TCC LC 250 PRADO REAR BAR

TECHNICAL DATA SHEET & FITTING INSTRUCTIONS

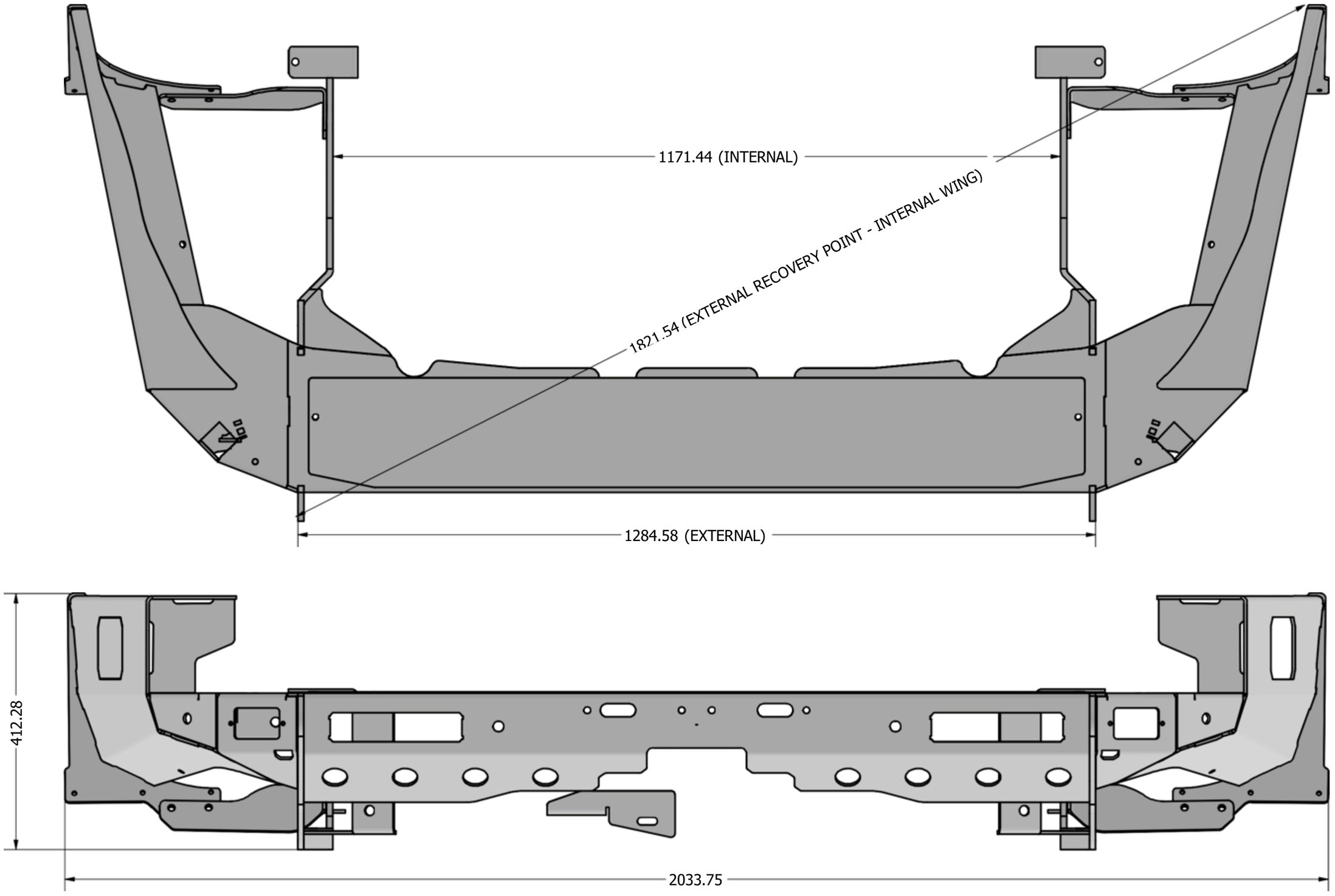


AUSTRALIAN MADE

GENERAL DIMENSIONS

ALL UNITS IN MM

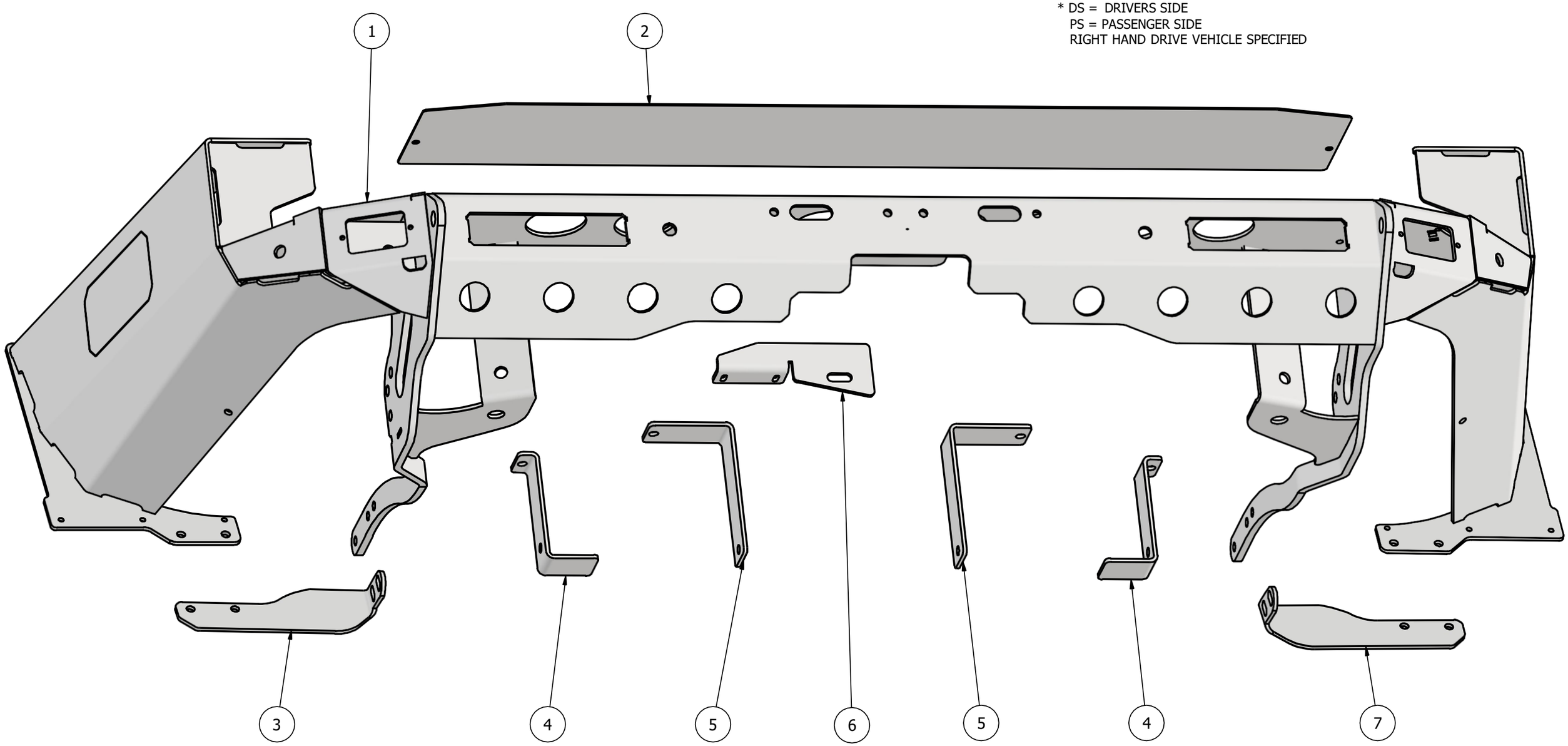
EXTERNAL / INTERNAL REFERS TO START & END POINTS FOR MEASUREMENT



BAR BASE ASSEMBLY

PARTS LIST		
ITEM	QTY	PART NAME
1	1	LC250 REAR BAR BASE
2	1	TREAD PLATE
3	1	WING TO CHASSIS BRACE (PS)
4	2	CHASSIS CLAMP (OUTER)
5	2	CHASSIS CLMP (INNER)
6	1	TRAILER PLUG MOUNT
7	1	WING TO CHASSIS BRACE (DS)

* DS = DRIVERS SIDE
PS = PASSENGER SIDE
RIGHT HAND DRIVE VEHICLE SPECIFIED



1. PREPARING FOR INSTALL

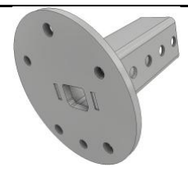
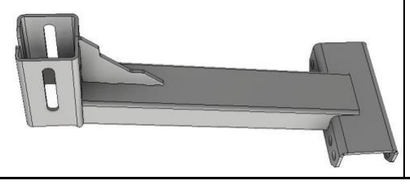
BAR BASE - DETAILED IN ASSEMBLY VIEW (PAGE 3)

QTY	PART NAME	PART IMAGE	PACKED (OFFICE USE ONLY)
2	ROADVISION TAIL LIGHTS		
2	ROADVISION REVERSE LIGHTS		

CARRIER ARMS

QTY	PART NAME	PART IMAGE	PACKED (OFFICE USE ONLY)
1	DRIVERS SIDE CARRIER ARM		
1	PASSENGER SIDE CARRIER ARM		
2	LATCH DROP DOWNS		

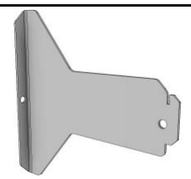
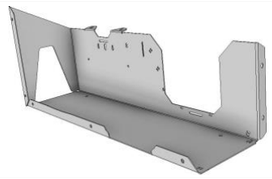
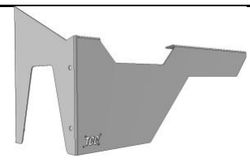
TYRE CARRIER

QTY	PART NAME	PART IMAGE	PACKED (OFFICE USE ONLY)
1	TYRE HEAD		
1	TYRE UPRIGHT		

ACCESSORIES INCLUDED IN BOX

WHEN ORDERED IN A STANDARD CONFIGURATION

JERRY HOLDER

QTY	PART NAME	PART IMAGE	PACKED (OFFICE USE ONLY)
1	UNIVERSAL SHELF BASE		
1	JERRY DIVIDER		
2	JERRY LOWER GUSSETS		
1	JERRY INTERNAL		
1	JERRY FRONT COVER		

HARDWARE KITS

QTY	PART NAME	PART IMAGE	PACKED (OFFICE USE ONLY)
1	VEHICLE SPECIFIC MOUNTING KIT	REF QTYS ON BAG LABEL	
1	TYRE CARRIER BOLT BAG	REF QTYS ON BAG LABEL	
1	JERRY HOLDER BOLT BAG	REF QTYS ON BAG LABEL	
1	CARRIER ARM (PAIR) BOLT BAG	REF QTYS ON BAG LABEL	
1	LATCH KIT (PAIR)	REF QTYS ON BAG LABEL	
1	TREAD PLATE BOLT BAG	REF QTYS ON BAG LABEL	
1	BEARING KIT (PAIR)	REF QTYS ON BAG LABEL	

3. GENERAL CARE INSTRUCTIONS

PLEASE NOTE THAT THIS PRODUCT REQUIRES A LEVEL OF PROFESSIONAL FITTING ABILITY. INEXPERIENCED FITTERS MAY FIND THIS TO BE A DIFFICULT TASK.

To ensure your product is properly cared for and lasts as expected, please consider the following:

- Ensure all components are properly adjusted during install so that they all align with one another.

- Check bolts after 1000km, then regularly every 10,000km.

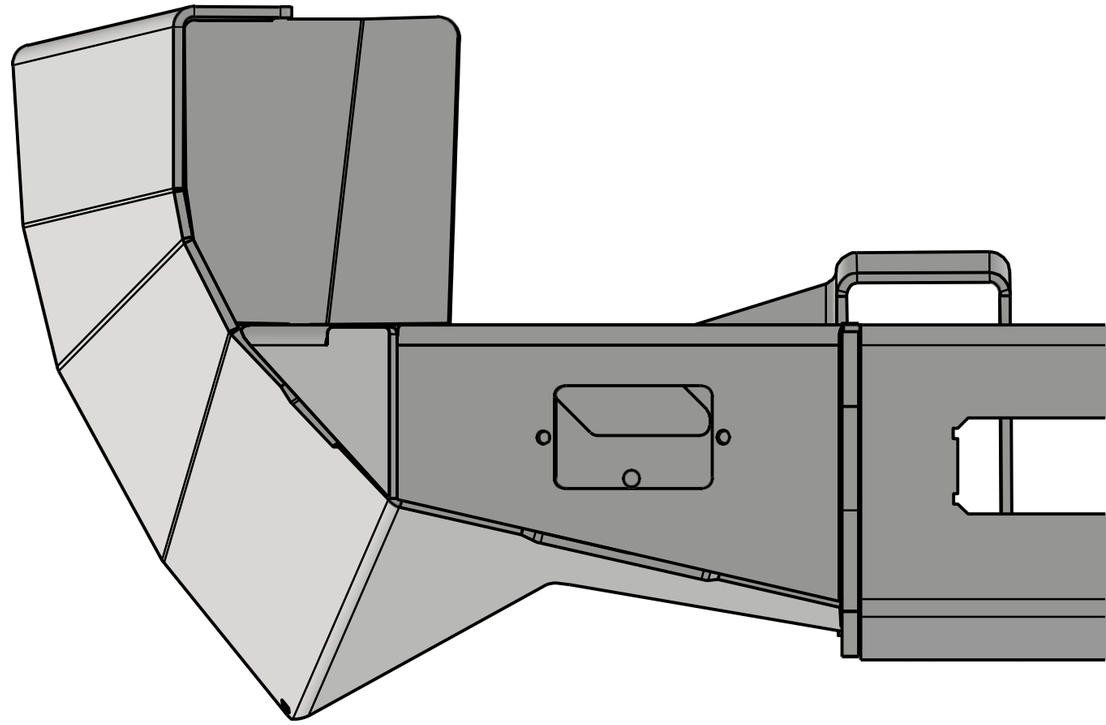
- Keep external joins and moving components properly protected with a lubricant such as Lanolin.

- Use a high quality grease and pack bearing sleeve full.

- Do not expose the product to salt water or salty conditions.

- Do not wash the product with any harsh chemicals.

- Do not over load product or use it for any purpose that it is not intended for.



4. REAR BAR INSTALL

REMOVING THE FACTORY LC250 BUMPER

PHOTOS TO COME

Note: Retain all factory plastic trim pieces and fittings in a safe spot until rear bar has been fully installed.

4.1 Remove the factory tow cover to expose the tow hitch. Remove 1 x plastic clip either side of the tow hitch. This will release the upper section of the cover. Set both sections aside.

4.2 Using a plastic trim removal tool, pry the tread plate from the rear bumper. Once the edge closest to you has been fully released, the tread plate can be carefully pulled upwards to remove it from the bumper. Set aside.

4.3 Disconnect the rear bumper wiring harness. 1 x plug accessed through the hole under the tread plate on the drivers side, and 1 x plug through a hole under the tread plate on the passenger side.

4.4 Remove plastic trim panel that is positioned between the top of the rear bumper, and the seal for the rear door. Start at the passenger side brake light and carefully remove the trim panel until you reach the drivers side brake light. This should uncover several bolts holding the top of the rear bumper to the vehicle. Set aside.

4.5 Remove 6 x 10mm bolts securing top of bumper to vehicle. Set aside in a safe place. 4 x bolts very visible along top edge. 2 x bolts hidden on far right side and far left side inline with bolts just removed.

4.6 Remove panel below brake lights by carefully pulling straight out towards you. Set aside in a safe place.

4.7 Starting on the drivers side, remove 2 x 10mm bolts from underneath the panel removed in STEP 4.6. Leave door stop bolt in place. Repeat for passenger side.

4.8 Remove 2 x bolts securing silver plastic trim either side of tow hitch. Bolts are located underneath. Remove silver trim pieces and set aside in a safe place.

4.9 Remove 4 x 10mm bolts (3 inside wheel arch, 1 behind mudflap) and 1 x plastic clip securing drivers side mudflap to vehicle. Remove mudflap and set aside in a safe place. Repeat for passenger side.

4.10 Remove drivers side flare by undoing 1 x 10mm bolt and 2 x plastic clips. Pull the flare outwards towards you working your way down to the bumper. Remove and set aside in a safe place.

4.11 Remove plastic clips securing bumper to vehicle from area exposed after removing flare in step 4.10.

4.12 Remove the rear bumper from the vehicle by starting on the drivers side wheel arch, and pulling out towards you. A second person can be used to prevent the bumper falling as it is removed from the vehicle. Set aside in a safe place.

4.13 Remove foam insert left behind.

4.14 Remove rear bumper wing bracket (long skinny black plastic with 2 x pink screws) by backing off screws then pulling hard towards you.

4. REAR BAR INSTALL

REMOVING THE FACTORY LC250 REAR BUMPER

4.15 Unplug the lane departure sensors and unclip from factory mounting bracket. **IMPORTANT! Handle with care and ensure LH and RH side sensors are noted. Failure to install in correct location will cause the lane departure system to malfunction.**

4.16 Remove the lane departure sensor brackets from the vehicle. Set aside.

4.17 Remove bumper corner braces by undoing 4 x bolts (each side). Set aside.

CONTINUE TO STEP 5

5. REAR BAR INSTALL

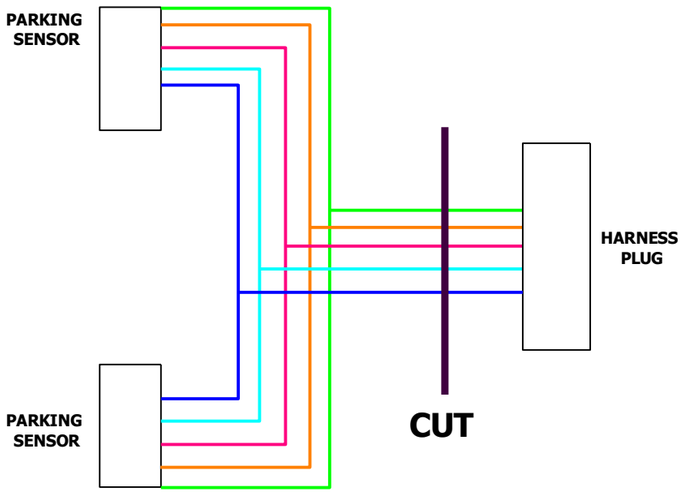
EXTENDING THE PARKING SENSOR HARNESS

5.1 Remove the factory parking sensors from the LC250 bumper by pushing 2 x plastic tabs outwards from the sensor body. **IMPORTANT! Handle with care and note the orientation and position of the sensors, as they must be repositioned in the TCC rear bar in the same place. Failure to do so will cause the sensors to malfunction.** A piece of masking tape marked with position and stuck to sensor can help keep track.

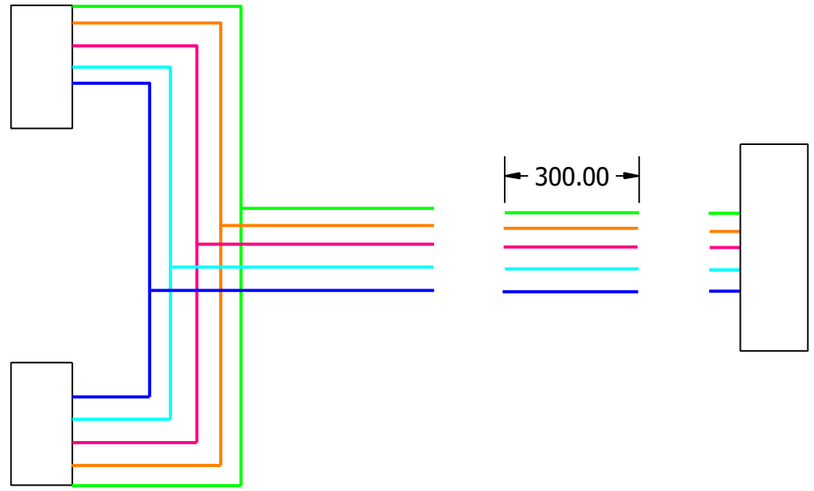
5.2 The parking sensor harness must be extended for the parking sensors to be housed in the TCC rear bar. To do this, take note of wire colour and position as it exists behind the large plug that joins to the body harness.

5.3 Cut all wires behind this plug on the sensor harness, leaving enough wire on both ends for a rejoin. Add an additional 300mm of wire, and rejoin wire to original position. Repeat for both divers side and passenger side parking sensor harness. Below is a simplified diagram of this process (**5.A - 5.B**):

5.A



5.B



WIRE COLOUR FOR ILLISTRATION PURPOSES ONLY

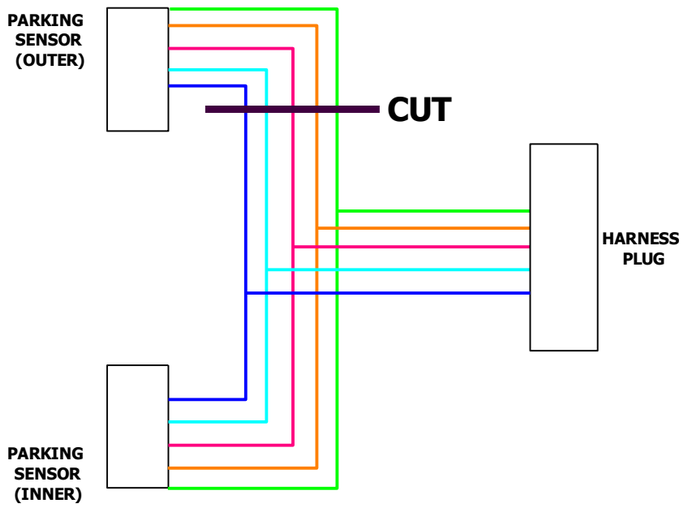
CONTINUE TO STEP 5.4 ON NEXT PAGE

5. REAR BAR INSTALL

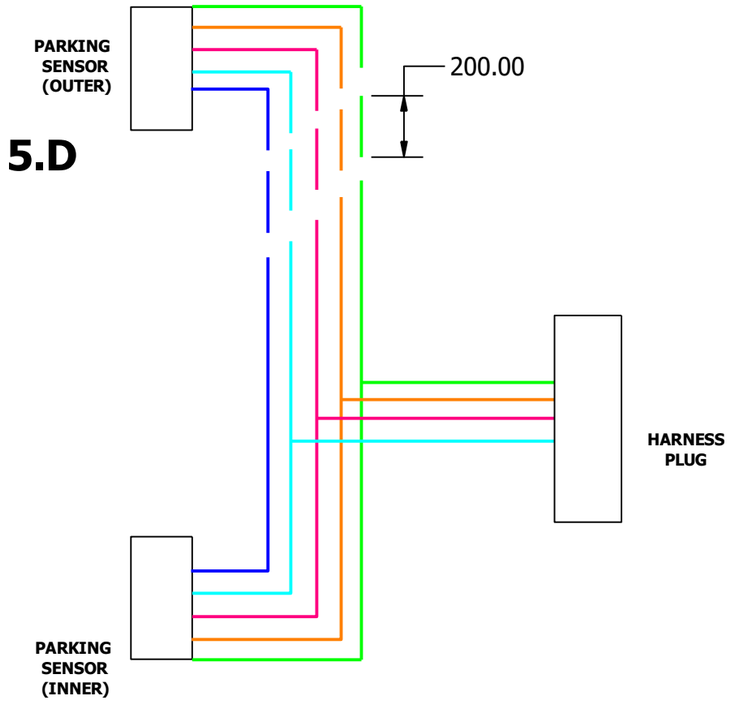
EXTENDING THE PARKING SENSOR HARNESS

5.4 The outer parking sensor also needs to be extended on the harness by approx. 200mm. Figure **5.C - 5.D** depicts the process required. Repeat for both drivers side and passenger side harness:

5.C



5.D



WIRE COLOUR FOR ILLISTRATION PURPOSES ONLY

CONTINUE TO STEP 6 ON NEXT PAGE

6. REAR BAR INSTALL

CUTTING AND INSTALLING TRIM PANELS

PHOTOS TO COME

6.1 Some pieces of the factory bumper are reinstalled on the vehicle with the TCC rear bar.

6.2 Locate the brackets that hold the painted trim below the brake lights to the vehicle. These brackets are attached to the rear bumper (circled in **FIGURE 6.A**)

6.3 Cut these brackets off the rear bumper so that all mounting clips for the painted trim panel are maintained, but no part of the bracket will be visible when the painted trim panel is installed.

6.4 The upper section of the rear bumper where it meets the rear door seal can be trimmed to fill the gap between TCC rear bar and vehicle (circled in FIGURE 6.B). This measurement will vary from vehicle to vehicle, however approx 20mm should be retained. Test fit TCC rear bar to confirm.

6.5 Install trim brackets (both sides) along with upper bumper trim. Install painted trim panel last.



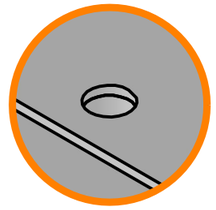
FIGURE 6.A
(TOYOTA)



FIGURE 6.B
(TOYOTA)

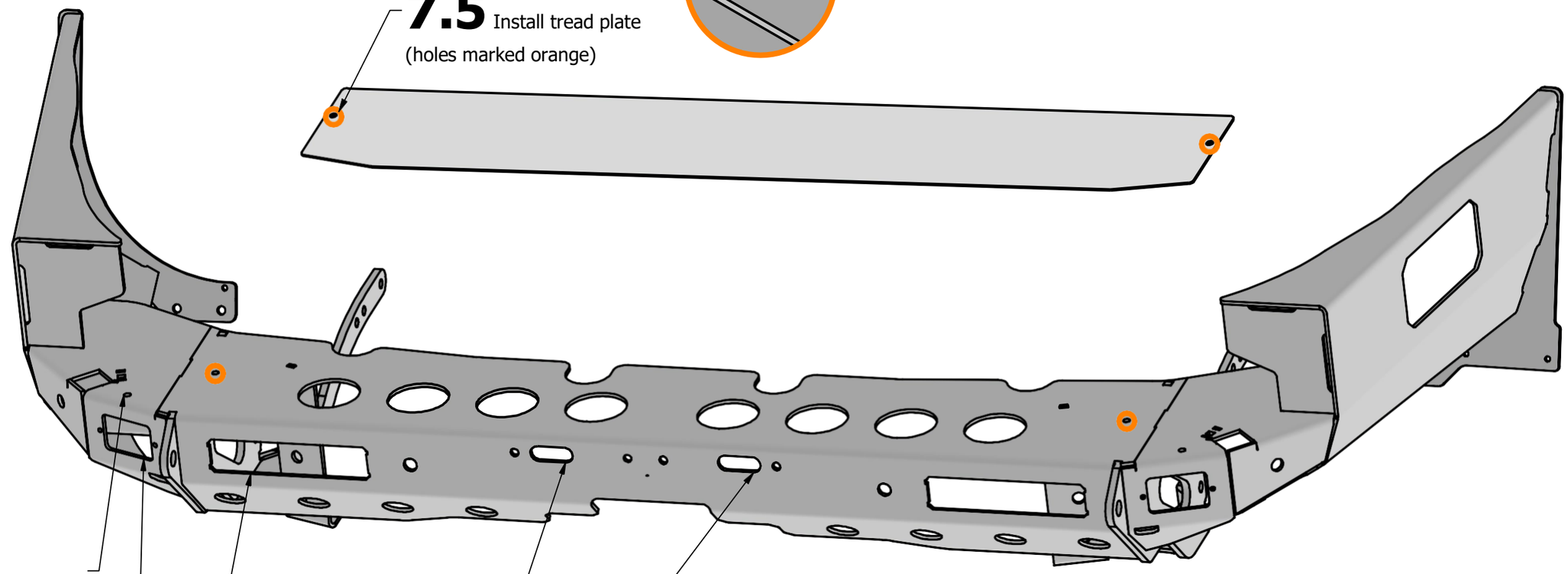
7. REAR BAR INSTALL

FITTING THE ACCESSORIES



M8 x 20mm BUTTON HEAD BOLTS
M8 WASHERS
M8 HEX NUTS

7.5 Install tread plate
(holes marked orange)



7.1 Install gas strut balls

7.2 Install reverse lights

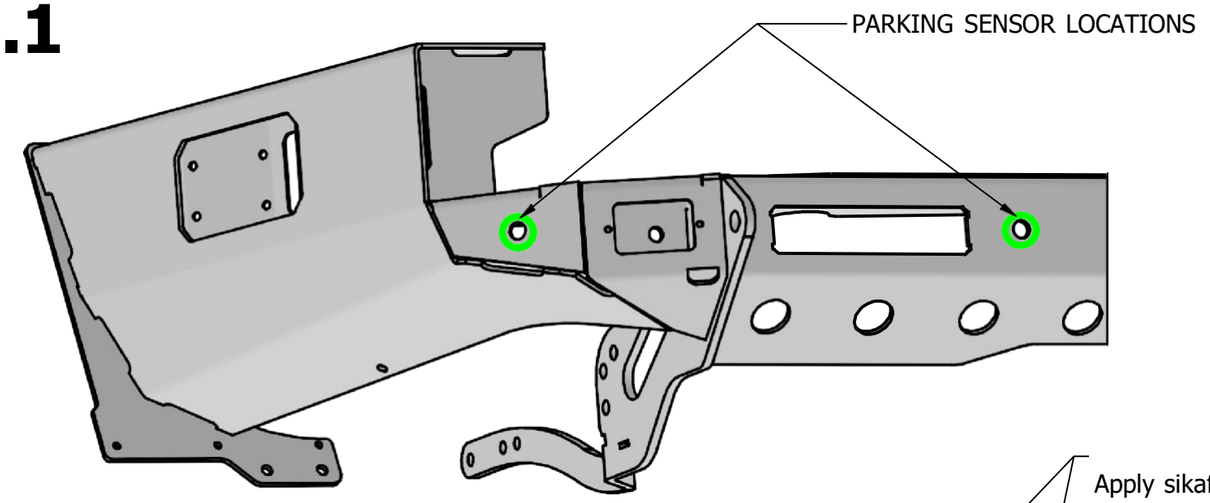
7.3 Install tail lights.
Ensure indicator is placed outside

7.4 Install latch hooks, hook plates
and carrier arm support plates (instructions online)

8. REAR BAR INSTALL

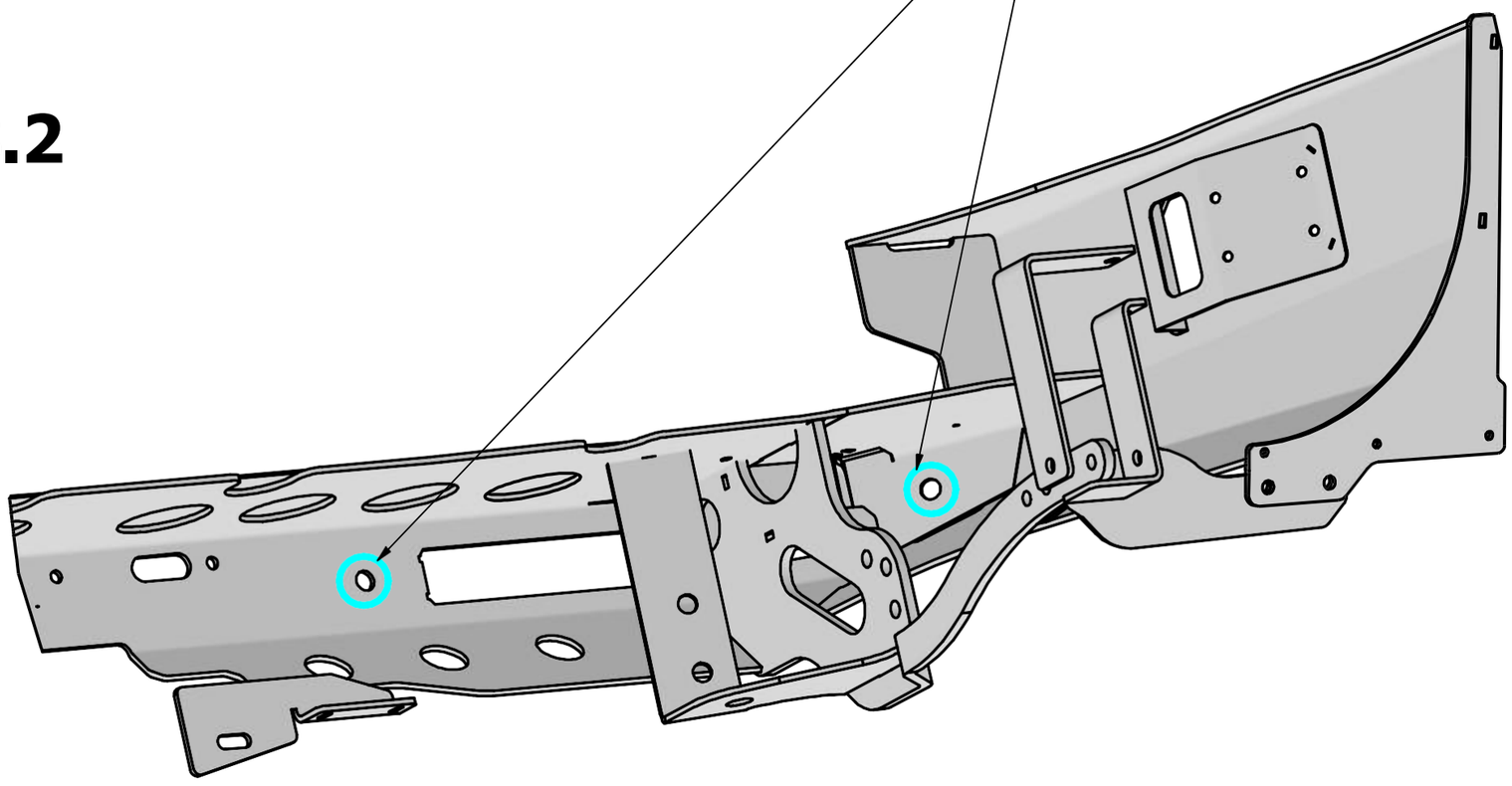
FITTING THE PARKING SENSORS

8.1



Apply sikaflex to factory sensor housing removed from factory bumper, align to sensor cutouts on TCC rear bar, and stick to internal face of TCC rear bar. **IMPORTANT!** Ensure parking sensors are installed in the same orientation as factory. Failure to do so will cause system to malfunction.
Allow 24 hours to dry before driving vehicle.

8.2

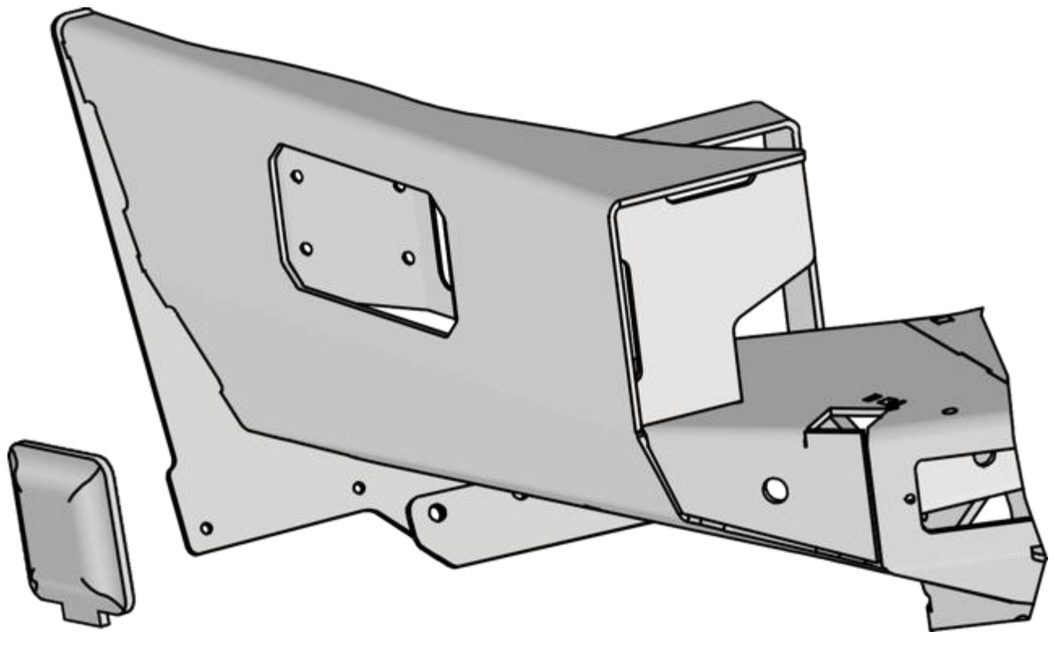


9. REAR BAR INSTALL

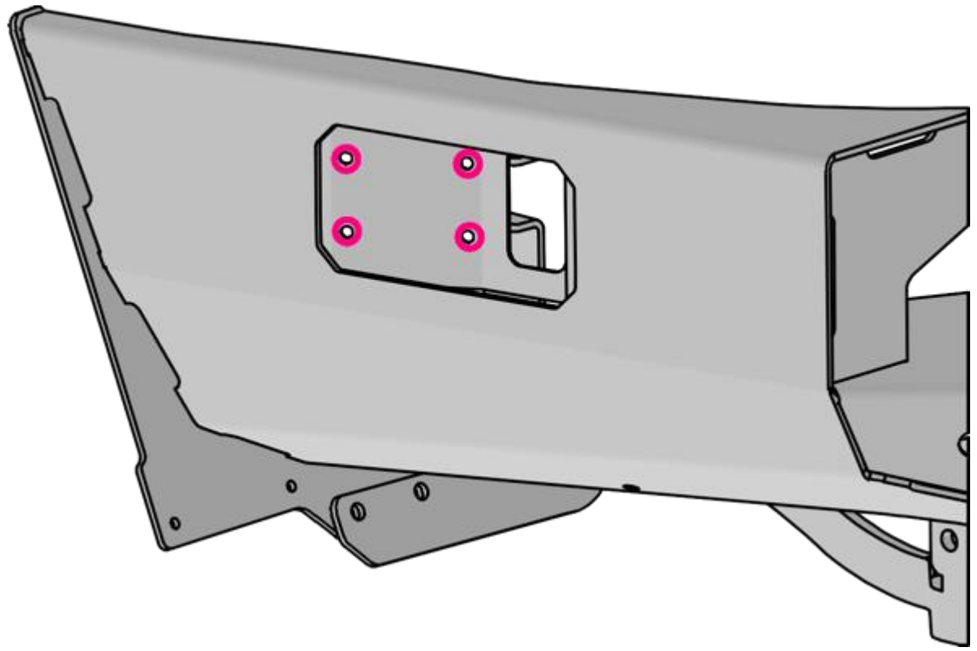
FITTING THE LANE DEPARTURE SENSORS

Remove lane departure from vehicle (detailed in STEP 4)

9.1



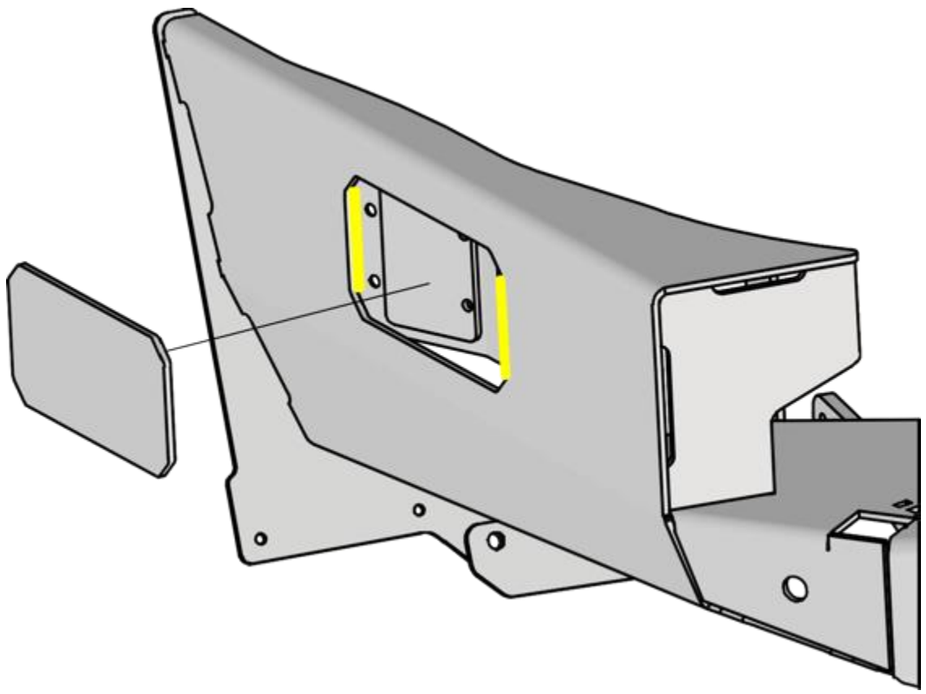
9.2



Affix sensor to bracket using cables and/or Sikaflex. Holes marked pink are designed for cable ties.

WARNING! Ensure sensor is positioned in the same orientation as factory position. Failure to do so will cause vehicle safety systems to malfunction.

9.3



Apply Sikaflex to exposed areas of bracket (highlighted yellow) and install sensor cover. Apply masking tape to external face to hold sensor cover while Sikaflex dries.

Please allow 24 hours for Sikaflex to dry before driving vehicle.

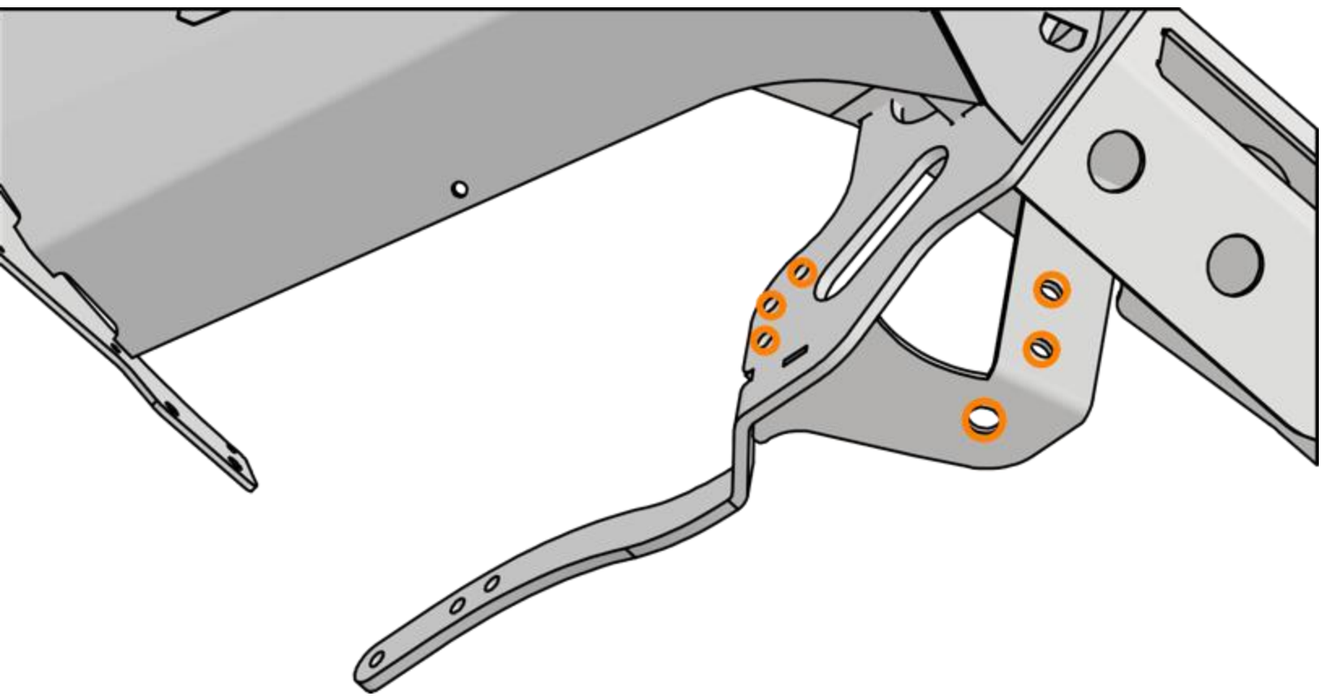
WARNING! Ensure no Sikaflex contaminates the surface of the sensor or sensor cover. Failure to keep either surface clean will cause vehicle safety systems to malfunction.

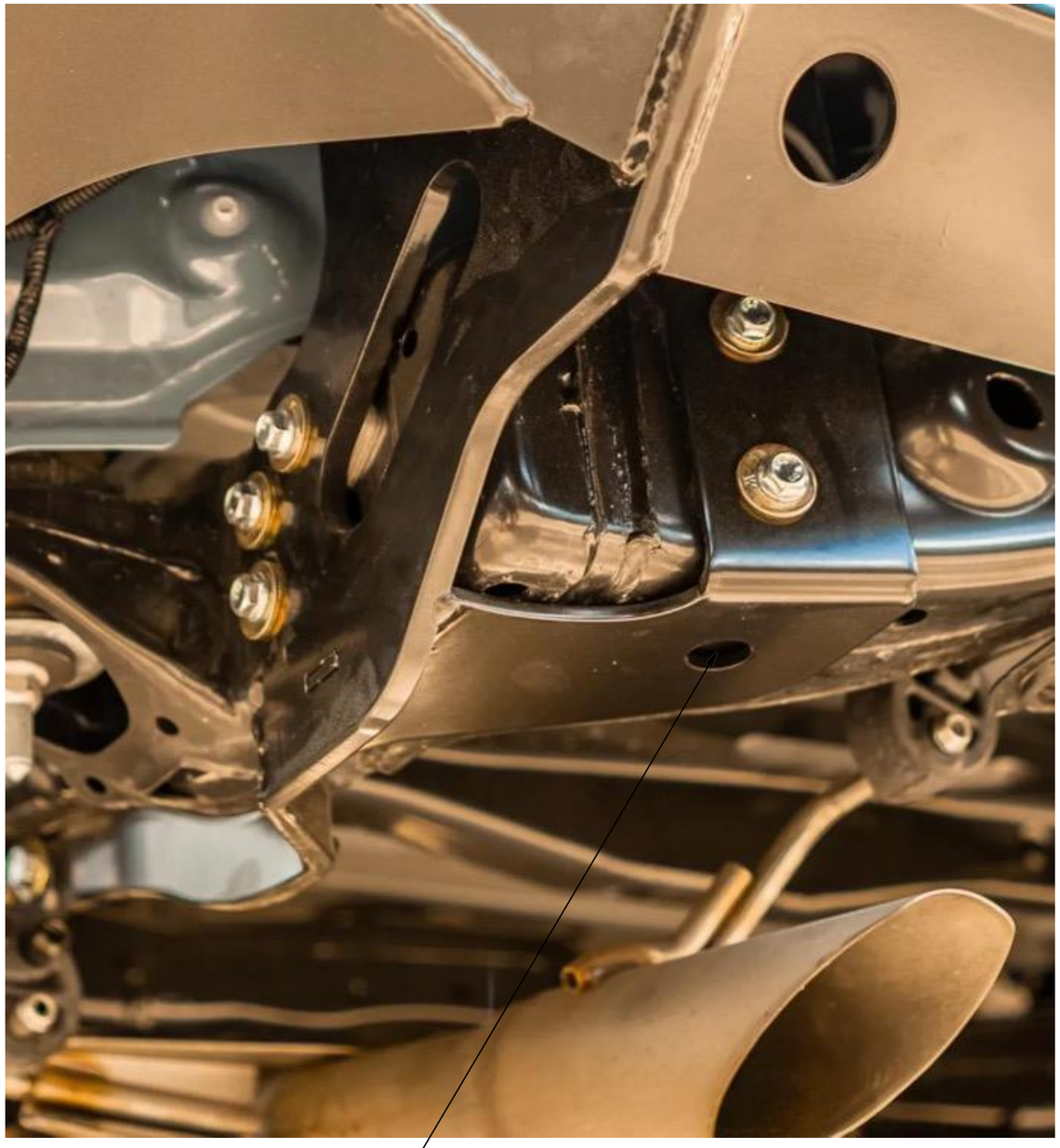
10. REAR BAR INSTALL

FITTING TO THE VEHICLE

10.1 Pickup points for TCC rear bar highlighted on LC250 chassis (holes marked orange, passenger side shown)





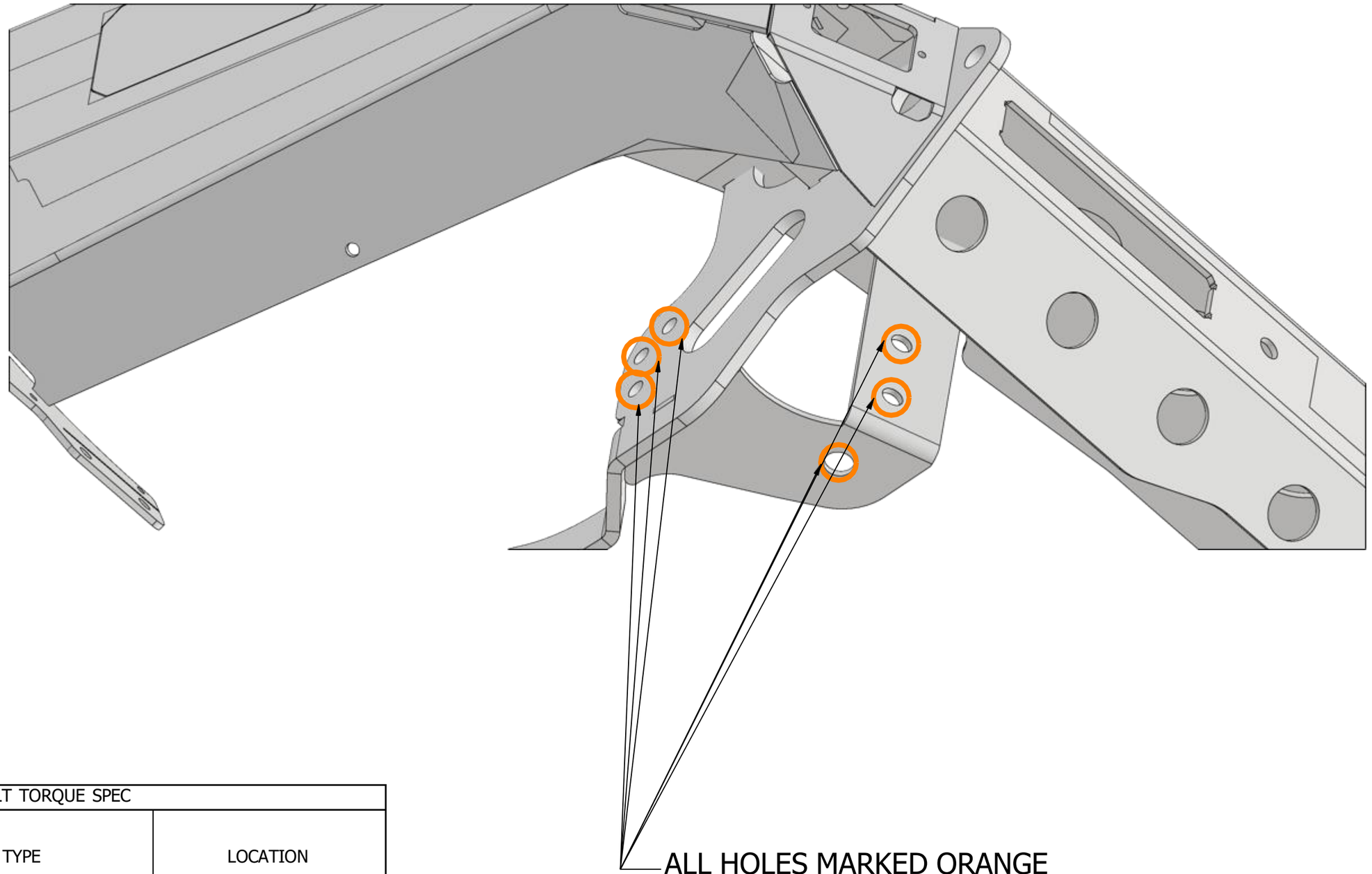


NOTE: BOLT MISSING IN PHOTO

10. REAR BAR

FITTING TO THE VEHICLE

10.2 Fitting Hardware



MOUNTING BOLT TORQUE SPEC		
TORQUE SETTING (NM)	BOLT TYPE	LOCATION
30	M8 x 1.25 x 50mm	CAPTIVE NUTS INSIDE CHASSIS

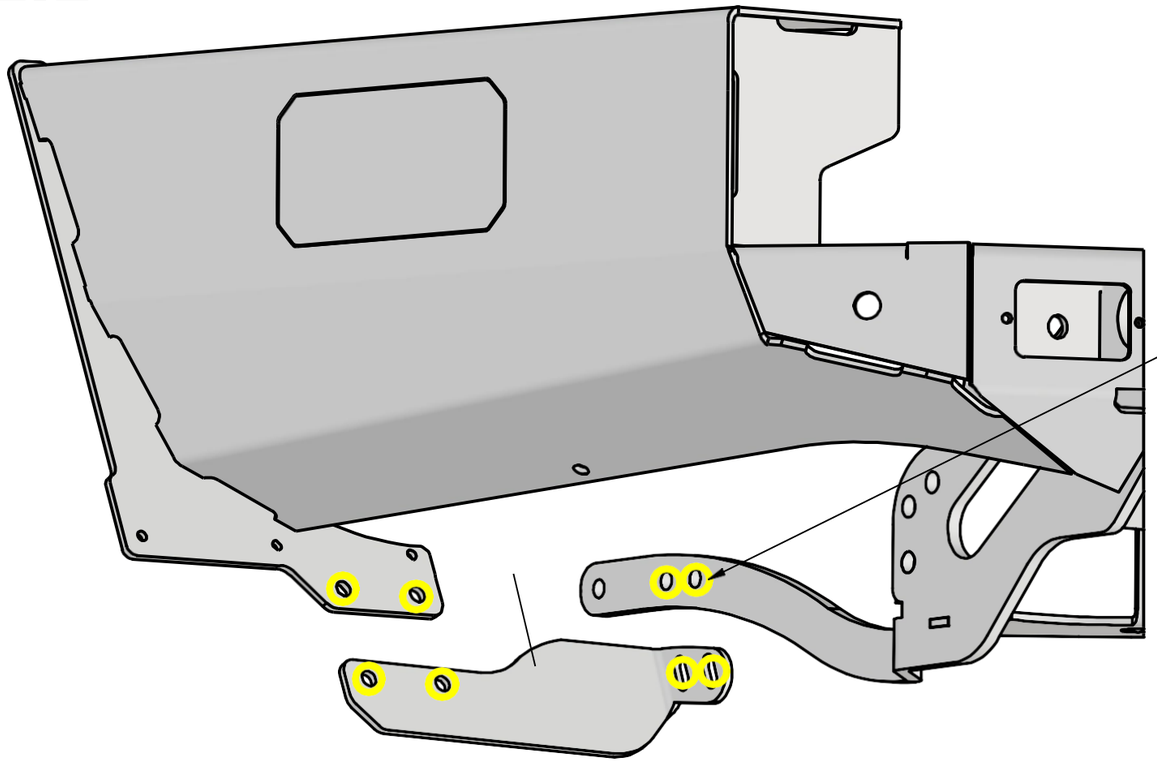
M8 x 1.25 x 50mm HEX HEAD BOLTS
HIGH TENSILE M8 WASHERS (GOLD)

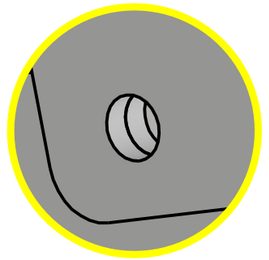
**** TIP ** Leave bolts loose until all bolts installed.**
Ensure TCC rear bar is straight and parallel to body lines.

11. REAR BAR INSTALL

WING TO CHASSIS BRACE

11.1





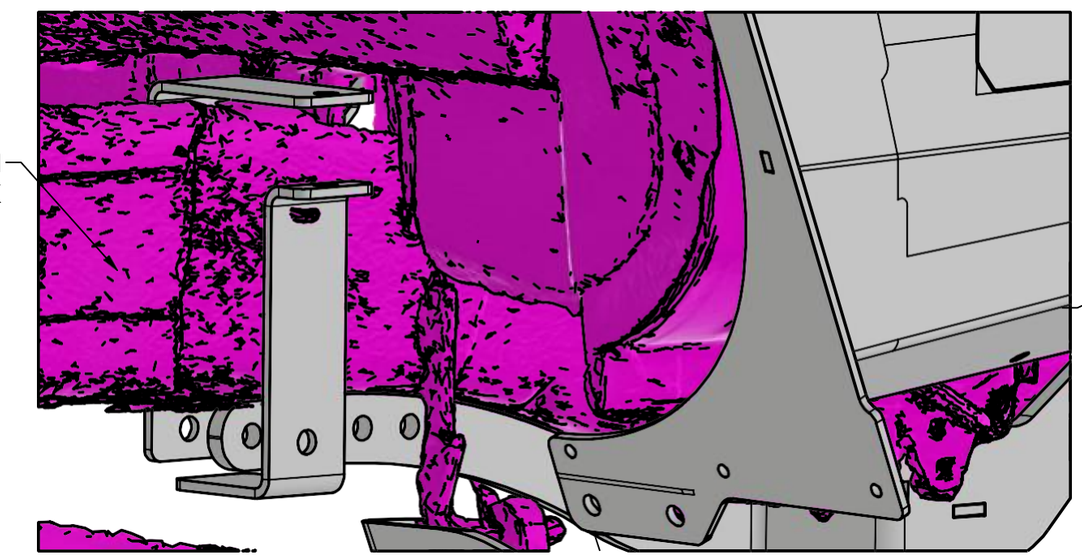
HOLES MARKED YELLOW

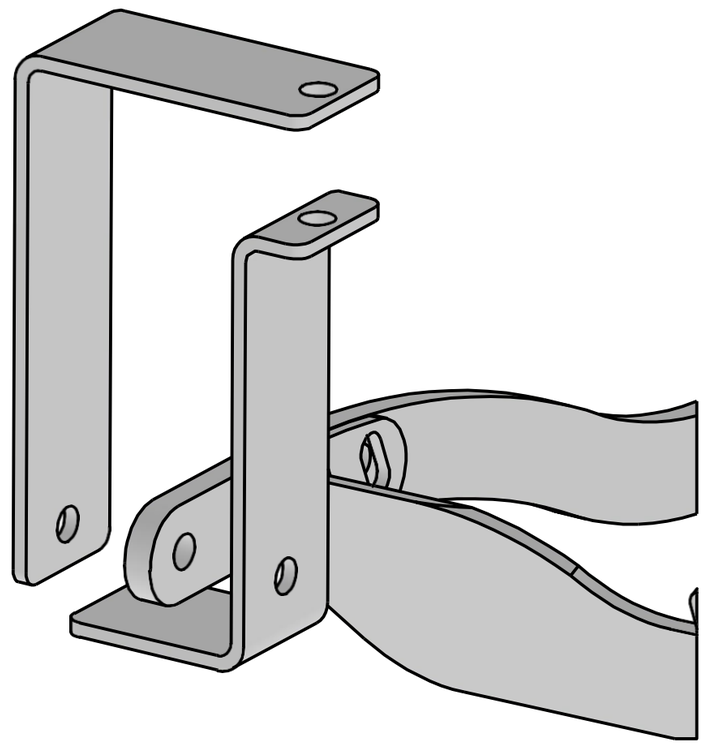
M10 X 35MM HEX HEAD BOLTS
M10 WASHERS
M10 HEX NUTS

ENSURE BOLTS ARE ORIENTATED SO THEY DO NOT CONTACT WHEEL

11.2

CHASSIS RAIL SHOWN IN PINK

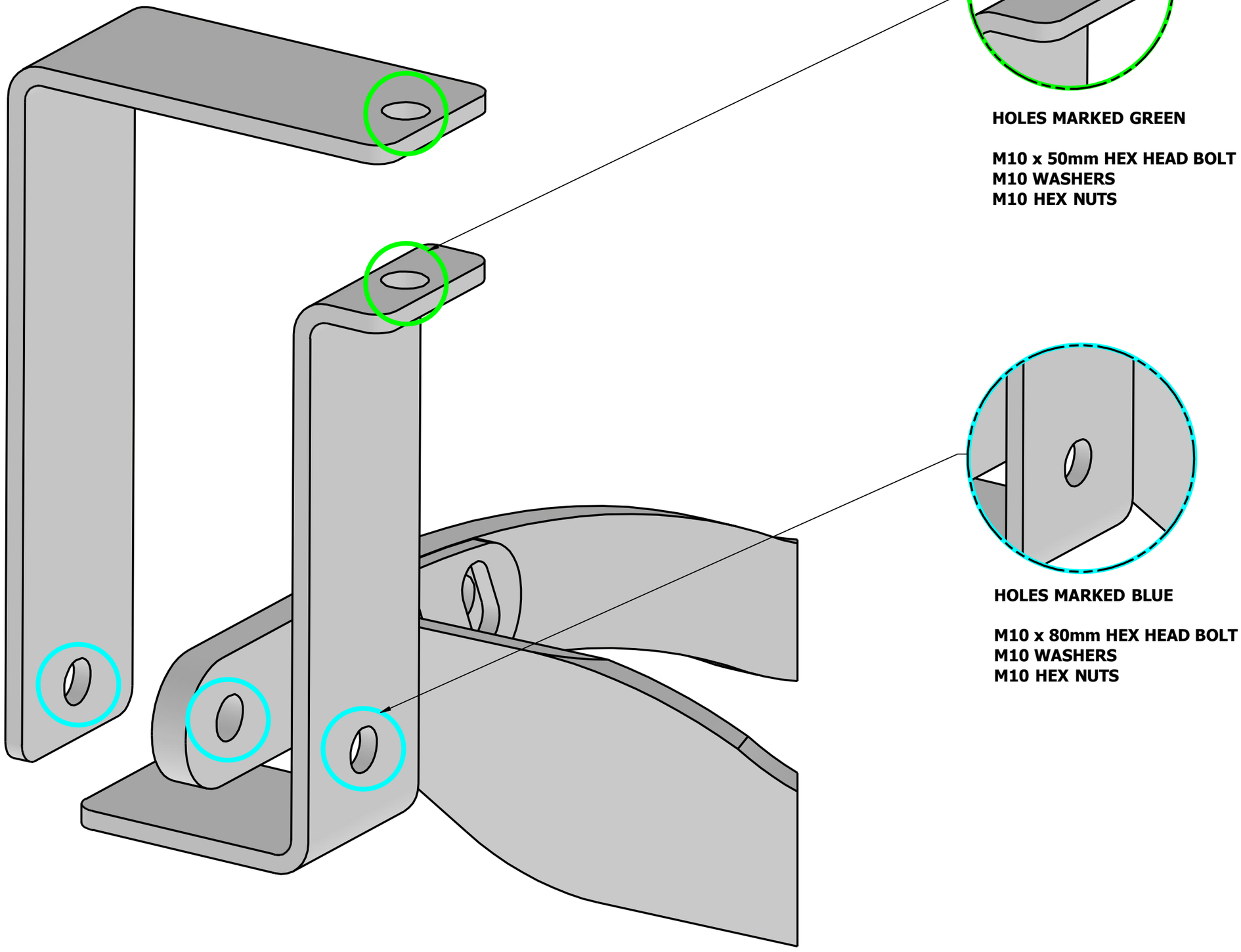


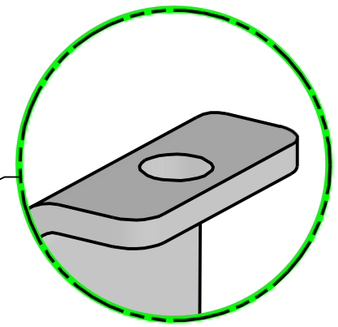


11. REAR BAR INSTALL

CHASSIS CLAMP

11.3





HOLES MARKED GREEN

M10 x 50mm HEX HEAD BOLT
M10 WASHERS
M10 HEX NUTS

HOLES MARKED BLUE

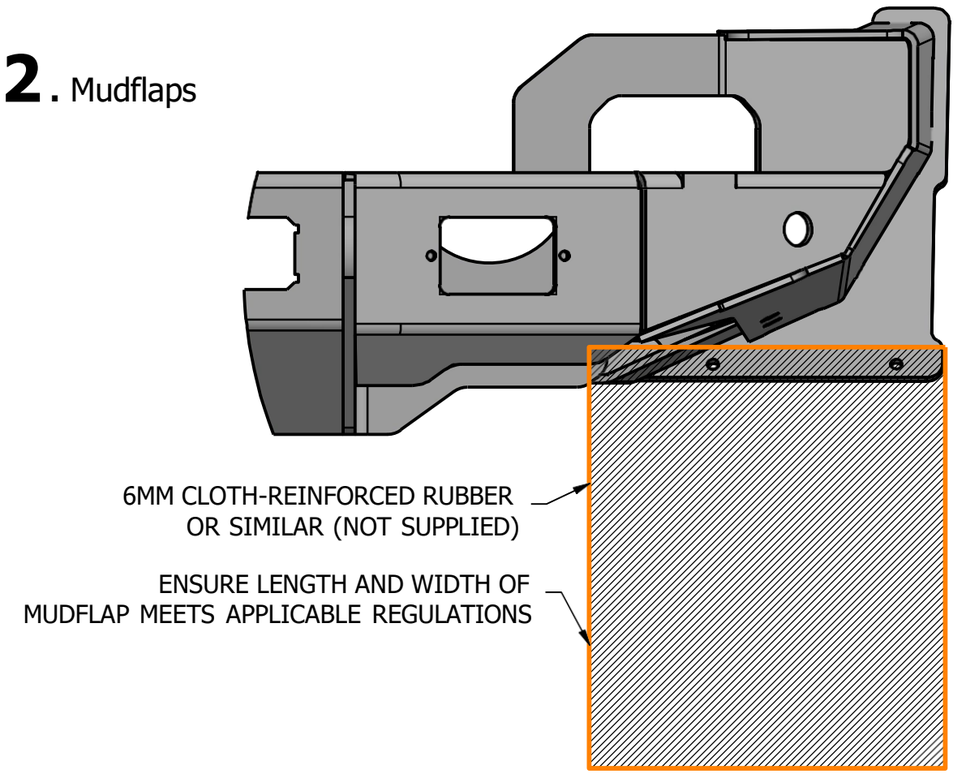
M10 x 80mm HEX HEAD BOLT
M10 WASHERS
M10 HEX NUTS

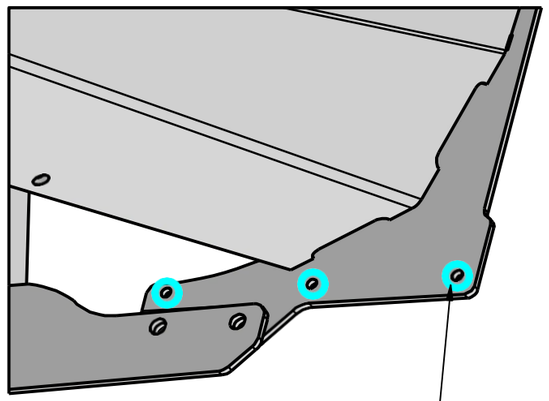
12. REAR BAR INSTALL

FINAL STEPS

12.1. A wiring harness is available for this vehicle. Please enquire at: sales@thecruisercompany.com.au if you require a harness. Wiring without a harness must be tapped into the brake light. Please consultant an automotive professional if unsure.

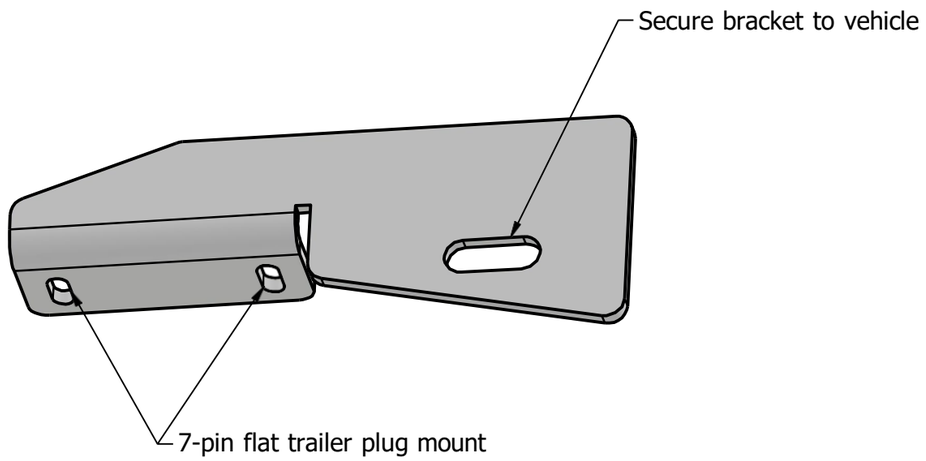
12.2. Mudflaps





12.3. Use the LH bolt hole (as shown in the image below) to secure the trailer plug bracket to the vehicle.





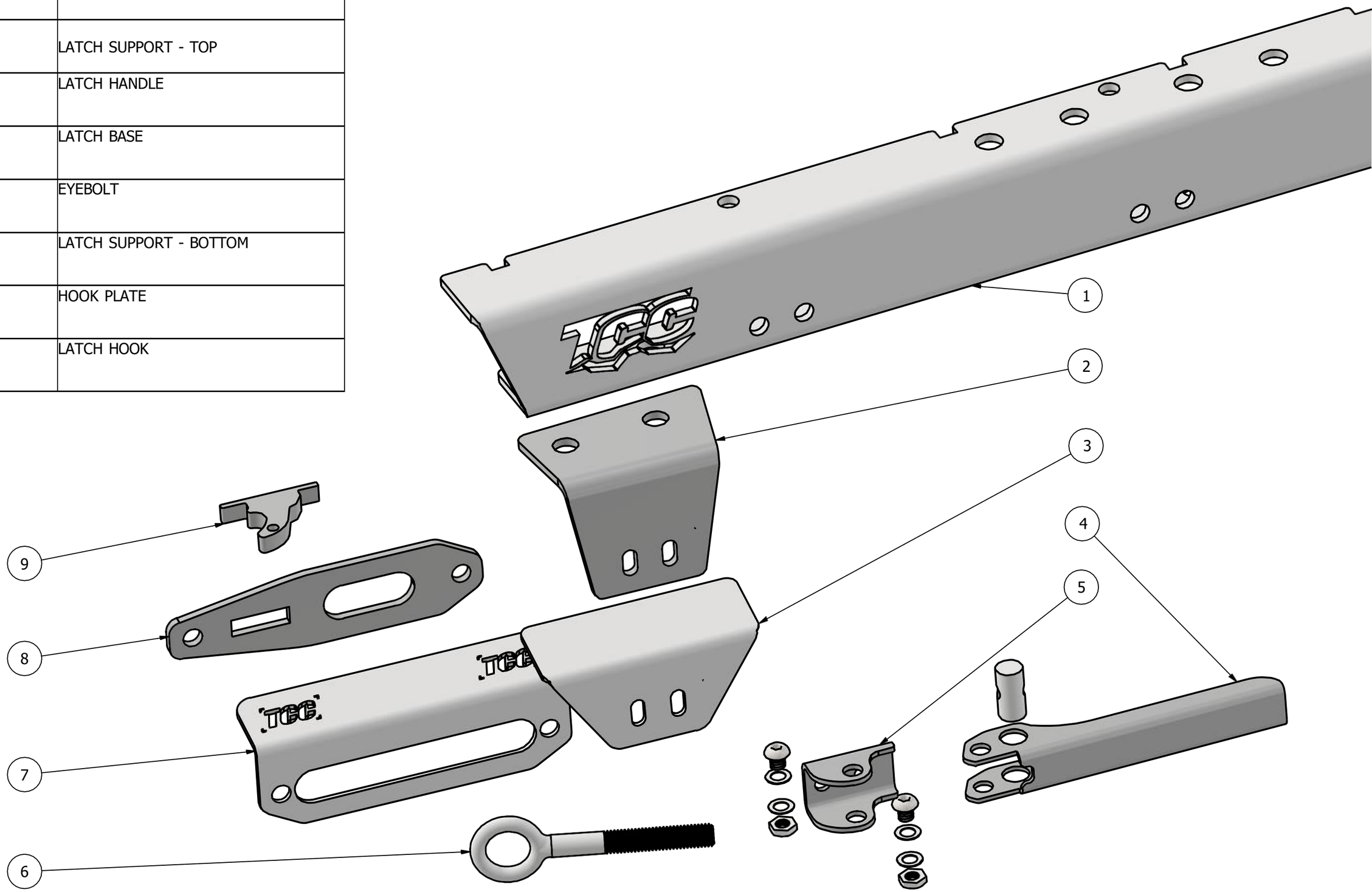
TCC LATCH ASSEMBLY

ASSEMBLY INSTRUCTIONS



AUSTRALIAN MADE

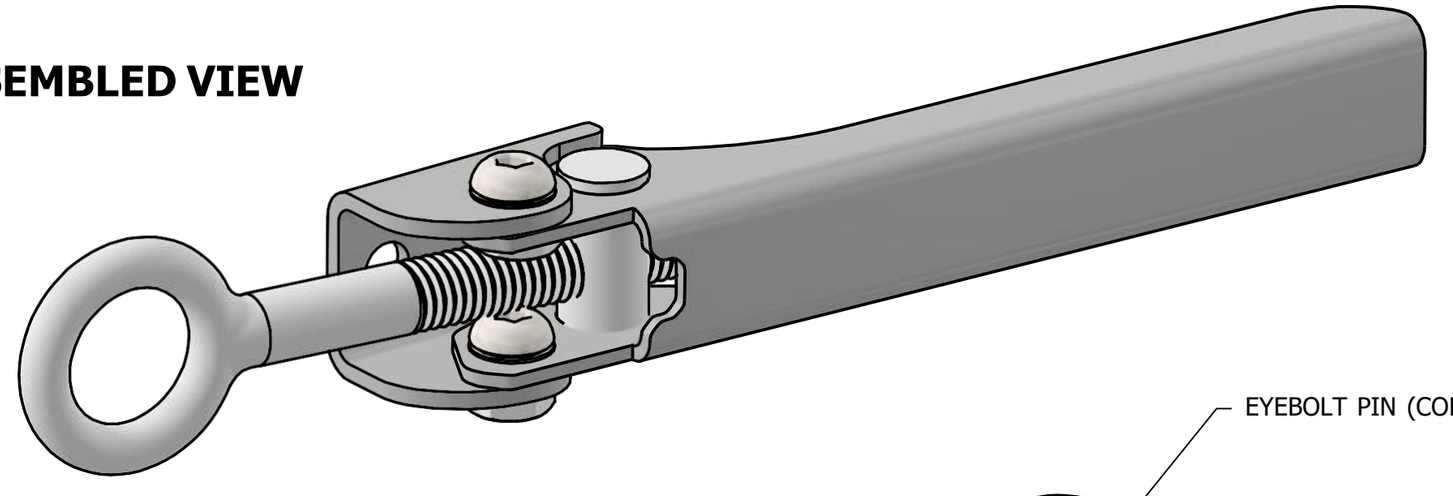
TABLE		
ITEM	QTY	ITEM NAME
1	1	TCC CARRIER ARM
2	1	LATCH DROP DOWN
3	1	LATCH SUPPORT - TOP
4	1	LATCH HANDLE
5	1	LATCH BASE
6	1	EYEBOLT
7	1	LATCH SUPPORT - BOTTOM
8	1	HOOK PLATE
9	1	LATCH HOOK



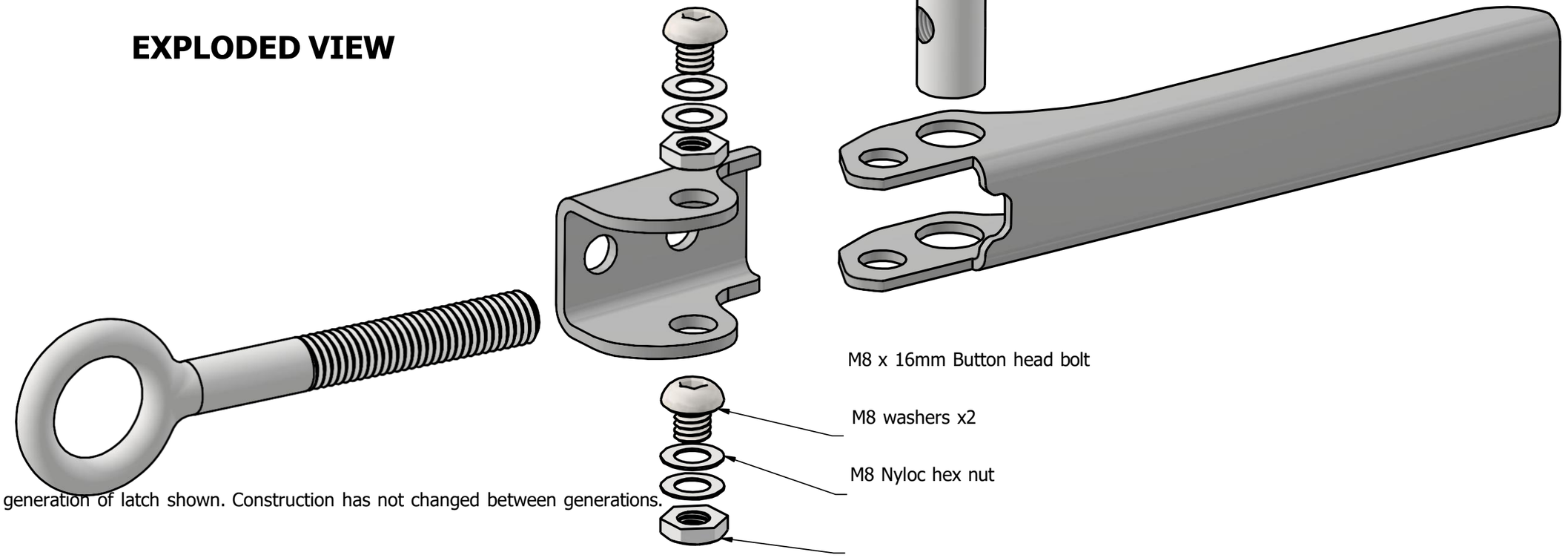
1. LATCH ASSEMBLY

1.1 Your latches will arrive pre-assembled. The diagram below shows how the latches are constructed in the rare event that they require reassembly. Please use Loctite on all fasteners if reassembling.

ASSEMBLED VIEW



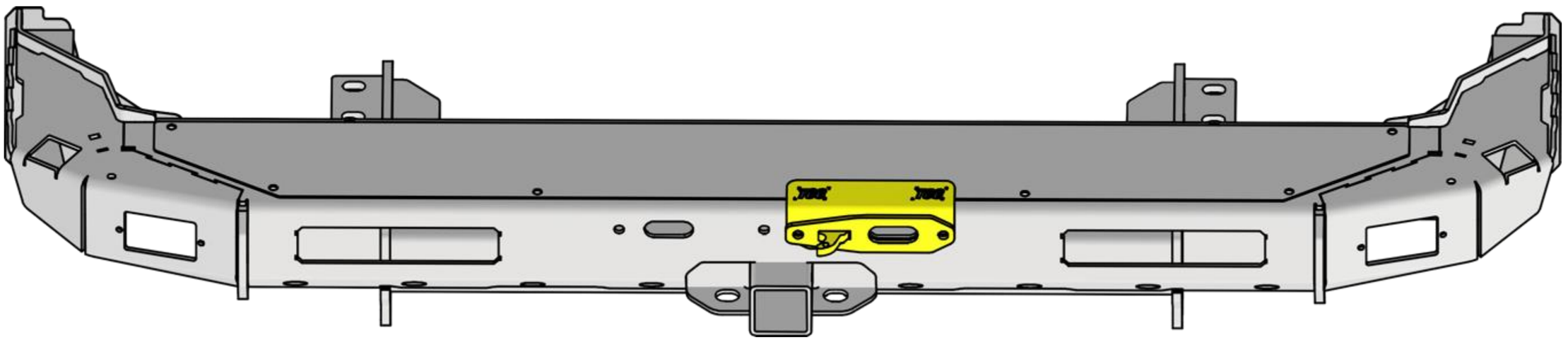
EXPLODED VIEW



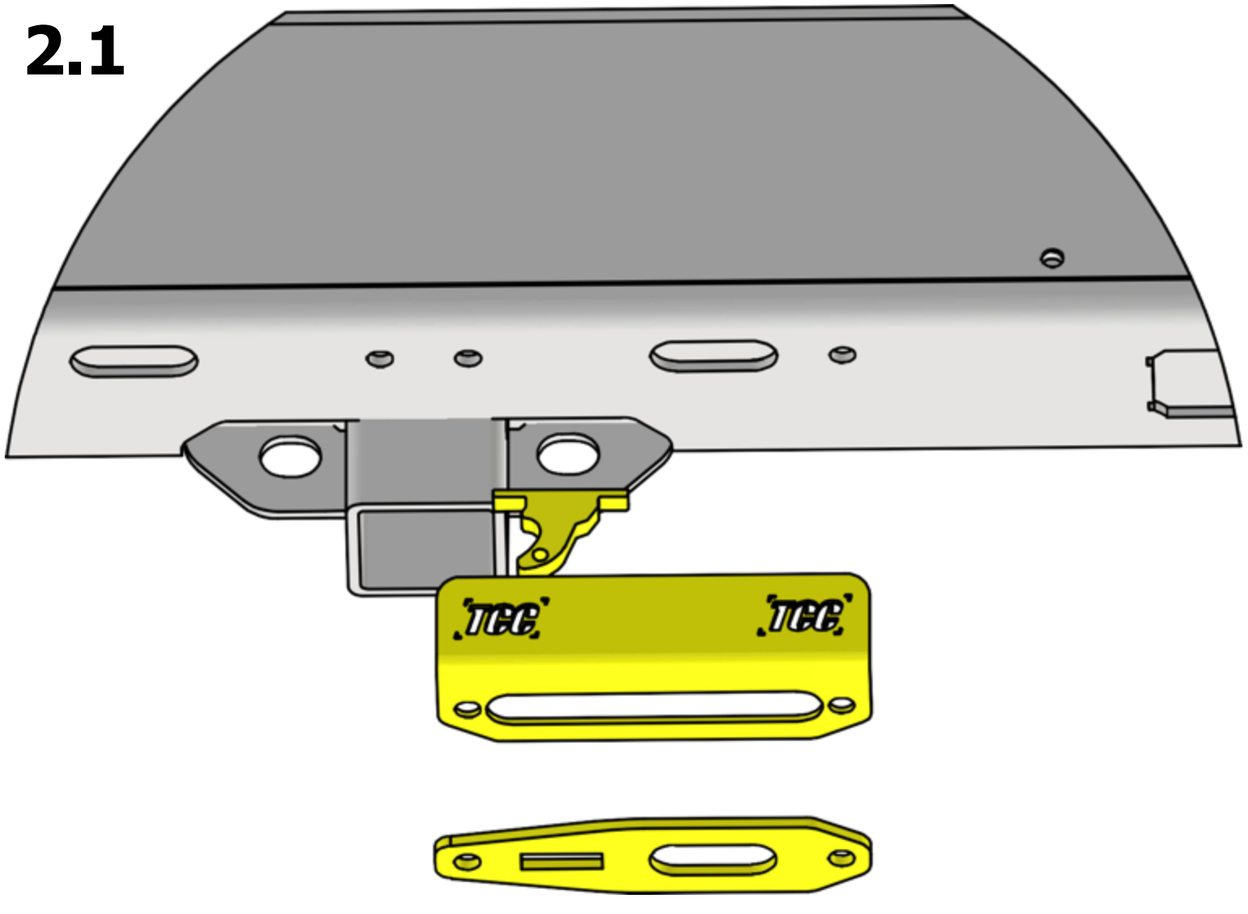
please note: previous generation of latch shown. Construction has not changed between generations.

2. JOINING LATCH TO REAR BAR

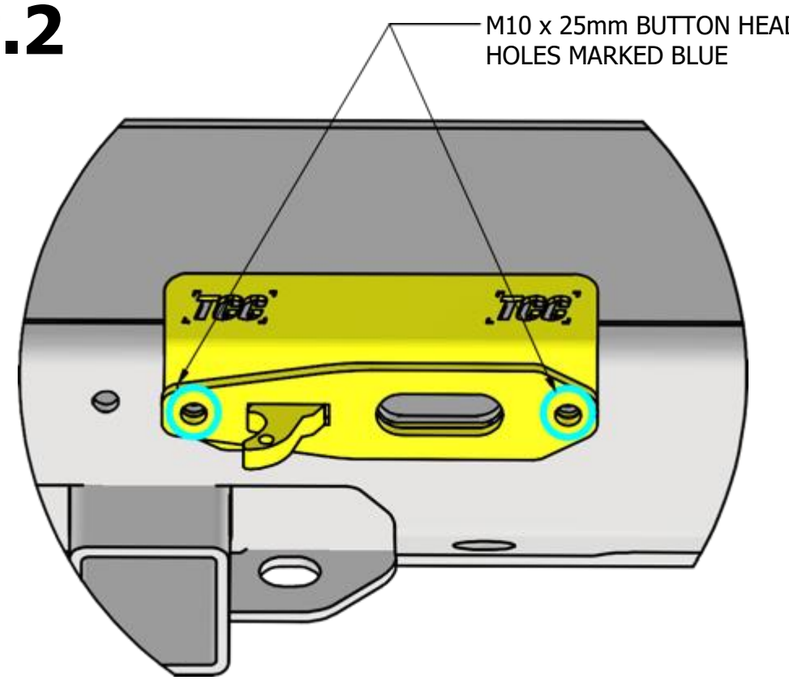
BAR BASE



2.1



2.2



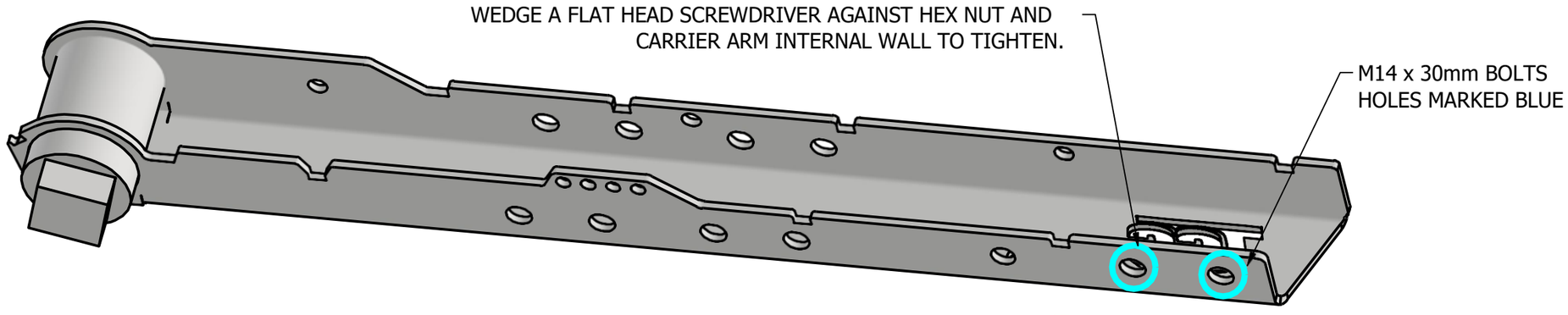
3. JOINING LATCH TO REAR BAR

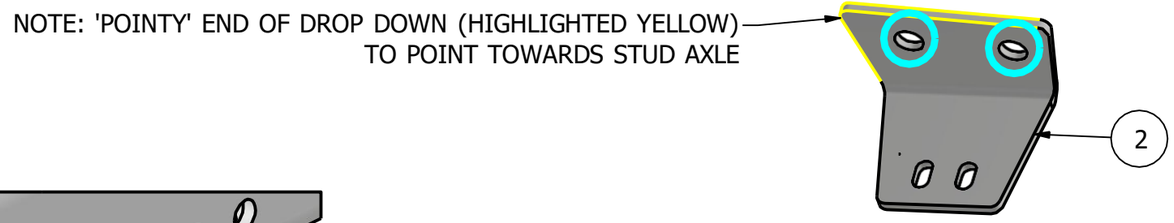
CARRIER ARM

3.1 Please ensure carrier arm is installed to bar base before proceeding to this step.

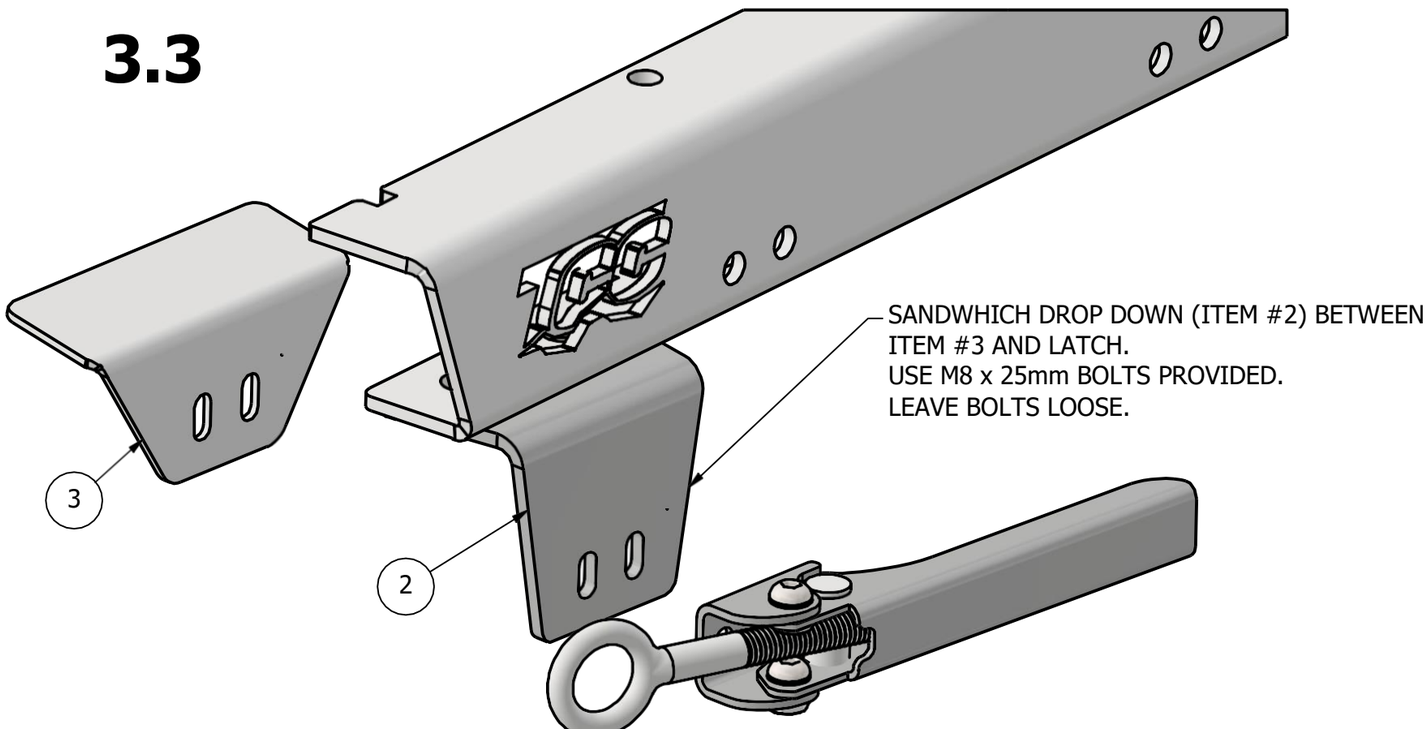
3.2

REAR VIEW OF PASSENGER SIDE ARM





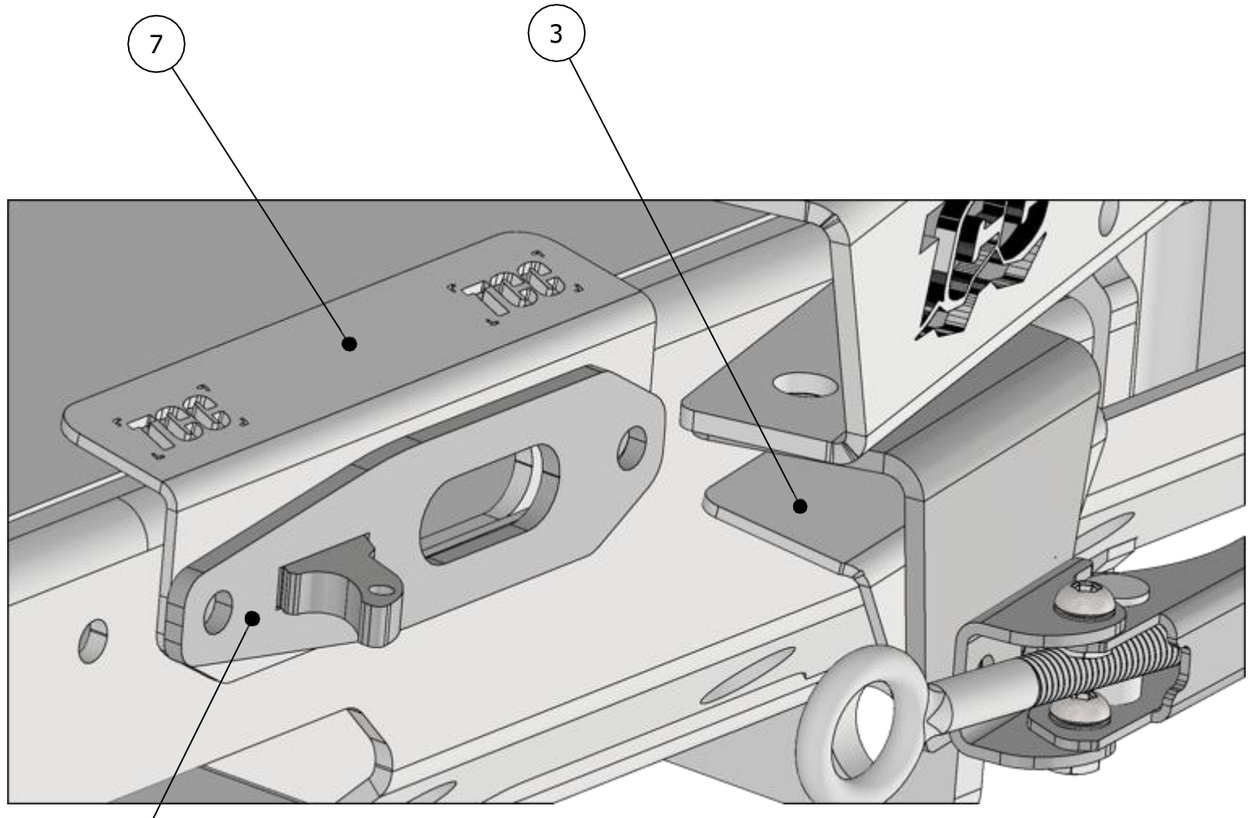
3.3



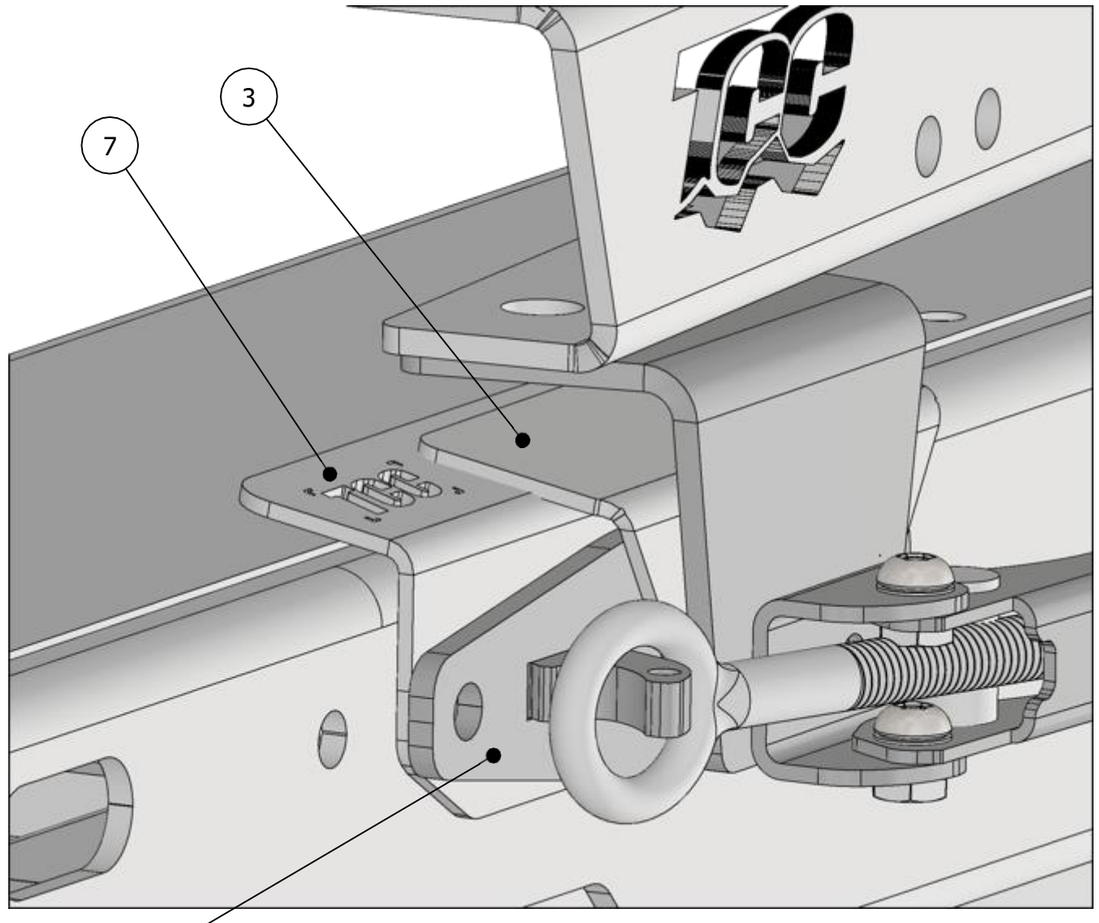
3. JOINING LATCH TO REAR BAR

CARRIER ARM

3.4 With latch M8 x 25mm bolts loose, open and close carrier arm. Nuts on the M8 x 25mm bolts should not interfere on the hook plate (**ITEM #8**). Top support plate (**ITEM #3**) should be adjusted in a way that friction is felt between it & **ITEM 7** when closed. Apply a small amount of lubricant between **ITEM #3** & **ITEM #7**.



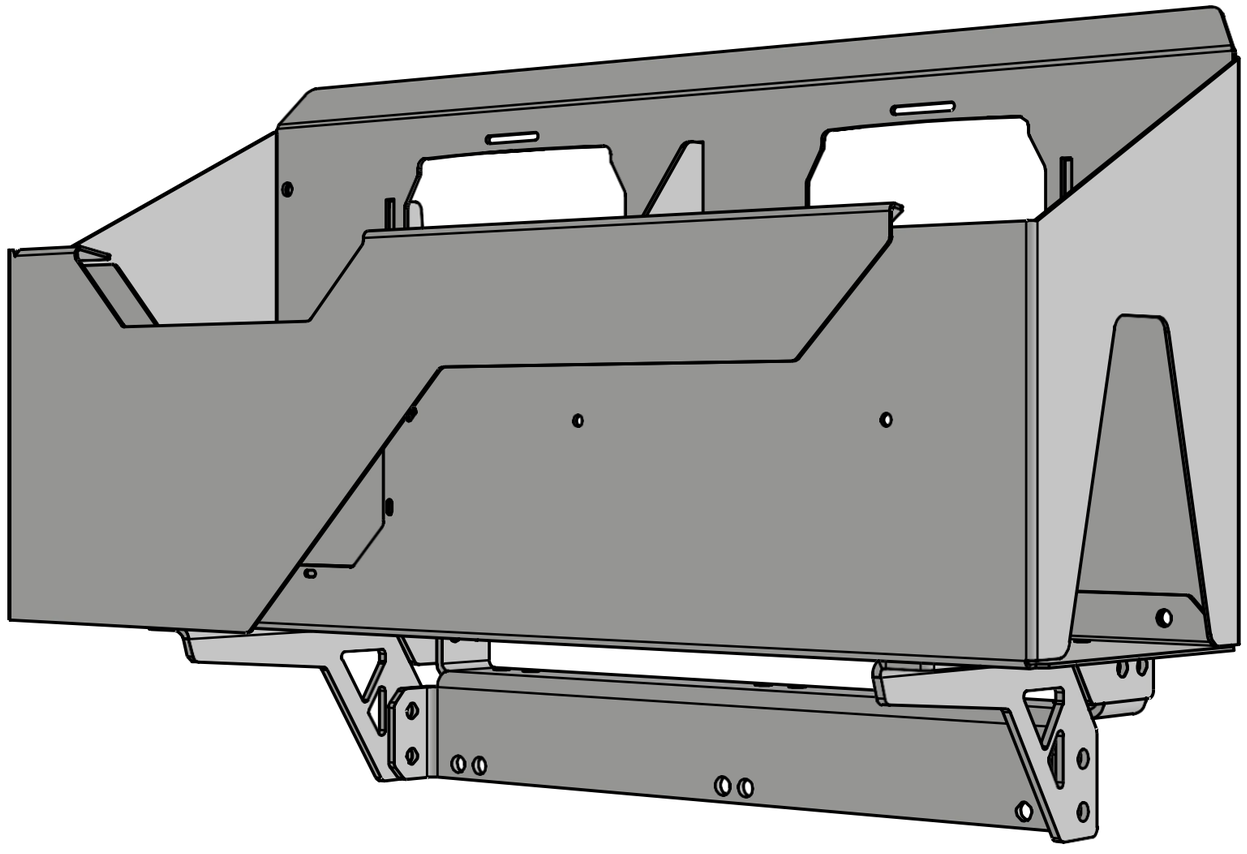
CARRIER ARM OPEN

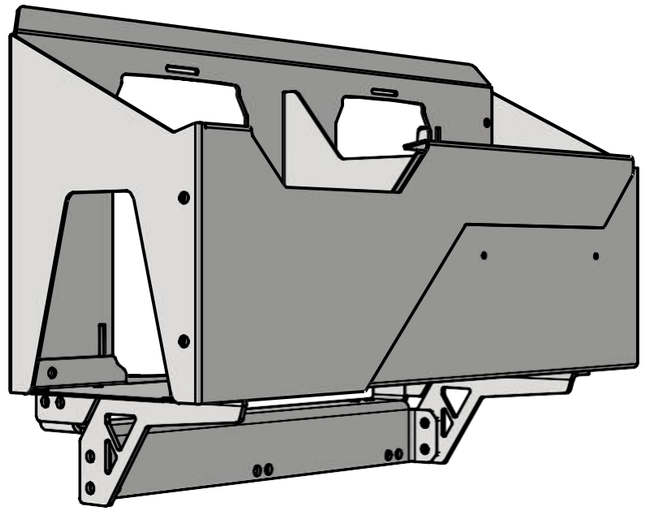


CARRIER ARM CLOSE

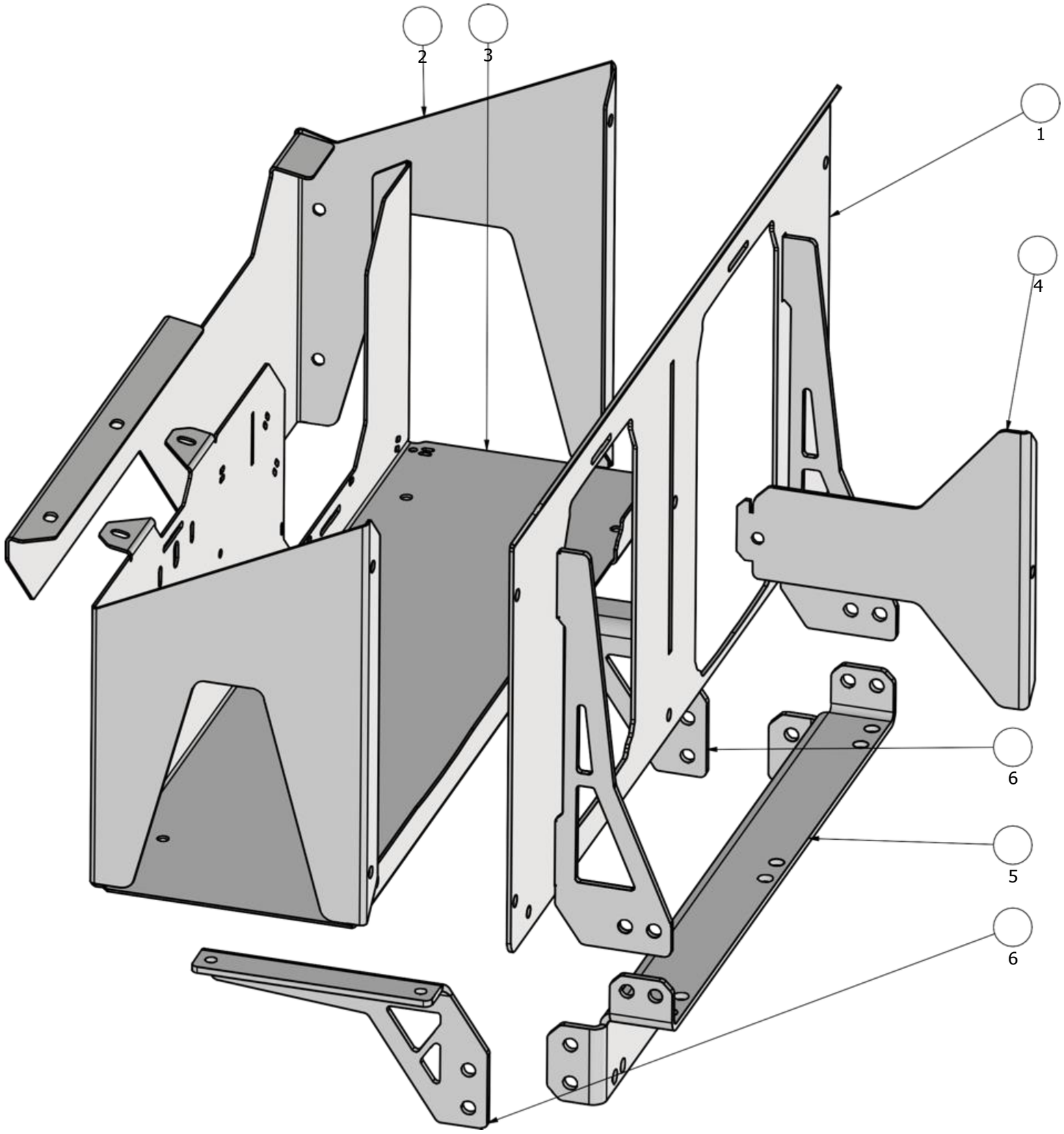
TCC JERRY/GAS HOLDER

ASSEMBLY INSTRUCTIONS



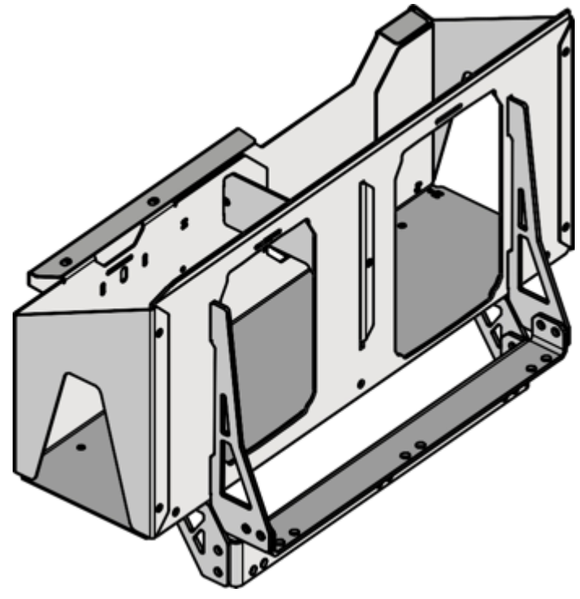


AUSTRALIAN MADE



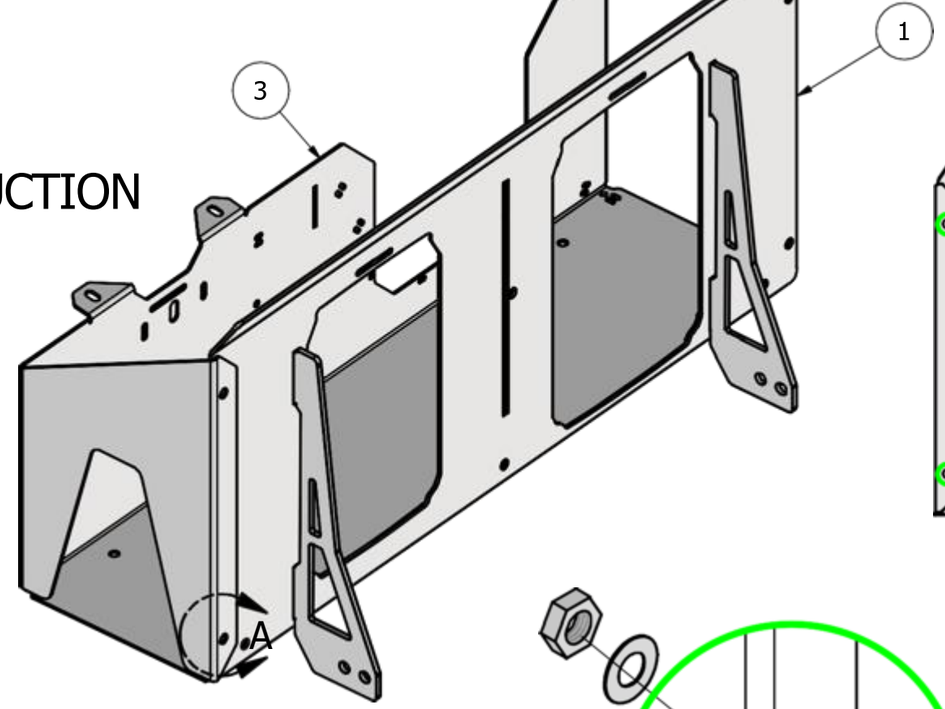
PARTS LIST		
ITEM	QTY	DESCRIPTION
1	1	JERRY BACKING
2	1	JERRY FRONT COVER
3	1	JERRY INTERNAL
4	1	JERRY DIVIDER
5	1	UNIVERSAL SHELF BASE
6	2	JERRY LOWER GUSSET

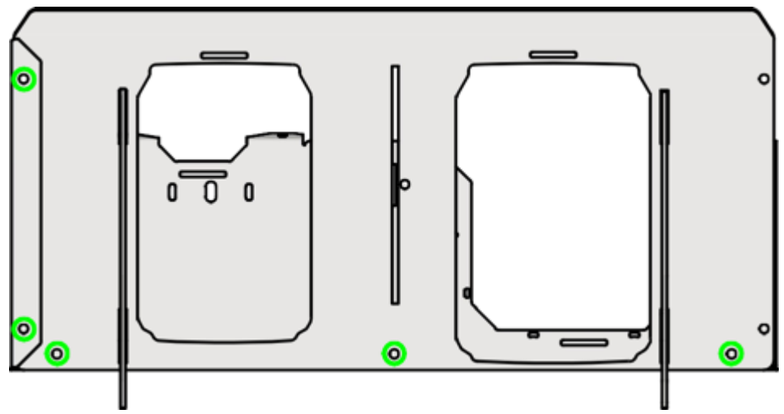
HARDWARE KIT (INCLUDED)	
QTY	DESCRIPTION
8	M10 X 25mm BUTTON HEAD BOLTS
6	M10 X 20mm BUTTON HEAD BOLTS
28	M10 WASHERS
14	M10 NUTS
16	M8 x 20mm BUTTON HEAD BOLTS
32	M8 WASHERS
16	M8 NUTS



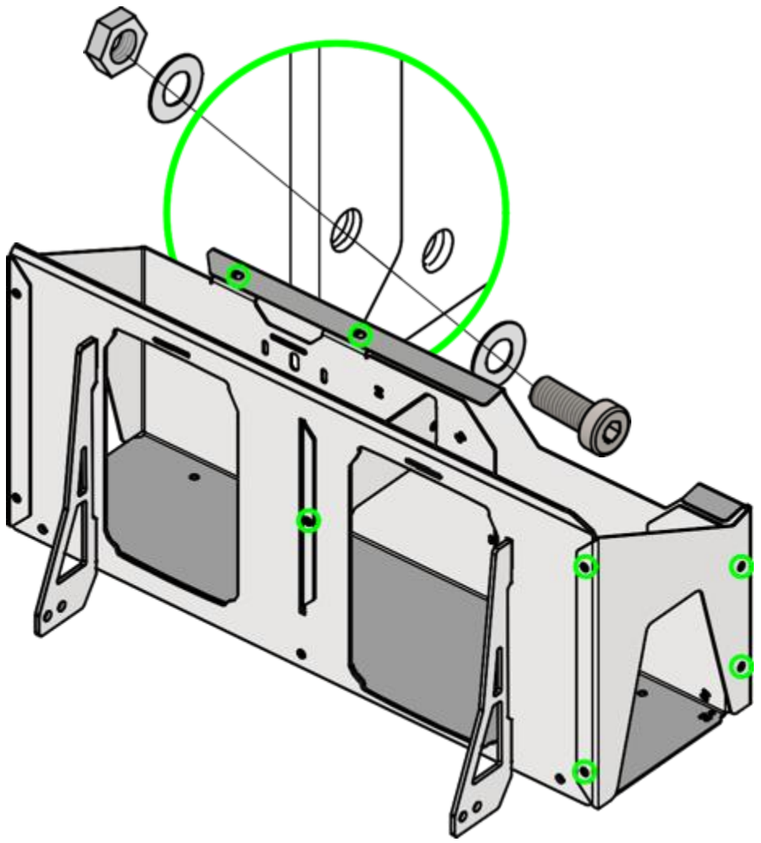
FULLY ASSEMBLED

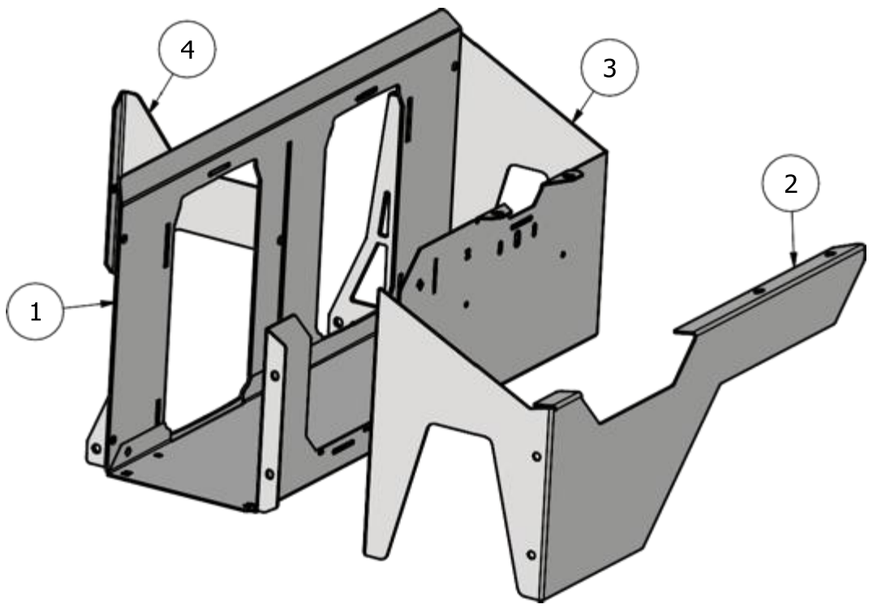
1. JERRY BODY CONSTRUCTION



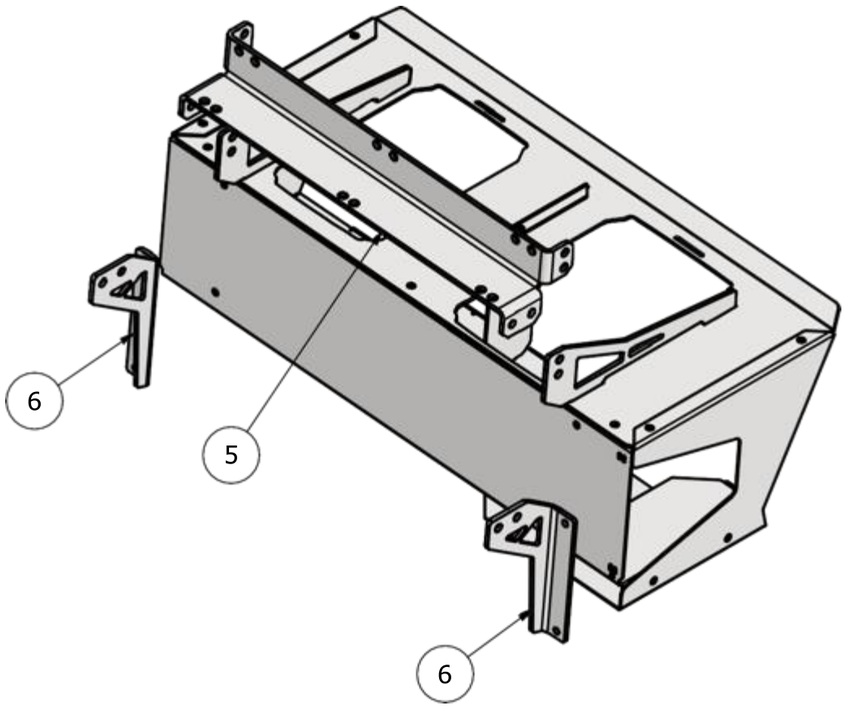


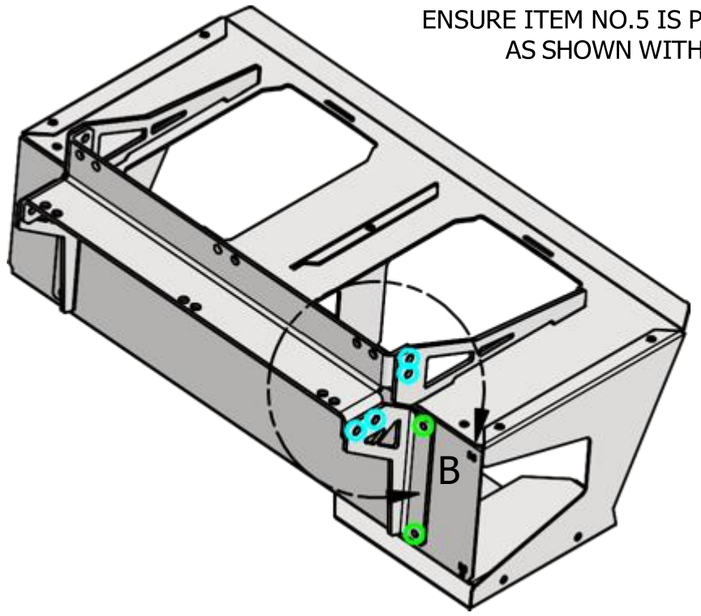
2. JERRY BODY CONSTRUCTION



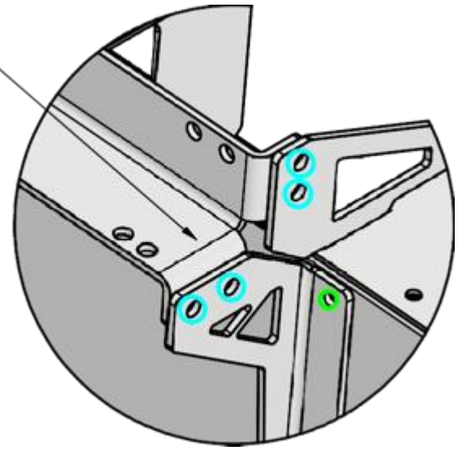


3. ATTACH UNIVERSAL MOUNT

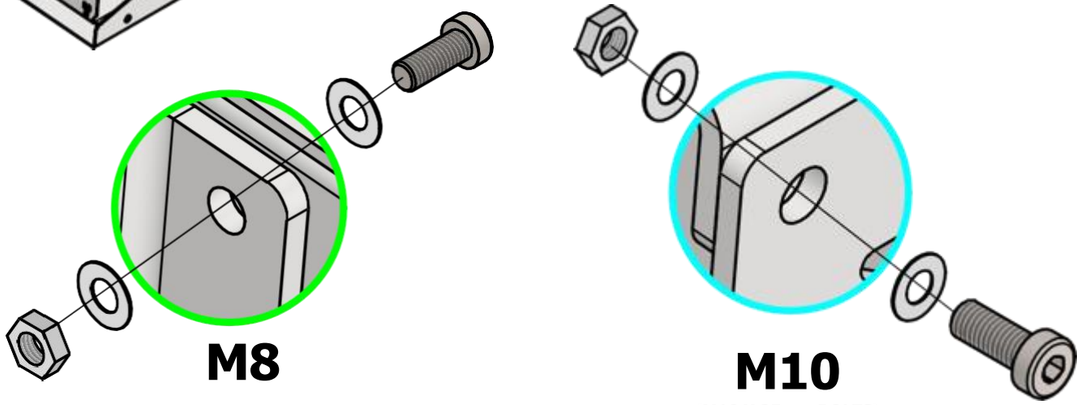




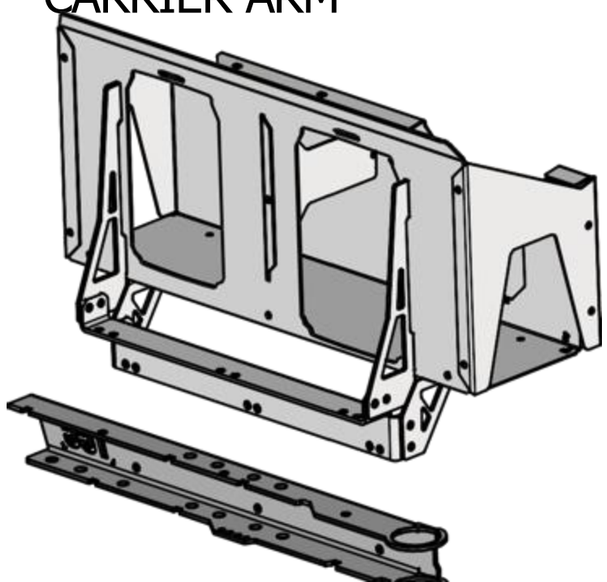
ENSURE ITEM NO.5 IS POSITIONED AS SHOWN WITHIN MOUNTS

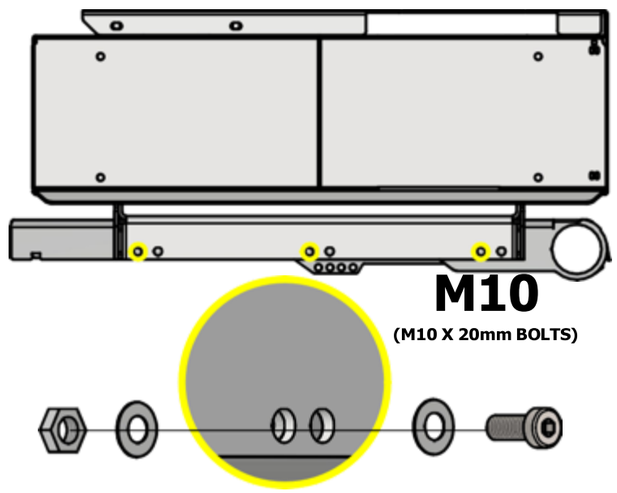


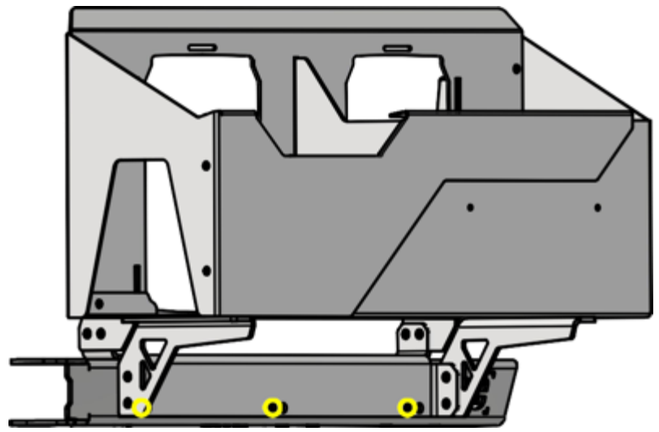
DETAIL B



4. ATTACH ASSEMBLY TO CARRIER ARM



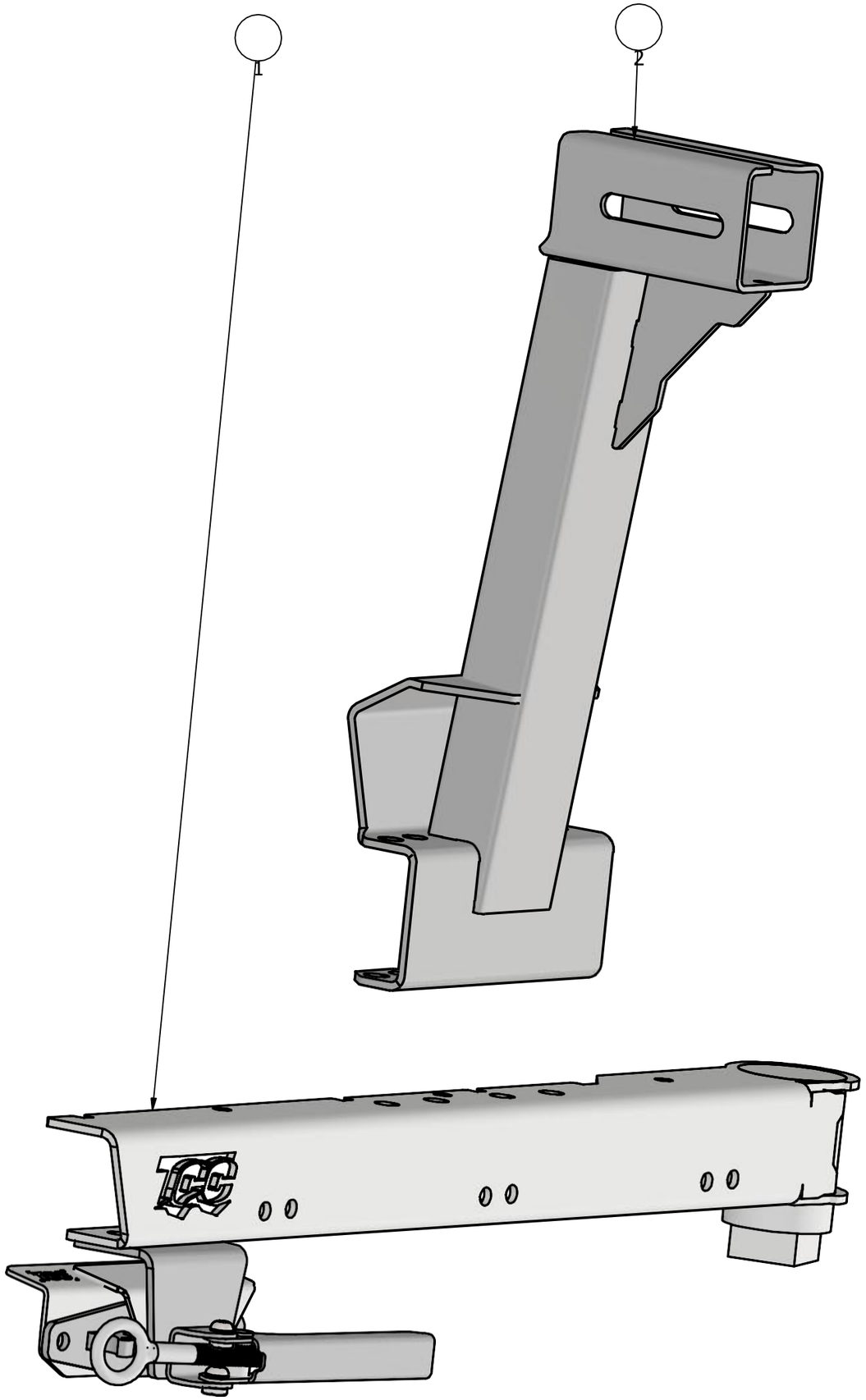




TCC TYRE UPRIGHT & TYRE HEAD

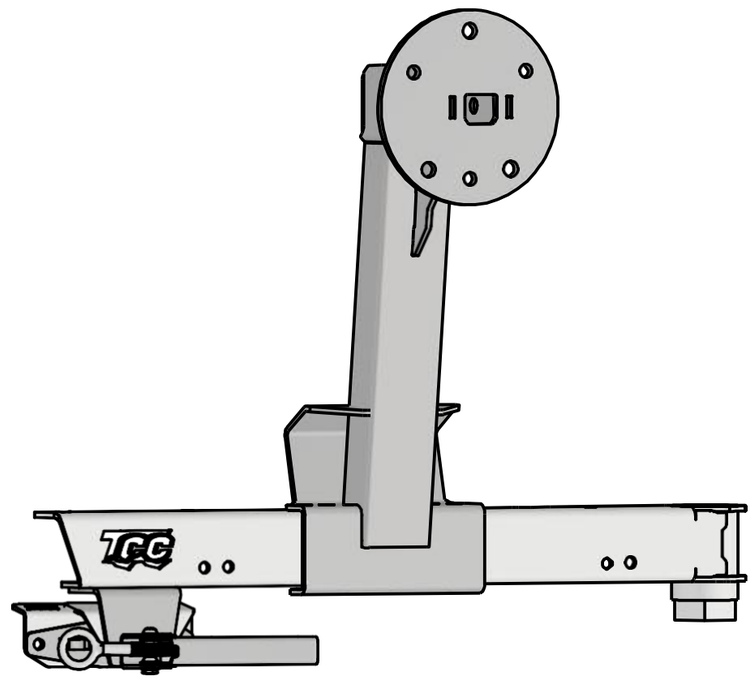
ASSEMBLY INSTRUCTIONS





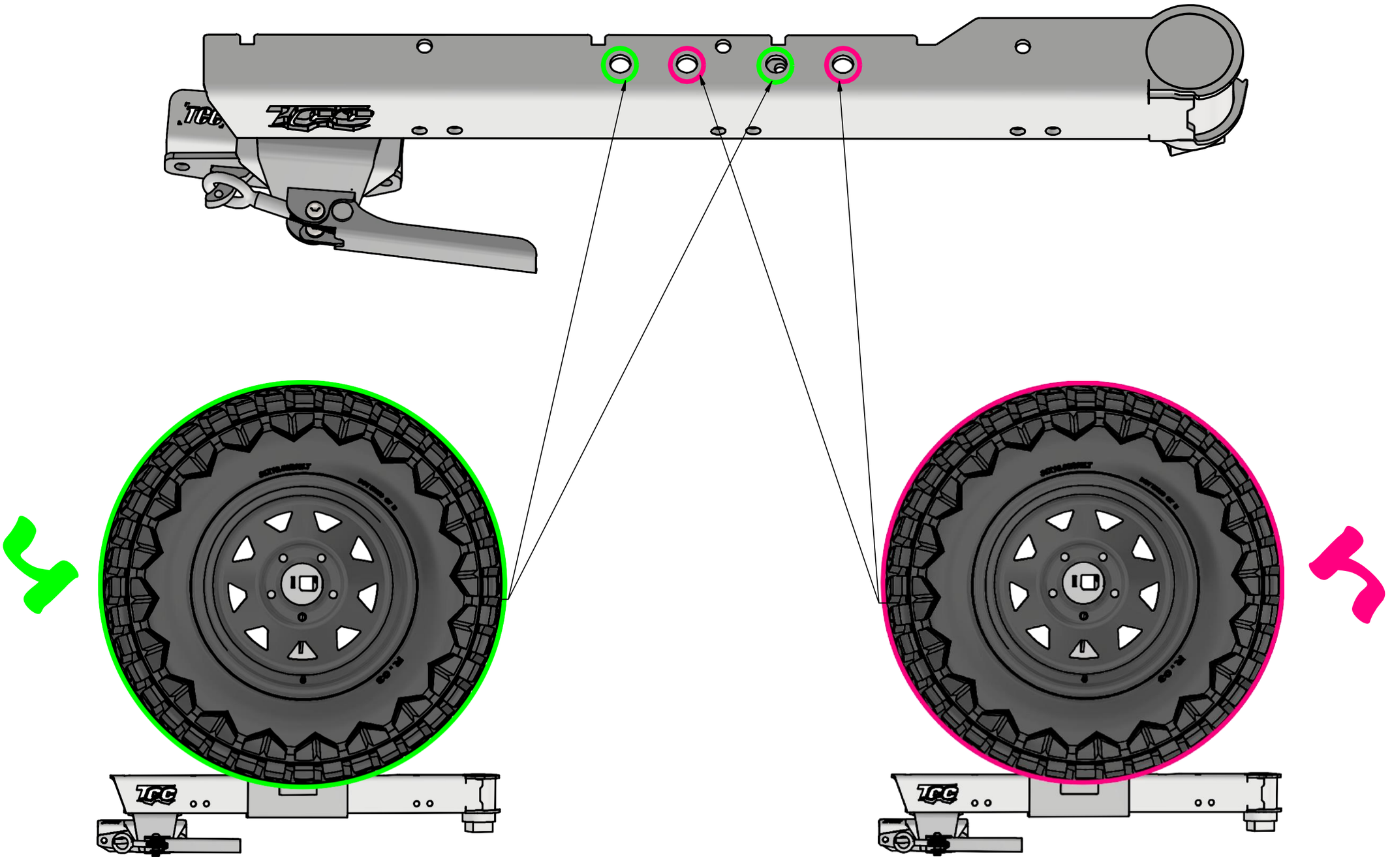
PARTS LIST		
ITEM #	QTY	PART NAME
1	1	TCC CARRIER ARM ASSEMBLY
2	1	TYRE UPRIGHT
3	1	TYRE HEAD

ASSEMBLED VIEW

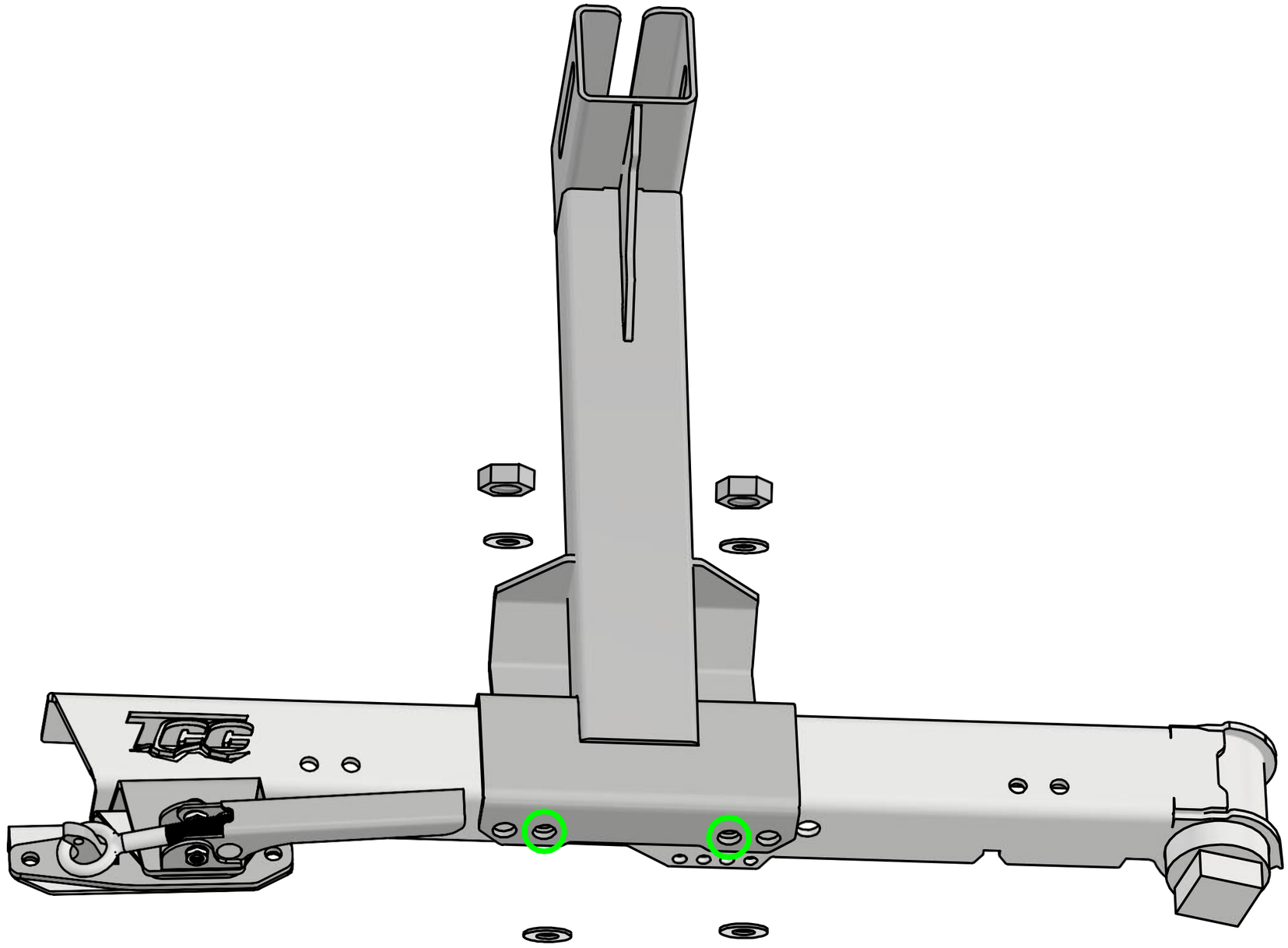


1. INSTALL THE TYRE UPRIGHT

TCC Carrier Arm must be assembled prior to installation

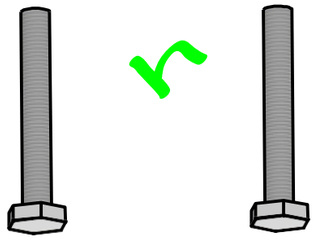


2. INSTALL TYRE UPRIGHT

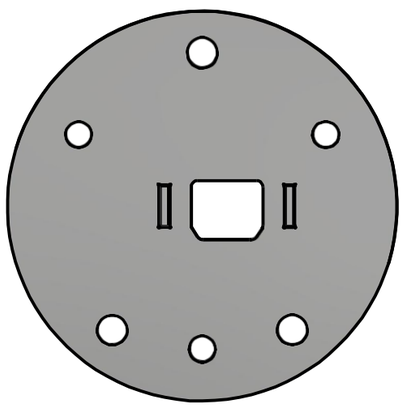


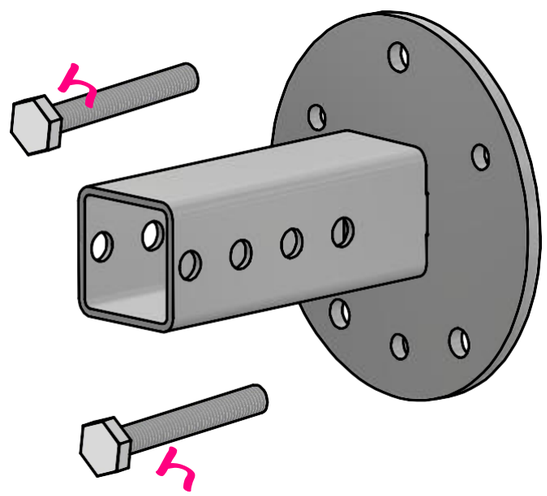
DOUBLE CHECK CLEARANCE TO REAR OF VEHICLE ADJUST BUMP STOP AS REQUIRED

M14 x 110mm BOLTS M14
WASHERS
M14 NUTS



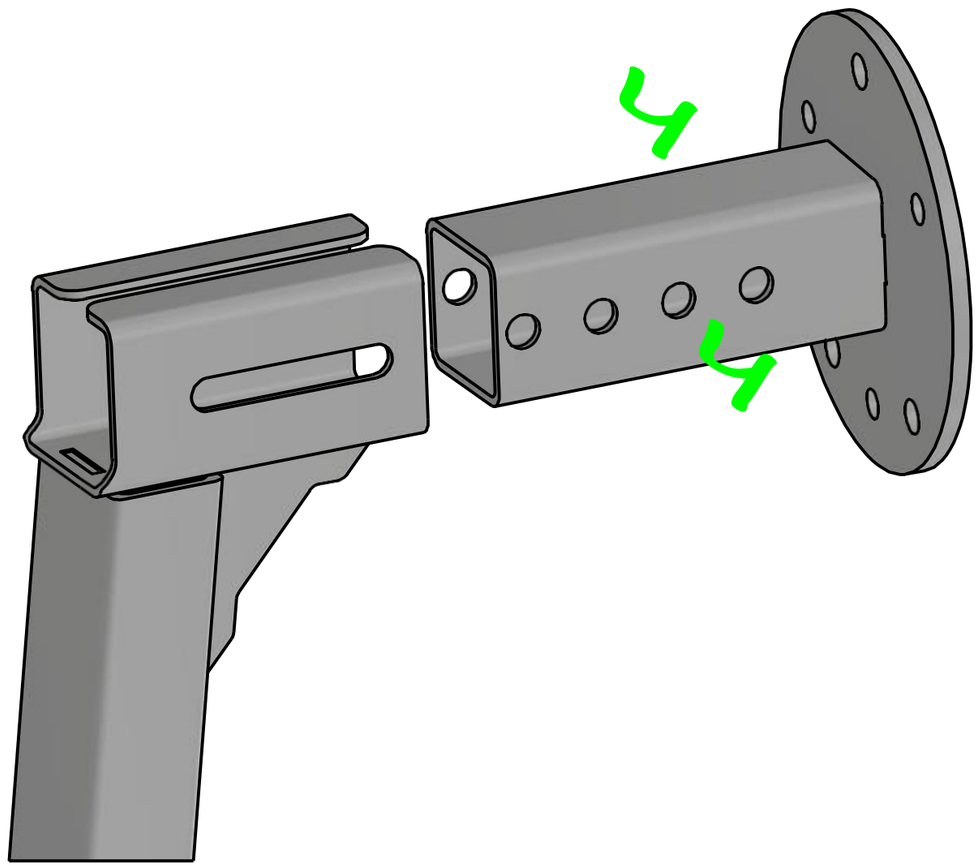
3. MOUNT TYRE HEAD

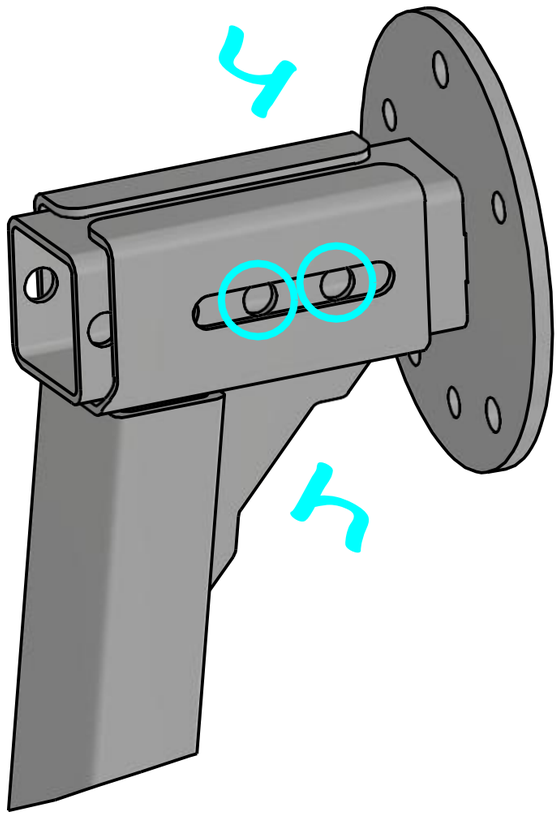




LARGE HOLES: 5 X 150 STUD PATTERN SMALL

HOLES: 6 X 139.7 STUD PATTERN

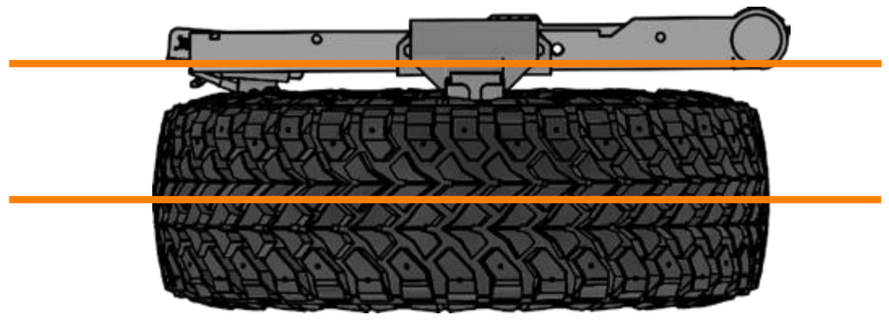




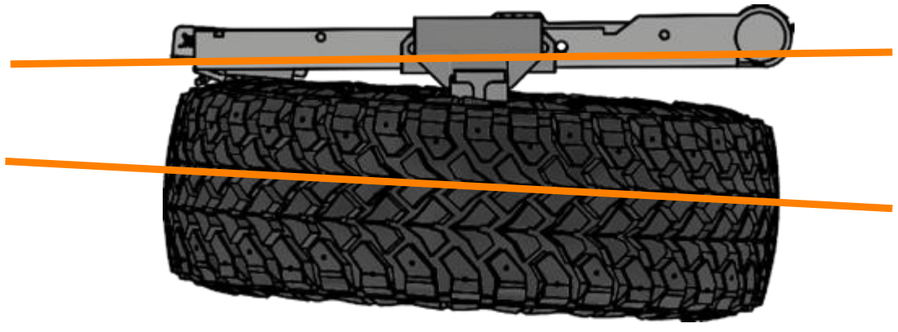
ADJUST IN/OUT FOR
WHEEL OFFSET

M14 x 30mm BOLTS M14
WASHERS
M14 NUTS









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