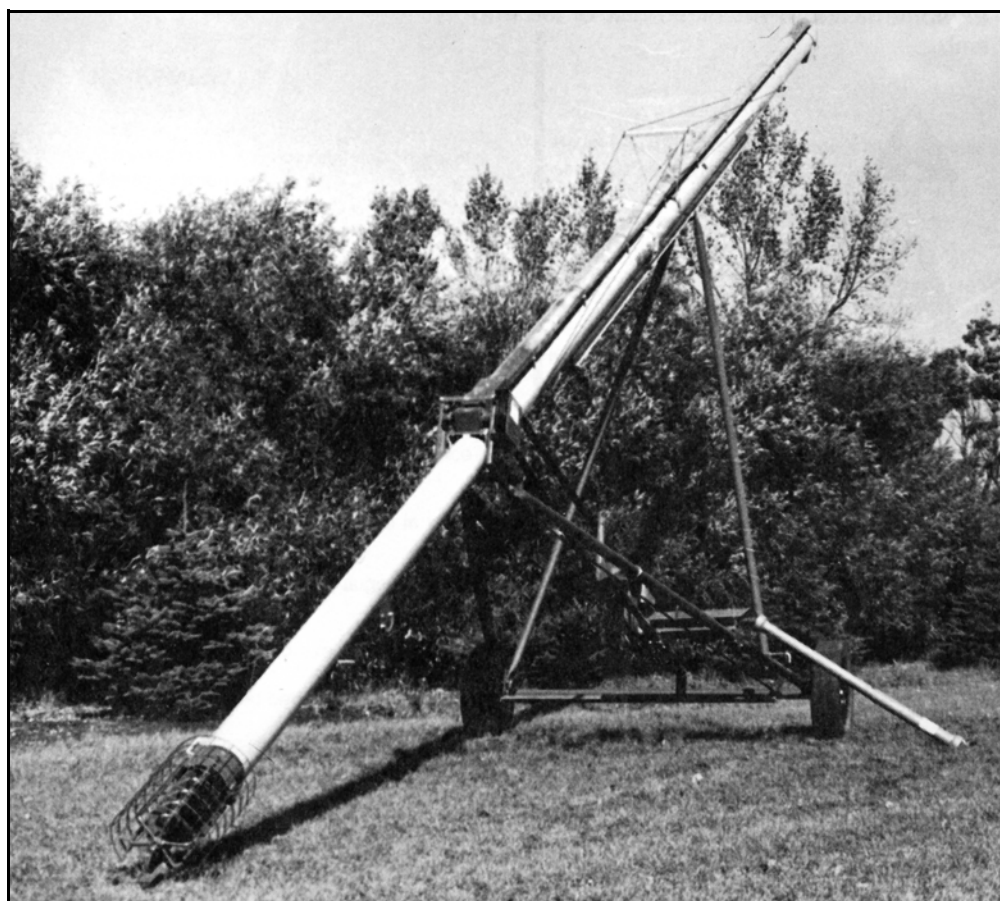




# GRAIN AUGER

## WR 60/80 X 36' - 51' PTO-BD MODELS ASSEMBLY & OPERATION MANUAL



WR PTO-BD Augers covered in  
this manual:

60-36, 60-41

80-36, 80-41, 80-46, 80-51

### 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: 30253 R1

Revised: 3/8/15



This product has been designed and constructed according to general engineering standards<sup>a</sup>. 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.

[illegible]

- 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, EN Standards, and/or others.



# TABLE OF CONTENTS

<b>1. Introduction .....</b>	<b>5</b>
1.1. Equipment Purpose .....	6
1.1.1. General Description .....	6
1.1.2. Intended Use .....	6
1.1.3. Misuse .....	6
<b>2. Safety .....</b>	<b>7</b>
2.1. Safety Alert Symbol and Signal Words .....	7
2.2. Basic Operator Safety, Responsibilities, & Qualifications .....	7
2.2.1. Personal Protective Equipment (Required to be Worn) .....	8
2.2.2. Safety Equipment Required .....	8
2.3. Drives and Lockout Safety .....	8
2.3.1. PTO Driveline Safety .....	9
2.4. Rotating Parts Safety .....	9
2.5. Rotating Flighting .....	9
2.6. Overhead Power Lines .....	10
2.7. Tire Safety .....	10
2.8. Safety Decals .....	10
2.8.1. Decal Installation/Replacement .....	11
2.8.2. Safety Decal Locations and Details .....	11
<b>3. Assembly .....</b>	<b>19</b>
3.1. Assembly Safety .....	19
3.2. Check Shipment .....	19
3.3. List of Required Tools .....	19
3.4. Before You Begin .....	20
3.5. Tubes & Flighting .....	20
3.6. Track Shoe & Track Stop .....	22
3.7. Intake Hitch .....	23
3.8. Multi-Stage Driveshaft .....	23
3.9. Belt Shaft Drive Gearbox .....	24
3.10. Upper Housing Lubrication .....	24
3.11. Driveshaft Shield .....	25
3.12. Truss .....	25
3.13. Transport Undercarriage .....	26
3.14. Winch & Liftcable .....	28
3.14.1. Winch Handle .....	29
3.15. Belt Drive (BD) .....	30
3.16. PTO Driveline .....	32
3.17. Belt Drive Guard .....	32
3.18. Safety Spout .....	32
3.19. Plastic Manual Container .....	33
3.20. Model Decal Placement .....	34



# TABLE OF CONTENTS

**4. Transport & Placement ..... 35**  
    4.1. Transport & Placement Safety..... 35  
    4.2. Transport Procedure..... 36  
    4.3. Placement Procedure ..... 36

**5. Operation ..... 39**  
    5.1. Operation Safety..... 39  
    5.2. Pre-Operational Checklist..... 40  
    5.3. Operating Procedure ..... 41  
        5.3.1. Start-Up & Break-In ..... 41  
        5.3.2. Operating With A Full Load..... 41  
        5.3.3. Shutdown ..... 41  
        5.3.4. Lowering & Completion..... 42

**6. Maintenance & Storage..... 43**  
    6.1. Maintenance Safety..... 43  
    6.2. General Maintenance Procedures..... 43  
    6.3. Storage Safety..... 44  
    6.4. General Storage Procedures..... 44

**7. Troubleshooting ..... 47**

**8. Appendix..... 49**  
    8.1. Bolt Torque Values ..... 49

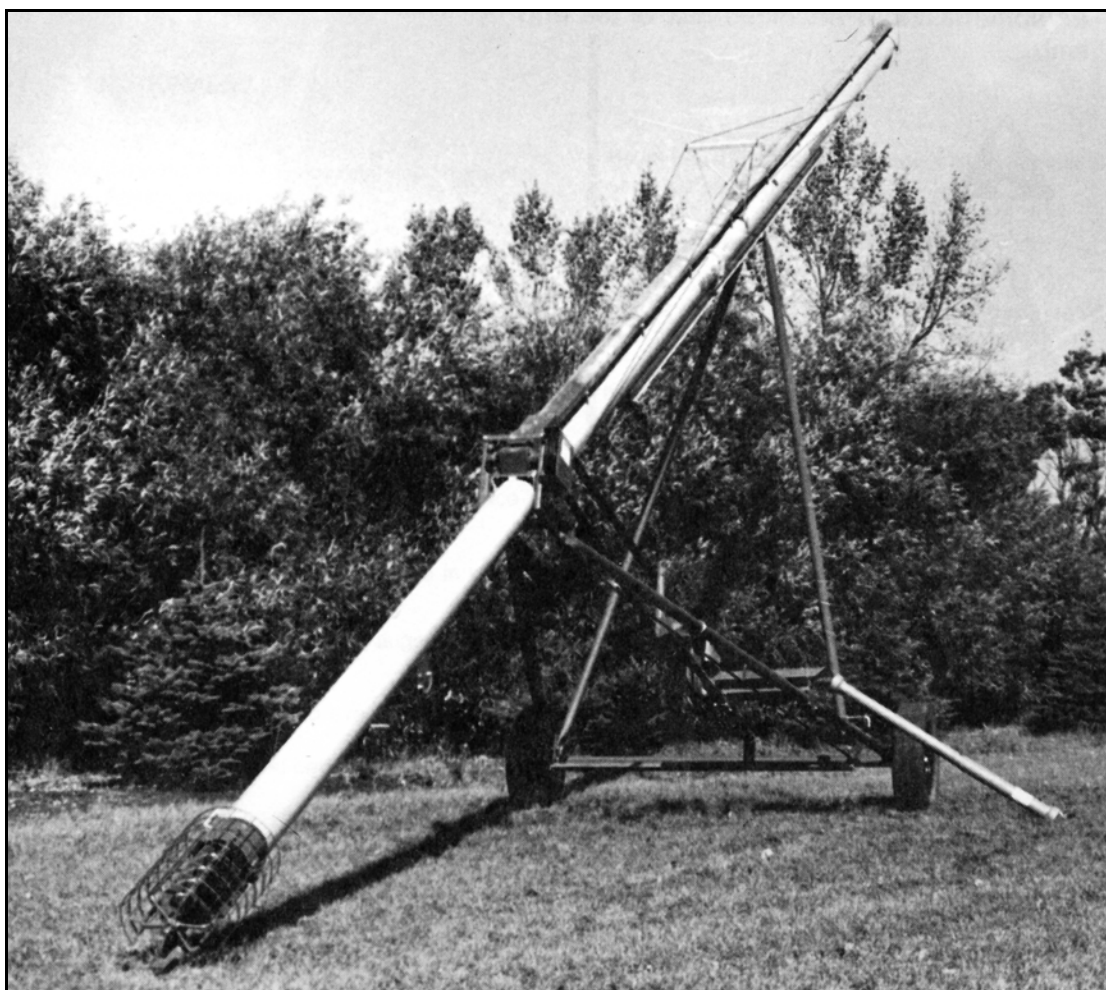
Warranty..... 51

# 1. Introduction

Thank you for purchasing Westfield 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 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.



<b>Serial Number:</b>	
Serial number is found on the right, at the top of the lower tube.	

## 1.1. Equipment Purpose

---

### 1.1.1. General Description

---

Your grain auger is designed to transport dry, free-flowing grains. The auger must be operated with all guards installed and can be used in any non-extreme weather. 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.

### 1.1.2. 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.

### 1.1.3. Misuse

---

When operating or maintaining the auger, **never**:

- auger material other than dry, free-flowing grains
- enter a grain bin or truck while loading or unloading grain with the auger
- operate the auger empty for extended periods of time
- overfeed or overload the auger
- change the size of the electric motor or pulleys to alter the auger speed
- modify the equipment
- 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. Basic Operator Safety, Responsibilities, & Qualifications

---



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.



## 2.2.1. 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

- A dust mask may be needed to prevent breathing potentially harmful dust.



### Hard Hat

- Wear a hard hat to help protect your head.



### Coveralls

- Wear coveralls to protect skin.



## 2.2.2. 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.



## 2.3. Drives and Lockout Safety

---

Inspect the power source (drive) 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.

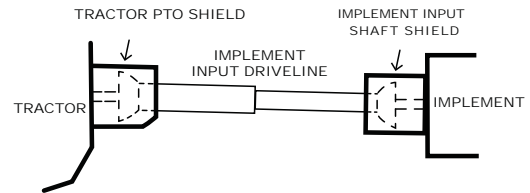


## 2.3.1. PTO Driveline Safety

### WARNING

#### Driveline

- 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.

## 2.4. Rotating Parts Safety

### WARNING

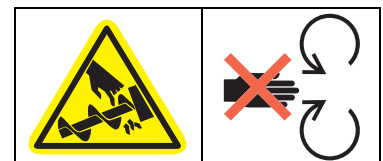
- Keep body, hair, and clothing away from rotating pulleys, belts, chains, and sprockets.
- Do not operate with any guard removed or modified. Keep guards in good working order.
- Shut off and remove key or lock out power source before inspecting or servicing machine.



## 2.5. Rotating Flighting

### 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.

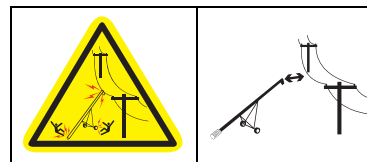


- NEVER touch the flighting. Use a stick or other tool to remove an obstruction or clean out.
- Shut off and lock out power to adjust, service, or clean.

## 2.6. Overhead Power Lines

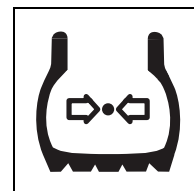
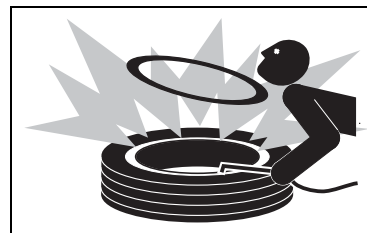


- When operating or moving, keep equipment away from overhead power lines and devices.
- This equipment is not insulated.
- Electrocutation can occur without direct contact.



## 2.7. 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.



## 2.8. 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.
- Replacement safety decals are available **free of charge** from your distributor, dealer, or factory.

## 2.8.1. 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.

## 2.8.2. 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.

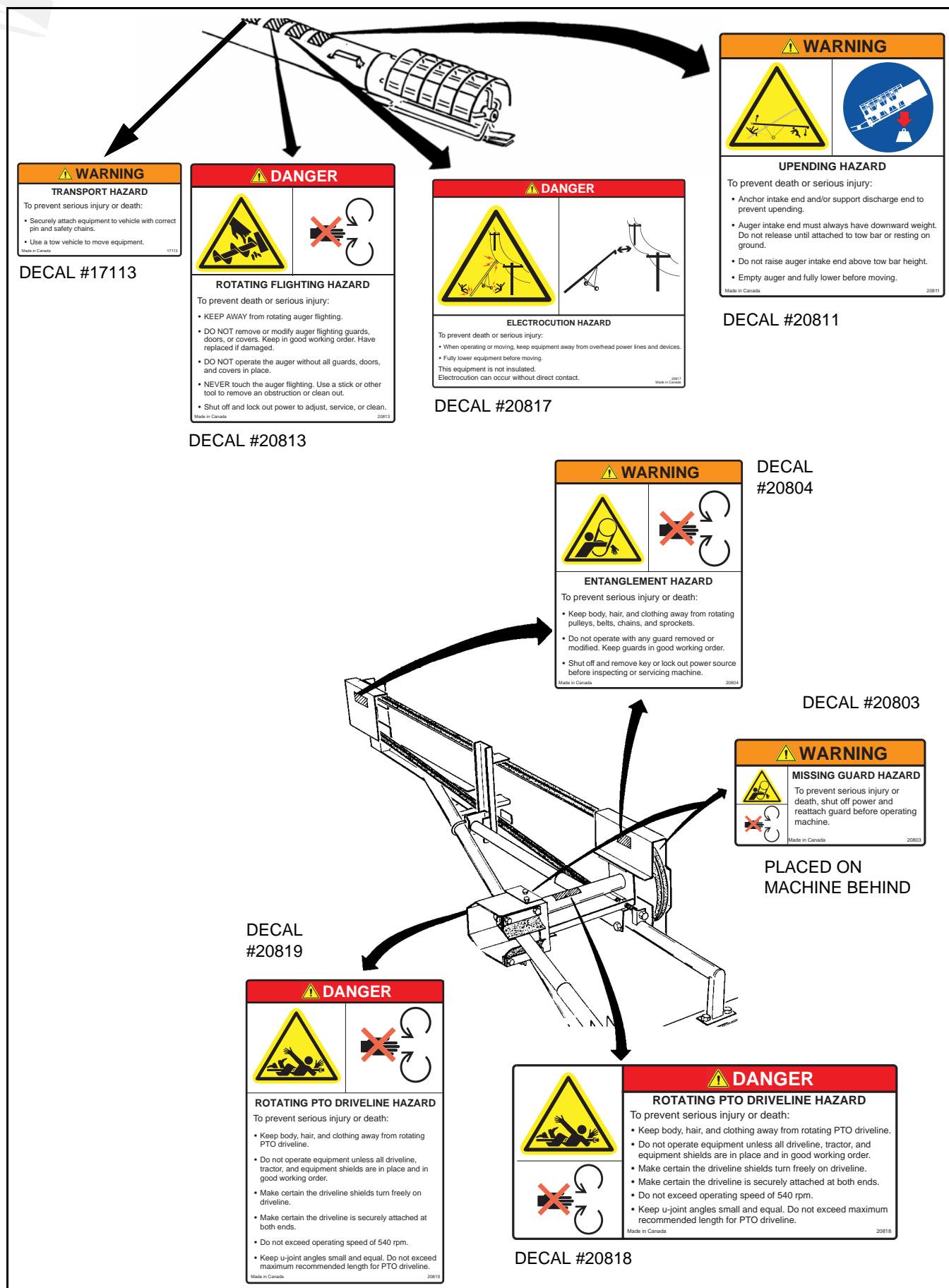


Figure 2.1

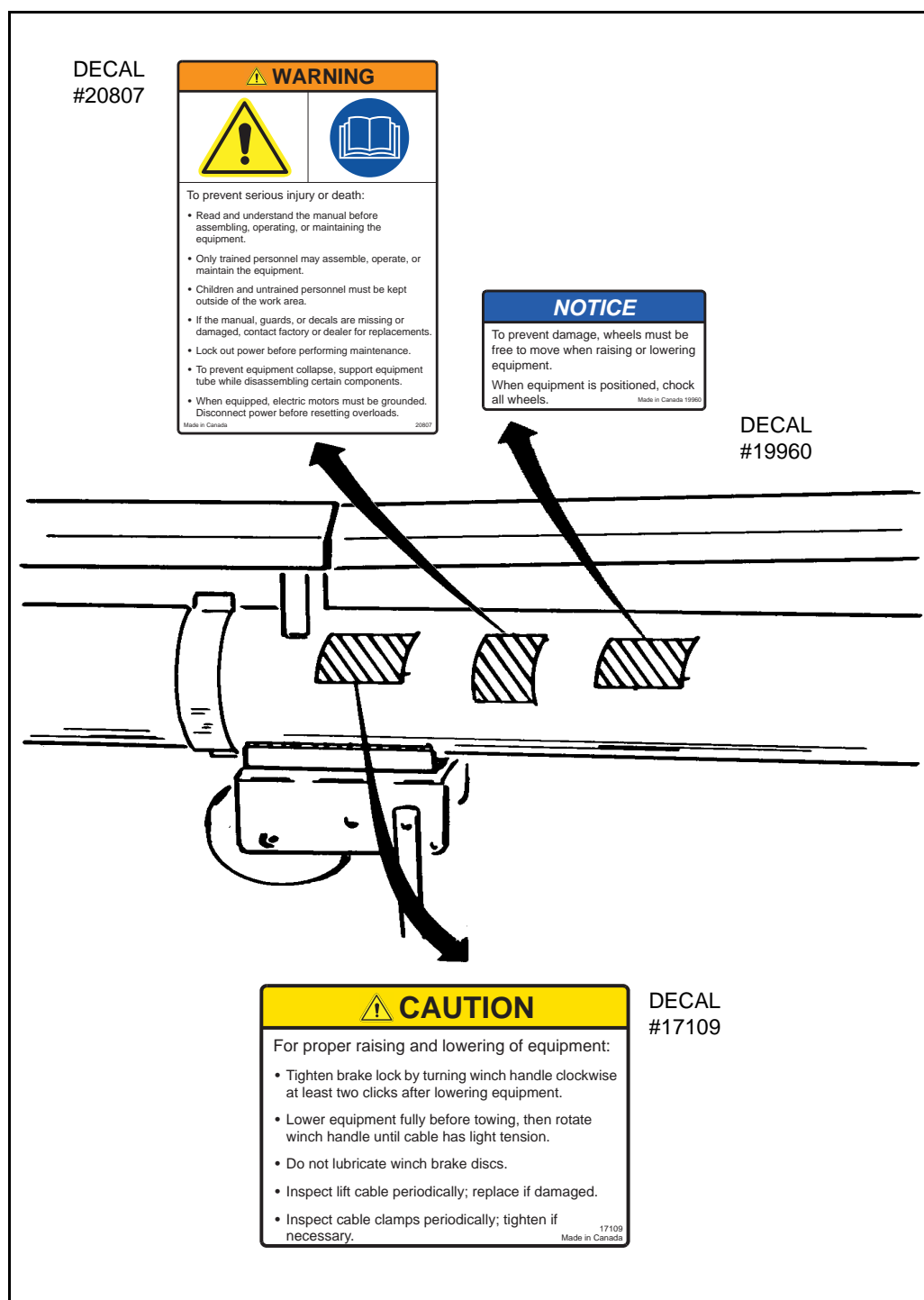
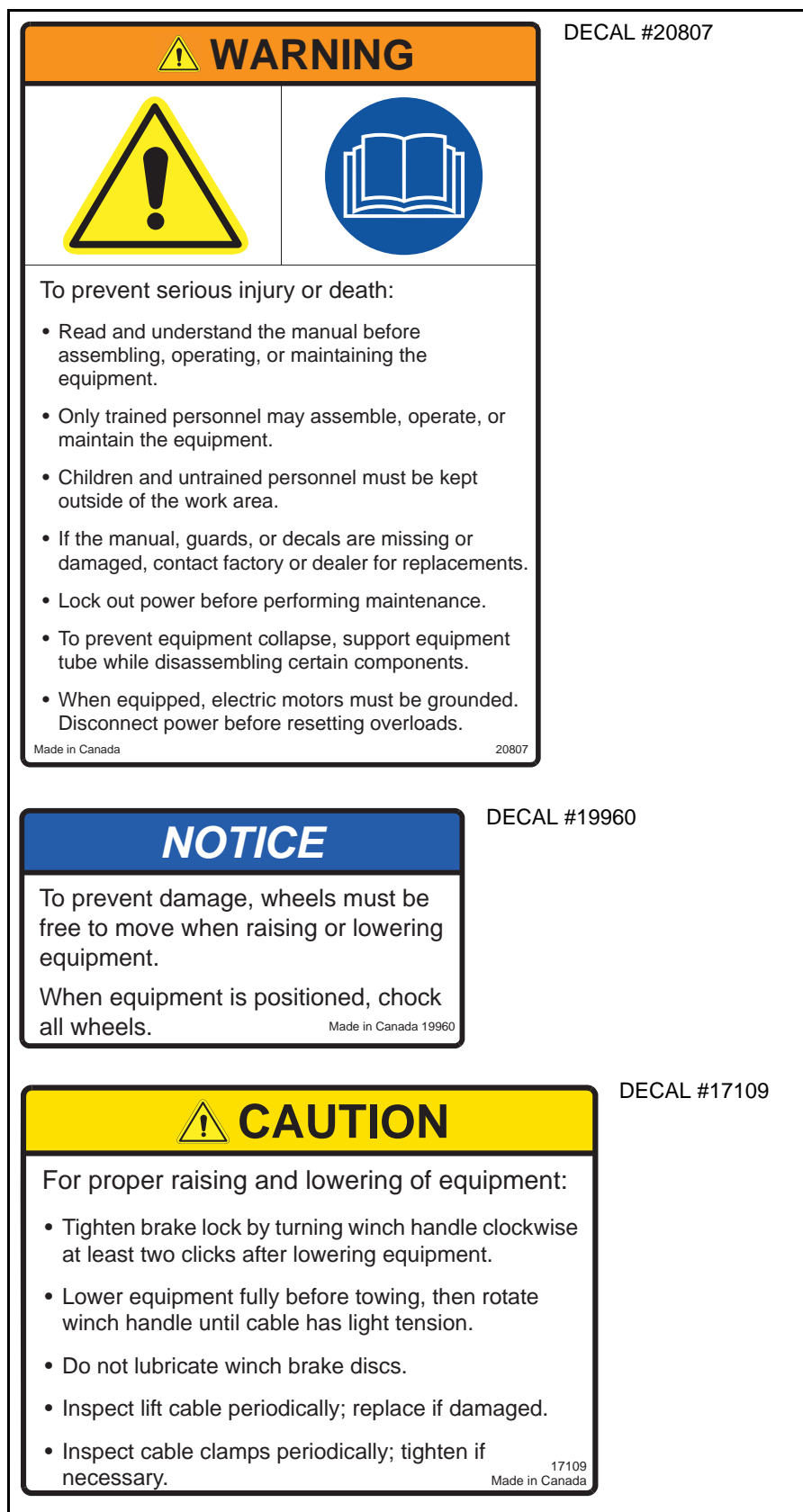
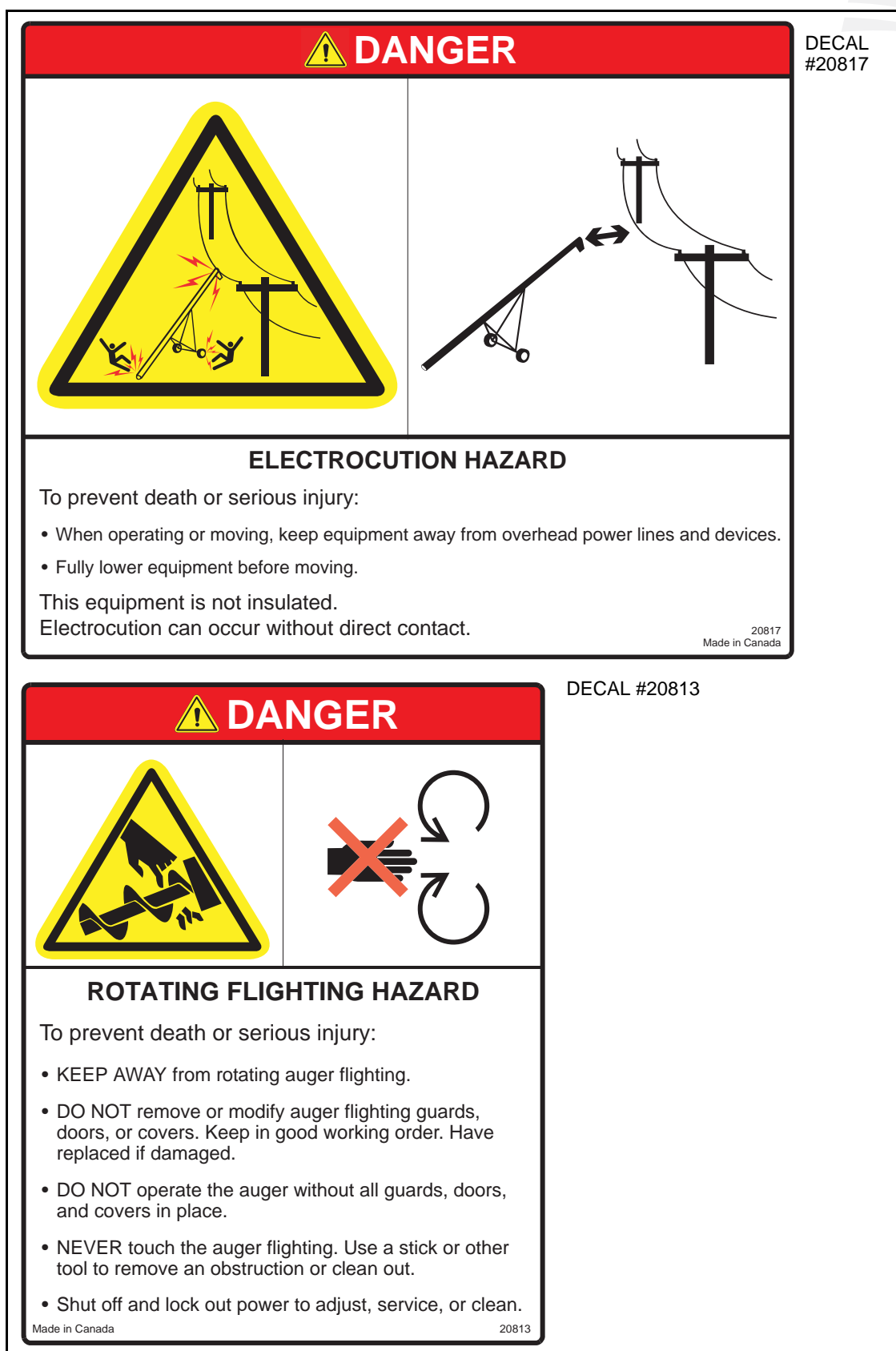


Figure 2.2




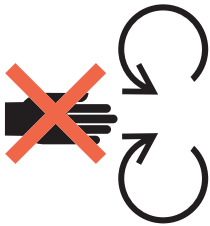
**Figure 2.3 Safety Decal Details**





**Figure 2.4 Safety Decal Details**

DECAL #20819

 <b>DANGER</b>	
	
<b>ROTATING PTO DRIVELINE HAZARD</b> To prevent serious injury or death: <ul style="list-style-type: none"> <li>• Keep body, hair, and clothing away from rotating PTO driveline.</li> <li>• Do not operate equipment unless all driveline, tractor, and equipment shields are in place and in good working order.</li> <li>• Make certain the driveline shields turn freely on driveline.</li> <li>• Make certain the driveline is securely attached at both ends.</li> <li>• Do not exceed operating speed of 540 rpm.</li> <li>• Keep u-joint angles small and equal. Do not exceed maximum recommended length for PTO driveline.</li> </ul>	
<small>Made in Canada</small> <span style="float: right;"><small>20819</small></span>	

 <b>WARNING</b>	
	<b>MISSING GUARD HAZARD</b> To prevent serious injury or death, shut off power and reattach guard before operating machine.
	<small>Made in Canada</small> <span style="float: right;"><small>20803</small></span>

DECAL #20803


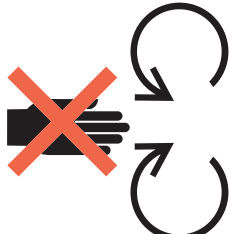

 <b>WARNING</b>	
	
<b>UPENDING HAZARD</b> To prevent death or serious injury: <ul style="list-style-type: none"> <li>• Anchor intake end and/or support discharge end to prevent upending.</li> <li>• Auger intake end must always have downward weight. Do not release until attached to tow bar or resting on ground.</li> <li>• Do not raise auger intake end above tow bar height.</li> <li>• Empty auger and fully lower before moving.</li> </ul>	
<small>Made in Canada</small> <span style="float: right;"><small>20811</small></span>	

DECAL #20811

 <b>WARNING</b>	
<b>TRANSPORT HAZARD</b> To prevent serious injury or death: <ul style="list-style-type: none"> <li>• Securely attach equipment to vehicle with correct pin and safety chains.</li> <li>• Use a tow vehicle to move equipment.</li> </ul>	
<small>Made in Canada</small> <span style="float: right;"><small>17113</small></span>	

DECAL #17113

Figure 2.5 Safety Decal Details

 	<div data-bbox="824 172 1188 235"> <b>DANGER</b></div> <div data-bbox="641 256 1364 298"><b>ROTATING PTO DRIVELINE HAZARD</b></div> <p>To prevent serious injury or death:</p> <ul style="list-style-type: none"><li>• Keep body, hair, and clothing away from rotating PTO driveline.</li><li>• Do not operate equipment unless all driveline, tractor, and equipment shields are in place and in good working order.</li><li>• Make certain the driveline shields turn freely on driveline.</li><li>• Make certain the driveline is securely attached at both ends.</li><li>• Do not exceed operating speed of 540 rpm.</li><li>• Keep u-joint angles small and equal. Do not exceed maximum recommended length for PTO driveline.</li></ul> <div data-bbox="560 709 690 730">Made in Canada</div> <div data-bbox="1393 709 1448 730">20818</div>
--	--

DECAL #20818

<div data-bbox="360 1012 766 1075"> <b>WARNING</b></div>	
	
<div data-bbox="292 1465 820 1507"><b>ENTANGLEMENT HAZARD</b></div> <p>To prevent serious injury or death:</p> <ul style="list-style-type: none"><li>• Keep body, hair, and clothing away from rotating pulleys, belts, chains, and sprockets.</li><li>• Do not operate with any guard removed or modified. Keep guards in good working order.</li><li>• Shut off and remove key or lock out power source before inspecting or servicing machine.</li></ul> <div data-bbox="186 1890 328 1911">Made in Canada</div> <div data-bbox="868 1890 928 1911">20804</div>	

DECAL #20804

Figure 2.6 Safety Decal Details



# 3. Assembly



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.

## 3.1. Assembly Safety

---

### **WARNING**

- Do not take chances with safety. The components can be large, heavy, and hard to handle. Always use the proper tools, rated lifting equipment, and lifting points for the job.
- Always have two or more people assembling the equipment.
- Make sure you have sufficient lighting for the work area.
- Tighten all fasteners according to their specifications. Do not replace or substitute bolts, nuts, or other hardware that is of lesser quality than the hardware supplied by the manufacturer.

## 3.2. Check Shipment

---

Unload the parts at the assembly site and inspect them thoroughly while comparing the packing slip to the shipment. Ensure that all items have arrived and that none are damaged.

It is important to report missing or damaged parts immediately to ensure that proper credit is received from either the manufacturer or from your distributor/dealer, and to ensure that any missing parts can be shipped quickly to avoid delaying the assembly process.

**Note:** Do not attempt to assemble or install a damaged component.

## 3.3. List of Required Tools

---

- 2-4 pipe stands
- Two sawhorses (1200 lb / 544 kg bearing capacity)
- One standard socket set and wrench set
- One torque wrench
- One standard 25' (7.62 m) tape measure
- One 2' (600 mm) level
- One 8" (200 mm) level magnetic
- Two C-clamps or vise grips
- One picker with minimum reach of 12' (3.66 m) and 4000-6000 lb and (1814 - 2722 kg) lifting capacity
- One 100' (30 m) measuring tape
- One tire pressure gauge
- One tire chuck

- 6-10 wood blocks (2x4's or smaller)
- Grease
- Impact wrench and sockets
- 2+ steel punches (for aligning bolt holes)

## 3.4. Before You Begin

- Perform assembly on a firm and level surface in an area large enough to allow access to all sides of the equipment.
- Before beginning assembly, familiarize yourself with all the sub-assemblies, components, and hardware that make up the equipment.
- Have all parts and components on hand, and arrange them for easy access.
- Separate the hardware (bolts, nuts, etc.) and lay them out into groups for easier identification during assembly.

**Note:** When options or more than one configuration is available for the equipment and the assembly information varies, additional instructions will be included.



These additional instructions will be indicated with an arrow.

- If assembling inside a building, be sure the ceiling is at least 14' (4.27 m) high to provide clearance when installing the undercarriage.
- Ensure there is adequate space to remove the assembled machine from the assembly area.

## 3.5. Tubes & Flighting

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

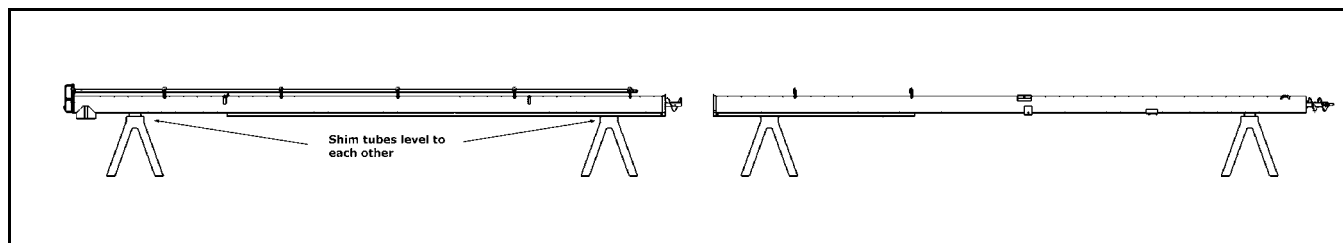


Figure 3.1



**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. Screw or slide lower flight shaft onto upper flight shaft until flight ends butt together and flighting spiral matches up. Secure with hardware listed in table below. Repeat, if necessary, for any remaining flight shafts.



3. Slide tube sections together and secure. Make sure to align upper and lower track ends and then tighten bolts. Secure with hardware in table below.

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

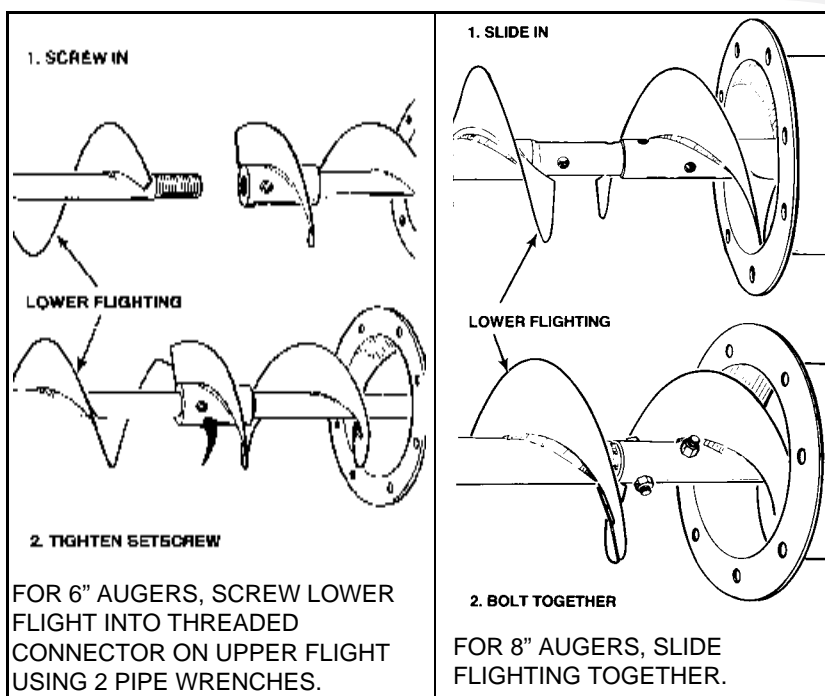


Figure 3.2

Details for fastenings:				
Auger	For Flighting	Qty	For Tubes	Qty
6"	use pipe wrenches set screw	2 1	7/16" x 1" bolts and locknuts	6
8"	7/16" x 2-1/4" GR 8 bolts and locknuts	2	7/16" x 1" bolts and locknuts	8

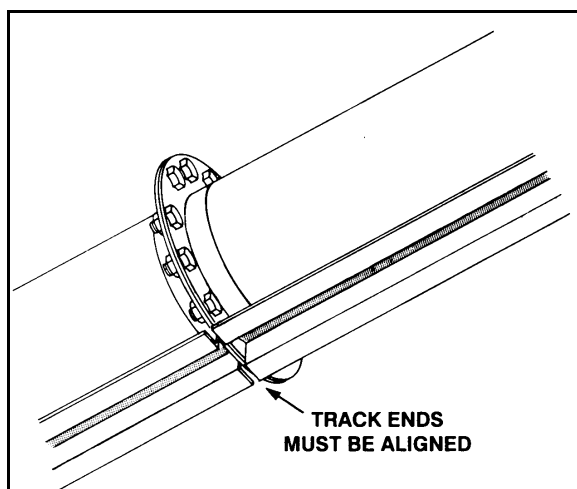


Figure 3.3

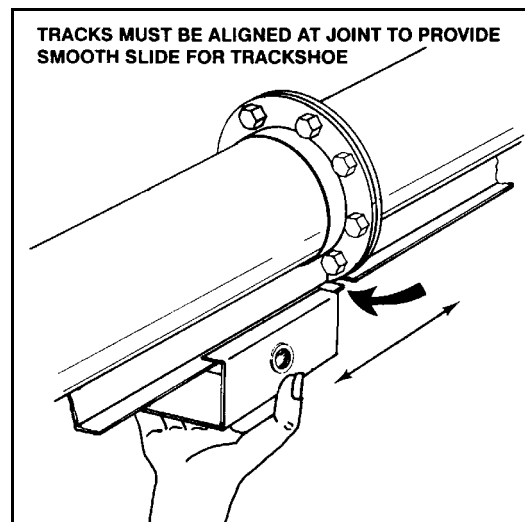


Figure 3.4

## 3.6. Track Shoe & Track Stop

1. Slide roller track shoe onto track.
2. Attach the upper track stop with 7/16" x 1" bolts, heavy flat washers, and locknuts (Figure 3.5). For correct positioning of the upper trackstop, see Table 3.1.

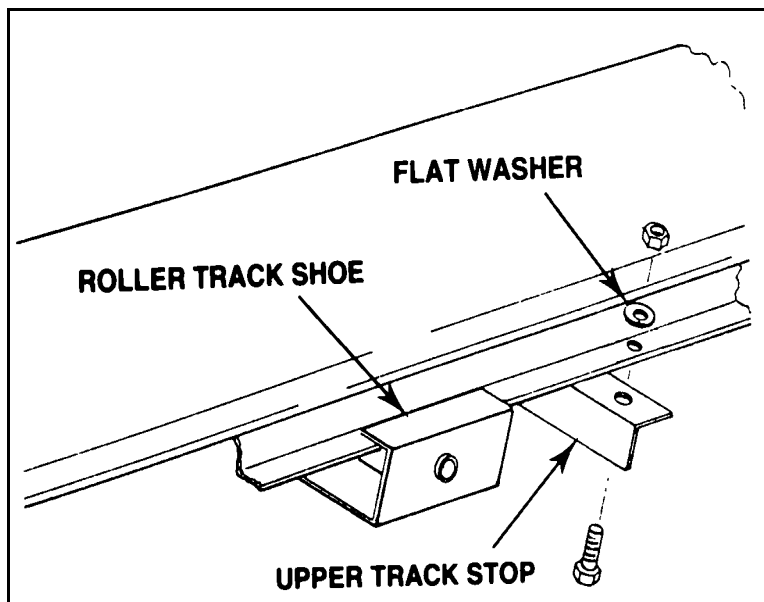


Figure 3.5

Table 3.1

Auger	Upper Track Stop	Measurement from Tube Flange
36'	1st set of holes from top end of track	160-5/8"
41'	3rd set of holes from top end of track	144"
46'	1st set of holes from top end of track	217-1/4"
51'	4th set of holes from top end of track	123"

**CAUTION** Failure to locate track stops in the proper holes can result in damage to the auger and/or personal injury.

## 3.7. 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.

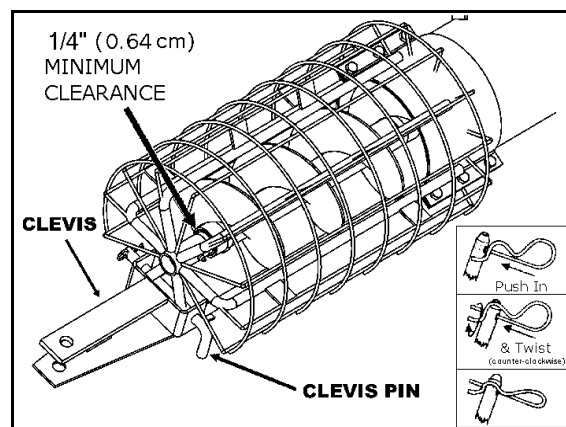


Figure 3.6

Part	Size	Qty
Intake Hitch	7/16" x 1" bolt and locknut	6
Clevis Pin	5/8" for 8" 3/4" for 10"	1

## 3.8. Multi-Stage Driveshaft

Because some sections of the driveshaft are factory installed, please consult the table below for correct sequence before completing installation. Then proceed as follows:

1. Clean paint and dirt from driveshaft end and shaft connectors.
2. Slide shaft connector halfway onto the last pre-installed driveshaft segment.
3. Slip lower driveshaft segments through bearings on lower tube section. Install a Woodruff key, and slide into shaft connector.
4. Place a few drops of oil at each driveshaft bearing to allow for break-in.
5. Tighten all set screws on shaft connectors.

**Table 3.2 Driveshaft Sequence**

Auger Length		Driveshaft Sequence		
		1st Hole	2nd Hole	3rd Hole
6" x 36'	From Discharge End	4'9" (1.45 m)	-	1" (2.54 cm)
6" x 41'		3'9-1/2" (1.15 m)	4'9" (1.45 m)	1" (2.54 cm)
8" x 36'		4'5-1/2" (1.36 m)	-	1-1/4" (3.18 cm)
8" x 41'		3'9-1/2" (1.15 m)	4'5-1/2" (1.36 m)	1-1/4" (3.18 cm)
8" x 46'		10'2-1/2" (3.11 m)	-	1-1/4" (3.18 cm)
8" x 51'		13'10" (4.21 m)	-	1-1/4" (3.18 cm)

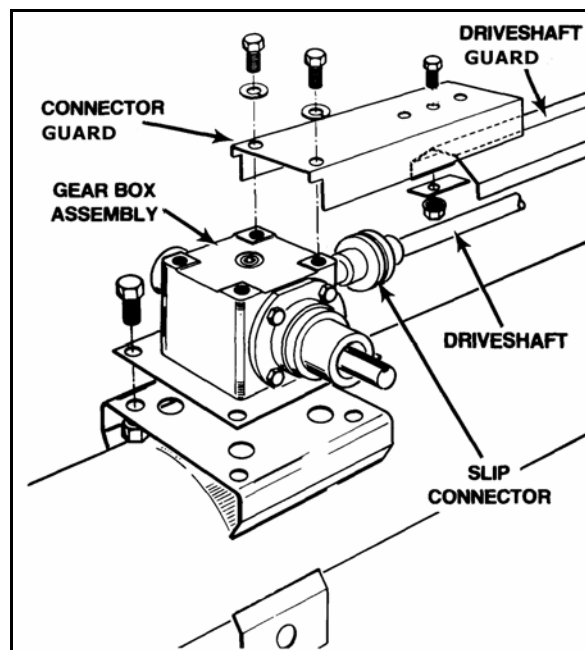
### 3.9. Belt Shaft Drive Gearbox

See Figure 3.7.

The PTO-BD gearbox assembly is shipped with the mounting plate and slip connector in place. To install:

1. Secure half the slip connector to the driveshaft using a Woodruff key.
2. Place gearbox assembly onto the mounting bracket welded to lower tube and secure with four 7/16" x 1" bolts and locknuts, maintaining a minimum 1/8" (3.2 mm) clearance between slip connector sections.

**Important:** Add EP90 lube oil to the gearbox before operating auger. Failure to do so will void warranty. Do not overfill. Fill half full only with about 540 mL or 19 fl oz.



**Figure 3.7**

### 3.10. Upper Housing Lubrication

Fill enclosed upper drive housing with grease.

WR60	550 g	20 oz
WR80	750 g	26 oz

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

## 3.11. Driveshaft Shield

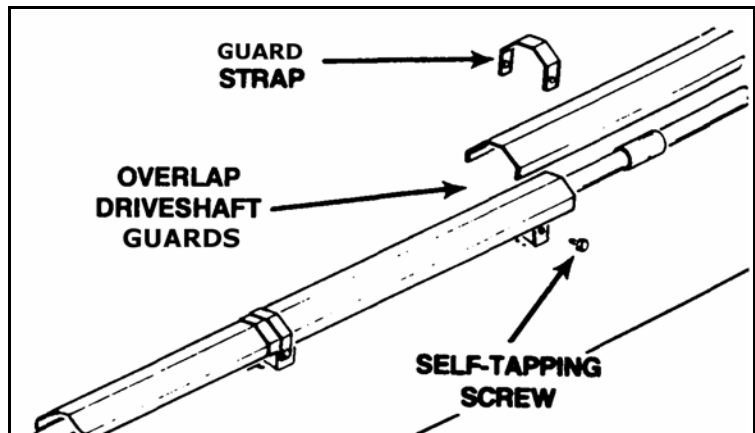
Refer to Table 3.3 for the proper sequence for your particular auger.

**Table 3.3 Driveshaft Shielding**

Auger Length	Step 1		Step 2		Step 3		Step 4	
	No.	Length	No.	Length	No.	Length	No.	Length
All 36'	1	48" (1.22 m)	1	42" (1.07 m)	4	48" (1.22 m)	1	42" (1.07 m)
All 41'	2	48" (1.22 m)	1	42" (1.07 m)	4	48" (1.22 m)	1	42" (1.07 m)
8" x 46'	3	42" (1.07 m)	4	60" (1.52 m)	1	48" (1.22 m)		
8" x 51'	1	48" (1.22 m)	6	60" (1.52 m)	1	48" (1.22 m)		

Shielding is installed working from the gearbox assembly up to the discharge end. To install:

1. Attach the connector guard to gearbox as shown in Figure 3.7 with two 3/8" x 3/4" bolts and lockwashers. Attach the first driveshaft shield (for size, see Step 1 in Table 3.3) to the connector guard with one 1/4" x 1/2" bolt, a washer-locknut, and a punched flat iron plate.
2. To install the remainder of the driveshaft shielding, work from the bottom up, overlapping at bearing bracket as shown in Figure 3.8.
3. Fasten with guard strap and self-tapping screws. Do not tighten until all guarding is in place.



**Figure 3.8**

## 3.12. Truss

See Figure 3.9.

**Note:** Steps 3-7 apply to the 46' and 51' augers only.

1. Fasten lower truss anchor to bracket located at the bottom of the reach arms (welded to lower tube); use two 7/16" x 1" bolts and locknuts.
2. Fasten the center truss support bracket with two 7/16" x 1" bolts and locknuts.
3. Attach eyebolt to one end of truss cable with a 5/16" cable clamp. Insert eyebolt into lower truss anchor and thread on nut a short way.

4. Pull truss cable over truss support brackets, around upper truss anchor and back over truss support brackets to lower truss anchor, holding it loosely in place with one 5/16" cable clamp at upper truss anchor, and two 5/16" cable clamps at each truss support bracket.

**Important:** Do not tighten cable clamps at this time.

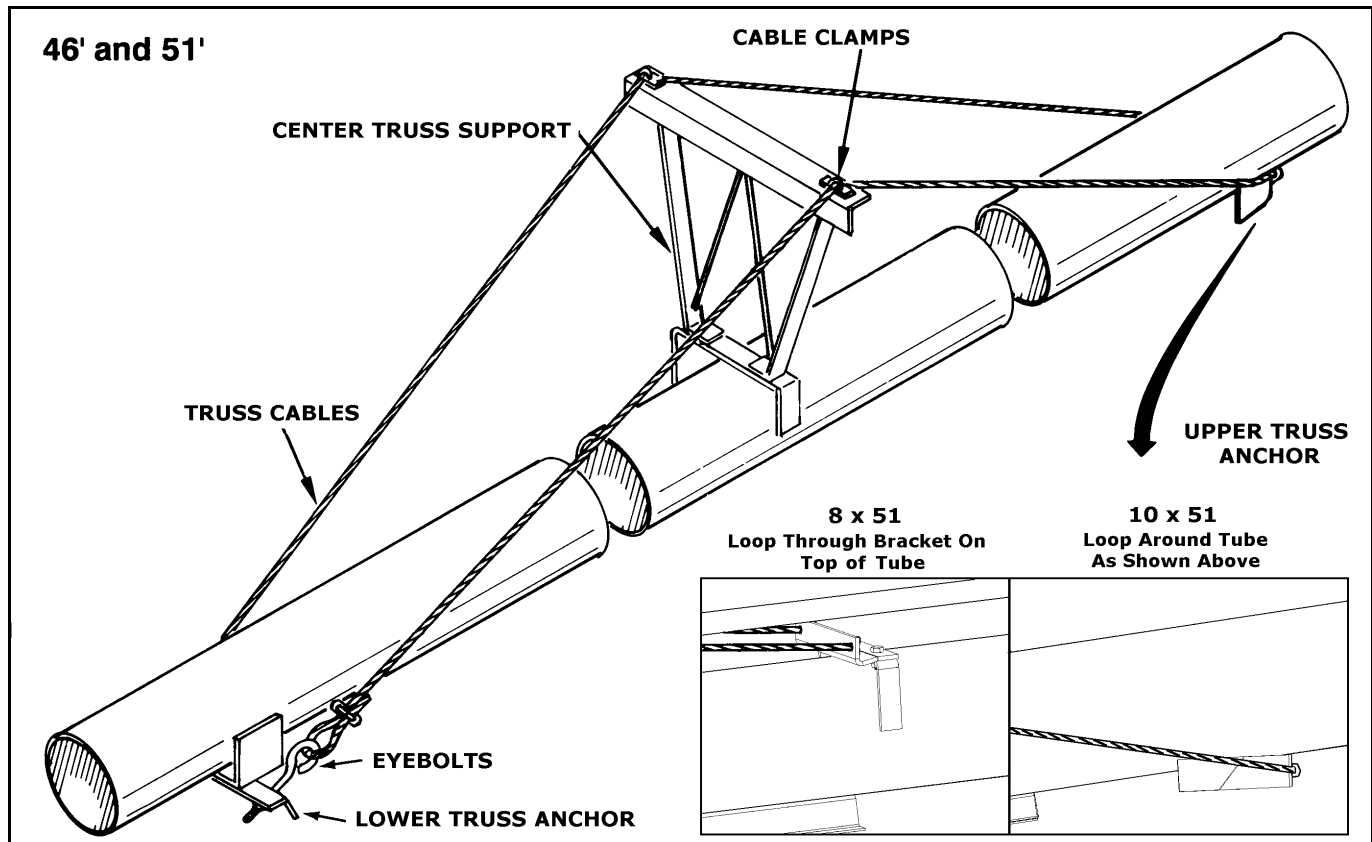


Figure 3.9

5. The upper end of augers equipped with truss cables should have an upward bow before being placed on the transport undercarriage (auger tube will straighten when fully assembled). Place supports under the discharge end until upward bow is correct.
  - upward bow should be about 2" (5.08 cm) on the 46' and 3" (3.62 cm) on the 51' auger.
6. Place other eyebolt onto lower truss anchor and thread on nut a short way.
7. Insert other end of truss cable through this eyebolt. Pull out all slack and secure with a cable clamp.
8. Tighten eyebolts to take remaining slack out of truss cable and to maintain the appropriate upward bow. After tension is adjusted, tighten cable clamps on truss support brackets and upper truss anchor. Check for proper side alignment.

**Important:** Once auger is fully assembled, adjust truss cables on all units (because of initial stretching). Cables may also require adjustment for side alignment.

### 3.13. Transport Undercarriage

See Figure 3.10.



1. To assemble undercarriage, fasten the lower reach arms to axle with three 7/16" x 1" bolts and locknuts on each side.
2. Attach long crossmember to bottom of undercarriage brackets with two 7/16" x 1" bolts and locknuts. Crossmember should be attached so that the 2 support-tube mounting holes are located to the right side of the auger (as determined when standing at intake end facing top discharge end) for right hand drive application.

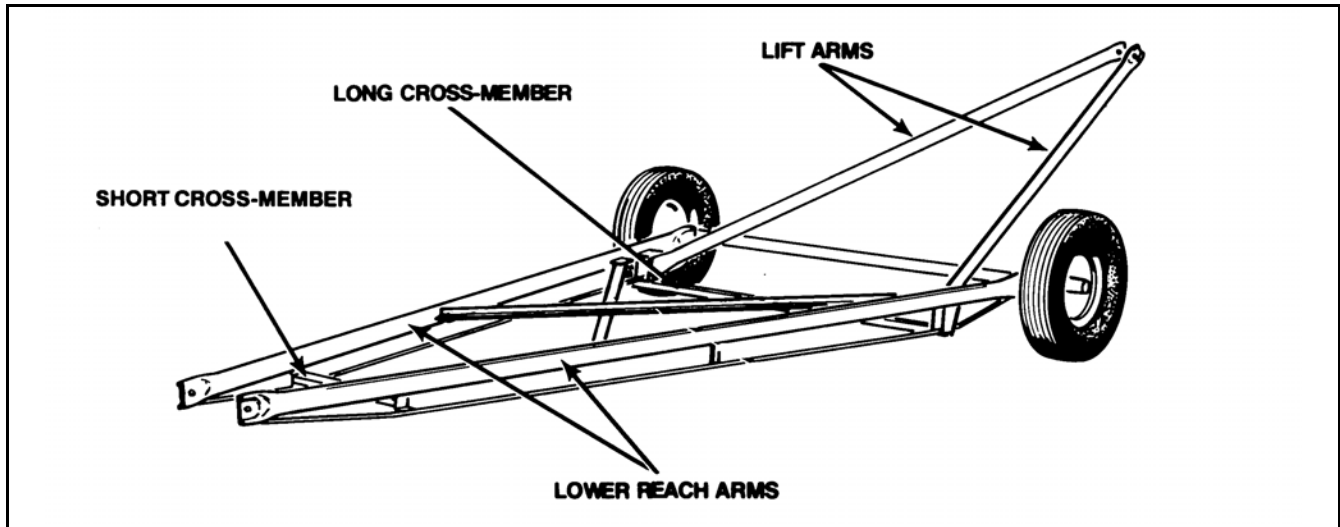


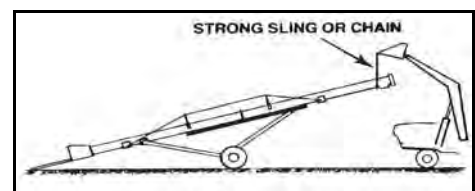
Figure 3.10

3. Attach the short crossmember (20" / 50.8 cm) to the undercarriage brackets (Figure 3.10) with two 1/2" x 1-1/4" bolts and locknuts.
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.
5. Fasten upper lift arms to lower reach arms with 5/8" x 1-1/2" bolts and locknuts. **Do not overtighten.** 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** Do not remove tube support until auger is fully assembled.



7. Slip lower reach arm extensions (left and right) onto gearbox hubs and attach spacer bracket with two 7/16" x 1" bolts and locknuts (Figure 3.11).
8. Position transport undercarriage beneath tube assembly and attach lower reach arms to arm extensions with 5/8" x 1-1/2" bolts and locknuts. Attach extensions to short crossmember with two 7/16" x 1" bolts and locknuts (Figure 3.12).
9. Attach upper lift arms to roller track shoe with one 5/8" x 6-1/2" bolt and locknut. **Do not overtighten.** Tighten snug only; this bolt acts as a pivot point (Figure 3.13).

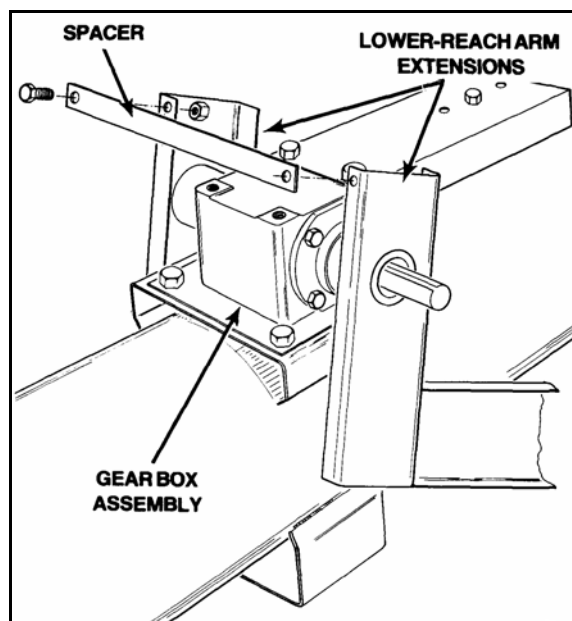


Figure 3.11

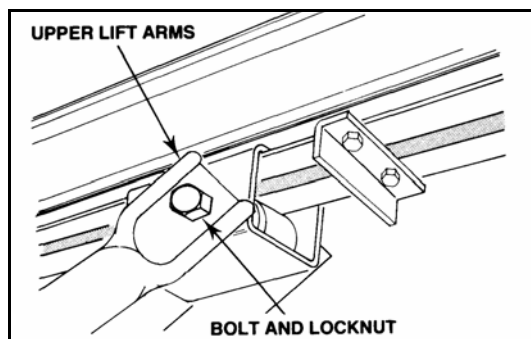


Figure 3.13

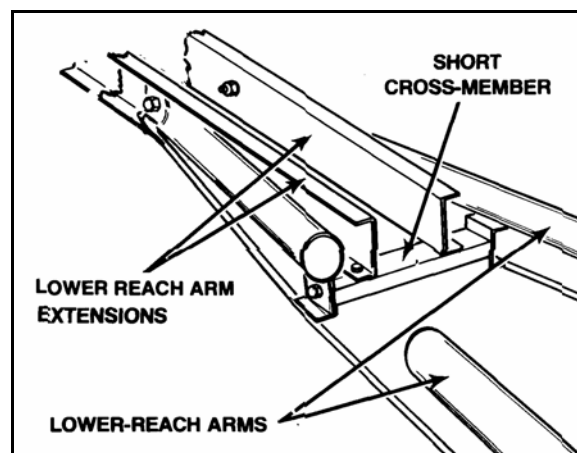
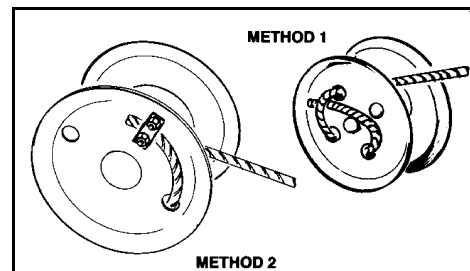


Figure 3.12

## 3.14. Winch & Liftcable

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 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.



**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).

3. Attach winch to winch mount with three 3/8" washer locknuts.
4. Thread lift cable under and around roller on track shoe, then back to cable attach rod welded to lower end of track.

**Note:** 36' augers only have a lower angle-iron track stop. On these augers, the cable must be threaded between track stop and auger tube so cable rests on top of the track stop (See Figure 3.15).

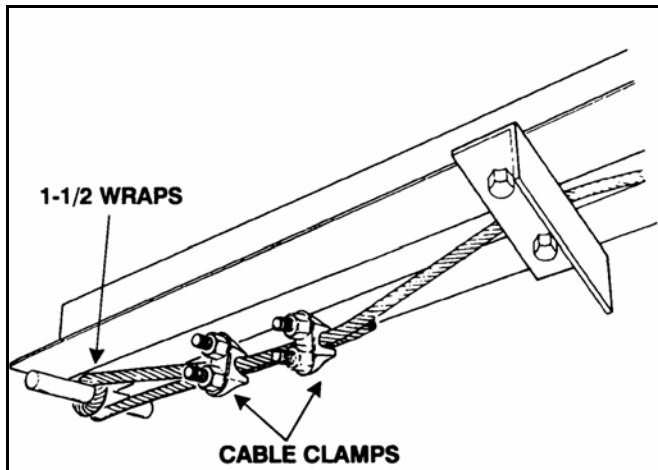


Figure 3.15

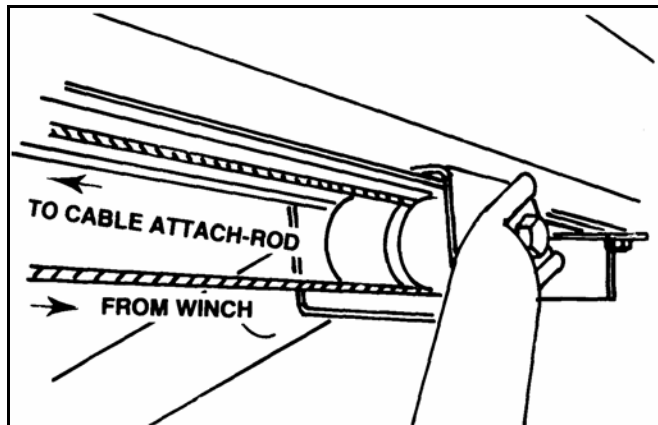


Figure 3.14

5. Wrap cable 1-1/2 times around the cable attach rod and secure with two 1/4" cable clamps. Position cable clamps as shown in Figure 3.15 and 3.16. Tighten clamps securely.

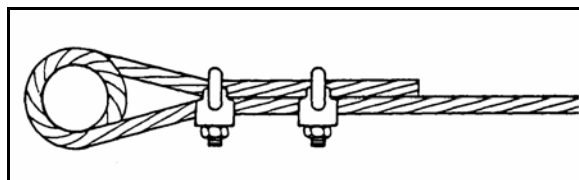


Figure 3.16

### 3.14.1. 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** Winch handle assembly must follow the instructions below. Improper assembly will result in sudden winch failure causing damage to equipment and/or personal injury.

#### Model K1051 & K1550

See Figure 3.17.

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

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

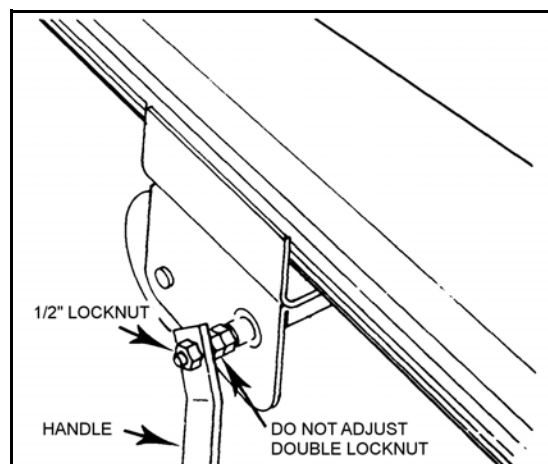


Figure 3.17

## 3.15. Belt Drive (BD)

### Right Hand Set-Up:

1. Slide the 1-3/4" support tube into the 2" support tube up to the welded stop. Attach the 2" tube to the long crossmember with two 7/16" x 1" bolts and locknuts.
2. Fasten the 1-3/4" tube to the right lower reach arm with one u-bolt (Figure 3.18).

**Important:** In Steps 2 through 5, do not tighten bolts until belts are adjusted.

- ➡ 3. **41', 46', and 51' augers:** Place sliding bracket on lower reach arm with the tab facing into the auger as shown in Figure 3.18. Fasten with two 7/16" x 3-1/2" bolts and locknuts.
- ➡ 4. The sliding bracket for the **36' auger** is mounted with tab facing outward from the auger (Figure 3.18). Fasten with two 7/16" x 3" bolts and locknuts.
- 5. Place jackshaft into position on the 2" support tube and insert two 7/16" x 3" bolts and locknuts (Figure 3.19).
- 6. Fasten jackshaft to sliding bracket with one 7/16" x 1" bolt and locknut.
- 7. Position 7/16" x 8" adjusting bolt.
- 8. Before installing pulleys, clean all paint and/or dirt from the gearbox shaft, jackshaft, and inside pulley hubs.

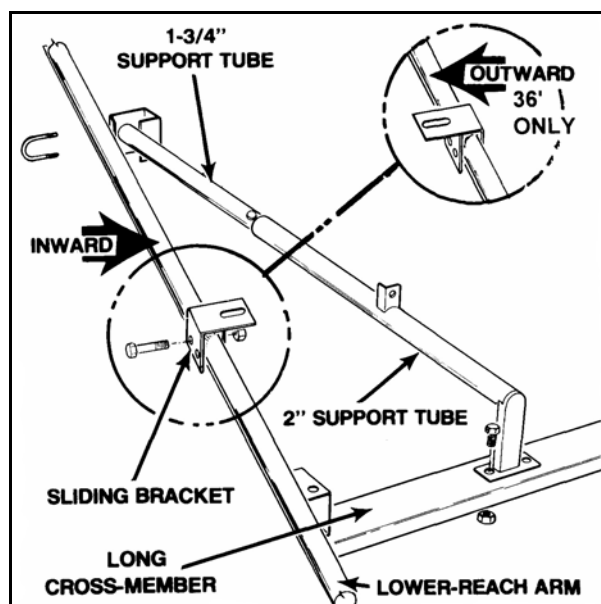


Figure 3.18

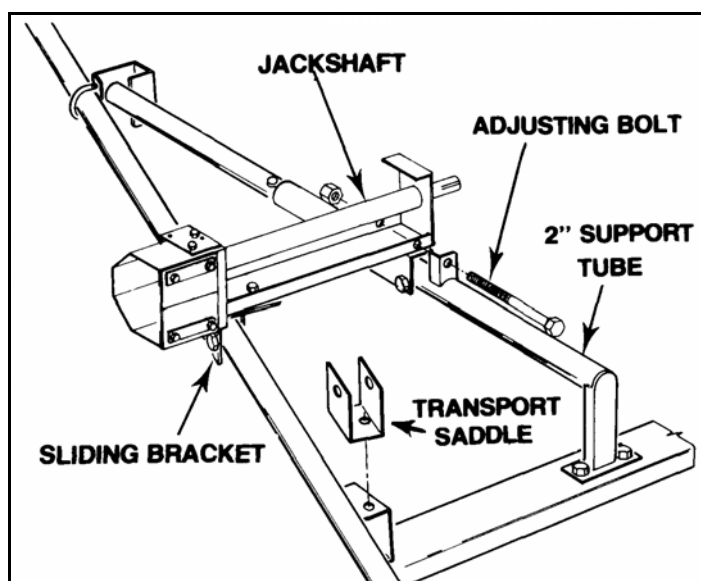


Figure 3.19

9. Secure one 15" double pulley to the jackshaft with a 1/4" x 2-1/2" square key. Position pulley hub to face gearbox.
- ➡ 10. Secure the 8" (double groove) pulley to the gearbox input shaft with a 1/4" x 1-1/2" square key. Position pulley hub to face gearbox.
- ➡ 11. Place belts on pulleys ensuring that they are properly aligned.

**Note:** To align belts, place a straight edge on the large pulley and sight along the straight edge toward the small pulley. Adjust pulleys and jackshaft assembly as needed until jackshaft is squared and belts are aligned.

12. Adjust the tension with the tension adjust bolt. During the adjustment, the sliding bracket may require an occasional nudge to prevent binding.

**Note:** The correct operation tension is the lowest tension at which the belt(s) will not slip under peak load conditions.

13. Once belt tension is adjusted, tighten all bolts in Steps 2 through 5.
14. Attach belt-guide bracket to the 1-3/4" support tube as shown in Figure 3.20. Adjust belt guides within 1/8" to 1/4" of belt(s) when belt(s) are under tension.

#### Left Hand Set-Up:

To change auger from a right-hand drive to a left-hand drive, take the following steps:

1. Support the discharge end of the auger using a front-end loader and a sling or chain, or a block-and-tackle.

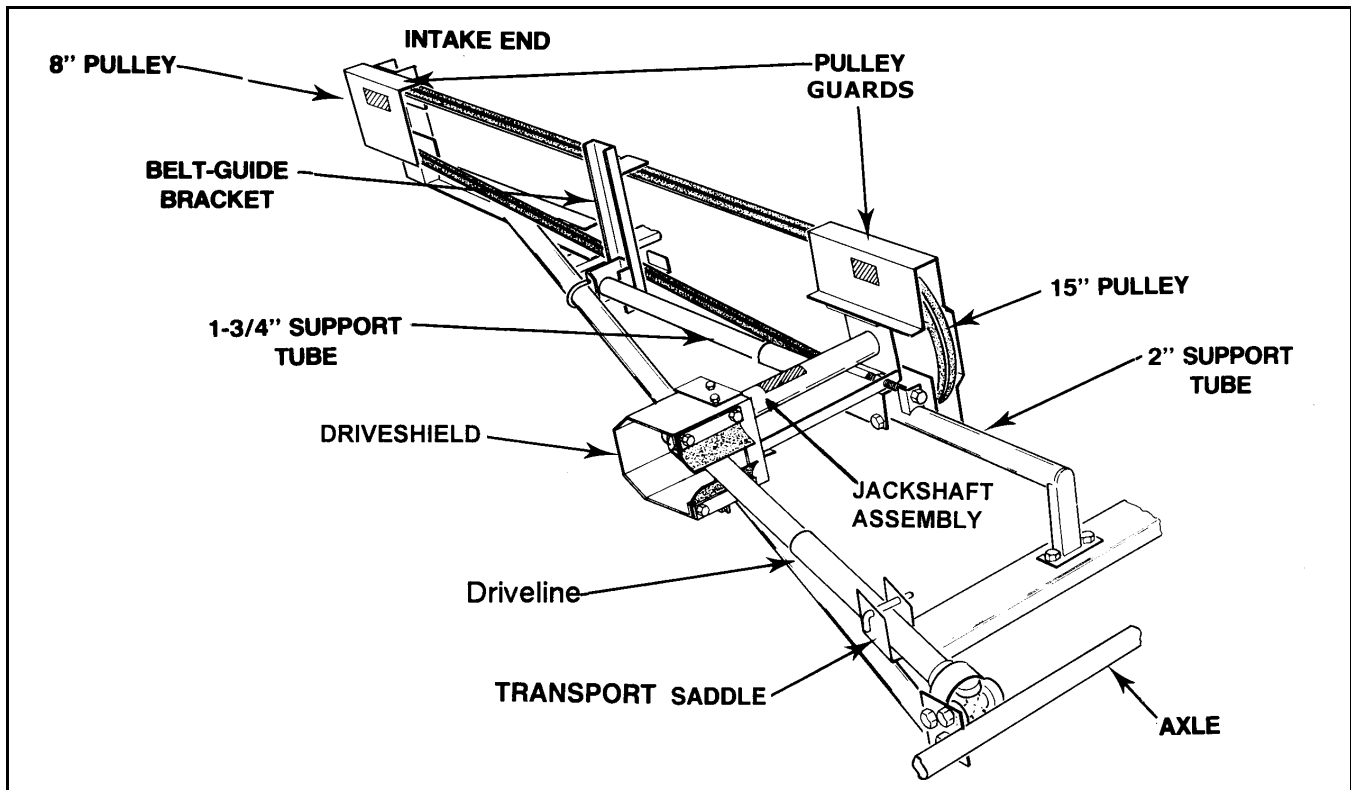


Figure 3.20



**DANGER** Never use a PTO driveline without a rotating guard in good working order. Do not exceed maximum recommended operating length or angularity of PTO driveline.

2. Remove the following items: pulley guards, v-belt(s), 8" pulley, PTO driveline, jackshaft assembly, belt guides, sliding bracket, support tubes, long crossmember, extension arms, and the spacer.
3. Remove the gearbox from the auger, and remove the mounting plate from the gearbox.
4. Place gearbox on level surface with the output shaft up. Switch air-vent filler plug (from top) with the solid plug (from bottom) to prevent oil leak after rotation of gear box.

5. Re-mount gearbox with pulley shaft to left side of auger as determined when standing at intake end facing discharge end.
6. Reverse and reinstall the long crossmember so that the support tube mounting holes are to the left side of the auger.
7. Reinstall all items removed. Remember to reverse the position of the items where necessary.

### 3.16. PTO Driveline

---

1. Clean PTO driveline and flighting shaft ends of any paint or dirt.
2. Slide non-spline end of PTO driveline onto the jackshaft using a 1/4" x 1-1/2" square key. Tighten set screws securely (Figure 3.20).

**Important:** Do not extend PTO driveline beyond 64" when in use.

3. Next, slide the driveshield over the PTO driveline and attach to jackshaft assembly with two 3/8" x 3/4" bolts and washer-locknuts.
4. Attach transport saddle for the PTO driveline to lower reach arm bracket with one 7/16" x 2-1/4" bolt and locknut (Figure 3.20).

### 3.17. Belt Drive Guard

---

See Figure 3.20.

1. Attach the small pulley guard with two 1/4" x 1/2" bolts and washer-locknuts.
2. Attach the large pulley guard using set of holes nearest the axle with four 1/4" x 1/2" bolts and washer-locknut.

### 3.18. Safety Spout

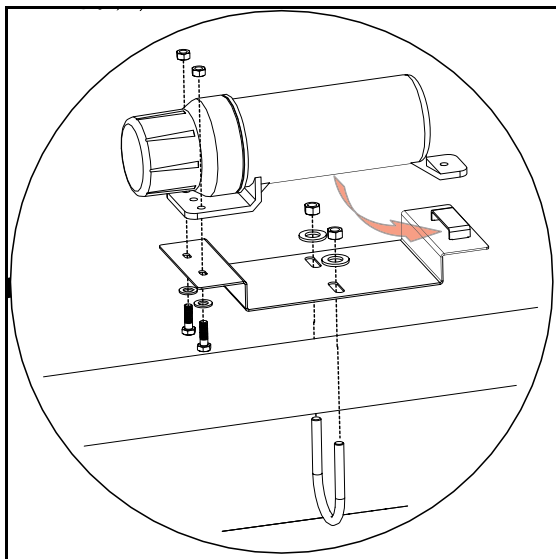
---

If a safety spout is being used with this auger, the safety release door should be on the left side of the auger, as determined when standing at intake, facing the discharge end.



## 3.19. Plastic Manual Container

1. Attach the manual container bracket to the top of the axle, centered between the two wheels, using a 3/8" x 2-1/2" U-bolt, two 3/8" washers, and two 3/8" locknuts (see Figure 3.21).



**Figure 3.21**

2. Slide the tab on the bottom of the manual container into the raised slot in the bracket.
3. Bolt the manual container to the bracket using two 1/4" x 3/4" bolts, two washers, and two 1/4" locknuts.

## 3.20. Model Decal Placement

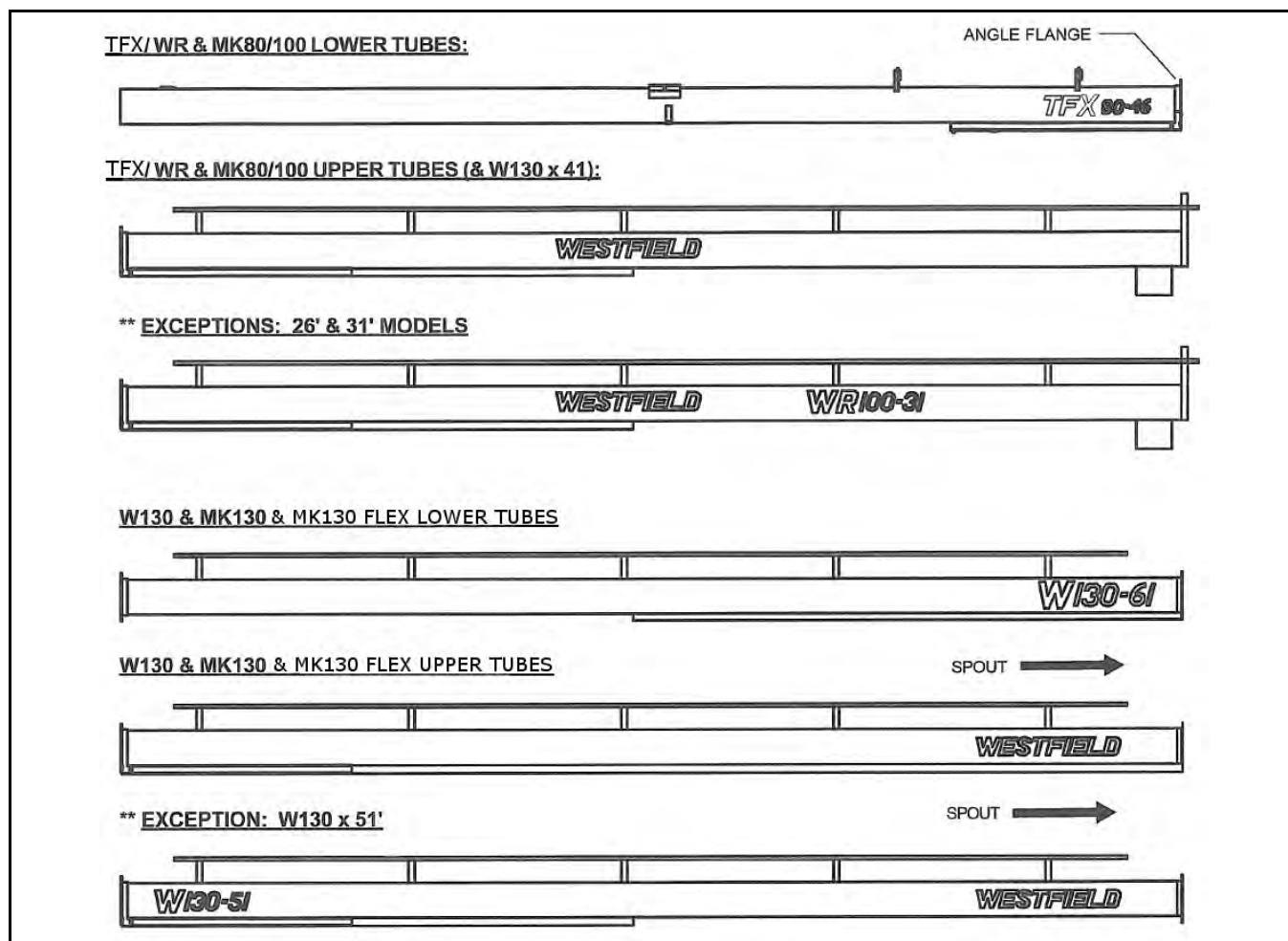


Figure 3.22

**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.

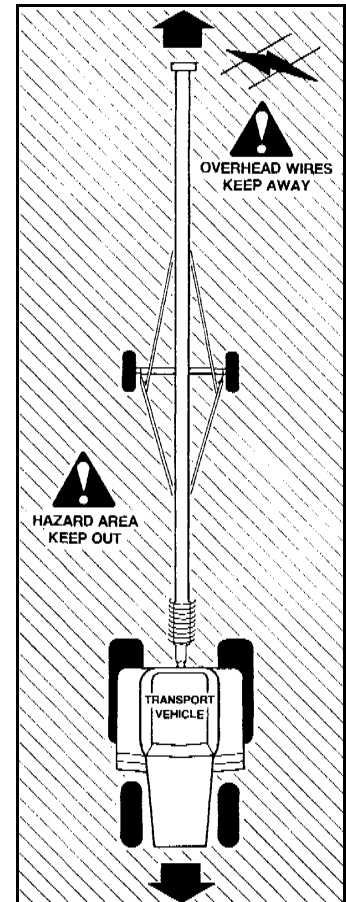
# 4. Transport & Placement



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 & 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.



- Disconnect PTO driveline from tractor before moving auger or tractor and secure in transport saddle (where applicable).
- 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 create an unsafe condition. Too much slack in the cable may also cause the auger to drop suddenly.
- The winch must make a clicking sound when raising auger. If clicking sound stops, retain grip on handle, lower auger fully, and repair winch.
- After lowering auger, turn handle clockwise two clicks to lock winch brake.
- Always keep a minimum of 3 cable wraps on the winch drum.
- The winch is designed for manual operation only.

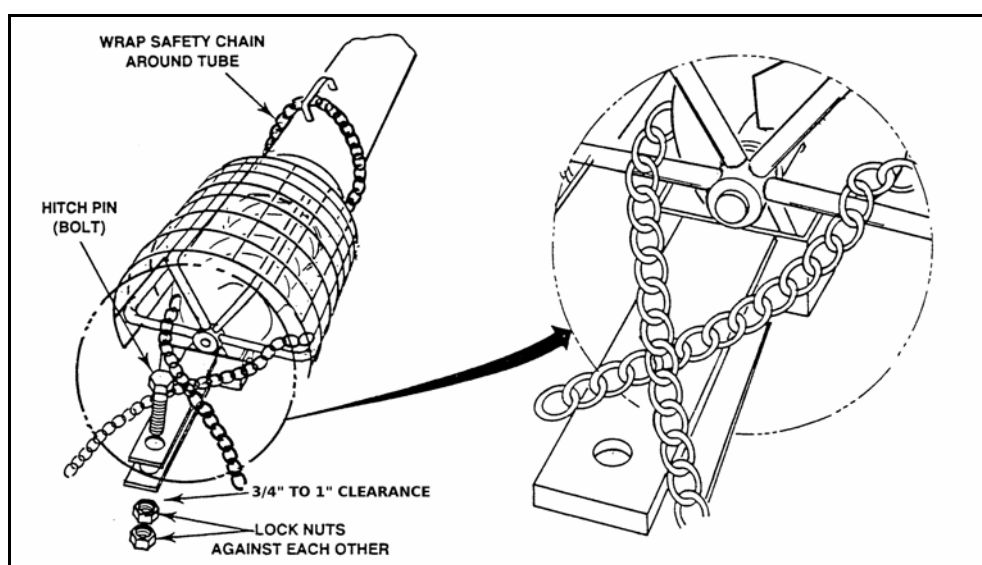
## 4.2. Transport Procedure

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 Section 5.3.4. Lowering & Completion on page 42.
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. Thread safety chain through handle on the lower tube and wrap 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. Disconnect PTO driveline from tractor and secure in transport saddle with the u-joint in the down position at the axle when transporting. See Figure 3.20.

**CAUTION** 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.


5. Beware of overhead obstructions and electrical wires and devices. The PTO-BD augers have minimum clearances from 10' (3.05 m) to 13' (3.96 m) in normal transport position.
6. Refer to Section 4.1. Transport & Placement Safety on page 35 for important safety information before towing.

## 4.3. Placement Procedure

1. Ensure towing hitch is in place and secure.

**Important:** Use a type of hitch pin (see 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. Place auger 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 3.14 on page 29.

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 the 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. Move the auger into working position slowly. Do not unhitch and attempt to move auger by hand.

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

6. 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.


**Important:** The PTO driveline is a non-separable type. Remove from tractor and secure in transport saddle on auger before moving tractor away from auger.

7. 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.

8. 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.

9. See Section 5.3.4. Lowering & Completion on page 42 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



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. 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).
- Keep the work area clean and tidy.
- Lock winch before operating auger.
- Inspect drive belts before using auger. Replace if frayed or damaged.
- Do not grab or touch drive belts during operation for any reason.

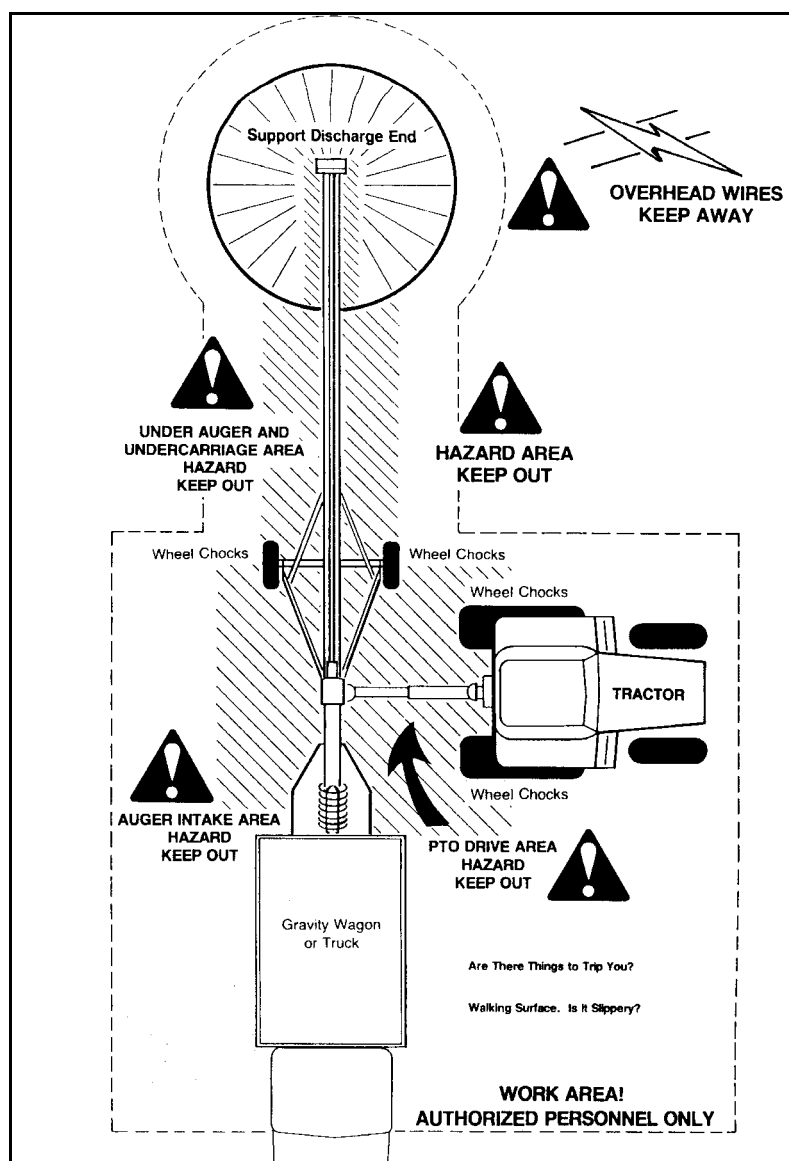


Figure 5.1

## 5.2. Pre-Operational Checklist

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

- All fasteners are secure as per assembly instructions.
- PTO driveline is connected and secure.
- PTO driveline shield rotates freely.
- PTO driveline is not exceeding the maximum operating length of 64" (1610 mm) or maximum angle of 15°.
- 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 if necessary, 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.

## 5.3. Operating Procedure


---

### 5.3.1. 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 at half speed.
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** Do not start auger until area is clear of all unauthorized personnel. Do not exceed 540 rpm on the PTO.

3. Start tractor and engage PTO driveline, then feed grain to auger. If auger functions normally, check 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.

4. Upon completion of initial run, shutdown auger (see Section 5.3.3. Shutdown on page 41 for more information on shutting down your auger).
5. 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.

### 5.3.2. 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.

### 5.3.3. Shutdown

---

**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 Shutdown / 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. Section 2.3. Drives and Lockout Safety on page 8.
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.

### 5.3.4. 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 Lowering procedure below).
4. Clean out auger (see Clean out procedure below).
5. Prepare for transport and placement or storage (see appropriate chapters for more information).

#### 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).
  - 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.
4. After lowering, turn handle clockwise until you hear 2 clicks to lock brake.

 **WARNING** 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.

#### Clean out:

1. Shut off tractor engine and lock out power.
2. Manually clean out grain with a piece of wood, vacuum cleaner, or other tool. Do not use hands.

# 6. Maintenance & Storage



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. 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.

## 6.2. General Maintenance Procedures

Proper maintenance habits on this auger mean a longer life, better efficiency, and safer operation. Please follow the guidelines below.

Area	Maintenance Procedure	Frequency
General	While auger is in use, observe Section 5.2. Pre-Operational Checklist on page 40.	Daily
General	Check all operating, lifting, and transport components. Replace damaged or worn parts before using auger.  For replacement instructions, see Chapter 3.	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 side-wall 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

Area	Maintenance Procedure	Frequency
Upper Chain Drive	Fill enclosed upper drive housing to plug level with grease. <b>WR60:</b> 550 g (20 oz) <b>WR80:</b> 750 g (26 oz)  For continuous use in extreme cold, semi-fluid arctic grease or heavy oil may be used	Check every time you do a drive chain adjustment.
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
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

### 6.3. Storage Safety


- Store the unit in an area away from human activity.
- Do not permit children to play on or around the stored equipment.

### 6.4. 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 if necessary. See tire sidewall for recommendations.

5. Clean and re-lubricate spline on PTO driveline. Cover PTO driveline with plastic bag to protect it from the weather and place in the transport saddle.
6. Tow auger to storage area. Park and chock wheels.

 **CAUTION** Support discharge end of auger before removing or replacing any parts on the undercarriage.

**To prepare auger for use after storage:**

1. Check tire pressure and inflate if necessary. See tire sidewall for 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. Conduct general maintenance procedures before using auger.
7. On augers equipped with lubricated upper drive, check level annually and add as needed. Refill to plug level.



# 7. 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.

Problem	Possible Cause	Remedy
<b>Excessive noise or vibration.</b>  *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	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.
<b>Drive belts jumping off pulleys.</b>	Pulleys 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.

Problem	Possible Cause	Remedy
<b>Shear bolts fail repeatedly.</b>	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.
<b>Premature wear on auger tubes.</b>	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.



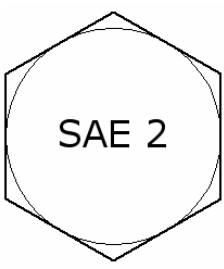
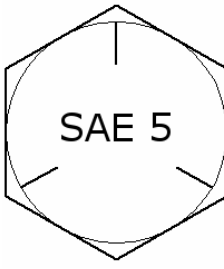
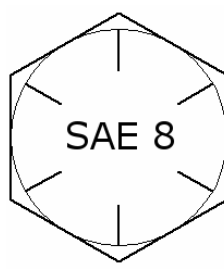
# 8. Appendix

## 8.1. Bolt Torque Values

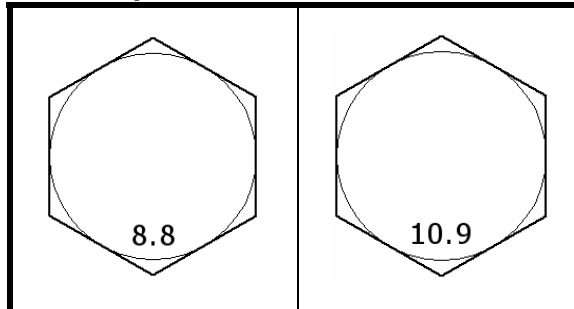
Tables 8.1 and 8.2 give correct torque values for various bolts and capscrews. The bolt diameter is measured to the outside of the threads. When tightening all bolts, tighten the nut on the bolt to the torque specified in the tables, unless otherwise specified. Do not replace or substitute bolts, nuts, 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 8.1 SAE Bolt Torque**

<div>    </div>						
Bolt Diameter	(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 8.2 Metric Bolt Torque**



<b>Bolt Diameter</b>	<b>(N·m)</b>	<b>(ft·lb)</b>	<b>(N·m)</b>	<b>(ft·lb)</b>
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

# 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.

WESTFIELD INDUSTRIES LTD.

ROSENORT, MANITOBA

CANADA

R0G 1W0



P.O. Box 39

Rosenort, Manitoba, CANADA R0G 1W0

Phone: (866) 467-7207 (Canada & USA) or (204) 746-2396

Fax: (866) 768-4852

Website: [www.grainaugers.com](http://www.grainaugers.com)

Email: [sales@grainaugers.com](mailto:sales@grainaugers.com)

Part of the Ag Growth International group

© Ag Growth International Inc. 2015



Printed in Canada