

***BRENT*** Grain Handling

AVALANCHE® DOUBLE-AUGER  
GRAIN CART  
MODEL 2598

Serial Number B42860100 & Higher

Part No. 296163

## **Foreword**

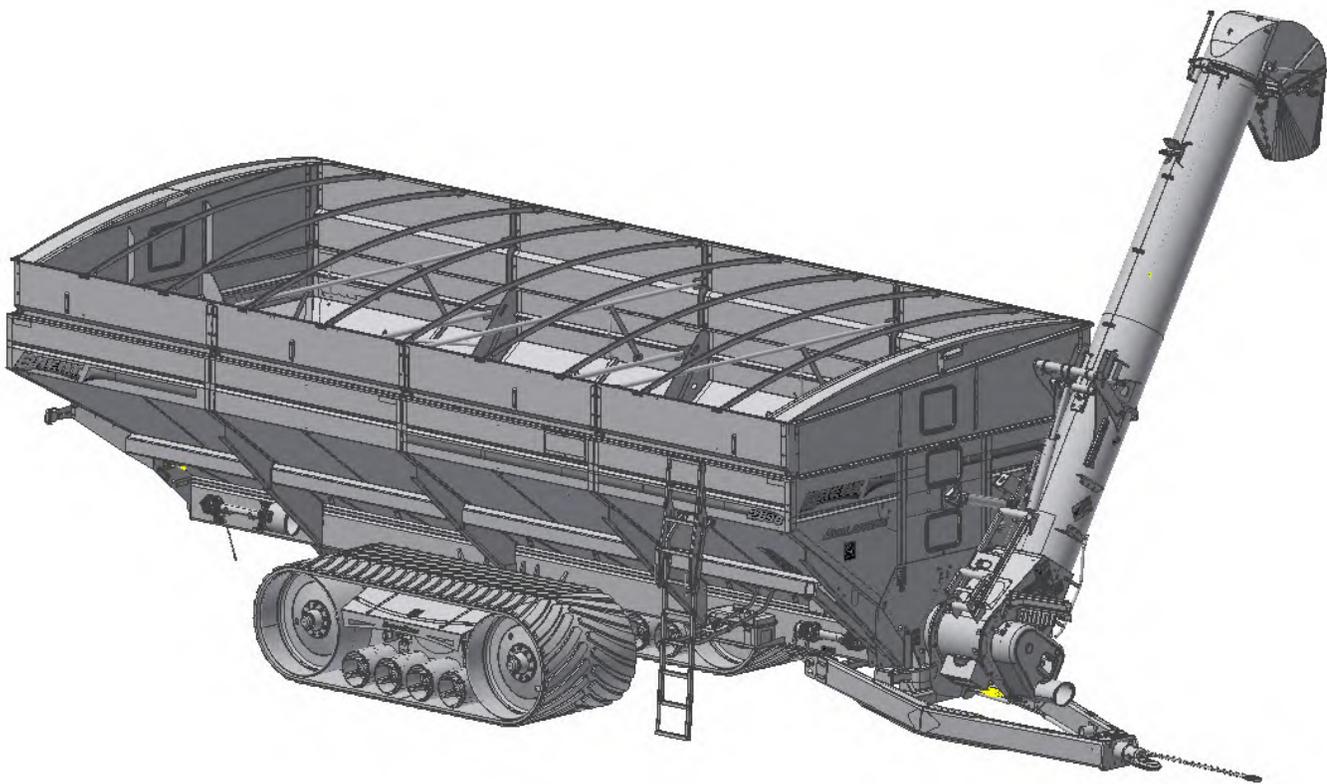
 This symbol identifies important safety messages. When you see it, read the message that follows and be alert to the possibility of personal injury.

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

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

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

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



## Product Information

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

- Machine name
- Model number
- Serial number

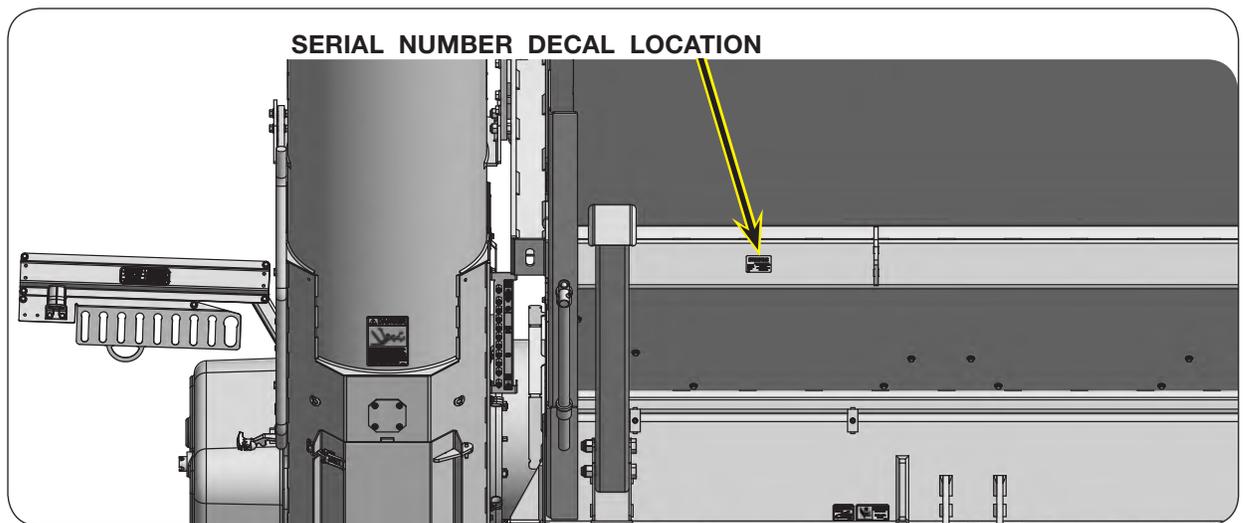
All products manufactured by Unverferth Mfg. Co., Inc. are warranted to be free from material and workmanship defects for one full year from time of consumer delivery. Your local dealer will gladly assist you with any warranty questions.

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

Purchase Date \_\_\_\_\_ Model \_\_\_\_\_ Serial No. \_\_\_\_\_

Dealer \_\_\_\_\_ City \_\_\_\_\_

Dealer Contact \_\_\_\_\_ Phone \_\_\_\_\_



### **IMPORTANT**

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

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

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

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## General Hazard Information

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

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

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

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



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

### SIGNAL WORDS



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



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



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

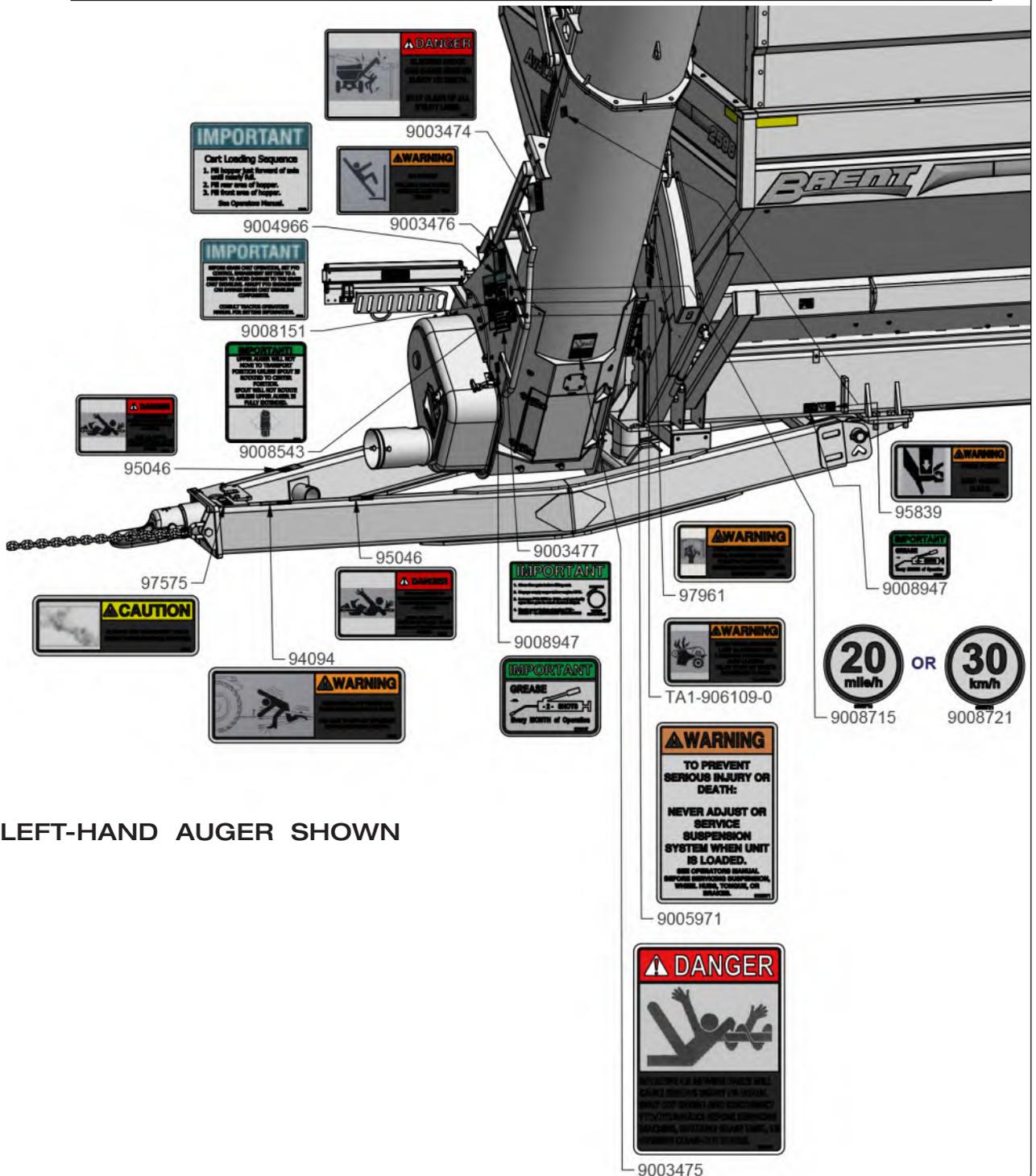


*Is used for instruction on operating, adjusting, or servicing a machine.*

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 AUGER SHOWN

Decals

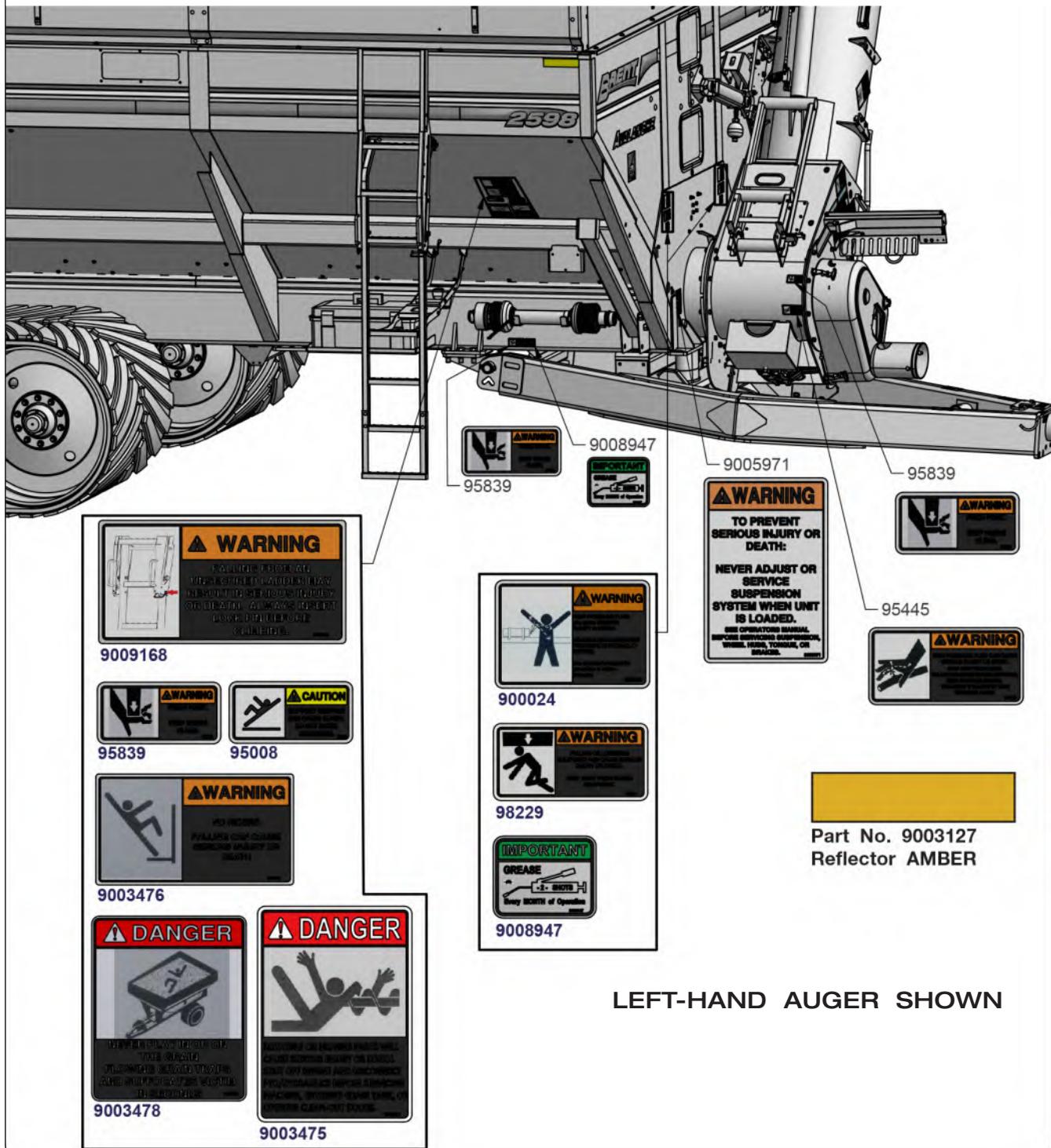
LEFT-HAND CONFIGURATION SHOWN  
RIGHT-HAND CONFIGURATION SIMILAR



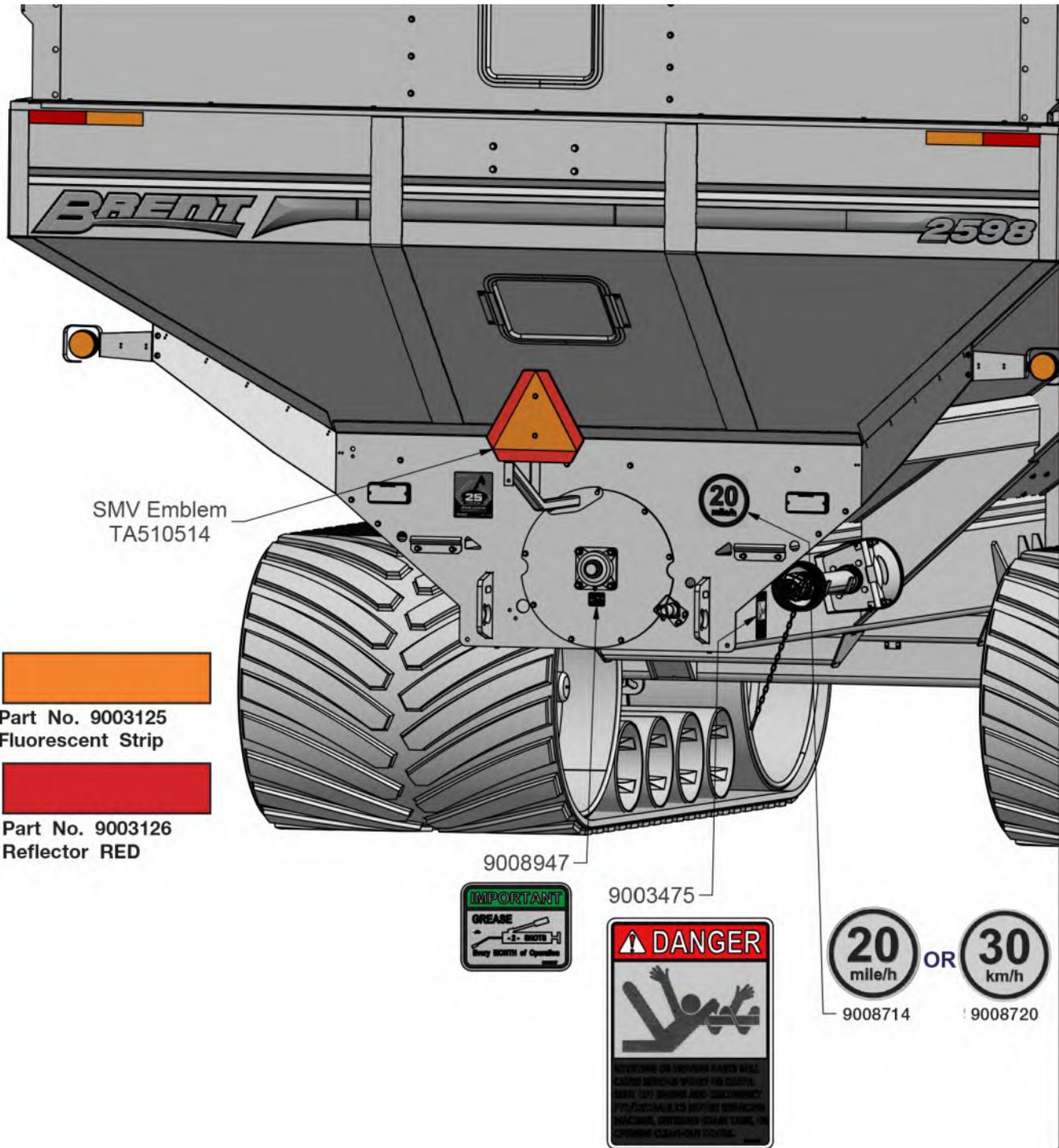
TA1-906109-0



Decals



Decals



SMV Emblem  
TA510514



Part No. 9003125  
Fluorescent Strip



Part No. 9003126  
Reflector RED

9008947



9003475



OR



9008714

9008720

## Following Safety Instructions

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

## Before Operating

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

## Before Servicing

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

## During Operation

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

## Before Transporting

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

### **During Transport**

- Comply with all laws governing highway safety when moving machinery.

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- Use transport lights as required by all laws to adequately warn operators of other vehicles.

---

- Regulate speed to road conditions and maintain complete control.

---

- Maximum transport speed of this implement should never exceed 20 m.p.h. as indicated on the machine. Maximum transport speed of any combination of implements must not exceed the lowest specified speed of the implements in combination. Do not exceed 10 m.p.h. during off-highway travel.

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- 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.

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

### **Pressurized Oil**

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

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

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- 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.

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

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

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

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- 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.

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

## Driveline Safety



- Do not allow children near equipment that is running or engaged.
- Do not exceed 1000 r.p.m. PTO speed.
- Disengage the PTO, stop the tractor engine, and remove key from ignition before making inspections, or performing maintenance and repairs.
- Inspect the driveline, quick disconnect, overload shear-bolt limiter or clutch, and shielding often. Repair immediately. Use replacement parts and attaching hardware equivalent to the original equipment. 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 the 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.
- Proper extended and collapsed lengths of the telescoping PTO shaft must be verified before first operation with each and every tractor. If the extended length of the PTO shaft is insufficient, it may become uncoupled during operation and cause serious injury or death from contact with uncontrolled flailing of PTO shaft assembly components.

### **Preparing for Emergencies**

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



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



### **Wearing Protective Equipment**

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



- Wear steel-toed shoes when operating.



- Wear hearing protection when exposed to loud noises.



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



**Notes**

# **Section II**

# **Set Up**

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

## Set Up Checklist

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

- Set or Calibrate tractor PTO control engagement to MINIMUM setting. Refer to tractor operator's manual for setting information.
- Remove auger spout cylinder stop.
- Remove auger spout rotate shipping bracket.
- Remove PTO from shipping brackets, install onto gearbox input shaft and set in PTO holder.
- For Right-Hand unload with water delivery, install transport rest (296086G/R/BM).
- Torque track wheel nuts as specified in MAINTENANCE section.
- Verify track has been aligned and is properly conditioned. (If applicable)
- Lubricate all grease fittings and check gearbox oil level.
- Inspect cleanout door assembly for play or movement, refer to "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.
- Install transport chains and torque hardware to specification. See "Transport Chain Connection" in OPERATION section.
- Paint all parts scratched in shipment.
- Test run the augers. See "Auger Operation" in OPERATION section.
- Check hydraulics for leaks and check hose routing.

## **Repositioning Tongue**

### **WARNING**

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

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

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

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

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- 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.

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- 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.

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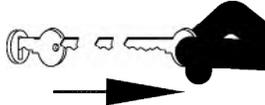
- FALLING OBJECTS CAN CAUSE SERIOUS INJURY OR DEATH. DO NOT WORK UNDER THE MACHINE AT ANY TIME WHILE BEING HOISTED. BE SURE ALL LIFTING DEVICES AND SUPPORTS ARE RATED FOR THE LOADS BEING HOISTED. THESE ASSEMBLY INSTRUCTIONS WILL REQUIRE SAFE LIFTING DEVICES UP TO 7,000 LBS. SPECIFIC LOAD RATINGS FOR INDIVIDUAL LOADS WILL BE GIVEN AT THE APPROPRIATE TIME IN THE INSTRUCTIONS.

Repositioning Tongue (continued)

**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 tracks on the machine to keep the unit from moving. Set the vehicle parking brake, shut off the engine and remove the ignition key.



2. Using a safe lifting device rated at a minimum of 7,000 lbs., raise the front of the cart.

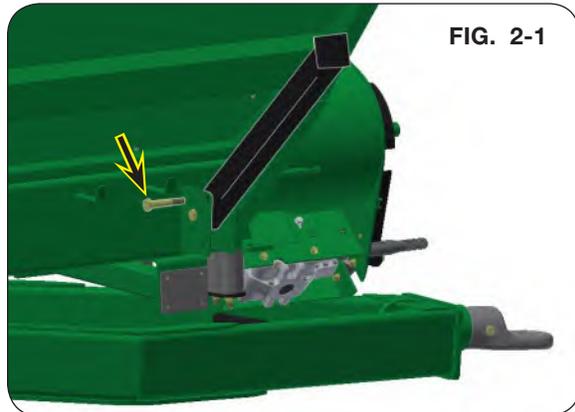


FIG. 2-1

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.

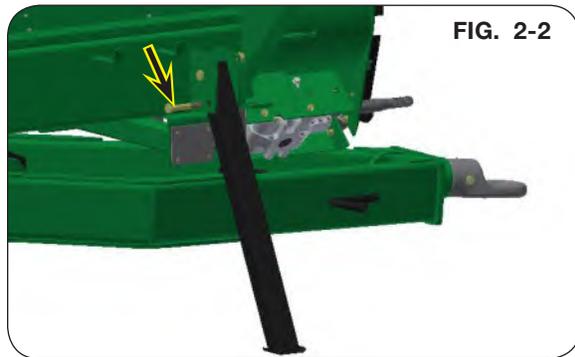


FIG. 2-2

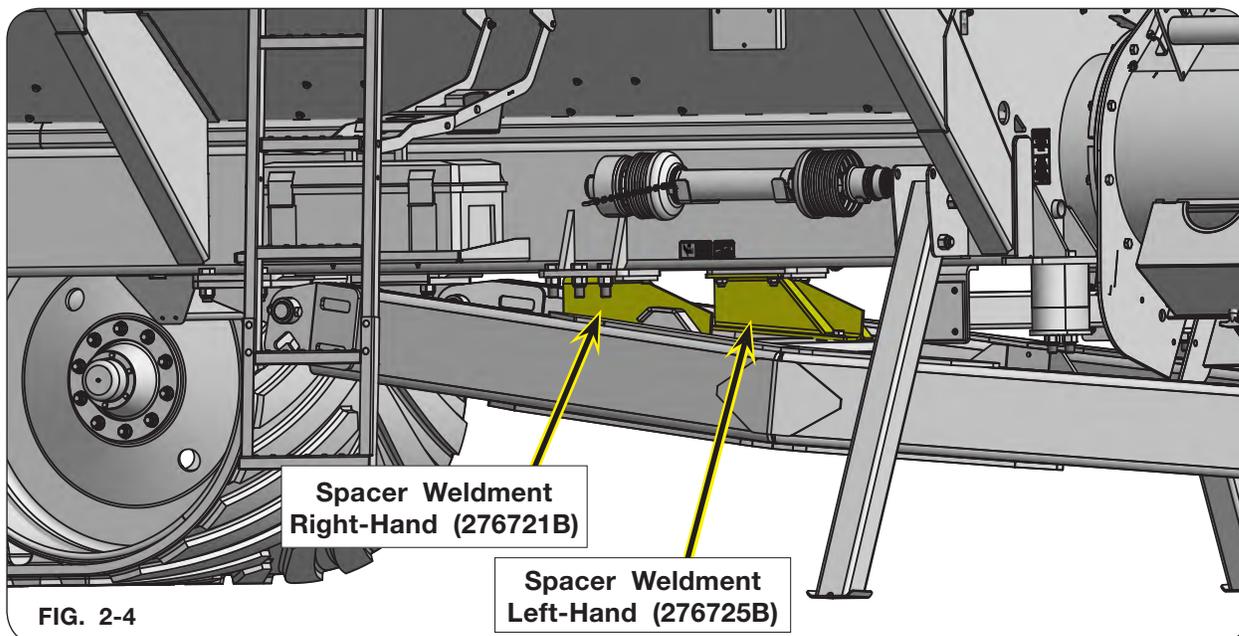
4. Remove and save the 1"-8UNC x 10 1/2" capscrews (9390-465), spring retainer plates (271687B), both urethane springs (9006456 and 9006457), and 1"-8UNC elastic locknuts (9398-026). (FIG. 2-3)



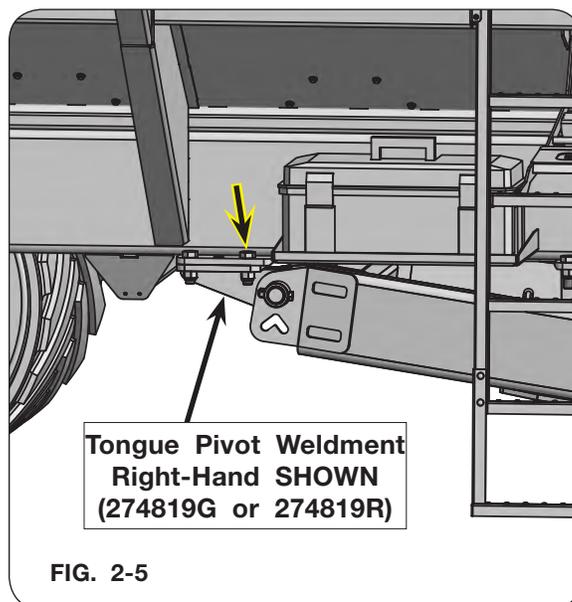
FIG. 2-3

**Repositioning Tongue** (continued)

5. Support the tongue with safe lifting devices rated for a minimum of 2,000 lbs.
6. Remove and discard the 3/4"-10UNC locknuts (9003399), 3/4" SAE flat washers (9405-104), 3/4"-10UNC x 2 1/4" capscrews (9390-146), and spacer weldments (left-hand 276725B and right-hand 276721B) from the tongue. (FIG. 2-4)



7. Remove and save the 1"-14UNS x 3" cap-screws (9390-409) and 1"-14UNS elastic lock nuts (9008441) from the tongue pivot weldments (left-hand 274818G or 274818R; right-hand 274819G or 274819R). (FIG. 2-5)



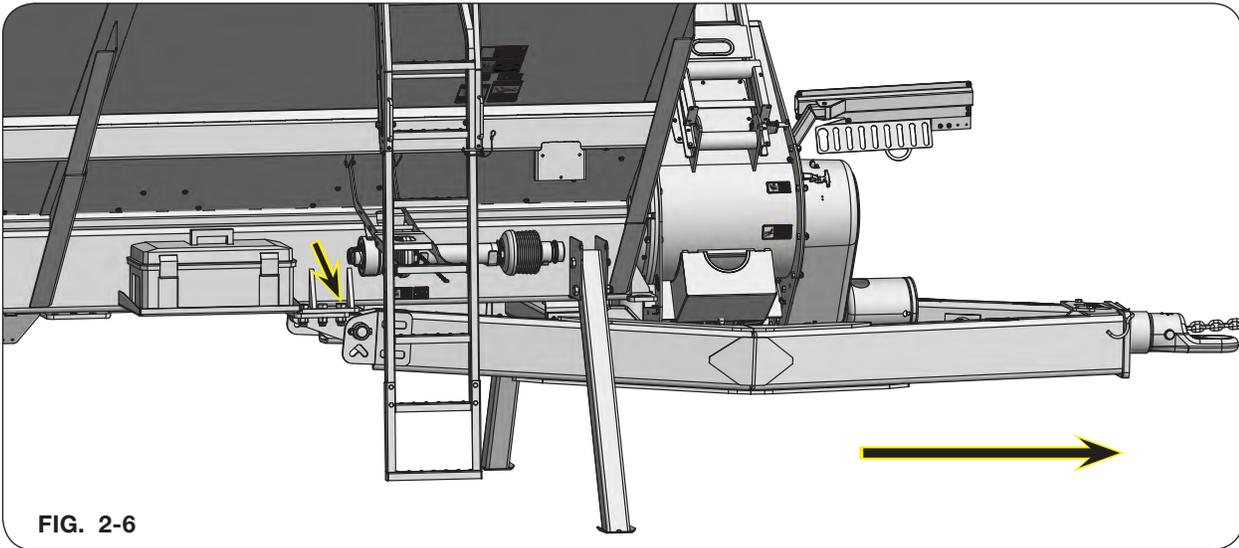
**Repositioning Tongue** (continued)

- Using a safe lifting device rated at a minimum of 2,000 lbs., slide the tongue forward until the tongue pivots align with the forward mounting plate. (FIG. 2-6)

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

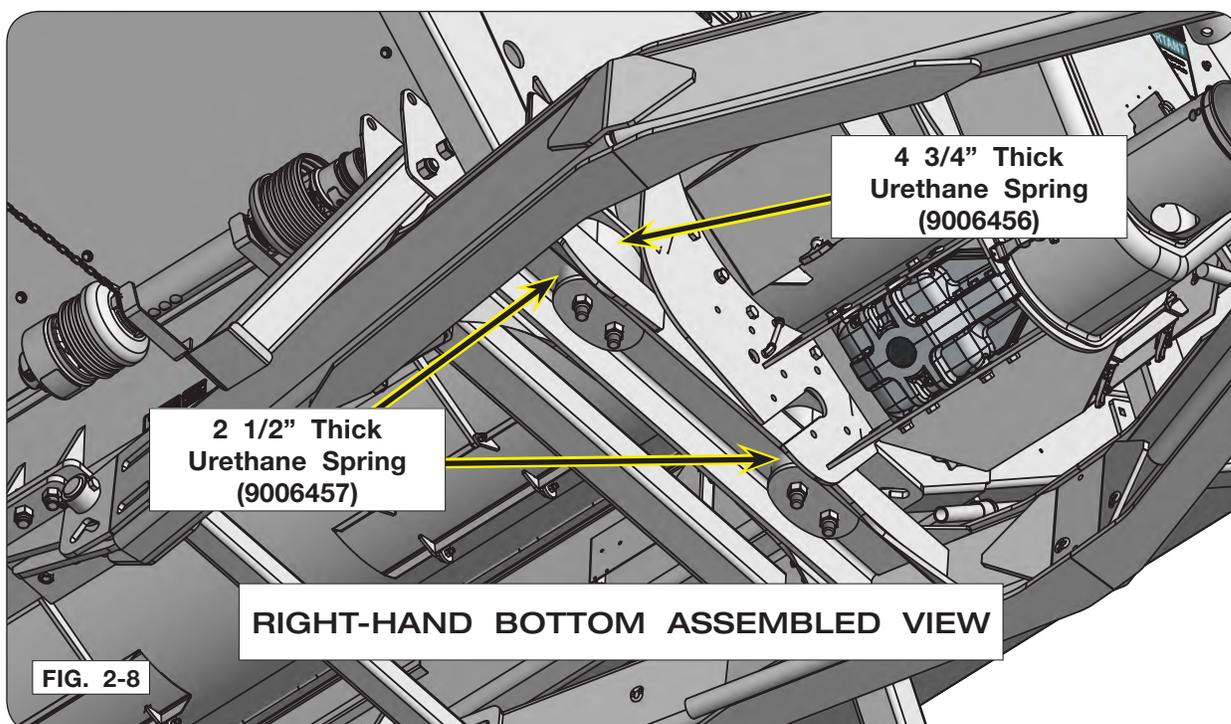
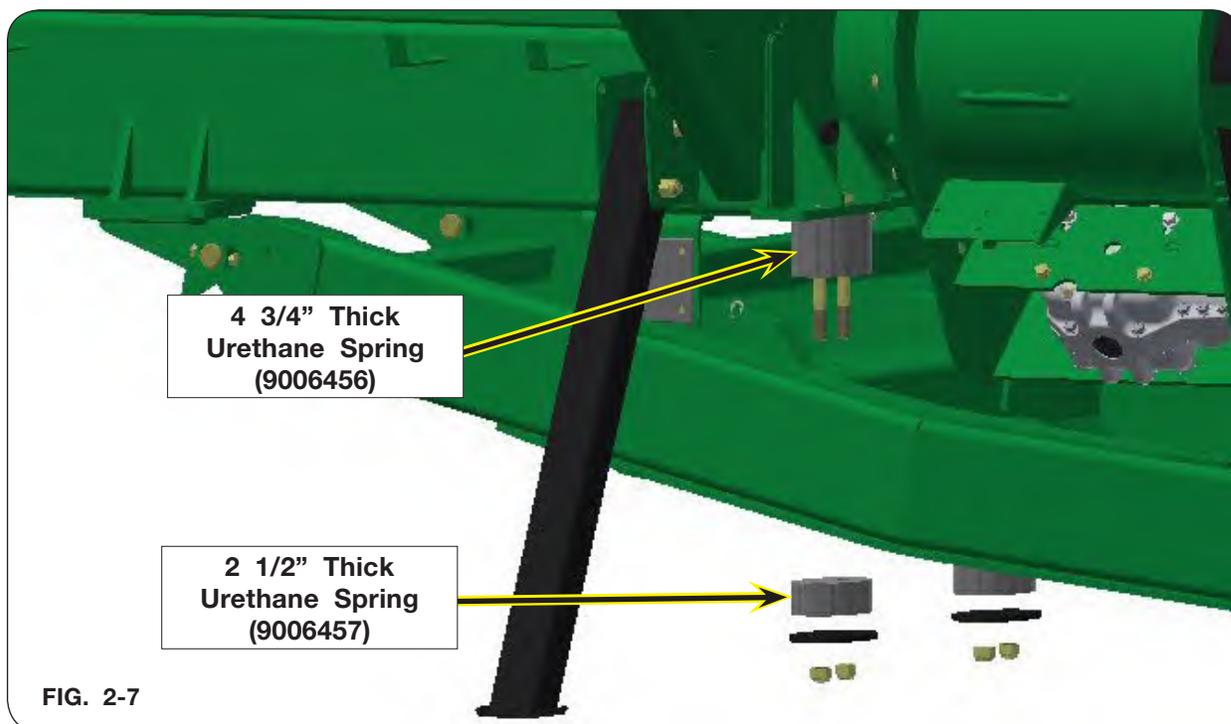
- Secure the tongue pivot weldment to the cart with 1"-14UNS x 3" capscrews (9390-409) and 1"-14UNS elastic lock nuts (9008441). (FIG. 2-6)

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



**Repositioning Tongue** (continued)

11. 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).
12. Tightening the 1" UNC hardware compresses the upper bumpers 1/4". (FIG. 2-7 & 2-8)



**Repositioning Tongue** (continued)

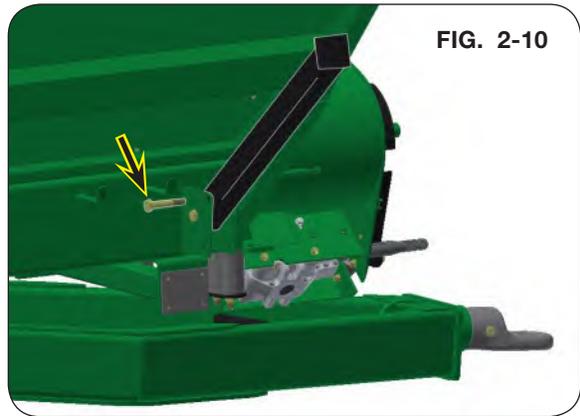
**13. HYDRAULIC JACK**

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.



14. 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)



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

## Upper Ladder Extension to Operating Position

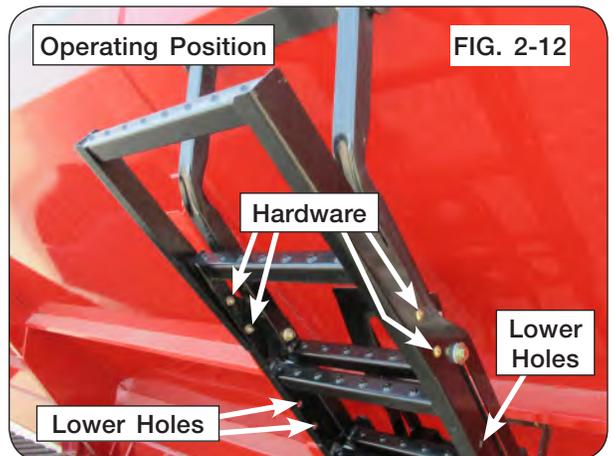
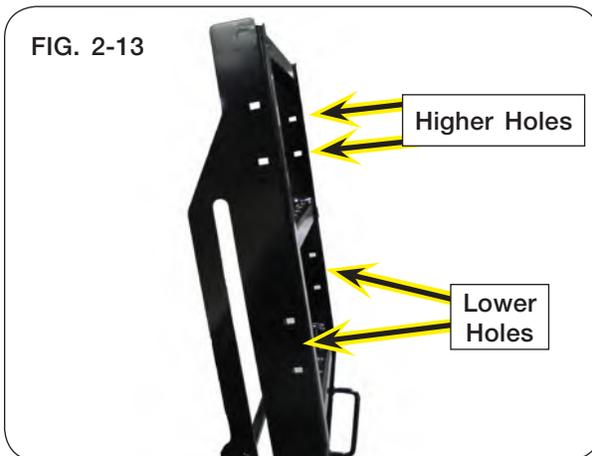
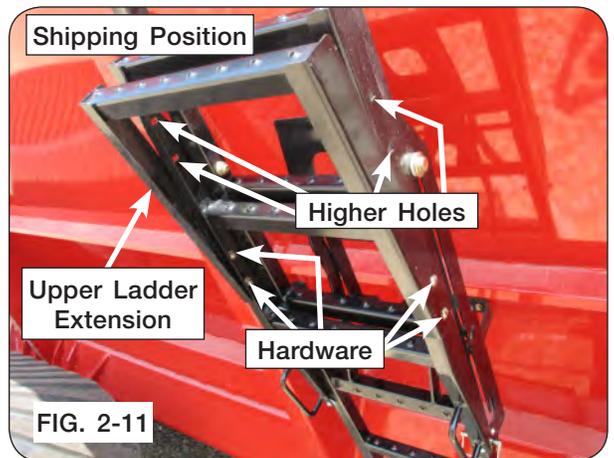
### **WARNING**

- FALLING OR LOWERING EQUIPMENT CAN CAUSE SERIOUS INJURY OR DEATH. KEEP EVERYONE AWAY FROM EQUIPMENT WHEN SUSPENDED, RAISING, OR LOWERING.
- KEEP HANDS CLEAR OF PINCH POINT AREAS.
- DO NOT ALLOW ANYONE TO RIDE ON THE LADDER. MAKE SURE EVERYONE IS CLEAR BEFORE OPERATING MACHINE OR TOWING VEHICLE.
- TO PREVENT PERSONAL INJURY OR DEATH, ALWAYS ENSURE THAT THERE ARE PEOPLE WHO REMAIN OUTSIDE THE CART TO ASSIST THE PERSON WORKING INSIDE, AND THAT ALL SAFE WORKPLACE PRACTICES ARE FOLLOWED. THERE ARE RESTRICTED MOBILITY AND LIMITED EXIT PATHS WHEN WORKING INSIDE THE IMPLEMENT.
- NEVER ENTER A CART CONTAINING GRAIN. FLOWING GRAIN TRAPS AND SUFFOCATES VICTIMS IN SECONDS.

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

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

1. Move the upper ladder extension (289707B) from shipping position by removing the 5/16”-18UNC x 3/4” carriage bolts (9388-024), 5/16” flat washers (9405-064) and 5/16”-18UNC lock nuts (9008441). Keep hardware for next step. (FIG. 2-11)
2. Using hardware from step 1, attach upper ladder extension to the higher set of holes to be in operating position. (FIG. 2-11, FIG. 2-12 & FIG. 2-13)
3. Torque hardware to 17 ft.-lbs.



## Auger Set Up

### **WARNING**

- HIGH-PRESSURE FLUIDS CAN PENETRATE THE SKIN AND CAUSE SERIOUS INJURY OR DEATH. USE CARDBOARD OR WOOD TO DETECT LEAKS IN THE HYDRAULIC SYSTEM. SEEK MEDICAL TREATMENT IMMEDIATELY IF INJURED BY HIGH-PRESSURE FLUIDS.
- RELIEVE THE HYDRAULIC SYSTEM OF ALL PRESSURE BEFORE ADJUSTING OR SERVICING. SEE THE HYDRAULIC POWER UNIT OPERATOR'S MANUAL FOR PROPER PROCEDURES.
- HYDRAULIC SYSTEM MUST BE PURGED OF AIR BEFORE OPERATING TO PREVENT SERIOUS INJURY OR DEATH.
- MOVING OR ROTATING COMPONENTS CAN CAUSE SERIOUS INJURY OR DEATH. ENSURE SERVICE COVERS, CHAIN/BELT COVERS AND CLEAN-OUT DOOR ARE IN PLACE AND SECURELY FASTENED BEFORE OPERATING UNIT.
- UNHITCHING A LOADED CART CAN CAUSE SERIOUS INJURY OR DEATH DUE TO THE TONGUE RISING OR FALLING. ALWAYS HAVE A LOADED CART ATTACHED TO A TRACTOR. THE JACK IS INTENDED TO SUPPORT AN EMPTY CART ONLY.
- 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.

## Auger Set Up (continued)

### Hydraulic System

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

### Auger Spout Tilt Cylinder Stop Removal

Remove and discard the stop on the spout tilt cylinder at the front of the cart, before operating the spout. (FIG. 2-14 & 2-15)

#### IMPORTANT

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

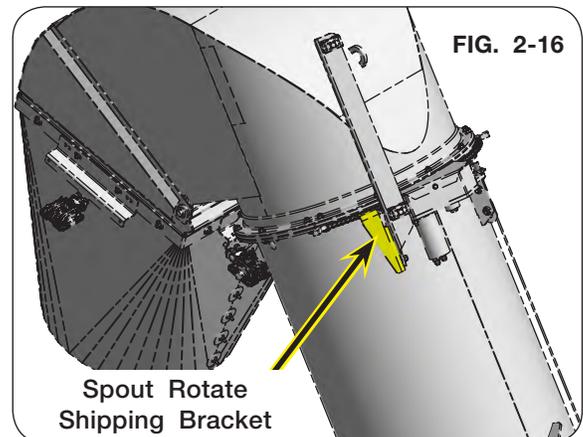


### Auger Spout Rotate Shipping Bracket Removal

Remove and discard the auger spout rotate shipping bracket, before operating the spout. (FIG. 2-16)

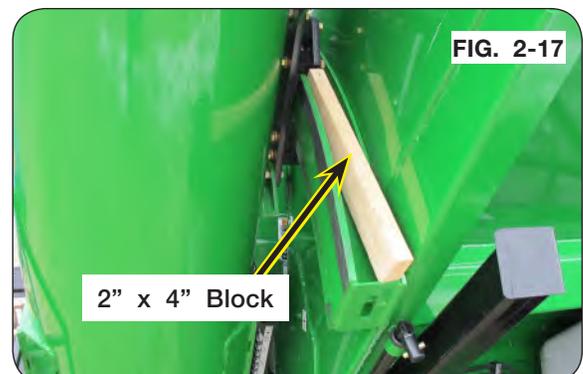
#### IMPORTANT

- *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.*



### Auger Pivot Slide Wood Removal

1. Attach cart to tractor. Refer to “Hitching to Tractor” in the OPERATION section.
2. Park the cart on a firm, level surface. Block tractor and cart tracks to prevent movement. Set the vehicle parking brake. Leave tractor on throughout procedure.
3. Use tractor SCV to pivot auger up.
4. Remove and discard the wood block from the auger pivot. (FIG. 2-17)



5. Cycle auger pivot all the way up and down to ensure movement is free.

**Auger Set Up** (continued)

**Auger Transport Positions**

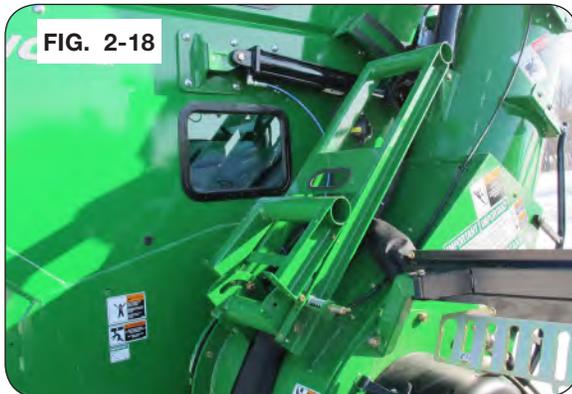
**⚠ WARNING**

- 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.



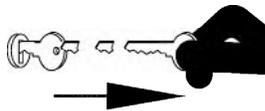
**Auger Set Up** (continued)

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

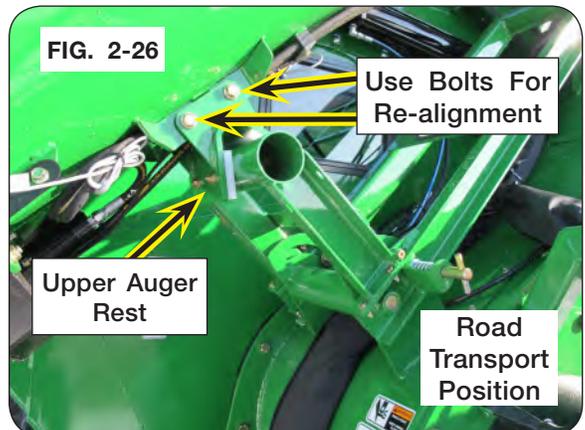
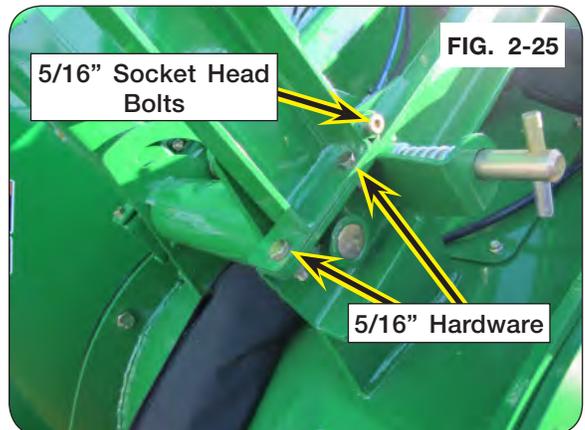
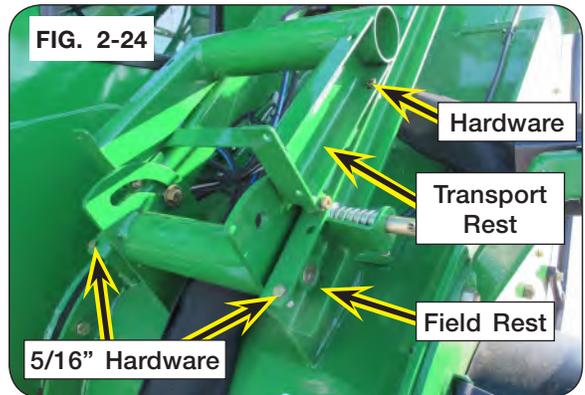


3. Remove 5/16”-18UNC x 1” capscrews (9390-030) and 5/16”-18UNC locknuts (901527) from transport rest (296086G/R/BM) and field rest (295556G/R/BM). Keep 5/16” hardware. (FIG. 2-24)
4. Pivot transport rest 90° from field rest. (FIG. 2-25)
5. Using previously removed 5/16” hardware and 5/16”-18UNC x 1” socket head bolts (9007843) and 5/16”-18UNC locknuts (901527), attach transport rest to field rest. (FIG. 2-25)
6. Torque 5/16” hardware to 17 ft.-lbs.

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

7. Fold auger back to road transport position (FIG. 2-26), making sure upper auger rest (272553G/R/BM) engages the transport rest and activates the auger switch.

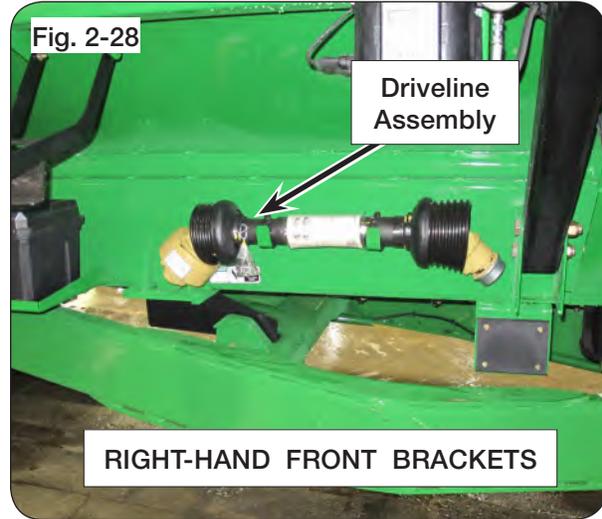
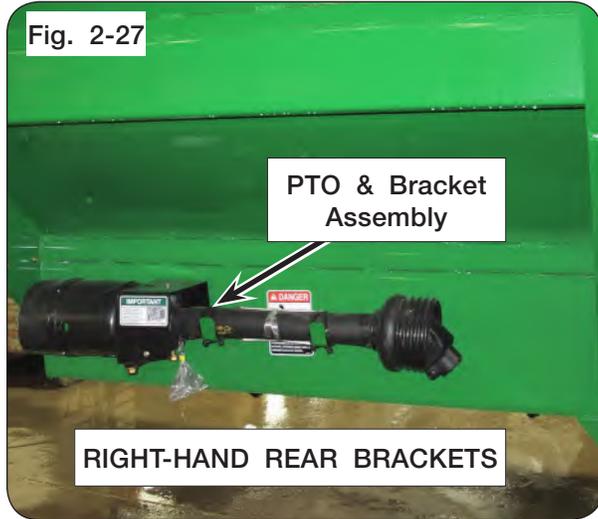
**NOTE:** Upper auger rest is factory adjusted. Bolts can be used for re-alignment of upper auger rest. See FIG. 2-26.



## Driveline Install

### Driveline Storage

Storage brackets are located on the right-hand side of the cart. Secure the PTO and bracket assembly and driveline assembly to these brackets for extended transporting or seasonal storage. (FIG. 2-27 and 2-28)



### Driveline Set Up

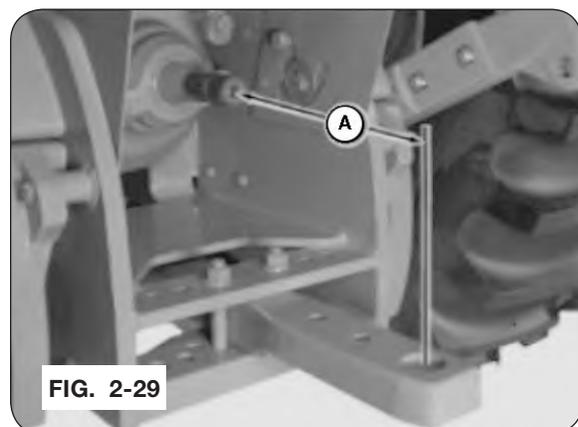


- ENTANGLEMENT WITH THE DRIVELINE WILL CAUSE SERIOUS INJURY OR DEATH. KEEP ALL GUARDS AND SHIELDS IN GOOD CONDITION AND PROPERLY INSTALLED AT ALL TIMES. AVOID PERSONAL ATTIRE SUCH AS LOOSE FITTING CLOTHING, SHOE STRINGS, DRAWSTRINGS, PANTS CUFFS, LONG HAIR, ETC. THAT CAN BECOME EN-TANGLED IN A ROTATING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

### IMPORTANT

- Prior to hitching grain cart to tractor drawbar, drawbar *MUST* be set at 20" from end of PTO shaft to center of hitch pin. dimension (A) in picture. Failure to do so will result in driveline damage. (FIG. 2-29)

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



**Driveline Install** (continued)

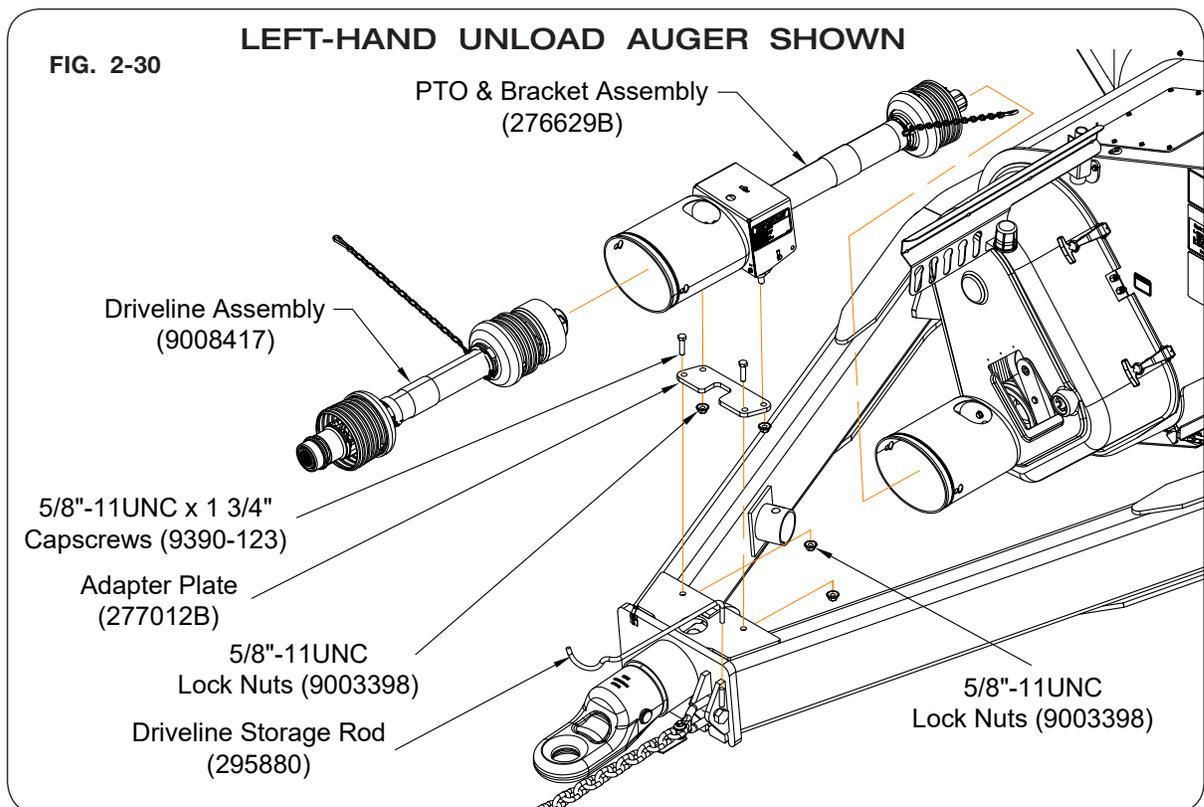
**Driveline Set Up** (continued)

2. Attach the adapter plate (277012B) to the tongue with 5/8"-11UNC x 1 3/4" capscrews (9390-123) and 5/8"-11UNC lock nuts (9003398). (FIG. 2-30)
3. Torque 5/8" hardware to 125 ft.-lbs. (FIG. 2-30)

**NOTE:** Adapter plate offset needs to match auger discharge. Flip adapter plate for Right-Hand unload versus Left-Hand unload. (FIG. 2-30)

4. Attach the PTO and bracket assembly (276629B) to the auger gearbox splined shaft. (FIG. 2-30)
5. Attach bracket assembly to adapter plate with 5/8"-11UNC x 1 3/4" capscrews (9390-123) and 5/8"-11UNC lock nuts (9003398). (FIG. 2-30)
6. Torque 5/8" hardware to 125 ft.-lbs. (FIG. 2-30)
7. Slide the driveline assembly (9008417) cut-out clutch end onto the PTO and bracket assembly (276629B) splined shaft end until retaining groove of PTO and bracket shaft aligns with clamping cone hole. (FIG. 2-30)

(Continued on next page.)



**Driveline Install** (continued)

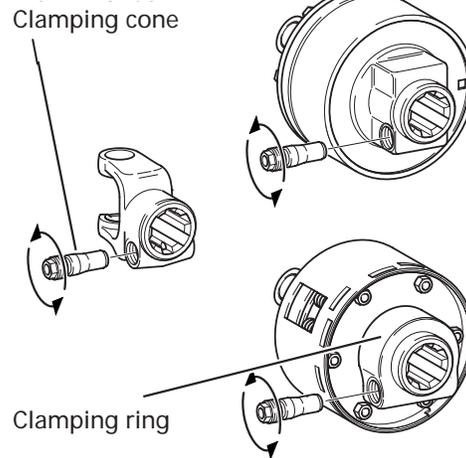
**Driveline Set Up** (continued)

8. Insert clamping cone into threaded hole, hand tighten. Torque cone to 75 ft.-lb. (FIG. 2-31)

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

9. Attach the anti-rotation chains on each driveline and verify that each of the shields can turn one revolution. (FIG. 2-30)
10. Pivot driveline storage rod (295880) 90° forward from the tongue. (FIG. 2-30)
11. Place the driveline assembly onto the driveline storage rod.

**Fig. 2-31**

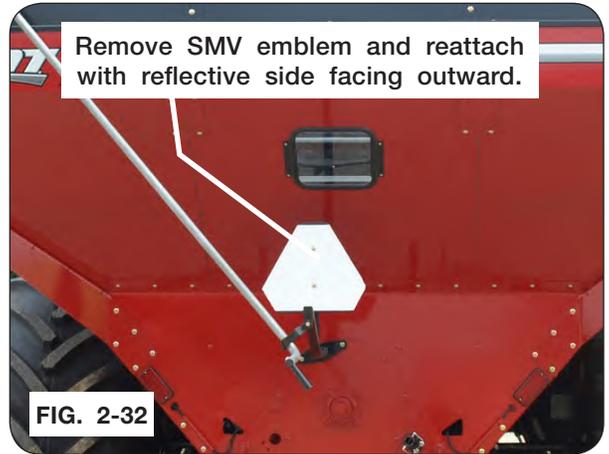


**Driveline Install** (continued)

**SMV Emblem & SIS Decals**

The reflective surface of the SMV must face rearward. This may require removal of film protecting the reflective surface or removing and reinstallation of the SMV.

When reinstalling the SMV make sure that it is mounted with the wide part of the SMV at the bottom. (FIG. 2-32)



For the SIS decals (one on the front and one on the rear of the cart) make sure both decals are clean and visible. (FIG. 2-33)

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

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



**Driveline Install** (continued)

**Belt Engagement**

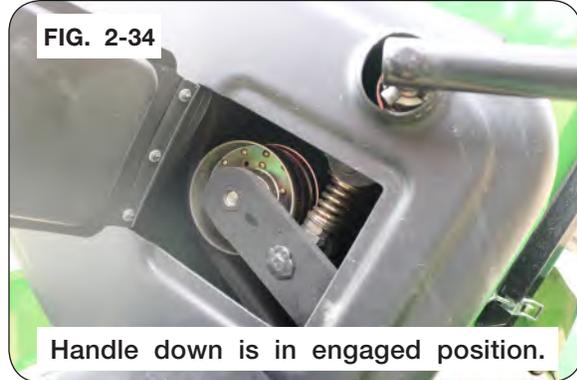
**⚠ WARNING**

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

The unit is shipped without 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. 2-34 and 2-35)

Rotate the handle downwards to engage tensioner. (Fig. 2-34)

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



## Driveline Install (continued)

### Operational Check

#### **WARNING**

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

#### **IMPORTANT**

- Tongue must be moved to operating position before horizontal auger clean-out doors can be closed.
- Before running the auger pivot, the vertical auger clean-out door must be closed to prevent machine damage.

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

1. Retrieve lynch pin from toolbox.

**NOTE:** To 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:

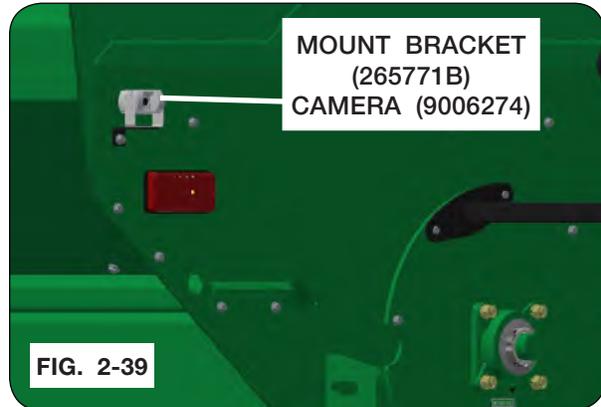
2. Lights - Work and Turn
3. Flow Door
4. Flow Door Indicator
5. Auger Fold
6. Auger Pivot
7. Spout Rotate
8. Spout Pivot (if applicable)
9. Auger Startup & Shut-down



## Video System Set-Up (Optional)

### Rear Bracket Location (2598 Grain Cart Only)

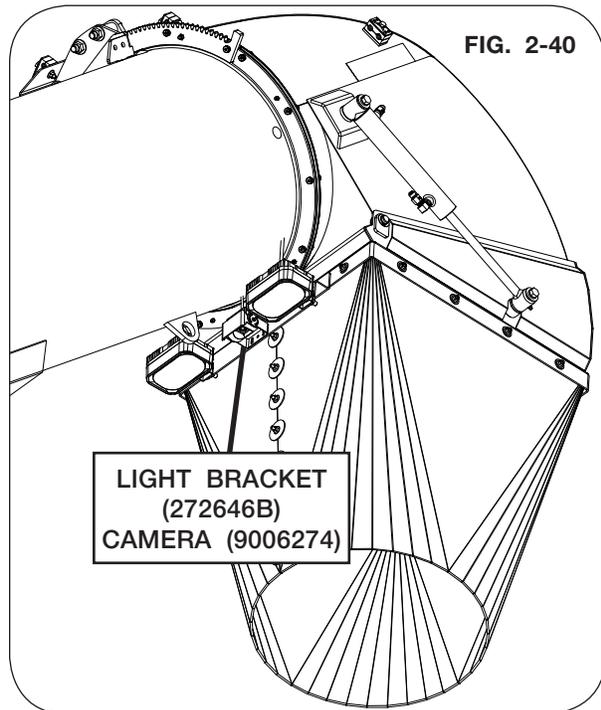
1. Attach mount bracket (265771B) to the rear undercarriage plate, as shown in FIG. 2-39.
2. Assemble camera (9006274) to the camera mount bracket.
3. Connect the 65' cable wire (9004513) to the camera.
4. Route the cable down to the left-hand side of the runner and out the front of the cart. ENSURE THERE IS ENOUGH SLACK AT THE JOINTS TO PREVENT OVEREXTENDING THE WIRE WHEN FOLDING. Use zip ties (9000107) to attach the cable to the runner as necessary. (FIG. 2-39)



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

### Vertical Auger Work Light Location

1. Assemble camera (9006274) to the light bracket (272646B), as shown in FIG. 2-40.
2. Connect the 65' cable wire (9004513) to the camera.
3. Route the cable down along the vertical auger the front of the cart. ENSURE THERE IS ENOUGH SLACK AT THE JOINTS TO PREVENT OVEREXTENDING THE WIRE WHEN FOLDING. Use zip ties (9000107) to attach the cable to the vertical auger tube as necessary. (FIG. 2-40)



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

# Section III

# Operation

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

### Operating Checklist

- Read and understand all safety precautions before operating cart.
- R.V. antifreeze needs to be completely flushed from the Water Delivery System and disposed of properly. Make certain the Water Delivery System only contains water before placing the Water Delivery System in service. (If applicable)
- Set or Calibrate tractor PTO control engagement to MINIMUM setting. Refer to tractor operator's manual for setting information.
- Verify track has been aligned and is properly conditioned. (If applicable)
- Verify track grease pump reservoir is full. Refer to track auto grease pump instruction sheet (282986) for setting information.
- Lubricate all grease fittings and check gearbox oil level.
- Inspect cleanout door assembly for 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, scale, tarp and if equipped, 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.
- Verify transport lights are working properly. Check and follow all regulations before towing on a road or highway.
- Verify tractor drawbar height and length. See "Preparing Tractor" in this section.
- Verify PTO length, see "Verify Telescoping PTO Shaft Length" in MAINTENANCE section.
- 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 transport chains are installed and properly secured. See "Transport Chain Connection" in OPERATION section.
- Test run the augers. See "Auger Operation" in OPERATION section.

### Preparing Tractor

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

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

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

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

Tractor drawbar should be adjusted so that the distance from the end of the PTO shaft on the tractor to the center line of the hitch pin is 20". If this is not done, the driveline on the cart will be damaged.

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.

(Continued on next page)

## Preparing Tractor (continued)

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. The tractor drawbar must also be a CAT 5 with a 2 3/4" diameter hitch pin.

### **CAUTION**

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

Hitch pin sizes for each Category to help identify which Category drawbar you have.  
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 implement driveline during turning. It may be necessary to remove tractor 3-point quick attach to avoid damage during turning.

## Preparing Cart

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

### Hardware

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

### Pivot Pins

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

### Hitch

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

### Auger

Inspect auger for damage and wear.

### 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.

### Track Wheels

### **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.**

## Hitching to Tractor

### Drawbar Connection

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

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

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

Lock tractor drawbar in center position.

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

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

### **WARNING**

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

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

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

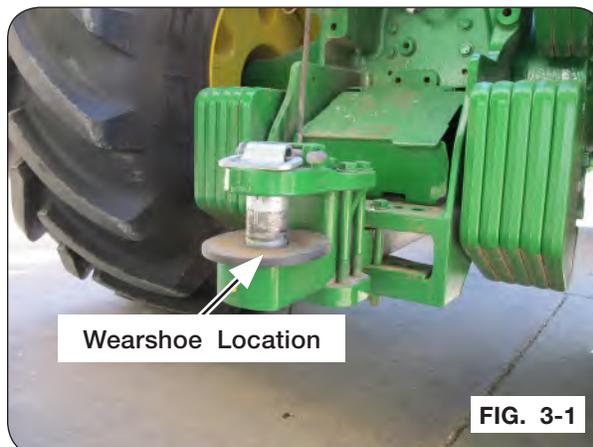


FIG. 3-1

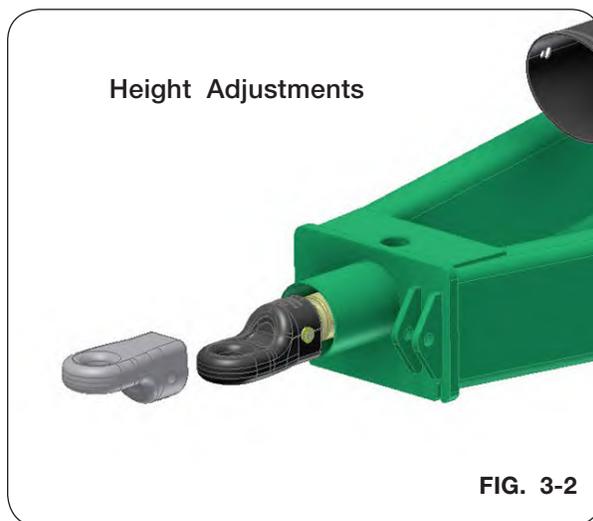


FIG. 3-2

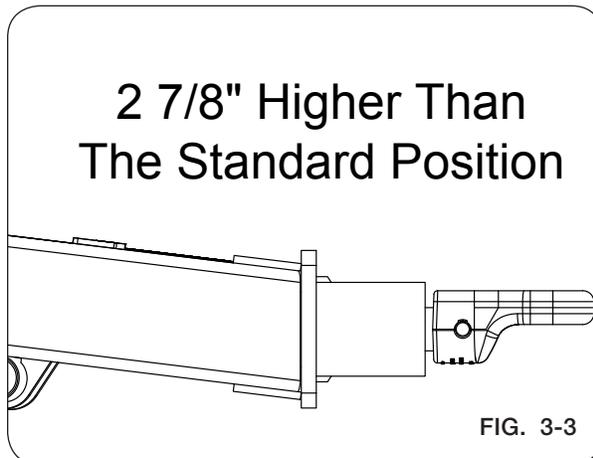


FIG. 3-3



### 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 OR DAMAGE IF CART BECOMES DISENGAGED.
- REPLACE TRANSPORT CHAIN IF ANY LINK OR END FITTING IS BROKEN, STRETCHED OR DAMAGED. DO NOT WELD TRANSPORT CHAIN.

Always use intermediate chain support when connecting the grain cart directly to a tractor. DO NOT use the intermediate chain support as the chain attaching point. Fig. 3-5 shows how the transport chain must be installed between the tractor and grain cart.

The transport chain is rated for towing the grain cart empty on public roads. Use only ASABE approved chains. Allow no more slack in the chain than necessary to permit turning.



FIG. 3-5

**Hitching to Tractor** (continued)

**Hydraulic Connections**

Clean hydraulic hose couplers before connecting to the tractor. For convenience, this unit is equipped with color-coded hose grips attached to the hydraulic hoses. This will help in identifying the hose function and correct hook up. (FIG. 3-6)

**NOTE:** The half gray color hose grip is for the retract port.

<b>Color</b>	<b>Function</b>
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

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

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

(Continued on next page)

## Hitching to Tractor (continued)

### Hydraulic Connections

Before disconnecting hoses from tractor, place tractor in park and shut PTO off, operate auger fold and pivot to the lowest positions. Where possible, remove hydraulic pressure loads and avoid potential pressure buildup in the lines from long storage periods such as upper auger not in rest position. Extend hydraulic jack to desired position and turn valve to closed position. See tractor operator's manual for proper procedure to relieve pressure from the lines. After SCV pressures have been relieved and tractor engine is off, disconnect hoses from tractor. Install couplers into storage slots provided. (FIG. 3-6)

FIG. 3-6



## Hitching to Tractor (continued)

### Electrical Connections

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

**NOTE:** 7-pin connector must be plugged into the tractor with power to the center pin 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.

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

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

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

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

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

See federal regulation 49 CFR 562; available at [www.govinfo.gov](http://www.govinfo.gov) for US federal law requirements.

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

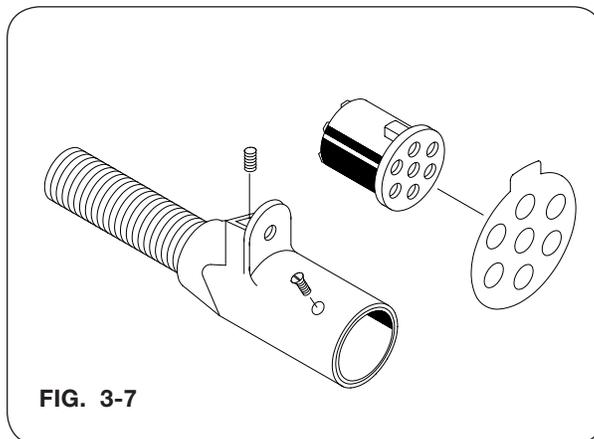


FIG. 3-7

### Hitching to Tractor (continued)

#### Towing

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

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

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

The PTO drive shaft must be properly attached to the tractor during transport. See “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.

The support stand must not be used for transport.

Secure transport chain to tractor chain support before towing.



### CAUTION

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

### 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 back into road transport position when auger is not in use. (FIG. 3-8)



FIG. 3-8

Road Transport Position Shown

## Auger Operation

### PTO Driven Auger

#### DANGER

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



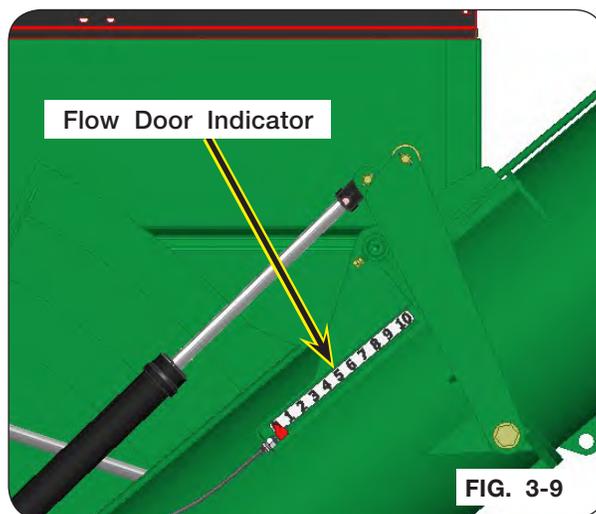
#### WARNING

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

2. Choose an area free from obstructions and unfold auger into unloading position. Allow sufficient time for the cylinder to fully engage the two augers and over-center latch to fully engage.
3. Engage PTO at low engine RPM, then increase engine RPM until 1000 PTO RPM is reached.



4. Open flow control door to desired unloading rate. Numbers on the auger tube provide a point of reference for operator convenience. (Fig. 3-9)
5. To slow or stop grain flow, close flow door, rather than reducing tractor RPM. Close flow door fully when unloading is complete.

**NOTE:** If an overload occurs, see “Auger Overload Procedure” in this section.

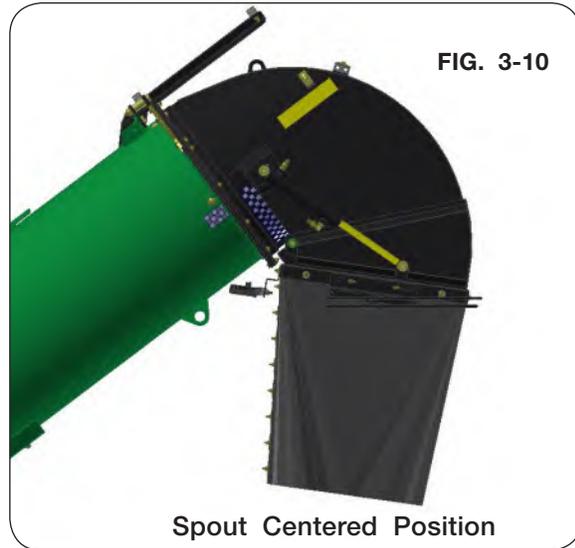
**NOTE:** It is not recommended to disengage auger with flow control door open. Auger system will require substantially more torque to start, placing extra stress on both cart and tractor driveline.

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

### Auger Operation (continued)

6. When auger is empty, reduce PTO rpm to idle, and stop PTO.
7. After PTO has come to a complete stop, align the checker flag decals to center spout as shown in FIG. 3-10.
8. Once spout is centered, fold auger to the road transport position or field rest position.

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



## Auger Operation (continued)

### Auger Overload Procedure

#### IMPORTANT

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

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

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

1. Close flow door.
2. With the PTO off and driveline stopped, disengage the belt tensioner using the belt tensioner handle, this disengages the horizontal auger from the drivetrain. (FIG. 3-11)
3. Restart and engage the tractor PTO at low engine RPM.
4. Increase engine RPM until 850 to 1,000 PTO RPM is reached to empty the vertical auger.
5. Once vertical auger is empty, stop PTO.
6. With the tractor PTO off and driveline stopped, reengage the belt tensioner using the belt tensioner handle. Return handle to storage. (FIG. 3-12)
7. Restart and engage the tractor PTO at low engine RPM.
8. Increase engine RPM until 850 to 1,000 PTO RPM is reached to empty the drag auger.

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



## Auger Operation (continued)

### Vertical Auger Fold

#### **WARNING**

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

Actuate hydraulic auger fold circuit to pivot vertical auger between transport and operating positions. When unfolding auger, allow sufficient time for cylinder to rotate the outside fold link into an over-center position. (FIG. 3-13)

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



FIG. 3-13

Road Transport  
Position Shown

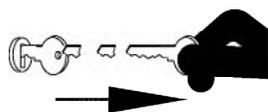
## Auger Operation (continued)

### Auger Field Rest Position

#### IMPORTANT

- Auger field rest is *ONLY* for use in the field. Auger must be folded to road transport position during road transport.

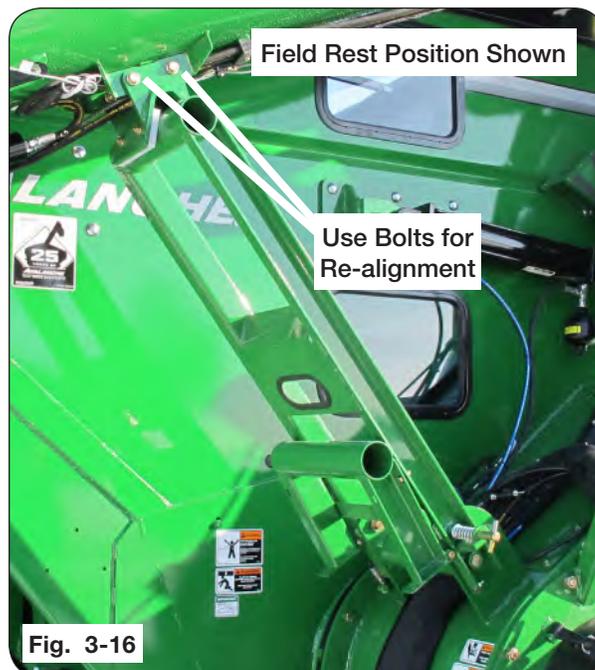
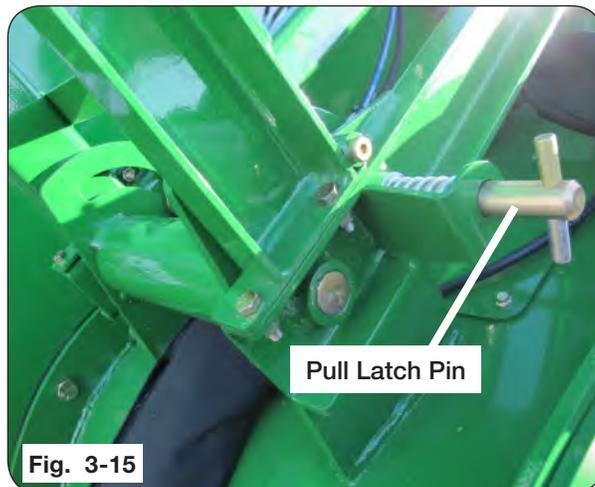
1. Extend auger to the unload position. Shut-off tractor's engine and remove the ignition key.



2. Remove hairpin cotter from latch pin (Figure 3-14) and pull latch pin to disengage (Figure 3-15). Raise auger rest stand up to field position and release latch pin. Make sure the pin is engaged in the field position hole and re-install hairpin removed earlier in this step.

3. Fold auger back to field rest position (Figure 3-16), making sure upper auger rest engages the field rest tube and activates the auger switch.

**NOTE:** Upper auger rest is factory adjusted. Bolts can be used for re-alignment of upper auger rest. See Fig. 3-16.



## Auger Operation (continued)

### Auger Road Transport Position

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



2. Remove hairpin and pull latch pin towards you to disengage. Lower field rest to the road transport position and release the latch pin (Figure 3-17). Make sure the pin is engaged in the road transport position hole and re-install hairpin removed earlier in this step.



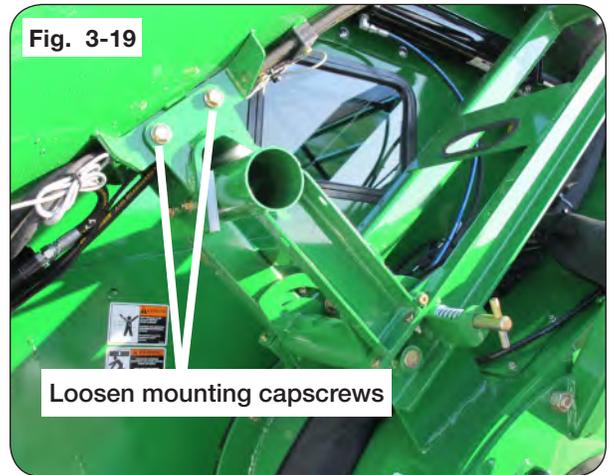
3. Fold auger down to road transport position. (FIG. 3-18)



## Auger Operation (continued)

### Upper Auger Rest Adjustments

1. Loosen mounting capscrews of upper auger rest. (FIG. 3-19)
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 transport tube evenly.
7. Torque mounting capscrews to 65 ft.-lbs.



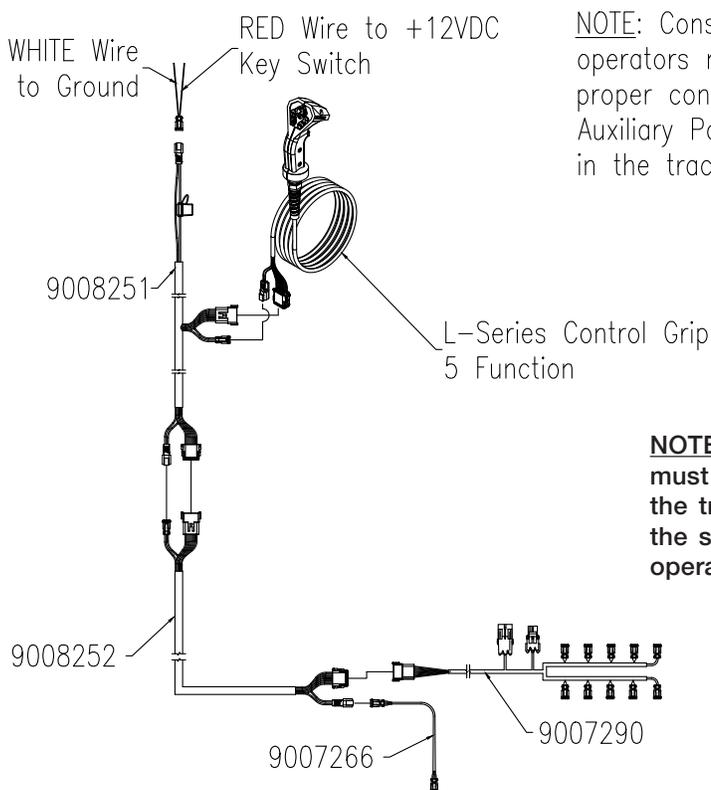
### Optional Electric Over Hydraulic Operation 5 Function

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

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

1. Connect the red wire from power harness (9008251) to a key-switched +12VDC power supply. (Fig. 3-20)
2. Connect the white wire from power harness (9008251) to ground. (Fig. 3-20)

FIG. 3-20



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

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

Kit #296250

**Optional Electric Over Hydraulic Operation 5 Function** (continued)

3. Connect the Hydraulic Pressure and Return hoses to the tractor SCV remote so that the Pressure line is able to be put in continuous detent.
4. Place the remote in continuous detent so that the Hydraulic Pressure hose is pressurized and set the hydraulic flow to a maximum 6 gal/min to minimum 4 gal/min.
5. To fold auger out from transport to operating position, push down the auger unfold button on joystick face until the upper and lower auger are engaged and fold linkage is over center. See Fig. 3-21.

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

6. To pivot spout OUT away from cart, push hat switch toward OUT. Hold the switch until desired position is achieved. See Fig. 3-21.
7. To pivot spout IN toward cart, push hat switch toward IN. Hold the switch until desired position is achieved. See Fig. 3-21.
8. To pivot the entire auger UP, press and hold the auger pivot UP button until the desired height is achieved. See Fig. 3-21.
9. To pivot the entire auger DOWN, press and hold the auger pivot DOWN button until the desired height is achieved. See Fig. 3-21.

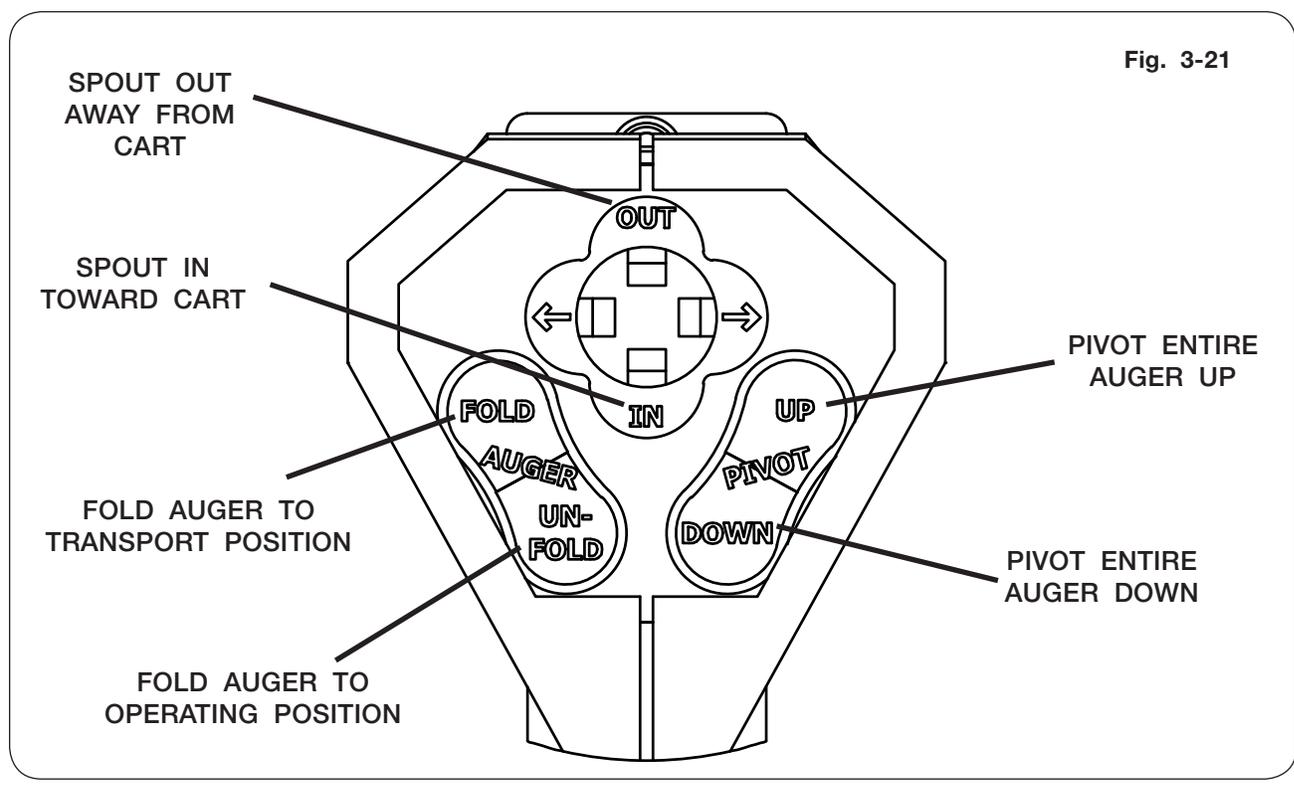
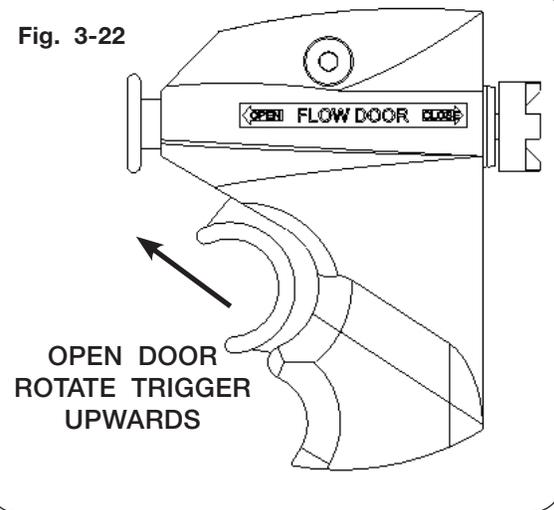


Fig. 3-21

**Optional Electric Over Hydraulic Operation 5 Function** (continued)

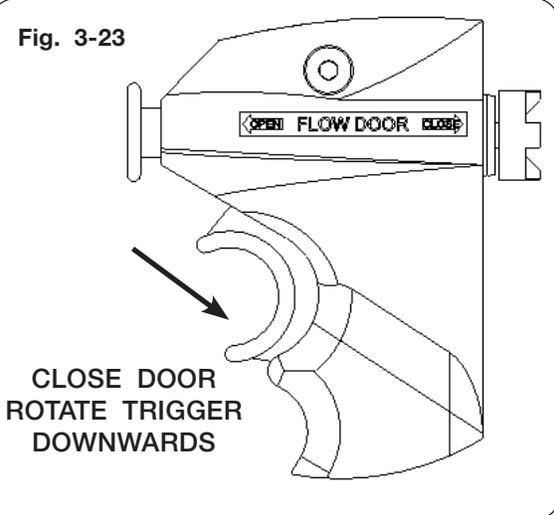
10. To open flow door, rotate the switch upwards. Observe flow door indicator to determine when to release trigger and stop flow door movement. See Fig. 3-22.

Fig. 3-22



11. To close flow door, rotate the switch downwards. Observe the flow door indicator and release trigger when door is closed to desired position. See Fig. 3-23.

Fig. 3-23



12. To fold auger from operating position to road transport position or field rest position:

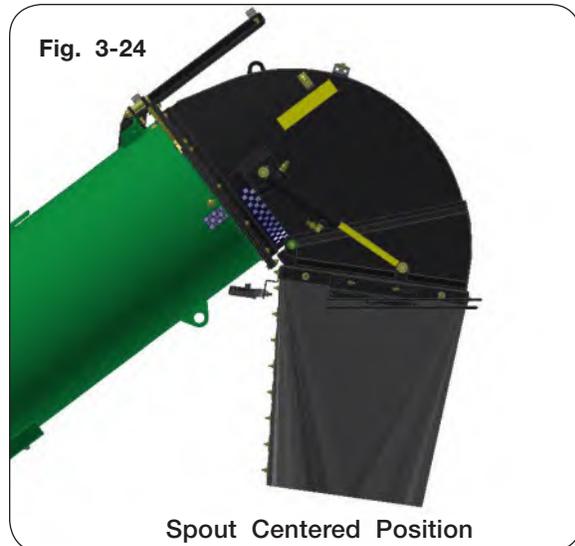
A. Rotate spout to centered position. Align the checker flag decals to locate center as shown in Fig. 3-24.

B. Press auger FOLD button on joystick.

C. Hold FOLD button until upper auger is on field rest or in transport position.

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

Fig. 3-24



## 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

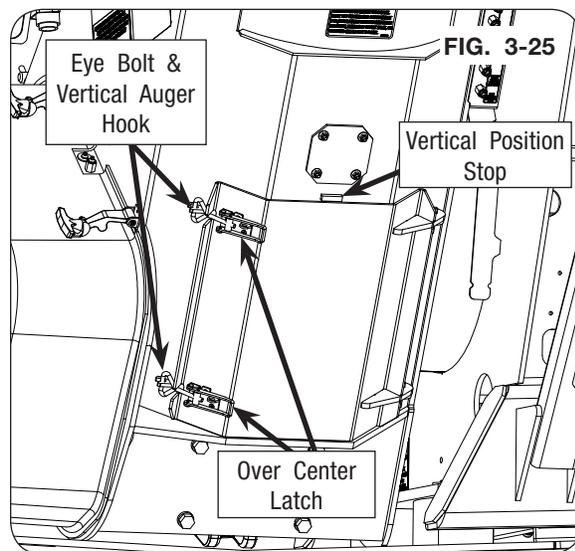
### **⚠ WARNING**

- 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.

### Vertical Cleanout Door

1. Raise the vertical auger to highest position.
2. Park the empty grain cart on a firm and level surface. Block the tracks on the machine to keep it from moving. Set the tractor's parking brake, shut-off the engine, remove the ignition key and disconnect the PTO shaft.
3. To completely close cleanout door, ensure the vertical auger cleanout door top edge clears the vertical position stop (key stop). (FIG. 3-25)
4. Attach eye bolt ends of over center latches to the hooks on the vertical auger. (FIG. 3-25)
5. Clasp the over center latch handles to lock the door in the closed position. (FIG. 3-25)
6. Inspect and verify cleanout door perimeter for gaps. Ensure all grain dust and filings are removed that may prevent the door from shutting completely.
7. If gaps are present, unclasp the over center latch and tighten eye bolt to improve door seal contact on the vertical auger.
8. Rehook eye bolt to vertical auger and clasp the over center latch.

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



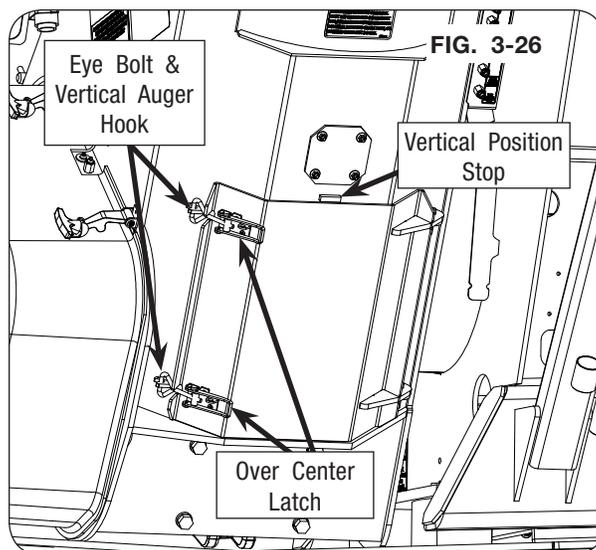
**Vertical & Horizontal Cleanout Door Operation** (continued)

**Vertical Cleanout Door**

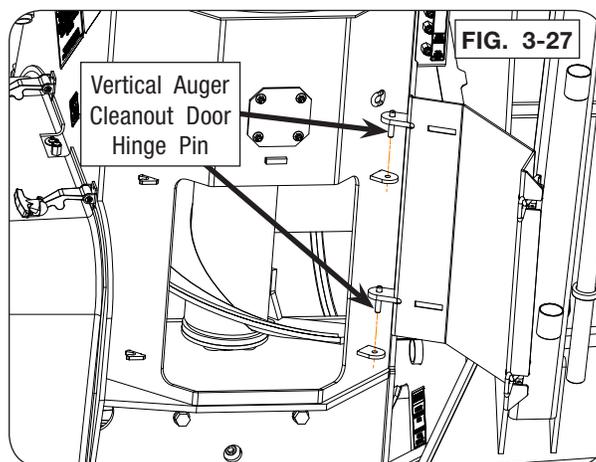
**OPENING VERTICAL CLEANOUT DOOR**

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

1. To open and remove the vertical auger cleanout door, unclasp the over center latch. (FIG. 3-26)
2. Unhook the eye bolt from the vertical auger and open the cleanout door. (FIG. 3-26)



3. 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. 3-27)
4. Inspect and verify all debris is removed from inside the vertical auger housing.
5. Reattach the vertical cleanout door to the vertical auger.

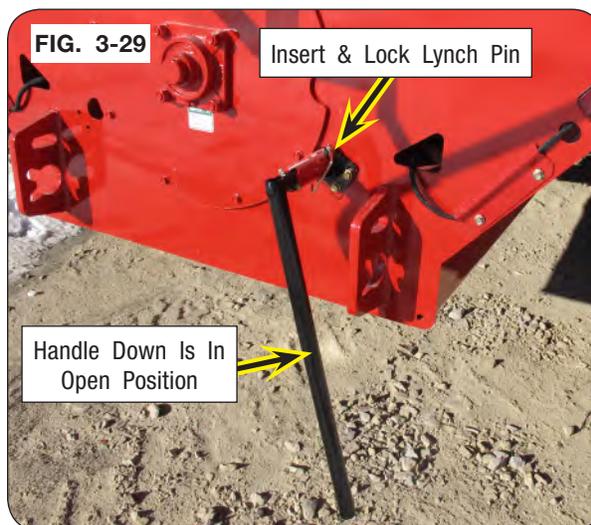
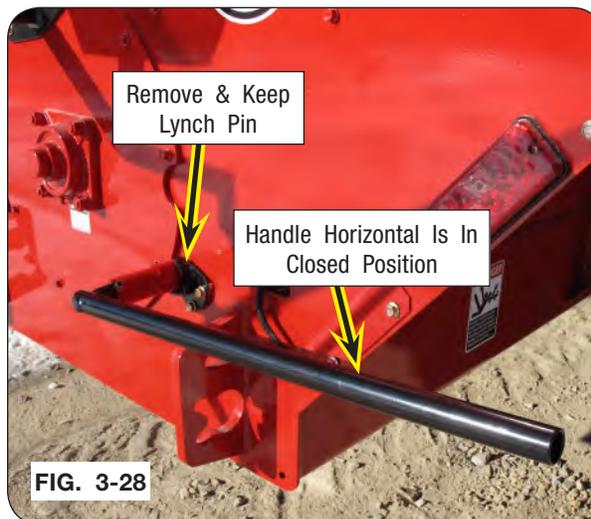


## Vertical & Horizontal Cleanout Door Operation (continued)

### Horizontal Cleanout Door

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

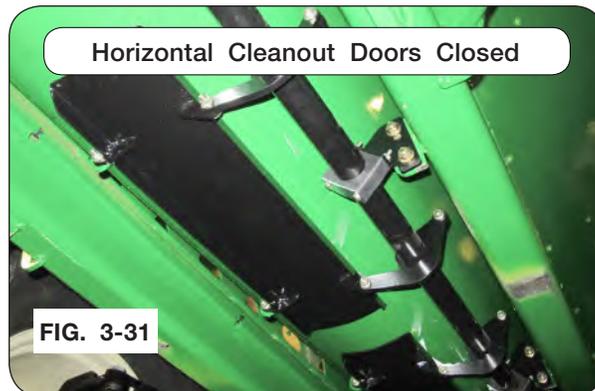
1. Insert tensioner handle into the cleanout door receiver coupler on the rear panel, and remove lynch pin from rockshaft. Keep lynch pin. (FIG. 3-28)
2. Rotate the tensioner handle clockwise to open the cleanout doors. (FIG. 3-29)
3. Insert and lock lynch pin into rockshaft. (FIG. 3-29)
4. Inspect and verify all debris is removed that may prevent the doors from shutting completely. (FIG. 3-30)
5. Remove lynch pin from rockshaft and rotate handle counter-clockwise and clockwise to check for smooth door operation.



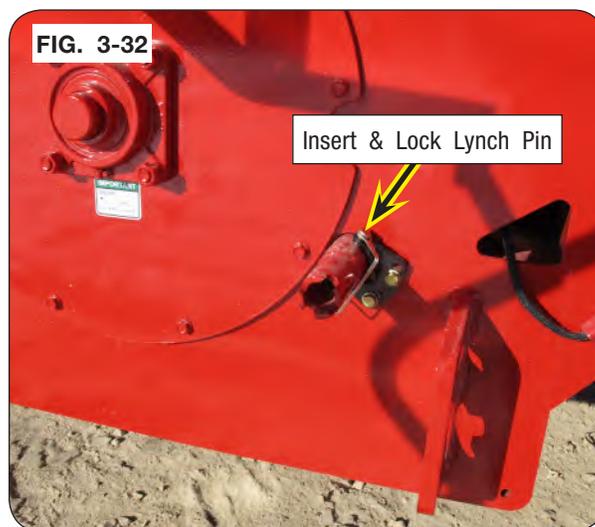
**Vertical & Horizontal Cleanout Door Operation** (continued)

**Horizontal Cleanout Door**

6. Rotate handle counter-clockwise to close doors and ensure all doors seal. (FIG. 3-31)



7. Insert and lock lynch pin into rockshaft and return handle to storage location. (FIG. 3-32)



## Ladder Operation

### **WARNING**

- **FALLING OR LOWERING EQUIPMENT CAN CAUSE SERIOUS INJURY OR DEATH. KEEP EVERYONE AWAY FROM EQUIPMENT WHEN SUSPENDED, RAISING, OR LOWERING.**
- **KEEP HANDS CLEAR OF PINCH POINT AREAS.**
- **DO NOT ALLOW ANYONE TO RIDE ON THE LADDER. MAKE SURE EVERYONE IS CLEAR BEFORE OPERATING MACHINE OR TOWING VEHICLE.**
- **TO PREVENT PERSONAL INJURY OR DEATH, ALWAYS ENSURE THAT THERE ARE PEOPLE WHO REMAIN OUTSIDE THE CART TO ASSIST THE PERSON WORKING INSIDE, AND THAT ALL SAFE WORKPLACE PRACTICES ARE FOLLOWED. THERE ARE RESTRICTED MOBILITY AND LIMITED EXIT PATHS WHEN WORKING INSIDE THE IMPLEMENT.**
- **NEVER ENTER A CART CONTAINING GRAIN. FLOWING GRAIN TRAPS AND SUFFOCATES VICTIMS IN SECONDS.**

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

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

**NOTE:** Always use lock pin in the working and storage position to lock the ladder extension. The lock pin can be inserted in either left-hand or right-hand ladder hole. (FIGS. 3-33 & 3-34)



## Ladder Operation (continued)

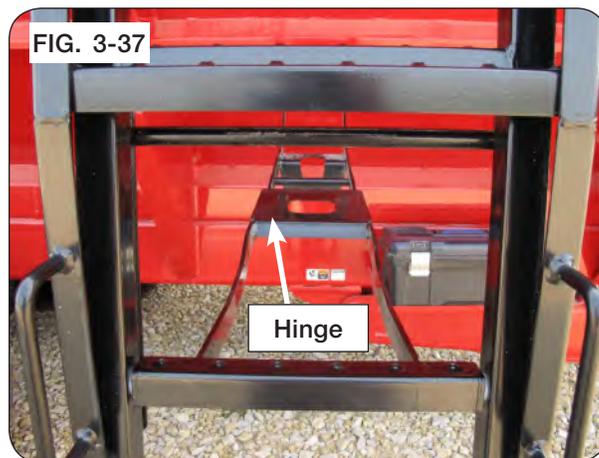
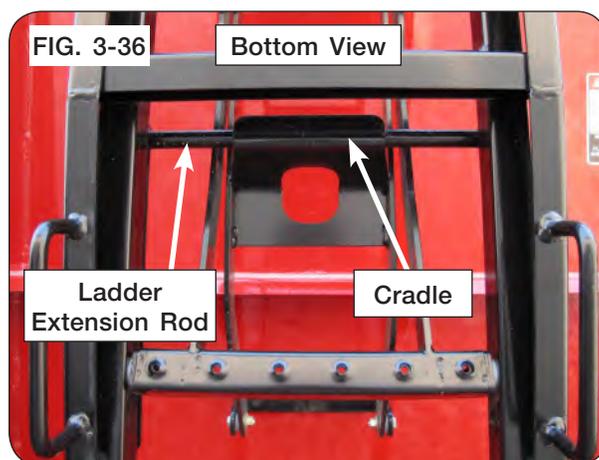
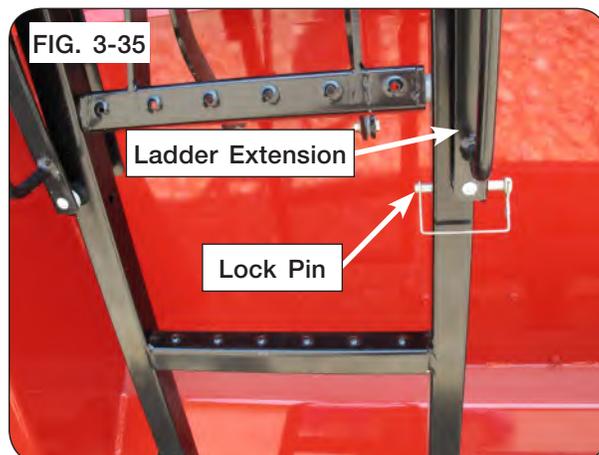
### Storage to Working Position

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. 3-35)
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. 3-36)

### CAUTION

- THE LADDER IS NOW FREE TO PIVOT.

4. Slowly swing ladder outward until hinge is fully extended and locks in the working position. (FIG. 3-37)



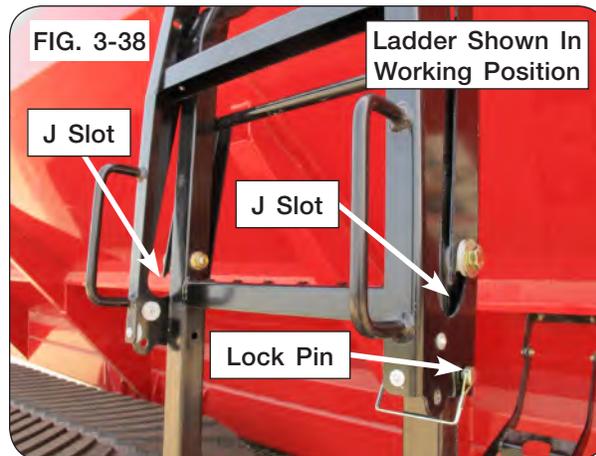
## Ladder Operation (continued)

### Storage to Working Position

5. Lift and seat ladder extension into shorter leg of “J slot”. (FIG. 3-38)
6. Using lock pin from step 2, insert lock pin into ladder extension and ladder. (FIG. 3-38)

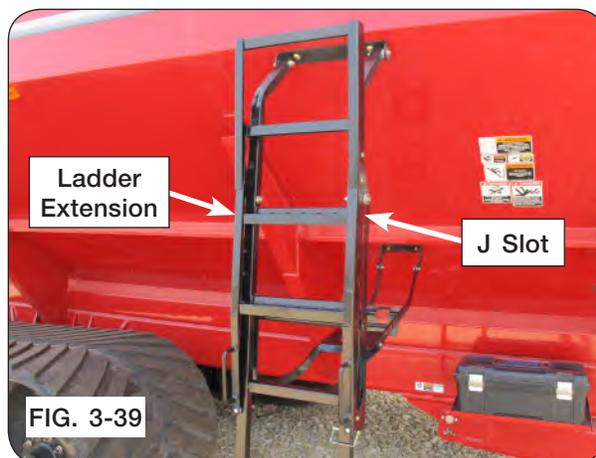
### **WARNING**

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

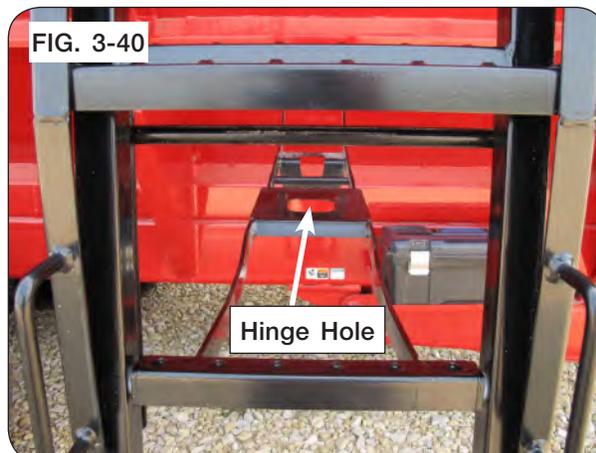


### Working to Storage Position

7. Standing in front of ladder, place hands on outside ladder handles.
8. Keep one hand on ladder handle and with opposite hand, remove lock pin from ladder extension. Retain for future use. (FIG. 3-38)
9. With hands back on ladder handles, lift and unseat ladder extension from shorter leg of “J slot”. (FIG. 3-38)
10. Lower ladder extension until fully seated in longer leg of “J slot”. (FIG. 3-39)



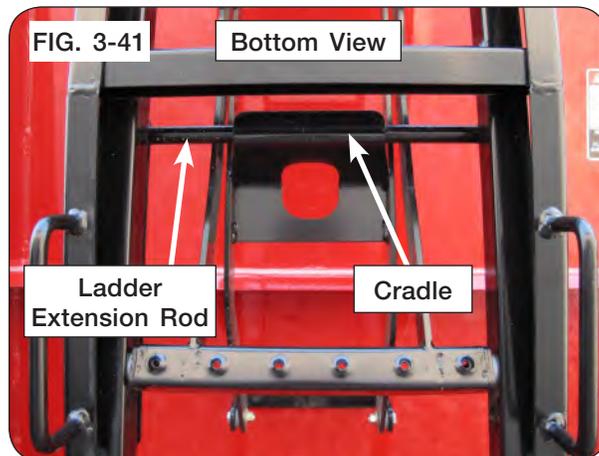
11. Keep one hand on ladder handle and with opposite hand, reach between ladder rungs and grab the ladder hinge hole. (FIG. 3-40)
12. Slowly lift ladder hinge until the ladder starts folding.
13. Remove hand from ladder hinge hole and place onto ladder handle.
14. Slowly push ladder towards hopper bin.



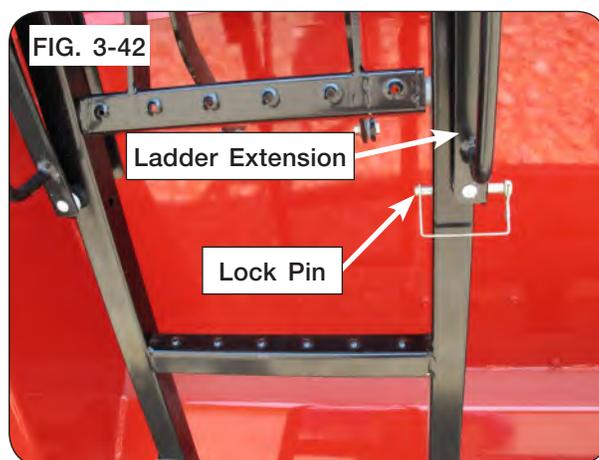
**Ladder Operation (continued)**

**Working to Storage Position**

15. Lower ladder extension and seat ladder extension rod onto the cradle. (FIG. 3-41)



16. Using lock pin from step 8, insert lock pin into ladder extension and ladder. (FIG. 3-42)



### Lubrication

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

### Video System (Optional)

#### IMPORTANT

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

The video system 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. If water pools on the tarp, adjust tension of tarp cables and/or arm springs as required.*

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 nobody is near the tarp system before and during operating.

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

If tarp is covered with snow, 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)**

1. Using both hands, carefully remove tarp handle weldment from tube holder. (FIG. 3-43)
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.

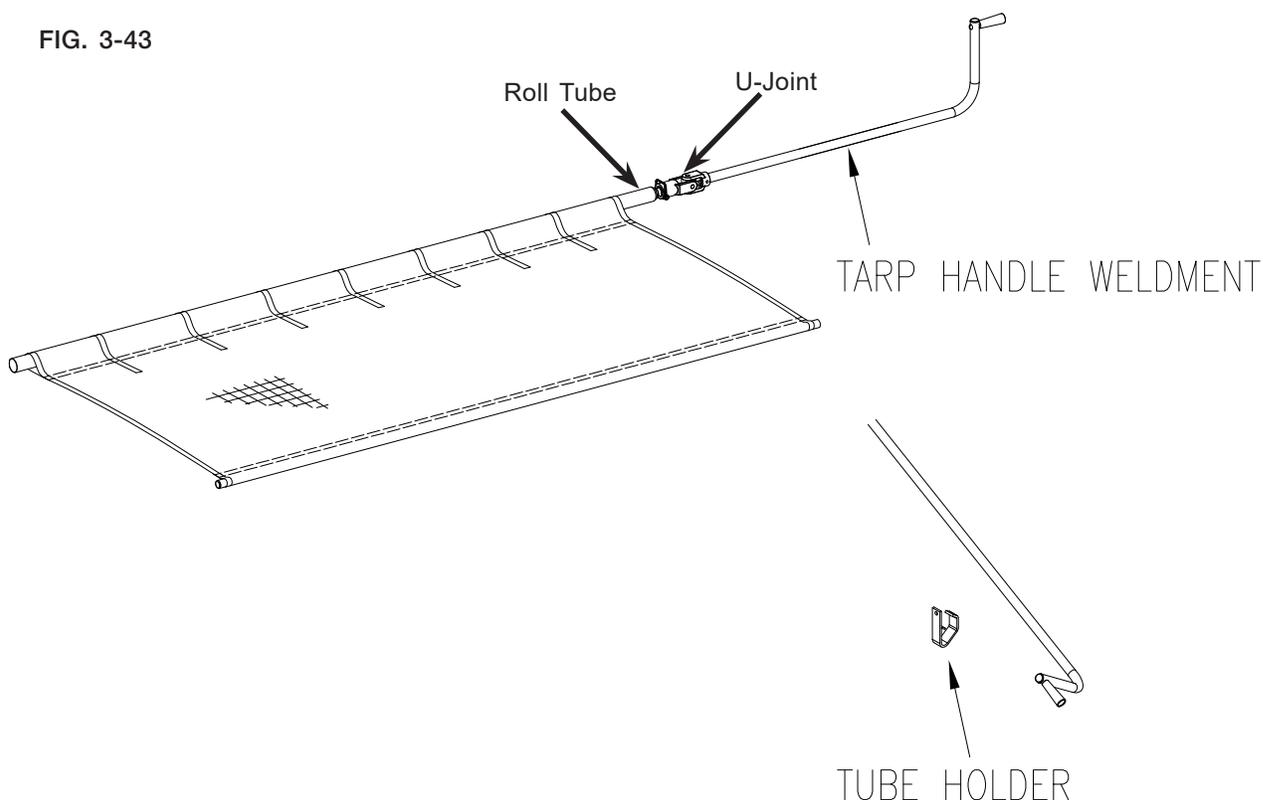
**NOTE:** Do not tighten if tarp overlaps end of the latch plate. Tearing of the tarp may occur. Reposition tarp, as necessary.

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. 3-43



**Notes**

# **Section IV**

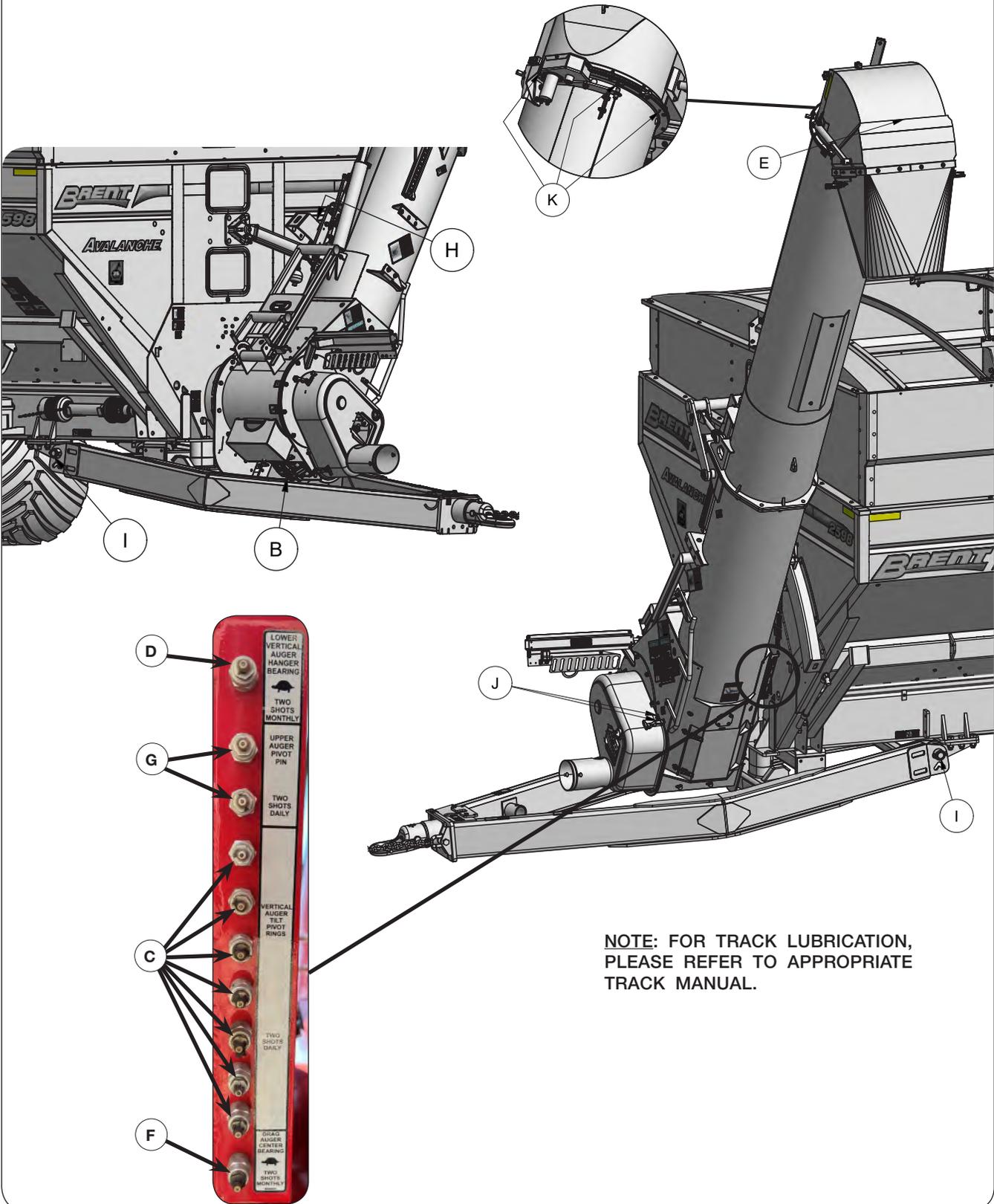
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FOR SCALE, TRACK, UHARVEST, ELECTRIC TARP, AND / OR WATER DELIVERY SYSTEM INFORMATION, PLEASE REFER TO THE INDIVIDUAL MANUALS.

## Lubrication

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



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



## Hydraulic System

Refer to parts section for hydraulic component detail listing.

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

Replacing Hoses/Fittings/Cylinders:

1. Use replacement hoses, fittings, and cylinders from your Unverferth Manufacturing dealer which are rated for 3,000 psi.
2. Do not use hoses, fittings and cylinders that have pipe threads.
3. Do not use Teflon tape or thread sealant on JIC or O-ring fittings. Tighten fittings according to “Torque Chart” in this section.
4. When replacing hoses, always allow sufficient slack to permit hoses to move through the full range of motion of the cylinders.
5. Always purge the hydraulic system after servicing.

## Purge Hydraulic System

### **WARNING**

- **HYDRAULIC SYSTEM MUST BE PURGED OF AIR BEFORE OPERATING TO PREVENT SERIOUS INJURY OR DEATH.**
- **RELIEVE HYDRAULIC SYSTEM OF ALL PRESSURE BEFORE ADJUSTING OR SERVICING. SEE THE HYDRAULIC POWER UNIT OPERATOR’S MANUAL FOR PROPER PROCEDURES.**
- **HIGH-PRESSURE FLUIDS CAN PENETRATE THE SKIN AND CAUSE SERIOUS INJURY OR DEATH. 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. Disconnect the rod end of all cylinders in a circuit and block up cylinders so the rod can completely extend and retract without contacting any other component.
- B. Pressurize the system and maintain system at full pressure for at least 5 seconds after cylinder rods stop moving. Check that all cylinders have fully extended or retracted.
- C. Check oil reservoir in hydraulic power source and refill as needed.
- D. Pressurize system again to reverse the motion of step B. Maintain pressure on system for at least 5 seconds after cylinder rods stop moving. Check that cylinders have fully extended or retracted.
- E. Check for hydraulic leaks using cardboard or wood. Tighten connections according to directions in Torque Chart.
- F. Repeat steps B, C, D, and E 3-4 times.
- G. Depressurize hydraulic system and connect cylinder rod clevises to their mating lugs.

### **IMPORTANT**

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

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

### Hydraulic System (continued)

#### Relieving Hydraulic Pressure

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

### Purging Procedure For EOH System

#### **WARNING**

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

**NOTE:** Make sure hoses are not kinked, stretched, or twisted. Secure hoses to prevent cuts or chafing during operation.

1. Open flow door and hold SCV for 5 seconds. Close flow door and hold SCV for 5 seconds.  
Repeat at least 3 times until movement is smooth and even.
2. Pivot auger all the way down and hold SCV for 5 seconds. Raise auger all the way up and hold SCV for 5 seconds. Repeat at least 3 times until movement is smooth and even.
3. Rotate spout all the way forward and hold SCV for 5 seconds. Rotate spout all the way rearward and hold SCV for 5 seconds. Repeat at least 3 times until movement is smooth and even.
4. Tilt spout all the way out and hold SCV for 5 seconds. Tilt spout all the way in and hold SCV for 5 seconds. Repeat at least 3 times until movement is smooth and even.
5. Fold auger to road transport position and hold SCV for 5 seconds. Unfold auger all the way and hold SCV for 5 seconds. Repeat at least 3 times until movement is smooth and even.

## Gearbox

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

For adequate lubrication, the oil should be visible in the sight glass. Fill with oil to the sight glass only. (FIG. 4-1)

***Maximum gearbox life:***

Check oil level every 2 weeks.

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

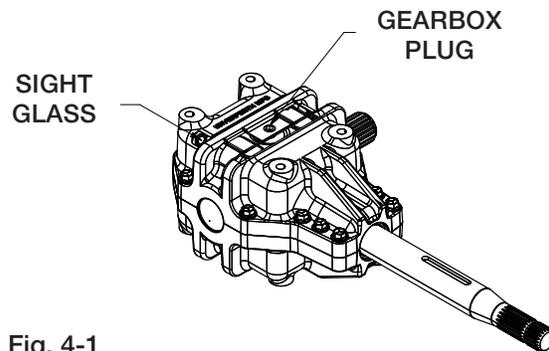


Fig. 4-1

## Track Wheels

### Torque Requirements

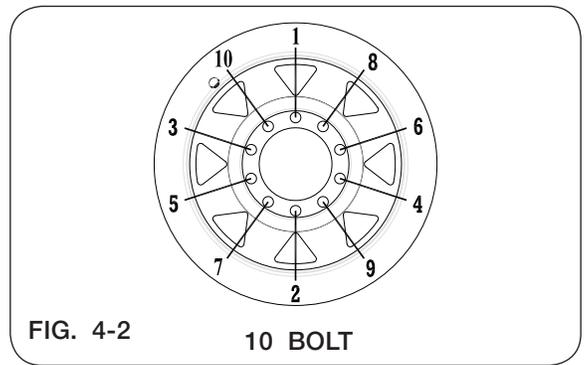
#### **CAUTION**

- **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 track 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 FIG 4-2.

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

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



## Manual Override for Optional Electric Over Hydraulic System

### **⚠ WARNING**

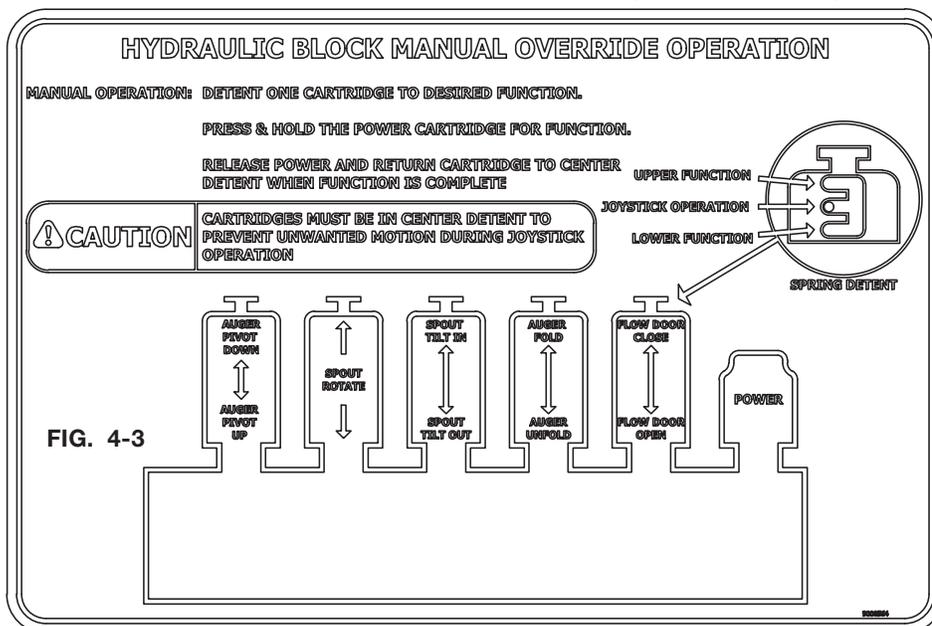
- MOVING OR ROTATING AUGER COMPONENTS CAN CAUSE SERIOUS INJURY OR MACHINE DAMAGE. BEFORE OPERATING MANUAL OVERRIDE(S), ENSURE EVERYONE IS AWAY FROM THE SPOUT AND THAT THE SPOUT WILL NOT CONTACT ANY OTHER PARTS OF THE GRAIN CART. ALL CONTROL SWITCHES ARE DEACTIVATED WHILE UTILIZING MANUAL OVERRIDE(S).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



1. Park the empty grain cart on a firm and level surface. Block the tracks on 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 EOH block assembly. Keep cover plate.
3. Connect the desired Hydraulic Pressure and Return hoses to the tractor SCV remote so that the Pressure line is able to be put in continuous detent.
4. To operate the manual override function, place the tractor SCV remote in continuous detent so that the Hydraulic Pressure hose is pressurized.

**Manual Override for Optional Electric Over Hydraulic System**  
(continued)

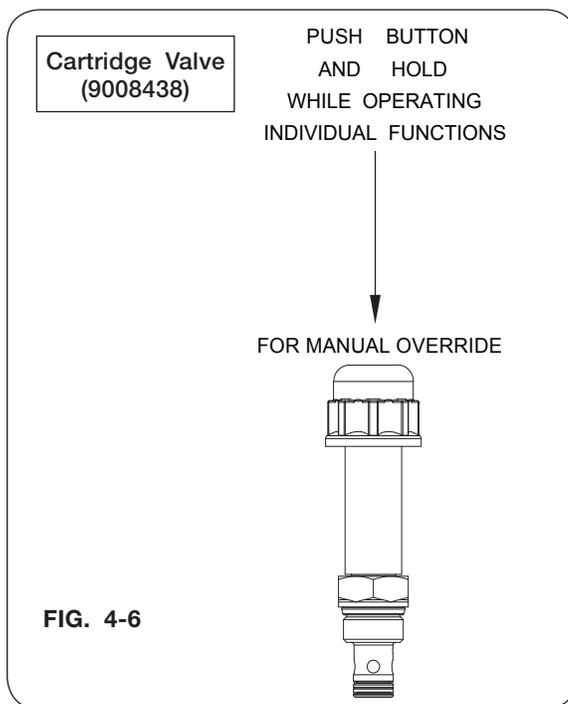
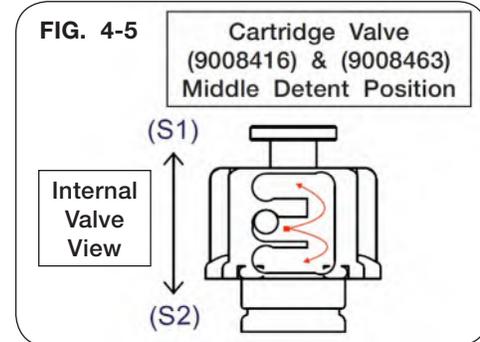
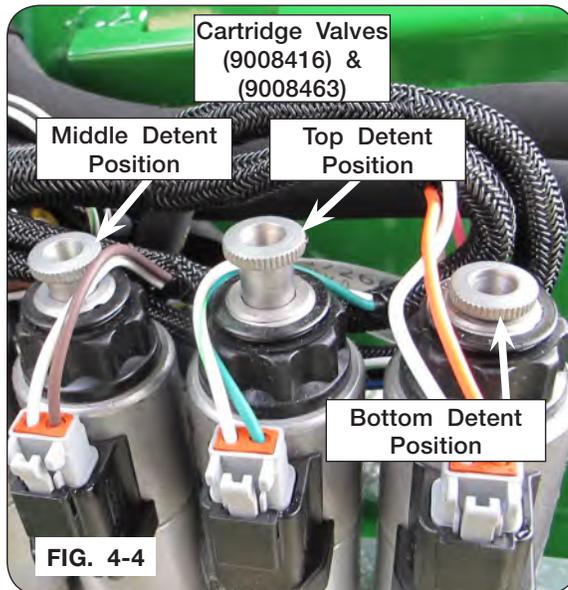
**NOTE:** Only one cartridge valve (9008416 & 9008463) must be in the top or bottom detent position at a time to function properly. All other valves must be in the middle detent position. (FIG. 4-4 & 4-5)

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

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

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

10. Replace cover plate (272606B) from step 2 to the bottom of the lower auger housing.



## Manual Override for SCV Controlled Spout Rotate & Auger Fold

### **⚠ WARNING**

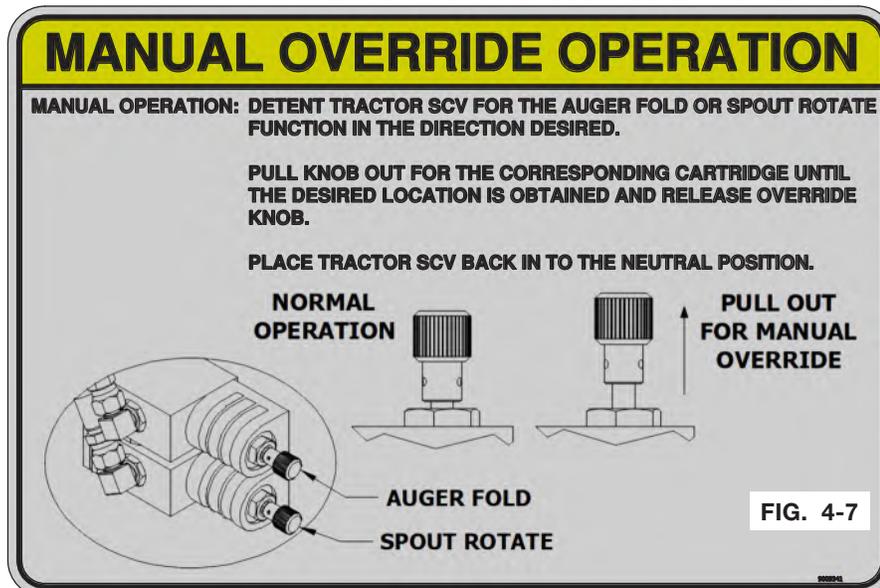
- MOVING OR ROTATING AUGER COMPONENTS CAN CAUSE SERIOUS INJURY OR MACHINE DAMAGE. BEFORE OPERATING MANUAL OVERRIDE(S), ENSURE EVERYONE IS AWAY FROM THE SPOUT AND THAT THE SPOUT WILL NOT CONTACT ANY OTHER PARTS OF THE GRAIN CART. ALL CONTROL SWITCHES ARE DEACTIVATED WHILE UTILIZING MANUAL OVERRIDE(S).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

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

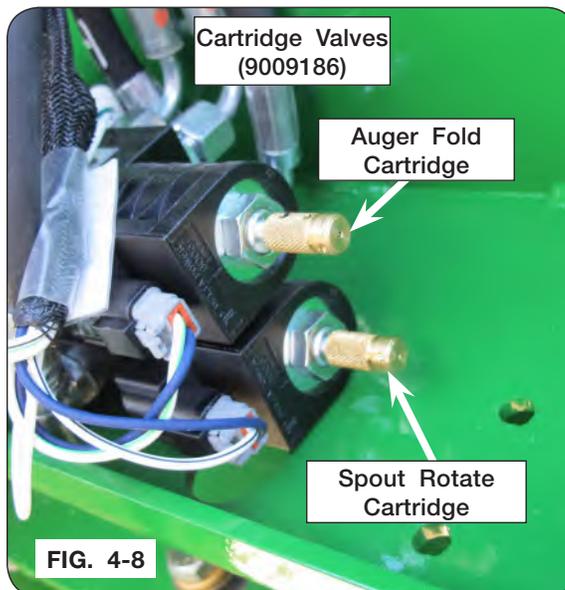


1. Park the empty grain cart on a firm and level surface. Block the machine to keep it from moving. Set the tractor's parking brake. Keep engine running.
2. Remove cover plate (295569B) from the bottom of the lower auger housing to access the auger fold / spout rotate interlock valve assemblies. Keep cover plate.
3. Connect the desired spout rotate hoses (tan hose grips) or auger fold hoses (green hose grips) to the tractor SCV.
4. 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. 4-8 & 4-9)

5. Locate the desired valve (9009186). (FIG 4-8)

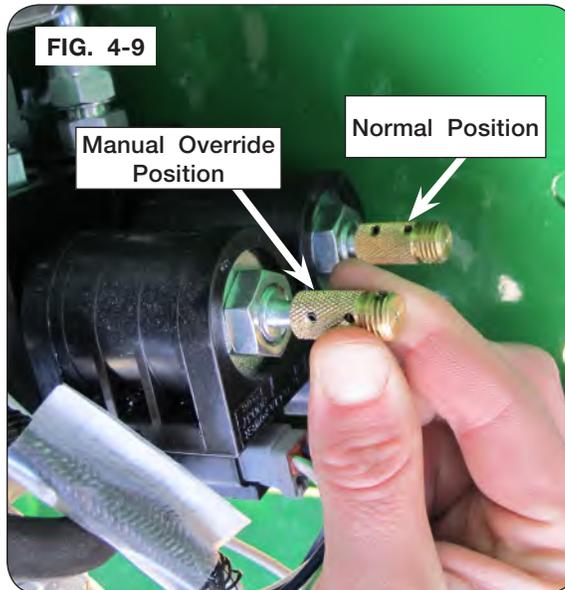


6. Pull and hold the knob out on valve from normal position to manual override position. (FIG. 4-9)

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

8. 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.



9. Replace cover plate (295569B) from step 2 to the bottom of the lower auger housing. (FIG. 4-10)



## Auger System

### **WARNING**

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



## Auger System

### Vertical Auger Height Check and Lubrication Locations

Annually check all bolts, nuts, and set screws for tightness. Replace the top of the upper vertical auger hardware, as necessary, with 1/2"-13UNC x 1 1/4" capscrew (9390-100), 1/2" lock washer (9404-025) and 2 1/2" dia. washer plate (407699). (Fig. 4-11)

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

**NOTE:** The lower auger position is indexed from the drive dog / tube flange hinge surface as shown. (Fig. 4-12)

Perform lubrication as specified. Refer to "Lubrication" in MAINTENANCE section for more details. (Fig. 4-13 & 4-14)

**NOTE:** Hanger bearing contains zerk (9005240) with pressure relief to prevent over-greasing that could push bearing seals out. If grease comes out of the relief on the zerk, this is normal and the bearing has enough grease. (Fig. 4-13)

Fig. 4-13

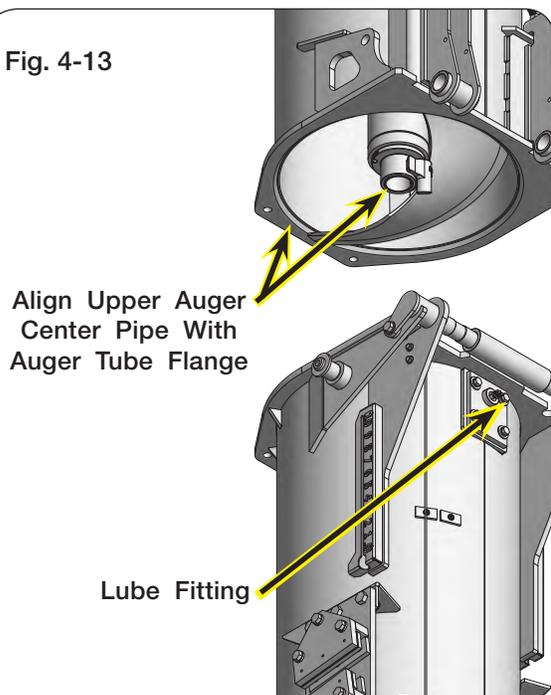


Fig. 4-11

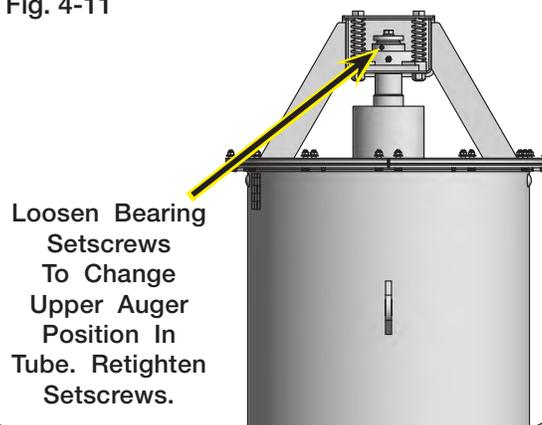


Fig. 4-12

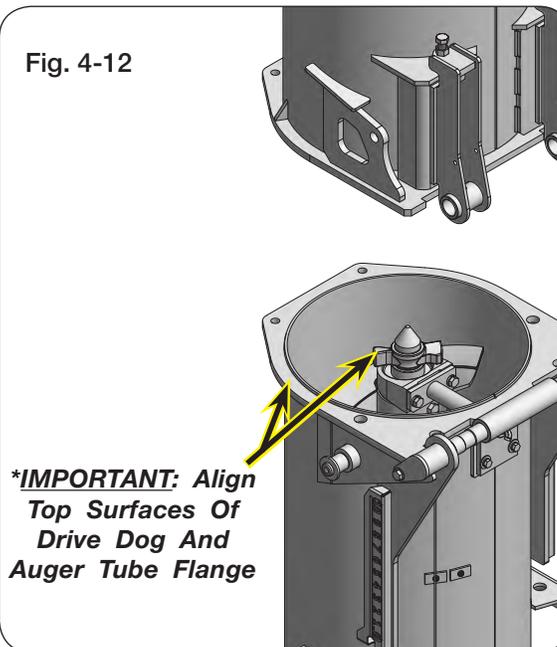
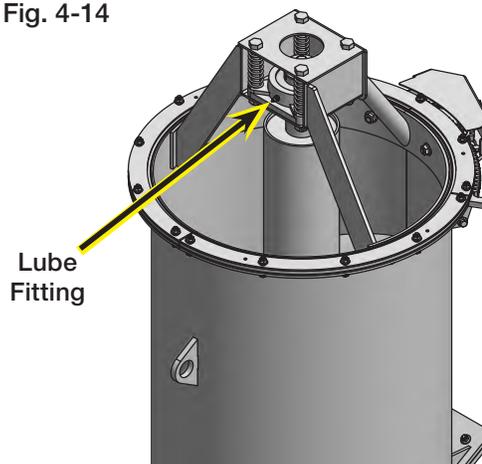


Fig. 4-14

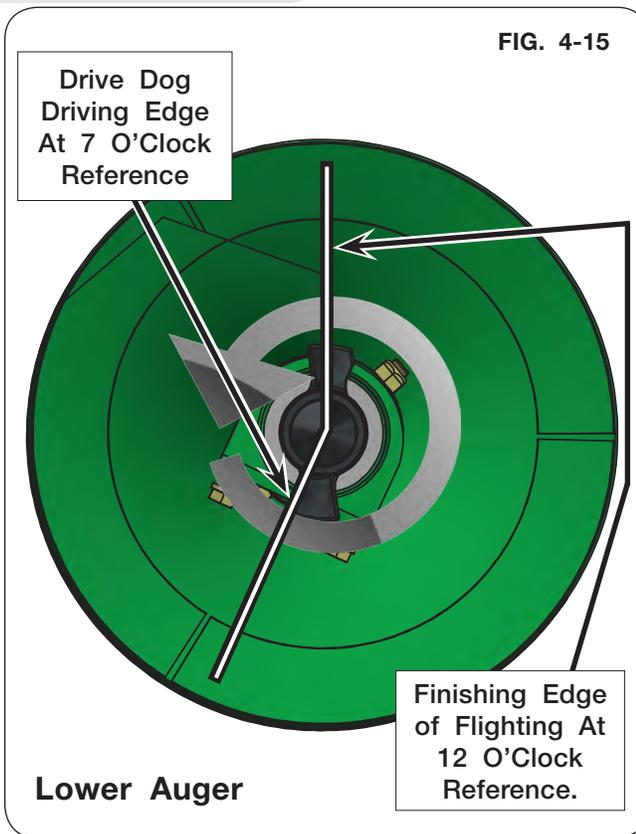


**Auger System** (continued)

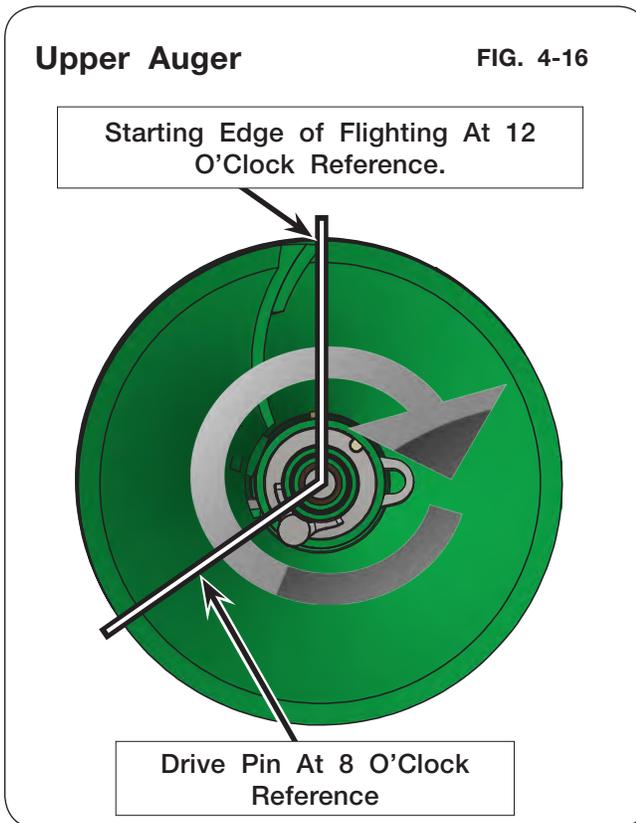
**Vertical Auger Timing**

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. (FIG. 4-15)

**NOTE:** Looking down at the lower flighting (FIG. 4-15) the auger rotation will be counter-clockwise. When looking up at the upper flighting (FIG. 4-16) the auger rotation will be clockwise.



2. For the upper auger, use the starting edge of the flighting as a 12 o'clock reference. Position the driven edge of the drive pin at the 8 o'clock position. See Fig. 4-16.
3. When engaged, the upper flighting should immediately follow the lower flighting.



## Auger System (continued)

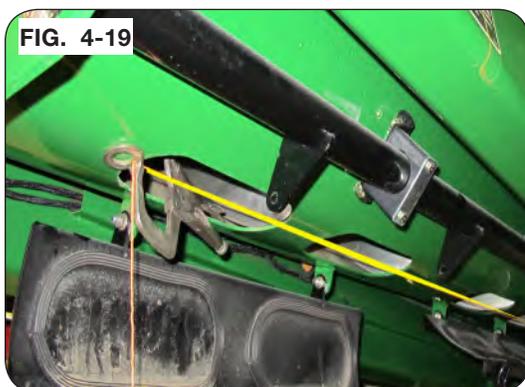
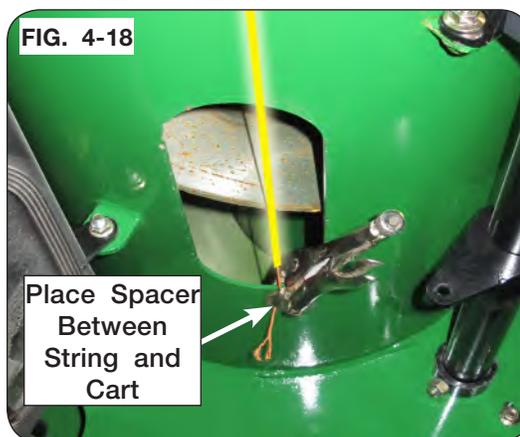
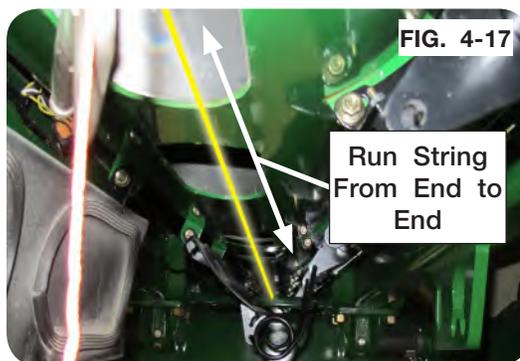
### Horizontal Auger

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. 4-17.
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. 4-18.
6. Attach the opposite end of the string to the back side of the rear belly pan opening. Pull the string tight and clamp to the center of the opening. (FIG. 4-19)
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. 4-20)

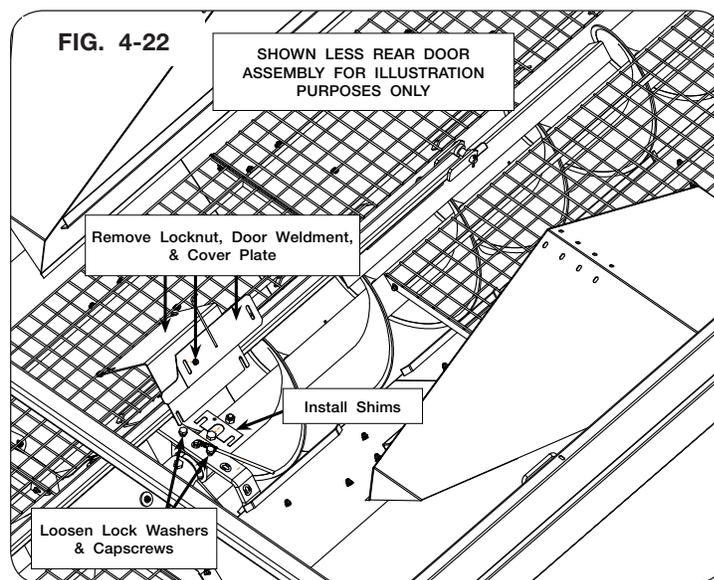
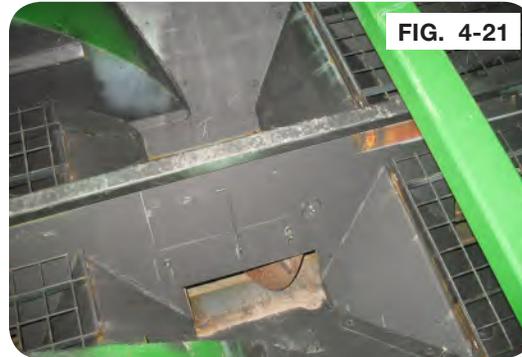
**NOTE:** The shims are 1/8" thick each. Add as needed. Shims are available from your Brent dealer.



## 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. 4-21)
10. Remove the restrictor weldment on the auger tent at the opening above the hanger bearing. (FIG. 4-22)
11. Loosen the two 5/8" x 2" 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. 4-22.



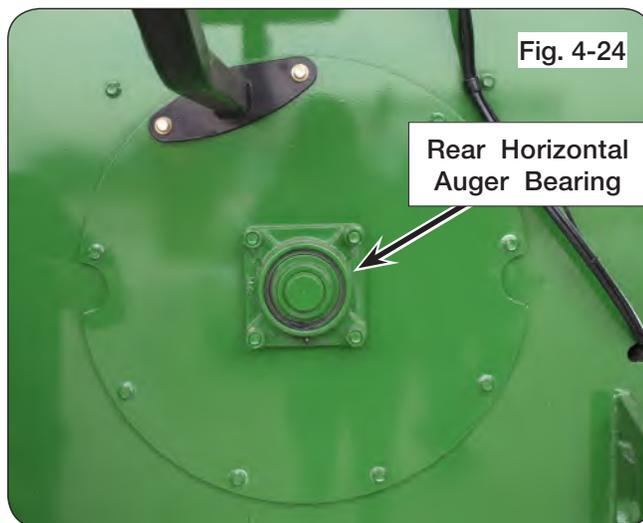
12. If more than two shims are necessary to set the bearing height, replace the 5/8" x 1 3/4" capscrews with the 5/8" x 2" capscrews supplied in the kit.
13. Re-measure the distance from the flighting tube to the string making sure the string is pulled tight. If the measurements are all within 1/8", 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 System** (continued)

**Horizontal Auger Driveline Bearings**

**IMPORTANT**

- Periodically check set screws in all bearings at either end of the driveline for tightness. (FIG. 4-23 & 4-24)



## 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.

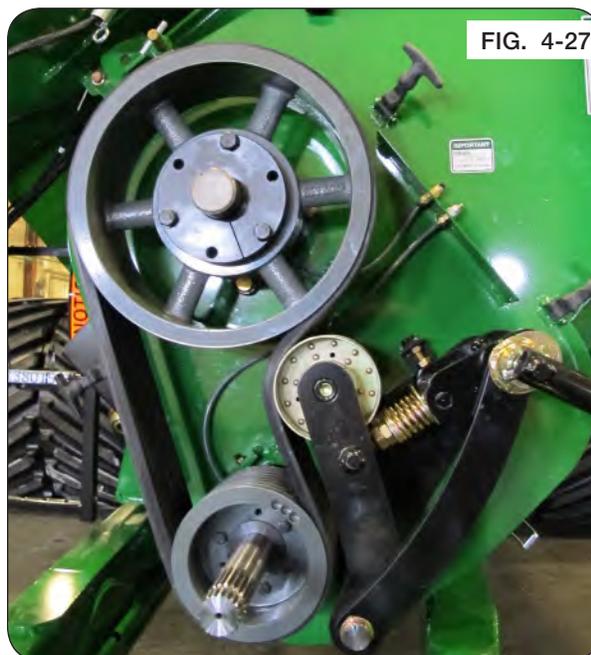
1. Park the unit on a firm, level surface. Block the tracks on the machine to keep it from moving. Set the vehicle parking brake, shut off the engine and remove the ignition key from the towing vehicle.



### WARNING

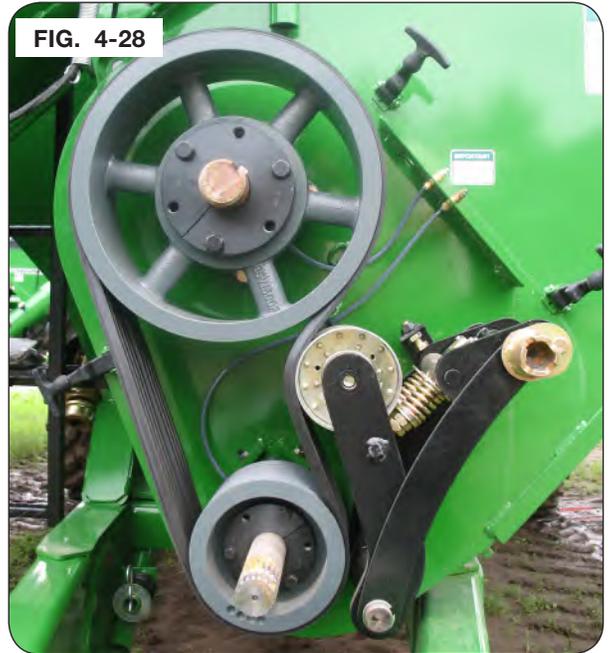
- MOVING OR ROTATING COMPONENTS CAN CAUSE SERIOUS INJURY OR DEATH. ALWAYS DISCONNECT POWER SOURCE BEFORE SERVICING. ENSURE SERVICE COVERS, CHAIN/BELT COVERS AND CLEAN-OUT DOOR(S) ARE IN PLACE AND SECURELY FASTENED BEFORE OPERATING UNIT.

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. 4-27.



**Belt Tightener Adjustment (continued)**

4. Remove cover, disengage belt tensioner handle and inspect belts for misalignment, loose parts and cracks. Replace if necessary with a matched set. (Fig. 4-28)



## Belt Tightener Adjustment (continued)

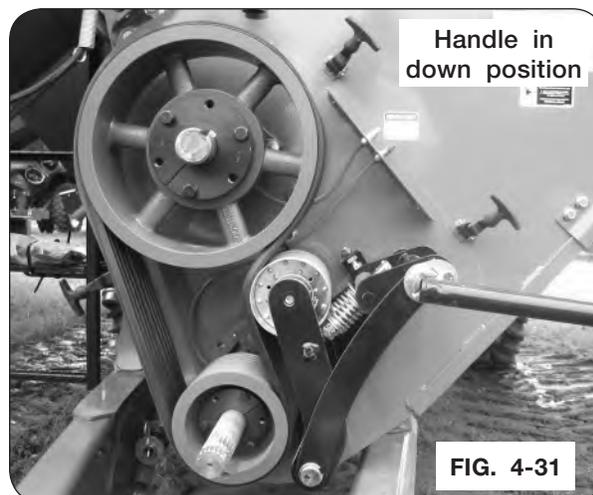
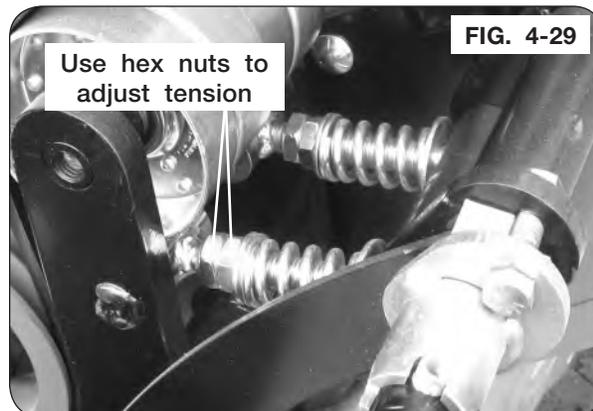
5. Belt tension is adjusted with hex nuts below the spring. All belt tension **MUST** be released from linkage. Loosen outer hex nut and adjust inner nut to establish a 3 1/16" pre-load dimension between the heavy washers. Tighten the outer hex nut against inner nut to lock position. (Fig. 4-29)
6. Check the lower belt pulley to ensure belt is aligned in their grooves and with the belt tensioner handle, engage the roller/idler linkage against the belt and over-center stop. The compressed spring should now be approximately 1 3/4" between the washers and generating a force of approximately 480 lbs. against the belt. (Fig. 4-30)
7. Release and tighten belt multiple times to confirm positions and final adjustments. See Fig. 4-30 and Fig. 4-31.
8. Tighten belt to reinstall the cover guard and the PTO shaft to the gearbox input shaft. Clear work area and test run drivetrain for 3 minutes at 1000 PTO RPM.

### **WARNING**

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

9. Disengage PTO and turn off tractor. Through the cover access door, check the compressed spring length is approximately 1 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.



### **V-Belt Alignment**

1. Pulleys must be aligned with the fixed idler. Belts should be centered on idler for longest belt life. (Fig. 4-32)
2. After tightening taper-lock bushing hardware, lay a straight edge across face of the drive and driven belt pulleys to ensure alignment between the grooves on the pulleys.

### **Split Tapered Bushings**

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

For the gearbox, bushing with 2 1/4" bore (9007376) - 30 ft.-lbs.

For the horizontal auger, bushing with 2 1/4" bore (9004813) - 75 ft.-lbs.

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

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



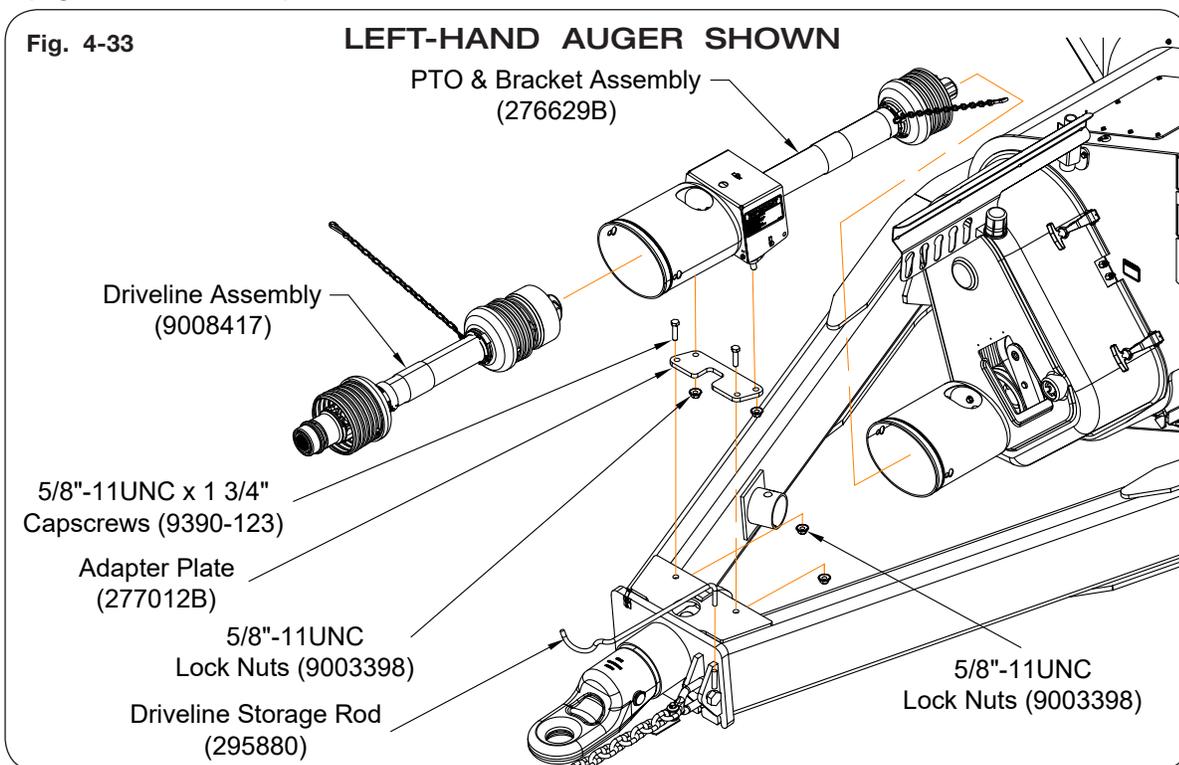
## Driveline Removal

### **⚠ 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.

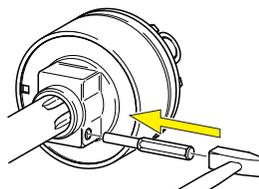
**NOTE:** Gearbox shaft guard has access doors for installing and removing of driveline.

- Remove the driveline assembly (9008417) cut-out clutch end from the PTO and bracket assembly (276629B) splined shaft end by removing the attaching clamping cone. (Fig. 4-33 and 4-34)



- Use a hammer and punch and moderately hit the end of clamping cone, as shown. Back off the clamping cone 1/2 turn. Continue alternating punch and unscrewing clamping cone until clamping cone can be removed by hand. (Fig. 4-34)

Fig. 4-34

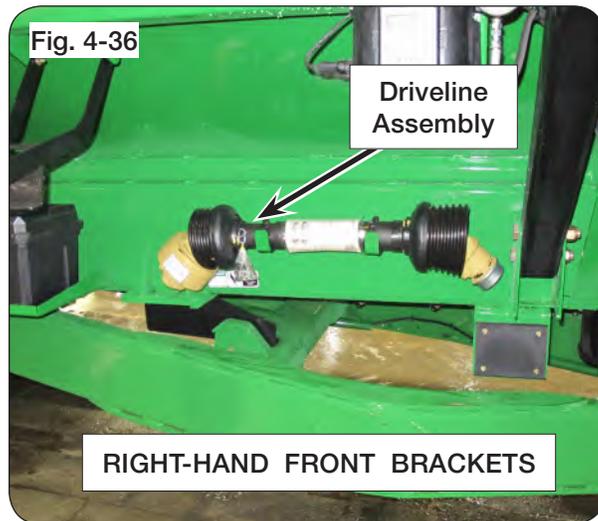
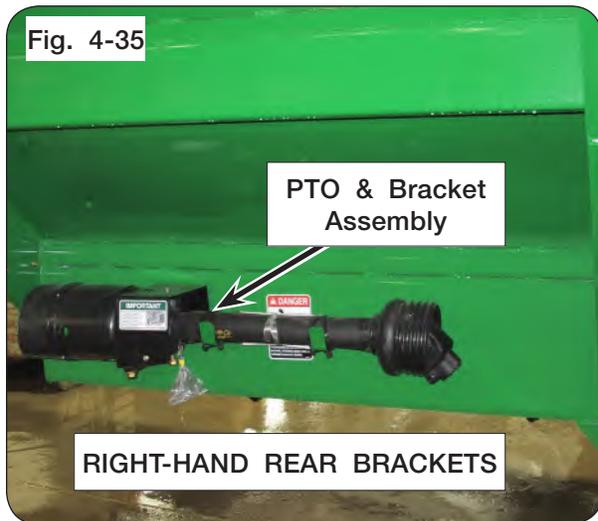


**NOTE:** Refer to "PTO Quick Disconnect" in this section for disassembly instructions.

- Remove the PTO and bracket assembly (276629B) from the gearbox splined shaft. Remove the other end from the adapter plate (277012B) bolted on the tongue with capscrews and lock nuts. (Fig. 4-33)

**Driveline Removal**

4. Once the PTO and bracket assembly is removed, clean and grease the implement gearbox splined shaft.
5. Secure PTO and bracket assembly and driveline assembly to right-hand side cart brackets. (Fig. 4-35 & 4-36)



### Seasonal Storage

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

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

Lubricate machine at all points outlined.

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

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

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

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

Close the tarp to keep debris out of the hopper.



## Baffle Adjustment

### **WARNING**

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

---

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

---

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

Refer to the following reasons for baffle adjustment:

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

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

**Baffle Adjustment** (continued)

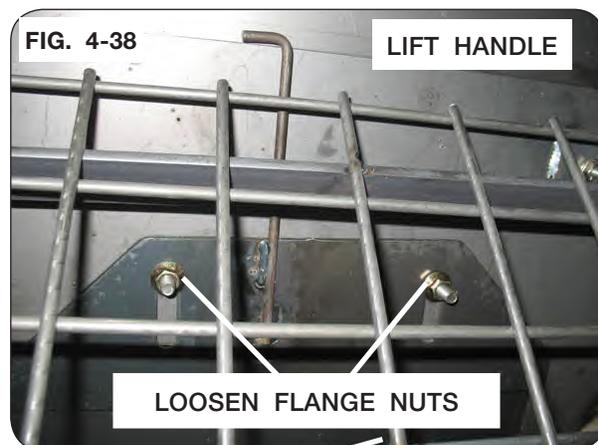
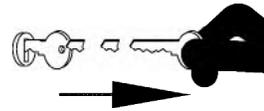
The horizontal auger baffles are factory-set at the lowest position. This position results in the lowest power requirements and longest flighting life. Once grain has been run through the unit, adjustments can be made to achieve the ideal unloading performance.

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

If a higher flow is desired and torque is not a factor, loosen the (2) flange nuts on each baffle, see figure 4-38. Use the lift handle to raise each baffle to the desired position, retighten both flange nuts, see figures 4-38 & 4-39.

**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 4-39 for illustration only.

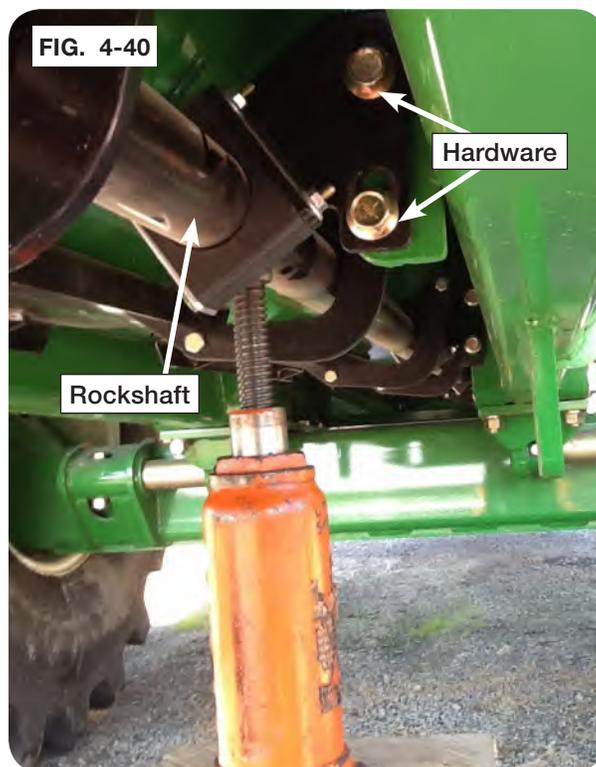


## Horizontal Cleanout Door Rockshaft Adjustment

### **WARNING**

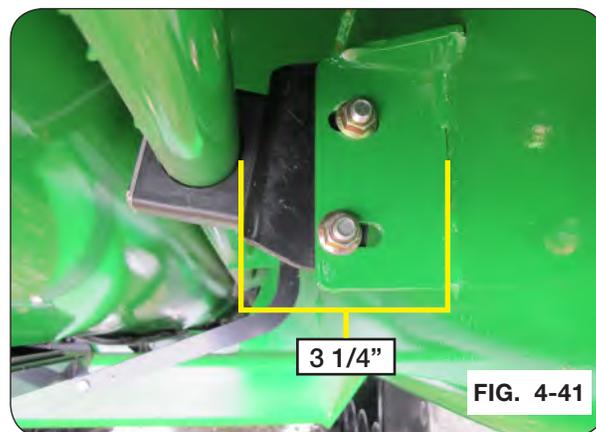
- MOVING OR ROTATING COMPONENTS CAN CAUSE SERIOUS INJURY OR DEATH. ENSURE SERVICE COVERS, CHAIN/BELT COVERS AND CLEANOUT DOORS ARE IN PLACE AND SECURELY FASTENED BEFORE OPERATING UNIT.
- KEEP HANDS CLEAR OF PINCH POINT AREAS.
- TIPPING OR MOVEMENT OF THE MACHINE CAN CAUSE SERIOUS INJURY OR DEATH. BE 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 tracks to keep the machine from moving. Set the tractor parking brake, turn off tractor engine, remove ignition key, and disconnect PTO shaft.
2. Loosen all the hardware in the slotted brackets connecting the cleanout door rockshaft to the grain cart tube. (Fig. 4-40)
3. Starting at the front of the cart, using a jack, push the rockshaft up and toward the runner tube. (Fig. 4-40)



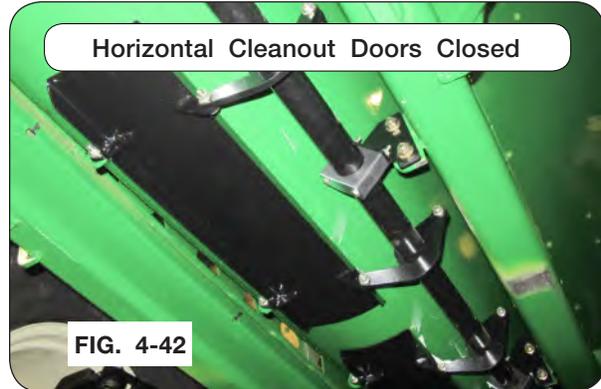
**NOTE:** Ideal distance between the runner tube and rockshaft is 3 1/4". (FIG. 4-41)

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



### **Horizontal Cleanout Door Rockshaft 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. 4-42)
7. Close the doors and ensure all doors seal. (Fig. 4-42)
8. Insert lynch pin into rockshaft and return handle to storage location.



**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 ensure 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.

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

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

1. Fully collapse PTO shaft and measure length "L" (Fig. 4-43).

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

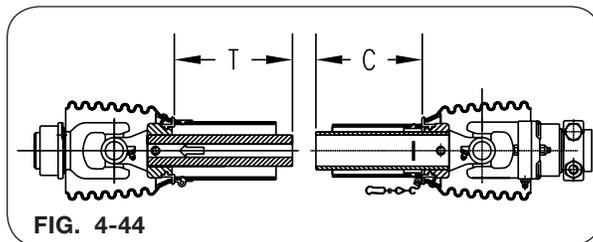
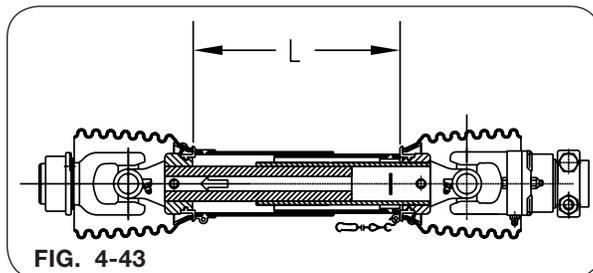
2. Pull apart PTO telescoping shaft ends and measure lengths "T" & "C" (Fig. 4-44)

Add "T" + "C" measurements together  
 Enter total here: \_\_\_\_\_(2)

3. Calculate maximum recommended extended length:

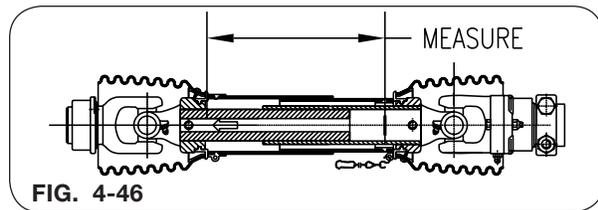
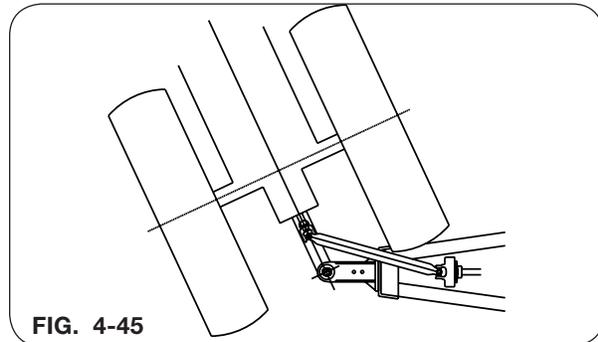
- a. Subtract line 1 from line 2  
 Enter here: \_\_\_\_\_(a)
- b. Divide line (a) by 2  
 Enter here: \_\_\_\_\_(b)
- c. Add line (b) to line 1.  
 Enter here: \_\_\_\_\_(c)
- d. Subtract 3 inches from line (c)  
 Enter here: \_\_\_\_\_(d)

This is the maximum recommended extended length.



### Verify Telescoping PTO Shaft Length (continued)

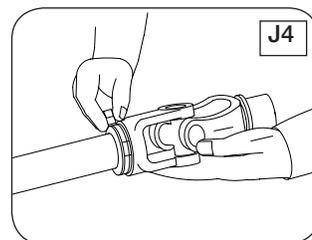
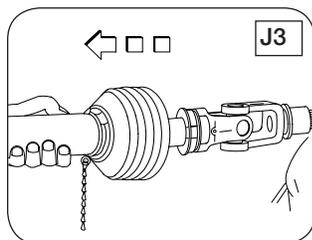
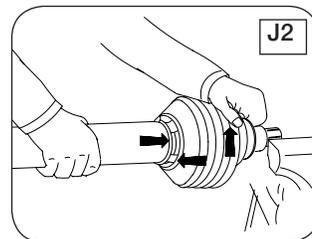
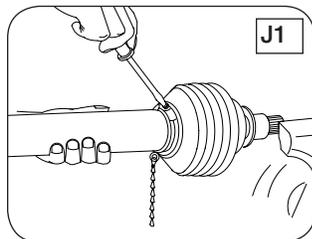
4. Hitch tractor drawbar to cart, ensuring that tractor and cart are on level ground and coupled as straight as practical.
5. Connect PTO shaft to tractor, and measure length “L” from same points as used in step 1. Ensure that this measurement does not exceed the maximum recommended extended length calculated 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. 4-45).
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. 4-46)



### **PTO Shaft and Clutch**

#### **To Dismantle Guard (Figs. J1 - J4)**

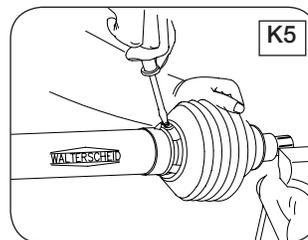
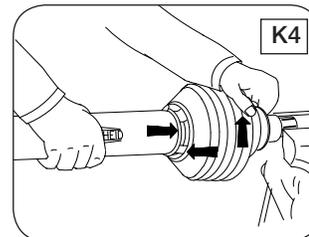
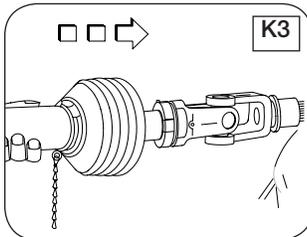
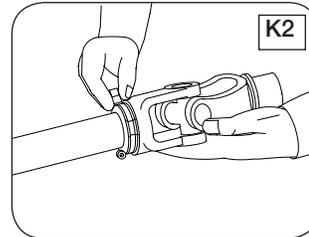
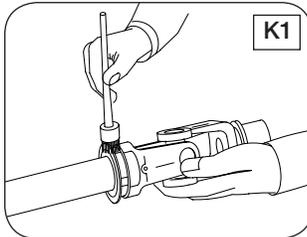
1. Remove locking screw.
2. Align bearing tabs with cone pockets.
3. Remove half-guard.
4. Remove bearing ring.



**PTO Shaft and Clutch (continued)**

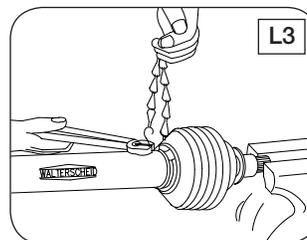
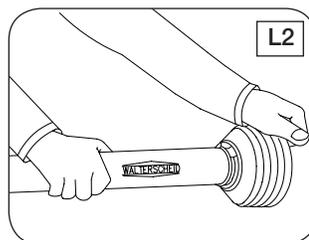
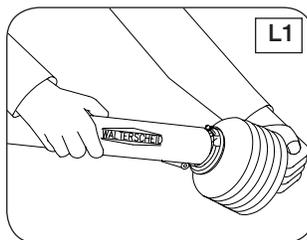
**To Assemble Guard (Figs. K1 - K5)**

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).

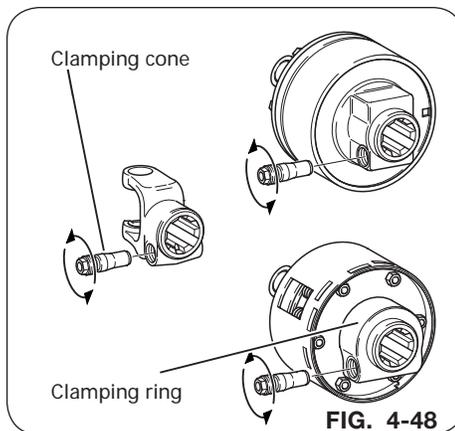
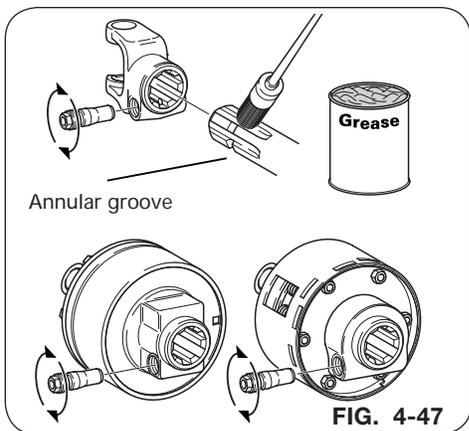


**PTO Quick Disconnect**

**Coupling**

Slide clamp yoke or cut-out clutch onto connecting shaft. Make sure the location hole for the clamping cone is positioned above the annular groove of the connecting shaft. (FIG. 4-47) Screw appropriate clamping cone into the location hole. (FIG. 4-48) Slightly moving the clamp yoke or clutch to and from in the axial direction will help drive in the clamping cone. Check the clamp yoke or clutch for a tight and safe fit and continue to check at regular intervals. Retighten the clamping cone as necessary. Torque clamping cone to 75 ft.-lbs.

When over loading occurs, the clutch disengages and will repeatedly attempt to reset. The clutch will create a repeated “clicking” noise when resetting. Torque demand must decrease for clutch to reset. Refer to "Auger Overload Procedure" in OPERATION section for details.

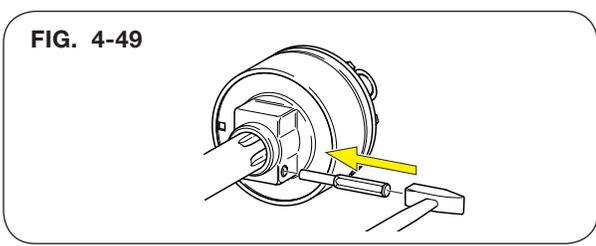


TIGHTEN TO  
75 FT.LBS.  
(100 Nm.)  
RECHECK  
PERIODICALLY

393970

**Uncoupling**

First dislodge the clamping cone with a punch and hammer from its current position. Unscrew the clamping cone a partial turn. Use the punch and hammer again to help alleviate the torque resistance on the wrench, if necessary. After a few cycles, the clamping cone will move freely with low torque resistance for the removal process. (FIG. 4-49)



## Hydraulic Jack Disassembly

### **WARNING**

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

---

- 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.

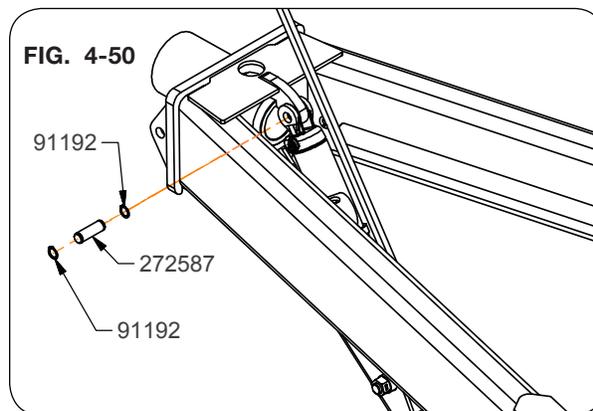
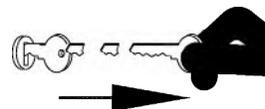
---

- 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 cart on a firm, level surface. Block tractor and the cart tracks to keep the machine 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.

**NOTE:** Discard all hardware and parts from step 8 to step 10.

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. 4-50)





**Hydraulic Jack Disassembly** (continued)

12. Attach shaft collars (9007301) to the rod end of the cylinder as shown in FIG. 4-53.

13. Assemble the cylinder (9009047) and jack foot (271723B) to the jack leg weldment (276380B) shown in FIG. 4-53 using 1"-8UNC x 7" capscrew (9390-197) and 1"-8UNC locknut (92199).

**NOTE:** Ensure all jack leg weldment (276380B) joints can pivot freely, especially jack foot (271723B). (FIG. 4-53)

14. Tighten 1" hardware to jack leg weldment and allow the joint to pivot. (FIG. 4-53)

15. Mounting bracket (273808B) must be attached to jack leg weldment (276380B) using 1"-8UNC x 7" capscrew (9390-197) and 1"-8UNC locknut (92199), before mounting to the tongue. (FIG. 4-54)

16. Tighten 1" hardware to jack leg weldment and allow the joint to pivot. (FIG. 4-54)

17. Then attach the mounting bracket (273808B) to the back side of the front hitch plate with two 7/8"-9UNC x 2 1/4" capscrews (9390-165) and 7/8" lock washers (9404-037). (FIG. 4-54)

18. Torque 7/8" hardware to 330 ft.-lbs. (FIG. 4-54)

19. 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. 4-55.

20. Remove the support used for the hydraulic jack assembly.

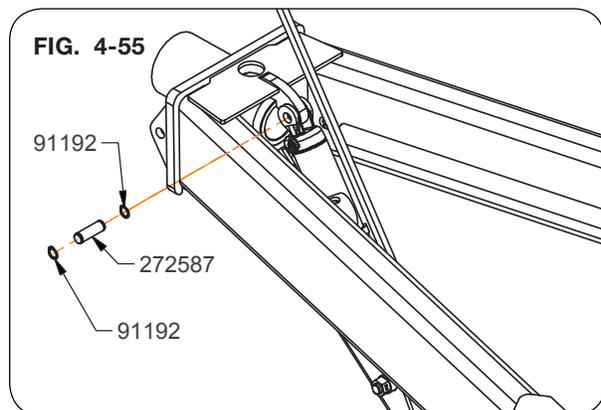
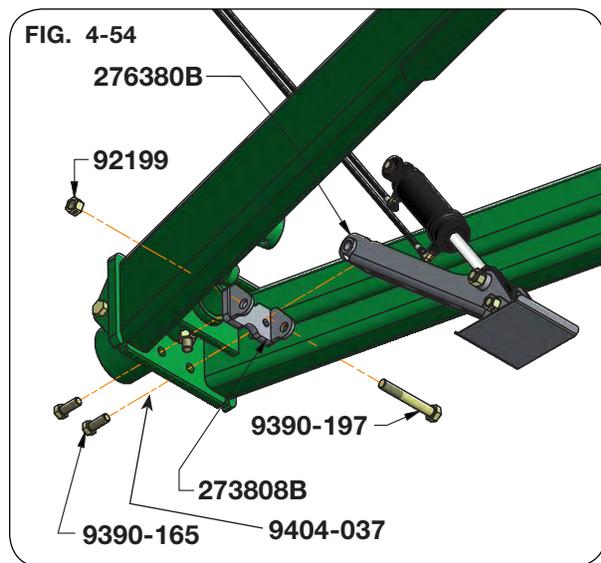
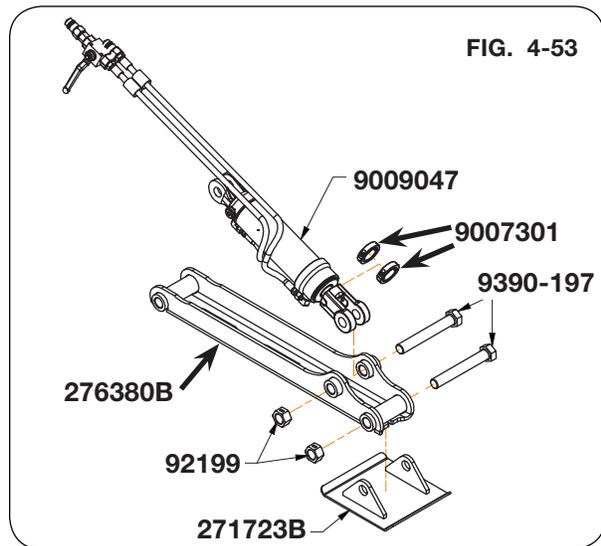
21. Use tractor hydraulics to cycle the hydraulic cylinder several times to ensure that air is purged from the cylinder.

22. Lower the grain cart onto the jackstand.

23. Close valve and then disconnect hose couplers from tractor.

24. Place hose couplers into storage caddy. Reattach PTO and be sure to route hoses to clear PTO driveline during operation.

25. Check for leaks.



## Horizontal Auger Removal

### **WARNING**

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

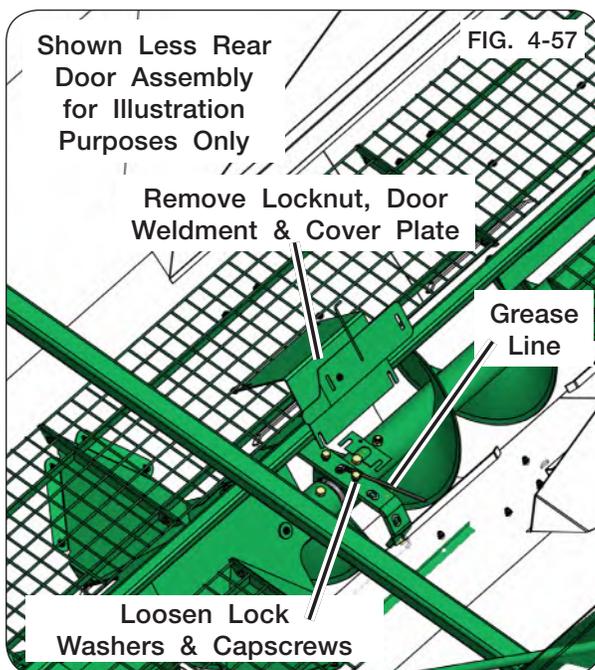
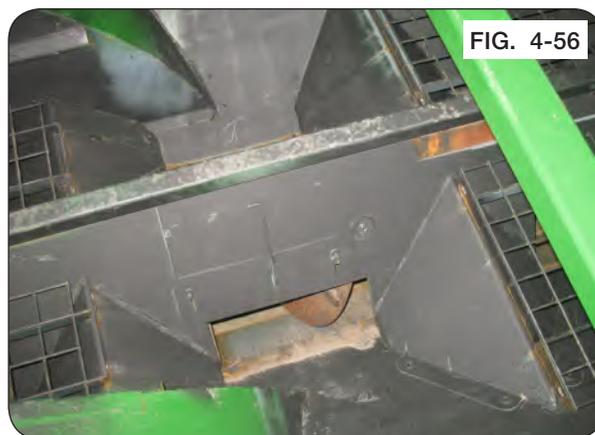
1. Park the unit on a firm, level surface. Block the tracks to keep the machine from moving. Set the vehicle parking brake, shut off the engine and remove the ignition key and disconnect the PTO shaft from the tractor.



2. Remove the bolts in both middle grates inside the cart. Remove the grates. (Figure 4-56)

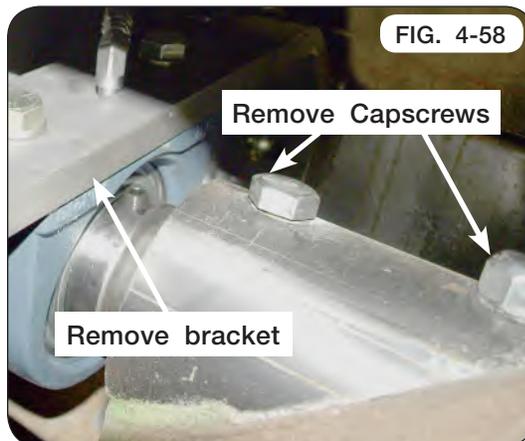
**NOTE:** Retain all hardware for reassembly.

3. Disconnect grease line. (Figure 4-57)
4. Remove the hanger bearing bolts on each side of the auger.
5. Remove capscrews and lock washers holding bearing onto the hanger bearing plate.

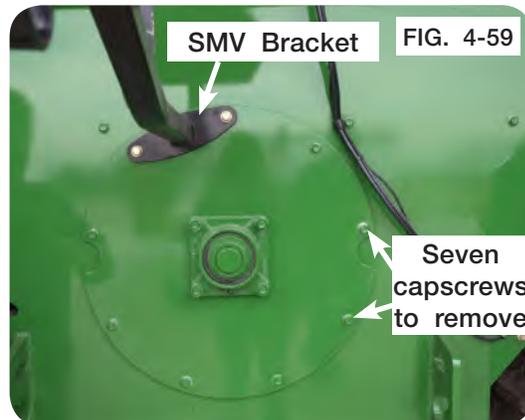


**Horizontal Auger Removal** (continued)

6. Remove the hanger bearing bracket to allow access to work on the bearing and shaft. Remove two center tube connecting capscrews in the horizontal auger. (Figure 4-58)

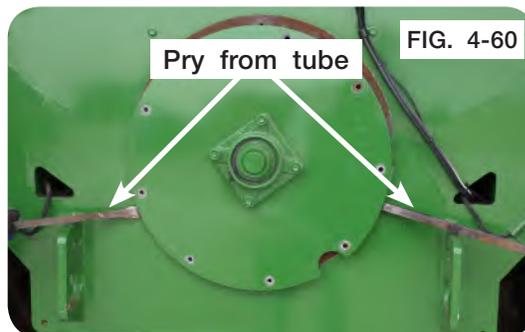


7. Remove the SMV bracket located on the rear auger cover. (Figure 4-59)



8. Remove the capscrews from the auger cover. (Figure 4-59)

9. Pry the auger from the auger tube. (Figure 4-60)

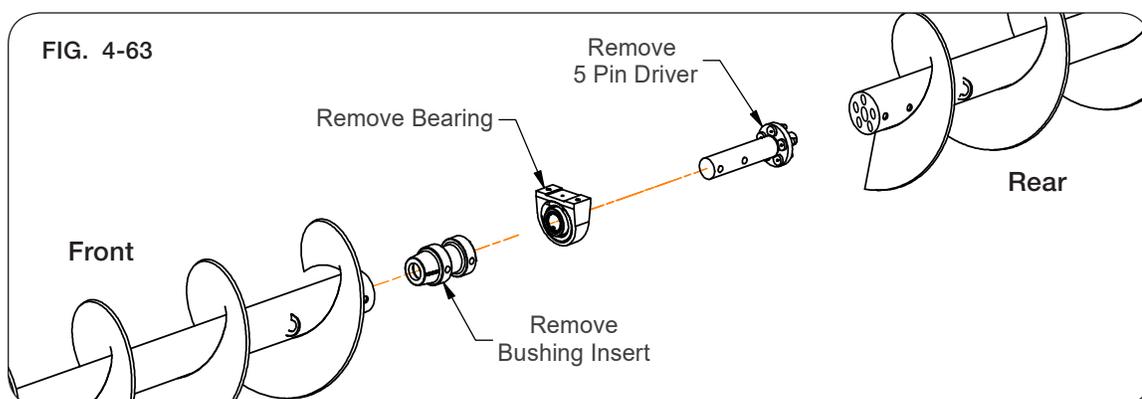


10. Using a safe lifting device rated for a minimum 1,000 lbs., pull the rear auger out 3 feet using a strap. (Figure 4-61)



**Horizontal Auger Removal** (continued)

- 11. Remove the original 5-pin driver, bearing and the bushing insert. (Figure 4-62 & Figure 4-63)
- 12. Discard 5-pin driver.

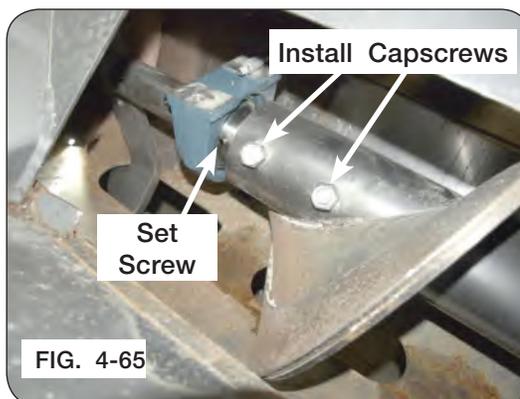


- 13. Substantially coat bushing insert with anti-seize.
- 14. Slide bushing insert into front auger and ensure tube holes are aligned. (Figure 4-63 & Figure 4-64)



**NOTE:** Make sure the set screws on bearing are towards the front of the cart. (Figure 4-65)

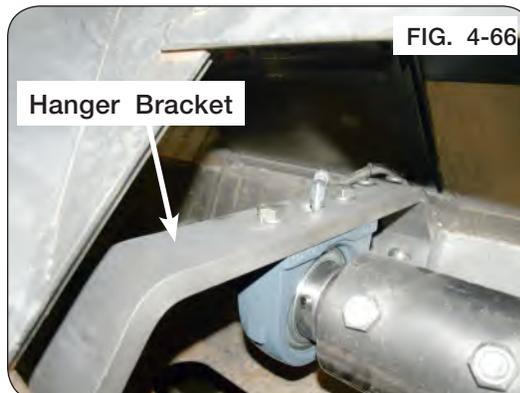
- 15. Slide bearing onto 5-pin driver. (Figure 4-65)
- 16. Insert new 5-pin driver into front auger and ensure tube holes are aligned.
- 17. Install front capscrews, spacer bushings and locknuts 180 degrees from each other and assemble spacer bushings on threaded side of capscrews. Hand tighten hardware. (Figure 4-65)



## Horizontal Auger Removal (continued)

18. Install hanger bracket. Leave the capscrews loose attaching hanger bracket to the cart. Attach hanger bracket to the bearing. (Figure 4-66)

19. Reattach grease line components. (Figure 4-66)



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

20. Slide the rear auger forward. Align the pins and holes with the rear auger pipe. (Figure 4-67)



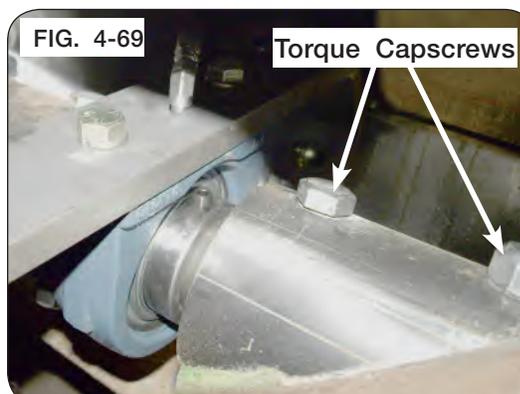
21. Extend a string tightly from front to rear to check horizontal auger alignment. Measure the string to the auger tube either in front or behind the hanger bearing. If this dimension is 1/8" greater than the measurement taken in the front and rear, shims (8GA - 286419B or 12GA - 286424B) are required on top of the center hanger bearing. Ideally the center measurement should be equal to or 1/8" lower than the measurements on the ends of the augers. (Figure 4-68)



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

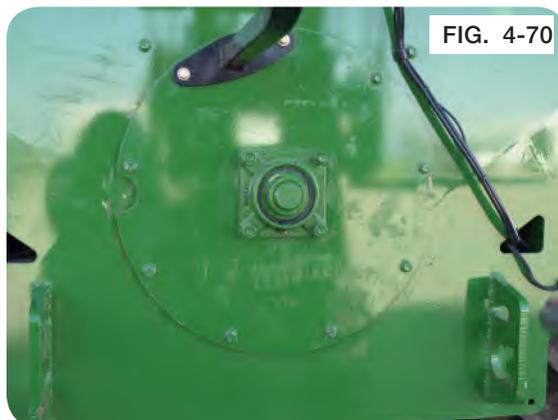
22. Torque hanger bracket capscrews to 130 ft.-lbs. See Figure 4-66.

23. Torque auger capscrews to 200 ft.-lbs. (Figure 4-69)



**Horizontal Auger Removal (continued)**

24. Reattach the rear auger cover and SMV bracket back onto the cart. (Figure 4-70)
25. Torque rear auger cover 3/8"-16UNC x 1" and SMV bracket 3/8"-16UNC x 1 1/4" flange screws to 25 ft.-lbs.
26. Reinstall ALL the grates.



**Troubleshooting**

<b>Problem</b>	<b>Possible Cause</b>	<b>Corrective Action</b>
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)**

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

### Inspection and Maintenance

#### **WARNING**

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

#### **IMPORTANT**

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

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

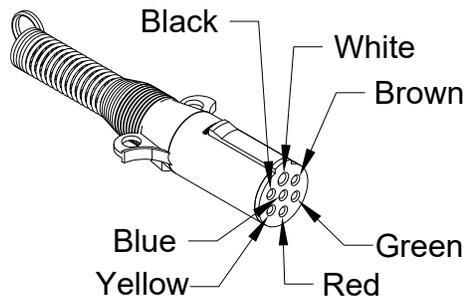
Tears in tarp should be addressed before further tarp operation. If water pools on tarp, adjust tension of tarp cables and/or arm springs.

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

**Electrical System Schematic**

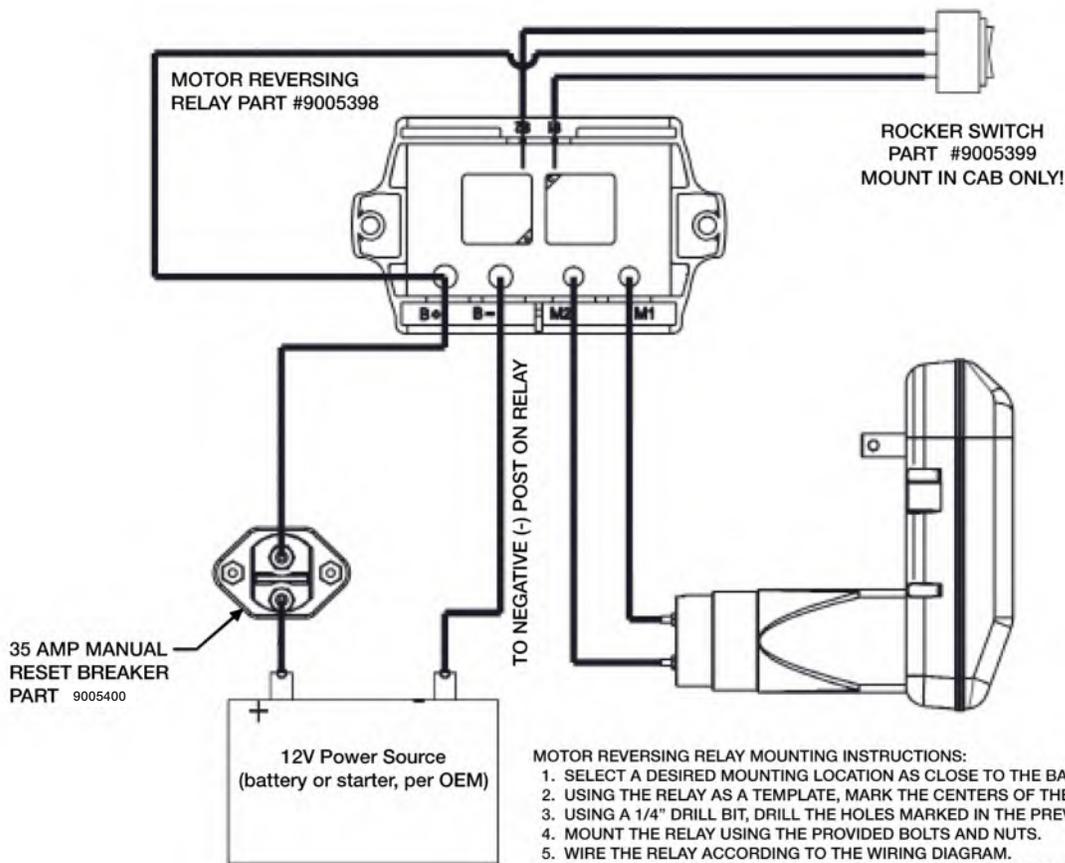
GRAIN CART WIRES

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



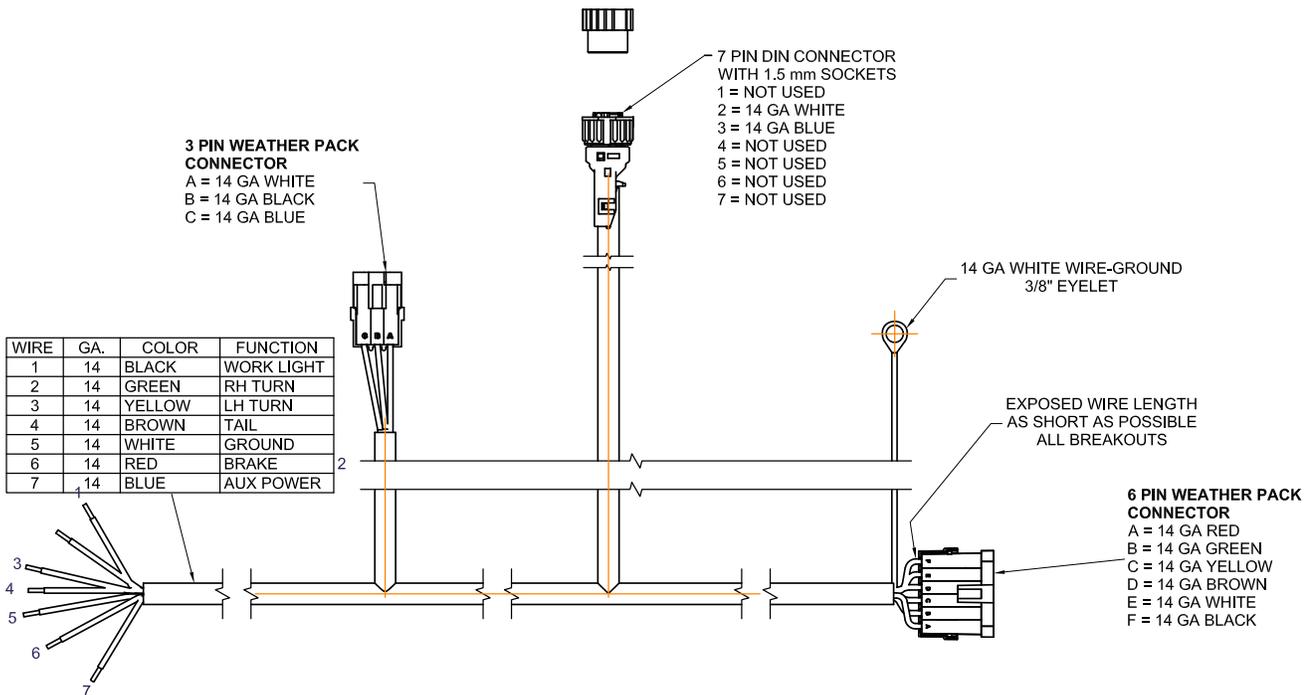
SAE SEVEN-POINT CONNECTOR PLUG

220912

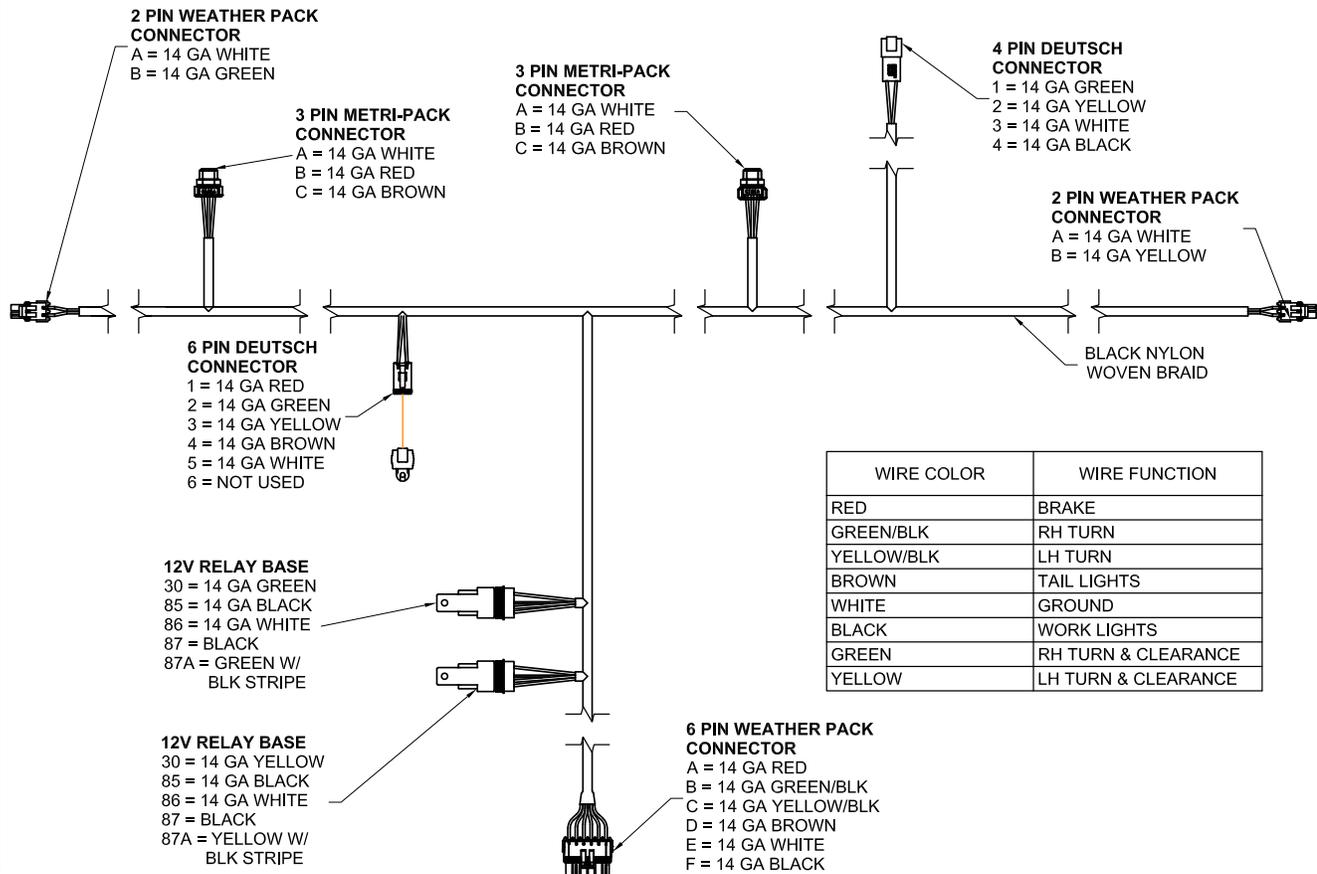


2598 Electric Tarp

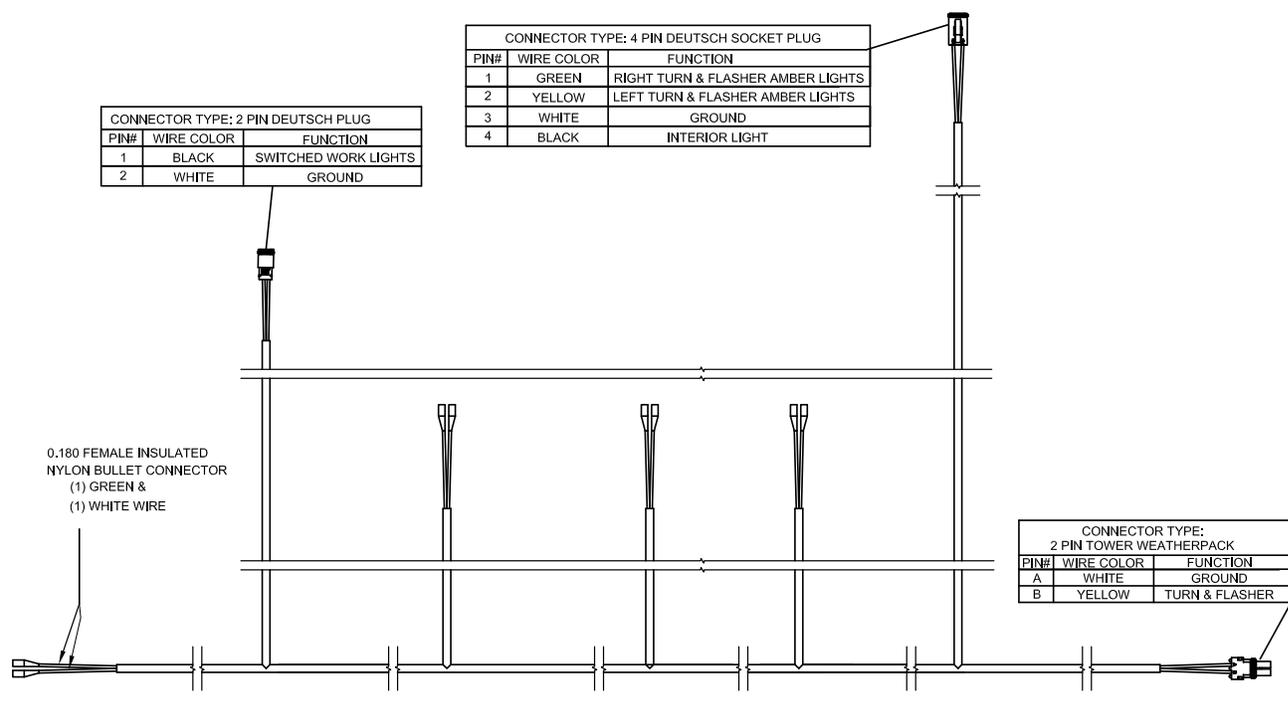
**Electrical System Schematic - Front Harness #9009540**



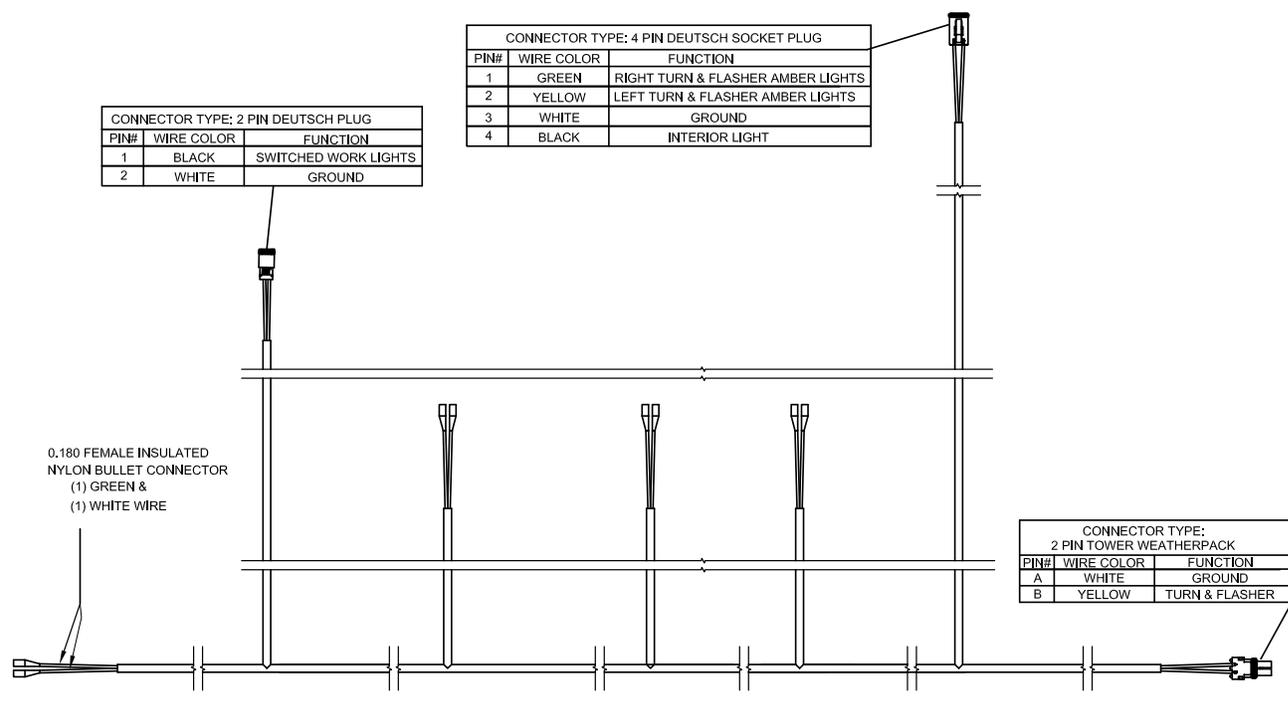
**Electrical System Schematic - Rear Harness #9009587**



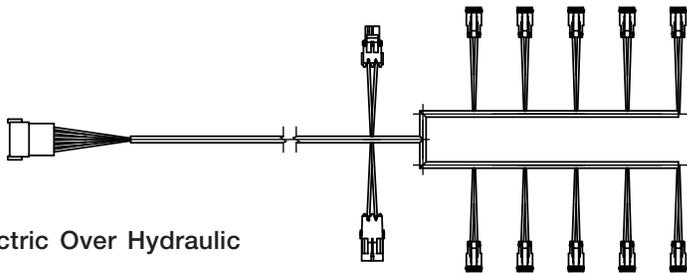
**Electrical System Schematic  
RH Clearance Light Harness # 9009032**



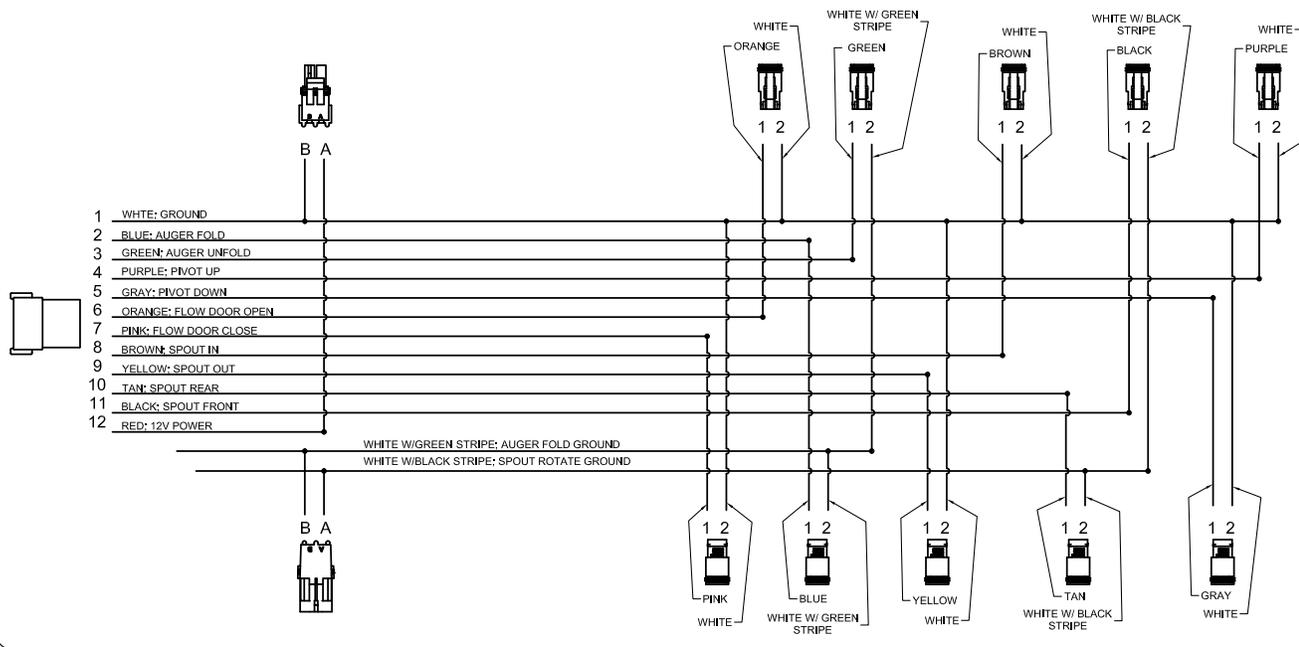
**Electrical System Schematic  
LH Clearance Light Harness # 9009070**



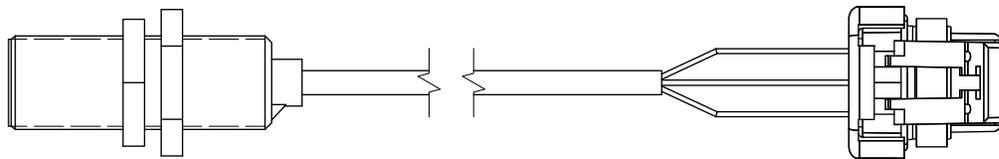
**Electrical System Schematic - Main Harness #9007290 (Opt.)**



**NOTE:** For Optional Electric Over Hydraulic 5 Function Valve.

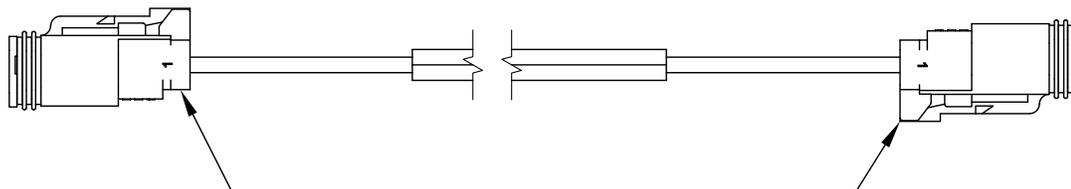


**Electrical System Schematic - Proximity Switch #9007223**



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

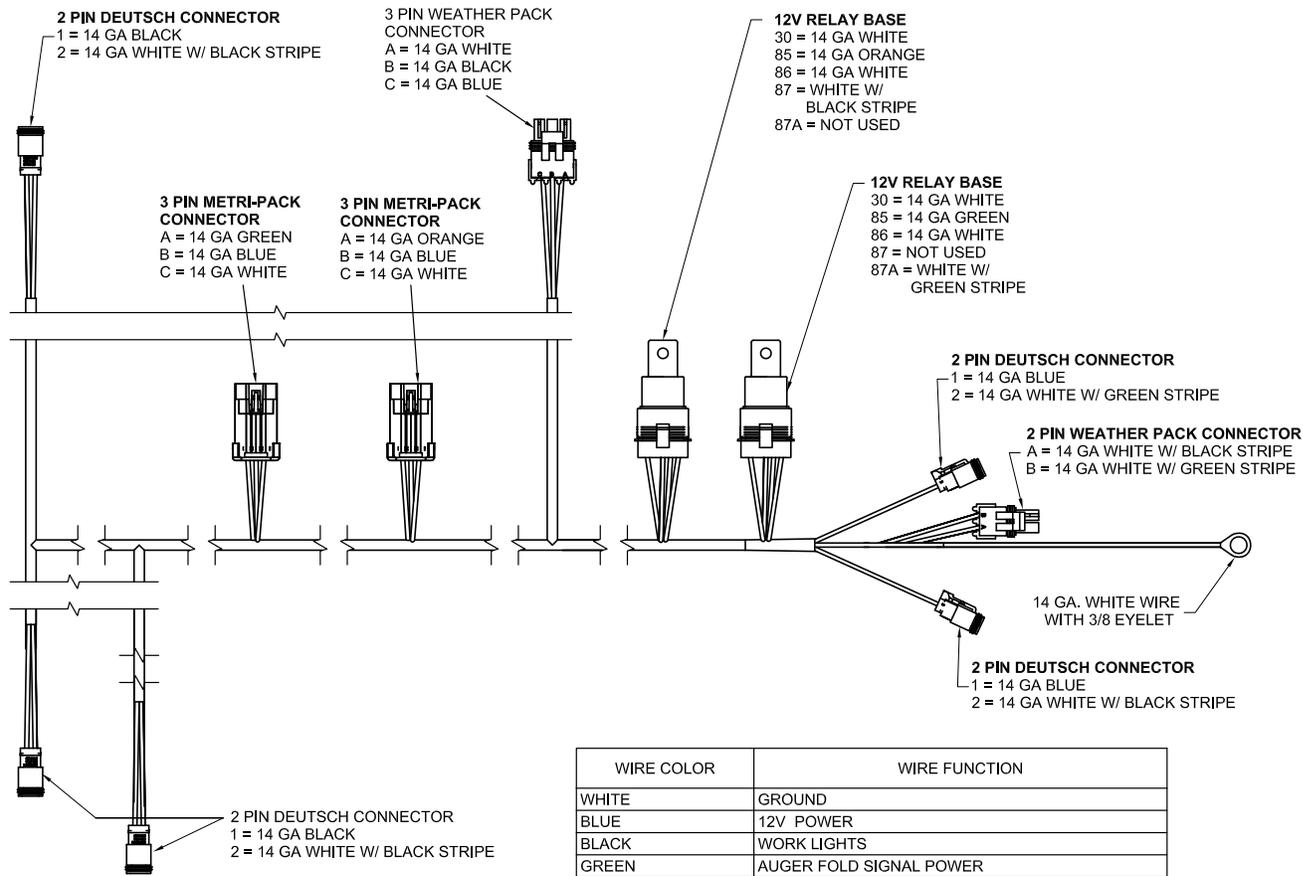
**Electrical System Schematic - Diverter Harness #9007266**



**CONNECTOR TYPE: 2 PIN DEUTSCH PLUG**

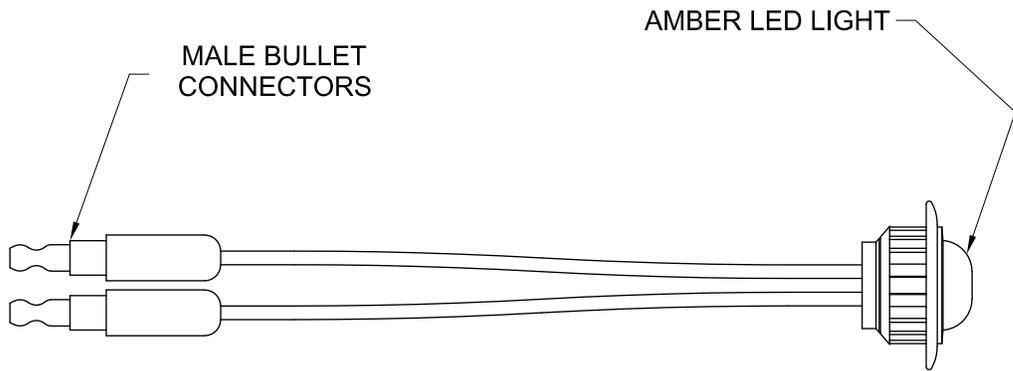
PIN #	WIRE COLOR	FUNCTION
1	RED	+12V POWER
2	WHITE	GROUND

**Electrical System Schematic - Auger Harness #9009531**

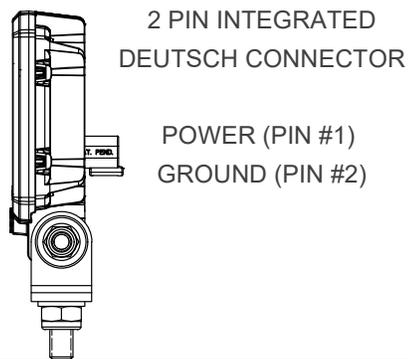


WIRE COLOR	WIRE FUNCTION
WHITE	GROUND
BLUE	12V POWER
BLACK	WORK LIGHTS
GREEN	AUGER FOLD SIGNAL POWER
ORANGE	SPOUT ROTATE/AUGER LIGHTS SIGNAL POWER
WHITE W/GRN STRIPE	AUGER FOLD SWITCHED GROUND
WHITE W/BLK STRIPE	SPOUT ROTATE/AUGER LIGHTS SWITCHED GROUND

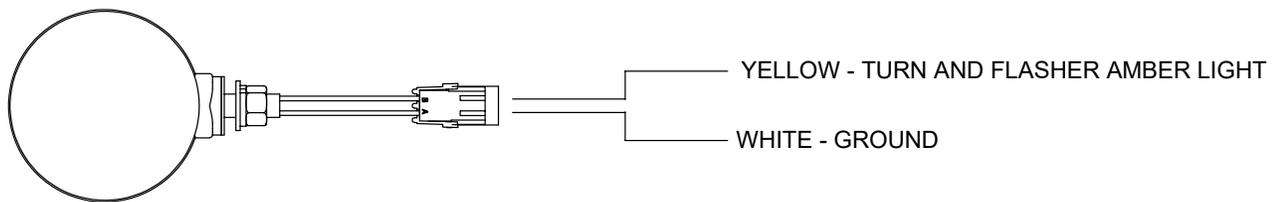
**Electrical System Schematic - Micro Dot, LED Light #9006107**



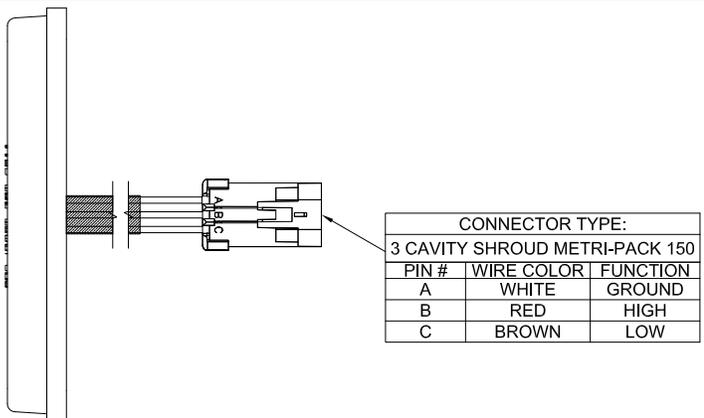
**Electrical System Schematic - Work Flood Lamp #9008957**



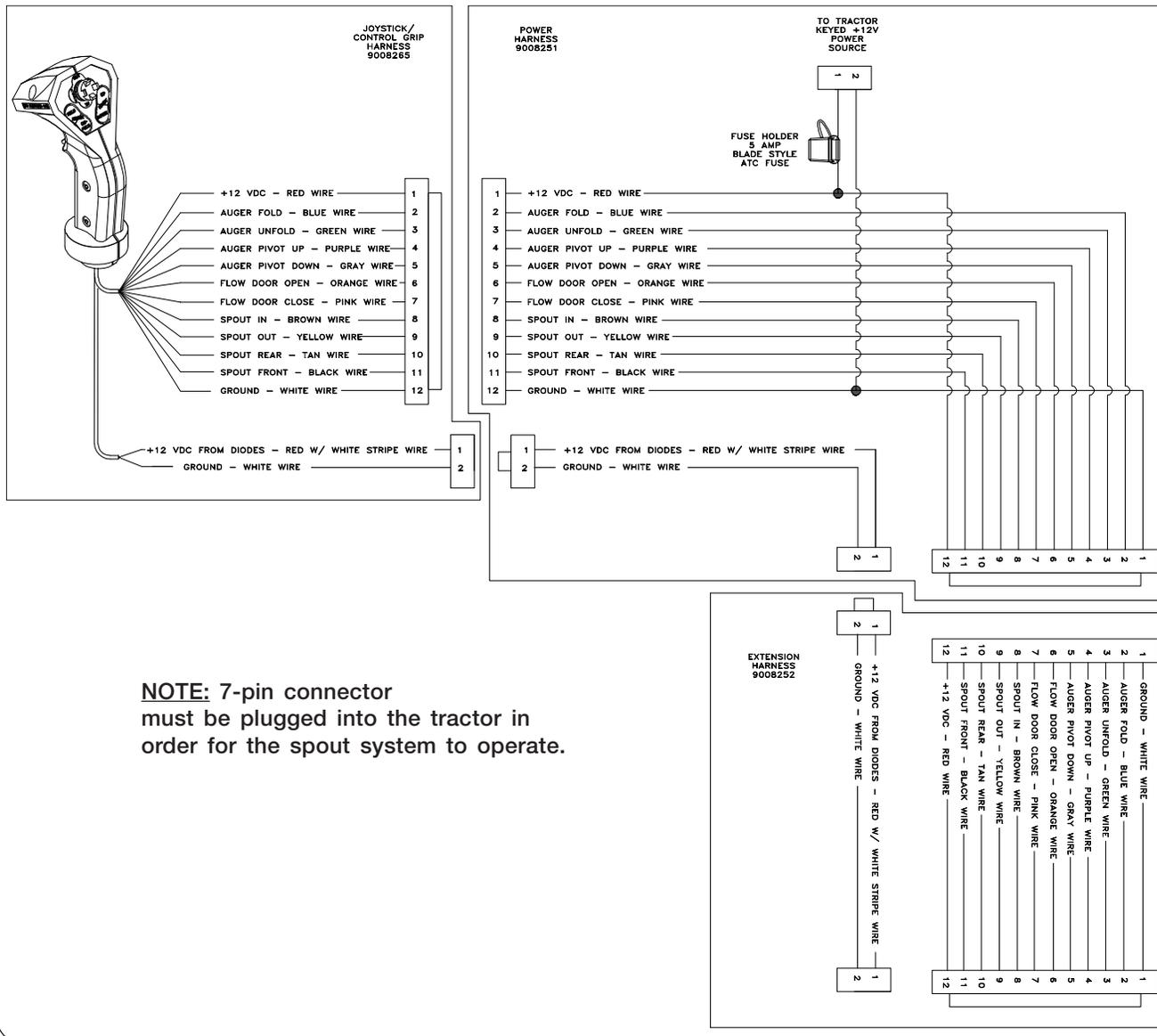
**Electrical System Schematic - Amber Lamp #9005142**



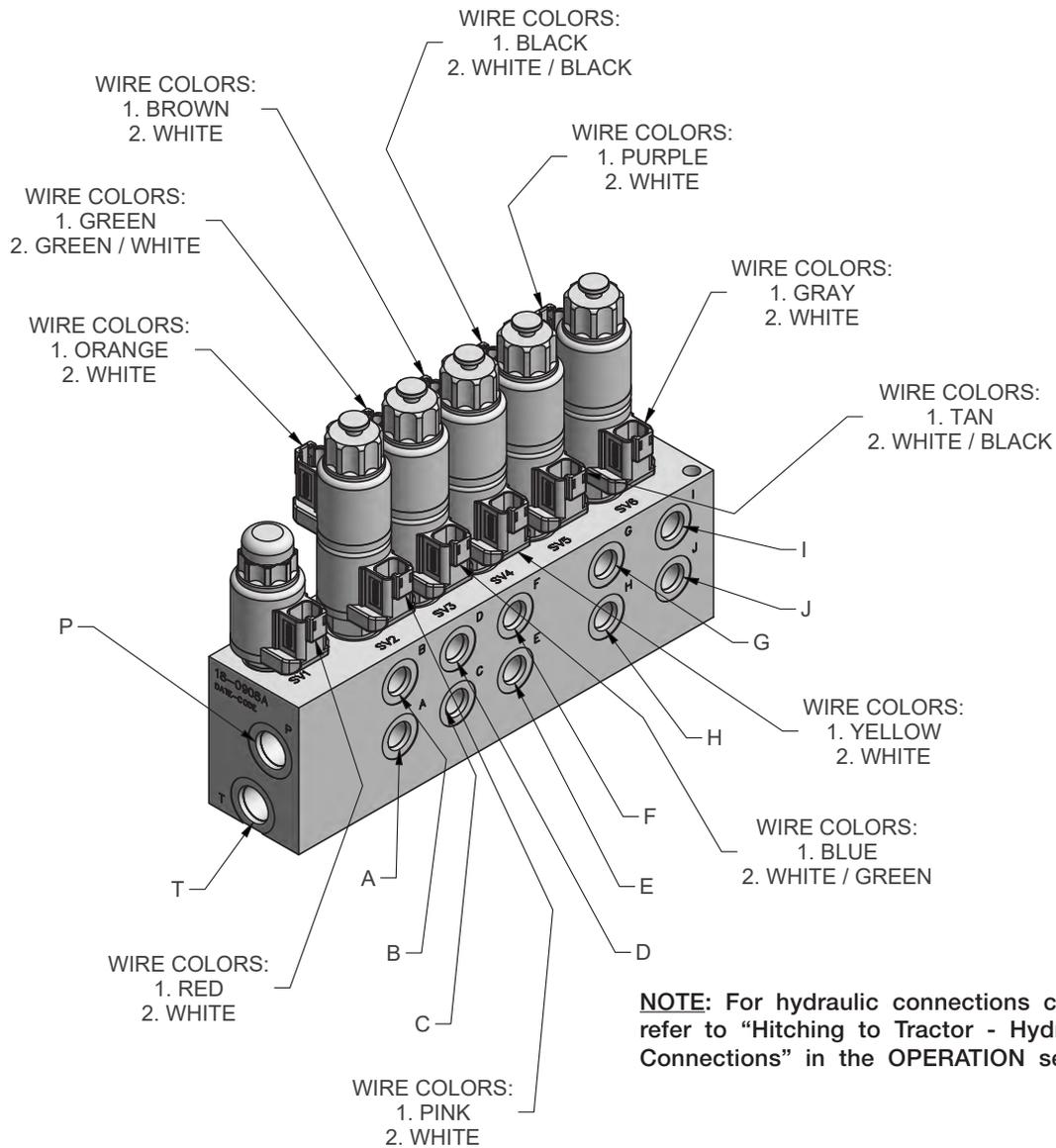
Electrical System Schematic - Red Lamp # 9006345



Electrical Over Hydraulic (EOH) System Schematic  
5 Function Optional



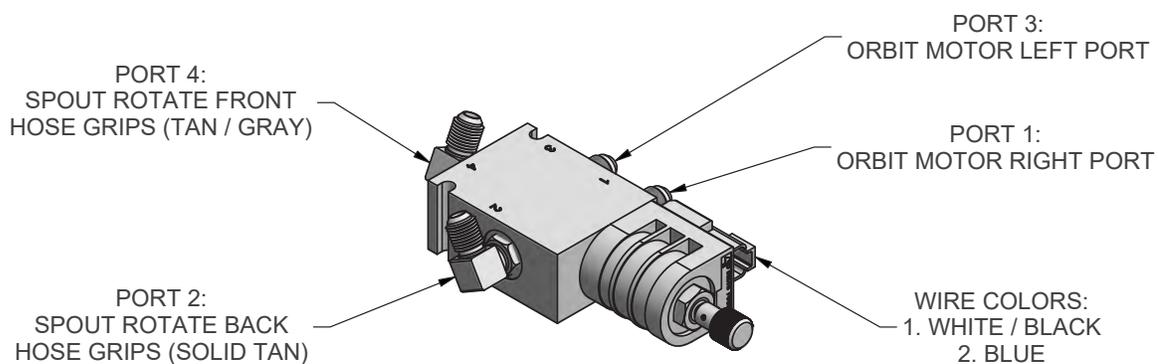
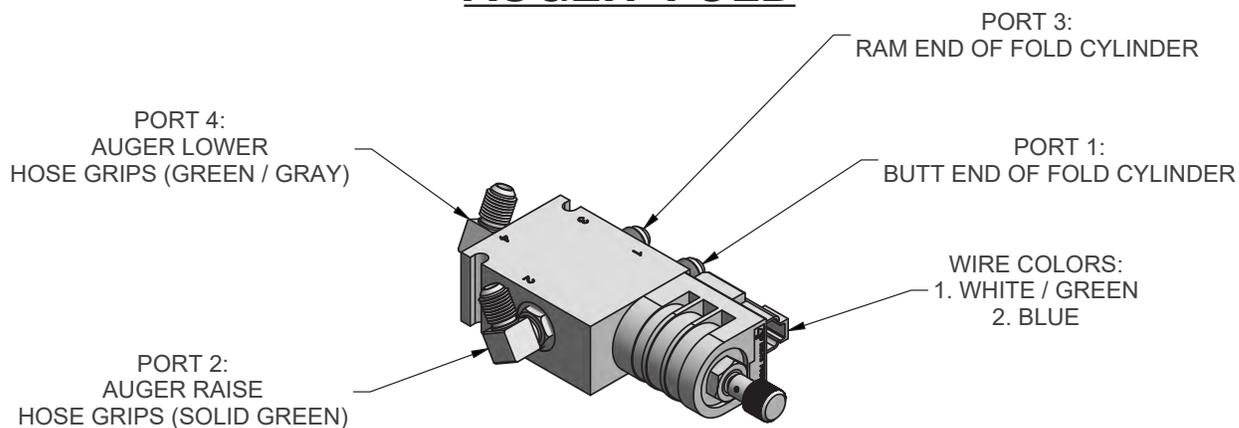
**Optional Electric Over Hydraulic Valve Electric Schematic  
5 Function**



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.

## Complete Torque Chart

### Cap screws - Grade 5

**NOTE:**

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

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

### IMPORTANT

- Follow these torque recommendations except when specified in text.

**Complete Torque Chart**

**Capscrews - Grade 8**

**NOTE:**

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



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

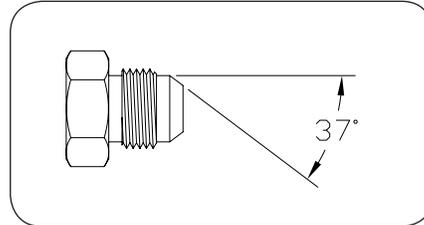
**IMPORTANT**

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

## Hydraulic Fittings - Torque and Installation

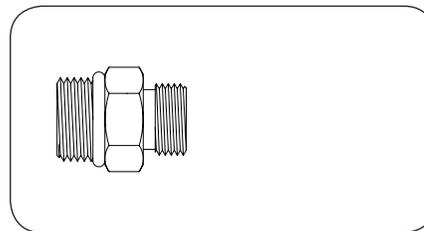
### SAE Flare Connection (J. I. C.)

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



### SAE Straight Thread O-Ring Seal

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



# Section V

# Parts

Please visit [www.unverferth.com/parts/](http://www.unverferth.com/parts/) for the most current parts listing.

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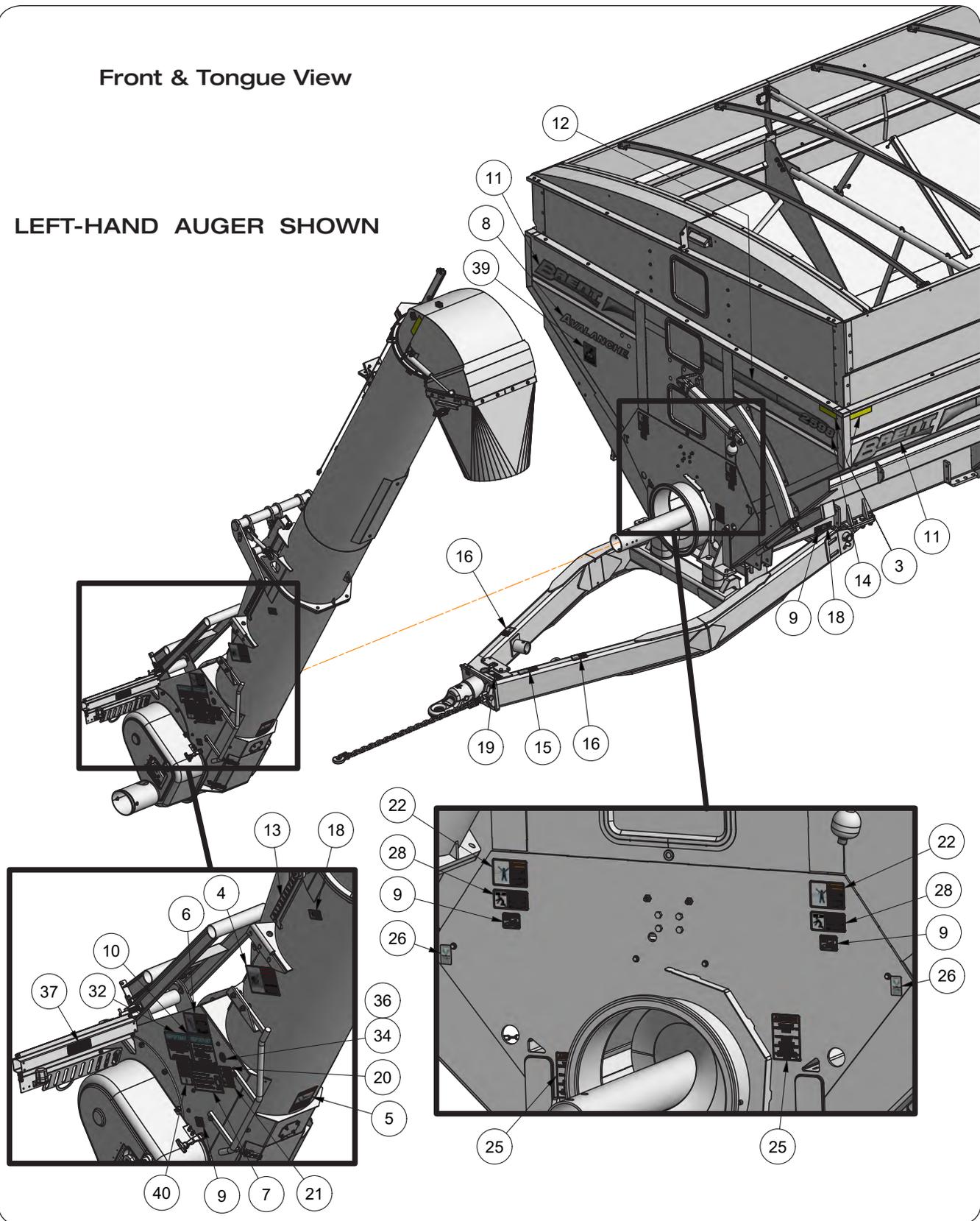
FOR SCALE, TRACK, UHARVEST, ELECTRIC TARP, AND / OR WATER DELIVERY SYSTEM INFORMATION, PLEASE REFER TO THE INDIVIDUAL MANUALS.

Decals

Please visit [www.unverferth.com/parts/](http://www.unverferth.com/parts/) for the most current parts listing.

Front & Tongue View

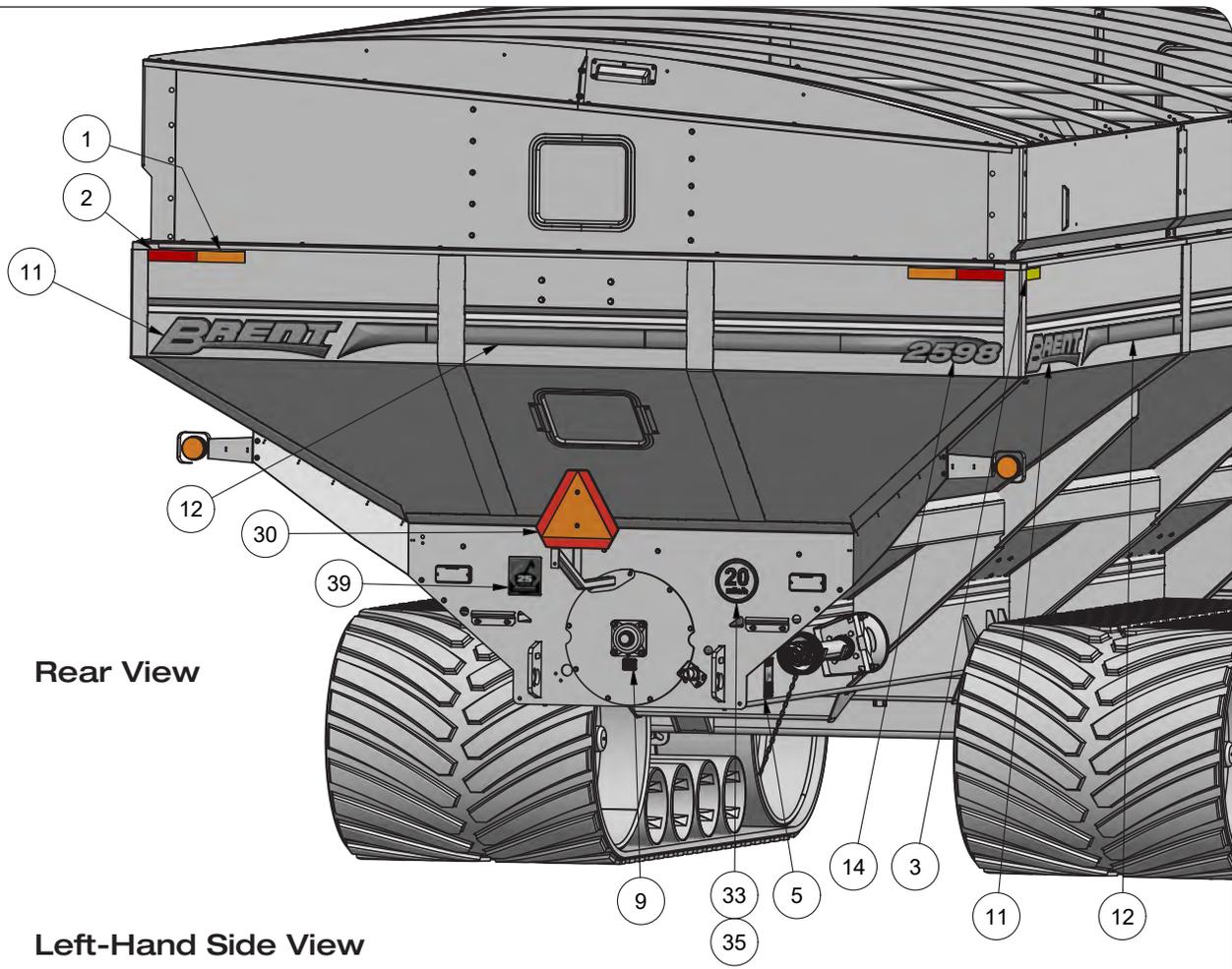
LEFT-HAND AUGER SHOWN



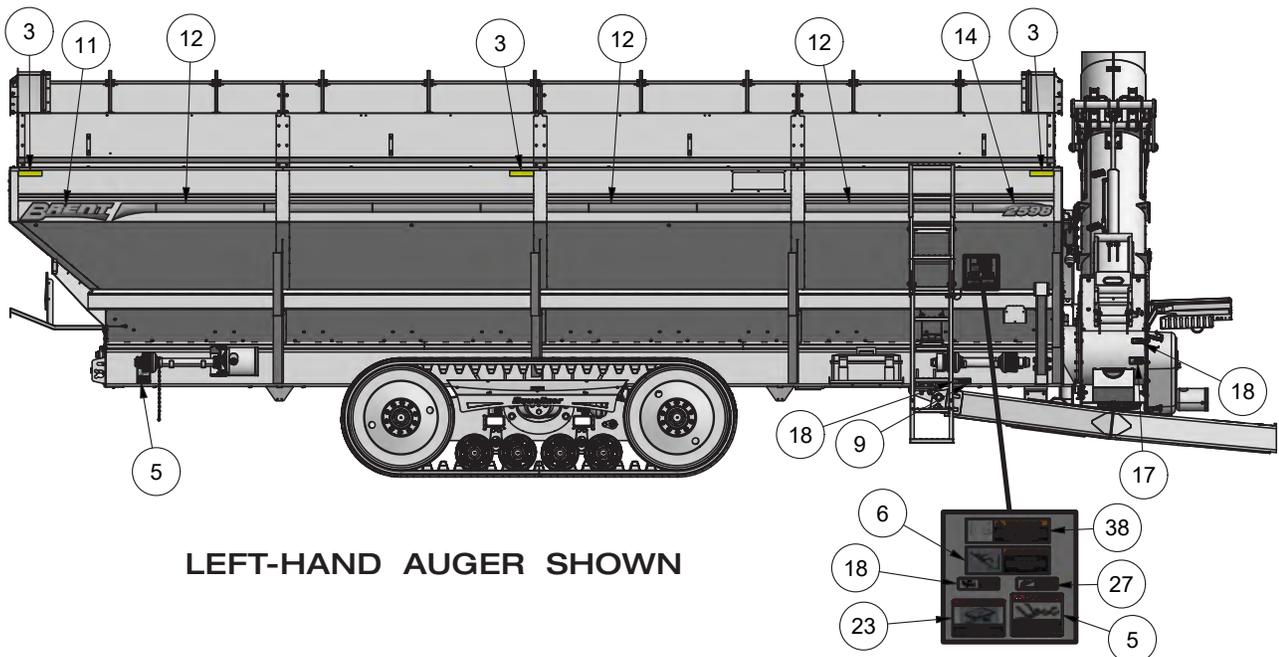


**Decals (continued)**

Please visit [www.unverferth.com/parts/](http://www.unverferth.com/parts/) for the most current parts listing.



**Left-Hand Side View**

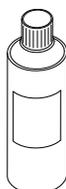


**Decals** (continued)

Please visit [www.unverferth.com/parts/](http://www.unverferth.com/parts/) for the most current parts listing.

ITEM	PART NO.	DESCRIPTION	QTY	NOTES
1	9003125	Reflector 2x9 =FLUORESCENT=	2	
2	9003126	Reflector 2x9 =RED=	2	
3	9003127	Reflector 2x9 =AMBER=	7	
4	9003474	Decal, DANGER (Electrical Lines)	1	
5	9003475	Decal, DANGER (Rotating or Moving Parts)	4	
6	9003476	Decal, WARNING (No Riders)	2	
7	9003477	Decal, IMPORTANT (Operation)	1	
8	9009631	Decal, Avalanche	2	
9	9008947	Decal, Grease	7	
10	9004966	Decal, Cart Loading Sequence	1	
11	9006588	Decal, Brent Logo	4	
12	9006589	Decal, Stripe	20	
13	9006601	Decal, Flow Door LH	1	For Left-Hand Unload
14	9009503	Decal, 2598	4	
15	94094	Decal, WARNING (Tongue Rise or Fall)	1	
16	95046	Decal, DANGER (Entanglement)	2	
17	95445	Decal, WARNING (High Pressure Oil)	1	
18	95839	Decal, WARNING (Pinch Point)	3	
19	97575	Decal, CAUTION (Transport Chains)	1	
20	97961	Decal, WARNING (Read Manual)	1	
21	TA1-906109-0	Decal, WARNING (Moving Parts Crush/Cut)	1	
22	900024	Decal, WARNING (High-Pressure Oil)	2	
23	9003478	Decal, DANGER (Never Play In Or On The Grain)	1	
24	9008947	Decal, Grease Every Month	1	
25	9005971	Decal, WARNING (Suspension System)	2	
26	91605	Decal, FEMA	2	
27	95008	Decal, CAUTION (Slippery Surface)	1	
28	98229	Decal, WARNING (Falling or Lowering Equipment)	1	
29	9008925	Decal, Grease Bank	1	
30	TA510514	SMV Emblem	1	
31	9008470	Decal, IMPORTANT (Hitching Grain Cart to Tractor)	1	
32	9008151	Decal, IMPORTANT (PTO Engagement)	1	
33	9008714	Decal, Rear SIS 20MPH	1	
34	9008715	Decal, Front SIS 20MPH	1	
35	9008720	Decal, Rear SIS 30KPH	1	
36	9008721	Decal, Front SIS 30KPH	1	
37	9009650	Decal, Hose Legend	1	
38	9009168	Decal, WARNING (Ladder Lock Pin)	1	
39	9009653	Decal, Avalanche 25th Anniversary	2	
40	9008543	Decal, IMPORTANT (Spout Rotate)	2	
41	9008626	Decal, Flow Door RH	1	For Right-Hand Unload

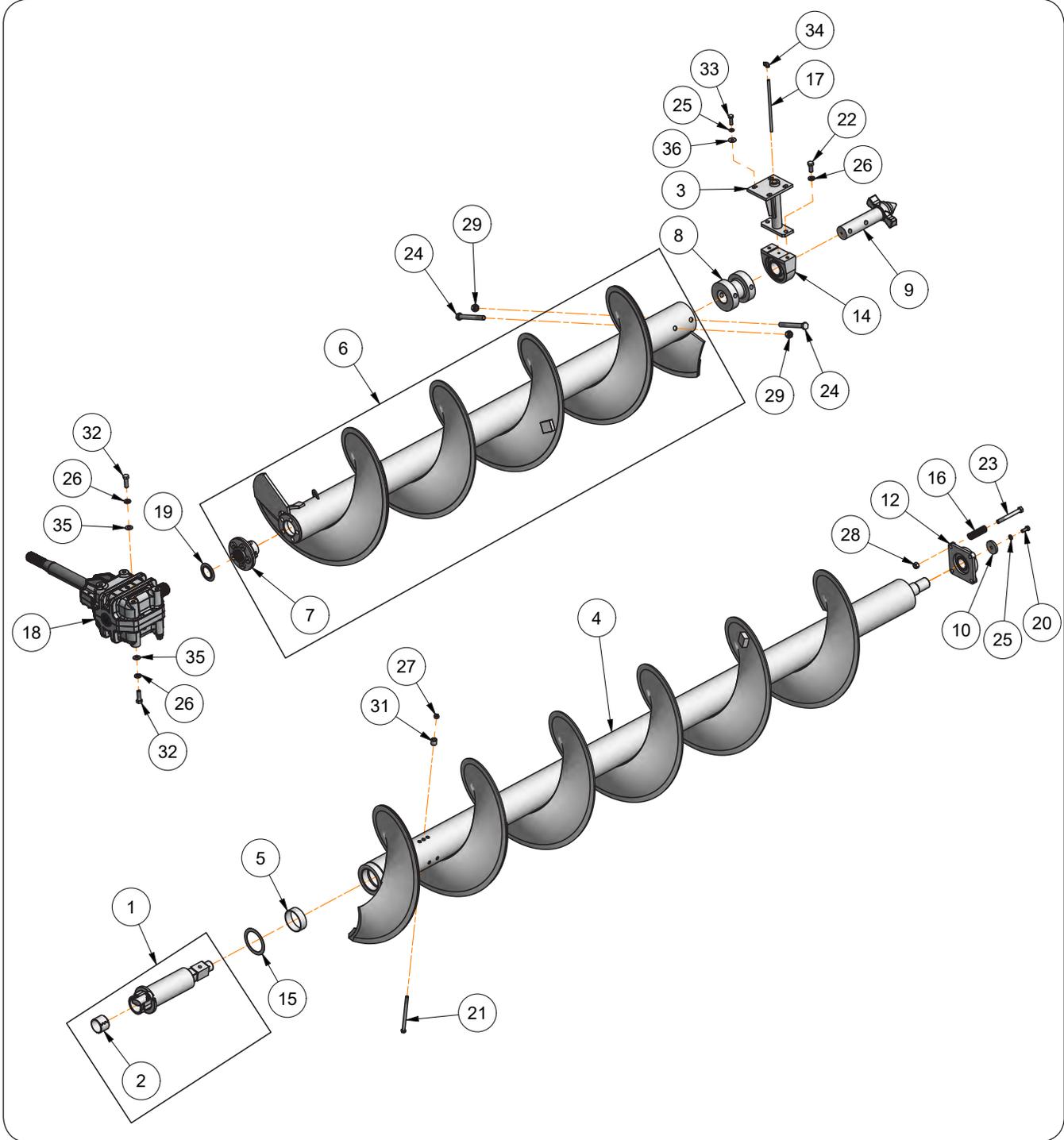
**Touch-Up Paint**



PAINT	SPRAY
Black	97013
Green	97015
Red	97301
Primer, Gray	9500082
Black Metallic	9504382

## Vertical Auger Flighting Components

Please visit [www.unverferth.com/parts/](http://www.unverferth.com/parts/) for the most current parts listing.



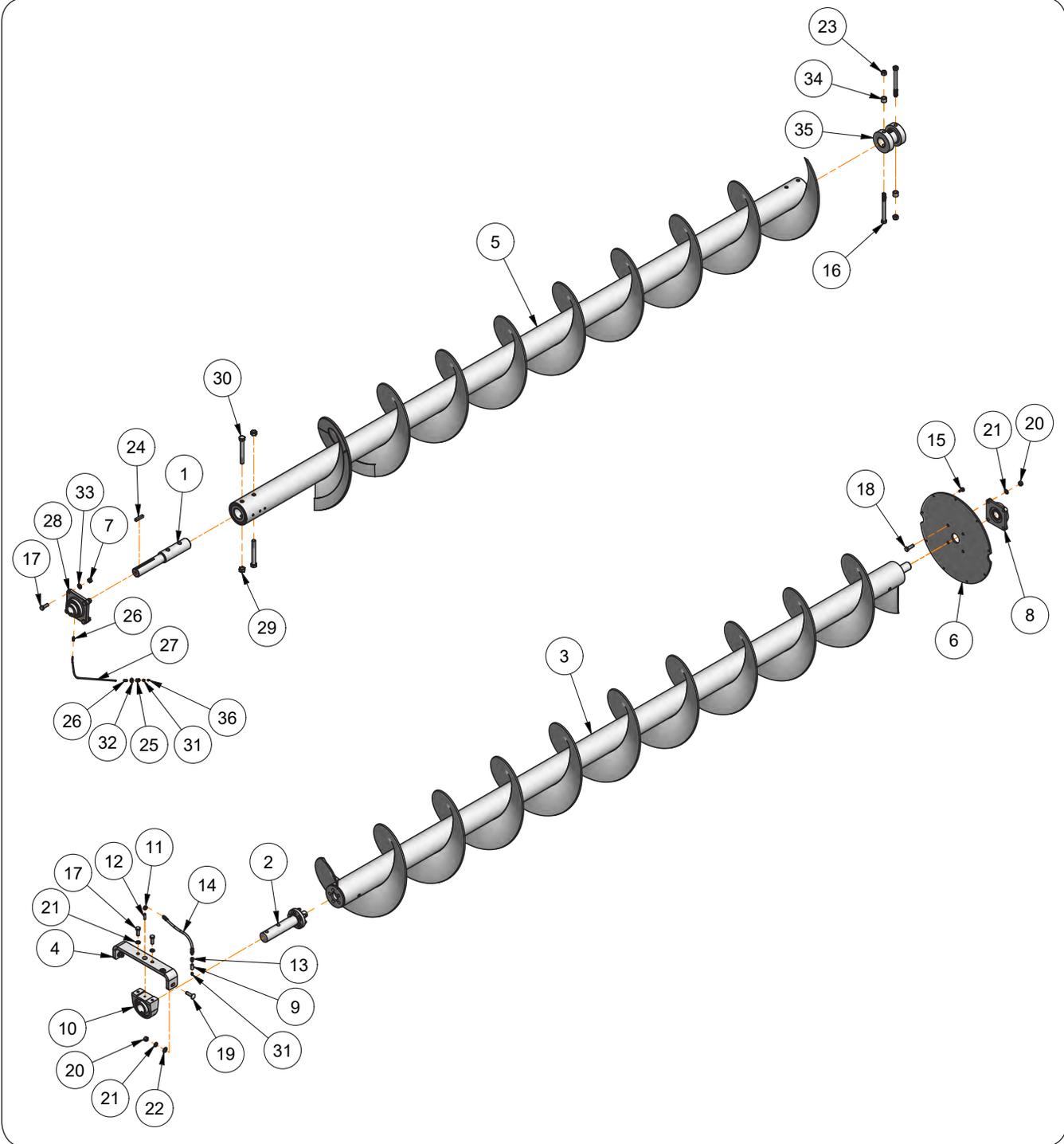
**Vertical Auger Fighting Components**

**Please visit [www.unverferth.com/parts/](http://www.unverferth.com/parts/) for the most current parts listing.**

ITEM	PART NO.	DESCRIPTION	QTY	NOTES
1	281283	Soft Start Assembly	1	Includes Item 2
2	9003230	Split Bushing 2 3/4" OD x 2 1/2" ID x 2"	1	
3	289932B	Bearing Bracket Replacement Kit (Black)	1	Includes Items 22 and 26
4	294960B	Upper Auger Weldment =Black=	1	Includes Soft Start Assembly #281283
5	9004877	Split Bushing 4.25" OD x 4.011" ID	1	
6	296317B	Lower Auger Replacement Kit (Black)	1	Includes Item 7 Fits 2 1/4"-20 Spline Gearbox Shaft
7	287802	Drive Plate Assembly (5-Pin)	1	
8	283515	Auger Tube Adapter	1	
9	288813	Drive Dog Casting	1	
10	407699	Washer Plate, 2 1/2" Dia.	1	
11	9001529	Flange Screws 1/2"-13UNC x 1"	4	
12	9002492	Bearing 2" Dia. Flanged	1	
13	9003949	Pipe Coupling, 1/8" NPT Female	2	
14	9004731	Pillow Block Bearing, 2 1/2" Bore	1	
15	9004878	Self Lubricating Washer	1	
16	9004899	Spring - 10 Coils	4	
17	9005793	Grease Pipe	1	
18	9007366	Gearbox 1 3/4"-20 Spline Input Shaft 2 1/4"-17 Spline Output Shaft	1	See "Gearbox" in this section for parts.
19	9007377B	Dust Cover =Black=	1	
20	9390-100	Capscrew, 1/2"-13UNC x 1 1/4" Grade 5	1	
21	9390-119	Capscrew, 1/2"-13UNC x 8" Grade 5	1	
22	9390-122	Capscrew, 5/8"-11UNC x 1 1/2" Grade 5	20	
23	9390-135	Capscrew, 5/8"-11UNC x 5 1/2" Grade 5	4	
24	9390-159	Capscrew, 3/4"-10UNC x 7" Grade 5	2	
25	9404-025	Lock Washer, 1/2" Grade 5	5	
26	9404-030	Lock Washer, 5/8"	10	
27	9800	Locknut, 1/2"-13UNC Grade 5	1	
28	9801	Locknut, 5/8"-11UNC Grade 5	4	
29	9802	Locknut, 3/4"-10UNC Grade 5	2	
30	903161-063	Flange Screw, 5/8"-11UNC x 1 1/4" Grade 5	2	
31	410511	Spacer Bushing	1	
32	9390-124	Capscrew, 5/8"-11UNC x 2" Grade 5	6	
33	9390-101	Capscrew, 1/2"-13UNC x 1 1/2" Grade 5	4	
34	9004764	90° Elbow Pipe	1	
35	9405-098	Flat Washer, 5/8" SAE	6	
36	9405-088	Flat Washer, 1/2" USS	4	

## Horizontal Auger Components

Please visit [www.unverferth.com/parts/](http://www.unverferth.com/parts/) for the most current parts listing.



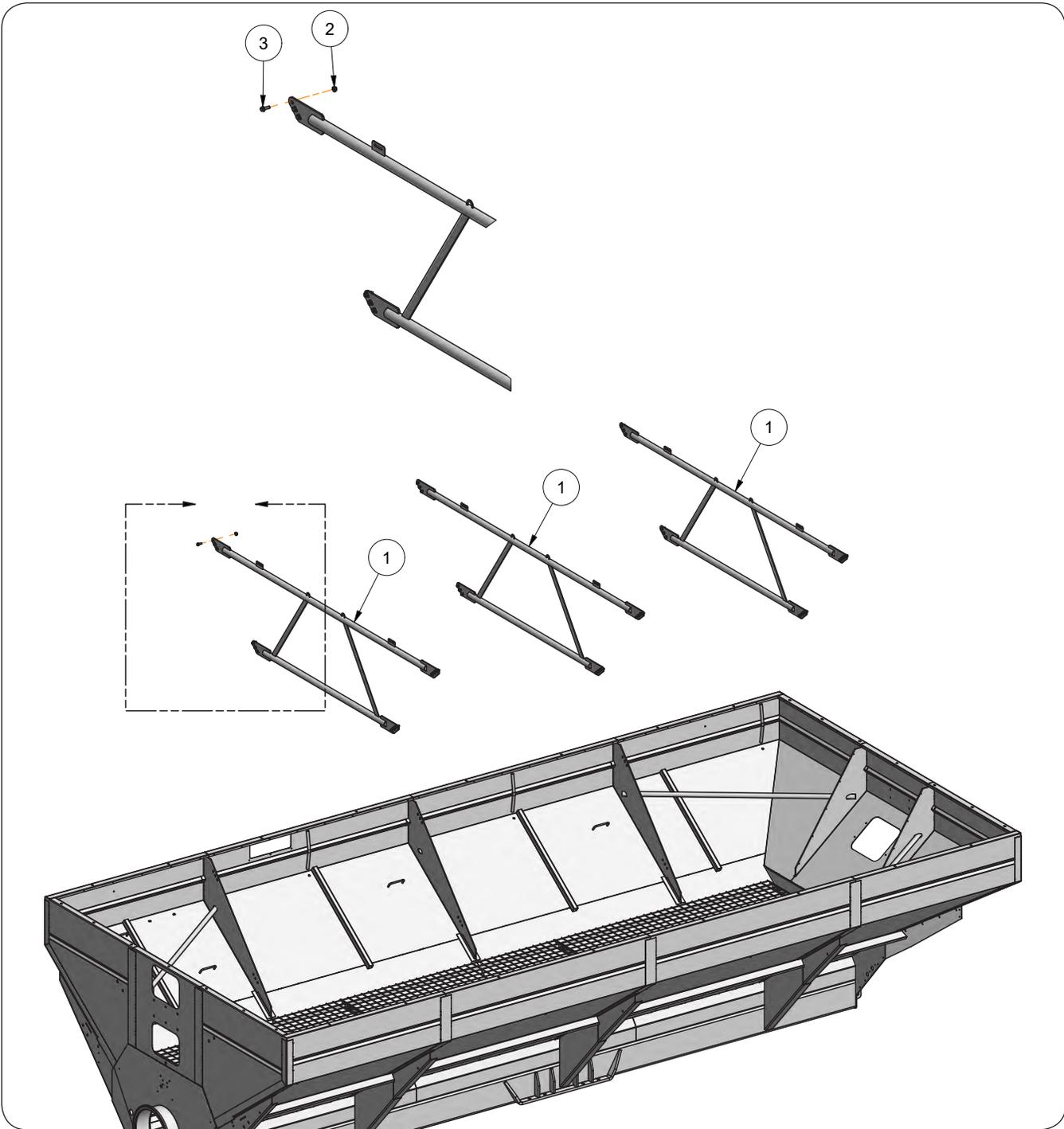
**Horizontal Auger Components**

**Please visit [www.unverferth.com/parts/](http://www.unverferth.com/parts/) for the most current parts listing.**

ITEM	PART NO.	DESCRIPTION	QTY	NOTES
1	273779	Auger Shaft 2 1/2" Dia. x 18"	1	
2	293957	Auger Coupler Shaft Weldment	1	
3	295613B	Rear Drag Auger Weldment =Black=	1	
4	286382B	Bearing Mount Bar =Black=	1	
5	295618B	Front Drag Auger Replacement Kit (Black)	1	Includes Items 5, 16, 23, 29, 30, 34, 35
6	295926G	Cover Plate =Green=	1	
	295926R	Cover Plate =Red=		
	295926BM	Cover Plate =Black Metallic=		
7	95905	Lock Nut/Center, 5/8"-11UNC	4	Grade 5
8	9002492	Bearing 2" Dia. Flanged	1	
9	9009171	Coupling Pipe 1/8NPT	1	
10	9004731	Bearing - Pillow Block	1	
11	9004764	90° Elbow Pipe	1	
12	9006964	Hex Pipe Nipple	1	
13	9002479	Adapter Pipe Union Swivel	1	
14	9006965	Grease Hose 1/8" x 15" (3000 PSI)	1	
15	91262	Large 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"	4	Grade 5
18	9390-124	Capscrew 5/8"-11UNC x 2"	4	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	Nylon Tube 1/4" OD	1	
28	9005565	Flange Bearing 4-Bolt, 2 1/4" ID	1	
29	91141	Locknut 7/8"-9UNC	2	
30	91299-178	Capscrew 7/8"-9UNC x 7"	2	Grade 8
31	93426	Grease Zerk	1	
32	9405-076	Flat Washer 3/8" USS	1	
33	9404-030	Lock Washer 5/8" Heavy-Duty	4	
34	283895B	Spacer Bushing =Black=	2	
35	295031	Auger Adapter Casting	1	
36	9006849	Grease Zerk Cap	1	

**Hopper Cross Brace Components**

Please visit [www.unverferth.com/parts/](http://www.unverferth.com/parts/) for the most current parts listing.



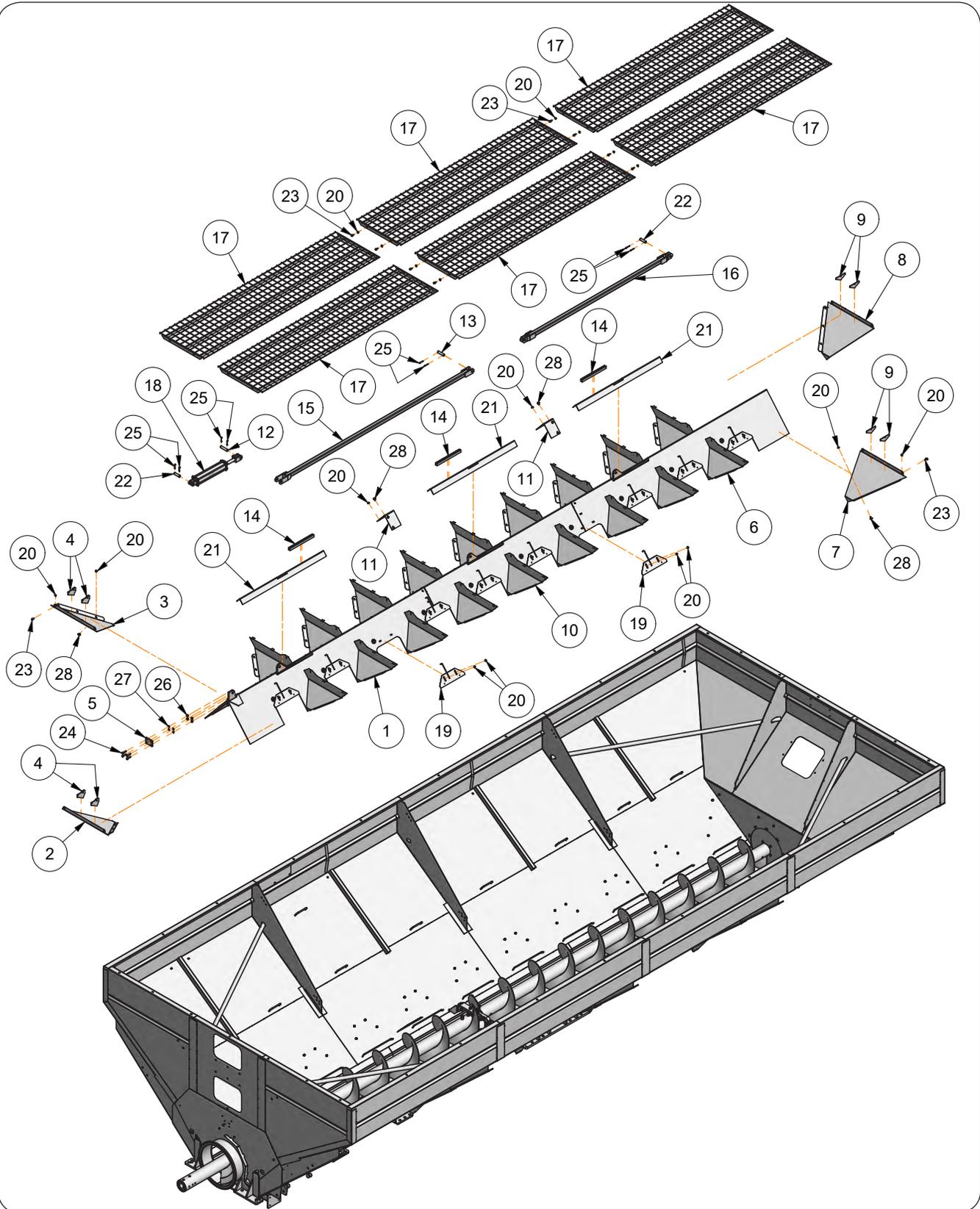
ITEM	PART NO.	DESCRIPTION	QTY	NOTES
1	294359B	Cross Brace Weldment =Black=	3	
2	903161-064	Flange Screw 5/8"-11UNC x 1 1/2"	48	
3	9502324	Serrated Flange Nut 5/8"-11UNC	48	

**Notes**

**Please visit [www.unverferth.com/parts/](http://www.unverferth.com/parts/) for the most current parts listing.**

### Hopper Flow Door Components

Please visit [www.unverferth.com/parts/](http://www.unverferth.com/parts/) for the most current parts listing.



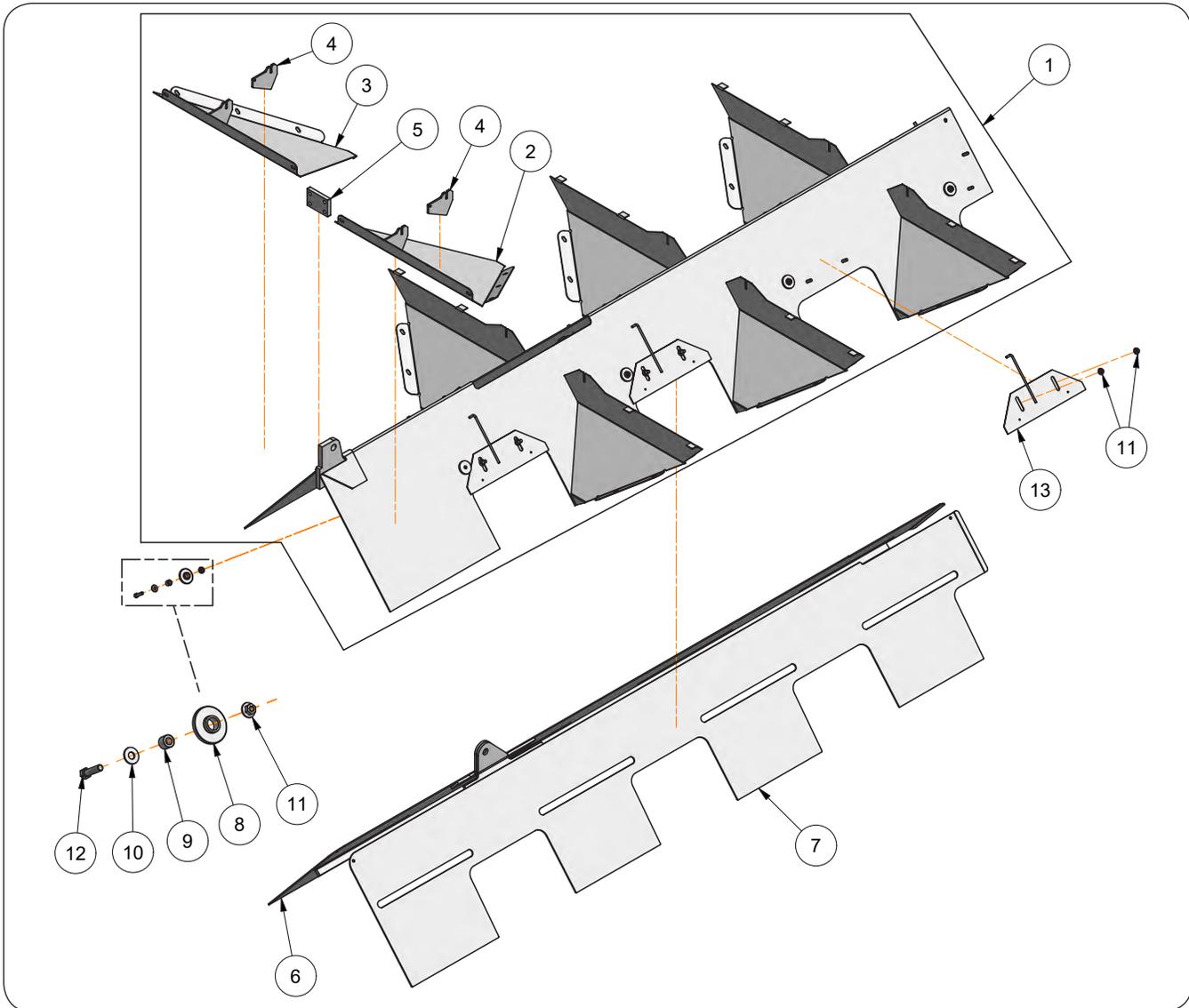
**Hopper Flow Door Components**

**Please visit [www.unverferth.com/parts/](http://www.unverferth.com/parts/) for the most current parts listing.**

ITEM	PART NO.	DESCRIPTION	QTY	NOTES	
1	296311B	Front Tent Service Kit (Black)	1	Includes Items 2 - 5 & Front Tent Weldment	
	2	294753B	Front LH Baffle =Black=	1	
	3	294754B	Front RH Baffle =Black=	1	
	4	294375B	Front Screen Mount Plate =Black=	4	
	5	271054*	Cylinder Mount Plate	-	*Not for individual sale, see Item 1
6	296313B	Rear Tent Service Kit (Black)	1	Includes Items 7-9 & Rear Tent Weldment	
	7	294752B	Rear LH Baffle =Black=	1	
	8	294751B	Rear RH Baffle =Black=	1	
	9	294376B	Rear Screen Mount Plate =Black=	4	
10	296312B	Middle Tent Service Kit (Black)	1	Includes Item 11 & Middle Tent Weldment	
	11	272141B	Cover Plate =Black=	2	
12	266285	Idler Pin 1" Dia. x 4 1/2"	1		
13	271112	Idler Pin 1" Dia. x 4"	1		
14	271331*	Seal Plate	6	*Not for individual sale, see Items 15, 16	
15	274675B	Front Flow Door Linkage Weld't =Black=	1		
16	273314B	Rear Flow Door Linkage Weld't =Black=	1		
17	294372B	Screen Weldment =Black=	6		
18	9002575	Hydraulic Cylinder 3 x 16 (3000PSI)	1	3/4-16 SAE O-Ring Ports	
19	284721B	Restrictor Weldment =Black=	4		
20	9008159	Locknut, 3/8-16UNC	132		
21	282187B	Tent Hole Cover Plate =Black=	3		
22	804572	Hydraulic Cylinder Pin 1" Dia. x 3 1/2"	2		
23	91262	Large Flange Screw 3/8"-16UNC x 1"	25	Grade 5	
24	9390-103	Capscrew 1/2"-13UNC x 2"	4	Grade 5	
25	9391-046	Cotter Pin 3/16" Dia. x 2"	8		
26	9394-010	Hex Nut 1/2"-13UNC	4	Grade 5	
27	9404-025	Lock Washer 1/2"	4		
28	95585	Large Flange Screw 3/8"-16UNC x 3/4"	88	Grade 5	

Flow Door Components — Front Flow Door

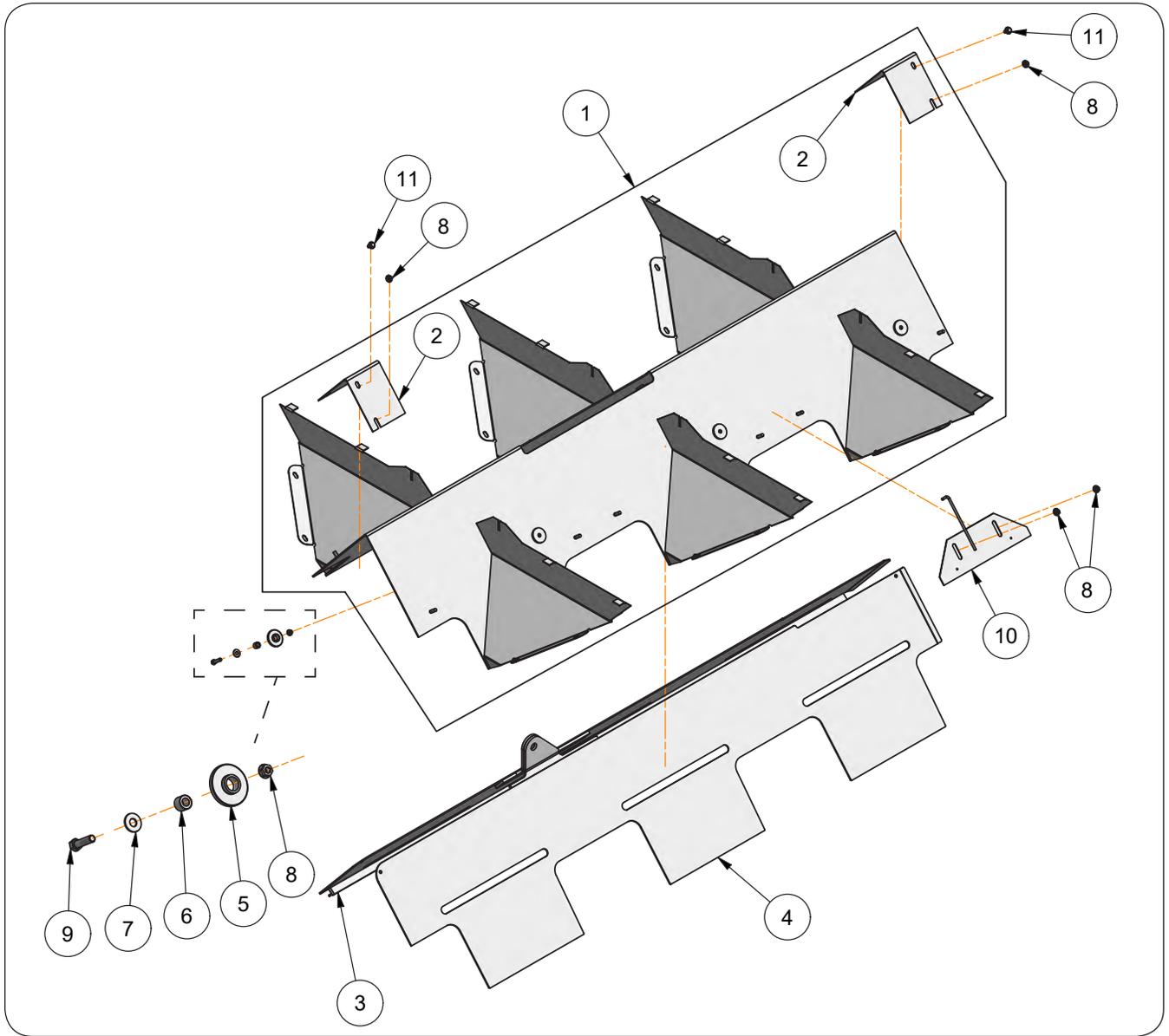
Please visit [www.unverferth.com/parts/](http://www.unverferth.com/parts/) for the most current parts listing.



ITEM	PART NO.	DESCRIPTION	QTY	NOTES
1	296311B	Front Tent Service Kit (Black)	1	Includes Items 2-5 & Front Tent Weldment
2	294753B	Front LH Baffle =Black=	1	
3	294754B	Front RH Baffle =Black=	1	
4	294375B	Front Screen Mount Plate =Black=	4	
5	271054*	Cylinder Mount Plate	-	*Not for individual sale, see Item 1
6	294729B	Front RH Door Weldment =Black=	1	
7	294731B	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	9008159	Lock Nut 3/8-16UNC	20	Grade F
12	91299-057	Capscrew 3/8-16UNC x 1 1/2 Gr.8	8	
13	284721B	Restrictor Weldment =Black=	6	

Flow Door Components — Middle Flow Door

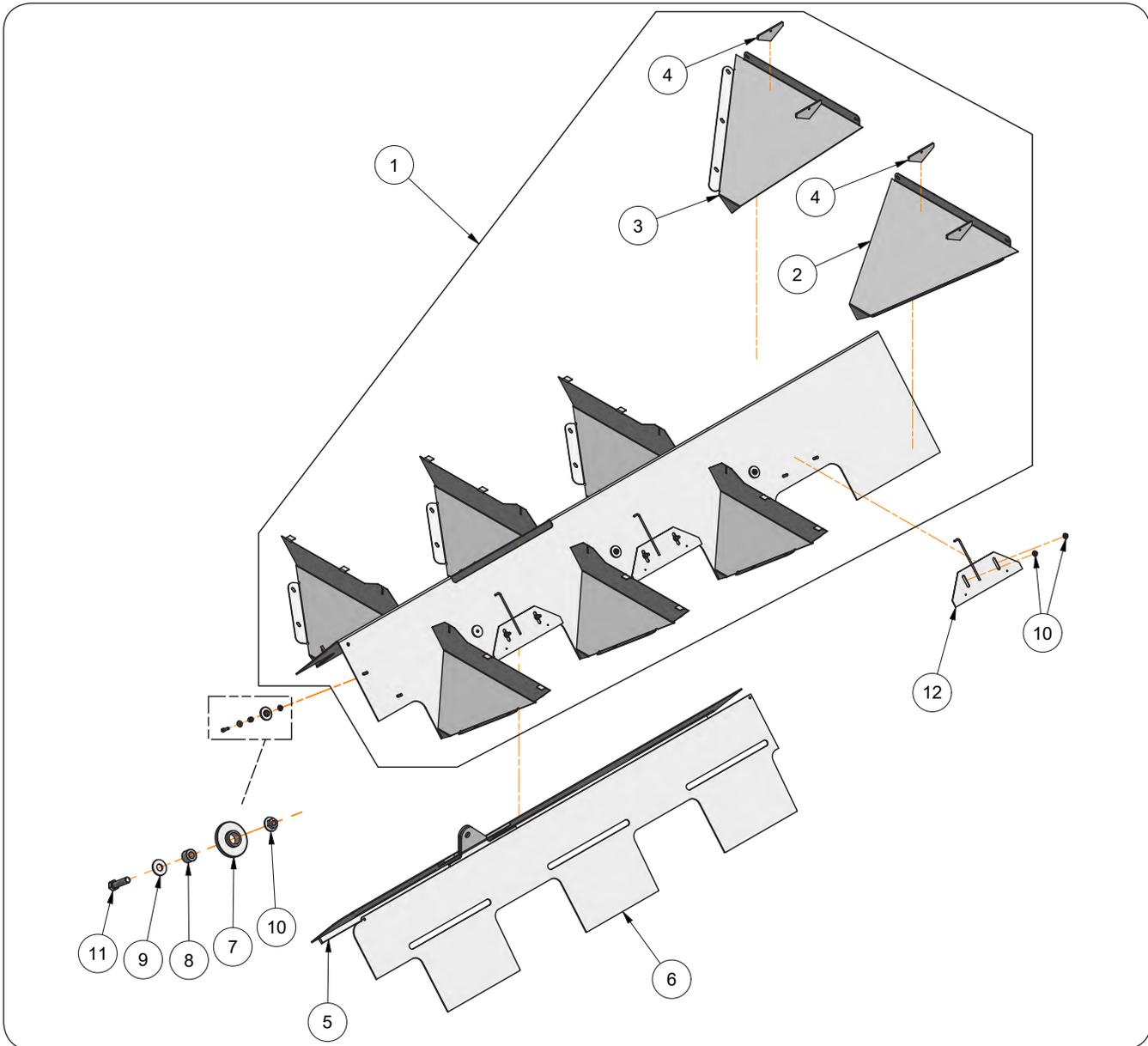
Please visit [www.unverferth.com/parts/](http://www.unverferth.com/parts/) for the most current parts listing.



ITEM	PART NO.	DESCRIPTION	QTY	NOTES
1	296312B	Middle Tent Service Kit (Black)	1	Includes Item 2 & Middle Tent Weldment
2	272141B	Cover Plate =Black=	2	
3	294737B	Middle RH Door Weldment =Black=	1	
4	294739B	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	9008159	Lock Nut 3/8-16UNC	18	Grade F
9	91299-057	Capscrew 3/8-16UNC x 1 1/2 Gr.8	6	
10	284721B	Restrictor Weldment =Black=	4	
11	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/](http://www.unverferth.com/parts/) for the most current parts listing.



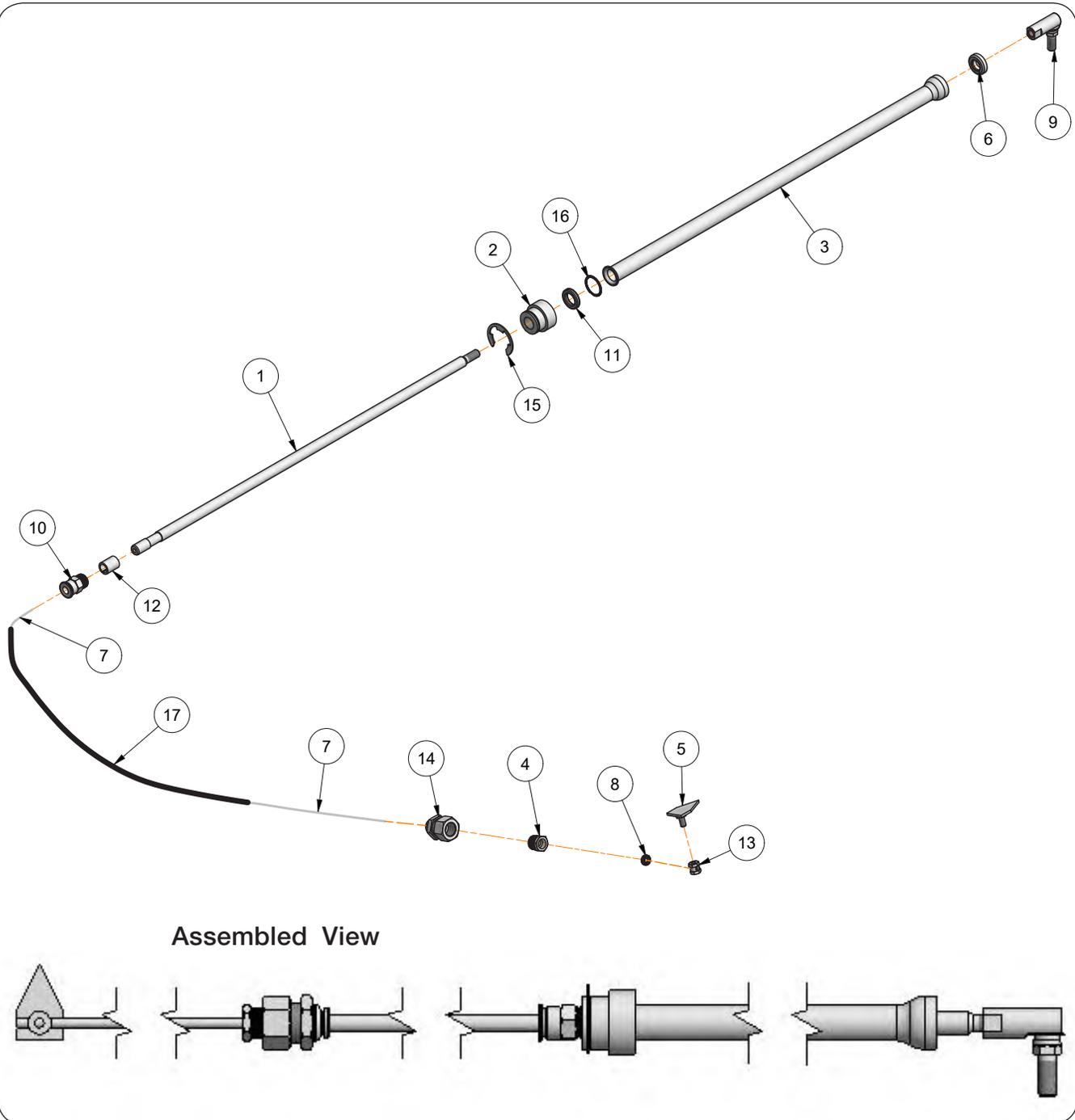
ITEM	PART NO.	DESCRIPTION	QTY	NOTES
1	296313B	Rear Tent Service Kit (Black)	1	Includes Items 2-4 & Rear Tent Weldment
2	294752B	Rear LH Baffle =Black=	1	
3	294751B	Rear RH Baffle =Black=	1	
4	294376B	Rear Screen Mount Plate =Black=	4	
5	294744B	Rear RH Door Weldment =Black=	1	
6	294746B	Rear LH Door Weldment =Black=	1	
7	284168	Bushing 2 1/4 OD x 49/64 ID x 0.500	6	
8	284169	Bushing 3/4 OD x 7/16 ID x 0.531	6	
9	9005471	Flat Washer 3/8 (Hardened)	6	
10	9008159	Lock Nut 3/8-16UNC	20	Grade F
11	91299-057	Cap screw 3/8-16UNC x 1 1/2 G8	6	
12	284721B	Restrictor Weldment =Black=	6	

**Notes**

**Please visit [www.unverferth.com/parts/](http://www.unverferth.com/parts/) for the most current parts listing.**

### Flow Door Indicator Assembly

Please visit [www.unverferth.com/parts/](http://www.unverferth.com/parts/) for the most current parts listing.



**Flow Door Indicator Assembly**

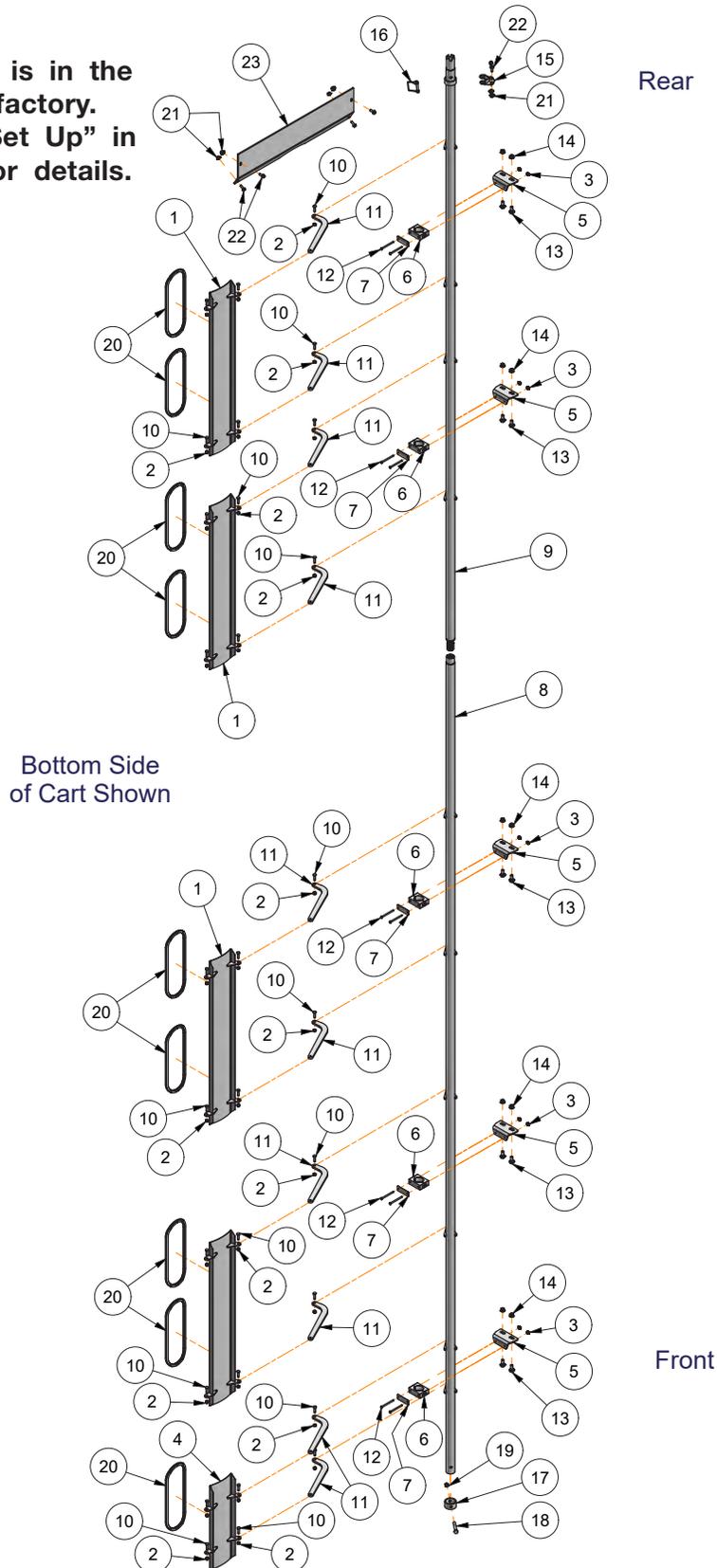
**Please visit [www.unverferth.com/parts/](http://www.unverferth.com/parts/) for the most current parts listing.**

ITEM	PART NO.	DESCRIPTION	QTY	NOTES
	293760R	Complete Indicator Assembly	1	Includes Items 1 through 17
1	271582	Push Rod Indicator	1	
2	271585	Bushing - Coupler	1	
3	271589	Cable Tube (Push Rod)	1	
4	271593	Reducer Bushing	1	
5	271595R	Flow Door Indicator =Red=	1	
6	9006610	Seal (Wiper)	1	
7	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	

### Clean Out Door Components

Please visit [www.unverferth.com/parts/](http://www.unverferth.com/parts/) for the most current parts listing.

**NOTE:** Item #16  
lynch pin 9005305 is in the  
toolbox from the factory.  
See “Basic Cart Set Up” in  
SET UP section for details.



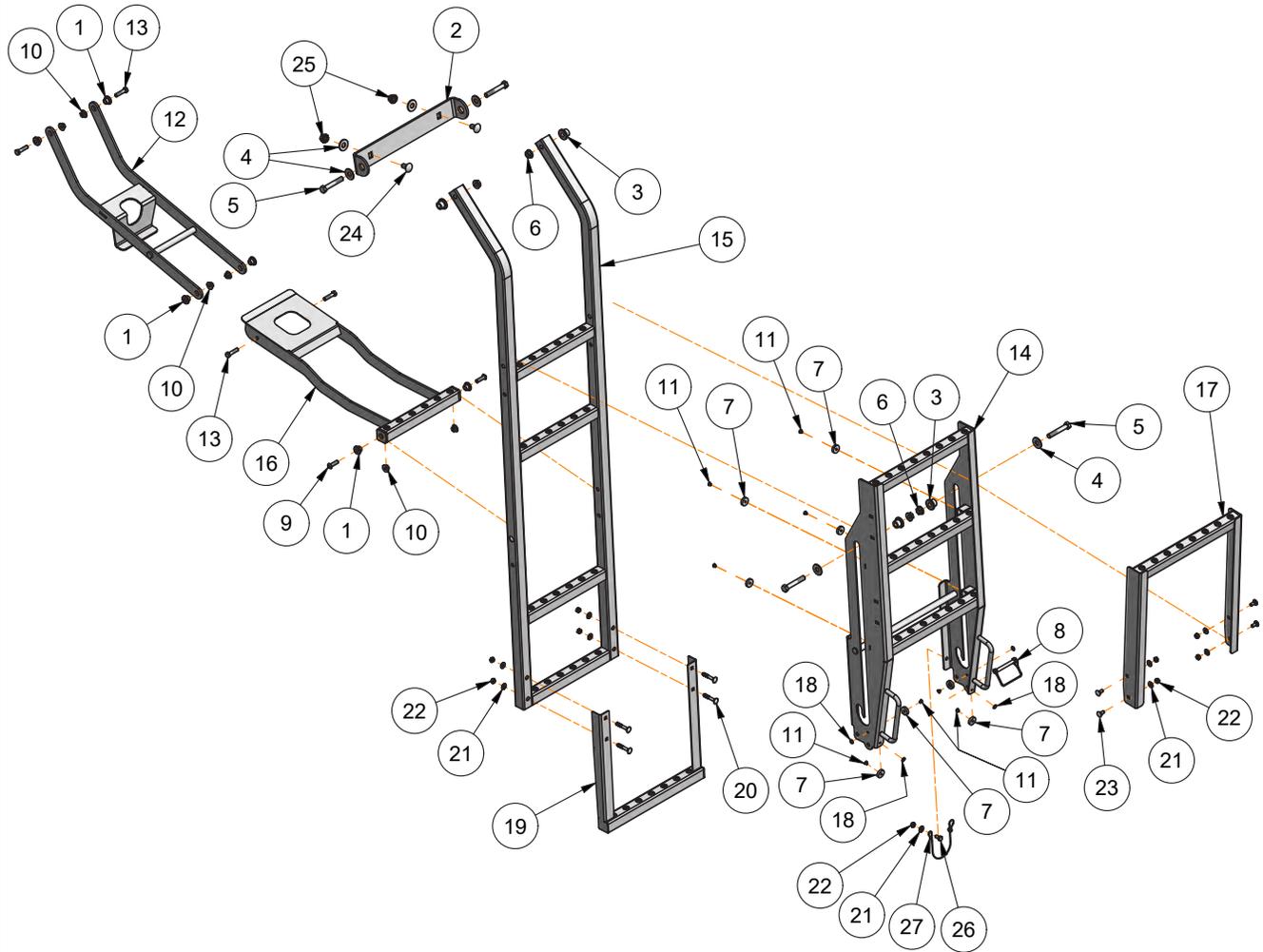
**Clean Out Door Components**

**Please visit [www.unverferth.com/parts/](http://www.unverferth.com/parts/) for the most current parts listing.**

ITEM	PART NO.	DESCRIPTION	QTY	NOTES
1	273730B	Cleanout Door Weldment =Black=	4	
2	9928	Locknut 3/8"-16UNC	30	
3	97189	Large Flange Hex Nut 1/4"-20UNC	10	
4	273748B	Cleanout Door Weldment =Black=	1	
5	273741B	Door Pivot Plate =Black=	5	
6	9006351	Clamp Pair	5	
7	9006352	Top Plate	5	
8	N/A	Front Link Arm Weldment =Black=	1	
9	N/A	Rear Link Arm Weldment =Black=	1	
10	9390-056	Capscrew 3/8"-16UNC x 1 1/4"	30	Grade 5
11	273734B	Door Linkage =Black=	10	
12	9390-015	Capscrew 1/4"-20UNC x 3 1/2"	10	Grade 5
13	91266	Flange Screw 1/2"-13UNC x 1 1/4"	10	Grade 5
14	91267	Flange Nut 1/2"-13UNC	10	
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
21	91263	Nut/Large Flange 3/8"-16UNC	6	
22	91262	Flange Screw 3/8"-16UNC x 1" G5	6	
23	276349B	Support Plate =Black=	1	

## Ladder Components

Please visit [www.unverferth.com/parts/](http://www.unverferth.com/parts/) for the most current parts listing.



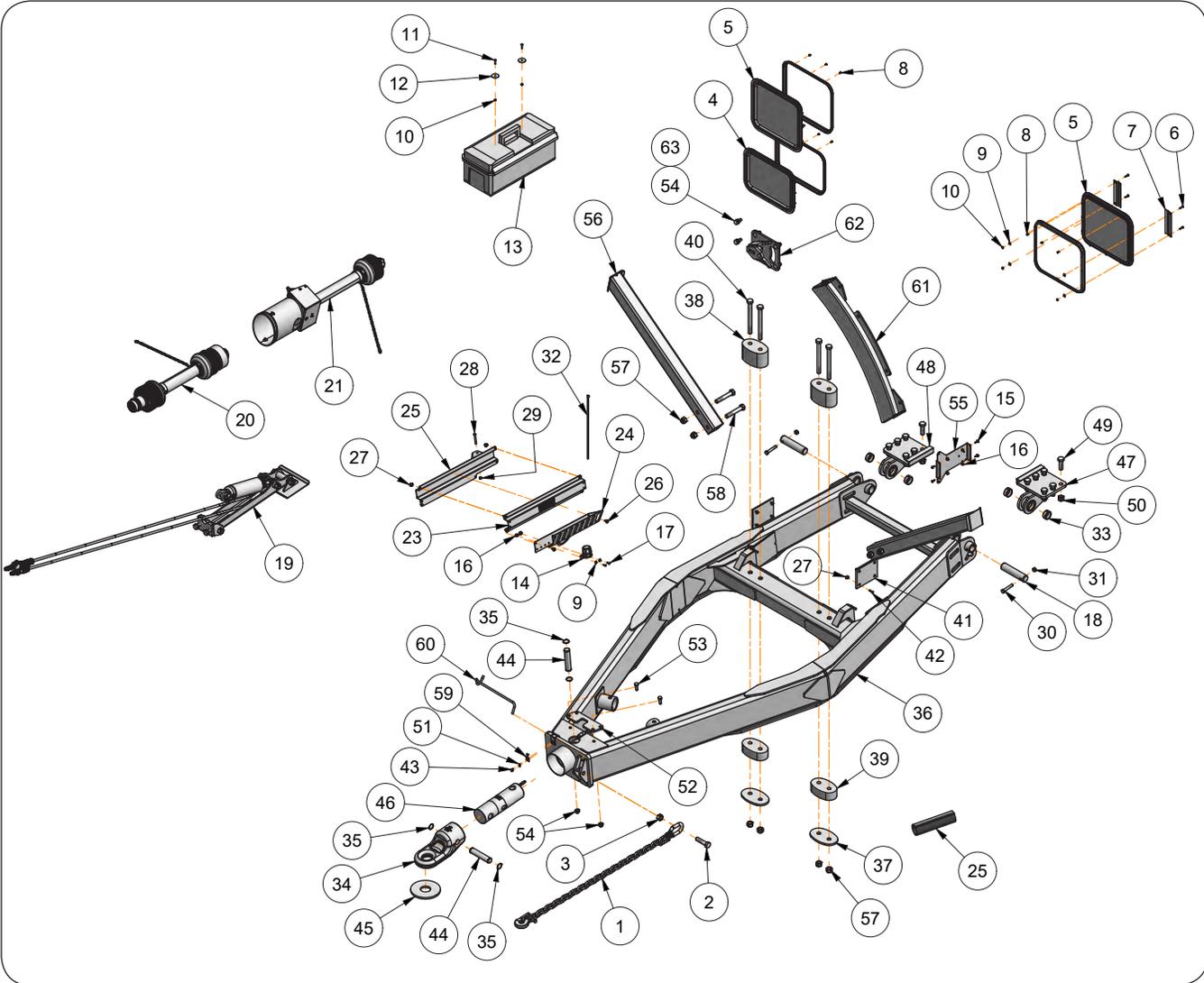
**Ladder Components**

**Please visit [www.unverferth.com/parts/](http://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	

**Hitch, Transport Chain, Toolbox, Hose Caddy, PTO, Window, & Tongue Components**

Please visit [www.unverferth.com/parts/](http://www.unverferth.com/parts/) for the most current parts listing.



ITEM	PART NO.	DESCRIPTION	QTY	NOTES
1	9004898	Transport Chain 41,000#	1	
2	91299-191	Capscrew 1-8UNC x 4	1	Grade 8
3	92199	Locknut 1-8UNC	1	
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"	3	Front, Rear Sideboards and Rear Slope Panel
6	9390-005	Capscrew 1/4"-20UNC x 1	4	Grade 5
7	294121B	Window Bracket =Black=	2	(Rear Slope Only)
8	9008933	Pan Head Phillips Screw 8-18UNC x 1/2"	36	
9	9405-064	Flat Washer 1/4"	4	
10	9936	Locknut 1/4-20UNC	6	
11	9390-006	Capscrew 1/4"-20UNC x 1 1/4"	2	Grade 5
12	94763	Fender Washer 2"	2	
13	9008634	Toolbox - 26"	1	
14	9001968	Trailer Connector Holder	1	
15	97420	Flange Screw 1/4-20UNC x 3/4	4	Grade 5
16	97189	Large Flange Hex Nut 1/4"-20UNC	6	
17	9390-003	Capscrew 1/4"-20UNC x 3/4"	2	Grade 5
18	276335	Tongue Pin 2" Dia. x 8 7/8"	2	
19	276645B	Hydraulic Jack Kit (Black)	1	

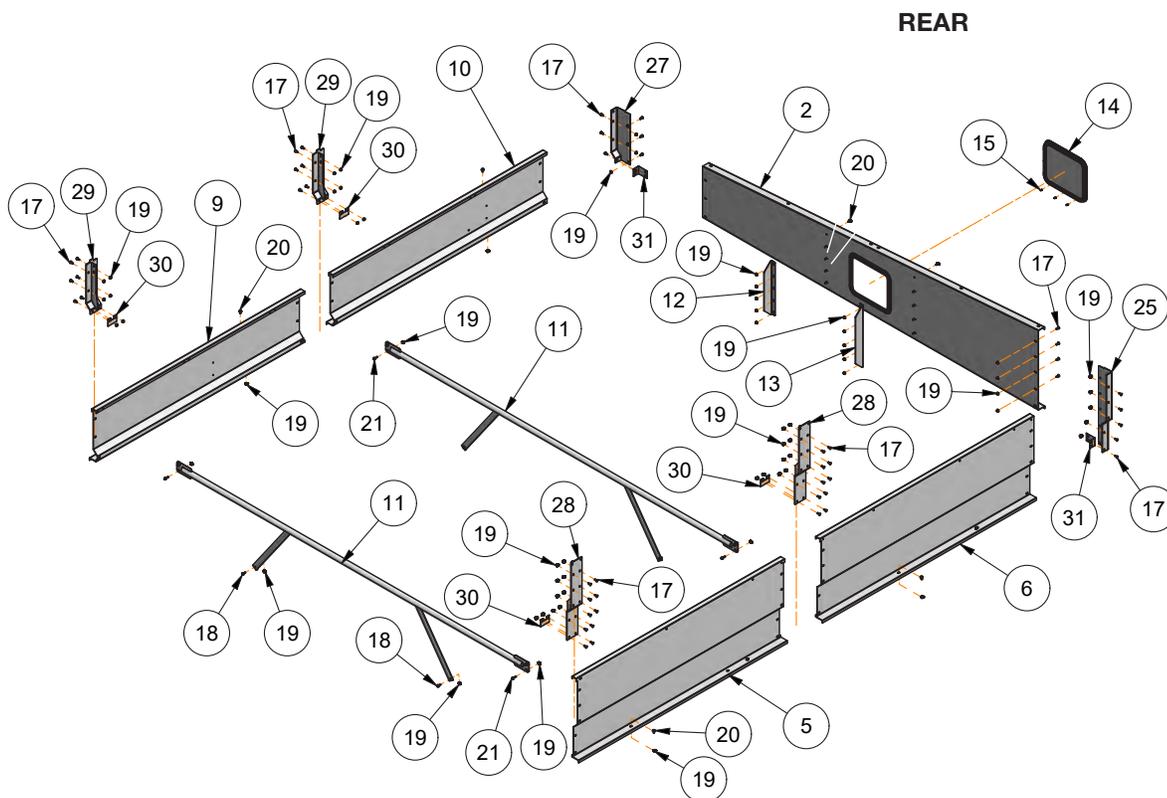
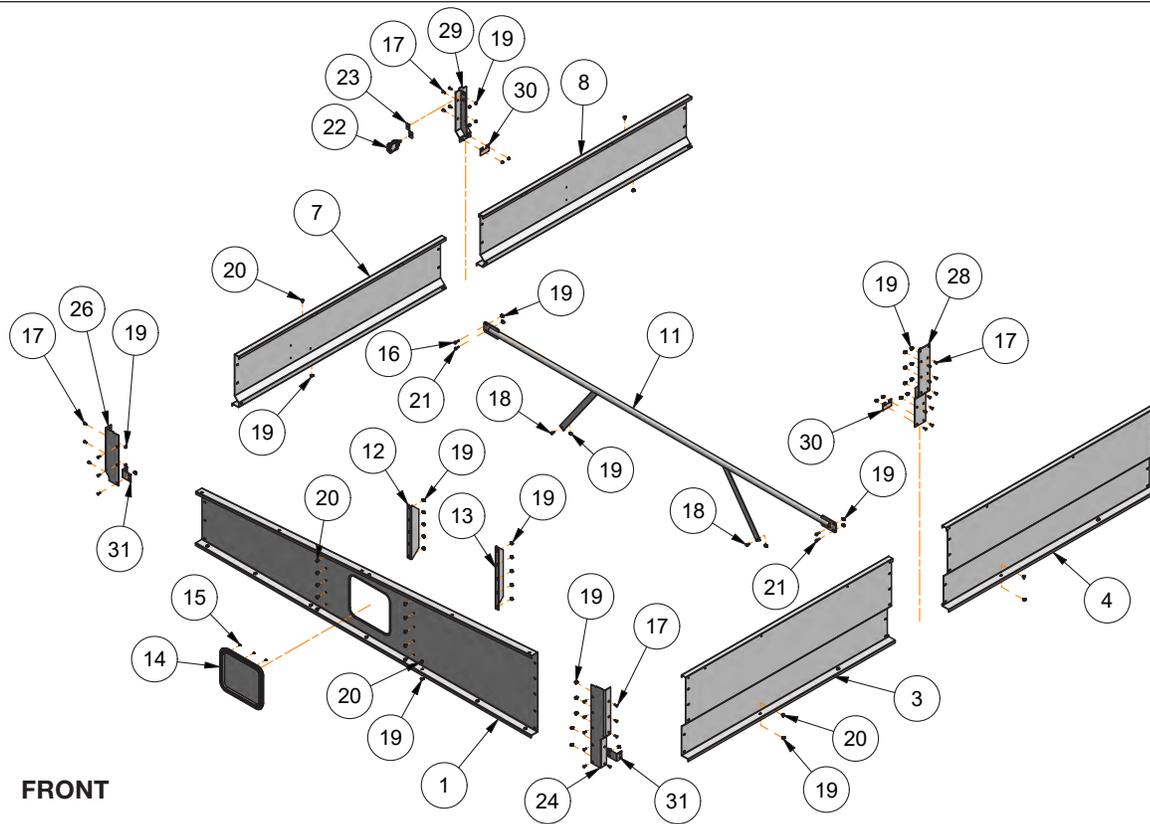
**Hitch, Transport Chain, Toolbox, Hose Caddy, PTO, Window, & Tongue Components**

**Please visit [www.unverferth.com/parts/](http://www.unverferth.com/parts/) for the most current parts listing.**

ITEM	PART NO.	DESCRIPTION	QTY	NOTES
20	9008417	Driveline Assembly Complete	1	1 3/4-20 Spline, W2500
21	276629B	PTO & Bracket Assembly (Black)	1	
22	295799B	Hose Caddy Weldment =Black=	1	
23	294085B	Hose Caddy Cover =Black=	1	
24	296159	Hose Retainer	1	
25	9003849	Hose Wrap 3"	1	Specify in Feet
26	91256	Large Flange Capscrew 5/16-18UNC x 3/4 Grade 5	6	
27	91257	Flange Nut 5/16"-18UNC	14	
28	9390-062	Capscrew 3/8"-16UNC x 2 3/4"	1	
29	902875	Lock Nut/Ctr 3/8"-16UNC	1	
30	9390-130	Capscrew 5/8"-11UNC x 3 1/2"	2	Grade 5
31	95905	Lock Nut/Ctr 5/8"-11UNC	2	
32	9000104	Cable Tie, 21 1/2" Lg	A/R	
33	9005473	Split Tension Bushing 2 3/8" OD x 2" ID x 1"	4	
34	282337B	Cast Hitch 4.5" Load Bar =Black= CAT 5	1	
35	97289	Retaining Ring 1 1/2"	4	
36	276310G	Tongue Weldment =Green=	1	
	276310R	Tongue Weldment =Red=		
	276310BM	Tongue Weldment =Black Metallic=		
37	271687B	Spring Retainer Plate =Black=	2	
38	9006456	Polyurethane Spring 4 3/4" Thick	2	
39	9006457	Polyurethane Spring 2 1/2" Thick	2	
40	9390-465	Capscrew 1"-8UNC x 10 1/2"	4	Grade 5
41	273237	Nylon Wear Pad	2	
42	903171-662	Screw Flat Countersunk Head Phillips 5/16"-18UNC x 1 1/4"	8	
43	903172-131	Pan Head Phillips Machine Screw #10-24UNC x 3/8"	2	
44	274864	Hitch Pin 1 1/2" Dia. x 7 3/8"	2	
45	281899	Wearshoe - Hitch, CAT 5	1	
46	9008023	Load Bar 4 1/2" Dia. with 16 ft. Cable CAT 5	1	
47	274818G	Tongue Pivot Weldment Left-Hand =Green=	1	
	274818R	Tongue Pivot Weldment Left-Hand =Red=		
	274818BM	Tongue Pivot Weldment Left-Hand =Black Metallic=		
48	274819G	Tongue Pivot Weldment Right-Hand =Green=	1	
	274819R	Tongue Pivot Weldment Right-Hand =Red=		
	274819BM	Tongue Pivot Weldment Right-Hand =Black Metallic=		
49	9390-409	Capscrew 1"-14UNS x 3"	12	Grade 5
50	9008441	Elastic Lock Nut 1"-14UNS	12	
51	91004	Star Washer #10-3/16" Dia.	2	
52	277012B	Adapter Plate =Black=	1	
53	9390-123	Capscrew 5/8"-11UNC x 3/4"	2	Grade 5
54	9003398	Locknut 5/8"-11UNC	12	
55	289382B	GCM Mounting Bracket =Black=	1	
56	276748B	Stand Weldment =Black=	2	
57	9398-026	Locknut 1-8UNC	8	
58	9390-195	Capscrew 1"-8UNC x 6"	4	Grade 5
59	9009652	Snap Down Latch (SS)	1	
60	295880	Driveline Storage Rod	1	
61	278019G	Slide Plate Weldment =Green=	1	
	278019R	Slide Plate Weldment =Red=		
	278019BM	Slide Plate Weldment =Black Metallic=		
62	295934G	Cylinder Lug Weldment =Green=	1	
	295934R	Cylinder Lug Weldment =Red=		
	295934BM	Cylinder Lug Weldment =Black Metallic=		
63	9388-135	Carriage Bolt, 5/8"-11UNC x 2 Grade 5	10	

### Sideboard Components

Please visit [www.unverferth.com/parts/](http://www.unverferth.com/parts/) for the most current parts listing.



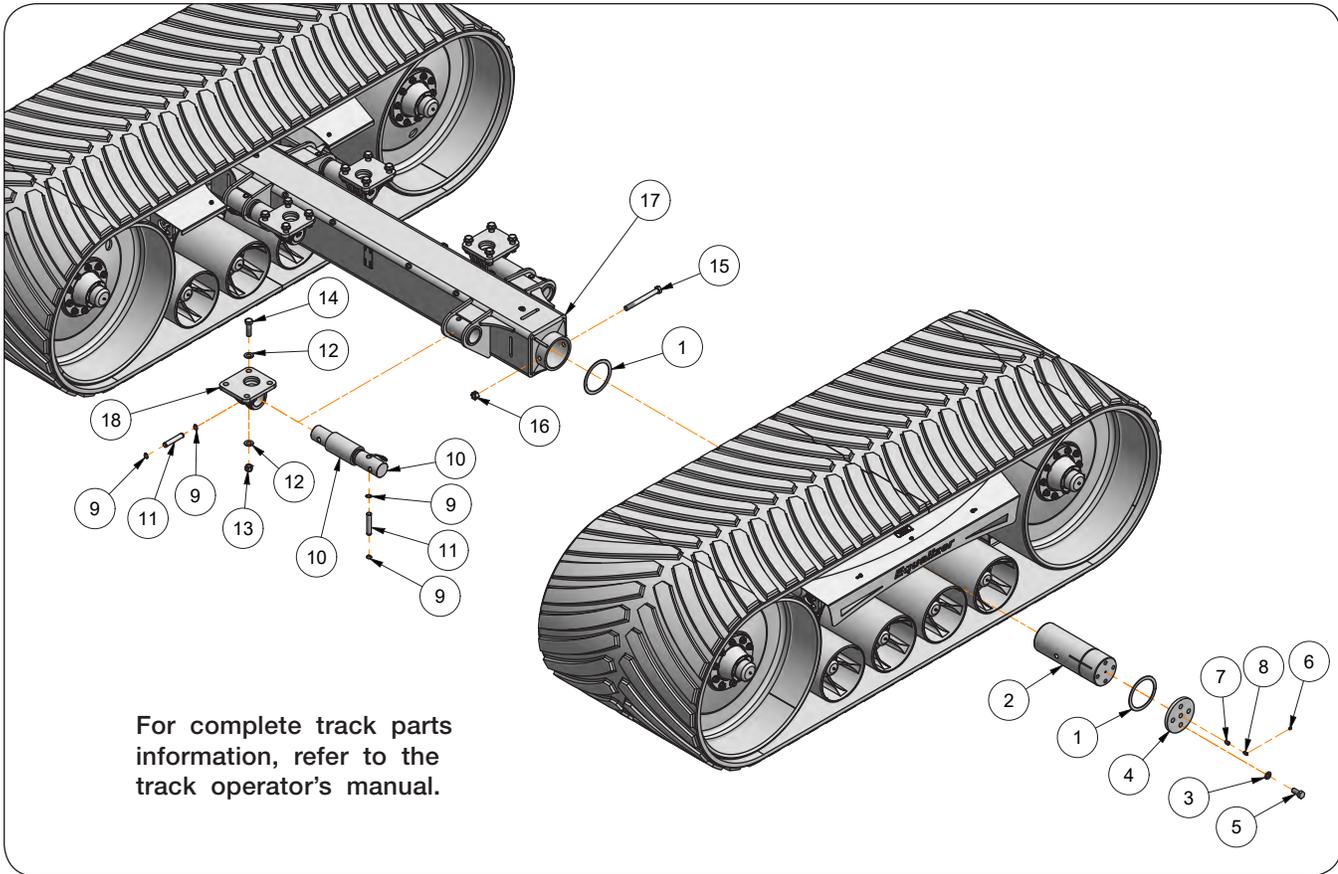
**Sideboard Components**

**Please visit [www.unverferth.com/parts/](http://www.unverferth.com/parts/) for the most current parts listing.**

ITEM	PART NO.	DESCRIPTION	QTY.	NOTES
1	295951B	Front Board Replacement Kit =Black=	1	Includes Items 14 & 15
2	295952B	Rear Board Replacement Kit =Black=	1	
3	295146B	Front LH Board =Black=	1	
4	295147B	2nd LH Board =Black=	1	
5	295148B	3rd LH Board =Black=	1	
6	295149B	Rear LH Board =Black=	1	
7	295150B	Front RH Board =Black=	1	
8	295151B	2nd RH Board =Black=	1	
9	295152B	3rd RH Board =Black=	1	
10	295153B	Rear RH Board =Black=	1	
11	294362B	Sideboard Brace =Black=	3	
12	294365B	Plate - Sideboard Brace 21 1/2" =Black=	2	
13	294364B	Plate - Sideboard Brace 24 13/16" =Black=	2	
14	9008680	Window and Trim Assembly	2	
15	9008933	Pan Head Phillips Screw 8"-18UNC x 1/2"	24	
16	95785	Screw/Large Flange, 3/8"-16 UNC x 1 1/2"	1	
17	9388-051	Carriage Bolt 3/8-16 UNC x 1	80	Grade 5
18	91262	Screw/Large Flange, 3/8-16 UNC x 1	6	Grade 5
19	91263	Hex Nut/Large Flange, 3/8-16 UNC	148	Grade 5
20	95585	Capscrew/Large Flange 3/8-16 UNC x 3/4	50	Grade 5
21	9003259	Flange Screw 3/8"-16UNC x 1 1/4"	11	
22	9008957	LED Work Light	1	
23	271574B	Lamp Mount =Black=	1	
24	295160B	LH Front Sideboard Corner Plate =Black=	1	
25	295131B	LH Rear Sideboard Corner Plate =Black=	1	
26	295129B	RH Front Sideboard Corner Plate =Black=	1	
27	295130B	RH Rear Sideboard Corner Plate =Black=	1	
28	295099B	LH Sideboard Bracket =Black=	3	
29	295098B	RH Sideboard Bracket =Black=	3	
30	295124B	Sideboard Cover Plate =Black=	6	
31	295125B	Sideboard Cover Bracket =Black=	4	

## Track Axle Mounting Components

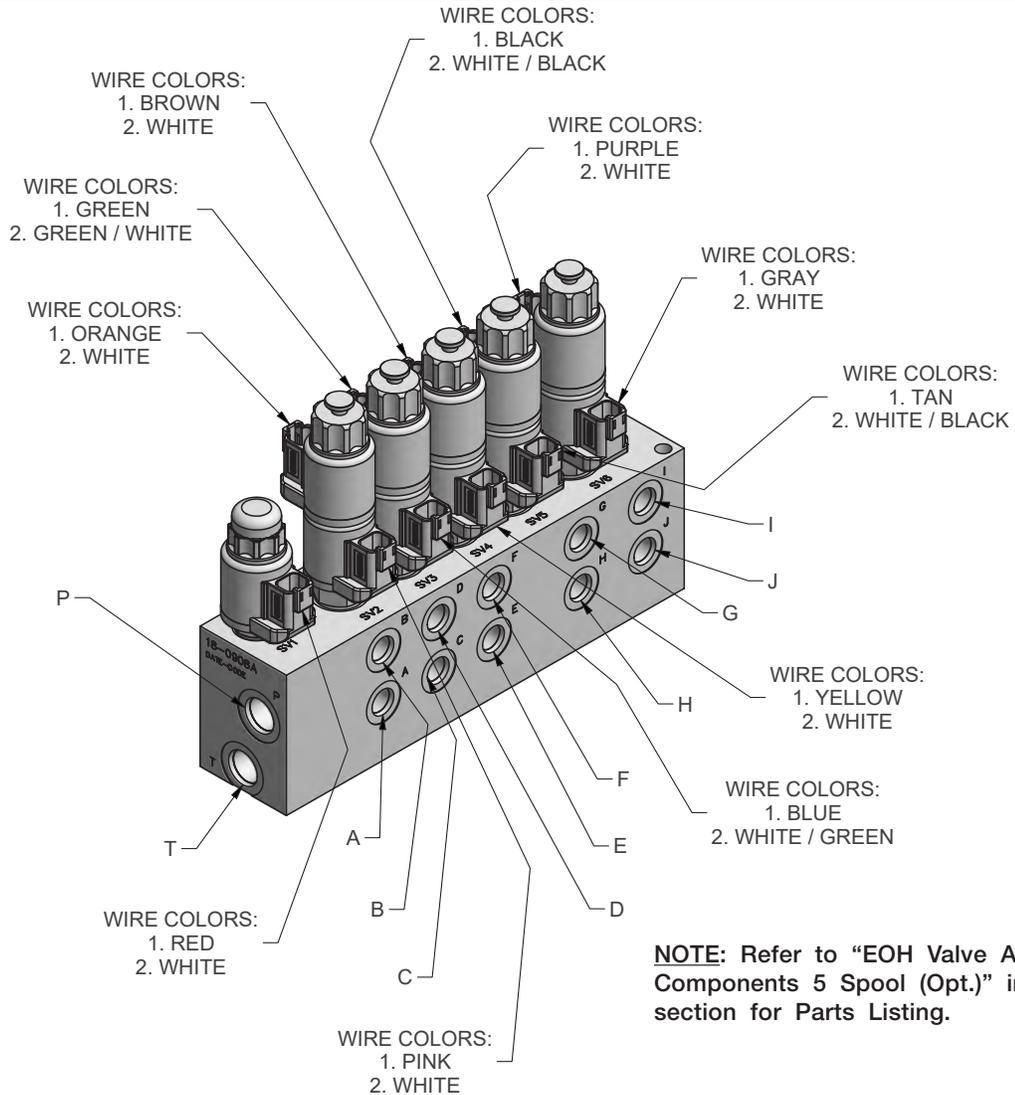
Please visit [www.unverferth.com/parts/](http://www.unverferth.com/parts/) for the most current parts listing.



ITEM	PART NO.	DESCRIPTION	QTY	NOTES
1	282690	Washer 8 1/2" OD	4	
2	282102	Track Pivot Shaft 7" Dia.	2	
3	9404-041	Lock Washer 1"	8	
4	282689B	Cover Plate	2	
5	9390-184	Capscrew 1"-8UNC x 2 1/4"	8	Grade 5
6	93426	Grease Zerk	2	
7	9006816	Adapter 1/8"NPT	2	
8	9006785	90° Adapter	2	
9	91192	Retaining Ring 1"	16	
10	9008448	Load Bar 3 1/2" Dia. w/ 30 Ft. Cable	4	
11	282876	Pin 1" Dia. x 5 1/2"	8	
12	804685	Hardened Flat Washer 1"	32	
13	9008441	Elastic Lock Nut 1"-14UNS	16	
14	91299-1458	Capscrew 1"-14UNS x 3 1/2"	16	Grade 8
15	9390-464	Capscrew 1"-8UNC x 10"	2	Grade 5
16	92199	Lock Nut 1-8UNC	2	
17	267797B	Axle Weldment =Black=	1	
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/](http://www.unverferth.com/parts/) for the most current parts listing.

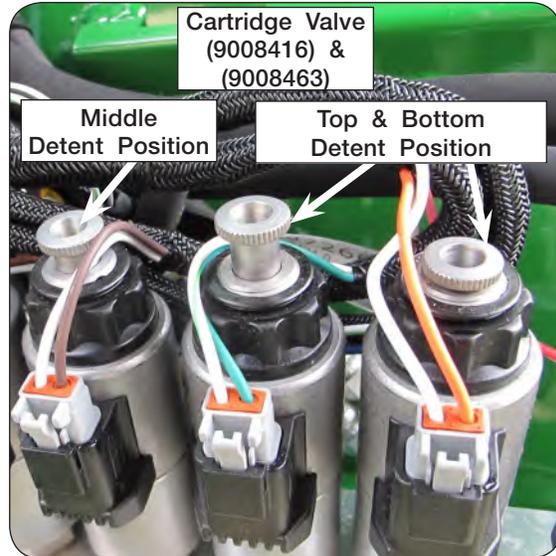
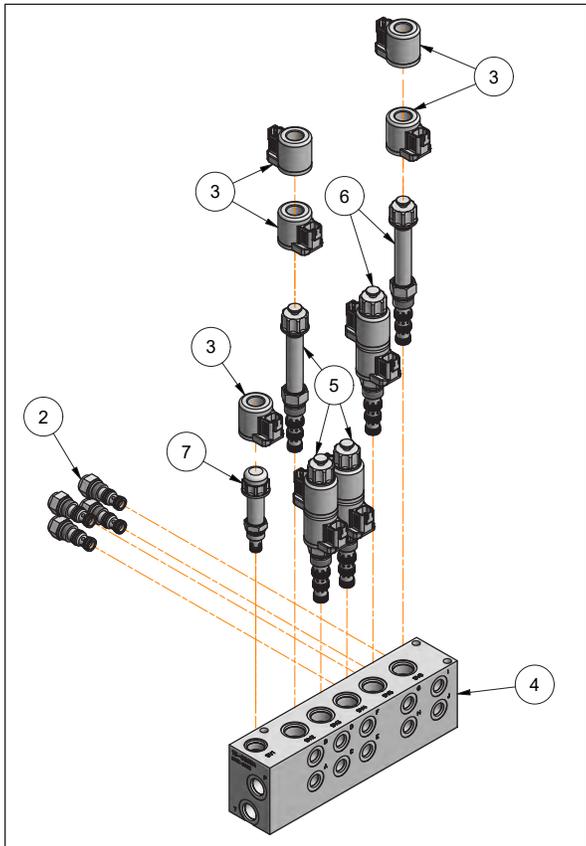


**NOTE:** Refer to “EOH Valve Assembly Components 5 Spool (Opt.)” in this section for Parts Listing.

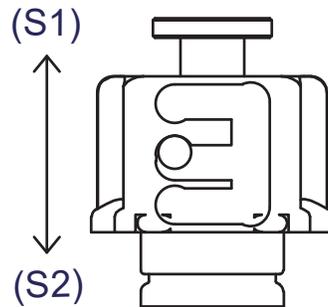
PORT	END OF CYLINDER	FUNCTION
A	BUTT END	Flow Door
B	RAM END	Flow Door
C	RAM END	Auger Fold
D	BUTT END	Auger Fold
E	RAM END	Spout Tilt Out
F	BUTT END	Spout Tilt In
G	ORBIT MOTOR LEFT-HAND PORT	Joystick / Spout Rotate
H	ORBIT MOTOR RIGHT-HAND PORT	Joystick / Spout Rotate
I	BUTT END	Auger Pivot Down
J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

**EOH Valve Assembly Components 5 Spool (Optional)**

Please visit [www.unverferth.com/parts/](http://www.unverferth.com/parts/) for the most current parts listing.



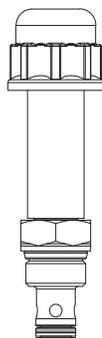
Cartridge Valve (9008416) & (9008463)  
Middle Detent Position



PUSH BUTTON  
AND HOLD  
WHILE OPERATING  
INDIVIDUAL FUNCTIONS

Cartridge Valve (9008438)

FOR MANUAL OVERRIDE



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

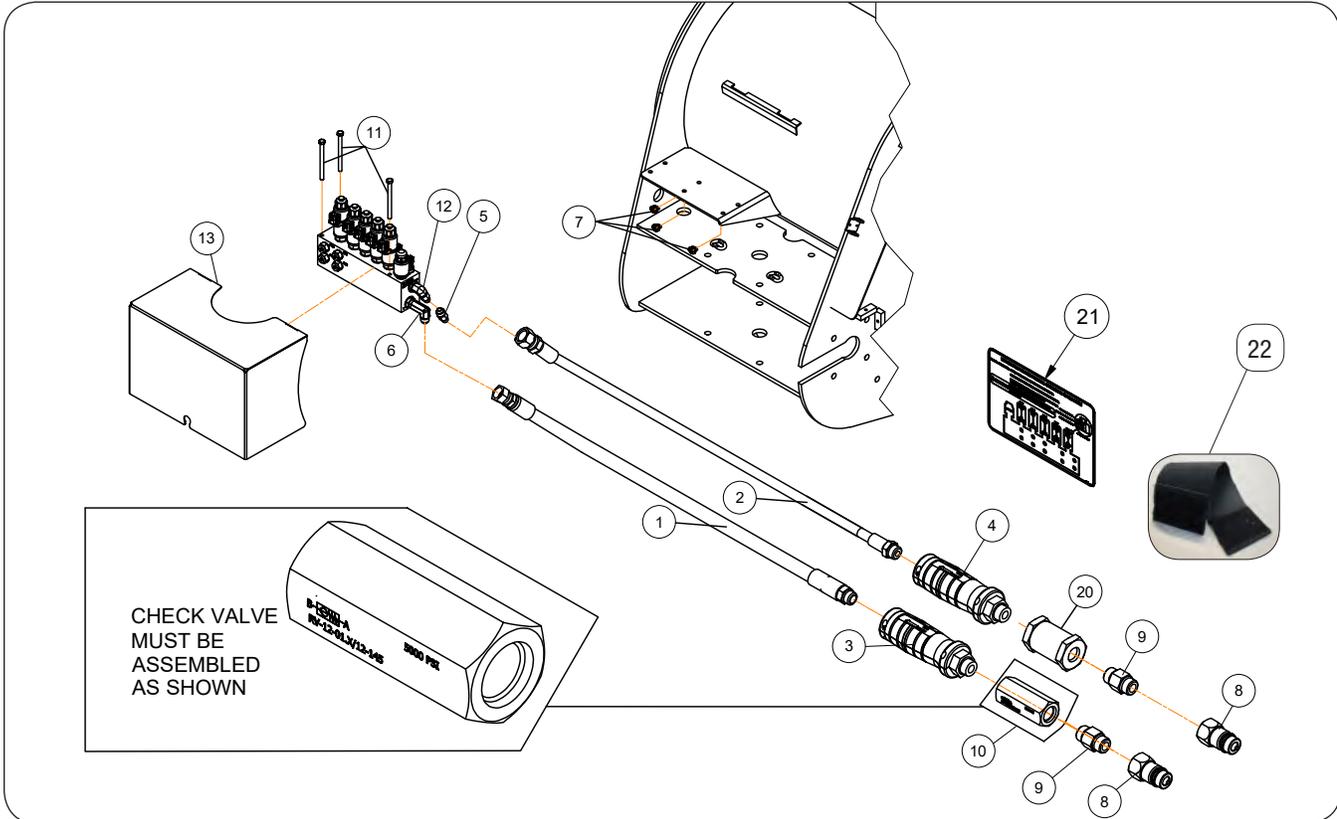
**EOH Valve Assembly Components 5 Spool (Optional)**

**Please visit [www.unverferth.com/parts/](http://www.unverferth.com/parts/) for the most current parts listing.**

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

**EOH Tractor Circuit Hydraulic Components (Optional)**

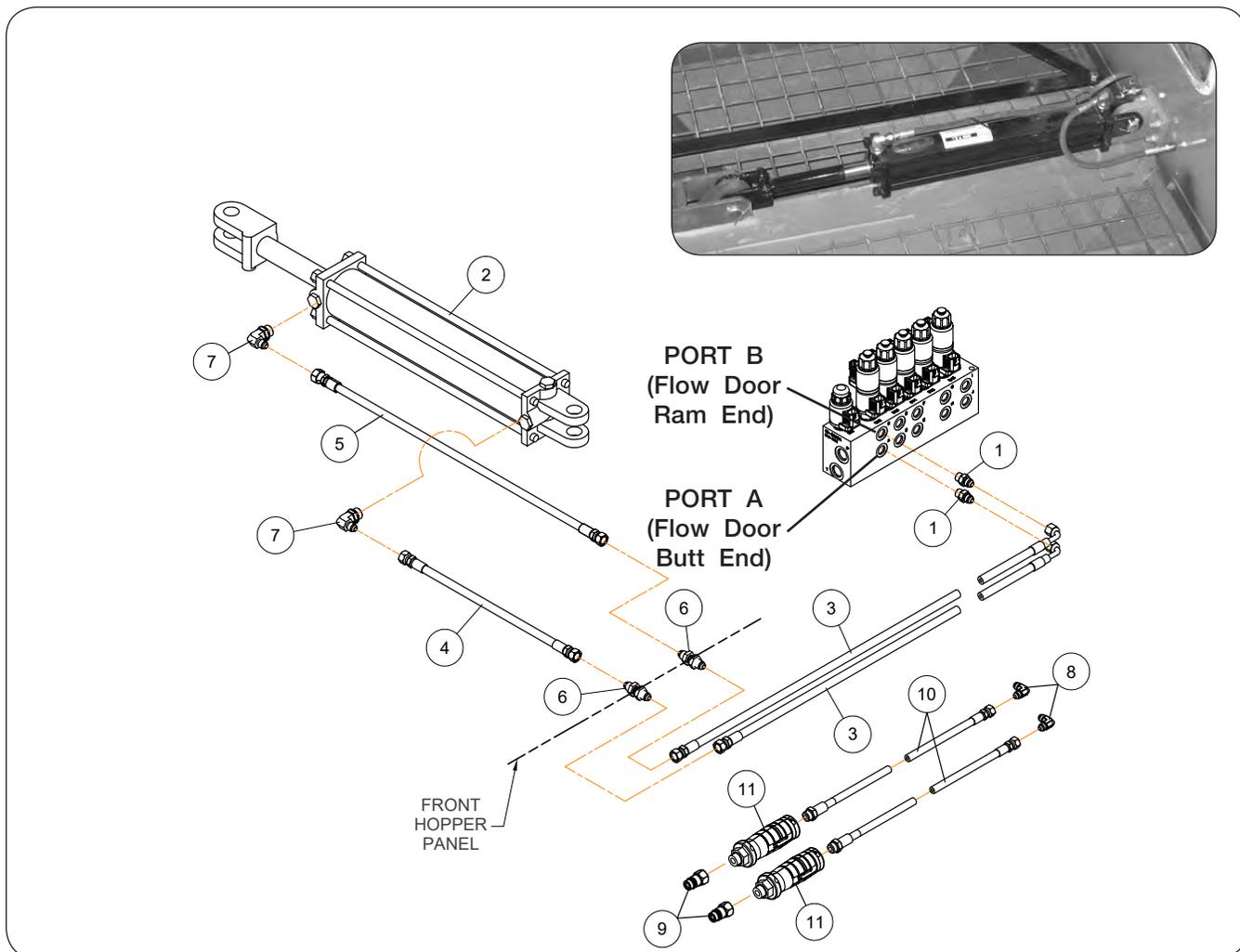
Please visit [www.unverferth.com/parts/](http://www.unverferth.com/parts/) for the most current parts listing.



ITEM	PART NO.	DESCRIPTION	QTY.	NOTES
1	95802	Hydraulic Hose, 1/2 x 205" - 3000 PSI	1	Tractor Return
2	9005574	Hydraulic Hose, 1/4 x 208" - 3000 PSI	1	Tractor Pressure
3	9008601	Hose Grips - Tan (Pair) - Spout Rotate Front (Joystick)	1	Half Tan/Half Gray - Cylinder Retracted (Return Line)
4	9008601	Hose Grips - Tan (Pair) - Spout Rotate Back (Joystick)	1	Solid Tan - Cylinder Extended (Pressure Line)
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	1	
10	9006994	Check Line Valve 145 PSI	1	
11	9390-043	Capscrew, 5/16-18UNC x 4 1/2 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 #21
20	9005403	120 Micron Hydraulic Filter	1	
21	9008564	Decal, CAUTION (Valve Block)	1	Located Inside Cover Plate #13
22	9003848	Velcro Hose Wrap, 2" I.D. x 127" Lg.	1	

**Flow Door Circuit Hydraulic Components**

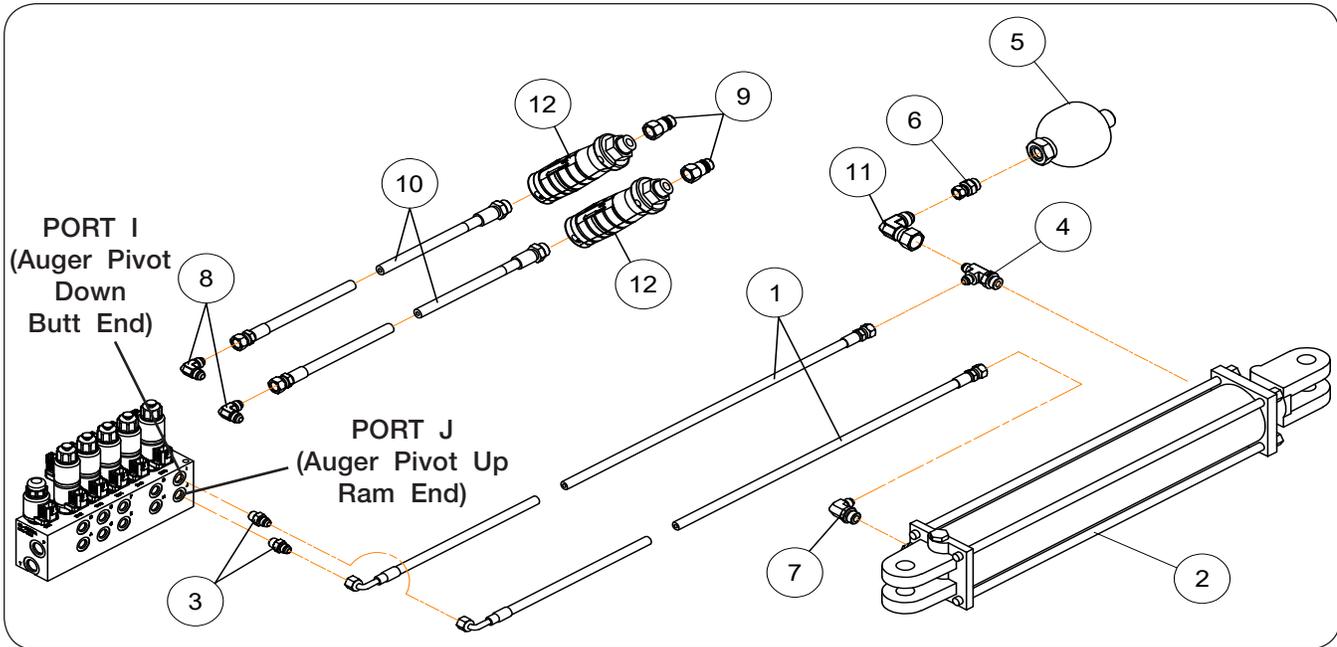
Please visit [www.unverferth.com/parts/](http://www.unverferth.com/parts/) for the most current parts listing.



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	2	
10	9006587	Hydraulic Hose, 1/4 x 186" - 3000 PSI	2	
11	9008596	Hose Grips - Red (Pair) - Flow Door Open	1	Solid Red - Cylinder Extended
	9008596	Hose Grips - Red (Pair) - Flow Door Close	1	Half Red/Half Gray - Cylinder Retracted

**Auger Pivot Hydraulic Components**

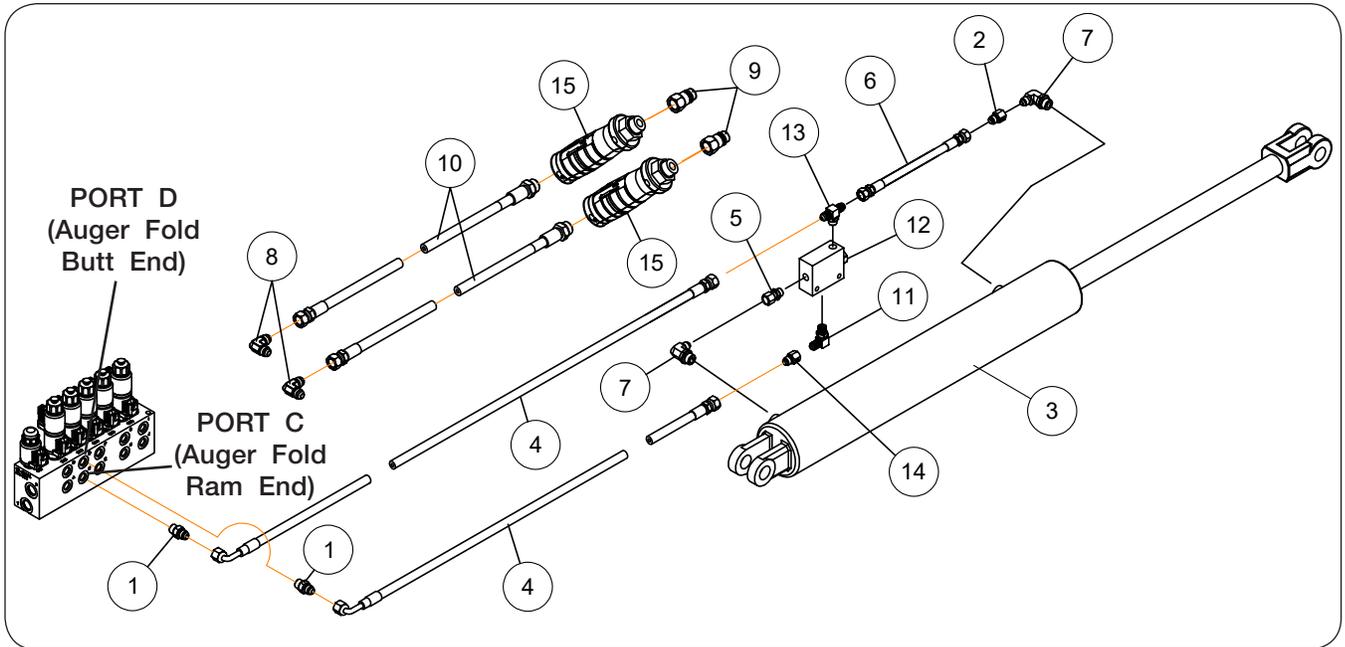
Please visit [www.unverferth.com/parts/](http://www.unverferth.com/parts/) for the most current parts listing.



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	9008603	Brent Hose Grips (Orange Pair) - Auger Pivot Up	1	Solid Orange - Cylinder Extended
	9008603	Brent Hose Grips (Orange Pair) - Auger Pivot Down	1	Half Orange/Half Gray - Cylinder Retracted

**Auger Fold Hydraulic Components**

Please visit [www.unverferth.com/parts/](http://www.unverferth.com/parts/) for the most current parts listing.

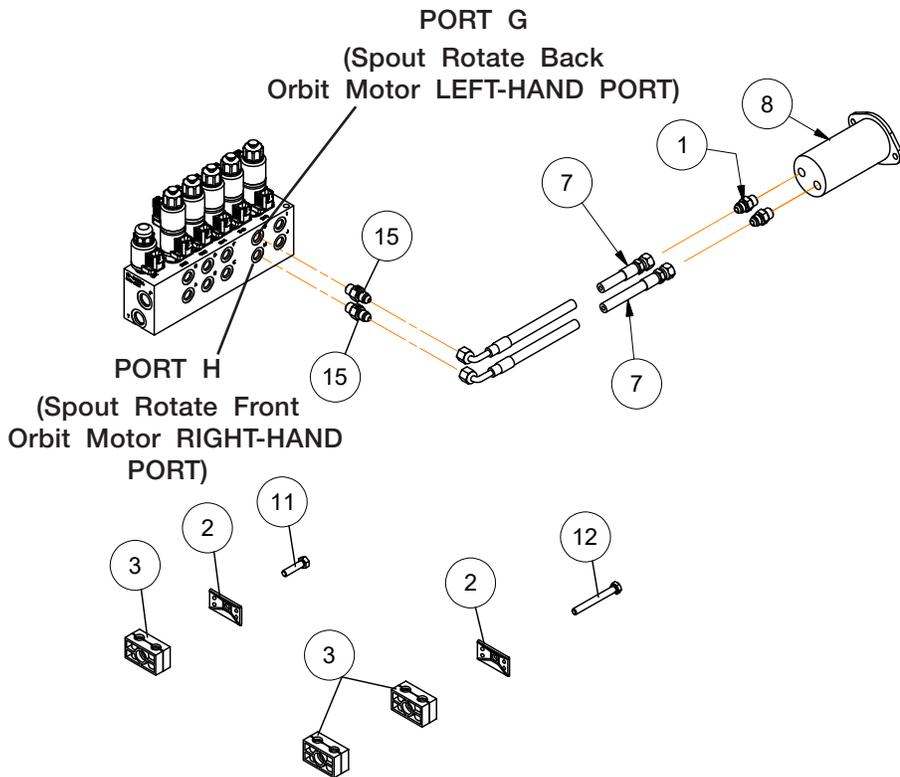


ITEM	PART NO.	DESCRIPTION	QTY.	NOTES
1	9001495	Adapter, 9/16"-18 JIC Male x 9/16"-18 OR Male	9	Optional
2	9002199	Reducer, 9/16"-18 JIC Female x 9/16"-18 JIC Male	1	0.060 Yellow Restrictor
3	9009659	Hydraulic Cylinder, 3 1/2" x 20" - 3000 PSI	1	
	9006942	Seal Kit	-	
4	9006608	Hydraulic Hose, 1/4" x 84" - 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	9008597	Brent Hose Grips (Green Pair) - Auger Raise	1	Solid Green - Cylinder Extended
	9008597	Brent Hose Grips (Green Pair) - Auger Lower	1	Half Green/Half Gray - Cylinder Retracted

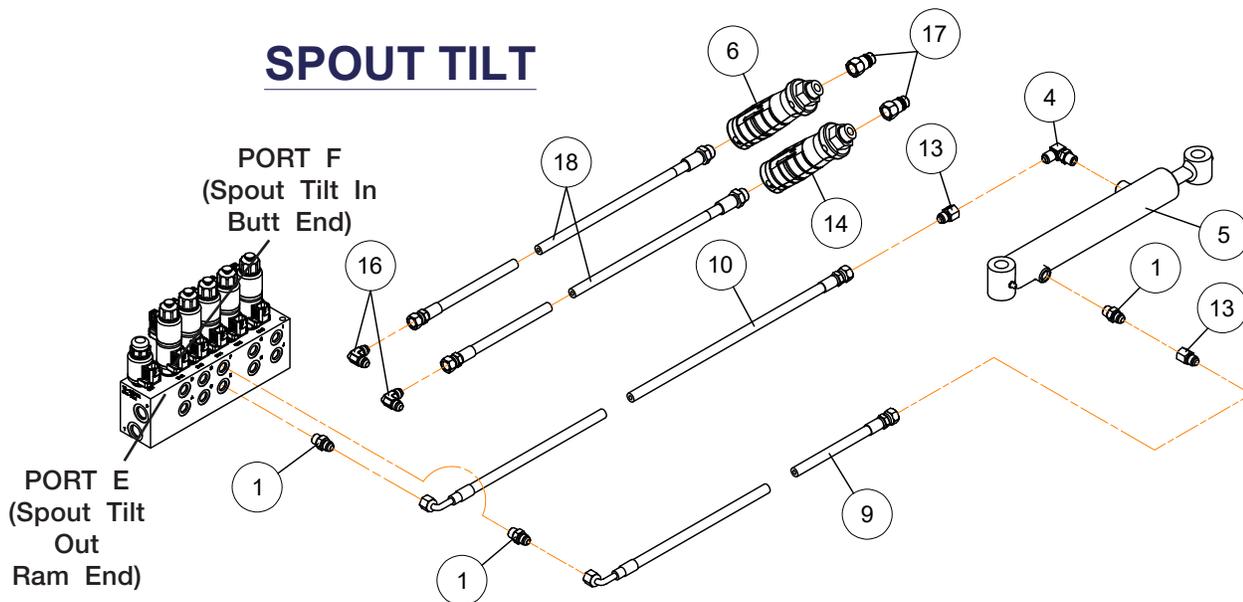
## EOH Spout Rotate & Tilt Hydraulic Components (Optional)

Please visit [www.unverferth.com/parts/](http://www.unverferth.com/parts/) for the most current parts listing.

### SPOUT ROTATE



### SPOUT TILT



**EOH Spout Rotate & Tilt Hydraulic Components (Optional)**

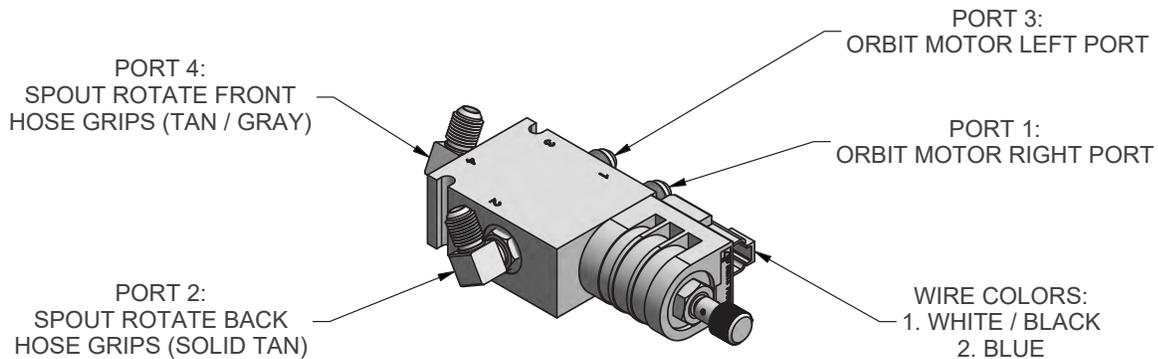
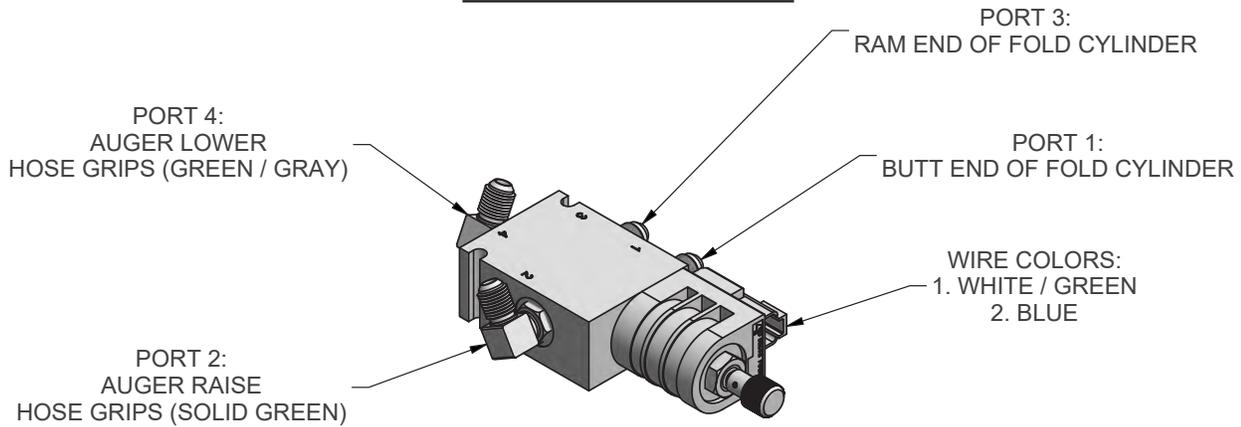
**Please visit [www.unverferth.com/parts/](http://www.unverferth.com/parts/) for the most current parts listing.**

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 JIC Male x 9/16-18 O-Ring ADJ Male	1	
5	9005135	Hydraulic Cylinder, 1 1/2 x 8 - 3000 PSI	1	
6	9008598	Hose Grips - Yellow (Pair) - Spout Out	1	Solid Yellow - Cylinder Extended
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	9008598	Hose Grips - Yellow (Pair) - Spout In	1	Half Yellow/Half Gray - Cylinder Retracted
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	

## SCV Controlled Inline Valve Assemblies - Valve Functions and Wire Locations

Please visit [www.unverferth.com/parts/](http://www.unverferth.com/parts/) for the most current parts listing.

### AUGER FOLD

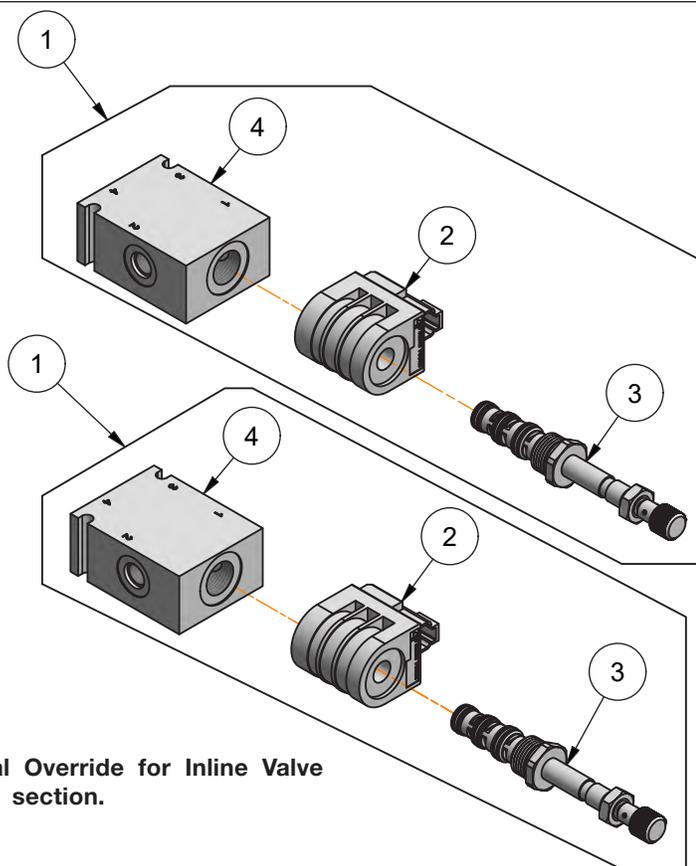


### SPOUT ROTATE

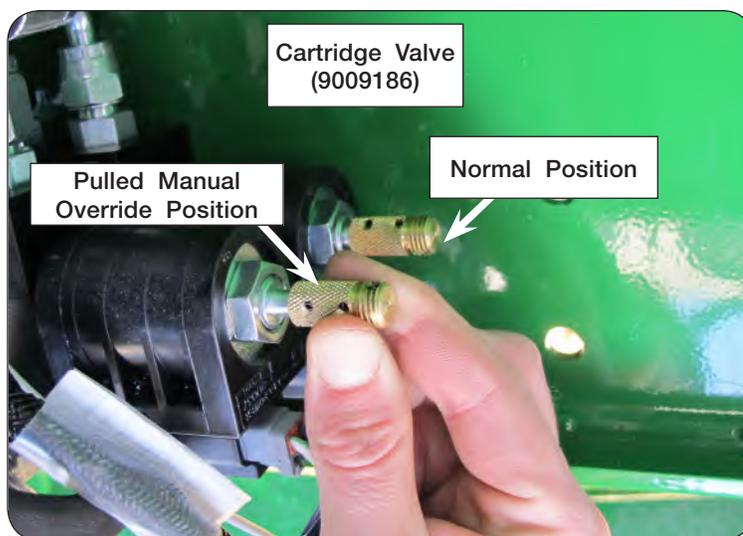
**NOTE:** Refer to "Inline Valve Assembly Components " in the next section for Parts Listing.

### SCV Controlled Inline Valve Assembly Components

Please visit [www.unverferth.com/parts/](http://www.unverferth.com/parts/) for the most current parts listing.



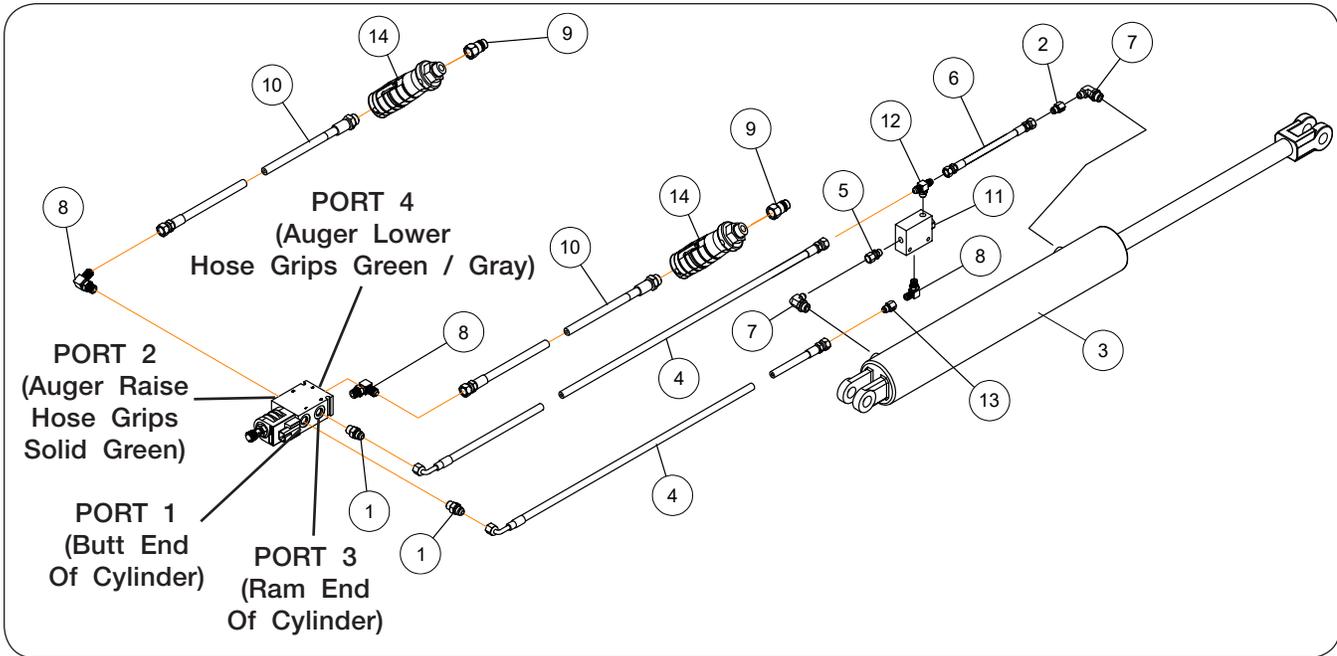
**NOTE:** Refer to “Manual Override for Inline Valve System” in OPERATION section.



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**

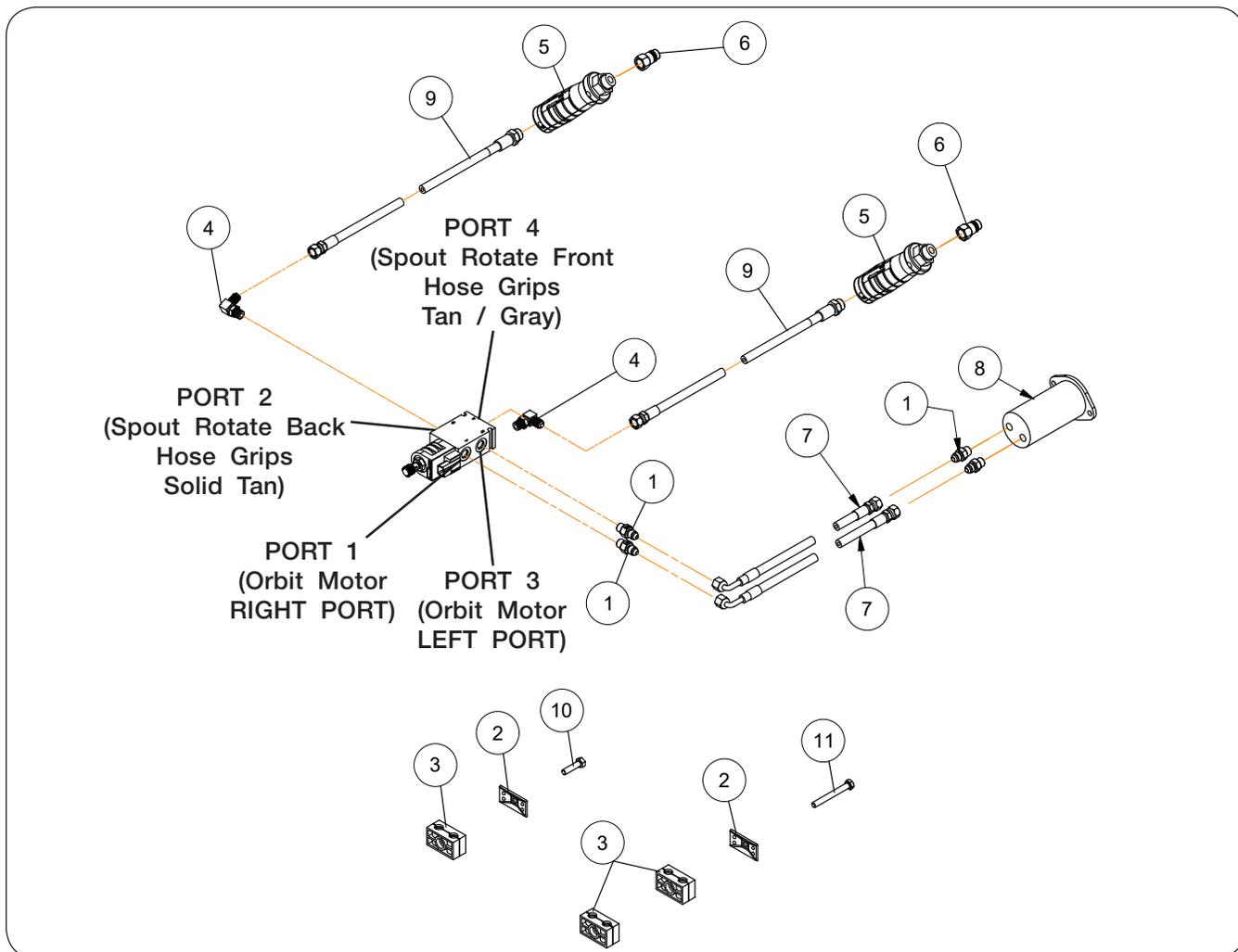
Please visit [www.unverferth.com/parts/](http://www.unverferth.com/parts/) for the most current parts listing.



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	9008597	Brent Hose Grips (Green Pair) - Auger Raise	1	Solid Green - Cylinder Extended
	9008597	Brent Hose Grips (Green Pair) - Auger Lower	1	Half Green/Half Gray - Cylinder Retracted

**SCV Controlled Inline Valve -  
Spout Rotate Hydraulic Components**

Please visit [www.unverferth.com/parts/](http://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 JIC Male x 9/16-18 O-Ring ADJ Male	2	
5	9008601	Brent Hose Grips - Tan (Pair) - Spout Rotate Back	1	Solid Tan - Cylinder Extended
	9008601	Brent Hose Grips - Tan (Pair) - Spout Rotate Front	1	Half Tan/Half Gray - Cylinder Retracted
6	91383	Male Tip Coupling, 3/4-16	2	
7	9009603	Hydraulic Hose, 1/4 x 260" - 3000 PSI	2	
8	9007626	Hydraulic Motor	1	
9	9006587	Hydraulic Hose, 1/4 x 186" - 3000 PSI	2	
10	9390-031	Capscrew, 5/16"-18UNC x 1 1/4" G5	6	
11	9390-035	Capscrew, 5/16"-18UNC x 2 1/4" G5	4	

**Cylinders**

Please visit [www.unverferth.com/parts/](http://www.unverferth.com/parts/) for the most current parts listing.

**Auger Flow Door Cylinder**

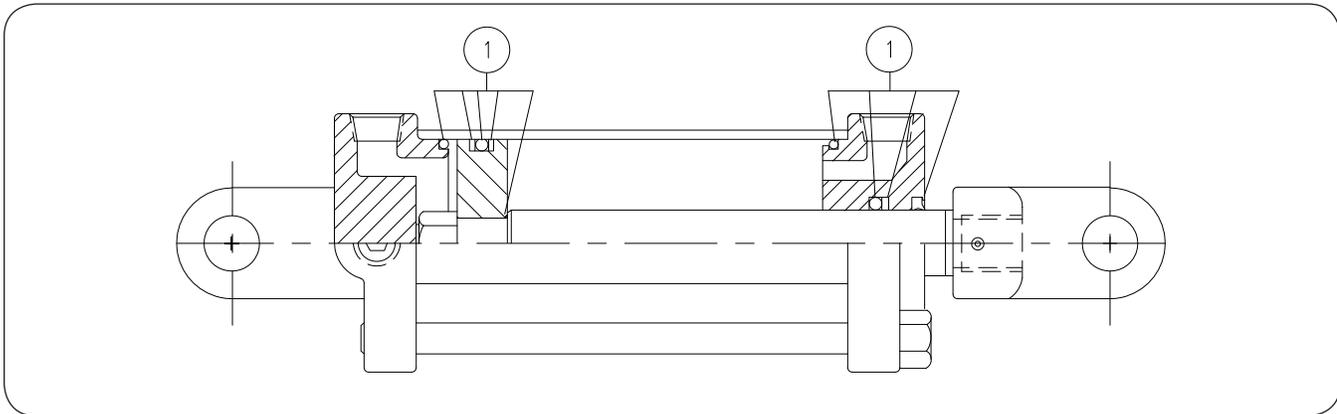
ITEM	PART NO.	DESCRIPTION	QTY	NOTES
	9002575	Cylinder 3 x 16	1	3/4-16 O-Ring Ports (3000 PSI)
1	9003772	Seal Kit	1	

**Auger Fold Cylinder**

ITEM	PART NO.	DESCRIPTION	QTY	NOTES
	9009659	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	



**Cylinders**

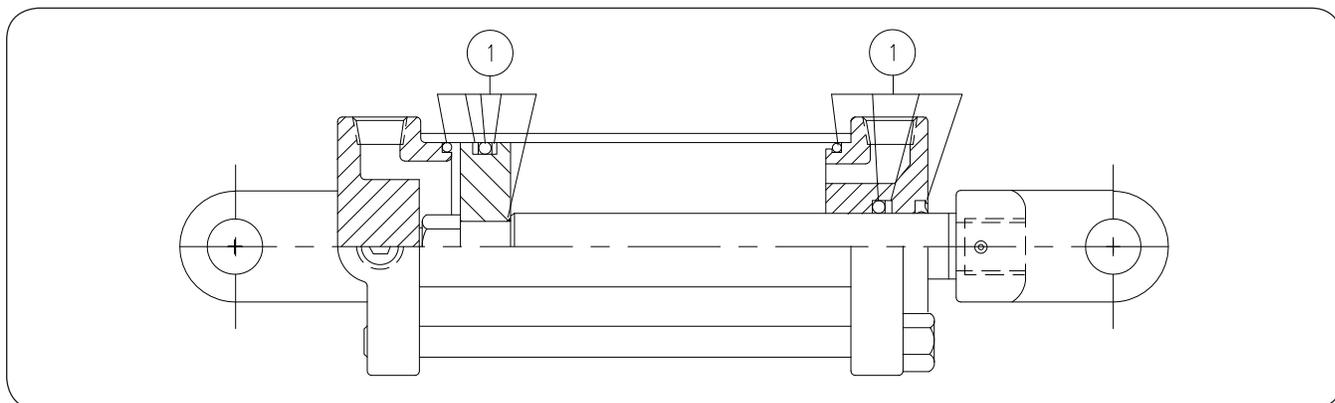
**Please visit [www.unverferth.com/parts/](http://www.unverferth.com/parts/) for the most current parts listing.**

**Spout Tilt Cylinder**

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

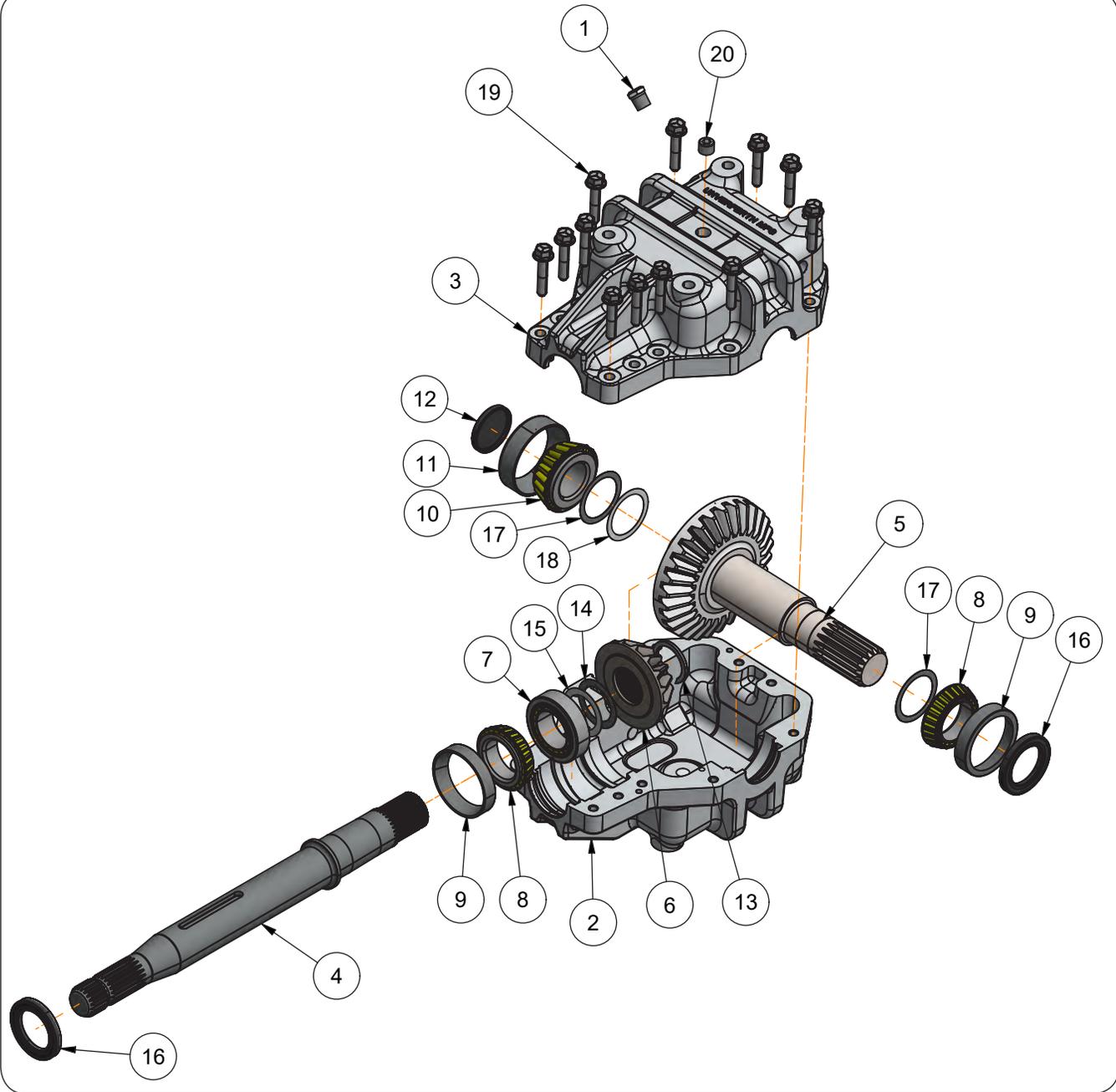
**Jack Cylinder - 3 1/2" x 8"**

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



### Gearbox Components

Please visit [www.unverferth.com/parts/](http://www.unverferth.com/parts/) for the most current parts listing.



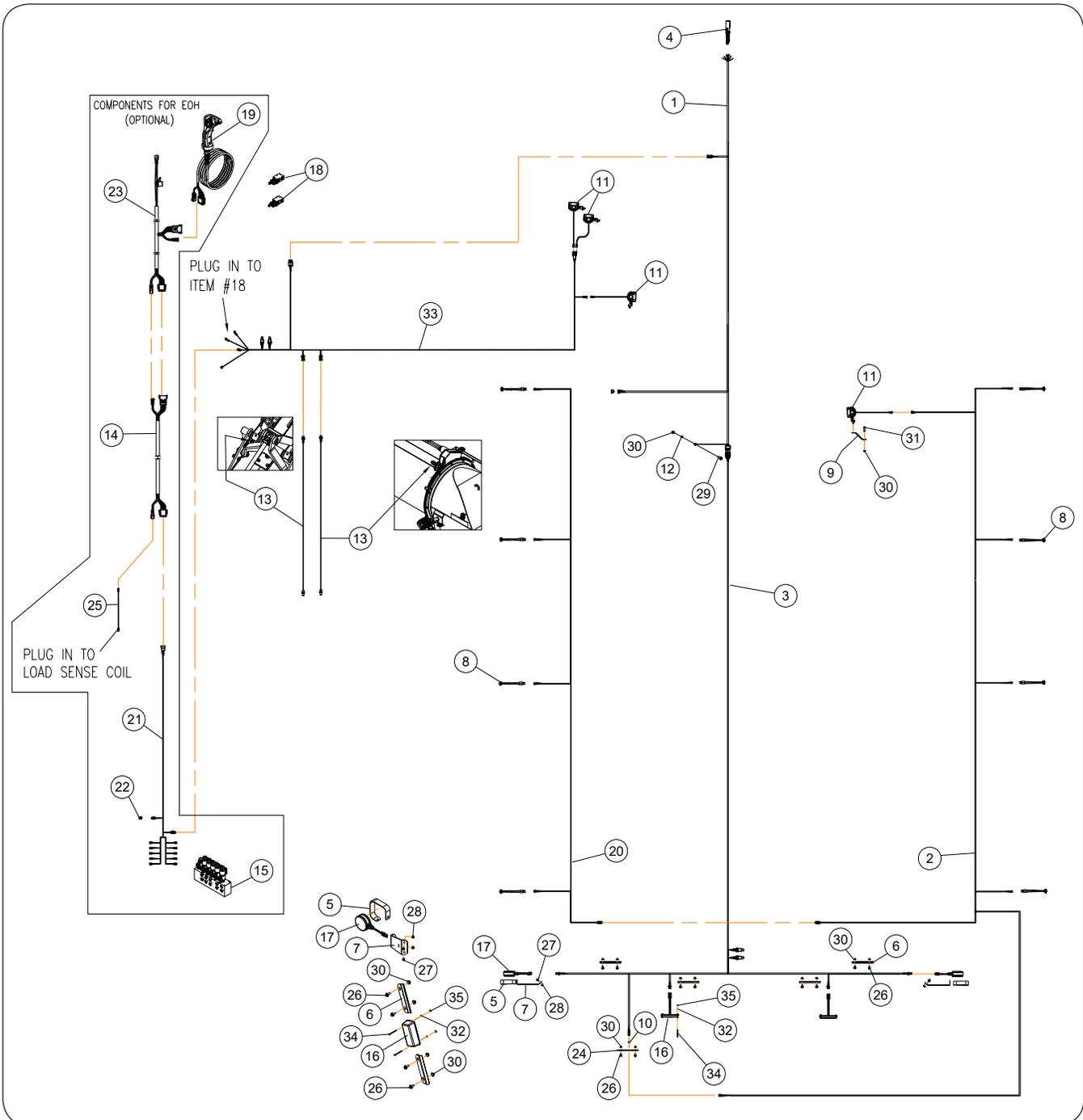
**Gearbox Components**

**Please visit [www.unverferth.com/parts/](http://www.unverferth.com/parts/) for the most current parts listing.**

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

## Electrical Components

Please visit [www.unverferth.com/parts/](http://www.unverferth.com/parts/) for the most current parts listing.



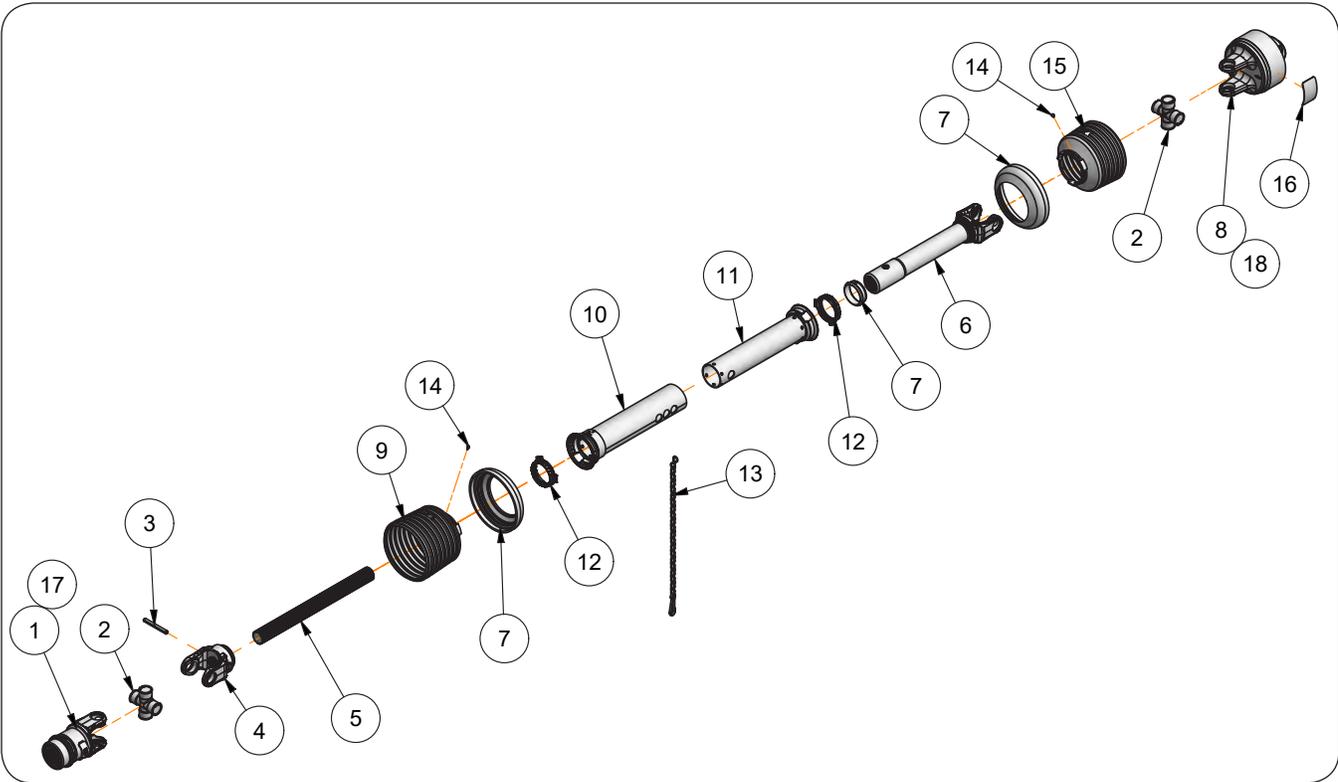
**Electrical Components**

**Please visit [www.unverferth.com/parts/](http://www.unverferth.com/parts/) for the most current parts listing.**

ITEM	PART NO.	DESCRIPTION	QTY	NOTES
1	9009540	Front Harness - 262"	1	
2	9009032	RH Clearance Light Harness	1	
3	9009587	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=		
	273371R	Harness Cover =Black Metallic=		
7	273894B	Light Bracket =Black=	2	
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	293416	EOH Block Assembly - 5 Spool Replacement Kit	1	
16	9006345	LED Lamp - Red	2	Includes Lamp, & Items 32, 34 & 35
	232169	LED Lamp - Red - Replacement Kit		
17	9005142	LED Lamp - Amber	2	
18	9009184	Inline Valve Assembly	2	
19	9008265	L-Series Control Grip - 5 Function	1	
20	9009070	LH Clearance Light Harness	1	
21	9007290	"T" Main Wiring Harness - 189"	1	
22	252386	Plug Assembly, 2 Pin Shroud	1	
23	9008251	Harness - Joystick Power	1	
24	276400G	Rear Trim =Green=	1	
	276400R	Rear Trim =Red=		
	276400BM	Rear Trim =Black Metallic=		
25	9007266	Wire Harness, 218 5/16" (2 Pin Diverter)	1	
26	95585	Large Flange Screw 3/8"-16UNC x 3/4"	10	Grade 5
27	91256	Large Flange Screw 5/16"-18UNC x 3/4"	4	
28	91257	Flange Nut 5/16"-18UNC	4	
29	91262	Flange Screw 3/8"-16UNC x 1"	1	Grade 5
30	91263	Large Flange Nut, 3/8-16UNC	12	Grade 5
31	9003259	Flange Screw 3/8"-16UNC x 1 1/4"	1	
32	9404-013	Lock Washer, #10	4	
33	9009531	Auger Harness	1	
34	903172-350	Pan Head Phillips Screw, #10-32UNF x 1 1/4"	4	
35	9830-016	Hex Nut, #10-32	4	Grade 2

**Cut Out Clutch PTO Assembly**

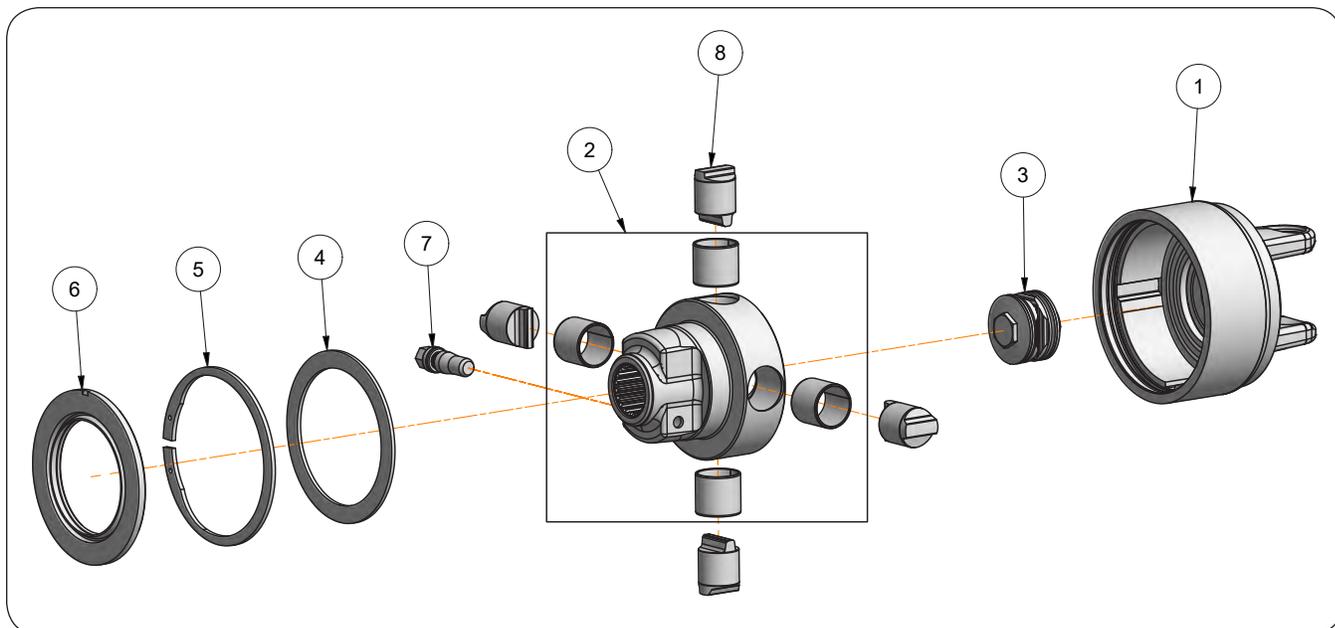
Please visit [www.unverferth.com/parts/](http://www.unverferth.com/parts/) for the most current parts listing.



ITEM	PART NO.	DESCRIPTION	QTY	NOTES
	9008417	PTO Assembly Complete, Front & Half Assembly 1 3/4-20 Spline	-	Includes Items 1-18
1	9005234	Over-Running PTO Clutch Assembly	1	
2	92529	Cross & Bearing Kit	2	
3	9002609	Spring Pin 10x90	2	
4	9008478	Inboard Yoke S4	1	
5	9008479	Inner Profile	1	
6	9008482	Inboard Yoke, Tube, & Sleeve	1	
7	9002513	Reinforcing Collar	1	
8	9005235	Cut Out Clutch (3200 N-m Setting)	1	1 3/4-20 Spline 1000RPM
9	9008481	Shield Cone 8 Rib	1	
10	9008480	Outer Shield Tube Oval	1	
11	9008483	Inner Shield Tube Oval	1	
12	92373	Bearing Ring	2	
13	92374	Safety Chain	1	
14	92372	Screw	2	
15	93866	Shield Cone 6 Rib	1	
16	9005233	Decal K64	1	"Tighten to 75 Ft.-Lbs."
17	93856	Quick-Disconnect Kit	1	1 3/4-20 Spline w/Metal Collar
18	9005253	Cut Out Clutch Lock Assembly	1	

**Cut Out Clutch Components**

Please visit [www.unverferth.com/parts/](http://www.unverferth.com/parts/) for the most current parts listing.

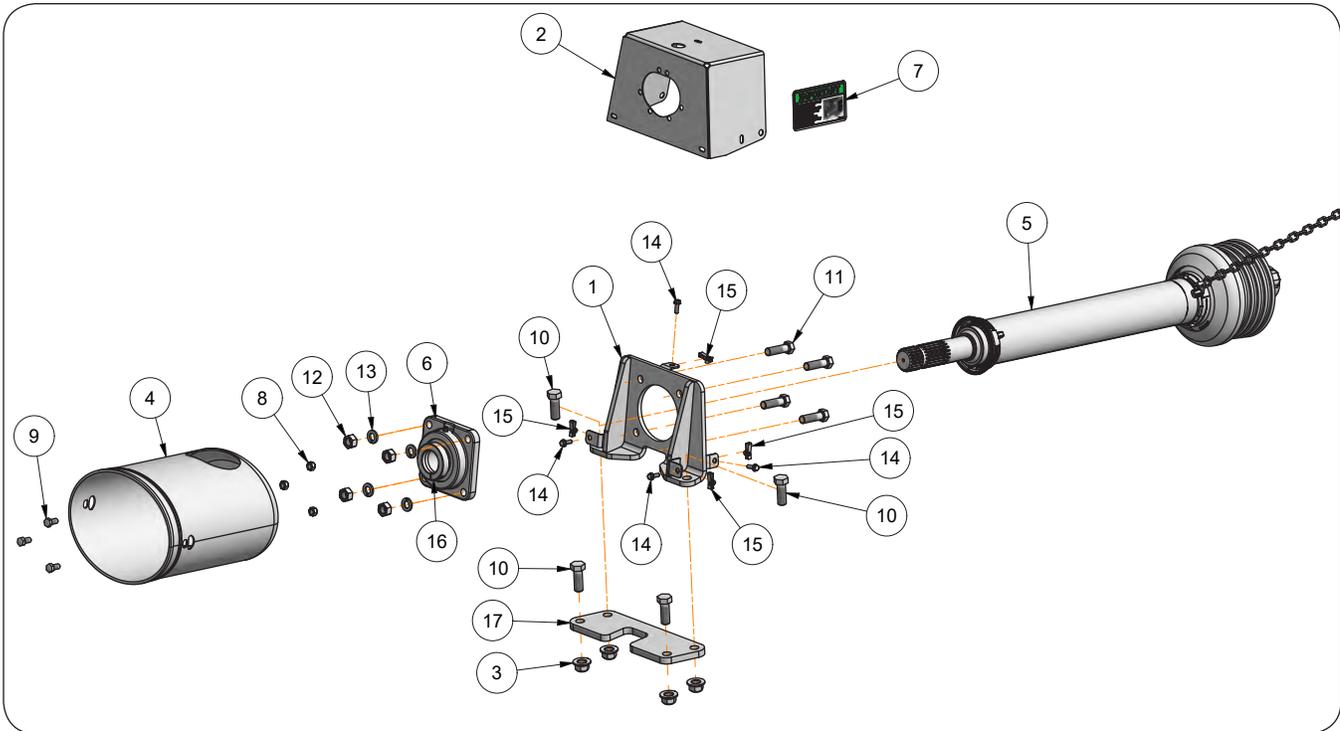


**NOTE:** Cut Out Clutch (9005235) must be used with the Complete PTO Assembly (9008417). This will not work with the Standard PTO Assembly (9005245).

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	

## PTO & Bracket Assembly

Please visit [www.unverferth.com/parts/](http://www.unverferth.com/parts/) for the most current parts listing.



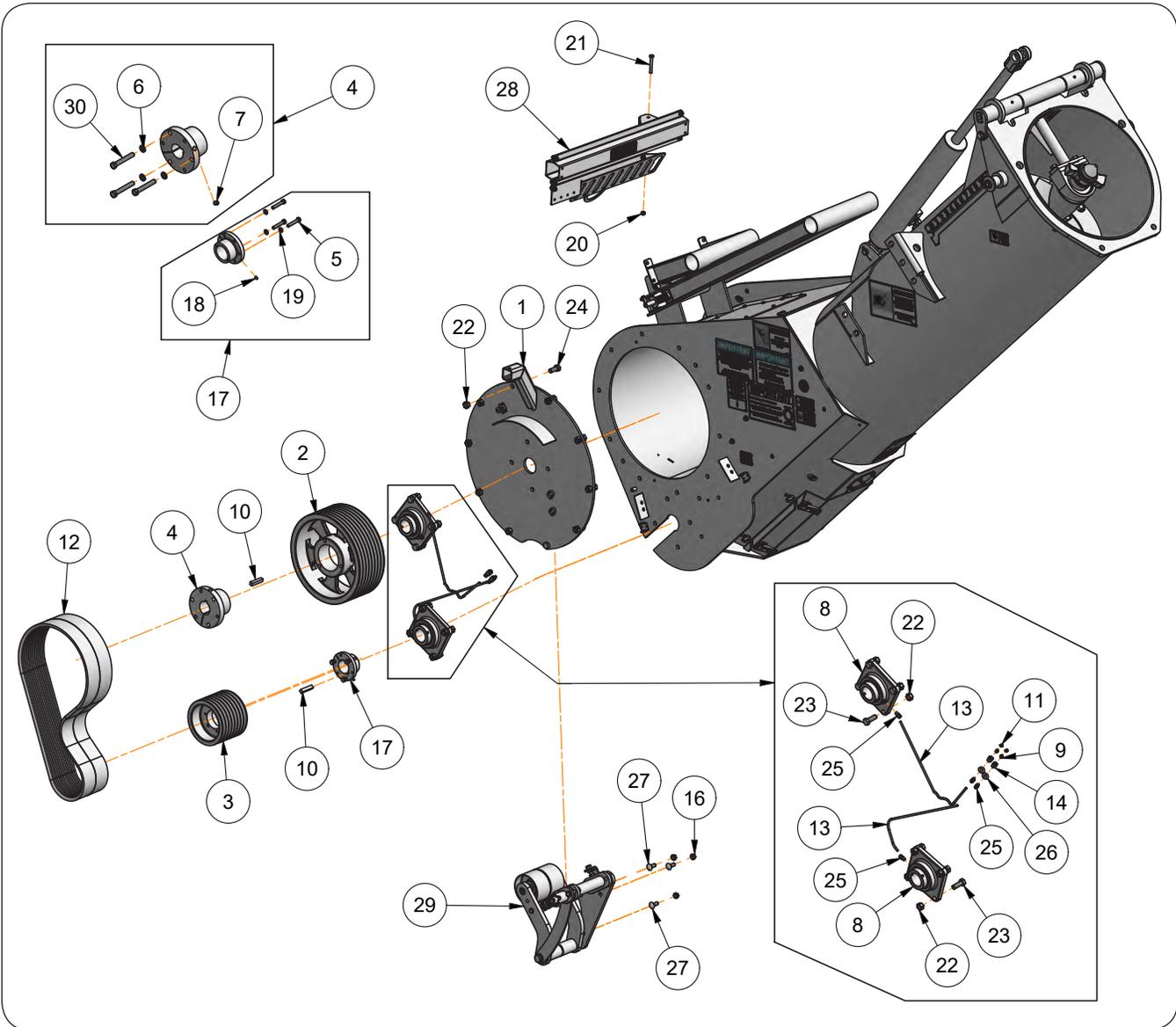
**PTO & Bracket Assembly**

**Please visit [www.unverferth.com/parts/](http://www.unverferth.com/parts/) for the most current parts listing.**

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

## Lower Auger Linkage Components

Please visit [www.unverferth.com/parts/](http://www.unverferth.com/parts/) for the most current parts listing.



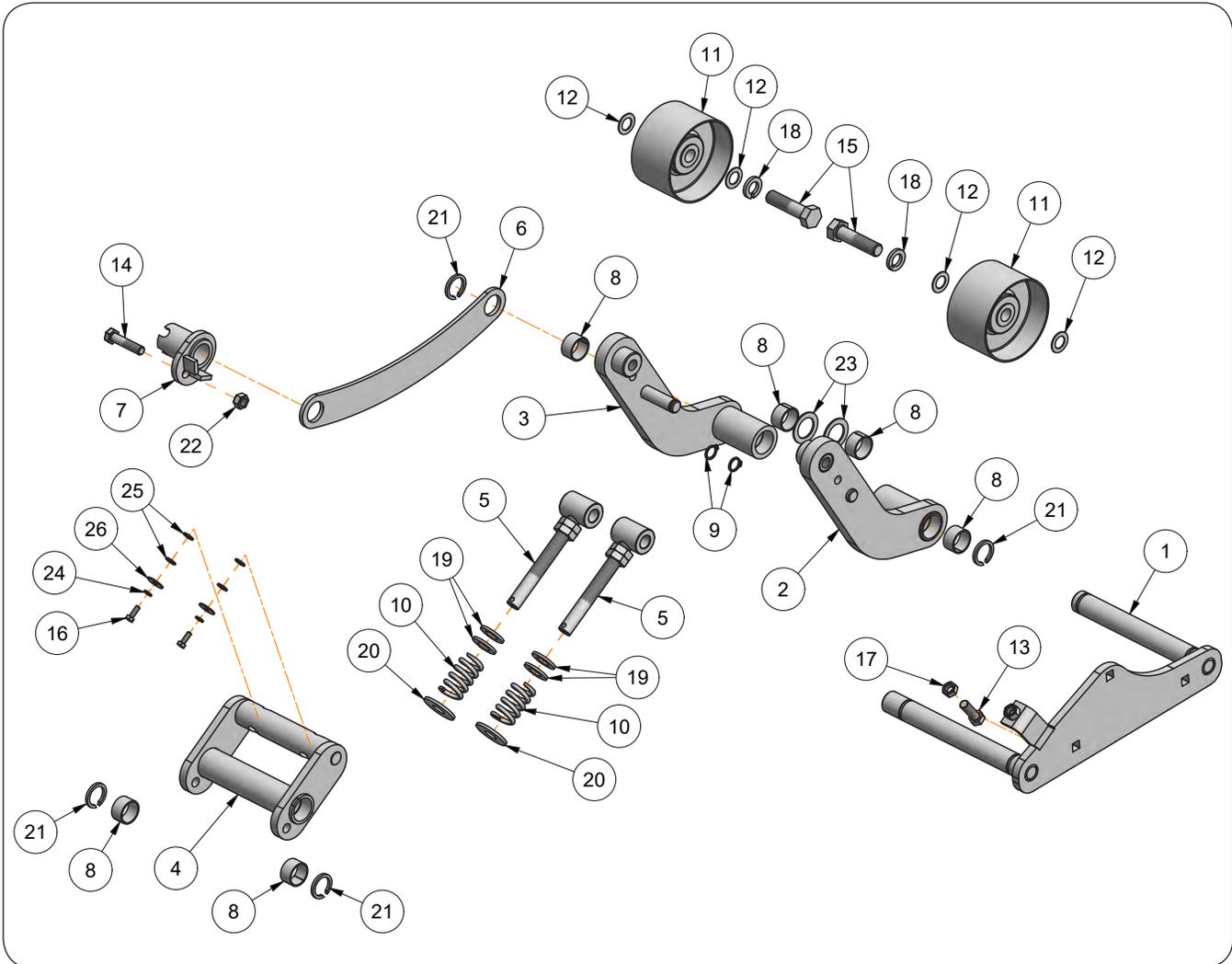
**Lower Auger Linkage Components**

**Please visit [www.unverferth.com/parts/](http://www.unverferth.com/parts/) for the most current parts listing.**

ITEM	PART NO.	DESCRIPTION	QTY	NOTES
1	295783B	Front Cover Junction Box Weldment =Green=	1	
	295783B	Front Cover Junction Box Weldment =Red=		
	295783B	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	Hose/Type Nylon, 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	Quickline 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 Page 5-24 & 5-25 for Components
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

### Idler Assembly Components

Please visit [www.unverferth.com/parts/](http://www.unverferth.com/parts/) for the most current parts listing.



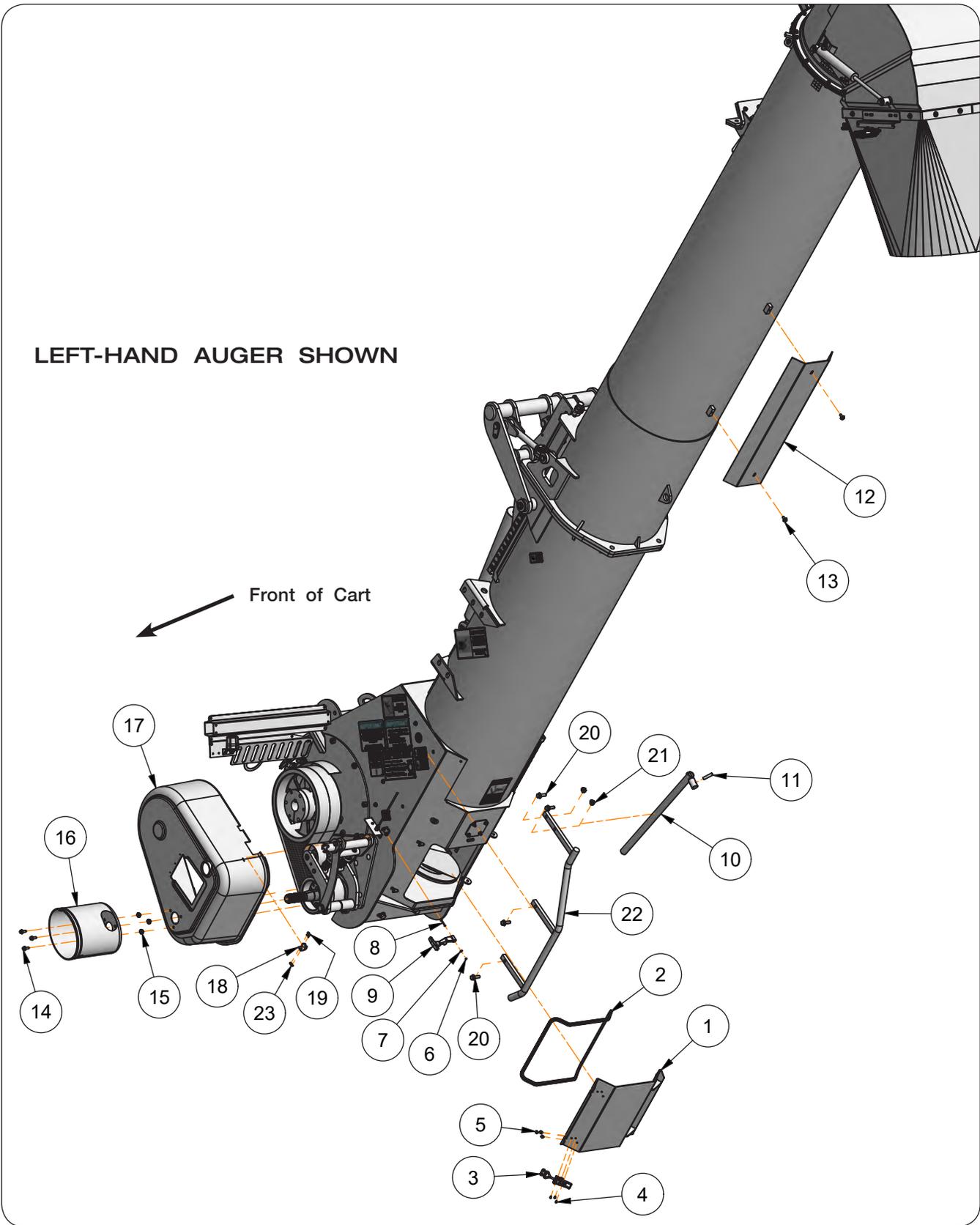
**Idler Assembly Components**

**Please visit [www.unverferth.com/parts/](http://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	
12	9005685	Machine Washer, 3/4"	4	
13	9390-101	Capscrew 1/2"-13UNC x 1 1/2"	1	Grade 5
14	9390-104	Capscrew, 1/2"-13UNC x 2 1/4"	1	Grade 5
15	9390-149	Capscrew, 3/4"-10UNC x 3"	2	Grade 5
16	9390-003	Capscrew, 1/4"-20UNC x 3/4"	2	Grade 5
17	9395-010	Hex Jam Nut, 1/2-13UNC	1	Grade 5
18	9404-033	Lock Washer, 3/4"	2	
19	9405-104	Flat Washer, 3/4"	4	
20	9405-106	Flat Washer, 3/4"	2	
21	94144	Retaining Ring, 1 1/4"	4	
22	94981	Locknut, 1/2"-13UNC	1	
23	TA500397	Bushing, 1.875"D x .074"	2	
24	9404-017	Lock Washer, 1/4"	2	
25	9405-062	Flat Washer, 1/4" SAE	4	
26	9405-066	Flat Fender Washer, 1/4"	2	

### Lower Auger Door & Cover Components

Please visit [www.unverferth.com/parts/](http://www.unverferth.com/parts/) for the most current parts listing.



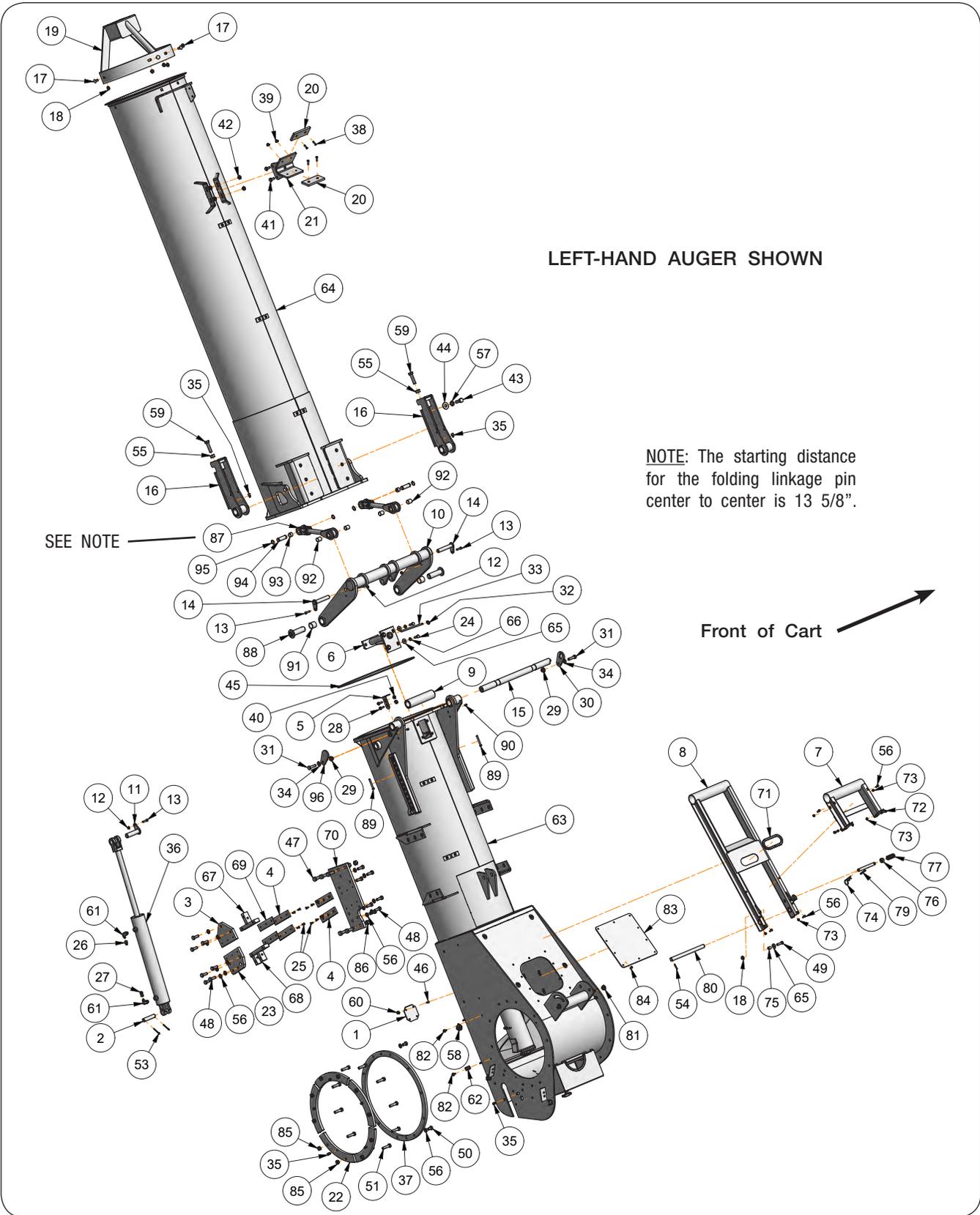
**Lower Auger Door & Cover Components**

**Please visit [www.unverferth.com/parts/](http://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=		
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/](http://www.unverferth.com/parts/) for the most current parts listing.



**Auger Tube Components**

**Please visit [www.unverferth.com/parts/](http://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	276507B	Hanger Bearing Weldment =Black=	1	
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/](http://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	9009711	Cord Stock - 1/4" Dia.	6.25	Specify in Feet
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"-11UNC 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	296402G	Lower Auger Housing Replacement Kit =Green=	1	
	296402R	Lower Auger Housing Replacement Kit =Red=		
	296402BM	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	

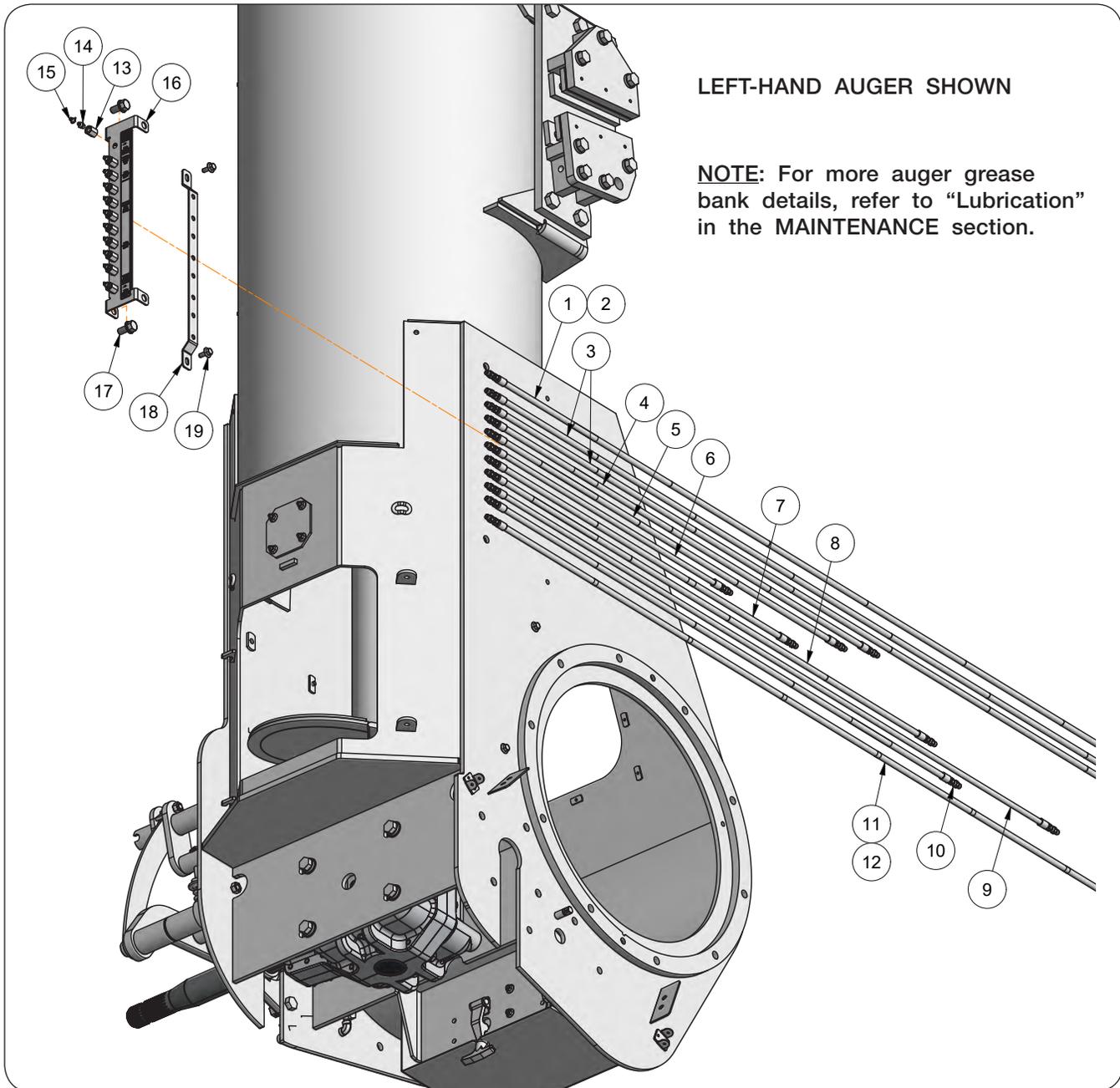
**Auger Tube Components (continued)**

**Please visit [www.unverferth.com/parts/](http://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/](http://www.unverferth.com/parts/) for the most current parts listing.



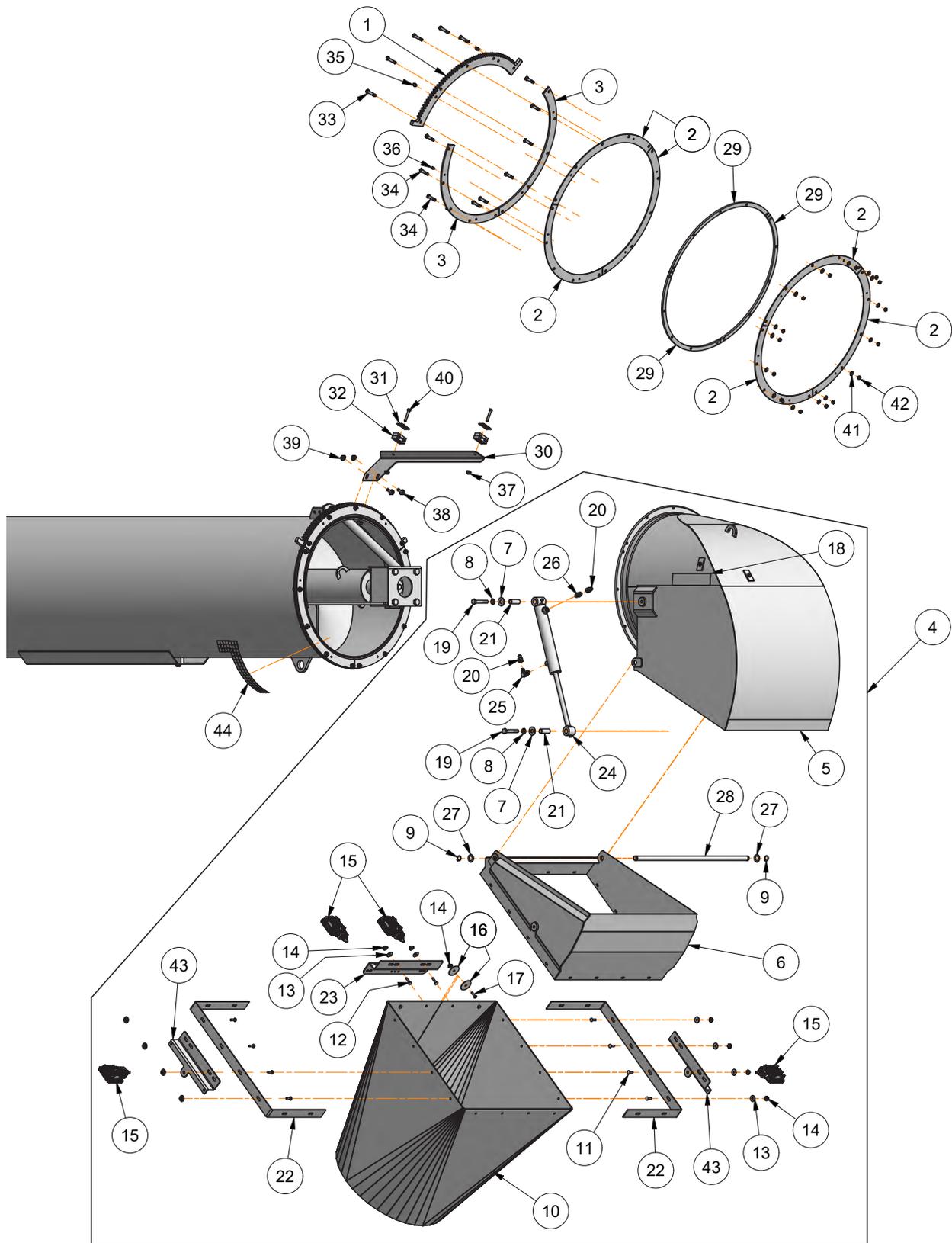
**Auger Grease Bank Components**

**Please visit [www.unverferth.com/parts/](http://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/](http://www.unverferth.com/parts/) for the most current parts listing.



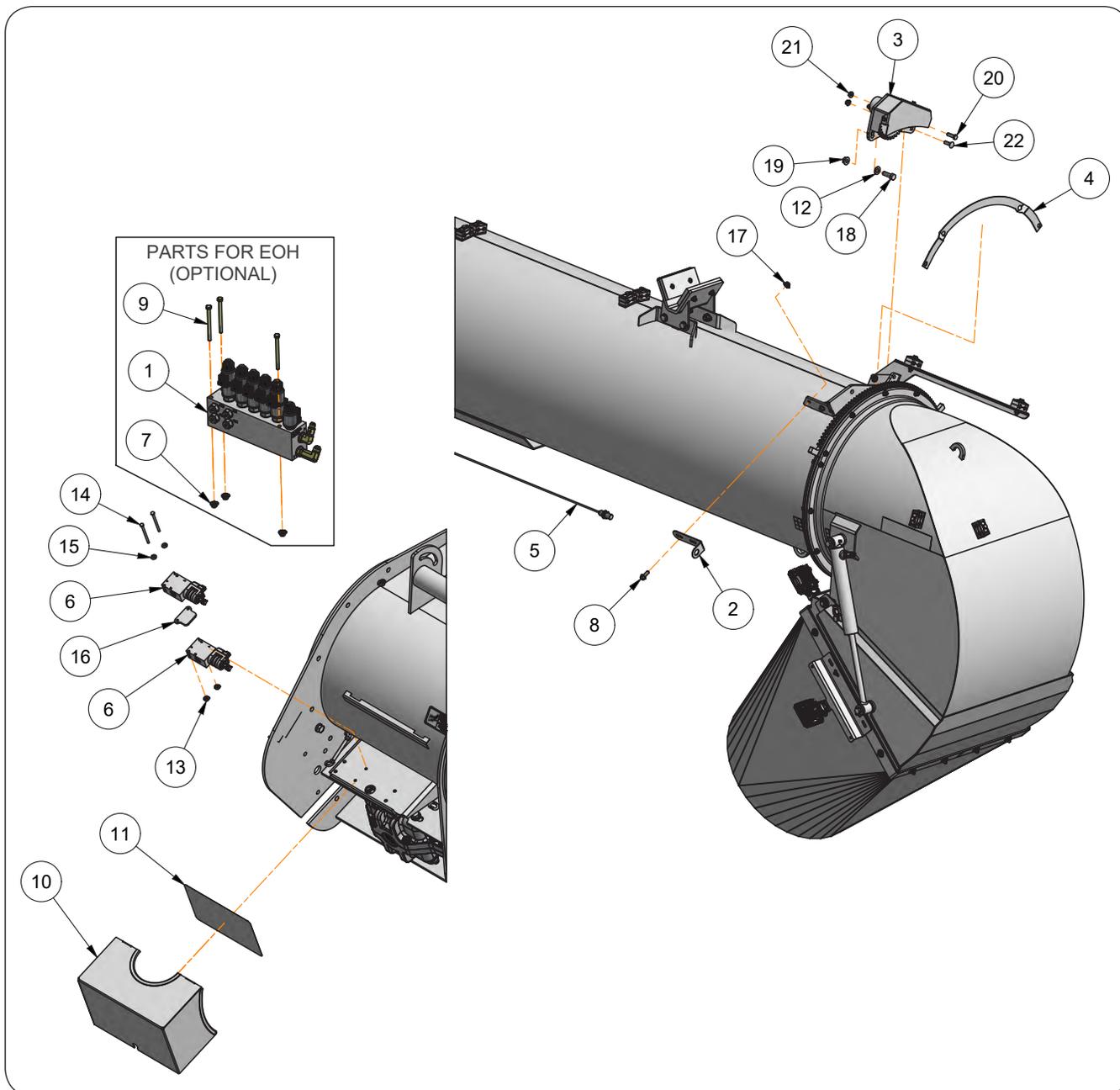
**Downspout Components**

**Please visit [www.unverferth.com/parts/](http://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	Spout Weldment =Black=	1	
6	276526B	Spout Weldment =Black=	1	
7	9405-088	Flat Washer 1/2" USS	2	
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	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 Male x 9/16-18 O-Ring ADJ Male	1	
26	9001495	Adapter 9/16-18 JIC Male 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	Sholder 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/](http://www.unverferth.com/parts/) for the most current parts listing.



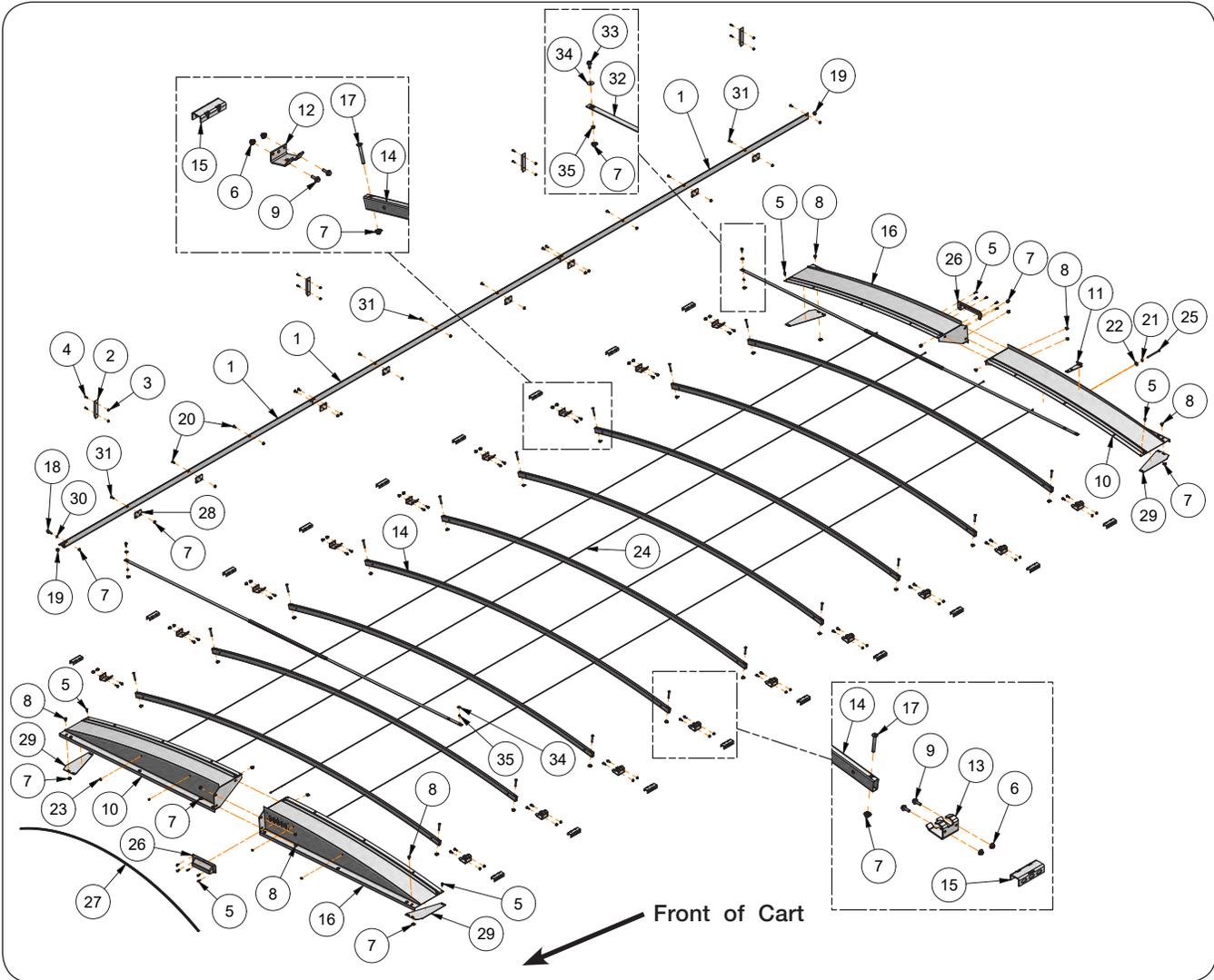
**Switch Assembly Components for Rotating Spout**

**Please visit [www.unverferth.com/parts/](http://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	Switch Bracket =Black=	1	
3	276457B	Spout Motor Assembly =Black=	1	
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	

### Weather Guard End Caps, Tarp Bows, & Brackets

Please visit [www.unverferth.com/parts/](http://www.unverferth.com/parts/) for the most current parts listing.



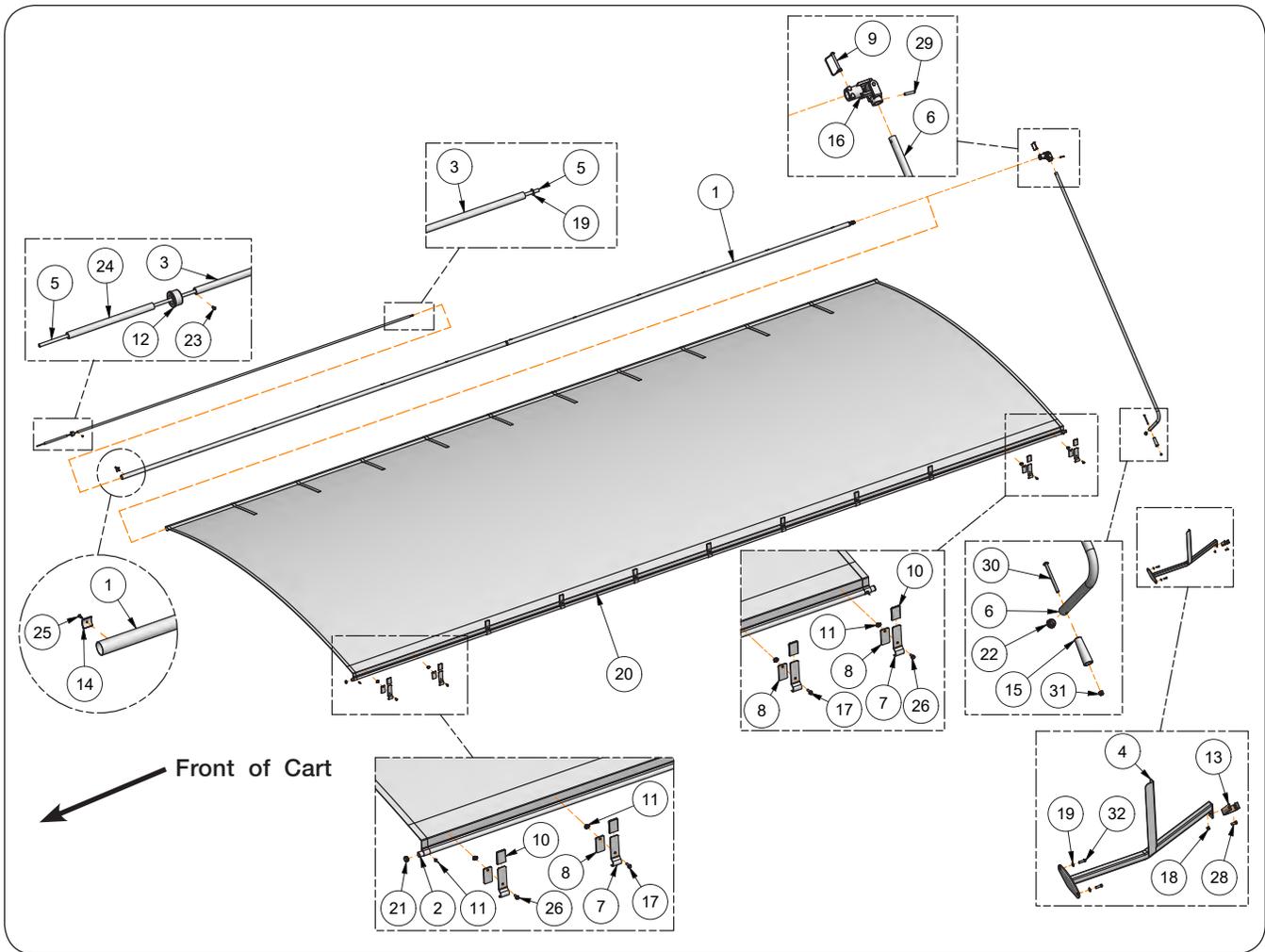
**Weather Guard End Caps, Tarp Bows, & Brackets**

**Please visit [www.unverferth.com/parts/](http://www.unverferth.com/parts/) for the most current parts listing.**

ITEM	PART NO.	DESCRIPTION	QTY	NOTES
1	276377	Plate - Latch 129 1/2"	3	
2	9005307	Poly Deflector 8"	4	
3	97189	Hex Nut/Large Flange, 1/4"-20UNC	8	
4	9004355	Screw, 1/4"-20UNC x 1" Self-Threading	8	
5	9512	Screw/Self Drilling, 1/4-14 x 1"	14	
6	91257	Flange Nut, 5/16"-18UNC	36	
7	91263	Nut/Large Flange, 3/8"-16UNC	57	
8	95585	Capscrew/Large Flange, 3/8"-16UNC x 3/4"	22	
9	97604	Flange Screw, 5/16"-18UNC x 1" G5	36	
10	276756B	Right-Hand-End Cap Weldment =Black=	2	
11	281712B	Bracket Assembly =Black=	4	
12	283425B	Tarp Bow Bracket Right-Hand =Black=	9	
13	283427B	Tarp Bow Bracket Left-Hand =Black=	9	
14	291289B	Tarp Bow =Black=	9	
15	289986B	Sideboard Doubler =Black=	18	
16	296115B	Left-Hand-End Cap Weldment =Black=	2	
17	902703-046	Pan Head Hex Socket Capscrew, 3/8"-16UNC x 3" G5	18	
18	9004548	Eye Bolt, 3/8"-16UNC x 1 3/4"	1	
19	9004968	Plug, 1" Dia.	2	
20	9005312	Torx Head Machine Screw, 3/8"-16UNC x 1" G5	11	
21	9005688	Star Washer 3/8"	4	
22	9005696	Fender Washer 3/8"	4	
23	9005727	Plug 7/16"	4	
24	9008179	Cable Assembly 373"	4	Holds up to 6
25	9008315	Capscrew, 3/8"-16UNC x 6" (Full Threaded) G5	4	
26	9009504	Endcap Vent Cover	2	
27	9000787	Trim-lok	A/R	14 Feet
28	295259B	Tarp Spacer Plate =Black=	8	
29	295284B	Sideboard Cover Plate =Black=	4	
30	9405-074	Flat Washer 3/8	1	
31	9009089	Torx Head Machine Screw 3/8-16UNC x 1 1/4 G5	3	
32	9008952	Hurricane Strap For 14 FT Wide Hopper	2	
33	96972	Screw/Self Tapping 3/8"-16UNC x 1"	2	
34	9008972	Flat Washer, 3/8" Aluminum	4	
35	9008949	Tarp Strap Spacer Bushing	4	

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

Please visit [www.unverferth.com/parts/](http://www.unverferth.com/parts/) for the most current parts listing.



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

**Please visit [www.unverferth.com/parts/](http://www.unverferth.com/parts/) for the most current parts listing.**

ITEM	PART NO.	DESCRIPTION	QTY	NOTES
1	274867	Roll Tube Weldment	1	
2	274865	Fixed Tube Weldment	1	
3	221668	Pipe - 180"	1	
4	273501B	Handle Bracket Weldment =Black=	1	
5	221722	Bungee 3/8" Dia. x 204"	1	
6	287944	Tarp Handle Weldment	1	
7	266689B	Tarp Short Stop Plate =Black=	11	
8	295183B	Tarp Stop Spacer Plate =Black=	11	
9	9005305	Lynch Pin 3/8" x 3"	1	
10	9003078	Cap - Plastic (2 x 3)	11	
11	9003378	Rivet/Pop 3/16"	2	
12	9004947	Plug 2"	1	
13	221770B	Handle Retainer Weldment =Black=	1	
14	9004949	U-Clamp	12	
15	9004969	Handle	1	
16	9004977	U-Joint w/ 1 3/8-21 Spline	1	
17	9003259	Flange Screw 3/8-16UNC x 1 1/4	9	Grade 5
18	9928	Locknut 3/8-16UNC	1	
19	9405-074	Flat Washer 3/8"	3	
20	9008175	Tarp 188" x 385"	1	
	9005581	Tarp Repair Kit	-	
21	9005088	Plug 1 1/8"	2	
22	9005089	Plug 1 1/4"	1	
23	9001396	Pan Head Screw #10-16 x 1/2"	1	
24	TA806225	Hose 1/2" EPDM	1	
25	9005197	Screw/Self Drilling #10-16 x 3/4" Pan Head	12	
26	91262	Screw/Large Flange 3/8"-16UNC x 1"	2	Grade 5
27	91263	Nut/Large Flange 3/8"-16UNC	11	Grade 5
28	9390-055	Capscrew 3/8"-16UNC x 1"	1	Grade 5
29	9392-180	Roll Pin 3/8" Dia. x 2"	1	
30	903172-450	Pan Head 3/8"-16UNC x 4 1/2" Phillips	1	
31	9398-012	Elastic Stop Nut 3/8"-16UNC	1	
32	9390-056	Capscrew 3/8"-16UNC x 1 1/4"	2	Grade 5



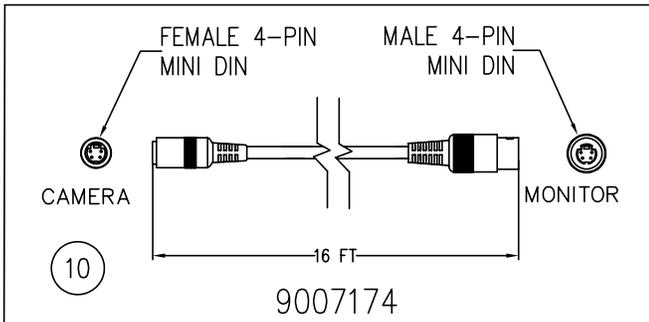
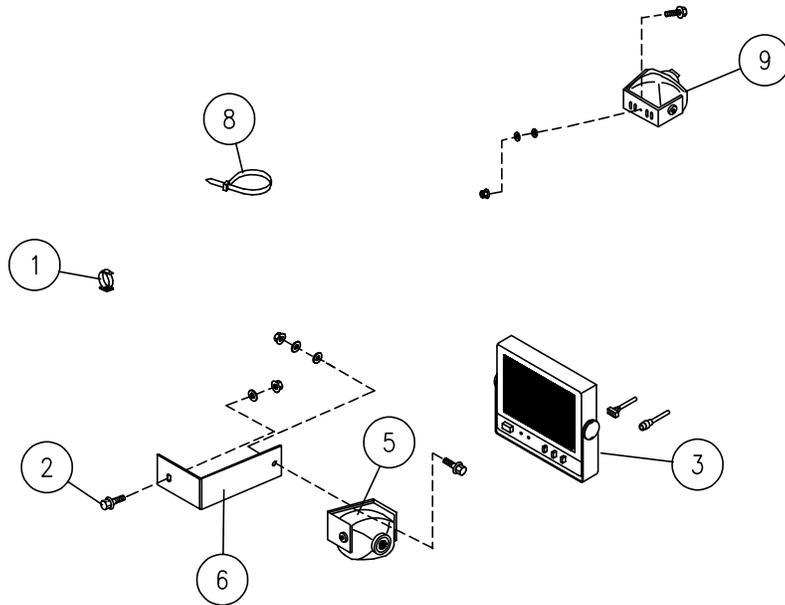
**Hydraulic Jack - Kit #27645B**

**Please visit [www.unverferth.com/parts/](http://www.unverferth.com/parts/) for the most current parts listing.**

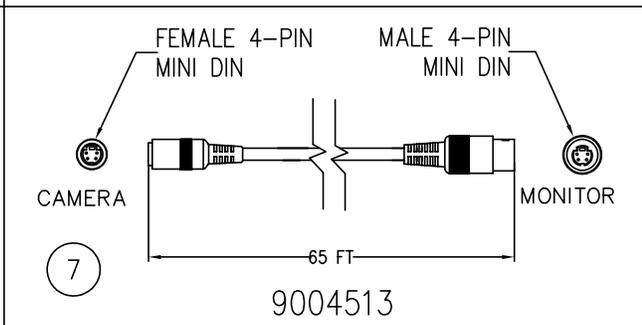
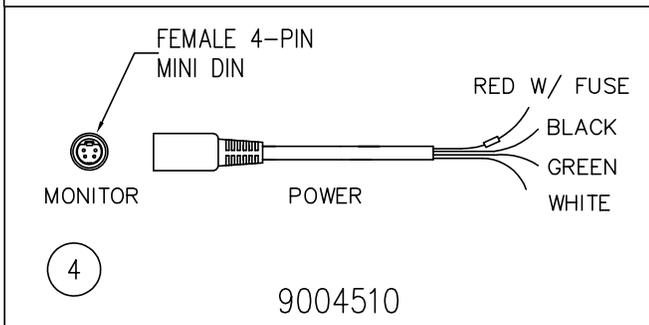
ITEM	PART NO.	DESCRIPTION	QTY	NOTES
1	271723B	Jack Foot Weldment =Black=	1	
2	272587	Pin, 1" Dia. x 3 1/8	1	
3	273808B	Jack Mount Weldment =Black=	1	
4	276380B	Jack Leg Weldment =Black=	1	
5	9005426	High Pressure Ball Valve	1	
6	9006068	Hydraulic Hose, 1/4 x 92" - 3000 PSI	2	
7	9006173	Elbow, 90°	2	
8	9008600	Hose Grips - Black (Pair) - Raise Jack	1	Solid Black - Cylinder Extended
9	9008600	Hose Grips - Black (Pair) - Lower Jack	1	Half Black/Half Gray - Cylinder Retracted
10	9007301	Shaft Collar - 1.25" Bore	2	
11	9009047	Hydraulic Cylinder, 3 1/2 x 8 - 3000 PSI	1	
12	91192	Retaining Ring, 1"	2	
13	91383	Male Tip Coupling	2	
14	92199	Center Locknut, 1-8UNC	3	
15	9390-165	Capscrew, 7/8-9UNC x 2 1/4 Grade 5	2	
16	9390-197	Capscrew, 1-8UNC x 7 Grade 5	3	
17	9404-037	Split Lock Washer, 7/8	2	
18	98508	Adapter, 3/4-16 OR Male x 3/4-16 OR Male	1	

**Video System (Optional)**

Please visit [www.unverferth.com/parts/](http://www.unverferth.com/parts/) for the most current parts listing.



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



**Video System (Optional)**

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



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