



**30279**

**UNDERCARRIAGE KIT**

**Ford F-250HD/350 4X4**

**1992 - 97**

**Installation Instructions**

**⚠ CAUTION**

Read this document before installing the snowplow.

**⚠ CAUTION**

See your BLIZZARD® outlet/Web site for specific vehicle application recommendations before installation. The Undercarriage Selection Guide has specific vehicle and snowplow requirements.

# SAFETY

## SAFETY DEFINITIONS

### ⚠ WARNING

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

### ⚠ CAUTION

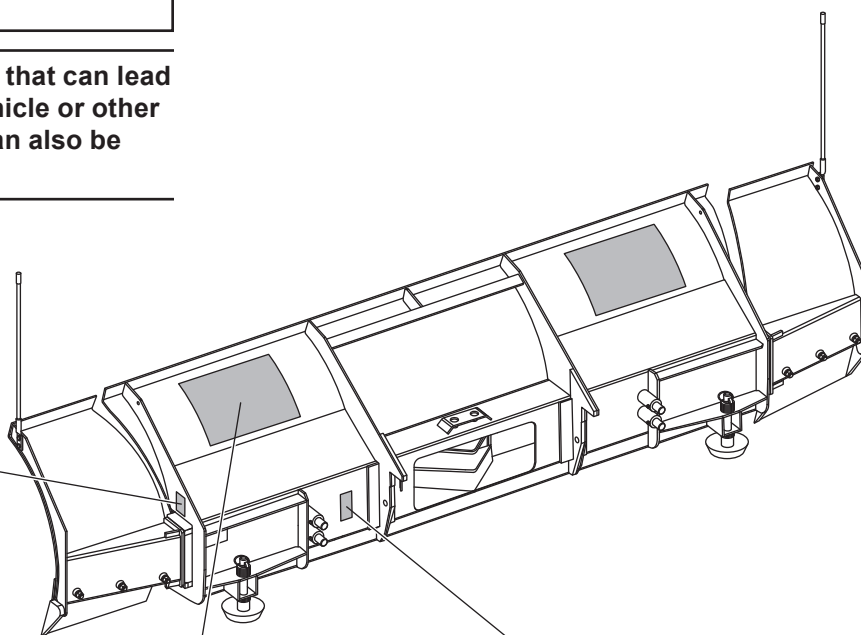
Indicates a potentially hazardous situation that, if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices.

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

## WARNING/CAUTION & INSTRUCTION LABELS

Become familiar with and inform users about the warning and instruction labels on the back of the blade.

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



### POWER PLOW™ & SPEEDWING™ Blades Only (both sides)

ATTACH	⚠ WARNING Keep fingers away from snowplow and truck attachment points. POWER HITCH™ 2 arm raises behind undercarriage pushbeam.	DETACH
<ol style="list-style-type: none"> <li>Slowly drive vehicle forward to engage mount adapter into A-frame.</li> <li>Move power switch to center or "OFF" position.</li> <li>Plug in electrical harnesses.</li> <li>Push and hold power switch RIGHT and push UP and hold armblade operation switch. Arm will engage mount adapter and pull snowplow toward vehicle.</li> <li>Rotate and release hitch pin. Hitch pin is fully engaged when pin handle is against the pin guide plate.</li> <li>Repeat Step 5 on passenger's side. Rotate and release hitch pin. Hitch pin is fully engaged when pin handle is against the pin guide plate.</li> <li>While holding power switch RIGHT, push DOWN and hold armblade operation switch. Arm will disengage mount adapter to relieve tension on the stand.</li> <li>Pull stand handle up. Stand will lift off ground. Put stand pin out. Rotate stand up until stand pin seats into upper hole. Pin must lock into upper A-frame hole.</li> <li>Repeat Step 8 on passenger's side. Pull stand handle up. Stand will lift off ground. Put stand pin out. Rotate stand up until stand pin seats into upper hole. Pin must lock into upper A-frame hole.</li> <li>Move power switch to left or "Plowing" position.</li> </ol>		<ol style="list-style-type: none"> <li>Lower snowplow into ground with blade straight. Turn snowplow control in cab OFF.</li> <li>Move power switch to center or "OFF" position.</li> <li>While holding the power switch RIGHT, push DOWN and hold the armblade operation switch. Arm will disengage mount adapter to relieve tension on the stand.</li> <li>Pull stand pin out. Rotate stand down until stand pin seats into lower A-frame hole. Push down on top of shoe. Shoe will be on the ground.</li> <li>Repeat Step 4 on passenger's side. Pull stand pin out. Rotate stand down until stand pin seats into lower A-frame hole. Push down on top of shoe. Shoe will be on the ground.</li> <li>Push and hold power switch RIGHT and push UP the armblade operation switch. Arm will engage mount adapter and pull snowplow lightly to vehicle.</li> <li>Rotate and pull hitch pin. Rotate hitch pin into retracted position.</li> <li>Repeat Step 7 on passenger's side. Rotate and pull hitch pin. Rotate hitch pin into retracted position.</li> <li>While holding power switch RIGHT, push DOWN and hold armblade operation switch to fully lower arm.</li> <li>Unplug electrical harnesses.</li> </ol>



## SAFETY

## SAFETY PRECAUTIONS

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

**⚠ WARNING**

**Lower blade when vehicle is parked. Temperature changes could change hydraulic pressure, causing the blade to drop unexpectedly or damaging hydraulic components. Failure to do this could result in serious personal injury.**

**⚠ WARNING**

**The driver shall keep bystanders clear of the blade when it is being raised, lowered or angled. Do not stand between the vehicle and the blade or within 8 feet of a moving blade. A moving or falling blade could cause personal injury.**

**⚠ WARNING**

**Keep hands and feet clear of the blade and A-frame when mounting or removing the snowplow. Moving or falling assemblies could cause personal injury.**

**⚠ WARNING**

**Do not exceed GVWR or GAWR including the blade and ballast. The rating label is found on the driver-side vehicle door cornerpost.**

**⚠ WARNING**

**To prevent accidental movement of the blade, always turn the control OFF whenever the snowplow is not in use. The power indicator light will turn OFF.**

**⚠ WARNING**

**Remove blade assembly before placing vehicle on hoist.**

**⚠ CAUTION**

**Refer to the Undercarriage Selection Guide for minimum vehicle recommendations and ballast requirements.**

## 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 snowplow.
- 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 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.**

**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 snowplow including proper personal protective safety equipment.

<b>Recommended Fastener Torque Chart (ft-lb)</b>			
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
<b>Metric Grade 8.8 (ft-lb)</b>			
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.			

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**UNDERCARRIAGE INSTALLATION**

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**NOTE: For easier assembly and installation, vehicle and all snowplow components should be on a smooth, level, hard surface, such as concrete.**

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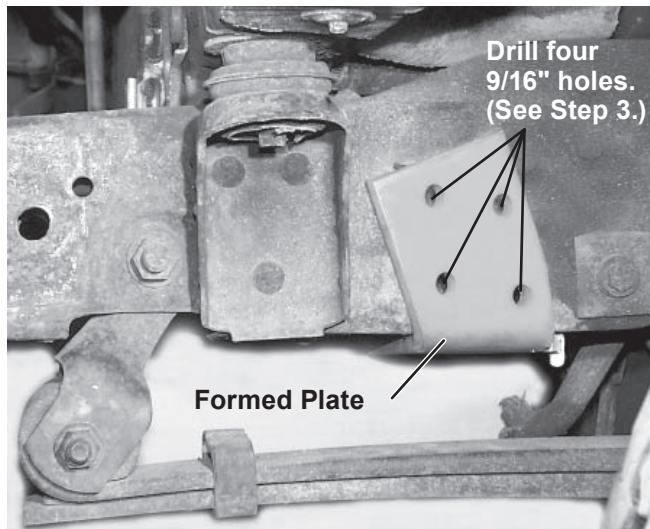
**MOUNTING INSTRUCTIONS**

1. Remove the bumper, with brackets attached, from the vehicle. Remove the threaded attaching fasteners and retainers from the bumper brackets.
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**NOTE: If the vehicle is equipped with a sway bar, the bar and brackets must be removed prior to attaching mount brackets. Retain all parts for reassembly if the undercarriage is ever removed from the vehicle.**

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2. Position the two formed plates tight against the outside and bottom of the vehicle frame, and against the long protruding rivet. (On vehicles without frame rivets, position the plates to the front edge of the 1/2" holes in the bottom of the vehicle frame rails.) Clamp in place.

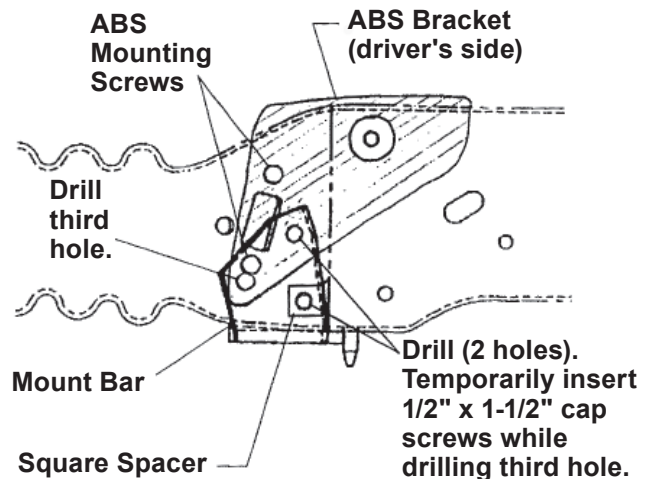


**NOTE: Vehicles with an ABS bracket, as shown in diagram, require the following additional steps A through F to install the formed plate on driver's side.**

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- a. Remove the two cap screws holding the ABS bracket in place.

- b. Pry the ABS bracket away from the vehicle frame and remove the lower cage nut by pushing the nut up into the slot.
- c. Replace the top bolt.
- d. Position the formed plates as described in Step 2.
- e. Temporarily insert 1/2" x 1-1/2" cap screws into the rear holes to hold the formed plate in position while drilling the front hole(s).
- f. Place the square spacer between the formed plate's lower rear hole and the vehicle frame to adjust for the ABS mounting bracket.

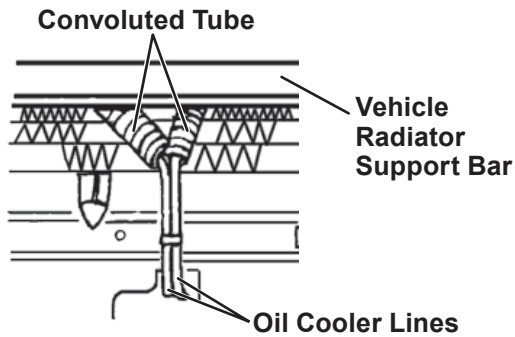


3. Use the formed plates as templates for drilling four 9/16" holes in each side of the vehicle frame. (Only three holes need to be drilled if the vehicle has a pre-existing slot.) Install two nut bars to the inside of each vehicle frame rail, aligning them with the drilled holes.

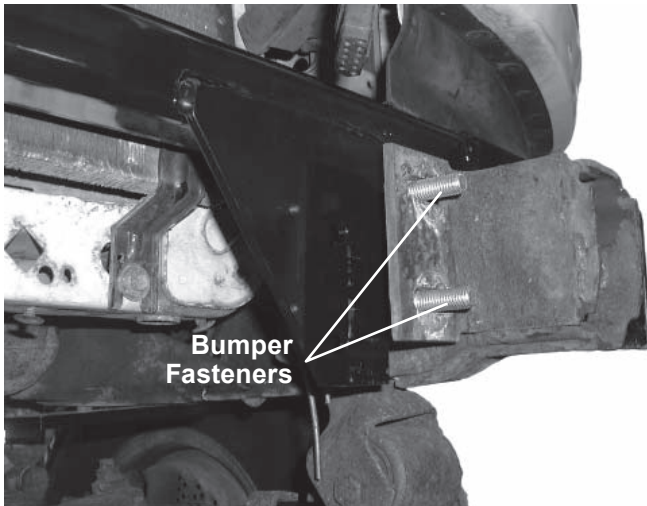
Fasten each formed plate to the nut bars with four 1/2" x 1-1/2" cap screws and lock washers. Use a drift pin to align one hole while attaching a cap screw to the other. Tighten the cap screws to corresponding Torque Chart values.

## UNDERCARRIAGE INSTALLATION

- On vehicles with a transmission cooler located in front of the radiator on the passenger side, install a convoluted tube over each cooler line above the Y formed by the cooler lines.



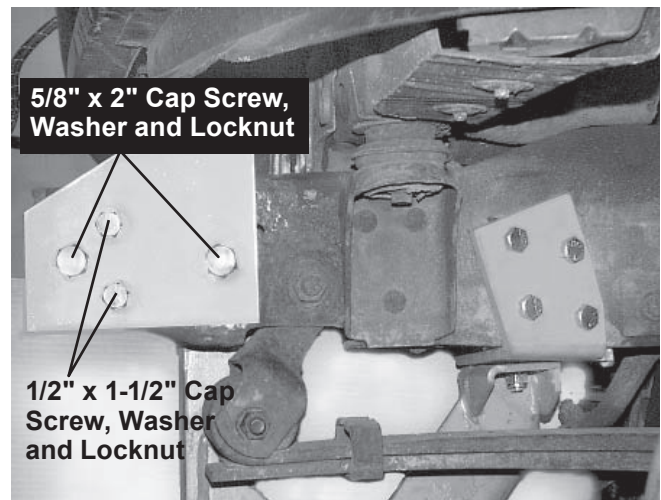
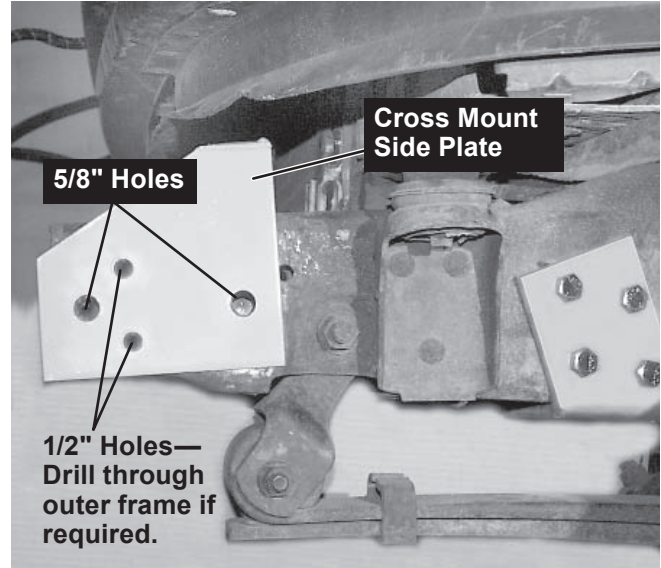
- Prior to placing the cross mount on the vehicle frame, assemble four 1/2" x 1-1/2" cap screws, flat washers and locknuts, from the inside out, through the bumper brackets on the vehicle frame. (Do not tighten the nuts. These fasteners will be used later to reattach the bumper.)



- Align the large holes, and from the outside of the frame insert a 5/8" x 2" cap screw, two flat washers and a locknut on each side of the vehicle. Install a flat washer against the cross mount side plate and against vehicle frame. (Depending on the vehicle model and year, the hole locations for

the 5/8" and 1/2" fasteners may vary from what is shown in the photos.) Install one fastener for each frame hole.

If the vehicle has only one 5/8" diameter hole, drill two 1/2" holes through the frame, using the mount side plate as a guide. Attach with 1/2" x 1-1/2" cap screws washers and locknuts.



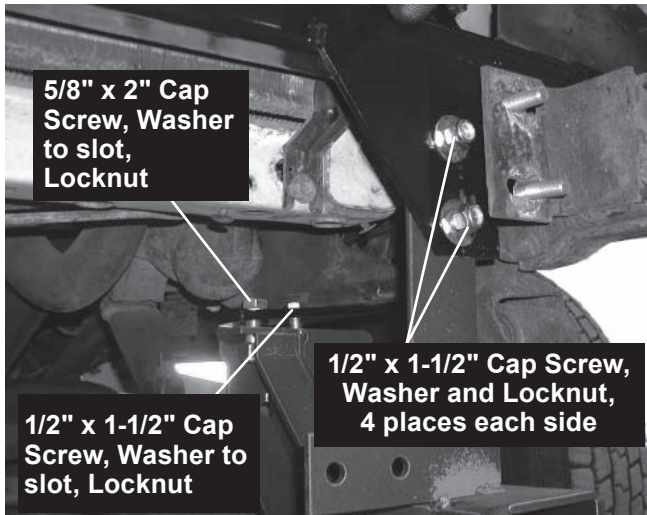
## UNDERCARRIAGE INSTALLATION

- Loosely attach the mounts to the cross mount with one 1/2" x 1-1/2" cap screw, washer and locknut in the outer hole and one 5/8" x 2" cap screw, washer and locknut in the inner hole. Install flat washers against the slots in the mounts.

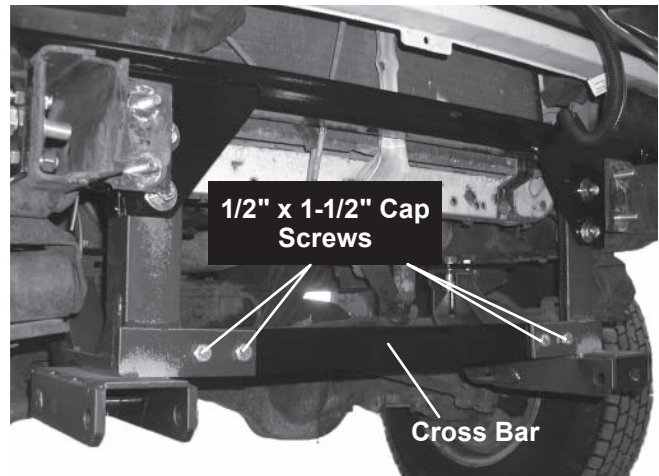
### **⚠ CAUTION**

Check for and maintain adequate clearance horizontally and vertically between hoses, steering linkage at maximum right turn, alternator drives and oil cooler lines, and do not collapse evaporator hose.

- If the vehicle has an evaporator canister that interferes with the mount, remove the canister and install the mount to the original canister mounting holes using existing fasteners. Secure canister to the rear side of the mount using four 5/16" x 1" cap screws, flat washers and locknuts. Install flat washers against slots.
- Attach the mounts to the cross mount using four 1/2" x 1-1/2" cap screws, flat washers to slots, and locknuts (four per side).



- Loosely attach the cross bar between both mounts using 1/2" x 1-1/2" cap screws and locknuts.



- Starting with the cross mount to vehicle frame fasteners, tighten all fasteners to the corresponding Torque Chart values.
- Reinstall the bumper to its original position using the 1/2" x 1-1/2" cap screws with flat washers under heads and locknuts (see Step 5).

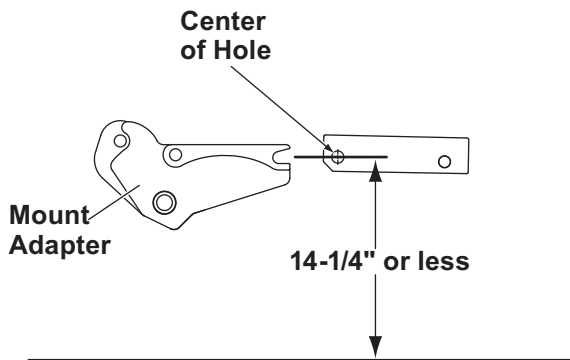
**NOTE: After five to ten hours of snowplow usage, retorque all undercarriage assembly fasteners.**

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**UNDERCARRIAGE INSTALLATION**

**MOUNT ADAPTER MEASUREMENT**

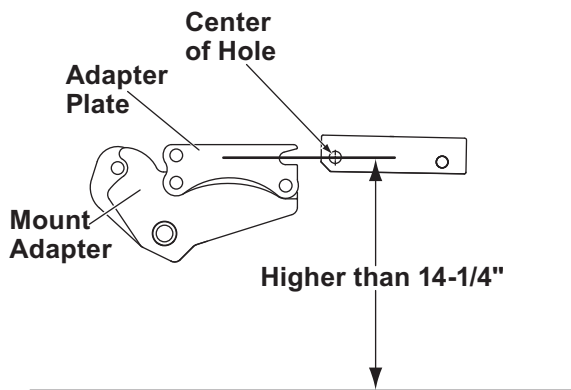
With vehicle on level ground, measure from ground to center of the hole on U-bracket sideplate on the mount.

The recommended height of the mount should be 14-1/4" or less from the center of the U-bracket hole to level ground. If the mount is higher than 14-1/4", the enclosed adapter plates need to be attached to the mount adapter. (The mount adapter comes packaged with the blade crate assembly.)



If measured height is 14-1/4" or less, no height adjustment is needed.

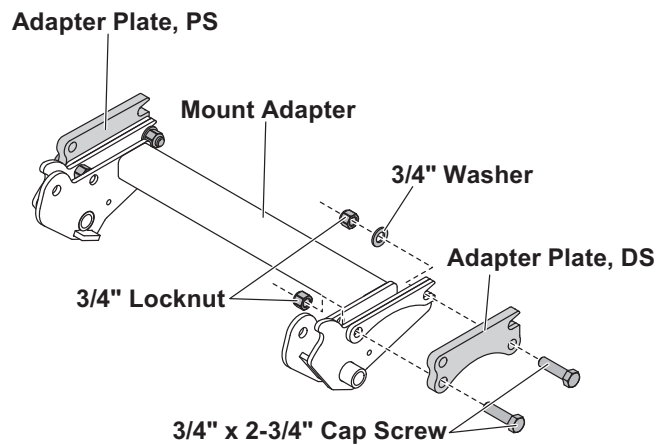
If measured height is higher than 14-1/4", install the height adjustment adapter plates as described.



**MOUNT ADAPTER INSTALLATION**

Install adapter plates as follows:

1. Position the adapter plate against the driver's side portion of the mount adapter as shown. Insert a 3/4" x 2-3/4" cap screw through the lower front adapter plate hole and through the appropriate hole on the mount adapter. Secure with a locknut.
2. Insert a cap screw through the rear adapter plate hole, through the slot on the mount adapter and through a washer. Secure with a locknut.



3. Repeat for the passenger's side. Tighten all fasteners according to the torque chart.

**NOTE: After five to ten hours of snowplow usage, retorque all undercarriage assembly fasteners.**







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