



**Assembly
&
Installation Instructions**
FOR
SUBFRAME COMPONENTS PACKAGE 99100410
AND
SUBFRAME NOSE PIECE PACKAGE 96103001

TO FIT
1999 - LATER TOYOTA TACOMA 4x4
1999 - LATER TOYOTA FORERUNNER 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

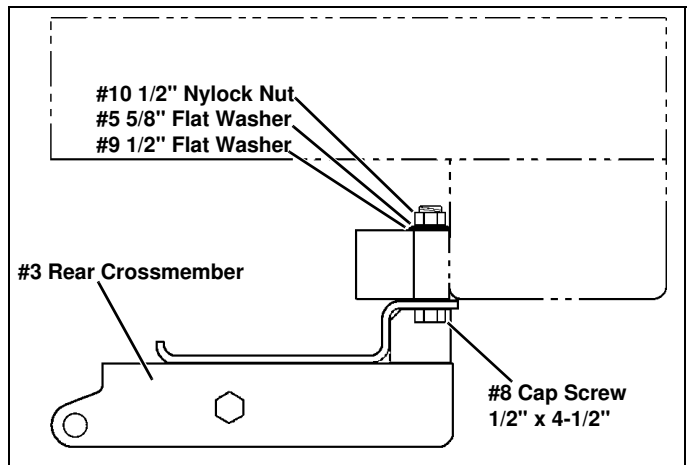
NOTE: On some vehicles it may be necessary to use a form of load booster to decrease the vehicle's front suspension sag with the snow plow in place. This can be accomplished with the use of supplementary air bags, booster springs, or similar load boosting devices. Since there are different load boosting 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	Hacksaw
Center Punch and Hammer	Alignment Pry Bar
Clamping Device ("C" Clamp, Bar Clamp, type device...)	

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 (#4).
5. It maybe necessary to relocate license plate holder. Relocate under the driver's side headlight by drilling new holes in the bumper.



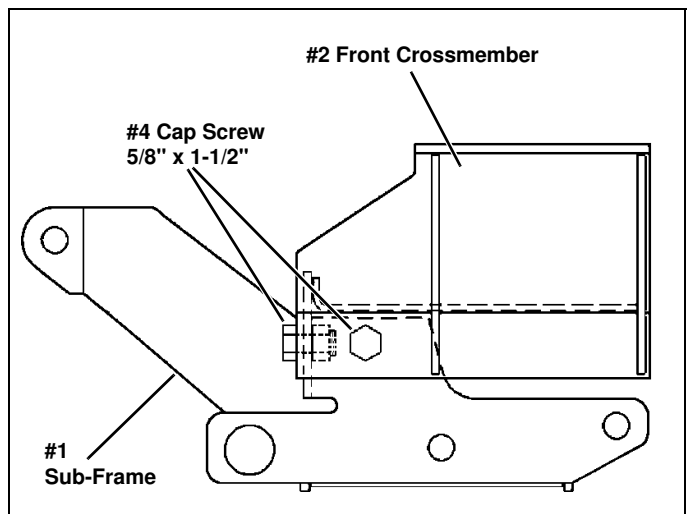
3. Mount the Front Crossmember (#2) on the Sub-Frame (#1). Secure using (4) 5/8" x 1-1/2" Cap Screws (#4), (4) 5/8" Flat Washers (#5), and (4) 5/8" Nylock Nuts (#6).

MOUNTING INSTRUCTIONS

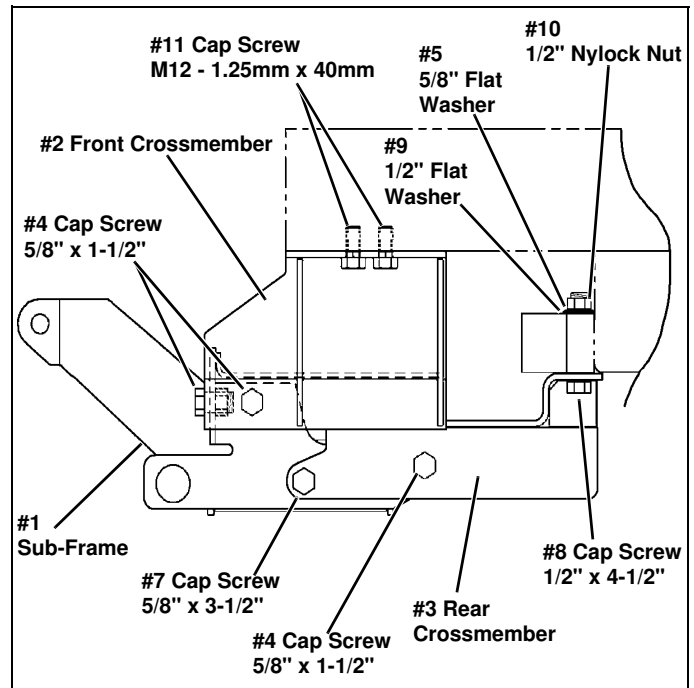
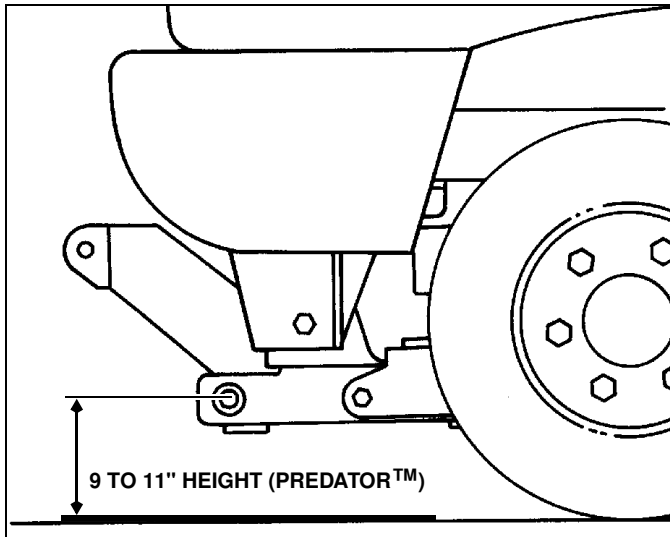
1. Remove splash guard and tow hook(s) if equipped. Retain, with mounting hardware, for future use if plow sub-frame is removed.

NOTE: Some vehicles will need to use the set of holes located toward the center of the Rear Crossmember.

2. Align the Rear Crossmember (#3) mounting holes with existing holes centered in vehicle crossmember. Secure using (2) 1/2" x 4-1/2" Cap Screws (#8), (2) 5/8" Flat Washers (#5), (2) 1/2" Flat Washers (#9), and (2) 1/2" Nylock Nuts (#10).

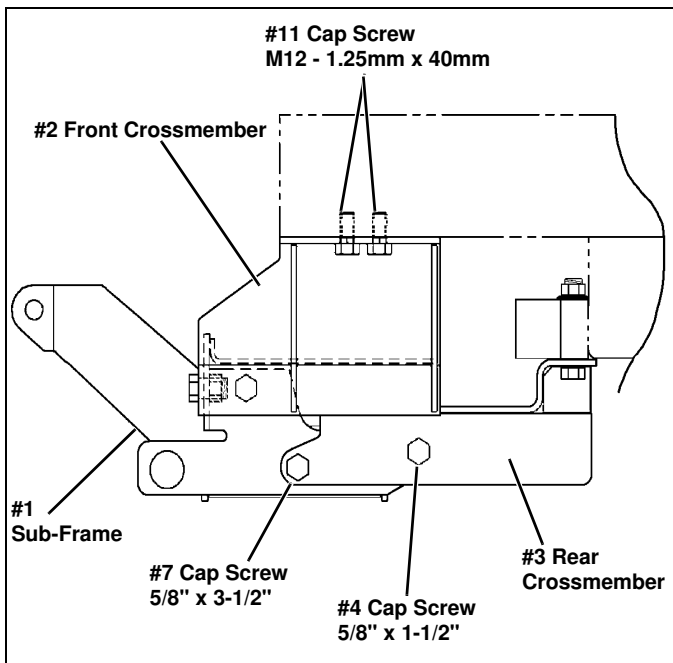


IMPORTANT: Height from the center of the lower Plow Mounting holes on the Sub-Frame to the ground should be between 9" and 11" to insure proper operation.



4. Align the Front Crossmember Assembly mounting holes, (from step #3) with the former tow hook holes and secure using (4) M12-1.25 x 40mm Metric Cap Screws (#11).

6. Using the Torque Specification Chart provided, first torque the Nose Piece (#1) to the Front Crossmember (#2). Start by torquing the two front Cap Screws and then the two side Cap Screws (#4). Then torque the remaining Cap Screws starting at the rear and working forward.



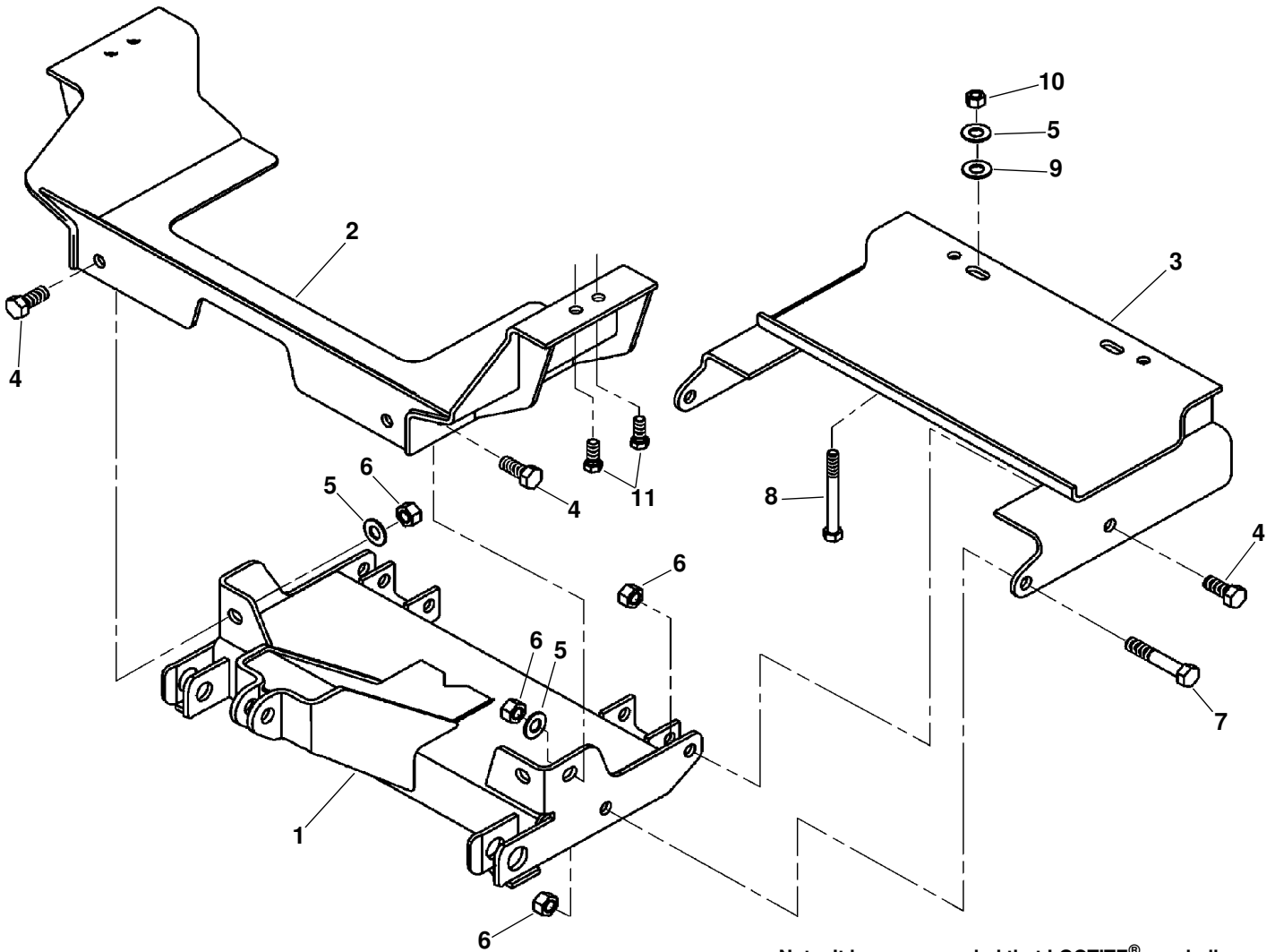
5. Align the Rear Crossmember mounting holes with the Front Crossmember Assembly mounting holes and secure as follows:

- Front Mounting — use (2) 5/8" x 3-1/2" Cap Screws (#7) and (2) 5/8" Nylock Nuts (#6).
- Rear Mounting — use (2) 5/8" x 1-1/2" Cap Screws (#4) and (2) 5/8" Nylock Nuts (#6).

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	96104176	Crossmember, Front	1
3	96104180	Crossmember, Rear	1
4	98009115	Cap Screw, Hex Head, 5/8" - 11NC x 1-1/2".....	6
5	98009039	Washer, Flat, 5/8"	6
6	98009038	Nut, Hex, 5/8" - 11NC Nylock	8
7	98009042	Cap Screw, Hex Head, 5/8" - 11NC x 3-1/2".....	2
8	98009055	Cap Screw, Hex Head, 1/2" - 13NC x 4-1/2".....	2
9	98009011	Washer, Flat, 1/2"	2
10	98009013	Nut, Hex, 1/2" - 13NC Nylock	2
11	98009054	Cap Screw, Metric Hex Head, M12 - 1.25 x 40mm.....	4

SNO-WAY® INTERNATIONAL, INC.



©1999 Sno-Way® International