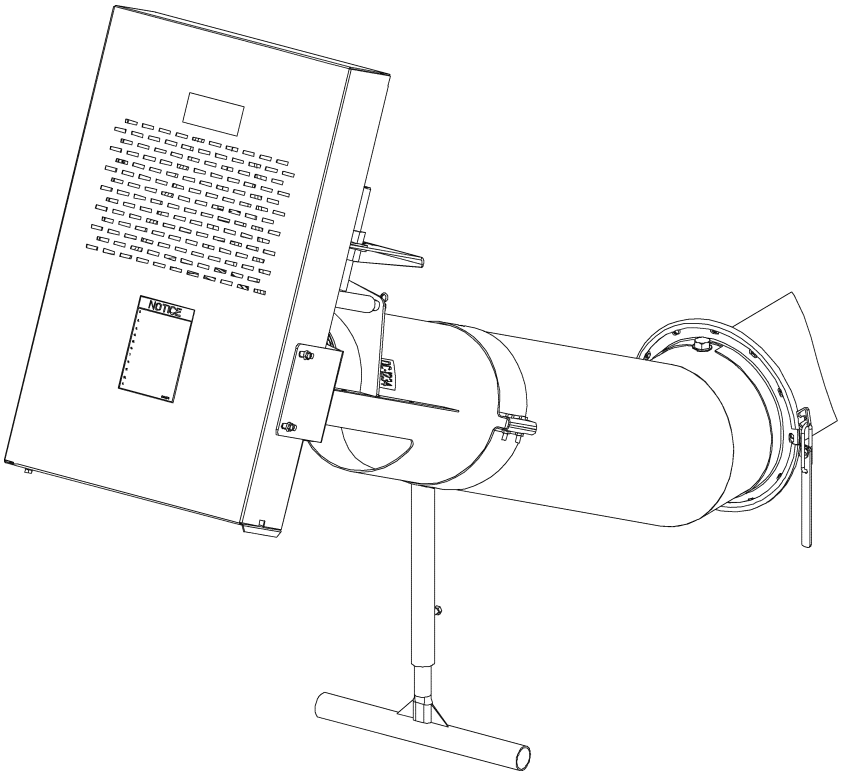


6"-6", 6"-8", 8"-8", 8"-10" and 10"-12" 25 Degree Bin Unloader

Assembly & Operation Manual

PNEG-1430

Date: 04-17-08

GSI GROUP

PNEG-1430

Contents

1. INTRODUCTION

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.

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.

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.

This warranty provides you the assurance that the company will back its products where defects appear within the warranty period. Should the equipment be abused, or modified to change its performance beyond the factory specifications, the warranty will become void.

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.

Safety Instructions

GSI'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.

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 near by 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

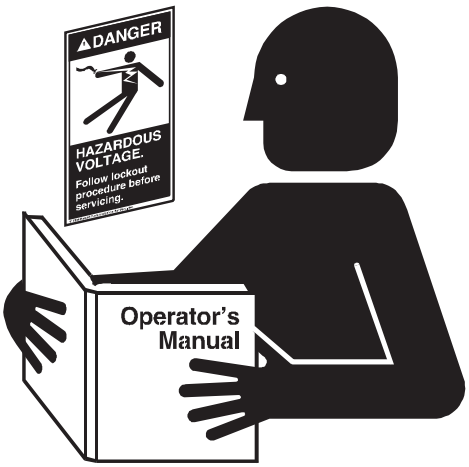
Follow Safety Instructions

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.

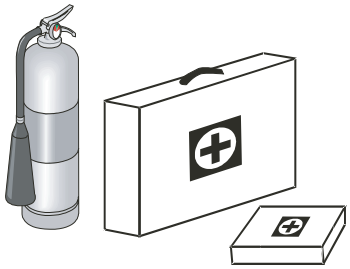
Electric Shock Hazard

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.



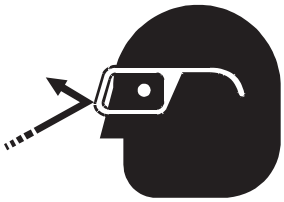
Keep Emergency Equipment Quickly Accessible.

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.

Eye Protection



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

Gloves

Wear steel toe boots to help protect your toes from falling debris.

Steel Toe Boots

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

Respirator

Remove all jewelry.

Tuck in any loose or dangling shoe strings.

Long hair should be tied up and back.

Wear hard hat to help protect your head.

Hard Hat

Operator Qualifications

1. 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:

   A. Any person who has not read and/or does not understand all operation and safety instructions is not qualified to operate any auger systems.

   B. 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.

   C. Unqualified or incompetent persons are to remain out of work area.

   D. 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).

2. As a requirement of O.S.H.A., 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.

Date	Employees Name (Printed)	Employees Signature
	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:

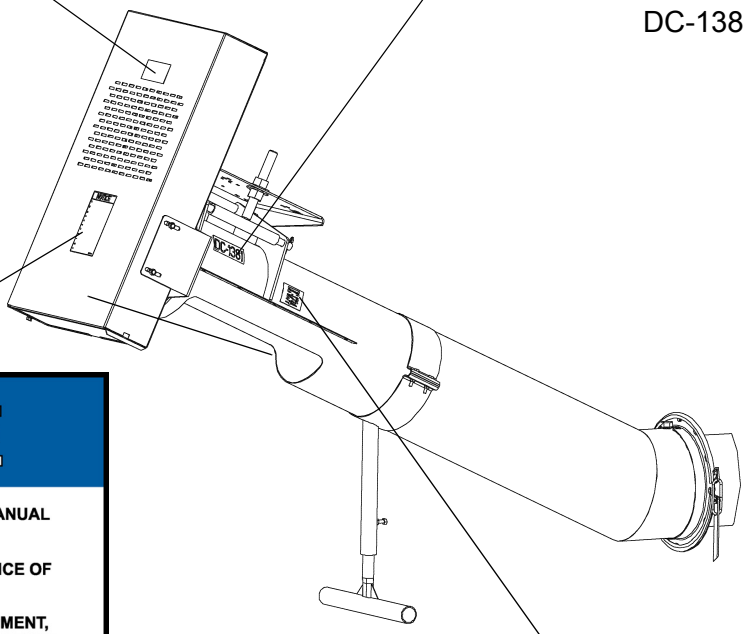
The GSI Group
PO Box 20
1004 E. Illinois Street
Assumption, IL 62510
Ph: 217-226-4421

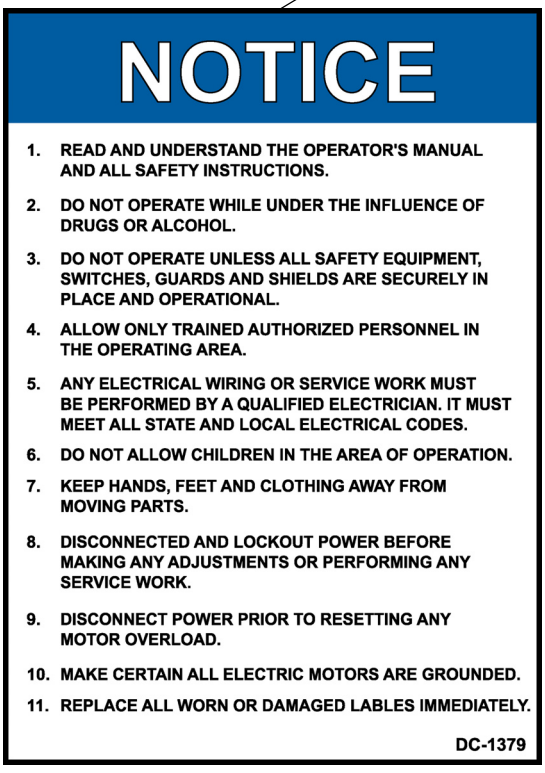
Check components shown below to insure that the safety decals are in place and in good condition. If a decal cannot be easily read for any reason or has been painted over, replace it immediately. Contact your dealer or the manufacturer to order a replacement decal free of charge.

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

DC-994

DC-1381





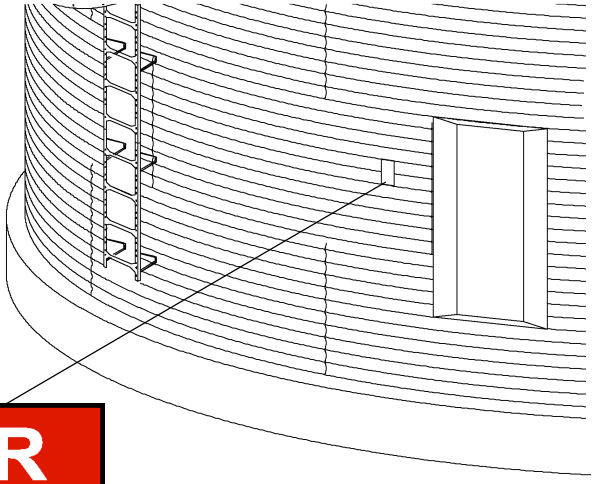
DC-1379

DC-1234

3. 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. Attaching the Adapter Plate (For 6" to 8", 8" to 10", and 10" to 12")

A. Align studs on Adapter Plate with the holes on the unload tubes angle ring.

B. Insert studs through the holes and fasten down using nuts from tube end plate. *(See Figure 4A)*

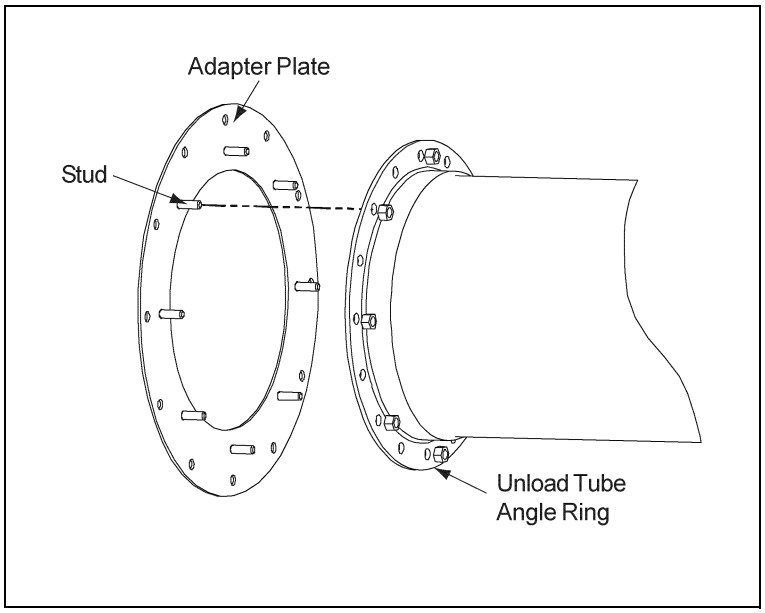


Figure 4A

2. Assembling Support Stand

A. Insert Support Stand Base into Support Stand Top and secure with 3/8" x 1-1/4" bolt. *(See Figure 4B)*

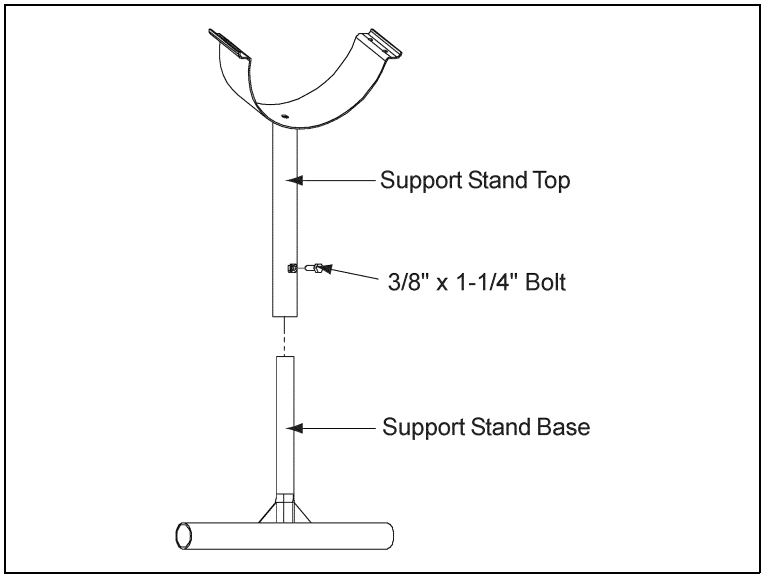


Figure 4B

3. Attaching Support Stand to Tube

A. Place Support Stand and Half Band around Tube and secure together with 5/16" Bolts and Serrated flange nuts. *(See Figure 4C)*

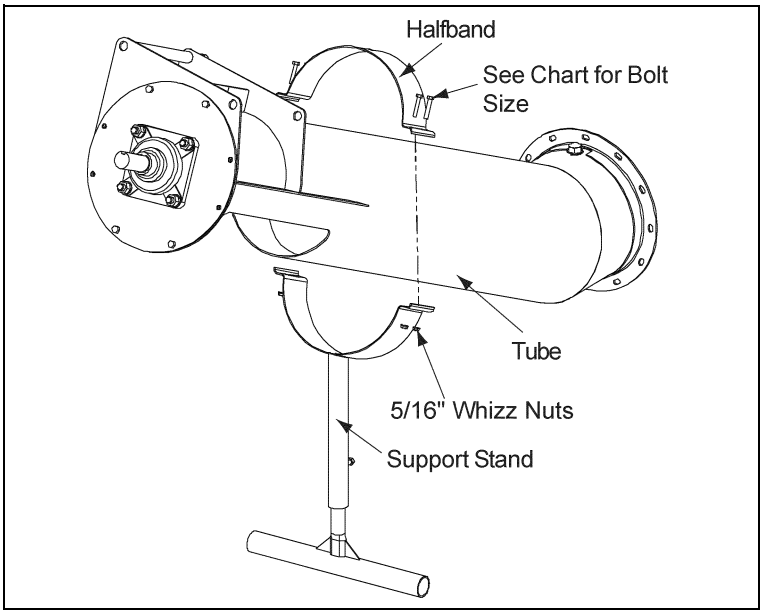


Figure 4C

4. Attaching Flights

A. Pull bin unload flight out of unload tube approximately one (1) foot.

B. Remove Bearing Connecting Stub Bolts and Nuts from Connecting Stub.

C. Position 25 Degree Unloader Assembly in-line with bin tube.

D. Align holes in unload flight with holes in Bearing Connecting Stub and slide flight onto stub.

E. With holes aligned secure with Bearing Connecting Stub Bolts and Nuts that were removed in step 4-B. *(See Figure 4D)*

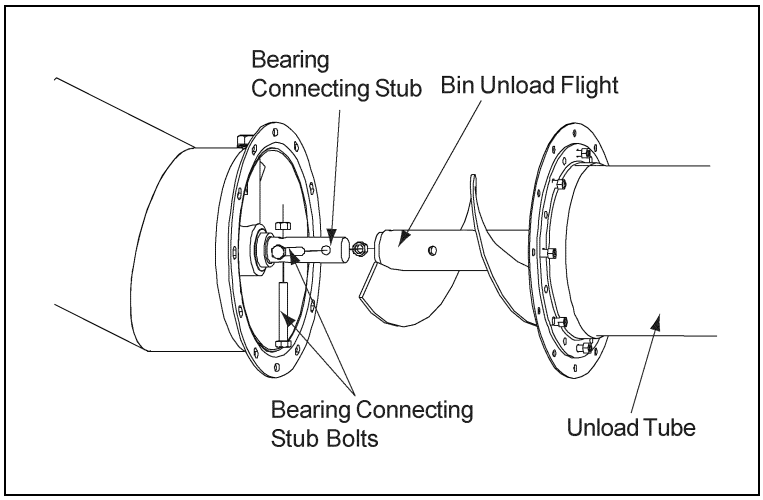


Figure 4D

5. Clamping Unloader to Bin

A. With Bolts secured, slide 25° Unloader assembly into position.

B. Once the 25° Unloader assembly is positioned with its angle ring mated against the Adapter Plate, use the Quick Clamp Band to secure assembly to bin. *(See Figure 4E)*

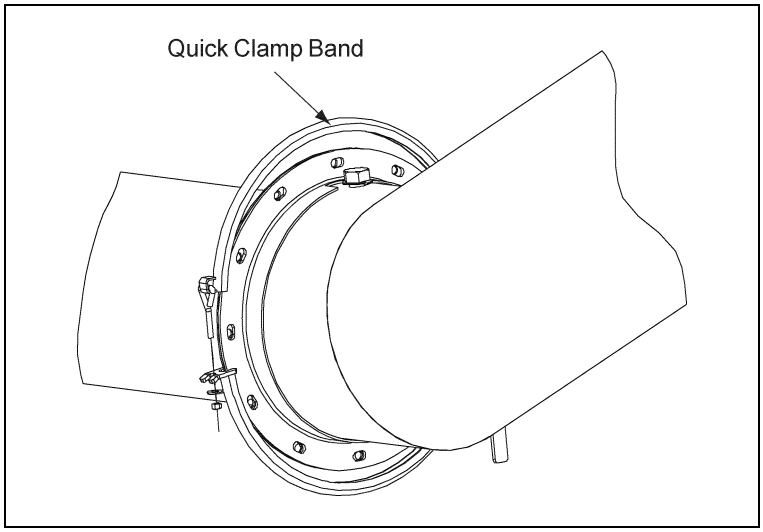


Figure 4E

6. Installing the Motor Mount Adjuster

A. Place Motor Mount Adjuster between the Head Plate & Back 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 4F)*

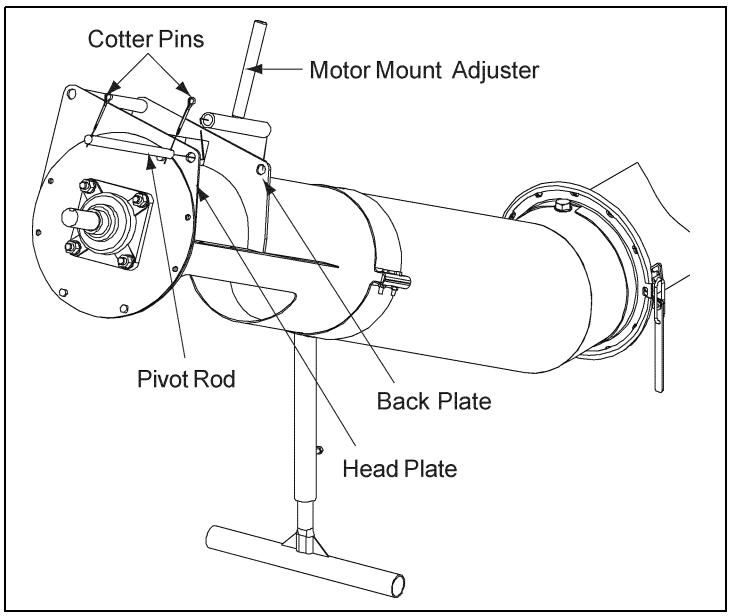


Figure 4F

7. Installing the Motor Mount Plate

A. Secure one (1) of the motor mount adjustment nuts and one (1) of 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 4G)*

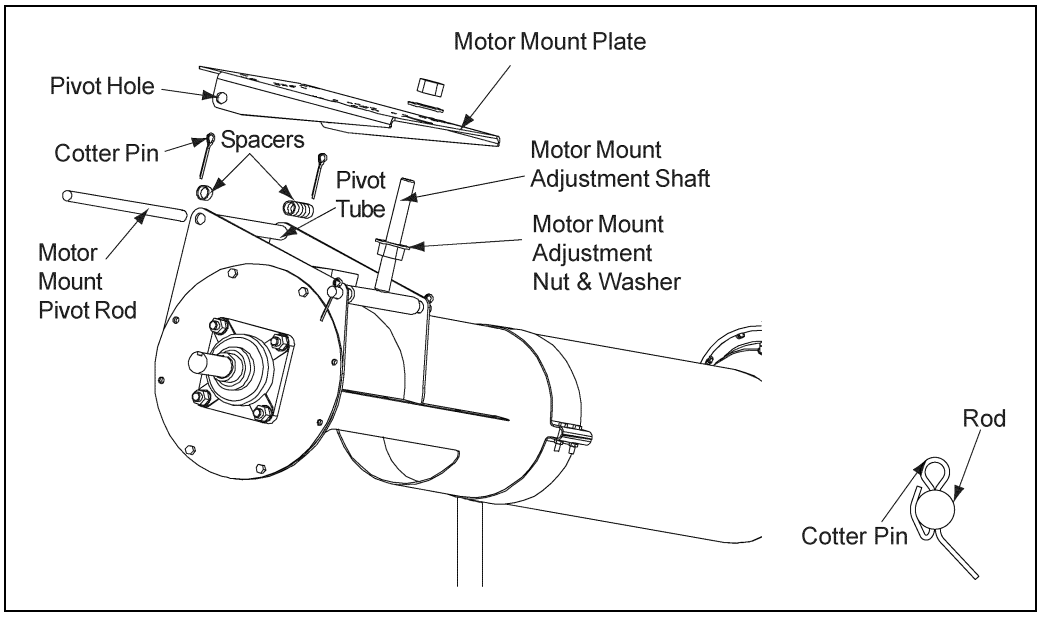


Figure 4G

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 4H)*

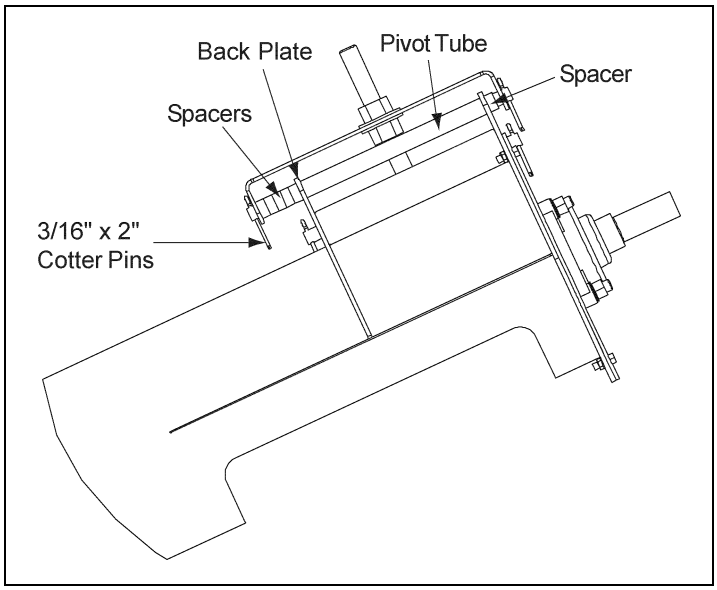


Figure 4H

E. Secure Pivot Rod with (2) 3/16" x 2" Cotter Pins.

Note: The number of spacers will vary depending on size of unloader.

8. 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 Serrated flange nuts. *(See Chart Below)*, *(See Figure 4I)*

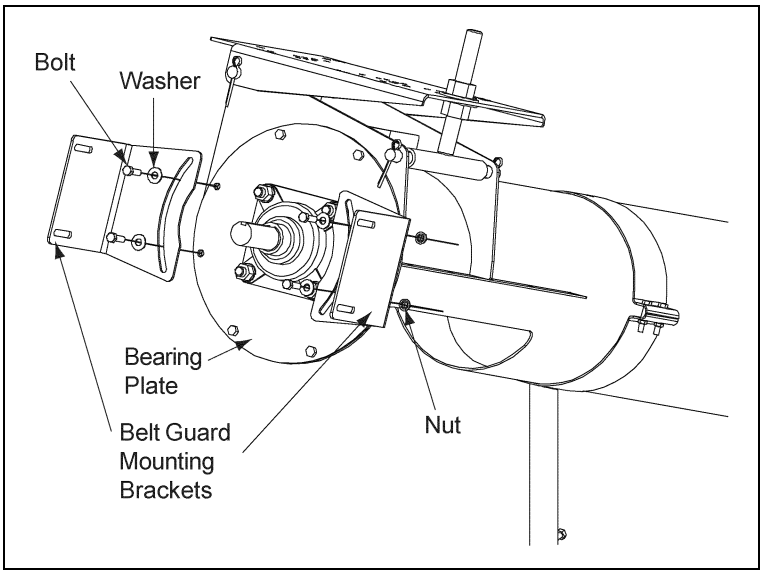


Figure 4I

Belt Guard Mounting Bracket Bolt		
5/16" - 18 x 1" Grade 5 Bolt	S-1196	6" to 6", 6" to 8", 8" to 8"
3/8" - 16 x 1-1/4" Grade 5 Bolt	S-2071	8" to 10" & 10" to 12"

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.

9. 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 Set Screw side of the pulley facing away from the Bearing Plate *(See Figure 4J)*. 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 4J)*

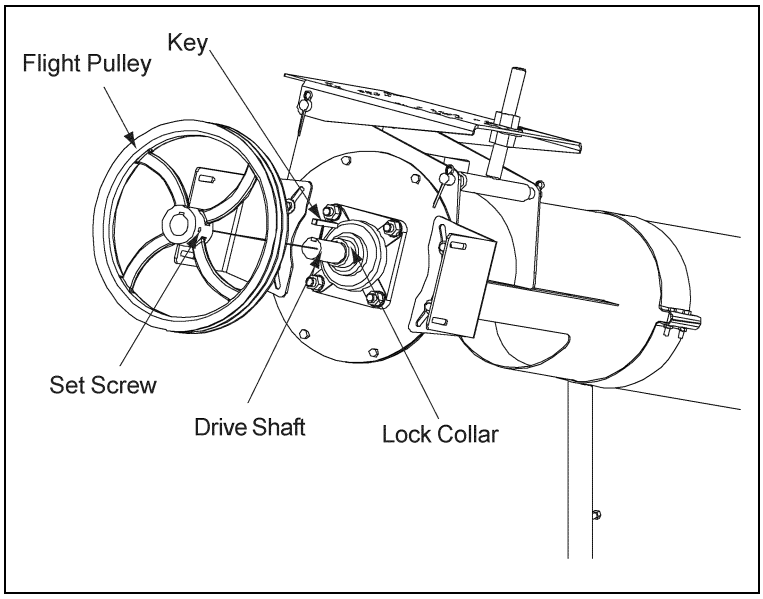


Figure 4J

10. Tightening the Lock Collar

A. Using a punch and hammer, drive the lock collar clockwise or in 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.

11. Installing the Motor (Not Provided)

A. Attach the Motor to the Motor Mount Plate using appropriate bolts, lock washers, and hex nuts. *(See Motor Bolt Chart)*

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 4K)*

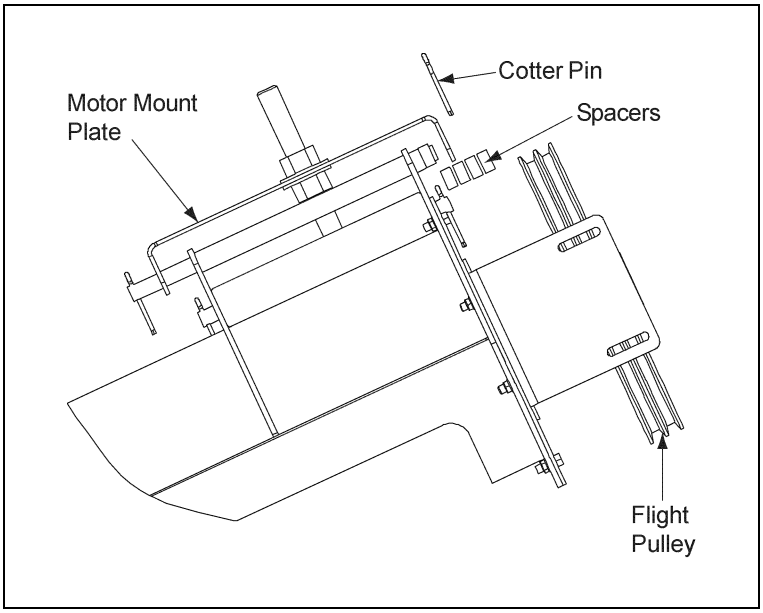


Figure 4K

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

12. 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.

13. 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 or shaft, and tighten down the Belt Guard Mounting Brackets to the Bearing Plate. *(See Figure 4L)*

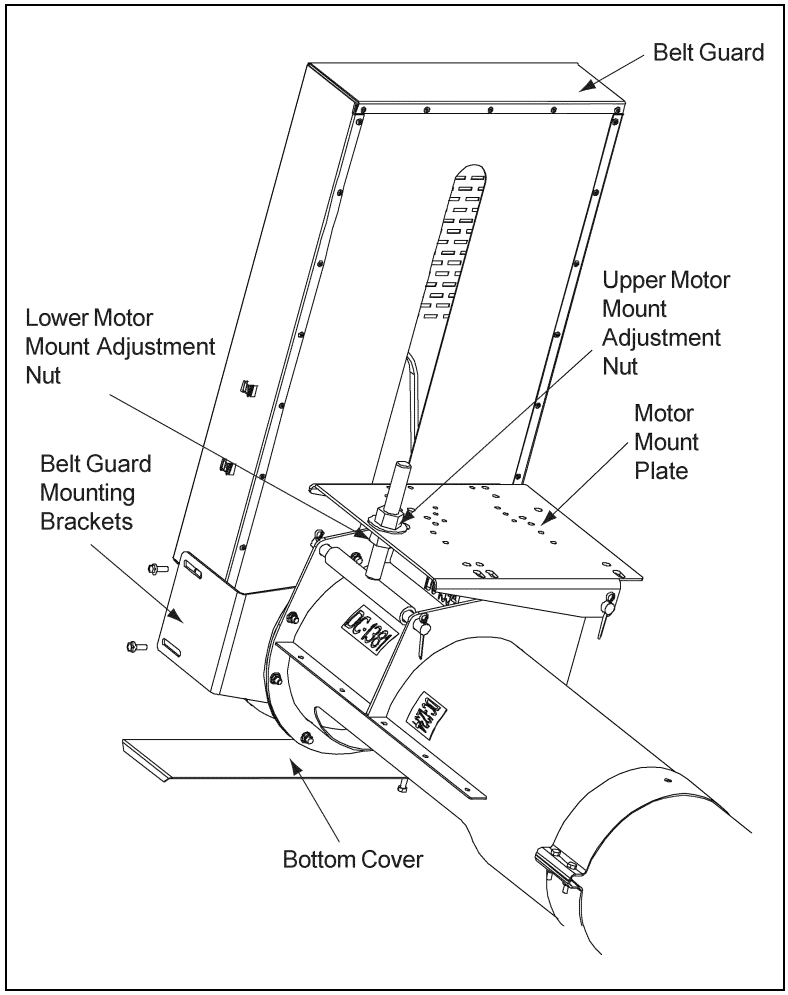


Figure 4L

D. Once the brackets are tightened slide the bottom cover back into place and secure with supplied bolt.

Electric Drive Motors

⚠ 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. Reset and motor starting stations should be located so that the operator can see that all personnel are clear of the equipment.

1. Knowing the bin size and the length of flighting to be used in the unloading tube will be necessary to determine how much horsepower is required for the job.

2. Use the chart below to determine the size of motor required. Use a larger motor when encountering high moisture or when high capacity is required.

25° Horse power	Grain Bin Diameter									
	15'	18'	21'	24'	27'	30'	33'	36'	42'	48'
6"	2	2	3	3	3	3	5	5	-	-
8"	3	3	5	5	5	7-1/2	7-1/2	7-1/2	7-1/2	7-1/2
10"	-	-	-	5	5	7-1/2	7-1/2	7-1/2	10	10

Note: For high capacity or high moisture, use one size larger motor.

Longer Belt Note: Longer belts may be required when using larger framed motors due to high capacity or high moisture applications.

3. The following horsepower recommendations are for auguring fairly dry grain. Use an electric motor of the proper size that operates at 1750 RPM. Motor pulleys are not furnished with the auger.

4. A magnetic starter should be used for the operator's protection and for the protection of the motor. This is to protect the operator against accidental restart caused by power interruption, conductor fault, low voltage, circuit interruption or motor overload. Therefore, the motor must be restarted manually. If using a motor with built-in thermal overload protection, make sure this type of motor has a manual reset.

⚠ WARNING ⚠

Disconnect and lockout power before resetting motor overloads. Make certain electric motors are grounded.

Perform Pre-Start Checks

⚠ DANGER ⚠

Failure to perform any or all of these pre-start checks may cause damage to the equipment and/or cause SERIOUS INJURY or DEATH to those in the work area.

Failure to perform any or all of these pre-start checks may also be a misuse of the equipment. Any misuse of the equipment may void the warranty.

1. Make sure ALL belts are tensioned properly.
2. Make sure ALL shields are in place and that the belt(s) and pulley(s) are able to move freely.
3. Inspect the drive unit for any problems or potential problems.
4. Be aware of any emergency shutdown procedures. Two (2) people must always be in a position where the operation of the equipment can be monitored.
5. Before starting the auger for the first time, make sure that all parts are assembled correctly according to the instructions in this manual.

⚠ DANGER ⚠

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

⚠ WARNING ⚠

Make certain ONLY trained operators are in the work area before operating or moving the machine. Two (2) people must always be in a position where the operation of the equipment can be monitored.

Start the Auger

1. Start the auger.

⚠ CAUTION ⚠

DO NOT start or stop the auger while it is under load. Doing so may cause the auger to "jam."

2. Run the auger through a "break-in" period, if it is being used for the first time or for the first time of the season.
3. Polish the flighting by running the auger at partial capacity until it is smooth, before attempting full capacity.

⚠ CAUTION ⚠

Failures may occur if the auger is run full before it has been “polished” during the “break-in” period.

⚠ CAUTION ⚠

NEVER operate the auger empty. Operating augers empty for any length of time will cause excessive wear.
NEVER operator the auger at speeds higher than recommended. Auger flight speed in excess of recommended speed causes excessive wear.

⚠ CAUTION ⚠

Be aware of any unusual vibration or noises during the initial startup and “break-in” period. If anything unusual is detected, immediately shutdown the auger, and disconnect and lockout the power supply before servicing.

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.

1. Make certain there are at least two (2) people in the work area to monitor operations at all times.

2. 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.

3. 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.

8. SHUTDOWN

Normal Shutdown

1. Before shutting down the unit, be sure the hoppers and augers are empty.
2. Disconnect and lockout the power source before leaving the work area.

Emergency Shutdown

1. Know how to shutdown the auger in case of an emergency.
2. Do not restart the auger while it is under load.
3. Close the bin well control gates.
4. Reconnect and unlock the power source.
5. Clear the auger gradually, until there is no grain and there are no obstructions.

⚠ CAUTION ⚠

NEVER start the equipment under load. Doing so may cause damage. This type of damage is considered a misuse of the equipment. Any misuse of the equipment may void the warranty.

Storage Preparation

1. Close all wells to the discharge auger.
2. Be sure the unload tube is empty.
3. Shutdown the auger.
4. Make sure all fasteners are tight.

Maintain the Auger

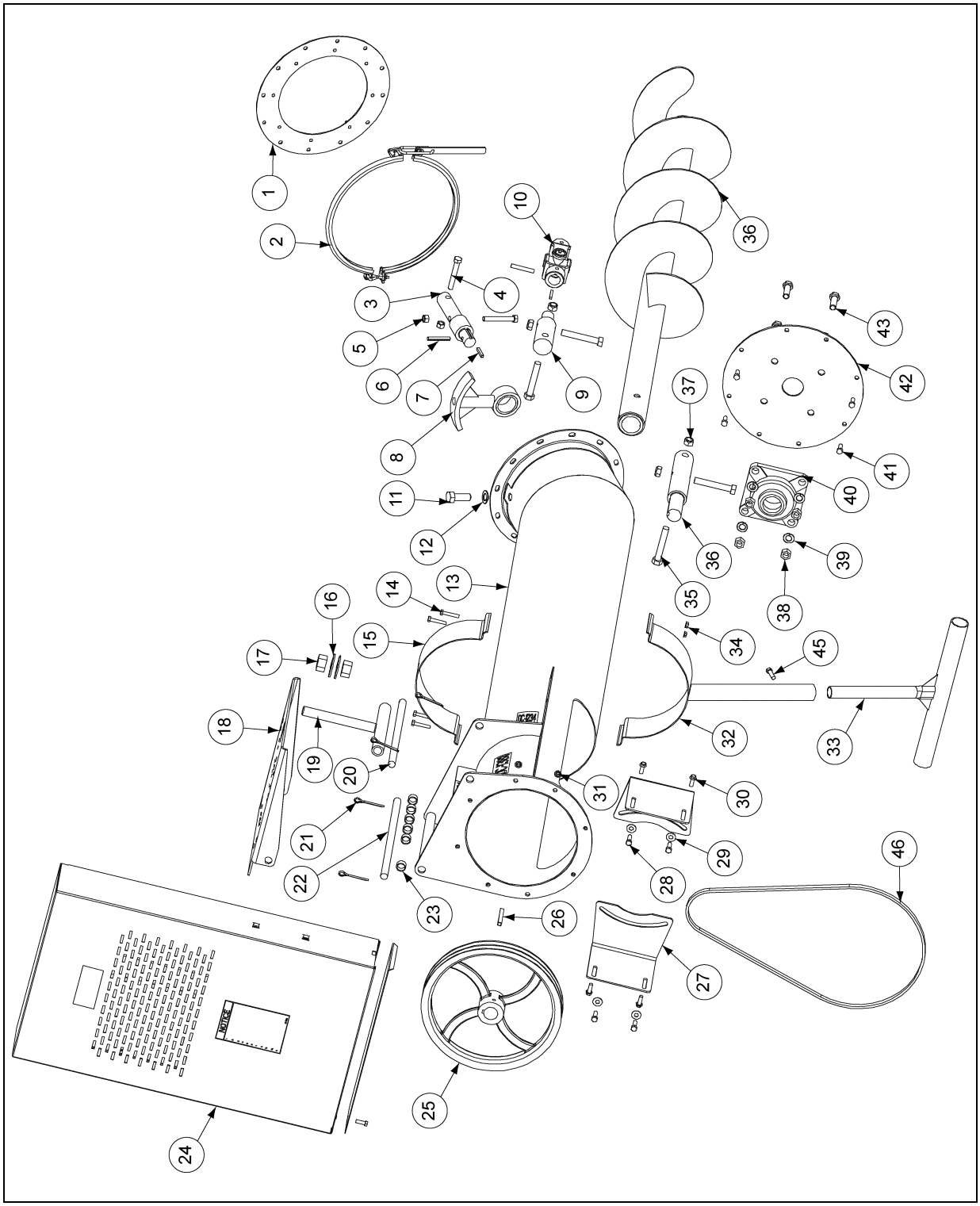
⚠ DANGER ⚠

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

1. Use caution when repairing or replacing equipment parts.
2. 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.
3. Ensure that ALL electric motors, etc., are operating at the proper speed.
4. Maintain proper adjustments on the belt(s).
5. Mount controls for any electric motors at a safe distance from the machine and in a location accessible in case of an emergency.
6. Make sure ALL electrical wiring is not damaged, and that it meets proper wiring codes.
7. Make sure ALL components are in good working condition before use.
8. Check the auger flighting to make sure it is in good working condition.
9. Check the internal bearing bracket, bearing and universal joint to make sure they are in good working order.
10. Grease bearing at least two (2) times each season.

10. PART LIST

25° Unloader Parts



25° Unloader Parts

Ref #	Part #	System	Description
1	GK1280	6" to 8"	**Adapter Plate**
	GK1298	8" to 10"	
	GK2013	10" to 12"	
2	GK1013	6" to 6"	**Quick Clamp Band**
	GK1279	6" to 8" & 8" to 8"	
	GK1299	8" to 10"	
	GK2012	10" to 12"	
3			**Bearing Connecting Stub**
	GK5706	6" to 6"	1" x 7-7/8"
	GK7241	6" to 8"	1" x 8-1/2"
	GK1283	8" to 8"	1-1/4" x 7-7/8"
	GK7240	8" to 10"	1-1/4" x 9"
	GK7242	10" to 12"	1-1/2" x 9"
4			**Bearing Connecting Stub Bolts**
	S-6762	6" to 6" & 6" to 8"	3/8" - 16 x 2-1/2" Grade 5 Bolt
	S-8316	8" to 8" & 8" to 10"	7/16" - 14 x 3" Grade 5 Bolt
	S-8314	10" to 12"	1/2" - 13 x 3-1/2" Grade 5 Bolt
5			**Bearing Connecting Stub Nuts**
	S-8251	6" to 6" & 6" to 8"	3/8" - 16 Stover Nut
	S-8317	8" to 8" & 8" to 10"	7/16" - 14 Stover Nut
	S-8315	10" to 12"	1/2" - 13 Stover Nut
6			**U-Joint Pin**
	S-8397	6" to 6", 6" to 8" & 8" to 8"	5/16" x 1-3/4" Rolled Pin
	S-7245	8" to 10" & 10" to 12"	3/8" x 2-1/2" Rolled Pin
7			**U-Joint Key**
	S-9169	10" to 12"	1/4" x 1-1/2" Square Key
8	GC06392	6" to 6"	**Hanger Bearing**
	GC06394	6" to 8" & 8" to 8"	
	GC06396	8" to 10"	
	GC06398	10" to 12"	
9			**Connecting Stub**
	GK1267	6" to 6", 6" to 8" & 8" to 8"	1" x 6"
	GK1290	8" to 10"	1-1/4" x 6-1/2"
	GK2008	10" to 12"	1-1/4" to 2" x 6-1/2"
10			**U- Joint**
	GK1266	6" to 6", 6" to 8" & 8" to 8"	1" Bore x 5" Long
	GK1291	8" to 10"	1-1/4" Bore x 7" Long
	GK2009	10" to 12"	1-1/4" Bore w/Key Way x 7" Long
11			**Hanger Bearing Bolt**
	S-7886	6" to 6", 6" to 8", 8" to 8" & 8" to 10"	5/8" - 11 x 1-3/4" Grade 8 Bolt
	S-869	10" to 12"	3/4" - 10 x 2" Grade 8 Bolt

25° Unloader Parts

Ref #	Part #	System	Description
12			**Hanger Bearing Lock Washer**
	S-3208	6" to 6", 6" to 8", 8" to 8" & 8" to 10"	5/8" Lock Washer
	S-233	10" to 12"	3/4" Lock Washer
13			**Unload Tube**
	GK7072	6" to 6"	6" 25 Deg Tube Assembly
	GK7073	6" to 8" & 8" to 8"	8" 25 Deg Tube Assembly
	GK7074	8" to 10"	10" 25 Deg Tube Assembly
	GK7075	10" to 12"	12" 25 Deg Tube Assembly
14			**Stand Connecting Band Bolts**
	S-2741	6" to 6", 6" to 8", 8" to 8" & 8" to 10"	5/16" - 18 x 1-1/2" Grade 5 Bolt
	S-7149	10" to 12"	5/16" - 18 x 1-3/4" Grade 5 bolt
15			**Half Band**
	GK1122	6" to 6"	6" x 4" 12GA
	GK1059	6" to 8" & 8" to 8"	8" x 4" 12GA
	GK1301	8" to 10"	10" x 4" 12GA
	GK2014	10" to 12"	12" x 4" 12GA
16			**Motor Mount Adjustment Washer**
	S-866	6" to 6"	3/4" Flat Washer
	S-7835	6" to 8", 8" to 8", 8" to 10" & 10" to 12"	1" Flat Washer
17			**Motor Mount Adjustment Nut**
	S-234	6" to 6"	3/4" - 10 Hex Nut
	S-240	6" to 8", 8" to 8", 8" to 10" & 10" to 12"	1" - 8 Hex Nut
18	GK7052	6" to 6"	**Motor Mount Plate**
	GK6986	6" to 8", 8" to 8", 8" to 10" & 10" to 12"	
19	GK7060	6" to 6"	**Motor Mount Adjustment Weldment**
	GK6942	6" to 8", 8" to 8", 8" to 10" & 10" to 12"	
20	GK7012	6" to 8", 8" to 8", 8" to 10" & 10" to 12"	**Motor Mount Adjustment Pivot Rod**
21	S-6994	ALL	3 -16" x 2" Cotter Pin
22	GK7058	6" to 6"	**Motor Mount Plate Pivot Rod**
	GK7013	6" to 8", 8" to 8", 8" to 10" & 10" to 12"	
23	GK7014	6" to 8", 8" to 8", 8" to 10" & 10" to 12"	**Pivot Spacer Tube**
24	GK7005	6" to 6", 6" to 8" 8" to 8" & 8" to 10"	**Belt Guard**
	GK7068	10" to 12"	

25° Unloader Parts

Ref #	Part #	System	Description
25			**Sheave**
	GK1321	6" to 6"	12" Diameter x 1" Bore 2 Belt
	GK1335	6" to 8", 8" to 8",	12" Diameter x 1-1/4" Bore 2 Belt
	GK1345	8" to 10" 2 Belt 10" to 12" 2 Belt	15" Diameter x 1-1/2" Bore 2 Belt
	GK1304	8" to 10" 3 Belt 10" to 12" 3 Belt	15" Diameter x 1-1/2" Bore 3 Belt
26			**Sheave Key**
	S-4513	6" to 6", 6" to 8" 8" to 8"	1/4" x 2" Key
	S-9181	8" to 10" & 10" to 12"	3/8" x 3" Key
27	GK7062	6" to 6"	**Belt Guard Mounting Brackets**
	GK7006	6" to 8" & 8" to 8"	
	GK7018	8" to 10"	
	GK7065	10" to 12"	
28			**Belt Guard Mounting Bracket Bolt**
	S-1196	6" to 6", 6" to 8" 8" to 8"	5/16" - 18 x 1" Grade 5 Bolt
	S-2071	8" to 10" & 10" to 12"	3/8" - 16 x 1-1/4" Grade 5 Bolt
29			**Belt Guard Mounting Bracket Washer**
	S-845	6" to 6", 6" to 8" 8" to 8"	5/16 Flat Washer
	S-248	8" to 10" & 10" to 12"	3/8" Flat Washer
30	S-9065	ALL	3/8" - 16 x 1" Grade 5 Bolt
31			**Bearing Plate Nut**
	S-3611	6" to 6", 6" to 8" 8" to 8"	5/16" - 18 Whiz Nut
	S-968	8" to 10" & 10" to 12"	3/8" - 16 Whiz Nut
32	GK2825	6" to 6"	**Support Stand Top**
	GK1278	6" to 8" & 8" to 8"	
	GK1300	8" to 10"	
	GK2011	10" to 12"	
33	GK1277	ALL	**Support Stand Base**
34	S-3611	ALL	5/16" - 18 Whiz Nut
35			**Flight Connection Bolts**
	S-6762	6" to 6"	3/8" - 16 x 2-1/2" Grade 5 Bolt
	S-8316	6" to 8", 8" to 8", 8" to 10" (Conn. Shaft)	7/16" - 14 x 3" Grade 8 Bolt
	S-8314	8" to 10" (Drive Shaft)	1/2" - 13 x 3-1/2" Grade 8 Bolt
	S-7893	10" to 12"	5/8" - 11 x 4" Grade 8 Bolt
36			**Drive Shaft**
	GK2025	6" to 6"	1" x 10"
	GK1331	6" to 8" & 8" to 8"	1-1/4" x 10-1/2"
	GK1289	8" to 10"	1-1/2" x 11-1/2"
	GK2006	10" to 12"	2" x 12"

25° Unloader Parts

Ref #	Part #	System	Description
37			**Flight Connection Nuts**
	S-8251	6" to 6"	3/8" - 16 Stover Nut
	S-8317	6" to 8" & 8" to 8" 8" to 10" (Conn. Shaft)	7/16" - 14 Stover Nut
	S-8315	8" to 10" (Drive Shaft)	1/2" - 13 Stover Nut
	S-8606	10" to 12"	5/8" - 11 Stover Nut
38			**Bearing Nuts**
	S-860	6" to 6"	7/16" - 14 Hex Nut
	S-7510	6" to 8", 8" to 8" 8" to 10"	1/2" - 13 Hex Nut
	S-4110	10" to 12"	5/8" - 11 Hex Nut
39			**Bearing Lock Washers**
	S-7014	6" to 6"	7/16" Lock Washer
	S-236	6" to 8", 8" to 8" 8" to 10"	1/2" Lock Washer
	S-3208	10" to 12"	5/8" Lock Washer
40			**Bearing with Flange**
	GK1049	6" to 6"	1" 2 Hole Flange w/Lock Collar
	GK1330	6" to 8" & 8" to 8"	1-1/4" 2 Hole Flange w/Lock Collar
	GK1343	8" to 10"	1-1/2" 4 Hole Flange w/Lock Collar
	GK2004	10" to 12"	2" 4 Hole Flange w/Lock Collar
41			**Bearing Plate Bolts**
	S-1196	6" to 6", 6" to 8" 8" to 8"	5/16" - 18 x 1" Grade 5 Bolt
	S-7469	8" to 10" & 10" to 12"	3/8" - 16 x 1" Grade 5 Bolt
42	GK7061	6" to 6"	**Bearing Plate**
	GK6987	6" to 8" & 8" to 8"	
	GK7017	8" to 10"	
	GK7064	10" to 12"	
43			**Bearing Bolts**
	S-3886	6" to 6"	7/16" - 14 x 1-1/4" Grade 5 Bolt
	S-8760	6" to 8", 8" to 8" 8" to 10"	1/2" - 13 x 1-1/2" Grade 5 Bolt
	S-8399	10" to 12"	5/8" - 11 x 2" Grade 5 Bolt
44			**Discharge Flight**
	GK2827	6" to 6"	6" 25 Degree Weldment
	GK1268	6" to 8" & 8" to 8"	8" 25 Degree Weldment
	GK6396	8" to 10"	10" 25 Degree Weldment
	GK2001	10" to 12"	12" 25 Degree Weldment
45	S-2071	ALL	3/8" -16 x 1-1/4" Grade 5 Bolt
46			**Belts**
	GK1323	6" to 6"	B48 V-Belt
	GK1952	6" to 8" & 8" to 8"	B50 V-Belt
	GK1346	8" to 10"	B57 V-Belt
	GK-2546	10" to 12"	B62 V-Belt

Problem	Possible Cause	Solution
1. Auger vibration	1. Drive belt may be overtightened, putting head stub and flight in a bind. Damage can occur to the auger flighting, thus causing noise. Damage usually is caused from foreign material having been run through the auger.	1. It may be necessary to remove the flighting for inspection. 2. Adjust the drive belt to the proper tension.
2. Low capacity	1. The auger may not be getting enough grain.	1. Check that the intake has not bridged over, restricting flow. The exposed flighting at the auger intake should be covered with grain to achieve maximum capacity.
	2. The auger is moving too slowly.	2. Check the auger speed. Speeds slower than the recommended speed will result in low capacity.
3. Auger plugs	1. The auger may be getting too much grain, causing “jamming” inside the housing.	1. Decrease the amount of grain the auger is gathering.
	2. The motor may be too small or wired improperly.	2. If the motor is a newer lightweight aluminum type, the next larger size should be considered.
	3. The grain may be wet.	3. If wet grain or other hard-to-move material is being augured, use a larger size motor than recommended for normal use.
	4. The auger may be jammed with foreign material.	4. Be sure there is no foreign material in the auger such as sacks, tarp corners, etc.
	5. The discharge end may be plugged.	5. Make sure the discharge end of the auger is not plugged. A plug of the discharge end will cause an auger plug.

NOTES

GSI GROUP

Limited Warranty

The GSI Group, LLC. ("GSI") warrants products which it manufactures to be free of defects in materials and workmanship under normal usage and conditions for a period of 12 months after sale to the original end-user or if a foreign sale, 14 months from arrival at port of discharge, whichever is earlier. The end-user's sole remedy (and GSI's only obligation) is to repair or replace, at GSI's option and expense, products that in GSI's judgment, contain a material defect in materials or workmanship. Expenses incurred by or on behalf of the end-user without prior written authorization from the GSI Warranty Group shall be the sole responsibility of the end-user.

Warranty Extensions: The Limited Warranty period is extended for the following products:

	Product	Warranty Period
AP Fans and Flooring	Performer Series Direct Drive Fan Motor	3 Years
	All Fiberglass Housings	Lifetime
	All Fiberglass Propellers	Lifetime
Cumberland Feeding/Watering Systems	Feeder System Pan Assemblies	5 Years **
	Feed Tubes (1.75" & 2.00")	10 Years *
	Centerless Augers	10 Years *
	Watering Nipples	10 Years *
Grain Systems	Grain Bin Structural Design	5 Years
Grain Systems Farm Fans Zimmerman	Portable & Tower Dryers	2 Years
	Portable & Tower Dryer Frames and Internal Infrastructure †	5 Years

* Warranty prorated from list price:
0 to 3 years – no cost to end-user
3 to 5 years – end-user pays 25%
5 to 7 years – end-user pays 50%
7 to 10 years – end user pays 75%

** Warranty prorated from list price:
0 to 3 years – no cost to end-user
3 to 5 years – end-user pays 50%

† Motors, burner components and moving parts not included. Portable Dryer screens included. Tower Dryer screens not included.

GSI further warrants that the portable and tower dryer frame and basket, excluding all auger and auger drive components, shall be free from defects in materials for a period of time beginning on the twelfth (12^{th}) month from the date of purchase and continuing until the sixtieth (60^{th}) month from the date of purchase (extended warranty period). During the extended warranty period, GSI will replace the frame or basket components that prove to be defective under normal conditions of use without charge, excluding the labor, transportation, and/or shipping costs incurred in the performance of this extended warranty.

Conditions and Limitations:

THERE ARE NO WARRANTIES THAT EXTEND BEYOND THE LIMITED WARRANTY DESCRIPTION SET FORTH ABOVE. SPECIFICALLY, GSI MAKES NO FURTHER WARRANTY OF ANY KIND, EXPRESS 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 GSI OR (ii) ANY ADVICE, INSTRUCTION, RECOMMENDATION OR SUGGESTION PROVIDED BY AN AGENT, REPRESENTATIVE OR EMPLOYEE OF GSI REGARDING OR RELATED TO THE CONFIGURATION, INSTALLATION, LAYOUT, SUITABILITY FOR A PARTICULAR PURPOSE, OR DESIGN OF SUCH PRODUCTS.

GSI shall not be liable for any direct, indirect, incidental or consequential damages, including, without limitation, loss of anticipated profits or benefits. The sole and exclusive remedy is set forth in the Limited Warranty, which shall not exceed the amount paid for the product purchased. This warranty is not transferable and applies only to the original end-user. GSI shall have no obligation or responsibility for any representations or warranties made by or on behalf of any dealer, agent or distributor.

GSI assumes no responsibility for claims resulting from construction defects or unauthorized modifications to products which it manufactured. Modifications to products not specifically delineated in the manual accompanying the equipment at initial sale will void the Limited Warranty.

This Limited Warranty shall not extend to products or parts which have been damaged by negligent use, misuse, alteration, accident or which have been improperly/inadequately maintained. This Limited Warranty extends solely to products manufactured by GSI.

Prior to installation, the end-user has the responsibility to comply with federal, state and local codes which apply to the location and installation of products manufactured or sold by GSI.

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.

GSI GROUP

GSI®

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