



Assembly & Installation Instructions

**FOR
SUBFRAME COMPONENTS PACKAGE 99100192
AND**

SUBFRAME NOSE PIECE PACKAGE 96100731

**TO FIT
1991 & LATER CHEVROLET & GMC 4X2 C3500HD CHASSIS CAB
(SINGLE & DUAL REAR WHEELS)**



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

Drill Bits 21/32"
Sockets 7/16" – 1-1/8"
Wrenches 7/16" – 1-1/8"
Torque Wrench
Center Punch and Hammer

INSTALLATION NOTES

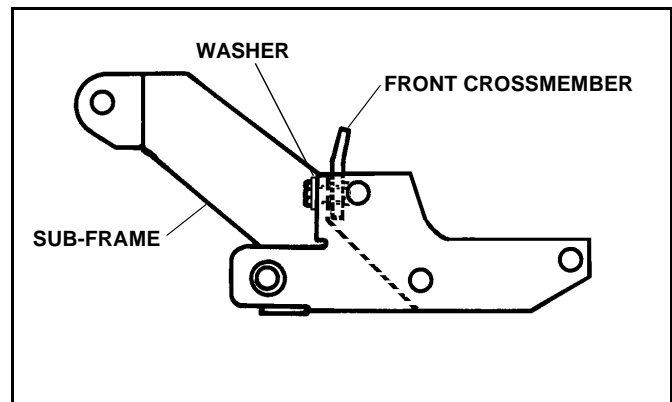
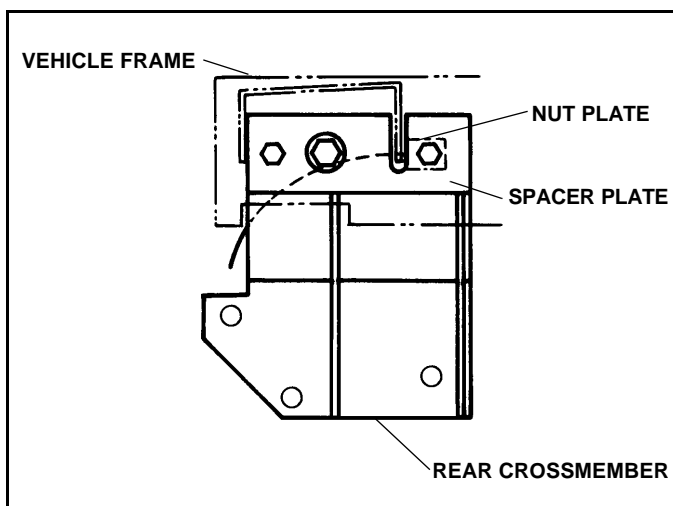
1. Unless specified, mount all sub-frame components to vehicle before tightening any bolts.
2. Vehicle should be parked on a level surface with the front suspension normally loaded.
3. It may be necessary to relocate license plate holder in order to clear Sub-Frame Assembly.

NOTE: It is recommended that LOCTITE® or similar thread lock be used on Rear Crossmember Mounting Capscrews.

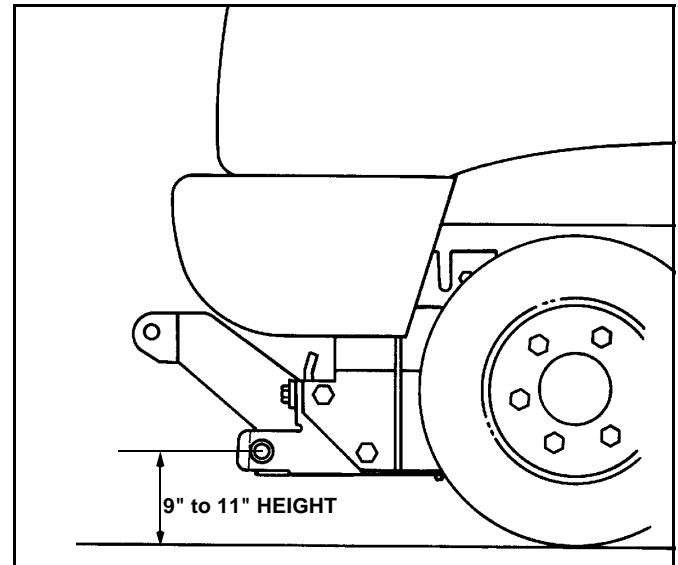
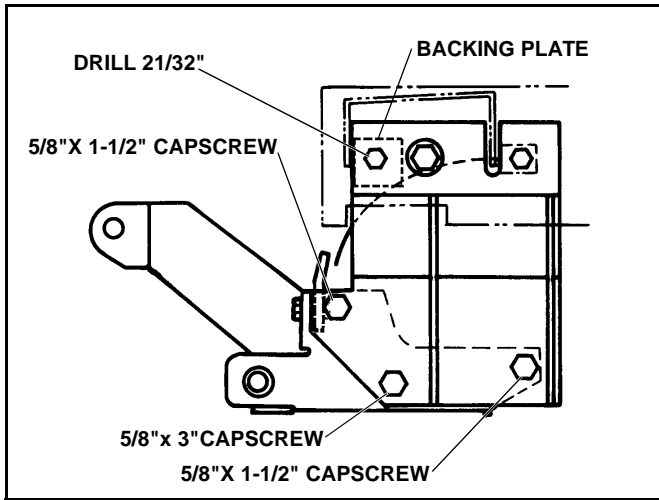
2. Mount Rear Crossmember to vehicle frame using Nut Plate Assemblies (#96102349)RH and (#96102350)LH. Secure with 5/8" X 1-1/2" Capscrews (#98009115), and 5/8" Flat Washers provided.

MOUNTING INSTRUCTIONS CROSSMEMBER

1. Position Rear Crossmember (#96102322) on inside of vehicle frame. Align holes in plates with vehicle shackle bolts and slot in frame. Because of variations in frame members, shim(s) (#96102328) may be required between end plates of Rear Crossmember and vehicle frame.



3. Install Front Crossmember (#96102323) behind ears on Sub-Frame Assembly (#96100477) using two (2) 5/8" X 1-1/2" Capscrews (#98009115), Flat Washers and Nylock Nuts provided.



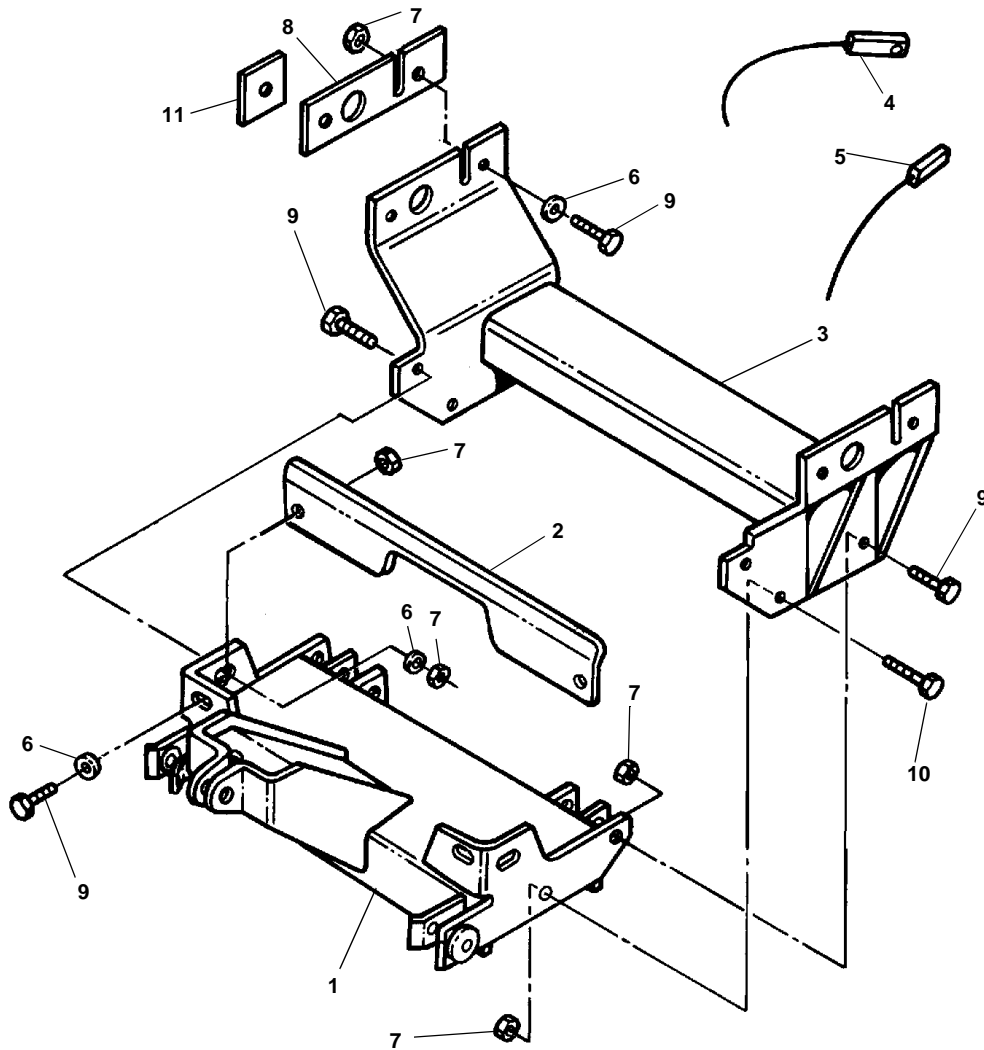
4. Raise Sub-Frame, with Front Crossmember, and align with mounting holes in Rear Crossmember. Secure four (4) 5/8" X 1-1/2" Capscrews (#98009115), and two (2) 5/8" X 3" Capscrews (#98009217), Flat Washers and Nylock Nuts provided.
5. Level Sub-Frame assembly. And center punch and drill two (2) 21/32" holes through vehicle frame using front mounting holes in Rear Crossmember as a template.
6. Place Back-Up Plates (#96101442) on inside of vehicle frame. Place two (2) 5/8" X 1-1/2" Capscrews (#98009115) in drilled holes and through Rear Crossmember, Spacer Plate, vehicle frame, and Back-Up Plates. Secure with, Flat Washers and Nylock Nuts provided.
7. Using The Torque Specification Chart provided torque all Capscrews starting at the rear and working forward.

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.

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

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	96100731	Sub-Frame, Nose Piece (96100477).....	1
2	96102323	Crossmember, Front	1
3	96102322	Crossmember, Rear	1
4	96102349	Plate, Nut, RH	1
5	96102350	Plate, Nut, LH.....	1
6	98009039	Washer, Flat, 5/8"	8
7	98009038	Nut, Hex, 5/8"-11NC Nylock.....	10
8	96102328	Plate, Shim.....	2
9	98009115	Capscrew, Hex Head, 5/8"-11NC x 1-1/2"	10
10	98009217	Capscrew, Hex Head, 5/8"-11NC x 3"	2
11	96101442	Plate, Back-Up	2



SNO-WAY INTERNATIONAL, INC.