

Installation Instructions

SHPE2250 SaltDogg® Electric Drive Poly Hopper Spreader 2.2 cubic yards



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General Information

Overall Length: 104.5 inches
Overall Width: 48 inches
Overall Height: 44 inches
Empty Weight: 707 lbs
Capacity Struck: 2.2 cu. yd.

Vehicle Requirements

Trucks with minimum GVWR 13,000 lbs.
150 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.

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.

Safety Precautions

1. Read the entire Installation Instructions 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.

—continued inside

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 kit 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.

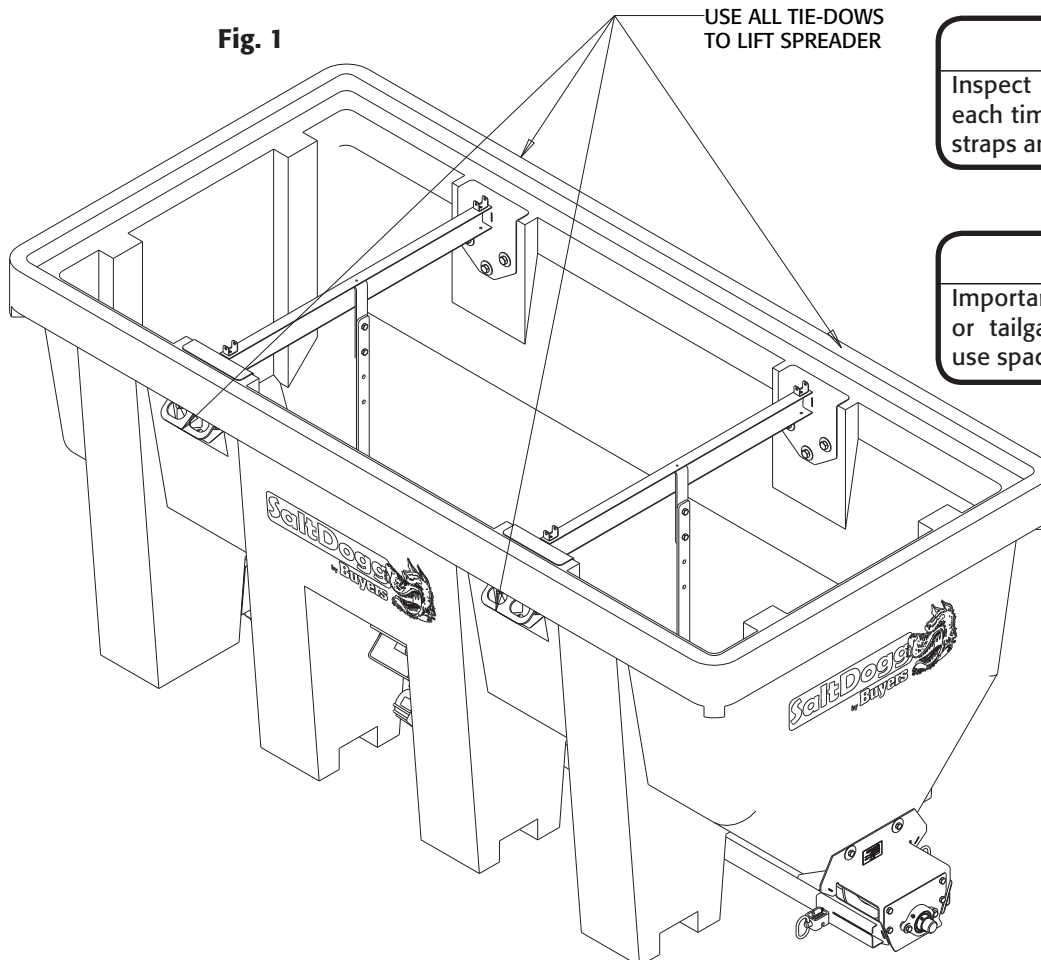
- D.** Lift spreader using tie downs (fig. 1), or using fork lift. Lower spreader into the truck bed.
- E.** Center the spreader on the truck with the end of the auger 10" to the rear of the nearest vertical obstruction (bumper, trailer hitch, etc).
- F.** Chute assembly. Slide chute guide into desired opening until it stops against inside rear wall. Upper opening is for flat bed and dump trucks;

Lower opening is for pick-up trucks.

Rest chute on top of chute guide as shown in Fig. 2

- G.** Using holes in chute guide as guides, drill 4 clearance holes for 3/8 dia. bolts. Bolt chute guide to chute as shown in Fig. 3
- H.** Detent spring latches located on chute slides. Slide chute guide into chute slides and secure chute in position by releasing spring latches Fig. 4
- I.** Slide spreader forward to have at least 1"-2" clearance between chute and rear most vertical obstruction.
- J.** 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. 5
- K.** In addition, secure spreader using four ratchet straps. Tighten straps evenly.

Fig. 1



CAUTION

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 use spacer!

Fig. 2

REST CHUTE ON TOP OF CHUTE GUIDE

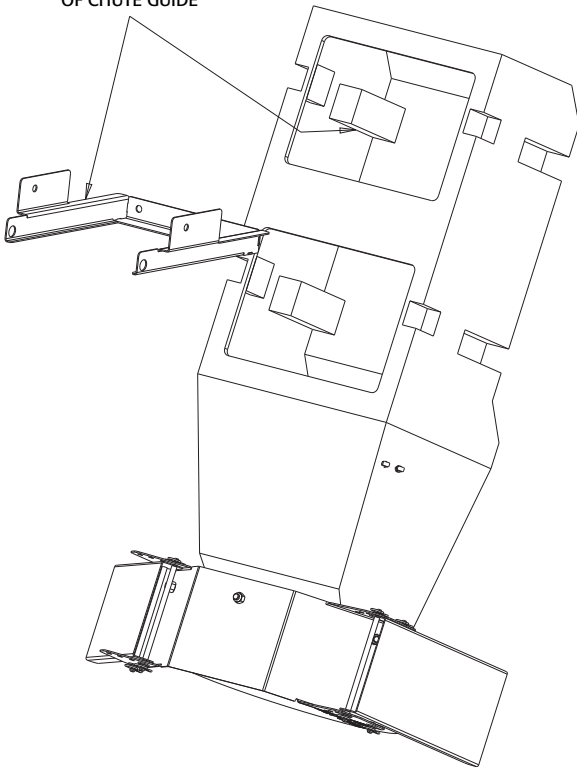


Fig. 3

DRILL HOLES THRU CHUTE. ASSEMBLY CHUTE GUIDE TO CHUTE AS SHOWN

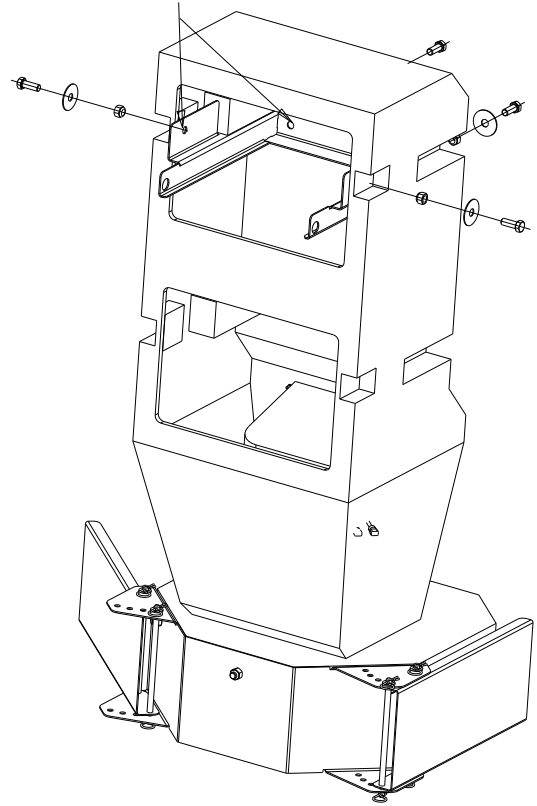


Fig. 4

SLIDE CHUTE GUIDE INTO CHUTE BRACKET. SECURE CHUTE USING LATCH.

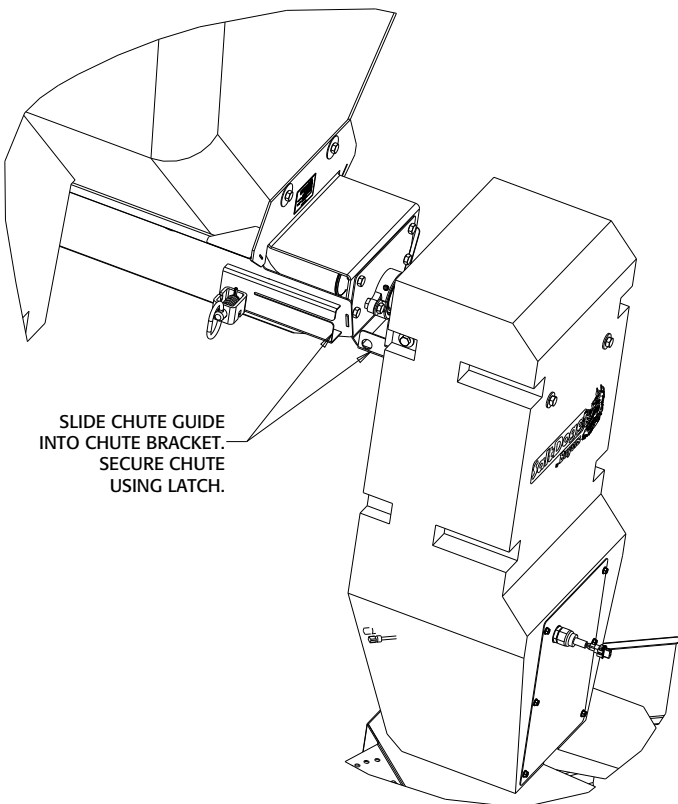
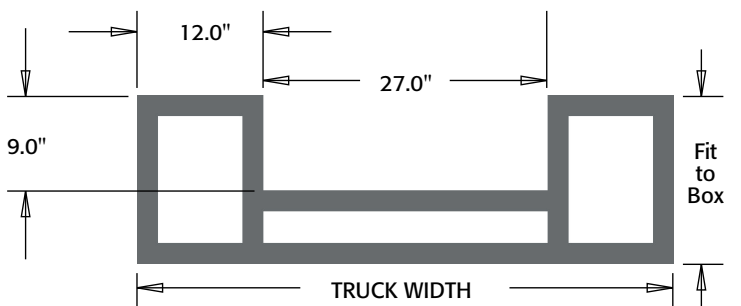
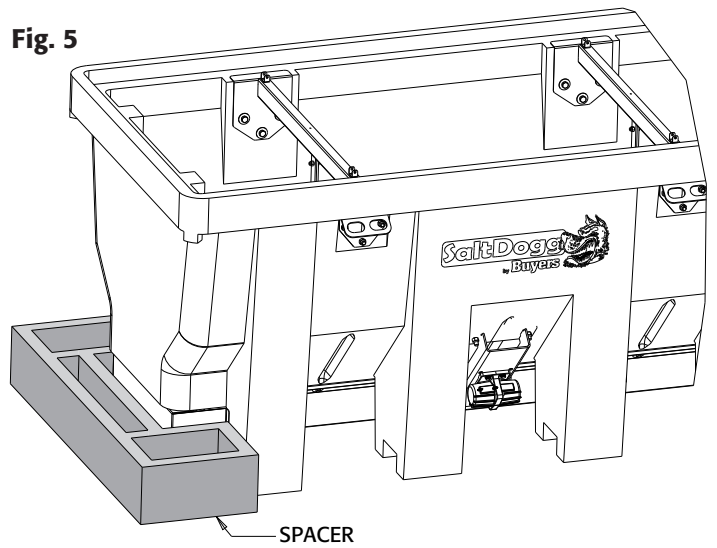


Fig. 5



2. Control Box and Vehicle Wiring Harness Installation

MAKE SURE YOU HAVE CONNECTED THE PROPER WIRE COLOR. THIS IS A WIRE GROUND ELECTRICAL SYSTEM! NO CONNECTIONS TO TRUCK'S FRAME OR BODY ALLOWED!

WARNING

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).
- 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. Connect the power cable directly to the battery.

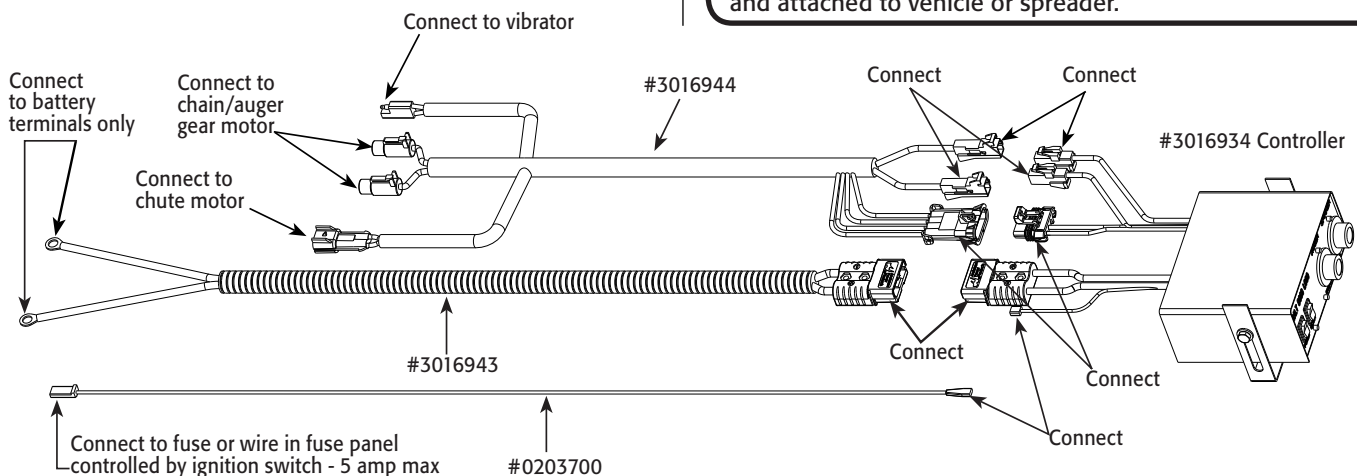
L. Insure all functions of the controller are working properly.

M. Observe auger moving in proper direction. If direction is wrong reverse wires between Motor and Wire Harness.

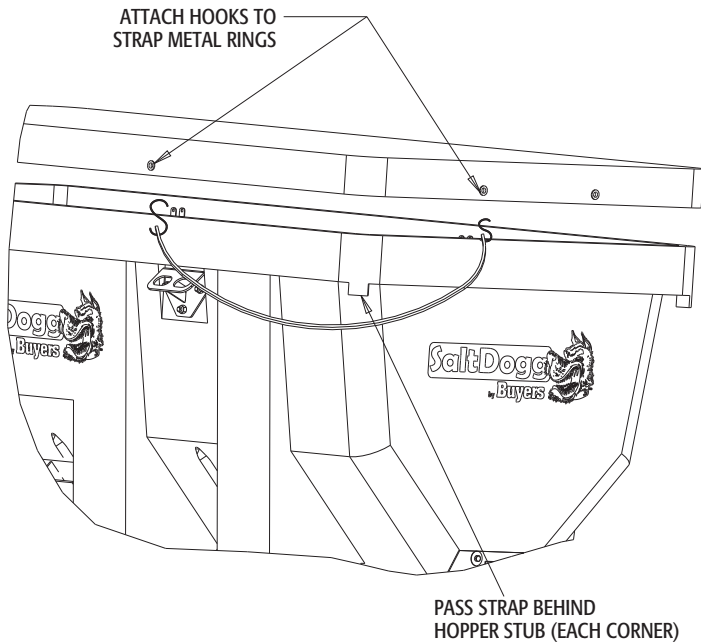
N. Optional spot light (5 AMP max) can be installed on spreader. Use utility light kit part number 3018009. Remove cap from single white wire. Connect light to this wire and the trucks frames known ground (negative).

IMPORTANT

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.



Tarp Installation



Spreader Operation

1. SHPE2250 is equipped with a dual independent speed controller. To start spreader, press "POWER" switch. Switch will be illuminated. Auger and spinner will start rotating. Auger and spinner can be adjusted independently.
2. To activate vibrator press "VIBRATOR" switch, vibrator switch will illuminate.
3. To stop spreader press "ON-OFF" switch again.
4. SHPE2250 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.
5. Spreading pattern can be controlled by repositioning of the baffles on the chute.

WARNING

Never attempt to lift spreader with material in hopper!

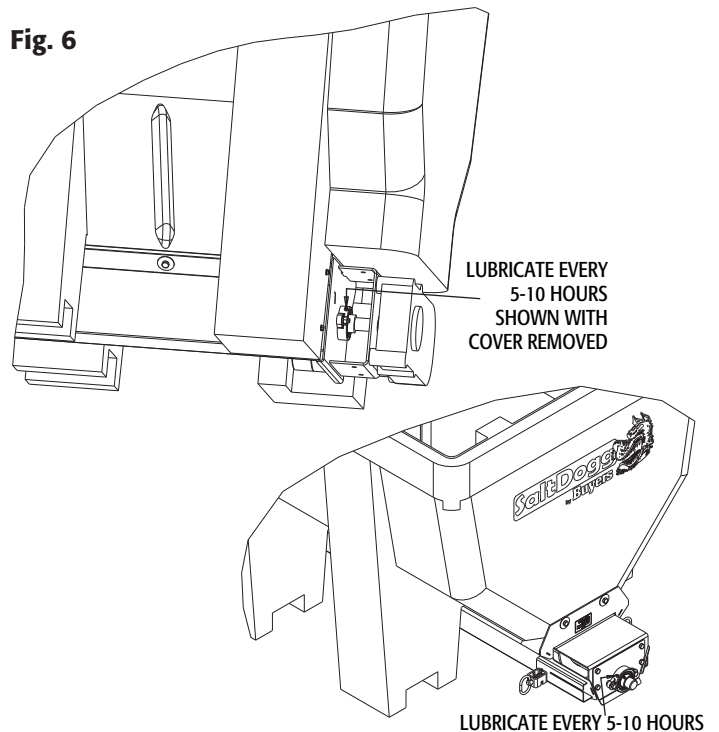
WARNING

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

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. (fig. 6)
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. Empty the spreader of all ice control materials when not in use. Wash out the spreader to prevent material builds up.
7. It is recommended to cover spreader with the tarp during storage periods.

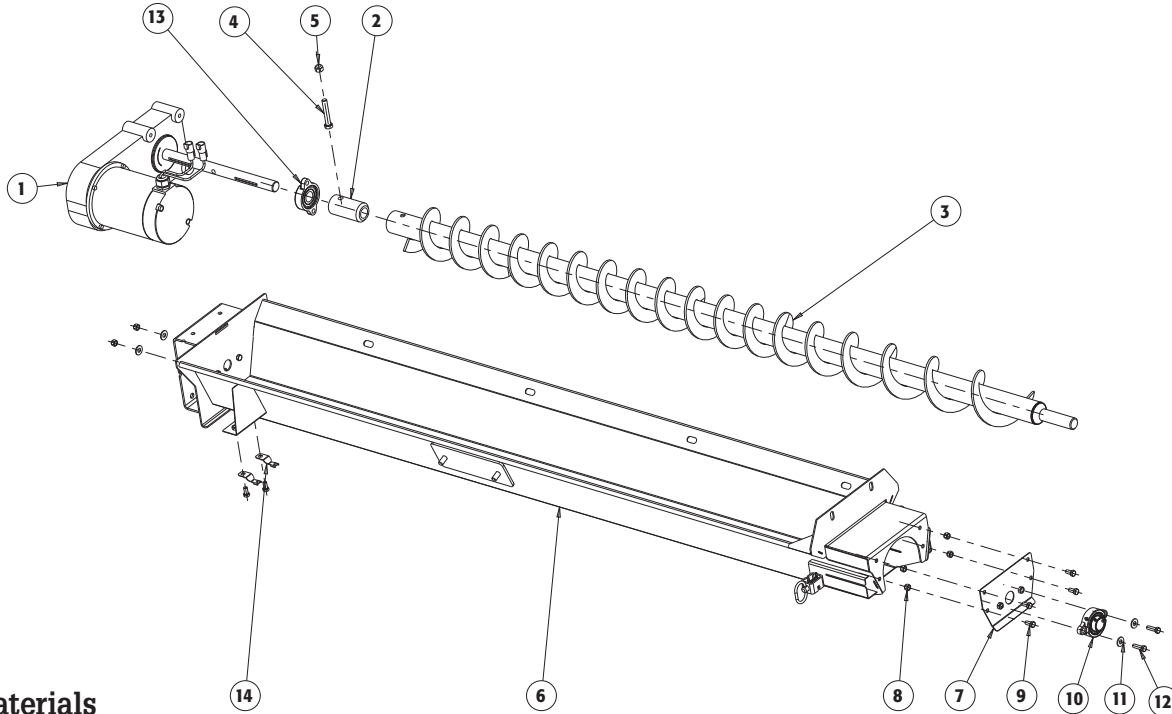
Fig. 6



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 bearings.
5. Protect hopper from excessive temperatures during summer storage.

Repair Parts- Trough Assembly

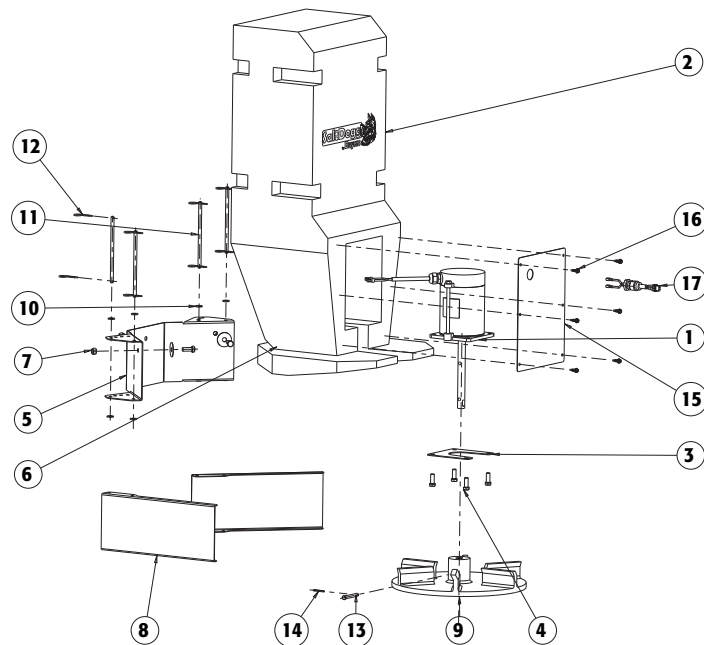


Bill of Materials

ITEM	PART NO.	QTY.	DESCRIPTION
1	3013821	1	GEAR MOTOR CONVEYOR 1 2 VDC
2	3014858	1	SLEEVE, AUGER ADAPTER
3	3019902	1	AUGER SHPE 5.25 VARIABLE RH
4	-	1	SCREW, HHC-1 72-13 X 3 SST
5	-	1	NUT, NYLOCK 1/2-13SS
6	3019903	1	TROUGH ASSEMBLY SHPE2500
7	3020117	1	BRACKET BEARING, WELDMENT

ITEM	PART NO.	QTY.	DESCRIPTION
8	-	6	NUT, NYLOCK 3/8-1 6X7/16 SST
9	-	6	SCREW, HHC-3/8-1 6X3/4 SST
10	9240086	1	BEARING, 1-1/4 FLANGE 2 HOLE
11	-	4	WASHER, FLAT 3/8 USS SST
12	-	2	SCREW, HHC-3/8-1 6X1. 25 SST
13	1410200	1	BEARING, FLANGED 1-1/8"
14	3017121	2	BRACKET, RECEPTACLE SZ8 DEUTSCH

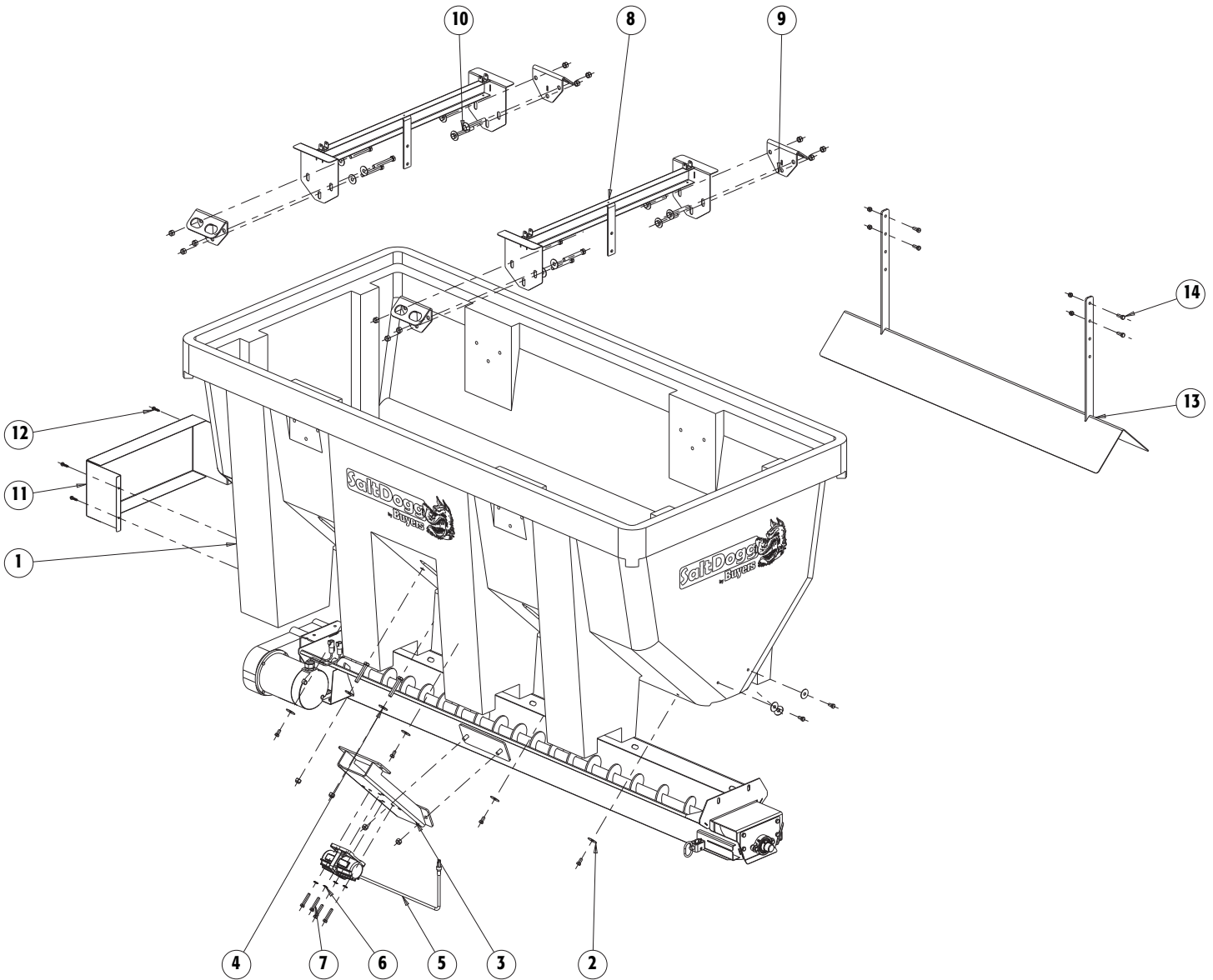
Repair Parts- Chute Assembly



Bill of Materials

ITEM	PART NO.	QTY.	DESCRIPTION
1	3014078	1	MOTOR 12VDC, .5 HP SPINNER
2	3019912	1	CHUTE POLY SHPE2500
3	3020042	1	RETAINER MOTOR CHUTE
4	-	7	SCREW, HHC 3/8-16X1 304 SST
5	3020043	1	SHIELD SHPE2250
6	-	3	WASHER, FLAT 3/8 X 1 .5 X.048 SST
7	-	3	NUT, NYLOCK 3/8-1 6X7/1 6 SST
8	3020044	2	BAFFLE CHUTE ADJUST
9	3012393	1	SPINNER, 14" POLY CW
10	-	8	WASHER, 5/1 6 SAE SST
11	3020045	4	PIN BAFFLE CHUTE
12	HP9	8	PIN, HAIR COTTER, .09 ZINC
13	3007113	1	PIN, CLEVIS, 5/1 6 X 2-1 12, .1 41 HOLE ZN
14	3014994	1	PIN, COTTER, 1/8INX1 IN SST
15	3020514	1	MOTOR COVER CHUTE
16	-	6	SCREW #1 2-14x74 SS SELF DRIL HEX WASHER HD
17	3006753	1	WIRE HARNESS, CHUTE

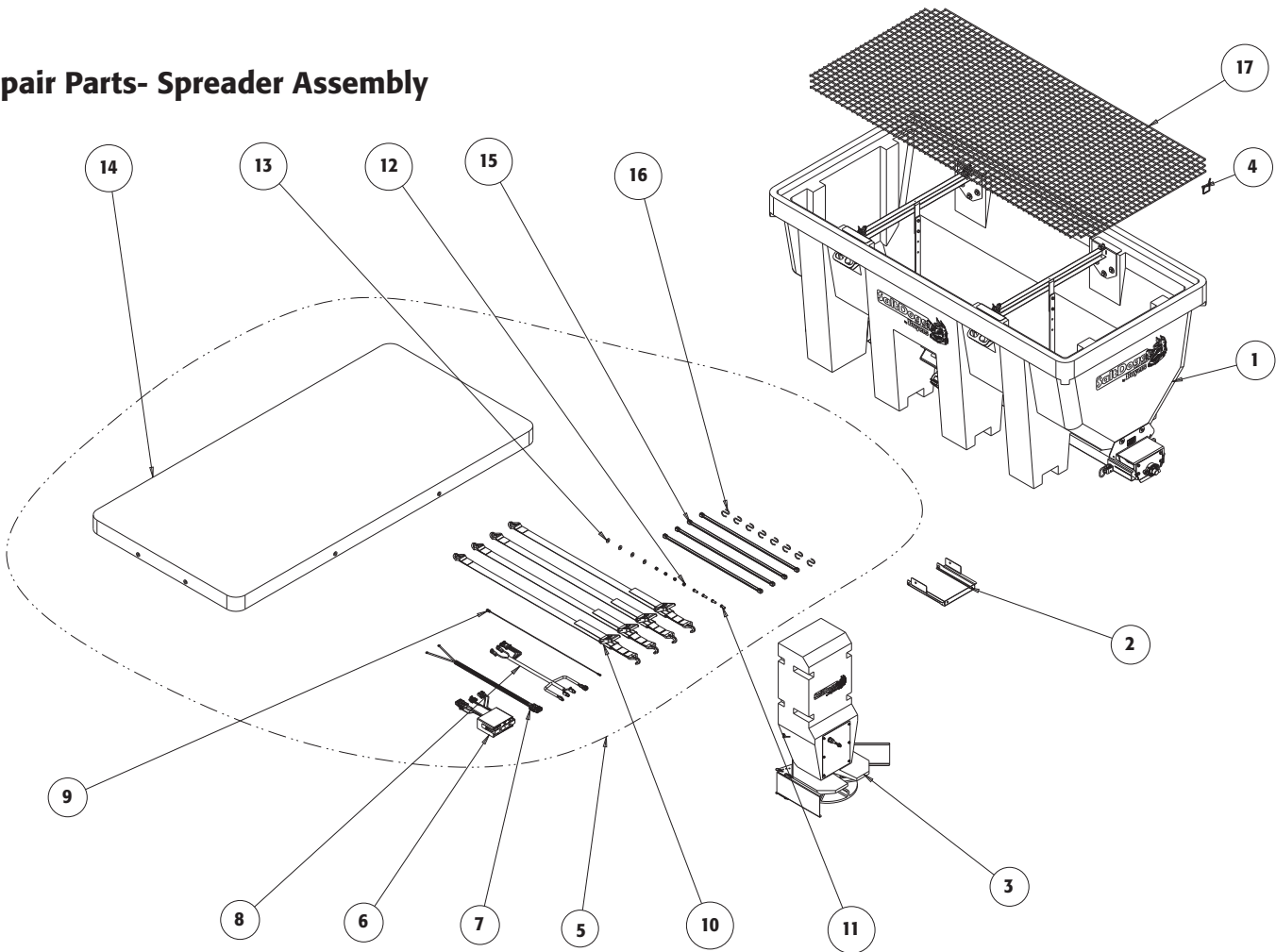
Repair Parts- Hopper Assembly



Bill of Materials

ITEM	PART NO.	QTY.	DESCRIPTION
1	3019900	1	HOPPER SHPE2250
2	-	10	WASHER, FLAT 3/8 X 1 .5 X.048 SST
3	3020046	1	BRACKET, VIBRATOR WELDMENT
4	-	14	WASHER FLAT .5 ID 1 .5 OD SST
5	3007416	1	VIBRATOR 200 LBS1 2 VDC
6	-	4	WASHER, EXTERNAL TOOTH LOCK 3/8 SS
7	-	4	SCREW, HHC-3/8-1 6 X 2 SST
8	3020053	2	CROSS MEMBER WELDMENT
9	3020096	4	TIE-DOWN WELDMENT
10	-	12	SCREW, HEX HEAD CAP 1/2-1 3 X 4.00 SST
11	3020121	1	COVER GEAR MOTOR
12	-	4	SCREW #14X1. 25 SST
13	3020145	1	INVERTED VEE, SHPE2250
14	-	4	SCREW, HHC 3/8-1 6 X 1 304 SST

Repair Parts- Spreader Assembly



Bill of Materials

ITEM	PART NO.	QTY.	DESCRIPTION
1	3019901	1	HOPPER ASSEMBLY SHPE2250
2	3020655	1	CHUTE GUIDE WELDMENT
3	3019913	1	CHUTE ASSEMBLY SHPE2500
4	66050	4	SNAPPER PIN, 1/4X 2, YLW ZINC
5	3020697	1	HARDWARE KIT SHPE2250
6	3016934	1	CONTROLLER SPEED 1 2 VDC, 60 AMP
7	3016943	1	POWER CORD
8	3016944	1	WIRE HARNESS MAIN
9	203700	1	WIRE ASSEMBLY, 36 LONG
10	1496505	1	HOLD DOWN KIT, SPREADER (4 STRAPS)
11	—	4	SCREW, HHC 3/8-1 6 X 1 304 SST
12	—	4	NUT, NYLOCK 3/8-1 6X7/16 SST
13	—	4	WASHER, FLAT 3/8 USS SST
14	3020127	1	TARP SHPE2250
15	TS31	4	STRAP, RUBBER TARP 31"
16	9225	8	S-HOOK, 2.5" ZN, TARP STRAP
17	3008390	1	SCREEN, SHPE2000

SHPE2250 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 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.