

SNO-WAY[®]

SNOW & ICE CONTROL EQUIPMENT

Assembly & Installation Instructions

**FOR
SUBFRAME PACKAGE 99100756**

**TO FIT
1997 & LATER JEEP WRANGLER 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
 Heavy Duty Suspension

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

| | |
|---------------|----------------|
| Sockets | 7/16" – 1-1/8" |
| Wrenches | 7/16" – 1-1/8" |
| Torque Wrench | |
| Clamps | |
| Drill Bit | 17/32" |

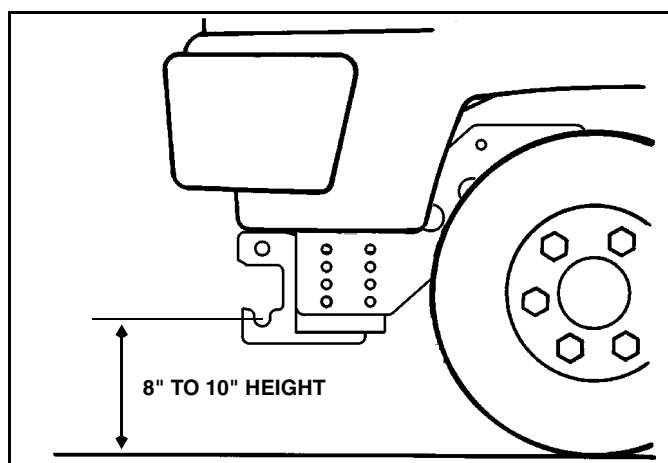
INSTALLATION NOTES

1. **Unless otherwise specified, mount all Subframe 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: (10) 1/2"-13 Nylock Nut (#7).
5. It maybe necessary to relocate license plate holder. Check state and local laws for placement, if needed.

4. Loosely secure the rear position of the Bracket by inserting through the slots in the frame rails (1) Bolt Handle Weldment (#4) through the front most hole and (1) Bolt handle Weldment (#11) through the rear most hole, along with (2) 1/2" Flat Washers (#10). It may be necessary to bend the handle welded to the bolt to reach the drilled holes. Secure the bolts with (2) 1/2" Nylock Nuts (#7).
5. Repeat steps 2-4 to install Side Bracket Assembly, RH (#3). (No spacer (#5) is needed for the RH Side Bracket.)
6. Install Mounting Assembly (#1) to the Side Bracket Assemblies (#2 and #3). Secure using (8) 1/2"-13 x 1-1/2" Cap Screws (#6), (2) 1/2" Lock Washers (#9) in the threaded holes, and (6) 1/2" Nylock Nuts (#7).
7. Keeping the Subframe parallel to ground, tighten all fasteners using Torque Specification Chart provided.

MOUNTING INSTRUCTIONS

1. Remove bumper bolts securing the bottom edge of the bumper to the vehicle frame.
2. Position Side Bracket Assembly, LH (#2) so that the front bottom mounting hole aligns with the mounting holes where the left side bumper bolt was removed. Secure loosely using (1) 1/2"-13 x 1-3/4" Cap Screw (#8), (1) 1/2" Lock Washer (#9) and (1) 1/2" Flat Washer (#10) inserted through the Bracket and bumper into the vehicle frame.
3. Insert Spacer (#5) between the Side Bracket Assembly, LH (#2) and the vehicle frame, aligned with the front side mounting hole. Clamp rear portion of the Bracket to the frame rails. Using the two side mounting holes in the rear portion of the Bracket as a template, drill (2) 17/32" holes through the outer frame rail.



IMPORTANT: Height from the center of the lower pin slots on the Subframe 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, Minimum Vehicle Recommendations).

**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 | | |

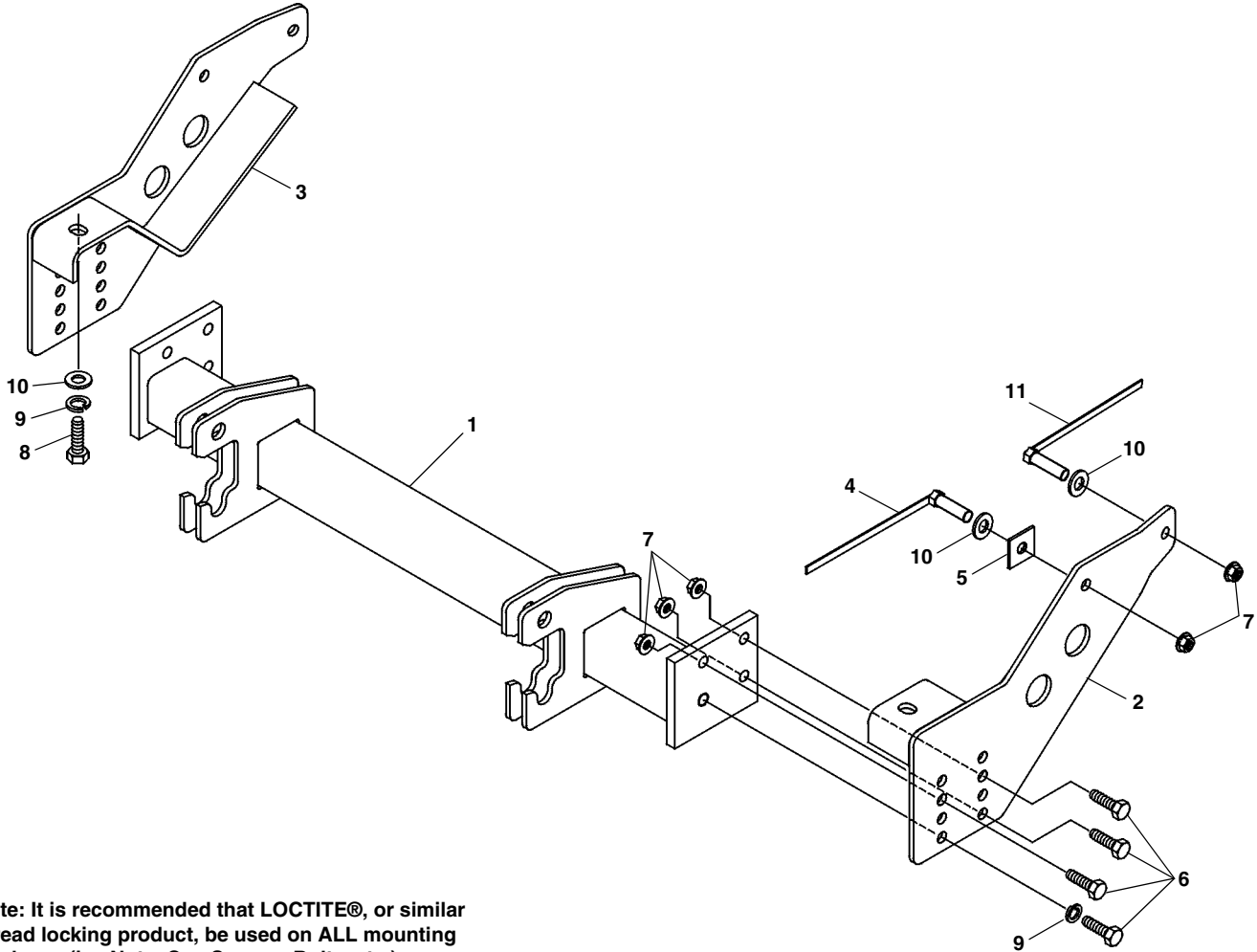
These torque values are to be used for all hardware. Unless otherwise specified, all torque values must meet this specification.

All torque values are in Ft.-Lbs unless otherwise stated

*In-Lbs

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 | 96107848* | Assembly, Mounting | 1 |
| 2 | 96107850* | Assembly, Side Bracket, LH | 1 |
| 3 | 96107851* | Assembly, Side Bracket, RH..... | 1 |
| 4 | 96108074* | Handle Bolt Weldment..... | 4 |
| 5 | 96108072* | Spacer..... | 1 |
| 6 | 98009010 | Cap Screw, Hex Head, 1/2"-13 x 1-1/2" | 8 |
| 7 | 98009013 | Nut, Nylock, 1/2"-13..... | 10 |
| 8 | 98100095 | Cap Screw, Hex Head, 1/2"-13 x 1-3/4" | 2 |
| 9 | 98009012 | Washer, Lock, 1/2" | 4 |
| 10 | 98009011 | Washer, Flat, 1/2" | 6 |
| 11 | 96108555* | Handle Bolt Weldment..... | 2 |

* Not Available As a Service Part

SNO-WAY® INTERNATIONAL, INC.



Hartford, WI 53027 USA
 Website: www.snoway.com
 ©2007 Sno-Way® International