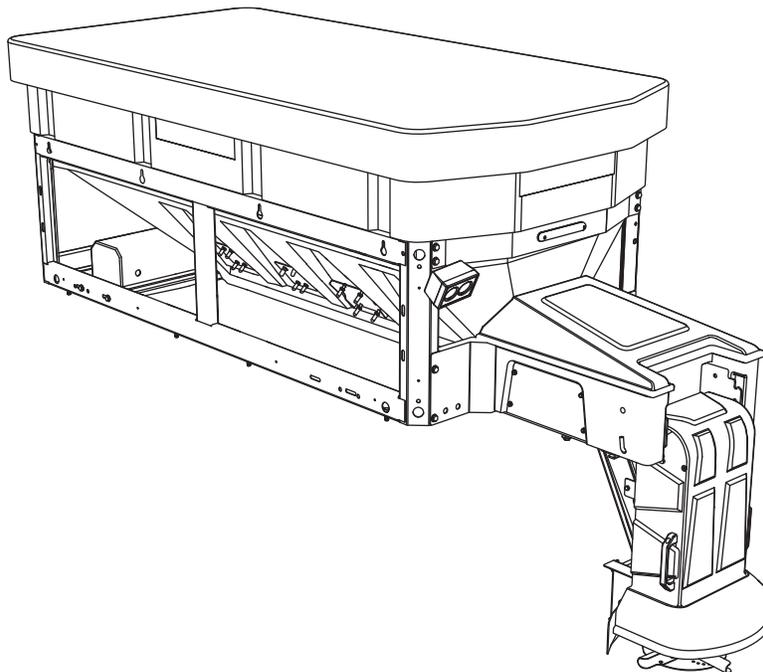




Super Maxx™ Hopper Spreader SP-9300XH

Owner's Manual and Installation Instructions

Original Instructions



⚠ CAUTION

Read this document before operating
or servicing the spreader.

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PREFACE

This manual has been prepared to acquaint you with the safety information, operation, and maintenance of your new hopper spreader. Please read this manual carefully and follow all recommendations. This will help ensure profitable and trouble-free operation of your spreader. Keep this manual accessible. It is a handy reference in case minor service is required.

When service is necessary, bring your spreader to your distributor. They know your spreader best and are interested in your complete satisfaction.

NOTE: This spreader is designed to spread snow and ice control materials only. Do not use it for purposes other than those specified in this manual.

Warranty Registration

Follow the directions on the SnowEx® Warranty Registration and Customer Survey form included in the spreader literature kit.

The registration form is also available online at **www.snowexproducts.com**. Under "Support" select "Warranty Registration" and submit the form online.

Register your spreader online at www.snowexproducts.com

OWNER'S INFORMATION

Owner's Name: _____

Date Purchased: _____

Outlet Name: _____ Phone: _____

Outlet Address: _____

Vehicle Model: _____ Year: _____

Spreader Type (Model): _____ Serial #: _____

Length: _____ Weight: _____ lb/kg: _____

SAFETY

SAFETY DEFINITIONS

⚠ WARNING

Indicates a potentially hazardous situation that, if not avoided, could result in death or serious personal injury.

⚠ CAUTION

Indicates a potentially hazardous situation that, if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices.

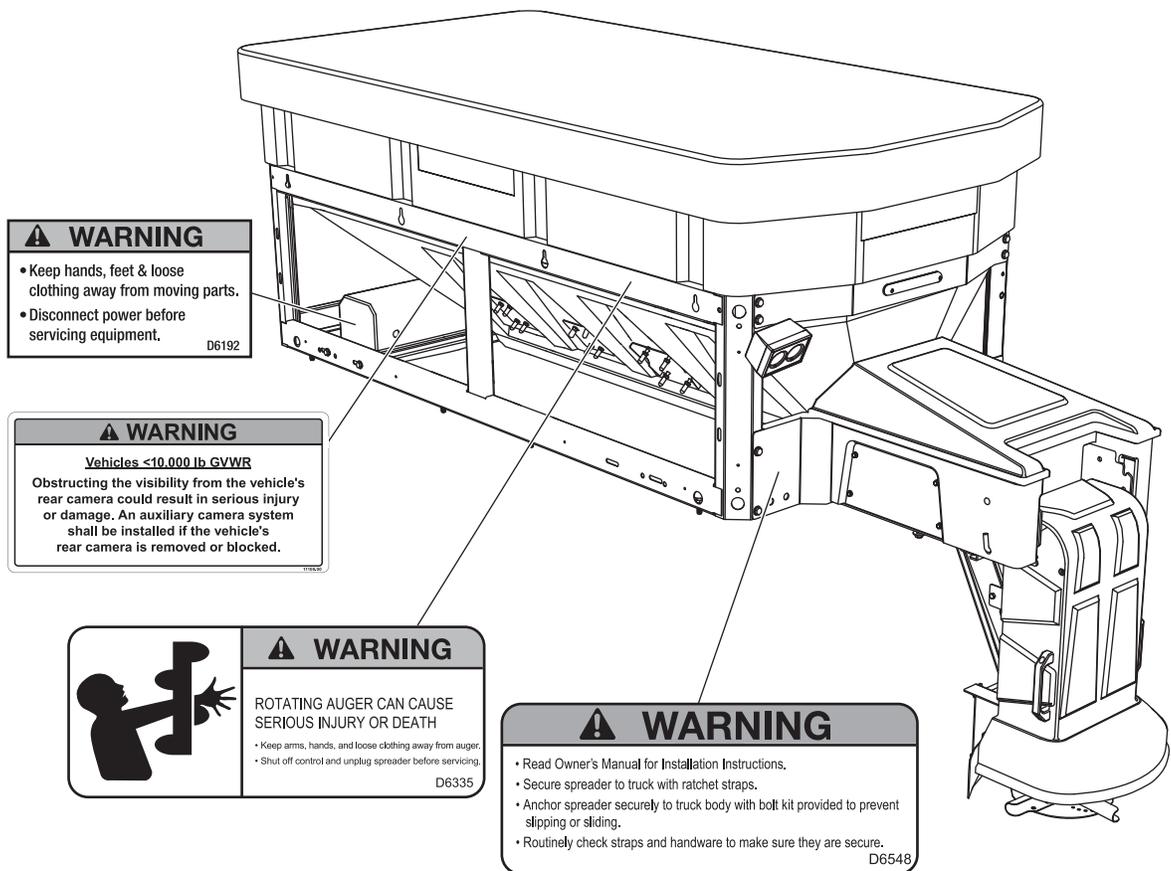
NOTE: Indicates a situation or action that can lead to damage to your spreader and vehicle or other property. Other useful information can also be described.

WARNING/CAUTION LABELS

Become familiar with and inform users about the warning and caution labels on the spreader.

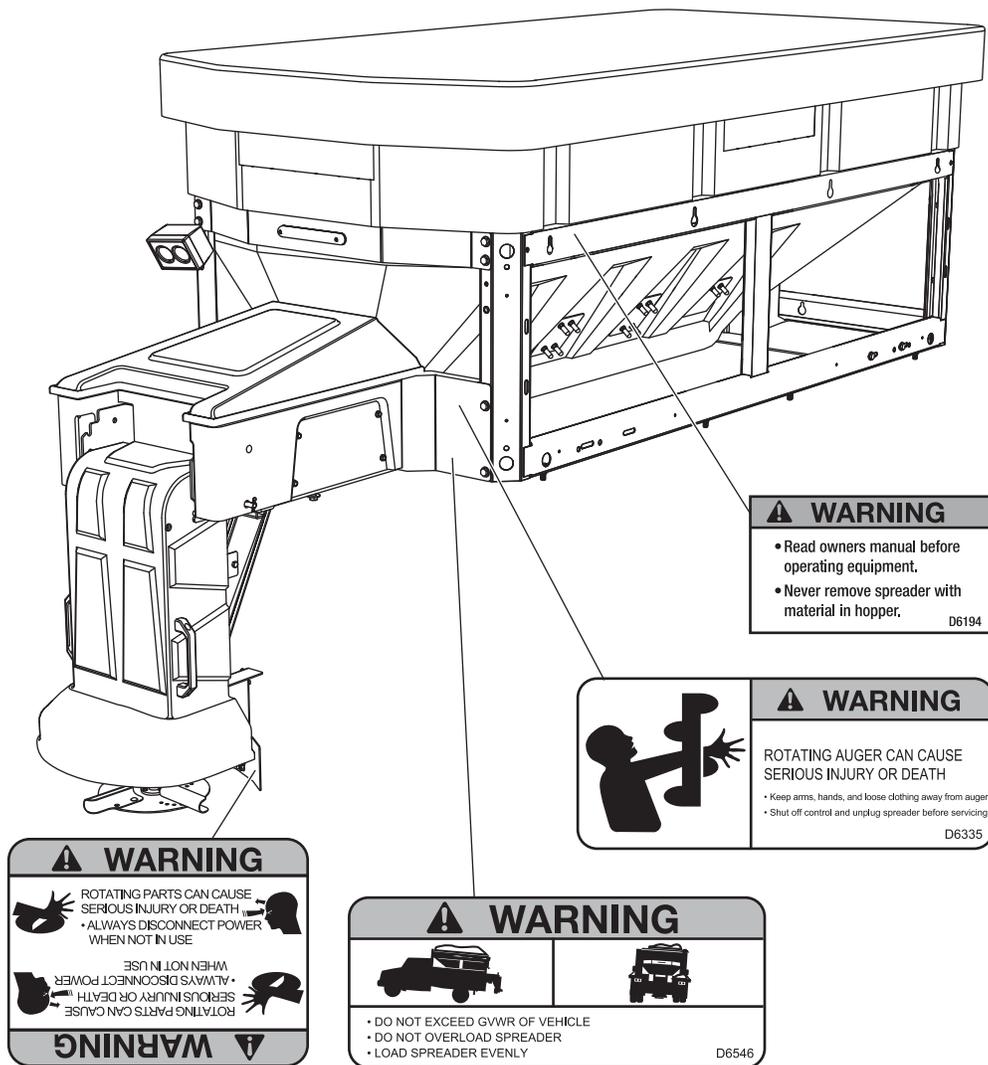
NOTE: If labels are missing or cannot be read, see your sales outlet.

Driver-Side Labels



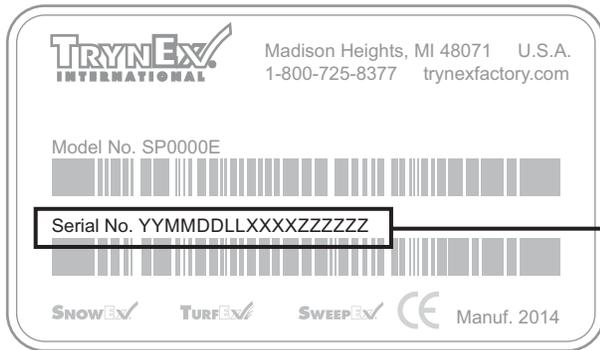
SAFETY

Passenger-Side Labels



SAFETY

SERIAL NUMBER LABEL



Code	Definition
YY	2-Digit Year
MM	2-Digit Month
DD	2-Digit Day
LL	2-Digit Location Code
XXXX	4-Digit Sequential Number
ZZZZZ	Assembly Part Number

SAFETY

SAFETY PRECAUTIONS

Improper installation and operation could cause personal injury and/or equipment and property damage. Read and understand labels and this Owner's Manual before installing, operating, or making adjustments.

⚠ WARNING

- Driver to keep bystanders minimum of 25 feet away from operating spreader.
- Before working with the spreader, secure all loose-fitting clothing and unrestrained hair.
- Before operating the spreader, verify that all safety guards are in place.
- Before servicing the spreader, wait for conveyor, auger, and spinner to stop.
- Do not climb into or ride on spreader.

⚠ WARNING



Overloading could result in an accident or damage. Do not exceed GVWR or GAWR ratings as found on the driver-side vehicle door cornerpost. See Loading section to determine maximum volumes of spreading material.

⚠ WARNING

Do not install the control for this product in the deployment path of an air bag. Refer to vehicle manufacturer's manual for air bag deployment area(s).

⚠ WARNING

Vehicles <10,000 lb GVWR: Obstructing the visibility from the vehicle's rear camera could result in serious injury or damage. An auxiliary camera system shall be installed if the vehicle's rear camera is removed or blocked.

⚠ CAUTION

If rear directional, CHMSL light, or brake stoplights are obstructed by the spreader, the lights shall be relocated, or auxiliary directional or brake stoplights shall be installed.

⚠ CAUTION

During the hopper installation we recommend the addition of an OSHA-compliant backup alarm. This alarm is required for OSHA governed employers.

⚠ CAUTION

- Do not operate a spreader in need of maintenance.
- Before operating the spreader, reassemble any parts or hardware removed for cleaning or adjusting.
- Before operating the spreader, remove materials such as cleaning rags, brushes, and hand tools from the spreader.
- Before operating the spreader, read the engine owner's manual, if so equipped.
- While operating the spreader, use auxiliary warning lights, except when prohibited by law.
- Tighten all fasteners according to the Torque Chart. Refer to Torque Chart for the recommended torque values.

⚠ CAUTION

Disconnect electric and/or hydraulic power and tag out, if required, before servicing or performing maintenance.

⚠ CAUTION



DO NOT leave unused material in hopper. Material can freeze or solidify, causing unit to not work properly. Empty and clean after each use.

NOTE: Lubricate grease fittings after each use. Use a good quality multipurpose grease.

FUSES

The electrical system contains several automotive-style fuses. If a problem should occur and fuse replacement is necessary, the replacement fuse must be of the same type and amperage rating as the original. Installing a fuse with a higher rating can damage the system and could start a fire.

SAFETY

PERSONAL SAFETY

- Remove ignition key and put the vehicle in PARK or in gear to prevent others from starting the vehicle during installation or service.
- Wear only snug-fitting clothing while working on your vehicle or spreader.
- Do not wear jewelry or a necktie, and secure long hair.
- Wear safety goggles to protect your eyes from battery acid, gasoline, dirt, and dust.
- Avoid touching hot surfaces such as the engine, radiator, hoses, and exhaust pipes.
- Always have a fire extinguisher rated BC handy, for flammable liquids and electrical fires.

FIRE AND EXPLOSION

⚠ WARNING

Gasoline is highly flammable and gasoline vapor is explosive. Never smoke while working on vehicle. Keep all open flames away from gasoline tank and lines. Wipe up any spilled gasoline immediately.

Be careful when using gasoline. Do not use gasoline to clean parts. Store only in approved containers away from sources of heat or flame.

CELL PHONES

A driver's first responsibility is the safe operation of the vehicle. The most important thing you can do to prevent a crash is to avoid distractions and pay attention to the road. Wait until it is safe to operate Mobile Communication Equipment such as cell phones, text messaging devices, pagers, or two-way radios.

VENTILATION

⚠ WARNING

Vehicle exhaust contains lethal fumes. Breathing these fumes, even in low concentrations, can cause death. Never operate a vehicle in an enclosed area without venting exhaust to the outside.

BATTERY SAFETY

⚠ CAUTION

Batteries normally produce explosive gases which can cause personal injury. Therefore, do not allow flames, sparks, or lit tobacco to come near the battery. When charging or working near a battery, always cover your face and protect your eyes, and also provide ventilation.

- Batteries contain sulfuric acid, which burns skin, eyes, and clothing.
- Disconnect the battery before removing or replacing any electrical components.

TORQUE CHART

⚠ CAUTION

Read instructions before assembling. Fasteners should be finger tight until instructed to tighten according to the Torque Chart. Use standard methods and practices when attaching spreader, including proper personal protective safety equipment.

Recommended Fastener Torque Chart

Inch Fasteners Grade 5 and Grade 8

Size	Torque (ft-lb)		Size	Torque (ft-lb)	
	 Grade 5	 Grade 8		 Grade 5	 Grade 8
1/4-20	8.4	11.9	9/16-12	109	154
1/4-28	9.7	13.7	9/16-18	121	171
5/16-18	17.4	24.6	5/8-11	150	212
5/16-24	19.2	27.3	5/8-18	170	240
3/8-16	30.8	43.6	3/4-10	269	376
3/8-24	35.0	49.4	3/4-16	297	420
7/16-14	49.4	69.8	7/8-9	429	606
7/16-20	55.2	77.9	7/8-14	474	669
1/2-13	75.3	106.4	1-8	644	909
1/2-20	85.0	120.0	1-12	704	995

Metric Fasteners Class 8.8 and 10.9

Size	Torque (ft-lb)		Size	Torque (ft-lb)	
	 Class 8.8	 Class 10.9		 Class 8.8	 Class 10.9
M6 x 1.00	7.7	11.1	M20 x 2.50	325	450
M8 x 1.25	19.5	26.9	M22 x 2.50	428	613
M10 x 1.50	38.5	53.3	M24 x 3.00	562	778
M12 x 1.75	67	93	M27 x 3.00	796	1139
M14 x 2.00	107	148	M30 x 3.50	1117	1545
M16 x 2.00	167	231	M33 x 3.50	1468	2101
M18 x 2.50	222	318	M36 x 4.00	1952	2701

These torque values apply to fasteners except those noted in the instructions.

LOADING

This Owner's Manual covers vehicles that have been recommended for carrying the hopper spreader. Please see your local dealer for proper vehicle applications.

CERTIFICATION

WARNING

New untitled vehicle installation of a spreader requires National Highway Traffic Safety Administration altered vehicle certification labeling. Installer to verify that struck load of snow or ice control material does not exceed GVWR or GAWR rating label and complies with FMVSS.

WARNING

Overloading could result in an accident or damage. Do not exceed GVWR or GAWR as found on the driver-side cornerpost of vehicle.

CAUTION

Never use wet materials or materials with foreign debris with any of these spreaders. These units are designed to handle dry, clean, free flowing material.

CAUTION



Read and adhere to manufacturer's ice-control material package labeling, including Safety Data Sheet requirements.

MATERIAL WEIGHTS

Material	Density		
	(lb/ft ³)	(lb/yd ³)	(kg/m ³)
Salt	80	2160	1282
Sand	100	2700	1602

Material densities are approximate and are based on dry, loose material. It is the responsibility of the operator to know the weight of the material to be spread and the vehicle carrying capacity.

DETERMINING VEHICLE PAYLOAD

WARNING

Overloading could result in an accident or damage. Do not exceed GVWR or GAWR ratings as found on the driver-side door cornerpost of the vehicle. Follow the steps below to determine maximum volumes of spreading material.

1. Install the hopper spreader and optional equipment according to the instructions.
2. Install or attach any other equipment that will be on the vehicle while the hopper spreader will be in use (step bumper, trailer hitch, snowplow, etc.). Fill gas tanks.
3. Obtain the Gross Vehicle Weight Rating (GVWR), Front Gross Axle Weight Rating (FGAWR), and Rear Gross Axle Weight Rating (RGAWR) from the certification label located inside the driver-side door jamb or door.
4. With the occupants in the truck for normal hopper spreader operation, weigh the vehicle to obtain gross vehicle weight (GVW).
5. Subtract the GVW from the GVWR to determine the available material payload.
6. Obtain the weight per cubic yard (lb/yd³) of the desired material. Divide the weight into the payload to determine the maximum volume of material that can be carried.
7. Fill the hopper with the calculated volume of material. Reweigh the vehicle with occupants and verify that the GVW is less than the vehicle's ratings.
8. Repeat Steps 6 and 7 for each type of material.

MOUNTING THE SPREADER

MOUNTING INSTRUCTIONS

⚠ WARNING

Spreader shall be bolted to vehicle frame. Do not rely on the tie-down chains or straps alone to hold spreader in vehicle.

⚠ WARNING

Rear stop bracket, ratchet straps, and mount kit must always be in place. All mounting systems work together; none of them should be used exclusive of the other methods. Do not remove unless servicing spreader or removing the spreader from vehicle. Check straps and hardware before each use, making sure that spreader is completely stable.

NOTE: Periodically throughout the snow and ice control season, verify that mounting devices are secure.

1. If installing on a dump body, remove the tailgate. If installing on a flatbed, remove the stake sides.

⚠ CAUTION

Before lifting, verify that hopper is empty of material. The lifting device must be able to support the spreader's weight

2. Load spreader onto the truck bed.
3. Install the rear stop bracket onto the auger extension using the provided hardware.
4. Slide the spreader forward until the stop bracket touches the rear of the truck body.
5. Center the spreader side to side on the truck bed. The spreader must be centered for the safety of the vehicle, the driver, and those nearby.

6. There are four holes in the bottom flange of each side frame. These holes will be used to mount the spreader to the truck body. There are also two holes in the rear stop bracket. Mark all of these holes with paint, a permanent marker, an oil pencil, or similar device.
7. Look underneath the truck body to be sure that there is clearance for the holes to be drilled. If there are interferences, the holes can be relocated in the spreader frame. If the holes need to be relocated, make sure that there is adequate fastening at the front and back.

⚠ CAUTION

Before drilling holes, check to be sure that no vehicle wiring or other components could be damaged.

8. Using a 9/16" drill bit, drill the holes in the marked locations. (The spreader may need to be moved side to side in order to drill the holes without climbing underneath the truck.)

NOTE: Pay special attention when drilling or clamping dissimilar metals to aluminum bodies. Galvanic corrosion can occur if not handled properly. Contact vehicle manufacturer for recommended attachment practices.

9. Slide the spreader back into the vehicle bed, aligning it with the drilled holes. Install fasteners through the spreader frame and truck body, with the washer and nut below. Tighten all fasteners according to the torque chart.
10. Attach the ratchet straps to the spreader frame using the provided 1/2" x 1" cap screw, 1/2" washer, and 1/2" serrated flange nut as shown in the diagram. Tighten the fasteners. Hook the outer end of each ratchet strap to the truck body. Tighten the straps.

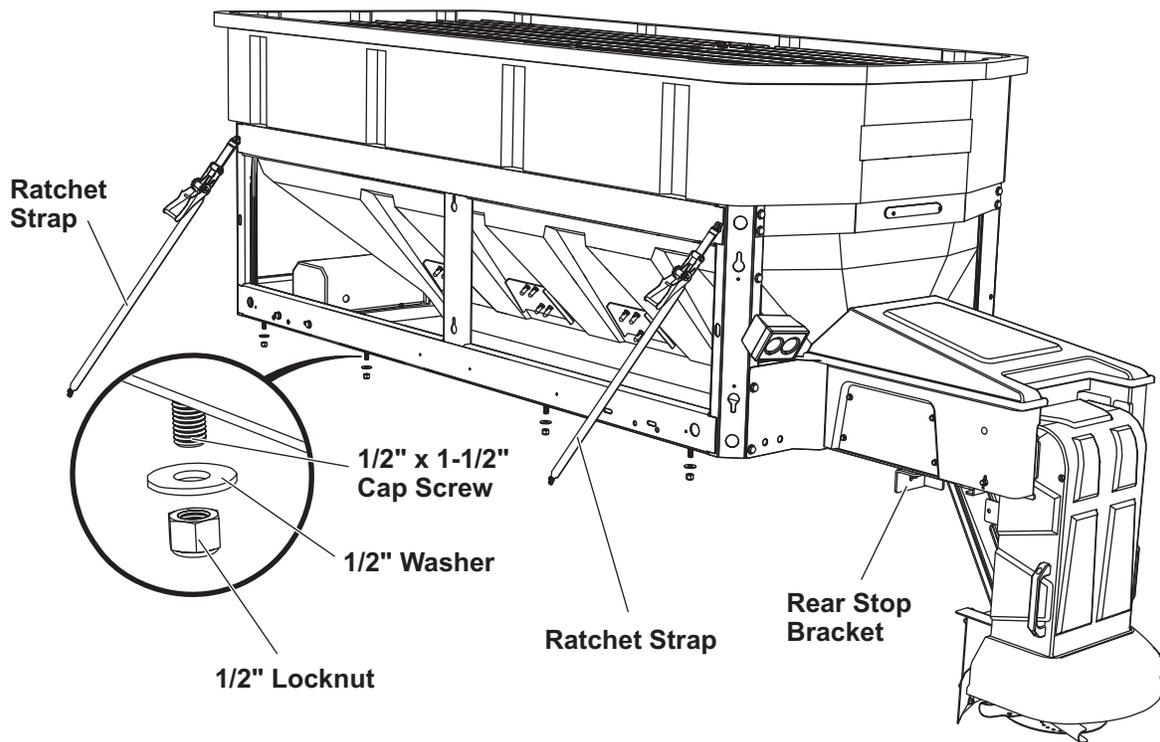
MOUNTING THE SPREADER

⚠ WARNING

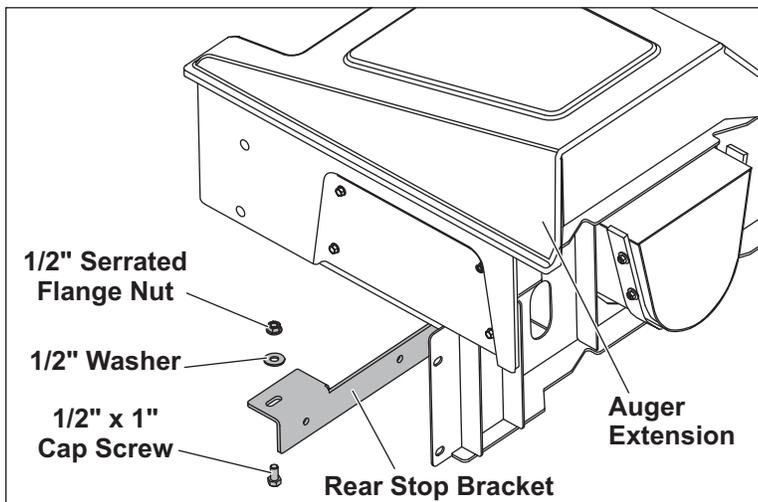
Check straps and hardware before each use, making sure that spreader is completely stable.

⚠ WARNING

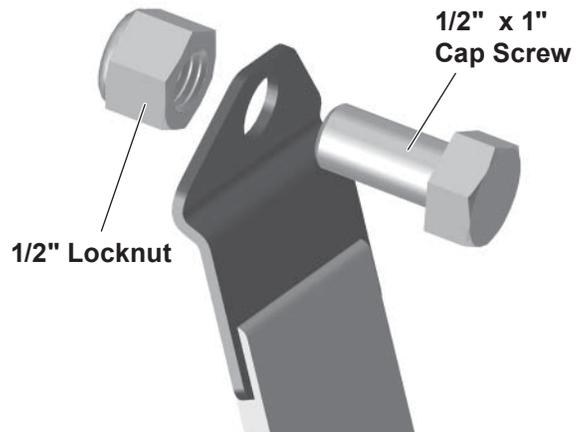
Rear stop bracket, ratchet straps, and mount kit must always be in place. All mounting systems work together; none of them should be used exclusive of the other methods. Do not remove unless servicing spreader or removing the spreader from vehicle. Check straps and hardware before each use, making sure that spreader is completely stable.



Rear Stop Bracket Fasteners



Ratchet Strap Fasteners



INSTALLING ELECTRICAL HARNESSES

WIRING INSTRUCTIONS

1. Mount the rear plug bracket on the back of the vehicle using supplied fasteners. Locate the bracket toward the center of the bumper, as that will reduce the amount of debris getting onto the plug.
2. Mount the vehicle harness plugs to the bumper bracket that was just installed. (The power harness plug will need to be removed and mounted to the bracket, then reconnected to the wires.) Apply dielectric grease to the plugs.
3. Route the wires from the back to front, being careful to avoid any sharp, hot, or moving parts. Secure the wires using cable ties or clamps (not supplied). Do not secure to brake lines or fuel lines. Use heavy-duty cable ties along the frame and lighter duty cable ties everywhere else.

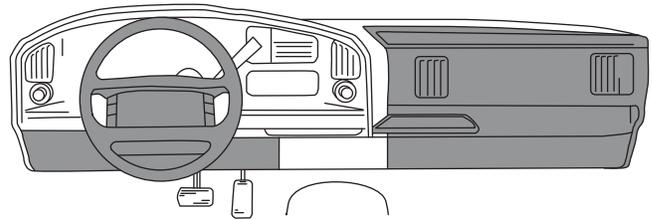
⚠ CAUTION

Before drilling holes, check to be sure that no vehicle wiring or other components could be damaged.

4. Drill a 3/4" hole in the fire wall near the steering column. Be sure to check for wires and components in the way (both sides of the fire wall) before drilling.

⚠ CAUTION

Do not alter, modify, or install additional components in shaded areas shown below. Failure to comply may interfere with airbag deployment or cause injury to operator in an accident.

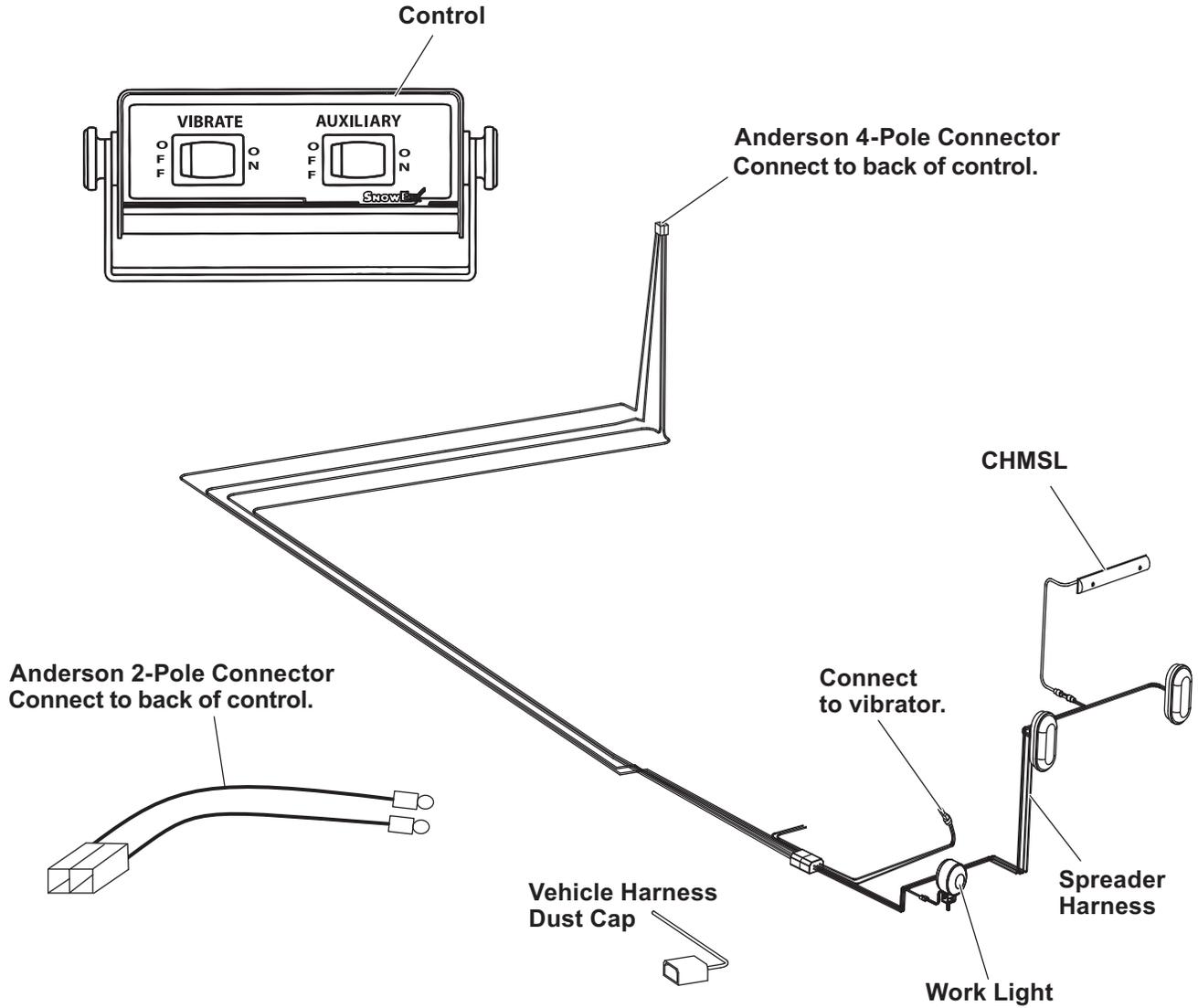


5. Run the data cable into the cab. Cable tie the wire under the dashboard so that it does not get in the way of the brake or accelerator pedals. Install the control mounting base and bracket.
6. Connect the harness to the back of the control. Wrap loose control harness with cable ties and move it to the engine compartment. Do not mount close to any heater vents.
7. Connect the power leads to the battery. Always connect to the primary battery when using a dual battery system.
 - Red — POSITIVE (+)
 - Black — NEGATIVE (-)
8. Secure loose loom to any other large or medium vehicle harness, using medium-duty cable ties to secure the wiring harness.
9. Push the ON/OFF button on the control to check for power. Once power is confirmed, turn the control OFF.

The electrical portion of the installation is complete.

ELECTRICAL DIAGRAM

CONTROL AND HARNESS DIAGRAM



OPERATING THE SPREADER

OPERATING THE SPREADER – CAB CONTROL

⚠ WARNING

Never operate equipment when under the influence of alcohol, drugs, or medications that might alter your judgment and/or reaction time.

⚠ WARNING

Never exceed 45 mph (72 km/h) when loaded spreader is attached to vehicle. Braking distances may be increased and handling characteristics may be impaired at speeds above 45 mph (72 km/h).

⚠ WARNING

Never allow children to operate or climb on equipment.

⚠ WARNING

Before starting the spreader, the driver shall verify that all bystanders are a minimum of 25 feet away from operating spreader.

Using the Control

To start the spreader, press the ON/OFF switch on the control.

Pressing the ON/OFF switch again will turn the spreader OFF.

NOTE: The truck ignition must be ON to start the spreader.

NOTE: If truck ignition is turned OFF while the spreader is running, the auger and spinner motors will stop.

Press the ON/OFF switch. The auger and spinner will begin to turn, spreading the material.

See "Adjusting the Spinner" for instructions on how to adjust the material distribution.

Press the ON/OFF switch to turn OFF the spreader and stop spreading.

SPREADING TIPS

- Spread ice melters with the storm to prevent unmanageable levels of ice.
- Never exceed 10 miles per hour when spreading.
- Calculate spread pattern when near vegetation and other vehicles.
- Never operate spreader near pedestrians.

For a heavier pass:

- Decrease vehicle speed.

For a lighter pass:

- Increase vehicle speed.

For a wider pass:

- See "Adjusting the Spinner."

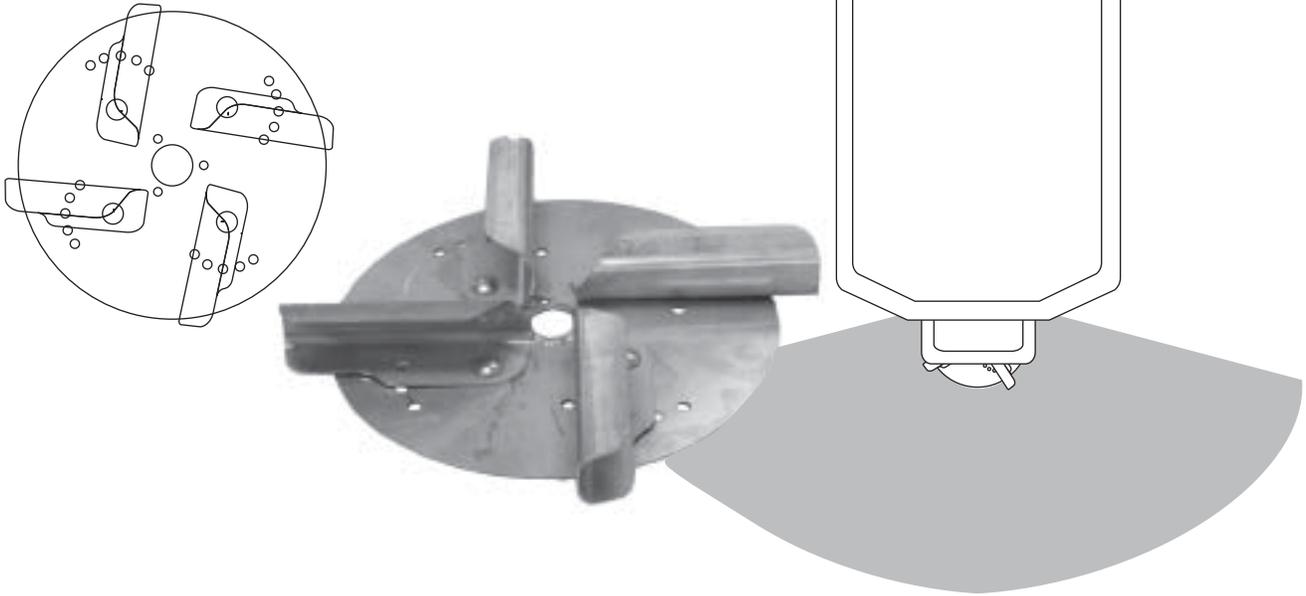
OPERATING THE SPREADER

ADJUSTING THE SPINNER

The spreader is equipped with an adjustable spinner to assist in more precise material application. The spinner plate gives the operator control over whether the material spreads to the right, left, or centered.

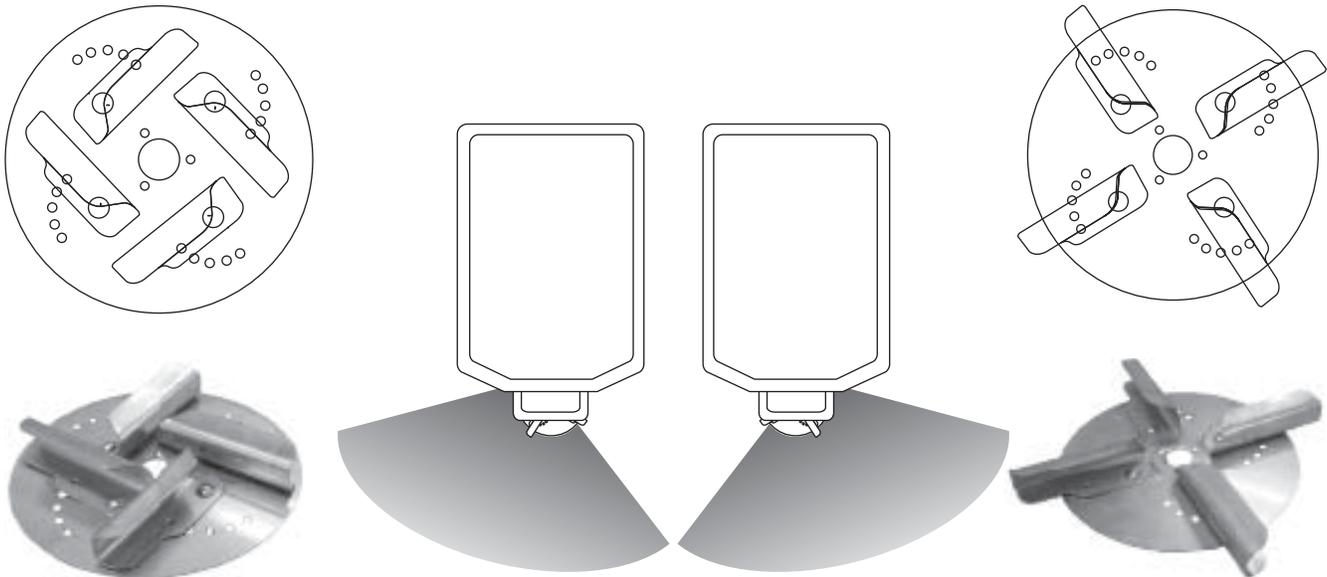
Before operating the spreader, spread some material in a clear area where the spread pattern can be easily observed to see how it changes with fin adjustment. Use the instructions below as a guide to get the desired spread pattern.

When the fins are in the center adjustment position, the spread pattern will be mostly centered.



When looking down at the spinner, moving the fins clockwise will adjust the spread pattern toward the left side of the spreader.

When looking down at the spinner, moving the fins counterclockwise will adjust the spread pattern toward the right side of the spreader.



OPERATING THE SPREADER

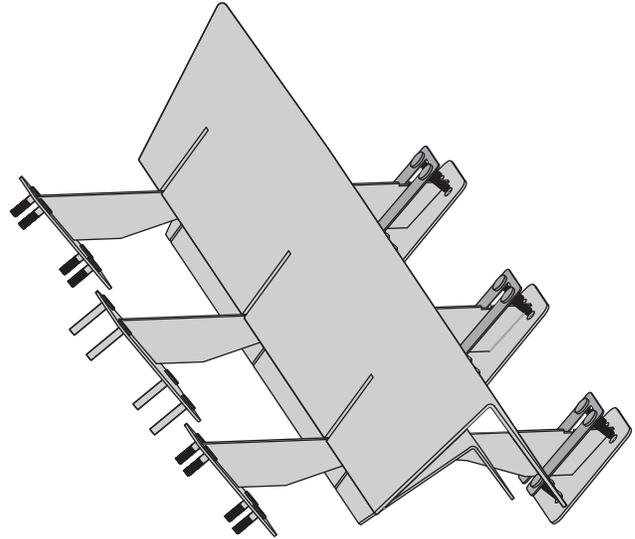
INVERTED V

⚠ WARNING

Always disconnect the power source before attempting to remove the material baffle.

The Super Maxx™ SP-9300XH hopper spreader uses an inverted V baffle design over the auger area. This baffle reduces the load on the auger. The inverted V should not be removed unless servicing the unit.

The secondary salt baffle can be removed for spreading sand/salt mix.

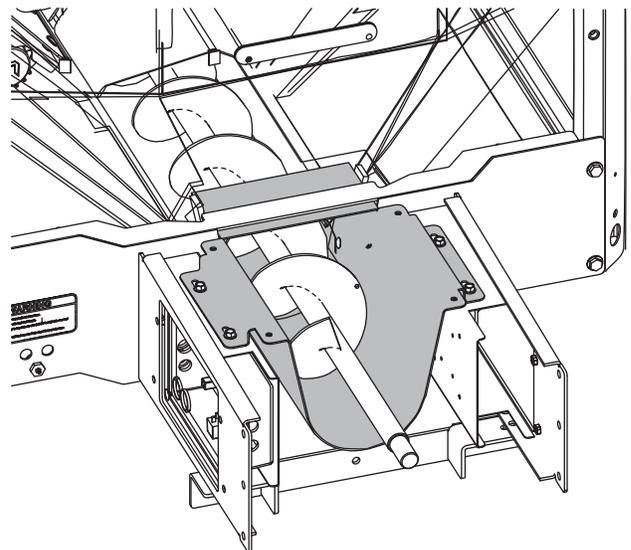


AUGER DISCHARGE TROUGH

⚠ WARNING

Always disconnect the power source before attempting to remove the auger discharge trough.

The Super Maxx SP-9300XH hopper spreader uses an auger discharge trough to reduce material leakage. It must not be removed unless servicing the unit.



MAINTENANCE

⚠ WARNING

Never remove the spreader with material in the hopper.

⚠ CAUTION

Disconnect electric power at spreader electrical wiring harness connection and tag out if required before servicing or performing maintenance.

⚠ CAUTION

When servicing is necessary, perform it in a protected area. Do not use power tools in rain or snow because of danger of electrical shock or injury. Keep area well lit. Use proper tools. Keep the area of service clean to help avoid accidents.

⚠ CAUTION

- Do not modify vehicle or spreader wiring harness. Doing so will void product warranty.
- When replacing parts use only original manufacturer's parts. Failure to do so will void warranty.
- The control is a solid-state electronic unit and is not serviceable. Any attempt to service will void warranty.
- There are no serviceable parts in the motor/transmission assembly. Any attempt to service will void warranty.
- When pressure washing motor enclosure area, keep spray at least 36" away from motor enclosures.
- Vibrator and spinner motor are not designed for continuous duty. Allow motor to cool between long cycle times.

LUBRICATION

To keep your spreader running smoothly, observe the following recommendations:

- Lubricate bearings after every 20 hours of use.
- Apply a small amount of light oil to latches as needed.

AFTER FIRST USE

Tighten all nuts and fasteners on spreader and mount.

AFTER EACH USE

⚠ CAUTION



DO NOT leave unused material in hopper. Material can freeze or solidify, causing unit to not work properly. Empty and clean after each use.

- Wash unit after each use to prevent material build-up and corrosion.
- Apply dielectric grease on all electrical connections to prevent corrosion.

MAINTENANCE

AT THE END OF EACH SEASON OR AFTER EXTENDED STORAGE

- To prevent corrosion, apply dielectric grease on all electrical connections at the beginning and end of the season and each time the power plugs are disconnected.
- Wash out the hopper and rinse off all external surfaces to prevent material build-up and corrosion.
- Paint or oil all bare metal surfaces before putting the unit in storage.
- Apply a small amount of light oil to latches as needed.
- If motor cover is removed for any reason, use silicone sealant to ensure weatherproofing of enclosure.

FUSE REPLACEMENT

If a problem should occur and fuse replacement is necessary, the replacement fuse must be of the same type and amperage rating as the original. Installing a fuse with a higher rating can damage the system and could start a fire.

STORAGE

Store the spreader in a clean, dry location and away from direct sunlight.

NOTE: In the off-season, remove the control and store it in a cool, dry place. Vehicle interior summer temperatures could damage the circuit board and void the warranty.

TROUBLESHOOTING GUIDE

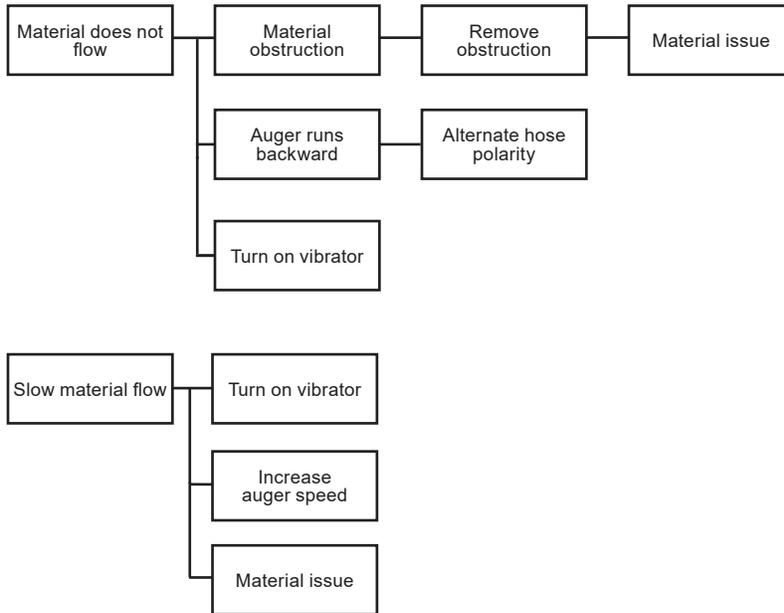
PRELIMINARY CHECKS

- Verify that all electrical connections are tight and clean.
- Verify that nothing is jammed in the hopper.
- Verify that all hydraulic connections are properly connected.

Problem	Possible Cause	Suggested Solution
Motor doesn't run	Loose hose connection	Check all connections
	Low fluid or pump malfunction	Fill reservoir or replace pump
Material not flowing from hopper	Empty hopper	Fill hopper
	Wet material	Replace with dry material
	Frozen or coarse material	Replace material
	Spinner not turning	Check drive assembly
	Auger coupling disengaged	Realign and tighten all set screws
	Vibrator not working	Check electrical connections

TROUBLESHOOTING GUIDE

TROUBLESHOOTING MATERIAL FLOW





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