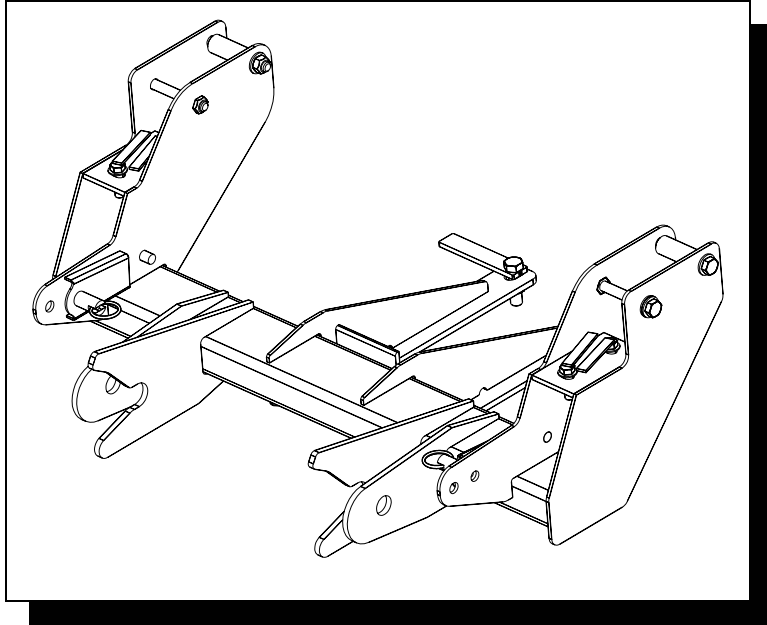




VEHICLE UNDERCARRIAGE INSTALLATION INSTRUCTIONS



UNDERCARRIAGE **31159**

HARDWARE KIT **61482**

FOR MODELS:

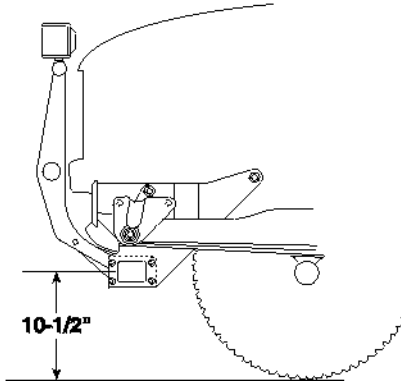
FORD EXPLORER (2002-2004)

INSTALLATION INSTRUCTIONS

P/N 31159
PUSH BEAM P/N 31160

BLZ 104747

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 10-1/2" from the center of the push beam to level ground. DO NOT exceed 12-1/2" 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.

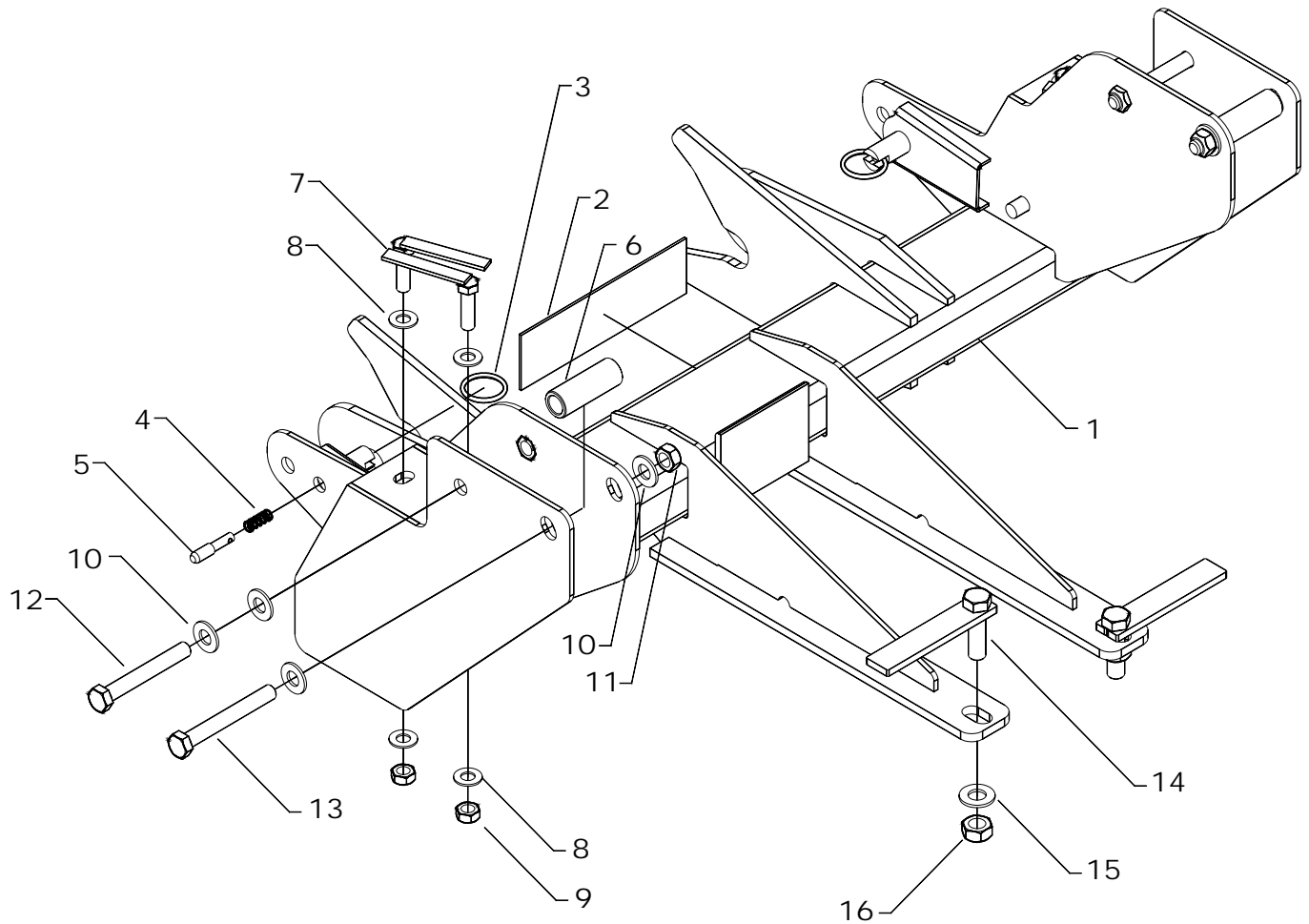
FAILURE TO COMPLY WITH THE ABOVE WARNINGS MAY RESULT IN SERIOUS INJURY OR DEATH.



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

1. Position the two tab bolts (**Ref 14**) through the access holes in the vehicle crossmember into the mount holes.
2. Install the four tab bolts (**Ref 7**) with washers (**Ref 8**) through the access holes in the bottom of the truck frame rail into the mount holes.
3. Position the bushings (**Ref 6**) through the holes located in the truck frame rail. *NOTE: The bushings should rest on the frame rail walls while the pushbeam weldment is secured to the frame.*
4. Align the pushbeam weldment with the tab bolts located in the truck frame rail. Secure the bolts to the pushbeam with washers (**Ref 8**) and nuts (**Ref 9**). Finger tighten the fasteners until all undercarriage parts are in place. *NOTE: The bumper fascia may need to be permanently notched.*
5. Secure the pushbeam weldment side rear hole to the frame through the bushings with bolts (**Ref 13**), washers (**Ref 10**) and nuts (**Ref 11**).
6. Secure the front side hole of the pushbeam weldment to the front frame rail with bolts (**Ref 12**) and washers (**Ref 10**). *NOTE: The bolt will thread into a nut welded on the pushbeam.*
7. Align the holes in the pushbeam weldment support arms with the holes in the vehicle crossmember. Secure tab bolts with washers (**Ref 15**) and nuts (**Ref 16**).
8. Once the undercarriage has been positioned and all hardware is in place, tighten hardware according to torque specifications.
9. 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.
10. 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
-	31159	1	Asm, Undercarriage	INCLUDES 1-16
-	61482	1	Kit, Hardware Ford UC	INCLUDES 6-16
1	31160	1	Weldment, Push Beam	
2	61128	1	Decal, Push Beam 1-1/2" x 9"	
3	61309	2	Ring, Standard Split, 1.48" O.D	
4	61000	2	Spring, Draw Latch Lock Pin	
5	40079	2	Pin, 3/8" DIA. x 1-3/4" SS	
6	31166	2	Bushing, .63"ID x .94"OD x 2.63 Lg	
7	61480	4	Screw, 7/16-14 x 1-1/2" HHCS Gr8 YZ w/ welded tab	
8	61162	8	Washer, 7/16" SAE Hardened	
9	61154	4	Nut, 7/16-14 Top Lock UNC	
10	61026	8	Washer, 1/2" USS Hardened	
11	61020	2	Nut, 1/2-13 Top Lock Z	
12	61472	2	Screw, 1/2-13 UNC x 3-3/4" HHCS	
13	61306	2	Screw, 1/2-13 UNC x 4 HHCS	
14	31119	2	Screw, 9/16-12 x 2 HHCS Gr8 YZ w/ welded tab	
15	61059	2	Washer, 9/16" SAE Hardened	
16	61058	2	Nut, 9/16-12 UNC 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 ADAPTER KIT GUIDE

VEHICLE APPLICATION	HEADLIGHT CONNECTOR	HEADLIGHT DESCRIPTION	HEADLIGHT NUMBERS	ADAPTER KIT
2002-2004 FORD EXPLORER	HB3/HB4	QUAD COMPOSITE HALOGEN BULB	H9005, H9006	62013

Note: Headlight adapter kits are not included with vehicle undercarriages. All headlight adapter kits sold separately.

TORQUE SPECIFICATIONS (For reference only)



Grade Identification Marking for J429-Grade 5 Bolt



Grade Identification Marking for J429-Grade 8 Bolt

Nominal Thread Size	SAE J429 – Grade 5			Nominal Thread Size	SAE J429 – Grade 8		
	Clamp Loads (lbs)	Tightening Torque			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

Diameter (mm)	Metric Class 8.8			Diameter (mm)	Metric Class 10.9		
	Clamp Loads (Pounds)	Tightening Torque			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