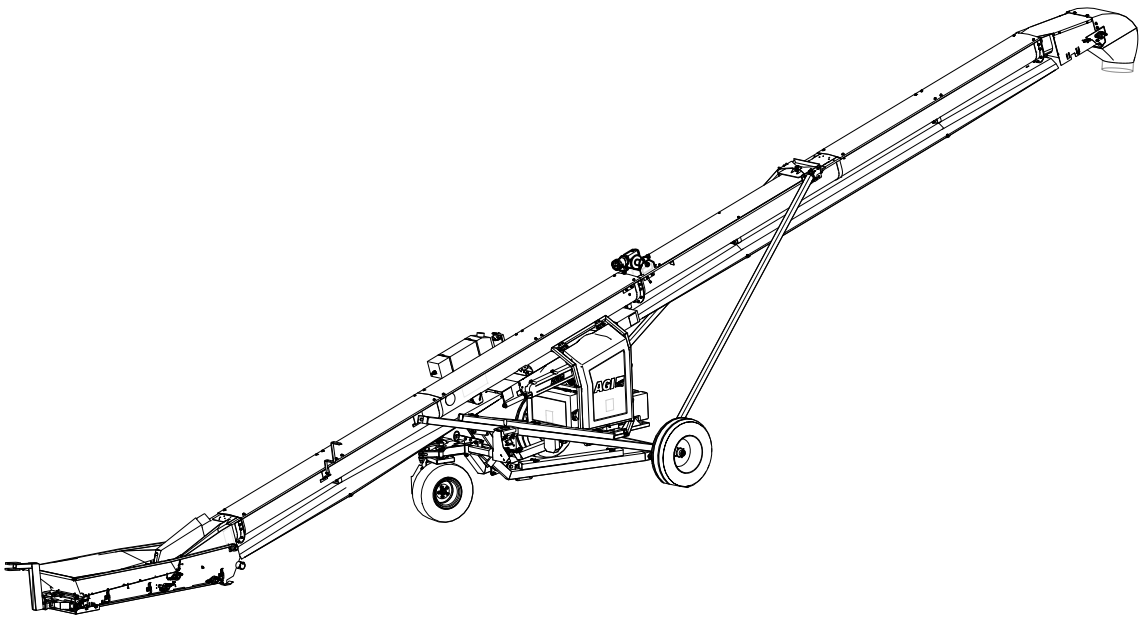
UCX3 S-Drive Field Loader

Portable Grain Belt Conveyor
Operator's Manual

This manual applies to:

1549

Gas Drive with Mover Kit



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: 8210-00036 R0

Revised: October 2022

Original Instructions

This product has been designed and manufactured to meet general engineering standards. Other local regulations may apply and must be followed by the operator. All personnel must be trained in the correct operational and safety procedures for this product. Use the sign-off sheet below to record initial and periodic reviews of this manual with all personnel.

Date	Employee Name and Signature	Employer Name and Signature

CONTENTS

1. Introduction

Thank you for your purchase. Follow the instructions in this manual for safe use of this conveyor. Following proper operation and maintenance will help to keep the conveyor running in optimal condition.

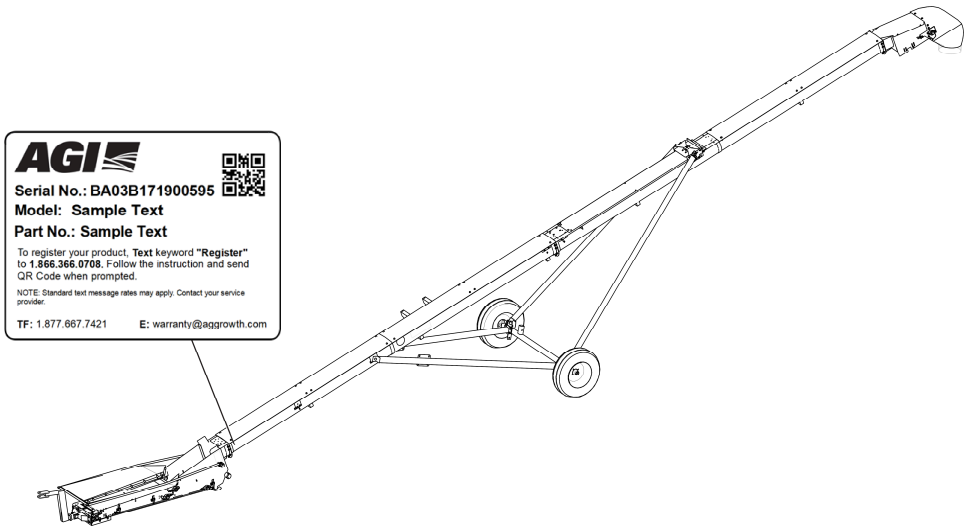
Keep this manual handy for frequent reference and to review with new personnel. A sign-off form is provided on the inside front cover for your convenience. If any information in this manual is not understood or if you need additional information, please contact AGI or your representative for assistance.

This manual should be regarded as part of the equipment.

1.1. Serial Number Location

The serial number location for your conveyor 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	



1.2. Intended Use

The conveyor is intended for use as listed below and described throughout this manual. Use in any other way is considered contrary to the intended use and is not covered by the warranty.

Intended use for the conveyor

- Handling grain, pulse crops, treated seeds, or other similar materials.
- Handling fertilizer when specific operating and cleanout procedures are followed.
- Handling oilseed when specific operating and cleanout procedures are followed.

Misuse

Do not install/use the conveyor for/with:

- transferring material other than dry, free-flowing food-grains.
- lifting or using as a hoist or crane.

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 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.
- Modification of the conveyor in any way without written permission from the manufacturer 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. Overhead Power Lines

DANGER

- When operating or moving, keep conveyor away from overhead power lines and devices.
- The conveyor is not insulated.
- Electrocution can occur without direct contact.

2.4. Moving Conveyor Belt Safety

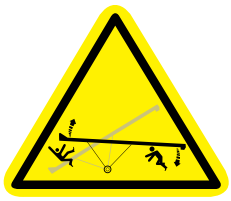
⚠ WARNING

- DO NOT step on or touch moving conveyor belt.
- Shut off and lock out power to adjust, service, or clean.

2.5. Upending

⚠ WARNING

- 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 the conveyor and fully lower before moving.



2.6. Rotating Parts Safety

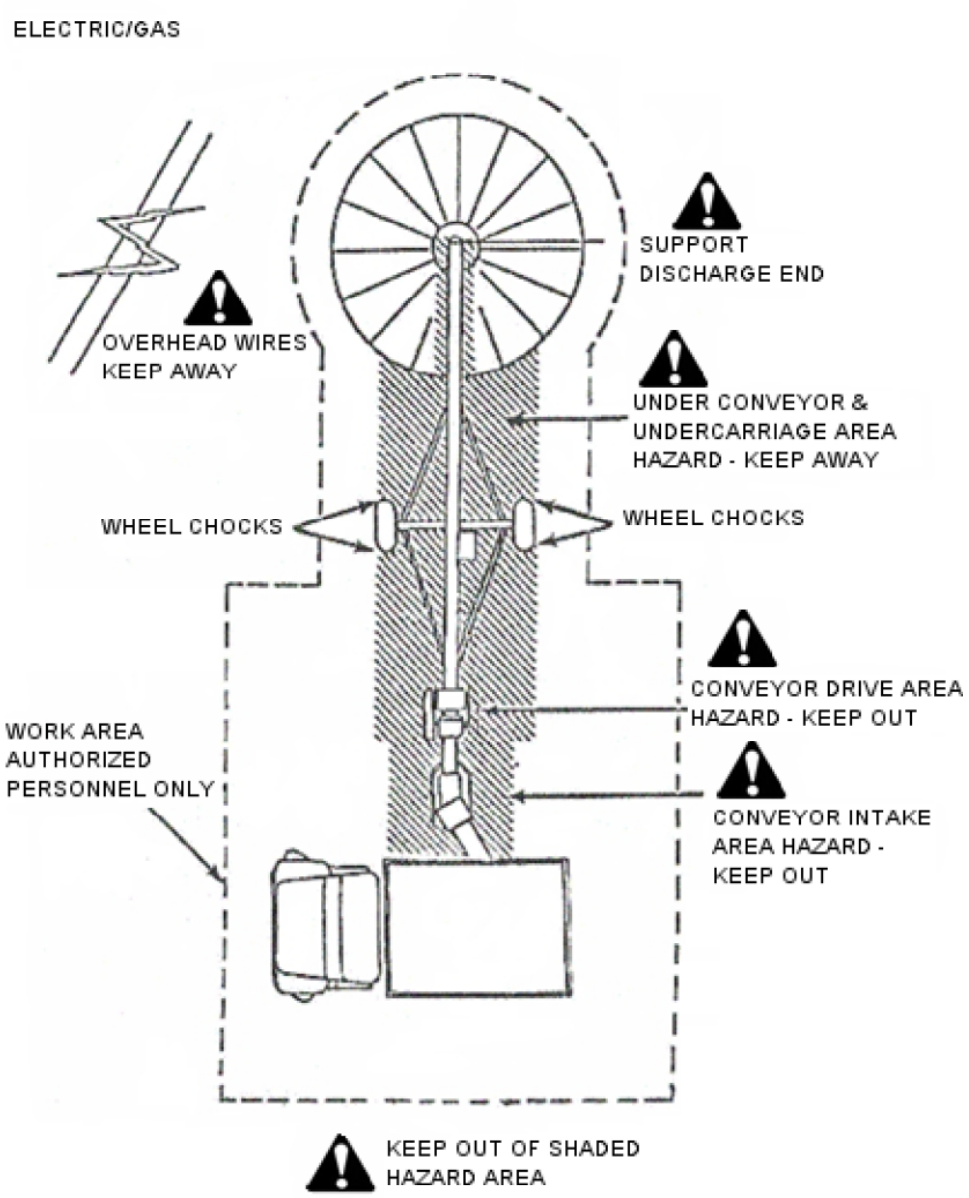
⚠ WARNING

- 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.

2.7. Work Area Safety

- Have another trained person nearby who can shut down the conveyor in case of accident.
- Do not allow any unauthorized persons in the work area.
- Keep the work area clean and free of debris.

Figure 1. Conveyor Work Area (Gas/Electric Drive)



2.8. Raising and Lowering the Conveyor

⚠ WARNING

- Before raising/lowering/moving/adjusting the conveyor, make sure the area around the conveyor is clear of obstructions and/or untrained personnel. Never allow anyone to stand on or beneath the conveyor when it is being placed.
- Lower the conveyor to its lowest position when not in use.
- Empty the conveyor before raising or lowering.
- Do not get on or beneath the conveyor when raising or lowering.
- Raise and lower conveyor on reasonably level ground only.
- Never attempt to increase height of the conveyor by positioning wheels on lumber, blocks, or by any other means. To do so will result in damage to conveyor and/or serious injury.
- Do not raise the conveyor in high winds.

2.9. 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 conveyor 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.

2.10. Positioning the Conveyor

⚠ WARNING

- Transport and place equipment on reasonably level ground when raising, lowering, positioning, or operating.
- Move the conveyor into position slowly. Do not unhitch and attempt to move by hand.
- Chock wheels and anchor intake end after placement.

2.11. Towing the Conveyor

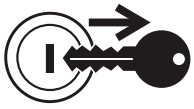
The conveyor is not intended for transport on public roads. If it requires transport on a public roadway, the following steps should be taken:

⚠ WARNING

- Check with local authorities regarding transport on public roads. Obey all applicable laws and regulations.
- Always travel at a safe speed, never exceeding 20 mph (32 km/h).
- Reduce speed on rough surfaces.
- Do not transport on slopes greater than 20°.
- Use caution when turning corners or meeting traffic.
- Make sure the SMV (slow moving vehicle) emblem and all the lights and reflectors that are required by local authorities are in place, are clean, and can be seen by all over-taking and oncoming traffic.
- Always use hazard-warning flashers on tractor/towing vehicle when transporting unless prohibited by law.
- Do not allow riders on the conveyor or towing vehicle during transport.
- Attach to towing vehicle with an appropriate pin and retainer. Always attach safety chains.
- Place the conveyor in the transport position before moving on roads.

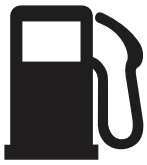
2.12. Drives and Lockout Safety

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.



2.12.1 Gas Engine Safety

⚠ WARNING **Power Source**



- Keep guards in place and secure.
- Properly ventilate surrounding area.
- Never fill the fuel tank with the engine running, while smoking, or near an open flame. Always shut down and allow engine to cool before filling with fuel.
- Never overfill the tank or spill fuel. If fuel is spilled, clean it up immediately.
- Be sure to use the correct type and grade of fuel. Ground the fuel funnel or nozzle against the filler neck to prevent sparks that could ignite fuel vapors.
- Be sure to replace the fuel fill cap when you are done.

Lockout

- For engines with an electric start, remove the ignition key, the spark plug wire, or the spark plug.
- For engines with a rope or crank start, remove the spark plug wire or the spark plug.

2.12.2 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.

2.13. Tire Safety

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

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

2.14. Battery Safety

⚠ WARNING

- Wear safety glasses and protective gloves when working near batteries.
- Make certain the battery or terminal covers are in place and in good working order.
- Keep all sparks and flames away from batteries; gas given off by electrolyte is explosive.
- Avoid contact with battery electrolyte. Wash off any spilled electrolyte immediately.
- Do not tip batteries more than 45° to avoid electrolyte loss.
- To avoid injury from sparks or short circuits, disconnect battery ground cable before servicing any part of an electrical system.

2.15. 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.

- **Steel-Toe Boots**

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

- **Coveralls**

Wear coveralls to protect skin.

- **Work Gloves**

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

- **Hard Hat**

Wear a hard hat to help protect your head.

- **Hearing Protection**

Wear ear protection to prevent hearing damage.

- **Dust Mask**

Wear a dust mask to prevent breathing potentially harmful dust.

2.16. Safety Equipment

The following safety equipment should be kept on site.

- **First-Aid Kit**

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

- **Fire Extinguisher**

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

2.17. 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.

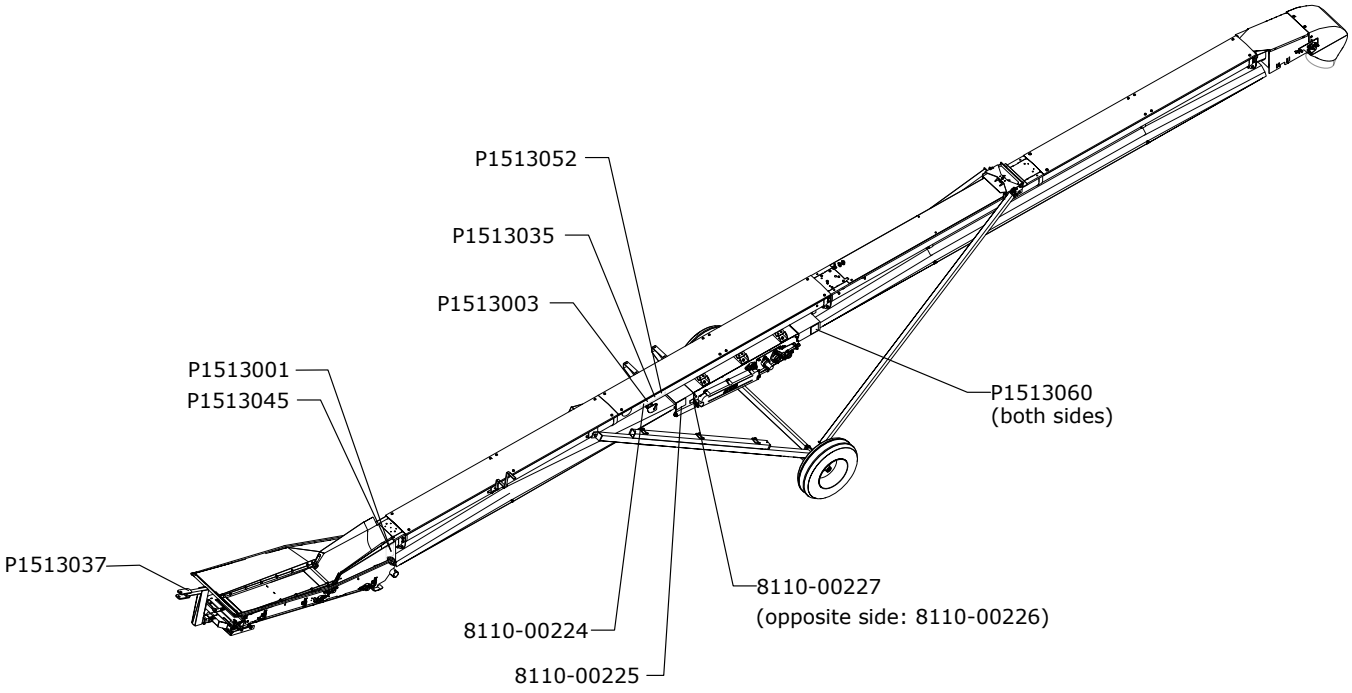
2.17.1 Decal Installation/Replacement

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.

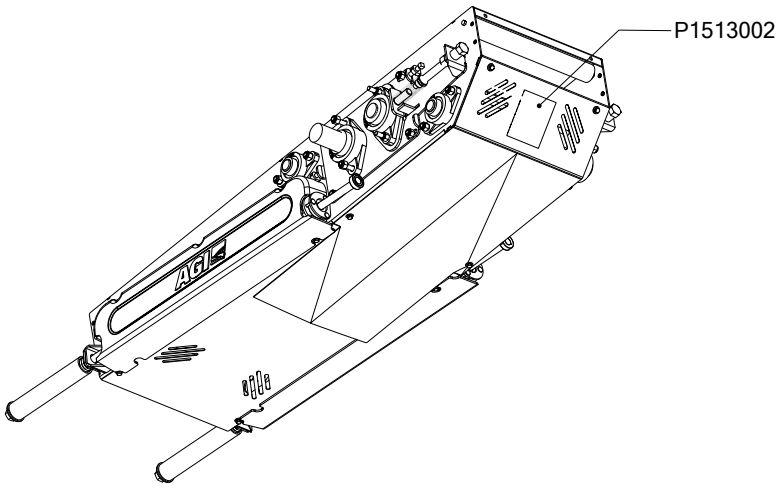
2.17.2 Safety Decal Locations and Details

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

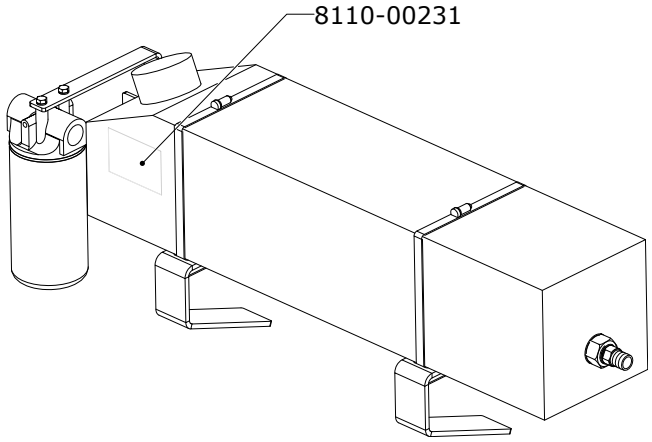
Safety Decal Locations



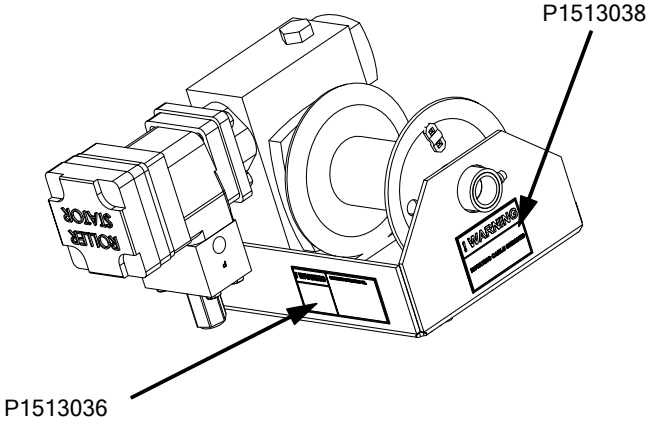
S-Drive Bottom Guard Decal Location



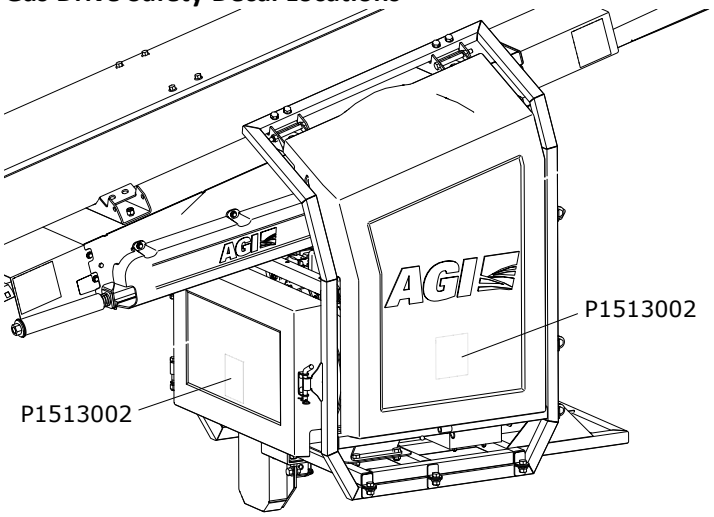
Hydraulic Tank Decal Location

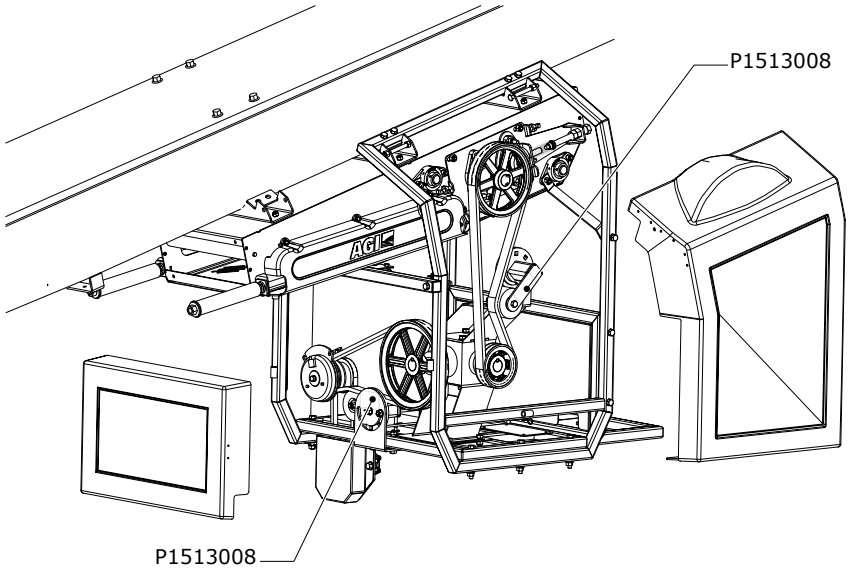


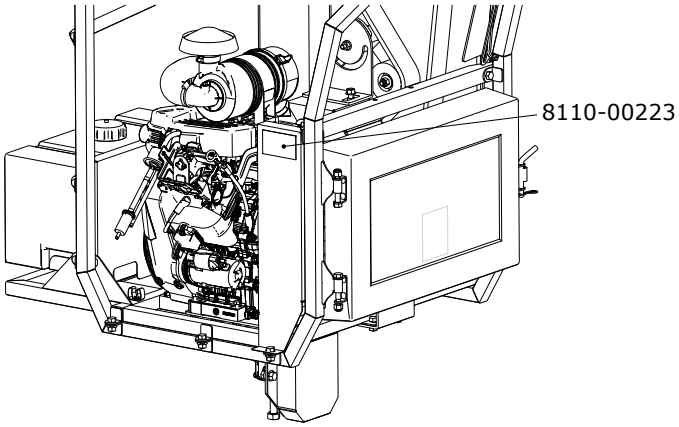
Hydraulic Winch Decal Locations (If Equipped)



Gas Drive Safety Decal Locations







Safety Decal Details

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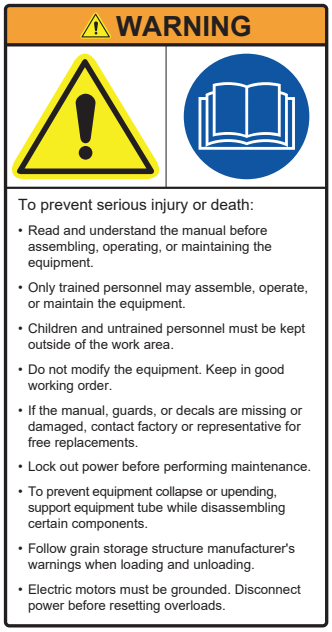

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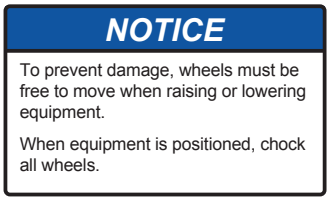

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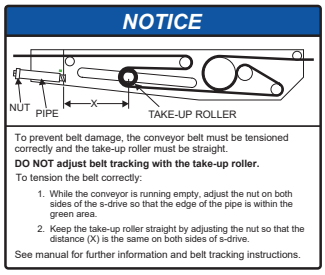

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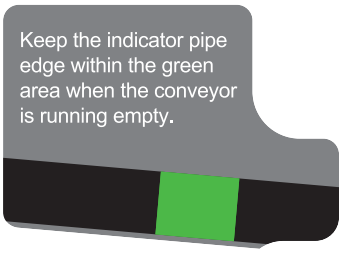

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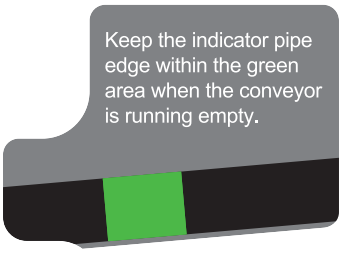

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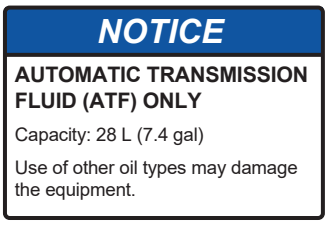

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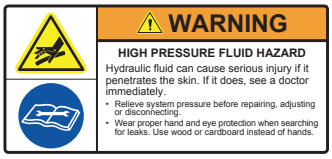

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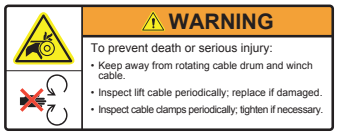

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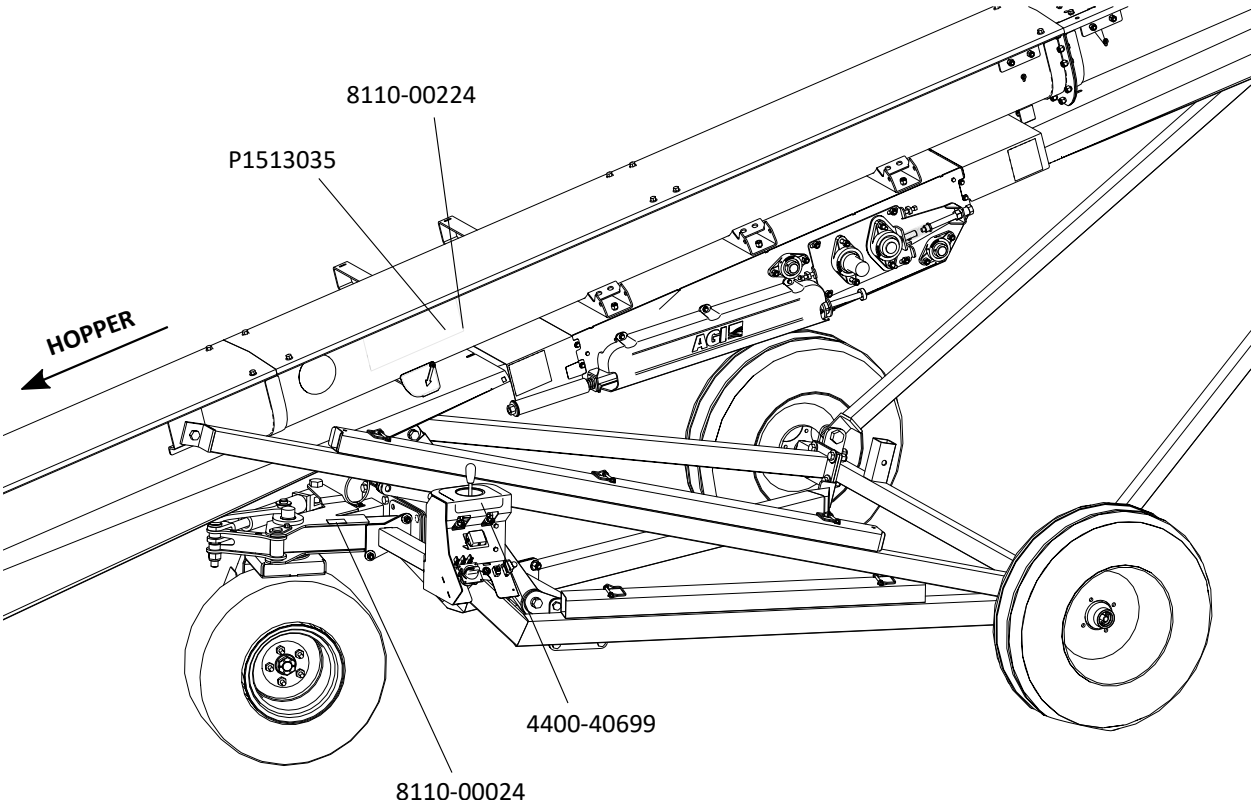
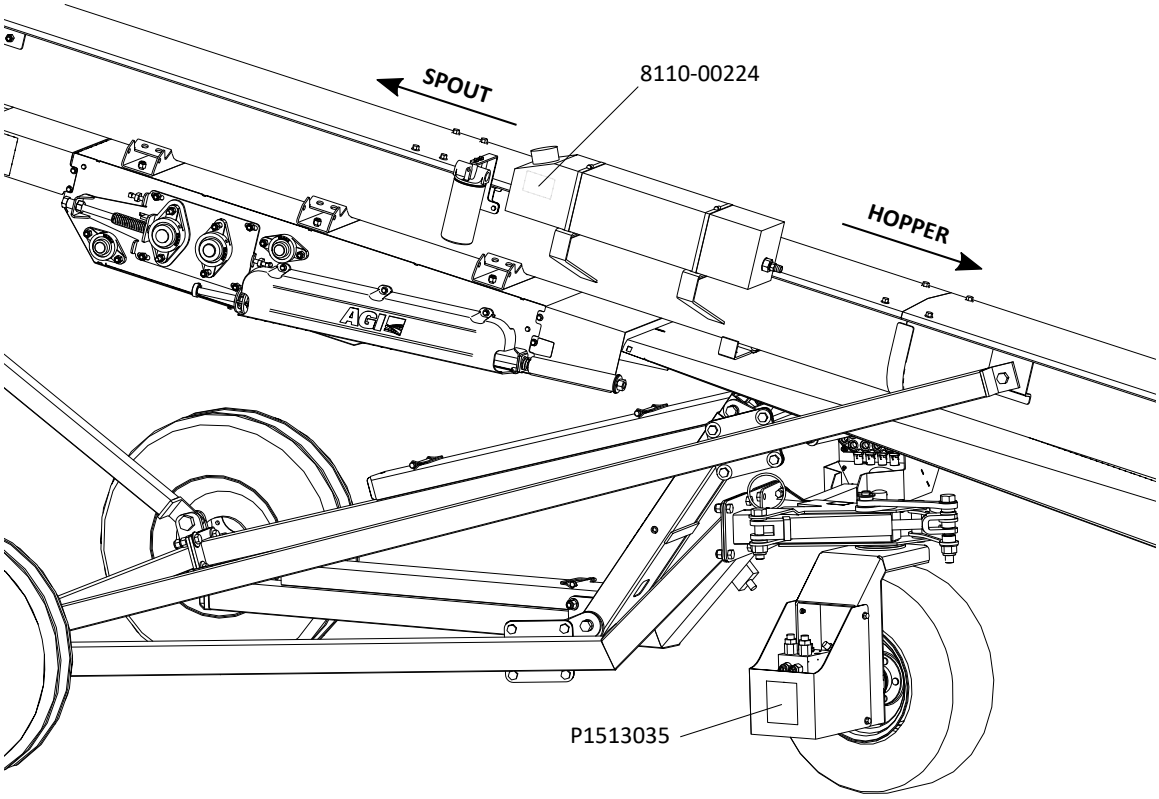
Safety Decal Locations — Mover Kit





Safety Decal Details

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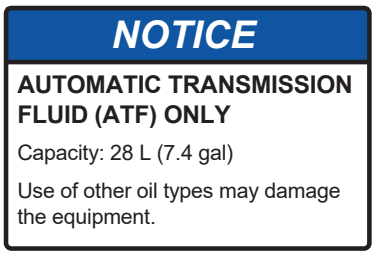

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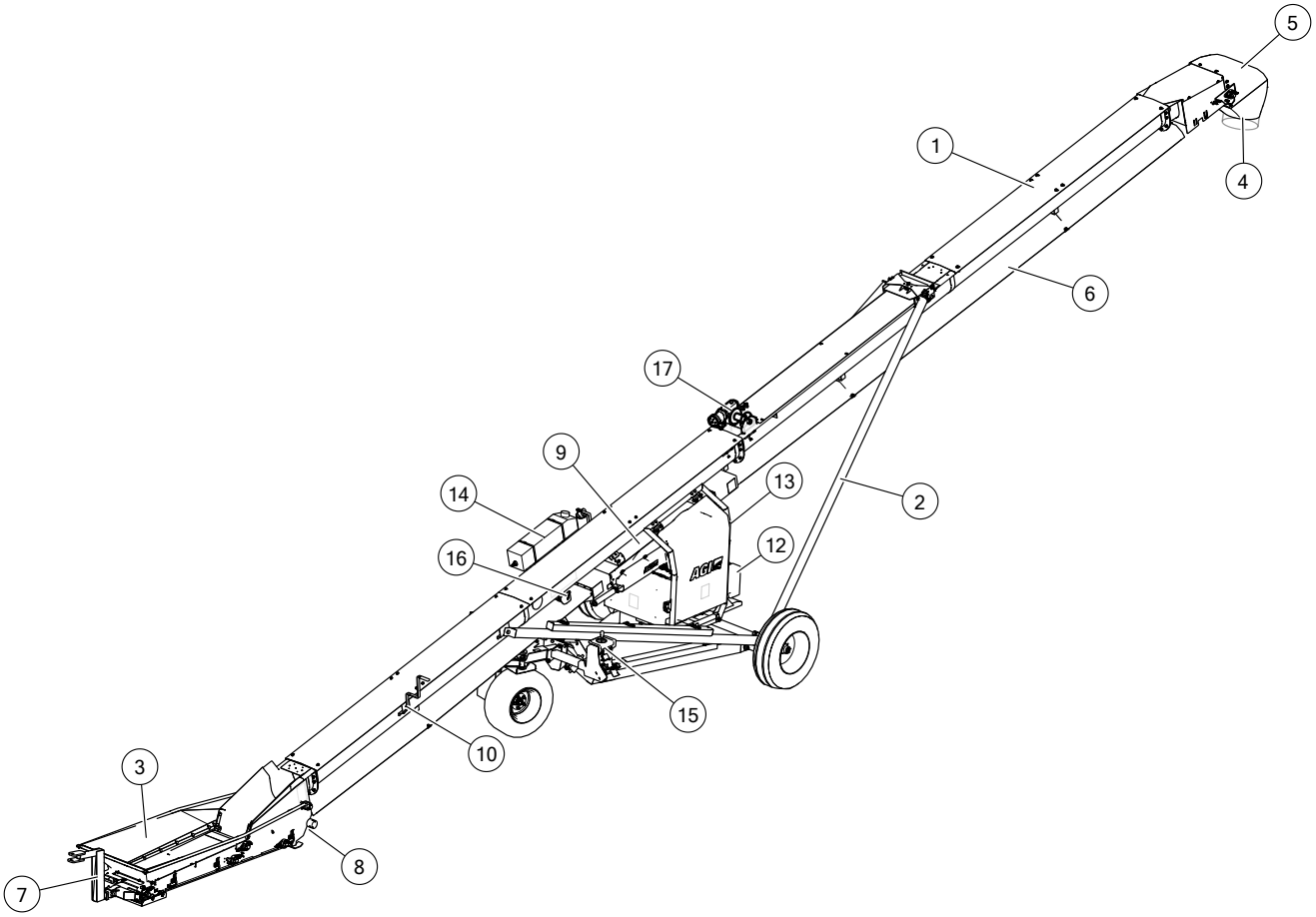
3. Features

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



ITEM	DESCRIPTION	ITEM	DESCRIPTION
1	U-Trough	11	Hitch Tongue Holder (not shown)
2	A-Frame	12	Gas Tank
3	Hopper	13	Gas Drive
4	Hood	14	Hydraulic Oil Tank
5	Spout Assembly	15	Mover Kit
6	Belt Return and Weather Guard	16	Angle Indicator
7	Hitch	17	Hydraulic Winch
8	Jack Mount Collar	18	Hopper and Spout Scrapers (not shown)
9	S-Drive	19	Jack (not shown)
10	Collapsible Hopper Control		

4. Transport

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. Transport Safety

⚠ WARNING

- Check with local authorities regarding transport on public roads. Obey all applicable laws and regulations.
- Always travel at a safe speed, never exceeding 20 mph (32 km/h). Reduce speed on rough surfaces. Use caution when turning corners or meeting traffic.
- Yield to other drivers and allow faster traffic to pass.
- Make sure the SMV (slow moving vehicle) emblem, maximum transport speed sign, and all the lights and reflectors that are required by local authorities are in place, are clean, and can be seen by all over-taking and oncoming traffic. Always use hazard-warning flashers on tractor/towing vehicle when transporting unless prohibited by law.
- Do not transport during times of limited visibility such as fog, snow, or heavy rain. Take extra precautions at night and at dusk.
- Keep others away from the transport vehicle and conveyor.
- Do not allow riders on the conveyor or towing vehicle during transport.
- Stay away from overhead obstructions and power lines when operating and transporting. Electrocution can occur without direct contact.
- Fully lower the conveyor before transporting, and only raise when next to storage facility.
- Attach to a proper towing vehicle with a hitch pin and retainer. Always attach safety chains.
- Empty conveyor of all grain or seed before transporting. Transporting a full conveyor will place excessive loads on the u-trough, frame, axle, hitch, and tow vehicle.
- Do not transport on slopes greater than 20°.
- Do not transport with an under-inflated tire(s).
- If the conveyor wheels are partially or fully buried in snow or grain, failure to clear area around the wheels before transporting may cause damage to the conveyor or result in serious injury.

4.2. Transport Preparation

1. It is not recommended that the conveyor be transported faster than 20 mph (32 km/h). Table 1 references the acceptable transport speed as per the ratio of tractor weight versus conveyor weight. See Specifications (Section 9. – Specifications on page 60) for conveyor weights.

   ⚠ WARNING A weight imbalance between the conveyor and the towing vehicle could result in a collision from reduced stability, handling, and braking ability.

2. Ensure the conveyor will clear any overhead obstructions or electrical wires prior to transporting. Refer to Section 9. – Specifications on page 60 for the transport height of your conveyor.

3. Longer conveyors have a large turning radius. Allow ample room for turning as the discharge end may swing dramatically. Allow all oncoming traffic to pass before turning right or left.

   ⚠ WARNING A collision with an oncoming vehicle could occur if the conveyor discharge swings into the opposing lane.

Table 1. Speed versus Weight Ratio

Road Speed	Weight of auger relative to weight of tow vehicle
Up to 32 km/h (20 mph)	1 to 1, or less than the weight of the tow vehicle
Up to 16 km/h (10 mph)	2 to 1, or less than the weight of the tow vehicle
Do not tow if	More than 2 to 1

4.3. Connecting the Conveyor to the Towing Vehicle

This section provides and overview of how to connect the conveyor to the towing vehicle. For specific information on the components, refer to the applicable section.

Follow all safety precautions when transporting the conveyor and use a proper towing vehicle.

1. Fully lower the conveyor, there should be slight tension on the lift cable.
2. Connect the conveyor to the tow vehicle with a hitch pin. Use a hitch pin that will not allow the conveyor to separate from the towing vehicle.
3. Connect a safety chain securely, forming a cradle to prevent the conveyor from digging into the road surface (should a breakaway occur). Do not use the safety chain if one or more links or end fittings are stretched, broken, damaged, or deformed.

   Important

   Use a safety chain with a load rating at least as high as the conveyor weight.

4. Use caution when transporting the conveyor over rolling terrain. In severe dips, the intake end may contact the ground.

Refer to Section 9. – Specifications on page 60 for conveyor weight and hitch pin information.

5. Placement

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.

5.1. Placement Safety

WARNING

- The conveyor is not insulated, keep away from overhead power lines. Electrocution can occur without direct contact.
- Anchor intake end before using.
- Place the conveyor on reasonably level ground before operating. The conveyor could topple if ground is too uneven.
- Chock the conveyor wheels after placement.
- Empty the conveyor before raising, lowering, or positioning.
- Check that wheels are free to move before raising or lowering the conveyor.
- Never attempt to increase height of the conveyor by positioning wheels on lumber, blocks, or by any other means.
- Do not permit anyone to stand beneath the conveyor when raising or lowering.
- Move the conveyor into position slowly.
- Do not leave conveyor in raised position when not in use.

5.2. Positioning the Conveyor

Before Positioning

- Confirm the area is reasonably level and that there is plenty of clearance for making wide turns.
- Remove the conveyor hitch to prevent interfering with other equipment.

Positioning for Operation

1. Turn the key to the on position. The fuel pump will cycle. Start the gas engine once it stops.
2. Adjust the Throttle (4) control to set engine RPM to approximately half or lower.

   Important

   Allow the hydraulic oil to warm before positioning if the weather is below -10°C (14°F).
3. Position the Discharge (3) in the fully lowered position.
4. Raise the Intake (2) slightly off the ground.
5. Move to the desired position and raise the Discharge (3) only for final positioning (when next to a storage bin / grain truck).

   NOTICE Do not rest the conveyor on the bin / grain truck. This may cause equipment damage.
6. When positioning is complete, use the throttle to reduce engine speed to low idle and turn the key to the off position.

7. Place chocks in the front and back of each wheel and anchor the intake end.

Completion

When operation is complete, fully lower the conveyor. When lowering, if the cable becomes slack before the conveyor is in the full down position, this indicates that the track shoe is stuck. To correct, reverse the winch and raise the conveyor until the cable is taut and the track slides normally. After lowering, adjust the hydraulic winch until the cable has light tension.

Figure 2. Controls

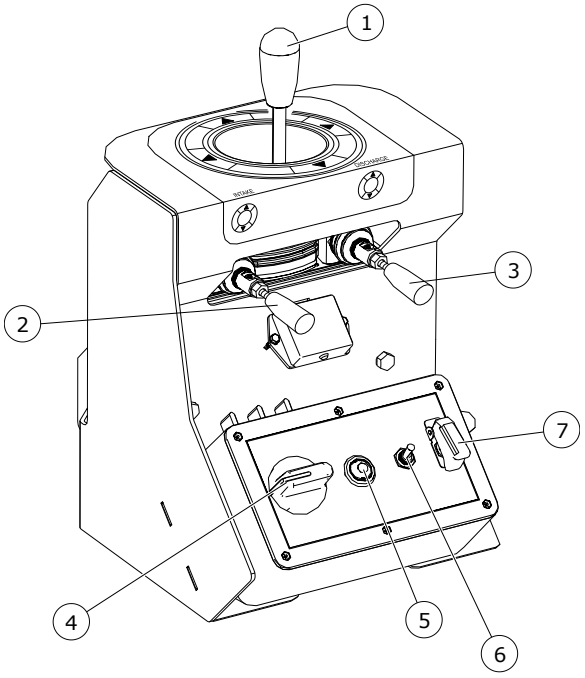


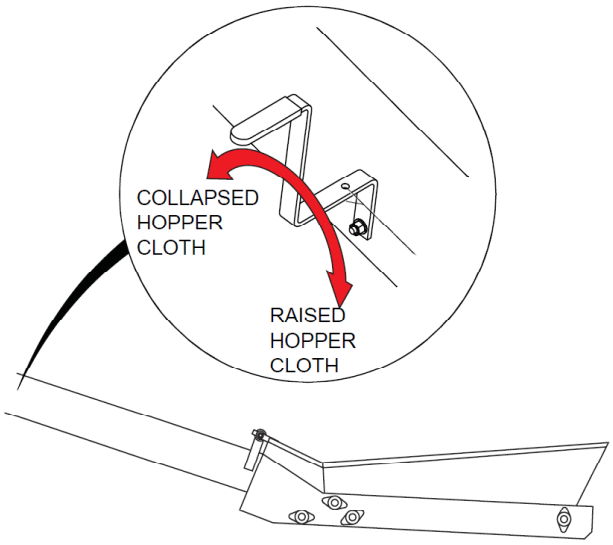
Table 2. Controls

Item	Description
1	Mover Control
2	Raise/Lower Intake
3	Raise/Lower Discharge
4	Throttle Dial
5	Check Engine Lights
6	Lights
7	Clutch

5.3. Collapsible Hopper Cloth Control

The conveyor is designed with a collapsible hopper cloth to allow it to go under low discharge units.

Move the control handle toward the hopper or intake to raise the hopper cloth, and move the handle toward the outlet or spout end to collapse the hopper cloth.



5.4. Conveyor Operating Angles

Some grains can be moved at steeper angles than others. Grain will roll back if the conveyor is positioned at an angle greater than the grains natural moving/piling angle (angle of repose). The following table indicates the maximum angle that different grain types can be moved.

To determine conveyor angle, use the angle guide decal on your conveyor.

Note

The lower the angle, the greater the capacity of the conveyor.

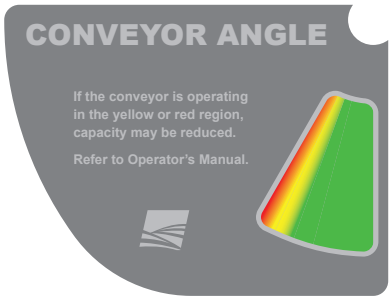


Table 3. Maximum Moving Angles for Grains

Grain	Maximum Conveyor Angle (degrees)	Grain	Maximum Conveyor Angle (degrees)
Flax	24	Wheat	26
Lentils	29	Alfalfa Pellets	34
Mustard	26	Barley	25
Canola	20	Canary Seed	26
Oats	28	Chickpeas	30

Table 3 Maximum Moving Angles for Grains (continued)

Grain	Maximum Conveyor Angle (degrees)	Grain	Maximum Conveyor Angle (degrees)
Peas	30	Corn	23
Rice	36	Shelled Corn (dry)	23
Rye	25	Shelled Corn (wet)	28
Soybeans	28	Cotton Seed	30-45
Sunflower	22	Durum	23
Triticale	23		

6. Operation

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.

6.1. Operation Safety

WARNING

- Keep away from rotating and moving parts, including the conveyor belt, drive components, shafts, and bearings.
- Do not enter the grain bin or truck while the conveyor is operating.
- Always operate with guards, covers, and shields in place.
- Have another trained person nearby who can shut down the equipment in case of accident.
- Keep the work area clear of bystanders.
- Keep the work area clean and free of debris.
- Ensure maintenance has been performed and is up to date.

Refer to your bin operation manual for specific operating and safety information for your bin.

6.2. Start-up and Break-in

Check the following during the first hours of operation.

1. Check that the conveyor intake and discharge areas are free of obstructions.
2. Check conveyor belt alignment to ensure preset alignment does not vary under loaded conditions. See Maintenance Section for alignment instructions.
3. Check the conveyor belt tension. See Maintenance Section for tension instructions.
4. Check the drive belt tension and alignment. See Maintenance Section for instructions.
5. Visually inspect the conveyor, see Visual Inspection in Maintenance Section.
6. Check tightness of all bolts/nuts, fasteners, and hardware (re-torque if necessary).
7. Be aware of unusual sounds. If any are heard, determine the source and stop the conveyor. Lock out the power and correct the problem before resuming work. If you are unsure of the problem or procedure, contact your local dealer.
8. Do not run the conveyor for long periods of time without material on the conveyor belt because it increases wear. Try to run only when moving material.

   Note

   Do not use canola during the initial break-in.

9. Stop the conveyor when it is empty of grain, lower fully and lockout power.

   Important

   After the initial start-up and inspection, the conveyor should be shut down and visually inspected (see Maintenance Section) after approximately ten hours of operation.

6.3. Moving Grain

1. Turn the key to the on position. The fuel pump will cycle. Start the gas engine once it stops.
2. Start the clutch.
3. Adjust the throttle as desired.
4. Set the clutch to the ON position to start the conveyor belt.
5. When operation is complete, use the throttle control to reduce engine speed to low idle.
6. Set the clutch to the OFF position and then turn the key to the off position.

Figure 3. Controls

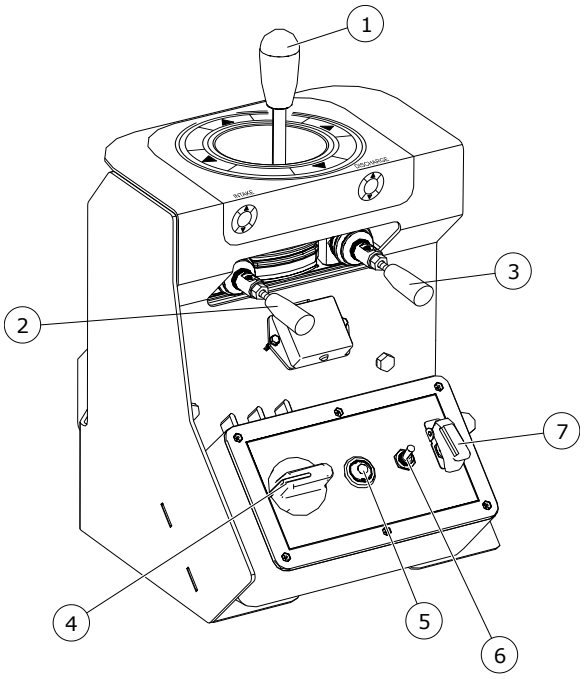


Table 4. Controls

Item	Description	Item	Description
1	Mover Control	5	Check Engine Lights
2	Raise/Lower Intake	6	Lights
3	Raise/Lower Discharge	7	Clutch
4	Throttle Dial		

6.4. Loading Area

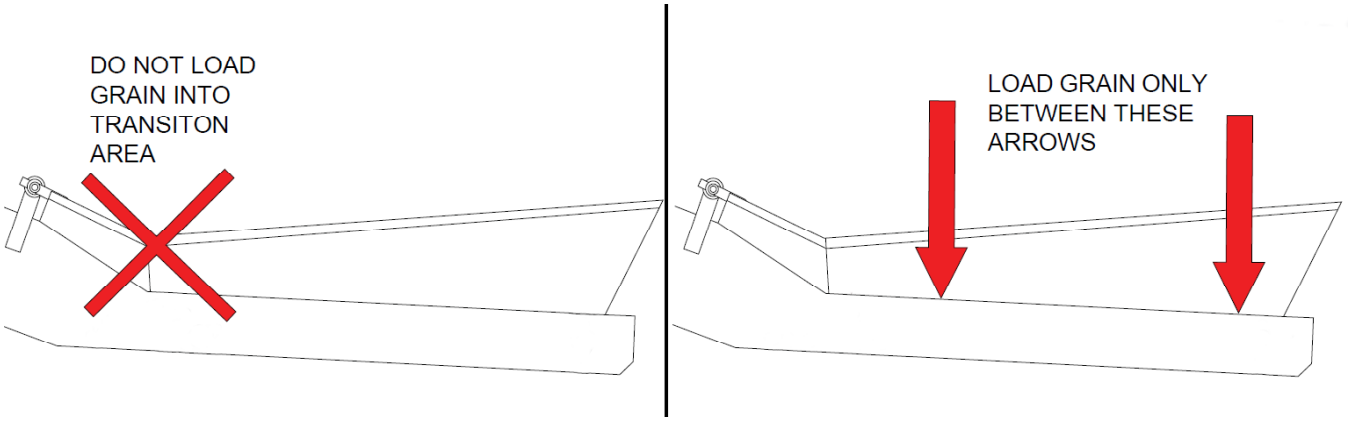
To achieve maximum capacity, feed material on the belt:

- until the material u-trough clearance is 1/2”.
- in the same direction as the belt travels.

Do not:

- unload material into the transition area.
- overflow the hopper.

Figure 4. Conveyor Loading Zone



6.5. Conveying Fertilizer

Fertilizer may be conveyed using the conveyor when operated at a reduced capacity and additional care is taken to thoroughly clean the conveyor after operation.

Important

Fertilizer weakens the belt lacing and warranty is void on all lacing used with fertilizer. The belt lacing may need to be replaced more often if you convey fertilizer.

Additional Operating Requirements

To prevent problems that can be caused by conveying fertilizer:

1. Reduce the flow if the conveyor belt starts to slip. Denser fertilizers will slow the conveyor belt down due to the weight of the product. Too much material will cause the drive roller to slip and lead to additional wear on the roller.
2. Do not move fertilizer with your conveyor in humid, wet or rainy conditions. This will cause buildup of fertilizer under your conveyor belt.

Additional Clean-Out Procedures

Proper cleaning will help to ensure longer belt life and prevent excess rust formation.

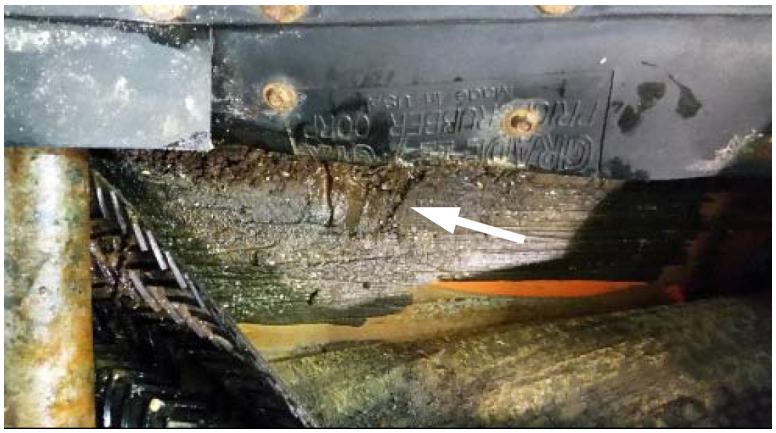
1. Run conveyor empty at full speed for 5-10 minutes after conveying fertilizer. This will help ensure that any product that may be under the belt will be cleaned out and prevent build up.

⚠ WARNING Do not attempt to manually remove build-up while conveyor is running.

2. Next, run the belt at low idle and inspect for damage on the belt and lacing, such as notches or cut outs caused by mice and normal wear. Any damage on the belt may result in fertilizer getting under the belt creating a buildup. Consider replacing the conveyor belt if it is in poor condition. If equipped with an electric motor, inspect on the belt return side with the electric motor not running. Turn on the conveyor to expose the belt that was previously in the u-trough. Turn off the conveyor and inspect the belt on the belt return, along with the lacing.
3. Shutdown and lockout power to the conveyor and vacuum or sweep out any remaining fertilizer from the hopper.
4. Remove the s-drive bottom cover and remove any buildup from this area and clean cover. Replace the cover when complete.
5. If buildup is evident on or under the belt, remove the buildup to ensure proper operation of the conveyor. When necessary remove fertilizer buildup from under the belt by scraping and washing the belt. For washdown, refer to Section 7.19 – Clean and Wash the Equipment on page 51

Figure 5. Fertilizer Buildup on Rollers

Figure 6. Fertilizer Buildup at Hopper Transition



6.6. Conveying Oilseed

Following the instructions in this section is mandatory to prevent performance issues from handling oilseed. Without and equipped oilseed package, failure to follow these instructions will invalidate the warranty.

Oilseed is small and high in oil content, which makes it easy for it to get under the conveyor belt and get crushed, leaving a build up of residue behind and releasing oil onto the conveyor belt and in the conveyor.

The best indicator that build up has occurred and a wash down is required is machine performance, including:

- build up on the hopper and spout scrapers
- rapid belt tension changes
- capacity reduction

Use extra care and **clean up all oilseed residue immediately** by following the instructions in this section to prevent:

- decreased capacity
- drag on the conveyor belt
- shrinkage of the conveyor belt

To maintain optimal operation, complete additional procedures as described below for:

- preparation
- operation
- clean out
- wash down

Before Conveying Oilseed

To prevent oil buildup and belt shrinkage:

1. Start the conveyor and lift the intake (hopper) end off the ground.
2. Shut down the conveyor.
3. Remove both hopper bottom covers.

   Note

   This allows oilseed to fall off the conveyor belt before being crushed.
4. Check the hopper and spout scrapers. Refer to Section 7.9 – Adjust the Belt Brush and Scraper on page 40.
5. Start the conveyor, re-position the intake end on the ground, and run empty.
6. Check the conveyor belt tracking. Refer to Section 7.13 – Align the Conveyor Belt on page 45
7. Check the conveyor belt tension. Refer to Section 7.12 – Tension the Conveyor Belt on page 42.
8. Shut down the conveyor.

Mandatory Actions After Conveying Oilseed and Between Loads

1. Run the conveyor empty for 1-5 minutes to clear out any buildup of material from the hopper and spout scrapers.
2. Remove buildup of any material from the spout scraper.

3. **To prevent performance problems and maintain warranty, wash down the conveyor belt before operating the conveyor again if the:**
   - conveyor belt requires tensioning. Refer to Section 7.12 – Tension the Conveyor Belt on page 42.
   - capacity begins to drop.
   - backside of the conveyor belt feels excessively oily.
   - conveyor belt becomes plugged with oilseed.

   Refer to Section 7.19 – Clean and Wash the Equipment on page 51.

Additional Tips for Conveying Oilseed

- Convey dry grain between loads of oilseed whenever possible.
- Due to the small size of oilseeds, a minimal amount of leakage is normal when conveying oilseed.
- Look for buildup of oil first on the hopper return roller as black lines.
- Wash down the conveyor after conveying approximately 30,000 bushels of oilseed.
- If working in freezing temperatures, move the conveyor to a heated shop to wash down.

6.7. Conveyor Belt Speed

The best results are obtained when the conveyor belt speed is set at 700 ft/min when the conveyor is loaded with grain or 800 ft/min when the conveyor is running empty.

Count the number of belt revolutions per minute to determine belt speed. See Section 7.12 – Tension the Conveyor Belt on page 42.Section 9. – Specifications on page 60 for belt length.

Note

Use the connector splice as a reference when counting belt revolutions.

To calculate, for example, 800 ft/min belt speed for a 110 ft belt:

$$\frac{BeltSpeed}{BeltLength} = \frac{800}{110} = 7.2$$

From the above, the belt will make about 7.2 passes in one minute when it is moving at 800 ft/min.

6.8. Emergency Shutdown

In an emergency situation:

1. Stop or shut down the power source immediately and lock out all power.
2. Stop the flow of material (if applicable).
3. Ensure the machine components come to a stop before inspecting.
4. Correct the emergency situation before resuming work.

6.9. Restarting with a Full U-Trough

When the conveyor is shut down inadvertently or due to an emergency, the u-trough may still be filled with grain.

1. With the power source locked out, remove as much of the grain as possible from the u-trough and intake using a shop vacuum or other tool. Do not use your hands.

   NOTICE Starting under load may result in damage to the conveyor.

2. If guards or covers have been opened or removed, close or replace them before restarting the unit.
3. Since the start-up torque loads are so much higher than normal when the conveyor belting is full, restart at low speed. Do not let the conveyor belt drive roller spin on the belt if conveying belt does not start moving immediately. This will damage the drive roller and conveying belt.
4. Once the conveyor has been started, you may resume normal operation.

6.10. Shutdown

When operation has been completed:

1. Once the conveyor is clear of grain, lock out the power source.
2. Lower the conveyor fully. See Raising and Lowering instructions.
3. Clean out any remaining grain from the conveyor with a vacuum or sweep out.
4. Clean the entire work area.
5. Remove anchors, supports, and chocks.

6.11. Storage

After the season's use, the conveyor should be thoroughly inspected and prepared for storage. Repair or replace any worn or damaged components and perform maintenance as described in the Maintenance Section to prevent any unnecessary downtime at the start of the next season.

To ensure a long, trouble-free life, this procedure should be followed when preparing the unit for storage.

1. Remove all residual material from the hopper and the u-trough.
2. Wash down the conveyor, especially after conveying oilseed. Refer to Section 7.19 – Clean and Wash the Equipment on page 51
3. Stop the machine with the belt lacing inside the u-trough. This helps prevent the lacing from rusting.
4. Wash the conveyor thoroughly using a water hose or pressure washer to remove all dirt, mud, debris, or residue.
5. Inspect all moving or rotating parts to see if anything has become entangled in them. Remove any entangled material.
6. Touch up all paint nicks and scratches to prevent rusting.
7. Check tire pressure and inflate. For inflation pressure, refer to Section 9. – Specifications on page 60.
8. Inspect the conveyor for cracks, tightness of fittings and fasteners, hydraulic hose cracks (if applicable). Have required repairs performed to replace worn or damaged components.

9. Store in an area that is dry, level, free of debris, and away from human activity. Store inside if possible.
10. Cover the motor with waterproof tarpaulin if stored outside to protect from weather.
11. Chock wheels.
12. Support intake on blocks to eliminate prolonged contact with the ground.
13. Place the mover in the raised position to prevent the hydraulic cylinder rods from rusting.
14. Lower the conveyor fully for storage.

7. Maintenance

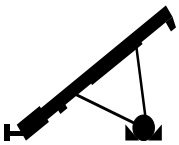
Before continuing, ensure you have completely read and understood this manual's Safety section, in addition to the safety information in the section(s) below.

7.1. Maintenance Safety

WARNING

- Keep components in good condition. Follow the maintenance procedures.
- Ensure the service area is clean, dry, and has sufficient lighting.
- Do not modify any components without written authorization from the manufacturer. Modification can be dangerous and result in serious injuries.
- Shut down and lock out power before maintaining equipment.
- After maintenance is complete, replace all guards, service doors, and/or covers.
- Use only genuine AGI replacement parts or equivalent. Use of unauthorized parts will void warranty. If in doubt, contact AGI or your local dealer.

Before attempting maintenance of any kind:



- Lower the conveyor fully.
- Chock wheels.
- Support u-trough if performing maintenance on the undercarriage assembly.
- **If equipped with hydraulics:** Before applying pressure to a hydraulic system, make sure all components are tight and that hoses and couplings are in good condition.

7.2. Maintenance Schedule

Proper maintenance habits mean a longer life, better efficiency, and safer operation of the unit. Please follow the Maintenance Schedule below. Keep good records of the hours the conveyor has been operated and the maintenance performed.

Daily:
Section 7.3 – Visually Inspect the Equipment on page 39
Section 7.4 – Lubricate the Equipment on page 39
Monthly:
Section 7.7 – Inspect Hydraulic Hoses and Fittings on page 40
Section 7.8 – Inspect the Hopper Flashing on page 40
Section 7.10 – Check the Roller Bearings on page 42
Section 7.11 – Check the Rollers on page 42
Section 7.14 – Inspect Belt Lacing on page 48
Section 7.9 – Adjust the Belt Brush and Scraper on page 40
Annually:
Section 7.12 – Tension the Conveyor Belt on page 42
Section 7.13 – Align the Conveyor Belt on page 45
Section 7.19 – Clean and Wash the Equipment on page 51
Section 7.5 – Check the Gearbox Oil on page 39
2–3 Years:
Section 7.15 – Replace the Belt Lacing on page 48
Section 7.16 – Seal the Belt Lacing on page 48
Section 7.6 – Change the Gearbox Oil on page 40
As Required:
Section 7.20 – Tension the Drive Belts on page 52
Section 7.21 – Align the Drive Belts on page 54
Section 7.22 – Replace the Drive Belts on page 54
Section 7.18 – Replace the Transition Seals on page 50
Section 7.23 – Repack the Wheel Bearings with Grease on page 54
Section 7.24 – Inspect and Service the Hydraulic Winch and Lift Cable on page 55
Section 7.17 – Replace the Conveyor Belt on page 49

7.3. Visually Inspect the Equipment

⚠ WARNING Lock out power before inspecting.

Check the following during a visual inspection:

1. Ensure all guards are in place and in good working order.
2. Examine the conveyor for damage or unusual wear.
3. Check that the belt inside the trough is still following the contour of the trough (no cupping).
4. Check tightness of bolts/nuts, fasteners, and hardware (re-torque if necessary).
5. Be sure all safety decals are in place and are legible.
6. Check that the discharge and intake area are free of obstructions.
7. Inspect all moving or rotating parts to see if anything has become entangled in them. Remove any entangled material.
8. Inspect hydraulic hoses and fittings for leaks and wear. Fix or replace where necessary.
9. Check wheel bolts are tight and examine tires for gashes, uneven wear, or loss of air pressure. See Section 9. – Specifications on page 60 for recommended tire pressure and torque information.
10. Check all operating, lifting, and transport components. Replace damaged or worn parts before using the conveyor.
11. Inspect the winch cable for fraying, kinking, unwinding, or other possible damage.

7.4. Lubricate the Equipment

1. Wipe the grease fittings with a clean cloth before greasing to avoid injecting dirt and grit.
2. Use a hand-held grease gun for all greasing.
3. If fittings will not take grease, remove and clean thoroughly.
4. Replace fittings if they are broken or will not accept grease.

Use SAE multi-purpose high-temperature grease with extreme pressure (EP) performance. SAE multi-purpose lithium-based grease is also acceptable.

Grease Locations

Apply grease to the conveyor at the roller bearings hopper, spout, and s-drive.

7.5. Check the Gearbox Oil

1. Remove fill/vent plug to check gearbox oil level. Insert an improvised dipstick (rolled paper or plastic tie) into the oil filler hole to determine the oil level.
2. Note the level and the condition of the oil. Maintain oil level at half full (center of cross shaft), adding as necessary or drain and refill if condition is poor.

   Refer to Section 9. – Specifications on page 60 for gearbox oil information.
3. Ensure gearbox is level when checking or refilling.
4. Do not overfill when adding oil.

5. Replace fill/vent plug.

7.6. Change the Gearbox Oil

Refer to Section 9. – Specifications on page 60 for gearbox oil information.

1. Remove gearbox from the conveyor.
2. Place a pan under the drain plug.
3. Use a wrench and remove the drain plug.
4. Loosen the filler plug so air can enter the gearbox and the oil will drain freely.
5. Allow the oil to drain completely.
6. Replace the drain plug.
7. Add oil until the gearbox is half full (center of cross shaft) and replace filler plug. A flexible funnel may be required. Gearbox should be level when checking or refilling. **Do not overfill.**
8. Reinstall the gearbox and guards.

7.7. Inspect Hydraulic Hoses and Fittings

1. Pressurize the system.
2. Using a piece of cardboard or wood, run it along the length of the hose and around all fittings.

   ⚠ WARNING Escaping hydraulic fluid under pressure will cause serious injury if it penetrates the skin surface.
3. Replace the hose or tighten/replace the fitting if a leak is found. For replacement hoses, refer to Section 9. – Specifications on page 60.
4. Replace any hose that is badly cut, nicked, abraded, or is separating from the crimped end of the fitting.
5. Secure hoses to the machine.

7.8. Inspect the Hopper Flashing

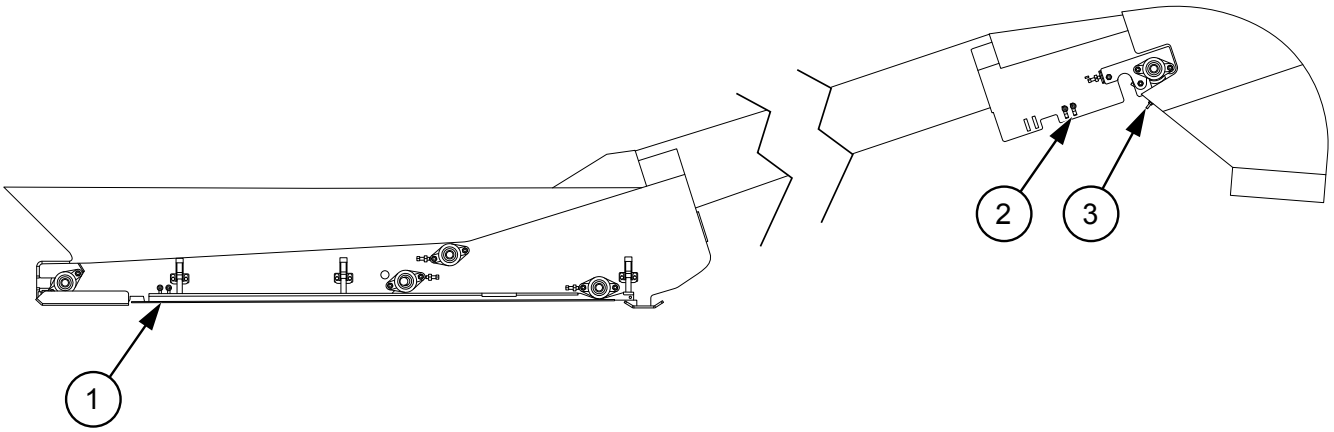
Check hopper flashing for wear and replace any that are worn. Worn flashing will cause hopper leakage.

7.9. Adjust the Belt Brush and Scraper

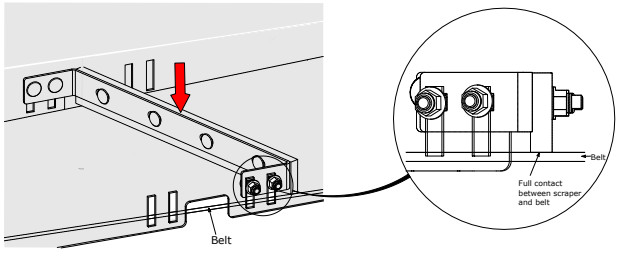
The conveyor is equipped with a brush in the spout and a scraper in the spout and hopper which help to clean the conveyor belt. These must contact the belt to remove residue.

1. Check that the scrapers (1,2) make contact with the conveyor belt.
2. Check that the brush (3) bristles reach all the way to the deepest part of the chevron pattern (grooves) in the conveyor belt.
3. Loosen the nuts to adjust the position of the scrapers and brush as needed. Tighten when complete.

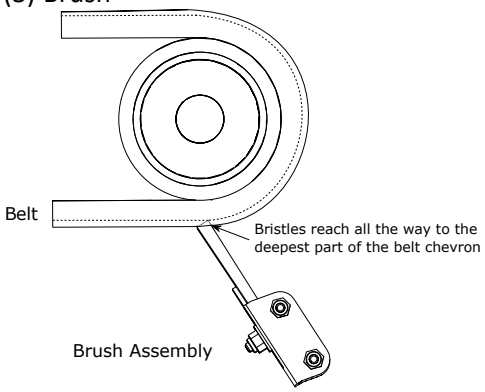
Figure 7. Belt Brush and Scraper Adjustment

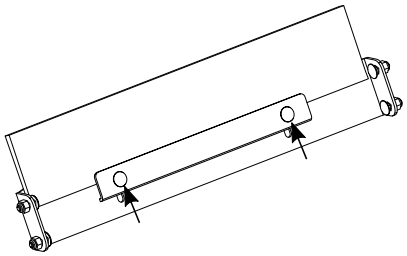


(1,2) Scraper



(3) Brush





7.10. Check the Roller Bearings

Check the roller bearings for wear. Any rollers making noise, getting hot while running, or that give should be replaced.

7.11. Check the Rollers

Inspect the roller to see if it is showing signs of wear. Replace rollers that are worn.

NOTICE Operating the conveyor with a damaged roller will result in a damaged conveyor belt.

7.12. Tension the Conveyor Belt

Adjusting your conveyor belt for proper tension helps to ensure trouble-free operation and long belt life.

The conveyor belt only needs to be tight enough to not slip on the drive roller. If the belt is too loose, it will slip on the drive roller making a noticeable sound, slowing the belt down.

The conveyor belt should not be easy to pull from the hopper transition sides, otherwise it requires tensioning.

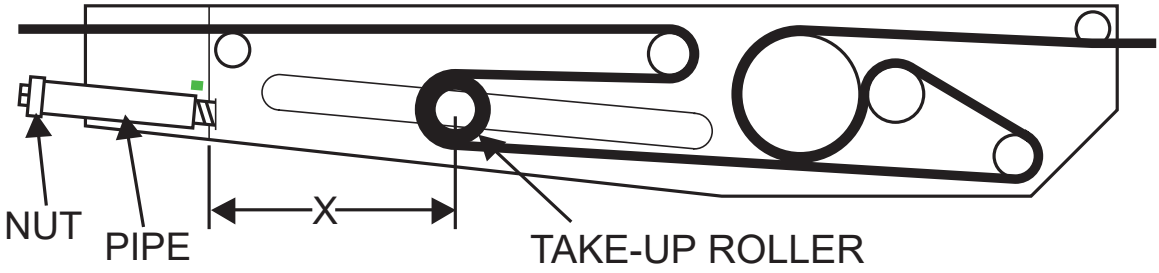
NOTICE To prevent belt damage, the conveyor belt must be tensioned correctly and the take-up roller must be straight.

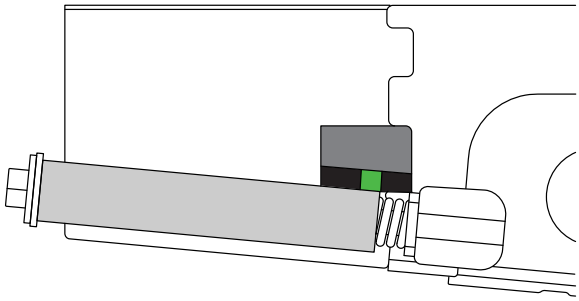
DO NOT adjust belt tracking with the take-up roller.

To set correct conveyor belt tension:

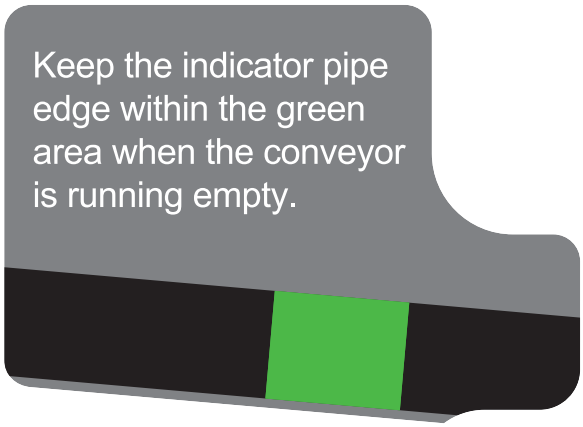
1. While the conveyor is running empty, adjust the nut on both sides of the s-drive so that the edge of the pipe is within the green area.
2. Keep the take-up roller straight by adjusting the nut so that the distance (X) is the same on both sides of s-drive.
3. If the belt is still loose after tensioning, the belt needs to be shortened or replaced (depending on wear).
4. After the conveyor belt has been tensioned, check the alignment of all s-drive rollers, see Section 7.13 – Align the Conveyor Belt on page 45.

Figure 8. S-Drive





Edge of pipe within green area when the conveyor is running empty.



7.12.1 S-Drive Pinch Roller

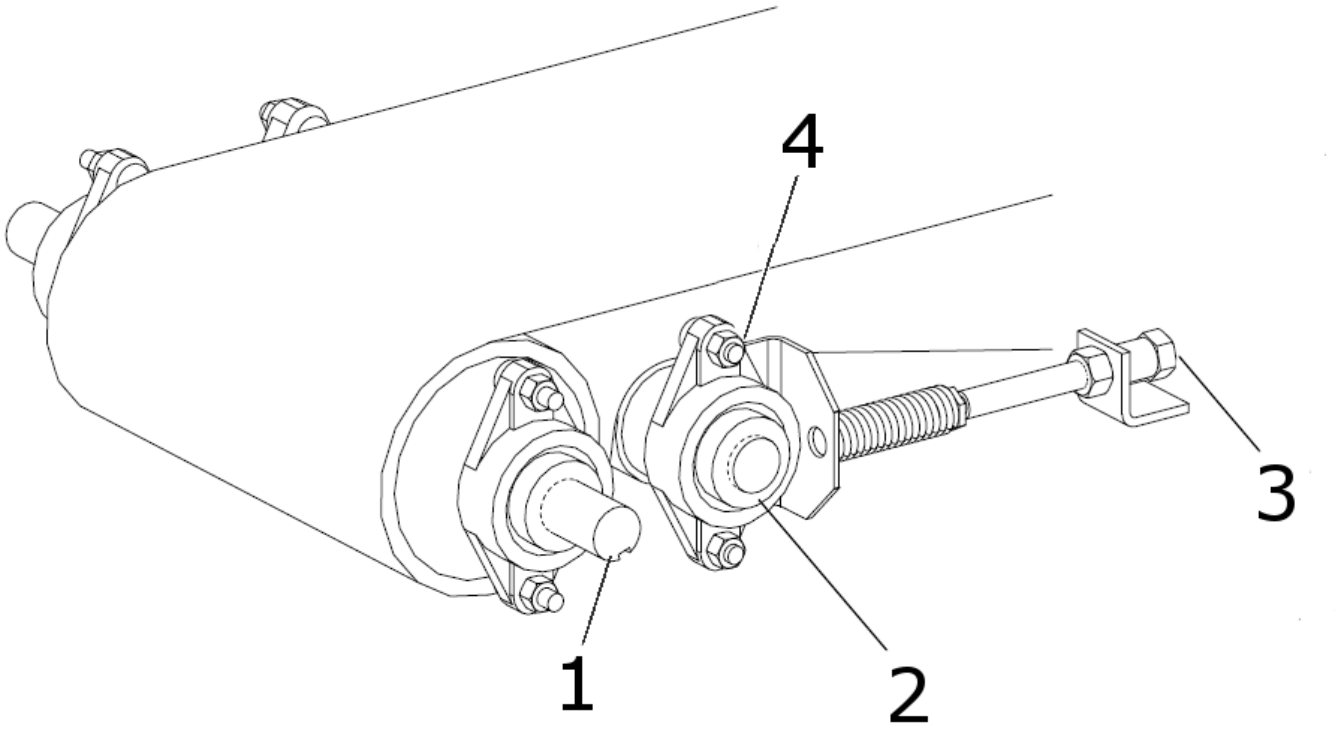
The s-drive pinch roller works correctly when it is able to move (wiggle) in the slots in the s-drive and has adequate spring tension. This should not normally require adjustment.

To check and correct the tension on the pinch roller.

1. Hit the pinch roller with a rubber mallet to confirm that it able to move.
2. Loosen or tighten the pinch roller adjustment bolt to adjust the tension.
3. Check that the bearing nuts on the pinch roller are tight. Tighten, if loose.

Item	Description
1	S-Drive Roller
2	Pinch Roller
3	Pinch Roller Adjustment Bolt
4	Pinch Roller Bearing Nuts

Figure 9. S-Drive Pinch Roller



7.13. Align the Conveyor Belt

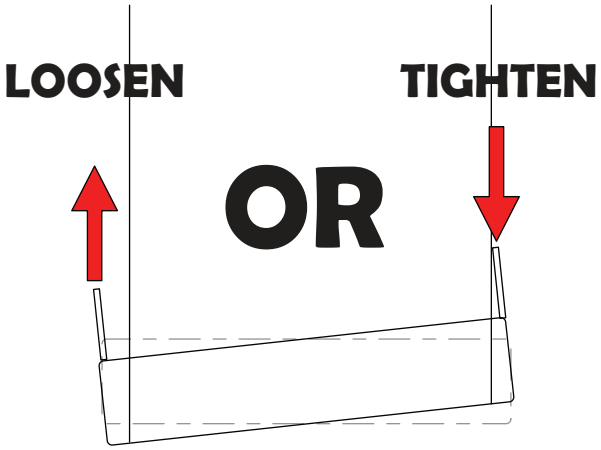
Basic Conveyor Belt Alignment:

The conveyor belt will run straight when all of the rollers are straight.

Loosen or tighten the adjustment bolt(s) to align the conveyor belt. Tighten the side the belt has moved toward, or loosen the side the belt has moved away from.

Belt alignment is done while the belt is running.

Figure 10. Roller out of Alignment



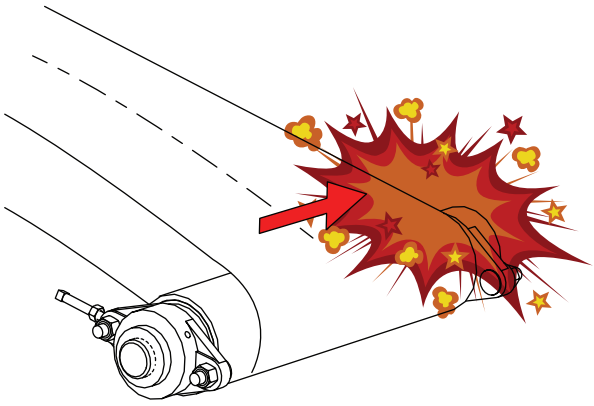
Before Aligning the Belt:

- The conveyor must be empty of all grain.
- Wait until the belt makes a complete revolution before adjusting the rollers. Some belts may have uneven edges, appearing misaligned.

To Align the Belt:

If your belt is tracking off-center, follow the sections and steps in the order following to center it.

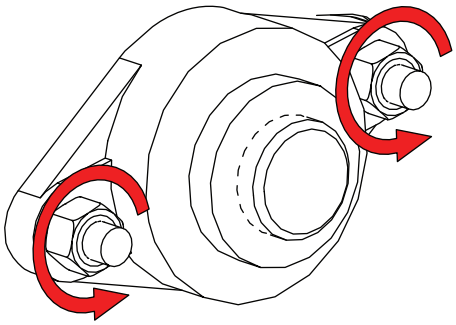
Figure 11. Belt Tracking to One Side



7.13.1 Adjust the Rollers

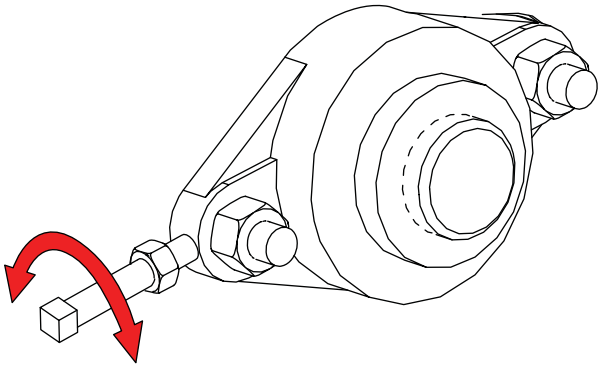
1. Loosen bearing nuts and jam nuts (if equipped).

Figure 12. Loosen the Bearing Nuts



2. Rotate adjustment bolt 1/2 turn.

Figure 13. Rotate the Adjustment Bolt



3. Restart conveyor and run empty for 1 minute.
4. Stop the conveyor and remove ignition key or lock out the power source.
5. If the belt has centered, move to next step. If not, repeat Step 2 to Step 4 until the belt is centered.
6. Tighten the bearing bolts and jam nut (if equipped).
7. Replace any guards that were removed.

7.13.2 Adjust the Belt Return and Internal Trough Wear Blocks

1. The edge of the conveyor belt should be positioned above the guide blocks and may wear a groove over time. If they are worn all the way down, rotate the wear blocks 90 or 180 degrees. Replace after all sides are worn.

Figure 14. Belt Return Wear Blocks

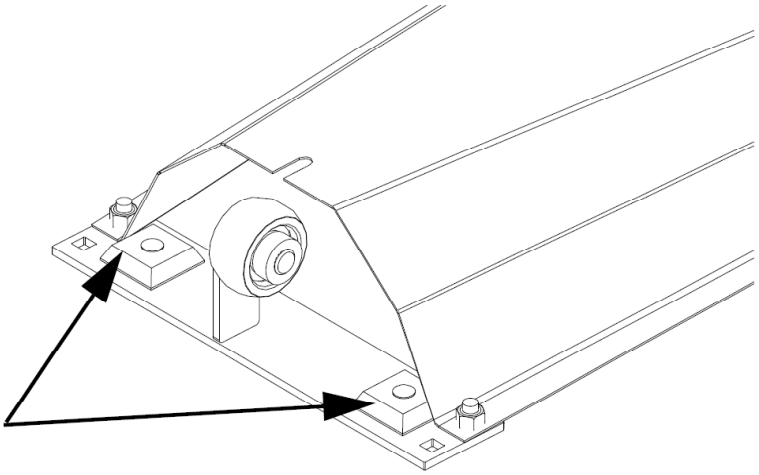
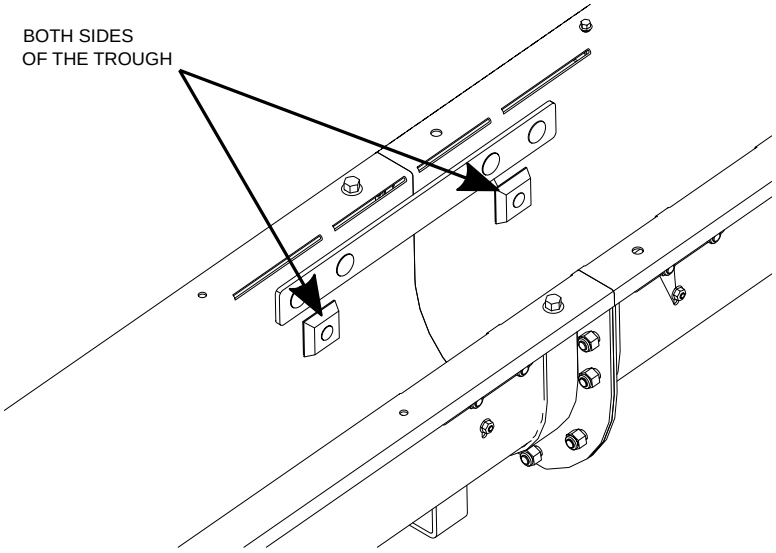


Figure 15. Internal Trough Wear Blocks



2. Replace the guards if removed.

7.14. Inspect Belt Lacing

Inspect the condition of the belt lacing, if any clips are worn through, replace all lacing.

7.15. Replace the Belt Lacing

1. Rotate the conveyor belt until the lacing is between the s-drive and the hopper.
2. Loosen the tension on the s-drive take-up roller all the way.
3. Remove the lacing retainer clip and pin.
4. Using a square and sharp knife, cut the lacing off right behind the lacing clips. The cut belt MUST have a square end.
5. Use a knife to cut Chevron pattern off 1” back from the end of the belt. This ensures that the lacing is centered and fully seated on the belt.
6. Count the lacing clips on the removed section and install the same number of new lacing clips with a lacing tool. Center the lacing on the belt and follow the lacing tool’s instructions.
7. Align the conveyor belt ends and install the lacing pin.
8. Crimp the retainer clips onto each end of the lacing pin. Refer to Figure 16.
9. Tighten the conveyor belt. Refer to Section 7.12 – Tension the Conveyor Belt on page 42.
10. Seal the belt lacing (if the conveyor is used to handle oilseed). Refer to Section 7.16 – Seal the Belt Lacing on page 48
11. Check and set the belt alignment. Refer to Section 7.13 – Align the Conveyor Belt on page 45.
12. Engage the conveyor drive. Allow the conveyor to run for 30 seconds, then shut down the conveyor and inspect the lacing.

7.16. Seal the Belt Lacing

When equipped with an oilseed kit, the lacing on the belt is sealed to prevent leakage when using the conveyor with oilseeds.

Re-seal the lacing if the seal appears worn or cracked.

1. Remove the existing, worn seal, using a utility knife.
2. Apply a thin layer of flexible industrial strength adhesive to the belt lacing while the belt is under tension.

   Note

   Eclectic E6000 Industrial Strength Adhesive or equivalent is recommended. This adhesive remains flexible once cured.

3. Spread the adhesive into all gaps between the teeth of the belt lacing.
4. Allow adhesive to cure.

   Important

   Do not install urethane seals and flashing or attempt to run the conveyor until the adhesive coating is allowed to dry or partially cure.

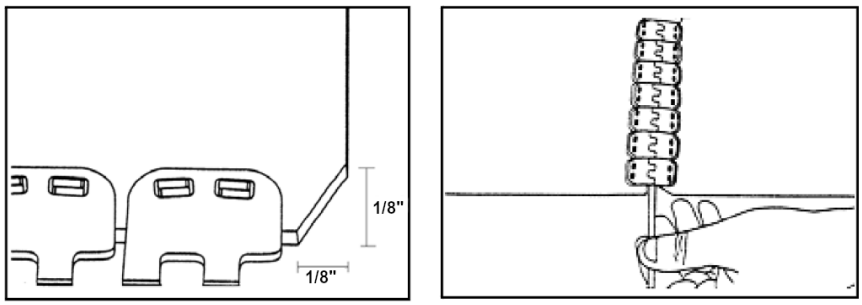
Note

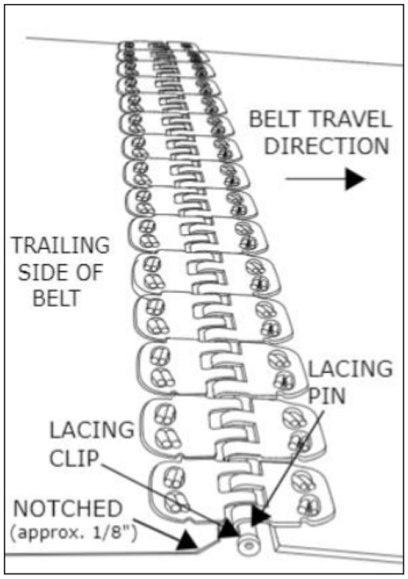
When using Eclectic E6000, pass a heat gun over the belt lacing for a minimum of 2 minutes to speed up the curing process. If the adhesive begins to bubble, decrease heat intensity.

7.17. Replace the Conveyor Belt

1. Rotate the conveyor belt until the lacing is by the hopper or is easily accessible.
2. Loosen the tension on the take-up roller all the way.
3. Pull all the slack to the lacing area.
4. Remove the lacing retainer clip and pin.
5. Attach one end of the replacement belt to the belt end being removed, closest to the hopper.
6. Pull the old belt out and the new belt will be threaded into place.
7. Disconnect the old belt.
8. Reattach conveyor belt ends together. If required, use a ratchet strap clamped to both ends of belt to cinch belting ends together.
9. Install the lacing pin and crimp the retainer clips onto each end of the lacing pin, see Figure 16.
10. Remove the ratchet strap and tighten the conveyor belt. Section 7.12 – Tension the Conveyor Belt on page 42.
11. Check and set the belt alignment. Refer to Section 7.13 – Align the Conveyor Belt on page 45.
12. Engage the conveyor drive. Allow it to run for 30 seconds, then shut down the conveyor and inspect the lacing.
13. On both corners of the trailing edge of the belt, trim 1/8” off the tip of the corner to prevent ing.

Figure 16. Lacing the Conveyor Belt





7.18. Replace the Transition Seals

The transition seals need to be replaced if the conveyor is leaking material excessively from this area.

To replace the seals, the conveyor belt is removed from the hopper area. Then the bearings and rollers are removed before the seals are replaced.

Accessing the Seals

1. Rotate the conveyor belt until the lacing is between the s-drive and the hopper.
2. Loosen the tension on the s-drive take-up roller all the way.
3. Remove the lacing retainer clip and pin.
4. Pull the belt up through the transition so that the hopper is visible from the top and bottom of the conveyor.
5. Raise the hopper and support it underneath.

Replacing the Lower Transition Seal

1. Remove the hardware (5, 7, 8) and bearings (4) and pull out the roller (1).
2. Remove the old seals (3) and put the new ones in place.
3. Re-install the roller (1) and bearings (4).

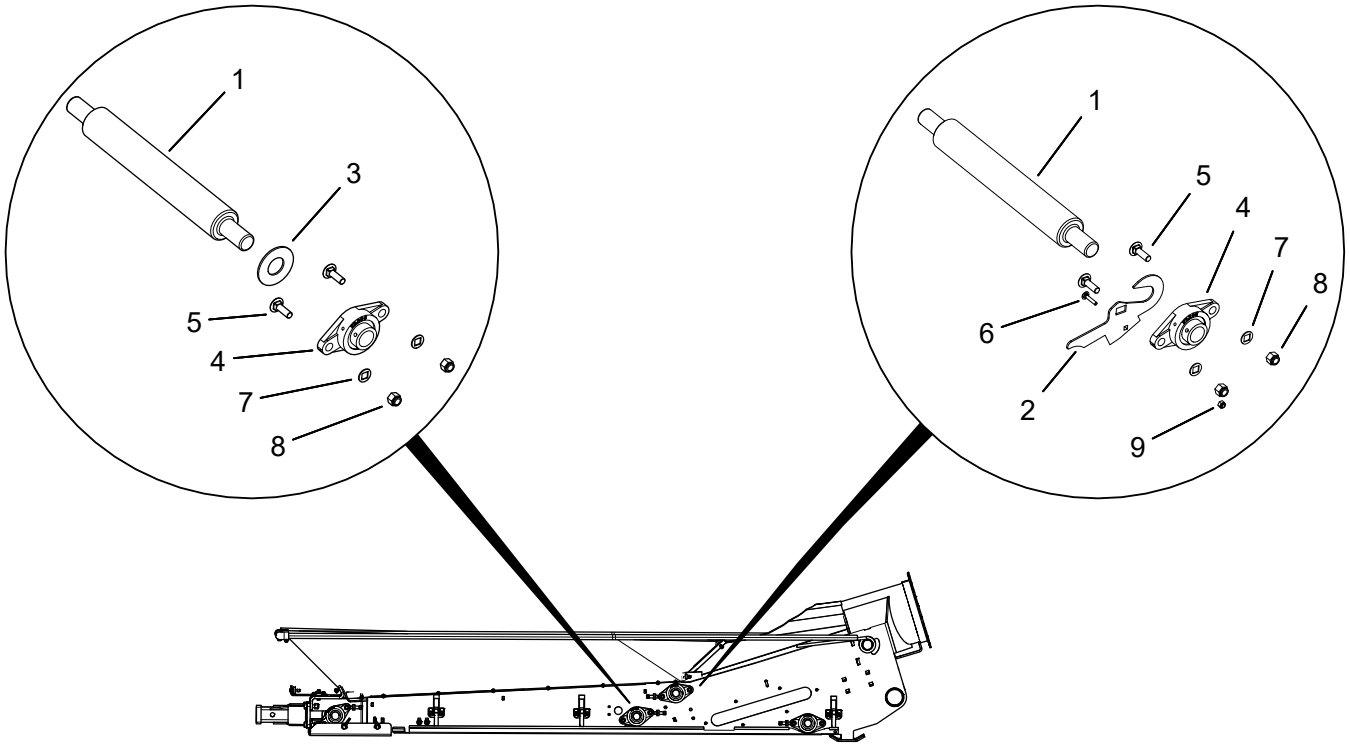
Replacing the Upper Transition Seal

1. Remove the locking collars from the roller (1).
2. Remove the two bolts (5, 6) that hold each seal (2) in place and remove the seals.
3. Place the new seals in the hopper. Hammer the roller (1) to the opposite side of the hopper to get more room to position the new seals.
4. Re-center the roller (1).
5. Re-attach the locking collars.

Finishing Up

1. Thread the belt back through the hopper until the lacing is between the s-drive and the hopper.
2. Insert the lacing retainer clip and pin.
3. Remove the supports and lower the hopper back to the ground.
4. Tension the s-drive take-up roller. Refer to Section 7.12 – Tension the Conveyor Belt on page 42.

Figure 17. Transition Seals



7.19. Clean and Wash the Equipment

Clean out the conveyor after handling any product.

⚠ WARNING Failure to lock out power can cause severe injury.

Clean out and wash down the conveyor after operation prevents:

	Dry Grain	Fertilizer
Product build up	✓	✓
Roller misalignment	✓	✓
Excess belt wear/damage	✓	✓

Cleaning Out the Conveyor

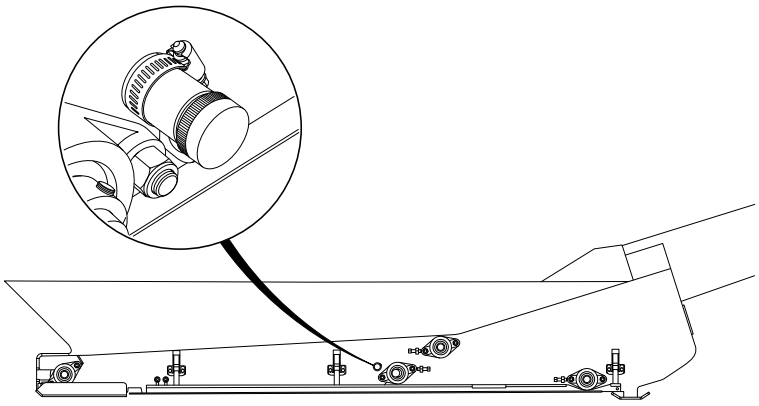
1. Remove any product remaining in the hopper and spout with a vacuum or sweep out.
2. Remove debris from shafts, sheaves, and drive belts (as equipped).
3. Once the conveyor is clean, check for damage to the belt lacing and belt notches or cuts. Any damage to the belt may result in product getting under it creating a build-up. If belt replacement and re-lacing is necessary, refer to the Maintenance Section.
4. Once cleaned out, cover the hopper to prevent moisture from collecting.

Washing Down the Conveyor (if equipped with Turbo Clean Belt Wash System)

Do not wash down the belt if there is a chance of freezing temperatures as this will cause the belt to freeze to the u-trough.

1. Attach a garden hose to the spray tube (if equipped).
2. Run clean water through the spray tube for 15-20 minutes while running the belt at medium throttle.
3. If the belt has experienced excessive build up, check between the belt and the weather guards at the spout for buildup and manually clean out.
4. Monitor the belt tension while running empty. Refer to Section 7.12 – Tension the Conveyor Belt on page 42.
5. Disconnect the garden hose and run empty for two minutes to clean out any remaining water.
6. Allow the conveyor belt to dry before using again.
7. Once the conveyor belt is washed, the capacity will be somewhat less once the belt has been cleaned and will increase after running a few loads of dry grain through the conveyor.

Figure 18. Turbo Clean Spray Tube Location



7.20. Tension the Drive Belts

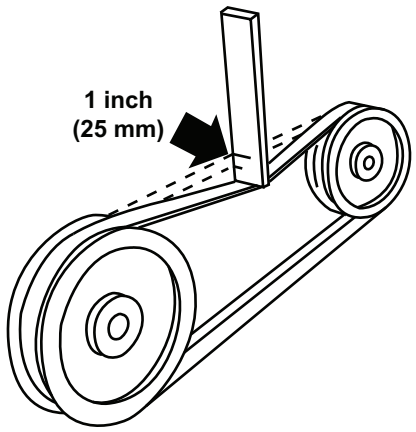
The drive belt should be just tight enough to not slip on the drive pulley when operating. If the belt is too loose, it will slip, possibly causing a squeaking sound and slowing the belt down. If the belt is too tight, it will cause excess wear.

Checking the Drive Belt Tension

1. Remove the guard.

2. Push on the center of the belt span with a force of approximately 5 lb.
3. Measure the belt deflection is approximately 1” (25 mm) for proper tension.
4. Tension the belt if the measurement is off or reattach the guard if the tension is set correctly.

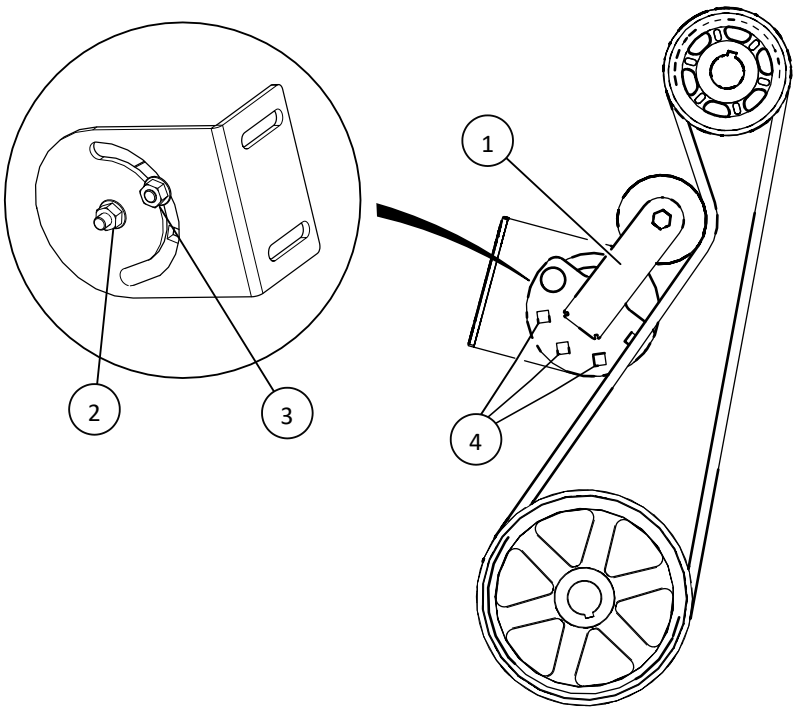
Figure 19. Tensioning the Drive Belt



Tensioning the Belt

1. Loosen the nuts (2, 3). This will allow the idler pulley (1) to pivot.
2. Place the square end of a ratchet into one of the square holes (4) in the idler pulley (1). Then rotate the idler pulley with the ratchet handle to a torque of 35 ft-lb to tighten the belt.
3. Hold the ratchet in position with the belt tight and tighten the nuts (2, 3).
4. Reattach and secure the guard. Start the system to ensure proper operation.

Figure 20. Belt Tensioner



7.21. Align the Drive Belts

1. Lay a straight edge across the pulley faces to check the alignment.
2. Use the pulley hub to move the pulley to the required position for alignment.
3. Tighten the hub bolts to secure pulley on the drive shaft.
4. Check the belt tension.
5. Reattach and secure the guard.

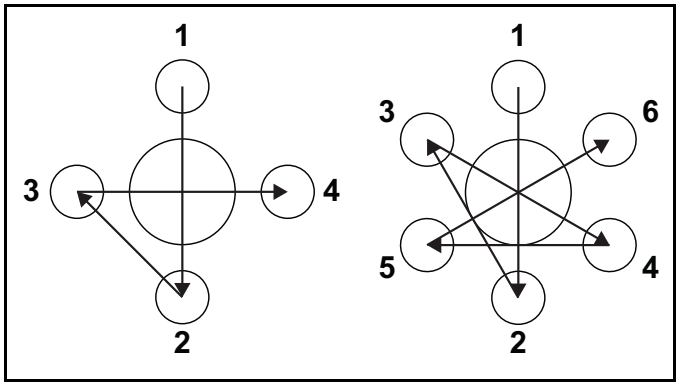
7.22. Replace the Drive Belts

1. Remove the guard.
2. Loosen the idler pulley. For details, see Section 7.20 – Tension the Drive Belts on page 52.
3. Remove and replace the old belts.
4. Tighten the drive belts as described in Belt Tension.
5. Align the drive belts as described in Belt Alignment.
6. Reattach and secure the guard.

7.23. Repack the Wheel Bearings with Grease

1. Block wheels and ensure unit is stable.
2. Remove the wheel bolts and the wheels.
3. Clean wheel and hub mounting surfaces to ensure there is no rust or debris.
4. Remove the wheel bearing and pack with grease. Use SAE multi-purpose high-temperature grease with extreme pressure (EP) performance. SAE multi-purpose lithium-based grease is also acceptable.
5. Tighten the wheel bolts (diagonal pattern) with a torque wrench to 100 ft-lb (±10 ft-lb) of torque. Inspect to make sure the wheel is sitting flush with the hub.

Figure 21. Diagonal Pattern for 4-bolt and 6-bolt Tires



7.24. Inspect and Service the Hydraulic Winch and Lift Cable

⚠ WARNING Place the conveyor in the fully lowered position with the cable slack.

To Inspect the Lift Cable:

1. Inspect the cable for damage such as fraying, kinking, or unwinding. Replace if damaged (see below).
2. Check to make sure the cable clamps are secure.
3. Oil the cable pulleys as needed.
4. Occasionally oil the bushings and drum shaft.

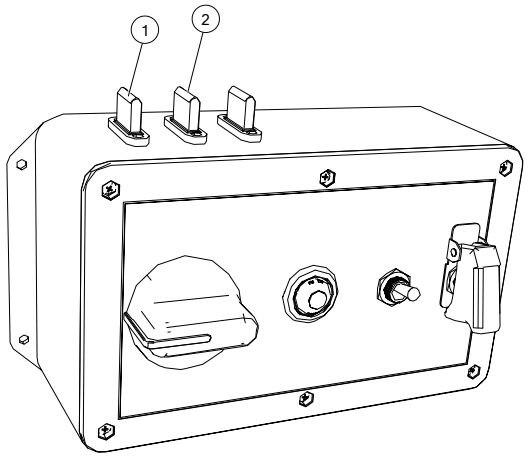
To Replace the Lift Cable:

1. Unwind the winch drum until the cable is slack and remove the cable clamps.
2. Free the cable from the winch and pulleys.
3. Remove the cable clamps that secure the hook in place.
4. Reverse the above steps to install the new cable.

7.25. Replace Fuses

There are two fuses used to operate the conveyor. These are found on the top of the control box.

Figure 22. Fuse locations



Item	Description
1	Lights Fuse
2	Clutch Fuse

8. Troubleshooting

⚠ WARNING Shut down and lock out all power sources before diagnosing any of the causes or attempting any of the solutions below.

In the following section, we have listed some causes and solutions to some of the problems you may encounter.

If you encounter a problem that is difficult to solve, even after having read through this section, please contact your local dealer or distributor. Before you contact them, please have this operation manual and the serial number from your machine ready.

Conveyor

Problem	Cause	Solution
Low conveying capacity.	Conveyor angle is too high.	Re-position with lower u-trough angle, see Operation.
	Incorrect belt speed.	Verify and adjust belt speed to appropriate speed, see Belt Speed in Operation.
	Conveyor belt slipping.	Tighten conveyor belt, see Conveyor Belt Tension in Maintenance.
	Drive belts slipping.	Tighten belts, see Drive Belt Tension in Maintenance.
Low capacity for some grains.	Smaller and smoother grains will slide at shallower angles.	Reduce conveyor height, see Conveyor Operating Angles in Operation.
Conveyor belt slipping.	Conveying belt loose.	Tighten and align belt, see Belt Tension and Belt Alignment in Maintenance.
	Drive roller worn or damaged.	Replace drive roller, see dealer.
	Drive belts loose.	Tighten belts, see Drive Belt Tension in Maintenance.
	Belt frozen to u-trough from operating in high humidity in cold conditions.	Remove conveyor from area of high humidity and warm belt to de-ice.
Excessive conveyor belt edge fraying.	Belt not aligned.	Align belt, see Belt Alignment in Maintenance.
Conveyor belt loose.	Belt stretches over time.	Re-tension belt, see Belt Tension in Maintenance.

Problem	Cause	Solution
		If belt is fully tensioned, you may need to shorten belt and re-lace, see Belt Relacing in Maintenance.
Grain leaking from conveyor hopper.	Belt not aligned (centered).	Align belt, see Belt Alignment in Maintenance.
	Flashing installed incorrectly or worn.	Inspect flashing for wear and replace if required.
	Seals are worn.	Replace seals. See Maintenance.
	Hopper cloth worn or damaged.	Replace damaged hopper cloth.
Hopper cloth collapsing under grain.	Misaligned or broken spring (s).	Check spring installation and repair as required.
	Pivot shafts improperly installed.	On some machines, switching pivot shafts left to right will increase hopper tension.
Grain leaking from conveyor discharge between belt and u-trough.	Belt not aligned (centered).	Align belt, see Belt Alignment in Maintenance.
Grain leaking from conveyor discharge between hood and belt.	Belt speed is too fast, hood plugging.	Decrease belt speed, see Belt Speed in Operation.
Light(s) not working.	Fuse has blown.	Replace fuse.
	Light has failed.	Replace light.
	Lighting harness damaged.	Replace light harness.

Drive

Problem	Cause	Solution
Drive making noise.	Slipping drive belt.	Tighten belts, see Drive Belt Tension in Maintenance.
	Hot shaft, pulley or bearing.	Overheated components indicate a failed bearing that must be repaired.

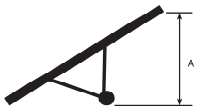
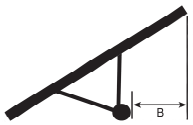
Problem	Cause	Solution
	Broken drive roller.	Replace damaged component.
Throttle not responding.	Wiring harness damaged	Replace wiring harness.
Clutch not responding.	Fuse has blown.	Replace fuse.
	Clutch has failed.	Replace clutch.
	Clutch wired incorrectly.	Verify wiring with manual.
Engine not turning over when key turned to start position.	Failed relay.	Replace relay.
	Failed ignition switch.	Replace ignition switch.
	When Equipped: Fuel pump not working. (Some units use a primer bulb instead of a fuel pump.)	The fuel pump will make a ticking sound when the key is in the on position. Have replaced if it does not make a ticking sound.

Mover Kit with Hydraulic Winch Lift

Problem	Cause	Solution
Valve is leaking.	Loose/cracked fittings.	Tighten/replace fittings.
	Worn hose.	Replace hose.
	Valve spools are worn.	Replace valve.
Machine operates slowly.	Oil is hot.	Check oil level and add if required.
	Blockage in hydraulic lines.	Suction hose blocked or kinked.
	Power source is not producing enough oil volume and/or pressure.	Speed up the engine to produce more flow/pressure The power unit may not have enough capacity to operate properly.
	Filter plugged.	Change filter.
Hydraulic winch will not raise conveyor.	Relief valve pressure set too low.	Adjust relief valve pressure, refer to Hydraulic Pressure Adjustment.
	Oil level is too low.	Check oil level.
	Pump is worn out.	Replace pump.

Problem	Cause	Solution
Hydraulic cylinder leaking.	Worn seal.	Replace seal.
Winch coupler spins off (Dutton winch).	Internal winch parts worn.	Replace worn parts.
	Damage or obstruction on tracking.	Check tracking for damage or obstructions.

9. Specifications

Brand / Model	**AGI Batco**	**1549 UCX³**
Capacity		Up to 12,500 bu/hr
Size		10"
Belt Length		110'8" (33.7 m)
Transport	Length	52'6" (16.0 m)
	Width	7'6" (2.3 m)
	Height	12'4" (3.8 m)
Discharge Clearance (A) 	Up	20'10" (6.3 m)
	Down	9'11" (3.02 m)
Reach to Wheels (B) 	Up	23' (7.0 m)
	Down	23'5" (7.1 m)
Tires	Type	4BLT ST205/75D15 LRC
	Inflation Pressure	See tire sidewall.
Total Weight		Contact Factory
Hitch Weight		470 lb (213kg)
Hitch Pin		1/2" x 3"
Gas Drive (HP)		40 HP EFI ECT Vanguard
Drive Belts		3B62 and 3B85
Gear Box Oil Type		80W90 or SAE Approved Equivalent
Hydraulic Oil		ATF Dexron III

Brand / Model	**AGI Batco**	**1549 UCX³**
Grease		SAE multi-purpose high temperature grease with extrme pressure (EP) performance, OR use SAE multi-purpose lithium base grease.
Chain and Shaft Lubricating Oil		Standard automotive oil

10. Limited Warranty

This warranty relates to Belt Conveyors (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** and in accordance with manufacturer's manual. Failure to follow the protocol when conveying oilseeds/canola will constitute misuse and will void any warranty protection.
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. This warranty does not cover damage caused by improper operation 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 repair 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. This warranty does not obligate the Seller to bear costs of travel in replacing defective parts.
5. 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.
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. 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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If you have any comments or questions on this manual, or find an error, email us at comments@aggrowth.com.
Please include the part number listed on the cover page in your message.