

Commercial Drive Unit for 10"-12" 25° Bin Unloader

Assembly and Operation Manual

PNEG-2035

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PNEG-2035

All information, illustrations, photos and specifications in this manual are based on the latest information available at the time of publication. The right is reserved to make changes at any time without notice.

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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. The customer should report and note any damage or shortage on the bill of lading to justify their claim to the transport company.

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

This warranty provides you the assurance that the company will back its products when defects appear within the warranty period. In some circumstances, the company also provides field improvements, often without charge to the customer, even if the product is out of warranty. Should the equipment be abused, or modified to change its performance beyond the factory specifications, the warranty will become void and field improvements may be denied.

Safety Guidelines

Safety guidelines are general-to-specific safety rules that must be followed at all times. This manual is written to help you understand safe operating procedures and problems that can be encountered by the operator and other personnel when using this equipment. Save these safety guidelines for future reference.

As owner or operator, you are responsible for understanding the requirements, hazards, and precautions that exist and to inform others as required. Unqualified persons must stay out of the work area at all times.

Alterations must not be made to the equipment. Alterations can produce dangerous situations resulting in **SERIOUS INJURY** or **DEATH**.

This equipment must be installed in accordance with the current installation codes and applicable regulations, which should be carefully followed in all cases. Authorities having jurisdiction must be consulted before installations are made.

When necessary, you must consider the installation location relative to electrical, fuel and water utilities.

Personnel operating or working around equipment must 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.

ST-0001-2

Cautionary Symbols Definitions

Cautionary symbols appear in this manual and on product decals. The symbols alert the user of potential safety hazards, prohibited activities and mandatory actions. To help you recognize this information, we use the symbols that are defined below.



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



This symbol indicates a potentially hazardous situation which, if not avoided, **may result in serious injury or death.**



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



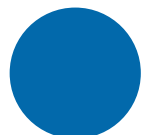
This symbol is used to address practices not related to personal injury.



This symbol indicates a general hazard.



This symbol indicates a prohibited activity.



This symbol indicates a mandatory action.

ST-0005

Safety Cautions

Use Personal Protective Equipment

- Use appropriate personal protective equipment:

Eye Protection



Respiratory Protection



Foot Protection



Hearing Protection



Head Protection



Fall Protection



Hand Protection



- Wear clothing appropriate to the job.
- Remove all jewelry.
- Tie long hair up and back.

ST-0004-1

Follow Safety Instructions

- Carefully read all safety messages in this manual and safety signs on your machine. 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.
- If you do not understand any part of this manual or need assistance, contact your dealer.



ST-0002-1

2. Safety

Maintain Equipment and Work Area

- Understand service procedures before doing work. Keep area clean and dry.
- Never service equipment while it is operating. Keep hands, feet, and clothing away from moving parts
- Keep your equipment in proper working condition. Replace worn or broken parts immediately.



ST-0003-1

Operate Motor Properly

- All electrical connections should be made in accordance with the National Electric Code (US) or Canadian Electrical Code (CEC). Be sure equipment and bins are properly grounded.
- Lock-out power before resetting motor overloads.
- Do not repetitively stop and start the drive in order to free a plugged condition. Jogging the drive in this manner can damage the equipment and drive components.



ST-0009-1

Rotating Auger Hazard

- Keep clear of rotating augers and moving parts.
- Do not remove or modify guards. Failure to follow these precautions will result in serious injury or death.



ST-0037-1

Stay Clear of Hoisted Equipment

- Always use proper lifting or hoisting equipment when assembling or disassembling equipment.
- Do not walk or stand under hoisted equipment.
- Always use sturdy and stable supports when needed for installation. Not following these safety precautions creates the risk of falling equipment, which could crush personnel and cause serious injury or death.



ST-0047-1

Stay Clear of Rotating Parts

- Do not enter the bin while the equipment is in operation.
- Entanglement in rotating augers will cause serious injury or death.
- Keep all shields and covers in place at all times.
- Lock-out power source before making adjustments, cleaning, or maintaining equipment.



ST-0008-1

Use Unload Equipment Properly

- Do not operate this equipment alone. Make sure someone nearby is aware of the proper shut down sequence in the event of an emergency.
- Do not allow any person intoxicated or under the influence of drugs to operate this equipment. All operators must be adequately rested and prepared to perform all functions of operating the equipment.
- Do not start equipment until all persons are clear of the work area. Do not allow anyone inside a bin truck or wagon which is being unloaded by an auger. Flowing grain can trap and suffocate in seconds.
- Use ample overhead lighting after sunset to light the work area.
- Always use caution to not hit the auger when positioning load.
- Do not leave equipment running while unattended.
- Be aware of pinch points which can trap or catch objects and cause injury.
- Be sure all equipment is locked in position before operating. Always lock out all power sources to the equipment when finished unloading.



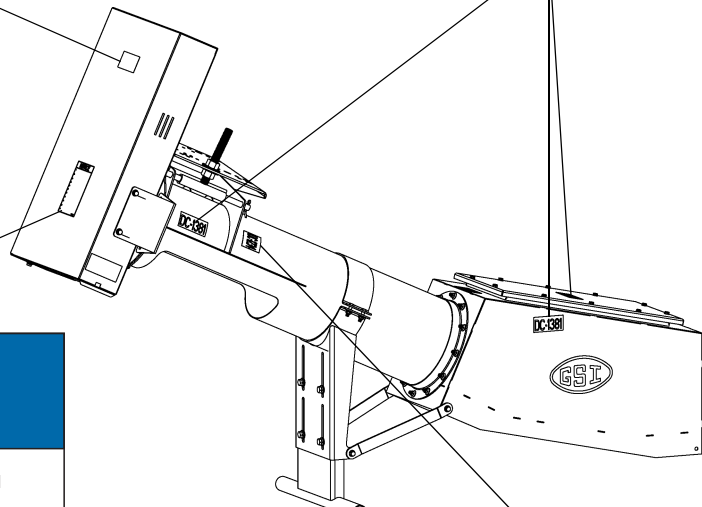


ST-0051-1

Check components shown below to ensure 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:

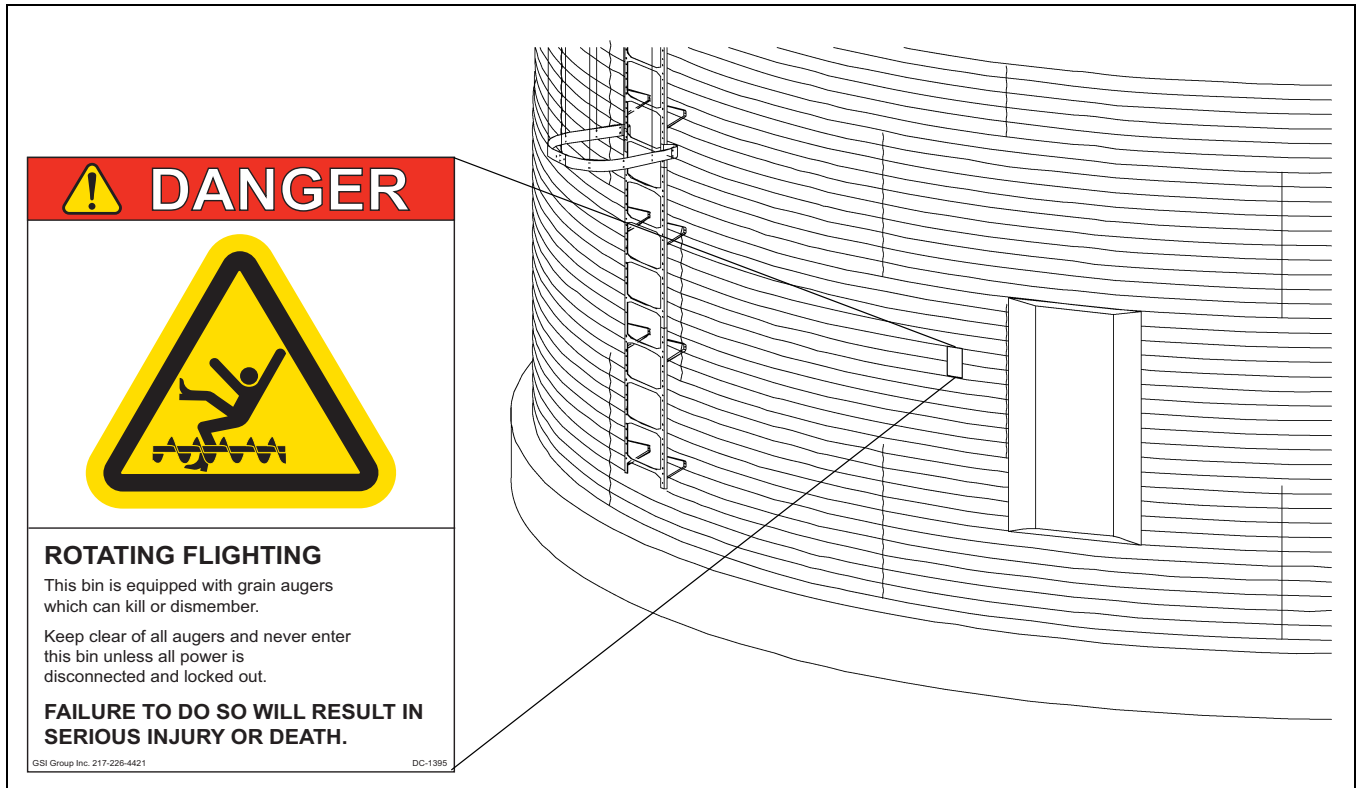
The GSI Group
 1004 E. Illinois St.
 Assumption, IL. 62510
 Phone: 1-217-226-4421

	<p style="text-align: center;">⚠ DANGER</p> <p>SHEAR POINT Keep hands clear of moving parts. Do not operate with guard removed. Disconnect and lockout power before servicing.</p> <p style="font-size: small;">GSI Group Inc. 217-226-4421 DC-994</p>		<p style="text-align: center;">⚠ DANGER</p> <p>SHEAR POINT Keep clear of rotating auger and moving parts. Do not remove or modify guards. Disconnect and lock out power before servicing. Failure to do so will result in serious INJURY or DEATH.</p> <p style="font-size: small;">GSI Group 217-226-4421 DC-1381</p>
			
<div style="background-color: #0056b3; color: white; text-align: center; padding: 5px; font-weight: bold; font-size: 24px;">NOTICE</div> <ol style="list-style-type: none"> 1. Read and understand the operator's manual and all safety instructions. 2. Do not operate while under the influence of drugs or alcohol. 3. Do not operate unless all safety equipment, switches, guards, and shields are securely in place and operational. 4. Allow only trained authorized personnel in the operating area. 5. Any electrical wiring or service work must be performed by a qualified electrician. It must meet all state and local electrical codes. 6. Do not allow children in the area of operation. 7. Keep hands, feet, & clothing away from moving parts. 8. Disconnect and lockout power before making any adjustments or performing any service work. 9. Disconnect power prior to resetting any motor overload. 10. Make certain all electric motors are grounded. 11. Replace all worn or damaged labels immediately. <p style="font-size: small;">GSI Group Inc. 217-226-4421 DC-1379</p> <p style="text-align: center; font-weight: bold;">DC-1379</p>		<div style="background-color: #0056b3; color: white; text-align: center; padding: 5px; font-weight: bold; font-size: 24px;">NOTICE</div> <p style="text-align: center; font-weight: bold;">FAILURE TO PROPERLY SELECT, INSTALL OR MAINTAIN AN AUGER, ITS DRIVE OR OTHER COMPONENTS CAN RESULT IN DANGEROUS OPERATION.</p> <p style="text-align: center; font-weight: bold;">THIS EQUIPMENT IF IMPROPERLY SELECTED, INSTALLED OR MAINTAINED MAY FAIL AND COULD RESULT IN SERIOUS INJURY OR PROPERTY DAMAGE.</p> <p style="text-align: center; font-weight: bold;">CHECK PRODUCT LITERATURE AND EQUIPMENT MANUFACTURER'S LITERATURE OR CALL THE FACTORY FOR FURTHER INFORMATION.</p> <p style="font-size: small;">GSI Group 217-226-4421 DC-1234</p> <p style="text-align: center; font-weight: bold;">DC-1234</p>	

3. Safety Decals

- A. 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.
- B. If the safety sign location suggested is not in full view because of equipment modifications, other equipment in the area or any reason, then locate the safety sign in a more suitable location.
- C. Be certain the surface is clean, dry and free of dirt and oil. Peel paper backing from decals and stick into place. The adhesive backing will bond on contact.

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



NOTE: *If the Safety Sign cannot be easily read for any reason or has been painted over, replace it immediately. Additional Safety Signs may be obtained free of charge from your dealer, distributor or ordered from the factory.*

Order SAFETY SIGN NO. DC-1395

Assembling Stand Plates

1. Attach the lower stand plate (B) with the upper stand plate (A) by using the 1/2" bolts (C), nuts (D) and washers (E). (See Figure 4A.)
2. Attach the stand strap (F) with the upper stand plate (A) by using the 3/8" bolts (G) and nuts (H). (See Figure 4A.)

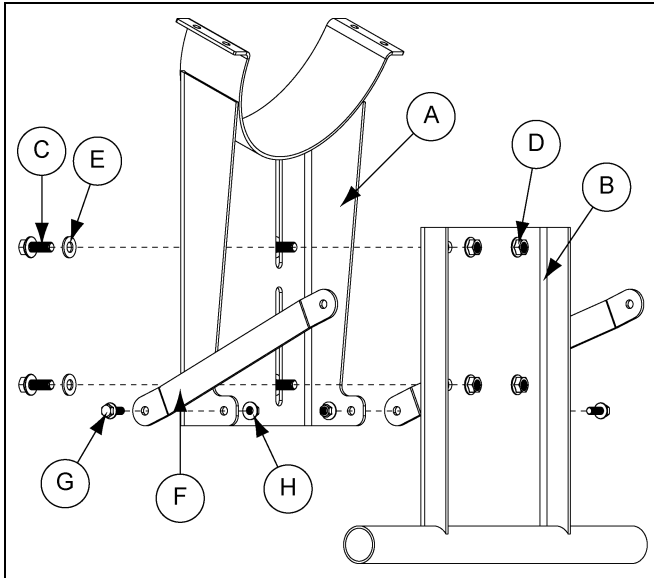


Figure 4A

Ref #	Part #	Description
A	GC20361	Upper Stand Plate
B	GC20362	Lower Stand Plate
C	S-9062	1/2" x 1-1/4" Flange Bolt
D	S-8506	1/2" Flange Nut
E	S-2120	1/2" Flat Washer
F	GK80298-Y	Stand Strap
G	S-9065	3/8" x 1" Flange Bolt
H	S-968	3/8" Flange Nut

Attaching Stand Plates to Tube

1. Place stand plates (E and F) and half band (A) around tube (B) and secure together with 3/8" flange bolts (C) and flange nuts (D). (See Figure 4B.)

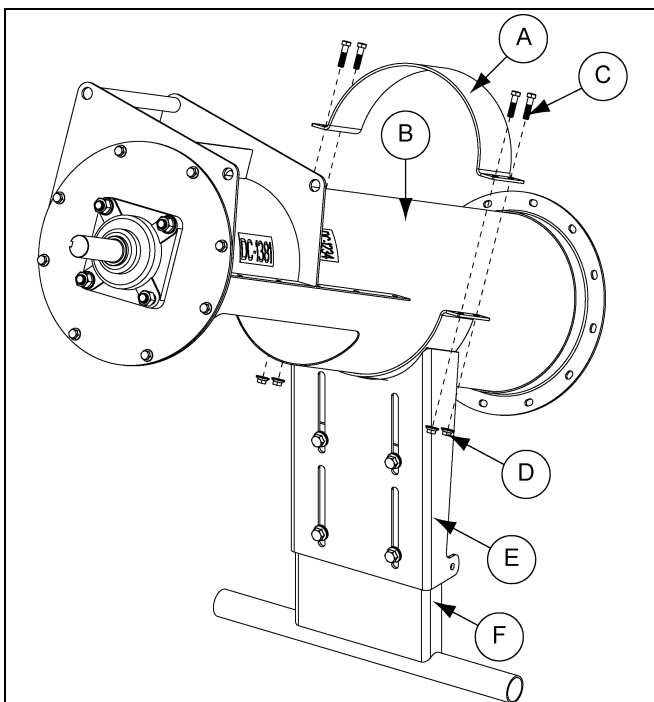


Figure 4B

Ref #	Part #	Description
A	GC08690	Half Band 12" x 4"
B	GC10542-18	Discharge Tube
C	S-2086	3/8"-16 x 1-1/2" Flange Bolt
D	S-968	3/8" Flange Nut
E	GC20361	Upper Stand Plate
F	GC20362	Lower Stand Plate

4. Assembly

Attaching Flights

1. Pull bin unload flight (C) out of unload tube (D) approximately one foot (1').
2. Remove bearing connecting stub bolts (B) and nuts (E) from connecting stub (A).
3. Position 25° unloader assembly in-line with bin tube.
4. Align holes in unload flight with holes in bearing connecting stub (A) and slide flight onto stub.
5. With holes aligned, secure with bearing connecting stub bolts (B) and nuts (E) that were removed in [Step 2. \(See Figure 4C.\)](#)

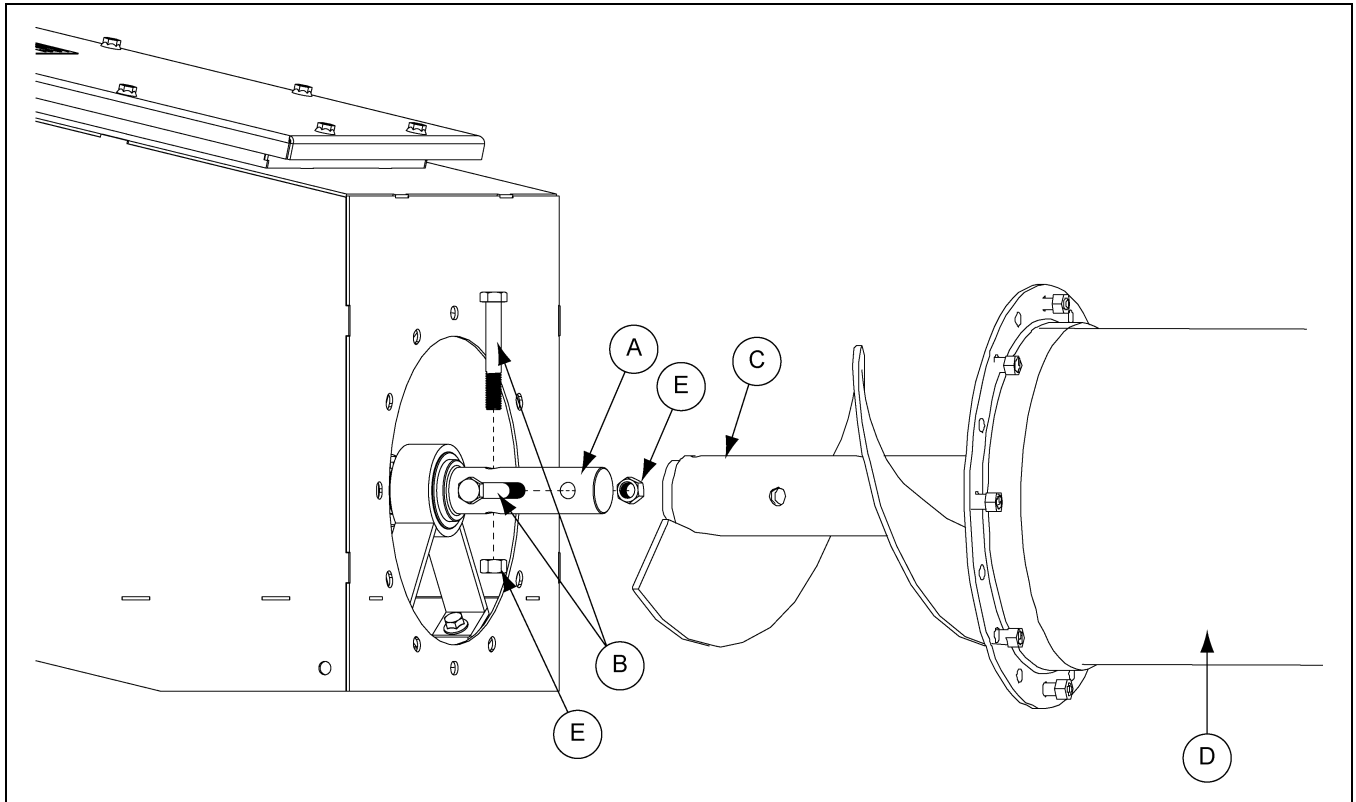


Figure 4C

Ref #	Description
A	Bearing Connecting Stub
B	Bearing Connecting Stub Bolts
C	Bin Unload Flight
D	Unload Tube
E	Bearing Connecting Stub Nuts

Installing the Motor Mount Adjuster

1. Place motor mount adjuster (D) between the head plate (A) and back plate (B) on the discharge tube.
2. Insert pivot rod (C) through the tube plates and motor mount adjuster (D). Secure in place with two (2) 3/16" x 2" cotter pins (E). (See Figure 4D.)

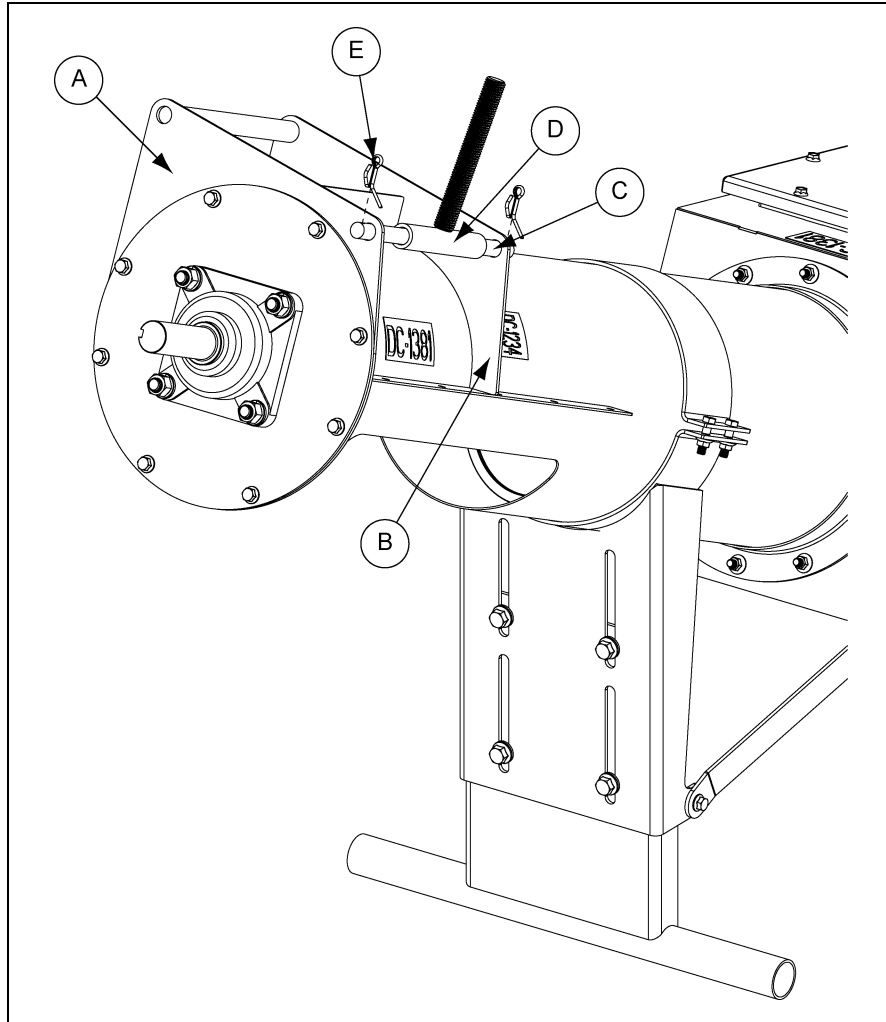


Figure 4D

Ref #	Part #	Description
A	GC10539	Head Plate 12" Horizontal
B	GC10540	Back Plate 12" Horizontal
C	GK7012	Motor Mount: Adjustment Pivot Rod 8"
D	GK6942	Motor Mount: Adjustment Rod Weld
E	S-6994	Cotter Pin 3/16" x 2" ZN Grade 2

4. Assembly

Installing the Motor Mount Plate

1. Secure one of the motor mount adjustment nuts (C) and one of the motor mount adjustment washers (D) approximately 3/4" of the way down the motor mount adjuster's threaded shaft.
2. Once the nut (C) and washer (D) are secure, slip the motor mount plate (A) over the adjuster (B) and align the pivot holes (H) with the pivot tube. (See Figure 4E.)

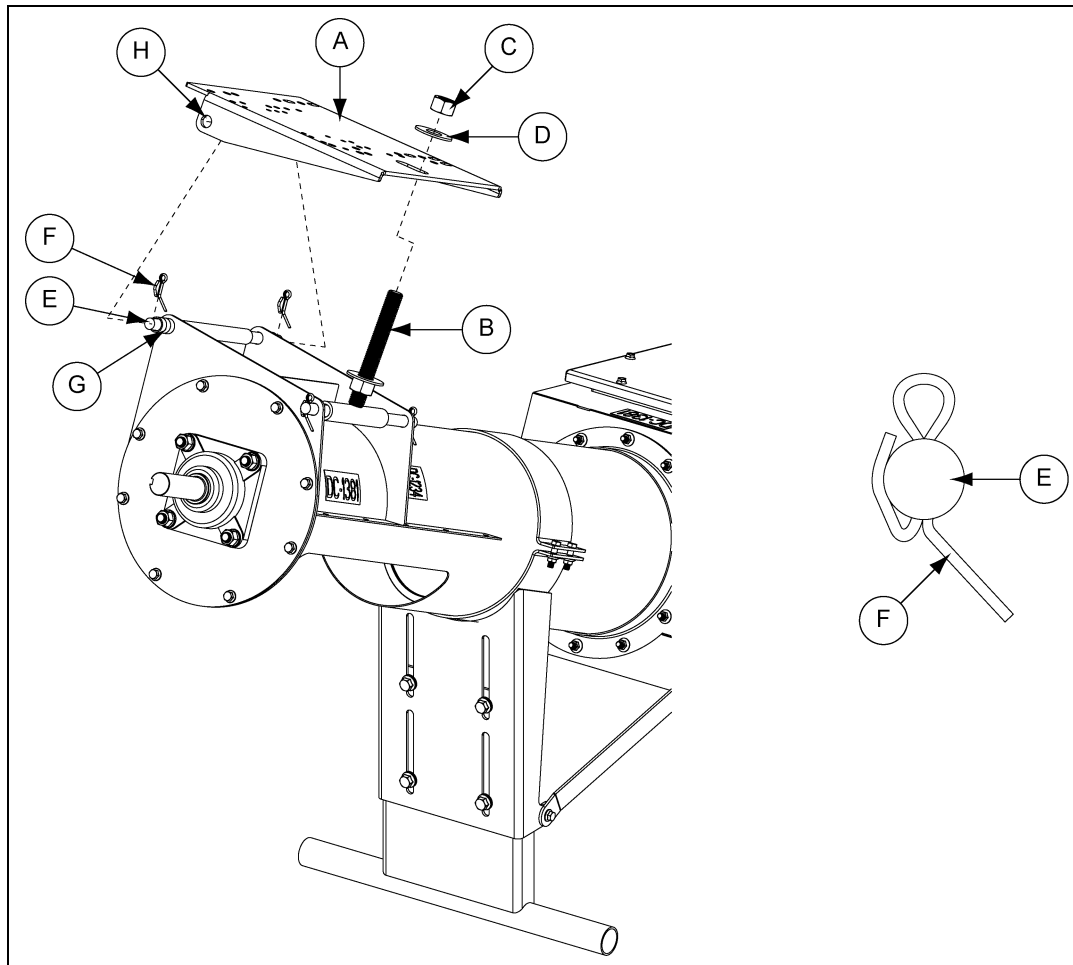


Figure 4E

Ref #	Part #	Description
A	GK6986-Y	Motor Plate: 8"-12"
B	GK6942	Motor Mount: Adjustment Rod Weld 8"
C	S-240	Hex Nut 1-8 ZN Grade 5
D	S-7835	Flat Washer 1" I.D. USS Washer, Low Carbon
E	GK7012	Motor Mount: Adjustment Pivot Rod 8"
F	S-6994	Cotter Pin 3/16" x 2" ZN Grade 2
G	GK7014	Drive Unit: Pivot Spacer Tube
H		Pivot Hole

Installing the Motor Mount Plate (Continued)

3. Slide the motor mount pivot rod (G) through the pivot tube on the discharge tube.
4. When the pivot rod begins to extend through the pivot tube, install the spacers (G) BETWEEN the back plate and the inner face of the motor mount plate. *(See Figure 4F.)*

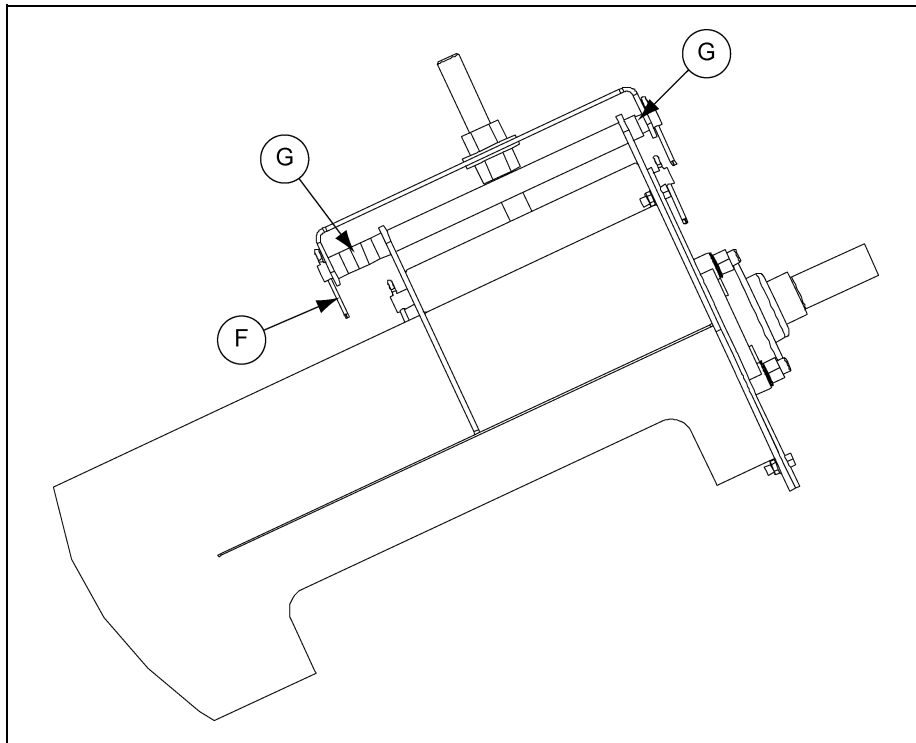


Figure 4F

Ref #	Part #	Description
F	S-6994	Cotter Pin 3/16" x 2" ZN Grade 2
G	GK7014	Drive Unit: Pivot Spacer Tube

5. Secure pivot rod (G) with two (2) 3/16" x 2" cotter pins (F).

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

Installing the Belt Guard Brackets

1. Align the holes on the bearing plate (B) with the slots on the belt guard mounting brackets (A).
2. Secure the brackets (A) with proper bolts (C) and flange nuts (D). (See Figure 4G.)

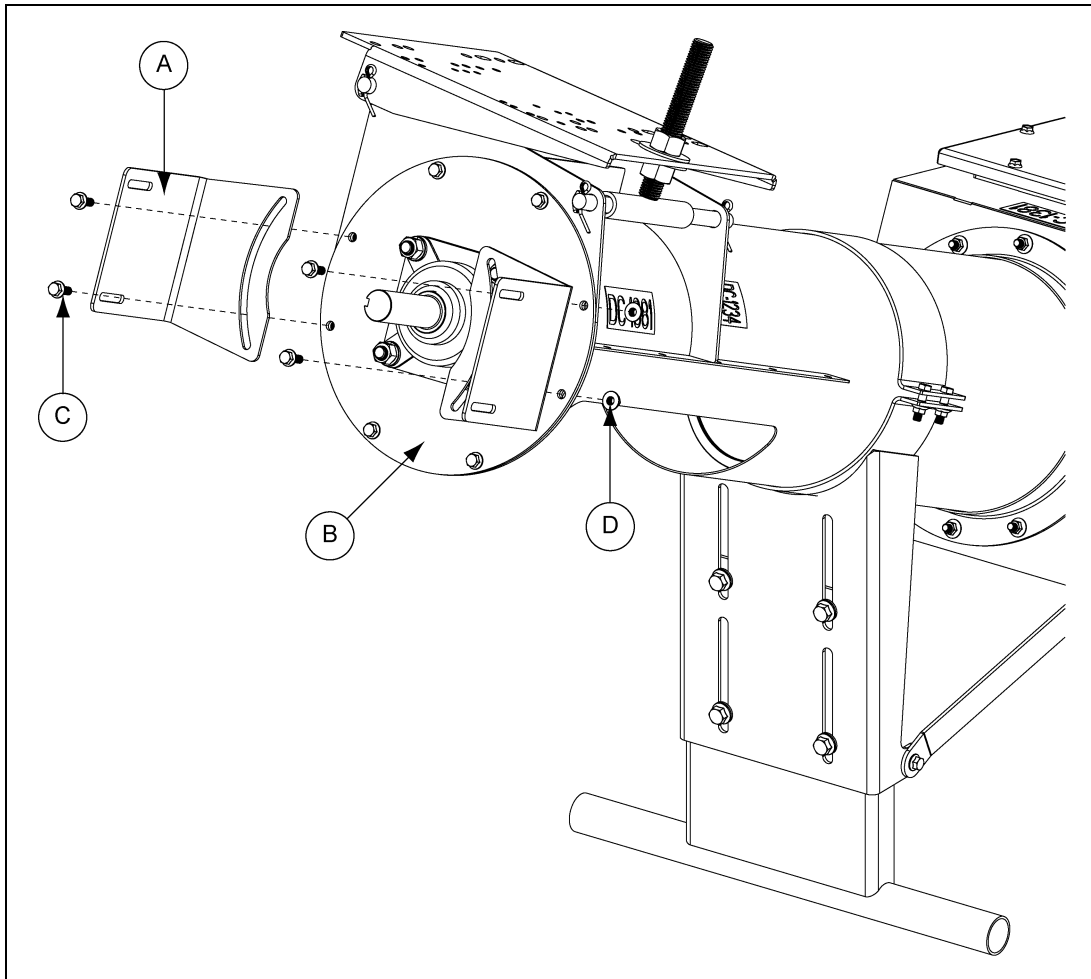


Figure 4G

Ref #	Part #	Description
A	GK7065	Belt Guard: 12" x 19" Mount Bracket
B	GK7064-BS	Bearing Plate: 12" Horizontal - Bin Silver
C	S-9065	3/8"-16 x 1" Flange Bolt
D	S-968	3/8"-16 Flange Nut

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.

Installing the Pulley

1. Place and position the key (D) into the keyway located on the drive shaft (B).
2. Place the pulley (C) onto the drive shaft (B) with the set screw side of the pulley (C) facing away from the bearing plate. (See Figure 4H.) Position the pulley so that it is as close to the lock collar (F) as possible, but without touching it.
3. Once the pulley is appropriately positioned, tighten the set screw (G) with a hex head wrench to secure it to the drive shaft (B). (See Figure 4H.)

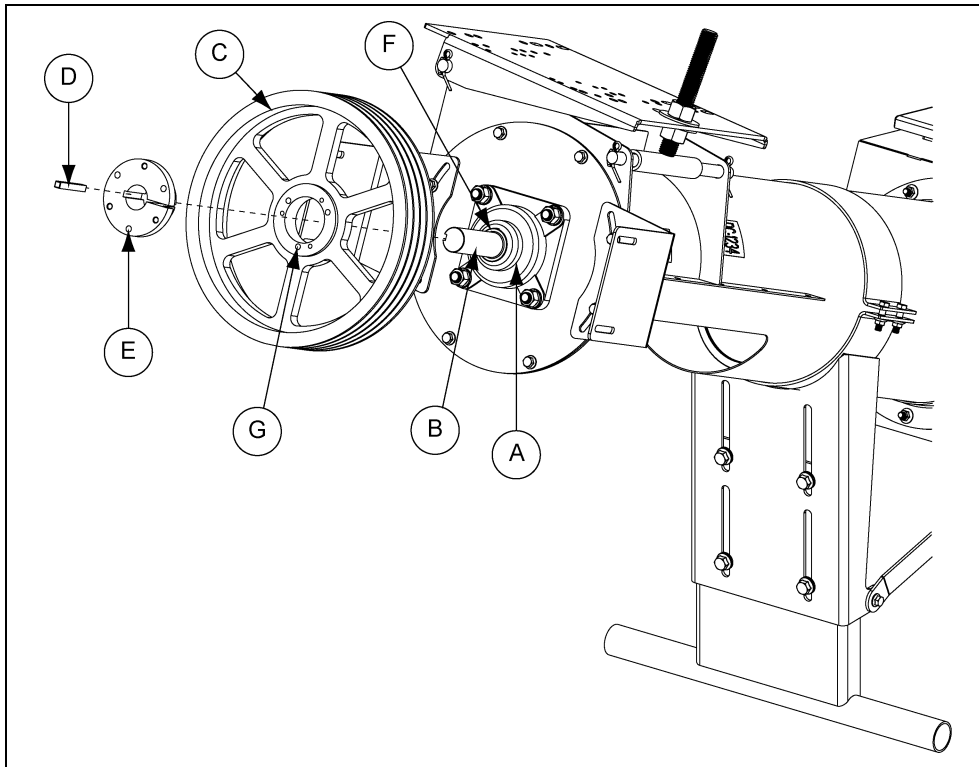


Figure 4H

Ref #	Part #	Description
A	GK2004	Bearing
B	GK2006	Shaft
C	GK3541	Sheave
D	S-9181	Square Key 3/8" x 3"
E	D03-0264	Bushing, SF 1-1/2"
F		Lock Collar
G		Set Screw

Tightening the Lock Collar

1. Use a punch and hammer to 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 set screw.

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

4. Assembly

Installing the Motor (Not Provided)

1. Attach the motor to the motor mount plate (A) using appropriate bolts, lock washers and hex nuts. *(See Motor Bolt Chart below.)*
2. Install pulley (C) onto motor shaft making sure that it is aligned with the flight pulley (C). It may be necessary to move spacers (B) to gain shaft alignment. *(See Figure 4I.)*

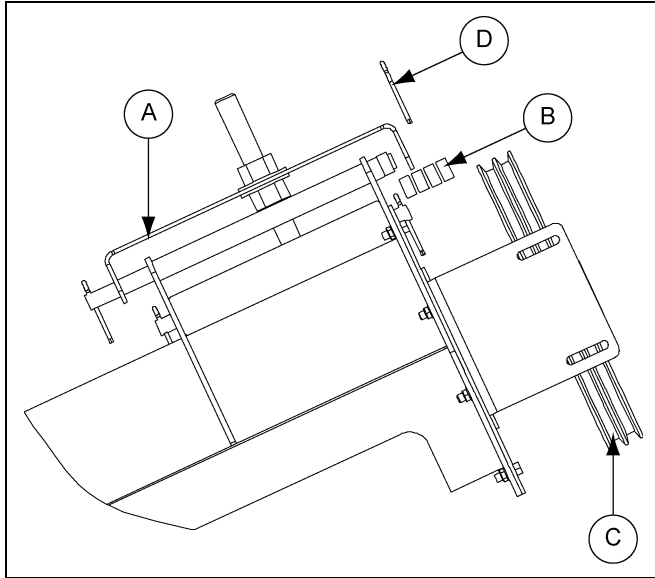


Figure 4I

Ref #	Part #	Description
A	GK6986-Y	Motor Plate: 8"-12"
B	GK7014	Drive Unit: Pivot Spacer Tube
C	GK3541	Sheave
D	S-6994	Cotter Pin 3/16" x 2" ZN Grade 2

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

Installing the Belts

1. Place the belts on the pulleys.
2. Screw the lower motor mount adjustment nut upward, thereby raising the motor mount plate and putting tension on the belts.
3. Once the desired tension is reached, tighten the upper motor mount adjustment nut down onto the motor mount plate to lock it into place. *(See Figure 4J on Page 21.)*

Installing the Belt Guard

1. With the belts properly tensioned, remove the bottom belt guard cover (D) and slip belt guard down over motor shaft.
2. Bolt the belt guard (D) to the belt guard mounting brackets (C). Note that the brackets should still be loose at this time.
3. 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 (C) to the bearing plate. (See Figure 4J.)
4. Once the brackets are tightened, slide the bottom cover (D) back into place and secure with supplied bolt.

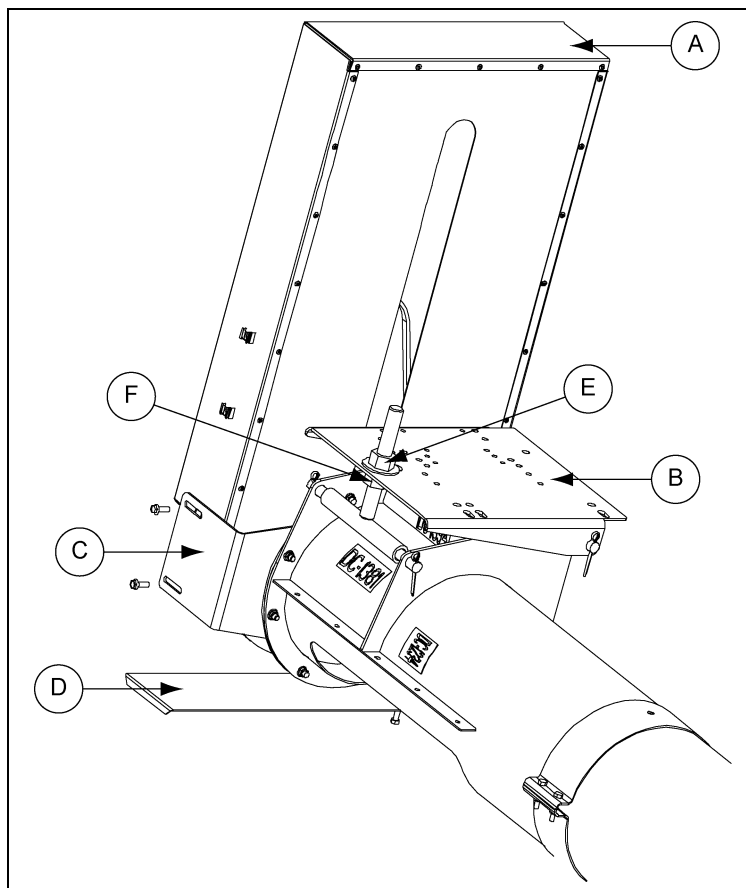


Figure 4J

Ref #	Part #	Description
A	GK7066	Belt Guard: 19" Top Assembly
B	GK6986-Y	Motor Plate: 8"-12"
C	GK7065	Belt Guard: 12" x 19" Mount Bracket
D	GK7067	Belt Guard: 19" Bottom Assembly
E		Upper Motor Mount Adjustment Nut
F		Lower Motor Mount Adjustment Nut

Electric Drive Motors



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 is 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° Horsepower	Grain Bin Diameter									
	15'	18'	21'	24'	27'	30'	33'	36'	42'	48'
10"-12"	-	-	-	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 augering relatively 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 helps to protect the operator against accidental re-start 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.



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

Perform Pre-Start Checks



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 shut down 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.



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



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.

6. Start-Up

Start the Auger

1. Start the auger.



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 to run it at full capacity.



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



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



Be aware of any unusual vibration or noises during the initial start-up and “break-in” period. If anything unusual is detected, immediately shut down the auger and disconnect and lock out 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. For example, 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.



Be alert for any unusual vibrations, noises and the loosening of any fasteners. If anything unusual is detected, immediately shut down the auger, disconnect and lock out 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 re-started under full load, it may result in damage to the auger. Using a larger diameter auger and reducing its load level is generally preferable to subjecting a smaller diameter auger to big loads. If an auger is kept from absolute filling, it will make start-up easier and it will convey more efficiently.

8. Shut Down

Normal Shut Down

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

Emergency Shut Down

1. Know how to shut down the auger in case of an emergency.
2. Do not re-start the auger when it is under load.
3. Close the bin well control gates.
4. Re-connect and unlock the power source.
5. Clear the auger gradually until there is no grain and there are no obstructions.



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. Shut down the auger.
4. Make sure all fasteners are tight.

Maintain the Auger

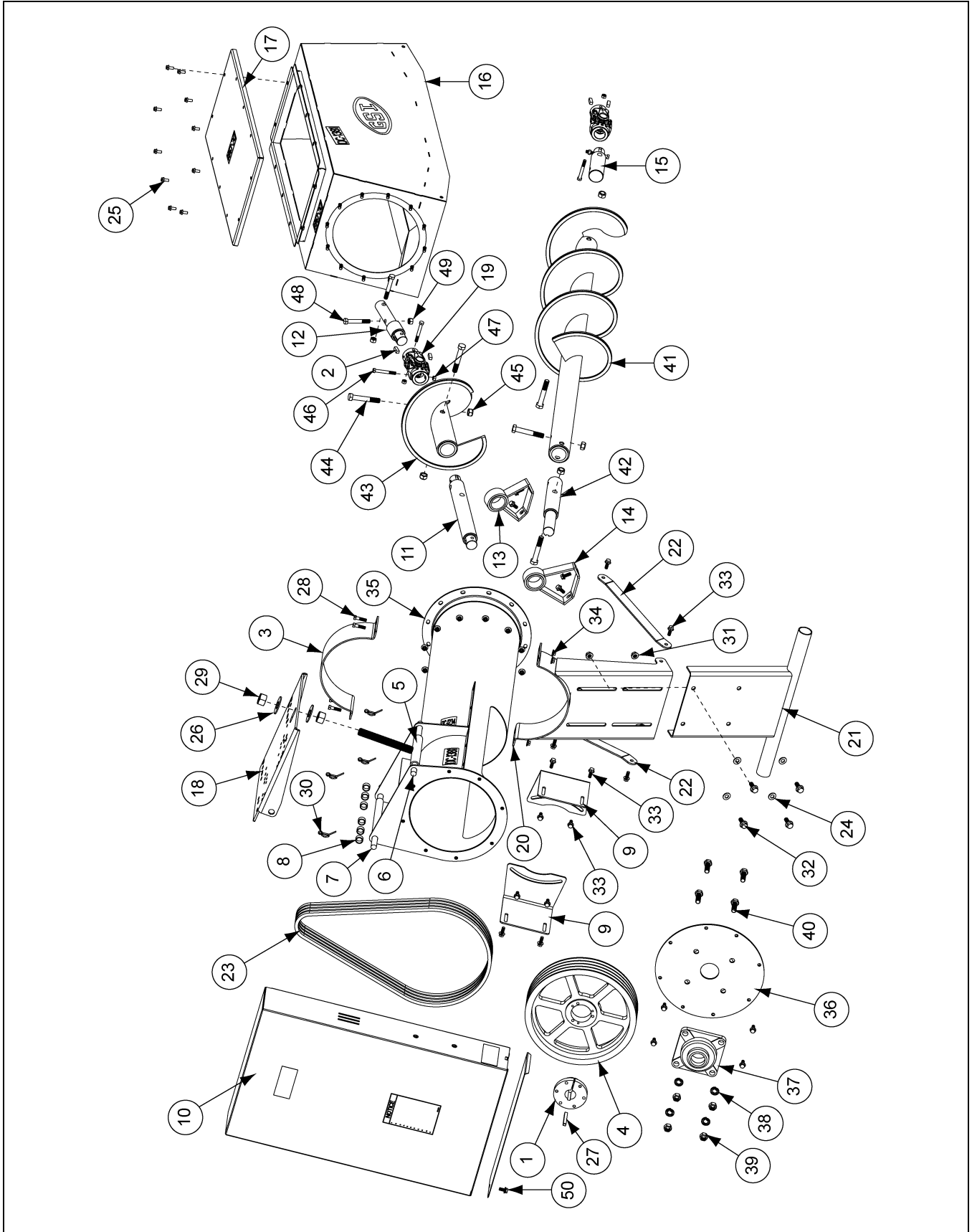


ALWAYS shut down and disconnect the power supply before adjusting, servicing or cleaning the equipment.

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 condition.
10. Grease bearing at least two (2) times each season.

10. Parts List

10" to 12" 25° Bin Unloader Parts (G1012254B)



10" to 12" 25° Bin Unloader (G1012254B) Parts List

Ref #	Part #	Description
1	D03-0264	Bushing, SF 1-1/2"
2	GC03540	Key, 3/8" x 3/8" x 1"
3	GC08690-Y	Band: Half 12" x 4" 7 Gauge
4	GK3541	Sheave, 4 Grade, A15.0-B15.4 - SF, 15-3/4" O.D.
5	GK6942	Motor Mount: Adjustment Rod Weld 8"
6	GK7012	Motor Mount: Adjustment Pivot Rod 8"
7	GK7013	Motor Mount: Plate Pivot Rod 8"
8	GK7014	Drive Unit: Pivot Spacer Tube
9	GK7065	Belt Guard: 12" x 19" Mounting Bracket
10	GK7068	Belt Guard: 19" Galvanized Assembly
11	GK80279	Drive Unit: Comm 10"-12" 25° Lower Flat Shaft
12	GK80284	Drive Unit: Comm 10"-12" 25° Lower Shaft
13	GK80289	Drive Unit: Comm 10"-12" 25° Lower Bearing Stand Assembly
14	GK80290	Drive Unit: Comm 10"-12" 25° Upper Bearing Stand Assembly
15	GK80291	Drive Unit: Comm 10"-12" 25° Upper Flat Shaft
16	GK80292	Drive Unit: Comm 10"-12" 25° Box Assembly
17	GK80308	Drive Unit: Comm 10"-12" 25° Box Cover Assembly
18	GK6986-Y	Motor Plate: 8"-12"
19	GK80285	U-Joint, 12E 1-1/2" Bore 5-3/4" Long
20	GK80296-Y	Drive Unit: Comm 10"-12" 25° Stand Upper Weld
21	GK80297-Y	Drive Unit: Comm 10"-12" 25° Stand Lower Weld
22	GK80298-Y	Drive Unit: Comm 10"-12" 25° Stand Strap
23	MHC00126	V-Belt, BX64
24	S-2120	Flat Washer 1/2" SAE ZN
25	S-6606	Flange Bolt 5/16"-18 x 3/4" ZN Clear Grade 5
26	S-7835	Flat Washer 1" I.D. USS Washer, Low Carbon
27	S-9181	Square Key 3/8" x 3"
28	S-2086	Bolt, HHCS 3/8"-16 x 1-1/2" ZN Grade 8
29	S-240	Hex Nut 1-8 ZN Grade 5
30	S-6994	Cotter Pin 3/16" x 2" ZN Grade 2
31	S-8506	Flange Nut 1/2"-13 ZN
32	S-9062	Flange Bolt 1/2"-13 x 1-1/4" ZN Grade 5
33	S-9065	Flange Bolt 3/8"-16 x 1" ZN Grade 5
34	S-968	Flange Nut 3/8"-16 ZN Grade 5 Wide Flange
35	GK6999-18	Tube: 12" Horizontal Assembly + 1-1/2'
36	GK7064-BS	Bearing Plate: 12" Horizontal - Bin Silver
37	GK2004	Bearing, Light Duty 2.00" Bore with Locking Collar 4 Hole Flange
38	S-3208	Split Lock Washer 5/8" Med ZN
39	S-4110	Hex Nut 5/8"-11 YDP Grade 5
40	S-8399	Bolt, HHTB 5/8"-11 x 2 ZN Grade 5
41	GK80309	Flight, 25° Drive Unit, Weld 11" x 1/4" x 55-3/4"
42	GK2006	Shaft: Drive 2" O.D. x 12" 25°
43	GK80310	Drive Unit: Comm 10"-12" 25° Lower Flat Weld
44	S-7893	Bolt, HHCS 5/8"-11 x 4" YDP Grade 8
45	S-8606	Stover Nut 5/8"-11 ZN Grade C
46	S-8677	Bolt, HHCS 3/8"-16 x 3" YDP Grade 8
47	S-8251	Stover Nut 3/8"-16 ZN Grade C
48	S-8314	Bolt, HHCS 1/2"-13 x 3-1/2" YDP Grade 8
49	S-8315	Lock Nut 1/2"-13 ZN Grade C Prevailing Torque
50	S-9067	Flange Bolt 3/8"-16 x 3/4" ZN Grade 5

11. Troubleshooting

Problem	Possible Cause	Solution
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.
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.
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 augered, 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.

GSI Group, LLC 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	* 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%
	All Fiberglass Housings	Lifetime	
	All Fiberglass Propellers	Lifetime	
AP and Cumberland	Flex-Flo/Pan Feeding System Motors	2 Years	
Cumberland Feeding/Watering Systems	Feeder System Pan Assemblies	5 Years **	** Warranty prorated from list price: 0 to 3 years - no cost to end-user 3 to 5 years - end-user pays 50%
	Feed Tubes (1-3/4" and 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 and Tower Dryers	2 Years	† Motors, burner components and moving parts not included. Portable dryer screens included. Tower dryer screens not included.
	Portable and Tower Dryer Frames and Internal Infrastructure †	5 Years	

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 (12th) month from the date of purchase and continuing until the sixtieth (60th) 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.



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