



PRODUCT: JL Wrangler 4xE UnderCloak Skid System

REV: A | 03-22-2022 | II-6388

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

13MM Socket 16MM Socket
18MM Socket 3/4" Socket
9/16" Socket



3/4" Wrench

8MM Allen Wrench
5/16" Allen Wrench



11/16" Drill Bit

Drill



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



DC-0001 REV A

SHEET 1 OF 2

	1	2	3	4	5	6	7	8
	ITEM	PART NUMBER/DESCRIPTION			QTY.			
	1	8998 INSTALLATION TOOL, 0.50-13 RIVET NUT			1			
	2	CP-3084 BEVELLED SKID WASHER			9			
E	3	CP-6084 REAR GUSSET STRAP, GAS TANK SKID, JL			1			
	4	CP-6085 BEVELLED SKID WASHER, 90DEG			7			
	5	CP-6094 MID GUSSET STRAP, GAS TANK SKID, JLU			1			
	6	CP-6209 GUSSET STRAP, 2.0L MOTOR SKID, JL PASS			1			
	7	CP-6257 REAR GUSSET STRAP, BATTERY SKID, 4XE, JLU			1			
	8	CP-6258 INSIDE HANGER, BATTERY SKID, 4XE, JLU			1			
	9	CP-6259 GUSSET STRAP, 2.0L MOTOR SKID, 4xE, JL DRIVE			1			
D	10	FM-12188 SFHCS, M12-1.5 X 45L STL C10.9 CLEAR ZINC			7			
	11	FS-06015 HHCS, 0.38-16 x 1.5L STL G8 ZINC, FULL THREAD			1			
	12	FS-06031 HHCS, 0.38-16 X 1.0L STL G5 ZINC			4			
	13	FS-06181 SFHCS, 0.38-16 X 1.00L SS 18-8 PLAIN			1			
	14	FS-06210 NYLOCK FLANGE NUT, 0.38-16 X 0.41H STL GF ZINC			5			
	15	FS-08023 WASHER, 0.53ID X 1.06OD X 0.10TH STL ZINC			3			
	16	FS-08038 SERRATED FLANGE LOCK NUT, 0.5-13 X 0.45H STL GF ZINC			3			
	17	FS-08061 HHCS, 0.5-13 X 1.25L STL G8 ZINC			3			
C	18	FS-08081 SFHCS, 0.5-13 X 1.75L STL G8 ZINC			9			
	19	FS-08082 RIVET NUT, 0.5-13 X 0.20GRIP STL G5 GOLD ZINC			1			
	20	WM-6093 WELDMENT, 2.0L MOTOR SKID PLATE, 4XE, JLU			1			
	21	WM-6094 WELDMENT, TRANSFER CASE SKID, 4XE, JLU			1			
	22	WM-6095 WELDMENT, GAS TANK SKID, 4XE, JLU			1			
	23	WM-6096 WELDMENT, JOINT PLATE, GAS TANK SKID, 4XE, JLU			1			
	24	WM-6097 WELDMENT, JOINT PLATE, BATTERY SKID, 4XE, JLU			1			
	25	WM-6098 WELDMENT, 2.0L FLAG NUT, JL			1			
B	26	WM-6101 WELDMENT, BATTERY SKID, 4XE, JLU			1			
	27	WM-6102 WELDMENT, MOUNTING RAIL, REAR, 4XE, JLU			1			
	28	WM-6103 WELDMENT, MOUNTING RAIL, MIDDLE, 4XE, JLU			1			
	29	WM-6104 WELDMENT, MOUNTING RAIL, FRONT, 4XE, JLU			1			

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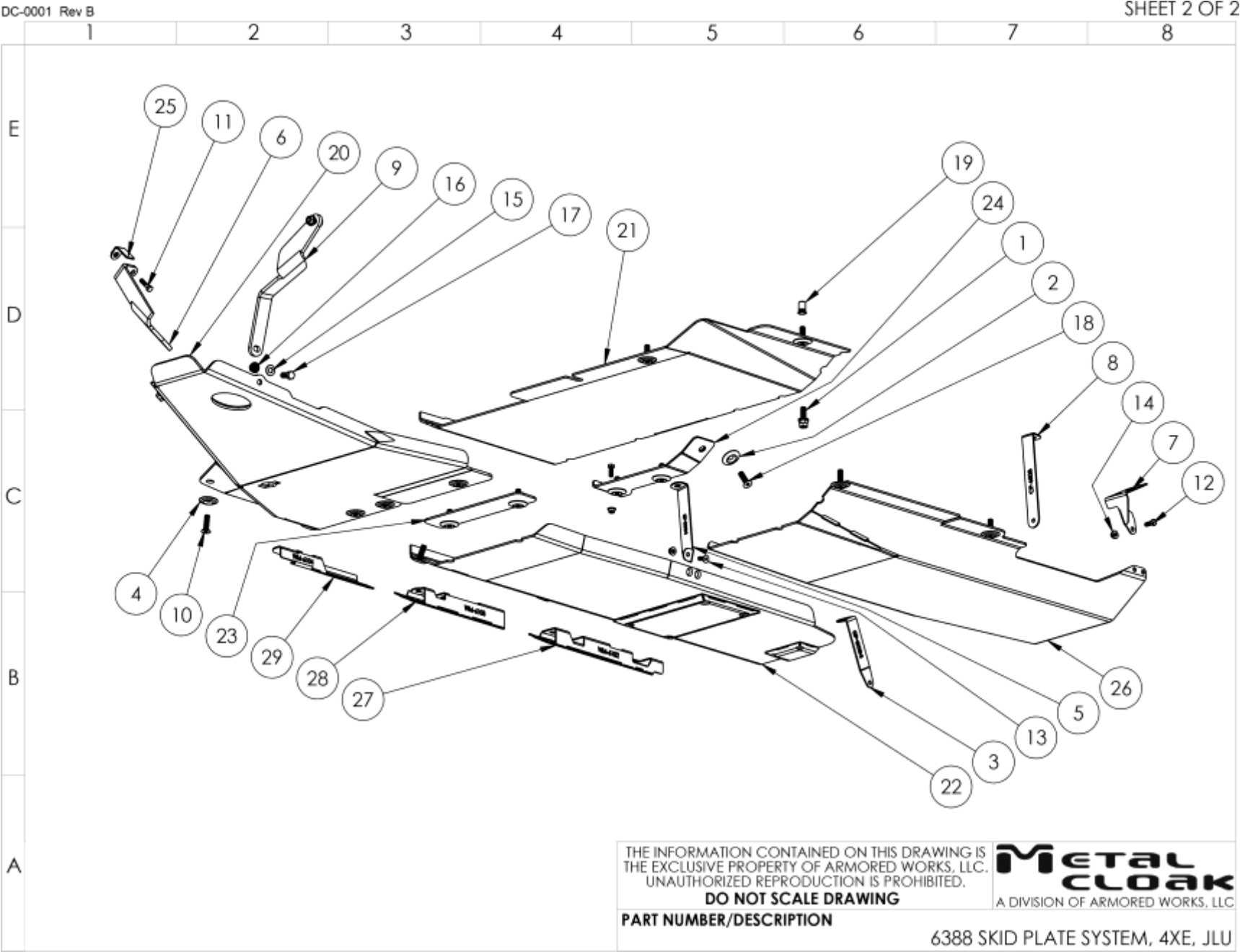
DO NOT SCALE DRAWING

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PART NUMBER/DESCRIPTION

6388 SKID PLATE SYSTEM, 4XE, JLU

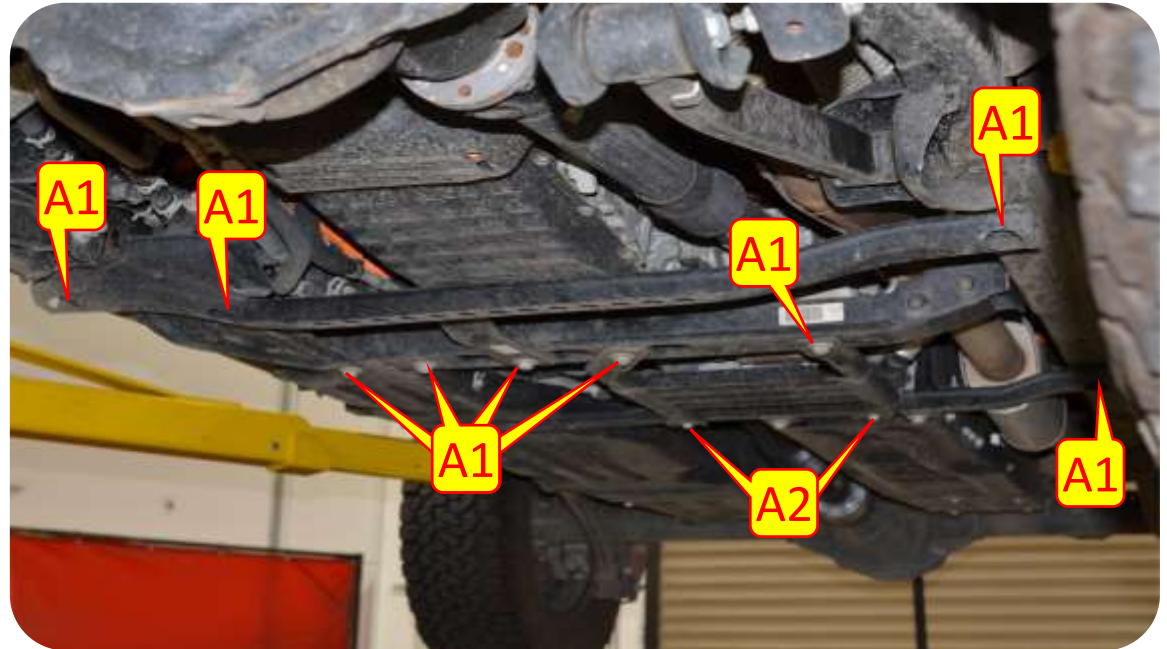
Section 2: Product Components



Section 3: Installation Instructions

Step 1: Preparation for Installation

- A. Using an 18mm (A1) & 13mm (A2) socket, remove the bolts from the stock transmission and transfer case skids. **Save Hardware.**
- B. On the passenger side of the vehicle (*just behind the frame side front control arm mount*) remove the factory cooling pump skid plate using a 18mm socket.
- C. Using a socket remove the factory skid/battery cable support in front of the battery bank (located rearward of the front output on the transfer case).



Section 3: Installation Instructions

Step 2: Gas Tank Rail & Motor Mount Installation

- D. Remove the threaded U-nut using a flat head screwdriver. There is one on the passenger and driver side.
- E. Remove the factory gas tank skid bolts in the bottom of the frame using an 18mm socket. **Save Hardware.**
- F. Loosely install the front rail (*BOM #29*) using the threaded frame hole just in front of the crossmember.
- G. Once the front rail is in place, the middle rail will key into the front rail and line up with another factory gas tank skid bolt hole and loosely reinstall the bolt in this location to mount the middle rail using the factory hardware.

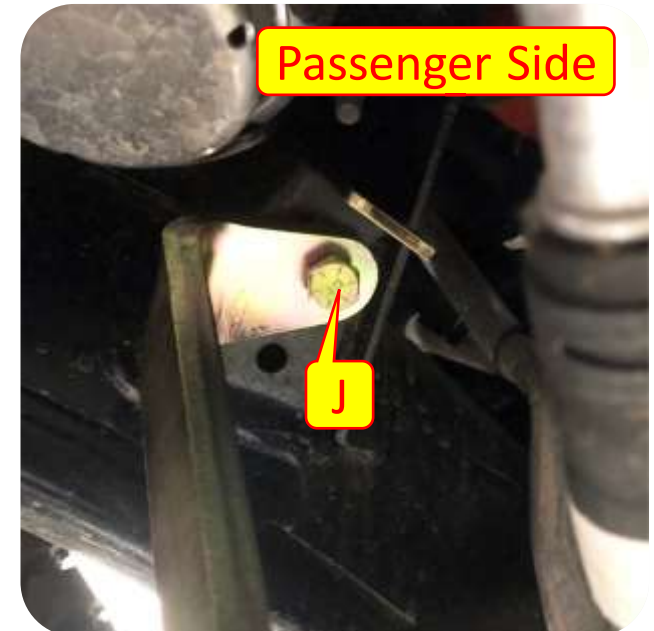


Section 3: Installation Instructions



Step 2: Gas Tank Rail & Motor Mount Installation

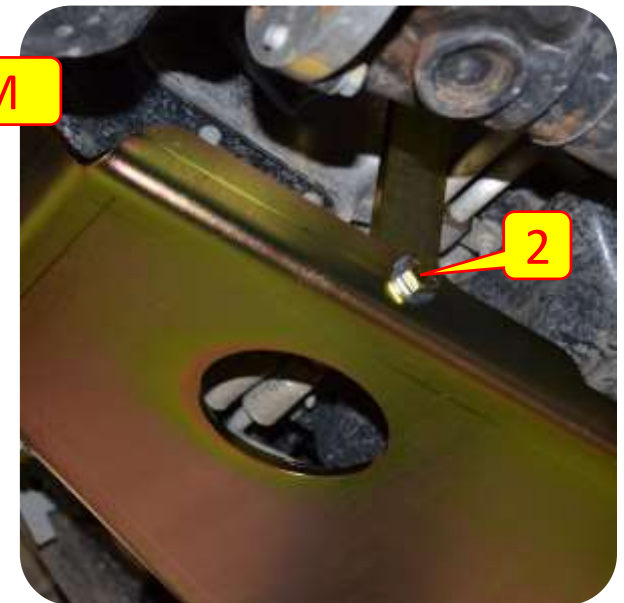
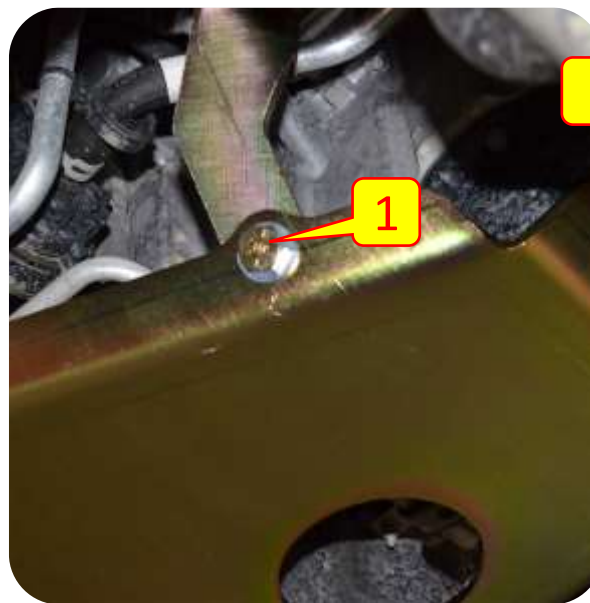
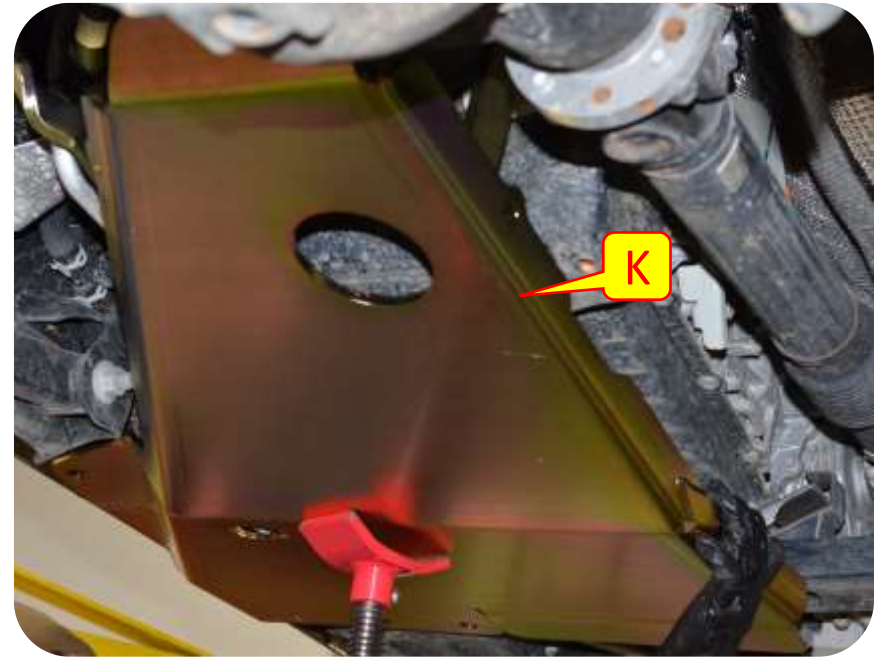
- H. Next key the rear mount rail (*BOM #27*) into the middle rail. The rear rail has two holes that will match two factory gas tank skid bolt holes. Install factory hardware back into these locations.
- I. Once all rails have been keyed together and loosely bolted in place, tighten the hardware in all the mounting rail pieces, starting at the front rail and working towards the rear with a 18mm socket.
- J. Loosely install motor skid gusset straps with the provided hardware. Use the 3/4 hex head nut and bolt for the driver side and 9/16 bolt and flag nut for the passenger side (*BOM 6 and 9*).



Section 3: Installation Instructions

Step 3: Motor Mount Skid Installation

- K. Put motor skid in place and loosely install all hardware using a 3/4 wrench and socket.
- L. Reuse factory 18mm bolt to mount cooling pump bracket to motor skid.
- M. Using a 3/4 wrench and socket install the motor skid gusset straps to the motor skid plate making sure the gusset straps are on the inside of the skid plate.

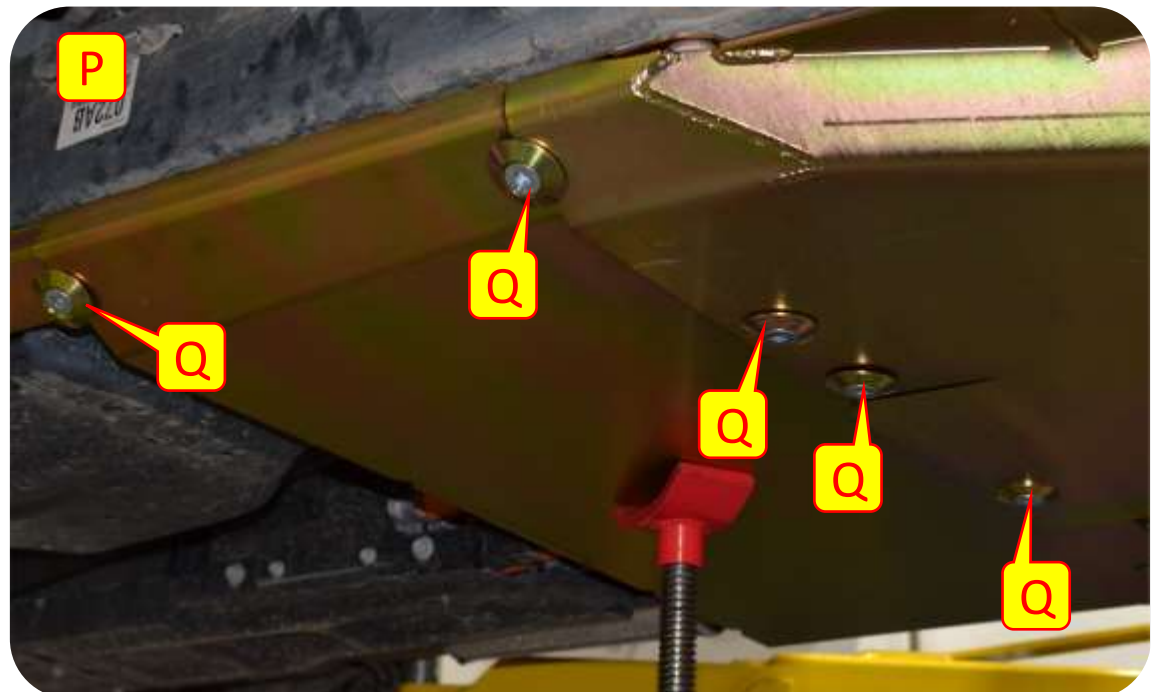


Section 3: Installation Instructions



Step 4: Transmission Skid Installation

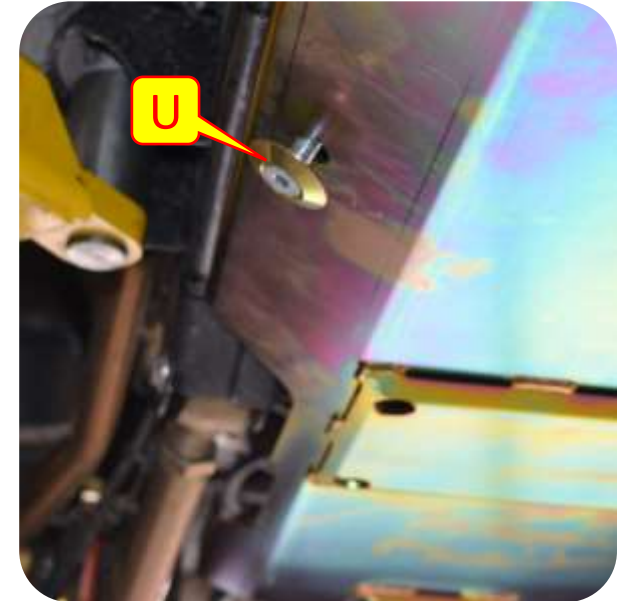
- N. Drill out the first unthread hexagon shaped hole that is located behind the crossmember on the bottom of the driver side frame rail. use an 11/16 drill bit. MetalCloak recommends painting any exposed metal to prevent rust.
- O. Install the rivet nut into hole using the supplied rivet nut installation tool and a 3/4 wrench and socket.
- P. Install the transfer case skid between the motor skid and crossmember by sliding the open slot in front of the skid on to the motor skid bolt that sits closest to the drive shaft.
- Q. Install remaining transfer case skid hardware. note that flathead bolt and skid washer that install into the mounting rails and rivnut are standard (*using a 5/16 allen wrench*) while the flathead bolts and skid washers going into the crossmember are metric (*using an 8mm allen wrench*).
- R. Thread in hardware loosely.



Section 3: Installation Instructions

Step 5: Gas Tank Skid Plate Installation

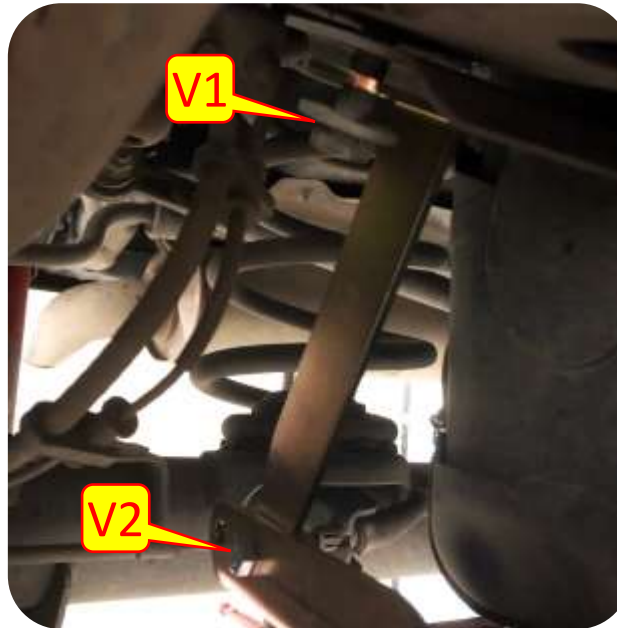
- S. Slide gas tank join plate (*BOM # 23*) on transfer case skid with the hardware offset to the rear of the vehicle.
- T. Slide the gas tank skid onto the gas tank joint plate.
- U. loosely install skid washers and flathead bolts through holes on the side of the gas tank mounting rails.



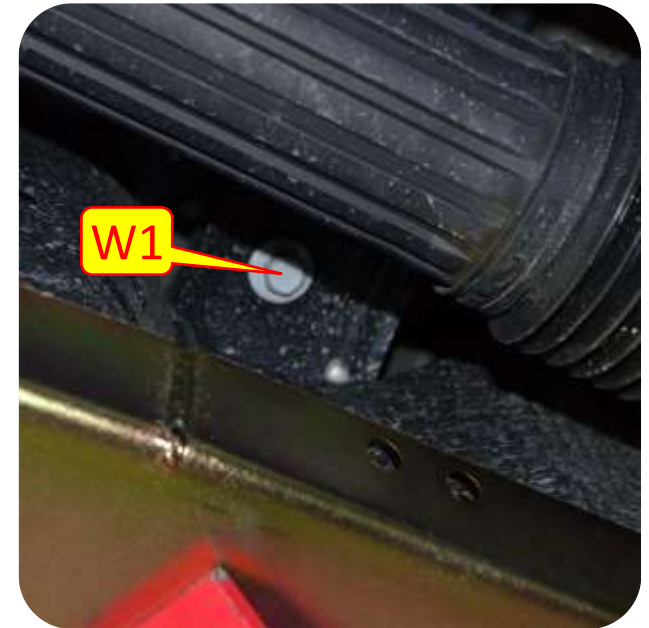
Section 3: Installation Instructions

Step 5: Gas Tank Skid Plate Installation

V. Install rear gas tank skid hanger using the factory bolt in to frame and provided hardware into the skid plate. using 18mm socket and 9/16 socket and wrench.



W. Install middle gas tank skid hanger using factory 18mm bolt at the top and use the provided 9/16 flat head bolt and nylock nut into the skid plate.

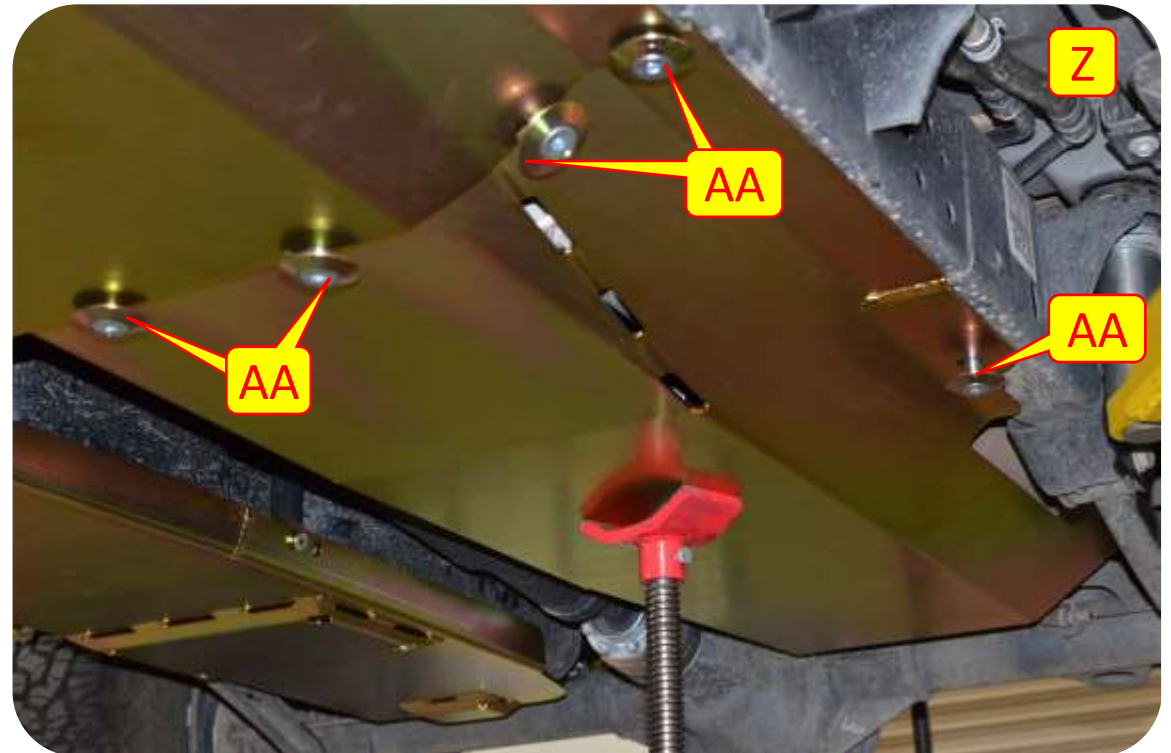


Section 3: Installation Instructions



Step 6: Battery Skid Plate Installation

- X. Slide battery tank join plate (*BOM # 24*) on transfer case skid with the hardware offset to the rear of the vehicle.
- Y. Attach the battery cable mounts to the join plate with the provided hardware using a 9/16 socket and wrench
- Z. Slide the battery skid onto the battery tank joint plate.
- AA. Loosely install skid washers and flathead bolts to the battery skid.

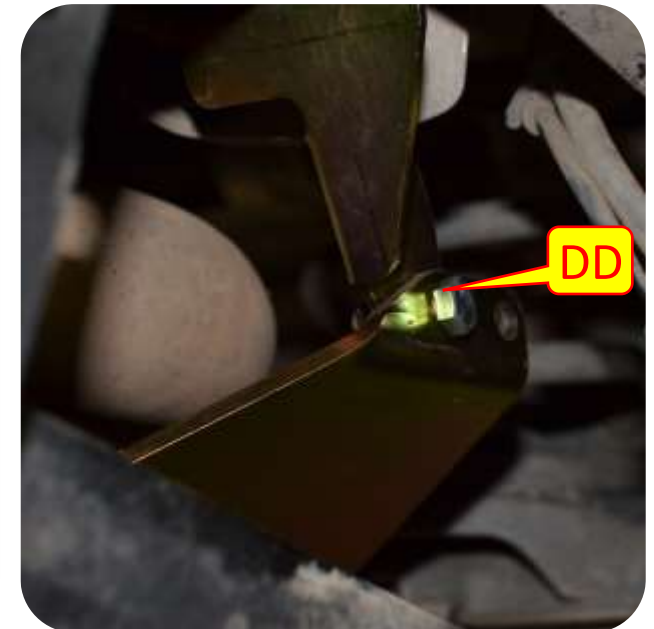
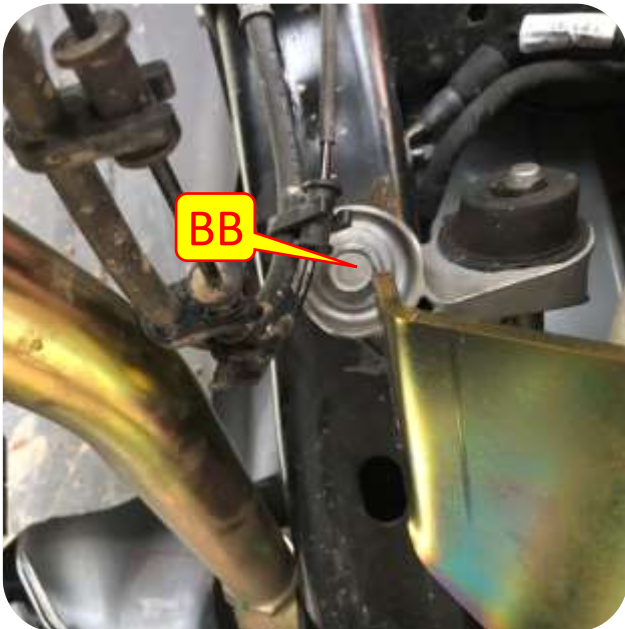


Section 3: Installation Instructions



Step 6: Battery Skid Plate Installation

- BB. Remove bolt from exhaust hanger located above the rear lower control arm on the drivers side on underside of the frame using an 18mm socket.
- CC. Slide the rear battery skid hanger between the exhaust hanger and frame and replace the factory bolt using an 18mm socket.
- DD. Install the battery skid to the exhaust hanger, placing the skid plate on the outside of the hanger. install the provided hardware and a 9/16 wrench and socket.



Section 3: Installation Instructions

Step 6: Battery Skid Plate Installation

DD. Loosely install battery skid hanger on the rear of the gas tank skid using the factory 18mm bolt.

EE. Install the rear battery skid hanger using the factory 18mm bolt.

FF. Attach the battery skid plate to the rear hanger using the provided hardware and tighten with a 9/16 socket and wrench.

GG. Tighten all UnderCloak hardware.

