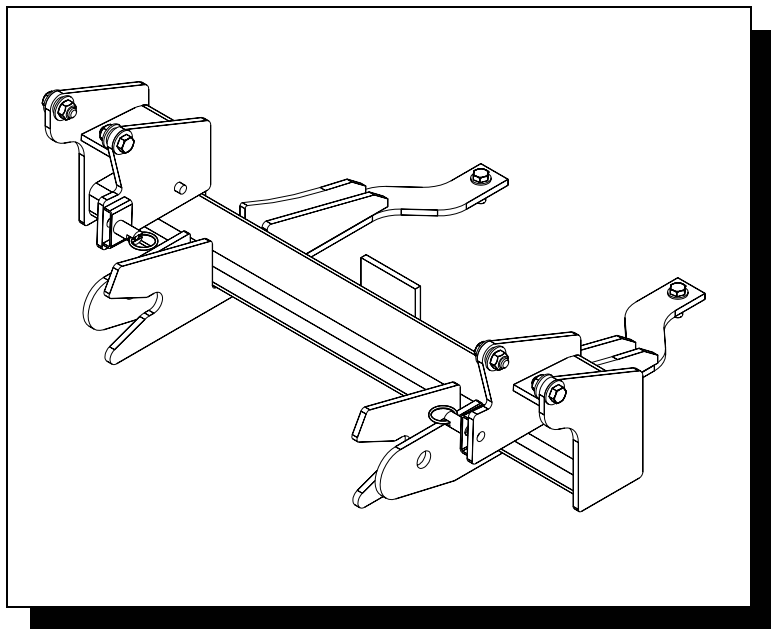




UNDERCARRIAGE INSTALLATION INSTRUCTIONS



UNDERCARRIAGE **31046**

HARDWARE KIT **61193**

FOR MODELS:

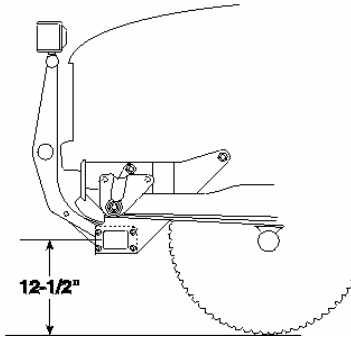
FORD F-150 PICKUP (1998-2003)

FORD F-150 HERITAGE (2004)

INSTALLATION INSTRUCTIONS



A label identifying the undercarriage assembly part number and push beam part number is applied to the rear of the push beam.



The recommended push beam height for this undercarriage assembly is 12-1/2" from the center of the push beam to level ground. DO NOT exceed 14-1/2" in height for this undercarriage.



WARNING: Always perform vehicle undercarriage installations with the keys removed from the vehicle's ignition. Properly tag the ignition switch to alert others work is being performed on the vehicle.

Most newer trucks are equipped with driver and passenger's side air bags. DO NOT remove, disable, or reposition any sensory equipment related to the safe operation of the air bags.

ALWAYS follow the vehicle manufacturer's recommendations for installing snowplowing equipment.

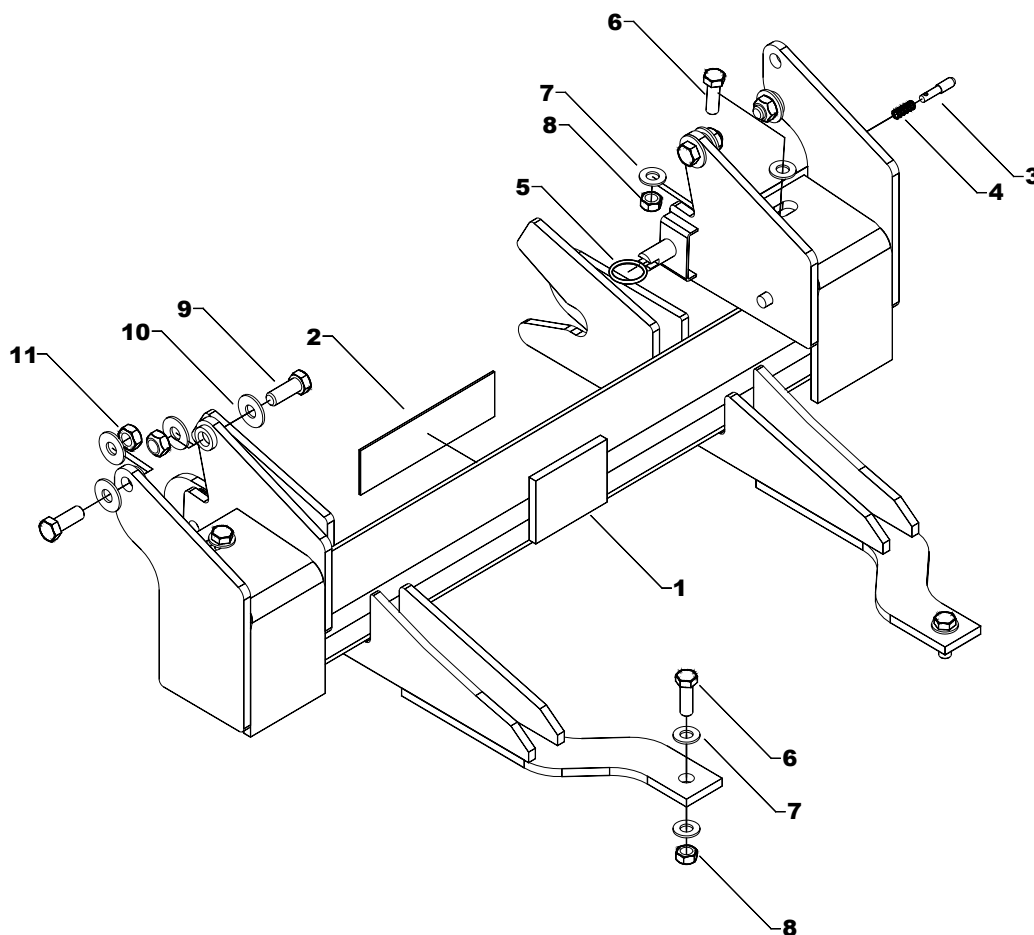
FAILURE TO COMPLY WITH THE ABOVE WARNINGS MAY RESULT IN SERIOUS INJURY OR DEATH.



CAUTION: If your vehicle is equipped with oversize tires, they may come into contact with the undercarriage hanger plates when turning the vehicle.

1. Remove the front bumper.
2. Remove the plastic bumper fascia from the bottom of the bumper. *NOTE: The bumper fascia will need to be permanently removed or notched to accommodate the undercarriage.* If your truck has frame rail mounted tow hooks these will have to be permanently removed as well.
3. Align the front mount holes on the pushbeam (**Ref 1**) with the tow hook mount holes on the truck frame rail. *NOTE: Use a hydraulic floor jack to hold the pushbeam in place.* Secure the pushbeam to the truck with bolts (**Ref 9**), washers (**Ref 10**) and nuts (**Ref 11**). Finger tighten the hardware until all undercarriage parts are in place.
4. Position the rear pushbeam support arm mount holes with the holes located in the truck frame crossmember. *NOTE: The crossmember contains two rubber access caps that need to be removed to gain access to the inside of the crossmember.* Using grease or other adhesive, attach one washer (**Ref 7**) to two bolts (**Ref 6**). Then attach a thin gauge wire to each bolt and position the wire through each crossmember access hole to the middle mount holes. Pull the bolt through the holes into the crossmember and pushbeam support arms. Fasten each bolt with nut (**Ref 8**) and additional washer. Replace the rubber access caps.
5. Finish securing the pushbeam to the truck frame with the two bolts (**Ref 6**), washers (**Ref 7**) and nuts (**Ref 8**) through the bottom of the pushbeam at the tow hook mount holes located under the truck frame rail
6. Once the undercarriage has been positioned and all hardware is in place, tighten all nuts. Reference the chart on page 4 for torque specifications.
7. Replace the bumper and notched fascia using existing hardware.
8. Position the **Light Tower** into the mount pockets on the push beam. Each pocket has a lock pin that secures both light tower arms. Pull out and twist each ring handle to temporarily unlock the pins. Place the light tower into the pockets and relock the pins. Mount each **Plow Headlight** to the light tower with the hardware kit provided.
9. Plug the connectors from the snowplow headlights into the connectors on the vehicle wire harness. Adjust both lights with the plow in the raised position.

UNDERCARRIAGE PARTS



REF	PN	QTY	DESCRIPTION	NOTES
-	31046	1	Asm, Undercarriage	INCLUDES 1-11
-	61193	1	Kit, Hardware Ford UC	INCLUDES 6-11
1	31084	1	Weldment, Push Beam 2 x 4 x 36.75	
2	63162	1	Decal, Push Beam 1-1/2" x 6-1/2"	
3	40079	2	Pin, 3/8" DIA. x 1-3/4" SS	
4	61000	2	Spring, Comp. .94" O.A.F.L. x .36" O.D. x .029" Wire DIA. SS	
5	61309	2	Ring, Standard Split, 1-1/4" O.D., 1-1/16" I.D., SS	
6	61055	4	Screw, 1/2-13 x 1-1/2 HHCS GR8 YZ	
7	61026	8	Washer, 1/2" x 1-1/16" O.D. x 17/32" I.D. YZ	
8	61020	4	Nut, 1/2-13 Top Lock Z	
9	61056	4	Screw, 9/16-12 x 1-1/2" HHCS Gr8 YZ	
10	61027	8	Washer, 1/2" Hardened USS	
11	61058	4	Nut, 9/16-12 Top Lock	

Note: The reference numbers listed identify parts shown in the illustration above. These numbers are specific to this illustration only. Always review the part number given for proper component identification. Blizzard Corporation reserves the right, under its Continuous Improvement Policy, to change construction or design details and furnish equipment when so altered without reference to illustrations or specifications.

HEADLIGHT CONVERSION HARNESS GUIDE

VEHICLE APPLICATION	HEADLIGHT CONNECTOR	HEADLIGHT DESCRIPTION	HEADLIGHT NUMBERS	CONVERSION HARNESS
1998-2003 Ford F-150 Pickup 2004 Ford F-150 Heritage	HB5	DUAL RECTANGULAR COMPOSITE HALOGEN	9007, H9007	62222

Note: Headlight conversion harness kits are not included with undercarriages. All headlight conversion harness kits sold separately.

TORQUE SPECIFICATIONS (For reference only)



Grade Identification Marking for J429-Grade 5 Bolt



Grade Identification Marking for J429-Grade 8 Bolt

SAE J429 – Grade 5				SAE J429 – Grade 8			
Nominal Thread Size	Clamp Loads (lbs)	Tightening Torque		Nominal Thread Size	Clamp Loads (lbs)	Tightening Torque	
		“Lubricated”	“Dry”			“Lubricated”	“Dry”
1/4-20	2,000	6 ft-lbs	8 ft-lbs	1/4-20	2,850	9 ft-lbs	12 ft-lbs
5/16-18	3,350	13 ft-lbs	18 ft-lbs	5/16-18	4,700	18 ft-lbs	25 ft-lbs
3/8-16	4,950	23 ft-lbs	31 ft-lbs	3/8-16	6,950	32 ft-lbs	44 ft-lbs
7/16-14	6,800	37 ft-lbs	50 ft-lbs	7/16-14	9,600	53 ft-lbs	70 ft-lbs
1/2-13	9,050	57 ft-lbs	75 ft-lbs	1/2-13	12,800	80 ft-lbs	107 ft-lbs
9/16-12	11,600	82 ft-lbs	109 ft-lbs	9/16-12	16,400	115 ft-lbs	154 ft-lbs
5/8-11	14,500	113 ft-lbs	151 ft-lbs	5/8-11	20,300	159 ft-lbs	211 ft-lbs
3/4-10	21,300	200 ft-lbs	266 ft-lbs	3/4-10	30,100	282 ft-lbs	376 ft-lbs
7/8-9	29,435	321 ft-lbs	430 ft-lbs	7/8-9	41,550	454 ft-lbs	606 ft-lbs
1-8	38,600	482 ft-lbs	640 ft-lbs	1-8	54,540	680 ft-lbs	900 ft-lbs



Grade Identification Marking for Metric-Grade 8.8 Bolt



Grade Identification Marking for Metric-Grade 10.9 Bolt

Metric Class 8.8				Metric Class 10.9			
Diameter (mm)	Clamp Loads (Pounds)	Tightening Torque		Diameter (mm)	Clamp Loads (Pounds)	Tightening Torque	
		“Lubricated”	“Dry”			“Lubricated”	“Dry”
5	1,389	3 ft-lbs	5 ft-lbs	5	1,987	5 ft-lbs	7 ft-lbs
6	1,965	6 ft-lbs	8 ft-lbs	6	2,812	8 ft-lbs	11 ft-lbs
7	2,826	10 ft-lbs	13 ft-lbs	7	4,044	14 ft-lbs	19 ft-lbs
8	3,579	14 ft-lbs	19 ft-lbs	8	5,121	20 ft-lbs	27 ft-lbs
10	5,672	28 ft-lbs	37 ft-lbs	10	8,116	40 ft-lbs	53 ft-lbs
12	8,243	49 ft-lbs	65 ft-lbs	12	11,796	70 ft-lbs	92 ft-lbs
14	11,246	77 ft-lbs	103 ft-lbs	14	16,092	111 ft-lbs	148 ft-lbs
16	15,882	125 ft-lbs	167 ft-lbs	16	21,970	173 ft-lbs	231 ft-lbs
18	19,423	172 ft-lbs	229 ft-lbs	18	26,868	238 ft-lbs	317 ft-lbs
20	24,784	244 ft-lbs	325 ft-lbs	20	34,284	338 ft-lbs	450 ft-lbs