

Installation Instructions

SHPE2000 Series SaltDog® Electric Drive Poly Hopper Spreader 2.0 cubic yards

Serial numbers 8500 and higher

Table of Contents

General Information	1
Safety Precautions	1
Warranty Information.....	2
Installation Instructions	2-4
Spreader Operation.....	5
Spreader Maintenance	5
Repair Parts & Drawings	6-10

General Information

Spreader models:

- SHPE2000- spreader with standard length chute
- SHPE2000X- spreader with extended length chute

Overall Length: 96 inches

Overall Width: 47-1/2 inches

Overall Height: (installed): 40 inches

Empty Weight: 437 lbs. (standard chute), 441 lbs. (extended chute)

Capacity Struck: 2.0 cu. yd.

Vehicle Requirements

- 3/4 or 1 ton pick-up truck above 8500# GVWR.
- 135 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.**

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/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.



SHPE2000 SALT DOGG 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. 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

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

Installation Instructions

1. Mounting the Spreader onto the Vehicle:

- A. Remove the tailgate from the vehicle.
- B. Check truck's bed for all kinds of sharp debris or foreign objects. They can cut and seriously damage poly hopper.
- C. Lift spreader using tie downs (fig. 1), or using fork lift.
- D. Lower spreader into the truck bed.
- E. Center the spreader from side to side on the vehicle.

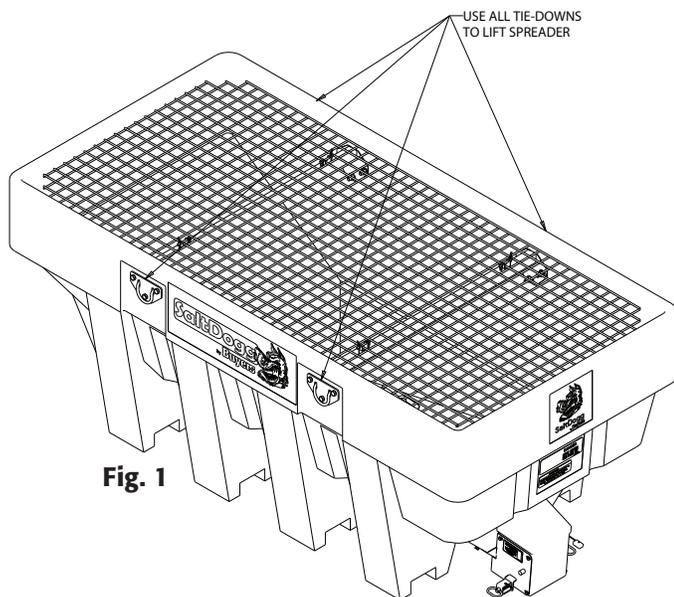


Fig. 1

F. Attach the Chute Assembly to the spreader. First, hook the Chute to the spreader by openings in the Chute's handle.

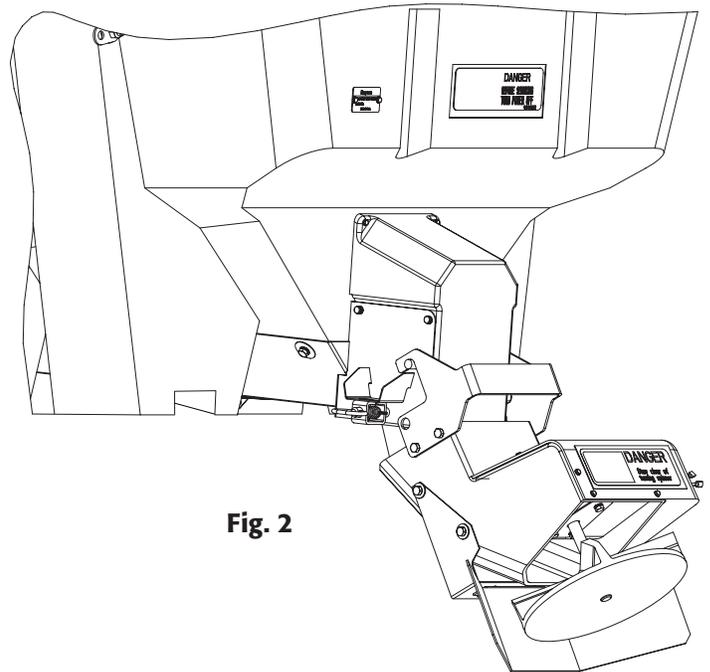


Fig. 2

Then rotate the Chute into operating position and lock using two spring latches.

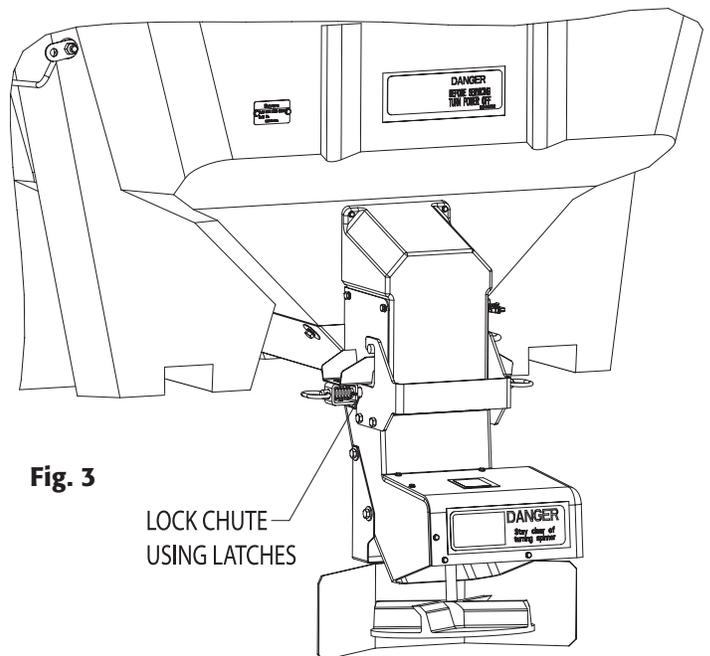
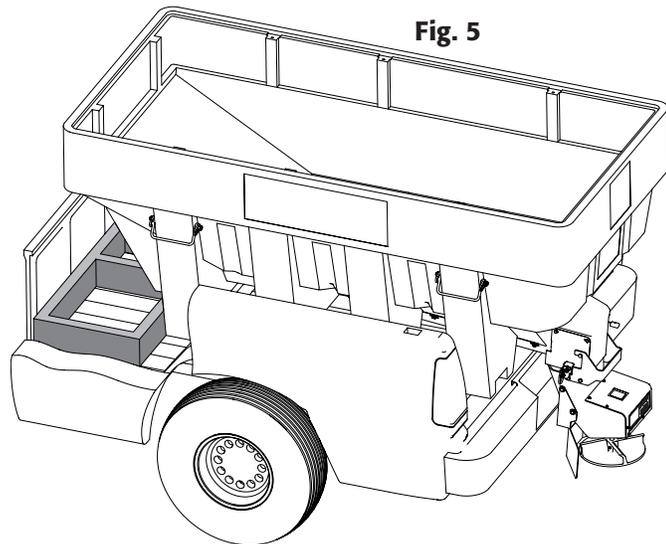
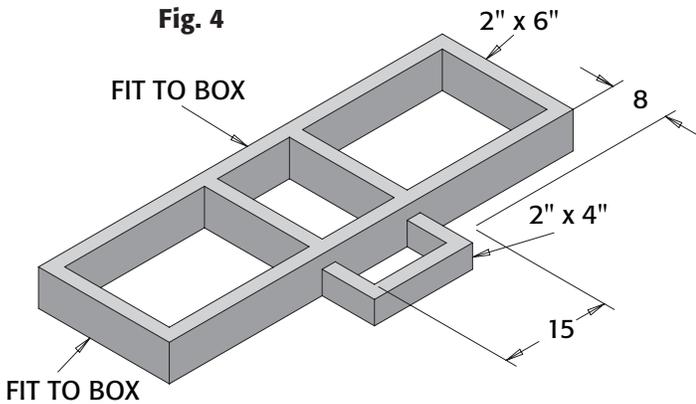
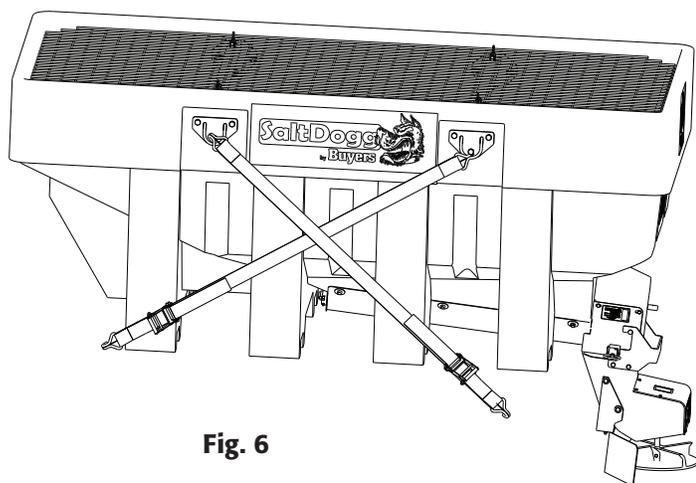


Fig. 3

G. Slide spreader towards front of the truck leaving adequate space between chute and truck (2-3 inches). Measure the distance from the front of the truck bed to front of the hopper's front legs. Fabricate spacer to fit between front of the spreader and front of the bed per Fig. 4 and Fig. 5



H. Secure spreader using four ratchet straps as shown in Fig. 6. Tighten straps evenly to secure spreader in the middle of the truck box.



Verify with the vehicle's manufacturer that the factory installed anchor points are designed for tie-down such load. Inspect straps and hardware after each time spreader is loaded. Tighten straps and hardware if necessary.

⚠ WARNING

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

2. Install Control Box & Vehicle Wiring Harness (Fig. 7).
NOTE: THIS IS A WIRE GROUND ELECTRICAL SYSTEM! NO CONNECTIONS TO TRUCK'S FRAME OR BODY ALLOWED! ALWAYS DISCONNECT BATTERY BEFORE ATTEMPTING TO INSTALL ELECTRICAL COMPONENTS ON YOUR VEHICLE.

⚠ WARNING

Use extreme caution when working around an operating vehicle engine.

To insure good performance of your spreader, check the condition of truck's electrical system. Using digital voltmeter, check alternator and battery voltage. The voltage reading should fall between 13.6 and 15.3 volts with engine running, head lights and heater fan turned on. 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 terminal to the Chute's harness, large terminal to the Hopper's harness. Drill all necessary holes or use existing ones to pass the round

CAUTION

DO NOT MOUNT CONTROLLER IN WAY OF AIR BAG DEPLOYMENT

connector into the trucks cab. Secure harness to truck's frame.

B. Mount the Controller in a convenient location in the truck cab. Do not mount controller directly in front of the heat vents. Allow ample air space around controller. Protect controller from water, dirt and dust.

C. Apply dielectric grease or similar compound to connectors before assembly. Connect the round connector on the wire harness to the round connector on the controller.

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 the wire harness. Passing the power cable from inside of the cab to the battery is recommended to protect the large high amperage connector. Do not route the power cable close to exhaust system!

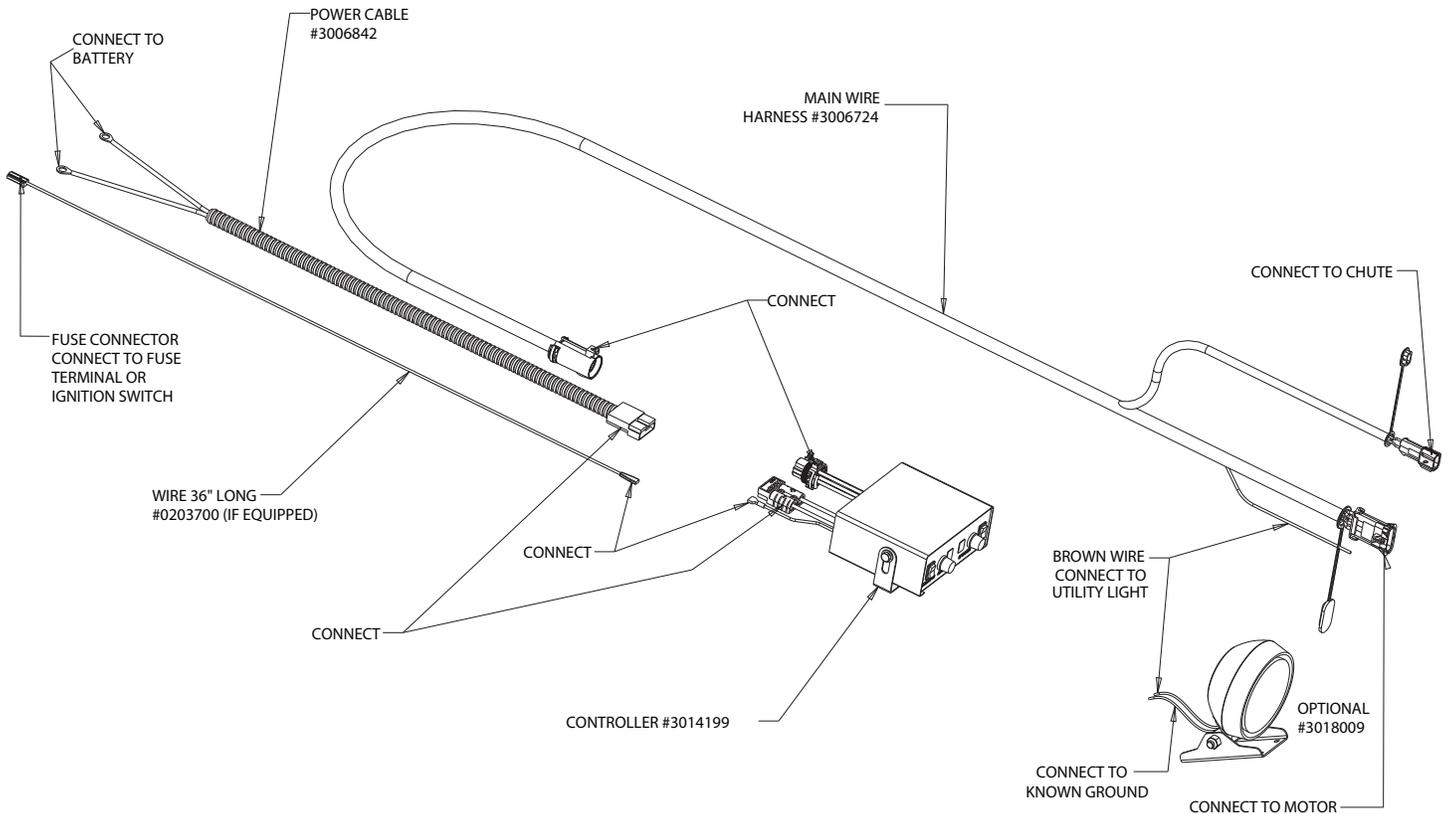
E. Connect power cable connector to controller.

F. Connect the power cable ring terminals to the truck battery, white-positive, and black-negative.

⚠ ATTENTION

Do not connect black (negative) wire to any part of vehicles frame. Connect this terminal to battery's negative terminal.

Fig. 7



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!

G. Make sure that the Controller is OFF. Connect the small female terminal on the blue wire to the controller Ignition (single red) wire, if equipped. Connect the blue wire to an accessory wire, terminal or fuse that is controlled by the vehicle's ignition switch located in the fuse panel inside the truck cab. **Do not connect blue wire to high amperage fuse or terminal.**

H. Attach utility light (optional) to spreader hopper in desired location. Connect as shown in Fig. 7. Use utility light kit part number 3018009.

Spreader Operation

1. Different materials absorb moisture at different rates and some materials may not perform as desired. Substitution of an alternative material may be necessary for optimum performance.

2. When filling hopper use the supplied screen to prevent large chunks of material and debris in the material to get into hopper and cause damage.

3. Material must never be left in hopper for an extended period of time. Material will absorb moisture, bind, harden and could prevent spreader from proper operation or may damage the spreader.

4. The SHPE2000 spreader is equipped with a dual independent speed controller with warning indicators 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 seconds, then slow down to dialed speed. The spinner will accelerate to full speed for 2 seconds, then slow down to dialed speed.

5. To activate the vibrator press the vibrator switch ON. Vibrator switch will illuminate.

6. To stop the spreader, push ON-OFF switch to OFF 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!

Note: To unclog auger manually, first remove the chute. Apply 1¼" open wrench on auger's nut. Turn auger counterclockwise several times.

Note: Do not run the vibrator longer than 30 minutes with 15 minutes between runs to avoid overheating.

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.

SHPE2000 has two discharge openings in the bottom of the hopper. Material flow through these openings can be controlled using two sliding baffles. The spreader is shipped from the factory with baffles adjusted for dry bagged salt. In this setting rear baffle has 4.0" opening and baffle in the middle of the hopper has 2.0" opening. However if you are using a sand/salt mixture or any chunky and hard to flow materials, it is advised to increase the open portion of discharge openings.

IMPORTANT! -Always open rear (closer to gear motor compartment) opening first. Always turn off power before adjusting baffles!

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 bearing 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.

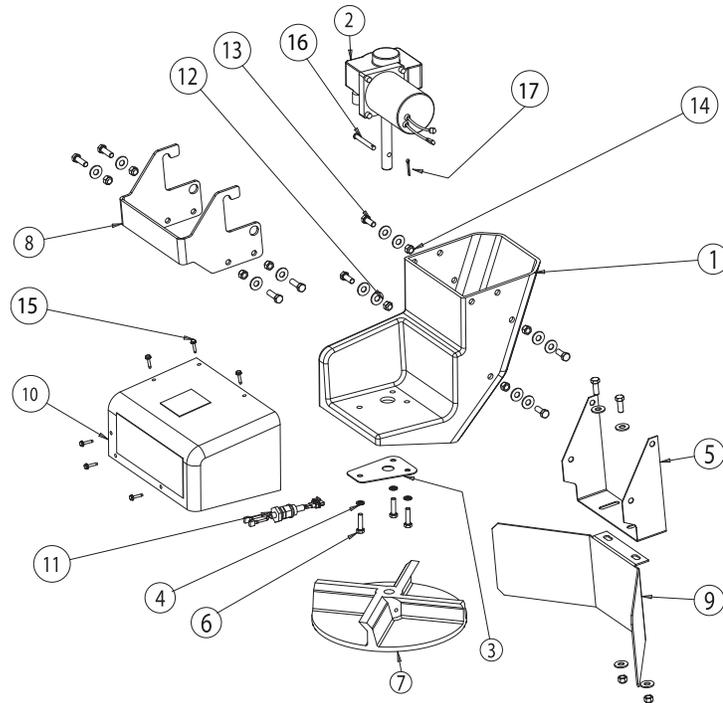
End of Season Maintenance

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.

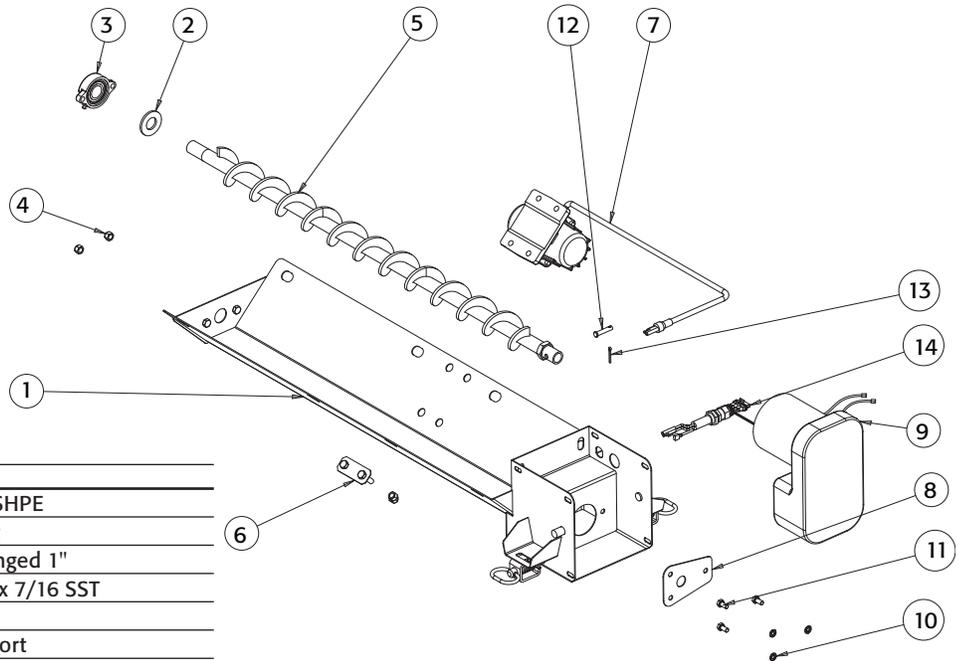
Repair Parts-Chute Assembly



Bill of Materials

ITEM	PART NO.	QTY.	DESCRIPTION
1	3007329	1	Chute Poly Std. Length
1	3007526	1	Chute Poly Ext. Length
2	3006833	1	Gear Motor 12 VDC Spinner
3	3007824	1	Retainer Gearmotor
4	-	3	Washer, 5/16 Lock SST
5	3007564	1	Bracket, Shield SST
6	-	3	Screw, Hex HD Cap 5/16 - 18 x 1-1/4 SST
7	3004611	1	Spinner, 12" Poly
8	3007299	1	Handle, Chute
9	3007004	1	Shield, Spinner
10	3007413	1	Cover, Gear Motor, Chute
11	3006753	1	Wire Harness, Chute
12	-	16	Washer, Flat 3/8 USS SST
13	-	10	Screw, HHC 3/8 - 16 x 1 304 SST
14	-	10	Nut, Nylock 3/8 - 16 x 7/16 SST
15	-	6	Screw, Sheet Mtl #12 x 3/4 Hex Washer HD SST
16	-	1	Pin, Clevis, 5/16 x 2-1/2, .141 Hole ZN
17	-	1	Cotter Pin, 1/8 x 1, Zinc
18	3002631	1	Label, "No Step"
19	3007844	1	Decal, "Danger, Stay Clear"

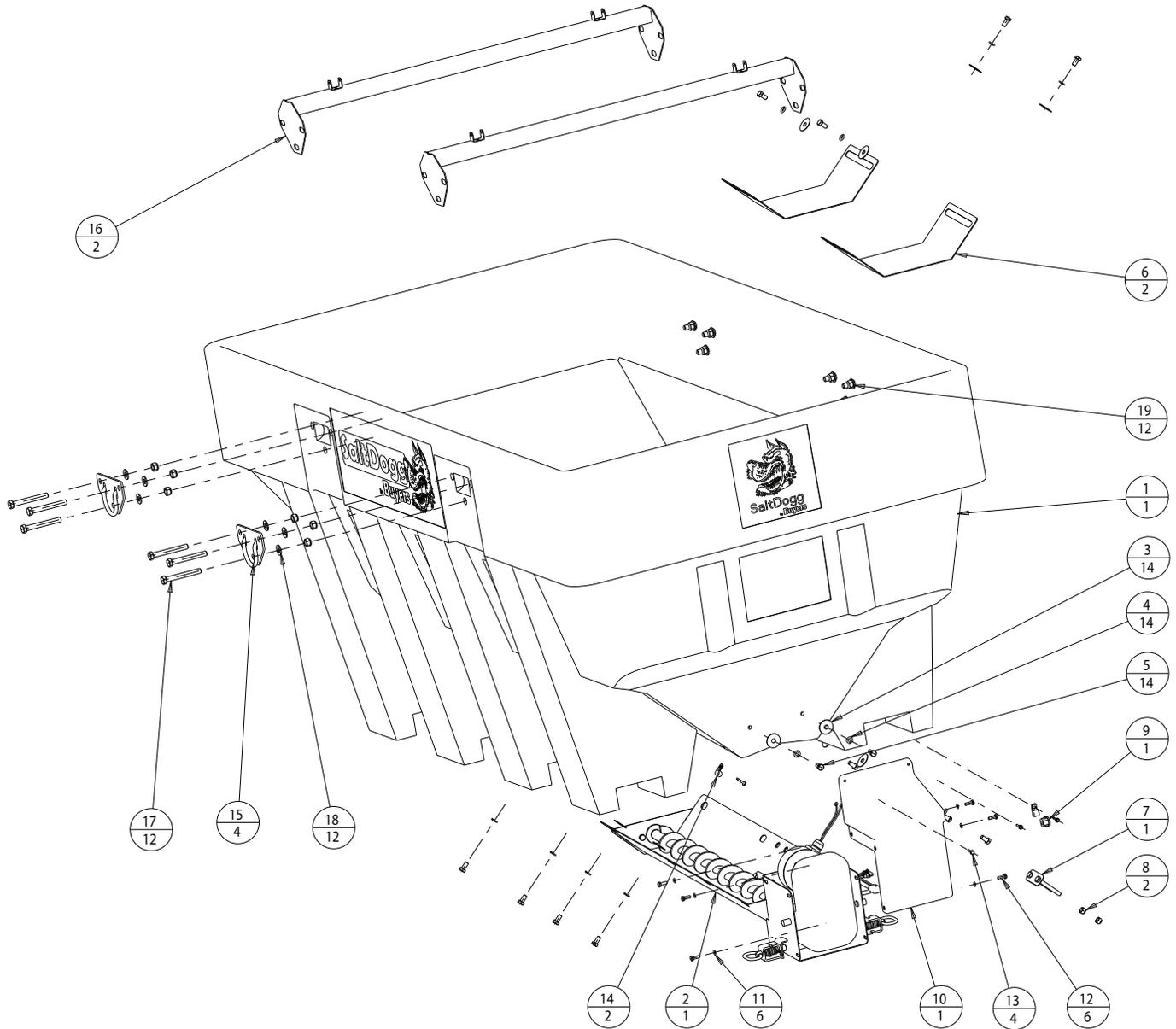
Repair Parts-Trough Assembly



Bill of Materials

ITEM	PART NO.	QTY.	DESCRIPTION
1	3007357	1	Trough Weldment, SHPE
2	3007000	1	Gasket, Felt Bearing
3	3018919	1	Bearing, 2-Hole Flanged 1"
4	-	4	Nut, Nylock 3/8-16 x 7/16 SST
5	3018007	1	Auger
6	3007730	1	Bracket, Vibrator Short
7	3007416	1	Vibrator 200lbs. 12 VDC
8	3007824	1	Retainer Gear Motor, Chute
9	3009995	1	Gear Motor, Auger SHPE
10	-	3	Washer, 5/16-18 x 5/8 SST Lock
11	-	3	Screw, HHC 5/16-18 x 5/8 SST
12	-	1	Pin, Clevis, 5/16 x 1 1/2, w/ 5/32 PH, ZN
13	-	1	Cotter Pin, 1/8 x 1, Zinc
14	3006844	1	Wire Harness

Repair Parts-Hopper Assembly

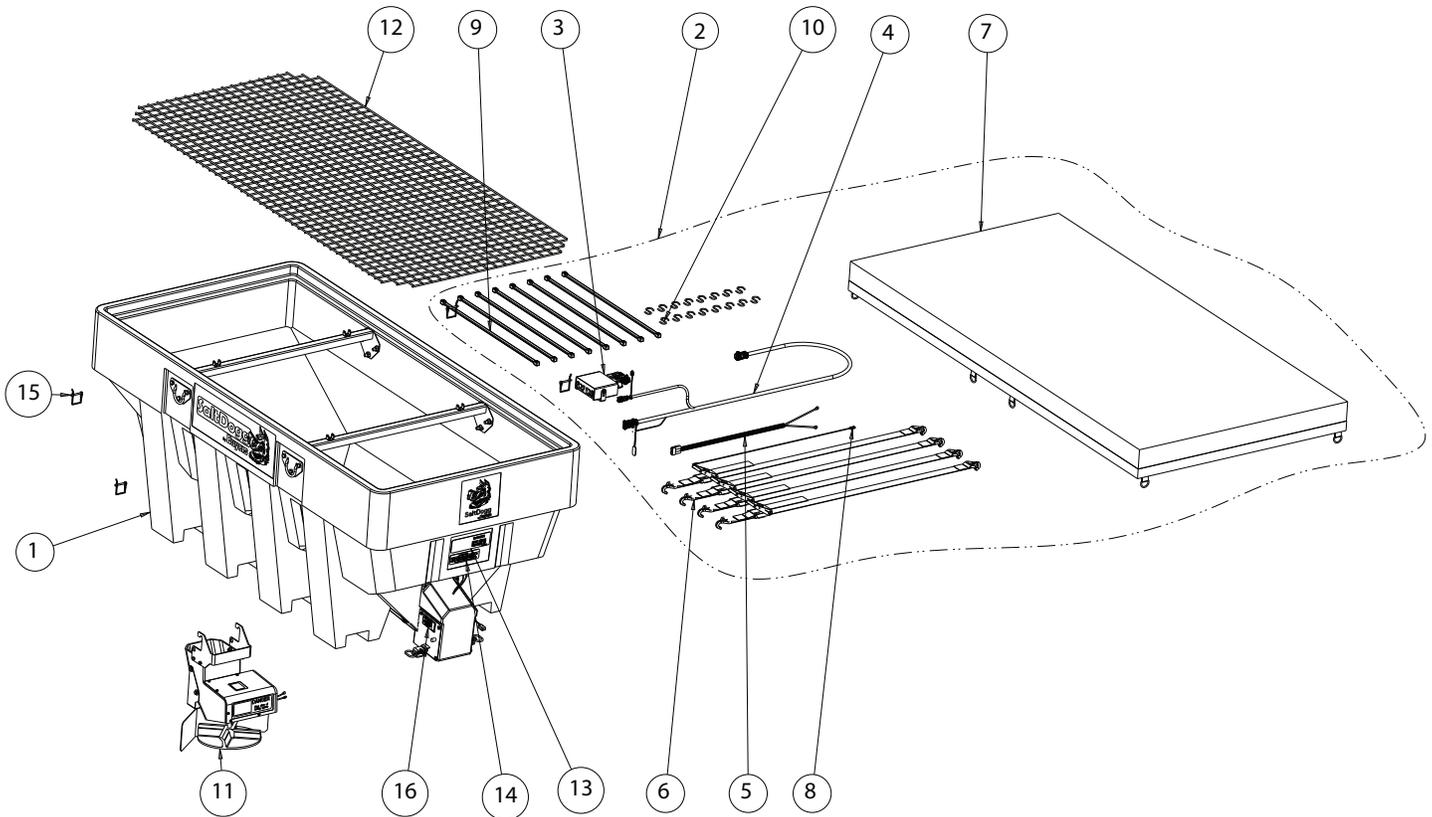


Bill of Materials

ITEM	PART NO.	QTY.	DESCRIPTION
1	3008001	1	HOPPER POLY 2 CU. YA.
2	3011865	1	TROUGH ASSEMBLY, SHPE
3	3007115	14	WASHER, FLAT 3/8 X 1.5 X.048 SST
4	—	14	WASHER, LOCK RHS-3/8 SST
5	—	14	SCREW, HHC-3/8-16 X 3/4 SST
6	3006959	2	BAFFLE, SHPE1500
7	3007731	1	BRACKET VIBRATOR, LONG SST
8	—	2	NUT, NYLOCK 3/8-16 X 7/16 SST
9	3007821	1	STRAIN RELIEF BUSHING
10	3007236	1	COVER GEARMOTOR
11	—	6	WASHER, 1/4 IN. SPRING LOCK SST

ITEM	PART NO.	QTY.	DESCRIPTION
12	—	6	SCREW, CAP 1/4-20 X 3/4 SST
13	3007522	4	SCREW, SHEET MTL #12x1.0 HEX WASHER HD SST
14	4375	2	CLAMP, HOSE .4375, 9/32 HOLE
15	3022220	4	TIE-DOWN WELDMENT
16	3022230	2	CROSS MEMBER
17	—	12	SCREW, HEX HEAD CAP 1/2-13 X 4.00 GR 5 ZN
18	—	12	WASHER, FLAT 1/2" SAE ZINC
19	—	12	NUT, NYLOCK 1/2-13 ZINC
	3006589	1	LUBRICANT ANTISEIZE MOLY

Repair Parts- Spreader



Bill of Materials

ITEM	PART NO.	QTY.	DESCRIPTION
1	3008011	1	HOPPER POLY 2 CU YA ASSEMBLY
2	3022352	1	HARDWAE KIT SHPE2000
3	3014199	1	CONTROLLER, SHPE, SALT DOGG
4	3006724	1	WIRE HARNESS, MAIN
5	3006842	1	POWER CABLE, CONTROL BOX
6	1496505	1	HOLD DOWN KIT, SPREADER (4 STRAPS)
7	3008838	1	TARP, SHPE2000
8	0203700	1	WIRE ASSEMBLY, 36 LONG

ITEM	PART NO.	QTY.	DESCRIPTION
9	TS31	8	STRAP, RUBBER TARP 31"
10	9225	16	S-HOOK, 2.5" ZN, TARP STRAP
11	3007412	1	CHUTE POLY STD. SHPE1500
12	3008390	1	SCREEN, SHPE2000
13	9240132	1	DECAL #2, DANGER BEFORE SVCE
14	3012898	1	DECAL, CHECK STRAPS
15	66050	4	SNAPPER PIN, 1/4 X 2, YLW ZINC
16	3022355	1	LABEL SERIAL NUMBER SHPE2000