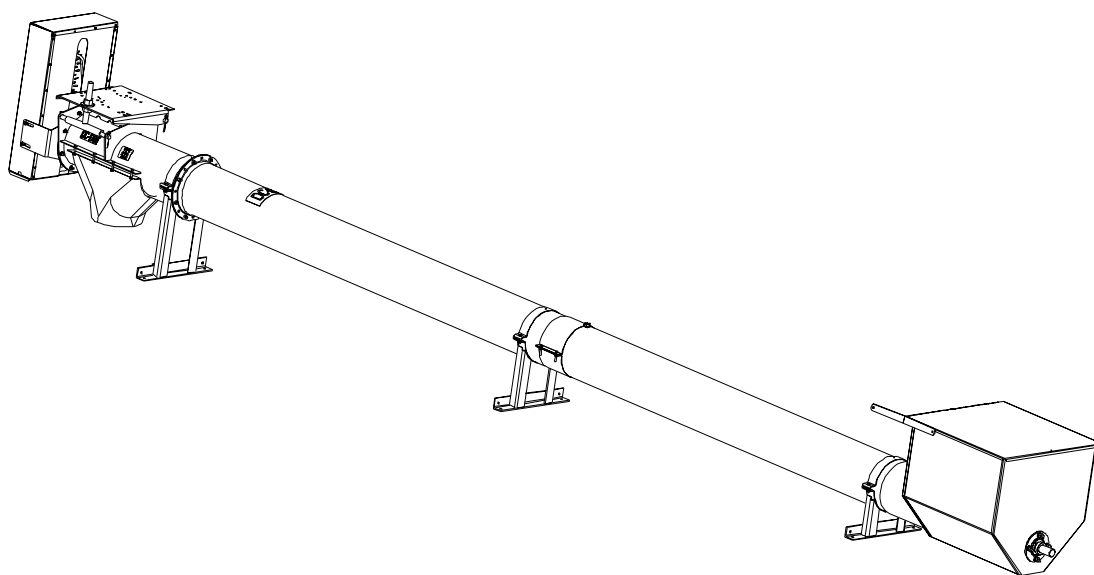


PNEG-1434

6", 8", & 10" Roof Augers

6", 8", & 10" Roof Augers

Assembly & Operation Manual



Revised: 2-2-06



PNEG-1434

**PNEG-1434
2-2-06**

This manual is valid for the roof auger catalog numbers in the table below.

Auger Length	6" Roof Auger	8" Roof Auger	10" Roof Auger
11'	GRA6111A	GRA8111A	GRA10111A
16'	GRA6161A	GRA8161A	GRA10161A
21'	GRS6211A	GRA8211A	GRA10211A

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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.

4. Specifications

6" Roof Auger

- 16 Gauge Housing
- 1.25" Flight Shaft
- 10 Gauge Flight
- 12" OD, 2 Belt, 1" Bore Pulley
- Available Lengths: 11', 16', 21'
- Available Extensions: 5', 10', 15', 20'
- Horsepower Requirements: 11' (1-1.5hp), 16'(1-1.5hp), 21'(1.5-2hp)
- Hopper Tail Piece w/Lid, 3 Mounting Brackets, and 90° Spout Included.

8" Roof Auger

- 14 Gauge Housing
- 1.90" Flight Shaft
- .188" Flight
- 12" OD, 2 Belt, 1.25" Bore Pulley
- Available Lengths: 11', 16', 21'
- Available Extensions: 5', 10', 15', 20'
- Horsepower Requirements: 11' (1.5-2hp), 16'(1.5-2hp), 21'(2-3hp)
- Hopper Tail Piece w/Lid, 3 Mounting Brackets, and 90° Spout Included.

10" Roof Auger

- 12 Gauge Housing
- 2.375" Flight Shaft
- .188" Flight
- 15" OD, 2 Belt, 1.5" Bore Pulley (3 Belt Pulley for 41' Model)
- Available Lengths: 11', 16' (w/Internal Bearing), 21' (w/Internal Bearing)
- Available Extensions: 5', 10', 15', 20'
- Horsepower Requirements: 11' (2-3hp), 16'(2-3hp), 21'(3-5hp)
- Hopper Tail Piece w/Lid, 3 Mounting Brackets, and 90° Spout Included.

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**

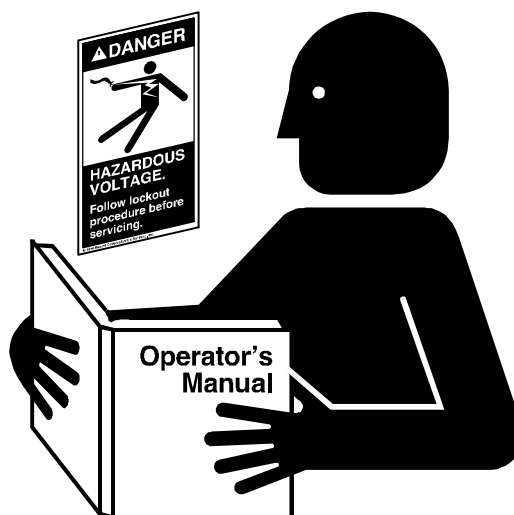
FOLLOW SAFETY INSTRUCTIONS

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.



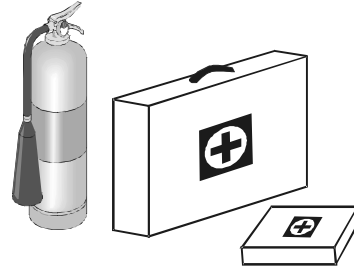
Electric Shock Hazard.

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.

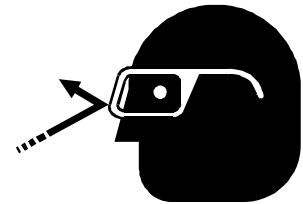
Wear hard hat and steel toe boots to help protect your head and toes from falling debris.

Remove all jewelry.

Tuck in any loose or dangling shoe strings.

Long hair should be tied up and back.

Eye Protection



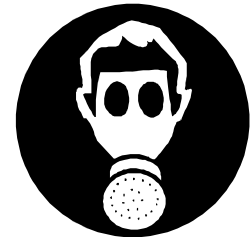
Gloves



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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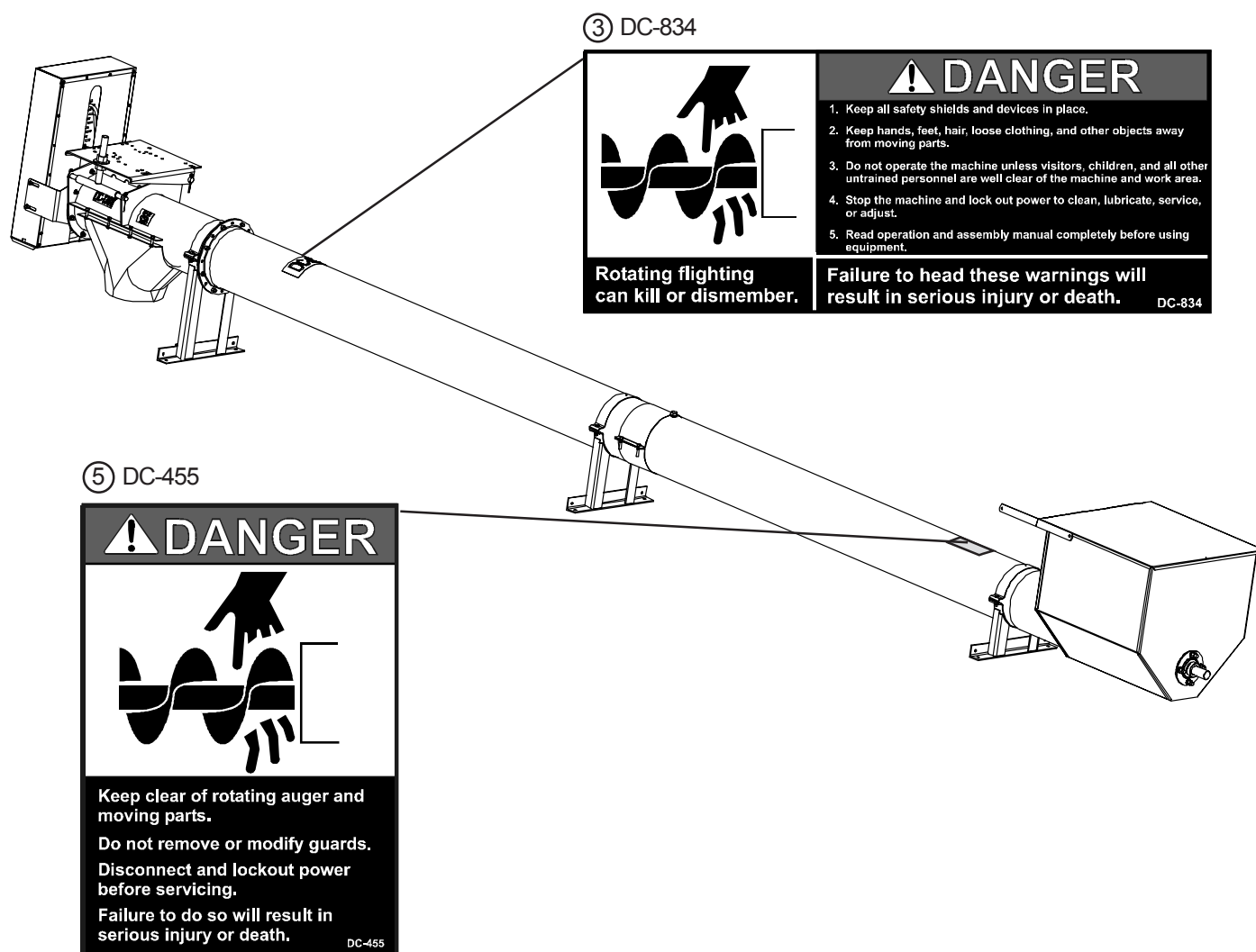
SAFETY DECALS

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"



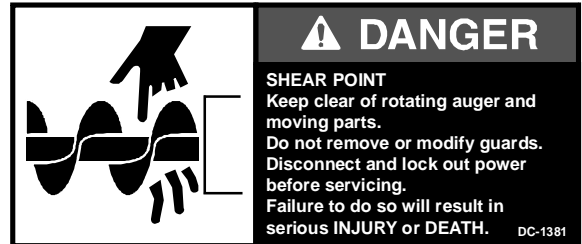
SAFETY DECALS

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

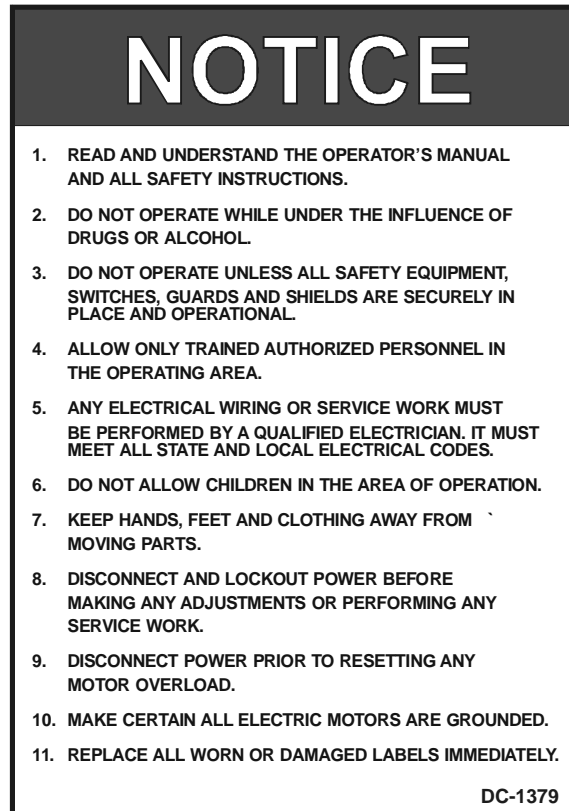


① DC-994

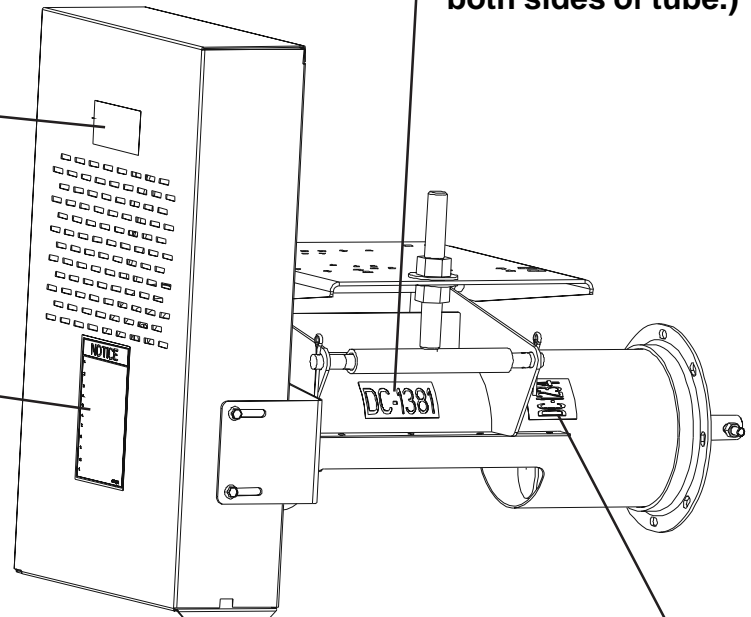


⑤ DC-1381

(Decal located on both sides of tube.)



④ DC-1379



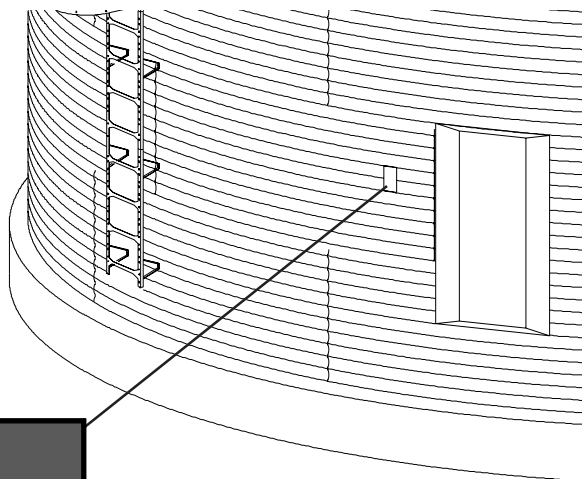
⑥ DC-1234

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.

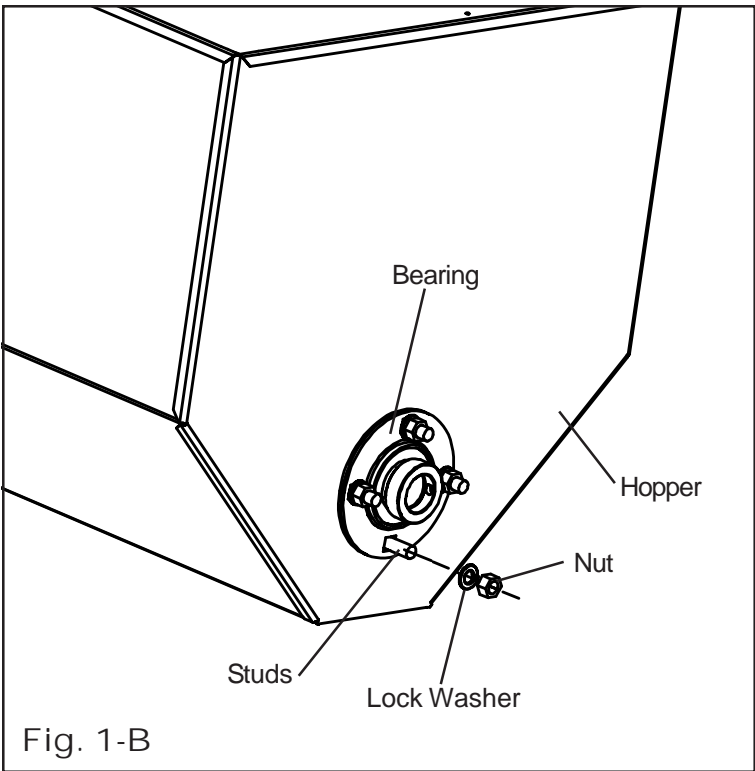
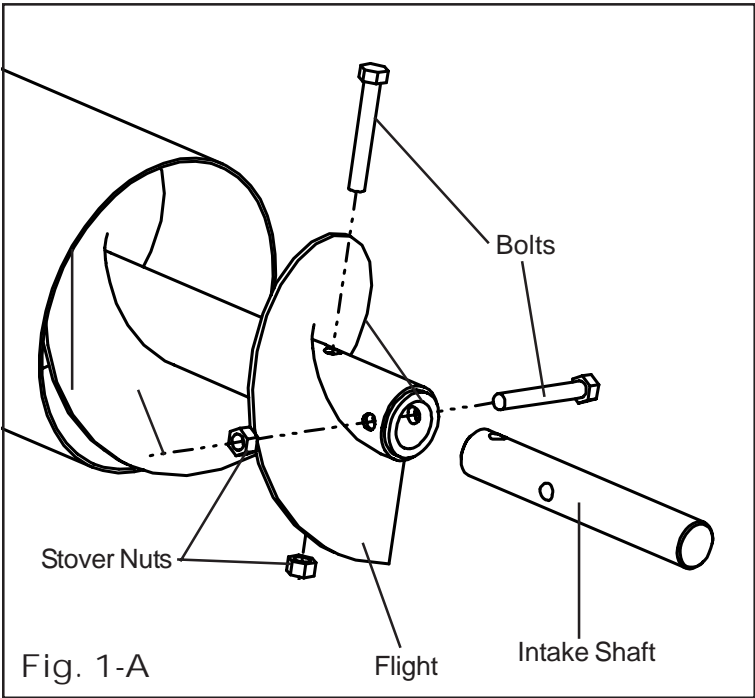
1. Installing Intake Shaft

- A. Begin by assembling the intake shaft to the flight using the required Grade 8 bolts and stover nuts. (See Chart Below) (See Figure 1-A)

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

- B. Next bolt the bearing with flange to the studs on the hopper using the required lock washer and nut. (See Chart Below) (See Figure 1-B)

Hopper Bearing Nut	
6" -	5/16" - 18 Hex Nut
8" -	3/8" - 16 Hex Nut
10" -	1/2" - 13 Hex Nut



2. Cutting Tube to Correct Size

- A. With the bearing attached slide the hopper onto the tube and align the end surface of the flight approximately 1/2" from the surface of the bearing. When the proper distance is achieved, mark the tube for the cut. (See Figure 2-A)
- B. Remove the hopper from the tube. Slide the flight out of the discharge end of the tube. It is not necessary to remove the flight completely, just slide it out far enough to clear the area where you have marked the cut. (See Figure 2-B) **NOTE: For 10" systems, the inspection cover & hanger bearing will need to be removed before flight can be slid out of discharge end.**
- C. Cut the tube where you have marked. Once you have completed your cut, you can slide the flight back into the tube. **NOTE: On 10" systems, secure the hanger bearing to the u-joint with the bolt and lock washer and reinstall the inspection cover.** (See Figure 2-C)

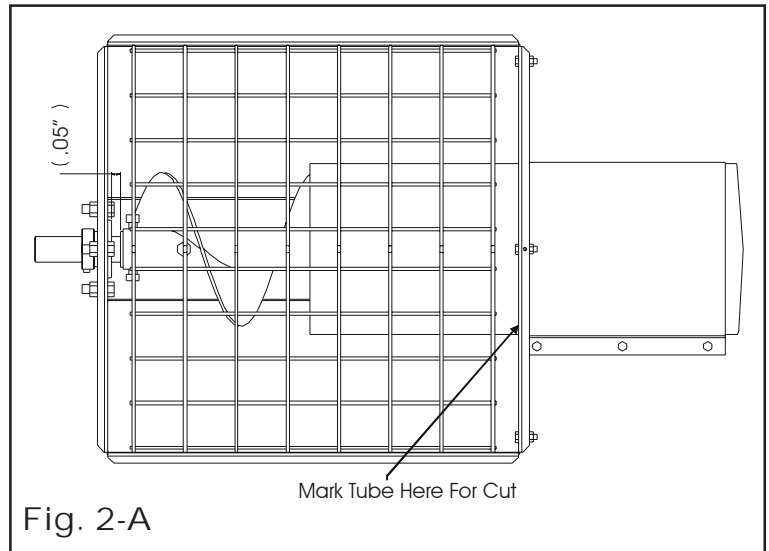


Fig. 2-A

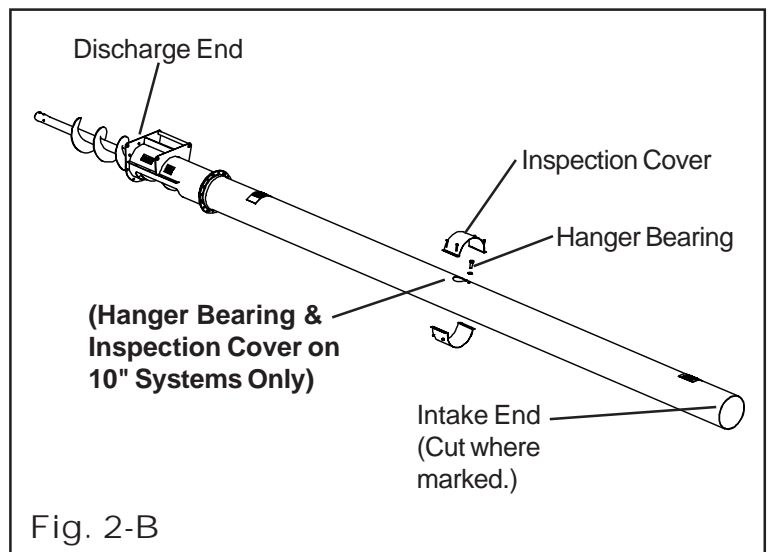


Fig. 2-B

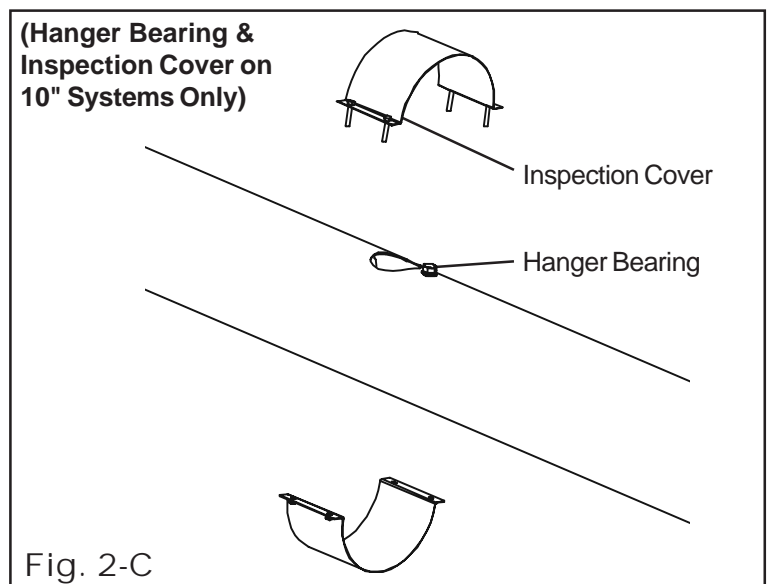


Fig. 2-C

3. Attach Hopper

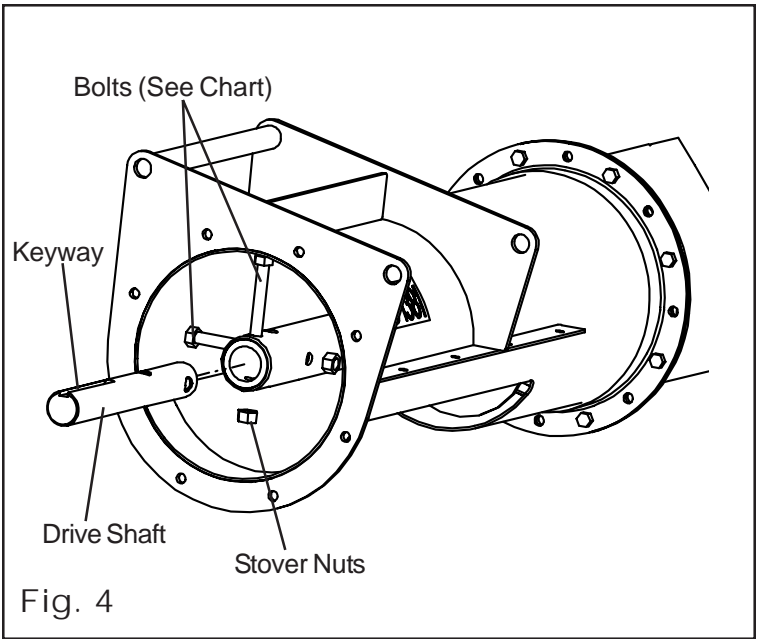
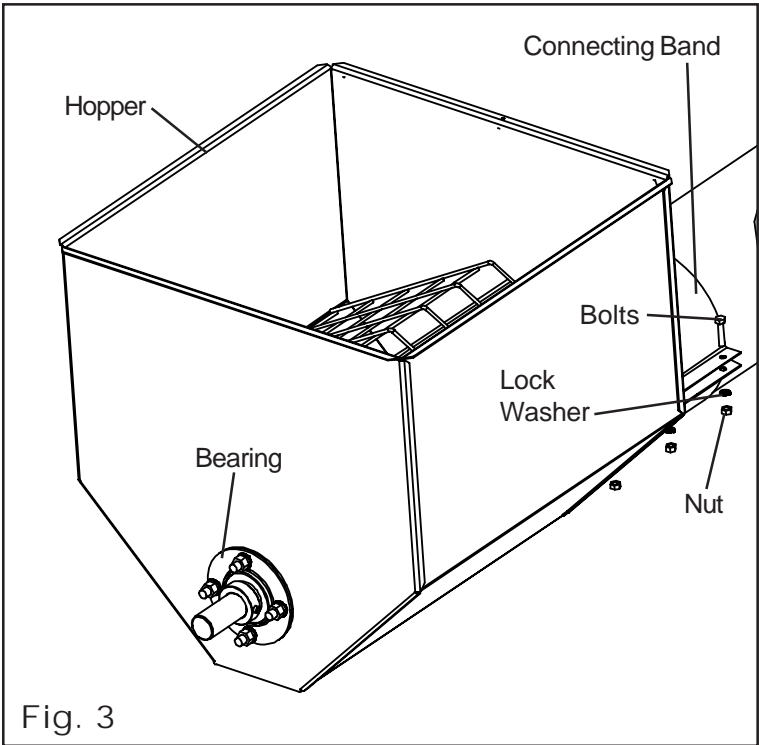
- A. Slide the hopper onto the tube and align the end of the flight approximately 1/2" from the surface of the bearing. With the proper distance set, install the proper bolt, lock washer and nut, and secure the hopper to the tube. (See Chart Below) (See Figure 3)

Hopper Connecting Band Bolt	
6" & 8"	5/16" - 18 x 1" Hex Bolt
10"	5/16" - 18 x 1-1/2" Hex Bolt

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)

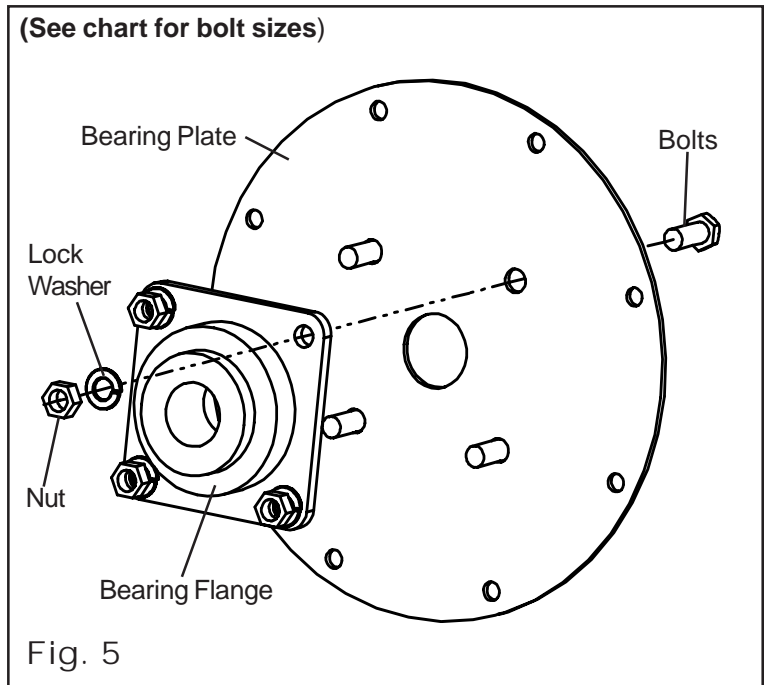
Flight Hardware	
6" -	3/8" x 2" - 16 Grade 8 Hex Bolts
8" -	7/16" x 3" - 14 Grade 8 Hex Bolts
10" -	1/2" x 3-1/2" - 13 Grade 8 Hex Bolts



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)

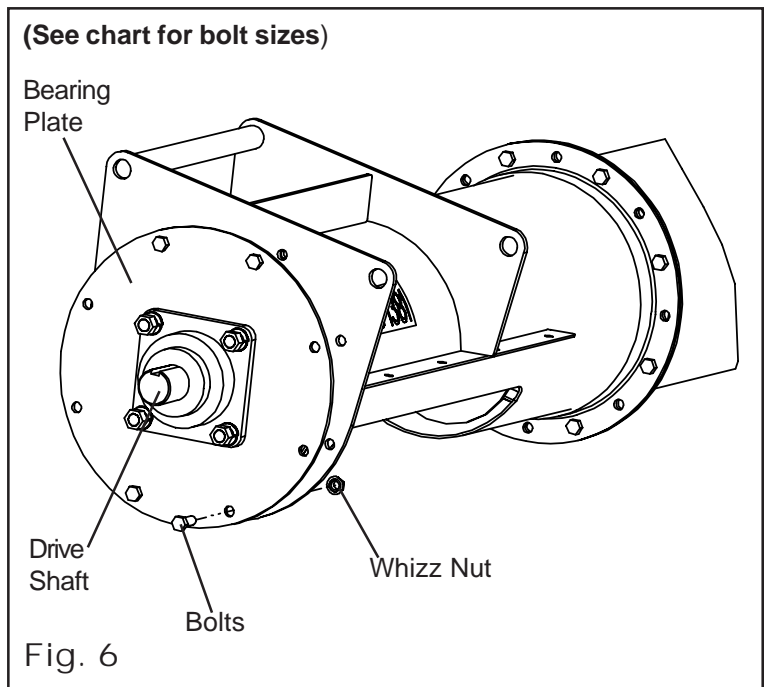
Bearing Bolts	
6"	7/16" x 1-1/2" -14 Hex Bolts
8" & 10"	1/2" x 1-1/2" -13 Hex Bolts
12"	5/8" x 2" - 11 Hex Bolt



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" & 12"	3/8" x 1-1/4" - 16 Hex Bolt
10" & 12"	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" & 12" 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.

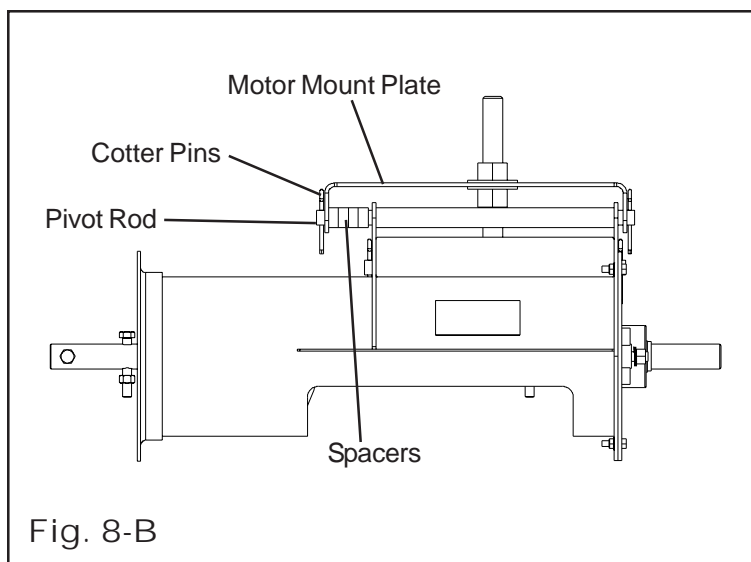
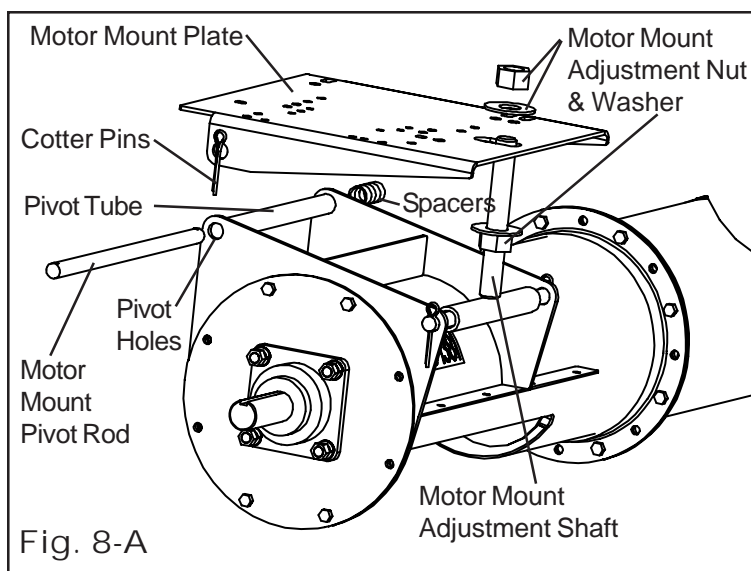
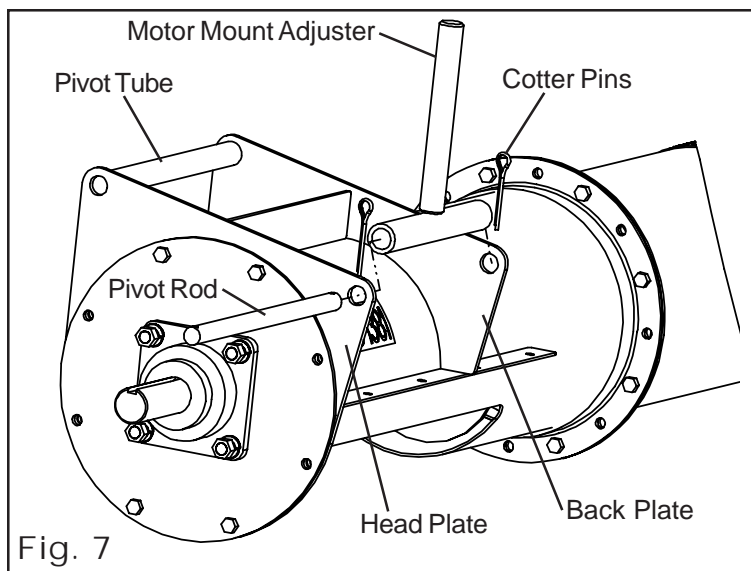
7. Installing the Motor Mount Adjuster

- 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) $\frac{3}{16}$ " 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 $\frac{3}{4}$ 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)

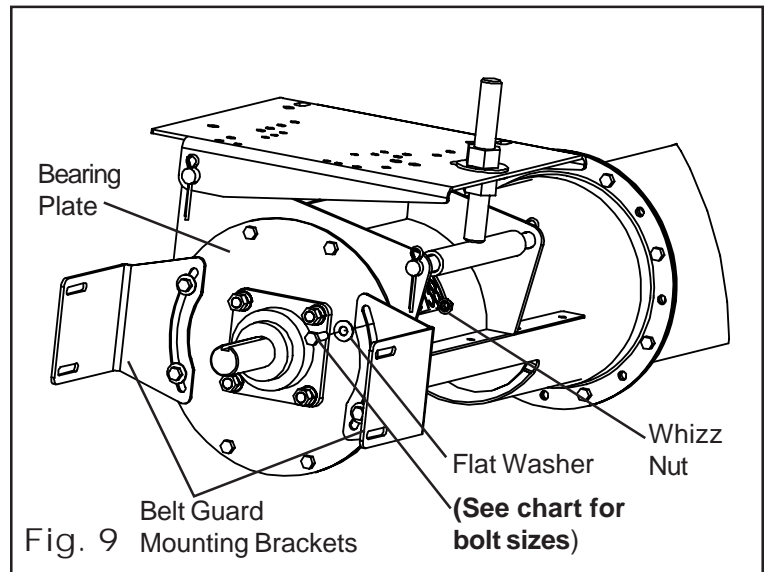
NOTE: The number of spacers will vary between each size of unloader.



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.

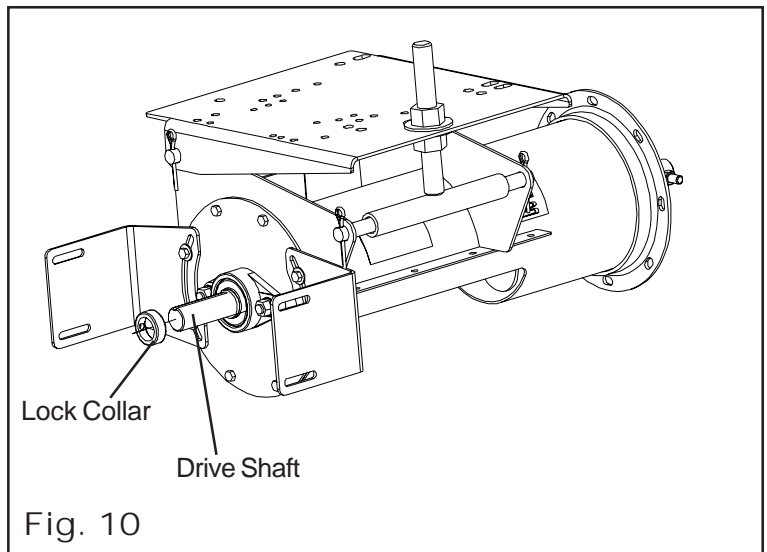


Bearing Plate Bolts

6" & 8"	5/16" x 1" - 18 Hex Bolt
10" & 12"	3/8" x 1-1/4" - 16 Hex Bolt

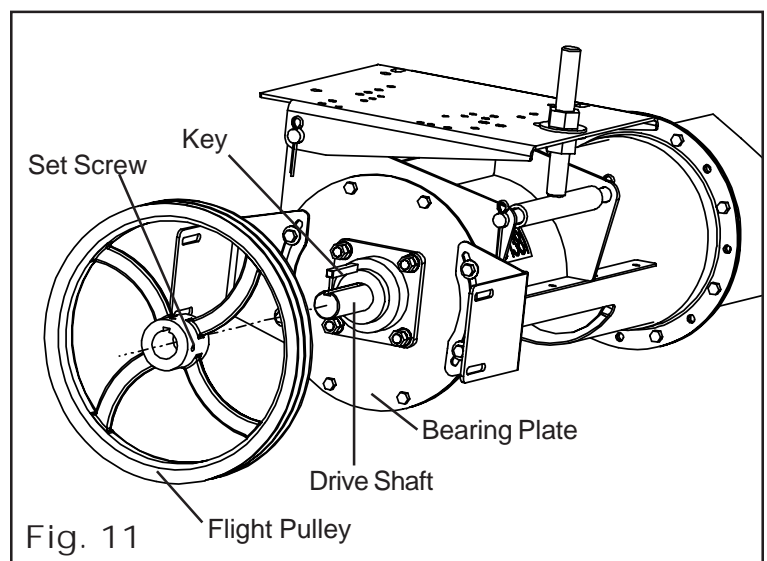
10. Installing the Lock Collar

- 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)



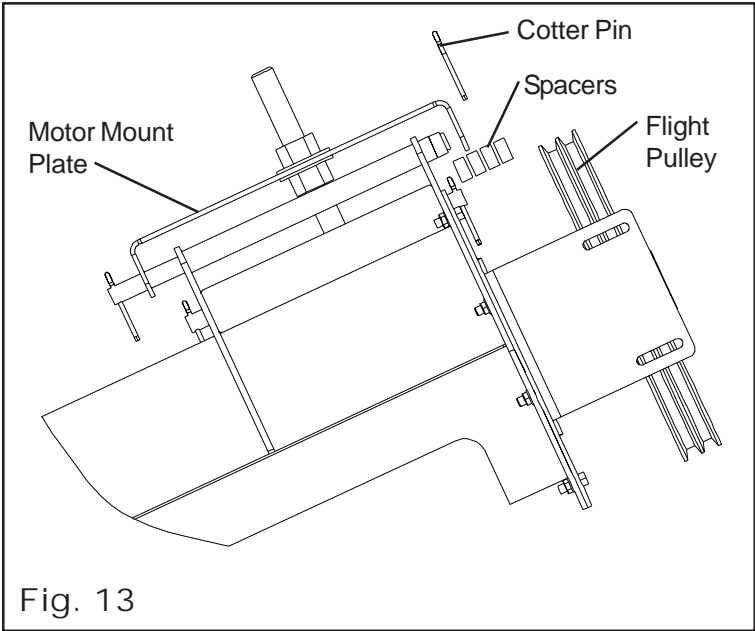
12. Tightening the Lock Collar

- A. Using a punch and hammer, drive the lock collar clockwise (the same direction as shaft direction). 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)



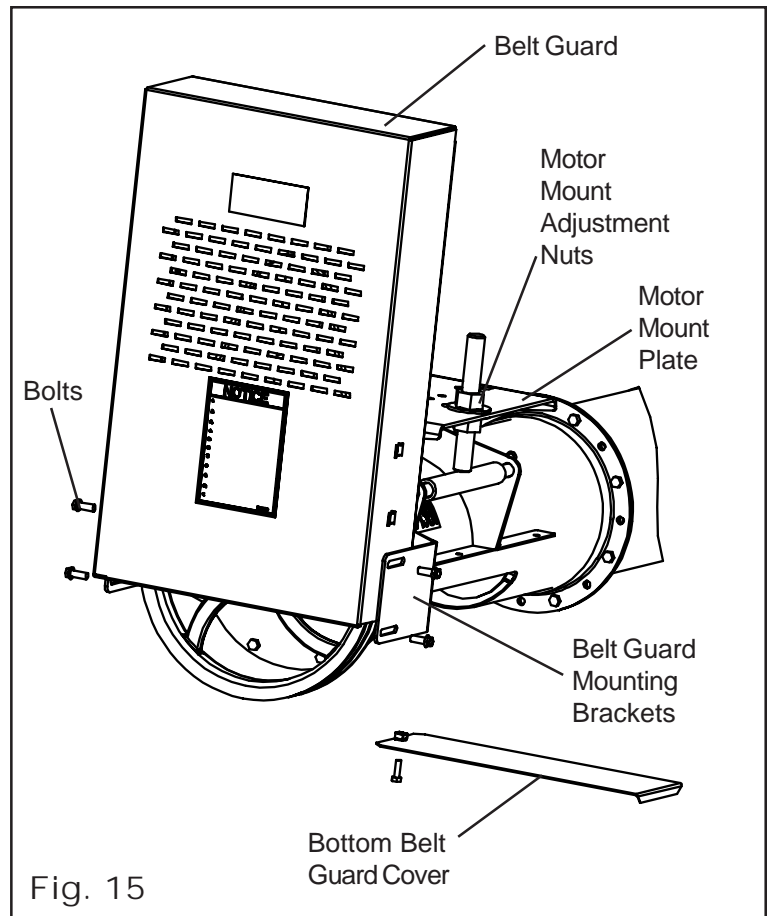
Motor Bolt Chart		
Motor Size	Hex Bolt Size	Qty.
56 143T 145T	5/16" x 1-1/4" - 18	4
182T 184T 213T 215T	3/8" x 1-1/4" - 16	4
254T 256T	1/2" x 1-3/4" - 13	4

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.



16. Installing the Spout

- A. Align spout with holes on motor mount tube.
- B. Attach spout using 5/16" – 18 x 1-1/2" hex-bolt and lock nut. (See Figure 16)

17. Installing the Auger Stands

- A. Attach the tallest stand on the motor mount side of the connecting flange. It is necessary to place the stand on the motor mount side of the flange to help support the weight of the motor. (See Figure 17-A)

CAUTION

Do not place roof auger support stands directly on roof panel surface. Attach stands to angle iron that spans completely across the roof panel ribs.

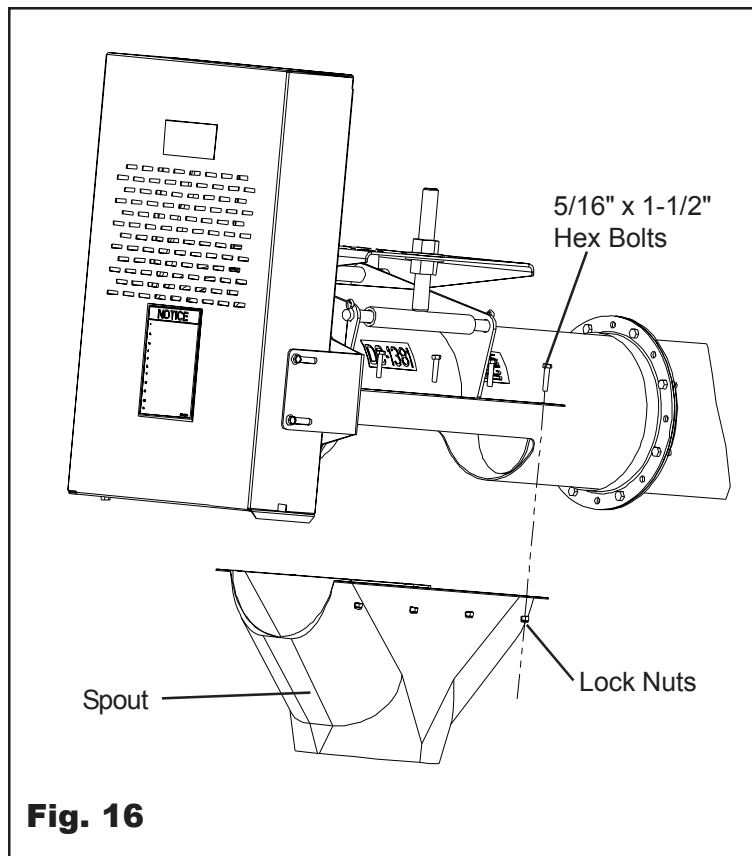


Fig. 16

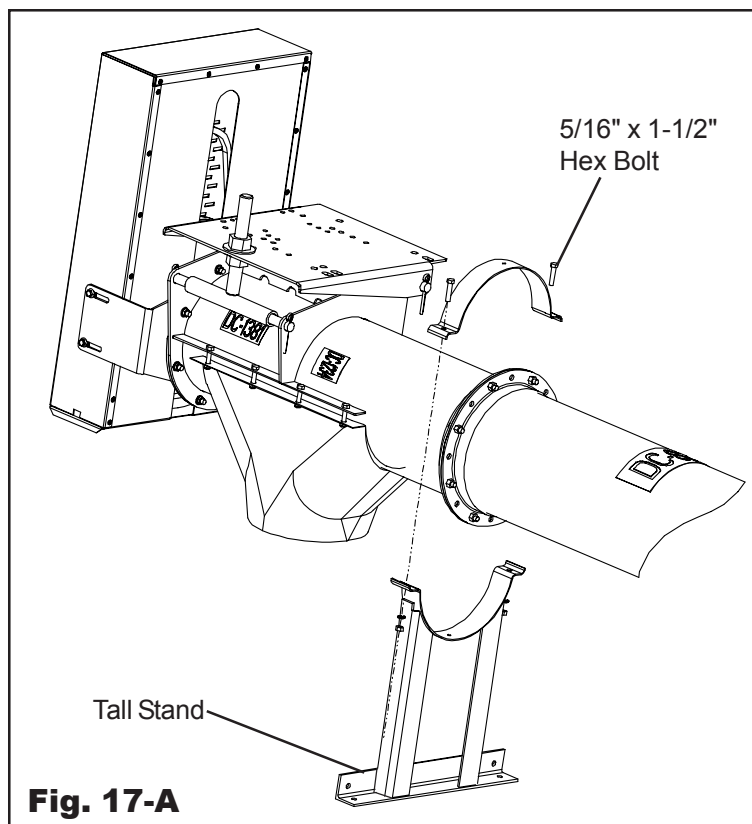
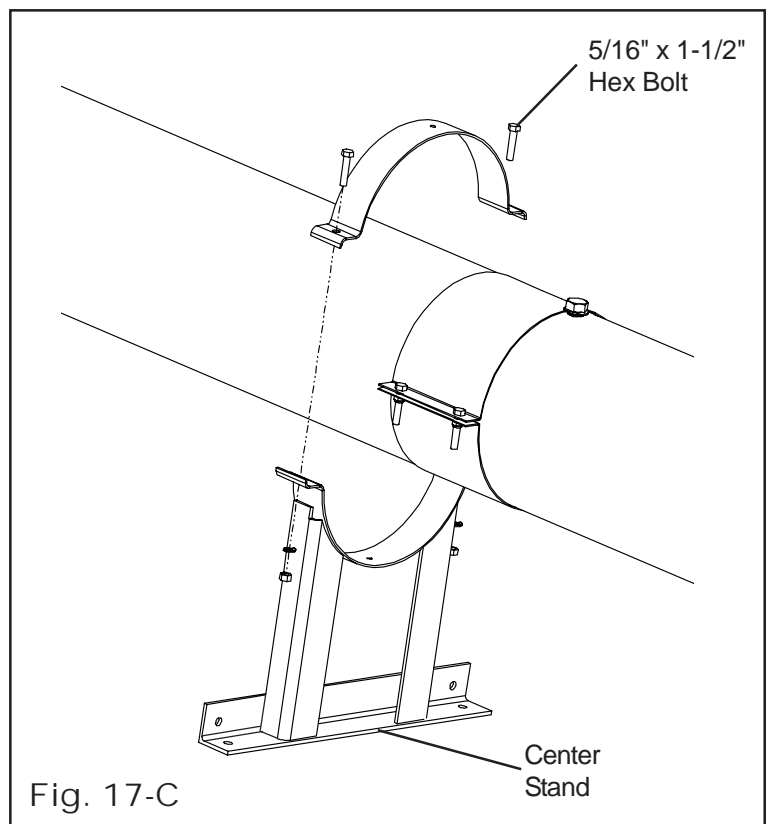
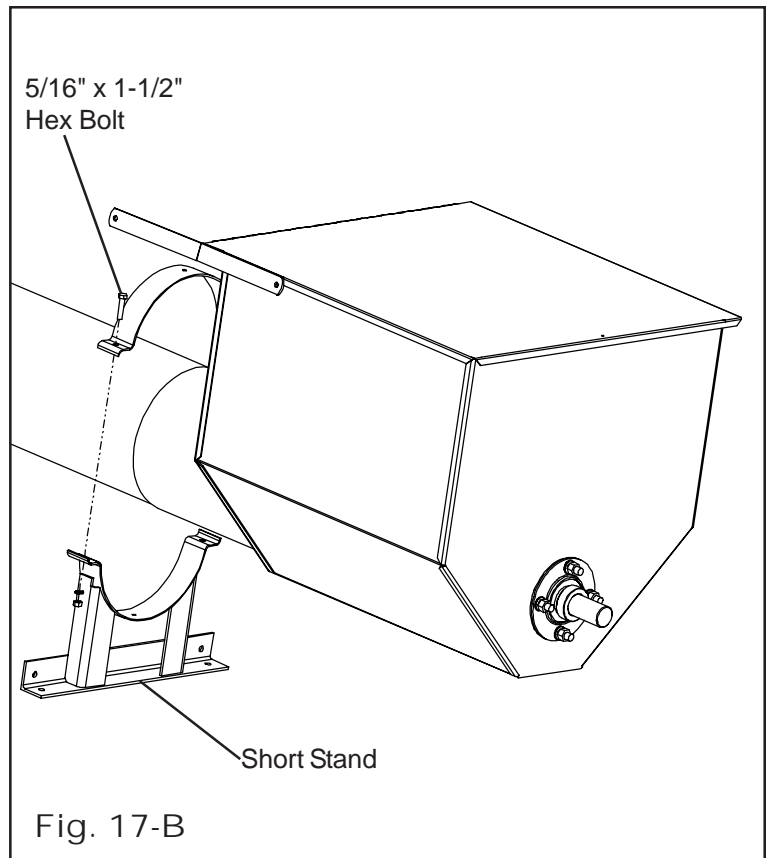


Fig. 17-A

17. Installing the Auger Stands (Cont.)

- B. Install the shortest stand as close to the intake hopper as possible. Positioning the stand as close as possible to the hopper will help to distribute the hoppers weight. (See Figure 17-B)
- C. Install the remaining stand in the center of the tube. Placing the stand in the center of the tube will help minimize vibration in the system when the auger is running. (See Figure 17-C)



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.

The Charts below are a suggested horsepower requirement for standard 6", 8", & 10" Roof Augers.

6" Horsepower Chart			
LENGTH:	11'	16'	21'
MOTOR H.P.	1 - 1.5	1 - 1.5	1.5 - 2

8" Horsepower Chart			
LENGTH:	11'	16'	21'
MOTOR H.P.	1.5 - 2	1.5 - 2	2 - 3

10" Horsepower Chart			
LENGTH:	11'	16'	21'
MOTOR H.P.	2 - 3	2 - 3	3 - 5

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.

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.

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.

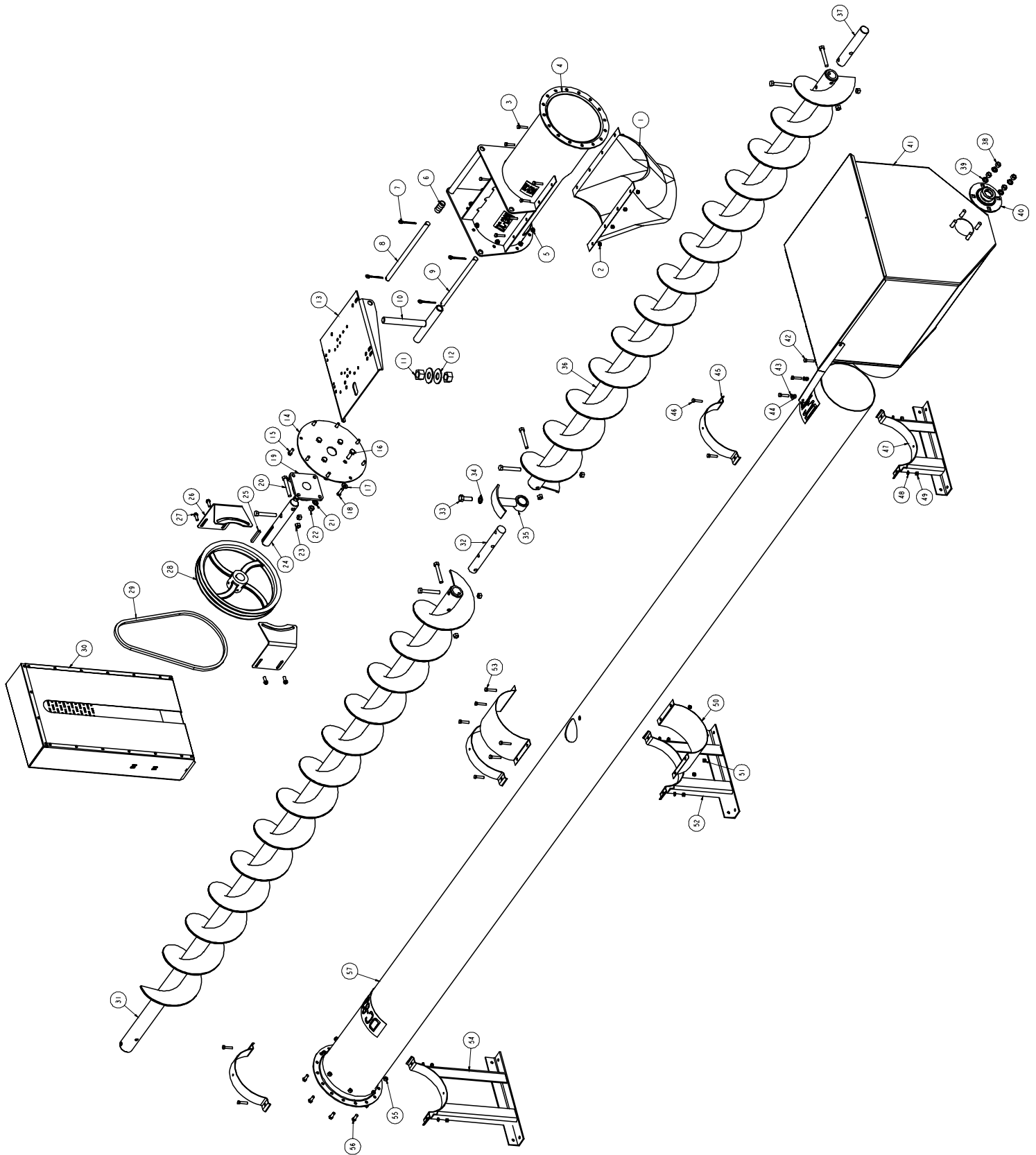
4. Storage Preparation

- 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.

PART LISTS

System Parts				System Parts			
Ref #	Description	Part #	System	Ref #	Description	Part #	System
1	90 Degree Spout	GK1713 6" GK3394 8" GK3397 10"				GK2854 6" x 11" GK2855 6" x 16" GK2856 6" x 21"	
2	Spout Nut			31	Discharge Flight	GK2879 8" x 11" GK2880 8" x 16" GK2881 8" x 21" GK5143 ALL 10"	
	5/16-18 Nylock Nut	S-7382 6", 8" & 10"					
3	Spout Bolt			32	Connecting Shaft	GK1951 10"	
	5/16" - 18 x 1-1/2" Hex Bolt	S-2741 6", 8" & 10"			1-1/2" OD x 11-1/2"		
4	Horizontal Power Head Tube	GK6996 6" GK6997 8" GK6998 10"		33	Hanger Bearing Bolt	S-7886 10"	
					5/8" - 11 x 1-3/4" Grade 8 Bolt		
5	Bearing Plate Nut	S-3611 6" & 8" S-968 10"		34	Hanger Bearing Lock Washer	S-3208 10"	
	5/16" - 18 Whiz Nut				5/8" Lock Washer		
6	Pivot Tube Spacer	GK7014 6", 8" & 10"		35	Hanger Bearing	GC06396 10"	
	3/8" - 16 Whiz Nut						
7	Pivot Tube Cotter Pin	S-6994 6", 8" & 10"		36	Extension Flight	GK3708 10" x 16" GK3706 10" x 21"	
8	Motor Mount Pivot Rod	GK7058 6" GK7013 8" and 10"					
9	Motor Mount Adjustment Rod	GK7012 8" and 10"		37	Intake Shaft	GK1117 6" GK1884 8" GK2907 10"	
10	Motor Mount Aduster	GK7060 6" GK6942 8" and 10"			1" OD x 7" 1-1/4" OD x 9" 1-1/2" OD x 9-1/2"		
11	Motor Mount Adjuster Nut	S-3234 6" S-240 8" and 10"		38	Intake Bearing Nut	S-396 6" S-456 8" S-7510 10"	
	3/4" - 10 Nut				5/16" - 18 Hex Nut		
	1" - 8 Nut				3/8" - 16 Hex Nut		
12	Motor Mount Adjuster Washer	S-866 6" S-7835 8" and 10"			1/2" - 13 Hex Nut		
	3/4" Flat Washer						
	1" Flat Washer			39	Intake Bearing Lock Washer	S-1147 6" S-1054 8" S-236 10"	
13	Motor Mount Plate	GK7052 6" GK6986 8" and 10"			5/16" Lock Washer		
					3/8" Lock Washer		
14	Bearing Plate	GK7061 6" GK6987 8" GK7017 10"			1/2" Lock Washer		
				40	Intake Bearing with Flangette	GK1583 6" GK7221 8" GK5653 10"	
15	Bearing Plate Bolt	S-1196 6" & 8" S-7469 10"			1" Bearing with 3 Hole Flangette		
	5/16" - 18 x 1" Hex Bolt				1-1/4" Bearing with 3 Hole Flangette		
	3/8" - 16 x 1" Hex Bolt				1-1/2" Bearing with 3 Hole Flangette		
16	Discharge Bearing Bolt	S-7837 6" S-8760 8" & 10"		41	Hopper	GK3995 6" GK3996 8" GK4127 10"	
	7/16" - 14 x 1-1/2" Hex Bolt						
	1/2" - 13 x 1-1/2" Hex Bolt			42	Hopper Connecting Band Bolt	S-1146 6" & 8" S-2741 10"	
17	Belt Guard Bracket Washer	S-845 6" & 8" S-248 10"			5/16" - 18 x 1-1/2" Hex Bolt		
	5/16" Flat Washer			43	Hopper Connecting Band Lock Washer	S-1147 6", 8" & 10"	
	3/8" Flat Washer				5/16" Lock Washer		
18	Belt Guard Bracket Bolt	S-1196 6" & 8" S-2071 10"		44	Hopper Connecting Band Nut	S-396 6", 8" & 10"	
	5/16" - 18 x 1" Hex Bolt				5/16" - 18 Hex Nut		
	3/8" - 16 x 1-1/4" Hex Bolt			45	Support Stand Half-Band	GK1053 6" GK1055 8" GK1057 10"	
19	Discharge Bearing	GK1049 6" GK1330 8" GK1343 10"			6" x 2" 12GA Half Band		
	1" ID With 2 Hole Flangette				8" x 2" 12GA Half Band		
	1-1/4" ID With 2 Hole Flangette				10" x 2" 12GA Half Band		
	1-1/2" ID With 2 Hole Flangette			46	Support Stand Bolt	S-2741 6", 8" & 10"	
20	Flight Connecting Bolt	S-7687 6" S-8316 8" S-8314 10"			5/16" - 18 x 1-1/2" Grade 5 Bolt		
	3/8" - 16 x 2" Gr. 8 Hex Bolt			47	Support Stand Short	GK7297 6" GK7300 8" GK7303 10"	
	7/16" - 14 x 3" Gr. 8 Hex Bolt						
	1/2" - 13 x 3-1/2" Gr. 8 Hex Bolt			48	Support Stand Lock Washer	S-1147 6", 8" & 10"	
21	Discharge Bearing Lock Washer	S-7014 6" S-236 8" & 10"			5/16" Lock Washer		
	7/16" Lock Washer			49	Support Stand Nut	S-396 6", 8" & 10"	
	1/2" Lock Washer				5/16" - 18 Hex Nut		
22	Discharge Bearing Nut	S-7332 6" S-7510 8" & 10"		50	Inspection Cover Half Band	GK3670 10"	
	7/16" - 14 Nut						
	1/2" - 13 Nut			51	Inspection Cover Lock Nut	S-7382 10"	
23	Flight Connecting Nut	S-8251 6" S-8317 8" S-8315 10"			5/16" - 18 lock nut		
	3/8" - 16 Stover Nut			52	Support Stand Medium	GK7298 6" GK7301 8" GK7304 10"	
	7/16" - 14 Stover Nut						
	1/2" - 13 Stover Nut			53	Inspection Cover Bolt	S-7149 10"	
24	Drive Shaft	GK2025 6" GK1331 8" GK1289 10"			5/16" - 18 x 1-3/4" Grade 5 Bolt		
	1" OD x 10"			54	Support Stand Tall	GK7299 6" GK7302 8" GK7305 10"	
	1-1/4" OD x 10-1/2"						
	1-1/2" OD x 11-1/2"			55	Power Head Connecting Nut	S-3611 6" & 8" S-456 10"	
25	Drive Shaft Key	S-4513 6" & 8" S-9181 10"			5/16" - 18 Whiz Nut		
	1/4" x 2" Square Key				3/8" - 16 Hex Nut		
	3/8" x 3" Square Key			56	Power Head Connecting Bolt	S-275 6" & 8" S-7520 10"	
26	Belt Guard Mounting Bracket	GK7062 6" GK7006 8" GK7018 10"			5/16" - 18 x 3/4" Bin Bolt		
					3/8" - 16 x 1" Bin Bolt		
27	Belt Guard Bolts	S-9065 6", 8" & 10"					
	3/8" - 16 x 1" Grade 5 Bolt			57	Auger Tube	GK7082 6" x 11" GK7083 6" x 16" GK7084 6" x 21" GK7079 8" x 11" GK7080 8" x 16" GK7081 8" x 21" GK7095 10" x 11" GK7098 10" x 16" GK7099 10" x 21"	
28	Sheave	GK1321 6" GK1335 8" GK1345 10"			6" x 9"		
	12" x 1"				6" x 14"		
	12" x 1-1/4"				6" x 19"		
	15" x 1-1/2"				8" x 8"		
29	Belts	GK1323 6" GK1952 8" GK1346 10"			8" x 13"		
	B48 V-Belt				8" x 18"		
	B50 V-Belts				10" x 7" 6"		
	B57 V-Belt				10" x 12" 6"		
30	Belt Guard	GK7005 6", 8" & 10"			10" x 17" 6"		

ROOF 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.

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