

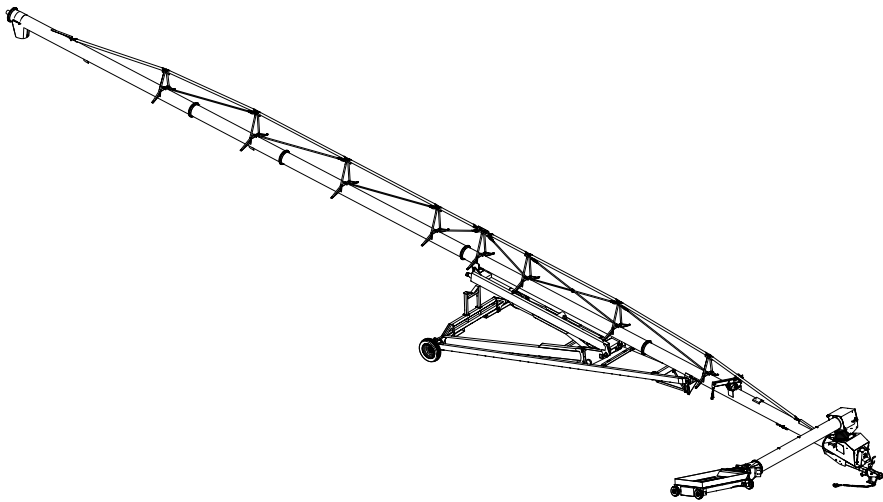


# X13 & HX13 Series

## Portable Grain Auger Assembly Manual

This manual applies to:

Westfield X13, AGI X13, Hutchinson HX13, Mayrath HX13:  
74', 84', 94'



Read this manual before using product. Failure to follow instructions and safety precautions can result in serious injury, death, or property damage. Keep manual for future reference.

Part Number: 30787 R9

Revised: October 2021

Original Instructions

## New in this Manual

The following changes have been made in this revision of the manual:

Description	Section
Added assembly note for the truss tower extension bracket.	<a href="#">Section 4.10 – Auger Tube Truss Assembly (74') on page 35</a>
Revised the top truss tube assemble note.	<a href="#">Section 4.11.2 – Top Truss Tube on page 40</a>
Replaced nuts securing the cross brace to the cross brace shackle.	<a href="#">Section 4.11.3 – Cross Brace on page 42</a> <a href="#">Section 4.19 – Install the Hopper Lift Arm and Winch on page 58</a>
Added assembly note to align the transport stand and the scissor support.	<a href="#">Section 4.13 – Assemble the Auger Frame on page 45</a>
Revised the wheel bolt torque value.	
Updated the valve holder.	<a href="#">Section 4.16 – Connecting Hydraulic Hose to Cylinders on page 52</a>
Modified the manual winch assembly.	<a href="#">Section 4.19 – Install the Hopper Lift Arm and Winch on page 58</a>

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# 1. Introduction

Before assembling, please read this manual. Familiarize yourself with the process and the necessary precautions for efficient and safe assembly of this AGI Portable Grain Auger.

Everyone present at the assembly site is required to be familiar with all safety precautions.

Keep this manual available for frequent reference and review it with new personnel. Call your local distributor or dealer if you need assistance or additional information.

## 2. Safety

### 2.1. Safety Alert Symbol and Signal Words

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This safety alert symbol indicates important safety messages in this manual. When you see this symbol, be alert to the possibility of injury or death, carefully read the message that follows, and inform others.

**Signal Words:** Note the use of the signal words **DANGER**, **WARNING**, **CAUTION**, and **NOTICE** with the safety messages. The appropriate signal word for each message has been selected using the definitions below as a guideline.



Indicates an imminently hazardous situation that, if not avoided, will result in serious injury or death.



Indicates a hazardous situation that, if not avoided, could result in serious injury or death.



Indicates a hazardous situation that, if not avoided, may result in minor or moderate injury.



Indicates a potentially hazardous situation that, if not avoided, may result in property damage.

### 2.2. Follow Safety Instructions

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Read and understand all safety instructions, safety decals, and manuals and follow them when operating or maintaining the equipment.

- Owners must give instructions and review the information initially and annually with all personnel before allowing them in the work area. Untrained users/operators expose themselves and bystanders to possible serious injury or death.
- Use for intended purposes only.
- Do not modify the auger in any way without written permission from the manufacturer and is not covered by the warranty.
- Follow a health and safety program for your worksite. Contact your local occupational health and safety organization for information.
- Follow applicable local codes and regulations.



## 2.3. Rotating Flighting Safety

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### DANGER

- KEEP AWAY from rotating flighting.
- DO NOT remove or modify flighting guards, doors, or covers. Keep in good working order. Have replaced if damaged.
- DO NOT operate the auger without all guards, doors, and covers in place.
- NEVER touch the flighting. Use a stick or other tool to remove an obstruction or clean out.
- Shut off and lock out power to adjust, service, or clean.



## 2.4. Rotating Parts Safety

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### WARNING

- Keep body, hair, and clothing away from rotating pulleys, belts, chains, and sprockets.
- Do not operate with any guard removed or modified. Keep guards in good working order.
- Shut off and lock out power source before inspecting or servicing machine.



## 2.5. Hand Winch Safety

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### WARNING

#### When Equipped:

- Inspect lift cable before using. Replace if frayed or damaged. Make sure lift cable is seated properly in cable sheaves and cable clamps are secure.
- Tighten brake lock by turning winch handle clockwise at least two clicks after lowering the auger.
- Raise the swing hopper fully before towing.
- Do not lubricate winch brake discs.

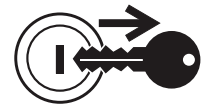
## 2.6. Hydraulic Winch Safety

### **WARNING** When Equipped:

- Keep away from rotating cable drum and winch cable. Do not touch or grab cable while winch is being operated or use hands to guide the cable.
- Inspect cable and cable clamps before using hydraulic winch. Replace cable if frayed or damaged. Tighten cable clamps if necessary.
- Check the cable anchor on the winch drum is tight.
- Confirm hydraulic hoses are in good condition.
- Do not continue to supply power to hydraulic winch after the swing hopper is fully lifted.
- Do not disconnect hydraulic quick couplers when lines are pressurized.
- Make sure lift cable is seated in cable pulley.
- Always keep a minimum of 3 cable wraps on the cable drum.

## 2.7. Drives and Lockout Safety

Inspect the power source(s) before using and know how to shut down in an emergency. Whenever you service or adjust your equipment, make sure you shut down the power source and unplug or remove the key (as applicable) to prevent inadvertent start-up and hazardous energy release. Know the procedure(s) that applies to your equipment from the following power source(s). Ensure that all personnel are clear before turning on power to equipment.



### 2.7.1 PTO Driveline Safety

#### **WARNING** Drive

- Keep body, hair, and clothing away from rotating PTO driveline.
- Make certain the driveline shields telescope and rotate freely on driveline before attaching.
- Make certain the driveline is securely attached at both ends.
- Do not operate auger unless all driveline, tractor, and equipment shields are in place and in good working order.
- Do not exceed the specified operating speed.
- Keep universal joint angles small and equal. Do not exceed maximum recommended length for PTO driveline.
- Engage tractor park brake and/or chock wheels.



#### **Lockout**

- Position all controls in neutral, shut off tractor's engine, and remove key from tractor.
- If removing key is impossible, remove PTO driveline from tractor.

## 2.7.2 Hydraulic Power Safety



### **WARNING** Power Source

- Refer to the rules and regulations applicable to the power source operating your hydraulic drive.
- Do not connect or disconnect hydraulic lines while system is under pressure.
- Keep all hydraulic lines away from moving parts and pinch points.
- Escaping hydraulic fluid under pressure will cause serious injury if it penetrates the skin surface (serious infection or toxic reaction can develop). See a doctor immediately if injured.
- Use metal or wood as a backstop when searching for hydraulic leaks and wear proper hand and eye protection.
- Check all hydraulic components are tight and in good condition. Replace any worn, cut, abraded, flattened, or crimped hoses.
- Clean the connections before connecting to equipment.
- Do not attempt any makeshift repairs to the hydraulic fittings or hoses with tape, clamps, or adhesive. The hydraulic system operates under extremely high pressure; such repairs will fail suddenly and create a hazardous and unsafe condition.

### **Lockout**

- Always place all hydraulic controls in neutral and relieve system pressure before disconnecting or working on hydraulic system.



## 2.8. Tire Safety

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### **WARNING**

Failure to follow proper procedures when mounting a tire on a wheel or rim can produce an explosion that may result in serious injury or death.

- DO NOT attempt to mount a tire unless you have the proper equipment and experience to do the job.
- Have a qualified tire dealer or repair service perform required tire maintenance.
- When replacing worn tires, make sure they meet the original tire specifications. Never undersize the replacement tire.
- DO NOT weld to the tire rim with the tire mounted on the rim. This action may cause an explosion which could result in serious injury or death.
- Inflate tires to the manufacturer's recommended pressure.
- Tires should not be operated at speeds higher than their rated speed.
- Keep wheel lug nuts tightened to manufacturer's recommendations.
- Never reinflate a tire that has been run flat or seriously under-inflated without removing the tire from the wheel. Have the tire and wheel closely inspected for damage before remounting.



## 2.9. Personal Protective Equipment

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The following Personal Protective Equipment (PPE) should be worn when operating or maintaining the equipment.

### **Safety Glasses**

- Wear safety glasses at all times to protect eyes from debris.



### **Coveralls**

- Wear coveralls to protect skin.



### **Hard Hat**

- Wear a hard hat to help protect your head.



### Steel-Toe Boots

- Wear steel-toe boots to protect feet from falling debris.



### Work Gloves

- Wear work gloves to protect your hands from sharp and rough edges.



### Dust Mask

- Wear a dust mask to prevent breathing potentially harmful dust.



### Hearing Protection

- Wear ear protection to prevent hearing damage.



## 2.10. Safety Equipment

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The following safety equipment should be kept on site.

### Fire Extinguisher

- Provide a fire extinguisher for use in case of an accident. Store in a highly visible and accessible place.



### First-Aid Kit

- Have a properly-stocked first-aid kit available for use should the need arise, and know how to use it.



## 2.11. Safety Decals

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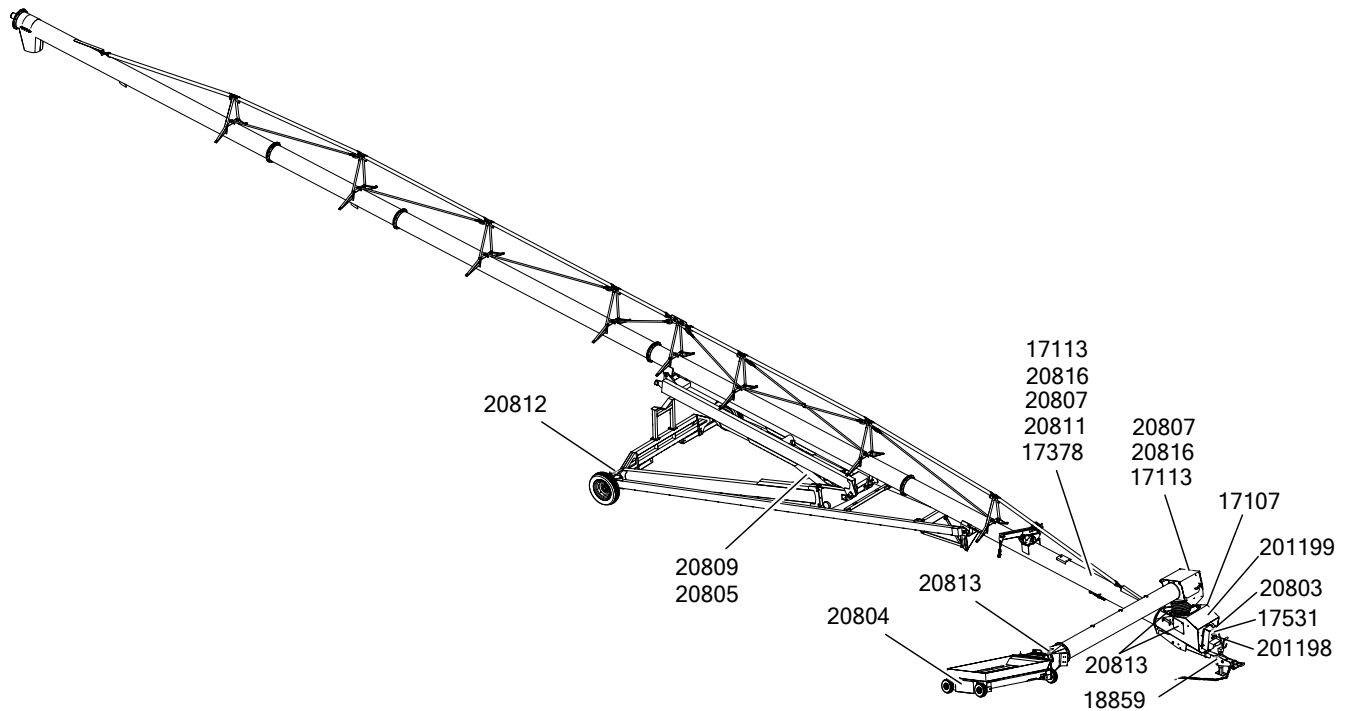
- Keep safety decals clean and legible at all times.
- Replace safety decals that are missing or have become illegible. See decal location figures that follow.
- Replaced parts must display the same decal(s) as the original part.
- Replacement safety decals are available **free of charge** from your distributor, dealer, or factory as applicable.

### 2.11.1 Decal Installation/Replacement

1. Decal area must be clean and dry, with a temperature above 50°F (10°C).
2. Decide on the exact position before you remove the backing paper.
3. Align the decal over the specified area and carefully press the small portion with the exposed sticky backing in place.
4. Slowly peel back the remaining paper and carefully smooth the remaining portion of the decal in place.
5. Small air pockets can be pierced with a pin and smoothed out using the decal backing paper.

### 2.11.2 Safety Decal Locations and Details

Replicas of the safety decals that are attached to the auger and their messages are shown in the figure(s) that follow. Safe operation and use of the auger requires that you familiarize yourself with the various safety decals and the areas or particular functions that the decals apply to, as well as the safety precautions that must be taken to avoid serious injury, death, or damage.





**Table 1. Safety Decals**



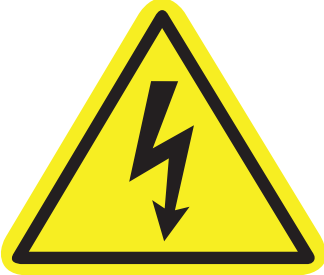
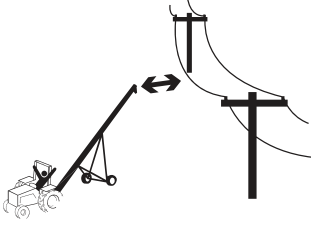







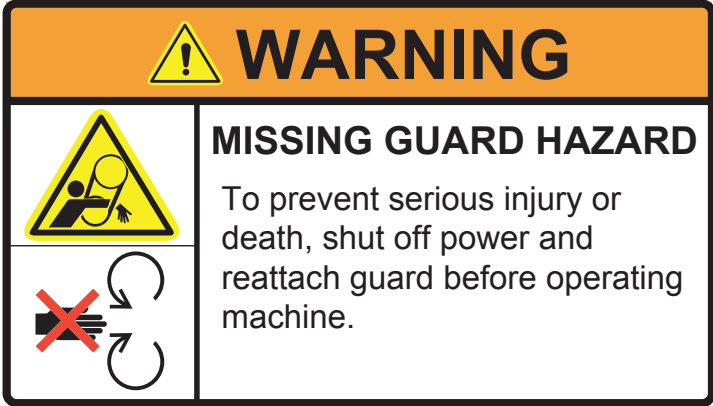

Part Number	Description
20813	<div data-bbox="360 275 1070 1287">  <p><b>ROTATING FLIGHTING HAZARD</b></p> <p>To prevent death or serious injury:</p> <ul style="list-style-type: none"> <li>• KEEP AWAY from rotating auger flighting.</li> <li>• DO NOT remove or modify auger flighting guards, doors, or covers. Keep in good working order. Have replaced if damaged.</li> <li>• DO NOT operate the auger without all guards, doors, and covers in place.</li> <li>• NEVER touch the auger flighting. Use a stick or other tool to remove an obstruction or clean out.</li> <li>• Shut off and lock out power to adjust, service, or clean.</li> </ul> </div>


Table 1 Safety Decals (continued)

Part Number	Description
20816	<div style="border: 1px solid black; padding: 10px;"> <div style="background-color: red; color: white; text-align: center; padding: 5px;">  <b>DANGER</b> </div> <div style="display: flex; justify-content: space-around; align-items: center; margin-top: 10px;">   </div> <div style="text-align: center; margin-top: 10px;"> <b>ELECTROCUTION HAZARD</b>            To prevent death or serious injury:           <ul style="list-style-type: none"> <li>• When operating or moving, keep equipment away from overhead power lines and devices.</li> <li>• Fully lower equipment before moving.</li> </ul>           This equipment is not insulated.            Electrocution can occur without direct contact.         </div> </div>
201198	<div style="border: 1px solid black; padding: 10px;"> <div style="display: flex; justify-content: space-between; align-items: center;"> <div style="text-align: center;">   </div> <div style="background-color: orange; color: white; text-align: center; padding: 5px;">  <b>WARNING</b> </div> </div> <div style="margin-top: 10px;"> <b>ENTANGLEMENT HAZARD</b>            To prevent serious injury or death:           <ul style="list-style-type: none"> <li>• Keep body, hair, and clothing away from rotating pulleys, belts, chains, and sprockets.</li> <li>• Do not operate with any guard removed or modified. Keep guards in good working order.</li> <li>• Shut off and lock out power source before inspecting or servicing machine.</li> </ul> </div> </div>
201199	<div style="display: flex; justify-content: space-between;"> <div style="width: 30%;"> <div style="text-align: center;">   </div> </div> <div style="width: 35%;"> <div style="background-color: red; color: white; text-align: center; padding: 5px;">  <b>DANGER</b> </div> <div style="margin-top: 5px;"> <b>ROTATING PTO DRIVELINE</b>            To prevent serious injury or death:           <ul style="list-style-type: none"> <li>• Keep body, hair, and clothing away from rotating PTO driveline.</li> <li>• Do not operate equipment unless all driveline, tractor, and equipment shields are in place and in good working order.</li> <li>• Make certain the driveline shields turn freely on driveline.</li> <li>• Make certain the driveline is securely attached at both ends.</li> <li>• Do not exceed specified operating speed (see operator's manual).</li> <li>• Keep u-joint angles small and equal. Do not exceed maximum recommended length for PTO driveline.</li> </ul> </div> </div> <div style="width: 30%;"> <div style="background-color: red; color: white; text-align: center; padding: 5px;">  <b>DANGER</b> </div> <div style="margin-top: 5px;"> <b>ROTATING FLIGHTING INSIDE</b>            To prevent serious injury or death, do not operate auger unless swing-hopper is securely attached to boot.         </div> <div style="background-color: blue; color: white; text-align: center; padding: 5px; margin-top: 10px;"> <b>NOTICE</b> </div> <div style="margin-top: 5px;">           To prevent damage, wheels must be free to move when raising or lowering equipment.             When equipment is positioned, chock all wheels.         </div> </div> </div>

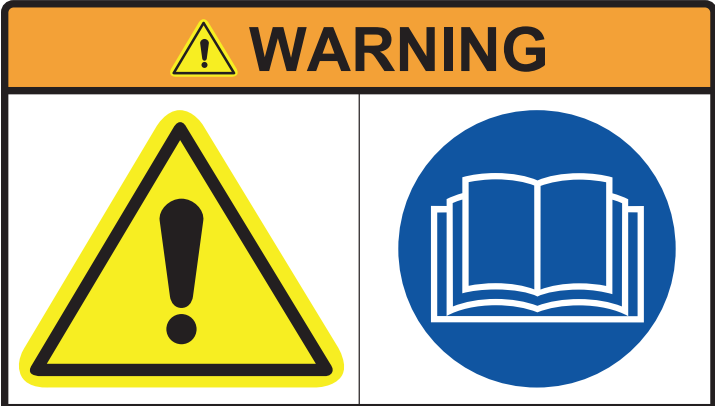
**Table 1 Safety Decals (continued)**

Part Number	Description
20803	<div data-bbox="360 277 1068 680">  </div>
20804	<div data-bbox="360 730 1068 1562">  </div>



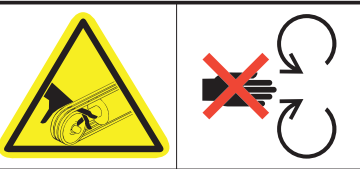
**Table 1 Safety Decals (continued)**

Part Number	Description
20805	<div data-bbox="360 275 1073 1081">  <p><b>WARNING</b></p> <p><b>HIGH PRESSURE FLUID HAZARD</b></p> <p>Hydraulic fluid can cause serious injury if it penetrates the skin. If it does, see a doctor immediately.</p> <ul style="list-style-type: none"> <li>• Relieve system pressure before repairing, adjusting or disconnecting.</li> <li>• Wear proper hand and eye protection when searching for leaks. Use wood or cardboard instead of hands.</li> </ul> </div>

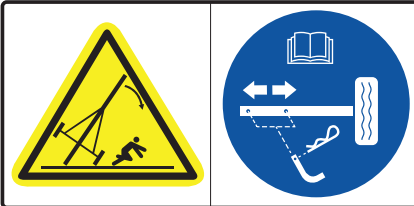
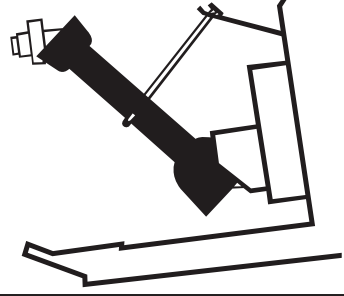
**Table 1 Safety Decals (continued)**

Part Number	Description
20807	<div data-bbox="360 275 1070 678">  </div> <p data-bbox="391 699 911 737">To prevent serious injury or death:</p> <ul data-bbox="391 758 1036 1612" style="list-style-type: none"> <li>• Read and understand the manual before assembling, operating, or maintaining the equipment.</li> <li>• Only trained personnel may assemble, operate, or maintain the equipment.</li> <li>• Children and untrained personnel must be kept outside of the work area.</li> <li>• Do not modify the equipment. Keep in good working order.</li> <li>• If the manual, guards, or decals are missing or damaged, contact factory or representative for free replacements.</li> <li>• Lock out power before performing maintenance.</li> <li>• To prevent equipment collapse or upending, support equipment tube while disassembling certain components.</li> <li>• Follow grain storage structure manufacturer's warnings when loading and unloading.</li> <li>• Electric motors must be grounded. Disconnect power before resetting overloads.</li> </ul>

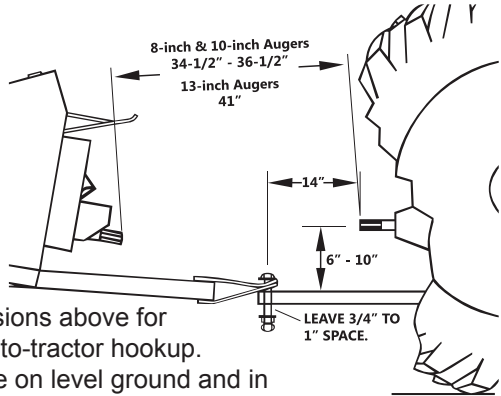

**Table 1 Safety Decals (continued)**

Part Number	Description
20811	<div>  <p><b>WARNING</b></p> <p><b>UPENDING HAZARD</b></p> <p>To prevent death or serious injury:</p> <ul style="list-style-type: none"> <li>• Anchor intake end and/or support discharge end to prevent upending.</li> <li>• Intake end must always have downward weight. Do not release until attached to tow bar or resting on ground.</li> <li>• Do not raise intake end above tow bar height.</li> <li>• Empty tube and fully lower before moving.</li> </ul> </div>
17113	<div>  <p><b>WARNING</b></p> <p><b>TRANSPORT HAZARD</b></p> <p>To prevent serious injury or death:</p> <ul style="list-style-type: none"> <li>• Securely attach equipment to vehicle with correct pin and safety chains.</li> <li>• Use a tow vehicle to move equipment.</li> </ul> </div>
20809	<div>  <p><b>WARNING</b></p> <p>To prevent serious injury or death:</p> <ul style="list-style-type: none"> <li>• Keep away from rotating cable sheaves and lift cables.</li> <li>• Inspect lift cable periodically; replace if damaged.</li> <li>• Inspect cable clamps periodically; tighten if necessary.</li> </ul> </div>

**Table 1 Safety Decals (continued)**

Part Number	Description
20812	 <div> <p><b>WARNING</b></p> <p><b>ROLLOVER / TRANSPORT HAZARD</b></p> <p>To prevent serious injury or death:</p> <ul style="list-style-type: none"> <li>• Fully extend axles before raising tube.</li> <li>• Retract axles before transporting.</li> </ul> </div>
17107	<div> <p><b>CAUTION</b></p> <p>To prevent personal injury or damage to equipment, close valve in lift cylinder hydraulic line after raising equipment into position.</p> </div>
18859	<div> <p><b>NOTICE</b></p>  <p>Disconnect PTO driveline from tractor before moving equipment.</p> <p>If attached, driveline will bottom out, severely damaging the CV u-joint and lower flight shaft.</p> <p>See manual for maintenance.</p> </div>

**Table 1 Safety Decals (continued)**

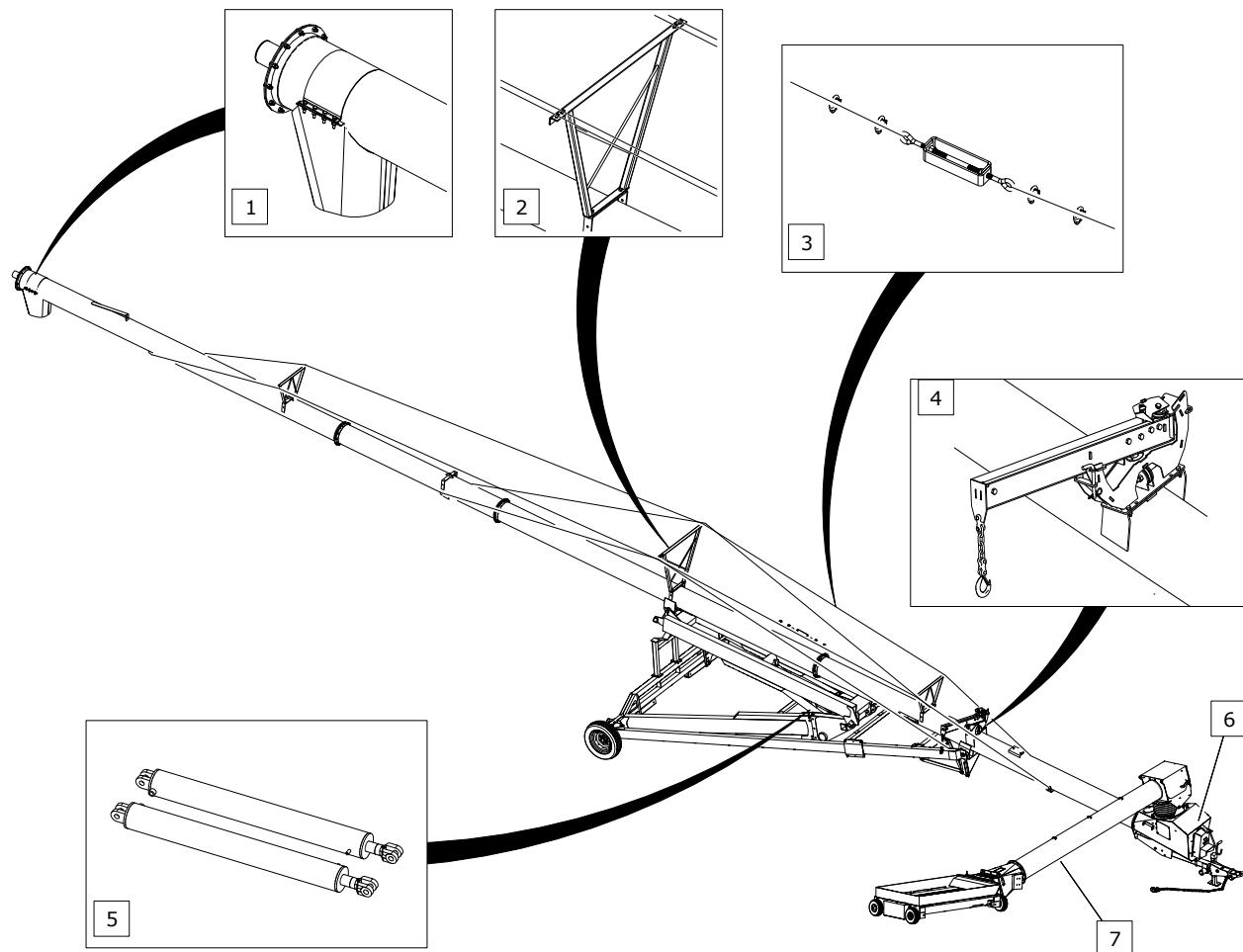
Part Number	Description
17531	<div data-bbox="358 275 1073 877"> <p style="text-align: center;"><b>NOTICE</b></p>  <p>To prevent damage during auger-to-tractor hookup:</p> <ul style="list-style-type: none"> <li>• Follow dimensions above for correct auger-to-tractor hookup.</li> <li>• Auger must be on level ground and in full down position when measuring.</li> <li>• Adjust drawbar as needed.</li> </ul> <p>See operation manual for complete details. </p> </div>
17378	<div data-bbox="358 930 1068 1444"> <p style="text-align: center;"><b>NOTICE</b></p> <p>This equipment is not intended for transport on public roads. If it must be moved, check local regulations.</p> <p>To avoid damaging the equipment:</p> <ul style="list-style-type: none"> <li>• Be careful when turning corners.</li> <li>• Watch for low overhead objects.</li> <li>• Retract axles before transporting unit.</li> </ul> </div>



# 3. Features

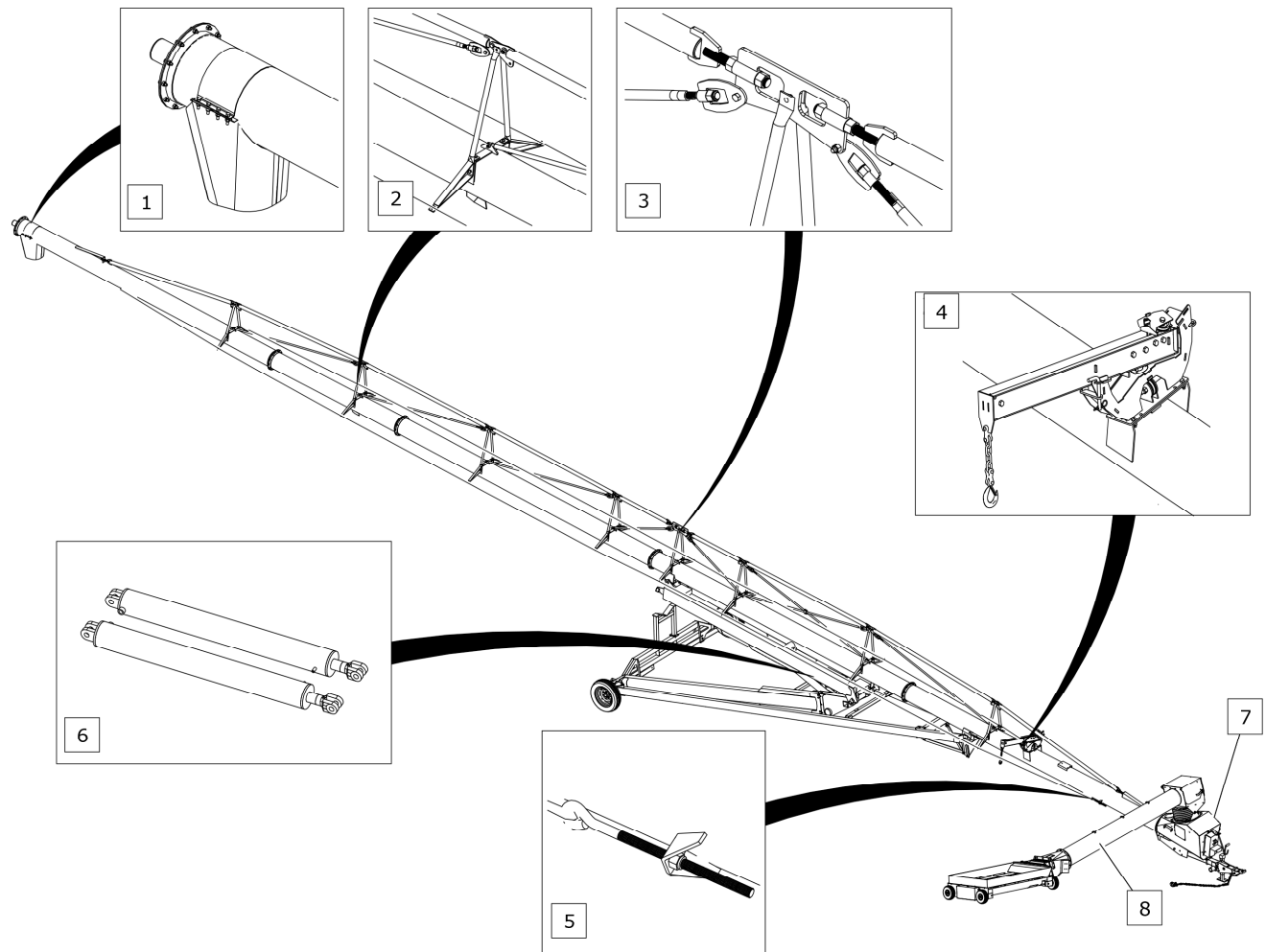
Read this section to familiarize yourself with the basic component names and functions of the auger.

## 74' Model Features



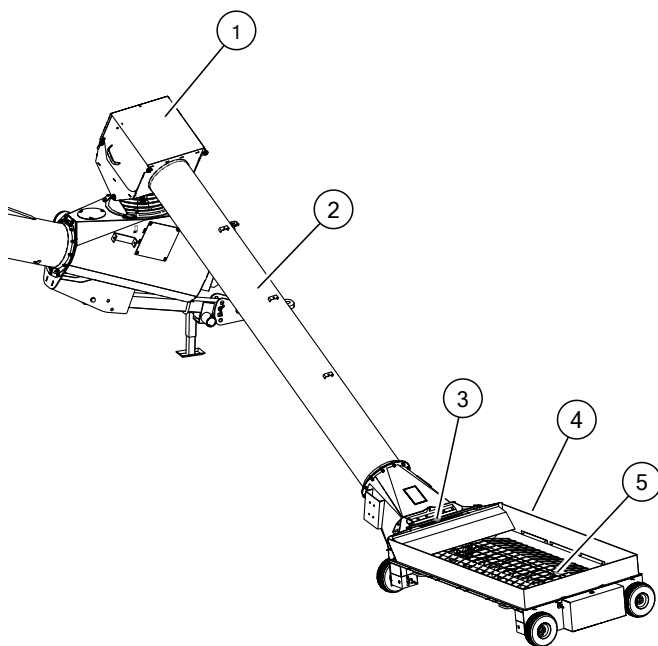
1	Discharge Spout	5	Hydraulic Cylinders
2	Truss Tower	6	Boot
3	Cable Adjustment	7	Swing
4	Lift Arm		

84'/94' Model Features



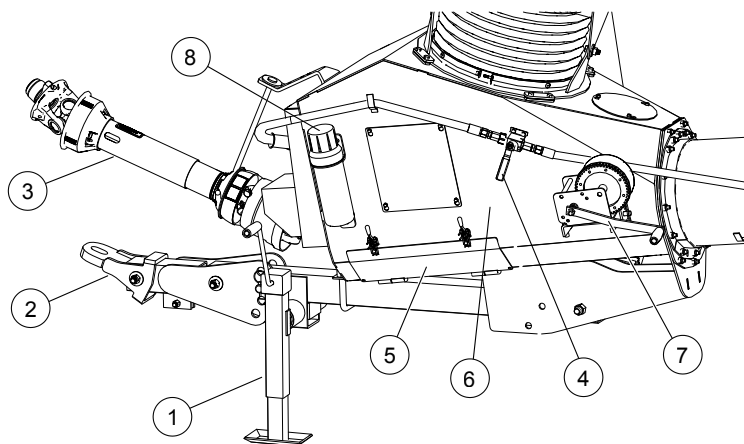
1	Discharge Spout	5	Cable Adjustment
2	Truss Tower	6	Hydraulic Cylinders
3	Truss Adjustment	7	Boot
4	Lift Arm	8	Swing

### Swing Features



1	Spout Head
2	Swing Arm
3	Maintenance Hatch
4	Hopper
5	Flights and Flight Guarding

### Grain Transfer Boot Features



1	Hitch Jack
2	Hitch
3	PTO Driveline
4	Ball Valve
5	Clean-Out Hatch
6	Grain Transfer Boot
7	Manual Winch (Hopper)
8	Manual Holder

# 4. Assembly



Before continuing, ensure you have completely read and understood this manual's Safety section, in addition to the safety information in the section(s) below.

## 4.1. Assembly Safety

---

### WARNING

- Do not take chances with safety. The components can be large, heavy, and hard to handle. Always use the proper tools, rated lifting equipment, and lifting points for the job.
- Carry out assembly in a large open area with a level surface.
- Always have two or more people assembling the auger.
- Make sure you have sufficient lighting for the work area.
- Tighten all fasteners according to their specifications. Do not replace or substitute bolts, nuts, or other hardware that is of lesser quality than the hardware supplied by the manufacturer.

## 4.2. Check Shipment

---

Unload the auger parts at the assembly site and compare the packing slip to the shipment. Ensure that all items have arrived and that none are damaged. Take pictures of shipments prior to or just after unloading if there are any damaged parts.

Report missing or damaged parts immediately to ensure that proper credit is received from AGI or your representative, and to ensure that any missing parts can be shipped quickly to avoid holding up the assembly process.

### **Important**

Do not assemble or install damaged components.

## 4.3. Before You Begin

---

Before you assemble the auger:

- Familiarize yourself with all the sub-assemblies, components, and hardware that make up the equipment.
- Have all parts and components on hand, and arrange them for easy access.
- Separate the hardware (bolts, nuts, etc.) and lay them out into groups for easier identification during assembly.
- If assembling inside, confirm the ceiling and door width/height provide enough clearance when installing the undercarriage and to remove the auger from the building.
- Ensure there is adequate space to remove the assembled auger from the assembly area.

## 4.4. Arrange Tubes and Apply Model Decals

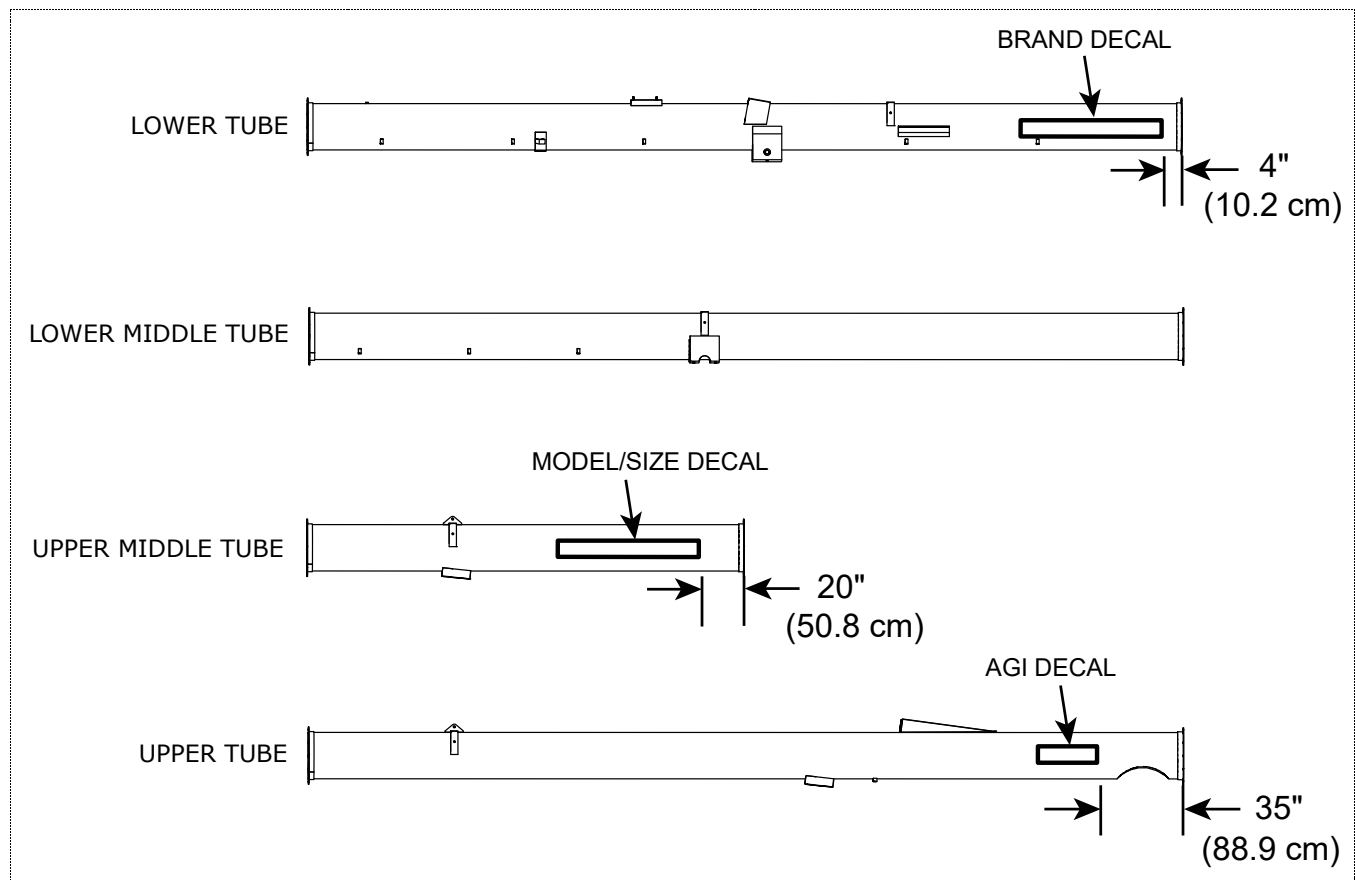
### Identify and Arrange the Auger Tube Sections

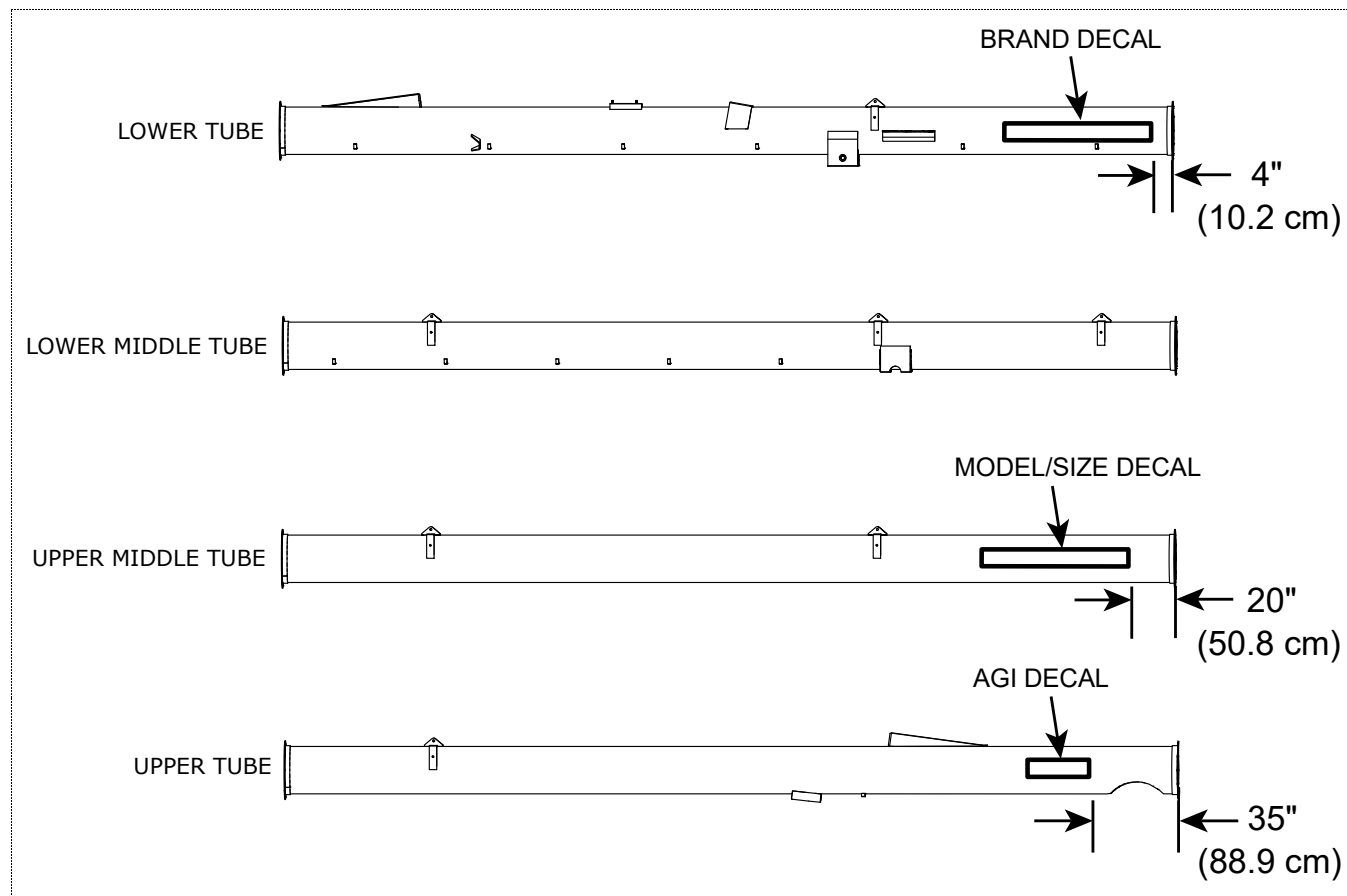
1. Align tube sections on a series of support stands, placing a support stand at the end of each tube (see the figures below for correct tube identification and positioning).
2. As tubes sections are added, make sure that support stands are at equal heights across all tubes to ensure that tubes are level with each other. Otherwise, use some form of shim to keep the tubes level across all of the support stands.

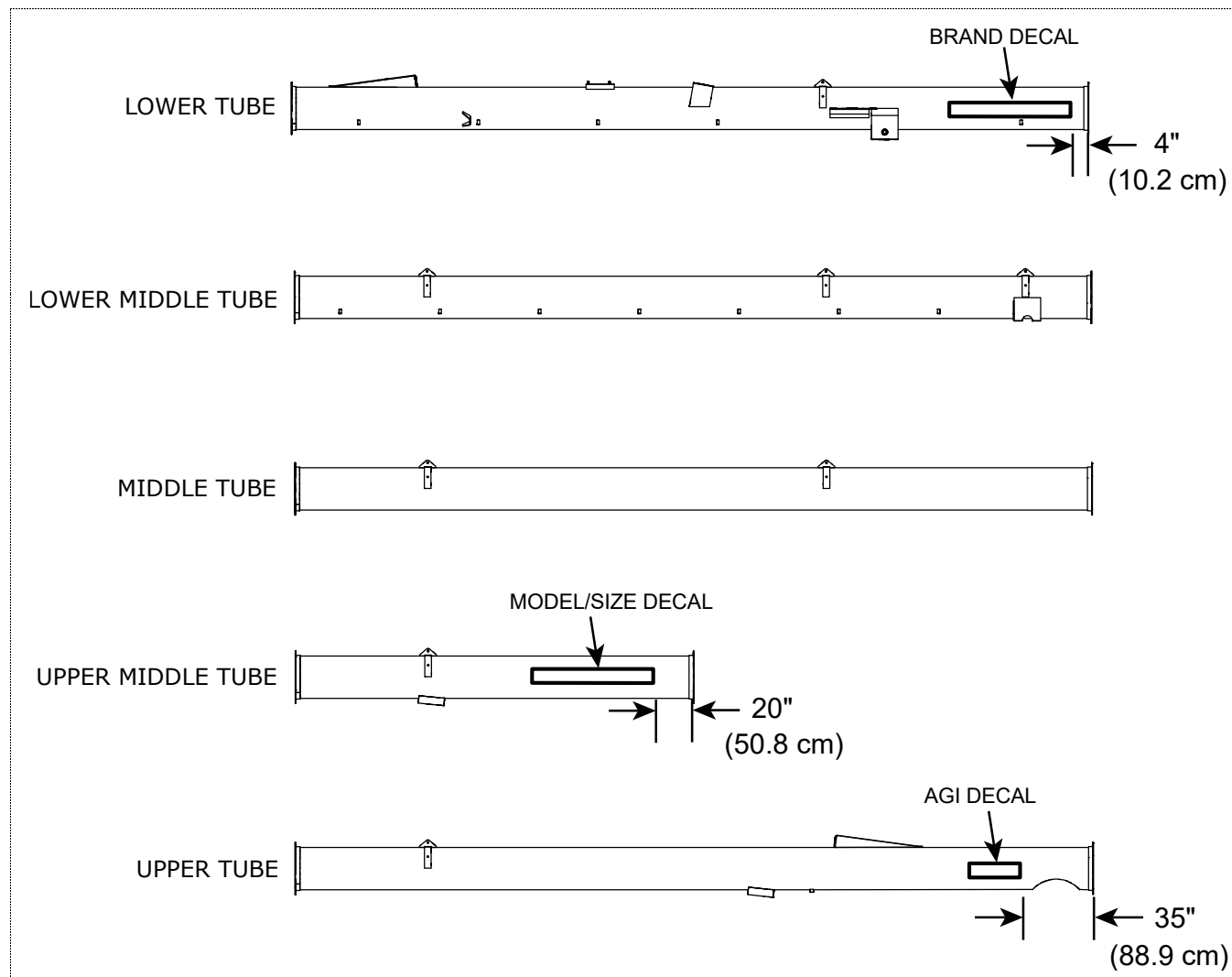
#### Important

Strap tubes to the support stands to prevent the tubes from rolling off the stands.

**Figure 1. 74' Auger Tube Sections**



**Figure 2. 84' Auger Tube Sections**

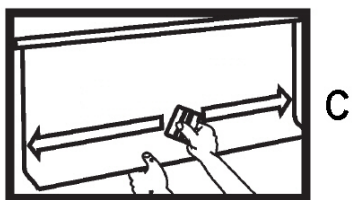
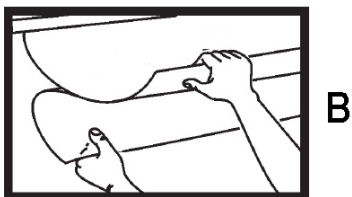
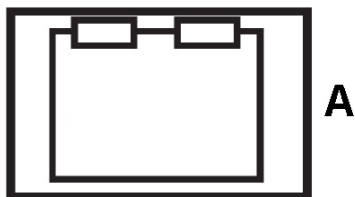
**Figure 3. 94' Auger Tube Sections**

## Apply the Logo and Model Decals on the Auger Tubes

### Important

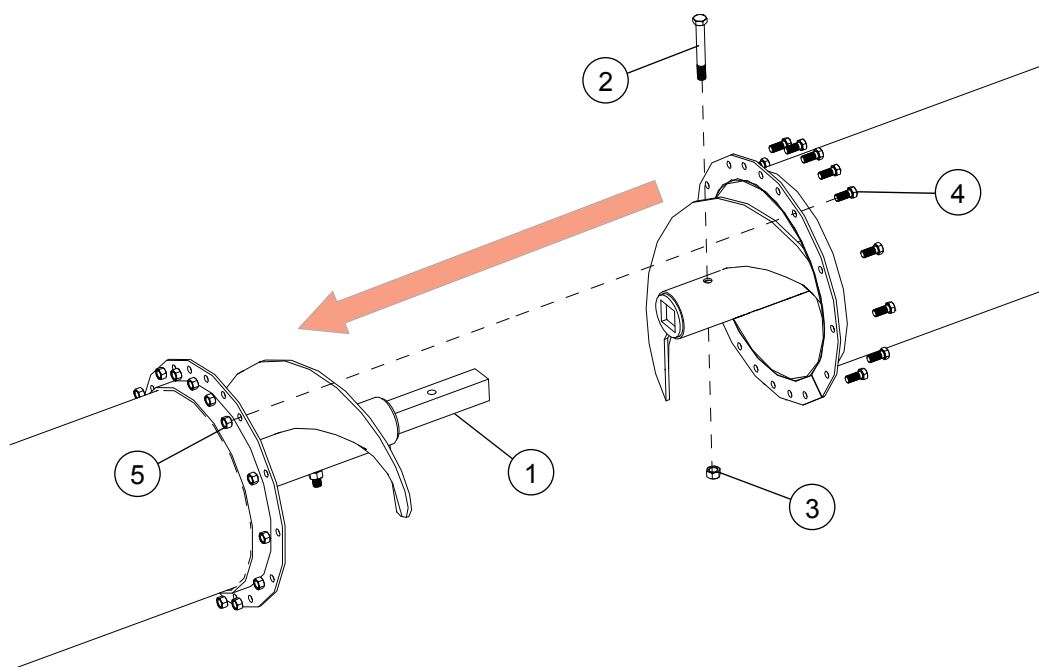
Do not cover any existing safety or instruction decals with the model decals.

1. Prepare surface by cleaning thoroughly with soap and water. Surface must be clean and free of dirt, grime, rust and oil. To clean oily surface, wipe with clean cloth and solvent cleaner or isopropyl alcohol.
2. Apply decals to both sides of the auger tube. Center decals vertically on the tube and apply masking tape along the top, creating a gate hinge. Figure A demonstrates.
3. Remove backing paper from decal 6" (15.2 cm) from the top and use the squeegee to adhere decal to the tube, as seen in Figure B. Start at the top center of the decal and work your way outward both left and right using overlapping strokes.
4. As you work your way down the decal, peel back the backing paper 6" (15.2 cm) at a time. Repeat Step 3 until the entire decal has been applied to the tube. See Figure C as an example.
5. Once the entire decal has been properly adhered to the tube, remove tape hinge from front of decal. Remove the front application tape at a sharp 180° angle.
6. Inspect the entire decal for air pockets; if found, remove them by punching a tiny hole with a pin and then squeegee the surface flat.
7. As a final process, squeegee the corners and edges of the decal to ensure proper adhesion and to prevent premature peeling.





## 4.5. Connect Auger Tubes



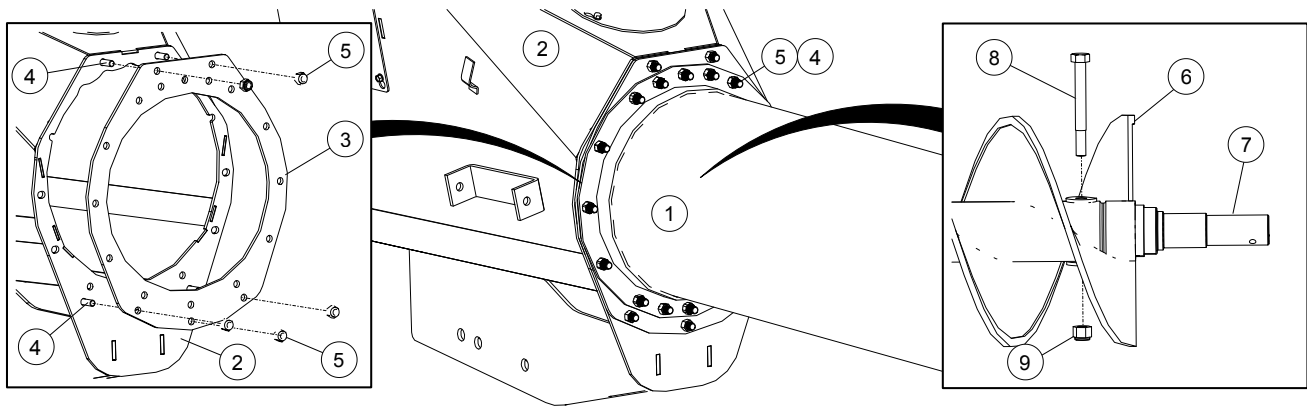
### Assembly Notes:

- Always strap tubes to the support stands to prevent the tubes from rolling off the stands.
- Align flighting to ensure a continual spiral of auger surface.

1	Flight Connecting Shaft	4	Bolt, 7/16" x 1-1/4"
2	Bolt, 1/2" x 4"	5	Lock Nut, 7/16"
3	Lock Nut, 1/2"		

# 4.6. Install the Boot on the Auger Tube

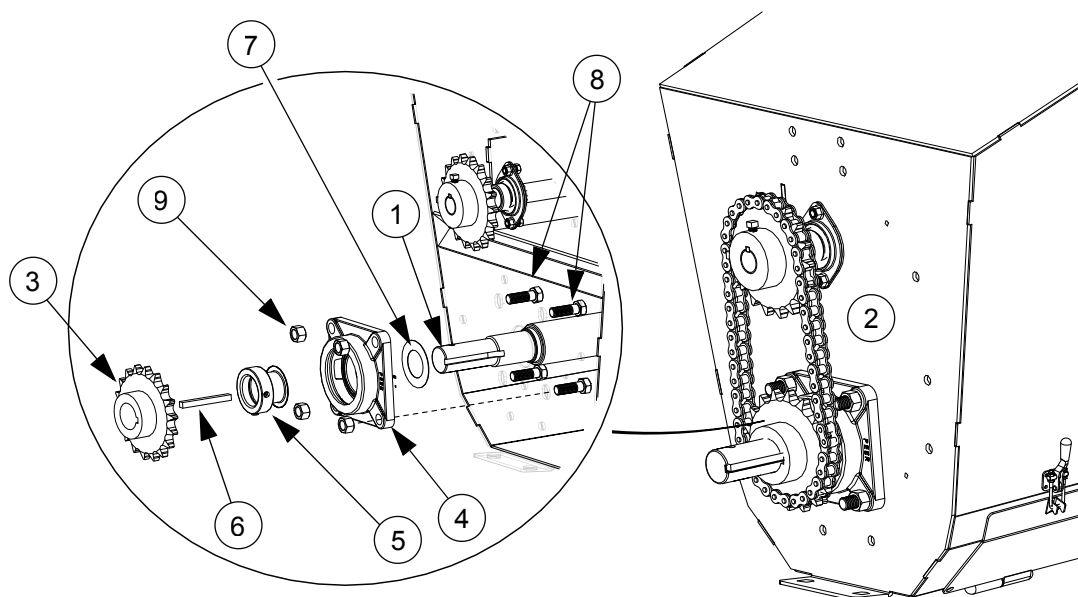
**⚠ WARNING** Components are heavy and create a crushing hazard if improperly handled. Be sure to use proper hoisting equipment and procedures, and ensure lifting apparatus is secure. Lock out the lifting apparatus before working around or under the raised components; failure to do so may cause serious personal injury.



**Assembly Notes:**

- The boot gearbox is sent from the factory filled half way with 2.5 L (0.66 gal) EP90 gear oil. Before further assembly, check oil level to make certain the gearbox is half full. Add oil if necessary. Do not use grease.
- Position the boot-tube attach plate with flat edge facing up.
- Ensure that the boot flighting is fastened to the lower tube flighting shaft with a 5/8" x 5-1/2" bolt and lock nut before proceeding.
- Slide boot flight into the boot first, then slide the entire apparatus onto the lower flight to install.

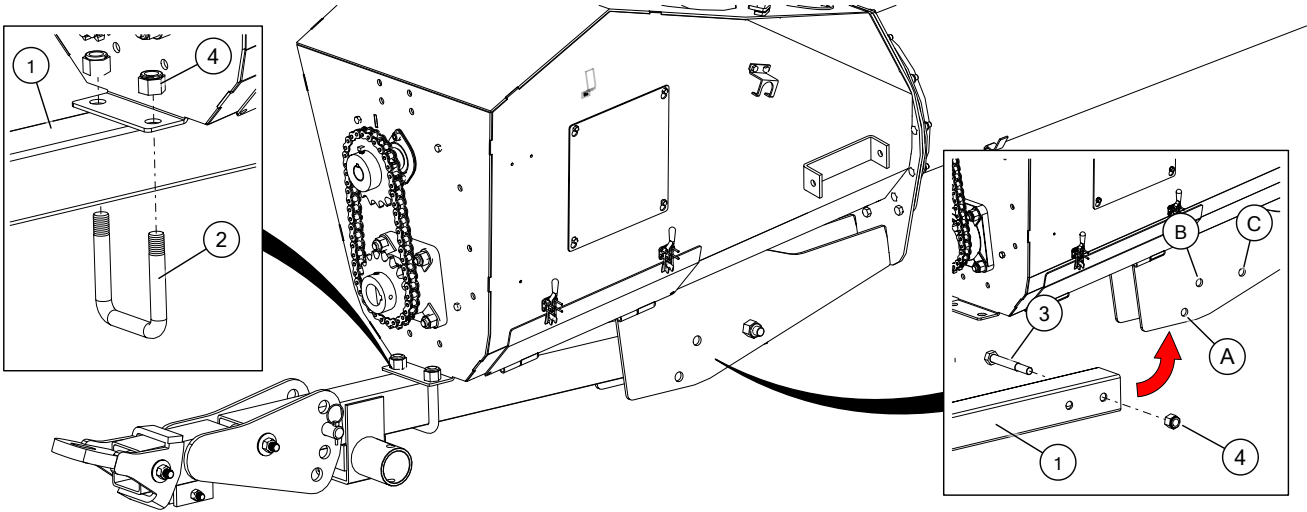
1	Lower Tube	6	Boot Flighting
2	Boot Assembly	7	Lower Tube Flighting
3	Boot-Tube Attach Plate	8	Bolt, 5/8" x 5-1/2"
4	Bolt, 7/16" x 1-1/4"	9	Lock Nut, 5/8"
5	Lock Nut, 7/16"		

**Assembly Notes:**

- Ensure that the flight shaft shoulder is seated against washer and bearing.
- Position the lock collar tightly against the bearing, then tighten the collar set screw.
- Align lower sprocket face with upper sprocket face using a straight edge, then tighten set screws.
- It is recommended you use a thread locking compound that meets or exceeds Loctite Blue© on all set screws.
- To prevent premature failure of the lower bearing, ensure it has been assembled in the correct sequence.
- Push the flighting shaft down until the chain is tensioned to within about 1/4" (0.6 cm) deflection, then tighten the four bolts on the bottom bearing. Oil the chain lightly.

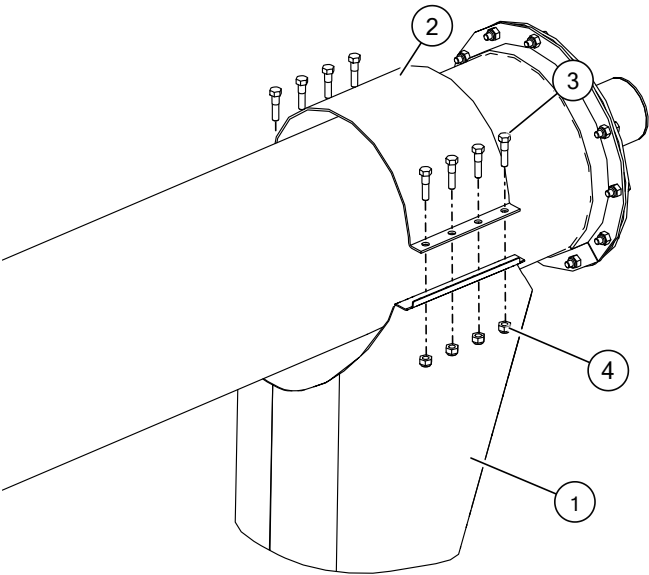
1	Lower Tube Flighting	6	Square Key, 3/8" x 3-3/8"
2	Roller Chain, #80 x 37P (Heavy)	7	Rim Washer, 2"
3	Sprocket, 80B18 x 1-3/4	8	Bolt, 5/8" x 2"
4	Bearing	9	Lock Nut, 5/8"
5	Lock Collar		

# 4.7. Install the Boot Tow Bar



1	Tow Bar	A	Reducer/Reverser
2	U-Bolt, 3/4" x 3-1/2" x 5"	B	Reverser
3	Bolt, 3/4" x 5-1/2"	C	Regular
4	Lock Nut, 3/4"		

# 4.8. Install the Spout



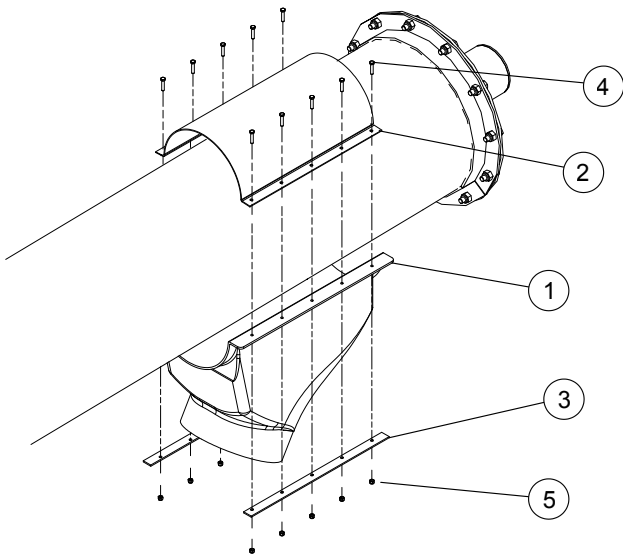
**Assembly Note:**

- Apply caulking to seal the seam of spout to tube.

1	Spout
2	Wide Half Clamp
3	Bolt, 7/16" x 1-3/4"
4	Lock Nut, 7/16"

## Plastic Spout (Optional)

This section only applies to the HX13 Swing-Away Augers.



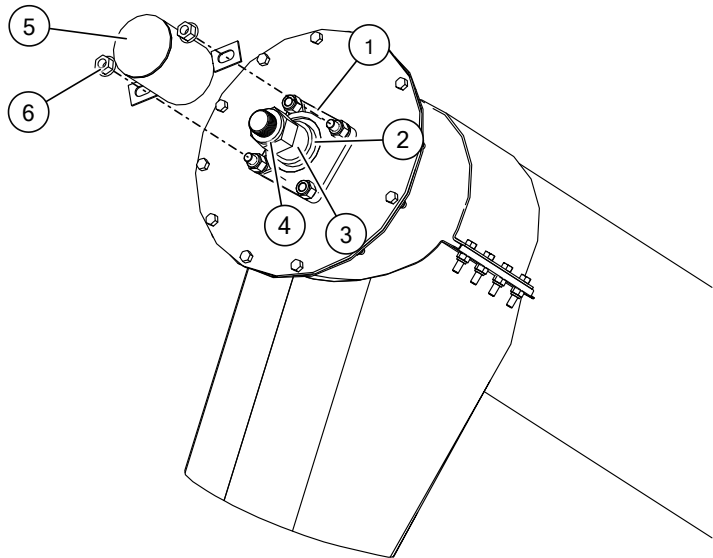
**Assembly Note:**

- Apply caulking to seal the seam of spout to tube.

1	Plastic Spout, 60 deg
2	Back Band
3	Reinforcement Bar
4	Bolt, 7/16" x 1-3/4"
5	Lock Nut, 7/16"

# 4.9. Set the Thrust Adjuster

- 1. Remove the upper bearing lock collar (if necessary). Ensure that flight shaft slides freely in/out of bearing.
- 2. Slide the lock collar and bushing onto the shaft and attach the 1-1/2" nut.
- 3. Turn the nut until it is snug against the bushing, then turn it so that the shaft moves an additional 1/4" (0.6 cm) away from the top plate.
- 4. Secure the lock collar and tighten the set screw.
- 5. Install the cover over the two longer 5/8" bolts. Secure with two 5/8" whiz-nuts.

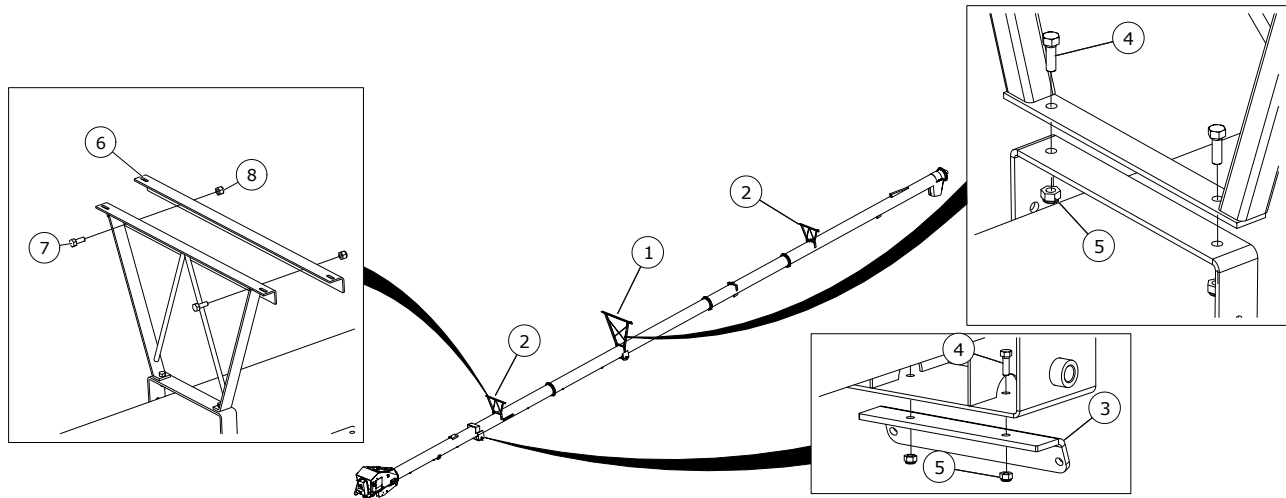


1	Bearing
2	Lock Collar
3	Bushing
4	Nut, 1-1/2"
5	Cover
6	Whiz Nut, 5/8"

## 4.10. Auger Tube Truss Assembly (74')

This section applies to the 13-74 Swing-Away Augers.

### Install the Cable Bridges



#### Assembly Note:

- The truss tower extension bracket is not required for augers with the x-tend hopper and gulp hopper.

1	High Truss Tower	5	Lock Nut, 7/16"
2	Low Truss Tower	6	Truss Tower Extension Adapter Bracket
3	Truss Cable Attach Bracket	7	Bolt, 1/2" x 1-1/4"
4	Bolt, 7/16" x 1-1/4"	8	Lock Nut, 1/2"

### Install the Truss Cables

#### Note

13-74 truss cables should be tightened to provide a 1" (2.5 cm) upward bow in the auger tube, as measured at the auger tube spout end.

- Ensure that the tube is supported by at least 3 stands (one at each end and one in the middle).
- Shim the stands (use wood blocks) at the spout end approximately 7" (17.8 cm) higher than the other stands to provide the required curve.
- For the first (short) cable run, thread truss cable through eyebolts and double-back a minimum of 9-1/2" (24 cm) of cable. Secure the cable in place by installing and tightening two 3/8" cable clamps.
  - Apply first clamp 8-1/2" (21.6 cm) from the cable loop with the u-bolt over the dead end. The live end rests in clamp saddle. Turn nuts firmly but do not tighten.
  - Apply second clamp as close to the loop as possible in the same orientation as the first clamp. The live end rests in clamp saddle. Apply tension and turn nuts firmly but do not tighten.
- Connect one of the eyebolts to one side of the truss cable attach bracket using a 1/2" lock nut threaded fully onto the eyebolt shaft, but not further than 1/4" (0.6 cm).
- Pull the cable:

- over the high (middle) truss tower,
  - under the tube and around the middle cable return bracket,
  - back over the middle cable bridge,
  - and back to the truss cable attach bracket
6. Place the second eyebolt into the truss cable attach bracket and thread on a 1/2" lock nut a short way.
  7. Thread the truss cable through the eyebolts and pull out all slack. Ensure a minimum turn back length of 9-1/2" (24 cm) of cable. Secure the cable in place by installing and tightening two 3/8" cable clamps.
    - a. Apply first clamp 8-1/2" (21.6 cm) from the cable loop with the u-bolt over the dead end. The live end rests in clamp saddle. Turn nuts firmly but do not tighten.
    - b. Apply second clamp as close to the loop as possible in the same orientation as the first clamp. The live end rests in clamp saddle. Apply tension and turn nuts firmly but do not tighten.
  8. Thread the 36' cable through the cable guide on the underside of the lower tube, and pull the cable through until there is an equal length of cable on each side of the tube.
  9. Starting at the lower tube, pull the 85'6" cable:
    - over the low and high truss towers (fasten loosely with 5/16" cable clamps)
    - under the tube and around the cable return bracket at the upper tube (fasten loosely with a 5/16" cable clamp)
    - back over the truss towers on the opposite side (fasten loosely with 5/16" cable clamps), providing equal lengths of cable on both sides of the tube.

**Important**

The 85' 6" cable must be installed on the outside of the high (middle) truss tower.

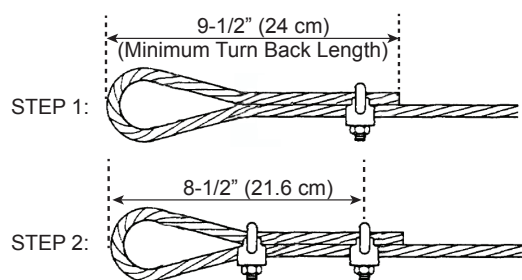
10. Insert an eyebolt into each side of the turnbuckles, and secure by threading on a 1/2" lock nut fully onto the eyebolt shaft, but not further than 1/4" (0.6 cm).
11. Thread the truss cable through the eyebolts and pull out all slack. Ensure a minimum turn back length of 9-1/2" (24 cm) of cable. Secure the cable in place by installing and tightening two 3/8" cable clamps.
  - a. Apply first clamp 8-1/2" (21.6 cm) from the cable loop with the u-bolt over the dead end. The live end rests in clamp saddle. Turn nuts firmly but do not tighten.
  - b. Apply second clamp as close to the loop as possible in the same orientation as the first clamp. The live end rests in clamp saddle. Apply tension and turn nuts firmly but do not tighten.

**Important**

Truss cables must be tightened to provide a 1" (2.5 cm) upward bow on the spout end. Blocks and shims can be used to elevate the spout to help create the required bow while tightening the truss cables, but the 1" (2.5 cm) bow is measured with the spout end unsupported.

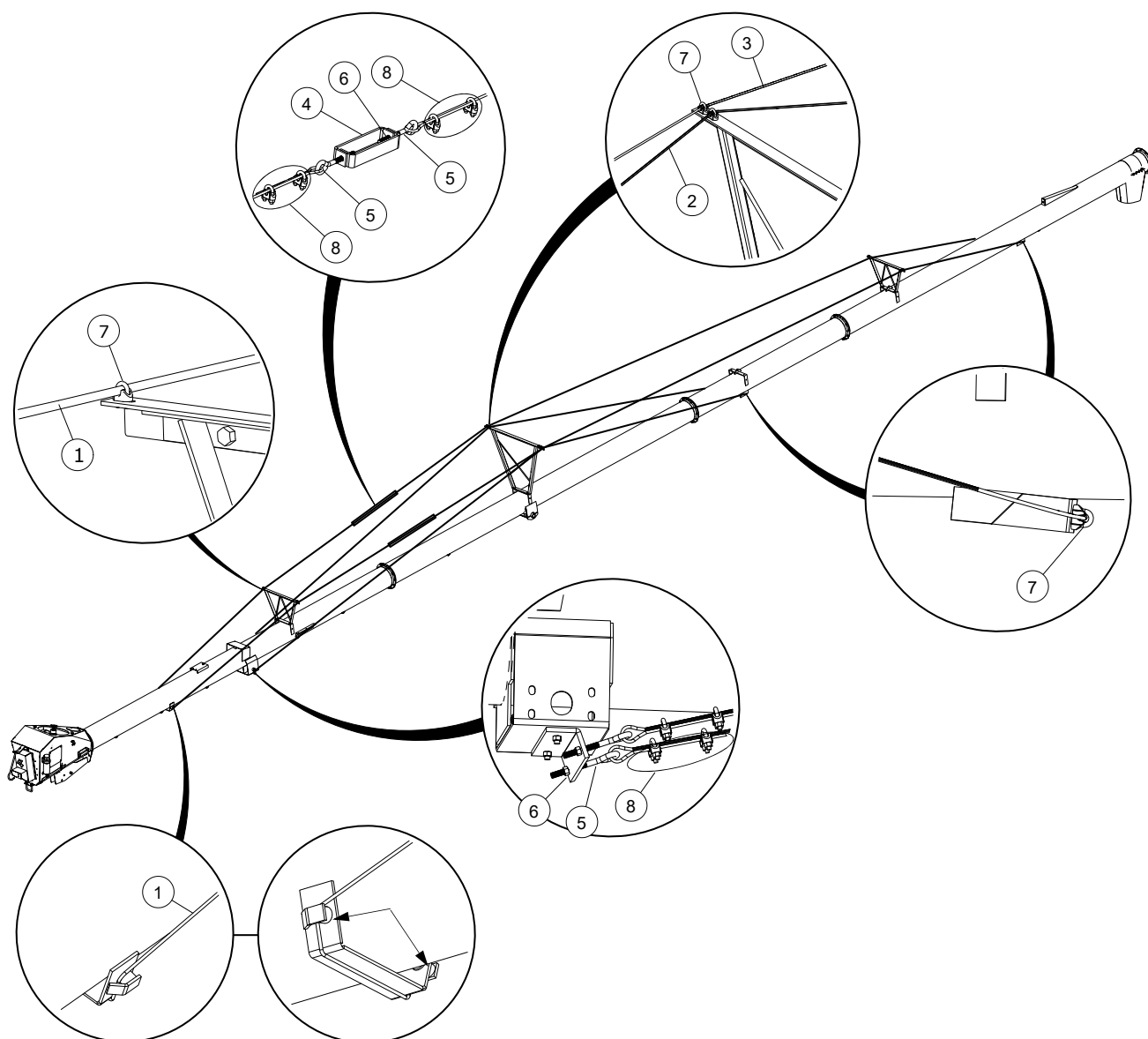
12. Tighten the eyebolts on the second (long) cable run evenly to take the remaining slack out of the truss cable. Once this cable run is tightened, repeat for the first (short) cable run.
13. After tension is adjusted, tighten all cable clamps to the recommended torque. Check for proper side alignment.





Cable Clamp	Nut Torque
5/16"	20 ft·lb
3/8"	30 ft·lb

### Installing the Truss Cable (74')



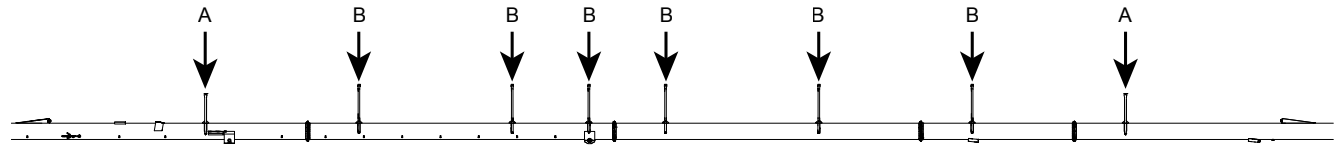
1	Cable, 36'	5	Eyebolt
2	Cable, 73'	6	Lock Nut, 1/2"

3	Cable, 85'6"	7	Cable Clamp, 5/16"
4	Turnbuckle	8	Cable Clamp, 3/8"

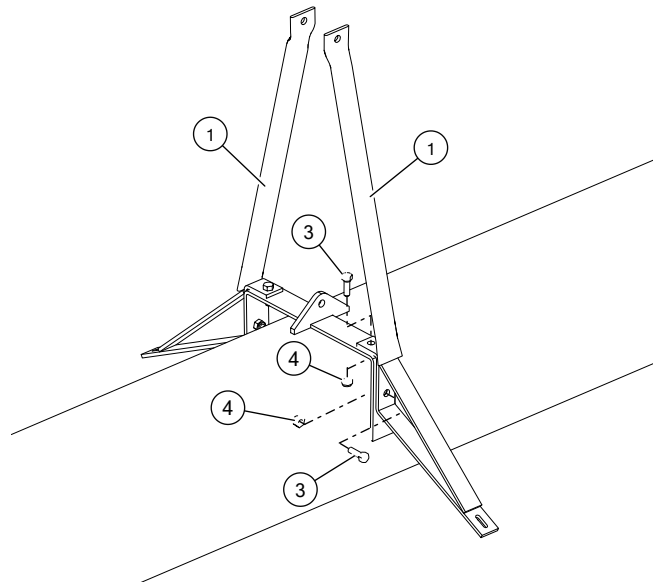
# 4.11. Auger Tube Truss Assembly (84'/94')

This section applies to 13-84 and 13-94 Swing-Away Augers.

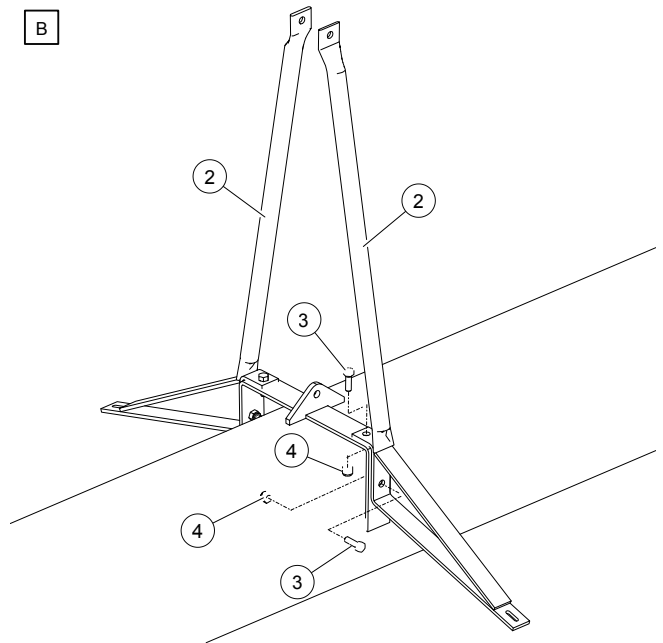
## 4.11.1 High and Low Towers



A

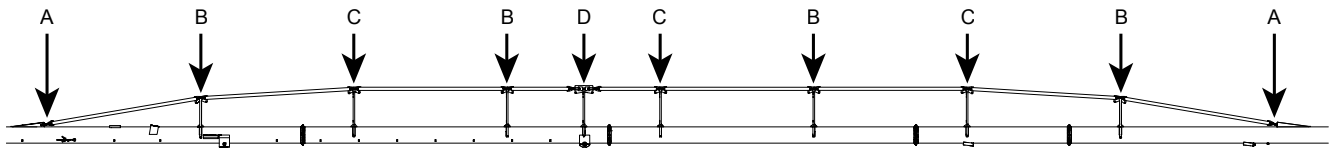


B



1	Low Truss Bracket	3	Bolt, 7/16" x 1-1/4"
2	High Truss Bracket	4	Lock Nut, 7/16"

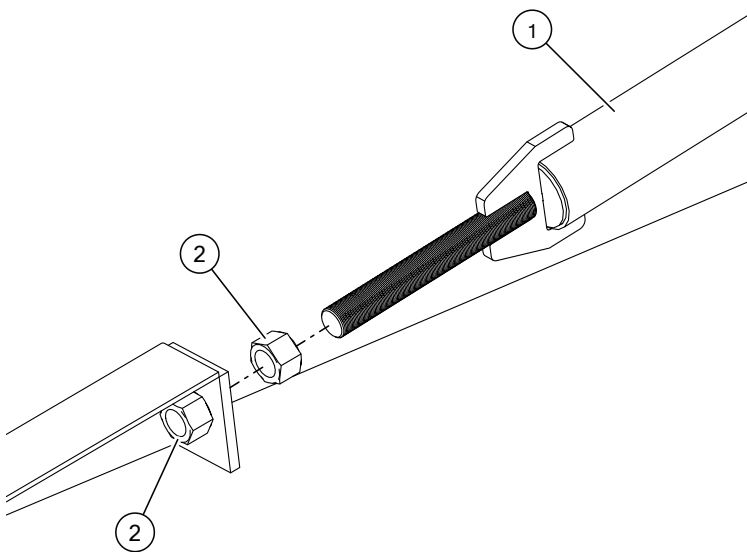
### 4.11.2 Top Truss Tube



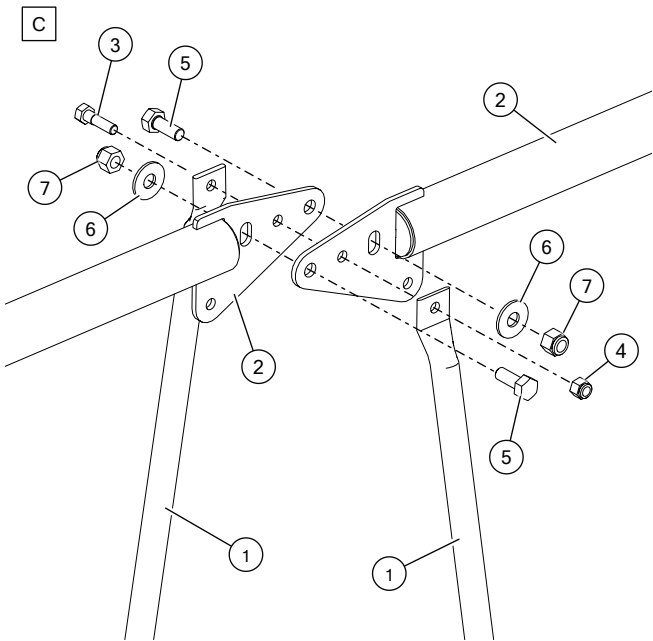
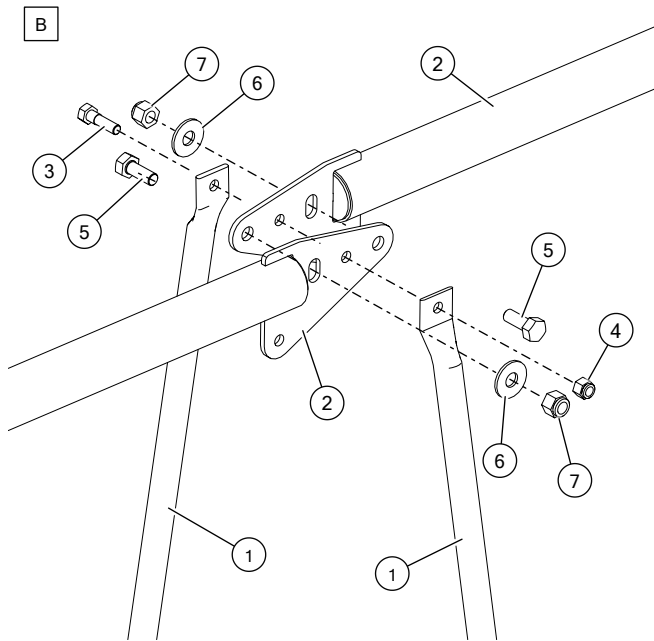
#### Assembly Notes:

- Work from discharge to intake.
- Once top trussing is installed, measure each section from the hole of the bottom top tube connection plate to the hole of the tab on the auger tube to ensure they are square and have the same length.
  - Adjust at the intake or discharge truss tube end connection as required.
  - Ensure each end adjustment has the same amount of thread engagement at the end of the threaded rod.
  - Once each section is square, fully tighten all fasteners.

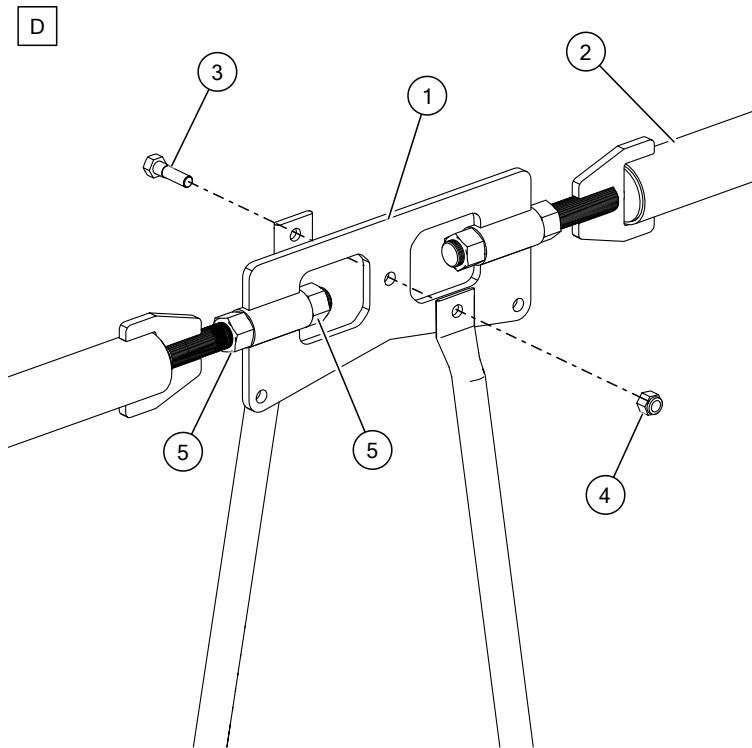
A



1	Top Truss Tube w/ Threaded Rod — Long
2	Hex Nut, 1"

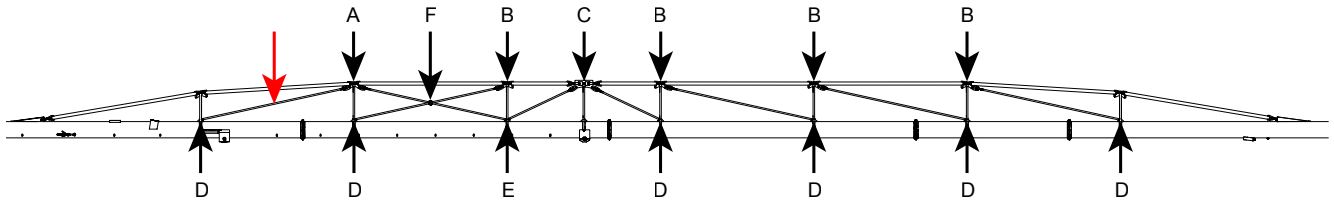


1	Truss Bracket	5	Bolt, 5/8" x 1-1/2"
2	Top Truss Tube	6	Flat Washer, 5/8"
3	Bolt, 1/2" x 1-3/4"	7	Lock Nut, 5/8"
4	Lock Nut, 1/2"		

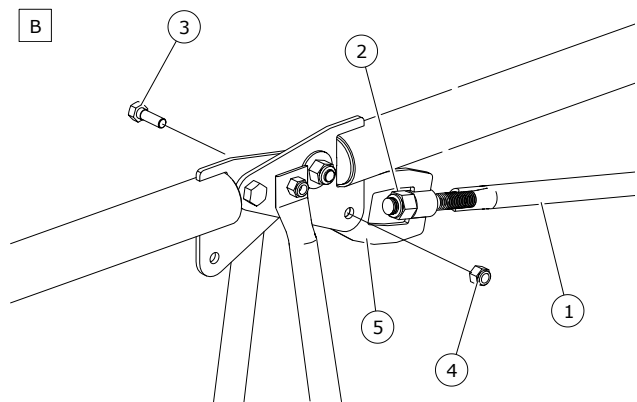
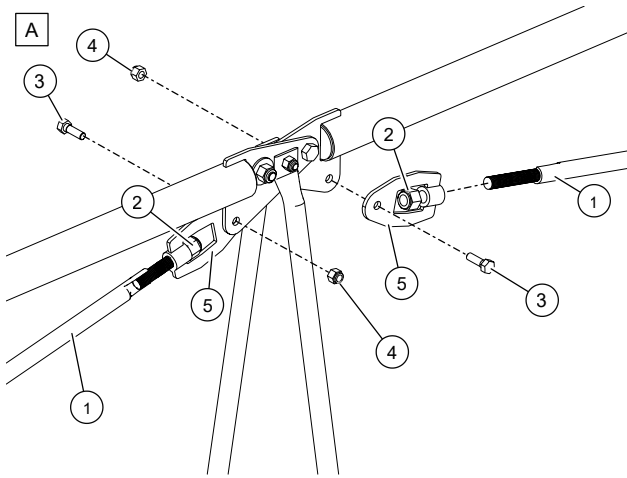


1	Center Adjust Mount
2	Top Truss Tube w/ Threaded Rod — Short
3	Bolt, 1/2" x 1-3/4"
4	Lock Nut, 1/2"
5	Hex Nut, 1"

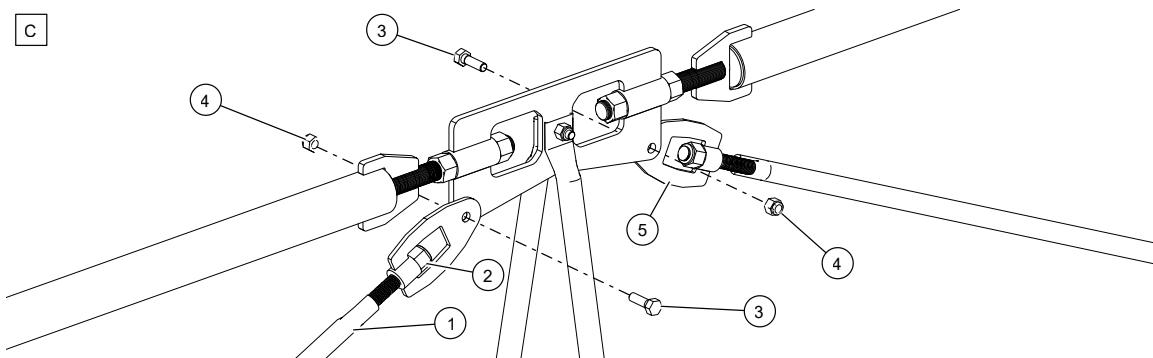
### 4.11.3 Cross Brace


**Assembly Note:**

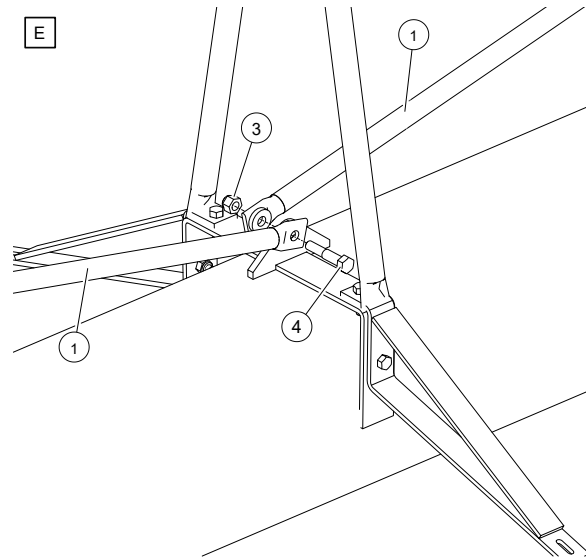
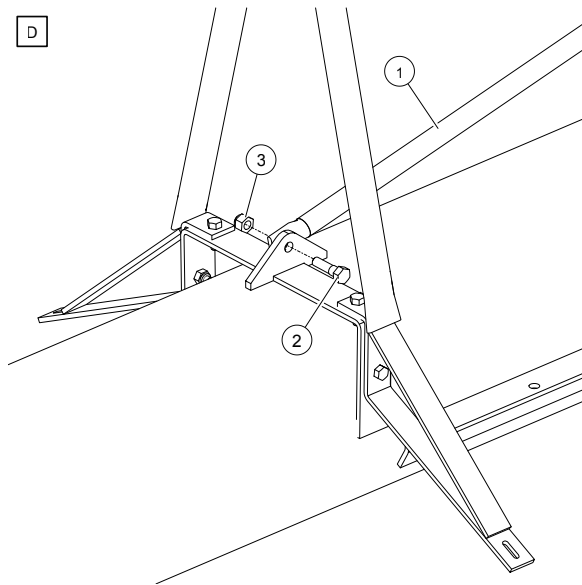
- Hand tighten all nuts on members only.
- The long cross brace closest to the intake end should NOT be installed for augers with a 15' swing tube.



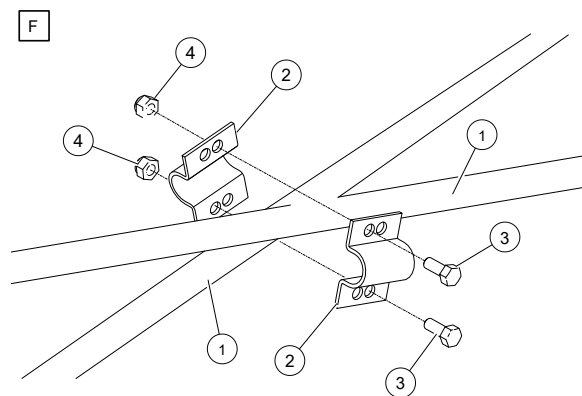
1	Cross Brace — Long	4	Lock Nut, 1/2"
2	Oval Lock Nut, 3/4"	5	Cross Brace Shackle
3	Bolt, 1/2" x 1-1/2"		



1	Cross Brace — Short	4	Lock Nut, 1/2"
2	Oval Lock Nut, 3/4"	5	Cross Brace Shackle
3	Bolt, 1/2" x 1-1/2"		



1	Cross Brace	3	Lock Nut, 1/2"
2	Bolt, 1/2" x 1-3/4"	4	Bolt, 1/2" x 2-1/2"

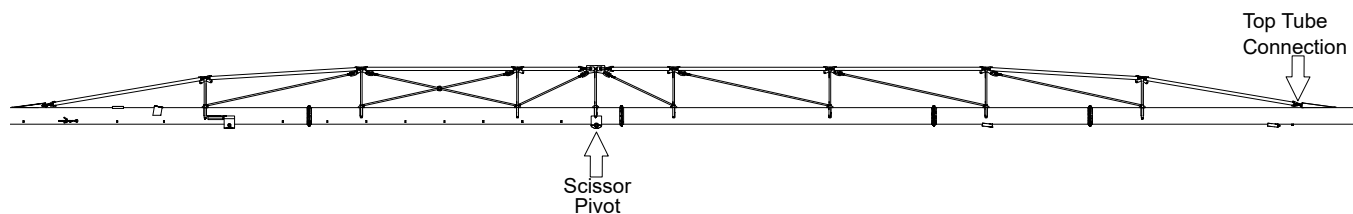


1	Cross Brace — Long
2	Cross Brace Clamp
3	Bolt, 7/16" x 1"
4	Lock Nut, 7/16"

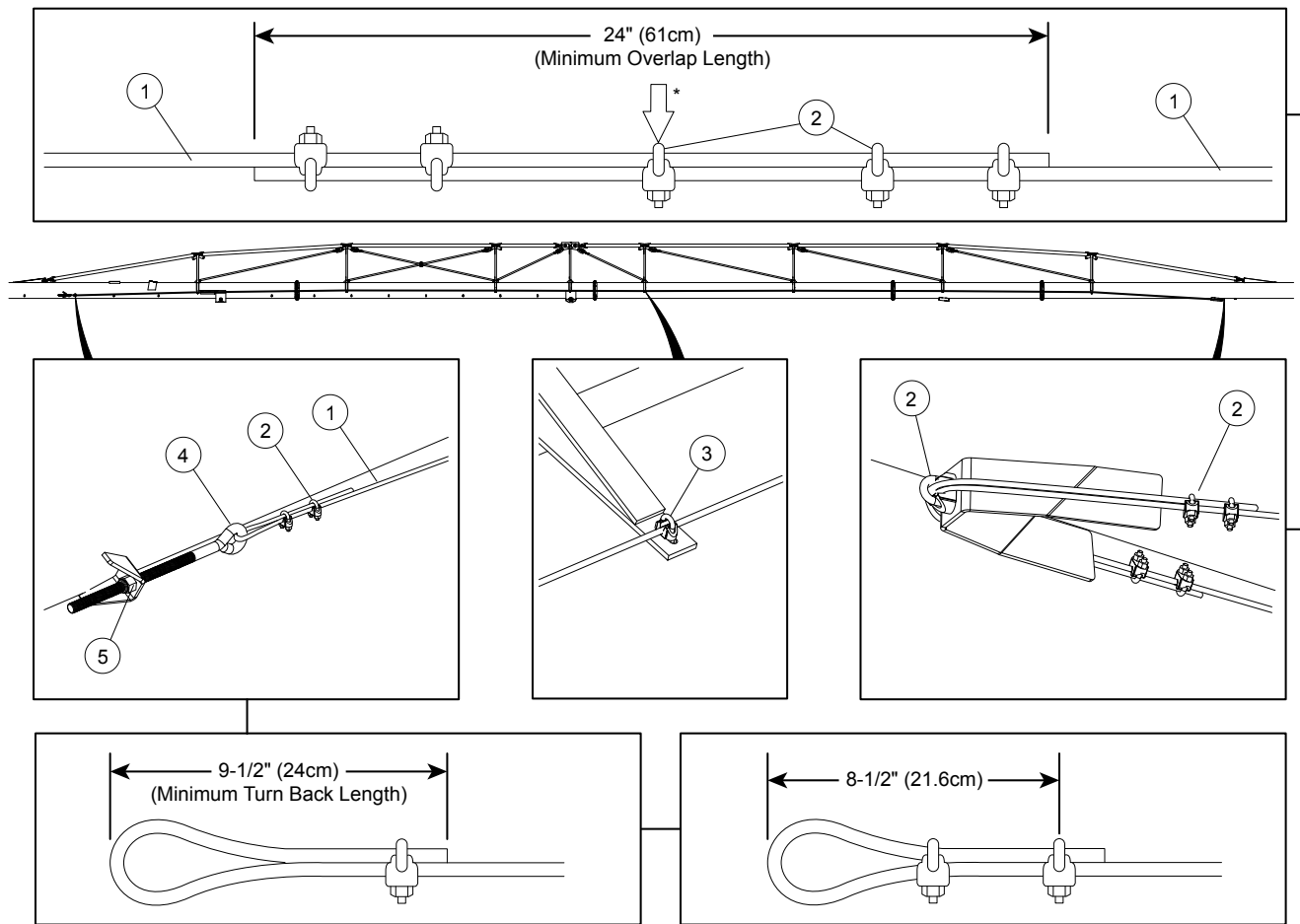
#### 4.11.4 Tube Bow

Support auger tube at the discharge end and loosen the 1" UNC Nut of the top tube at that location. Raise end up approximately 6" (15.2 cm) to provide a small upward bow. Fasten top tube connection nuts and cross member nuts by working from discharge to intake. Once all nuts are tightened, lower tube end to check for a gradual upward bow. If the tube does not have a continuous gradual upward bow after the scissor pivot, adjust individual cross members as needed. Do not tighten 3/4" UNC Hex Nuts on cross members by more than one full rotation after snug fit. All cross members need to be tightened to the same amount.

**Figure 4. Top Tube Connection**



## 4.12. Install Truss Cables (84'/94')



1	Cable	4	Eyebolt
2	Cable Clamp, 3/8"	5	Lock Nut, 5/8"
3	Cable Clamp, 5/16"		

\*This is the clamp that attaches the cable and tube at the discharge end.

- Overlap cable ends by at least 24" (61 cm), fasten together using two 3/8" cable clamps at both sides. Install section of overlapped cable symmetrically on bracket at discharge end with 3/8" cable clamp.
- Run the truss cables down the tube and attach to each truss tower using a 5/16" cable clamp.
- Thread truss cables through eyebolts and double-back a minimum of 9-1/2" (24 cm) of cable. Secure the cable in place by installing and tightening two 3/8" cable clamps.
  - Apply first clamp 8-1/2" (21.6 cm) from the cable loop with the u-bolt over the dead (short) end. Live end rests in clamp saddle. Turn nuts firmly but do not tighten.
  - Apply second clamp as close to loop as possible with the u-bolt over the dead end. Live end rests in clamp saddle. Apply tension and turn nuts firmly but do not tighten.
- Tighten the cables by adjusting the eyebolt lock nuts. These cables must be very tight.
- Tighten all cable clamps to the recommended torque (see next page).

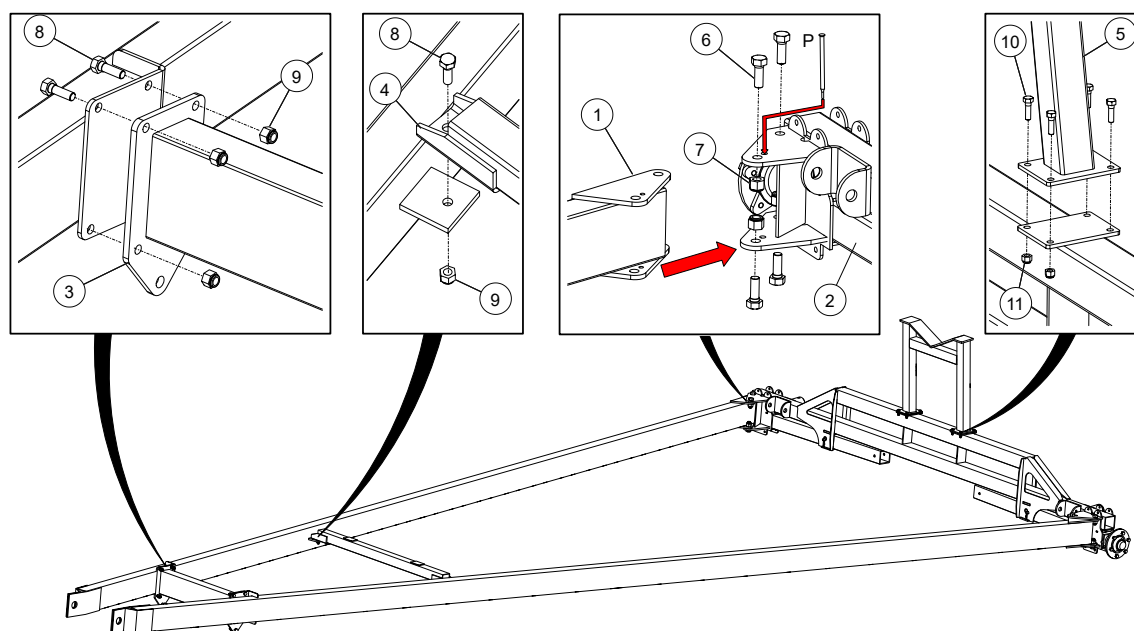


Cable Clamp	Nut Torque
5/16"	20 ft·lb
3/8"	30 ft·lb

## 4.13. Assemble the Auger Frame

**⚠ WARNING** Components are heavy and create a crushing and pinching hazard if improperly handled. Be sure to use proper hoisting equipment and procedures, and ensure lifting apparatus is secure. Lockout the lifting apparatus before working around or under the raised components. Failure to do so may cause serious personal injury.

### Assembling the Lower Frame Arms to the Axle

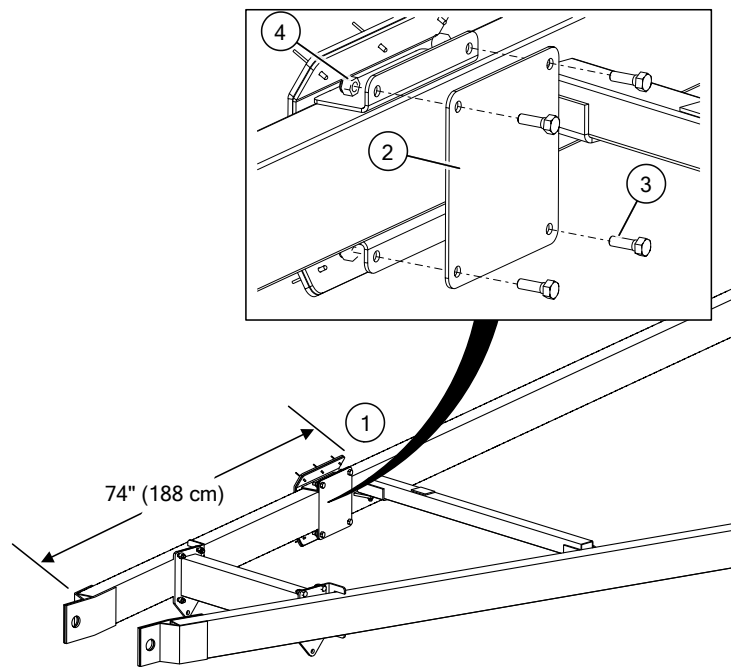


#### Assembly Notes:

- Insert a punch tool (P) in the hole shown to align bolt holes from the axle with the lower reach arm.
- Loosely install the stabilizer cross member to the lower frame arm.
- Loosely install the scissor rest to the lower frame arm.
- Ensure that the transport stand is oriented as shown in the diagram.

1	Lower Frame Arm	7	Lock Nut, 3/4"
2	Axle Assembly	8	Bolt, 1/2" x 1-1/2"
3	Stabilizer Cross Member	9	Lock Nut, 1/2"
4	Scissor Rest	10	Bolt, 3/8" x 1-1/4"
5	Transport Stand	11	Lock Nut, 3/8"
6	Bolt, 3/4" x 2"		

### Installing the Deflector Assembly (74' Models only)

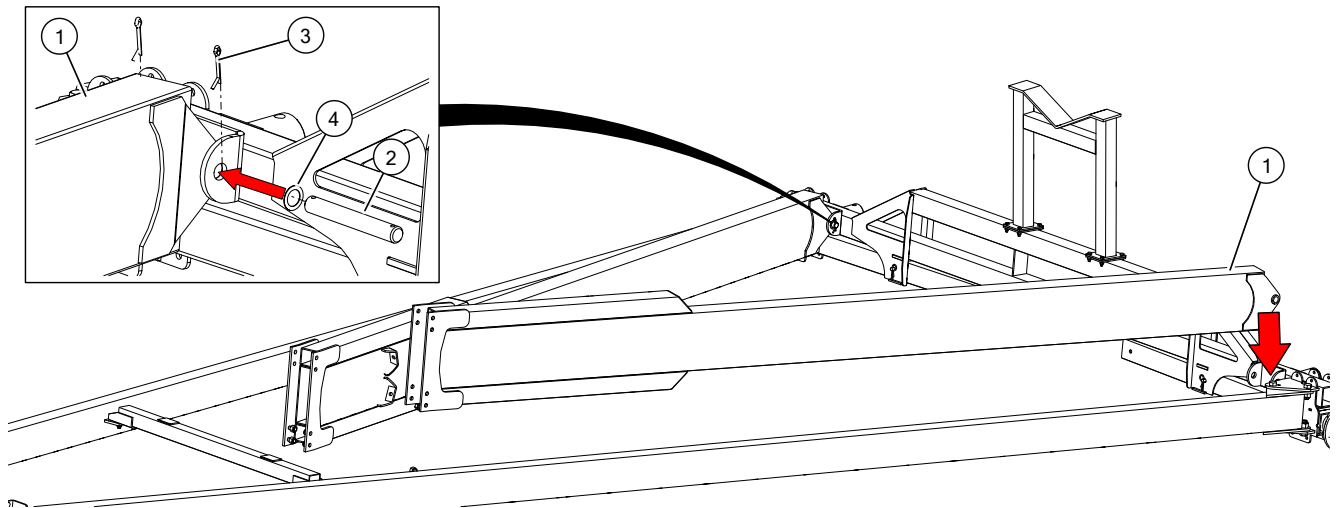


#### Assembly Note:

- Position the deflector assembly on the same side that the hopper will be operating on.

1	Deflector Assembly
2	Skid Clamp
3	Bolt, 1/2" x 1-1/2"
4	Lock Nut, 1/2"

### Installing the Lower Scissors

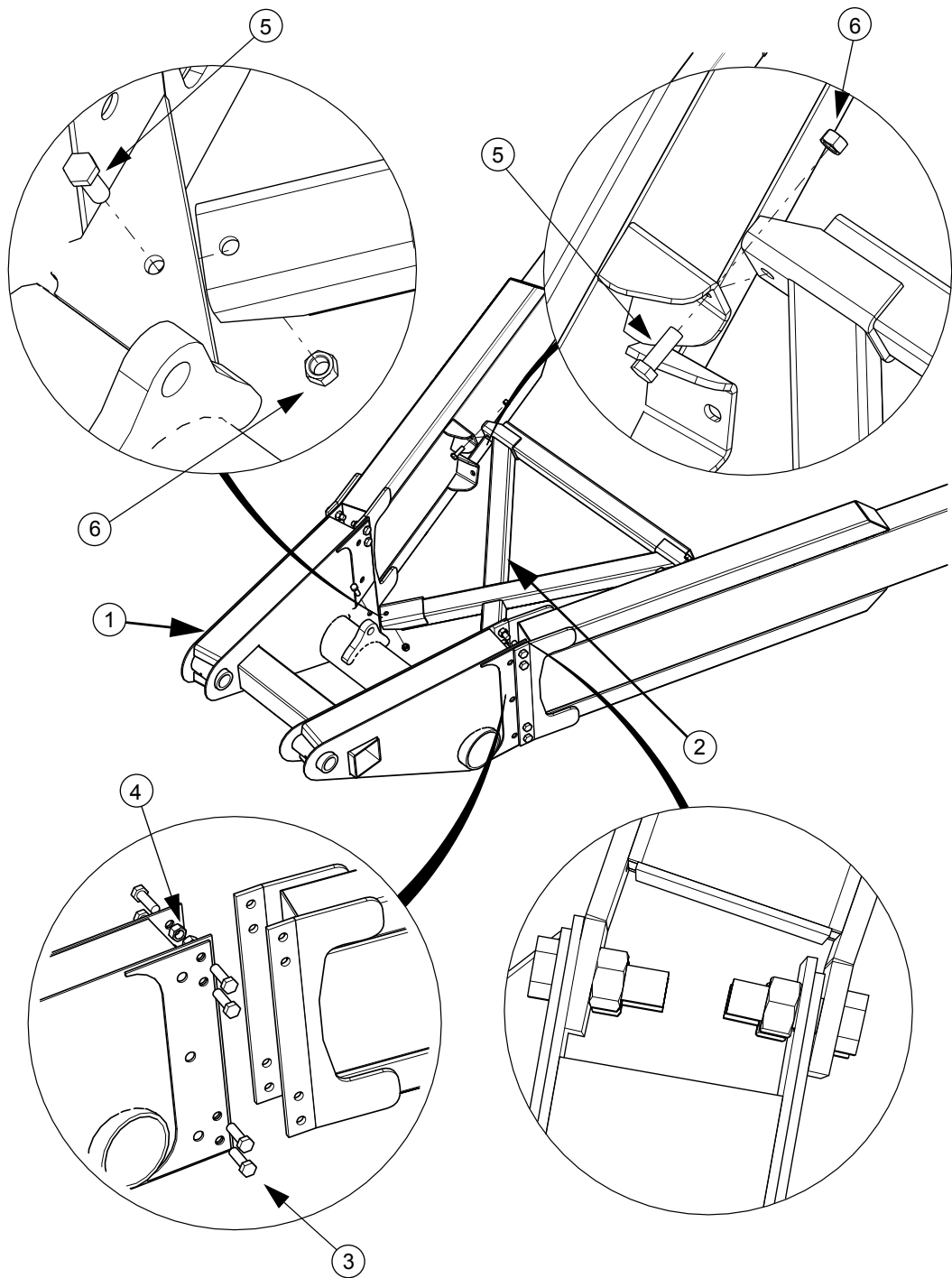


#### Assembly Notes:

- Elevate the frame arm with a support stand placed under the stabilizer cross member.
- Elevate the lower scissor arms with a support stand.

1	Lower Scissor Arm	3	Cotter Pin, 1/4" x 1-3/4"
2	Lower Scissor Arm Attach Pin	4	SAE Washer, 1"

**Installing the Bowtie and Bowtie Cross Brace**

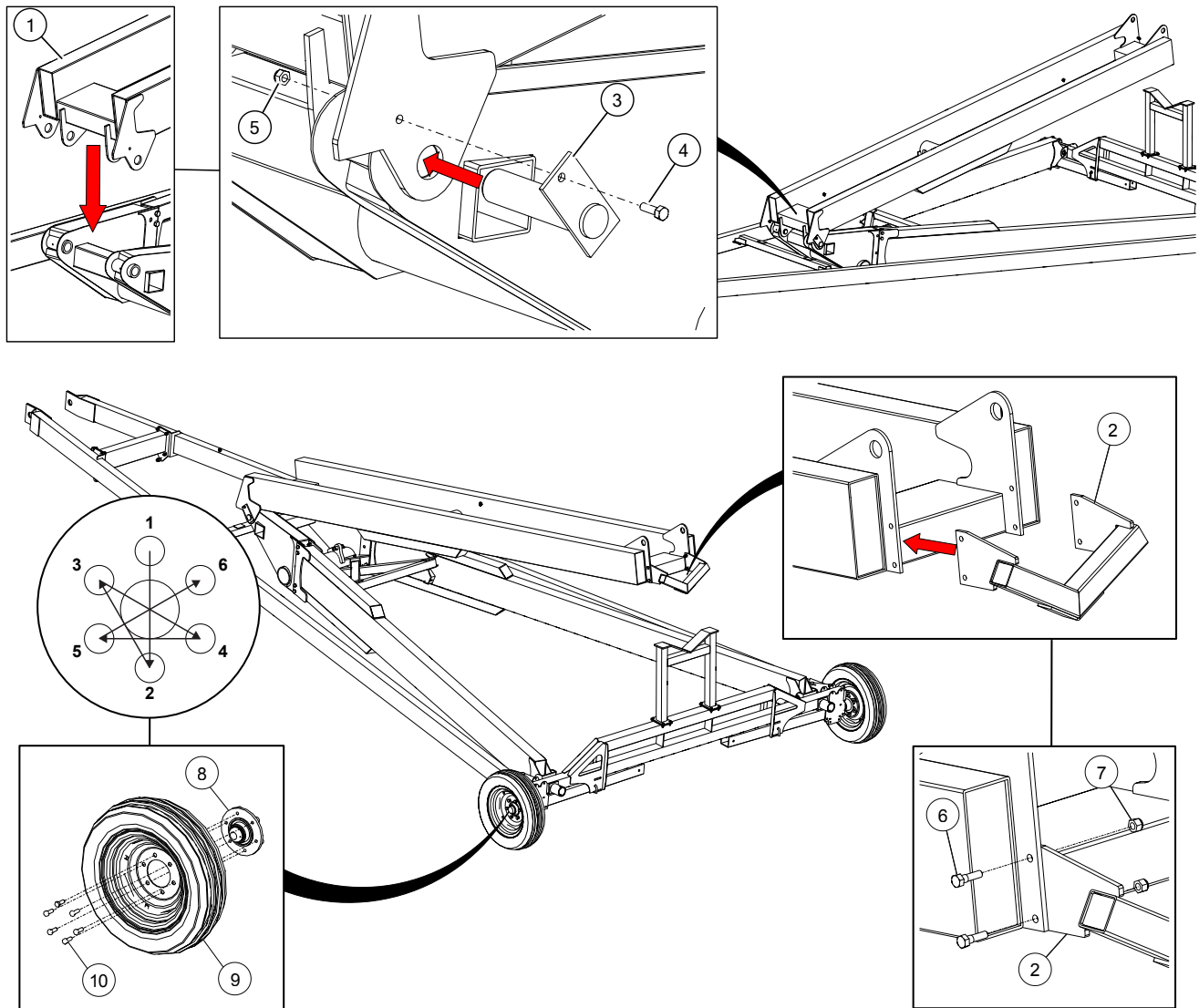


**Assembly Note:**

- A steel punch may be necessary to align the bowtie bolt holes.

1	Bowtie	4	Lock Nut, 5/8"
2	Bowtie Cross Brace	5	Bolt, 1/2" x 1-1/2"
3	Bolt, 5/8" x 2"	6	Lock Nut, 1/2"

## Attaching the Upper Scissor and Scissor Support

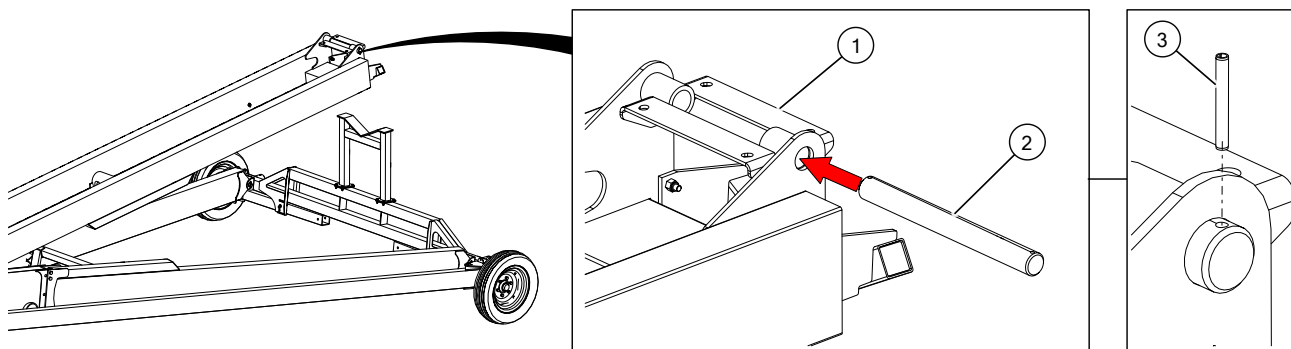


### Assembly Notes:

- Ensure the hub and wheel mounting surfaces are free from rust and debris.
- Torque the wheel bolts to 100 ft·lb ± 10 ft·lb using the pattern shown.
- Ensure the transport stand and the scissor support are aligned. If necessary, washers (not included) can be used as shims.

1	Upper Scissor	6	Bolt, 1/2" x 1-3/4"
2	Scissor Support	7	Lock Nut, 1/2"
3	Scissor Pin	8	Axle Assembly
4	Bolt, 7/16" x 1-1/4"	9	Wheel
5	Lock Nut, 7/16"	10	Wheel Bolt, 1/2" x 1-1/4"

## Installing the Scissor Pivot Mount

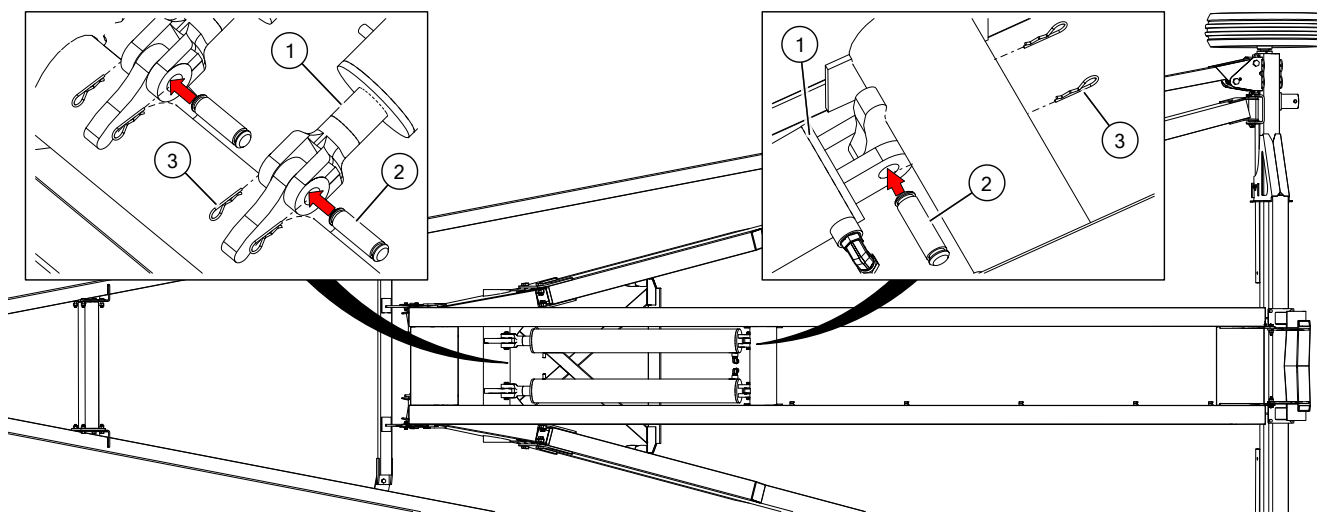


### Assembly Note:

- Grease the upper scissor frame attach pin.

1	Upper Scissor Pivot Mount	3	Roll Pin, 5/16" x 2-1/2"
2	Upper Scissor Frame Attach Pin		

## 4.14. Installing the Hydraulic Cylinders



### Assembly Notes:

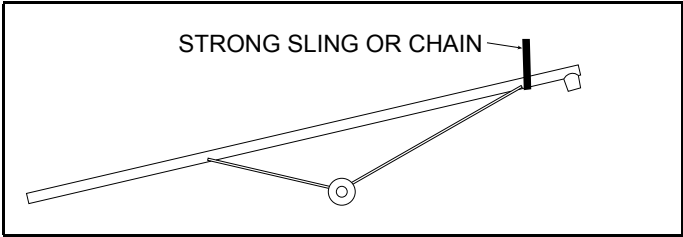
- The rod end of the cylinder must be attached to the bowtie so that the rod extends towards the intake.
- The cylinder ports must face each other.

1	Hydraulic Lift Cylinder Assembly	3	External Hitch Pin Clip, 1"
2	Cylinder Pin, 1" x 3-3/8"		

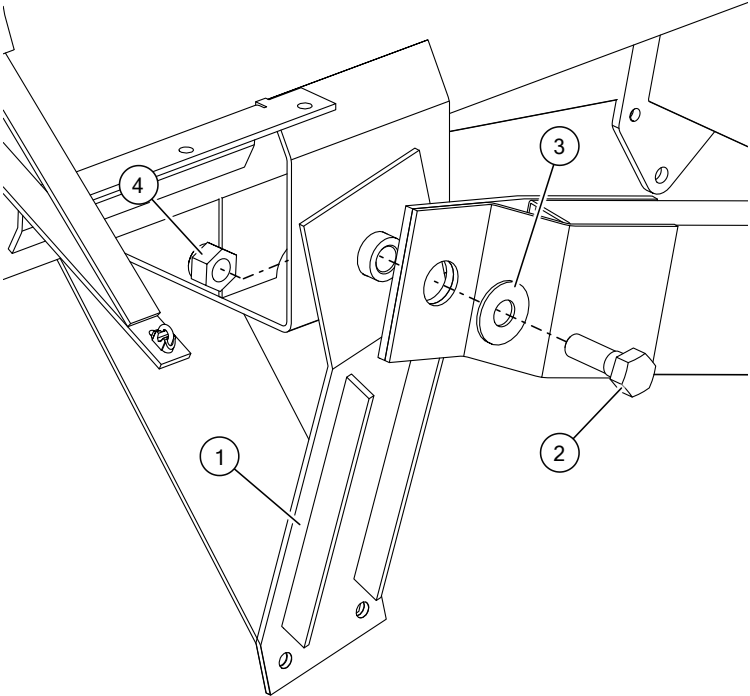
# 4.15. Connect the Auger Tube to the Frame

**Important**

Be sure to use proper hoisting equipment and procedures when raising the discharge end of the auger. Lock out the hoist apparatus prior to working around or under the raised tube.



## Attaching the Stabilizer Brackets and Frame to the Tube

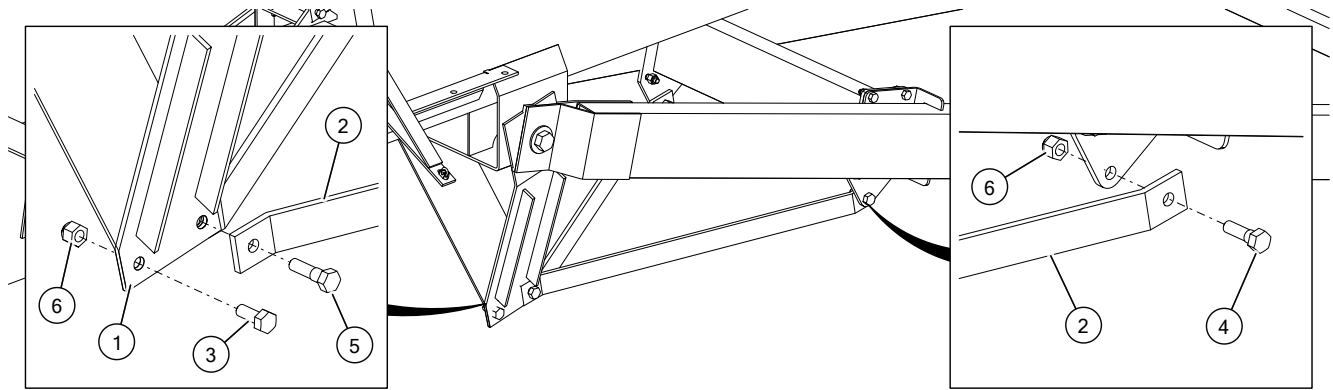


**Assembly Note:**

- Move the tube over top of the assembled frame, ensuring the tube is centered on the scissor frame before proceeding.

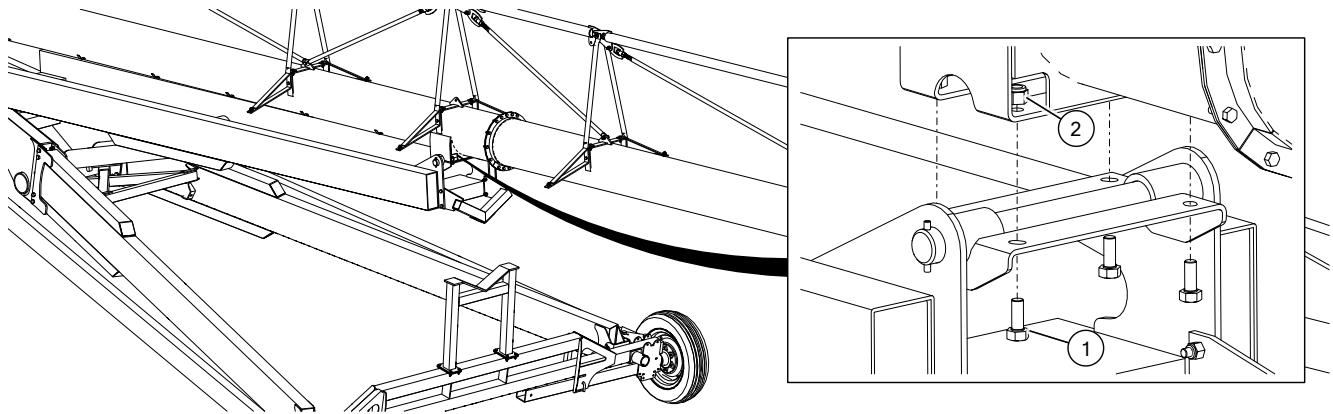
1	Stabilizer Bracket
2	Bolt, 1" x 3"
3	Flat Washer, 1"
4	Lock Nut, 1"

**Attaching the Stabilizer Braces to the Frame**



1	Stabilizer Bracket	4	Bolt, 5/8" x 2"
2	Stabilizer Brace	5	Bolt, 5/8" x 2-1/4"
3	Bolt, 5/8" x 1-1/2"	6	Lock Nut, 5/8"

**Connecting the Upper Scissor Frame to the Tube**



**Assembly Notes:**

- Tighten the hardware that secures the stabilizer cross member and scissor rest to the lower frame arm.
- Lower the scissor lift until it rests lightly on the frame once the frame has been attached to the tube.

1	Bolt, 5/8" x 1-1/2"	2	Lock Nut, 5/8"
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## 4.16. Connecting Hydraulic Hose to Cylinders

**Note**

Refer to the Appendix for hydraulic fitting tightening specifications.

**Note**

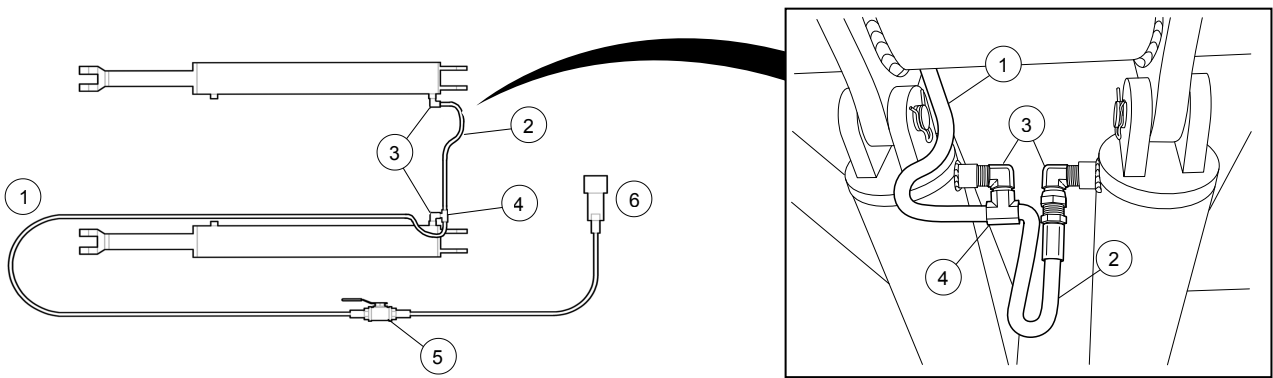
Elbow fittings are factory installed. Use thread sealant on fittings and hose threads (not supplied).

1. Attach steel tee fitting to the elbow fitting on the cylinder.
2. Connect one end of the short hydraulic hose between one steel tee fitting port, and connect the remaining end to the elbow fitting on the other cylinder.
3. Connect the end of the long hose to the remaining steel tee fitting port.
4. Lay the long hose along the upper scissor frame and tube.
5. Secure the hydraulic hose along the top of the upper scissor and on the tube using the welded hose clips.
6. Provide slack or a loop between each secured point.
7. Bend tops of welded clips over slightly to retain hose.
8. Connect ball valve to the boot using the valve holder and two 1/4" x 3/4" bolts and lock nuts.

**Important**

Do not make bends in hydraulic hose too tight. The bends must have a radius of at least 4" (10.2 cm) to prevent failure of the hose.

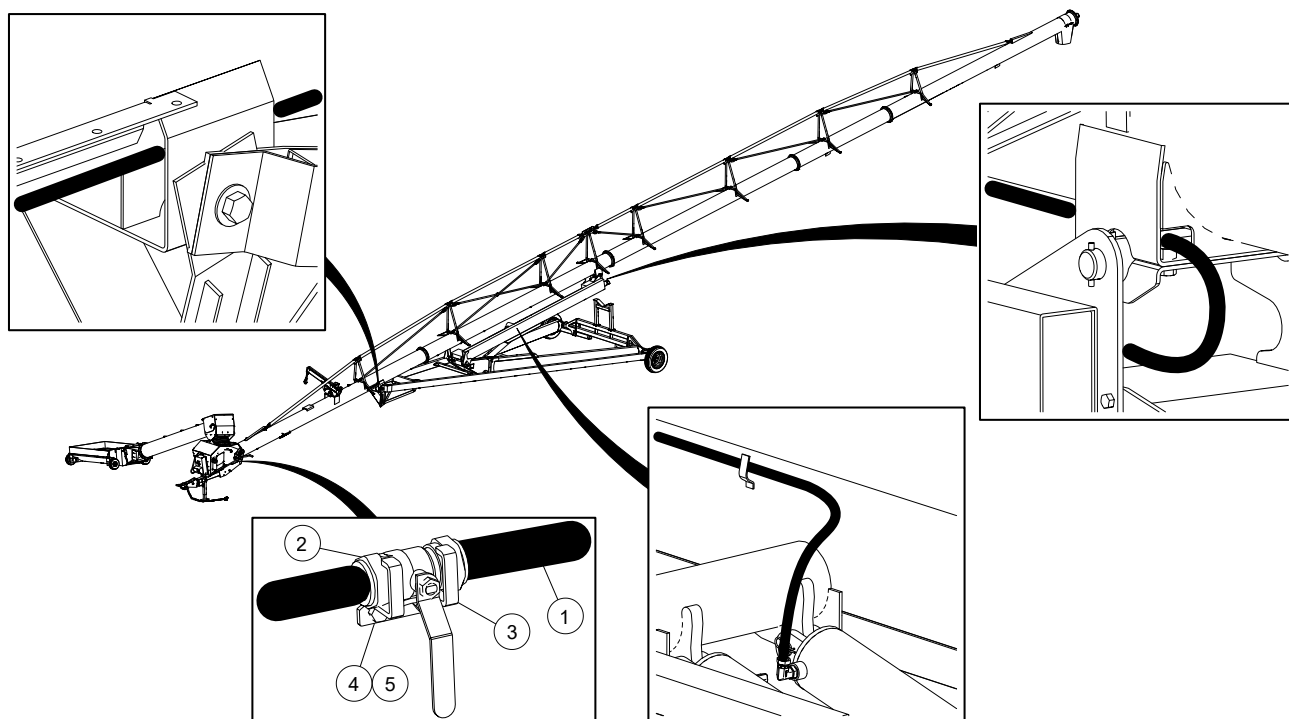
### Scissor Lift Hydraulic Fittings on Cylinders



1	Cylinder Hose Assembly	4	Steel Tee
2	Hydraulic Hose, 3/8" x 2', 2500 PSI	5	Ball Valve
3	Steel Elbow	6	Pioneer Coupler

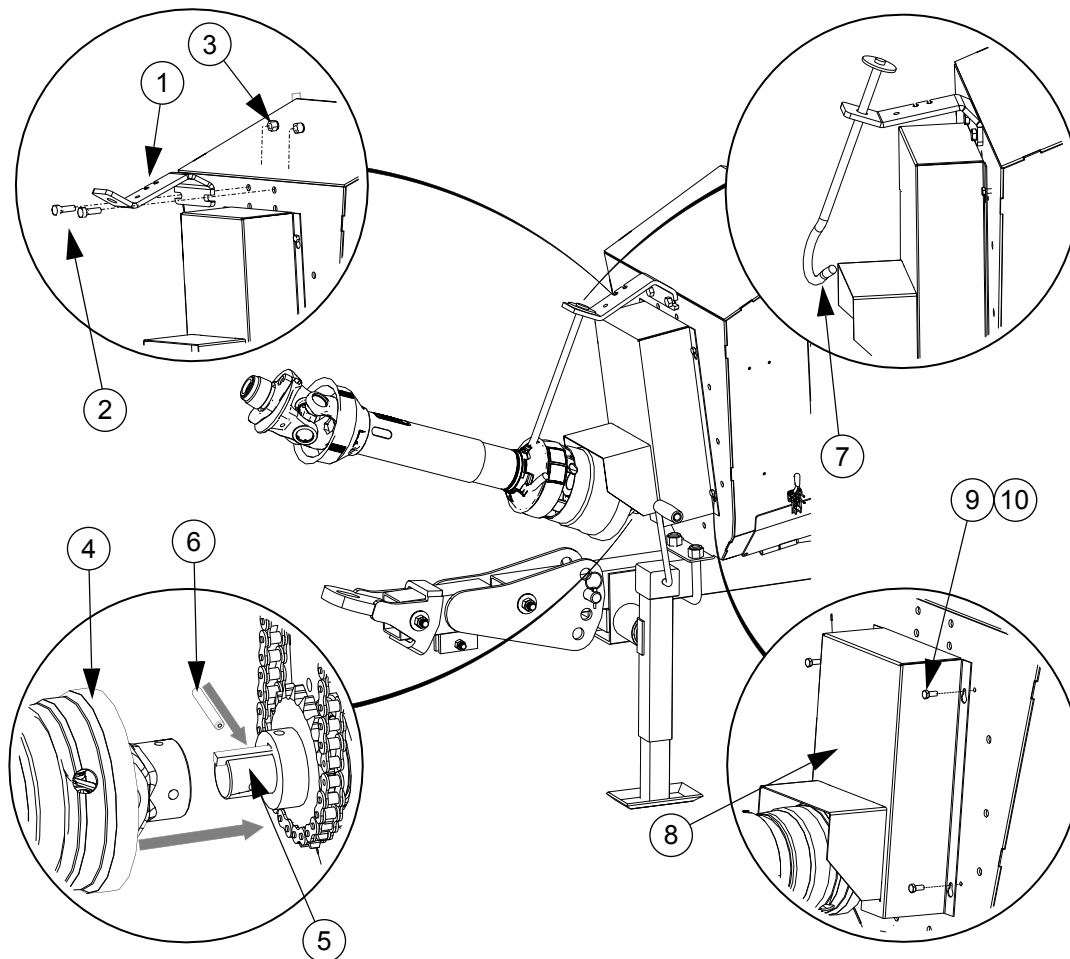


## Running Hydraulic Hose Through Frame



1	Cylinder Hose Assembly	4	Bolt, 1/4" x 3/4"
2	Ball Valve	5	Lock Nut, 1/4"
3	Valve Holder		

## 4.17. Connect the PTO Driveline



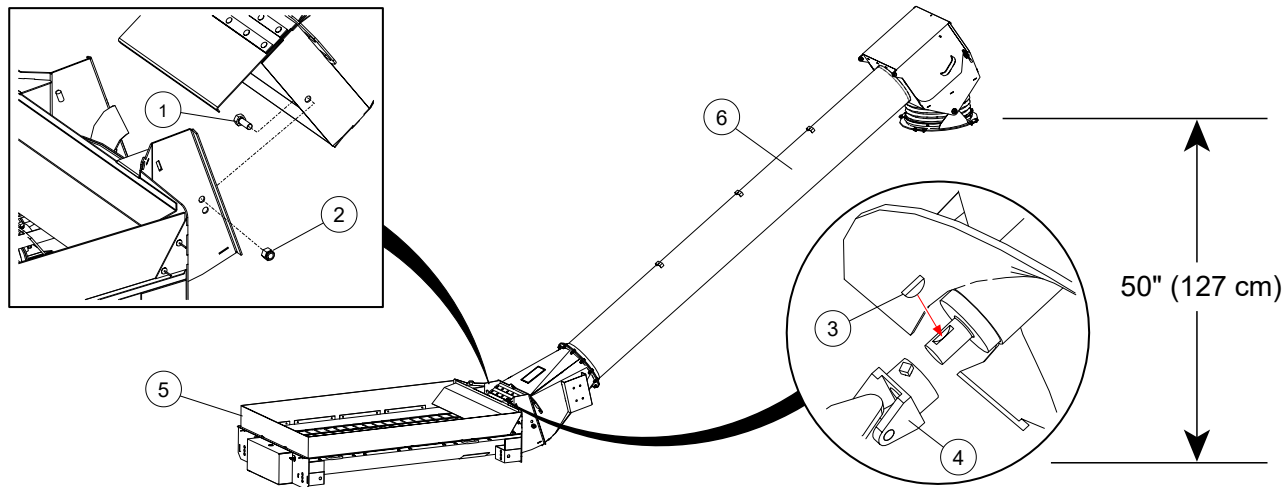
### Assembly Note:

- Clean paint or dirt off of PTO driveline and flighting shaft ends.

1	PTO Bracket	6	Roll Pin, 3/8" x 2-1/2"
2	Bolt, 1/2" x 1-1/2"	7	Transport Saddle
3	Lock Nut, 1/2"	8	Sprocket Cover
4	PTO	9	Bolt, 5/16" x 3/4"
5	Square Key, 3/8" x 3-3/8"	10	Lock Nut, 5/16"

# 4.18. Install Low Profile Intake Hopper

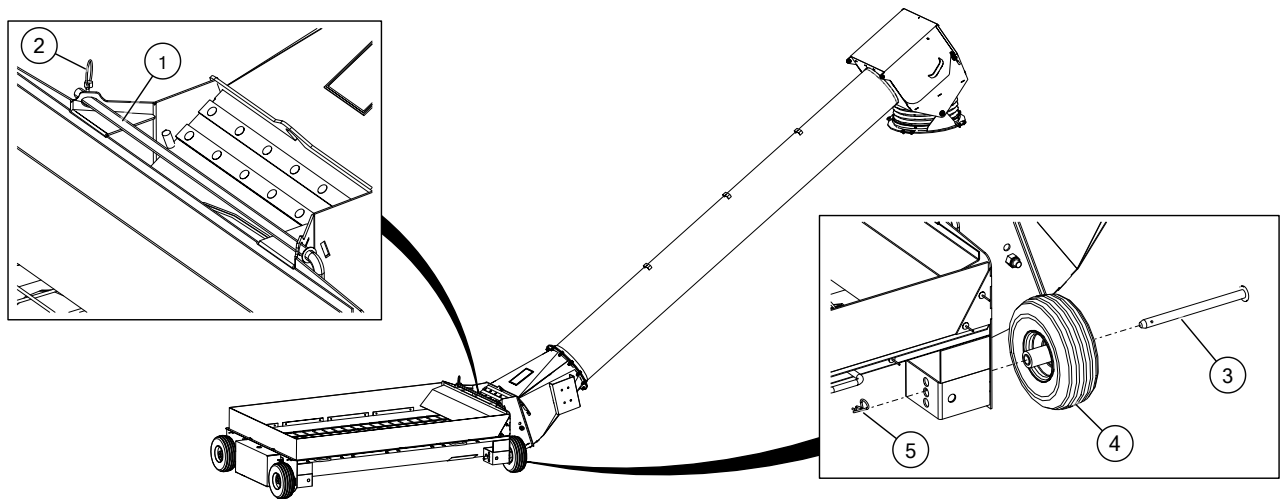
**⚠ WARNING** Components are heavy and create a crushing hazard if improperly handled. Be sure to use proper hoisting equipment and procedures, and ensure lifting apparatus is secure. Lockout the lifting apparatus before working around or under the raised components. Failure to do so may cause serious personal injury.



**Assembly Notes:**

- Clean dirt and paint from inside the u-joint and flighting shaft end, grease the shaft end, then insert a woodruff key.
- Raise and support the hopper tube spout head on a stand about 50" (127 cm) high.
- DO NOT overtighten; tighten to a slightly loose fit only as these bolts act as pivot points.

1	Bolt, 5/8" x 1-1/2"	4	U-Joint
2	Lock Nut, 5/8"	5	Hopper Assembly
3	Woodruff Key	6	Swing Tube Assembly

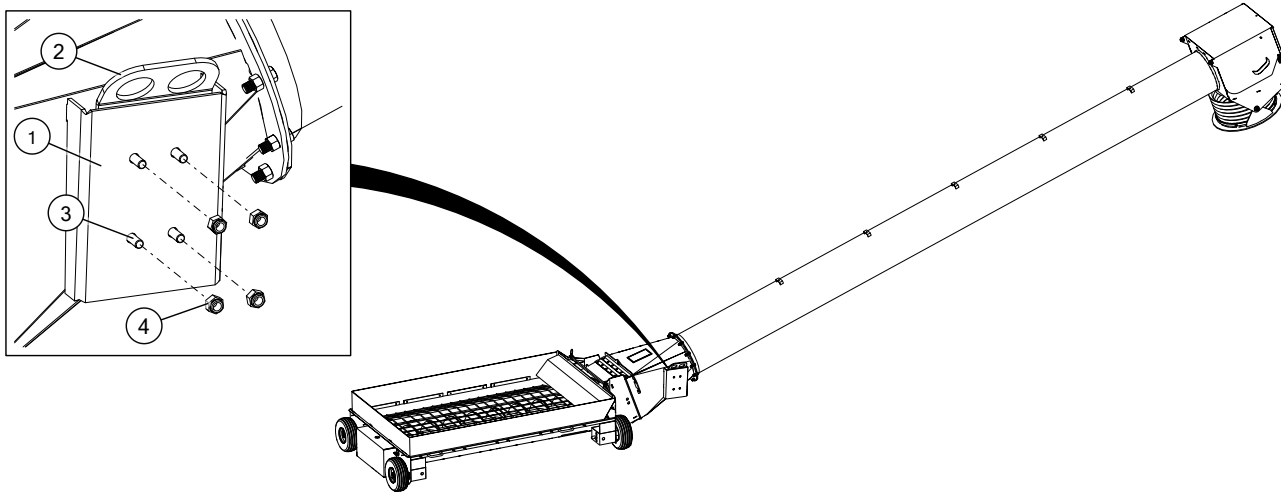


**Assembly Notes:**

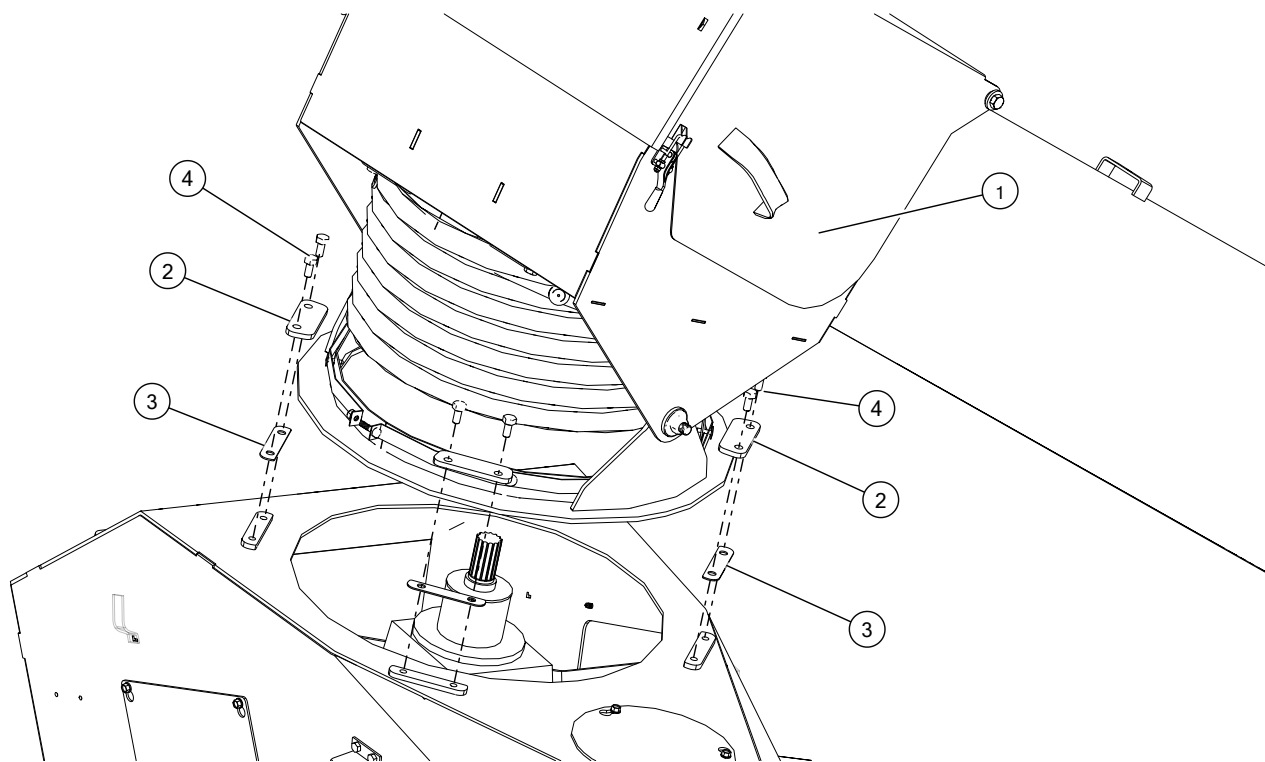
- Tighten set screws on u-joints, then close and secure the service door.
- There are 3 height settings for the hopper wheels that can be used according to preference.

1	Door Pin	4	Wheel
2	Lynch Pin	5	Hairclip
3	Wheel Axle		

**15' Swing Tube Assembly Only (Optional)**



1	Transition	3	Bolt, 7/16" x 1-1/4"
2	Swing Lift Bracket	4	Lock Nut, 7/16"

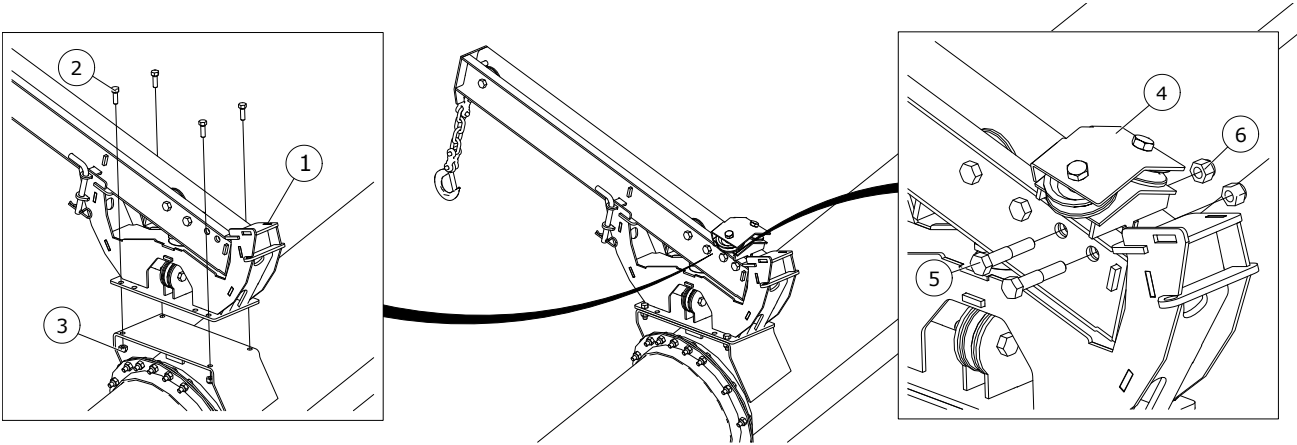
**Assembly Notes:**

- Open the spring clasps and rotate the spout lid open, so that it lies down on the top of the swing tube.
- Clean the u-joint spline and splined shaft on the lower gearbox, then apply a light film of grease on this splined shaft.
- Guide the splined u-joint onto the splined gearbox shaft.
- Lubricate the u-joint, then close and secure the spout head lid.
- Always keep the spout head lid closed and secured during operation.

1	Spout Head Lid	3	Spout Head Spacer
2	Spout Head Retainer	4	Bolt, 3/8" x 3/4"

# 4.19. Install the Hopper Lift Arm and Winch

## Augers with 10' Swing Tube Assembly (Standard)

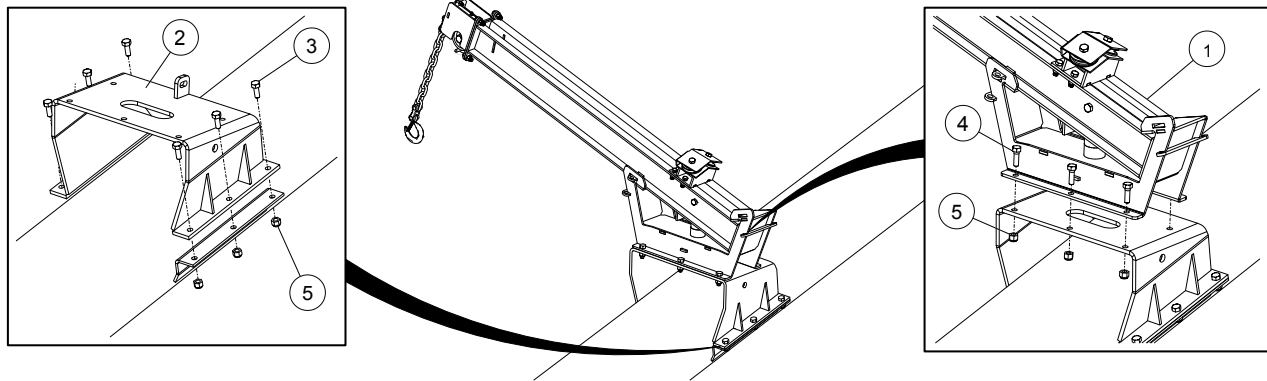


### Assembly Notes:

- Determine which side of the auger the hopper will be operating on.
- Position the lift arm assembly on top of the auger tube with the arm overhanging the side that the hopper will be operating on.
- The lift arm pulley guide assembly is only required for augers with the manual winch.

1	Lift Arm Assembly	4	Lift Arm Pulley Guide Assembly
2	Bolt, 7/16" x 1-1/4"	5	Bolt, 1/2" x 2-1/2"
3	Lock Nut, 7/16"	6	Lock Nut, 1/2"

### Augers with 15' Swing Tube Assembly (Optional)

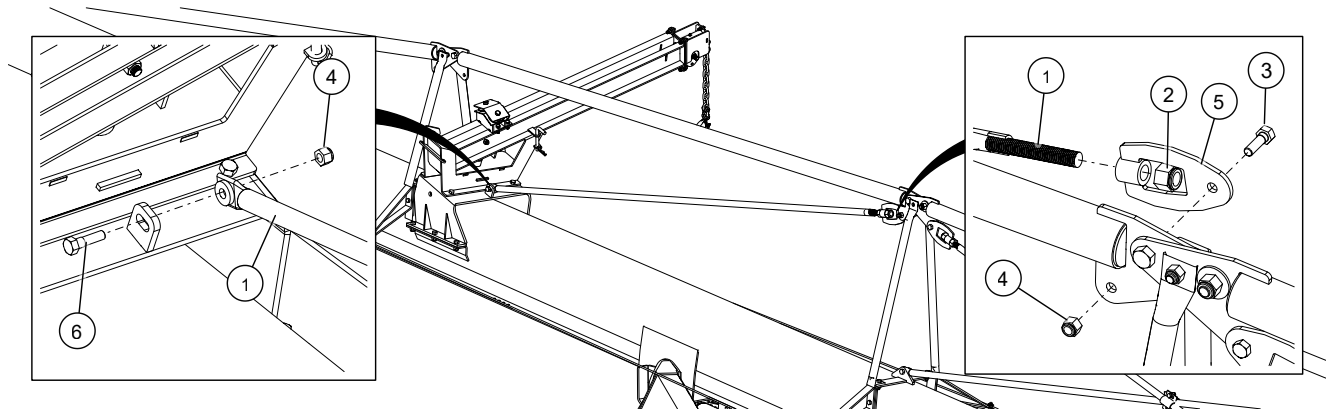


#### Assembly Notes:

- Determine which side of the auger the hopper will be operating on.
- Position the lift arm assembly on top of the auger tube with the arm overhanging the side that the hopper will be operating on.

1	Lift Arm Assembly	4	Bolt, 1/2" x 1-1/2"
2	Lift Arm Mount	5	Lock Nut, 1/2"
3	Bolt, 1/2" x 1-1/4"		

#### 84'/94' Models Only

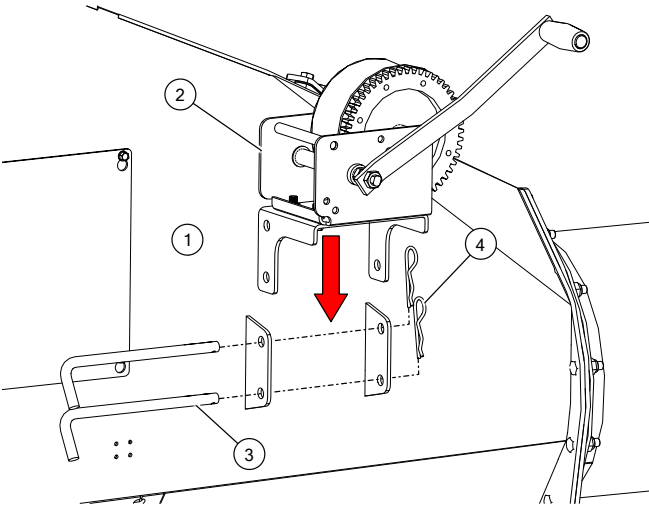


1	Cross Brace — Short	4	Lock Nut, 1/2"
2	Oval Lock Nut, 3/4"	5	Cross Brace Shackle
3	Bolt, 1/2" x 1-1/2"	6	Bolt, 1/2" x 1-3/4"

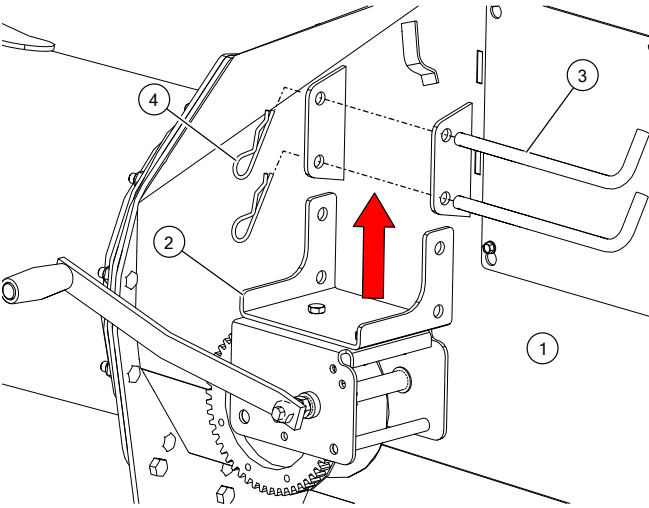
Manual Winch Installation

➡ This section only applies to X13 models.

Right Side



Left Side



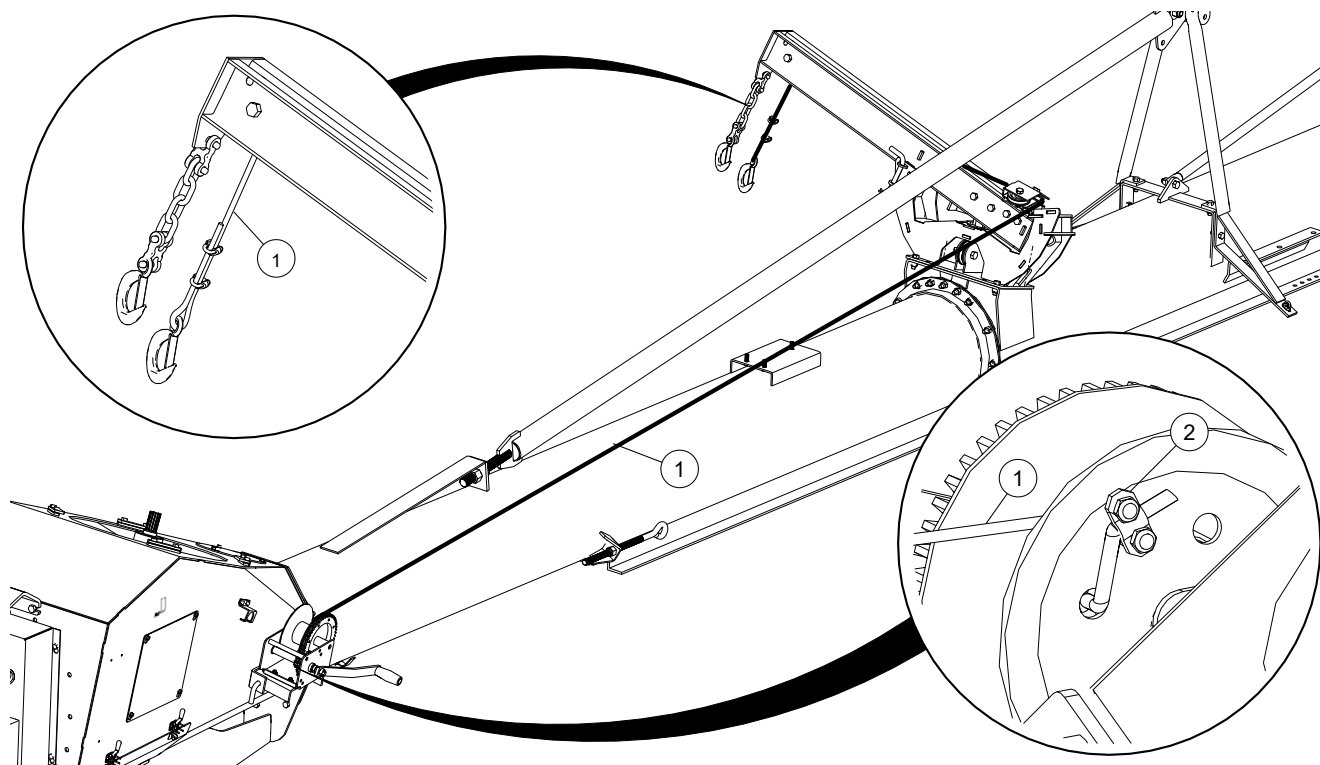
Assembly Note:

- Position the winch assembly on the opposite side that the hopper will be operating on.

1	Boot	3	Pin
2	Winch Assembly	4	Hairpin



## Winch Cable



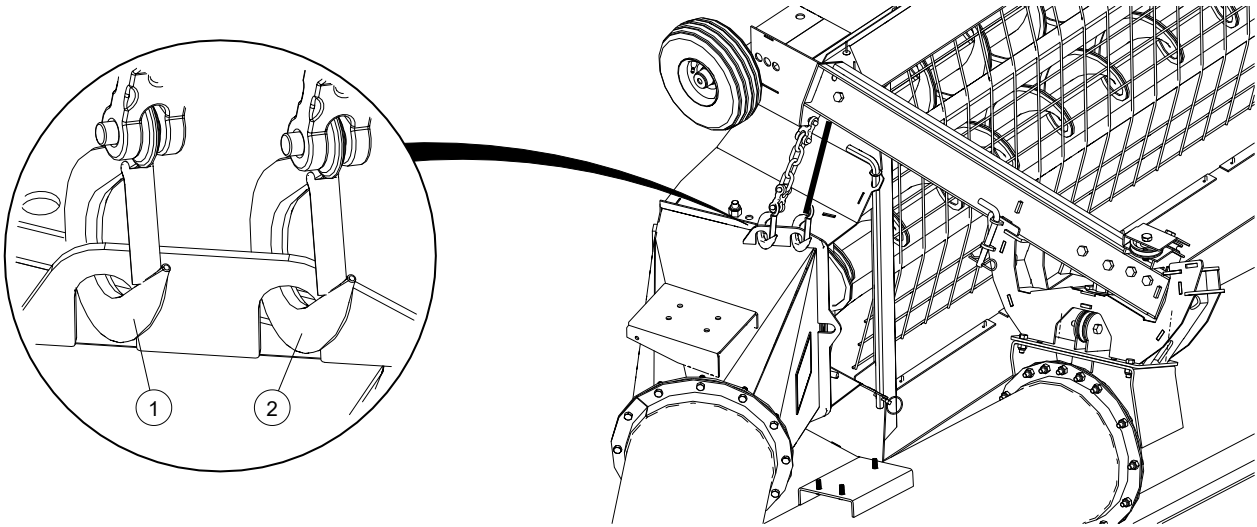
### Assembly Notes:

- Thread the cable through the hopper lift arm and pull the cable to the winch.
- Wrap the cable over and around the winch spool at least three times, then insert the cable end through the hole provided in the side of the spool and secure the end with the provided cable clamp.

1	Winch Cable	2	Cable Clamp
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# 4.20. Hopper Transport Position

## Augers with 10' Swing Tube Assembly (Standard)

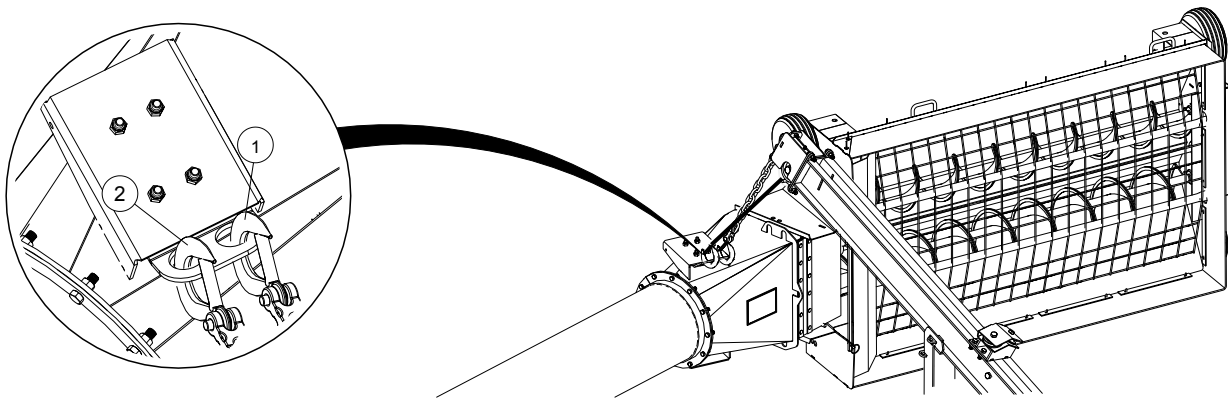


**Assembly Note:**

- Feed side of hopper must face the main auger when in transport.

1	Safety Chain	2	Winch Cable
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## Augers with 15' Swing Tube Assembly (Optional)



**Assembly Note:**

- Feed side of hopper must face the main auger when in transport.

1	Safety Chain	2	Winch Cable
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## 4.21. Install the Hitch Jack

The jack is attached to the auger with a pin at the pivot point. To install:

1. Elevate the auger boot (intake end) approximately 2' (61 cm) with a front-end loader and sling, and install the jack in a vertical position. Secure with supplied pin.
2. Place a board beneath the jack before setting it on the ground, then lower the auger until the jack is seated. Remove front-end loader from auger.

### Note

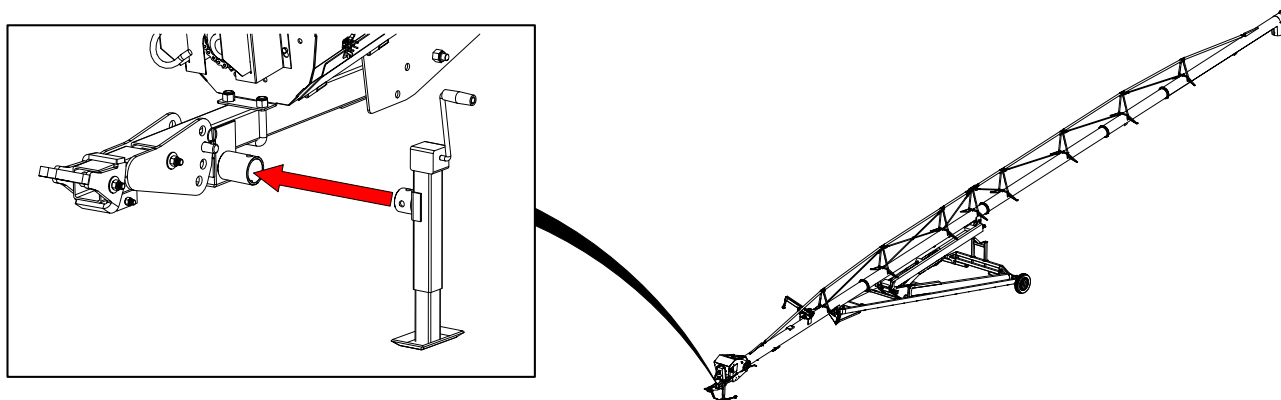
Jack can be rotated 90° for transport or operation.



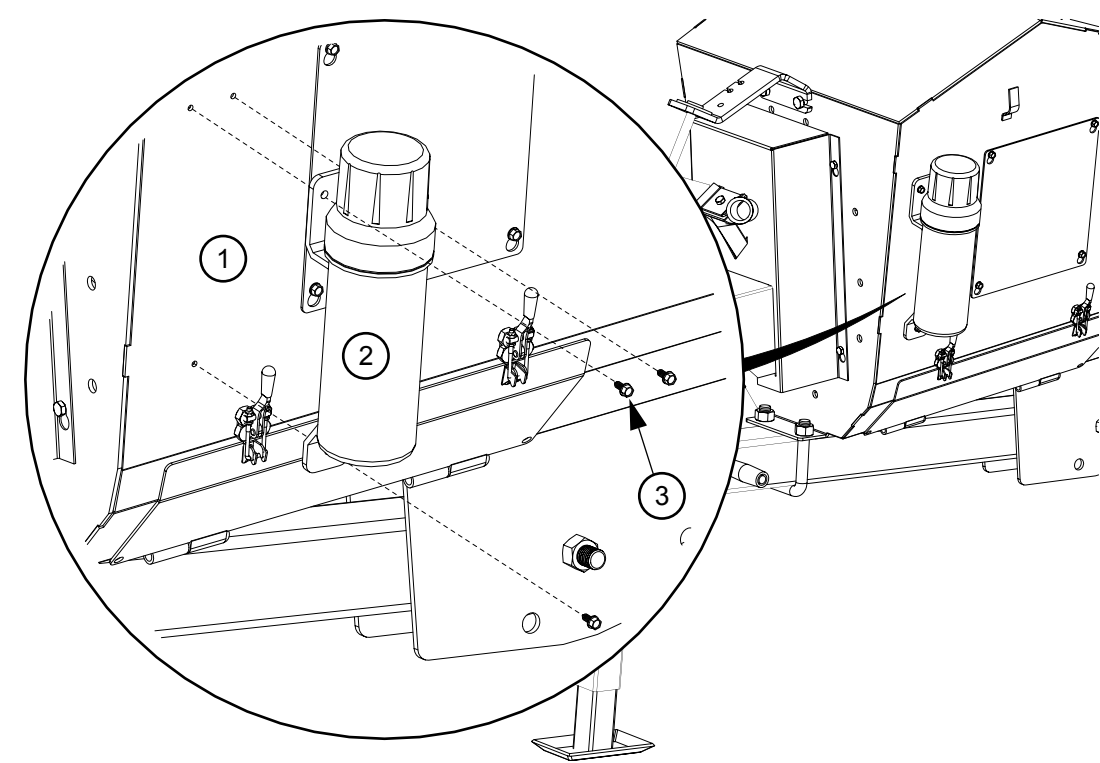
### WARNING

Jack is designed for raising or lowering auger hitch only.

Do not get on or beneath auger while supported by or while jack is being operated.



# 4.22. Install the Plastic Manual Container



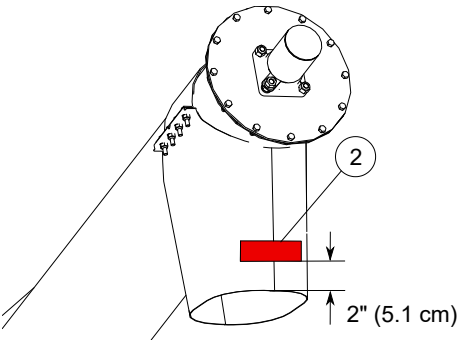
**Assembly Note:**

- Before beginning installation, ensure that all winch/auger lift controls are locked in place and shut down and/or lock out auger.

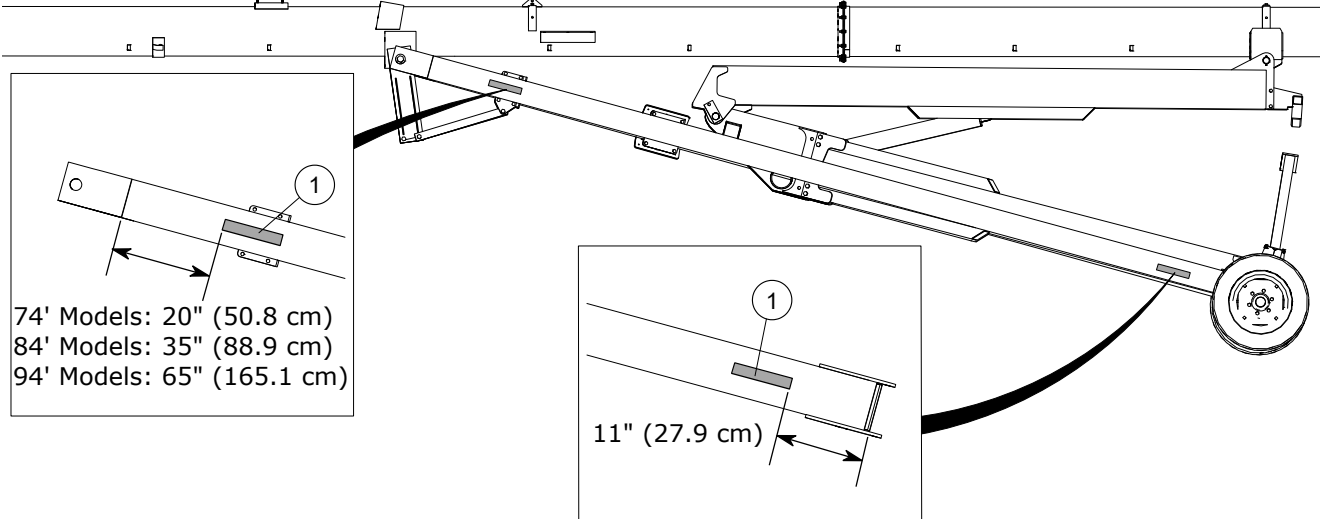
1	Boot	3	Self Tapping Screw
2	Plastic Manual Holder		

# 4.23. Install the Retroreflective Strips

## Spout



## Lower Arms



**Assembly Note:**

- Add 2 safety strips at the given locations on each arm.

1	Yellow Retroreflective Strip	2	Red Retroreflective Strip
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# 5. Specifications

Specification		13-74	13-84	13-94
Tube Size		13" (33.0 cm)		
CAPACITIES				
Unloading Rate		8700-9600 Bu/Hr		
TRANSPORT DIMENSIONS				
Length		74' (22.6 m)	84' (25.6 m)	94' (28.7 m)
Width		11'8" / 15' (3.55 m / 4.57 m)		
Height		12'1" (3.67 m)	11'8" (3.55 m)	12'4" (3.75 m)
DISCHARGE CLEARANCE DIMENSIONS				
Min		9'9" (2.97 m)	9'3" (2.82 m)	9'11" (3.02 m)
Max		49' (14.9 m)	53'9" (16.4 m)	61'3" (18.7 m)
REACH TO WHEELS				
Min		26'9" (8.15 m)	29'1" (8.84 m)	30'1" (9.06 m)
Max		35'9" (10.9 m)	42' (12.8 m)	45'2" (13.8 m)
TIRES				
Type		16" Bias Ply		
Inflation Pressure		See Manufacturer Recommended Pressure on Tire Sidewall		
WEIGHT				
Total Weight		4915 lb (2229.4 kg)	5550 lb (2517.4 kg)	6745 lb (3059.5 kg)*
POWER RECOMMENDATIONS				
PTO Drive		100 HP	120 HP	140 HP
PART SPECIFICATIONS				
PTO Speed		550 RPM (without speed reducer) 1000 RPM (with speed reducer)		
PTO Shaft		35R	55R	
Shear Bolt		3/8" x 1" GR8 Bolts		
PTO Maximum Operating Angle		15°		
Hitch Jack		2000 lb Side Winder		
Upper/Lower Gearbox Oil Capacity		0.9 US quarts (0.85 L)		
Speed Reducer Gearbox Oil Capacity		2.65 US quarts (2.5 L)		
Replacement Hose & Hose Ends	Min Strength (Working Pressure)	2500 PSI (17200 kPa)		
Hitch Pin (Minimum)		1" x 5"		

\* Weights are estimated.

# 6. Appendix

## 6.1. Bolt Torque

Table 2 gives the correct torque values for various hardware. Tighten all bolts to the torque specified, unless otherwise noted. Check tightness periodically, using Table 2 as a guide. Replace the hardware with the same strength bolt, contact AGI if you are unsure.

**Table 2. Recommended Bolt Torque<sup>a</sup>**

Size	Dry or Lubricated	Threads per inch (Course/ Fine)	Area of Bolt (sq in.)		Recommended Torque (ft-lb)							
					Grade 2		Grade 5		Grade 8		8.8 S/S	
			Coarse	Fine	Coarse	Fine	Coarse	Fine	Coarse	Fine	Coarse	Fine
1/4"	Dry	20/28	0.0318	0.0364	5.5	6.3	8	10	12	14	6.3	7.8
	Lubricated				6.3	4.7	6.3	7.2	9	10	-	-
5/16"	Dry	18/24	0.0524	0.058	11	12	17	19	24	27	11	11.8
	Lubricated				8	9	13	14	18	20	-	-
3/8"	Dry	16/24	0.0775	0.0878	20	23	30	35	45	50	20	22
	Lubricated				15	17	23	25	35	35	-	-
7/16"	Dry	14/20	0.1063	0.1187	32	36	50	55	70	80	31	33
	Lubricated				24	27	35	40	50	80	-	-
1/2"	Dry	13/20	0.1419	0.1599	50	55	75	85	110	120	43	45
	Lubricated				35	40	55	65	80	90	-	-
9/16"	Dry	12/18	0.182	0.203	70	80	110	120	150	170	57	63
	Lubricated				55	60	80	90	110	130	-	-
5/8"	Dry	11/18	0.226	0.256	100	110	150	170	210	240	93	104
	Lubricated				75	85	110	130	160	180	-	-
3/4"	Dry	10/16	0.334	0.373	175	200	260	300	380	420	128	124
	Lubricated				130	140	200	220	280	310	-	-
7/8"	Dry	9/14	0.462	0.508	170	180	430	470	600	670	194	193
	Lubricated				125	140	320	350	180	180	-	-
1"	Dry	8/14	0.606	0.679	250	280	640	720	910	1020	287	289
	Lubricated				190	210	480	540	680	760	-	-
1-1/8"	Dry	7/12	0.763	0.856	350	400	790	890	1290	1440	288	290
	Lubricated				270	300	590	670	970	1080	-	-
1-1/4"	Dry	7/12	0.989	1.073	500	550	1120	1240	1820	2010	289	291
	Lubricated				380	420	840	930	1360	1510	-	-
1-1/2"	Dry	6/12	1.405	1.581	870	960	1950	2200	3160	3560	-	-
	Lubricated				650	730	1460	1640	2370	2670	-	-

<sup>a</sup>Torque value for bolts and cap screws are identified by their head markings. Established at 75% of yield strength of bolt given the cross-sectional area.

### Note

Torque figures in table are valid for non-greased or non-oiled threads and head unless otherwise specified. Therefore, do not grease or oil bolts or cap screws unless otherwise specified in this manual. When using locking elements, increase torque values by 5%.

# 7. AGI Limited Warranty

This warranty relates to AGI Augers (the “Product”) sold by AGI, (referred to herein as the “Seller”) and applies only to the first user of the Product (meaning a purchaser directly from the Seller or from an authorized dealer or distributor of the Product, referred to herein as the “Buyer”).

This warranty shall only be effective if properly registered with the Seller in accordance with information provided to the Buyer at the time of sale.

1. The Seller warrants to the Buyer that the Product is free from defects in material and workmanship **under normal and reasonable use.**
2. This warranty applies only to defects in materials and workmanship and not to damage incurred in shipping or handling, through normal wear and tear, or damage due to causes beyond the control of the Seller such as lightning, fire, flood, wind, earthquake, excessive voltage, mechanical shock, water damage, or damage arising out of abuse, alteration, improper assembly, improper installation, improper maintenance or improper repair of the Product.
3. **The warranty period for the Product shall be two years from delivery of the Product to the Buyer where the Product is used in a normal farm operation. First year of warranty coverage of parts and labour, second year warranty coverage of parts only. Warranty period for the Product shall be 90 days from delivery of the Product to the Buyer where the Product is used in a commercial operation.** In the event that any part incorporated into the Product is manufactured and sold to the Seller by a third party vendor, such part is only warranted to the extent of the warranty given by that third party.
4. The obligations set forth in this warranty are conditional upon the Buyer promptly notifying the Seller of any defect and completing reasonably required documentation and, if required, promptly making the Product available for correction. The Seller shall be given reasonable opportunity to investigate all claims and no Product shall be returned to the Seller or part disposed of until after inspection and approval by the Seller and receipt by the Buyer of written shipping instructions, with transportation charges prepaid.
5. Upon return of the Product, or such part of the Product that requires correction, the Seller shall, at the Seller’s option, either repair or replace the Product or such part. The Seller shall replace or attempt to repair and return the Product or such part within a reasonable period of time from receipt of an approved warranty claim from the Buyer. If the Seller is unable to repair or replace the Product, the Buyer shall be entitled to a credit note in the amount of the purchase price for the Product.
6. The total liability of the Seller on any claim, whether in contract, tort or otherwise, arising out of, connected with, or resulting from the manufacture, sale, delivery, repair, replacement or use of the Product or any part thereof **shall not exceed the price paid for the Product** and the Seller shall not be liable for any special indirect, incidental or consequential damages caused by reason of the installation, modification, use, repair, maintenance or mechanical failure of the Product. **Consequential or special damages as used herein include, but are not limited to, lost or damaged products or goods, costs of transportation, lost sales, lost orders, lost income, increased overhead, labor and incidental costs and operational inefficiencies.**
7. **Notwithstanding anything contained herein to the contrary, the foregoing is the Buyer’s sole and exclusive remedy for breach of warranty by the Seller in respect of the Product. The Seller, for itself, its agents, contractors, employees and for any parent or subsidiary of the Seller, expressly disclaims all warranties, either express or implied, written or oral, including implied warranties of merchantability or fitness for a particular purpose and undertakes no obligation with respect to the conformity of the Product except as set out in the purchase agreement, if any, or marketing materials.**
8. The foregoing warranty is the entire warranty of the Seller to the Buyer and the Buyer shall not be entitled to rely upon any representation or warranty contained in any marketing material of the Seller in respect of the Product. The Seller neither assumes, nor authorizes any other person purporting to act on its behalf to modify or to change this warranty, nor to assume for it any other warranty or liability concerning the Product.

**WARRANTY VOID IF NOT REGISTERED**










AGI is a leading provider of equipment solutions for agriculture bulk commodities including seed, fertilizer, grain, and feed systems with a growing platform in providing equipment and solutions for food processing facilities. AGI has manufacturing facilities in Canada, the United States, the United Kingdom, Brazil, South Africa, India and Italy and distributes its products globally.



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Please include the part number listed on the cover page in your message.