

# **Swing-Away Grain Auger**

#### MKX13, X13, HX13 Assembly Manual

#### This manual applies to:

Westfield MKX13-84, MKX13-94, MKX13-114

**AGI X13-114** 

**Hutchinson HX13-114** 

Mayrath HX13-114





Part Number: 30797 R8 Revised: October 2021

Original Instructions

#### **New in this Manual**

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

| Description                                                                   | Section                                                                                                 |  |
|-------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|--|
| Cylinder mount bolts are used to install the 94/114 hydraulic lift cylinders. | Section 4.5 – Install Hydraulic Lift Cylinders on page 28                                               |  |
| Revised the top truss tube assembly note.                                     | Section 4.12.2 – Top Truss Tube on page 37                                                              |  |
| Replaced nuts securing the cross brace to the cross brace shackle.            | Section 4.12.3 – Cross Brace on page 38 Section 4.20 – Install the Hopper Lift Arm and Winch on page 55 |  |
| Modified stabilizer brace.                                                    | Section 4.14 – Assemble the Frame on page 42                                                            |  |
| Added the wheel bolt torque value.                                            |                                                                                                         |  |
| Replaced bolt used to attach the stabilizer brackets.                         | Section 4.15 – Connect the Auger Tube to the Frame on page 46                                           |  |
| Replaced bolts attaching the lower frame to the tube.                         |                                                                                                         |  |
| Updated the valve holder.                                                     | Section 4.17 – Connect Hydraulic Hoses and Ball<br>Valve on page 49                                     |  |
| Modified the manual winch assembly.                                           | Section 4.20 – Install the Hopper Lift Arm and Winch on page 55                                         |  |

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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 Swing-Away 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



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.

**⚠ WARNING** 

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

**⚠ CAUTION** 

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

NOTICE

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

#### 2.2. Follow Safety Instructions

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



- 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



- · 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

#### **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

#### **MARNING** 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



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

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

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

- 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.

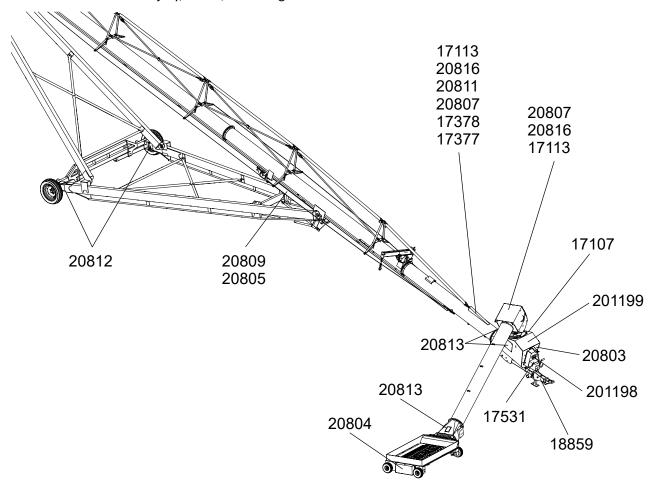


Table 1. Safety Decals

| Part Number | Description                                                                                                                                                                                                                                                                                                               |  |  |
|-------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|
| 20813       | DANGER                                                                                                                                                                                                                                                                                                                    |  |  |
|             | ROTATING FLIGHTING HAZARD                                                                                                                                                                                                                                                                                                 |  |  |
|             | To prevent death or serious injury:                                                                                                                                                                                                                                                                                       |  |  |
|             | KEEP AWAY from rotating auger flighting.                                                                                                                                                                                                                                                                                  |  |  |
|             | <ul> <li>DO NOT remove or modify auger flighting<br/>guards, doors, or covers. Keep in good working<br/>order. Have replaced if damaged.</li> </ul>                                                                                                                                                                       |  |  |
|             | DO NOT operate the auger without all guards, doors, and covers in place.                                                                                                                                                                                                                                                  |  |  |
|             | NEVER touch the auger 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.                                                                                                                                                                                                                                                                 |  |  |
| 201198      | <u> </u>                                                                                                                                                                                                                                                                                                                  |  |  |
|             | ENTANGLEMENT HAZARD To prevent serious injury or death:  • 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. |  |  |

Table 1 Safety Decals (continued)

| Part Number | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|-------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 201199      | ROTATING PTO DRIVELINE To prevent serious injury or death:  * Keep body, hair, and clothing away from rotating prof driveline.  * On not operate equipment unless all driveline, rator, and equipment shields are in place and in good working order.  * Make certain the driveline is securely attached at both ends.  * On not operate auger unless swing-hopper is securely attached to boot.  **NOTICE**  To prevent damage, wheels must be free to move when raising or lowering equipment.  * On not exceed specified operating speed (see operator's manual).  * Keep u-joint angles small and equal. Do not exceed maximum recommended length for PTO driveline. |
| 20816       | ELECTROCUTION HAZARD  To prevent death or serious injury:  • When operating or moving, keep equipment away from overhead power lines and devices.  • Fully lower equipment before moving.  This equipment is not insulated.  Electrocution can occur without direct contact.                                                                                                                                                                                                                                                                                                                                                                                             |
| 17113       | TRANSPORT HAZARD  To prevent serious injury or equipment damage, before towing:  Lift up wheel frame completely and secure with safety chain.  Pull handle to disengage drive wheel motors.                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |

Table 1 Safety Decals (continued)

| Description                                                                                                     |  |  |
|-----------------------------------------------------------------------------------------------------------------|--|--|
| <b>⚠ WARNING</b>                                                                                                |  |  |
|                                                                                                                 |  |  |
| ENTANGLEMENT HAZARD                                                                                             |  |  |
| To prevent serious injury or death:                                                                             |  |  |
| <ul> <li>Keep body, hair, and clothing away from rotating<br/>pulleys, belts, chains, and sprockets.</li> </ul> |  |  |
| <ul> <li>Do not operate with any guard removed or<br/>modified. Keep guards in good working order.</li> </ul>   |  |  |
| Shut off and lock out power source before inspecting or servicing machine.                                      |  |  |
|                                                                                                                 |  |  |

Table 1 Safety Decals (continued)

| Part Number | Description                                                                                                  |  |  |
|-------------|--------------------------------------------------------------------------------------------------------------|--|--|
| 20811       | <b>⚠ WARNING</b>                                                                                             |  |  |
|             |                                                                                                              |  |  |
|             | UPENDING HAZARD                                                                                              |  |  |
|             | To prevent death or serious injury:                                                                          |  |  |
|             | Anchor intake end and/or support discharge end to prevent upending.                                          |  |  |
|             | Intake end must always have downward weight.  Do not release until attached to tow bar or resting on ground. |  |  |
|             | Do not raise intake end above tow bar height.                                                                |  |  |
|             | Empty tube and fully lower before moving.                                                                    |  |  |

Table 1 Safety Decals (continued)

| Part Number | Description                                                                                                             |  |
|-------------|-------------------------------------------------------------------------------------------------------------------------|--|
| 20807       | <b>⚠ WARNING</b>                                                                                                        |  |
|             |                                                                                                                         |  |
|             | To prevent serious injury or death:                                                                                     |  |
|             | <ul> <li>Read and understand the manual before<br/>assembling, operating, or maintaining the<br/>equipment.</li> </ul>  |  |
|             | Only trained personnel may assemble, operate, or maintain the equipment.                                                |  |
|             | Children and untrained personnel must be kept outside of the work area.                                                 |  |
|             | Do not modify the equipment. Keep in good working order.                                                                |  |
|             | If the manual, guards, or decals are missing or<br>damaged, contact factory or representative for<br>free replacements. |  |
|             | Lock out power before performing maintenance.                                                                           |  |
|             | To prevent equipment collapse or upending,<br>support equipment tube while disassembling<br>certain components.         |  |
|             | Follow grain storage structure manufacturer's warnings when loading and unloading.                                      |  |
|             | Electric motors must be grounded. Disconnect power before resetting overloads.                                          |  |
|             |                                                                                                                         |  |

Table 1 Safety Decals (continued)

| Part Number | Description                                                                                                                                                                                                                                                                                                         |
|-------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 20803       | WARNING  MISSING GUARD HAZARD  To prevent serious injury or death, shut off power and reattach guard before operating machine.                                                                                                                                                                                      |
| 20809       | To prevent serious injury or death:  • Keep away from rotating cable sheaves and lift cables.  • Inspect lift cable periodically; replace if damaged.  • Inspect cable clamps periodically; tighten if necessary.                                                                                                   |
| 20805       | HIGH PRESSURE FLUID HAZARD  Hydraulic fluid can cause serious injury if it penetrates the skin. If it does, see a doctor immediately.  Relieve system pressure before repairing, adjusting or disconnecting.  Wear proper hand and eye protection when searching for leaks. Use wood or cardboard instead of hands. |

Table 1 Safety Decals (continued)

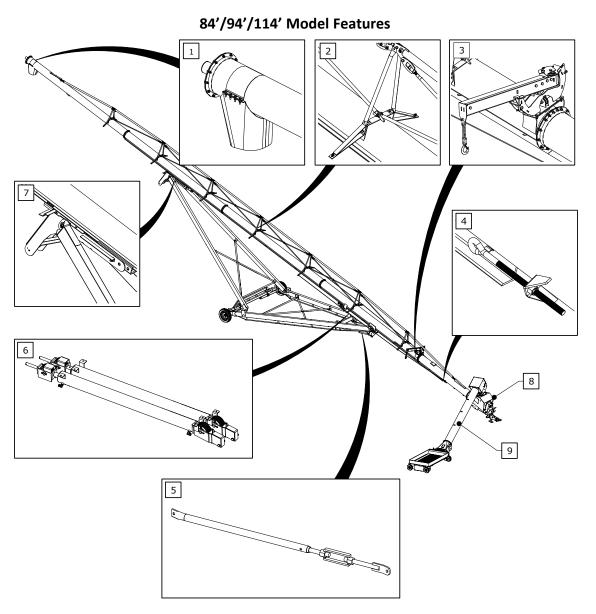
| Part Number | Description                                                                                                                                                                                                                                              |
|-------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 20812       | ROLLOVER / TRANSPORT HAZARD  To prevent serious injury or death:  • Fully extend axles before transporting.                                                                                                                                              |
| 17107       | CAUTION  To prevent personal injury or damage to equipment, close valve in lift cylinder hydraulic line after raising equipment into position.                                                                                                           |
| 17378       | This equipment is not intended for transport on public roads. If it must be moved, check local regulations. To avoid damaging the equipment:  Be careful when turning corners.  Watch for low overhead objects.  Retract axles before transporting unit. |
| 17377       | To lower equipment, start tractor, then engage hydraulic lever in down position.  This pumps oil to upper chamber of the hydraulic cylinders preventing overfill of tractor reservoir.                                                                   |

Table 1 Safety Decals (continued)

| Part Number | Description                                                                                                                                                                                                                                                          |
|-------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 17531       | NOTICE                                                                                                                                                                                                                                                               |
|             | To prevent damage during auger-to-tractor hookup:  • Follow dimensions above for correct auger-to-tractor hookup.  • Auger must be on level ground and in full down position when measuring.  • Adjust drawbar as needed. See operation manual for complete details. |
| 18859       | Disconnect PTO driveline from tractor before moving equipment.  If attached, driveline will bottom out, severely damaging the CV u-joint and lower flight shaft.  See manual for maintenance.                                                                        |

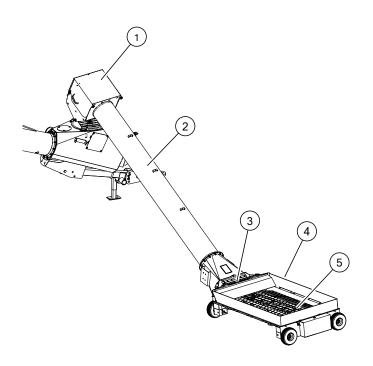
## 3. Features

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



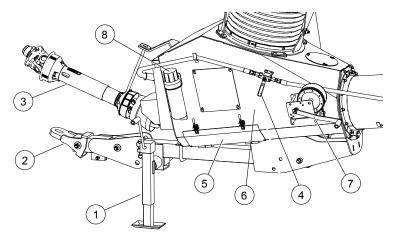
| 1 | Discharge Spout             | 6 | Hydraulic Cylinders |
|---|-----------------------------|---|---------------------|
| 2 | Truss Tower                 | 7 | Track               |
| 3 | Lift Arm                    | 8 | Boot                |
| 4 | Cable Adjustment            | 9 | Swing               |
| 5 | Adjustable Stabilizer Brace |   | ,                   |

#### **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

- MARNING 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.
  - Stay away from overhead power lines and other obstructions during assembly. Contact with power lines can cause electrocution.
  - Do not work in high winds.
  - The equipment shall be installed in accordance with applicable local codes and regulations.

#### 4.2. Check Shipment

Unload the parts at the assembly site and compare the packing slip to the shipment. Ensure that all items have arrived and that none are damaged.

Report damaged parts or shortages immediately to your dealer. Your dealer will order replacement parts immediately to ensure that assembly will not be held up by missing parts. All parts will be charged for and credit will be issued by party at fault. No credit will be issued if freight bills are signed as received in good condition.

#### 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. 84' Auger Tube Sections

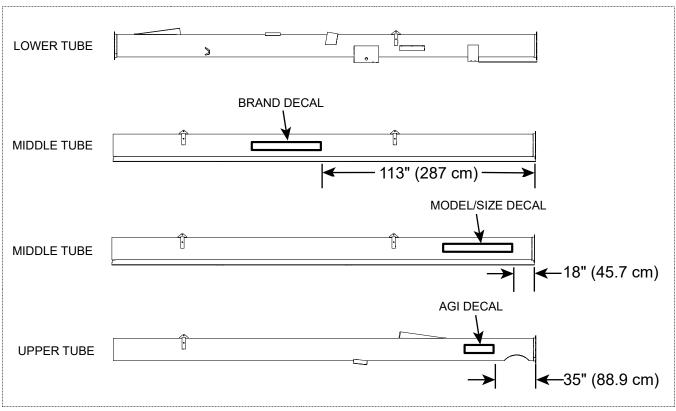


Figure 2. 94' Auger Tube Sections

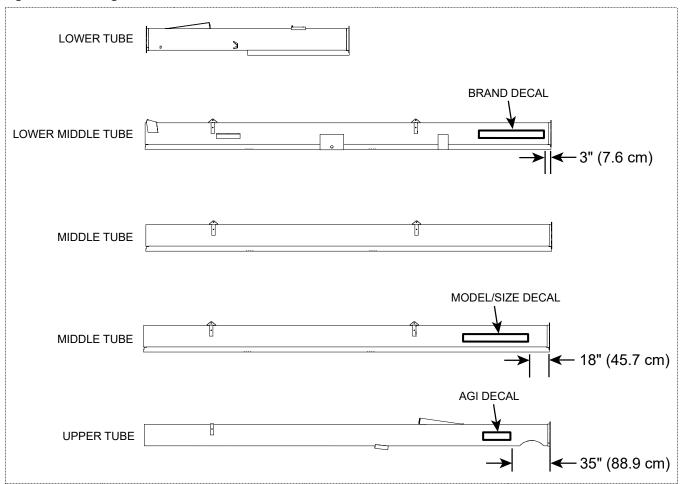
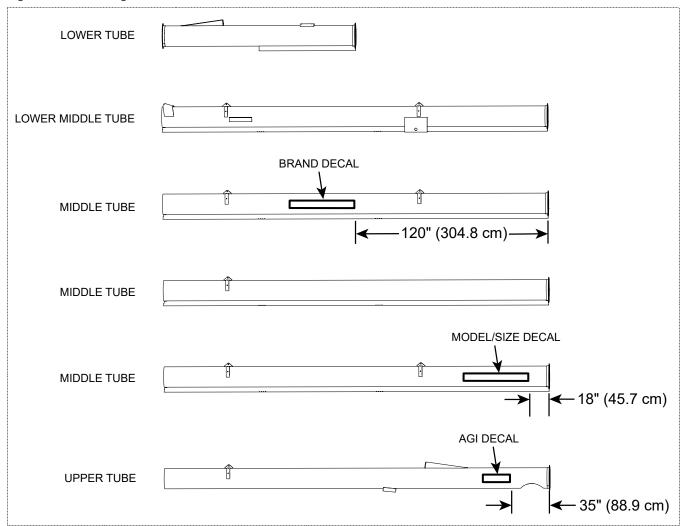


Figure 3. 114' Auger Tube Sections

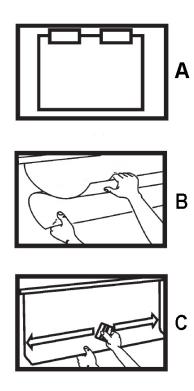


#### Apply the Logo and Model Decals on the Auger Tubes

#### **Important**

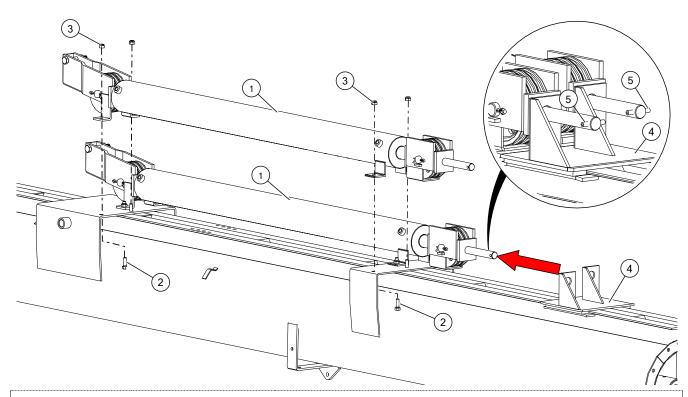
Do not cover any existing safety or instruction decals with the model decals.

- 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. Install Hydraulic Lift Cylinders

#### 84' Models

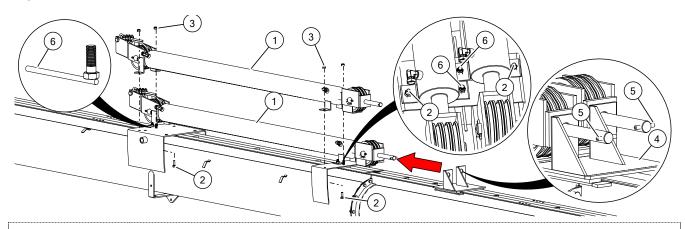


#### **Assembly Notes:**

- Rotate tube so that the cylinder mount brackets are facing up.
- Ensure triangular gussets of ram guide are facing the discharge end.
- Hydraulic Lift Cylinders must be positioned with the rod end towards the discharge end.

| 1 | Cylinder             | 4 | Ram Guide            |
|---|----------------------|---|----------------------|
| 2 | Bolt, 7/16" x 1-1/4" | 5 | Roll Pin, 5/16" x 2" |
| 3 | Lock Nut, 7/16"      |   |                      |

#### 94'/114' Models

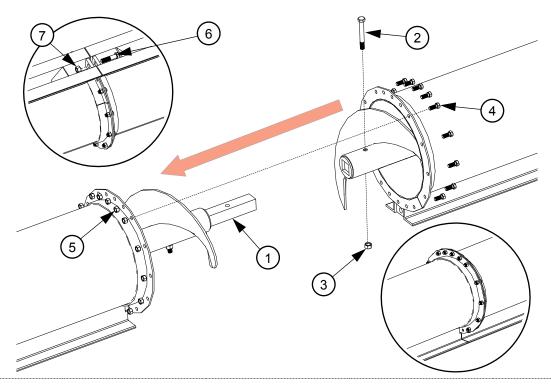


#### **Assembly Notes:**

- Rotate tube so that the cylinder mount brackets are facing up.
- Ensure triangular gussets of ram guide are facing the discharge end.
- Hydraulic Lift Cylinders must be positioned with the rod end towards the discharge end.
- The cylinder mount bolts were designed to go in the inner holes where it is hard to reach.

| ľ | 1 | Cylinder             | 4 | Ram Guide            |
|---|---|----------------------|---|----------------------|
|   | 2 | Bolt, 7/16" x 1-1/4" | 5 | Roll Pin, 5/16" x 2" |
| ĺ | 3 | Lock Nut, 7/16"      | 6 | Cylinder Mount Bolt  |

#### 4.6. Connect Auger Tubes

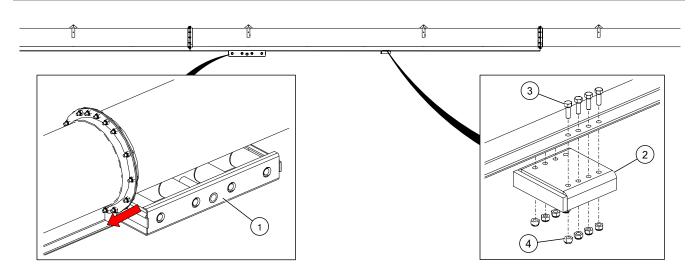


#### **Assembly Notes:**

- 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.
- Use a straight edge to align tracks at joint to ensure smooth slide for track shoe.

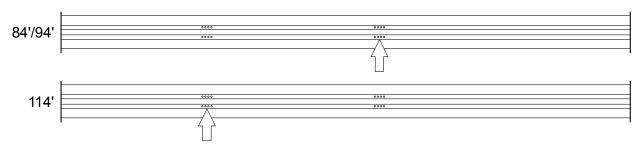
| 1 | Flight Connecting Shaft | 5 | Lock Nut, 7/16"     |
|---|-------------------------|---|---------------------|
| 2 | Bolt, 1/2" x 4"         | 6 | Bolt, 5/8" x 2-3/4" |
| 3 | Lock Nut, 1/2"          | 7 | Lock Nut, 5/8"      |
| 4 | Bolt, 7/16" x 1-1/4"    |   |                     |

#### 4.7. Install the Track Shoe and Track Stop



# Assembly Note: • Slide Track Shoe onto track before attaching upper track stop. 1 Track Shoe 3 Bolt, 7/16" x 1–1/4" 2 Track Stop 4 Lock Nut, 7/16"

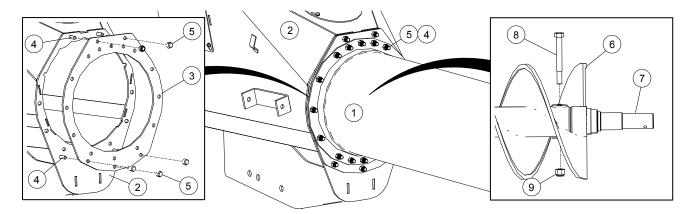
#### **Track Stop Locations**



#### 4.8. Install the Boot on the Auger Tube

#### **⚠ WARNING**

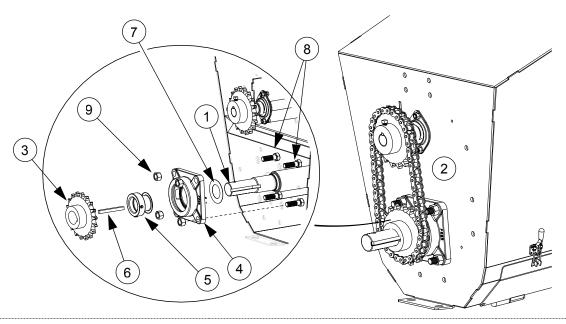
Components are heavy and create a crushing hazard if improperly handled. Be sure to use proper hoisting equipment and procedures, and ensure lifting apparatus is secure. Lock out the lifting apparatus before working around or under the raised components; failure to do so may cause serious personal injury.



#### **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"        |   |                      |

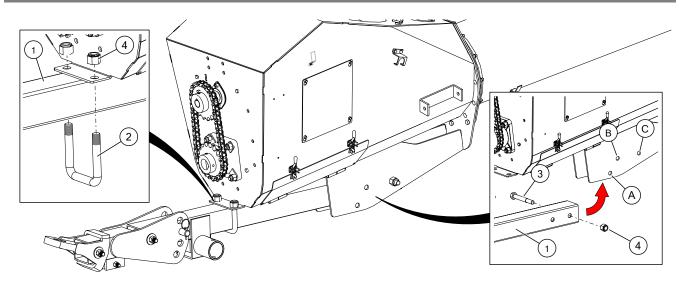


#### **Assembly Notes:**

- 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.

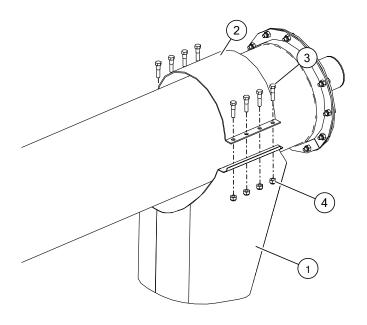
| 1 | Lower Tube Flighting            | 6 | Square Key, 3/8" x 3-3/8" |
|---|---------------------------------|---|---------------------------|
| 2 | Roller Chain, #80 x 37P (Heavy) | 7 | Rim Washer, 2"            |
| 3 | Sprocket, 80B18 x 1-3/4         | 8 | Bolt, 5/8" x 2"           |
| 4 | Bearing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

#### 4.9. Install the Boot Tow Bar



| 1 | Tow Bar                    | Α | Reducer/Reverser |
|---|----------------------------|---|------------------|
| 2 | U-Bolt, 3/4" x 3-1/2" x 5" | В | Reverser         |
| 3 | Bolt, 3/4" x 5-1/2"        | С | Regular          |
| 4 | Lock Nut, 3/4"             |   |                  |

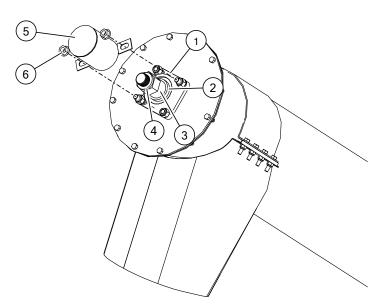
#### 4.10. Install the Spout



# Assembly Note: Apply caulking to seal the seam of spout to tube. Spout Wide Half Clamp Bolt, 7/16" x 1–3/4" Lock Nut, 7/16"

#### 4.11. Set the Thrust Adjuster

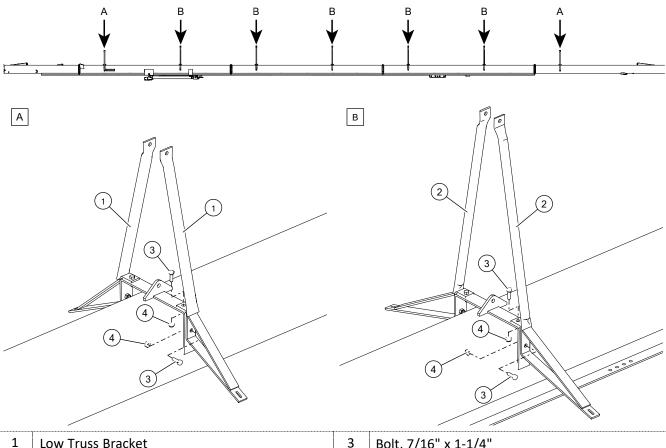
- 1. Remove the upper bearing lock collar (if necessary). Ensure that flight shaft slides freely in/out of bearing.
- 2. Slide the lock collar and bushing onto the shaft and attach the 1-1/2" nut.
- 3. Turn the nut until it is snug against the bushing, then turn it so that the shaft moves an additional 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" |

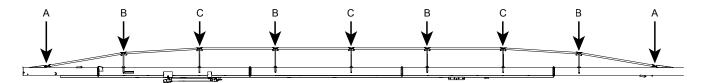
#### 4.12. Install Truss Support Towers and Truss Tubes

#### 4.12.1 High and Low Towers



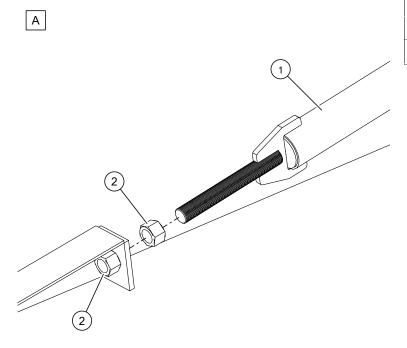
| <br>1 | Low Truss Bracket  | 3 | Bolt, 7/16" x 1-1/4" |
|-------|--------------------|---|----------------------|
| 2     | High Truss Bracket | 4 | Lock Nut, 7/16"      |

## 4.12.2 Top Truss Tube

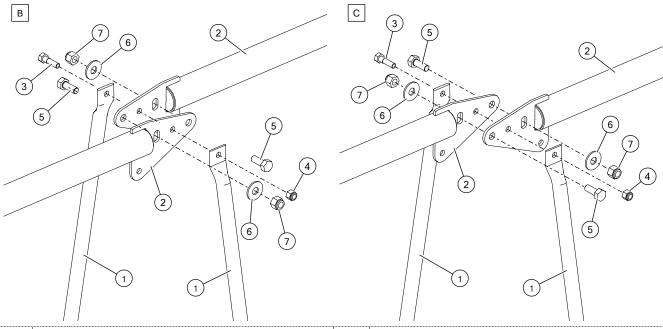


#### **Assembly Notes:**

- 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.

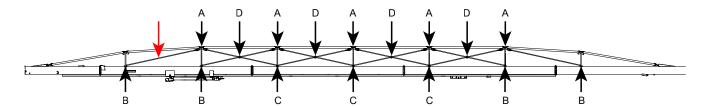


| 1 | Top Truss Tube w/ Threaded Rod — Long |
|---|---------------------------------------|
| 2 | Hex Nut, 1"                           |



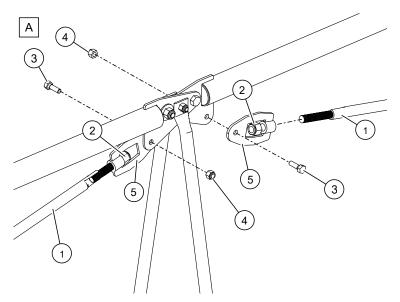
| 1 | Truss Bracket       | 5 | Bolt, 5/8" x 1-1/2" |
|---|---------------------|---|---------------------|
| 2 | Top Truss Tube      | 6 | Flat Washer, 5/8"   |
| 3 | Bolt, 1/2" x 1-3/4" | 7 | Lock Nut, 5/8"      |
| 4 | Lock Nut, 1/2"      |   |                     |

## 4.12.3 Cross Brace

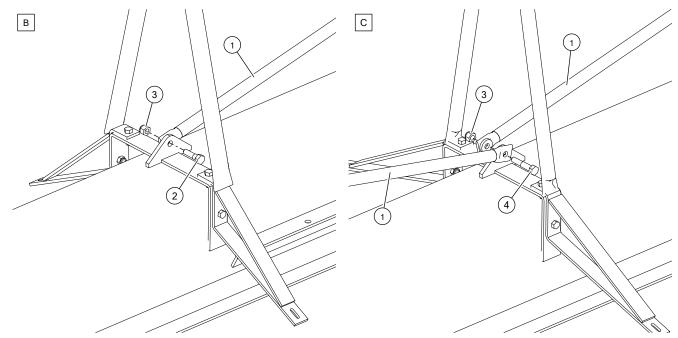


## **Assembly Note:**

- 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.

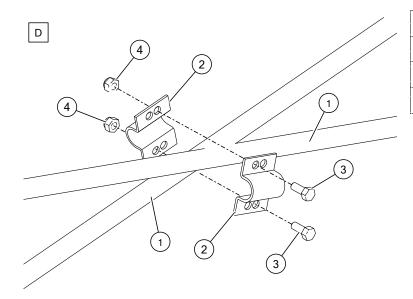


| 1 | Cross Brace — Long  |
|---|---------------------|
| 2 | Oval Lock Nut, 3/4" |
| 3 | Bolt, 1/2" x 1-1/2" |
| 4 | Lock Nut, 1/2"      |
| 5 | Cross Brace Shackle |



 1
 Cross Brace — Long
 3
 Lock Nut, 1/2"

 2
 Bolt, 1/2" x 1-3/4"
 4
 Bolt, 1/2" x 2-1/2"

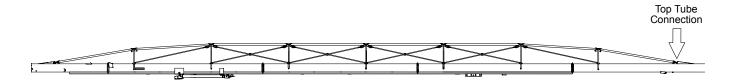


| 1 | Cross Brace — Long |
|---|--------------------|
| 2 | Cross Brace Clamp  |
| 3 | Bolt, 7/16" x 1"   |
| 4 | Lock Nut, 7/16"    |

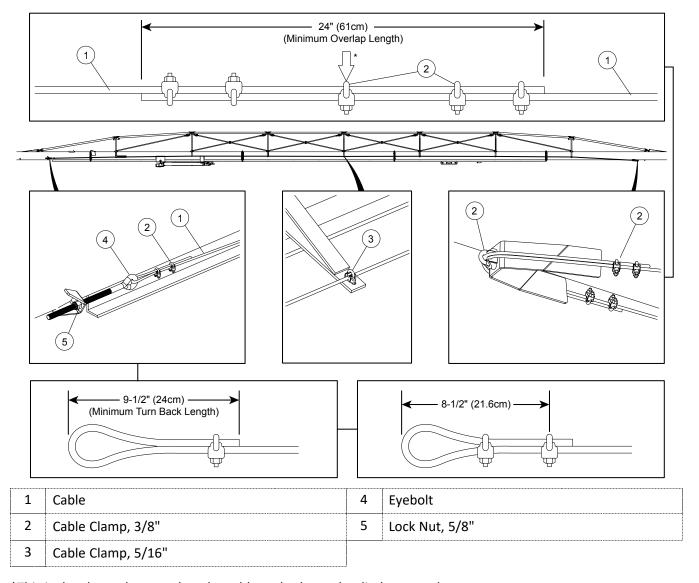
## 4.12.4 Tube Bow

Support auger tube at the discharge end and loosen the 1" UNC Nut of the top tube at that location. Raise end up approximately 2" (5.1 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. 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



## 4.13. Install Truss Cables

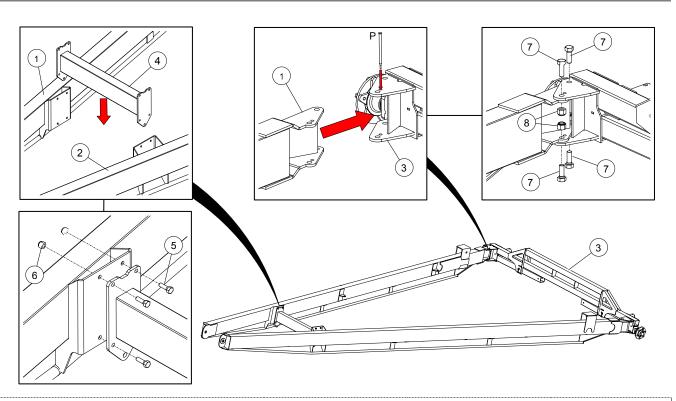


\*This is the clamp that attaches the cable and tube at the discharge end.

- 1. 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 symetrically on bracket at discharge end with 3/8" cable clamp.
- 2. Run the truss cables down the tube and attach to each truss tower using a 5/16" cable clamp.
- 3. 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.
  - a. 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.
  - b. 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.
- 4. Tighten the cables by adjusting the eyebolt lock nuts. These cables must be very tight.
- 5. 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   |

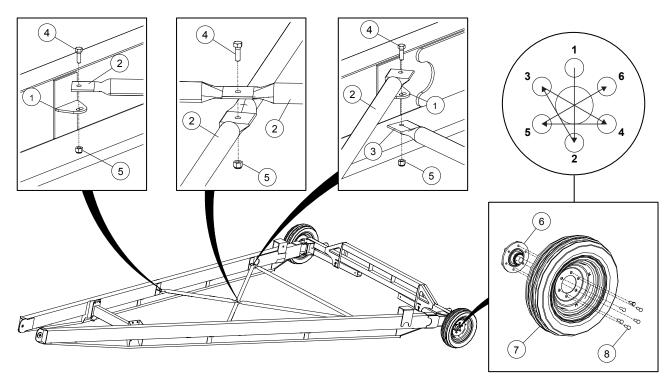
# 4.14. Assemble the Frame



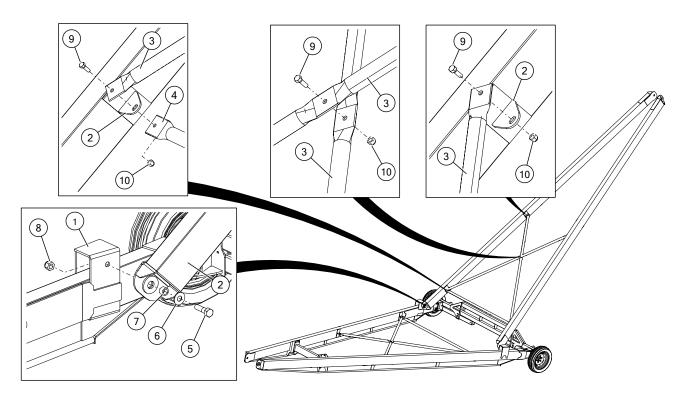
## **Assembly Note:**

• Insert a punch tool (P) in the hole shown to align bolt holes from the axle with the lower reach arm.

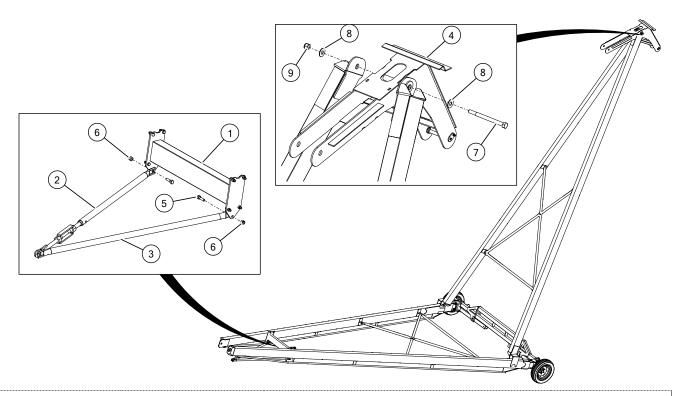
| ļ |                     | 1 |                     |
|---|---------------------|---|---------------------|
| 1 | Lower Reach Arm, LH | 5 | Bolt, 1/2" x 1-1/2" |
| 2 | Lower Reach Arm, RH | 6 | Lock Nut, 1/2"      |
| 3 | Axle Assembly       | 7 | Bolt, 3/4" x 2"     |
| 4 | Short Cross Member  | 8 | Lock Nut, 3/4"      |



#### **Assembly Note:** • Torque the wheel bolts to 100 ft·lb (± 10 ft·lb) using the pattern shown. 1 Lower Reach Arm Lock Nut, 1/2" 2 Cross Brace Tube 6 Axle Assembly 3 7 Wheel Lower Arm Tie Brace Bolt, 1/2" x 1-1/2" Wheel Bolt, 1/2" x 1-1/4" 4 8



| 1 | Lower Reach Arm     | 6  | Flat Washer, 1"       |
|---|---------------------|----|-----------------------|
| 2 | Upper Lift Arm      | 7  | Medium Spacer Bushing |
| 3 | Cross Brace Tube    | 8  | Lock Nut, 1"          |
| 4 | Upper Arm Tie Brace | 9  | Bolt, 1/2" x 1-1/2"   |
| 5 | Bolt, 1" x 3-1/2"   | 10 | Lock Nut, 1/2"        |



## **Assembly Note:**

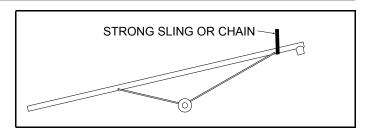
• The adjustable stabilizer brace must be installed on the same side as the swing tube and hopper.

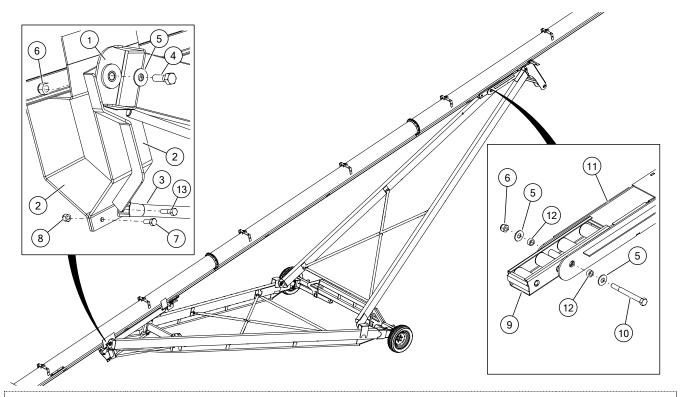
|   | The adjustable stabilizer brace must be installed on the same side as the swing tube and hopper. |   |                 |  |
|---|--------------------------------------------------------------------------------------------------|---|-----------------|--|
| 1 | Short Cross Member                                                                               | 6 | Lock Nut, 5/8"  |  |
| 2 | Adjustable Stabilizer Brace                                                                      | 7 | Bolt, 1" x 12"  |  |
| 3 | Stabilizer Brace                                                                                 | 8 | Flat Washer, 1" |  |
| 4 | Lift Assist                                                                                      | 9 | Lock Nut, 1"    |  |
| 5 | Bolt, 5/8" x 2"                                                                                  |   |                 |  |

# 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.





#### **Assembly Note:**

• Do not remove tube support until the assembly in this section has been completed.

| 1 | Lower Reach Arm     | 8  | Lock Nut, 5/8"       |  |
|---|---------------------|----|----------------------|--|
| 2 | Stabilizer Bracket  | 9  | Track Shoe           |  |
| 3 | Stabilizer Brace    | 10 | Bolt, 1" x 10"       |  |
| 4 | Bolt, 1" x 4-1/2"   | 11 | Lift Assist          |  |
| 5 | Flat Washer, 1"     | 12 | Short Spacer Bushing |  |
| 6 | Lock Nut, 1"        | 13 | Bolt, 5/8" x 2-1/4"  |  |
| 7 | Bolt, 5/8" x 1-3/4" |    | <u> </u>             |  |

## 4.16. Install the Lift Cylinder Cables

## **⚠ CAUTION**

Track shoe must rest against track stop when adjusting cable.

If this isn't done, the auger can raise higher than designed to lift, resulting in damage to auger and possible injury to personnel.

#### **Important**

Although the lift cable is factory installed on the cylinder, make sure that the cable clamps on the cylinder are secure and the cables are properly seated in the cable sheaves before attaching the other end of the cable to the track shoe.

- 1. Ensure that both cylinders are fully retracted, and that track shoe is resting against the track stop.
- 2. Thread both cables over the cable-attach-rod on the track shoe and pull tight. Ensure the minimum turn-back length of cable has been reached.

#### **Important**

The 84'/94' models require three 5/16" Cable Clamps per cable, and the 114' model requires four 3/8" Cable Clamps per cable. **Tighten cable clamps securely**.

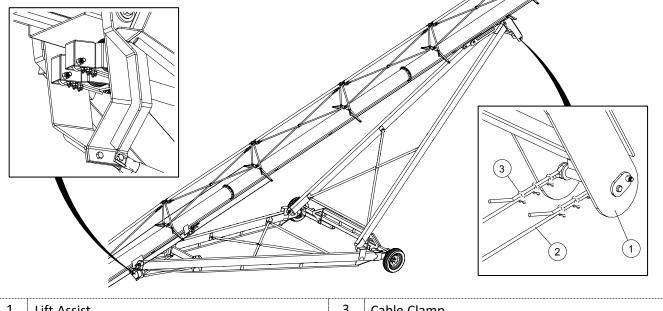
- 3. Secure the cables in place by installing and tightening the cable clamps.
  - a. Apply first clamp 1" (2.5 cm) from the cable end with the u-bolt over the dead end. Live end rests in clamp saddle. Tighten nuts evenly to the recommended torque.
  - b. Apply second clamp as close to loop as possible with the u-bolt over the dead end. Live end rests in clamp saddle. Turn nuts firmly but do not tighten.
  - c. Apply remaining clamps evenly between the first two with the u-bolt over the dead end. Live end rests in clamp saddle.
  - d. Apply tension and tighten all nuts evenly to the recommended torque.

| Model   | Cable Clamp | Turn-Back Length | Nut Torque |
|---------|-------------|------------------|------------|
| 84'/94' | 5/16"       | 7-3/4" (20 cm)   | 20 ft∙lb   |
| 114'    | 3/8"        | 9-1/2" (24 cm)   | 30 ft⋅lb   |

4. Tie up excess ends of lift cable with tape or cable ties.

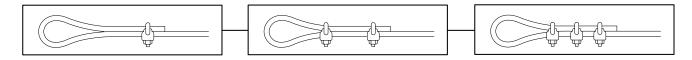
#### **Important**

Lift cables will stretch with initial use. Check and adjust frequently.

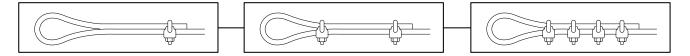


| ĺ | 1 | Lift Assist | 3 | Cable Clamp |
|---|---|-------------|---|-------------|
|   | 2 | Lift Cable  |   |             |

## 84'/94' Models



## 114' Models



## 4.17. Connect Hydraulic Hoses and Ball Valve

Determine right or left side of auger by standing at intake end facing top discharge end.

- **Lower** fittings refer to those closer to intake end of auger.
- **Upper** fittings refer to those closer to discharge end of auger.

#### Note

Use thread sealant (not supplied) on all hydraulic connections.

- 1. Position both elbow fittings on right lift cylinder. The lower one should face forward and downward at approximately 45°. The upper one should face rearward and downward at approximately 45°. Make certain they are tight.
- 2. Secure the solid connector end of the 3/8" x 16" hydraulic hose to the lower elbow fitting.
- 3. Secure the solid connector end of the 3/8" x 32" hydraulic hose to the upper elbow fitting.

#### Note

Before attaching short connector hydraulic hose to left side lift cylinder, make certain lift cables are tightly stretched and that this hose is positioned beneath lift cable on left side lift cylinder. If lift cable is not installed above this hose, it could result in the hoses wearing through during operation, causing a hazardous condition.



MARNING Wear on hose can cause auger to drop suddenly, causing serious injury or death and damage to the equipment.

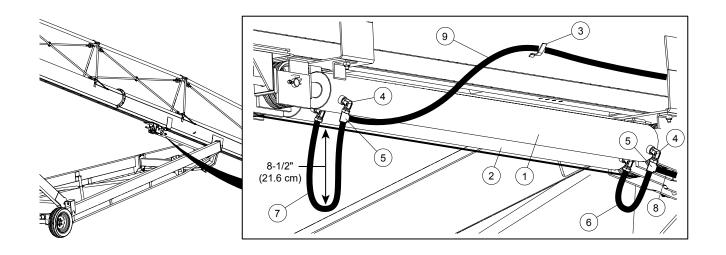
- 4. Position the elbow fittings on the left lift cylinder. The lower one should face forward and downward at approximately 45°. The upper one should face rearward and upward at approximately 10°.
- 5. Secure the tee fittings to the left cylinder elbow fittings and position them as shown. Make certain they are securely tightened.
- 6. Secure the swivel ends of the two cylinder-connector hoses to the tees.
- 7. Check 3/8" x 32" hydraulic hose position to ensure there is 8-1/2" (21.6 cm) clearance to lift cables as shown.
- 8. Attach the hydraulic pressure hose with shutoff valve to the lower tee fitting (nearest the auger intake).
- 9. Attach the hydraulic fluid return hose to the upper tee fitting (nearest auger discharge end).
- 10. Thread hoses through back arm attach bracket as shown.
- 11. Place both hoses into retaining brackets welded to side of auger tube and boot. Bend tops of brackets over slightly to hold hoses in place.

#### **Important**

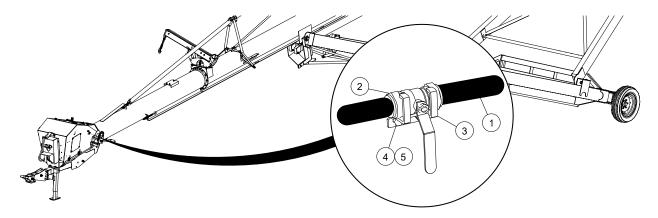
Protect hose ends from dirt.

- 12. Recheck that bolts on undercarriage, lift cylinders, and cable clamps are tight, then remove auger tube support.
- 13. Secure the ball valve to the boot using the valve holder and two 1/4" x 3/4" bolts and lock nuts.

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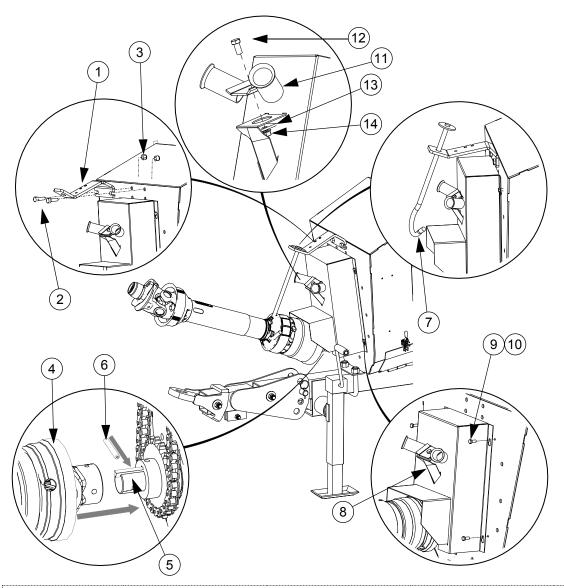


| 1 | Cylinder, Left                 | 7 | Hydraulic Hose, 3/8" x 32"                |
|---|--------------------------------|---|-------------------------------------------|
| 2 | Cylinder, Right                | 8 | Cylinder Hose Assembly                    |
| 3 | Retaining Brackets             |   | Hydraulic Hose, 3/8" x 327" (84' Models)  |
| 4 | Steel Elbow, 6 MORB x 3/8 NSPM | 9 | Hydraulic Hose, 3/8" x 408" (94' Models)  |
| 5 | Tee Fitting, 3/8"              |   | Hydraulic Hose, 3/8" x 480" (114' Models) |
| 6 | Hydraulic Hose, 3/8" x 16"     |   |                                           |



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

# 4.18. Connect the PTO Driveline

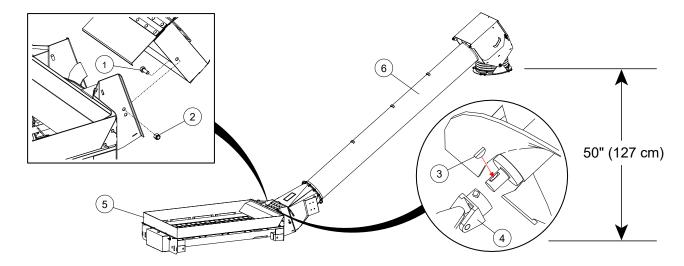


| Asse | sembly Note:                                                       |    |                    |  |  |  |  |
|------|--------------------------------------------------------------------|----|--------------------|--|--|--|--|
| • (  | Clean paint or dirt off of PTO driveline and flighting shaft ends. |    |                    |  |  |  |  |
| 1    | PTO Bracket                                                        | 8  | Sprocket Cover     |  |  |  |  |
| 2    | Bolt, 1/2" x 1-1/2"                                                | 9  | Bolt, 5/16" x 3/4" |  |  |  |  |
| 3    | Lock Nut, 1/2"                                                     | 10 | Lock Nut, 5/16"    |  |  |  |  |
| 4    | PTO                                                                | 11 | Double Hose Holder |  |  |  |  |
| 5    | Square Key, 3/8" x 3-3/8"                                          | 12 | Bolt, 3/8" x 3/4"  |  |  |  |  |
| 6    | Roll Pin, 3/8" x 2-1/2"                                            | 13 | Square Washer      |  |  |  |  |
| 7    | Transport Saddle                                                   | 14 | Flange Nut, 3/8"   |  |  |  |  |

## 4.19. Install Low Profile Intake Hopper

#### **⚠ WARNING**

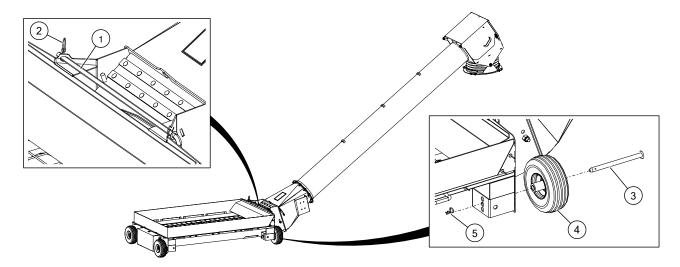
Components are heavy and create a crushing hazard if improperly handled. Be sure to use proper hoisting equipment and procedures, and ensure lifting apparatus is secure. Lockout the lifting apparatus before working around or under the raised components. Failure to do so may cause serious personal injury.



#### **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 U-Joint     |
|---|---|---------------------|---|---------------------|
| 1 | 2 | Lock Nut, 5/8"      | 5 | Hopper Assembly     |
| 3 | 3 | Woodruff Key        | 6 | Swing Tube Assembly |

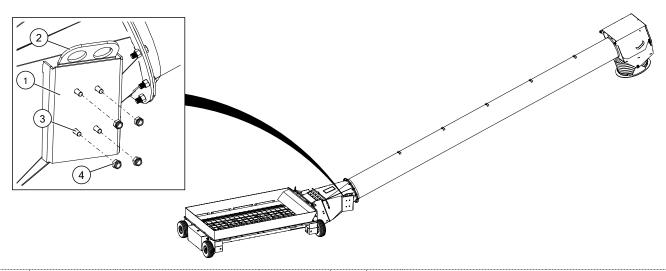


## **Assembly Notes:**

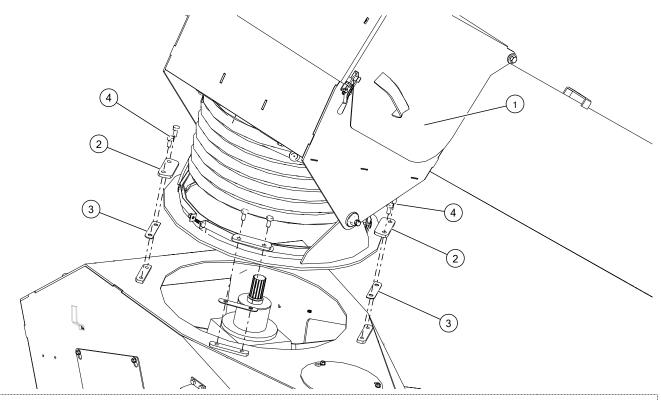
- Tighten set screws on u-joints, then close and secure the service door.
- There are 3 height settings for the hopper wheels that can be used according to preference.

| 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"      |



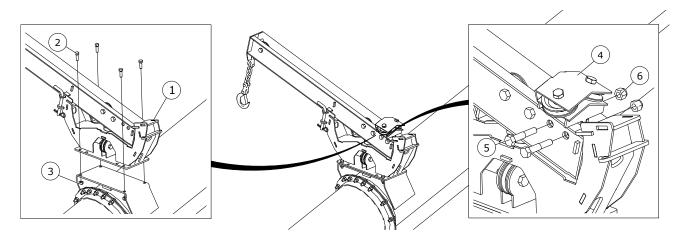
## **Assembly Notes:**

- 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" |

# 4.20. Install the Hopper Lift Arm and Winch

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

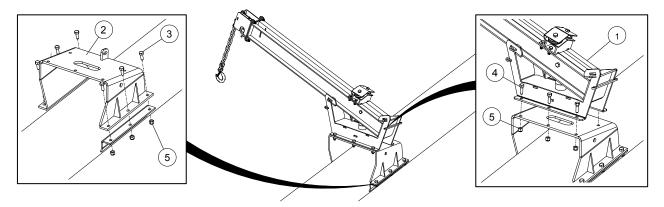


## **Assembly Notes:**

- 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"                 |

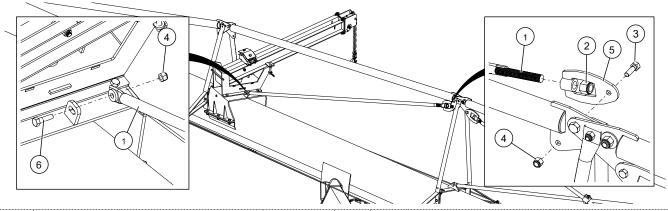
## Augers with 15' Swing Tube Assembly (Optional)



## **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.

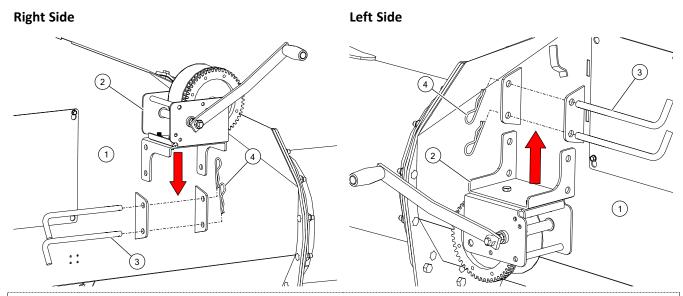
|   | 1 | Lift Arm Assembly   | 4 | Bolt, 1/2" x 1-1/2" |
|---|---|---------------------|---|---------------------|
|   | 2 | Lift Arm Mount      | 5 | Lock Nut, 1/2"      |
| İ | 3 | Bolt, 1/2" x 1-1/4" |   |                     |



| 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 MKX13 and X13 models.

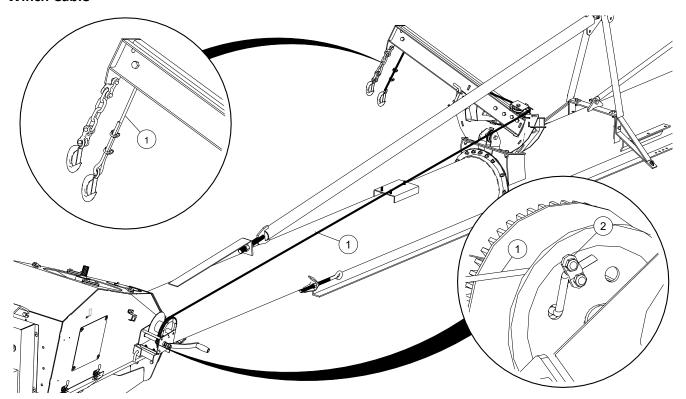


## **Assembly Note:**

• 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**



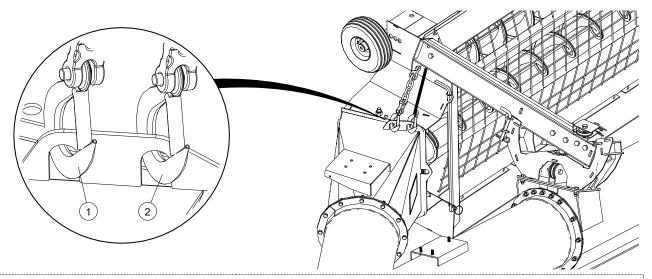
## **Assembly Notes:**

- 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.

|   |             | · · · · · · · · · · · · · · · · · · · | Ţ           |  |
|---|-------------|---------------------------------------|-------------|--|
| 1 | Winch Cable | 2                                     | Cable Clamp |  |

# 4.21. Hopper Transport Position

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

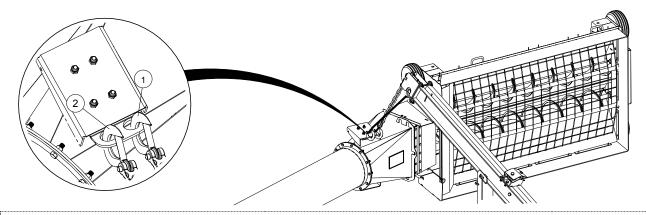


## **Assembly Note:**

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

1 Safety Chain 2 Winch Cable

## 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

## 4.22. Install the Hitch Jack

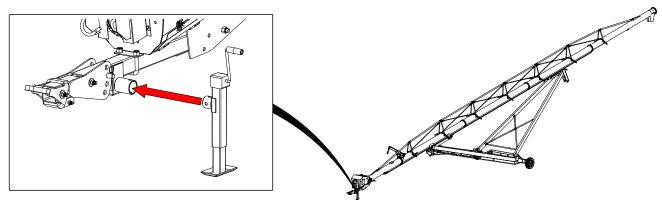
The jack is attached to the auger with a pin at the pivot point. To install:

- 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

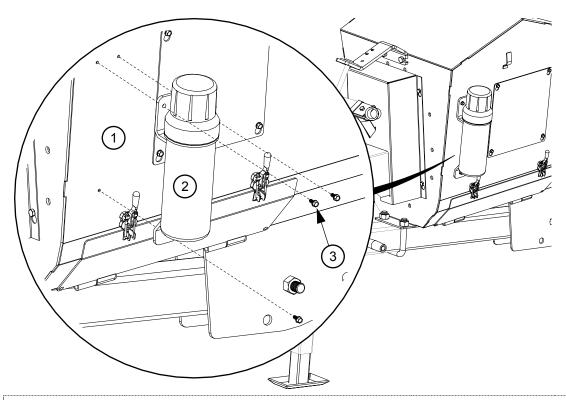
Jack can be rotated 90° for transport or operation.

MARNING 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.



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# 4.23. Install the Plastic Manual Container

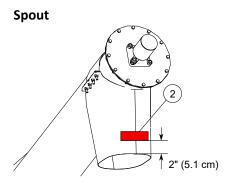


## **Assembly Note:**

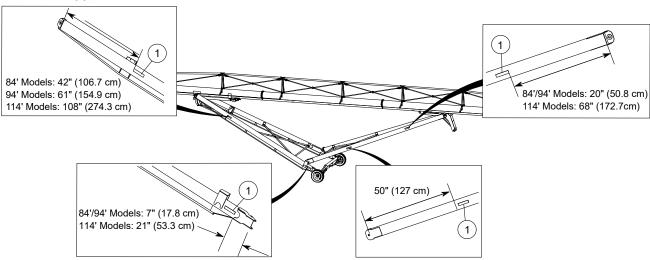
• Before beginning installation, ensure that all winch/auger lift controls are locked in place and shut down and/or lock out auger.

| 1 | 1 | Boot                  | 3 | Self Tapping Screw |
|---|---|-----------------------|---|--------------------|
| 2 | 2 | Plastic Manual Holder |   |                    |

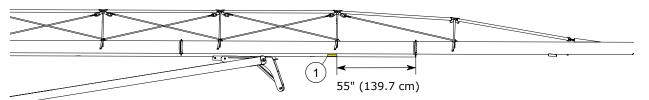
# 4.24. Install the Retroreflective Strips



## **Lower and Upper Arms**



#### **Upper Middle Tube (114' Models Only)**



#### **Assembly Note:**

- Add 2 safety strips at the given locations on each arm.
- For 114' Models only: Add safety strip at a given location on both sides of the tube.

1 Yellow Retroreflective Strip 2 Red Retroreflective Strip

# 5. Specifications

| Specification                      |                                       | 13-84                                                  | 13-114                       |                   |  |  |  |  |  |
|------------------------------------|---------------------------------------|--------------------------------------------------------|------------------------------|-------------------|--|--|--|--|--|
| Tube Size                          |                                       | 13" (33.0 cm)                                          |                              |                   |  |  |  |  |  |
| CAPACITIES                         | •                                     |                                                        |                              |                   |  |  |  |  |  |
| Unloading Rate                     |                                       | 8700-9600 Bu/Hr                                        |                              |                   |  |  |  |  |  |
| TRANSPORT DIMENSIONS               | •                                     |                                                        |                              |                   |  |  |  |  |  |
| Length                             |                                       | 84' (25.6 m)                                           | 114' (34.7 m)                |                   |  |  |  |  |  |
| Width                              |                                       | 12'2" / 15'2"<br>(3.71 m / 4.62 m)                     |                              |                   |  |  |  |  |  |
| Height                             |                                       | 13'1" (4.0 m)                                          | 13'1" (4.0 m) 13'4" (4.06 m) |                   |  |  |  |  |  |
| DISCHARGE CLEARANCE DIM            | ENSIONS                               |                                                        |                              |                   |  |  |  |  |  |
| Min                                |                                       | 10'2" (3.09 m)                                         | 10'4" (3.15 m)               | 12'2" (3.70 m)    |  |  |  |  |  |
| Max                                |                                       | 58' (17.67 m)                                          | 59' (17.98 m)                | 67'9" (20.65 m)   |  |  |  |  |  |
| REACH TO WHEELS                    | •                                     |                                                        |                              |                   |  |  |  |  |  |
| Min                                |                                       | 32'2" (9.80 m)                                         | 33'5" (10.19 m)              | 45' (13.72 m)     |  |  |  |  |  |
| Max                                |                                       | 42'9" (13 m)                                           | 43'8" (13.30 m)              | 55' (16.76 m)     |  |  |  |  |  |
| TIRES                              | <u>.</u>                              |                                                        |                              |                   |  |  |  |  |  |
| Туре                               |                                       | 16" Bias Ply                                           |                              |                   |  |  |  |  |  |
| Inflation Pressure                 |                                       | See Manufacturer Recommended Pressure on Tire Sidewall |                              |                   |  |  |  |  |  |
| WEIGHT                             |                                       |                                                        |                              |                   |  |  |  |  |  |
| Total Weight                       |                                       | 6544 lb (2968 kg)                                      | 7642 lb (3466 kg)            | 9109 lb (4131 kg) |  |  |  |  |  |
| POWER RECOMMENDATIONS              | S                                     |                                                        |                              |                   |  |  |  |  |  |
| PTO Drive                          |                                       | 135-155 HP                                             | 135–155 HP 145–165 HP        |                   |  |  |  |  |  |
| PART SPECIFICATIONS                |                                       |                                                        |                              |                   |  |  |  |  |  |
| PTO Speed                          | PTO Speed                             |                                                        | 550 RPM                      |                   |  |  |  |  |  |
| PTO Shaft                          |                                       | 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<br>Ends    | Min Strength<br>(Working<br>Pressure) | 2500 PSI (17200 kPa)                                   |                              |                   |  |  |  |  |  |
| Hitch Pin (Minimum)                |                                       | 1" x 5"                                                |                              |                   |  |  |  |  |  |

<sup>\*</sup> 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>1</sup>

|        | Dry or<br>Lubricated | Threads<br>per inch<br>(Course/<br>Fine) | Area of Bolt<br>(sq in.) |        | Recommended Torque (ft-lb) |      |         |      |         |      |         |      |
|--------|----------------------|------------------------------------------|--------------------------|--------|----------------------------|------|---------|------|---------|------|---------|------|
| Size   |                      |                                          |                          |        | 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   |
| 3/0    | 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   |
| 1/2    | 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  |
| 7/0    | 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>1.</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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