

Installation Instructions

SHPE4000CH SaltDogg® Electric Drive Poly Hopper Spreader 4.0 cubic yards

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General Information

Overall Length: 123.3 inches
Overall Width: 77 inches
Overall Height: 47.3 inches
Empty Weight: 812 lbs
Capacity Struck: 4.0 cu. yd.

Vehicle Requirements

Trucks with GVWR 15,000 to 26,000 lbs.
150 AMP or higher alternator is recommended.

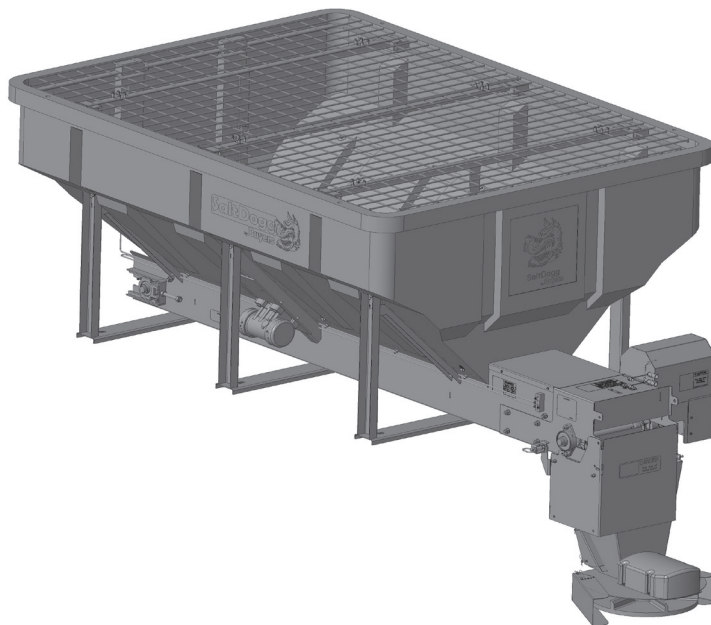
Average Material Weights

Materials to use	Weight (pounds per cubic yard)
Fine Salt-Dry	2,250
Coarse Salt-Dry	1,431
Sand Coarse-Dry	2,565

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

WARNING

Improper installation and operation could cause personal injury, and/or property damage. 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.



CAUTION

Do not overload vehicle beyond the vehicle's GVWR or GAWR. Check vehicle's load rating certification sticker for maximum vehicle capacity.

Safety Precautions

1. Read this entire Owners Manual before operating this spreader.
2. Read all safety decals on the spreader before operating.
3. Check to make sure all safety guards are securely mounted into place before operating this spreader.
4. Verify that all personnel are clear of the spreader spray area before starting or operating this spreader.
5. Do not over-load your vehicle beyond payload limits. If there are any questions, contact the vehicle manufacturer.
6. Do not adjust, clean, lubricate or unclog material jams without first turning off the spreader.
7. Do not climb on or in the spreader during operation. Do not ride on the spreader while the vehicle is in motion.
8. Make sure the spreader is securely fastened to the vehicle in accordance with this manual.
9. Do not operate a spreader that is in need of maintenance or repairs.
10. Batteries normally produce explosive gases which can cause personal injury. Always disconnect the battery before removing or replacing electrical components.
11. Do not leave unused material in hopper. Material can freeze or solidify, causing spreader to not work properly, and/ or damage the unit. Empty and clean after each use.

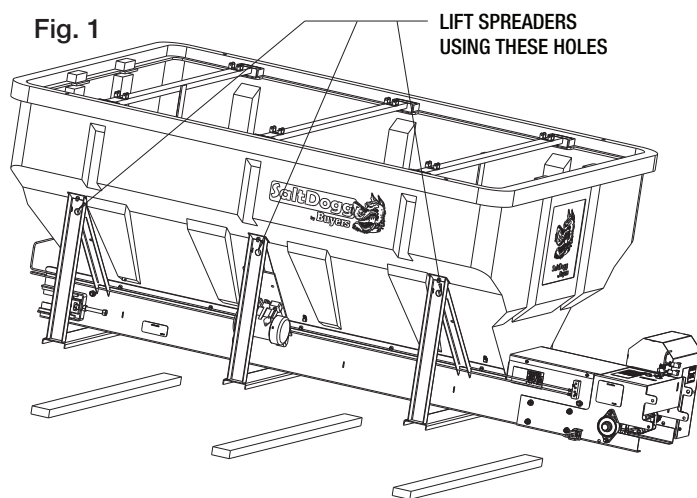
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INSTALLATION INSTRUCTIONS

1. MOUNTING THE SPREADER ONTO THE VEHICLE:

- A.** Remove the tailgate from the vehicle (if equipped) as well as any other object which will interfere with the spreader.
- B.** Check truck's bed for all kinds of sharp debris or foreign objects. They can cut and seriously damage poly hopper.
- C.** Remove chute, hardware kit from inside spreader. If spreader has been used make sure there is no material left in the hopper.
- D.** Prepare 4 boards as shown in Fig. 1. A board size is 2" x 4" x 60" long minimum. Boards can be as long as width of inside of trucks body.
- E.** Next, set the spreader in the truck body. Use four bars on the frame to lift the spreader (Fig. 1).

Fig. 1



- F.** Lower spreader onto 2" x 4" boards positioned in truck bed.
- G.** 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.
- H.** Bolt the spreader to the vehicle frame through the lengths of lumber using the holes located in each of the four (4) cross members. Use 1/2" SAE Grade 5 hardware as required by vehicle application.
- I.** In addition, secure spreader using four ratchet straps or chain tie down kit (sold separately). Always tighten straps evenly!
 - 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.



CAUTION

Never lift spreader with material in the hopper.



WARNING

Do not drill holes into fuel tanks, fuel lines, thru electrical wiring, etc that may be damaged by drilling.



CAUTION

Inspect straps and hardware after each time spreader is loaded. Tighten straps and hardware if necessary.



WARNING

Important! Do not use ratchet straps or tailgate latch exclusively! Always fasten spreader to the vehicle!

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!**
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.
- B.** Route both wire harnesses into truck cab through firewall (it may be 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.



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.



CAUTION

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

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.

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 motors and vibrator. Make sure wire colors on wire harness match colors on the motor.

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!

K. Install the circuit breaker within 12" from the battery. Connect red wire from cable 3035935 and battery cable 3001379 to circuit breaker according to the breaker markings. Connect the power cable and battery cable directly to the battery.

Make sure connection to battery terminals is good and tight. Loose connection to battery terminals will result in sparking, overheating and possible battery damage!

In trucks with dual battery systems always connect power cable to primary battery (larger capacity/ truck starting battery).

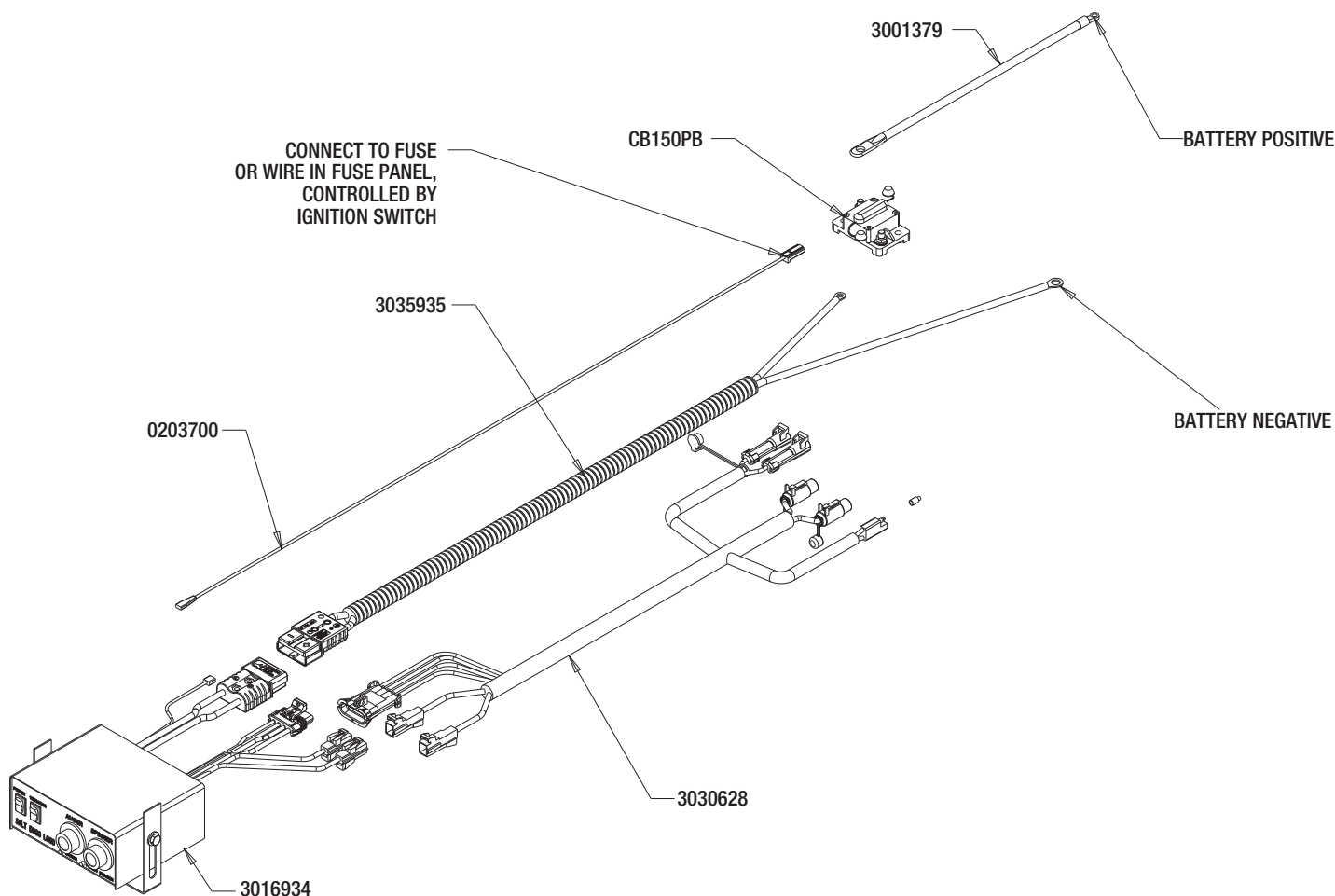
L. Insure all functions of the controller are working properly.

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

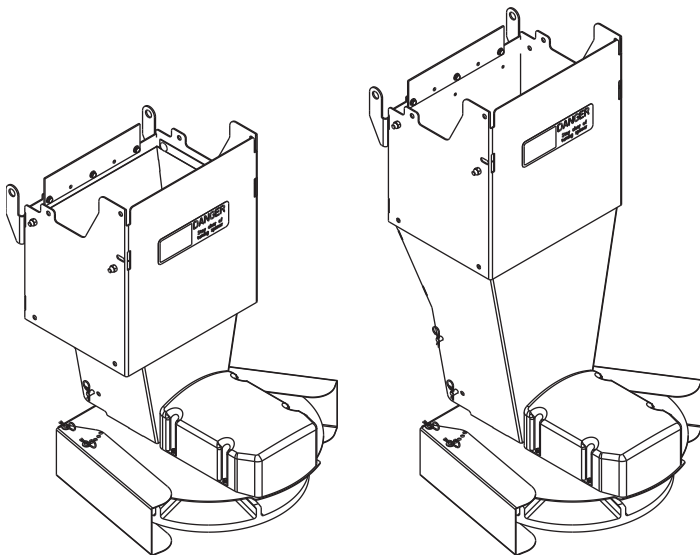
N. Optional spot light (5 AMP max) can be installed on spreader. Use utility light kit part number 3018009. Remove cap from single white wire. Connect light to this wire and the trucks frames known ground (negative) and trucks frame.

3. CONTROLLER OPERATION

A. SHPE4000CH is equipped with a dual independent speed controller. To start spreader, press "POWER" switch. Switch will be illuminated. Chain and spinner will start rotating full speed for 2-3 sec then will slow down to originally dialed speeds. Chain and spinner can be adjusted independently.



4. 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 dependent on the following factors:

1. Chain Gear Motor RPM
2. Baffle positions
3. Spinner Gear 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.

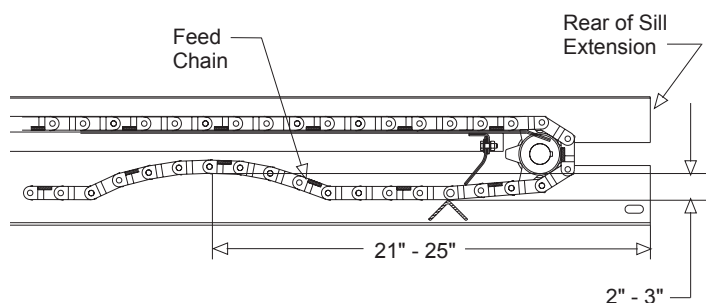
Spreader Maintenance

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)
- Flange bearings (2)

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.

End of Season Maintenance.

1. Wash spreader. Make sure no material or residue left in and outside hopper.

2. Lubricate bearing using general automotive grease.

3. Inspect wire harness, connectors for broken insulation, missing components. Replace if necessary.

4. Apply dielectric grease on all electrical connectors.

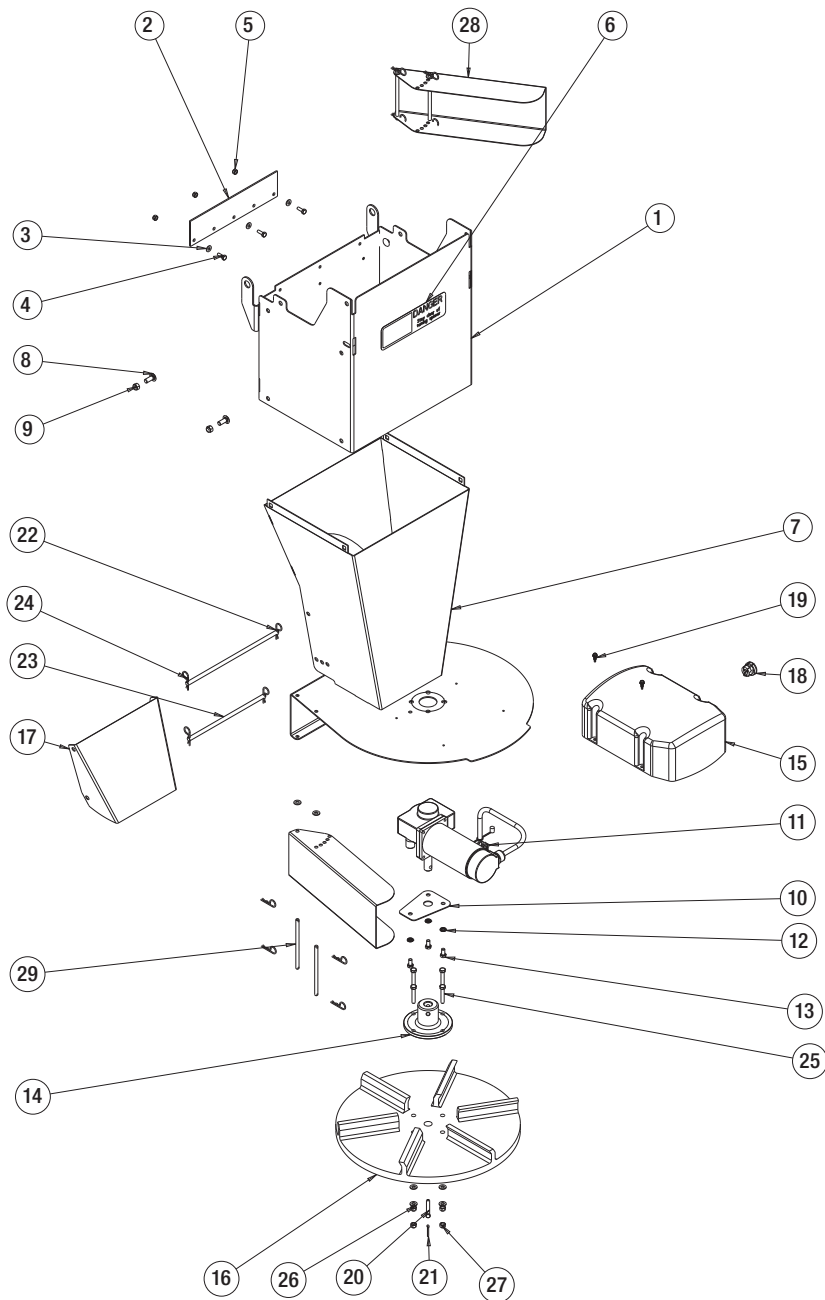
5. Store hopper indoors, in dry, cool place.

6. Inspect, clean and repaint frame.

7. Remove controller from truck. Store controller indoors, in dry, cool place

8. Wash and lubricate chain.

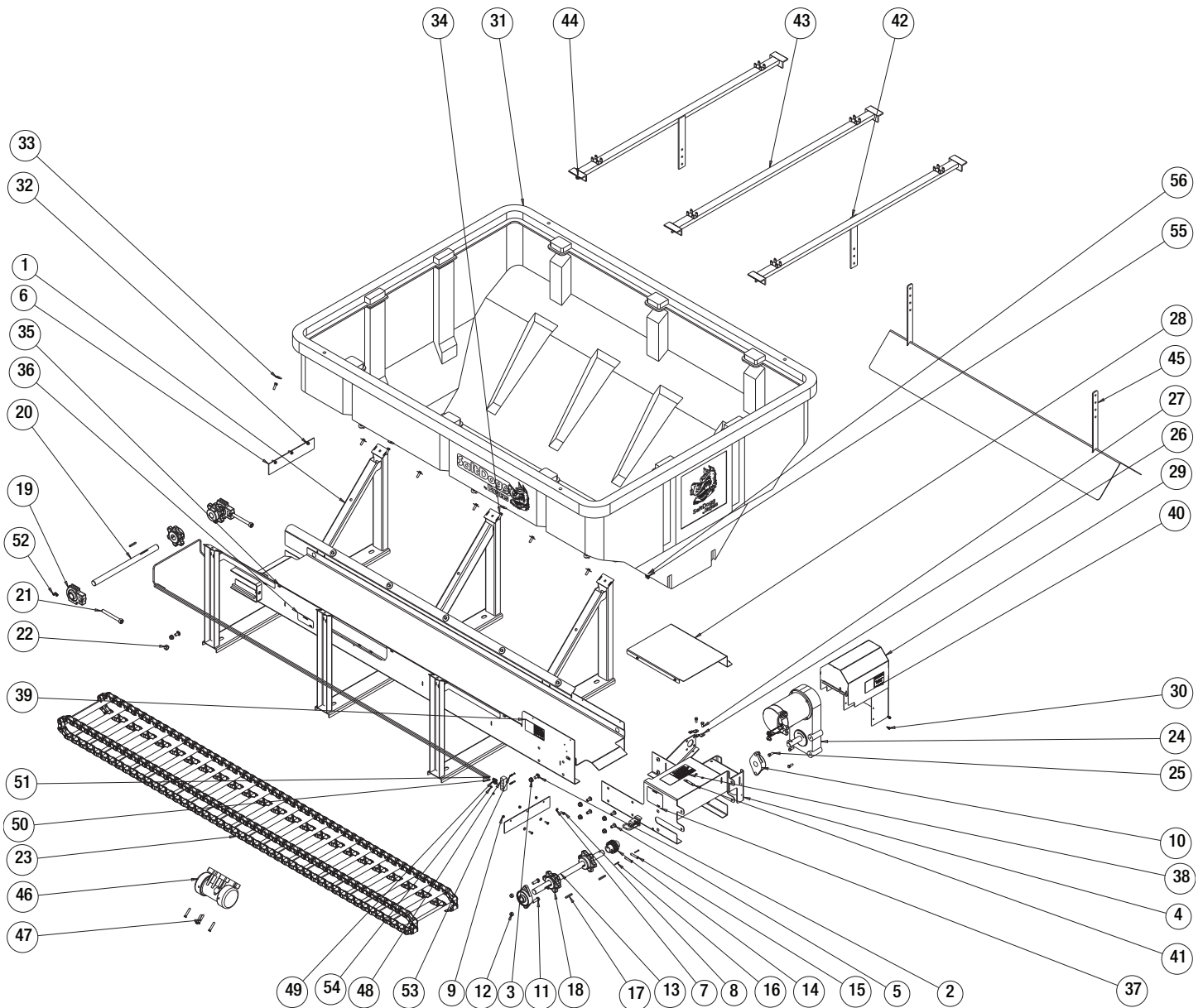
Chute Assembly



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

Hopper Assembly

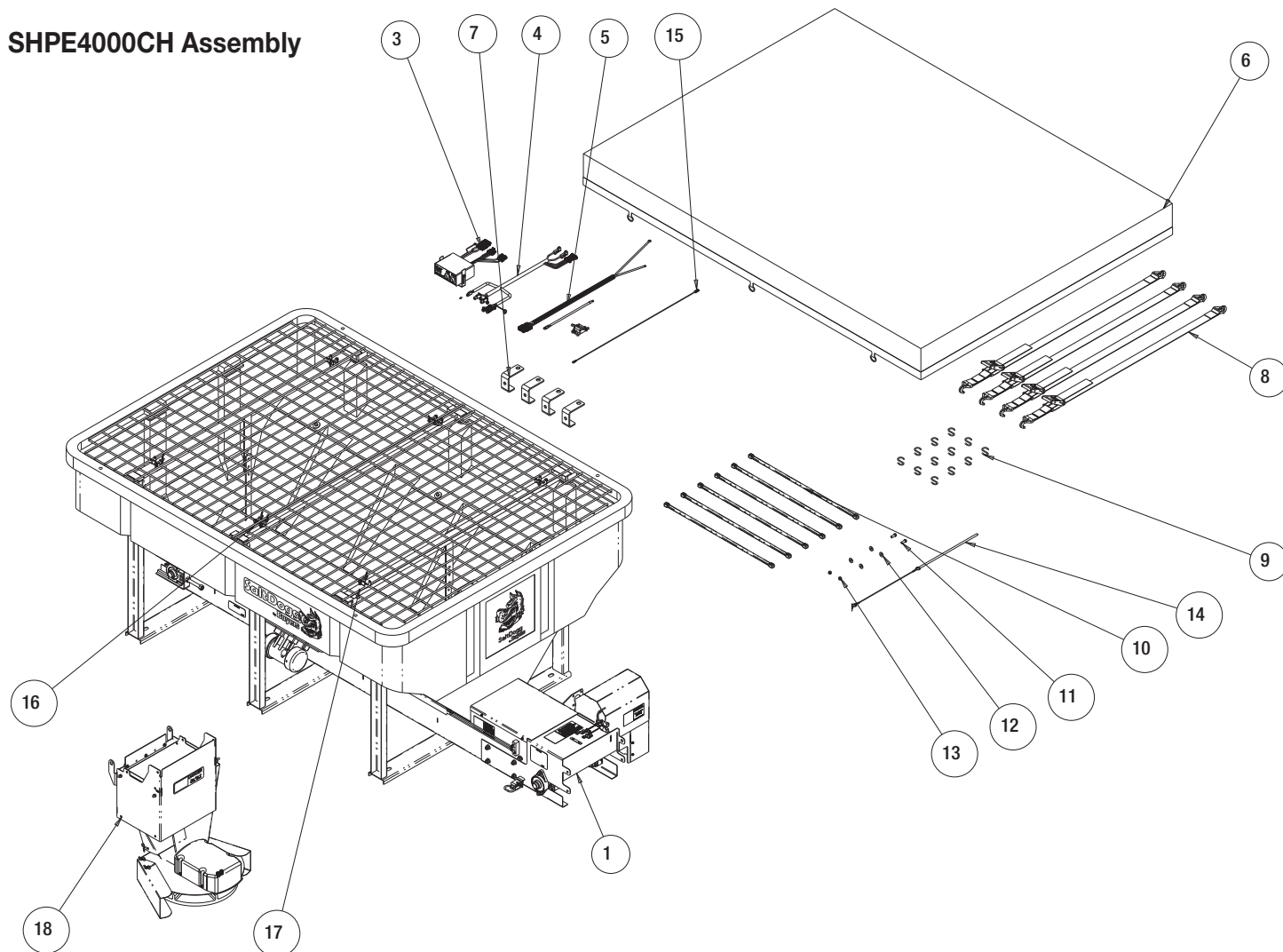


Hopper Assembly Bill of Materials

ITEM NO.	PART NO.	QTY.	DESCRIPTION
1	3038843	1	TROUGH WELDMENT SHPE4000CH
2	3001522	4	BOLT, CARRIAGE 1/2-13 X 1 SST
3	3001523	12	NUT, HX FLNG-1/2-13 SST
4	3025245	1	MOTOR DECK, WELDMENT
5	3004278	8	SCREW, BTN HD SOC CAP 1/2-13x 1 SST
6	3008872	2	WIPER BELT, HOPPER
7	FWF025063007SS	9	WASHER, FLAT 1/4 SAE SS
8	FCS025020075SS	3	SCREW, CAP 1/4-20 X 3/4 SST
9	FNE025020031SS	6	NUT, NYLON INSERT 1/4-20 SST
10	3008294	2	BEARING, FLANGED
11	3006723	4	SCREW, HEX HD 1/2-13x1.5 GR5 SS
12	FNE050013053SS	4	NUT, NYLOCK 1/2-13 SS
13	3008316	1	SHAFT, SPROCKET DRIVE END
14	3008289	1	COUPLING, DRIVE SHAFT/ GEARBOX
15	1410803	2	PIN, CLEVIS, 3/8 X 2, 1038 ST, YZN
16	FPC013000100	2	COTTER PIN, 1/8 X 1, ZINC
17	KS402	3	KEY, 1/4 X 1/4 X 2
18	3008300	4	SPROCKET, D667H CHAIN
19	3008290	2	BEARING, HEAVY DUTY TAKE-UP
20	3008317	1	SHAFT, IDLER SPROCKET
21	141050WSS	2	BOLT, WELDED TAKE UP, SCH IDLER
22	FNH063011054SS	2	NUT, HH 5/8-11 X 17/32 HIGH SST
23	3008860	1	CHAIN, 9FT. D667H CONVEYOR
24	3024575	1	GEAR MOTOR CONVEYOR 12 VDC
25	FCS038016100SS	4	SCREW, HHC 3/8-16 X 1 304 SST
26	3017121	2	BRACKET, RECEPTACLE SZ8 DEUTSCH
27	FCS038016075SS	2	SCREW, HHC-3/8-16 X 3/4 SST
28	3039489	1	COVER, CHAIN
29	3036883	1	WELDMENT, MOTOR COVER
30	3015873	8	SCREW #12-14x.74 SS SELF DRIL HEX WASHER HD
31	3038847	1	HOPPER POLY 4 CU YA

ITEM NO.	PART NO.	QTY.	DESCRIPTION
32	FCS025020100SS	3	SCREW, CAP HEX HD 1/4-20 X 1 SST
33	3007115	16	WASHER, FLAT 3/8 X 1.5 X.048 SST
34	FCS038016125SS	22	SCREW, HHC-3/8-16 X 1.25 SST
35	FNE038016044SS	26	NUT, NYLOCK 3/8-16 X 7/16 SST
36	1499035	2	LABEL, WARNING 3
37	1499030	1	LABEL, CAUTION 1 (PAYLOAD)
38	3032591	1	DECAL, DANGER, MOVING CONVEYOR/ AUGER
39	3032593	1	DECAL, DANGER, CONVEYOR
40	3032595	1	DECAL, CAUTION, MOUNTING
41	3033172	1	DECAL CONNECTION
42	3039490	2	SCREEN SUPPORT, SHPE4000
43	3013279	1	SCREEN SUPPORT, SHPE4000
44	FWF038100007SS	6	WASHER, FLAT 3/8 USS SST
45	3039492	1	INVERTED VEE, WELDMENT
46	3012081	1	VIBRATOR 450 LBS, 12 VDC
47	3007066	4	SCREW, HHC-3/8-16 X 2 SST
48	3035346	1	RIGHT ANGLE JUNCTION BLOCK
49	3035347	2	GREASE FITTING 1/4TUBE 1/8 NPT STRAIGHT
50	3036051	1	GREASE HOSE FRONT DR SIDE
51	3036052	1	GREASE HOSE FRONT PS SIDE
52	3035345	2	GREASE FITTING 1/4TUBE 1/4-28 MALE 90 DEGREES
53	3035357	2	SCREW SOCKET HD, RND 8-32X 1.50 SST
54	3035358	2	NUT, NYLOCK 8-32 SST, BLACK OXIDE
55	4375	3	CLAMP, HOSE .4375, 9/32 HOLE
56	3007522	3	SCREW, SHEET MTL #12x1.0 HEX WASHER HD SST

SHPE4000CH Assembly



Bill of Materials

ITEM NO.	PART NO.	QTY.	DESCRIPTION
1	3038842	1	HOPPER ASM 4.0 CU YD ELECTRIC MTR
2	3039515	1	HARDWARE KIT SHPE4000CH
3	3016934	1	CONTROLLER SPEED 12 VDC, 60 AMP
4	3030628	1	WIRE HARNESS MAIN
5	3035938	1	KIT POWER CABLE REPLACES 3016943
6	3012959	1	TARP, SHPE4000
7	3013589	4	HOOK, TIE-DOWN SHPE4000
8	1496505	1	HOLD DOWN KIT, SPREADER (4 STRAPS)
9	9225	12	S-HOOK, 2.5" ZN, TARP STRAP

ITEM NO.	PART NO.	QTY.	DESCRIPTION
10	TS31	6	STRAP, RUBBER TARP 31"
11	FCS038016100SS	2	SCREW, HHC 3/8-16 X 1 304 SST
12	FWF038100007SS	4	WASHER, FLAT 3/8 USS SST
13	FNE038016044SS	2	NUT, NYLOCK 3/8-16 X 7/16 SST
14	3030627	1	LANYARD PIN ASSEMBLY
15	0203700	1	WIRE ASSEMBLY, 36 LONG
16	3012458	2	WIRE MESH, TOP SCREEN
17	66050	8	SNAPPER PIN, 1/4 X 2, YLW ZINC
18	3030391	1	CHUTE ADJUSTABLE ELECTRO, SST

SALDOGG® SPREADER WARRANTY

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 two (2) years. 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.