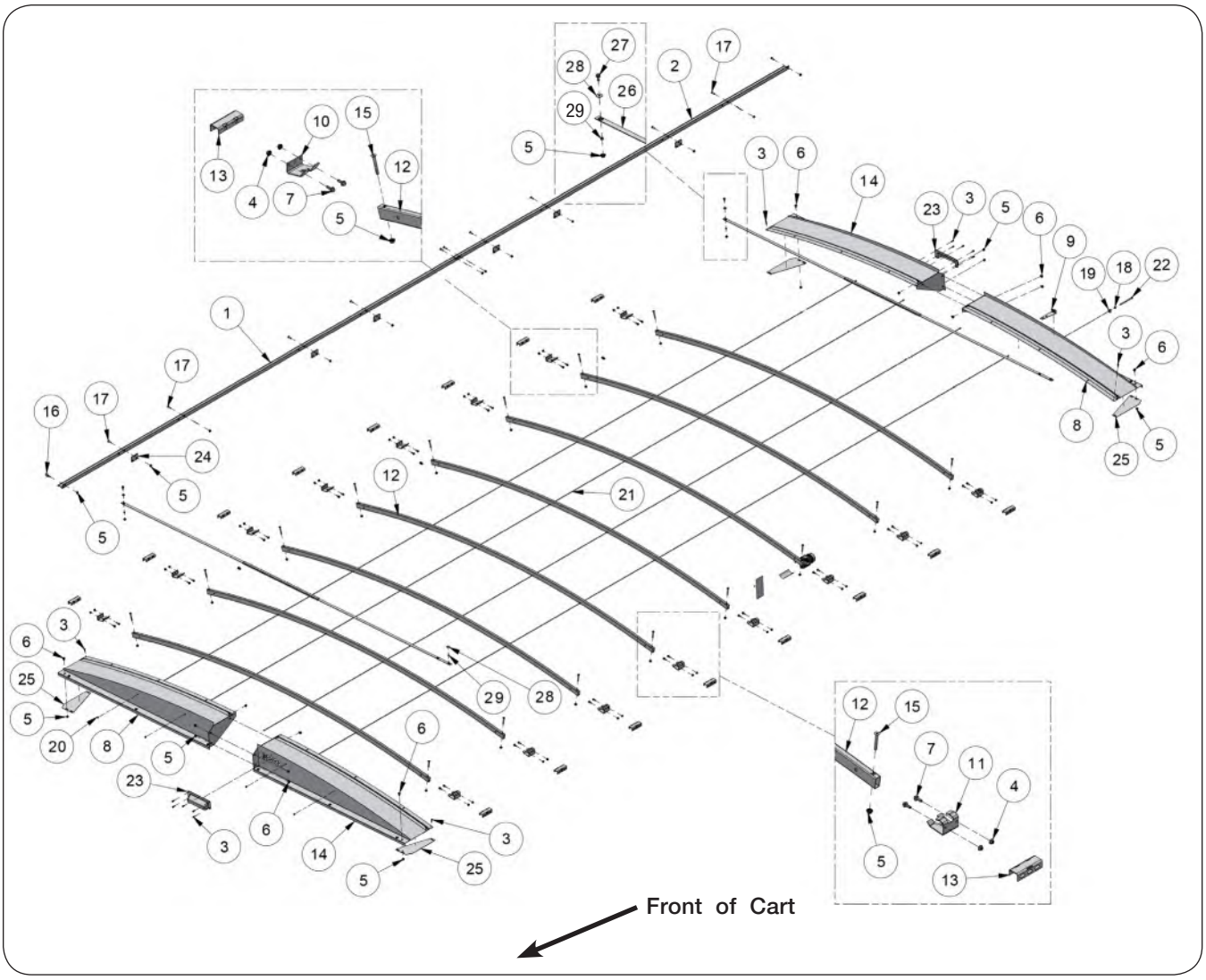
Spout Motor Assembly

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

ITEM	PART NO.	DESCRIPTION	QTY	NOTES
1	276457B	Spout Motor Assembly (Black)	1	Includes All Items
2	272840	Gear Weldment w/ 1/4"-20UNC x 1/4" Set Screws	1	
3	276451	Gear and Shaft Weldment	1	
4	276456B	Panel-Cover =BLACK=	1	
5	276453B	Gear Drive Mount Weldment =BLACK=	1	
6	9003809	Self-Lubricating Bushing, .882" OD x .758" ID x 1/2"	2	
7	9001495	Adapter 9/16"-18 JIC M x 9/16"-18 OR M	2	
8	9007626	Motor-Hydraulic 3.07" CID, 5.28 GPM, 2 Bolt Flange Mount	1	
9	9394-004	Hex Nut 5/16"-18UNC	2	
10	9404-019	Lock Washer 5/16"	2	
11	9405-068	Flat Washer 5/16" SAE	2	
12	97420	Flange Screw 1/4"-20UNC x 3/4"	2	
13	TA500309	Washer 3/4"	2	
14	9390-031	Capscrew, 5/16"-18UNC x 1 1/4" G5	4	
15	9003810	Snap Ring 3/4"	1	

Weather Guard End Caps, Tarp Bows, & Brackets

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



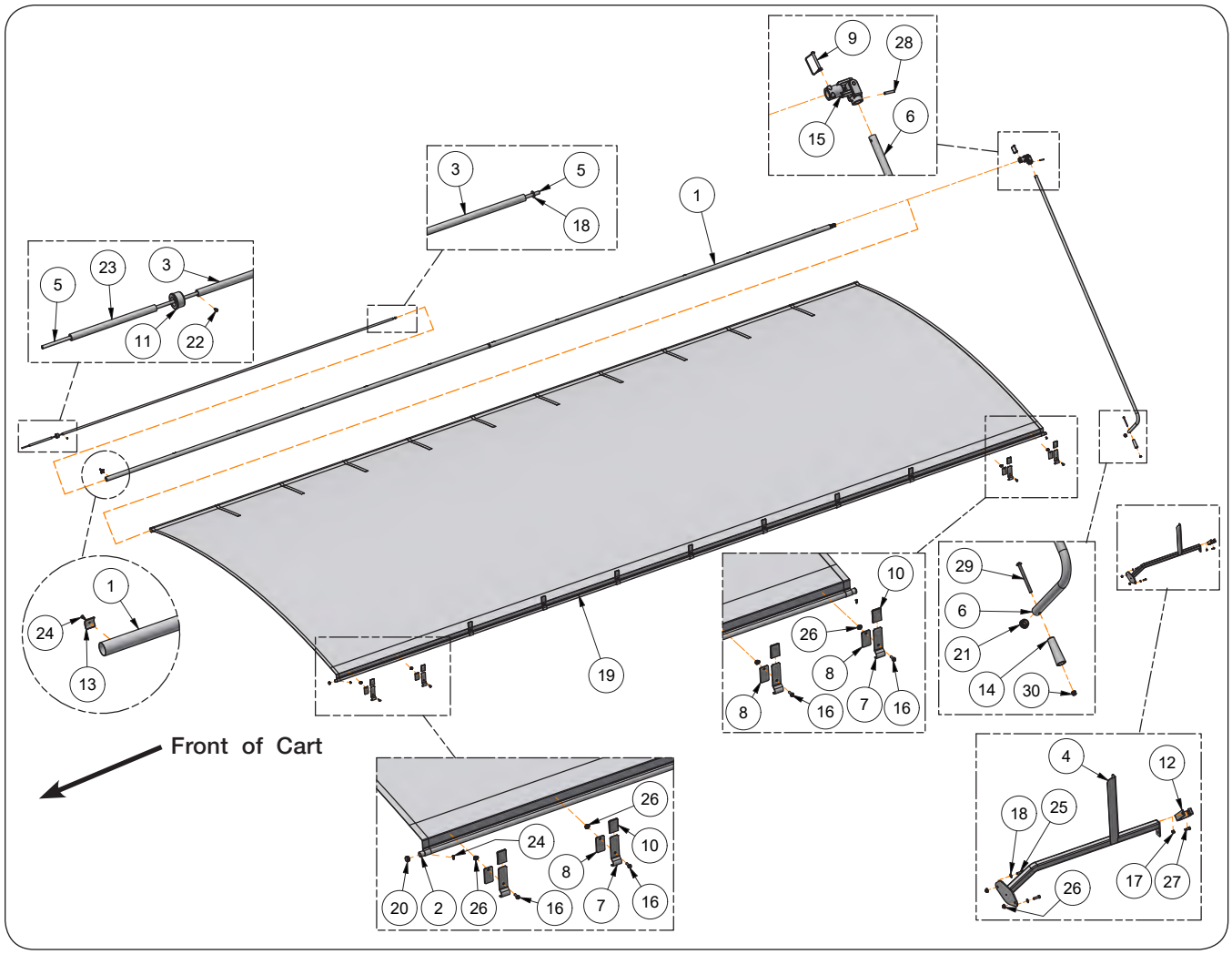
Weather Guard End Caps, Tarp Bows, & Brackets

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

ITEM	PART NO.	DESCRIPTION	QTY	NOTES
1	296842	Plate - Latch 171 1/4" (Front)	1	
2	296843	Plate - Latch 171 1/4" (Rear)	1	
3	9512	Self Drilling Screw 1/4-14 x 1"	18	
4	91257	Hex Nut/Large Flange, 5/16-18 UNC	32	
5	91263	Nut/Large Flange 3/8"-16UNC Grade 5	59	
6	95585	Capscrew/Large Flange 3/8-16UNC x 3/4	20	Grade 5
7	97604	Screw/Large Flange, 5/16"-18UNC x 1"	32	
8	276756B	RH Front & LH Rear-End Cap Weldment =Black=	2	
9	281712B	Bracket Assembly =Black=	4	
10	283425B	RH Bracket For Side Boards/Tarp Bow Weldment =Black=	8	
11	283427B	LH Bracket For Side Boards/Tarp Bow Weldment =Black=	8	
12	291289B	Tarp Bow Weldment =Black=	8	
13	294678B	Sideboard Doubler =Black=	16	
14	296115B	LH Front & RH Rear-End Cap Weldment =Black=	2	
15	902703-046	Flat Socket Capscrew 3/8"-16UNC x 3"	16	
16	9004548	Eye Bolt 3/8"-16UNC x 1 3/4"	1	
17	9009089	Torx Head Machine Screw 3/8-16UNC x 1 1/4	11	
18	9005688	Star Washer	4	
19	9005696	Fender Washer	4	
20	9005727	Plug 7/16"	4	
21	9005990	Cable Assembly 324"	4	Holds up to 6
22	9008315	Capscrew 3/8"-16UNC x 6" (Full Threaded)	4	
23	9009504	End Cap Vent Cover	2	
24	295259B	Tarp Spacer Plate =Black=	6	
25	295284B	Sideboard Cover Plate =Black=	4	
26	9008952	Hurricane Strap For 14 FT Wide Hopper	2	
27	96972	Screw/Self Tapping 3/8"-16UNC x 1"	2	
28	9008972	Flat Washer, 3/8" Aluminum	4	
29	9008949	Tarp Strap Spacer Bushing	4	

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

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



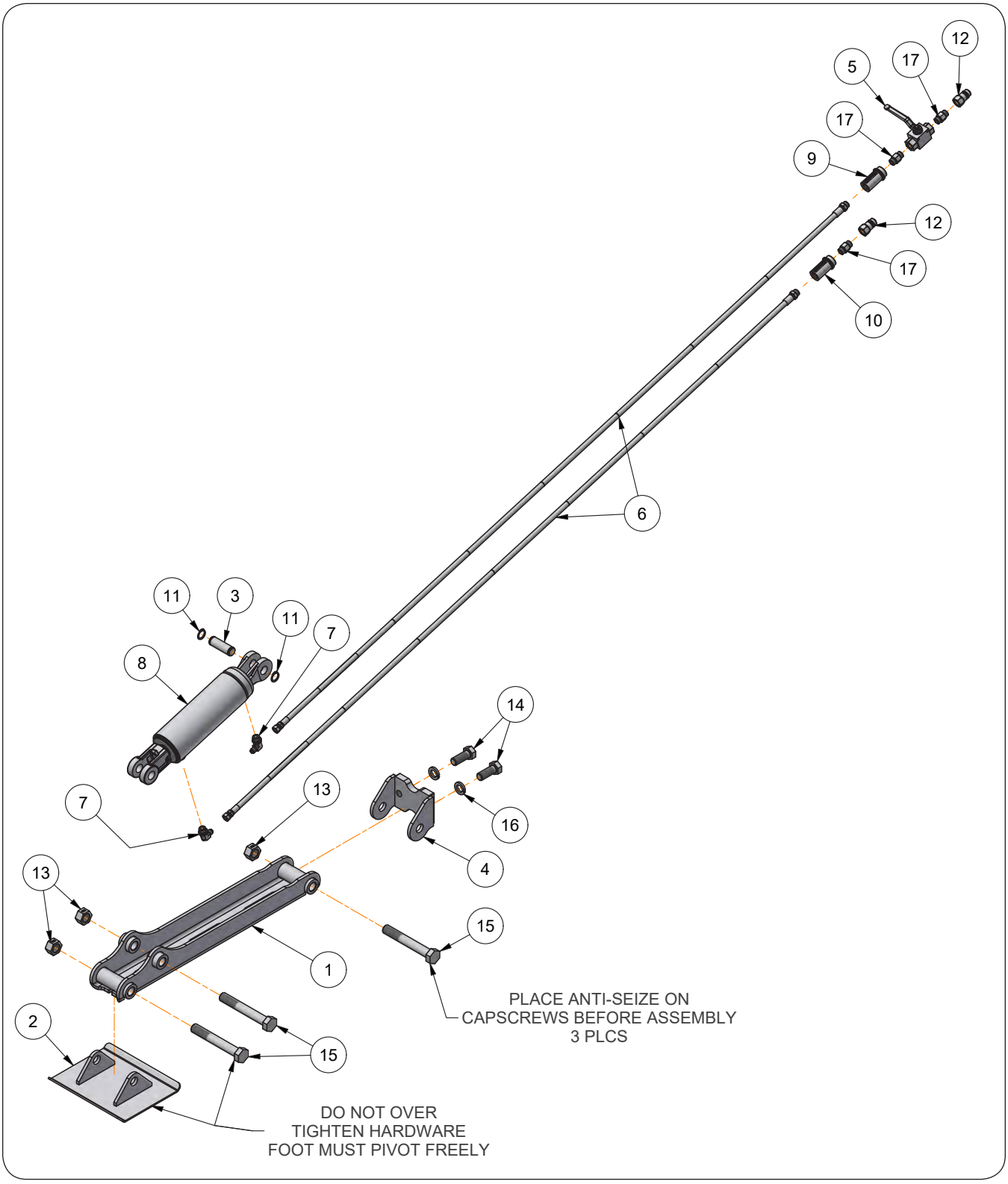
Weather Guard Tarp, Handle, Tubes, & Stop Plate Components

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

ITEM	PART NO.	DESCRIPTION	QTY	NOTES
	273518	Tarp Kit	-	Includeds All Items
1	273381	Roll Tube Weldment	1	
2	273382	Fixed Tube Weldment	1	
3	221668	Pipe - 180"	1	
4	296594B	Handle Bracket Weldment =Black=	1	For SN B44430100 & Higher
	273501B		1	For SN B44430099 & Lower
5	221722	Bungee 3/8" Dia. x 204"	1	
6	297234	Tarp Handle Weldment	1	For SN B44430100 & Higher
	221749			For SN B44430099 & Lower
7	266689B	Tarp Short Stop Plate =Black=	10	
8	295183B	Tarp Stop Spacer Plate =Black=	8	
9	9005305	Lynch Pin 3/8" x 3"	1	
10	9003078	Cap - Plastic (2" x 3")	10	
11	9004947	Plug 2"	1	
12	221770B	Handle Retainer Weldment =Black=	1	
13	9004949	U-Clamp	9	
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	9	
17	9928	Locknut 3/8"-16UNC	1	
18	9405-074	Flat Washer 3/8"	3	For SN B44430100 & Higher
			1	For SN B44430099 & Lower
19	9005856	Tarp 188" x 337"	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	Self Drilling Screw #10-16 x 3/4" Pan Head	11	
25	91262	Large Flange Screw 3/8"-16UNC x 1" Grade 5	4	For SN B44430100 & Higher
	9390-056	Capscrew 3/8"-16UNC x 1 1/4"	2	For SN B44430099 & Lower
26	91263	Nut/Large Flange 3/8"-16UNC Grade 5	12	For SN B44430100 & Higher
			10	For SN B44430099 & Lower
27	9390-055	Capscrew 3/8"-16UNC x 1" Grade 5	1	
28	9392-180	Roll Pin 3/8" Dia. x 2"	1	
29	903172-450	Pan Head 3/8"-16UNC x 4 1/2" Phillips	1	
30	9398-012	Elastic Stop Nut 3/8"-16UNC	1	

Hydraulic Jack - Kit #294143B

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



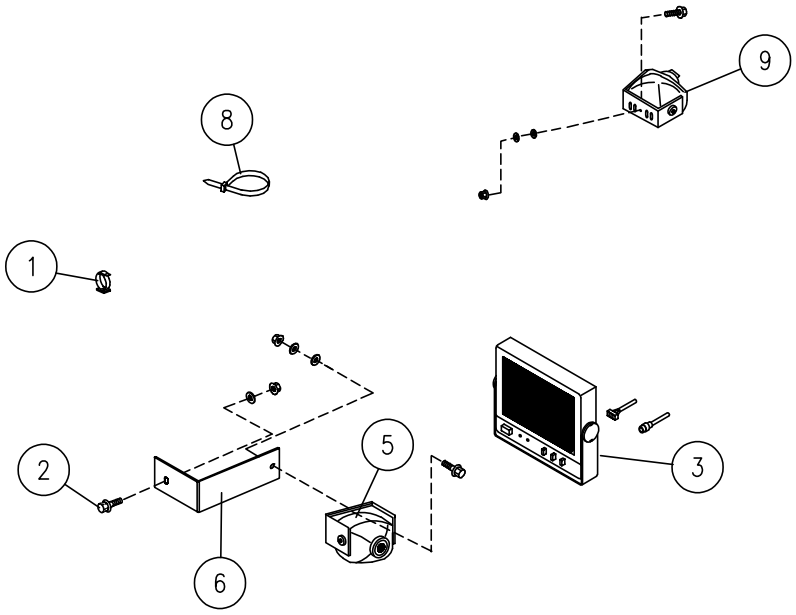
Hydraulic Jack - Kit #294143B

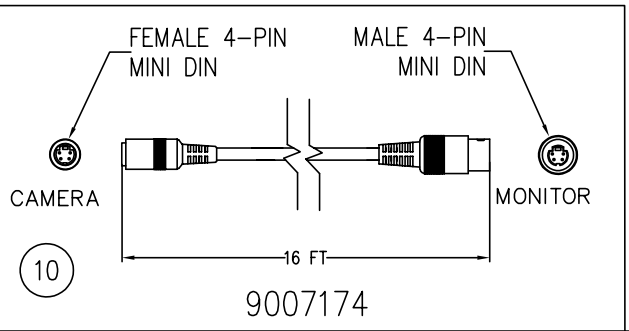
Please visit www.unverferth.com/parts/ for the most current parts listing.

ITEM	PART NO.	DESCRIPTION	QTY	NOTES
1	271712B	Jack Weldment =Black=	1	
2	271723B	Jack Foot Weldment =Black=	1	
3	272587	Pin, 1" Dia. x 3 1/8"	1	
4	273808B	Jack Mount 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°	2	
8	9009047	Hydraulic Cylinder, 3 1/2" x 8" - 3000 PSI	1	
9	9009757	Hose Grips - Black (+ Raise Jack)	1	
10	9009758	Hose Grips - Black (- Lower Jack)	1	
11	91192	Retaining Ring, 1"	2	
12	91383	Male Tip Coupling	2	
13	92199	Center Locknut, 1"-8UNC	3	
14	9390-165	Capscrew, 7/8"-9UNC x 2 1/4" Grade 5	2	
15	9390-197	Capscrew, 1"-8UNC x 7" Grade 5	3	
16	9404-037	Split Lock Washer, 7/8"	2	
17	98508	Adapter, 3/4"-16 OR Male x 3/4"-16 OR Male	3	

Video System (Optional)

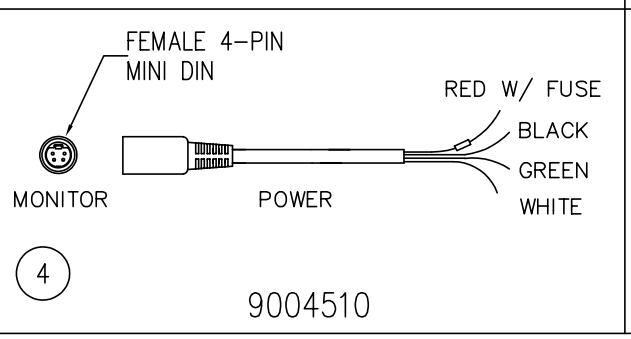
Please visit www.unverferth.com/parts/ for the most current parts listing.

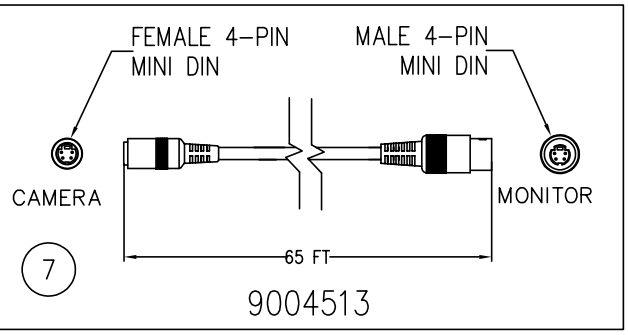




9004510 CABLE W/FUSE WIRES
Red -- Key Switched Power
Black -- Ground
Green -- **NOT USED**
White -- **NOT USED**

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





Video System (Optional)

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

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


MEMBER
FEMA
FARM EQUIPMENT
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