

Installation Instructions

SHPE3000CH Series SaltDog® Electric Chain Drive Poly Hopper Spreader 3.0 cubic yards

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General Information

Overall Length: 123.7 inches
Overall Width: 49.6 inches
Overall Height: 52.7 inches
Empty Weight: 945 lbs
Capacity Struck: 3.0 cu. yd.
Average Installation Time: 3 hrs.

Vehicle Requirements

- Trucks with minimum GVWR 13,000 lbs.
- 150 AMP or higher alternator is recommended.

CAUTION

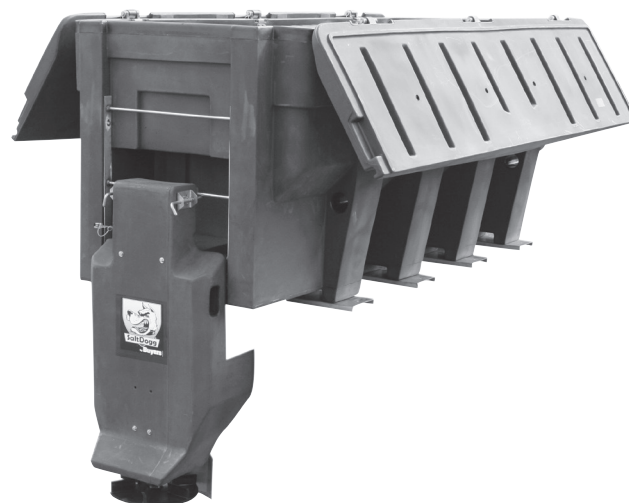
**Do not overload vehicle beyond the vehicle's GVWR or GAWR.
Check vehicle's load rating certification sticker for maximum
vehicle capacity.**

Materials Recommended to Spread

Average Material Weights

<u>Materials to use</u>	<u>Weight (pounds per cubic yard)</u>
Fine Salt-Dry	2,250
Coarse Salt-Dry	1,431
Coarse Sand-Dry	2,565
Sand/Salt up to 50/50 Mix-Dry	2,700

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



SHPE3000CH SALTDogg® 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 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.

Safety Precautions

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.

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.

CAUTION

It is recommended to install Backup Alarm on trucks to be up fitted with spreaders.

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 box from inside spreader. If spreader has been used make sure there is no material left in the hopper.

CAUTION

Never lift spreader with material in the hopper.

- D. Prepare 4 boards as shown in Fig.1. A board size is 2" x 6", 49" long minimum (cross boards from shipping pallet can be used). Boards can be as long as width of inside width of trucks body.

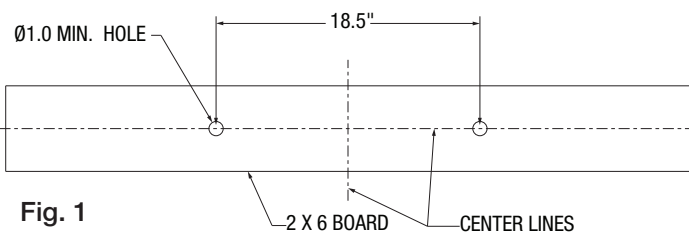


Fig. 1

E. Next, set the spreader in the truck body. Use four tie-downs to lift the spreader (Fig.2). Rectangular openings on the bottom of support legs can also be used to lift spreader using fork lift.

F. Lower spreader onto 2" x 6" boards positioned in truck bed. Make sure that bolt heads in stainless steel cross members would go into boards openings (Fig. 2). Attach chute to the spreader. If necessary, slide spreader rearward to have at least 2" clearance between chute and rear most vertical obstruction. (Fig. 3)

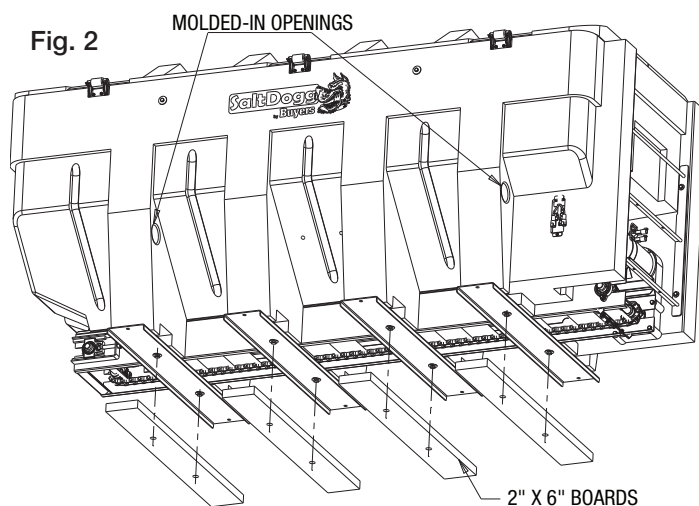
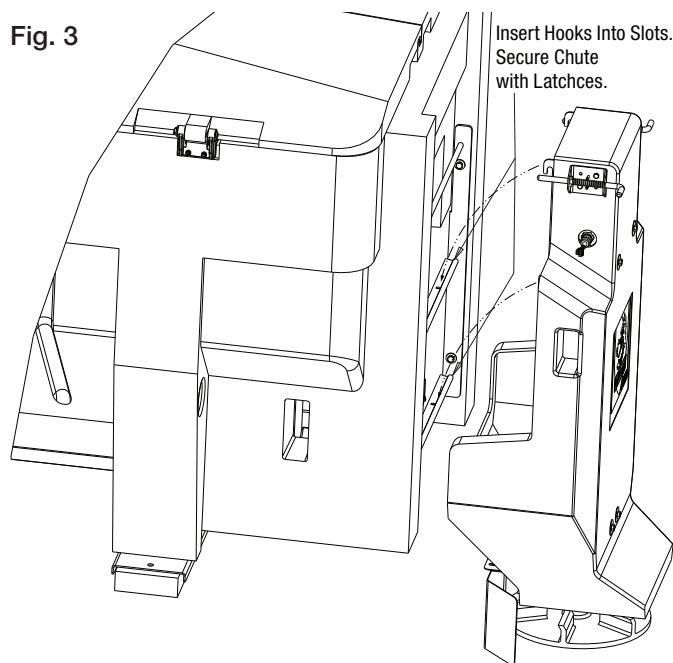


Fig. 2

Fig. 3



- G.** Make sure the spreader is centered from side to side and rear legs rest fully on trucks body.
- H.** Using holes in cross members fasten spreader to the boards and vehicles body.



WARNING!

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



WARNING!

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

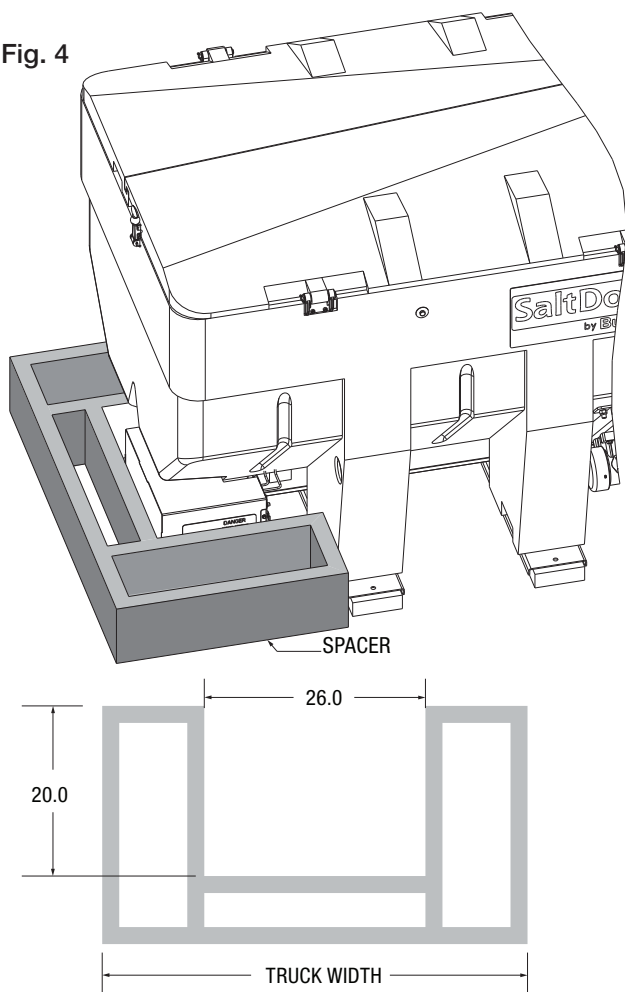


CAUTION!

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

- I.** Measure the distance from the front of the truck bed to the front of the hoppers front legs. Fabricate spacer to fit between front of the spreader and front of the bed using 2 x 8 boards and install it between the spreader and truck bed front wall as shown in Fig. 4.
- J.** In addition, secure spreader using four ratchet straps. Attach straps to tie-downs. Tighten straps evenly.

Fig. 4



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.

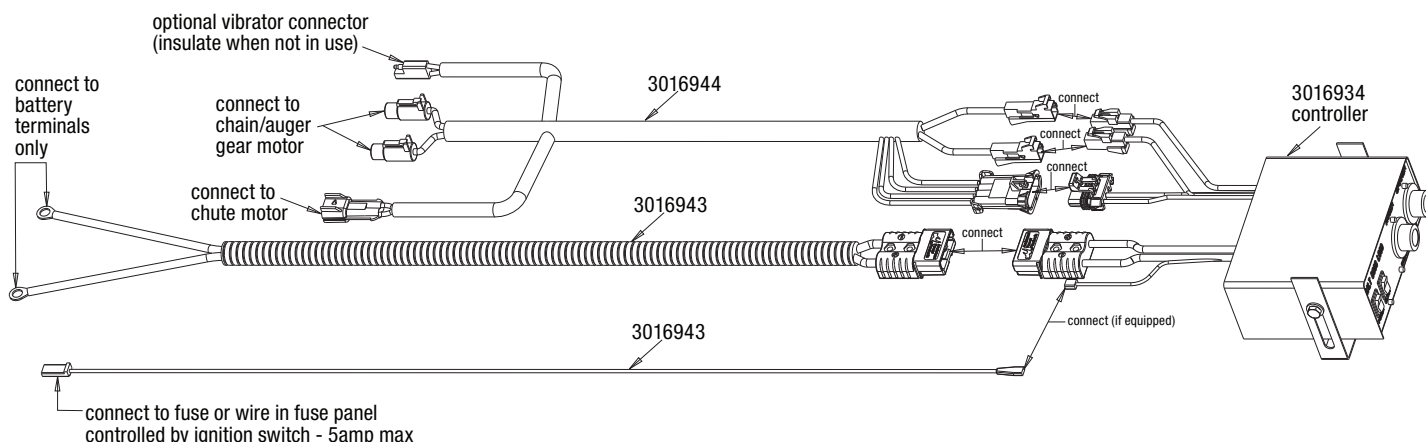
- A.** Mount the controller in a convenient location in the truck cab. It is recommended not to mount the controller directly in front of heat vents. Allow ample air space around controller.



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) if equipped.
- 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. 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.** Connect the power cable directly to the 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. Remove cap from single capped wire. Connect light to this wire and trucks frame.

! 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. Spreader operation.

- A.** SHPE3000 is equipped with a dual independent speed controller. To start spreader, press "POWER" switch. Switch will be illuminated. Chain and spinner will start rotating. Chain and spinner can be adjusted independently.
- B.** To stop spreader press "ON-OFF" switch again.
- C.** SHPE3000 controller is equipped with electronic overload and current spikes protection. Controller is not serviceable. Controller has "Jam" light. If auger becomes jammed by chunk of material or foreign debris "Jam" light will be illuminated and controller will turn it self "OFF". Controller can be restarted normally after jam removal. Controller is equipped with internal vibrator circuit breaker. Vibrator circuit breaker will trip and vibrator switch light will turn "OFF" if vibrator becomes overloaded. To reset vibrator circuit breaker turn vibrator switch off for 30 sec then turn it on again. Vibrator can operate continuously for 30 min max with 15 min brakes to avoid overheating.
- Controller manufacturers constantly update and modify their product. Please check controller box for manuals and/or updates.**
- D.** Spreading pattern can be controlled by repositioning of spinner shield on the shield bracket. Loose two screws and slide shield into desired position, then tighten screws.

4. Precautions

! CAUTION

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

- 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

! WARNING

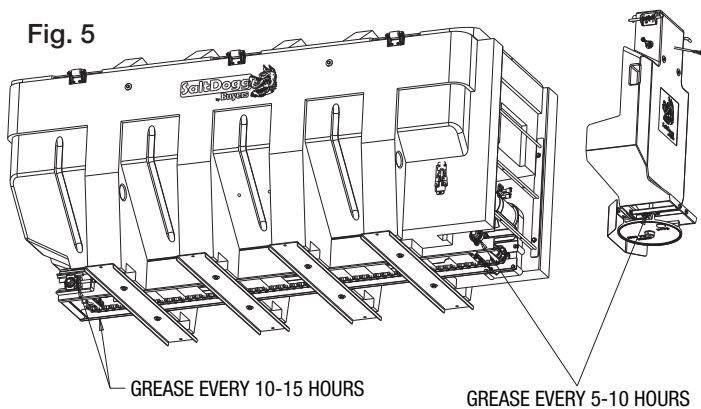
Never attempt to lift spreader with material in hopper!

! WARNING

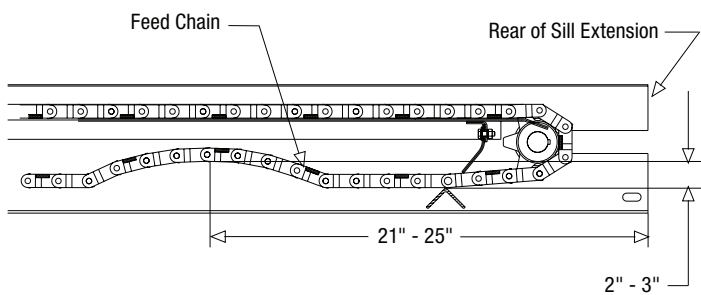
Never leave material in hopper for extended period of time. Material can freeze, solidify and seriously damage the spreader.

- A.** Wash spreader after every use. Make sure no material is left under auger and/or inside trough.
- B.** Inspect and retighten fasteners after every 5-7 hours of operation.
- C.** Lubricate bearings as shown on Fig. 5 using general automotive grease.
- D.** Inspect terminals/connectors every time you disconnect spreader from wire harness. Apply thin layer of dielectric grease on terminals. If any tarnish/corrosion is found, clean terminals and apply dielectric grease.

Fig. 5

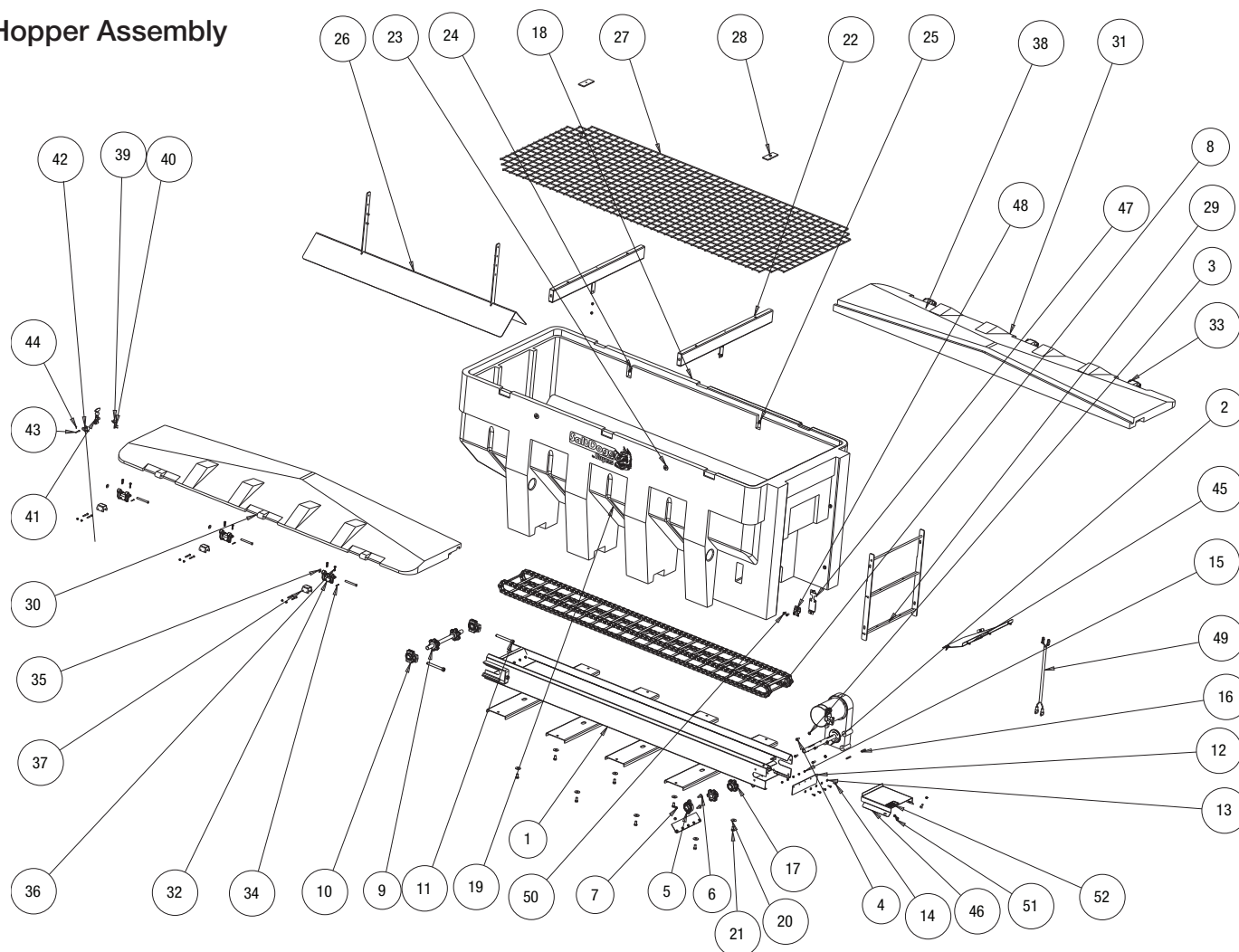


- E.** Use dielectric grease on all electrical connectors before an electrical connection is made or after connector is disconnected
- F.** Empty the spreader of all ice control materials when not in use. Wash out the spreader to prevent material builds up.
- G.** Check the Feed Chain tension periodically.



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.

Hopper Assembly

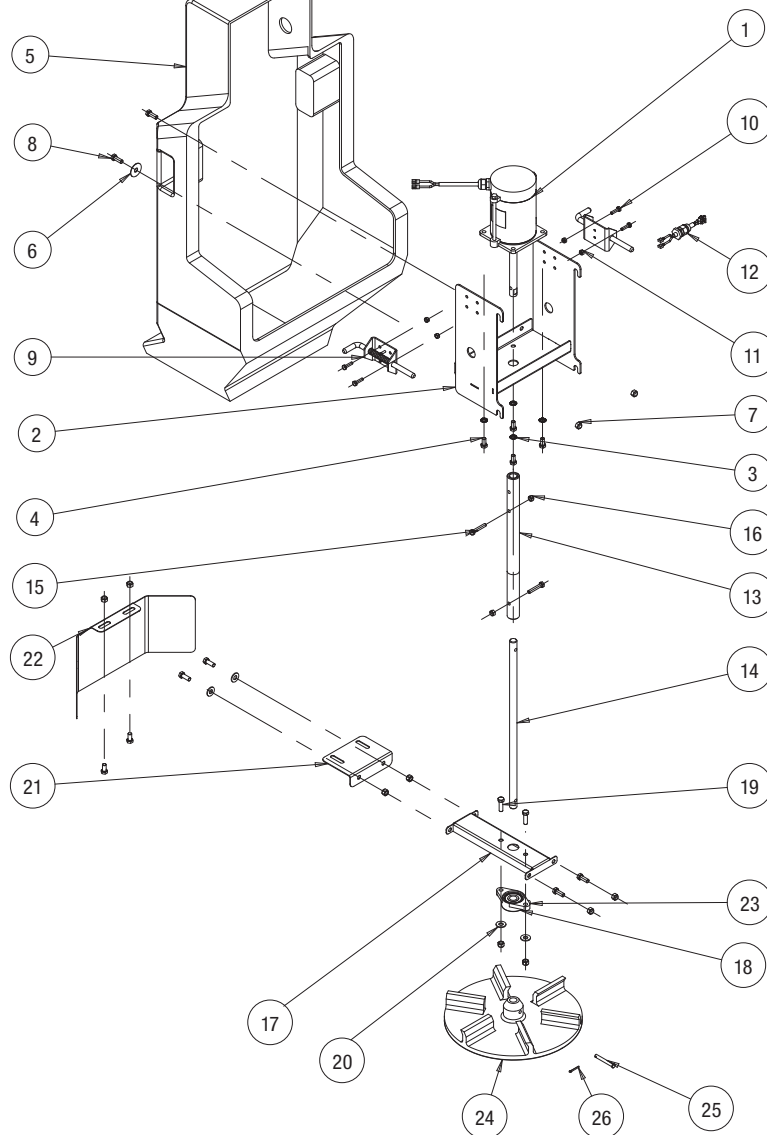


Bill of Materials

ITEM	PART NO.	QTY.	DESCRIPTION
1	3027301	1	TROUGH WELDMENT, CHAIN
2	3013821	1	GEAR MOTOR CONVEYOR 12 VDC
3	FWL038069009SS	4	WASHER, LOCK RHS-3/8 SST
4	FCS038016100SS	14	SCREW, HHC 3/8-16 X 1 304 SST
5	1410200	1	BEARING, FLANGED 1-1/8"
6	1410305	2	BOLT, 3/8 X 1 1/4, LOW HEAD
7	FNE038016044SS	14	NUT, NYLOCK 3/8-16 X 7/16 SST
8	1401100P	1	CHAIN ASSY D662 122 LINKS
9	3008571	1	SHAFT IDLER, ASSEMBLY
10	1411001	2	BEARING, IDLER TAKE UP
11	141050WSS	2	BOLT, WELDED TAKE UP, SCH IDLER
12	1410241	3	WIPER BELT, HOPPER
13	FWF025063007SS	13	WASHER, FLAT 1/4 SAE SS
14	FCS025020075SS	13	SCREW, CAP 1/4-20 X 3/4 SST
15	FNE025020031SS	25	NUT, NYLON INSERT 1/4-20 SST
16	KS402	2	KEY, 1/4 X 1/4 X 2
17	1410250	2	SPROCKET, 6 TOOTH PINTLE CHAIN
18	3015951	1	HOPPER POLY 3.0 CU YA
19	3027662	2	PLUG ROUND TUBE 3/4-14-20 WALL
20	3017858	8	WASHER FLAT .5 ID 1.5 OD SST
21	FCS050013100SS	8	SCREW, HHC-1/2-13 X 1 SST
22	3016701	2	BRACKET WELDMENT, INVERTED VEE
23	3007115	4	WASHER, FLAT 3/8 X 1.5 X.048 SST
24	3007068	4	CAP SCREW, HX HD-3/8-16X3 SST
25	FWF038100007SS	8	WASHER, FLAT 3/8 USS SST
26	3017393	1	INVERTED VEE, SHPE300
27	3015999	1	TOP SCREEN SHPE3000

ITEM	PART NO.	QTY.	DESCRIPTION
28	3012795	2	RETAINER, SCREEN
29	3017439	1	CHUTE HANGER, WELDMENT
30	3016023	1	LID, TOP LOCK
31	3015996	1	LID, LOWER LOCK
32	3016098	6	HINGE, LID
33	3017896	6	PIN, CLEVIS, 7/16 X 4.00 SST
34	3014994	6	PIN, COTTER, 1/8IN X 1IN SST
35	3018073	6	WASHER FLAT 7/16 SST
36	3015925	17	SCREW #14X1.25 SST
37	3017849	6	BRACE, HINGE
38	3017932	12	SCREW, CAP HEX HD 1/4-20X2.0 SST
39	3018079	1	CATCH, STAINLESS A-BRACKET
40	3007522	6	SCREW, SHEET MTL #12x1.0 HEX WASHER HD SST
41	3002398	1	STRAP, HOOD LATCH
42	3018078	1	BRACKET, STAINLESS PIVOT
43	3002390	1	PIN, CLEVIS 3/16" X 1-11/16" SST
44	3002392	1	PIN, COTTER 1/16" X 1/2" SST
45	3025124	1	COVER DISCHARGE SHPE3000
46	3027701	1	COVER, TROUGH SHPE3000
47	3027766	1	BRACKET, CONNECTORS
48	3017121	2	BRACKET, RECEPTACLE SZ8 DEUTSCH
49	3024521	1	HARNES, UTS, LID LONG
50	FCS038016075SS	2	SCREW, HHC-3/8-16 X 3/4 SST
51	3014960	2	BOLT, 3/8-16 X 1 CARRIAGE SHORT NECK SST
52	3027767	1	LABEL SERIAL NUMBER SHPE3000CH

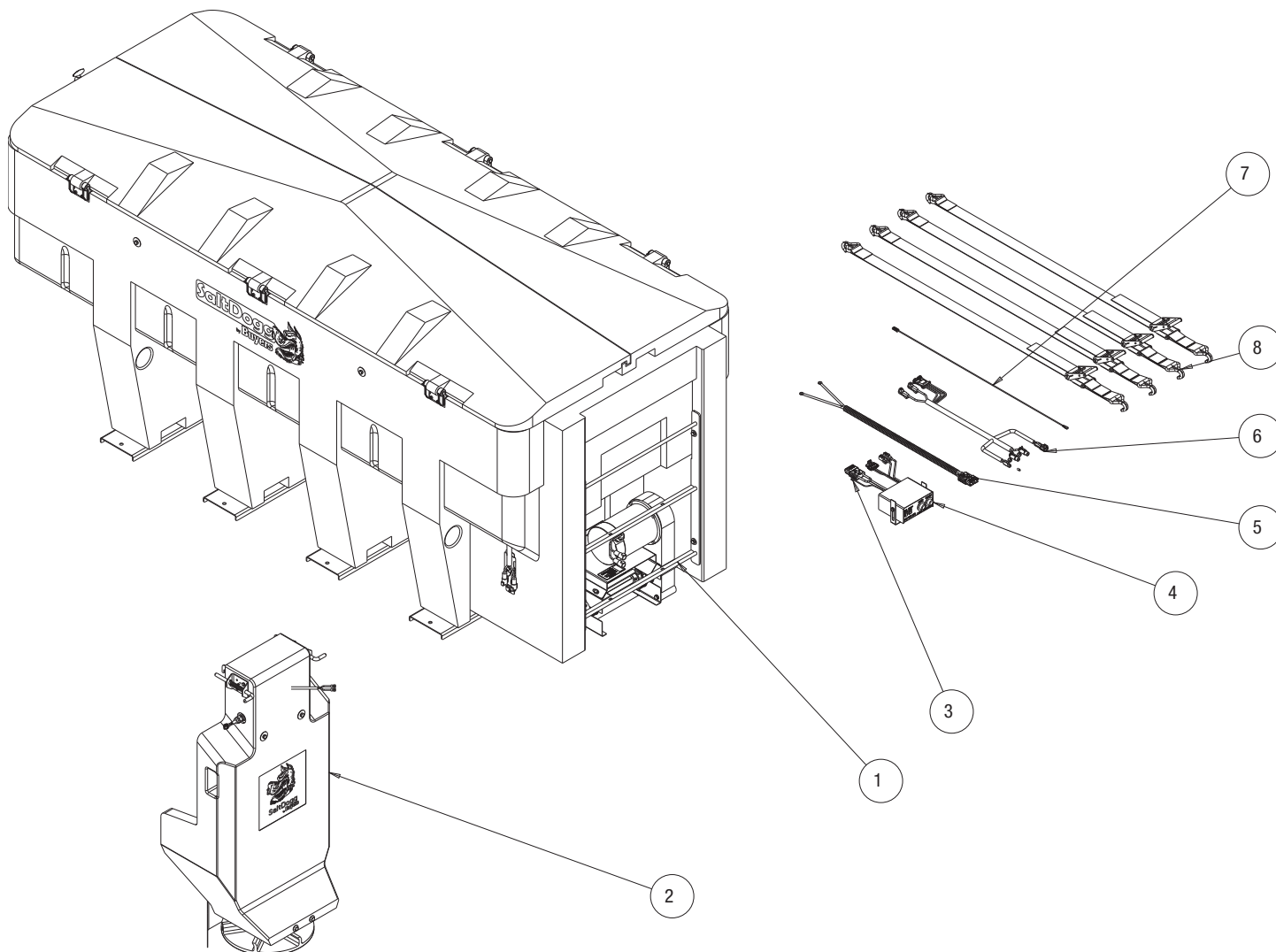
Chute Assembly



ITEM	PART NO.	QTY.	DESCRIPTION
1	3014078	1	MOTOR 12 VDC, .5 HP SPINNER
2	3017448	1	MOTOR FRAME, CHUTE
3	3017356	4	WASHER, EXTERNAL TOOTH LOCK 3/8 SS
4	FCS038016075SS	6	SCREW, HHC-3/8-16 X 3/4 SST
5	3015953	1	CHUTE, POLY ADJUSTABLE
6	3007115	2	WASHER, FLAT 3/8 X 1.5 X.048 SST
7	FNE038016044SS	10	NUT, NYLOCK 3/8-16 X 7/16 SST
8	FCS038016100SS	6	SCREW, HHC 3/8-16 X 1 304 SST
9	3009988	2	LATCH, SPRING
10	FCS025020100SS	4	SCREW, CAP HEX HD 1/4-20 X 1 SST
11	FNE025020031SS	4	NUT, NYLON INSERT 1/4-20 SST
12	3006753	1	WIRE HARNESS, CHUTE
13	3017974	1	COUPLER SHAFT ADJUSTABLE

ITEM	PART NO.	QTY.	DESCRIPTION
14	3018106	1	SHAFT CHUTE ADJUSTABLE
15	FCS031018175SS	2	SCREW, HHC 5/16-18 X 1 3/4 SS
16	FNE031018034SS	2	NUT, NYLOCK 5/16-18 SS
17	3018286	1	BRACKET, SPINNER BEARING
18	2F12SCR	1	BEARING, 2-HOLE FLANGED .75 ID
19	FCS038016125SS	2	SCREW, HHC-3/8-16 X 1.25 SST
20	FWF038100007SS	4	WASHER, FLAT 3/8 USS SST
21	3017443	1	BRACKET, SHIELD CHUTE
22	3017444	1	SHIELD, CHUTE
23	455	1	GREASE FITTING 1/4-28 TAPERED
24	3012393	1	SPINNER, 14" POLY CW
25	3007113	1	PIN, CLEVIS, 5/16 X 2-1/2, .141 HOLE ZN
26	FPC013000100	1	COTTER PIN, 1/8 X 1, ZINC

Spreader Assembly



Bill of Materials

ITEM	PART NO.	QTY.	DESCRIPTION
1	3027304	1	HOPPER, CHAIN ASSEMBLY SHPE3000
2	3015954	1	CHUTE ASSEMBLY
3	3028184	1	HARDWARE KIT SHPE3000CH
4	3016934	1	CONTROLLER SPEED 12 VDC, 60 AMP
5	3016943	1	POWER CORD
6	3016944	1	WIRE HARNESS MAIN
7	0203700	1	WIRE ASSEMBLY, 36 LONG
8	1496505	1	HOLD DOWN KIT, SPREADER (4 STRAPS)

Service Parts and Accessories for SHPE3000CH

PART NO.	DESCRIPTION
3014778	Replacement Motor for Gear Motor 3013821
3024738	Repair Kit Connector for Gear Motor 3013821
LS6H	Wetting System, Hydraulic, 30 Gal.