



VEHICLE UNDERCARRIAGE INSTALLATION INSTRUCTIONS

**CHEVROLET S10 ZR2 (1994-2003)
CHEVROLET BLAZER ZR2 (1995-2003)
GMC SONOMA ZR2 (1994-2003)
GMC JIMMY ZR2 (1995-2003)**

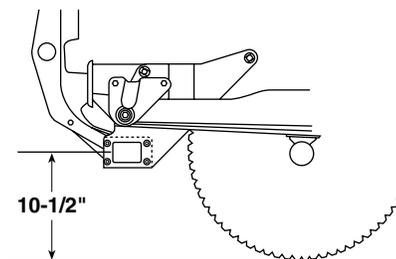
**UNDERCARRIAGE PART NO.
30141
HARDWARE KIT PART NO.
61461**

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.

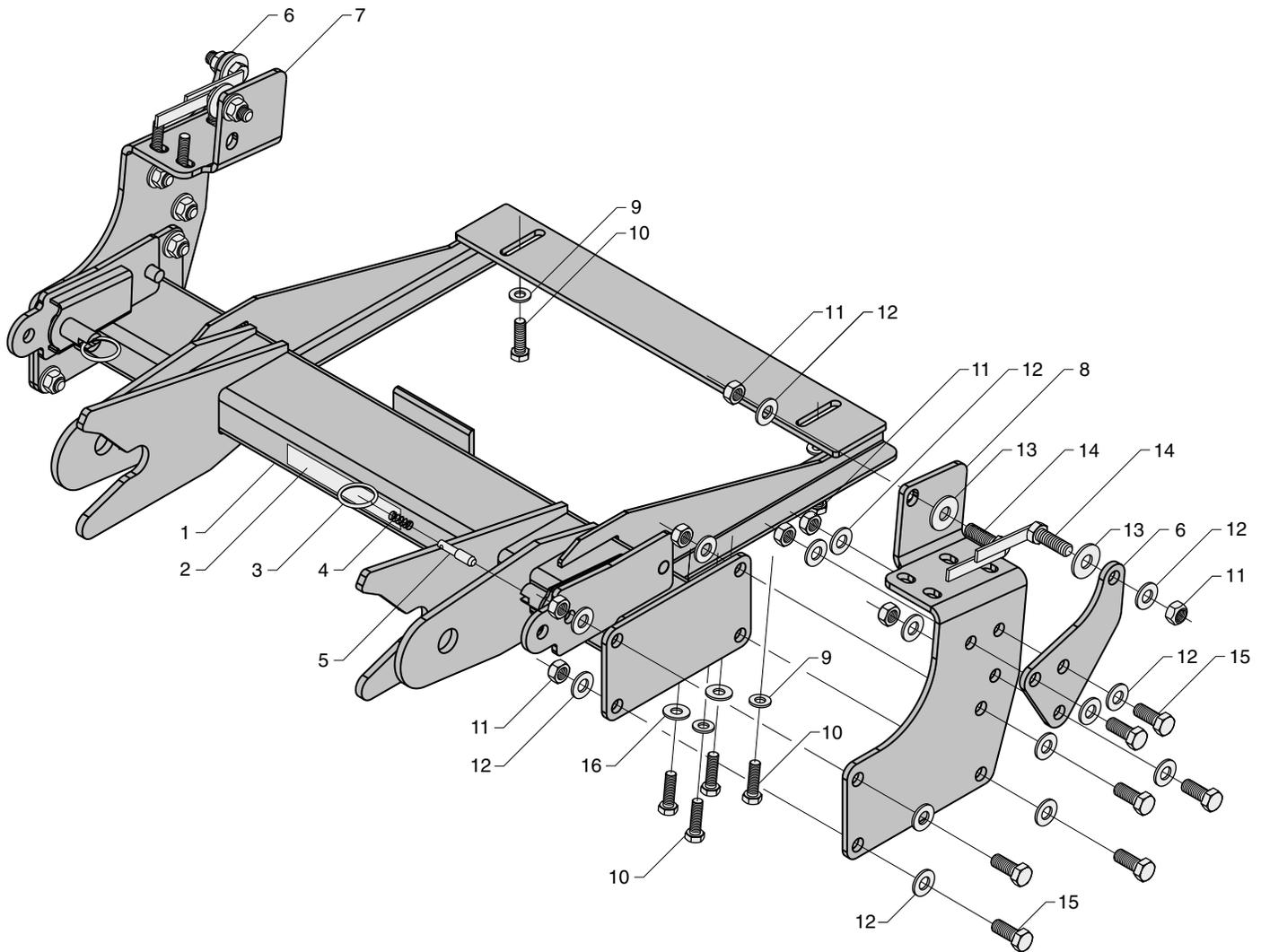


CAUTION: If your vehicle is equipped with oversize tires, they may come into contact with the undercarriage hanger plates when turning the vehicle.

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 PLASTIC BUMPER FASCIA mounted to the bottom of the bumper. *Note: The bumper fascia may need to be permanently notched to accommodate the undercarriage assembly.* Also, if the vehicle is equipped with fog lamps, disconnect the each lamp electrical harness before removing the bumper fascia.
2. Remove the AIR DAM and both TOW HOOKS from the vehicle. Discard all original fasteners.
3. Position each HANGER PLATE under the truck frame rails. The holes in the plate should align with the tow hook/air dam mount holes in the frame. Secure each hanger plate in position with one 1/2"-13 x 1-1/2" bolt with welded tab and 1/2" USS washer. Position the bolt and washer through the inside wall of the truck frame rail and hanger plate. Secure it with one 1/2" USS washer (inside) and one 1/2" SAE washer and top lock nut on the outside of the frame. Finger tighten the fasteners until all undercarriage parts are in place.
4. Next, position the HANGER SUPPORT PLATES at the outside of each truck frame rail. Secure the support plate to the frame with one 1/2"-13 x 1-1/2" bolt with welded tab. Locate the bolt, and 1/2" USS washer, through the interior of the truck frame rail and top hole in the support plate. Secure the bolt with one 1/2" SAE washer and top lock nut on the outside of the frame.
5. Reposition the air dam and tow hooks. Secure the air dam to each hanger plate using two M10-1.5 x 35 bolts with 3/8" USS washers. The bolts will secure to welded nuts at the interior of the truck frame rail. Secure the tow hooks to each truck frame rail using two M10-1.5 x 35 bolts with 3/8" SAE washers. The bolts will locate through the hanger plate and thread into the tow hooks.
6. Align the holes in the support plate with the holes in the hanger plates. Secure the plates together with three 1/2"-13 x 1-1/4" bolts, six 1/2" SAE washers and three 1/2" top lock nuts.
7. Next, proceed to position the PUSH BEAM between the two hanger plates and locate the rear crossmember support in the middle of the truck frame crossmember. *Note: Use a hydraulic floor jack to help facilitate the installation procedure.*
8. Position the air dam against the crossmember and align the holes in the push beam crossmember support with the holes in the frame. Secure the support to the crossmember with two M10-1.5 x 35 bolts and 3/8" SAE washers. The bolts will thread into the welded nuts at the interior of the crossmember.
9. Mount the push beam to the hanger plates using eight 1/2"-13 x 1-1/4" bolts. Secure each bolt with two 1/2" SAE washers and one 1/2" top lock nut.
10. 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. *Note: The hardware kit provided with this undercarriage contains fasteners not used in the assembly. The following hardware is not used: (2) 1/2"-13 x 1-1/2" bolts.*
11. Replace the plastic bumper fascia using the existing hardware and connect the fog lamp electrical harnesses (if applicable).
12. 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	30141	1	Assembly, Undercarriage: Nos. 1-16
1	30136	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	30142	2	Plate, Hanger Support, Passenger's & Driver's Side
7	30138	1	Plate, Hanger, Passenger's Side
8	30139	1	Plate, Hanger, Driver's Side
9	61016	6	Washer, SAE Mil-Carb, High-Strength, 3/8", 13/16" O.D., 13/32" I.D., YZ
10	61451	10	Screw, Hex Head Cap, M10-1.5 x 35 Grade 8.8, Z
11	61020	18	Nut, Top Lock, 1/2"-13 Grade C, Z
12	61026	32	Washer, SAE Mil-Carb High-Strength, 1/2", 1-1/16" O.D., 17/32" I.D., YZ
13	61027	4	Washer, USS Mil-Carb High-Strength, 1/2"-13, 1-3/8" O.D., 9/16" I.D., YZ
14	61151	4	Screw, Hex Head Cap, 1/2"-13 x 1-1/2" Grade 8, YZ with Welded Tab
15	61057	14	Screw, Hex Head Cap, 1/2"-13 x 1-1/4" Grade 8, YZ
16	61452	4	Washer, USS Thru-Hard High-Strength, 3/8", 1" O.D., 7/16" I.D., YZ
N/A	61461	1	Kit, Hardware - Undercarriage P/N 30141: Nos. 9-16

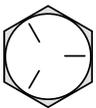
Note: The reference numbers listed identify parts shown in the illustration above. These numbers are specific to this illustration only. Always review the part number given for proper component identification. Blizzard Corporation reserves the right, under its Continuous Improvement Policy, to change 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
1998-2003 CHEVROLET S10 PICKUP 1998-2003 CHEVROLET BLAZER 1998-2003 GMC JIMMY 1998-2003 GMC SONOMA	HB3/HB4	QUAD COMPOSITE HALOGEN BULB	H9005, H9006	62013 OR 62014 OR 62054
1983-1997 CHEVROLET S10 PICKUP 1983-1997 CHEVROLET S10/BLAZER 1983-1997 GMC S15/JIMMY 1983-1997 GMC S15 PICKUP/SONOMA	2B/2D HB3/HB4 2E	DUAL RECTANGULAR LAMP QUAD COMPOSITE HALOGEN BULB DUAL RECT. (SMALL) HALOGEN LAMPS	HP6054, H6054 H9005, H9006 HP6545, H6545	62010 62013 62053

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

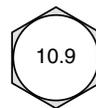
- Material: Medium carbon alloy steel: quenched and tempered
- Minimum Proof Strength: 120,000 psi
- Minimum Tensile Strength: 150,000 psi
- Core Hardness Rockwell (min.): C33, (max.): C39
- Minimum Yield Strength: 130,000 psi

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	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.