

Installation Instructions

SHPE4000 SaltDogg® Electric Drive Poly Hopper Spreader 4.0 cubic yards

This manual applies serial numbers 11010 and above

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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

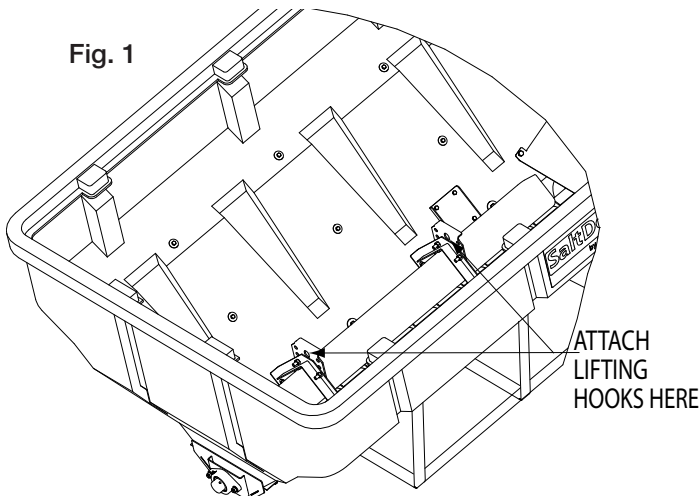
Improper installation and operation could cause personal injury, and/or property damage. Observe the following Safety Precautions before, during and after operating this spreader. By following these precautions and common sense, possible injury to persons and potential damage to this machine may be avoided.

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).

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

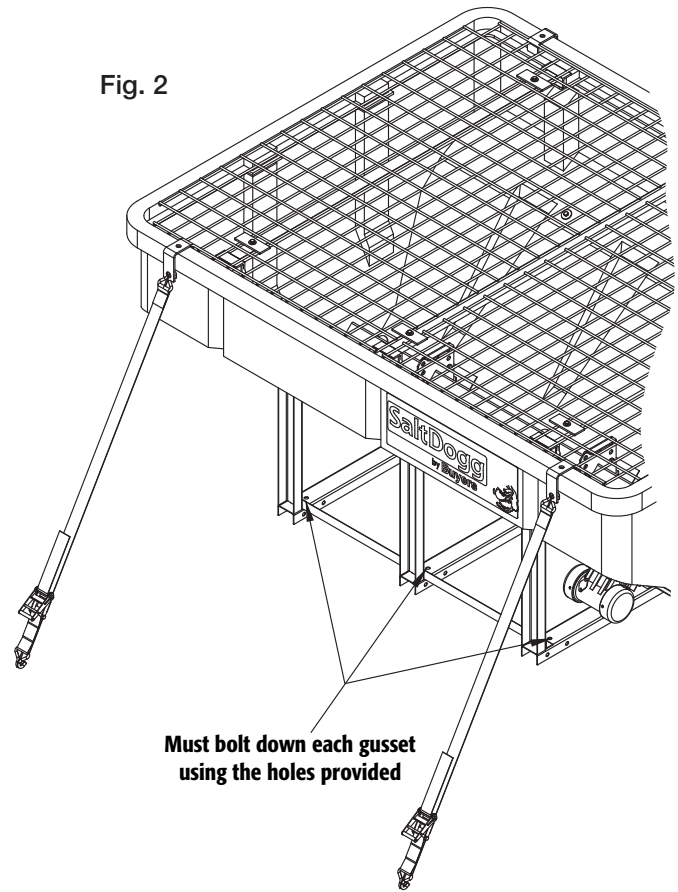
Do not drill holes into fuel tanks, fuel lines, through electrical wiring, etc. that may be damaged by drilling.

- 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

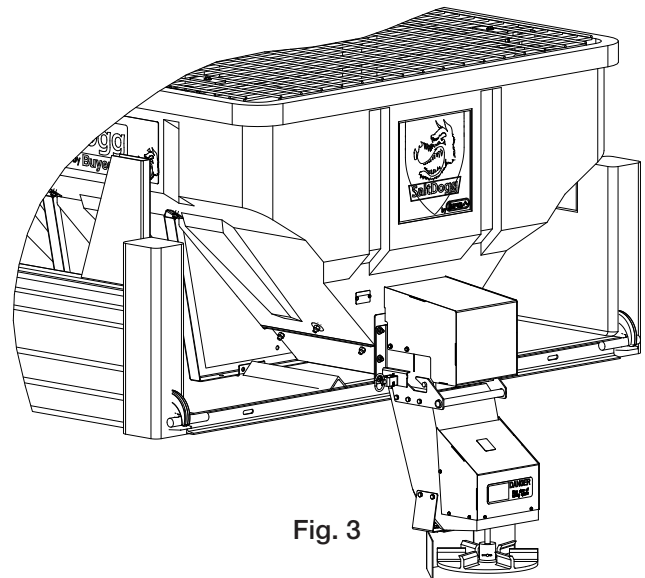
Important! Do not use ratchet straps or tailgate latch exclusively! Always bolt spreader to the vehicle.

Fig. 2

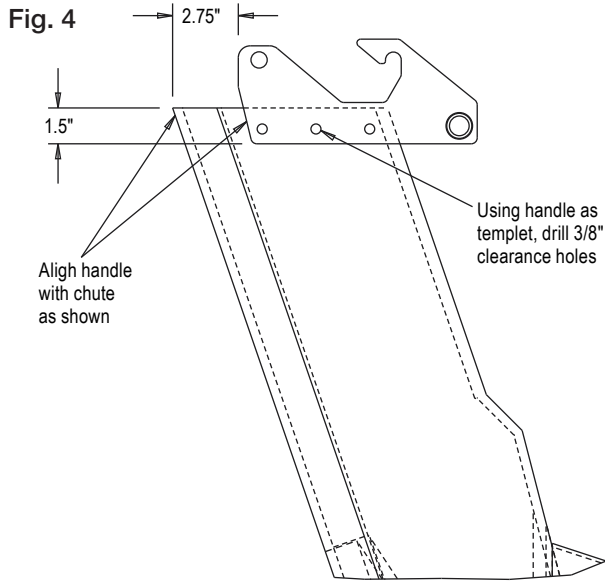


Alternative tie-down methods:

- 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.



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

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

⚠ WARNING

Use extreme caution when working around an operating vehicle engine.

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.

A. Lay out a wiring path for the Vehicle Wiring Harness. Connect the Wire Harness smaller connector to the Chute's harness, large connector to the Hopper's harness. Drill all necessary holes or use existing ones to pass the round connector into the trucks cab. Attach harness to truck's frame.

⚠ WARNING

Do not install controller in the deployment path of an airbag. Refer to vehicle manufacturer's manual for airbag deployment area(s).

B. Mount the Controller in a convenient location in the truck cab. It is recommended not to mount Controller directly in front of the heat vents.

C. Connect the Wire Harness round terminal to the Controller round terminal.

D. Lay out path for the Power Cable in the truck's engine compartment. Drill hole in the firewall or use an existing one to pass wire harness. It is recommended to pass the Power Cable from inside of the cab to the battery due to the large high amperage connector. Do not route close to exhaust system!

E. Connect Power Cable terminal to Controller.

F. Connect the Power Cable ring terminals to the truck's battery, white-positive, and black-negative.

G. Make sure that the Controller is OFF. Connect blue wire's small female terminal to Controller's Ignition wire. Connect the blue wire from the Controller to an accessory wire/terminal that is controlled by the vehicle's ignition switch. (Fig. 5)

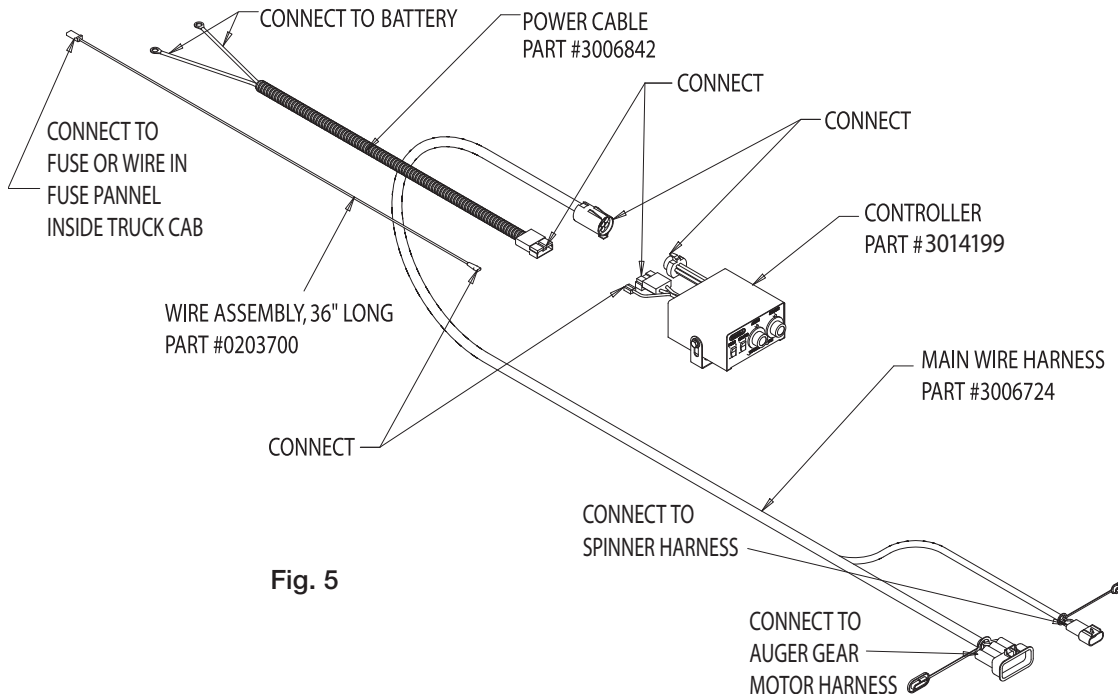


Fig. 5

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.

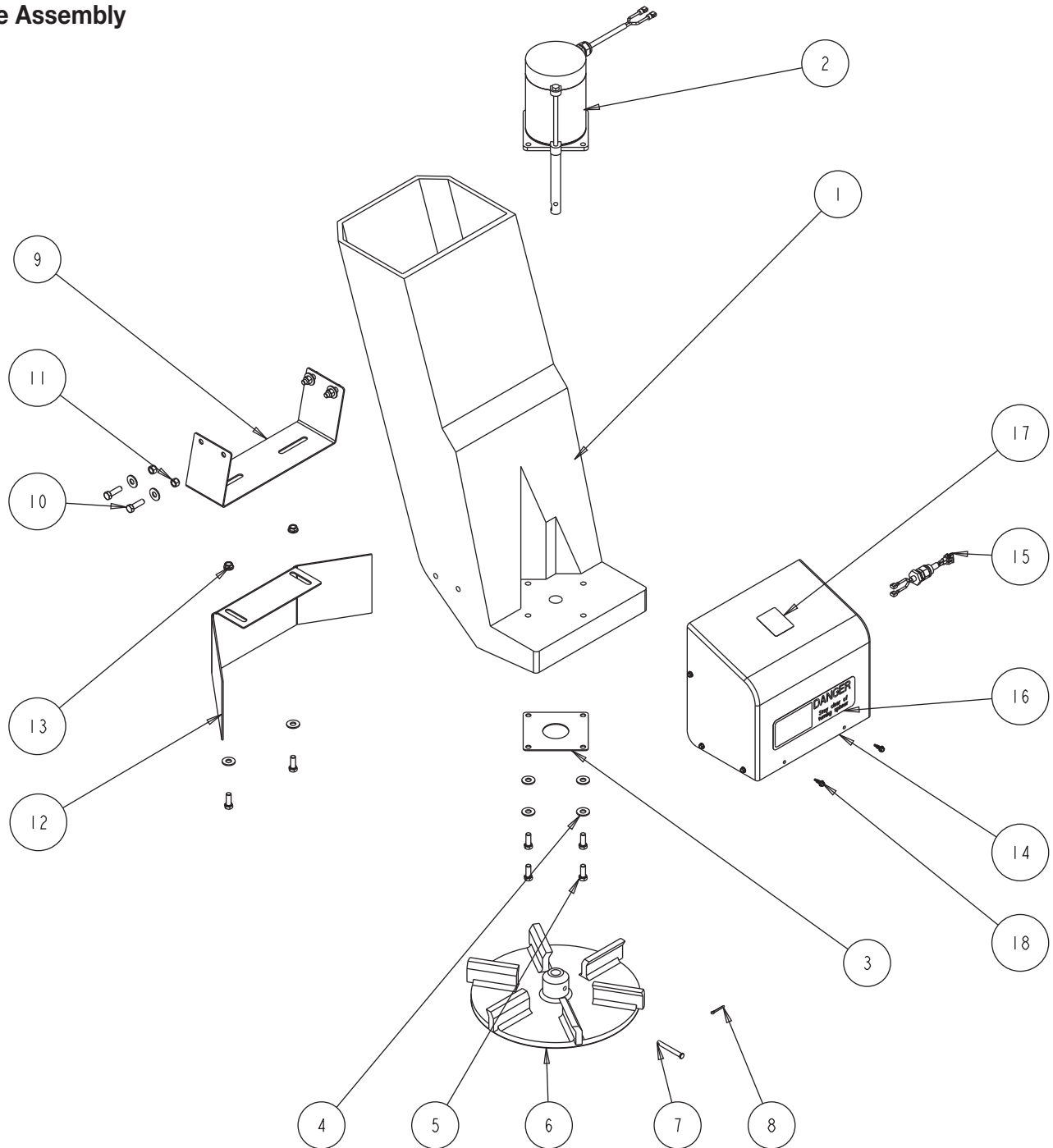
End of Season Maintenance

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

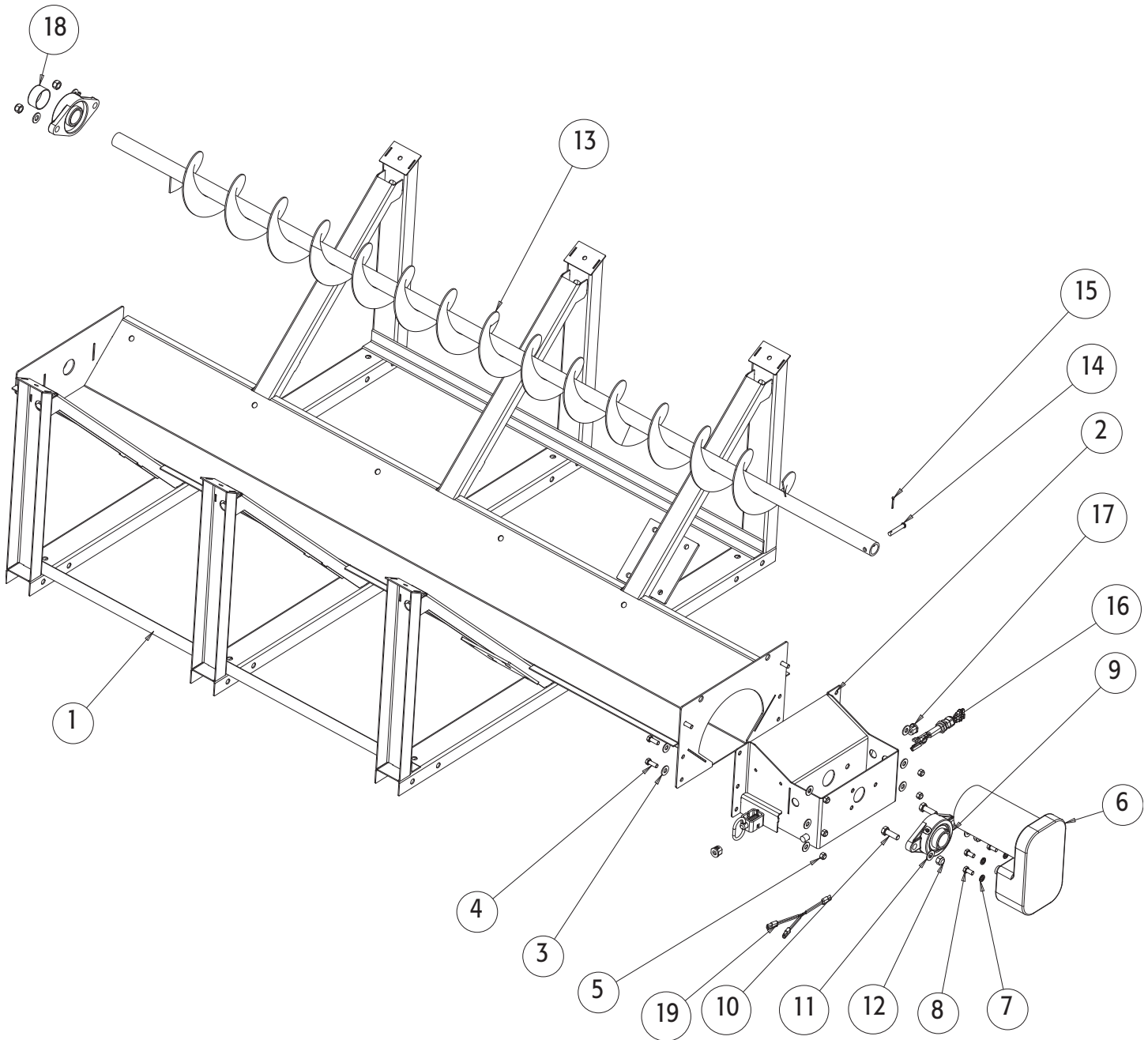


Bill of Materials

ITEM NO.	PART NO.	QTY.	DESCRIPTION
1	3012374	1	CHUTE
2	3014078	1	MOTOR 12 VDC, .5 HP SPINNER
3	3012802	1	RETAINER, MOTOR, CHUTE
4	-	10	WASHER, FLAT 3/8 USS SST
5	-	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

ITEM NO.	PART NO.	QTY.	DESCRIPTION
10	-	4	SCREW, HHC 3/8-16 X 1.25 SST
11	-	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	3006753	1	WIRE HARNESS, CHUTE
16	3007844	1	DECAL, DANGER STAY CLEAR
17	3002631	1	LABEL, "NO STEP"
18	-	8	SCREW # 12-14x.74 SS SELF DRIL HEX WASHER HD

Trough Assembly

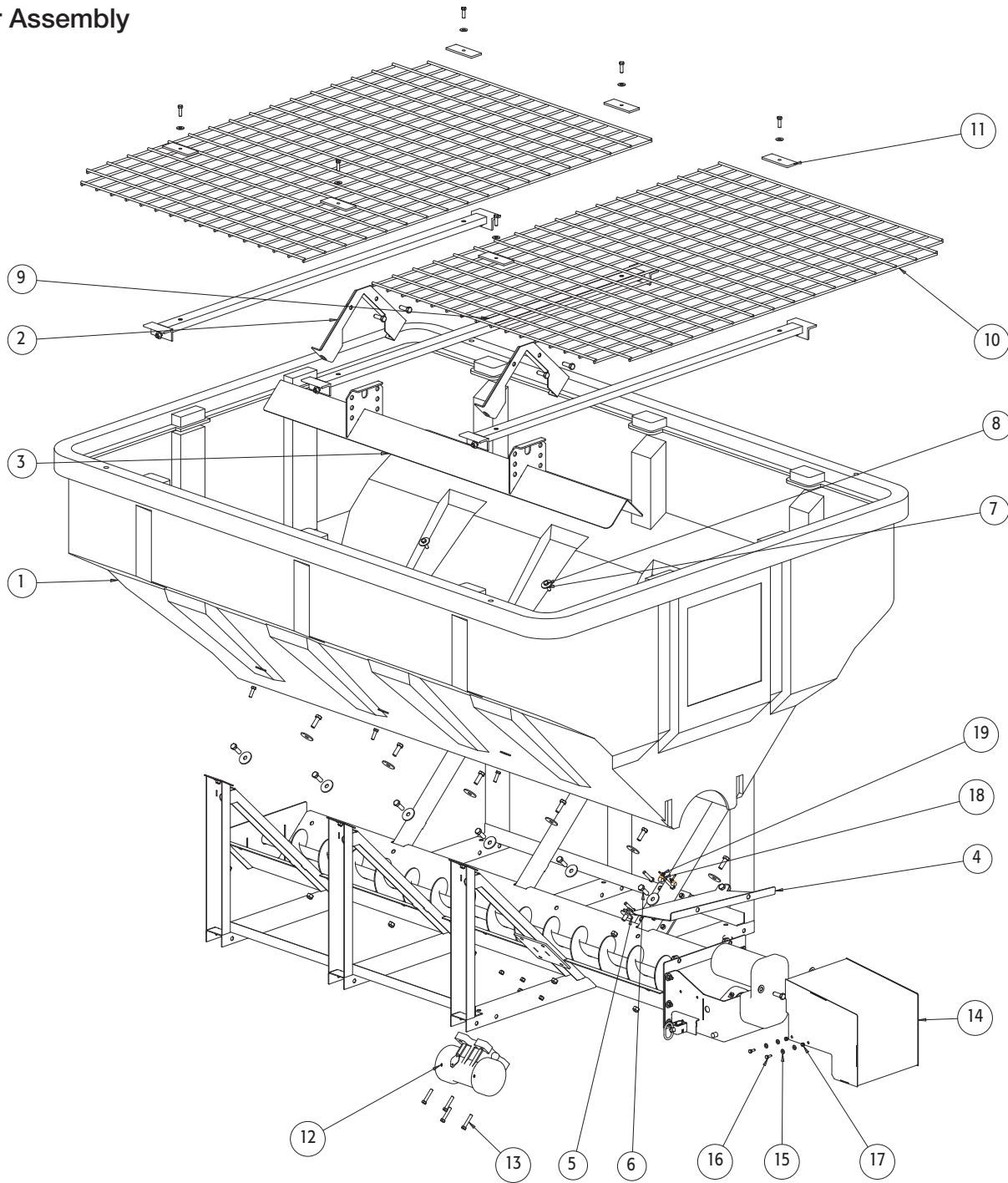


Bill of Materials

ITEM	PART NO.	QTY.	DESCRIPTION
1	3013270	1	Trough Weldment, SHPE4000
2	3012093	1	Bracket, Weldment Gear Motor
3	-	10	Washer, Flat 3/8 USS SST
4	-	4	Screw, HHC 3/8-16 x 1 304 SST
5	-	6	Nut, Nylock 3/8-16 x 7/16 SST
6	3012057	1	Gear Motor, Auger SHPE
7	-	3	Washer, Lock RHS - 3/8 SST
8	-	3	Screw, HHC - 3/8-16 x 3/4 SST
9	2F24SCR	2	Bearing Flange 2 Holes, 1.5 ID Set Screw
10	-	2	Screw, HHC - 1/2-13 x 1 SST

ITEM	PART NO.	QTY.	DESCRIPTION
11	-	4	Washer, Flat 1/2 ID SST
12	-	4	Nut, Nylock 1/2-13 ZN
13	3012001	1	Auger SHPE4000
14	-	1	Pin, Clevis, 3/8 x 2, 1038 ST, YZN
15	-	1	Cotter Pin, 1/8 x 1 ZN
16	3006844	1	Wire Harness, Spreader
17	3007821	1	Strain Relief Bushing
18	3013541	1	Cap Vinyl 2.0 ID 1.0 Lg
19	3015652	1	Adapter Dual Vibrators

Hopper Assembly

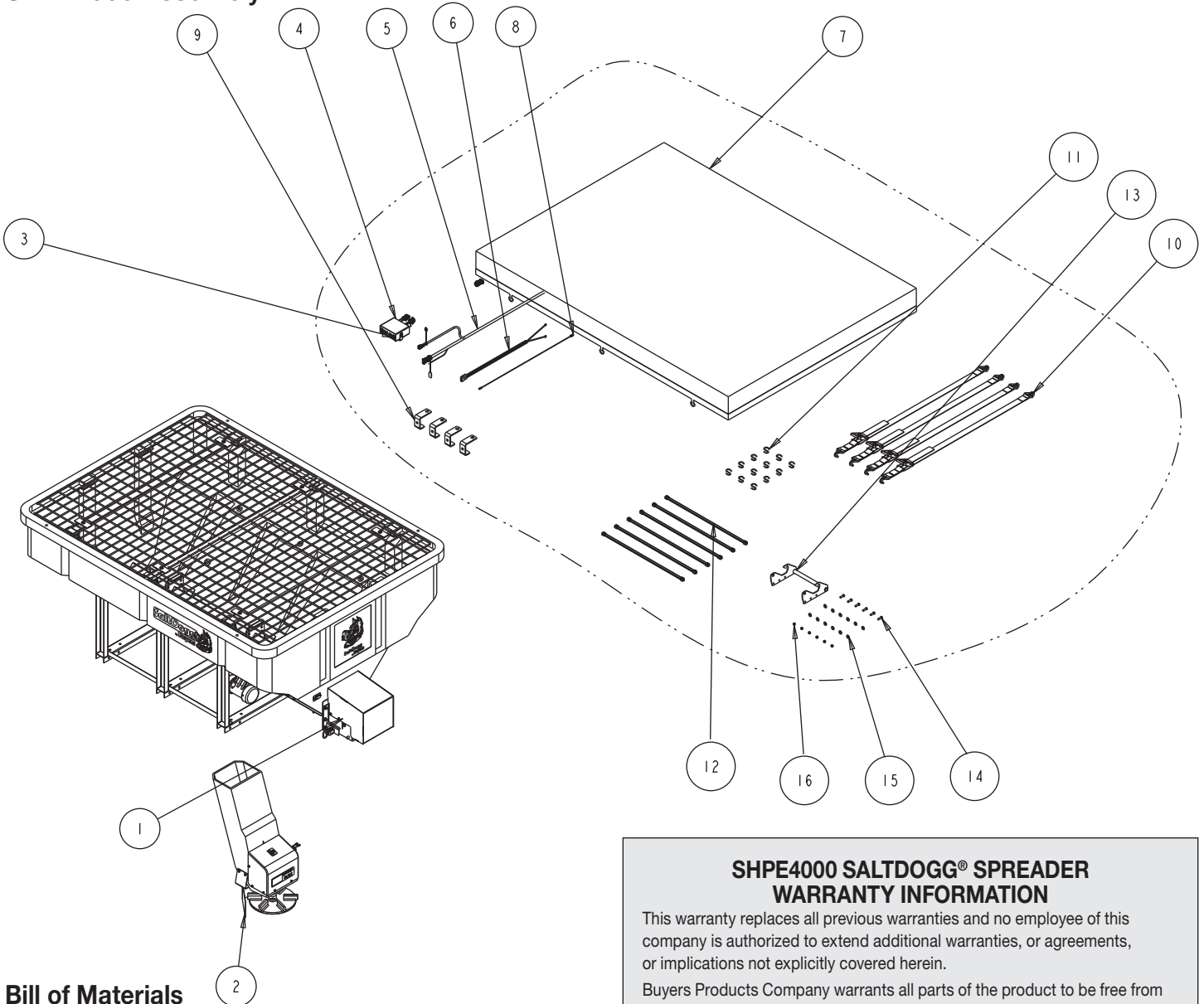


Bill of Materials

ITEM	PART NO.	QTY.	DESCRIPTION
1	3011999	1	Hopper Poly 4 Cu Yd
2	3013442	2	Bracket Weldment, Inert. Vee
3	3013444	1	Inverted Vee, Weldment
4	3012607	1	Cover Discharge
5	-	14	Washer, Flat 1/2 ID 2.0 OD .135 THK SST
6	-	12	Screw, Hex HD 1/2-13x1.5 Gr 5 SST
7	-	6	Washer, Flat 3/8 x 1.5 x .120 SST
8	-	18	Screw, HHC - 3/8-16 x 1.25 SST
9	3013279	3	Screen Support, SHPE4000
10	3012458	2	Wire Mesh, Top Screen

ITEM	PART NO.	QTY.	DESCRIPTION
11	3012795	6	Retainer, Screen
12	3012081	2	Vibrator 450 lbs, 12 VDC
13	-	8	Screw, HHC - 3/8-16 x 2 SST
14	3012408	1	Cover, Weldment, Gear Motor
15	-	8	Washer, Flat 1/4 SAE SST
16	-	4	Screw, Cap 1/4-20 x 3/4 SST SST
17	-	4	Nut, Nylon Insert 1/4-20 SST
18	4375	1	Clamp, Hose .4375, 9/32 Hole
19	-	1	Screw, Sheet Mtl #12x1.0 Hex Washer HD SST

SHPE4000 Assembly



Bill of Materials

ITEM NO.	PART NO.	QTY.	DESCRIPTION
1	3012015	1	HOPPER ASSEMBLY SHPE4000
2	3019256	1	CHUTE ASSEMBLY, SHPE6000
3	3012961	1	ACCESSORIES BOX, SHPE4000
4	3014199	1	CONTROLLER, SHPE, SALT DOGG
5	3006724	1	WIRE HARNESS, MAIN
6	3006842	1	POWER CABLE, CONTROL BOX
7	3012959	1	TARP, SHPE4000
8	0203700	1	WIRE ASSEMBLY, 36 LONG
9	3013589	4	HOOK, TIE-DOWN SHPE4000
10	1496505	1	HOLD DOWN KIT, SPREADER (4 STRAPS)
11	9225	12	S-HOOK, 2.5" ZN, TARP STRAP
12	TS31	6	STRAP, RUBBER TARP 31"
13	3013427	1	HANDLE WELDMENT, CHUTE
14	-	6	SCREW, HHC-3/8-16 X 1.25 SST
15	-	12	WASHER, FLAT 3/8 USS SST
16	-	6	NUT, NYLOCK 3/8-16 X 7/16 SST

SHPE4000 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.