

Installation Instructions

SHPE4000 SaltDogg® Electric Drive Poly Hopper Spreader 4.0 cubic yards

This manual applies serial numbers 11010 and above

Table of Contents

General Information	1
Safety Precautions	1
Installation Instructions	2-4
Spreader Operation	5
Spreader Maintenance	5
Repair Parts & Drawings	6-8
Warranty Information	8

General Information

Overall Length: 107.62 inches
 Overall Width: 74 inches
 Overall Height: 44 inches
 Empty Weight: 774 lbs
 Capacity Struck: 4.0 cu. yd.

Vehicle Requirements

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

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
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.



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. Always disconnect the battery before removing or replacing electrical components.

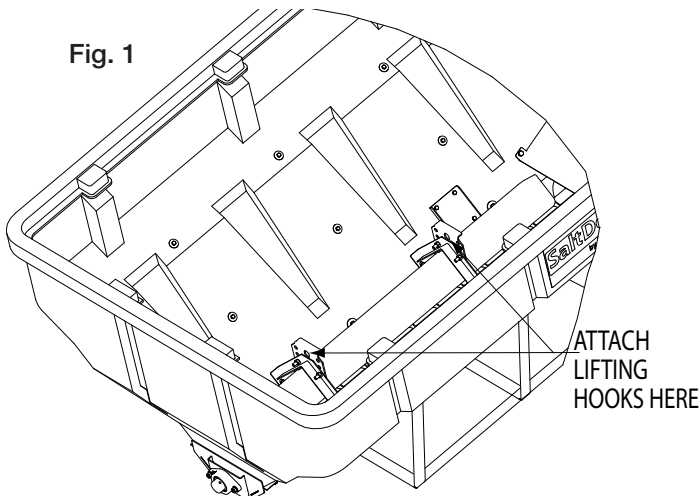
WARNING

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.

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.** Next, set the spreader in the truck body. Use openings in both inverted vee brackets to lift the spreader (Fig.1).



- D.** Lower spreader into the truck bed. Attach chute to the spreader. If necessary, slide spreader rearward to have at least 1" clearance between chute and rear most vertical obstruction.
- E.** Make sure the spreader is centered from side to side and rear gussets rest fully on trucks body.
- F.** Using holes in gussets as templates transfer six (6) holes positions on trucks bed. Make sure that these holes will not interferes with any important trucks components. Drill six 9/16" holes. Bolt spreader to the vehicle. Using 1/2" grade 5 hardware.

⚠ WARNING

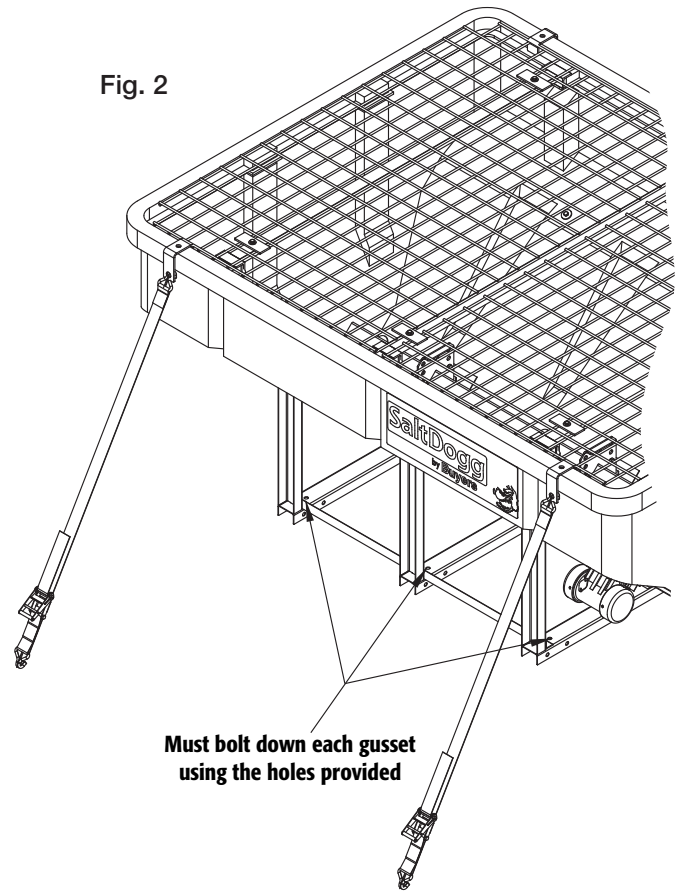
Do not drill holes into fuel tanks, fuel lines, through electrical wiring, etc. that may be damaged by drilling.

- G.** Attach tie-down hooks to the hopper. Secure spreader using four ratchet straps as shown. Tighten straps evenly to secure spreader in the middle of the truck box (Fig. 2). **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 bolt spreader to the vehicle.

Fig. 2



Alternative tie-down methods:

- Attach straps to round openings in frame uprights.
- As alternative method spreader can be installed into dump bed using Tailgate Latch Kit #3013744 (sold separately) Fig. 3. To insure proper installation follow instructions supplied with kit #3013744.

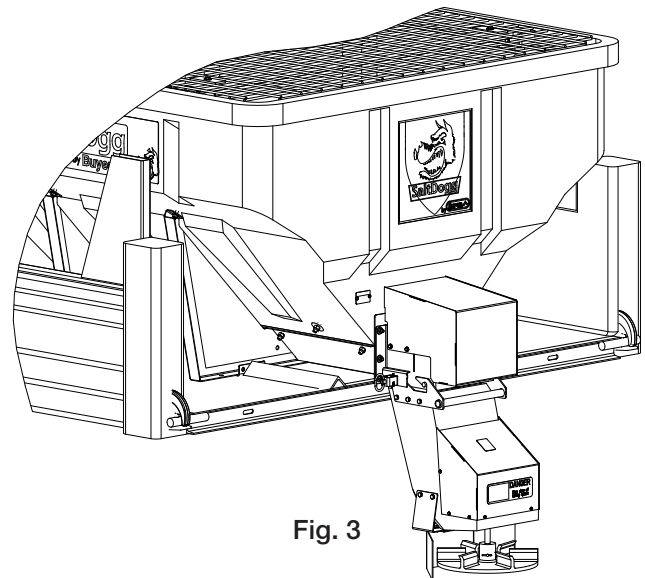
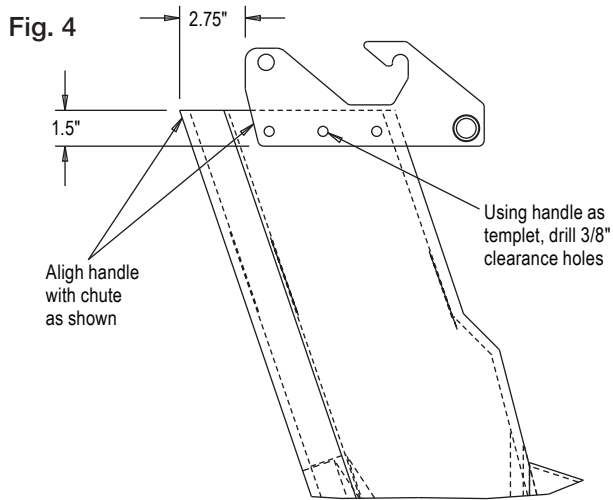


Fig. 3

H. It is recommended to have spinner disk positioned 16-20 inches above ground. If chute is too long for recommended heights, trim chute. Then follow instructions shown in Fig.4 to drill holes for chute handle. Attach handle to chute using 3/8 screws, washers and nuts from hardware kit.



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.
- 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.

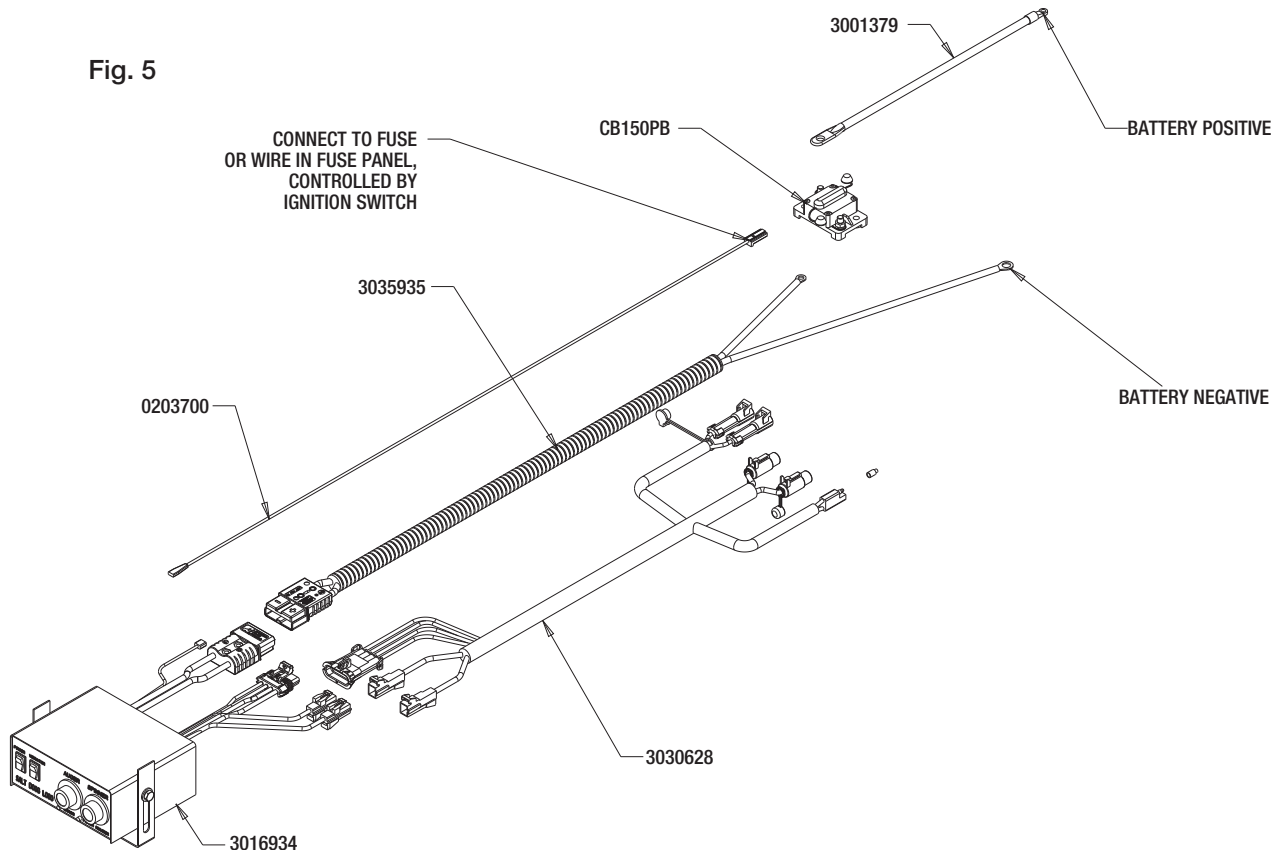
⚠ WARNING

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!

Fig. 5



- 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 auger 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.

Spreader Operation

- 1.** SHPE4000 spreader is equipped with a dual independent speed Controller with warning lights and a Vibrator switch. To start the spreader, press the ON-OFF switch. Switch will illuminate. The auger will accelerate to full speed for 2 sec., then slow down to dialed speed. The spinner will accelerate to full speed for 2 sec., then slow down to dialed speed.
- 2.** To activate the Vibrator press the Vibrator switch ON. Vibrator switch will illuminate.
- 3.** To stop the spreader push ON-OFF switch to OFF position.

Material Flow Adjustments

Always use screen during spreader operation! Various materials have different moisture absorption rate, some materials may not perform as desired. Therefore, the substitution of the alternate material may be necessary for optimum performance.

The SHPE4000 is equipped with an adjustable inverted vee. Use lowest setting for salt and raise inverted vee when salt/sand

mixture or sand is used. Material spray pattern can be adjusted by changing chute shield position.

Controller Warnings

Check controller instruction sheet for latest controller updates and troubleshooting codes. Controller instruction sheet is inside controller shipping box.

IMPORTANT! INSTALLER, DO NOT DISCARD CONTROLLER INSTRUCTION SHEET. STAPLE SHEET TO SPREADER MANUAL AND GIVE TO END USER!

Spreader Maintenance

- 1.** Wash spreader after every use. Make sure no material is left under auger and/or inside trough.
- 2.** Inspect and retighten fasteners after every 5-7 hours of operation.
- 3.** Lubricate bearings every 7-10 hours of operation using general automotive grease.
- 4.** 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.
- 5.** Use dielectric grease on all electrical connectors before an electrical connection is made or after connector is disconnected
- 6.** Grease and spray with lubricant Auger bearing after every 20 hours of use.
- 7.** Empty the spreader of all ice control materials when not in use. Wash out the spreader to prevent material builds up.
- 8.** It is recommended to cover spreader with the tarp during storage periods. Tarp can be attached to anchors on both sides of tie downs.

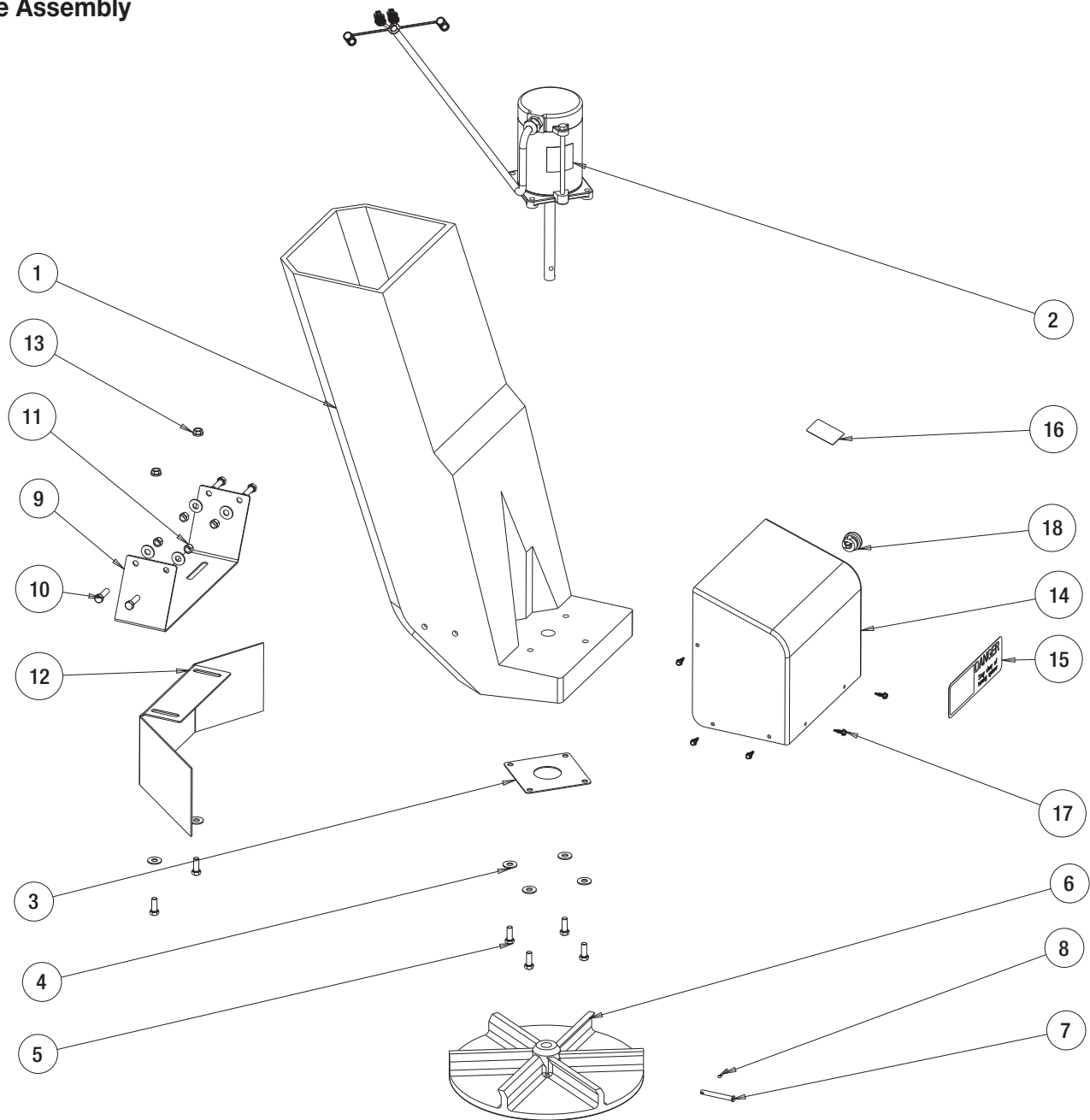
End of Season Maintenance

- 1.** Wash spreader. Make sure no material or residue is left in and outside the 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 a dry, cool place.
- 6.** Remove controller from truck. Store controller indoors, in a dry, cool place.

Summer Storage

- 1.** Apply dielectric grease or similar protective compound on all electrical connectors & protect them with caps before storage.
- 2.** Disconnect and remove speed controller from vehicle and store it in dry and cool place. Protect controller from excessive heat and moisture.
- 3.** Clean hopper and trough from all kinds of debris.
- 4.** Remove, thoroughly lubricate and reinstall trough bearing.
- 5.** Protect hopper from excessive temperatures during summer storage.

Chute Assembly

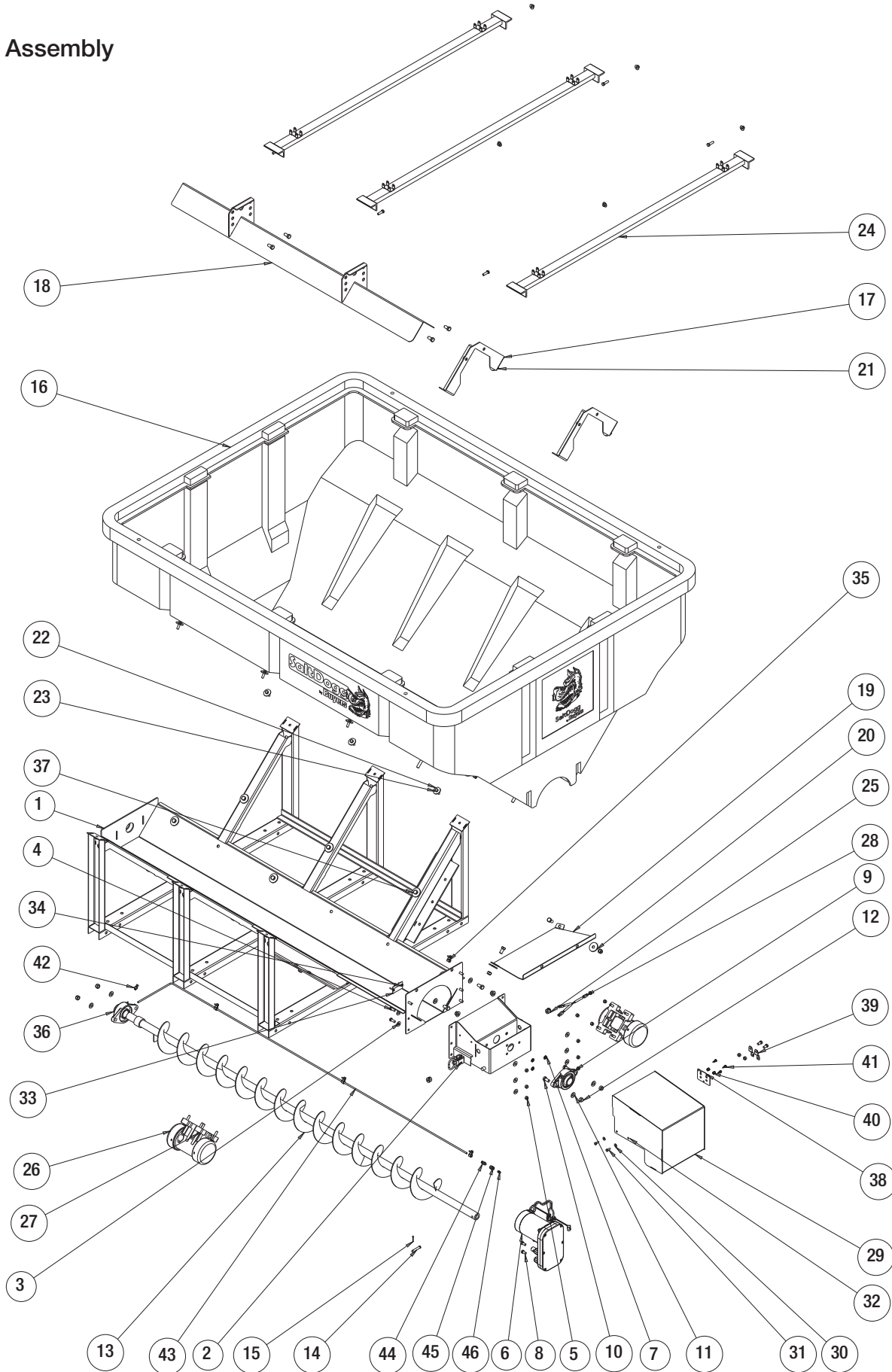


Bill of Materials

ITEM NO.	PART NO.	QTY.	DESCRIPTION
1	3012374	1	CHUTE, SHPE4000
2	3030907	1	MOTOR 12 VDC, .5 HP SPINNER
3	3012802	1	RETAINER, MOTOR, CHUTE
4	FWF038100007SS	10	WASHER, FLAT 3/8 USS SST
5	FCS038016100SS	6	SCREW, HHC 3/8-16 X 1 304 SST
6	3012393	1	SPINNER, 14" POLY CW
7	3007113	1	PIN, CLEVIS, 5/16 X 2-1/2, .141 HOLE ZN
8	FPC013000100	1	COTTER PIN, 1/8 X 1, ZINC
9	3012397	1	BRACKET, SHIELD CHUTE
10	FCS038016125SS	4	SCREW, HHC-3/8-16 X 1.25 SST

ITEM NO.	PART NO.	QTY.	DESCRIPTION
11	FNE038016044SS	4	NUT, NYLOCK 3/8-16 X 7/16 SST
12	3012396	1	SHIELD CHUTE SHPE4000
13	3001255	2	NUT, HEX FLNG-3/8-16 SST
14	3025108	1	MOTOR COVER, CHUTE
15	3007844	1	DECAL, DANGER STAY CLEAR
16	3002631	1	LABEL, "NO STEP"
17	3015873	8	SCREW #12-14x 74 SS SELF DRIL HEX WASHER HD
18	3025065	1	BUSHING STRAIN RELIEF

Hopper Assembly

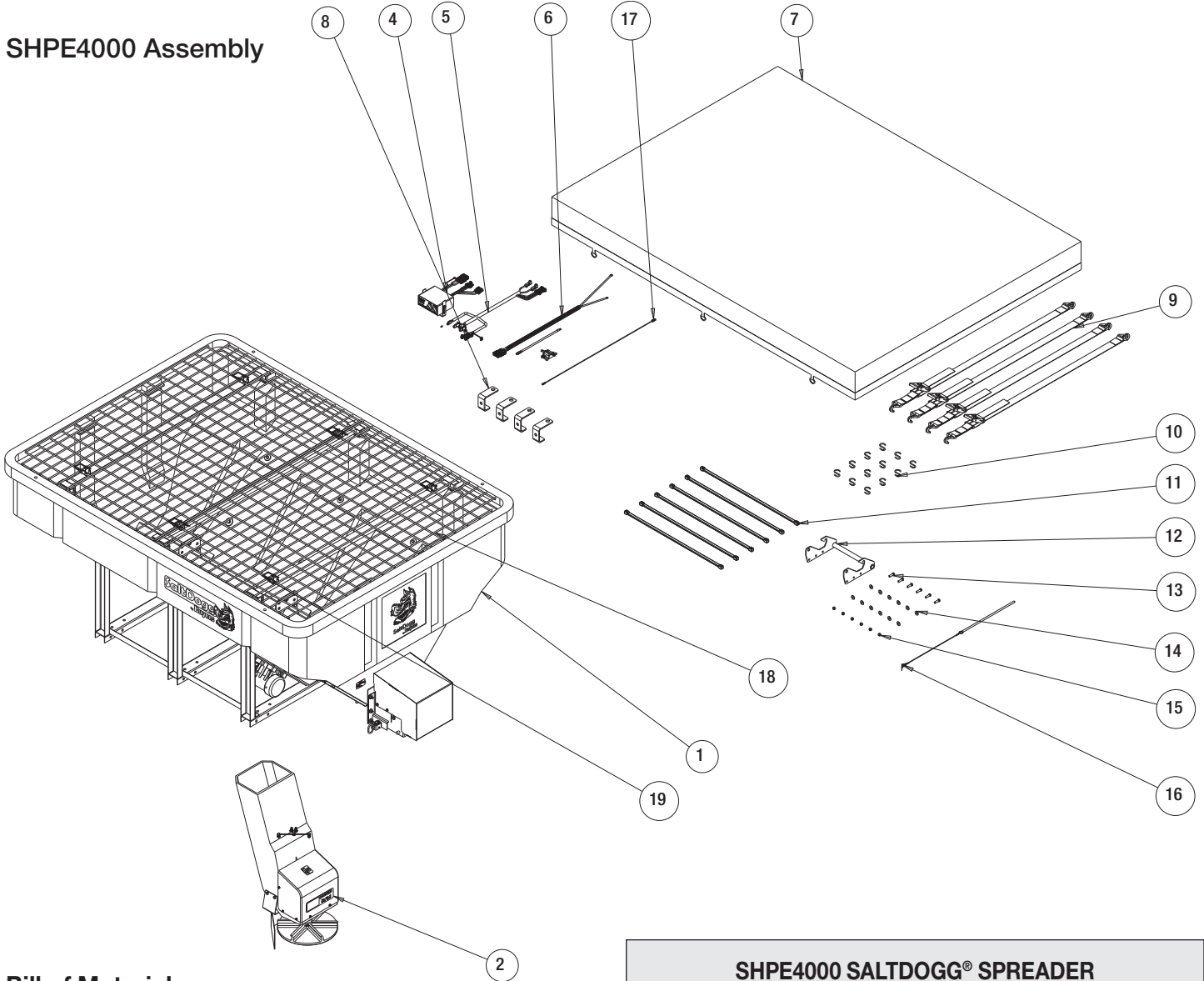


Bill of Materials for Hopper Assembly

ITEM NO.	PART NO.	QTY.	DESCRIPTION
1	3013270	1	TROUGH WELDMENT, SHPE4000
2	3012093	1	BRACKET, WELDMNT GEAR MOTOR
3	FWF038100007SS	16	WASHER, FLAT 3/8 USS SST
4	FCS038016100SS	4	SCREW, HHC 3/8-16 X 1 304 SST
5	FNE038016044SS	28	NUT, NYLOCK 3/8-16 X 7/16 SST
6	3038812	1	GEAR MOTOR, AUGER SHPE4000
7	FWL038069009SS	3	WASHER, LOCK RHS-3/8 SST
8	FCS038016075SS	5	SCREW, HHC-3/8-16 X 3/4 SST
9	2F24SCR	2	BEARING FLANGE 2 HOLES .75 ID SET SCREW
10	FCS050013100SS	10	SCREW, HHC-1/2-13 X 1 SST
11	3003873	14	WASHER, FLAT 1/2 ID SST
12	FNE050013053SS	24	NUT, NYLOCK 1/2-13 SS
13	3012001	1	AUGER SHPE4000
14	1410803	1	PIN, CLEVIS, 3/8 X 2, 1038 ST, YZN
15	FPC013000100	1	COTTER PIN, 1/8 X 1, ZINC
16	3011999	1	HOPPER POLY 4 CU YA
17	3013442	2	BRACKET WELDMNT, INERT. VEE
18	3013444	1	INVERTED VEE, WELDMNT
19	3012607	1	COVER DISCHARGE
20	3013516	18	WASHER, FLAT 1/2 ID 2.0 OD .135 THK SST
21	3006723	14	SCREW, HEX HD 1/2-13x1.5 GR5 SS
22	3014189	6	WASHER, FLAT 3/8 X 1.5 X.120 SST
23	FCS038016125SS	12	SCREW, HHC-3/8-16 X 1.25 SST
24	3013279	3	SCREEN SUPPORT, SHPE4000
25	3007821	3	STRAIN RELIEF BUSHING
26	3012081	2	VIBRATOR 450 LBS, 12 VDC
27	3007066	8	SCREW, HHC-3/8-16 X 2 SST

ITEM NO.	PART NO.	QTY.	DESCRIPTION
28	3015652	1	ADAPTER DUAL VIBRATORS, SHPE4000
29	3012408	1	COVER, WELDMNT, GEAR MOTOR
30	FWF025063007SS	8	WASHER, FLAT 1/4 SAE SS
31	FCS025020075SS	4	SCREW, CAP 1/4-20 X 3/4 SST
32	FNE025020031SS	4	NUT, NYLON INSERT 1/4-20 SST
33	3017031	1	PLATE, SERIAL NO. SHPE4000 SERIES
34	3007522	7	SCREW, SHEET MTL #12x1.0 HEX WASHER HD SST
35	4375	5	CLAMP, HOSE .4375, 9/32 HOLE
36	3013541	1	CAP VYNIL 2.0 ID 1.0 LG
37	3019616	2	SCREW, HEX HEAD CAP 1/2-13 X 5.00 SST
38	3038833	1	PLATE, CONNECTOR MOUNT
39	3017121	2	BRACKET, RECEPTACLE S28 DEUTSCH
40	3017982	2	WIRE BUSHING OPEN/CLOSED HEYCO 2867
41	3015873	3	SCREW #12-14x.74 SS SELF DRIL HEX WASHER HD
42	3035344	1	GREASE FITTING 1/4TUBE 1/4-28 MALE STRAIGHT
43	3035360	1	GREASE TUBE FRONT BEARING AUGER
44	3035347	1	GREASE FITTING 1/4TUBE 1/8 NPT STRAIGHT
45	H3309X2	1	CONNECTOR, FEM NPT TO FEM NPT 1/8 X 1/8
46	800	1	GREASE FITTING, 1/4 STD
	3006588	.01	COMPOUND ELECTRICAL NOCO CB-104
	3006589	.01	LUBRICANT ANTISEIZE MOLY

SHPE4000 Assembly



Bill of Materials

ITEM NO.	PART NO.	QTY.	DESCRIPTION
1	3012015	1	HOPPER ASSEMBLY SHPE4000
2	3019256	1	CHUTE ASSEMBLY, SHPE6000
3	3039498	1	HARDWARE KIT SHPE4000
4	3016934	1	CONTROLLER SPEED 12 VDC, 60 AMP
5	3030628	1	WIRE HARNESS MAIN
6	3035938	1	KIT POWER CABLE REPLACES 3016943
7	3012959	1	TARP, SHPE4000
8	3013589	4	HOOK, TIE-DOWN SHPE4000
9	1496505	1	HOLD DOWN KIT, SPREADER (4 STRAPS)
10	9225	12	S-HOOK, 2.5" ZN, TARP STRAP
11	TS31	6	STRAP, RUBBER TARP 31"
12	3013427	1	HANDLE WELDMENT, CHUTE
13	FCS038016125SS	6	SCREW, HHC-3/8-16 X 1.25 SST
14	FWF038100007SS	12	WASHER, FLAT 3/8 USS SST
15	FNE038016044SS	6	NUT, NYLOCK 3/8-16 X 7/16 SST
16	3030627	1	LANYARD PIN ASSEMBLY
17	0203700	1	WIRE ASSEMBLY, 36 LONG
18	3012458	2	WIRE MESH, TOP SCREEN
19	66050	8	SNAPPER PIN, 1/4 X 2, YLW ZINC

SHPE4000 SALDOGG® 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.