

# 6", 8" and 10" Vertical Bin Unload Auger

Assembly and Operation Manual

PNEG-1079

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PNEG-1079

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**Personnel operating or working around this equipment should read this manual. This manual must be delivered with equipment to its owner. Failure to read this manual and its safety instructions is a misuse of the equipment. Any misuse of the equipment may void the warranty.**

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## 1. Introduction

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### General Information

1. We reserve the right to improve our product whenever possible and practical to do so. We reserve the right to change, improve and modify products at any time without obligation to make changes, improvements and modifications on equipment sold previously.
2. The 6", 8" and 10" Vertical Bin Unload Augers have been designed and manufactured to give years of dependable service. The care and maintenance of this machine will affect the satisfaction and service obtained. By observing the instructions and suggestions we have recommended, the owner should receive competent service for many years. If additional information or assistance should be required, please contact the factory or the local dealer.
3. 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:
  - Speed
  - Angle of operation
  - Moisture content
  - Amounts of foreign matter
  - Different materials
  - Methods of feeding
2. For example, a twenty-five percent (25%) moisture could cut capacity by as much as 40% under some conditions.

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## **Safety Guidelines**

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

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

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

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

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

Personnel operating or working around equipment must read this manual. This manual must be delivered with equipment to its owner. Failure to read this manual and its safety instructions is a misuse of the equipment.

**ST-0001-3**

### Cautionary Symbols Definitions

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



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



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



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



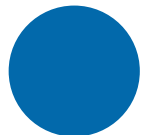
This symbol is used to address practices not related to personal injury.



This symbol indicates a general hazard.



This symbol indicates a prohibited activity.



This symbol indicates a mandatory action.

ST-0005-2

## Safety Cautions

### Use Personal Protective Equipment

- Use appropriate personal protective equipment:

**Eye Protection**



**Respiratory Protection**



**Foot Protection**



**Hearing Protection**



**Head Protection**



**Fall Protection**



**Hand Protection**



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

ST-0004-1

### Follow Safety Instructions

- Carefully read all safety messages in this manual and safety signs on your machine. Keep signs in good condition. Replace missing or damaged safety signs. Be sure new equipment components and repair parts include the current safety signs. Replacement safety signs are available from the manufacturer.
- Learn how to operate the machine and how to use controls properly. Do not let anyone operate without instruction.
- If you do not understand any part of this manual or need assistance, contact your dealer.



ST-0002-1

## 2. Safety

### Maintain Equipment and Work Area

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



ST-0003-1

### Operate Motor Properly

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



ST-0009-2

### Rotating Auger Hazard

- Keep clear of rotating augers and moving parts.
- Do not remove or modify guards or covers.
- Lock-out power source before making adjustments, cleaning, or maintaining equipment.
- Failure to follow these precautions will result in serious injury or death.



ST-0037-1

### Stay Clear of Hoisted Equipment

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



ST-0047-1



### Stay Clear of Rotating Parts

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



ST-0008-1

### Use Unload Equipment Properly

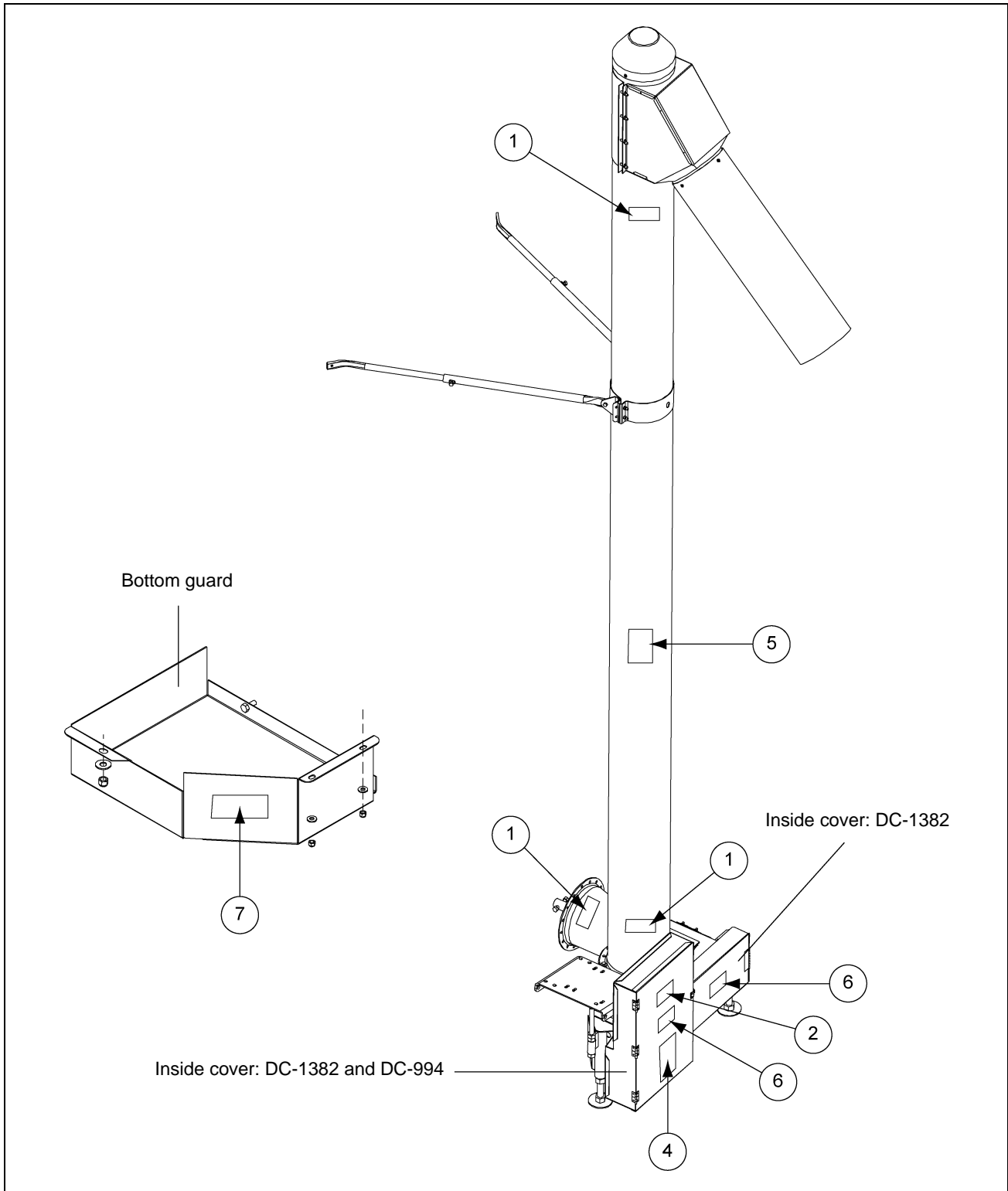
- Do not operate this equipment alone. Make sure someone nearby is aware of the proper shut down sequence in the event of an emergency.
- Do not allow any person intoxicated or under the influence of drugs to operate this equipment. All operators must be adequately rested and prepared to perform all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



ST-0051-1



The figure *below* shows the location of the decals and safety signs which should appear on the Commercial Vertical Bin Unload Auger. Samples and explanations of these decals are shown *on Pages 12 and 13*.




**NOTE:** Please remember safety signs provide important safety information for people working near bin unloading equipment that is in operation. Any safety signs that are worn, missing, illegible or painted over should be replaced immediately. Obtain FREE replacements by contacting your dealer.

### 3. Safety Decals

The safety decals [Chart below](#) lists all the safety decals that should be included with the auger. Inspect all decals and replace any that are illegible, worn or missing. Contact the dealer or the manufacturer to order replacement decals.

Ref #	Part #	Description	Size	Qty
1	DC-1381	Danger - Shear Point (Auger)	4-1/2" x 2"	3
2	DC-995	Warning - Shear Point (Belt)	4-1/2" x 2"	1
3	DC-994	Danger - Shear Point (Belt)	4-1/2" x 2"	1
4	DC-1379	Notice	5-1/8" x 7-3/8"	1
5	DC-1234	Notice	2-1/4" x 2-3/4"	1
6	DC-1386	Warning - Shear Point (Chain)	4-1/2" x 2"	2
7	DC-1382	Danger - Shear Point (Chain)	4" x 1-3/4"	3
8	DC-1395	Danger - Rotating Flight (for Bin)	6-1/4" x 4-1/4"	1




**! DANGER**

**SHEAR POINT**  
Keep clear of rotating auger and moving parts.  
Do not remove or modify guards. Disconnect and lock out power before servicing.  
Failure to do so will result in serious **INJURY** or **DEATH**.

GSI Group 217-226-4421 DC-1381

1




**! WARNING**

**SHEAR POINT**  
Keep hands clear of moving parts. Do not operate with guard removed. Disconnect and lockout power before servicing.

GSI Group Inc. 217-226-4421 DC-995

2



**! DANGER**

**SHEAR POINT**  
Keep hands clear of moving parts. Do not operate with guard removed. Disconnect and lockout power before servicing.

GSI Group Inc. 217-226-4421 DC-994

3

NOTICE

1. Read and understand the operator's manual and all safety instructions.
2. Do not operate while under the influence of drugs or alcohol.
3. Do not operate unless all safety equipment, switches, guards, and shields are securely in place and operational.
4. Allow only trained authorized personnel in the operating area.
5. Any electrical wiring or service work must be performed by a qualified electrician. It must meet all state and local electrical codes.
6. Do not allow children in the area of operation.
7. Keep hands, feet, & clothing away from moving parts.
8. Disconnect and lockout power before making any adjustments or performing any service work.
9. Disconnect power prior to resetting any motor overload.
10. Make certain all electric motors are grounded.
11. Replace all worn or damaged labels immediately.

GSI Group Inc. 217-226-4421 DC-1379

4

# NOTICE

FAILURE TO PROPERLY SELECT, INSTALL OR MAINTAIN AN AUGER, ITS DRIVE OR OTHER COMPONENTS CAN RESULT IN DANGEROUS OPERATION.

THIS EQUIPMENT IF IMPROPERLY SELECTED, INSTALLED OR MAINTAINED MAY FAIL AND COULD RESULT IN SERIOUS INJURY OR PROPERTY DAMAGE.

CHECK PRODUCT LITERATURE AND EQUIPMENT MANUFACTURER'S LITERATURE OR CALL THE FACTORY FOR FURTHER INFORMATION.

GSI Group 217-226-4421

DC-1234

5



GSI Group Inc. 217-226-4421

## WARNING

**SHEAR POINT**  
Moving parts can crush and cut.  
Keep hands clear of sprocket and chain.

DC-1386

6



GSI Group 217-226-4421

## DANGER

**SHEAR POINT**  
Moving parts can crush and cut. Keep hands clear of sprocket and chain.

DC-1382

7



# DANGER



## ROTATING FLIGHTING

This bin is equipped with grain augers which can kill or dismember.

Keep clear of all augers and never enter this bin unless all power is disconnected and locked out.

**FAILURE TO DO SO WILL RESULT IN SERIOUS INJURY OR DEATH.**

GSI Group Inc. 217-226-4421

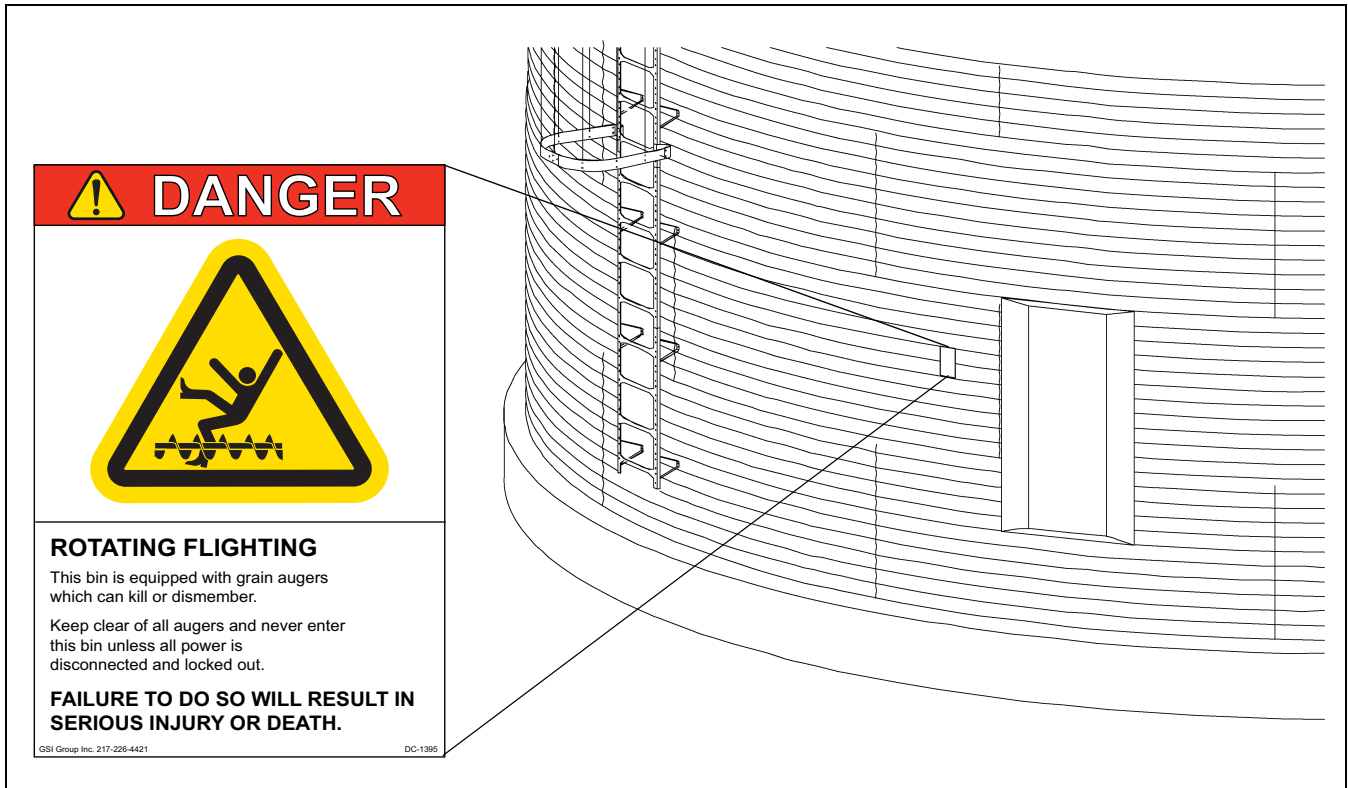
DC-1395

8

### 3. Safety Decals

- A. DANGER Sign No. DC-1395 was supplied with your bin unloading equipment. This safety sign should be applied to the side of the bin near the bin opening, so it will be viewed by people entering into the bin storage building. Do not cover any safety signs or any other signs that are already there.
- B. If the safety sign location suggested is not in full view because of equipment modifications, other equipment in the area or any reason, then locate the safety sign in a more suitable location.
- C. Be certain the surface is clean, dry and free of dirt and oil. Peel paper backing from decals and stick into place. The adhesive backing will bond on contact.

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



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

Order SAFETY SIGN NO. DC-1395

## Attaching Vertical to Bin

1. First, slide out enough bin unload flight (A) to connect it to the connecting stub (D).
2. Attach the bin unloading flight (A) and the horizontal flight (B) to the connecting stub (D) using two (2) 3/8" x 2" hex head cap screws for 6", two (2) 7/16" x 2-1/2" hex head cap screws for 8" or two (2) 1/2" x 3" hex head cap screws for 10" with lock nuts. *(See Chart.)* (See *Chart on Page 23* for proper bin unloading flight.)

Connecting Stub Bolts	
6"	Use Two (2) 3/8" x 2" Bolts
8"	Use Two (2) 7/16" x 2-1/2" Bolts
10"	Use Two (2) 1/2" x 3" Bolts

3. Slide bin unloading flight (A) into unloading tube. With vertical auger in upright position, attach flanges (C) together using 5/16" x 3/4" bolts with hex nuts. *(See Figure 4A below and Figure 4B on Page 16.)*
4. Adjust stands (E) so they hold the weight of the vertical auger. *(See Figure 4A.)*

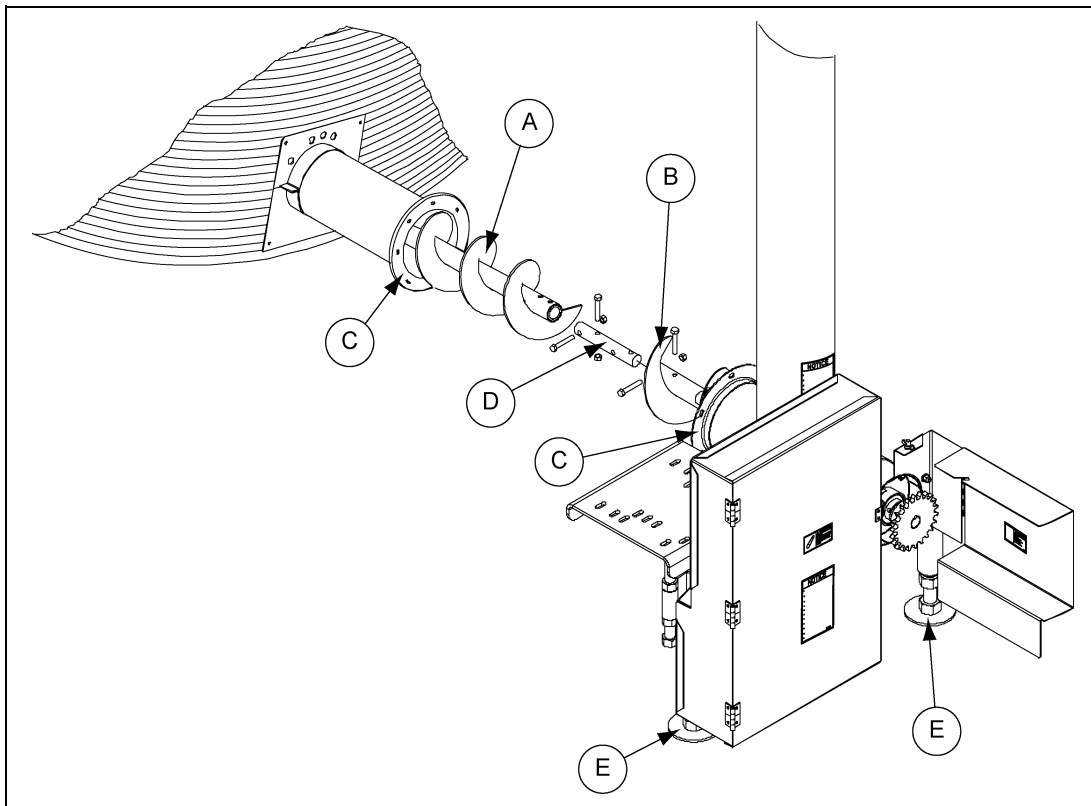


Figure 4A 8" Shown

Ref #	Description
A	Unload Flight
B	Horizontal Flight
C	Flange
D	Connecting Stub
E	Stands

## 4. Assembly Instructions

### Attaching Vertical to Bin (Continued)

5. Using the same U-bolts (M) and nuts (R), attach ears and half band (F) to vertical tube at the same. For maximum stability, locate the bands on the upper half of the tube. (See Figure 4B.)
6. Bolt telescoping tubes (L) to the ears (O) using two (2) 3/8" x 1" bolts (N) and nylock nuts (P). (See Figure 4B.)

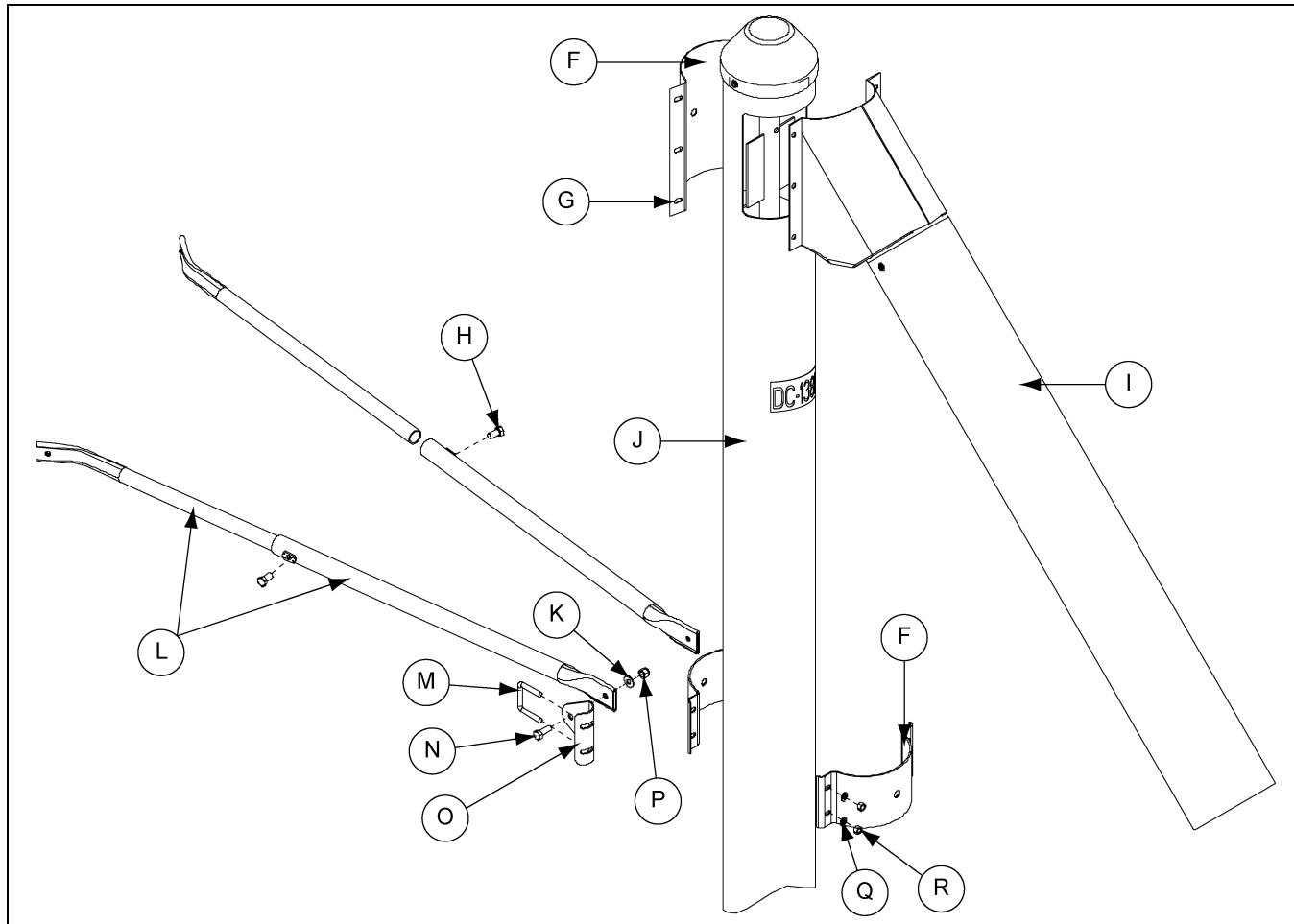


Figure 4B

Ref #	Description
F	Half Band
G	Bolt, HHCS 5/16" x 1-3/4"
H	Bolt, HHCS 3/8" x 3/4"
I	45° Spout
J	Vertical Auger
K	3/8" Flat Washer
L	Telescoping Tube

Ref #	Description
M	U-Bolt
N	Bolt, HHCS 3/8" x 1"
O	Ears
P	3/8" Nylock Nut
Q	5/16" Split Lock Washer
R	5/16" Hex Nut

7. Secure telescoping tube (L) inside of tube at appropriate length with 3/8" x 3/4" hex head set screws (H).
8. Attach telescoping tube (L) to bin structure. (Hardware not included.)
9. Assemble spout (I) to vertical auger (J) over discharge opening with half band (F) using 5/16" x 1-3/4" hex head cap screws (G) and lock nuts.



## Electric Motor Drive

1. Assemble a 3/4" nut onto threaded adjustment rod. Then thread adjustment rod into the 3/4" nut that is welded onto the sleeve of vertical. (See Figure 4C.)

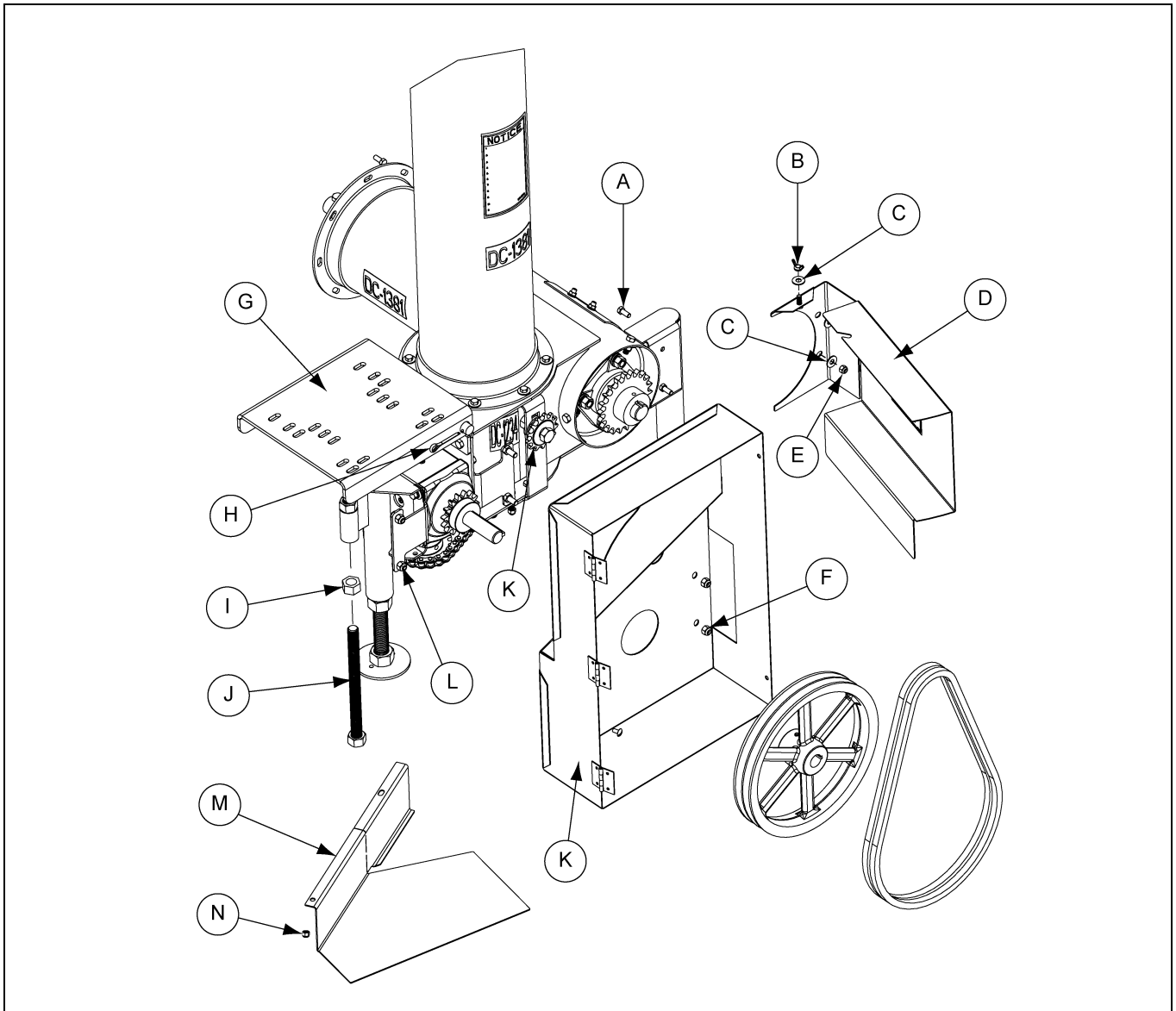


Figure 4C 6" and 8" Vertical

2. Slide motor mount plate (G) onto pivot rod weldment of vertical. Install cotter pin (H) to hold motor mount plate (G) place.
3. Attach belt guard (K) to belt guard mounting brackets with four (4) 3/8" x 3/4" long HHCS (L) and nylon lock nuts.
4. **6" and 8"**: Attach hinged side chain guard to vertical with two (2) 5/16" x 3/4" long HHCS (A), flat washers (C) and nylon lock nuts (E). Hold chain guard closed by using a 5/16" flat washer (C) and wing nut (B). (See Figure 4C.)  
**10"**: Attach hinged side chain guard to vertical with two (2) 5/16" x 3/4" long HHCS (A), flat washers (C) and nylock nuts (E). Hold chain guard by attaching it to the lower chain guard using a 5/16" nylock nut (E). (See Figure 4D on Page 18.)

## 4. Assembly Instructions

### Electric Motor Drive (Continued)

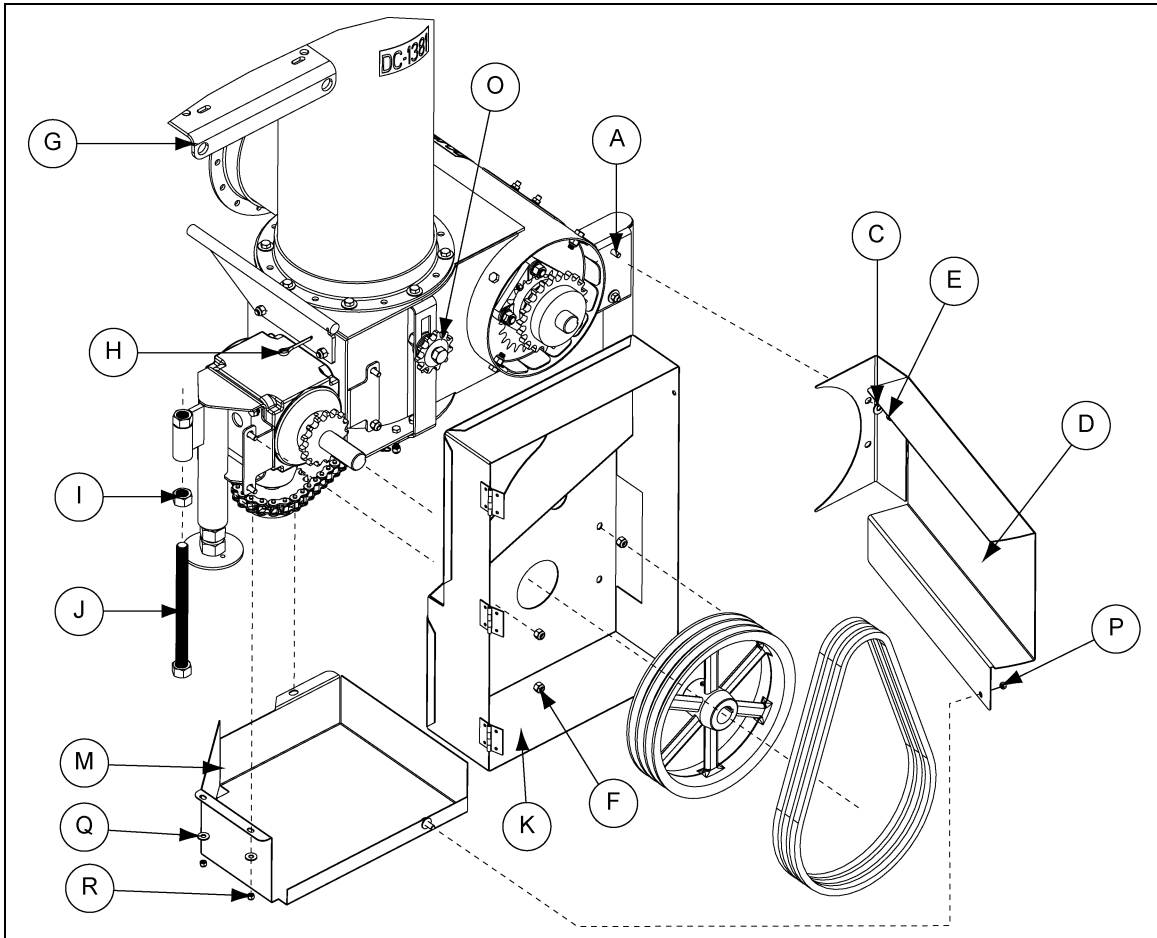


Figure 4D 10" Vertical

Ref #	Description	Ref #	Description
A	Bolt, HHCS 5/16" x 3/4"	J	Adjustment Rod
B	5/16" Wing Nut	K	Belt Guard
C	5/16" Flat Washer	L	Bolt, HHCS 3/8" x 3/4"
D	Hinged Side Chain Guard	M	Lower Chain Guard
E	5/16" Nylock Nut	N	5/16" x 3/4" HHCS and Nylock Nut
F	3/8" Nylock Nut	O	Idler Sprocket
G	Motor Mount Plate	P	5/16" Lock Nut
H	3/16" x 1-1/2" Cotter Pin	Q	1/4" Flat Washer
I	3/4" Hex Nut	R	1/4" Nylock Nut

## Electric Motor Drive (Continued)

5. **6" and 8"**: Bolt lower chain guard (M) to underside of vertical using two (2) 5/16" x 3/4" long HHCS (A) and nylon lock nuts (E). *(See Figure 4C on Page 17.)*  
**10"**: Bolt lower chain guard (M) to underside of vertical using one 3/8" x 1" HHCS (S) flat washer (V) and 3/8" nylock nut (F) through the flange with one hole. On the flange with two (2) holes, use two (2) 1/4" x 3/4" HHCS (T), flat washers (Q) and nylock nuts (R). *(See Figure 4D on Page 18 and Figure 4E.)*
6. Assemble chain onto sprockets. Tighten the chain using the idler sprocket, which should be attached with two (2) 5/8" x 2" HHCS (Z), three (3) flat washers (Y), one split lock washer (X) and nylock nut (W). (The chain should run underneath idler sprocket (O).) *(See Figure 4F on Page 20.)*
7. Install a 4-1/2" O.D. pulley for 6" and 8" models on motor and for 10" models use a 4" O.D. pulley on motor. *(This pulley not furnished.)* Install 12" pulley on gearbox shaft as close to the sprocket as possible that is already mounted there. Using the 1/4" square key, which should already be in place, tighten set screws in pulleys. *(See Figure 4C on Page 17 and Figure 4D on Page 18.)*
8. Install belts onto pulleys and tighten by using the adjustment rod to raise motor mount plate. Once the belts are tight, use locking nut to secure adjustment rod in place.

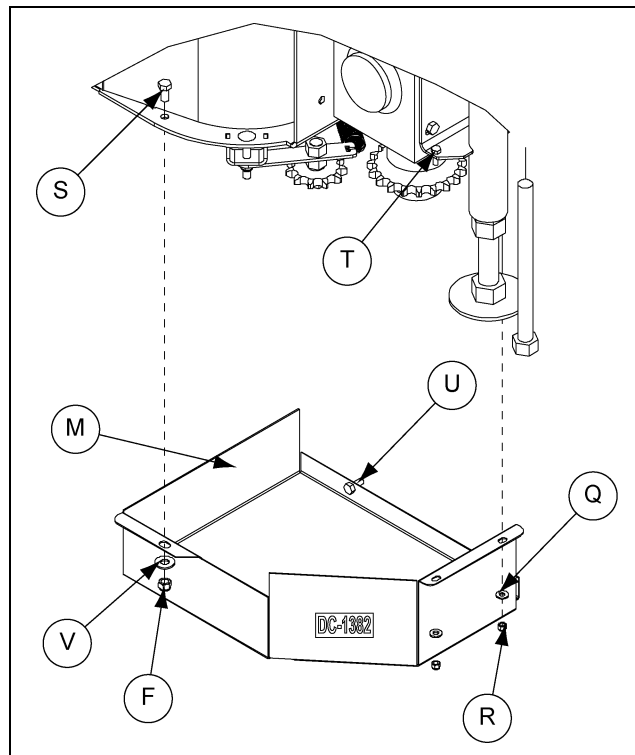


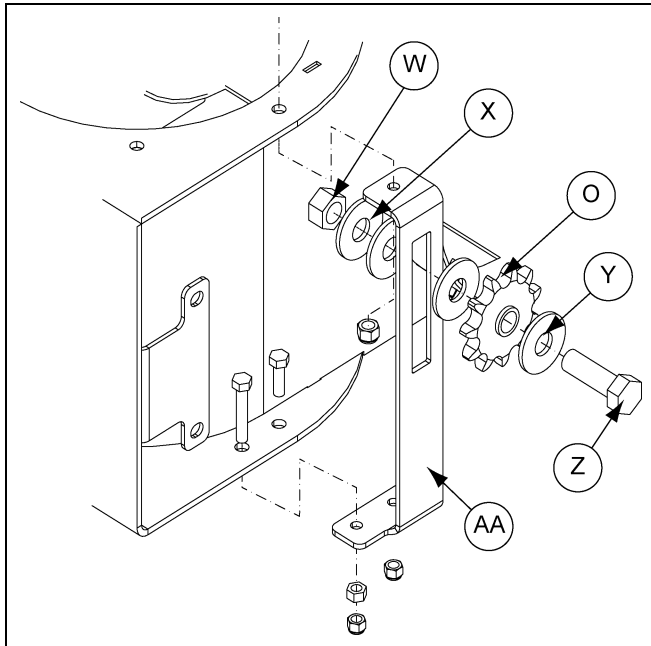
Figure 4E Lower Chain Guard for 10"

Ref #	Description
F	3/8" Nylock Nut
M	Lower Chain Guard
O	Idler Sprocket
Q	1/4" Flat Washer
R	1/4" Nylock Nut

Ref #	Description
S	Bolt, HHCS 3/8" x 1"
T	Bolt, HHCS 1/4" x 3/4"
U	5/16" x 3/4" Long HHCS and Nylon Lock Nut
V	3/8" Flat Washer
W	5/8" Nylock Nut

## 4. Assembly Instructions

### Electric Motor Drive (Continued)



Ref #	Description
X	5/8" Split Lock Washer
Y	5/8" Flat Washer (3)
Z	Bolt, HHCS 5/8" x 2"
AA	Chain Tightener Mount

Figure 4F Idler Sprocket

### Vent Plug

1. Remove solid plug that was installed for shipping purposes.
2. Install the 1/8" x 1/4" pipe bushing (B) followed by the 1/8"-27 7.5 PSI-15 PSI vent plug (A).  
(See Figure 4G.)

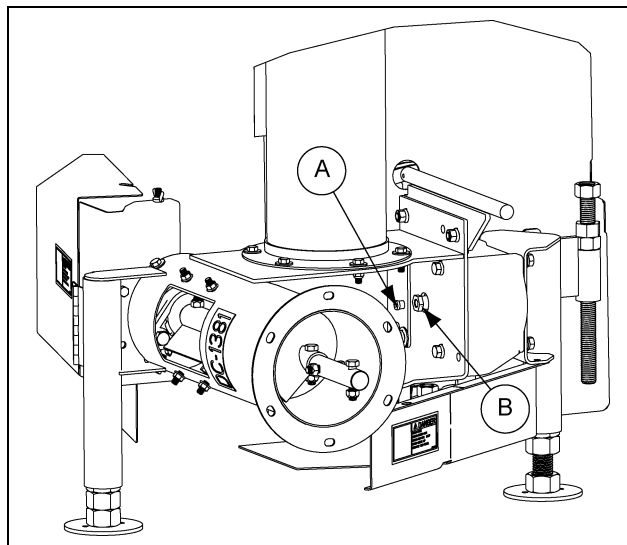


Figure 4G Vent Plug

Ref #	Part #	Description
A	GK2697	Vent Plug 1/8"-27 7.5 PSI-15 PSI
B	GK4470	Pipe Bushing 1/8" x 1/4"

## Inspect the Auger

After delivery of the new auger and/or completion of assembly and before each use, inspection of the machine is mandatory. This inspection should include, but not be limited to:

1. Check to see that all guards listed in the assembly instructions are secured in place and functional.
2. Check all safety signs and replace any that are worn, missing or illegible. They are listed in the front in the decal section *on Pages 12 and 13* of this manual. Safety signs may be obtained from the dealer or ordered from the factory.
3. Check to see if all the fasteners are tight.

## Designate a Work Area

Designate a large perimeter around the auger for a work area.



***Under no circumstances should persons not involved in the operation be allowed to trespass into the work area.***



***It shall be the duty of all operators to see that children and/or other persons stay out of the work area. If anyone not involved in the actual operation trespasses into the work area, it shall result in an immediate shut down by the operator.***



***It shall be the responsibility of all operators to see that the work area has secure footing, is clean and free of all debris and tools which might cause accidental tripping and/or falling.***

## Operating Procedures

During the operation of the auger, one person shall be in a position to monitor the operation. Inspect the drive before adding power and know how to shut down in an emergency. *(See Page 22.)* Visually inspect the auger periodically during operation. For efficient and safe operation, be aware of all the adjustments and checks which should be performed.



***Make certain everyone is clear before operating equipment.***



***The operator shall be aware of any unusual vibrations, noises and the loosening of any fasteners.***



***Keep all safety shields and devices in place.***



***Keep hands, feet and clothing away from moving parts***



***Shut off and lock out power to adjust, service or clean.***

## 5. Operation Procedures

The auger may be operated at speeds from 500 RPM-750 RPM. Operating speeds of 650 RPM-730 RPM are recommended to achieve rated capacity. Auger flight speed in excess of recommended speed causes excessive wear. Do not attempt full load operation at speeds below 350 RPM as high torque requirements may damage the auger.

### Break-In Period



**Before operating the unit, add #90 weight non-foaming oil to the gearbox until it reaches the level check plug in the side of the gearbox.**

Any screw conveyor when it is new or after it sets idle for a season should go through a “break-in” period. The auger should be run at partial capacity until several hundred bushels of grain have been augered. This polishes the flighting assembly and tube. Once this is accomplished, the auger can be operated at full capacity. The auger should not be operated empty except at start-up and during clean-out.

### PTO Drive

Only use a tractor with 540 RPM power take-off. If the tractor output PTO shaft is operated at 540 RPM, the auger will have a 540 RPM auger flight speed.

**NOTE:** *The PTO driveline furnished with the auger is equipped with a “SPRING-LOCK” coupler at the tractor end. This type coupler is spring loaded and will fit the standard 1-3/8" x 6" spline PTO output shaft from a tractor.*

The retaining balls of the coupler lock into the ring groove of the tractor PTO output shaft to prevent inadvertent detachment. The PTO driveline is a pin stop-type; that is, the two (2) telescoping sections will not separate. It is a good practice to operate the PTO driveline in as short a configuration as possible and keep in line with the tractor as much as possible during operation.

Double check the following before adding power:



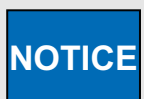
**Before starting the tractor, be certain power to PTO is OFF.**



**Be certain that the PTO driveline is securely attached to the auger and the tractor.**



**Use a PTO driveline with a rotating shield in good working order that can be turned freely on the shaft.**



**Align PTO driveline with tractor.**

Engage PTO at a slow RPM to minimize shock loads. Then work up RPM to recommend speed.

Never operate the auger empty for any length of time, as excessive wear will result. If at all possible, do not stop or start the auger under load, especially before the flight and tube have become well polished, as this may cause the auger to “freeze-up”. (See break-in period [above](#).)

## To Start Auger

1. Before starting the tractor, be certain power to PTO is OFF.
2. Start tractor.
3. Engage PTO at a slow RPM to minimize shock loads. Then work up RPM to recommended speed.

## To Stop Auger

1. Let auger empty of grain before stopping.
2. Disengage PTO and lock out.

## Electric Motor Drive

Use a 1750 RPM motor with HP as suggested in the [Chart below](#). Electric motors and controls shall be installed by a qualified electrician and must meet the standards set by the National Electrical Code and all local and state codes. Use a 4-1/2" motor pulley (not furnished) for 650 RPM flight speed (6" and 8").

**Use a 4" motor pulley for 580 RPM flight speed (10").**

A magnetic starter should be used to protect the 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 one with manual reset.



**Reset and motor starting controls must be located so that the operator has full view of the entire operation. A main power disconnect switch capable of being locked only in the OFF position shall be provided. This shall be locked whenever servicing or adjusting the auger.**

The horsepower recommendations are based on clean, dry shelled corn or wheat. High moisture grain (above 15%) will require greater power. The maximum possible capacity will be less with high moisture grain than with dry grain.

### Horizontal Flight and Horsepower Required

Bin Diameter	Horizontal Flight Length			Vertical Horsepower		
	6"	8"	10"	6"	8"	10"
14'-16'	8'-9"	8'-10"	-	3"	7-1/2"	-
17'-19'	10'-9"	10'-10"	-	3"	7-1/2"	-
20'-22'	11'-9"	11'-10"	-	5"	7-1/2"	-
23'-25'	13'-3"	13'-4"	13'-6"	5"	7-1/2"	10"
26'-28'	14'-9"	14'-10"	15'-0"	5"	7-1/2"	10"
29'-31'	16'-3"	16'-4"	16'-6"	5"	7-1/2"	10"
32'-34'	18'-3"	18'-4"	18'-0"	7-1/2"	10"	15"
35'-37'	19'-3"	19'-4"	19'-6"	7-1/2"	10"	15"

**NOTE:** For higher moisture grain (up to 25%) the next larger motor may be used as a maximum.



**Disconnect power before resetting motor overloads. Make certain electric motor is grounded.**

Never operate the auger empty for any length of time as excessive wear will result. If at all possible, do not stop or start the auger under load, especially before the flight and tube become well polished, as this may cause the auger to "freeze-up". (See break-in information [on Page 22](#).)

## 5. Operation Procedures

### Check the Following before Adding Power

1. Double check to make sure the guards are secured in place and functional.

### To Start Auger

1. Start electric motor before conveying grain.

### To Stop Auger

1. Let auger empty of grain before stopping.
2. Shut off electric motor and lock out.

### Normal Shut Down

Make certain that the auger is empty before stopping the unit. Before the operator leaves the work area, the power source shall be locked out. (*See Lock Out below.*)

### Intermittent Operation Shut Down

When an auger is stopped and restarted under full load, it may result in damage to the auger. Therefore, if intermittent operation is to be carried out, it is advisable to reduce the load level. When kept from absolute filling, auger start-up is easier and operation is more efficient.

### Emergency Shut Down

Should the auger be immediately shut down under load, first disconnect and lock out all power source. Clear as much grain from the auger as you can using the clean-out doors. Never attempt to restart auger when full.



***Whenever you must service or adjust the equipment, make sure to stop motor and lock out the power source.***

**NOTE:** *Starting the unit under load may result in damage to the auger. Such damage is considered abuse of the equipment. When as much grain as possible has been cleared, reconnect power source and clear auger gradually.*

### Lock Out



***If the operator must leave the work area or whenever servicing or adjusting, the unloading auger must be stopped and the power source locked out. Precautions should be made to prevent anyone from operating the auger when the operator is absent from the work area.***

PTO Drive: Remove ignition key or coil wire from power source. (If this is impossible, remove the PTO driveline from the work area.)

Electric Motor Drive: Use a main disconnect switch capable of being locked only in the OFF position.



## Capacity

The results or capacities of screw conveyors or augers can vary greatly under diverse conditions. Different materials, moisture content, amounts of foreign matter, angle of operation, methods of feeding and speed all play a role in performance of the auger. Capacities listing in the *Chart below* will be achieved when augering reasonably dry grain. Maximum possible capacity will be less with high moisture grain (above 15%) than with dry grain.

Unit	Capacity BPH
6"	850-1250
8"	2000-2500
10"	3250-3750

## Clean-Up

1. Check to see that all guards listed in the assembly instructions are in place and secured and functional.
2. Check all safety decals and replaced any that are worn, missing or illegible. The safety decals are listed *on Pages 12 and 13*. Safety decals may be obtained free of charge from the dealer or ordered from the factory.
3. Check to see that all fasteners are securely in place.

## Storage Preparation

1. Close all wells to discharge 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.

## Lubrication and Maintenance

The flange bearing on the head and tail ends of the auger should be lubricated at frequent intervals.

Check belt tension on motor drive belts for electric drive units.

Lubricate and check drive chain at frequent intervals. Adjust chain tension, if necessary.

Check to make sure all guards are in place.



***Never clean, adjust or lubricate a machine that is in operation.***

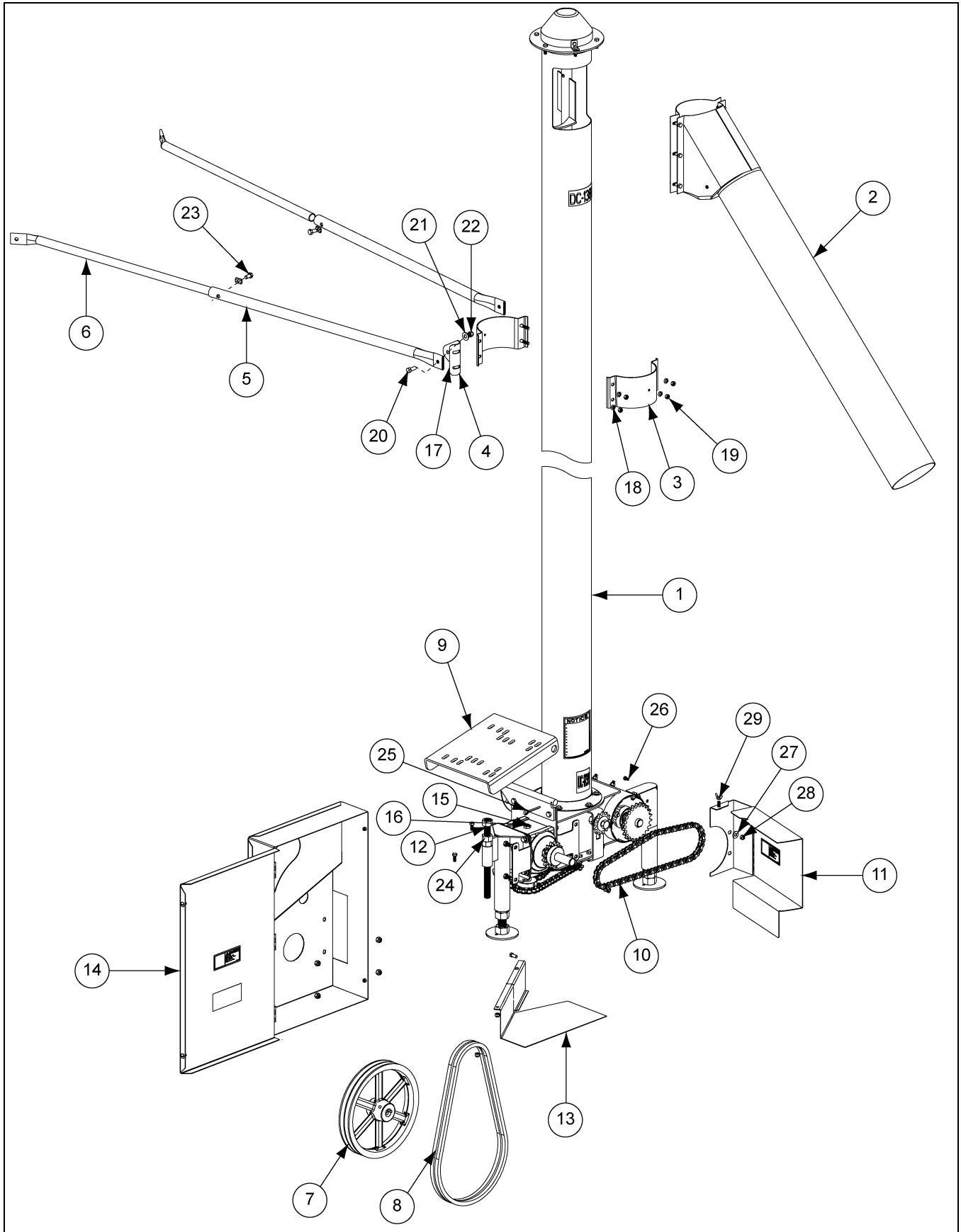
## 6. Troubleshooting

### Troubleshooting Guide

Problem	Possible Cause	Solution
<b>The auger is vibrating.</b>	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.
<b>Capacity is too low.</b>	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.
<b>The auger plugs.</b>	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 too small or wired incorrectly.	4. Check wiring or consider using the next larger size motor.

1. 6" Catalog Level Breakdown - *(See Pages 28-29.)*
2. 6" Spout with Extension - *(See Pages 30.)*
3. 6" Spout with Band - *(See Pages 31.)*
4. 6" Tube and Flight Assembly - *(See Pages 32-33.)*
5. 8" Catalog Level Breakdown - *(See Pages 34-35.)*
6. 8" Spout with Band and Extension - *(See Pages 36.)*
7. 8" Tube and Flight Assembly - *(See Pages 38-39.)*
8. 10" Catalog Level Breakdown - *(See Pages 40-41.)*
9. 10" Spout with Extension - *(See Pages 42.)*
10. 10" Spout with Band - *(See Pages 43.)*
11. 10" Tube and Flight Assembly - *(See Pages 44-45.)*

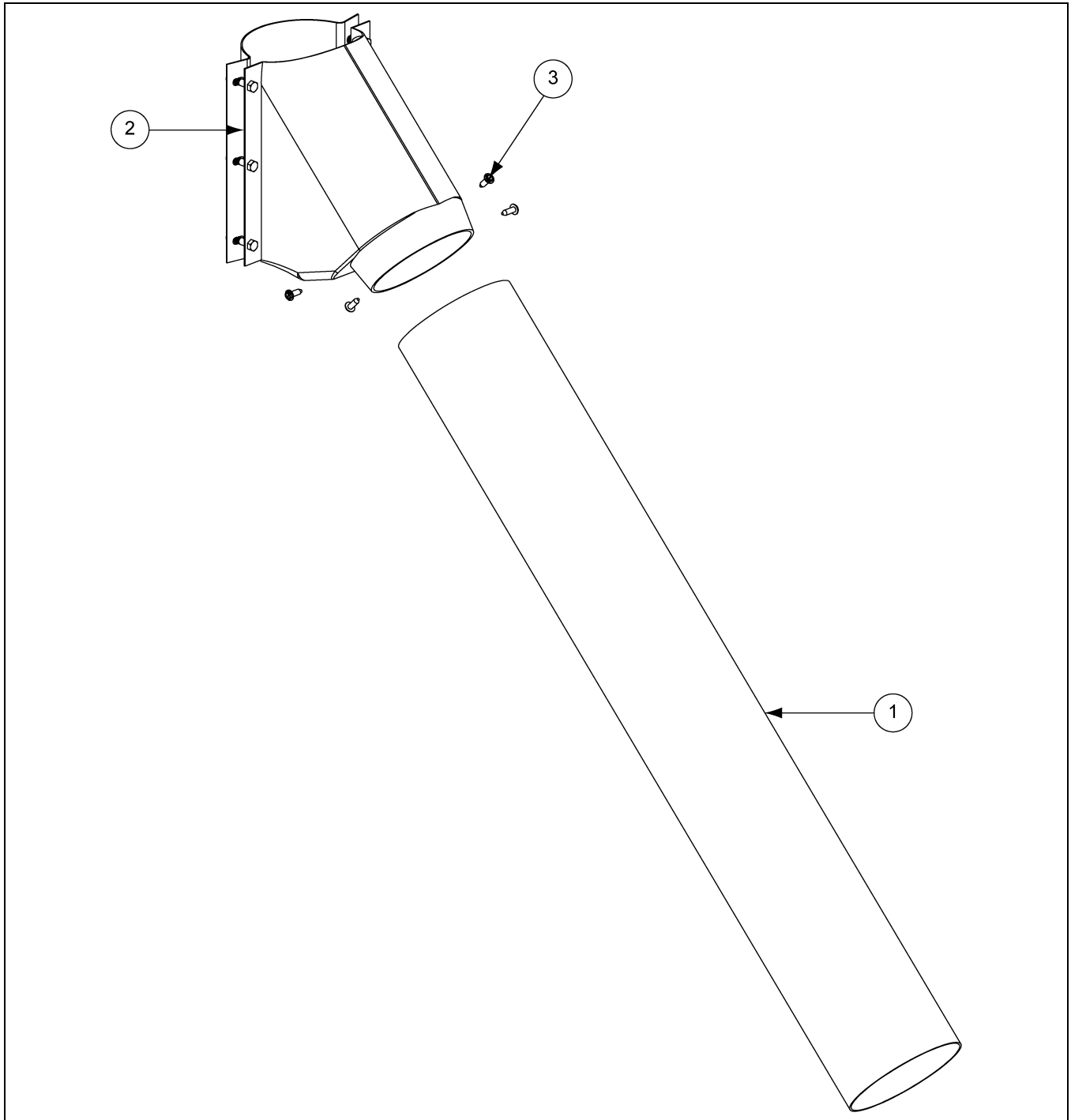
# 6" Catalog Level Breakdown



## 6" Catalog Level Breakdown Parts List

Ref #	Part #	Description
1	GK5093	6" Vertical Tube and Flight Assembly
2	GK1043	6" Vertical Auger Spout with Band
3	GK1122	Half Band 6" x 4" 12 Gauge Galvanized
4	GK1034	Adjustable Mounting Ear
5	GK1892	Telescoping Outer Leg
6	GK1891	Telescoping Inner Leg
7	GK1321	Sheave, 2 Grade, B Belt, 1" B, 12" O.D. - Aluminium
8	GC06680	V-Belt, BX-48
9	GK4907-Y	Motor Mount Plate
10	GK4914	Chain Roller #50 x 66 Pitch
11	GK4915	Horizontal Chain Guard
12	GK5726	Lead Screw: 3/4" x 10" ZN Weld
13	GK4931	Bottom Chain Guard
14	GK6471	Belt Guard
15	GK4470	1/8"-27 NPT x 1/4"-18 NPT Pipe Bushing
16	GK2697	1/8"-27 NPT Vent Plug, 7-1/2 - 15 PSI
17	S-7079	5/16"-18 x 1-3/4" U-Bolt
18	S-1147	5/16" Split Lock Washer Zinc
19	S-396	5/16"-18 Hex Nut YDP Grade 2
20	S-7469	Bolt, HHCS 3/8"-16 x 1" ZN Grade 5
21	S-248	3/8" Flat Washer YDP
22	S-7383	3/8"-16 Nylon Lock Nut
23	S-7105	Bolt, HHCS 3/8"-16 x 3/4" Grade 5
24	S-234	3/4"-10 Hex Nut Zinc Grade 5
25	S-8312	3/16" x 1-1/2" Cotter Pin Zinc
26	S-4275	Bolt, HHTC 5/16"-18 x 3/4" Zinc Grade 5
27	S-845	5/16" Flat Washer YDP Grade 2
28	S-7382	5/16"-18 Nylon Lock Nut Zinc Grade 5
29	S-4301	5/16"-18 Wing Nut Zinc Grade 2

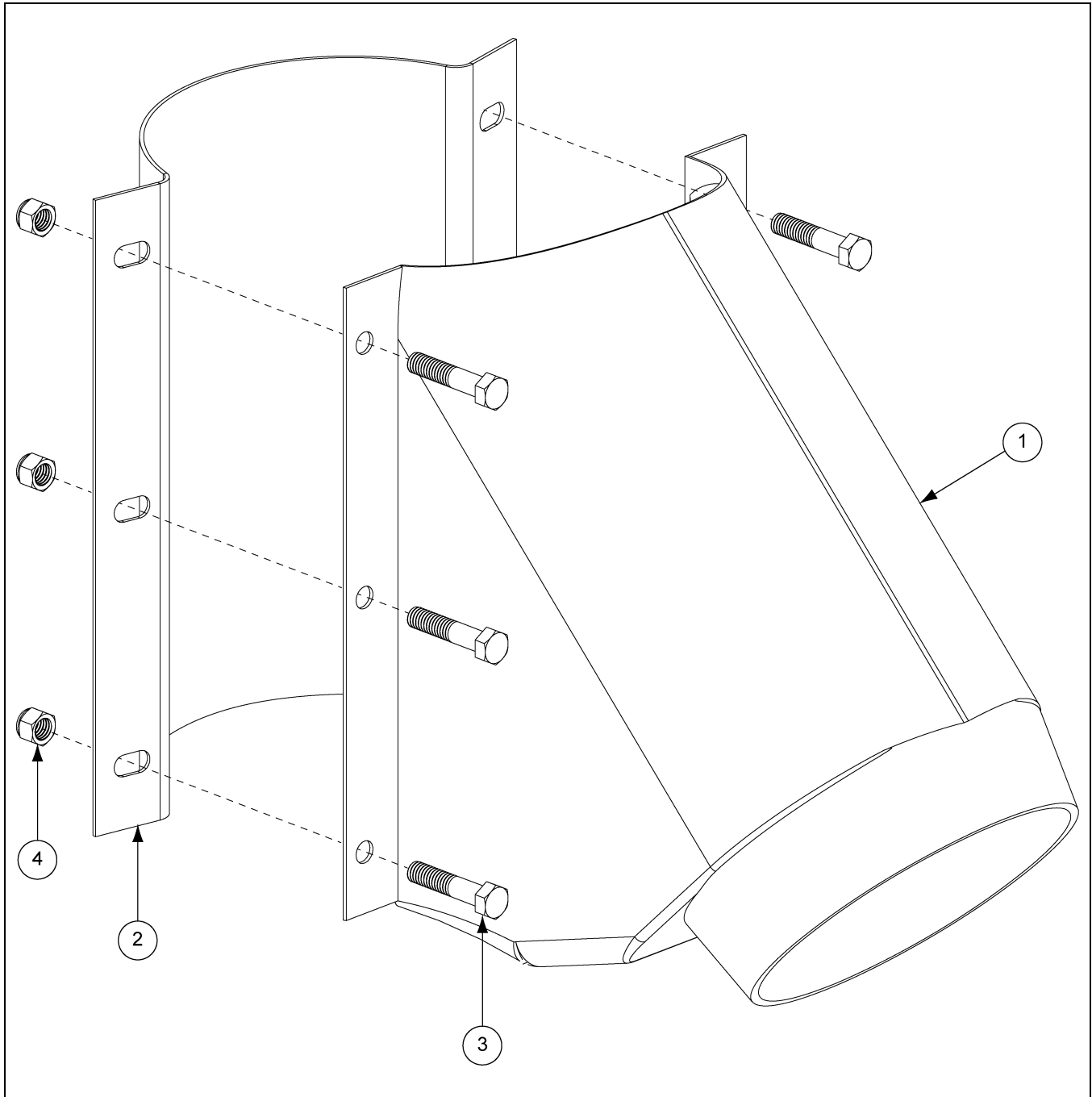
## 6" Spout with Extension



**6" Spout with Extension Parts List**

Ref #	Part #	Description
1	GK1124	6" x 42" 16 Gauge Galvanized Tube
2	GK2421	6" 45° Spout with Band
3	S-6497	1/4" x 3/4" Self-Tapping Screw Zinc

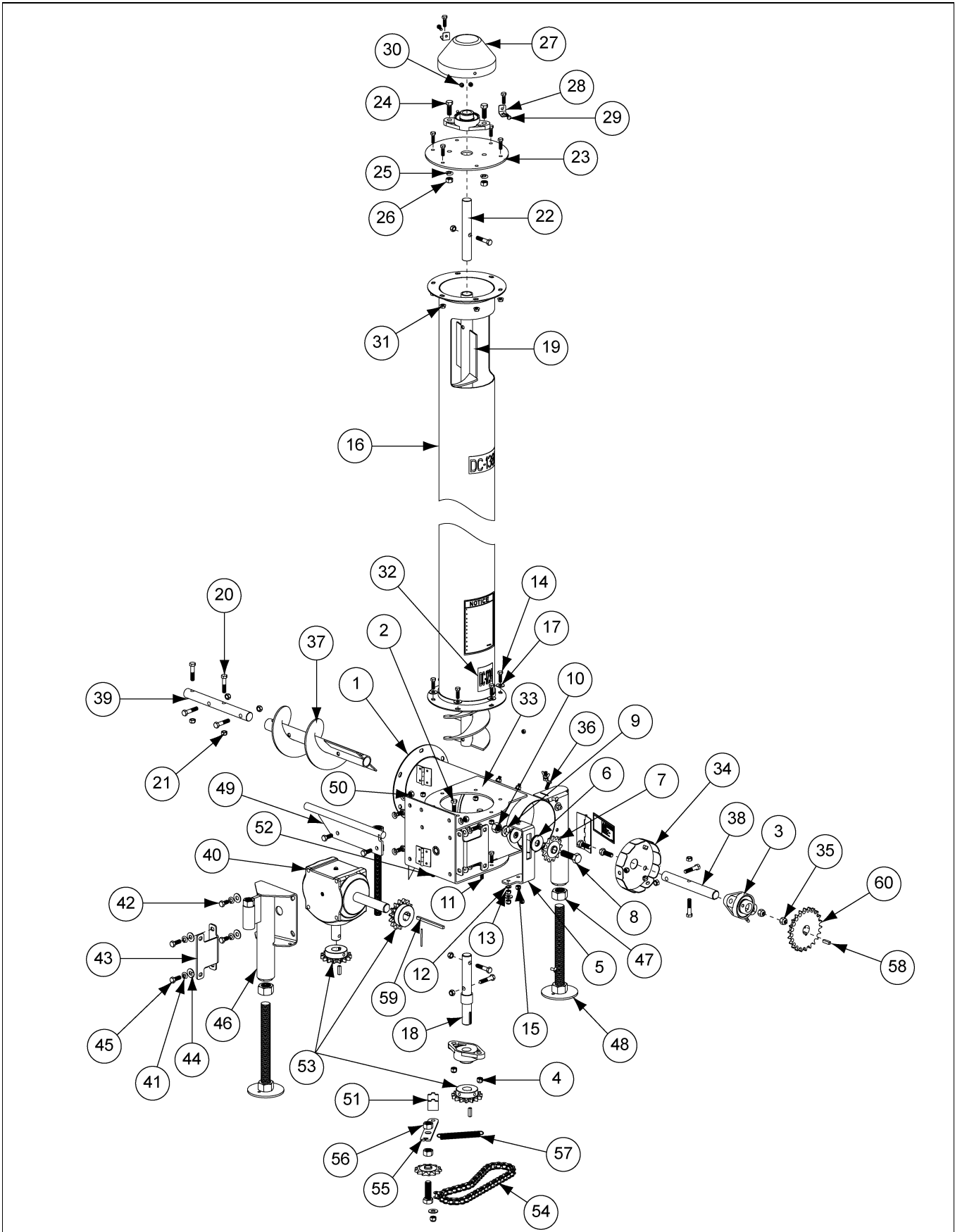
## 6" Spout with Band



### 6" Spout with Band Parts List

Ref #	Part #	Description
1	GK1123	6" 45° Spout
2	GK1125	6" x 10" 16 Gauge Half Band
3	S-2741	Bolt, HHCS 5/16"-18 x 1-1/2" Zinc Grade 5
4	S-7382	5/16"-18 Nylon Lock Nut Zinc Grade 5

# 6" Tube and Flight Assembly

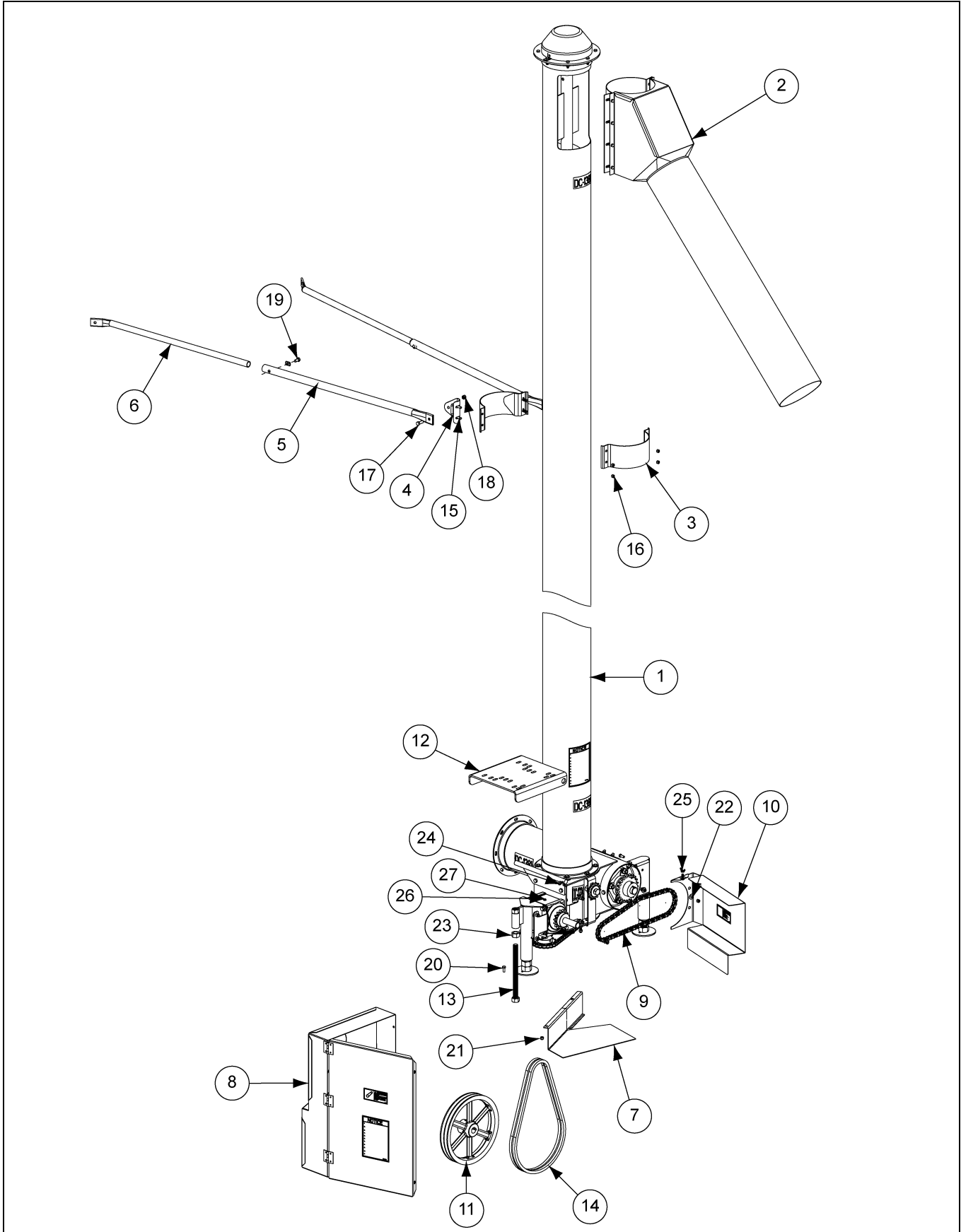




## 6" Tube and Flight Assembly Parts List

Ref #	Part #	Description	Ref #	Part #	Description
1	GK4905-BS	6" Vertical Cross Welded Assembly - Bin Silver	31	S-3611	Flange Nut 5/16"-18 YDP Grade 2
2	S-2071	Bolt, HHCS 3/8"-16 x 1-1/4" ZN Grade 5	32	DC-1234	Decal, Caution 2-1/4" x 2-3/4"
3	GK1049	1" 2 Hole Flange Bearing with Lock Collar	33	DC-1381	Decal, Auger Danger 2" x 4-1/2"
4	S-7383	3/8"-16 Nylon Lock Nut	34	GK4912	Horizontal Bearing Plate
5	GK4911	Chain Tightening Mount	35	S-8234	7/16"-14 Nylon Lock Nut Zinc Grade 2
6	S-858	Flat Washer 5/8" USS ZN	36	S-4275	Bolt, HHCS 5/16"-18 x 3/4" Zinc Grade 5
7	GK1701	#50 Idler Sprocket with Bearing, 13 Tooth, 5/8" Bore	37	GK2180	Horizontal Flight Welded Assembly
8	S-8399	Bolt, HHTB 5/8"-11 x 2" Zinc Grade 5	38	GK1116	1" O.D. x 7-7/8" Drive Shaft
9	S-3208	5/8" Split Lock Washer Zinc	39	GK1351	1" O.D. x 9-19/32" Connecting Shaft
10	S-4110	5/8"-11 Hex Nut Zinc Grade 5	40	GK10071	Gearbox, 1:1
11	S-7149	5/16"-18 x 1-3/4" HHTB Zinc Grade 5	41	S-1054	3/8" Split Lock Washer Zinc
12	S-1147	5/16" Split Lock Washer Zinc	42	S-7105	Bolt, HHCS 3/8"-16 x 3/4" Grade 5
13	S-396	5/16"-18 Hex Nut YDP Grade 2	43	GK4913	Belt Guard Mount Bracket
14	S-1196	5/16"-18 x 1" HHCS Zinc Grade 5	44	S-248	3/8" Flat Washer YDP
15	S-7382	5/16"-18 Nylon Lock Nut Zinc Grade 5	45	S-7469	Bolt, 3/8"-16 x 1" Zinc Grade 5
16	GK5068	Vertical Tube	46	GK4910-BS	Support Stand - Bin Silver
17	S-845	5/16" Flat Washer YDP Grade 2	47	S-240	1"-8 Hex Nut Zinc Grade 5
18	GK4904	1" O.D. x 8-1/16" Drive Stub	48	GK4908-BS	Support Foot - Bin Silver
19	GK4903	Vertical Flight Welded Assembly	49	GK4906-BS	Motor Mount Plate Pivot - Bin Silver
20	S-3727	3/8"-16 x 1-3/4" HHCS YDP Grade 8	50	S-456	3/8"-16 Hex Nut YDP Grade 5
21	S-8251	3/8"-16 Stover Nut Zinc Grade C	51	GK4917	Tension Arm Mount
22	GK1117	1" O.D. x 7" Intake Shaft	52	S-6995	3/8"-16 x 2-1/2" Carriage Bolt Zinc Grade 5
23	GK7929-BS	Vertical Bearing Plate - Bin Silver	53	GK1014	#50 Sprocket, 15 Tooth, 1" Bore
24	S-3886	Bolt, HHCS 7/16"-14 x 1-1/4" Zinc Grade 5	54	GK7867	#50 Roller Chain, 41 Pitch with Connecting Link
25	S-7014	7/16" Split Lock Washer Zinc	55	GK4918	Idler Tension Arm
26	S-7332	7/16"-14 Hex Nut YDP Grade 5	56	S-6494	5/8"-11 Deformed Lock Nut Zinc Grade 5
27	GK1115-Y	Vertical Cap	57	GK1704	5" x 1/16" Pitch Return Spring Zinc
28	GC12223	Cap Bracket	58	S-9168	Square Key 1/4" x 1"
29	S-1429	Bolt, HHCS 1/4"-20 x 3/4" Zinc Grade 2	59	S-8679	Square Key 1/4" x 1/4" x 4" Long
30	S-7025	1/4"-20 Nylon Lock Nut	60	GK1110	#50 Sprocket, 22 Tooth, 1" Bore

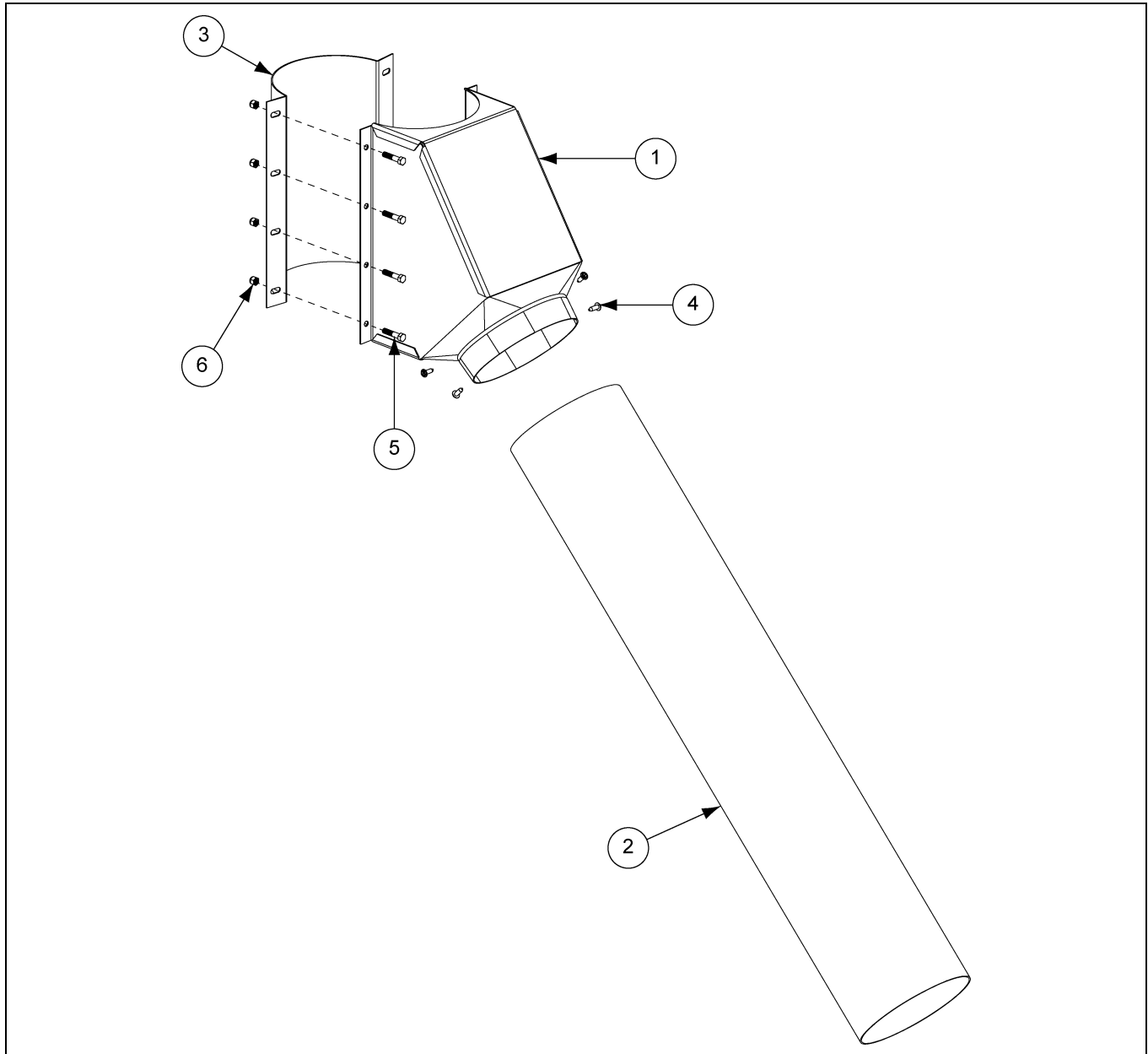
# 8" Catalog Level Breakdown



## 8" Catalog Level Breakdown Parts List

Ref #	Part #	Description
1	GK5210	8" Vertical Tube and Flight Assembly
2	GK1002	45° Spout with 3'-8" Extension
3	GK1059	4" 12 Gauge Half Band
4	GK1034	Adjustable Mounting Ear
5	GK1892	Telescoping Outer Leg
6	GK1891	Telescoping Inner Leg
7	GK4932	Bottom Chain Guard
8	GK6471	Belt Guard
9	GK1024	#50 Roller Chain, 69 Pitch with Connecting Link
10	GK4925	Horizontal Chain Guard
11	GK1321	2 Groove, 12" O.D., 1" I.D. Sheave
12	GK4907-Y	Motor Mount Plate
13	GK5726	Lead Screw: 3/4" x 10" ZN Weld
14	GC06637	V-Belt, BX-51
15	S-7079	5/16"-18 x 1-3/4" U-Bolt
16	S-396	5/16"-18 Hex Nut YDP Grade 2
17	S-7469	Bolt, 3/8"-16 x 1" Zinc Grade 5
18	S-7383	3/8"-16 Nylon Lock Nut
19	S-7105	Bolt, HHCS 3/8"-16 x 3/4" Grade 5
20	S-4275	Bolt, HHCS 5/16"-18 x 3/4" HHTB Zinc Grade 5
21	S-7382	5/16"-18 Nylon Lock Nut Zinc Grade 5
22	S-845	5/16" Flat Washer YDP Grade 2
23	S-234	3/4"-10 Hex Nut Zinc Grade 5
24	S-8312	3/16" x 1-1/2" Cotter Pin Zinc
25	S-4301	5/16"-18 Wing Nut Zinc Grade 2
26	GK4470	1/8"-27 NPT x 1/4"-18 NPT Pipe Bushing
27	GK2697	1/8"-27 NPT Vent Plug, 7-1/2 - 15 PSI

## 8" Spout with Band and Extension



**8" Spout with Band and Extension Parts List**

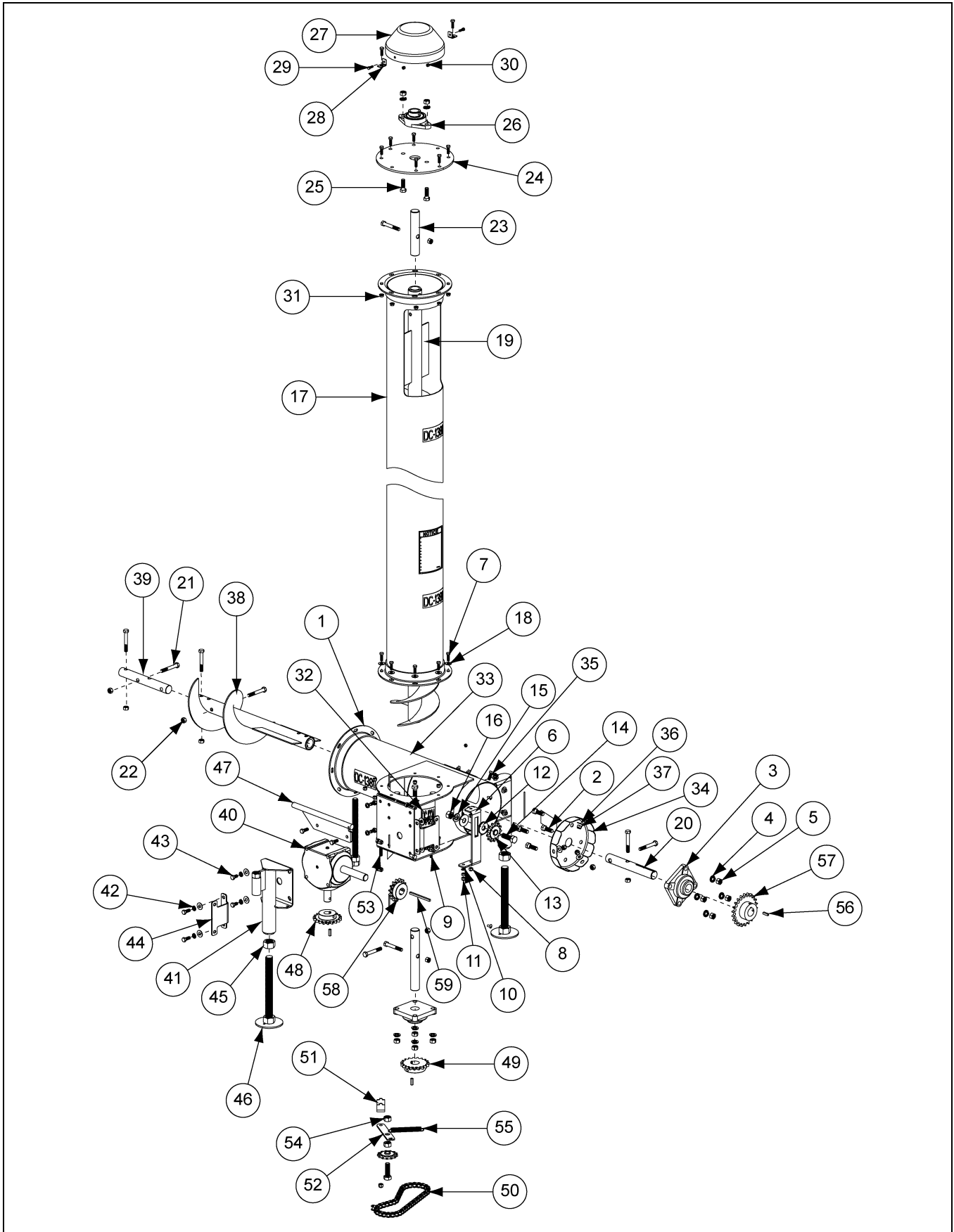
Ref #	Part #	Description
1	GK6509-BS	8" 45° Spout - Bin Silver
2	GK1039	8" x 44" 14 Gauge Galvanized Tube
3	GK1505	8" x 14" 14 Gauge Half Band
4	S-6497	1/4" x 3/4" Self-Tapping Screw Zinc
5	S-2741	Bolt, HHCS 5/16"-18 x 1-1/2" Zinc Grade 5
6	S-7382	5/16"-18 Nylon Lock Nut Zinc Grade 5

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# NOTES



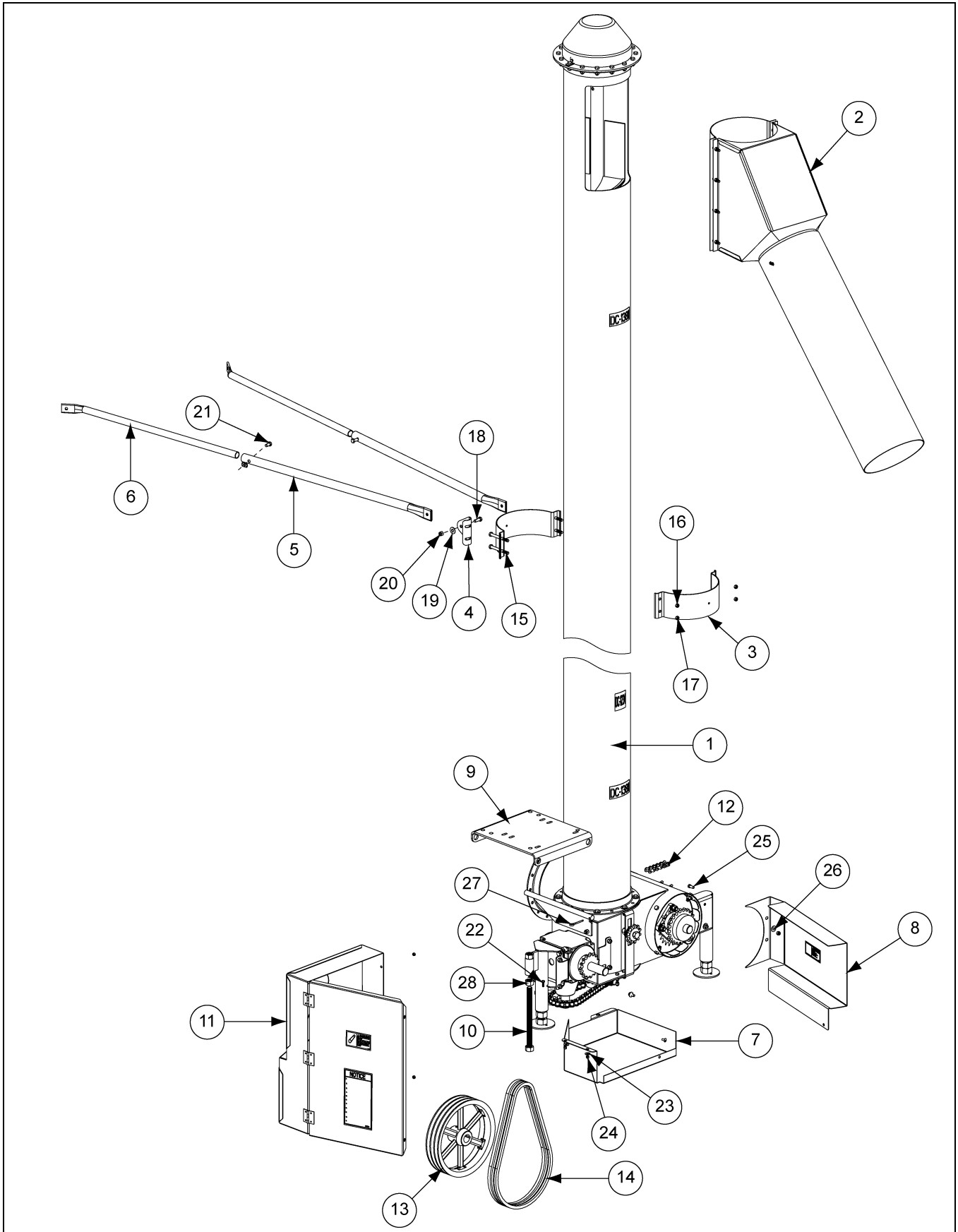
# 8" Tube and Flight Assembly



## 8" Tube and Flight Assembly Parts List

Ref #	Part #	Description	Ref #	Part #	Description
1	GK4922-BS	8" Vertical Cross Welded Assembly - Bin Silver	31	S-3611	Flange Nut 5/16"-18 YDP Grade 2
2	S-7528	Bolt, HHCS 1/2"-13 x 1-1/2" ZN Grade 2	32	DC-1234	Decal, Caution 2-1/4" x 2-3/4"
3	GK1017	1-1/4" 4 Hole Flange Bearing with Lock Collar	33	DC-1381	Decal, Auger Danger 2" x 1
4	S-236	1/2" Split Lock Washer Zinc	34	GK4924	Horizontal Bearing Plate
5	S-3729	1/2"-13 Hex Nut YDP Grade 5	35	S-7469	Bolt, HHCS 3/8"-16 x 1" Zinc Grade 5
6	GK4923	Chain Tightening Mount	36	S-248	3/8" Flat Washer YDP
7	S-1196	Bolt, HHCS 5/16"-18 x 1" Zinc Grade 5	37	S-7383	3/8"-16 Nylon Lock Nut
8	S-7382	5/16"-18 Nylon Lock Nut Zinc Grade 5	38	GK1005	Horizontal Flight Welded Assembly
9	S-7149	Bolt, HHTB 5/16"-18 x 1-3/4" Zinc Grade 5	39	GK1328	1-1/4" O.D. x 9-1/2" Connecting Shaft
10	S-1147	5/16" Split Lock Washer Zinc	40	GK10071	Gearbox, 1:1
11	S-396	5/16"-18 Hex Nut YDP Grade 2	41	GK4910-BS	Support Stand - Bin Silver
12	S-858	Flat Washer 5/8" USS ZN	42	S-1054	3/8" Split Lock Washer Zinc
13	GK1701	#50 Idler Sprocket with Bearing, 13 Tooth, 5/8" Bore	43	S-7105	Bolt, HHCS 3/8"-16 x 3/4" Grade 5
14	S-8399	5/8"-11 x 2" HHTB Zinc Grade 5	44	GK4913	Belt Guard Mount Bracket
15	S-3208	5/8" Split Lock Washer Zinc	45	S-240	1"-8 Hex Nut Zinc Grade 5
16	S-4110	5/8"-11 Hex Nut Zinc Grade 5	46	GK4908-BS	Support Foot - Bin Silver
17	GK5069	Vertical Tube	47	GK4906-BS	Motor Mount Plate Pivot - Bin Silver
18	S-845	5/16" Flat Washer YDP Grade 2	48	GK4927	#50 Sprocket, 19 Tooth, 1" Bore
19	GK4920	Vertical Flight Welded Assembly	49	GK4928	#50 Sprocket, 19 Tooth, 1-1/4" Bore
20	GK1018	1-1/4" O.D. x 9-1/4" Drive Shaft	50	GK4929	#50 Roller Chain, 45 Pitch with Connecting Link
21	S-8316	Bolt, HHCS 7/16"-14 x 3" YDP Grade 8	51	GK4917	Tension Arm Mount
22	S-8317	7/16"-14 Stover Nut Zinc Grade C	52	GK4918	Idler Tension Arm
23	GK1012	1-1/4" O.D. x 6-3/4" Intake Shaft	53	S-6995	3/8"-16 x 2-1/2" Carriage Bolt Zinc Grade 5
24	GK7401-BS	Vertical Bearing Plate - Bin Silver	54	S-6494	5/8"-11 Deformed Lock Nut Zinc Grade 5
25	S-8760	Bolt, HHCS 1/2"-13 x 1-1/2" Zinc Grade 5	55	GK1704	5" x 1/16" Pitch Return Spring Zinc
26	GK1330	1-1/4" 2 Hole Flange Bearing with Lock Collar	56	S-9168	Square Key 1/4" x 1"
27	GK1011-Y	Vertical Cap	57	GK1022	#50 Sprocket, 22 Tooth, 1-1/4" Bore
28	GC12223	Cap Bracket	58	GK1014	#50 Sprocket, 15 Tooth, 1" Bore
29	S-1429	Bolt, HHCS 1/4"-20 x 3/4" Zinc Grade 2	59	S-8679	Square Key 1/4" x 1/4" x 4" Long
30	S-7025	1/4"-20 Nylon Lock Nut			

# 10" Catalog Level Breakdown

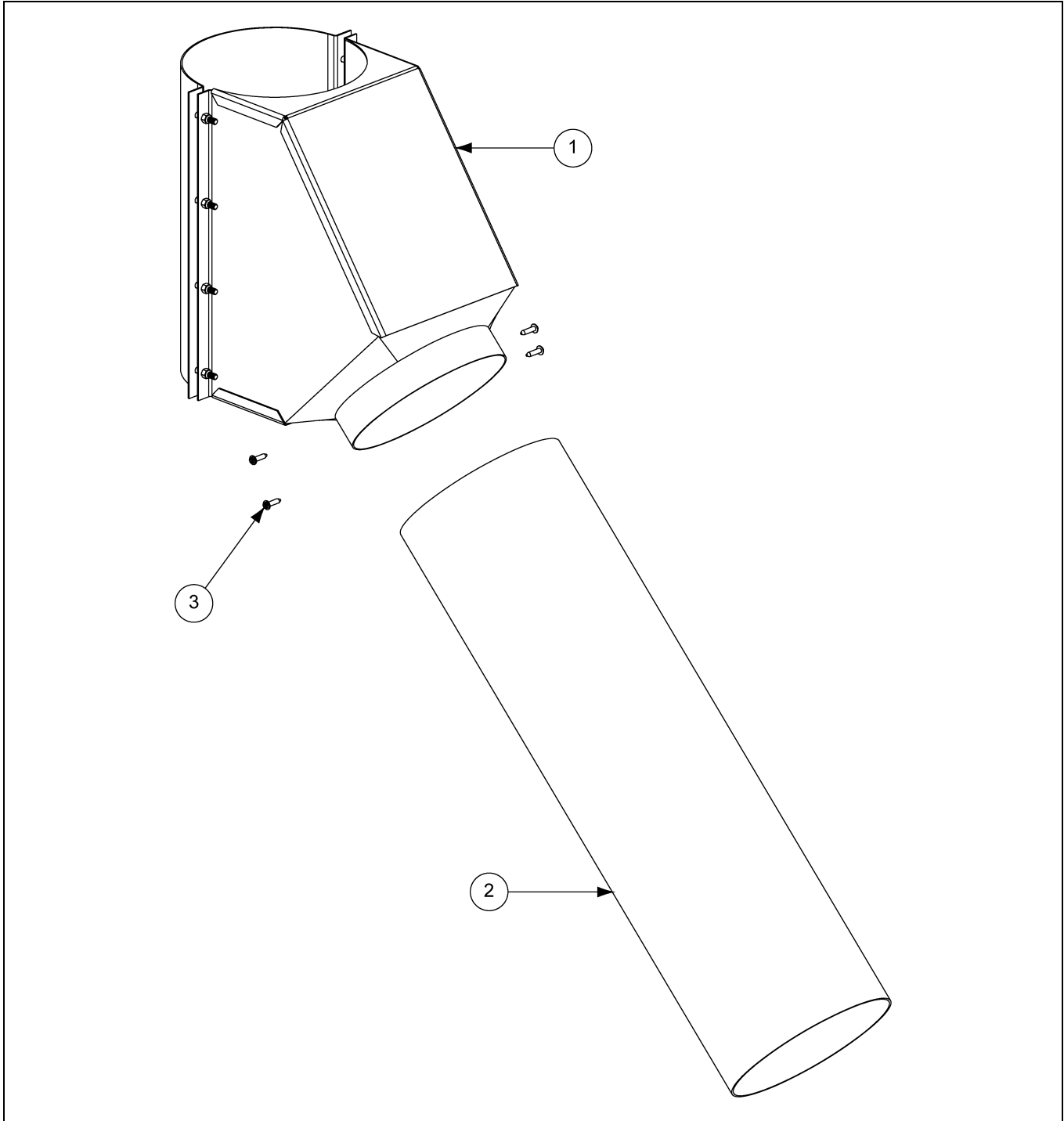




## 10" Catalog Level Breakdown Parts List

Ref #	Part #	Description
1	GK5274	10" Vertical Tube and Flight Assembly
2	GK1875	45° Spout with 3' Extension
3	GK1301	4" 12 Gauge Half Band
4	GK1034	Adjustable Mounting Ear
5	GK1892	Telescoping Outer Leg
6	GK1891	Telescoping Inner Leg
7	GK4948	Bottom Chain Guard
8	GK4945	Horizontal Chain Guard
9	GK4938-Y	Motor Mount Plate
10	GK5726	Lead Screw: 3/4" x 10" ZN Weld
11	GK6471	Belt Guard
12	GK4944	#60 Roller Chain, 70 Pitch
13	GK2332	3 Groove, 12" O.D., 1-1/4" I.D. Sheave
14	GC06337	V-Belt, BX-51
15	S-7079	5/16"-18 x 1-3/4" U-Bolt
16	S-7382	5/16"-18 Nylon Lock Nut Zinc Grade 5
17	S-396	5/16"-18 Hex Nut YDP Grade 2
18	S-7469	Bolt, HHCS 3/8"-16 x 1" Zinc Grade 5
19	S-248	3/8" Flat Washer YDP
20	S-7383	3/8"-16 Nylon Lock Nut
21	S-7105	Bolt, HHCS 3/8"-16 x 3/4" Grade 5
22	S-8244	Bolt, HHCS 1/4"-20 x 3/4" Zinc Grade 5
23	S-1430	1/4" Flat Washer Zinc Grade 2
24	S-7025	1/4"-20 Nylon Lock Nut
25	S-4275	Bolt, HHCS 5/16"-18 x 3/4" Zinc Grade 5
26	S-845	5/16" Flat Washer YDP Grade 2
27	S-8312	3/16" x 1-1/2" Cotter Pin Zinc
28	S-234	3/4"-10 Hex Nut Zinc Grade 5

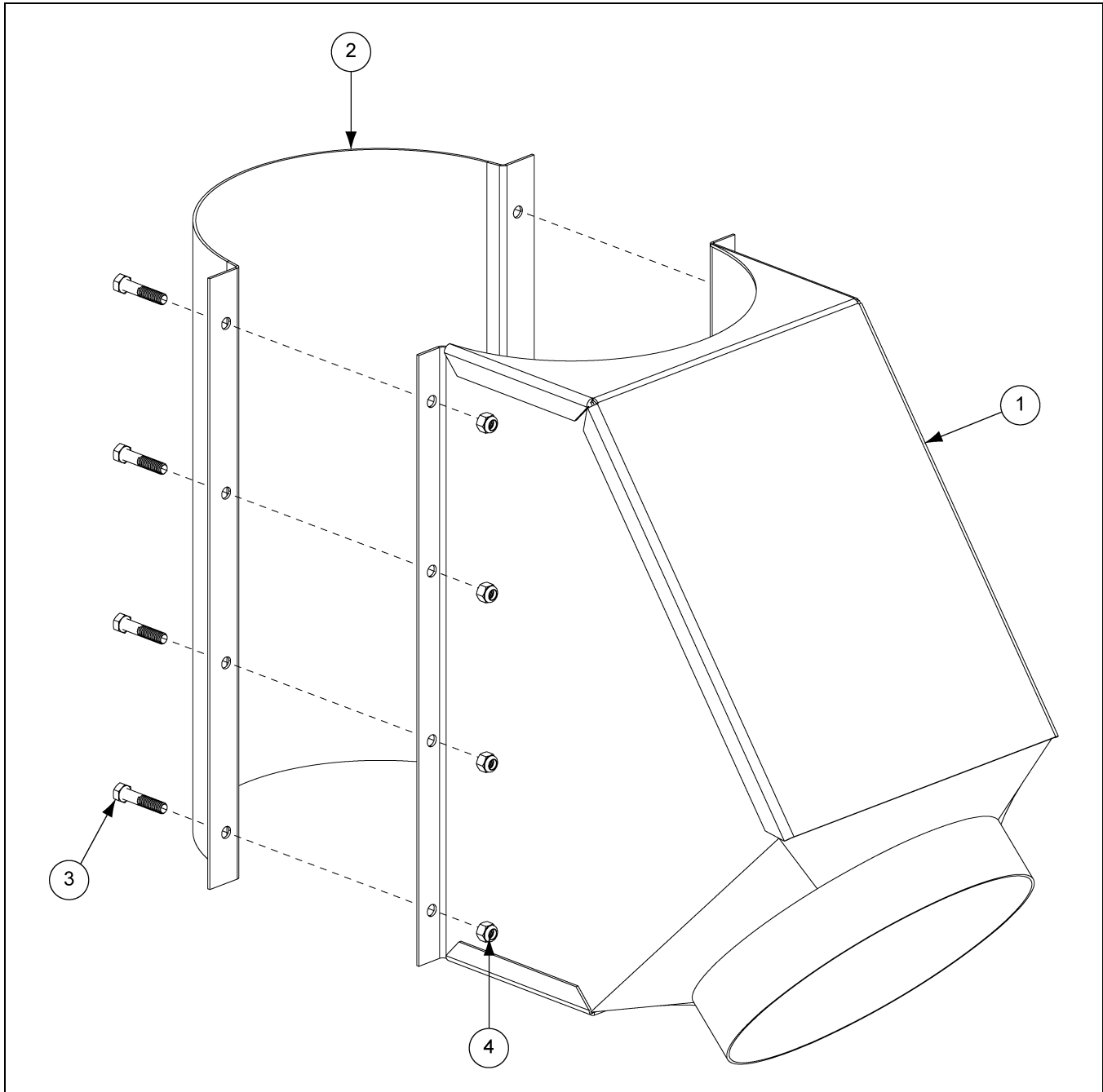
# 10" Spout with Extension



**10" Spout with Extension Parts List**

Ref #	Part #	Description
1	GK3386	10" 45° Spout with Band
2	GK1885	10" x 36" 12 Gauge Galvanized Tube
3	S-7229	1/4" x 1" Self-Tapping Screw Zinc

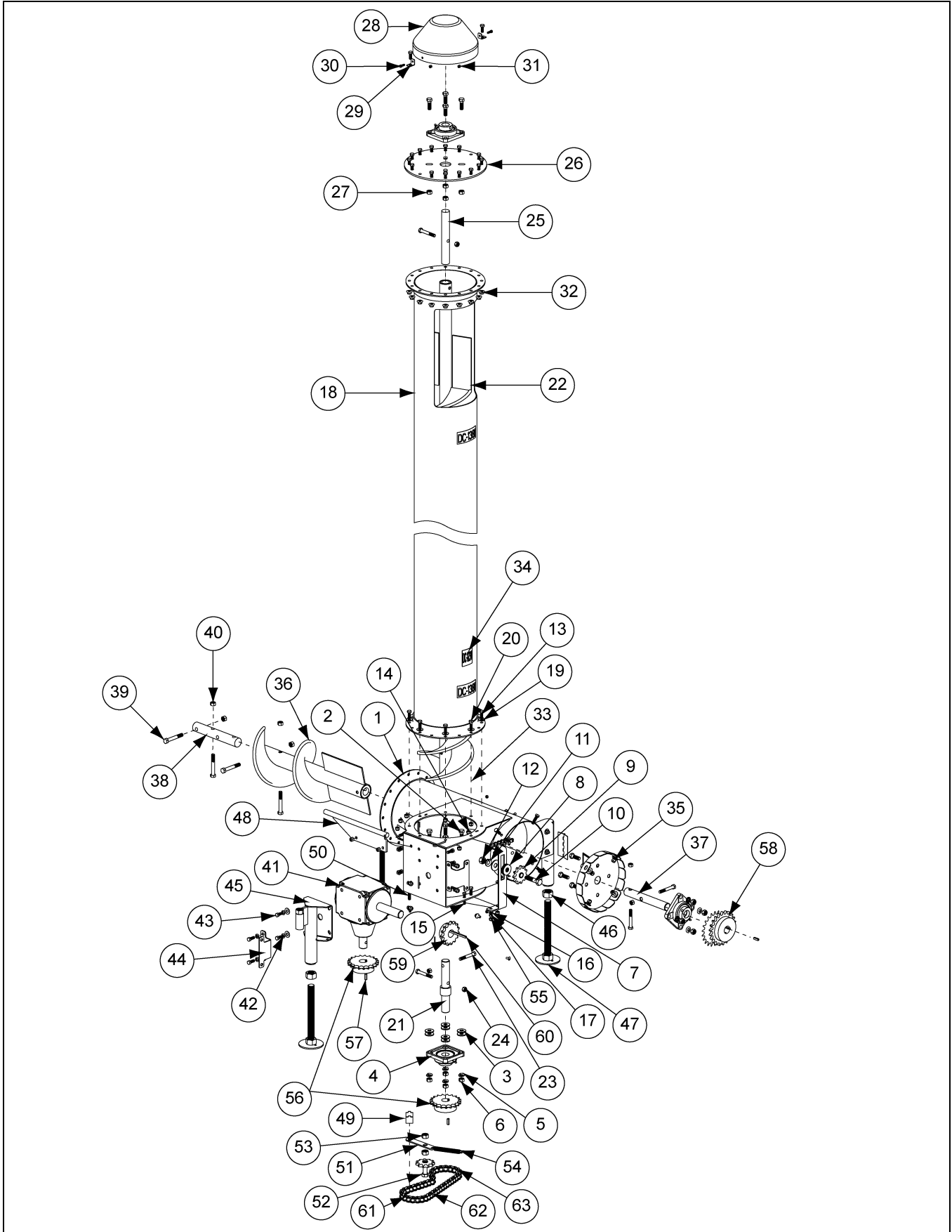
## 10" Spout with Band



### 10" Spout with Band Parts List

Ref #	Part #	Description
1	GK1881-BS	10" 45° Spout - Bin Silver
2	GK2333	10" x 18" 14 Gauge Half Band
3	S-2741	Bolt, HHCS 5/16"-18 x 1-1/2" Zinc Grade 5
4	S-7382	5/16"-18 Nylon Lock Nut Zinc Grade 5

# 10" Tube and Flight Assembly



## 10" Tube and Flight Assembly Parts List

Ref #	Part #	Description	Ref #	Part #	Description
1	GK4936-BS	10" Vertical Cross Welded Assembly - Bin Silver	33	DC-1381	Decal, Auger Danger 2" x 4-1/2"
2	S-3728	Bolt, HHTB 1/2-13 x 1-1/2 YDP Grade 8	34	DC-1234	Decal, Caution 2-1/4" x 23/4"
3	S-2121	1/2" Flat Washer	35	GK4940	Horizontal Bearing Plate
4	GK1017	1-1/4" 4 Hole Flange Bearing with Lock Collar	36	GK5284	Horizontal Flight Welded Assembly
5	S-236	1/2" Split Lock Washer Zinc	37	GK1018	1-1/4" O.D. x 9-1/4" Drive Shaft
6	S-3729	1/2"-13 Hex Nut YDP Grade 5	38	GK1339	1-1/2" O.D. x 9-1/2" Connecting Shaft
7	GK4939	Chain Tightening Mount	39	S-8314	Bolt, HHCS 1/2"-13 x 3-1/2" YDP Grade 8
8	S-858	Flat Washer 5/8" USS ZN	40	S-8315	Lock Nut 1/2"-13 ZN Grade C Prevailing Torque
9	GK4941	#60 Idler Sprocket with Bearing, 5/8" Bore	41	GK23201	Gearbox, 1:1
10	S-8429	Bolt, HHCS 5/8"-11 x 2-1/2" Zinc Grade 8	42	S-1054	3/8" Split Lock Washer Zinc
11	S-3208	5/8" Split Lock Washer Zinc	43	S-7105	Bolt, HHCS 3/8"-16 x 3/4" Grade 5
12	S-4110	5/8"-11 Hex Nut Zinc Grade 5	44	GK4942	Belt Guard Mount Bracket
13	S-7469	Bolt, HHCS 3/8"-16 x 1" Zinc Grade 5	45	GK4910-BS	Support Stand - Bin Silver
14	S-7383	3/8"-16 Nylon Lock Nut	46	S-240	1"-8 Hex Nut Zinc Grade 5
15	S-7149	Bolt, HHTB 5/16"-18 x 1-3/4" Zinc Grade 5	47	GK4908	Support Foot
16	S-1147	5/16" Split Lock Washer Zinc	48	GK4937-BS	Motor Mount Plate Pivot - Bin Silver
17	S-396	5/16"-18 Hex Nut YDP Grade 2	49	GK4917	Tension Arm Mount
18	GK4933	Vertical Tube	50	S-6995	3/8"-16 x 2-1/2" Carriage Bolt Zinc Grade 5
19	S-248	3/8" Flat Washer YDP	51	GK4918	Idler Tension Arm
20	S-2071	Bolt, HHCS 3/8"-16 x 1-1/4" ZN Grade 5	52	S-4329	5/8"-11 x 2" HHCS YDP Grade 8
21	GK4921	1-1/4" O.D. x 8-13/16" Drive Stub	53	S-6494	5/8"-11 Deformed Lock Nut Zinc Grade 5
22	GK4934	Vertical Flight Welded Assembly	54	GK1704	5" x 1/16" Pitch Return Spring Zinc
23	S-8316	Bolt, HHCS 7/16"-14 x 3" Zinc YDP Grade 8	55	S-7382	5/16"-18 Nylon Lock Nut Zinc Grade 5
24	S-8317	7/16"-14 Stover Nut Zinc Grade C	56	GK3244	#60 Sprocket, 19 Tooth, 1-1/4" Bore
25	GK1884	1-1/4" O.D. x 9" Intake Shaft	57	S-9168	Square Key 1/4" x 1"
26	GK7347-BS	Vertical Bearing Plate - Bin Silver	58	GK2324	#60 Sprocket, 22 Tooth, 1-1/4" Bore
27	S-8315	Lock Nut 1/2"-13 ZN Grade C Prevailing Torque	59	GK2323	#60 Sprocket, 15 Tooth, 1-1/4" Bore
28	GC01380-Y	Vertical Cap	60	S-8679	Square Key 1/4" x 1/4" x 4" Long
29	GC12223	Cap Bracket	61	GK4947	#60 Roller Chain, 45 Pitch
30	S-1429	Bolt, HHCS 1/4"-20 x 3/4" Zinc Grade 2	62	S-8619	#60 Roller Chain Half Link
31	S-7025	1/4"-20 Nylon Lock Nut	63	S-8618	#60 Roller Chain Connecting Link
32	S-968	3/8"-16 Serrated Flange Nut Zinc Grade 5			

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# NOTES

## GSI Group, LLC Limited Warranty

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

### Warranty Extensions:

The Limited Warranty period is extended for the following products:

	Product	Warranty Period	
<b>AP Fans and Flooring</b>	Performer Series Direct Drive Fan Motor	3 Years	* Warranty prorated from list price: 0 to 3 years - no cost to end-user 3 to 5 years - end-user pays 25% 5 to 7 years - end-user pays 50% 7 to 10 years - end-user pays 75%
	All Fiberglass Housings	Lifetime	
	All Fiberglass Propellers	Lifetime	
<b>AP and Cumberland</b>	Flex-Flo/Pan Feeding System Motors	2 Years	
<b>Cumberland Feeding/Watering Systems</b>	Feeder System Pan Assemblies	5 Years **	** Warranty prorated from list price: 0 to 3 years - no cost to end-user 3 to 5 years - end-user pays 50%
	Feed Tubes (1-3/4" and 2.00")	10 Years *	
	Centerless Augers	10 Years *	
	Watering Nipples	10 Years *	
<b>Grain Systems</b>	Grain Bin Structural Design	5 Years	
<b>Grain Systems Farm Fans Zimmerman</b>	Portable and Tower Dryers	2 Years	† Motors, burner components and moving parts not included. Portable dryer screens included. Tower dryer screens not included.
	Portable and Tower Dryer Frames and Internal Infrastructure †	5 Years	

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

### Conditions and Limitations:

THERE ARE NO WARRANTIES THAT EXTEND BEYOND THE LIMITED WARRANTY DESCRIPTION SET FORTH ABOVE. SPECIFICALLY, GSI MAKES NO FURTHER WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING, WITHOUT LIMITATION, WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR USE IN CONNECTION WITH: (I) PRODUCT MANUFACTURED OR SOLD BY GSI OR (II) ANY ADVICE, INSTRUCTION, RECOMMENDATION OR SUGGESTION PROVIDED BY AN AGENT, REPRESENTATIVE OR EMPLOYEE OF GSI REGARDING OR RELATED TO THE CONFIGURATION, INSTALLATION, LAYOUT, SUITABILITY FOR A PARTICULAR PURPOSE, OR DESIGN OF SUCH PRODUCTS.

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

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

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

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

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



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**GSI is a worldwide brand of AGCO Corporation.**