

# Assembly Instructions for **XTR1 BedRack**



XTRUSION DESIGNS LLC

CONTACT: [SUPPORT@XTRUSIONDESIGNS.COM](mailto:SUPPORT@XTRUSIONDESIGNS.COM)

**Let me begin by thanking you for purchasing one of our products. We strive for top quality components and excellent customer service. If you have any issues during installation, don't hesitate to contact us via email at [support@xtrusiondesigns.com](mailto:support@xtrusiondesigns.com) and we will do everything we can to make sure any issues with our product are resolved!**

#### **General Notes:**

The assembly instructions depicted below are not truck model specific. However, there will be notes if there are steps that differ from truck models.

Depending on the options that you chose on your rack, the components and hardware may vary. Please refer to your pack list for all contents that are to be included in your kit. If you think you are missing a component, please contact us for further assistance.

#### **Safety First:**

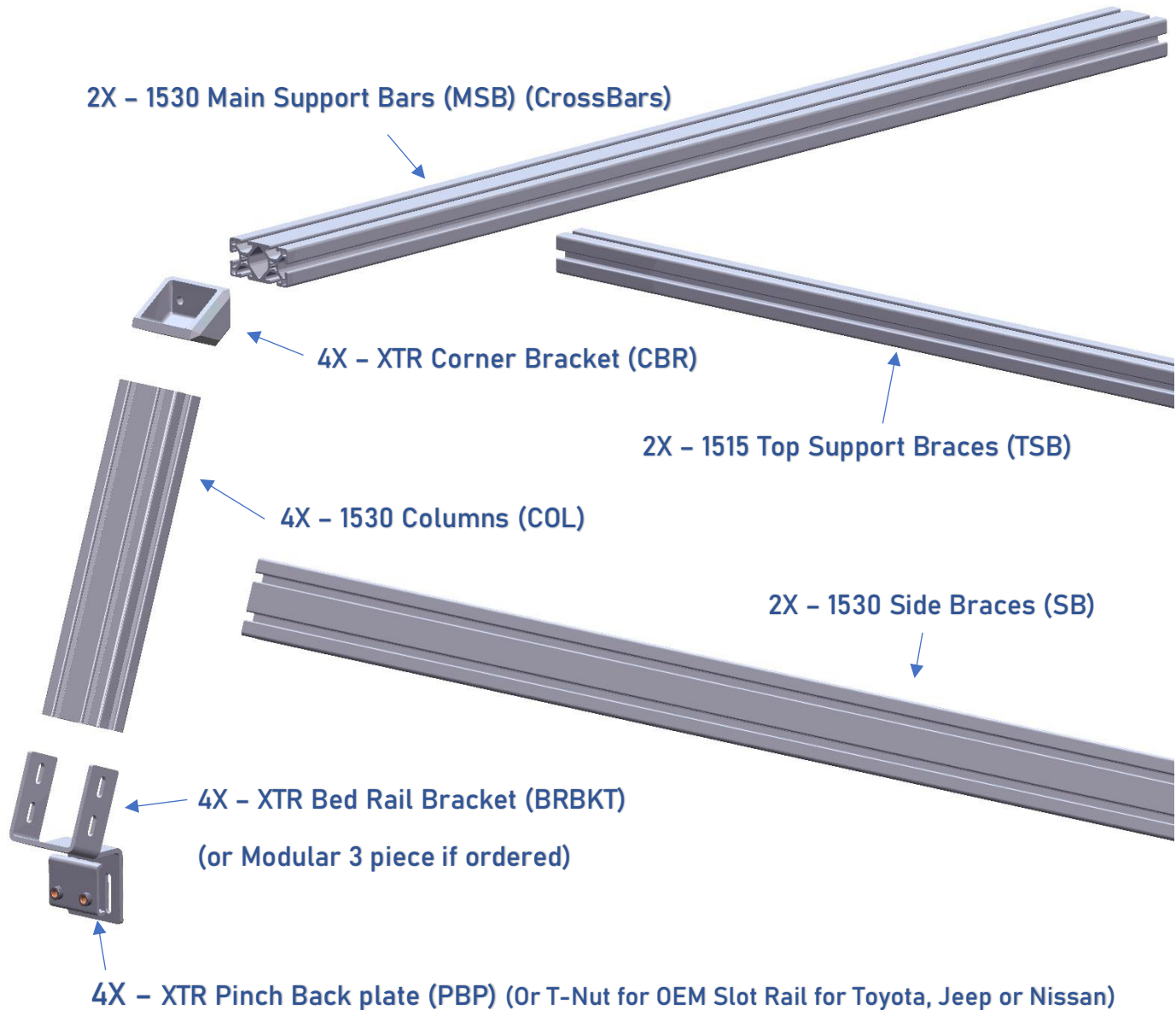
We have developed this product with great structural capabilities. However, it is your responsibility to make sure that all nuts and bolts, straps and all adjustable components are always tight and secured. Periodically check the condition of all components including straps, nuts, bolts, knobs, screws and locks to make sure they are free of corrosion, damage, fatigue or wear as any loose components might lead to structural failure and deem the warranty void. Please double check before every trip that there are no loose attachments, hardware, accessories, etc. The system is intended for Off-Road use. If you use on highway roads, it is under your responsibility to ensure its operation is safe. Never exceed the vehicle manufacturer load capabilities, taking precedence over the XTR1 capabilities and taking the weight of the system plus loaded accessories into consideration. All long boards such as kayaks, canoes, surfboards need to be secured to a vehicle attachment point, such as bumper, tow hooks, etc. Remove valuables from vehicle when left unattended for long periods of time.

Always plan your route and check local and state laws governing projection of objects beyond the perimeter of a vehicle. Always be aware of the width and height of your cargo while driving through low clearance obstacles such as bridges, branches, trees, garages, etc.

Obey all posted speed limits and adapt driving to the weather, load and cargo conditions and remember that cargo can affect the vehicle driving behavior.

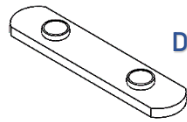
## STEP 1

Check all the components against your pack list. Next, Identify the main components:



\*Please note that the components will vary depending on options selected at time of ordering, such as extra Side Braces or Front to Back Braces, and model specific components. Also refer to accessories ordered for installation instructions. **Powder coated components might have small handling marks that would not affect its durability, with exception of sheet metal wing brackets. Pay attention to these and touch up as they are handled.**

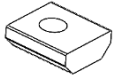
Identify the standard hardware components:



Double T-Slot Slide in Nut (DTSN)



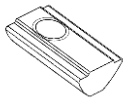
Button Cap Screw (BCS) (5/16"-18)



High Torque T-Nut (HTSTN)



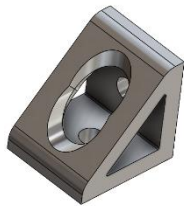
Socket Head Cap Screw (SHCS) (5/16"-18)  
(1/4-20) for some optional upgrades.



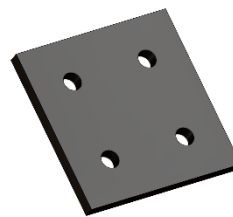
Drop-In T-Nuts (DITN) (Optional)



Hex Head Bolt (HHB) (5/16"-18)  
(optional models)



Corner Joint Bracket (CJB)



Joint Plate 4 - Hole (JP4)

\*Please note that other optional versions might have additional hardware. Refer to those accessories or options for further detail.

\*Before Assembly, plan where you will be utilizing Slide-In Standard T-Nuts (HTSTN) to mount any accessories. In many instances you will not be able to slide these after assembly and will be limited to using only Drop In T-Nuts.

We provide a couple 1ml Vibra-Tite® VC3 packs to coat certain Key pieces of hardware pieces that are in contact with raw aluminum. It is important to only lightly coat 2-3 threads maximum.

Component Identification tip: MSB's or Crossbars are the long pieces with tapped holes. Columns are tapped on one end for Wing Bracket or both ends for Modular.

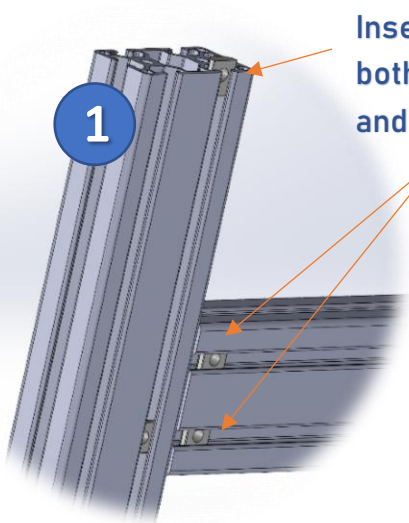
## STEP 2

Assemble The Columns and Side Braces with Joint Plate (JP4) included with kit.

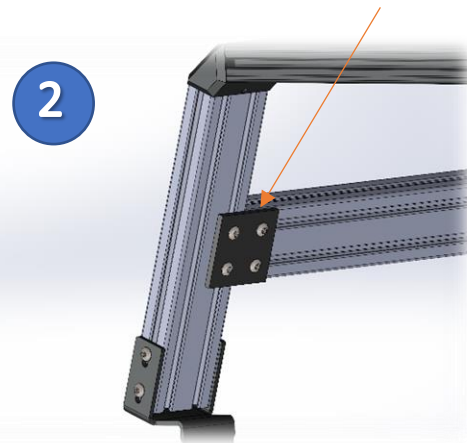
While laying the components on a surface such as a table or workbench, insert the slide in T-Nuts (HTSTN) on the component's preassembly (2 on each column on the inside channel that will face the interior of the rack, 2 on each side of the Side Brace (SB) that will face the interior of the rack).

Repeat steps to assemble the opposite (COL) into the same (SB) however, see note below before proceeding with the opposite (COL)

Insert required T-Nut's on the Extrusion before proceeding.

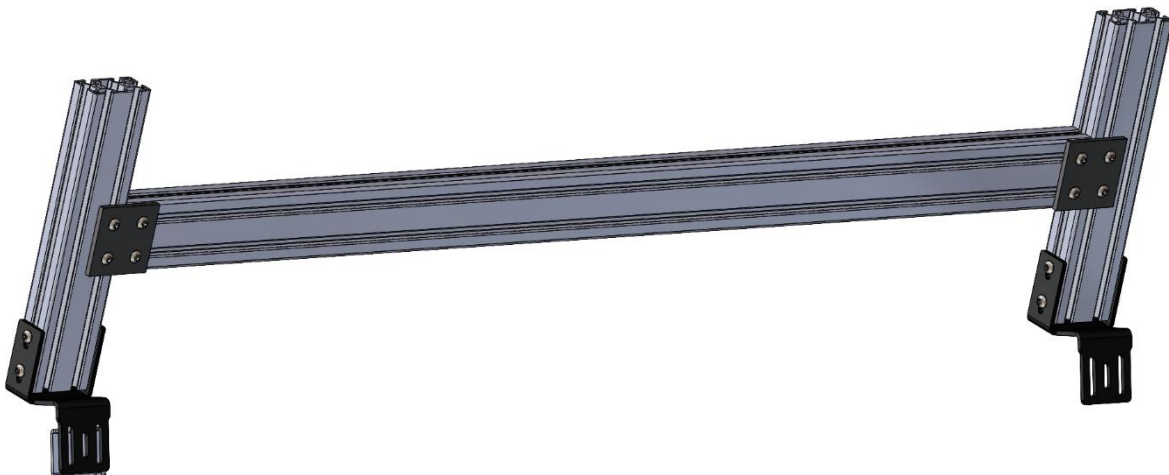


Insert the T-Nuts on both the 2x (COL) and 2x (SB)

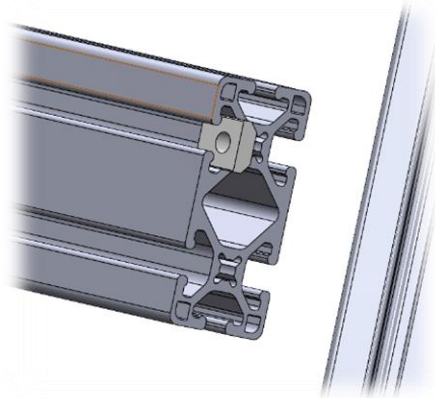


Assemble the Joint Plate (JP4) to (COL) and (SB) on the inside of the rack.

Completed Side Brace (SB) Assembly with joint plate method. (Inside of the rack)



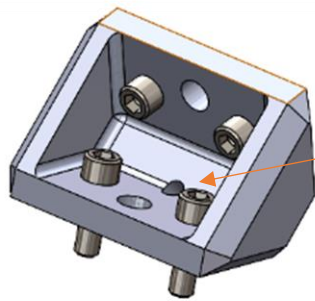
***IMPORTANT: Insert any High Torque Slide in T-Nuts (HTSTN) in side braces on the side you wish to have accessories or attachments, as once you assemble the opposite column, you will not have access for Slide In T-Nuts and you would only be able to use Drop In T-Nuts.***



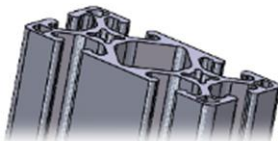
## STEP 3

Assemble the XTR Corner Brackets (CBR) to the Columns (COL) using **5/16"-18 X 1-1/4 long (SHCS) Bolts with Vibra-Tite® VC3 Coating** and hand tighten 20 Ft-Lbs to 24 Ft-Lbs.

***If you are planning to use Slide-In T-Nuts for Handle assembly or another accessory, insert in the Column T-Slot before assembling the CBR.***

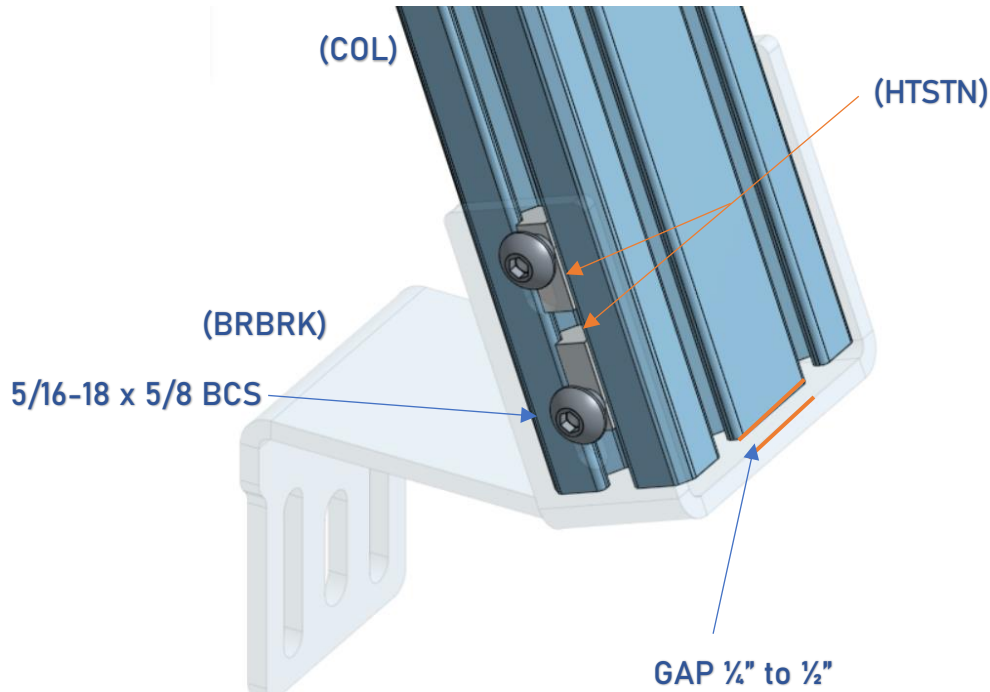


Please note the orientation of the drain hole, to make sure it is facing downwards.

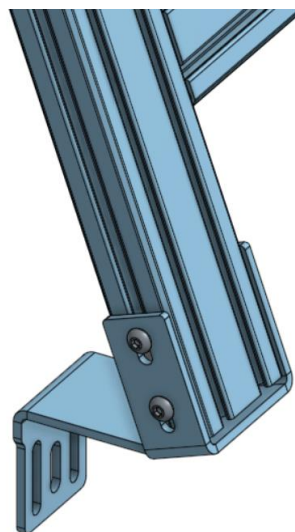


## STEP 4

Assemble the Bed Rail Brackets (BRBKT) to the Columns using 2 ea. High Torque Slide in Tnuts (HTSTN) on each side of the extrusion and insert the 5/16"-18 x Button Cap Screws.

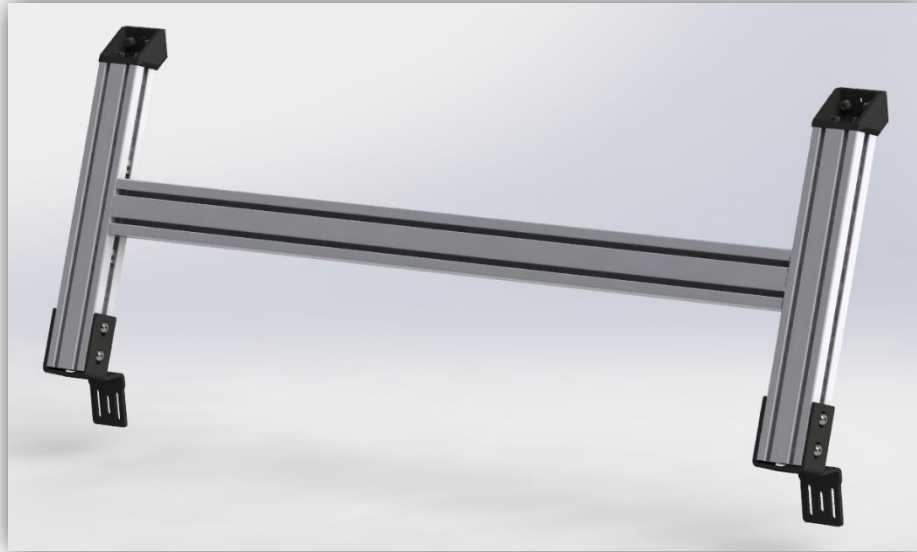


Leave a gap of approx. 1/4 to 1/2 from (COL) to (BRBKT). This will settle once the rack has been placed on the truck, to adjust for width of assembly.



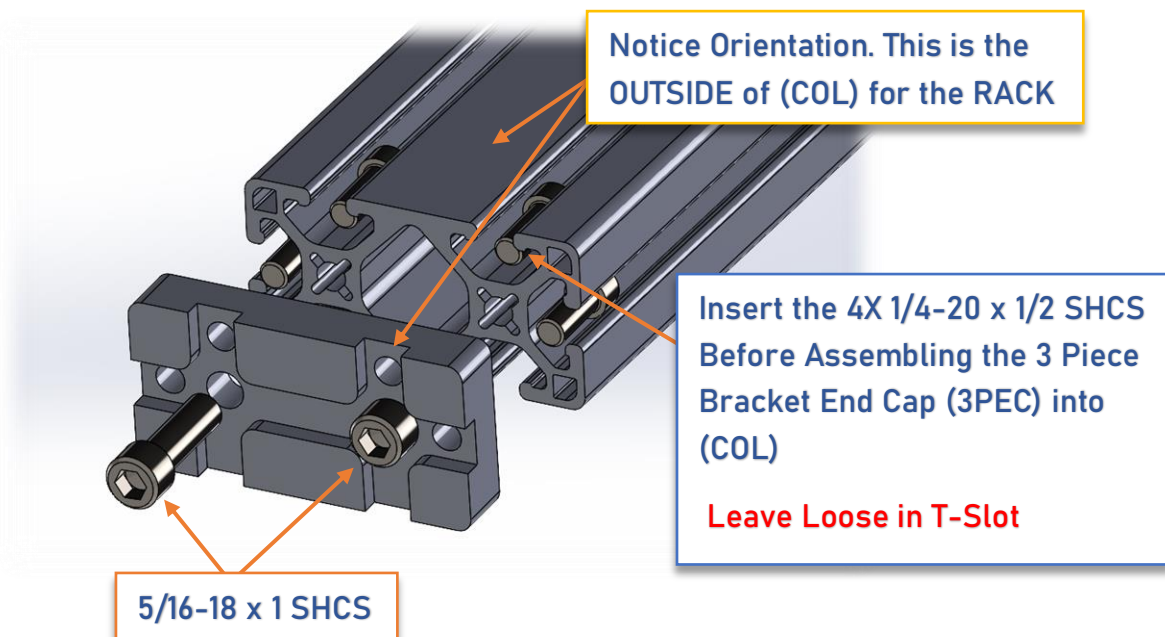
*Do not tighten the screws on these brackets, as they will settle once installed into the truck bed. Once in truck bed and with some weight placed, tighten all bracket bolts to Minimum of 10 Ft-Lbs of Torque. Do not Exceed 15 Ft-Lbs.*

Columns (COL) and Side Brace (SB) Assembled with XTR1 Corner Brackets (CBR) and Bed Rail Brackets (BRBRK) Shown below. Repeat Steps for Opposite Side.



## 4a Optional Assembly Method (UPGRADE OPTION)

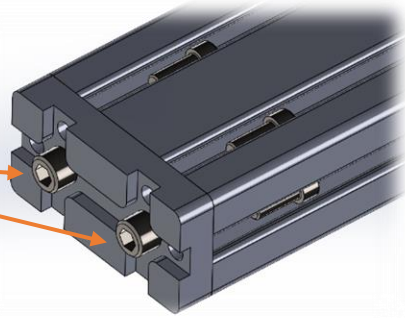
If you ordered the optional CNC Machined 3 Part Modular Bracket Assembly the Step 4 will be different and as shown below: (PN: "CNC-4-KIT-ST" OR "CNC-4-KIT-WD")





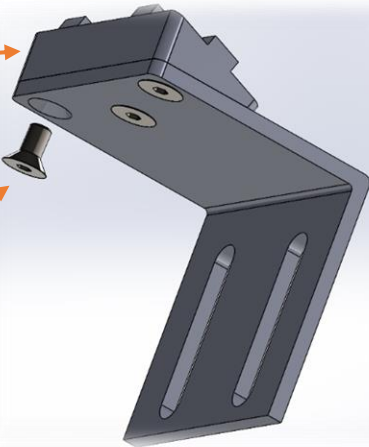
### Optional Assembly Method Continued.

Tighten the 5/16"-18 X 1"  
SHCS screw into (COL)  
hand tight, do not exceed  
MAX of 24 Ft-Lb of Torque.

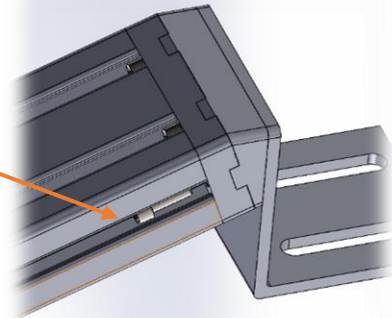


Assemble the 3 Piece  
Bracket Angle Adapter  
(3PAN) to the 3 Piece Bed  
Rail Bracket (3PBR)

Tighten the 1/4"-20 x 1/2"  
CSK Screws hand tight.  
Do not exceed 10 Ft-Lbs  
with a 5/32" Allen Wrench



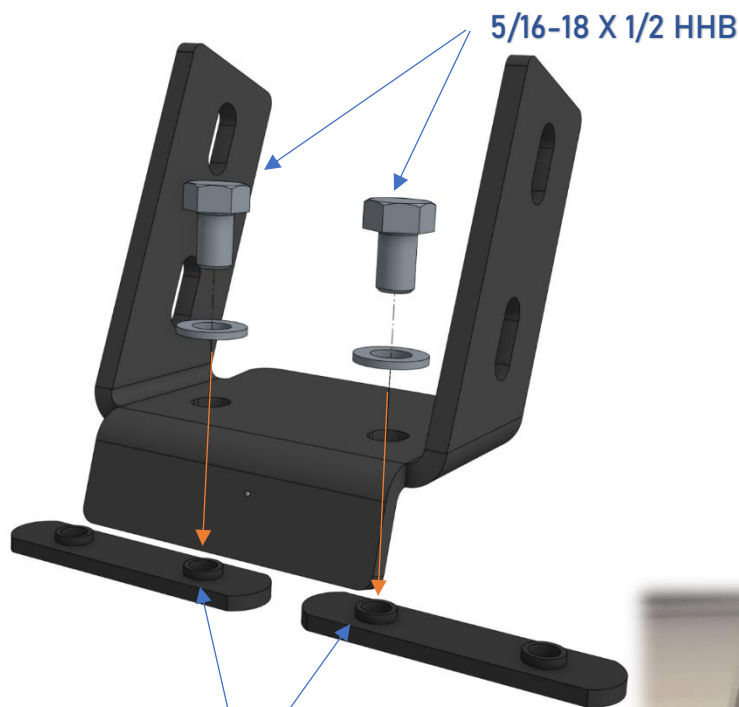
Using a 3/16" Long Allen  
Wrench with Ball End  
tighten the 4X 1/4"-20  
SHCS Screws into  
Bracket.



***Note: Long Allen Wrench with Ball End needed to tighten screws is not included.***

## 4b RetraxONE XR Bracket Assembly Method (If ordered)

If you ordered your bedrack with the optional RetraxONE® XR Tonneau compatible bracket, the assembly to the bedrail will be slightly different. Follow same steps as Step 4. You will need 8 ea. (DTSN) for the assembly to the RetraxONE® XR rails. Insert 4ea (DTSN) on each side of the RetraxONE® XR rails. Align with the location of the bracket and assemble with the provided washer and 5/16-18 x 1/2" Hex Head Bolts. Do not over tighten. Recommended to use **Vibra-Tite® VC3** up to 2 threads and use a paint marker to detect if bolts are becoming loose.



(DTSN)

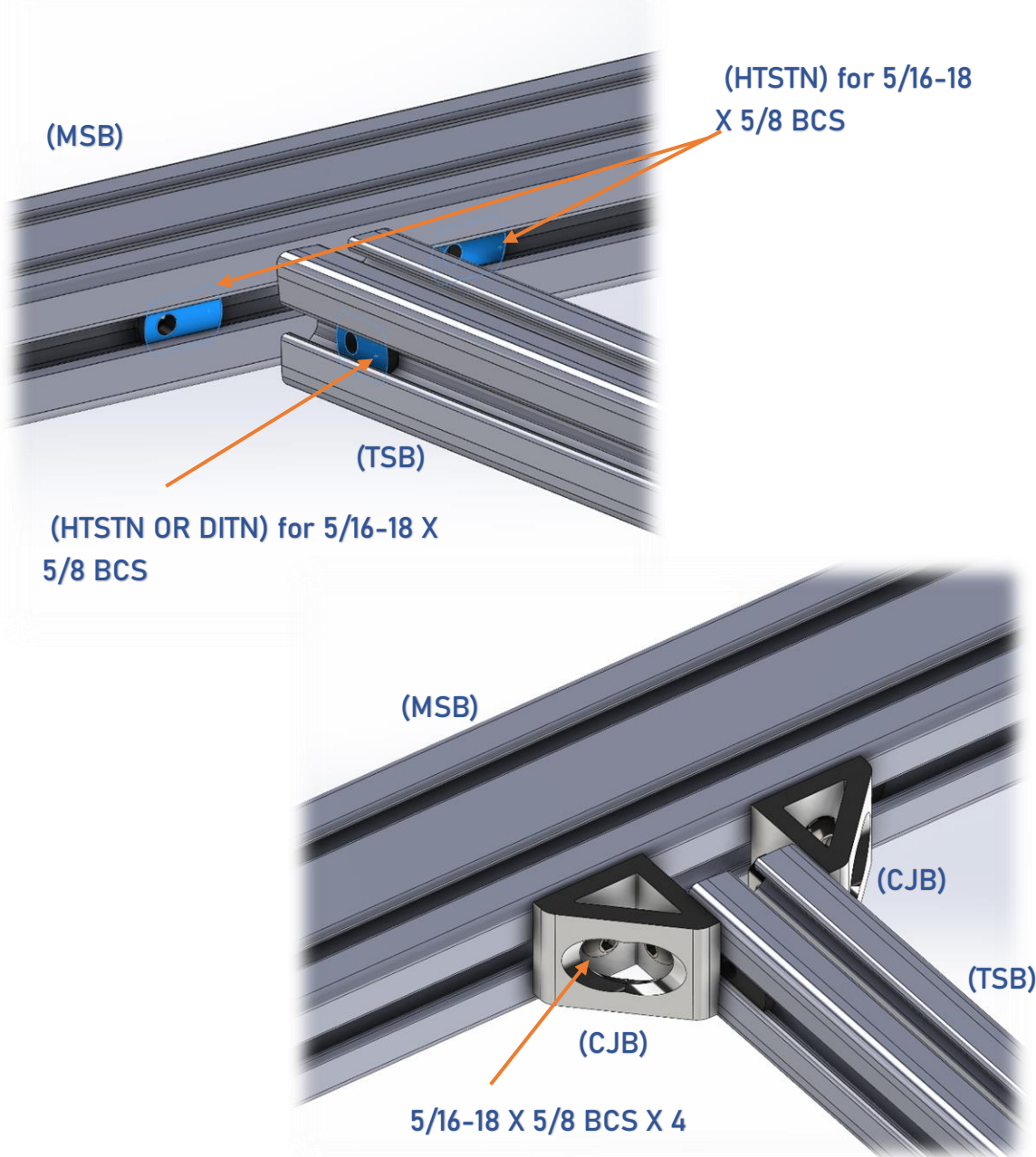
Use the indicated  
holes.

2 ea DTSN's per  
Bracket.



## STEP 6 – MAIN SUPPORTS ASSEMBLY

Assemble 2 Top Support Braces (TSB) to one of the Main Support Bars (MSB). Slide in 2 T-Nuts on each end facing inwards into the rack on MSB's and 2 on each side of the (TSB).

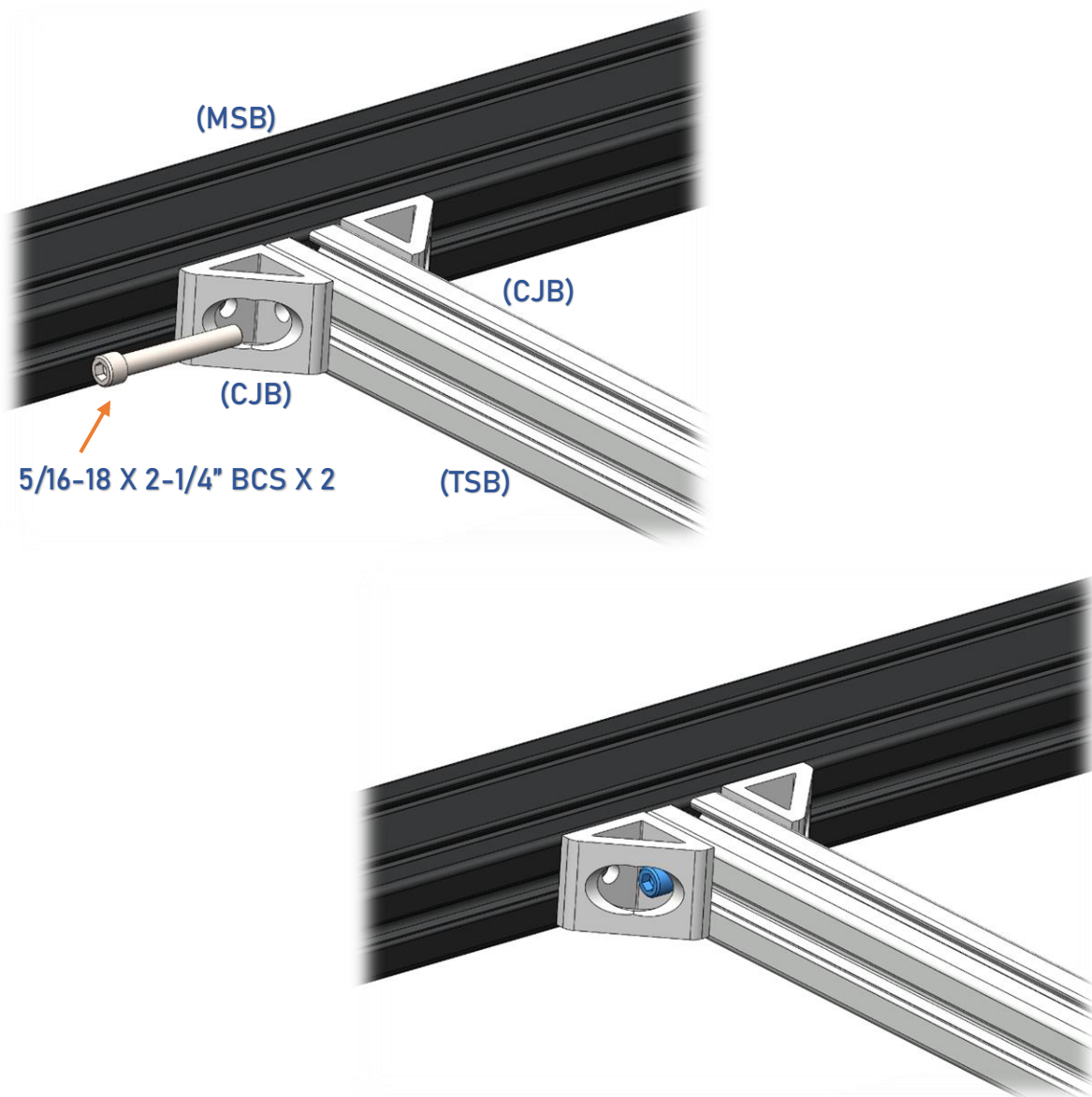


*Tighten all bracket bolts to Minimum of 10 Ft-Lbs of Torque. Do not Exceed 15 Ft-Lbs. These joints tend to loosen over time. Please check continuously for tight fit!*

## STEP 6a – MAIN SUPPORTS ASSEMBLY (HEAVY DUTY)

Newer version of the rack kit started shipping with TSB's with two bores on each end. This is to have the option to assemble the main supports with a THROUGH HOLE BOLT ASSEMBLY. This ensures that there is no slippage of the top braces if there is failure to keep the bolts tightened.

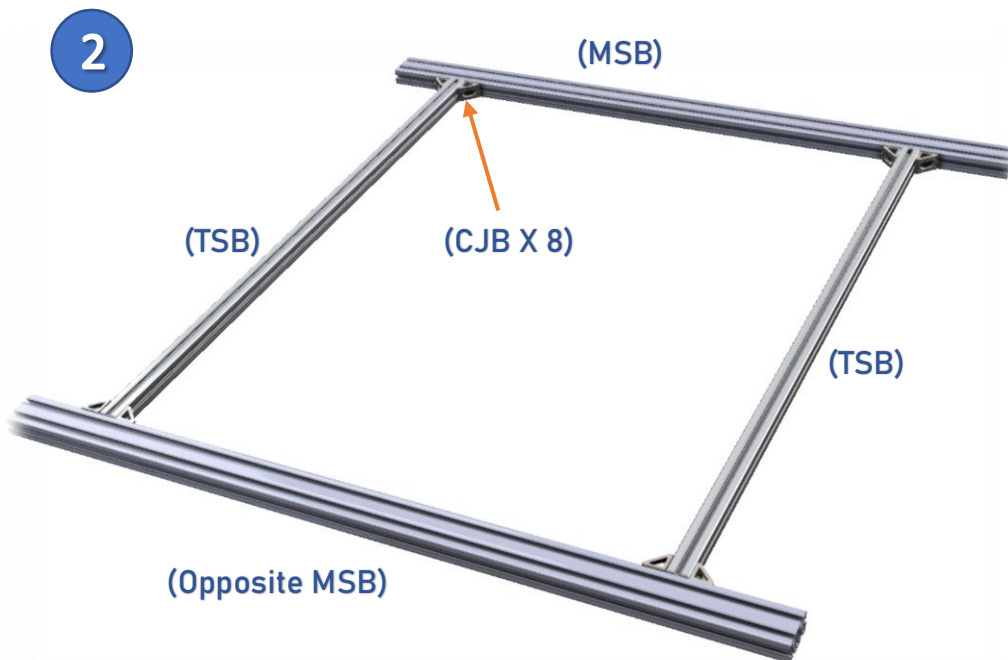
*Insert your 5/16-18 x 5/8 BCS screws into the holes facing the MSB before you insert the long bolt. Otherwise, you won't be able to fit them through!*



Note: Assemble Both Top Support Braces (TSB) into a single Main Support Bar (MSB) before assembling the opposite side of (MSB)

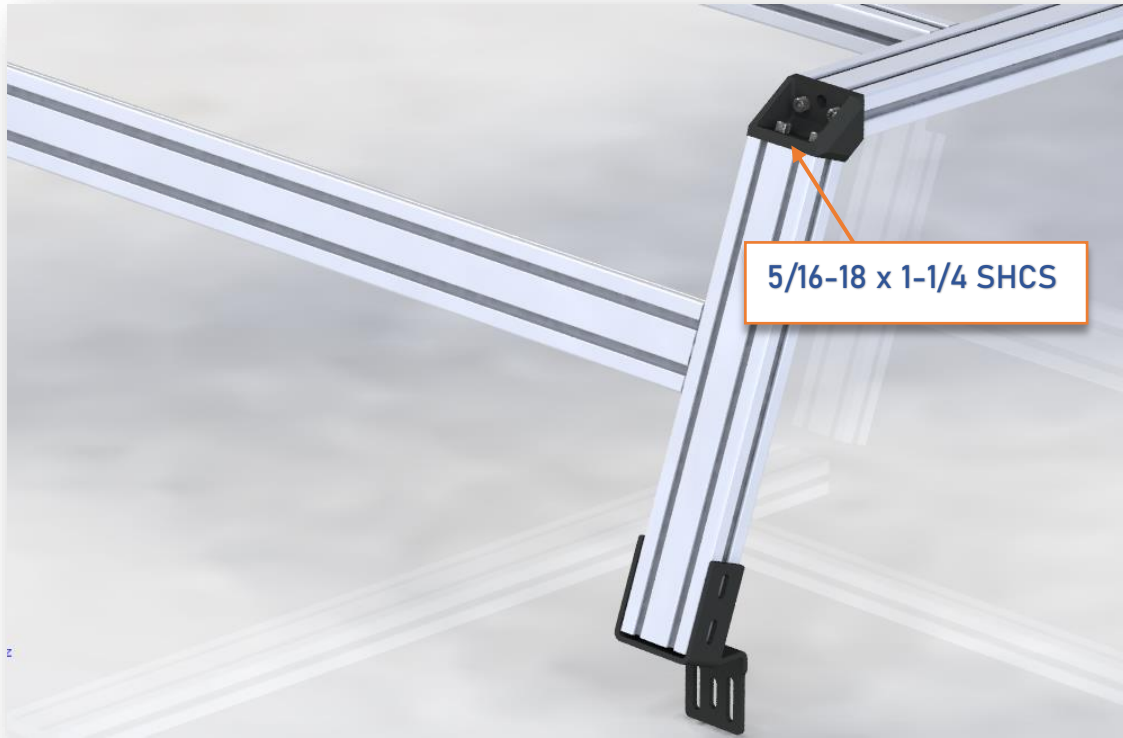


*If you are planning to use Slide-In T-Nuts instead of Drop-In T-Nuts for any accessories, insert in the extrusion channel before finalizing the top assembly.*



## STEP 7 – FINAL ASSEMBLY OF ALL COMPONENTS

Place the Main Support Bar Sub-Assembly on a surface such a table, saw horse or any other raised surface. With the help of a friend, assemble both sides of the rack by tightening the 5/16"-18 X 1 SHCS from XTR1 Corner Bracket (CB).

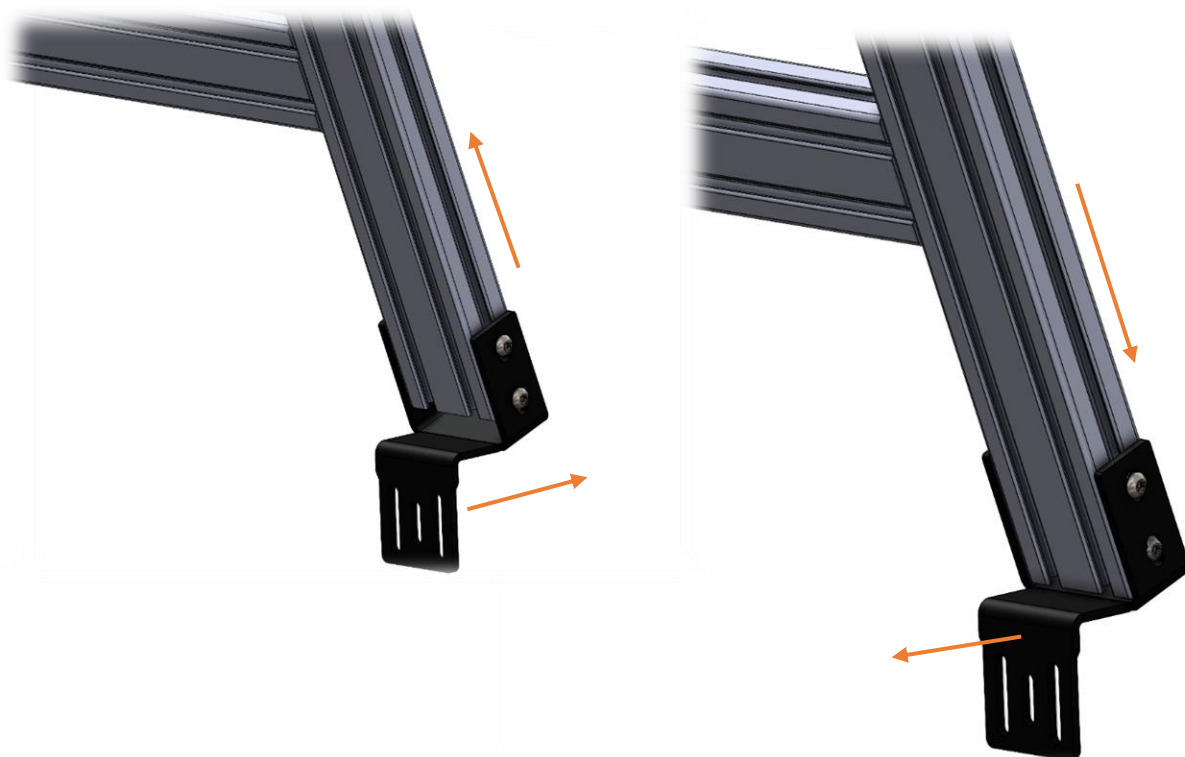


Congratulations, you are almost done. No one said it would be easy. Ok, maybe we did say it was easy. but that is in comparison to the competitor's racks!

We seriously hope you did not forget to insert your standard T-Nuts wherever slot you wanted to mount stuff. If not, do not worry, we have more drop-in T-Nuts available on our website.

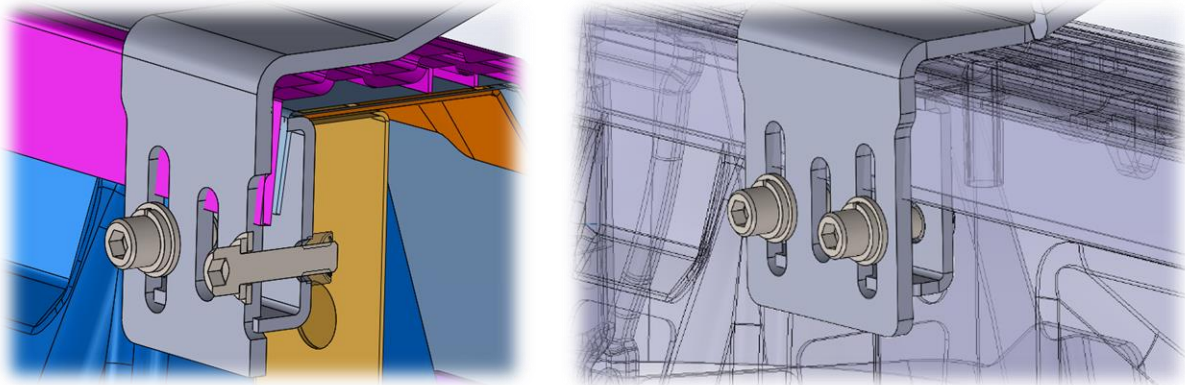
If you have a tonneau cover, you will need to uninstall prior to bed rack installation. The compatible tonneau cover rails would sit on top of our brackets. We advise using a 1/4" foam seal (usually available in major hardware stores) to seal the tonneau rails due to the gap created by our brackets.

Now, let's get back on *track*. With the help of a friend again (sorry, beers not included) take the bed rack assembly and place it on top of the bed rails. **There is some adjustment as depicted below. The height of column on wing bracket will displace the bracket inwards or outwards for rack assembly width. This is by design to have a tolerance built in. Usually a 1/4" gap between Column and Bracket is average.**



## STEP 8 – ASSEMBLY OF BEDRACK INTO TRUCK'S BED

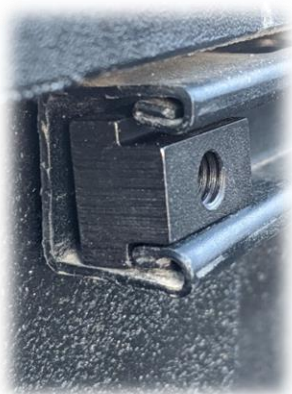
Secure the (BRBRK) brackets onto the truck's Bed Rails. Insert the Pinch Back Plate (PBP) behind the bracket and secure it with the 5/16"-18 X 1-1/4 SHCP. Use Washers and/or locknuts if applicable for your model. Hand tighten, observing PBP deformation. Max torque should not exceed 24 ft-lb.



*Alternatively, if you have Toyota, Nissan or Jeep OEM Bed Rail T-Slot and if you selected this option during ordering, you can assemble with the T-Nuts supplied in lieu of (PBP) brackets. \* UPDATE\* - New version of T-Slot Trail Rail started shipping with bedracks after 6/2021. You might have either a PemSert Stainless Steel backplate or T-Slot Nut as depicted below.*

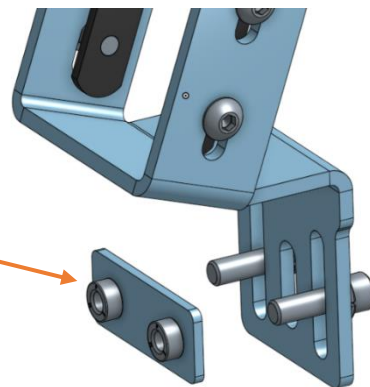
*If you use RetraxONE® XR Brackets, these are assembled into the tonneau rails as explained in step 4b.*

LEGACY VERSION - T-NUT



PROPRIETARY NEW  
BACKPLATE FOR TRAIL RAIL

NOTICE ORIENTATION  
OF PEMSERTS. INSERT  
SCREWS THROUGH  
THE FLAT SIDE



Before you hit the road, check every bolt, screw and attachment. Make sure it's properly tightened. Do not forget to periodically check for loose conditions.



## STEP 8a – ASSEMBLY OF BEDRACK FOR CHEVY TRUCKS

Chevrolet Silverado and GMC Sierra models are assembled differently, as they use stake pocket mounts. Some exceptions apply, such as Softopper or shorter bedracks.

For more information about this installation or if you have questions, contact us at [support@xtrusiondesigns.com](mailto:support@xtrusiondesigns.com)

To assemble the rear stake pockets, use the supplied “L” bracket. Affix to the inner bed side with the supplied 5/16-18 bolt using the fender washer, and a standard washer. Do not tighten yet. Then locate the rear “wing style” bracket. Bolt against the mating surface of the “L” bracket. Do not tighten completely until the bedrack structure is in place.

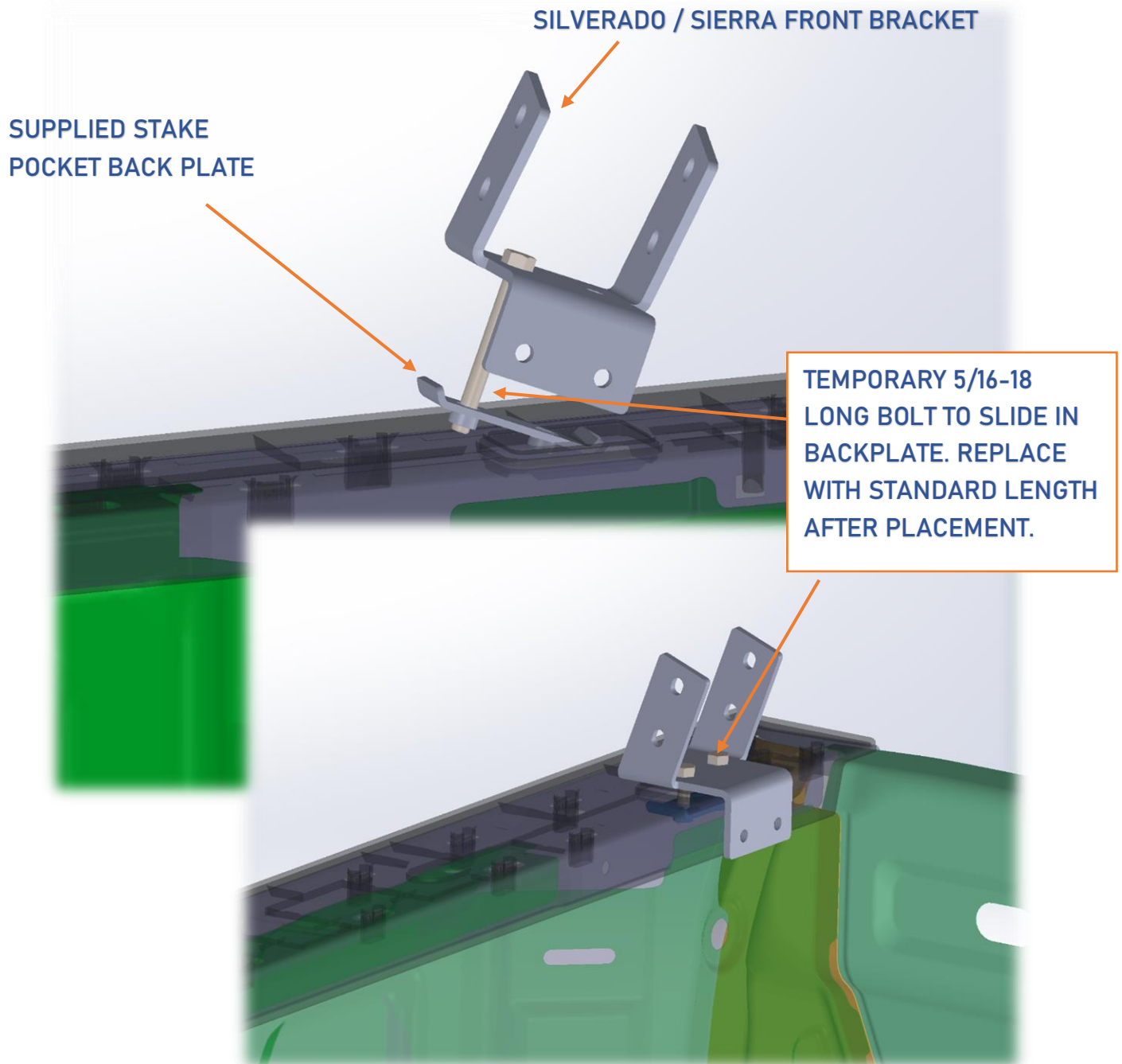
### SILVERADO / SIERRA REAR BRACKET

### SUPPLIED “L” BRACKET

5/16-18 SOCKET HEAD SCREW & STANDARD WASHER. USE VC3 THREAD LOCKER.

5/16-18 SOCKET HEAD SCREW WITH FENDER & STANDARD WASHER. USE VC3 THREADLOCKER

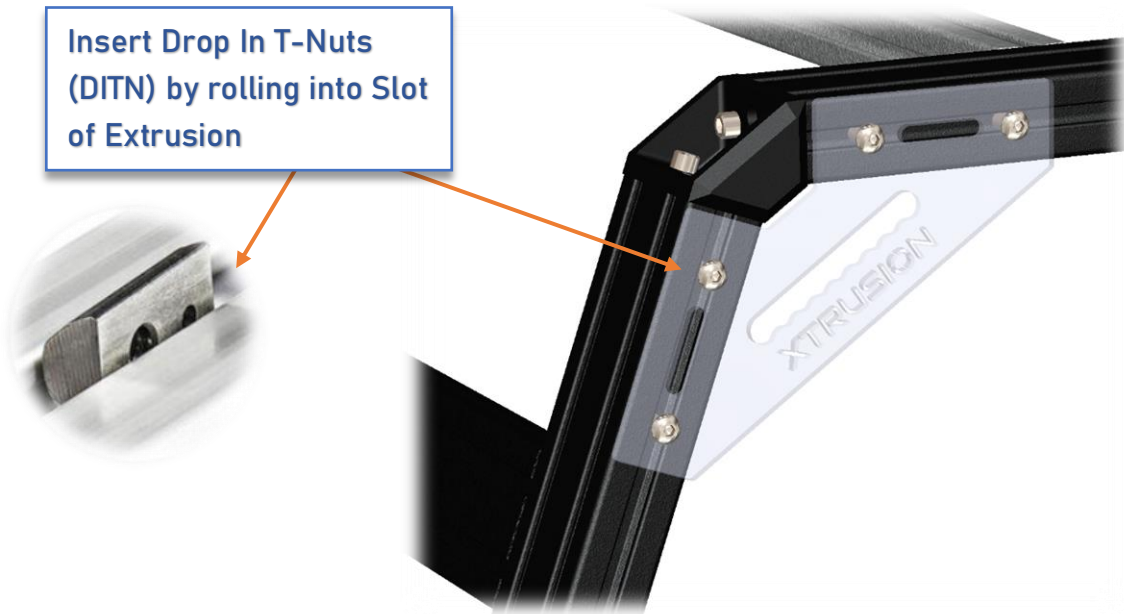
The brackets near the cabin will have a double nut backplate. On some models you will have to identify and open up the stake pocket area from the bedrail trim. Once you do, insert the supplied long bolt into one of the bedrail bracket holes, and start the threads on the back plate. Slide in the backplate into the stake pocket so that it grips the sheet metal portion of the stake pocket as you pull the bolt up. Use the supplied shorter Hex bolts to secure the other hole. Remove the long bolt and secure with short bolt. Do not tighten until bedrack structure is in place. Use VC3 Threadlocker.



## OPTIONAL – “OFF-ROAD REINFORCEMENT PLATES

If you chose the optional OFF-ROAD REINFORCEMENT PLATES from our website (PN: “XTR1-OFFRD4-BLK” OR “XTR1-OFFRD4-SIL”), you can assemble at the end, by inserting 2 Drop In T-Nuts (DITN) on the single side of the Main Support Bars (MSB) and Column (COL). Slide in place and tighten with the supplied (5/16-18 X 5/8 BCS) screws. Check orientation of text to your desired side.

Insert Drop In T-Nuts  
(DITN) by rolling into Slot  
of Extrusion





\*Rack shown with OPTIONAL Black Rugged Powder Coat and Clear Off-Road Reinforcement Plates.

## ACCESSORIES

Please refer to the Accessories Instructions provided with your purchase. We have several under continuous development! If you would like to see something in particular, let us know!



Notes:

The rack was designed with latest OEM CAD data. However, every model has tolerances and variances. Additionally, every kit is cut to size and there are thousands of variations for each model. If your rack does not fit into the rails, or if it has a big gap, please contact us to get more details and review options. We will resolve any issue with fitment as soon as possible. Contact us via email to [support@xtrusiondesigns.com](mailto:support@xtrusiondesigns.com).

Our racks use generic extrusion in 15 series, so it is compatible with most manufacturers accessories and components such as Faztek®, 8020 Inc ®, Bosch®, etc. You can keep adding and creating structures, at your own risk of damage and/or warranty loss.

## WARRANTY

Xtrusion Designs warrants product to be free from defects in material and workmanship, for a period of 1 year, provided there has been normal use and proper maintenance. All remedies under this warranty are limited to the repair or replacement of any item found by the factory to be defective within the time period specified. If you have a warranty claim, first contact us via email to evaluate all options. Warranty applies to original buyer of the rack. You must retain proof of purchase and submit a copy with any items returned for warranty work. Upon completion of warranty work, if any, we will return the repaired or replaced item or items to you freight prepaid. Damage to our products caused by accidents, Fire, vandalism, negligence, mis-installation, misuse, modifications, Acts of God, or by defective parts not manufactured by us, is not covered under this warranty.

Damage or scratches to powder coat paint or anodize finishes that is part of daily use is not covered under this warranty. High speed off road driving even with a light load can cause damage to the rack, accessories and vehicle body. Damage caused by high speed off road driving and abuse is not covered under warranty.

Any implied warranties of merchantability and/or fitness for a particular purposed created hereby are limited in duration to the same duration and scope as the express written warranty. Xtrusion Designs LLC shall not be liable for any incidental or consequential damage. Some states do not allow limitations on how long an implied warranty lasts, or the exclusion or limitation of incidental or consequential damages, so the above limitations or exclusions may not apply to you. This warranty gives you specific legal rights, and you may also have other rights that vary from state to state.

Please contact us at [support@xtrusiondesigns.com](mailto:support@xtrusiondesigns.com) or call us at 316-841-3107 for any warranty related issues.