



VEHICLE UNDERCARRIAGE INSTALLATION INSTRUCTIONS

JEEP LIBERTY (2004)

UNDERCARRIAGE PART NO.

32207

HARDWARE KIT PART NO.

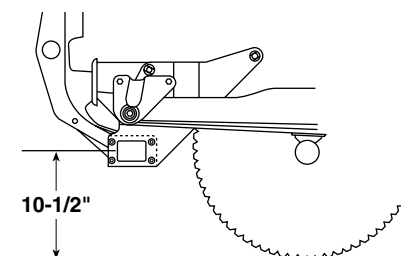
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SEE REVERSE FOR ADDITIONAL INSTALLATION INSTRUCTIONS

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 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.

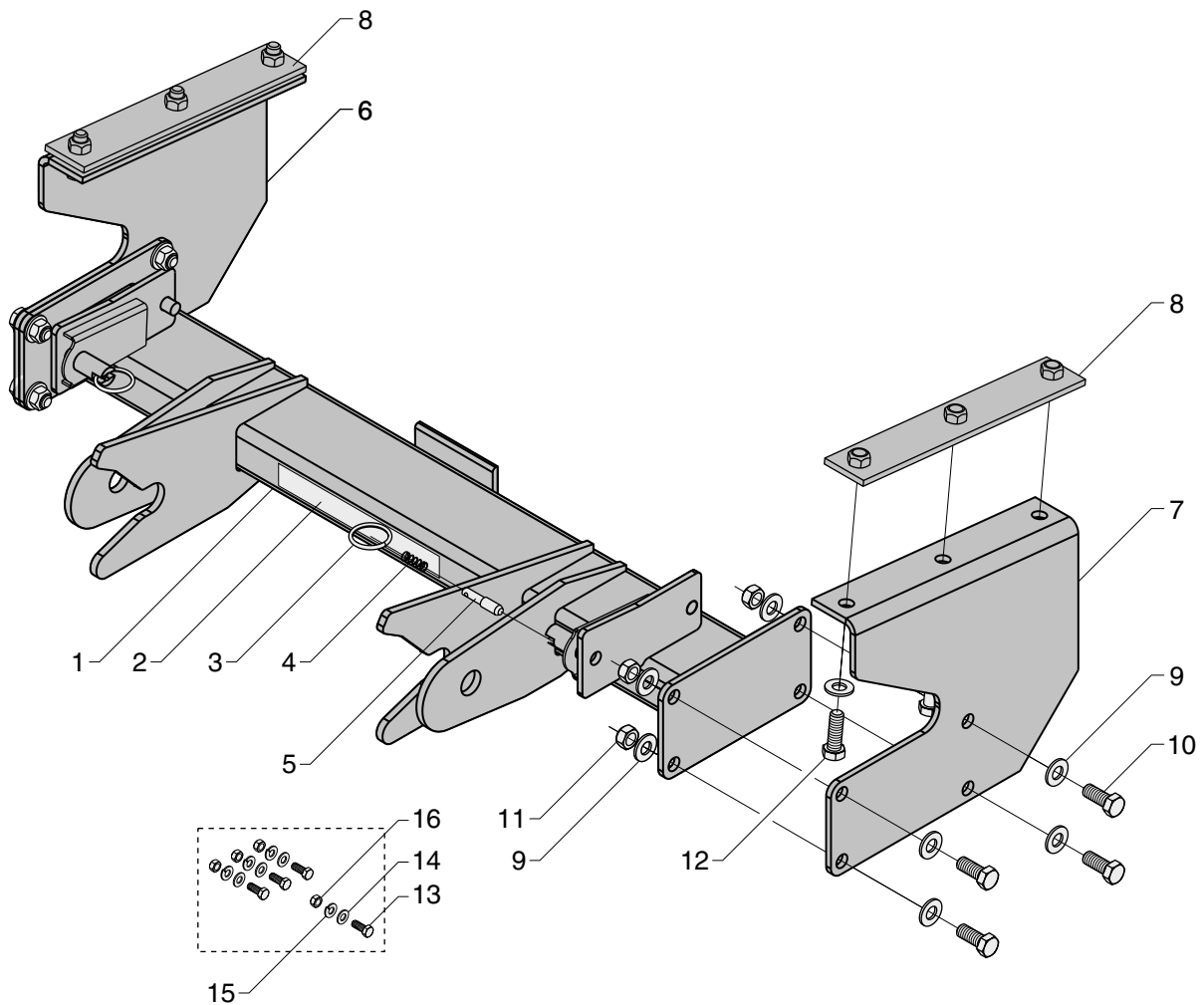


CAUTION: If your vehicle is equipped with oversize tires, they may come into contact with the undercarriage hanger plates when turning the vehicle.

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 assembly by removing the GRILL ASSEMBLY and BUMPER from the vehicle. The grill assembly uses five screws to attach to the frame and can easily be removed. The bumper is mounted to the frame using plastic push rivets (top of bumper) and plastic Klik-lock rivets (bottom of bumper). The top rivets should be saved for reuse. The bottom rivets will be replaced with hardware provided. *Note: The plastic air dam will need to be permanently removed or notched to accommodate the undercarriage assembly.* Disconnect all lamp harnesses (if applicable) before removing the grill assembly and bumper.
2. Next, remove both TRUCK FRAME RAIL END CAPS. Save all original hardware for reuse.
3. Position the driver's side HANGER PLATE under the truck frame rail and clamp it in place. *Note: The 90 degree bend in the plate should face inward. Review the diagram on page 3.* The plate should install against the front flange at the end of the frame rail.
4. Repeat step #3 for the passenger's side hanger plate.
5. Secure the PUSH BEAM to each hanger plate using eight 1/2"-13 x 1-1/4" bolts, sixteen 1/2" SAE washers and eight 1/2" top lock nuts. Tighten all bolts to insure the hanger plates are square.
6. With the assembly in place, proceed to mark the hole locations (for each hanger plate) on the truck frame rails. There are three holes in each hanger plate.
7. Remove the assembly from the vehicle and proceed to drill the pilot holes into each frame rail. *Note: Only drill through the bottom of the frame rail.* Bore each pilot hole to a 9/16" diameter.
8. Position each NUT PLATE WELDMENT through the end of the frame rail and align it with the holes in the frame. Secure each hanger plate to the frame rail with three 1/2" SAE washers and 1/2"-13 x 1-1/2" bolts.
9. 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.
10. Replace the truck frame rail end caps, bumper and grill assembly using the original vehicle hardware. *Note: Replace the plastic Klik-lock rivets (bottom of bumper) with four 1/4"-20 x 3/4" bolts, 1/4" flat and lock washers and 1/4" hex nuts.* Connect all lamp harnesses and test for proper working condition (if applicable).
11. 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 |
|----------|--------------|----------|--|
| N/A | 32207 | 1 | Assembly, Undercarriage: Nos: 1-16 |
| 1 | 32086 | 1 | Push Beam Weldment |
| 2 | 61128 | 1 | Decal, Push Beam, 1-1/2" x 9" |
| 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 | 32208 | 1 | Plate, Hanger, Driver's Side |
| 7 | 32209 | 1 | Plate, Hanger, Passenger's Side |
| 8 | 32210 | 2 | Nut Plate Weldment, Triple Top Lock, 1/2"-13 Grade C, Z |
| 9 | 61026 | 22 | Washer, SAE Mil-Carb, High-Strength, 1/2", 1-1/16" O.D., 17/32" I.D., YZ |
| 10 | 61057 | 8 | Screw, Hex Head Cap, 1/2"-13 x 1-1/4" Grade 8, YZ |
| 11 | 61020 | 8 | Nut, Top Lock, 1/2"-13 Grade 8, YZ |
| 12 | 61055 | 6 | Screw, Hex Head Cap, 1/2"-13 x 1-1/2" Grade 8, YZ |
| 13 | 61037 | 4 | Screw, Hex Head Cap, 1/4"-20 x 3/4" Grade 8, YZ |
| 14 | 61039 | 4 | Washer, SAE Mil-Carb, High-Strength, 1/4", 5/8" O.D., 9/32" I.D., YZ |
| 15 | 61558 | 4 | Washer, Split Lock, High Alloy, 1/4", YZ |
| 16 | 61143 | 4 | Nut, Hex, 1/4"-20 Grade 8, YZ |
| N/A | 61557 | 1 | Kit, Hardware - Undercarriage P/N 32207: Nos. 8-16 |

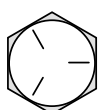
Note: The reference numbers listed identify parts shown in the illustration above. These numbers are specific to this illustration only. Always review the part number given for proper component identification. Blizzard Corporation reserves the right, under its Continuous Improvement Policy, to change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

HEADLIGHT ADAPTER KIT GUIDE

| VEHICLE APPLICATION | HEADLIGHT CONNECTOR(S) | HEADLIGHT DESCRIPTION | HEADLIGHT NUMBERS | HEADLIGHT ADAPTER KIT |
|---------------------|------------------------|------------------------------|-------------------|-----------------------|
| 2004 JEEP LIBERTY | HB5 | DUAL ROUND COMPOSITE HALOGEN | 9007, H9007 | 62012 |
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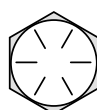
Note: Headlight adapter kits are not included with vehicle undercarriage mounts. All headlight adapter kits sold separately.

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

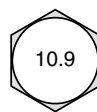
- Material: Medium carbon alloy steel: quenched and tempered
- Minimum Proof Strength: 120,000 psi
- Minimum Tensile Strength: 150,000 psi
- Core Hardness Rockwell (min.): C33, (max.): C39
- Minimum Yield Strength: 130,000 psi

| 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 | 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 | 482.5 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.