



STX GRAIN AUGER

80 & 100 SERIES

OPERATION AND MAINTENANCE MANUAL

STX Augers covered in this manual:

8-36, 8-41, 8-46, 8-51

10-36, 10-41, 10-51

ORIGINAL INSTRUCTIONS



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: 30965 R1

Revised: 19/8/16





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1. Introduction

Thank you for purchasing a Westfield STX Grain Auger. This equipment will allow safe and efficient operation when you read and follow all of the instructions contained in this manual. With proper care, your STX Grain Auger will provide you with many years of trouble-free operation.

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 your local distributor or dealer for assistance.

This manual should be regarded as part of the equipment. Suppliers of both new and second-hand equipment are advised to retain documentary evidence that this manual was provided with the equipment.

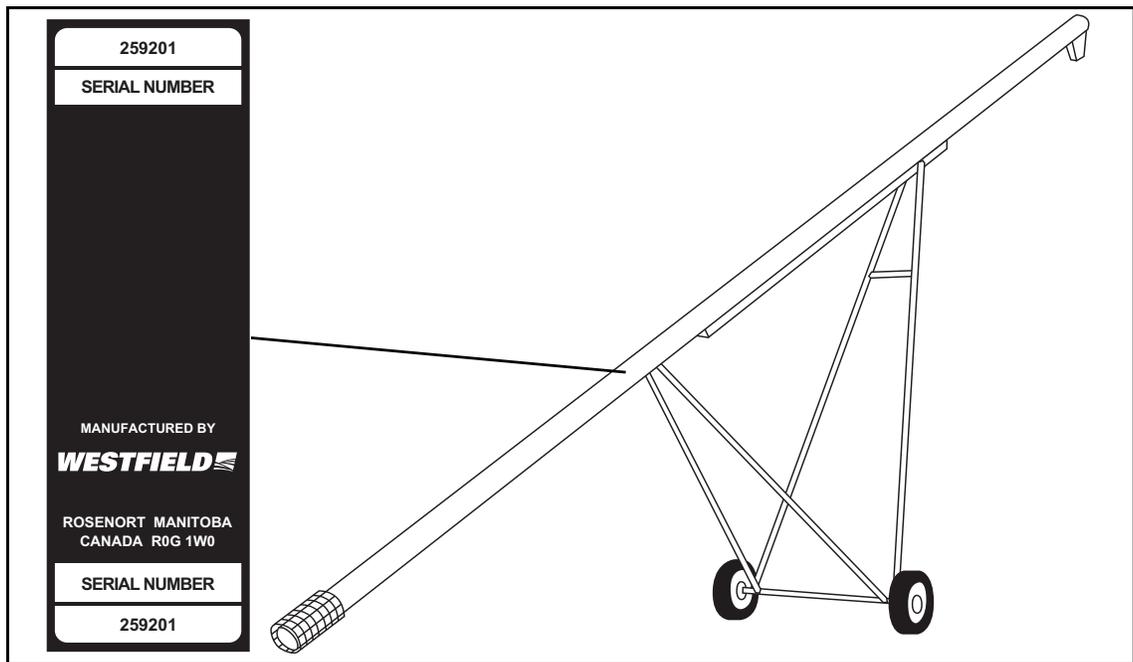


Figure 1.1 Serial Number Location

If one long tube, serial number is found on the right, in the middle of the tube. If more than one tube, number is on the right, at the top of the lower tube.

Always give your dealer the serial number on your equipment (shown above) when ordering parts or requesting service or other information. Please record this information in the table below for easy reference.

Model Number	
Serial Number	
Date Received	

1.1. Intended Use

This equipment is designed solely for use in customary agricultural or similar operations. Use in any other way is considered as contrary to the intended use. Compliance with and strict adherence to the conditions of operation and maintenance as specified by the manufacturer, also constitute essential elements of the intended use.

This equipment should be operated, maintained, serviced, and repaired only by persons who are familiar with its particular characteristics and who are acquainted with the relevant safety procedures.

Accident prevention regulations and all other generally recognized regulations on safety and occupational medicine must be observed at all times.

Any modifications carried out to this equipment may relieve the manufacturer of liability for any resulting damage or injury.

Your grain auger is designed to transport dry, free-flowing grains. Treated seed and fertilizer can be safely augered as well; however, when augering fertilizer, special procedures apply as noted in the Operation chapter. Although the auger is designed for on-farm use, it can be transported on public roadways with the addition of a Westfield lighting and marking kit.

When operating or maintaining the auger, do not: use the auger as a hoist

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



The safety information found throughout this complete Safety Section of the manual applies to all safety practices. Additional instructions specific to a certain safety practice (such as Operation Safety), can be found in the appropriate section.

YOU are responsible for the **SAFE** use and maintenance of your equipment. **YOU** must ensure that you and anyone else who is going to work around the equipment understands all procedures and related **SAFETY** information contained in this manual.

Remember, **YOU** are the key to safety. Good safety practices not only protect you, but also the people around you. Make these practices a working part of your safety program. All accidents can be avoided.

- It is the equipment owner, operator, and maintenance personnel's responsibility to read and understand **ALL** safety instructions, safety decals, and manuals and follow them when assembling, operating, or maintaining the equipment. 
- Equipment owners must give instructions and review the information initially and annually with all personnel before allowing them to operate this product. Untrained users/operators expose themselves and bystanders to possible serious injury or death.
- This equipment is not intended to be used by children.
- Use this equipment for its intended purposes only.
- Do not modify the equipment in any way without written permission from the manufacturer. Unauthorized modification may impair the function and/or safety, and could affect the life of the equipment. Any unauthorized modification of the equipment will void the warranty.

2.3. Rotating Flighting Safety

DANGER

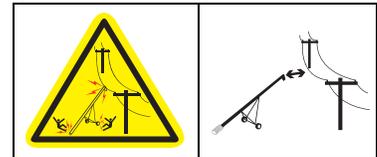
- KEEP AWAY from rotating flighting.
- DO NOT remove or modify flighting guards, doors, or covers. Keep in good working order. Have replaced if damaged.
- DO NOT operate the equipment without all guards, doors, and covers in place.
- NEVER touch the flighting. Use a stick or other tool to remove an obstruction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



2.4. Overhead Power Lines

DANGER

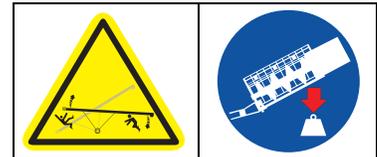
- When operating or moving, keep equipment away from overhead power lines and devices.
- This equipment is not insulated.
- Electrocutation can occur without direct contact.



2.5. Prevent 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 equipment and fully lower before moving.



2.6. Rotating Parts Safety

WARNING

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



2.7. Guards Safety

WARNING

- Install guards to prevent contact with moving parts.
- Do not operate equipment unless all guards are in place.
- Do not walk or step on guards.
- Lock out power before removing a guard.
- Ensure all guards are replaced after performing maintenance.

2.8. Hand Winch Safety

Where equipped:

WARNING

- Inspect lift cable before using. Replace if frayed or damaged. Make sure lift cable is seated properly in cable sheaves and cable clamps are secure.
- Tighten brake lock by turning winch handle clockwise at least two clicks after lowering equipment.
- Lower equipment fully before towing, then rotate winch handle until cable has light tension.
- Do not lubricate winch brake discs.

2.9. Hydraulic Winch Safety

Where 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. Failure to heed could result in serious injury.
- Inspect cable and cable clamps before installing and using hydraulic winch. Replace cable if frayed or damaged. Tighten cable clamps if necessary.
- Do not continue to supply power to hydraulic winch after equipment has reached full up position.
- Do not disconnect hydraulic quick couplers when lines are pressurized.
- Make sure lift cable is seated in cable pulley.
- Always keep a minimum of 3 cable wraps on the cable drum.

2.10. Raising and Lowering Equipment

WARNING

- Before raising/lowering/moving/adjusting the equipment, make sure the area around the equipment is clear of obstructions and/or untrained personnel. Never allow anyone to stand on or beneath the equipment when it is being placed.
- Lower equipment to its lowest position when not in use.

- Empty equipment before raising or lowering.
- Do not get on or beneath equipment when raising or lowering.
- Raise and lower equipment on reasonably level ground only.
- Never attempt to increase height of the tube by positioning wheels on lumber, blocks, or by any other means. To do so will result in damage to equipment and/or serious injury.

2.11. Equipment Stability

WARNING

- Transport and place equipment on reasonably level ground when raising, lowering, positioning, or operating.
- Chock wheels and anchor intake end after placement.

2.12. Towing the Equipment

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.
- 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 equipment or towing vehicle during transport.
- Attach to towing vehicle with a pin and retainer. Always attach safety chain(s).
- Do not raise the intake end above drawbar, upending may occur.
- Do not transport on slopes greater than 20°.

2.13. Work Area Safety

WARNING

- Have another trained person nearby who can shut down the equipment in case of accident.
- The work area should be kept clear of bystanders.
- Keep the work area clean and free of debris.



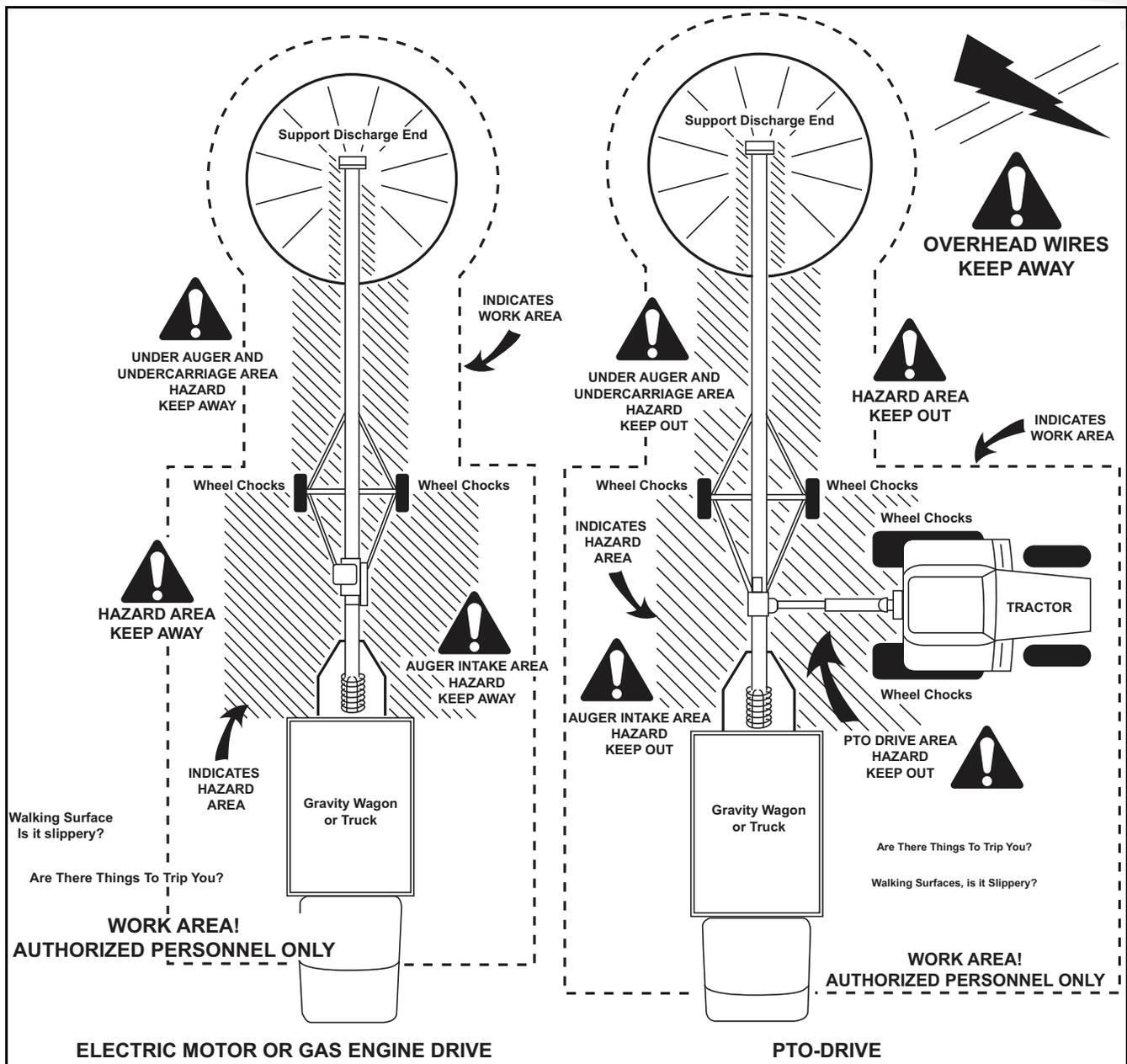


Figure 2.1 Portable Auger Work Areas

2.14. Drives and Lockout Safety

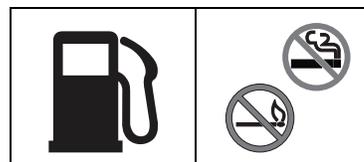
Inspect the power source(s) before using and know how to shut down in an emergency. Whenever you service or adjust your equipment, make sure you shut down and lock out your power source to prevent inadvertent start-up and hazardous energy release. Know the procedure(s) that applies to your equipment from the following power sources.

2.14.1. Gas Engine Safety

WARNING

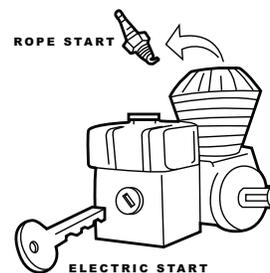
Power Source

- Keep guards in place and secure.
- Properly ventilate surrounding area.
- Never fill the fuel tank 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.



2.14.2. PTO Driveline Safety

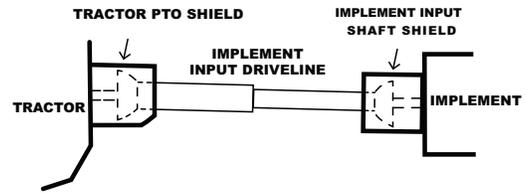
WARNING

Drive

- Keep body, hair, and clothing away from rotating PTO driveline.
- Make certain the driveline shields telescope and rotate freely on driveline before attaching.



- Make certain the driveline is securely attached at both ends.
- Do not operate equipment unless all driveline, tractor, and equipment shields are in place and in good working order.
- Do not exceed operating speed of 540 rpm.
- Keep universal joint angles small and equal. Do not exceed maximum recommended length for PTO driveline.
- Engage tractor park brake and/or chock wheels.



Lockout

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

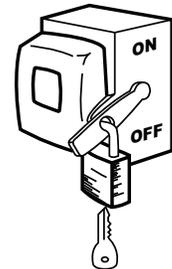
2.14.3. Electric Motor Safety

WARNING

Power Source

- Electric motors and controls shall be installed and serviced by a qualified electrician and must meet all local codes and standards.
- A magnetic starter should be used to protect your motor.
- You must have a manual reset button.
- Reset and motor starting controls must be located so that the operator has full view of the entire operation.
- Locate main power disconnect switch within reach from ground level to permit ready access in case of an emergency.
- Motor must be properly grounded.
- Guards must be in place and secure.
- Ensure electrical wiring and cords remain in good condition; replace if necessary.
- Use a totally enclosed electric motor if operating in extremely dusty conditions.

SERVICE DISCONNECT



Lockout

- The main power disconnect switch should be in the locked position during shutdown or whenever maintenance is performed.
- If reset is required, disconnect all power **before** resetting motor.

2.14.4. 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.
- 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.

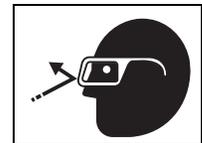


Lockout

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

2.15. Battery Safety

- Wear safety glasses 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.



2.16. Tire Safety

- Failure to follow proper procedures when mounting a tire on a wheel or rim can produce an explosion that may result in serious injury or death.
- DO NOT attempt to mount a tire unless you have the proper equipment and experience to do the job.



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



2.17. Personal Protective Equipment (Required to be Worn)

Ear Protection

- Wear ear protection to prevent hearing damage.



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.



2.17.1. Safety Equipment Required

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.



2.18. 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.

2.18.1. 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 sign backing paper.

2.18.2. Safety Decal Locations and Details

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

Westfield reserves the right to update safety decals without notice. Safety decals may not be exactly as shown.

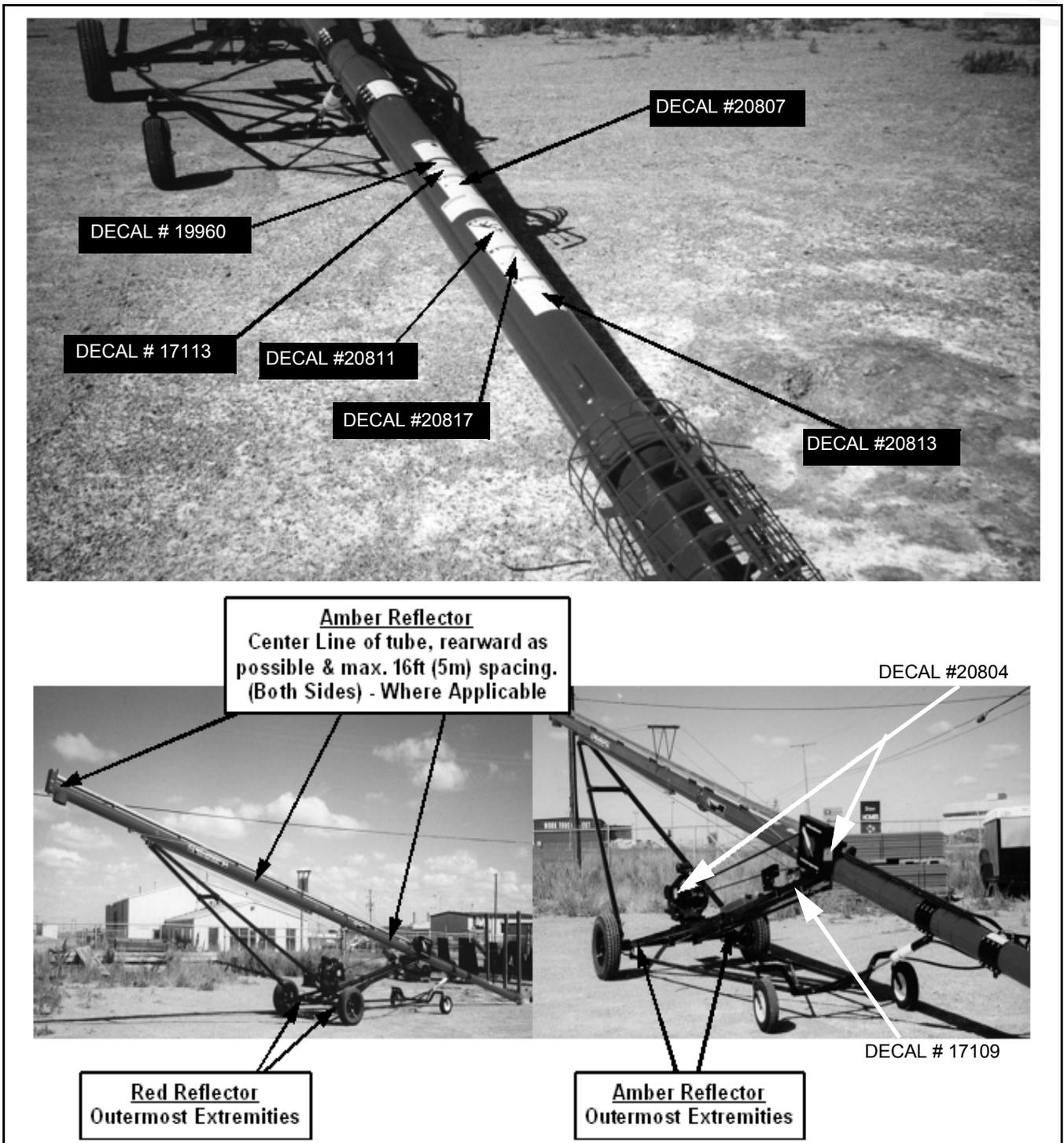


Figure 2.2 Safety Decal Locations

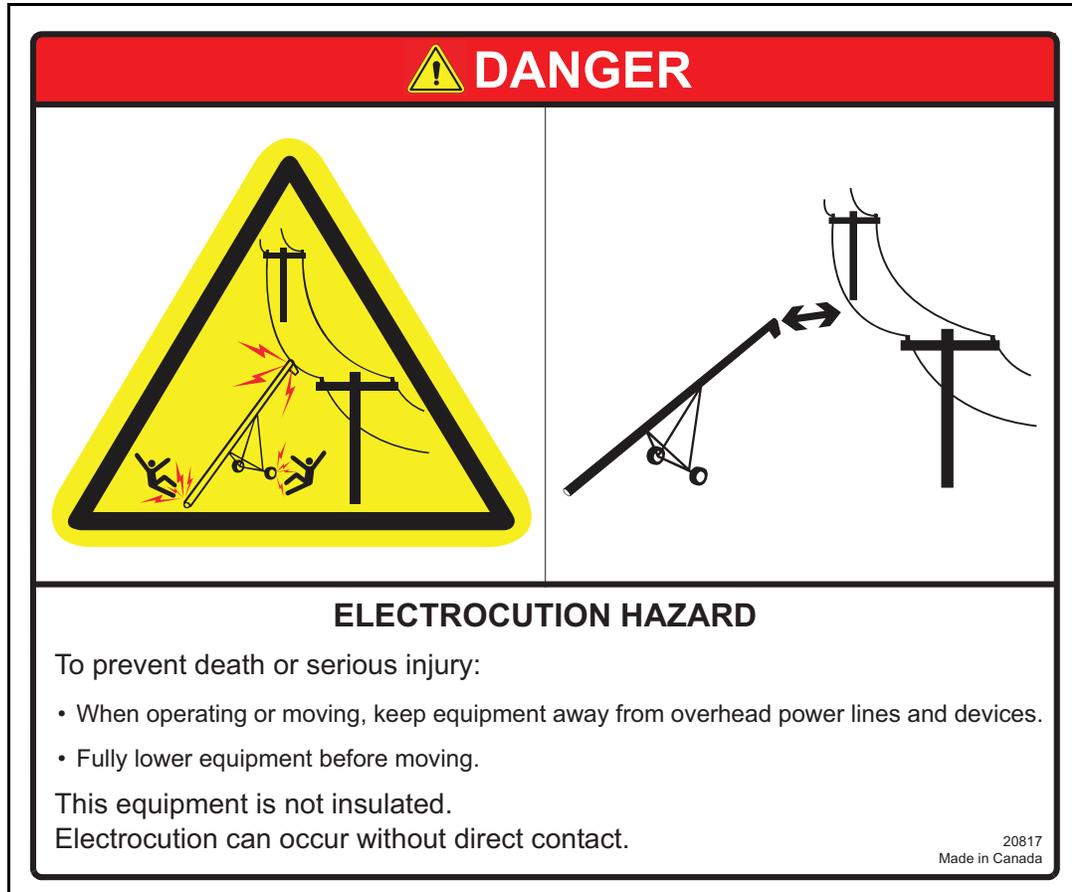


Figure 2.3 Safety Decal 20817

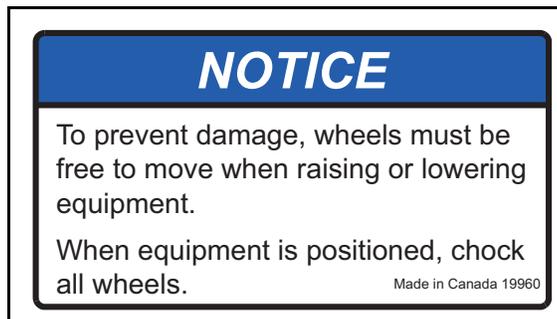


Figure 2.4 Safety Decal 19960

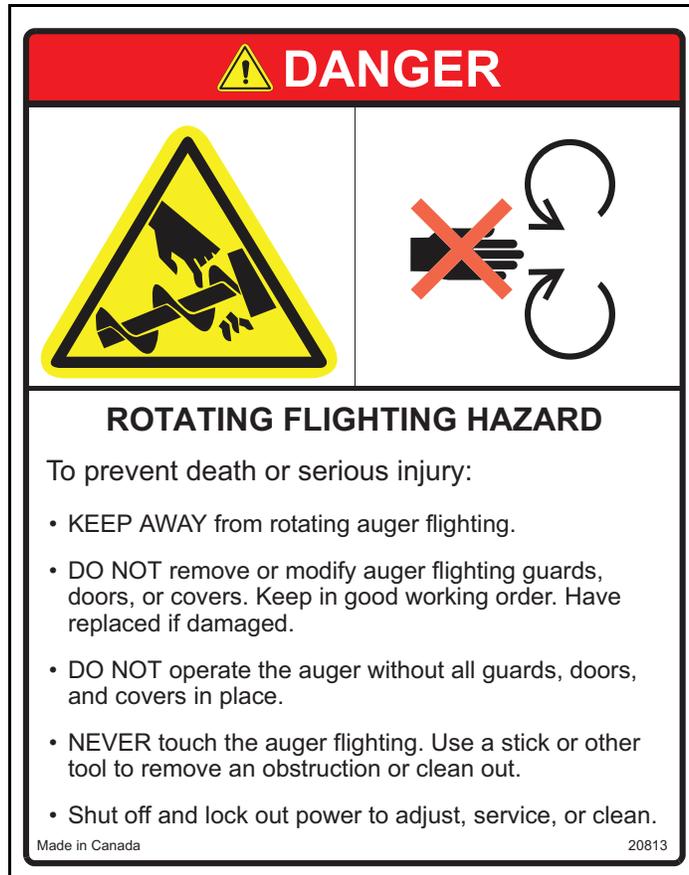


Figure 2.5 Safety Decal 20813



Figure 2.6 Safety Decal 17113

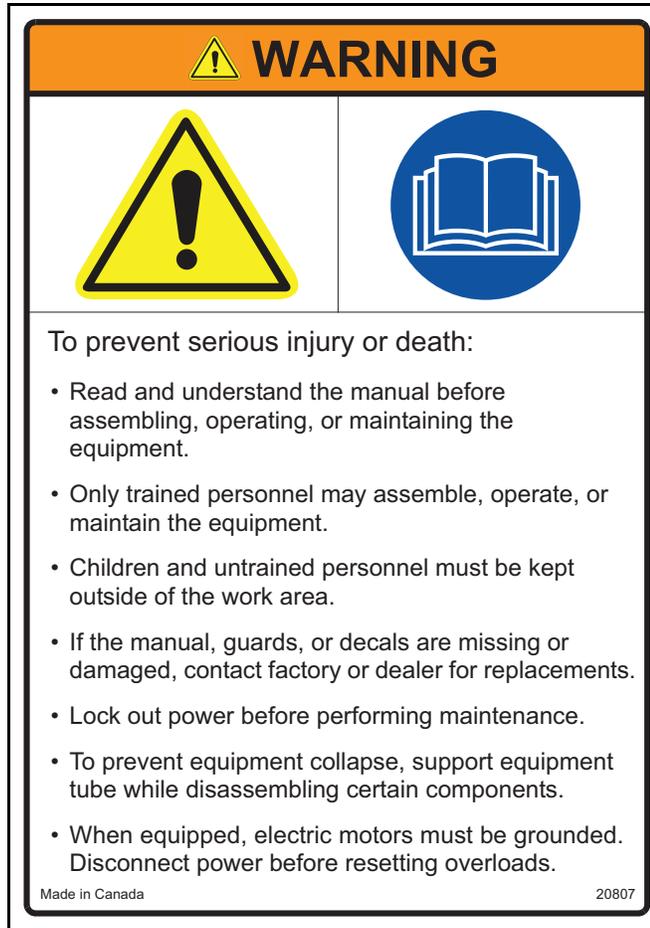


Figure 2.7 Safety Decal 20807



Figure 2.8 Safety Decal 20811

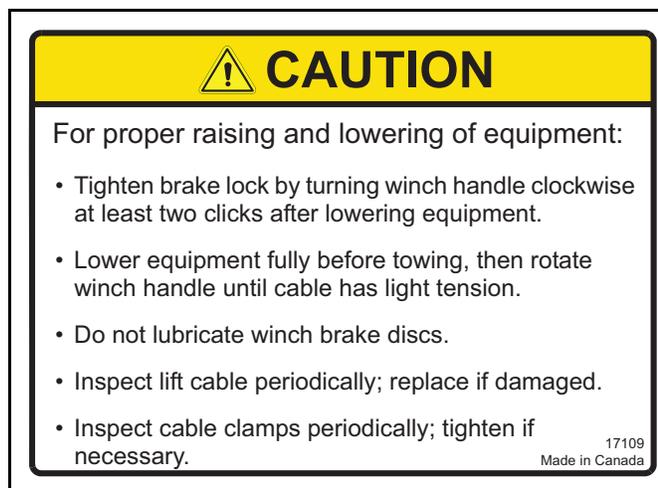


Figure 2.9 Safety Decal 17109



Figure 2.10 Safety Decal 20804

3. Features

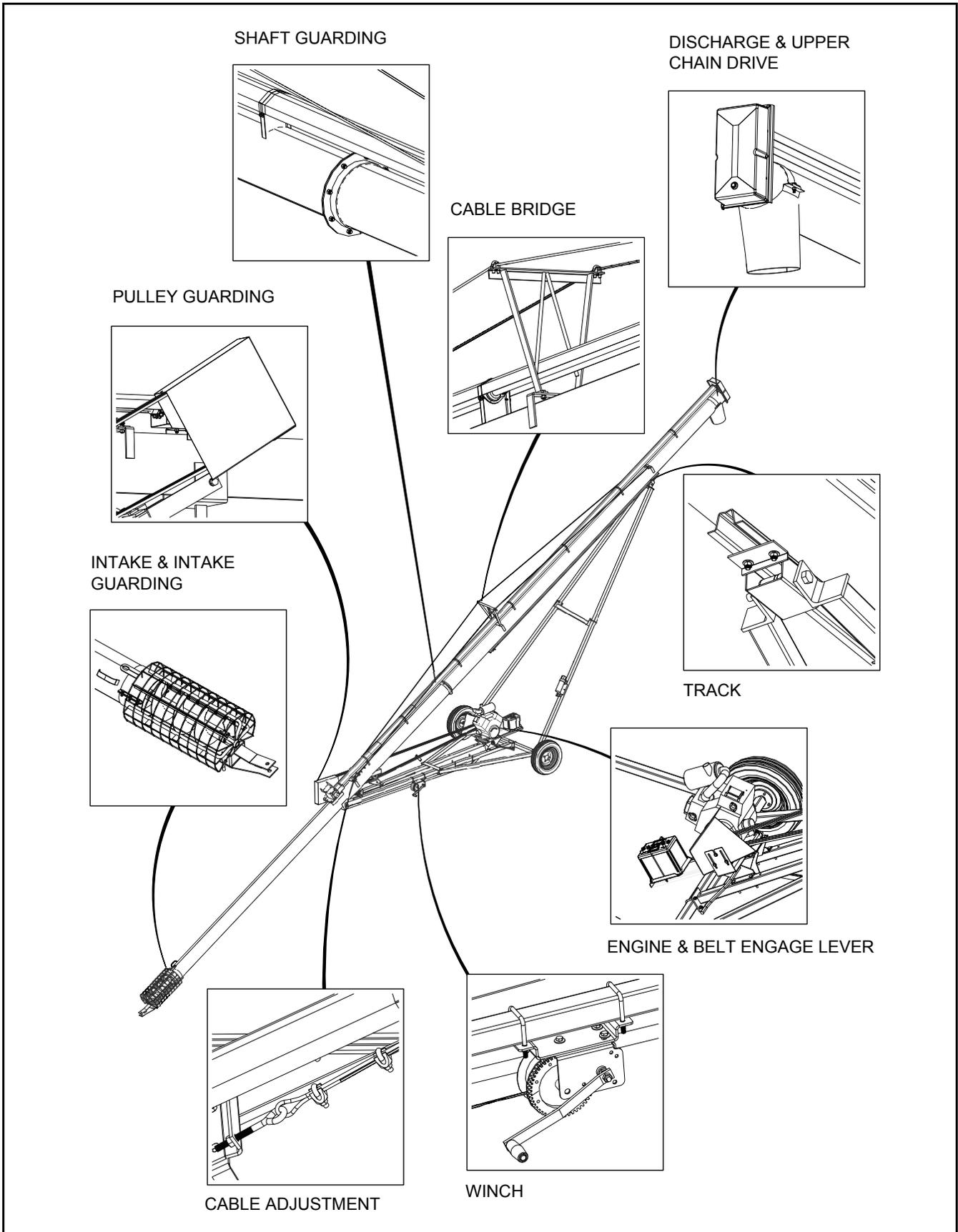


Figure 3.1

The belt engaging lever, winch, and engine are located as shown in Figure 3.2. Please refer to engine manual for engine controls.

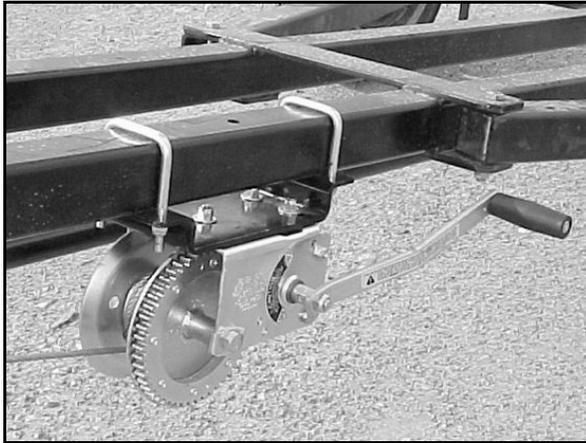


Figure 3.2 Winch



Figure 3.3 Belt Engaging Lever & Engine

4. Transport

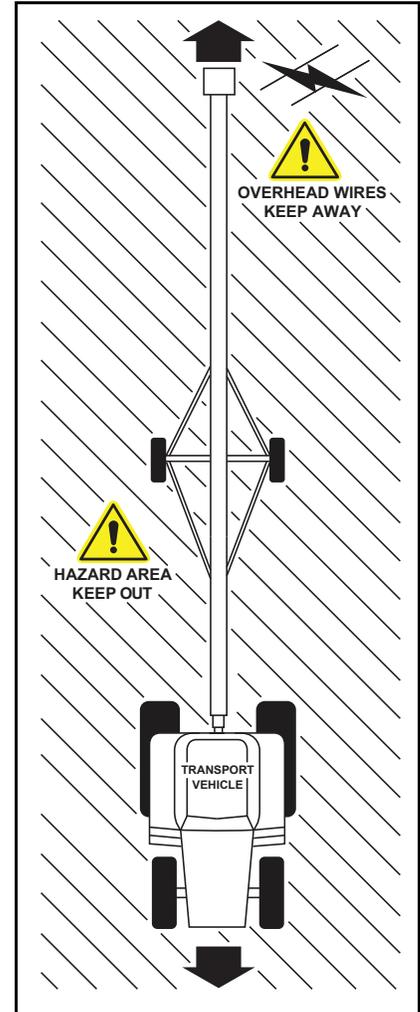


Before continuing, ensure you have completely read and understood this manual's Safety chapter, in addition to the safety information in the section(s) below.

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 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 auger.
- Do not allow riders on the machine, towing vehicle, tractor, or skid steer during transport.
- Stay away from overhead obstructions and power lines when operating and transporting. Electrocutation can occur without direct contact.
- Fully lower equipment before transporting, and only raise when next to storage facility.
- Attach to towing vehicle with a pin and retainer. Always attach safety chain(s).
- Do not raise the intake end above drawbar, upending may occur.
- Empty auger of all grain before transporting. Transporting a full auger will place excessive loads on the tube, frame, axle, hitch, and tow vehicle.
- Do not transport on slopes greater than 20°.
- Do not transport with an under-inflated tire(s).
- If auger wheels are partially or fully buried in snow or grain, failure to clear area around the wheels before transporting may cause damage to the auger or result in serious injury.



4.2. Connecting the Auger to the Towing Vehicle

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

1. Place auger in full down position. The roller track shoe should be seated against the upper track stop with slight tension on the lift cable. Refer to Lowering procedure.
2. Place and secure hitch pin and safety chain. The safety chain should be threaded through the handle on the lower tube and wrapped around auger tube and form a cradle that will prevent the auger from digging into the road surface or upsetting (should a breakaway occur) before attaching to the towing vehicle (Figure 4.1).
3. Replace the safety chain if one or more links or end fittings are stretched, broken, damaged, or deformed.
4. The safety chain should have a load rating at least as high as the auger weight, refer to Specifications.

Important: Use a type of hitch pin (see Figure 4.1) that will not allow auger to separate from towing vehicle.

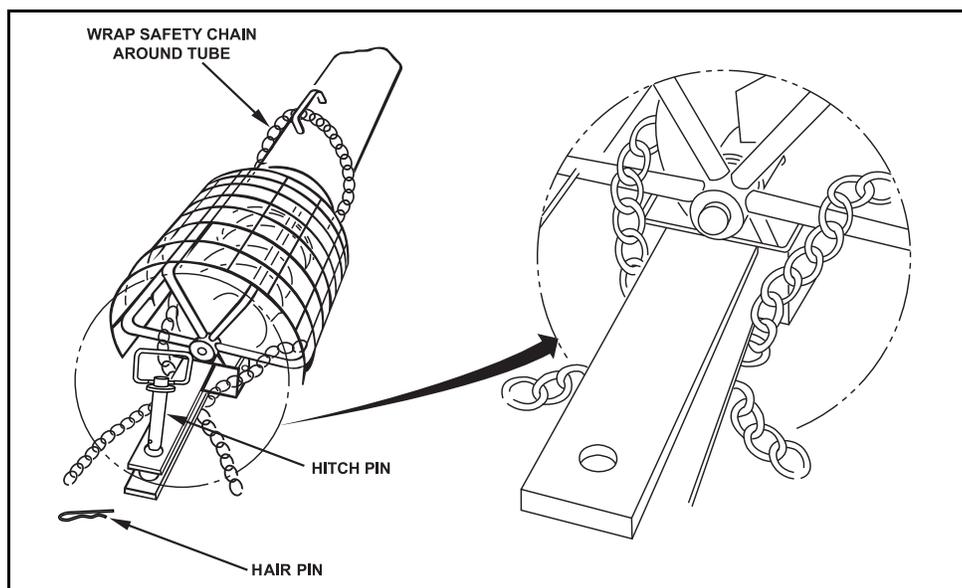


Figure 4.1

4.3. Transport Preparation

1. It is not recommended that the auger be transported faster than 20 mph (32 km/h). Table 4.1 references the acceptable transport speed as per the ratio of tractor weight versus auger weight. See Specifications Section for auger weights.
2. Ensure the auger will clear any overhead obstructions or electrical wires prior to transporting. Refer to the Specifications Section for transport height of your auger.

Table 4.1 Speed versus Weight Ratio

Road Speed	Weight or fully equipped or loaded implement(s) relative to weight of towing machine
Up to 32 km/h (20 mph)	1 to 1, or less
Up to 16 km/h (10 mph)	2 to 1, or less
Do not tow if	More than 2 to 1

5. Placement

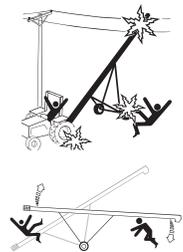


Before continuing, ensure you have completely read and understood this manual's Safety chapter, in addition to the safety information in the section(s) below.

5.1. Placement Safety

WARNING

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



5.2. Placement Procedure

Under Hopper Bottom Bins

1. Confirm that hopper is centered between the hopper bin vertical legs. This ensures that the operator has adequate clearance.
2. Move auger into place. Do not allow auger tube or components to contact grain bin.
3. Raise the auger to desired height.
4. Place chocks in the front and back of each wheel and anchor the intake end.

Filling Bins

1. Back the auger up to the storage facility while it is in its lowered configuration.
2. Set the park brake on the tractor before dismounting.
3. When releasing auger from the towing vehicle, test the intake end for downward weight.
4. Raise the auger so it clears the storage facility.
5. Slowly back the auger up until the outlet is over the opening in the storage facility.
6. Unhook the unit from the tractor or towing vehicle and lower hopper to the ground.

 **WARNING** Upending hazard, do not hook or unhook hitch unless weight is down.

7. Slowly lower the auger to the bin.

8. Remove the hitch from the machine to prevent interfering with other equipment.
9. Place chocks in the front and back of each wheel and anchor the intake end.

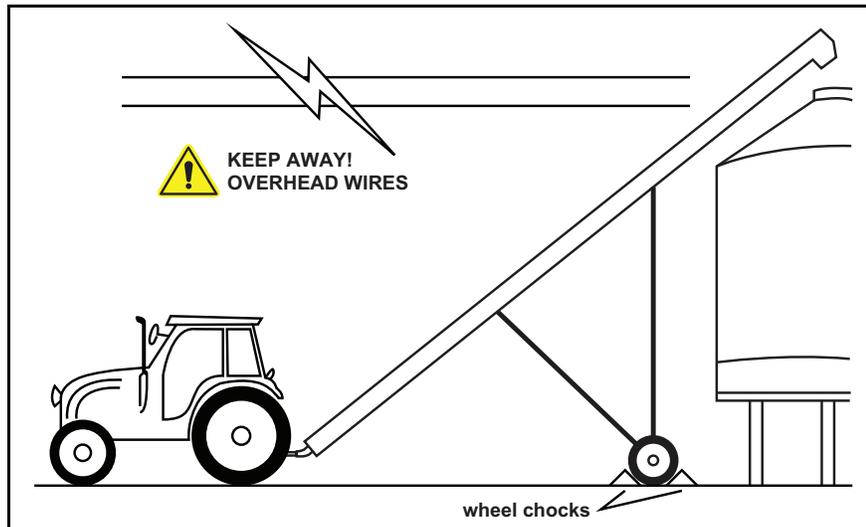


Figure 5.1 Typical Grain Auger Placement for Filling Bins

5.3. Hand Winch Operation

➔ When equipped with a hand winch:

Before using the hand winch, ensure that:

- the cable anchor on the winch drum is tight
- all cable clamps are secure
- the lift cable is seated in cable pulley
- the cable is in good condition, if damaged, replace it immediately.
- there is a minimum of 3 cable wraps on the winch drum when the auger fully lowered.



To operate:

1. Turn the winch handle to raise and lower the auger. The winch must make a clicking sound when raising auger. If clicking sound stops, retain grip on handle, lower auger fully and repair winch.
2. When lowering, if the cable becomes slack before auger is in full down position, this indicates that the track shoe is stuck. To correct the problem, reverse the winch and raise the auger until the cable is taut and the track slides normally.

⚠ CAUTION Do not lubricate the winch brake discs.

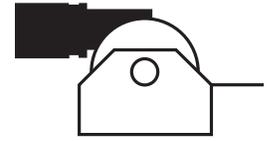
3. After lowering the auger, always tighten the brake lock by turning the winch handle clockwise at least two clicks.
4. After lowering, rotate the winch handle until cable has light tension.

5.4. Hydraulic Winch Operation

➔ When equipped with a hydraulic winch:

Before using the hydraulic winch, ensure that:

- the cable anchor on the winch drum is tight
- all cable clamps are secure
- the lift cable is seated in cable pulley
- the cable is in good condition, if damaged, replace it immediately.
- there is a minimum of 3 cable wraps on the winch drum when the auger fully lowered.
- the hydraulic hoses are free from leaks, binding, flattening, kinks, or wear.



To operate:

1. Wipe the hydraulic hose couplers clean before connecting it to the tractor.

NOTICE Dirt in the hydraulic system can damage the winch motor and can cause failure of the system.

2. Connect the hydraulic hoses and ensure the connections are tight.
3. Start tractor and idle at low rpm. Engage hydraulic lever to power winch. Test the direction of rotation of winch to ensure drum is moving in the direction required. Increase tractor rpm until desired rate of lift or descent is reached.

CAUTION Do not touch, grab, or guide cable while equipment is being raised or lowered.

NOTICE Do not continue to supply power to winch when equipment has reached full up position as this can damage the equipment.

4. Close the hydraulic ball valve when the equipment is fully raised.

NOTICE Failure close the ball valve will cause the frame to lower, damaging the equipment.

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

5.5. Self Propelled Kit Controls

➔ When Equipped With a Self-Propelled Kit:

NOTICE If operating in conditions below -10°C (14°F), the hydraulic oil must be warmed prior to use. Failure to warm the hydraulic oil can damage the pump or other components.

1. With the engine at idle, use the control valve (Figure 5.2) to fully lower the auger before moving it into position.
2. Position the auger using the controls as shown in Figure 5.2.

- Raise the intake end slightly off the ground to position the auger.
- Raise the auger discharge end only for final positioning such as when next to a storage bin or grain truck.
- Leave extra clearance for making wide turns.

WARNING Do not attempt to move the machine on uneven or hilly terrain. The mover will not perform well under these conditions and could damage the machine or injure the operator.

Important: When running the machine in colder temperatures, you should always disengage the pump when starting the motor cold. This will put less pressure on the starter and allow the motor to turn over easier, helping it to start.

NOTICE The hydraulic oil should be checked periodically to ensure that the levels are correct. Running the machine on low oil will overheat the system causing components to break down and eventually fail.

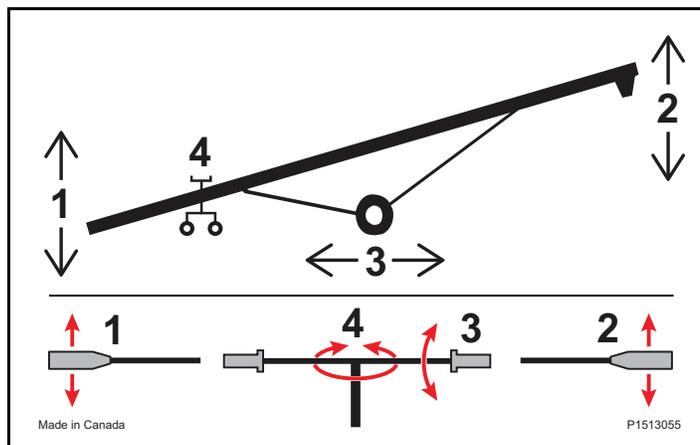


Figure 5.2 Self-Propelled Kit Controls

3. Connect the mover axle to the auger when operation is complete or before transporting.

5.6. Self-Propelled Kit Drive Wheels



When Equipped With a Self-Propelled Kit:

1. To operate the self-propelled kit, engage the over-center handle at each wheel and check if the gears are fully meshed (Figure 5.3). If necessary, refer to Pinion Gear Adjustment section.
2. To transport, fully disengage the over-center handles and secure the handle with the attached pin.

CAUTION When moving grain, the pump should be disengaged to take the strain off the auger drive components. In addition, the wheel move motors should be disengaged to take the strain off of the springs.

NOTICE Ensure that the over-center bolts are tight enough to prevent the handle from engaging. If they are not tight enough, damage to the gears and motor will result.

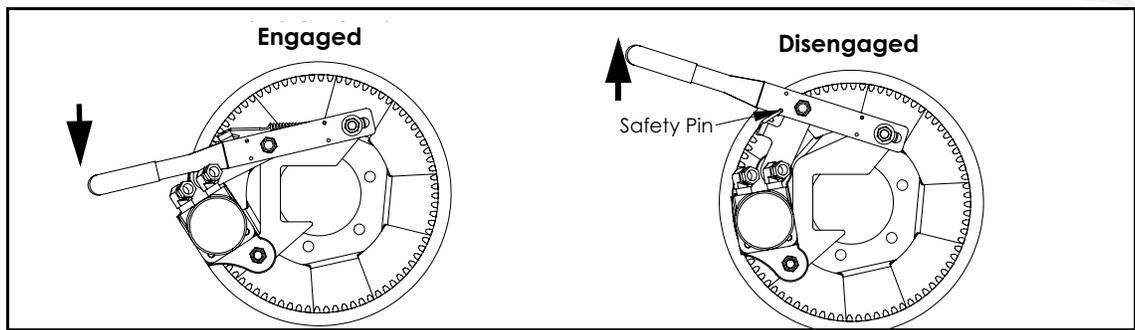


Figure 5.3 Wheel Over-Center Handle Positions



Figure 5.4 Chain position

5.7. Self Propelled Kit Ram and Travel Speed Adjustment

➔ When Equipped With a Self-Propelled Kit:

5.7.1. Hydraulic Pressure Adjustment

If the controls are “jerky” or act too fast, it may be necessary to adjust the hydraulic pressure on the wheel move. To do this, follow the steps below and refer to Figure 5.5.

1. Place the machine on level surface and fully lower the intake and discharge ends. Ensure the engine is in idle and the auger drive is disengaged before adjusting.
2. **To decrease hydraulic pressure:** Loosen jam nut on 3 spool valve (bottom right side of valve) and turn adjustment screw out (counter-clockwise) 1/8 turn. Tighten jam nut.
3. **To increase hydraulic pressure:** Loosen jam nut on 3 spool valve (bottom right side of valve) and turn adjustment screw out (clockwise) 1/8 turn. Tighten jam nut.

RAM Speed Adjustment

Ram speed in each direction of travel is regulated at the control valve. Adjust the stroke limiter screws and jam nuts until the desired rate of travel is achieved.

- Turning the screws inward results in a slower speed.
- Turning the screws outward results in a faster speed.

Note: All spools are of a special metering design which allows more precision in maneuverability.

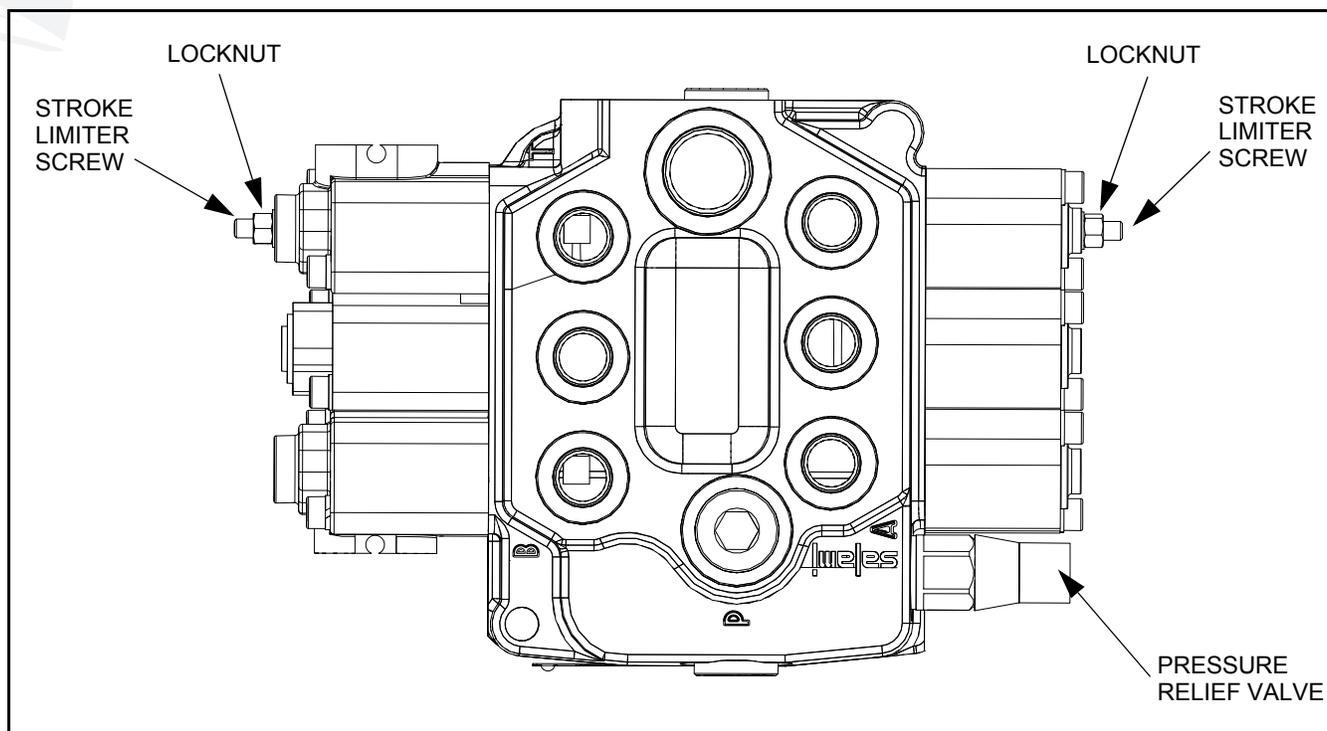


Figure 5.5 Control Valve Adjustment

5.7.2. Travel Speed Adjustment

To control the speed of the mover, the adjustable cushion valve can be:

- screwed in for increased speed. Adjust by 1/8 turn increments.
- screwed out for decreased speed. Adjust by 1/8 turn increments.

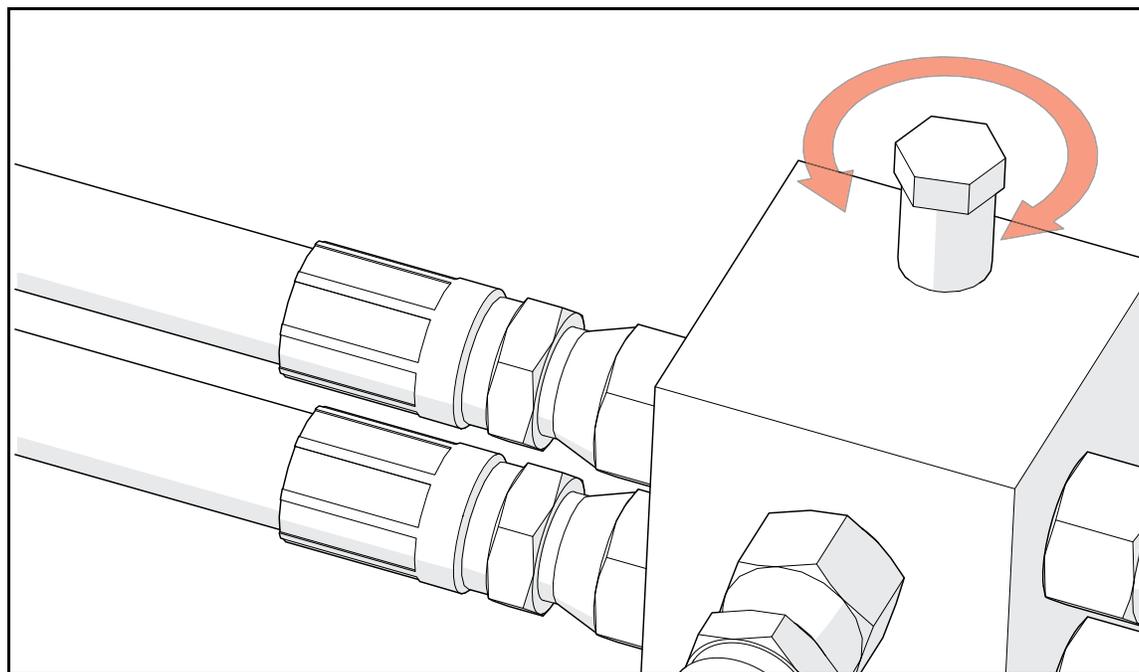


Figure 5.6 Cushion Valve Adjustment

6. Operation



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

6.1. Operating Safety

WARNING

- Keep away from rotating auger flighting and moving parts, including drive components, shafts, and bearings.
- Always operate with guards, covers, and shields in place.
- Have another trained person nearby who can shut down the equipment in case of accident.
- The work area should be kept clear of bystanders.
- Keep the work area clean and free of debris.
- Ensure maintenance has been performed and is up to date.



6.2. Start-up and Break-in

1. Check that the intake and discharge areas are free of obstructions.

NOTICE Foreign objects can damage the auger. Remove any obstructions from the intake and discharge areas before operating the unit.

2. Visually inspect the auger, see Maintenance Section.
3. Ensure adequate power is being used to operate the auger. Refer to the Specifications Section.
4. Start the auger and operate normally, refer to power source instructions for further detail.
5. Be aware of unusual sounds. If any are heard, determine the source and stop the auger. Lock out and correct the problem before resuming work. If unsure of the problem or procedure, contact your local dealer.

Note: The auger may run rough until the tube is polished.

6. Do not run the auger for long periods of time without material in the auger because it increases wear. Try to run only when moving material.
7. Stop the auger when it is empty of grain and lockout power.

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

6.3. Operation - Gas Engine Models

➔ When Equipped with a Gas Engine:

1. If the drive belts are tight, disengage the belts.
2. Start the gas engine. Follow instructions provided with the gas engine for specific starting instructions.
3. Engage belt drive lever (when equipped).

Note: The drive belt should be just tight enough to not slip on the drive pulley. If the belt is too loose, it will slip, lowering power transfer from the engine and possibly causing a squealing sound. If the belt is too tight, it will cause excess wear.

4. Adjust gas engine to provide maximum engine RPM.
5. Run until all grain has been emptied from the equipment.
6. Reduce engine speed to low idle.
7. Shut off engine and lock out power source.
8. Shut off fuel supply.
9. Keep the belts engaged when transporting the auger.

When starting under load:

If restarting the auger under load (tube is full), start at low speed since the start-up torque loads are so much higher than normal. It may be necessary to tighten the drive belts slightly to handle the heavier than normal loads.

6.4. Operation - PTO Drive - 540 RPM

➔ When Equipped with a 540RPM PTO Drive

1. Attach the PTO driveline is securely to the tractor and confirm connection to the auger shaft is secure.
2. Confirm the PTO driveline rotating shield and other shields/guards are in place and in good working order.
3. Align the tractor axis with the auger input shaft to minimize the angles of the universal joints on the PTO driveline. Check that the PTO does not exceed the maximum operating angle as noted in the Specifications section of this manual.
4. The auger-to-tractor PTO hookup distances are set as specified.
5. Ensure the PTO drive on the tractor is in the off position before starting the tractor.
6. Start tractor engine at low idle, slowly engage the PTO with the tractor idling to prevent unneeded stress on the drive components and shear bolts.
7. If everything is operating normally, start running grain through the auger and increase the speed to rated rpm to produce the required flow.
8. To shut down, reduce the speed to low idle and lock out the PTO.

Disconnect PTO driveline from tractor and secure to the PTO transport saddle. Secure it with the safety chain and keep in transport saddle when transporting.

When raising or lowering the auger:

Disconnect the PTO driveline.

When starting under load:

If restarting the auger under load (tube is full), engage the PTO with the tractor idling.

NOTICE

Engaging PTO at high engine speed will result in equipment damage.

Shear Bolts:

If a shear bolt in the PTO driveline fails, shut down and lock out the tractor to replace the shear bolt. Ensure that the shear point is through the shank of the bolt, not the threads. Refer to Specifications Section for shear bolt size.

6.5. Operation - Electric Motor Models



When Equipped with an Electric Motor:

1. Turn the electric motor on.
2. Run until the auger is empty.
3. Turn off motor and lock out power source.
4. Unplug the power cord, wrap around frame, and secure to prevent dragging, especially when transporting or placing the auger.

When starting under load:

If restarting the auger under load (tube is full), it may be necessary to tighten the drive belts slightly to handle the heavier than normal loads.

6.6. Bin Level Indicators

These augers are fast and bins fill up quickly. A full bin will cause auger to plug, which can damage the flighting and other drive components. Installing quality grain-level indicators on your bins will allow you to monitor bin filling and help prevent damage to your auger.

6.7. Use of Grain Spreaders

Many grain spreaders cannot handle the large capacity of some augers and can cause the auger to plug, damaging the flighting and other drive components. This type of damage is not covered by warranty. To avoid this:

- Make sure spreader is turned on and operating.
- When using a flex down spout, center auger spout above spreader and do not lower auger spout into spreader.
- Suspend the spreader lower from bin ceiling leaving extra room for excess grain to flow over the spreader.
- Get a larger spreader, if available.
- Remove the spreader.

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 Tube

When the auger is shut down inadvertently or due to an emergency, the tube may still be filled with material.

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

NOTICE Starting under load may result in damage to the auger if grain is not removed as much as possible.

2. If guards or covers have been opened or removed, close or replace them before restarting the unit.
3. Once the auger has been started, you may resume normal operation.

6.10. Shutdown

When operation has been completed:

1. Once auger is clear of grain, lock out the power source.
2. Clean out any remaining grain from the auger with a shop vacuum or sweep out.
3. Clean entire work area.
4. Remove anchors, supports, and chocks.
5. Move auger away from the bin, and ensure that there is nothing under the auger that would make contact when the auger tube is lowered.
6. Lower the auger, refer to Raising and Lowering.

6.11. Use with Fertilizer

If auger has been used to move fertilizer, it should be cleaned out to prevent corrosion. The easiest way to prevent corrosion is to run a load of grain through it after moving fertilizer or clean the machine as noted in the Maintenance section.

6.12. Storage

To ensure a long, trouble-free life, the following procedure should be followed when preparing the auger for storage after the season's use:

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 tube.
2. Wash the entire auger thoroughly using a water hose or pressure washer to remove all dirt, mud, debris, or residue.
3. Inspect all moving or rotating parts to see if anything has become entangled in them. Remove any entangled material.
4. Touch up all paint nicks and scratches to prevent rusting.
5. Check tire pressure and inflate according to tire side-wall recommendations.
6. Inspect the auger for cracks, tightness of fittings and fasteners, hydraulic hose cracks (if applicable). Have required repairs performed to replace worn or damaged components and complete required annual maintenance.
7. Store in an area that is dry, level, free of debris, and away from human activity. Store inside if possible. Cover motor (as applicable) to protect from weather.
8. Chock wheels.
9. Support intake on blocks to eliminate prolonged contact with the ground.

7. Maintenance

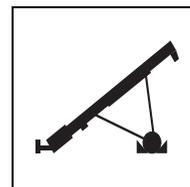


Before continuing, ensure you have completely read and understood this manual's Safety chapter, in addition to the safety information in the section(s) below.

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 authorization from the manufacturer. Modification can be dangerous and result in serious injuries.
- After maintenance is complete, replace all guards, service doors, and/or covers.
- Shut down and lock out power before maintaining.
- Use only genuine Westfield replacement parts or equivalent. Use of unauthorized parts will void warranty. If in doubt, contact the manufacturer or your local dealer.
- Lower auger fully.
- Chock wheels.
- Support tube 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. Fluids & Lubricants

Storage & Handling

- Your equipment can operate at top efficiency only if clean fluids and lubricants are used. Use clean containers to handle all fluids and lubricants. Store them in an area protected from dust, moisture, and other contaminants.

Grease

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

Engine Gasoline

- Use a standard automotive unleaded gasoline for all operating conditions.

Oil for Gas Engine Crankcase

- Consult gas engine operation manual for details.

7.3. Maintenance Checklist

Copy this page to continue record keeping.

Use the maintenance checklist provided to keep a record of all scheduled maintenance.

Hours:																			
Serviced by:																			
Maintenance Schedule																			
8 Hours or Daily																			
Visually Inspect the Auger (Section 7.3.1.)																			
Grease the PTO Driveline (Section 7.3.6.)																			
40 Hours or Weekly																			
Grease Intake Bushing and Upper Drive Chain (Section 7.3.4.)																			
Check Gearbox Oil (Section 7.3.7.)																			
Inspect/Service the Hand Winch and Lift Cable (Section 7.3.11.)																			
100 Hours or Annually																			
Check and Maintain Tire Pressure (Section 7.3.3.)																			
Adjust the Upper Drive Chain (Section 7.3.5.)																			
Change Gearbox Oil (Section 7.3.8.)																			
Tension and Align Drive Belt (Section 7.3.9.)																			
2-3 Years or as Required																			
Repack the Wheel Bearings with Grease (Section 7.3.2.)																			
Replace the Drive Belts (Section 7.3.10.)																			
Replace the winch cable																			
Check/Adjust the Truss Cables (Section 7.3.12.)																			

7.3.1. Visually Inspect the Auger

Before beginning the visual inspection, chock auger wheels and ensure that all operators are aware of safety precautions. When inspecting:

- Ensure all guards are in place, and in good working order.
 - Examine the auger for damage or unusual wear.
 - Check tightness of bolts/nuts, fasteners, and hardware (re-torque if necessary).
- ➔
- **When applicable:** Inspect hydraulic hoses and fittings for leaks and wear. Fix or replace where necessary.
 - Be sure all safety decals are in place and are legible.
 - Check that the discharge spout and intake area are free of obstructions.
 - Examine all flighting for damage or unusual wear.
 - Examine tires for gashes, uneven wear, or loss of air pressure.
 - Check all operating, lifting, and transport components. Replace damaged or worn parts before using auger.
 - Inspect auger shaft bushing for unusual wear or discoloration.

7.3.2. 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 80 ft-lb (± 10 ft-lb) of torque. Inspect to make sure the wheel is sitting flush with the hub.

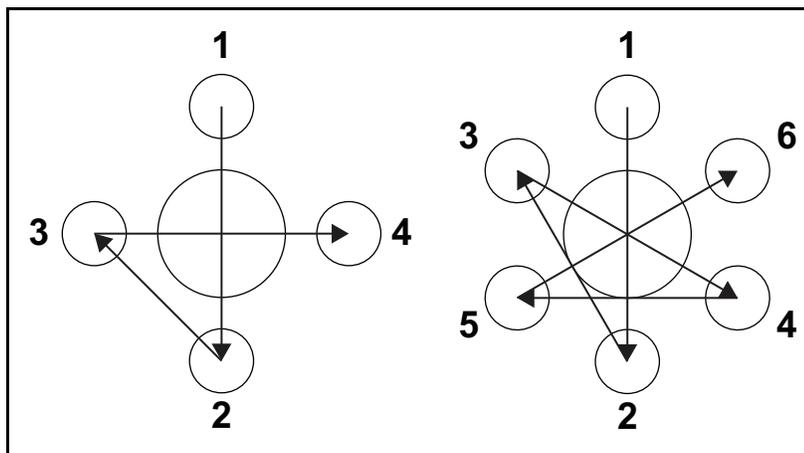


Figure 7.1 Diagonal Pattern for 4-bolt and 6-bolt tires

7.3.3. Check and Maintain Tire Pressure

Check with a pressure gauge. Pressure should be maintained according to tire side-wall recommendations.

7.3.4. Grease Intake Bushing and Upper Drive Chain

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

For continuous use in extreme cold, semi-fluid arctic grease or heavy oil may be used.

Use only a hand-held grease gun.

Wipe grease fitting with a clean cloth before greasing to avoid injecting dirt and grit.

If a fitting will not take grease, remove and clean thoroughly. Also clean lubricant passageway. Replace fitting if necessary.

1. Fill enclosed upper drive housing to plug level with grease (see “Specifications” for quantity).
2. Lubricate the intake bushing zerk.

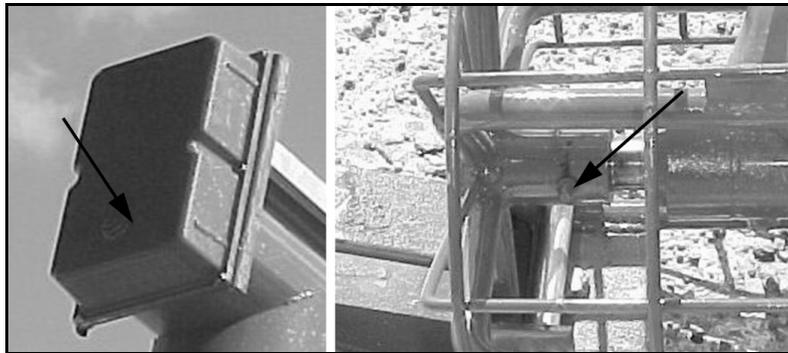


Figure 7.2 Upper Chain Drive Zerk & Intake Zerk

7.3.5. Adjust the Upper Drive Chain

Maintain 1/4" - 1/2" (0.64 cm - 1.27 cm) chain deflection.

1. To adjust, loosen bolts on top bearing in the upper drive housing.

Note: Improper adjustment of chain will result in premature wear.

2. Adjust chain to proper tension:
 - Remove the connecting link from the chain.
 - Remove a link from the chain; if the chain will not fit with one link removed, add a half link to the chain and replace.
3. Grease the chain with SAE multi-purpose high-temperature grease with extreme pressure (EP) performance. SAE multi-purpose lithium-based grease is also acceptable.
4. Reattach cover plate and tighten bolts.



Figure 7.3 Upper Drive Chain

7.3.6. Grease the PTO Driveline



When equipped with a PTO Driveline:

1. Use SAE multi-purpose high-temperature grease with extreme pressure (EP) performance. SAE multi-purpose lithium-based grease is also acceptable.
2. Lubricate both universal joints after every 8 hours of operation. Lubricate the center portion of the driveline (grease fitting is beneath shield) on a yearly basis (where applicable).

7.3.7. Check Gearbox Oil

1. Maintain oil level at half full (center of cross shaft) with EP90 lube oil.
2. Ensure gearbox is level when checking or refilling.
3. Do not overfill when adding oil.

7.3.8. Change Gearbox Oil

Use SAE approved 90W or equivalent gear oil.

1. Remove gearbox from auger.
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 gearbox and guards.

7.3.9. Tension and Align Drive Belt

⚠ WARNING Ensure ignition key is removed or power is locked out before adjusting or servicing.

Belt Tension

1. Remove guards and push on the center of the belt span with a force of approximately 5 lb.
2. The belts will deflect approximately 1" (25 mm) when properly tensioned.

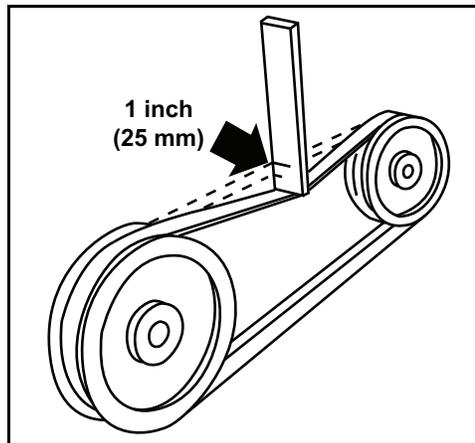


Figure 7.4 Schematic

3. Tighten or loosen the drive belts to achieve the proper tension.

Note: 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.

4. Reattach and secure guards. Start system to ensure proper operation.

Belt Alignment

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 hub bolts to secure pulley on shaft.
4. Check belt tension.
5. Reattach and secure guards.

7.3.10. Replace the Drive Belts

1. Fully loosen the drive belts.
2. Remove old belt and replace with new one.
3. Tighten the drive belts as described in Belt Tension.

4. Align the drive belts as described in Belt Alignment.
5. Reattach and secure guards.

7.3.11. Inspect/Service the Hand Winch and Lift Cable

 **WARNING** Place auger in fully lowered position with cable slack.

1. Inspect the cable for damage such as fraying, kinking, or unwinding. Replace if damaged (see below).
2. Check to make sure cable clamps are secure.
3. Oil cable pulleys as needed.
4. Keep a film of grease on the gears. Occasionally oil the bushings, drum shaft, and ratchet.
5. Do not get oil or grease on brake discs.
6. Replace brake discs if less than 1/16" (1.6 mm) thick.
7. Check for proper ratchet pawl operation:
 - When cranking in (clockwise) = loud clicking
 - When cranking out (counterclockwise) = no clicking and ratchet pawl fully engaged into gear teeth.

To Replace the Lift Cable:

1. Unwind the winch drum until cable is slack and remove all cable clamps.
2. Remove the cable.
3. Reverse the above steps to install the new cable.

7.3.12. Check/Adjust the Truss Cables

When equipped with Truss Cables:

Check the Truss Cables:

Check tube for straightness, no slack in the cables, and a just noticeable upward deflection of the discharge end. During operation, it is normal that for the tube to deflect downward.

If required, adjust cables by following the procedure below:

1. Lift the discharge end of the auger with a overhead crane, front end loader, or other proper lifting device so that the tube has a slight upward deflection at the discharge to give the cable some slack.

 **WARNING** The lifting device must be capable of supporting at least half of the weight of the auger as provided in the Specifications section.

-  2. When the auger has more than one set of cables start from the innermost cables and work your way out.
3. Loosen cable clamps on cable truss where the cable requires adjustment.
4. Locate the eyebolt anchors for the cable. Refer to Figure 7.5.
5. Tighten cable eyebolts evenly on both sides (use eyebolt nuts to tighten eyebolts) until the discharge end just starts to angle upward (see Figure 7.5).

- The tube should not deflect to the left or right if tightened evenly.
 - Tension should be greater on shorter cables than on longer cables. If the auger tubes remain straight then the cables are tensioned properly.
6. If the proper cable tension can't be obtained before the eyebolts run out of adjustment, then do the following:
 - a. Loosen the eyebolts.
 - b. At the eyebolts, loosen the cable clamps, shorten the cables until there is tension on the cable, then tighten the cable clamps fully.
 - c. Return to step 5.
 7. Secure jam nut on cable eyebolt and re-tighten any cable clamps that were loosened.
 8. The cables are properly tightened when:
 - There is no slack in the cables.
 - The discharge end is deflected slightly upwards.
 - The tube is straight side-to-side.

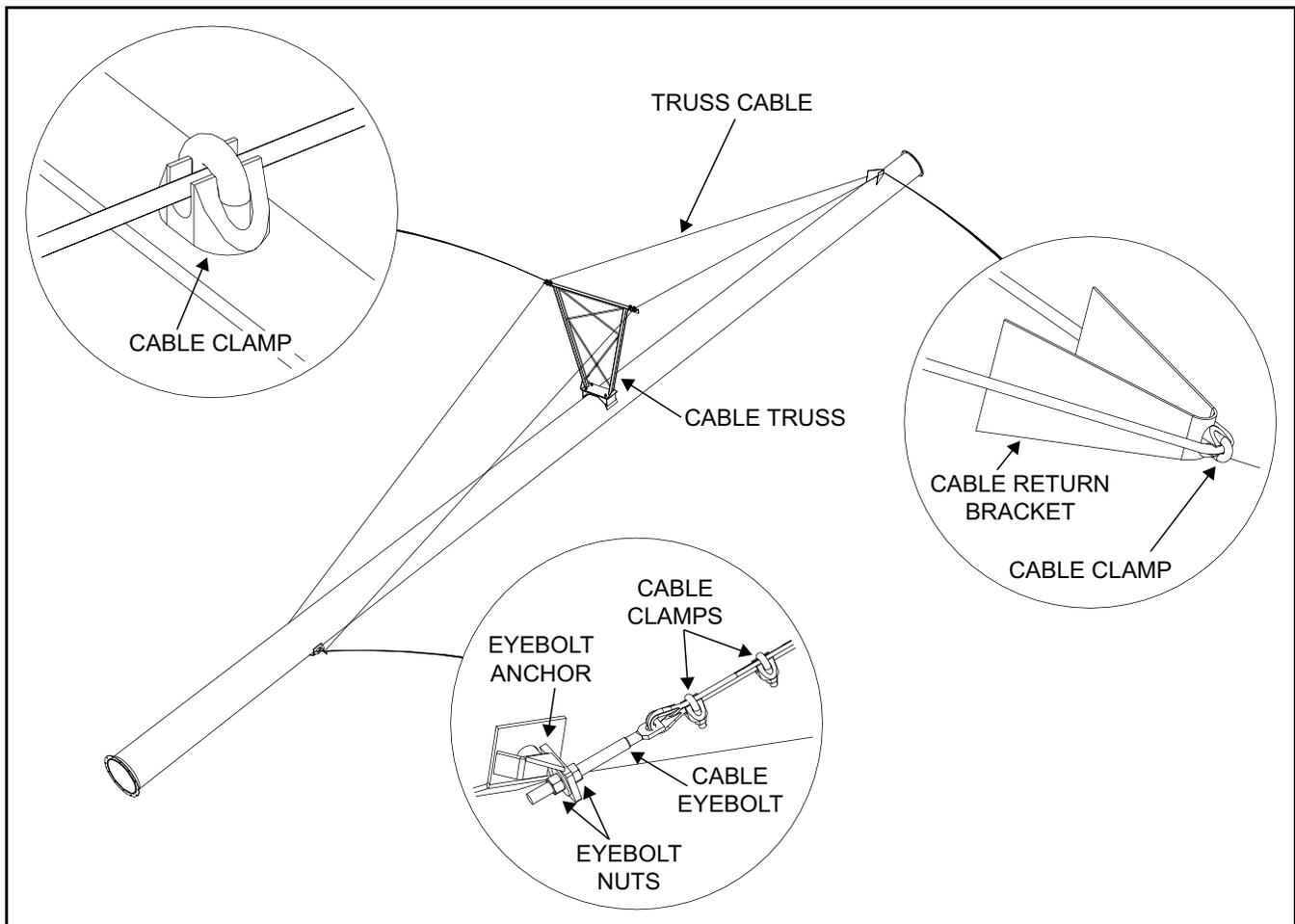


Figure 7.5 Typical Cable Truss Assembly

8. Troubleshooting



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

This chapter covers possible causes and solutions to problems you may encounter. If you encounter a problem that is difficult to solve, even after having read this chapter, please contact your local Westfield dealer or distributor. Before contacting them, please have this operation manual and your machine's serial number handy.

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

Auger Tube/Flighting

Problem	Cause	Solution
Excessive noise or vibration. *Remember to follow proper break-in procedures—auger may run rough until tube is polished. If noise is extreme from outset or continuous after several loads of grain are fed, continue with troubleshooting.	Chatter from wooden bearings.	Spray penetrating lubricant between shaft and bearing surface. Bearings will break in over time. *If replacement of a bearing becomes necessary, split bearings are available to avoid having to slide all bearings off driveshaft.
	Flighting peeled back due to plugging.	Inspect spout end of auger for flight condition. Remove and replace flight sections as necessary.
	Top drive inadequately lubricated.	Fill to appropriate level with grease. Top drive is not designed to be filled with oil.
	Bent flighting sections.	Support auger and remove all flight sections. Check for straightness of flight stubs by rolling across flat concrete section. Straighten stub or replace as necessary. Take care not to bend flighting when reinstalling.
	Obstruction in tube.	Visually inspect for cloth or trash wrapped around flighting, or buildup of gum from oily crops such as flax or canola.

Auger Tube/Flighting

Problem	Cause	Solution
Premature wear on auger tubes.	Auger being run at low capacity or empty for extended period of time.	Frequently occurs on farms using grain wagons. Auger should not be left unattended when filling bins. Depending on application, a belt conveyor may be more appropriate.
	Bent flighting.	
	Flighting allowed to wear beyond normal point of replacement.	When flighting becomes razor-thin at intake, replacement is critical. Since flight material is double thickness at welded lap joints, high spots on flight occur and can accelerate spot tube wear.
The auger does not turn.	Auger is plugged or obstructed.	Identify and remove obstruction.
	Bearing is seized.	Identify the bearing and replace.
	Upper drive chain is broken.	Repair or replace.
	Gearbox is seized.	Fix or replace the gearbox.
	Gearbox coupler bolt is broken or missing.	Replace the bolt.
The bottom auger will not turn.	Center coupler bolt is broken or missing.	Replace the bolt.
Auger is noisy.	Obstruction in the auger.	Identify and remove obstruction.
	Auger shaft bolts are loose or damaged.	Tighten or replace bolts.
	Auger shaft is bent.	Repair or replace auger.
	Flighting is damaged.	Repair or replace auger.
	Worn bearing.	Repair or replace bearing.
	Low gear oil level.	Inspect the gearbox, replace if damaged or add oil if not damaged.
	Upper chain drive loose.	Tighten the chain as required.

Auger Tube/Flighting

Problem	Cause	Solution
Shear bolts fail repeatedly.	Incorrect shear bolt type.	Replace with correct part number. Westfield shear bolts are specifically designed to provide correct driveline protection.
	Shear bolt hole worn out-of-round.	Frequent use of the incorrect shear bolt size can wear the mounting hole creating a “scissor effect,” which will require replacement of the affected parts.
	Corn spreaders in bin unable to keep up with auger output.	Slow down auger or remove corn spreaders.
	Flighting peeled back as a result of plugging.	Occurs when bin has overfilled, or corn spreaders restrict end of discharge. Inspect flighting at discharge end of auger. If necessary, replace flighting.
	Driveline failure (bearing, gearbox, etc.).	See Maintenance Section.
Low material augering rate.	Inadequate material flow from truck or hopper.	Increase flow of material.
	Flow into the auger intake is restricted.	Clear grating of obstructions.
	Material too wet or heavy.	Unloading rates are for dry grain.
	Flighting is worn.	Repair or replace as required.

Drive Belts/Pulleys

Problem	Cause	Solution
Drive belts jumping off pulleys.	Motor misaligned.	Ensure drive and driven pulleys are correctly aligned.
	Belts mismatched.	Check assembly section for correct belt sizes and only replace in pairs.
	Belt tension inadequate.	Maintain correct tension as per assembly section.
	Using a lower horsepower motor than recommended.	See manual for recommended motor sizes.
Low material augering rate.	Belt slipping.	Identify the belt, adjust or replace as required.

Frame/Undercarriage with Hand Winch

Problem	Cause	Solution
The auger will not raise or lower.	The auger is already at its maximum or minimum height.	If at maximum height, lower the auger.
	Obstruction in the slide.	Clear the obstruction.
	Faulty cable.	Replace cable.
	Faulty winch.	Consult your local dealer.
	The bottom or top of auger is obstructed.	Clear the obstruction.
The auger will not stay elevated	Faulty winch.	Lower auger to transport position and repair or replace winch.

Frame/Undercarriage with Hydraulic Winch

Problem	Cause	Solution
The auger lifts slowly.	Inadequate hydraulic pressure from source.	Use alternate hydraulic pressure source; contact your local dealer for assistance.
	If auger lowers faster than it lifts, then the check valve may be installed in opposite direction.	Lower auger to transport position and inspect check valve; re-install in opposite direction if required (see indicator arrow on valve).
The auger will lift but not lower.	Foreign object clogging check valve.	Contact your local dealer for assistance.
The auger will not stay elevated	Faulty winch.	Lower auger to transport position and repair or replace winch.
	Faulty cable.	Lower auger to transport position and repair or replace cable.

Gas Engine

Problem	Cause	Solution
Low material augering rate.	Engine speed is too slow.	Increase rpm of the engine.

Truss Cables

Problem	Cause	Solution
Excessive noise or vibration.	Truss cables incorrectly adjusted. (when equipped)	Support end of auger and adjust cables so auger is flat or curves slightly upwards. See Maintenance.
Tube is flexing.	Loose truss cables.	Tighten cables as required.

9. Appendix

9.1. SPECIFICATIONS

Important: *Westfield reserves the right to change specifications without notice.*

Auger Model		8-36	8-41	8-46	8-51	10-36	10-41	10-51
Tube Size		8" (203 mm)				10" (254 mm)		
CAPACITIES								
Unloading Rate		Up to 3000 Bu/Hr (106 m ³ /Hr)				Up to 6000 Bu/Hr (212 m ³ /Hr)		
DIMENSIONS								
Transport	Length	36' 5" (11.1 m)	41' 5" (12.6 m)	46' 4" (14.1 m)	51' 3" (15.6 m)	36' 11" (11.2 m)	42' (12.8 m)	51' 3" (15.6 m)
	Width	8' (2.44 m)						
	Height	11' (3.35 m)	10' 9" (3.28 m)	11' 10" (3.6 m)	12' 10" (3.91 m)	11' 2" (3.39 m)	11' 6" (3.39 m)	12' 10" (3.91 m)
Discharge Clearance	Min	8' 6" (2.59 m)	8' 6" (2.59 m)	9' 8" (2.95 m)	10' 9" (3.28 m)	8' 6" (2.59 m)	8' 11" (2.72 m)	10' 9" (3.28 m)
	Max	20' 3" (6.17 m)	23' 6" (7.16 m)	26' 6" (8.08 m)	29' 3" (8.92 m)	20' 3" (6.17 m)	23' 6" (7.16 m)	29' 3" (8.92 m)
TIRES								
Type		15" Radial						
Inflation Pressure		20 – 24 PSI (137-165kPa)						
WEIGHT								
Hitch Tongue Weight (no engine)		66 lb (30 kg)	68 lb (31 kg)	72 lb (33 kg)	70 lb (32 kg)	70 lb (32 kg)	90 lb (41 kg)	100 lb (41 kg)
Total Weight		1188 lb (539 kg)	1285 lb (583 kg)	1397 lb (634 kg)	1540 lb (699 kg)	1250 lb (567 kg)	1351 lb (617 kg)	1975 lb (896 kg)
POWER REQUIREMENTS								
Gas Engine		16-18 HP (11.9-13.5 KW)	18-20 HP (13.5-15 KW)	22-25 HP (16.5-18.8 KW)	25-27 HP (18.8-20.3 KW)	27-30 HP (20.3-22.4 KW)	30-35 HP (22.5-26.3 KW)	35-38 HP (22.5-26.3 KW)
Electric Motor		5 - 7-1/2 HP (3.75-5.6 KW)	5 - 7-1/2 HP (3.75-5.6 KW)	7-1/2 HP (5.6 KW)	10-15 HP (7.5-11.3 KW)	15 HP (11.3 KW)	15 HP (11.3 KW)	15 HP (11.3 KW)
PTO Drive		540 rpm						
Max PTO Driveline Operating Angle		15°						
PART SPECIFICATIONS								
Gas Tank Capacity		5 Imp Gal (22 L)						
Gearbox Oil Capacity		1/2 Imp Gal (2.3 L)						
Upper Drive Housing Grease Quantity		750 g (26 oz)				1100 g (40 oz)		
Belt Size		B210	B240	B270	B300	B210	B240	B310

9.2. BOLT TORQUE VALUES

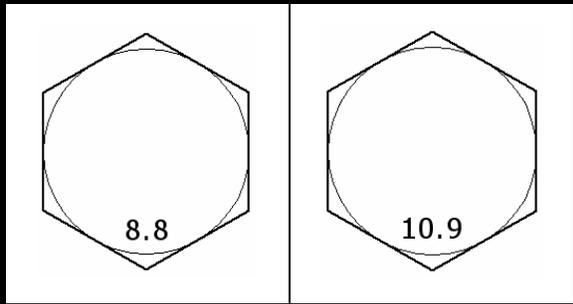
Tables 9.1 and 9.2 give correct torque values for various bolts and capscrews. The bolt diameter is measured to the outside of the threads. When tightening all bolts, tighten the nut on the bolt to the torque specified in the tables, unless otherwise specified. Do not replace or substitute bolts, nuts, or other hardware that is of lesser strength than the hardware supplied by the manufacturer.

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

Table 9.1 SAE Bolt Torque

Bolt Diameter	SAE 2		SAE 5		SAE 8	
	(N·m)	(ft·lb)	(N·m)	(ft·lb)	(N·m)	(ft·lb)
1/4"	8	6	12	9	17	12
5/16"	13	10	25	19	36	27
3/8"	27	20	45	33	63	45
7/16"	41	30	72	53	100	75
1/2"	61	45	110	80	155	115
9/16"	95	60	155	115	220	165
5/8"	128	95	215	160	305	220
3/4"	225	165	390	290	540	400
7/8"	230	170	570	420	880	650
1"	345	225	850	630	1320	970

Table 9.2 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
M30	1495	1103	2100	1550
M36	2600	1917	3675	2710

9.3. TIGHTENING FLARE TYPE TUBE FITTINGS

1. Check flare and flare seat for defects that might cause leakage.
2. Align tube with fitting before tightening.
3. Lubricate connection and hand tighten swivel until snug.
4. To prevent twisting the tube(s), use two wrenches. Place one wrench on the connector body. With the second wrench, tighten the swivel nut to the torque shown.

Table 9.3 Flare Type Tube Fittings

Tube Size OD (in.)	Nut Size Across Flats (in.)	Torque Values (N·m) ^a	Torque Values (lb·ft) ^a	# of Turns to Tighten (Flats)	Turn (After Finger Tightening)
3/16	7/16	8	6	1	1/6
1/4	9/16	12	9	1	1/6
5/16	5/8	16	12	1	1/6
3/8	11/16	24	18	1	1/6
1/2	7/8	46	34	1	1/6
5/8	1	62	46	1	1/6
3/4	1-1/4	102	75	3/4	1
7/8	1-3/8	122	90	3/4	1

a. * The torque values shown are based on lubricated connections as in reassemble.

9.4. TIGHTENING O-RING FITTINGS

1. Inspect o-ring and seat for dirt or obvious defects.
2. On the angle fittings, back the lock nut off until washer bottoms out at top of groove.
3. Hand-tighten fitting until backup washer or washer face (if straight fitting) bottoms on face and o-ring is seated.
4. Position angle fittings by unscrewing no more than one turn.
5. Tighten straight fittings to torque shown.
6. Tighten while holding body of fitting with a wrench.

Table 9.4 O-Ring Fittings

Tube Size OD (in.)	Nut Size Across Flats (in.)	Torque Values ^a (N·m)	Torque Values ^a (ft·lb)	# of Turns to Tighten (Flats)	Turn (After Finger Tightening)
3/8	1/2	8	6	2	1/3
7/16	9/16	12	9	2	1/3
1/2	5/8	16	12	2	1/3
9/16	11/16	24	18	2	1/3
3/4	7/8	46	34	2	1/3
7/8	1	62	46	1-1/2	1/4
1-1/16	1-1/4	102	75	1	1/6
1-3/16	1-3/8	122	90	1	1/6
1-5/16	1-1/2	142	105	3/4	1/8
1-5/8	1-7/8	190	140	3/4	1/8
7/8	2-1/8	217	160	1/2	1/12

a. The torque values shown are based on lubricated connections as in reassemble.

WARRANTY

Westfield Industries Ltd. warrants products of its manufacture against defects in materials or workmanship under normal and reasonable use for a period of one year after date of delivery to the original purchaser.

Our obligation under this warranty is limited to repairing, replacing, or refunding defective part or parts which shall be returned to a distributor or a dealer of our Company, or to our factory, with transportation charges prepaid. This warranty does not obligate Westfield Industries Ltd. to bear the cost of labor in replacing defective parts. Any defects must be reported to the Company before the end of the one year period.

This warranty shall not apply to equipment which has been altered, improperly assembled, improperly maintained, or improperly repaired so as to adversely affect its performance. Westfield Industries Ltd. makes no express warranty of any character with respect to parts not of its manufacture.

The foregoing is in lieu of all other warranties, expressed or implied, including any warranties that extend beyond the description of the product, and the IMPLIED WARRANTY of MERCHANTABILITY is expressly excluded.

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