



GRAIN AUGERS

W130 - 41' PTO-SD & EMD OPERATION & ASSEMBLY



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: 30261 R2

Revised: 21/3/13



This product has been designed and constructed according to general engineering standards^a. Other local regulations may apply and must be followed by the operator. We strongly recommend that all personnel associated with this equipment be trained in the correct operational and safety procedures required for this product. Periodic reviews of this manual with all employees should be standard practice. For your convenience, we include this sign-off sheet so you can record your periodic reviews.

Date	Employee Signature	Employer Signature

a. Standards include organizations such as the American Society of Agricultural and Biological Engineers, American National Standards Institute, Canadian Standards Association, International Organization for Standardization, and/or others.

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1. Introduction

Thank you for purchasing a Westfield grain auger. Before using, please read this manual and understand the various features of the equipment and precautions for efficient and safe operation.

Keep this manual handy for frequent reference and to review with new personnel. A sign-off form is supplied on the inside front cover to record your safety reviews. Call your local distributor or dealer if you need assistance or additional information.

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 machine.

Serial Number:	
Serial number is found on the right at the top of the lower tube.	

2. Safety First



The Safety Alert symbol to the left identifies important safety messages on the product and in the manual. When you see this symbol, be alert to the possibility of personal injury or death. Follow the instructions in the safety messages.

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.

2.1. GENERAL SAFETY

Important: *This general safety section includes instructions that apply to all safety practices. Any instructions specific to a certain safety practice (e.g., assembly safety), can be found in the appropriate section. Always read the complete instructional sections and not just these safety summaries before doing anything with the equipment.*

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 all on-product labels and 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.

- 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. All accidents can be avoided.
- 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.
- Use this equipment for its intended purposes only.
- Do not modify the equipment in any way that is not authorized by the manufacturer. Unauthorized modification may impair the function and/or safety, and could affect the life of the equipment. Any modification to the equipment voids the warranty.
- Do not allow anyone within the work area who doesn't need to be there.
- Follow all practices to ensure that the workplace is safe.
- Have a first-aid kit available for use should the need arise, and know how to use it.
- Provide a fire extinguisher for use in case of an accident. Store in a highly visible and accessible place.
- Wear appropriate protective gear. This list includes, but is not limited to:
 - a hard hat
 - gloves
 - protective shoes with slip-resistant soles
 - protective goggles
 - hearing protection
 - dust mask or respirator
- For Powered Equipment: before servicing, adjusting, or repairing powered equipment, unplug, place all controls in neutral or off position, stop the engine or motor, remove ignition key or lock out power source, and wait for all moving parts to stop.



- Follow good shop practices:
 - keep service area clean and dry
 - be sure electrical outlets and tools are properly grounded
 - use adequate light for the job at hand
 - Think SAFETY! Work SAFELY!



2.2. ASSEMBLY SAFETY

- Read through the instructions to get to know the sub-assemblies and hardware that make up the equipment.
- Do not take chances with safety. The components are large, heavy, and can be hard to handle. Always use the proper tools, stands, jacks, and hoists for the job.
- Read and understand the assembly instructions for the product before proceeding to assemble the product.
- Always have two or more people assembling the equipment. Because of the weight, do not attempt assembly alone.

2.3. OPERATION SAFETY

- Have another trained person nearby who can shut down the auger in case of accident. Always work with a second trained person around augers.
- Do not operate with any of the safety guards removed.
- Keep body, hair, and clothing away from moving parts. Stay away from intake during operation.
- Inspect lift cable before using auger. Replace if frayed or damaged. Make sure it is seated properly in cable sheaves and cable clamps are secure.
- Operate auger on level ground free of debris. If ground is uneven, anchor the auger to prevent tipping or upending.
- Augers are not insulated. Keep away from electrical lines. Electrocution can occur without direct contact.
- Support the discharge end and/or anchor the intake end before operating to prevent upending.
- Do not use auger as a hoist.
- Empty auger before raising or lowering.
- Lower auger at completion of operation or when not in use. Auger could drop rapidly in case of cable break or hydraulic failure (where applicable).
- Ensure that winch is locked before operating auger.
- Do not grab or touch drive belts during operation for any reason.

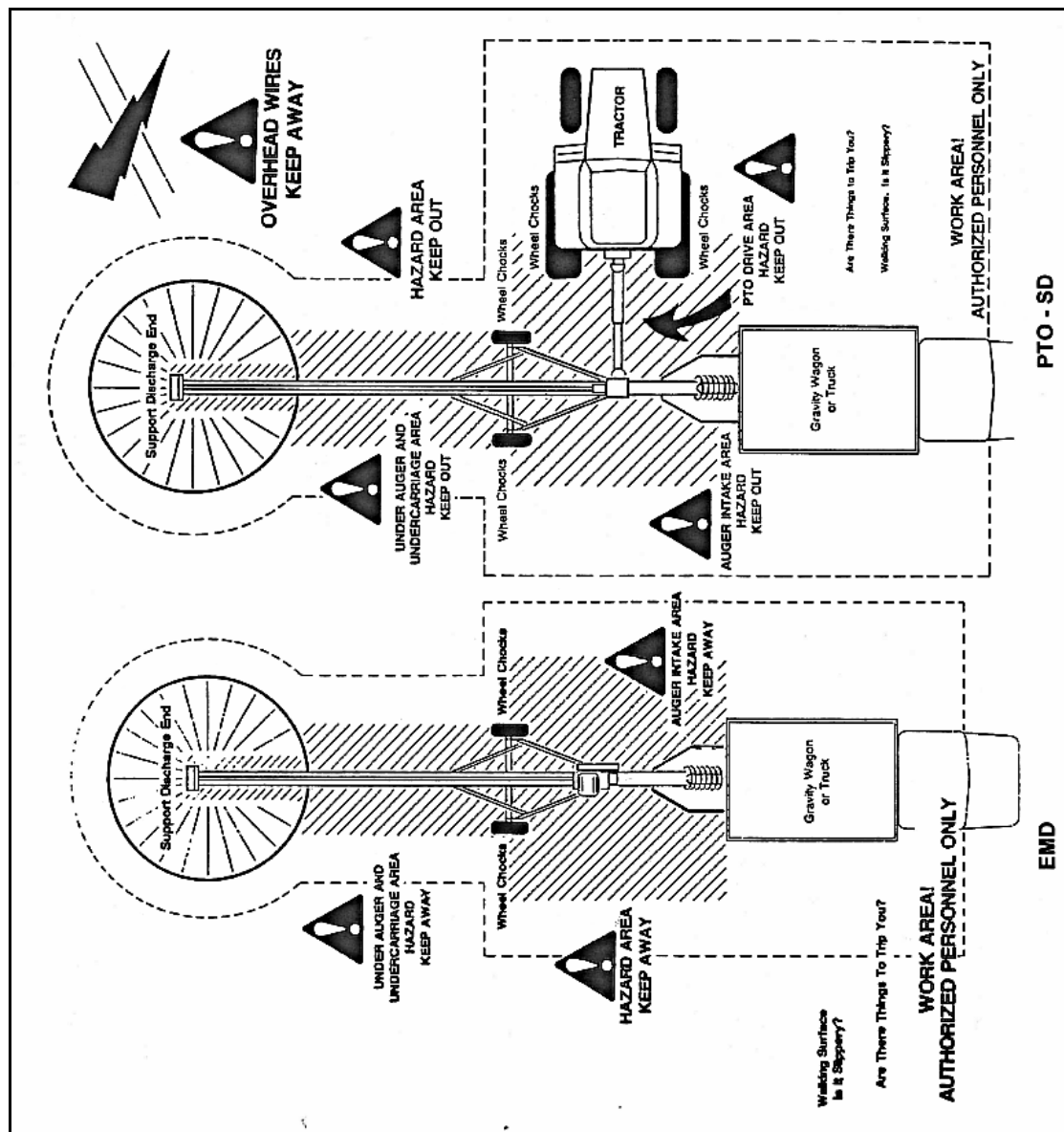


Figure 2.1

2.4. PTO SAFETY

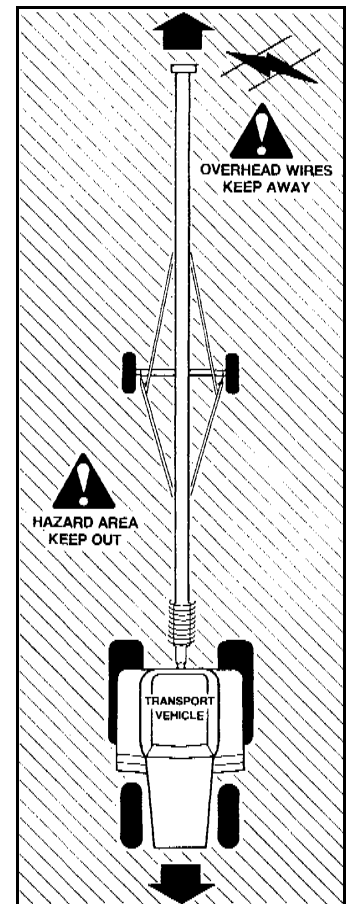
- Never use a PTO driveline without a rotating shield in good working order.
- Ensure PTO driveline is securely attached at both ends before operating.
- Before starting tractor, turn power to PTO to the off position (where applicable).
- Keep body, hair, and clothing away from rotating PTO driveline.
- Ensure the PTO driveline shields turn freely on the PTO driveline.
- Do not exceed operating speed of 540 rpm.
- Keep u-joint angles small and equal. Do not exceed recommended operating length for PTO driveline.

2.5. ELECTRIC MOTOR SAFETY

- Inspect the drive belts before using auger. Replace if frayed or damaged.
- Do not grab or touch drive belts during operation for any reason.
- Remember to ground electric motor before using auger.

2.6. TRANSPORT & PLACEMENT SAFETY

- Transport auger in full down position with slight tension on cable.
- Properly place hitch pin and securely attach safety chain. Use a type of hitch pin that will not allow auger to separate from towing vehicle.
- Always attach an SMV (slow moving vehicle) sign before transporting auger. Equip the auger with the necessary lights for transportation where required by law. Always use hazard warning flashers on the tractor/towing vehicle when transporting unless prohibited by law.
- Always travel at a safe speed, never exceeding 15 mph (24 km/hr). Reduce speed on rough surfaces and be cautious when turning corners or meeting traffic.
- Before raising/lowering/moving the auger, make sure the area around the auger is clear of obstructions and/or untrained personnel. Never allow anyone to stand on or beneath auger while transporting or placing auger.
- Do not transport auger on slopes greater than 20°.
- Wheels must be free to move when raising or lowering auger.
- Never attempt to move auger manually. To do so will result in serious injury.
- Before moving auger, check for overhead obstructions and/or electrical wires. Electrocutation can occur without direct contact.
- When lowering the auger the track shoe may become stuck; if this happens, do not continue to turn the winch handle counter-clockwise because it will disengage the brake mechanism and will create an unsafe condition. Too much slack in the cable may also cause the auger to drop suddenly.
- Disconnect PTO driveline from tractor before moving auger or tractor and secure in transport saddle (where applicable).
- The winch must make a clicking sound when raising auger. If clicking sound stops, retain grip on handle, lower auger fully, and repair winch.
- Always keep a minimum of 3 cable wraps on the winch drum.



2.7. MAINTENANCE SAFETY

- Shut down and lock out all power before attempting maintenance of any kind. **If applicable**, disconnect PTO driveline from tractor or hydraulic hoses on units with hydraulic drive hoppers.
- After maintenance is complete, replace and secure all safety guards and safety devices, and if applicable, service doors and cleanout covers.
- Support auger tube before attempting maintenance on the undercarriage assembly. Auger should be in full down position for maintenance.
- Use only genuine Westfield replacement parts or equivalent. Replacement parts such as intake guards, pulley guards, PTO driveline shields, winches, and lift cables must meet ASABE standards or serious injury may result. Use of unauthorized parts will void warranty. If in doubt, contact Westfield or your Westfield dealer.
- Do not modify any auger components without authorization from Westfield. Modification can be dangerous and result in serious injuries.

2.8. 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.
- Safety decals are available from your distributor, dealer, or factory.

2.8.1. DECAL INSTALLATION

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.

2.8.2. SAFETY DECAL LOCATIONS

Replicas of the safety decals that are attached to the equipment are shown in the figure(s) that follow. Proper safety procedures require 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.*

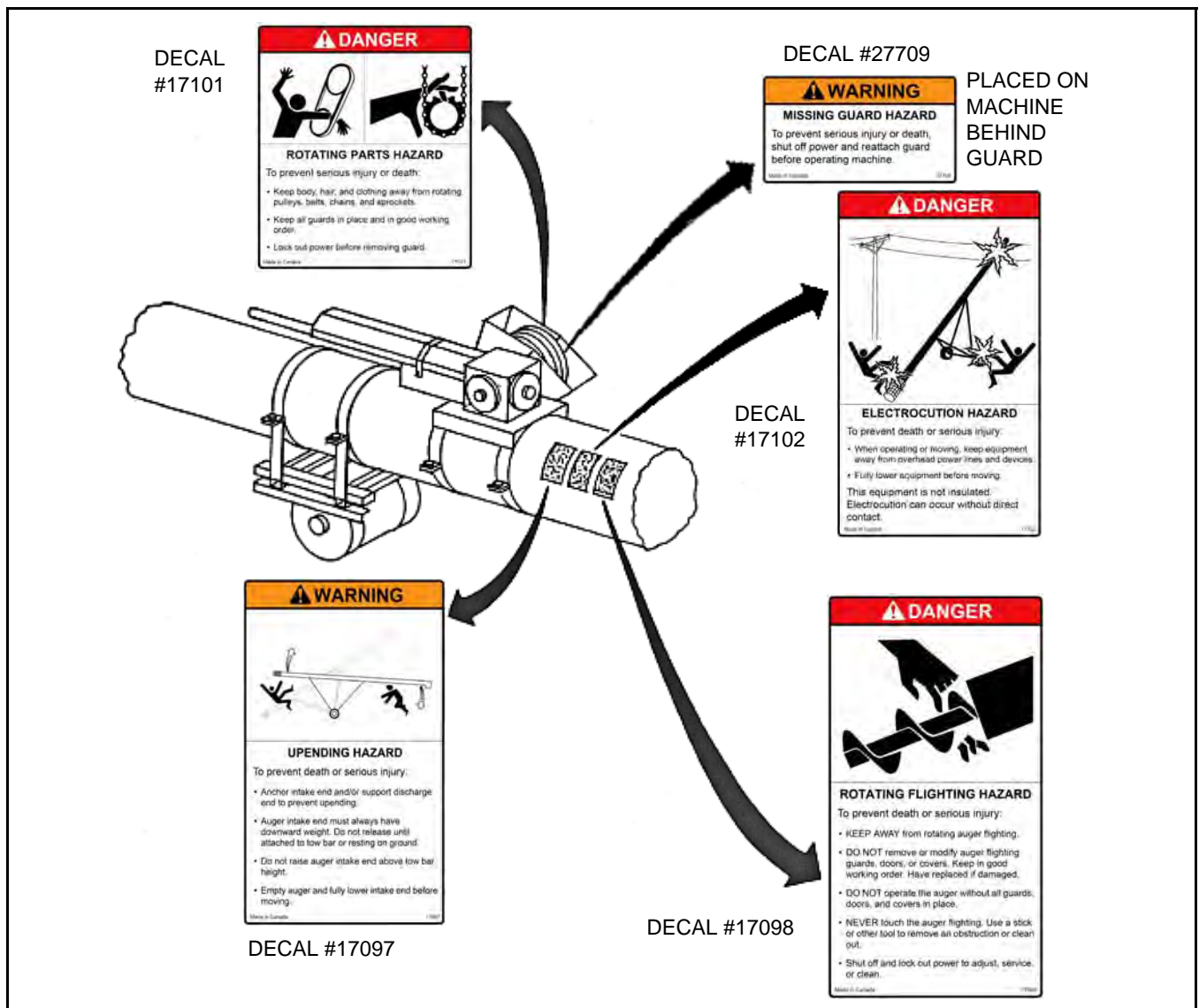


Figure 2.2

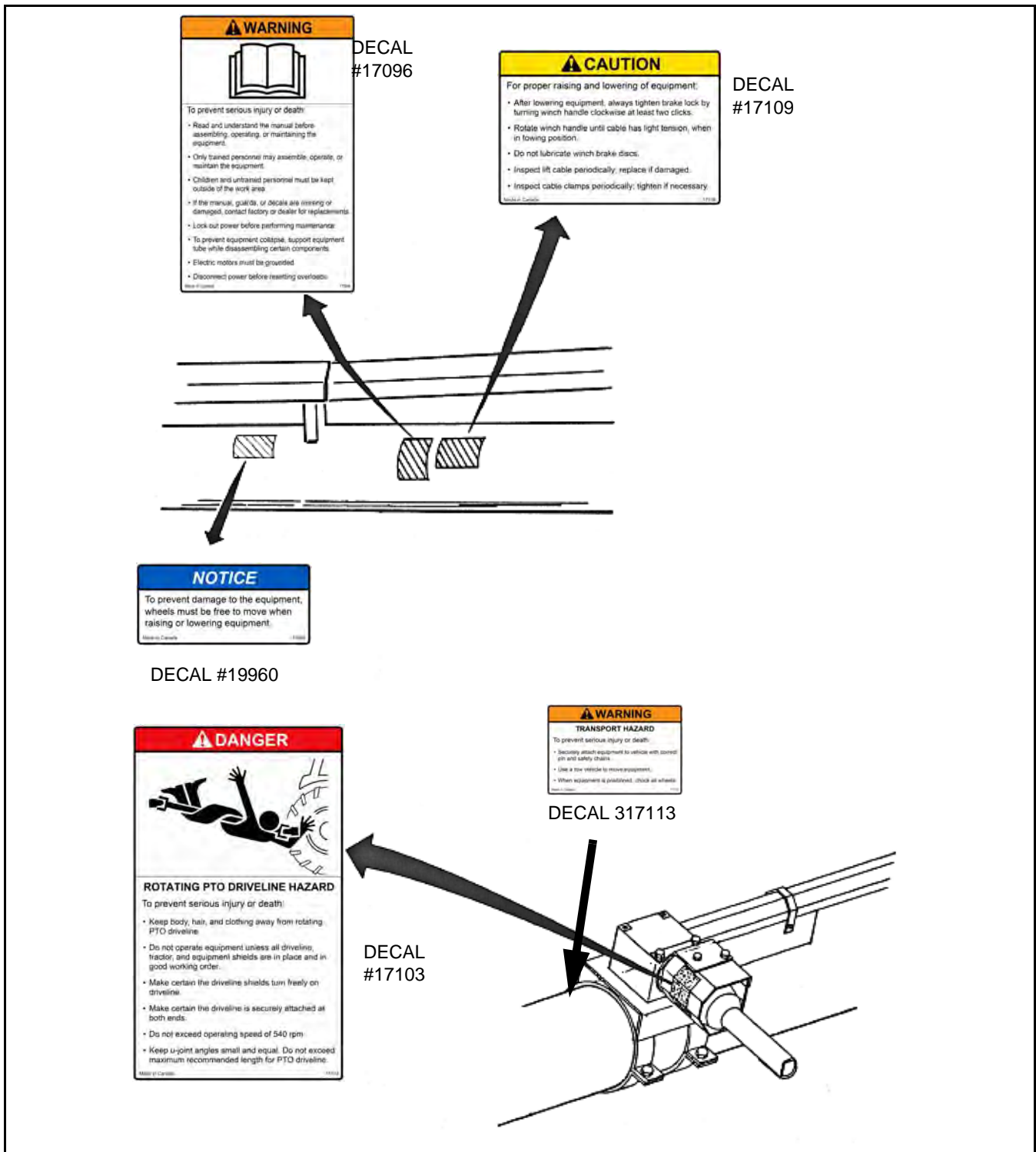


Figure 2.3

3. Assembly

Warning: Before continuing, ensure you have read and understand the relevant information in the safety section. Safety information is provided to help prevent serious injury, death, or property damage.

3.1. PRE-ASSEMBLY


Before beginning assembly, familiarize yourself with all the sub-assemblies and hardware making up the auger. Have all parts on hand and arrange them for easy access. Carry out assembly in a large open area with a level surface.

Important: *Always have 2 or more people assembling the equipment. Because of the weight, do not attempt assembly alone.*

➔ Augers are available in various combinations. In most cases, the following instructions will apply to all augers. Where the assembly information varies, additional instructions will be included and will be indicated with an arrow.

3.2. TUBES & FLIGHTING

1. Position tube sections. Align tube sections on a flat surface or on a series of benches.

WARNING	
	Do not drop. Damage to equipment or serious personal injury will result.

Note: *When assembling more than 2 sections, start from spout end and work towards hopper.*

2. Slide lower flight shaft onto upper flight shaft until flight ends butt together and flighting spiral matches up. Secure with two 5/8" x 4-1/2" grade 8 bolts and locknuts. Repeat, if necessary, for any remaining flight shafts.
3. Clean driveshaft coupler and driveshaft ends, then insert a 1/4" x 1-1/2" square key.
4. Slide tube sections and driveshafts together and insert the twelve 7/16" x 1-1/4" bolts and locknuts. Align the upper and lower track ends, then tighten the bolts. Also tighten set screws in the driveshaft coupler (see Figure 3.2).

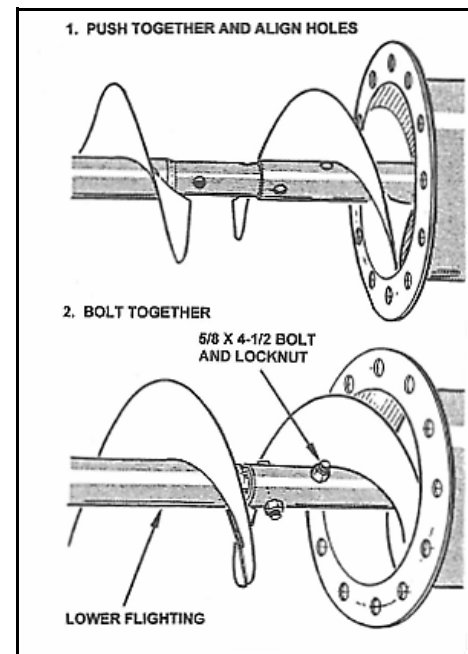


Figure 3.1

Important: *Track ends must align to allow track shoe to smoothly slide over track joint. Misalignment may cause jamming.*

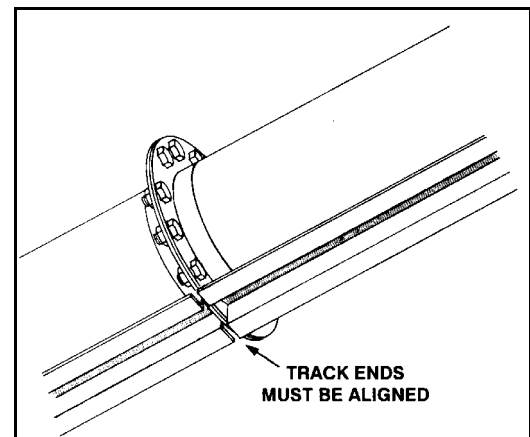


Figure 3.2

3.3. TRACK SHOE & TRACKSTOP

1. Slide the roller track shoe onto track.
2. Attach the angle track stop to upper end of track at the set of bolt holes nearest to the intake using two 7/16" x 1-1/4" bolts, locknuts, and flat iron washers (see Figure 3.3). Make certain the flat iron washers are placed on top of track.
3. Slide track shoe along full length of track to make certain there is no binding and that track ends are properly aligned. The upper and lower tracks must align to allow track shoe to roll smoothly over this joint (Figure 3.2 and 3.3).

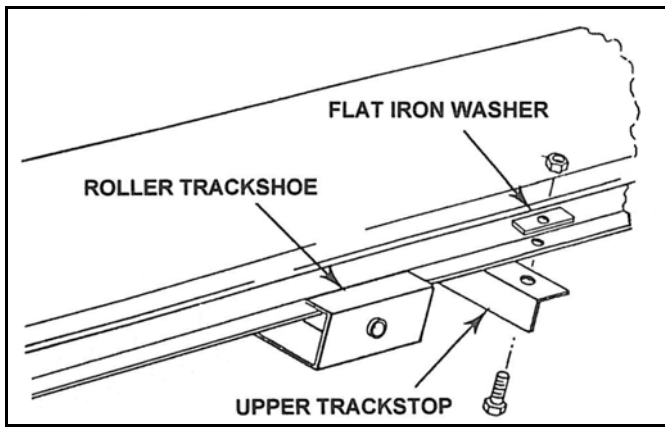


Figure 3.3

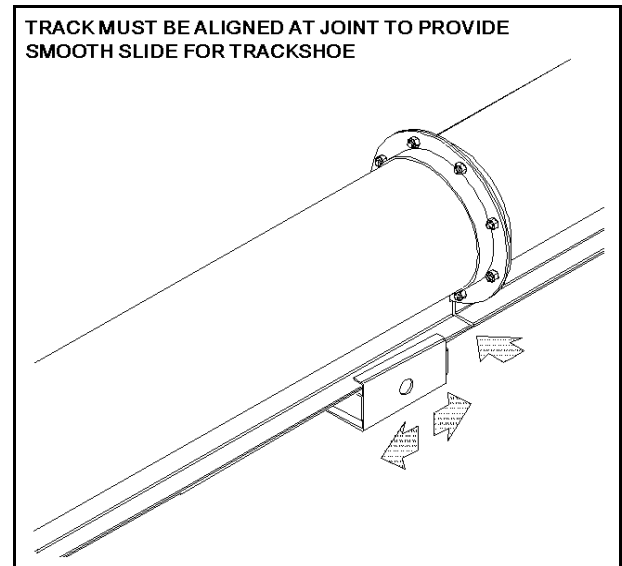


Figure 3.4

3.4. INTAKE HITCH

1. Clean dirt and paint from lower flight stub and intake bushing.
2. Attach intake hitch to lower auger tube and tighten securely.
3. Maintain 1/2" (1.27 cm) clearance between bushing and end of flight.
4. Attach clevis to intake hitch with clevis pin and gripclip.

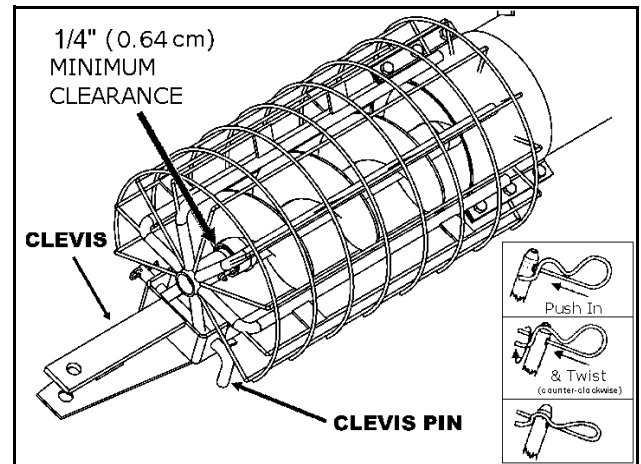


Figure 3.5

Part	Size	Amt.
Intake Hitch	7/16" x 1-1/4" bolt and locknut	8
Clevis Pin	3/4"	1

3.5. PTO S-DRIVE & SHIELD

See Figure 3.6.

The driveshaft segments are factory installed, ready for connecting to the gearbox.

1. Clean dirt and paint from driveshaft ends, inside couplers, and PTO driveline yoke.
2. Remove chain from chain coupler on gearbox, then attach chain coupler sprocket to driveshaft with a 1/4" x 1-1/2" square key. Tighten set screws.
3. Place gearbox assembly on auger tube, then reinstall chain-to-chain coupler leaving minimum of 1/16" (1.6 mm) between coupler sprockets.
4. Secure gearbox assembly to auger tube with two halfbands and four 7/16" x 1-1/4" bolts and locknuts. Tighten securely.

Important: *Fill gearbox half full only with EP90 lube oil before operating auger. Do not over fill. Failure to heed will void warranty. It is easier to fill oil into gearbox when in flat position.*

5. Attach the chain coupler guard to gearbox base with two 3/8" x 3/4" bolts and washer locknuts (Figure 3.6).
6. Slide non-spline end of PTO driveline onto input shaft on gearbox using a 1/4" x 1-1/2" square key. Tighten set screws securely.


Note: *The PTO driveline is non-separable. Do not extend beyond 80".*

7. Install the PTO driveline transport saddle to auger tube about 3' above gearbox. Secure with two 7/16" x 1-1/4" bolts and locknuts.
8. Attach the drive shield to the shield mount with two 3/8" x 3/4" bolts and washer locknuts, then slide this assembly over PTO driveline and attach to gearbox with two 1/2" x 1" bolts and lockwashers (Figure 3.6).

Table 3.1. Horsepower Requirements^a

Auger Length	13" x 41' PTO-HP
41'	60
51'	70
61'	80
71'	90

- a. Approximate horsepower requirements under normal conditions. When augering full tube of high moisture grain, additional horsepower will be needed.

CAUTION	
	<p>Never use a PTO driveline without a shield in good working order.</p> <p>Do not exceed maximum recommended operating length or angularity of PTO driveline u-joints.</p>

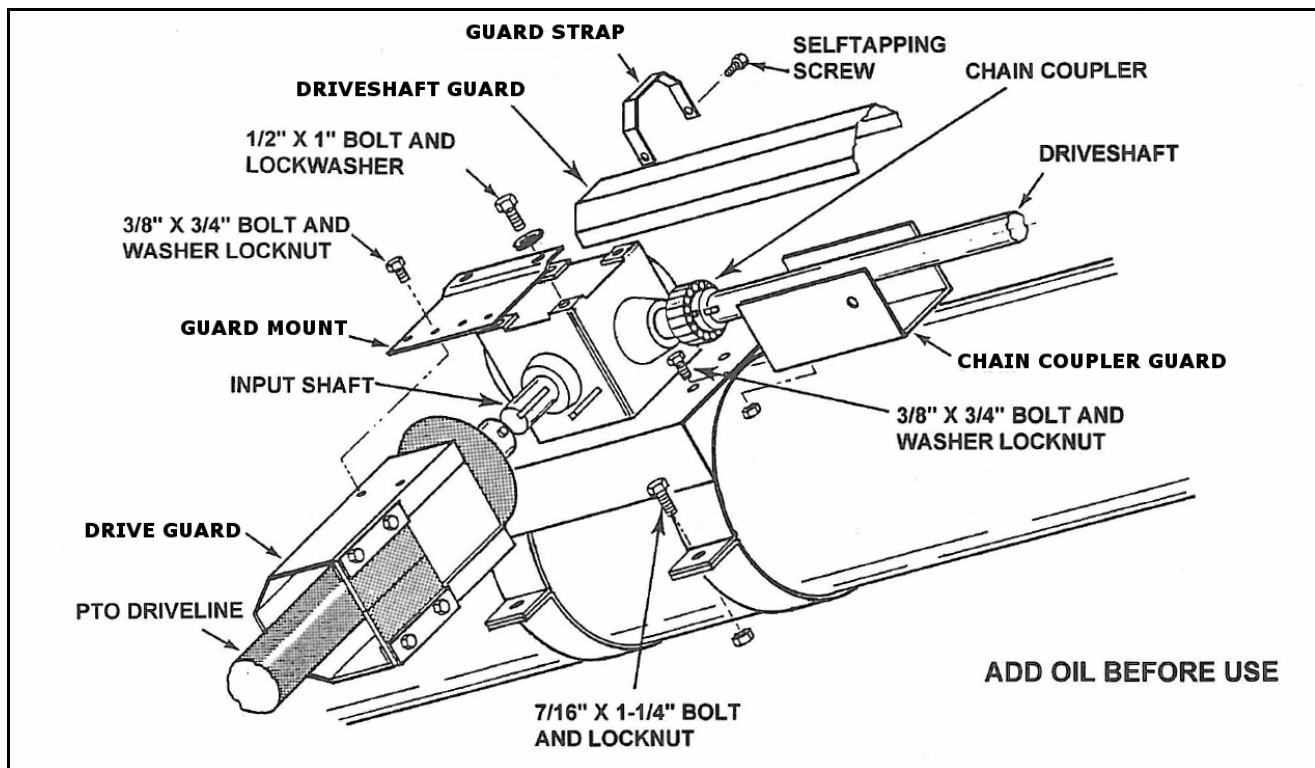


Figure 3.6

3.6. EMD DRIVE

See Figure 3.7 and 3.8.

1. Remove the driveshaft segment nearest the intake end of auger (9'9" long). This driveshaft is not used on EMD augers.
2. Clean dirt and paint from driveshaft ends and inside couplers.
3. Remove and discard driveshaft bearing at third bearing bracket from intake end.
4. Remove chain from chain coupler on gearbox, then attach chain coupler sprocket to driveshaft with a 1/4" x 1-1/2" square key. Tighten set screw.
5. Place gearbox assembly on auger tube, then reinstall chain coupler leaving minimum of 1/16" between coupler sprockets.
6. Secure gearbox assembly to auger tube with two halfbands and four 7/16" x 1-1/4" bolts and locknuts. Tighten securely.
7. Attach the chain coupler guard to gearbox base with two 3/8" x 3/4" bolts and washer locknuts.

Table 3.2. Horsepower Requirements^a

Auger Length	13" x 41' ELECTRIC- HP
41'	20

a. Approximate horsepower requirements under normal conditions. When augering full tube of high moisture grain, additional horsepower will be needed.

Important: *Fill gearbox half full with EP90 lube oil before operating auger. Do not overfill. Failure to heed will void warranty. It is easier to fill oil into the gearbox when it is in the horizontal position.*

8. Position electric motor mount beneath auger as shown, about 1-1/2" to 2" (3.81 cm - 5.08 cm) from gearbox assembly. Secure with two halfbands and four 7/16" x 1-1/4" bolts and locknuts.
9. Slide the 15" pulley onto gearbox shaft with hub facing gearbox. Insert 1/4" x 1-1/2" square key, then tighten securely.

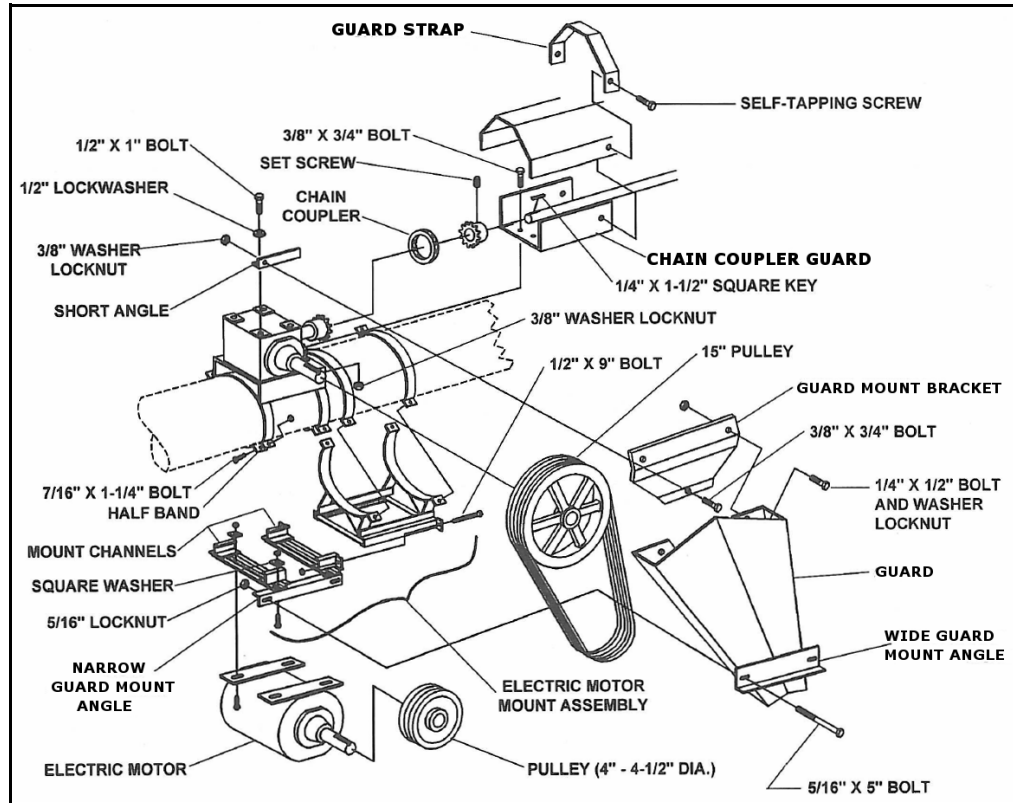


Figure 3.7

STEPS 10. THROUGH 17. MAY BE COMPLETED AT THIS TIME OR AFTER AUGER TUBE AND UNDERCARRIAGE ASSEMBLY IS COMPLETED.

10. Place drive pulley onto motor shaft, then insert square key and tighten set screws. (A 4" to 4-1/2" pulley is recommended. Pulley and square key are not supplied).
11. Attach electric motor to motor mount with four bolts and locknuts (not provided) and four square washers (provided). The square washers go inside the mount channels.
12. Attach the "narrow" guard mount angle to the motor mount channels with two 7/16" x 1-1/4" bolts, square washers, and locknuts. Align angle with outside edge of the mount channels.
13. Place belts on the pulleys and apply slight tension. Align the two pulleys with a straight edge, then tighten set screws.
14. Apply final tension to belts with the 1/2" x 9" adjusting bolts on the motor mount.

Note: *The correct operating tension is the lowest tension at which the belts will not slip under peak load conditions.*

15. Place the short angle on top of the gearbox as shown and attach with two 1/2" x 1" bolts and lockwashers.

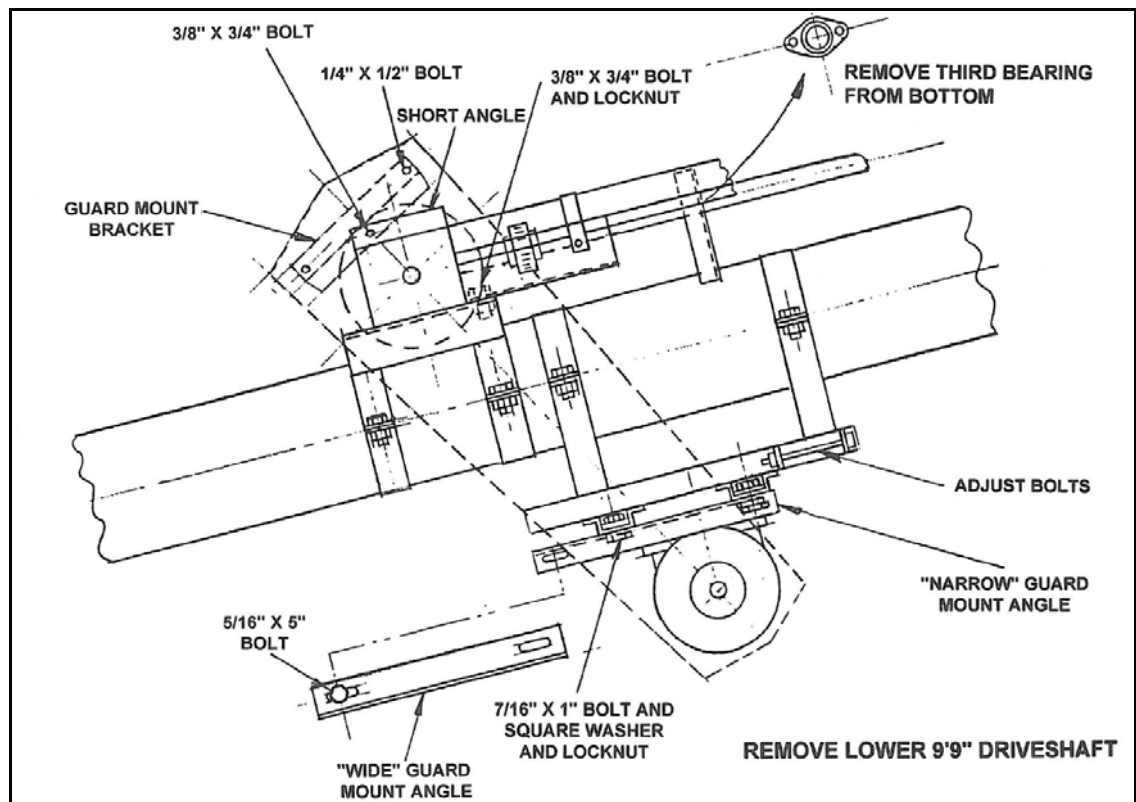


Figure 3.8

16. Attach the guard to gearbox assembly by bolting the guard mount bracket to the short angle with one 3/8" x 3/4" bolt and washer locknut.
17. Secure the other end of guard by bolting the "wide" guard mount angle to the "narrow" guard mount angle with two 5/16" x 5" bolts and locknuts. Adjust the width of guard at the motor pulley to suit the pulley diameter.

When using an electric motor:

- The motor and controls should be installed by a qualified electrician in accordance with all local and national codes.
- Incorporate a magnetic starter to protect the motor.
- The motor must have a manual reset button.
- Locate reset and starter controls 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.
- A main power disconnect switch capable of being locked (in the off position only) must be provided.

3.7. DRIVESHAFT SHIELD

Before installing the driveshaft shields, refer to Table 3.3 for the proper sequence for your particular auger. Install shields working from the gearbox assembly up to the discharge end.

To install:

1. Place driveshaft shield against gearbox and over chain coupler guard, then secure with a guard strap and 2 self-tapping screws (Figure 3.6).
2. To install remainder of the driveshaft shielding, work from the bottom up. Shields should overlap at bearing support brackets (Figure 3.9).

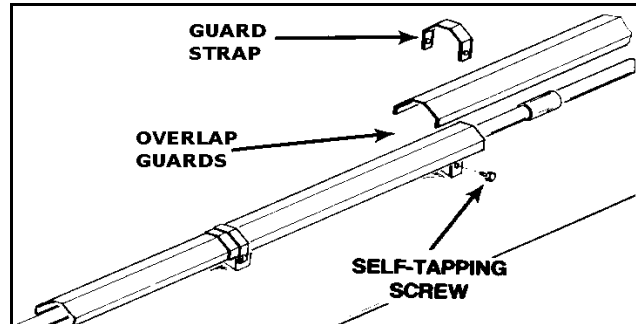


Figure 3.9

Note: When installing driveshaft shielding, refer to step 1 in Table 3.3.

3. Fasten with shield strap and self-tapping screws. Do not tighten until all shielding is in place.

Table 3.3 Driveshaft Shielding Sequence

STEP	130-41 SD		130-41 EMD	
	QTY	LENGTH	QTY	LENGTH
1	1	60" (1.52 m)	1	60" (1.52 m)
2	3	42" (1.07 m)	5	48" (1.22 m)
3	5	48" (1.22 m)	1	42" (1.07 m)
4	1	42" (1.07 m)	-	-

3.8. DISCHARGE SPOUT

1. Attach discharge spout with two 7/16" x 1-3/4" bolts and locknuts (Figure 3.10).

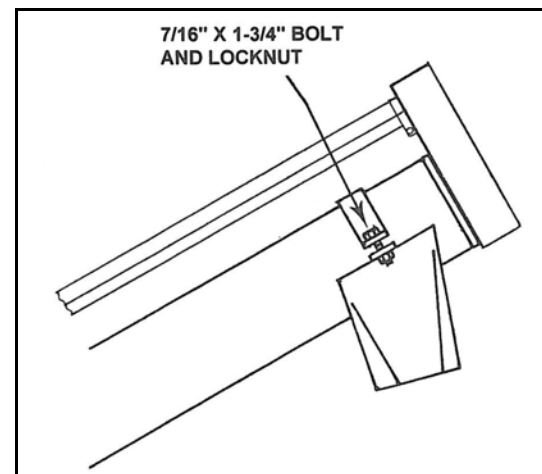


Figure 3.10

3.9. TRANSPORT UNDERCARRIAGE

See Figure 3.11 to 3.15.

1. To assemble undercarriage, fasten the lower reach arms to axle with three 7/16" x 1-1/4" bolts and locknuts on each side.
2. Attach long crossmember to bottom of undercarriage brackets as shown, with two 7/16" x 1-1/4" bolts and locknuts.
3. Attach the short crossmember to lower reach arms with two 1/2" x 1-1/4" bolts and locknuts.

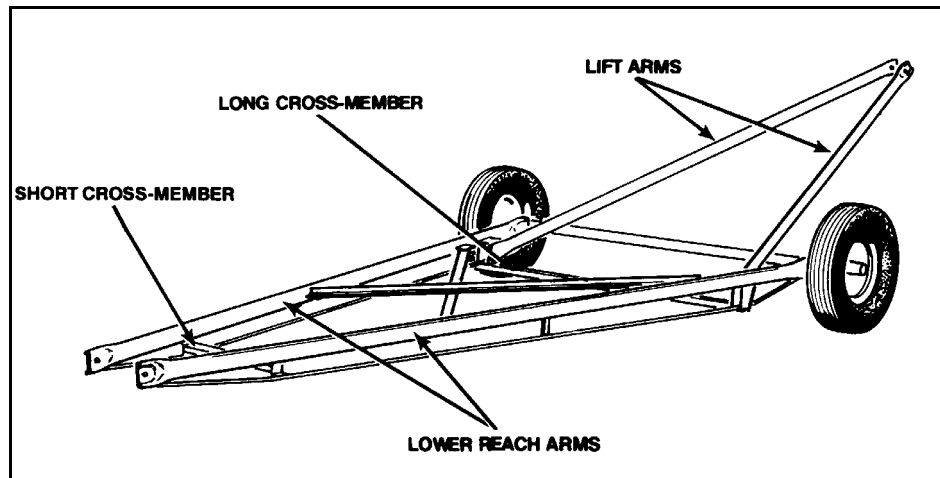


Figure 3.11

4. Wheel hub assembly:
 - a. Remove any dirt or paint from spindle and hub.
 - b. Thoroughly pack wheel bearings and cups with a good grade of bearing grease.
 - c. Place large bearing into hub and carefully tap in seal.
 - d. Slip hub onto spindle and insert small bearing.
 - e. Tighten slotted spindle nut until hub drags slightly. Back off nut about 1/4 turn until hub turns freely.
 - f. Install cotter pin and dust cap.

Note: *Installing tires may not leave you with enough clearance to position and attach undercarriage once auger tube is raised. If so, install wheels after assembly is complete.*

- g. Check that pressure of pre-inflated tires matches pressure indicated on tire sidewall. Mount wheels on hubs and attach with six 1/2" x 1-3/4" wheel bolts.

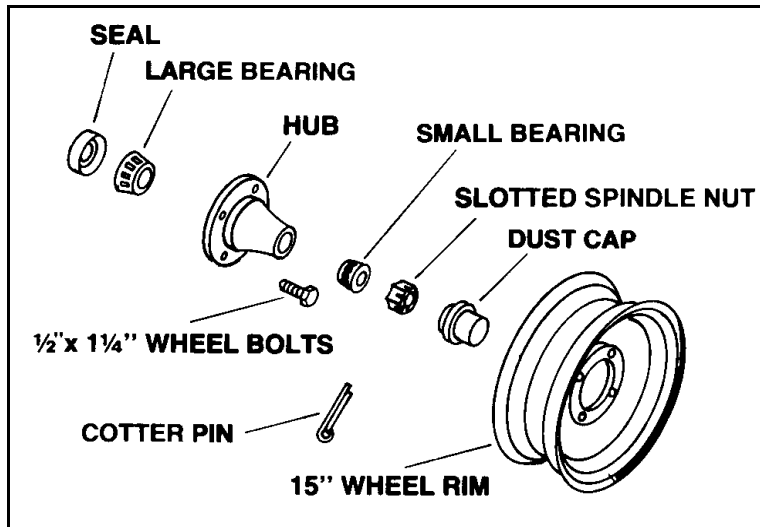
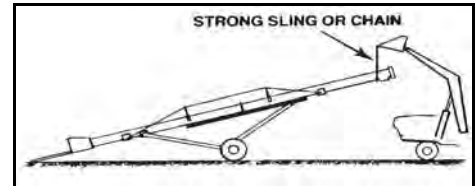


Figure 3.12

5. Fasten upper lift arms to lower reach arms with 3/4" x 2" bolts and locknuts. Do not over-tighten. Tighten snug only; these bolts act as pivot points.
6. Raise the discharge end of auger with a front end loader and a strong sling / chain or block and tackle. The height should be sufficient to clear undercarriage assembly.



WARNING	
	<p>Do not remove tube support until auger is fully assembled.</p>

7. Position transport undercarriage beneath tube assembly and attach lower reach arms (Figure 3.13) to mounting bracket on bottom tube with 3/4" x 2" bolts and locknuts. Do not over-tighten. Tighten snug only as these bolts act as pivot points.

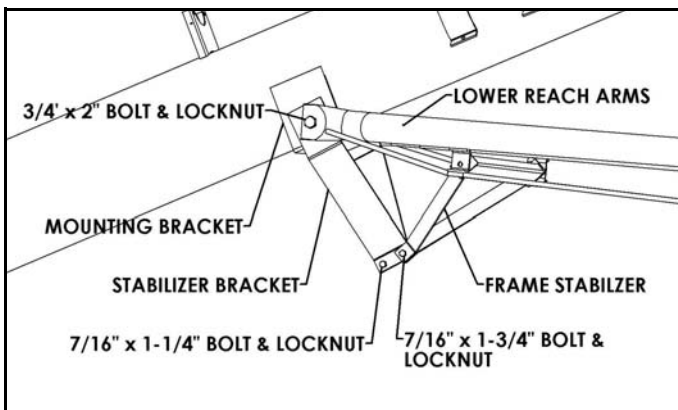


Figure 3.13

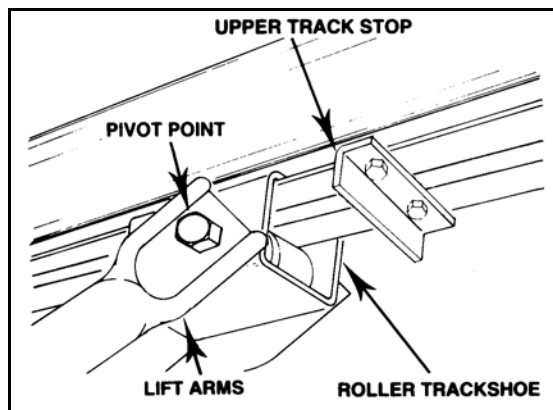


Figure 3.14

8. Attach upper lift arms to roller track shoe with one 3/4" x 6-1/2" bolt and locknut. Do not over-tighten. Tighten snug only; this bolt acts as a pivot point (Figure 3.14).
9. Lower upper end of auger slowly until the roller track shoe rests against the track stop.

3.10. WINCH & LIFT CABLE

1. Attach cable to winch using one of the 2 methods shown, depending on supplied winch.
 - If method 2 is used, the nut must be on the outside of the drum to prevent damage to the cable. Leave about one inch (2.54 cm) of cable extending past the clamp. Cable must leave winch from bottom side.
2. The winch must have a minimum of 3 wraps of cable on drum when auger is in transport position.
3. Attach winch to winch mount with three 3/8" washer locknuts.

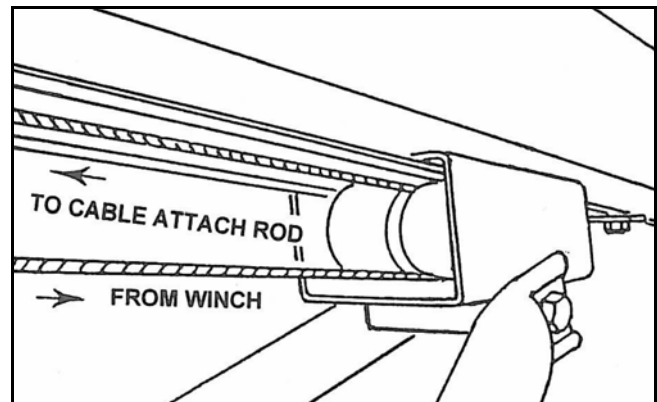
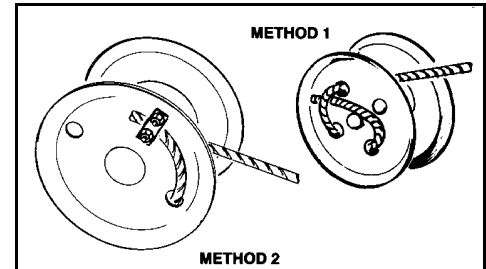


Figure 3.15

Important: *Winch handle must be positioned on the left side of the auger (determine left by standing at the intake end, facing the discharge end).*

4. Thread lift cable under and around roller on track shoe, then back to cable attach rod welded to lower end of track.
5. Wrap cable 1-1/2 times around the cable attach rod and secure with three cable clamps. Position cable clamps as shown in Figure 3.16 and 3.17. Tighten cable clamps securely.

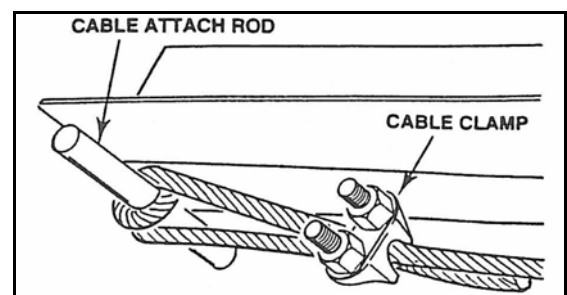


Figure 3.16

Note: *Make certain cable is properly seated in cable groove before raising auger.*

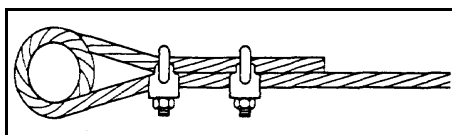



Figure 3.17

3.10.1. WINCH HANDLE

This auger may use one of several different winch models. Before installing handle on the main winch assembly, check the model number stamped on winch housing and follow the correct set of instructions.

CAUTION	
	<p>Winch handle assembly must follow the instructions below. Improper assembly will result in sudden winch failure causing damage to equipment and/or personal injury.</p>

MODEL K2550

1. Slide handle over flat sides of input shaft.
2. Fasten with 1/2" locknut.

Important: *Do not remove or loosen the locknut on brake side of winch: it is an important part of the brake system of the winch.*

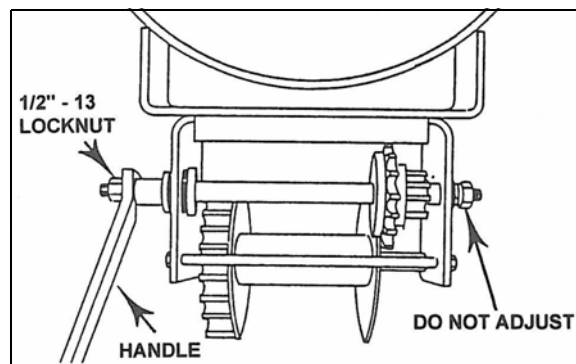


Figure 3.18

3.11. UPPER HOUSING LUBRICATION

Fill enclosed upper drive housing with grease.

2200 g	78 oz
--------	-------

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

3.12. PLASTIC MANUAL HOLDER

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

1. Attach holder to the lower frame arms. Manual holder must be accessible at all times, whether frame is up or down.
2. The manual holder cap must face up (towards the intake end). Attach manual holder with supplied zip ties. Tighten the zip ties, securing the holder in place.

Note: *Where possible, attach the zip ties above a frame brace tab to prevent the manual holder from slipping down the lower frame arms.*

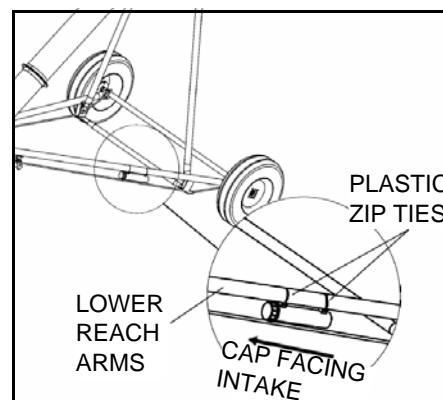


Figure 3.19

3.13. MODEL DECAL PLACEMENT

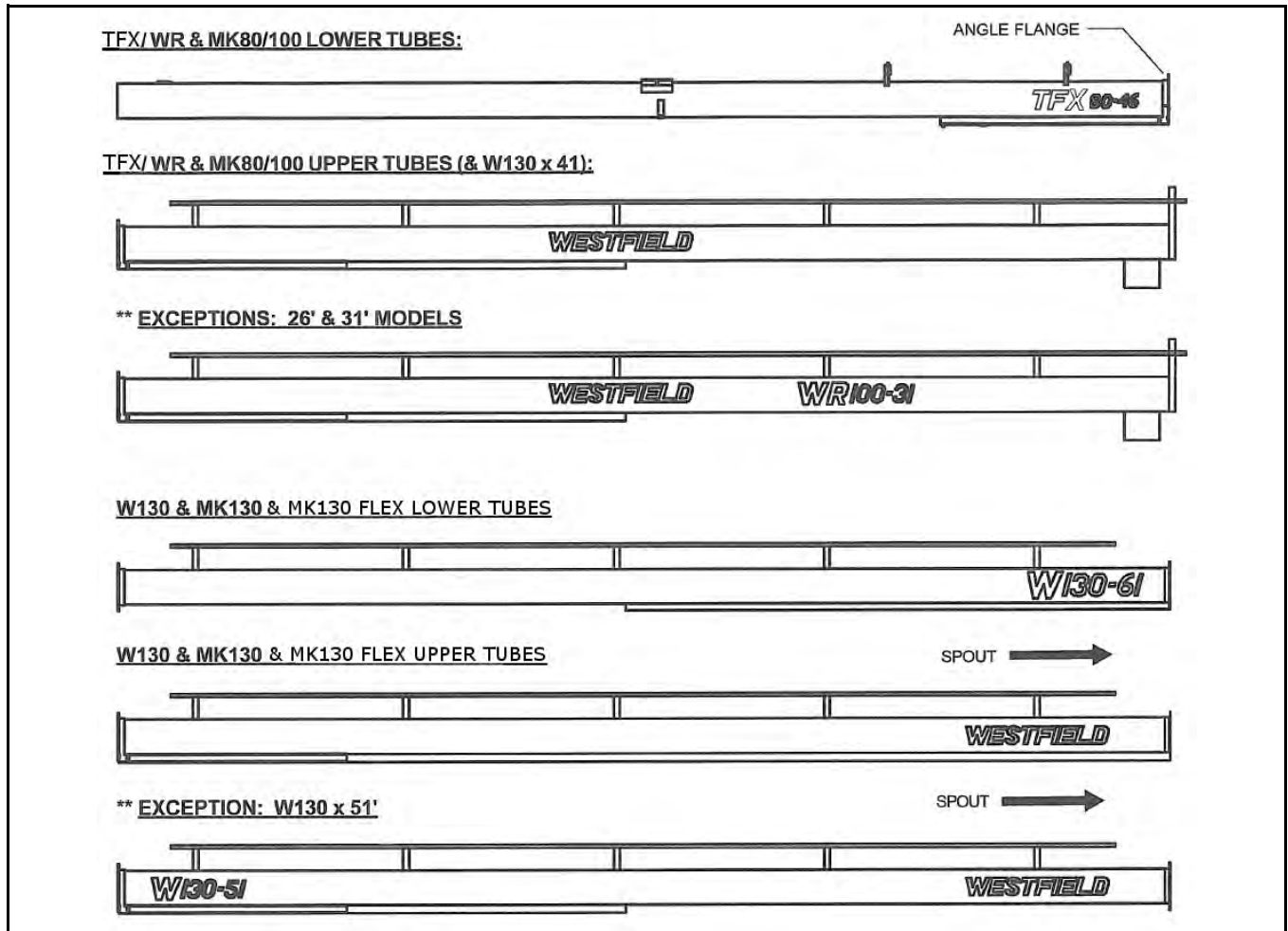


Figure 3.20

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

For most decal placement, follow the figure above. Apply decals to both sides of auger tube.

Lower Tubes: Place decals just below the angle flange, centered on the tube. Decals must be easily seen from the ground when auger assembly is complete. (For 36' augers, the model decal can be located in the center of the lower tube.)

Upper Tubes: Place Westfield decals in the center of the upper tube, where they are easily seen from the ground when auger assembly is complete. For the W130 & MK130 series, the Westfield decal is located at the top end of the upper middle tube.

4. Transport & Placement

Warning: Before continuing, ensure you have read and understand the relevant information in the safety section. Safety information is provided to help prevent serious injury, death, or property damage.

4.1. TRANSPORT PROCEDURE

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

1. If auger is raised, place 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 & Completion" on page 37.
2. Lock winch: turn handle clockwise until 2 clicks are heard.

Important: *The winch must have a minimum of 3 wraps of cable on drum when auger is in transport position.*

3. Place and secure hitch pin and safety chain. The safety chain should be threaded through handle on the lower tube and wrapped around auger tube before attaching to the towing vehicle (Figure 4.1).

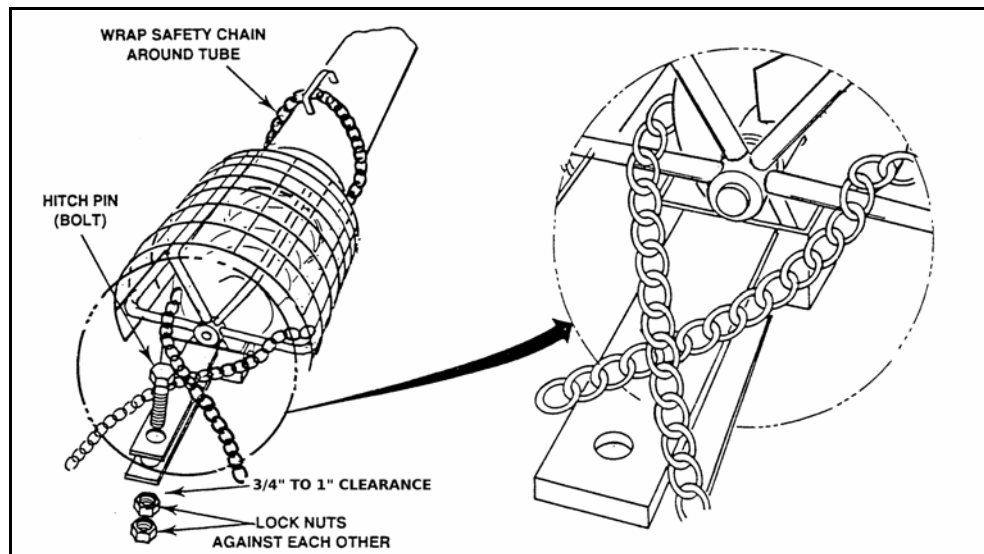



Figure 4.1

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

4. Be aware of overhead obstructions and electrical wires and devices. The 130-41' augers need a minimum clearance of 13'7" (4.11 m) in normal transport position.

5. Refer to "Transport & Placement Safety" on page 11 for important safety information before towing.


CAUTION	
	If auger wheels are partially or fully buried in snow or grain, failure to clear area around the wheels before moving may cause damage to the auger or result in serious injury.

4.2. PLACEMENT PROCEDURE

1. Ensure towing hitch is in place and secure.

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

2. Before raising or positioning auger, make sure that entire area in line of travel, both on the ground and overhead, is clear of any obstructions or electrical wires.

WARNING	
	If auger wheels are partially or fully buried in snow or grain, failure to clear the area around the wheels before moving may cause damage to the auger or result in serious injury.

3. Ensure auger is on reasonably level ground when raising, lowering, or positioning.

Note: Make certain cable is properly seated in cable groove before raising auger. Refer to Figure 3.25.

4. To raise auger, turn winch handle clockwise. Use a firm grip on winch handle; do not release unless the ratchet pawl is fully engaged.

NOTICE	
Do not turn winch handle counter-clockwise except when lowering auger or severe damage to winch will occur.	

Important: Winch must make clicking sound when raising auger. If clicking stops, retain grip on handle, lower auger fully, and repair ratchet.

5. To raise auger, turn winch handle clockwise. Use a firm grip on winch handle; do not release unless the ratchet pawl is fully engaged.

Note: Do not turn winch handle counter-clockwise except when lowering auger or severe damage to winch will occur.

WARNING



Never attempt to increase height of auger by positioning wheels on lumber, blocks, or by any other means. To do so will result in damage to equipment and/or personal injury.

➔ **PTO Models Only:** *The driveline is non-separable. Remove from tractor and secure in transport saddle on auger before moving tractor away from auger.*

6. Move the auger into working position slowly. Do not unhitch and attempt to move auger by hand.
7. Once auger is in position, chock wheels on both sides and apply the park brake on the tractor (or chock its wheels as well) to prevent movement during operation.

Important: *When releasing auger from the towing vehicle, test the intake end for downward weight. Do not raise the intake end above drawbar height. When the intake end is elevated too high with auger in raised position, the balance of weight quickly transfers to the discharge end, causing it to upend. Ensure proper anchoring/support.*

8. When operating auger in the raised position, rest the discharge end lightly on the bin roof, or tie to bin to prevent wind from toppling auger. When operating the auger in a freestanding position, anchor the intake end.
9. Anchor and/or support auger during operation.
 - When lower half of auger empties of grain, the weight balance transfers to upper end of auger, which can cause upending.
10. See “Lowering & Completion” on page 37 for correct lowering procedure.

CAUTION



Do not use auger as a hoist to raise any object regardless of weight. This will create an unsafe condition and will void warranty.

5. Operation

Warning: Before continuing, ensure you have read and understand the relevant information in the safety section. Safety information is provided to help prevent serious injury, death, or property damage.

Operators must observe safety procedures at all times and follow the pre-operational checklist before each start-up.

Pre-Operational Checklist

Before operating auger each time, the operator must confirm the following:

- All fasteners are secure as per assembly instructions.
- ➔ • **PTO SD Models:**
 - Driveline is connected and secure.
 - Driveline shield rotates freely.
- ➔ • **EMD Models:**
 - Drive belt(s) are not frayed or damaged.
 - Drive belt(s) are properly adjusted and aligned.
- Lift cable is not frayed or damaged.
- Lift cable is properly seated in cable sheaves.
- Cable clamps are secure.
- Tube alignment is reasonably straight.
- Auger wheels are chocked, and
- ➔ • **PTO SD Models:** tractor wheels are chocked or the parking brake has been engaged.
- Intake area and discharge spout are free of obstructions.
- Proper maintenance has been performed.

5.1. AUGER DRIVE & LOCKOUT PROCEDURE

Drive Type	Before Operation	Lockout
Electric Motor	Before starting motor, ensure <ul style="list-style-type: none"> • motor is properly grounded • pulley shields are in place and secure 	The electric motor should be equipped with a main power disconnect switch capable of being locked in the off-position only. The switch should be in the locked position during shutdown or whenever maintenance is performed on the auger. <ul style="list-style-type: none"> • If reset is required, disconnect all power before resetting motor.


Drive Type	Before Operation	Lockout
PTO Drive-line	Before starting, ensure <ul style="list-style-type: none"> • PTO driveline is securely attached to the tractor and jackhaft • tractor park brake in engaged and/or wheels are chocked • you are not exceeding the maximum operating length of 80" (2016 mm) of the PTO driveline or maximum angle of 15° • PTO drive on the tractor is in the off position 	Shut off tractor's engine and remove key from tractor. <ul style="list-style-type: none"> • If removing key is impossible, remove PTO driveline from tractor.

5.2. OPERATING PROCEDURE

5.2.1. START-UP & BREAK IN

1. Properly place auger and complete the pre-operational checklist at the beginning of this chapter. If everything is satisfactory, prepare for a 30 minute operation (**half speed for PTO**).
2. Correctly position portable grain hopper secure it to the auger with both straps (where applicable).

Important: *Anchoring and/or support auger during operation. When lower half of auger empties of grain, the weight balance transfers to the upper end of auger, which can cause upending.*

CAUTION	
	<p>Do not start auger until area is clear of all unauthorized personnel.</p> <p>Do not exceed 540 rpm on the PTO.</p>



3. Start tractor and engage PTO driveline or start electric motor (depending on model), then feed grain to auger.
4. **PTO Models:** If auger functions normally, check PTO drive at varying speeds for a period of 30 minutes.

Important: *When starting auger for the first time, be prepared for an emergency shutdown in case of excessive vibration or noise. Note that auger may run rough until tube is polished.*

5. Upon completion of initial run, shutdown auger (see section below for more information on shutting down your auger).
6. Lock out tractor and conduct a complete inspection of auger following the checklist at the beginning of this chapter.


After the initial start-up and inspection, the auger should be shut down and inspected at least three more times during the first 10 hours of operation.

Keep operation of empty auger to a minimum, as this results in excessive wear.

Once auger is broken in, the checklist should be a part of the daily routine before operating auger.

5.2.2. OPERATING WITH A FULL LOAD

1. When operating the auger, always work with a second person in a position to monitor the operation and initiate a shutdown in case of emergency.
2. Monitor the auger during operation for abnormal noises or vibrations.
3. Shut off all power before making adjustments, servicing, or clearing the machine.

DANGER	
	<p>Rotating Flighting Hazard!</p> <p>To prevent death or serious injury:</p> <ul style="list-style-type: none">• Keep away from rotating auger flighting.• Do not remove or modify auger flighting guards, doors, or covers. Keep in good working order. Have replaced if damaged.• Do not operate the auger without all guards, doors, and covers in place.• Never touch the auger flighting. Use a stick or other tool to remove an obstruction or clean out.• Shut off and lock out power to adjust, service, or clean.

USE OF GRAIN SPREADERS: Many grain spreaders cannot handle the large capacity of some augers. Some augers plug, causing damage to the flighting and other drive components. This type of damage is not covered by warranty. Hints on how to avoid this...

- Get a larger spreader, if available.
- Remove the spreader.
- Make sure spreader is turned on.
- Center auger spout on spreader.
- Do not lower auger spout into spreader.
- Suspend the spreader from bin ceiling leaving extra room for excess grain to flow over the spreader.

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.

5.2.3. SHUTDOWN

➔ PTO

NORMAL SHUTDOWN:

1. Near the end of a load, decrease auger speed until all grain is clear of machine.
2. When auger is clear of grain, disengage PTO drive.
3. Shut down and lock out tractor.

EMERGENCY / FULL-TUBE RESTART:

1. If the auger is shut down for an emergency, lock out tractor before correcting the problem.
 - If the problem is plugging, clear as much of the grain as possible using a piece of wood, wet/dry vac, or other tool before restarting auger. **Do not reach in and use your hands** even if the tractor has been locked out.
2. If auger tube is full of grain, do not restart at full speed. Engage PTO at low rpm, gradually increasing power until normal operating speed is reached.

NOTICE

Starting the auger when there is grain blockage will result in damage.

➔ EMD

NORMAL SHUTDOWN:

1. Near the end of a load, decrease the flow of grain until auger is clear.
2. Once auger is clear, stop motor and lock out power.

Note: *The flighting rpm on augers equipped with electric motors is not adjustable. To clear auger of grain, decrease the grain flow until auger is clear and stop motor.*

EMERGENCY / FULL-TUBE RESTART:

1. If the auger is shut down for an emergency, lock out motor before correcting the problem.
 - If the problem is plugging, clear as much of the grain as possible using a piece of wood, shop vac, or other tool before restarting auger. **Do not reach in and use your hands** (See “Auger Drive & Lockout Procedure” on page 33.” for lockout procedure.)

NOTICE

Starting the auger under load may result in damage to unit. Be sure there is no blockage.

5.2.4. LOWERING & COMPLETION

After operation:

1. Clean entire work area.
2. Remove all supports and chocks.
3. Move auger out of working position and lower fully (see shaded box that follows for lowering procedure).
4. Move auger to the next work area or to a storage area and then clean out.

LOWERING

1. **For PTO drives:** disconnect driveline from tractor before lowering.
2. Ensure area beneath auger is clear.
3. Turn winch counterclockwise to lower (no clicking sound when lowering).
4. After lowering, turn handle clockwise until you hear 2 clicks to lock brake.
 - Use a firm grip on handle. Do not release unless ratchet pawl is fully engaged.
 - The winch is designed for manual operation only.
 - When lowering, never continue to turn handle counterclockwise if the cable does not keep moving out under load. This will disengage the brake mechanism and create an unsafe condition. If this happens, winch in slack cable and correct problem.

Do not leave auger in raised position when not in use. Auger could drop rapidly due to a cable break. High winds may also upset auger.

5. Clean out auger.
 - a. Shut off tractor engine and lock out power.
 - b. Manually clean out grain with a piece of wood, vacuum cleaner, or other tool. Do not use hands.
6. Prepare for transport and placement or storage (see appropriate chapters for more information).

6. Maintenance & Storage

Warning: Before continuing, ensure you have read and understand the relevant information in the safety section. Safety information is provided to help prevent serious injury, death, or property damage.

Proper maintenance habits on the 130-41' auger mean a longer life for the machine and a more efficient and safer operation.

6.1. GENERAL MAINTENANCE PROCEDURES

Please follow the guidelines below.

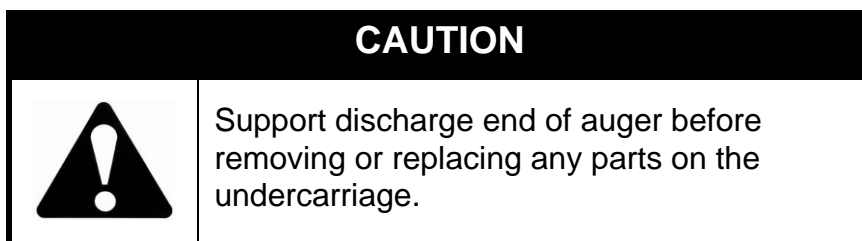
Area	Maintenance	Frequency
General	While auger is in use, observe the "Pre-Operational Checklist" on page 33.	Daily
General	Check all operating, lifting, and transport components. Replace damaged or worn parts before using auger. For replacement instructions, see Assembly Section.	Regularly
Lift Cable	Check and replace if frayed or damaged. Make sure cable clamps are secure.	Periodically
Wheel Hubs	Repack with lithium-based grease.	Every 2–3 years
Tire Pressure	Check with a pressure gauge. Pressure should be maintained according to tire sidewall recommendation.	Monthly, or if it seems low
PTO Driveline	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.	Yearly
Upper chain drive	Fill enclosed upper drive housing to plug level with grease. 130: 3400 g (120 oz) For continuous use in extreme cold, semi-fluid arctic grease or heavy oil may be used	Yearly
Drive Chain Adjustment	Maintain 1/4" - 1/2" (0.64 cm - 1.27 cm) chain deflection. To adjust, loosen bolts on top bearing in the upper drive housing, adjust chain to proper tension, and re-tighten bolts	Regularly
Intake Bushing	Lubricate.	Daily
Gearbox	Maintain oil level at half full (center of cross shaft) with EP90 lube oil. Gearbox should be level when checking or refilling Do not overfill	Oil must be added to gearbox before operating, and then regularly as needed
Drive Belt	Check and replace if frayed or damaged. Ensure tension is correct under load (correct tension is the lowest at which the belts will not slip under peak load conditions)	Frequently

Area	Maintenance	Frequency
Winch Note: Service winch with auger in fully lowered position and cable slack.	Keep a film of grease on gears.	Regularly
	Oil the ratchet pawl pivot, bushings, and pinion threads. Do not get oil or grease on brake discs.	Occasionally
	Replace brake discs if less than 1/16" thick.	As required
	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	Regularly
Truss Cables	Adjust to keep auger tube reasonably straight.	As necessary

6.2. GENERAL STORAGE PROCEDURES

TO PROTECT AUGER IN STORAGE DURING THE OFF-SEASON:

1. Lower the auger to full down position with slight tension on the cable.
2. Lubricate all grease fittings according to the maintenance procedure.
3. Inspect auger for damage and note any repairs required. Order replacement parts from your dealer.
4. Check tire pressure and inflate according to side wall recommendations.
5. Clean and re-lubricate the spline on PTO driveline. Cover PTO driveline with a plastic bag to protect it from the weather and place it in the transport saddle.
6. Cover motor with protective covering to protect from weather (where applicable).
7. Tow auger to storage area. Park and chock wheels.



TO PREPARE AUGER FOR USE AFTER STORAGE:

1. Check tire pressure and inflate according to side wall recommendations.
2. Tow auger to work site.
3. Remove cover from spline of PTO driveline and re-lubricate.
4. Check oil level in gearbox and refill if necessary (half full only).
5. Replace any damaged parts and decals.
6. Check and perform general maintenance before using auger.
7. Before raising auger after storage, make certain cable is in good condition, replacing it if frayed or damaged. Also make sure cable is properly seated in roller track and that cable clamps are secure.
8. On augers equipped with lubricated upper drive, check level annually and add as needed (fill to plug level).
9. Remove protective covering from motor (where applicable).

Note: *Use only genuine Westfield replacement parts or equivalent. Replacement parts such as intake guards, pulley guards, PTO driveline shields, winches and lift cables must meet ASAE standards or serious injury may result. Use of unauthorized parts will void warranty. If in doubt, contact Westfield or your Westfield dealer. Do not modify any auger components.*

7. Troubleshooting

Problem	Possible Cause	Remedy
<p>Excessive noise or vibration.</p> <p>*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 grade are fed, continue with troubleshooting below</p>	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.
	Truss cables incorrectly adjusted.	Support end of auger and adjust cables so auger is flat or curves slightly upwards.
	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.
<p>Drive belts jumping off pulleys.</p>	Motor misaligned.	Ensure drive and driven pulleys are correctly aligned.
	Belts mismatched.	Check manual for correct belt sizes and only replace in pairs.
	Belt tension inadequate.	Maintain correct tension as per manual.
	Using a lower horsepower motor than recommended.	See manual for recommended motor sizes.
<p>Shear bolts fail repeatedly.</p>	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, gear-box, etc.).	See maintenance section.

Problem	Possible Cause	Remedy
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.

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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