



Assembly & Installation Instructions

**FOR
SUBFRAME COMPONENTS PACKAGE 99004049
AND
SUBFRAME NOSE PIECE PACKAGE 96100694**

**TO FIT
1991 & LATER TOYOTA 4X4 LANDCRUISER**

97100241B



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 REQUIREMENTS

Heavy Duty Alternator
Heavy Duty Battery

ASSEMBLY TOOLS NEEDED

Drill Bits	1/4", 17/32"
Impact Sockets	7/16" – 1-3/8"
Metric Sockets	10 - 19mm
Wrenches	7/16" – 1-3/8"
Torque Wrench	
Hammer & Center Punch	

INSTALLATION NOTES

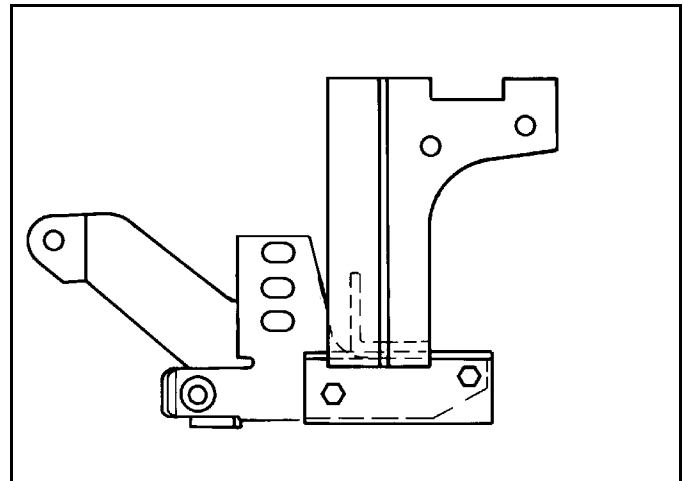
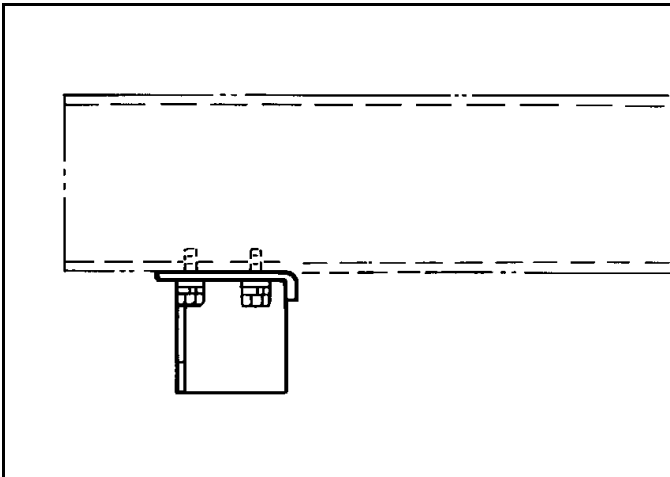
1. Unless specified, mount all Sub-Frame components to vehicle before tightening any bolts.
2. Vehicle should be parked on a level surface with the front suspension normally loaded.

NOTE: It is recommended that Loctite® or similar thread locking material be used on the Metric Capscrews during installation.

3. Remove engine splash guard. Retain with hardware for reinstallation after subframe is in place.
4. Install Rear Crossmember (#96101559) to Sub-Frame Assembly (#96100294) using two (2) 5/8" x 1-1/2" Capscrews (#98009115), two (2) 5/8" x 3" Capscrews (#98009217) and Nylock Nuts provided. Secure tightly using Torque Specification Chart.

MOUNTING INSTRUCTIONS

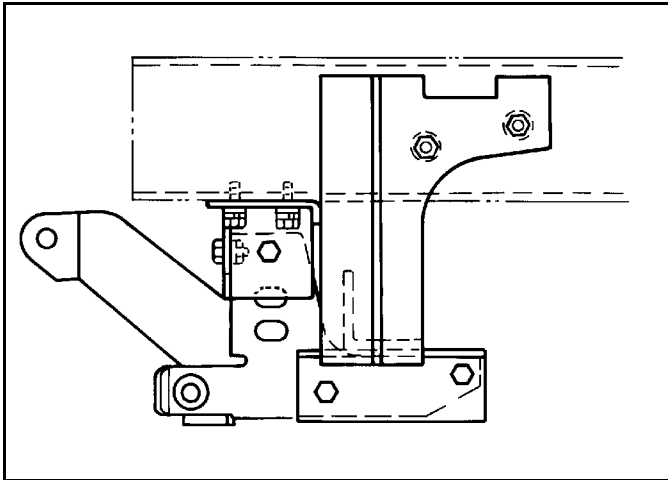
1. Remove tow hooks. Retain hardware for re-installation if Sub-Frame Assembly is removed.
2. Install Front Crossmember (#96101558) to tow hook mounting holes using Metric Capscrews (#98009054), Lockwashers, and Flat Washers provided. Secure tightly using Torque Specification Chart.



CAUTION

Loosen power steering hold down brackets and pull away from inside of both left and right vehicle frame rails before drilling holes in frame.

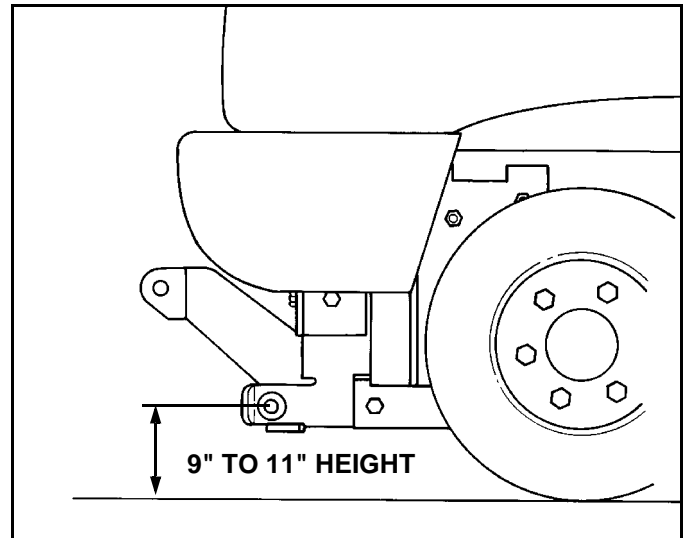
- Install Assembly from step #4 to Front Crossmember using 5/8" x 1-1/2" Capscrews (#98009115), Flatwashers, and Nylock Nuts Provided.
- Align lower edge of Rear Crossmember, near frame mounting with bottom of vehicle frame profile. Clamp in place.



- Using holes in Rear Crossmember as a template, center punch and drill 1/4", then 9/16" holes through frame rails. Secure using 1/2" x 3-1/2" Capscrews (#98009036), Washers and Nylock Nuts provided.

NOTE: Install bolts from inside of vehicle frame out. Nuts should be on Rear Crossmember.

- Using the Torque Specification Chart, torque all bolts.
- Re-install power steering hold down brackets and torque to factory specifications.
- Re-install engine splash pan removed in step #3 and torque bolts to factory specifications.

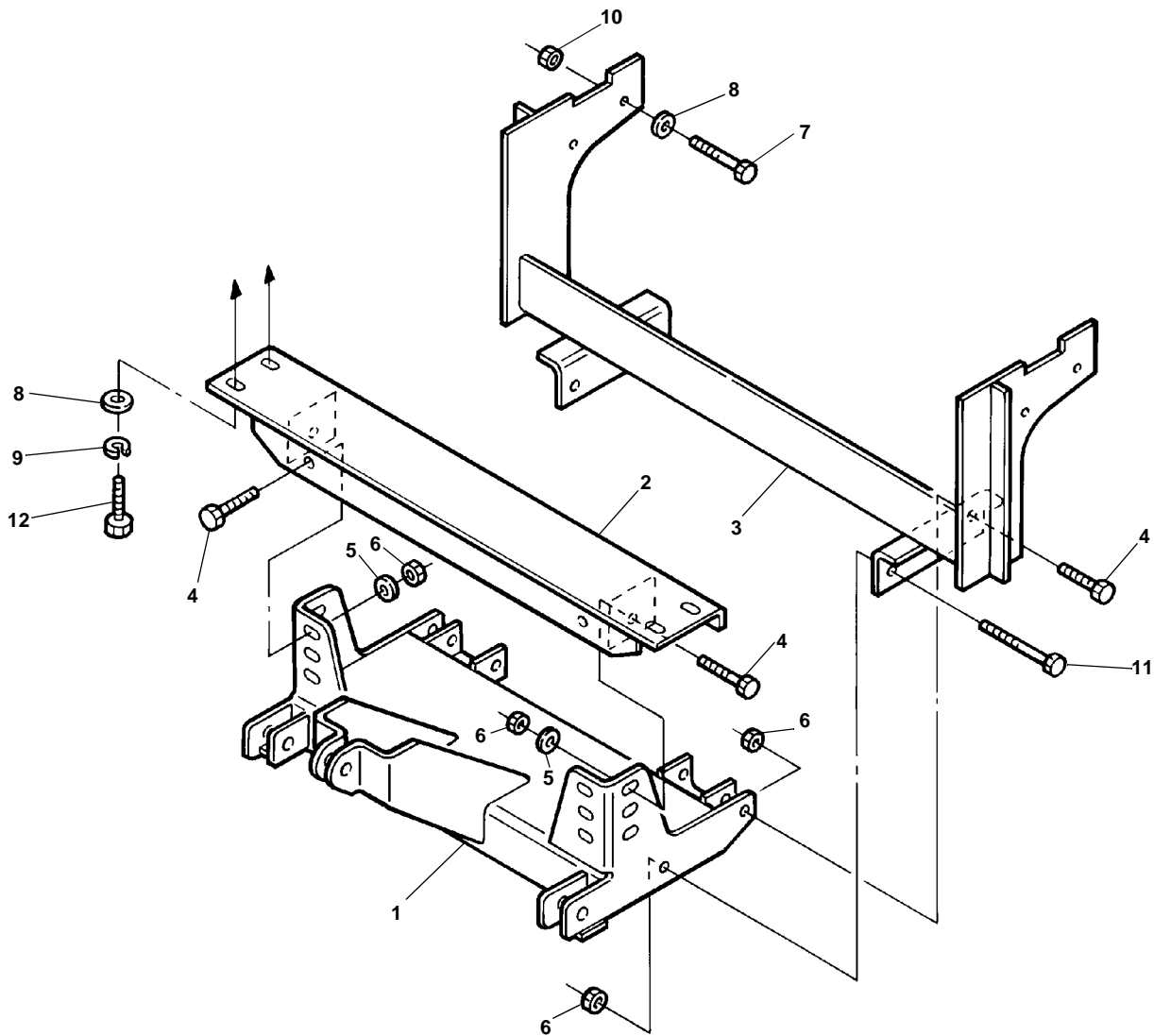


IMPORTANT: Height from the center of the lower Plow Mounting holes on the Sub-Frame into the ground should be between 9" and 11" to insure proper operation.

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

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



ITEM	PART NO.	DESCRIPTION	QTY.
1	96100694	Sub-Frame,Nose Piece (96100294).....	1
2	96101558	Crossmember, Front	1
3	96101559	Crossmember, Rear.....	1
4	98009115	Capscrew, Hex Head, 5/8"-11NC x 1-1/2"	6
5	98009039	Washer, Flat 5/8".....	4
6	98009038	Nut, Hex, 5/8" - 11NC Nylock,	8
7	98009036	Capscrew, Hex Head, 1/2"-13NC x 3-1/2"	4
8	98009011	Washer, Flat 1/2	8
9	98009012	Washer, Lock 1/2.....	4
10	98009013	Nut, Hex, 1/2" - 13NC Nylock,	4
11	98009217	Capscrew, Hex Head, 5/8"-11NC x 3"	2
12	98009054	Capscrew, Hex Head,M12 -1.75 x 40.....	4



SNO-WAY INTERNATIONAL, INC.