

#### **SAFETY DEFINITIONS**

# **A** WARNING

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

#### A CAUTION

Indicates a potentially hazardous situation that, if not avoided, may result in minor to 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 AND INSTRUCTION LABELS

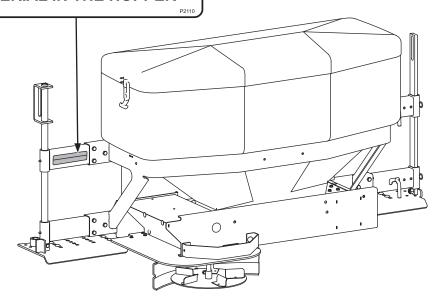
Become familiar with and inform users about the warning and caution labels on the spreader.

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

# **A** CAUTION

DO NOT SWING SPREADER WITH MATERIAL IN THE HOPPER

Caution Label, pivot mount only (located on both sides)



#### SAFETY PRECAUTIONS

Park the vehicle on a level surface, place shift lever in PARK or NEUTRAL and set the parking brake. Turn OFF the engine and remove keys.

#### **A 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 all safety guards are in place.
- Before servicing the spreader, wait for conveyor, auger or spinner to stop, then lock out power.
- Do not climb into or ride on spreader.

## **A 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.

#### **A** 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.

## **A** CAUTION

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

#### A 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.
- 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.

#### **A** CAUTION

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

#### **A** 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.

# 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**

#### **A** WARNING

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

#### BATTERY SAFETY

# **A** CAUTION

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

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

#### **NOISE**

Airborne noise emission during use is below 70 dB(A) for the spreader operator.

#### VIBRATION

Operating snowplow vibration does not exceed 2.5 m/s<sup>2</sup> to the hand-arm or 0.5 m/s<sup>2</sup> to the whole body.

#### **TORQUE CHART**

#### **A** CAUTION

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

Recommended Fastener Torque Chart (ft-lb)				
Size	Torque			
	SAE Grade 2	SAE Grade 5	SAE Grade 8	
1/4-20	6	9	13	
5/16-18	11	18	28	
3/8-16	19	31	46	
3/8-24	24	46	68	
7/16-14	30	50	75	
1/2-13	45	75	115	
9/16-12	66	110	165	
5/8-11	93	150	225	
3/4-10	150	250	370	
7/8-9	150	378	591	
1-8	220	583	893	
Metric Grade 8.8 (ft-lb)				
Size	Torque	Size	Torque	
M 6	7	M 12	60	
M 8	17	M 14	95	
M 10	35	M 16	155	
These torque values apply to fasteners except those noted in the instruction				

# WEIGHT/LOADING RESTRICTIONS

These instructions cover vehicles recommended for carrying the spreader. Please see your sales outlet for proper vehicle applications.

# **A** WARNING

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

#### CERTIFICATION

#### **A** 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.

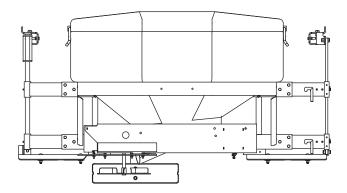
# **APPROXIMATE MATERIAL WEIGHTS**

#### A CAUTION

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

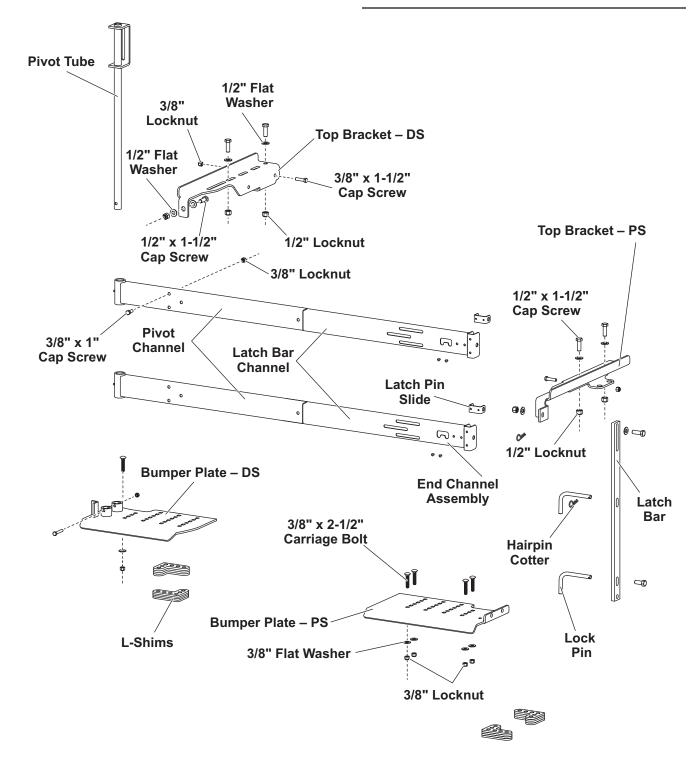
	Density	
Material	(lb per cubic ft)	
Very Coarse Salt	35	
Coarse Salt	45	
Fine Salt	50	
Average Density for Salt	40	

Weight of spreader and mount must be added to struck material weight to determine total spreader weight.



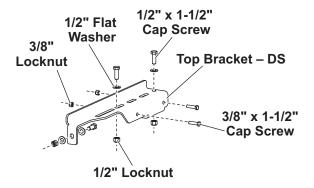
# **Pivot Mount Installation**

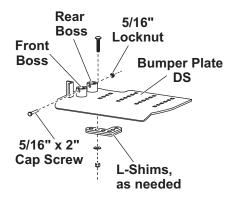
NOTE: Remove any existing trailer hitch and other after-market equipment that may interfere with the installation of this product according to these instructions.



# **PIVOT MOUNT INSTALLATION**

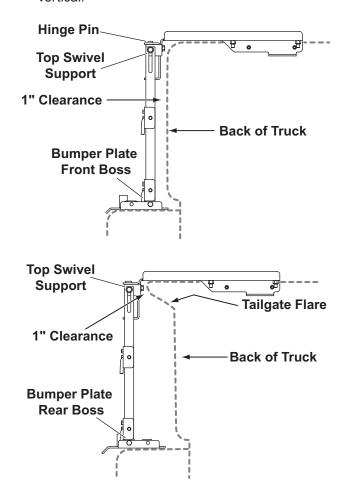
- 1. Shut vehicle OFF and remove key from ignition.
- 2. Remove all mount assembly parts and hardware from the shipping carton.
- 3. Set the bumper plates on the bumper in the approximate positions where they will be installed.





Use L-shims to compensate for bumpers that are stepped or not completely flat.

4. Set the top brackets on the truck bed rail and loosely fasten pivot tube and latch bar to top brackets and bumper plates, leaving at least 1" clearance between frame and rearmost tailgate. The mount bumper plates have two configurations to allow room for tailgate flares at the top. Make sure the pivot tube and latch bar are completely vertical.



NOTE: The pins must be vertical and the bracket bosses must be aligned with each other. Any misalignment will create difficulty in removal of the pins. Use shims as required to align parts.

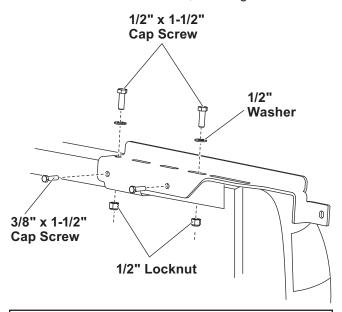
5. Clamp top brackets into place. Use the large slots in the top of the brackets as guides to locate and mark two holes on each side. Check under the bed rails for any obstructions before choosing the hole locations. Remove the vehicle tail lamps, if necessary, to locate the rearmost holes.

# **A** CAUTION

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

Center punch and drill 17/32" diameter holes through the bed rail in the marked positions (2 per side). Install and tighten the 1/2" x 1-1/2" cap screws, two flat washers and two locknuts.

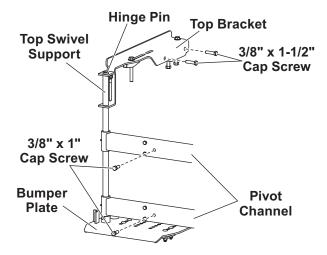
If it is not possible to install the rearmost cap screw from above, remove the vehicle tail lamp and install the 1/2" locknut, inserting it from below.



# **A** CAUTION

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

7. Use the 3/8" pre-punched holes in the top bracket as a template to center punch and drill two 13/32" diameter holes in the inside flanges of each side of the truck bed. Check behind the bed rail for any obstruction before choosing holes. 8. Install and tighten two 3/8" x 1-1/2" cap screws, two flat washers and two locknuts through the bracket and inside flanges on each side of the truck bed.



 Readjust the bumper plates if necessary to ensure vertical alignment with the top brackets and clearance to the vehicle. Verify that the pivot tube does not bind when inserted in the top bracket and the bumper plate.

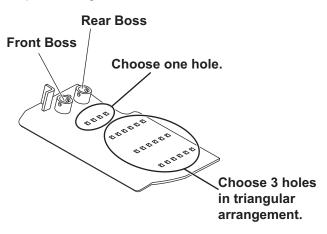
## **A** CAUTION

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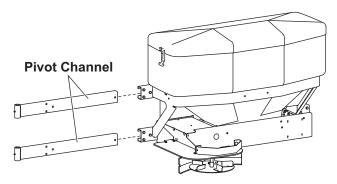
- 10. With the pivot tube and latch bar in the vertical position, mark four holes on each bumper plate to be drilled, making sure that there are no obstructions or electrical harnesses underneath the bumper. (If using the L-shims to level the bumper plates, mark holes that align with the L-shims to keep the bumper plates level.)
- Drill the marked holes in the bumper with a 13/32" drill. Install the eight carriage bolts into the bumper plates. Loosely tighten all fasteners to the bumper.

# PIVOT MOUNT INSTALLATION

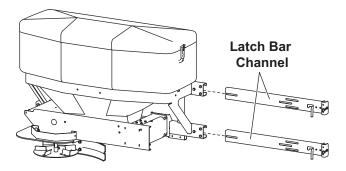
12. If L-shims are used, at least one fastener should pass through each set of shims.



13. Slide pivot channels into driver-side tailgate spreader as shown, using the supplied 3/8" hardware. Loosely fasten them in place.



14. Slide latch bar channels into passenger-side tailgate spreader as shown, using the supplied 3/8" hardware. Loosely fasten them in place.



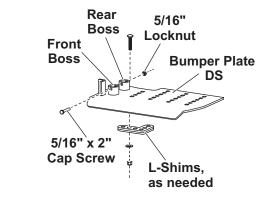
NOTE: Passenger-side channels have slots to adjust the width to align to the pivot mount. The passenger-side channels will use the supplied washers to ensure a tight channel to spreader frame connection.

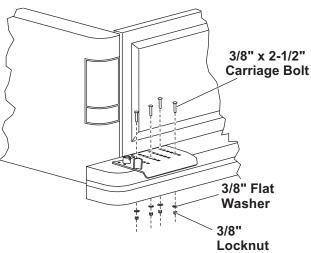
15. Remove the pivot tube from the mount setup on the truck. Slide into the driver-side pivot channels.

#### A CAUTION

During removal or mounting, securely grip spreader to avoid dropping.

16. Lift the spreader assembly and place the pivot tube into the boss that was configured for set-up. Install and tighten the 5/16" x 2" cap screw and locknut. Place the 1/2" x 1-1/2" cap screw, two washers and locknut into the driver-side top bracket and pivot tube slot. Tighten in place.





- 17. Pivot the spreader assembly toward the latch bar. Slide and adjust the passenger-side channels to align with the latch bar. Lift and slide the latch pins into place.
- 18. Recheck all alignments of the pivot tube and latch bar. Tighten all channel and the bumper plate hardware according to the torque chart on page 4.

The company reserves the right under its product improvement policy to change construction or design details and furnish equipment when so altered without reference to illustrations or specifications used. This equipment manufacturer or the vehicle manufacturer may require or recommend optional equipment for spreaders. Do not exceed vehicle ratings with a spreader. The company offers a limited warranty for all spreaders and accessories. See separately printed page for this important information.		
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