



X-Tend (A383)

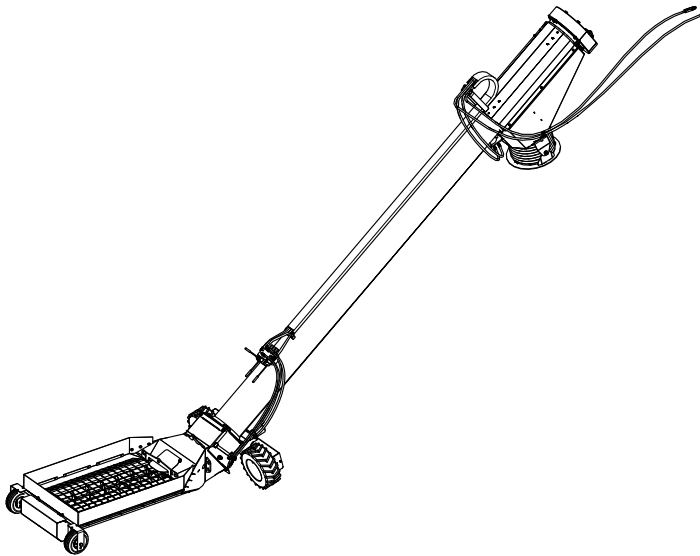
Retracting Swing Hopper Assembly Manual

This hopper is for use with:

AGI Westfield MKX² 13 (84/94/114)

AGI Westfield X² 13 (84/94)

AGI X² 13 (84/94/114)



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: WF00031020 R0

Revised: May 2025

Original Instructions

New in this Manual

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

Description	Section
This is a new manual.	

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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 Retracting Swing Hopper.

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.

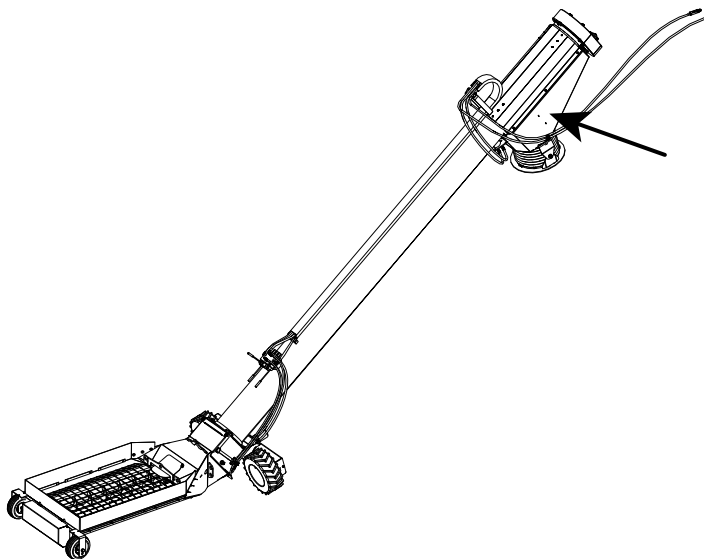
This manual describes the assembly of the X-Tend, used as an accessory on MKX²/X² 13 grain augers, and is intended as a supplement to your MKX²/X² 13 Series Auger Assembly Manual. Refer to the appropriate manual for additional assembly instructions.

1.1. Serial Number Location

The serial number location for your X-Tend is shown in the figure below. Have the serial number ready when ordering parts or requesting service or other information. Record information in the table below for easy reference.

Model Number	
Serial Number	
Date Received	

Figure 1. Serial Number Location



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.



DANGER 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. General Safety Information

Read and understand all safety instructions, safety decals, and manuals and follow them when assembling the equipment.

- Only experienced personnel who are familiar with this type of assembly and installation should perform this work. Untrained assemblers/installers expose themselves and bystanders to possible serious injury or death.
- Do not modify the X-Tend in any way or deviate from the instructions in this manual without written permission from the manufacturer. Unauthorized modification or methods may impair the function and/or safety. Any unauthorized modification will void the warranty.
- Follow a health and safety program for your worksite. Contact your local occupational health and safety organization for information.
- Contact your local representative or AGI if you need assistance or additional information.
- Always follow applicable local codes and regulations.



2.3. Rotating Flighting Safety

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 X-Tend 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

WARNING

- Keep body, hair, and clothing away from rotating shafts, 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. Guards Safety

WARNING

- Keep guards in place. Do not operate with guard removed.
- Do not walk on, step on, or damage guards.
- Lock out power before removing a guard.
- Ensure all guards are replaced after performing maintenance.

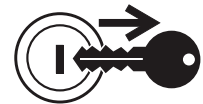
2.6. Hydraulic Winch Safety

➡ When Equipped:

- ⚠ WARNING**
- 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 X-Tend has reached full up position.
 - Do not disconnect hydraulic quick couplers when lines are pressurized.
 - Make sure lift cable is seated properly.
 - 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 Hydraulic Power Safety

WARNING Power Source

- Refer to the rules and regulations applicable to the power source operating the hydraulic system.
- 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. Personal Protective Equipment

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

Work Gloves

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



Steel-Toe Boots

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



Safety Glasses

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



Dust Mask

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



Hard Hat

- Wear a hard hat to help protect your head.



Coveralls

- Wear coveralls to protect skin.



2.9. 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.



2.10. 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.

2.10.1 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.

2.10.2 Safety Decal Locations and Details

Replicas of the safety decals that are attached to the X-Tend and their messages are shown in the figure(s) that follow. Safe operation and use of the X-Tend 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.

Figure 2. Safety Decal Locations

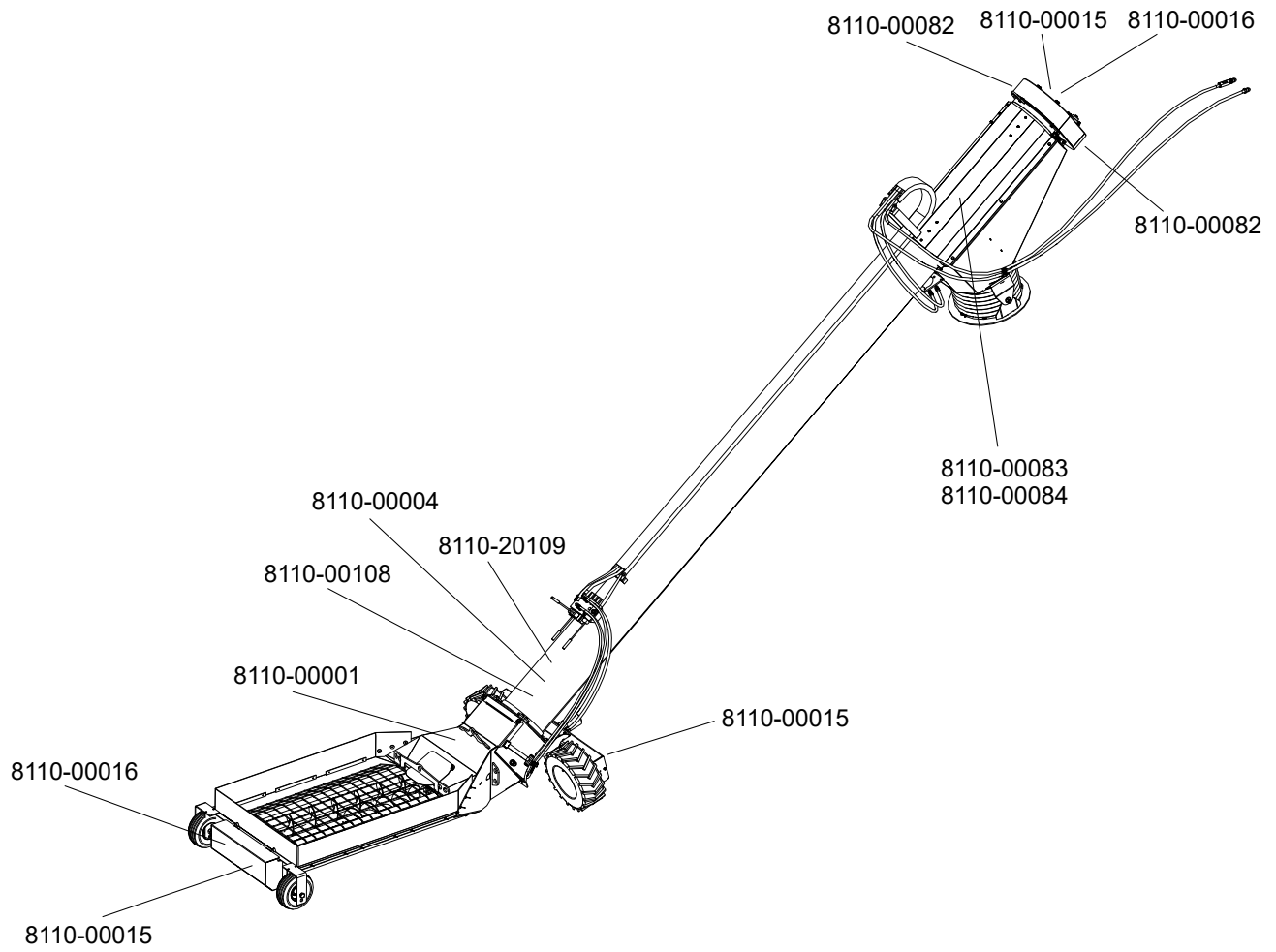


Table 1. Safety Decals


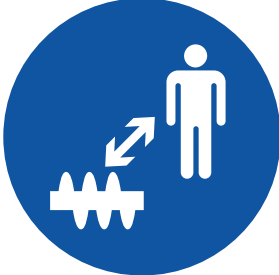


Part Number	Description
8110-00001	<div style="border: 1px solid black; padding: 10px;"> <div style="background-color: red; color: white; text-align: center; padding: 5px;">! DANGER</div> <div style="display: flex; justify-content: space-around; align-items: center;">   </div> <div style="text-align: center; margin-top: 10px;">ROTATING FLIGHTING HAZARD</div> <p>To prevent death or serious injury:</p> <ul style="list-style-type: none"> • KEEP AWAY from rotating auger fighting. • DO NOT remove or modify auger fighting 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 auger fighting. Use a stick or other tool to remove an obstruction or clean out. • Shut off and lock out power to adjust, service, or clean. </div>
8110-00016	<div style="border: 1px solid black; padding: 10px;"> <div style="background-color: orange; color: white; text-align: center; padding: 5px;">! WARNING</div> <div style="display: flex; justify-content: space-between; align-items: center;"> <div style="text-align: center;">   </div> <div style="margin-left: 20px;"> <p>MISSING GUARD HAZARD</p> <p>To prevent serious injury or death, shut off power and reattach guard before operating machine.</p> </div> </div> </div>

Table 1 Safety Decals (continued)

Part Number	Description
8110-00015	<div style="border: 2px solid black; padding: 10px;"> <div style="background-color: #f4a460; text-align: center; padding: 5px; border: 1px solid black;">  WARNING </div> <div style="display: flex; justify-content: space-around; align-items: center; padding: 10px;"> <div style="text-align: center;">  </div> <div style="text-align: center;">  </div> </div> <div style="text-align: center; padding: 10px;"> <p>ENTANGLEMENT HAZARD</p> <p>To prevent serious injury or death:</p> <ul style="list-style-type: none"> 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. </div> </div>

Table 1 Safety Decals (continued)






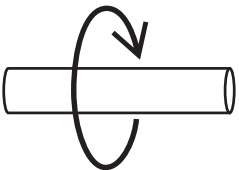
Part Number	Description
8110-00004	<div style="border: 1px solid black; padding: 10px;"> <div style="background-color: #f4a460; text-align: center; padding: 5px;">  WARNING </div> <div style="display: flex; justify-content: space-around; align-items: center; margin-top: 10px;"> <div style="text-align: center;">  </div> <div style="text-align: center;">  </div> </div> <div style="margin-top: 10px;"> <p>HIGH PRESSURE FLUID HAZARD</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"> • 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. </div> </div>
8110-00082	<div style="border: 1px solid black; padding: 10px;"> <div style="background-color: #f4a460; text-align: center; padding: 5px;">  WARNING </div> <div style="display: flex; justify-content: space-between; align-items: center; margin-top: 10px;"> <div style="text-align: center;">  </div> <div style="padding-left: 20px;"> <p>Moving Parts will cause severe injury.</p> <p>KEEP AWAY</p> </div> </div> <div style="display: flex; justify-content: space-between; align-items: center; margin-top: 10px;"> <div style="text-align: center;">  </div> <div style="padding-left: 20px;"> <p>ROTATING SHAFT</p> <p>Keep hair and loose clothing away</p> </div> </div> </div>

Table 1 Safety Decals (continued)



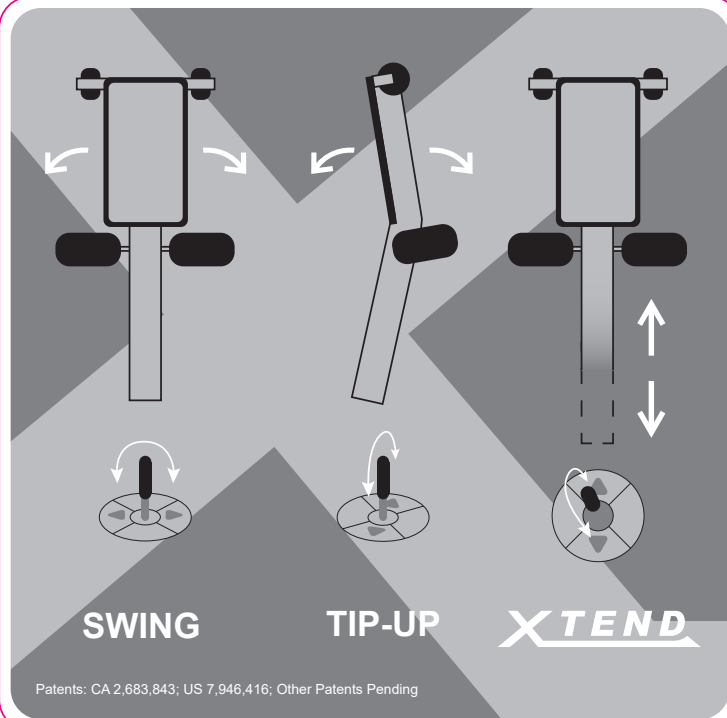
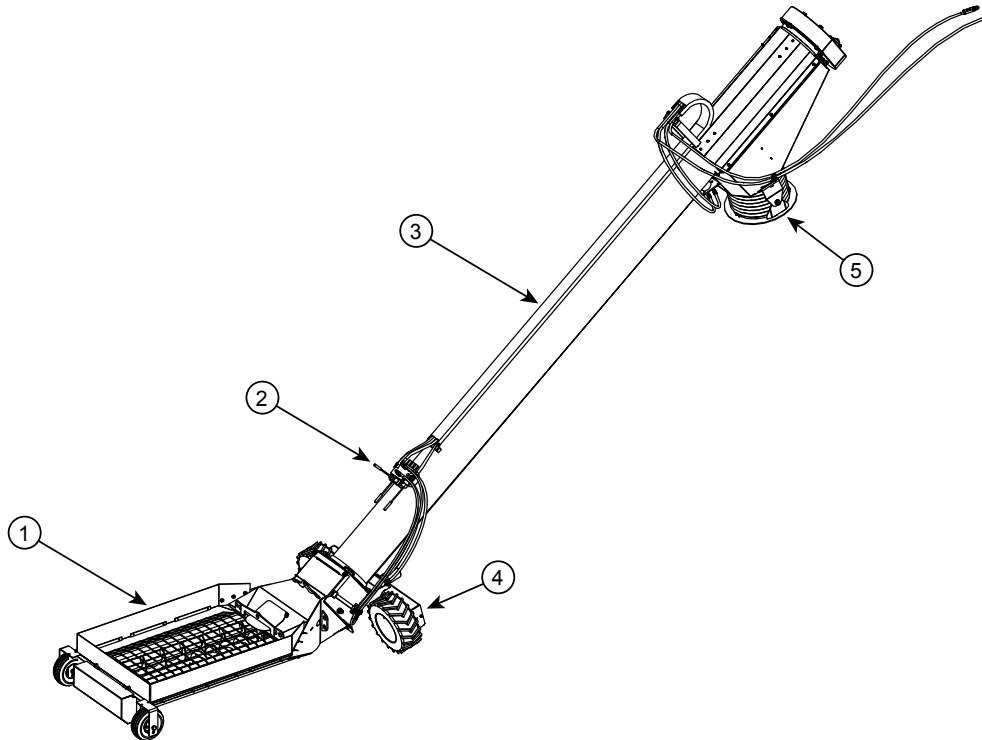
Part Number	Description
8110-00108	<div style="border: 2px solid black; padding: 10px;"> <div style="background-color: yellow; text-align: center; padding: 5px;">  CAUTION </div> <div style="padding: 10px;"> <ol style="list-style-type: none"> 1. SHUT OFF PTO when retracting or extending swing to or from its fully retracted position. 2. Engaging spline shaft with PTO running will damage the machine. 3. Make certain everyone is clear of the equipment before applying power or moving the machine. </div> </div>
8110-00083	<div style="border: 2px solid black; padding: 10px;"> <div style="background-color: blue; color: white; text-align: center; padding: 5px; font-weight: bold; font-size: 24pt;">NOTICE</div> <div style="padding: 10px;"> <p>DO NOT operate the PTO when retracted past this point.</p> <p>Failure to follow could result in equipment damage.</p> <div style="display: flex; align-items: center; justify-content: flex-end; margin-top: 10px;">  </div> </div> </div>

Table 1 Safety Decals (continued)

Part Number	Description
8110-00084	<div style="border: 1px solid black; padding: 10px;"> <p style="text-align: center; background-color: #0056b3; color: white; font-weight: bold; font-size: 1.2em; margin: 0;">NOTICE</p> <div style="display: flex; align-items: center; margin-top: 10px;"> <div style="font-size: 2em; margin-right: 10px;">←</div> <div>DO NOT operate the PTO when retracted past this point.</div> </div> <div style="display: flex; align-items: center; margin-top: 10px;"> <div style="font-size: 2em; margin-right: 10px;">←</div> <div>Failure to follow could result in equipment damage.</div> </div> </div>
8110-20109	<div style="border: 1px solid black; padding: 10px;">  <p style="text-align: center; font-weight: bold; font-size: 1.1em; margin-top: 10px;">SWING TIP-UP XTEND</p> <p style="font-size: 0.8em; margin-top: 5px;">Patents: CA 2,683,843; US 7,946,416; Other Patents Pending</p> </div>

3. Features

Figure 3. Typical X-Tend Components



1	hopper	4	wheel drive assembly
2	positioning controls	5	swing ring
3	swing auger		

General Description

The X-Tend is an option for the AGI MKX²/X² 13. It provides the ability to drive hopper bottom trailers into place with the X-Tend retracted and when extended will reach both trailer hopper gates on most straight trailers without having to re-position the truck. The X-Tend may be extended under the trailer under operator control safely and with ease once the trailer is stopped.

4. Assembly

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.
- Do not stand on, under, or near any component that is not secured.
- Carry out assembly in a large open area with a level surface.
- Always have two or more people assembling the X-Tend.
- 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. General Assembly

The X-Tend is available installed as part of the normal assembly of an MKX²/X² 13 auger or as a kit to replace an already-installed low-profile hopper.

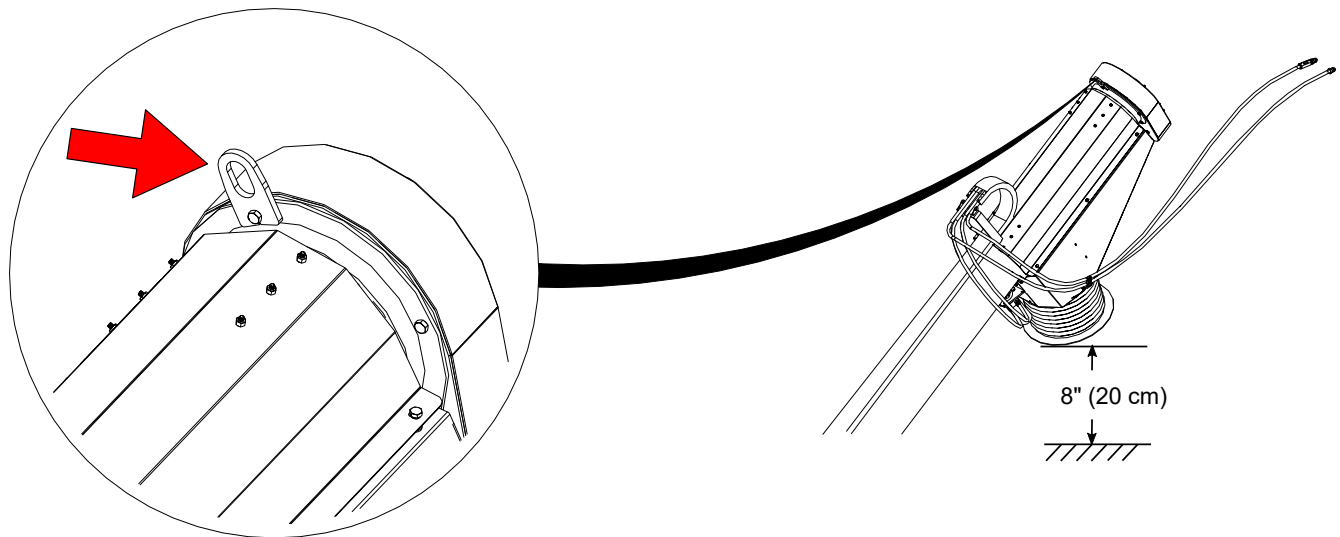
Refer to the main assembly manual for complete auger assembly information.

Note

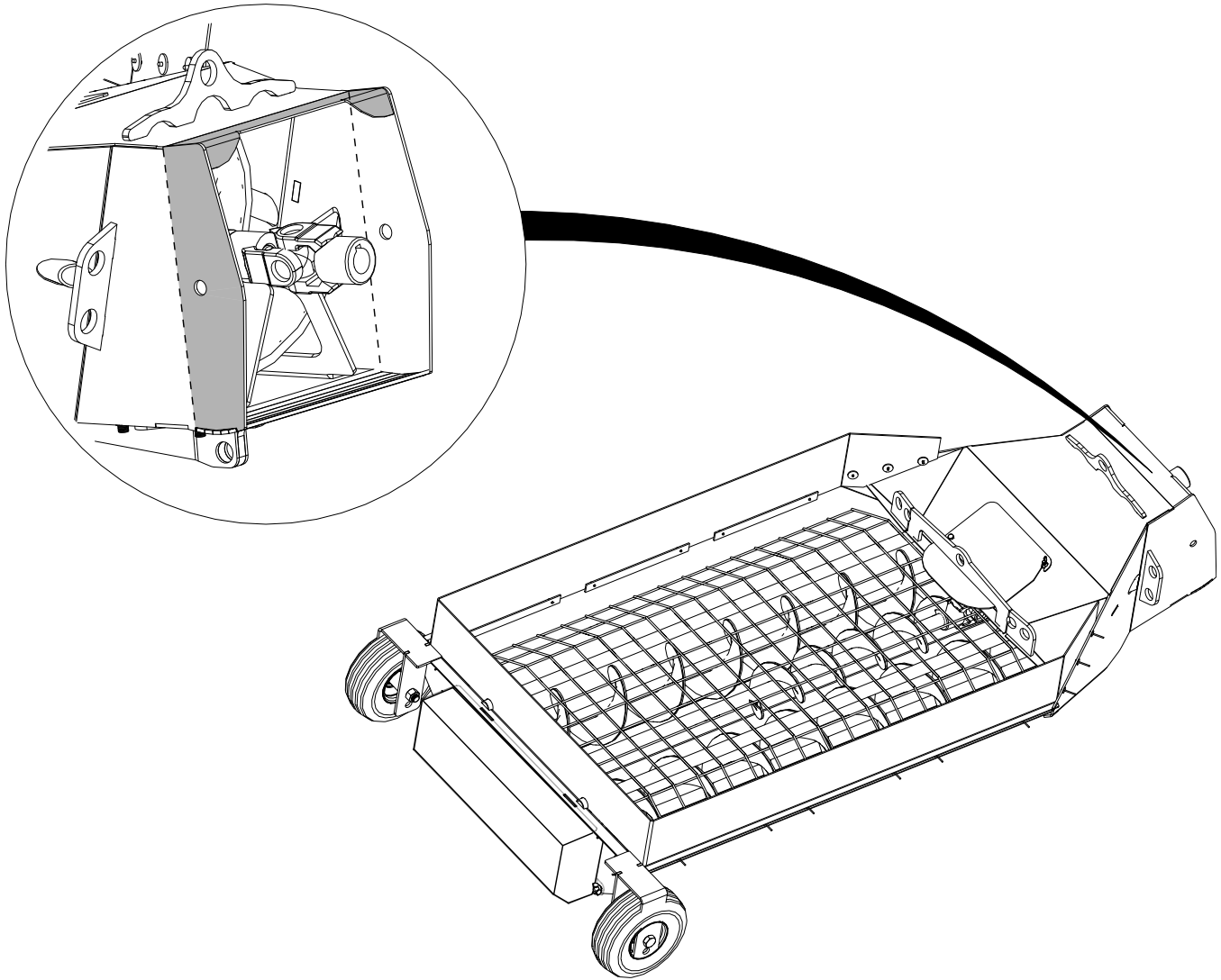
Installation of the X-Tend replaces the installation of the low profile hopper, swing tube and spout head in the main auger assembly manual.

Install Hopper

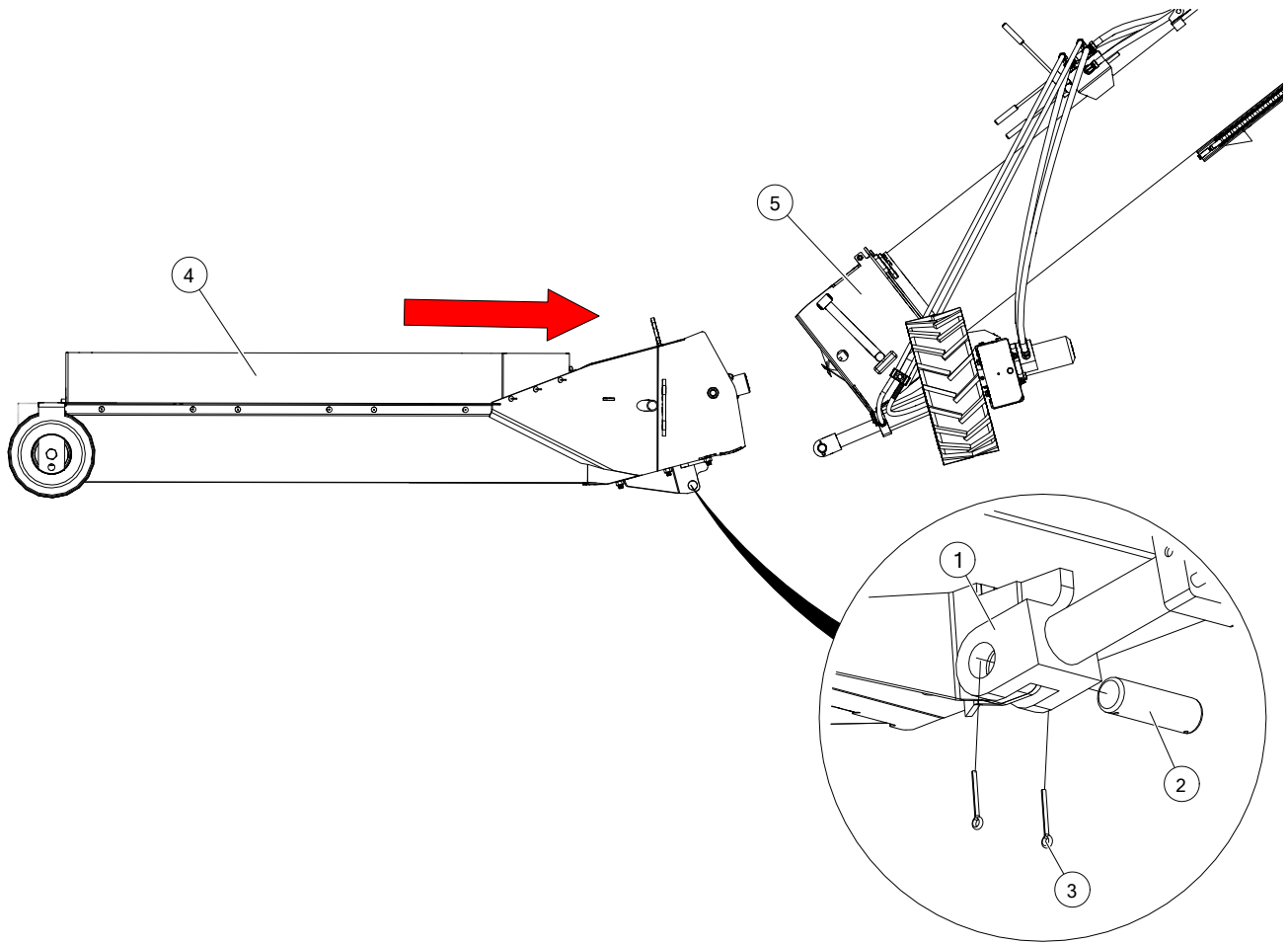
1. Raise the spout head on a stand about 8" high. Support the spout head at the lift lug for stability.



2. Install hopper cylinder bolt
 - a. Grease sides of hopper where they overlap with tube.

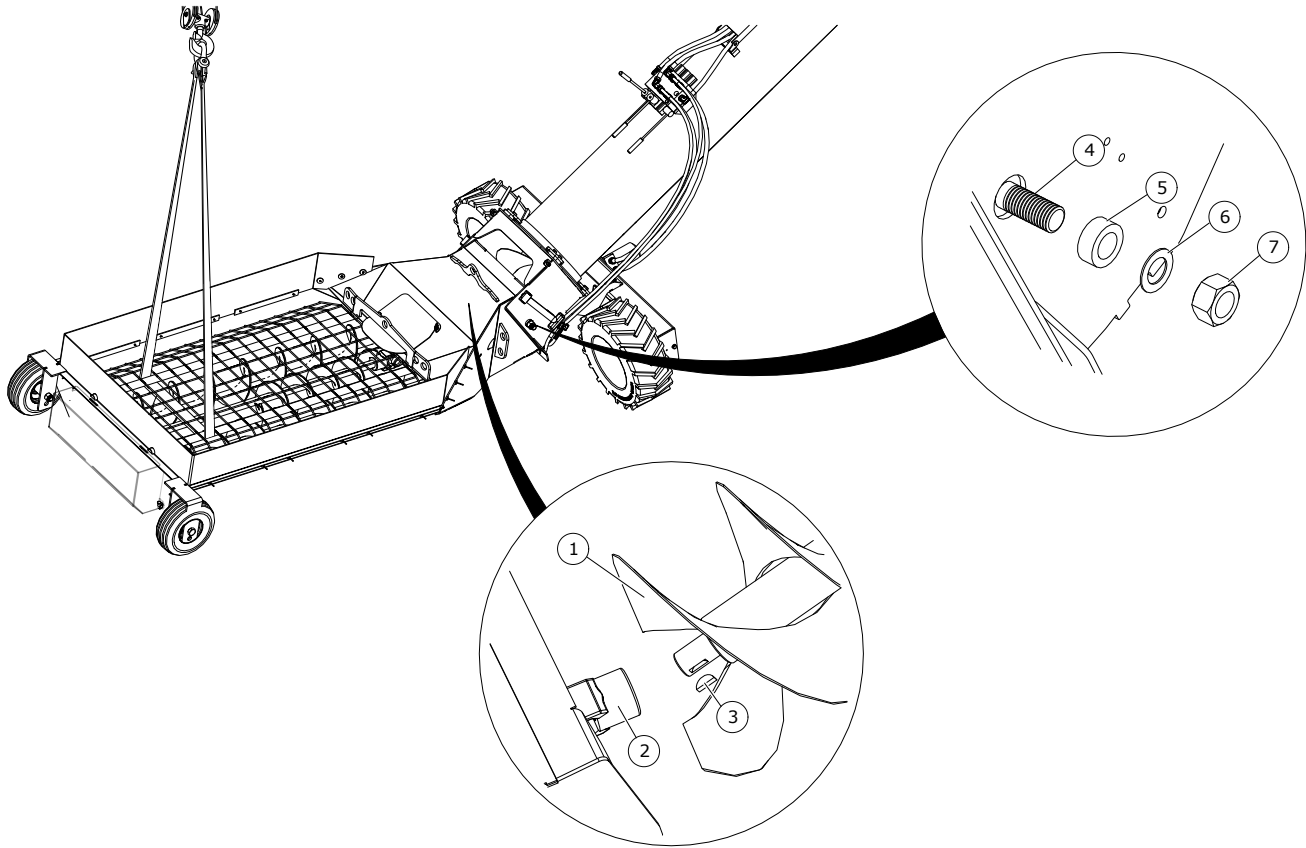


- b. Place the hopper next to the X-Tend tube assembly. Attach the hydraulic cylinder to the hopper using the cylinder pin and cotter pins.



1	hydraulic cylinder	4	hopper
2	cylinder pin	5	X-Tend tube assembly
3	cotter pin		

3. Lift hopper and install u-joint.
 - a. Move strap and start to lift hopper, it will pivot on the cylinder pin.
 - b. Ensure hopper flight is rotated to have u-joint keyway at the same position as the woodruff key.
 - c. As hopper is slowly raised, align u-joint with shaft.
4. Continue to lift hopper until holes align, then install bolts.



1	retractor flight	5	bushing, 1-1/4" x 1/2"
2	U-joint	6	plain washer, M20
3	woodruff key	7	nylock nut, M20
4	hex bolt, M20 x 50L		

Installation of the X-Tend on a New Auger

1. Secure an appropriate lifting device with lifting straps or chains to the X-Tend.
2. Check that the u-joint spline and splined shaft on the lower gearbox are clean, then apply a light film of grease on this splined shaft.
3. Remove the collector service door/cover on side of collector.
4. Lower the X-Tend collector onto the boot while guiding the u-joint onto the gearbox shaft. Reach through the collector service door to rotate u-joint (as necessary), to line up with the splined gearbox shaft. Once positioned, the swivel ring should be resting flat on the boot surface.
5. Secure the ring in place using four retainer tabs, four retaining spacers and eight M10 x 20L bolts.
6. Lubricate the u-joint.
7. Close and secure the collector service door/cover.

Figure 4. X-Tend General Installation



Installation of the X-Tend for Retrofits

1. Swing your old swing auger into a position out from the side of your auger that is safe to lift.
2. Secure an appropriate lifting device with lifting straps or chains to your old swing.
3. Apply slight tension to prevent swing from falling when the fasteners are removed.
4. Remove the bolts and washers that hold swivel ring of your old swing unit down to the auger boot. Keep the parts for use on your new X-Tend.
5. Usually the lower half of the u-joint that connects the swing auger to main auger is splined and should slip up as the swing auger is lifted. If the spline is seized (usually due to running fertilizer through the auger) then it may have to be pried off, and sometimes heating is necessary. Lift the old swing auger off the main auger boot in a safe manner.
6. The X-Tend swing can be lowered into place on the main auger using the same lift system that you lifted the old one off. Grease the lower spline before lowering the auger. Remove the service door/cover on side of collector. Align u-joint by reaching down through this hole. Lower the X-Tend auger into place.
7. Secure the ring in place using the existing bolts, retaining spacers and retainer tabs.

4.3. Assemble Auger Components

During the assembly of the auger, the following standard parts must be replaced by parts modified to be compatible with the X-Tend:

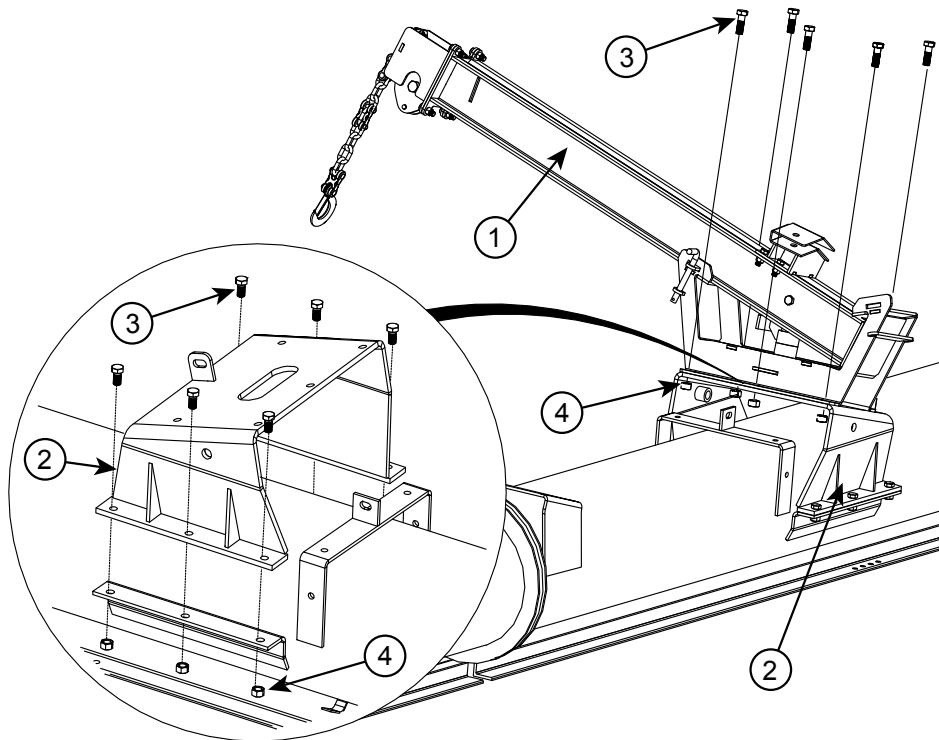
- hopper lift arm (installed with hydraulic winch), see [Section 4.3.1 – Install the X-Tend Lift Arm on page 23](#)
- intake-end single cross brace, see [Section 4.3.2 – Replace the Short Truss Brace on page 24](#)

4.3.1 Install the X-Tend Lift Arm

For retrofits, during the assembly of the auger, ensure that the standard lift arm is replaced by the X-Tend lift arm.

1. Attach the lift arm mount to the lift arm mount brackets using six M14 x 40L hex bolts and lock nuts.
2. Position the hopper lift arm assembly on the X-Tend lift arm mount with the arm overhanging the side of the auger that the hopper will be operating on.
3. Fasten the hopper lift arm assembly to the mount bracket using five M14 x 40L hex bolts and lock nuts.

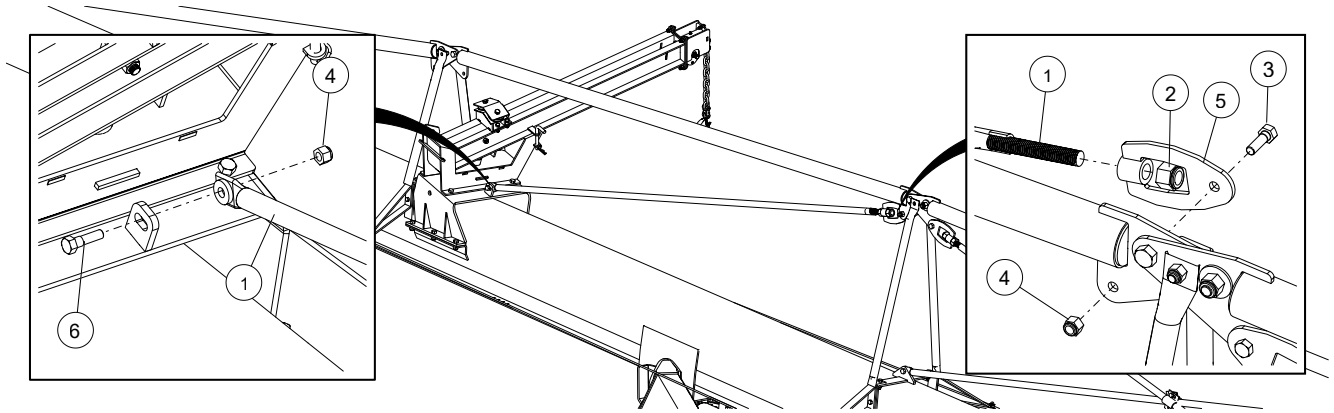
Figure 5. X-Tend Lift Arm



1	hopper lift arm assembly	3	hex bolt, M14 x 40L
2	lift arm mount	4	nylock nut, M14

4.3.2 Replace the Short Truss Brace

For retrofits, during the assembly of the auger, ensure that the standard single truss brace tube closest to the boot is replaced by the short truss brace tube listed below.



1	cross brace — short	4	nylock nut, M14
2	nylock nut, M20	5	cross brace shackle
3	hex bolt, M14 x 40L	6	hex bolt, M14 x 45L

4.3.3 Install the Hydraulic Winch

1. Position the hydraulic winch on the winch mounting plate, and secure it using three M10 washers and three M10 lock nuts as shown in [Figure 6](#).
2. Thread the winch cable through the two lift arm pulleys (at the top of the lift arm and at the pulley guide), then under the spool and connect it to the spool (minimum 3 wraps around the spool, feed cable through hole in side of spool, and secure with clamp and clamp hardware) as shown in [Figure 7](#).
3. Connect the hydraulic hoses to the winch, and install pioneer couplings on the hose ends, see [Figure 8](#).
4. Thread both hoses through hydraulic hose upper catches on side of auger lower tube and boot. Tighten hydraulic hose upper catches slightly to hold hoses in place.

Figure 6. Installing the Hydraulic Winch

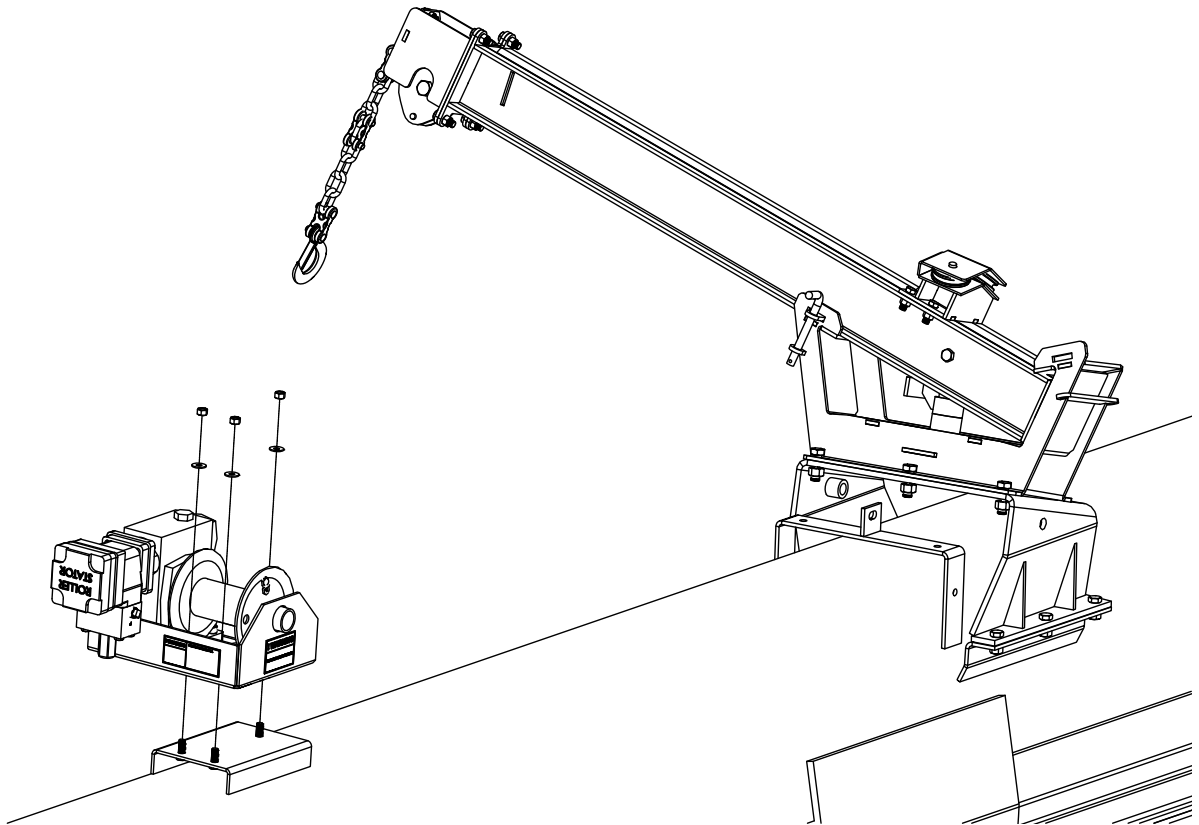


Figure 7. Installing the Winch Cable

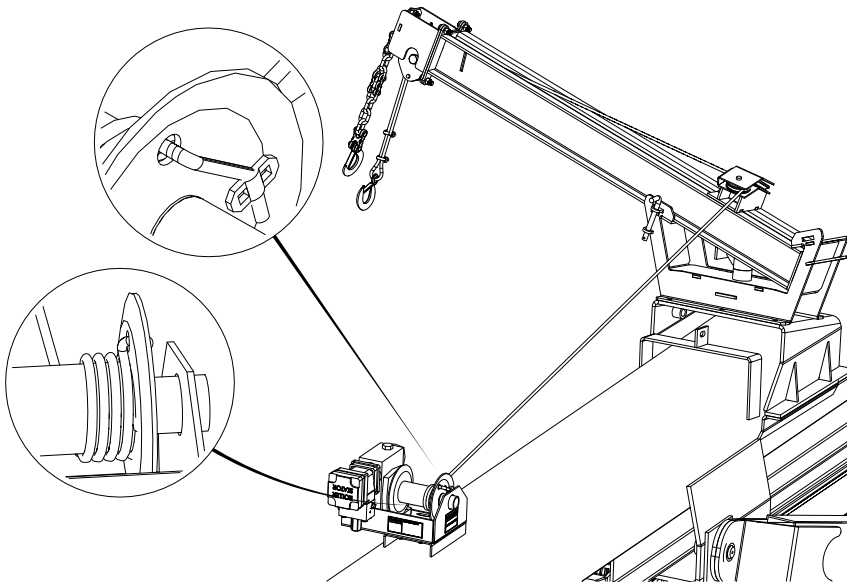
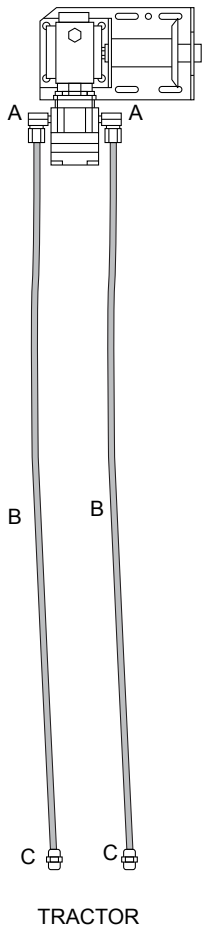


Figure 8. Installing the Hydraulic Winch Hose



A	steel elbow, 1/2 MNPT x 1/2 FNPSM
B	hydraulic hose, 1/2" x 220"
C	pioneer coupler

5. Specifications

Specification	X-Tend 13
Tractor Hydraulic Flow	Adjust to 8 GPM
Tractor PTO Speed	540/1000 rpm
Hopper Height	12"
Hopper Length	50"
Hopper Width	36"
Total Swing Weight	1500 lbs
Weight on Lift Arm	800 lbs
Power Swing Tire Pressure	20 psi
PTO Operating Range	24"

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 Torque¹



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
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	-	-

1. 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%.

Table 3. Metric Bolt Torque

Bolt Diameter				
	(N·m)	(ft·lb)	(N·m)	(ft·lb)
M3	0.5	0.4	1.8	1.3
M4	3	2.2	4.5	3.3
M5	6	4	9	7
M6	10	7	15	11
M8	25	18	35	26
M10	50	37	70	52
M12	90	66	125	92
M14	140	103	200	148
M16	225	166	310	229
M20	435	321	610	450
M24	750	553	1050	774
M27	1100	811	1563	1154
M30	1495	1103	2100	1550
M36	2600	1917	3675	2710

6.2. Fittings Torque Values

These specifications are for carbon steel. With Zinc plating always lubricate threads and seals. For stainless steel, use the high value of the torque range of steel. For brass, use 70% of the torque value of steel. For mixed metals, use the torque of the lower of the two metals. Torque range is normally calculated +/- 10%.

Table 4. Pipe Rigid - Tapered Pipe Threads (NPTF, N/NF) - Carbon Steel

Pipe Size	Turns-from-finger	Max ft-lbs	Max N-m
1/8" (-2)	3/4 - 1 3/4	12	16
1/4" (-4)	3/4 - 1 3/4	25	34
3/8" (-6)	3/4 - 1 3/4	40	54
1/2" (-8)	1/2 - 1 1/2	54	73
3/4" (-12)	1/2 - 1 1/2	78	106
1" (-16)	1/2 - 1 1/2	112	152
1 1/4" (-20)	1/2 - 1 1/2	154	209
1 1/2" (-24)	1/2 - 1 1/2	211	286
2" (-32)	1/2 - 1 1/2	300	407

Table 5. Pipe Swivel - Straight Pipe Threads (NPSM, N/NFS) - Carbon Steel

Pipe Size	Max ft-lbs	Max N-m
1/8" (-2)	12	16
1/4" (-4)	25	3
3/8" (-6)	40	54
1/2" (-8)	54	73
3/4" (-12)	78	106
1" (-16)	112	152
1 1/4" (-20)	154	209
1 1/2" (-24)	211	286
2" (-32)	300	407
Note: seals on an internal male 30° seat		

Table 6. Stud End O-Ring Boss (ORB) SAE (U/UF) – Carbon Steel

Tube Size	Thread UNF-2A	Max ft-lbs	Max N-m
-2	5/16" - 24	6-7	8-9
-3	3/8" - 24	8-9	11-12
-4	7/16" - 20	13-15	18-20
-5	1/2" - 20	17-19	23-26

Table 6 Stud End O-Ring Boss (ORB) SAE (U/UF) – Carbon Steel (continued)

Tube Size	Thread UNF-2A	Max ft-lbs	Max N-m
-6	9/16" - 18	22-24	29-33
-8	3/4" - 16	40-43	49-53
-10	7/8" - 14	43-48	59-64
-12	1 1/16" - 12	68-75	93-102
-14	1 3/16" - 12	90-99	122-134
-16	1 5/16" - 12	112-123	151-166
-20	1 5/8" - 12	146-161	198-218
-24	1 7/8" - 12	154-170	209-231

Table 7. JIC 37° Flare Tube Fitting (J/JFS)

Tube Size	Thread UNF-2A	Torque ft-lbs	Torque N-m
-2	5/16 - 24	6-7	8-9
-3	3/8 - 24	8-9	11-12
-4	7/16 - 20	11-12	15-16
-5	1/2 - 20	14-15	19-21
-6	9/16 - 18	18-20	24-28
-8	3/4 - 16	36-39	49-53
-10	7/8 - 14	57-63	77-85
-12	1 1/16 - 12	79-88	107-119
-14	1 3/16 - 12	94-103	127-140
-16	1 5/16 - 12	108-113	147-154
-20	1 5/8 - 12	127-133	172-181
-24	1 7/8 - 12	158-167	215-226
-32	2 1/2 - 12	245-258	332-350

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.






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