



**PRODUCT: JL 4x4 Rack System, Blow Mold Bumper**

REV: B | 09-22-2023 | R74030

**READ INSTRUCTIONS IN FULL BEFORE INSTALLATION.**

**QUESTIONS? CALL 916-760-4575 M-F 7:00 AM – 5:00 PM PST**

The ARS 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 Jeep or are not easily understandable.

If you have any difficulties at all, please give us a call. Thank you and enjoy your ARS 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 way 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 ARS 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 ARS 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 ARS 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 Wrench

5mm Allen    7/32" Allen  
3/8" Allen    1/4" Allen



T40 Torx Socket

1/2", 9/16", 3/4", 7mm, 8mm,  
10mm, 16mm Sockets  
9/16", 1/2", 11/16", 16mm  
Wrenchs



13/32" Bit    17/32" Bit  
5/16 Bit    21/24" Bit



Dremel & Cut-Off Wheel

Cutters



Blue Lock Tight

Clamps



**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 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](mailto:techhelp@metalcloak.com)

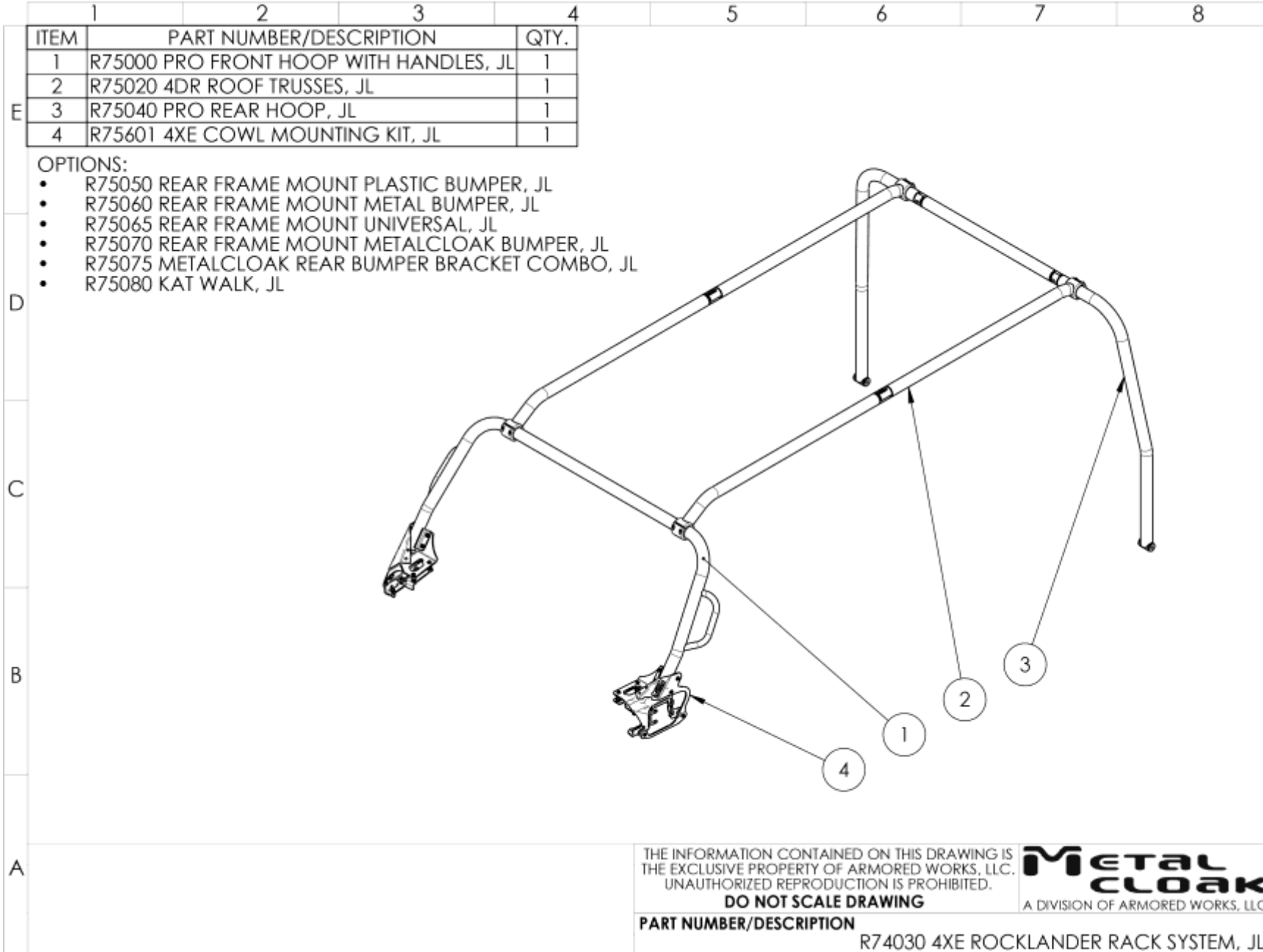
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## Section 2: Product Components



DC-0001 Rev B

SHEET 1 OF 1

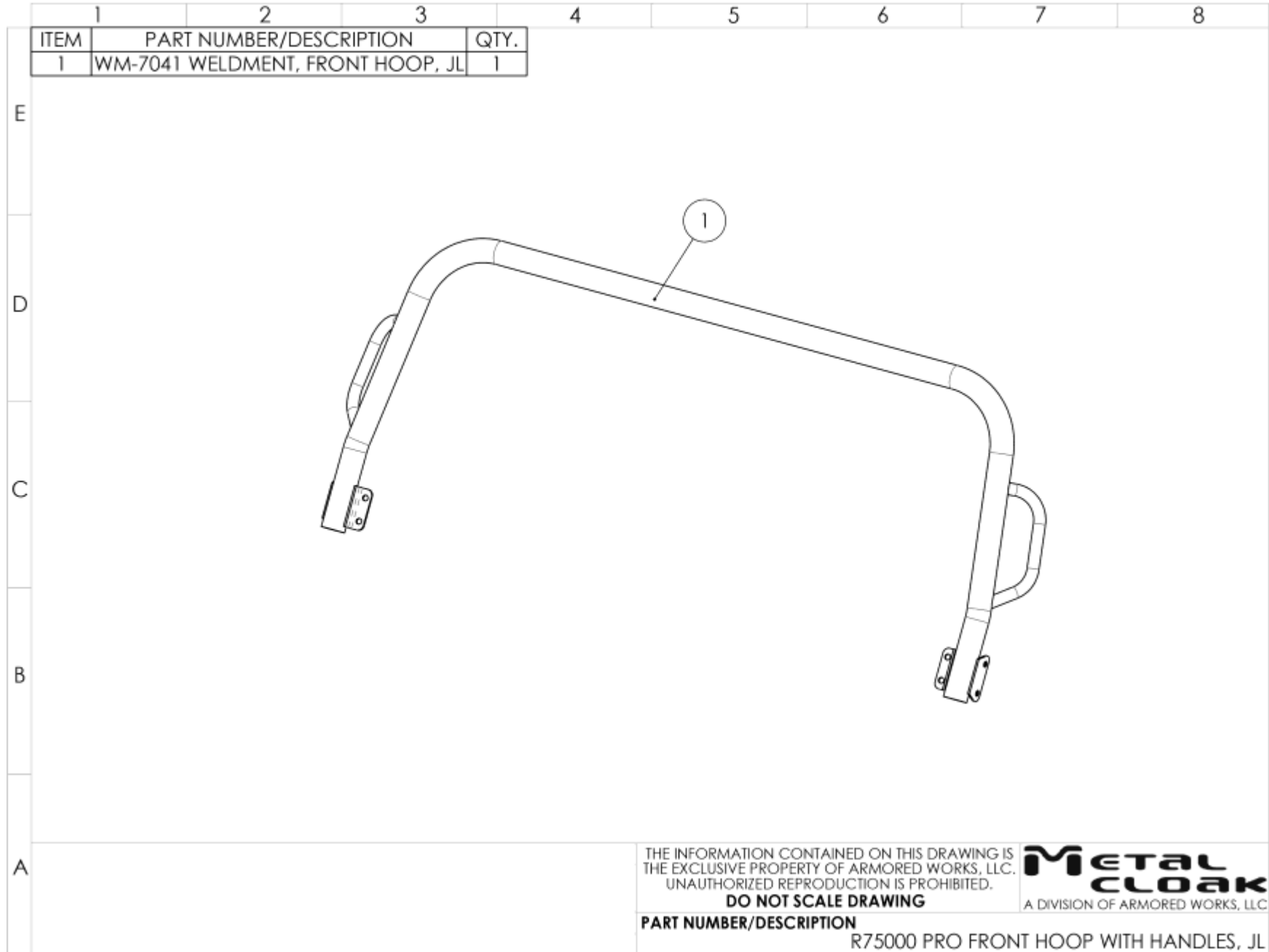


## Section 2: Product Components



DC-0001 REV A

SHEET 1 OF 1



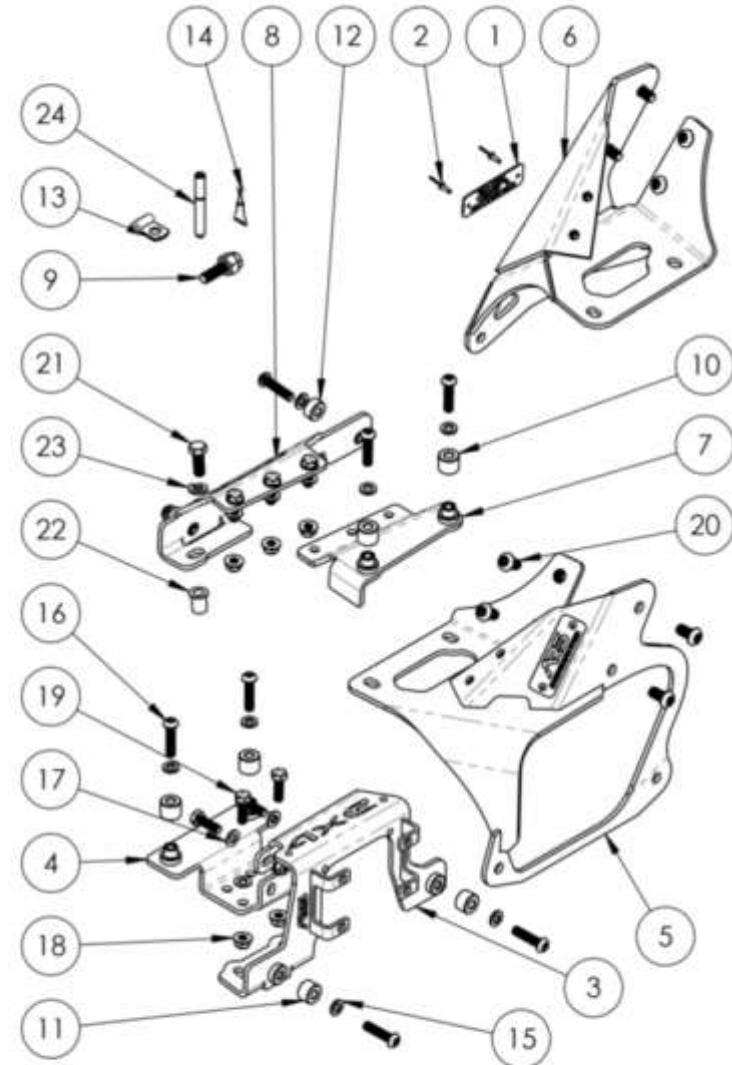
# Section 2: Product Components



DC-0001 Rev B

SHEET 1 OF 2

ITEM	PART NUMBER/DESCRIPTION	QTY.
1	CS-0216 PLT, ARS LOGO TAG PLT	2
2	FA-2116 BLIND POP RIVET 0.125 X 0.25L SS	4
E 3	WM-7103 WELDMENT, 4XE LOWER COWL PIER PLT, JL	1
4	WM-7102 WELDMENT, 4XE UPPER COWL PIER PLT, JL	1
5	WM-7101 WELDMENT, 4XE COWL MOUNT, JL	1
6	WM-7040-P WELDMENT, FRONT MOUNTING BASE, JL	1
7	WM-7043-P WELDMENT, FRONT INNER BASE SUPPORT UPPER, JL	1
8	WM-7044-P WELDMENT, FRONT INNER BASE SUPPORT LOWER, JL	1
HK-R75601		
9	8999 INSTALLATION TOOL, 0.38-16 RIVET NUT	1
D 10	CS-0158 BILLET, FRONT INNER SPACER, JL-4XE	4
11	CS-0167 BILLET, 4XE COWL SPACER .50, JL	2
12	CS-0170 BILLET, FRONT HOOP BASE OUTER SPACER, JL-4XE	2
13	FA-2020 CLAMP, 0.188X1.375 VINYL LOOP, ZINC	1
14	FA-2107 LOCTITE 243, BLUE .02OZ CAPSULE	1
15	FM-08269 WASHER, 8.4ID X 15.0OD X 1.6TH SS 18-8 PLAIN-4XE	8
16	FM-08278 SBHCS, M8-1.25 X 35L SS 18-8 PLAIN-4XE	8
C 17	FS-05242 WASHER, 0.33ID X 0.63OD X 0.05TH STL ZINC	10
18	FS-05250 NYLOCK FLANGE NUT, 0.31-18 X 0.34H STL GF ZINC	7
19	FS-05280 HHCS, 0.31-18 X 1.0L STL G5 ZINC	7
20	FS-06001 SBHCS, 0.38-16 X 0.75L SS 18-8 PLAIN	8
21	FS-06031 HHCS, 0.38-16 X 1.0L STL G5 ZINC	1
22	FS-06033 RIVET NUT, 0.38-16 X 0.15GRIP STL G5 GOLD ZINC	1
23	FS-06231 LOCK WASHER SPLIT, 0.39ID X 0.68OD X 0.10TH STL ZINC	1
24	SP-0105 ANTI-SEIZE TUBE	1



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PART NUMBER/DESCRIPTION

R75601 4XE COWL MOUNTING KIT, JL

# Section 2: Product Components



SHEET 1 OF 1

DC-0001 REV A

ITEM	PART NUMBER/DESCRIPTION	QTY.
1	WM-7049 WELDMENT, PRO 4DR SPREADER 2.00, JL	2
2	CS-0039 BILLET, PRO SPREADER BAR END CAP	4
3	FS-05235 SHCS, 0.31-18 X 0.88L STL G8 ZINC	16

**DETAIL A  
SCALE 1 : 4**

**METAL CLOAK**  
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**PART NUMBER/DESCRIPTION**  
**R75020 PRO 4DR SPREADER BARS, JL**

## Section 2: Product Components



SHEET 1 OF 2

DC-0001 REV A

ITEM	PART NUMBER/DESCRIPTION	QTY.
1	WM-7051 WELDMENT, PRO RACK REAR HOOP LEG, JL	1
2	WM-7051-P WELDMENT, PRO RACK REAR HOOP LEG, JL	1
3	WM-7052 WELDMENT, PRO RACK REAR HOOP UPPER TUBE, JL	1
4	FA-2002 BUSHING, .375ID X .50OD X 2.50L, STL ZINC	2
5	FA-2006 BUSHING, 0.50ID X 1.00 X 1.00 BLK URETHANE	4
6	FS-08236 SHCS, 0.5-13 X 1.5L STL G8 ZINC	2
7	FS-08237 NYLOCK NUT, 0.5-13 X 0.59H STL GF ZINC	2

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PART NUMBER/DESCRIPTION	QTY.
R75040 PRO REAR HOOP, JL	1

## Section 2: Product Components



DC-0001 Rev B

SHEET 1 OF 1

ITEM	PART NUMBER/DESCRIPTION	QTY.
1	CS-0190 PLT, REAR J HOOK BRACKET, JL	2
2	CS-0212 PLT, REAR BUMPER SUPPORT BRACKET PB2, JL	1
3	CS-0212-P PLT, REAR BUMPER SUPPORT BRACKET PB2, JL	1
4	FA-2022 PUSH IN RIVET, 0.312 X 0.875 BLK PLASTIC	6
5	FS-06004 WASHER, 0.41ID X 0.81OD X 0.05TH SS 18-8	2
6	FS-06210 NYLOCK FLANGE NUT, 0.38-16 X 0.41H STL GF ZINC	10
7	FS-06227 HHCS, 0.38-16 X 3.5L STL G5 ZINC	2
8	FS-06231 LOCK WASHER SPLIT, 0.39ID X 0.68OD X 0.10TH STL ZINC	2
9	FS-06288 CARRIAGE BOLT, 0.38-16 X 1.0L STEEL G5 ZINC	8
10	FS-06289 ANCHOR BOLT, 0.38-16 X 8.0L STEEL B7 ZINC	2
11	FS-08038 SERRATED FLANGE LOCK NUT, 0.5-13 X 0.45H STL GF ZINC	4
12	FS-08221-BZ CARRIAGE BOLT, 0.5-13 X 1.25L STL G5 BLACK ZINC	4
13	WM-7045 WELDMENT, REAR LOWER HOOP SUPPORT, JL	1
14	WM-7045-P WELDMENT, REAR LOWER HOOP SUPPORT, JL	1
15	WM-7065 WELDMENT, REAR HOOP SUPPORT BRACKET PB2, JL	1
16	WM-7065-P WELDMENT, REAR HOOP SUPPORT BRACKET PB2, JL	1

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**PART NUMBER/DESCRIPTION**  
R75055 REAR HOOP FRAME MOUNT PB2, JL

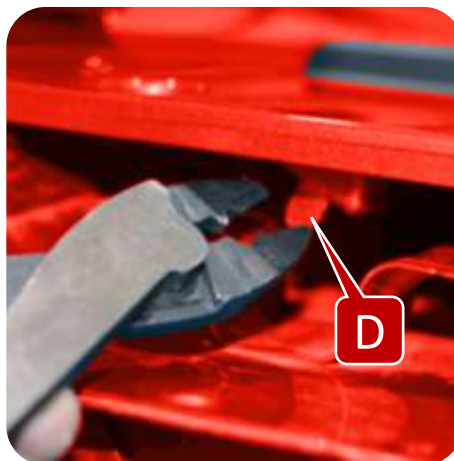
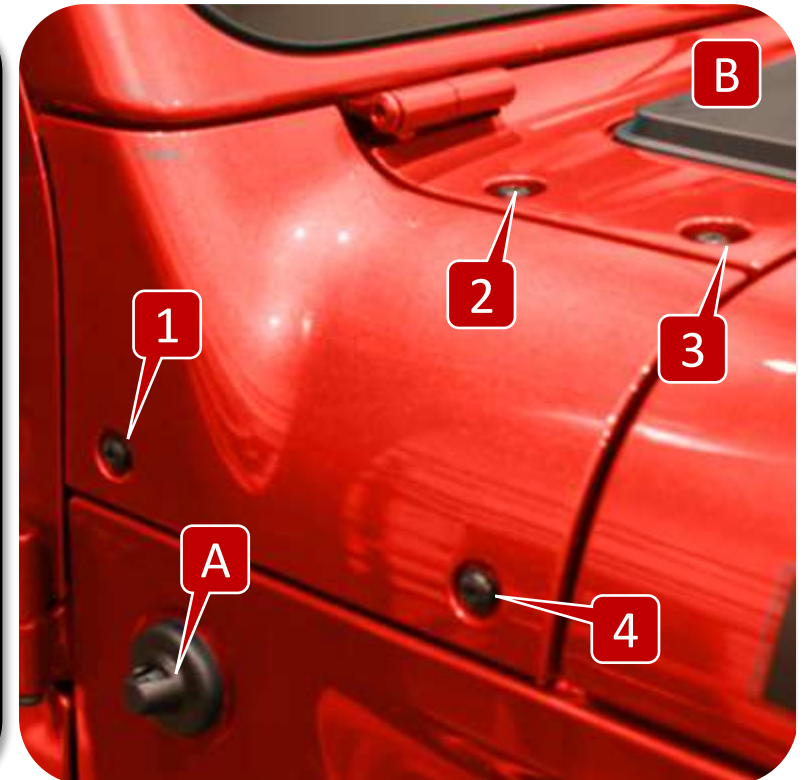


## Section 3: Installation Instructions



### Step 1: Front Hoop Passenger Bracket Installation

- A. Remove antenna.
- B. Using a T40 torx wrench remove the four stock torx bolts from the side panel and hood cowl.
- C. Remove the cowl cover.
- D. Using cutters remove the plastic tab underneath the hood cowl.
- E. Mask area around holes and use a dremel enlarge the T40 torx holes on the hood cowl making sure they are large enough to fit the upper bracket's 1/2" standoffs. Do NOT use a drill to open the holes.



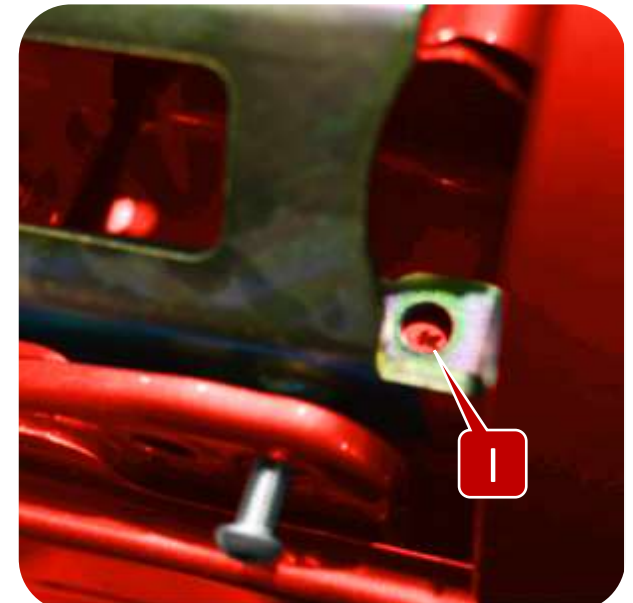
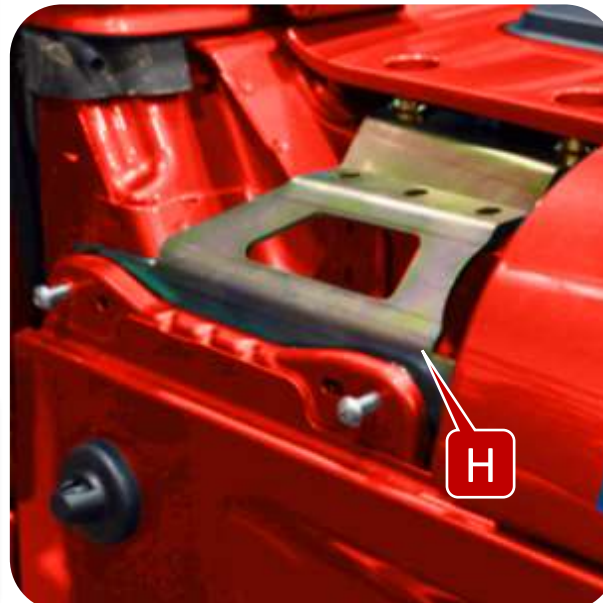
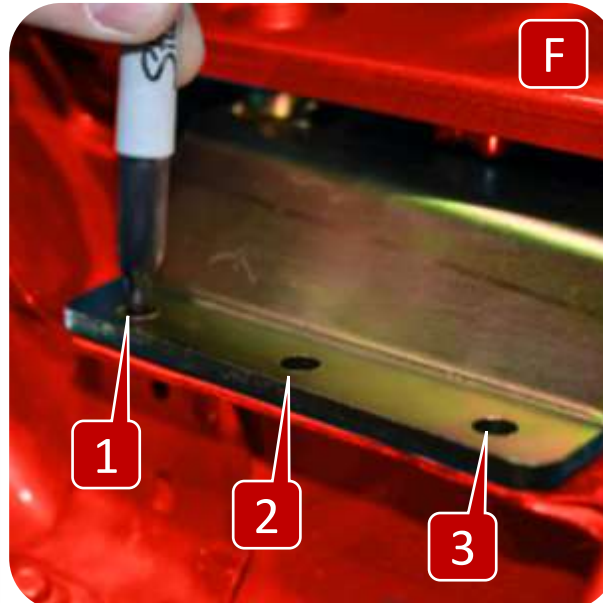
## Section 3: Installation Instructions



### Step 1: Front Hoop Passenger Bracket Installation

- F. Mark the three upper bracket holes.
- G. Enlarge the two outer flange stock bolt holes to  $13/32$ ".
- H. Install the side bracket and hold into place with the provided allen bolts.
- I. Mark the 4 side bracket holes in preparation for drilling.
- J. Remove both the upper and side brackets.

**Note:** *The side bracket bolt hole that requires drilling on the passenger side should align with a pre-existing hole that will need to be expanded to  $17/32$ ".*

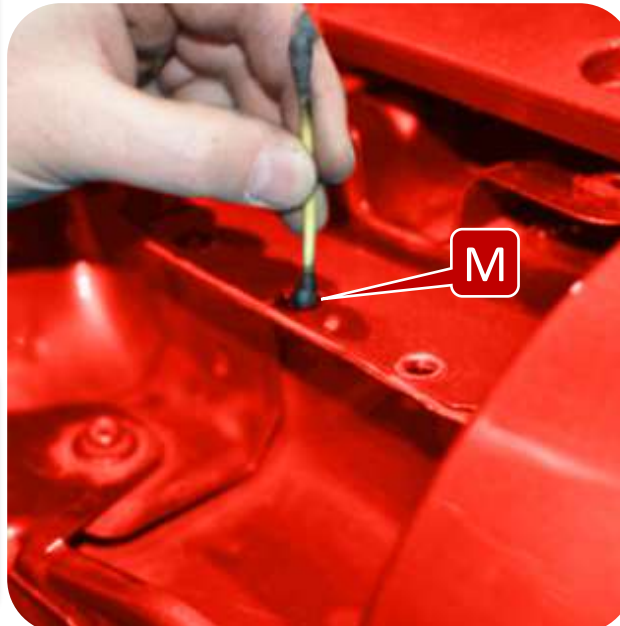


## Section 3: Installation Instructions



### Step 1: Front Hoop Passenger Bracket Installation

- K. Center punch and drill a pilot hole on the three upper bracket marked locations and step up to a 5/16" drill bit.
- L. Center punch and drill a pilot hole on the one side bracket marked location and step up to a 17/32" drill bit. We recommend opening the hood to gain better access to the marked location.
- M. Paint any exposed metal to prevent rusting.
- N. Using the provided installation tool install the rivet nut into the 17/32" hole. Use a 9/16" socket and 11/16" wrench for the installation tool.



**Note:** *The passenger side has two layers of steel that must be drilled through.*

## Section 3: Installation Instructions



### Step 1: Front Hoop Passenger Bracket Installation

- O. Using a clamp hold the side panel securely to help prevent movement when cutting.

**Note:** *The marked locations are the parts that will need to be removed from the side panel.*

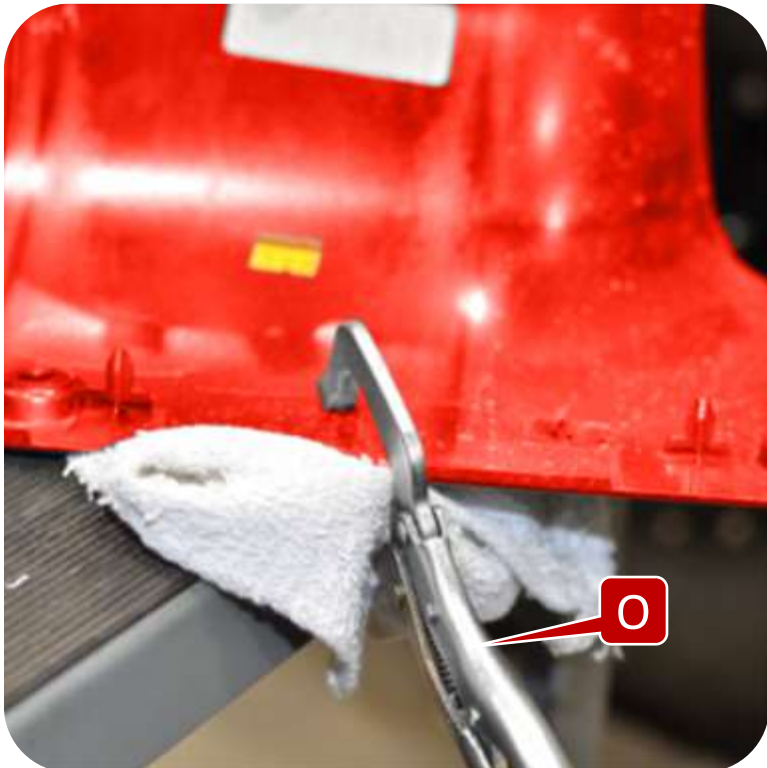
Front

Note



Back

Note

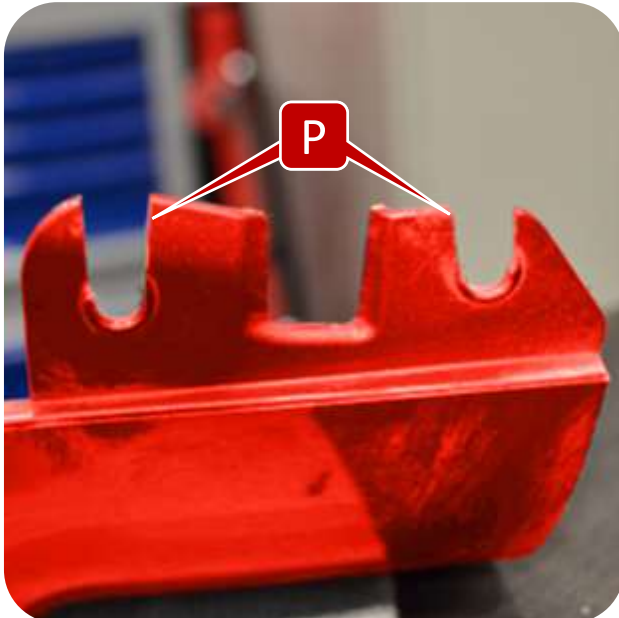


## Section 3: Installation Instructions



### Step 1: Front Hoop Passenger Bracket Installation

- O. Using the cut off wheel cut the notches on the front of the plastic side panel. The notches need to be wide enough to fit snugly around the bracket standoffs (approx. 1/2" Wide). If cuts are too wide the panel can rattle against the bracket.
- P. Using a cut off wheel cut off the plastic standoffs on the back of the side panel (*Do not trim flush, leave 1/8" of material, test fit and shave off material till you reach the desired fitment. should be slightly snug*).
- Q. Using a cut off wheel cut off the previously marked center bracket.



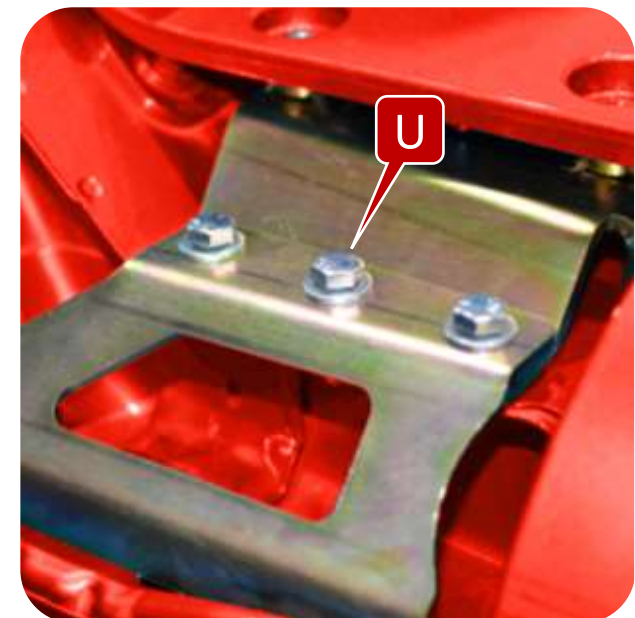
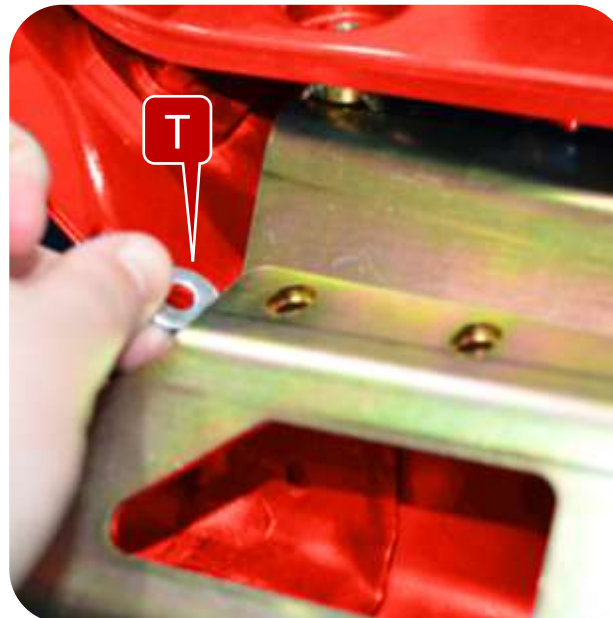
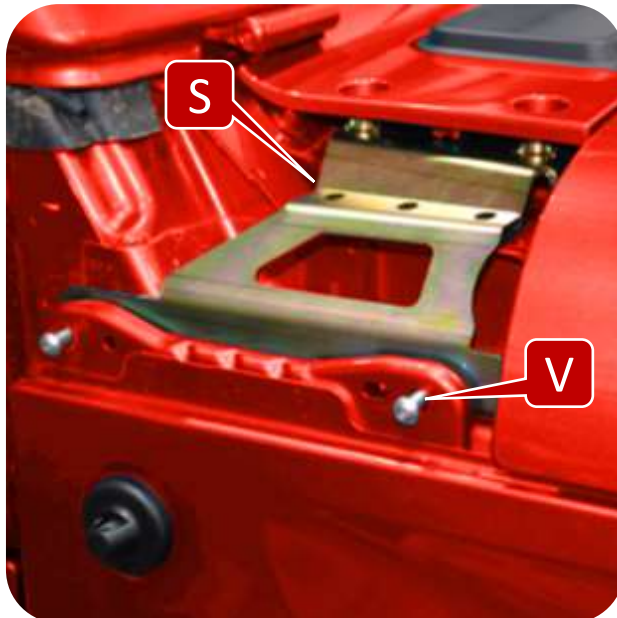
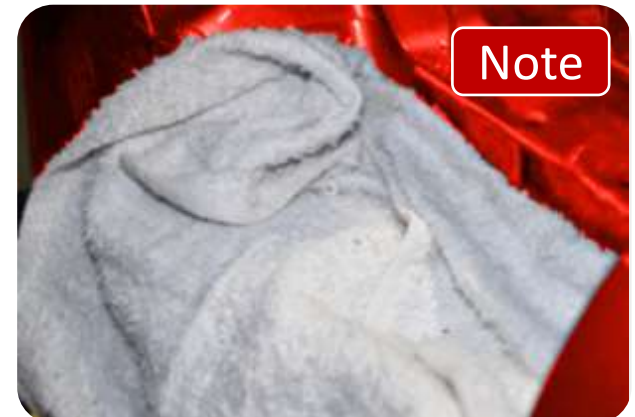
## Section 3: Installation Instructions



### Step 1: Front Hoop Passenger Bracket Installation

- S. Install the upper and side brackets. The side bracket sits on top of the upper bracket.
- T. Place a spacer washer between each of the three holes of the two brackets.
- U. Loosely install the provided bolts, washers and nuts into the three bolt holes. *(There are nine total washers: one washer on top, one as a spacer, one on the bottom).*
- V. Install two of the provided allen bolts into the drilled-out stock locations to hold the side bracket into place before tightening the hex head bolts.

**Note:** MetalCloak recommends placing a shop towel over the cowl area before installing the brackets to make sure the hardware does not fall.

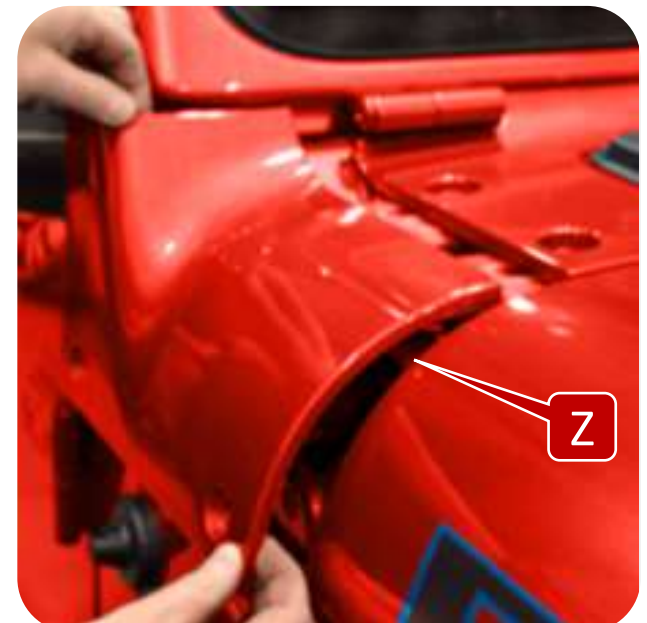
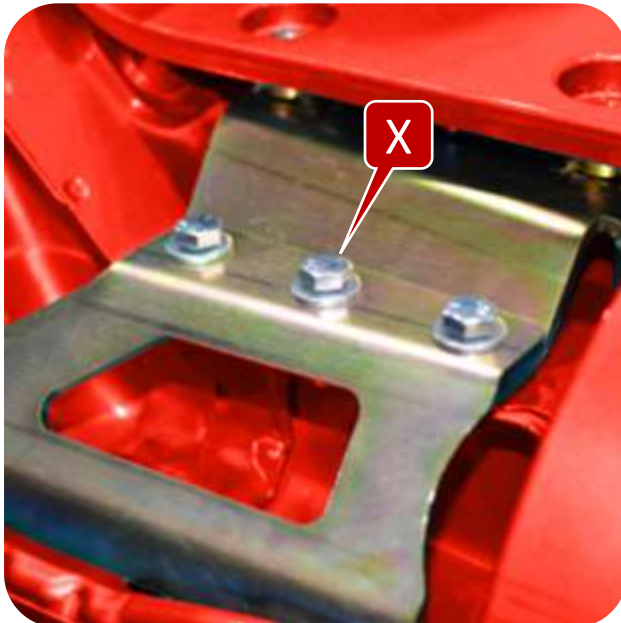
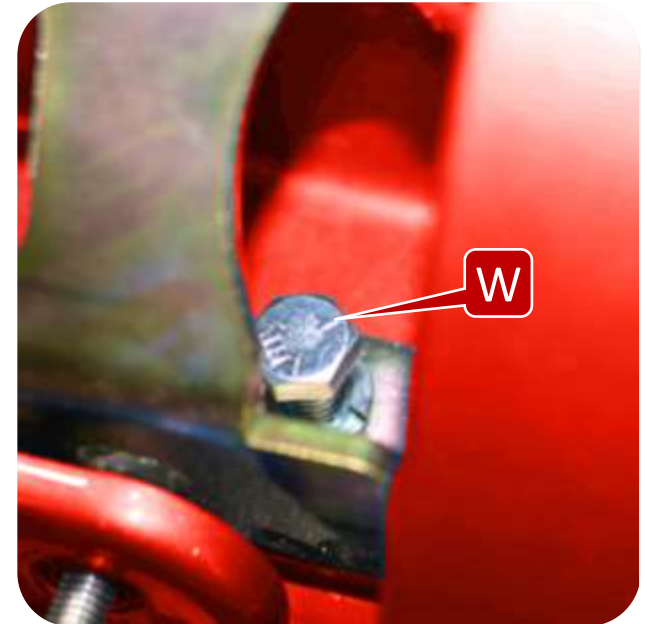


## Section 3: Installation Instructions



### Step 1: Front Hoop Passenger Bracket Installation

- W. Install the provided bolt and split washer into the rivet nut.
- X. Using a 1/2" socket and wrench tighten the three bracket bolts.
- Y. Using a 9/16" socket tighten the rivet nut bolt.
- Z. If the allen head bolts do not move freely you must unbolt and readjust the bracket. Once the allen head bolts move freely remove the two bolts and reinstall the plastic hood cowl.



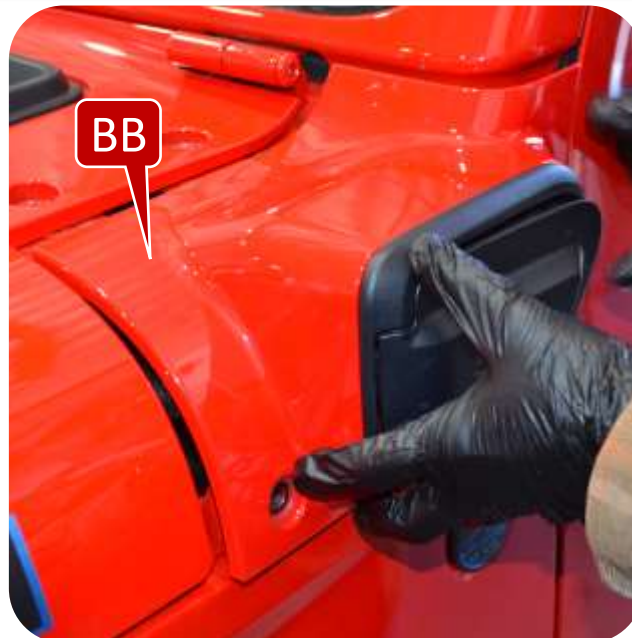
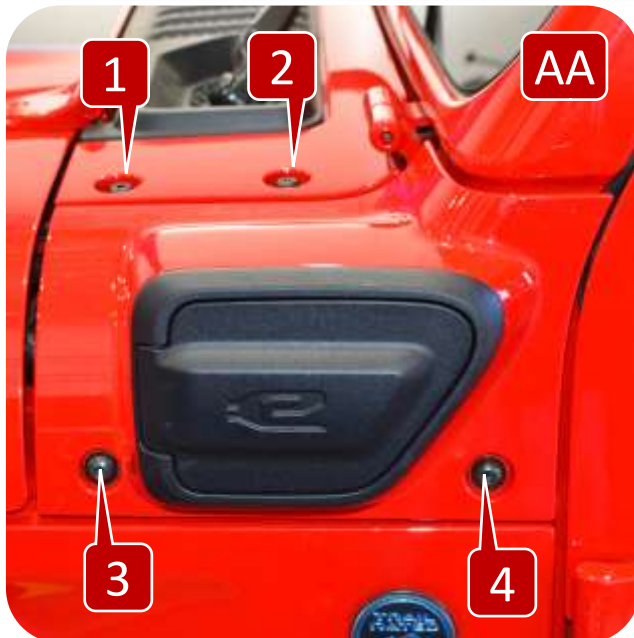
## Section 3: Installation Instructions

### Step 2: Front Hoop Driver Bracket Installation

AA. Using a T40 torx wrench remove the four stock torx bolts from the side panel and hood cowl.

BB. Remove the cowl cover.

CC. Disconnect the plug from the cowl cover.



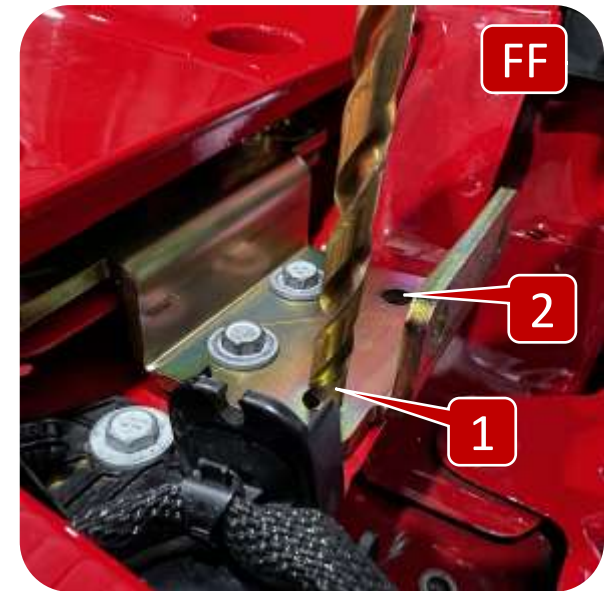
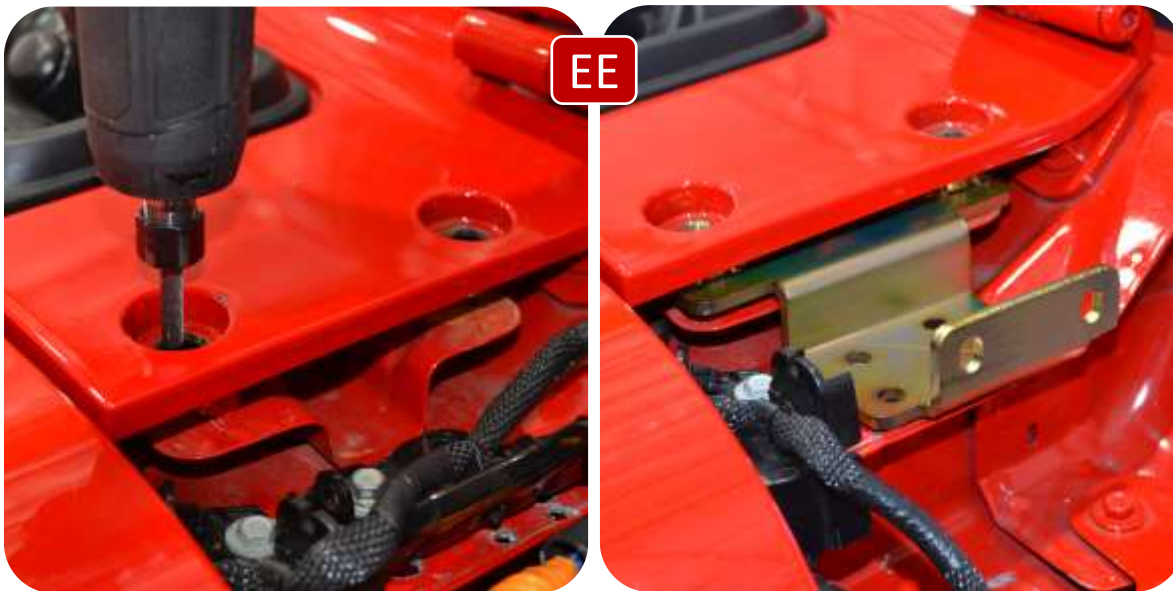
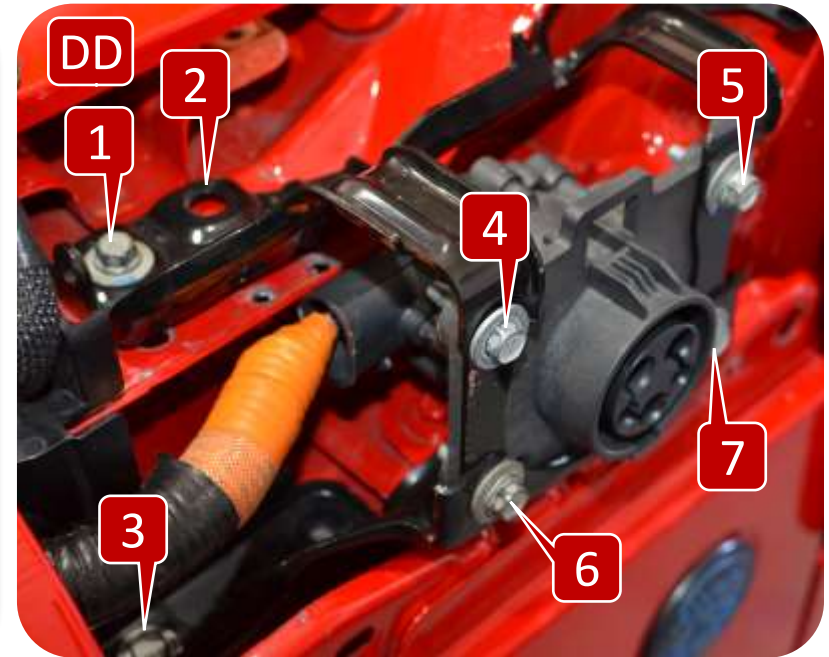


## Section 3: Installation Instructions



### Step 2: Front Hoop Driver Bracket Installation

- DD. Disconnect the 7 bolts on the charging port bracket using a 10mm socket and remove upper and lower OEM brackets, these will not be used.
- EE. Mask area around holes and use a Dremel enlarge the T40 torx holes on the hood cowl making sure they are large enough to fit the upper bracket's 1/2" standoffs. Do NOT use a drill to open the holes.
- FF. Install the upper pier plate using two factory bolts and drill out the other holes with a 21/64" drill bit.



## Section 3: Installation Instructions

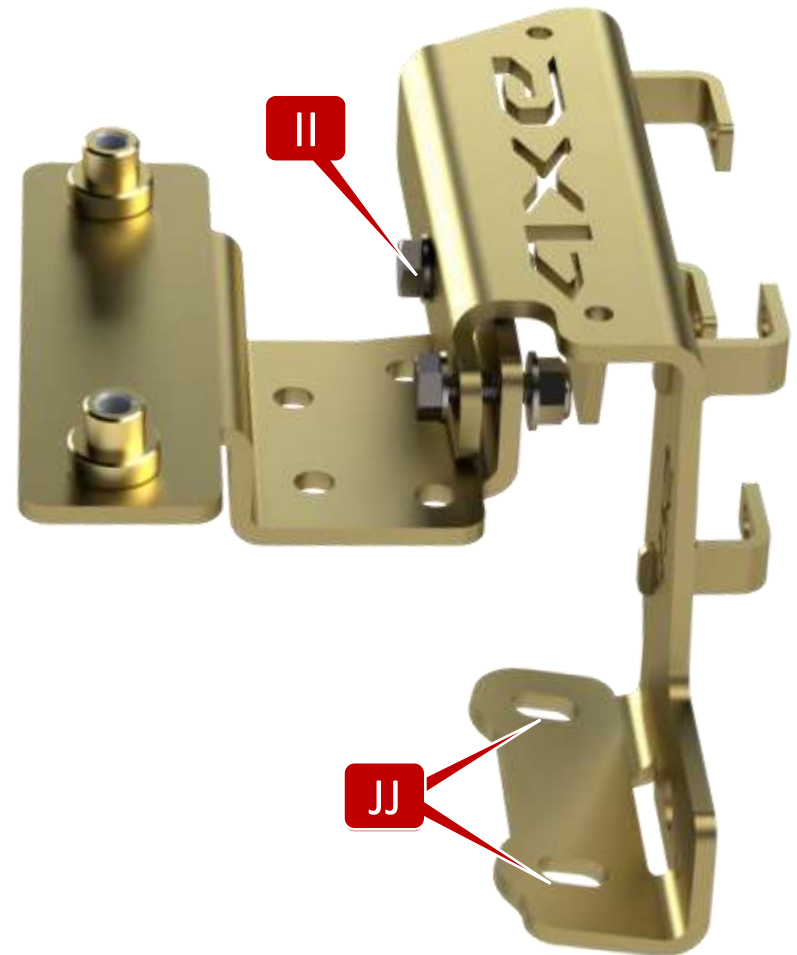
### Step 2: Front Hoop Driver Bracket Installation

GG. Using a 1/2" socket and wrench tighten the provided bolts in the drilled-out holes and using a 10mm socket tighten the factory hardware on the upper pier plate.

HH. Using the factory bolts install the charging port to the lower pier plate.

II. Install the lower pier plate over the top of the upper pier plate and loosely install the provide hardware.

JJ. Using the factory hardware install the bottom of the lower pier plate.



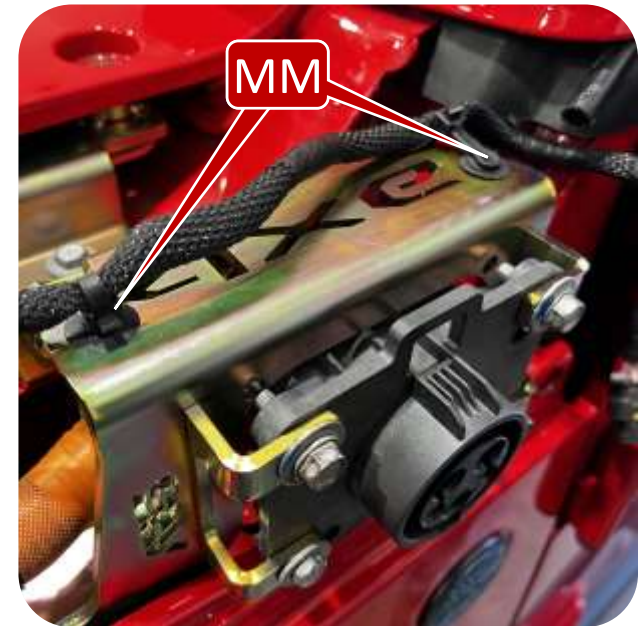
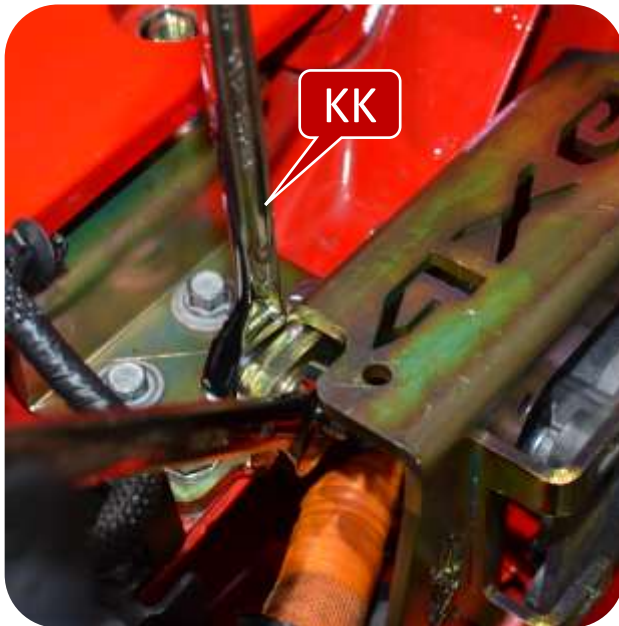
## Section 3: Installation Instructions

### Step 2: Front Hoop Driver Bracket Installation

KK. Using two 1/2" wrenches tighten the upper and lower pier plate attaching bolts.

LL. Tighten all charging port and pier plate hardware.

MM. Attach the charging port wiring to the lower pier plate by inserting the factory plastic rivets into the holes located on top of the bracket.



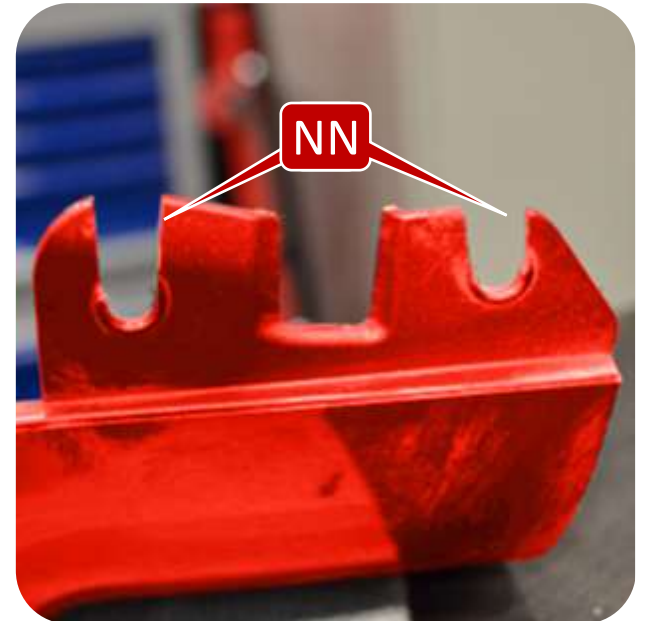
## Section 3: Installation Instructions

### Step 2: Front Hoop Driver Bracket Installation

NN. Using the cut off wheel cut the notches on the front of the plastic side panel. The notches need to be wide enough to fit around the bracket standoffs (*approx. 1/2" Wide*).

OO. Using a cut off wheel cut off the plastic standoffs on the back of the side panel. (*Do not trim flush, leave 1/8" of material, test fit and shave off material till you reach the desired fitment. should be slightly snug.*)

PP. Reconnect the charging port plug to the cowl cover and reinstall the cowl cover onto the Jeep.



## Section 3: Installation Instructions



### Step 3: Front Hoop Mounting Base Installation

**Note:** ARS highly recommends using blue lock tight on the four allen head bolts when installing the front hoop mounting base.

QQ. Place the larger provided spacers into the top T40 bolt locations.

RR. Loosely install the hoop mounting base into the top spacers using the provided longer allen bolts and washers. Do not fully tighten.

SS. Place the provided smaller spacers into the stock T40 bolt locations.

TT. Loosely install the mounting base into the side spacers using the provided longer allen bolts and washers. Do not fully tighten.



## Section 3: Installation Instructions

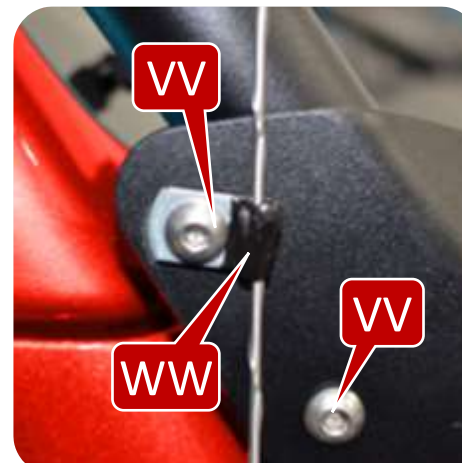


### Step 4: Front Hoop Installation

- UU. Install the finishing caps into the front hoop.
- VV. Using the provided allen head bolts (use anti-seize) attach the hoop to the mounting brackets.
- WW. On the passenger side insert the antenna into the provided antenna clamp and secure to the mounting bracket using the provided hoop allen bolt. Tighten with a 7/32" allen wrench.
- XX. Using a 5mm allen wrench tighten the 4 allen bolts. Repeat on other side.



**Note:** ARS recommends having a second pair of hands help install the front hoop.





## Section 3: Installation Instructions

### Step 5: Rear Hoop Preparation

YY. Install the bushing ends into the end of the rear hoop.

ZZ. Install the bushing sleeve into the rear hoop bushing ends.

AAA. Using a 3/8" allen socket or wrench install the cross bar to the hoop ends.



## Section 3: Installation Instructions

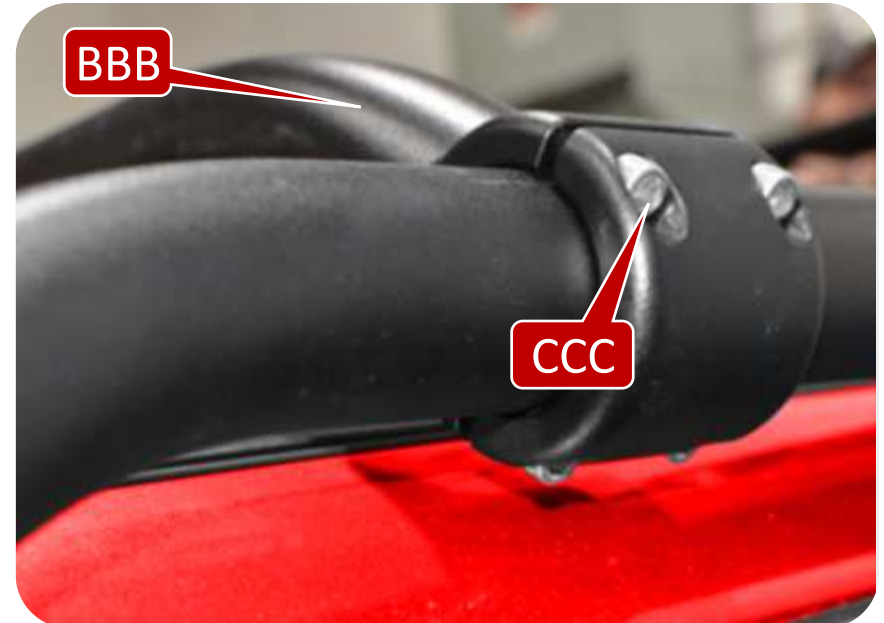


### Step 5: Rear Hoop Preparation

BBB. Place the spreader bars with the engineered bend facing the front hoop.

CCC. Install the spreader bar clamp ends to the front hoop using the provided allen head bolts. **DO NOT FULLY TIGHTEN.**

DDD. ARS recommends having a second person help install the spreader bar clamps to the rear hoop using the provided allen head bolts. **DO NOT FULLY TIGHTEN.**





## Section 3: Installation Instructions

### Step 5: Rear Hoop Preparation

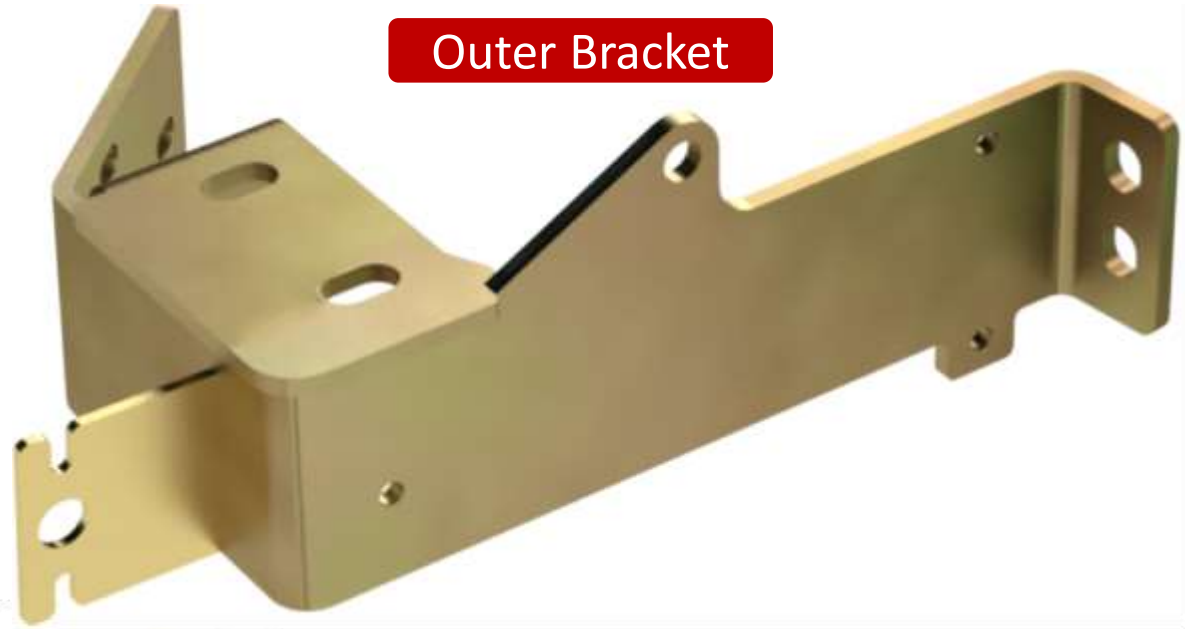
**Note:** When installing the rear hoop make sure the rear hoop is evenly spaced from the Jeep tub, use a square to make sure the rear hoop is straight vertically, and make sure there is clearance for the gas cap to open and close.



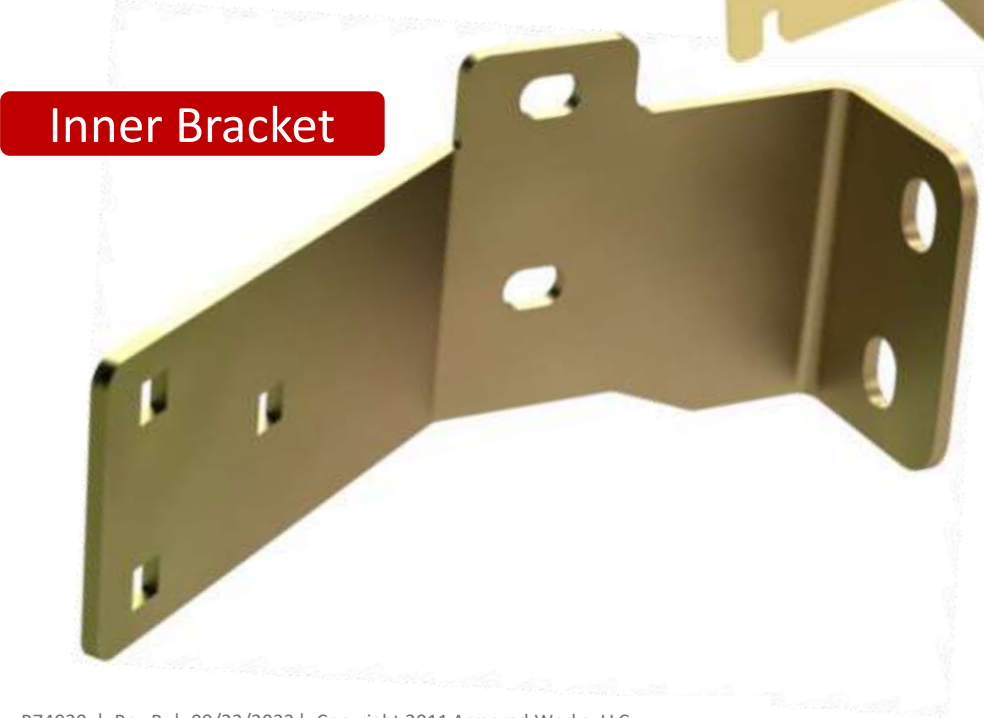
## Section 3: Installation Instructions



### Step 6: Rear Hoop Mounting Brackets (*Blow Mold Bumper*)



Outer Bracket



Inner Bracket

## Section 3: Installation Instructions



### Step 6: Rear Hoop Mounting Brackets (Blow Mold Bumper)

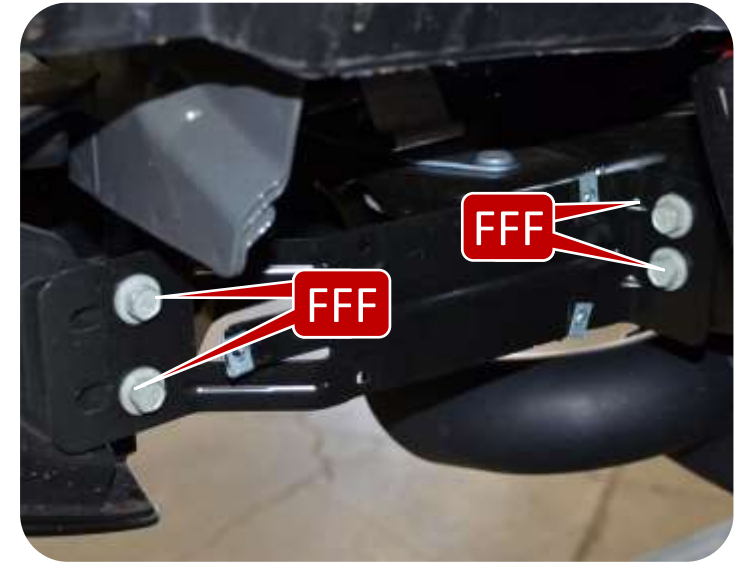
**Note:** When working on the driver side, you will need to use a 21mm socket to remove the bumper hook.

EEE. Using an 8mm socket remove the 3 bolts mud shield.

FFF. Using a 16mm socket remove the 4 bolts bumper outer bracket. **SAVE ALL HARDWARE.**

GGG. Using a 7mm socket remove the inner brackets 2 bolts.

HHH. Using a 21mm socket remove the inner brackets 2 bolts. A breaker bar maybe required.



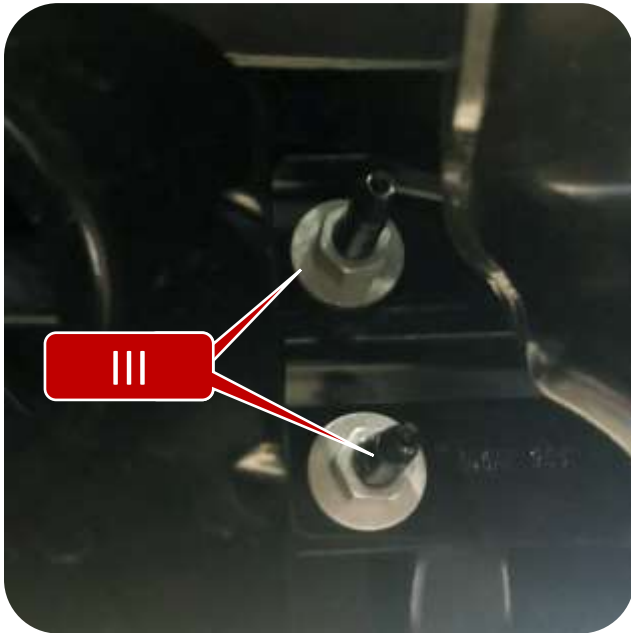
## Section 3: Installation Instructions

### Step 6: Rear Hoop Mounting Brackets (*Blow Mold Bumper*)

III. Using a 16mm wrench remove the 2 bumper nuts that holds the inner bumper bracket into place. **Save All Hardware.**

JJJ. Using a 10mm socket remove the bolt located on the underside of the bumper.

KKK. Remove the inner bracket.

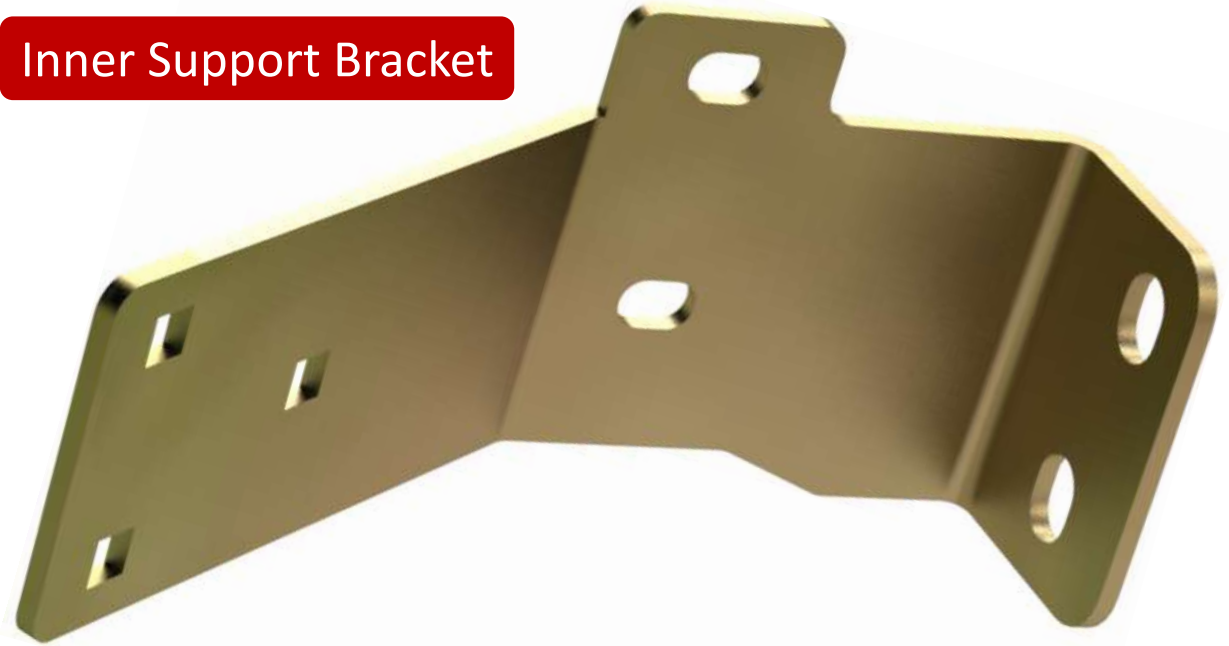


## Section 3: Installation Instructions



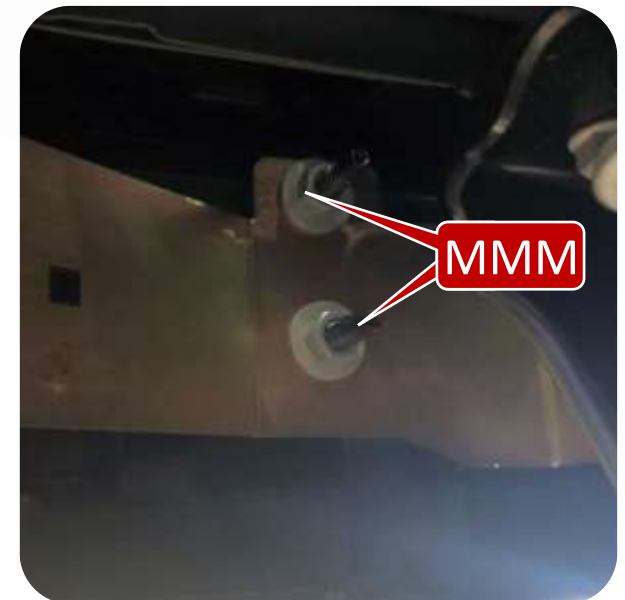
### Step 6: Rear Hoop Mounting Brackets (*Blow Mold Bumper*)

Inner Support Bracket



LLL. Loosely install the provided inner support bracket reusing the stock 21mm hardware.

MMM. Loosely Install the stock inner bumper bracket 16mm nuts.



## Section 3: Installation Instructions

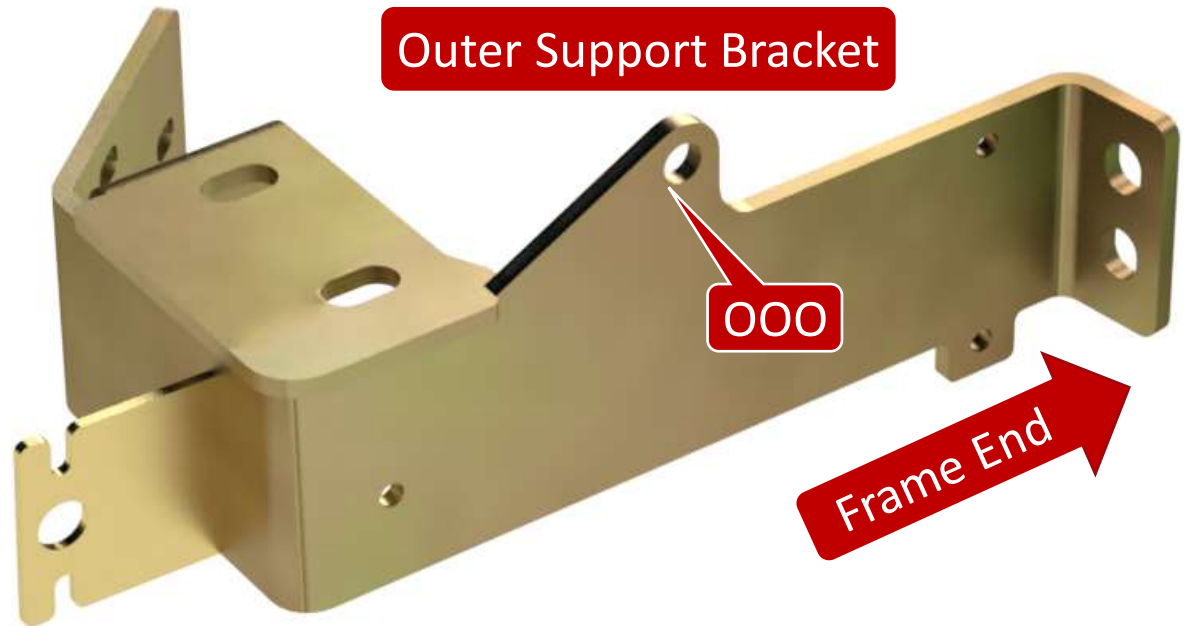


### Step 6: Rear Hoop Mounting Brackets (*Blow Mold Bumper*)

NNN. Loosely install the rear hoop support bracket to the outer support bracket using the 1/2" carriage bolts.

OOO. Install the provided anchor bolt to the outer support bracket making sure the threaded end faces the frame end.

PPP. Install the provided J hook bracket to the anchor bolt.



## Section 3: Installation Instructions

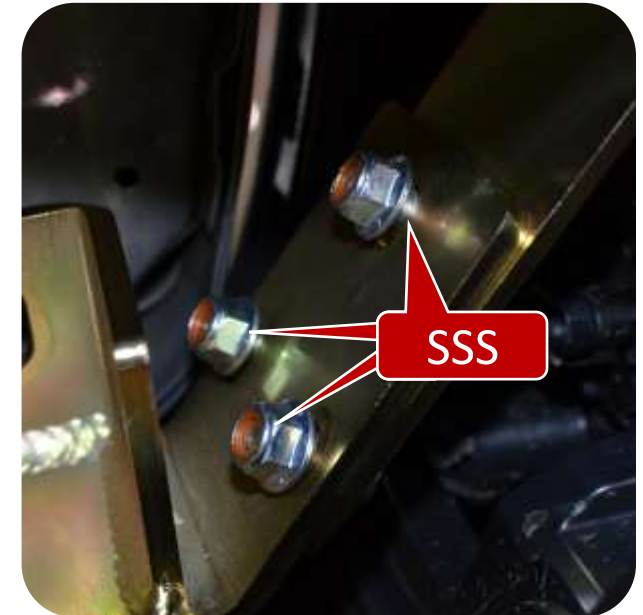
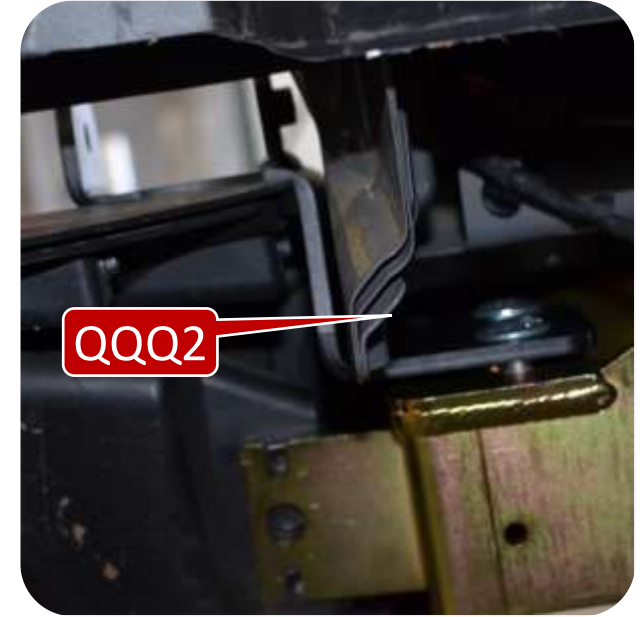


### Step 6: Rear Hoop Mounting Brackets (*Blow Mold Bumper*)

QQQ. Install the outer bracket to the frame making sure the anchor bolt goes on top of the frame (QQQ1) and the rear lower hoop bracket goes between the bumper and the Jeep body (QQQ2).

RRR. Using the stock bolts loosely install the outer support bracket.

SSS. Using the provided carriage bolts and nylock nuts connect the inner and outer support brackets together and tighten with a 9/16" socket.



## Section 3: Installation Instructions



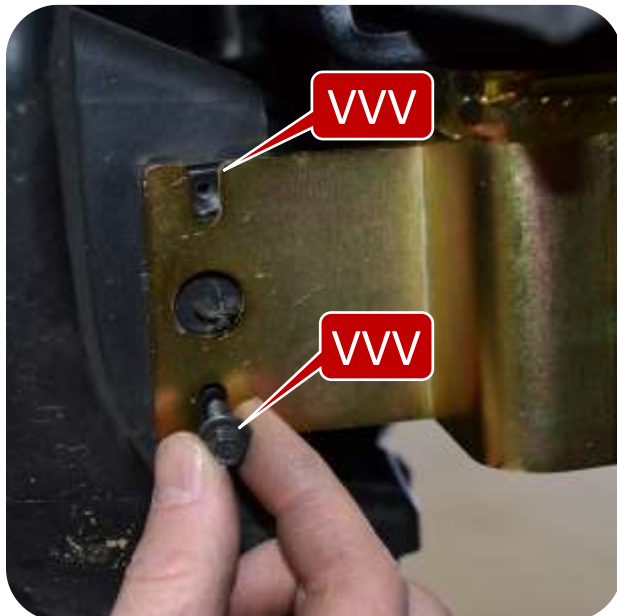
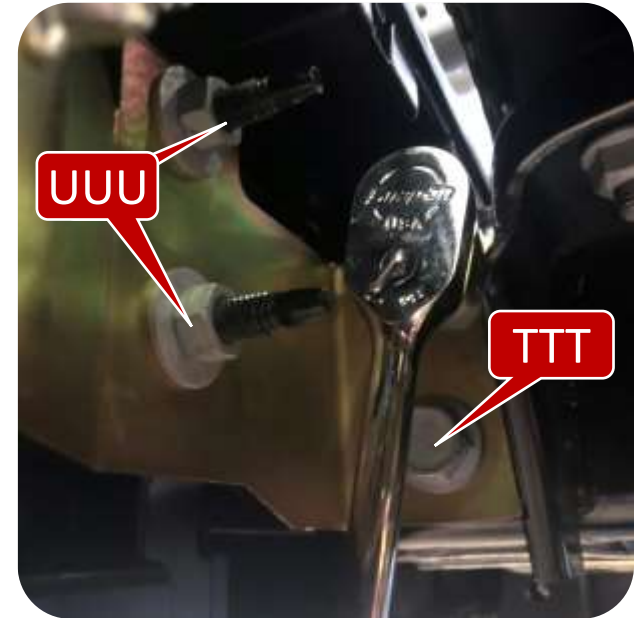
### Step 6: Rear Hoop Mounting Brackets (*Blow Mold Bumper*)

TTT. Tighten the inner support bracket bolts using a 21mm socket and torque to 30 ftlbs.

UUU. Tighten the inner support bracket nuts using a 16mm socket and torque to 30 ftlbs.

VVV. Reinstall the stock bolts into the outer support bracket using a 7mm socket.

WWW. Make sure the rack bracket clears the jeep body (1) then tighten the 1/2" carriage bolts (2) with a 3/4" socket and torque to 30 ftlbs.



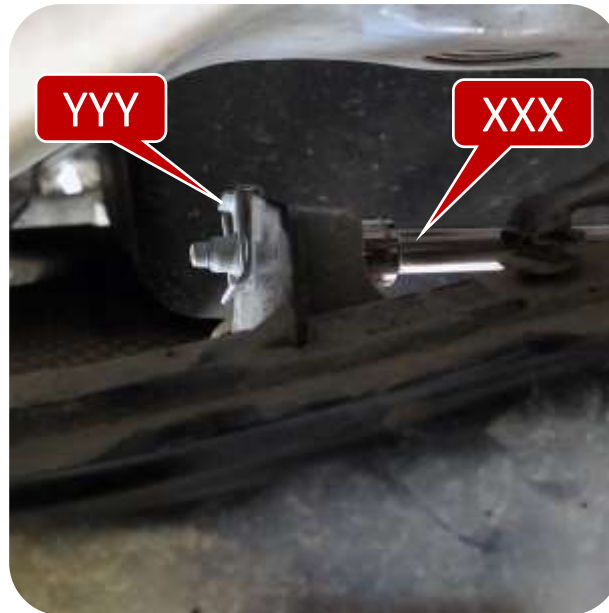
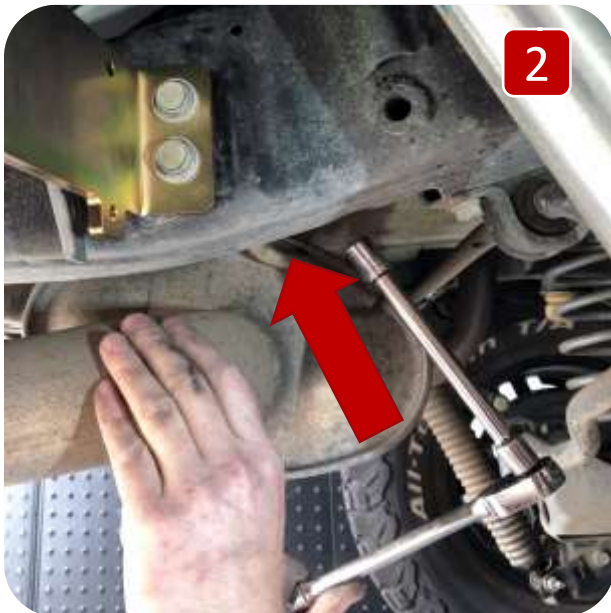


## Section 3: Installation Instructions

### Step 6: Rear Hoop Mounting Brackets (*Blow Mold Bumper*)

XXX. To install the anchor bolt and bracket you will need to disconnect a muffler bracket located above the muffler you can see the bracket looking through the hole above the frame bracket (1) using a 13mm socket. To gain access to the bolt we recommend going above the muffler (2).

YYY. Remove the nut clip on the muffler bracket.



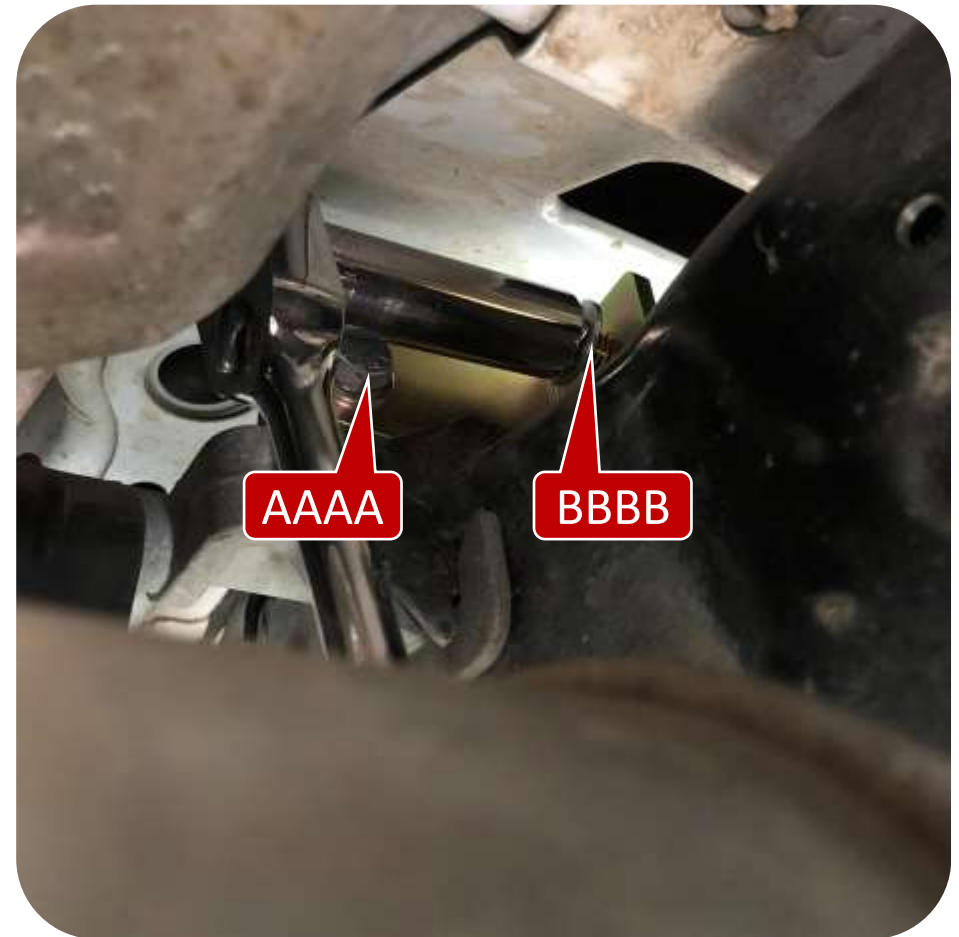
## Section 3: Installation Instructions

### Step 6: Rear Hoop Mounting Brackets (*Blow Mold Bumper*)

ZZZ. When installing the anchor bracket make sure the bracket hook faces the rear of the Jeep.

AAAA. Install the provided carriage bolt to install the anchor bolt bracket and tighten with a 9/16 socket (bolt shown is a prototype).

BBBB. Using a 9/16 socket tighten the anchor bolt to the bracket.



## Section 3: Installation Instructions



### Step 6: Rear Hoop Mounting Brackets (*Blow Mold Bumper*)

CCCC. Using a 5/16 drill bit enlarge the 3 stock bolt hole locations on the mud guard.

DDDD. Using the provided plastic rivets install the mud guard.

EEEE. Using a 10mm socket reinstall the bumper bolt.

FFFF. Using a 9/16" socket install the rear hoop into the mounting brackets.



## Section 3: Installation Instructions

### Step 7: Spreader Bar Installation

**Note:** ARS recommends using anti-seize on the spreader bar bolts.

GGGG. Make sure the spreader bars are 40" on center.

HHHH. Using a 1/4" allen wrench tighten the front spreader bar bolts. Torque to 24ftlbs.

IIII. Using a 1/4" allen wrench tighten the rear spreader bar bolts. Torque to 24ftlbs.

