

# 31271-1

## MOUNT KIT

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

**2017–\_\_**

**Ford Super Duty F-350/450 Diesel**

**Dual Rear Wheel Pickup**

**2020–\_\_**

**Installation Instructions**

**▲ CAUTION**

Read this document before installing the snowplow.

**▲ CAUTION**

See your sales outlet/website for specific vehicle application recommendations before installation. The online selection system has specific vehicle and snowplow requirements.

**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.

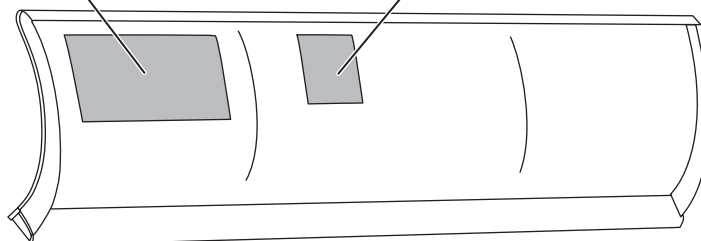
**WARNING/CAUTION & INSTRUCTION LABELS**

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.

**NOTE :** Translated safety labels are available. Please contact your sales outlet.

Instruction Label



Warning/Caution Label

<b>⚠ WARNING</b>	
	<p>Blade could drop unexpectedly, crushing or trapping limbs. Lower blade when vehicle is parked.</p> <p>Overloading could negatively affect vehicle handling. To avoid serious injury or death, do not exceed GVWR or GAWR including blade and ballast.</p>
<b>⚠ CAUTION</b>	
	<p>Read Owner's Manual before operating or servicing snowplow.</p> <p>Transport speed should not exceed 45 mph (72 km/h). Further reduce speed under adverse travel conditions.</p> <p>Plowing speed should not exceed 10 mph (16 km/h).</p> <p>See your sales outlet/website for specific vehicle application recommendations.</p> <p><b>WWW.</b></p>

## 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 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 vehicle and 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/T-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 online selection system 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.**

**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.**

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.

**INSTALLATION INSTRUCTIONS FOR FORD SUPER DUTY F-250/350/450/550**

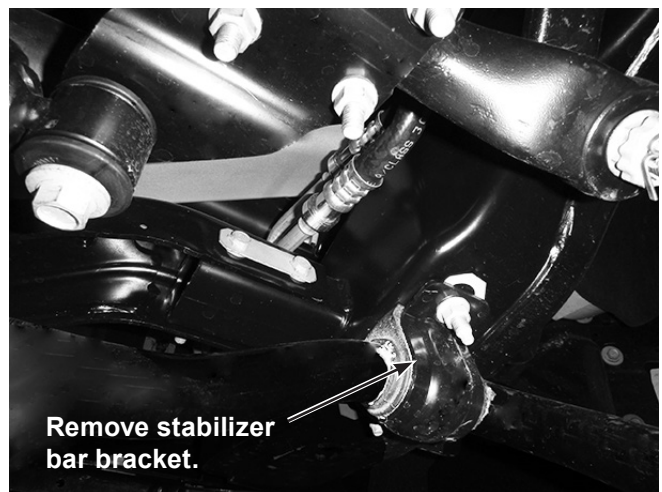
For Ford Super Duty F-350/450 Diesel Dual Rear Wheel Pickups, skip to the Installation Instructions beginning on Page 9.

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

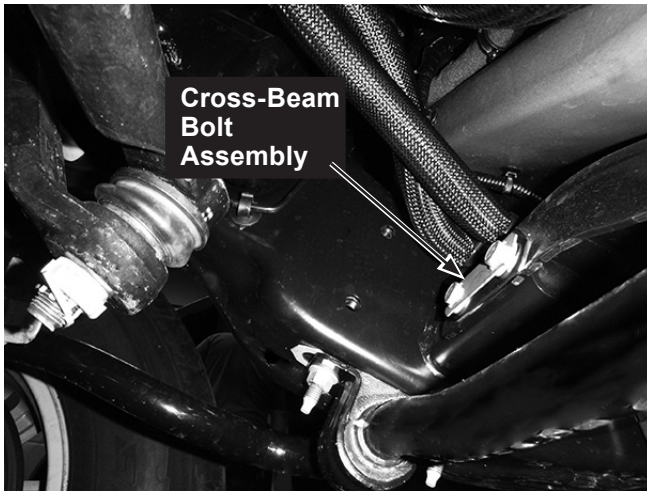
1. Remove the air dam and bumper. Retain the fasteners for later installation.
2. Remove compatibility structures, if vehicle is so equipped. Retain them for reinstallation if the snowplow mount is removed from the vehicle.



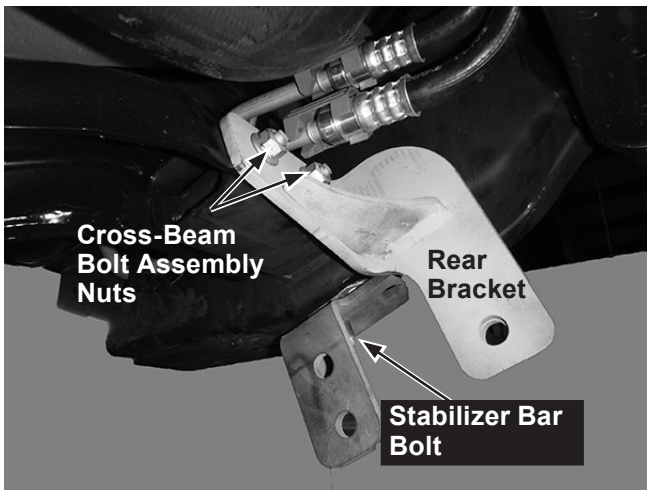
3. Remove the stabilizer bar brackets and locknuts and retain for reinstallation later in this procedure.



4. On the passenger's side, remove the nuts from the cross-beam bolt assembly.

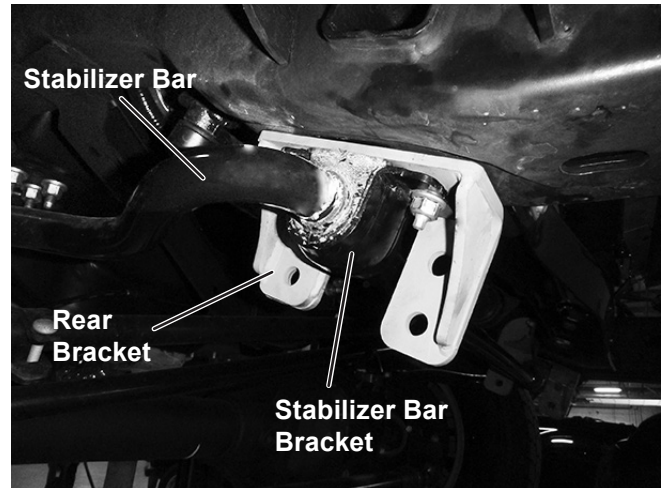


5. Position the rear bracket over the cross-beam bolt assembly as shown. Ensure that the stabilizer bar bolts protrude through the rear bracket. Secure the rear bracket with the fasteners removed in Step 4. If there are hoses close to the cross-beam bolt assembly, remove the cross-beam bolt assemblies and reinstall from the bracket side. Secure them with the locknuts on the front side of the cross beam.



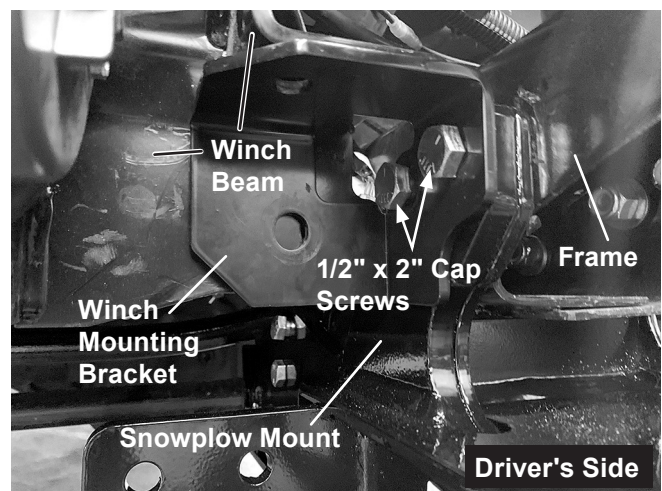
6. Repeat Steps 4 and 5 on the driver's side.

7. Replace the stabilizer bar and install the stabilizer bar brackets over the rear brackets as shown. Secure with the stabilizer bar nuts removed in Step 3.



**For vehicles *not* equipped with a factory-installed winch, skip to Step 17. For vehicles that are equipped with a winch:**

8. Beginning on the driver's side, remove the winch mounting bracket. Position the snowplow mount against the inner frame surface and set the winch bracket in place against the side of the mount. Install two 1/2" x 2" cap screws through the bracket, mount, and frame and secure with 1/2" locknuts to hold all three components in place against the frame. Hand-tighten locknuts.

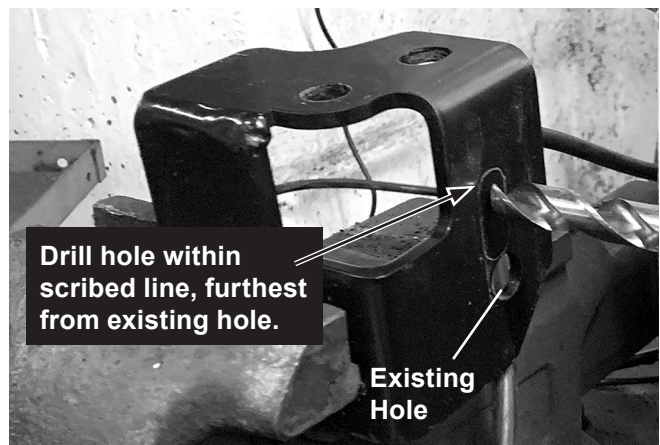
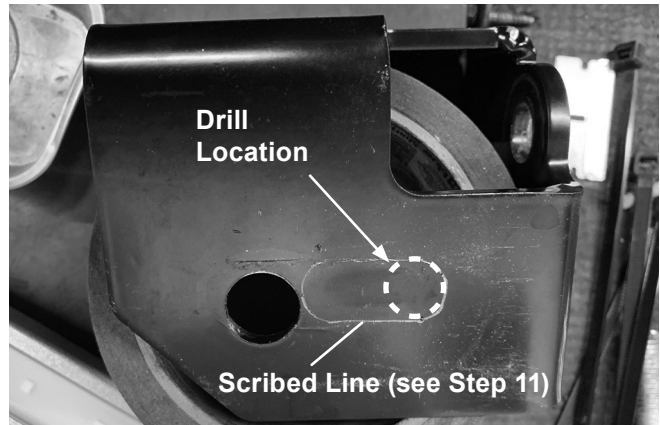


- Insert three 1/2" x 1-1/2" cap screws through the snowplow mount holes against the outer frame surface. Secure with 1/2" locknuts and 1/2" washers on the inside of the frame.



- Attach the snowplow mount to the rear brackets using three 1/2" x 2" cap screws and 1/2" locknuts. For the upper forward hole, install two 1/2" washers, one at the head of the cap screw and one at the tail end, as shown above.
- Use a scribe or other sharp implement to TRACE the slot of the winch beam onto the upper surface of the winch mounting bracket. (See next photo.)

- Remove the winch mounting bracket installed in Step 8. Using a bench vise to hold the bracket securely, drill a 17/32" diameter hole through the upper surface of the bracket at the end of the scribed slot furthest away from the existing hole.



- Reinstall the winch mounting bracket as in Step 8, and secure the winch beam from above using OEM hardware (bolt, nut, and washers) inserted through the hole drilled in Step 12. Tighten all fasteners according to the torque chart.

**⚠ CAUTION**

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

14. Using the front-facing winch-bracket hole as a guide, drill a 17/32" diameter hole through the winch beam.



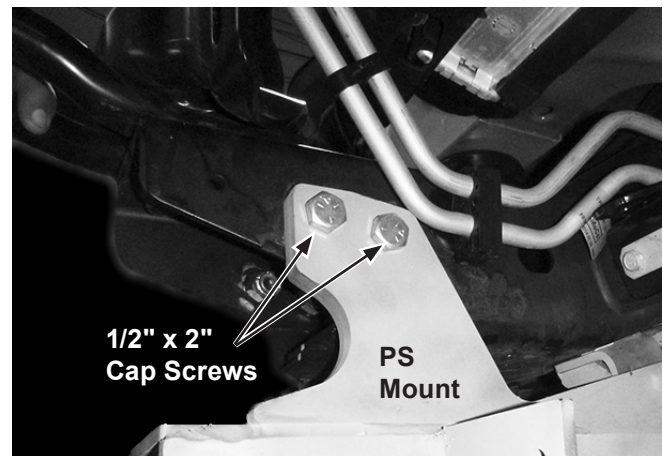
15. Secure the winch beam to the winch bracket using the OEM hardware (bolt, nut, and washers) inserted through the hole drilled in Step 14 as shown.



16. Repeat Steps 8–15 on the passenger's side, then skip to Step 21.

For vehicles not equipped with a factory-installed winch:

17. Position the passenger-side mount as shown. Insert two 1/2" x 2" cap screws through the mount holes against the inner frame surface. Secure with 1/2" washers and 1/2" locknuts on the inside of the frame.



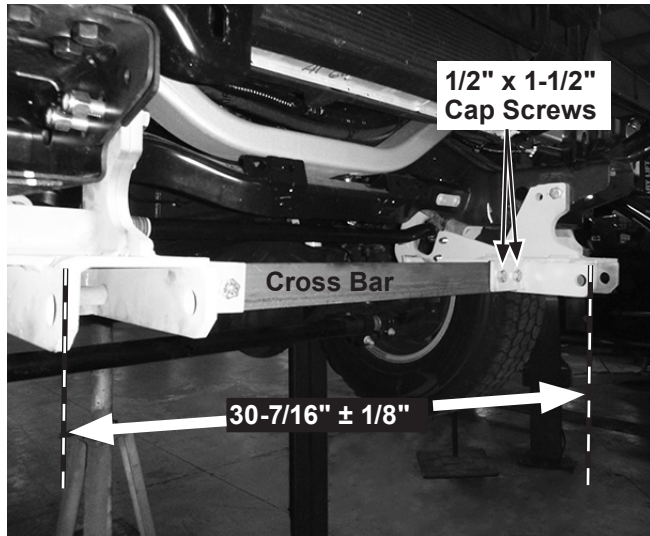
18. Insert three 1/2" x 1-1/2" cap screws through the mount holes against the outer frame surface. Secure with 1/2" locknuts and 1/2" washers on the inside of the frame.



19. Attach the snowplow mount to the rear brackets using three 1/2" x 2" cap screws and 1/2" locknuts. For the upper forward hole, install two 1/2" washers, one at the head of the cap screw and one at the tail end, as shown above.
20. Repeat Steps 17–19 on the driver's side, before continuing to Step 21.

**For all vehicles, with and without winch:**

21. Position the cross bar as shown and secure with four 1/2" x 1-1/2" cap screws and 1/2" locknuts.
22. Check for a U-bracket to U-bracket distance of 30-7/16" ± 1/8". Adjust if needed and tighten the cross bar fasteners to set the specified separation distance.



23. Tighten all fasteners according to the torque chart.
24. Position the bumper in place. In some cases a small amount of trimming of the lower metal bumper may be needed to clear the mounts.



25. Notch the lower plastic section of the bumper to allow clearance for the U-brackets. Reattach the bumper using the original fasteners.

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**NOTE: Installation of the headlamp harnesses may require removal of the grille, which is easier if the bumper is off the vehicle. Do not reattach the bumper until the headlamp harness installation is complete.**

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26. Check clearances between the installed snowplow mount and any vehicle wires, hoses, and brake or cooling lines. Reposition and secure any interfering truck components to ensure at least 3/16" clearance, taking into account any possible movement of the truck components during normal operation.

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

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**This completes the Installation Instructions for Ford Super Duty F-250/350/450/550 vehicles.**

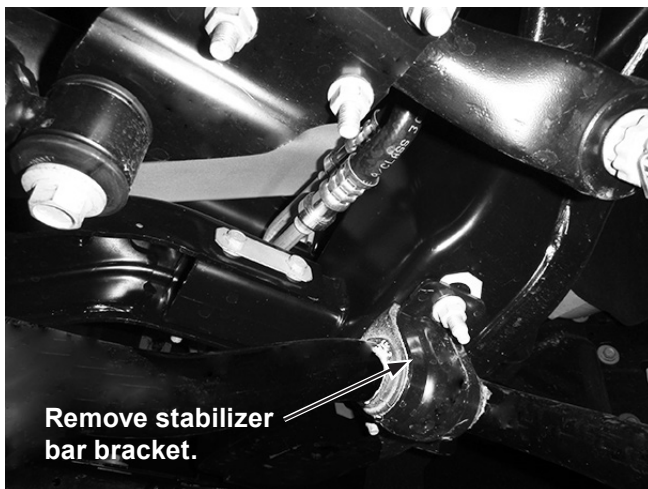
## INSTALLATION INSTRUCTIONS FOR FORD SUPER DUTY F-350/450 DIESEL DUAL REAR WHEEL PICKUPS

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

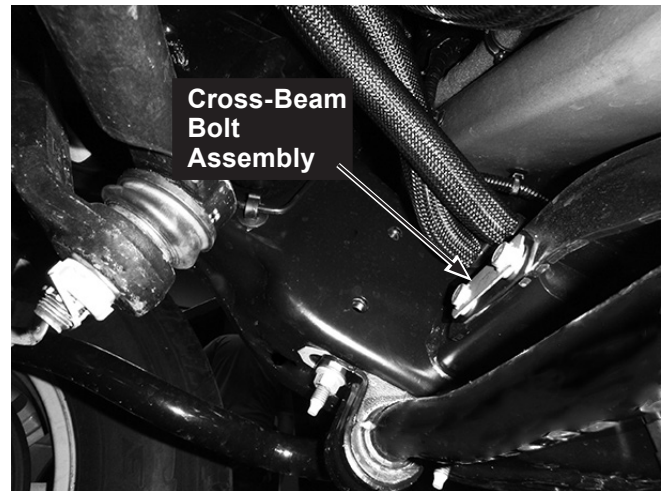
1. Remove the air dam and bumper. Retain the fasteners for reinstallation.
2. Remove compatibility structures, if vehicle is so equipped. Retain them for reinstallation if the snowplow mount is removed from the vehicle.



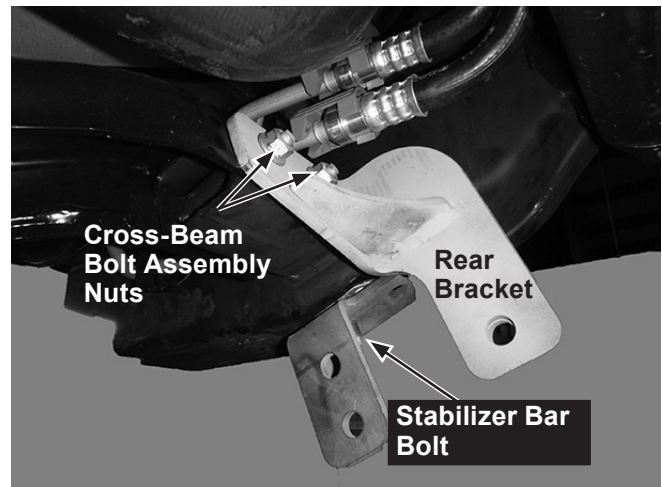
3. Remove the stabilizer bar brackets and locknuts and retain for reinstallation later in this procedure.



4. On the passenger's side, remove the nuts from the cross-beam bolt assembly.

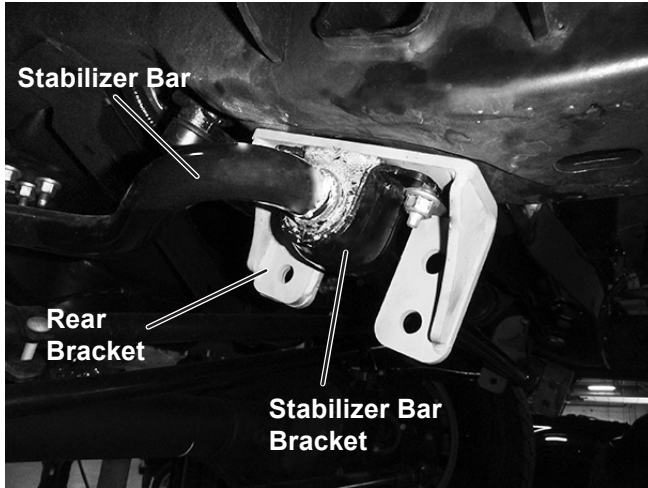


5. Position the rear bracket over the cross-beam bolt assembly as shown. Ensure that the stabilizer bar bolts protrude through the rear bracket. Secure the rear bracket with the fasteners removed in Step 4. If there are hoses close to the cross-beam bolt assembly, remove the cross-beam bolt assemblies and reinstall from the bracket side. Secure them with the locknuts on the front side of the cross beam.

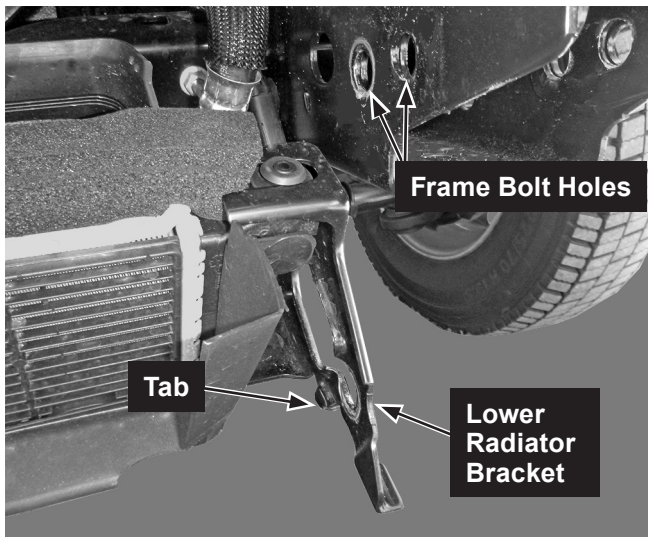


6. Repeat Steps 4 and 5 on the driver's side.

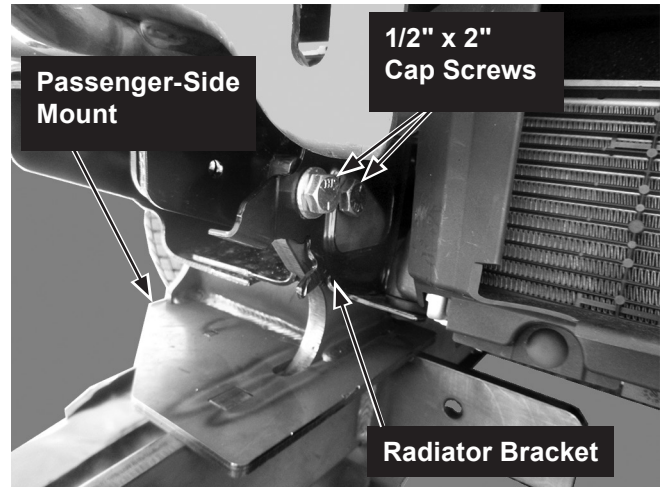
- Replace the stabilizer bar and install the stabilizer bar brackets over the rear brackets as shown. Secure with the stabilizer bar nuts removed in Step 3.



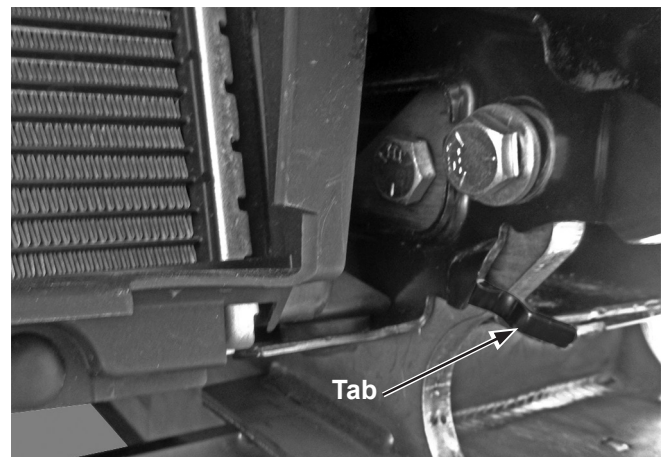
- Remove the four fasteners that secure the lower radiator bracket to the frame. Retain for reinstallation if the mount is removed. Straighten the bracket tabs as shown.



- Lift the passenger-side mount into place against the frame as shown. Position the radiator bracket against the mount.



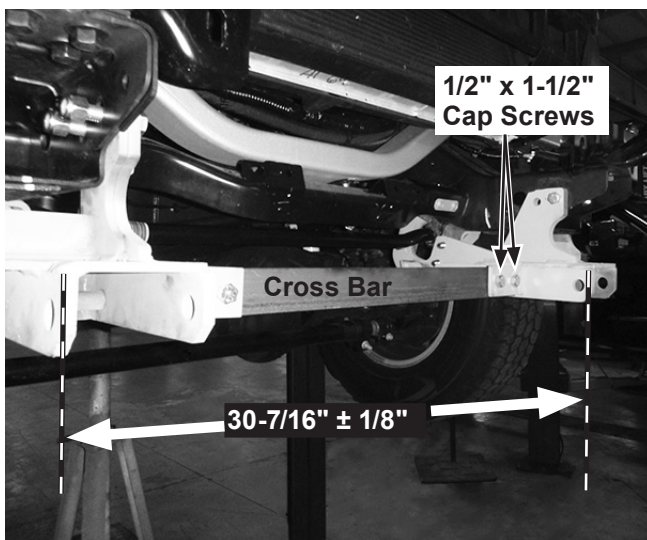
- Place a washer on one 1/2" x 2" cap screw and install through the front bolt hole of the radiator bracket, the passenger-side mount, and into the frame.
- Install a second 1/2" x 2" cap screw through the radiator bracket window, the passenger-side mount bolt hole, and into the frame. Secure both cap screws with 1/2" washers and 1/2" locknuts on the inside of the frame.
- Repeat Steps 9–11 on the driver's side. The radiator bracket may need to slide toward the center of the vehicle to allow clearance for the driver-side mount.
- With both mounts installed, bend the radiator bracket tabs over the mount plates.



14. Insert three 1/2" x 1-1/2" cap screws through the mount holes against the outer frame surface. Secure with 1/2" washers and 1/2" locknuts on the inside of the frame.



15. Attach the snowplow mount to the rear brackets using three 1/2" x 2" cap screws and 1/2" locknuts. For the upper forward hole, install two 1/2" washers, one at the head of the cap screw and one at the tail end, as shown above.
16. Repeat Steps 14 and 15 on the driver's side.
17. Position the cross bar on the inner tabs of the mount as shown and secure with four 1/2" x 1-1/2" cap screws and 1/2" locknuts.
18. Check for a U-bracket to U-bracket distance of 30-7/16"  $\pm$  1/8". Adjust if needed and tighten the cross bar fasteners to set the specified separation distance.



19. Tighten all fasteners according to the torque chart.

20. Position the bumper. It may be necessary to trim the bumper to clear the mounts.



21. Notch the lower plastic section of the bumper to allow clearance for the U-brackets. Reinstall the bumper using the original fasteners.

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**NOTE: Installation of the headlamp harnesses may require removal of the grille, which is easier if the bumper is off the vehicle. Do not reattach the bumper until the headlamp harness installation is complete.**

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22. Check clearances between the installed snowplow mount and any vehicle wires, hoses, and brake or cooling lines. Reposition and secure any interfering vehicle components to ensure at least 3/16" clearance, taking into account any possible movement of the vehicle components during normal operation.

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

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