SNO-WAY®

SNOW & ICE CONTROL EQUIPMENT

Assembly
&
Installation Instructions

FOR
SUBFRAME COMPONENTS PACKAGE 99100692

TO FIT

2002 - Later Ford Explorer 4 x 4

2002 - Later Mercury Mountaineer 4 x 4

22 SERIES ONLY

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97100990A

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

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

Impact Sockets	7/16" – 1-3/8"
MetricSockets	10mm - 17mm
Wrenches	7/16" – 1-3/8"

Torque Wrench
Hacksaw
Clamping Devices ("C", Bar, type device .....)

INSTALLATION NOTES

1. Unless otherwise specified, mount all Subframe 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: (10) Washer, Lock, 1/2" (#8).
5. It maybe necessary to relocate license plate holder. Check state and local laws for placement, if needed.

MOUNTING INSTRUCTIONS

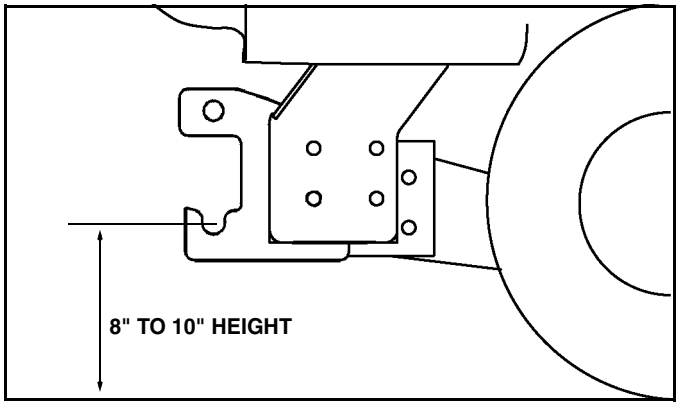
1. Remove the bumper and air dam from the front of the vehicle. Retain with hardware for re-installation in later step.
2. Insert Nut Plates (#5) into the truck frame and align with existing holes in the frame. Install the Front Mounting Brackets, LH (#3) and RH (#4) by aligning the side mounting holes with the holes in the frame. Using (2) 1/2" x 1-1/2" Cap Screws (#6), (2) 1/2" Lock Washers (#8), (2) 1/2" Flat Washers (#7) into Nut Plates (#5).
3. Insert Nut Plates (#10) in the square slots in the vehicle crossmember. Install (1) Rear Crossmember Assembly (#2) by aligning the holes in the Rear Crossmember Assembly with the existing holes in the vehicle crossmember. Secure using (4) 1/2" x 1-1/2" Cap Screws (#6), (4) 1/2" Lock Washers (#8), (4) 1/2" Flat Washers (#7) into the Nut Plates (#10).
4. Install the Mounting Assembly. Secure to the Front Mounting Plates using (8) 1/2" x 1-1/2" Cap Screws (#6), (6) 1/2" Nylock Nuts (#9) and in the threaded holes (2) 1/2" Lock Washers (#8). Secure to the Rear Crossmember using (4) 1/2" x 1-1/2" cap screws (#6) and (4) 1/2" Nylock nuts (#9).
5. Using the torque specification chart provided, torque all bolts.
6. Re-install bumper.

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		

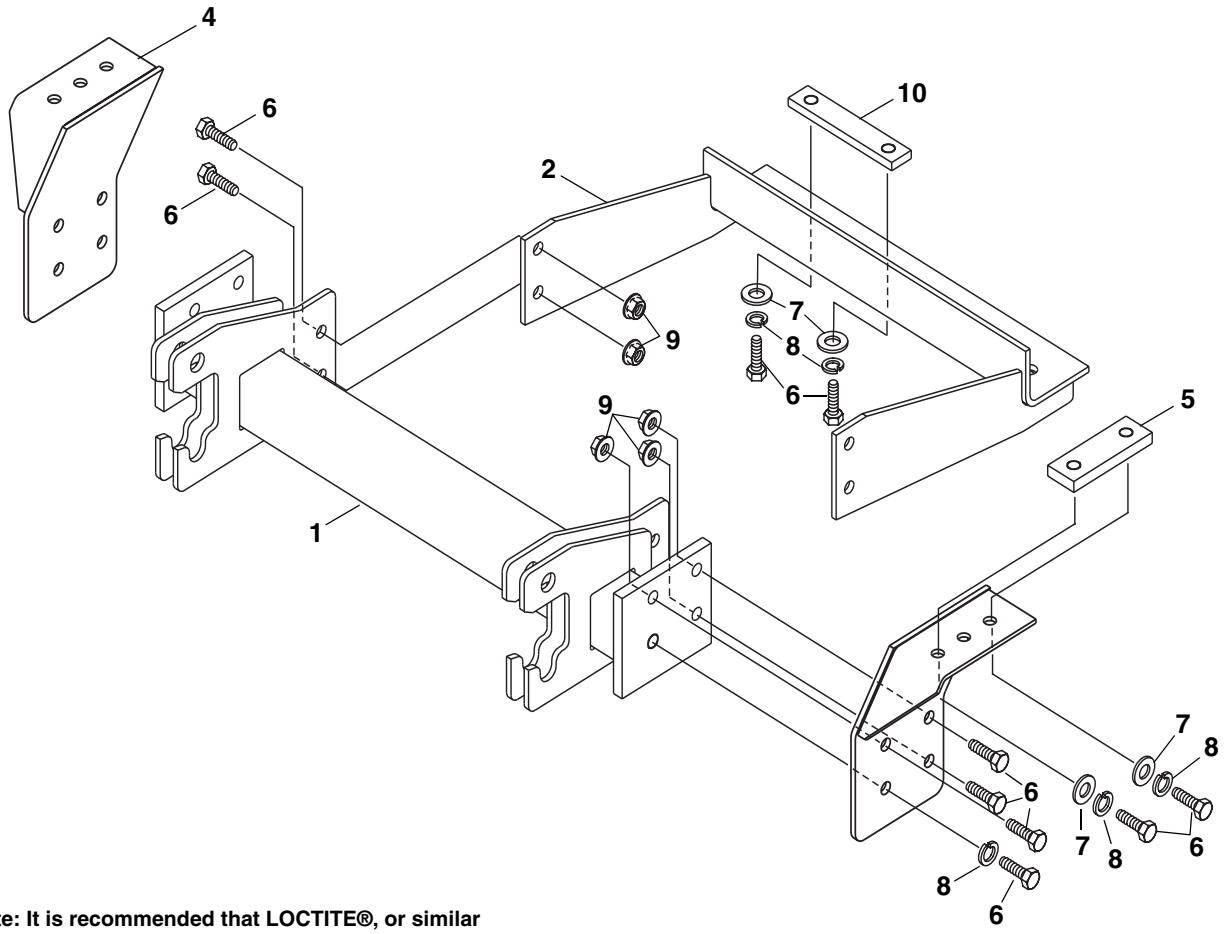
Note: These torque values are to be used for all hardware. Unless otherwise specified, all torque values must meet this specification.
Note: All torque values are in Ft.-Lbs unless otherwise stated
Note: *In-Lbs

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



IMPORTANT: Height from the center of the lower Plow Mounting holes on the Subframe to the ground should be between 8" and 10" to ensure proper operation.

PARTS LIST



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ITEM	PART NO.	DESCRIPTION	QTY.
1	96106947	Mounting, Assembly	1
2	96106953	Assembly, Rear Crossmember	1
3	96105367	Mounting Bracket, Front, LH	1
4	96105368	Mounting Bracket, Front, RH	1
5	96105992	Plate, Nut	2
6	98009010	Cap Screw, Hex Head 1/2"-13 x 1-1/2"	22
7	98009011	Washer, Flat, 1/2”	8
8	98009012	Washer, Lock, 1/2”	12
9	98009013	Nut, Hex, 1/2 - 13, Nylock	10
10	96106091	Plate, Nut	2

SNO-WAY® INTERNATIONAL, INC.

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