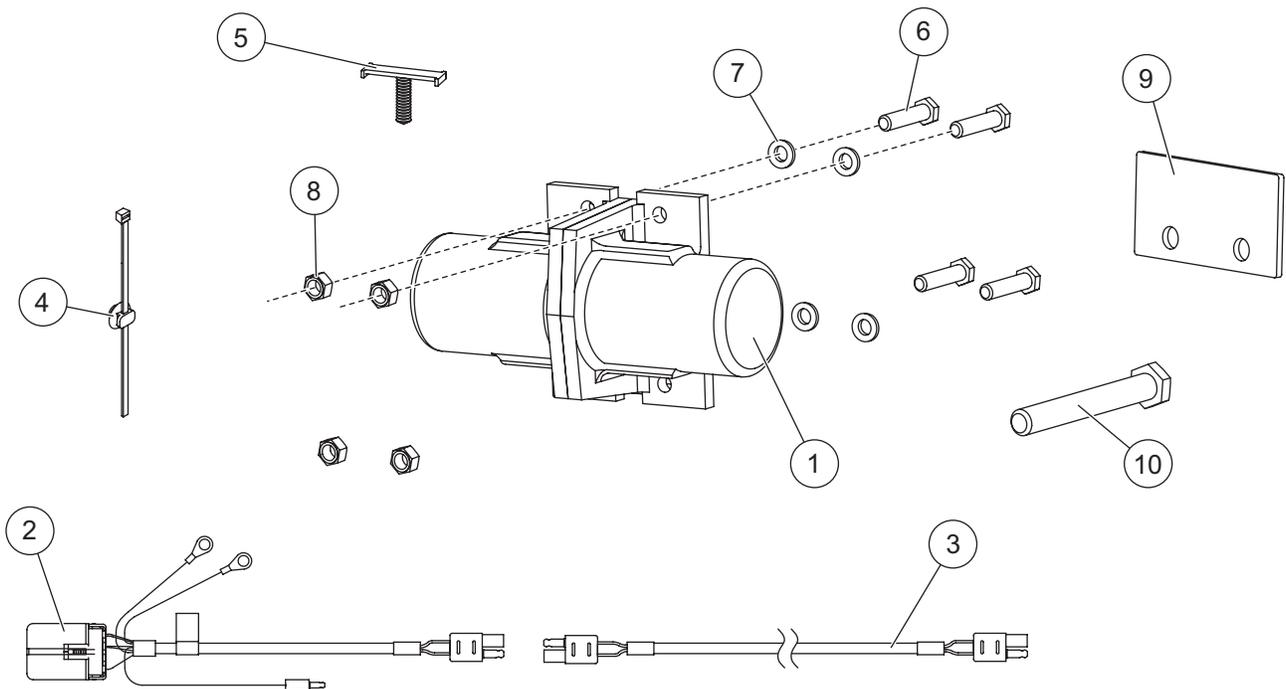


Vibrator Kit

Stainless Steel & Poly Hopper Spreaders with FLEET FLEX Electrical System

PARTS LIST



99504-1 Vibrator Kit							
Item	Part	Qty	Description	Item	Part	Qty	Description
1	85151	1	Vibrator – Service Part	5		4	Bundling Clip
2	78382	1	Relay/Fuse Harness Assembly	ns	61536	10	Cable Tie – Long
3	78391	1	Harness Assy – Vibrator Extension	ns	95095	1	Bolt Bag – Vibrator Kit
4		4	Fir Tree Mount w/Cable Tie				
95095 Bolt Bag – Vibrator Kit							
6		4	3/8-16 x 1-1/2 Hex Cap Screw SS	9		1	Spacer Plate
7		4	3/8 Flat Washer Wide SS	10		1	5/8-11 x 4 Take-Up Bolt SS
8		4	3/8-16 Locknut SS				
ns = not shown				SS = Stainless Steel			

INSTALLATION INSTRUCTIONS

⚠ WARNING

Do not exceed GVWR or GAWR ratings as found on the driver-side vehicle door cornerpost.

⚠ CAUTION

Read this document before installing the vibrator kit.

⚠ CAUTION

Use standard methods and practices when attaching spreader and installing accessories, including proper personal protective safety equipment.

⚠ CAUTION

Contact with a vibrating surface can cause numbness, tingling and loss of dexterity. Users should take breaks and wear gloves to limit vibrating exposure.

⚠ CAUTION

Plants can be damaged when exposed to vibrating surface.

REMOVING THE SPREADER

For Stainless Steel Spreaders

If necessary for installation, the spreader may be removed from the vehicle.

1. Unplug the chute motor plug from the hopper body (passenger side of the chute).
2. Remove and retain the chute attachment pins.
3. Remove the chute and set it on its side on the ground or work bench. Two people are recommended for this step, as the chute weighs more than 70 lb.
4. Remove and retain the hopper mounting bolts and tie-downs for reinstallation.

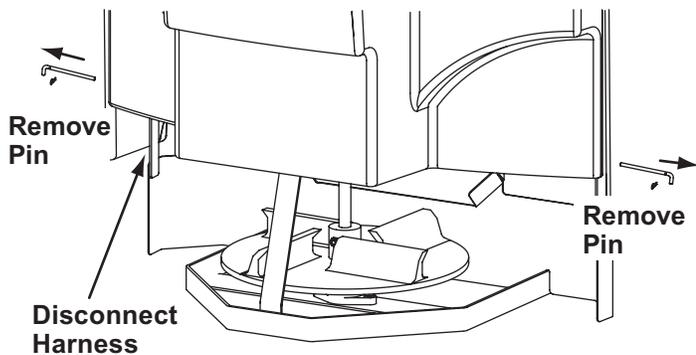
⚠ CAUTION

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

5. Attach slings to the four corner lift points and, using a hoist, lift the hopper out of the vehicle. Move the spreader to the storage location with the hoist or lower it onto blocks and use a forklift to move it to a secure location.
6. Use blocking to ensure that the spreader is stable.

For Poly Spreaders

1. The spreader can be removed from the truck bed either by lifting the spreader by the four molded-in handles located on the corner legs or by sliding the spreader out of the truck bed onto the ground.
2. To remove the spreader from the truck without a lifting device, first make sure all material has been removed from the spreader and the chute is detached. To empty the spreader and remove the chute:
 - a. Remove the two pins that hold the chute to the hopper body.



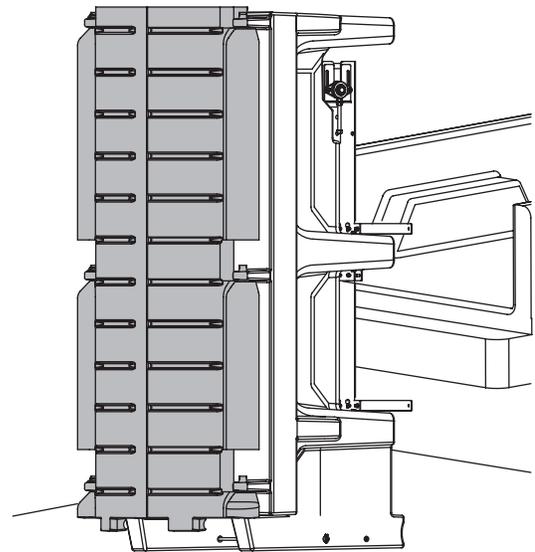
- b. Disconnect the spinner motor connector.
 - c. Grasp the chute, raise it and remove it from the hopper body.
 - d. Operate the hopper to convey all material from the spreader.
3. Disconnect the electrical connections at the spreader.
4. Remove any means used to attach the spreader to the truck bed and ensure the lids are closed securely.

Retain any fasteners and tie-downs for reinstallation.

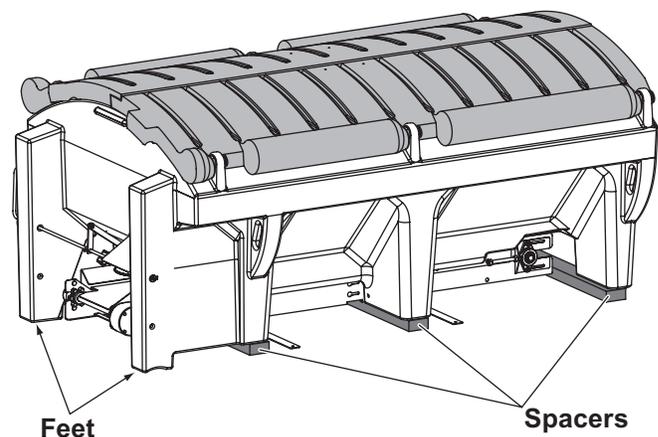
⚠ CAUTION

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

5. To remove the spreader without a lifting device, two or more people are recommended. Move spreader rearward until it balances at the rear of the bed. Carefully lower the back of the spreader to the ground so it is resting on its feet.
6. Tip the spreader up so it is fully supported by the feet.



7. **Do not leave an unsecured spreader standing on its feet.** Lower the spreader so it is resting on its 6 legs and place spacers under the legs so the feet at the rear of the spreader are off the ground.



VIBRATOR INSTALLATION

For Stainless Steel Spreaders

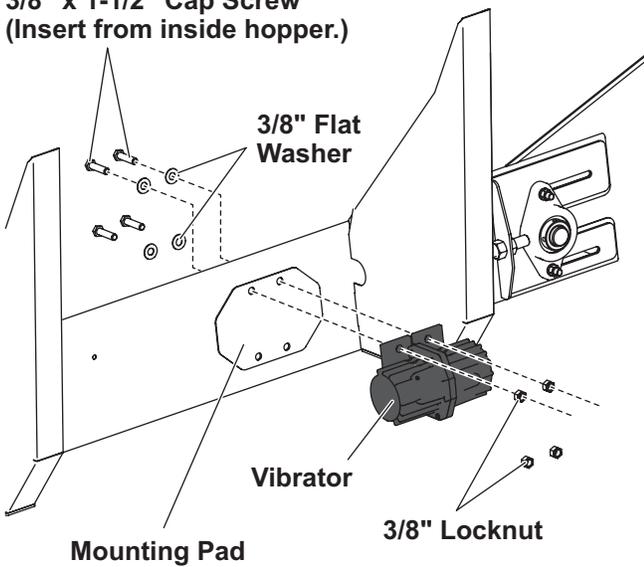
Gas and Hydraulic Spreaders: The Accessory Harness and Bracket Kit must be installed before the vibrator accessory can be installed.

Stainless Steel Electric Spreader: The vibrator relay/fuse assembly will be installed in the existing electrical enclosure.

The vibrator can be mounted on either side of the hopper. A mounting pad and holes to secure the harness are provided on both sides of the hopper sill. The illustrations below show the vibrator being mounted on the passenger side.

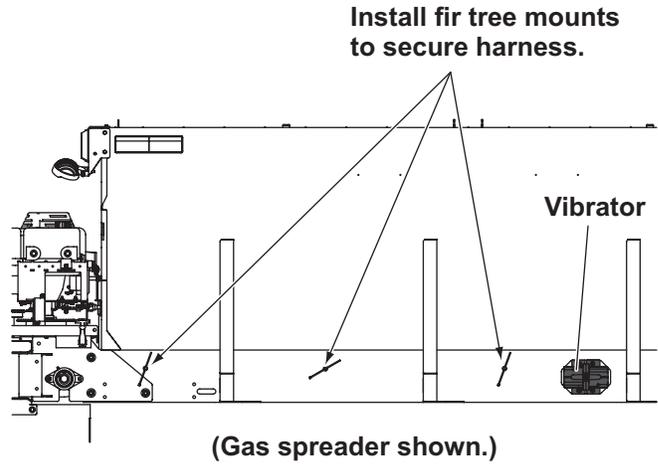
1. Park the vehicle on a smooth, level, hard surface, such as concrete. Turn the vehicle ignition to the "OFF" position and remove the key.
2. Attach the vibrator to its mounting location using the supplied 3/8" x 1-1/2" cap screws, 3/8" flat washers, and 3/8" locknuts. The cap screws with washers must be inserted from the inside, with the nuts on the outside, to avoid interference with the conveyor chain.

3/8" x 1-1/2" Cap Screw
(Insert from inside hopper.)



3. Route the vibrator extension harness through the openings in the hopper legs and along the sill. Plug the harness into the vibrator lead.

4. Install fir tree mounts into the holes along the sill and secure the 90" harness using the fir tree mount cable ties.



⚠ CAUTION

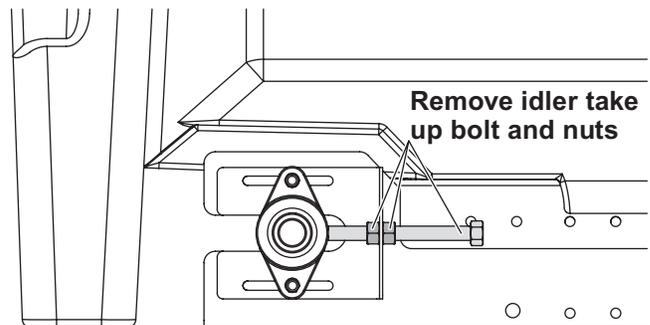
Before drilling any holes, check both sides of the material for any wires, fuel lines, fuel tanks, etc. that may be damaged by drilling.

An additional fir tree mount is supplied for use if needed. Drill a 1/4" hole at the desired location to install the additional fir tree mount.

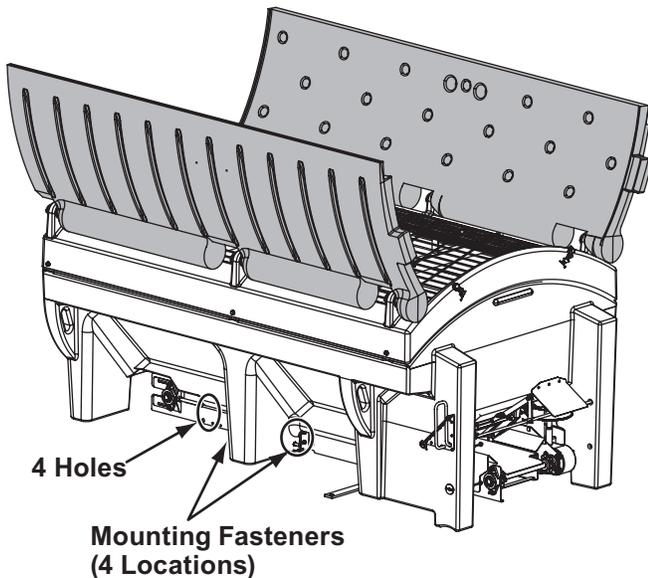
For Poly Spreaders

1. Remove the 5/8" x 6" idler take-up bolt and nuts from the driver's side bracket on the forward end of the sill.

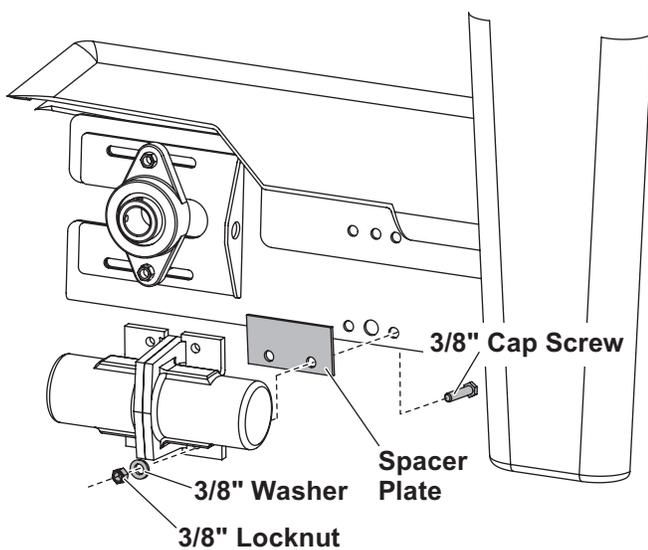
Retain nuts for reinstallation in Step 5. The bolt will be replaced with a shorter one from the kit.



2. Locate the four holes approximately 12-3/8" from the forward end of the driver-side sill.



3. The fasteners holding the hopper to the stainless steel sill may have to be loosened and the hopper body centered on the sill to install the vibrator.
4. Install the vibrator with the wire lead up and spacer plate into the four holes using 3/8" x 1-1/2" cap screws, washers and 3/8" locknuts. Insert the 3/8" cap screws from the inside through the sill and into the vibrator. Secure with washers and 3/8" locknuts on the vibrator side as shown.



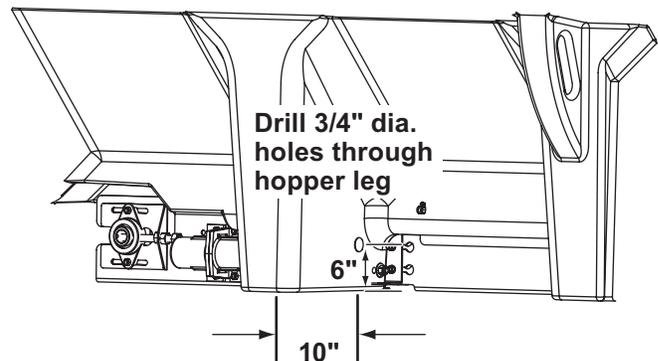
5. Install the 5/8" x 4" take-up bolt provided in the kit in place of the 6" bolt removed in Step 1, using the nuts retained in Step 1.

⚠ CAUTION

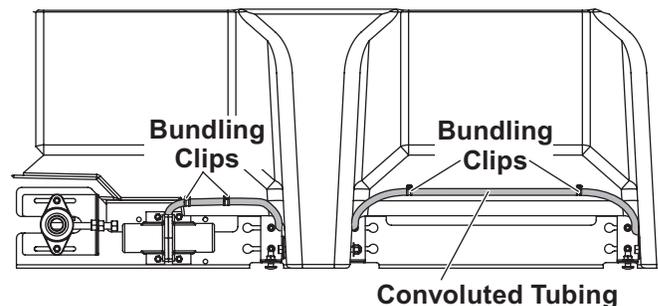
Before drilling any holes, check both sides of the material for any wires, fuel lines, fuel tanks, etc. that may be damaged by drilling.

6. Drill four 3/4" holes through both sides of the legs of the poly hopper as shown.

The hole in the rear leg should be positioned so the harness will feed into the opening at the front of the large electrical enclosure.



7. Route the vibrator harness through the four holes drilled the poly hopper legs, and connect the molded plug to the vibrator lead.
8. Secure the molded plugs to the hopper body using bundling clips within 2" of each side of the plug connection.
9. Secure the convoluted tubing to the hopper body using bundling clips. Drill 1/4" pilot holes as needed.



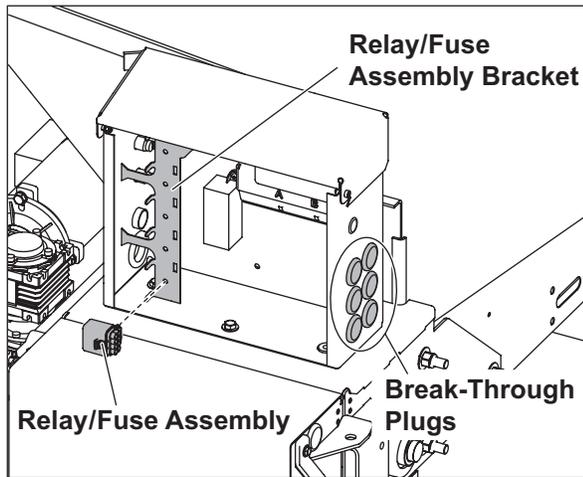
ELECTRICAL CONNECTIONS

1. **Stainless Steel Electric or Hydraulic Spreader:**
Cut a hole in one of the break-through plugs and feed the vibrator extension harness into the enclosure. The hole should be sized to form a tight seal around the harness.

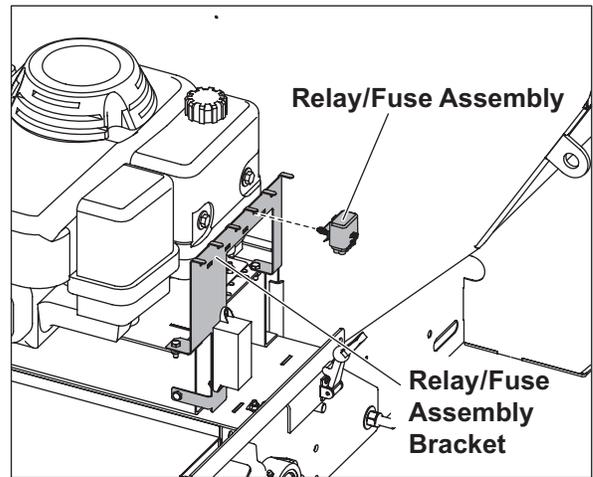
Gas Spreader: Route the vibrator extension harness into the engine compartment coming in from the passenger side on the forward (hopper) side of the engine. Make sure that the engine cover will not contact the cable when the cover is closed.

2. Mount the relay/fuse assembly to the relay/fuse assembly bracket or enclosure by pushing the connector clip on the back of the assembly into one of the holes in the bracket or enclosure. Secure the relay/fuse assembly to the bracket by running a cable tie through the slots in the bracket and around the assembly.
3. Plug the vibrator extension harness 2-pin connector into the relay/fuse harness assembly.

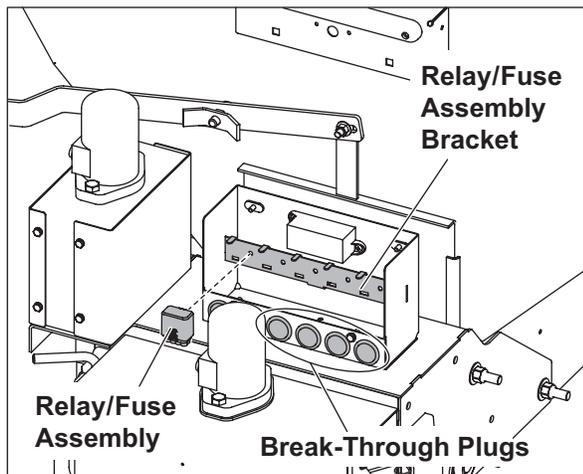
Stainless Steel Electric Spreader



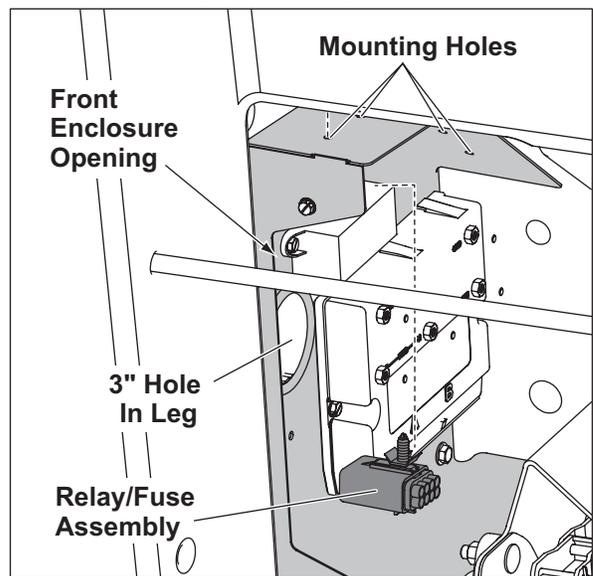
Gas Spreader



Hydraulic Spreader



Poly Electric Spreader

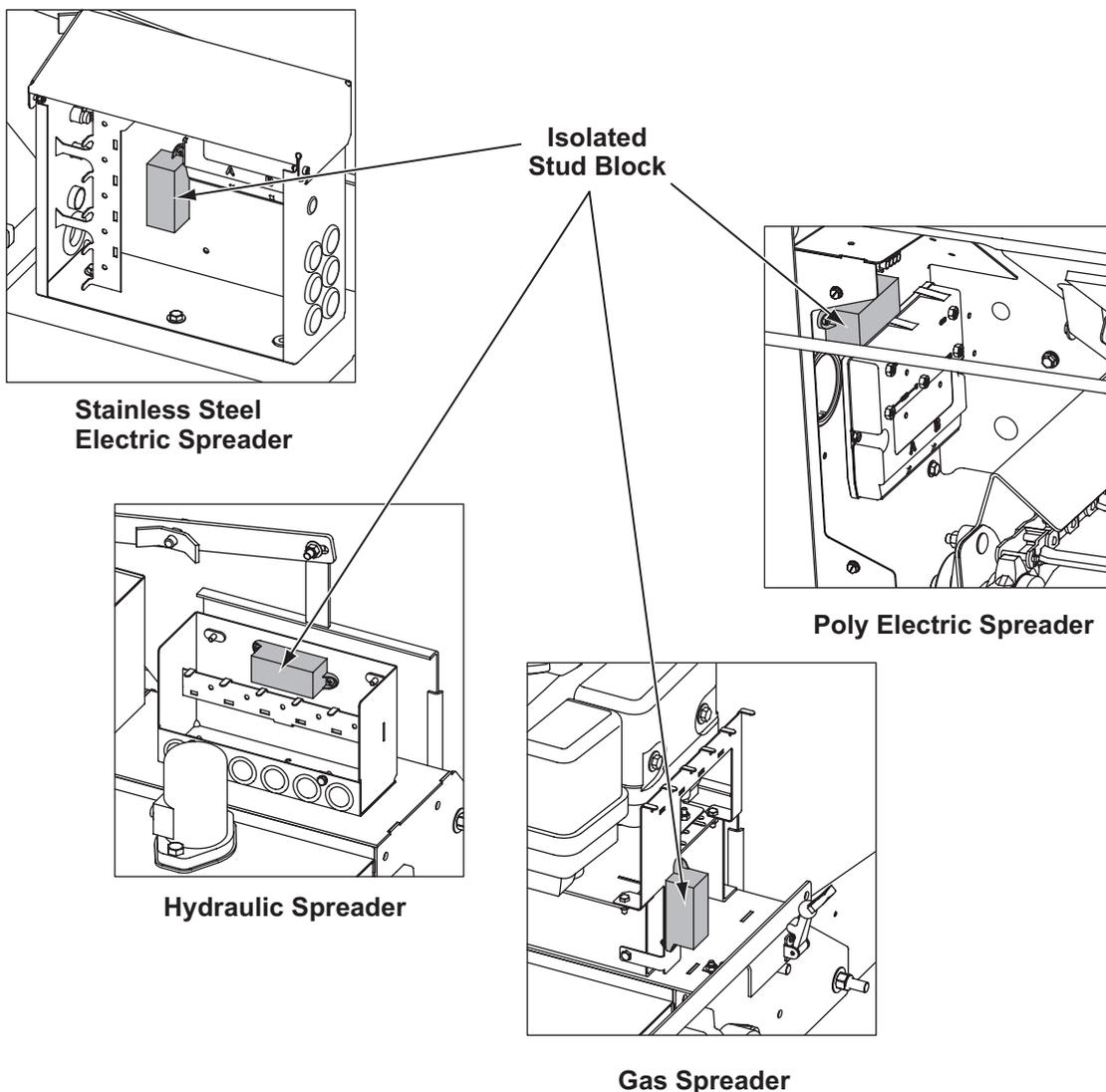


(Electrical enclosure covers not shown.)

4. Remove the cover from the isolated stud block. Connect the red wire from the relay/fuse assembly harness to the positive terminal and the black wire to the negative terminal of the isolated stud block.
5. Replace the isolated stud block cover, being careful not to pinch any wires. (On spreader installations with multiple accessories, it may be necessary to notch the sides of the isolated stud block cover to accommodate all the wires.)
6. **Stainless Steel Electric Spreader:** Connect the single-pin terminal on the relay/fuse assembly harness (blue wire) to the blue wire coming from port A of the spreader module.

Gas or Hydraulic Spreader: Connect the single-pin terminal on the relay/fuse assembly harness (blue wire) to the blue wire coming from the previously installed hopper accessory cable assembly.

Poly Electric Spreader: Connect the single-pin terminal on the relay/fuse assembly harness (blue wire) to the blue wire coming from port A of the spreader module.



REINSTALLING THE SPREADER

For Stainless Steel Spreaders

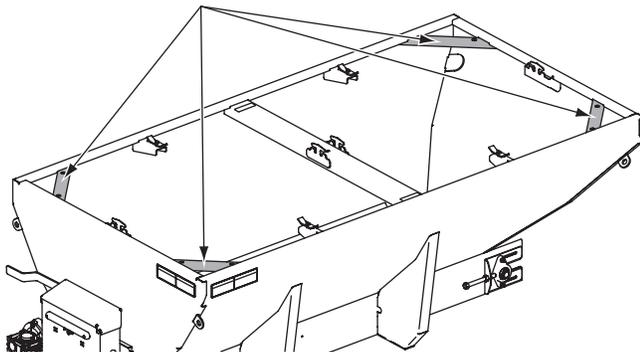
NOTE: Periodically throughout the snow and ice control season, verify that mounting devices are secure.

⚠ CAUTION

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

1. Remove the top screens and set them aside. Remove any debris from inside the hopper.
2. If the material chute has been stored inside the hopper, remove the chute and set it aside. Two or more people are recommended for this step, as the chute weighs more than 70 lb.
3. Lift the spreader by the four diagonal corner rails, as shown, using slings or chains. Move the spreader into the truck bed.

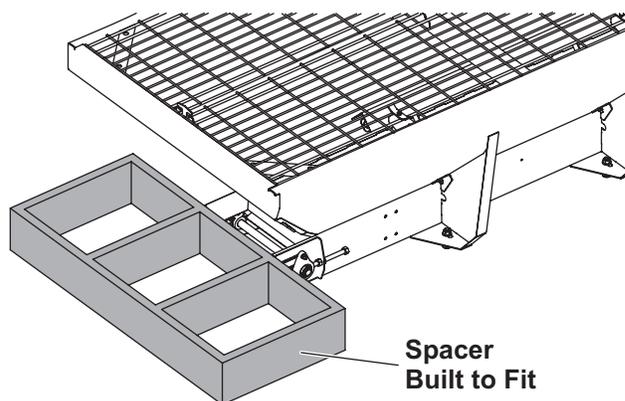
Use all 4 rails when lifting.



⚠ WARNING

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

4. Adjust the spreader position to align the holes in the hopper support legs with the mounting holes in the truck bed. Install the spreader to the truck bed using retained fasteners.
5. Connect the vehicle-side harness to the hopper-side harness.
6. Reinstall the top screens.
7. Install the sill spacer between the end of the hopper sill and the front of the truck bed as shown. **Failure to install this spacer could result in damage to the spreader.**

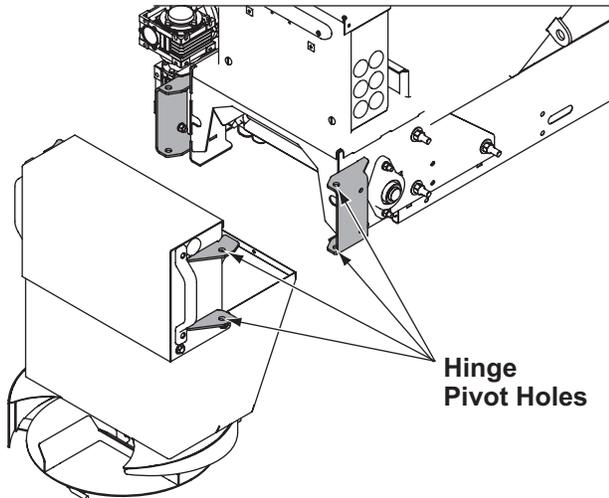


Tie-Down Straps

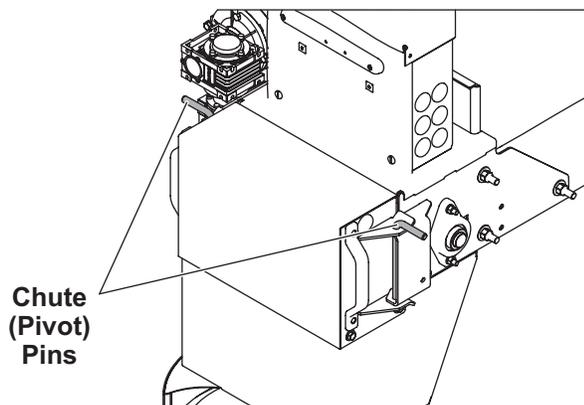
Reinstall tie-down straps from the tie-down loops on the spreader body to the truck frame. Use one strap per loop, pulling diagonally away from the hopper body.

Install Chute to Hopper

1. Two people are recommended for this step. Pick up the chute from each side and slide the chute hinges over the hopper hinges. Line up the hinge pivot holes.
2. Insert a 1/2" x 8-1/4" chute pin on each side and secure with a 3/32" x 2-1/4" cotter pin.



The chute can pivot on either pin to provide access to the feed area of the hopper. An interlock prevents the feed system from running if the chute is rotated to either side or removed.



3. Connect the chute motor plug to the hopper harness plug.

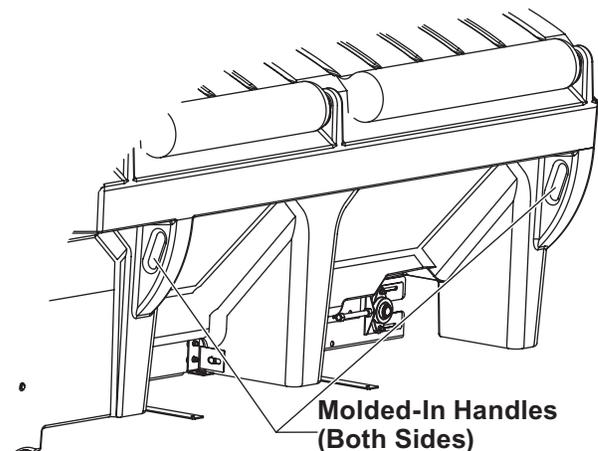
For Poly Spreaders

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

⚠ CAUTION

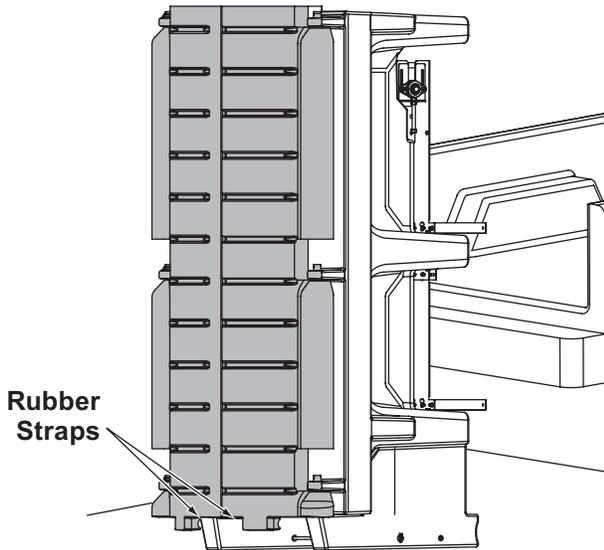
Before lifting, verify hopper is empty of material. The lifting device must be able to support the spreader's weight.

1. The spreader can be moved into the truck bed either by lifting the spreader by the four molded-in handles located on the corner legs or by sliding the spreader into the truck bed from the ground.



2. To lift the spreader into the truck bed from the ground, stand the spreader up on the feet at the rear of the spreader. The chute must be removed.

3. Position spreader on its feet at the rear of the truck.

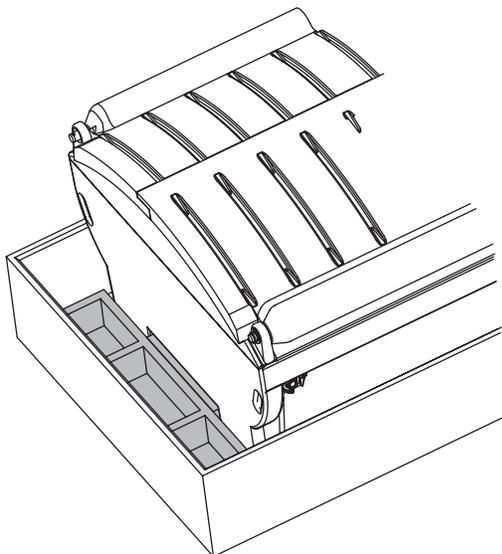


4. Tip the spreader toward the truck until the sill rests on the rear edge of the truck bed.
5. Lift the rear of the spreader and slide it into the truck bed. Two or more people are recommended for this task.

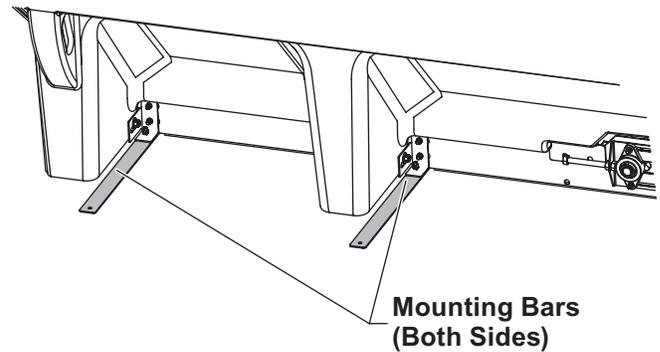
⚠ WARNING

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

6. Install the spacer between the end of the sill and the front of the truck bed as shown.



7. Center the spreader in the truck.
8. Fasten the spreader to the truck frame using the mounting bars and existing holes and hardware.



9. To assemble the chute to the spreader:
 - a. Select the height for the chute assembly. The upper chute position is typically used for pickup truck installations.
 - b. Lift the chute onto the feed gate actuator bar and slide it down into place.
 - c. Align the holes in the hopper body with the threaded inserts in the chute, and install the pins to secure the chute to the hopper body.
 - d. Connect the spinner motor wiring harness.
10. Connect the vehicle and spreader wiring harnesses.

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