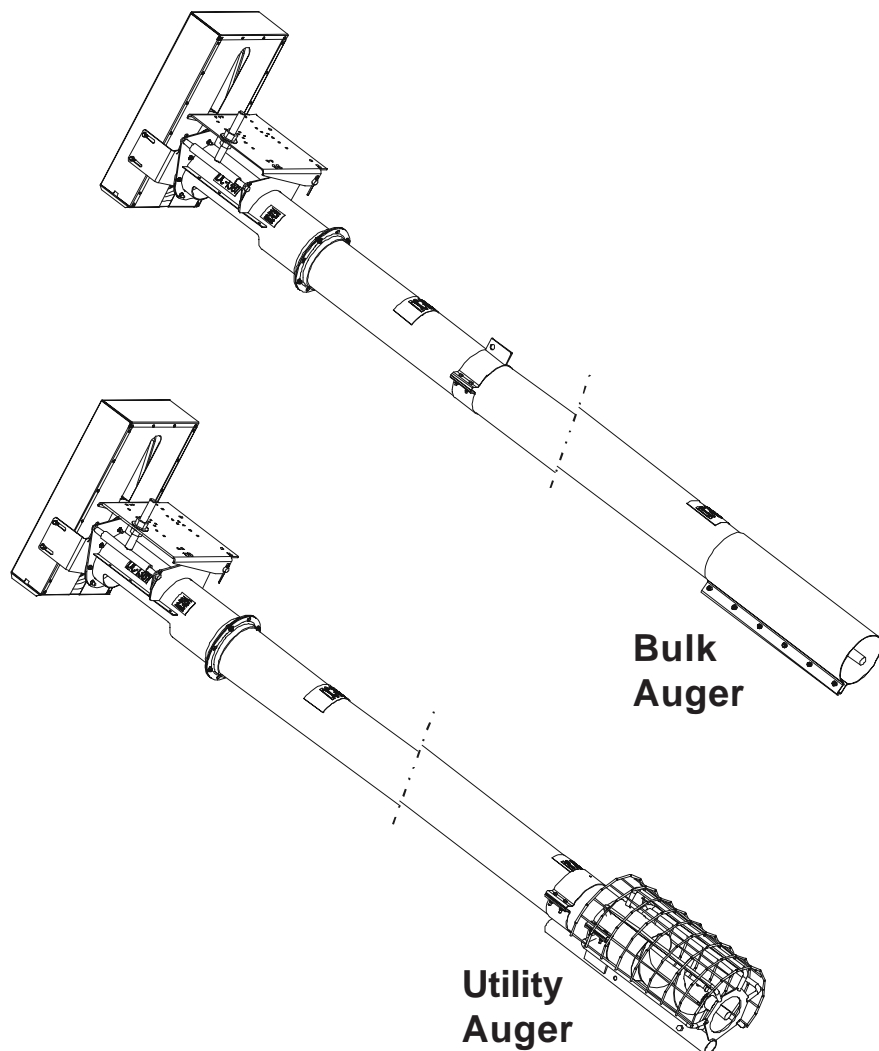


PNEG-1435

6", 8", & 10" Utility & Bulk Tank Augers

Assembly & Operation Manual



Revised: 4-20-05



PNEG-1435

**6", 8", & 10" Utility &
Bulk Tank Augers**

**PNEG-1435
4-20-05**

This manual is valid for the bulk tank and utility auger catalog numbers in the tables below.

Auger Length	6" Utility Auger	8" Utility Auger	10" Utility Auger
11'	GUF6111A GUF6112B1A	GUF8111A -	GUF10111A -
16'	GUF6161A GUF6162B1A	GUF8161A -	GUF10161A -
21'	GUF6211A GUF6212B1A	GUF8211A -	GUF10211A -
27'	GUF6271A GUF6272B1A	GUF8271A -	- -
31'	-	-	GUF10311A
33'	GUF6331A GUF6332B1A	GUF8331A -	- -
41'	GUF6411A GUF6412B1A	GUF8411A -	GUF10411A -
53'	-	GUF8531A	-

Auger Length	6" Bulk Tank Auger	8" Bulk Tank Auger
11'	GBF6111A GBF6112B1A	GBF8111A -
16'	GBF6161A GBF6162B1A	GBF8161A -
21'	GBF6211A GBF6212B1A	GBF8211A -
27'	GBF6271A GBF6272B1A	GBF8271A -
33'	GBF6331A GBF6332B1A	GBF8331A -
41'	GBF6411A GBF6412B1A	GBF8411A -

TABLE OF CONTENTS

Introduction	4
Safety Guidelines.....	5-10
Decals	11-13
Assembly	14-23
Electric Drive Motors.....	24
Startup	25
Operation/Maintenance	26
Shutdown	27
Parts List	28-29
Troubleshooting	30
Warranty	Inside Back Cover

INTRODUCTION

1. General Information

READ THIS MANUAL carefully to learn how to properly use and install equipment. Failure to do so could result in personal injury or equipment damage.

THIS MANUAL SHOULD BE CONSIDERED a permanent part of your equipment and should be easily accessible when needed.

WARRANTY is provided as part of the company's support program for customers who use and maintain their equipment as described in the manual. The warranty is explained on the warranty page located on the inside of the back cover.

2. Receiving Merchandise and Filing Claims

INSPECT the shipment immediately upon arrival. The Customer is responsible for ensuring that all quantities are correct. Report any damage or shortages by recording a detailed description on the Bill of Lading to justify the Customer's claim from the Transport Firm. 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.

3. Capacity

- A. The capacities may vary 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
 - Different materials
 - Methods of feeding
- B. For example, a twenty-five percent (25%) moisture could cut capacity by as much as 40% under some conditions.

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 its 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**

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

**WARNING**

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

**CAUTION**

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

CAUTION

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

NOTE

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

Safety Instructions

Our 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.

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.

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.

OPERATE UNLOAD EQUIPMENT PROPERLY

Make sure ALL equipment is locked in position before operating.

NEVER start equipment until ALL persons are clear of the work area.

Be sure all operators are adequately rested and prepared to perform all functions of operating this equipment.

NEVER allow any person intoxicated or under the influence of alcohol or drugs to operate the equipment.

NEVER work alone.

Make sure someone is nearby who is aware of the proper shutdown sequence in the event of an accident or emergency.

ALWAYS think before acting. NEVER act impulsively around the equipment.

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.

Use ample overhead lighting after sunset to light the work area.

Keep area around intake free of obstacles such as electrical cords, blocks, etc. that might trip workers.

NEVER drive, stand or walk under the equipment.

Use caution not to hit the auger when positioning the load.

ALWAYS lockout ALL power to the equipment when finished unloading a bin.



**Operate
Unload
Equipment
Safely**

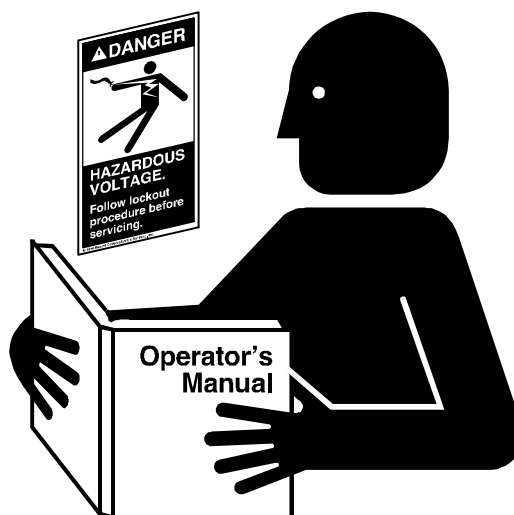
FOLLOW SAFETY INSTRUCTIONS

Carefully read all safety messages in this manual and on your machine safety signs. Keep signs in good condition. Replace missing or damaged safety signs. Be sure new equipment components and repair parts include the current safety signs. Replacement safety signs are available from the manufacturer.

Learn how to operate the machine and how to use controls properly. Do not let anyone operate without instruction.

Keep your machinery in proper working condition. Unauthorized modifications to the machine may impair the function and/or safety and affect machine life.

If you do not understand any part of this manual and need assistance, contact your dealer.



Read and Understand Manual.

INSTALL & OPERATE ELECTRICAL EQUIPMENT PROPERLY

To avoid serious injury or death, stay away from unit and make sure everyone is clear of all augers before starting or operating the unit.

Electrical controls should be installed by a qualified electrician and must meet the standards set by the national electrical code and all local and state codes.

Disconnect and lock out all power sources before installing wires/cables or servicing equipment .

Do not operate electric motor equipped units until motors are properly grounded.

Disconnect power on electrical driven units before resetting motor overloads.

Do not repetitively stop and start the drive in order to free a plugged condition. Jogging the drive in this type of condition can damage the equipment.



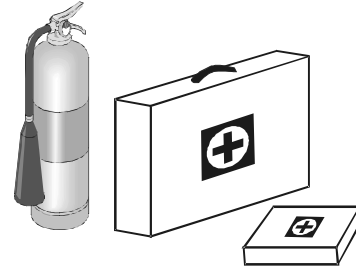
Electric Shock Hazard.

PREPARE FOR EMERGENCIES

Be prepared if fire starts.

Keep a first aid kit and fire extinguisher handy.

Keep emergency numbers for doctors, ambulance service, hospital, and fire department near your telephone.



Keep Emergency Equipment Quickly Accessible.

WEAR PROTECTIVE CLOTHING

Wear close fitting clothing and safety equipment appropriate to the job.

Safety glasses should be worn at all times to protect eyes from debris.

Wear gloves to protect your hands from sharp edges on plastic or steel parts.

A respirator may be needed if a hog house has poor ventilation. Waste fumes can be toxic.

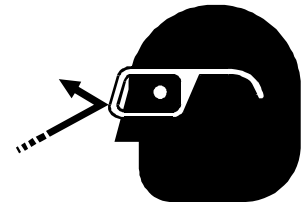
Wear hard hat and steel toe boots to help protect your head and toes from falling debris.

Remove all jewelry.

Tuck in any loose or dangling shoe strings.

Long hair should be tied up and back.

Eye Protection



Gloves



Steel Toe Boots



Respirator



Hard Hat



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 instructions 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 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. Sub part D, Section 19287.57 (a) (6).
- 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 people 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.

<i>Date</i>	<i>Employees Name (printed)</i>	<i>Employees Signature</i>
	1	
	2	
	3	
	4	
	5	
	6	
	7	
	8	
	9	
	10	
	11	
	12	
	13	
	14	
	15	

***SAFETY* 1st**

*Replace missing guards and shields
FREE OF CHARGE!*

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

One of the most important aspects of our engineering is **SAFETY 1st** design throughout all product lines. Safety is NO ACCIDENT!

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

While it is our main goal 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:

<p>The GSI Group PO Box 20 1004 E. Illinois Street Assumption, IL 62510 Ph: 217-226-4421</p>
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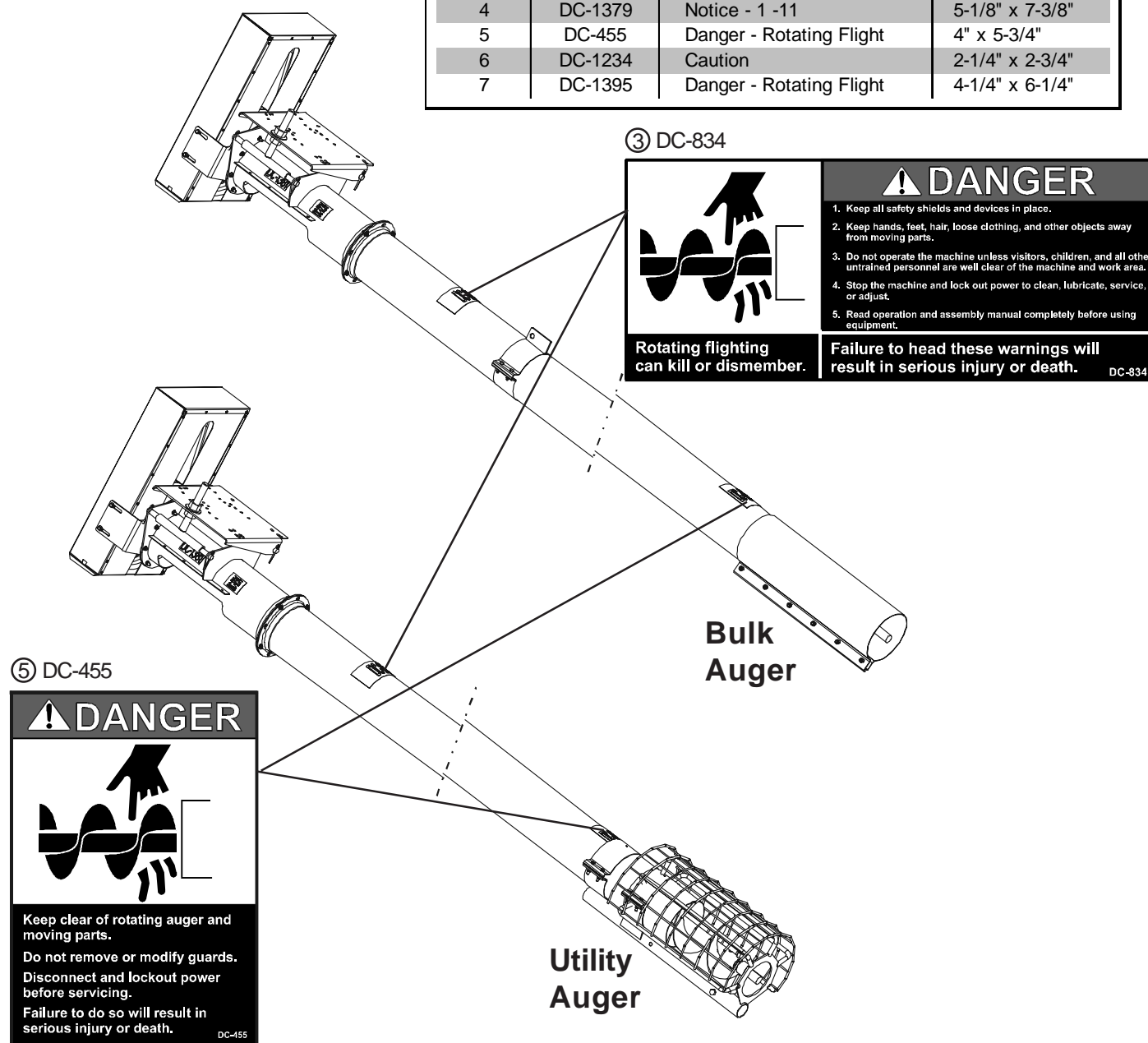
SAFETY DECALS

The Decal List below has all the safety decals that should be included with your equipment. The following pages show what the decals look like and where they should be located on the equipment. Inspect all decals and replace any that are illegible, worn, or missing. Contact your local dealer or the manufacturer to order replacement decals free of charge.

Contact: The GSI Group
1004 E. Illinois Street
Assumption, IL 62510
Ph: 217-226-4421

6", 8", & 10" Roof Auger Decal List

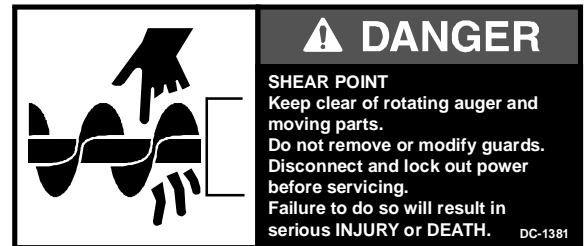
Ref. #	Part #	Description	Size
1	DC-1381	Danger - Shear Point	4-1/2" x 2"
2	DC-994	Danger - Shear Point	4-1/2" x 2"
3	DC-834	Danger - Unloading	9" x 3-3/4"
4	DC-1379	Notice - 1 -11	5-1/8" x 7-3/8"
5	DC-455	Danger - Rotating Flight	4" x 5-3/4"
6	DC-1234	Caution	2-1/4" x 2-3/4"
7	DC-1395	Danger - Rotating Flight	4-1/4" x 6-1/4"



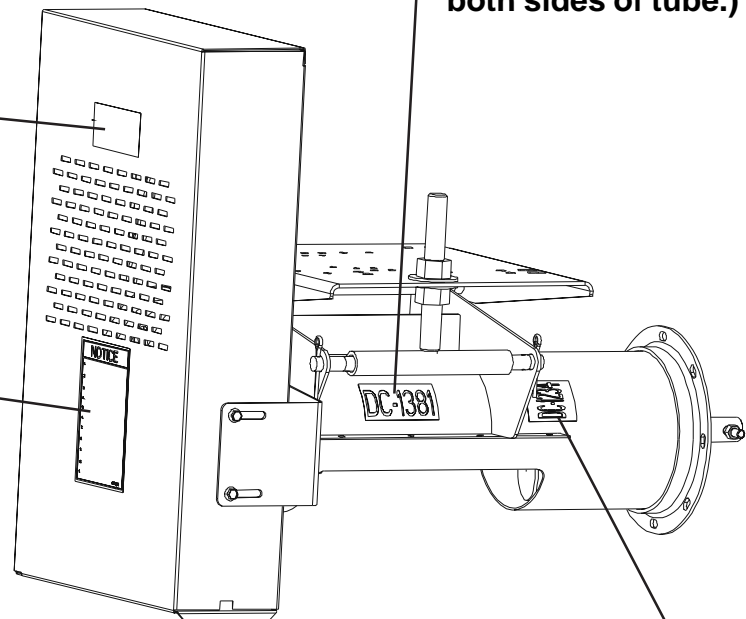
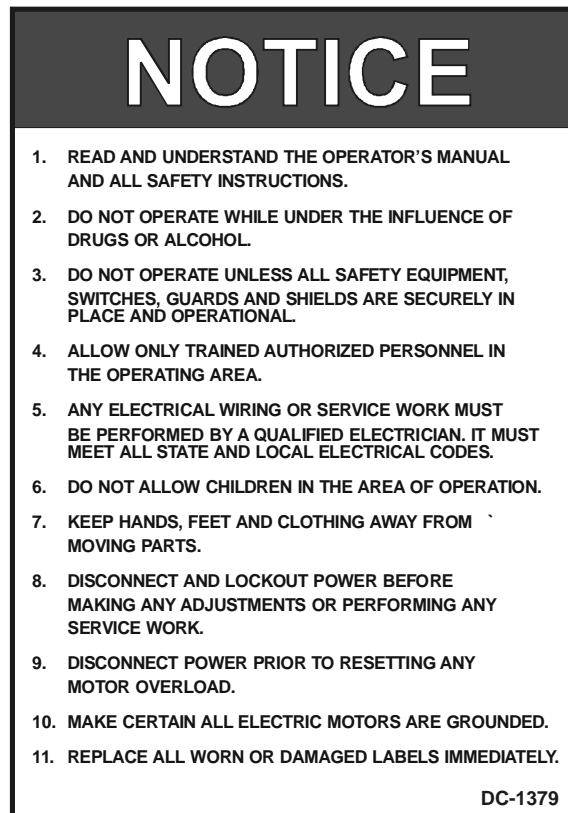
SAFETY DECALS

Check components shown below to insure that the safety decals are in place and in good condition. If a decal cannot be easily read for any reason or has been painted over, replace it immediately. Contact your dealer or the manufacturer to order a replacement decal free of charge.

Contact: The GSI Group
1004 E. Illinois Street
Assumption, IL 62510
Ph: 217-226-4421



(Decal located on both sides of tube.)

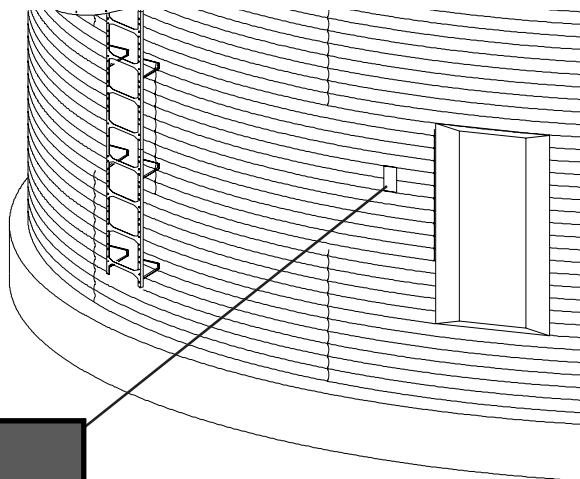


SAFETY DECALS

Check components shown below to insure that the safety decals are in place and in good condition. If a decal cannot be easily read for any reason or has been painted over, replace it immediately.

Contact your dealer or the manufacturer to order a replacement decal free of charge.

DANGER Sign No. DC-1395 was supplied with your bin unloading equipment. This safety sign should be applied to the side of the bin near the bin opening, so it will be viewed by people entering into the bin storage building. Do not cover any safety signs or any other signs that are already there.



⑥ DC-1395

NOTE

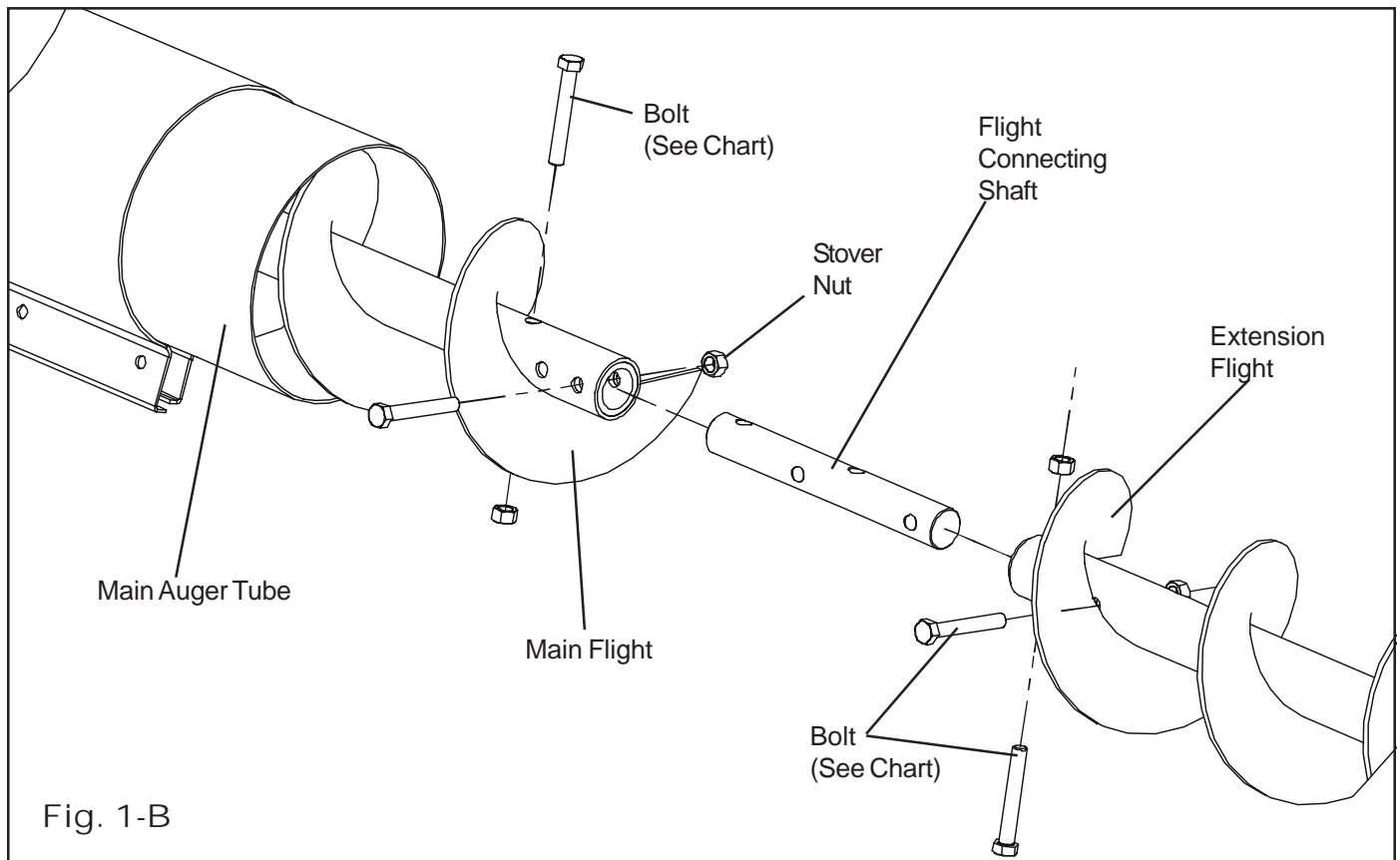
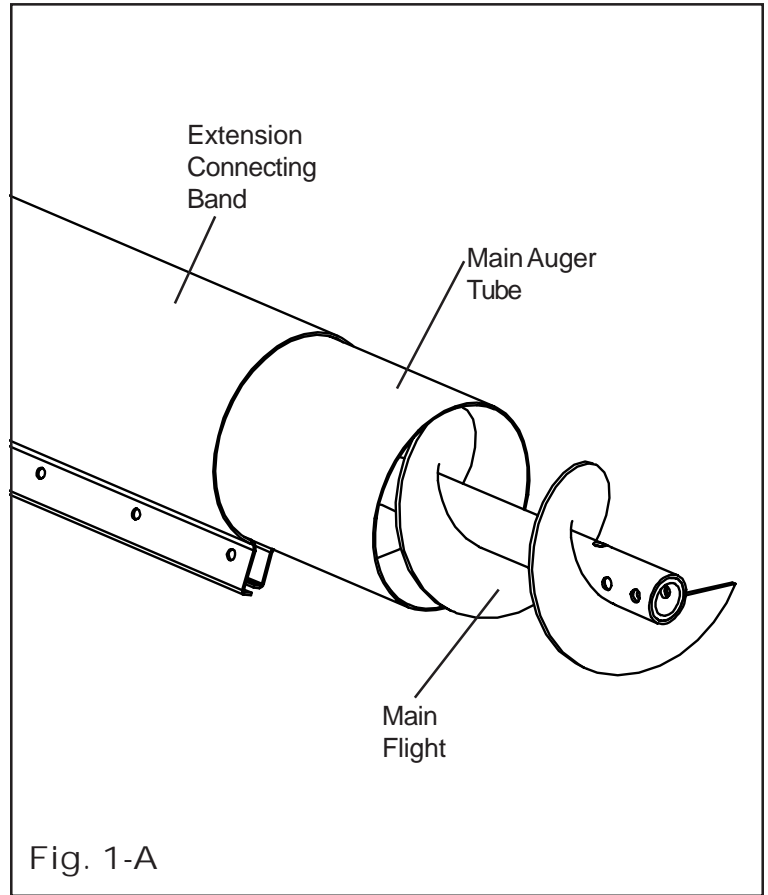
Please remember, safety signs provide important safety information for people working near bin unloading equipment that is in operation.

1. Assembling the Flight Extension

NOTE: If your auger does not include an extension skip ahead to Step 1-E.

- A. Begin by sliding the extension connecting band onto the main auger tube. (See Figure 1-A)
- B. Slide the flight connecting shaft into the main section of flight and bolt together with Grade 8 Hex Bolt and Stover nut. Next slide extension flight onto connecting shaft and bolt together using proper grade 8 bolts and stover nuts. (See Chart Below)(See Figure 1-B)

Flight Hardware	
6" -	3/8" x 2" - 16 Grade 8 Hex Bolts
8" -	7/16" x 3" - 14 Grade 8 Hex Bolts
10" -	1/2" x 3-1/2" - 13 Grade 8 Hex Bolts



1. Assembling the Flight Extension (Cont.)

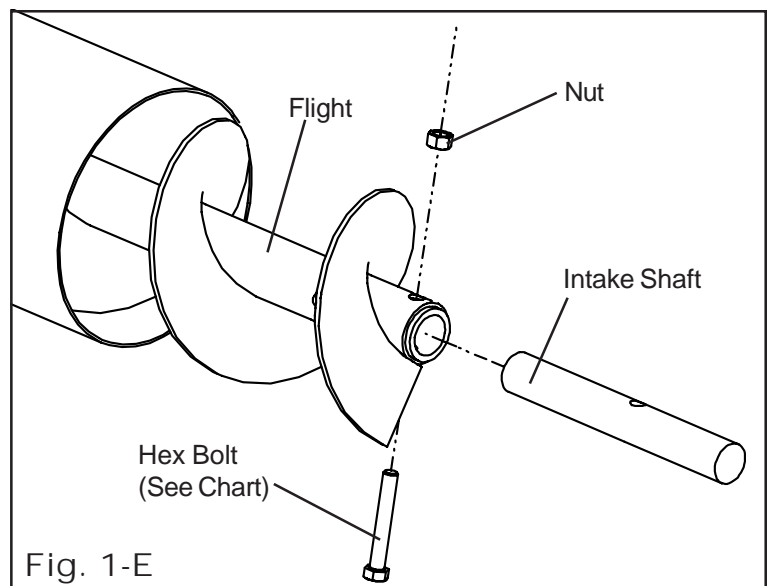
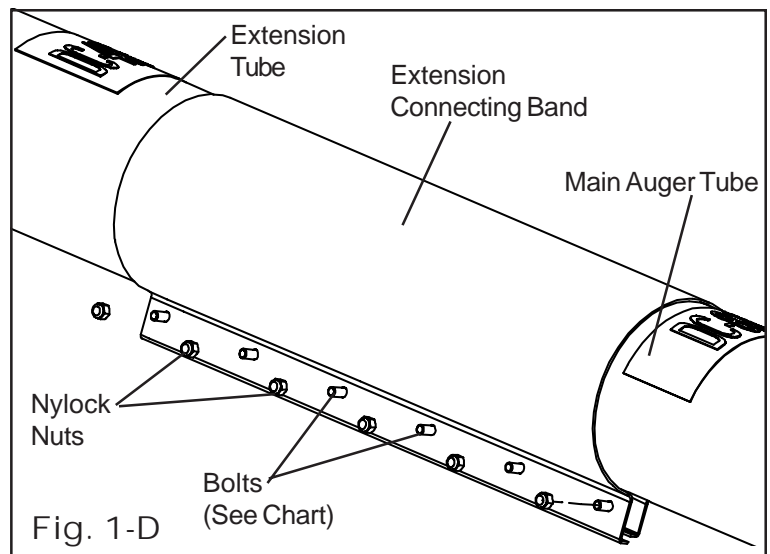
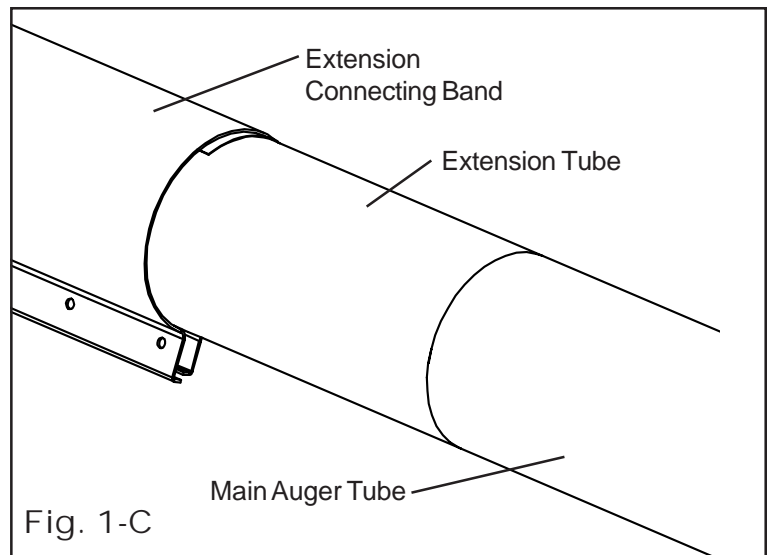
- C. Slide the extension tube over the extension flight, making sure the tube is pressed securely against the main auger tube. (See Figure 1-C)
- D. Slide the extension connecting band over the two sections of tube, making sure the connecting band is centered over the mated surfaces of the tubes. Tighten the connecting band down using the correct Hex Bolts and Nylock nuts. (See Chart Below) (See Figure 1-D)

Connecting Band Bolts			
5/16" - 18 GR5 Nylock Nut	6"		
5/16" - 18 GR5 Nylock Nut	8"		
3/8" - 16 GR5 Nylock Nut	10"		

- E. Insert the intake shaft into the flight and connect with proper grade 8 bolt and stover nut. (See Chart Below) (See Figure 1-E)

Flight Hardware	
6" -	3/8" x 2" - 16 Grade 8 Hex Bolts
8" -	7/16" x 3" - 14 Grade 8 Hex Bolts
10" -	1/2" x 3-1/2" - 13 Grade 8 Hex Bolts

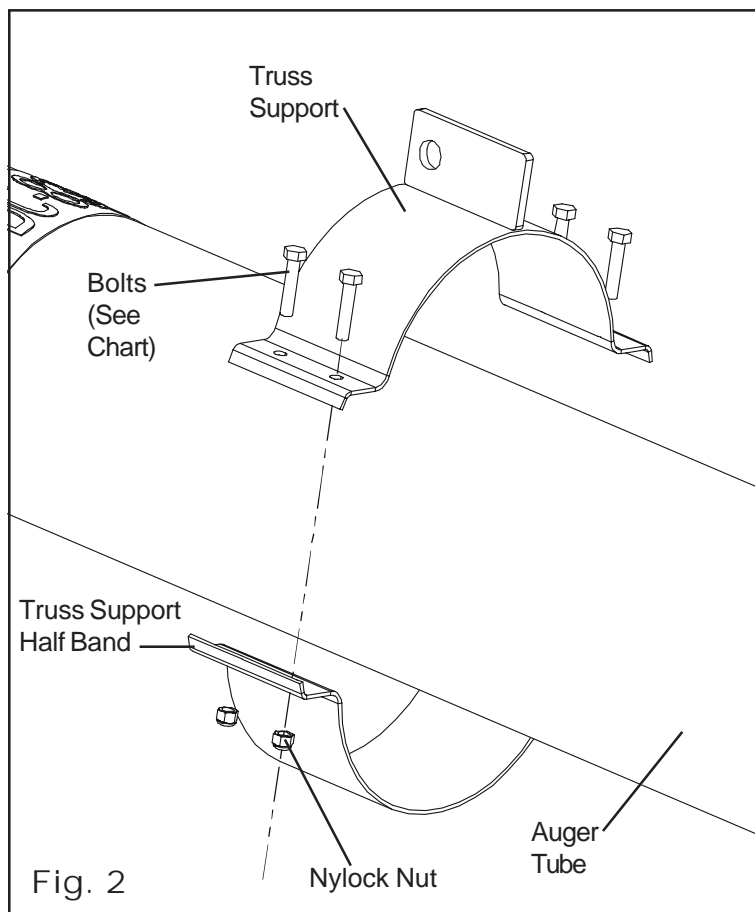
- F. The galvanized tube may need to be cut to expose enough auger flighting, depending on the application.



2. Install the Truss Support

NOTE: For Bulk Tank Augers Only.

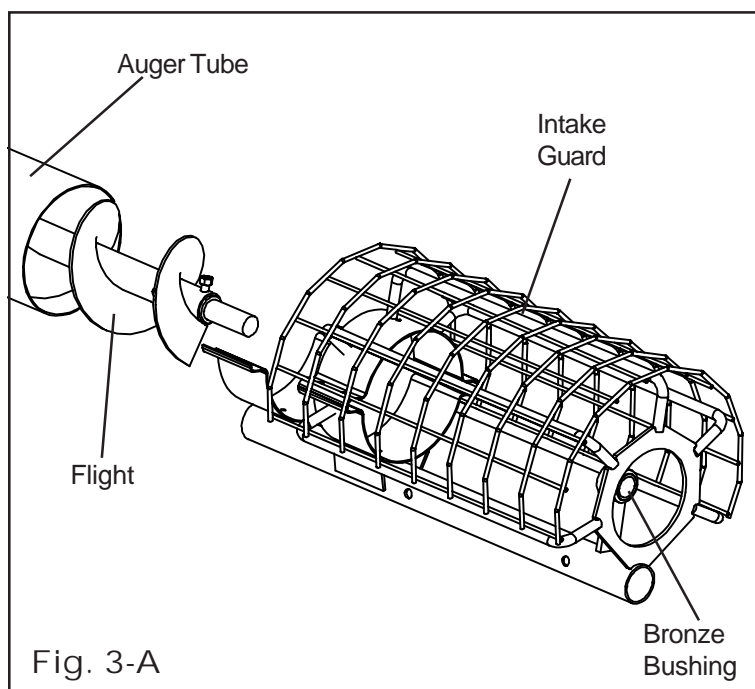
- A. Begin by placing the Truss Support on the top side of the Auger Tube. Position the Truss Support Half Band below the Truss Support and align the holes. Attach together using appropriate hex bolt and Nylock nut. Do not tighten the nuts down until the proper distance has been determined for the desired angle. (See Chart Below) (See Figure 2)



3. Installing the Intake Guard

NOTE: For Utility Augers Only

- A. Slide the Intake guard onto the Auger Tube aligning the intake shaft with the bronze bushing. (See Figure 3-A)

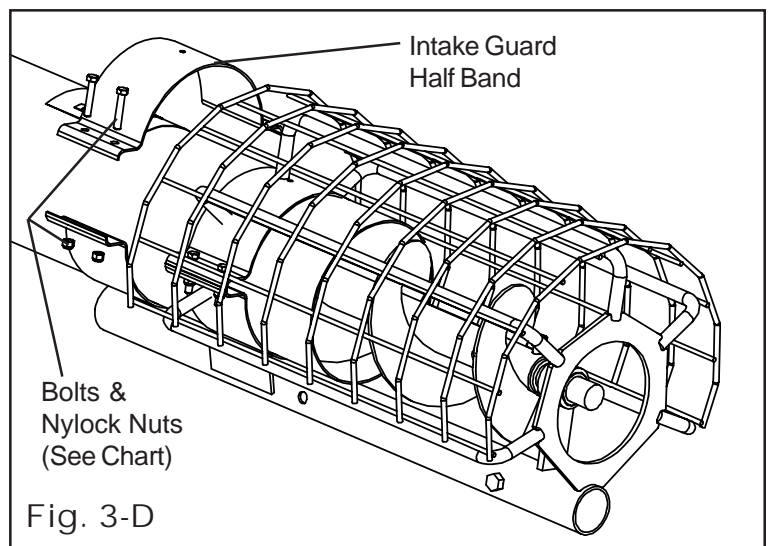
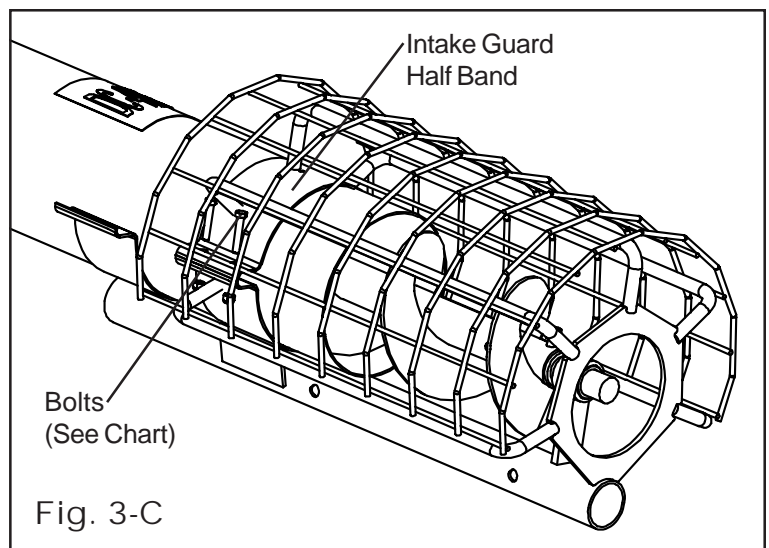
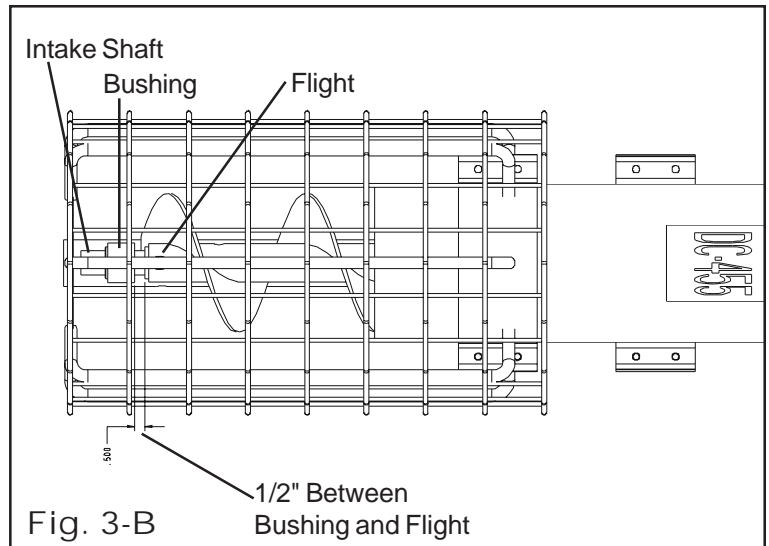


3. Installing the Intake Guard (Cont.)

- B. With the Intake Shaft inserted in the bushing make sure to leave approximately 1/2" of clearance between the end of the Flight and the face of the bushing. (See Figure 3-B)
- C. Attach the Intake Guard to the Tube using the proper hex bolts and Nylock nuts through the half bands that are welded to the Intake Guard. (See Chart Below) (See Figure 3-C)

Intake Guard Bolts	
5/16" - 18 x 1-3/4" GR5 Hex Bolt	6"
5/16" - 18 x 1-3/4" GR5 Hex Bolt	8"
3/8" - 16 x 1-1/2" GR5 Hex Bolt	10"

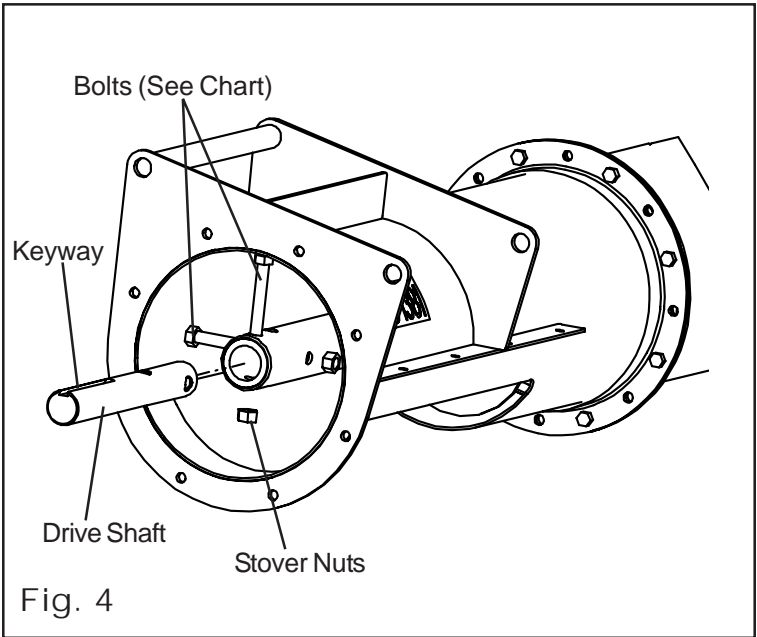
- D. Place Intake Guard Half Band above the lower half band on the Intake Guard and attach using proper hex bolts and Nylock nuts. (See Chart Above) (See Figure 3-D)



4. Installing Drive Shaft

- A. Insert the Drive Shaft into the opposite end of flight with keyway facing outward. Align the holes in the shaft and secure with Grade 8 bolts and stover nuts. (See Chart Below) (See Figure 4)

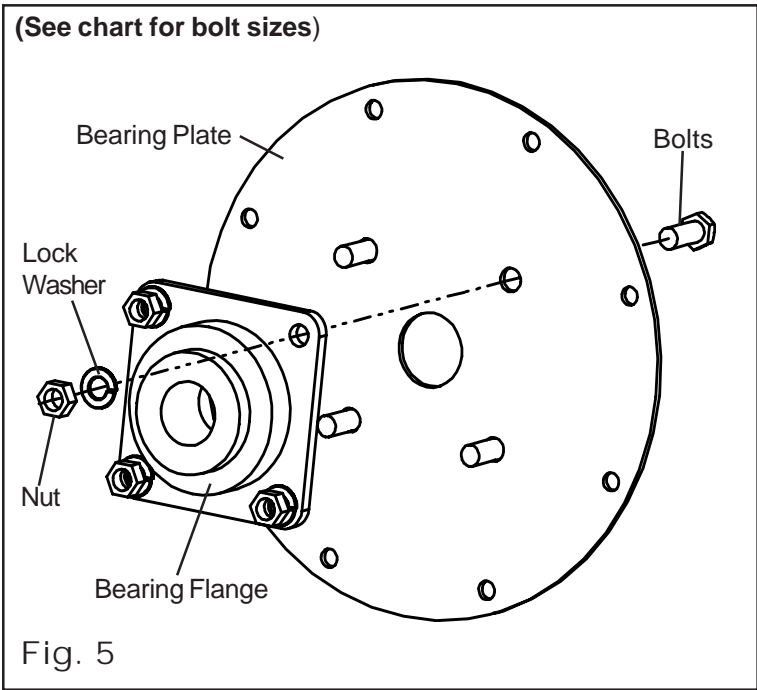
Flight Hardware	
6" -	3/8" x 2" - 16 Grade 8 Hex Bolts
8" -	7/16" x 3" - 14 Grade 8 Hex Bolts
10" -	1/2" x 3-1/2" - 13 Grade 8 Hex Bolts



5. Mounting Bearing to Bearing Plate

- A. Align bolt holes on Bearing Flange with bolt holes on Bearing Plate.
- B. Secure Bearing to Bearing plate using appropriate bolts, lock washers, and nuts. (See Chart Below) (See Figure 5)

Bearing Bolts	
6"	7/16" x 1-1/2" -14 Hex Bolts
8" & 10"	1/2" x 1-1/2" -13 Hex Bolts



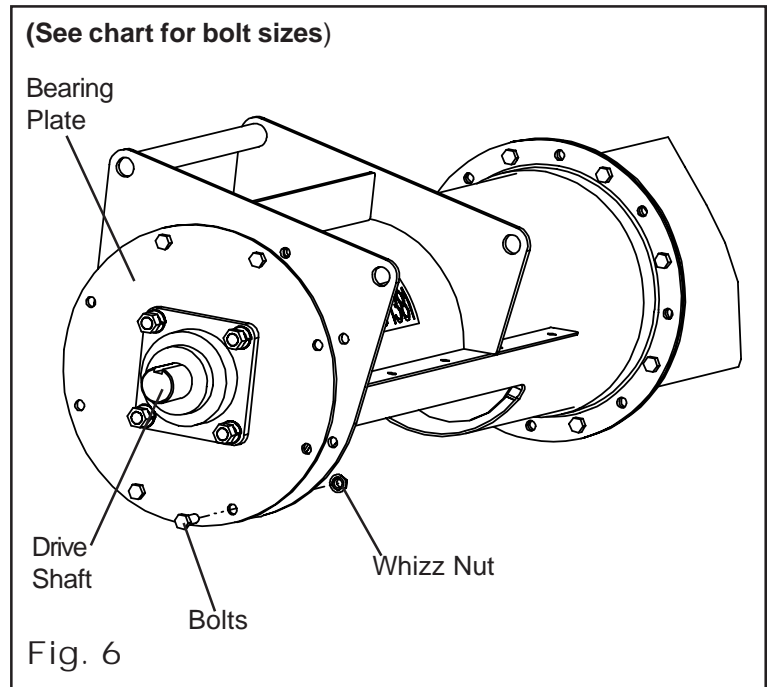
6. Installing Bearing Plate onto Tube

- A. Align Bearing with Drive Shaft and slip Shaft through bearing.
- B. Rotate Plate until bolt holes in tube flange and plate align. Secure with appropriate bolts, and Whizz nuts. (See Chart Below)

Bearing Plate Bolts	
6" & 8"	5/16" x 1" - 18 Hex Bolt
10"	3/8" x 1-1/4" - 16 Hex Bolt
10"	3/8" x 1" - 16 Hex Bolt

- C. Only Secure with UPPER and LOWER four (4) bolts. (See Figure 6) The other four (4) bolts will be installed later with the Belt Guard Mounting Brackets.

NOTE: On the 10" systems use the four (4) 3/8" x 1" -16 bolts in this step, the longer bolts will be used to attach the Belt Guard Mounting Brackets in a future step.



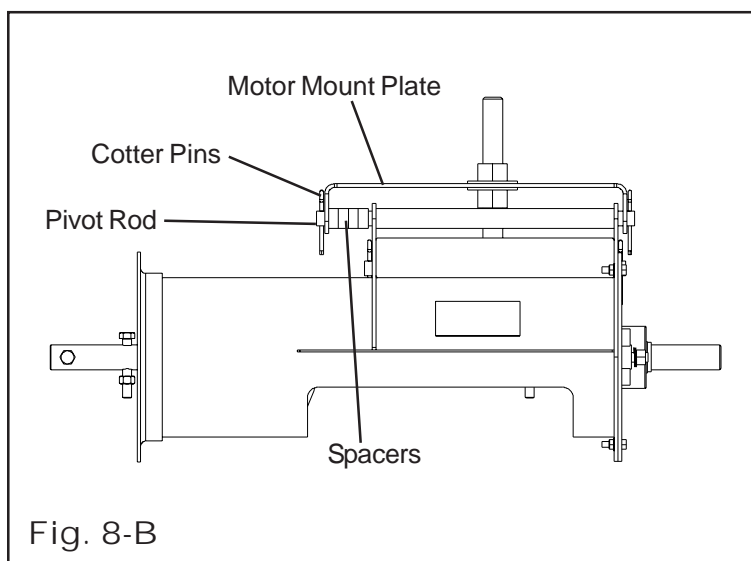
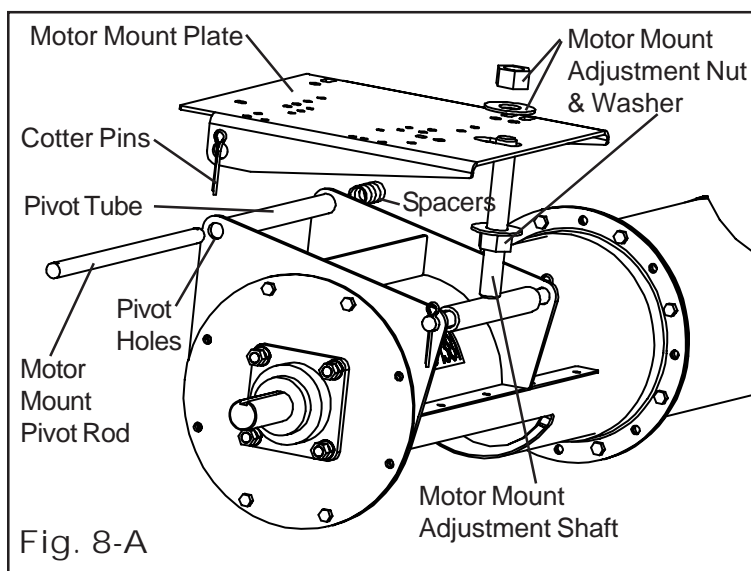
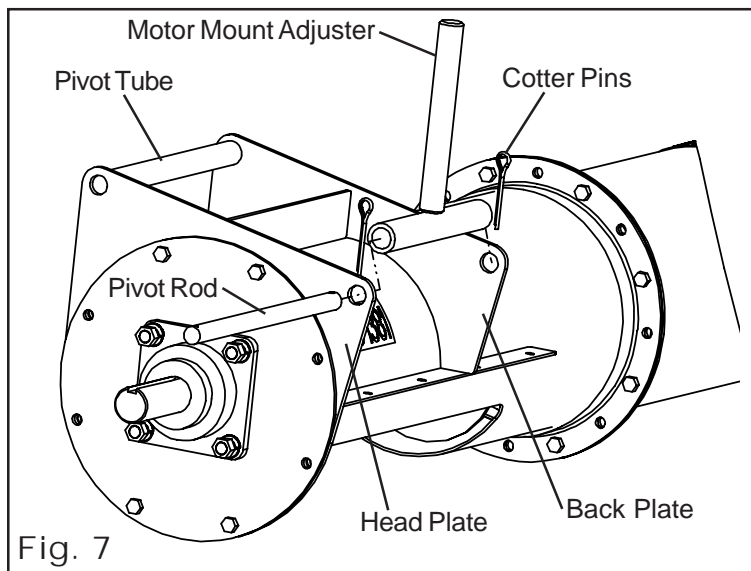
7. Installing the Motor Mount Adjuster

- A. Place Motor Mount Adjuster between the Back Plate and Head Plate on the Discharge Tube.
- B. Insert Pivot Rod through the Tube plates and Motor Mount Adjuster. Secure in place with two (2) 3/16" x 2" cotter pins. (See Figure 7)

8. Installing the Motor Mount Plate

- A. Secure one (1) of the motor mount adjustment nuts and one (1) the motor mount adjustment washers approximately 3/4 of the way down the motor mount adjuster's threaded shaft.
- B. Once the nut and washer is secure, slip the Motor Mount Plate over the adjuster and align the pivot holes with the pivot tube. (See Figure 8-A)
- C. Slide the Motor Mount Pivot Rod through the pivot tube on the Discharge Tube.
- D. When the pivot rod begins to extend through the pivot tube install the spacers, BETWEEN the Back Plate and the inner face of the Motor Mount Plate. (See Figure 8-B)

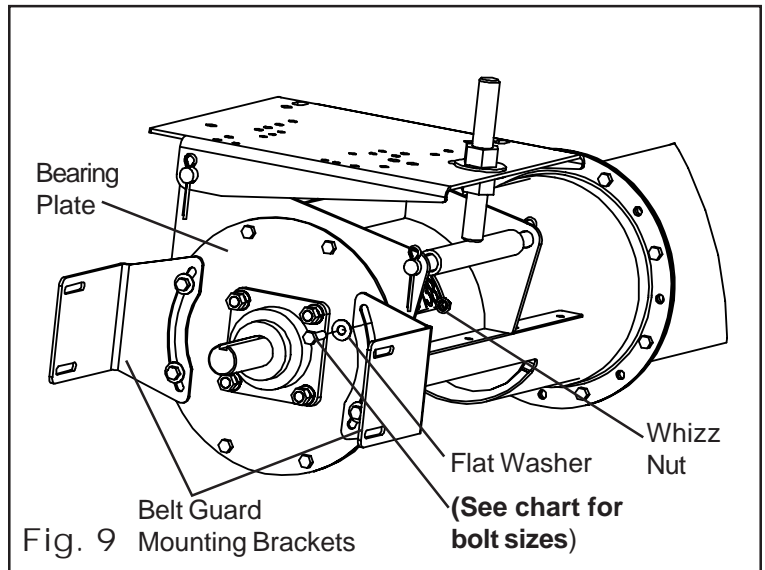
NOTE: The number of spacers will vary between each size of unloader.



9. Installing the Belt Guard Brackets

- A. Align the holes on the Bearing Plate with the slots on the Belt Guard Mounting Brackets.
- B. Secure the Brackets with proper bolts, flat washers, and Whizz nuts. (See Chart Below) (See Figure 9)

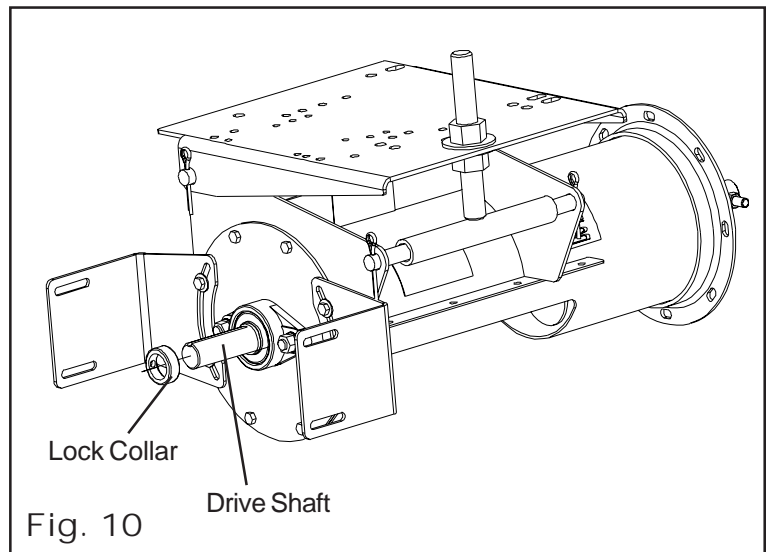
NOTE: DO NOT tighten the bolts completely. The brackets will need to be rotated to align the slot in the Belt Guard with the shafts on the motor and flight.



Bearing Plate Bolts	
6" & 8"	5/16" x 1" - 18 Hex Bolt
10"	3/8" x 1-1/4" - 16 Hex Bolt

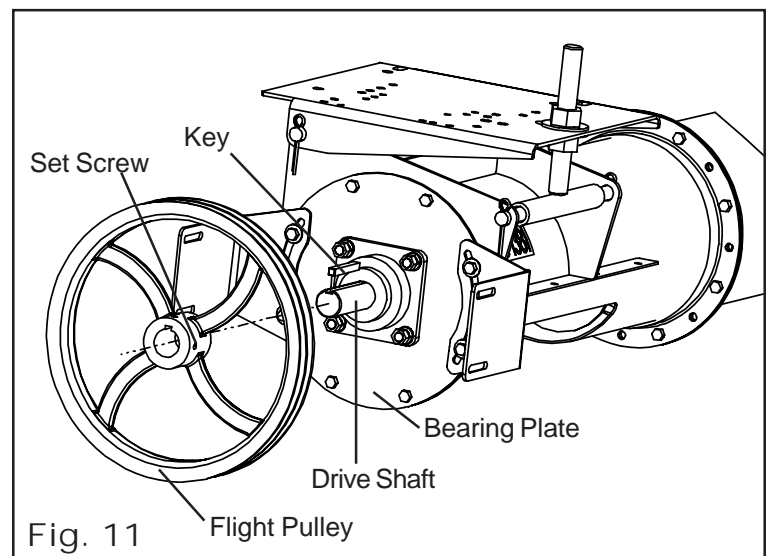
10. Installing the Lock Collar

- A. Slide the Lock Collar over the Drive Shaft, positioning it against the bearing. Do not tighten the lock collar at this time as it will be tightened later in the assembly. (See Figure 10)



11. Installing the Pulley

- A. Place and position the key into the keyway located on the Drive Shaft.
- B. Place the pulley onto the Drive Shaft with the setscrew side of the pulley facing away from the Bearing Plate. Position the pulley so that it is as close to the lock collar as possible, but not touching it.
- C. Once the pulley is appropriately positioned, tighten the setscrew with a hex head wrench to secure it to the drive shaft. (See Figure 11)



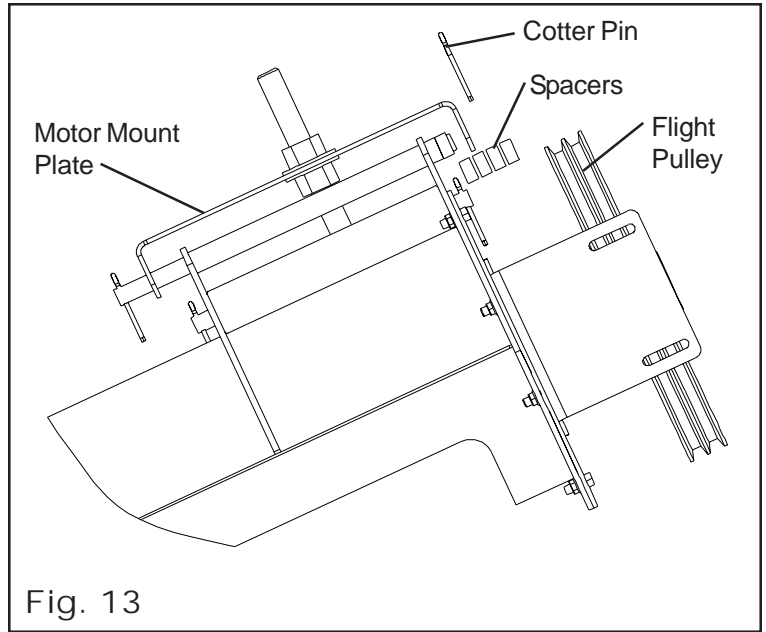
12. Tightening the Lock Collar

- A. Using a punch and hammer, drive the lock collar clockwise (the same direction as the shaft rotation). Once the lock collar is set in place, use a hex head wrench to tighten the lock collar by tightening the setscrew.

NOTE: If the lock collar is not turned far enough, the setscrew will not lock it into place.

13. Installing the Motor (Not Provided)

- A. Attach the Motor to the Motor Mount Plate using appropriate bolts, lock washers, and hex nuts. (See Chart Below)
- B. Install pulley onto motor shaft making sure that it is aligned with the flight pulley. It may be necessary to move spacers to gain shaft alignment. (See Figure 13)



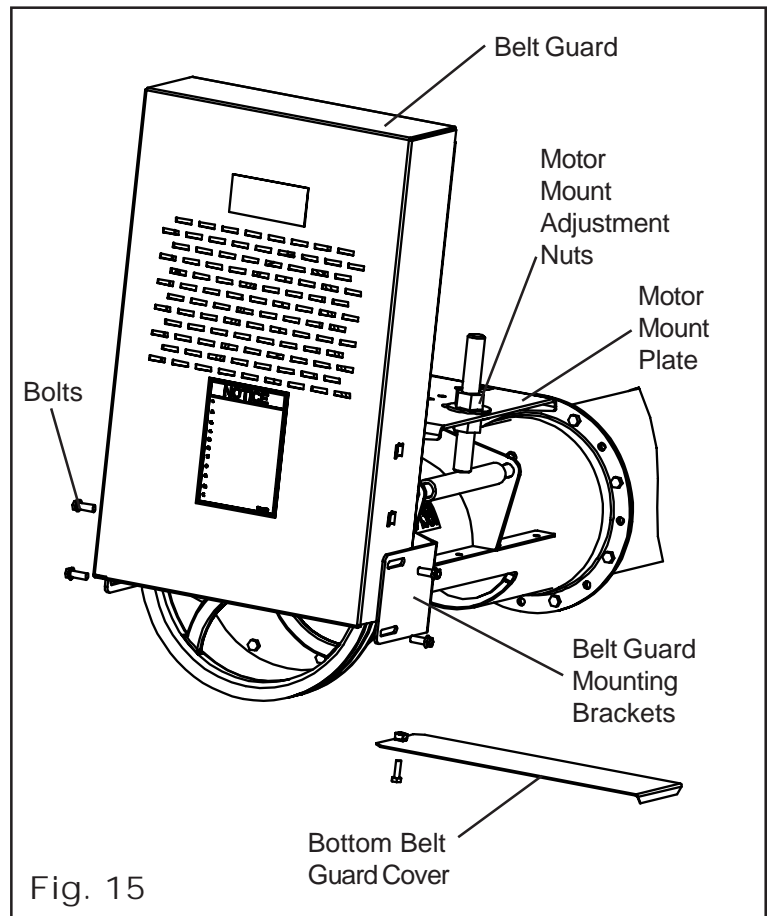
Motor Bolt Chart		
Motor Size	Hex Bolt Size	Qty.
56 143T 145T	5/16" x 1-1/4" - 18	4
182T 184T 213T 215T	3/8" x 1-1/4" - 16	4
254T 256T	1/2" x 1-3/4" - 13	4

14. Installing the Belts

- A. Place the belts onto the pulleys.
- B. First screw the lower Motor Mount Adjustment Nut upward, raising the Motor Mount Plate, putting tension on the belts.
- C. Once the desired tension is reached tighten the Upper Motor Mount Adjustment Nut down onto the Motor Mount Plate locking it into place.

15. Installing the Belt Guard

- A. With the belts properly tensioned remove the bottom Belt Guard cover and slip Belt Guard down over motor shaft.
- B. Bolt the Belt Guard to the Belt Guard Mounting Brackets, the brackets should still be loose at this time.
- C. Align the motor shaft and the Flight Drive Shaft in the Belt Guard's slot, making sure that the Belt Guard DOES NOT contact either pulley, and tighten down the Belt Guard Mounting Brackets to the Bearing Plate. (See Figure 15)
- D. Once the brackets are tightened slide the bottom cover back into place and secure with supplied bolt.



ELECTRIC DRIVE MOTORS

1. Horsepower Information for Electric Motors

- A. Horsepower recommendations are for augering reasonably dry grain at different angles. Grain with 15% moisture and above may require more horsepower if maximum capacity is to be maintained. Use a 2.5" to 3.0" motor pulley for a recommended auger speed of 550 to 650 R.P.M. Motor pulley not furnished. Excessive wear will result if auger speed is in excess of 700 R.P.M. and auger load up will occur if auger speed is less than 500 R.P.M. or flow gate is required.
- B. Auger speeds in excess of 750 R.P.M. should be avoided as excessive wear will result. Auger speed below 450 R.P.M. require a flow control to restrict intake to the auger. High torque is required to turn the flighting if it is permitted to "load up" at low speed and damage to the auger can result. An optional control gate is available for this purpose.

This Chart is a suggested horsepower requirement for standard Utility Augers.

Horsepower Requirements			
Size	HP	Size	HP
6" x 11'	$\frac{3}{4}$	8" x 11"	1- $\frac{1}{2}$
6" x 16'	1	8" x 16'	2
6" x 21'	2	8" x 21'	3
6" x 27'	3	8" x 27'	3
6" x 33'	5	8" x 33'	5
6" x 41'	5	8" x 41'	5
		8" x 53'	7- $\frac{1}{2}$
		10" x 21'	5
		10" x 31'	7- $\frac{1}{2}$
		10" x 41'	10

WARNING

Electrical controls and wiring should be installed by a qualified electrician. The motor disconnect switches and conductor cables should comply with the National Electrical Code and any local codes which apply. Motor starting control stations should be so located that the operator can see that all personnel are clear of the equipment.

2. Power Source

- A. Use electric motors that operate at 1750 R.P.M.
- B. Electric motors and controls should be installed by a qualified electrician and must meet the standards set by the National Electrical Code and all local and state codes.
- C. A magnetic starter should be used to protect your motor when starting and stopping. It should stop the motor in case of power interruption, conductor fault, low voltage, circuit interruption, or motor overload. Then the motor must be restarted manually. Some motors have built-in thermal overload protection. If this type motor is used, use only those with a manual reset.

⚠ WARNING

A Main Power Disconnect Switch capable of being locked only in the OFF position shall be provided This shall be locked whenever work is being done on the auger.

CAUTION

Disconnect power before resetting motor overloads.

⚠ WARNING

Make sure all electrical motors are grounded.

⚠ WARNING

Reset and motor starting and stopping controls must be located so that the operator has full view of the entire operation.

⚠ DANGER

Shut off power to adjust , service, or clean the machinery.

⚠ DANGER

Keep all safety guards and shields in place.

START-UP

1. Start-up and Break-In

⚠ DANGER

ALWAYS keep ALL guards and shields in place, until all the power is disconnected and locked out.

- A. Make sure all belts are tensioned properly.
- B. Make sure ALL shields are in place and that the belt(s) and pulley(s) are able to move freely.
- C. Double check the assembly instructions to see that all parts have been assembled properly.
- D. During operation of equipment, one person should be in a position to monitor the entire operation.

NOTE

During the initial start-up and break-in period, the operator should note any unusual vibrations or noises and take the appropriate action.

⚠ WARNING

Make certain everyone is clear before operating or moving the machine.

- E. The bin well inside the bin should have a control gate. The gate should be closed before start-up and closed before shutdown to allow the machine to clean out.
- F. The controls for the control gate should either pull or push open, depending on the type of well you have. Use the control gate to regulate a flow of less than full capacity until several hundred bushels of grain have been augered to polish the flighting assembly and tube.
- G. Any new screw conveyor or one that has set idle for a season should go through a "break-in" period. This "break-in" consists of running the auger at half capacity until the screw becomes polished and smooth before attempting to run at full capacity. It is recommended that several hundred bushels of grain be augered at partial capacity.

CAUTION

Failure of your auger is very likely to occur if it is run at full capacity before the screw has become polished.

CAUTION

NEVER operate augers empty for any length of time as excessive wear will result.

- H. Do not stop or start augers under load, especially before the flight and tube become well polished, as this may cause the auger to "lockup".

CAUTION

Excessive wear will result if auger is run at speeds in excess of what is recommended.

- I. Do not run auger at too slow speed, this will load up or over load the auger. An loading up of the auger will cause the motor to over load and a higher torque will be required to turn the auger, which in turn may cause damage to the auger.

1. Operate the Auger

NOTE

The auger capacity can fluctuate greatly under varying conditions. Moisture content, different commodities, amount of foreign matter and speeds all play a part in the performance of the auger. Twenty-five percent (25%) moisture may cut capacity by as much as 40% under some conditions.

- A. Make certain there are at least two (2) people in the work area to monitor operations at all times.
- B. Visually inspect the auger periodically during operation.

⚠ WARNING

Be alert for any unusual vibrations, noises and the loosening of any fasteners. If anything unusual is detected, immediately shutdown the auger, disconnect and lockout the power source before servicing.

- C. Consideration should be given to the proper size auger for a batch drying or any intermittent type operations. When augers are stopped and restarted under full load, it may result in damage to the auger. Using a larger diameter auger and reducing its load level will be far better than subjecting a smaller diameter auger to big loads. If an auger is kept from absolute filling, it will make startup easier and will convey more efficiently.

1. Maintain the Auger

⚠ DANGER

ALWAYS shutdown and disconnect the power supply before adjusting, servicing or cleaning the equipment.

- A. Use caution when repairing or replacing equipment parts.
- B. Make sure ALL decals are legible and tightly attached to the auger. If necessary, replace them **FREE OF CHARGE** by contacting your dealer or the manufacturer.
- C. Ensure that ALL electric motors, etc. are operating at the proper speed.
- D. Maintain proper adjustments on the belt(s).
- E. Mount controls for any electric motors at a safe distance from the machine and in a location accessible in case of an emergency.
- F. Make sure ALL electrical wiring is not damaged, and that it meets proper wiring codes.
- G. Make sure ALL components are in good working condition before use.
- H. Check the auger flighting to make sure it is in good working condition.
- I. Check the internal bearing bracket, bearing and universal joint to make sure they are in good working order.
- J. Grease bearing at least two (2) times each season.

SHUTDOWN

1. Normal Shutdown

- A. Make certain unloading tubes are empty before stopping the unit.
- B. Disconnect and lockout the power source before leaving the work area.

2. Emergency Shutdown

- A. Know how to shut down the auger in case of an emergency.
- B. Disconnect and lockout the power source.
- C. Close bin well control gates.
- D. Clear out as much grain from the auger and hopper as you can.

CAUTION

Never restart when under a full load. Starting unit under load may result in damage to the machine. Such damage is considered abuse of the equipment.

- E. Reconnect and unlock the power source.
- F. Gradually clear the auger until there is no grain or obstructions.

3. Lockout

- A. Always stop and disconnect the power source whenever the operator must leave the work area or for maintenance of the machinery.
- B. Make sure equipment is locked out and that the machinery cannot be started while the operator is not in the work area.

WARNING

Use the type of main power disconnect switch that is capable of being locked only in the off position.

4. Storage Preparation

- A. Close all wells to discharge tube.
- B. Be sure the unload tube is empty.
- C. Make sure power source is disconnected and locked out.
- D. Check to see that all fasteners are secure.

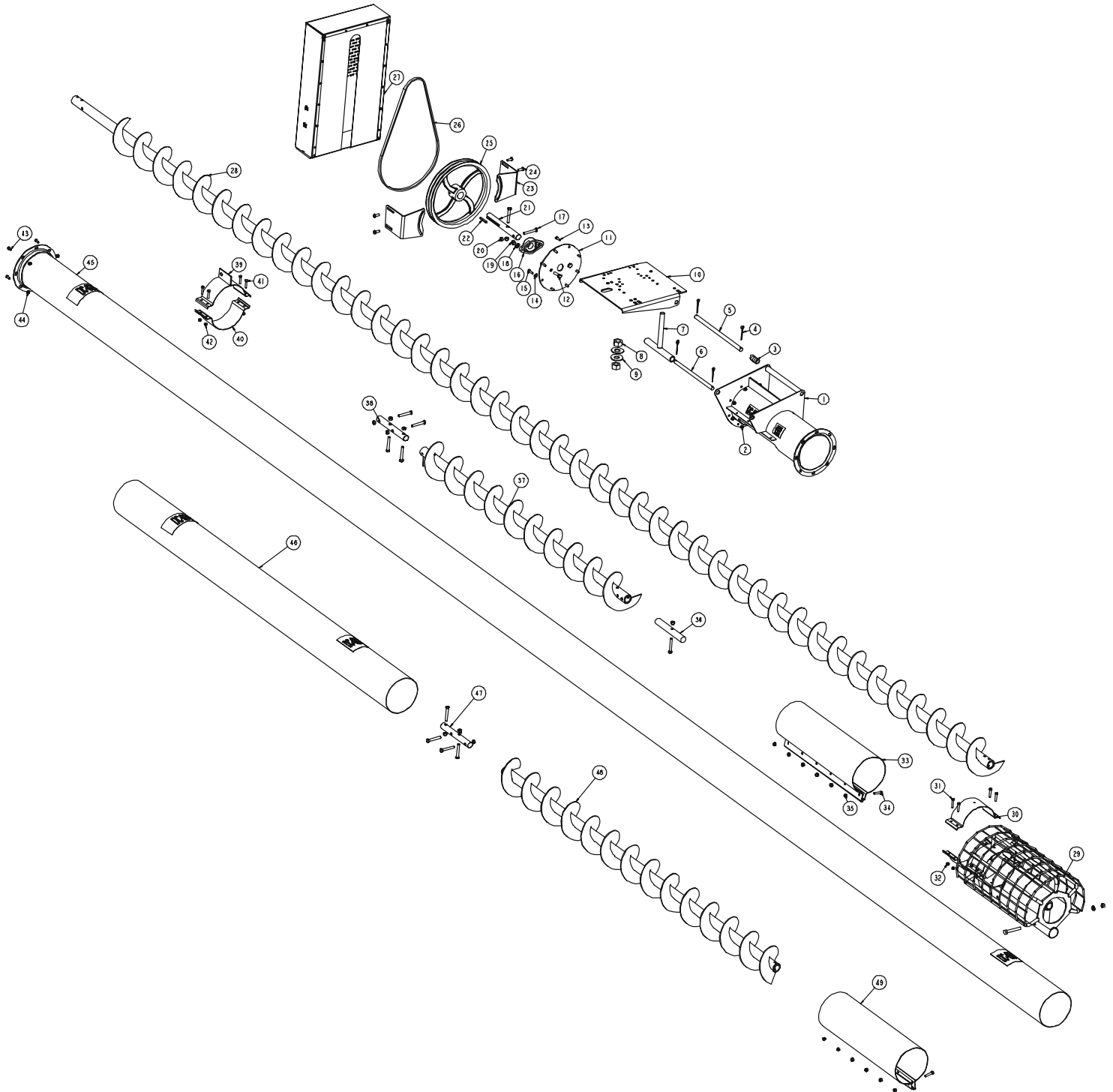
UTILITY & BULK AUGER PART LIST

System Parts							
Ref #	Description	Part #	System	Ref #	Description	Part #	System
1	Horizontal Power Head Tube	GK6996	6"	20	Flight Connecting Nut 3/8" - 16 Stover Nut 7/16" - 14 Stover Nut 1/2" - 13 Stover Nut	S-8251	6"
		GK6997	8"			S-8317	8"
		GK6998	10"			S-8315	10"
2	Bearing Plate Nut 5/16" - 18 Whiz Nut 3/8" - 16 Whiz Nut	S-3611	6" & 8"	21	Drive Shaft 1" OD x 10" 1-1/4" OD x 10-1/2" 1-1/2" OD x 11-1/2"	GK2025	6"
		S-968	10"			GK1331	8"
3	Pivot Tube Spacer	GK7014	6", 8" & 10"			GK1289	10"
4	Pivot Tube Cotter Pin	S-6994	6", 8" & 10"	22	Drive Shaft Key 1/4" x 2" Square Key 3/8" x 3" Square Key	S-4513	6" & 8"
5	Motor Mount Pivot Rod	GK7059	6"			S-9181	10"
		GK7013	8" and 10"	23	Belt Guard Mounting Bracket	GK7062	6"
6	Motor Mount Adjustment Rod	GK7012	8" and 10"			GK7006	8"
7	Motor Mount Aduster	GK7060	6"			GK7018	10"
		GK6942	8" and 10"	24	Belt Guard Bolts 3/8" - 16 x 1" Grade 5 Bolt	S-9065	6", 8" & 10"
8	Motor Mount Adjuster Nut 3/4" - 10 Nut 1" - 8 Nut	S-3234	6"				
		S-240	8" and 10"	25	Sheave 12" OD x 1" ID 12" OD x 1" ID 12" OD x 1-1/4" ID 15" OD x 1-1/2" ID	GK1309	6" 1 Belt
9	Motor Mount Adjuster Washer 3/4" Flat Washer 1" Flat Washer	S-866	6"			GK1321	6" 2 Belt
		S-7835	8" and 10"			GK1335	8"
10	Motor Mount Plate	GK7052	6"			GK1345	10"
		GK6986	8" and 10"	26	Belts B48 V-Belt B50 V-Belts B57 V-Belt	GK1323	6"
11	Bearing Plate	GK7061	6"			GK1952	8"
		GK6987	8"			GK1346	10"
		GK7017	10"	27	Belt Guard	GK7005	6", 8" & 10"
12	Discharge Bearing Bolt 7/16" - 14 x 1-1/2" Hex Bolt 1/2" - 13 x 1-1/2" Hex Bolt	S-7837	6"	28	Discharge Flight 6" x 11' 6" x 16' 6" x 21' 6" x 21' 6" x 21' 6" x 21' 6" x 21' 8" x 11' 8" x 16' 8" x 21' 8" x 27' 8" x 27' 8" x 27' 8" x 27' 8" x 27' 10" x 11' 10" x 16' 10" x 21' 10" x 21' 10" x 21'	GK2854	6" x 11'
		S-8760	8" & 10"			GK2855	6" x 16'
13	Bearing Plate Bolt 5/16" - 18 x 1" Hex Bolt 3/8" - 16 x 1" Hex Bolt	S-1196	6" & 8"			GK2856	6" x 21'
		S-7469	10"			GK2856	6" x 27'
14	Belt Guard Bracket Washer 5/16" Flat Washer 3/8" Flat Washer	S-845	6" & 8"			GK2856	6" x 33'
		S-248	10"			GK2856	6" x 41'
15	Belt Guard Bracket Bolt 5/16" - 18 x 1" Hex Bolt 3/8" - 16 x 1-1/4" Hex Bolt	S-1196	6" & 8"			GK2879	8" x 11'
		S-2071	10"			GK2880	8" x 16'
						GK2881	8" x 21'
16	Discharge Bearing 1" ID With 2 Hole Flangette 1-1/4" ID With 2 Hole Flangette 1-1/2" ID With 2 Hole Flangette	GK1049	6"			GK2882	8" x 27'
		GK1330	8"			GK2882	8" x 33'
		GK1343	10"			GK2882	8" x 41'
17	Flight Connecting Bolt 3/8" - 16 x 2" Gr. 8 Hex Bolt 7/16" - 14 x 3" Gr. 8 Hex Bolt 1/2" - 13 x 3-1/2" Gr. 8 Hex Bolt	S-7687	6"			GK2882	8" x 53'
		S-8316	8"			GK5143	10" x 11'
		S-8314	10"			GK5144	10" x 16'
18	Dischage Bearing Lock Washer 7/16" Lock Washer 1/2" Lock Washer	S-7014	6"			GK5130	10" x 21'
		S-236	8" & 10"			GK5130	10" x 31'
19	Discharge Bearing Nut 7/16" - 14 Nut 1/2" - 13 Nut	S-7332	6"			GK5130	10" x 41'
		S-7510	8" & 10"	29	Intake Guard	GK3496	6" Utility
						GK3501	8" Utility
						GK3502	10" Utility

UTILITY & BULK AUGER PART LIST

System Parts							
Ref #	Description	Part #	System	Ref #	Description	Part #	System
30	Intake Guard Half Band			41	Truss Support Bolt		
	6" x 4" 12GA	GK3986	6" Utility		5/16" - 18 x 1-1/2" GR5 Hex bolt	S-2741	6" Bulk Tank
	8" x 4" 12GA	GK5118	8" Utility		5/16" - 18 x 1-1/2" GR5 Hex bolt	S-2741	8" Bulk Tank
	10" x 4" 7 GA	GK5117	10" Utility	42	Truss Support Nut		
31	Intake Guard Bolt				5/16" -18 GR5 Nylock Nut	S-7382	6" Bulk Tank
	5/16" - 18 x 1-3/4" GR5 Hex Bolt	S-7149	6" Utility		5/16" -18 GR5 Nylock Nut	S-7382	8" Bulk Tank
	5/16" - 18 x 1-3/4" GR5 Hex Bolt	S-7149	8" Utility	43	Power Head Connecting Bolt		
	3/8" - 16 x 1-1/2" GR5 Hex Bolt	S-7515	10" Utility		5/16" - 18 x 3/4" Bin Bolt	S-275	6" & 8"
32	Intake Guard Nut				3/8" - 16 x 1" Bin Bolt	S-7520	10"
	5/16" - 18 GR5 Nylock Nut	S-7382	6" Utility	44	Power Head Connecting Nut		
	5/16" - 18 GR5 Nylock Nut	S-7382	8" Utility		5/16" - 18 Whiz Nut	S-3611	6" & 8"
	3/8" - 16 GR5 Nylock Nut	S-7383	10" Utility		3/8" - 16 Hex Nut	S-456	10"
33	Extension Connecting Band			45	Discharge Tube		
	6" x 24"	GK1048	6"		6" x 9'	GK7082	6" x 11'
	8" x 27"	GK1015	8"		6" x 14'	GK7083	6" x 16'
34	Connecting Band Bolt				6" x 19'	GK7084	6" x 21'
	3/8" - 16 x 1-1/2" GR5 Hex Bolt	S-7515	6"		6" x 24' 8"	GK7202	6" x 27'
	3/8" - 16 x 1-3/4" GR5 Hex Bolt	S-8322	8"		6" x 30' 8"	GK7203	6" x 33'
	3/8" - 16 x 1-1/2" GR5 Hex Bolt	S-7515	10"		6" x 19'	GK7084	6" x 41'
35	Connecting Band Nut				8" x 8'	GK7079	8" x 11'
	3/8" - 16 Nylock Nut	S-7383	6"		8" x 13'	GK7080	8" x 16'
	3/8" - 16 Nylock Nut	S-7383	8"		8" x 18'	GK7081	8" x 21'
	3/8" - 16 Stover Nut	S-8251	10"		8" x 24'	GK7204	8" x 27'
36	Intake Shaft				8" x 30'	GK7205	8" x 33'
	1" OD x 7"	GK1117	6"		8" x 30'	GK7205	8" x 41'
	1-1/4" OD x 9"	GK1884	8"		8" x 30'	GK7205	8" x 53'
	1-1/2" OD x 9-1/2"	GK2907	10"		10" x 7' 6"	GK7095	10" x 11'
37	Extension Flight				10" x 12' 6"	GK7096	10" x 16'
	6" x 6' 6-1/2"	GK4665	6" x 27'		10" x 17' 6"	GK7097	10" x 21'
	6" x 12'	GK5505	6" x 33'		10" x 17' 6"	GK7097	10" x 31'
	6" x 20'	GK2893	6" x 41'		10" x 17' 6"	GK7097	10" x 41'
	8" x 6'	GK5101	8" x 33'	46	Extension Tube		
	8" x 6'	GK5101	8" x 41'		6" x 20'	GK2865	6" x 41'
	8" x 6'	GK5101	8" x 53'		8" x 8'	GK2877	8" x 41'
	10" x 10'	GK5157	10" x 31'		8" x 20'	GK2878	8" x 53'
	10" x 20'	GK5161	10" x 41'		10" x 10'	GK2899	10" x 31'
38	Connecting Shaft				10" x 20'	GK2900	10" x 41'
	1" OD x 9-19/32"	GK1351	6"	47	Connecting Shaft		
	1-1/4" OD x 9-1/2"	GK1328	8"		1" OD x 9-19/32"	GK1351	6"
	1-1/2" OD x 9-1/2"	GK1339	10"		1-1/4" OD x 9-1/2"	GK1328	8"
39	Truss Support				1-1/2" OD x 9-1/2"	GK1339	10"
		GK2923	6" Bulk Tank	48	Extension Flight		
		GK2922	8" Bulk Tank		6" x 20'	GK2859	6" x 41'
40	Truss Support Half Band				8" x 8' 3/16"	GK2884	8" x 41'
	6" x 4" 12GA	GK1122	6" Bulk Tank		8" x 20' 3/16"	GK2885	8" x 53'
	8" x 4" 12GA	GK1059	8" Bulk Tank	49	Bulk Tank Connecting Band		
					6" x 24"	GK1048	6" Bulk Tank
					8" x 27"	GK1015	8" Bulk Tank

UTILITY & BULK AUGER PART LIST



<i>Problem</i>	<i>Possible Cause</i>	<i>Solution</i>
1. The auger is vibrating.	A. Damage can occur to the auger flighting, causing noise. Damage usually is caused from foreign material being run through the auger.	A1. It may be necessary to remove the flighting for inspection.
	B. Drive belt may be overtightened, putting head stub and flight in a bind.	B1. Loosen the drive belts.
2. Capacity is too low.	A. There may not be enough grain reaching the auger.	A1. Make sure the intake has not bridged over, restricting flow. The flighting at the intake should be covered with grain for maximum capacity.
	B. The auger is moving too slowly.	B1. Check the auger speed. Low capacity will result from speeds slower than recommended.
3. The auger plugs.	A. The auger may be "jamming" because too much grain is reaching the auger.	A1. Use the control gates to decrease the amount of grain the auger is gathering.
	B. The grain may be wet.	B1. If wet grain or other hard-to-move material is being augured, use a larger size motor than recommended for normal use.
	C. The auger may be jammed with foreign material.	C1. Remove any foreign material in the auger.
	D. The motor may be too small or wired incorrectly.	D1. Check wiring or consider using the next larger size motor.

WARRANTY

THE COMPANY WARRANTS ALL PRODUCTS MANUFACTURED 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. OUR ONLY OBLIGATION IS, AND PURCHASER'S SOLE REMEDY SHALL BE TO REPAIR OR REPLACE, AT THE COMPANY'S OPTION AND EXPENSE, PRODUCTS THAT, IN THE MANUFACTURER'S SOLE JUDGEMENT, CONTAIN A MATERIAL DEFECT DUE TO MATERIALS OR WORKMANSHIP. ALL DELIVERY AND SHIPMENT CHARGES TO AND FROM THE FACTORY WILL BE PURCHASER'S RESPONSIBILITY. EXPENSES INCURRED BY OR ON BEHALF OF THE PURCHASER WITHOUT PRIOR WRITTEN AUTHORIZATION FROM AN AUTHORIZED EMPLOYEE OF THE COMPANY SHALL BE THE SOLE RESPONSIBILITY OF THE PURCHASER.

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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.

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 installation occurs.

**1004 East Illinois Street
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217-226-4421 Phone**