

Gravity Flow Grain Spreaders

Models:
3050 and 10000

Owner's Manual

PNEG-1150

Version: 3.0

Date: 10-20-15



Spreading Capacities			
	3050	3050 with Chute Extension and Counterweight	10000
Dry Grain	15'-36' Diameter 3000 BPH	15'-42' Diameter 5000 BPH	36'-72' Diameter 10000 BPH
NOT recommended for grain wetter than 16% moisture content.			

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

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Safety Guidelines

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

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

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

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

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

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

ST-0001-2

Cautionary Symbols Definitions

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



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



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



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



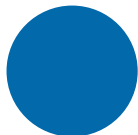
This symbol is used to address practices not related to personal injury.



This symbol indicates a general hazard.



This symbol indicates a prohibited activity.



This symbol indicates a mandatory action.

ST-0005

Safety Cautions

Use Personal Protective Equipment

- Use appropriate personal protective equipment:

Eye Protection



Respiratory Protection



Foot Protection



Hearing Protection



Head Protection



Fall Protection



Hand Protection



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

ST-0004-1

Follow Safety Instructions

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



ST-0002-1

Sharp Edge Hazard

- This product has sharp edges, which may cause serious injury.
- To avoid injury, handle sharp edges with caution and always use proper protective clothing and equipment.



ST-0036-1

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

Assembly of 3050 Spreaders

Refer to the exploded views in the parts section [on Page 14](#).

1. Assemble chute (3071027-Y) to hopper (3071034-Y) with six (6) 3/8" x 1" bolts, lock washers and nuts.
2. Assemble chute (3071026-Y) to the end of the first chute with three (3) 3/8" x 1" bolts, lock washers and nuts based on the size of the bin.
 - a. 21' Diameter and smaller - Assemble in the shortest position. *(See Figure 2A.)*
 - b. Over 21' through 30' diameter - Assemble in the middle position. *(See Figure 2A.)*
 - c. Over 30' through 36' diameter - Assemble in the longest position. *(See Figure 2A.)*
 - d. The 3050 spreader can be used for bin diameters up to 42' diameter when a chute extension option (3079009-Y) is installed between the first and second chutes. **NOTE:** *The counterweight option (3079011-Y) must be installed when using the chute extension. (See Figure 2A.)*
3. Attach the curved slinger (3071029-Y) to the bottom at the end of the second chute and to the straightening vane of the first chute (or straight extension 3071028-Y) with two (2) 3/8" x 1" bolts, lock washers and nuts.
4. When the second chute is in the middle or longest position, the straight extension (3071028-Y) is assembled to the bottom of the chute with two (2) 3/8" x 1" bolts, lock washers and nuts. This extension is not used when the chute is assembled in the shortest position.
5. **For Model 3050 with counterweight options:** Assemble the counterweight tube (3071040-Y) to the back of the hopper with two (2) 3/8" x 1" bolts, lock washers and nuts.

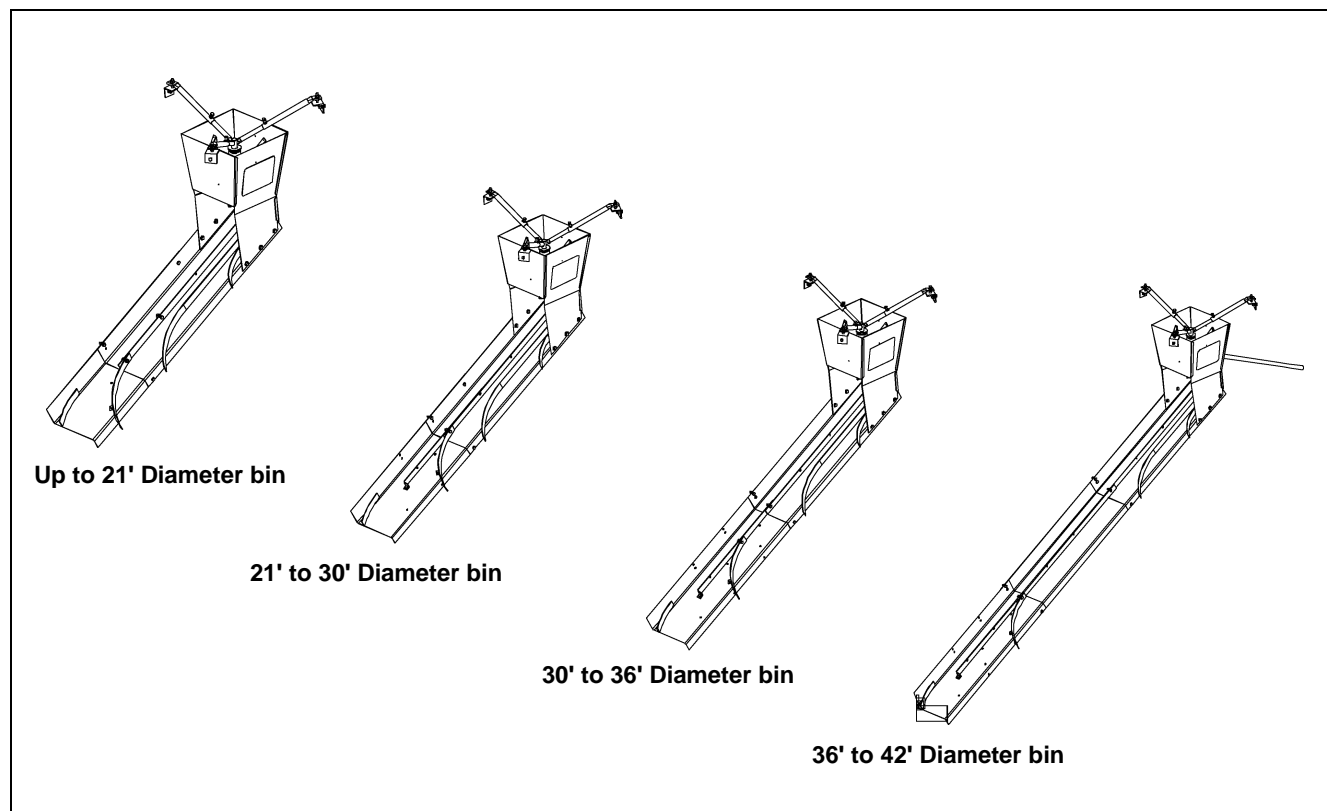


Figure 2A

Assembly of 3050 Spreaders (Continued)

6. Assemble the center spider (3071037) to the hopper by placing a 1" flat washer on the center shaft and inserting the shaft through the bearings in the center of the hopper. Place another 1" washer on the bottom of the shaft and secure with the overcenter retaining pin (3FH1224). Pull the center spider back up until the bottom washer is up against the bottom bearing and tighten the set screws in both the top and bottom bearings.
7. Assemble the three (3) telescoping arms (3071039-Y) to the arms of the center spider and lock in place by inserting a 3/8" x 1" bolt into the weld nut and tightening to the spider arm. The standard arms are 12" long. Telescoping arms 18" long are available in option 3079010-Y for larger diameter fill rings (36" to 50") and will fit the fill openings from 26" to 40" in diameter.

At the Fill Ring of the Bin

8. Drill three (3) 13/32" diameter holes equally spaced around the fill ring. Attach the angle brackets (3071038-Y) to the fill ring with 3/8" x 1" bolts, flat washers, lock washers and nuts. Thread a 3/8" nut and a flat washer onto the stud of each of the angle brackets.
9. Attach a lifting cable or rope to the center spider and lift the assembled spreader up to the fill ring of the bin. Loosen each of the telescoping arms and attach them to the studs on the angle brackets; secure with flat washers and 3/8" nuts.
10. **For Model 3050 with counterweight options:** When the spreader has been lifted so it clears the floor, slide the counterweight (3071042-Y) onto the tube and adjust it until the spreader hangs with the chute slightly elevated. Secure in place by tightening the set screw.
11. Center the spider assembly in the fill ring and lock in place by tightening the 3/8" x 1" bolt in each of the telescoping arms.
12. Level the spreader by turning the nut under the end of each of the telescoping arms. The spreader is level when it does not coast to a low spot. Lock the spreader in position by tightening the 3/8" nuts on top of the ends of the telescoping arms.

NOTE: *The spreader will not function properly if it is not level.*

Assembly of 10000 Spreader

Refer to the exploded views in the parts section [on Page 16](#).

1. Assemble the center shaft (3072024-Y) and chute to the bottom of main chute (3072020-Y) with six (6) 3/8" x 1" bolts, lock washers and nuts.
2. Attach the counterweight support tube (3072013-Y) to the back of the main chute with two (2) 3/8" x 1" bolts, lock washers and nuts.
3. Slide the counterweight support channel (3072009-Y) over the shaft extending out of the center chute and fasten to the bottom of the main chute with two (2) 5/16" x 1" carriage bolts, flat washers, lock washers and nuts. Attach the other end of the channel to the counterweight tube with a 3/8" x 3-1/2" bolt, lock washer and nut.
4. Assemble two (2) 1-1/4" bearings (PT0140) with cast housings to the top of the channels in the spreader hopper with four (4) 7/16" x 1-1/2" bolts, lock washers and nuts. Do not tighten the mounting bolts at this time.
5. Slide the hopper and bearings over the center chute shaft. Make sure to place the bearing locking collar, rubber washer and steel washer on top of each bearing. Insert the snap over retaining pin (3FH1224) through the hole in the top of the shaft.
6. Tighten the mounting hardware for the two (2) bearings and lift the hopper up on the shaft as far as possible. Lock the bearings in place by tightening the locking collars in a counterclockwise direction when viewed from the top of the hopper.
7. Thread a 1/2" nut and flat washer onto each of the three (3) studs on the top of the hopper. Attach a angle hanger (3072014-Y) to each stud and secure with a flat washer and 1/2" nut.
8. Build a frame into the top and center of the bin to support the spreader. The outside face of the three (3) angle hangers on the hopper form a 21" diameter circle so the frame should be constructed in a triangle to allow the angle hangers to be bolted directly to the frame with three (3) 3/8" x 1" bolts, flat washers, lock washers and nuts. [\(See Figure 2B on Page 12.\)](#)
9. Attach a lifting cable to the center of the hopper and lift the spreader until it clears the floor. Slide the counterweight onto the tube and adjust its position until it hangs with the chute slightly elevated. Secure in place by tightening the set screw on the weight. Finish lifting the spreader to the frame constructed in [Step 8](#) and bolt into place.
10. Level the spreader by adjusting the bottom 1/2" nuts on each of the studs on the hopper. The spreader is level when it does not coast to a low spot. Lock in position by tightening the top nuts.

NOTE: *The spreader will not function properly if it is not level.*

Assembly of 10000 Spreader (Continued)

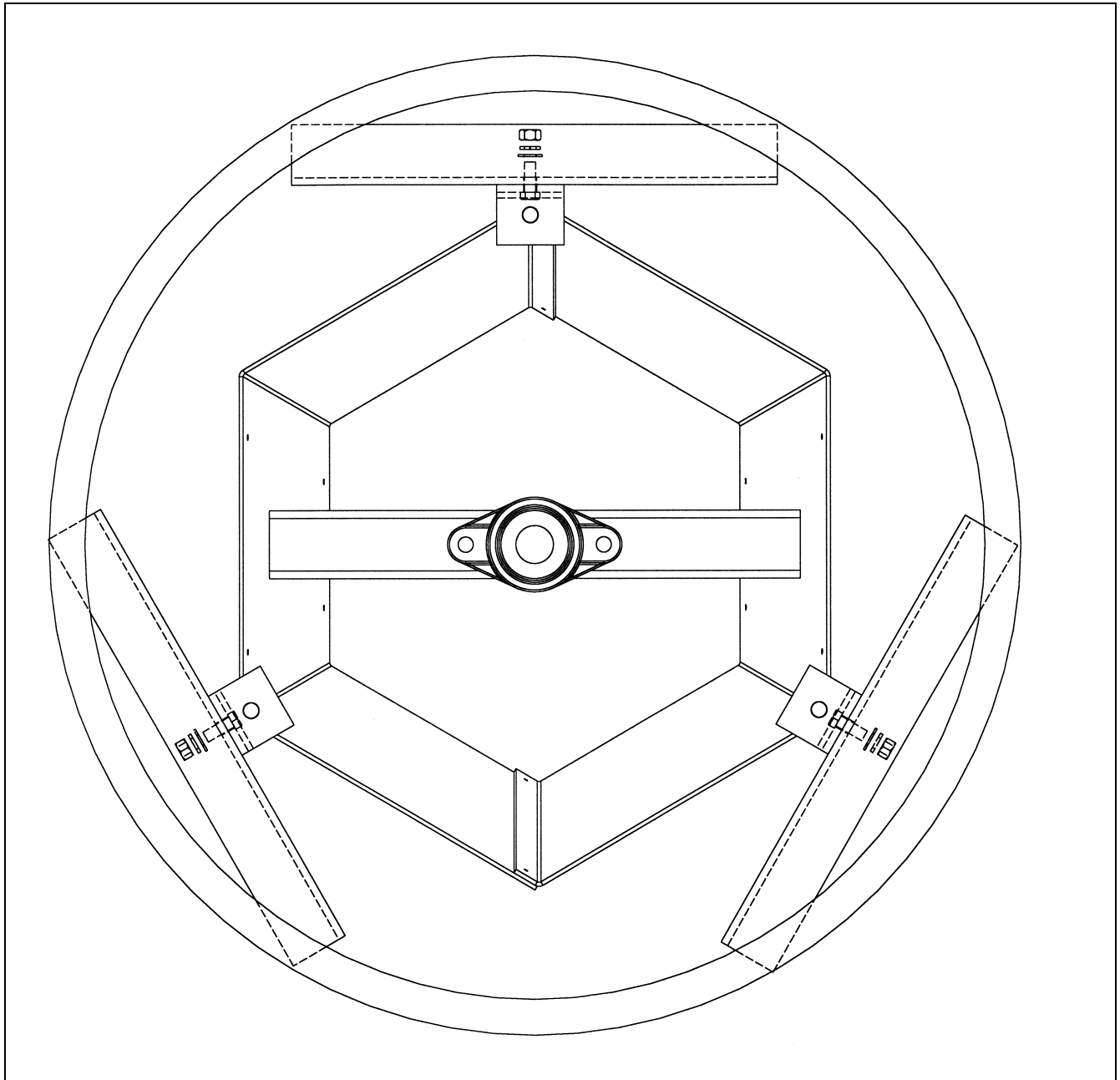


Figure 2B Model 10000 Installation

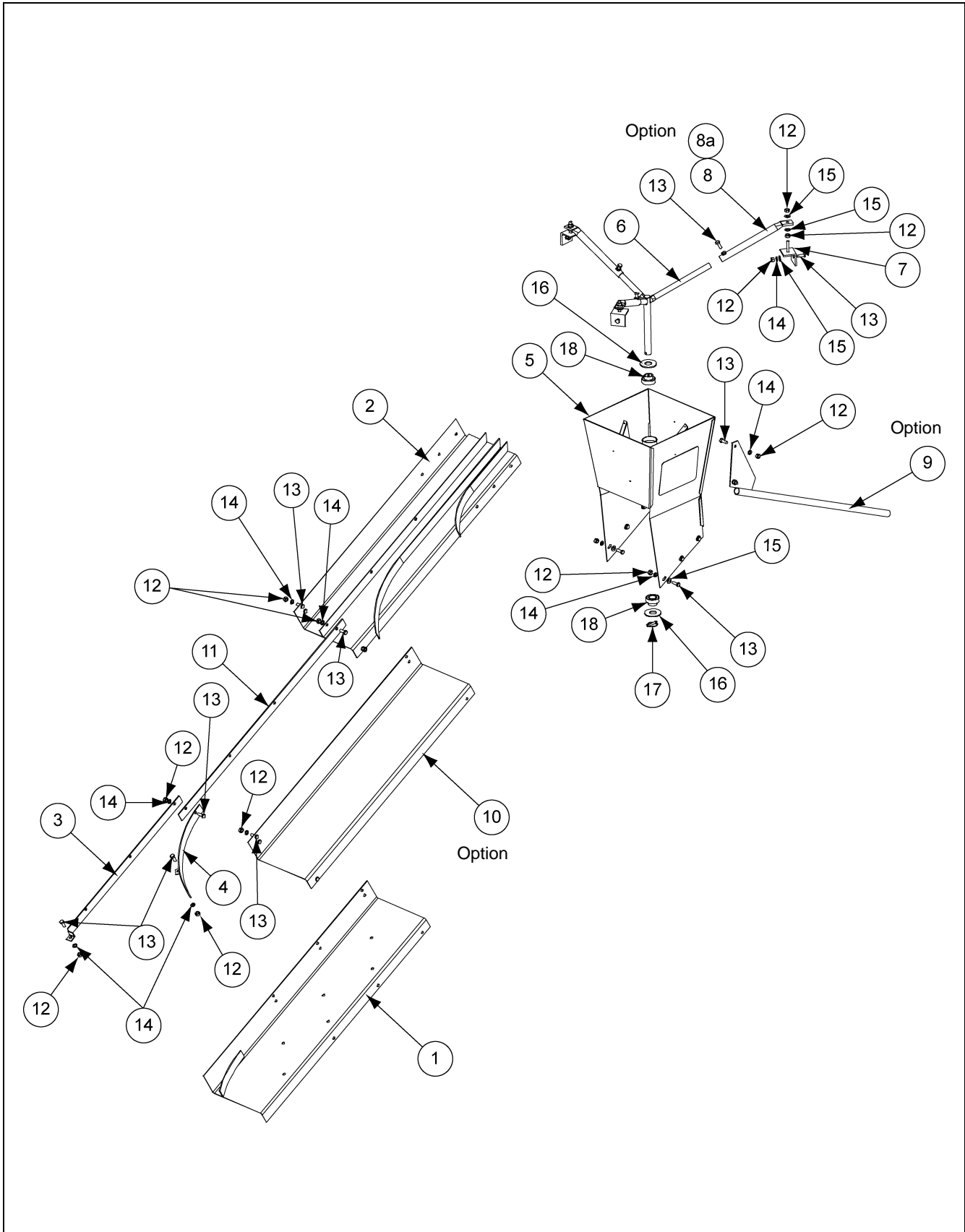
Operation of Spreaders

Gravity flow spreaders rotate and spread grain because of the force of the falling grain against the curved vanes in the spreader chute. The minimum flow rate depends on the density and moisture content as well as the velocity of the grain entering the spreader. Grain above 16% moisture and lightweight grains at a low flow rate generally will not generate enough force to rotate the spreader chute properly.

Uneven distribution of grain to one side of the bin can be caused by the following conditions:

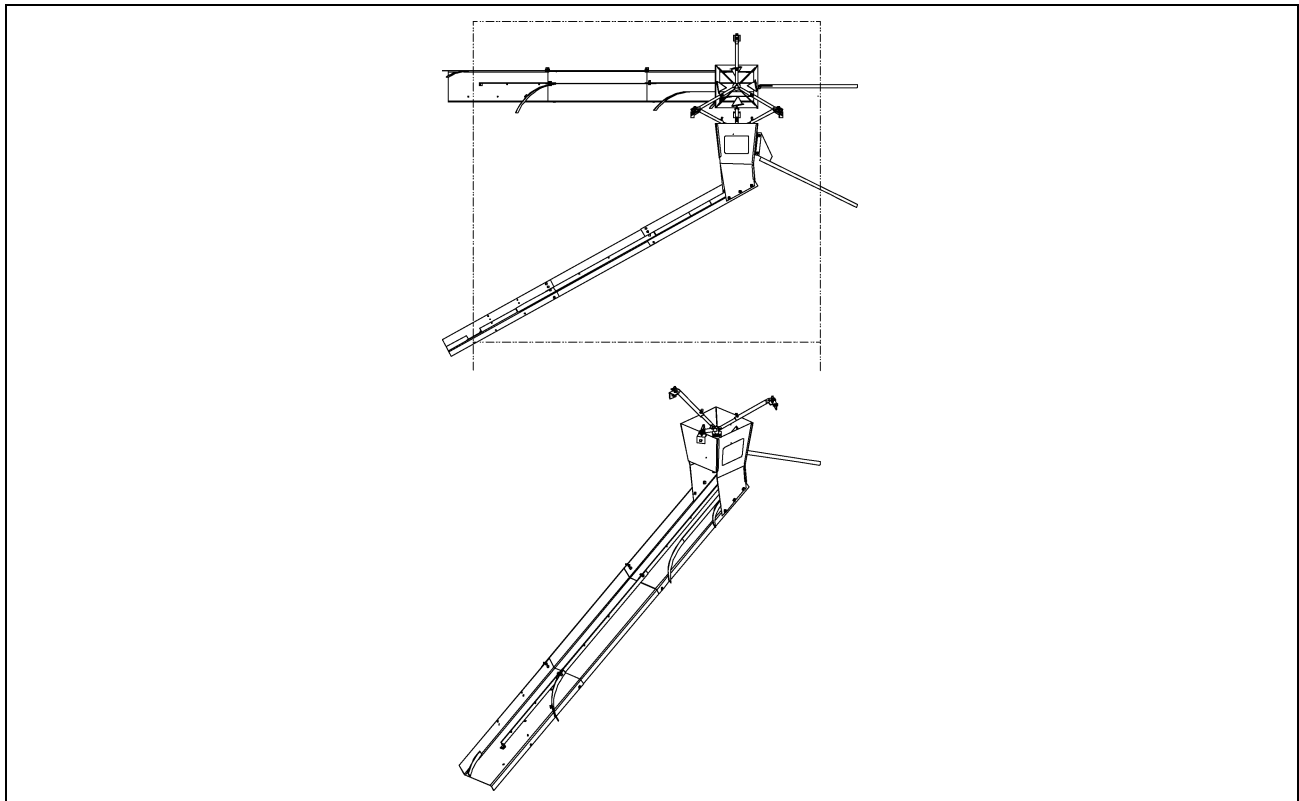
1. **Grain is not entering the spreader at the center of the hopper.** Readjust the down spout to direct the grain vertically to the center of the hopper.
2. **The spreader is not level.** Adjust the hanging brackets until the spreader is level. Check by swinging the chute by hand several times. It should coast to a stop and be pointing in a different direction each time.
3. **The bearings may be seizing.** Check it by swinging the chute by hand.
4. **The flow of grain may not be enough to swing the chute uniformly.** Observe the spreader in operation to see if the grain moves the chute.

Model 3050 Parts

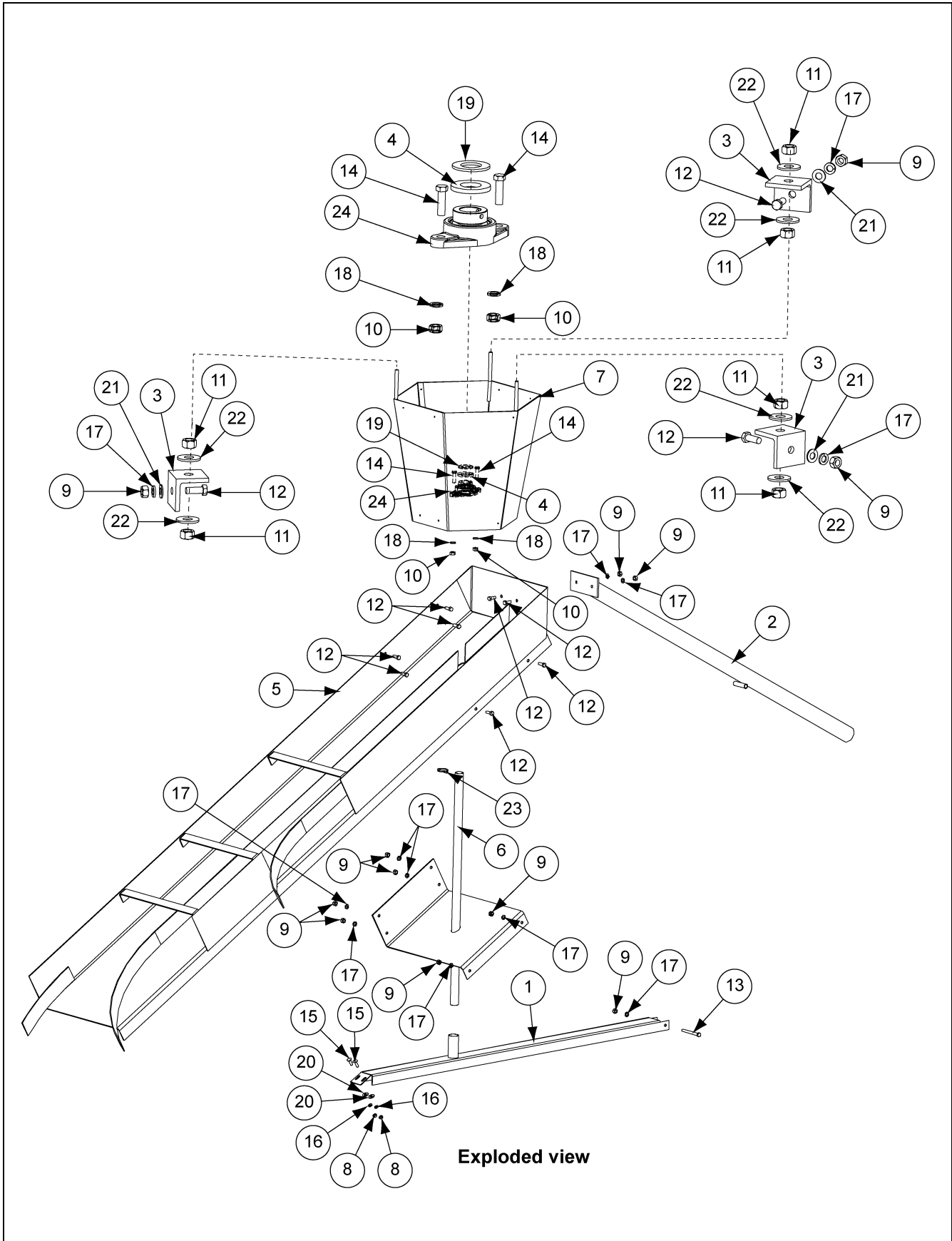


Model 3050 Parts List

Ref #	Part #	Description	Qty
1	3071026-Y	Chute - Extension, Weldment	1
2	3071027-Y	Chute - Upper, Weldment	1
3	3071028-Y	Slinger - Straight, Extension, Weldment	1
4	3071029-Y	Slinger - Curved, Extension, Weldment	1
5	3071034-Y	Hopper - Weldment	1
6	3071037	Hanger Spider - Weldment	1
7	3071038-Y	Hanger - Weldment	3
8	3071039-Y	Tube - Telescoping, Weldment (12" Long)	3
8a	3071045-Y	Option: Tube - Telescoping, Weldment (18" Long)	3
9	3071040-Y	Option: Tube - Counterweight, Weldment	1
10	3071043-Y	Option: Chute Extension, 42' and Up	1
11	3071044-Y	Slinger Extension, 42' and Up	1
12	S-7489	Hex Nut, 3/8"-16 JS500 Grade 5	27
13	S-7469	Hex Bolt, Standard Thread - Grade 5, 3/8"-16 UNC x 1", Plated	24
14	S-1054	Lock Washer, Regular 3/8", Plated	21
15	S-248	Flat Washer, Standard, 3/8", Plated	15
16	S-7835	Flat Washer, Standard 1", Plated	2
17	3FH1224	Retaining Pin, Snap-Over, 1/4" Diameter x 1-3/4" Long	1
18	PT0240	Bearing with Collar, 1", ECC LK, EXT, NRL, SPH	2



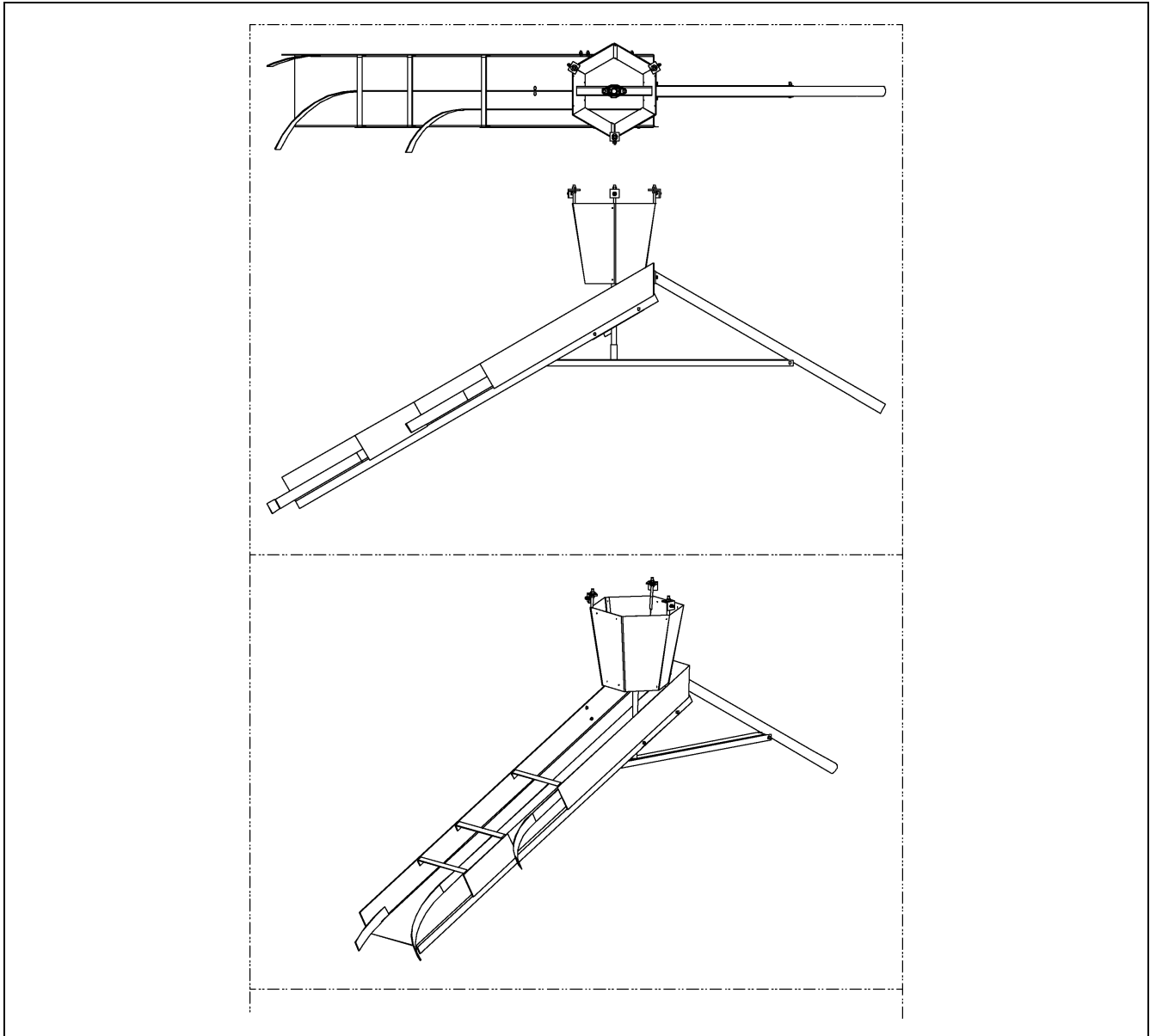
Model 10000 Parts



Model 10000 Parts List

Ref #	Part #	Description	Qty
1	3072009-Y	Channel - Counterweight Support, Weldment	1
2	3072013-Y	Tube - Counterweight Support, Weldment	1
3	3072014-Y	Angle - Hanger	3
4	3072015	Washer - Rubber	2
5	3072020-Y	Chute - Weldment	1
6	3072024-Y	Center Shaft and Chute - Weldment	1
7	3072033-Y	Hopper - Hex, Weldment	1
8	S-7484	Hex Nut, 5/16"-18 JS500 Grade 5	2
9	S-7489	Hex Nut, 3/8"-16 JS500 Grade 5	12
10	S-860	Hex Nut, 7/16"-14 UNC, Finished, Plated, Grade 2	4
11	S-7510	Hex Nut, 1/2"-13 UNC, Finished, Plated, Grade 2	6
12	S-7469	Hex Bolt, Standard Thread - Grade 5, 3/8"-16 UNC x 1", Plated	11
13	S-8676	Hex Bolt, Standard Thread - Grade 5, 3/8"-16 UNC x 3-1/2", Plated	1
14	S-7837	Hex Bolt, Standard Thread - Grade 5, 7/16"-14 UNC x 1-1/2", Plated	4
15	S-3550	Carriage Bolt, Standard Thread - Grade 5, 5/16"-18 UNC x 1", Plated	2
16	S-1147	Lock Washer, Regular, 5/16", Plated	2
17	S-1054	Lock Washer, Regular, 3/8", Plated	12
18	S-7014	Lock Washer, Regular 7/16", Plated	4
19	3FH0833	Bushing - (Mach) Wide - Plated, 2-1/4" O.D. x 1-1/4" I.D. x 10 Gauge	2
20	S-845	Flat Washer, Standard, 5/16" Plated	2
21	S-248	Flat Washer, Standard, 3/8" Plated	3
22	S-2121	Flat Washer, Standard, 1/2" Plated	6
23	3FH1224	Retaining Pin, Snap-Over, 1/4" Diameter x 1-3/4" Long	1
24	GK1330	Bearing with Housing, 1-1/4", ECC LK, EXT, RL, SPH, 2H	2

Model 10000 Parts (Continued)



GSI Group, LLC Limited Warranty

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

Warranty Extensions:

The Limited Warranty period is extended for the following products:

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

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

Conditions and Limitations:

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

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

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

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

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

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



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