

Installation Manual

Stainless Steel Self-Contained Hopper Spreaders

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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, excluding the gasoline engine, from the date of installation. 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.

The gasoline engine is solely warranted through engine's manufacturer. All engine related warranty claims are to be processed through the engine's manufacturer. This information is explained in the engine owner's manual.



Spreader Models and Specifications

MODEL #	POWER	HOPPER LENGTH	OVERALL LENGTH	OVERALL WIDTH	EMPTY WEIGHT	CAPACITY
1400455SSE	Electric	96"	122"	58"	1,335 lbs.	2.5 yds.
1400455SSH	Hydraulic	96"	122"	58"	1,335 lbs.	2.5 yds.
1400460SSE	Electric	108"	134"	58"	1,400 lbs.	2.75 yds.
1400460SSH	Hydraulic	108"	134"	58"	1,400 lbs.	2.75 yds.
1400465SSE	Electric	118"	144"	58"	1,466 lbs.	3.0 yds.
1400465SSH	Hydraulic	118"	144"	58"	1,466 lbs.	3.0 yds.
1400475SSE	Electric	96"	122"	70"	2,630 lbs.	3.0 yds.
1400500SSE	Electric	108"	134"	70"	2,750 lbs.	4.0 yds.
1400550SSE	Electric	118"	144"	70"	2,860 lbs.	4.5 yds.
1400560SSE	Electric	118"	144"	70"	2,960 lbs.	5.0 yds.
1400560SSH	Hydraulic	118"	144"	70"	2,960 lbs.	5.0 yds.

General Information

1. Recommended Vehicle Requirements:

This spreader is to be used on trucks with dump bodies or flat bed trucks with a Gross Vehicle Weight Rated chassis of 15,000 lbs. or greater.

CAUTION

Do not overload vehicle beyond the vehicle's Gross Vehicle Weight Rating (GVWR) or Gross Axle Weight Ratings (GAWR). Check the vehicle's load rating certification sticker for maximum vehicle capacity.

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

Note: To calculate the total spreader weight (including ice control material); add the empty spreader weight plus the ice control material and spreader accessories.

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 FT-LBS	SAE GRADE 5 FT-LBS
1/4-20	6	9
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

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 this spreader.
4. Make sure the motor cover is securely fastened to the spreader before operating the spreader.
5. Verify that all personnel are clear of the spreader spray area before starting or operating this spreader.
6. Keep all loose clothing, hair, jewelry and limbs clear of the spreader before starting or operating this spreader.
7. Do not over-load your vehicle beyond payload limits. If there are any questions, contact the vehicle manufacturer.
8. Do not adjust, clean, oil or unclog material jams without first turning off the spreader.
9. Do not climb on or in the spreader during operation. Do not ride on the spreader while the vehicle is in motion.
10. Make sure the spreader is securely fastened to the vehicle in accordance with this manual.
11. Do not operate a spreader that is in need of maintenance or repairs.
12. Always disconnect the wire harness before removing or replacing any electrical components.

Installation Instructions

1. Mounting the Spreader onto the Vehicle:

- A. Remove the tailgate from the vehicle.
- B. Lift the spreader by lifting loops on side of 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 spreader before lifting.

- C. Elevate the spreader off the vehicle with lumber. Place lumber under the side gussets of the spreader. This will help with removal of excess material that accumulates under the spreader.
- D. Center the spreader on the vehicle with the end of the gear mount 14" to the rear of the nearest vertical obstruction (bumper, trailer hitch, etc). Attach chute to spreader, check for interference between the vehicle and the Spinner/Chute Assembly.
- E. Bolt the spreader to the vehicle frame through the lengths of lumber using the holes located in each of the four (4) side gussets. Use 1/2" SAE Grade 5 hardware as required by vehicle application.
- F. In addition secure the spreader to the vehicle by attaching the four (4) tie-down eyes located at each corner of the spreader to the vehicle's factory installed anchor points using suitable tie-down devices.
 - The spreader must be securely fastened to the frame of the vehicle.
 - Verify with the vehicle's manufacturer that the factory installed anchor points are designed for tie-down of such load.
 - Periodically check that the spreader mounting hardware is securely tightened, retighten if necessary.

2. Control Box and Vehicle Wiring Harness Installation

*Make sure you have connected the proper wire color.
This is wire ground electrical system! No connections to truck's frame or body allowed!*

⚠ WARNING

Do not drill holes into fuel tanks, fuel lines, through electrical wiring, etc. that may be damaged by drilling. To insure good performance of your spreader, check the condition of truck's electrical system. Using digital voltmeter, check alternator and battery voltage. With engine running and head lights and heater fan ON good voltage reading should fall between 13.0 and 15.3 volts. If voltage reading falls out of this range, check and adjust your electric system.

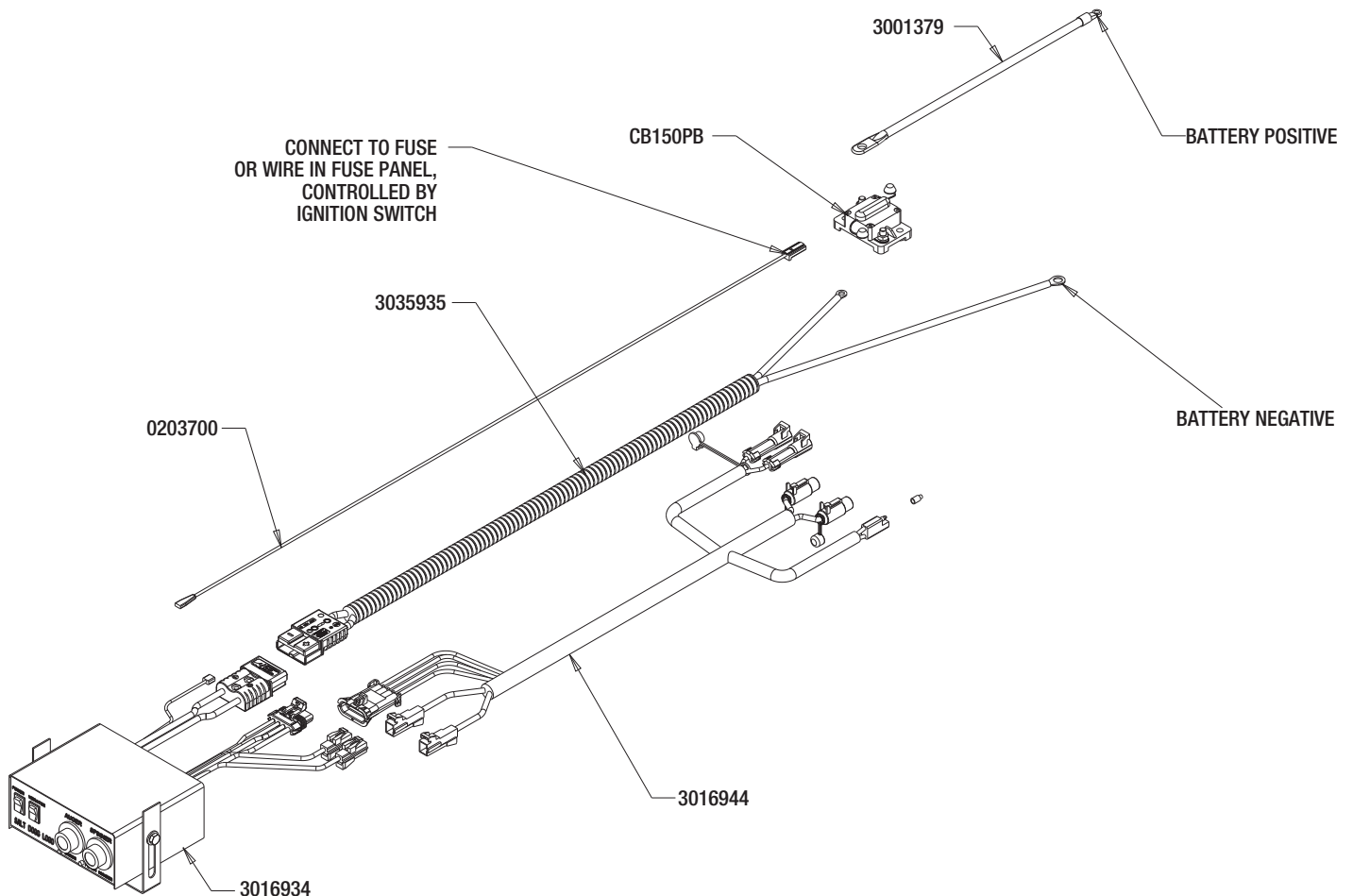
NOTE: Always disconnect battery before attempting to install electrical components on your vehicle.

A. Mount the controller in a convenient location in the truck cab. It is recommended not to mount the controller directly in front of heat vents. Allow ample air space around controller.

⚠ CAUTION

Do not mount controller in the way of air bag deployment!

- B.** Route both wire harnesses into truck cab through firewall (it maybe necessary to drill holes). Insulate hole to avoid water leaks.
 - C.** Insure no wires are nicked or damaged during installation.
 - D.** Connect the 4-pin connector on the wire harness to the control box 4-pin connector.
 - E.** Connect the 2-pin connector on the power cable to the control box mating connector.
 - F.** Connect wire harness single connectors to control box connectors.
 - G.** Connect fuse connector to the fuse terminal or ignition switch (5 AMP max).
 - H.** Lay out a path for the power cable to the battery, use quick ties to secure power cable.
- DO NOT CONNECT TO BATTERY AT THIS TIME!**



I. Lay out path for wire harness to the rear of the vehicle. It is recommended to stay clear of the exhaust system. Excess heat can damage the wire harnesses. Use quick ties to secure harness to underbody.

J. Connect the wire harness to the motor. Make sure wire colors on wire harness match colors on the motor.

K. Thoroughly clean battery terminals. Make sure battery terminals have no tarnish or corrosion. **DO NOT CONNECT WIRE HARNESS TO DAMAGED OR CORRODED TERMINALS! IT MAY RESULT IN OVERHEATING, LOST POWER AND POTENTIAL CONTROLLER DAMAGE!**

L. Connect the power cable directly to the battery.

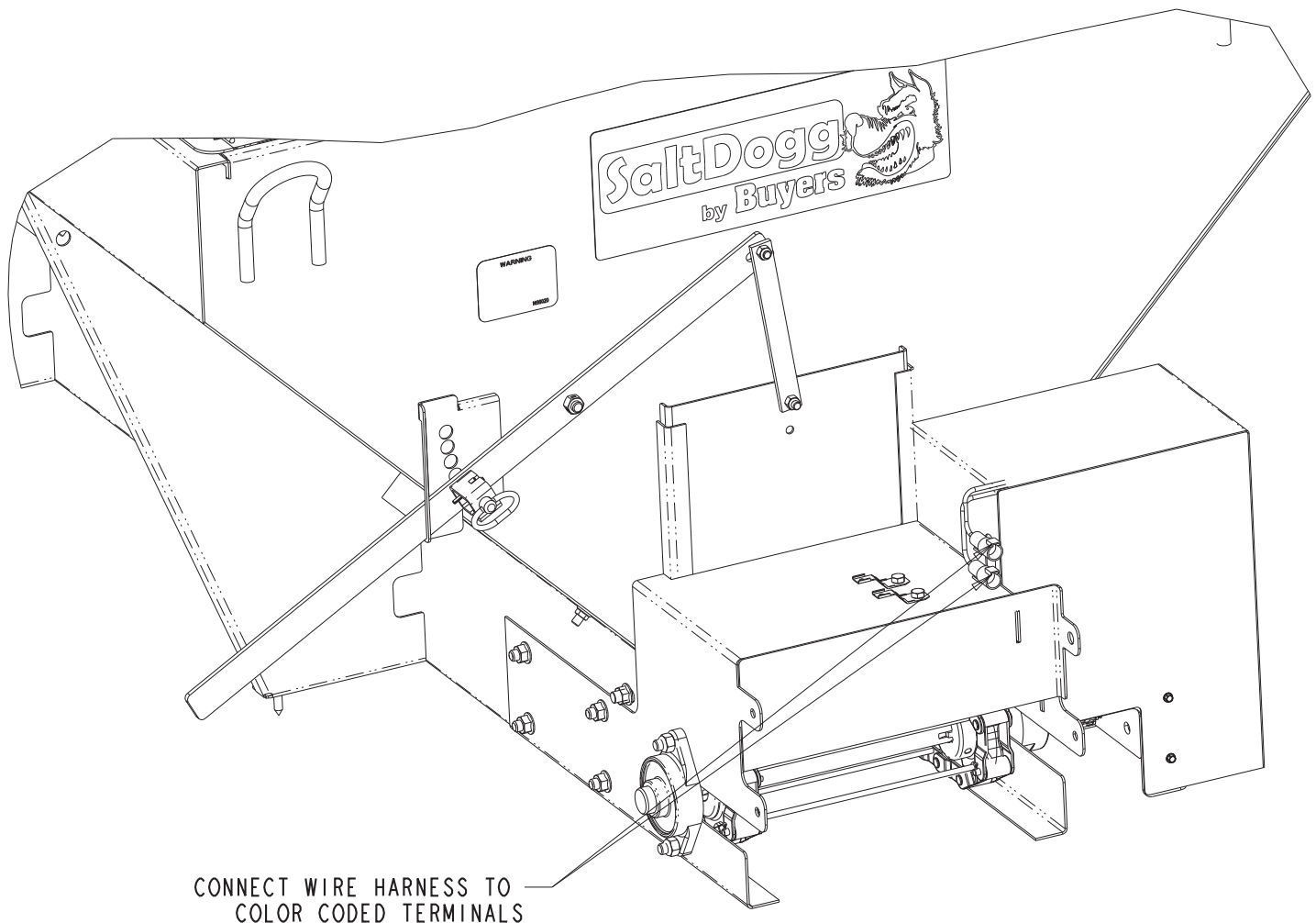
M. Insure all functions of the controller are working properly.

N. Observe chain moving in proper direction. If direction is wrong reverse wires between Motor and Wire Harness.

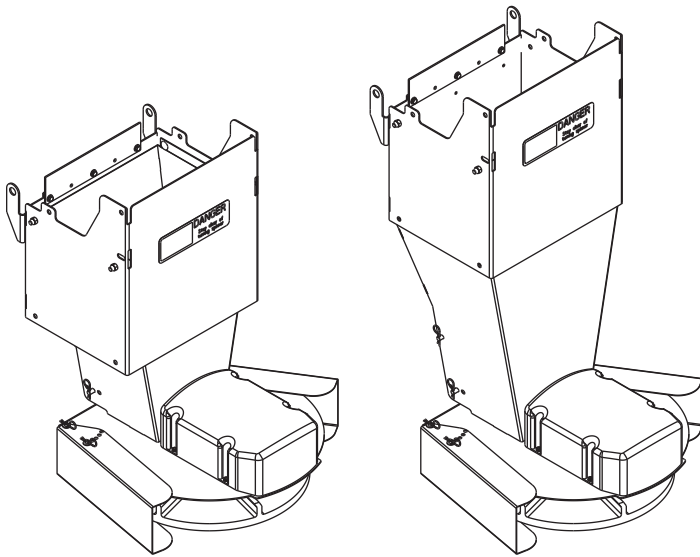
O. Optional spot light (5 AMP max) can be installed on spreader. Remove cap from single white wire. Connect light to this wire and trucks frame.

IMPORTANT

IMPORTANT Make sure all wires securely attached to vehicle or spreader. Use wire ties and/or wire clamps to attach wires. All excess wires must be rolled into bungles and attached to vehicle or spreader.



3. Spinner/Chute Assembly Operation



A. Attach chute to hopper assembly by bolting chute to lower tabs of motor mount. Then secure chute by engaging spring latches in respective holes. Chute height can be adjusted by attaching lower chute weldment to the upper one using upper or lower set of holes.

B. The spread pattern and the amount of material dispensed is dependant on the following factors:

1. Gear Motor RPM
2. Feed gate position
3. Baffle positions
4. Spinner Motor RPM

CAUTION

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

4. Precautions

A. If the feed chain does not move because of dense material or a material jam, remove all material from the hopper and free the chain.

B. If the material in the hopper freezes, move the spreader into a warm area to thaw.

C. To prevent the feed chain from freezing, do not store material in the spreader.

D. The gearbox is designed to only accept torque from the electrical motor. Therefore, **DO NOT ATTEMPT TO FREE THE FEED CHAIN BY USING A PIPE OR SIMILAR TOOL TO MOVE OR DISLODGE THE CHAIN.** If the feed chain is moved, the gears within the gearbox will strip. This action will void all warranties.

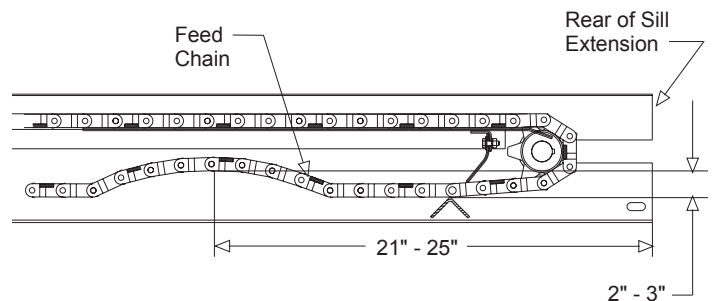
Spreader Maintenance

1. Use dielectric grease on all electrical connections before an electrical connection is made or after a connector is disconnected.

2. Grease the following:

- Idler shaft bearings (2)
- Bearing (1)

3. Check the Feed Chain tension periodically. To check the tension, measure in 21"-25" from the rear edge of the gear box mount. Push up on the chain with your hand. The conveyor chain should lift up 2"-3" off the conveyor chain guide or cross angles.



4. Empty the spreader of all ice control material when not in use to prevent a frozen feed chain.

5. 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. Paint and oil all bare metal surfaces and chains to protect from rust. Properly store the spreader for the next season.

Installation Instructions - Hydraulic Models

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. The spinner rotates clockwise when looking down from the top.

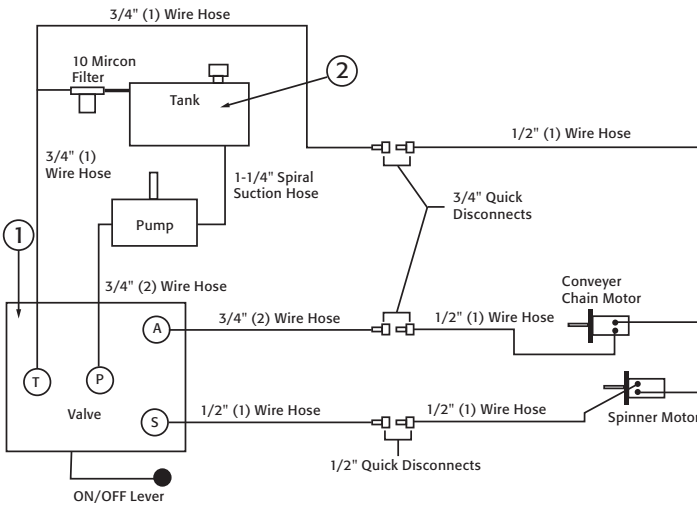
Note: Use of a pipe joint sealant compatible with hydraulic oil is recommended for all screw fittings.

5. 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.

6. A 10 micron return line filter is recommended to protect the pump, valve, and motors from wear causing contamination.

Spreader Operation - Hydraulic Models

Hydraulic Plumbing Diagram



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	—	1	Reservoir 25 Gal Min
N/S	HVC1	1	Dual Flow Regulator Console

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 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 chute section.
2. Shut off spinner and auger (conveyor chain) knobs and position the on/off lever to on. Engage the PTO and allow the hydraulic system to warm up.
3. After the system is warm turn the spinner and auger (conveyor chain) knobs to the desired settings.
4. Changing the conveyor chain and spinner speeds as well as adjusting the baffle positions will produce various spread patterns.

Miscellaneous

1. Valve setting changes may be made with truck in motion.
2. 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

Before working in or around spreader, the valve control lever must be in the off position. Disengage PTO and shut off engine.

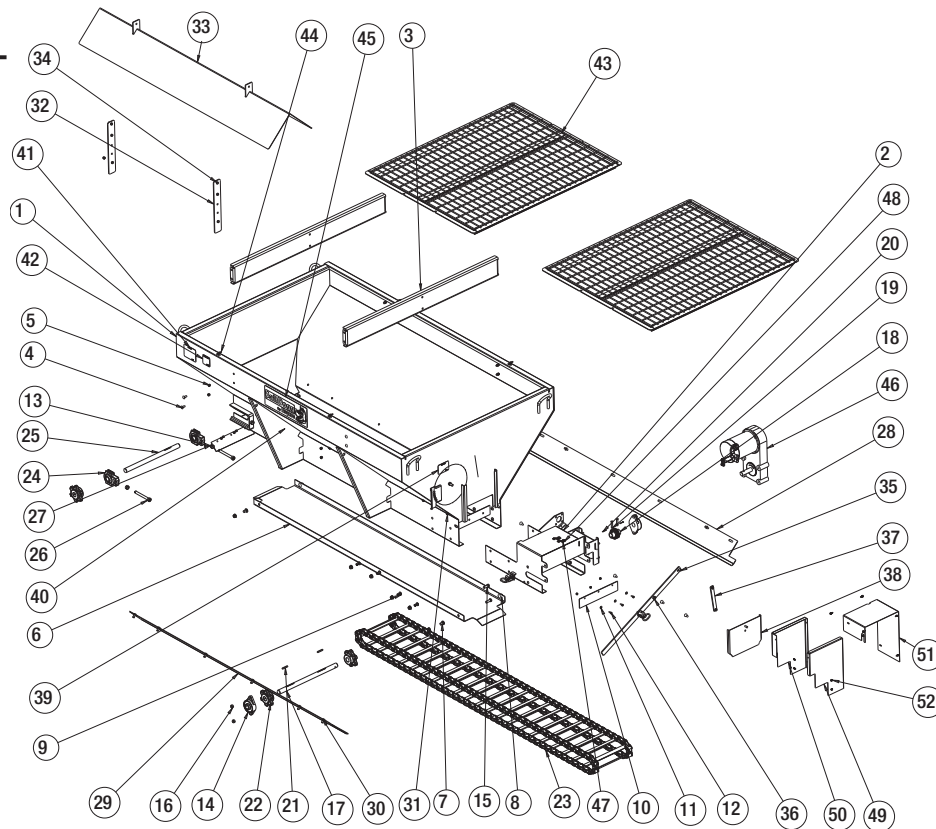
CAUTION

Position the valve on/off control lever in the off position when the spreader is not in use or is removed. In the event the valve on/off control lever is left in the on position, a heat problem may occur as the pump continues to pump oil to the hydraulic valve. This could cause a hose to burst spraying hot oil.

Spreader Maintenance - Hydraulic Models

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. Maintain the proper lubrication level in all gearboxes with SAE 90 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 after each season.

Hopper Assembly - Electric Model

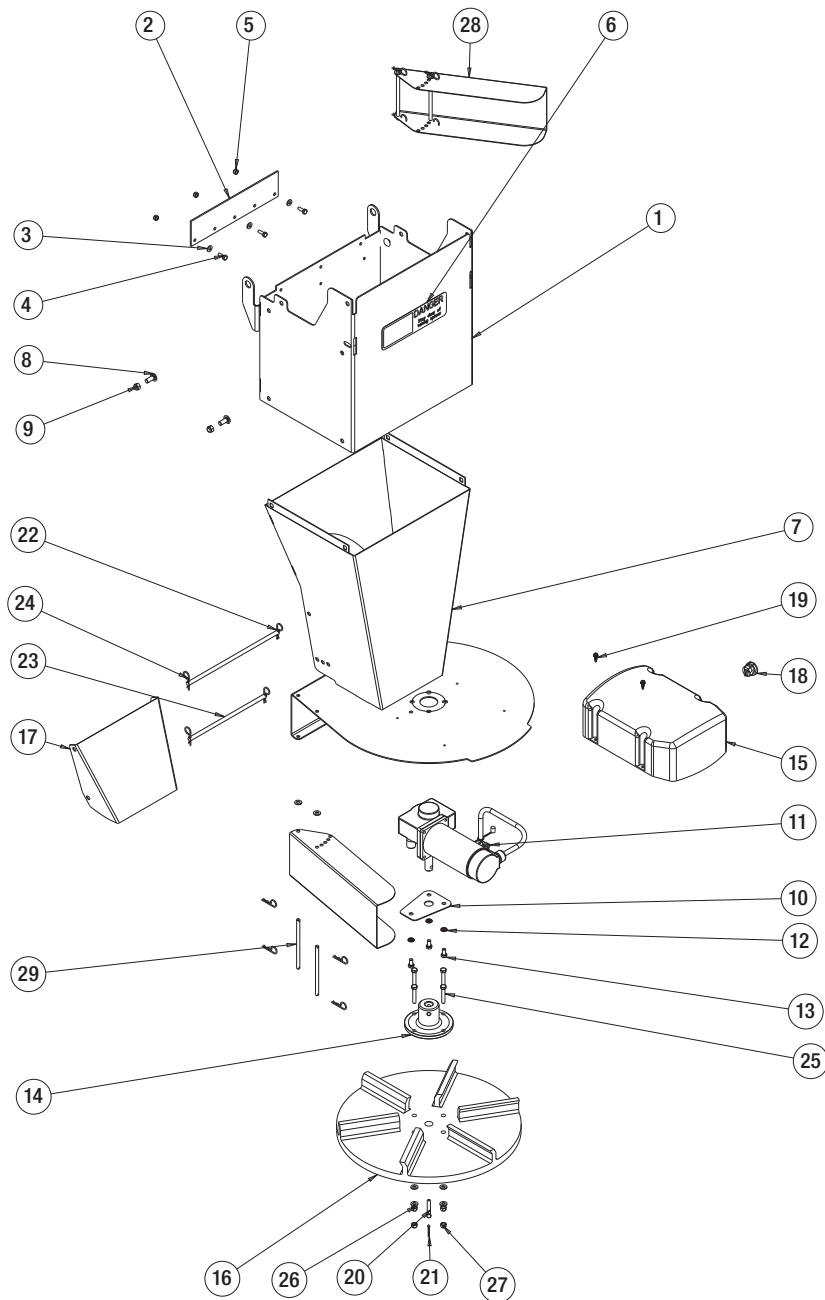


Bill of Materials

ITEM	PART NO.	QTY.	DESCRIPTION
1	3025240	1	Hopper, 3.0CY, 10ft
1	3028138	1	Hopper, 2.75CY, 9ft
1	3028151	1	Hopper, 2.5CY, 8ft
1	3030180	1	Hopper, 4.5CY, 10ft
1	3030633	1	Hopper, 4.0CY, 9ft
1	3030635	1	Hopper, 3.5CY, 8ft
1	3031067	1	Hopper, 5.5CY, 10ft
2	3025245	1	Motor Deck
3	3025241	2	Cross Member
4	FCB037516100SS	8	Carriage Bolt, 3/8-16 x 1 SST
5	FNE038016044SS	16	Nylock Nut, 3/8-16 SST
6	3008301	1	Conveyer Floor, 9ft
6	3009197	1	Conveyor Floor, 10ft
6	3028159	1	Conveyor Floor, 8ft
7	3001522	4	Carriage bolt, 1/2-13 x 1 SST
8	3001523	12	Flange Nut, 1/2-13 SST
9	3004278	8	Screw, Button Head, 1/2-13 x 1 SST
10	3008872	2	Wiper Belt
11	FWF025063007SS	6	Flat Washer, 1/4, SST
12	FCS025020075SS	6	Hex Head Screw, 1/4-20 x 3/4 SST
13	FNE025020031SS	6	Nylock Nut, 1/4-20 SST
14	3008294	2	Flanged Bearing
15	3006723	4	Hex Head Screw, 1/2-13 x 1-1/2 SST
16	FNE050013053SS	4	Nylock Nut, 1/2-13 SST
17	3008316	1	Drive Shaft Assy
18	3008289	1	Gearbox Coupling
19	1410803	2	Clevis Pin, 3/8 X 2
20	FPC013000100	2	Cotter Pin, 1/8 x 1
21	KS402	3	Key, 1/4SQ x 1-1/2
22	3008300	4	Chain Sprocket
23	3008860	1	Chain, D667H, 9ft
23	3009114	1	Chain, D667H, 10ft
23	3014539	1	Chain, D667H, 8ft
24	3008290	2	Take Up Bearing
25	3008317	1	Idler Shaft

ITEM	PART NO.	QTY.	DESCRIPTION
26	141050WSS	2	Take Up Bolt, SST
27	FNH063011054SS	2	Hex Nut, 5/8-11 SST
28	3008353	1	Trough Shield, PS, 9ft
28	3009199	1	Trough Shield, PS, 10ft
28	3014540	1	Trough Shield, PS, 8ft
29	3024535	1	Trough Shield, DS, 8ft
29	3024539	1	Trough Shield, DS, 9ft
29	3024546	1	Trough Shield, DS, 10ft
30	3014960	14	Carriage Bolt, Short Neck, 3/8-16 x 1 SST
31	3001255	14	Flange Nut, 3/8-16 SST
32	3025252	2	Inverted Vee Bar
33	3025254	1	Inverted Vee, 10ft
33	3028141	1	Inverted Vee, 9ft
33	3028160	1	Inverted Vee, 8ft
34	FCS038016100SS	12	Hex Head Screw, 3/8-16 x 1 SST
35	3011832	1	Feed Gate Lever
36	3003874	1	Lock Nut, 1/2-13
37	3008339	1	Feed Gate Door Bar
38	3008338	1	Feed Gate Door
39	1499020	1	Warning Label
40	1499035	2	Warning Label
41	1499030	1	Warning Label
42	1499045	1	Warning Label
43	3009206	4	Screen, 10ft
43	3025436	2	Screen, 10ft
43	3028143	2	Screen, 9ft
43	3028154	2	Screen, 8ft
44	HP9	4	Hair Pin, 3/32 x 1-1/2
45	3011132	3	Decal, SaltDogg
46	3024575	1	Conveyor Gear Motor
47	3017121	2	Receptacle Bracket, SZ8 Deutsch
48	FCS038016075SS	2	Hex Head Screw, 3/8-16 x 3/4 SST
49	3026364	1	Gear Motor Hood
50	3015873	4	Hex Head Screw, #12-14 x 3/4 SST

Chute Assembly - Electric Model

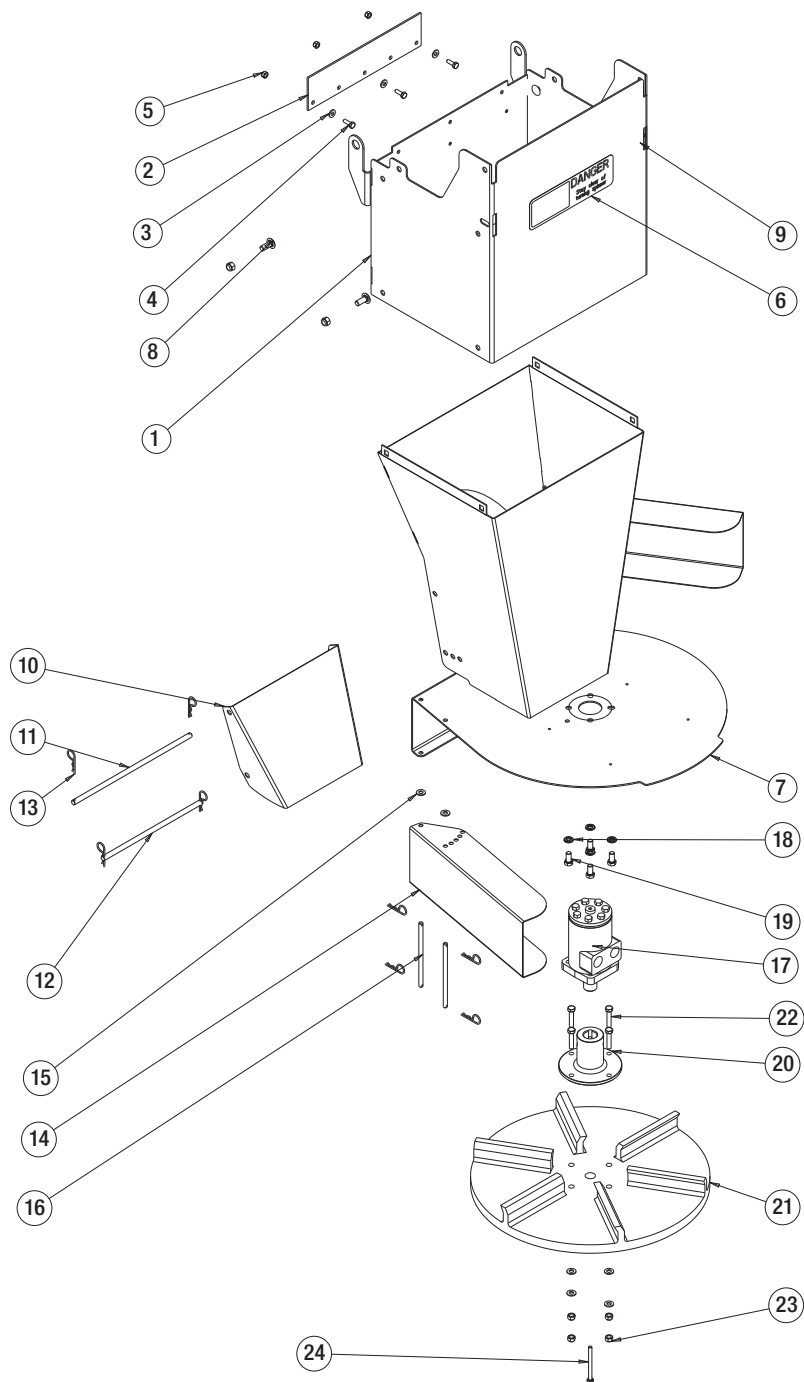


Bill of Materials

ITEM	PART NO.	QTY.	DESCRIPTION
1	3030392	1	UPPER CHUTE WELDMENT
2	1410241	1	WIPER BELT, HOPPER
3	FWF025063007SS	3	WASHER, FLAT 1/4 SAE SS
4	FCS025020075SS	3	SCREW, CAP 1/4-20 X 3/4 SST
5	FNE025020031SS	3	NUT, NYLON INSERT 1/4-20 SST
6	9240131	1	DECAL #1, DANGER STAY CLEAR
7	3030420	1	CHUTE LOWER WELDMENT
8	3014960	4	BOLT, 3/8-16 X 1 CARRIAGE SHORT NECK SS'
9	FNE038016044SS	4	NUT, NYLOCK 3/8-16 X 7/16 SST
10	3007824	1	RETAINER GEARMOTOR, CHUTE
11	3030222	1	GEAR MOTOR .4 HP SPINNER
12	FWL031058008SS	3	WASHER, 5/16 LOCK SST
13	FCS031018063SS	3	SCREW, HHC 5/16-18 X 5/8 SST
14	3030182	1	HUB, SPINNER POLY
15	3030575	1	ENCLOSURE, GEAR MOTOR CHUTE

ITEM	PART NO.	QTY.	DESCRIPTION
16	3030179	1	SPINNER 18" POLY CW
17	3030579	1	BAFFLE, CHUTE
18	3025065	1	BUSHING STRAIN RELIEF
19	3015873	4	SCREW #12-14x.74 SS SELF DRIL HEX WASHER HD
20	3007113	1	PIN, CLEVIS, 5/16 X 2-1/2, .141 HOLE ZN
21	3014994	1	PIN,COTTER,1/8IN X 1IN SST
22	3030580	1	PIN, BAFFLE ATTACHMENT
23	3030581	1	PIN, BAFFLE ADJUSTMENT
24	3001257	12	PIN, HAIR COTTER STAINLESS STL
25	FCS031018175SS	4	SCREW, HHC 5/16-18 X 1 3/4 SS
26	FWF031075006SS	12	WASHER, 5/16 SAE SST
27	FNE031018034SS	4	NUT, NYLOCK 5/16-18 SS
28	3031025	2	BAFFLE CHUTE ADJUST
29	3031051	4	PIN BAFFLE CHUTE

Chute Assembly - Hydraulic Model

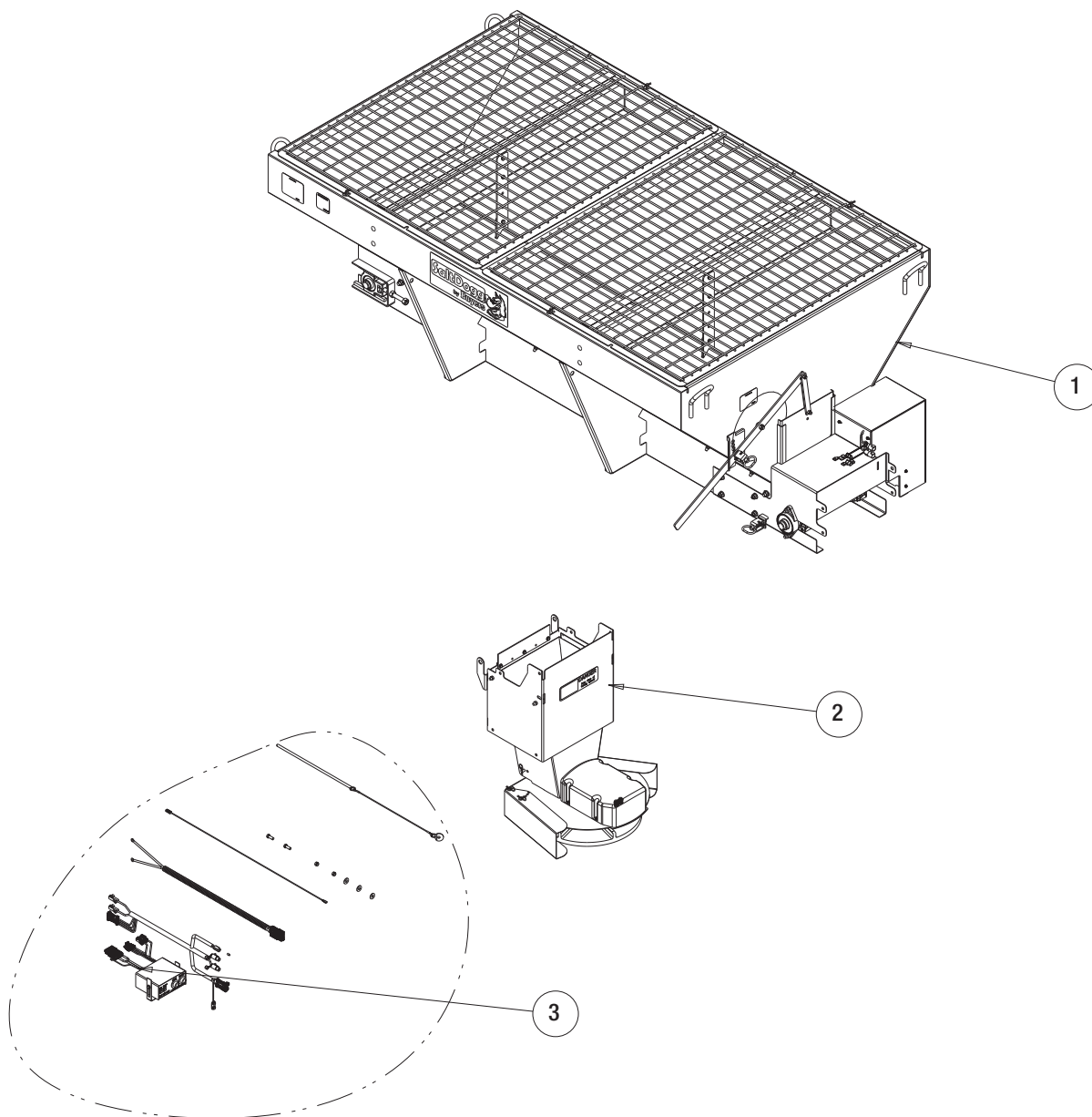


Bill of Materials

ITEM	PART NO.	QTY.	DESCRIPTION
1	3030392	1	UPPER CHUTE WELDMENT
2	1410241	1	WIPER BELT, HOPPER
3	FWF025063007SS	3	WASHER, FLAT 1/4 SAE SS
4	FCS025020075SS	3	SCREW, CAP 1/4-20 X 3/4 SST
5	FNE025020031SS	3	NUT, NYLON INSERT 1/4-20 SST
6	9240131	1	DECAL #1, DANGER STAY CLEAR
7	3030420	1	CHUTE LOWER WELDMENT
8	3014960	4	BOLT, 3/8-16 X 1 CARRIAGE SHORT NECK SST
9	FNE038016044SS	4	NUT, NYLOCK 3/8-16 X 7/16 SST
10	3030579	1	BAFFLE, CHUTE
11	3030580	1	PIN, BAFFLE ATTACHMENT
12	3030581	1	PIN, BAFFLE ADJUSTMENT

ITEM	PART NO.	QTY.	DESCRIPTION
13	3001257	12	PIN, HAIR COTTER STAINLESS STL
14	3031025	2	BAFFLE CHUTE ADJUST
15	FWF031075006SS	13	WASHER, 5/16 SAE SST
16	3031051	4	PIN BAFFLE CHUTE
17	CM004P	1	MOTOR, HYD 4 BOLT
18	FWL038069009SS	4	WASHER, LOCK RHS-3/8 SST
19	FCS038016075SS	4	SCREW, HHC-3/8-16 X 3/4 SST
20	3008632	1	HUB, LONG NECK SPINNER
21	3030179	1	SPINNER 18" POLY CW
22	FCS031018150SS	4	SCREW, HHC 5/16-18 X 1.5 SST
23	FNE031018034SS	4	NUT, NYLOCK 5/16-18 SS
24	3013623	1	SCREW HH CAP 1/4-20 X 3.0 SST

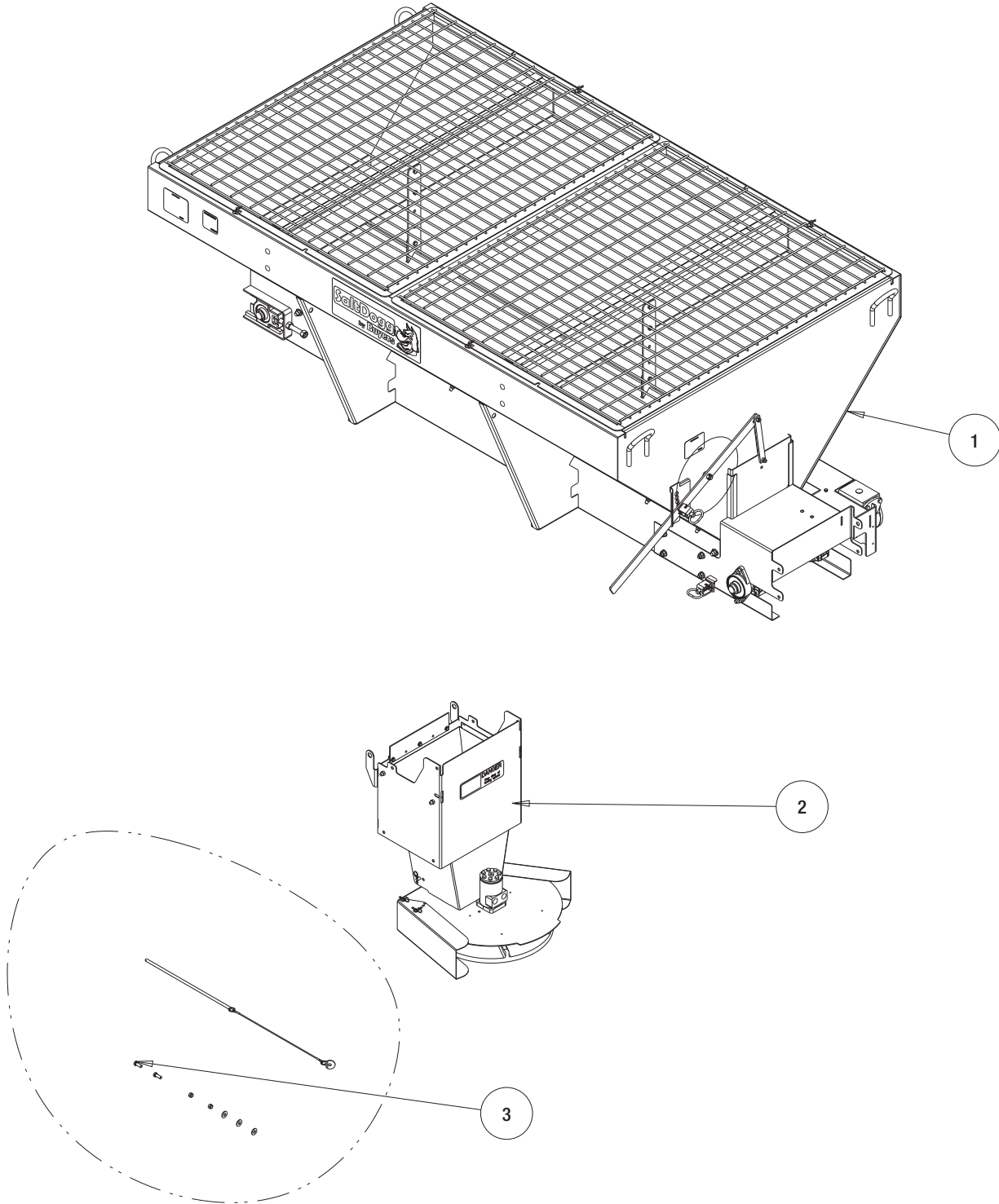
Spreader Kit - Electric Model



Bill of Materials

ITEM	PART NO.	QTY.	DESCRIPTION
1	3028148	1	HOPPER ASM, 2.5 CU.YD. SST ELECTRIC MOTOR
1	3028146	1	HOPPER ASM, 2.75 CU.YD. SST ELECTRIC MOTOR
1	3024576	1	HOPPER ASM, 3.0 CU.YD. SST ELECTRIC MOTOR
1	3030634	1	HOPPER ASM, 3.5 CU.YD. SST ELECTRIC MOTOR
1	3030632	1	HOPPER ASM, 4.0 CU.YD. SST ELECTRIC MOTOR
1	3030223	1	HOPPER ASM, 4.5 CU.YD. SST ELECTRIC MOTOR
1	3031124	1	HOPPER ASM, 5.5 CU.YD. SST ELECTRIC MOTOR
2	3030391	1	CHUTE ADJUSTABLE ELECTRIC, SST
3	3030624	1	HARDWARE BOX 1400465SSE

Spreader Kit - Hydraulic Model



Bill of Materials

ITEM	PART NO.	QTY.	DESCRIPTION
1	3028149	1	HOPPER ASM, 2.5 CU.YD. SST HYDRAULIC MOTOR
1	3028137	1	HOPPER ASM, 2.75 CU.YD. SST HYDRAULIC MOTOR
1	3024579	1	HOPPER ASM, 3.0 CU.YD. SST HYDRAULIC MOTOR
1	3031128	1	HOPPER ASM, 5.5 CU.YD. SST HYDRAULIC MOTOR
2	3031074	1	CHUTE ADJUSTABLE HYDRAULIC, SST
3	3031538	1	HARDWARE KIT, MID-SIZE, HYDRAULIC