

# Installation Instructions

## PRO4000 & PRO4000CH SaltDogg® Electric Drive Poly Hopper Spreaders 4.0 cubic yards

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### General Information

Overall Length: 123.3 inches  
 Overall Width: 77 inches  
 Overall Height: 47.3 inches  
 Empty Weight: 812 lbs  
 Capacity Struck: 4.0 cu. yd.

### Vehicle Requirements

Trucks with GVWR 15,000 to 26,000 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.*

### 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.



### 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

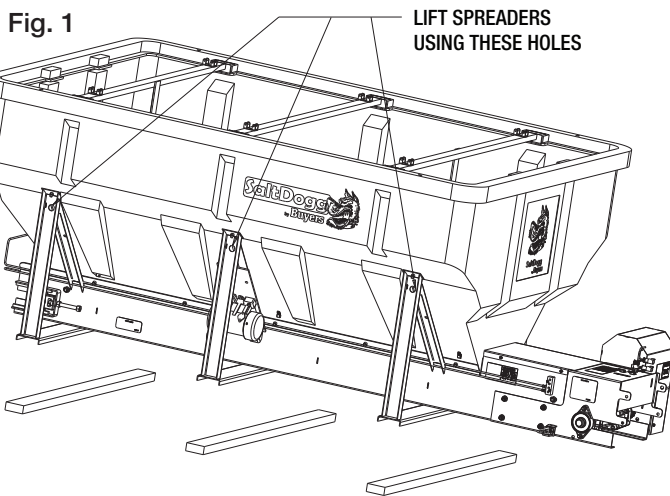
1. Read this entire Owners Manual before operating this spreader.
2. Read all safety decals on the spreader before operating.
3. Check to make sure all safety guards are securely mounted into place before operating this spreader.
4. Verify that all personnel are clear of the spreader spray area before 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. 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.
- D.** Prepare 4 boards as shown in Fig. 1. A board size is 2" x 4" x 60" long minimum. Boards can be as long as width of inside of trucks body.
- E.** Next, set the spreader in the truck body. Use four bars on the frame to lift the spreader (Fig. 1).



- F.** Lower spreader onto 2" x 4" boards positioned in truck bed.
- G.** Center the spreader on the vehicle with the end of the gear mount 14" to the rear of the nearest vertical obstruction (bumper, trailer hitch, etc). Attach chute to spreader, check for interference between the vehicle and the Spinner/Chute Assembly.
- H.** Bolt the spreader to the vehicle frame through the lengths of lumber using the holes located in each of the four (4) cross members. Use 1/2" SAE Grade 5 hardware as required by vehicle application.
- I.** In addition, secure spreader using four ratchet straps or chain tie down kit (sold separately). Always tighten straps evenly!
  - The spreader must be securely fastened to the frame of the vehicle.
  - Verify with the vehicle's manufacturer that the factory installed anchor points are designed for tie-down of such load.
  - Periodically check that the spreader mounting hardware is securely tightened, retighten if necessary.

### **CAUTION**

Never lift spreader with material in the hopper.

### **WARNING**

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

### **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 fasten spreader to the vehicle!

### 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.

### **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!

**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.**

**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).

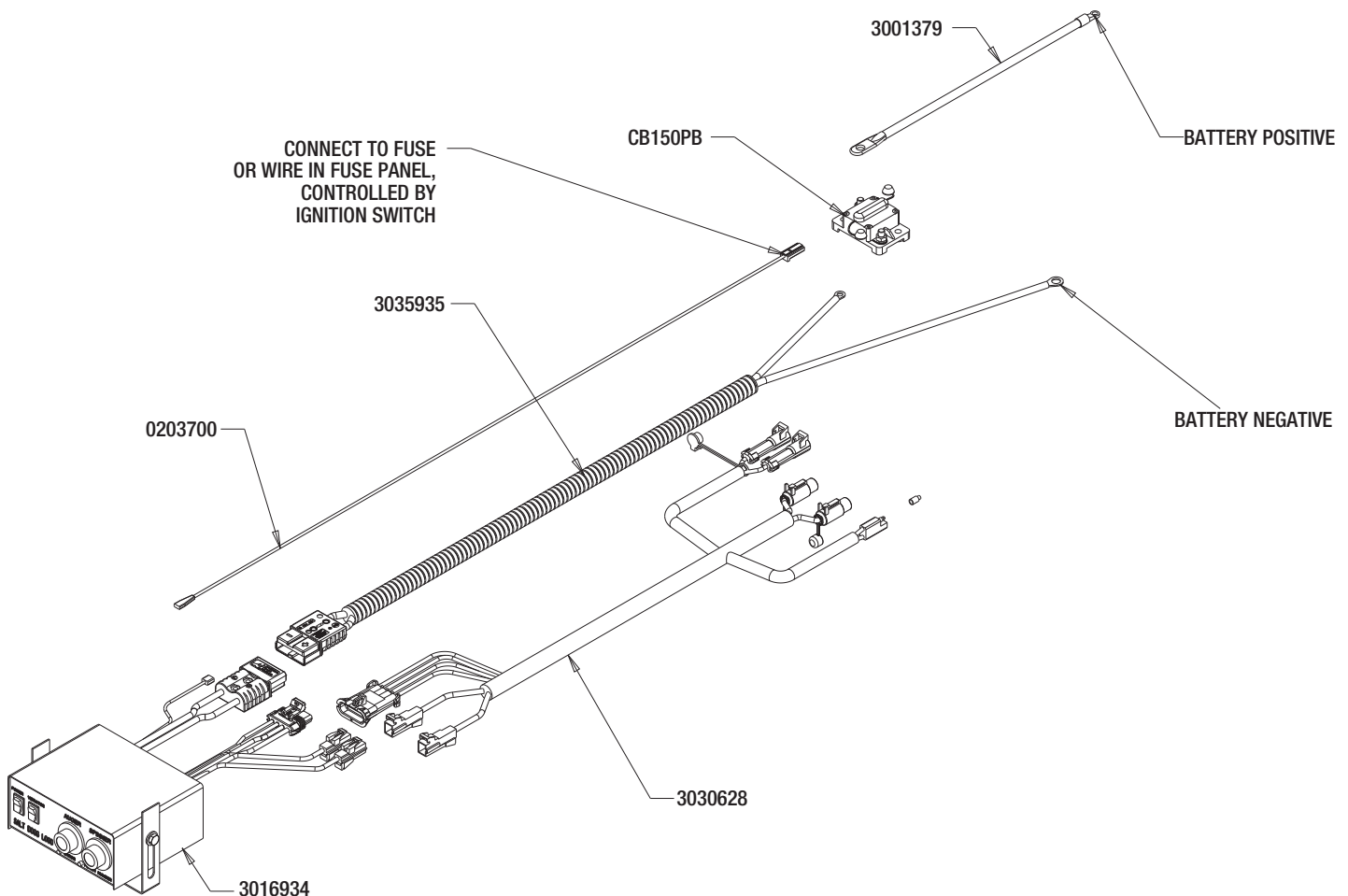
**L.** Insure all functions of the controller are working properly.

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

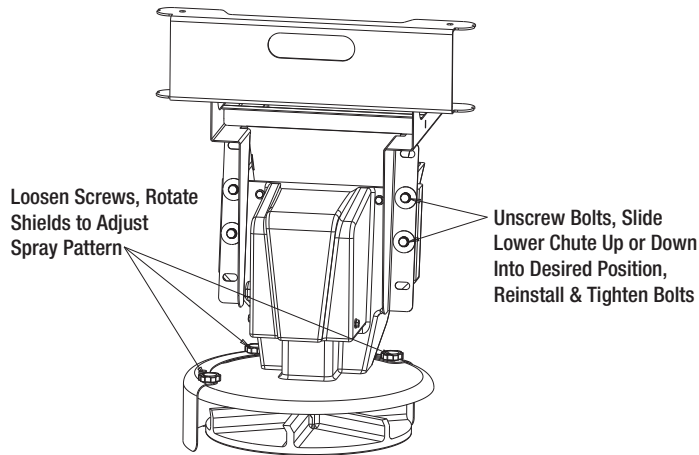
**N.** Optional spot light (5 AMP max) can be installed on spreader. Use utility light kit part number 3018009. Remove cap from single white wire. Connect light to this wire and the trucks frames known ground (negative) and trucks frame.

### 3. CONTROLLER OPERATION

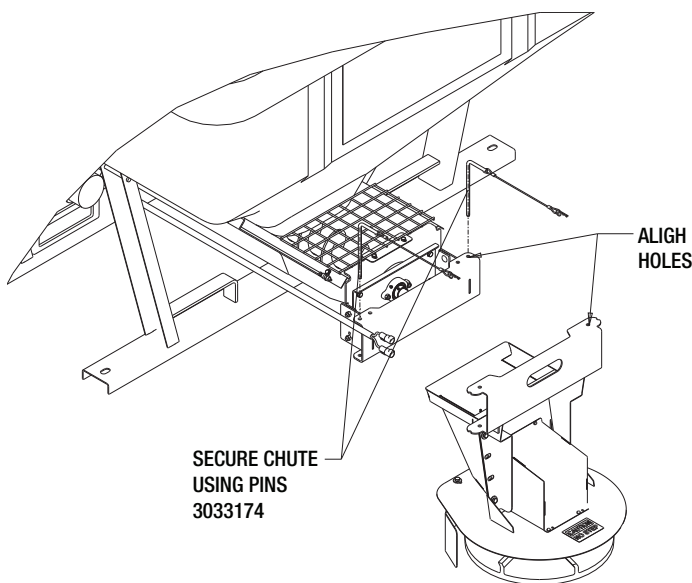
**A.** PRO4000/CH is equipped with a dual independent speed controller. To start spreader, press "POWER" switch. Switch will be illuminated. Chain and spinner will start rotating full speed for 2-3 sec then will slow down to originally dialed speeds. Chain and spinner can be adjusted independently.



#### 4. SPINNER/CHUTE ASSEMBLY OPERATION



**A.** Attach chute to hopper assembly by bolting chute to lower tabs of motor mount. Then secure chute by engaging spring latches in respective holes. Chute height can be adjusted by attaching lower chute weldment to the upper one using upper or lower set of holes.



**B.** The spread pattern and the amount of material dispensed is dependent on the following factors:

1. Chain Gear Motor RPM
2. Baffle positions
3. Spinner Gear Motor RPM

#### **CAUTION**

Always follow the following precautions so as not to cause damage to the spreader.

#### 4. Precautions

**A.** If the feed chain does not move because of dense material or a material jam, remove all material from the hopper and free the chain.

**B.** If the material in the hopper freezes, move the spreader into a warm area to thaw.

**C.** To prevent the feed chain from freezing, do not store material in the spreader.

**D.** The gearbox is designed to only accept torque from the electrical motor. Therefore, **DO NOT ATTEMPT TO FREE THE FEED CHAIN BY USING A PIPE OR SIMILAR TOOL TO MOVE OR DISLODGE THE CHAIN.** If the feed chain is moved, the gears within the gearbox will strip. This action will void all warranties.

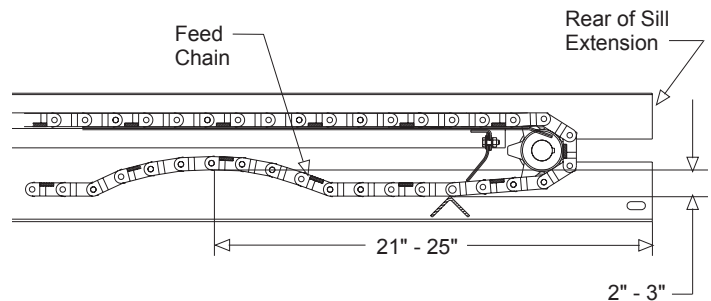
#### Spreader Maintenance

**1.** Use dielectric grease on all electrical connections before an electrical connection is made or after a connector is disconnected.

**2.** Grease the following:

- Idler shaft bearings (2)
- Flange bearings (2)

**3.** Check the Feed Chain tension periodically. To check the tension, measure in 21"-25" from the rear edge of the gear box mount. Push up on the chain with your hand. The conveyor chain should lift up 2"-3" off the conveyor chain guide or cross angles.

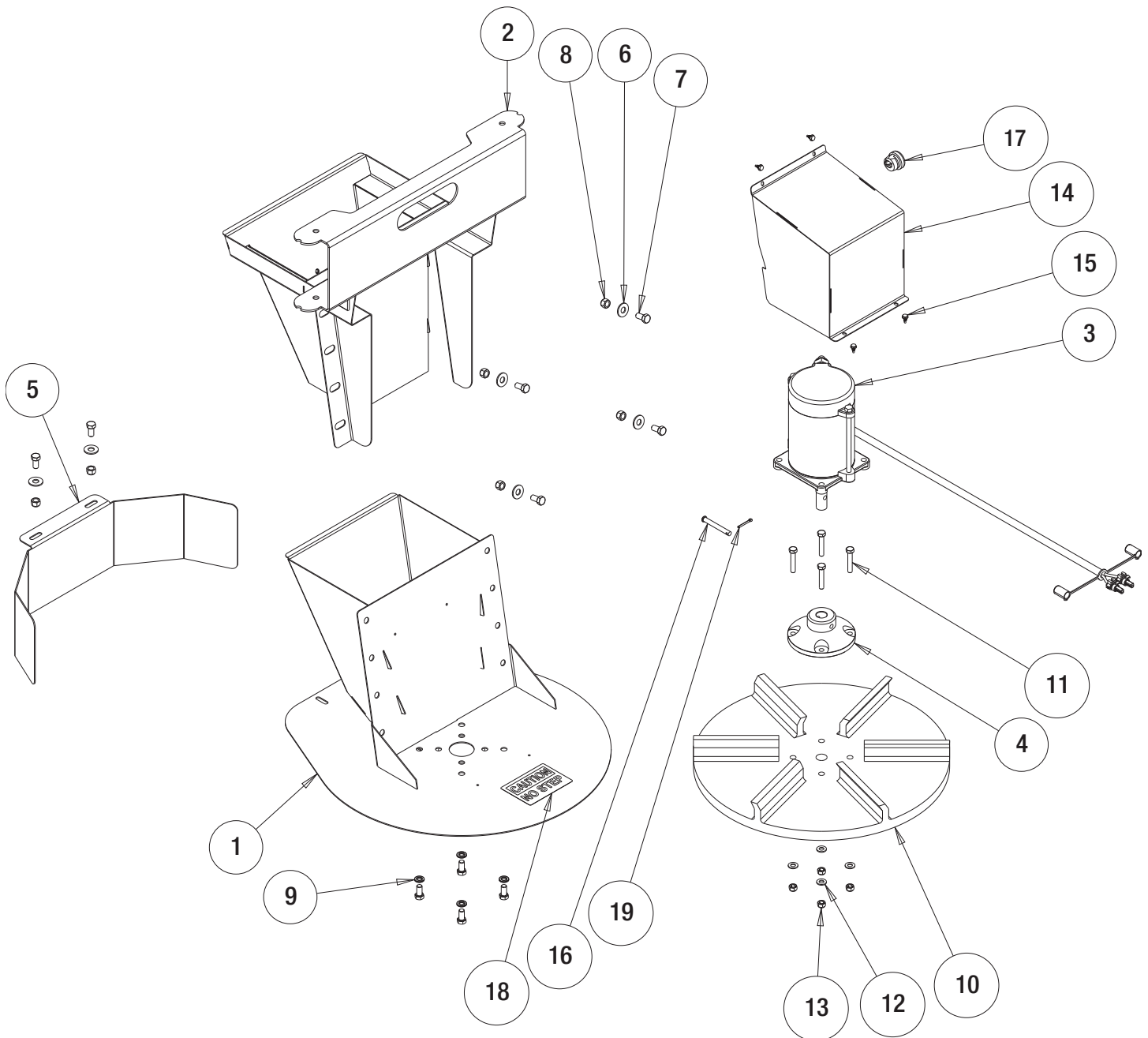


**4.** Empty the spreader of all ice control material when not in use to prevent a frozen feed chain.

**5.** Wash out the spreader when it is not in use. At the end of the season wash out the spreader to remove all ice control materials. Thoroughly dry all metal surfaces. Paint and oil all bare metal surfaces and chains to protect from rust. Properly store the spreader for the next season.

#### End of Season Maintenance.

- 1.** Wash spreader. Make sure no material or residue left in and outside 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 dry, cool place.
- 6.** Inspect, clean and repaint frame.
- 7.** Remove controller from truck. Store controller indoors, in dry, cool place
- 8.** Wash and lubricate chain.



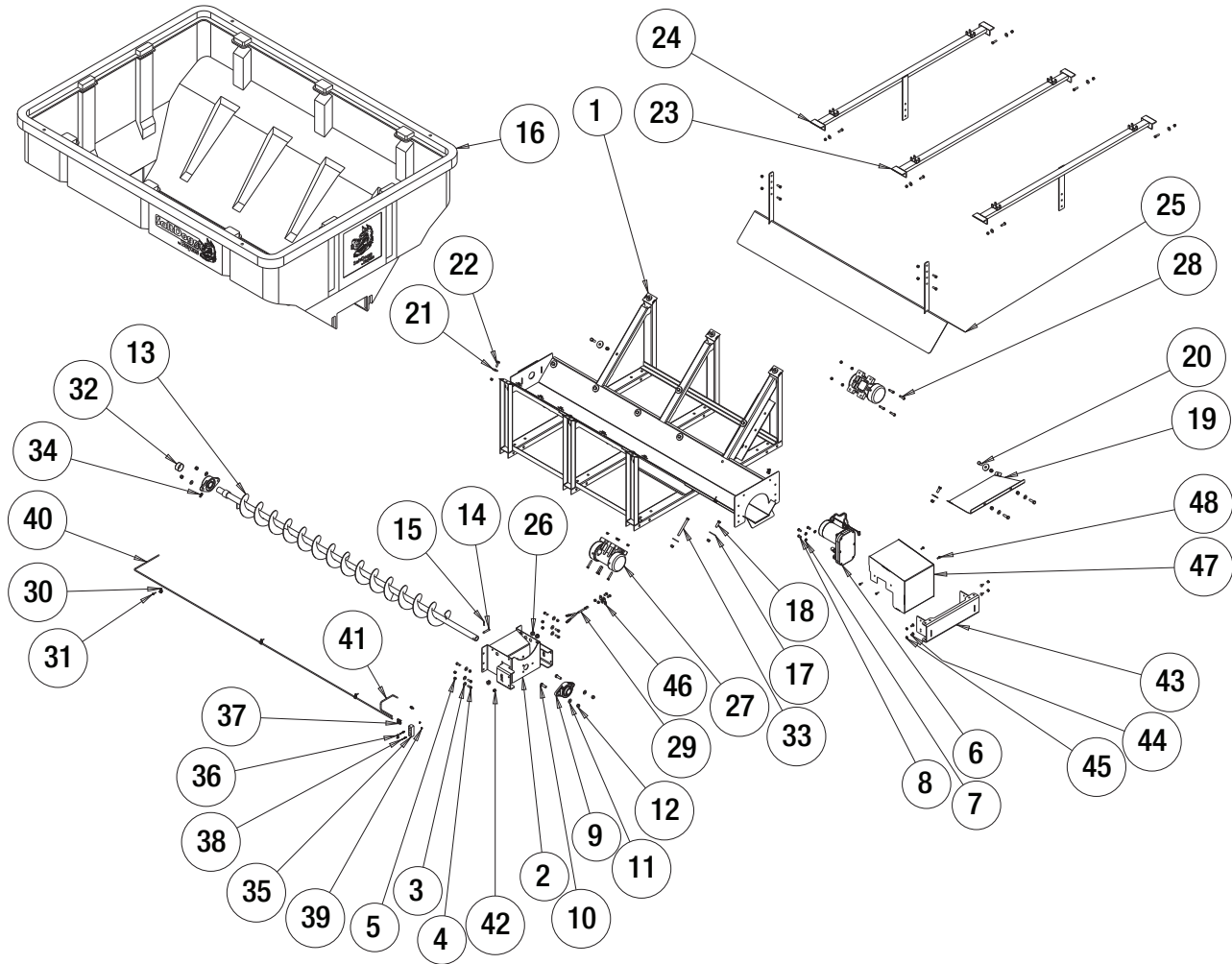
**Bill of Material**

ITEM	PART NO.	QTY.	DESCRIPTION
1	3002631	1	LABEL, "NO STEP"
2	3007113	1	PIN, CLEVIS, 5/16 X 2-1/2, .141 HOLE ZN
3	3014994	1	PIN, COTTER, 1/8IN X 1IN SST
4	3016309	1	MOTOR 12 VDC, .5 HP SPINNER
5	3018893	4	SCREW, SELF DRILL-SST, 10-16
6	3025065	1	BUSHING STRAIN RELIEF
7	3030179	1	SPINNER 18" POLY CW
8	3030182	1	HUB, SPINNER POLY
9	3030868	1	UPPER CHUTE WELDMENT
10	3052038	1	CHUTE LOWER WELDM

ITEM	PART NO.	QTY.	DESCRIPTION
11	3052046	1	SHIELD
12	3053491	1	MOTOR COVER, CHUTE
13	FCS031018175SS	4	SCREW, HHC 5/16-18 X 1 3/4 SS
14	FCS038016075SS	10	SCREW, HHC-3/8-16 X 3/4 SST
15	FNE031018034SS	4	NUT, NYLOCK, 5/16-18, GR A, SST
16	FNE038016044SS	6	NUT, NYLOCK 3/8-16 X 7/16 SST
17	FWF031075006SS	4	WASHER, FLAT, 5/16 X .688 X .065, SST
18	FWF038100007SS	6	WASHER, FLAT 3/8 USS SST
19	FWL038069009SS	4	WASHER, LOCK RHS-3/8 SST



## PRO4000 Hopper Assembly

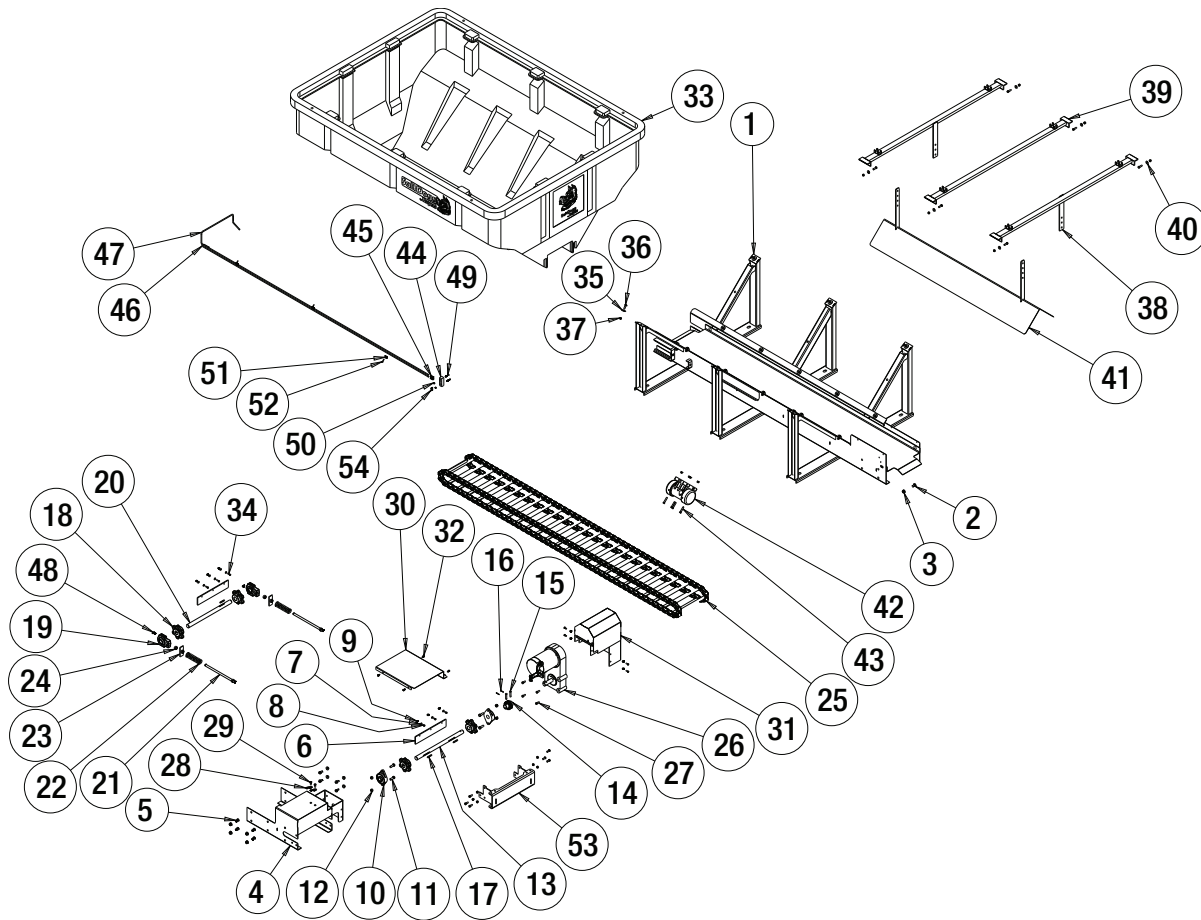


### Bill of Materials

ITEM	PART NO.	QTY.	DESCRIPTION
1	3052795	1	TROUGH WELDMENT, PRO4000
2	3053262	1	BRACKET, WELDMENT GEAR MOTOR
3	FWF038100007SS	12	WASHER, FLAT 3/8 USS SST
4	FCS038016100SS	10	SCREW, HHC 3/8-16 X 1 304 SST
5	FNE038016044SS	32	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	FCS050013150SS	4	SCREW, HHC-1/2-13 X 1.50 SST
11	3003873	14	WASHER, FLAT 1/2" SAE TYPE A 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	3013516	18	WASHER, FLAT 1/2 ID 2.0 OD .135 THK SST
18	3006723	14	SCREW, HEX HD 1/2-13x1.5 GR5 SS
19	3012607	1	COVER DISCHARGE
20	FCS050013125SS	2	SCREW, HHC-1/2-13 X 1-1/4 SST
21	3014189	6	WASHER, FLAT 3/8 X 1.5 X.120 SST
22	FCS038016125SS	12	SCREW, HHC-3/8-16 X 1.25 SST
23	3013279	1	SCREEN SUPPORT, SHPE4000
24	3039490	2	SCREEN SUPPORT, SHPE4000

ITEM	PART NO.	QTY.	DESCRIPTION
25	3039492	1	INVERTED VEE, WELDMENT
26	3007821	3	STRAIN RELIEF BUSHING
27	3012081	2	VIBRATOR 450 LBS, 12 VDC
28	3007066	8	SCREW, HHC-3/8-16 X 2 SST
29	3015652	1	ADAPTER DUAL VIBRATORS, SHPE4000
30	4375	5	CLAMP, HOSE .4375, 9/32 HOLE
31	3007522	5	SCREW, SHEET MTL #12x1.0 HEX WASHER HD SST
32	3013541	1	CAP VYNIL 2.0 ID 1.0 LG
33	3019616	2	SCREW, HEX HEAD CAP 1/2-13 X 5.00 SST
34	3035344	2	GREASE FITTING 1/4TUBE 1/4-28 MALE STRAIGHT
35	3035346	1	RIGHT ANGLE JUNCTION BLOCK
36	800	2	GREASE FITTING, 1/8in NPT, STRAIGHT
37	3035347	2	GREASE FITTING 1/4TUBE 1/8 NPT STRAIGHT
38	3035357	2	SCREW SOCKET HD, RND 8-32X 1.50 SST
39	3035358	2	NUT, NYLOCK 8-32 SST, BLACK OXIDE
40	3036016	1	GREASE TUBE FRONT BEARING AUGER
41	3035359	1	GREASE TUBE REAR BEARING AUGER
42	3035742	1	BUSHING SNAP THICK PANEL
43	3053487	1	CHUTE ATTACHMENT, 4000/6000
44	3012144	4	BOLT, CARRIAGE, 5/16-18 X 3/4 RD HD SST
45	FNE031018034SS	4	NUT, NYLOCK, 5/16-18, GR A, SST
46	3017121	2	BRACKET, RECEPTACLE SZ8 DEUTSCH
47	3053680	1	MOTOR COVER, PRO4000
48	FCS025020075SS	4	SCREW, CAP 1/4-20 X 3/4 SST

## PRO4000CH Hopper Assembly

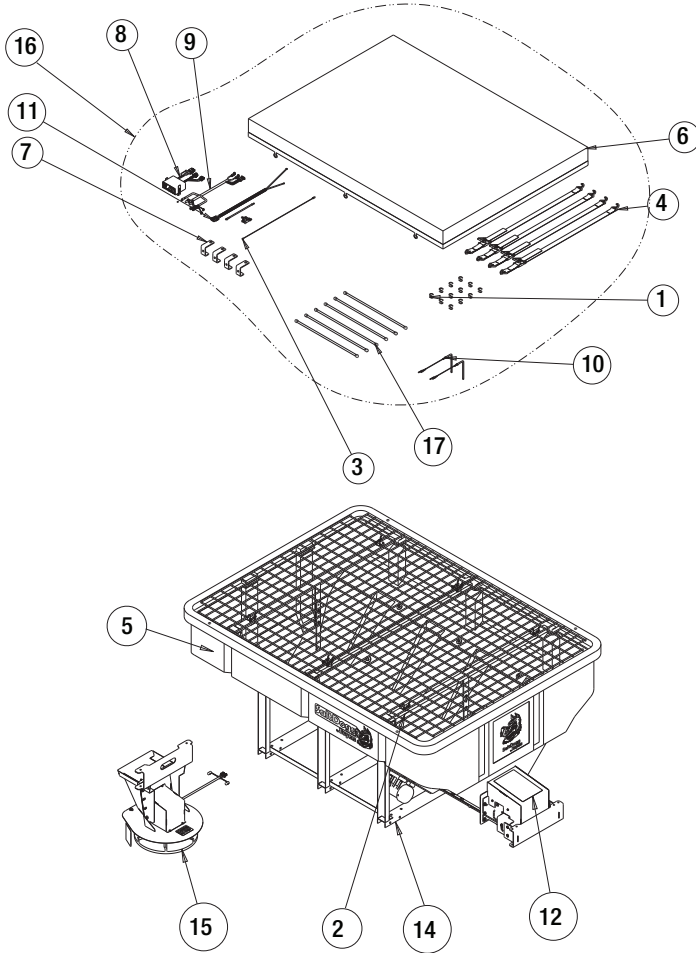


### Bill of Materials

ITEM	PART NO.	QTY.	DESCRIPTION
1	3038843	1	TROUGH WELDMENT SHPE4000CH
2	3001522	4	BOLT, CARRIAGE 1/2-13 X 1 SST
3	3001523	12	NUT, HX FLNG-1/2-13 SST
4	3052649	1	MOTOR DECK, WELDMENT
5	3004278	8	SCREW, BTN HD SOC CAP 1/2-13x 1 SST
6	3008872	2	WIPER BELT, HOPPER
7	FWF025063007SS	9	WASHER, FLAT 1/4 SAE SS
8	FCS025020075SS	7	SCREW, CAP 1/4-20 X 3/4 SST
9	FNE025020031SS	10	NUT, NYLOCK, 1/4-20, GR A, SST
10	3008294	2	BEARING, FLANGED
11	3006723	4	SCREW, HEX HD 1/2-13x1.5 GR5 SS
12	FNE050013053SS	4	NUT, NYLOCK 1/2-13 SS
13	3008316	1	SHAFT, SPROCKET DRIVE END
14	3008289	1	COUPLING, DRIVE SHAFT/ GEARBOX
15	1410803	2	PIN, CLEVIS, 3/8 X 2, 1038 ST, YZN
16	FPC013000100	2	COTTER PIN, 1/8 X 1, ZINC
17	KS402	3	KEY, 1/4 X 1/4 X 2
18	3008300	4	SPROCKET, D667H CHAIN
19	3008290	2	BEARING, HEAVY DUTY TAKE-UP
20	3008317	1	SHAFT, IDLER SPROCKET
21	3023046	2	BOLT, WELDED TAKE UP
22	3023022	2	SPRING CHAIN TENSION
23	3031199	2	TAKE-UP NUT WELDMENT
24	FNH063011054SS	2	NUT, HH 5/8-11 X 17/32 HIGH SST
25	3008860	1	CHAIN, 9FT. D667H CONVEYOR
26	3024575	1	GEAR MOTOR CONVEYOR 12 VDC
27	FCS038016100SS	10	SCREW, HHC 3/8-16 X 1 304 SST

ITEM	PART NO.	QTY.	DESCRIPTION
28	3017121	2	BRACKET, RECEPTACLE SZ8 DEUTSCH
29	FCS038016075SS	2	SCREW, HHC-3/8-16 X 3/4 SST
30	3039489	1	COVER, CHAIN
31	3036883	1	WELDMENT, MOTOR COVER
32	3015873	4	SCREW #12-14x.74 SS SELF DRIL HEX WASHER HD
33	3038847	1	HOPPER POLY 4 CU YA
34	FCS025020100SS	3	SCREW, CAP HEX HD 1/4-20 X 1 SST
35	3007115	16	WASHER, FLAT 3/8 X 1.5 X.048 SST
36	FCS038016125SS	22	SCREW, HHC-3/8-16 X 1.25 SST
37	FNE038016044SS	32	NUT, NYLOCK 3/8-16 X 7/16 SST
38	3039490	2	SCREEN SUPPORT, SHPE4000
39	3013279	1	SCREEN SUPPORT, SHPE4000
40	FWF038100007SS	6	WASHER, FLAT 3/8 USS SST
41	3039492	1	INVERTED VEE, WELDMENT
42	3012081	1	VIBRATOR 450 LBS, 12 VDC
43	3007066	4	SCREW, HHC-3/8-16 X 2 SST
44	3035346	1	RIGHT ANGLE JUNCTION BLOCK
45	3035347	2	GREASE FITTING 1/4TUBE 1/8 NPT STRAIGHT
46	3036051	1	GREASE HOSE FRONT DR SIDE
47	3036052	1	GREASE HOSE FRONT PS SIDE
48	3035345	2	GREASE FITTING 1/4TUBE 1/4-28 MALE 90 DEGREES
49	3035357	2	SCREW SOCKET HD, RND 8-32X 1.50 SST
50	3035358	2	NUT, NYLOCK 8-32 SST, BLACK OXIDE
51	4375	3	CLAMP, HOSE .4375, 9/32 HOLE
52	3007522	3	SCREW, SHEET MTL #12x1.0 HEX WASHER HD SST
53	3052651	1	CHUTE ATTACHMENT, PRO4000/6000
54	800	2	GREASE FITTING, 1/8in NPT, STRAIGHT

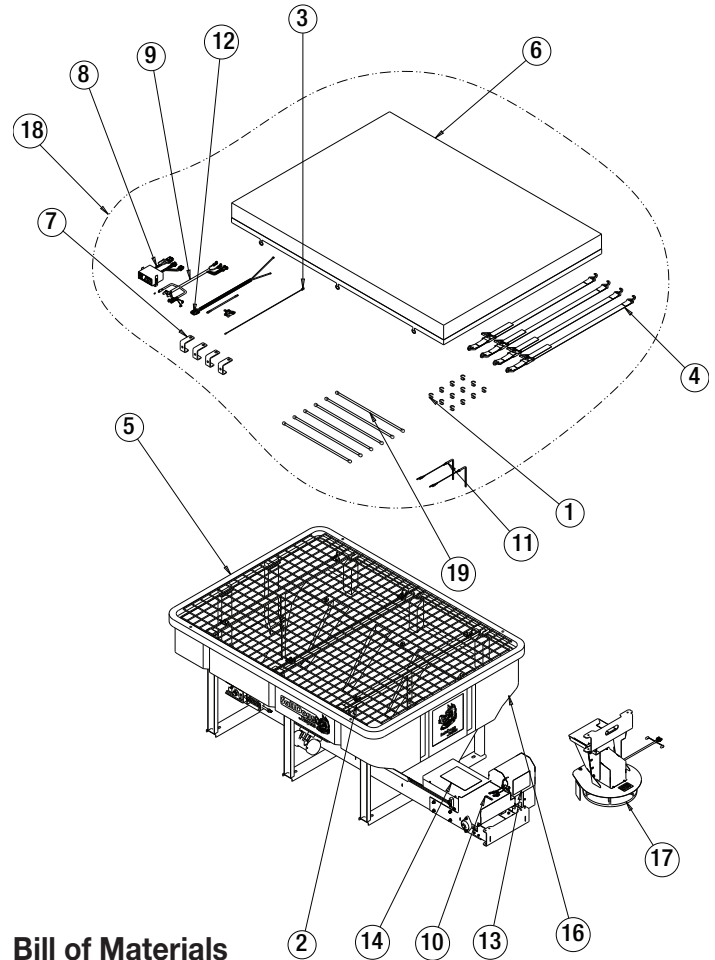
### PRO4000 Assembly



### Bill of Materials

ITEM	PART NO.	QTY.	DESCRIPTION
1	9225	12	S-HOOK, 2.5" ZN, TARP STRAP
2	66050	8	SNAPPER PIN, 1/4 X 2, YLW ZINC
3	0203700	1	WIRE ASSEMBLY, 36 LONG
4	1496505	1	HOLD DOWN KIT, SPREADER (4 STRAPS)
5	3012458	2	WIRE MESH, TOP SCREEN
6	3012959	1	TARP, SHPE4000
7	3013589	4	HOOK, TIE-DOWN SHPE4000
8	3016934	1	CONTROLLER SPEED 12 VDC, 60 AMP
9	3030628	1	WIRE HARNESS MAIN
10	3033174	2	PIN, CHUTE ATTACHMENT
11	3035938	1	KIT POWER CABLE REPLACES 3016943
12	3048137	1	LABEL DANGER, REAR
13	3052071	2	BAG 40X24, WOVEN PP, WHITE
14	3052794	1	HOPPER ASSEMBLY PRO4000
15	3053387	1	CHUTE SWING, ADJUSTABLE, 12VDC
16	3053537	1	HARDWARE KIT PRO4000
17	TS31	6	STRAP, RUBBER TARP 31"

### PRO4000CH Assembly



### Bill of Materials

ITEM	PART NO.	QTY.	DESCRIPTION
1	9225	12	S-HOOK, 2.5" ZN, TARP STRAP
2	66050	8	SNAPPER PIN, 1/4 X 2, YLW ZINC
3	0203700	1	WIRE ASSEMBLY, 36 LONG
4	1496505	1	HOLD DOWN KIT, SPREADER (4 STRAPS)
5	3012458	2	WIRE MESH, TOP SCREEN
6	3012959	1	TARP, SHPE4000
7	3013589	4	HOOK, TIE-DOWN SHPE4000
8	3016934	1	CONTROLLER SPEED 12 VDC, 60 AMP
9	3030628	1	WIRE HARNESS MAIN
10	3033172	1	DECAL CONNECTION
11	3033174	2	PIN, CHUTE ATTACHMENT
12	3035938	1	KIT POWER CABLE REPLACES 3016943
13	3047964	1	LABEL DANGER, SIDE
14	3048137	1	LABEL DANGER, REAR
15	3052071	2	BAG 40X24, WOVEN PP, WHITE
16	3052786	1	HOPPER ASM 4.0 CU YD 12VDC, CHAIN
17	3053387	1	CHUTE SWING, ADJUSTABLE, 12VDC
18	3053537	1	HARDWARE KIT PRO4000
19	TS31	6	STRAP, RUBBER TARP 31"

### SALTDogg® SPREADER WARRANTY

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.