

## WHEELCHAIR ACCESSIBLE VEHICLES







Kangoo



**Townstar** 







## SPACIOUS, FLEXIBLE AND VERSATILE

A reliable family car with a wide range of seating options and optimal space and visibility for wheelchair passenger.

## Conversion manual

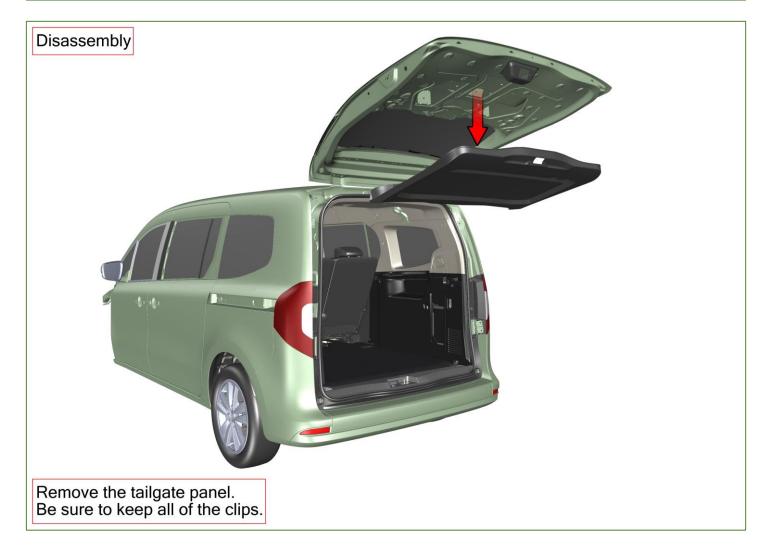
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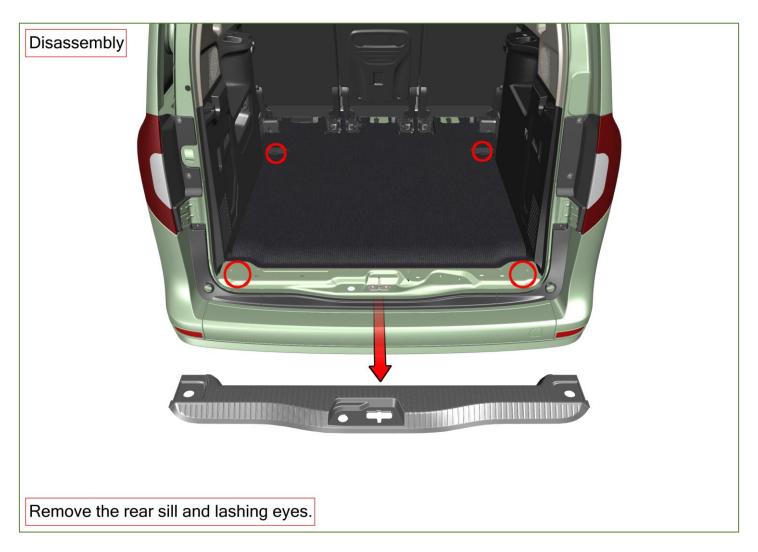
## **IMPORTANT:**

Keep all bolts & nuts!

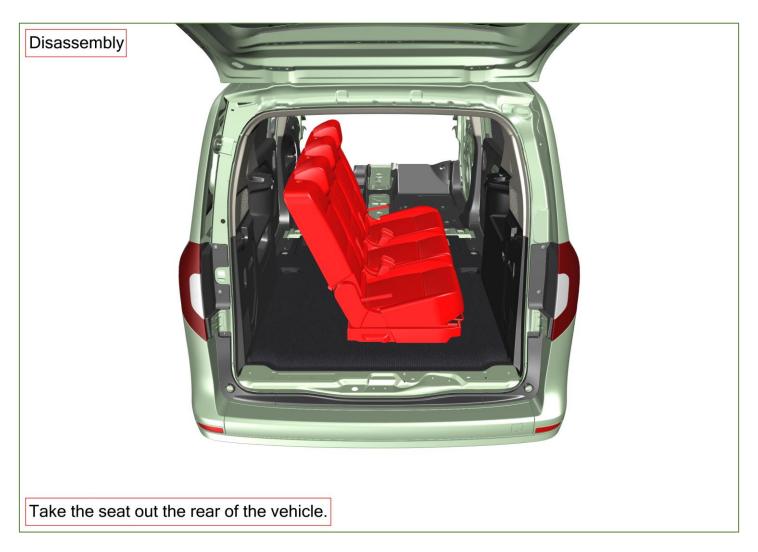
The steps where tectyl, glue and some where sealant is used require time to dry. In the meantime it's possible to do some steps that do not intervene with the drying process.

Disconnect the battery during the conversion. The parts that recieve the tectyl treatment, must have the tectyl applied when mounted to the vehicle, NOT before.

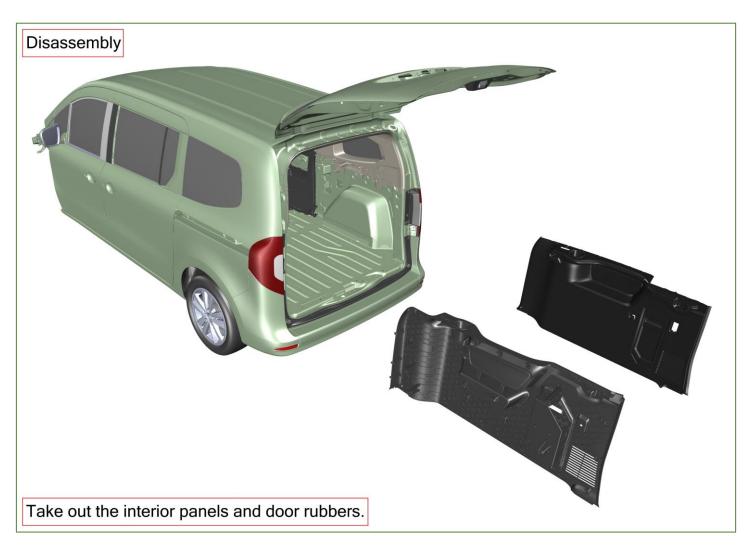


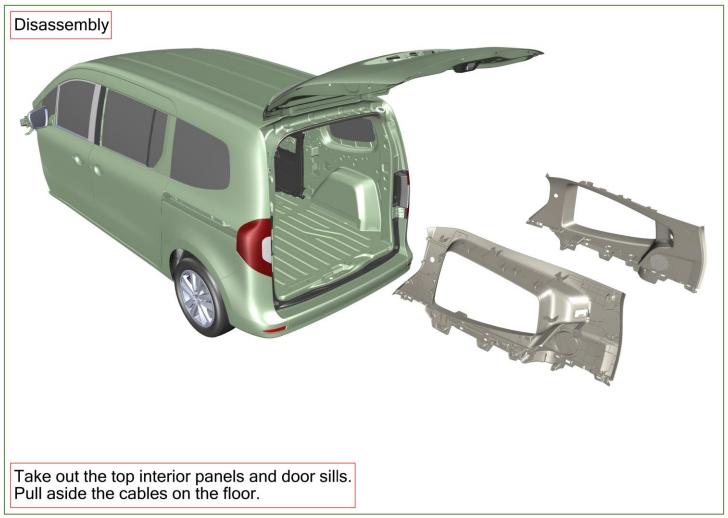


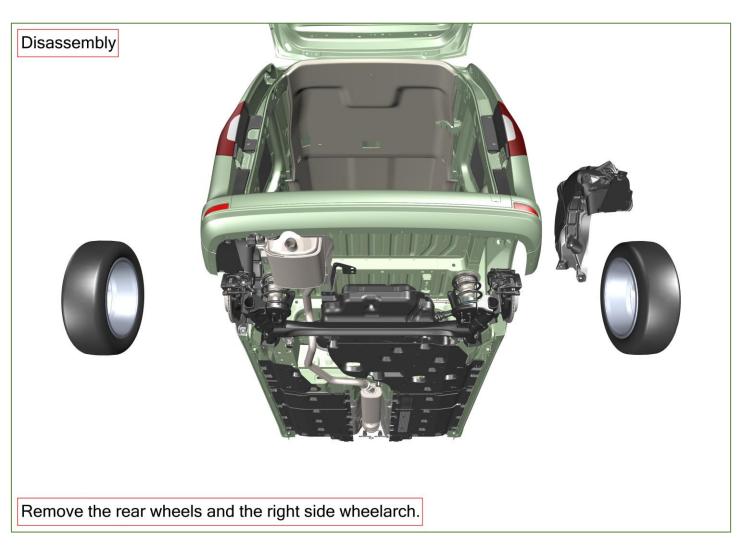




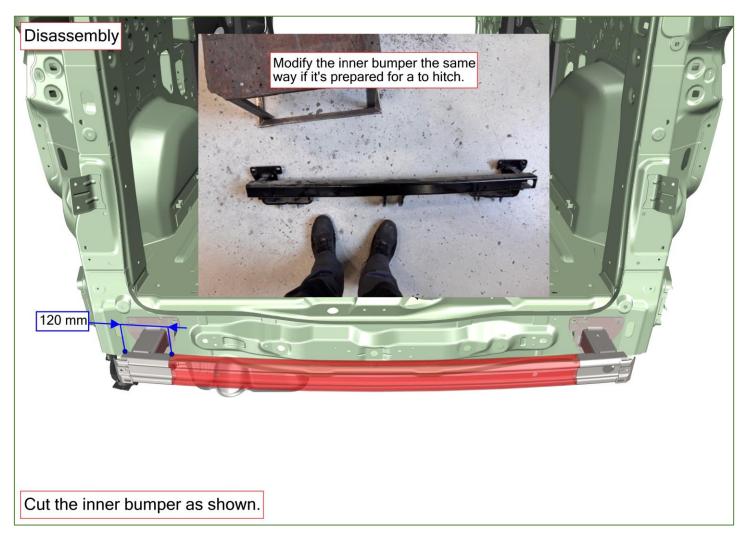


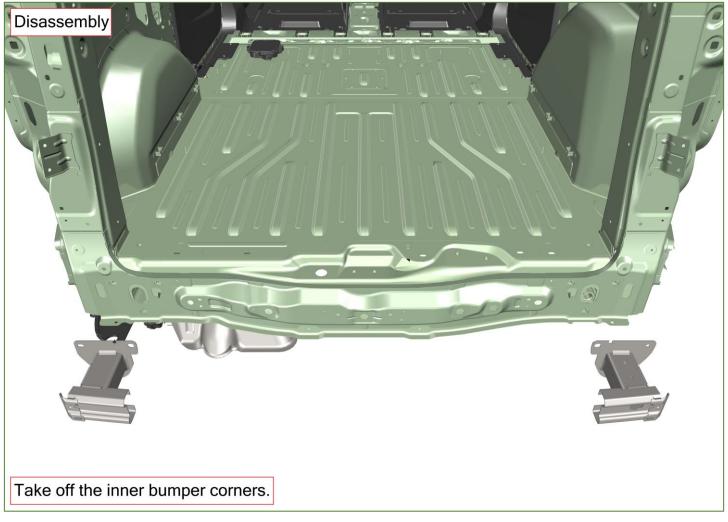


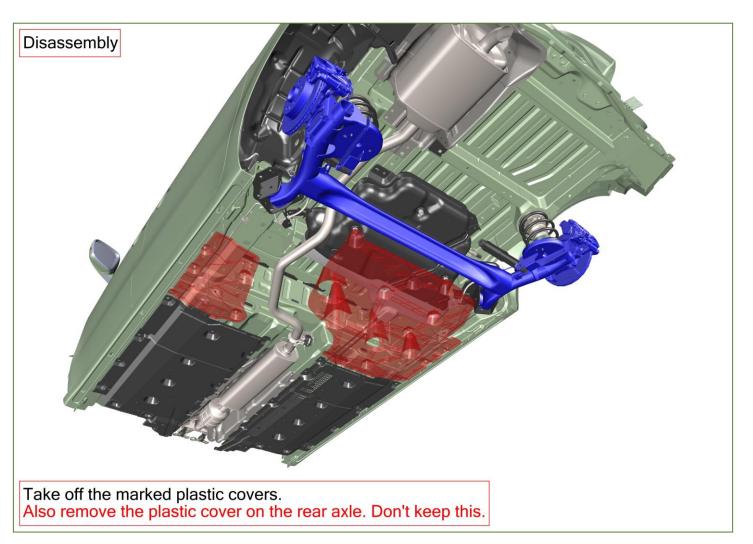


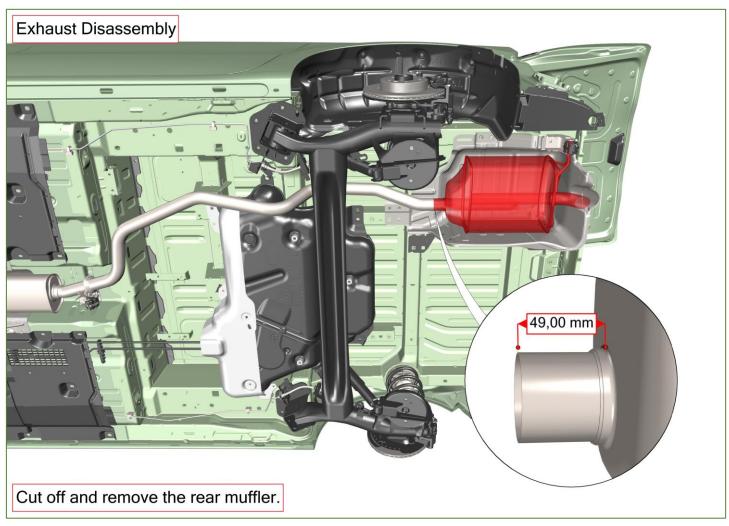


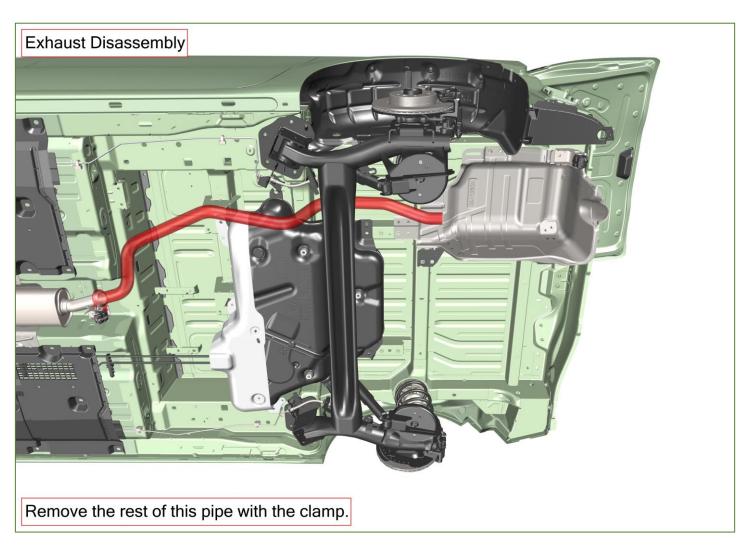


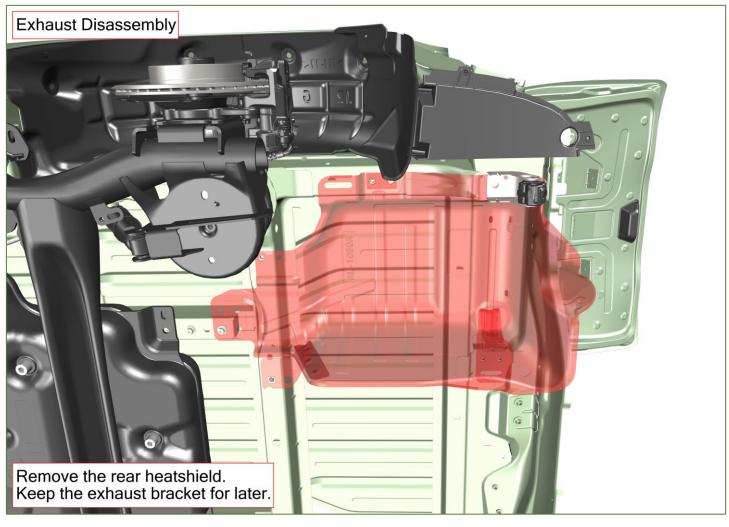


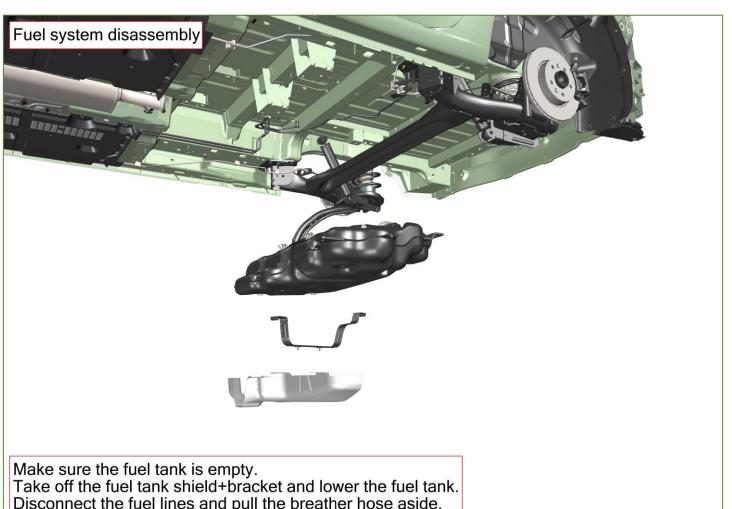




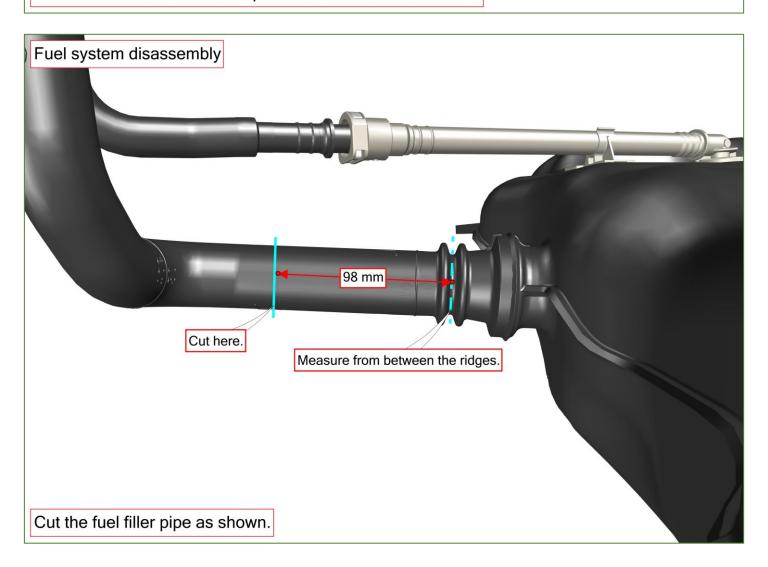


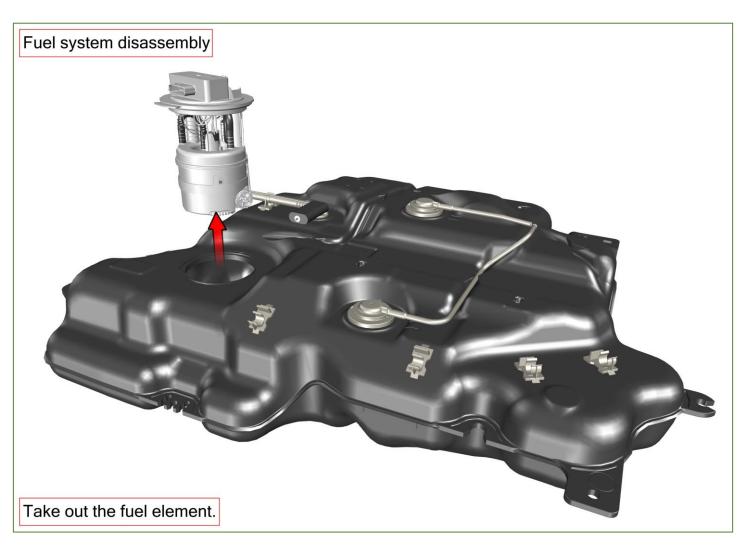


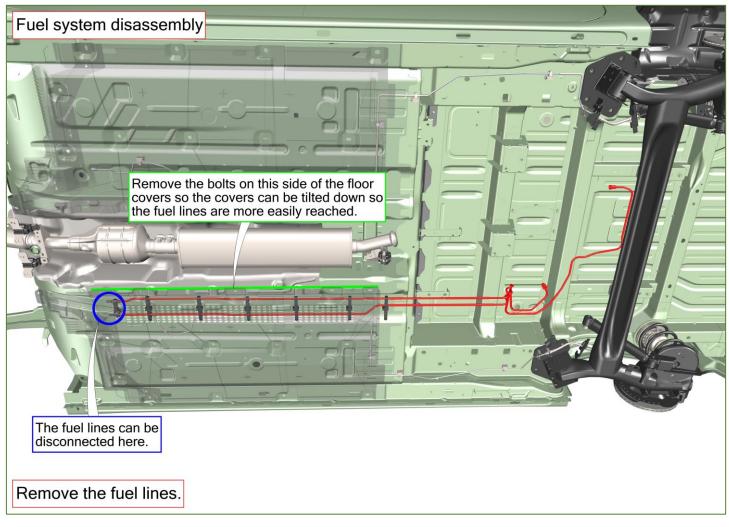


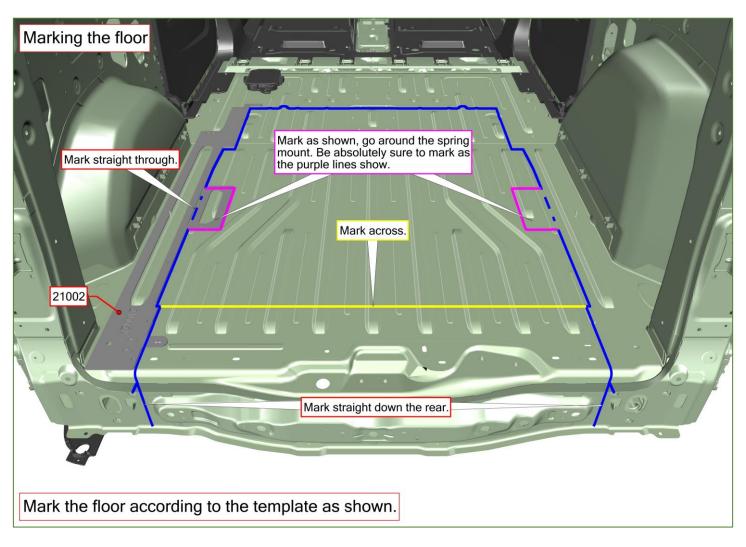


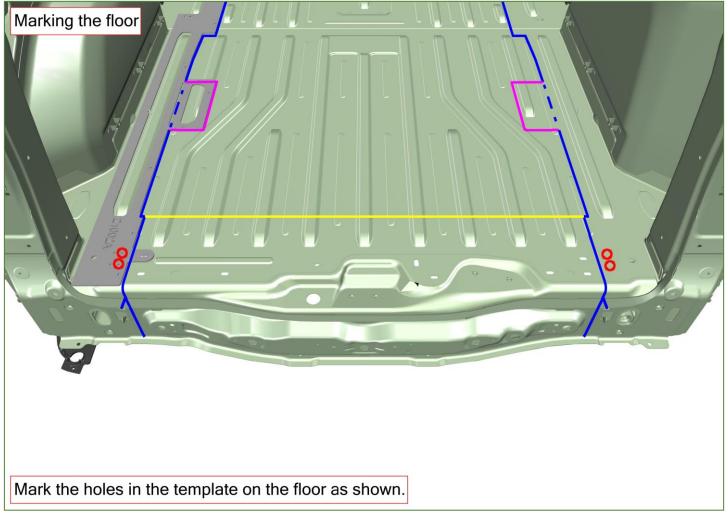
Disconnect the fuel lines and pull the breather hose aside.

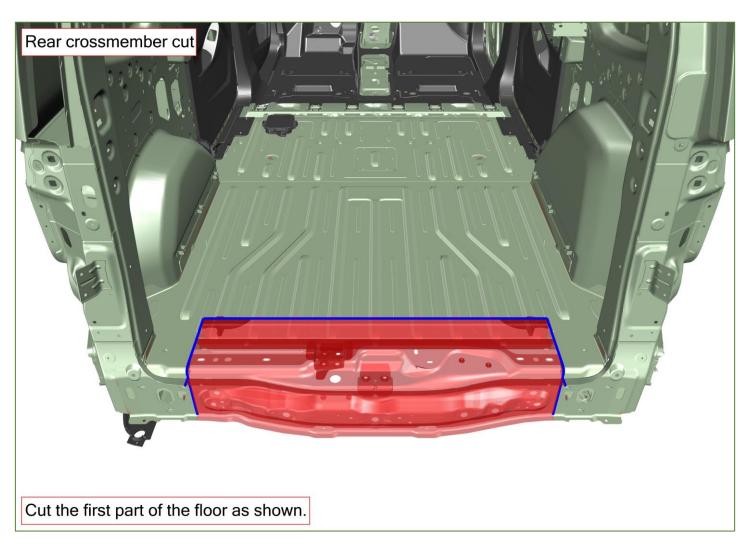


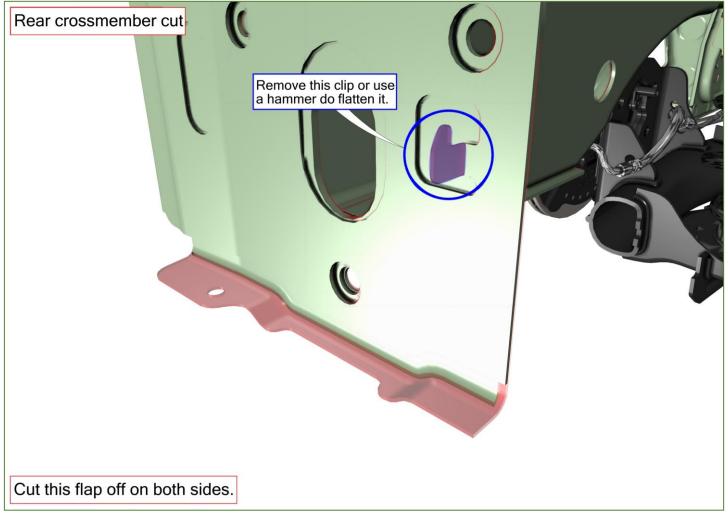


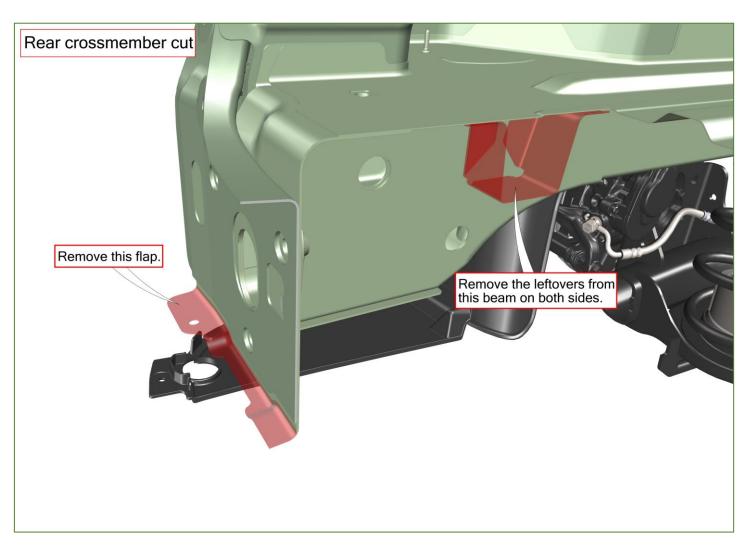


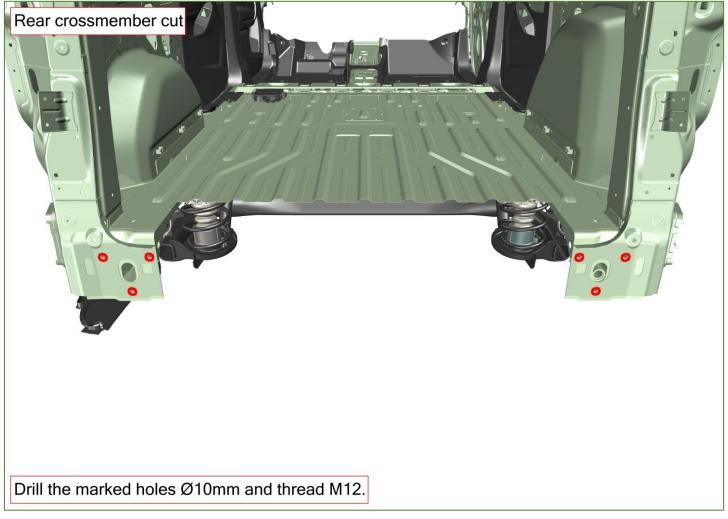


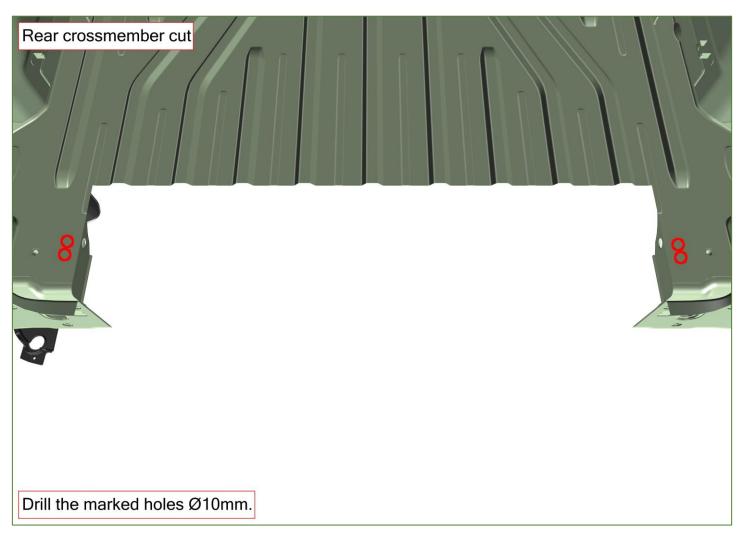


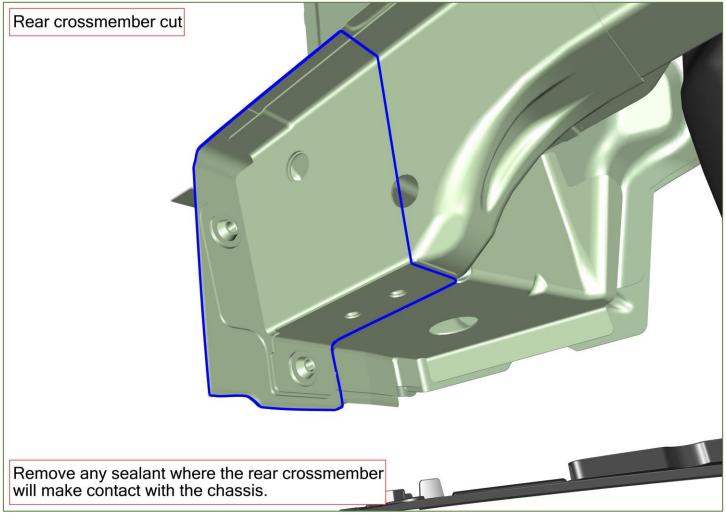


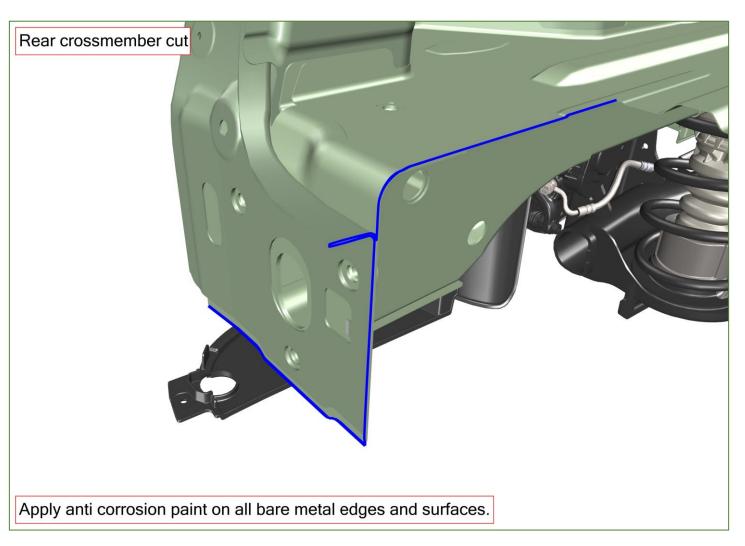


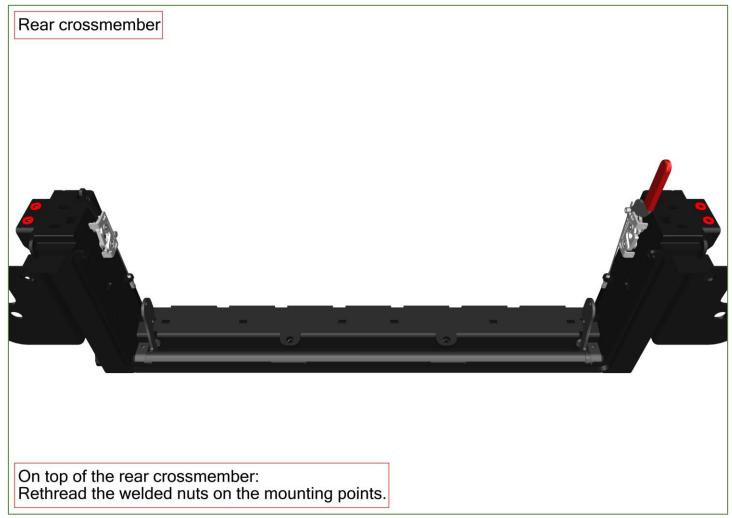


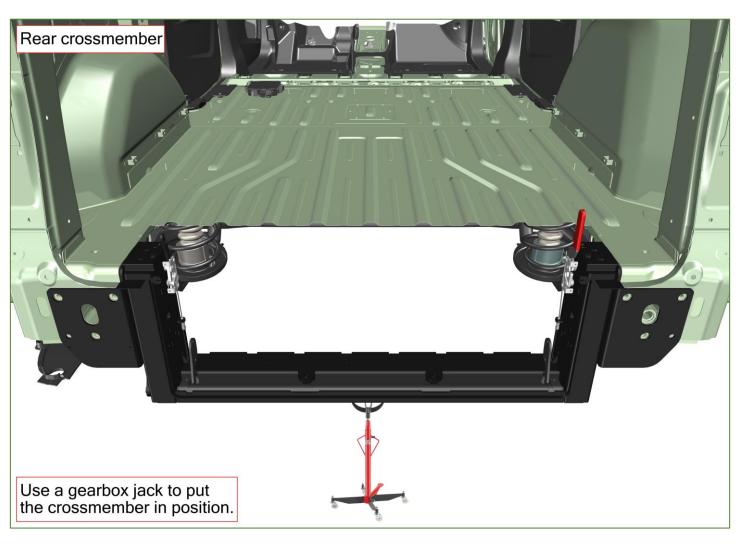


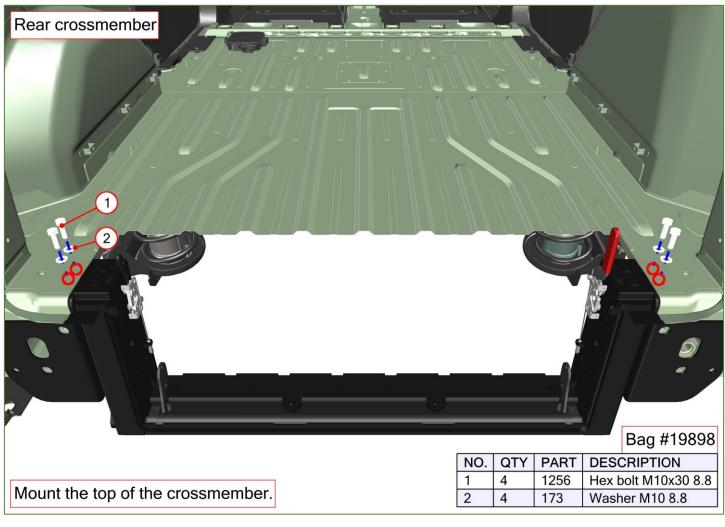


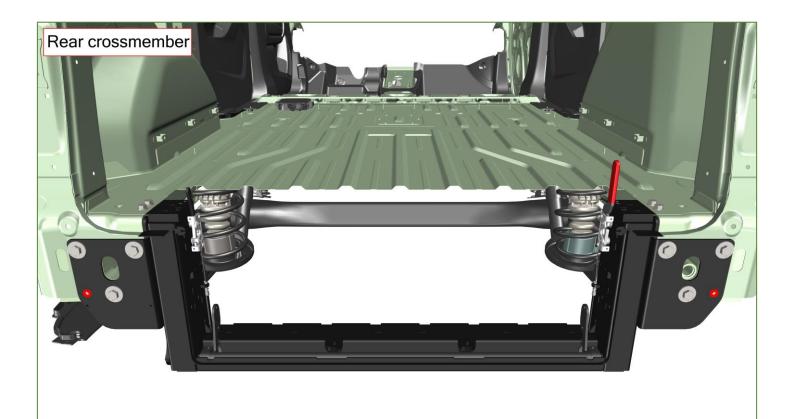






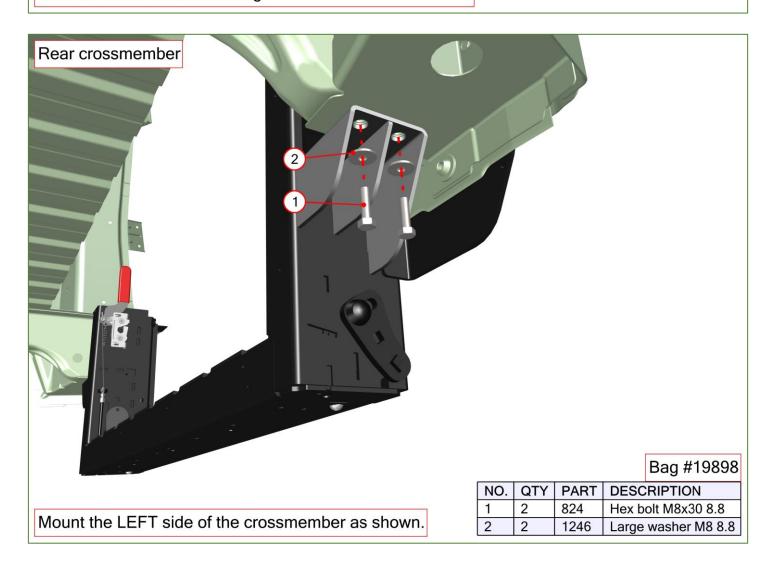


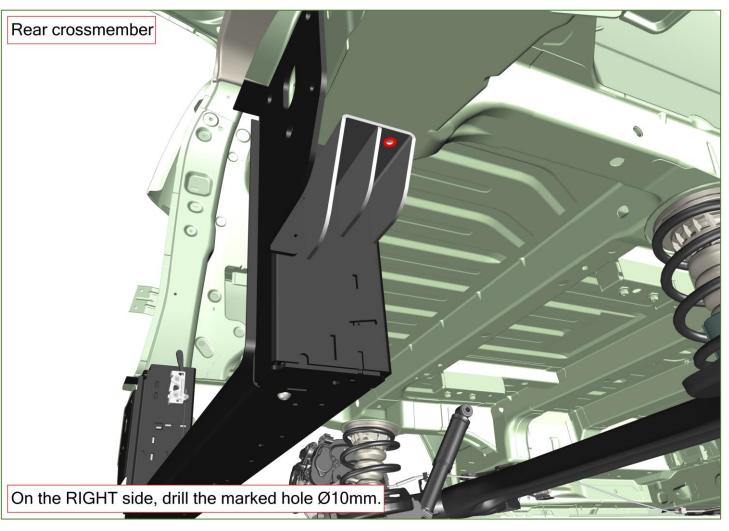


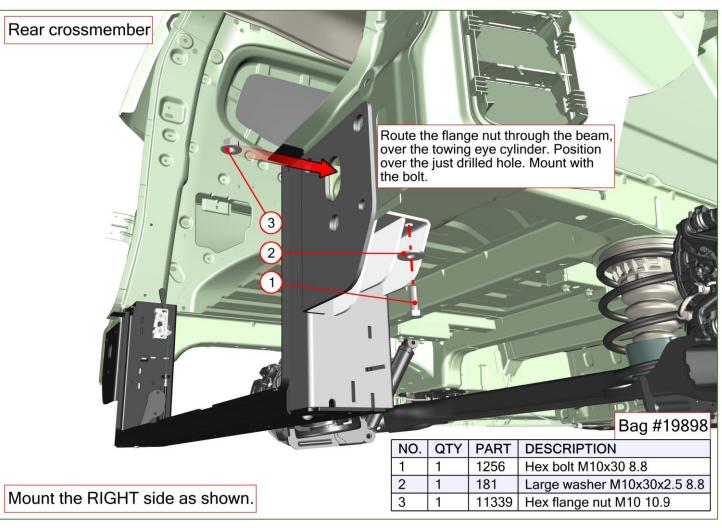


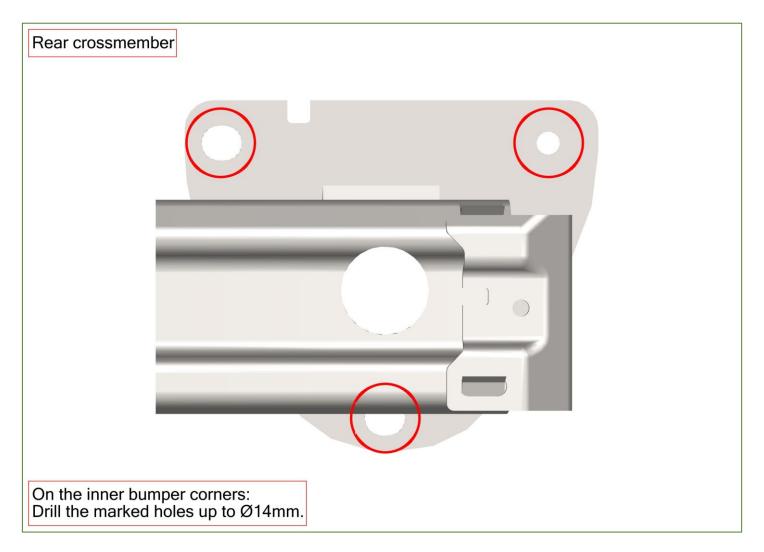
Temporarily mount the rear side to secure correct position. Drill the marked holes Ø12mm.

Take the bolts out after drilling.







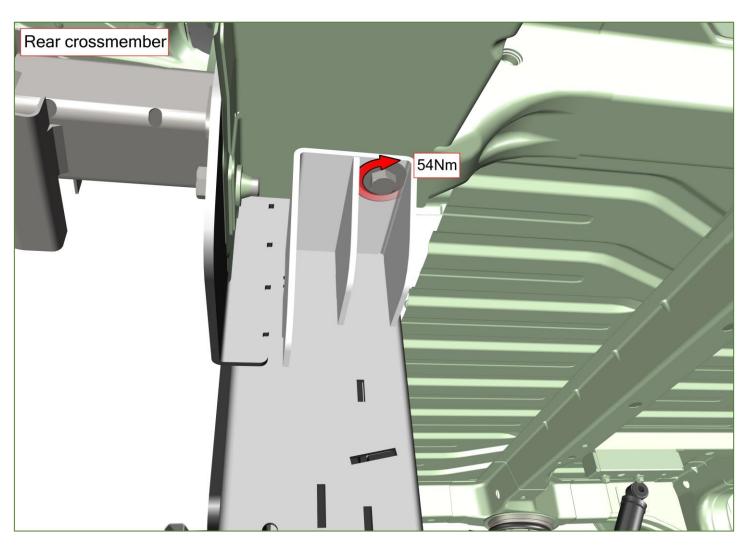


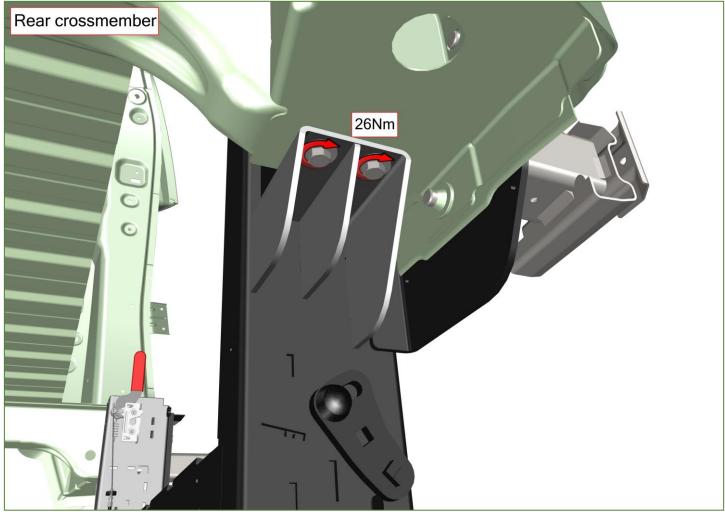


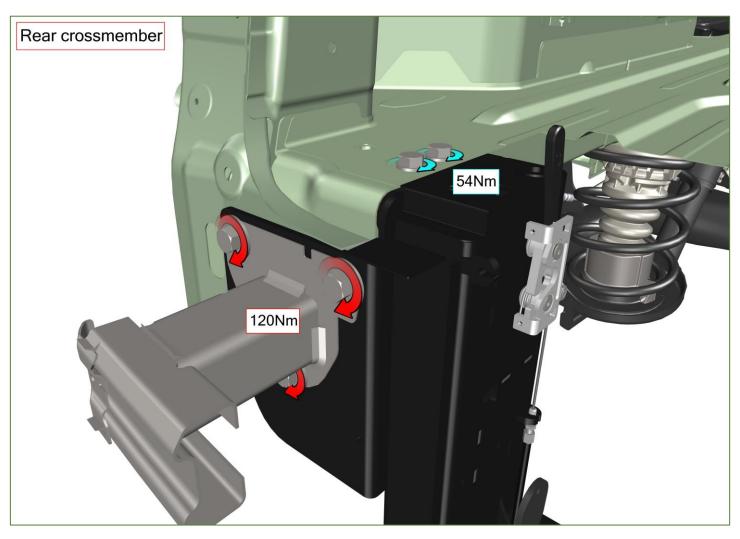
Bag #19898

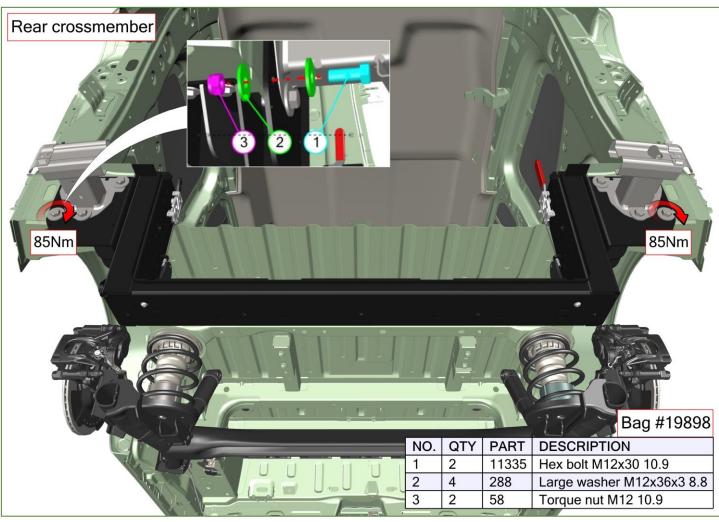
Place the OEM inner bumper corners on the crossmember. Mount the back of the crossmember.

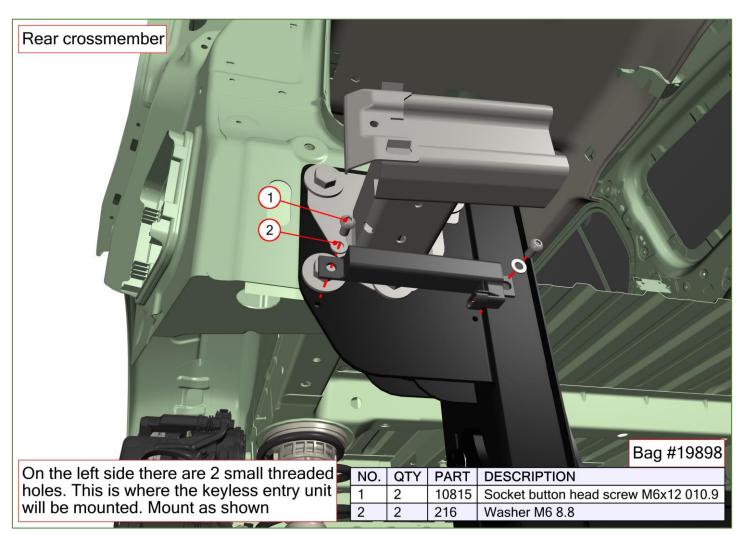
N	O. QTY	PART	DESCRIPTION
1	6	11335	Hex bolt M12x30 10.9
2	6	7209	Large washer M12x36x3 8.8

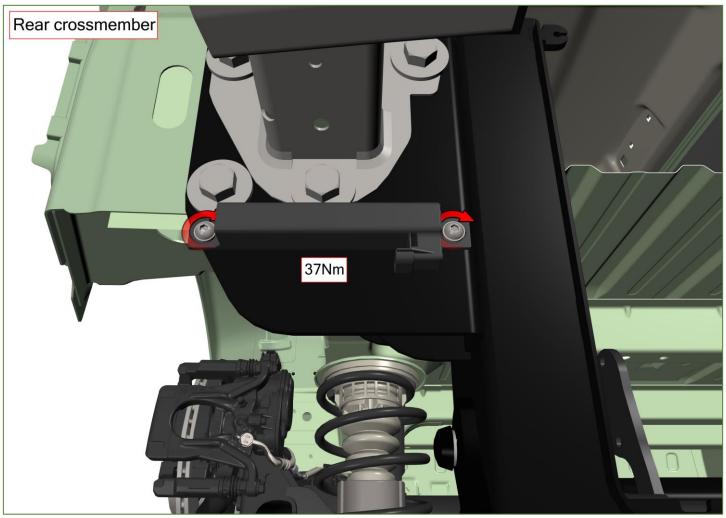


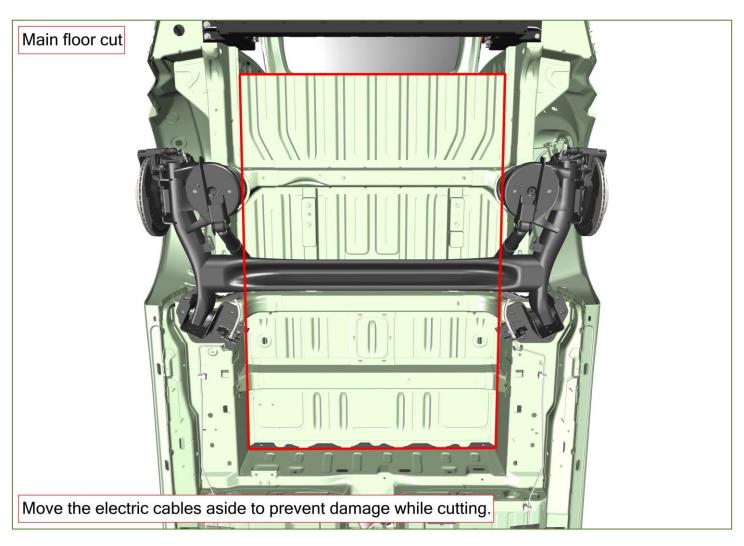


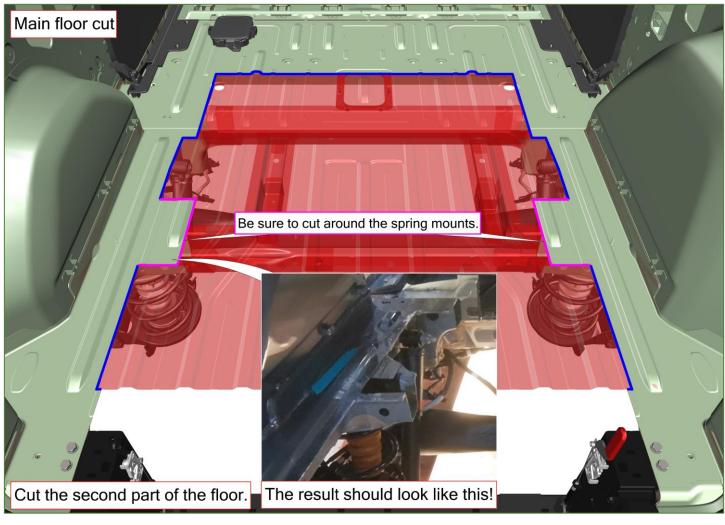


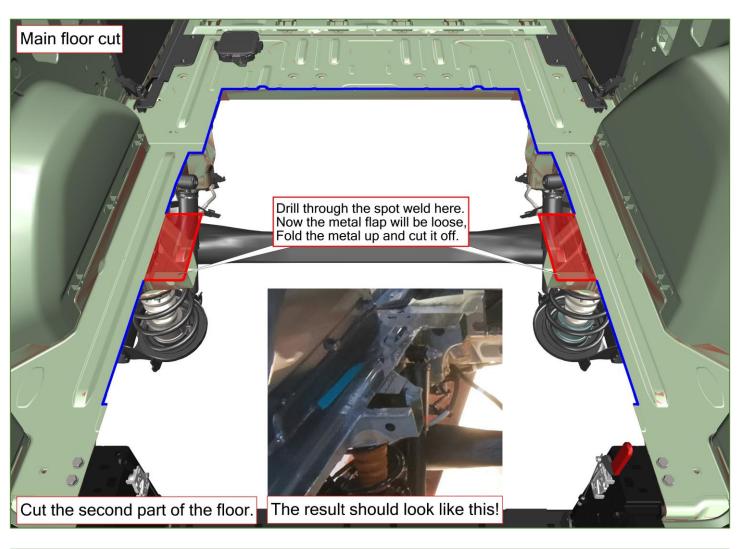


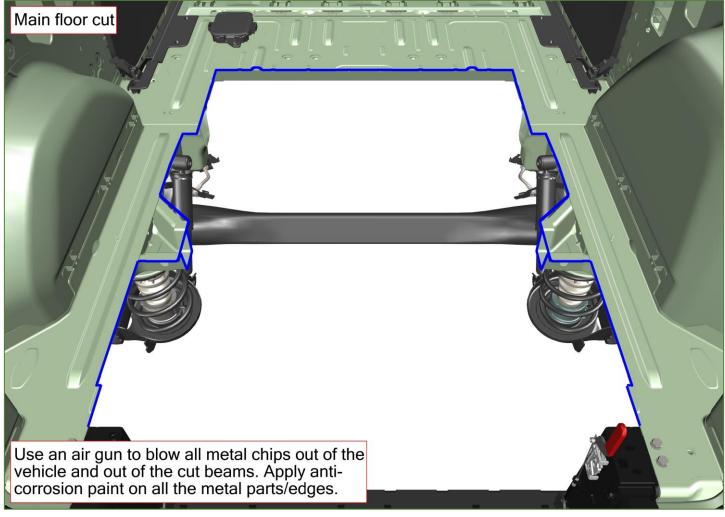


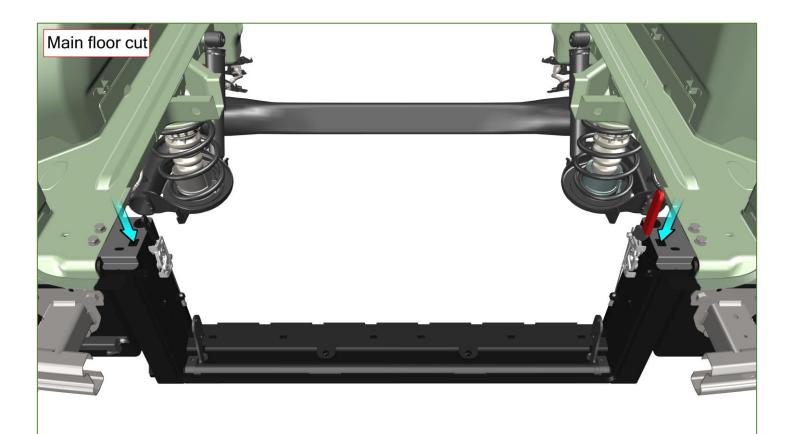




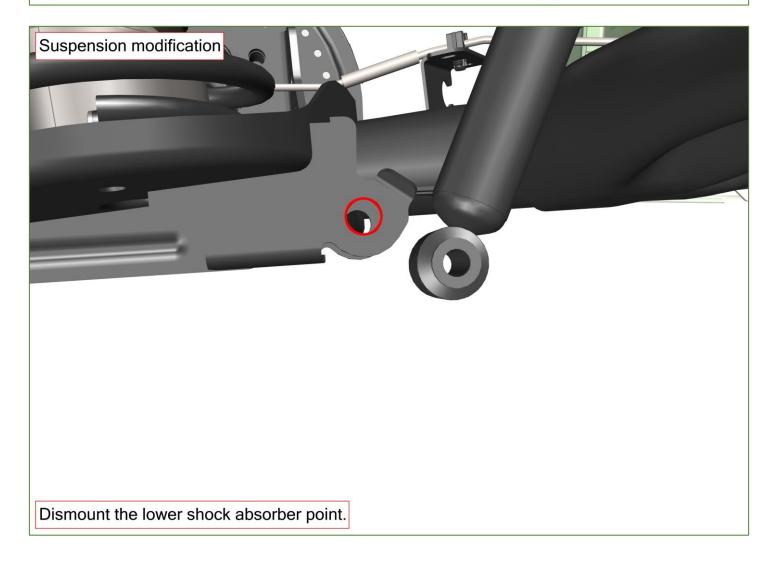


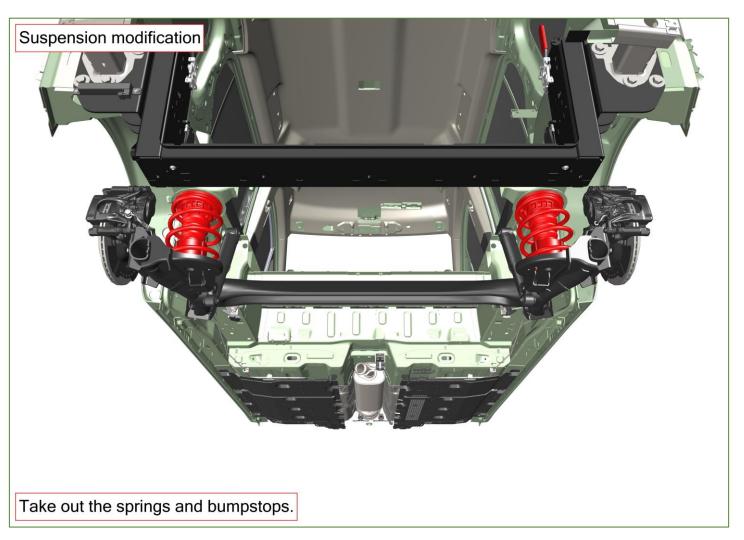


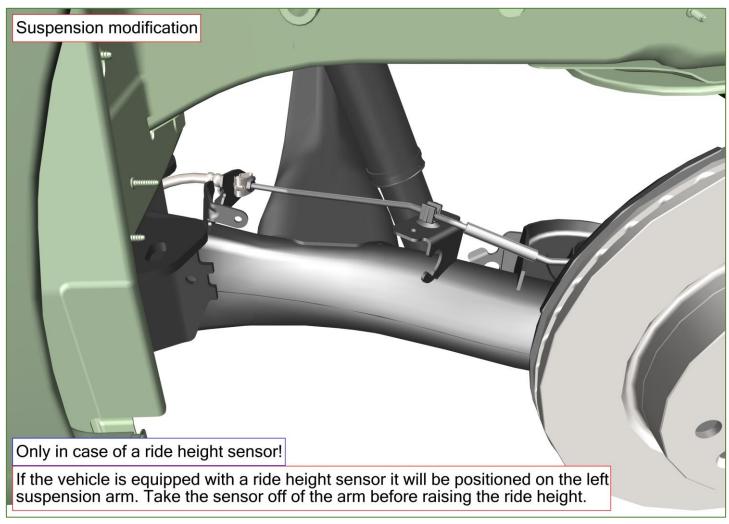


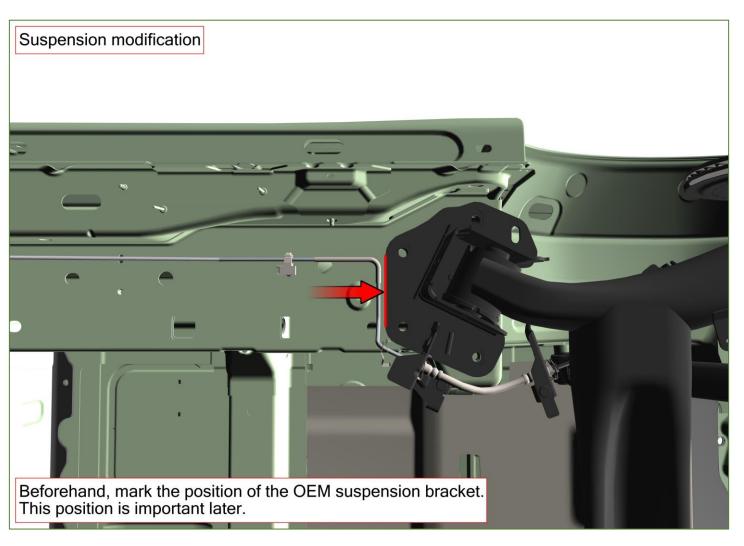


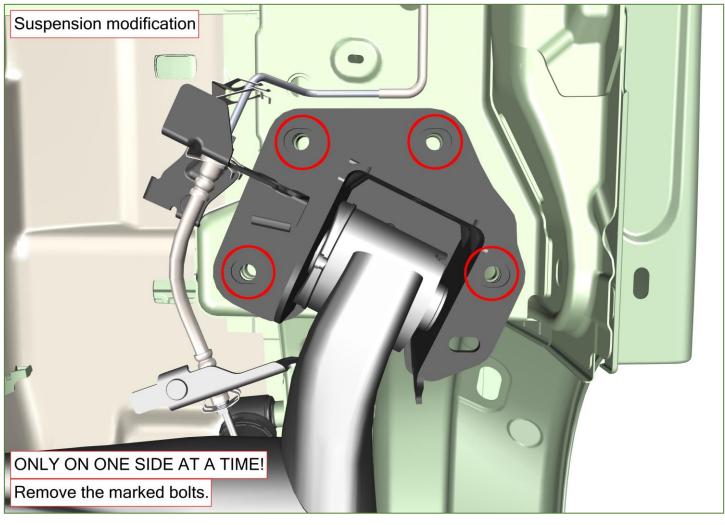
Use an air gun to blow all te metal chips out of the rear crossmember. Apply cavity protection coating inside the standing beams of the rear crossmember through the holes marked with the arrows.

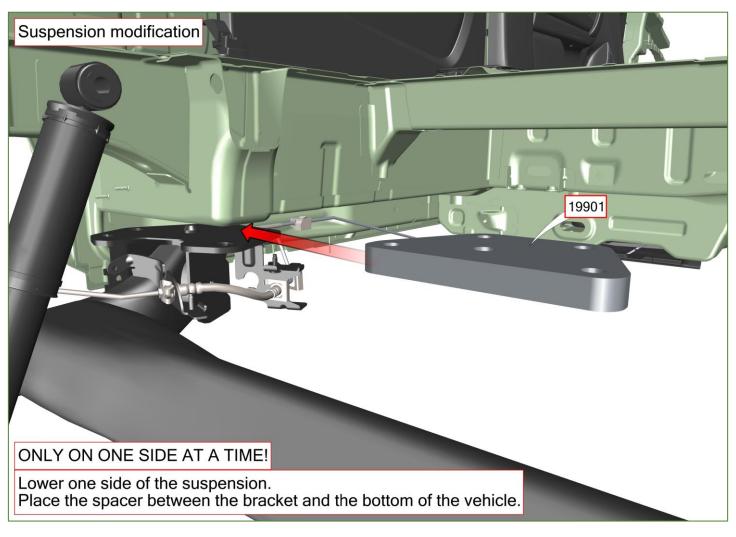


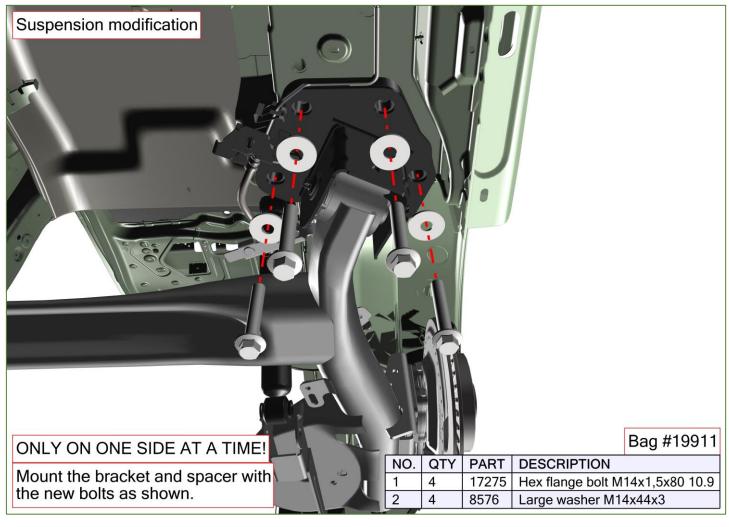


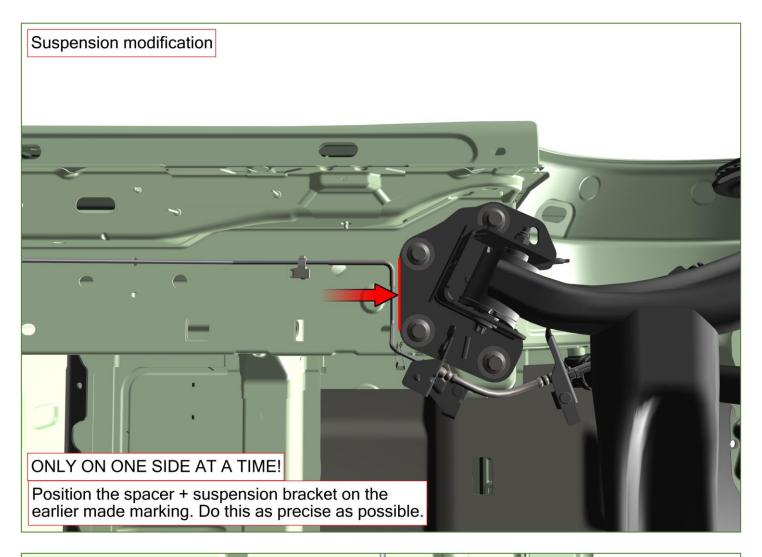


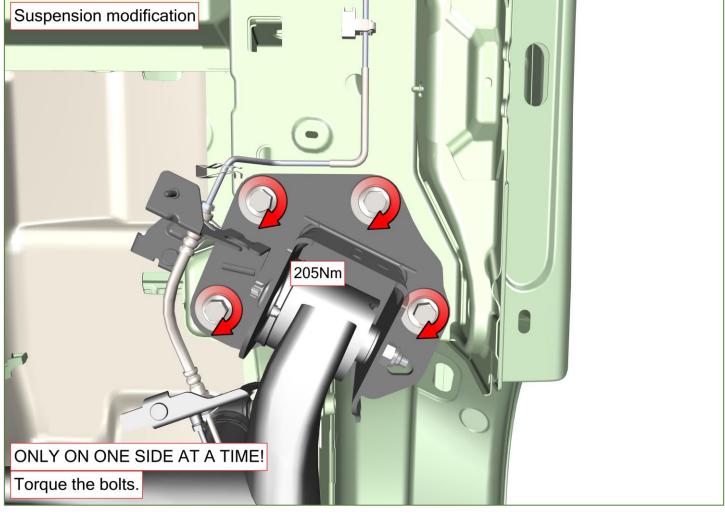


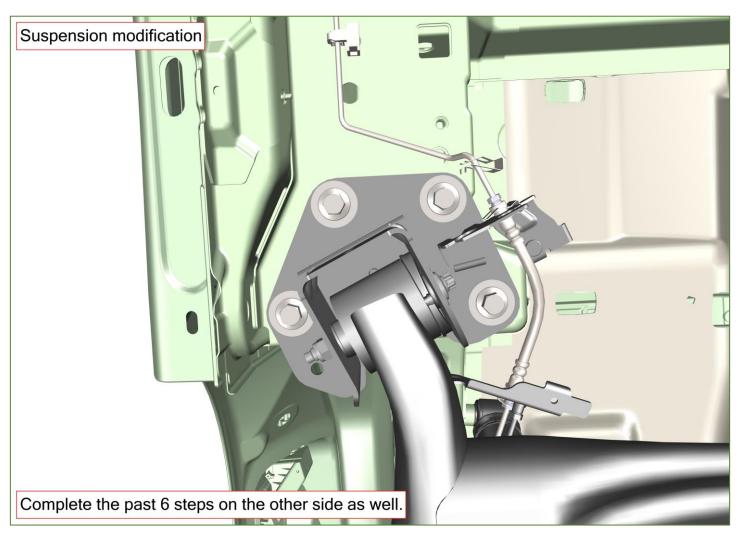


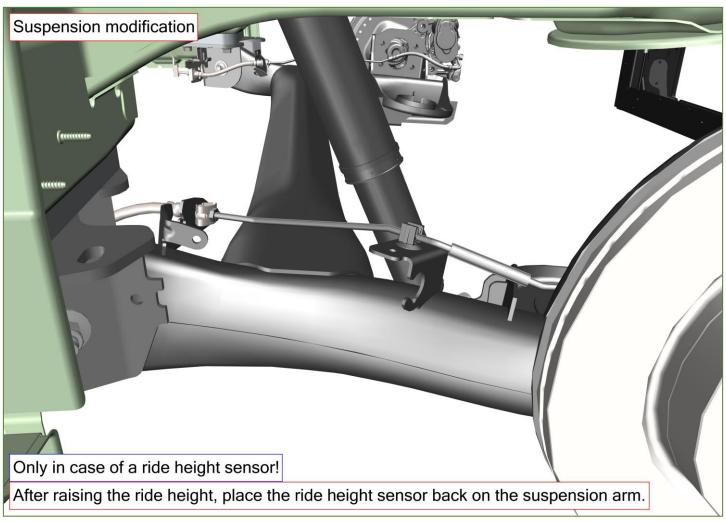


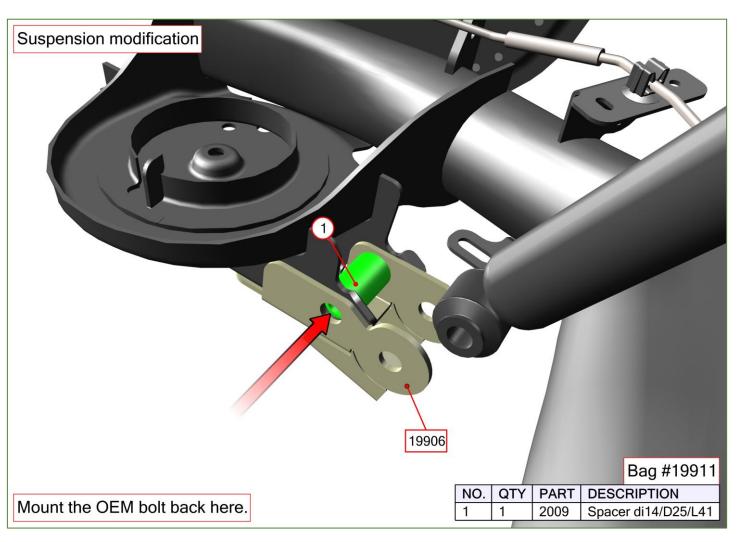


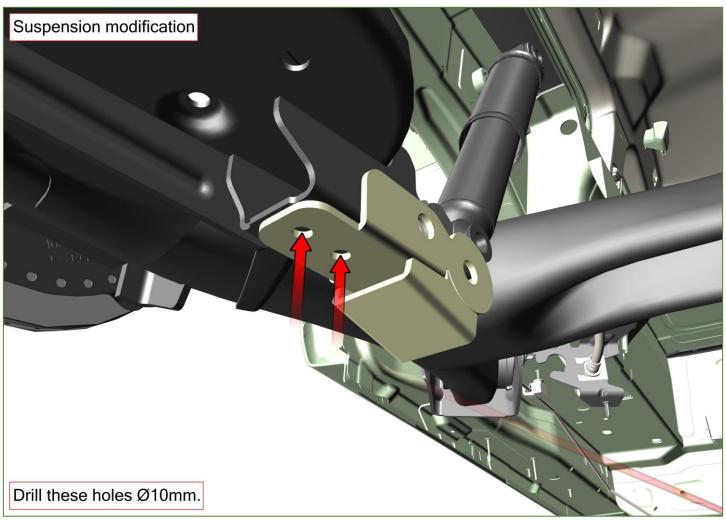


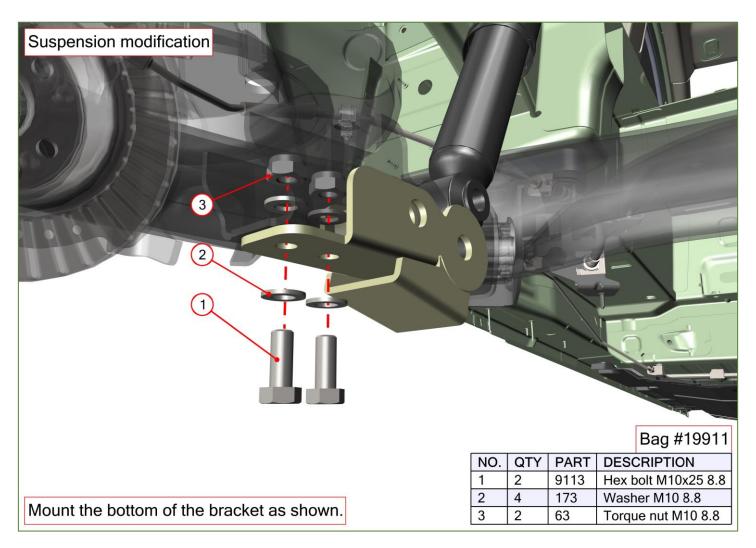


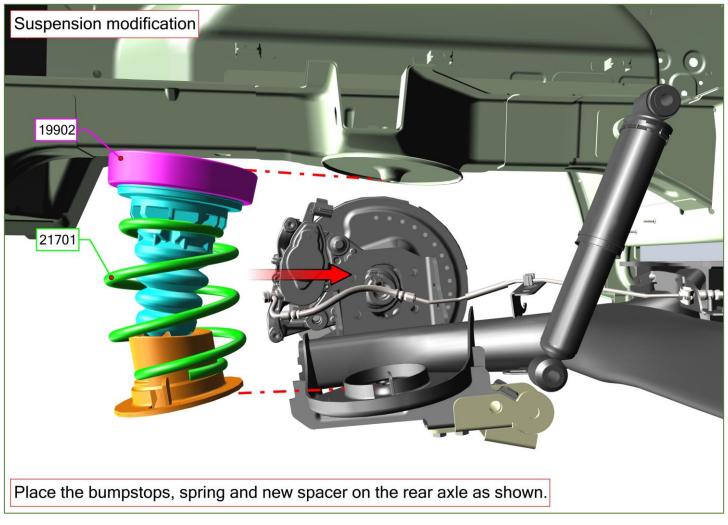


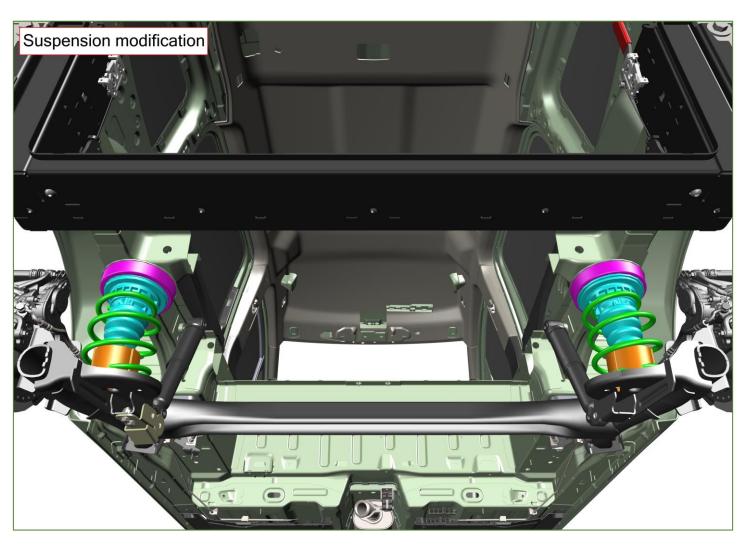


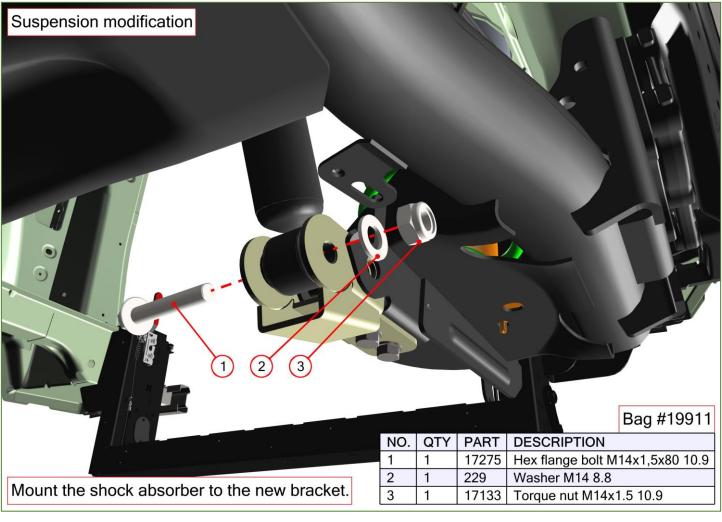


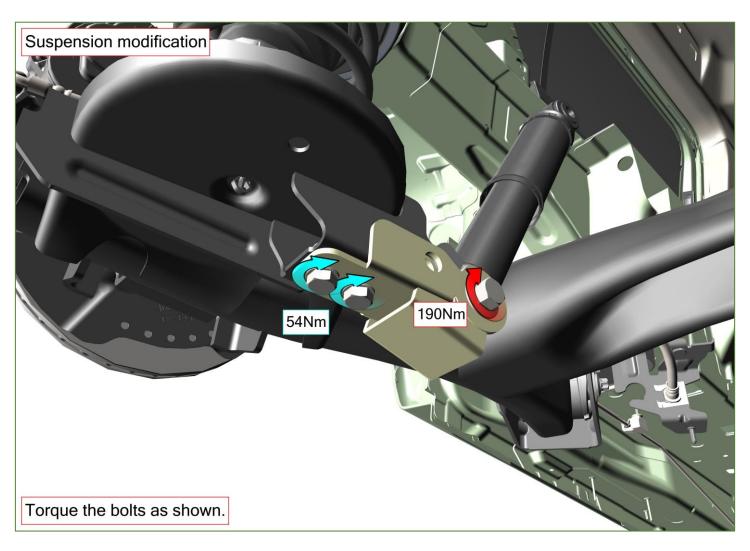


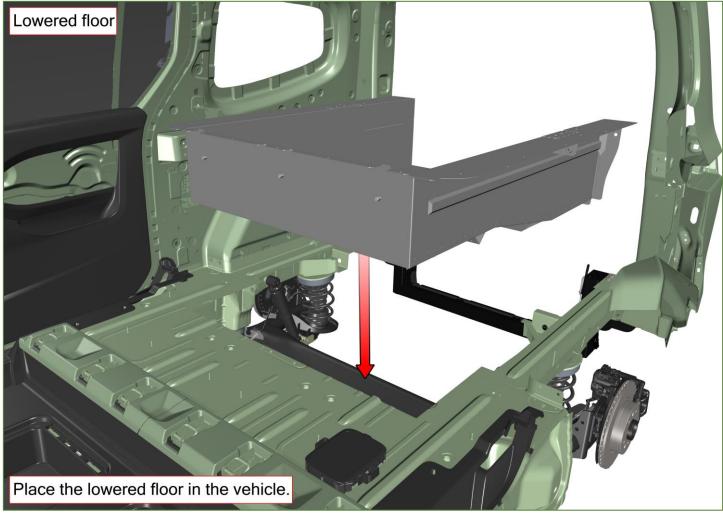


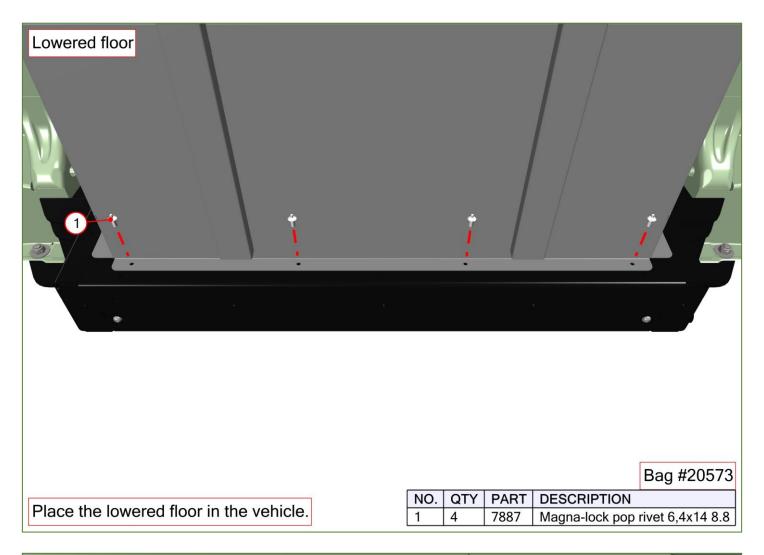


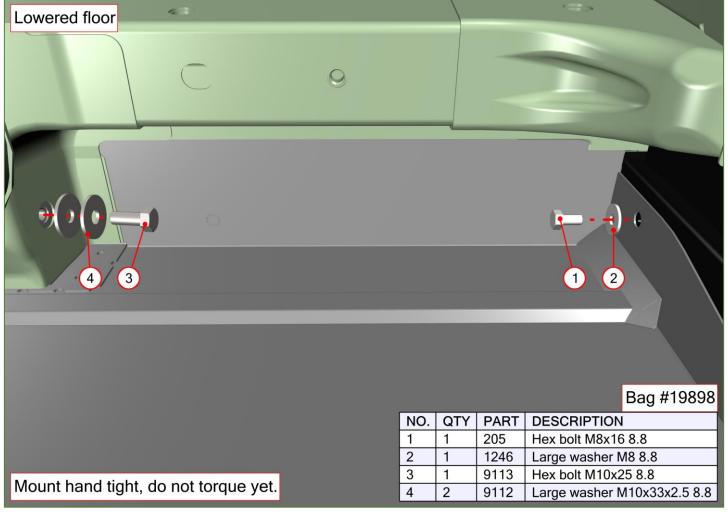


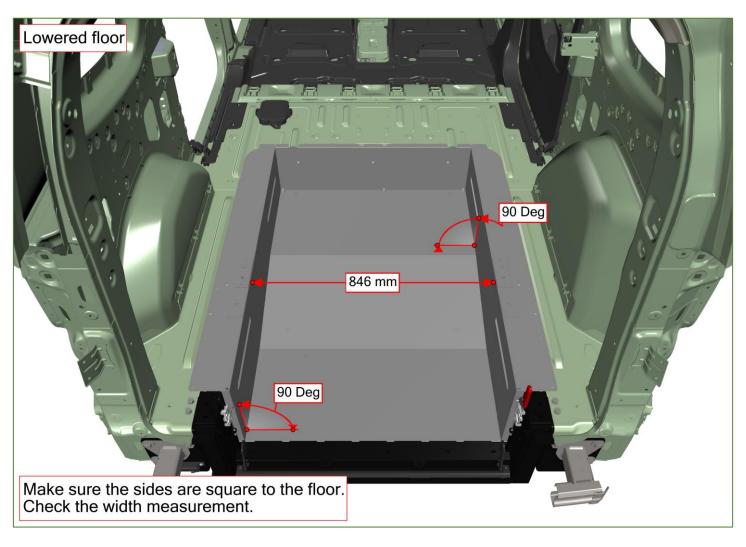


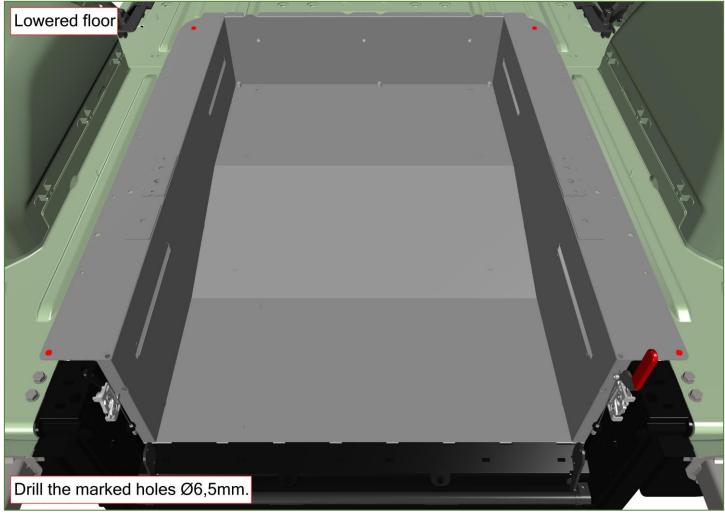


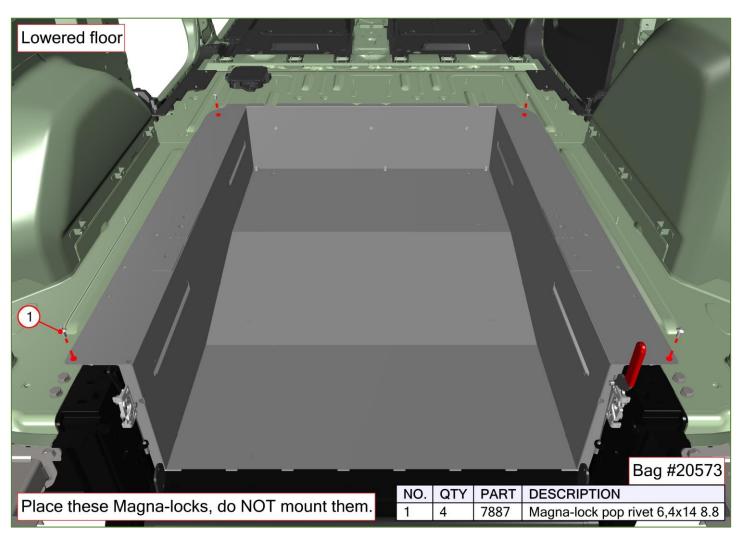


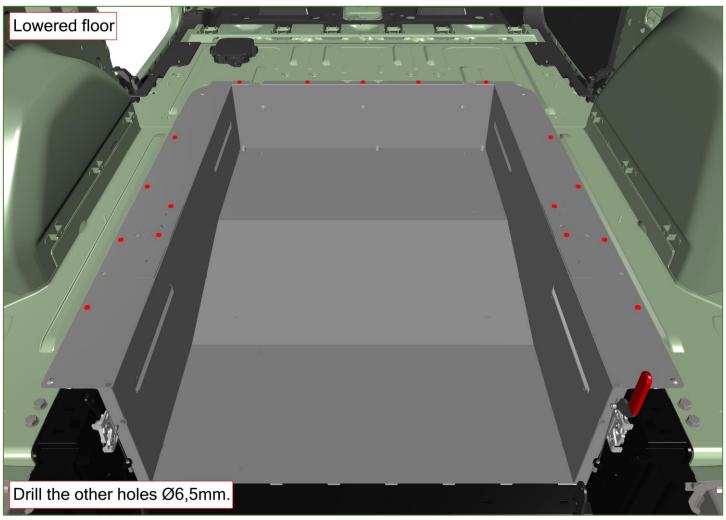


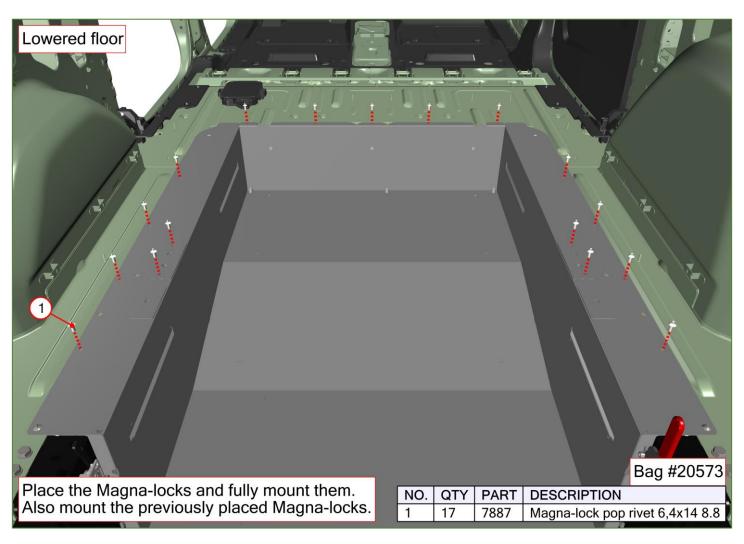


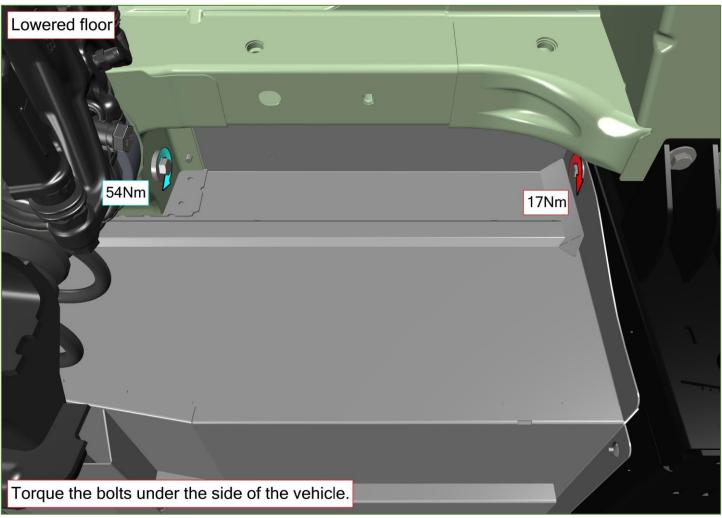


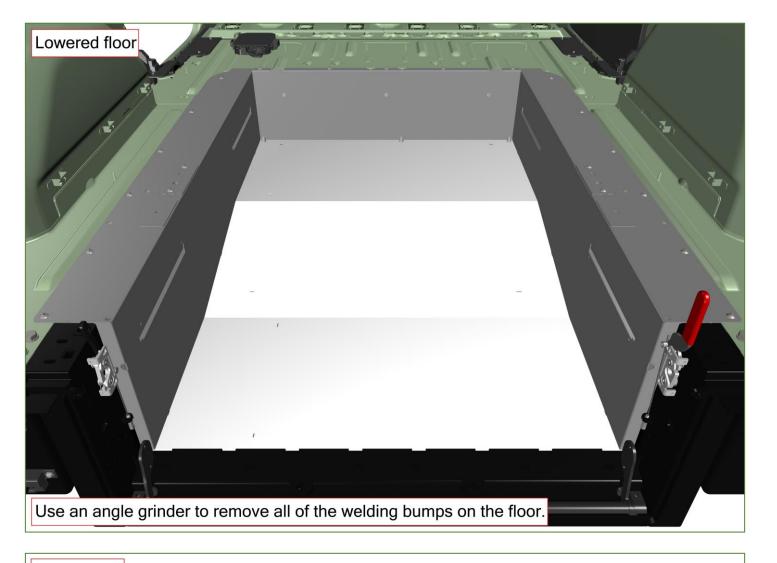


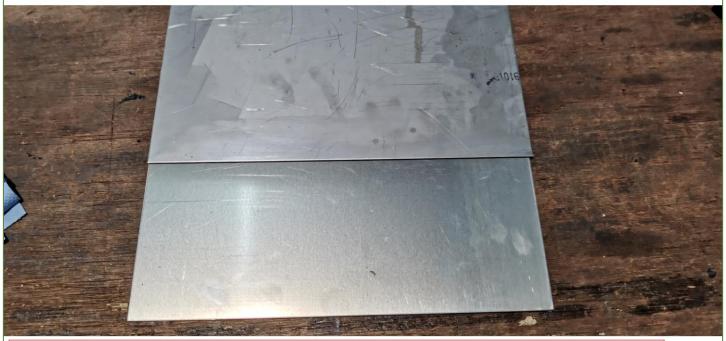












When applying sealant, first locate the edge or spot that needs sealant. Edges where 2 or more plates overlap eachother or form a corner are an example. Also any spot where even a slight opening/gap from the outside to the inside of the vehicle or a closed beam is located.

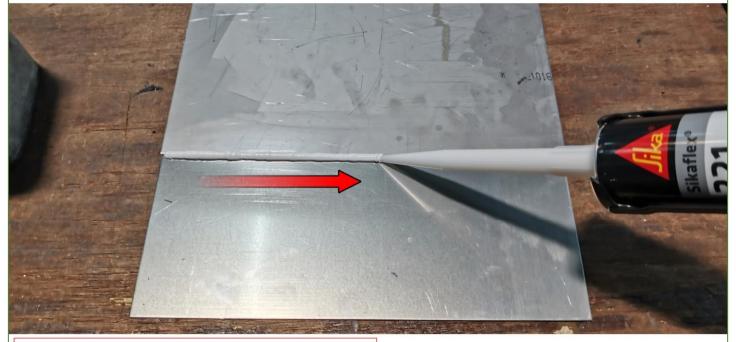


Degrease the surfaces that the sealant will be applied to.

# How to seal



Position the sealant gun at the start of the edge.



With a smooth and controlled motion, move the sealant gun along the edge to apply the sealant. Use the trigger with a controlled matter to create an even line of sealant.

### How to seal



When done properly, the lineof sealant should look loke this. BEWARE, this is not the final step to properly seal.



To properly seal, the sealant must be spread out evenly by using a sealant bush.

## How to seal



Some people might prefer to cut the brush to a short size, this allows for more precise usage. This is not mandatory.

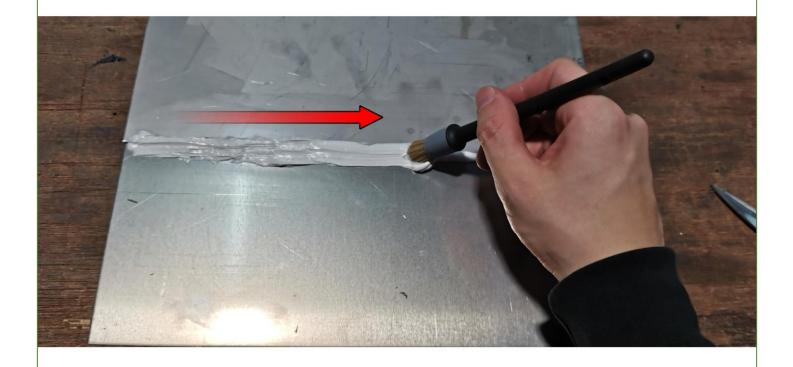


Some people might prefer to cut the brush to a short size, this allows for more precise usage. This is not mandatory.

### How to seal

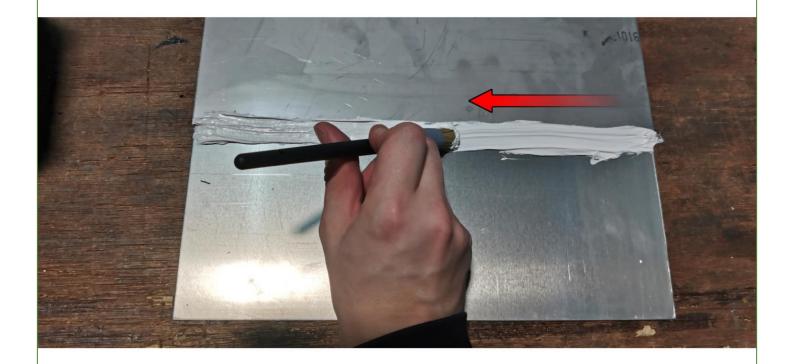


Start spreading the sealant with the brush. Start at the beginning of the sealant line.



First use the brush in one direction.

## How to seal



When finished in direction one, use the brush back in the other direction. This way the sealant will spread evenly and its use will be optimized.

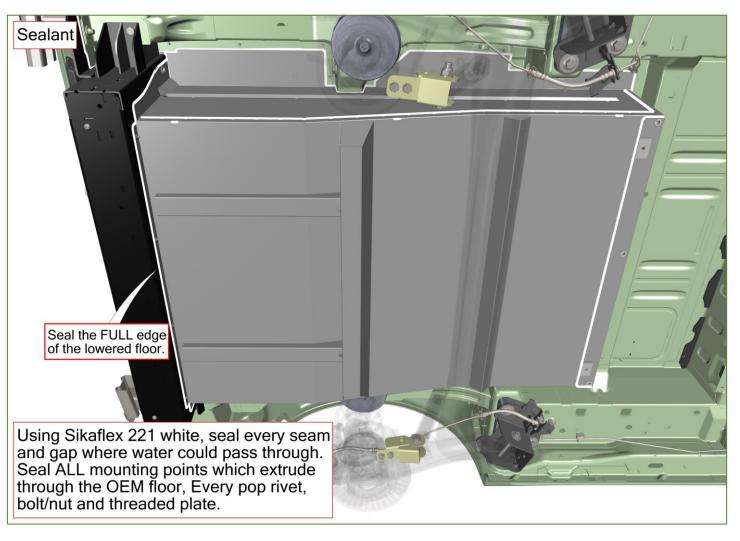


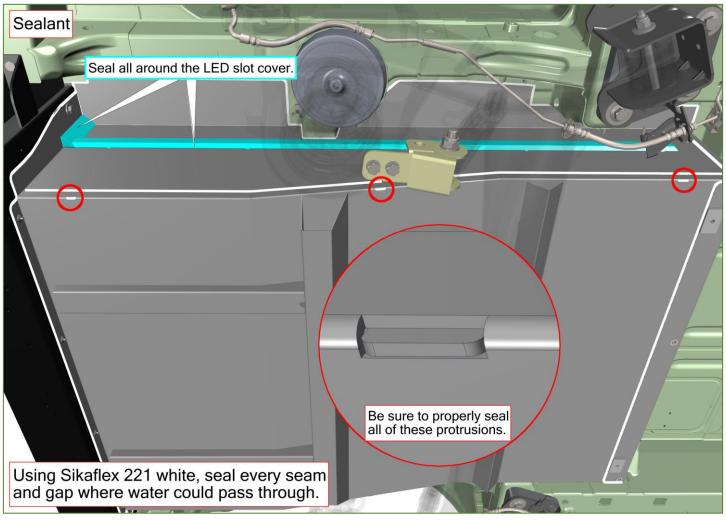
Be sure to fully cover the edge/gap with sealant using the brush. If ALL edges and gaps have been covered, there should be no way possible for water to enter the vehicle where it could cause corrosion. Only then is has the sealant been applied properly.

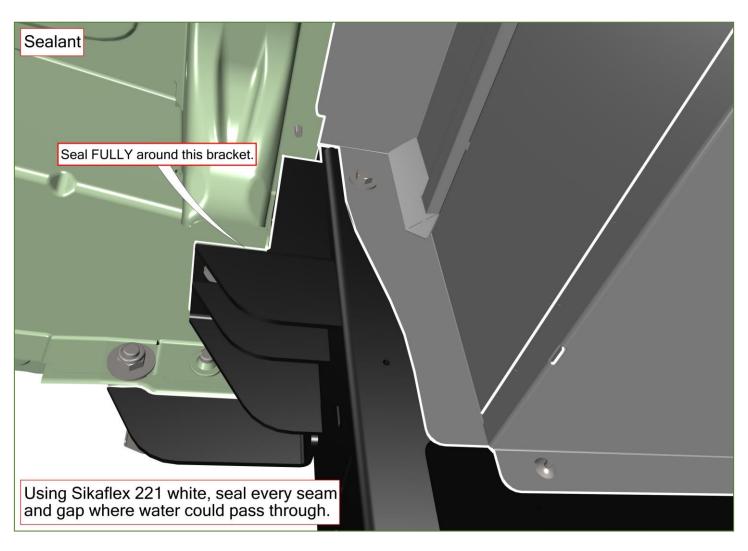
How to seal

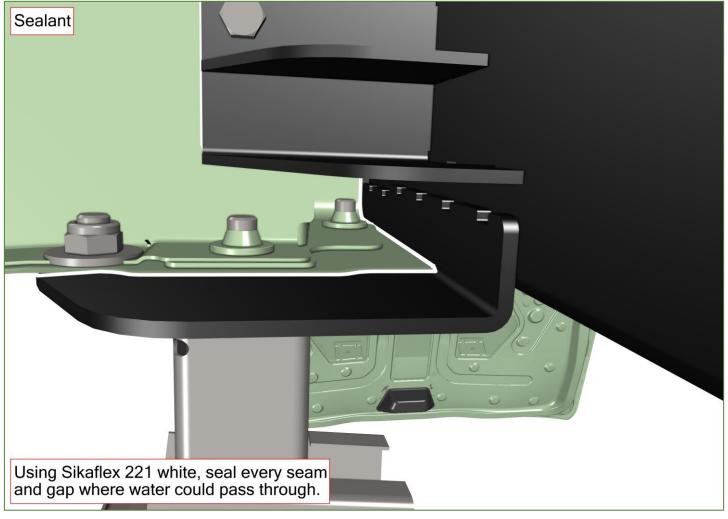


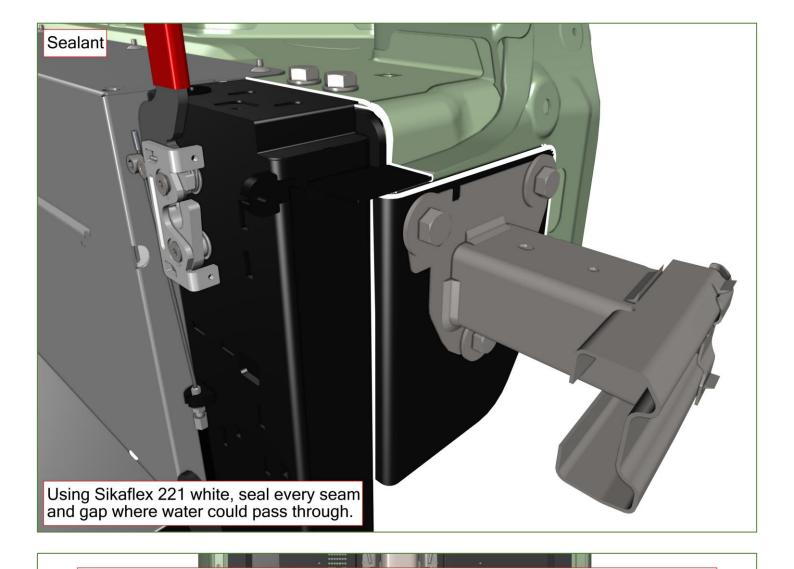
After sealing, wipe the sealant off the brush and place the brush in a cup with turpentine to get the sealant out of the brush.







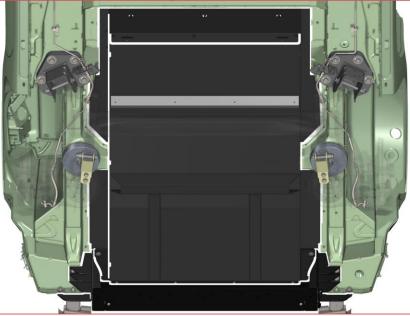




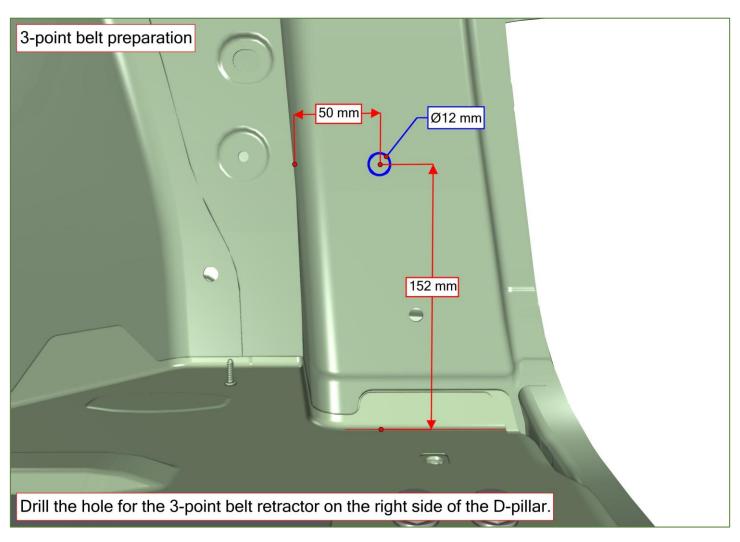
It is VERY IMPORTANT to let the sealant dry overnight!

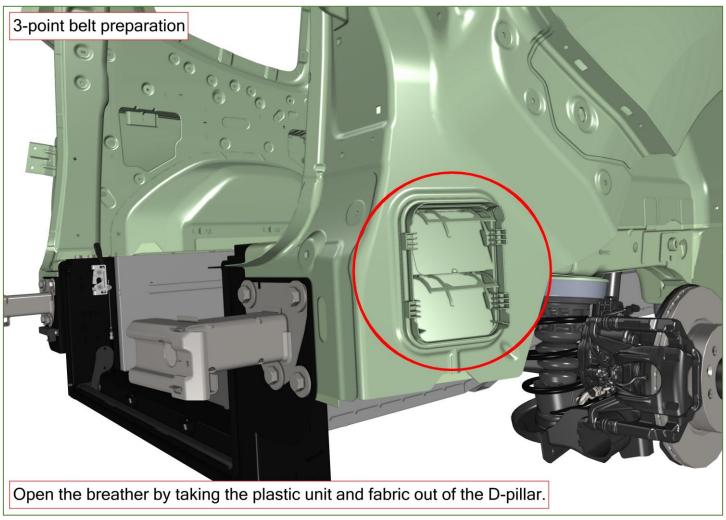
Only when the sealant is completely dry you can tectyl the chassis and the floor.
On the inside of the car: use tape to close EVERY hole/opening ro protect the interior.
Tectyl the floor using:

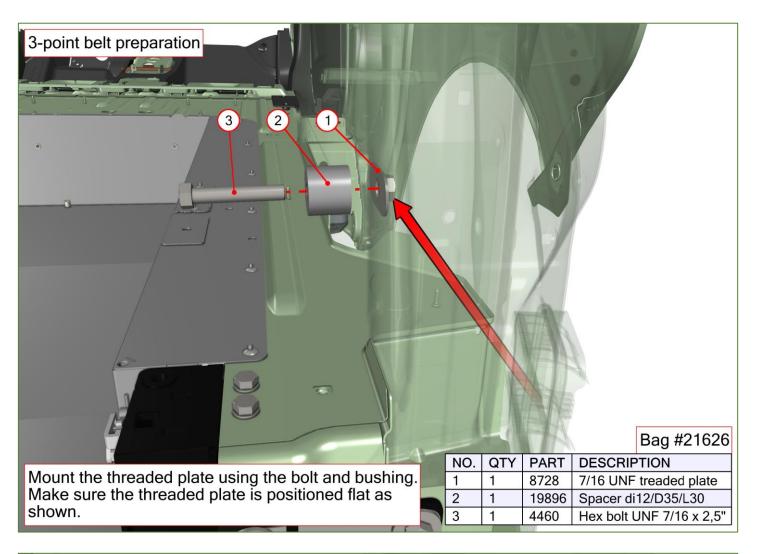
- Tectyl Terotex HV450 in all hollow beams and compartments
   Tectyl Terotex aqua 3000 on the entire lowered floor
- Lectyl Terotex aqua 3000 on the entire lowered floor or 3M anti stone chill protection waterbaseblack 1L 08881

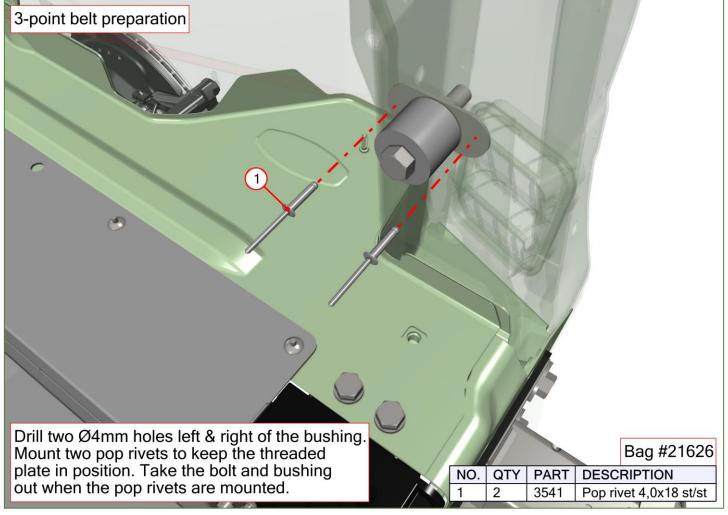


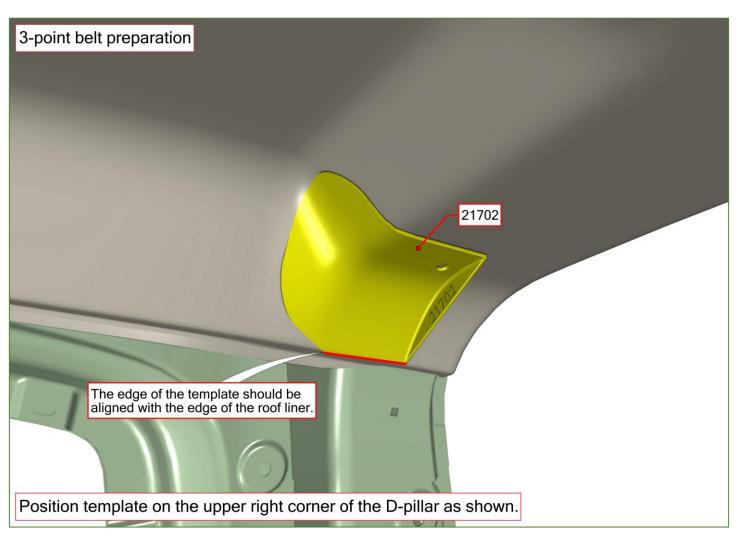
Do NOT work on the bottom of the car once tectyl has been applied until it's dry, wait about 24h. In the meantime, work on the interior/wiring/bumper etc.

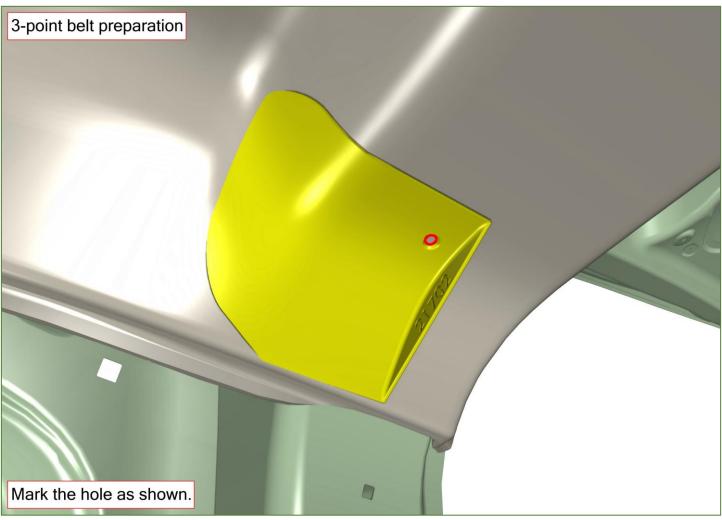


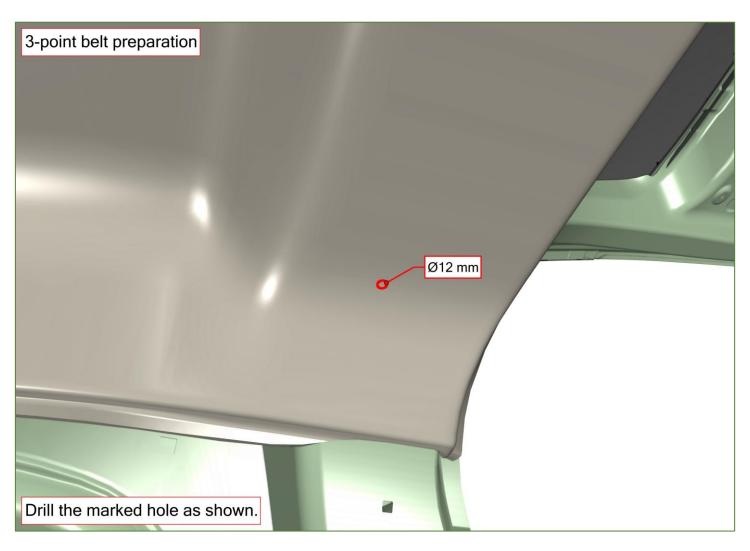


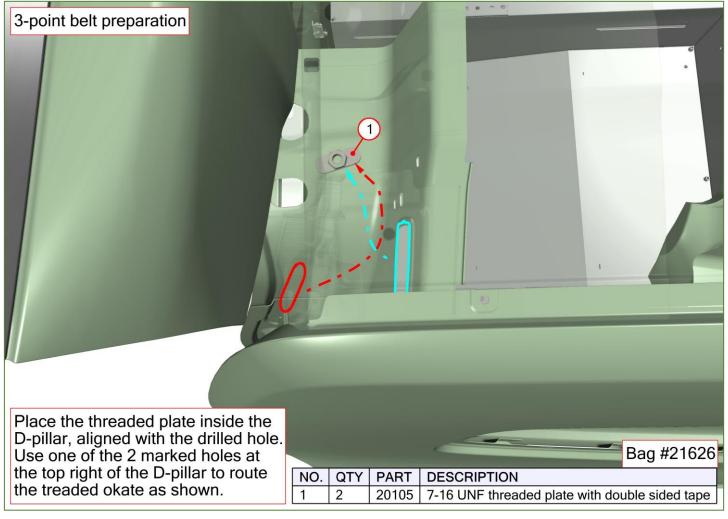


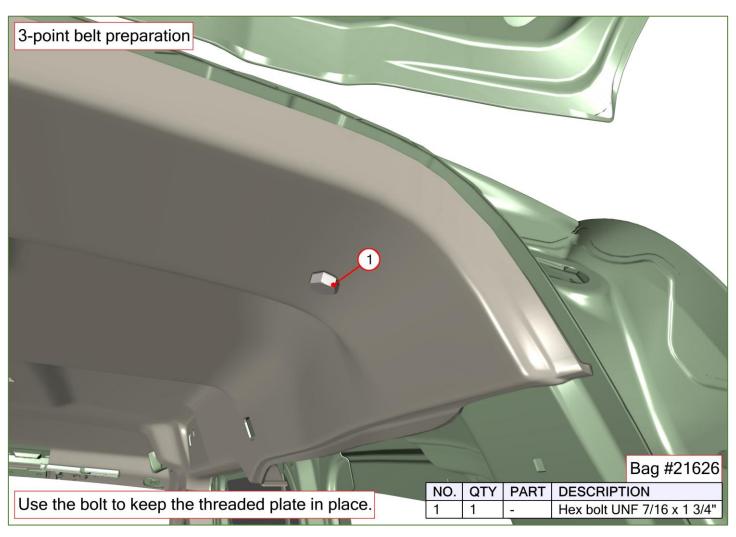


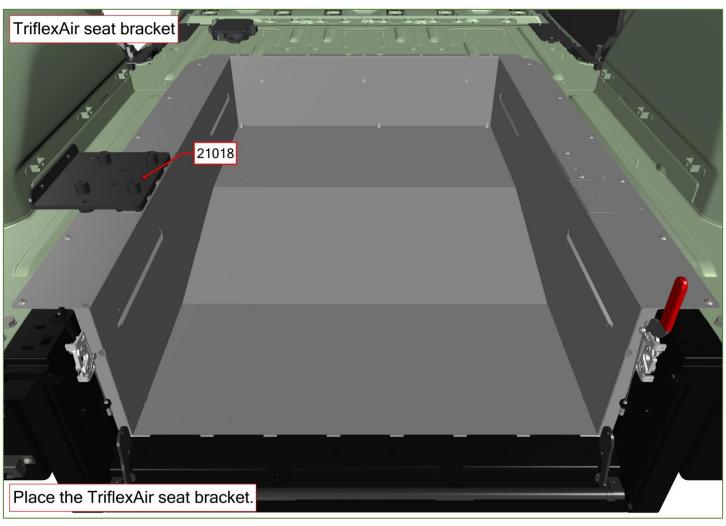


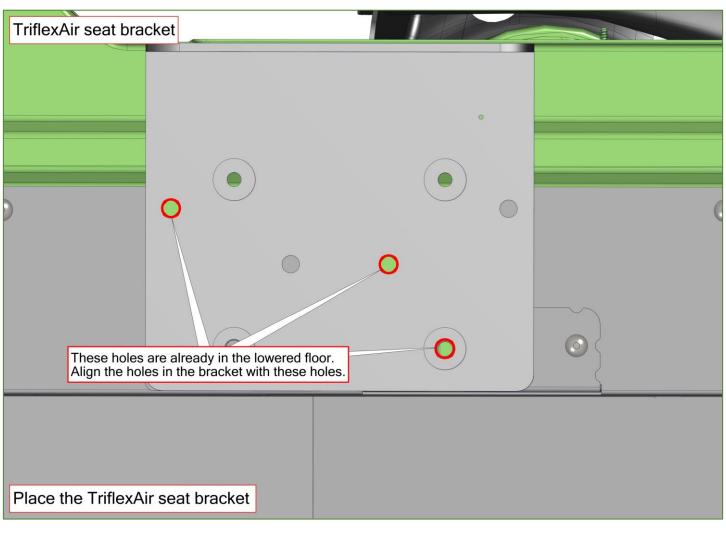


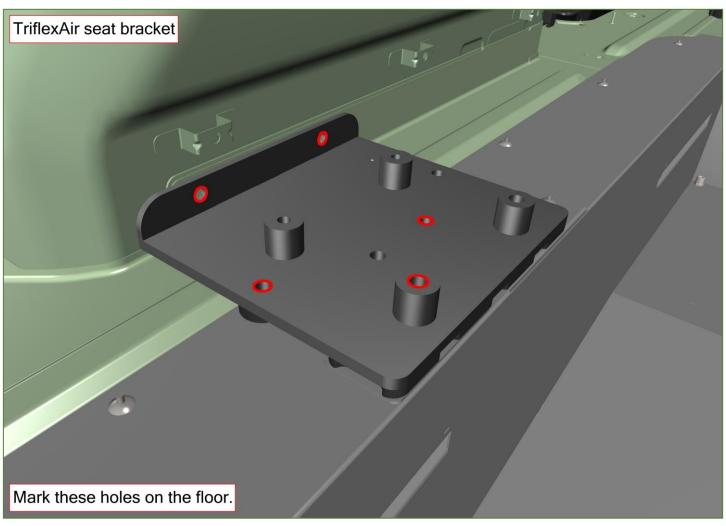


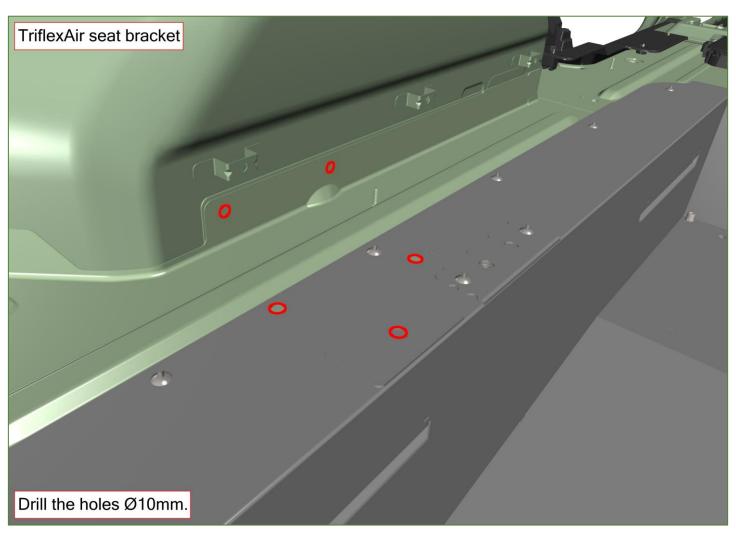


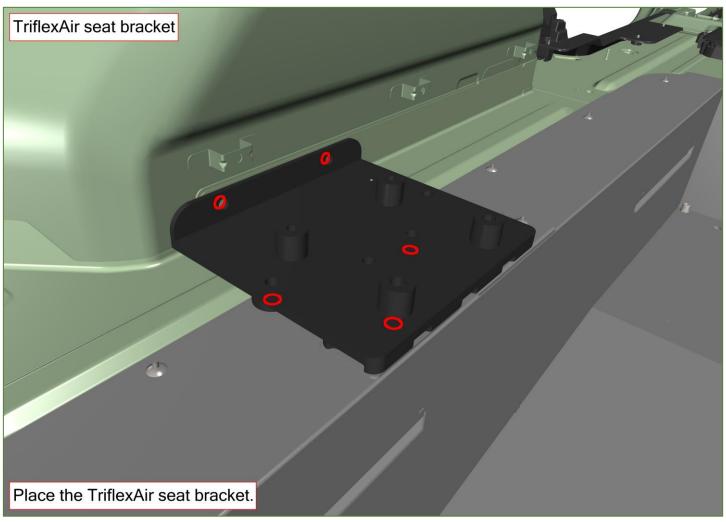


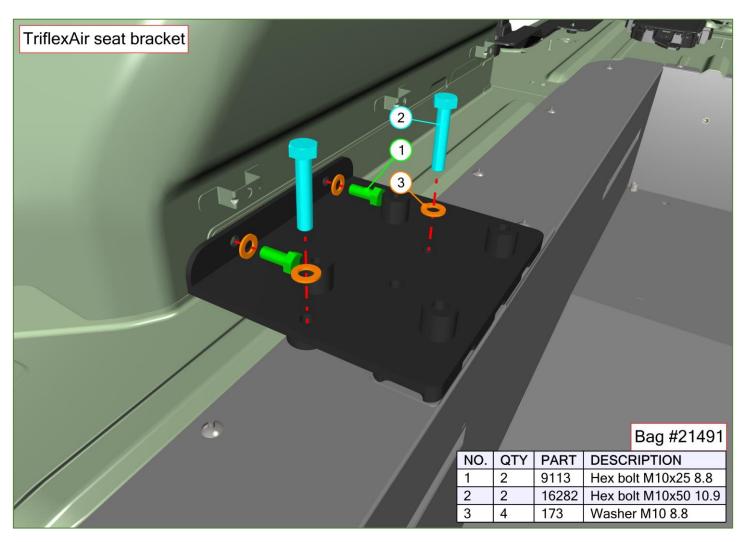


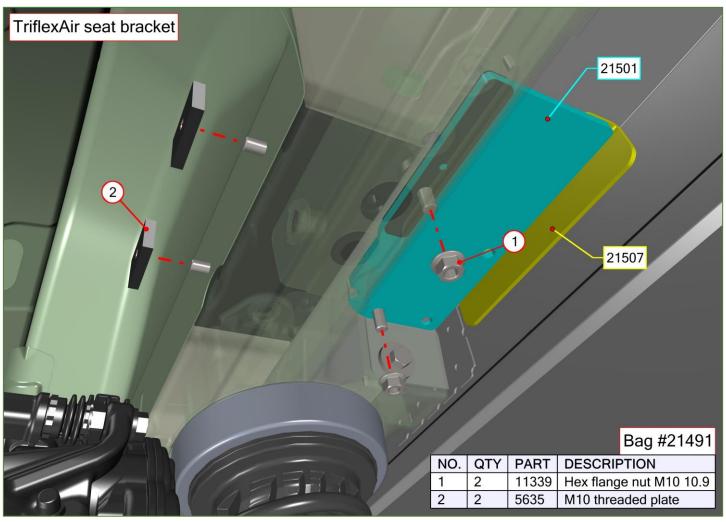


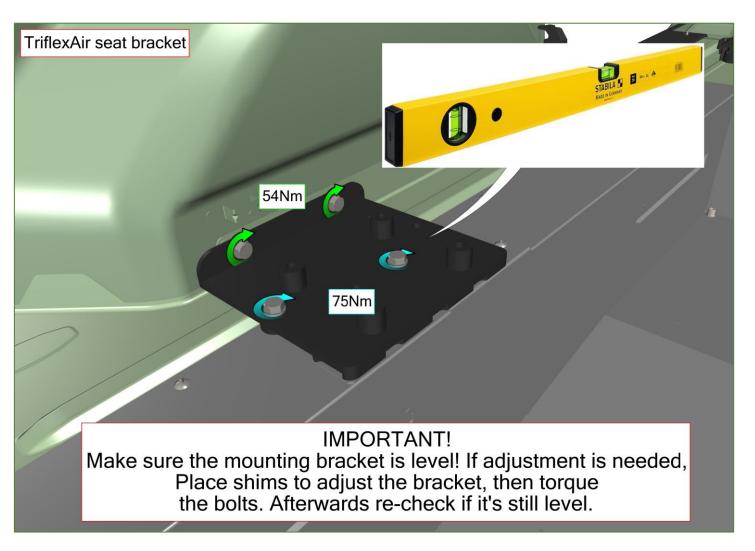


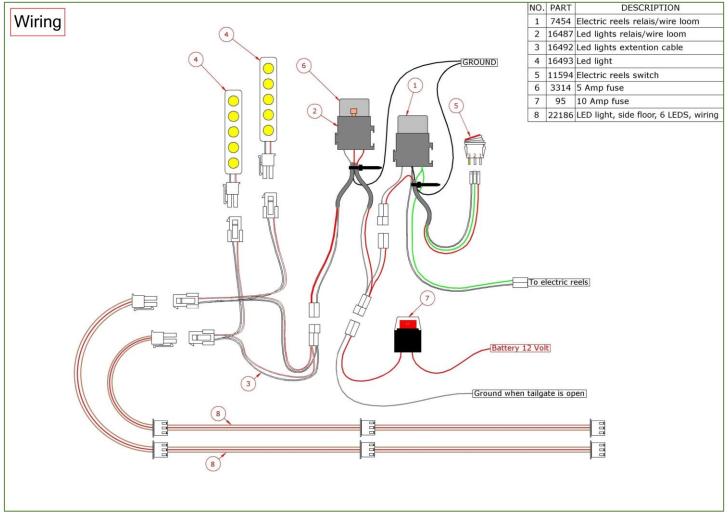


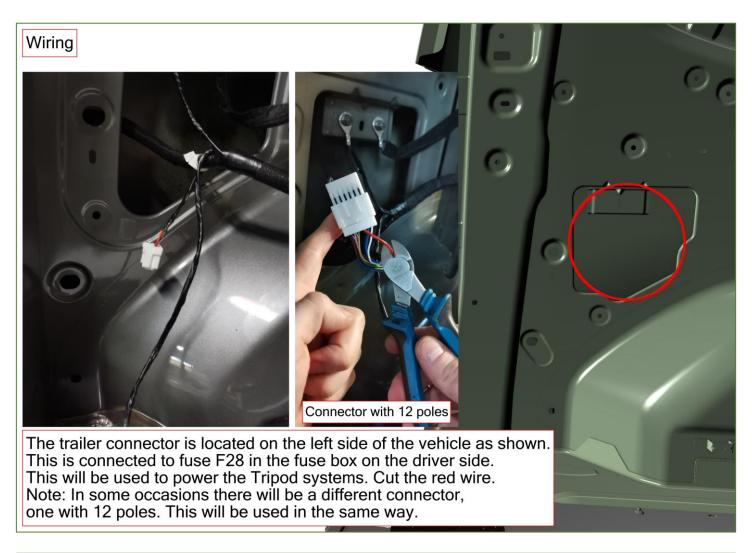


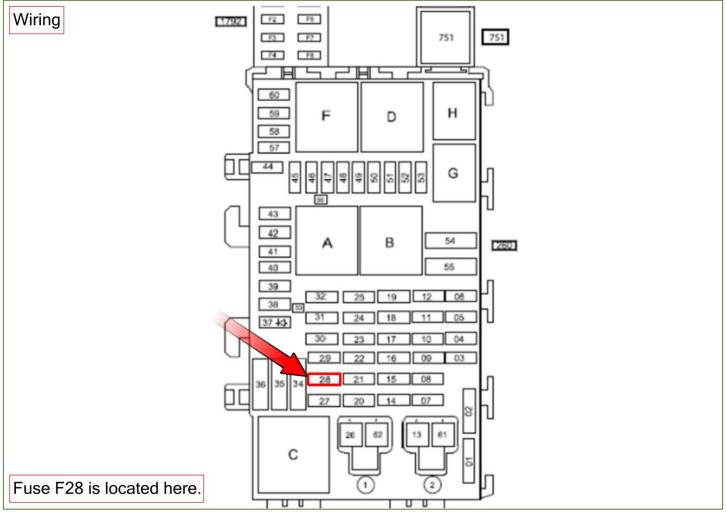


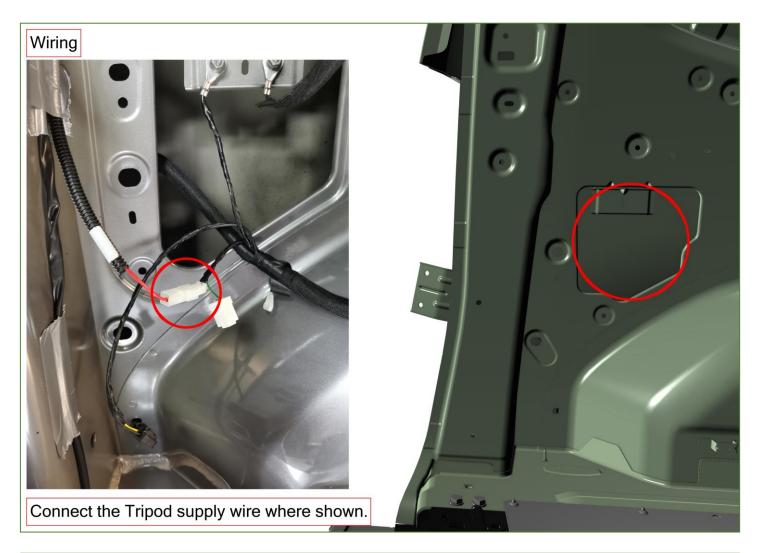


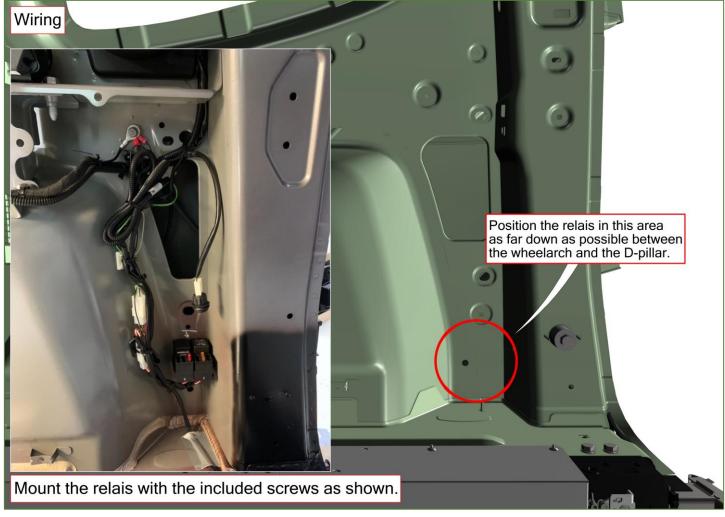


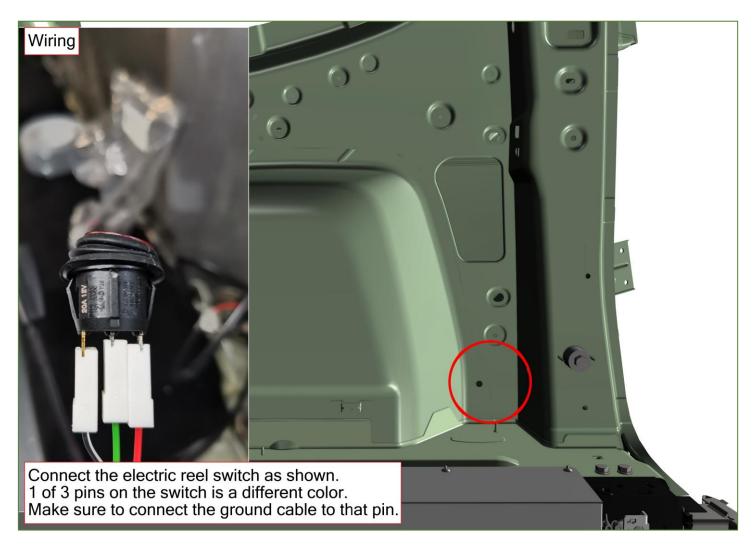


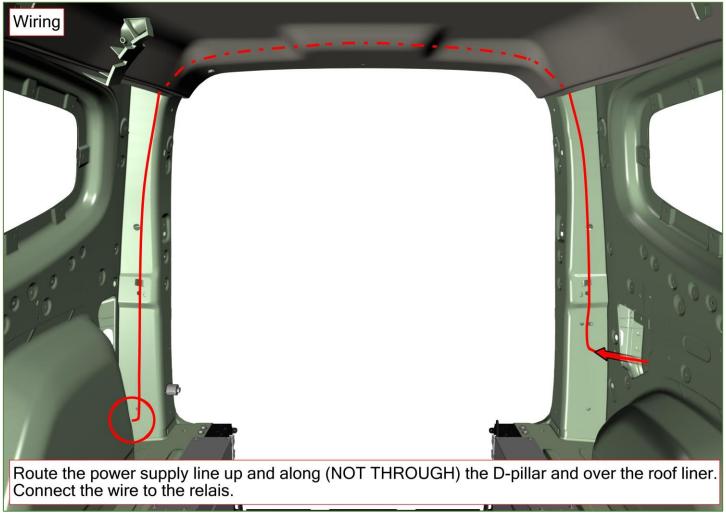


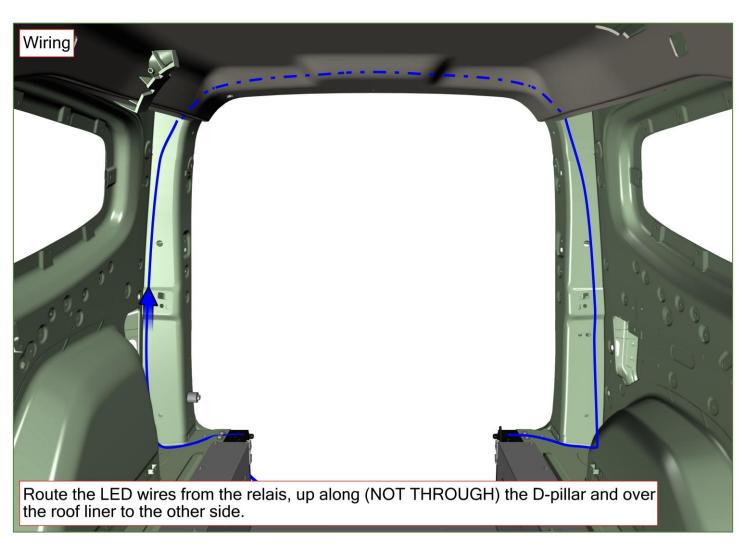


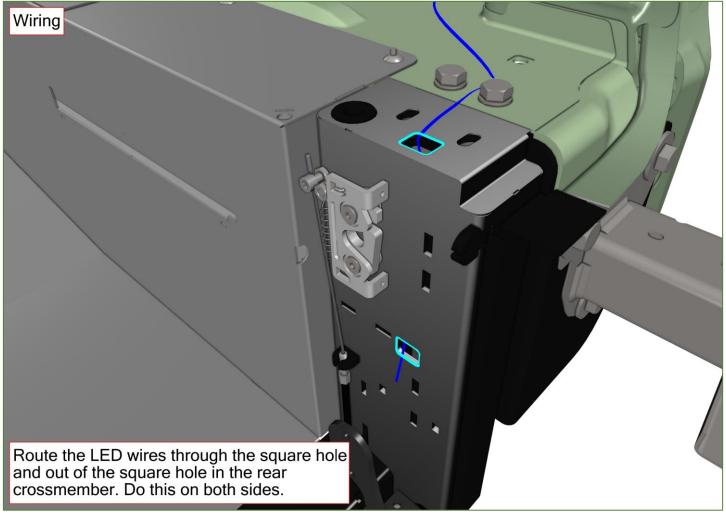


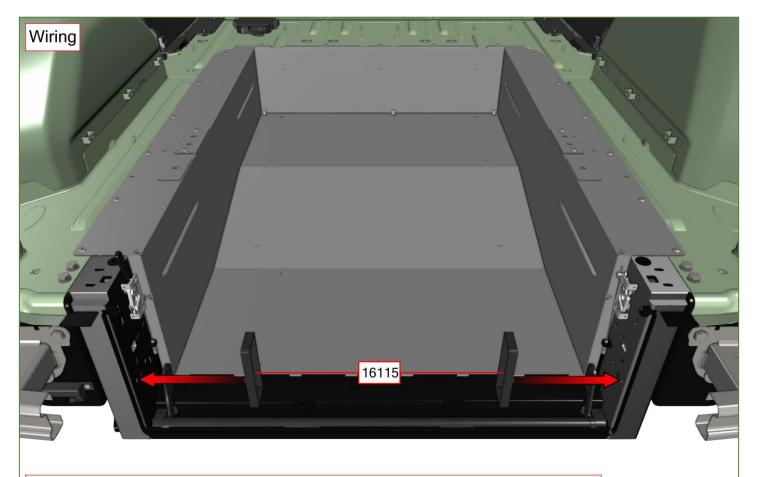




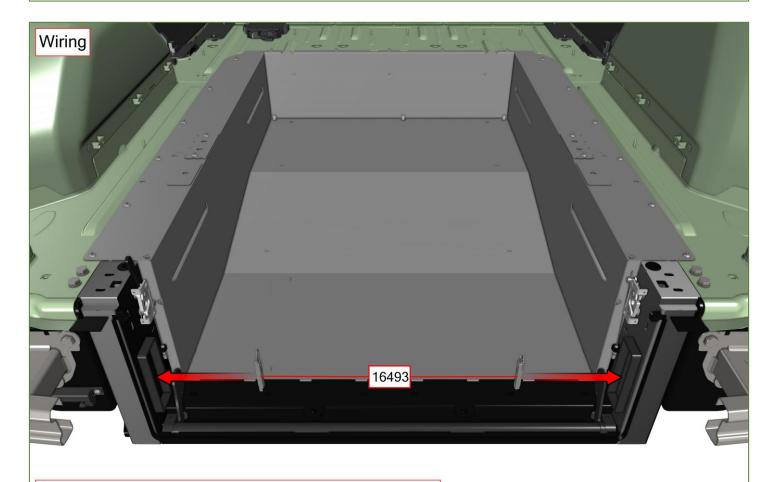




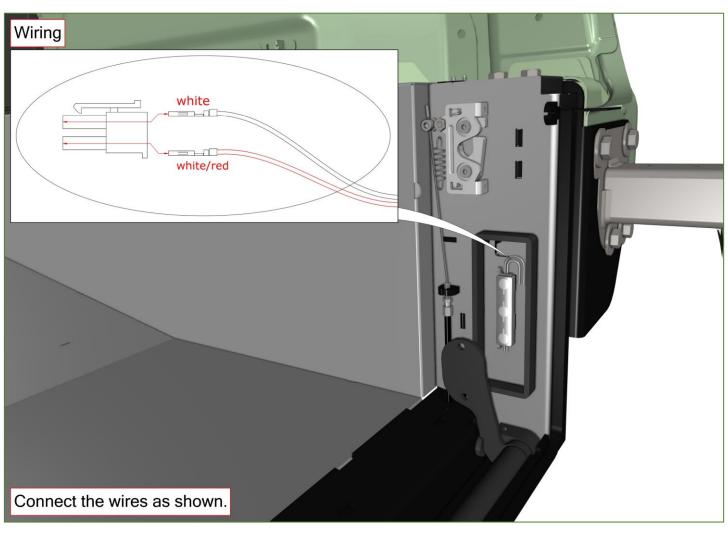


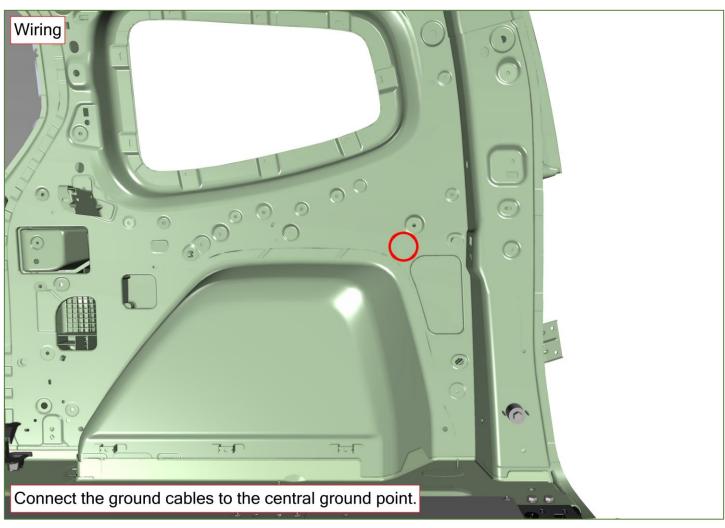


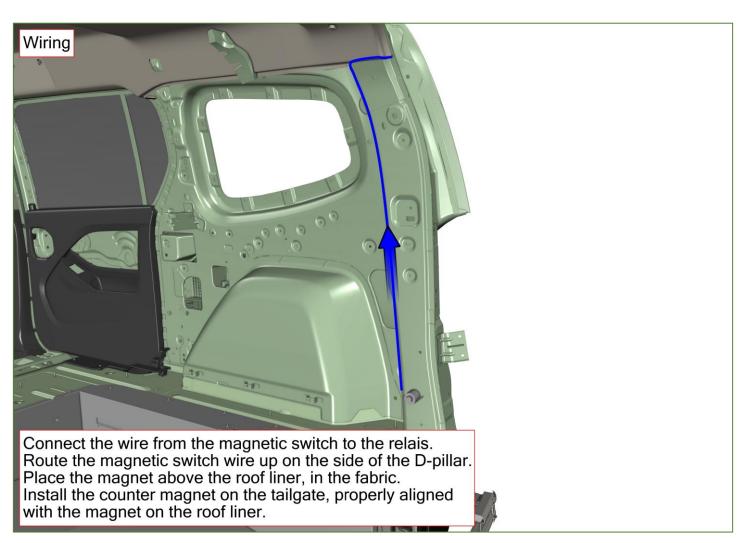
Apply cyanoacrylate glue (super/instant glue) to the back of the led housing and fix them to the crossmember using the square holes to position correctly.

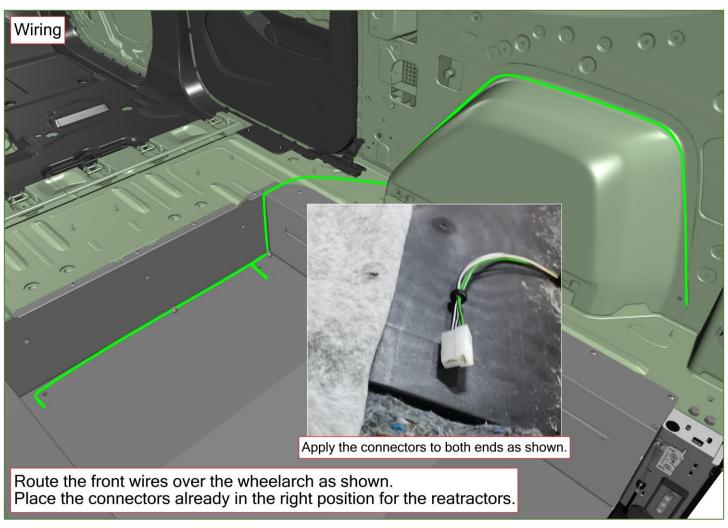


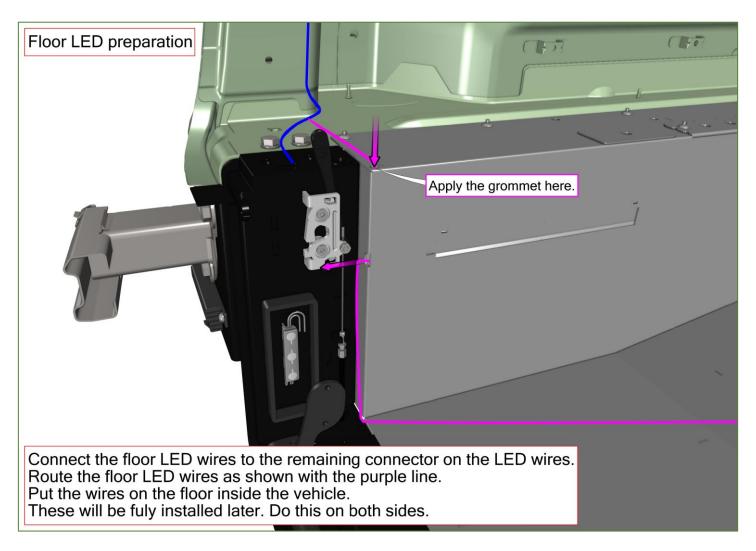
Pull the foil from the back of the led lights and position them centered in the housing on the crossmember.

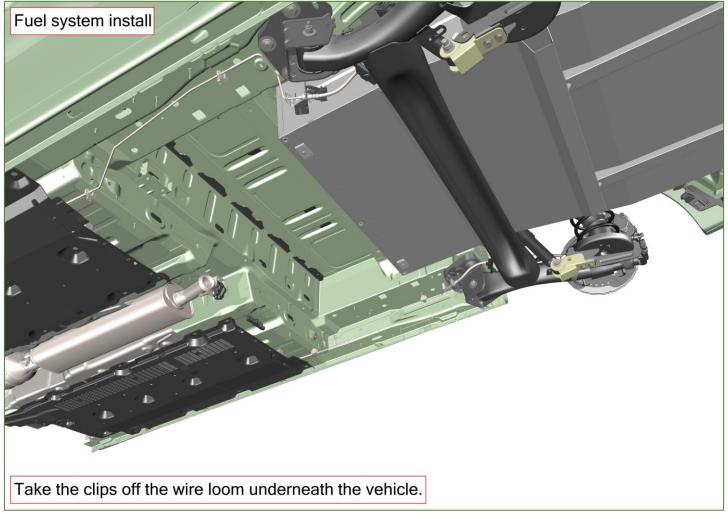


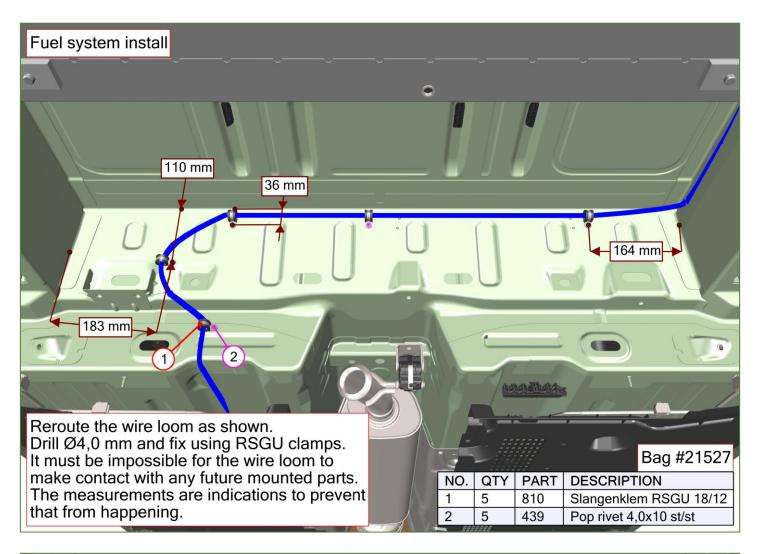


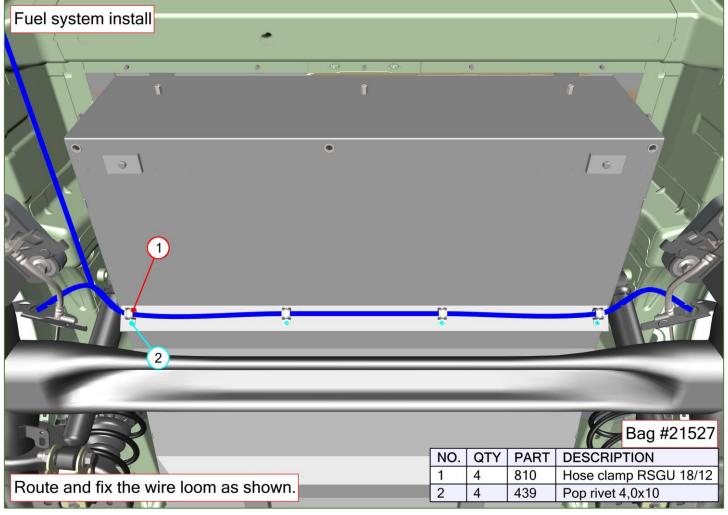


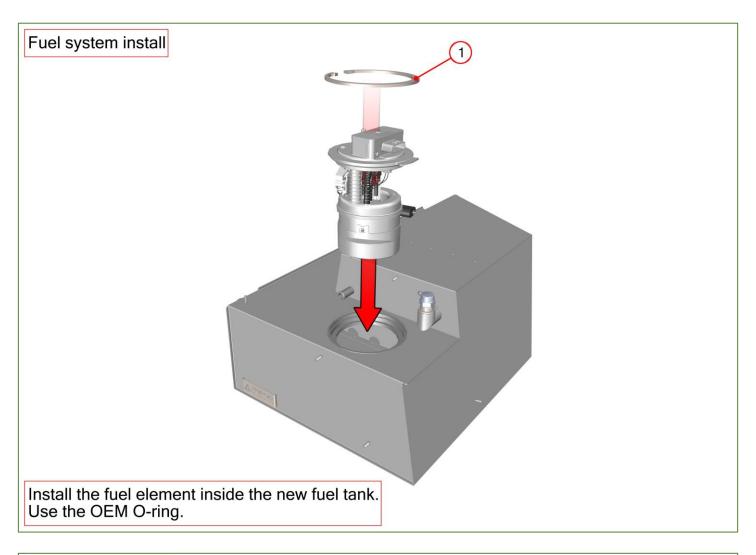




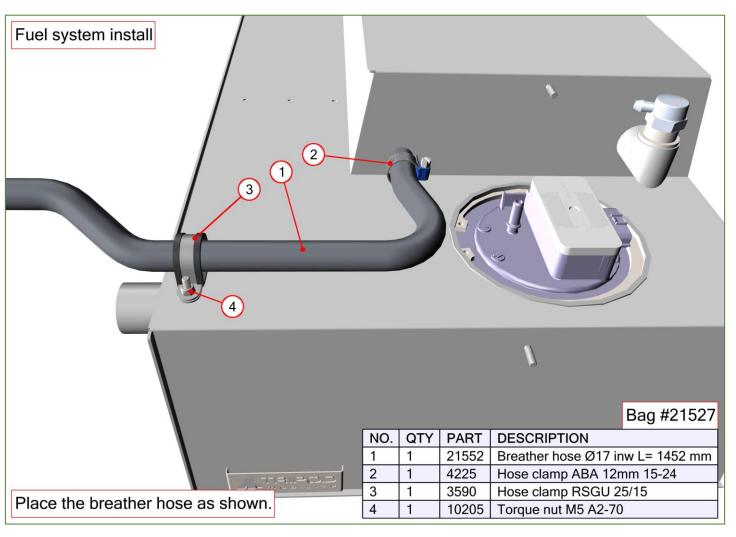


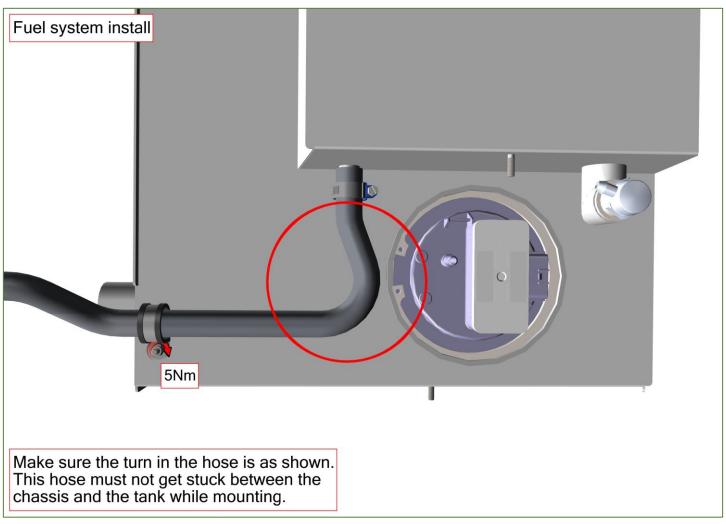


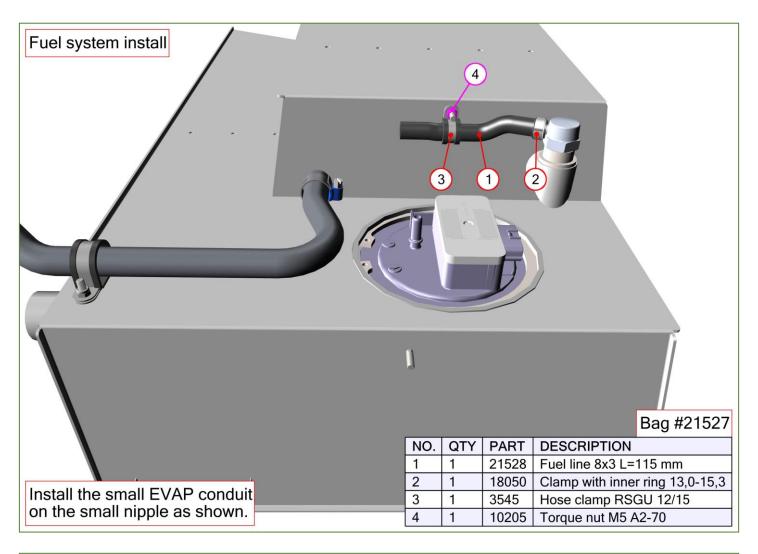


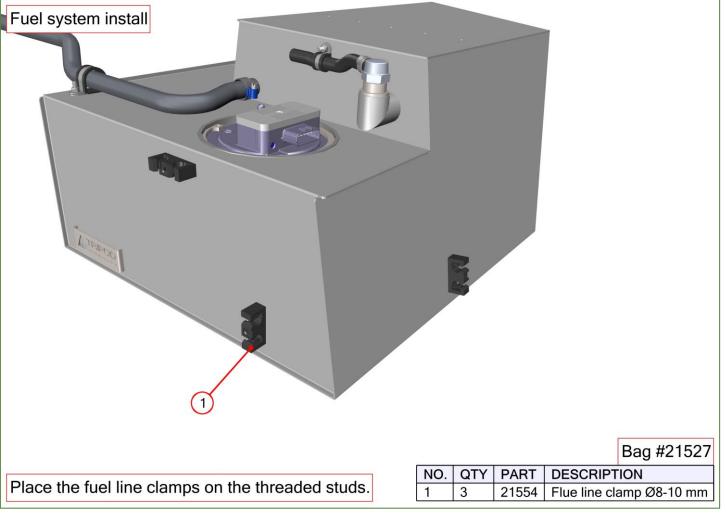


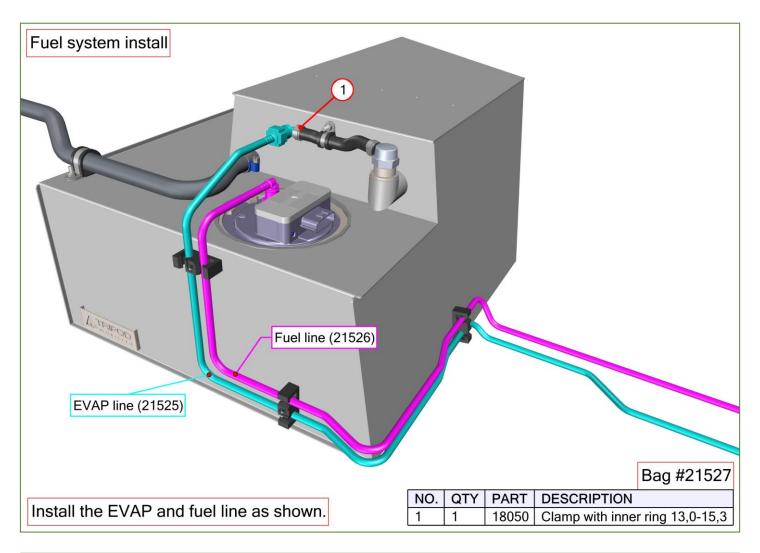


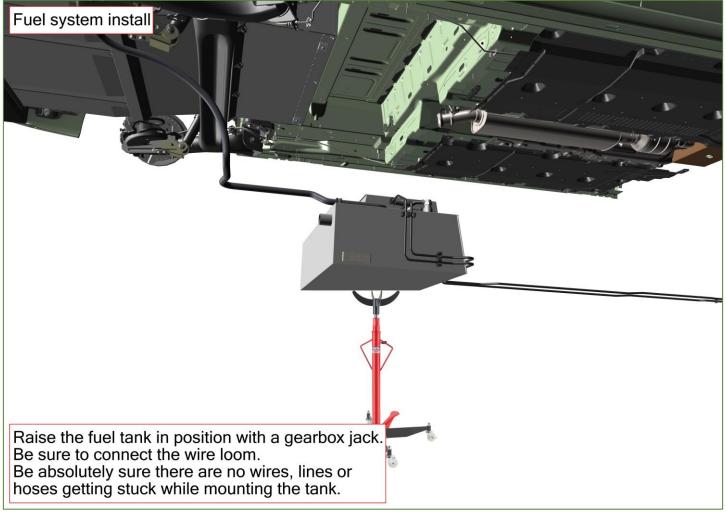


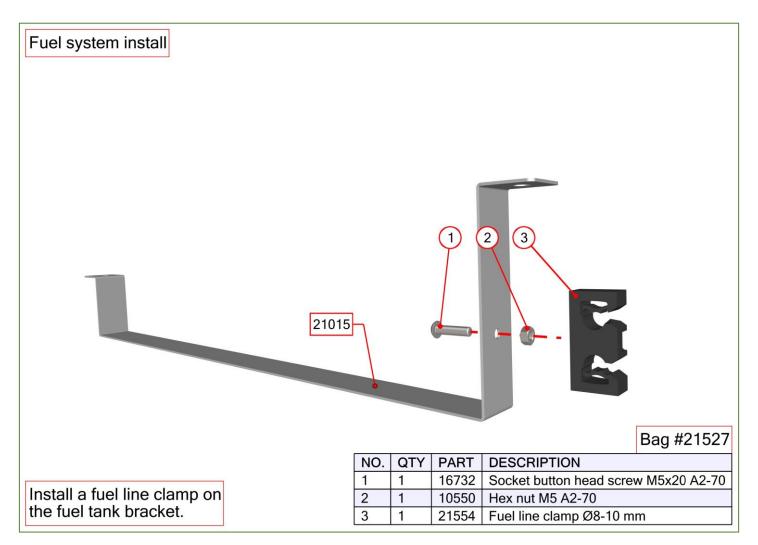


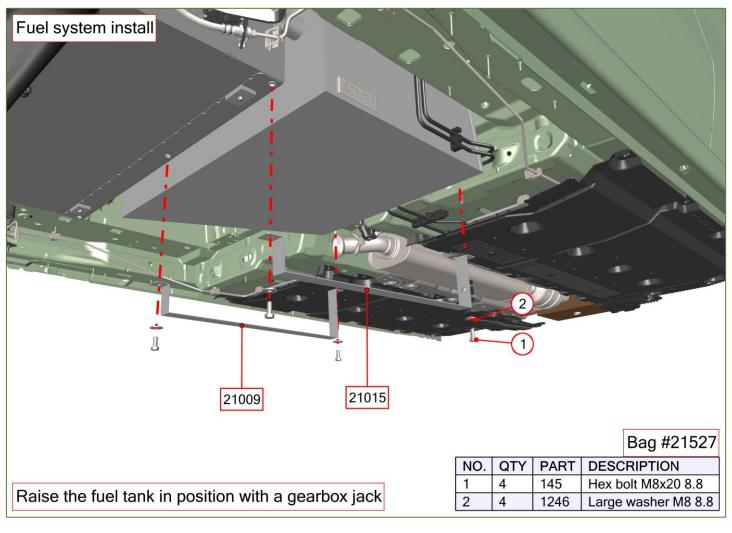


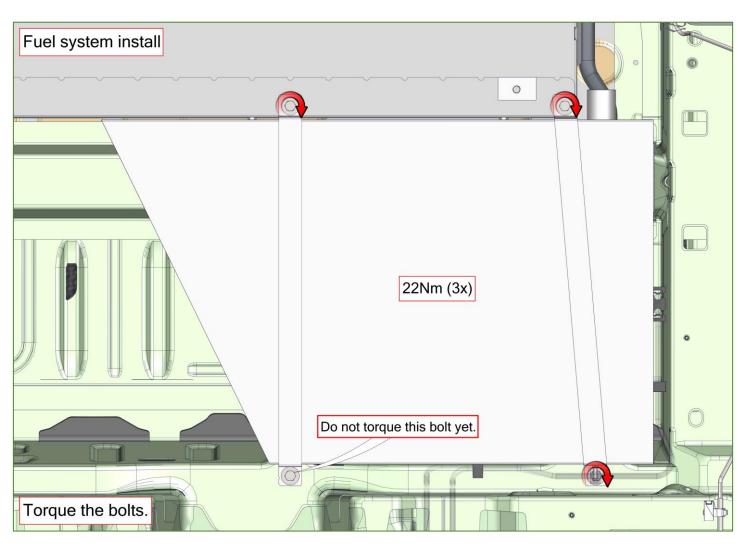


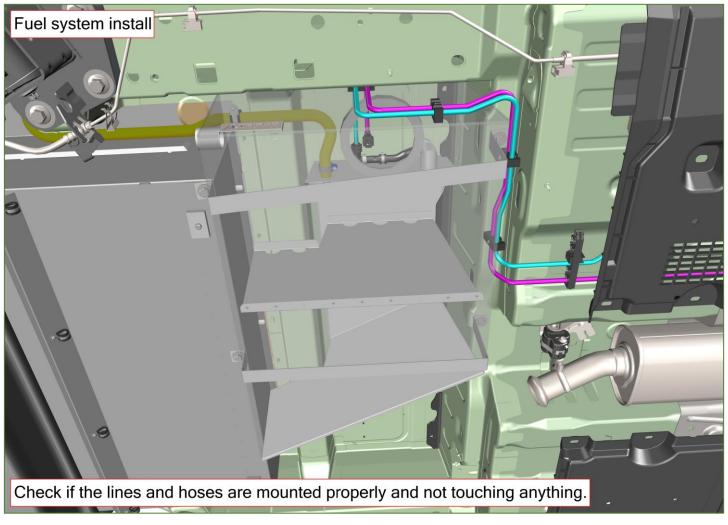


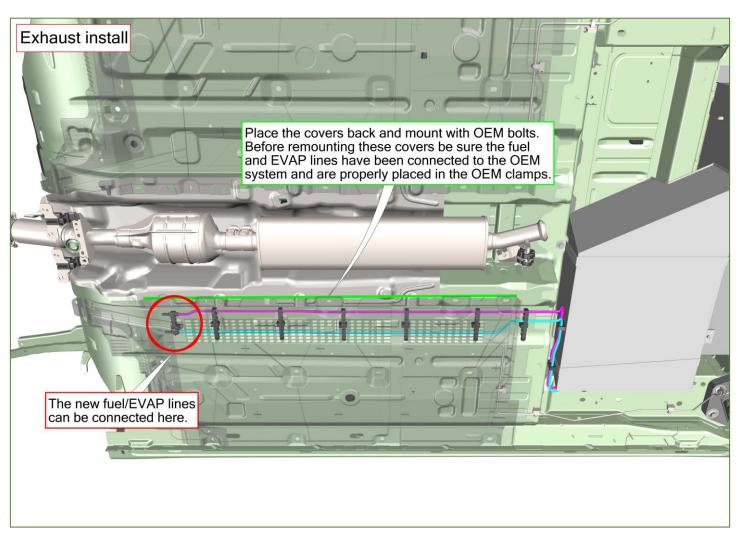


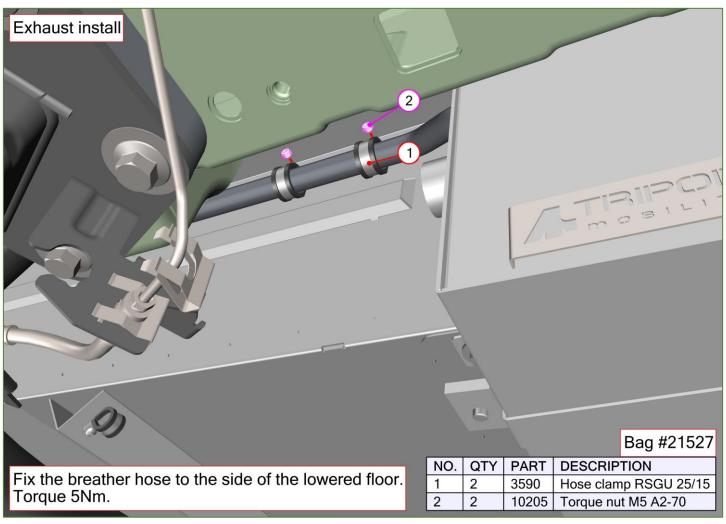


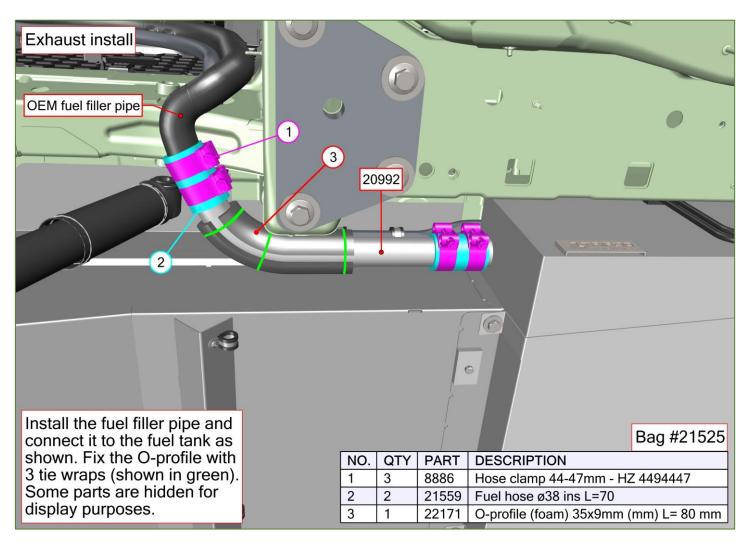


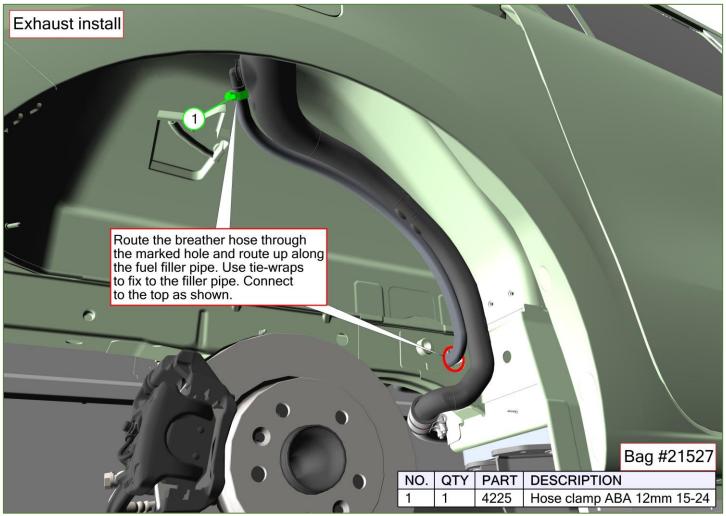


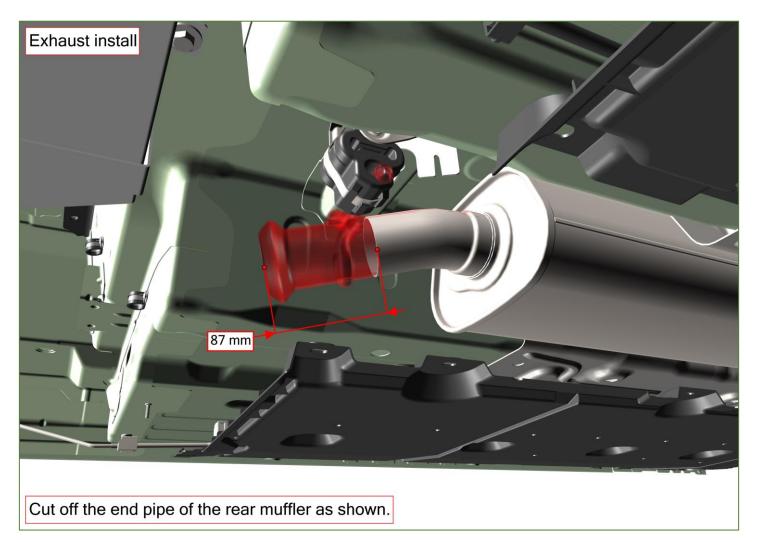


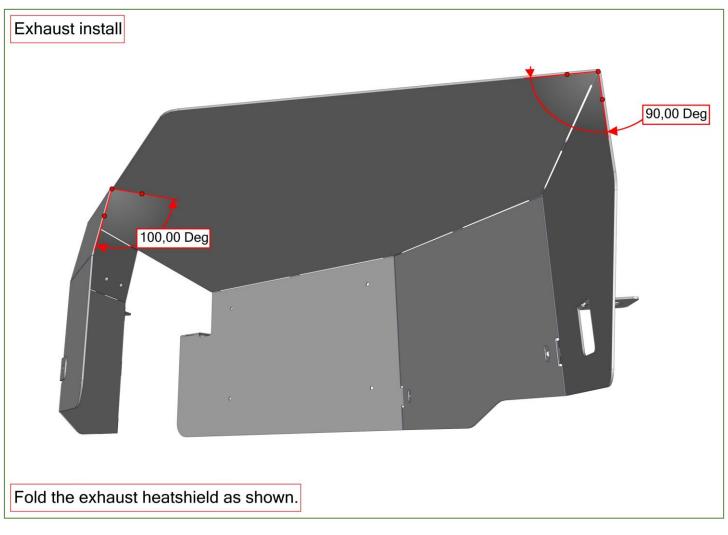


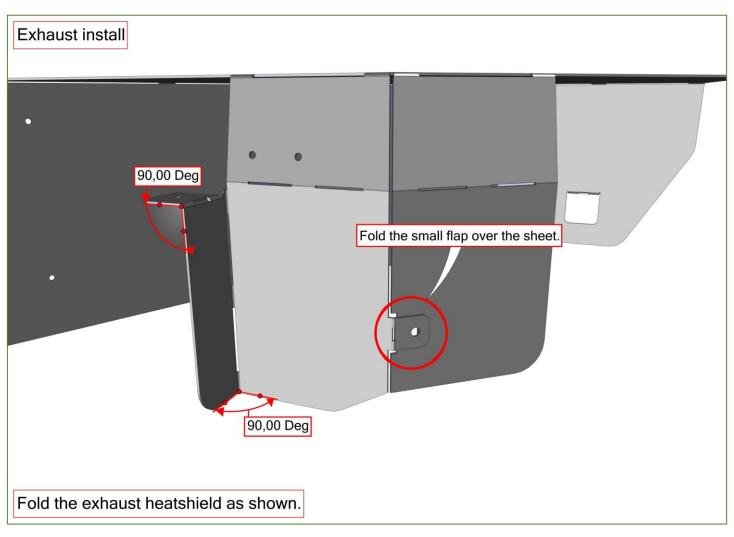


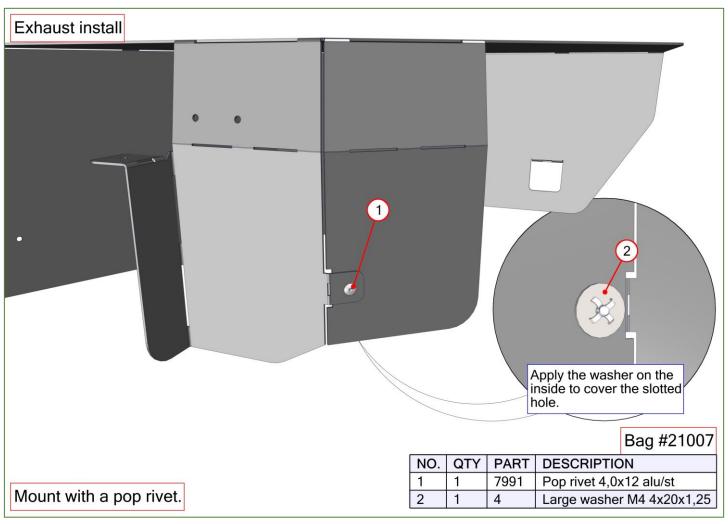


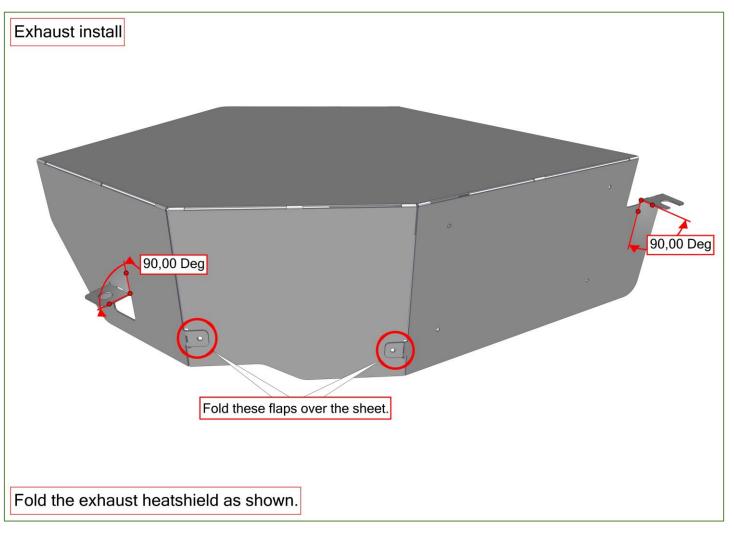


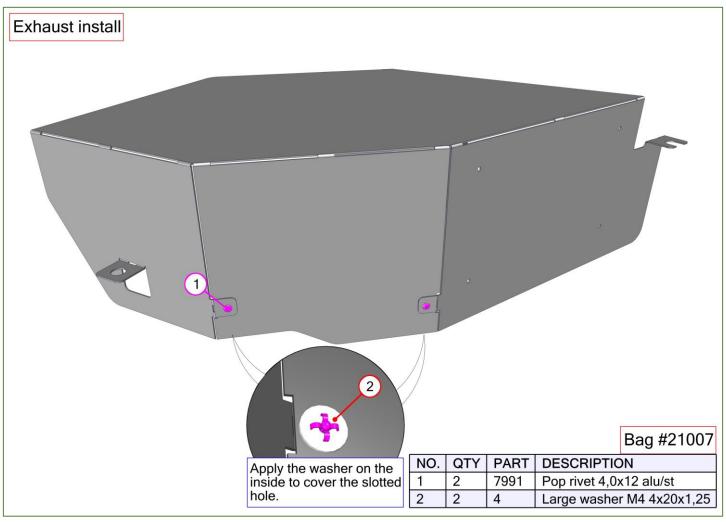


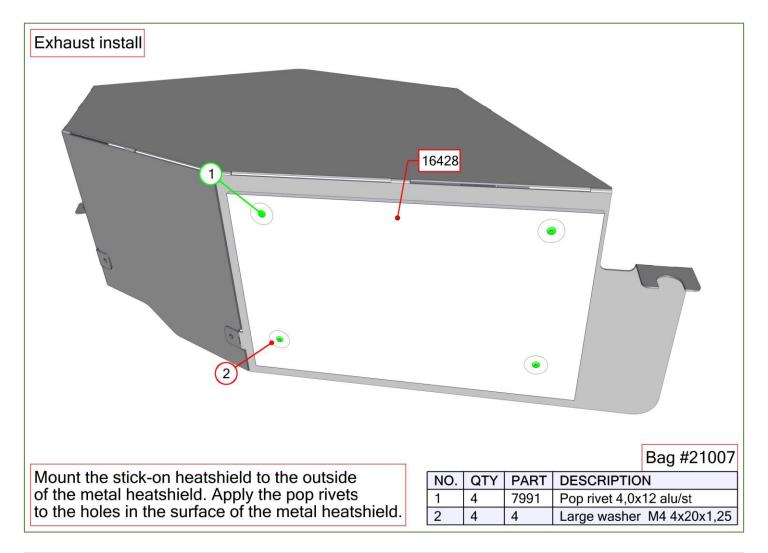


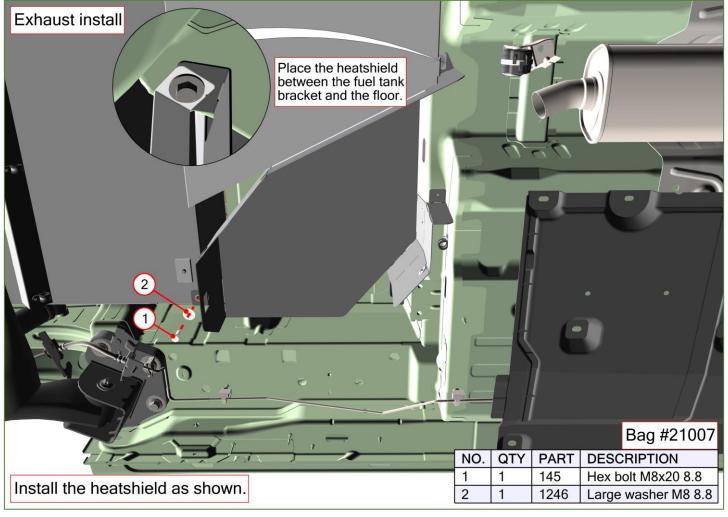


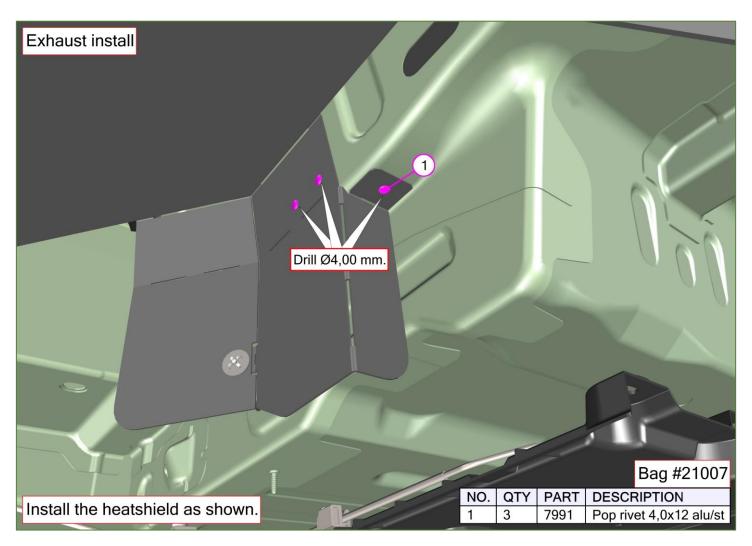


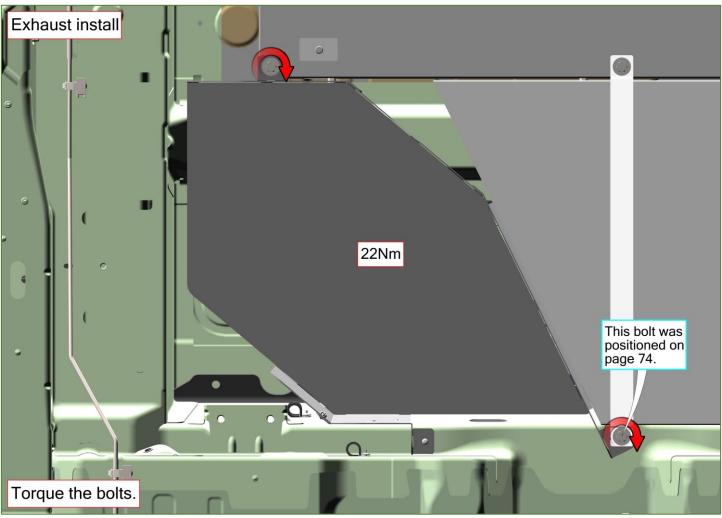


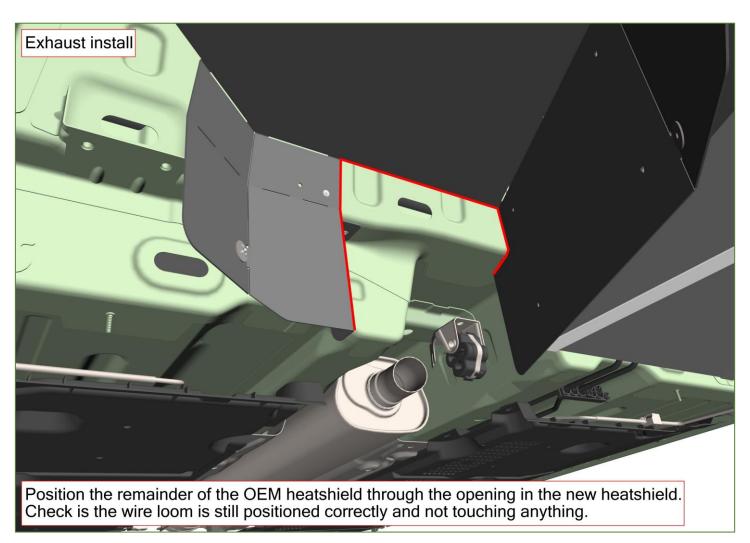


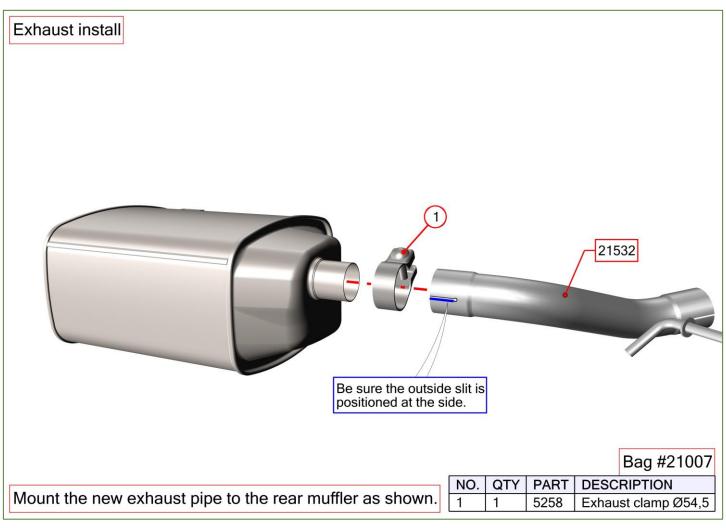


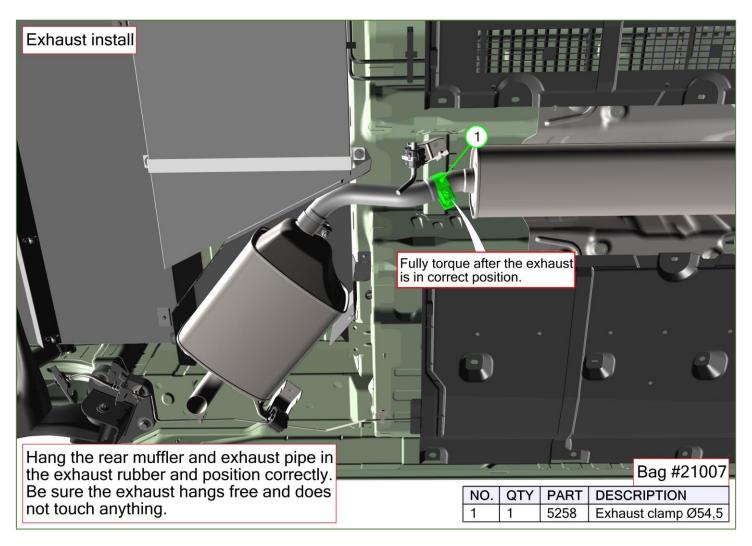


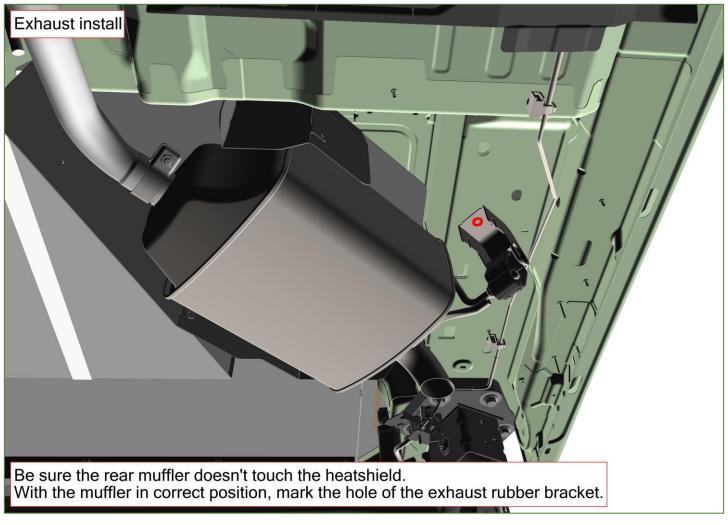


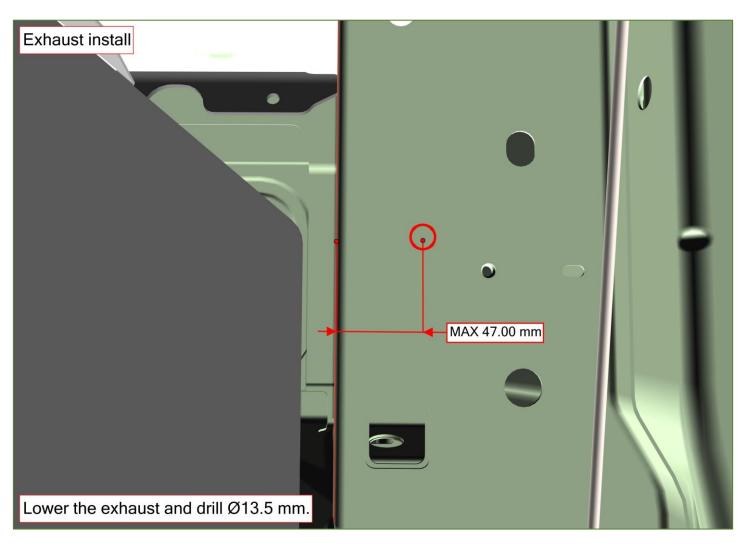


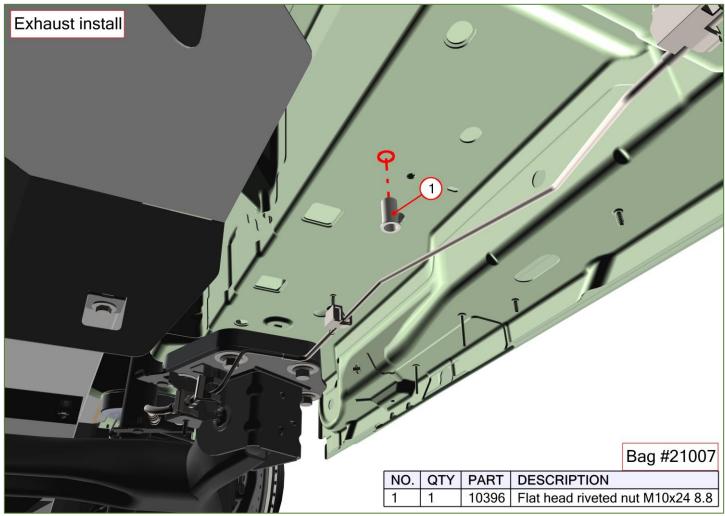


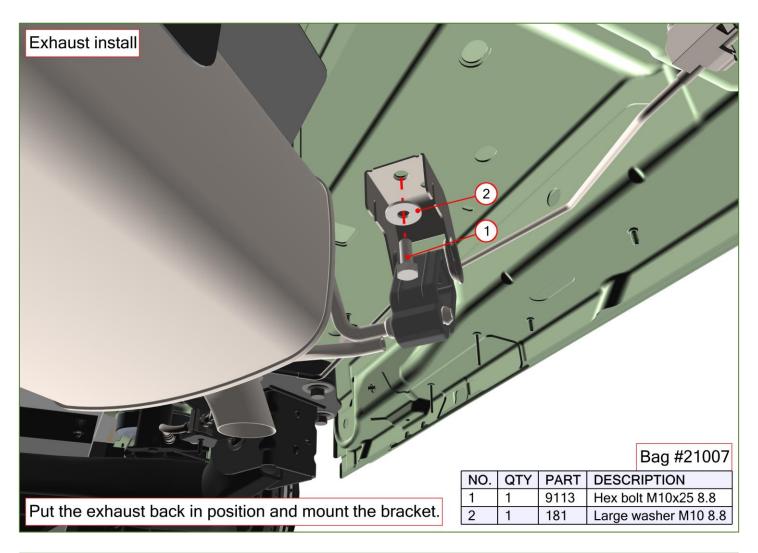


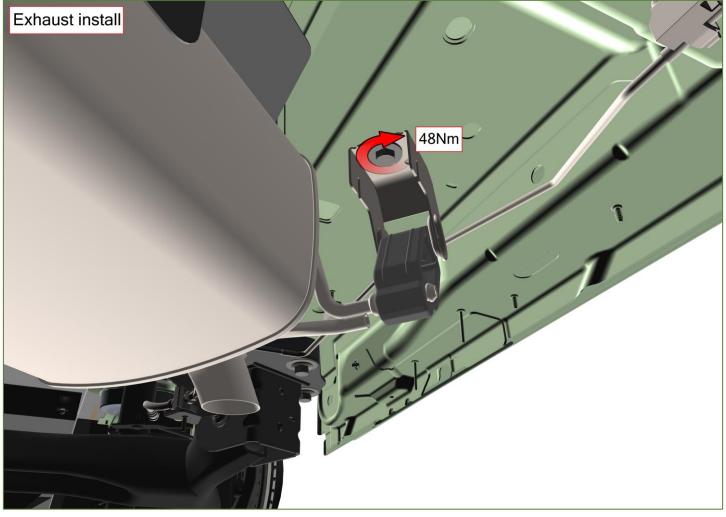


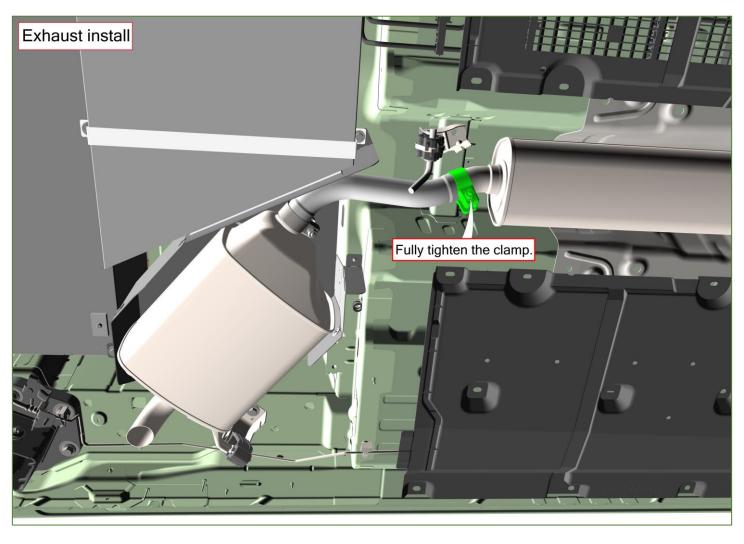


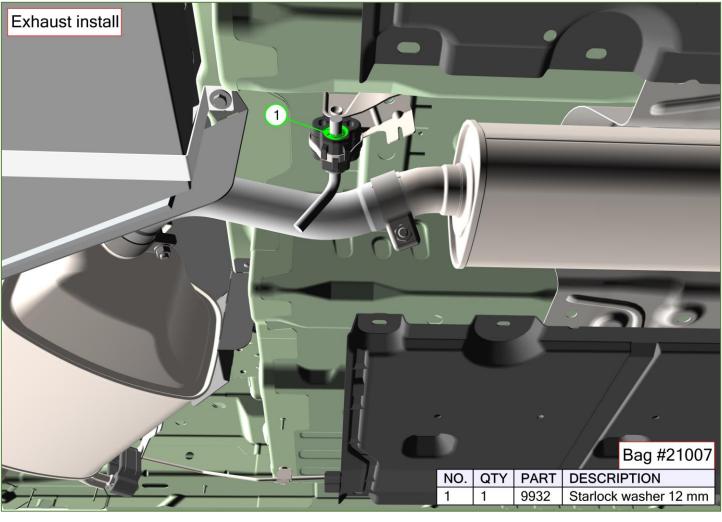


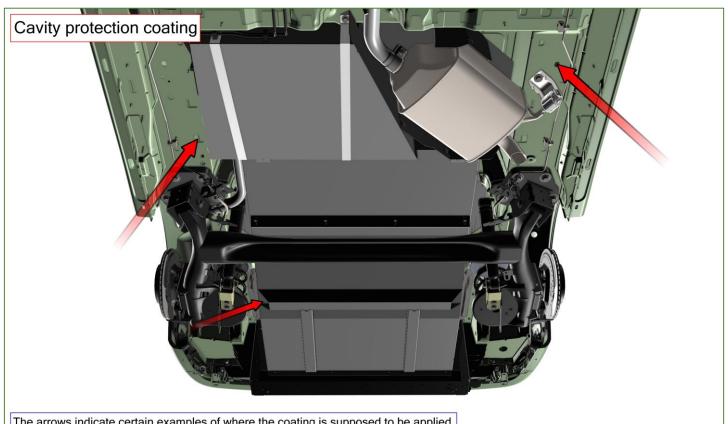










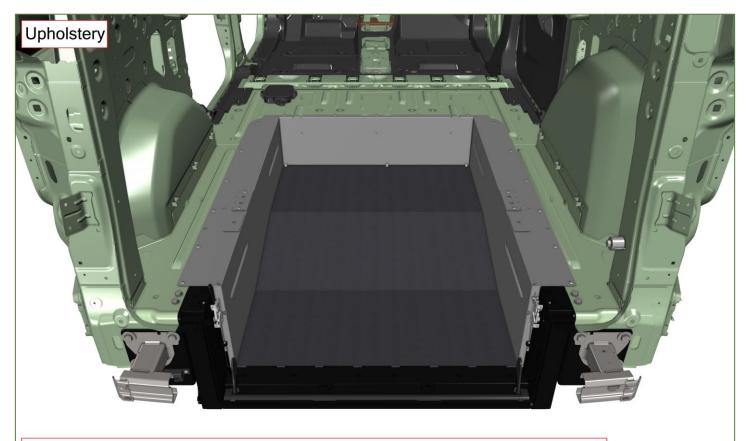


The arrows indicate certain examples of where the coating is supposed to be applied.

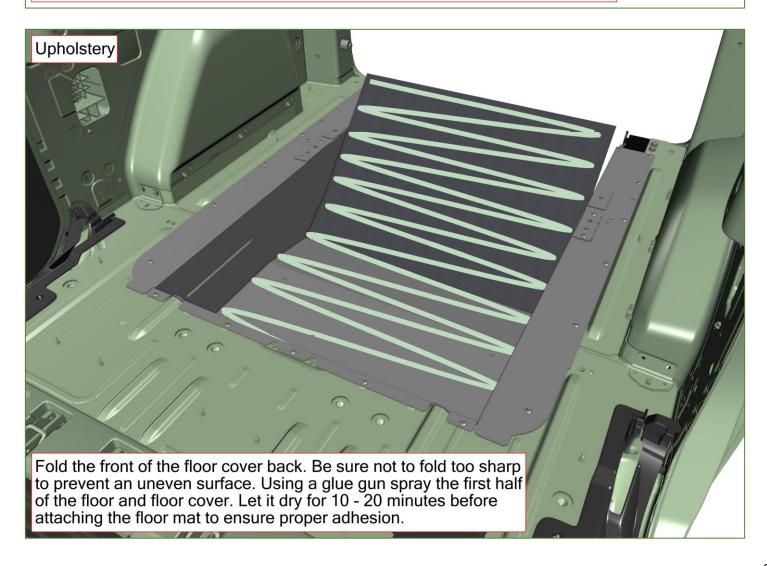
Apply cavity protection coating in all hollow/open areas on the bottom of the conversion to prevent rust in the future. This includes all hollow parts that are affected by the conversion, wether it's a Tripod part or an OEM part which has been cut open.

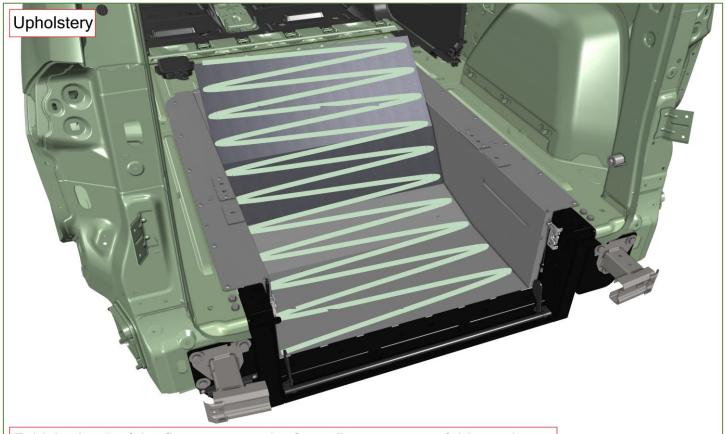


Put the right side wheelarch and both wheels back on the vehicle.

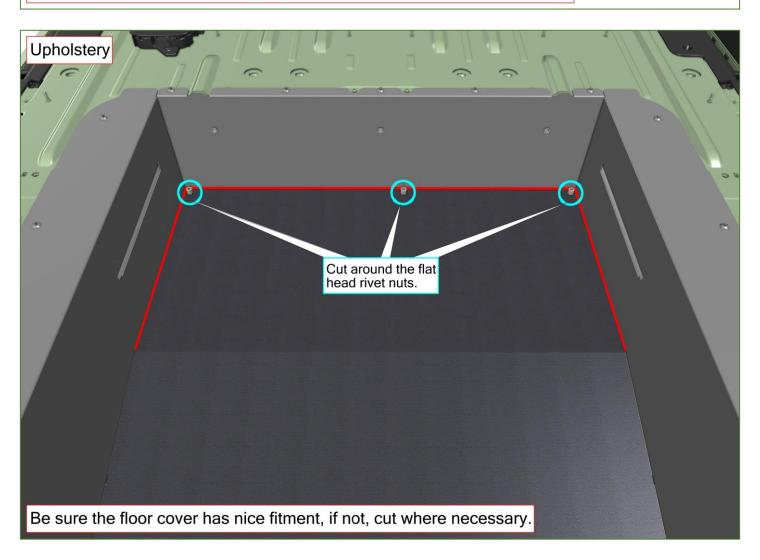


Before placing the floor cover, use an airgun to blow all metal bits off the floor. Degrease afterwards. When the floor is perfectly clean, place the floor cover in correct position. Fix the rear half temporarily in place. For example, by placing something heavy on the rear half.

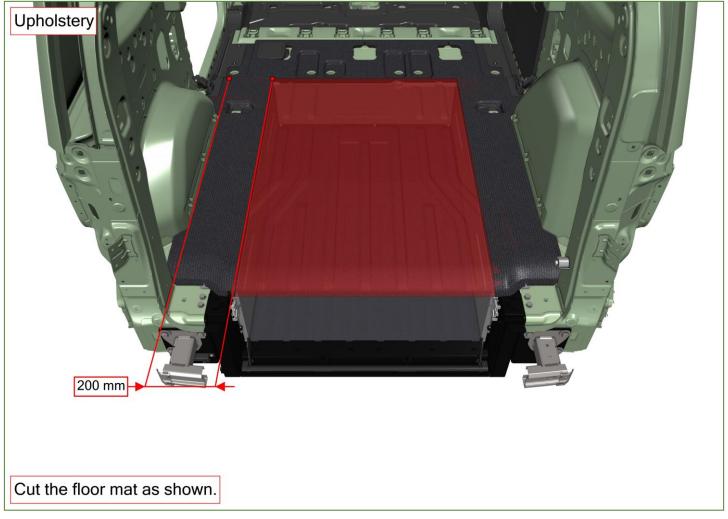


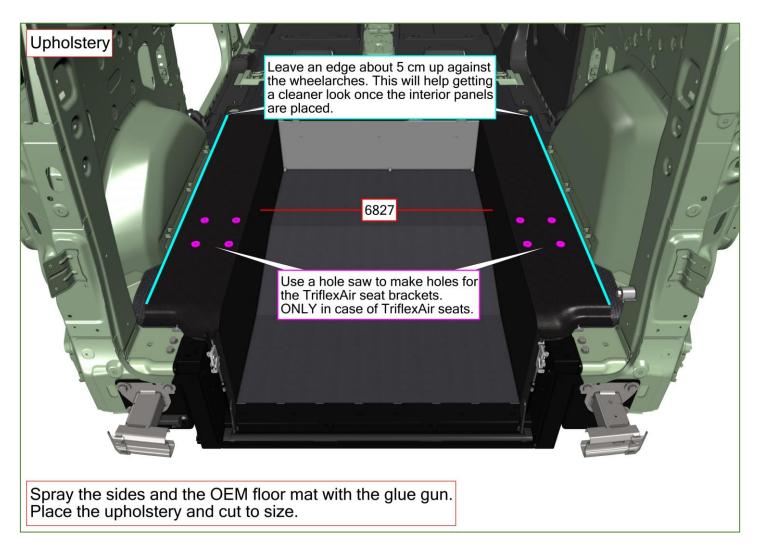


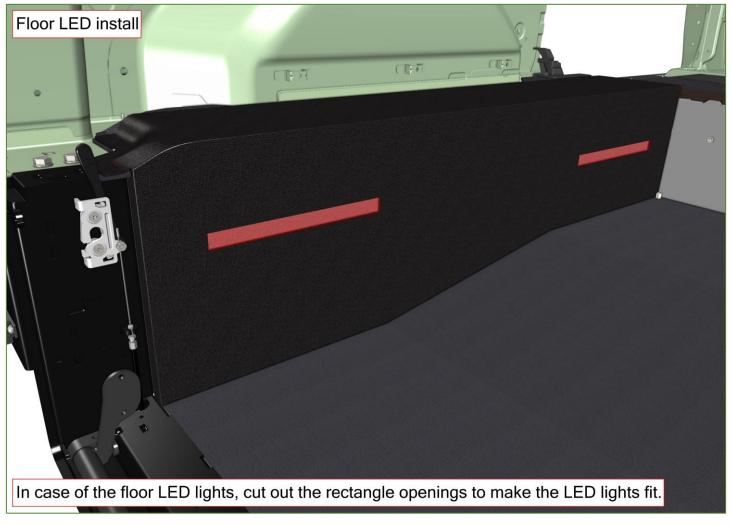
Fold the back of the floor cover to the front. Be sure not to fold too sharp to prevent an uneven surface. Using a glue gun, spray the rear half of the floor and floor cover. Let it dry for 10 - 20 minutes before attaching the floor mat to the floor to ensure proper adhesion.

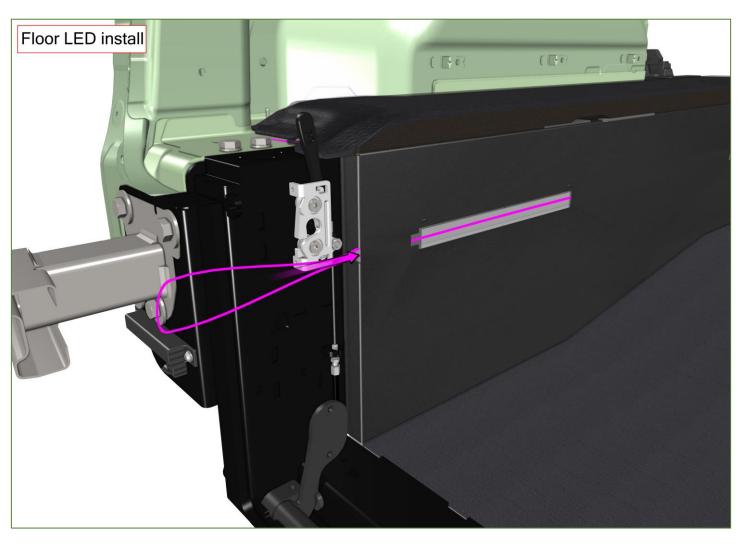


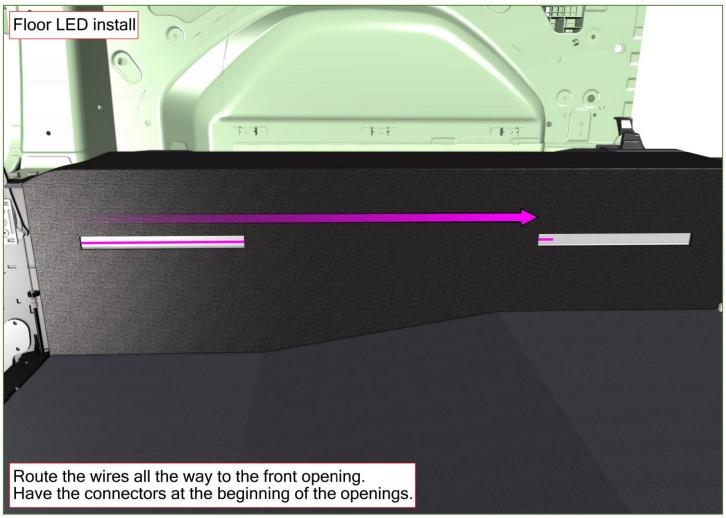


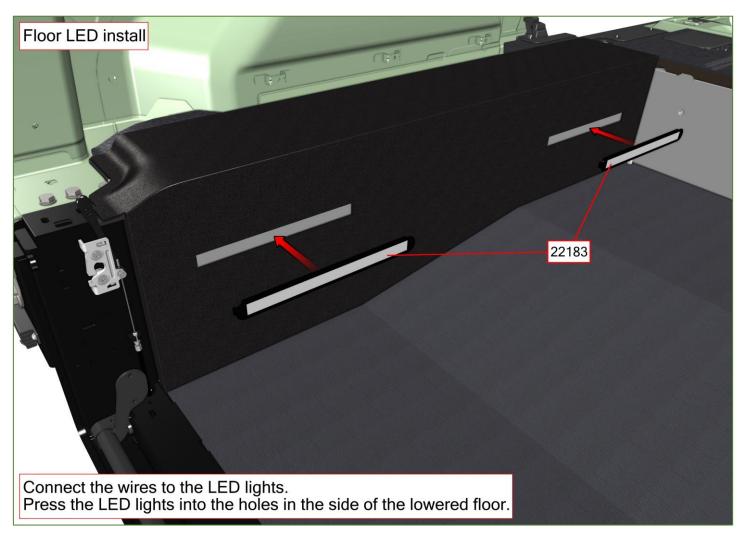


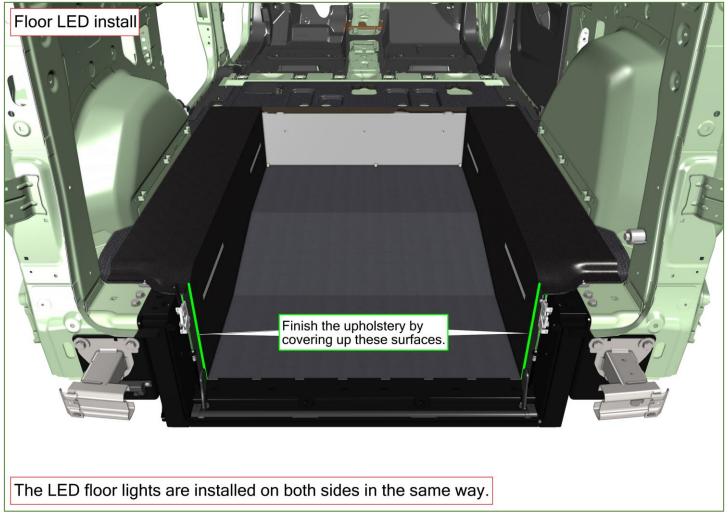


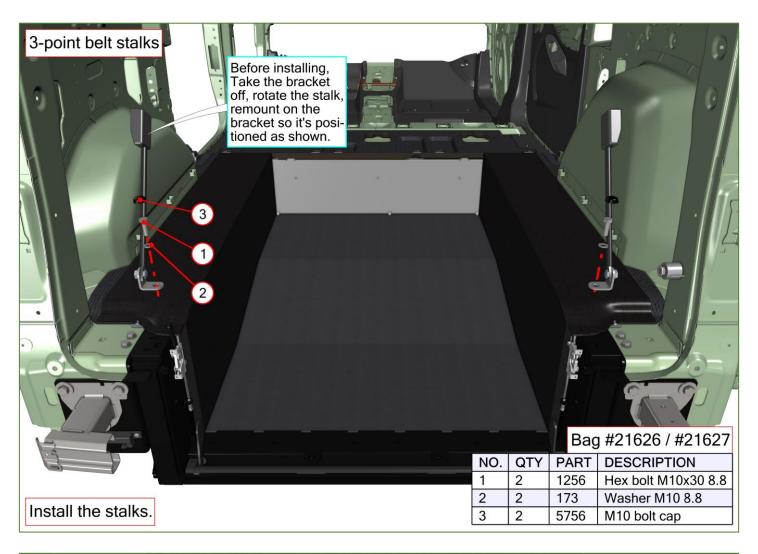




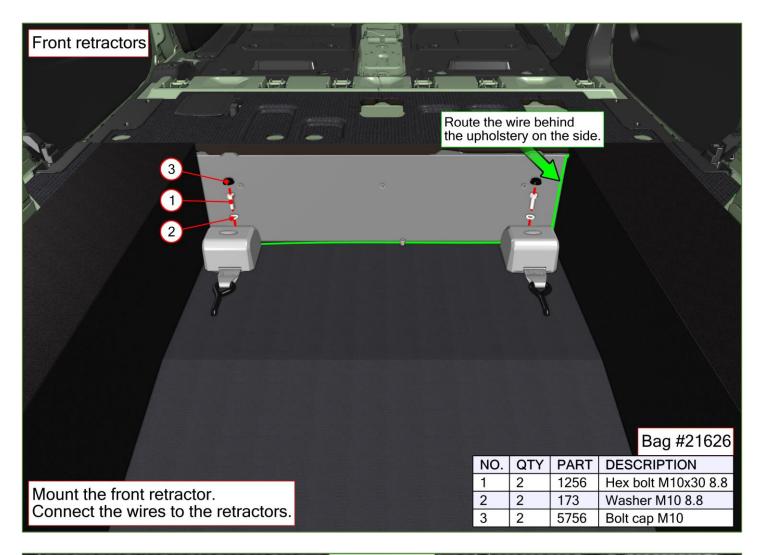




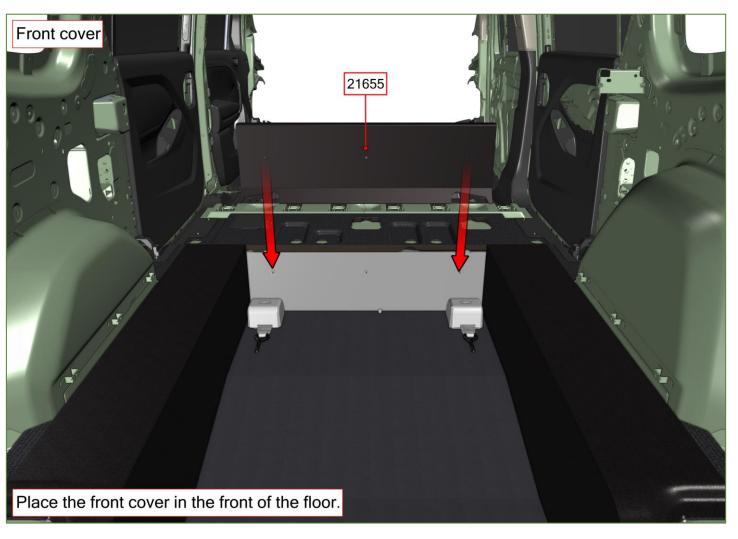


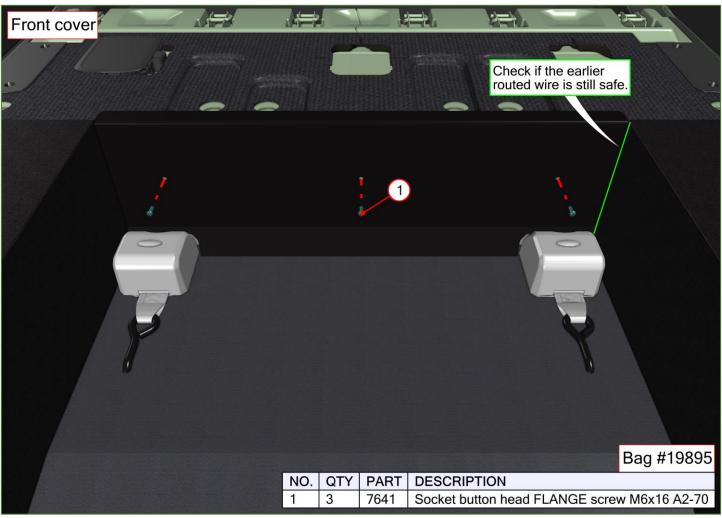




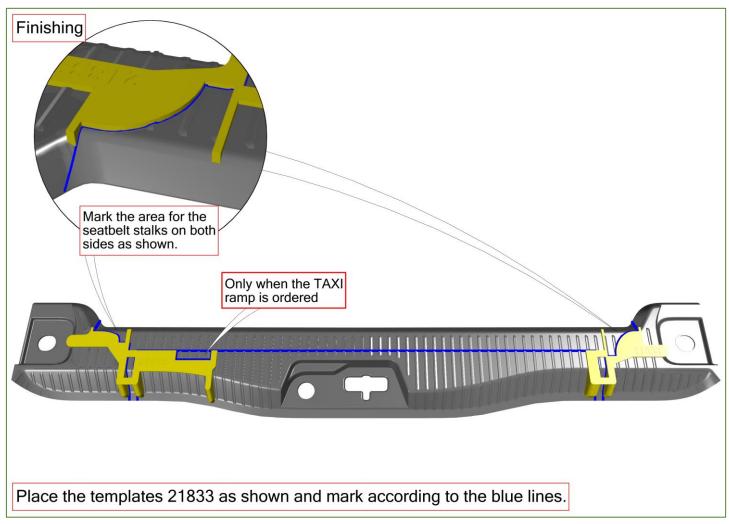


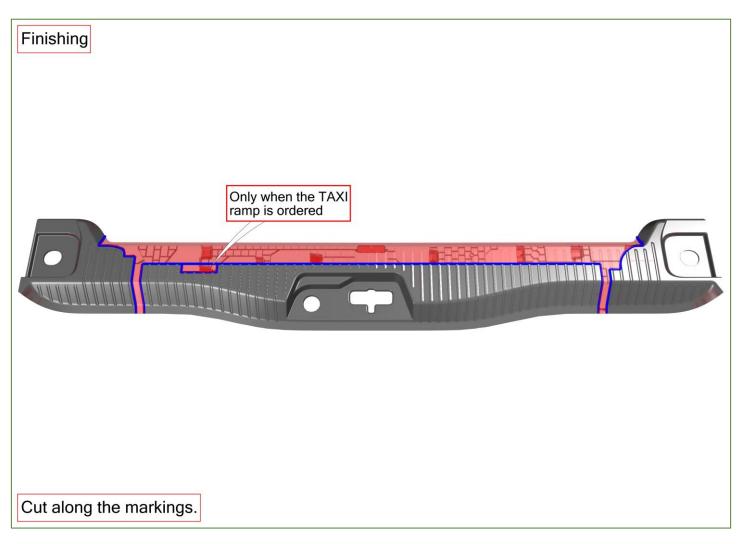


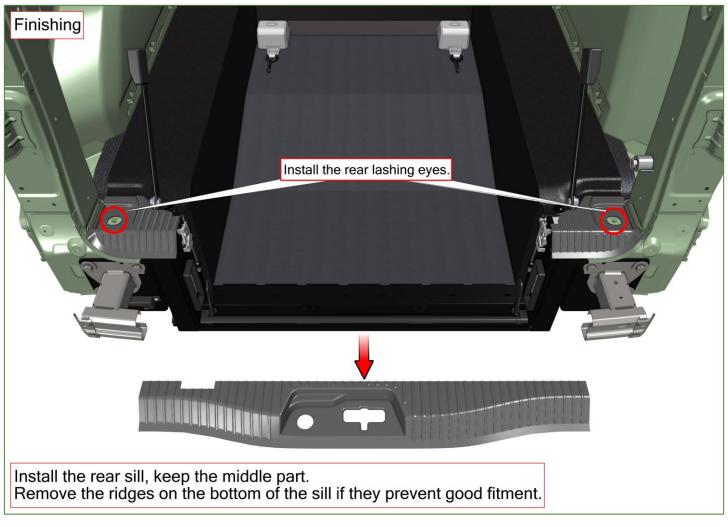


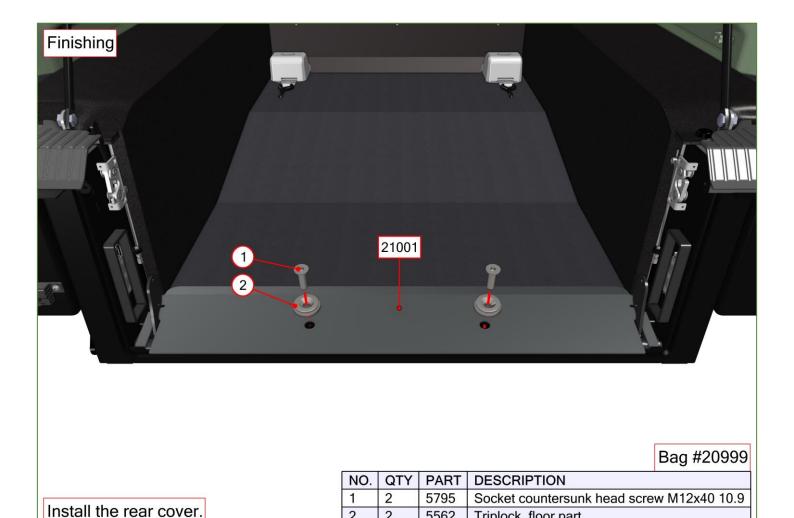






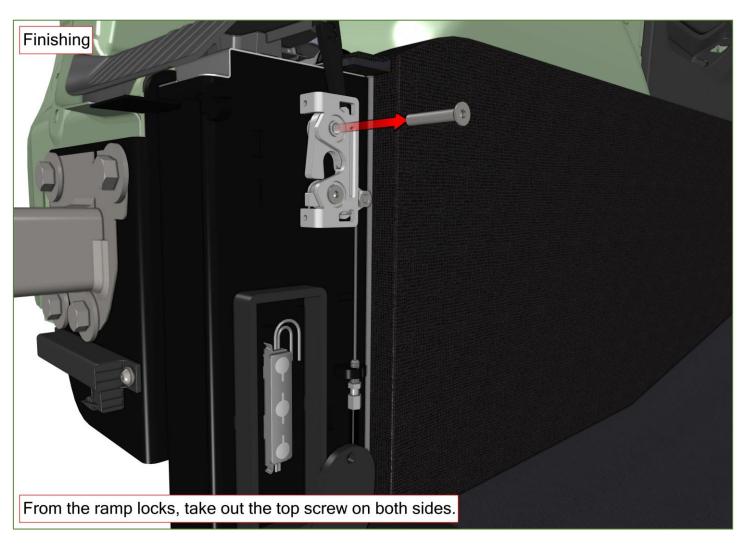




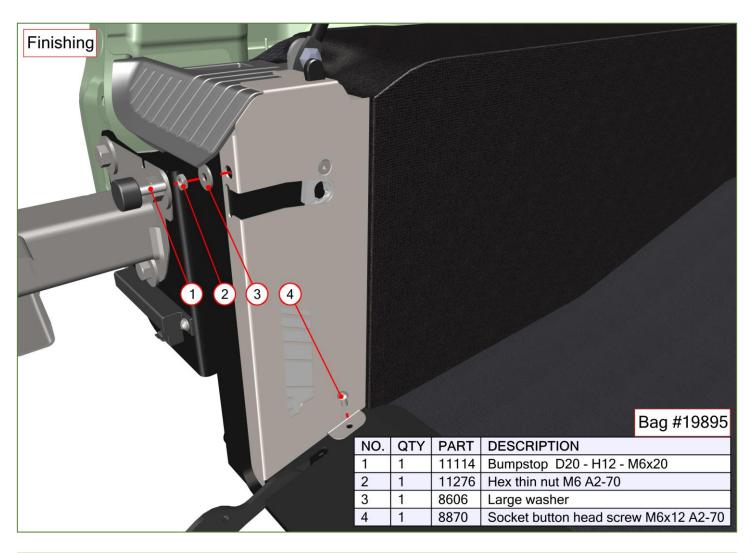


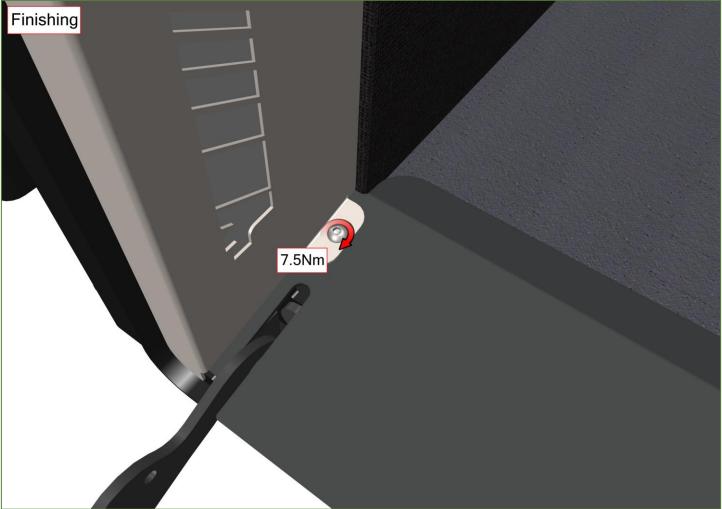
Triplock, floor part

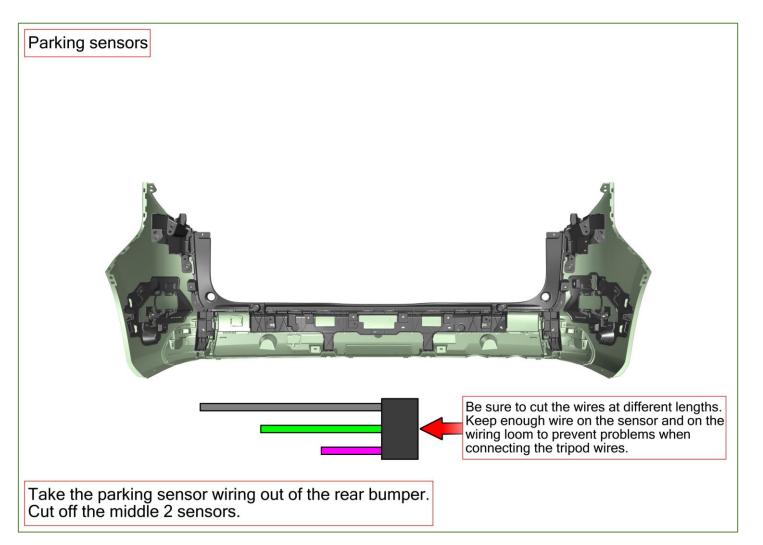


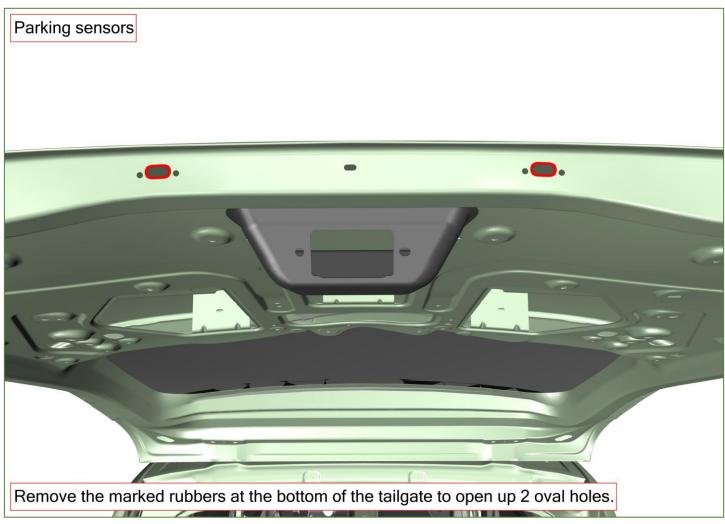


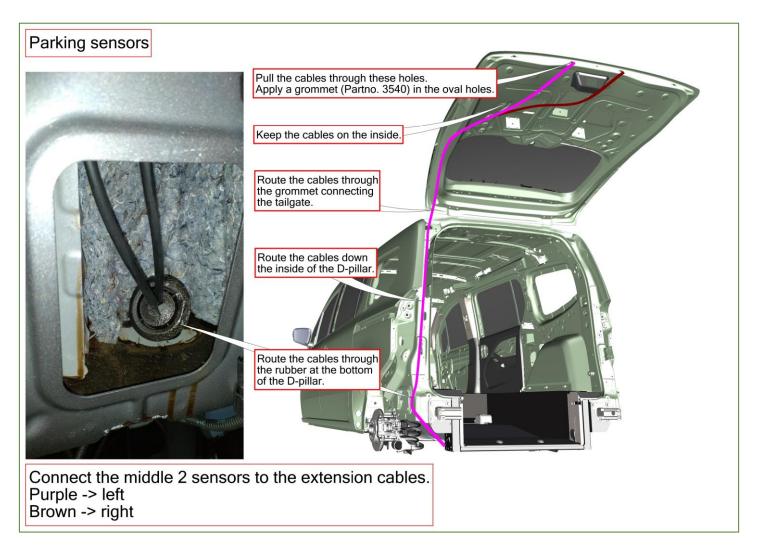


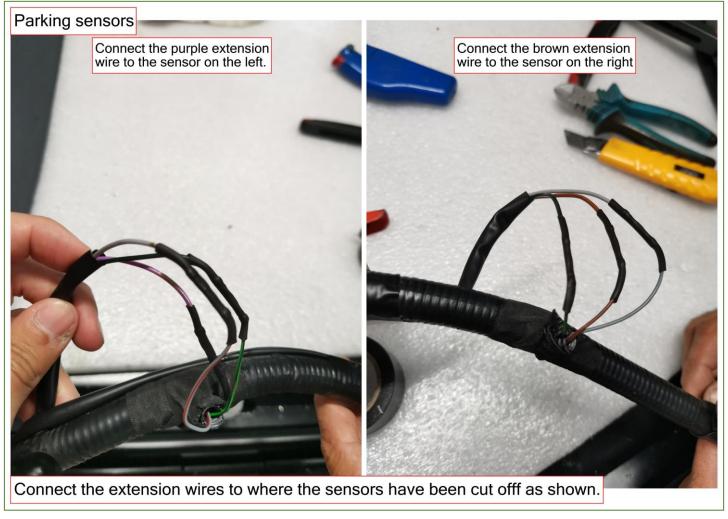


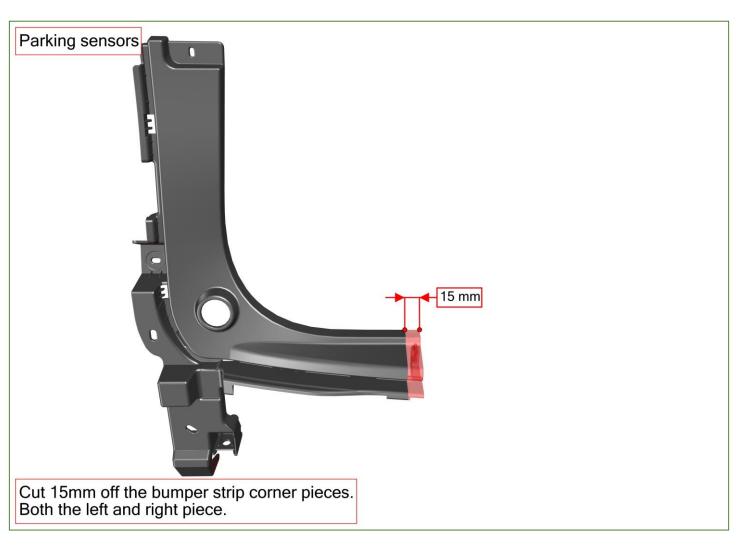


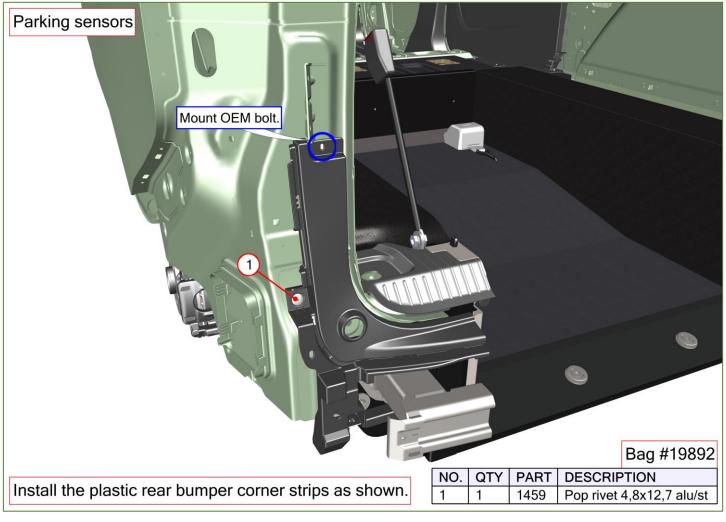


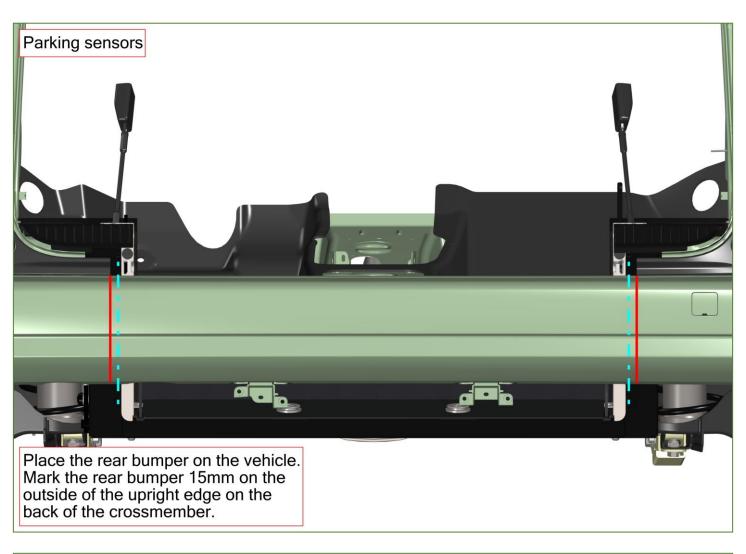


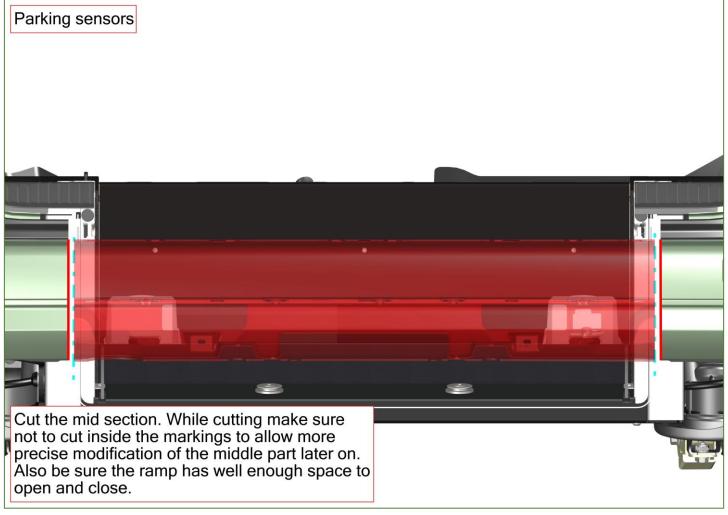


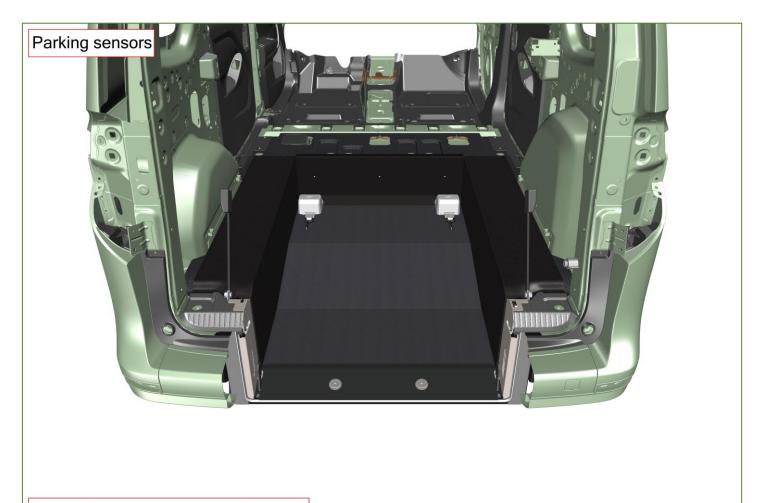




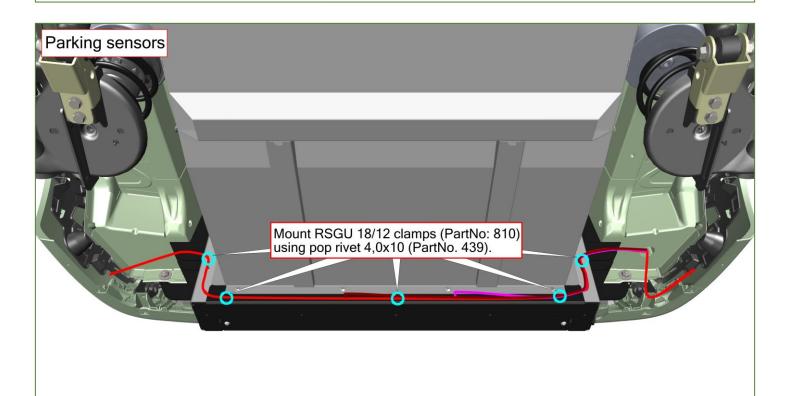




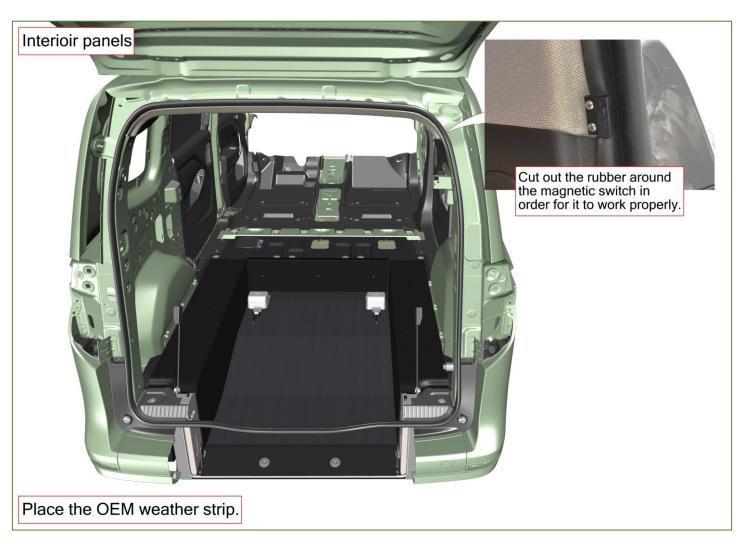


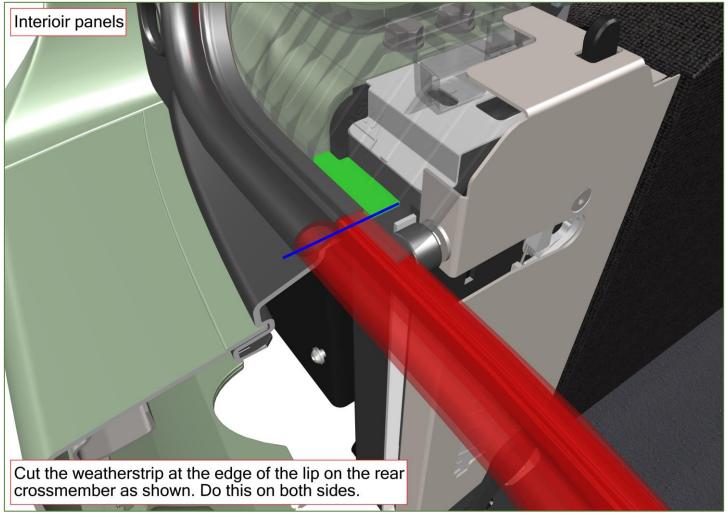


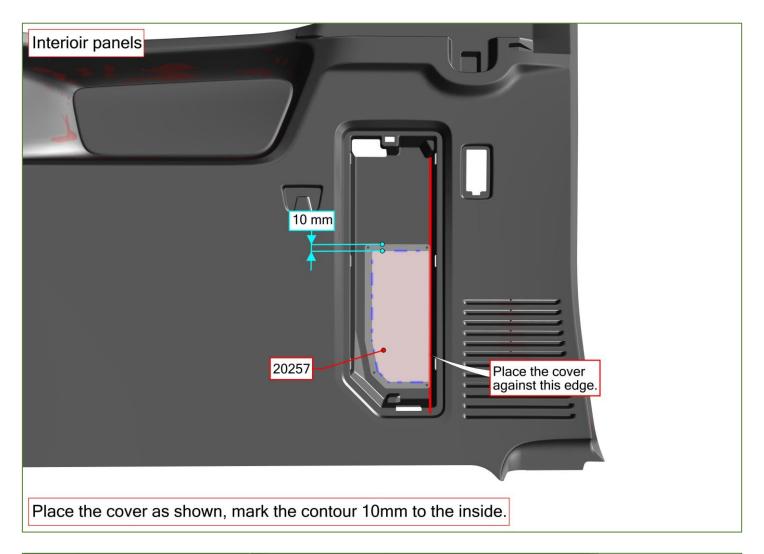
Keep the rear bumper on the vehicle.



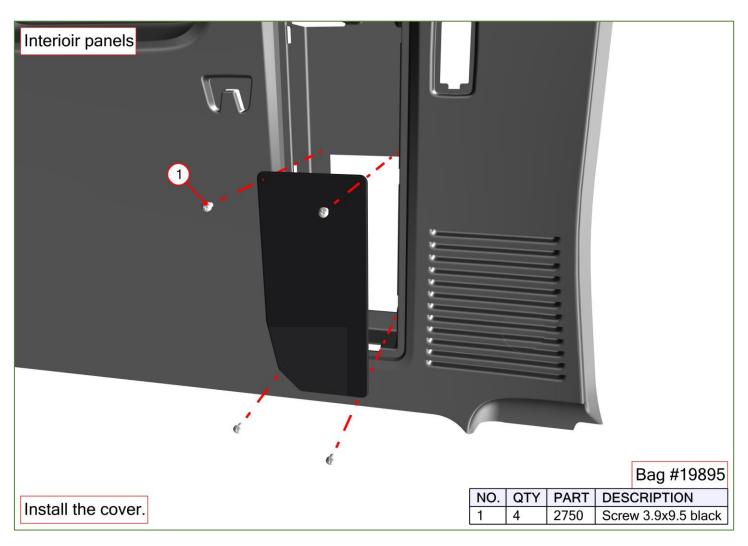
Route the parking sensor wiring loom across the front side of the rear crossmember. Place the corner sensors back in the bumper. Wrap the cables in water resistant tape for proper protection against short circuit.

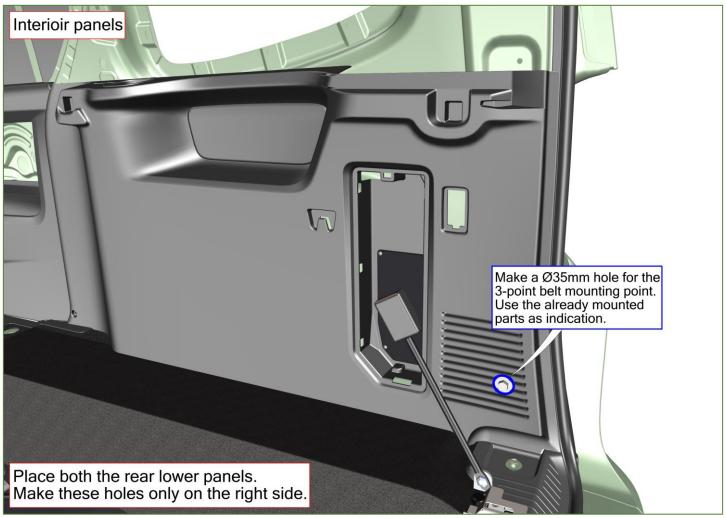


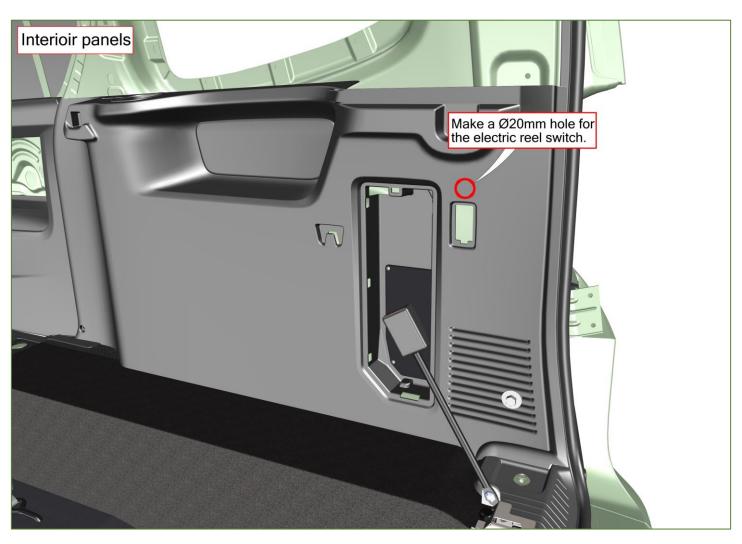


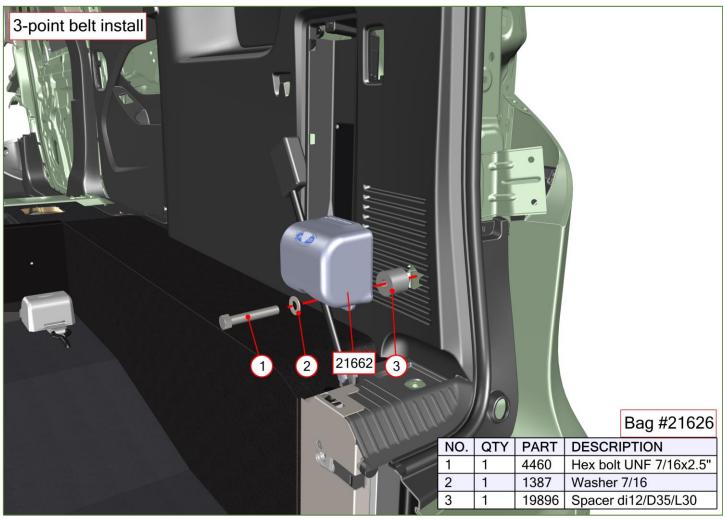


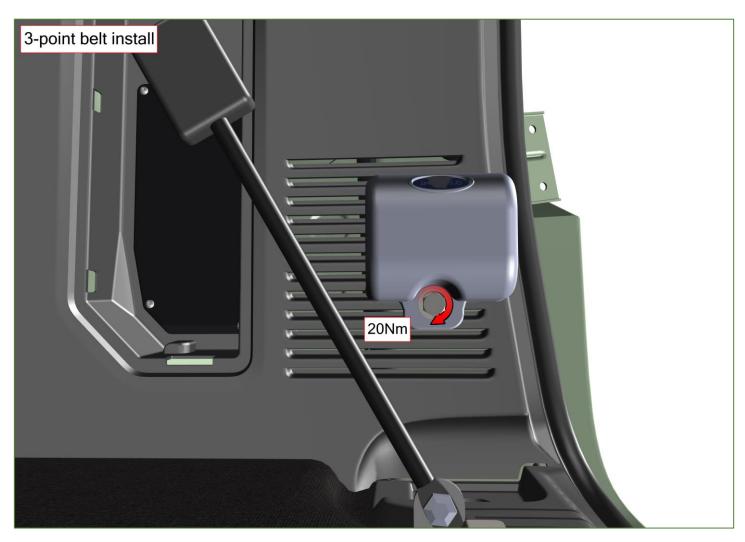


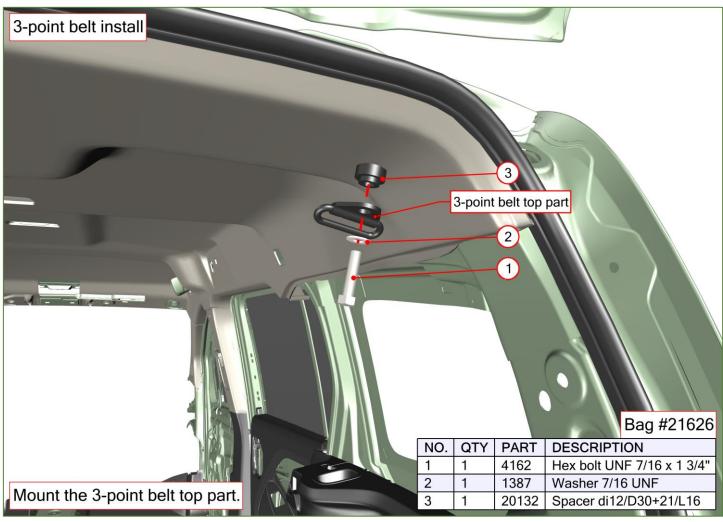


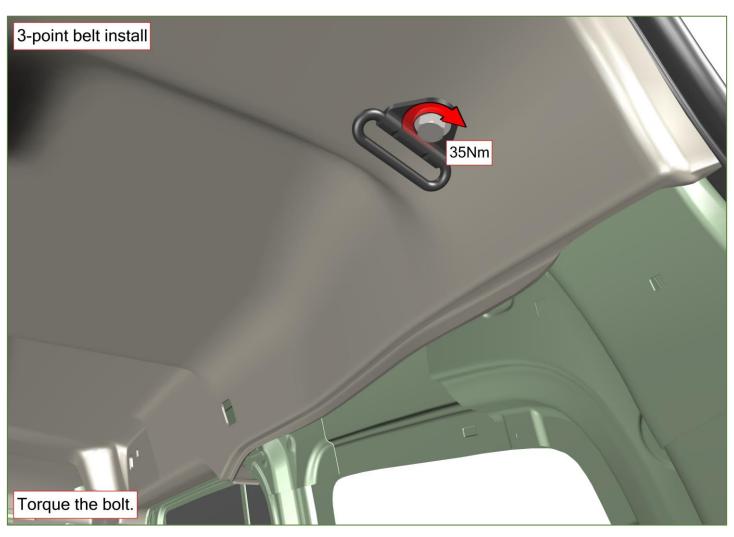


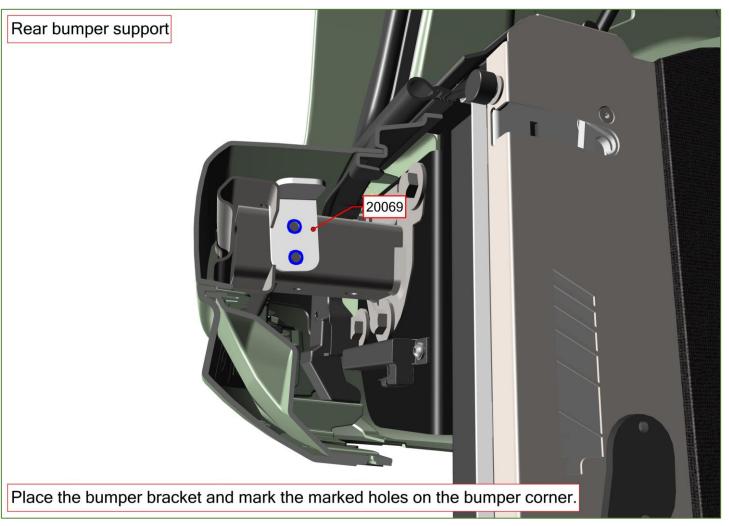


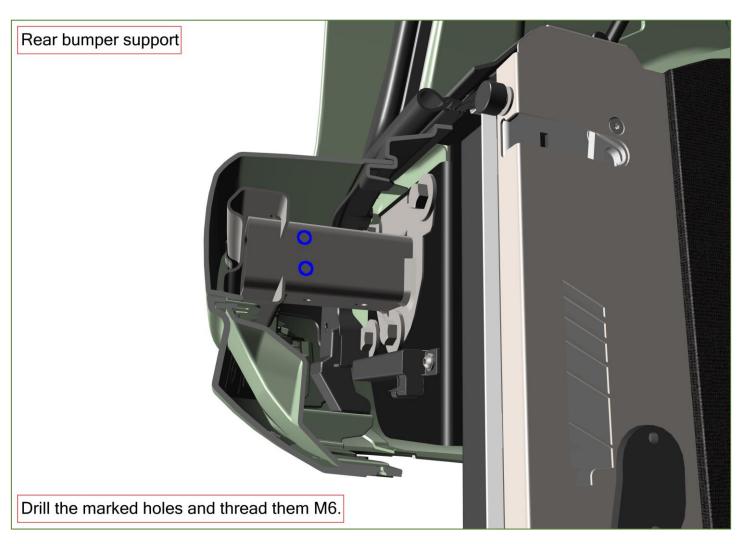


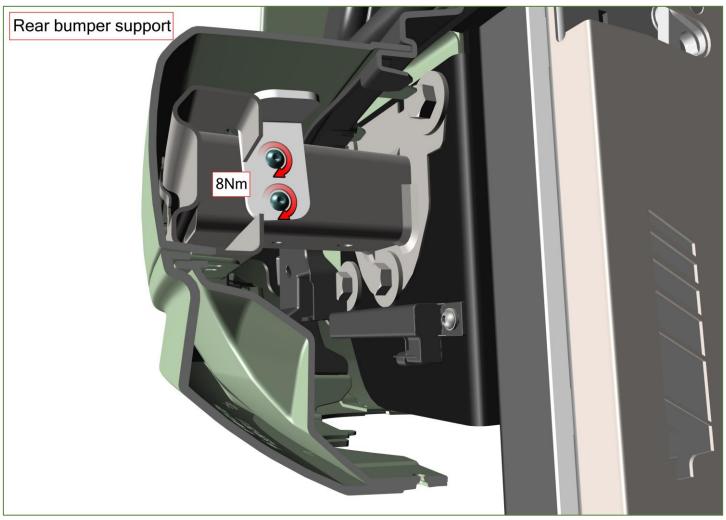


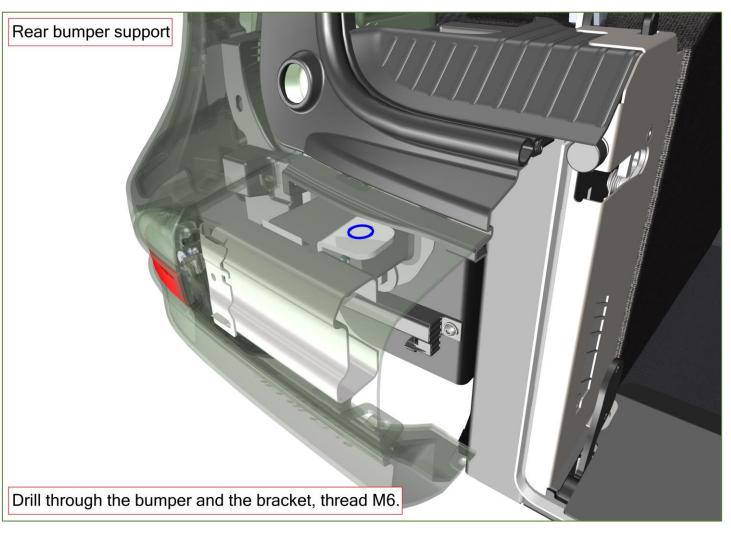


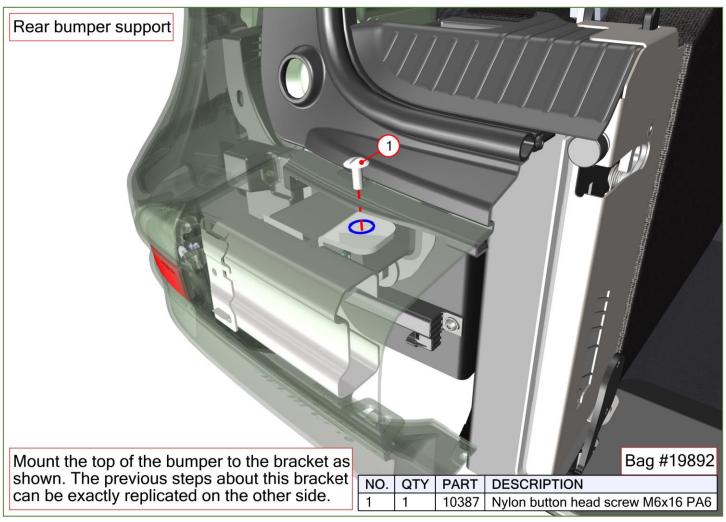


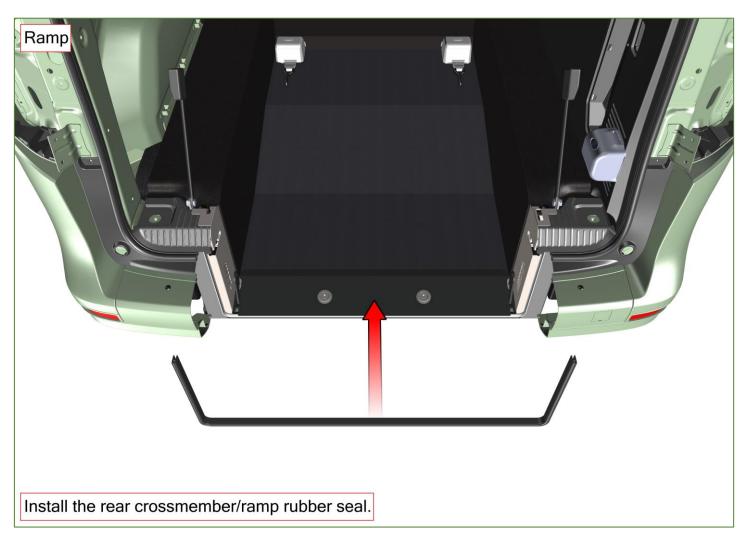


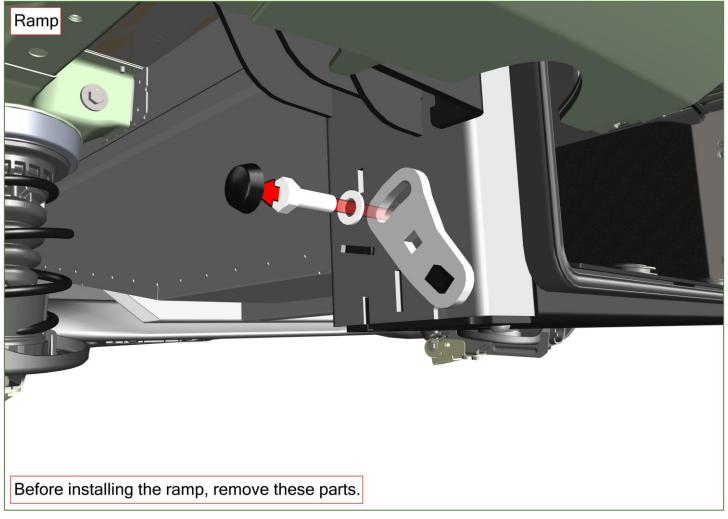


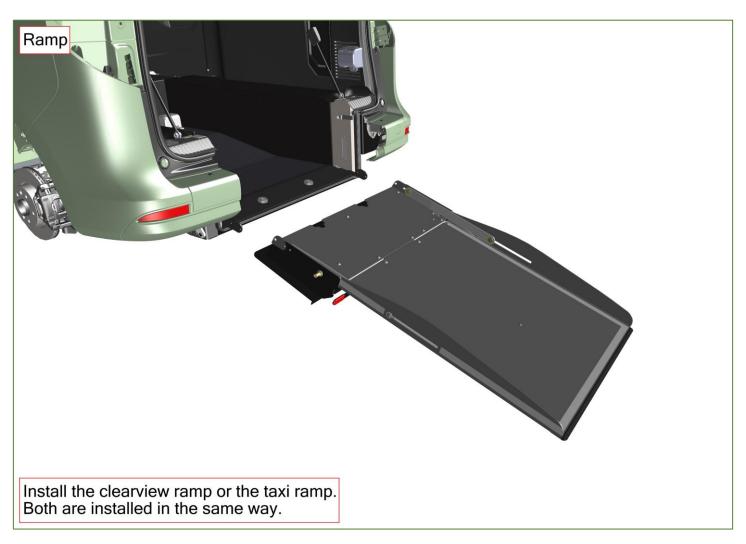


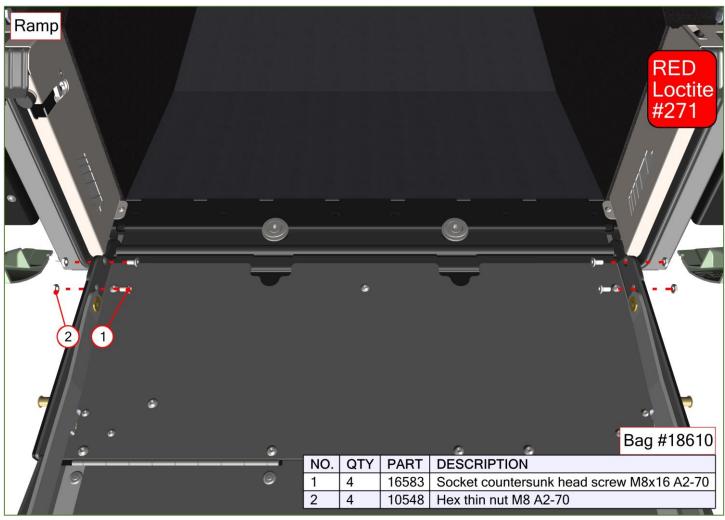


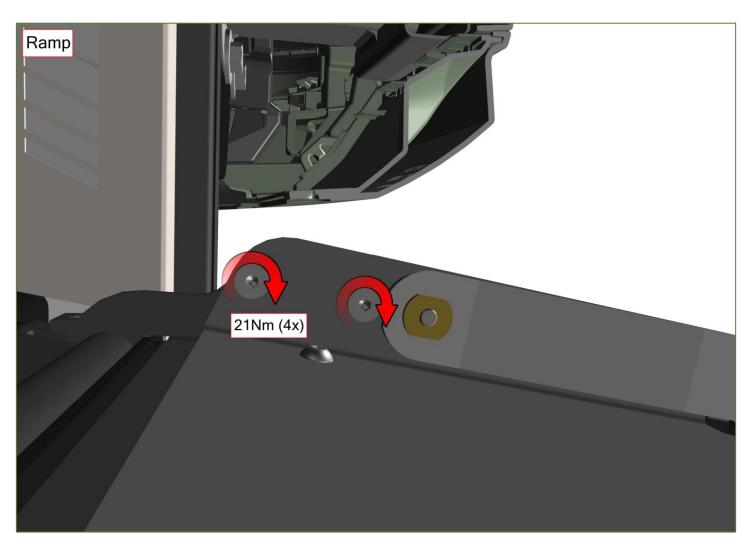


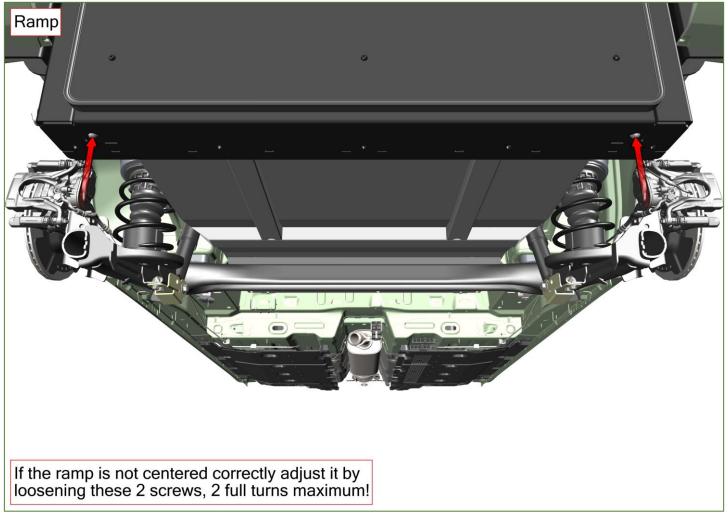


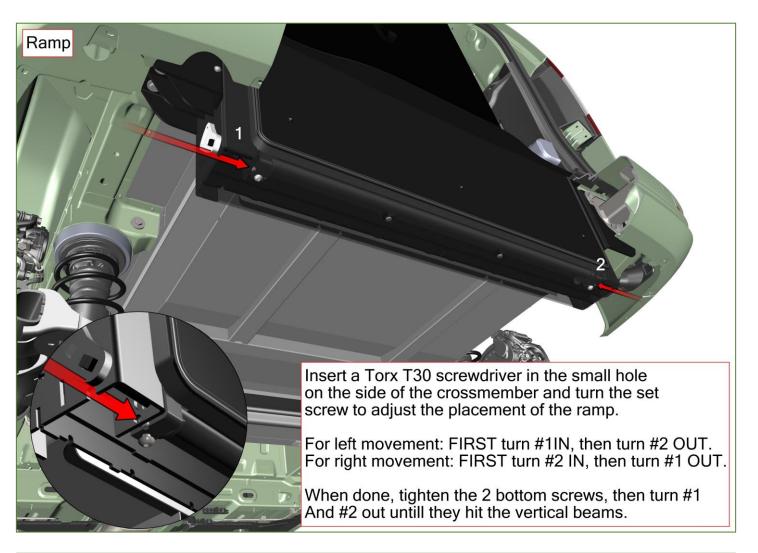


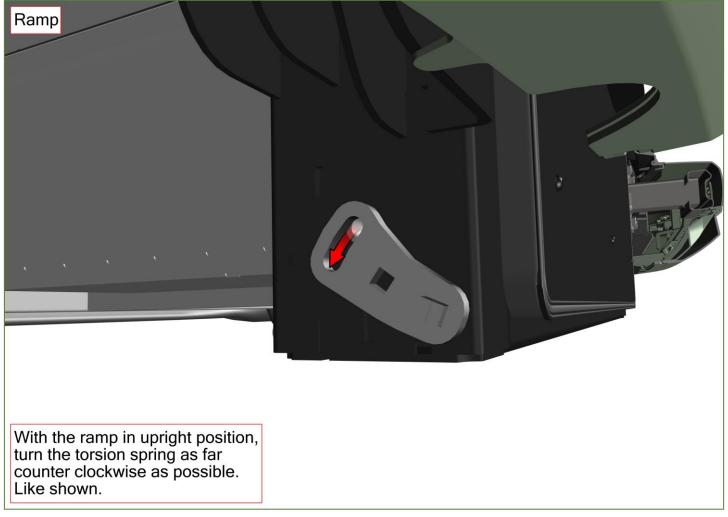


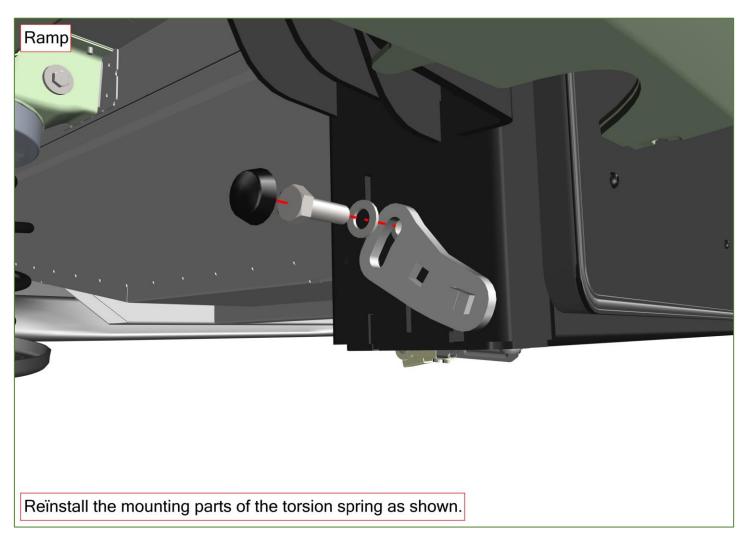




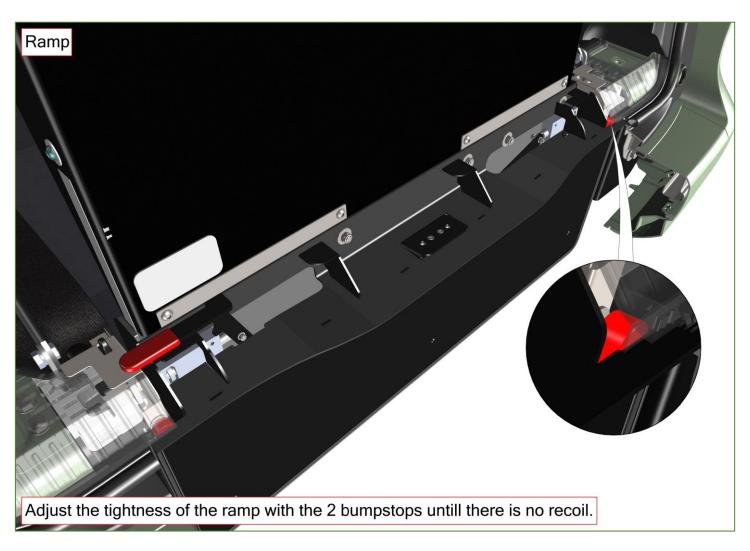


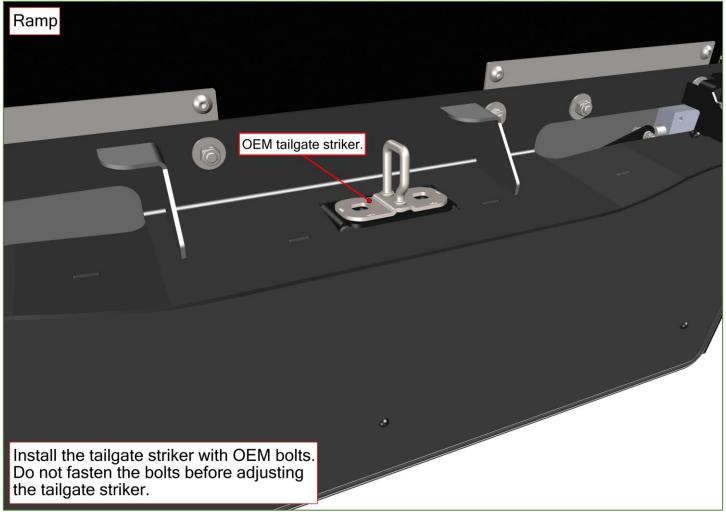


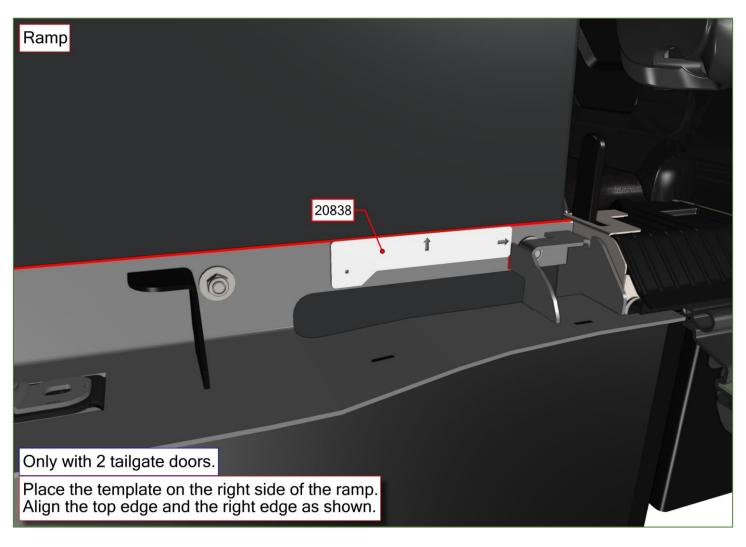


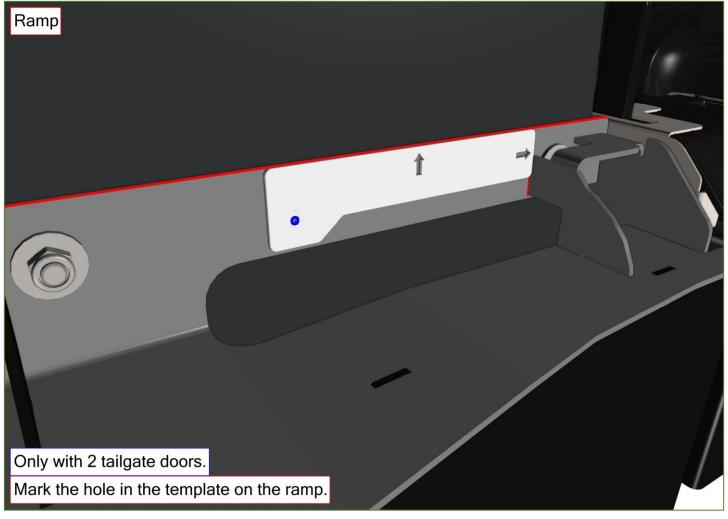


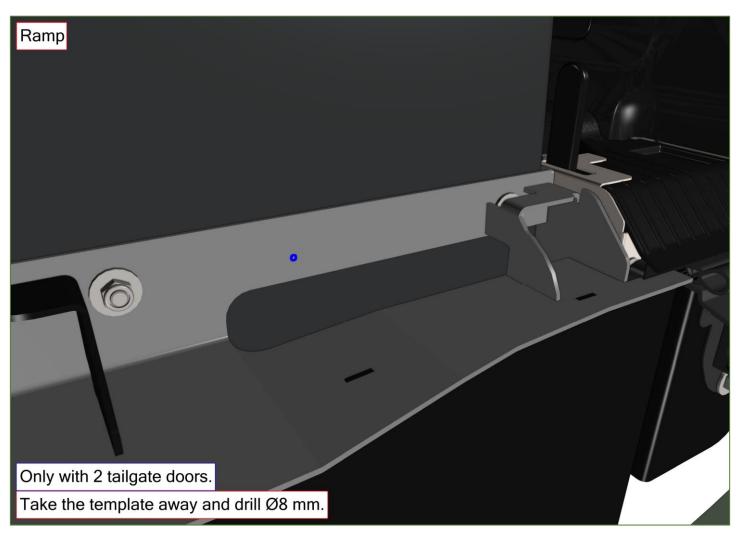


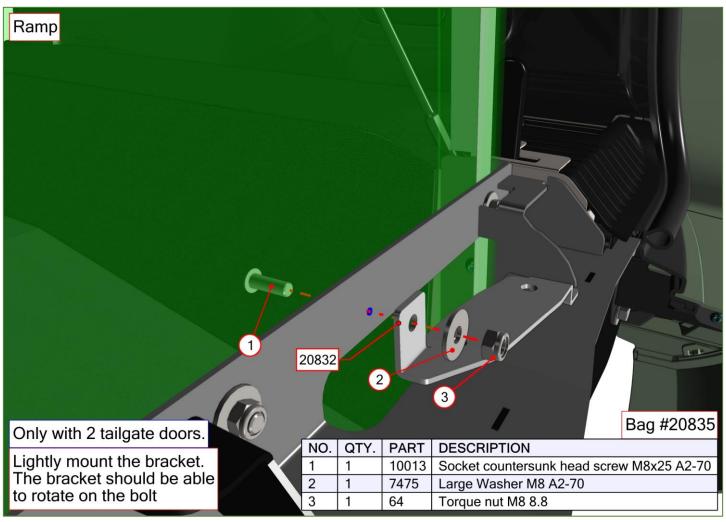


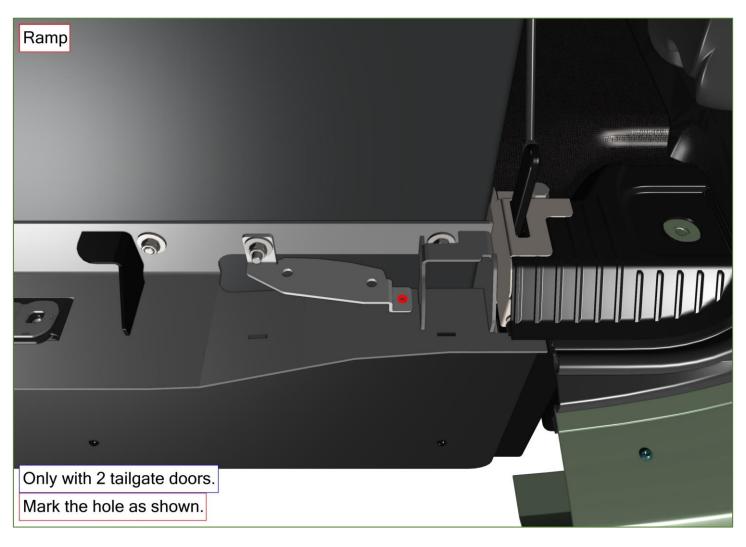


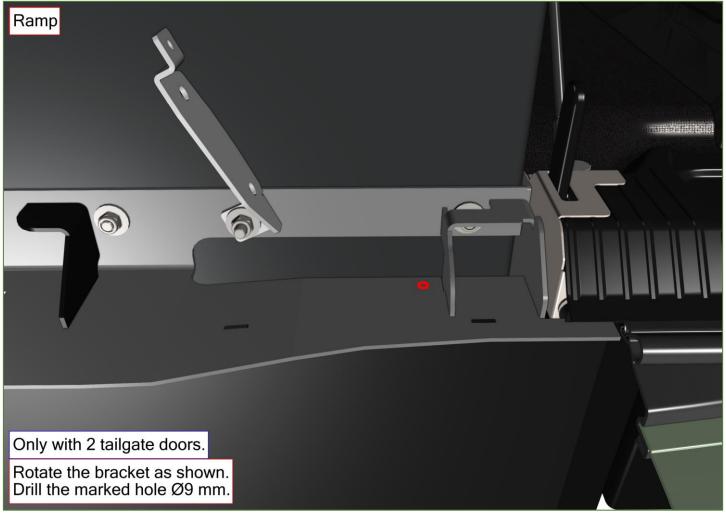


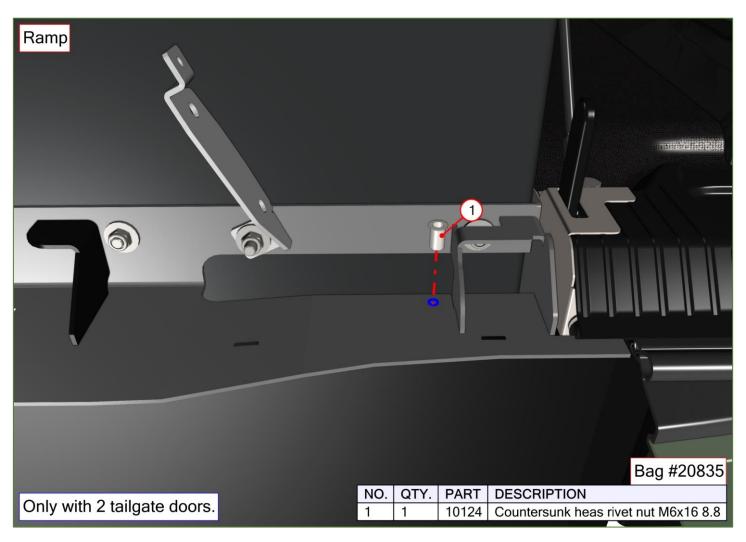


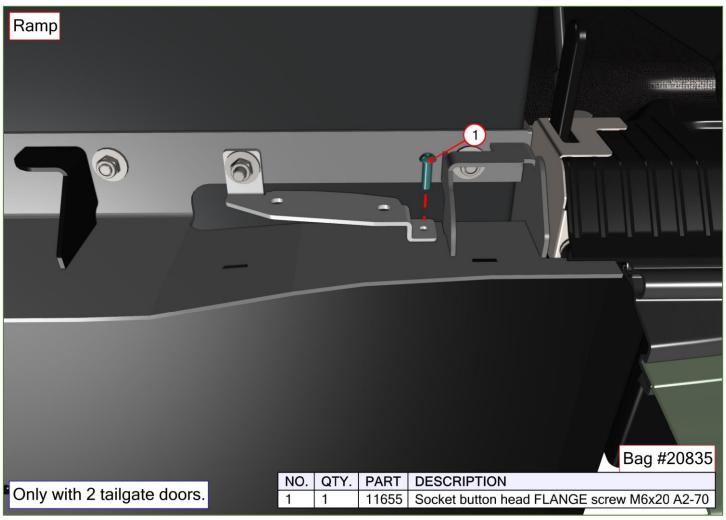


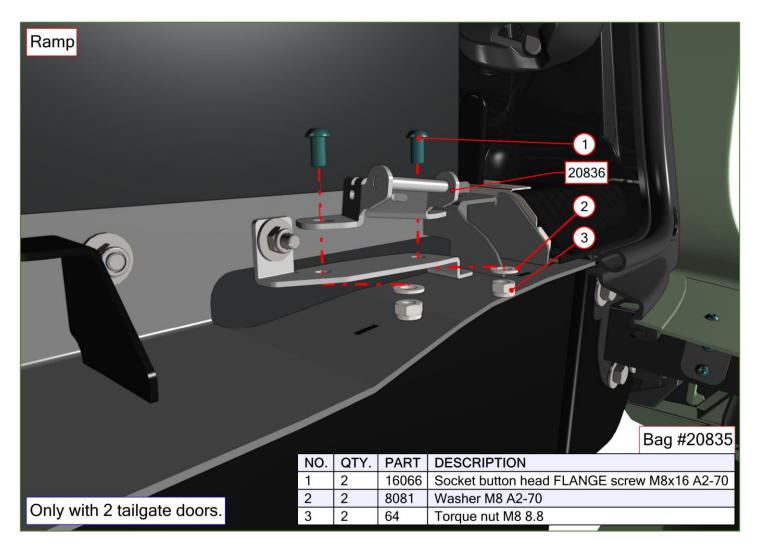


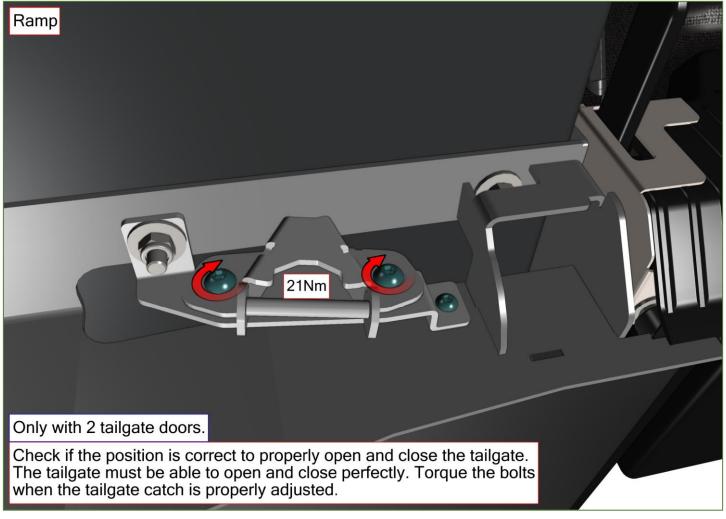


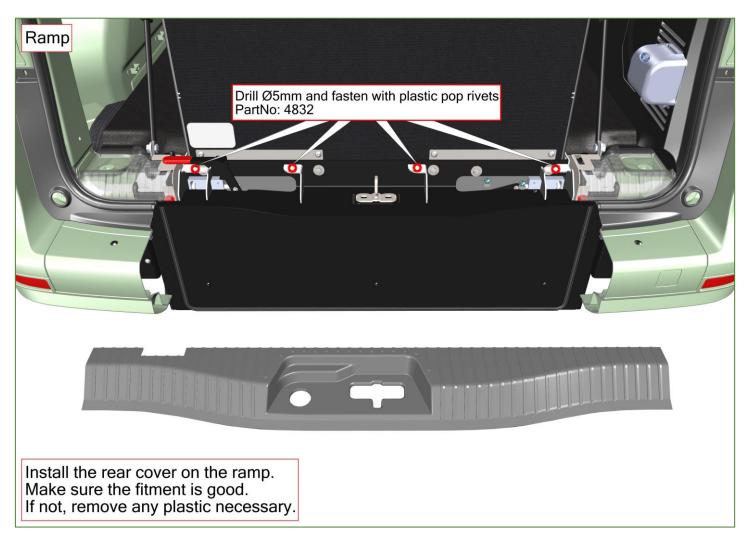


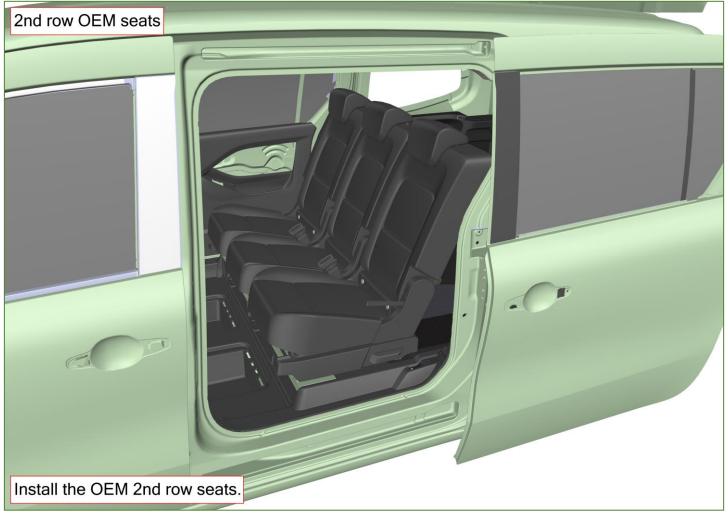






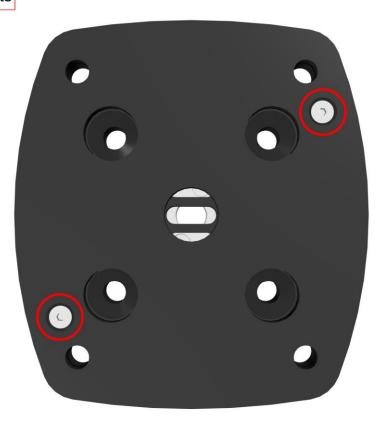






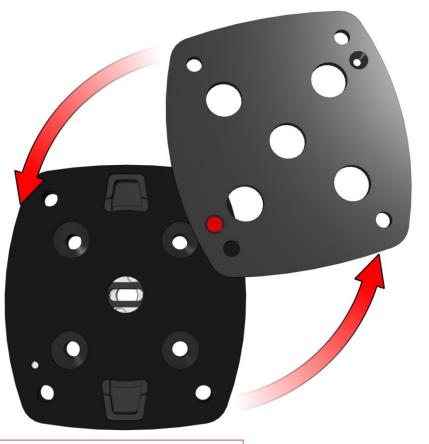


## 3rd row TriflexAir seats



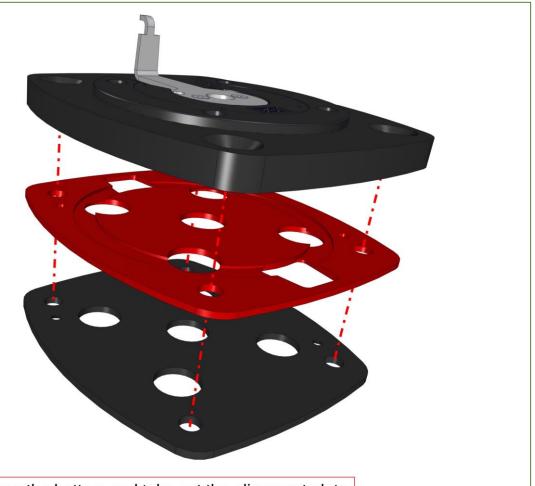
Remove the bottom of the swivel plate by taking the marked bolts out. If one of the bolts doesn't come loose, follow the next step.



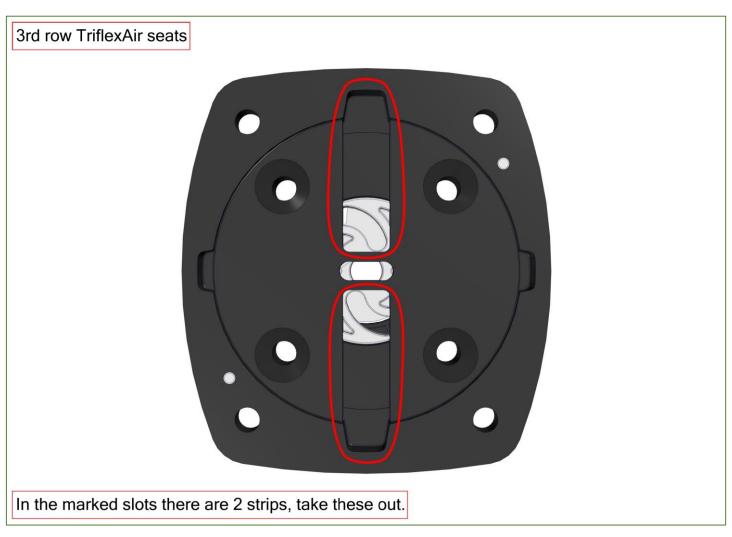


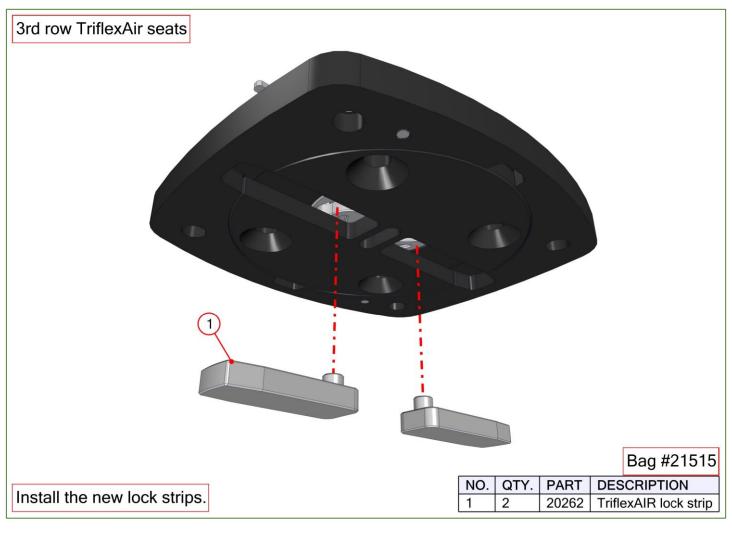
If one of the bolts won't come loose, try the other bolt and use the bottom part to rotate the stuck bolt to open the swivel plate as shown.

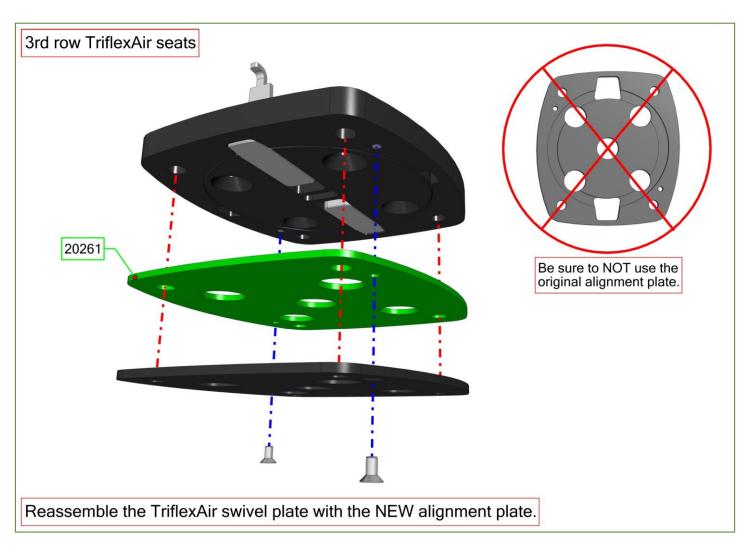
## 3rd row TriflexAir seats

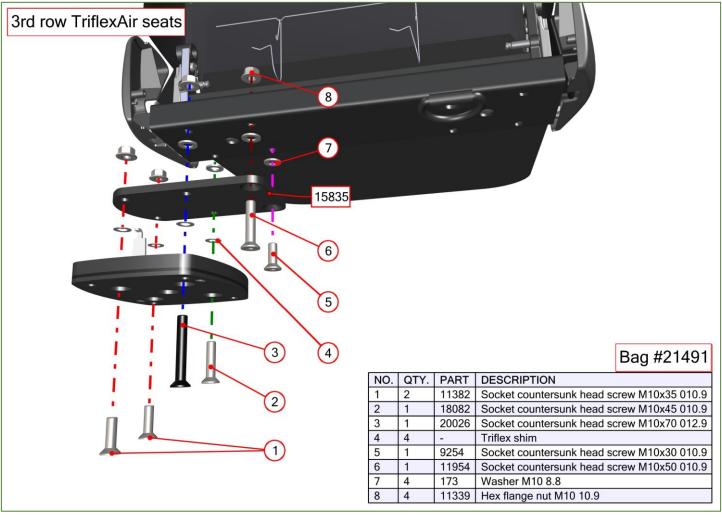


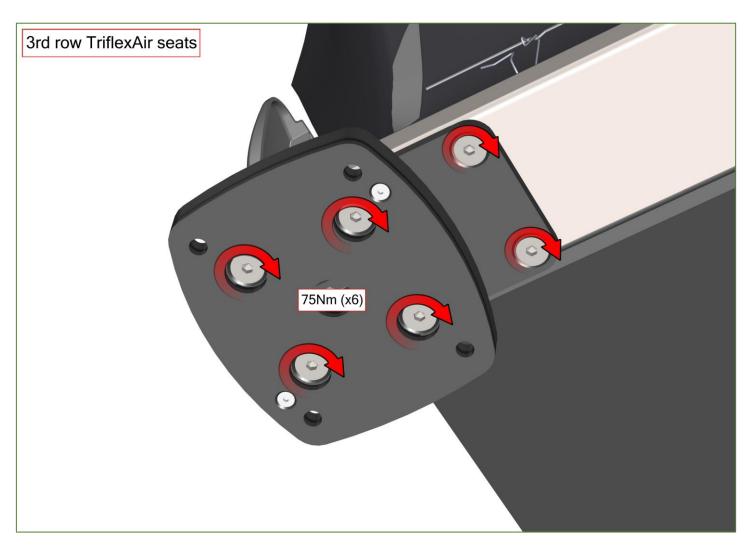
Remove the thin plate from the bottom and take out the alignment plate.

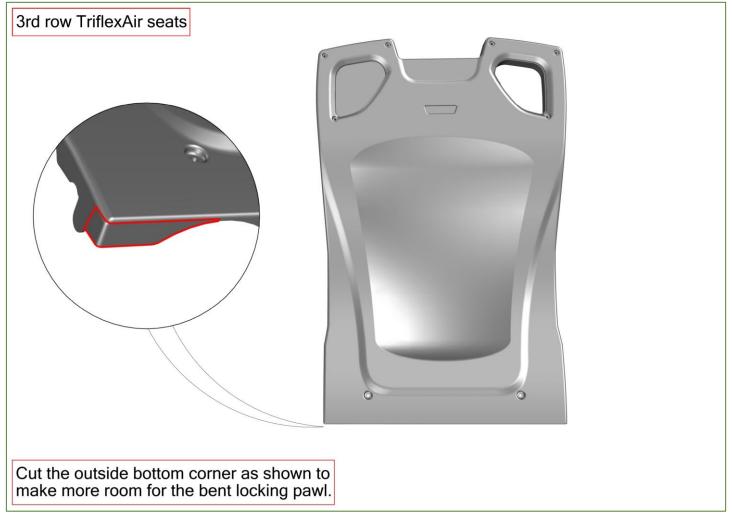


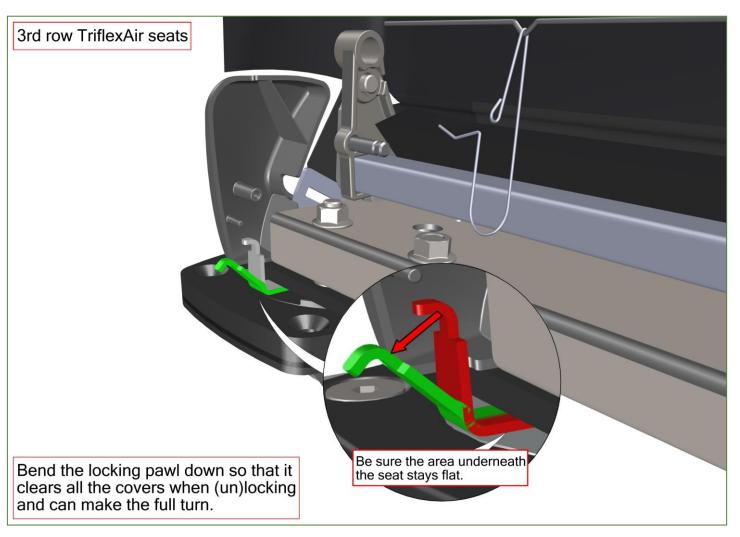


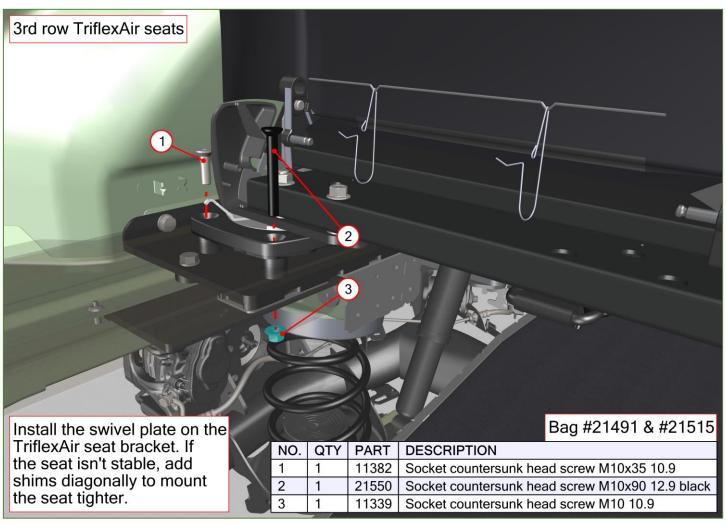


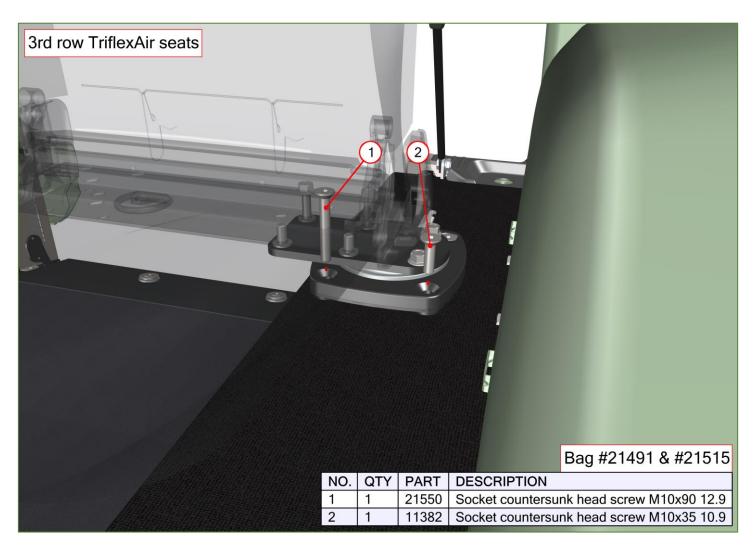


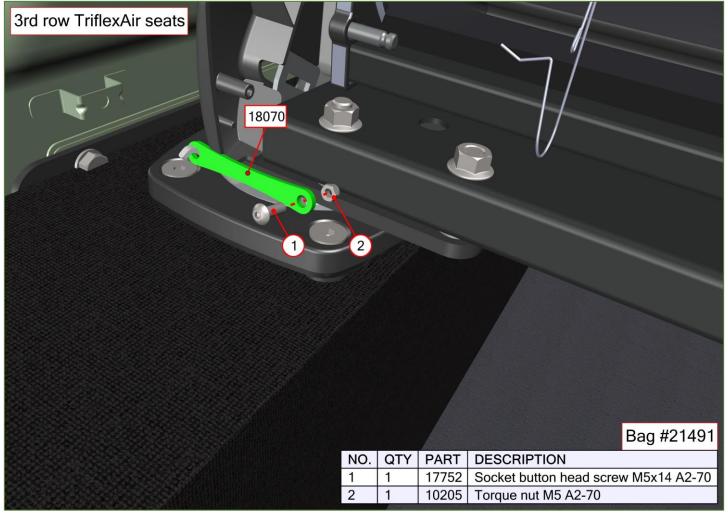




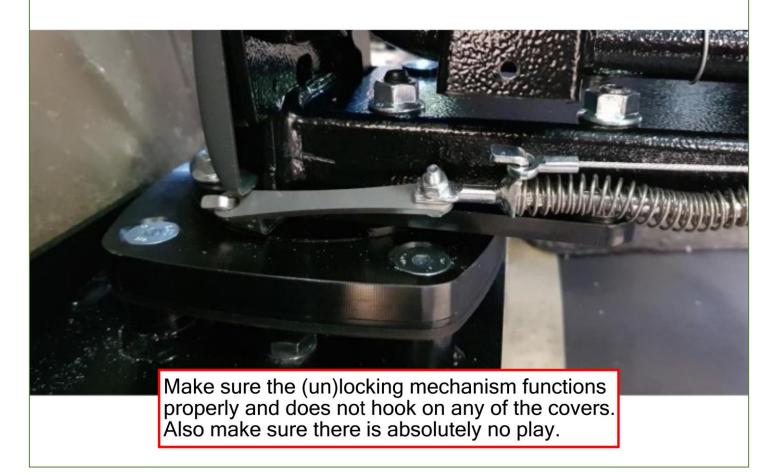








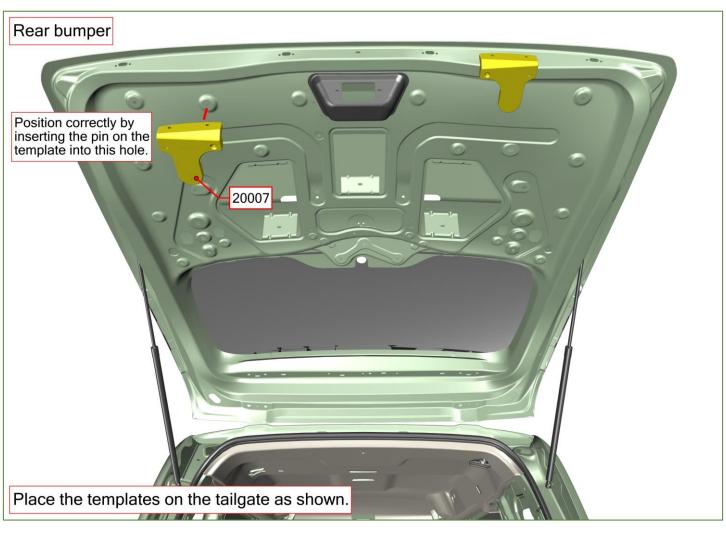
## 3rd row TriflexAir seats







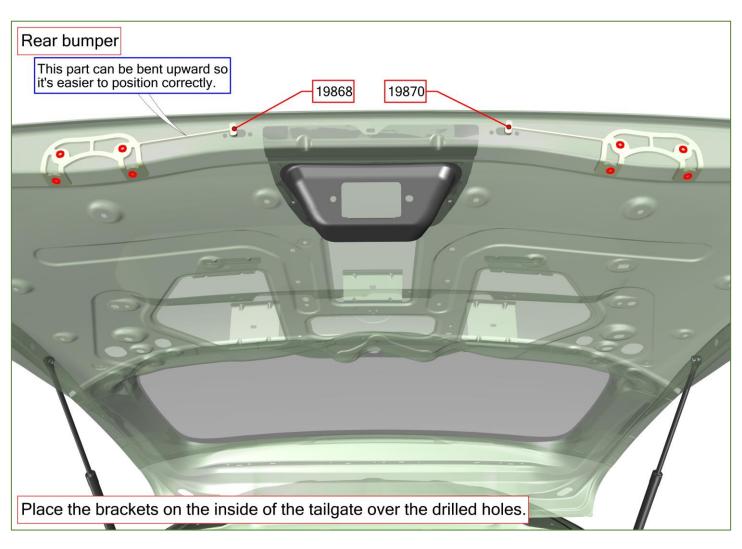


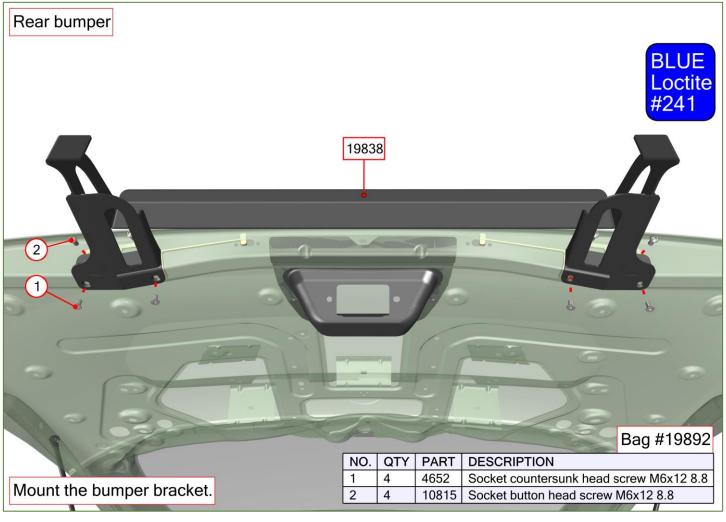




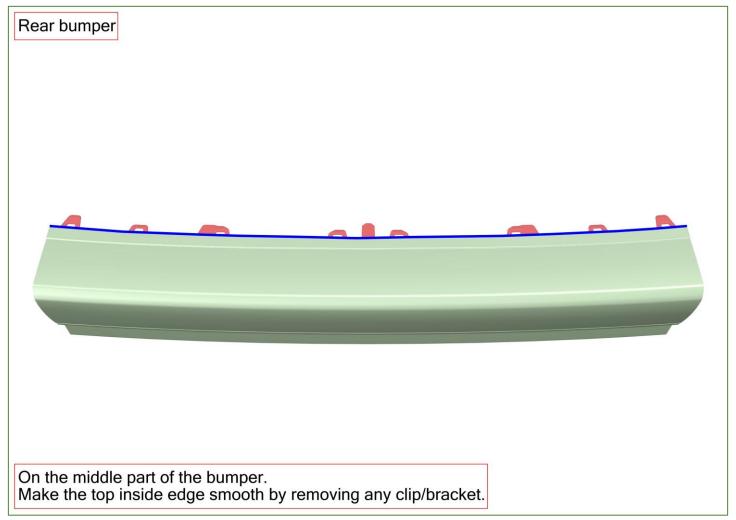


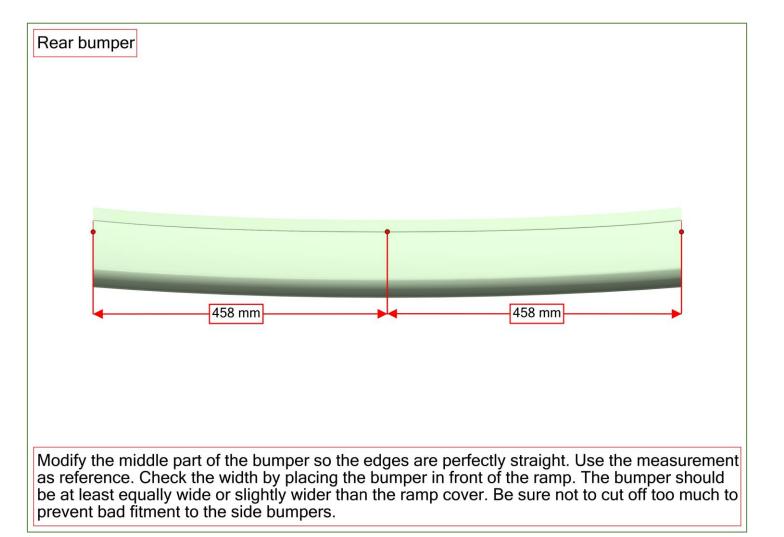


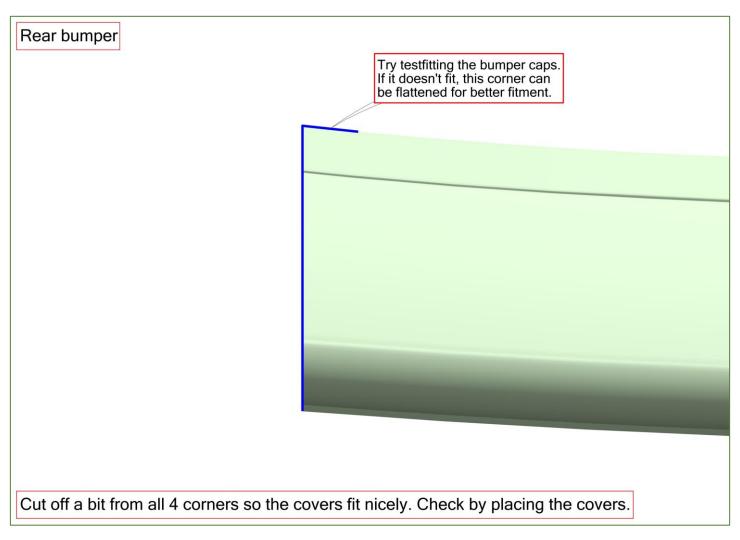


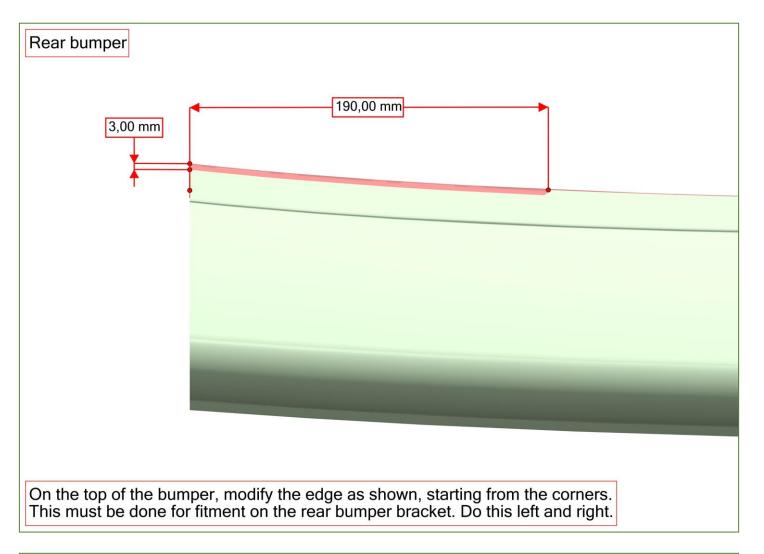


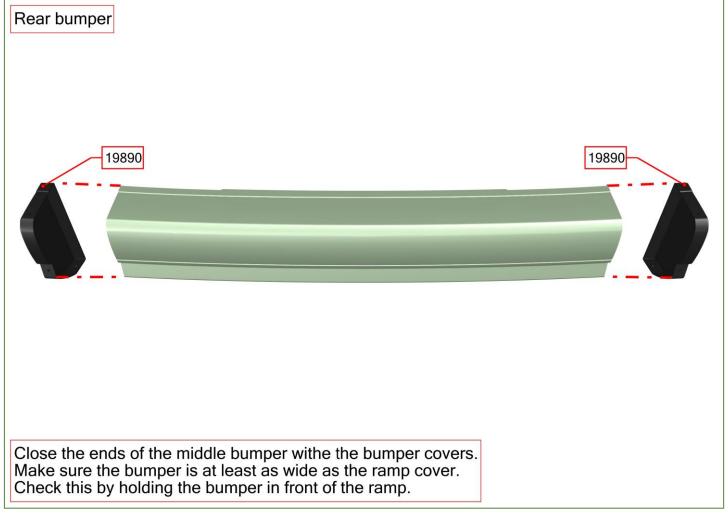


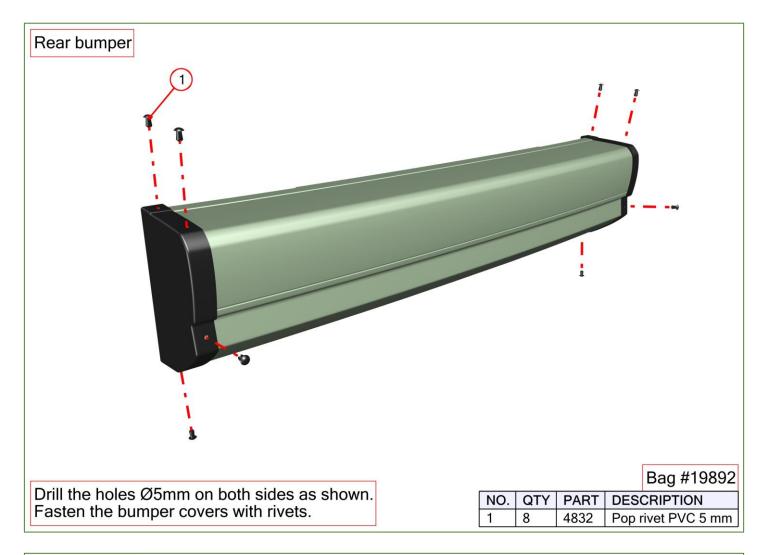


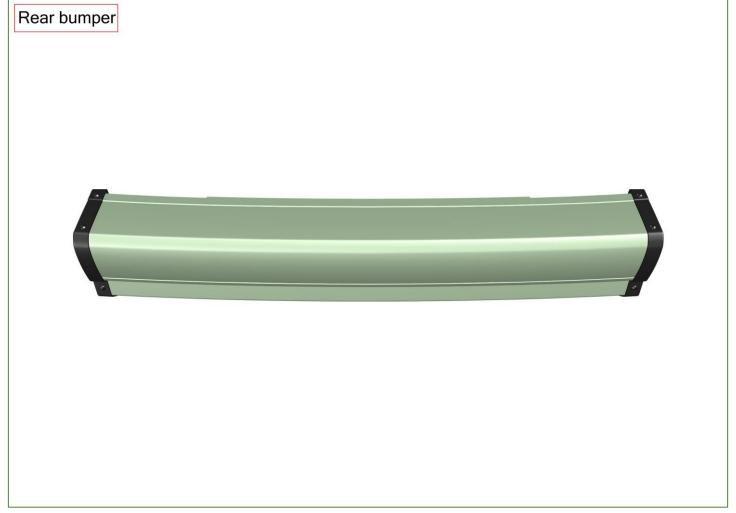


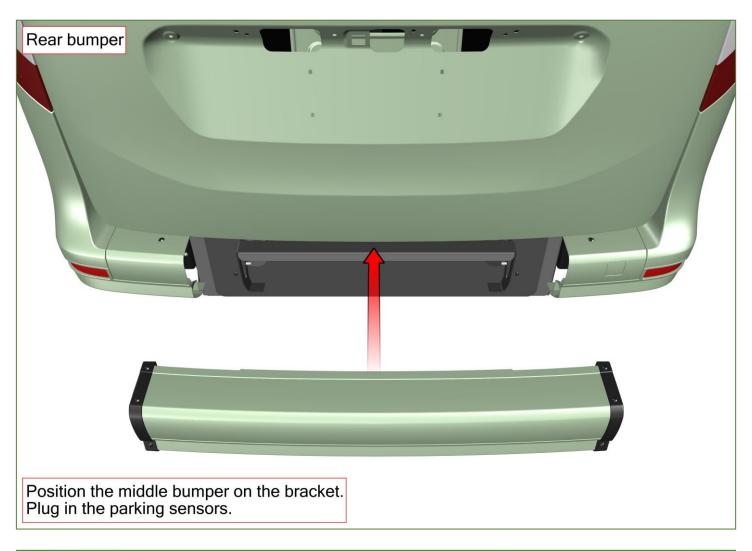


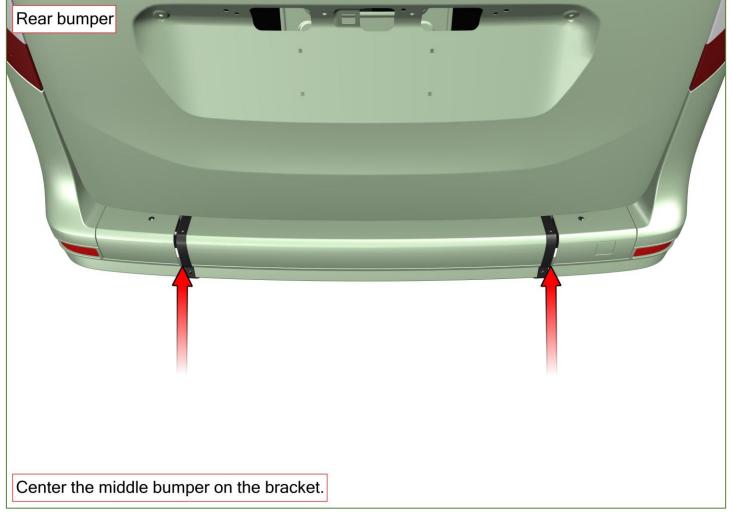


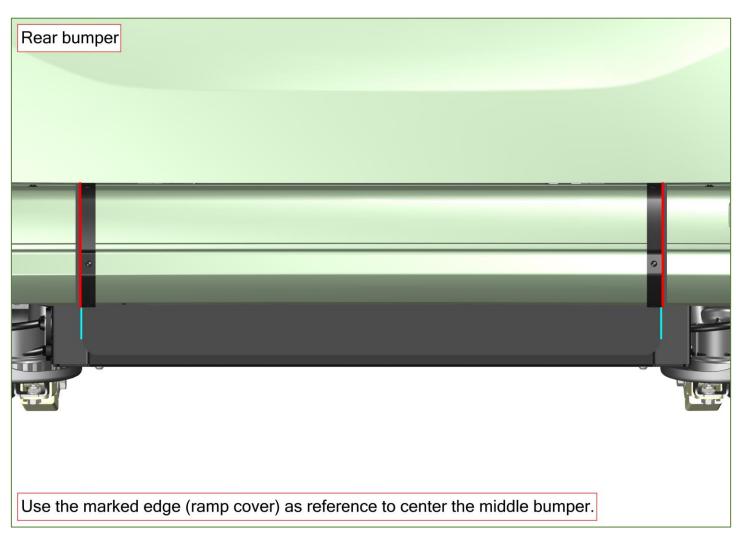


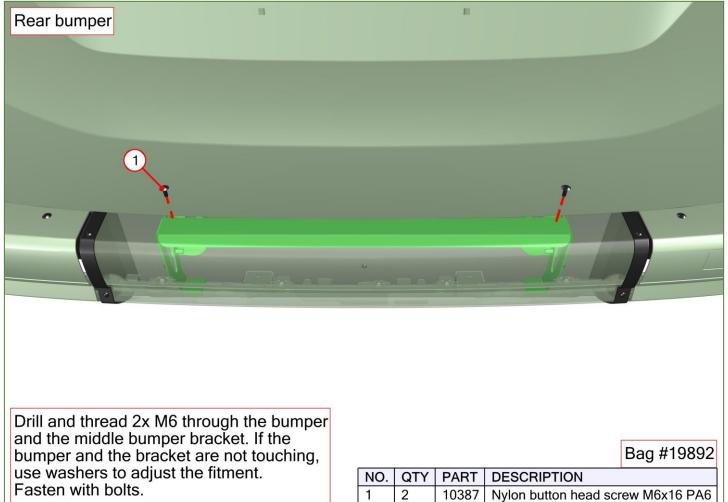


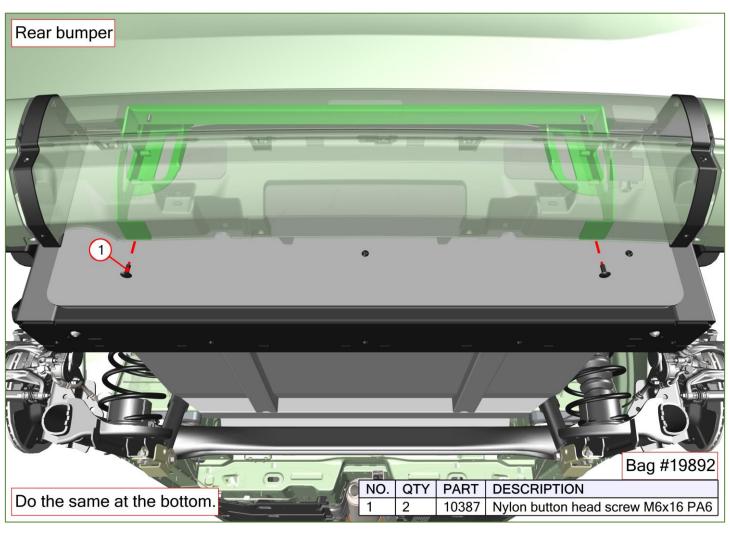


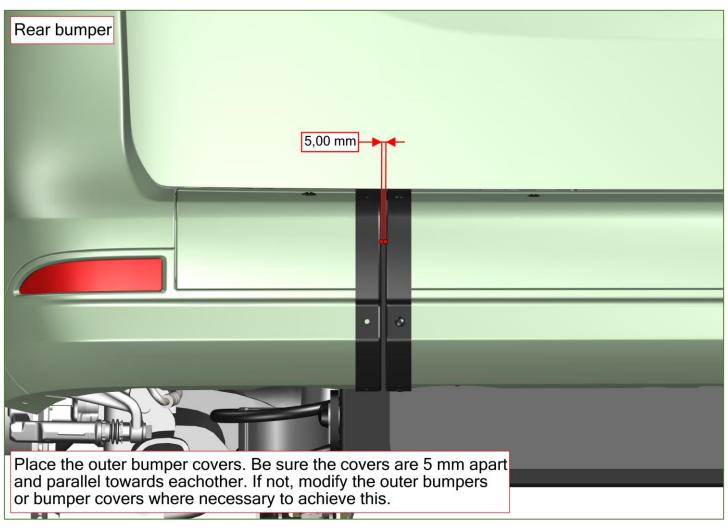


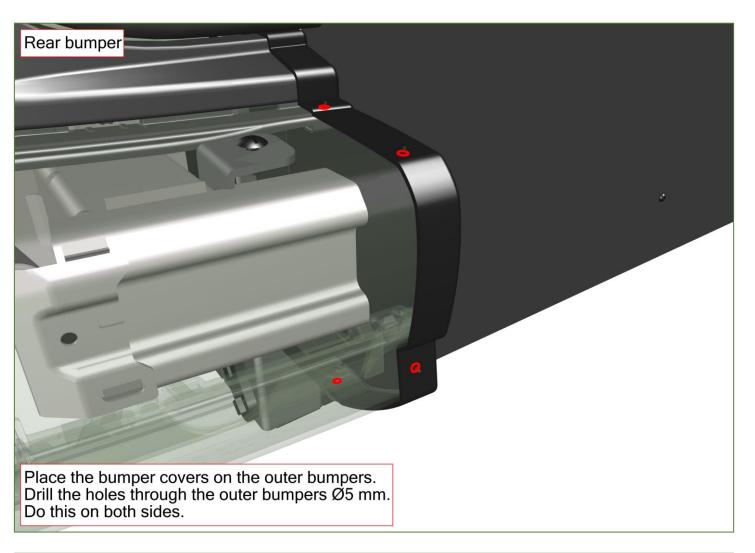


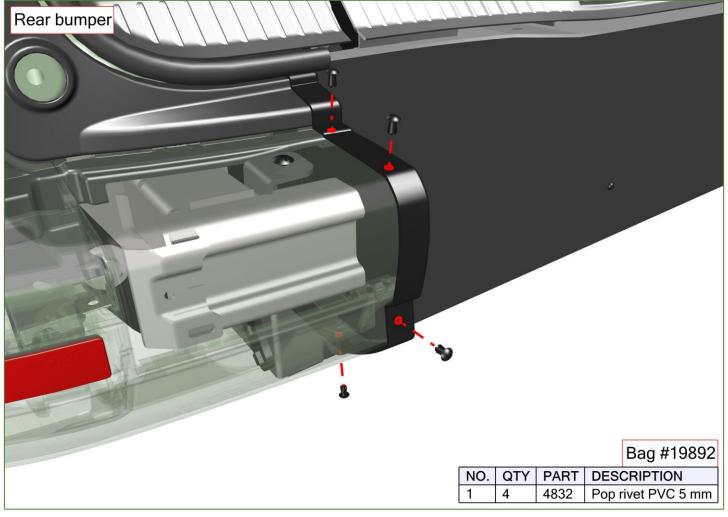




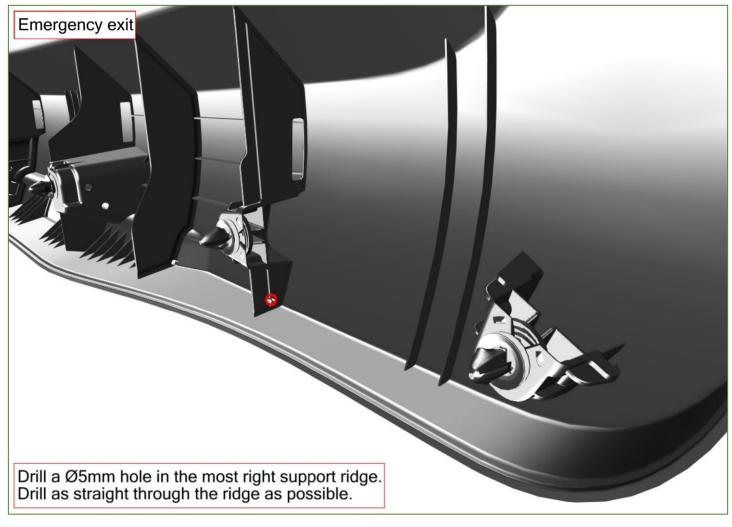


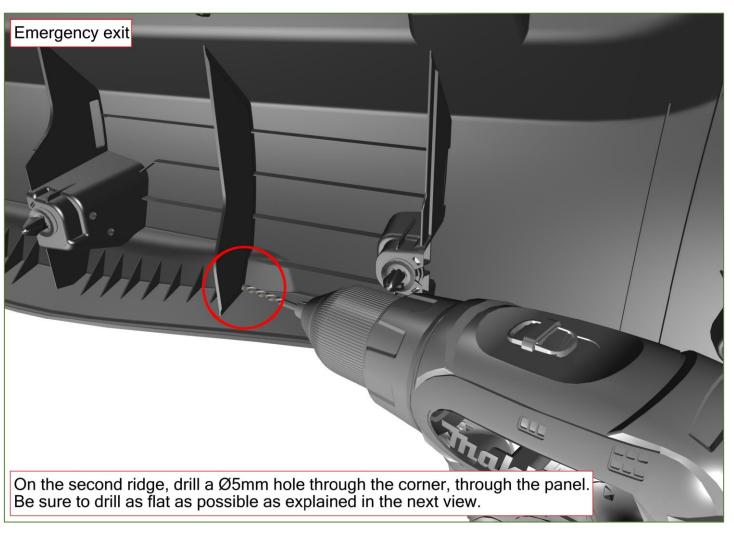


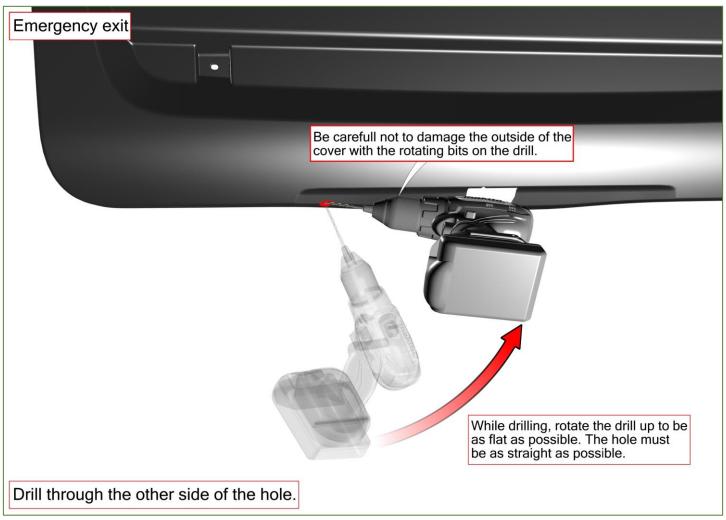


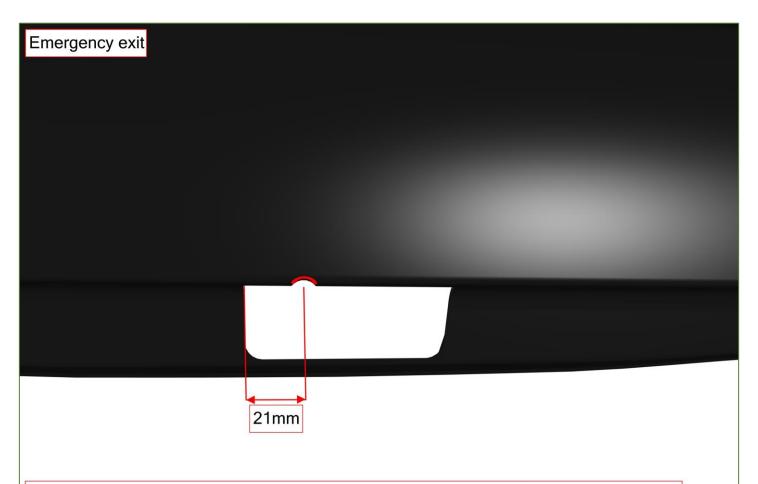




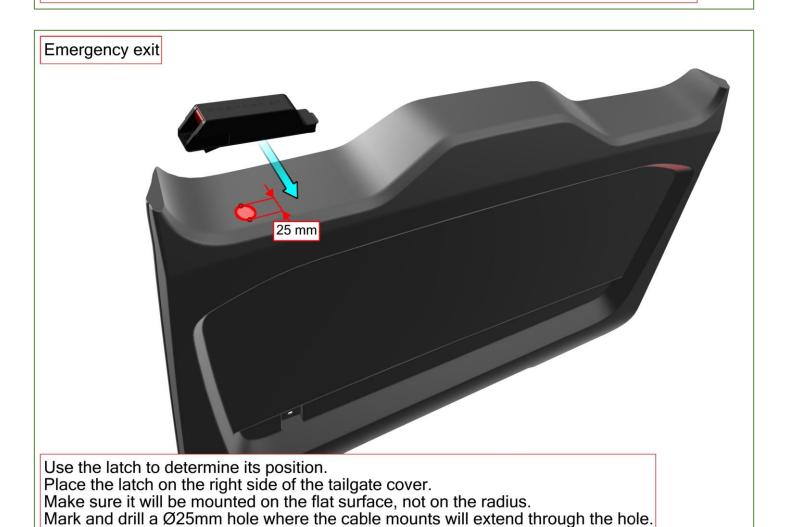


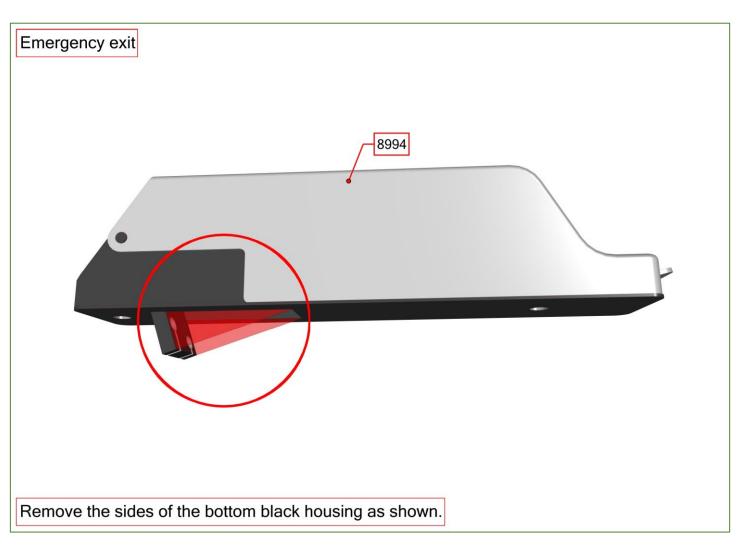


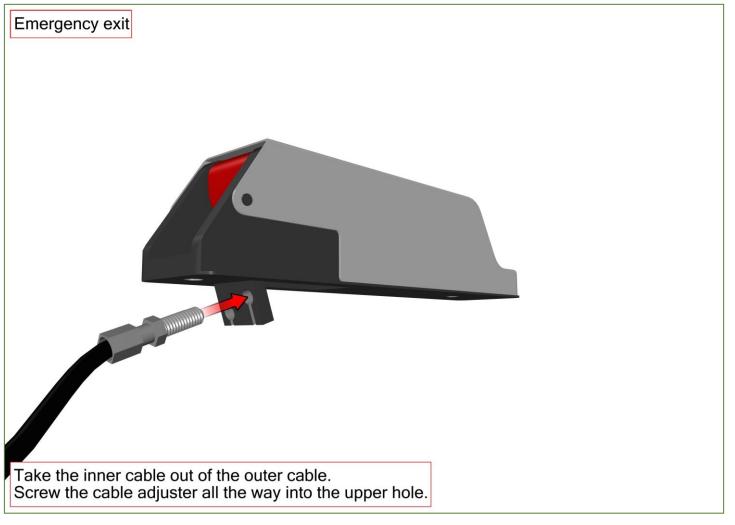


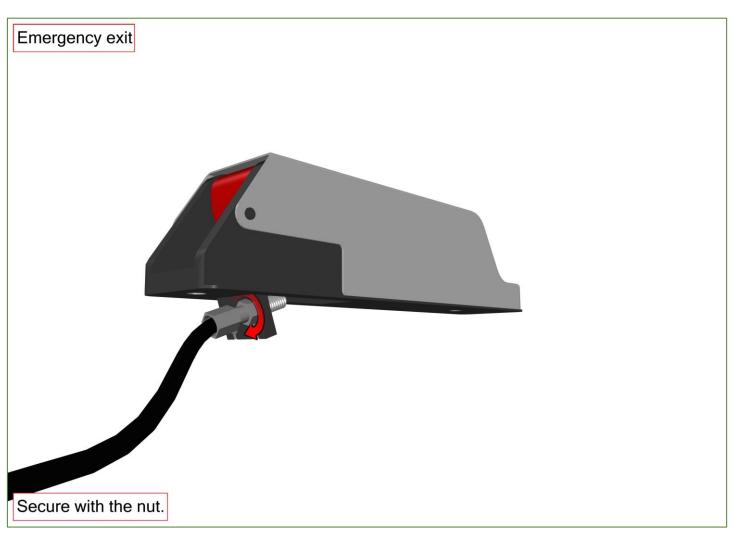


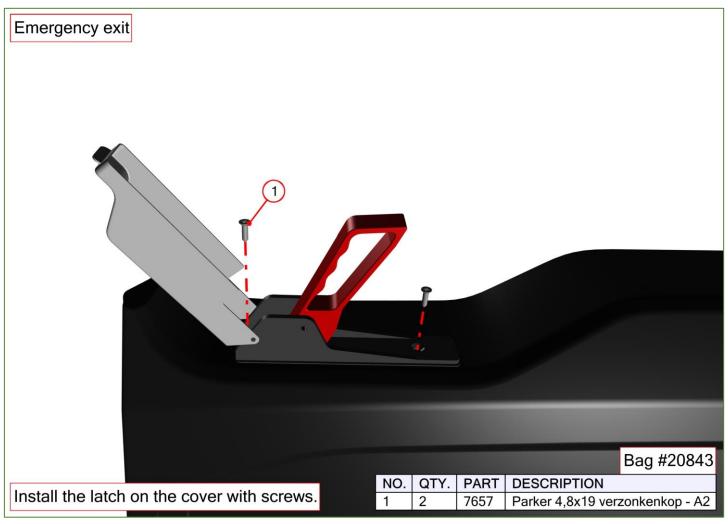
Use a Ø10mm drill to carve a slight extra bit of space in the opening for the tailgate lock. Drill where marked.

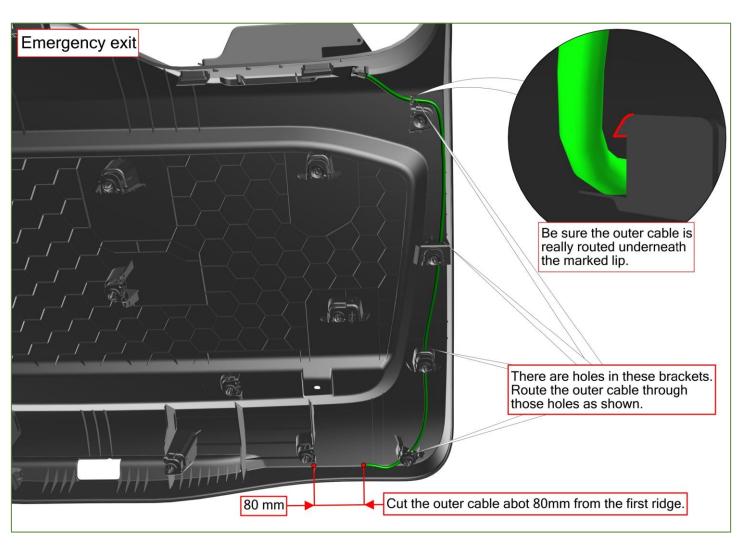


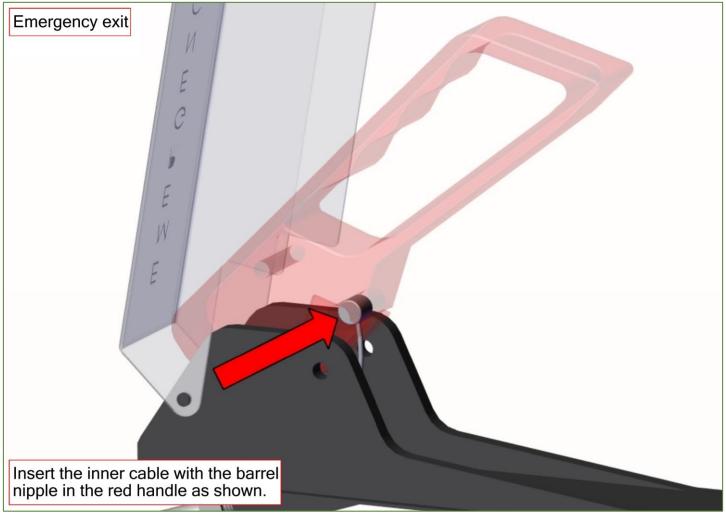


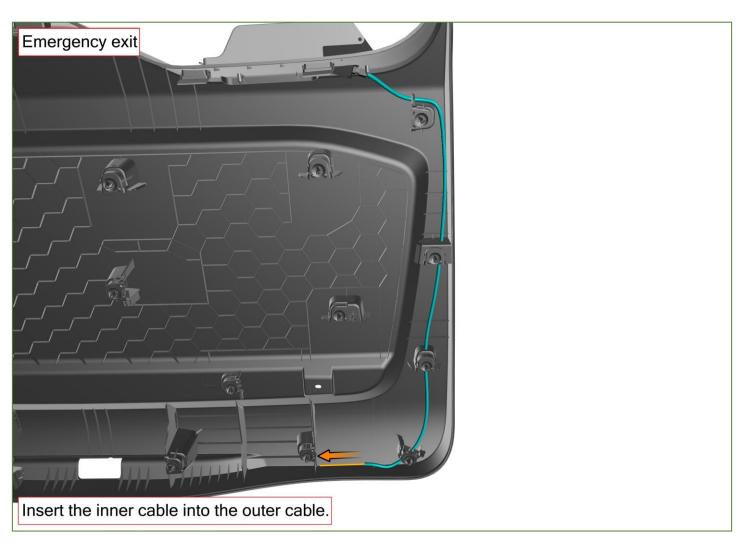


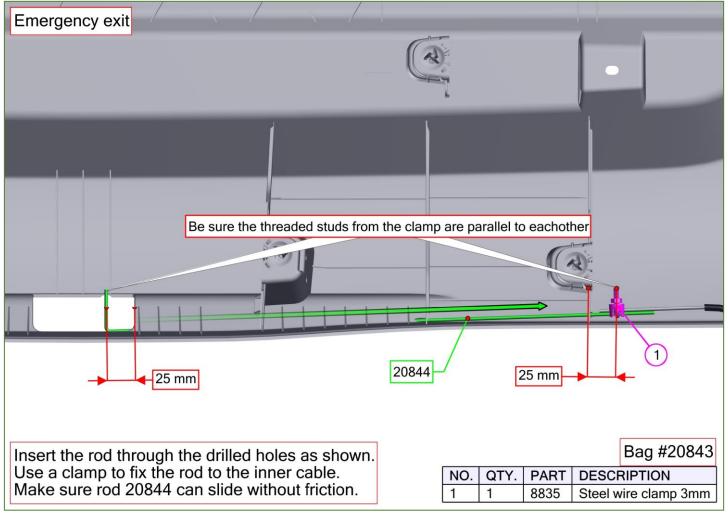


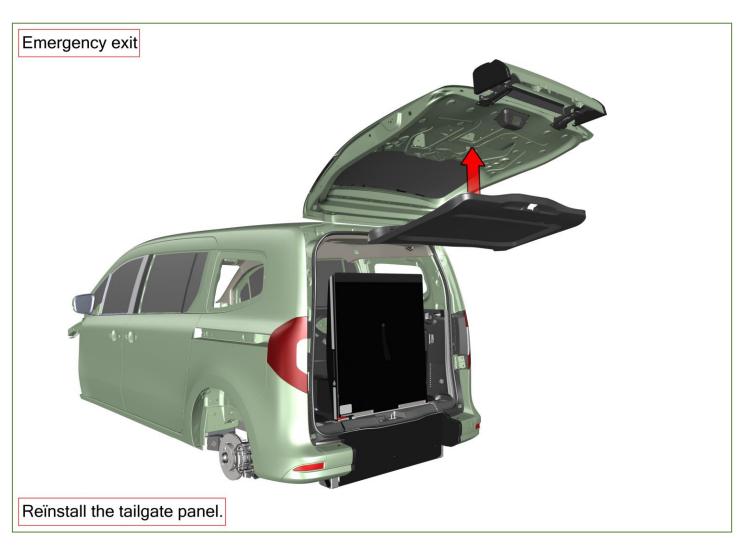




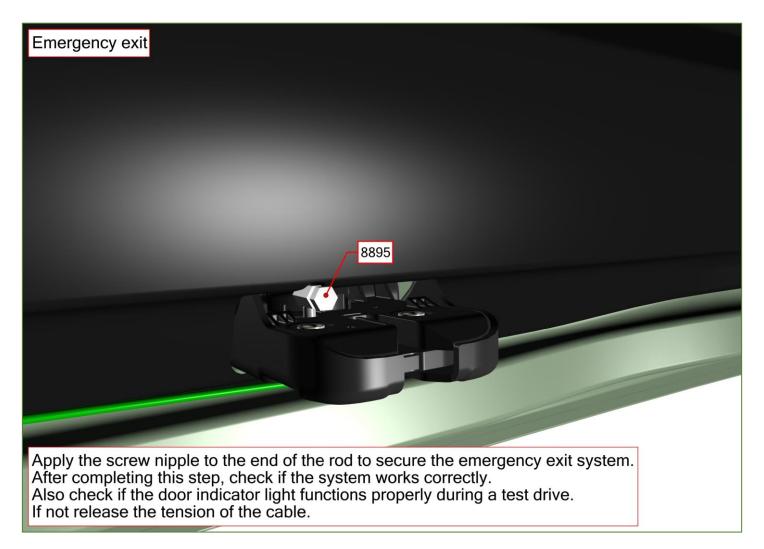


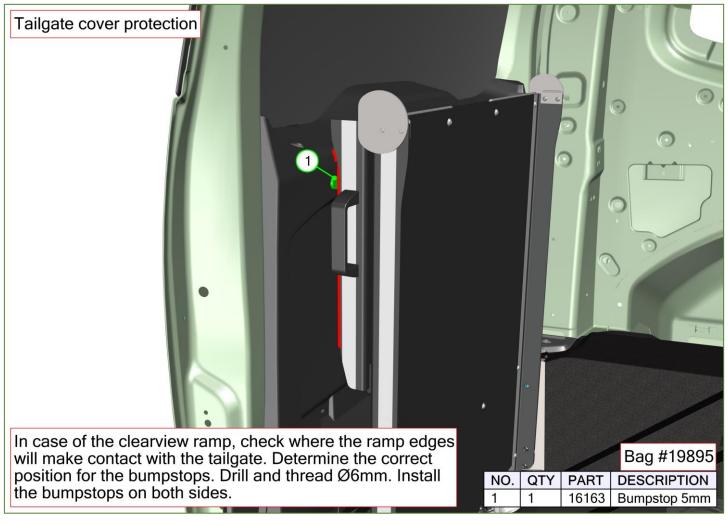


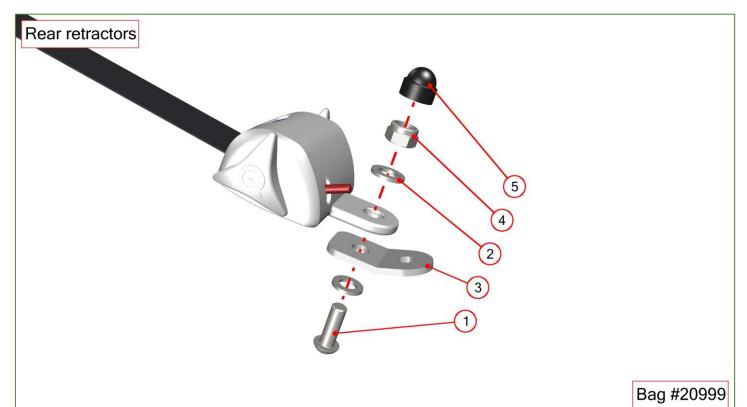






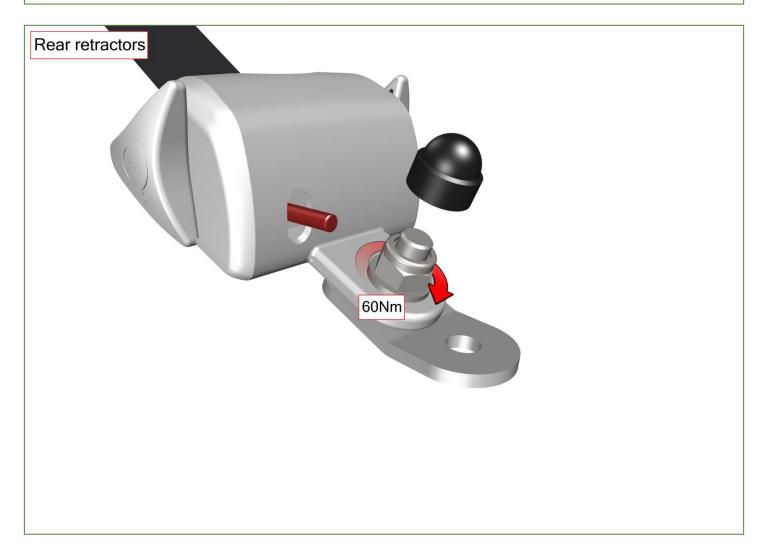


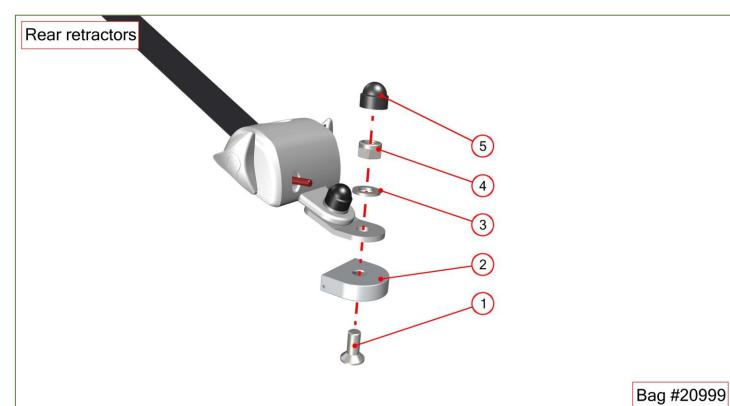




Install the Triplock mounting parts on the rear retractor. Left and right are installed the same.

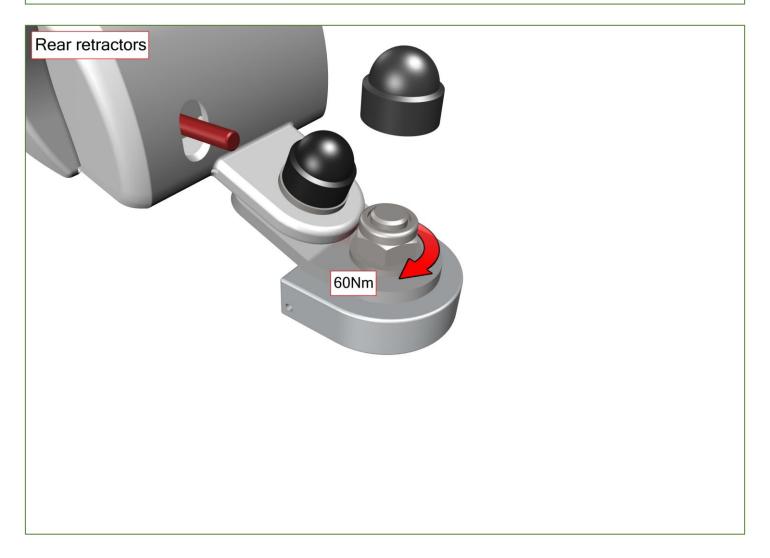
NO.	QTY	PART	DESCRIPTION			
1	1	21613	Socket button head screw M12x35 10.9			
2	2	294	Washer M12 8.8			
3	1	20997	Angled bracket			
4	1	18139	Torque nut M12 10.9			
5	1	21011	Bolt cap M12			

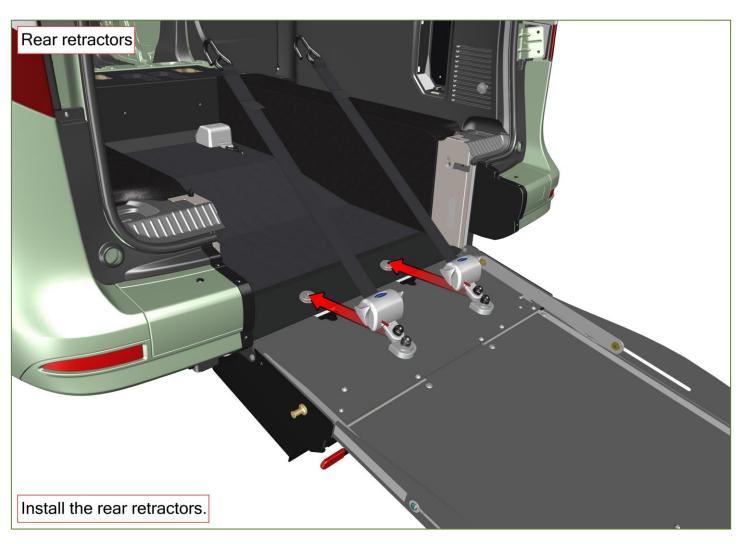


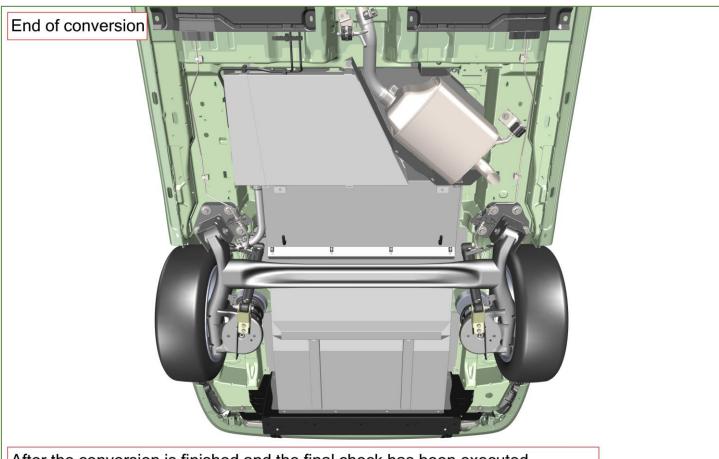


Install the Triplock mounting parts on the rear retractor. Left and right are installed the same.

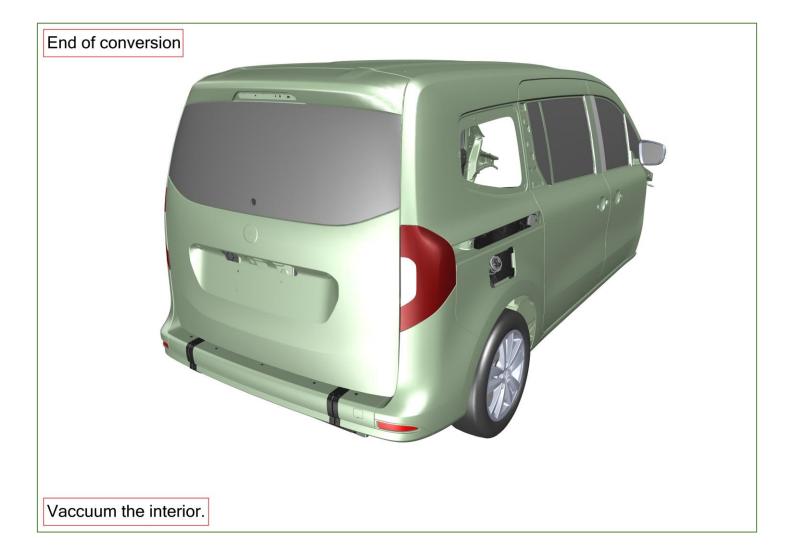
NO.	QTY	PART	DESCRIPTION
1	1	21006	Socket countersunk head screw M12x30 10.9
2	1	20996	Triplock floor part
3	1	294	Washer M12 8.8
4	1	18139	Torque nut M12 10.9
5	1	21011	Bolt cap M12







After the conversion is finished and the final check has been executed, Apply cavity protection coating to ALL bolts that are affected by the conversion. This includes: New bolts/OEM bolts/reused bolts.



## Tightening torques

	Zinc coa	ited steel	Stainless steel	
	8.8	10.9	70	80
M4	3 Nm	4 Nm	2,5 Nm	3,5 Nm
M5	6 Nm	8 Nm	5 Nm	7 Nm
M6	10 Nm	14 Nm	8 Nm	11 Nm
M8	26 Nm	37 Nm	21 Nm	28 Nm
M10	54 Nm	75 Nm	44 Nm	58 Nm
M12	85 Nm	120 Nm	71 Nm	88 Nm
M12x1,5	89 Nm	125 Nm		
M14x1,5	150 Nm	205 Nm		
M16x1,5	220 Nm	310 Nm		
ι	JNF			
		Grade 5		
7/16 CT	SK Triplock	60 Nm		
7/16	seat belt	35 Nm		
Blind	rivet nut			
	Steel	Aluminium	Stainless	
M5	5	4	4,5	
M6	9	6	7,5	
M8	22	18	20	
M10	48	28	41	

Always use these torques unless else is mentioned in the manual.

Tighten wheel bolts with the manufacturer's instructions. Bolts with special attention are:

- Suspension
- Seats
- Seat belts

## Tools and chemicals used by Tripod



Sealant gun



Click clamp pliers





Crimping tool, for electrical connections

Heat gun, for bending plastic fuel lines



Step drill, for drilling variable diameter holes



Brake bleeder



Cleaning solvent, type 1



Cleaning solvent, type 2



Contact spray glue, for the upholstery



## Sikaflex 221 sealant, for sealing seams



Zink spray primer, for uncoated metal.

First layer



1K epoxy primer Second layer



Satin black spray paint Third layer





Tectyl Terotex HV450, used in all hollow parts of the body, with the appropriate spray gun



Tectyl Terotex 2000, used for protection of the underside of the chassis and lowered floor, with the appropriate spray gun



Tectyl ML, for parts where you can't use Tectyl Terotex HV450



Tectyl Bodysafe, for parts where you can't use Tectyl Terotex 2000



## WHEELCHAIR ACCESSIBLE VEHICLES

If you want to receive product information (safety/data sheets) of the products mentioned in this chapter, please contact <a href="mailto:support@tripodmobility.com">support@tripodmobility.com</a>

Disclaimer; descriptions are based on the information available during publication and are valid until further notice. We cannot guarantee the correctness and completeness of the information given and therefore do not accept liability.

