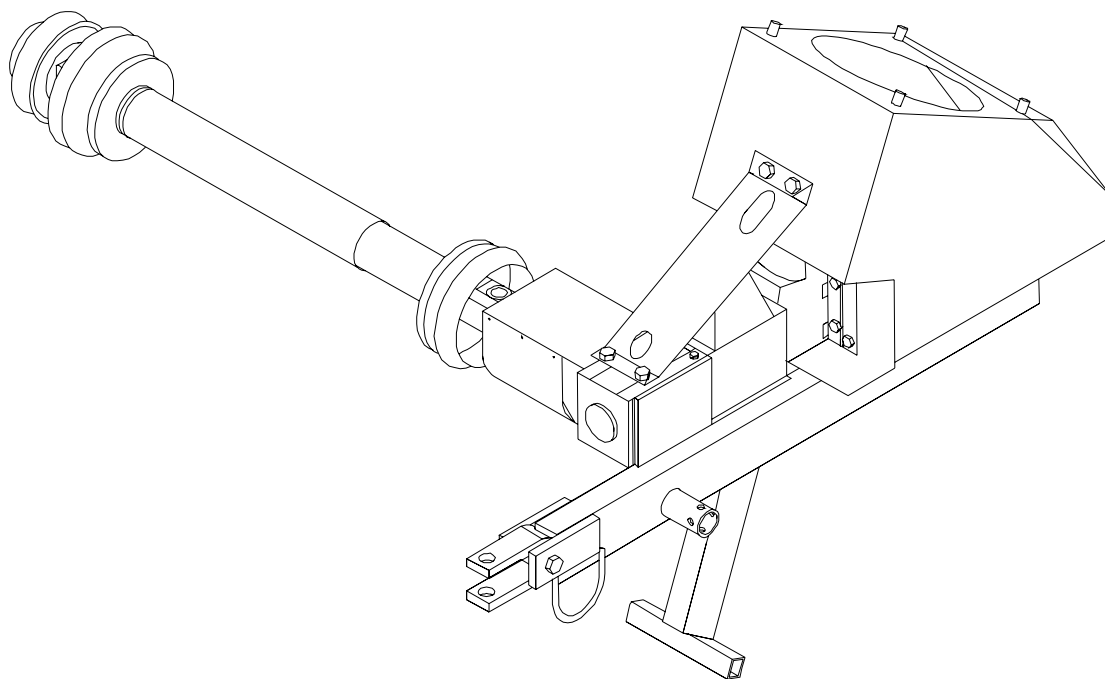


# GRAIN KING

## Side Drive Conversion Kit for Direct Gear Drive SAW Transport Auger

*Assembly & Operation Manual*



PNEG-853

# Table of Contents

Personnel operating or working around this equipment should read this manual. This manual must be delivered with equipment to its owner. Failure to read this manual and its safety instructions is a misuse of the equipment. Any misuse of the equipment may void the warranty.

1.	Warranty.....	i
2.	Table of Contents.....	ii
3.	<b>SAFETY</b> 1 <sup>st</sup> .....	iii
4.	Introduction.....	1
5.	Safety.....	2
6.	Assembly.....	5
7.	Startup.....	9
8.	Operation.....	11
9.	Shutdown.....	13
10.	Parts List.....	14

# SAFETY GUIDELINES

This manual contains information that is important for you, the owner/operator, to know and understand. This information relates to protecting **personal safety** and **preventing equipment problems**. It is the responsibility of the owner/operator to inform anyone operating or working in the area of this equipment of these safety guidelines. To help you recognize this information, we use the symbols that are defined below.

Please read the manual and pay attention to these sections. Failure to read this manual and it's safety instructions is a misuse of the equipment and may lead to serious injury or death.



**This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.**



**DANGER** indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.



**WARNING** indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.



**CAUTION** indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.



**CAUTION** used without the safety alert symbol indicates a potentially hazardous situation which, if not avoided, may result in property damage.



**NOTE** indicates information about the equipment that you should pay special attention to.

# == *GRAIN KING* == **1<sup>st</sup>** **SAFETY**

Grain King equipment is built to provide many years of dependable service to our customers through durable craftsmanship.

One of the most important aspects of Grain King engineering is **SAFETY 1<sup>st</sup>** design throughout all product lines. At Grain King - safety is NO ACCIDENT!

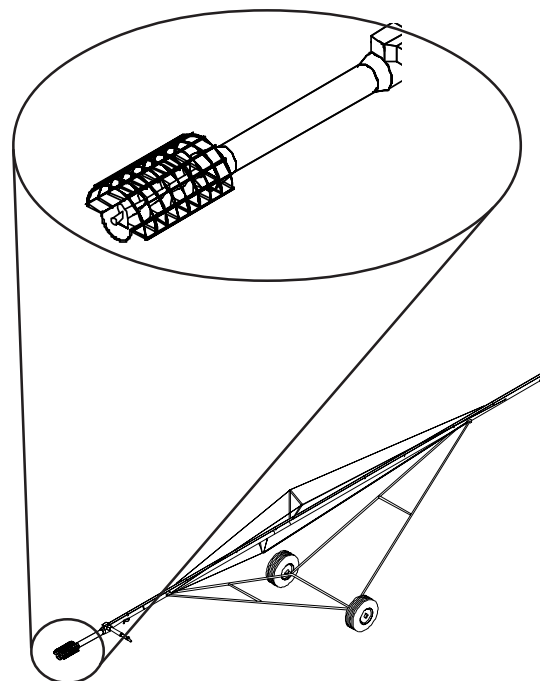
That is why Grain King is implementing its **SAFETY 1<sup>st</sup>** program. Should you ever need guards, shields, safety decals or owner/operator manuals, simply contact Grain King, and we will supply you with them **FREE OF CHARGE!**

While it is our main goal for Grain King to be the world leader in auger manufacturing, it is always our first priority to keep our customers safe.

If you need any of the above listed safety items or have safety questions, please contact Grain King:

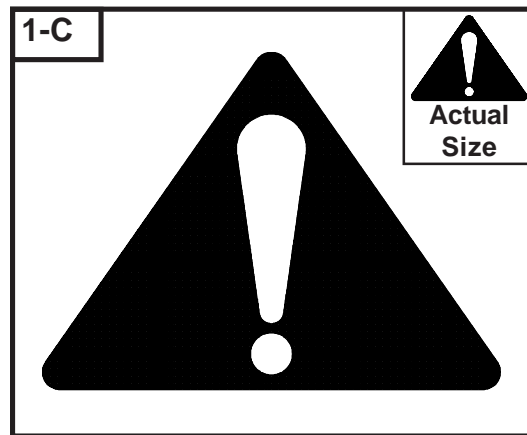
P.O. Box 1095  
Du Quoin, Illinois 62832  
Ph: 618-542-9197  
Fax: 618-542-2927

*Replace missing guards and shields  
**FREE OF CHARGE!***



## 1. General Safety Statements.

- A. Grain King's principle concern is your safety and the safety of others associated with grain handling equipment. We want to keep you as a customer. This manual is to help you understand safe operating procedures and some problems which may be encountered by the operator and other personnel.
- B. As owner and/or operator, it is your responsibility to know what requirements, hazards and precautions exist, and to inform all personnel associated with the equipment or in the area. Safety precautions may be required from the personnel. Avoid any alterations to the equipment. Such alterations may produce a very dangerous situation, where **SERIOUS INJURY** or **DEATH** may occur.
- C. This symbol is used to call attention to instructions concerning your personal safety. Watch for this symbol; it points out important safety precautions. It means "ATTENTION", "WARNING", "CAUTION", and "DANGER". Read the message that follows, and be cautious to the possibility of personal **INJURY** or **DEATH**.
- D. This equipment shall be installed in accordance with the current installation codes and applicable regulations which should be carefully followed in all cases. Authorities having jurisdiction should be consulted before installations are made.
- E. Untrained operators subject themselves and others to **SERIOUS INJURY** or **DEATH**. **NEVER** allow untrained personnel to operate this equipment.
- F. Keep children and other unqualified personnel out of the working area at **ALL** times. Refer to the **Startup** section of this manual for diagrams of the working area.
- G. **NEVER** start equipment until **ALL** persons are clear of the work area.
- H. Be sure **ALL** operators are adequately rested and prepared to perform **ALL** functions of operating this equipment.
- I. Keep hair, loose clothing, and shoestrings away from rotating and moving parts. **NEVER** wear loose fitting clothing when working around augers.
- J. **NEVER** allow any person intoxicated or under the influence of alcohol or drugs to operate the equipment.
- K. **NEVER** allow anyone inside a bin, truck or wagon which is being unloaded by an auger or conveyor. Flowing grain can trap and suffocate in seconds.
- L. Make sure someone is nearby who is aware of the proper shutdown sequence in the event of an accident or emergency.
- M. **NEVER** work alone.
- N. **ALWAYS** think before acting. **NEVER** act impulsively around the equipment.
- O. Make sure **ALL** equipment is locked in position before operating.
- P. Keep hands and feet away from the auger intake and other moving parts.
- Q. **NEVER** attempt to assist machinery operation or to remove trash from equipment while in operation.
- R. **NEVER** drive, stand or walk under the equipment.
- S. Use caution not to hit the auger when positioning the load.
- T. Use ample overhead lighting after sunset to light the work area.
- U. **ALWAYS** lock out **ALL** power to the equipment when finished unloading a bin.
- V. Keep area around intake free of obstacles such as electrical cords, blocks, etc. that might trip workers.



**2. Emergency Shutdown Sequence.**

- A. In an emergency, shutdown the power source.

**3. Pinch Points.**

**A pinch point is any place on the equipment which can injure an operator.**

- A. Components of this equipment have sharp edges which can scrape and/or cut an operator.
- B. A moving auger can sever an operator's limbs or even kill.

**4. Shields and Guards.**

- A. ALWAYS keep ALL shields and guards in place during operation.

**5. Personal Protective Equipment.**

- A. The proper personal protective equipment should be worn at ALL times by anyone in the work area.
- B. ALWAYS wear safety glasses when in the work area.
- C. The operator should NEVER wear jewelry.
- D. Loose clothing should not be worn. Any clothing that becomes loosened should be tucked in tightly.
- E. Loose shoe strings or dangling shoe strings should be tucked in.
- F. Long hair should be tied up and/or back.

**6. Operator Qualifications.**

- A. The User/Operator must be competent and experienced to operate auger equipment. Anyone who works with or around augers must have good common sense in order to be qualified. These persons must also know and meet all other qualifications, such as:
  - 1. Any person who has not read and/or does not understand all operation and safety procedures is not qualified to operate any auger systems.
  - 2. Certain regulations apply to personnel operating power machinery. Personnel under the age of 18 years may not operate power machinery, including augers. It is your responsibility, as owner and/or supervisor, to know what these regulations are in your area or situation.
  - 3. Unqualified or incompetent persons are to remain out of the work area.
  - 4. O.S.H.A. (Occupational Safety & Health Administration) regulations state:  
"At the time of initial assignment and at least annually thereafter, the employer shall instruct every employee in the safe operation and servicing of all equipment with which the employee is, or will be involved." (Federal Occupational Safety & Health Standards for Agriculture. Subpart D, Section 19287.57 (a) (6).

**6. Operator Qualifications. (cont.)**

B. As a requirement of OSHA, it is necessary for the employer to train the employee in the safe operating and safety procedures for this auger. We included this sign-off sheet for your convenience and personal record keeping. All unqualified persons are to stay out of the work area at all times. It is strongly recommended that another qualified person who knows the shutdown procedure is in the area in the event of an emergency. A person who has not read this manual and understands all operating and safety instructions is not qualified to operate the machine.

DATE	EMPLOYER'S SIGNATURE	EMPLOYEE'S SIGNATURE

## 1. General Information.

- A. This manual explains how to assemble the **optional** Side Drive Conversion Kit to a Direct Gear Drive SAW Auger.
- B. Grain King reserves the right to improve its product whenever possible and practical to do so. We reserve the right to change, improve and modify products at any time without obligation to make changes, improvements and modifications on equipment sold previously.
- C. The Side Drive for the Direct Gear Drive SAW Transport Auger has been designed and manufactured to give years of dependable service. The care and maintenance of this machine will affect the satisfaction and service obtained. By observing the instructions and suggestions we have recommended, the owner should receive competent service for many years. If additional information or assistance should be required, please contact Grain King.
- D. When receiving merchandise, it is important to check both the quantity of parts and their descriptions with the packing list enclosed within each package. All claims for freight damage or shortage must be made by the consignee within ten (10) days from the date of the occurrence of freight damage. The consignee should accept the shipment after noting the damage or loss.

## 2. Capacity.

- A. The capacities of augers or screw conveyers varies greatly under varying conditions. The following factors play a role in the performance of the auger:
  - Speed
  - Angle of operation
  - Moisture content
  - Amounts of foreign matter
  - Methods of feeding
  - Different materials
- B. An auger operating at a 45° incline might experience 20% less capacity than an auger operating horizontally. Twenty-five percent (25%) moisture could cut capacity by as much as 40% under some conditions.

## 3. Tractor Requirements.

- A. The SAW portable auger and side drive kit was designed for use with a tractor meeting the following requirements:
  - 1. 540 RPM Power Take Off (PTO)
  - 2. Adjustable Drawbar
  - 3. One (1) hydraulic control circuit for lifting the main auger. Minimum pressure of 1800 to 2000 PSI.

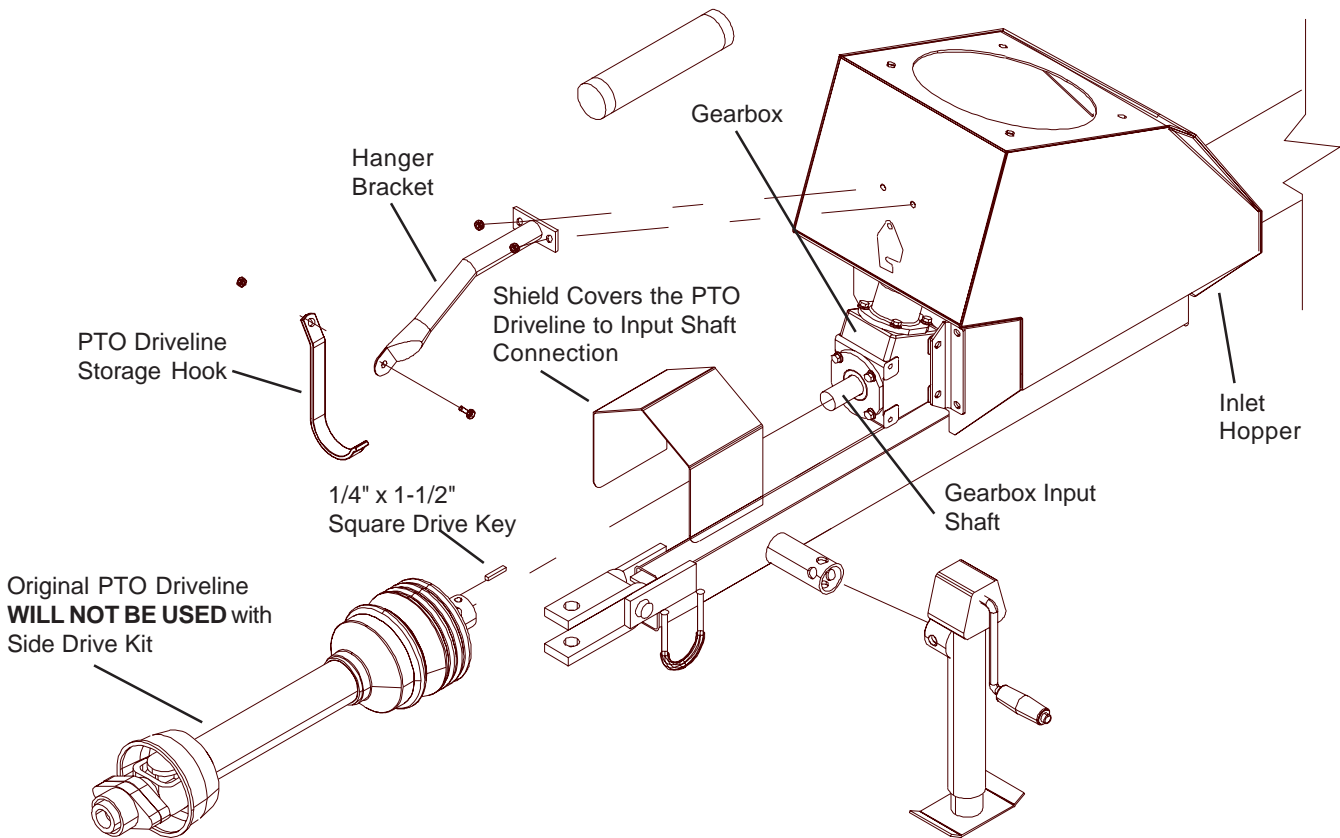
## 4. PTO Driveline.

- A. The PTO driveline will be attached to the tractor during placement of the auger. Refer to the **Startup** section of this manual for more information.
- B. The PTO driveline furnished with the auger is equipped with a “Spring-Lok” coupler at the tractor end. The coupler is spring loaded and will fit the standard 1-3/8" x 6" spline PTO output shaft from the tractor.
- C. The PTO driveline is equipped with a shear bolt at the tractor connection. The shear bolt protects the auger from damage if the auger becomes plugged or subjected to high loads.
- D. Do not exceed the maximum recommended operating length of the PTO driveline.



## 1. Pre-Assembly.

- A. If your SAW auger is set up for direct drive operation, you must disassemble the following components. These will be used with the side drive conversion kit.
1. PTO—Remove the PTO driveline from the gearbox input shaft. **NOTE: The PTO driveline included with the SAW auger will NOT be used with the side drive kit.**
  2. Connection Shield—Remove the connection shield covering the gearbox input shaft.
  3. Hanger Bracket and PTO Storage Hook—Remove the hanger bracket and the PTO driveline storage hook.




## 2. Assemble the Side Drive Conversion Kit.

- A. Slide the 1-1/4" bore flex coupler half onto the gearbox input shaft.
- B. Insert a 1/4" x 1-1/4" square key.
- C. Tighten the setscrew in the flex coupler to secure it to the gearbox input shaft.
- D. Attach the gearbox mount to the gearbox on the inlet hopper using the following hardware:
- Four (4) 3/8" x 1" long (Grade 5) hex head capscrews
  - Four (4) lockwashers
- E. Slide the 1-1/4" bore flex coupler half onto the 2-1/2" output shaft of the side drive gearbox.
- F. Insert a 1/4" x 1-1/4" long square key.


**2. Assemble the Side Drive Conversion Kit. (cont.)**

- G. Tighten the setscrew in the flex coupler, securing it to the gearbox output shaft. You can adjust both flex couplers after the gearbox is mounted.

 **IMPORTANT: Do not operate without adding oil to the gearbox. The gearbox is shipped without oil.**

- H. Remove the vented plug from the gearbox and add oil. Make sure the gearbox is level, then fill to half full. The type of oil you should use for the gearbox depends on operating temperature:

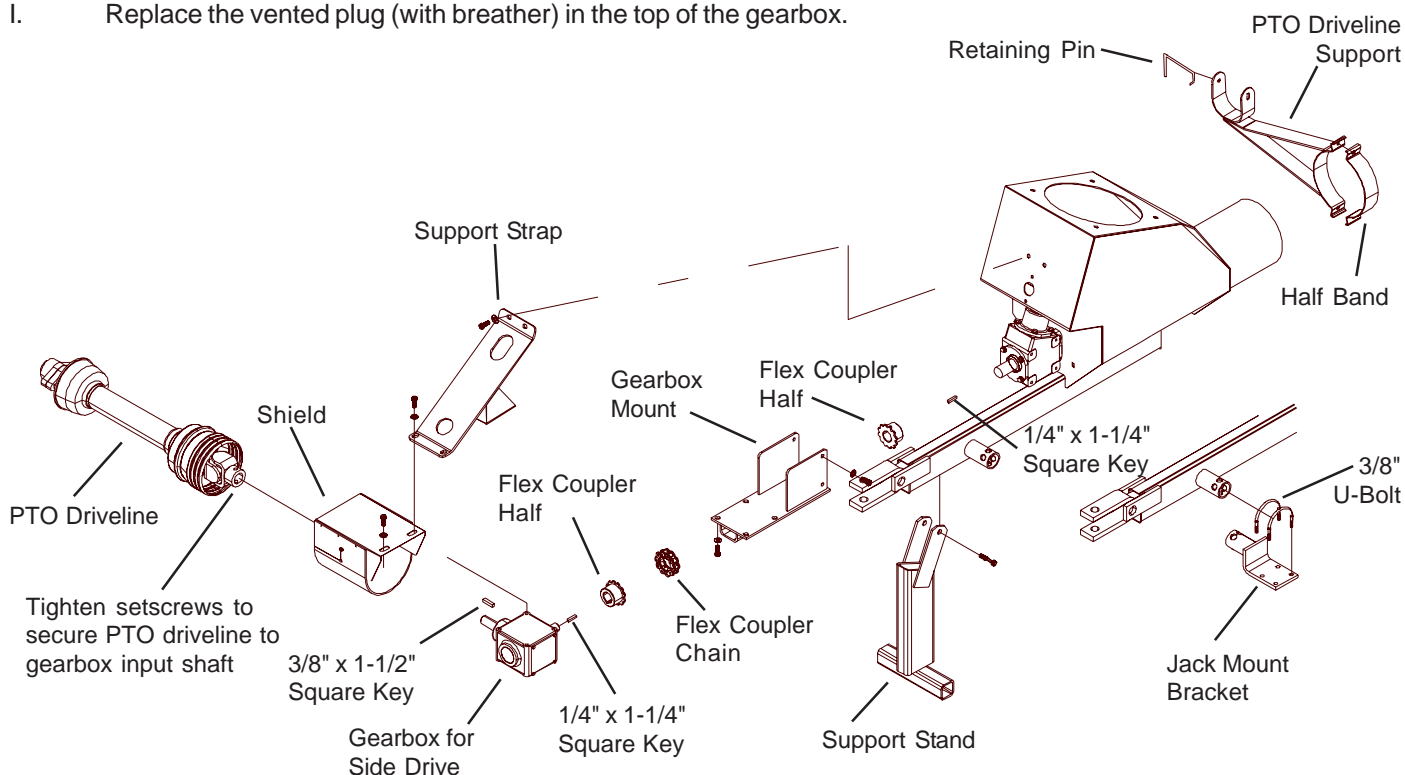
- For normal operating temperatures between 40°F—120°F, use non-foaming, multi-purpose gear oil, SAE 90 weight.
- For temperatures below 40°F, use SAE 80 weight oil.

 **Use commercial grade oil that is available for automotive differentials. If you are running the auger in severe applications, such as running the auger 24 hours a day, extra pressure additives may be of value.**

**Oil dissipates under working conditions. Be sure to frequently check the oil in the gearboxes and maintain the proper level.**

**NEVER add more oil than is recommended. Adding too much oil may damage the seals or force the oil out through the vented plug.**

- I. Replace the vented plug (with breather) in the top of the gearbox.



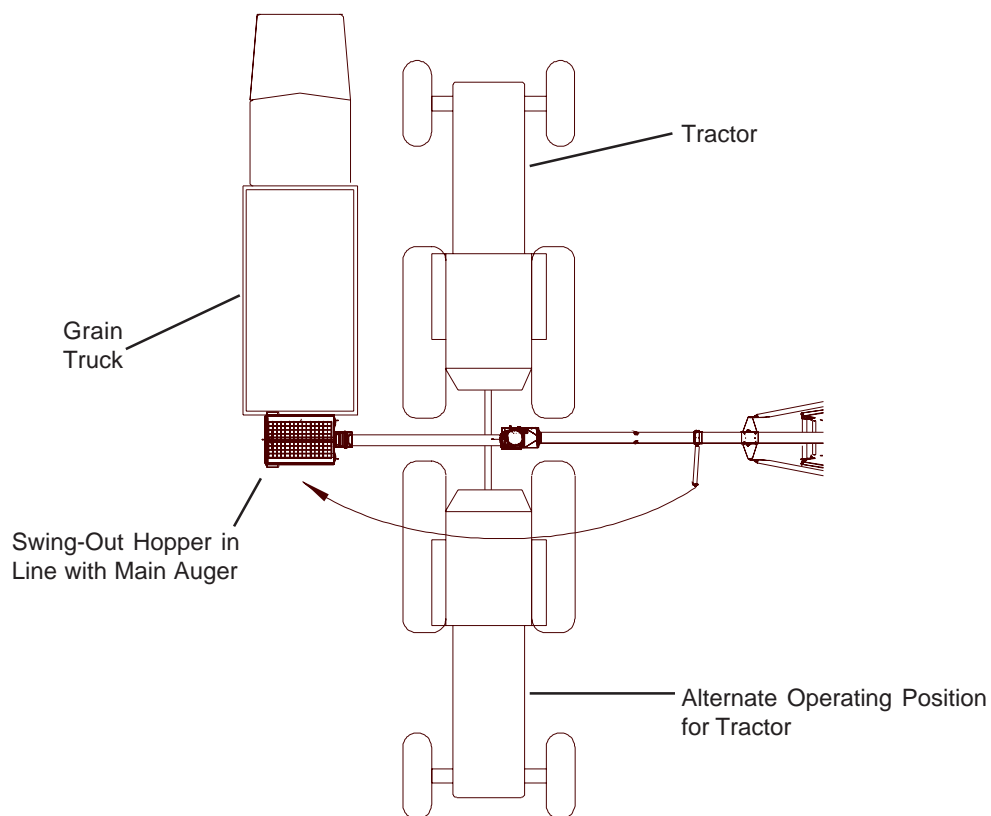
## 2. Assemble the Side Drive Conversion Kit. (cont.)

- J. Secure the gearbox to the gearbox mount using four (4) 3/8" x 1" long hex head capscrews and lockwashers.



Side drives can be operated from either the right or left hand side of the auger. The illustration below shows it positioned in the left drive position. To change the drive for a right hand drive:

1. Turn the gearbox over and bolt the other side to the gearbox mount.
2. Position the vent plug in the gearbox on the top side of the gearbox.
3. Install the PTO driveline support on the other side of the auger housing.
4. Install the jack bracket on the other side using two (2) 3/8" u-bolts with four (4) nylon locknuts.



- K. Loosen the setscrews in both flex coupler halves. Leave a 1/8" gap between the two flex coupler halves.
- L. Use a connecting chain to join the flex coupler halves.
- M. Tighten the flex coupler setscrews to secure them in place.

**2. Assemble the Side Drive Conversion Kit. (cont.)**

- N. Attach the longer (pin-stop) PTO driveline to the gearbox input shaft using the 3/8" x 1-1/2" drive key.

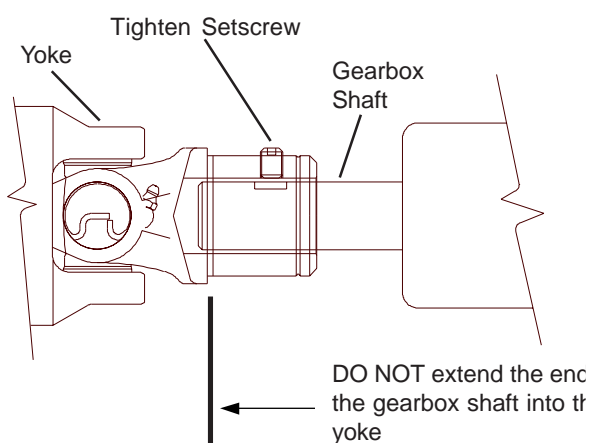


**IMPORTANT: DO NOT use the original PTO driveline (shorter length) that is included with the SAW auger. You must only use the LONGER PTO driveline provided with the side drive kit.**

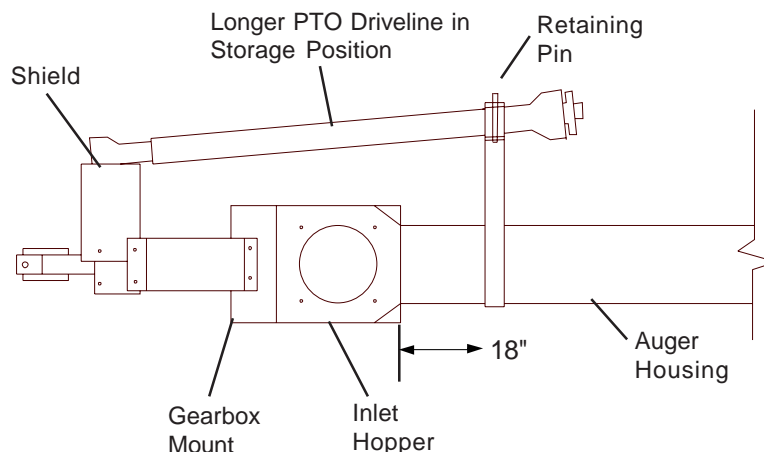
**To properly engage the the setscrew in the PTO driveline yoke on the gearbox input shaft, slide the yoke onto the shaft until the setscrew will sit on the flat section of the gearbox shaft.**

**NEVER extend the gearbox input shaft beyond the inside edge of the yoke.**

**Drawing A—PTO Driveline to Gearbox Input Shaft Detail**



**Drawing B—PTO Driveline in Storage Position**



- O. Slide the shield over the PTO driveline, then secure the shield and support strap to the gearbox using three (3) 3/8" x 1" long (Grade 5) hex head capscrews and lockwashers.
- P. Attach the other end of the support strap to the inlet hopper using two (2) 3/8" x 1-1/4" long (Grade 5) hex head capscrews, flatwashers, and nylon locknuts.
- Q. Attach the PTO driveline support to the auger housing using a halfband and two (2) 5/16" x 1-1/2" long (Grade 5) hex head capscrews and nuts. The driveline support should be positioned 18" from the front of the hopper, as shown in Figure B above.
- S. Set the PTO driveline into the support to ensure the support is installed correctly. Refer to Figure B above.
- R. Fasten the retaining pin by slipping the short, bent end of the pin through the hole in the PTO driveline support and through the slot on the opposite side. The long end of the pin should rotate downward, securing the pin in place.
- T. Secure the stand to the hitch tube using a 1/2" x 3-1/2" hex head capscrew and nylon locknut.

# Start-Up

## 1. Designate Work Area.

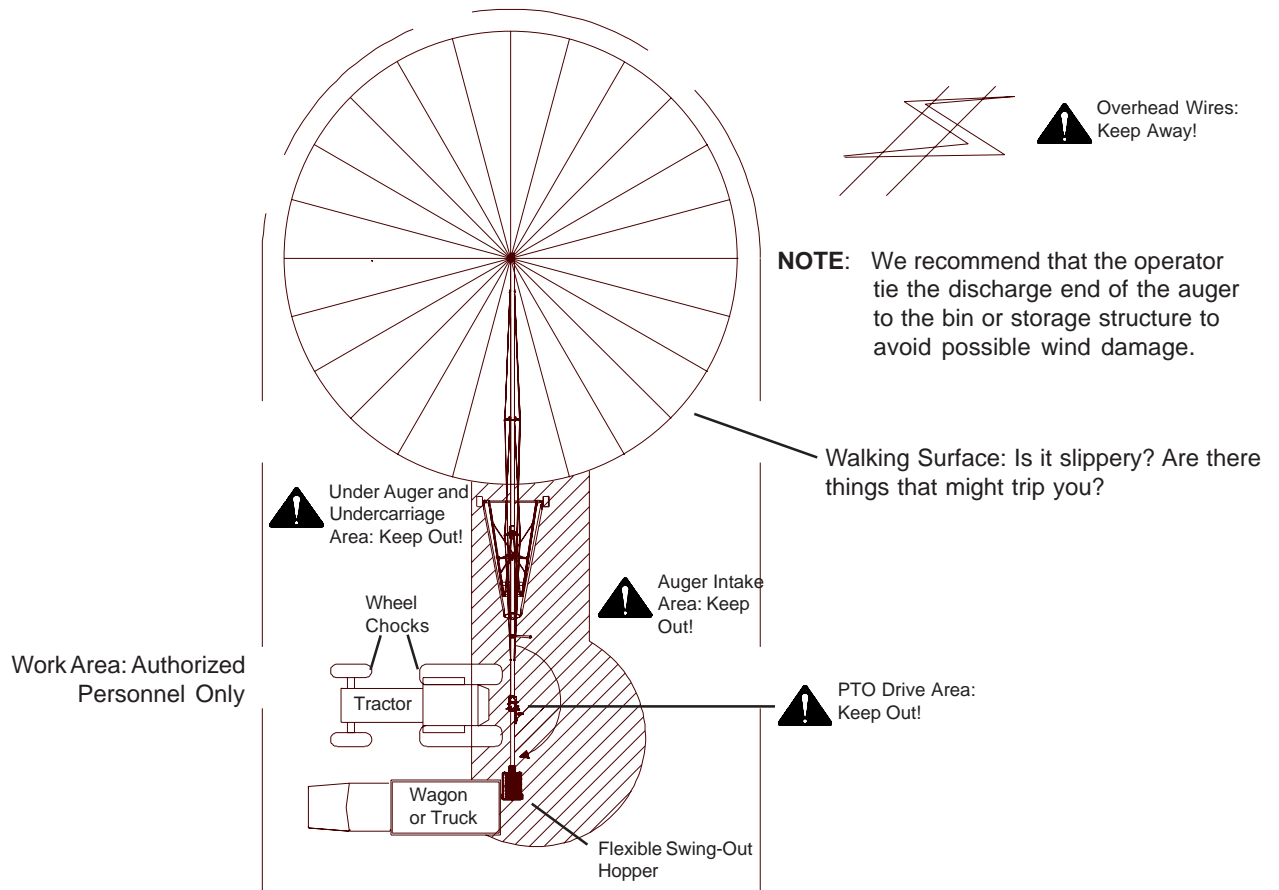
- Before starting the auger, establish the designated work areas. The diagram below shows where boundaries should be established.
- Mark off the designated work areas using colored nylon or plastic rope as portable barriers.



### RULES FOR SAFE WORK AREA.

Under no circumstances should persons not involved in the operation of the auger be allowed to trespass into the designated work area. It is the duty of ALL operators to ensure that children and/or other persons stay out of the work areas. Should anyone not involved in the operation trespass into the work area or into a hazard area, the operator should immediately shutdown the auger.

It is the responsibility of ALL operators to ensure that the work area has secure footing, and is clean and free of debris and tools that might cause accidental tripping or falling. The operator is also responsible for keeping the work area clean and orderly during operation of the auger.



## 2. Inspect the Auger.

- After your new auger is delivered and assembly is complete, and before each use, you must inspect the auger.
- Be sure that ALL guards listed in the assembly instructions are in place, secured, and functional.
- Be sure that the shields on the PTO rotate easily.
- Check ALL safety decals. Replace any that are worn, missing, or illegible. A list of decals found on the auger is included in the back of this manual. You may obtain decals from your dealer or ordered from the factory.
- Check the hopper winch and cable to ensure they are secure and operational.

**2. Inspect the Auger. (cont.)**

- F. Ensure that ALL fasteners are tight.
- G. Check the hydraulic hose and fittings to ensure they are tight and are not leaking hydraulic oil.
- H. Check the oil level in ALL gearboxes. The **Maintenance** section of this manual gives oil level recommendations.
- I. Make sure that the clean out door is shut. It is located in the bottom of the inlet hopper.
- J. Ensure that the inspection covers are in place.

## 1. Operation Recommendations.

- A. One person must be in a position to monitor the operation of the auger at ALL times. That person should visually inspect the auger before and during operation and be alert to any unusual vibrations, noises, and the loosening of any fasteners.
- B. For smoother startups, keep the auger from operating totally filled. This will also help ensure efficient operation.
- C. To avoid excessive wear, do not operate the auger empty for any length of time.
- D. You must “break-in” a screw conveyor when it is new and at the beginning of each season. Refer to Step 2 for instructions.
- E. To avoid damage and excessive wear of the 8" and 10" augers:
  - Do not operate the auger at speeds in excess of 540 RPM.
  - Do not operate the auger at speeds below 450 RPM.



**Be certain to close ALL the clean-out doors and inspection doors in the main auger hopper before operating the auger.**

**The operator should not add power before viewing the entire work area and checking that ALL personnel are clear of the designated work areas.**

**The operator should be alert to any unusual vibrations or noises that might indicate a need for service or repair during the initial startup and break-in period.**

**The operator should regulate the grain flow into the main auger by controlling the amount of grain fed to the swing-out hopper. Avoid plugging the main auger by overfeeding the hopper.**

**Be certain that ALL safety shields and devices remain in place during operation.**

**Ensure that hands, feet, and clothing are kept away from moving parts.**

**Stop the engine and lockout the power source whenever the equipment must be serviced or adjusted.**

## 2. Startup and Break-In

- A. Any auger that is new or has set idle for a season needs to go through a “break-in” period.
- B. Before you start the tractor, be sure the PTO driveline is securely attached to the auger and the tractor. Make sure the side drive is in working position.
- C. Be sure that power to the PTO is **OFF**.



**Be certain that the shaft shield rotates freely on the shaft before engaging the PTO driveline.**

- D. Inspect all the u-joint angles. They should be equal, as depicted by the drawing on the following page.
- E. Turn on the tractor.
- F. Engage the PTO (by turning the switch to **ON**, engaging the lever, or whatever means necessary) at a slow RPM to minimize shock loads.
- G. Do not allow the auger flighting to “load up” at low speed. If this occurs, high torque must be used to turn the auger flighting, and this can damage the auger.

**2. Startup and Break-In. (cont.)**

- H. Run the auger at partial capacity until several hundred bushels of grain have been augered and the flighting assembly and tube are polished.

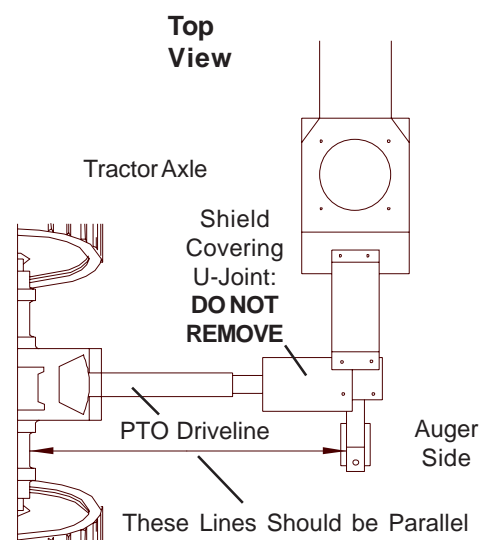
**Do not stop or start the auger under load because the auger has a tendency to “freeze up,” especially if the flight and tube have not become well polished.**

- I. When the screw and tube are polished and smooth, slowly work up to the recommended speed and run the auger at full speed.

**You will minimize shock loads by engaging the PTO at a slow RPM, then increasing the RPM to the recommended speed.**

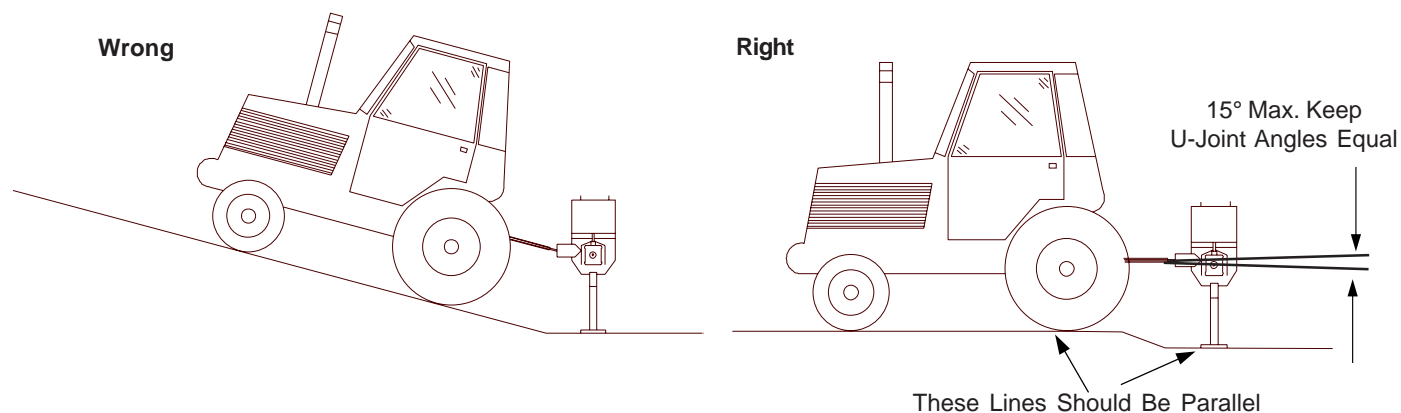
**3. Align PTO Driveline with Tractor.**

- A. During operation, make sure the PTO driveline is aligned with the tractor. The PTO is a pin stop model. This means that the two (2) telescoping sections will not separate.
- B. Operate the PTO driveline in as short a configuration as possible.
- C. Operate the PTO driveline in as straight a line as possible.
- D. When connecting the tractor and the auger, ensure that the tractor axle and side of the auger are parallel, as shown in the illustration to the right.



**4. Keep the U-Joint Angles Equal.**

- A. The center line of the tractor and the gearbox must be parallel.
- B. As shown in the drawing below, if the tractor and auger are on unlevel ground or are at different levels, adjust them so that the u-joint angles are equal and the center line is parallel.





# Shutdown

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## 1. Normal Shutdown.

- A. Make sure that the flexible swing-out hopper and auger are empty before shutting down the unit.
- B. Slow down the RPM.
- C. Turn off the tractor.
- D. Before the operator leaves the work area, the power source should be locked out, as described below.



**WARNING:** Precautions should be taken to prevent anyone from operating the auger when the operator is absent from the work area. The operator must stop the auger and turn off the power source any time he/she must leave the work area, or service or adjust the auger.

## 2. Intermittent Operation Shutdown.



**IMPORTANT:** Do not stop and restart the auger when it is fully loaded. This may damage the auger.

- A. During intermittent operations such as batch drying, give careful consideration to the size of auger to use. Using a larger diameter auger and reducing its load level is far better than subjecting a smaller diameter auger to high loads. An auger that is kept from absolute filling will startup easier and convey more efficiently.

## 3. Emergency Shutdown.

- A. If you have to immediately shutdown the auger under load, **be sure to disconnect and lockout the power source.**
- B. Remove as much grain from the hoppers and auger that you can before restarting. Use the clean-out door in the bottom of the main auger inlet hopper.
- C. **Never** attempt to restart the auger when it is full.



**IMPORTANT:** Starting the auger under load may result in damage to the auger. Such damage is considered abuse of the equipment.

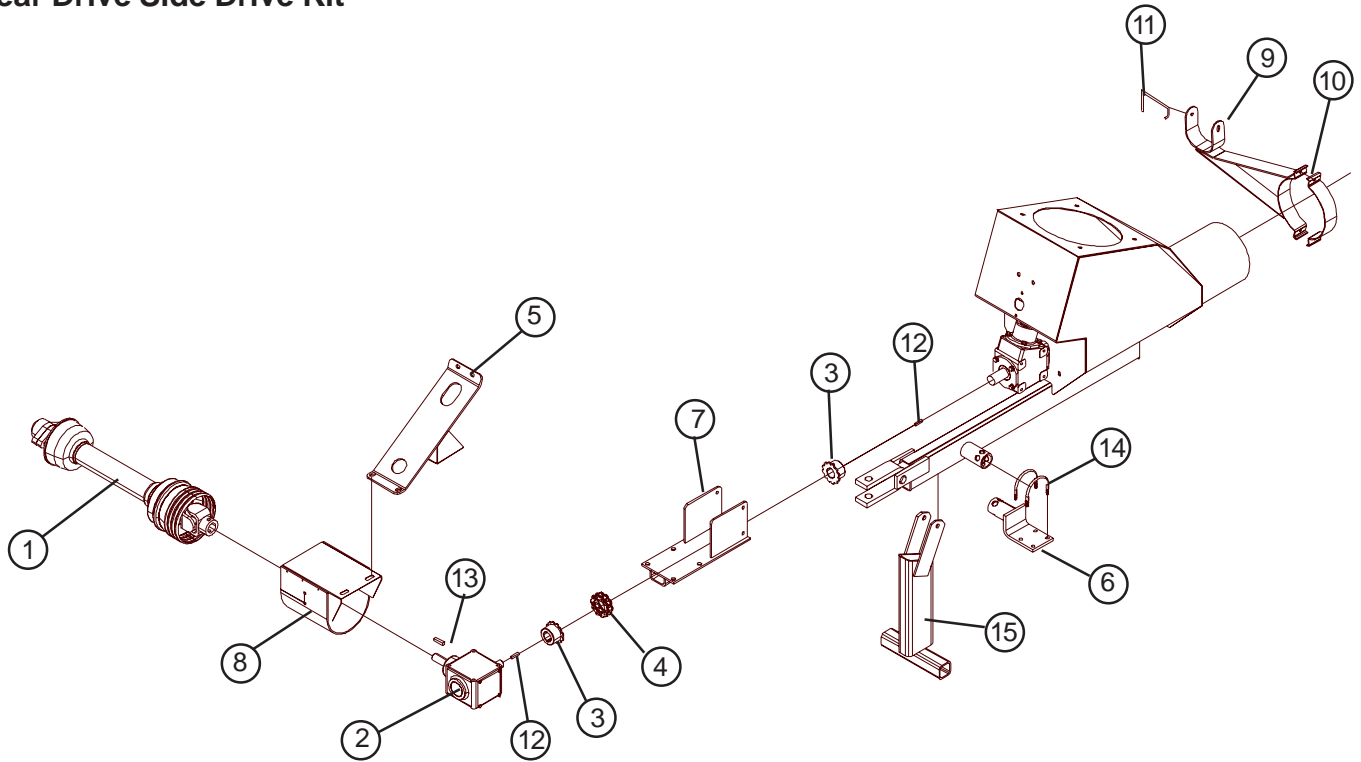
- D. When as much grain as possible has been cleared from the hoppers and the auger, reconnect the power source and clear the remaining grain gradually.

## 4. Lockout.

- A. To lockout the auger, stop the auger and turn off the power supply.
- B. Remove the ignition key or coil wire from the power source. If this is not possible, remove the PTO driveline from the work area.
- C. The operator should lockout the SAW auger in the following situations:
  - Anytime the operator leaves the work area, such as after shutdown.
  - Anytime the operator services or adjusts the auger.

# Parts List

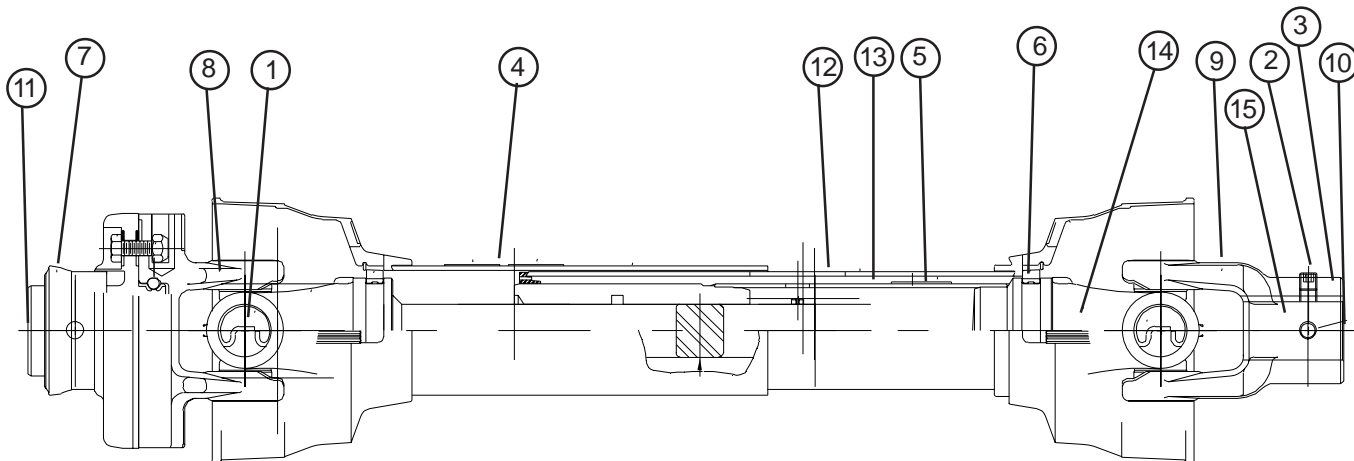
## Gear Drive Side Drive Kit



Side Drive Kit		
Ref. #	Part #	Description
1	GK3176	Pin Stop Type PTO Driveline
2	GK3191	Gearbox with 1-1/2" Input Shaft
3	GK3192	Flex Coupler Half 1-1/4" Bore
4	GK1887	Flex Coupler Connecting Chain
5	GK1493	Support Strap
6	GK1494	Jack Mount Bracket
7	GK1492	Gearbox Mount
8	GK1570	Shield for PTO Driveline to Gearbox Connection
9	GK1516	PTO Driveline Support for 8" Model
9	GK1517	PTO Driveline Support for 10" Model
10	GK1055	2" Wide Half Band for PTO Driveline Support for 8" Model
10	GK1057	2" Wide Half Band for PTO Driveline Support for 10" Model
11	GK3246	Retaining Pin for PTO Driveline Support
12	S-8331	Square Drive Key - 1/4" x 1-1/4" Long
13	S-8332	Square Drive Key - 3/8" x 1-1/2" Long
14	S-8333	3/8" U-Bolt 3"wide x 2"Long
15	GK1378	Support Stand

## Parts List

### Side Drive Kit PTO



PTO Driveline for Side Drive Kit		
Ref. #	Grain King Part #	Description
1	GK2651	35R Cross & Bearing Kit
2	GK2655	Set Screw: 3/8"-16x.38 Sckt Hd
3	GK3377	Set Screw: 3/8"-16x.50 Sckt Hd
4	GK2658	Safty Sign - Outer
5	GK2659	Safty Sign - Inner
6	GK3376	Nylon Repair Kit: Shield Retainer
7	GK2665	Spring - Lok Repair Kit
8	GK3375	Ball Shear Asm
9	GK3374	End Yoke
10	GK3371	Joint & Tube Half Asm w/Guard
11	GK3368	Joint & Shaft Half Asm w/Guard
12	GK3369	Inner Guard
13	GK3370	Outer Guard
14	GK3372	Yoke, Tube & Slip Sleeve
15	GK3373	Yoke and Shaft

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# WARRANTY

GRAIN KING WARRANTS ALL PRODUCTS MANUFACTURED BY GRAIN KING TO BE FREE OF DEFECTS IN MATERIAL AND WORKMANSHIP UNDER NORMAL USAGE AND CONDITIONS FOR A PERIOD OF TWELVE (12) MONTHS AFTER RETAIL SALE TO THE ORIGINAL END USER OF SUCH PRODUCTS. GRAIN KING'S ONLY OBLIGATION IS, AND PURCHASER'S SOLE REMEDY SHALL BE FOR GRAIN KING, TO REPAIR OR REPLACE, AT GRAIN KING'S OPTION AND EXPENSE, PRODUCTS THAT, IN GRAIN KING'S SOLE JUDGEMENT, CONTAIN A MATERIAL DEFECT DUE TO MATERIALS OR WORKMANSHIP. ALL DELIVERY AND SHIPMENT CHARGES TO AND FROM GRAIN KING'S FACTORY WILL BE PURCHASER'S RESPONSIBILITY. EXPENSES INCURRED BY OR ON BEHALF OF THE PURCHASER WITHOUT PRIOR WRITTEN AUTHORIZATION FROM AN AUTHORIZED EMPLOYEE OF GRAIN KING SHALL BE THE SOLE RESPONSIBILITY OF THE PURCHASER.

EXCEPT FOR THE ABOVE EXPRESS LIMITED WARRANTIES, GRAIN KING MAKES NO WARRANTY OF ANY KIND, EXPRESSED OR IMPLIED, INCLUDING, WITHOUT LIMITATION, WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR USE IN CONNECTION WITH (I) PRODUCT MANUFACTURED OR SOLD BY GRAIN KING OR (II) ANY ADVICE, INSTRUCTION, RECOMMENDATION OR SUGGESTION PROVIDED BY AN AGENT, REPRESENTATIVE OR EMPLOYEE OF GRAIN KING REGARDING OR RELATED TO THE CONFIGURATION, INSTALLATION, LAYOUT, SUITABILITY FOR A PARTICULAR PURPOSE, OR DESIGN OF SUCH PRODUCT OR PRODUCTS.

IN NO EVENT SHALL GRAIN KING BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, OR CONSEQUENTIAL DAMAGES, INCLUDING, WITHOUT LIMITATION, LOSS OF ANTICIPATED PROFITS OR BENEFITS. PURCHASER'S SOLE AND EXCLUSIVE REMEDY SHALL BE LIMITED TO THAT STATED ABOVE, WHICH SHALL NOT EXCEED THE AMOUNT PAID FOR THE PRODUCT PURCHASED. THIS WARRANTY IS NOT TRANSFERABLE AND APPLIES ONLY TO THE ORIGINAL PURCHASER. GRAIN KING SHALL HAVE NO OBLIGATION OR RESPONSIBILITY FOR ANY REPRESENTATIVE OR WARRANTIES MADE BY OR ON BEHALF OF ANY DEALER, AGENT OR DISTRIBUTOR OF GRAIN KING.

GRAIN KING ASSUMES NO RESPONSIBILITY FOR FIELD MODIFICATIONS. MODIFICATIONS TO THE PRODUCT NOT SPECIFICALLY COVERED BY THE CONTENTS OF THIS MANUAL WILL NULLIFY ANY PRODUCT WARRANTY THAT MIGHT HAVE BEEN OTHERWISE AVAILABLE. THE USE OF GRAIN KING EQUIPMENT TO HANDLE MATERIALS OTHER THAN FREE FLOWING, NON-ABRASIVE AND DRY MATERIALS, AS INTENDED, WILL RESULT IN THE VOIDING OF THIS LIMITED WARRANTY.

THE FOREGOING WARRANTY SHALL NOT COVER PRODUCTS OR PARTS WHICH HAVE BEEN DAMAGED BY NEGLIGENT USE, MISUSE, ALTERATION, OR ACCIDENT. ANY NEGLIGENT USE, MISUSE, ALTERATION, OR DAMAGE DUE TO ACCIDENT, AS DETERMINED BY GRAIN KING, MAY VOID THE WARRANTY. THIS WARRANTY COVERS ONLY PRODUCTS MANUFACTURED BY GRAIN KING. THIS WARRANTY IS EXCLUSIVE AND IN LIEU OF ALL OTHER WARRANTIES EXPRESS OR IMPLIED. GRAIN KING RESERVES THE RIGHT TO MAKE DESIGN OR SPECIFICATION CHANGES AT ANY TIME, BEARING NO RESPONSIBILITY TO MAKE SIMILAR DESIGN OR SPECIFICATION CHANGES ON PREVIOUSLY SOLD MERCHANDISE.

PRIOR TO INSTALLATION, PURCHASER HAS THE RESPONSIBILITY TO RESEARCH AND COMPLY WITH ALL FEDERAL, STATE, AND LOCAL CODES WHICH MAY APPLY TO THE LOCATION AND INSTALLATION.

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THIS EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH THE CURRENT INSTALLATION CODES AND APPLICABLE REGULATIONS WHICH SHOULD BE CAREFULLY FOLLOWED IN ALL CASES. AUTHORITIES HAVING JURISDICTION SHOULD BE CONSULTED BEFORE INSTALLATIONS ARE MADE.

== *GRAIN KING* ==

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