



**DRILL FILL TUBE CONVEYOR
FITS JD 1690, 1890, and 1990
CCS AIR DRILLS**

Beginning With Serial #D61770100

Part No. 2005063

Foreword

Your new TUBE CONVEYOR is designed and manufactured to give you years of dependable service. To keep it running efficiently, read the instructions in this operator's manual.

This manual covers operation, service, assembly, and parts for your TUBE CONVEYOR. Read and study manual completely before attempting to operate this implement. Take this manual to the field for handy reference when operating, adjusting, or servicing your machine.

"Right-Hand" and "Left-Hand" side of the machine are determined by standing behind the implement and facing in the direction of forward travel.

IMPORTANT

- *The information, specifications, and illustrations in the manual are on the basis of 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.*

Drill Fill Tube Conveyor — Introduction

Product Information

Please fill out and retain this portion for your records. 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.

The serial number plate is located as shown in Fig. 1.

Product _____

Serial Number _____

Date of Purchase _____

Dealer _____

City _____ State _____ Zip _____

Please supply this information when you have questions or when ordering repair or replacement parts. Your dealer needs this information to give you prompt, efficient service.

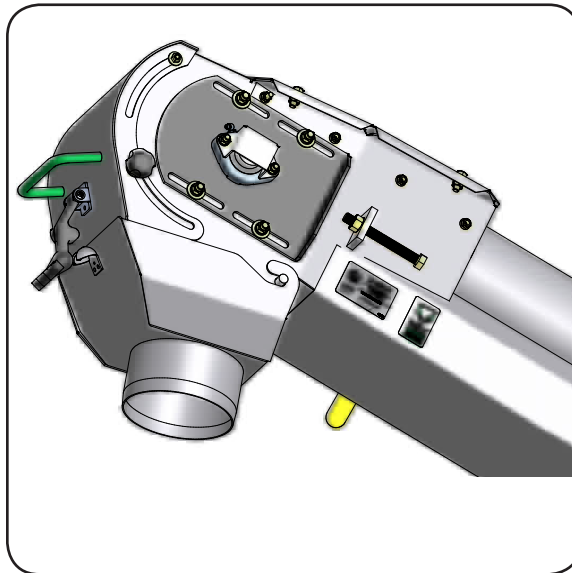


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General Hazard Information

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.

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 & remove key before servicing the implement.



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

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



Drill Fill Tube Conveyor — Safety

Before Operating or Servicing

- Avoid working under the unit; however, if it becomes absolutely unavoidable, make sure the implement is safely blocked.
- Always make certain everyone and everything is clear of the machine before beginning operation.
- Turn engine off and remove key from ignition before servicing or adjusting equipment.
- Ensure that all applicable safety decals are installed and legible.



During Operation

- Keep away from overhead power lines. Electrical shock can cause serious injury or death.
- Regulate speed to field conditions, maintain complete control at all times
- Use extreme care when operating close to ditches, fences, or on hillsides.
- Do not dismount from a moving tractor.
- Never lubricate equipment when in operation.
- Seed being transported may contain seed treatment. Read and follow all requirements for personal protective equipment and first aid as outlined on seed tags.
- Be sure that all safety shields are in place, and that the clean-out door is closed and securely latched.

Before Transporting

- Install transport locks before transporting.
- Check for proper function of all available transport lights. Make sure that all reflectors are clean and in place on machine.

During Transport

- Comply with state and local laws governing highway safety when moving machinery.
- Maximum speed of implement should never exceed 20 mph. Do not exceed 10 mph during off-highway travel.
- Use transport lights as required by local laws to adequately warn operators of other vehicles.
- Use good judgment when transporting equipment on highways. Regulate speed to road conditions and maintain complete control.

Pressurized Oil

- Relieve pressure before disconnecting hydraulic lines from tractor, loosening any hydraulic fittings or servicing hydraulic system. See hydraulic power unit manual for procedure to relieve pressure.

- Use a piece of cardboard or wood to detect leaks of hydraulic fluid under pressure. Correct hydraulic leaks immediately.

- High-pressure fluids can penetrate the skin and cause serious injury or death. Seek medical treatment immediately if injured by high-pressure fluids.

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

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

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

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

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

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.



**SECTION II
Set Up**

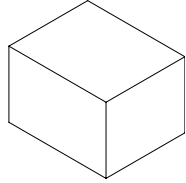
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Drill Fill Tube Conveyor — Set Up

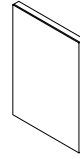
Shipping Bundles

You should receive the following bundles:

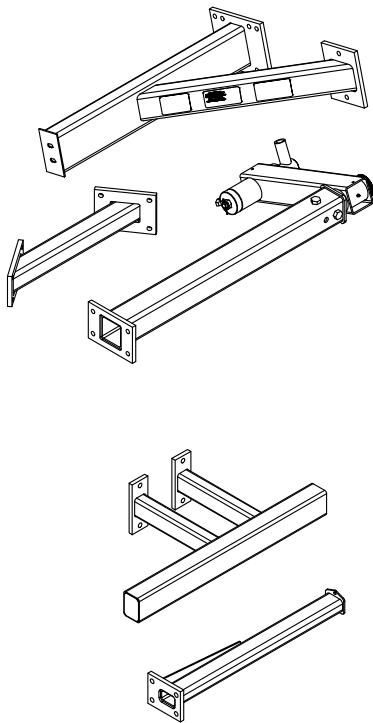
PARTS BOX #25230



**HOPPER BUNDLE
PART #27717B**



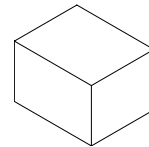
**STAND WELDMENT
BUNDLE #25559B**



**CONVEYOR ASSEMBLY
PART #25190B**



**FLOW CONTROL VALVE KIT
PART #23669**



Basic Set Up

WARNING

- READ AND UNDERSTAND SAFETY RULES BEFORE OPERATING OR SERVICING THIS MACHINE. REVIEW THE SAFETY SECTION IN THIS MANUAL IF NECESSARY.
- TIPPING OR MOVEMENT OF THE MACHINE CAN CAUSE SERIOUS INJURY OR DEATH. BE SURE THE MACHINE IS SECURELY BLOCKED.
- ENTANGLEMENT WITH MOVING PARTS CAN CAUSE SERIOUS INJURY OR DEATH. USE EXTREME CARE WHEN INSPECTING AND ADJUSTING BELT TRACKING. AVOID PERSONAL ATTIRE SUCH AS LOOSE FITTING CLOTHING, SHOESTRINGS, DRAWSTRINGS, PANTS CUFFS, LONG HAIR, ETC., THAT MAY BECOME ENTANGLED IN MOVING PARTS.
- 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 500 LBS. SPECIFIC LOAD RATINGS FOR INDIVIDUAL LOADS WILL BE GIVEN AT THE APPROPRIATE TIME IN THE INSTRUCTIONS.
- EYE PROTECTION AND OTHER APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT MUST BE WORN WHILE SERVICING THE IMPLEMENT.

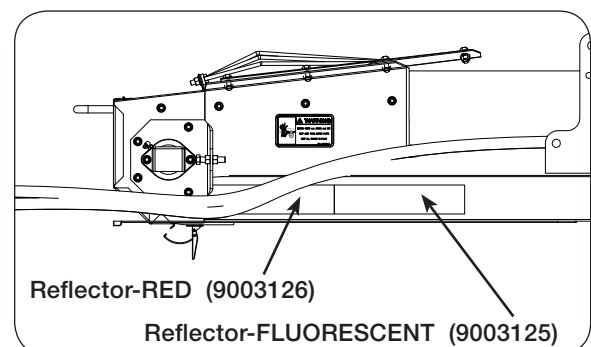
IMPORTANT

- *The procedures for assembling this unit are intended for two or more people.*

For your safety, and the safety of others, use proper tools and equipment and always use safe working procedures. Refer to these instructions before starting any work on the machine.

For ease of assembly, install all hardware loosely until assembly is complete and then tighten according to Torque Chart in the Maintenance Section of this manual.

Install fluorescent (9003125) and red reflectors (9003126) to the extreme left-hand side of conveyor near hopper. Be sure that reflectors are clearly visible when looking at rear of unit.



Place planter on a solid, level surface with sufficient clear space to unfold the wings of the planter. Unfold wings, lower unit to the ground, block from moving, set the tractor brakes, shutoff the engine, and remove the ignition key

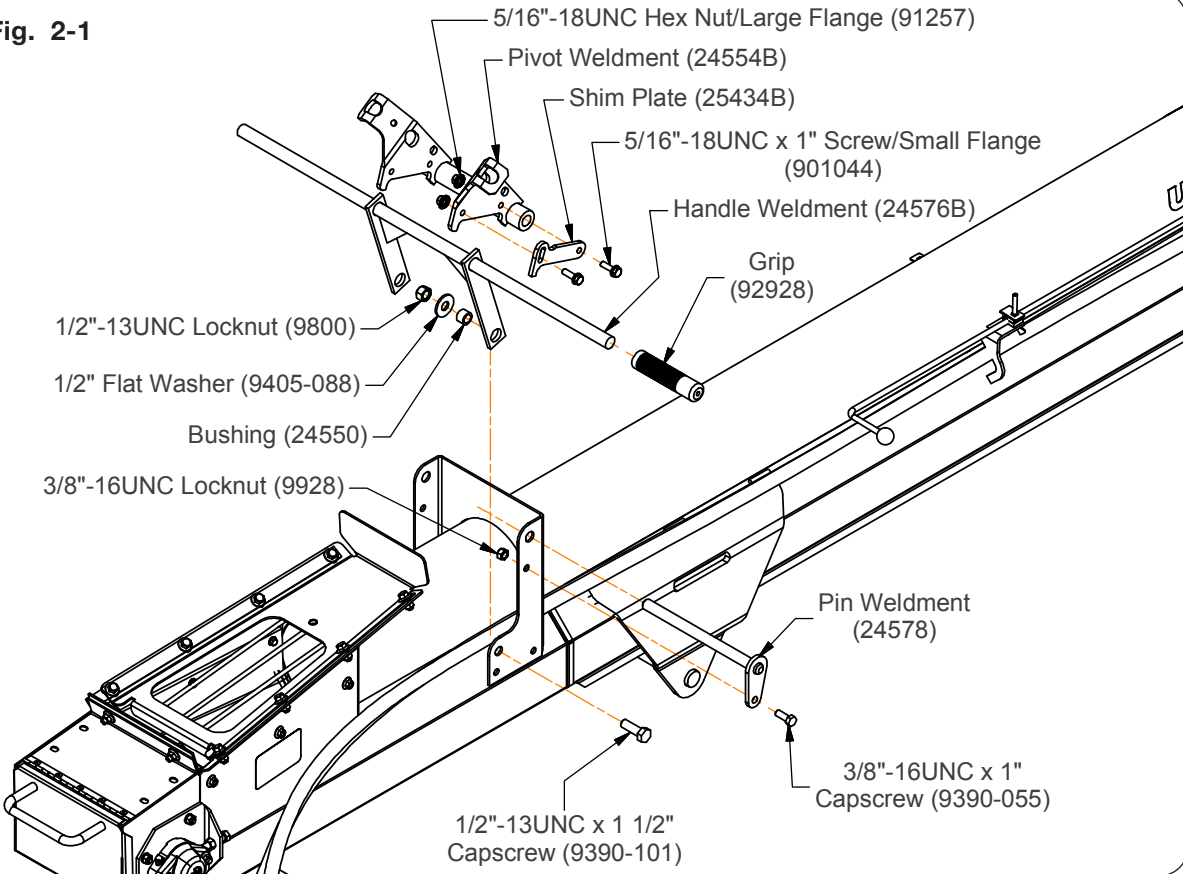


Drill Fill Tube Conveyor — Set Up

Hopper

1. Attach the pivot weldment (24554B) to the tube conveyor using pin weldment (24578), 3/8"-16UNC x 1" capscrew (9390-055), and 3/8"-16UNC locknut (9928) (Fig. 2-1).

Fig. 2-1



2. Attach the shim plate (25434B) to the pivot weldment (24554B) using 5/16"-18UNC x 1" screws/small flange (901044) and 5/16"-18UNC hex nuts/large flange (91257) (Fig. 2-1).
3. Push the grips (92928) onto the ends of the handle weldment (24576B). Attach the handle weldment (24576B) to the tube conveyor using 1/2"-13UNC x 1 1/2" capscrews (9390-101), bushings (24550), 1/2" flat washers (9405-088) and 1/2"-13UNC locknuts (9800) (Fig. 2-1).
4. Insert the formed tube (24549B) into the vinyl hopper (901058) as shown in Fig. 2-2. Attach the tube ends to the pivot weldment (24554B) using 5/16"-18UNC x 1 1/2" capscrews (9390-032) and 5/16"-18UNC locknuts (9807).

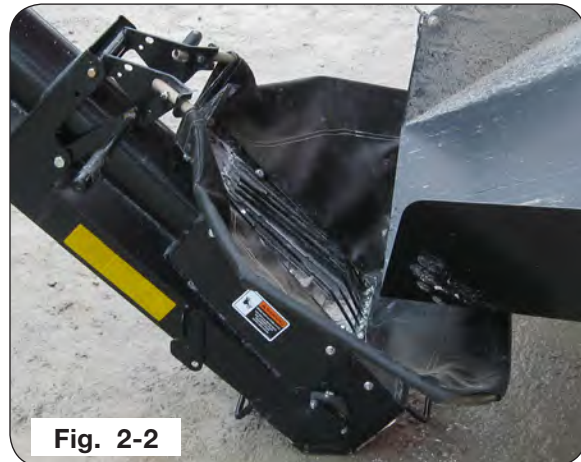
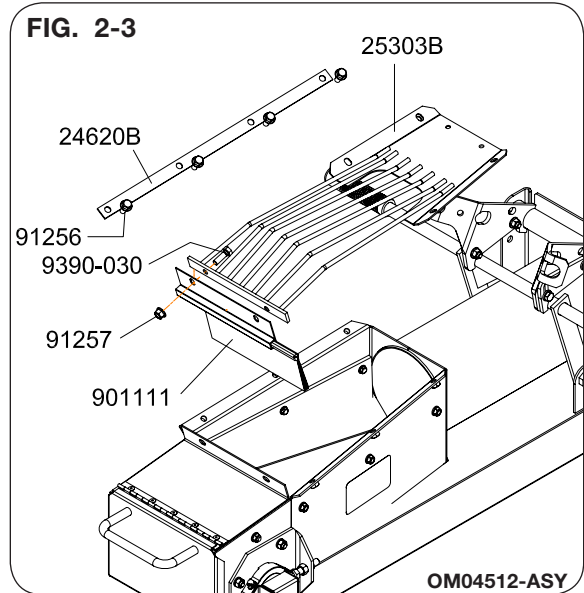


Fig. 2-2

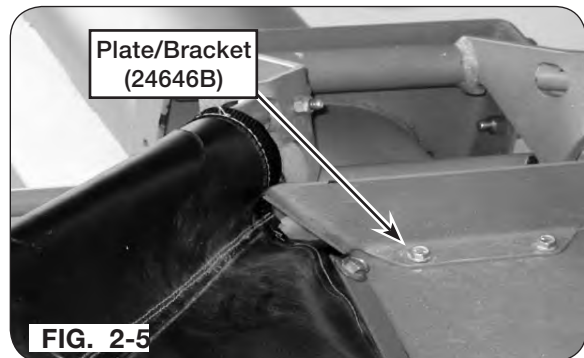
Drill Fill Tube Conveyor — Set Up

Hopper (Continued)

5. Remove the 5/16"-18UNC hex nuts/large flange (91257), 5/16"-18UNC x 1" capscrews (9390-030), 5/16"-18UNC x 3/4" screws/large flange (91256), straps (24620B), brush (901111), and guard (25303B) from the tube conveyor (Fig. 2-3).



6. Attach the vinyl hopper to the tube conveyor using the poly strips (24986), plate (24646B), 1/4"-20UNC x 3/4" flange screws (97420), and 1/4"-20UNC hex nuts/large flange (97189) Fig. 2-4 & Fig. 2-5.



Drill Fill Tube Conveyor — Set Up

Transport Support Stand

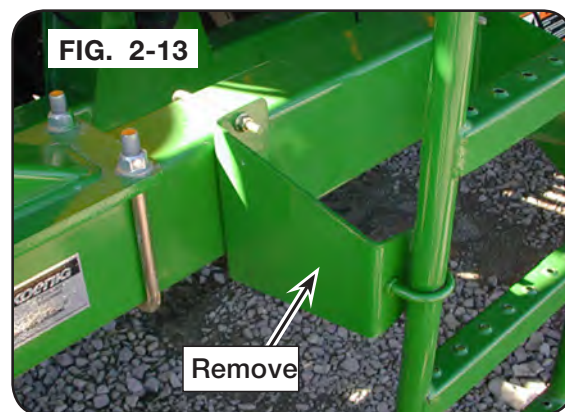
JD 1690 CCS Only

CAUTION

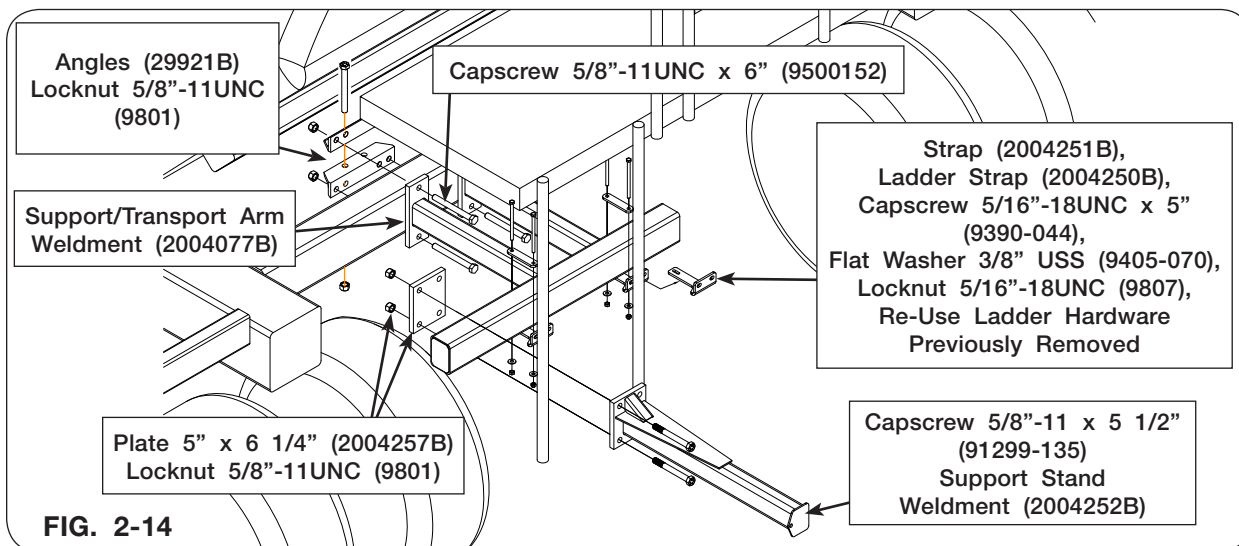
- DO NOT USE LADDER TO ACCESS UPPER PLATFORM WHILE LADDER SUPPORT BRACKET IS NOT INSTALLED. FAILURE TO DO SO COULD CAUSE LADDER TO FAIL CAUSING DAMAGE OR SERIOUS PERSONAL INJURY.

JD 1690 CCS Air Drills require removal of the ladder bracket prior to installation of the support stand weldment.

1. FOR 1690 AIR DRILLS ONLY-Remove the original ladder support bracket as provided from John Deere. Retain the u-bolt, washers, and nuts for reinstallation (FIG. 2-13).



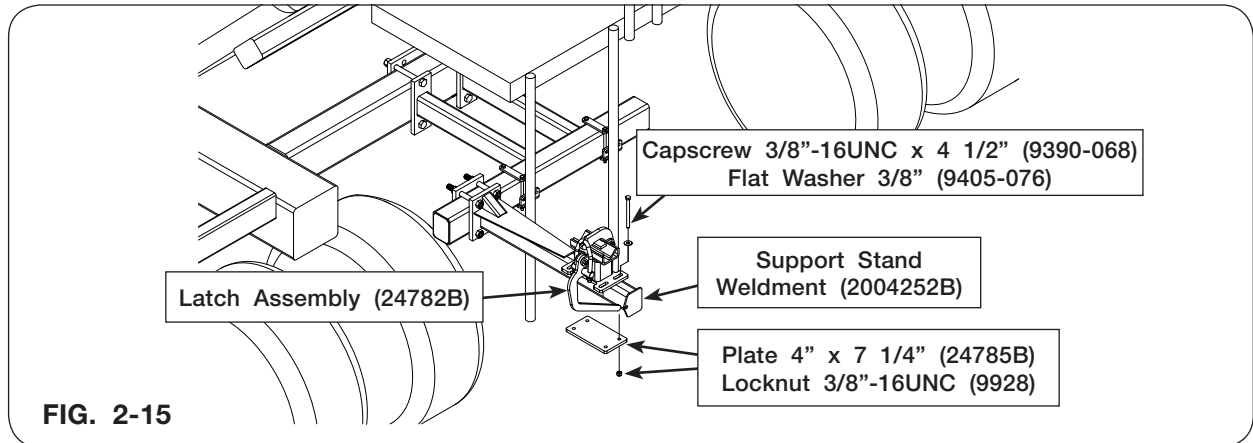
2. Install support/transport arm weldment (2004077B) to the left-rear side of air drill (FIG. 2-14). Secure with angles (29921B), capscrews (9500152) and locknuts (9801). (FIG. 2-14)
3. Position and attach the ladder support with straps (2004251B), ladder straps (2004250B), capscrews (9390-044), 3/8" USS flat washers (9405-070), locknuts (9807), and previously saved hardware. (FIG. 2-14)
4. Attach the support stand weldment (2004252B) to the support/transport arm weldment (2004077B) with plate (2004257B), capscrews (91299-135) and locknuts (9801). (FIG. 2-14)



Drill Fill Tube Conveyor — Set Up

Transport Support Stand (Continued)

5. Position latch assembly (24782B) on top of the support stand weldment (2004252B) being sure handle is to the left-hand side as shown in FIG. 2-15. Loosely secure latch assembly using 3/8" capscrews (9390-068), flat washers (9405-076), plate (24785B), and nuts (9928) provided. Latch will be adjusted once conveyor is mounted back on planter. Do not tighten hardware.

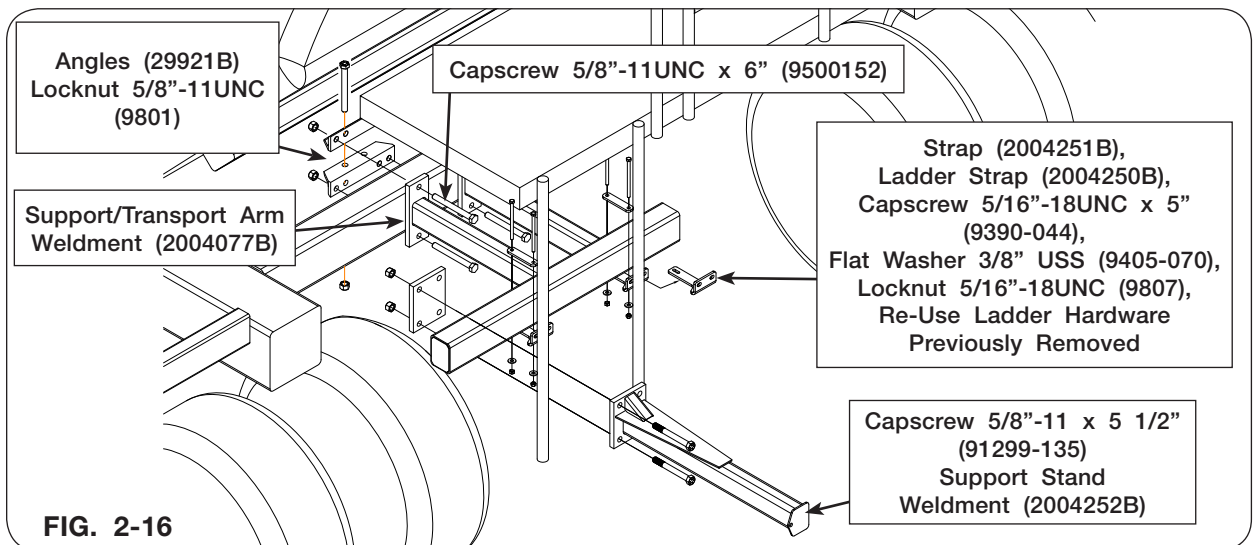


6. Tighten hardware according to "Torque Chart".

JD 1890 & 1990 CCS ONLY

JD 1890 & 1990 CCS Air drills require the support stand be installed as shown in FIG. 2-16.

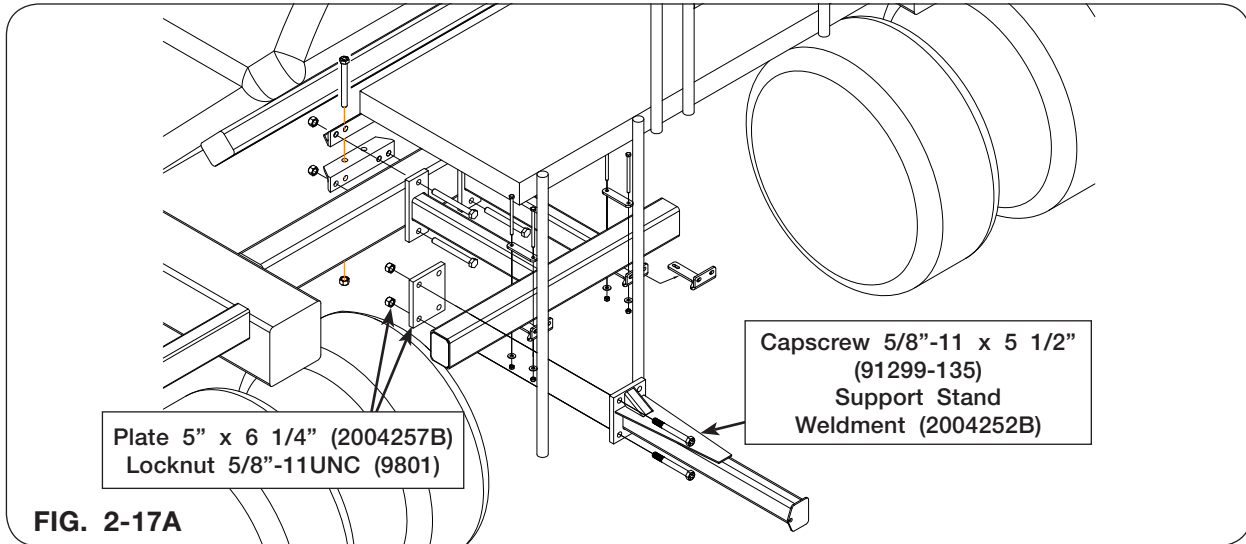
1. FOR 1890/1990 AIR DRILLS ONLY. Position support stand weldment (2004252B) as far left of ladder as possible so the conveyor is in the center of the tank when filling, shown in Fig. 2-16. Be sure that the ladder tab, previously discussed for the 1690 air drill, is positioned in a manner facing away from ladder. The ladder tab will not be necessary for the installation of the transport stand.



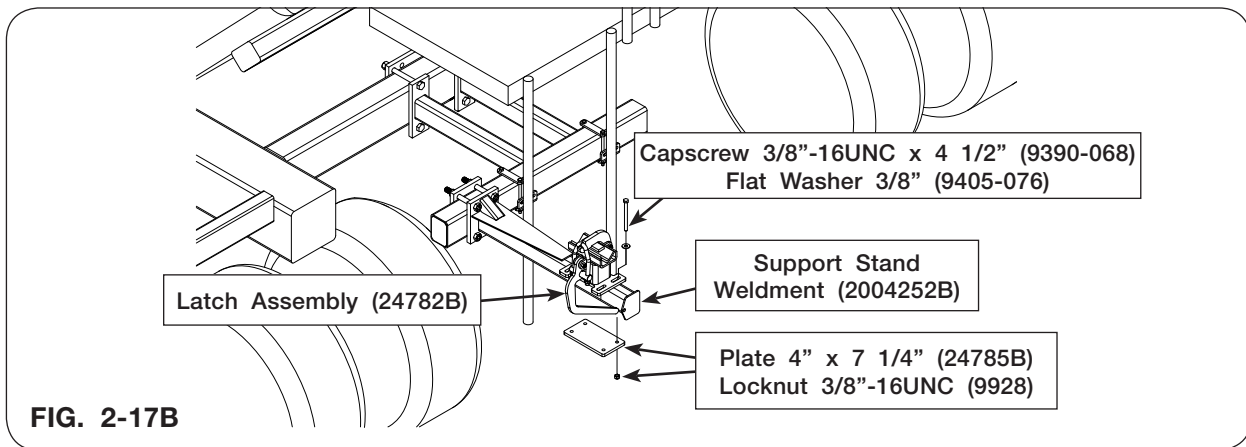
Drill Fill Tube Conveyor — Set Up

Transport Support Stand (Continued)

- Secure support stand (2004252B) to the frame with plate (2004257B), 5/8"-11UNC x 5 1/2" capscrews (91299-135) and locknuts (9801) as shown in FIG. 2-17A.



- Position latch assembly (24782B) on top of the support stand weldment (2004252B) being sure handle is to the left-hand side as shown in Fig. 2-17B. Loosely secure latch assembly using 3/8" capscrews (9390-068), flat washers (9405-076), plate (24785B), and nuts (9928) provided. Latch will be adjusted once conveyor is mounted back on planter. Do not tighten hardware.

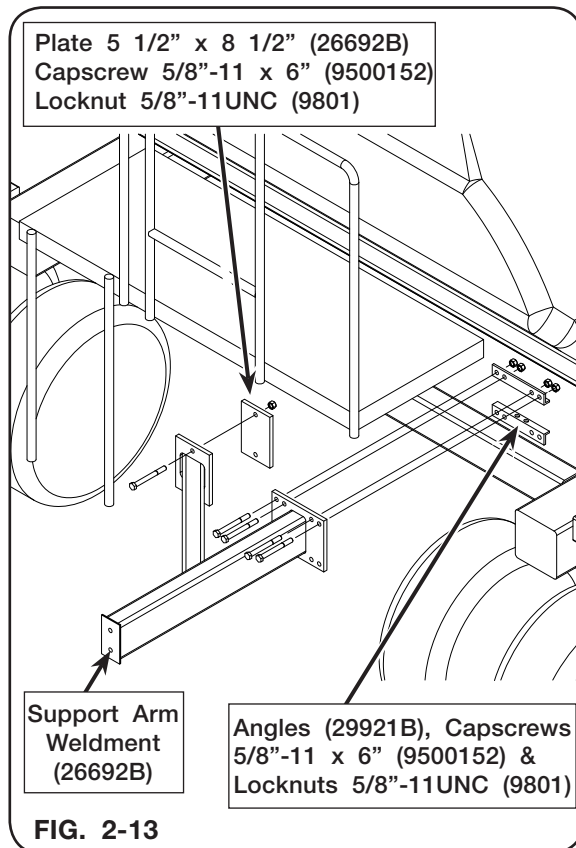


- Tighten hardware according to "Torque Chart" in Service section of this manual.

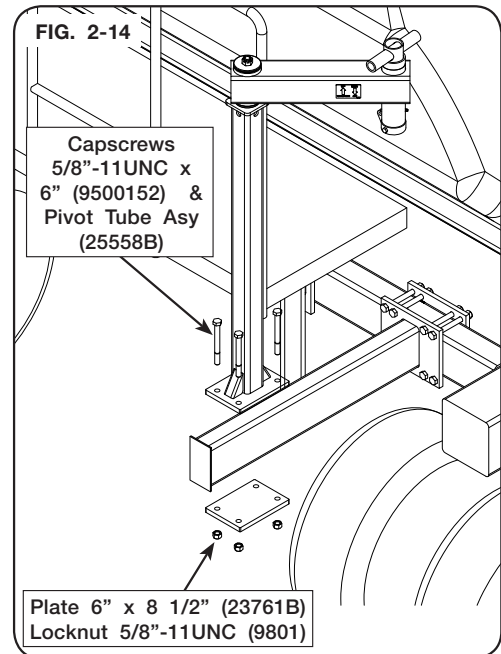
Drill Fill Tube Conveyor — Set Up

Pivot Support Stand

1. Install the pivot support arm weldment (26692B) to the rear tube (6" x 4") of air drill as shown in Fig. 2-13. Secure using angles (29921B), 5 1/2" x 8 1/2" plate (26692B), capscrews (9500152), and locknuts (9801) (Fig. 2-13).

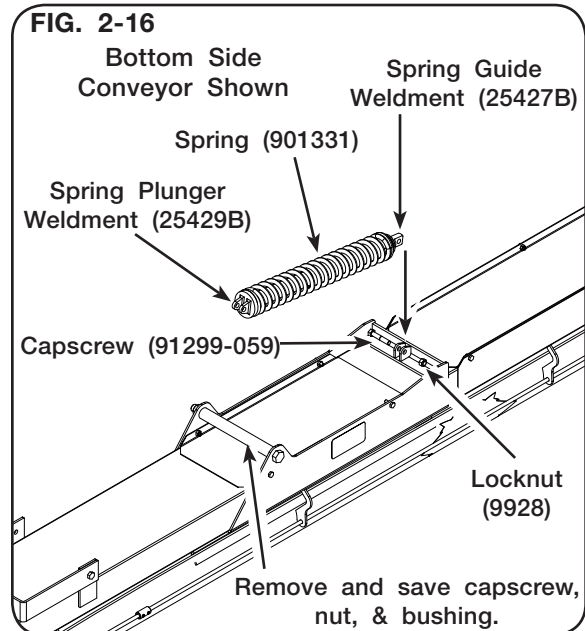


2. Install the vertical/pivot tube assembly (25558B) to the top of the support arm weldment (26692B) and secure using plate (23761B), capscrews (9500152), and locknuts (9801). Position vertical/pivot tube assembly approximately 10" from end of the tube on the 1690 air drill, and to the end on 1890 and 1990 air drills (Fig. 2-14). Secure all hardware.
3. Install the horizontal brace 29909B with 5/8"-11 UNC x 8" capscrew 9390-140 and 5/8"-11 UNC locknut 9801. Make sure the brace is inside of the "Y" brace on the pivot support arm as pointed out in Fig. 2-15.
4. Tighten hardware according to "Torque Chart" in Service section of this manual.

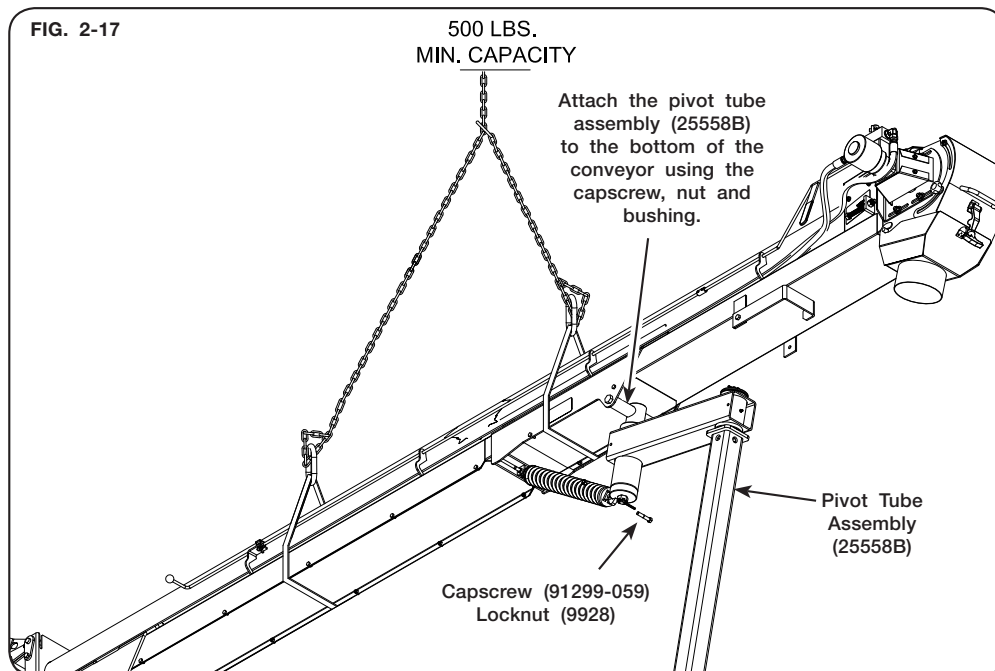


Attaching The Conveyor

1. Remove the capscrew, nut, and bushing from the bottom of the conveyor to be used to attach the pivot tube assembly to the conveyor (Fig. 2-16).
2. Using a hoist and lifting devices rated at 500 lbs. minimum, lift the conveyor assembly into the mounting position as shown in Fig. 2-17 and secure with the hardware previously removed.
3. Attach the base end of the spring guide weldment (25427B) to the bottom side of the conveyor using capscrew 3/8"-16UNC x 2" (91299-059) and locknut 3/8"-16UNC (9928) as shown in Fig. 2-16.
4. Attach the base end of the spring plunger weldment (25429B) to the collar on the pivot tube assembly using (grade 8) 3/8"-16UNC x 2" capscrew (91299-059) and 3/8"-16UNC locknut (9928) as shown in Fig. 2-17.



5. Grease the rod end of the spring plunger weldment (25429B) (Fig. 2-16).
6. Raise the hopper end of the conveyor up so that spring plunger can be inserted into spring guide. Position the compression spring (901303) over the spring guide weldment (25427B) and insert the greased spring plunger weldment (25429B) into the opposite end of the spring (Fig. 2-16). Slowly lower hopper end down being sure that the spring guide and plunger are sliding freely and not binding.
7. Tighten all hardware according to "Torque Chart".



Hydraulics

WARNING

- **HYDRAULIC SYSTEM MUST BE PURGED OF AIR BEFORE OPERATING TO PREVENT SERIOUS INJURY OR DEATH.**
- **HIGH-PRESSURE FLUIDS CAN PENETRATE THE SKIN AND CAUSE SERIOUS INJURY OR DEATH. SEEK MEDICAL TREATMENT IMMEDIATELY IF INJURED BY HIGH-PRESSURE FLUIDS. USE CARDBOARD OR WOOD TO DETECT LEAKS IN THE HYDRAULIC SYSTEM.**
- **RELIEVE HYDRAULIC PRESSURE BEFORE SERVICING HYDRAULIC SYSTEM. SEE TRACTOR AND PLANTER OPERATOR'S MANUALS FOR PROPER PROCEDURE.**

Route hoses as shown in Fig. 2-19 & Fig. 2-20. Secure with the tie straps provided. Be sure that the hoses do not rub any sharp surfaces or are kinked in any way.

Hoses are provided to the remote outlets on the drill. If outlets are not present, contact your John Deere dealer for Deere's optional package, or provide additional hose lengths to reach the tractor.

Unverferth recommends that tying into drill hydraulics should only be done with John Deere's remote outlet accessory kit.



FIG. 2-19



FIG. 2-20

Final Assembly Adjustment

General Adjustment

IMPORTANT

- *If any reflective or safety decals are covered or not visible by installing this unit, the decals must be moved or replaced so that they are clearly visible.*

Latch Assembly Adjustment

1. Raise conveyor and position it into the transport/latch mechanism. Be sure that tube rests securely in “V” (Fig. 2-21 & Fig. 2-22). Tighten 3/8” bolts securing latch to tube.
2. Tighten the draw latch by flipping over the latch hook and attaching the U-bolt. Draw down with the handle (Fig. 2-21 & Fig. 2-22). Be sure that the handle has pressure on the U-bolt at all times. Adjust draw on U-bolt by tightening or loosening the nuts on the U-bolt. The U-bolt should be tight enough to prevent the conveyor from bouncing in the field.

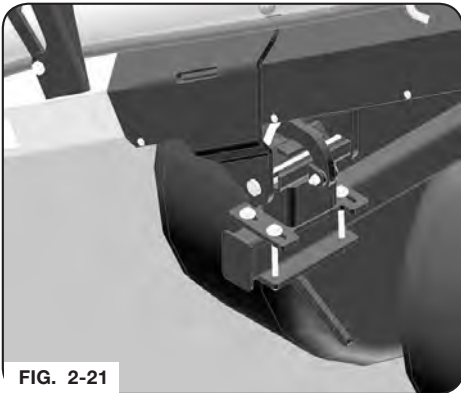


FIG. 2-21

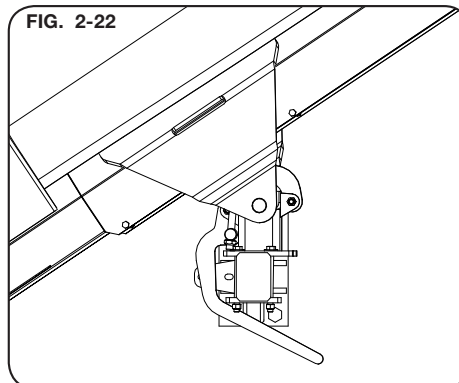


FIG. 2-22

Pivot Tube Assembly Adjustments

Once unit is completely assembled, it may be necessary to adjust the pivot arm so that optimum performance when moving from transport to fill position can be obtained. To reach the proper amount of friction, it may be necessary to remove the wavy spring washers from the vertical post side of the pivot arm first. If additional friction must be removed, it may be necessary to remove the washers found at the bottom of the spring pivot side of the pivot arm as follows:

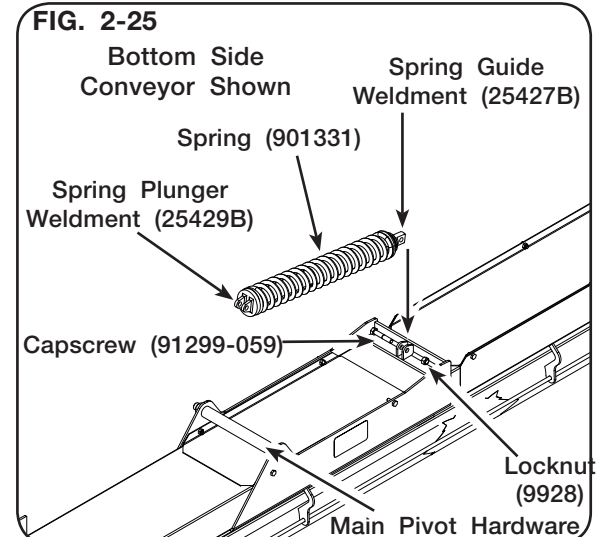
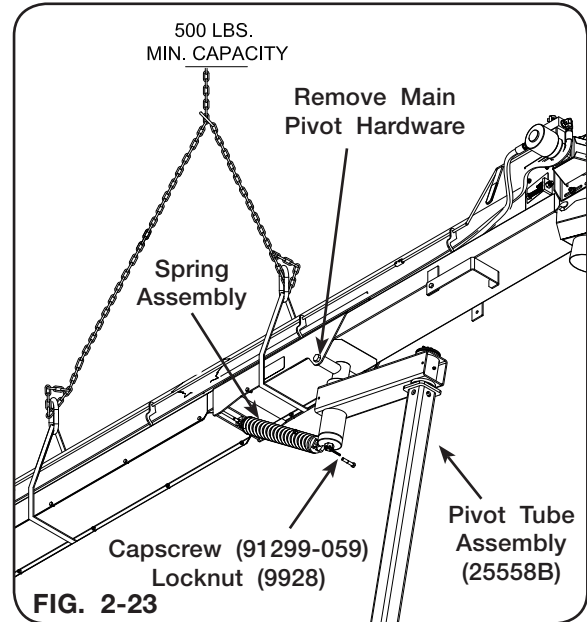
Drill Fill Tube Conveyor — Set Up

Final Assembly Adjustment (Continued)

1. Raise conveyor with 500 lb. min. hoist or safe lifting device at the hopper end. Raise conveyor until no pressure is being exerted on the bolts securing the spring assembly. Remove spring assembly and hardware (Fig. 2-23).

WARNING

- WHEN DISASSEMBLING SPRING, BE SURE THAT ALL PRESSURE IS REMOVED FROM SPRING BEFORE REMOVING ANY HARDWARE. FAILURE TO DO SO COULD RESULT IN DAMAGE TO UNIT OR CAUSE BODILY HARM.
2. Remove conveyor from unit by removing the main pivot bolt. Once the pivot bolt is removed, lift conveyor straight up and move away from drill (Fig. 2-23).
 3. Remove main pivot arm from vertical post. Remove cotter pin, slotted hex nut, and retainer cap securing arm (Fig. 2-24).
 4. Add or remove a wavy spring to the pivot arm or draw down the castle nut to increase or decrease friction in the joints (Fig. 2-24). Adjust as required.
 5. Secure the main pivot arm onto the vertical post with the retainer cap, slotted hex nut and cotter pin previously removed.
 7. Raise the conveyor with 500 lb. min. hoist or safe lifting device and secure with main pivot hardware previously removed (Fig. 2-25).
 8. Attach the spring assembly with the hardware previously removed (Fig. 2-25).

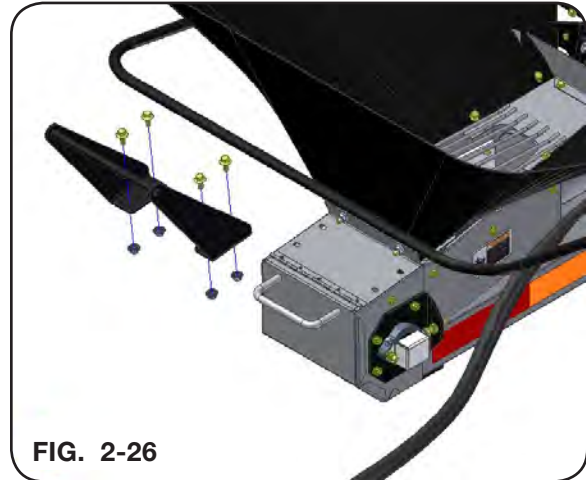


Drill Fill Tube Conveyor — Set Up

Final Assembly Adjustment (Continued)

Handle Weldment

1. Using the handle weldment (26851B) as a template, mark location of holes and drill four 11/32" holes (Fig. 2-26).
2. Attach the handle weldment (26851B) to the conveyor as shown in Fig. 3-26 using four 5/16"-18UNC x 3/4" screws/large flange (91256) and 5/16"-18UNC hex nuts (91257).

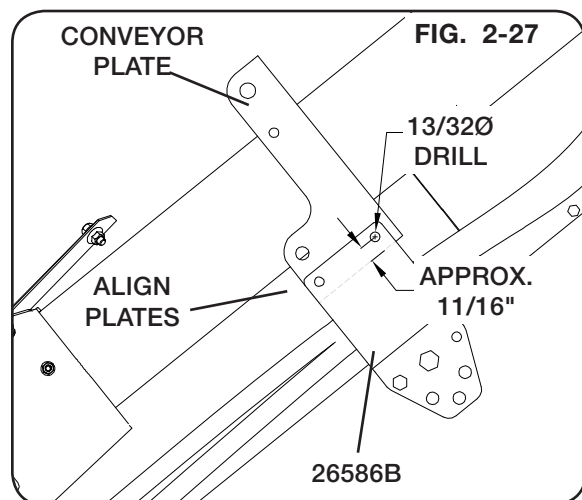


Hopper Lift Stand Bundle (Optional)

WARNING

- EYE PROTECTION AND OTHER APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT MUST BE WORN WHILE SERVICING IMPLEMENT.
- KEEP HANDS CLEAR OF PINCH POINT AREAS.

1. Raise hopper end of tube conveyor using a hoist or lifting device rated for 200 lbs. min.
2. Place tube conveyor on properly rated jack stands.
3. Using lift stand assembly, align on top of conveyor plate so center of holes in plate (26586B) are located approximately 11/16" from bottom of conveyor plate and sides of plates are flush with same side as current hole in the conveyor plate. See figure 2-27.
4. Once located, center punch both hole locations. Drill two 13/32 diameter holes into conveyor plate, see figure 2-27. Repeat steps 3 and 4 to other side of conveyor.



Drill Fill Tube Conveyor — Set Up

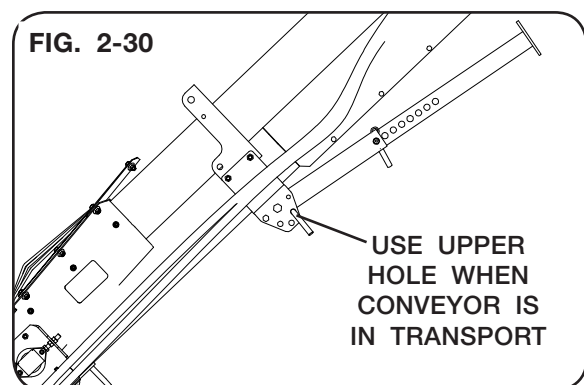
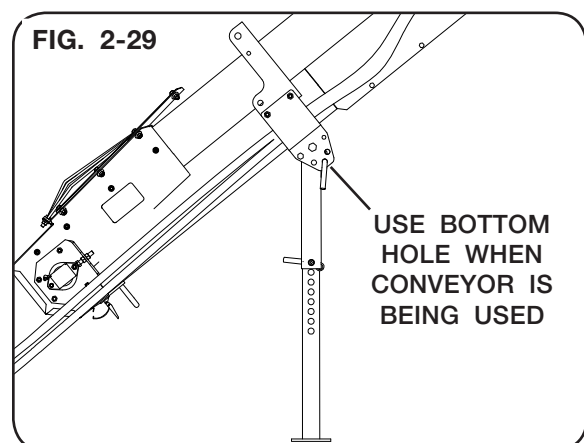
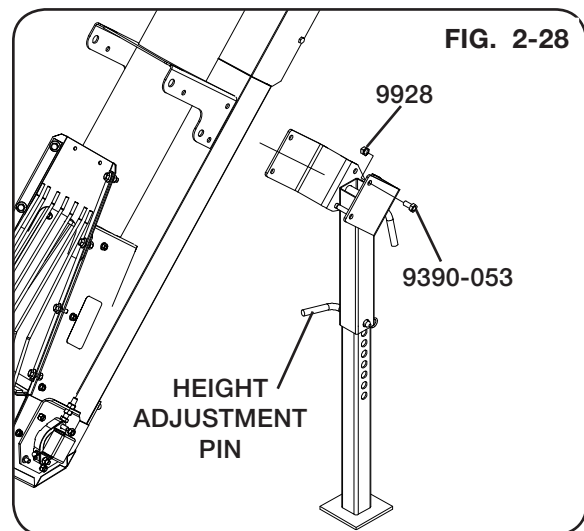
Hopper Lift Stand Bundle (Optional) (Continued)

5. Attach hopper lift stand using four capscrews (9390-053) and four locknuts (9928). See figure 2-28.

6. Bent pin (900803) location:

Place bent pin (900803) into bottom hole of plate (26586B) when conveyor is in use. See figure 3-29.

Place bent pin (900803) into upper hole of plate (26586B) when conveyor is in transport position. See figure 2-30.

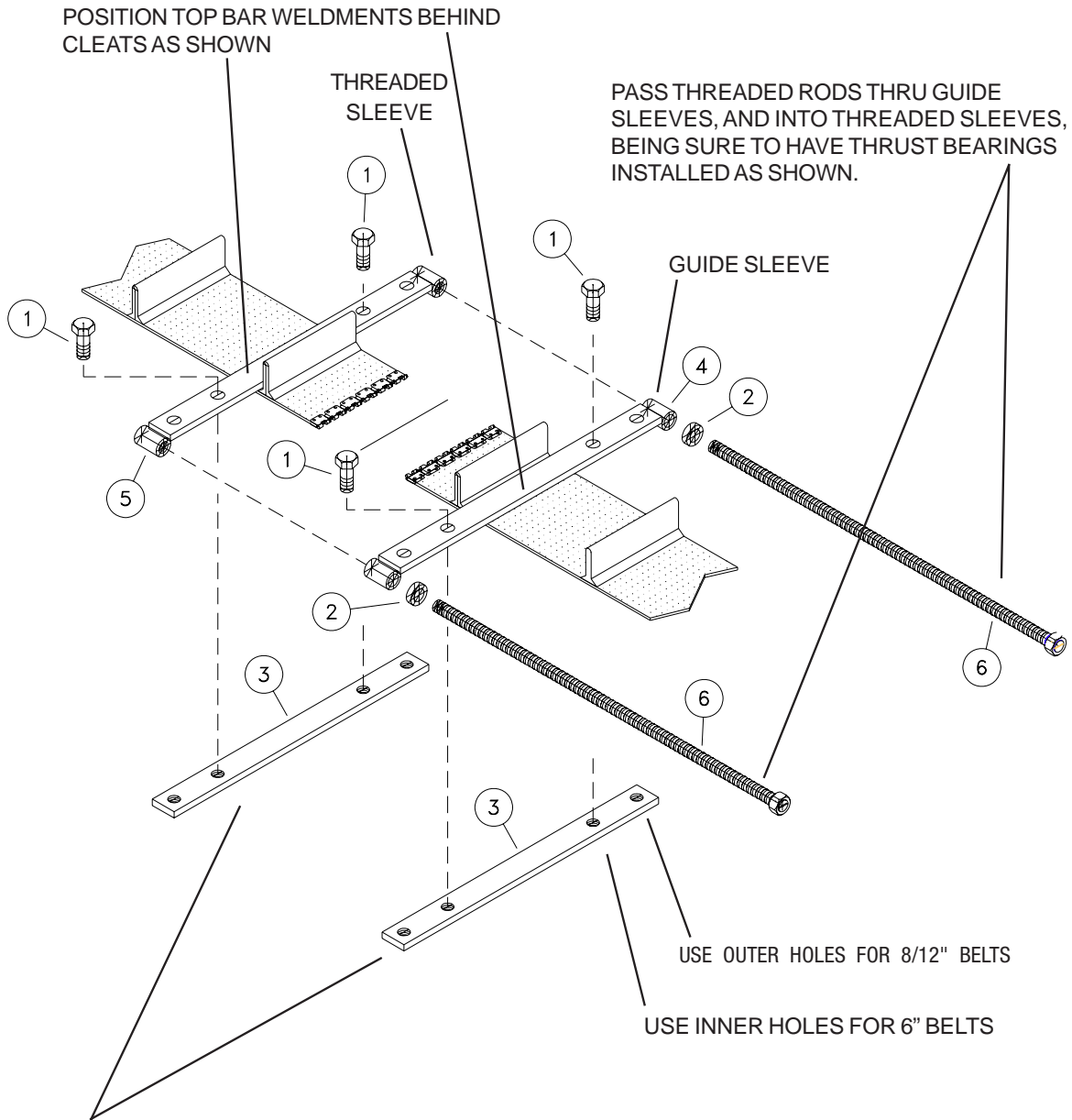


WARNING

- EXCESSIVE WEIGHT ON HOPPER LIFT STAND CAN CAUSE LIFT STAND TO COLLAPSE RESULTING IN SERIOUS INJURY OR DEATH. DO NOT PLACE BULK SEED BAGS OR CONTAINERS DIRECTLY ON OR IN HOPPER.

Drill Fill Tube Conveyor — Set Up

Tube Conveyor Belt Stretcher (Optional) For Replacement of Cleated Belts

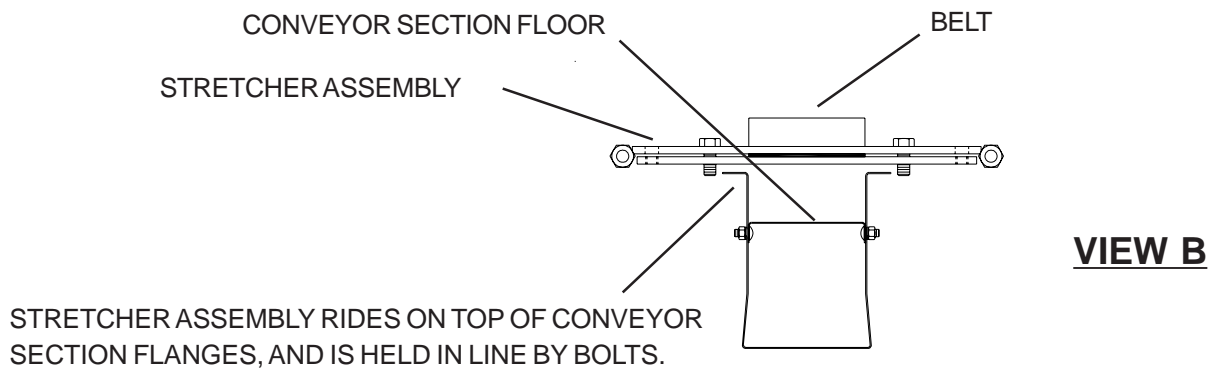
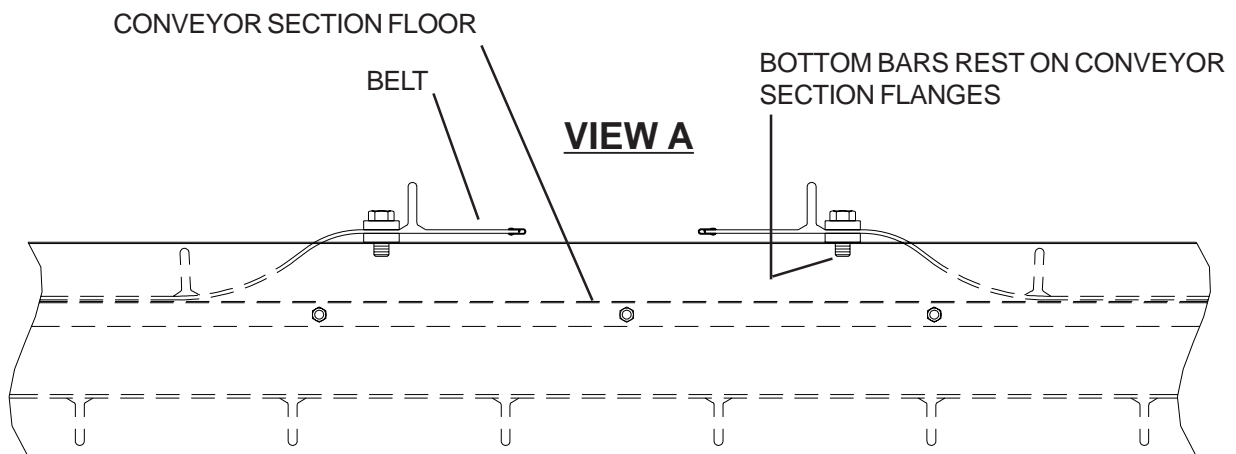
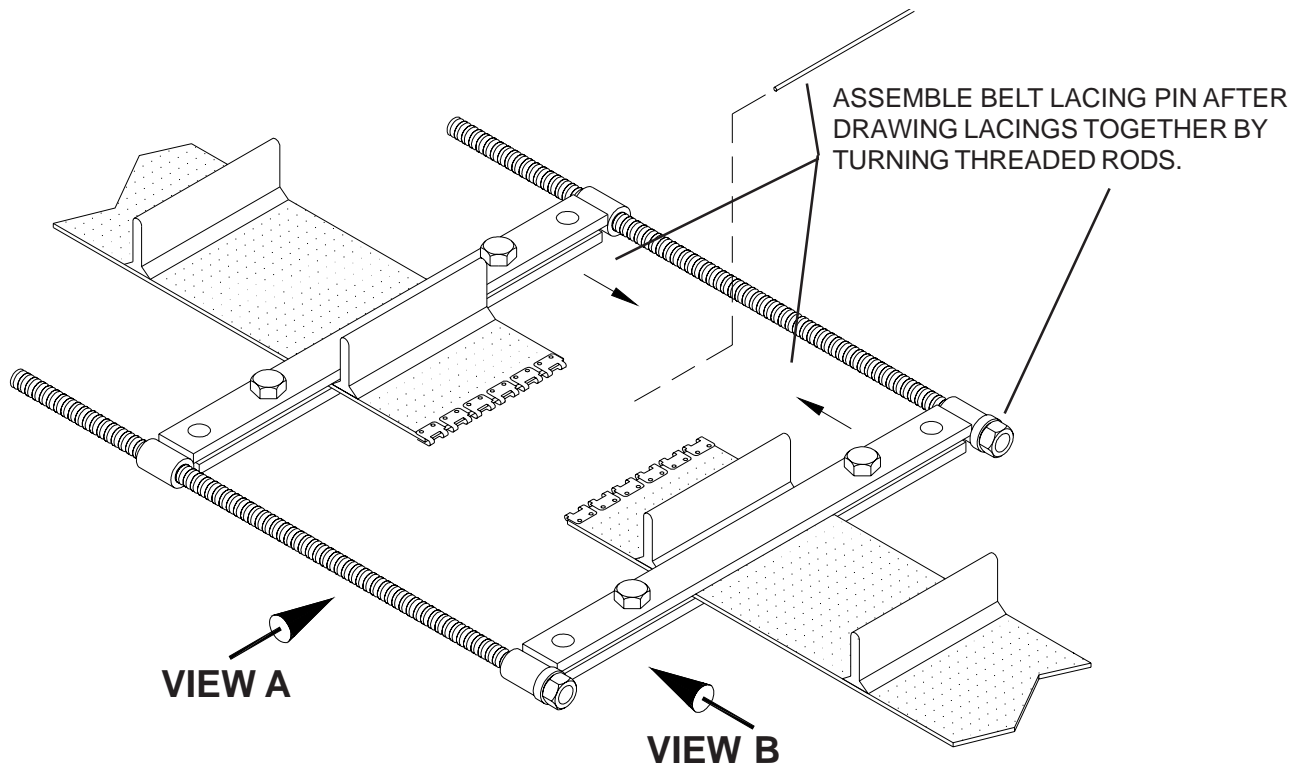


INSTALL BOTTOM BARS ACROSS UNDERSIDE OF BELT, AND SECURE WITH FOUR 5/8NC X 1-1/2" BOLTS THROUGH TOP BARS AS SHOWN.

REF	PART NO.	QTY	DESCRIPTION
1	TA0-907235-0	4	BOLT, HEX 5/8NC X 1/2" GRADE 5
2	TA0-903118-0	2	BEARING, BALL THRUST, 5/8" I.D.
3	TA1-114401-0	2	BOTTOM BAR, 6" & 12" BELT STRETCHER
4	TA2-114404-0	2	PLAIN TOP BAR WELDMENT, 6" & 12" BELT STRETCHER
5	TA2-114406-0	2	THREADED TOP BAR WELDMENT, 6" & 12" BELT STRETCHER
6	TA1-114408-0	2	THREADED ROD WELDMENT, 6" & 12" BELT STRETCHER

Drill Fill Tube Conveyor — Set Up

Stretcher Assembled To Belt



Notes

SECTION III Operation

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Clean-Out Doors	3-5

Drill Fill Tube Conveyor — Operation

Preparing Drill

WARNING

- **KNOW AND UNDERSTAND SAFETY RULES BEFORE OPERATING OR SERVICING THIS MACHINE. REVIEW “SAFETY” SECTION IN THIS MANUAL IF NECESSARY.**

Read this operation section thoroughly. Acquaint yourself with the adjustments required to obtain efficient and trouble-free operations.

IMPORTANT

- *Before attempting to attach the drill to the tractor, familiarize yourself with operations and adjustments of the unit. To insure safe operating conditions, obey all safety notes outlined in the drill's operator's manual.*

Operating Procedures

CAUTION

- **KEEP ALL UNAUTHORIZED PEOPLE CLEAR OF WORK AREA.**
1. Pull tractor and air drill into position, shift tractor into park (or neutral) and lock brakes on tractor. Air drill must be lowered to the ground to fill.
 2. Open the lid on the air drill tanks to allow the conveyor to be positioned.
 3. Raise the latch assembly (24782B) from the transport bracket as shown in Fig. 3-1.



Drill Fill Tube Conveyor — Operation

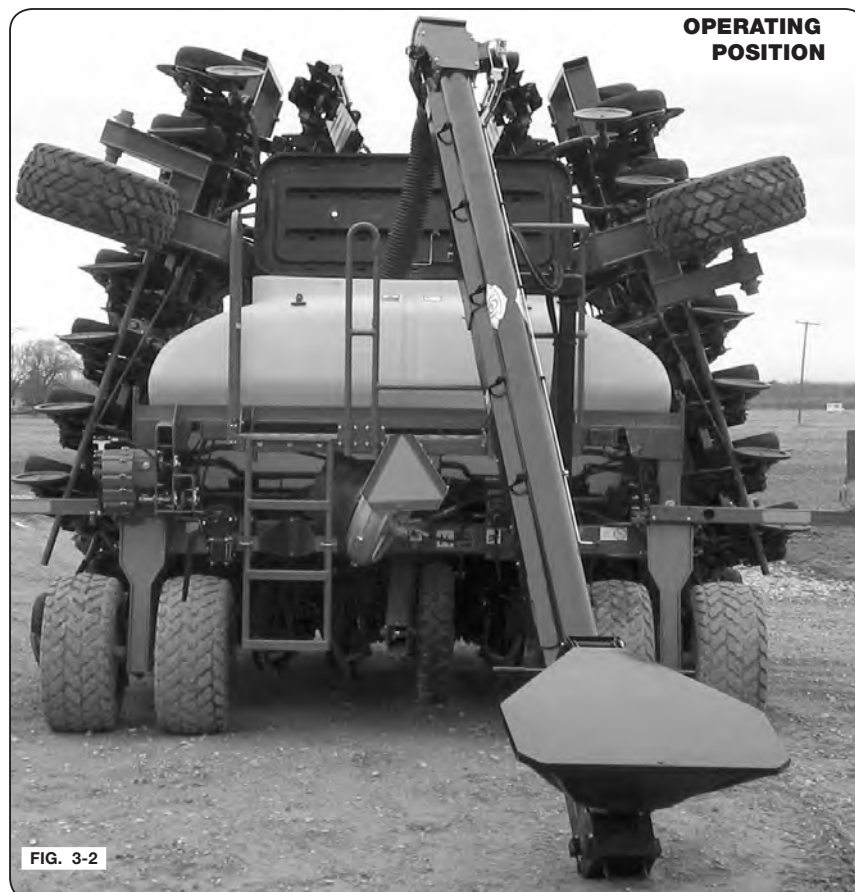
Operating Procedures (Continued)

4. Swing the conveyor into operating position as shown in Fig. 3-2.
5. Engage the tractor hydraulic system to allow the hydraulic oil to flow to the conveyor. Make sure the conveyor belt is moving in a forward direction. If the belt is moving in a backward direction, either reverse the hoses going into the tractor or move the tractor control hydraulic lever in the opposite direction to reverse the flow.

WARNING

- **SEED MAY BE TREATED WITH HAZARDOUS MATERIAL. AVOID CONTACTING SEED WITH SKIN, EYES, AND AVOID BREATHING DUST. FOLLOW MANUFACTURER'S RECOMMENDATIONS.**

6. Start the conveyor moving and begin the flow of seed into the conveyor. Adjust the seed flow for a smooth, even flow of seed through the conveyor.
7. Fill the tank evenly by moving the adjustable spout from side-to-side while the conveyor is running. When the desired level is reached in the tank(s), close the transfer wagon door and empty out the conveyor.



Drill Fill Tube Conveyor — Operation

Transporting

1. Once finished filling, place the conveyor back in the transport bracket (Fig. 3-3). Secure into position with the latch assembly (24782B).

IMPORTANT

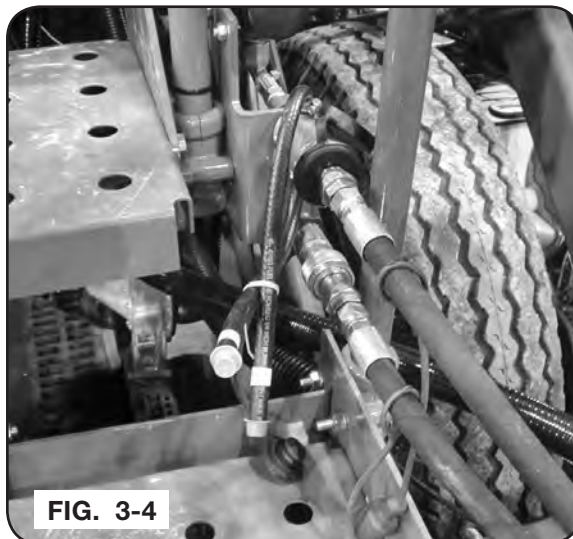
- Do not move the conveyor while filling the air drill.



Hydraulics

WARNING

- HYDRAULIC SYSTEM MUST BE PURGED OF AIR BEFORE OPERATING TO PREVENT SERIOUS INJURY OR DEATH.
- HIGH-PRESSURE FLUIDS CAN PENETRATE THE SKIN AND CAUSE SERIOUS INJURY OR DEATH. SEEK MEDICAL TREATMENT IMMEDIATELY IF INJURED BY HIGH-PRESSURE FLUIDS. USE CARDBOARD OR WOOD TO DETECT LEAKS IN THE HYDRAULIC SYSTEM.
- RELIEVE HYDRAULIC PRESSURE BEFORE SERVICING HYDRAULIC SYSTEM. SEE TRACTOR OPERATOR'S MANUAL FOR PROPER PROCEDURE.



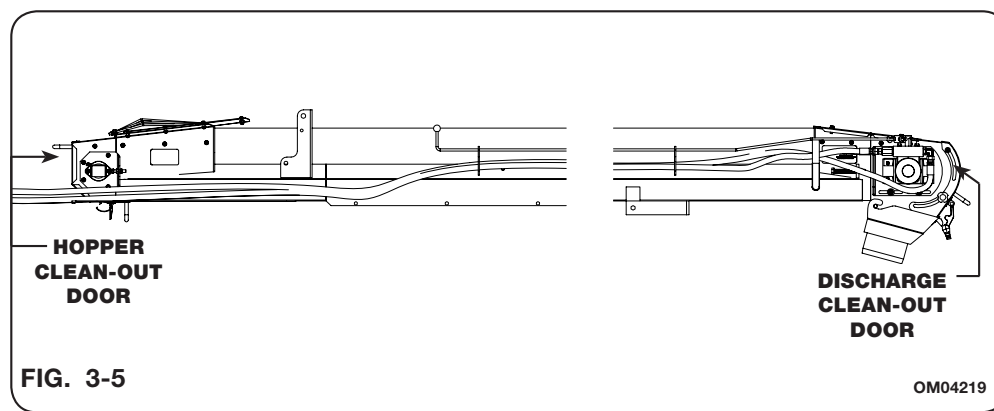
Clean-Out Doors

WARNING

- DISCONNECT POWER OR HYDRAULIC SOURCES BEFORE OPENING ANY CLEAN-OUT DOOR!

Check routing of all hydraulic hoses. Hoses should not be kinked, twisted, or rubbing against sharp edges. Hoses should be secured with tie straps. Check hose fittings for hydraulic leaks. Tighten and/or repair or replace as required.

The hopper end of the conveyor can be cleaned by releasing the latch and opening the clean-out door. The conveyor discharge head can be cleaned by releasing the latch and opening the clean-out door (Fig. 3-5).



Notes

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Drill Fill Tube Conveyor — Maintenance

Lubrication

Lubricate with an SAE multi-purpose grease. All fittings must be free from dirt and paint to insure entry of lubricant inside bearing.

Conveyor Bearings

Lubricate the bearings every 100 hours of operation and at the end of each season before storage. Use only one stroke of grease per bearing.



- **DO NOT USE A HIGH-PRESSURE GREASE GUN TO LUBRICATE THIS BEARING, AS DAMAGE TO BEARING SEAL COULD OCCUR.**

NOTE: Excessive lubrication of these bearings will result in premature failure.

Miscellaneous Lube Points

Oil or grease periodically (or as needed) the following:

- Hinge for clean-out door
- Swivel base on conveyor
- Latch pin housing
- Pivot bracket and arm
- On/Off control rod

Storage/Maintenance

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

DO THE FOLLOWING AFTER USE:

1. Clean out conveyor/hopper. Use pressurized water to wash out conveyor and hopper after use.
2. Wipe off the following:
 - Hydraulic valve, motor, hoses, and fittings
 - Swivel base, cradle
 - Reflectors and warning/caution decals
3. Check the following:
 - Mounting bolts for tightness
 - Cable ties for tightness
 - Valve, motor, hoses, and fittings for leaks, etc.
 - Hydraulic hoses for wear-abuse

DO THE FOLLOWING BEFORE PLACING THE CONVEYOR IN STORAGE:

- Repaint any chipped or scraped areas.
- Inspect for damaged or worn parts. Replace before next season.
- Store unit inside, away from livestock.

Hydraulic System

Refer to parts section for hydraulic component detail listing.

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

Replacing Hoses/Fittings/Cylinders:

1. Use replacement hoses, fittings, and cylinders from your Unverferth Manufacturing dealer which are rated for 3000 psi.
2. Do not use hoses, fittings and cylinders that have pipe threads.
3. Do not use Teflon tape or thread sealant on JIC or O-ring fittings. Tighten fittings per torque chart in the maintenance 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.

WARNING

- RELIEVE HYDRAULIC SYSTEM OF ALL PRESSURE BEFORE ADJUSTING OR SERVICING. SEE TRACTOR OPERATOR'S MANUAL FOR PROPER PROCEDURES.
- **HIGH-PRESSURE FLUIDS CAN PENETRATE THE SKIN AND CAUSE SERIOUS INJURY OR DEATH. SEEK MEDICAL TREATMENT IMMEDIATELY IF INJURED BY HIGH-PRESSURE FLUIDS. USE CARDBOARD OR WOOD TO DETECT LEAKS IN THE HYDRAULIC SYSTEM.**

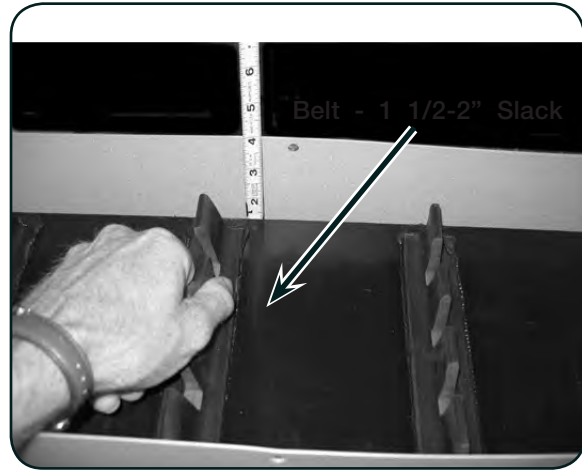


Conveyor Belt

Proper belt tension and correct ‘tracking’ of the belt are critical to maintaining the belt for years of worry-free use. Belt tension and tracking should be checked at the beginning of each season, and every 50 hours of use. Belt alignment should be checked after the first 2 hours of initial use or after every adjustment of belt tension/alignment. Once belt tracking is set, it will be necessary to check alignment after every 8 hours of use.

WARNING

- **ENTANGLEMENT WITH MOVING PARTS CAN CAUSE SERIOUS INJURY OR DEATH. USE EXTREME CARE WHEN INSPECTING AND ADJUSTING BELT TRACKING. AVOID PERSONAL ATTIRE SUCH AS LOOSE FITTING CLOTHING, SHOESTRINGS, DRAWSTRINGS, PANTS CUFF, LONG HAIR, ETC., THAT MAY BECOME ENTANGLED IN MOVING PARTS.**



Belt Tension

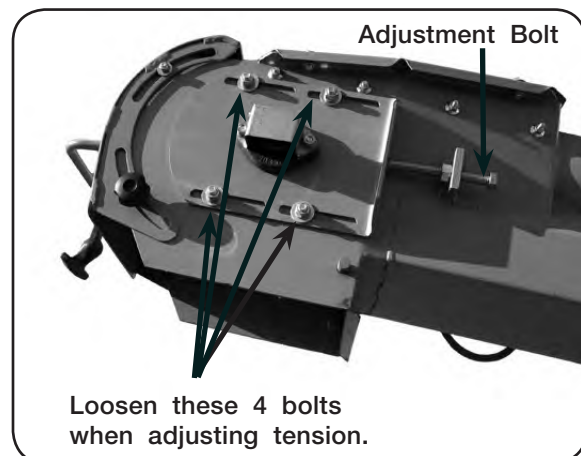
Belt tension is inspected by removing lower intake panel/guard from conveyor, and gently pull on the conveyor belt. The belt should have approximately 1 1/2"-2" of slack at the center.

Belt tension is adjusted at the discharge end of the conveyor. Loosen, **DO NOT REMOVE**, the four 3/8" bolts on each side of the conveyor. Use the two adjusting bolts to adjust the belt to the proper tension.

It is important to move both sides the same distance. Too much tension on the belt will stretch the splice link and greatly reduce belt life. Too little tension on the belt could result in belt slipping on drive pulley. Replace the bottom cover panel and continue to check belt tracking before re-tightening the four bolts on each side of the conveyor.

IMPORTANT

- *Belt tracking must be done every time tension is adjusted.*



Conveyor Belt (Continued)

Belt Tracking

Conveyor belt must always run at the center of the pulley on both the intake and discharge end. Improper tracking of the belt will result in excessive wear to the edge of the belt, and will greatly reduce belt life. Check belt tracking every 50 hours of use, and every time belt tension is adjusted.

⚠ WARNING

- **ENTANGLEMENT IN MOVING PARTS CAN CAUSE SERIOUS INJURY OR DEATH. AVOID PERSONAL ATTIRE SUCH AS LOOSE FITTING CLOTHING, SHOE-STRINGS, DRAWSTRINGS, PANTS CUFFS, LONG HAIR, ETC. THAT MAY BECOME ENTANGLED IN MOVING PARTS.**

Inspect tracking of belt at discharge end by removing lower spout, pivoting deflector up, and looking up at the belt and pulley. Belt should be in center of pulley.

Adjust by loosening, **DO NOT REMOVE**, the four bolts on the side of the conveyor. Operate conveyor at slow speed, and tighten or loosen the adjustment bolt until belt is running in the center of the pulley.

Tighten all bolts on side of conveyor, and lock adjustment bolts into place.

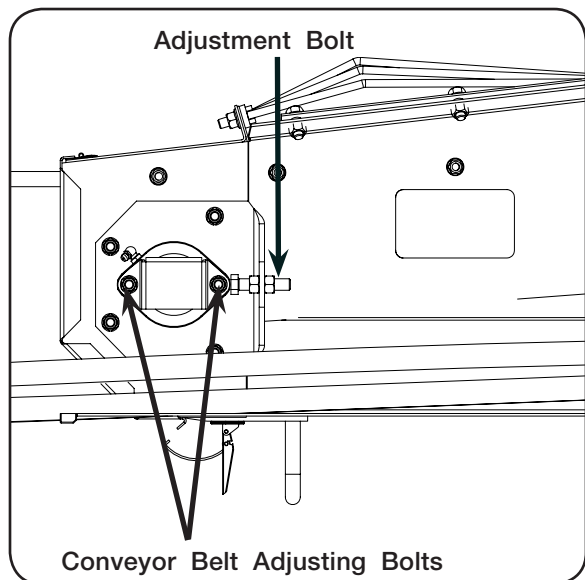
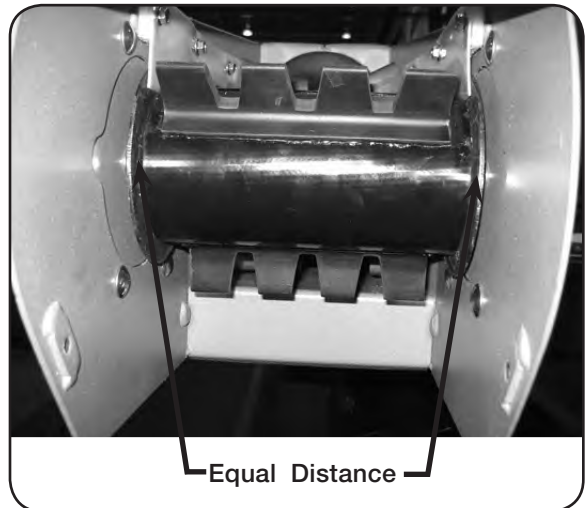
Inspect tracking of belt at intake end by opening bottom inspection door on conveyor. Belt should be in the center of the pulley.

Adjust by loosening (Do Not Remove) the four bolts (two on each side) on the adjusting plate.

Operate conveyor at slow speed, and tighten or loosen adjustment bolt until belt is running in the center of the pulley.

IMPORTANT

- *Use extreme care when inspecting and adjusting belt tracking. Keep hands, feet, and clothing away from belt.*
- Tighten the two bolts on the adjustment plate, and lock the adjustment bolt into place.



Troubleshooting

SYMPTOMS	REMEDIES
A. CONVEYOR WILL NOT TURN OVER OR DEVELOP PROPER SPEED OR TORQUE:	
<ol style="list-style-type: none"> 1. Pump does not deliver sufficient pressure or volume 2. Conveyor jammed 	<ol style="list-style-type: none"> 1. Check output and delivery, change if necessary 2. Shut-off and lock-out power, open clean-out door and remove excess material (make sure swivel spout is clear)
B. CONVEYOR RUNS TOO SLOW:	
<ol style="list-style-type: none"> 1. Engine running too slow 2. Pump not producing minimum required flow and pressure 3. Pump is worn 4. Internal leak in controls or motor 5. Air in system 6. Improper hydraulic oil viscosity 	<ol style="list-style-type: none"> 1. Increase engine speed 2. Check pump capacity and correct 3. Repair or replace pump 4. Replace seals; repair or replace valves or motor 5. Bleed system and tighten connections 6. If auger starts slowly and speed increases after oil heats up, oil is too heavy weight. If auger slows down after oil heats up, oil is too light weight
C. CONVEYORS MOVING IN WRONG DIRECTION:	
<ol style="list-style-type: none"> 1. Control valve on tractor not set properly 	<ol style="list-style-type: none"> 1. Reset
D. OIL HEATS EXCESSIVELY:	
<ol style="list-style-type: none"> 1. Oil viscosity incorrect 2. Dirty oil 3. Oil level too low 4. Oil slipping through worn pump 5. Restricted line or piping 6. Reservoir too small to provide adequate cooling 	<ol style="list-style-type: none"> 1. Drain and refill with proper weight oil 2. Drain, flush, and refill with a clean oil and filter 3. Fill to proper level 4. Repair or replace pump 5. Reroute lines to eliminate restrictions 6. Replace with larger reservoir or install oil cooler
E. PUMP / MOTOR SEALS BLOW-SHAFT / HOUSING BREAKS - HOSE BURST:	
<ol style="list-style-type: none"> 1. When a standard control valve is returned to neutral, to stop, or start a motor, sudden pressure is created which may break seals, tear off motor shafts, burst housing or hoses. (Especially at speed under load.) This sudden shock cannot be relieved through the primary relief valve in the system 	<ol style="list-style-type: none"> 1. Avoid sudden and rapid starting and stopping (or convert to a free wheeling control valve (on the tractor) or a cushion valve may be installed)
E. BELT EDGES SHOWING EXCESSIVE WEAR:	
<ol style="list-style-type: none"> 1. Belt tracking incorrect 2. Poly seals on intake and/or discharge end worn. 	<ol style="list-style-type: none"> 1. Adjust tracking as detailed in service section of this manual 2. Replace poly seals

Drill Fill Tube Conveyor — Maintenance

Troubleshooting (Continued)

Occasionally when a conveyor has been connected into an auxiliary hydraulic system, it may not operate. When hydraulic pressure and flow gauges are not available, it may be difficult to determine if the fault is in the source hydraulic system, or the conveyor. A convenient method of determining this is to connect the conveyor hydraulic hoses to another tractor system and check the operation. If, for example, the conveyor operates from the other tractor system but not from the original tractor connection, or the original tractor system is not adequate. If the conveyor fails to operate; however, there is probably a fault with the control valve, motor or the conveyor itself. In this case, refer to the troubleshooting guide.

Complete Torque Chart - Capscrews - Grade 5

IMPORTANT

- Grade 5 capscrews can be identified by three radial dashes on head.
- Tighten U-bolts to have the same number of threads exposed on each end.

SIZE	FOOT POUNDS	NEWTON METERS	SIZE	FOOT POUNDS	NEWTON METERS
1/4-20	8-10	11-13	3/4-10	200-220	270-300
1/4-28	9-11	12-15	3/4-16	210-230	285-310
5/16-18	15-17	20-23	7/8-9	330-350	425-475
5/16-24	17-19	23-26	7/8-14	360-380	460-515
3/8-16	25-28	34-38	1-8	500-525	675-710
3/8-24	28-31	38-42	1-14	540-560	730-760
7/16-14	40-45	54-61	1 1/8-7	600-635	815-860
7/16-20	45-50	61-68	1 1/8-12	665-700	920-950
1/2-13	62-68	84-92	1 1/4-7	850-895	1150-1215
1/2-20	68-75	92-102	1 1/4-12	940-990	1275-1340
9/16-12	90-98	22-133	1 3/8-6	1125-1175	1525-1590
9/16-18	100-110	134-148	1 3/8-12	1280-1335	1735-1810
5/8-11	120-135	162-183	1 1/2-6	1500-1560	2035-2115
5/8-18	124-137	168-186	1 1/2-12	1685-1755	2285-2380

Drill Fill Tube Conveyor — Maintenance

Complete Torque Chart - Capscrews - Grade 8

IMPORTANT

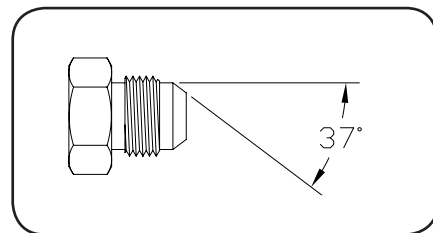
- Grade 8 capscrews can be identified by six radial dashes on head.
- For wheel torque requirements, refer to *Wheels and Tires*.
- Tighten U-bolts to have the same number of threads exposed on each end.

SIZE	FOOT POUNDS	NEWTON METERS	SIZE	FOOT POUNDS	NEWTON METERS
1/4-20	11-13	15-17	3/4-10	280-295	380-400
1/4-28	12-15	16-20	3/4-16	330-365	445-495
5/16-18	20-22	27-30	7/8-9	410-430	555-580
5/16-24	21-23	28-31	7/8-14	420-440	570-595
3/8-16	35-39	47-53	1-8	630-650	850-880
3/8-24	36-41	49-55	1-14	680-700	920-950
7/16-14	54-58	73-78	1 1/8-7	900-930	1220-1260
7/16-20	55-60	75-80	1 1/8-12	930-950	1260-1290
1/2-13	82-88	110-120	1 1/4-7	1250-1300	1695-1760
1/2-20	94-99	125-135	1 1/4-12	1280-1320	1735-1790
9/16-12	127-134	170-180	1 3/8-6	1665-1715	2250-2325
9/16-18	147-155	199-210	1 3/8-12	1750-1780	2370-2410
5/8-11	160-170	215-230	1 1/2-6	2225-2275	3015-3080
5/8-18	165-175	225-235	1 1/2-12	2285-2330	3100-3160

Hydraulic Fittings - Torque and Installation

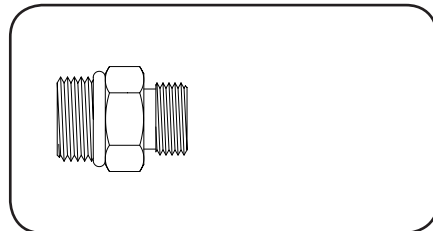
SAE FLARE CONNECTION (J.I.C.)

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 -- VERY IMPORTANT!
3. Thread into port until washer bottoms onto spot face.
4. Position elbows by backing up adapter.
5. Tighten jam nut.

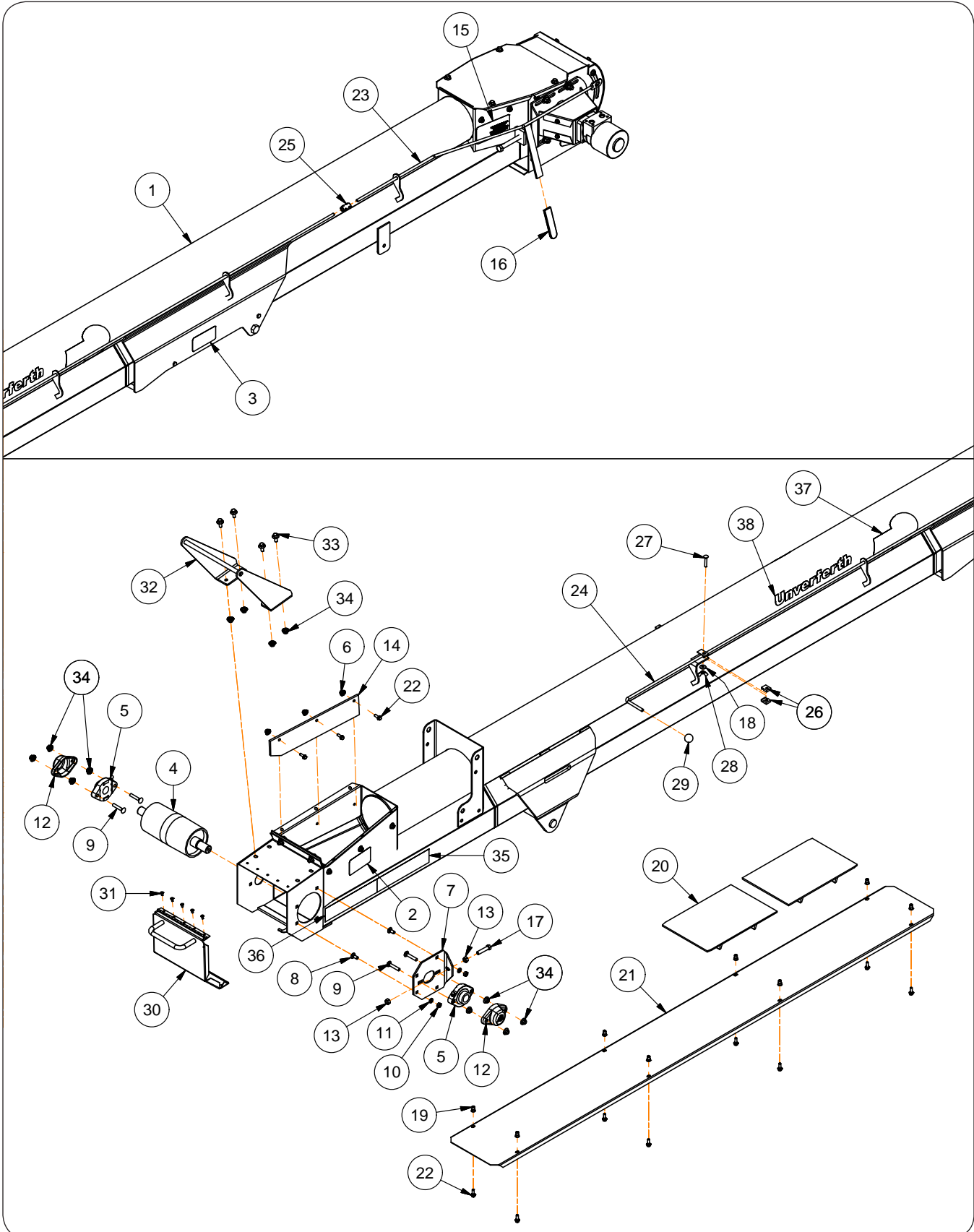


SECTION V Parts

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Drill Fill Tube Conveyor — Parts

Idler End Components



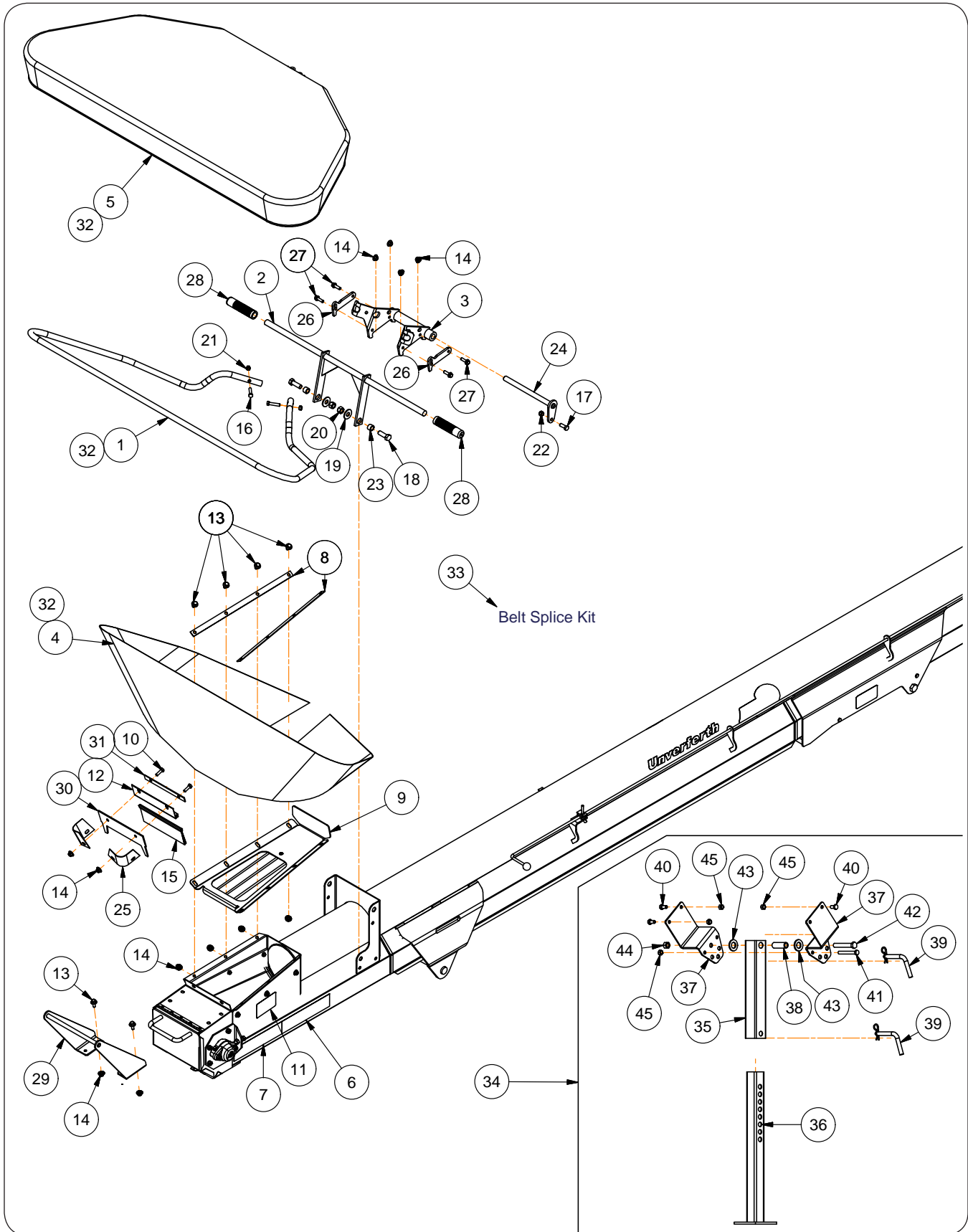
Drill Fill Tube Conveyor — Parts

Idler End Components (continued)

ITEM	PART NO.	DESCRIPTION	QTY.	NOTES
1	25189B	Conveyor Weldment	1	
2	TA1-906109-0	Decal, WARNING (Moving Parts)	2	
3	95839	Decal, WARNING (Pinch Point)	2	
4	900608	Idler Pulley	1	
5	TA0-903088-0	Bearing w/Zerk	2	
6	97189	Hex Nut/Large Flange 1/4-20UNC	6	
7	23912B	Adjustment Plate	1	
8	9388-024	Carriage Bolt 5/16-18UNC x 3/4	4	Grade 5
9	9500341	Carriage Bolt 5/16-18UNC x 1 3/4	4	Grade 5
10	9394-004	Hex Nut 5/16-18UNC	4	Grade 5
11	9404-019	Lock Washer 5/16	4	
12	9500310	Bearing Cover	2	
13	9394-006	Hex Nut 3/8-16UNC	2	Grade 5
14	24756	Poly Strip	2	
15	95445	Decal, WARNING "High-Pressure Fluid"	2	Grade 5
16	900209	Vinyl Handle	1	Grade 5
17	TA0-907104-0	Capscrew 3/8-16UNC x 1 3/4 (Full Threaded)	1	Grade 5
18	9405-064	Flat Washer 1/4	1	
19	902340	Rivet Nut 1/4-20 UNC	8	Grade 5
20	901245	Belt/Cleated 8 x 376	1	
21	29972B	Bottom Shield	1	
22	97420	Flange Screw 1/4-20 x 3/4	8	Grade 5
23	25205	Control Rod Weldment	1	
24	23698	Control Rod	1	
25	23701	Coupler 5/8 O.D. x 1 1/4 Long	1	
26	24266	Friction Block	2	
27	9388-005	Carriage Bolt 1/4-20UNC x 1 1/2	1	Grade 5
28	901056	Wing Nut 1/4-20UNC w/Nylon-Insert Lock	1	
29	TA0-914793-0	Knob	1	
30	23923B	Clean Out Door Weldment	1	
31	TA0-908335-0	Rivet 3/16 x 3/8	5	
32	26851B	Handle Weldment	1	
33	91256	Large Flange Screw 5/16-18UNC x 3/4	4	
34	91257	Hex Nut/Large Flange 5/16-18UNC	4	Grade 5
35	9003125	Decal =Fluorescent Orange=	1	
36	9003126	Reflector =Red=	1	
37	901607	Decal UM Oval	2	
38	901725	Decal Unverferth Logo	2	

Drill Fill Tube Conveyor — Parts

Hopper Components



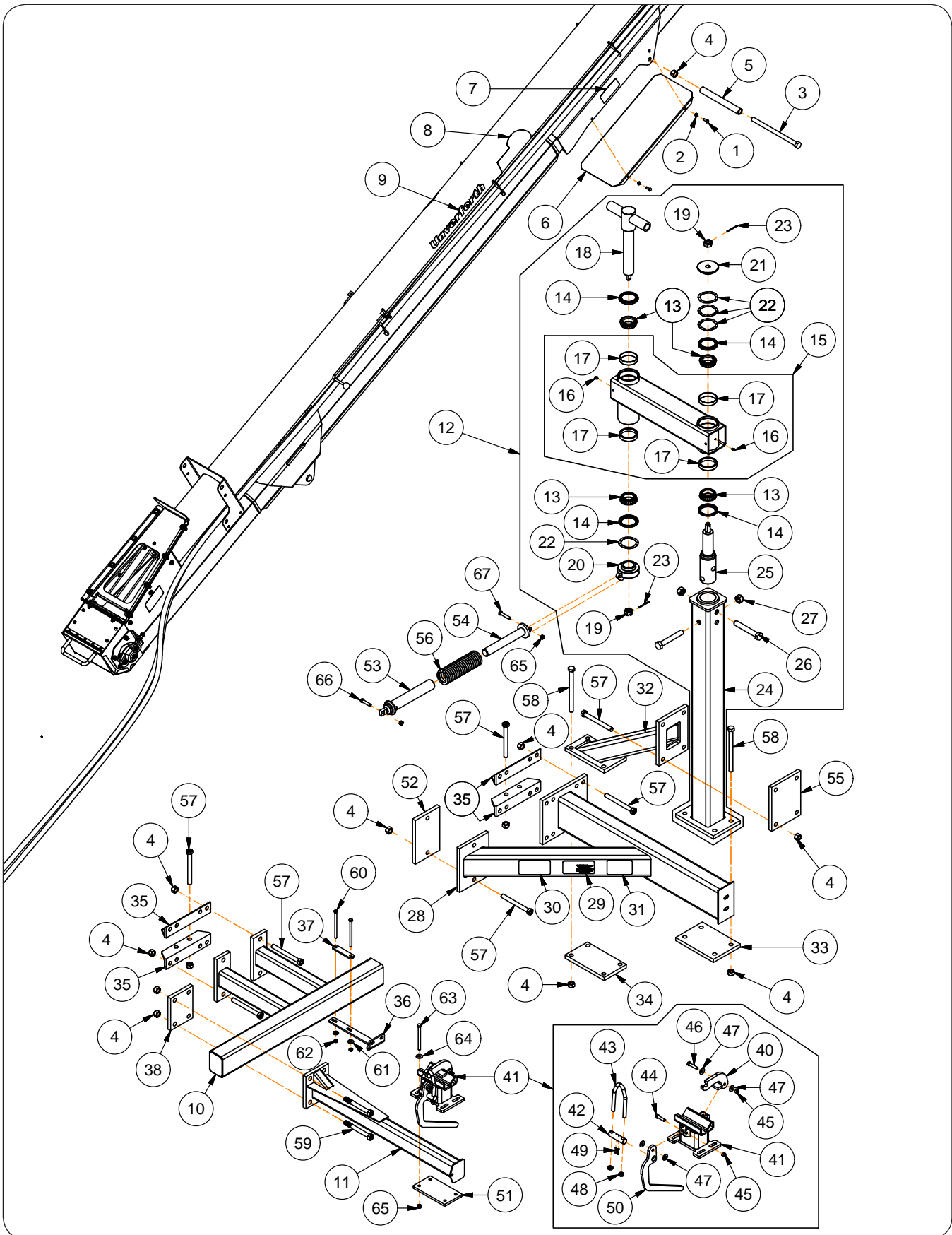
Drill Fill Tube Conveyor — Parts

Hopper Components (continued)

ITEM	PART NO.	DESCRIPTION	QTY	NOTES
1	26918B	Upper Hopper Frame	1	S/N A53950100 & Up
2	24576B	Handle Weldment	1	
3	24554B	Pivot Weldment	1	
4	902421	Hopper, Vinyl	1	S/N A53950100 & Up
5	27715	Hopper Cover, Vinyl w/Bungee Cord	1	S/N A53950100 & Up
6	9003125	Reflector =Fluorescent=	1	
7	9003126	Reflector =Red=	1	
8	24620B	Strap 3/4 x 17 1/2	2	
9	28400B	Guard	1	
10	9390-030	Capscrew 5/16-18UNC x 1	2	Grade 5
11	TA1-906109-0	Decal, WARNING (Moving Parts)	1	
12	24964	Brush Holder	1	
13	91256	Screw/Large Flange 5/16-18UNC x 3/4	8	Grade 5
14	91257	Hex Nut/Large Flange 5/16-18UNC	4	Grade 5
15	901111	Nylon Brush	1	
16	9390-032	Capscrew 5/16-18UNC x 1 1/2	2	Grade 5
17	9390-055	Capscrew 3/8-16UNC x 1	1	Grade 5
18	9390-101	Capscrew 1/2-13UNC x 1 1/2	2	Grade 5
19	9405-088	Flat Washer 1/2	2	
20	9800	Locknut 1/2-13UNC	2	Grade 5
21	9807	Locknut 5/16-18UNC	2	Grade 5
22	9928	Locknut 3/8-16UNC		Grade 5
23	24550	Bushing	2	
24	24578	Pin Weldment	1	
25	24986	Poly Strip	2	
26	25434B	Shim Plate	2	
27	901044	Screw/Small Flange 5/16-18UNC x 1	4	Grade 5
28	92928	Grip/Handle Bar	2	
29	26851B	Handle Weldment	1	
30	26865	Belt Seal	1	
31	28486B	Strap 3/4 x 7 1/2	1	
32	27717B	6" Hopper Kit (Not Shown)	-	Includes Items: 1, 4, 5
33	28982	Belt Splice Kit	-	
34	26588B	Hopper Lift Stand Bundle (Optional)	1	
35	26572B	Tube w/Holes	1	
36	26574B	Post Weldment	1	
37	26586B	Bracket w/Holes	1	
38	26587	Bushing	1	
39	900803	Bent Pin w/Haripin Cotter	1	
40	9390-053	Capscrew, 3/8-16UNC x 3/4	2	
41	9390-064	Capscrew, 3/8-16UNC x 3 1/4	1	
42	9390-109	Capscrew, 1/2-13UNC x 3 1/2	1	
43	9405-104	Flatwasher, 3/4	1	
44	9800	Locknut, 1/2-13UNC	1	
45	9928	Locknut, 3/8-16UNC	2	

Drill Fill Tube Conveyor — Parts

Transport & Pivot Support Stands



Drill Fill Tube Conveyor — Parts

Transport & Pivot Support Stands (continued)

ITEM	DESCRIPTION	PART NO.	QTY	NOTES
1	Capscrew 1/4-20UNC x 3/4	9390-003	6	Grade 5
2	Locknut 1/4-20UNC	9936	6	
3	Capscrew 5/8-11UNC x 10	9390-443	1	Grade 5
4	Locknut 5/8-11UNC	9801	34	
5	Tube/Bushing 8 5/8" Long	24415	1	
6	Bottom Shield	25217B	1	
7	Decal, WARNING (Pinch Point)	95839	2	
8	Decal, UM Oval Logo	901607	2	
9	Decal, Unverferth Logo (Grey)	901725	2	
10	Support/Transport Arm Weldment =Black=	2004077B	1	
11	Support Stand Weldment =Black=	2004252B	1	
12	Pivot Tube Assembly	25558B	1	
13	Bearing Cone LM501349	9247	4	
14	Seal 2.25" I.D.	9355	4	
15	Pivot Arm Weldment	25535B	1	
16	Zerk 1/4-28	91160	2	
17	Bearing Cup LM501310	9349	2	
18	Pivot Weldment	25539B	1	
19	Slotted Nut 3/4-10UNC	9393-015	2	Grade 2
20	Pivot Cap Weldment	25541B	1	
21	Retainer Cap	25804B	1	
22	Spring/Wave Washer	901564	4	
23	Cotter Pin 1/8" Dia. x 2	9391-027	2	
24	Vertical Post Assembly	27744B	1	Includes Post and Items 25, 26, 27
	Pivot Post	2001844	1	
25	Vertical Post Weldment	2001845B	1	
26	Capscrew 3/4-10UNC x 5	9390-155	2	
27	Locknut 3/4-10UNC	9802	2	
28	Support Arm Weldment with Decals	26692B	1	Includes Items 49, 50, 51
29	Decal, "WARNING"	95445	1	
30	Decal, "WARNING"	902084	1	
31	Decal, "CAUTION"	902085	1	
32	Diagonal Brace Weldment	29909B	1	
33	Plate (6 x 8 1/2)	23761B	1	
34	Plate	29914B	1	
35	Angle (2 x 2 x 10)	29921B	4	
36	Ladder Strap =Black=	2004250B	2	
37	Strap 1 x 4 1/4 =Black=	2004251B	2	
38	Plate 5 x 6 1/4	2004257B		

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Drill Fill Tube Conveyor — Parts

Transport & Pivot Support Stands (continued)

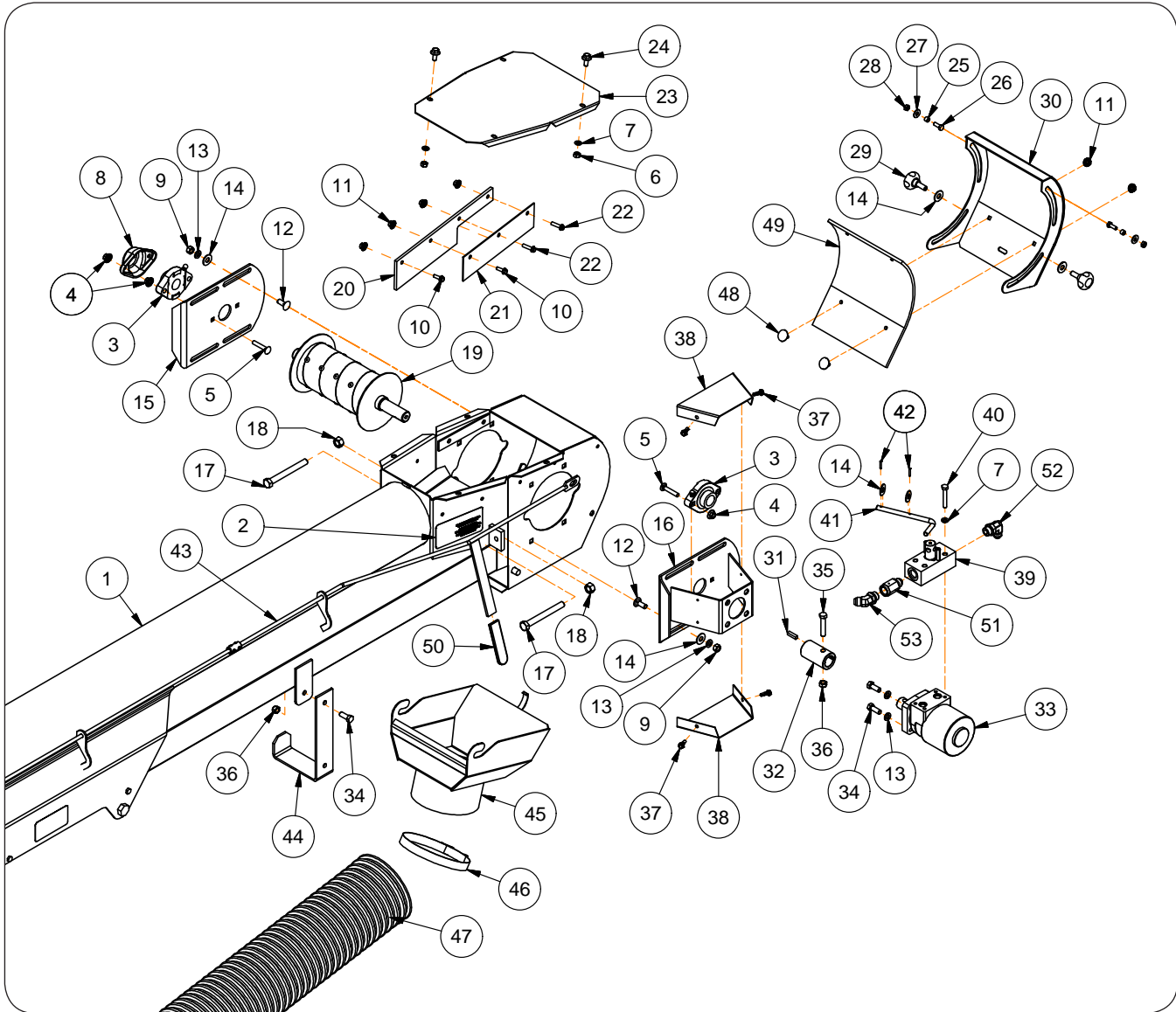
ITEM	DESCRIPTION	PART NO.	QTY	NOTES
39	Latch Assembly	24782B	1	
40	Latch Weldment	24732B	1	
41	Rest Weldment	24783B	1	
42	Pin 7/8" Dia. x 3 1/4	24737	1	
43	U-Bolt 1/2-20UNF	901080	1	Grade 5
44	Capscrew 3/8-16UNC x 1 1/2	9390-057	1	Grade 5
45	Locknut 3/8-16UNC	9928	2	
46	Capscrew 3/8-16UNC x 1 3/4	9390-058	1	Grade 5
47	Flat Washer 3/8	9405-076	4	
48	Elastic Jam Nut 1/2-20UNF	9397-013	2	
49	Roll Pin 1/8" Dia. x 1	9392-060	2	
50	Plate (9 x 12 1/16)	25542B	1	
51	Bar/Plate 4 x 7 1/4	24785B	1	
52	Plate (5 1/2 x 8 1/2)	26704B	1	
53	Spring Guide Weldment	25427B	1	
54	Spring Plunger Weldment	25429B	1	
55	Plate (6 1/2 x 8 1/2)	29913B	1	
56	Spring/Compression 2.46" O.D.	901331	1	
57	HCS 5/8-11UNC x 6	9500152	22	Grade 8
58	Capscrew, 5/8-11UNC x 8	9390-140	8	Grade 5
59	Capscrew 5/8-11UNC x 5 1/2	91299-135	4	Grade 8
60	Capscrew 5/16-18UNC x 5	9390-044	4	Grade 5
61	Flat Washer 3/8" USS	9405-070	4	
62	Locknut 5/16-18UNC	9807	4	
63	Capscrew 3/8-16UNC x 4 1/2	9390-068	4	Grade 5
64	Flat Washer 3/8	9405-076	4	
65	Locknut 3/8-16UNC	9928	6	
66	Capscrew 3/8-16UNC x 1 3/4	91299-058	1	Grade 8
67	Capscrew 3/8-16UNC x 2	91299-059	1	Grade 8

Drill Fill Tube Conveyor — Parts

Notes

Drill Fill Tube Conveyor — Parts

Discharge Spout Components



ITEM	PART NO.	DESCRIPTION	QTY	NOTES
1	25189B	Conveyor Weldment	1	
2	95445	Decal, WARNING (High Pressure Oil)	2	
3	TA0-903088-0	Bearing w/Zerk	2	
4	91257	Hex Nut/Large Flange 5/16-18UNC	6	Grade 5
5	9500341	Carriage Bolt 5/16-18UNC x 1 3/4	4	Grade 5
6	9394-004	Hex Nut 5/16-18UNC	4	Grade 5
7	9404-019	Lock Washer 5/16	4	
8	9500310	Bearing Cover	1	
9	9394-006	Hex Nut 3/8-16UNC	8	Grade 5
10	97420	Flange Screw 1/4-20UNC x 3/4	4	Grade 5
11	97189	Hex Nut/Large Flange 1/4-20UNC	12	Grade 5
12	9388-051	Carriage Bolt, 3/8-16UNC x 1	8	Grade 5

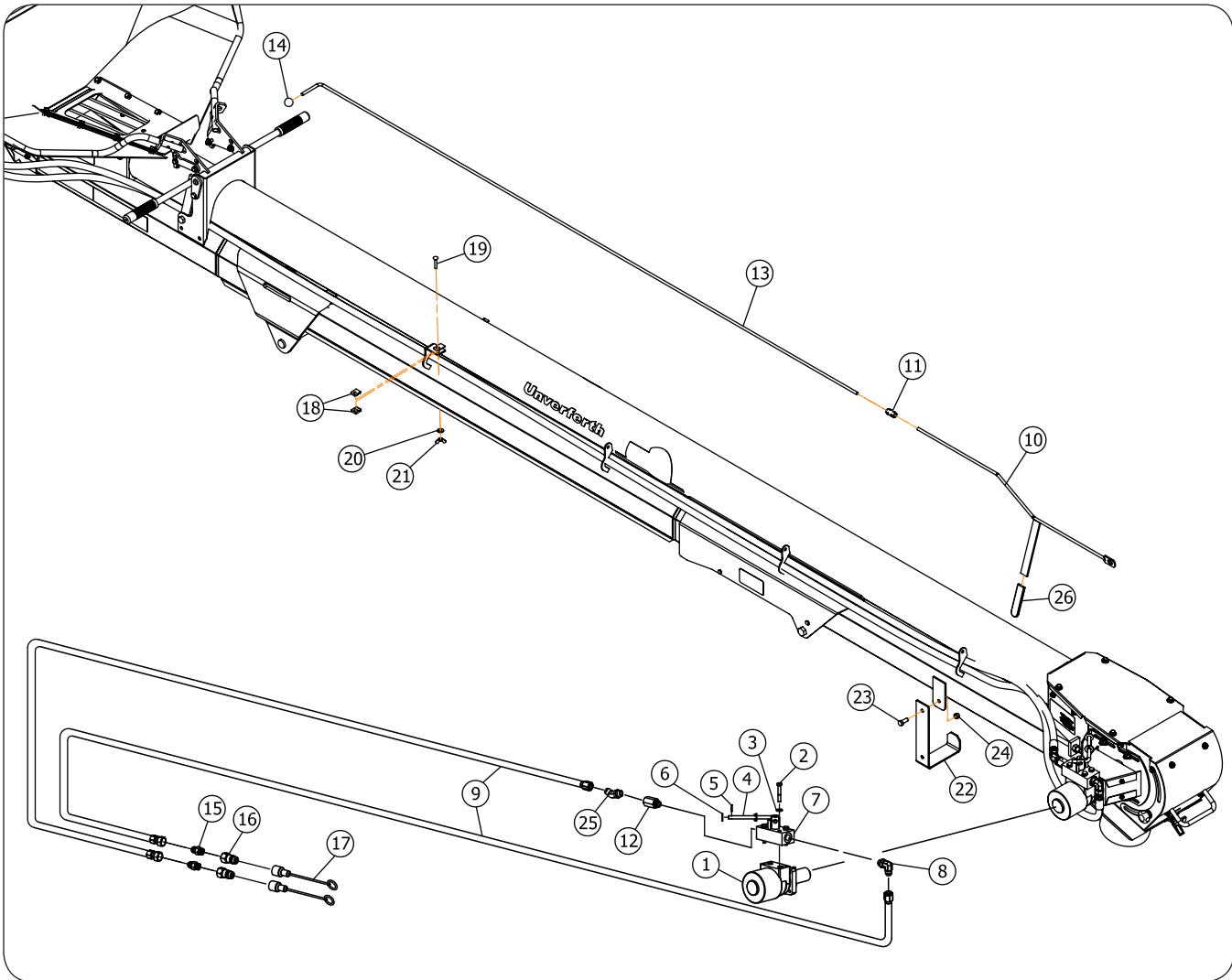
Drill Fill Tube Conveyor — Parts

Discharge Spout Components (continued)

ITEM	PART NO.	DESCRIPTION	QTY	NOTES
13	9404-021	Lock Washer 3/8	12	
14	9405-076	Flat Washer 3/8	12	
15	23994B	Adjustment Plate	1	
16	24091B	Bracket Weldment	1	
17	93400	Capscrew 1/2-13UNC x 4 1/2 (Full Threaded)	2	Grade 5
18	9394-010	Hex Nut 1/2-13UNC	2	Grade 5
19	901077	Drive Pulley	1	
20	24755	Poly Strip	2	
21	24260	Seal	2	
22	901101	Flange Screw 1/4-20UNC x 1	4	Grade 5
23	23918B	Top Shield	1	
24	91256	Screw/Large Flange 5/16-18UNC x 3/4	4	Grade 5
25	22018	Tube/Bushing	2	
26	9390-003	Capscrew 1/4-20UNC x 3/4	2	Grade 5
27	9405-064	Flat Washer 1/4	2	
28	9936	Locknut 1/4-20UNC	2	Grade 5
29	901046	Knob/Plastic	2	
30	26214B	Deflector Weldment	1	
31	9001501	Keystock 1/4 x 1/4 x 1	1	
32	23690	Coupler	1	
33	91604B	Hydraulic Motor w/O-Rings	1	
	91306	O-Ring (Repair Purposes Only)	-	
	91687	Seal Kit (Repair Purposes Only)	-	
34	9390-055	Capscrew 3/8-16UNC x 1	5	
35	9390-059	Capscrew 3/8-16UNC x 2	1	
36	9928	Locknut 3/8-16UNC	2	
37	9473	Screw/Self-Drilling 1/4-20UNC x 3/4	4	
38	24399B	Shield	2	
39	95488	Valve - Hydraulic Control	1	
	96918	Seal Kit	-	
40	9390-034	Capscrew 5/16-18UNC x 2	4	
41	23693	Handle 3/8" Dia.	1	
42	9392-056	Roll Pin 1/8" Dia. x 3/4	2	
43	25205	Control Rod Weldment	1	
44	24414B	Bracket	1	
45	26220B	Spout Weldment	1	
46	98060	Clamp/T-Bolt	1	
47	TAAU14170	Flex Spout	1	
48	902006	Elevator Bolt 1/4-20UNC x 3/4	4	
49	901723	Neoprene Sheet 9 x 11 1/2	1	
50	900209	Vinyl Handle	1	
51	94909	In-Line Check Valve	1	
52	9863	90° Elbow 3/4-16 JIC Male x 3/4-16 O-Ring Male	1	
53	93586	45° Elbow 3/4-16 JIC Male x 3/4-16 O-Ring Male	1	

Drill Fill Tube Conveyor — Parts

Hydraulic Components



ITEM	PART NO.	DESCRIPTION	QTY	NOTES
1	91604B	Hydraulic Motor 6 CU. IN.	1	
	91687	Seal Kit for Hydraulic Motor		
2	9390-034	Capscrew 5/16-18UNC x 2	4	Grade 5
3	9404-019	Lock Washer 5/16	4	
4	23693	Handle	1	
5	9392-056	Roll Pin 1/8" Dia. x 3/4" Long	2	
6	9405-076	Flat Washer 3/8	2	
7	95488	Hydraulic Control Valve w/ 3/4-16 Ports	1	
	96918	Seal Kit for Hydraulic Control Valve		
8	9863	90° Elbow 3/4-16 JIC Male x 3/4-16 O-Ring Male	1	
9	23851	Hose 1/2 x 252 (3000 PSI)	2	
10	25205	Control Rod Weldment	1	
11	23701	Coupler 1 1/4" Long	1	
12	94909	In-Line Check Valve w/ 3/4-16 O-Ring Ports	1	

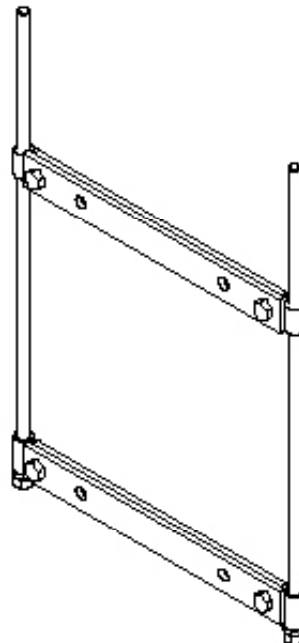
Drill Fill Tube Conveyor — Parts

Hydraulic Components (continued)

ITEM	PART NO.	DESCRIPTION	QTY	NOTES
13	23698	Control Rod 5/16" Dia.	1	
14	TA0-914793-0	Knob	1	
15	9864	Adapter 3/4-16 JIC Male x 3/4-16 O-Ring Male	2	
16	91383	Male Tip Coupling 3/4-16 O-Ring Female Thrd	2	
17	91511	Dust Cap	2	
18	24266	Friction Block	2	
19	9388-005	Carriage Bolt 1/4-20UNC x 1 1/2	1	Grade 5
20	9405-064	Flat Washer 1/4	1	
21	901056	Wing Nut 1/4-20UNC w/Nylon-Insert Lock	1	
22	24414B	Spout Bracket/Holder	1	
23	9390-055	Capscrew 3/8-16UNC x 1	1	Grade 5
24	9928	Locknut 3/8-16UNC	1	Grade 5
25	93586	45° Elbow, 3/4-16JIC M x 3/4-16 O-R ADJ M	1	
26	900209	Vinyl Handle	1	

Conveyor Option

Belt Stretcher (Part No. TA4-114400-0)





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