

In-Bed Mount

For Single- and Two-Stage Tailgate Spreaders

Installation Instructions

⚠ CAUTION

Read Owner's Manual before operating or servicing spreader.

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 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.

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.

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 or spinner to stop, then lock out power.
- 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.

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.

SAFETY

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.

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.

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 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.

SAFETY

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/s² to the hand-arm or 0.5 m/s² to the whole body.

TORQUE CHART

⚠ 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					
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

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

⚠ 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

⚠ 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.

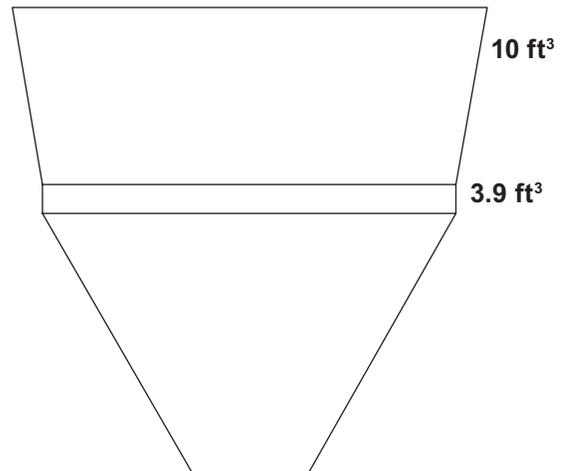
⚠ CAUTION

Read and adhere to manufacturer's ice-control material package labeling including Material 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.



IN-BED MOUNT INSTALLATION

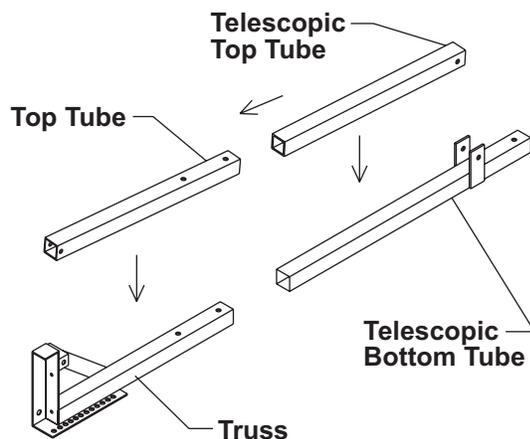
In-Bed Mount Installation

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

The in-bed mount can be installed in most pickup truck boxes which are in good condition. The telescoping frame members and various attachment methods will work for most situations.

Mount Assembly

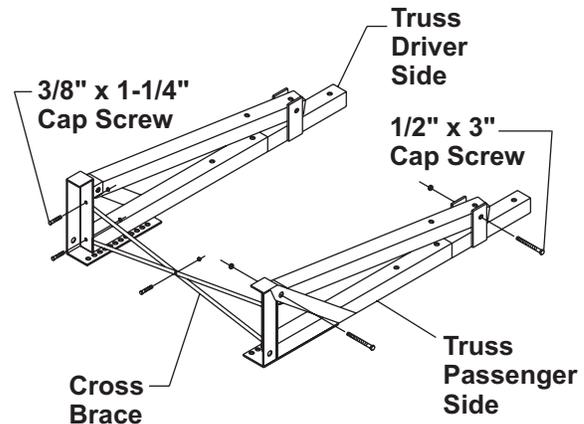
1. Remove all of the mount assembly hardware from the shipping carton. Verify no parts are missing.
2. Remove the tailgate from the vehicle.
3. Slide the telescopic top tube into the top tube.



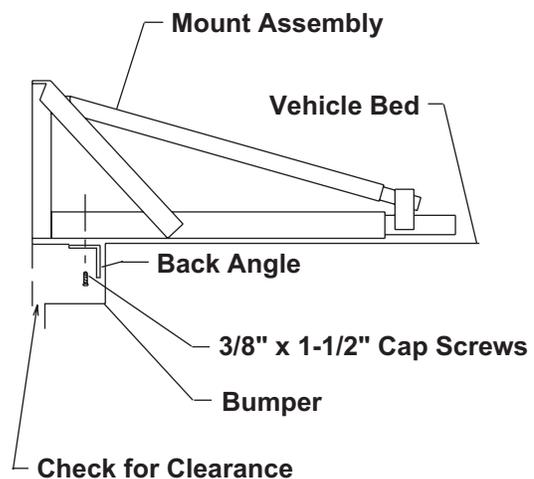
4. Slide the telescopic bottom tube into the truss.
5. Loosely attach the top tube to the truss and the telescopic top tube to the telescopic bottom tube using four 1/2" x 3" cap screws and locknuts.

NOTE: Attach the top tube to the truss with dimples facing up.

6. Loosely assemble the mount assembly by connecting the trusses. Use the two cross braces and five 3/8" x 1-1/4" cap screws and locknuts.



7. Place the mount assembly into the vehicle bed with clearance between the rear of the mount assembly and the rearmost obstruction of the vehicle (bumper, hitch, etc.).



8. Position the back angle with the longer leg pointing down against the back of the bed and below the mount assembly.
9. Connect the back angle to the truss assembly using two 3/8" x 1-1/2" cap screws and locknuts. Insert the bolts from the bottom up. Tighten, but do not torque these bolts at this time.

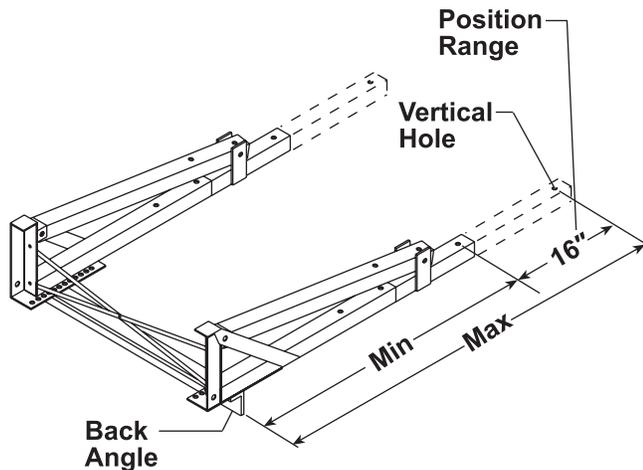
IN-BED MOUNT INSTALLATION

Channel Installation

Establish Channel Position Range

1. Position the back angle against the rear of the vehicle bed and telescope the telescopic tubes to their shortest length.
2. Measure the distance from the back angle to the vertical hole in the front of the truss tube. This is the minimum position of the range. The minimum position plus 16 inches is the maximum position of the range.

NOTE: The channel attachment hardware must be assembled to the vehicle frame within the position range.



Channel Attachment Hardware Location

1. Inspect the area of the frame within the position range of the mount assembly as determined in the previous section.
2. Select a location for the channel attachment hardware that is free from obstructions and is suited to one of following three installation methods. Ideally, this location should be below a bed support channel.

⚠ CAUTION

If location chosen for mount channel is not above a bed support channel, a hardwood block **MUST** be placed between the frame and the vehicle bed to prevent collapsing of the bed. This should be held in place by one carriage bolt coming through the bed. Wood blocks are provided for this and may be cut to the required height.

The three methods of securing the channel to the frame on most vehicles, as required by vehicle fit-up, are listed from most recommended to least recommended.

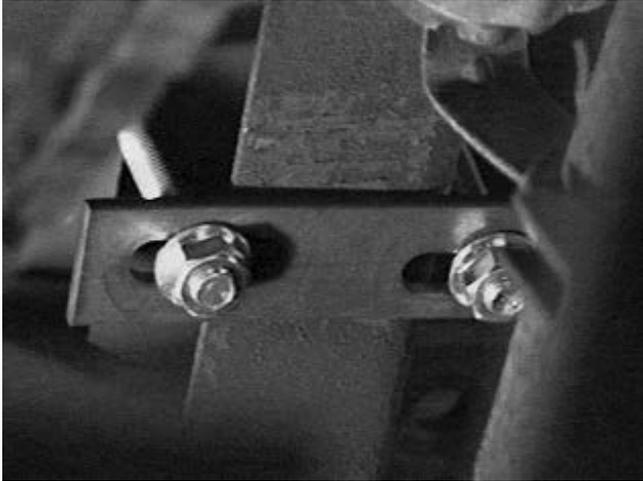
1. Angle Bracket Method



- An angle bracket is bolted to the outside of the vehicle frame. One carriage bolt is used on each side.
- Use this method if there is an existing 1/2" hole in the vehicle frame or there is clearance for one 1/2" hole to be drilled.

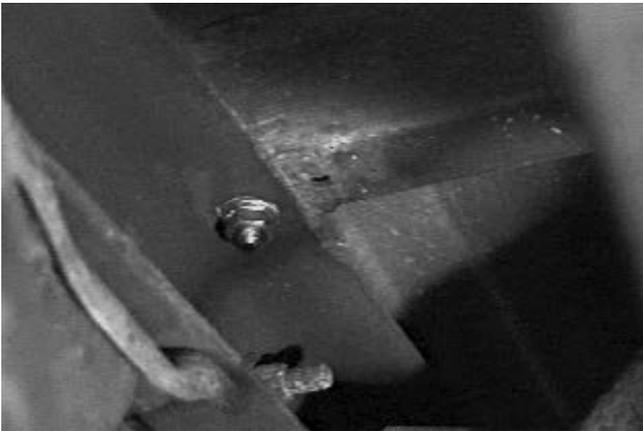
IN-BED MOUNT INSTALLATION

2. Strap Method



- A strap straddles the vehicle frame and is held in place with two carriage bolts.
- Use this method if there is clearance on both sides of the vehicle frame but little clearance for drilling holes in the vehicle frame.

3. Frame Flange Method



- A hole is drilled through the flange of the vehicle frame. One carriage bolt is bolted to the frame flange on each side.
- Recommended only for vehicles which do not accommodate one of the previous two options.

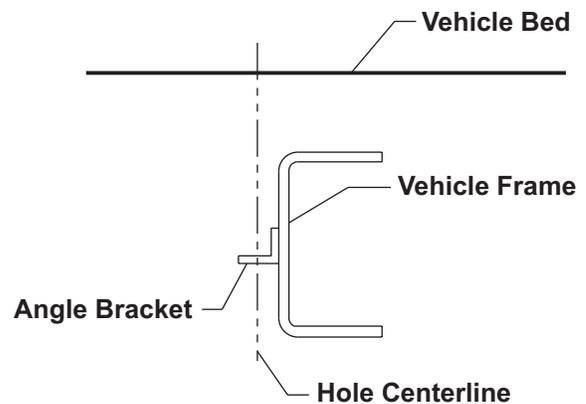
Angle Bracket Method

1. Inspect both sides of the frame and underside of the truck bed for an area that does not have any obstructions for the carriage bolts that will pass through from the channel on top of the bed floor to the angle brackets mounted to the frame rails. Be sure this area is within the position range of the telescopic truss tubes.

⚠ CAUTION

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

2. On each side of the vehicle bed, drill a 5/8" hole located 1" outside the vehicle frame.



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.

3. Place a 1/2" x 14" carriage bolt through each hole in the bed.
4. Using the carriage bolts as a reference, locate the positions for the angle brackets on the vehicle frame. Remove the carriage bolts.

IN-BED MOUNT INSTALLATION

5. Use an existing 1/2" hole in the vehicle frame to mount the angle bracket. Center the angle brackets vertically on the vehicle frame. If there is no hole, use the angle bracket as a template to mark a hole position.

⚠ CAUTION

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

6. Remove the angle bracket and drill one 1/2" hole on each side of the vehicle frame.

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.

7. Attach the angle brackets with the larger 5/8" hole facing down using one 1/2" x 2" cap screw and top lock flange locknut on each side.



8. Insert bolts from the outside of the vehicle frame. Tighten according to the torque chart.
9. Center the channel over the drilled holes in the vehicle bed.
10. Insert one 1/2" x 14" or 1/2" x 6-1/2" carriage bolt on each side through the slots in the mount channel, the holes drilled in the truck bed, the wood block (if required), and through the angle brackets.



11. Secure the channel using one 1/2" top lock flange locknut on each side below the angle bracket. Verify the channel is still centered side-to-side in the vehicle bed and parallel with the back of the bed.
12. Tighten the carriage bolts according to the torque chart, alternating sides as you tighten.
13. Cut off excess bolt thread to provide clearance for exhaust, suspension, etc. Proceed to Mount Installation.

IN-BED MOUNT INSTALLATION

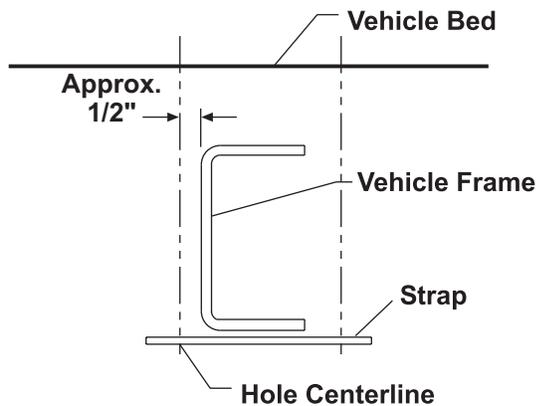
Strap Method

1. Inspect both sides of the frame and underside of the truck bed for an area that does not have any obstructions for the carriage bolts that will pass through from the channel on top of the bed floor to the bottom of the frame rails. Be sure this area is within the position range of the telescopic truss tubes.

⚠ CAUTION

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

2. On each side of the vehicle bed, drill a 5/8" hole located 1/2" outside the vehicle frame.



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.

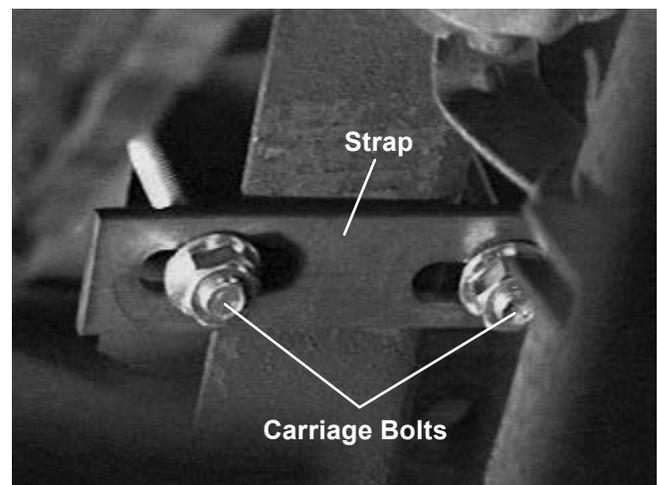
3. Mark a position for one 5/8" hole located 1/2" inside the vehicle frame on each side. DO NOT drill the hole at this time. Locate a second hole position 15-1/4" from the centerline of the vehicle bed on each side.
4. Drill one 5/8" hole on each side at the hole positions closest to the centerline of the vehicle bed.
5. Place the channel over the drilled holes and center it from side to side.

6. Insert two 1/2" x 14" carriage bolts on each side through the slots in the channel and through the holes drilled in the vehicle bed.



NOTE: The carriage bolt on the outside of the vehicle frame should also pass through the wood block (if required).

7. Slide the strap onto the bolts and secure with two top lock flange locknuts on each side.



8. Make sure the channel is still centered side to side in the vehicle bed and parallel with the back of the vehicle bed. Tighten the carriage bolts according to the torque chart, alternating sides as you tighten.
9. Cut off excess bolt thread to provide clearance for exhaust, suspension, etc. Proceed to Mount Installation.

IN-BED MOUNT INSTALLATION

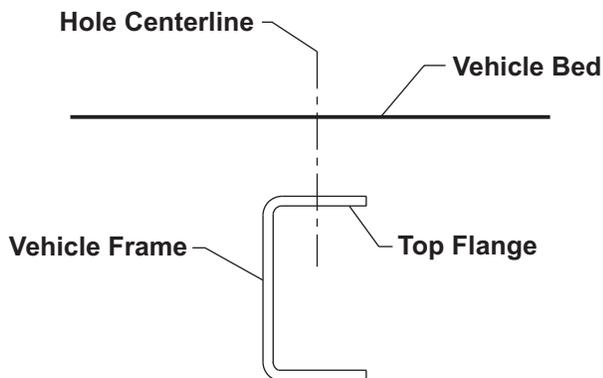
Frame Flange Method

1. Inspect both sides of the frame and underside of the truck bed for an area that does not have any obstructions for the carriage bolts that will pass through from the channel on top of the bed floor to the top of the frame rails. Be sure this area is within the position range of the telescopic truss tubes.

⚠ CAUTION

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

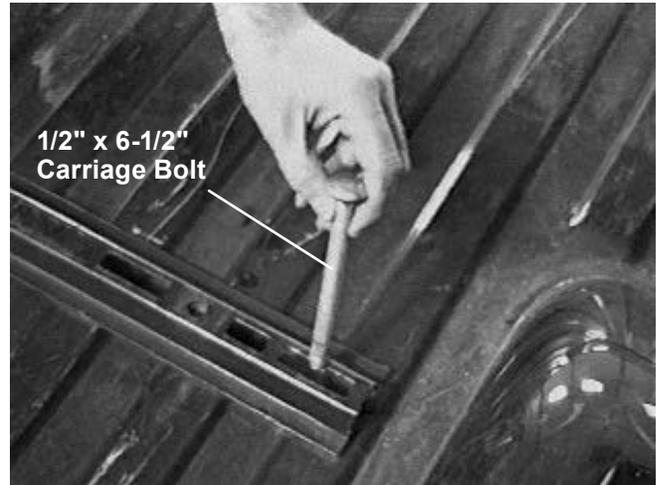
2. On each side of the vehicle bed, drill one 5/8" hole extending through the center of the top flange of the vehicle frame.



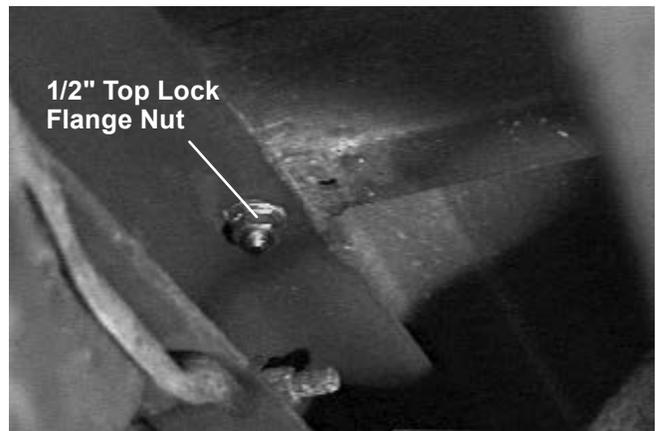
NOTE: Pay special attention when drilling or clamping dissimilar metals to aluminum bodies. Galvanic corrosion can occur if not handled properly. Contact vehicle manufacturer for recommended attachment practices.

3. Place the mount channel over the drilled holes and center it from side to side.

4. Insert one 1/2" x 6-1/2" carriage bolt on each side through slots in the channel, through the holes drilled in the vehicle bed, through the wood block (if required), and through the holes drilled in the vehicle frame.



5. Secure the channel using one 1/2" top lock flange locknut on each side.



6. Verify the channel is still centered side to side in the vehicle bed and parallel with the back of the vehicle bed.
7. Tighten the carriage bolts according to the torque chart, alternating sides as you tighten.
8. Cut off excess bolt thread to provide clearance for exhaust, suspension, etc. Proceed to Mount Installation.

IN-BED MOUNT INSTALLATION

MOUNT INSTALLATION

Attach Wood Board To Mount Assembly

1. Place the mount assembly in the vehicle bed with the back angle of the mount assembly against the back of the vehicle bed.
2. Extend the telescoping tubes of the mount assembly to the channel.
3. Secure mount assembly to channel in vehicle bed using the hold-down bolts.

NOTE: Only hand tighten hold-down bolts.



4. Center the mount assembly side to side in the vehicle bed. Verify trusses are perpendicular to the back angle.
5. Position the 1" x 6" wood board directly in the front of the back angle and below the mount assembly.

6. Mark the location for two 3/8" holes on each side of the wood board using the holes in the mount assembly.



⚠ CAUTION

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

7. Remove the wood board from the vehicle and drill 3/8" holes at the marked locations.

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.

8. Use four 3/8" x 1-1/2" carriage bolts (installed from the bottom) and serrated flange locknuts to loosely attach the wood to the mount assembly.
9. Make sure the trusses are perpendicular to the back angle and tighten the back angle and cross-brace bolts according to the torque chart.

IN-BED MOUNT INSTALLATION

Secure Telescoping Tubes

1. Center the back of the mount assembly side to side and make sure the back angle is tight against the vehicle bed.

⚠ CAUTION

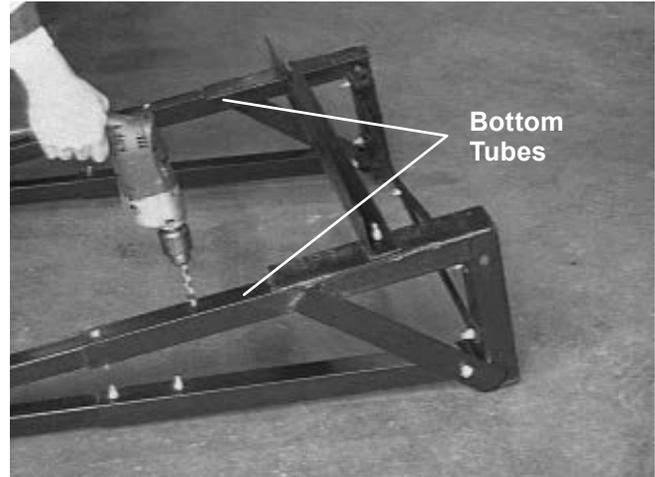
Before drilling holes, check to be sure that no vehicle wiring or other components could be damaged.

2. Using the holes or the dimples in the outer truss tubes as a template, drill two 13/32" holes in the top telescopic tube on each side of the mount assembly.



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.

3. After drilling each hole, insert a 3/8" x 2-1/2" cap screw from the top, and secure with a locknut.
4. Remove the mount assembly from the vehicle and place it upside-down on the ground.



5. Using the holes or the dimples in the trusses as a template, drill two 13/32" holes in each of the bottom telescopic tubes.

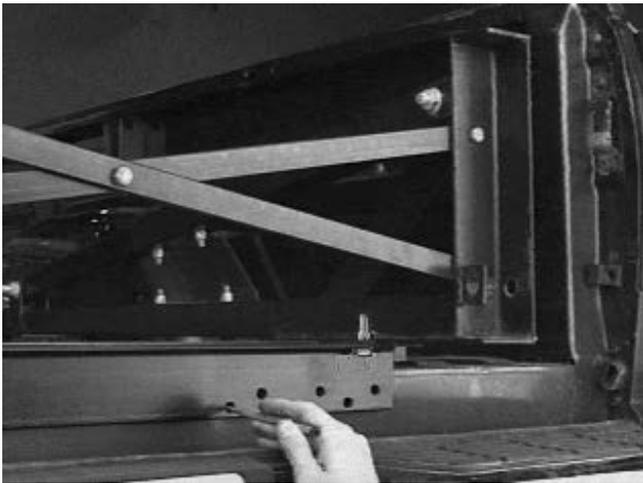
NOTE: Tubes are shown with the bottom tubes on top.

6. After drilling each hole, insert a 3/8" x 2-1/2" cap screw from the bottom side up (as seen when the assembly is upright), and secure with a locknut.

IN-BED MOUNT INSTALLATION

Locator Studs Installation

1. Place mount in vehicle bed; secure with hold-down bolts. Verify back of mount assembly is centered side to side on the vehicle bed.
2. Locate one hole on each side of the back angle with no obstructions on opposite side of vehicle body. Stay clear of electrical wiring.
3. Using back angle as a template, mark one hole on each side on back of vehicle bed.



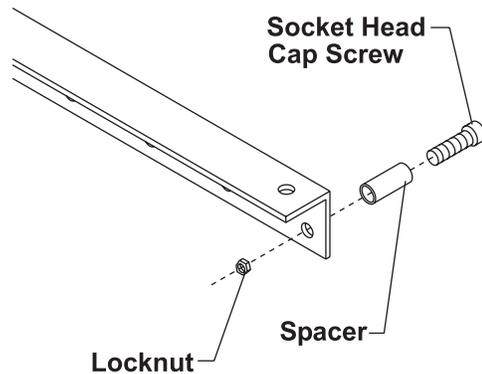
⚠ CAUTION

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

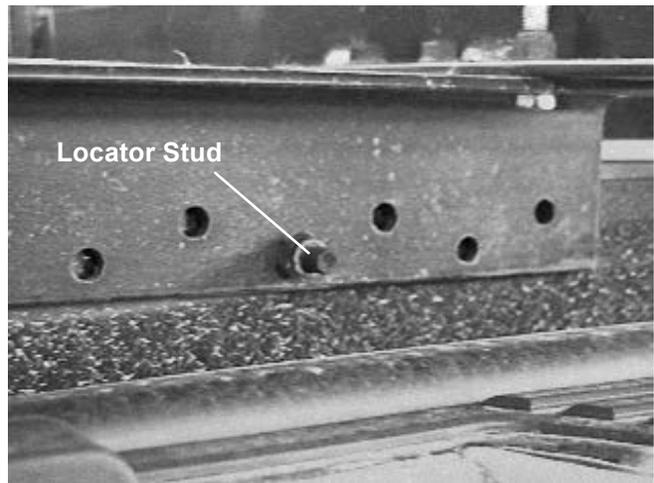
4. Remove mount assembly from vehicle bed; drill two 5/8" holes at location marked.

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.

5. Assemble the locator studs (3/8" x 2" socket head cap screw, spacer, and locknut) to the back angle in the previously selected holes, tighten according to the torque chart.



6. Place the mount assembly in the vehicle bed.
7. Insert the locator studs into the drilled holes while pushing forward into the final mounting position.



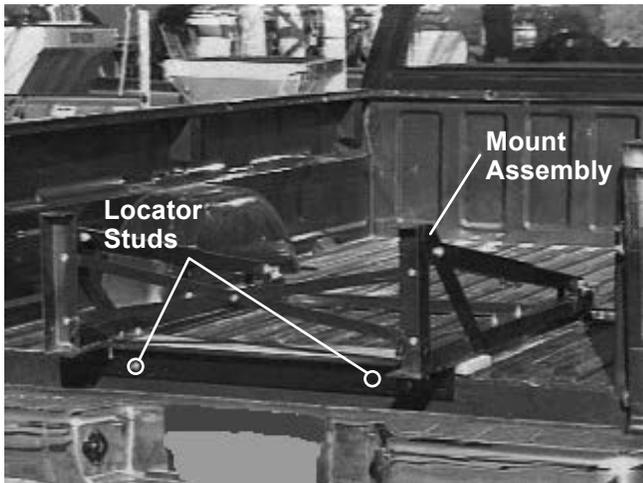
8. Secure with hold-down bolts.
9. Tighten all fasteners in mount assembly according to the torque chart.

NOTE: After first use, retorque all nuts and fasteners on mount and spreader.

IN-BED MOUNT INSTALLATION

Spreader Attachment

1. Remove tailgate from the vehicle.
2. Place mount assembly into the vehicle bed inserting the locator studs into the holes in the back of the vehicle bed.



3. Secure mount assembly to channel in vehicle bed with hold-down bolts.

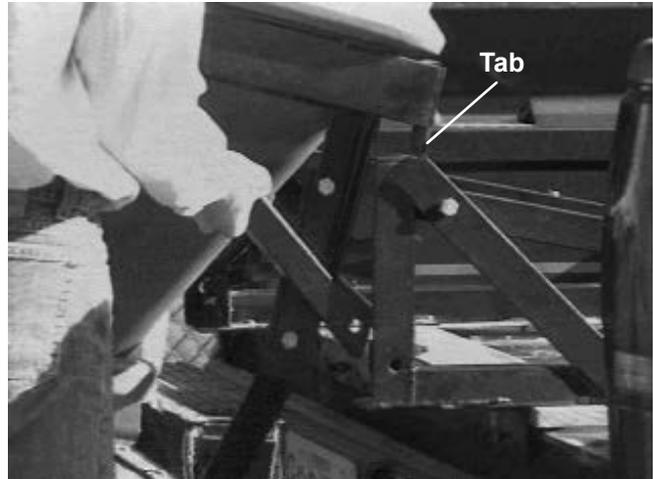
⚠ CAUTION

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

4. Lift spreader assembly and tip slightly forward.



5. Position tabs on the spreader assembly over the top of the mount assembly and lower the hopper assembly.



6. Allow spreader assembly to rotate until the bottom contacts mount assembly.
7. Insert hold-down pins on each side and secure with hairpin cotter pins.



8. Connect spreader-side wiring harness to vehicle-side wiring harness.
9. Tighten all fasteners according to the torque chart.

NOTE: After first use, retorque all nuts and fasteners on mount and spreader.

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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