



Assembly & Installation Instructions

**FOR
SUBFRAME COMPONENTS PACKAGE 99100068
AND
SUBFRAME NOSE PIECE PACKAGE 96100694**

**TO FIT
1992 & LATER FORD 4X4, F150 AND BRONCO**



1. THINK SAFETY, ALWAYS WEAR SAFETY GLASSES WHEN PERFORMING THE OPERATIONS PRESCRIBED IN THESE INSTRUCTIONS

2. READ ALL INSTRUCTIONS CAREFULLY BEFORE ATTEMPTING INSTALLATION

MINIMUM VEHICLE RECOMMENDATIONS

Heavy Duty Alternator
Heavy Duty Battery
Heavy Duty Front Springs
Manufacturers Snow Plow Package.

ASSEMBLY TOOLS NEEDED

Drill Bits 1/4", 17/32", 21/32"
Sockets 7/16" – 1-1/8"
Wrenches 7/16" – 1-1/8"
Torque Wrench
Center Punch and Hammer
Hacksaw

INSTALLATION NOTES

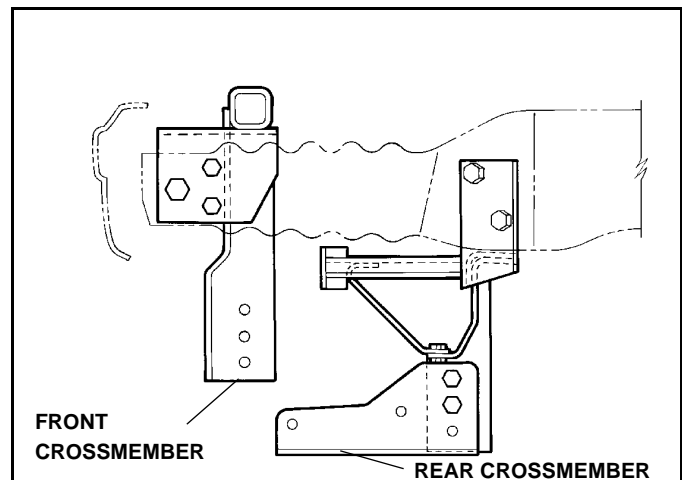
1. Unless specified, mount all Sub-Frame Components to vehicle before tightening any bolts.
2. Vehicle should be parked on a level surface with the front suspension normally loaded.

MOUNTING INSTRUCTIONS

1. Remove the four nuts from the bolts securing the bumper to the bumper support flanges, and remove bumper.
2. Mount Front Crossmember (#96101135) over frame rails, and align 3/4" hole in Crossmember with existing hole in frame horn. Secure loosely using 3/4" x 1-3/4" Capscrews, Washers, and Nylock Nuts provided.
3. F150 Only: (if equipped with stabilizer)
 - A. Remove stabilizer mounting plate from attaching point at frame. Retain hardware for future use if Sub-Frame is removed.
 - B. Remove stabilizer mounting plate from stabilizer. Retain hardware for future use if Sub-Frame is removed.
 - C. Install stabilizer to mounting holes in Rear Crossmember (#96101136) using 1/2"-13 x 1-1/2" Capscrews, and Nylock Nuts provided.
 - D. Swing Rear Crossmember up and align holes in Crossmember with Stabilizer Plate Mounting holes. Secure loosely using 1/2" x 1-1/2" Capscrews, Washers, and Nylock Nuts Provided.

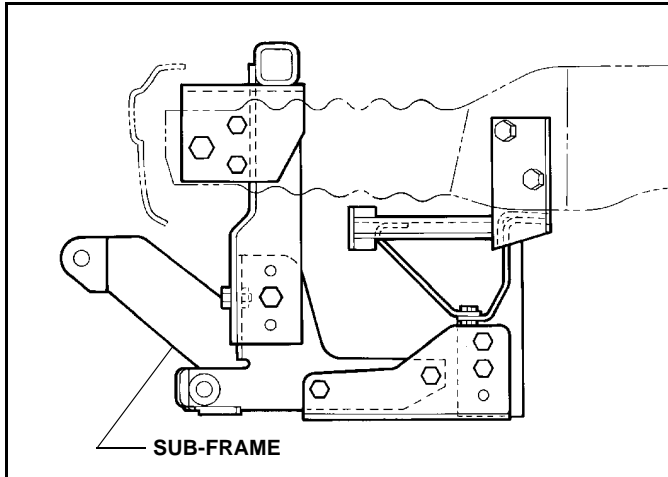
4. Bronco Only: (if equipped with stabilizer)

- A. Remove stabilizer from mounting points at frame, retain hardware for future use if Sub-Frame is removed.
- B. Attach LH & RH Adapter Brackets (#96101137 96101151) to Rear Crossmember (96101136) using 1/2" x 1-1/2" Capscrews, Washers, and Nylock Nuts provided.
- C. Align Stabilizer with mounting holes in Rear Crossmember, swing up to align with Stabilizer Brackets at frame. Secure loosely using 1/2" x 1-1/2" Capscrews and Nylock Nut provided.



5. Attach Adjuster Brackets (#96101148) to Rear Crossmember using 1/2" x 1-1/2" Capscrews and Nylock Nuts provided.
6. Loosely secure LH & RH Brackets (#96101138 and 96101139) to other side of Adjuster Brackets using 5/8" x 1-1/2" Capscrews and Nylock Nuts provided.

7. Attach Sub-Frame to Front Crossmember (9136101135) using 5/8" x 1-1/2" Capscrews, Washers, and Nylock Nuts provided.
8. Attach Sub-Frame to LH & RH Brackets (96101138 & 96101139) using 5/8" x 1-1/2" Capscrews at rear of Sub-Frame, and 5/8 x 3" Capscrews at middle of Sub-Frame, and Nylock Nuts provided.



9. Tighten hardware using the Torque Chart.

10. Using holes in Rear Crossmember as a template, center punch and drill 1/4" then 21/32" dia. holes through frame rails. Secure using 5/8" x 3-3/4" Capscrews, Shim Plates (96101444) and Nylock Nuts provided.

CAUTION

Beware of brake and fuel lines secured to inside wall of frame rails when performing Step 10.

11. Using hole in Front Crossmember (96101135) as a template, center punch and drill 1/4" then 17/32" dia. hole through outer wall of frame rails. Secure using 1/2" x 1 1/2" Capscrews, Washers, and Nylock Nuts

TORQUE SPECIFICATIONS FOR STANDARD MACHINE HARDWARE

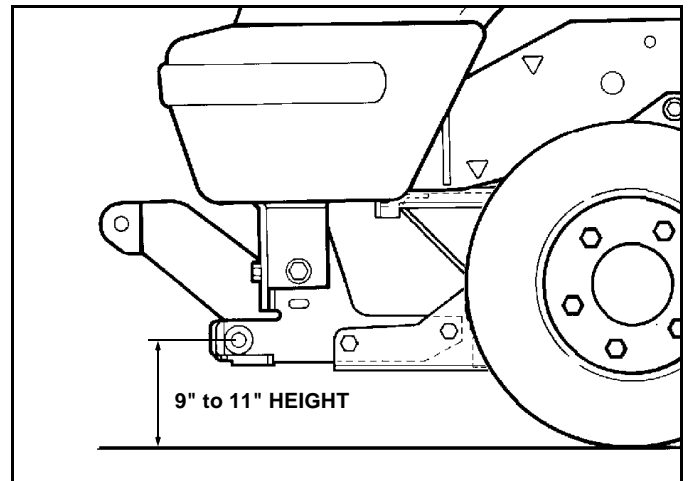
Bolt Size	GR.2 Dry	GR.5 Dry	GR.8 Dry	Metric Size	GR.8.8 Dry
1/4"	66*	9	12	M8	17
5/16"	11	17	25	M10	35
3/8"	20	30	45	M12	60
7/16"	32	50	70	M14	95
1/2"	50	75	110	M16	155
9/16"	70	110	150		
5/8"	100	150	220		
3/4"	175	260	380		
7/8"	170	430	600		
1"	250	640	900		

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

provided.

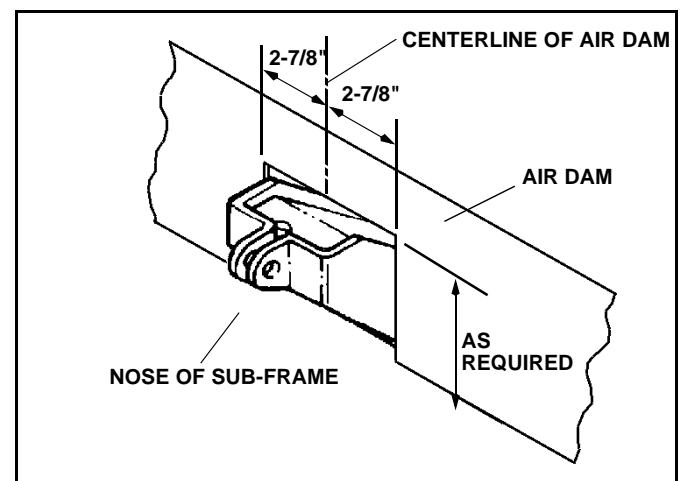
NOTE: It may be necessary to relocate license plate holder. This is best done by aligning the plate holder below the driver's side headlight and drilling two (2) new mounting holes in the bumper.

12. Using the Torque Specification Chart, torque all Capscrews starting at the rear and working forward.

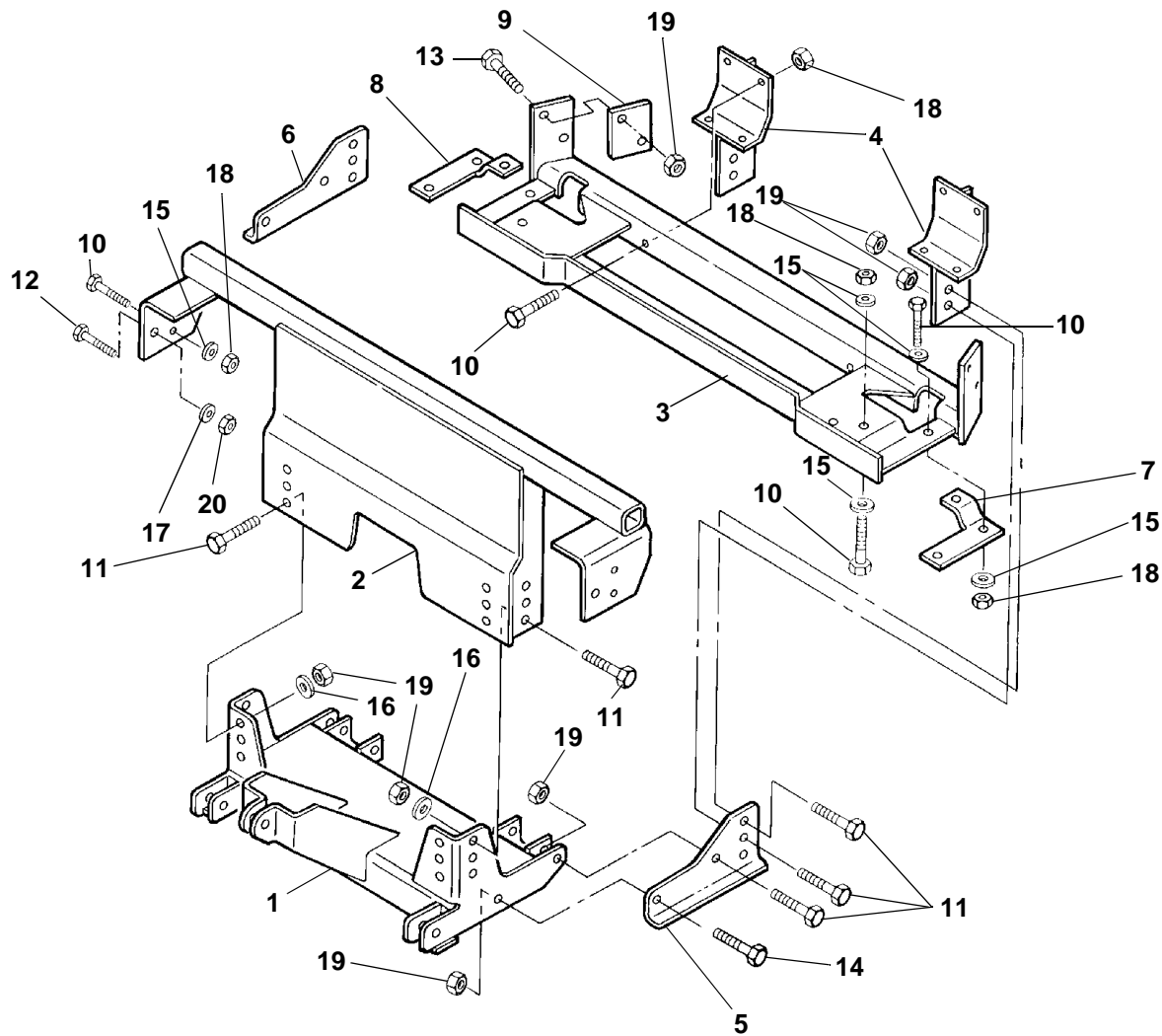


IMPORTANT: Height from the center of the lower Plow Mounting holes on the Sub-Frame to the ground should be between 9" and 11" to insure proper operation.

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



NOTE: Front air dam can be modified to clear subframe by cutting dam to allow clearance for nose of Subframe. To modify air dam measure 2-7/8" from each side of center and remove a section as required from between the marked areas to provide clearance for nose of subframe.



ITEM	PART NO.	DESCRIPTION	QTY.
1	96100694	Sub-Frame, Nose Piece (96100294)	1
2	96101135	Crossmember, Front	1
3	96101136	Crossmember, Rear	1
4	96101148	Adjuster Bracket	2
5	96101138	Bracket, LH	1
6	96101139	Bracket, RH	1
7	96101137	Adapter Bracket LH (Bronco Only)	1
8	96101151	Adapter Bracket RH (Bronco Only)	1
9	96101444	Shim Plate	3
10	98009010	Capscrew, Hex Head, 1/2"-13NC x 1-1/2"	20
11	98009115	Capscrew, Hex Head, 5/8"-11NC x 1-1/2"	10
12	98009098	Capscrew, Hex Head, 3/4"-10NC x 1-3/4"	2
13	98100064	Capscrew, Hex Head, 5/8"-11NC x 3-3/4"	4
14	98009217	Capscrew, Hex Head, 5/8"-11NC x 3"	2
15	98009011	Washer, Flat, 1/2"	16
16	98009039	Washer, Flat, 5/8"	8
17	98009030	Washer, Flat, 3/4"	2
18	98009013	Nut, Hex, 1/2"-13 NC Nylock	20
19	98009038	Nut, Hex, 5/8"-11 NC Nylock	16
20	98009003	Nut, Hex, 3/4"-10 NC Nylock	2



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