



Assembly & Installation Instructions

**FOR
SUBFRAME COMPONENTS PACKAGE 99100088
AND
SUBFRAME NOSE PIECE PACKAGE 96100694
TO FIT**

1973 - 1987 CHEVROLET & GMC 4X4 1500, 2500, & 3500 PICKUP

1973 - 1991 CHEVROLET 4X4 1500 BLAZER, 1500 SUBURBAN, & 2500 SUBURBAN

1973 - 1991 GMC 4X4 1500 JIMMY, 1500 SUBURBAN, & 2500 SUBURBAN



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 Front Springs

ASSEMBLY TOOLS NEEDED

Drill Bits 1/4", 17/32"
 Impact Sockets 7/16" – 1-3/8"
 Wrenches 7/16" – 1-3/8"
 Torque Wrench
 Hammer & Center Punch
 Two 6" C-Clamps

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 (#10).
5. It maybe necessary to relocate license plate holder. Relocate under the driver's side headlight by drilling new holes in the bumper. Check state and local laws for placement, if needed.

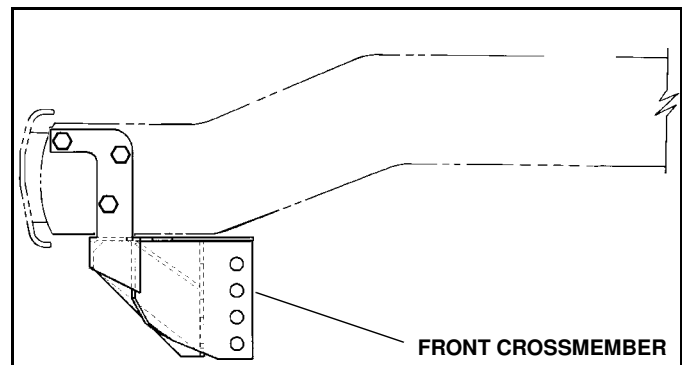
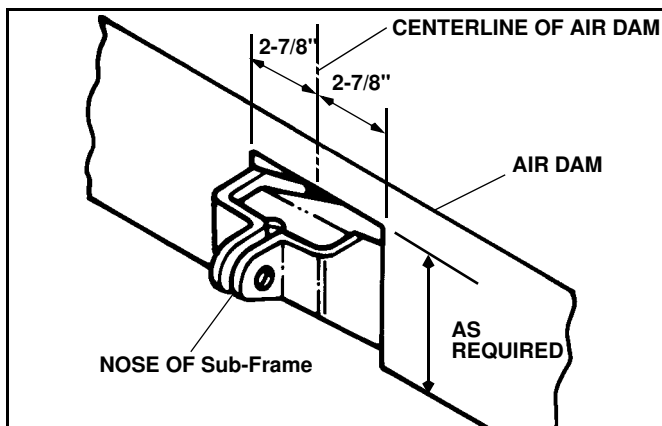
NOTE: Air Dam may be used with Plow by cutting Dam to allow clearance for nose of Sub-Frame. To modify air dam, measure 2 7/8" from each side of center and remove a 5-3/4" deep section from between the marked areas.

2. Install Front Crossmember (#2) utilizing existing holes in vehicle frame horns behind front bumper. Insert Shims (#6) and/or (#7), between Front Crossmember and frame horns as required. Secure using (6) 1/2" x 2" Cap Screws (#14), Washers (#15), and Nylock Nuts (#16).

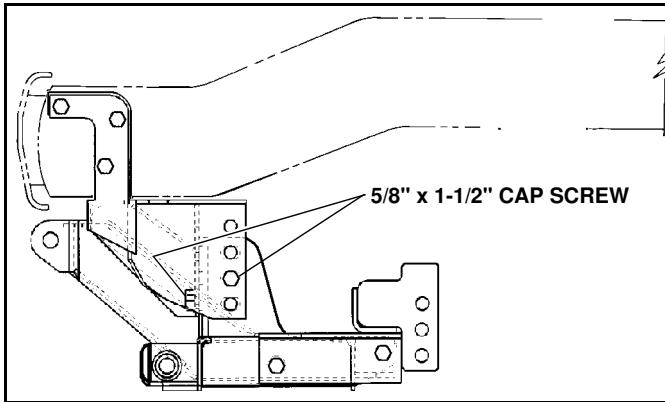
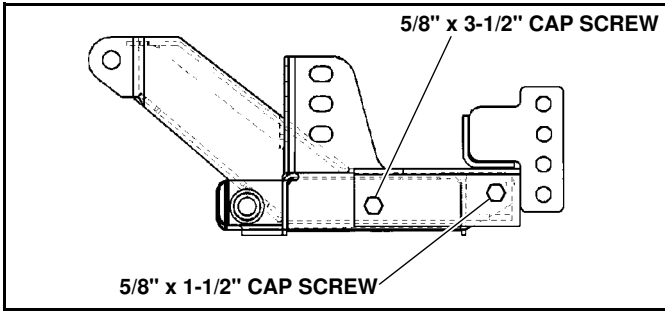
NOTE: When inserting Shims equalize amount on each side to keep Front Crossmember in center of vehicle.

MOUNTING INSTRUCTIONS

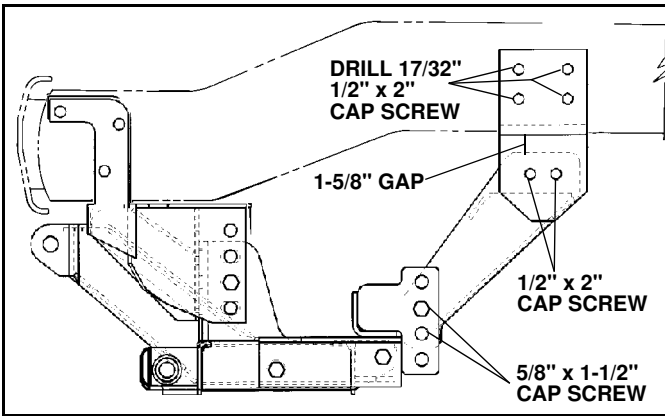
1. Remove air dam from vehicle, Retain, with mounting hardware, for future use if plow is removed.



3. Attach Center Crossmember (#3) to Sub-Frame Assembly (#1) using (2) 5/8" x 1-1/2" Cap Screws (#10) at rear holes, and 5/8" x 3-1/2" Cap Screws (#11) at forward holes, Washers (#13), and Nylock Nuts (#12).



4. Raise Sub-Frame Assembly, with Center Crossmember, and align with mounting holes in Front Crossmember. Secure using (4) 5/8" x 1-1/2" Cap Screws (#10) Washers (#13), and Nylock Nuts (#12).



5. Install Rear Crossmember (#4) to Center Crossmember (#3) using (4) 5/8" x 1-1/2" Cap Screws (#10), and Nylock Nuts (#12).

NOTE: Keep the top of Rear Crossmember approximately 1-5/8" below the bottom edge of the vehicle frame.

6. Loosely assemble Rear Mounting Brackets (#5) to Rear Crossmember (#4) using (4) 1/2 x 2" Cap Screws (#14) and Nylock Nuts (#16).

7. Adjust Rear mounting Brackets position on vehicle frame until Sub-Frame is parallel with the ground with vehicle resting on ground. Clamp Rear Crossmember securely to vehicle frame with two 6" C-clamps.

NOTE: When mounted in place the Sub-Frame must be level with the ground.

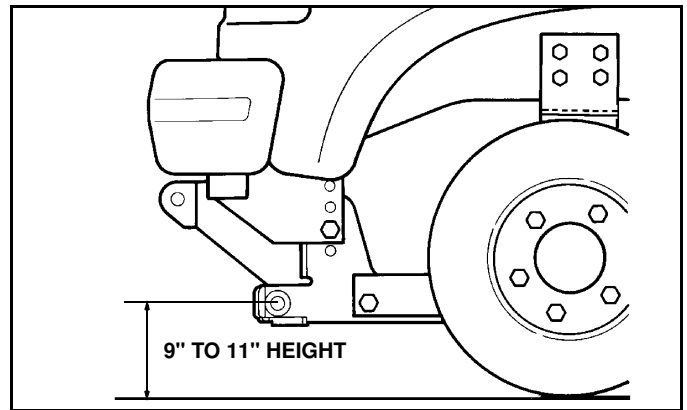


CAUTION

Beware of brake and fuel lines secured to inside wall of frame rails when performing Step 9.

8. Using the holes in the Rear Crossmember as a template drill a 1/4" hole then 17/32" hole through vehicle frame. Place Spacers (#8) and/or (#9) between Crossmember and vehicle frame as required. Secure using (8) 1/2" x 2" Cap Screws (#14) Washers (#15), and Nylock Nuts (#16).

9. Using the Torque Specification Chart below, torque all Cap Screws 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.

TORQUE SPECIFICATIONS FOR STANDARD MACHINE HARDWARE

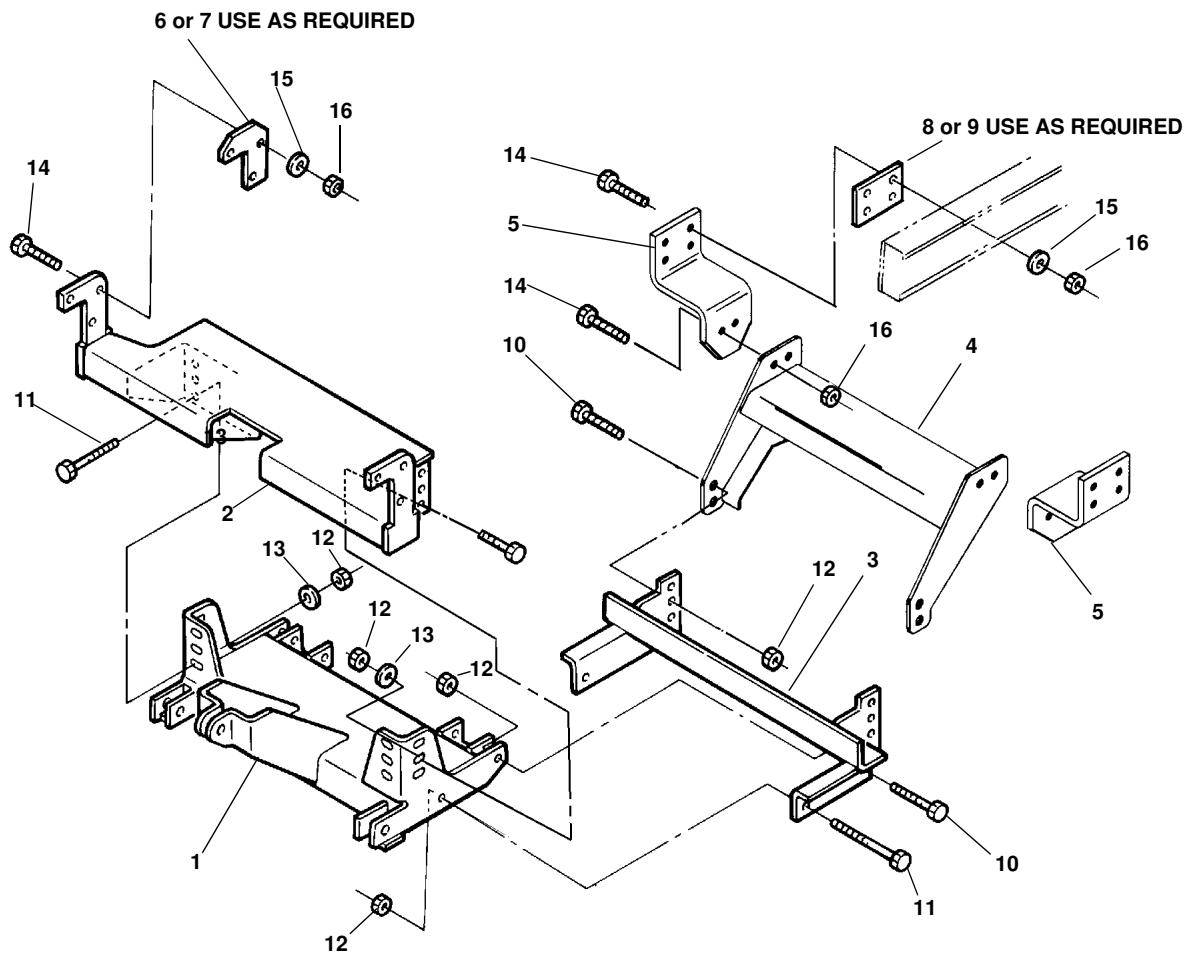
Bolt Size	GR.2 Dry	GR.5 Dry	GR.8 Dry	Metric Size	GR.8.8 Dry
1/4"	66*	9	12	M8	17
5/16"	11	17	25	M10	35
3/8"	20	30	45	M12	60
7/16"	32	50	70	M14	95
1/2"	50	75	110	M16	155
9/16"	70	110	150		
5/8"	100	150	220		
3/4"	175	260	380		
7/8"	170	430	600		
1"	250	640	900		

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!



ITEM	PART NO.	DESCRIPTION	QTY.
1	96100694	Sub-Frame, Nose Piece (96100294).....	1
2	96101997	Crossmember, Front	1
3	96101419	Crossmember, Center	1
4	96102004	Crossmember, Rear	1
5	96102009	Bracket, Mounting	2
6	96100590	Plate, Shim, 5/16" Thick	2
7	96100591	Plate, Shim, 1/8" Thick	4
8	96101429	Spacer, 1/8"	4
9	96101443	Spacer, 5/16"	2
10	98009115	Cap Screw, Hex Head, 5/8"-11NC x 1-1/2"	10
11	98009042	Cap Screw, Hex Head, 5/8"-11NC x 3 -1/2"	2
12	98009038	Nut, Hex, 5/8" - 11NC Nylock,	12
13	98009039	Washer, Flat, 5/8"	4
14	98100010	Cap Screw, Hex Head, 1/2"-13NC x 2"	18
15	98009011	Washer, Flat, 1/2"	14
16	98009013	Nut, Hex, 1/2"-13NC Nylock	18

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