

SNO-WAY[®]

SNOW & ICE CONTROL EQUIPMENT

Assembly & Installation Instructions

**FOR
VEHICLE MOUNT KIT 99100861
USING
VEHICLE CENTER MEMBER 99100950**

**TO FIT
1999 - LATER FORD F250-F550 SUPER DUTY SERIES 4x4**



1. THINK SAFETY, ALWAYS WEAR SAFETY GLASSES WHEN PERFORMING THE OPERATIONS PRESCRIBED IN THESE INSTRUCTIONS
2. READ ALL INSTRUCTIONS CAREFULLY BEFORE ATTEMPTING INSTALLATION
3. BEFORE BEGINNING WORK MAKE SURE TO SET PARKING BRAKE AND CHOCK WHEELS



MINIMUM VEHICLE RECOMMENDATIONS

Heavy Duty Alternator Heavy Duty Battery
Manufacturers Snow Plow Package

NOTE: On some vehicles it may be necessary to use a form of load booster to decrease the vehicle's front suspension sag with the snow plow in place. This can be accomplished with the use of supplementary air bags, booster springs, or similar load boosting devices. Since there are different load boosting devices available, it will up to the customer/end user to decide and purchase the product to suit the application, and not the responsibility of Sno-Way International, Inc.

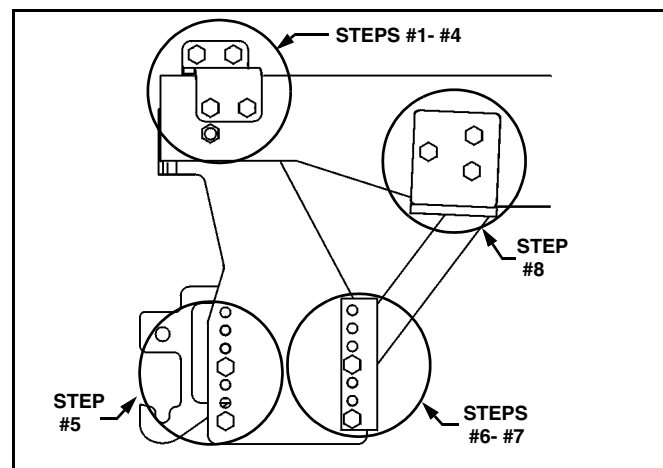
ASSEMBLY TOOLS NEEDED

| | |
|--|------------------|
| Drill Bits | 1/4", 17/32" |
| Impact Sockets | 7/16" – 1-3/8" |
| Impact Sockets Metric | 10mm – 19mm |
| Wrenches | 7/16" – 1-3/8" |
| Wrenches Metric | 10mm – 19mm |
| Torque Wrench | Rat Tail Pry Bar |
| Center Punch and Hammer | |
| Clamping Device ("C", Bar, type device...) | |

INSTALLATION NOTES

1. Unless otherwise specified, mount all Vehicle Mount Kit Components to vehicle before tightening any hardware.
2. It is recommended that **LOCTITE®**, or similar thread locking product, be used on **ALL** mounting hardware (i.e. Nuts, Cap Screws, Bolts, etc.).
3. Vehicle should be parked on a level surface with a normal vehicle load on the FRONT suspension.
4. Items in parentheses () refer to quantity required for this step. Items in parentheses with a pound sign (#) indicate the part number as found in the parts list on the last page of this document.
Example: (2) 1/2" x 13 x 1-1/2" Cap Screws (#9).
5. It maybe necessary to relocate license plate holder. Check state and local laws for placement, if needed.

MOUNTING INSTRUCTIONS



1. Unsnap rubber portion of air dam and other items, if equipped, so that the front bumper can be removed completely. Remove vehicle front bumper assembly, by removing the four (4) nuts that secure the bumper to the bumper support. Retain, with hardware, for replacement at end of installation.


*NOTE: It may be necessary to install spacers (provided) between the bumper mounting plate and the Plates (#2 and #3) to ensure proper hole alignment between the Plates and Rear Weldments when hardware is secured. Test fit by loosely attaching a Plate, Bracket and Rear Weldment on one side of the vehicle (refer to Step 3, then Steps 6-8). **Do not install carriage bolts securing the Front Plate to the bumper mounting plate at this time.** Align the mounting holes in the Plate and Rear Weldment, then check for a gap between the Plate and bumper mounting plate. If a gap exists, add Spacers (#18 and/or #19) to fill the gap and maintain mounting hole alignment when all hardware is installed and tightened. Included in the hardware bag are (4) 1/2" x 2-1/2" Carriage Bolts to secure the Plates (#2 and #3) to the bumper mounting plate if Spacers are used.*



WARNING

According to the Ford Owner Guide, removing the BlockerBeam™ without installing snow plow attachment hardware may affect air bag deployment in a crash. DO NOT operate the truck unless either the BlockerBeam™ or snow plow attachment hardware is installed on the vehicle! FAILURE TO HEED CAN RESULT IN INJURY OR DEATH!

2. Install the Plates (#2, RH and #3, LH) to the inside of the frame, aligning with existing holes in the bumper mounting plate. Insert (4) 1/2" Carriage Bolts (#10, no spacers) or (#16, with spacers) in the slots on the inward side of the tow hooks, and secure the Plates with (4) 1/2" Lock Washers (#14) and (4) 1/2" Hex Nuts (#15).
3. Position the Brackets (#4, RH and #5, LH) over the top of the truck frame and secure to the Plates (#2 and #3) with (4) 1/2" x 1-1/2" Cap Screws (#9) and (4) 1/2" Nylock Nuts (#12). Tighten the Nuts for proper alignment in the following steps.

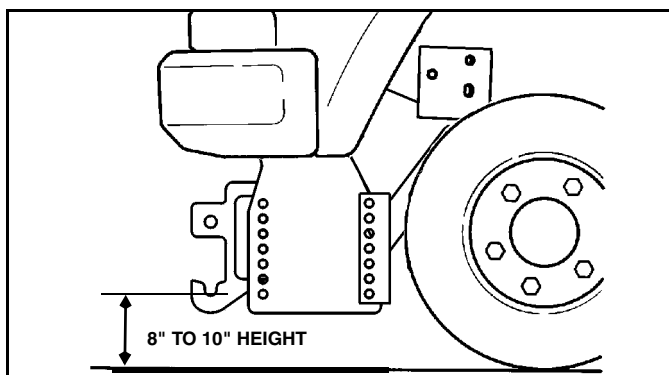


WARNING

Beware of brake and fuel lines secured to inside wall of frame rails when drilling holes in vehicle frame!

FAILURE TO HEED CAN RESULT IN INJURY OR DEATH!

4. Using the Plates and Brackets as a template, drill 1/4", then 17/32" holes through the sides of the frame rail in six places. Secure using (6) 1/2"-13 x 1-3/4" Cap Screws (#13) and (6) Nylock Nuts (#12).
5. Attach Vehicle Center Member (#1) to the Plates (#2 and #3) by aligning the front set of vertical holes in each member then using (4) 1/2"-13 x 1-3/4" Cap Screws (#13), (2) 1/2" Lock Washers (#14) in the threaded holes and (2) 1/2" Nylock Nuts (#12).
6. Align the Lower portion of the LH and RH Rear Weldments (#6 and #7) with the back vertical holes in the Plates (#2 and #3) and Vehicle Center Member (#1).
7. Secure loosely the Rear Weldments (#6 and #7) to the Plates (#2 and #3) and Vehicle Center Member (#1) using (4) 1/2"-13 x 2" Cap Screws (#17) and (4) Nylock Nuts (#12).



IMPORTANT: Height from the bottom of the lower pin slots on the Vehicle Mount Kit to the ground should be between 8" and 10" to insure proper operation. On some vehicles it may be necessary to use a form of load booster (See note page 1, Minimum Vehicle Recommendations).

8. Position the LH and RH Rear Weldments (#6 and #7) firmly against the side and bottom of the truck frame. **Note: the Rear Weldments may not lay flush against the bottom of the frame at this point. They may be interfering with the existing rivet in the frame. Be sure that the side of the Rear Brackets are flush against the side of the frame and continue the installation.** Using the holes on the side of the Rear Weldments as a template, drill 1/4" then 17/32" holes in the vehicle frame. Insert Nut Plate Assembly (#8) through the opening in the front of the vehicle frame and align with the drilled holes. Secure using (6) 1/2"-13 x 1-1/2" Cap Screws (#9) and (6) 1/2" Lock Washers (#12).
9. Using the Torque Specification chart provided, torque all bolts, starting at the rear and working forward.

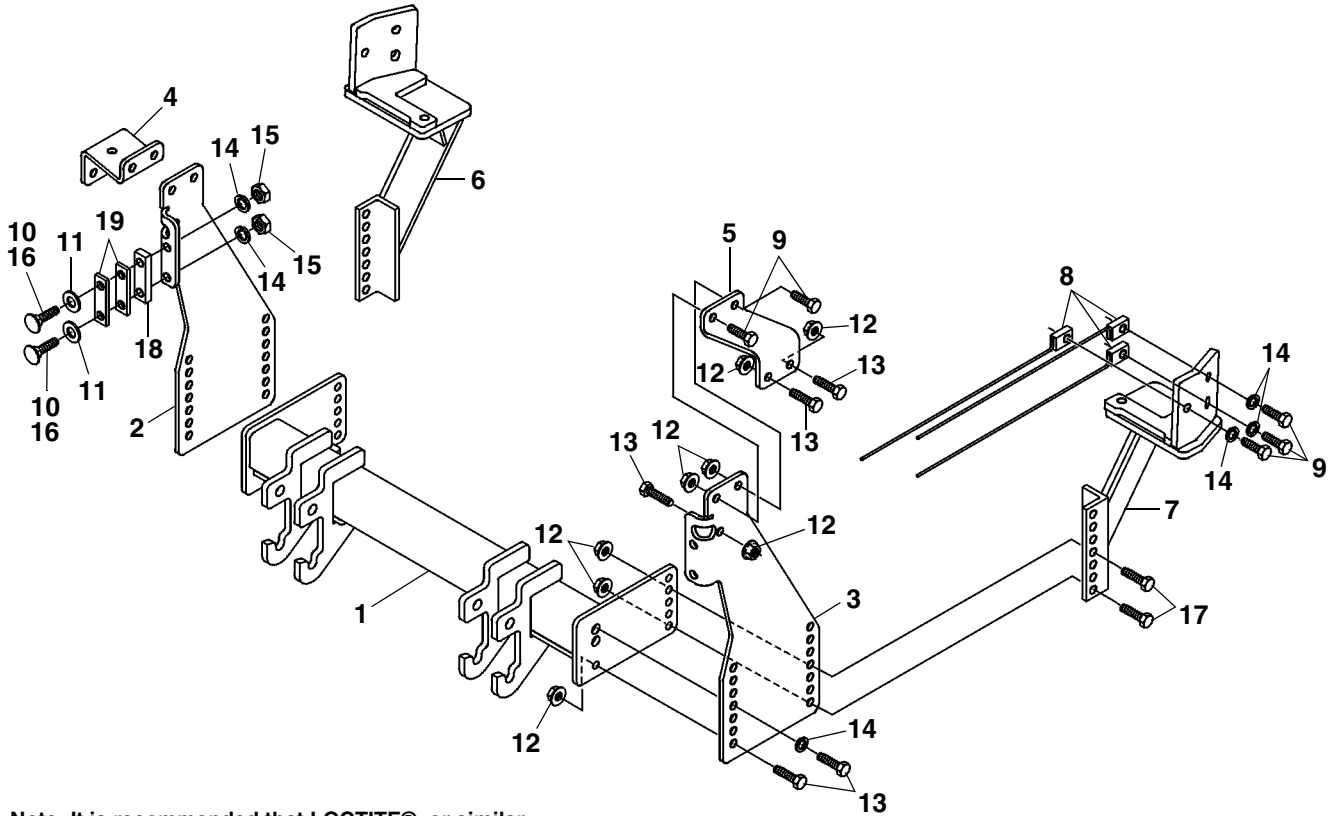
| TORQUE SPECIFICATIONS FOR STANDARD MACHINE HARDWARE | | | | | |
|---|----------|----------|----------|-------------|------------|
| Bolt Size | GR.2 Dry | GR.5 Dry | GR.8 Dry | Metric Size | GR.8.8 Dry |
| 1/4" | 66* | 9 | 12 | M8 | 17 |
| 5/16" | 11 | 17 | 25 | M10 | 35 |
| 3/8" | 20 | 30 | 45 | M12 | 60 |
| 7/16" | 32 | 50 | 70 | M14 | 95 |
| 1/2" | 50 | 75 | 110 | M16 | 155 |
| 9/16" | 70 | 110 | 150 | | |
| 5/8" | 100 | 150 | 220 | | |
| 3/4" | 175 | 260 | 380 | | |
| 7/8" | 170 | 430 | 600 | | |
| 1" | 250 | 640 | 900 | | |

Note: These torque values are to be used for all hardware. Unless otherwise specified, all torque values must meet this specification.
Note: All torque values are in Ft.-Lbs unless otherwise stated
Note: *In-Lbs

10. Reinstall bumper and all other items previously removed. Position (4) 1/2" Flat washers (#11) on the existing bumper bolts between the bumper brackets and the bumper supports on the vehicle when replacing the front bumper.

REMEMBER After 5 to 10 hours of snowplow usage, re-torque all Cap Screws!

PARTS LIST



Note: It is recommended that LOCTITE®, or similar thread locking product, be used on ALL mounting hardware (i.e. Nuts, Cap Screws, Bolts, etc.).

| ITEM | PART NO. | DESCRIPTION | QTY. |
|------|-----------|--|------|
| 1 | 99100950 | Vehicle Center Member (96110186) | 1 |
| 2 | 96108747* | Plate, RH..... | 1 |
| 3 | 96108746* | Plate, LH..... | 1 |
| 4 | 96103545* | Bracket, RH | 1 |
| 5 | 96103546* | Bracket, LH..... | 1 |
| 6 | 96109034* | Rear Weldment, RH | 1 |
| 7 | 96109033* | Rear Weldment, LH..... | 1 |
| 8 | 96103509* | Nut Plate Assembly | 6 |
| 9 | 98009010 | Hex Head Cap Screw, 1/2"-13 x 1-1/2" | 10 |
| 10 | 98009171 | Carriage Bolt, 1/2"-13 x 1-1/2"..... | 4 |
| 11 | 98009011 | Flat Washer, 1/2"..... | 4 |
| 12 | 98009013 | Nylock Nut, 1/2"-13..... | 18 |
| 13 | 98100095 | Hex Head Cap Screw, 1/2"-13 x 1-3/4" | 10 |
| 14 | 98009012 | Lock Washer, 1/2" | 12 |
| 15 | 98009076 | Hex Nut, 1/2"-13..... | 4 |
| 16 | 98100330 | Carriage Bolt, 1/2"-13 x 2-1/2"..... | 4 |
| 17 | 98100010 | Hex Head Cap Screw, 1/2"-13 x 2"..... | 4 |
| 18 | 96107981* | Spacer, 1/2"..... | 2 |
| 19 | 96107982* | Spacer, 1/4"..... | 4 |

* Not Available As a Service Part

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