



**30259**

**UNDERCARRIAGE KIT**

**Ford Super Duty F-250/350/450/550**

**2005 - 07**

**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

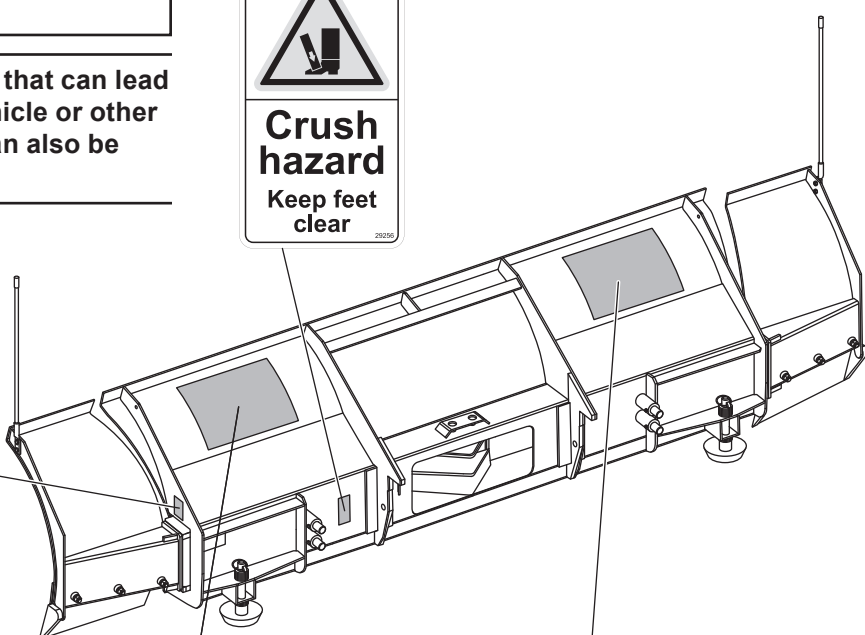
Indicates a potentially hazardous situation that, if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices.

**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	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 arm/blade 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 arm/blade 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>	<p>Keep fingers away from snowplow and truck attachment points. POWER HITCH™ 2 arm raises behind undercarriage pushbeam.</p>	<ol style="list-style-type: none"> <li>Lower snowplow onto 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 arm/blade 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 arm/blade 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 arm/blade operation switch to fully lower arm.</li> <li>Unplug electrical harnesses.</li> </ol>

Read Owner's Manual for complete instructions.

U.S. patents 5,420,450; 5,638,616; 5,999,007; 6,178,669; 6,253,470; 6,276,076; 6,393,737; 6,408,549; 6,442,877; 6,615,513; 7,134,227; 7,400,058; 7,430,921; 7,574,716; CAN patents 2,400,425; 2,184,922; 2,223,763; 2,250,548; 2,358,145; 2,389,554; 2,529,533; and other patents pending.

	<p><b>⚠ WARNING</b></p> <p>Lower blade when vehicle is parked.</p>
	<p><b>⚠ WARNING</b></p> <p>Do not exceed GVWR or GAWR including blade and ballast.</p>
	<p><b>⚠ CAUTION</b></p> <p>Read Owner's Manual before operating or servicing snowplow.</p>
	<p><b>⚠ CAUTION</b></p> <p>Transport speed should not exceed 45 mph (72 km/h). Further reduce speed under adverse travel conditions.</p>
	<p><b>⚠ CAUTION</b></p> <p>Plowing speed should not exceed 10 mph (16 km/h).</p>
	<p>See your sales outlet/Web site for specific vehicle application recommendations.</p>

## 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 the blade when the 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 the 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, 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.**

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**TORQUE SPECIFICATIONS**

**NOISE**

Airborne noise emission during use is below 70 dB(A) for the snowplow 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**

**⚠ 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.



Grade Identification for J429-Grade 5 Bolt



Grade Identification for J429-Grade 8 Bolt

SAE J429 Grade 5 Torque Values				SAE J429 Grade 8 Torque Values			
Nominal Thread Size	Clamp Loads (lb)	Tightening Torque		Nominal Thread Size	Clamp Loads (lb)	Tightening Torque	
		"Lubricated"	"Dry"			"Lubricated"	"Dry"
1/4-20	2,000	6 ft-lb	8 ft-lb	1/4-20	2,850	9 ft-lb	12 ft-lb
5/16-18	3,350	13 ft-lb	18 ft-lb	5/16-18	4,700	18 ft-lb	25 ft-lb
3/8-16	4,950	23 ft-lb	31 ft-lb	3/8-16	6,950	32 ft-lb	44 ft-lb
7/16-14	6,800	37 ft-lb	50 ft-lb	7/16-14	9,600	53 ft-lb	70 ft-lb
1/2-13	9,050	57 ft-lb	75 ft-lb	1/2-13	12,800	80 ft-lb	107 ft-lb
9/16-12	11,600	82 ft-lb	109 ft-lb	9/16-12	16,400	115 ft-lb	154 ft-lb
5/8-11	14,500	113 ft-lb	151 ft-lb	5/8-11	20,300	159 ft-lb	211 ft-lb
3/4-10	21,300	200 ft-lb	266 ft-lb	3/4-10	30,100	282 ft-lb	376 ft-lb
7/8-9	29,435	321 ft-lb	430 ft-lb	7/8-9	41,550	454 ft-lb	606 ft-lb
1-8	38,600	482 ft-lb	640 ft-lb	1-8	54,540	680 ft-lb	900 ft-lb



Grade Identification for Metric-Grade 8.8 Bolt



Grade Identification for Metric-Grade 10.9 Bolt

Metric Class 8.8 Torque Values				Metric Class 10.9 Torque Values			
Diameter (mm)	Clamp Loads (lb)	Tightening Torque		Diameter (mm)	Clamp Loads (lb)	Tightening Torque	
		"Lubricated"	"Dry"			"Lubricated"	"Dry"
5	1,389	3 ft-lb	5 ft-lb	5	1,987	5 ft-lb	7 ft-lb
6	1,965	6 ft-lb	8 ft-lb	6	2,812	8 ft-lb	11 ft-lb
7	2,826	10 ft-lb	13 ft-lb	7	4,044	14 ft-lb	19 ft-lb
8	3,579	14 ft-lb	19 ft-lb	8	5,121	20 ft-lb	27 ft-lb
10	5,672	28 ft-lb	37 ft-lb	10	8,116	40 ft-lb	53 ft-lb
12	8,243	49 ft-lb	65 ft-lb	12	11,796	70 ft-lb	92 ft-lb
14	11,246	77 ft-lb	103 ft-lb	14	16,092	111 ft-lb	148 ft-lb
16	15,882	125 ft-lb	167 ft-lb	16	21,970	173 ft-lb	231 ft-lb
18	19,423	172 ft-lb	229 ft-lb	18	26,868	238 ft-lb	317 ft-lb
20	24,784	244 ft-lb	325 ft-lb	20	34,284	338 ft-lb	450 ft-lb

## INSTALLATION INSTRUCTIONS

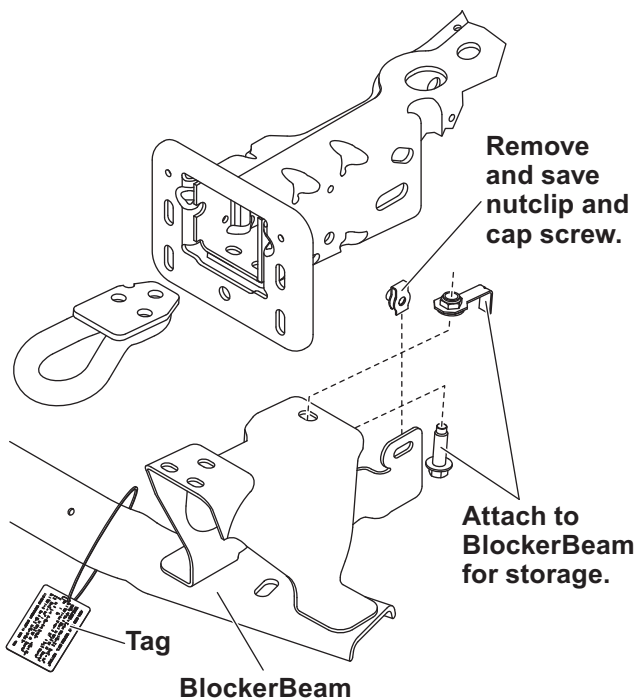
**NOTE:** For easier assembly and installation, the vehicle and all snowplow components should be on a smooth, level, hard surface, such as concrete.

1. Remove the bumper by first detaching any electrical cords attached to bumper (diesel engine and vehicles with fog lamps). Remove the bumper fasteners and save for reinstallation.

### **⚠ WARNING**

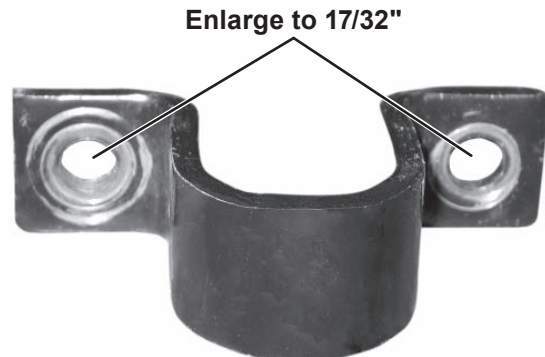
**Removing the BlockerBeam™ without installing snowplow attachment hardware may affect air bag deployment in a crash. Do not operate the truck unless either the BlockerBeam or the snowplow attachment hardware is installed on the vehicle.**

2. The vehicle is equipped with a BlockerBeam between the frame horns and behind the bumper. Disconnect the rubber air deflector from the BlockerBeam, then detach the BlockerBeam and tow hooks from the truck frame. Save the tow hooks and three tow hook fasteners for reinstallation later in this instruction. Remove and save nutclips and cap screws for reinstallation on bumper mounting bracket in Step 6.



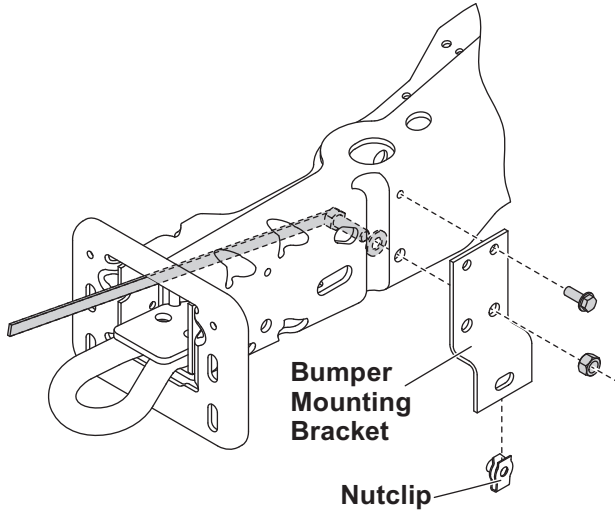
Loosely reattach the rear fastener and retainer nut to each side of the BlockerBeam to prevent loss. Affix the provided BlockerBeam warning tag to the BlockerBeam using the cable tie. The BlockerBeam must be reinstalled if the snowplow mount is ever removed, and must be transferred when the vehicle is sold or traded.

3. Replace the tow hook into the frame and install and tighten only the single rear tow hook fastener at this time. If necessary, loosely install a front tow hook fastener to maintain tow hook hole alignment temporarily while tightening the rear fastener. Remove the front cap screw after tightening the rear cap screw.
4. Beginning on the driver's side, remove the two sway bar bracket fasteners and remove the retained nutclips from the sway bar bracket. Allow the sway bar bushing and U-bracket to separate from the vehicle frame.
5. Remove the U-bracket from the sway bar bushing. Enlarge the two holes in the U-bracket with a 17/32" drill to allow clearance for 1/2" cap screws, and save for later installation.



## UNDERCARRIAGE INSTALLATION

6. Install the bumper mounting bracket to existing frame holes using the self-tapping screw, and the 1/2" x 1-1/2" cap screw with handle, flat washer and locknut. Use only the rearmost holes in the bracket. Tighten these fasteners at this time, then reinstall the nutclip taken from the BlockerBeam™.



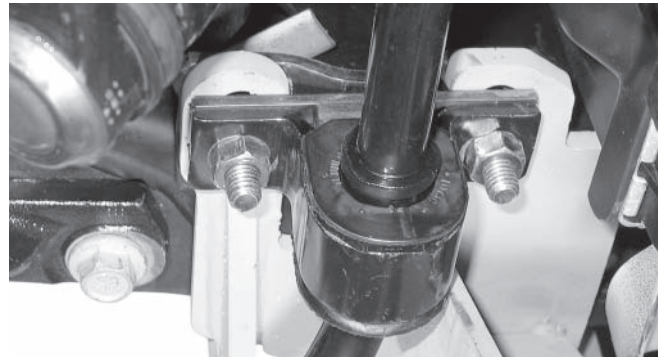
7. Position the mount against the vehicle frame with the tow hook and sway bar holes aligned. Install, but do not tighten, the 1/2" x 1-3/4" cap screw, flat washers and locknut through the front of the mount and the existing hole in the outboard side of the frame to support the mount in position.



8. Install, but do not tighten, the two remaining tow hook fasteners.



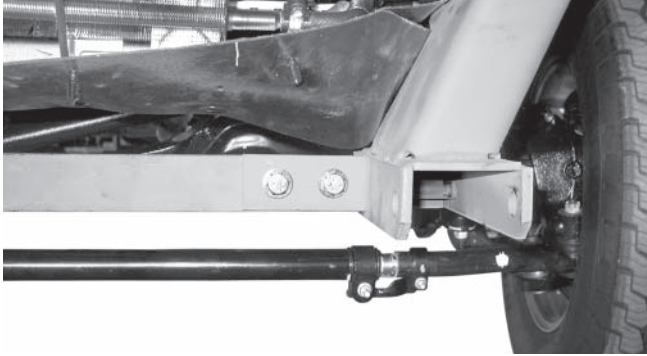
9. Insert the sway bar spacer between the mount and the sway bar bushing. Loosely attach the rear of the mount using cap screws (1/2" x 1-3/4" in rear hole and 1/2" x 2" in front hole), one flat washer on the top of the sway bar bracket and one on the bottom of the modified U-bracket and locknuts. Cap screws and washers may be installed up from below with nuts and washers on top of the sway bar bracket as required for clearance.



10. Repeat Steps 3 through 9 on the passenger's side, using 1/2" x 2" cap screws in both holes of the sway bar bracket.

## UNDERCARRIAGE INSTALLATION

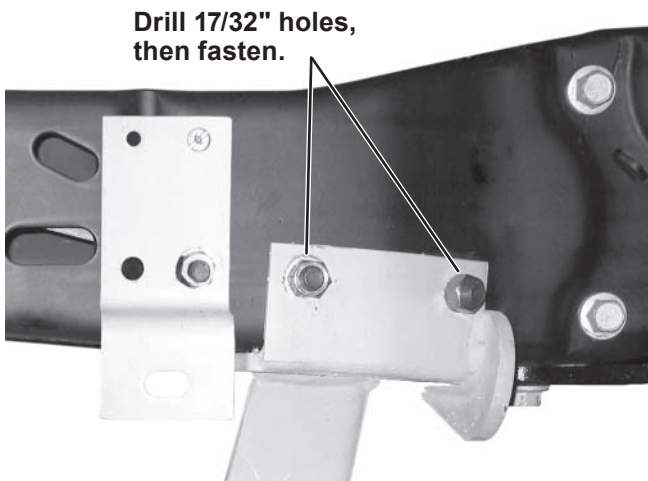
11. Loosely attach the cross bar between both mounts using 1/2" x 1-3/4" cap screws, flat washers and locknuts. Set the center-to-center measurement between the mount receivers to 30-7/16", and tighten these four cap screws and locknuts.



**⚠ CAUTION**

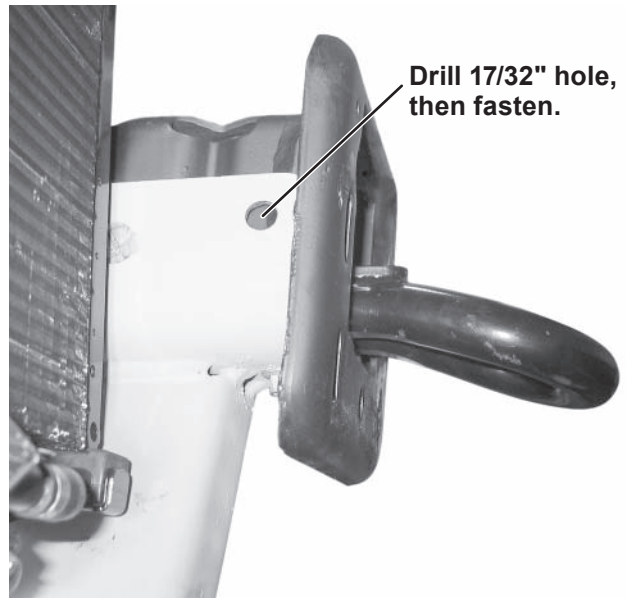
**Protect radiators and cooling lines against damage while drilling holes in the frame.**

12. With the mount firmly against the truck frame, drill two 17/32" holes through the side of the frame at the rear of mount, using the holes in the mount as locators. Fasten securely using two 1/2" x 1-1/2" cap screws with handles, flat washers and locknuts.



13. Beginning on the driver's side, tighten the tow hook fasteners first, then tighten the sway bar bracket fasteners. Next, tighten the 1/2" x 1-1/2" cap screw and locknut passing through the frame side.

14. Drill one 17/32" hole through the inboard side of the frame at the front of the mount, just ahead of the radiators, using the hole provided in the mount as the locator. Fasten securely using one 1/2" x 1-3/4" cap screw, flat washers and locknut.



15. Repeat Steps 12 through 14 on the passenger's side.
16. Tighten all fasteners at this time according to the torque chart.
17. Use cable ties to tie up coolant lines that may contact parts just installed. It is important to provide sufficient clearance between all portions of the coolant lines and the snowplow mount components.

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**NOTE: Use anti-chafing material in those situations where sufficient clearance cannot be maintained.**

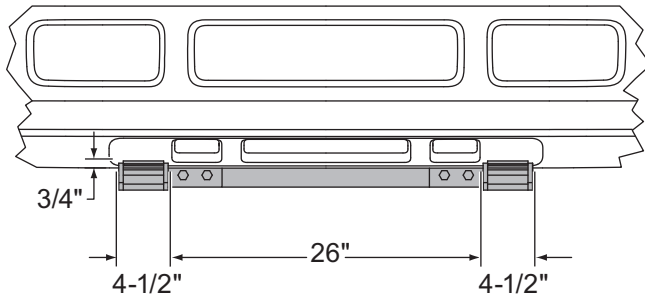
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**UNDERCARRIAGE INSTALLATION**

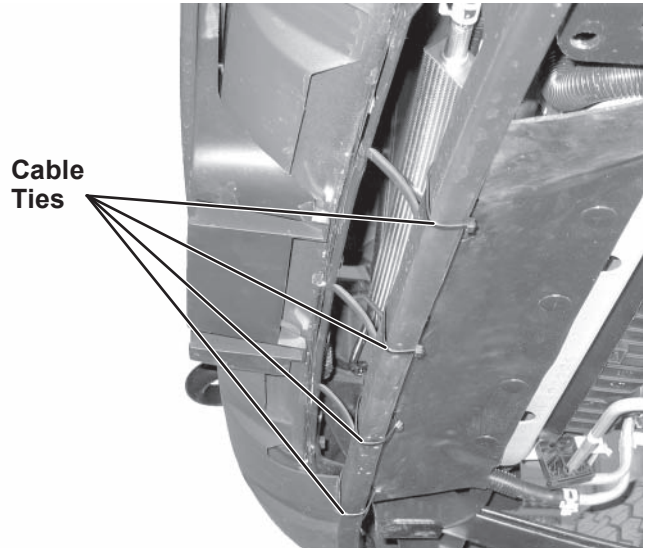
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18. Reinstall the bumper using existing hardware at the frame horns and at the bumper mounting brackets. Reattach any electrical cords removed during bumper removal.

19. The air dam can be notched generally as shown to clear the mount receivers, if necessary.



20. Attach the front of the rubber air deflector that was originally attached to the BlockerBeam™ to the bottom of the air dam with the four provided cable ties.



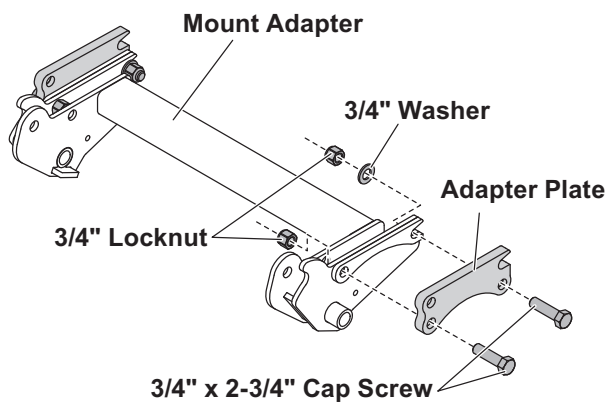


## MOUNT ADAPTER INSTALLATION

### MOUNT ADAPTER INSTALLATION

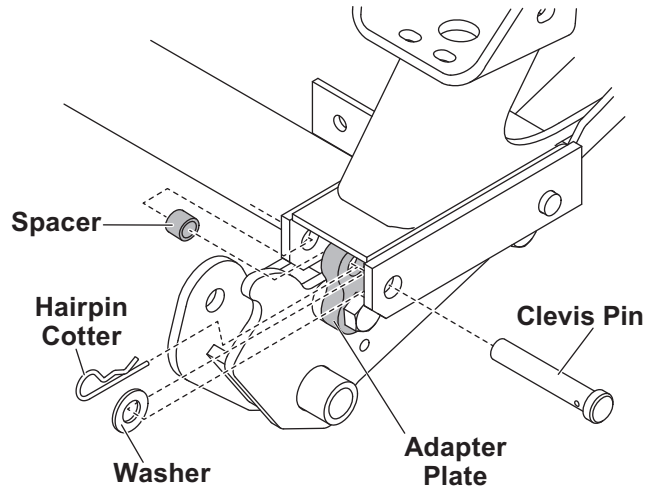
Attach the enclosed height adjustment adapter plates to the mount adapter. (The mount adapter comes packaged with the blade crate assembly.) Install the short adapter plates as follows:

1. Position one 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.

When positioning the mount adapter between the undercarriage brackets, insert a spacer between the adapter plate and the inner side plate of the undercarriage as shown.



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



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