

OWNER'S MANUAL

DMC

GRAVITY FLOW GRAIN SPREADERS

MODELS
3050 AND 10,000

PNEG-1150

Date: 9-21-06



PNEG-1150

SAFETY GUIDELINES

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

Please read the manual and pay attention to these sections. Failure to read this manual and its safety instructions is a misuse of the equipment and may lead to serious injury or death.



This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.

 **DANGER**

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

 **WARNING**

WARNING indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

 **CAUTION**

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

CAUTION

CAUTION used without the safety alert symbol indicates a potentially hazardous situation which, if not avoided, may result in property damage.

NOTE

NOTE indicates information about the equipment that you should pay special attention to.



CAUTION



1. Be sure electrical power is disconnected prior to entering the bin.
2. Do NOT enter a bin while the unit is operating without proper eye protection.
3. Do NOT attempt to service or adjust the unit from a ladder unless the ladder is secured to another piece of equipment or to the bin. The grain spreader can swing and will not support a ladder.
4. Read and understand the Operator's Manual.

WARNING

Failure to follow these instructions may result in personal injury or property damage.

SPREADING CAPACITIES			
	3050	3050 With Chute Extension and Counterweight	10,000
Dry Grain	15' - 36' Diameter 3000 BPH	15' - 42' Diameter 5000 BPH	36' - 72' Diameter 10,000 BPH
NOT recommended for grain wetter than 16% moisture content.			



SAFETY INFORMATION PLEASE READ



WATCH FOR THIS SYMBOL! IT POINTS OUT IMPORTANT SAFETY PRECAUTIONS. IT MEANS, "ATTENTION ---- BECOME ALERT! YOUR SAFETY IS INVOLVED!"



It is recommended that you review the entire contents of this manual, paying particular attention to items preceded by this symbol. FAILURE TO HEED THESE INSTRUCTIONS CAN RESULT IN PERSONAL INJURY!

OPERATOR QUALIFICATIONS



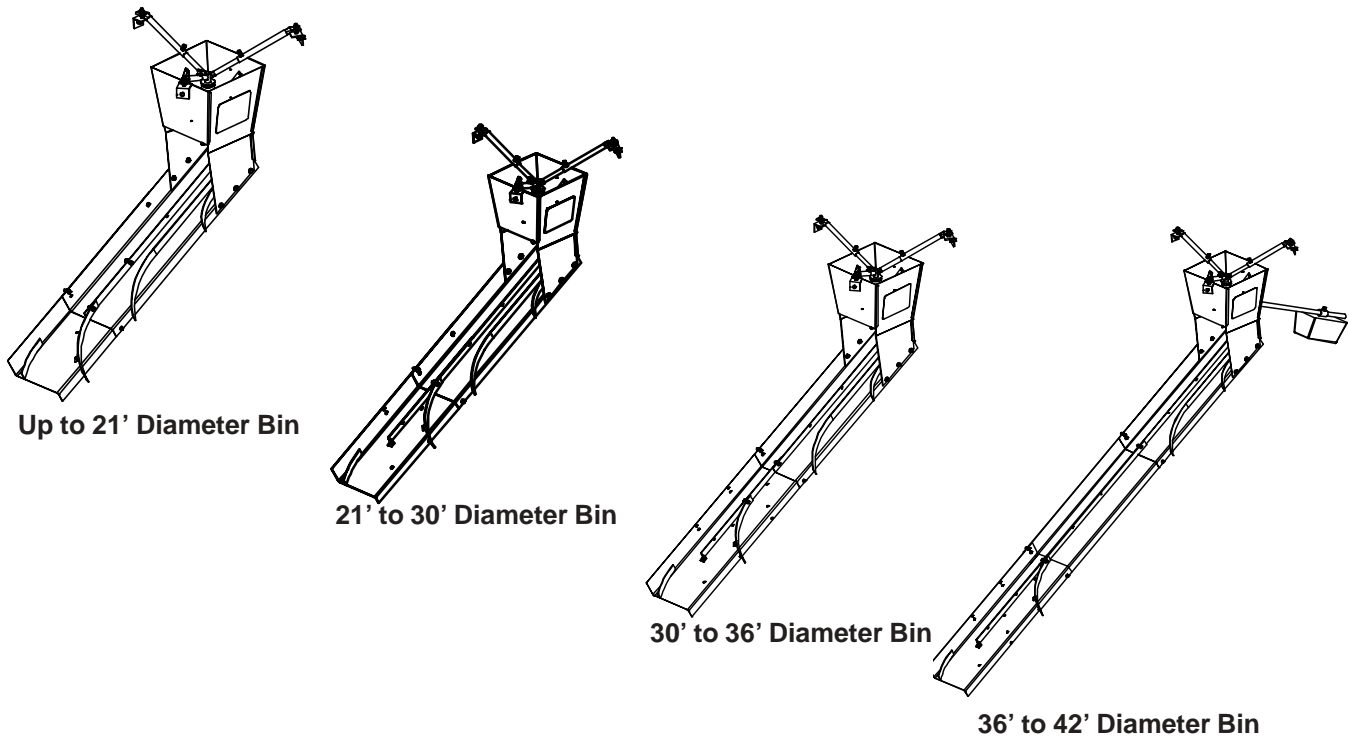
Operation of this farmstead equipment shall be limited to competent and experienced persons. In addition, anyone who will operate or work around power equipment must use good common sense. In order to be qualified, he must also know and meet all other requirements, such as:

1. Some regulations specify that no one under the age of 16 may operate power machinery. This includes farmstead equipment. It is your responsibility to know what these regulations are in your own area or situation.
2. Current OSHA regulations state in part: "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."*
3. Unqualified persons are to stay out the work area. The "Work Area" is defined as any area within the storage bins where this equipment is installed.
4. A person who has not read and understood all operating and safety instructions is not qualified to operate the machine.

*Federal Occupational Safety & Health Standards for Agriculture Subpart D, Section 1928.57 (a)(6).

ASSEMBLY of 3050 SPREADERS

1. Assemble 3071027 Chute to 3071034 Hopper with (6) 3/8" x 1" bolts, lockwashers and nuts.
2. Assemble 3071026 Chute to the end of the first chute with (3) 3/8" x 1" bolts, lockwashers and nuts depending on the size of the bin.
 - a. 21' diameter & smaller - assemble in the shortest position - see below.
 - b. Over 21' thru 30' diameter - assemble in the middle position - see below.
 - c. Over 30" thru 36' diameter - assemble in the longest position - see below.
 - d. The 3050 spreader can be used for bin diameters up to 42' diameter when a chute extension option (3079009) is installed between the first & second chutes. The counter weight option (3079011) must be installed when using the chute extension - see below.
3. Attach the 3071029 Curved Slinger to the bottom at the end of the second chute and to the straightening vane of the first chute (or 3071028 Straight Extension) with (2) 3/8" x 1" bolts, lockwashers and nuts.
4. When the second chute is in the middle or longest position, the 3071028 Straight Extension is assembled to the bottom of the chute with (2) 3/8" x 1" bolts, lockwashers 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 3071040 Counter Weight Tube to the back of the hopper with (2) 3/8" x 1" bolts, lockwashers and nuts.



ASSEMBLY of 3050 SPREADERS (continued)

6. Assemble the 3071037 Center Spider to the hopper by first 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 3FH1224 over-center retaining pin. Pull the center spider back up until the bottom washer is up against the bottom bearing and tighten the setscrews in both the top and bottom bearings.
7. Assemble the (3) 3071039 Telescoping arms to the arms of the center spider, lock in place by inserting a 3/8" x 1" bolt into the weldnut and tightening to the spider arm. The standard arms are 12" long. Telescoping arms 18" long are available in option 3079010 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 (3) 13/32" diameter holes equally spaced around the fill ring. Attach the 3071038 Angle Brackets to the fill ring with 3/8" x 1" bolts, flat washers, lockwashers 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 3071042 Counterweight onto the tube and adjust it until the spreader hangs with the chute slightly elevated. Secure in place by tightening the setscrew.
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 THE 10,000 SPREADER
(Refer to the exploded views in the parts section)

1. Assemble the 3072024 Center Shaft & Chute to the bottom of 3072020 Main Chute with (6) 3/8" x 1" bolts, lockwashers and nuts.
2. Attach the 3072013 Counter Weight Support Tube to the back of the main chute with (2) 3/8" x 1" bolts, lockwashers and nuts.
3. Slide the 3072009 Counter Weight Support Channel over the shaft extending out of the center chute and fasten to the bottom of the main chute with (2) 5/16" x 1" carriage bolts, flat washers, lockwashers and nuts. Attach the other end of the channel to the counter weight tube with a 3/8" x 3 1/2" bolt, lockwasher and nut.
4. Assemble (2) PT0140 1 1/4" Bearings with cast housings to the top of the channels in the spreader hopper with (4) 7/16" x 1 1/2" bolts, lockwashers 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 3FH1224 Snap Over Retaining Pin through the hole in the top of the shaft.
6. Tighten the mounting hardware for the two 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 counter-clockwise direction when viewed from the top of the hopper.
7. Thread a 1/2" nut and flat washer onto each of the three studs on the top of the hopper. Attach a 3072014 Angle Hanger 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 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 (3) 3/8" x 1" bolts, flat washers, lockwashers and nuts. (See Figure 1 on next page.)
9. Attach a lifting cable to the center of the hopper and lift the spreader until it clears the floor. Slide the counter weight onto the tube and adjust its position until it hangs with the chute slightly elevated. Secure in place by tightening the setscrew 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.

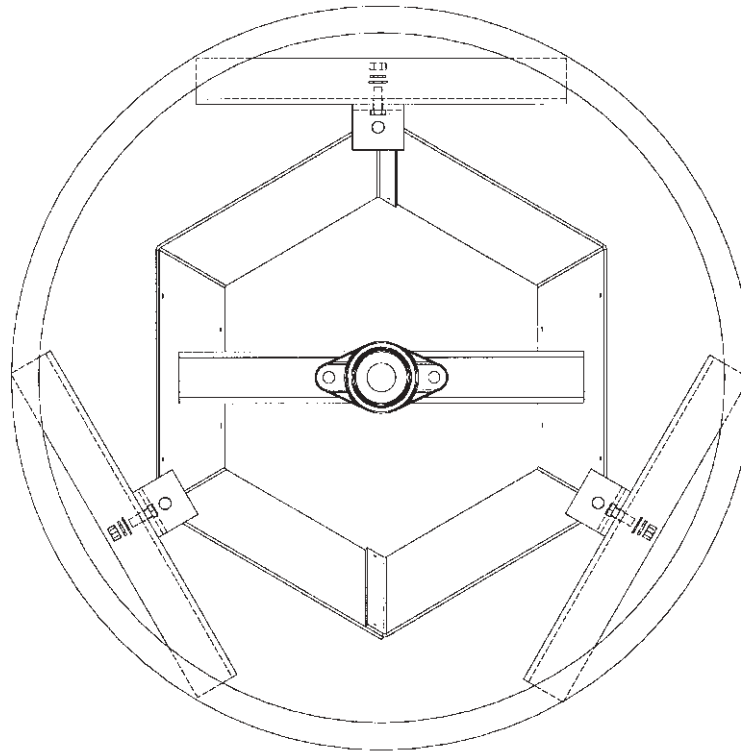


Figure 1 - Model 10,000 Installation

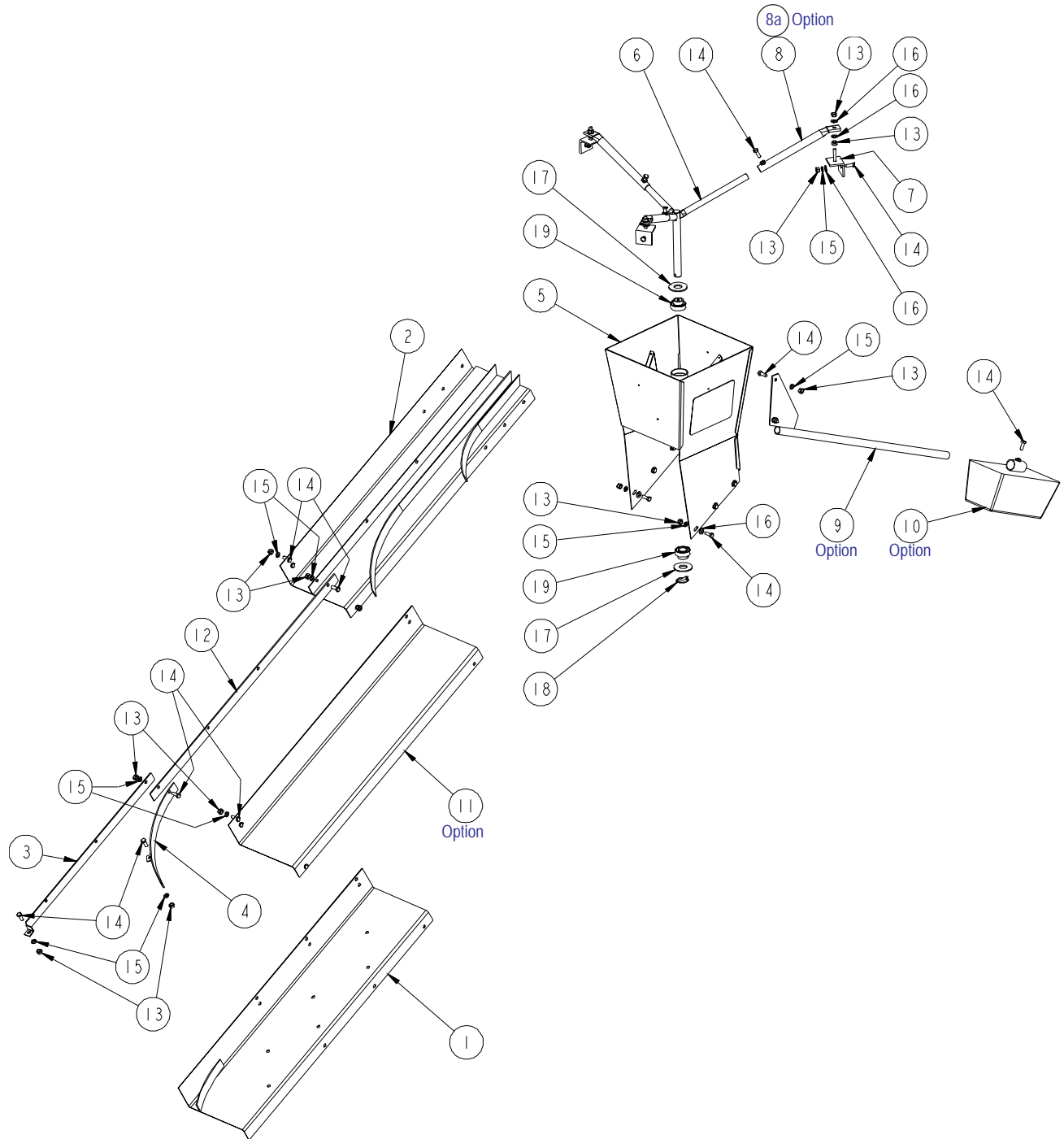
OPERATION OF SPREADERS

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.

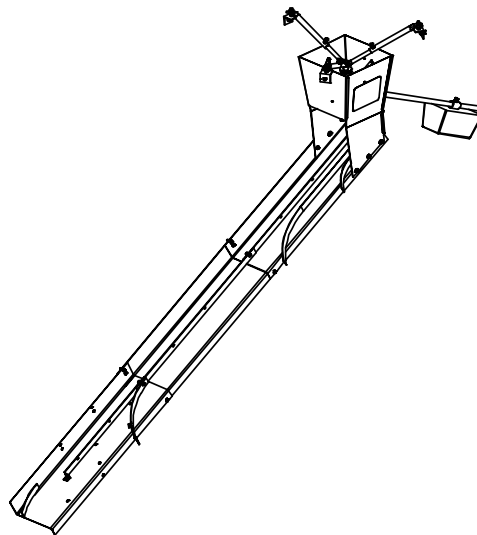
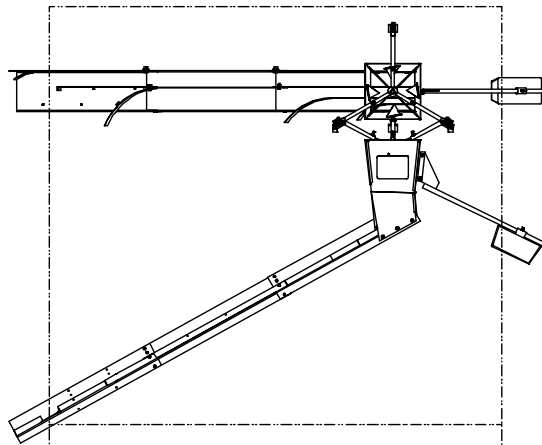
Uneven distribution of grain to one side of the bin can be caused by the following conditions:

- 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.
- 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.
- The bearings may be seizing.** Check it by swinging the chute by hand.
- 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.

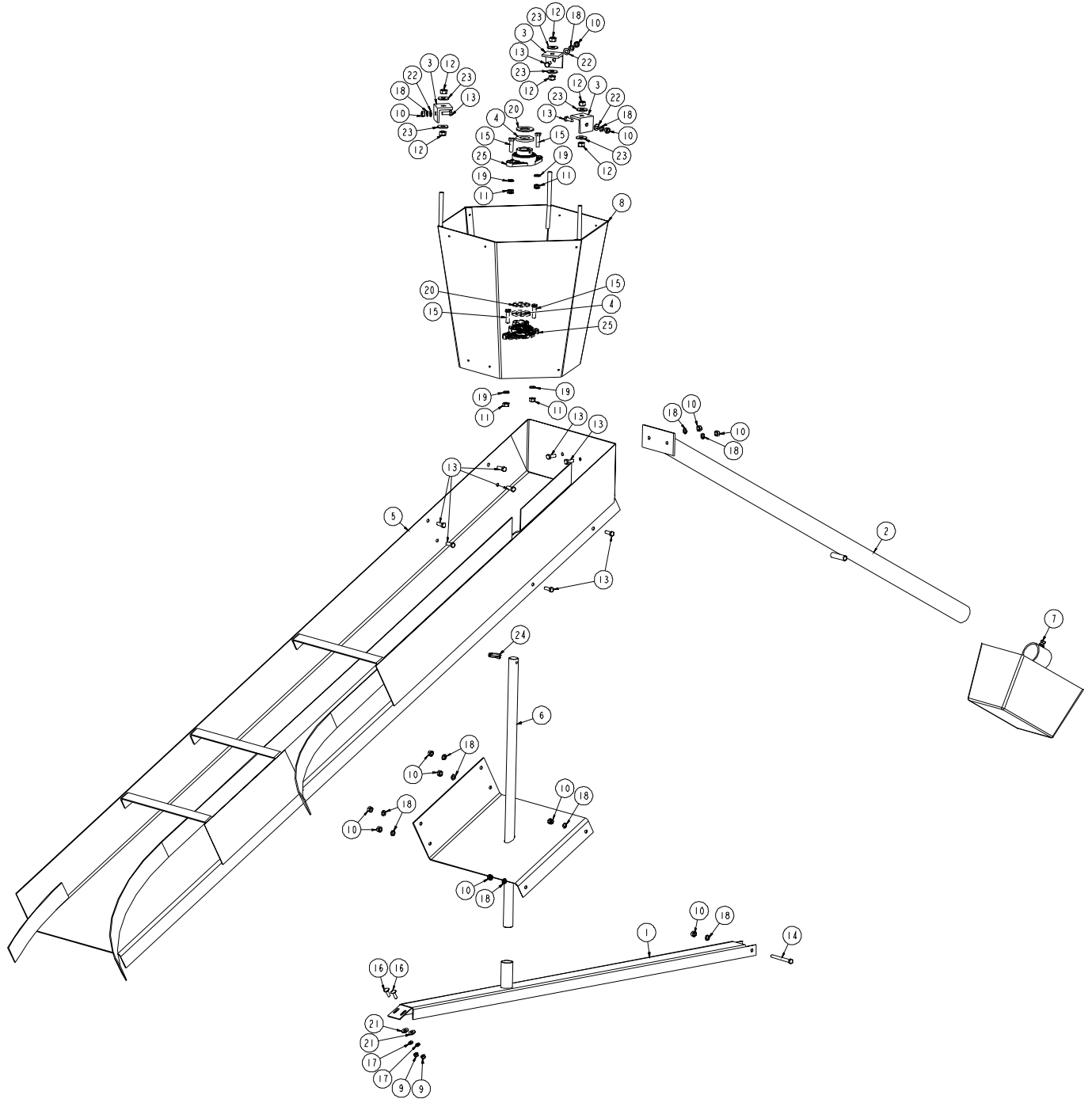
Model 3050 Parts



Model 3050			
Index	Part #	Description	Qty
1	3071026	Chute - extension, weldment	1
2	3071027	Chute - upper, weldment	1
3	3071028	Slinger - straight, ext. weldment	1
4	3071029	Slinger - curved, ext. weldment	1
5	3071034	Hopper - weldment	1
6	3071037	Hanger spider - weldment	1
7	3071038	Hanger - weldment	3
8	3071039	Tube - telescoping, weldment (12" long)	3
8a	3071045	Option: Tube - telescoping, weldment (18" long)	3
9	3071040	Option: Tube - counterweight, weldment	1
10	3071042	Option: Counterweight Assembly	1
11	3071043	Option: Chute extension, 42' & up	1
12	3071044	Slinger extension, 42' & up	1
13	S-456	Nut - hex, 3/8 - 16 UNC, Finished, pltd, grade 2	27
14	S-7469	Bolt - hex, std. Thrd - Grd 5, 3/8 - 16 unc x 1, pltd	24
15	S-1054	Washer - lock, regular 3/8", pltd	21
16	S-248	Washer - flat, standard, 3/8", pltd	15
17	S-7835	Washer - flat, standard 1", pltd	2
18	3FH1224	Pin - retaining, snap-over, 1/4" DIA x 1-3/4" long	1
19	PT0240	Bearing with collar, 1", ecc lk, ext, nrl, sph	2

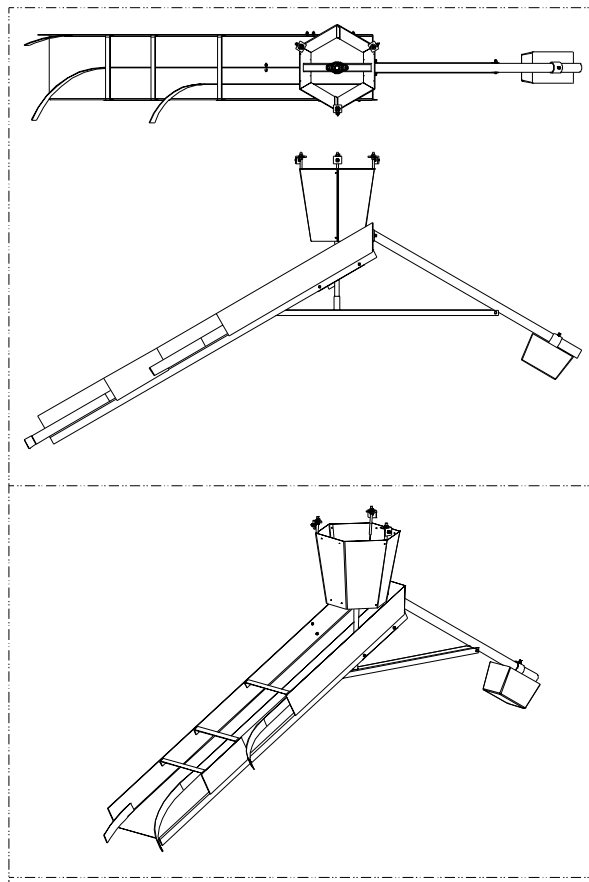


Model 10000 Parts



EXPLODED VIEW
SCALE 0.313

Model 10000			
Index	Part #	Description	Qty
1	3072009	Channel - counterweight support, weldment	1
2	3072013	Tube - counterweight support, weldment	1
3	3072014	Angle - hanger	3
4	3072015	Washer - rubber	2
5	3072020	Chute - weldment	1
6	3072024	Center shaft & chute - weldment	1
7	3072032	Counterweight - assembly	1
8	3072033	Hopper - hex, weldment	1
9	S-396	Nut - hex, 5/16-18 unc, finished, pltd, grade 2	2
10	S-456	Nut - hex, 3/8-16 unc, finished, pltd, grade 2	12
11	S-860	Nut - hex, 7/16-14 unc, finished, pltd, grade 2	4
12	S-7510	Nut - hex, 1/2-13 unc, finished, pltd, grade 2	6
13	S-7469	Bolt - hex, std thrd-grade 5, 3/8-16 unc x 1, pltd	11
14	S-8676	Bolt - hex, std thrd-grade 5, 3/8-16 unc x 3-1/2, pltd	1
15	S-7837	Bolt - hex, std thrd-grade 5, 7/16-14 unc x 1-1/2, pltd	4
16	S-3550	Bolt - car, std thrd-grade5, 5/16-18 unc x 1, pltd	2
17	S-1147	Washer - lock, regular, 5/16, pltd	2
18	S-1054	Washer - lock, regular, 3/8", pltd	12
19	S-7014	Washer - lock, regular 7/16", pltd	4
20	3FH0833	Bushing - (mach)wide - pltd, 2-1/4 OD x 1-1/4 ID x 10GA	2
21	S-845	Washer - flat, standard, 5/16 pltd	2
22	S-248	Washer - flat, standard, 3/8" pltd	3
23	S-2121	Washer - flat, standard, 1/2" pltd	6
24	3FH1224	Pin - retaining, snap-over, 1/4" dia x 1-3/4" long	1
25	GK1330	Bearing - w/ housing, 1-1/4", ECC LK, EXT, RL, SPH, 2H	2



NOTES

The GSI Group, Inc. Warranty

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THE FOREGOING WARRANTY SHALL NOT EXTEND TO PRODUCTS OR PARTS WHICH HAVE BEEN DAMAGED BY NEGLIGENT USE, MISUSE, ALTERATION OR ACCIDENT. THIS WARRANTY EXTENDS SOLELY TO ONLY PRODUCTS MANUFACTURED BY GSI. THIS WARRANTY IS EXCLUSIVE AND IN LIEU OF ALL OTHER WARRANTIES EXPRESS OR IMPLIED. GSI RESERVES THE RIGHT TO MAKE DESIGN OR SPECIFICATION CHANGES AT ANY TIME.

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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 installation occurs.

For more information, contact the DMC Distribution Center closest to you.

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