



PRODUCT: JL Wrangler Rear Long Arm Frame Brackets

REV: A | 07-20-2023 | II-7299

READ INSTRUCTIONS IN FULL BEFORE INSTALLATION.
QUESTIONS? CALL 916-631-8071 M-F 7:00 AM – 5:00 PM PST

The MetalCloak experience includes the ease of installation of our products. We design for most contingencies, but installation may be different based on different Jeep condition, configuration and/or year.

We are continually trying to improve our products and instructions – please help us by providing feedback and pictures if you find any part of the instructions that do not match your particular Jeep or are not easily understandable.

If you have any difficulties at all, please give us a call. Thank you and enjoy your MetalCloak Products!

IMPORTANT NOTE: We use Stainless Steel Hardware where possible. Therefore, a tube of Silver Anti-seize is provided and should be used on all bolts—only a small amount is needed.

WARRANTY INFORMATION: This article is sold without warranty expressed or implied. No warranty or representation is made as to this products ability to protect the user from injury or death. The user assumes that risk. The effectiveness, warranty and longevity of this equipment are directly related to the manner in which it is INSTALLED, USED and/or MAINTAINED. THE USER ASSUMES ALL RISK. By purchasing this product and opening the packaging, purchasers expressly acknowledge, understand and agree that they take, select and purchase these MetalCloak products from Armored Works, LLC, its affiliates and distributors and agents as is and with all faults. The entire risk as to the quality and performance of these MetalCloak products is with the purchaser. Working on your vehicle can be a dangerous activity. If you are unsure of what you are doing, please leave mechanical or safety critical work to a skilled mechanic. We take no responsibility for the incorrect use and/or installation of MetalCloak products.

Section 1: Tools & Notes on Installation

Tools Required: This list is the recommended tools for ease of installation. Other versions of the same tool can be used. For example, Allen Wrenches instead of Allen Drive Sockets.



Socket & Ratchet Wrench

7MM Socket 18MM Socket
21MM Socket 9/16" Socket
3/4" Socket 15/16" Socket



Drill
Drill Bits (1/8" up to 1/2")

21MM Wrench



Center Punch

Tape Measure



Cut-Off Disc and Grinder

5/16" Allen Wrench



HOW TO USE THIS GUIDE: The installation guide contains ALL steps for installation. Please read and follow the instructions in order of each page top to bottom, and left to right.

Jeep Model: Instructions may apply to multiple Jeep models, but are labeled separately where appropriate (i.e. TJ vs. LJ).

Options: Because of the number of component options we offer, these instructions may contain steps that will not match your particular configuration. You can skip these steps.

Images: Pictures are provided and parts are labeled throughout the instructions. Each text box contains guidance based on the pictures next to it. The text will refer to alphabetical labels (A, B, etc.) found in the images.

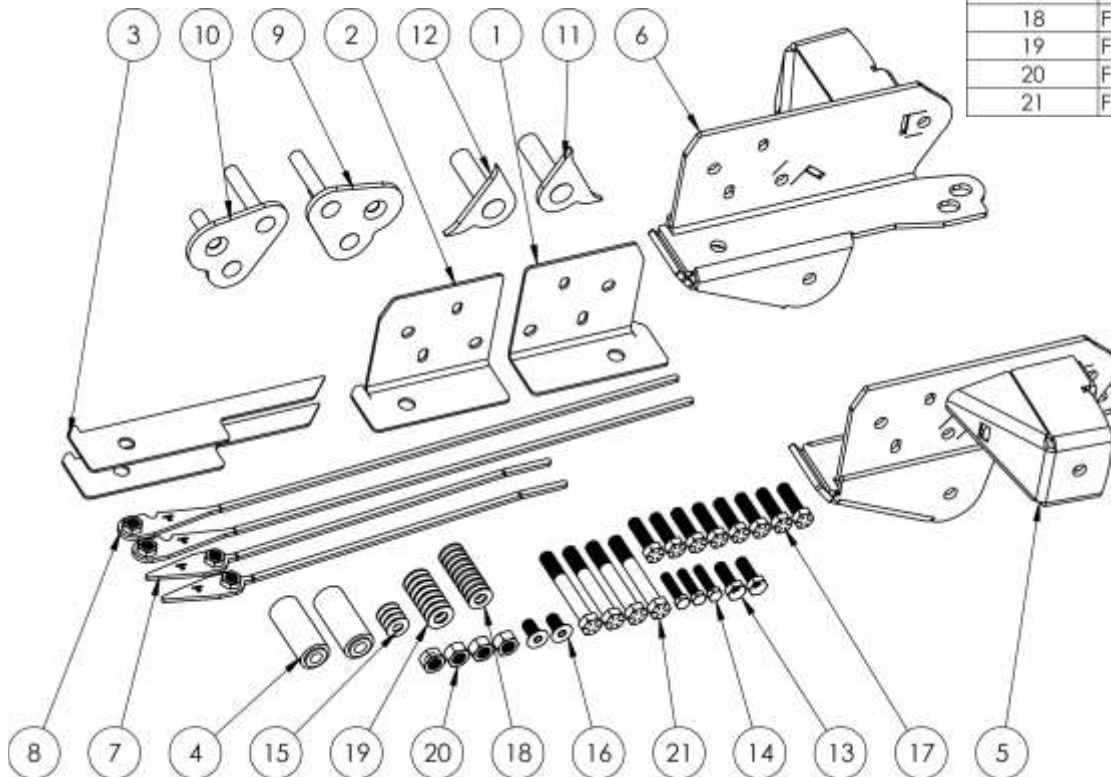
Installation Notes: Terms may be used in the body of the instructions that you may not be familiar with, if you have any questions feel free to contact us at the number below, or email techhelp@metalcloak.com

QUESTIONS: Any questions or comments about the instructions? Call us at 916-631-8071 M-F 7:00 AM – 5:00 PM PST.

Section 2: Product Components



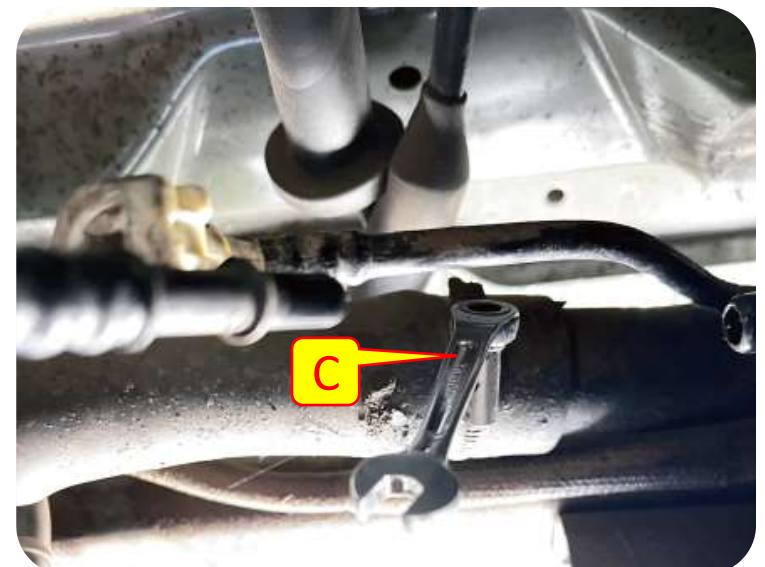
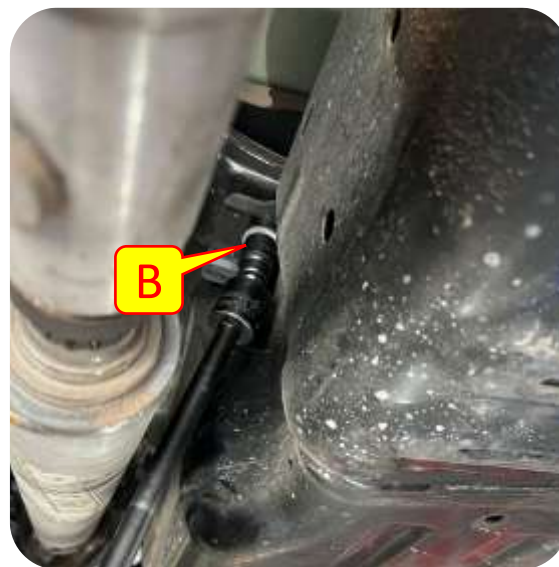
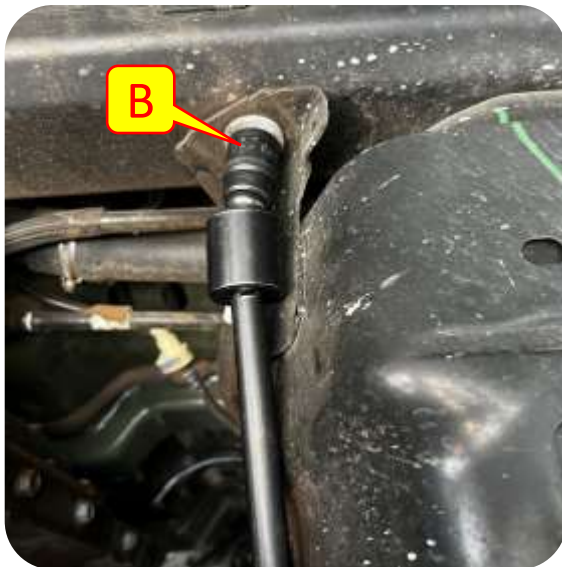
ITEM NO.	PART NUMBER	QTY.
1	SS-0289 SIDE SHIM PLATE, 4-LINK MOUNT, REAR JK-JL	1
2	SS-0289-P SIDE SHIM PLATE, 4-LINK MOUNT, REAR JK-JL	1
3	SS-0290 BOTTOM SHIM PLATE, 4-LINK MOUNT, REAR JK-JL	2
4	SS-0312 THREADED FRAME INSERT, 4-LINK MOUNT, REAR JL	2
5	WM-5890 WELDMENT, 4-LINK MOUNT, REAR JK-JL	1
6	WM-5890-P WELDMENT, 4-LINK MOUNT, REAR JK-JL	1
7	WM-5950 WELDMENT, SIDE STICK NUT, 4-LINK MOUNT JL	2
8	WM-5951 WELDMENT, BOTTOM STICK NUT, 4-LINK MOUNT JL	2
9	WM-5956 WELDMENT, LARGE FRAME PLATE, 4-LINK MOUNT REAR JL	1
10	WM-5956-P WELDMENT, LARGE FRAME PLATE, 4-LINK MOUNT REAR JL	1
11	WM-5957 WELDMENT, SMALL FRAME PLATE, 4-LINK MOUNT, REAR JL	1
12	WM-5957-P WELDMENT, SMALL FRAME PLATE, 4-LINK MOUNT, REAR JL	1
HK-7299		
13	FM-12350 HHCS, M12-1.5 X 35L STL C10.9 GOLD ZINC	2
14	FS-06015 HHCS, 0.38-16 x 1.5L STL G8 ZINC, FULL THREAD	4
15	FS-06142 WASHER, 0.41ID X 1.0OD X 0.09TH STL ZINC	4
16	FS-08083 SFHCS, 0.5-13 X 1.00L STL G8 ZINC	2
17	FS-08173 HHCS, 0.5-13 x 1.75L STL G8 ZINC FULL THREAD	8
18	FS-08307 WASHER, 0.53ID X 1.06OD X 0.20TH STL GR8 GOLD ZINC	10
19	FS-09119 WASHER, 0.59ID X 1.16OD X 0.10TH STL GOLD ZINC	8
20	FS-09305 TOPLOCK NUT, 0.56-18 X .48H STL GC STL ZINC	4
21	FS-09313 HHCS, 0.56-18 X 4.0L STL GOLD ZINC	4



Section 3: Installation Instructions

Step 1: Remove Gas Tank

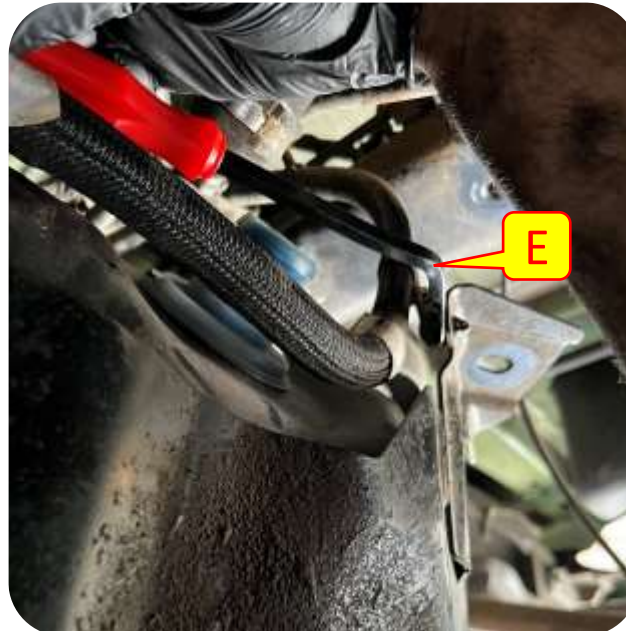
- A. Place a jack or something similar under the gas tank to support it.
- B. Remove all the bolts holding the gas tank in place with a 18mm socket.
- C. Remove the gas fill neck by loosening the hose clamp using a 7mm socket or wench.



Section 3: Installation Instructions

Step 1: Remove Gas Tank

- D. Remove filler breather by removing the plastic retaining clip before pressing on the line fitting. ****be careful not to break as they are not very strong****
- E. Remove any plastic "Christmas trees" that may be connecting the fuel line to the gas tank.
- F. Remove the fuel lines in front of the gas tank by removing plastic retaining clip before pressing down on the line fitting. ****Be careful as these lines may be under pressure and release fuel. We recommend using a container to catch any released fuel to prevent mess.****



Section 3: Installation Instructions

Step 1: Remove Gas Tank

- G. Remove evap canister hoses by pressing on the line fittings.
- H. Remove the gas tank.

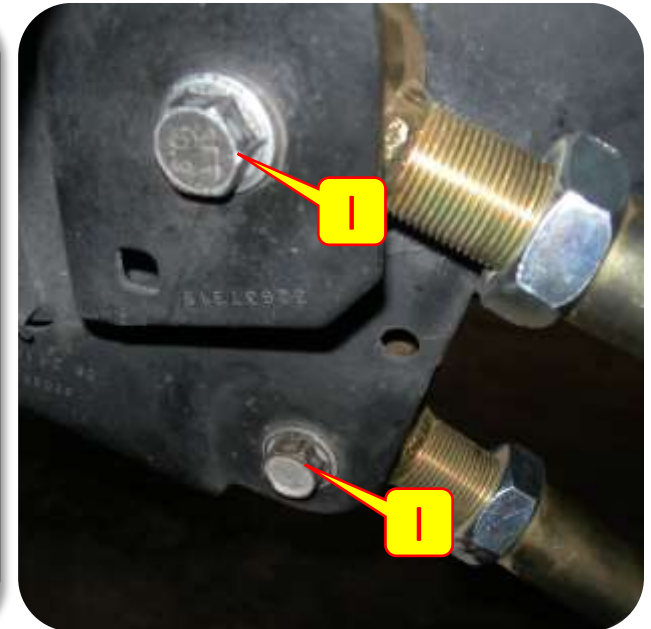
Important Note: Move the gas tank at least 25 ft away and make sure the room is well vented as we will be drilling and grinding.



Section 3: Installation Instructions

Step 2: Rear Control Arm Bolt On Bracket Installation

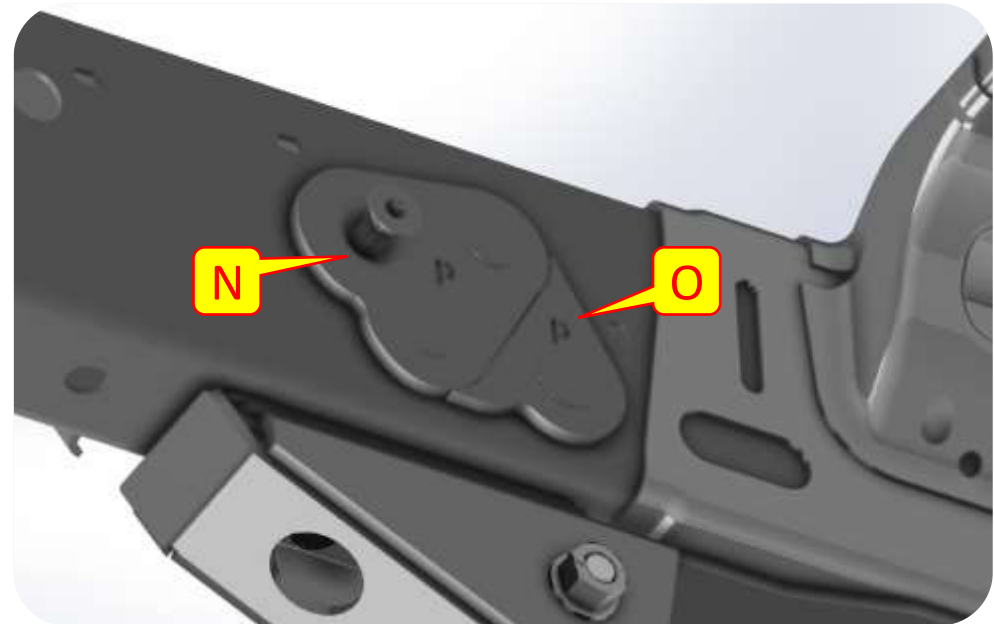
- I. Support the rear axle with jack stands and remove the rear control arms using a 21mm socket and wrench.
- J. Using a cut off wheel/grinder or torch; remove the existing rear control arm brackets from the frame, clean the frame and paint the left-over exposed metal.
- K. Make sure to grind down the factory weld spatter on each side of the frame so it is flush and paint the exposed metal to prevent rust



Section 3: Installation Instructions

Step 2: Rear Control Arm Bolt On Bracket Installation

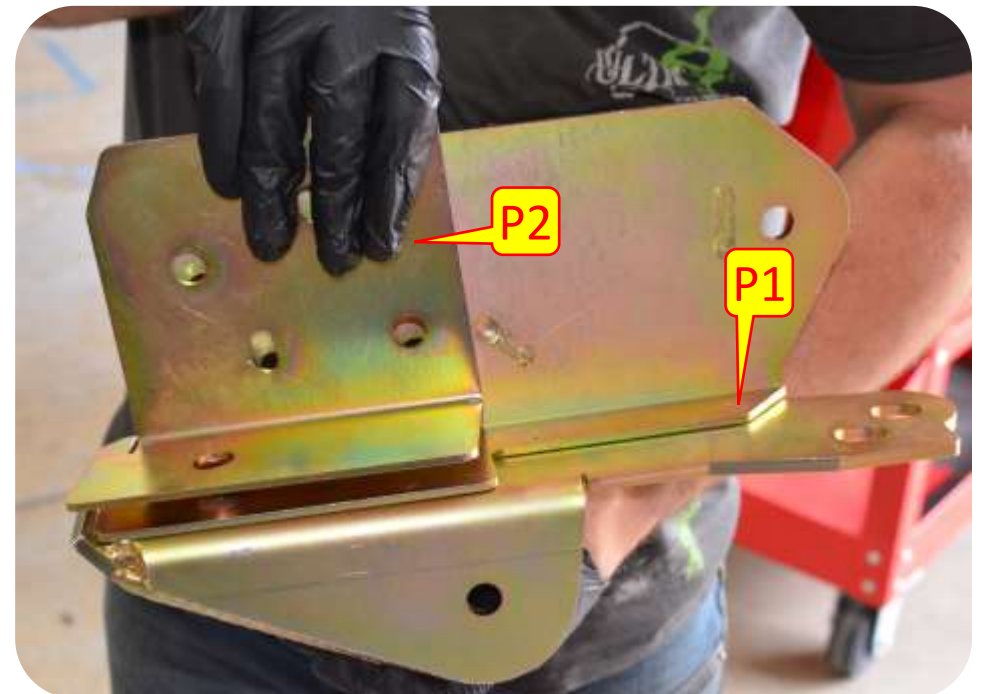
- L. Thread in the tapered flat head bolt into the threaded frame insert as shown, this will help prevent losing it inside the frame by accident.
- M. Insert the spacer through the outer part of the frame as shown.
- N. Once the space is lined up, remove the hardware and place the large frame plate onto the frame, then reinstall the 5/16 allen flat head bolt.
- O. Install the small frame plate.



Section 3: Installation Instructions

Step 2: Rear Control Arm Bolt On Bracket Installation

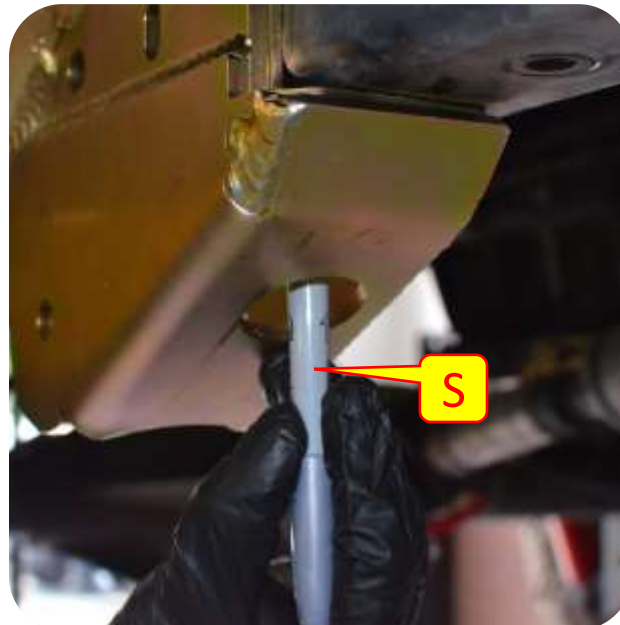
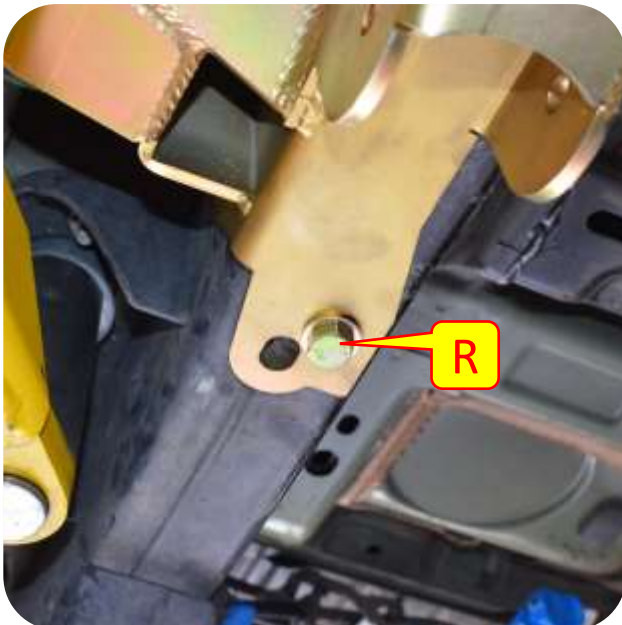
P. Place the control arm bracket shims into the inside of the rear control arm bracket.



Section 3: Installation Instructions

Step 2: Rear Control Arm Bolt On Bracket Installation

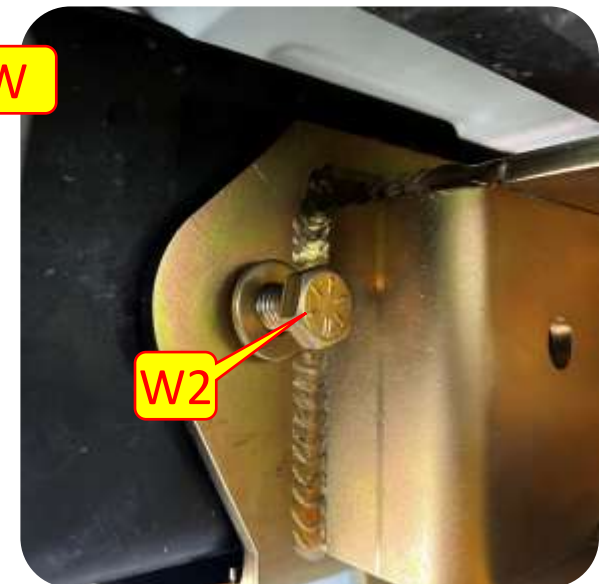
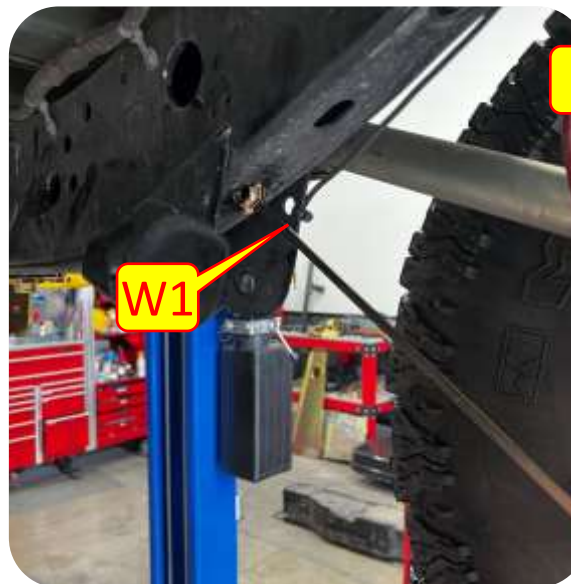
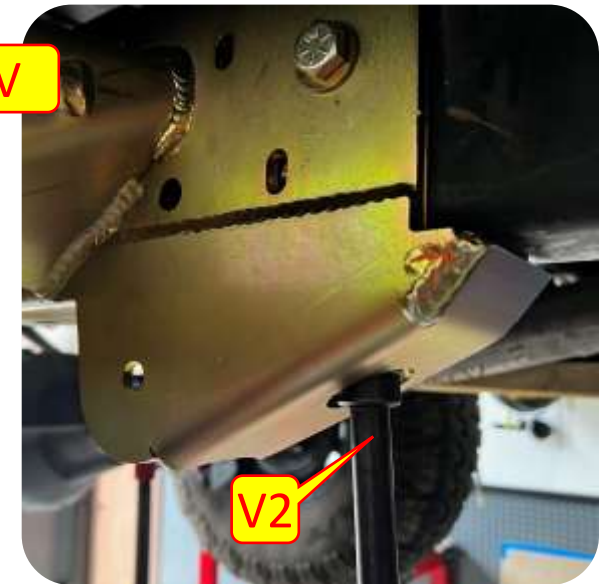
- Q. Place the long arm bracket onto the frame and install the provided 1/2 bolts (3/4" heads). We recommend using a floor jack or clamp to hold the bracket tight to the frame.
- R. Install provided 12mm bolts (18mm bolt head) hardware into the bottom of the bracket.
- S. Mark the hole location at the bottom and side of the bracket for drilling.
- T. Remove the bracket drill out the marked locations starting with a smaller drill bit, work your way up to 1/2 drill bit. We recommend painting any exposed metal to prevent rust.



Section 3: Installation Instructions

Step 2: Rear Control Arm Bolt On Bracket Installation

- U. Reinstall the bracket with shims onto the frame, installing the 1/2" bolts (3/4" heads) and 3/8" in bolts with (9/16" heads) hardware.
- V. Insert the longer flag nut (*BOM#8*) through the hole located in the factory lower control arm mount and install the 1/2" bolt (3/4" head) hardware into the hole that was drilled in Step T.
- W. Insert the shorter flag nut (*BOM#7*) through the hole located in the factory lower control arm mount and install the 1/2" bolt (3/4" head) hardware into the hole located at the rear of the bracket.



Section 3: Installation Instructions



Step 3: Gas Tank Installation

Important Note: If you're installing the rear long arm kit with our UnderCloak system. Check to see if the UnderCloak system will mount without modification. If the UnderCloak does not fit the gas tank skid plate will need to be modified, you will need to notch out the gas tank skid plate and reinstall the skid plate (See Last Page for Instructions).

Important Note 2: Cut off the gas tank mount as shown. Make sure there is plenty of ventilation before cutting the mount off.



Section 3: Installation Instructions

Step 3: Gas Tank Installation

- X. Reinstall the gas tank.
- Y. Reinstall the fuel lines in front of the gas tank.
- Z. Reinstall any plastic "Christmas trees" that connected the fuel line to the gas tank.
- AA. Reconnect filler breather.



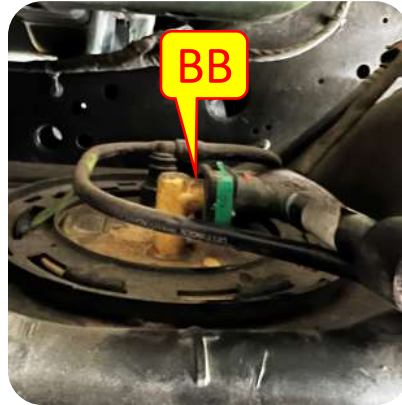
Section 3: Installation Instructions

Step 3: Gas Tank Installation

BB. Reinstall evap canister hoses.

CC. Reconnect the gas fill neck using a 7mm socket or wench.

DD. Reinstall all the gas tank bolts with a 18mm socket.



Section 3: Installation Instructions



Step 4: Modifying the UnderCloak Gas Tank Skid

The Following Step is ONLY if you have the MetalCloak UnderCloak System that needs to be modified.

To modify your UnderCloak Gas Tank Skid Plate measure 1.5" up from the bend line to the cut out for factory arms. from this point measure forward 19" in parallels to the bend line (dash line) and then up to the edge of the skid at a 135 deg angle. measure forward 14.25" and draw a circle approximately 1.5" diameter this is to clear the hardware on the long arm mount. Using a cutoff wheel cut along the line (green line). These Measurements are starting points you may need to modify your skid slightly to fit properly.

