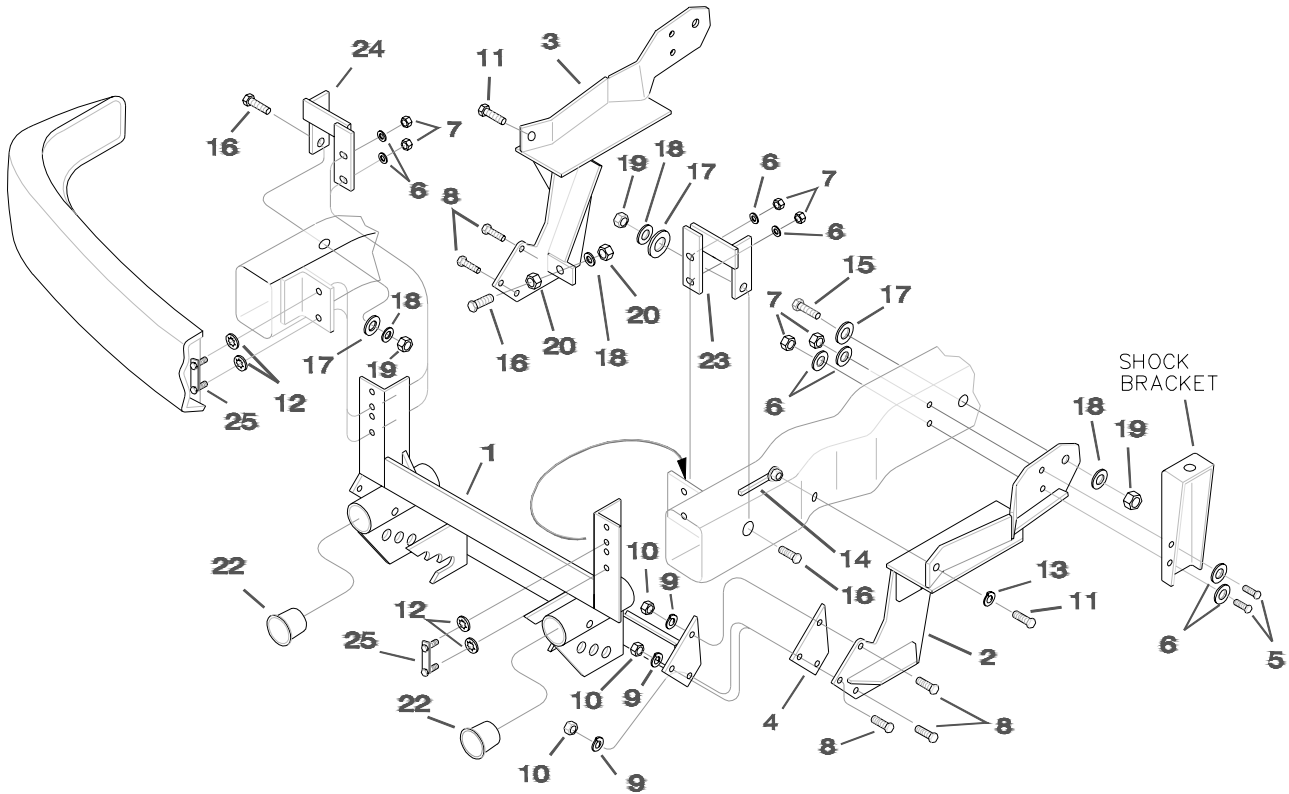




SNOWPLOWS
by Meyer

81011
June 6, 1996

**FRAME ATTACHMENT KIT
1995- FORD F-450 SUPERDUTY**



ITEM #	STOCK #	DESCRIPTION	QTY.	ITEM #	STOCK #	DESCRIPTION	QTY.
1	815000 086	MOUNTING FRAME	1	14	815000 046	5/8" NUT HANDLE	2
2	80139	PUSH ARM (D.S.)	1	15	* 20162	3/4"-10 X 1-1/2" CAPSCREW	2
3	80140	PUSH ARM (P.S.)	1	16	* 20164	3/4"-10 X 2" CAPSCREW	4
4	815000 105	SPACER	2	17	* 20359	3/4" FLATWASHER	4
5	* 8500014 079	7/16"-14 X 2" CAPSCREW	4	18	* 20333	3/4" LOCKWASHER	6
6	* 20354	7/16" FLATWASHER	12	19	* 8501001 015	3/4"-10 NUT	4
7	* 20306	7/16"-14 LOCKNUT	8	20	* 8501003 015	3/4"-10 JAM NUT	4
8	* 20095	1/2"-13 X 1-1/2" CAPSCREW	6	21	819000 013	RELEASE HOOK	1
9	* 20329	1/2" LOCKWASHER	6	22	815000 146	REC. TUBE END CAP	2
10	* 8501001 009	1/2"-13 NUT	6	23	80147	FRONT HANGER (D.S.)	1
11	* 20139	5/8"-11 X 1-1/2" CAPSCREW	2	24	80146	FRONT HANGER (P.S.)	1
12	* 22163	7/16" PUSHNUT	4	25	* 80144	7/16"-14 X 2" BOLT BAR	2
13	* 20331	5/8" LOCKWASHER	2				

* ITEMS PACKED IN 80151 BOLT BAG

Diamond Equipment assumes no responsibility for installations not made according to these instructions

Diamond Equipment reserves the right, under its continuing product improvement program, to change construction or design details, specifications and prices without notice or without incurring any obligation.



1995 - FORD F-450 SUPER DUTY

PARTICULAR ATTACHMENTS INSTRUCTIONS PULL AWAY MOUNTINGS

CAUTION: This snow removal equipment should be mounted only on vehicles that are equipped with the vehicle manufacturer optional snow plow preparation package. Mounting snow removal equipment on a vehicle that the vehicle manufacturer does not recommend for snowplowing could damage the vehicle, impair operation and control of the vehicle, and / or may void the new vehicle warranty. Snow Plow Preparation Package information is available from vehicle manufacturers and new vehicle dealers.

GENERAL INSTRUCTIONS: Disconnect the vehicle battery or batteries before beginning installation (reconnect after installation is complete). Do not burn holes into or weld pieces onto the vehicle frame. Use extreme caution when drilling any holes in the vehicle to prevent damage to brake lines, fuel lines, wiring, or any other vehicle components. Assemble parts and fasteners "finger tight" until instructions indicate final tightening. After first usage and periodically thereafter, retighten all fasteners to correct torque.

NOTE: 7/16"-14 GRADE 8 fasteners should be torqued to 75 ft. lbs.
1/2"-13 GRADE 5 fasteners should be torqued to 75 ft. lbs.
5/8"-11 GRADE 5 fasteners should be torqued to 150 ft. lbs.
3/4"- 10 GRADE 5 fasteners should be torqued to 250 ft. lbs.

1. **PRELIMINARY:** Jack the vehicle up from under the center of the frame until the front tires just clear the ground. Place jack stands under the frame to prevent accidental lowering of the vehicle. Screw a 3/4"- 10 jam nut (20) all the way on to each of the 3/4"- 10 X 2" capscrews (16). Place each of the 3/4"- 10 X 2" capscrew / jam nut assemblies through the hole in the lower front ear of the driver's side and passenger's side push arms (2),(3), with the heads of the capscrews (16) toward the front of the vehicle. Fasten with a 3/4" lockwasher (18) and 3/4"- 10 jam nut (20) on each capscrew (16). Remove and discard the two capscrews, flatwashers, and nuts holding each front shock absorber bracket to the frame rails.

2. **DRIVER'S SIDE PUSH ARM:** Place the rear upper section of the driver's side push arm (2) up and out through the space between the top of driver's side spring and the bottom flange of the vehicle frame rail. Align the holes in the rear plate of the push arm with the shock absorber bracket holes in the vehicle frame. Place the shock absorber bracket against the rear plate of the push arm and install two 7/16" - 14 x 2" capscrews (5) with 7/16" flatwashers (6) through the bracket, the rear plate of the push arm, the vehicle frame rail and fasten using 7/16" flatwashers (6), and 7/16" - 14 locknuts (7). Install a 3/4"- 10 X 1-1/2" capscrew (15) and 3/4" flatwasher (17) out through the slotted hole in the frame rail just behind the shock absorber bracket and through the rear plate of the push arm (2). Fasten using a 3/4" lockwasher (18) and a 3/4"- 10 nut (19). Install a 5/8"-11 X 1-1/2" capscrew (11) and 5/8" lockwasher (13) through the forward hole in the rear portion of the push arm (2) and through the slotted hole in the frame rail. Fasten using a 5/8"- 11 nut with handle (14) inside the boxed frame rail.

3. **PASSENGER'S SIDE PUSH ARM:** Install the passenger's side push arm (3) in the same manner and with the same number and type of fasteners as described for attaching the driver's side push arm.

4. **MOUNTING FRAME:** Remove and discard the four metric flange nuts holding the front bumper brackets to the front end of the vehicle frame rails. Remove the front bumper from the frame rails, then remove and discard the metric bolt bars and push nuts from the front bumper brackets. Install the 7/16"-14 x 2" bolt bars (25) onto the front bumper brackets in place of the metric bolt bars that were removed and discarded. Fasten the 7/16"-14 x 2" bolt bars (25) in place using four 7/16" push nuts (12). Place the front bumper back onto the frame rails with the 7/16"-14 x 2" bolt bar bolts through the slotted holes in the brackets on the frame rails. Place the upright hanger angles of the mounting frame (1) up behind the front bumper mounting brackets on the frame rails with the 7/16"-14 x 2" bolt bar bolts through the lower set of holes in the upright hanger angles. Install the driver's side and passenger's side front hangers (23),(24) up over the top of the frame rails with the 7/16"-14 x 2" bolt bar bolts through the slotted holes of the hangers and with the large round holes in the hangers lined up with the large slotted holes in the outside surface of the frame rails. Fasten the front bumper, the mounting frame (1), and the front hangers (23),(24) to the brackets on the frame rails by installing four 7/16" flatwashers (6) and 7/16" locknuts (7) onto the 7/16"-14 x 2" bolt bar bolts. Install 3/4"-10 x 2" capscrews (16) in through the large holes in the front hangers (23),(24) and through the large slotted holes in the frame rails. Fasten inside the frame rails using 3/4" flatwashers (17), 3/4" lockwashers (18), and 3/4"-10 nuts (19). Line up the three holes in the front section of each push arm (2),(3) with the holes in the end plates of the push angle on the mounting frame (1). Insert a spacer (4) between each push arm (2),(3) and each end plate of the push angle on the mounting frame (1). Fasten each of the push arms (2),(3) to the mounting frame (1) using three 1/2"-13 X 1-1/2" capscrews (8), 1/2" lockwashers (9) and 1/2"-13 nuts (10). Remove jack stands from under frame and lower vehicle to the ground.

5. **FASTENERS:** Align the front bumper and the mounting frame (1) so that they are centered with the grill and level with the ground. Tighten the four 7/16"-14 locknuts (7) holding the bumper brackets, mounting frame (1), and front hangers (23),(24) to the brackets on the vehicle frame. Hold the push arms (2),(3) tight against the outside and bottom flange of the frame rails and tighten the fasteners holding them to the vehicle frame. Adjust the 3/4" capscrews (16) with the 3/4" jam nuts (20) so that the heads of the capscrews are tight against the push angles of the mounting frame. Lock the 3/4" capscrews (16) in place using the rear jam nuts (20). Tighten the 1/2" fasteners holding the push arms (2),(3) to the mounting frame (1).

6. **LIFT FRAME:** Clean paint and burrs from the outside tube ends of the lift frame and the inside surfaces of the receiver tubes of the front mounting frame (1).

SPECIAL NOTE: Liberally coat the entire tube ends of the lift frame, the inside surfaces of the receiver tubes and threads of the slack adjusting bolts on the receiver tubes with chassis grease or anti-seize lubricant.

Back off the slack adjusting bolts on the receiver tubes until they no longer protrude inside the tubes. Slide the lift frame into the receiver tubes of the front mounting frame (1) until the fastening holes line up. Tighten the slack adjusting bolts on the receiver tubes until the lift frame will just slide in and out of the receiver tubes. Secure the lift frame to the front mounting frame using 5/8" hinge pins (26) and hairpin cotters (27).

7. **LIFT ARM:** Install the lift arm (24) and lift cylinder or electric hydraulic unit onto the lift frame using the 5/8"-11 X 5-1/2" capscrew (25) through the upper lift frame ears and the rear lift arm hole. Place a 5/8"-11 X 4-3/4" capscrew through the front lift arm hole and the ram end of the lift cylinder or electric hydraulic unit. Place a 5/8"-11 X 3-1/4" capscrew through the lower lift frame ears and stationary end of the lift cylinder or electric hydraulic unit. Fasten the three 5/8"-11 capscrews using three 5/8"-11 locknuts (32).

8. **LIFT CHAIN:** Attach each end of the lift chain (40) to the two holes in each of the diagonal braces of the push frame using 7/16" -14 "U" bolts (41), 7/16" lockwashers (43), and 7/16"-14 nuts (42).

9. **PUSH FRAME:** Install the push frame onto the plow blade with the upper and lower pivot holes lined up with the pivot holes in the back of the plow blade. Insert the shorter pivot pin (36) down through the upper pivot holes. Insert the longer pivot pin (39) down through the lower pivot holes. Secure the pivot pins (36),(39) using 1/4" X 2" cotter pins (23).

10. **ANGLE CYLINDERS:** Install the angle cylinders between the push frame and the ears on the back side of the plow blade with the rod end of the cylinders toward the plow blade. The elbows in the ports of the angle cylinders should be between the angle cylinders and the push frame.

NOTE: When installing the angle cylinders on 8' and 8-1/2' plow blades, place four 1-1/4" flatwashers (30) between each lower push frame ear and the stationary end of each angle cylinder.

Attach the stationary end of the angle cylinders to the push frame using the two shorter cylinder pins (22). Attach the rod ends of the angle cylinders to the back side of the plow blade using the two longer cylinder pins (44). Secure the cylinder pins using 1/4" X 2" cotter pins (23).

11. **PLOW MARKERS:** Attach each plow marker (33) to the two holes in the upper outer surface of each end rib of the plow blade using two 5/16"-18 X 1" capscrews (35), 5/16" lockwashers (37), and 5/16"- 18 nuts (38).

12. **HOOK UP PINS:** Compress each hook up pin spring (50) slightly and place them between the inner most ear and the center ear on each side of the push frame with the hole through the center of each spring lined up with the pin holes in the push frame ears. Insert each hook up pin (48) through the pin hole in each inner most ear of the push frame , through the center of the springs (50), and out through the center and outside ears on each side of the push frame. Compress the hook up pin springs (50) slightly and secure the hook up pins (48) using a 1" snap ring (49) in the snap ring groove of each hook up pin (48). **(The snap rings should be between the end of the spring and the inner surface of each of the center ears on the push frame.)**

13. **PLOW TO VEHICLE ATTACHING:** **Pull back** and lock the spring loaded hook up pins (48) on each side of the push frame . Attach the lift chain to the lift arm hooks and lift the back end of the push frame up level using the vehicle hydraulics. Line up the spring loaded hook up pins with the corresponding set of holes in the lower part of the mounting frame. Unlock the spring loaded hook up pins so that they go completely through the holes in the mounting frame and the push frame ears.

Adjust the lift chain at the lift chain hooks on the lift arm so that the plow blade will lift fully and also be able to follow the ground contour while plowing.

NOTE: If the lift chain does not pull evenly, shorten the longer side by attaching at a different link or at half a link where the chain is attached to the push frame with the 7/16" -"U" bolts.

14. PUSH FRAME STOP BOLTS: Screw a 5/8"-11 jam nut (29) all the way onto each of the 5/8"-11 X 3" full thread capscrews (28). Place the capscrew / jam nut assemblies up through the ears on each side of the lower lift frame with the heads of the capscrews down. Fasten with a 5/8" lockwasher (31) and jam nut (29). Adjust the 5/8"-11 X 3" full thread capscrews (28) with the jam nuts (29) so that the heads of the capscrews (28) contact the push frame before the upper pivot section of the push frame contacts the lift arm or the lift cylinder / out front electric hydraulic unit while lifting plow or stacking snow.

NOTE: If the push frame is attached to a different set of connecting holes on the mounting frame, the push frame stop bolts should be checked and may need to be readjusted to prevent the push frame from contacting the lift arm, or the lift cylinder / out front electric hydraulic unit while lifting plow or stacking snow.

CAUTION: CHECK THE TRIPEDGE ADJUSTMENT AT THIS TIME.

- A. THE SPRINGS ARE PROPERLY ADJUSTED WHEN A PIECE OF PAPER CAN BE PLACED BETWEEN THE COILS.
- B. IF THE TRIPEDGE SPRINGS NEED ADJUSTMENT, LOOSEN THE BOTTOM LOCK NUT ON BOTH SPRING ASSEMBLIES. ROTATE THE TOP NUT UNTIL THE SPRINGS ARE PROPERLY ADJUSTED.
- C. BE SURE TO TIGHTEN THE BOTTOM LOCK NUT SECURELY ON BOTH ASSEMBLIES TO THE TOP NUT TO PREVENT LOOSENING OF THE ASSEMBLIES.

NOTICE: Diamond Equipment or Meyer Products assume no responsibility for installations not made in accordance with these instructions.

Instructions are subject to change without notice.