



Assembly & Installation Instructions

**FOR
SUBFRAME COMPONENTS PACKAGE 99100072
AND
SUBFRAME NOSE PIECE PACKAGE 96103001**

**TO FIT
1986 1/2 & LATER NISSAN PICKUP 4x4
1986 1/2 & LATER NISSAN PATHFINDER 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

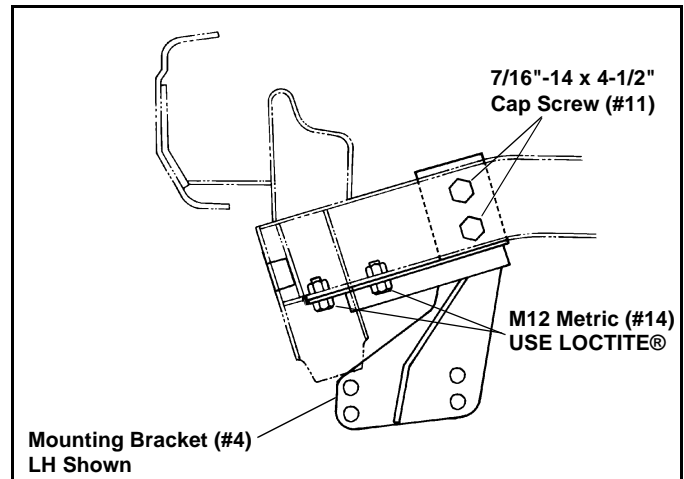
ASSEMBLY TOOLS NEEDED

| | |
|----------------|----------------|
| Sockets | 7/16" – 1-1/8" |
| Metric Sockets | 10-17mm |
| Wrenches | 7/16" – 1-1/8" |
| Torque Wrench | |

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.

INSTALLATION NOTES

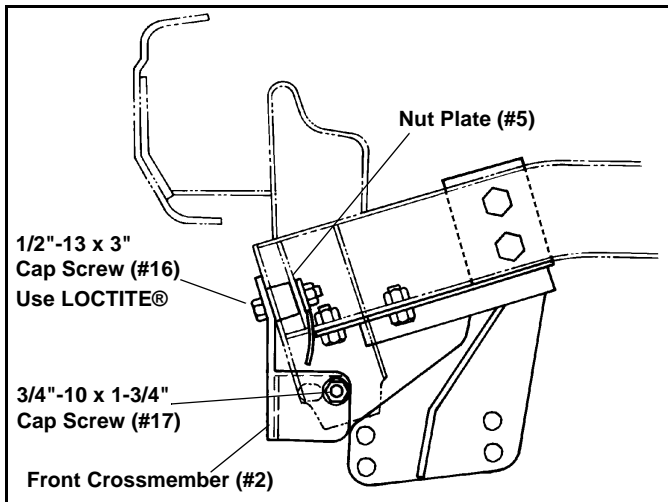
1. **Unless otherwise specified, mount all Sub-Frame Components to vehicle before tightening any hardware.**
2. **It is recommended that LOCTITE®, or similar thread locking product, be used on ALL mounting hardware (i.e. Nuts, Cap Screws, Bolts, etc.).**
3. Vehicle should be parked on a level surface 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) 5/8" x 1-1/2" Cap Screws (#6).
5. It maybe necessary to relocate license plate holder. Relocate under the driver's side headlight by drilling new holes in the bumper.



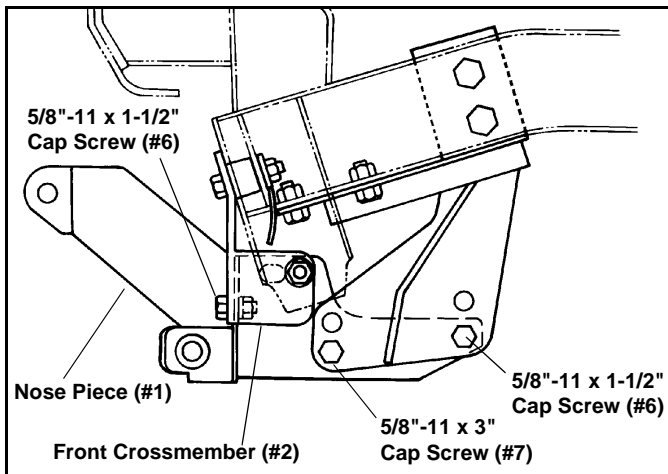
4. Secure Front Crossmember to vehicle Front Crossmember by using (2) 1/2" x 3" Cap Screws (#16), Flat Washers (#15) and (2) Nut Plate (#5) inserted through slot directly above vehicle tie down brackets. Also secure to Tie-down bracket using (2) 3/4" x 1-3/4" Cap Screws (#17), Flat Washers (#18) and Nylock Nuts (#19).

MOUNTING INSTRUCTIONS

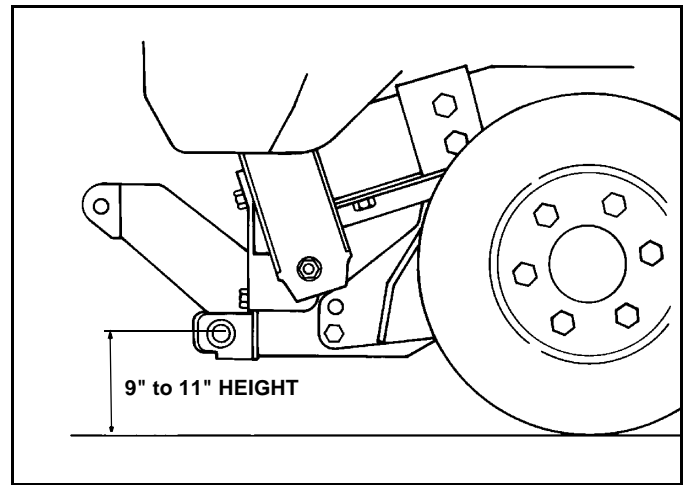
1. Remove tow hook(s), if so equipped. Retain hardware.
2. Remove vehicle splash guard, retain hardware.
3. Install Mounting Brackets (#3) RH, and (#4) LH by aligning holes with holes formerly used for tow hook(s) and inside frame rails at crush tubes. Secure Mounting Brackets loosely using (4) M12 Metric Cap Screws (#14) and Flat Washers (#15). Remove hardware at upper holes where crush tubes are welded into vehicle frame, and secure Mounting Brackets upper holes using four (4) 7/16" x 4-1/2" Cap Screws (#11), 5/8" Flat Washers (wide) (#9), 7/16" Washers (#12) and Nylock Nuts (#13).



5. Raise Nose Piece Assembly (#1) to Front Crossmember (#2) and secure with (2) 5/8" x 1-1/2" Cap Screws (#6), Washers (#8) and Nylock Nuts (#10) in the rear .



6. Insert (2) 5/8" x 3" Cap Screws (#7) in the lower front holes of Mounting Brackets aligned with center holes in the Nose Piece Assembly. Insert (2) 5/8" x 1-1/2" Cap Screws (#6) in lower rear holes of Mounting Brackets aligned with rear holes in Nose Piece Assembly. Secure using Nylock Nuts (#10).



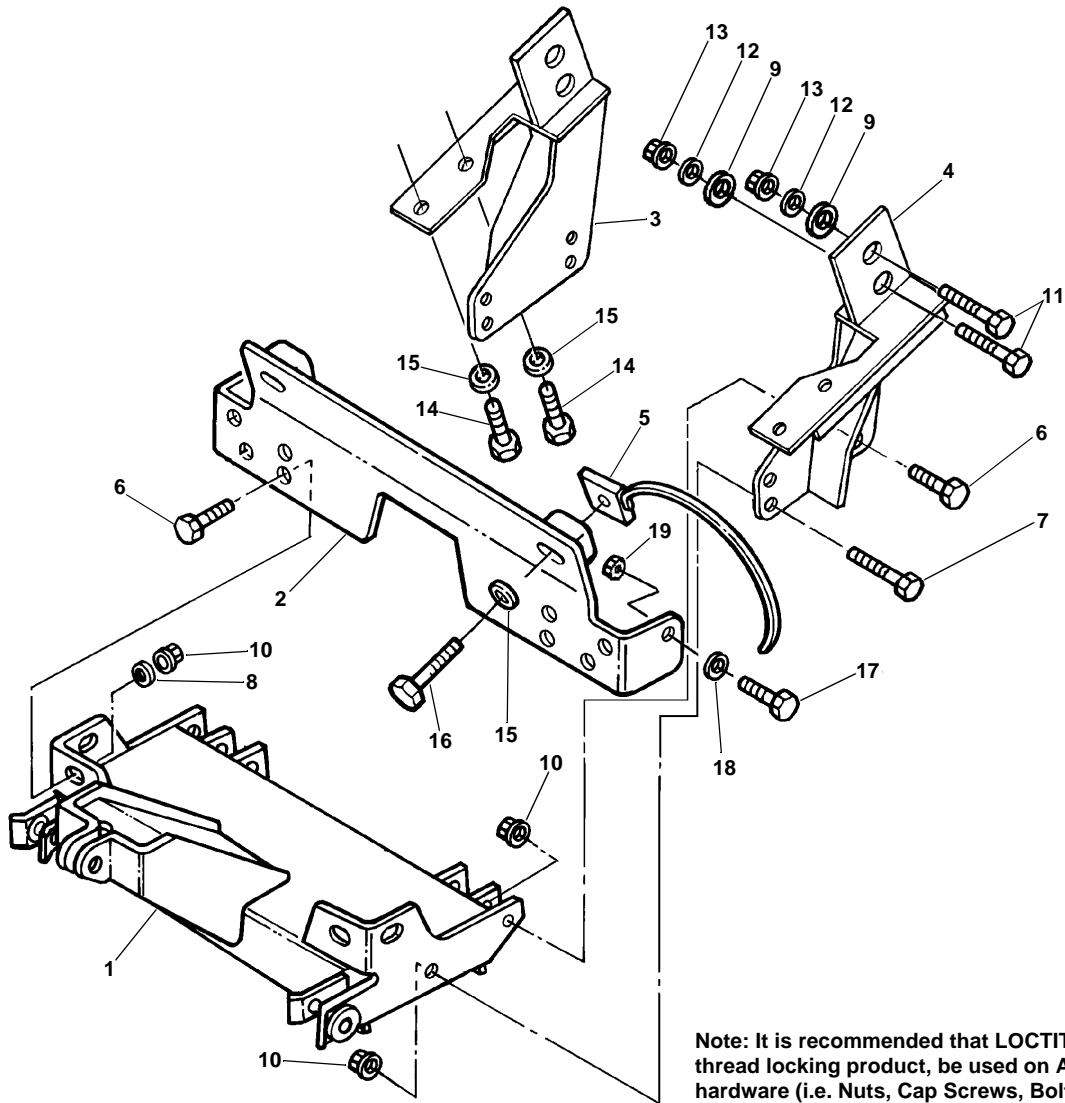
IMPORTANT: Height from the center of the lower Plow Mounting holes on the Sub-Frame to the ground should be between 9" and 11" to insure proper operation.

7. Using the Torque Specification Chart, 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

REMEMBER After 5 to 10 hours of snowplow usage, re-torque all cap screws!



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 | 96103001 | Sub-Frame, Nose Piece (96102924)..... | 1 |
| 2 | 96101413 | Front Crossmember | 1 |
| 3 | 96102207 | Bracket, Mounting, RH | 1 |
| 4 | 96102206 | Bracket, Mounting, LH..... | 1 |
| 5 | 96101417 | Nut Plate | 2 |
| 6 | 98009115 | Cap Screw, Hex Head, 5/8"-11NC x 1-1/2" | 4 |
| 7 | 98009217 | Cap Screw, Hex Head, 5/8"-11NC x 3" | 2 |
| 8 | 98009039 | Washer, Flat 5/8" (Regular)..... | 2 |
| 9 | 98100107 | Washer, Flat 5/8" (Wide) | 4 |
| 10 | 98009038 | Nut, Hex, Nylock 5/8"-11NC | 6 |
| 11 | 98100106 | Cap Screw, Hex Head 7/16"-14NC x 4-1/2" | 4 |
| 12 | 98100109 | Washer, Flat 7/16" | 4 |
| 13 | 98009050 | Nut, Hex, Nylock 7/16"-14NC | 4 |
| 14 | 98009054 | Cap Screw, Hex Head, M12 - 1-1/4" x 40 | 4 |
| 15 | 98009011 | Washer, Flat 1/2" | 6 |
| 16 | 98009017 | Cap Screw, Hex Head, 1/2"-13NC x 3" | 2 |
| 17 | 98009098 | Cap Screw, Hex Head, 3/4"-10NC x 1-3/4" | 2 |
| 18 | 98009030 | Washer, Flat 3/4" | 2 |
| 19 | 98009003 | Nut, Hex, Nylock 3/4"-10NC | 2 |

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