



# **VEHICLE UNDERCARRIAGE INSTALLATION INSTRUCTIONS**

**FORD F-250 PICKUP (1980-1991)  
FORD F-350 PICKUP (1980-1991)**

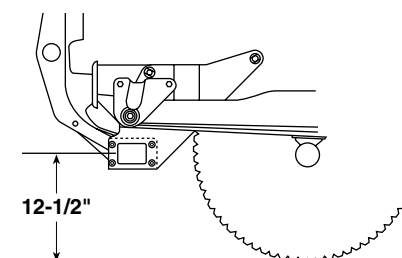
**UNDERCARRIAGE PART NO.  
31041  
HARDWARE KIT PART NO.  
61157**

**SEE REVERSE FOR ADDITIONAL INSTALLATION INSTRUCTIONS**

# UNDERCARRIAGE 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.**

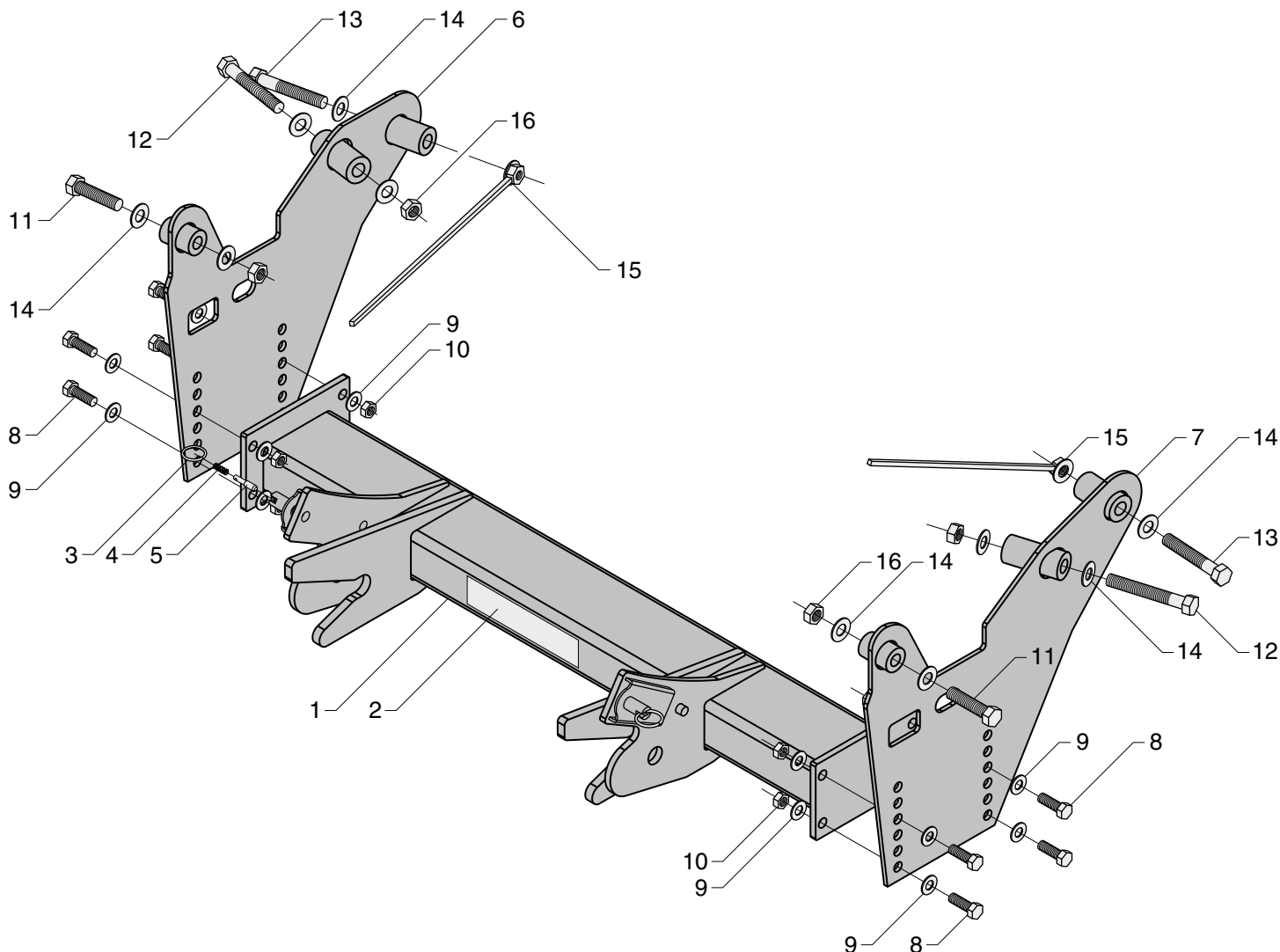


**CAUTION:** If your vehicle is equipped with oversize tires, they may come into contact with the undercarriage hanger plates when turning the vehicle.

The problem may be resolved by setting the steering stops on the vehicle. If this does not correct the problem, the original tires will need to be installed on the vehicle.

1. Begin the undercarriage assembly by removing the front bumper of the vehicle. There are two mounting plates with four M12-1.75 x 45 flanged hex head screws and M12-1.75 nuts to be removed. These are located on the inside of the truck frame rail.
2. Match the holes in each of the HANGER PLATES to those located on the outside of the truck frame rail. Insert one 5/8"-11 x 4" bolt through the rear hole in the hanger plate and truck frame rail. Position one 5/8"-11 top locking nut with 14" welded stock and washer inside of the truck frame rail and fasten. Finger tighten the fasteners until all undercarriage parts are in place.
3. Position the hanger plate cut-outs over the spring shackle bolt and leaf spring clamp mounts. Align the front mounting hole on the plate with the hole in the truck frame. Fasten the plate to the vehicle with one 5/8"-11 x 2-3/4" bolt, two 5/8" washers and two top lock nuts.
4. Complete the hanger plate installation by positioning one 5/8"-11 x 4-1/2" bolt with 5/8" washer through the middle mounting hole in the plate. Secure the screw with one 5/8" washer and top lock nut.
5. Repeat steps #2 through #4 for the opposite hanger plate. *Note: If your vehicle is equipped with oversize tires, the steering stop may need to be adjusted to prevent the tire from hitting the hanger plate.*
6. Mount the PUSH BEAM to each hanger plate using four 1/2"-13 x 1-1/2" bolts, eight 1/2" washers and four 1/2"-13 top lock nuts.
7. Once the undercarriage has been positioned and all hardware is in place, proceed to tighten all top lock nuts. Reference the chart on page 4 for maximum bolt torque.
8. Replace the bumper using the existing hardware.
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.

Complete the assembly by plugging 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 LIST

Ref. No.	Part No.	Qty.	Part Description
<b>N/A</b>	<b>31041</b>	<b>1</b>	<b>Assembly, Undercarriage: Nos: 1-16</b>
1	31045	1	Push Beam Weldment 3 x 5 x 41.63
2	63161	1	Decal, Push Beam, 2-1/4" x 9-3/4"
3	61309	2	Ring, Standard Split, 1-1/4" O.D., 1-1/16" I.D., SS
4	61000	2	Spring, Compression, 0.94" O.A.F.L. x 0.36" O.D., 0.029" Wire DIA., SS
5	40079	2	Pin, 3/8" DIA. x 1-3/4", SS
6	31042	1	Plate, Hanger, Passenger's Side
7	31043	1	Plate, Hanger, Driver's Side
8	61055	8	Screw, Hex Head Cap, 1/2"-13 x 1-1/2" Grade 8, YZ
9	61026	16	Washer, SAE Mil-Carb High-Strength, 1/2", 1-1/16" O.D., 17/32" I.D., YZ
10	61020	8	Nut, Top Lock, 1/2"-13 Grade C, Z
11	61061	2	Screw, Hex Head Cap, 5/8"-11 x 2-3/4" Grade 8, YZ
12	61065	2	Screw, Hex Head Cap, 5/8"-11 x 4-1/2" Grade 8, YZ
13	61155	2	Screw, Hex Head Cap, 5/8"-11 x 4" Grade 8, YZ
14	61064	10	Washer, SAE Mil-Carb High-Strength, 5/8", 1-5/16" O.D., 21/32" I.D., YZ
15	61161	2	Nut, Top Lock, 5/8"-11 Grade C, Z with 14" Welded Square Stock and Washer, 5/8", 1-5/16" O.D., 21/32" I.D., YZ
16	61063	4	Nut, Top Lock, 5/8"-11 Grade C, Z
<b>N/A</b>	<b>61157</b>	<b>1</b>	<b>Kit, Hardware - Undercarriage P/N 31041: Nos. 8-16</b>

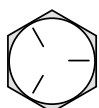
Note: The reference numbers listed identify parts shown in the illustration above. These numbers are specific to this illustration only. Always review the part number given for proper component identification. Blizzard Corporation reserves the right, under its Continuous Improvement Policy, to change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

# HEADLIGHT CONVERSION HARNESS GUIDE

VEHICLE APPLICATION	HEADLIGHT CONNECTOR(S)	HEADLIGHT DESCRIPTION	HEADLIGHT NUMBERS	CONVERSION HARNESS
1980-1991 FORD F-250 PICKUP 1980-1991 FORD F-350 PICKUP	2B/2D	DUAL RECT. & DUAL ROUND HEADLAMP	6014, H6024, H6059, 6052 H6054, HP6054	62220
	HB1	DUAL RECTANGULAR COMPOSITE HALOGEN	9004, H9004	62221

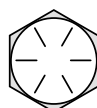
Note: Headlight conversion harness kits are not included with undercarriage mounts. All headlight conversion harness kits sold separately.

## TORQUE SPECIFICATIONS



### Grade Identification Marking for J429 - Grade 5 Bolt

- Material: Medium carbon steel: quenched and tempered
- Minimum Proof Strength: 85,000 psi
- Minimum Tensile Strength: 120,000 psi
- Core Hardness Rockwell (min.): C25, (max.): C34
- Minimum Yield Strength: 92,000 psi



### Grade Identification Marking for J429 - Grade 8 Bolt

- Material: Medium carbon alloy steel: quenched and tempered
- Minimum Proof Strength: 120,000 psi
- Minimum Tensile Strength: 150,000 psi
- Core Hardness Rockwell (min.): C33, (max.): C39
- Minimum Yield Strength: 130,000 psi

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	75 in-lbs	100 in-lbs	1/4-20	2,850	107 in-lbs	143 in-lbs
5/16-18	3,350	157 in-lbs	210 in-lbs	5/16-18	4,700	220 in-lbs	305 in-lbs
3/8-16	4,950	23 ft-lbs	31 ft-lbs	3/8-16	6,950	32.5 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	21 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	482.5 ft-lbs	640 ft-lbs	1-8	54,540	680 ft-lbs	900 ft-lbs



### Grade Identification Marking for Metric - Grade 8.8 Bolt

- Material: Medium carbon steel: quenched and tempered
- Minimum Proof Strength: 580 MPa
- Minimum Tensile Strength: 800 MPa
- Core Hardness Rockwell (min.): C22, (max.): C32
- Minimum Yield Strength: 640 MPa



### Grade Identification Marking for Metric - Grade 10.9 Bolt

- Material: Low carbon alloy steel: quenched and tempered
- Minimum Proof Strength: 830 MPa
- Minimum Tensile Strength: 1040 MPa
- Core Hardness Rockwell (min.): C32, (max.): C39
- Minimum Yield Strength: 940 MPa

Diameter (millimeters)	Metric Class 8.8			Diameter (millimeters)	Metric Class 10.9		
	Clamp Loads (Newton)	Tightening Torque			Clamp Loads (Newton)	Tightening Torque	
		“Lubricated”	“Dry”			“Lubricated”	“Dry”
5	6177	4.63 N-m	6.18 N-m	5	8840	6.63 N-m	8.84 N-m
6	8743	7.87 N-m	10.5 N-m	6	12512	11.3 N-m	15.0 N-m
7	12570	13.2 N-m	17.6 N-m	7	17990	18.9 N-m	25.2 N-m
8	15921	19.1 N-m	25.5 N-m	8	22784	27.3 N-m	36.5 N-m
10	25230	37.8 N-m	50.5 N-m	10	36105	54.1 N-m	72.2 N-m
12	36670	66.0 N-m	88.0 N-m	12	52475	94.5 N-m	125 N-m
14	50025	105 N-m	140 N-m	14	71587	150 N-m	200 N-m
16	70650	170 N-m	226 N-m	16	97732	235 N-m	313 N-m
18	86400	233 N-m	311 N-m	18	119520	323 N-m	430 N-m
20	110250	330 N-m	441 N-m	20	152513	458 N-m	610 N-m

**Disclaimer:** All torque values included in the charts above are advisory only, and their use by anyone is entirely voluntary. Reliance on the contents for any purpose by anyone is the sole risk of that person and Blizzard Corporation is not responsible for any loss, claim or damages arising therefrom. Blizzard Corporation has made an effort to present the above contents accurately, but we do not guarantee its completeness or validity. This information is subject to change at any time, without notice. Blizzard Corporation makes no representations or warranties, express or implied, in connection with the information.