

# Manual

## Municipal-Sized Hydraulic Powered Stainless Steel Hopper Spreaders

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### General Information

MODEL NO.	OVERALL LENGTH	WIDTH	HEIGHT	EMPTY WEIGHT	CAPACITY CU. YDS.
<b>1471056SSH</b>	162"	84"	60"	2655 lbs.	7.0
<b>1471156SSH</b>	168"	84"	60"	2855 lbs.	8.0
<b>1471256SSH</b>	180"	84"	60"	3055 lbs.	9.0
<b>1471456SSH</b>	204"	84"	60"	3561 lbs.	10.0

### 1. Recommended Vehicle Requirements

Buyers Municipal-Sized Hopper Spreaders are intended for spreading abrasives and/or chemicals, primarily for ice and snow control. They are intended for installation on truck chassis or dump bodies with GVWR 26,000 lbs. Spreaders are intended to be mounted on trucks with **Cab To Axle/Tandem Dimension** minimum of 84 inches.

**⚠ IMPORTANT**

The Cab to Axle/Tandem dimensions are only guidelines. Consult federal, state and local weight laws and chassis manufacturer's ratings to ensure neither government weight restrictions, nor GVWR and GAWRs are exceeded.



### 2. Average Material Weights

MATERIAL WEIGHT (POUNDS PER CUBIC YARD)

- #1 Rock Salt - 950
- #2 Rock Salt - 1,215
- Coarse Sand - Dry 2,565
- Coarse Sand - Wet 3,240

### 3. Recommended Fastener Torques

Maintain all fastener torques as shown in the following table. Failure to do so may cause injury to persons.

	SAE GRADE 2	SAE GRADE 5
	ft-lbs	ft-lbs
5/16-18	11	18
3/8-18	19	31
3/8-24	24	46
7/16-14	30	50
1/2-13	45	75
9/16-12	66	110
5/8-11	93	150

## General Safety Precautions

### WARNING

Observe the following Safety Precautions before, during and after operating this spreader. By following these precautions and common sense, possible injury to persons and potential damage to this machine may be avoided.

1. Read this entire Owner's Manual before operating this spreader.
2. Read all safety decals on the spreader before operating the spreader.
3. Check to make sure all safety guards are securely mounted into place before operating your spreader.
4. Verify that all personnel are clear of the spreader spray area before starting or operating this spreader.
5. Keep all loose clothing, hair, jewelry and limbs clear of the spreader before starting or operating this spreader.
6. Do not over-load your vehicle beyond payload limits.
7. Do not perform any service operation on the spreader while it is running.
8. Do not climb on or into the spreader during operation.
9. Do not ride on the spreader while the vehicle is in motion.
10. Make sure the spreader is securely fastened to the vehicle.
11. Do not operate a spreader that is in need of maintenance or repair.

## General Installation Instructions

### Dump Body Mounting

1. Remove the tailgate from the vehicle if applicable.
2. Lift the spreader using the (4) lifting loops in the corners of the hopper.

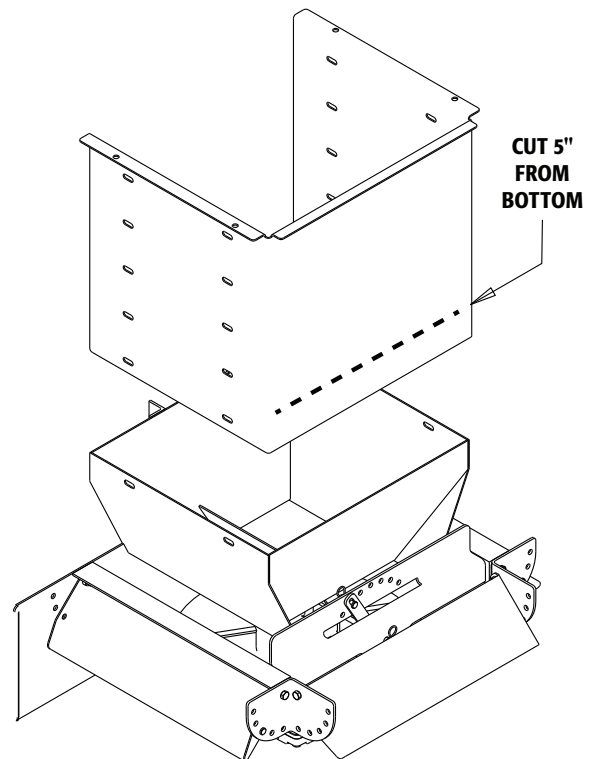
### WARNING

The lifting device must be adequately rated to lift a payload equal to or greater than the spreader weight. See page 1 for spreader weights. Empty the spreader before lifting.

3. Center the spreader in the vehicle. Spreader sills must overhang 20" beyond the back end of the vehicle.
4. If the dump body is not flat, it is suggested that the spreader be placed on two 1" x 6" hardwood boards. This will evenly distribute the weight of the loaded spreader on the entire cross channels.
5. The spreader may be secured to the vehicle by using Tie-Down Kit Buyers part #3010548 (sold separately).
6. Periodically check that the spreader mounting hardware is securely tightened.

### Chassis Mounting

1. Hardwood wear strips usually 1" x 3" (not furnished) must be fitted to the truck chassis.
2. The spreader should be positioned on the wooden wear strips so hopper sills must overhang 20" beyond the back end of the vehicle.
3. In addition a distance of approximately 4"-6" must be left between the truck cab and the front of the hopper. This will help facilitate any future servicing of the conveyor chain.
4. Qualified installer must fabricate suitable angles to attach hopper cross members to truck's frame. **DO NOT** weld mounting angles to the truck frame. Doing so can cause fatigue cracking of the truck frame.

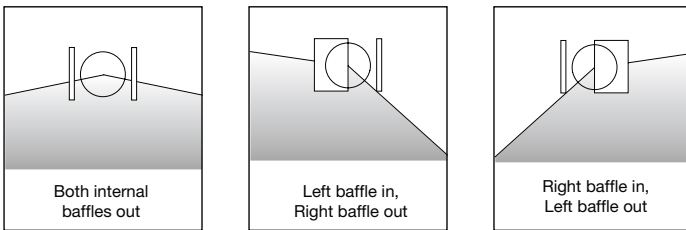


### Chute Installation

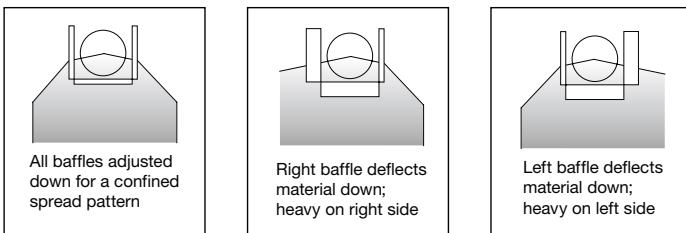
1. Bolt chute to Hopper using provided hardware.
2. Chute heights can be adjusted by sliding lower chute assembly up or down inside of upper chute assembly. Adjustment slots are spaced by 3". Secure lower chute assembly using all 4 carriage bolts provided. Make sure all four bolts are used for installation. To increase ground clearance cut upper chute as shown and use lower slots in bottom chute.
3. The spread pattern and the amount of material dispensed will depend on the following factors:
  - Auger speed.
  - Spinner RPM.
  - Baffle settings.

Below are illustrations that show the baffles effect on the spread pattern as viewed from the top of the spinner disk.

### Internal Baffle Adjustment

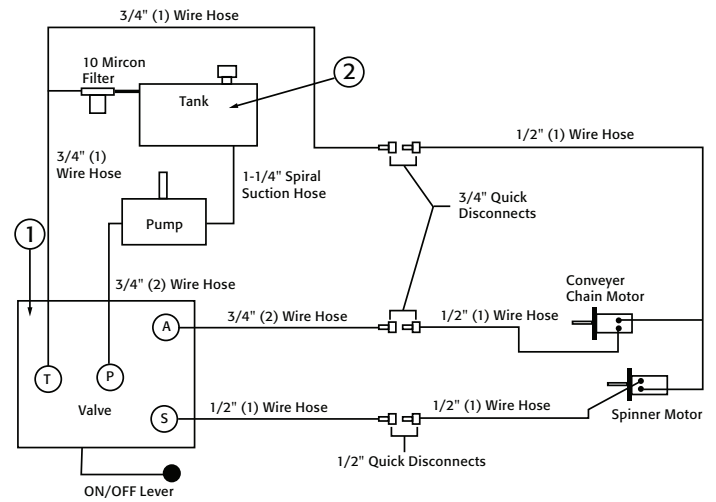


### External Baffle Adjustment



### Installation Instructions – Hydraulic System

1. During assembly take precautions to keep all hydraulic components as clean as possible.
2. Allow enough hose length to prevent kinking and stretching of the hoses and to permit raising the dump body. Support long hoses with wire ties or clamps.
3. Protect hoses from wear caused by sliding and/or vibration.
4. For proper rotation of conveyor chain and spinner motors, hoses may be reversed.
5. Note: Use of a pipe joint sealant compatible with hydraulic oil is recommended for all screw fittings.
6. Use swivel type hose ends to connect hoses to flow valve. Damage to valve body may occur if the fittings in flow valve are over tightened.
7. A 10 micron return line filter is recommended to protect the pump, valve, and motors from wear causing contamination.



**Valve Key**  
**T**= Tank/Reservoir  
**P**= Pump/Pressure In  
**A**= Auger (Conveyer Chain)  
**S**= Spinner

**(1) Single braid wire hose**  
**(2) Double braid wire hose**

### Main Components

ITEM	PART NO.	QTY.	DESCRIPTION
1	HV715	1	Dual Flow Regulator Valve
2	SMR15S	1	15-Gallon reservoir
N/S	HVC1	1	Dual Flow Regulator Console

## Spreader Operation

### Initial Priming and Inspecting of the System

#### CAUTION

- Be sure everyone is standing clear of spreader.
- Be alert for anything that may require shutting down the system.
- Before working in or around spreader equipment, be sure all hydraulic controls are moved to OFF position.

1. Use high grade non-foaming hydraulic oil to fill reservoir about 3/4 full.
2. Position valve on/off lever to OFF.
3. Move auger (conveyor chain) and spinner knobs on the valve to the open position.
4. Engage PTO and circulate hydraulic oil for several minutes to warm up.
5. Move valve on/off lever to ON.
6. Inspect hydraulic system for leaks.
7. Check auger and spinner to see if they are working properly and rotating the correct direction. To reverse rotation, switch the hydraulic lines at the motor.
8. Refill reservoir to 3/4 full.
9. Hydraulic system should now be ready for use.

### Spreader Start-Up

1. Check baffle positions for desired material flow and spread pattern. See Spreader Operation section.
2. Check to make sure that no loose parts or other material are in hopper, on in chute or spinner disk.
3. Shut off spinner and auger knobs and position the on/off lever to ON. Engage the PTO and allow the hydraulic system to warm up.
4. After the system is warm turn the spinner and auger (conveyor chain) knobs to the desired settings.
5. Changing the conveyor chain and spinner speeds as well as adjusting the baffle positions will produce various spread patterns.

### Miscellaneous

- Valve setting changes may be made with truck in motion.

- By moving on/off lever to the off position, spinner and auger may be stopped at the same time without changing their valve settings.

#### CAUTION

Always follow the following precautions so as not to cause damage to the spreader.

- If the auger does not move because of dense material or a material jam, remove all material from the hopper and free the chain.
- If the material in the hopper freezes, move the spreader into a warm area to thaw.
- To prevent the auger from freezing, do not store material in the spreader.
- DO NOT ATTEMPT TO FREE THE AUGER BY USING A PIPE OR SIMILAR TOOL TO MOVE OR DISLodge THE AUGER. This action will void all warranties.

### Spreader Maintenance

- Grease the front bearing regularly.

#### IMPORTANT!

CHANGE THE HYDRAULIC OIL FILTER AFTER THE FIRST WEEK (OR NOT MORE THAN 50 HOURS) OF OPERATION ON A UNIT

- Tighten all screw fasteners to recommended torques after the first week of operation and annually thereafter. If loose fasteners are found at any time, tighten to the recommended torques. Replace any lost or damaged fasteners or other parts immediately upon finding such damage or loss. Check body mounting bolts every week.

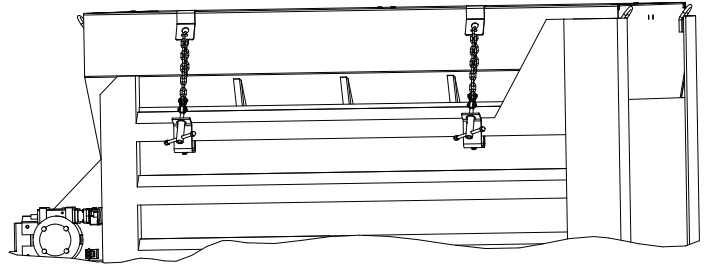
#### CAUTION

- Empty the spreader of all ice control material when not in use to prevent a frozen feed chain & damage due to corrosion.
- Wash out the spreader when it is not in use. At the end of the season wash out the spreader to remove all ice control materials. Thoroughly dry all metal surfaces. Re-paint and oil all previously painted surfaces and chains to protect from rust. Properly store the spreader for the next season.

### Spreader Maintenance - Hydraulic System

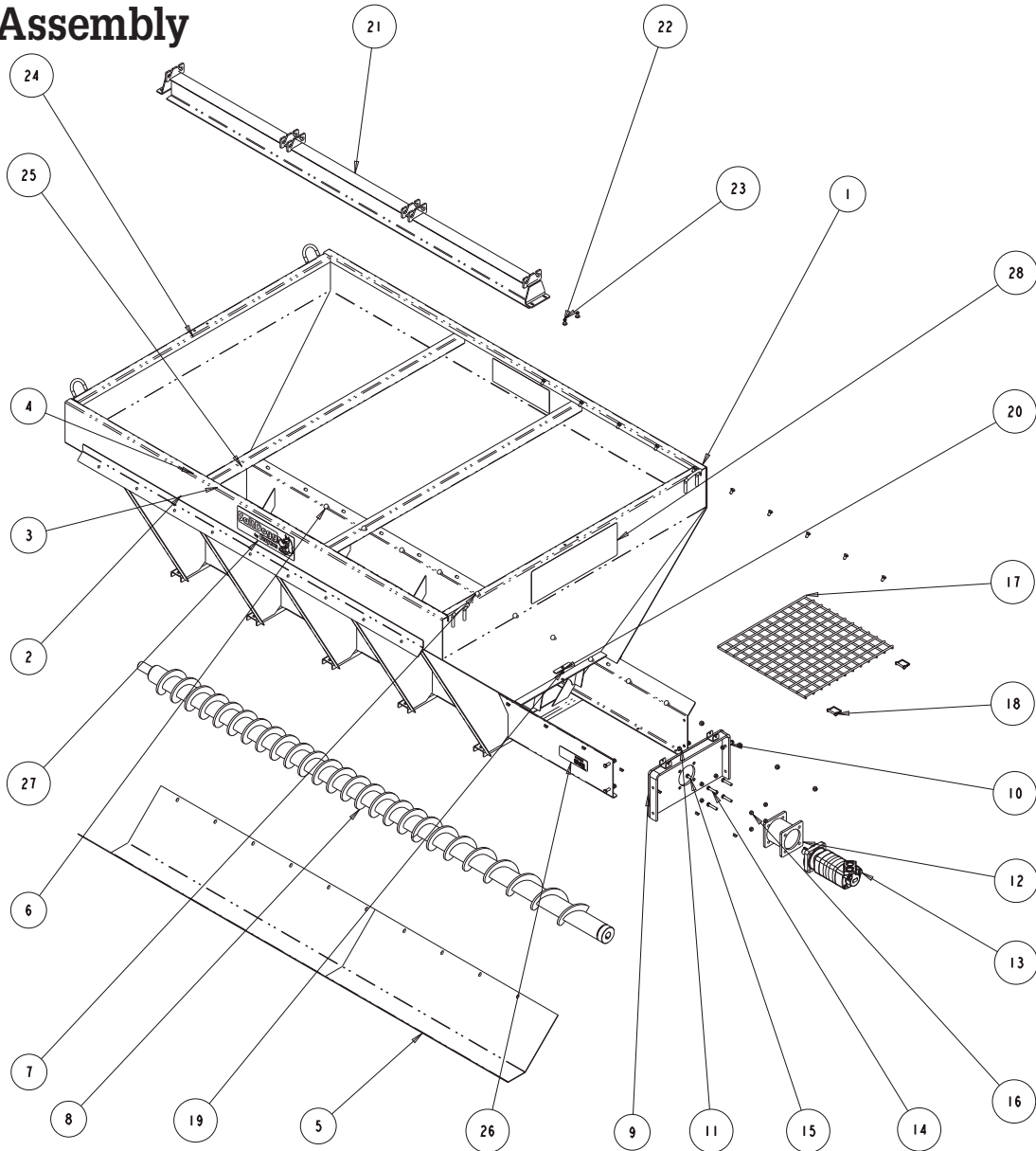
1. Warm up hydraulic system before using.
2. Keep the reservoir 3/4 full with high grade non-foaming hydraulic oil.
3. Use precautions to keep contaminants from getting in reservoir when filling.
4. Quick connects are a prime source of contamination.
  - Clean quick connects before connecting or disconnecting them.
  - Protect quick connects from contaminants at all times.
5. Lubricate all bearings with suitable type grease on a regular basis. More frequent lubrication is recommended during periods of heavy use.
6. When not in use, keep the spreader empty to prevent freezing of material in the hopper in extremely cold weather.
7. To extend the life of your spreader:
  - Hose down and clean after each use.
  - Repaint and/or oil, where necessary, after each season.

### Optional Equipment



**3010548 Tie-Down Kit**

# Hopper Assembly

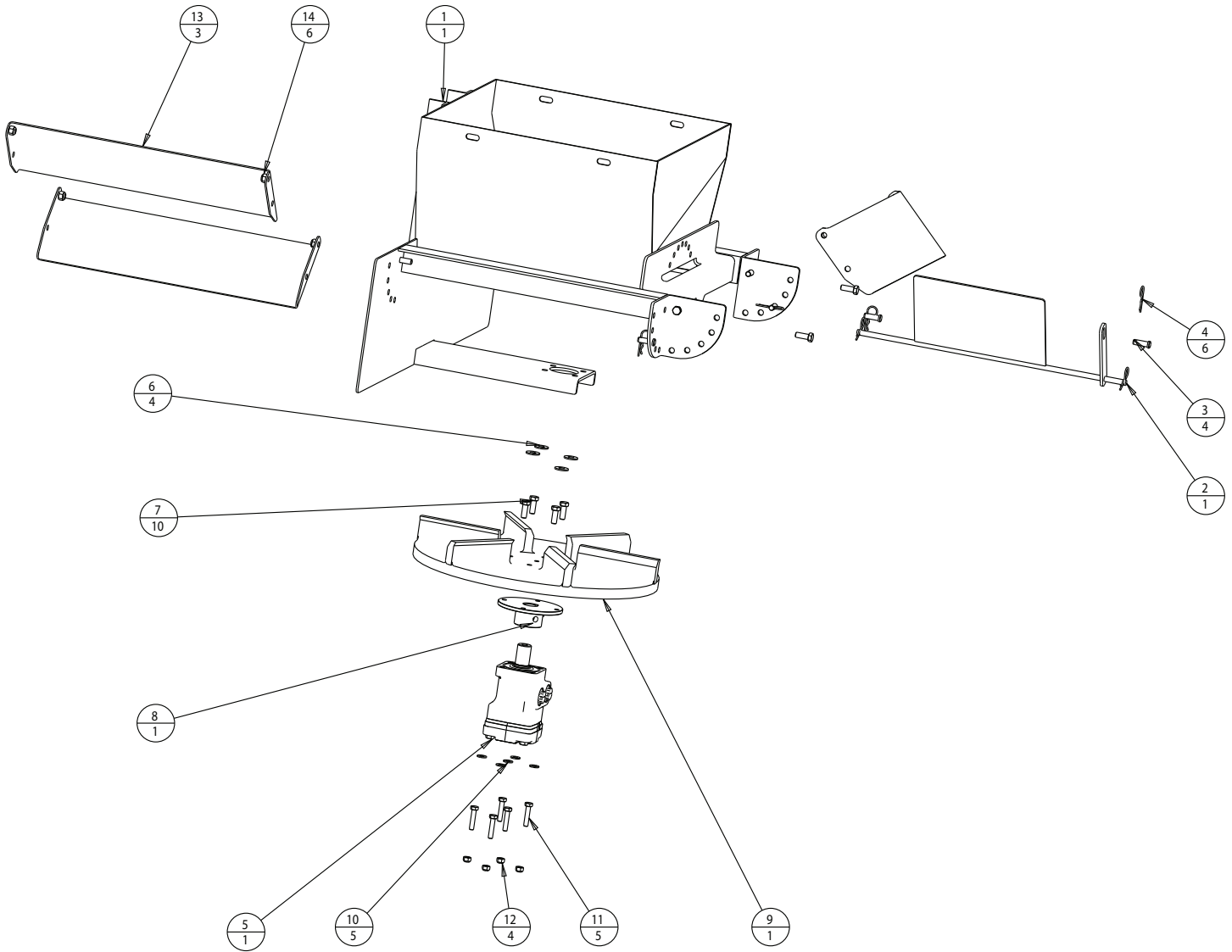


## Bill of Materials

ITEM	PRODUCT NO.	QTY.	DESCRIPTION
1	3023626	1	HOPPER WELDMENT 10 FT AUGER SST
	3023727	1	HOPPER WELDMENT 11 FT AUGER SST
	3023738	1	HOPPER WELDMENT 12 FT AUGER SST
	3024828	1	HOPPER WELDMENT 14 FT AUGER SST
2	4F32SCR	1	BEARING FLANGE 2.0 DIA, 4 HOLES SET SCREW
3	-	4	SCREW HH 5/8- 1X2.25 SS
4	-	4	NUT, HEX NYLOCK 5/8-1 1 SST
5	3023633	1	TROUGH WELDMENT, 10'
	3023734	1	TROUGH WELDMENT, 11', 12', 14'
6	-	20	BOLT, CARRIAGE 1/2-13 X 1 SST
7	-	20	NUT, HX FLNG-1/2- 3 SST
8	3018003	1	AUGER VARIABLE PITCH 7 OD
9	3017749	1	MOTOR MOUNT, WELDMENT
10	-	4	SCREW, HEX HD 1/2-13x1 .5 GR5 SS
11	-	4	NUT, NYLOCK 1/2-13 SS
12	3023640	1	ADAPTER, HYDRAULIC MOTOR
13	62100001	1	MOTOR HYDRAULIC 59.97 CU IN ( 982.7 CO
14	-	4	SCREW, HEX HD CAP 72-13 X 2.5 GR. 5 ZN

ITEM	PRODUCT NO.	QTY.	DESCRIPTION
15	-	4	SCREW, HEX CAP 1/2-13 X 2" GR5 ZN
16	-	8	NUT, NYLOCK 1/2-13 ZINC
17	3017750	1	GRATE, AUGER OPENING
18	66060	2	SNAPPER PIN, 3/8" X 2-1/2", ZY
19	3019874	1	HOLDER, SCREEN
20	-	1	SCREW, HX HD CAP 3/8-16 X 1- 12 SST
	3023636	1	GRATE SUPPORT, WELDMENT 10'
	3023736	1	GRATE SUPPORT, WELDMENT 11'
	3023750	1	GRATE SUPPORT, WELDMENT 12'
21	3022846	1	GRATE SUPPORT, WELDMENT 14'
	-	8	WASHER, FLAT 3/8 USS SST
22	-	8	WASHER, FLAT 3/8 USS SST
23	-	4	SCREW, HHC 3/8-16 X 1 304 SST
24	-	4	NUT, NYLOCK 3/8-16 X 7/16 SST
25	1413200	1	GROMMET, 1 12 RUBBER
26	9240132	1	DECAL #2, DANGER BEFORE SVCE
27	301 1 132	2	DECAL, SALT DOGG, BLK/WHT ON CLR 18X6.3125
28	3010849	1	DECAL SALT DOGG 27.25 X 9

# Chute Assembly

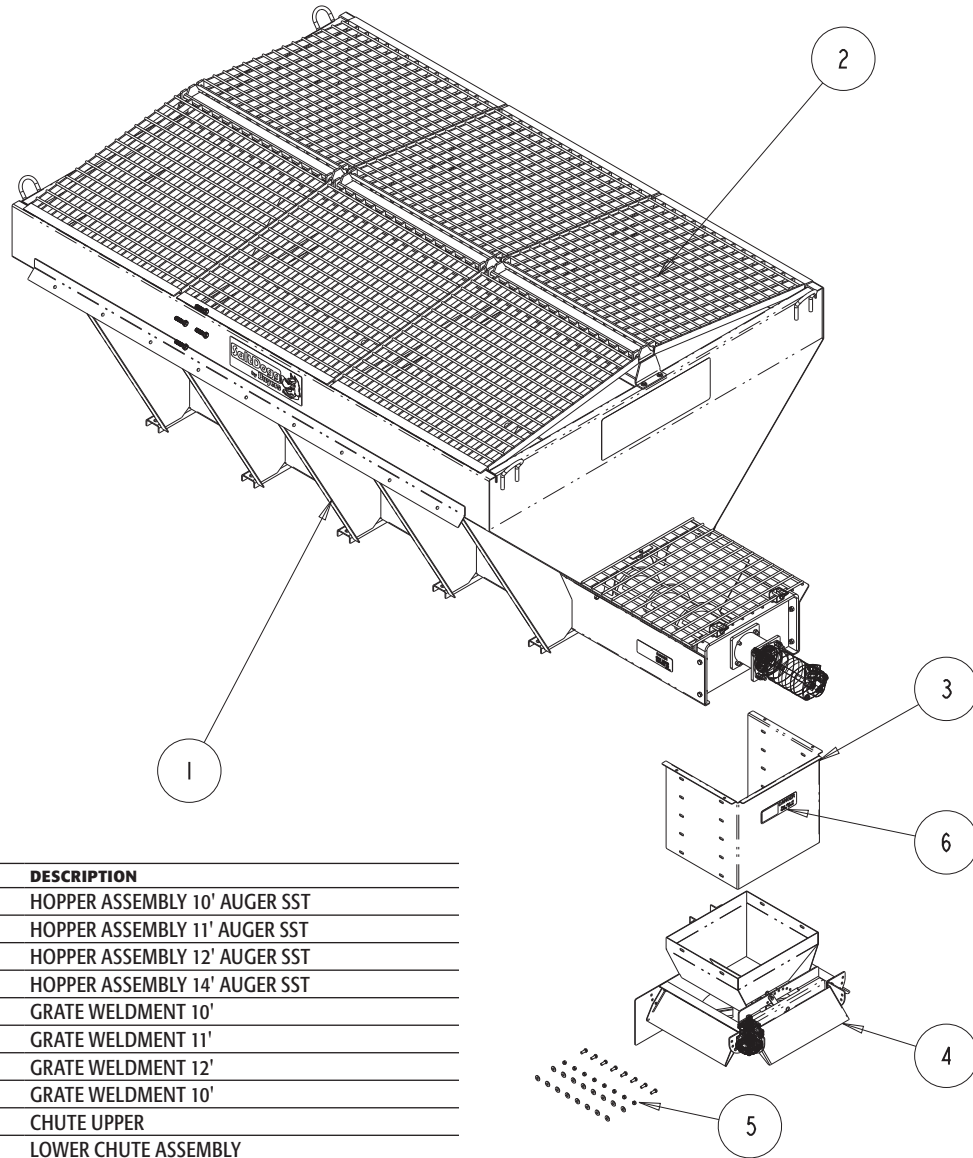


## Bill of Materials

ITEM	PRODUCT NO.	QTY.	DESCRIPTION
1	3017759	1	LOWER CHUTE WELDMENT
2	3018020	1	CENTER BAFFLE WELDMENT
3	BCP84620SS	4	PIN, CLEVIS 3/8 X 1.125 SST
4	300257	6	PIN, HAIR COTTER STAINLESS STL
5	CM004P	1	MOTOR, HYDRAULIC, 4-BOLT, 3.2 CIPR
6	-	4	WASHER, FLAT 3/8 USS SST
7	-	10	SCREW, HHC 3/8-16 X 1 304 SST
8	924F0017A	1	ASSEMBLY, SPINNER HUB

ITEM	PRODUCT NO.	QTY.	DESCRIPTION
9	9240016	1	SPINNER, 18" POLY CCW
10	-	5	WASHER, 5/16 SAE SST
11	-	5	SCREW, HHC 5/16-18 X 1.5 SST
12	-	4	NUT, NYLOCK 5/16-18 SS
13	3017770	3	DEFLECTOR CHUTE
14	-	6	NUT, NYLOCK 3/8-16 X 7/16 SST

# Spreader Assembly



## Bill of Materials

ITEM	PART NO.	QTY.	DESCRIPTION
	3023869	1	HOPPER ASSEMBLY 10' AUGER SST
1	3023870	1	HOPPER ASSEMBLY 11' AUGER SST
	3023871	1	HOPPER ASSEMBLY 12' AUGER SST
	3024829	1	HOPPER ASSEMBLY 14' AUGER SST
	3023854	6	GRATE WELDMENT 10'
2	3017635	6	GRATE WELDMENT 11'
	3023850	6	GRATE WELDMENT 12'
	3017635	8	GRATE WELDMENT 10'
3	3017758	1	CHUTE UPPER
4	3018242	1	LOWER CHUTE ASSEMBLY
5	3020101	1	HARDWARE BAG
6	3007844	1	DECAL, DANGER STAY CLEAR