

Instruction Manual

Municipal-Sized Hydraulic Powered Stainless Steel Hopper Spreaders

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General Information

SPREADERS- 34,000 lb. to 38,000 lb. GVW Chassis
HOPPER LENGTH: 144" OVERALL LENGTH: 167" WIDTH: 82"

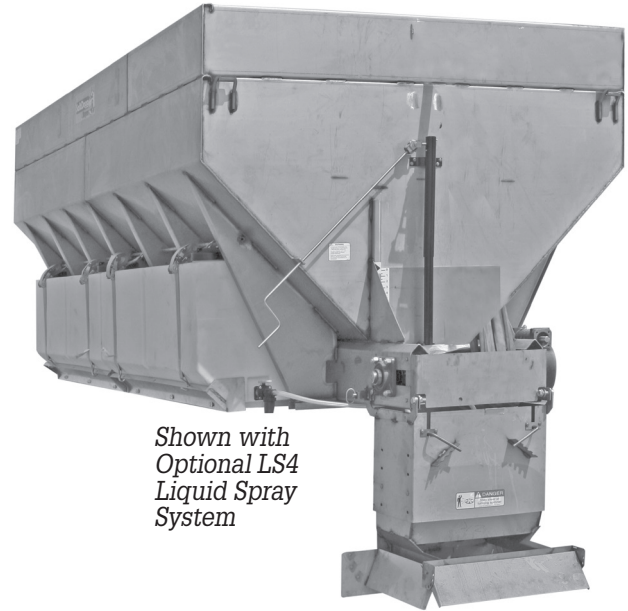
PART NO.	GEARBOX RATIO	LEVEL CU. YRDS.	ROUNDED CU. YRDS.	SIDE HEIGHT	EMPTY WT. LBS.
1451057SSH	50:1	8.76	10.00	57"	2990 LBS.
1421057SSH	25:1	8.76	10.00	57"	2990 LBS.
1451163SSH	50:1	10.28	11.82	63"	3155 LBS.
1421163SSH	25:1	10.28	11.82	63"	3155 LBS.
1451369SSH	50:1	11.82	13.59	69"	3260 LBS.
1421369SSH	25:1	11.82	13.59	69"	3260 LBS.

SPREADERS- 48,000 lb. to 60,000 lb. GVW Chassis
HOPPER LENGTH: 168" OVERALL LENGTH: 191" WIDTH: 82"

PART NO.	GEARBOX RATIO	LEVEL CU. YRDS.	ROUNDED CU. YRDS.	SIDE HEIGHT	EMPTY WT. LBS.
1451257SSH	50:1	10.22	11.75	57"	3570 lbs.
1421257SSH	25:1	10.22	11.75	57"	3570 lbs.
1451363SSH	50:1	12.00	13.80	63"	3930 lbs.
1421363SSH	25:1	12.00	13.80	63"	3930 lbs.
1451469SSH	50:1	13.80	15.87	69"	4040 lbs.
1421469SSH	25:1	13.80	15.87	69"	4040 lbs.

▲ IMPORTANT

Consult federal, state and local weight laws and chassis manufacturer's ratings to ensure neither government weight restrictions, nor GVWR and GAWRs are exceeded.



*Shown with
Optional LS4
Liquid Spray
System*

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

4. Gearbox Oil

The gearbox of the spreader is filled with ISO VG 460 synthetic gear lubricant at the factory. This lubricant has operating temperature -40° C to 150° C.

WARNING

Verify that the above oil meets your operating temperature requirements. If not, empty and refill with the proper viscosity oil. Before starting spreader, check that the gearbox is filled to the proper level with lubricant.

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 track'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 Chute Guide using screws, washers and nuts. Place washers between Chute Guide tabs and Chute brackets.
2. Swing chute towards vehicle. Connect chute to the hopper by engaging two latches into corresponding holes in chute brackets.
3. 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.

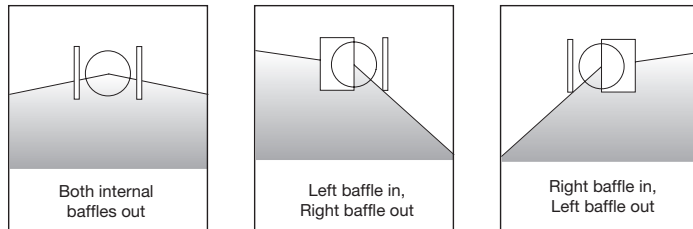
Spreader Operation

The spread pattern and the amount of material dispensed will depend on the following factors:

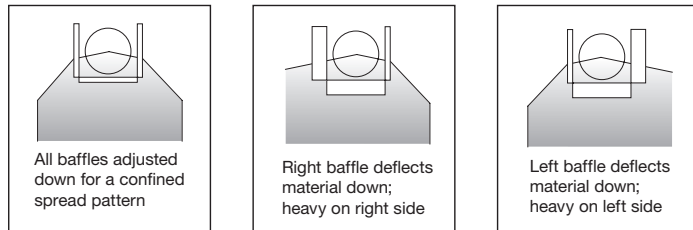
- Conveyor speed.
- Spinner RPM.
- Feed gate door position.
- Baffle settings.

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

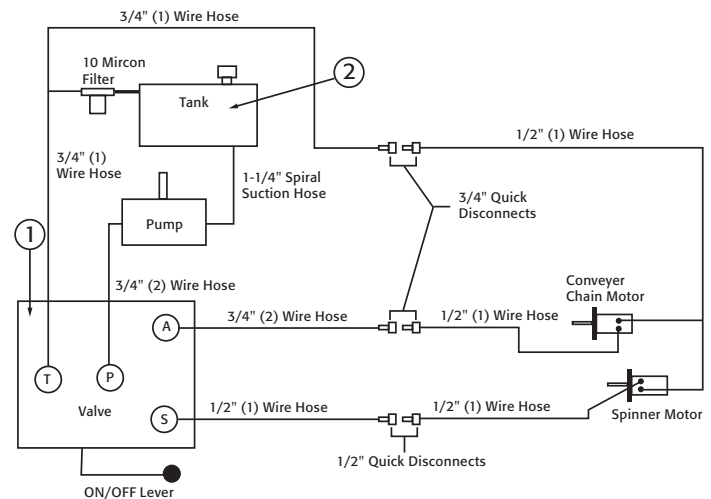
1. During assembly take precautions to keep all hydraulic components as clean as possible.
2. Allow enough hose length to prevent kinking and stretching of the hoses and to permit raising

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.

8. Spreader Operation

Initial Priming and Inspecting of the System



Valve Key
T= Tank/Reservoir
P= Pump/Pressure In
A= Auger (Conveyor 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

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 conveyor chain 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 feed gate opening and 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 conveyor chain 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 conveyor chain 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 conveyor chain 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 feed chain from freezing, do not store material in the spreader.
- The gearbox is designed to only accept torque from the input shaft. Therefore, **DO NOT ATTEMPT TO FREE THE CONVEYOR BY USING A PIPE OR SIMILAR TOOL TO MOVE OR DISLodge THE CHAIN.** This action will void all warranties.

Spreader Maintenance

- Grease the following components regularly:
 - Idler shaft bearings (2)
 - Drive shaft bearing (1)
 - Feed Gate Jack
 - Gearbox input shaft (if equipped with fitting)
 - Check gearbox oil level periodically and maintain the oil level by adding appropriate lubricant.

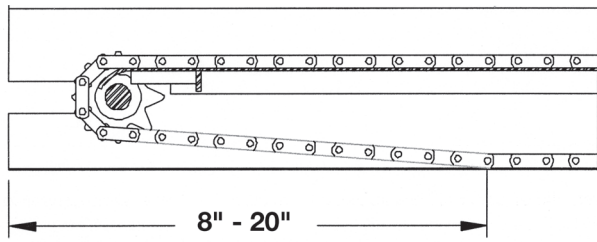
IMPORTANT!

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

- Check the Feed Chain tension periodically. Proper chain tension is illustrated below. Be sure the chain is tensioned equally on both sides. This adjustment is made on each side of the spreader at the idler bearing.

Lubricate the conveyor chain at least once a week. Use a mixture of 75% fuel oil and 25% SAE 10 oil in a pressurized hand spray gun.

- 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

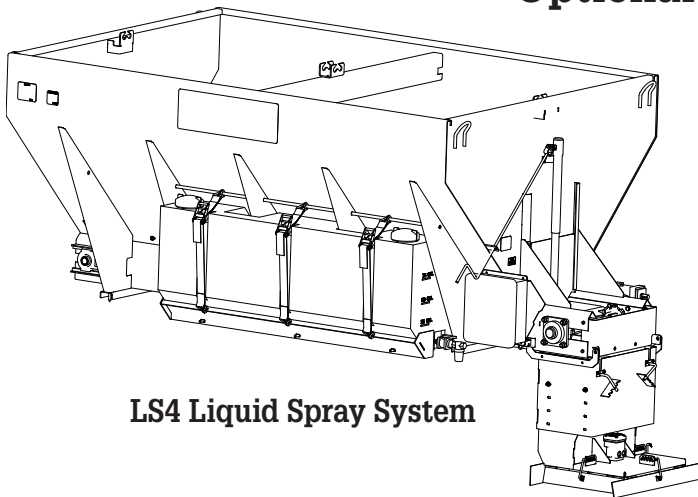
Do not over-tension the conveyor chain. This can cause damage to the chain, bearings, and gearbox.

- 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.

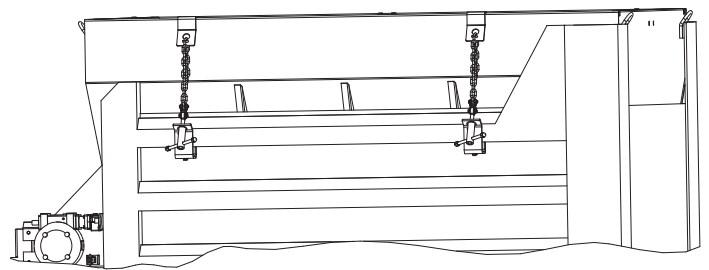
Spreader Maintenance - Hydraulic System

- 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 and jack with suitable type grease on a regular basis. More frequent lubrication is recommended during periods of heavy use.
- 6.** Maintain the proper lubrication level in all gear-boxes with appropriate gear lubricant.
- 7.** When not in use, keep the spreader empty to prevent freezing of material in the hopper in extremely cold weather.
- 8.** 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

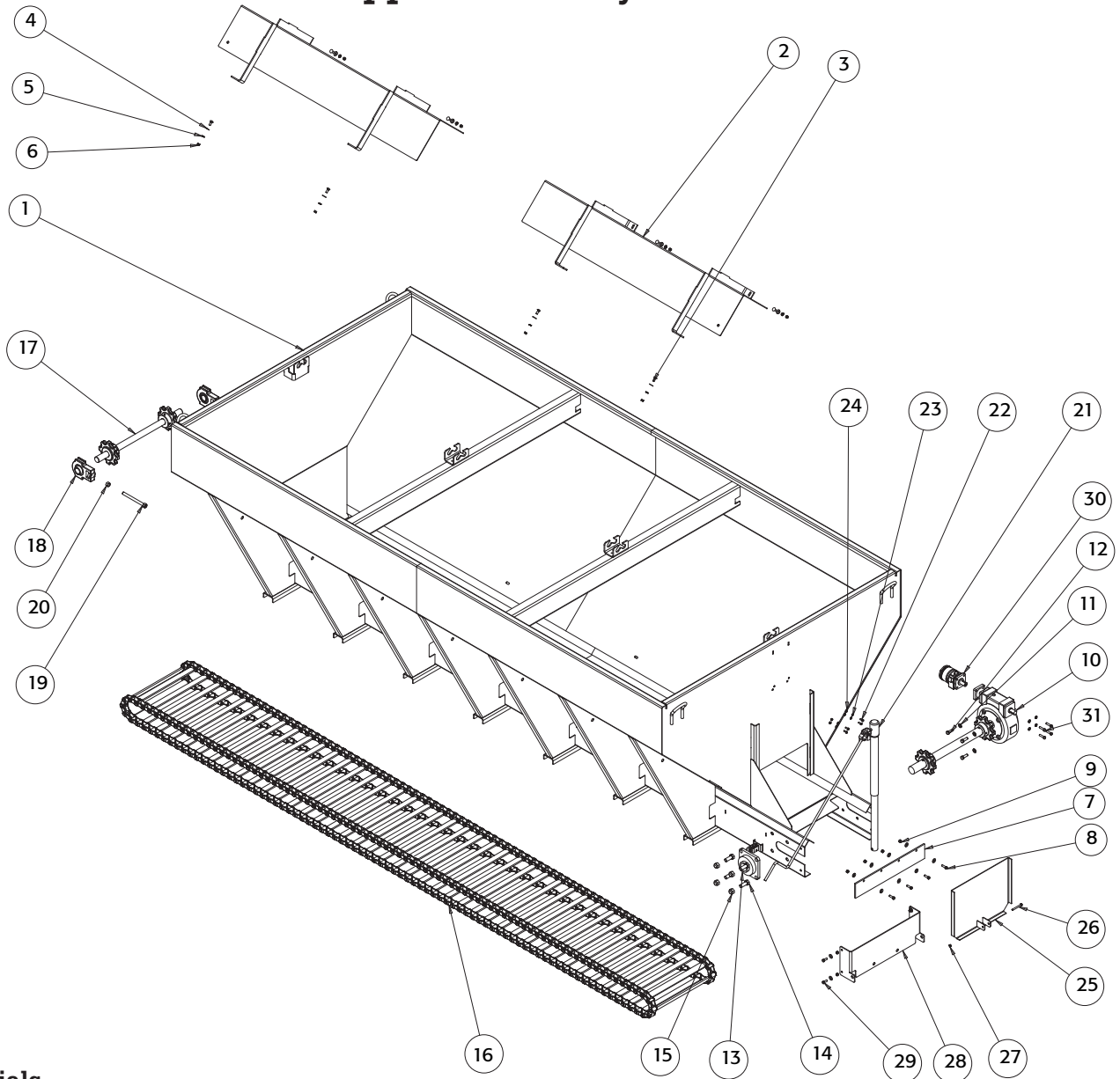


LS4 Liquid Spray System



3010548 Tie-Down Kit

Hopper Assembly

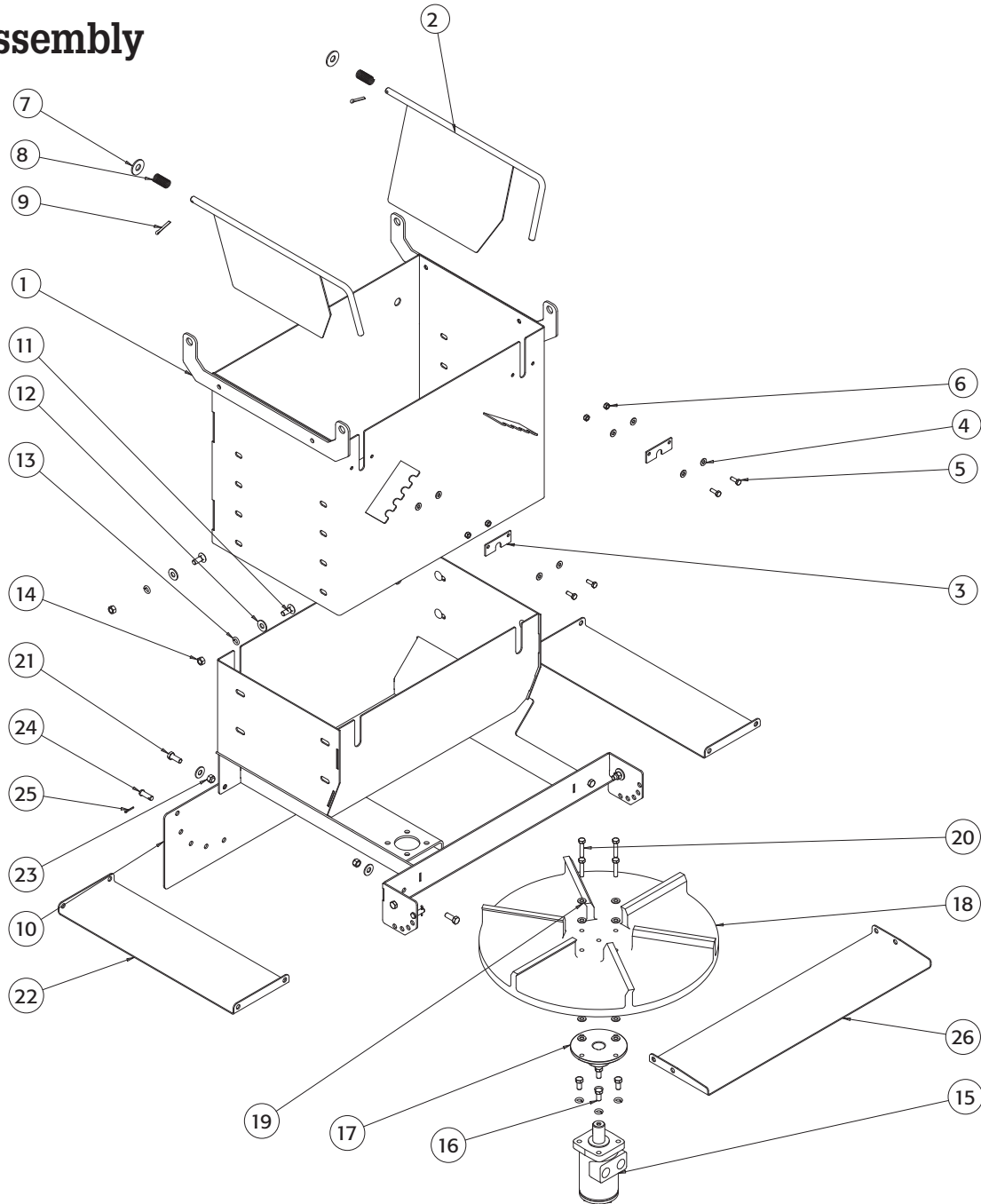


Bill of Materials

ITEM	PART NO.	QTY.	DESCRIPTION
1	-	1	Hopper Weldment, 14ft.
1	-	1	Hopper Weldment, 12ft.
2	3015144	2	Inverted "V" Assy., 14ft.
2	3015543	1	Inverted "V" Assy., 12ft.
3	-	8	Bolt, 3/8-16 x 1 Carriage SST
4	-	20	Washer, Flat 3/8 USS SST
5	-	12	Washer, Lock RHS-3/8 SST
6	-	12	Nut, 3/8-16 Hex SST
7	3010131	1	Wiper, Rubber
8	-	4	Screw, HHC 3/8-16 x 1.25 SST
9	-	8	Nut, Nylock 3/8-16 x 7/16 SST
10	3010991	1	Gear Box 25:1; Sprockets Assy.
10	3010847	1	Gear Box 50:1; Sprockets Assy.
11	-	4	Waasher, Lock - 1/2 Split SST
12	-	4	Screw, HHC 1/2-13 x 1 SST
13	4F32SCR	1	Bearing Flange, 1.5 dia. 4 holes set screw
14	-	4	Screw, Hex HD 3/4 x 10 x 2 SST
15	-	4	Nut, Hex Nylock 3/4-10 SST

ITEM	PART NO.	QTY.	DESCRIPTION
16	3015134	1	Chain, 14ft. D667X Conveyor
16	3015545	1	Chain, 12ft. D667X Conveyor
17	3010358	1	Idler Shaft, Assy.
18	3010603	2	Bearing, HD Take-Up 1.5 dia.
19	-	2	Bolt, Welded Take Up
20	-	2	Nut, HH 5/8-11 x 17/32 High SST
21	3010443	1	Jack Assy., Feed Gate
22	-	4	Screw, Cap 1/4-20 x 3/4 SST
23	-	4	Washer, Flat 1/4 SAE SS
24	-	4	Nut, Nylock Insert 1/4-20 SST
25	3010312	1	Feed Gate, Weldment
26	-	1	Screw, HH Cap 5/16-18 x 3 SST
27	-	1	Nut, Nylock 5/16-18 SS
28	3010180	1	Guide, Chute
29	-	4	Screw, HHC 3/8-16 x 1 304 SST
30	CM034P	1	Motor, Hyd. 4-Bolt 17.9 CI/R
31	-	4	Screw, HX HD CAP 3/8-16 x 1-1/2 SST

Chute Assembly

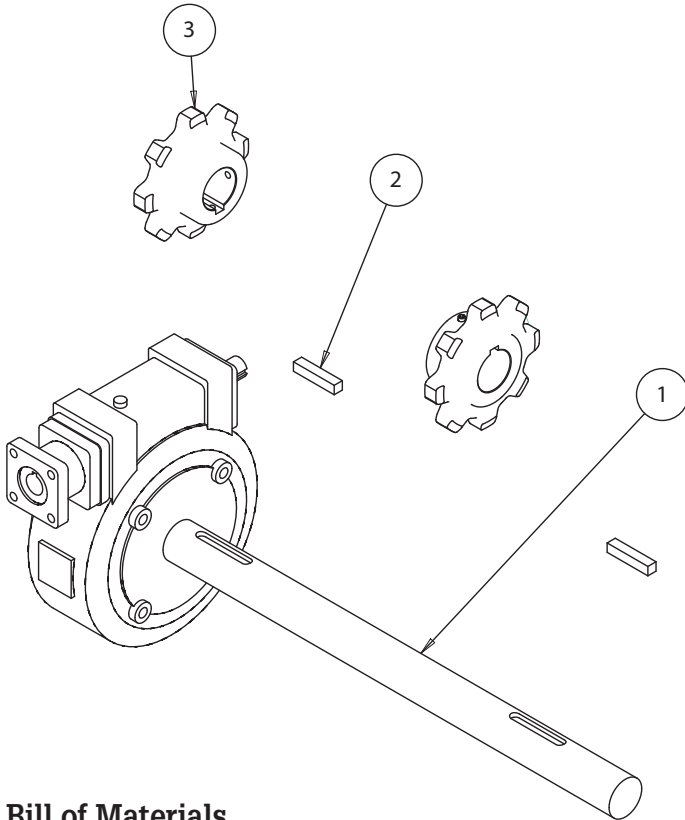


Bill of Materials

ITEM	PART NO.	QTY.	DESCRIPTION
1	3010172	1	Weldment Upper Chute
2	3010202	2	Weldment Deflector Inner
3	3010278	2	Retainer Deflector Inner
4	-	8	Washer, Flat 1/4 SAE SST
5	-	4	Screw, Cap 1/4-20 x 3/4 SST
6	-	4	Nut, Nylon Insert 1/4-20 SST
7	-	2	Washer, Flat 1/2 USS SST
8	3008853	2	Spring, Spinner Chute Baffle
9	-	2	Pin, Cotter 3/16" x 1.25" ZN
10	3012495	1	Weldment Lower Chute Bottom Motor
11	-	6	Bolt, 3/8-16 x 1 Carriage Set
12	-	12	Washer, Flat 3/8 USS SST
13	-	10	Washer, Lock RHS - 3/8 SST

ITEM	PART NO.	QTY.	DESCRIPTION
14	-	6	Nut, 3/8 - 16 Hex SST
15	CM004P	1	Motor, Hydraulic 4-Bolt
16	-	4	Screw, HHC - 3/8-16 x 3/4 SST
17	924F0017A	1	Assy., Spinner Hub
18	9240020	1	Spinner, 20" Poly CCW
19	-	8	Washer, 5/16 SAE SST
20	-	4	Screw, HHC 5/16-18 x 1.5 SST
21	-	6	Screw, HHC 3/8-16 x 1 304 SST
22	3012506	2	Baffle Side, Lower Chute
23	-	6	Nut, Nylock 3/8-16 x 7/16 SST
24	-	3	Pin, Clevis 3/8 x 1.125 SST
25	-	3	Pin, Cotter 3/32 x 3/4 SST
26	3012507	1	Baffle Rear, Lower Chute

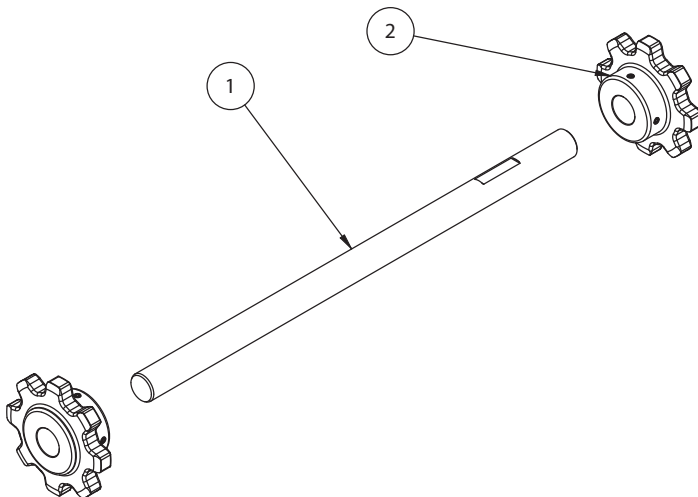
Gear Box, Sprockets Assembly



Bill of Materials

ITEM	PART NO.	QTY.	DESCRIPTION
1	3010863	1	Gear Box 25:1 Left Hand
1	3010057	1	Gear Box 50:1 Left Hand
2	3010989	2	Key Square, 1/2" x 2 1/2"
3	3010845	2	Sprocket Drive Assembly

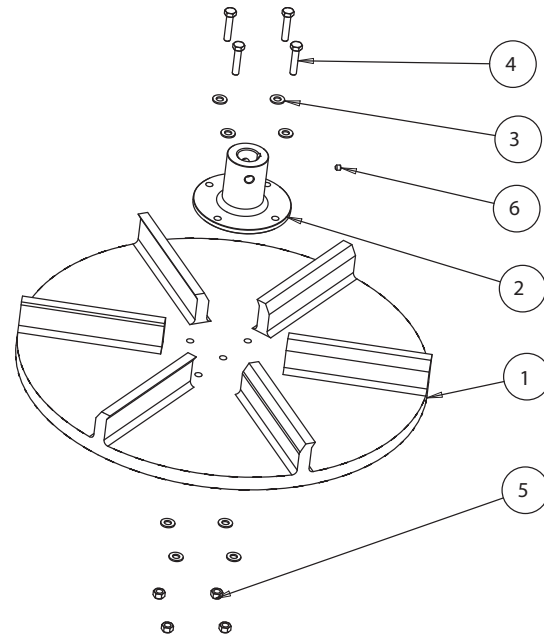
Idler Shaft Assembly



Bill of Materials

ITEM	PART NO.	QTY.	DESCRIPTION
1	3010034	1	Shaft, Idler 28" long
2	3010846	2	Sprocket Idler Assembly

Spinner Disc Assembly



Bill of Materials

ITEM	PART NO.	QTY.	DESCRIPTION
1	9240020	1	Spinner, 20" Poly CCW
2	3008632	1	Hub, Long Neck Spinner
3	-	8	Washer, 5/16 SAE SST
4	-	4	Screw, HHC 5/16-18 x 1 1/2 Gr 5 SS
5	-	4	Nut, Nylock 5/16-18 SS
6	-	1	Screw, Set SOC Cup Point 1/4-20 x /4 SS

SPREADER WARRANTY INFORMATION

This warranty replaces all previous warranties and no employee of this company is authorized to extend additional warranties, or agreements, or implications not explicitly covered herein.

Buyers Products Company warrants all parts of the product to be free from defects in material and workmanship for a period of one (1) year. Parts must be properly installed and used under normal conditions. Normal wear is excluded.

Any part which has been altered, including modifications, misuse, accident, or lack of maintenance will not be considered under this warranty.

The sole responsibility of Buyers Products Company under this warranty is limited to repairing or replacing any part(s) which are returned, prepaid, 30 days after such defect is discovered, and returned part(s) are found to be defective by Buyers Products Company.

Authorization from Buyers Products Company must be obtained before returning any part. The following information must accompany defective parts returned to Buyers Products Company: RMA#, spreader model, serial number, date installed, and distributor from whom purchased.

Buyers Products Company shall not be liable for damage arising out of failure of any unit to operate properly, or failure, or delay in work, or for any consequential damages. No charges for transportation or labor performed on any part will be allowed under this warranty.