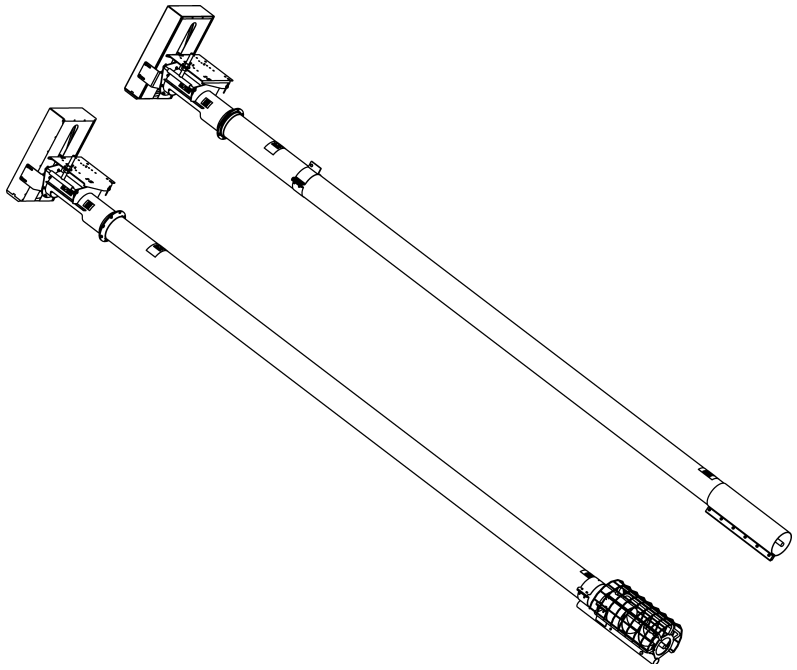


6", 8" & 10" Utility & Horizontal Bin Unloader

Assembly & Operation Manual

PNEG-1435

Date: 03-20-07

GSI GROUP

GSI®

PNEG-1435

This Manual is valid for the bulk tank and utility auger catalog numbers in the tables below:

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

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

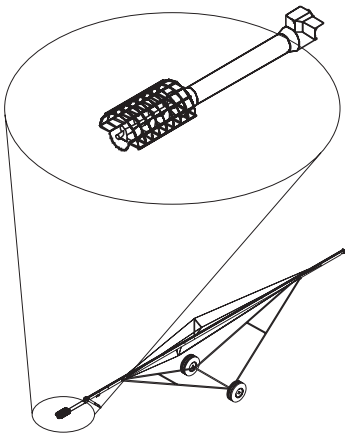
NOTICE:

This equipment shall be installed in accordance with the current installation codes and applicable regulations which should be carefully followed in all cases. Authorities having jurisdiction should be consulted before installation occurs.

Contents

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

1. INTRODUCTION

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.

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.

Capacity

1. The capacities may vary greatly under varying conditions. The following factors play a role in the performance of the auger:

   a. Speed

   b. Angle of operation

   c. Moisture Content

   d. Amounts of Foreign matter

   e. Different materials

   f. Methods of feeding

2. For example, a twenty-five percent (25%) moisture could cut capacity by as much as 40% under some conditions.

Safety Guidelines

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

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 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

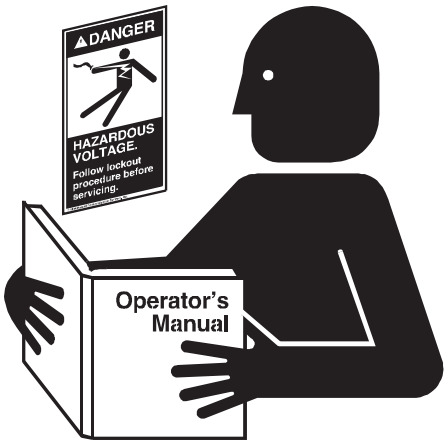
Follow Safety Instructions

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.

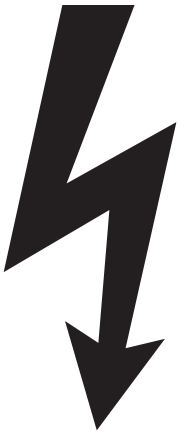
Electrical controls should be installed by a qualified electrician and must meet the standards set by the national electrical code and all local and state codes.

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.



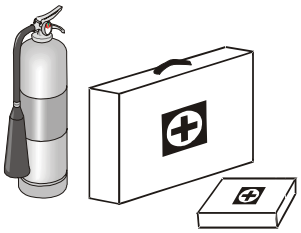
Electric Shock Hazard

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.



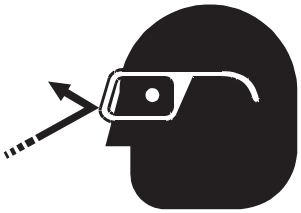
Keep Emergency Equipment Quickly Accessible.

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	
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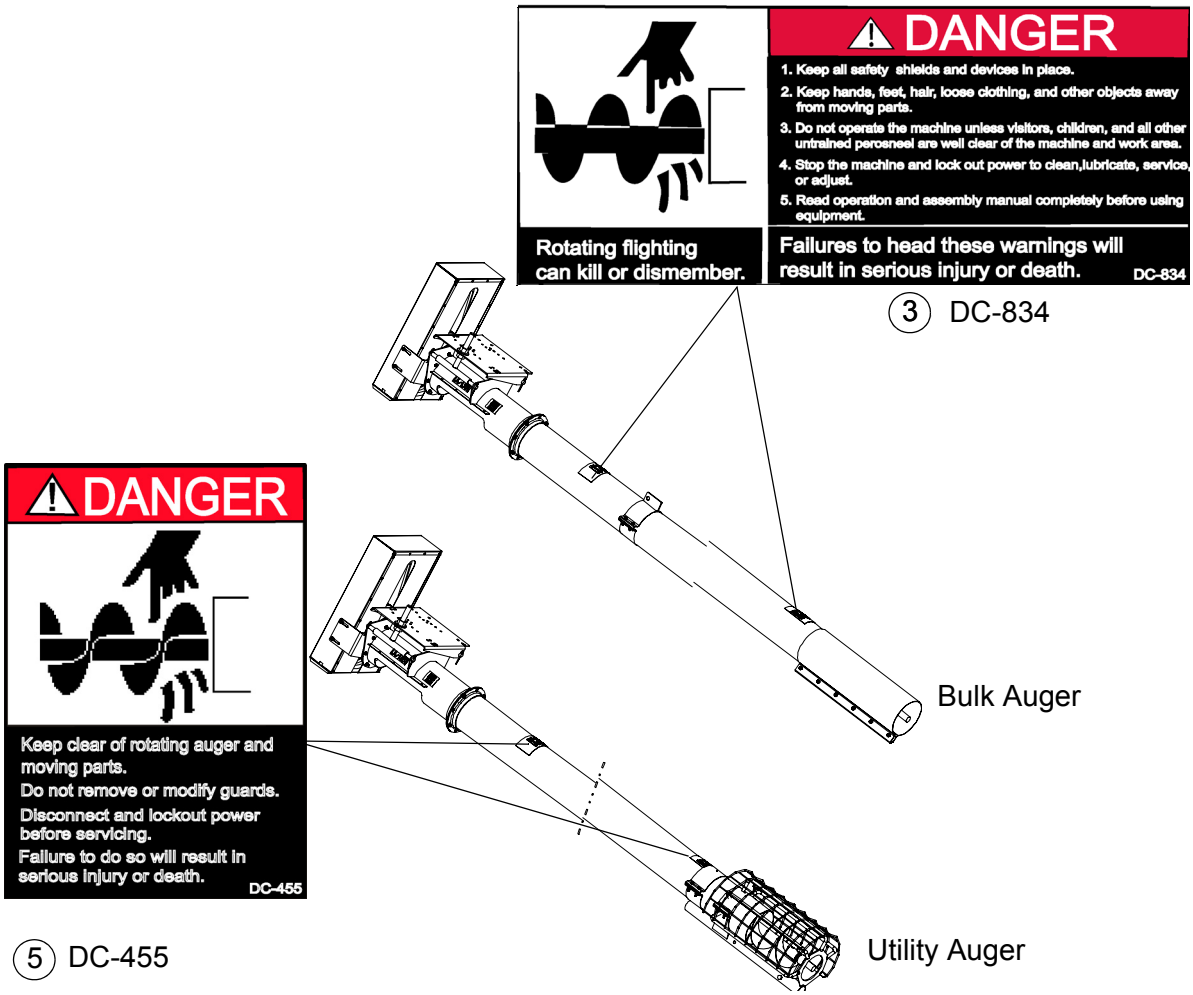
	20	

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

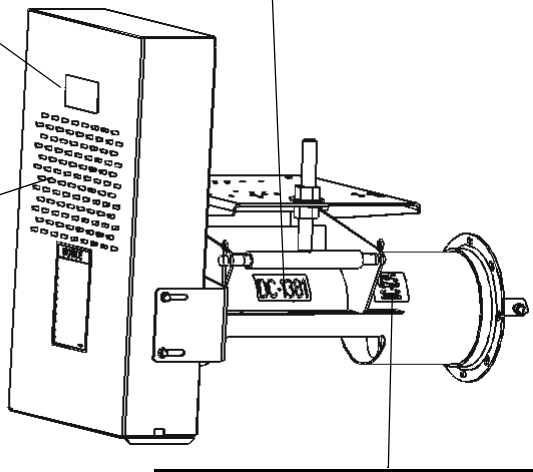
3. SAFETY DECALS

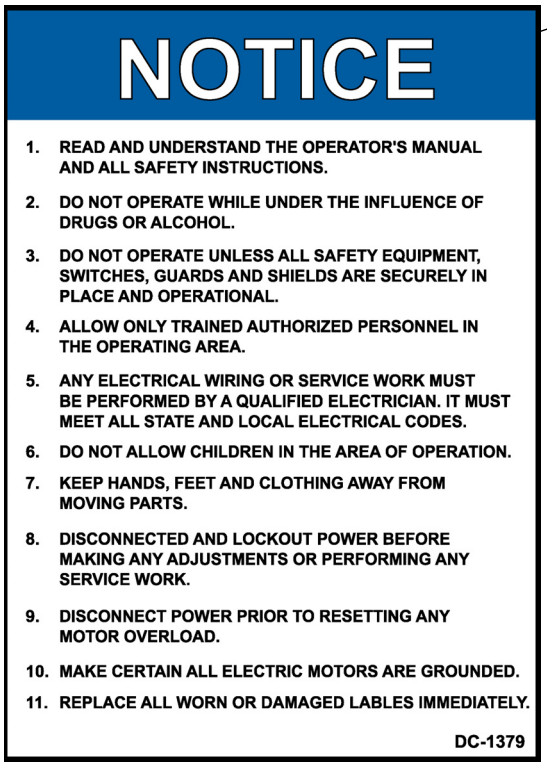
Check components shown below to insure that the safety decals are in place and in good condition. If a decal cannot be easily read for any reason or has been painted over, replace it immediately. Contact your dealer or the manufacturer to order a replacement Decal free of charge.

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

1 DC-994

5 DC-1381



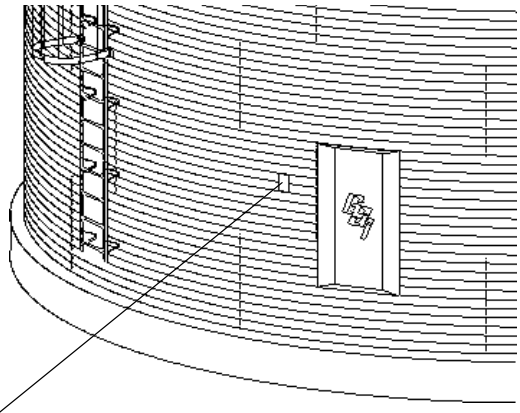


4 DC-1379

6 DC-1234

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.

Assembling the Flight Extension

Note: If your auger does not include an extension skip ahead to Step 5.

1. Begin by sliding the extension connecting band onto the main auger tube *(Figure 4A)*.

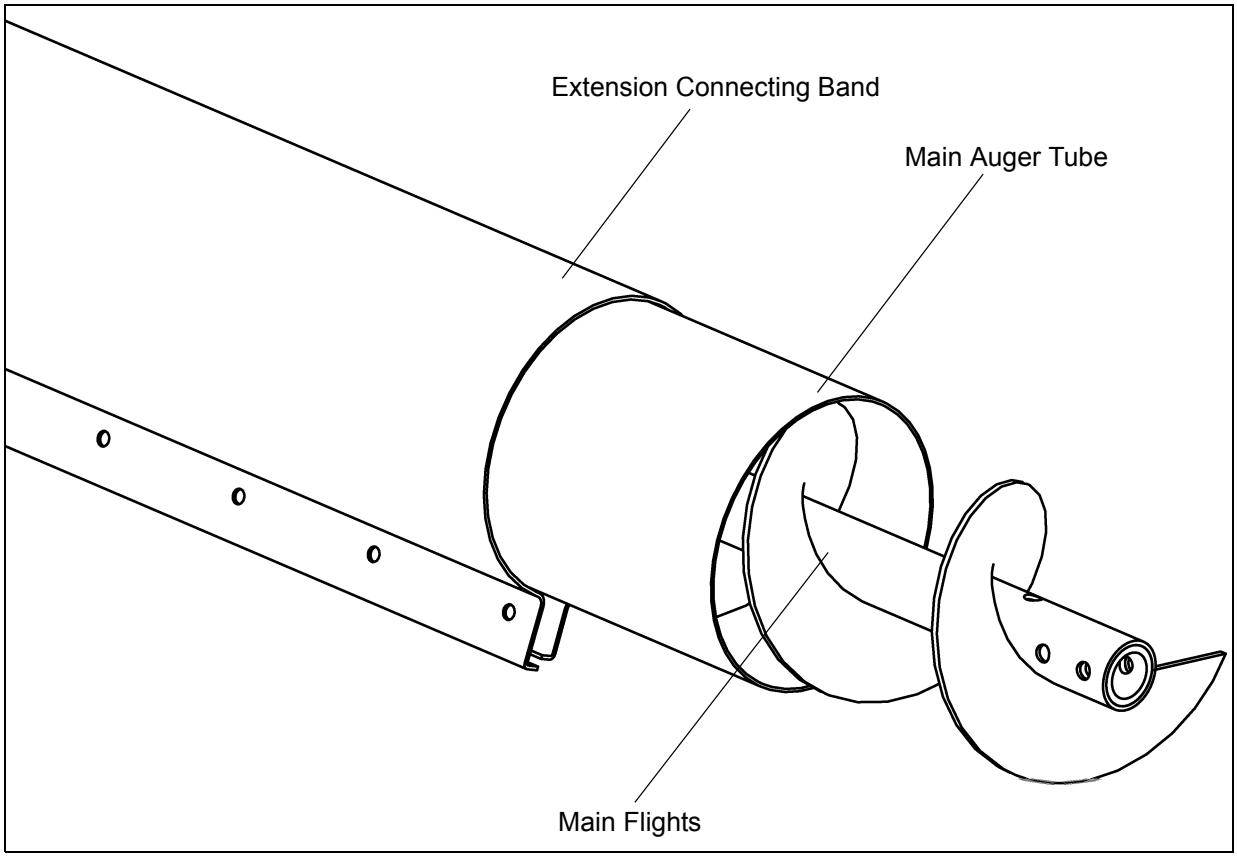


Figure 4A

2. Slide the flight connecting shaft into the main section of flight and bolt together with Grade 8 Hex Bolt and Stover nut. Next slide extension flight onto connecting shaft and bolt together using proper grade 8 bolts and stover nuts *(See Chart)* and *(Figure 4B)*.

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

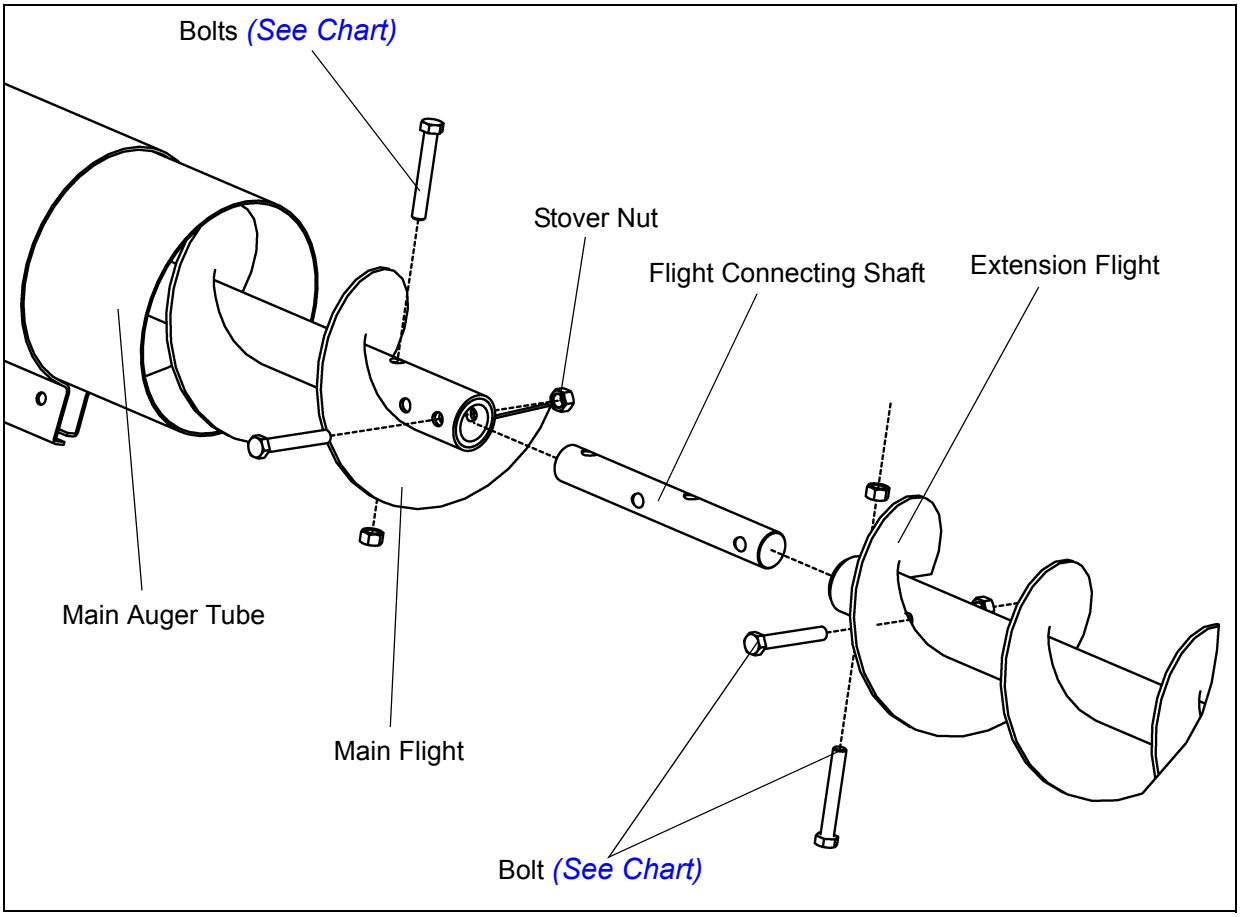


Figure 4B

3. Slide the extension tube over the extension flight, making sure the tube is pressed securely against the main auger tube *(Figure 4C)*.

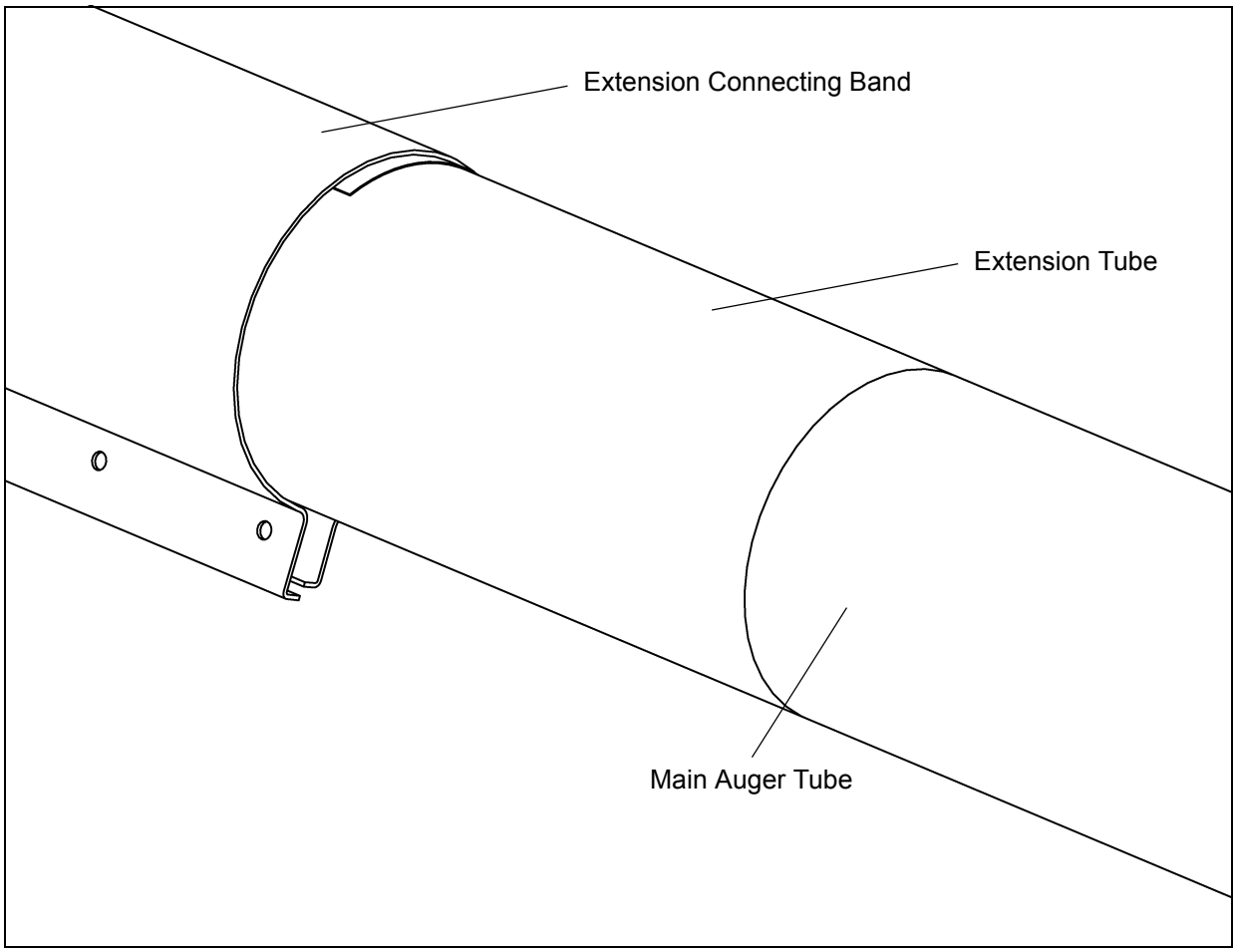


Figure 4C

4. Slide the extension connecting band over the two sections of tube, making sure the connecting band is centered over the mated surfaces of the tubes. Tighten the connecting band down using the correct Hex Bolts and Nylock nuts *(See Chart)* and *(Figure 4D)*.

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

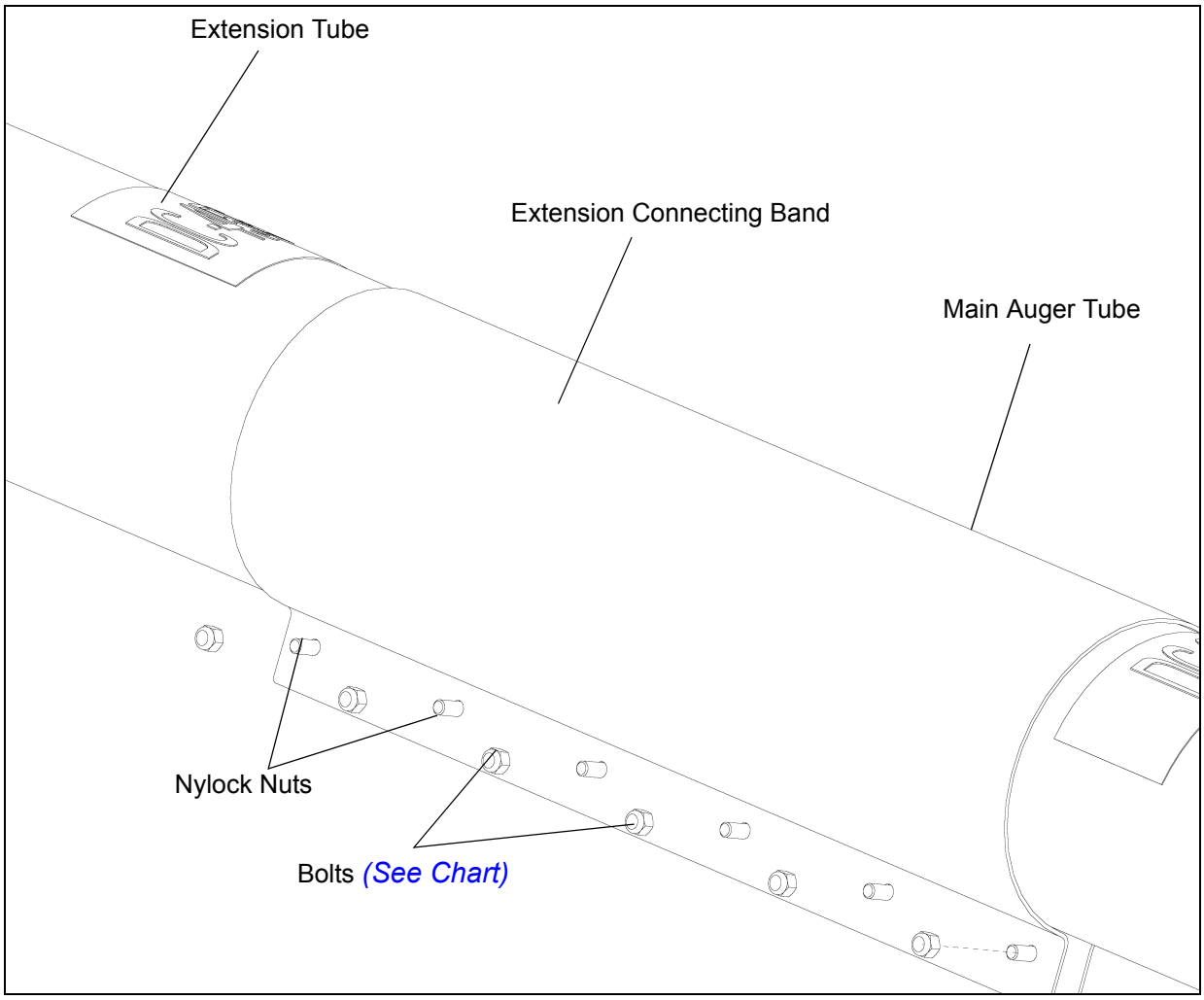


Figure 4D

5. Insert the intake shaft into the flight and connect with proper grade 8 bolt and stover nut *(See Chart)* and *(Figure 4E)*.

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

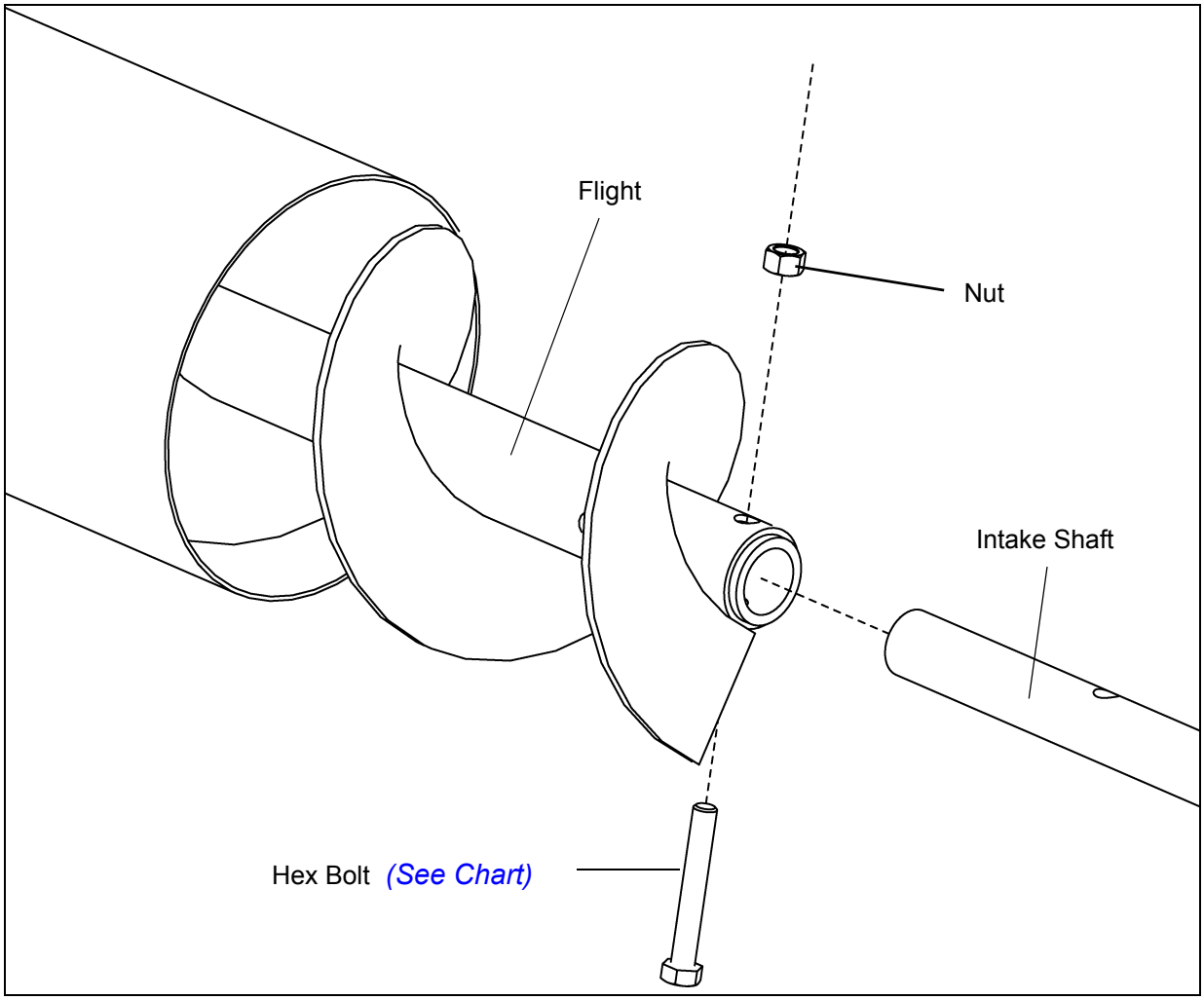


Figure 4E

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

Install the Truss Support

Note: For Bulk Tank Augers Only.

1. Begin by placing the Truss Support on the top side of the Auger Tube. Position the Truss Support Half Band below the Truss Support and align the holes. Attach together using appropriate hex bolt and Nylock nut. Do not tighten the nuts down until the proper distance has been determined for the desired angle *(See Chart)* and *(Figure 4F)*.

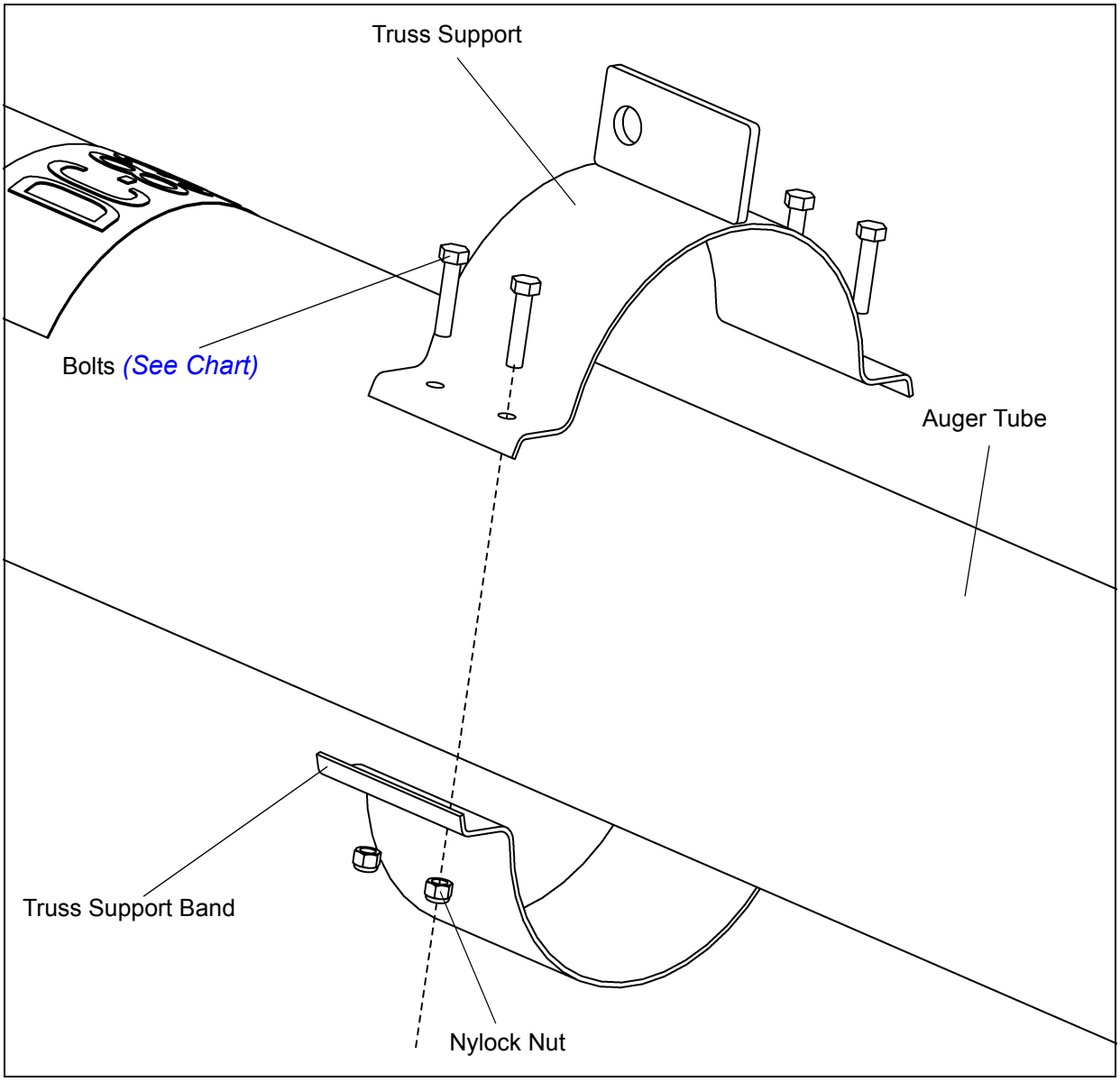


Figure 4F

Installing the Intake Guard

Note: For Utility Augers Only.

1. Slide the Intake guard onto the Auger Tube aligning the intake shaft with the bronze bushing *(Figure 4G)*.

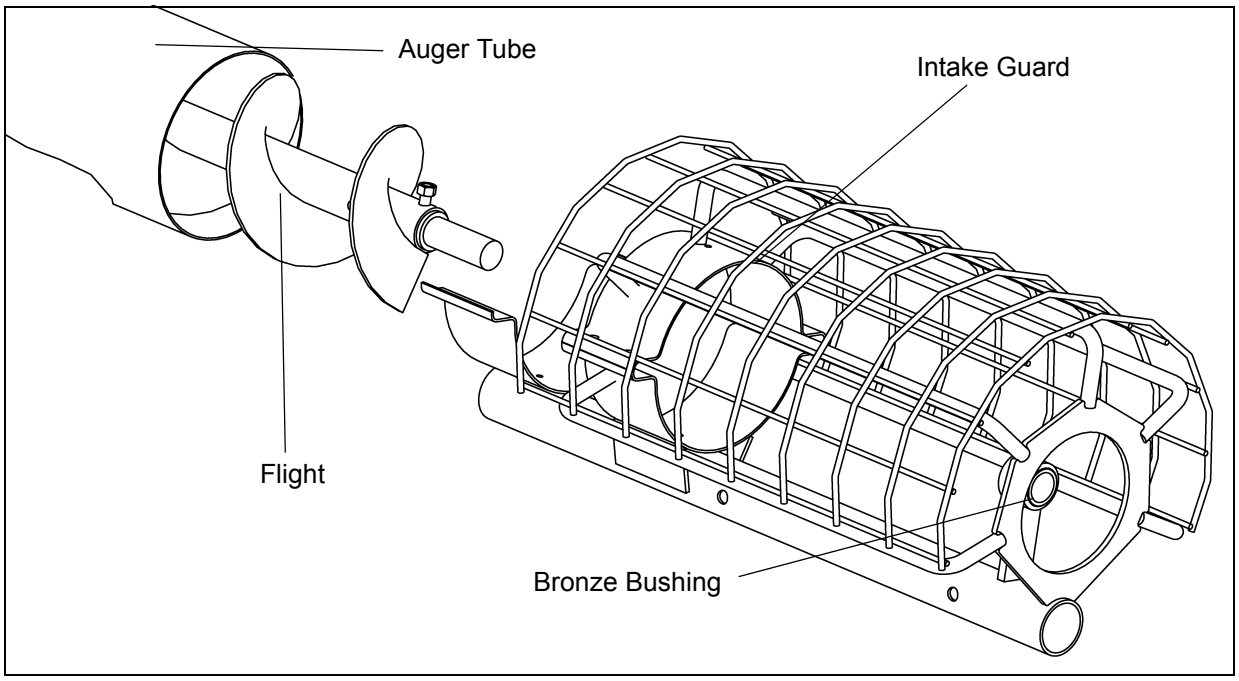


Figure 4G

2. With the Intake Shaft inserted in the bushing make sure to leave approximately 1/2" of clearance between the end of the Flight and the face of the bushing *(Figure 4H)*.

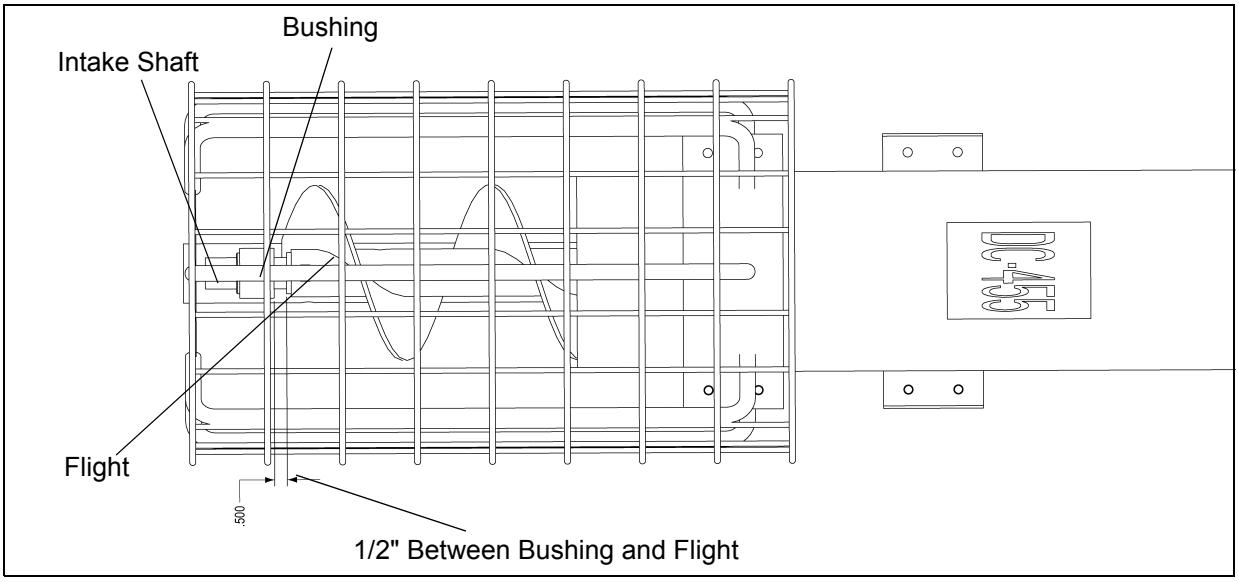


Figure 4H

3. Attach the Intake Guard to the Tube using the proper hex bolts and Nylock nuts through the half bands that are welded to the Intake Guard *(See Chart)* and *(Figure 4I)*.

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

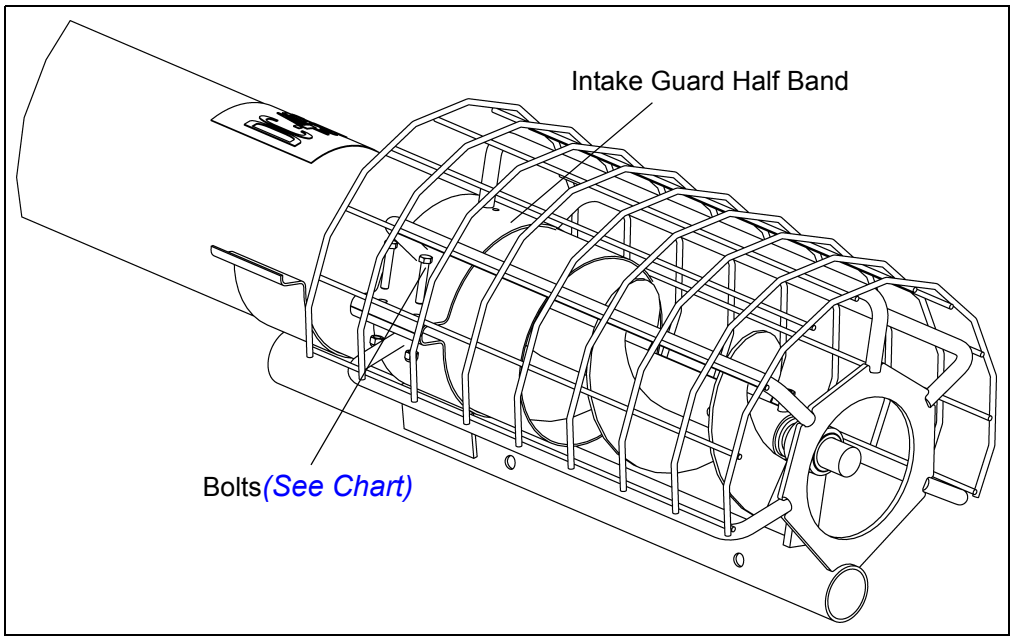


Figure 4I

4. Place Intake Guard Half Band above the lower half band on the Intake Guard and attach using proper hex bolts and Nylock nuts *(See Chart)* and *(Figure 4J)*.

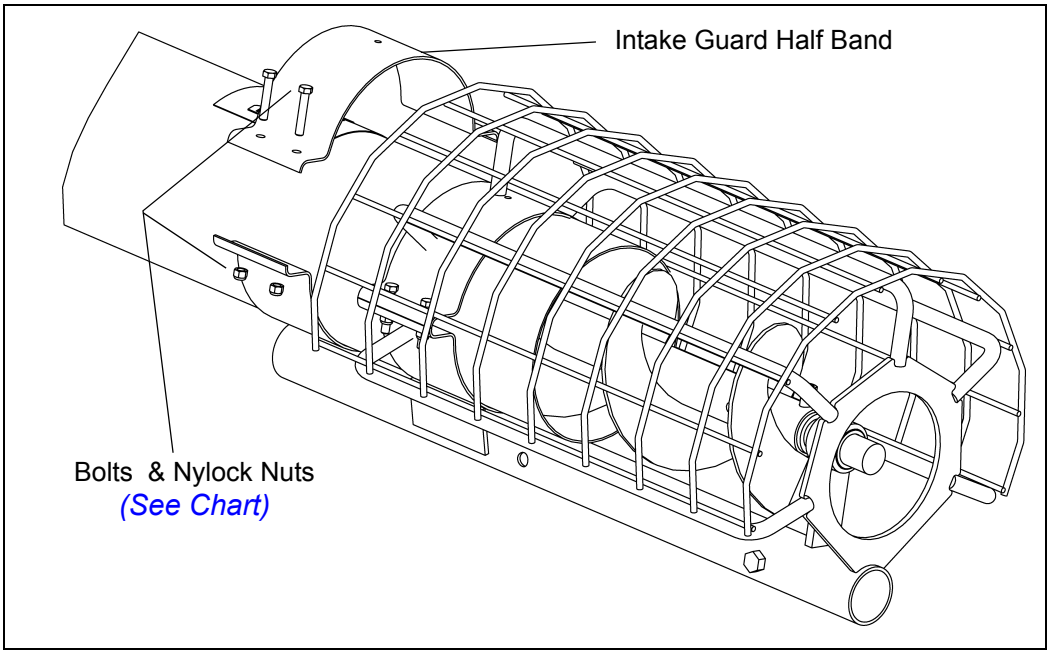


Figure 4J

Installing Drive Shaft

1. 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)* and *(Figure 4K)*.

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

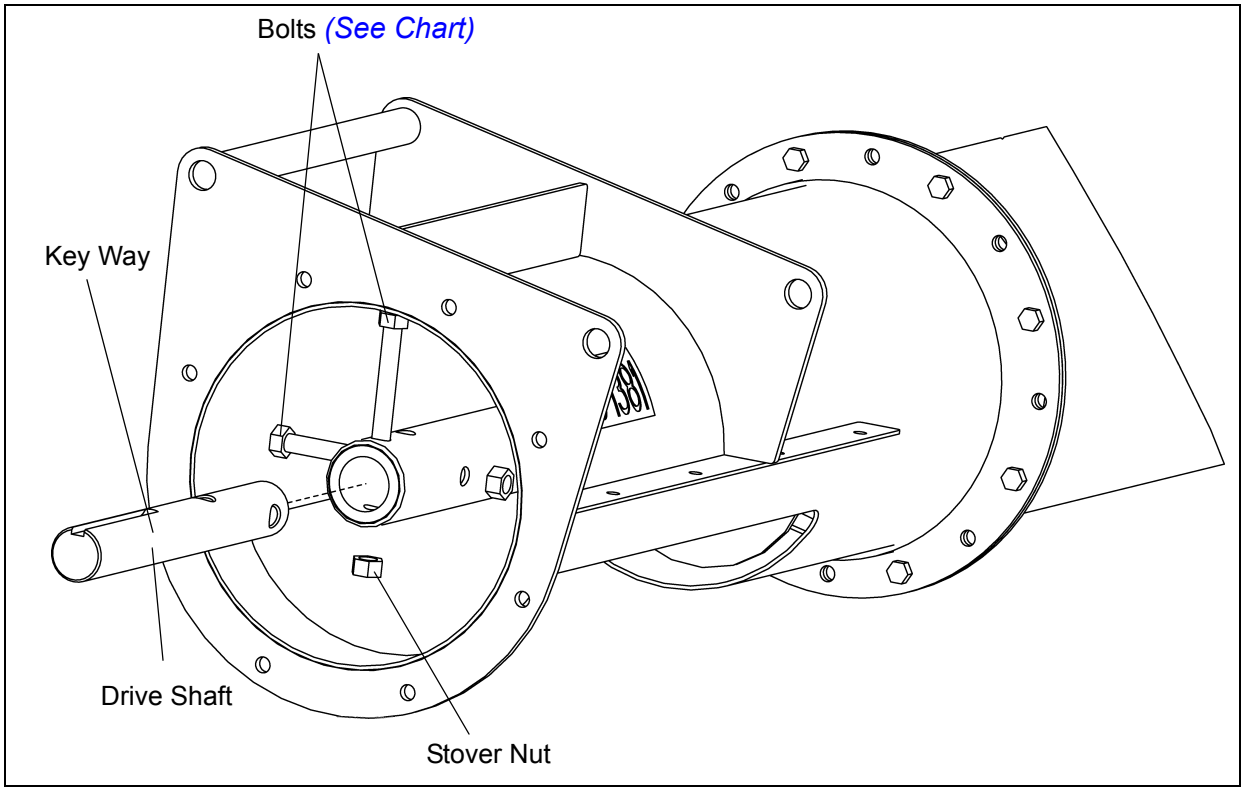


Figure 4K

Mounting Bearing to Bearing Plate

1. Align bolt holes on Bearing Flange with bolt holes on Bearing Plate.

2. Secure Bearing to Bearing plate using appropriate bolts, lock washers, and nuts *(See Chart)* and *(Figure 4L)*.

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

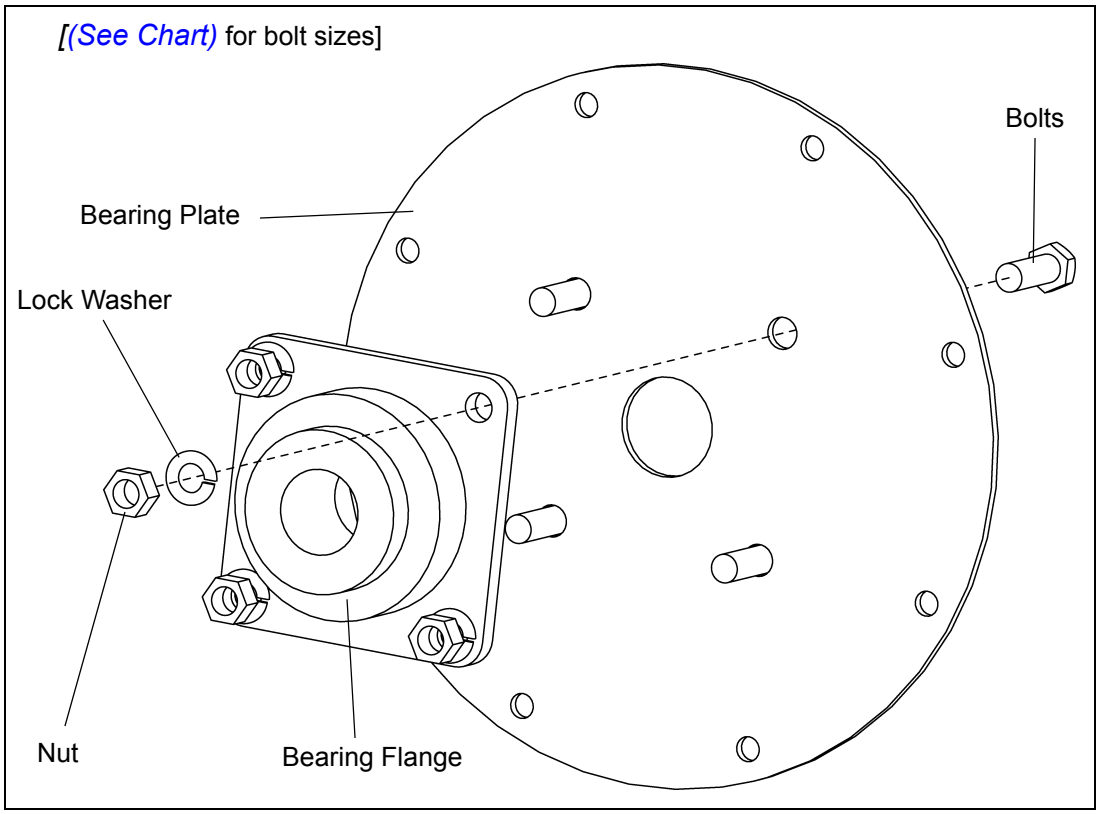


Figure 4L

Installing Bearing Plate onto Tube

1. Align Bearing with Drive Shaft and slip Shaft through bearing.

2. Rotate Plate until bolt holes in tube flange and plate align. Secure with appropriate bolts, and Serrated Flange Nuts *(See Chart)*.

Bearing Plate Bolts	
6" & 8"	5/16" x 1" - 18 Hex Bolts
10"	3/8" x1" - 1/14" - 16 Hex Bolts
10"	3/8" x 1" - 16 Hex Bolts

3. Only Secure With UPPER and LOWER four(4) bolts *(Figure 4M)*. The other four (4) bolts will be installed later with the Belt Guard Mounting Brackets.

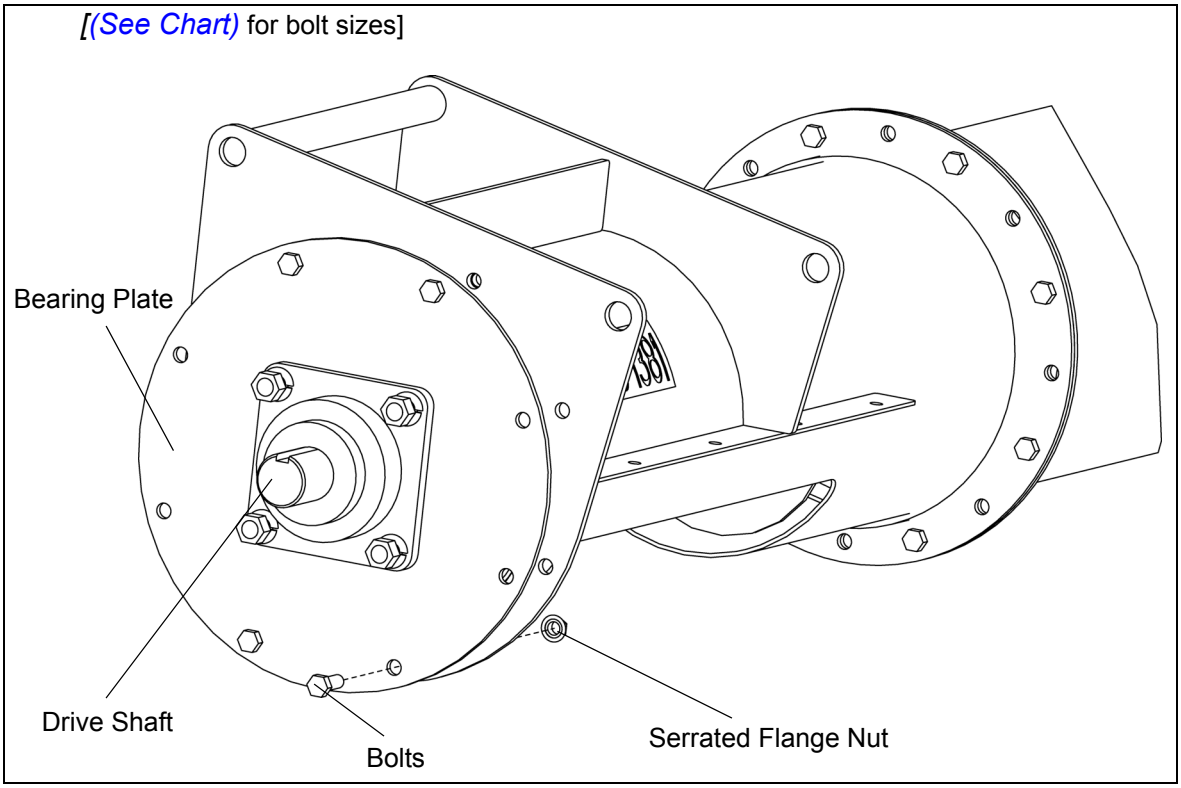


Figure 4M

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

Installing the Motor Mount Adjuster

1. Place Motor Mount Adjuster between the Back Plate and Head Plate on the Discharge Tube.

2. 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 4N)*.

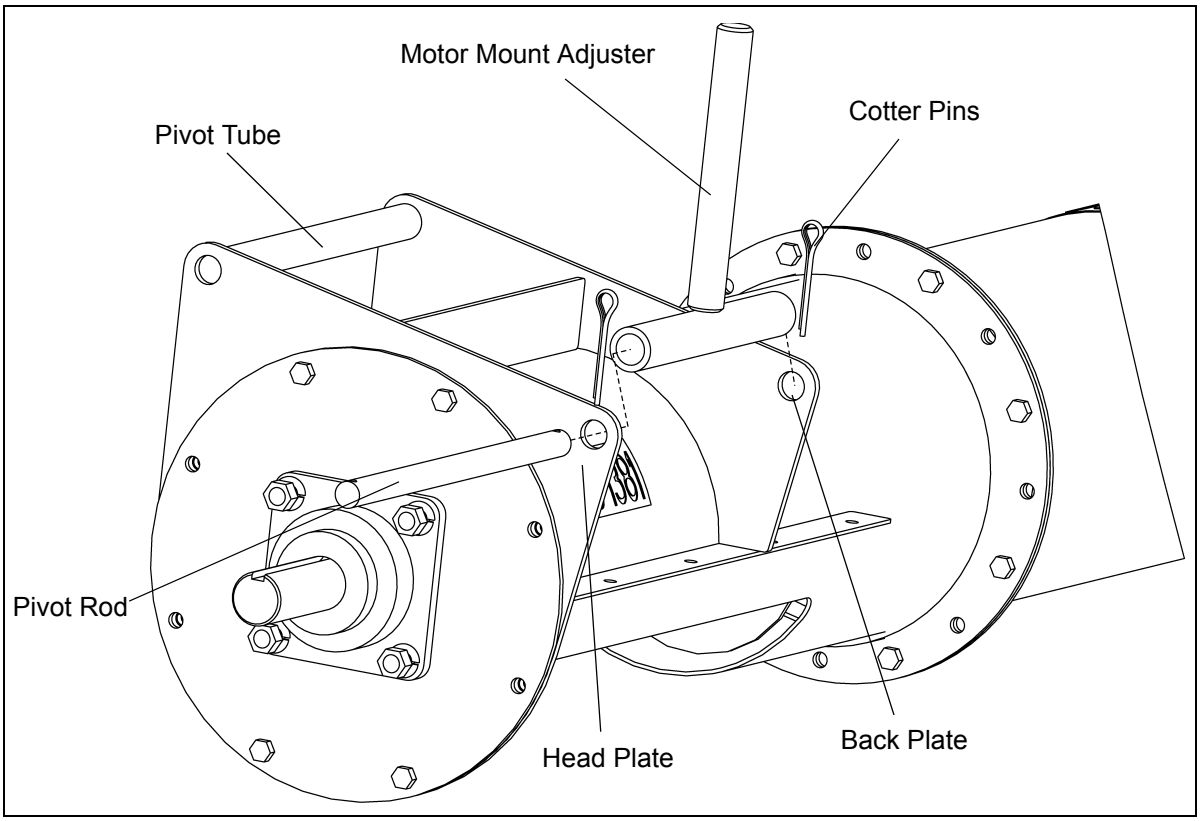


Figure 4N

Installing the Motor Mount Plate

1. Secure one (1) of the motor mount adjustment nuts and one (1) the motor mount adjustment washers approximately 3/4 of the way down the motor mount adjuster's threaded shaft.

2. 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 4O)*.

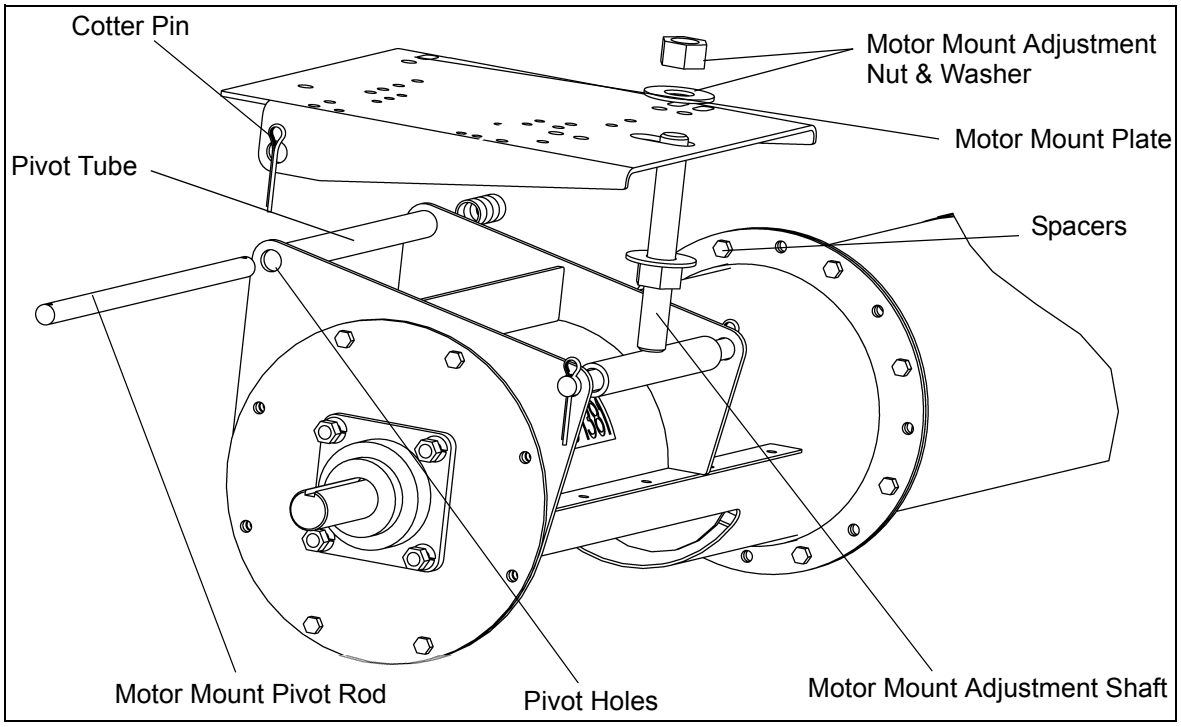


Figure 4O

3. Slide the Motor Mount Pivot Rod through the pivot tube on the Discharge Tube.

4. 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 4P)*.

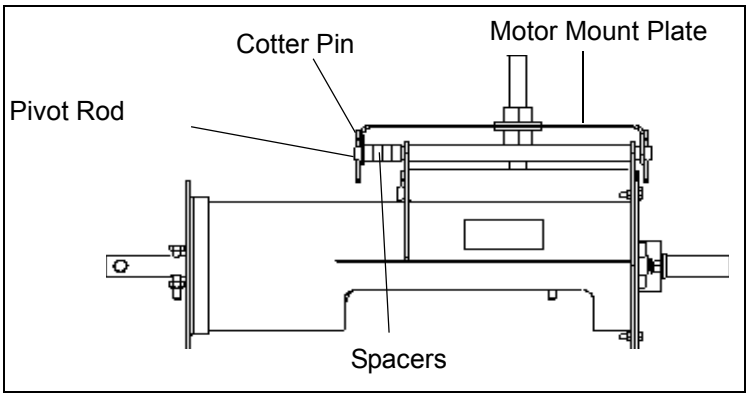


Figure 4P

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

Installing the Belt Guard Brackets

1. Align the holes on the Bearing Plate with the slots on the Belt Guard Mounting Brackets.

2. Secure the Brackets with proper bolts, flat washers, and Serrated Flange Nuts *(See Chart)* and *(Figure 4Q)*.

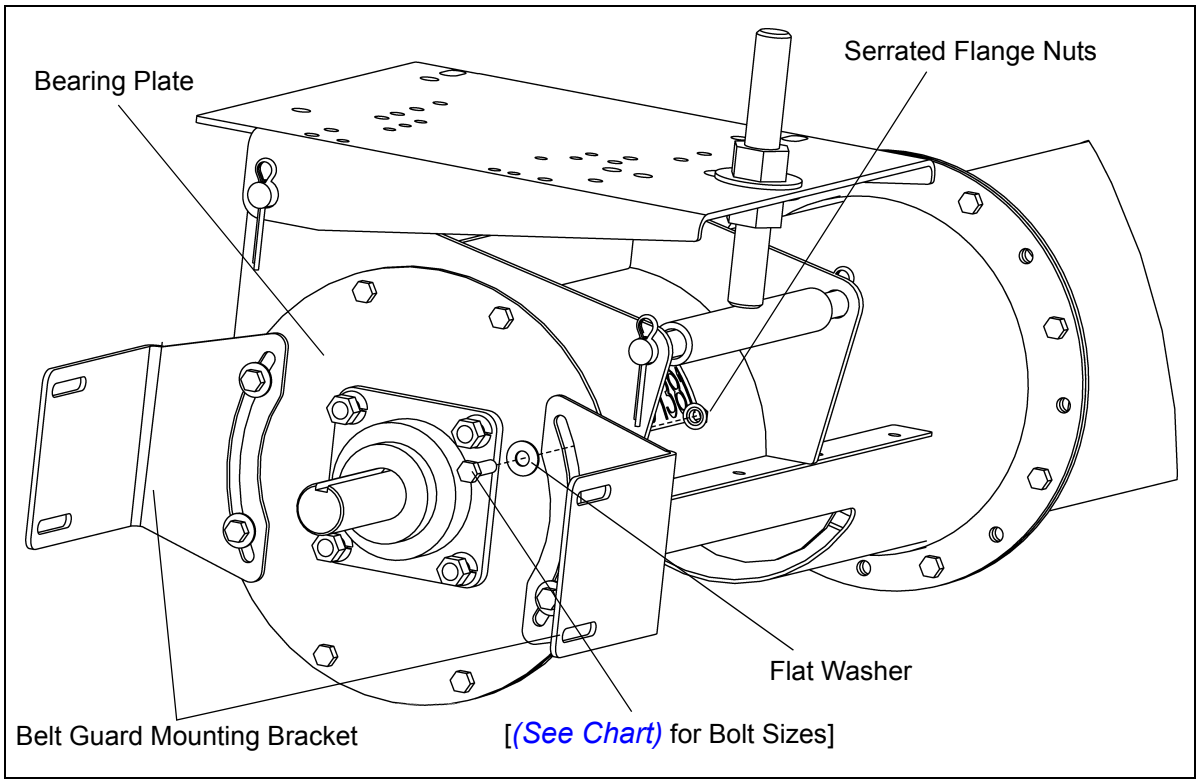


Figure 4Q

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

Installing the Lock Collar

1. 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 4R)*.

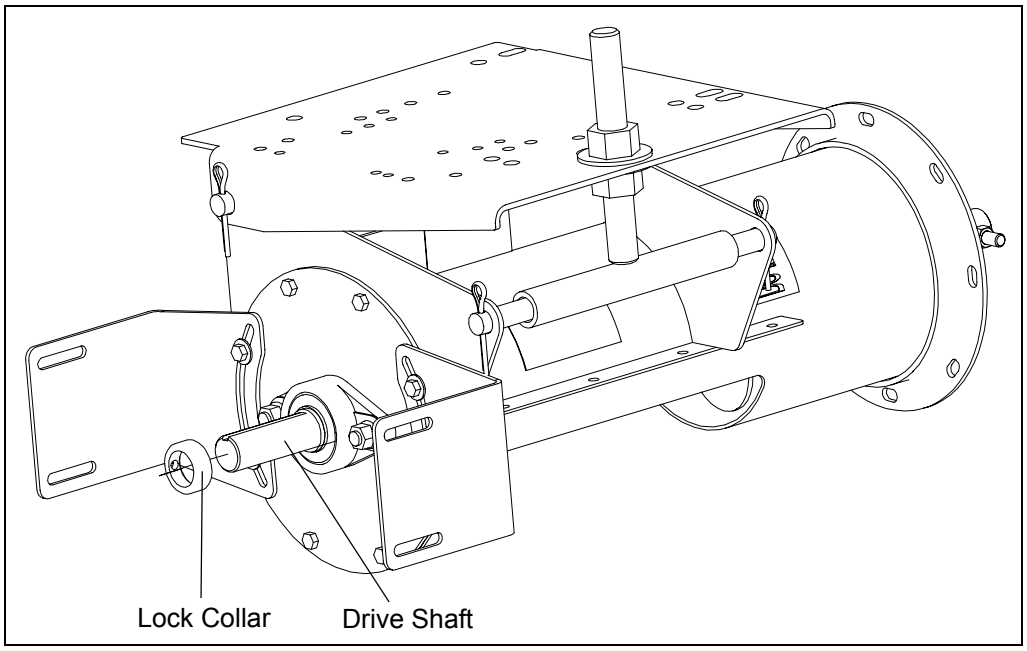


Figure 4R

Installing the Pulley

1. Place and position the key into the keyway located on the Drive Shaft.

2. 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.

3. Once the pulley is appropriately positioned, tighten the Setscrew with a hex head wrench to secure it to the drive shaft *(See Figure 4S)*.

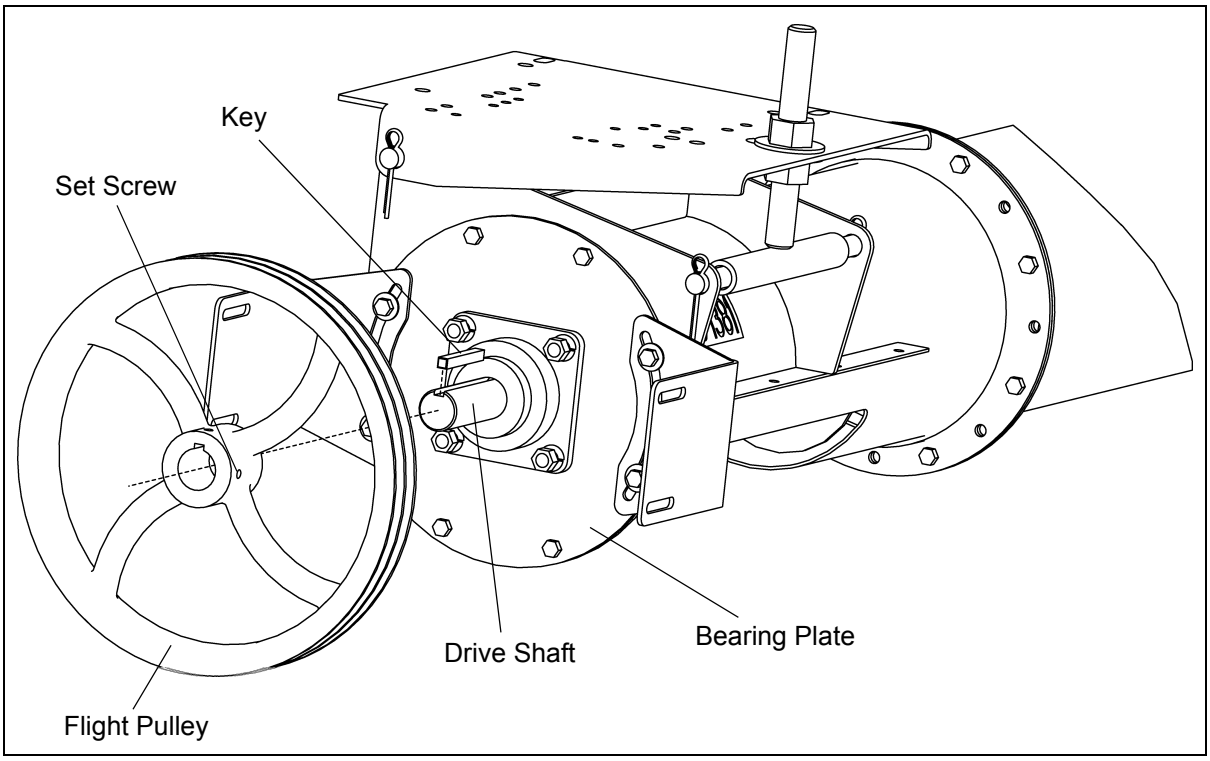


Figure 4S

Tightening the Lock Collar

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

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

Installing the Motor (Not Provided)

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

2. 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 4T)*.

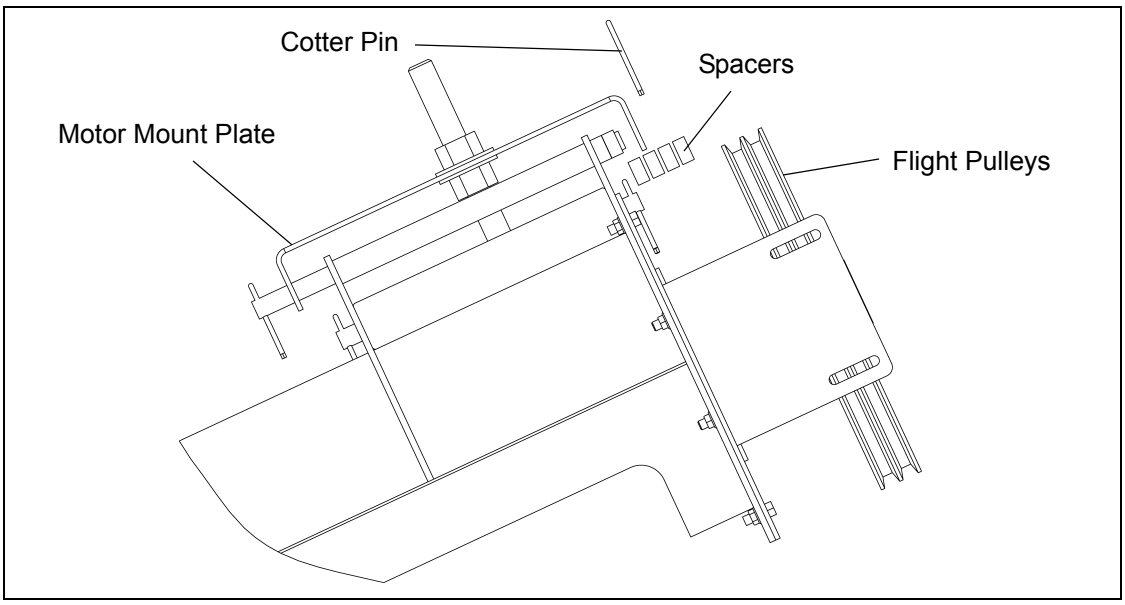


Figure 4T

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

Installing the Belts

1. Place the belts onto the pulleys.

2. First screw the lower Motor Mount Adjustment Nut upward, raising the Motor Mount Plate, 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 locking it into place.

Installing the Belt Guard

1. With the belts properly tensioned remove the bottom Belt Guard cover and slip Belt Guard down over motor shaft.

2. Bolt the Belt Guard to the Belt Guard Mounting Brackets, 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, and tighten down the Belt Guard Mounting Brackets to the Bearing Plate *(See Figure 4U)*.

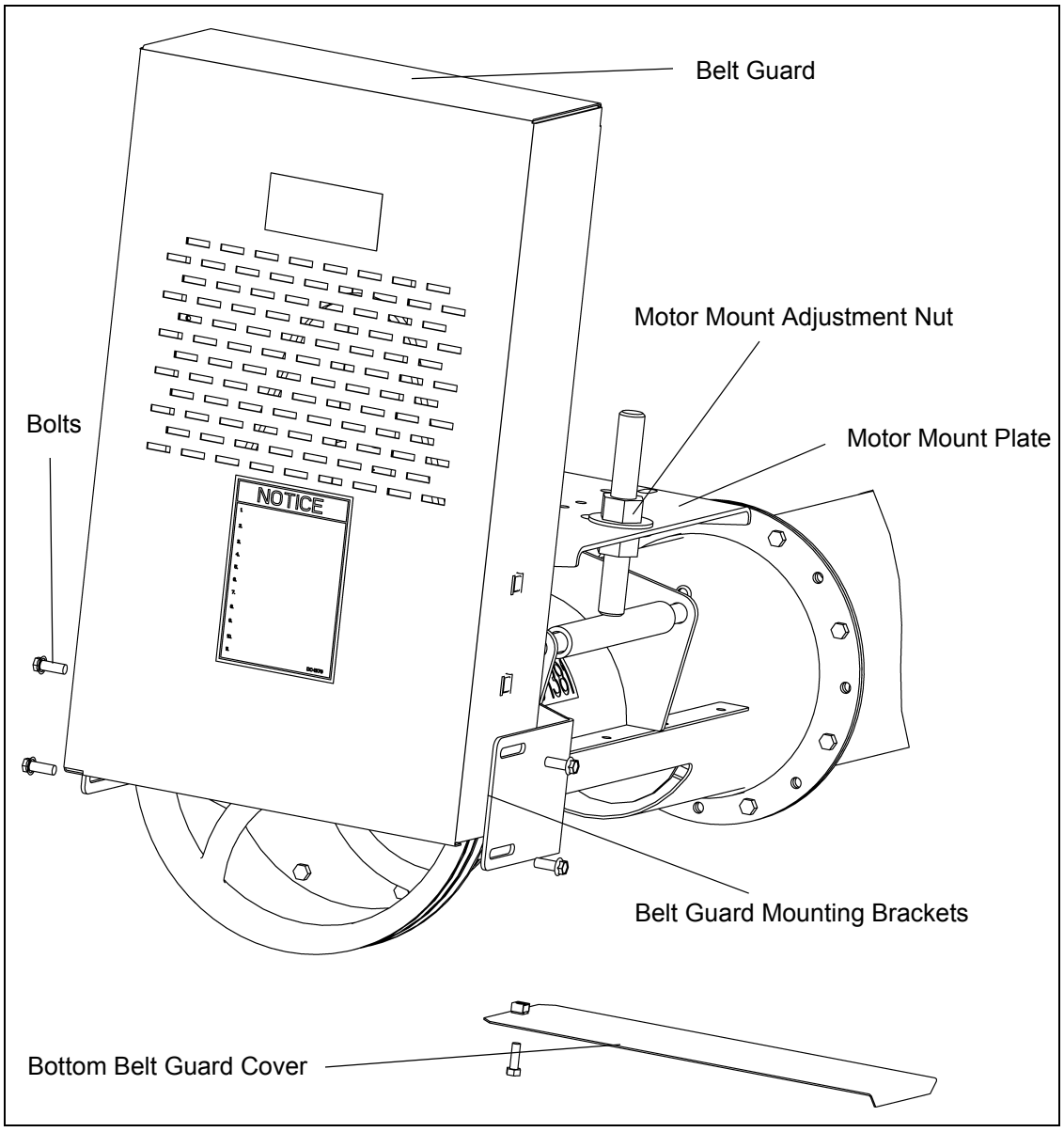


Figure 4U

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

Horsepower Information for Electric Motors

1. 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.

2. Auger speeds in excess of 750 R.P.M. should be avoided as excessive wear will result. Auger speed below 450 R.P.M. require a flow control to restrict intake to the auger. High torque is required to turn the flighting if it is permitted to “load up” at low speed and damage to the auger can result. An optional control gate is available for this purpose.

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

Horsepower Requirements	
Size	**HP**
6" x 11'	3/4
6" x 16'	1
6" x 21'	2
6" x 27'	3
6" x 33'	5
6" x 41'	5
8" x 11'	1-1/2
8" x 16'	2
8" x 21'	3
8" x 27'	3
8" x 33'	5
8" x 41'	5
8" x 53'	7 -1/2
10" x 21'	5
10" x 31'	7-1/2
10" x 41'	10

⚠ WARNING ⚠

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

Power Source

1. Use electric motors that operate at 1750 R.P.M

2. Electric motors and controls should be installed by a qualified electrician and must meet the standards set by the National Electrical Code and all local and state codes.

3. A magnetic starter should be used to protect your motor when starting and stopping. It should stop the motor in case of power interruption, conductor fault, low voltage, circuit interruption, or motor overload. Then the motor must be restarted manually. Some motors have built-in thermal overload protection. If this type motor is used, use only those with a manual reset.

⚠ WARNING ⚠

A main power disconnect switch capable of being locked only in the OFF position shall be provided. This shall be locked whenever work is being done on the auger.

⚠ CAUTION ⚠

Disconnect power before resetting motor overloads.

⚠ WARNING ⚠

Make sure all electrical motors are grounded.

⚠ WARNING ⚠

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

⚠ DANGER ⚠

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

⚠ DANGER ⚠

Keep all safety guards and shields in place.

Start-Up and Break-In

⚠ WARNING ⚠

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

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. Double check the assembly instructions to see that all parts have been assembled properly.
4. 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.

5. 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.
6. 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.
7. 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.

8. 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.

9. Do not run auger at to 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.

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.

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.

9. SHUTDOWN

Normal Shutdown

1. Make certain unloading tubes are empty before stopping the unit.
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. Disconnect and lockout the power source.
3. Close bin well control gates.
4. 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.

5. Reconnect and unlock the power source.
6. Gradually clear the auger until there is no grain or obstructions.

Lockout

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

⚠ WARNING ⚠

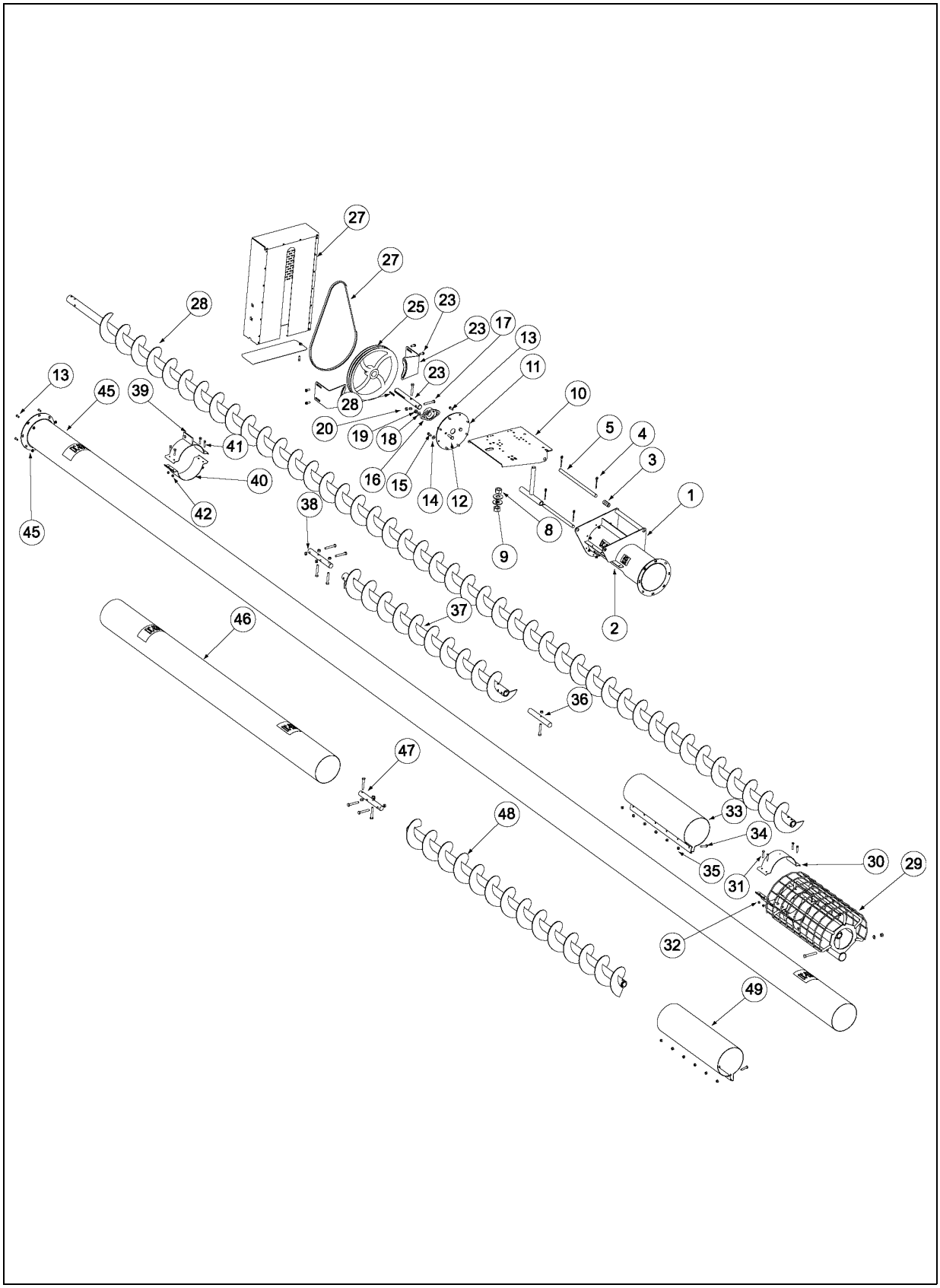
Use the type of main power disconnect switch that is capable of being locked only in the off position.

Storage Preparation

1. Close all wells to discharge auger tube.
2. Be sure the unload tube is empty.
3. Make sure power source is disconnected and locked out.
4. Check to see that all fasteners are secure.

1. 6" Utility & Bulk Auger Parts
2. 8" Utility & Bulk Auger Parts
3. 10" Utility & Bulk Auger Parts

6" Utility & Bulk Auger Parts



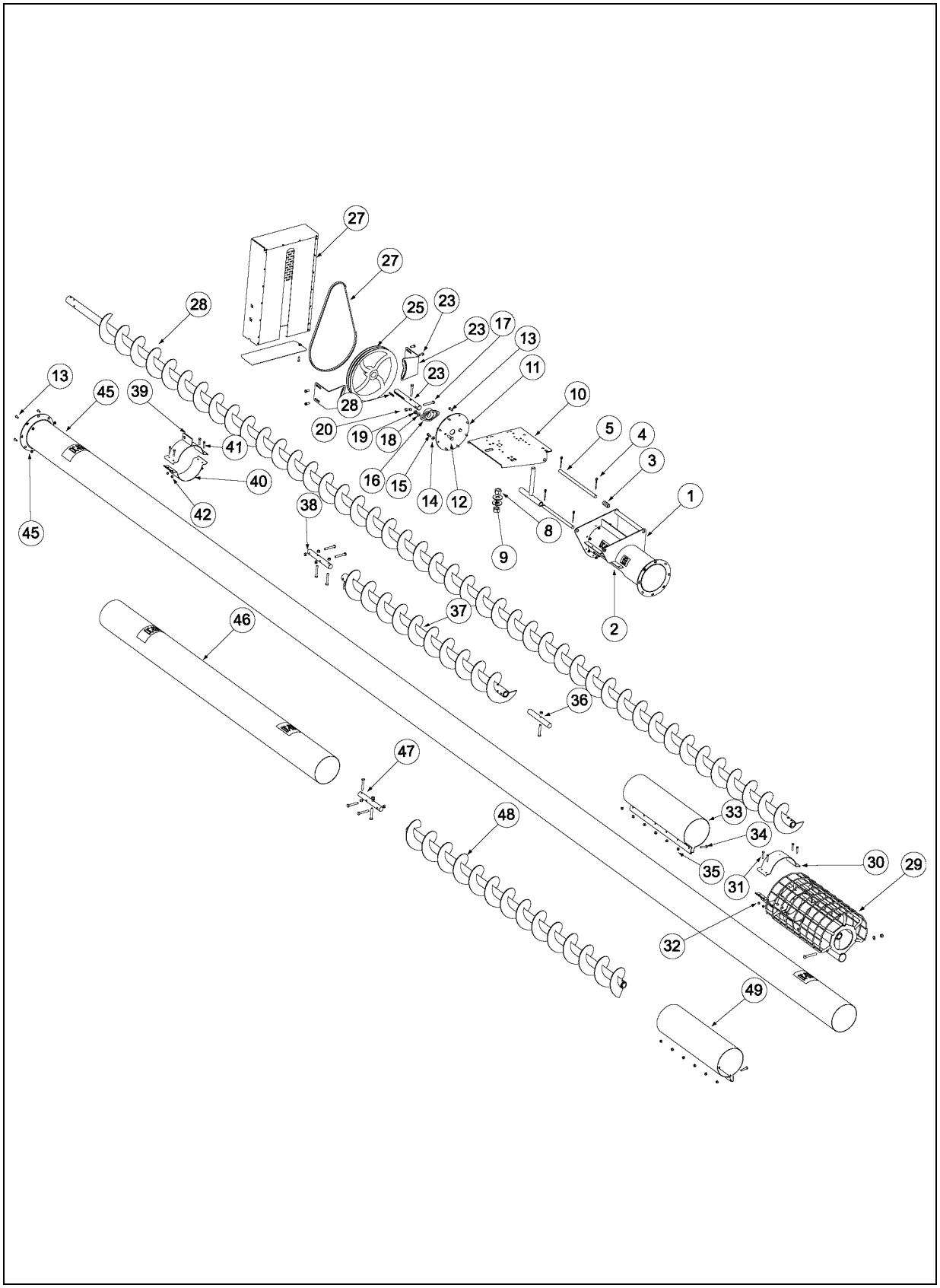
6" Utility & Bulk Auger Parts

Ref #	Part #	Description & System
1	GK6996	Horizontal Power Head Tube
2	S-3611	Bearing Plate Nut 5/16" - 18 Serrated Flange Nut
3	GK7014	Pivot Tube Spacer
4	S-6994	Pivot Tube Cotter Pin
5	GK7059	Motor Mount Pivot Rod
7	GK7060	Motor Mount Adjuster
8	S-3234	Motor Mount Adjuster Nut 3/4" - 10 Nut
9	S-866	Motor Mount Adjuster Washer 3/4" Flat Washer
10	GK7052	Motor Mount Plate
11	GK7061	Bearing Plate
12	S-7837	Discharge Bearing Bolt 7/16" - 14 x 1 -1/2" Hex Bolt
13	S-1196	Bearing Plate Bolt 5/16" - 18 x 1" Hex Bolt
14	S-845	Belt Guard Bracket Washer 5/16" Flat Washer
15	S-1196	Belt Guard Bracket Bolt 5/16" - 18 x 1" Hex Bolt
16	GK1049	Discharge Bearing 1" ID with 2 hole Flanged
17	S-7687	Flight Connecting Bolt 3/8" - 16 x 2" Gr.8 Hex Bolt
18	S-7014	Discharge Bearing Lock Washer 7/16" Lock Washer
19	S-7332	Discharge Bearing Nut 7/16" - 14 Nut
20	S-8251	Flight Connecting Nut 3/8" - 16 Stover Nut
21	GK2025	Drive Shaft 1" OD x 10"
22	S-4513	Drive Shaft Key 1/4" x 2" Square Key
23	GK7062	Belt Guard Mounting Bracket
24	S-9065	Belt Guard Bolts 3/8" - 16 x 1" Grade 5 Bolt
25	GK1309	Sheave 12" OD x 1" ID - System (6" 1 Belt)
	GK1321	Sheave 12" OD x 1" ID - System (6" 2 Belt)
26	GK1323	Belts B48 V-Belt
27	GK7005	Belt Guard
28	GK2854	Discharge Flight 6" x 11' - System (6" x 11')
	GK2855	Discharge Flight 6" x 16' - System (6" x 16')
	GK2856	Discharge Flight 6" x 21' - System (6" x 21')
	GK2856	Discharge Flight 6" x 21' - System (6" x 27')
	GK2856	Discharge Flight 6" x 21' - System (6" x 33')
	GK2856	Discharge Flight 6" x 21' - System (6" x 41')
29	GK3496	Intake Guard
30	GK3986	Intake Guard Half Band 6" x 4" 12 GA

6" Utility & Bulk Auger Parts

Ref #	Part #	Description & System
31	S-7149	Intake Guard Bolt 5/16" - 18 x 1 - 3/4" GR5 Hex Bolt
32	S-7382	Intake Guard Nut 5/16" - 18 GR5 Nylock Nut
33	GK1048	Extension Connecting Band 6" x 24"
34	S-7515	Connecting Band Bolt 3/8" - 16 x 1 -1/2" GR5 Hex Bolt
35	S-7383	Connecting Band Nut 3/8" - 16 Nylock Nut
36	GK1117	Intake Shaft 1" OD x 7"
37	GK4665	Extension Flight 6" x 6' 6-1/2" - System (6" x 27')
	GK5505	Extension Flight 6" x 12" - System (6" x 33')
	GK2893	Extension Flight 8" x 6' - System (6" x 41')
38	GK1351	Connecting Shaft 1" OD x 9 -19/32"
39	GK2923	Truss Support - System (6" Bulk Tank)
40	GK1122	Truss Support Half Band 6" x 4" 12 GA - System (6" Bulk Tank)
41	S-2741	Truss Support Bolt 5/16" - 18 x 1 -1/2" GR5 Hex Bolt - System (6" Bulk Tank)
42	S-7382	Truss Support Nut 5/16" - 18 GR5 Nylock Nut - System (6" Bulk Tank)
43	S-275	Power Head Connecting Bolt 5/16" - 18 x 3/4" Bin Bolt
44	S-3611	Power Head Connecting Nut 5/16" - 18 Serrated Flange Nut
45	GK7082	Discharge Tube 6" x 9' - System (6" x 11')
	GK7083	Discharge Tube 6" x 14' - System (6" x 16')
	GK7084	Discharge Tube 6" x 19 - System (6" x 21')
	GK7202	Discharge Tube 6" x 24' 8" - System (6" x 27')
	GK7203	Discharge Tube 6" x 30' 8" - System (6" x 33')
	GK7084	Discharge Tube 6" x 19' - System (6" x 41')
46	GK2865	Extension Tube 6" x 20' - System (6" x 41')
47	GK1351	Connecting Shaft 1" OD x 9-19/32"
48	GK2859	Extension Flight 6" x 20' - System (6" x 41')
49	GK1048	Bulk Tank Connecting Band 6" x 24"

8" Utility & Bulk Auger Parts



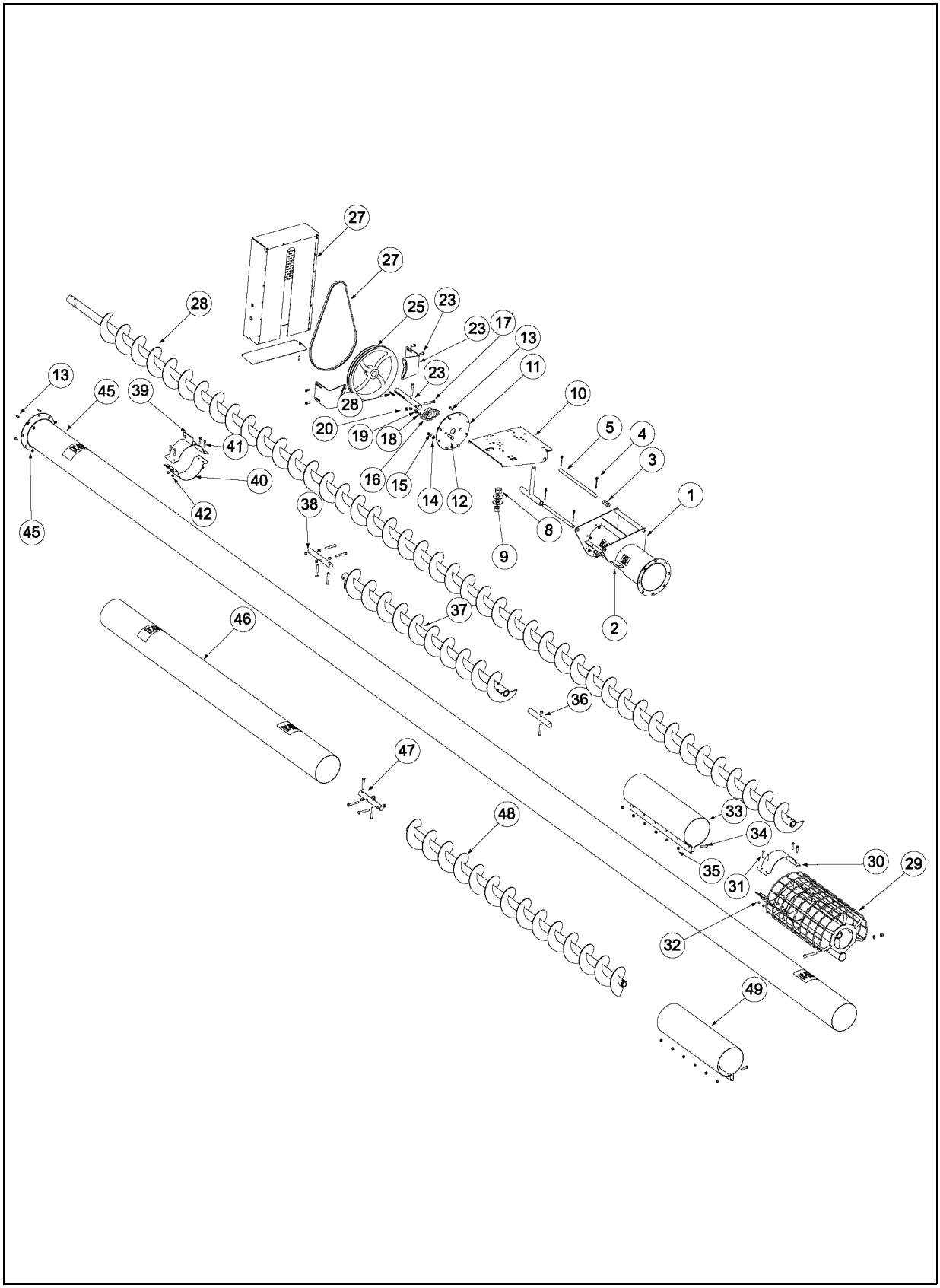
8" Utility & Bulk Auger Parts

Ref #	Part #	Description & System
1	GK6997	Horizontal Power Head Tube
2	S-3611	Bearing Plate Nut 5/16" - 18 Serrated Flange Nut
3	GK7014	Pivot Tube Spacer
4	S-6994	Pivot Tube Cotter Pin
5	GK7013	Motor Mount Pivot Rod
6	GK7012	Motor Mount Adjustment Rod
7	GK6942	Motor Mount Adjuster
8	S-240	Motor Mount Adjuster Nut 1" - 8 Nut
9	S-7835	Motor Mount Adjuster Washer 1" Flat Washer
10	GK6986	Motor Mount Plate
11	GK6987	Bearing Plate
12	S-8760	Discharge Bearing Bolt 1/2" - 13 x 1 - 1/2" Hex Bolt
13	S-1196	Bearing Plate Bolt 5/16" - 18 x 1" Hex Bolt
14	S-845	Belt Guard Bracket Washer 5/16" Flat Washer
15	S-1196	Belt Guard Bracket Bolt 5/16" - 18 x 1" Hex Bolt
16	GK1330	Discharge Bearing 1-1/4" ID With 2 Hole Flanged
17	S-8316	Flight connecting Bolt 7/16" - 14 x 3" GR.8 Hex Bolt
18	S-236	Discharge Bearing Lock Washer 1/2" Lock Washer
19	S-7510	Discharge Bearing Nut 1/2" - 13 Nut
20	S-8317	Flight Connecting Nut 7/16" - 14 Stover Nut
21	GK1331	Drive Shaft 1 - 1/4" OD x 10 - 1/2"
22	S-4513	Drive Shaft Key 1/4" x 2" Square Key
23	GK7006	Belt Guard Mounting Bracket
24	S-9065	Belt Guard Bolts 3/8'' - 16 x 1" Grade 5 Bolt
25	GK1335	Sheave 12" OD x 1" - 1/4" ID
26	GK1952	Belts B50 V - Belts
27	GK7005	Belt Guard
28	GK2879	Discharge Flight 8" x 11' - System (8" x 11')
	GK2880	Discharge Flight 8" x 16' - System (8" x 16')
	GK2881	Discharge Flight 8" x 21' - System (8" x 21')
	GK2882	Discharge Flight 8" x 27' - System (8' x 27')
	GK2882	Discharge Flight 8" x 27' - System (8" x 33')
	GK2882	Discharge Flight 8" x 27' - System (8" x 41')
	GK2882	Discharge Flight 8" x 27' - System (8" x 53')
29	GK3501	Intake Guard
30	GK5118	Intake Guard Half Band 8" x 4" 12 GA

8" Utility & Bulk Auger Parts

Ref #	Part #	Description & System
31	S-7149	Intake Guard Bolt 5/16" - 18 x 1 - 3/4" GR5 Hex Bolt
32	S-7382	Intake Guard Nut 5/16" - 18 GR5 Nylock Nut
33	GK1015	Extension Connecting Band 8" x 27"
34	S-8322	Connecting Band Bolt 3/8" - 16 x 1 - 3/4" GR5 Hex Bolt
35	S-7383	Connecting Band Nut 3/8" - 6 Nylock Nut
36	GK1884	Intake Shaft 1 - 1/4" OD x 9"
37	GK5101	Extension Flight 8" x 6' - System (8" x 33')
	GK5101	Extension Flight 8" x 6' - System (8" x 41')
	GK5101	Extension Flight 8" x 6' - System (8" x 53')
38	GK1328	Connecting Shaft 1 - 1/4" OD x 9 - 1/2"
39	GK2922	Truss Support
40	GK1059	Truss Support Half Band
41	S-2741	Truss Support Bolt 5/16" - 18 x 1 - 1/2" GR5 Hex Bolt
42	S-7382	5/16" - 18 GR5 Nylock Nut
43	S-275	Power Head Connecting bolt 5/16" - 18 x 3/4" Bin Bolt
44	S-3611	Power Hear connecting Nut 5/16" - 18 Serrated Flange Nut
45	GK7079	Discharge Tube 8" x 8' - System (8" x 11')
	GK7080	Discharge Tube 8" x 13' - System (8" x 16')
	GK7081	Discharge Tube 8" x 18' - System (8" x 21')
	GK7204	Discharge Tube 8" x 24' - System (8" x 27')
	GK7205	Discharge Tube 8" x 30' - System (8" x 33')
	GK7205	Discharge Tube 8" x 30' - System (8" x 41')
	GK7205	Discharge Tube 8" x 30' - System (8" x 53')
46	GK2877	Extension Tube 8" x 8' - System (8" x 41')
	GK2878	Extension Tube 8" x 20' - System (8" x 53')
47	GK1328	Connecting Shaft 1-1/4" OD x 9-1/2"
48	GK2884	Extension Flight 8" x 8' 3/16" - System (8" x 41')
	GK2885	Extension Flight 8" x 20' 3/16" - System (8" x 53')
49	GK1015	Bulk Tank Connecting Band 8" x 27"

10" Utility & Bulk Auger Parts



10" Utility & Bulk Auger Parts

Ref #	Part #	Description & System
1	GK6998	Horizontal Power Head Tube
2	S-968	Bearing Plate Nut 3/8" - 16 Serrated Flange Nut
3	GK7014	Pivot Tube Spacer
4	S-6994	Pivot Tube Cotter Pin
5	GK7013	Motor Mount Pivot Rod
6	GK7012	Motor Mount Adjustment Rod
7	GK6942	Motor Mount Adjuster
8	S-240	Motor Mount Adjuster Nut 1"-8 Nut
9	S-7835	Motor Mount Adjuster Washer 1" Flat Washer
10	GK6986	Motor Mount Plate
11	GK7017	Bearing Plate
12	S-8760	Discharge Bearing Bolt 1/2" - 13 x 1 - 1/2" Hex Bolt
13	S-7469	Bearing Plate Bolt 3/8" - 16 x 1" Hex Bolt
14	S-248	Belt Guard Bracket Washer 3/8" Flat Washer
15	S-2071	Belt Guard Bracket Bolt 3/8" - 16 x 1 - 1/4" Hex Bolt
16	GK1343	Discharge Bearing 1 - 1/2" ID With 2 Hole Flanged
17	S-8314	Flight Connecting Bolt 1/2" - 13 x 3 - 1/2" GR. 8 Hex Bolt
18	S-236	Discharge Bearing Lock Washer 1/2" Lock Washer
19	S-7510	Discharge Bearing Nut 1/2" - 13 Nut
20	S-8315	Flight Connecting Nut 1/2" - 13 Stover Nut
21	GK1289	Drive Shaft 1 - 1/2" OD x 11 - 1/2"
22	S-9181	Drive Shaft Key 3/8" x 3" Square Key
23	GK7018	Belt Guard Mounting Bracket
24	S-9065	Belt Guard bolts 3/8" - 16 x 1" Grade 5 Bolt
25	GK1345	Sheave 15' OD x 1" - 1/2" ID
26	GK1346	Belts B57 V - Belt
27	GK7005	Belt Guard
28	GK5143	Discharge Flight 10" x 11' - System (10" x 11')
	GK5144	Discharge Flight 10" x 16' - System (10" x 16')
	GK5130	Discharge Flight 10" x 21' - System (10" x 21')
	GK5130	Discharge Flight 10" x 21' - System (10" x 31')
	GK5130	Discharge Flight 10" x 21' - System (10" x 41')
29	GK3502	Intake Guard
30	GK5117	Intake Guard Half Band 10" x 4" 7 GA

10" Utility & Bulk Auger Parts

Ref #	Part #	Description & System
31	S-7515	Intake Guard Bolt 3/8" - 16 x 1 - 1/2" GR5 Hex Bolt
32	S-7383	Intake Guard Nut 3/8" - 16 GR5 Nylock Nut
33	GK1883	Extension Connecting Band 10" x 30"
34	S-7515	Connecting Band Bolt 3/8" - 16 x 1 - 1/2" GR5 Hex Bolt
35	S-8251	Connecting Band Nut 3/8" - 16 Stover Nut
36	GK2907	Intake Shaft 1-1/2" OD x 9-1/2"
37	GK5157	Extension Flight 10" x 10' - System (10" x 31')
	GK5161	Extension Flight 10" x 20' - System (10" x 41')
38	GK1339	Connecting Shaft 1 - 1/2" OD x 9 - 1/2"
43	S-7520	Power Head Connecting Bolt 3/8" - 16 x 1" Bin Bolt
44	S-456	Power Hear Connecting Nut 3/8" - 16 Hex Nut
45	GK7095	Discharge Tube 10" x 7' 6" - System (10" x 11')
	GK7096	Discharge Tube 10" x 12' 6" - System (10" x 16')
	Gk7097	Discharge Tube 10" x 17' 6" - System (10" x 21')
	Gk7097	Discharge Tube 10" x 17' 6" - System (10" x 31')
	Gk7097	Discharge Tube 10" x 17' 6" - System (10" x 41')
46	GK2899	Extension Tube 10" x 10' - System (10" x 31')

Problem	Possible Cause	Corrective Action
1. The Auger is vibrating.	1. Damage can occur to the auger flighting, causing noise. Damage usually is caused from foreign material being run through the auger.	1. It may be necessary to remove the flighting for inspection.
	2. Drive belt may be overtightened, putting head stub and flight in a bind.	2. Loosen the drive belts.
2. Capacity is too low.	1. There may not be enough grain reaching the auger.	1. Make sure the intake has not bridged over, restricting flow. The flighting at the intake should be covered with grain for maximum capacity.
	2. The auger is moving too slowly.	2. Check the auger speed. Low capacity will result from speeds slower than recommended.
3. The Auger plugs.	1. The auger may be “jamming” because too much grain is reaching the auger.	1. Use the control gates to decrease the amount of grain the auger is gathering.
	2. The grain may be wet.	2. If wet grain or other hard-to-move material is being augered, use a larger size motor than recommended for normal use.
	3. The auger may be jammed with foreign material.	3. Remove any foreign material in the auger.
	4. The motor may be to small or wired incorrectly.	4. Check wiring or consider using the next larger size motor.

NOTES

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

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