

# Installation Instructions

## SHPE1500, SHPE1500X Series SaltDogg® Electric Drive Poly Hopper Spreader 1.5 cubic yards

U.S. PATENT 9,562,333  
 Serial Number 20100 and Above.

### Table of Contents

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

### General Information

#### Spreader models:

- SHPE1500- spreader with standard length chute
- SHPE1500X- spreader with extended length chute

**Overall Length:** 82 inches

**Overall Width:** 48 inches

**Overall Height:** (installed): 41 inches

**Empty Weight:** 524 lbs. (standard chute), 534 lbs. (extended chute)

**Capacity Struck:** 1.5 cu. yd.

**Average Installation Time:** 3 hrs.

### Vehicle Requirements

- 3/4 or 1 ton pick-up truck above 8500# GVWR.
- 135 AMP or higher alternator is recommended.

### Materials Recommended to Spread

#### Average Material Weights

### CAUTION

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

Materials to use	Weight (pounds per cubic yard)
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.



### SHPE1500 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, pre-paid, 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.

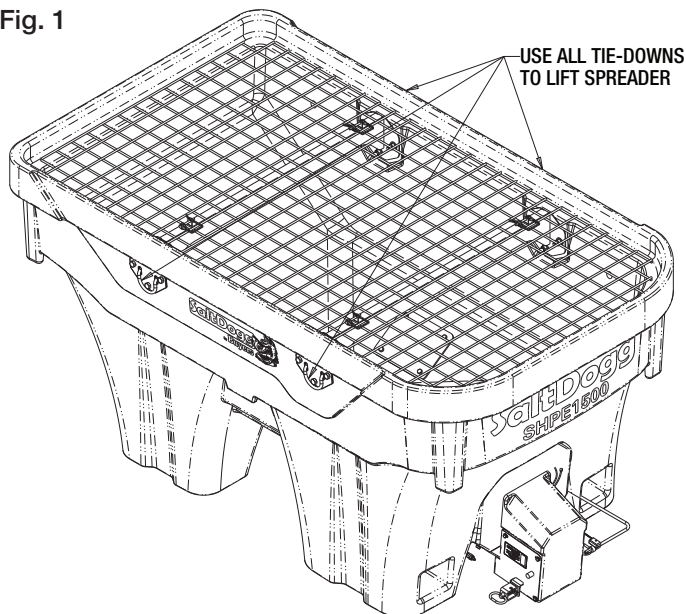
1. Read this entire Owners Manual before operating this spreader.
2. Read all safety decals on the spreader before operating.
3. Check to make sure all safety guards are securely mounted into place before operating this spreader.
4. Verify that all personnel are clear of the spreader spray area before 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 unplug 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:

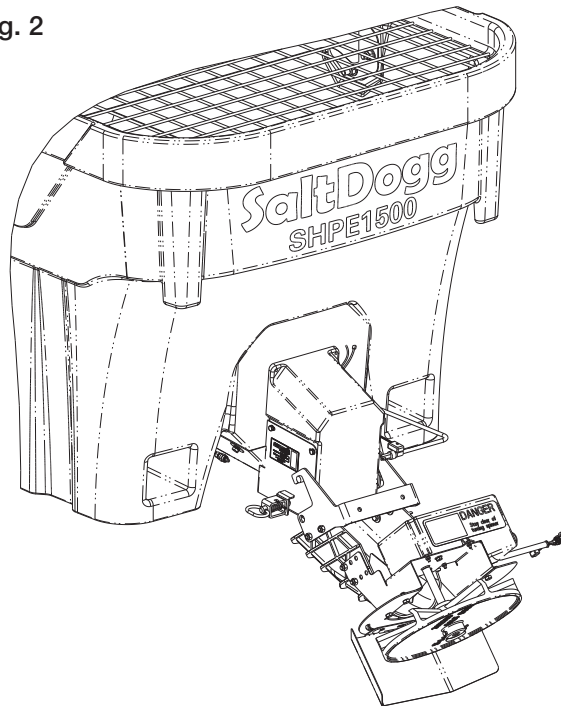
- A. Remove the tailgate from the vehicle.
- B. Check truck's bed for all kinds of sharp debris or foreign objects. They can cut and seriously damage poly hopper.
- C. Lift spreader using tie downs (fig. 1), or using fork lift.
- D. Lower spreader into the truck bed.
- E. Center the spreader from side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

Fig. 1



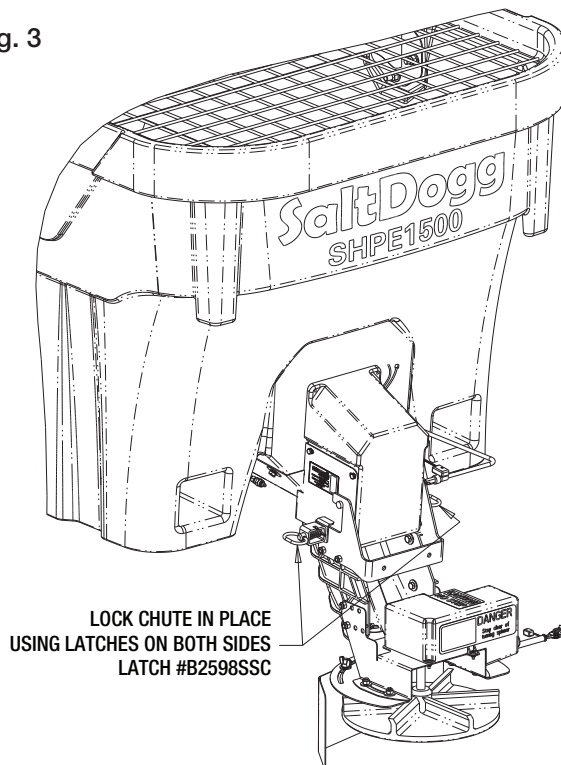
F. Attach the Chute Assembly to the spreader. First, hook the Chute to the spreader by openings in the Chute's handle.

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

Fig. 4

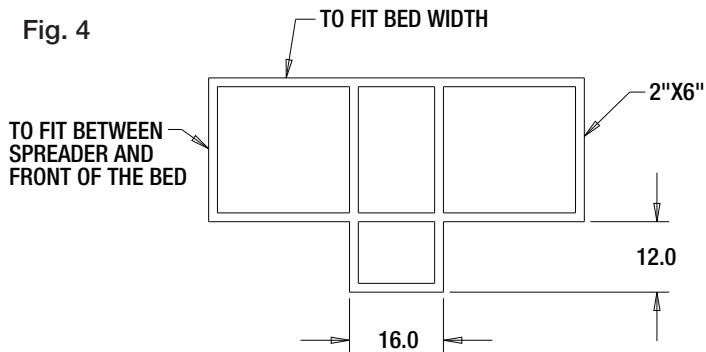
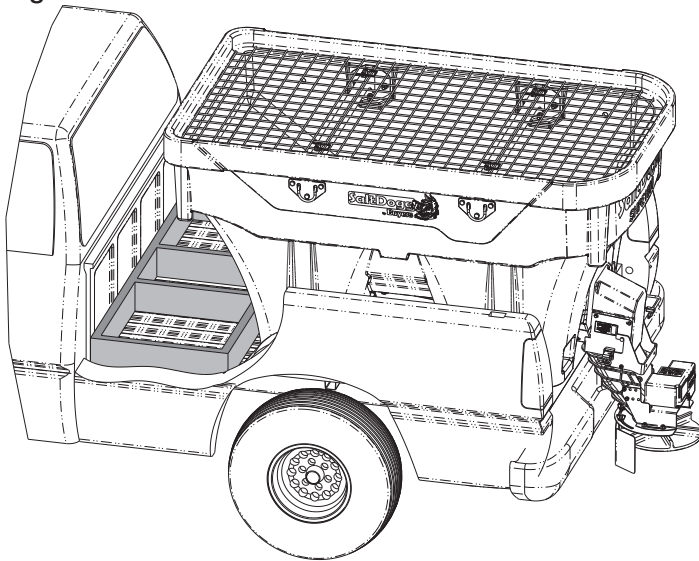
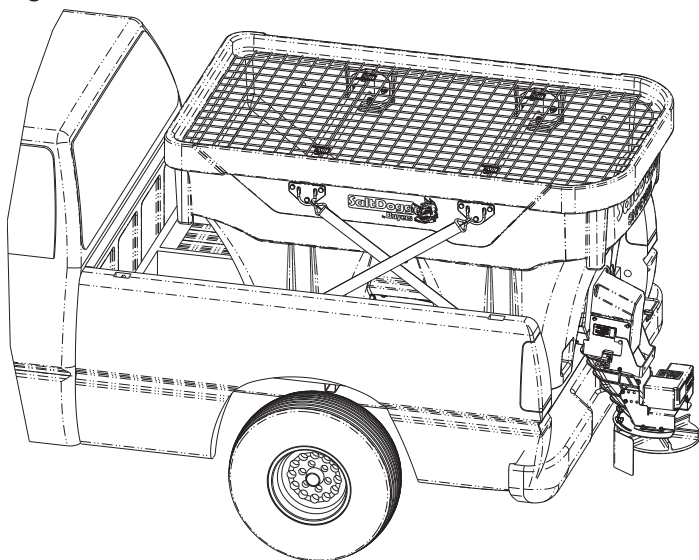


Fig. 5



**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.

Fig. 6



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

**CAUTION**

Do not mount controller in way of air bag deployment

**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!

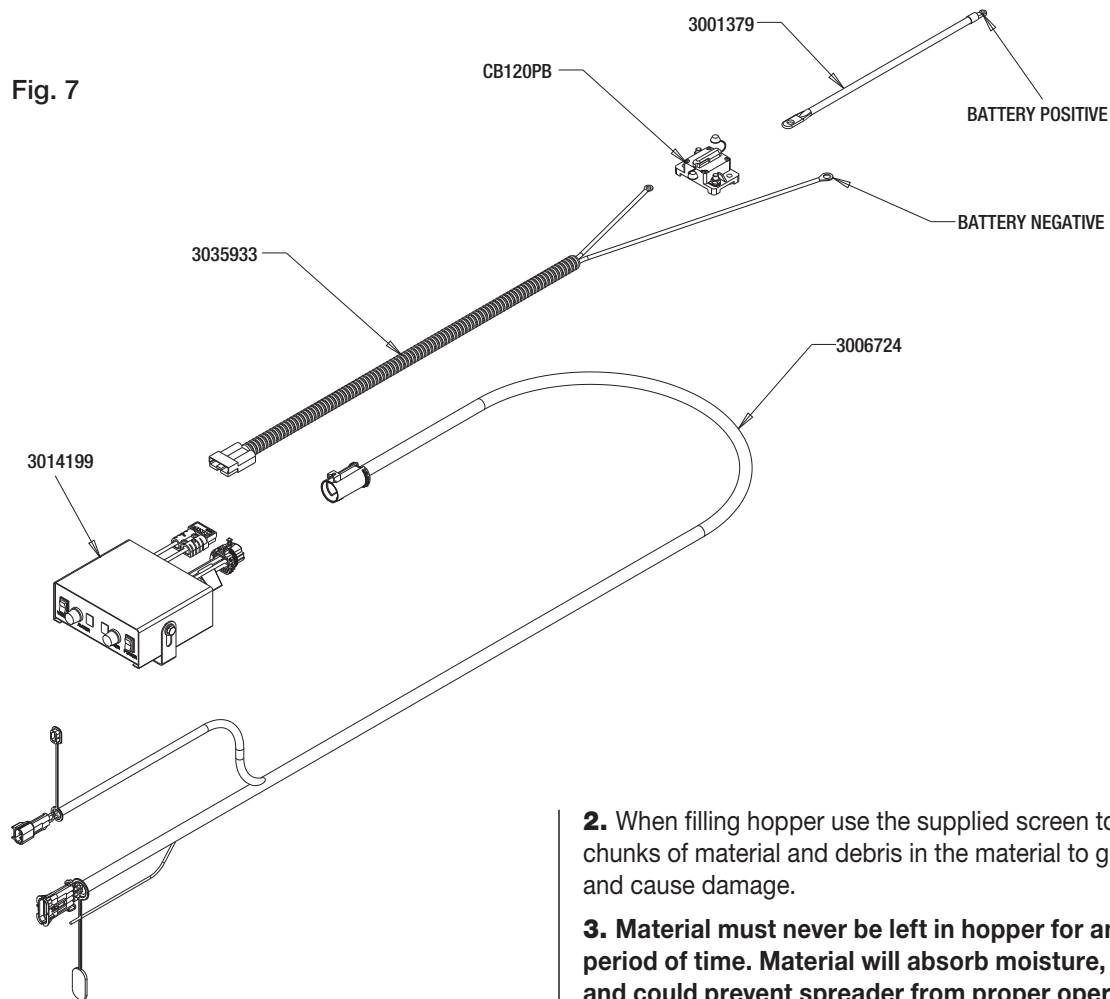
**E.** Connect power cable connector to controller.

**F.** Connect the power cable ring terminals to the truck battery (fig. 7).

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

**H.** LED spot light installation. Connect LED light's positive wire to harness brown wire. Verify with vehicle manufacturer if your truck is "frame ground" or "switched ground" i.e. frame is positive. In trucks with "frame ground" connect light's negative wire to truck frame. In trucks with "switched ground" find negative conductor (battery negative terminal) and connect light's negative wire to it.

**I.** See controller instructions for latest updates and error codes.

### 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. Empty and clean after each use.**

**4.** The SHPE1500 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. Rotate knobs to desired positions to activate Auger and Spinner. Press Pause button to stop Auger and Vibrator. To restart Auger and Vibrator press Pause button again. Auger will start with same 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 1/4" 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.

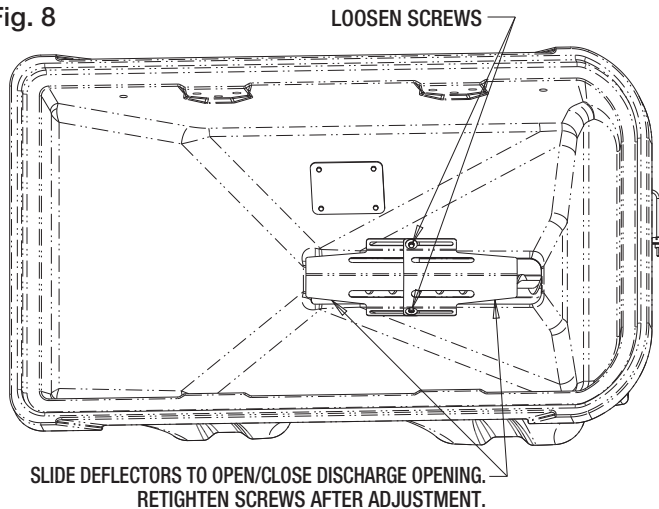
## Material Flow Adjustments

**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.**

The SHPE1500 has one discharge opening covered with two adjustable deflectors. To adjust the amount of material going through this opening loosen the two screws in Fig. 8 and slide the deflectors to increase or decrease opening exposure. It is recommended to expose more of rear (closer to truck's rear end) portion of discharge opening to increase flow without overloading auger gear motor.

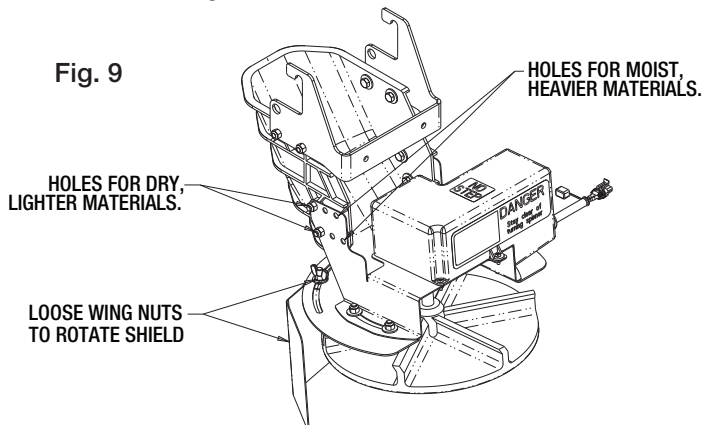
**IMPORTANT!** - Always turn off power before making any spreader adjustments!

Fig. 8



## Spread Pattern Adjustment.

Spread pattern can be adjusted by changing spinner disc speed on controller by turning Spinner knob to desired speed level from 1 (low) to 9 (high). Direction of material spread can also be adjusted by rotating shield on chute assembly. To rotate shield loosen 2 wing nuts, rotate shield in desired direction, and retighten wing nuts. See Fig. 9. Make sure that after adjustment, bracket stays inside shield groove located on top of shield. In addition, chute assembly can be adjusted to lighter (drier) and heavier (more moist) materials. Use different holes on bracket for lighter or heavier materials to have material drop on spinner disc center. See Fig. 9.



## 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 auger bearing with lubricant 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.

### **WARNING**

Never remove spreader with material in hopper.

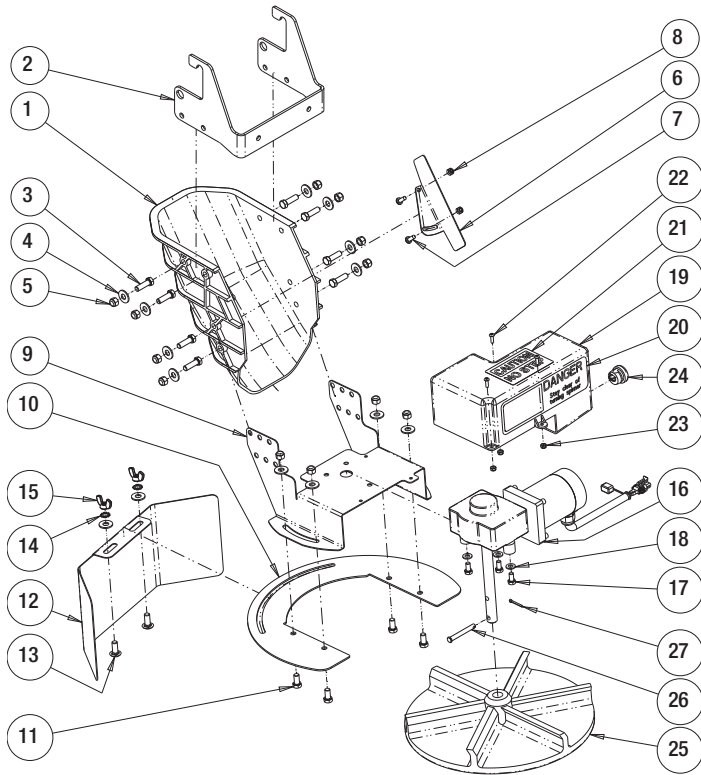
## End of Season Maintenance

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.
7. Inspect wire near connectors. Check for broken or missing insulation. Check for tarnished or corroded wires. Trim corroded wires and replace connectors if necessary.

## 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.

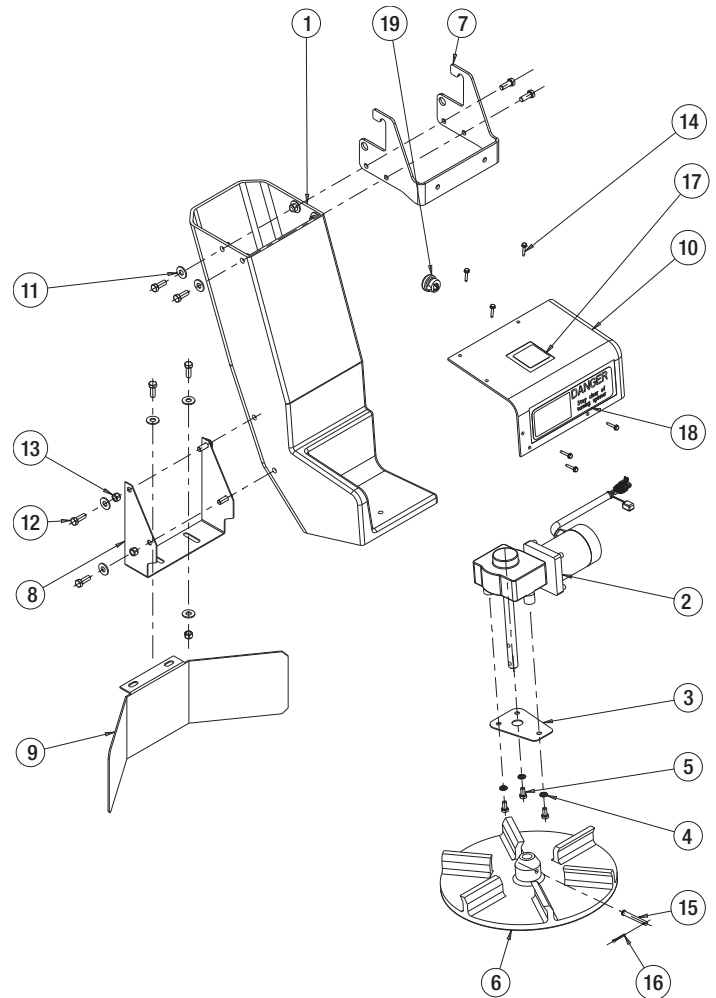
## Repair Parts - Standard Chute Assembly



### Bill of Material

ITEM	PART NO.	QTY.	DESCRIPTION
1	3025063	1	CHUTE POLY SHPE STD LENGTH
2	3027699	1	HANDLE, CHUTE
3	FCS038016125SS	8	SCREW, HHC 3/8in-16 X 1-1/4in SST
4	FWF038100007SS	14	WASHER, FLAT 3/8in USS SST
5	FNE038016044SS	12	NUT, NYLOCK 3/8in-16 X 7/16in SST
6	3039828	1	GUIDE, MATERIAL
7	3009646	2	SCREW, PAN 1/4in-20 X 3/4in SST
8	FNE025020031SS	2	NUT, NYLOCK 1/4in-20 SST
9	3025715	1	BRACKET, GEAR MOTOR / SHIELD
10	3033547	1	BRACKET, SHIELD
11	FCS038016075SS	2	SCREW, HHC 3/8in-16 X 3/4in SST
12	3017444	1	SHIELD, CHUTE
13	3014960	2	BOLT, CARRIAGE 3/8in-16 X 1 SST
14	3017356	2	WASHER, LOCK 3/8in SST
15	3025064	2	NUT, WING 3/8in-16 SST
16	3027293	1	GEAR MOTOR 12 VDC SPINNER
17	FCS031018063SS	3	SCREW, HHC 5/16in-18 X 5/8in SST
18	FWF031075006SS	3	WASHER, FLAT 5/16in SST
19	3025067	1	ENCLOSURE, GEAR MOTOR
20	3007844	1	DECAL, DANGER STAY CLEAR
21	3002631	1	LABEL, "NO STEP"
22	3001537	3	SCREW, BHC 10-24 X 5/8in SST
23	FNE010024024SS	3	NUT, NYLOCK 10-24 SST
24	3025065	1	BUSHING, CABLE STRAIN RELIEF
25	3012393	1	SPINNER, 14in POLY CW
26	3007113	1	PIN, CLEVIS, 5/16in X 2-1/2in ZN
27	3014994	1	COTTER PIN, 1/8in X 1in SST

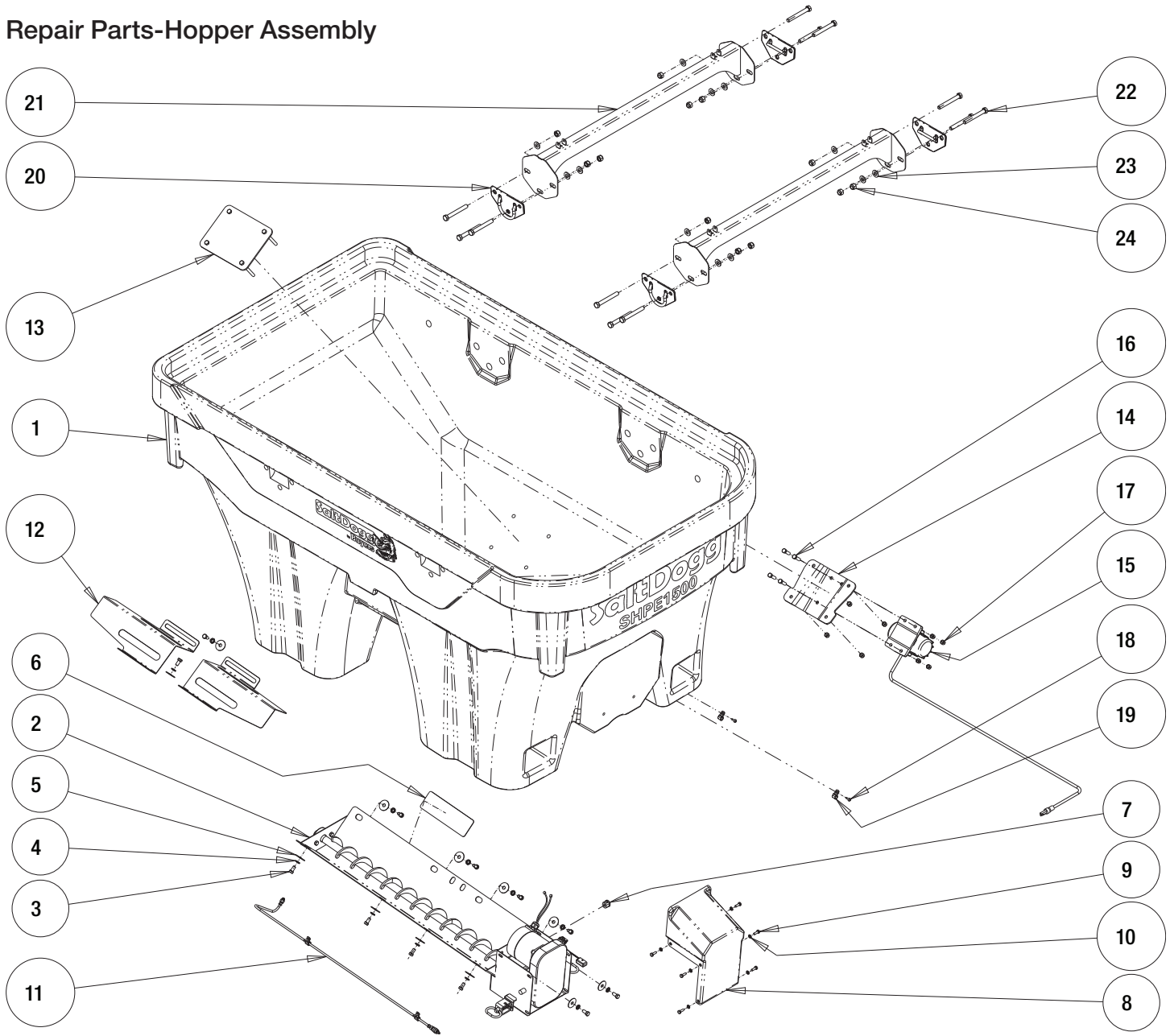
## Repair Parts - Extended Chute Assembly



### Bill of Material

ITEM	PART NO.	QTY.	DESCRIPTION
1	3007526	1	CHUTE POLY. EXT. LENGTH
2	3006833	1	GEAR MOTOR 12 VDC. SPINNER
3	3007824	1	RETAINER GEARMOTOR, CHUTE
4	FWL031058008SS	3	WASHER, 5/16 LOCK SST
5	FCS031018063SS	3	SCREW, HHC 5/16-18 X 5/8 SST
6	3012393	1	SPINNER, 14" POLY CW
7	3027699	1	HANDLE, CHUTE
8	3007564	1	BRACKET, SHIELD SST
9	3007004	1	SHIELD, SPINNER, SHPE1500
10	3007413	1	COVER, GEAR MOTOR, CHUTE
11	FWF038100007SS	16	WASHER, FLAT 3/8 USS SST
12	FCS038016100SS	10	SCREW, HHC 3/8-16 X 1 304 SST
13	FNE038016044SS	10	NUT, NYLOCK 3/8-16 X 7/16 SST
14	3007522	6	SCREW, SHEET MTL #12x1.0 HEX WASHER HD SST
15	3007113	1	PIN, CLEVIS, 5/16 X 2-1/2, .141 HOLE ZN
16	FPC013000100	1	COTTER PIN, 1/8 X 1, ZINC
17	3002631	1	LABEL, "NO STEP"
18	3007844	1	DECAL, DANGER STAY CLEAR
19	3025065	1	BUSHING STRAIN RELIEF

## Repair Parts-Hopper Assembly

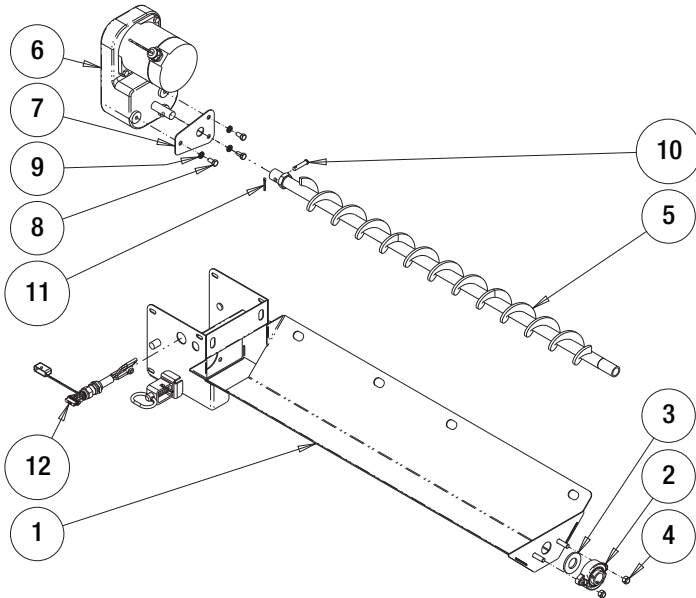


### Bill of Material

ITEM	PART NO.	QTY.	DESCRIPTION
1	3049411	1	HOPPER POLY 1.5 CU YD
2	3024289	1	TROUGH ASSEMBLY, SHPE
3	FCS038016075SS	12	SCREW, HHC 3/8in-16 X 3/4in SST
4	FWL038069009SS	12	WASHER, SPLIT LOCK 3/8in SST
5	3007115	12	WASHER, FENDER 3/8in SST
6	9240132	1	DECAL, DANGER BEFORE SERVICE
7	3007821	1	BUSHING, STRAIN RELIEF
8	3007236	1	COVER, GEAR MOTOR
9	FCS025020075SS	6	SCREW, HHC 1/4in-20 X 3/4in SST
10	FWL025050006SS	6	WASHER, SPLIT LOCK 1/4in SST
11	3050476	1	REMOTE GREASE KIT, SHPE
12	3022977	2	DEFLECTOR

ITEM	PART NO.	QTY.	DESCRIPTION
13	3034598	1	PLATE WELDMENT, VIBRATOR
14	3039179	1	BRACKET, VIBRATOR
15	3007416	1	VIBRATOR 200 LBS 12 VDC
16	FCS038016125SS	4	SCREW, HHC 3/8in-16 X 1-1/4in SST
17	FNE038016044SS	8	NUT, NYLOCK 3/8in-16 X 7/16in SST
18	3007522	2	SCREW, HH SHEET MTL #12 X 1 SST
19	4375	2	CLAMP, HOSE 7/16in, 9/32in HOLE
20	3022220	4	TIE-DOWN WELDMENT
21	3050265	2	CROSS MEMBER WELDMENT
22	3020338	12	SCREW, HHC 1/2in-13 X 4in SST
23	3003873	12	WASHER, FLAT 1/2in SAE SST
24	FNE050013053SSC	12	NUT, NYLOCK 1/2in-13 SST CTD

### Repair Parts-Trough Assembly



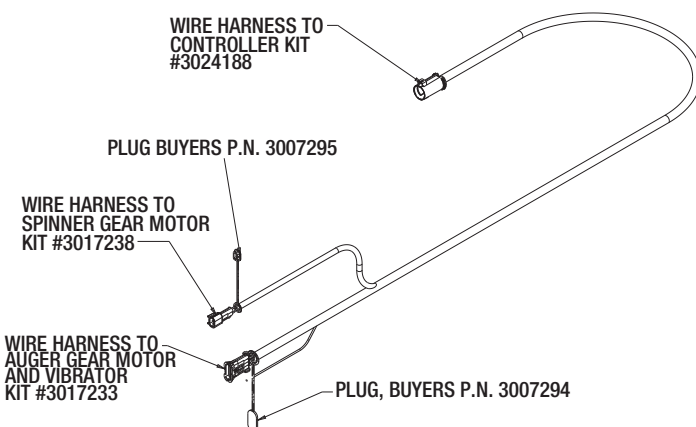
#### Bill of Material

ITEM	PART NO.	QTY.	DESCRIPTION
1	3024290	1	TROUGH WELDMENT, SHPE
2	3018919	1	BEARING, 2-HOLE FLANGED 1in SST
3	3007000	1	GASKET, FELT BEARING
4	FNE038016044SS	2	NUT, NYLOCK 3/8in-16 X 7/16in SST
5	3018007	1	AUGER, SHPE SST
6	3009995	1	GEAR MOTOR, AUGER SHPE
7	3007824	1	RETAINER, GEAR MOTOR
8	FCS031018063SS	3	SCREW, HHC 5/16in-18 X 5/8in SST
9	FWL031058008SS	3	WASHER, SPLIT LOCK 5/16in SST
10	FPY031000150	1	PIN, CLEVIS, 5/16in X 1-1/2in ZN
11	3014994	1	COTTER PIN, 1/8in X 1in SST
12	3006844	1	WIRE HARNESS

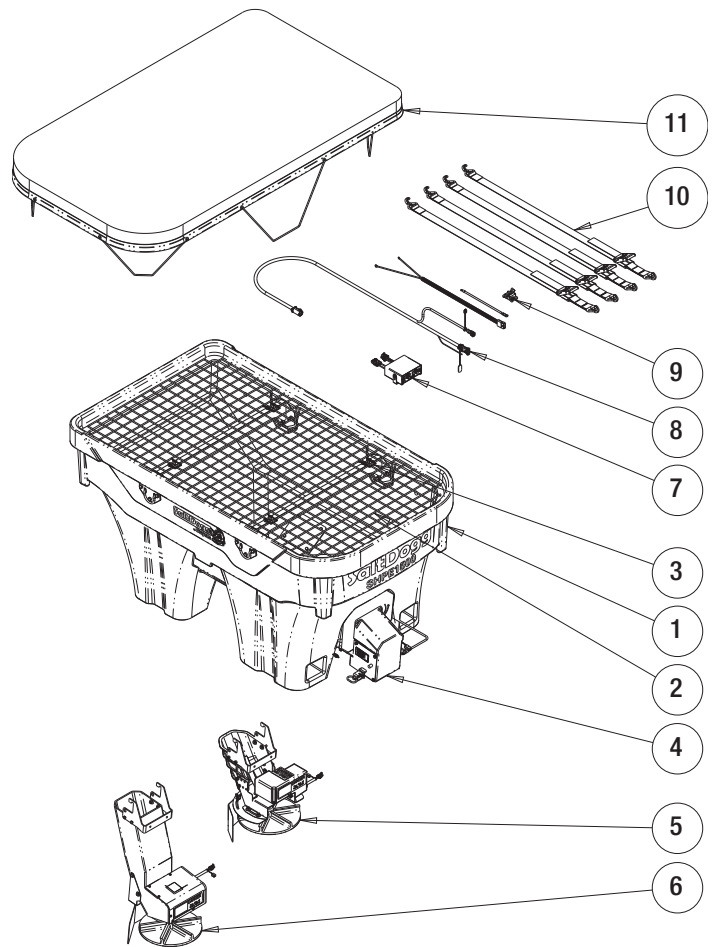
#### Service Parts and Accessories

PART NO.	DESCRIPTION
3012431	Replacement Motor for 3006833, 3027293
3021617	Replacement Coupler for 3006833, 3027293
3019085	Replacement Motor for 3009995

#### Wire Harness Repair Kits



### Repair Parts- Spreader



#### Bill of Material

ITEM	PART NO.	QTY.	DESCRIPTION
1	3049412	1	HOPPER ASM 1.5 CU YD POLY
2	3041211	1	TOP SCREEN
3	66050	4	SNAPPER PIN, 1/4in X 2in ZN
4	3035854	1	LABEL, PATENT
5	3025070	1	CHUTE ASSEMBLY, STD LENGTH
6	3007527	1	CHUTE ASSEMBLY, EXT LENGTH
7-11	3049872	1	HARDWARE KIT SHPE1500
7	3014199	1	CONTROLLER, SHPE SALTDogg
8	3006724	1	WIRE HARNESS, MAIN
9	3035936	1	POWER CABLE KIT
10	1496505	1	HOLD DOWN KIT, SPREADER (4 STRAPS)
11	3043774	1	TARP