November 15, 2014 Lit. No. 66885, Rev. 04

# 67982 MOUNT KIT

### Ford Super Duty 250/350/450/550 4X4 1999 - 2004

Installation Instructions

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Read this document before installing the snowplow.

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

**A DIVISION OF DOUGLAS DYNAMICS, LLC** 

#### SAFETY DEFINITIONS

#### **A** WARNING

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

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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.

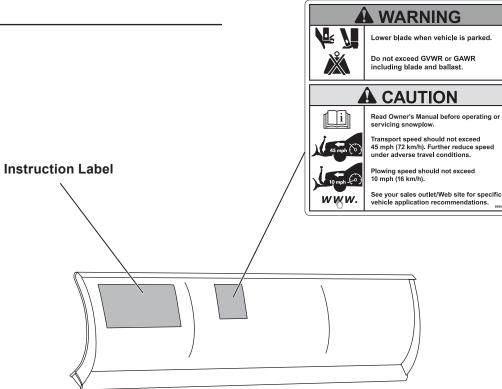
NOTE: Indicates a situation or action that can lead to damage to your snowplow and vehicle or other property. Other useful information can also be described.

## 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.

#### Warning/Caution Label



#### 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.

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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.

#### **A** 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.

#### **A** 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.

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

#### A 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.

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Remove blade assembly before placing vehicle on hoist.

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Refer to the online selection tool 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

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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

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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 $^2$  to the hand-arm or 0.5 m/s $^2$  to the whole body.

#### **TORQUE CHART**

#### **A** 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)			Torque (ft-lb)	
	Grade 5		Size	Grade 5	Grade
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)			Torque (ft-lb)	
	Class 8.8	Class 10.9	Size	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

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

#### **A** WARNING

Removing the BlockerBeam<sup>™</sup> 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.

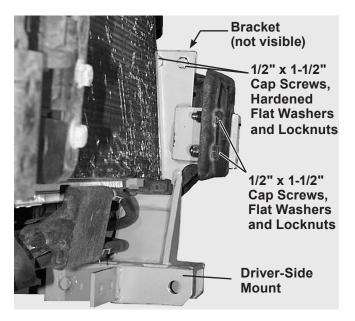
- If the vehicle is equipped with a BlockerBeam between the frame horns and behind the bumper, unbolt and remove it. Save it for reinstallation if the snowplow mount is later removed from the vehicle. Attach the 66871 BlockerBeam warning tag using the cable tie provided. The BlockerBeam must be reinstalled if the snowplow mount is ever removed and must be transferred with the vehicle when it is sold or traded.
- Remove the bumper by first detaching the rubber flap and any electrical cords attached to the bumper (vehicles with fog lamps and diesel). Remove the bumper fasteners and slide the bumper forward until it is clear of the tow hooks. Remove and discard the two thin plates hanging from the bumper mounts.
- 3. Beginning on the driver's side, position the rear of the mount by fitting it between the leaf springs and the frame. The truck frame may have to be raised to provide clearance for mount installation. Check for and eliminate any interference with the Ford nut retainers on the bottom of frame.

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To avoid damaging A/C condensers, heads of cap screws should be on the inside, with nuts on the outside of (PN 22289) bracket; this will increase clearance with condenser. 4. Once the rear of the mount is in position, rotate the front of the mount into place and loosely secure by attaching a bracket with two 1/2" x 1-1/2" cap screws, 1/2" hardened flat washers and locknuts. The heads of the cap screws should be on the inside. Slide the mount rearward after attaching the bracket and hardware.

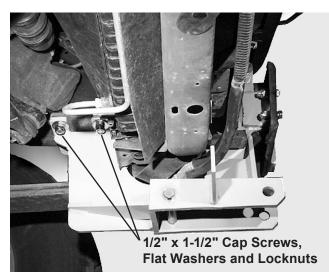
NOTE: The rear cap screw can also be assembled by lifting the A/C condenser up in its attaching pocket and pulling it forward from its lower pocket. Assemble the bolt and lift and replace A/C condenser to its attaching pockets.

5. Loosely attach front of mount to bumper brackets on frame using 1/2" x 1-1/2" cap screws, flat washers and locknuts.



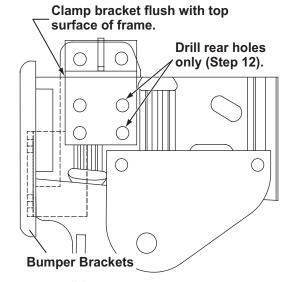
 For F-250, F-350 and all other vehicles with a swaybar bracket: Loosely attach the rear of the mount to swaybar bracket using 1/2" x 1-1/2" cap screws, one flat washer on top of swaybar bracket and one on bottom of mount slotted hole, and locknuts.

For F-450, F-550, and all vehicles without swaybar bracket: Proceed to Step 7.

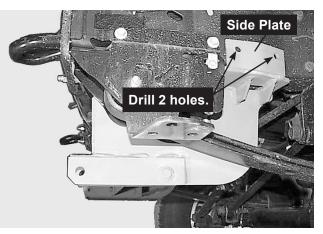


- 7. Repeat Steps 2–5 on the passenger's side.
- Loosely attach the cross bar between both mounts using 1/2" x 1-1/2" cap screws, flat washers and locknuts.
- 9. With the mount fitted snugly into position, clamp the brackets to the top surface of the frame. Make sure the bracket is flush with the top frame surface and the shim welded to the bracket is flush with the smaller boxed frame section.

10. Tighten the fasteners at the front of the mount where it meets the bumper plate. These fasteners should now be toward the tops of the slotted holes in the bumper plate.



11. Attach the rear of the mount.



For F-250, F-350, and all other vehicles with a swaybar bracket: With the rear of the mount tight against both the side and bottom of the frame, tighten fasteners running through swaybar bracket.

Mark and drill two 17/32" holes through the side of the frame using mount holes as guides. Fasten securely using two 1/2" x 1-1/2" cap screws with handles, flat washers and locknuts. NOTE: To ensure a tight fit, loosen the swaybar bracket fasteners before tightening the cap screws with handles, then re-tighten the bracket fasteners.

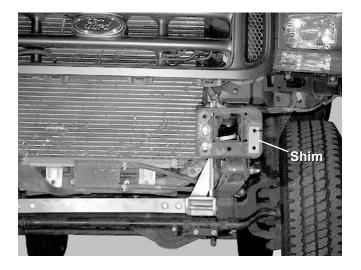
**For F-450, F-550, and all vehicles without a swaybar bracket:** With the rear of each mount tight against both the side and the bottom of the frame, use the mount holes as guides to mark and drill two 9/16" holes through the bottom of the frame. To facilitate drilling, remove the mounts and drill smaller pilot holes to start.

Place a bushing between mount and frame, centered over the rear hole. Fasten securely using two 1/2" x 1-1/2" cap screws with handles, flat washers and locknuts. Using the mount holes as guides, mark and drill two 17/32" holes through the side of the frame. Fasten securely using two, 1/2" x 1-1/2" cap screws with handles, flat washers, and locknuts.

12. On both driver's and passenger's side, drill the two rear holes in the brackets (see Step 10 diagram) and fasten using 1/2" x 1-1/2" cap screws, flat washers to the inside of the frame, and locknuts. Tighten all fasteners at this time according to the torque chart.

## NOTE: The front holes in the bracket are not used at any time.

- 13. Use cable ties to tie up the cooling lines on the driver's side forward of the frontmost radiator. It is important to provide sufficient clearance between all portions of the cooling lines and the driver-side mount.
- 14. Place 1/2" shims in place to space the bumper forward of the frame. Use cable ties to temporarily hold the shims in place. Reinstall the bumper and reattach any rubber flaps or electrical cords removed during bumper removal.



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

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 snow removal. Do not exceed vehicle ratings with a snowplow. The company offers a limited warranty for all snowplows and accessories. See separately printed page for this important information.

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