

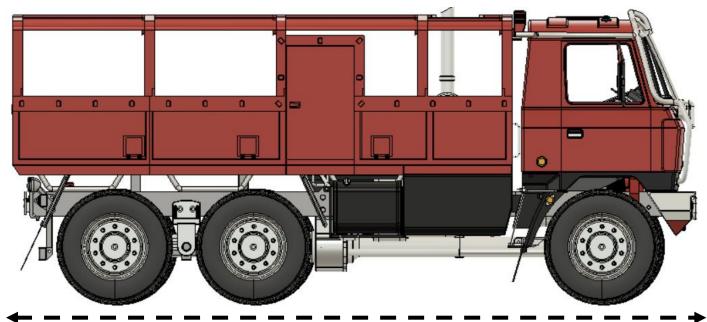
## Instructions "Tatra 815 DAKAR 6×6 1988"



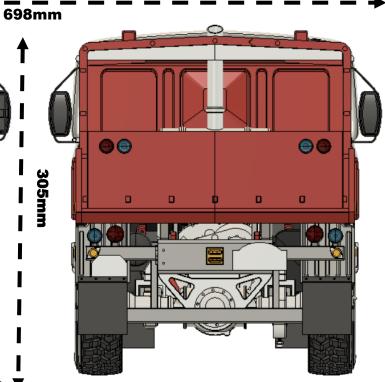
Miroslav Liesner

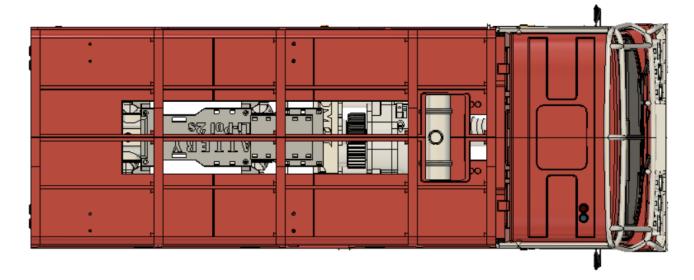
MLmodel

www.mlmodel.webnode.cz









#### Thank you for purchasing the STL model files.

I tried to prepare the parts as carefully as possible, with regard to simplicity and possible repairability.

#### Some parts may not exactly match the pictures in this manual.

These are later modified or improved parts.

#### Please watch for updates:

http://www.mlmodel.webnode.cz

#### For construction you will need:

3D printer

the text refers to sellers of quality and perfectly built, tuned 3D printers with warranty + lots of benefits.

#### **Definitely worth a look**

About 3 kg of high-quality PLA

Transparent PLA - parts are marked "Clear"

Flex filament - parts are marked "Flex"

Medium cyanoacrylate adhesive + activator

Durofol 0.2 mm - https://www.peckamodel.cz/6bi3020-durofol-0-2mm-v-rozmeru-0-5x1m-140g-bm

#### 2x tension spring 5x20mm

https://www.aliexpress.com/item/1005003895142563.html?spm=a2g0o.productlist.0.0.2e687b77r2ZPb5&alg o pvid=b29b7a7f-0261-4252-b010-

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34&pdp ext f=%7B%22sku id%22%3A%2212000027408551385%22%7D&pdp npi=2%40dis%21EUR%213. 36%213.36%21%21%21%21%21%402103255b16706741208242795e751b%2112000027408551385%21sea&c urPageLogUid=GnDrdAkuN4LX&ad\_pvid=202212100408408488234977636140002786156\_8&ad\_pvid=20221 2100408408488234977636140002786156\_8

M2, M3 screws (hex cylinder, half-round head)

M3 nuts

M3 worms

3x20mm smooth round rod/stainless steel (wire), preferably a shaft with a diameter of 3mm 2x 3x23mm smooth round rod/stainless steel (wire), preferably a shaft with a diameter of 3mm

2 mm brass wire

M3 threaded rod: 2x 250mm + for making tie rods

Hats-

https://www.rcprofi.cz/traxxas-kulovy-cep-dlouhy-6

6x preferably black balloons

Carbon tube 8x6x195mm

Micro servo 1pc

Standard servo - at least 30 kg

#### Bearings:

#### 28ks - 10X15X4 MM (6700ZZ)

-https://www.loziska-rc.com/10x15x4-kulickove-lozisko-metal-6700zz

27ks - 15X21X4 MM (6702ZZ)

-https://www.loziska-rc.com/15x21x4-zz-6702zz-kulickove-lozisko-1ks?search=15x21x4

4ks - 8X12X3,5 MM (MR128ZZ)

-https://www.loziska-rc.com/8x12x3-5-zz-mr128zz-kulickove-lozisko?search=8x12x3%2C5

RC dampers 90mm 2ks-

https://www.aliexpress.com/item/4001116500005.html?spm=a2g0o.productlist.0.0.6ada6e3eVS0XJ0&ad\_p vid=20220909213451103989433268880001923672\_2&s=p

AC motor C3548 900kv-

https://www.aliexpress.com/item/4000386445386.html?spm=a2g0o.order\_list.order\_list\_main.36.3c531802 2GnONd

AC regulator 40-60A - Car ESC BH Power 60A ☆ | RC BigHobby.cz

LiPol 2s, transmitter, receiver, PTFE vaseline, paints/varnishes, sandpaper

LED:

10x LED 5mm, warm white, 1120mcd, 140°, cylindrical

https://www.gme.cz/v/1492053/optosupply-osm5dk57e1a-kl-led-5mm-tepla-bila

4x LED 3mm, warm white, 8500mcd, 30° 304WC4B-W6-1PD

LED 3mm, teplá bílá, 8500mcd, 30° 304WC4B-W6-1PD

2x LED 5mm, yelow, 1000mcd, 45° 503UYC2E-Y2-2BE

https://www.gme.cz/v/1495999/lucky-light-503uyc2e-y2-2be-led-5mm-zluta

6x LED 3mm, yelow, 2900mcd, 30° 304UYC4B-Y2-4GD

https://www.gme.cz/v/1496006/lucky-light-304uyc4b-y2-4gd-led-3mm-zluta

4x LED 3mm, red, 2200mcd, 30° 304VC4B-V1-4ID

LED 3mm, červená, 2200mcd, 30° 304VC4B-V1-4ID

2xLED 5mm, red, 503VC2Z-V1-4KF

https://www.gme.cz/v/1495989/lucky-light-503vc2z-v1-4kf-led-5mm-cervena

#### **Light module:**

https://www.bighobby.cz/12-led-control-car-system/?gclid=Cj0KCQiAqOucBhDrARIsAPCQL1bv-gc5WmtuG0QIMUrx0IIVyjvvh\_3hybVLsfp2DzNEkz0Ato82B5kaApxXEALw\_wcB

#### Recommended print settings:

Nozzle: 0.4 mm

Extrusion width: 0.4 mm - 0.5 mm

Layer height: 0.15 mm - 0.25 mm

Fill: 5% - 50%

Perimeters: 3

Parts that are to be printed differently have this indicated in the title or in the instructions.

Print speed: 70 mm/s, outside perimeters 30 mm/s

Temperatures: 220°C HE, 50°C HB

Parts printed with support have "support" in the title.

This is my recommended printer setting,

however, you can also use your proven ones, and I recommend that. No one knows your printer better than YOU.

Before gluing the parts, test their seating.

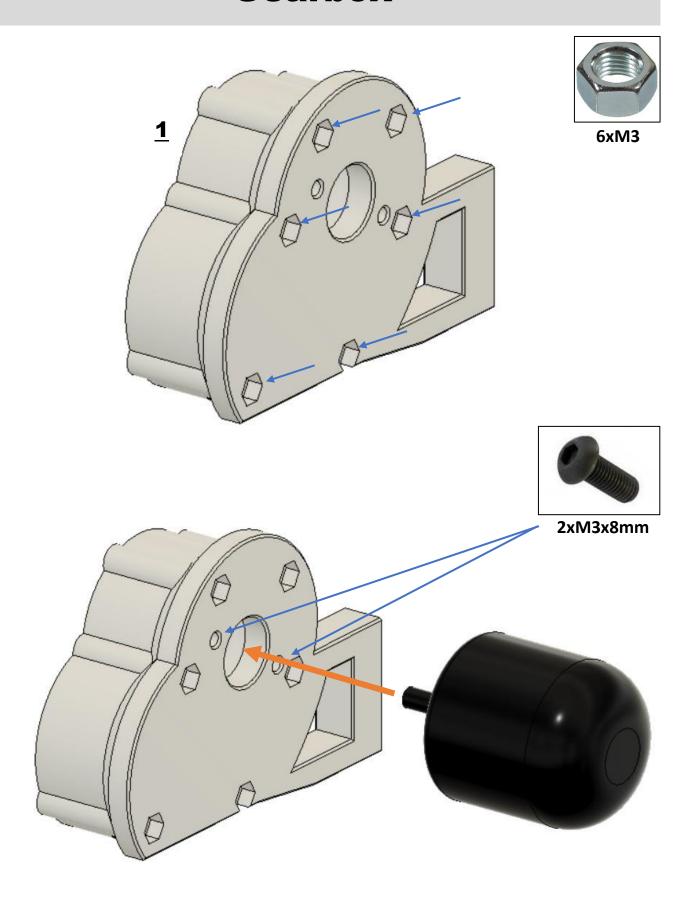
Use a file to compare the contact surfaces,

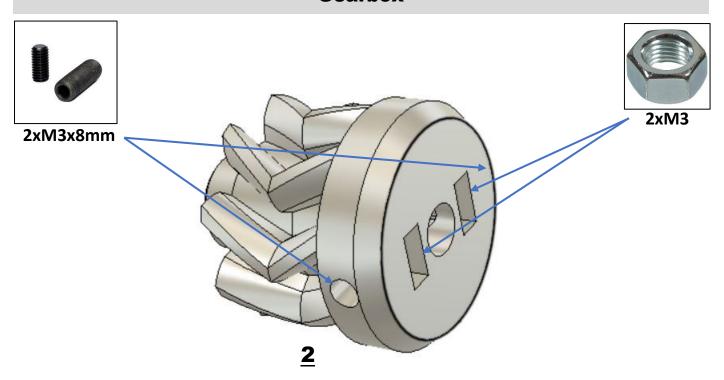
sharp knife or sandpaper.

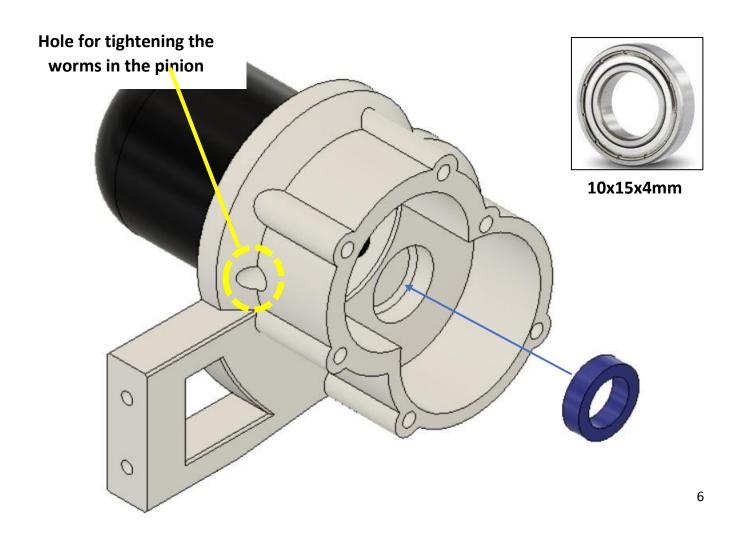
The most common problem is "elephant leg" - the extension of the print

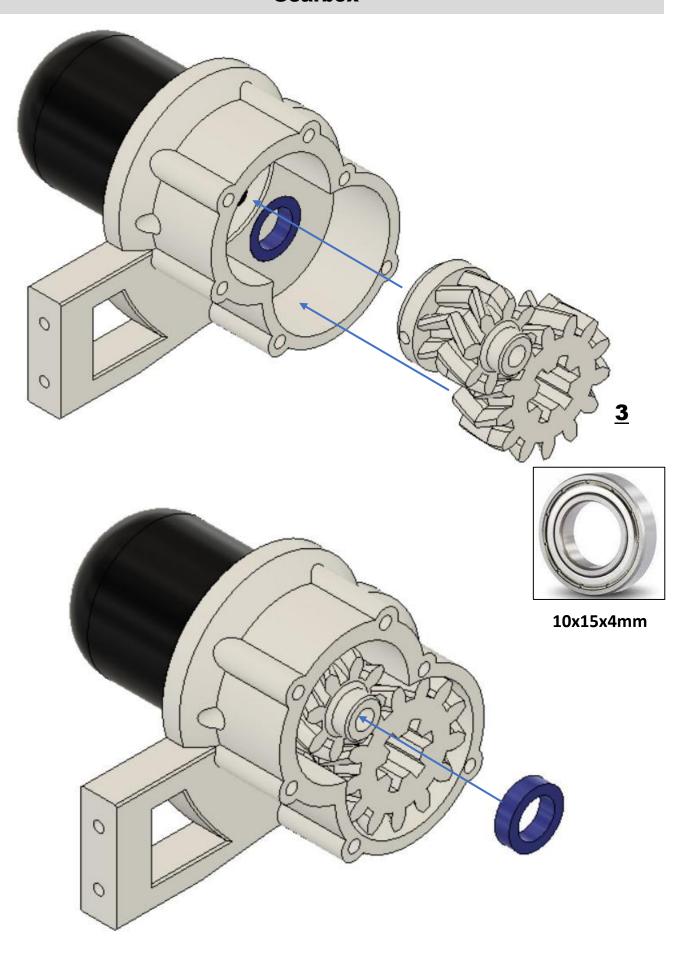
on the mat. This needs to be sharpened.

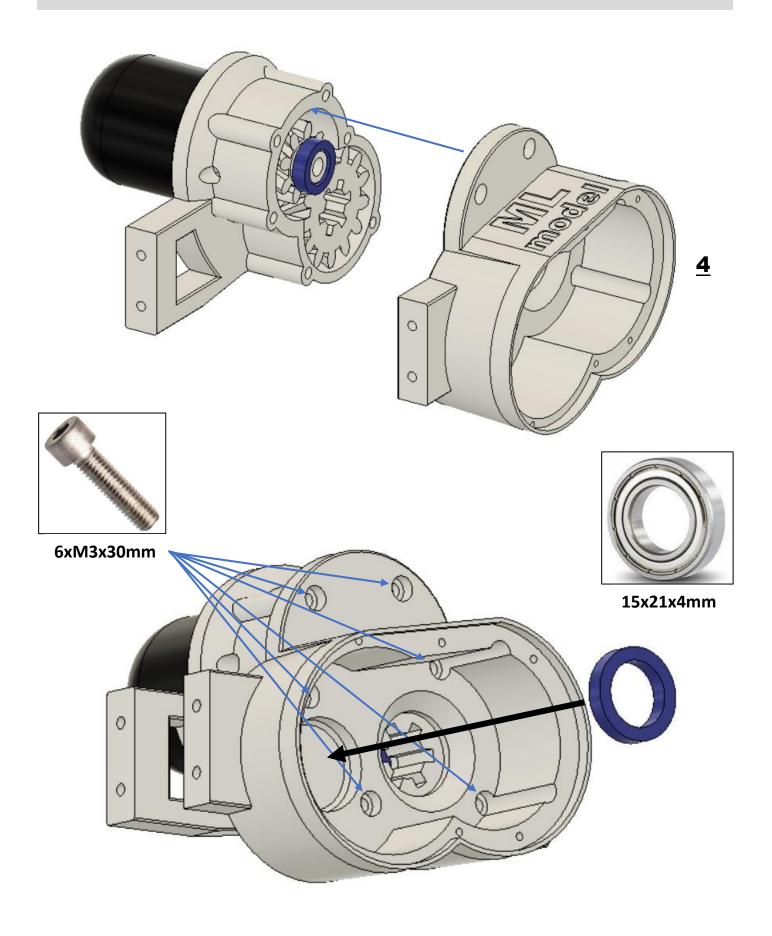
Also, carefully plan the placement of the seams.

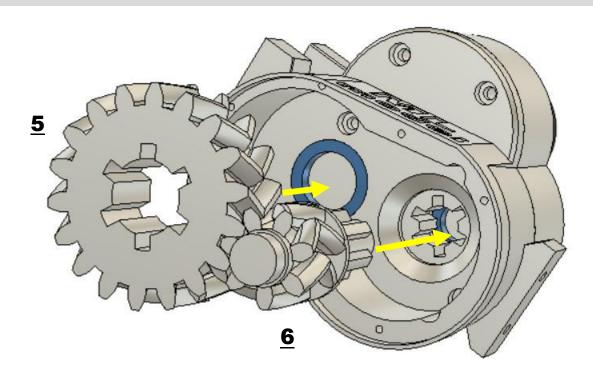


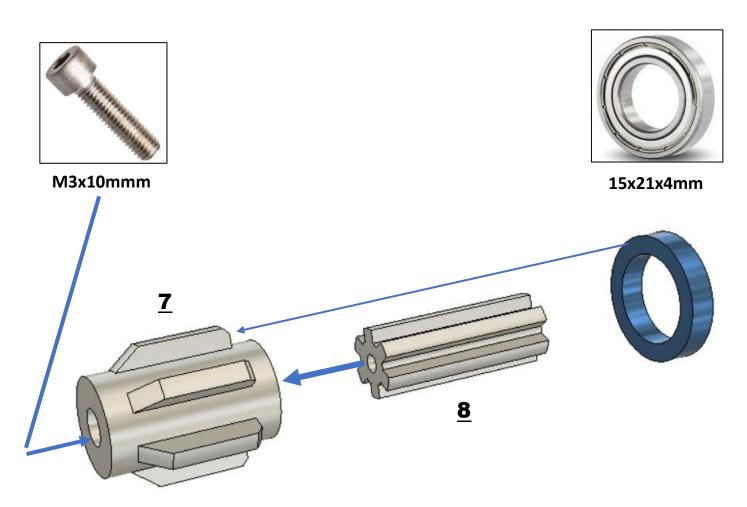


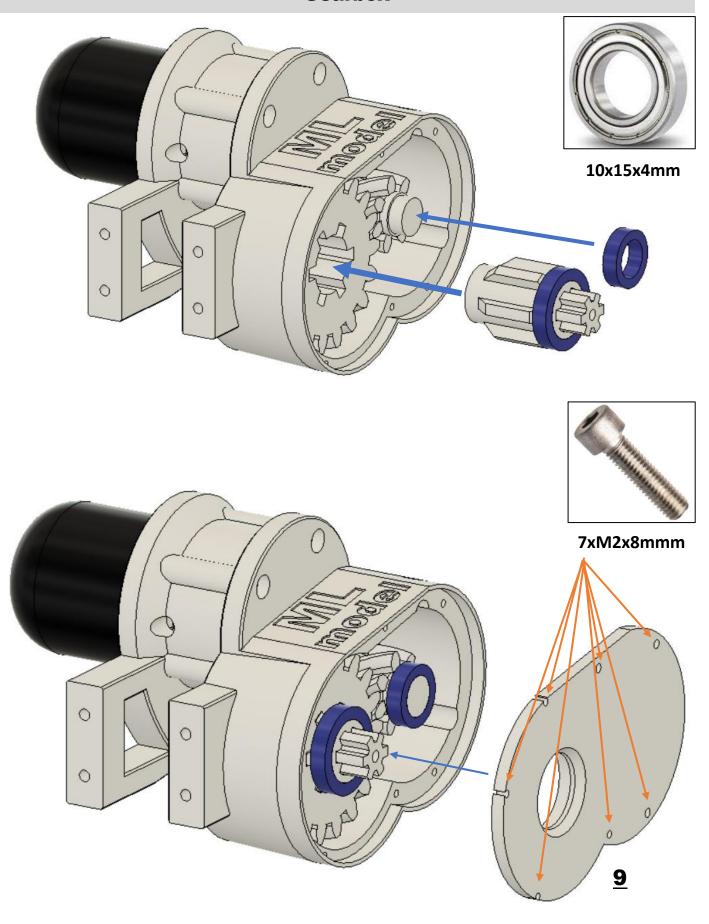


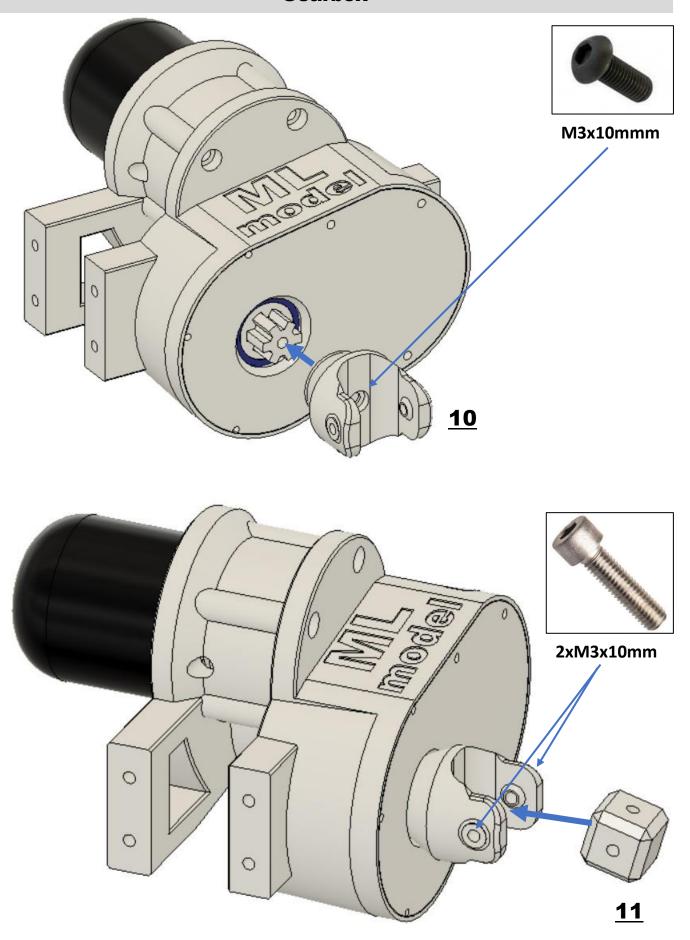


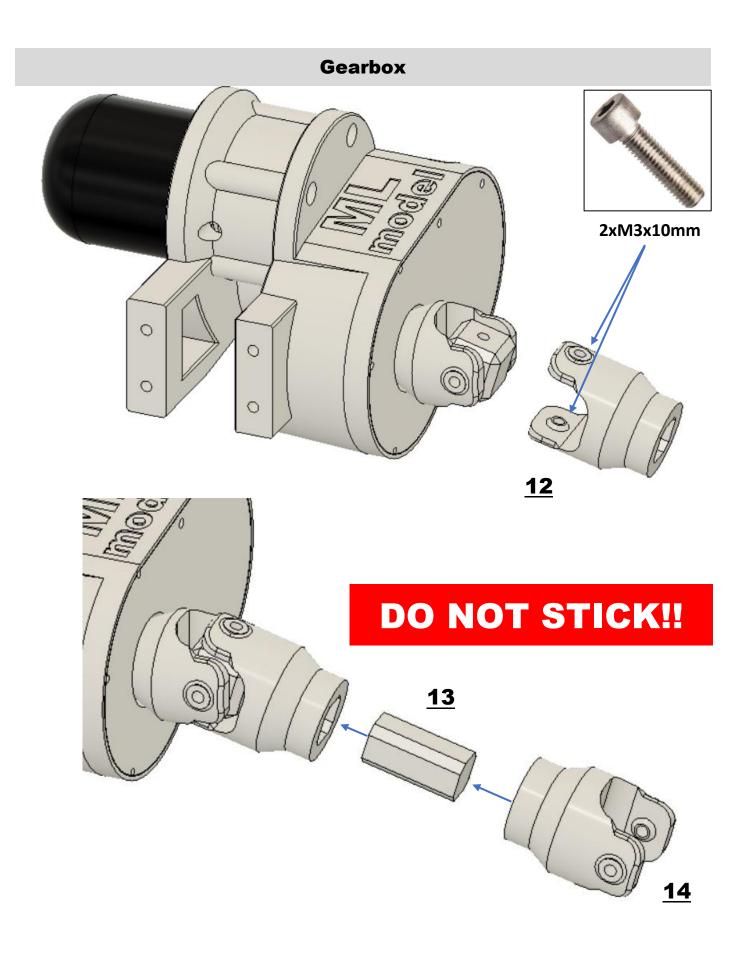


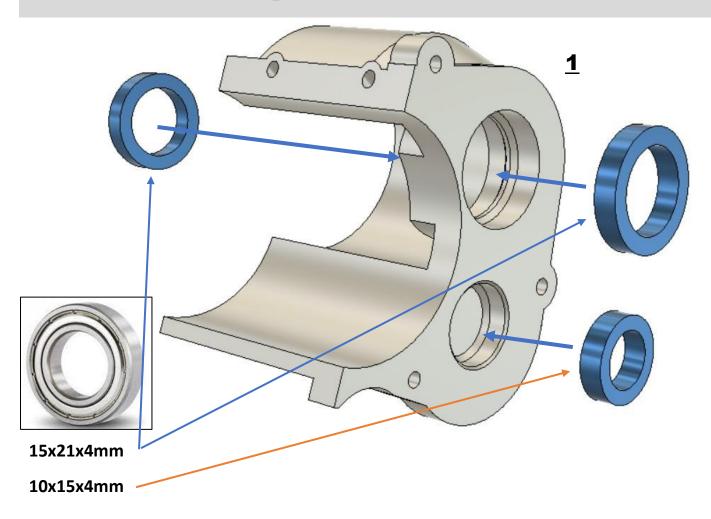




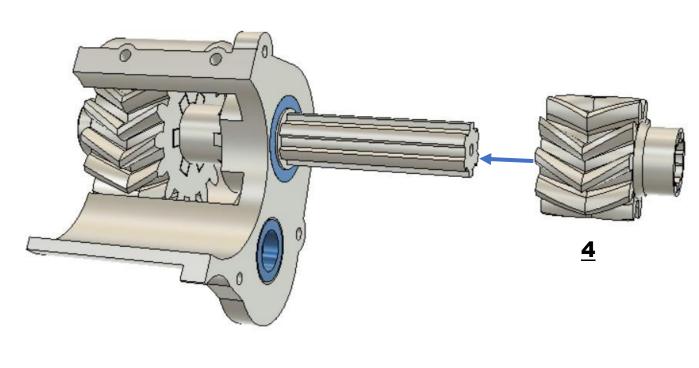


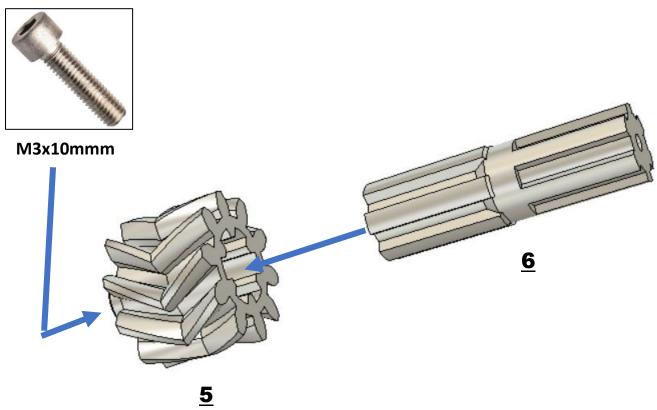


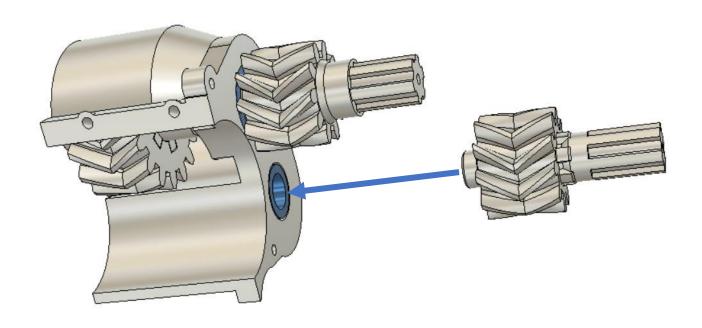


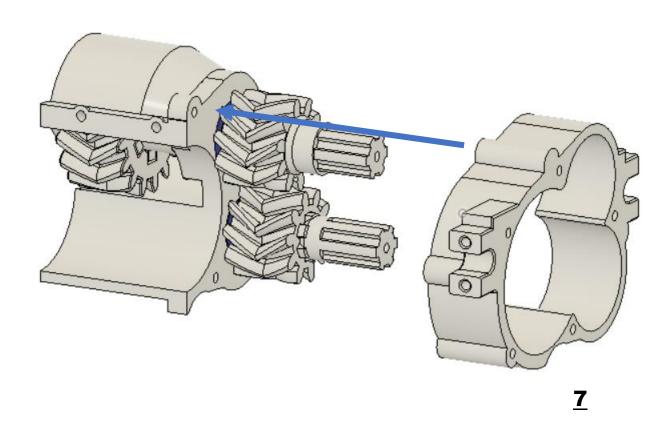


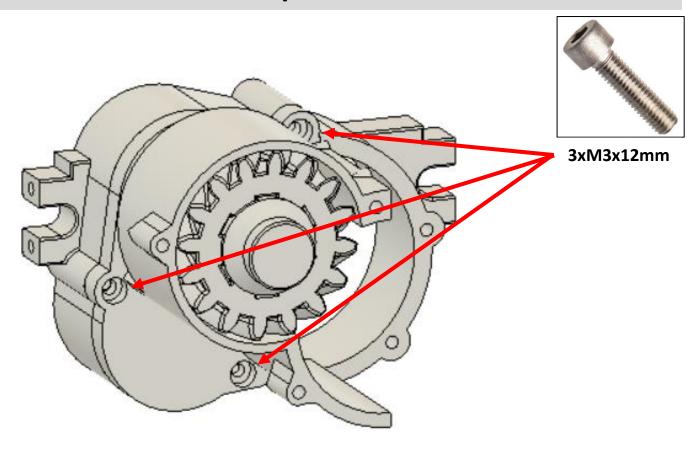


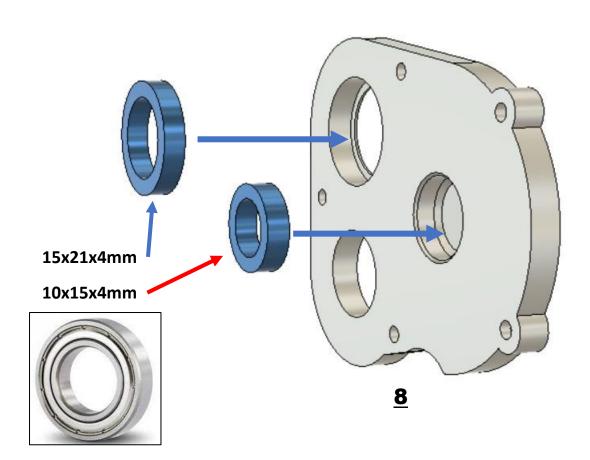


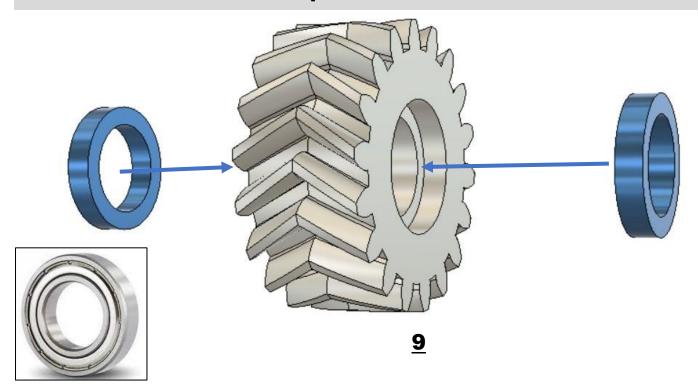


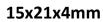


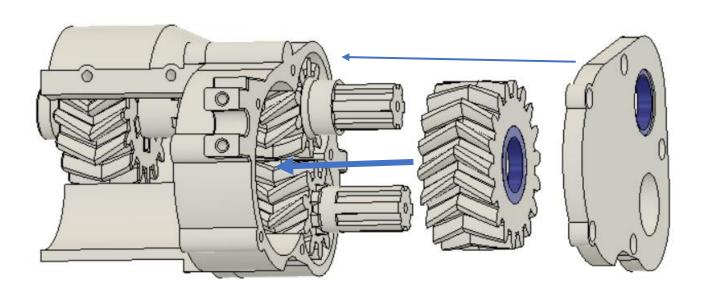


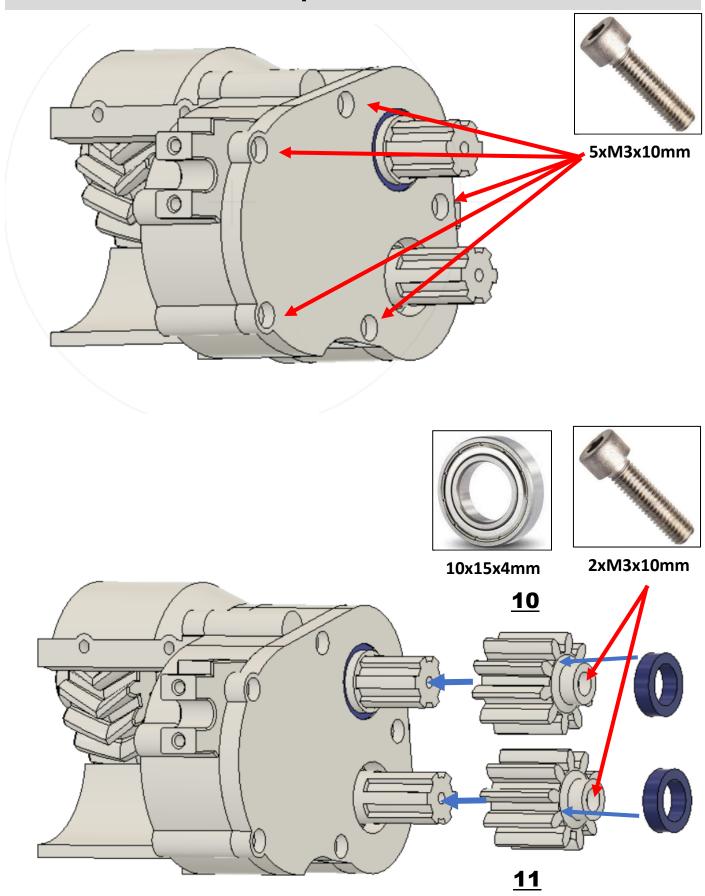


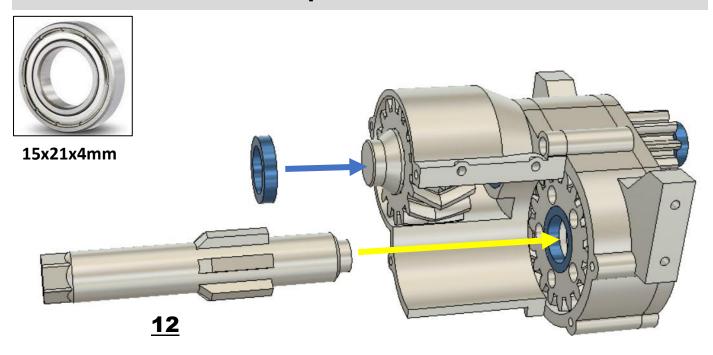






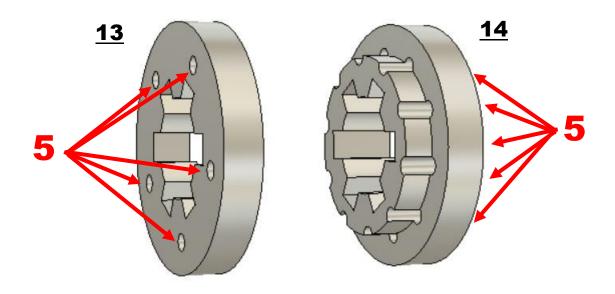


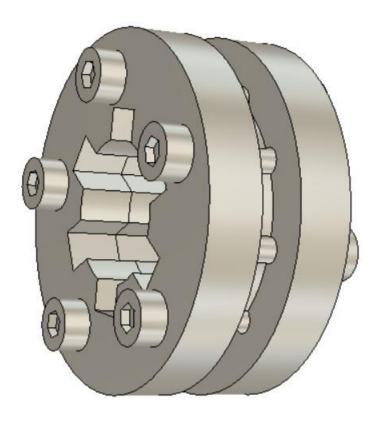


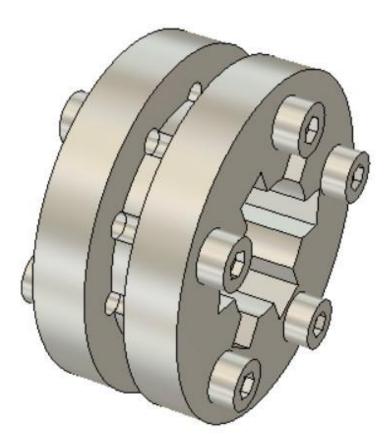


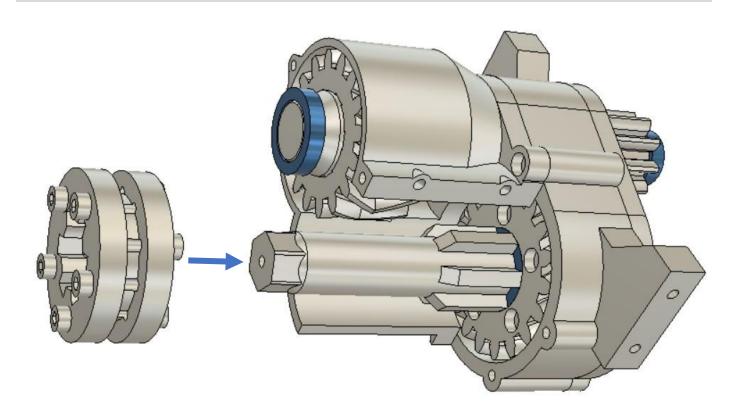


10xM3x16mm



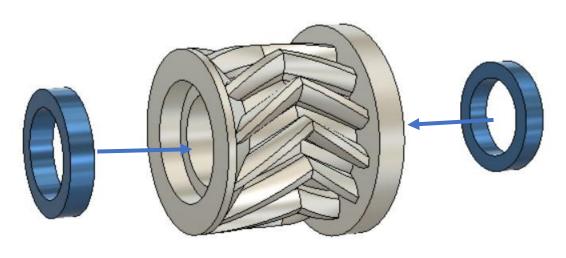




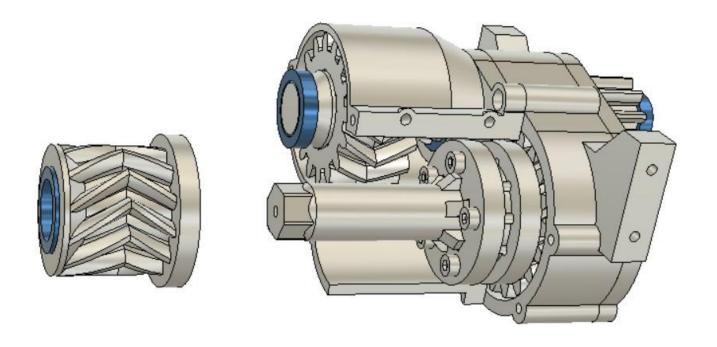


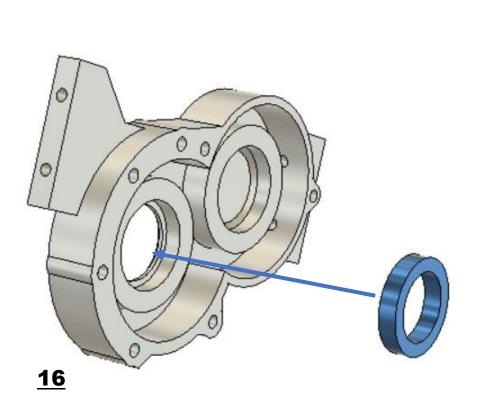


15x21x4mm



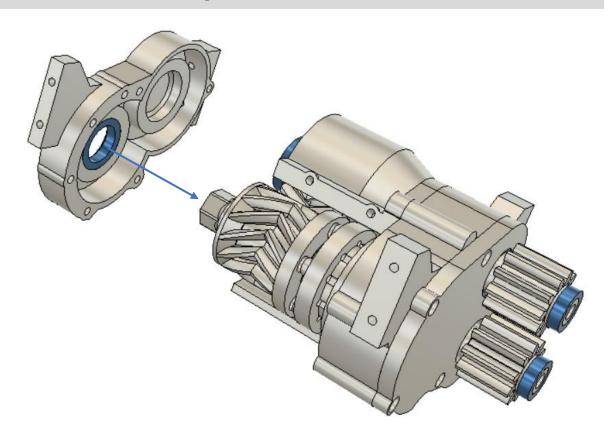
<u>15</u>

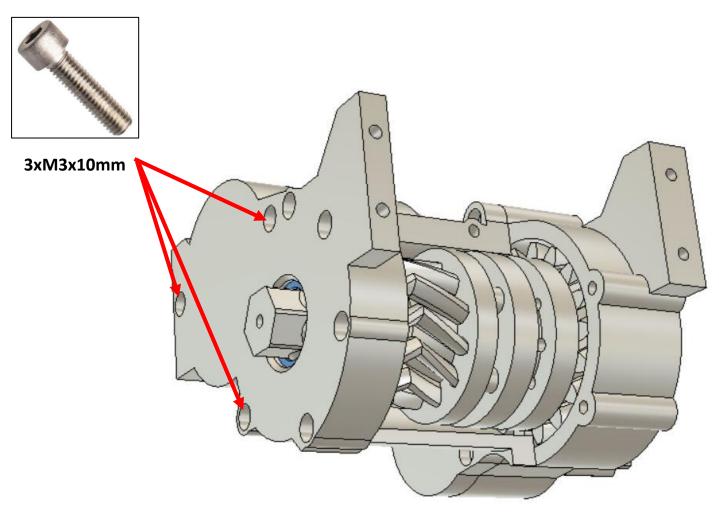


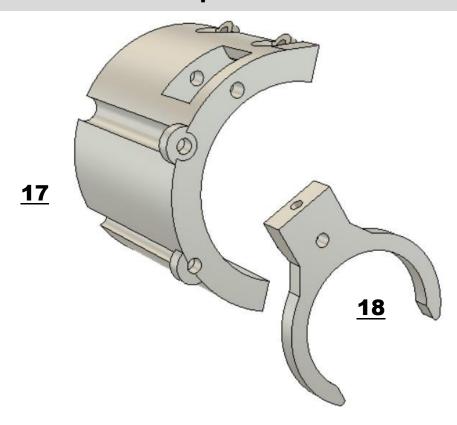




15x21x4mm

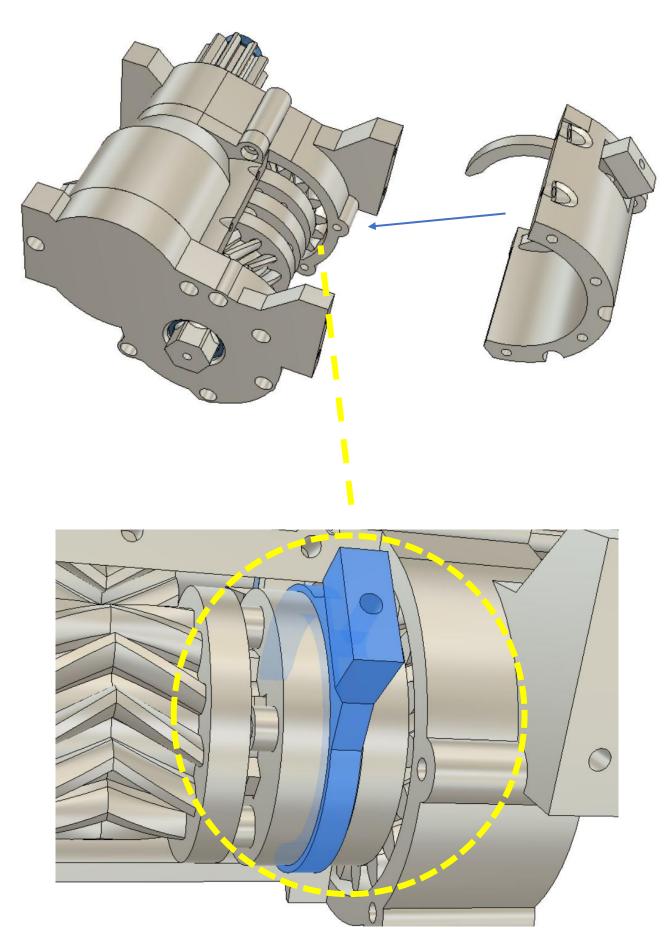


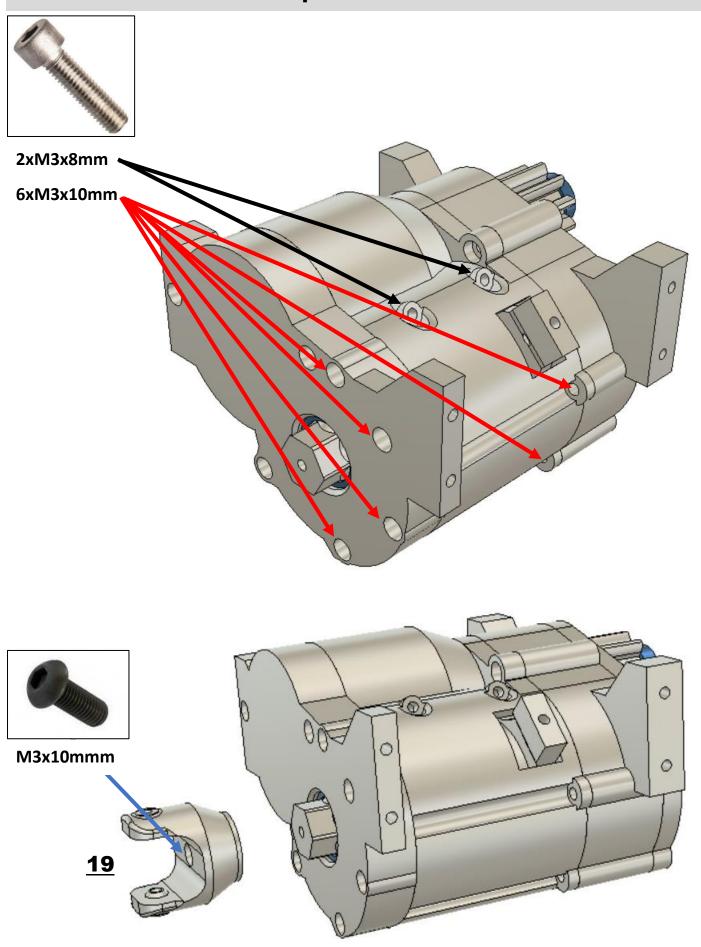


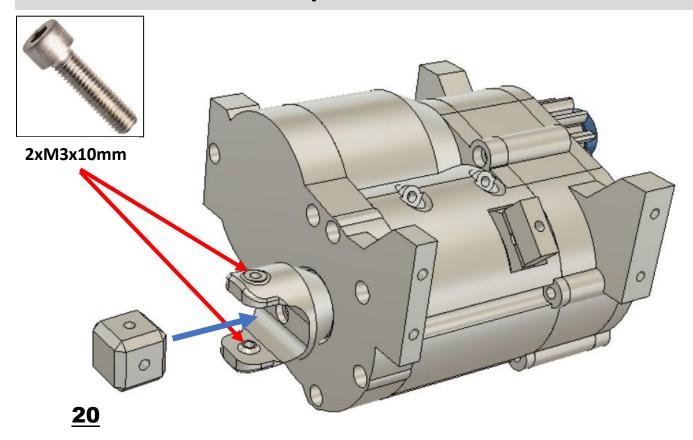


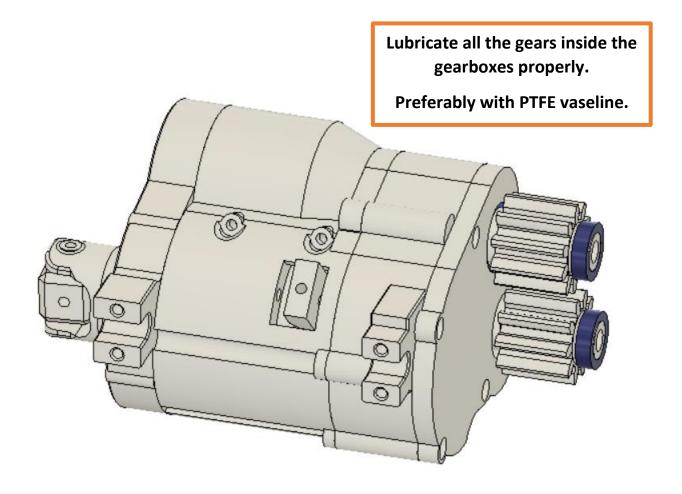
3x20mm - polished rod or steel wire and or shaft.

Part 18 must move freely along the rod. If not, clamp the rod in a drill and "polish" the hole in part 18. The rod must have some clearance in part 18.



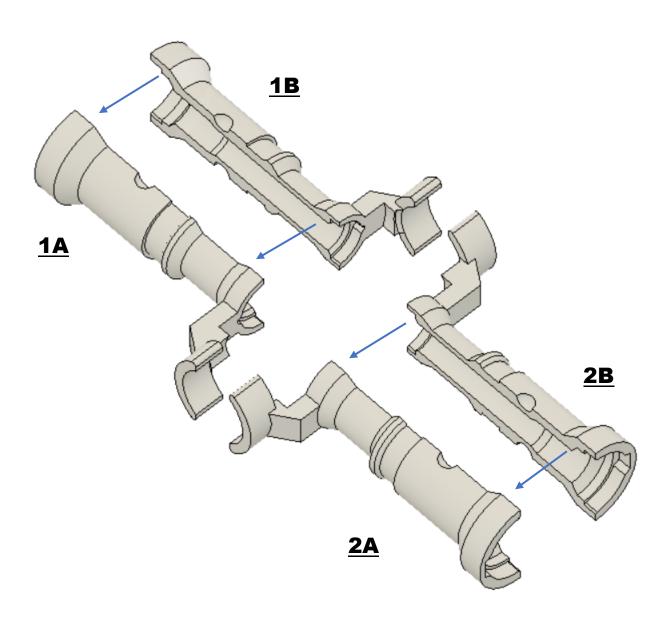


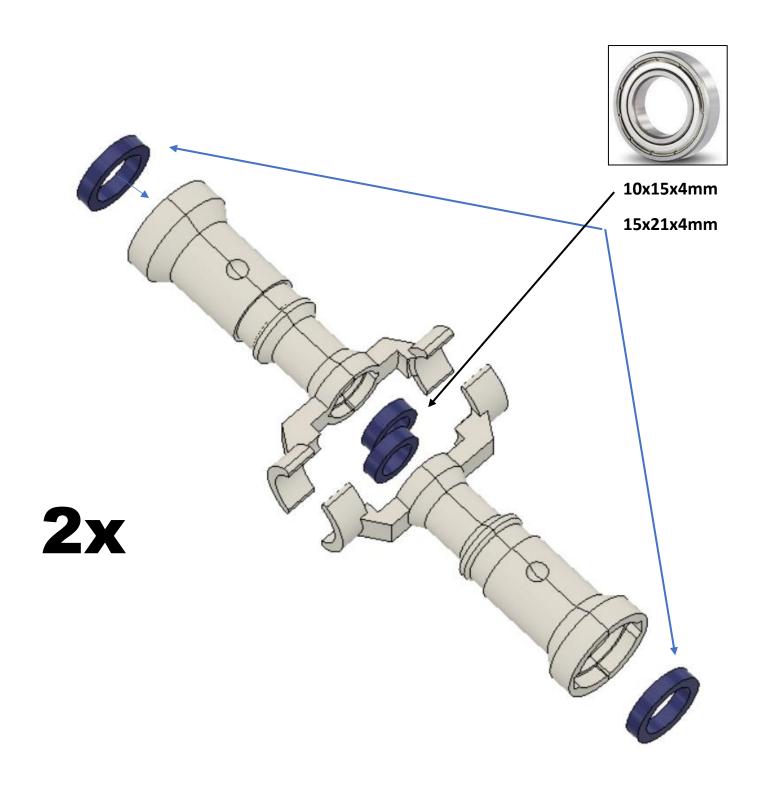


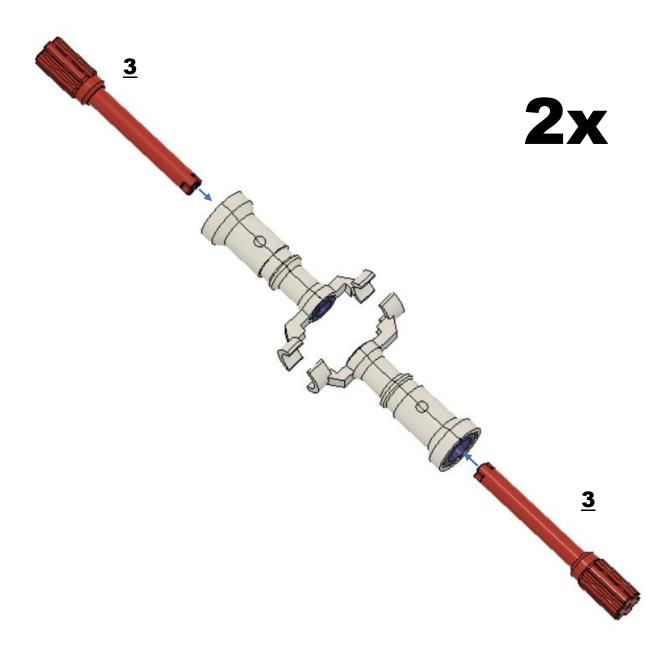


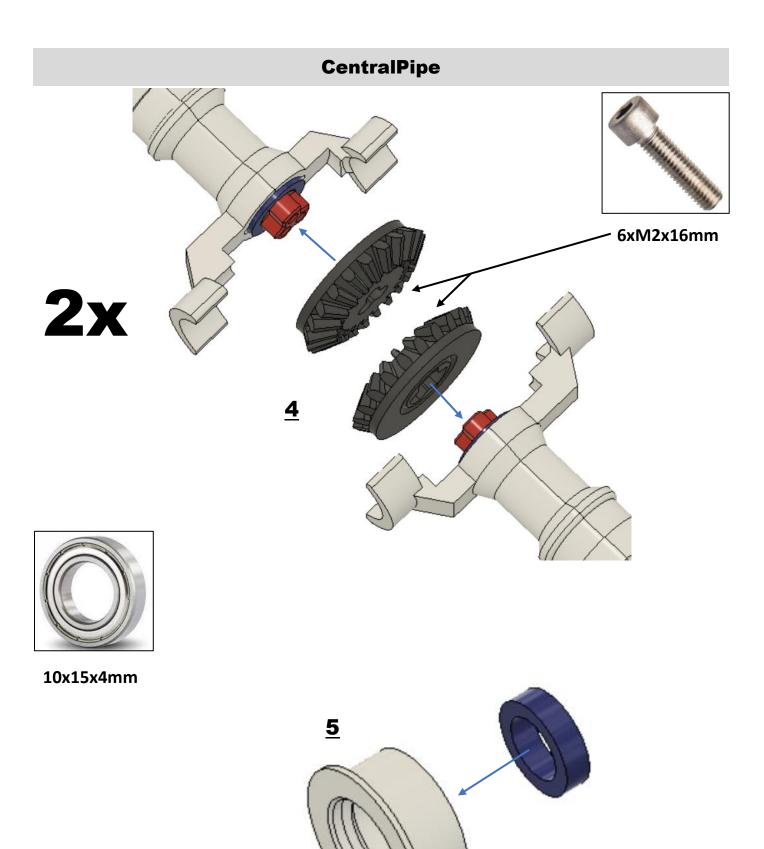


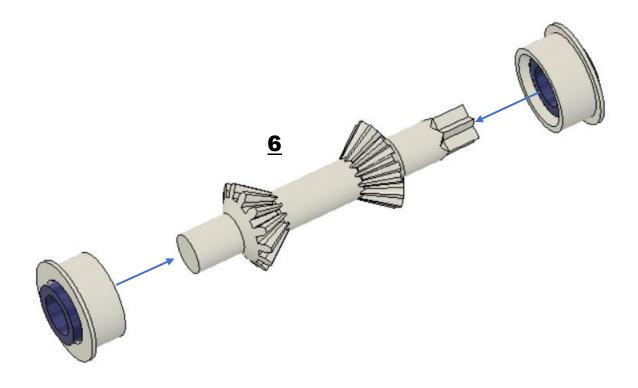
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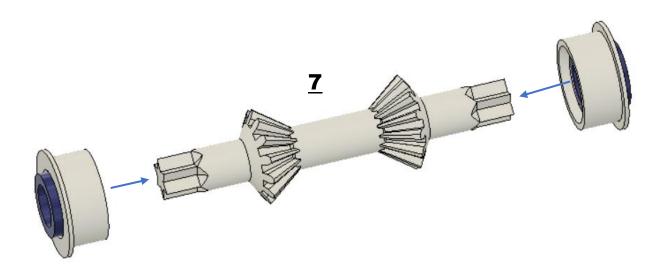


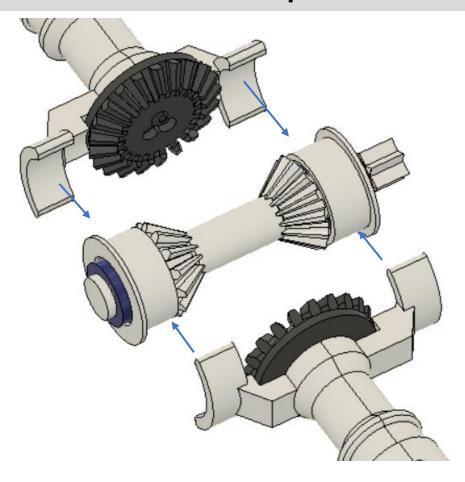


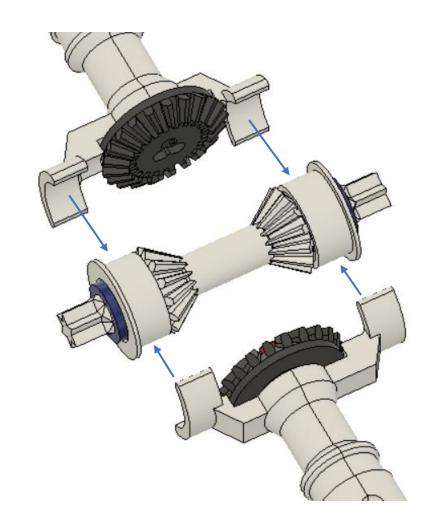


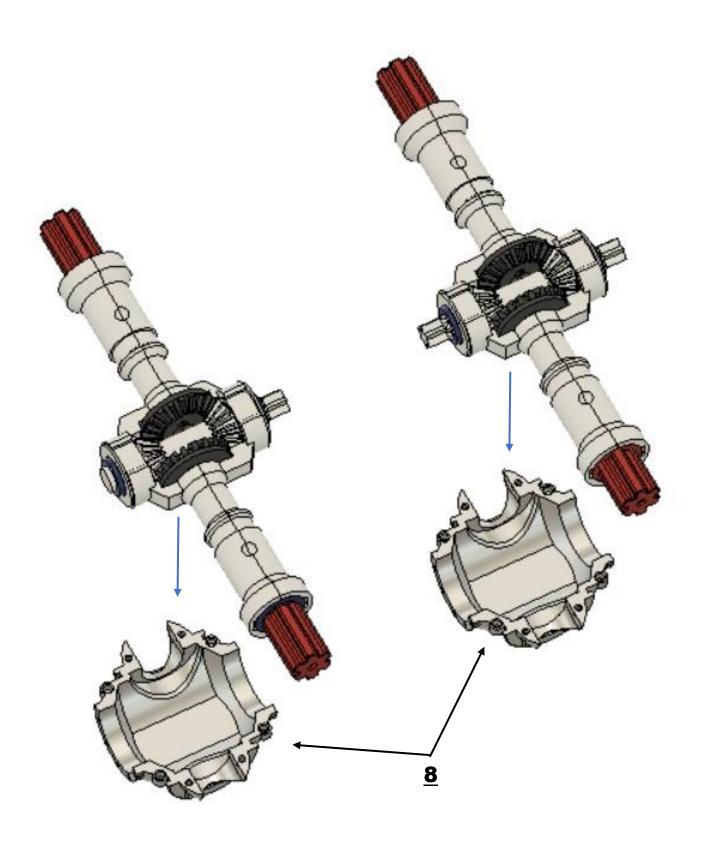


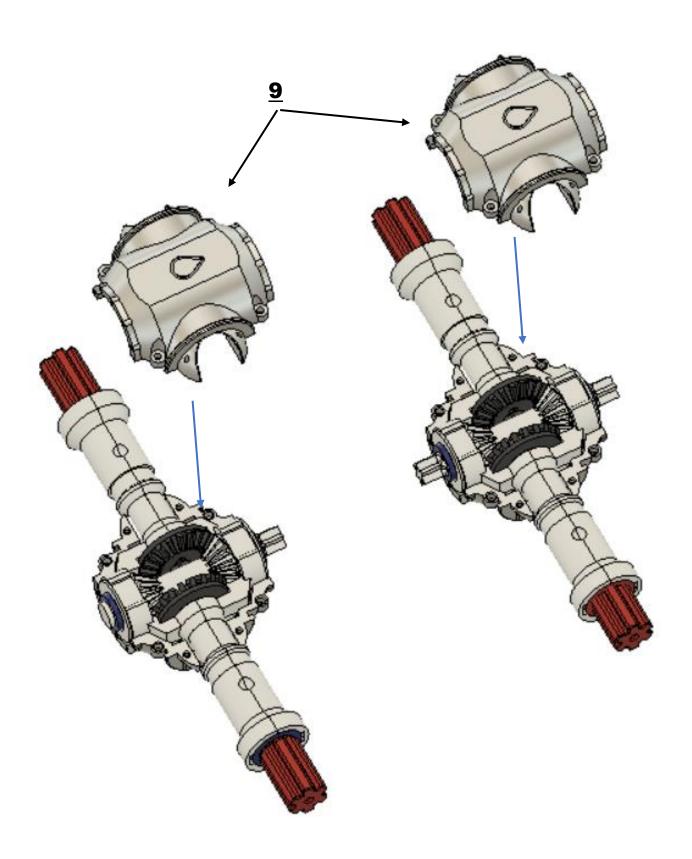


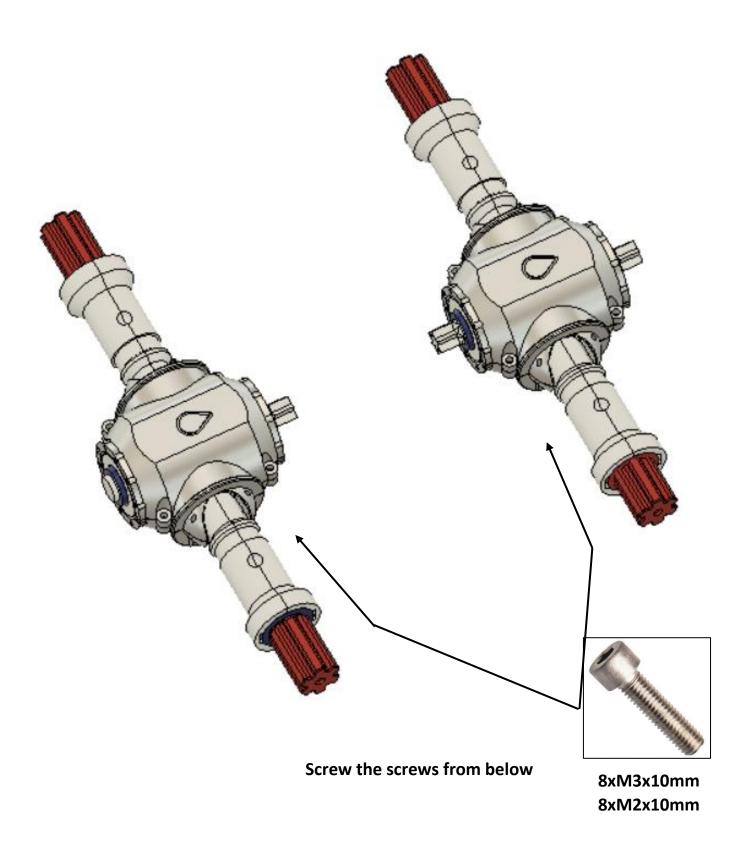


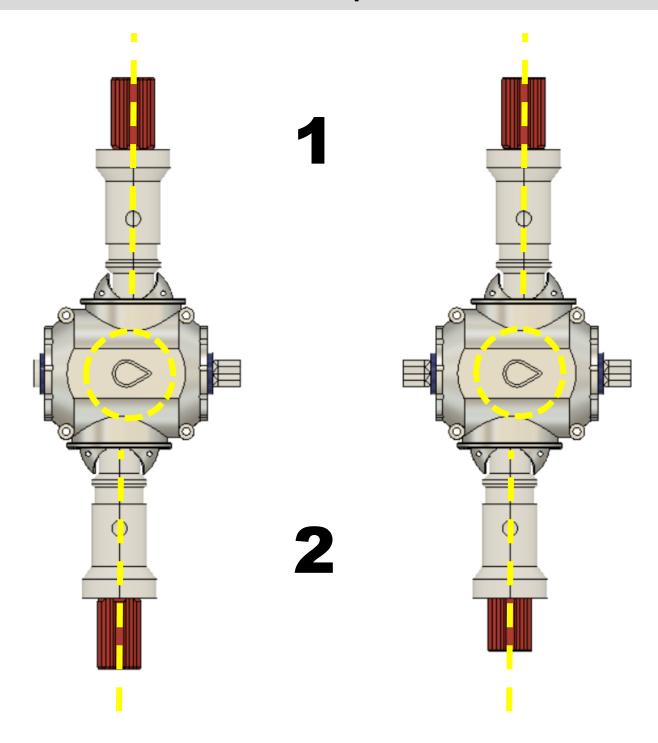


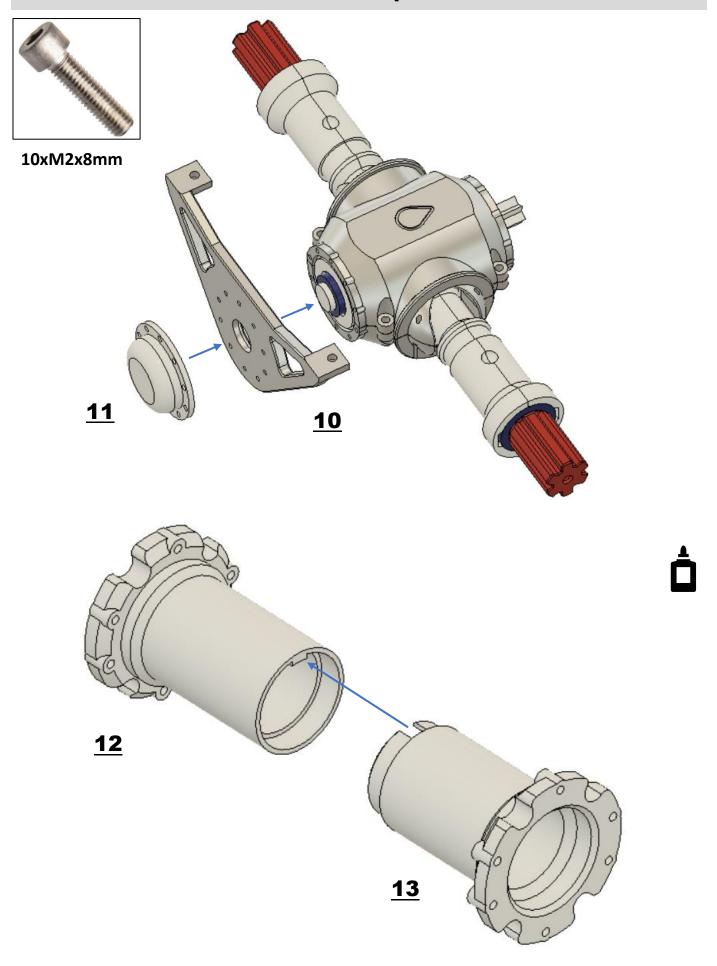


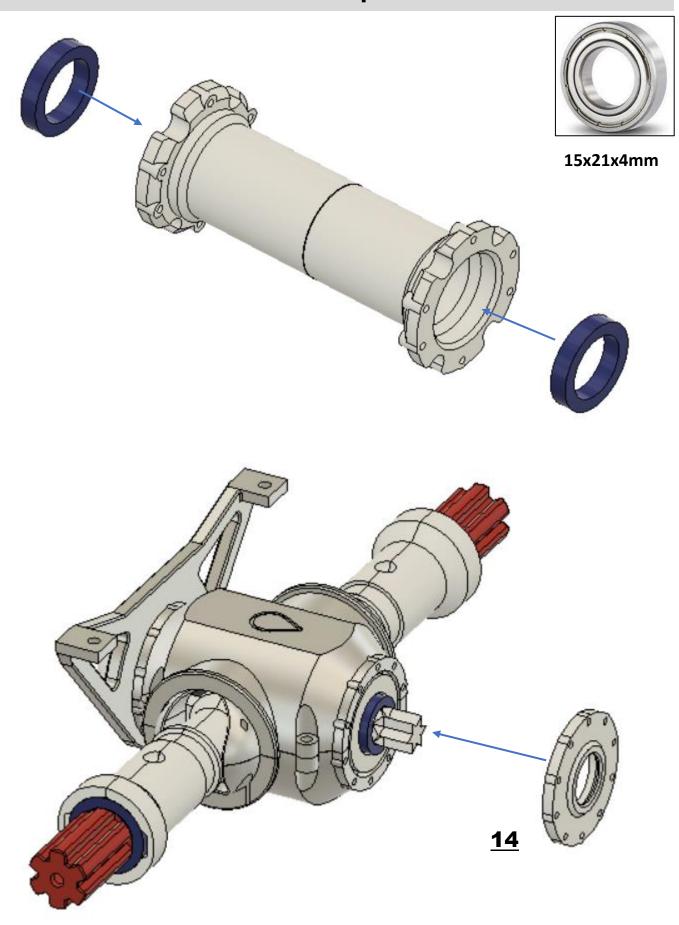


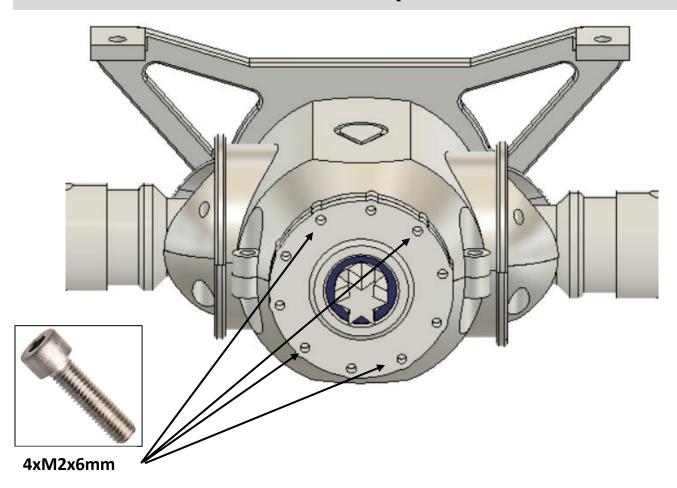


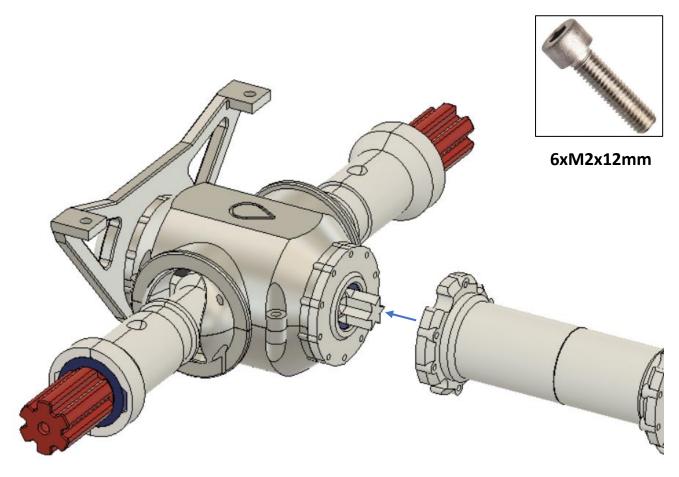


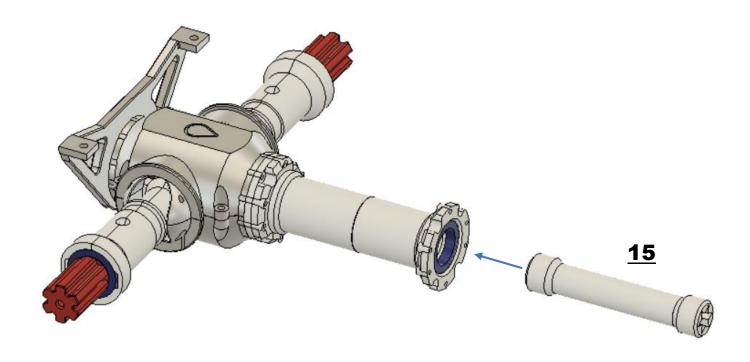


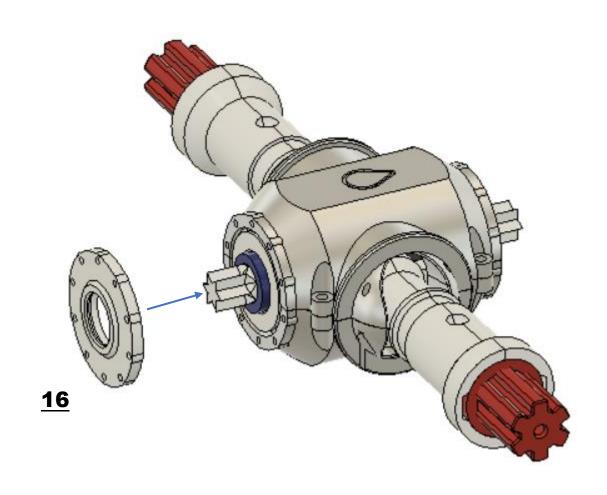


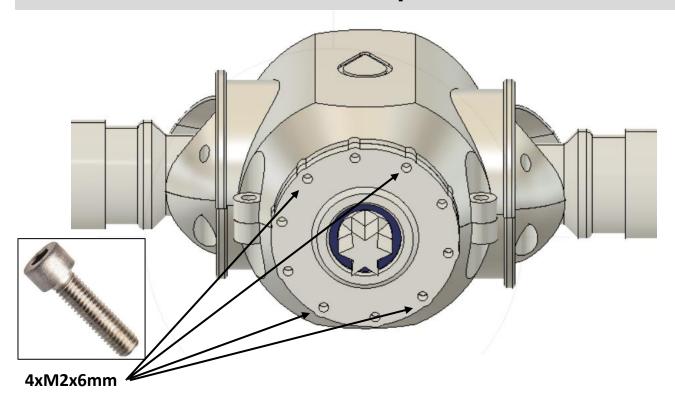


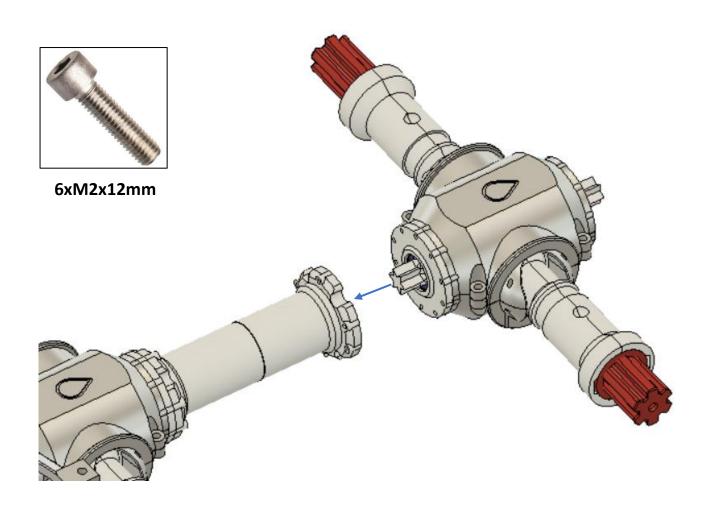


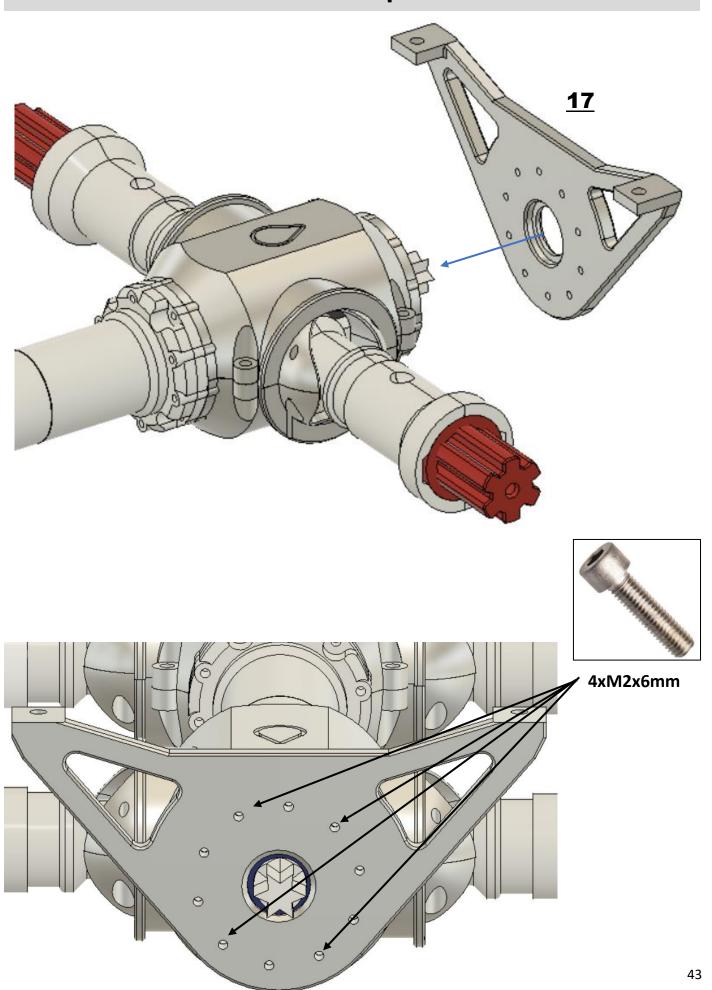


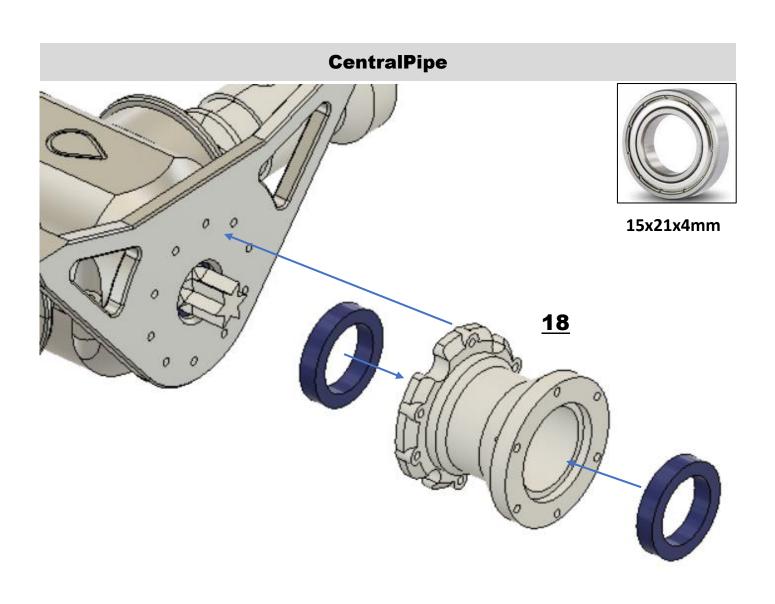


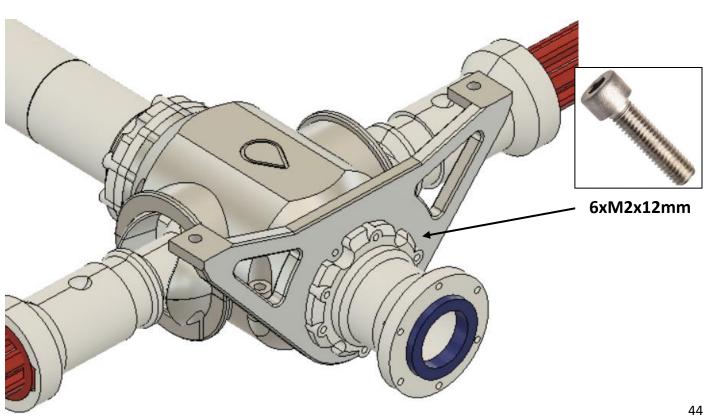


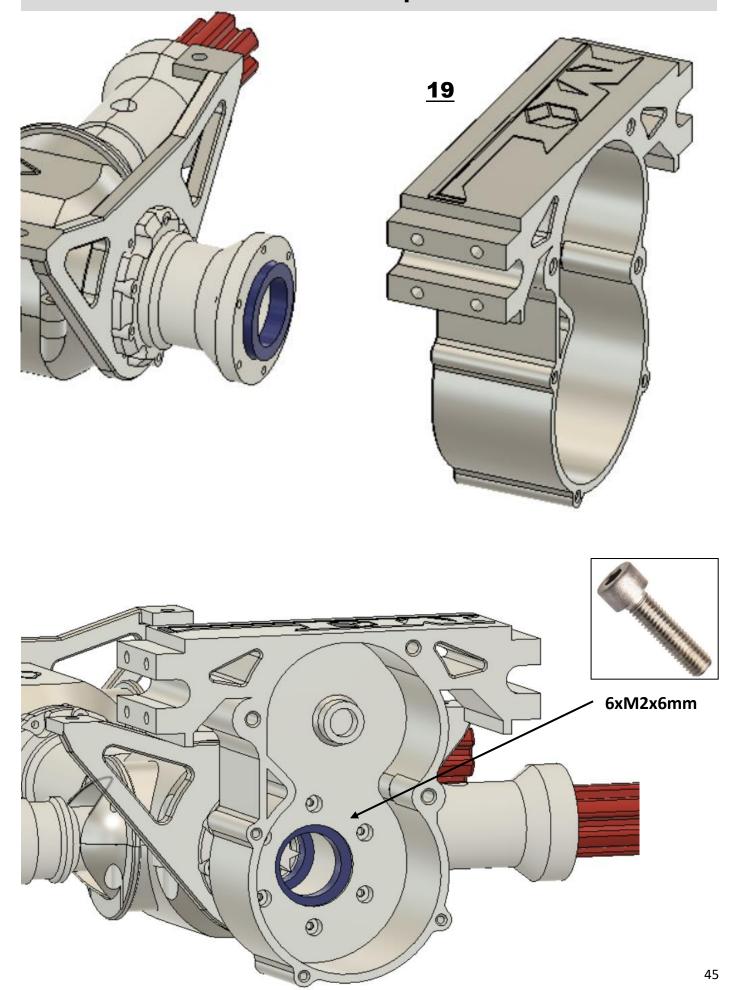


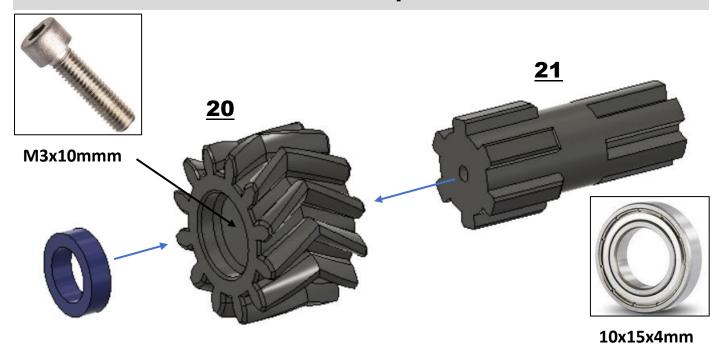


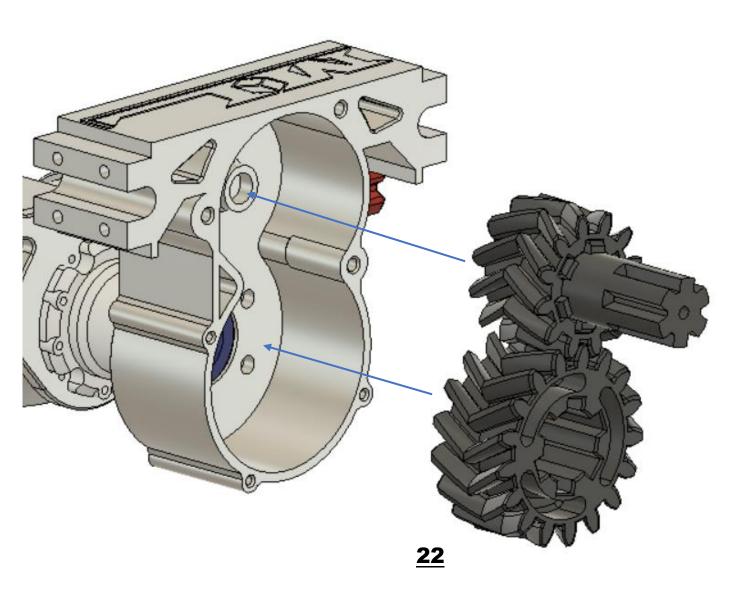


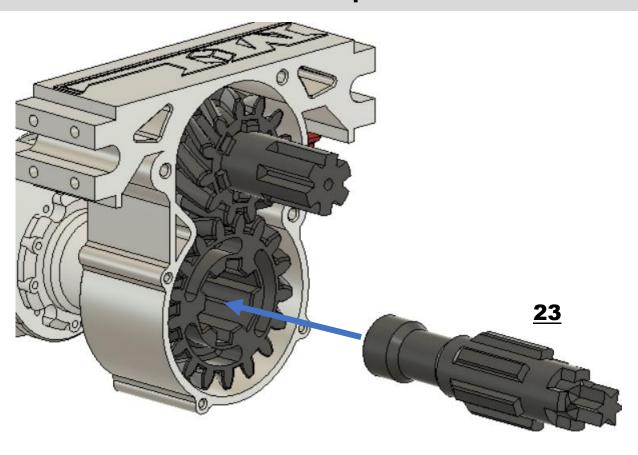


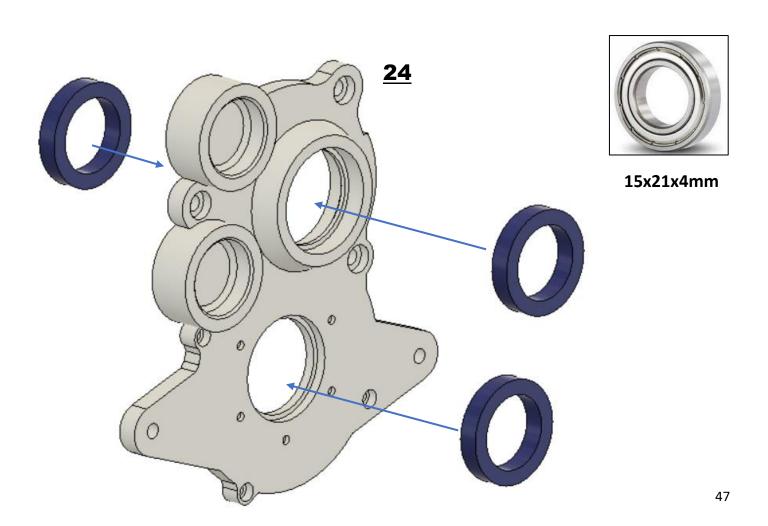


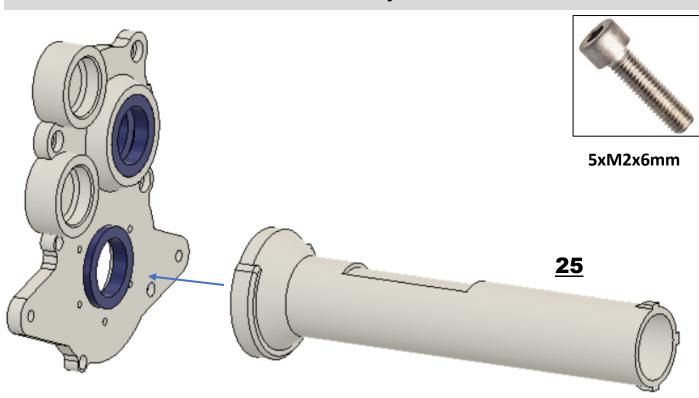


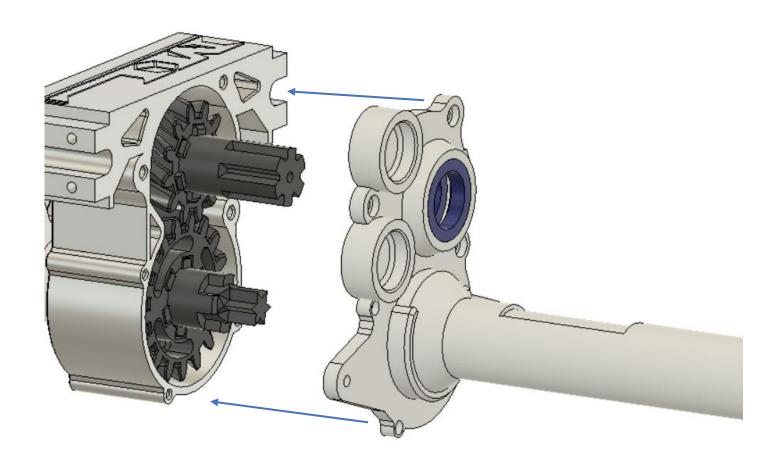




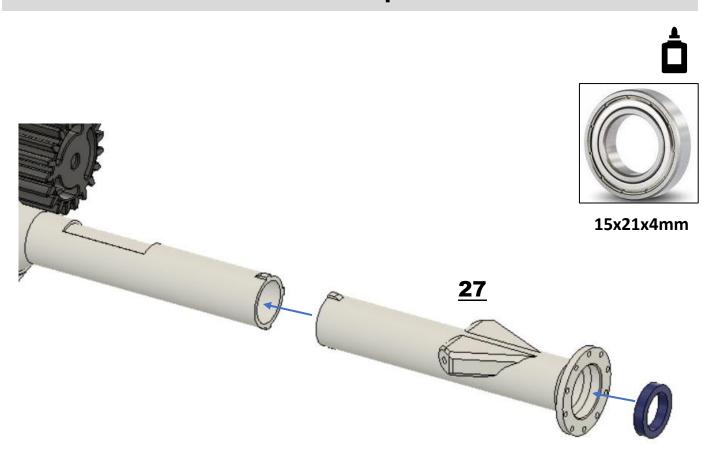


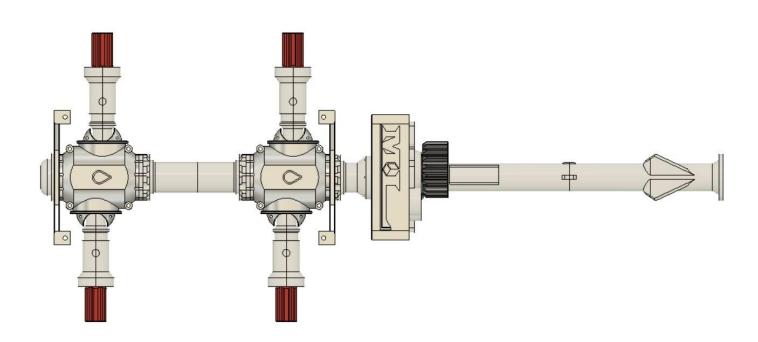


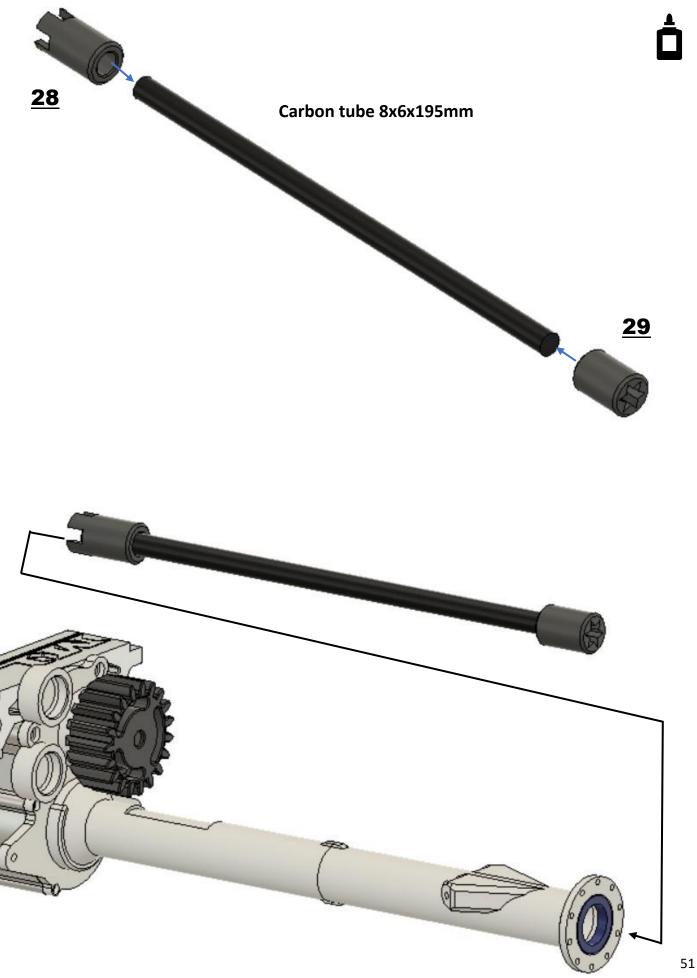


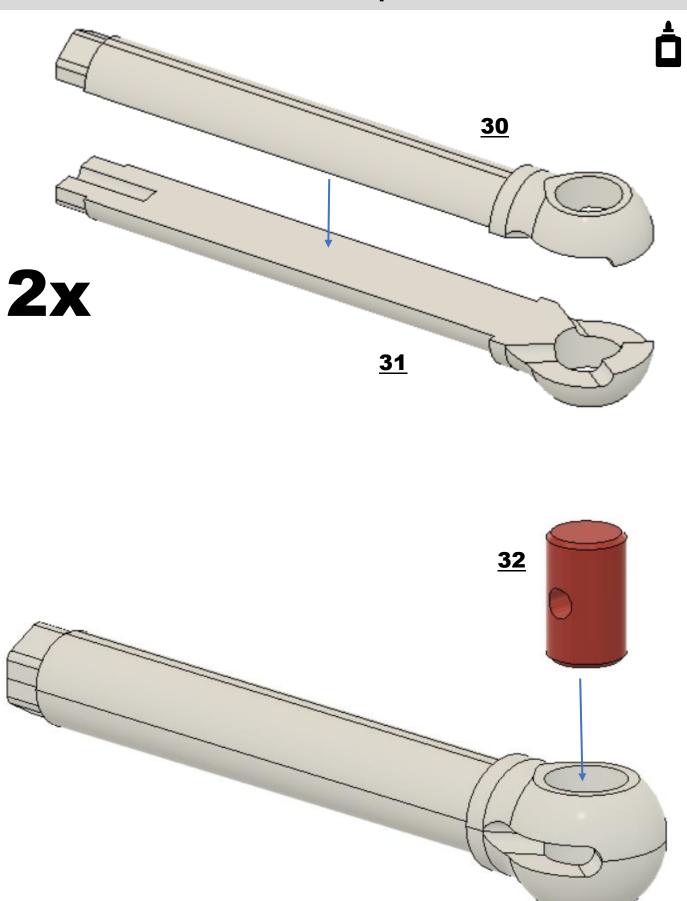


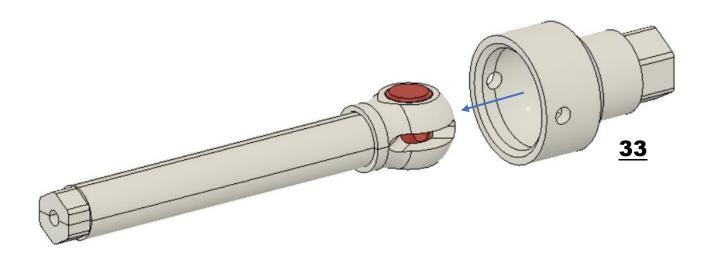
# CentralPipe 3xM3x8mm 3xM2x8mm M3x10mmm





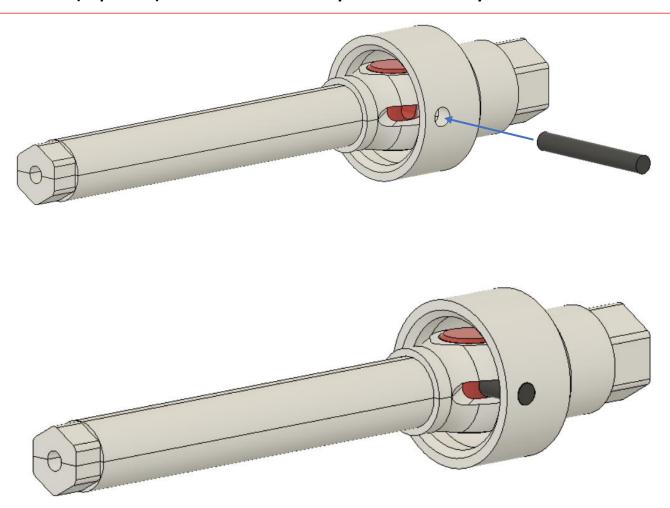


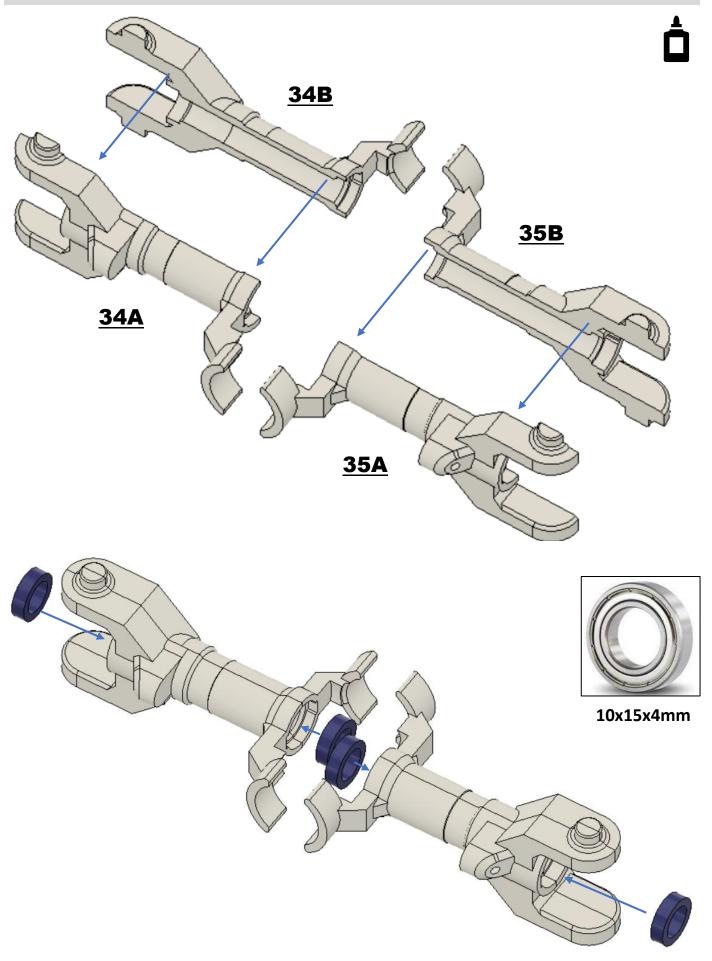


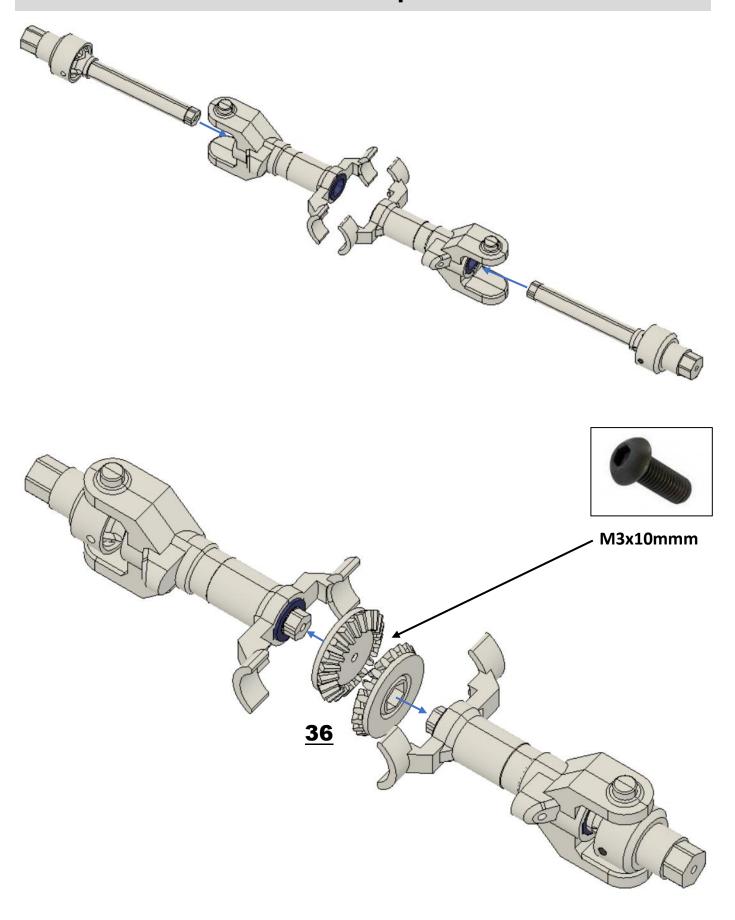


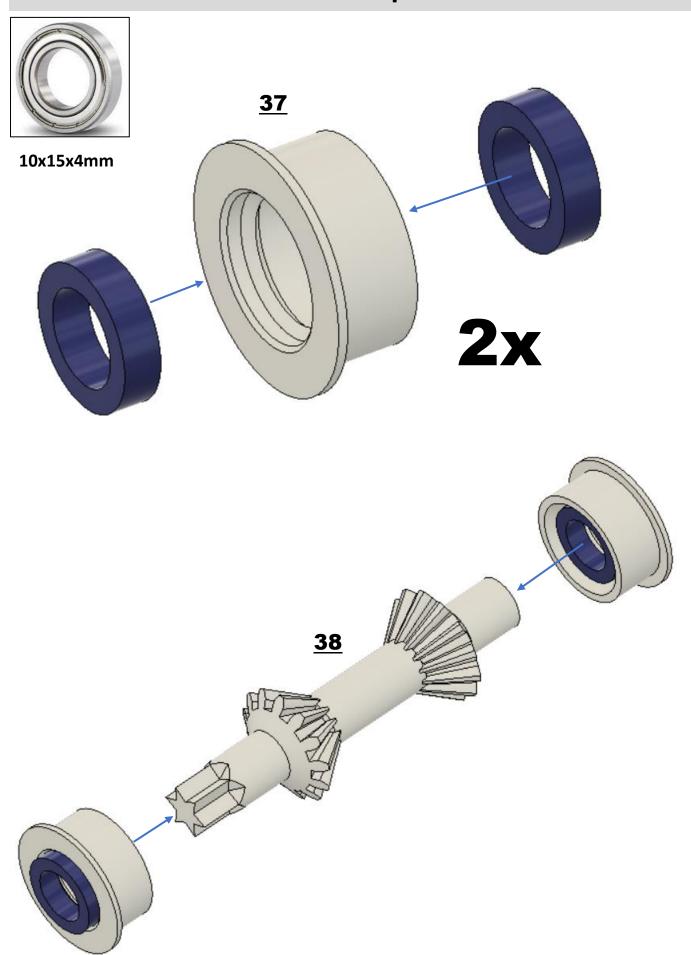
Thread steel wire (round steel, shaft) 3x23mm through the parts and secure the ends against movement with a drop of glue

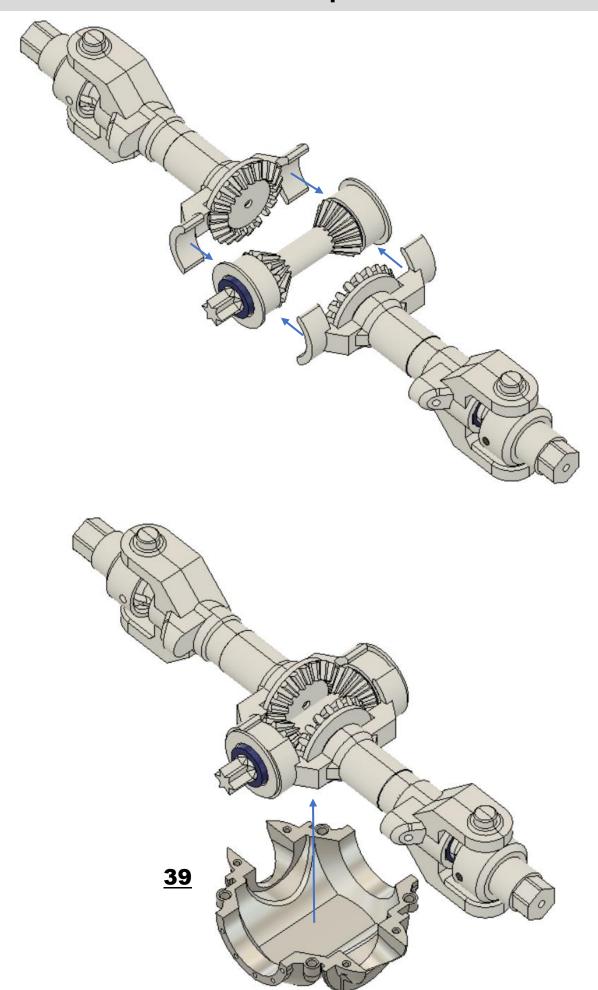
(in part 33). The half axle assembly must move freely in all directions.

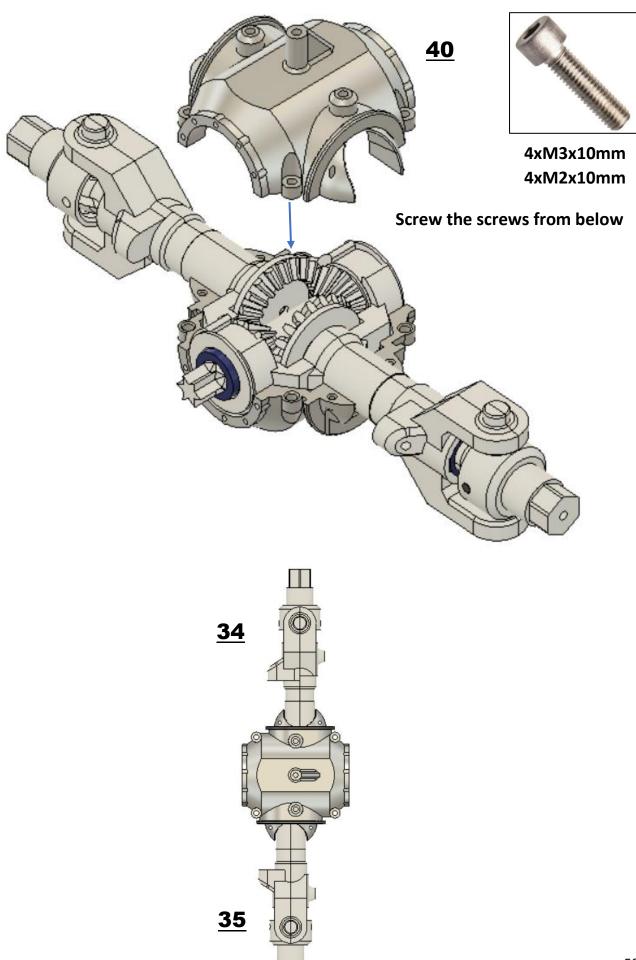














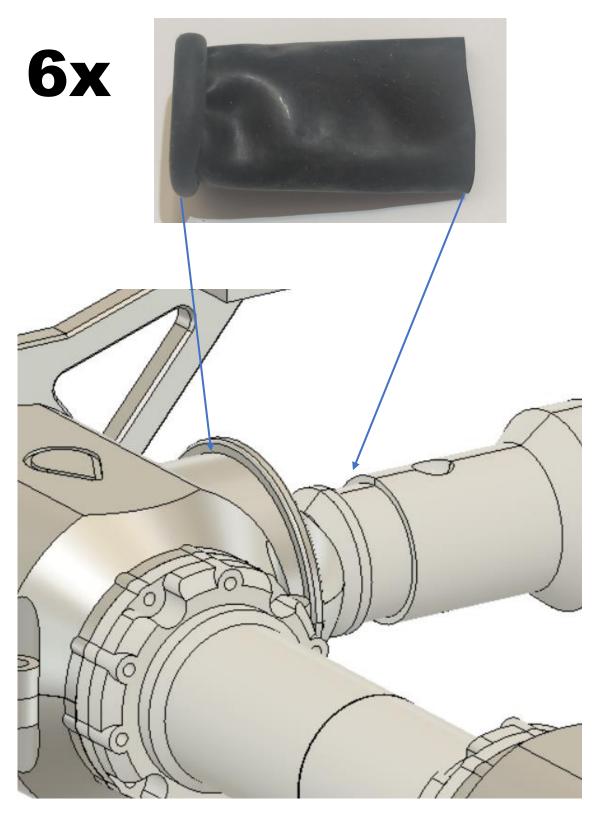
**6**x



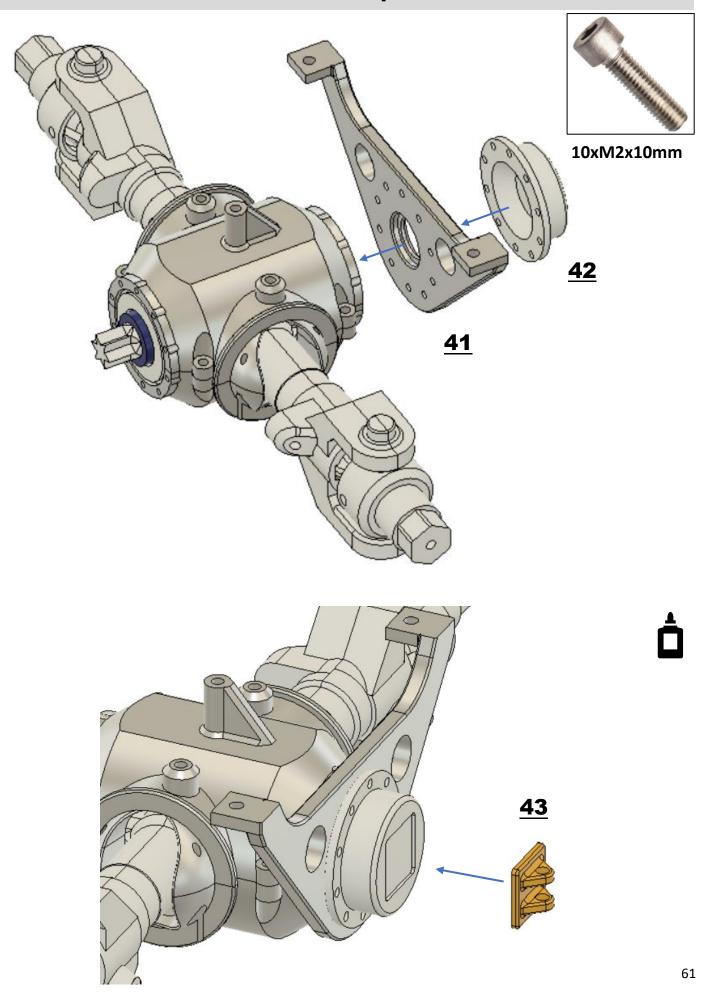
**6**x

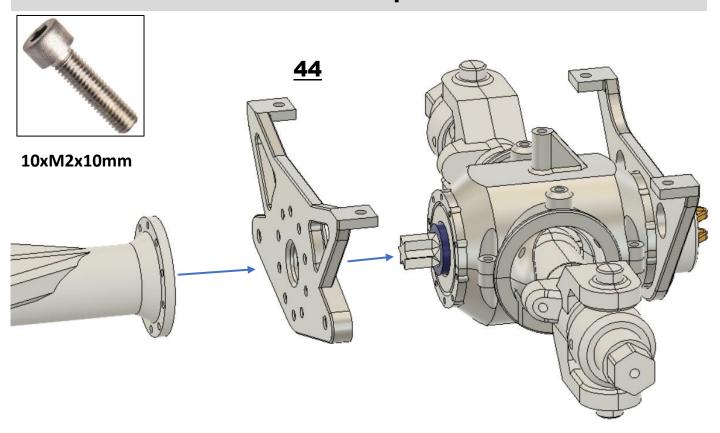
**Approximately 50mm** 

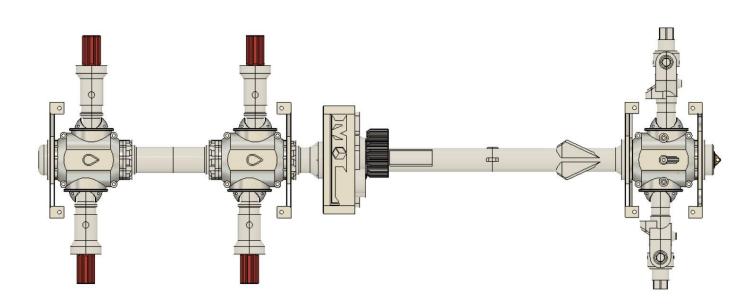


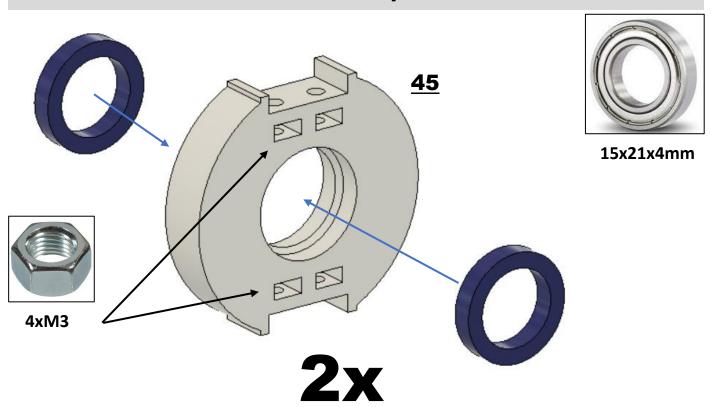


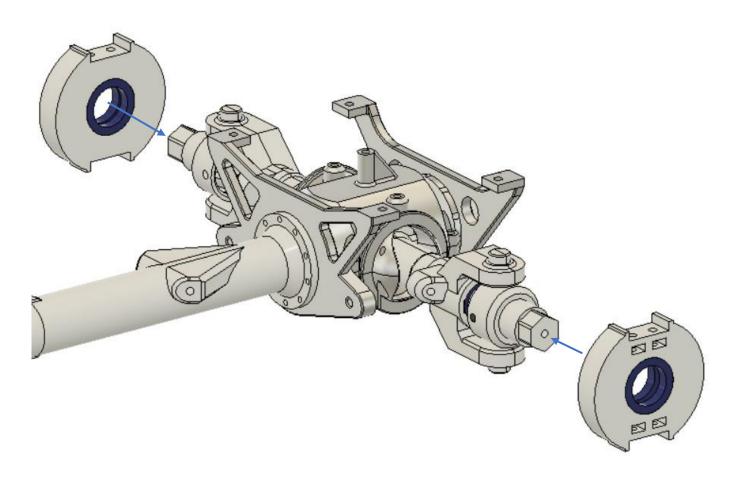
Roll up the excess rest of the balloon and neatly adjust the balloon in the groove on the semi-axes

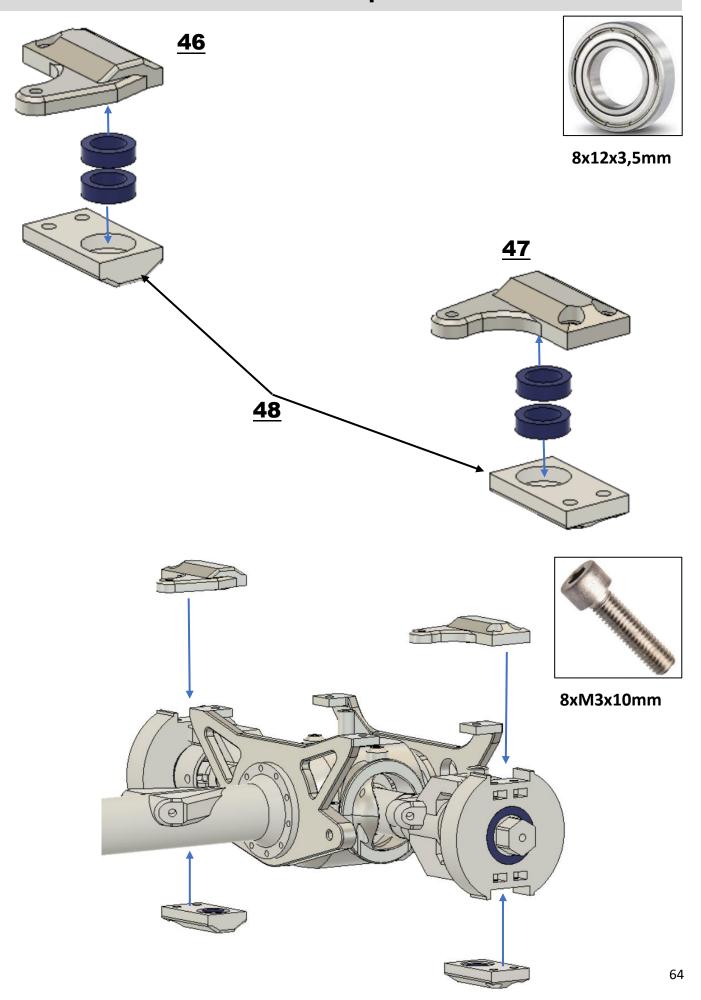


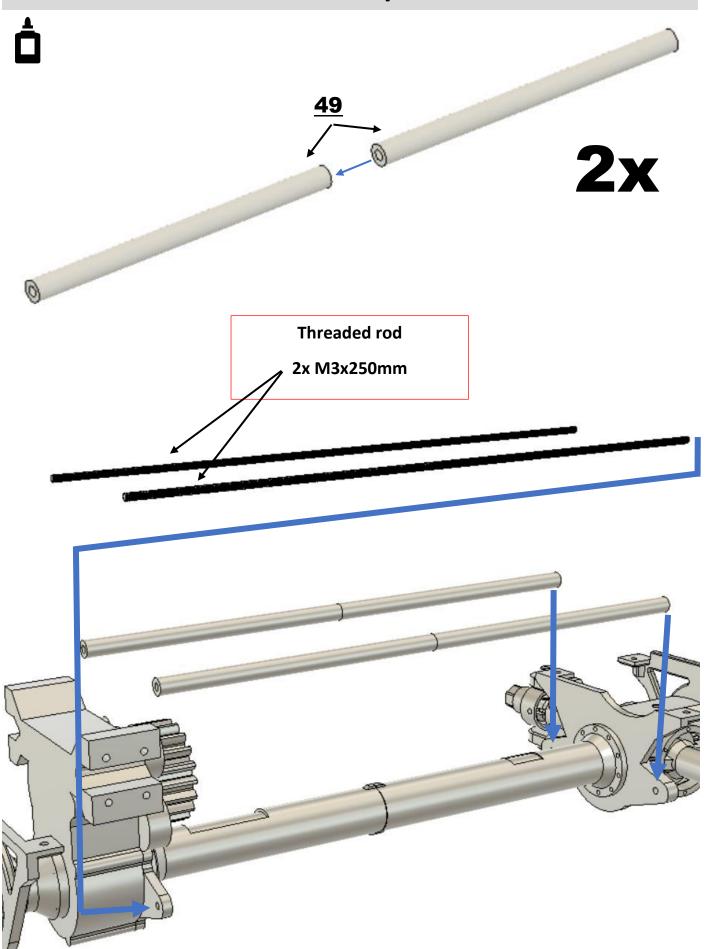


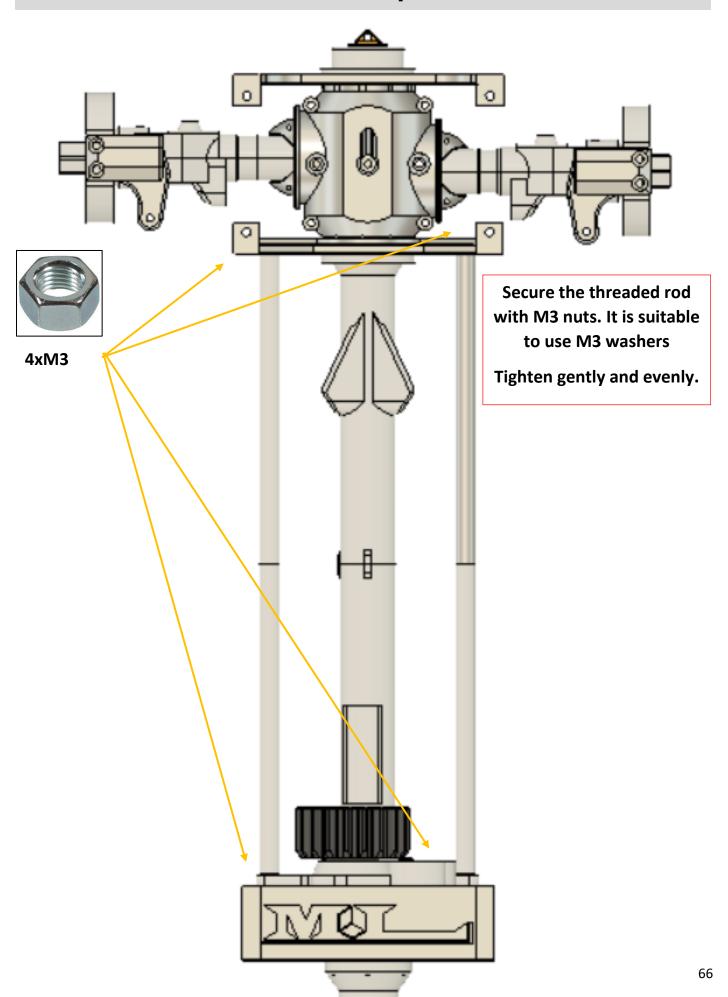


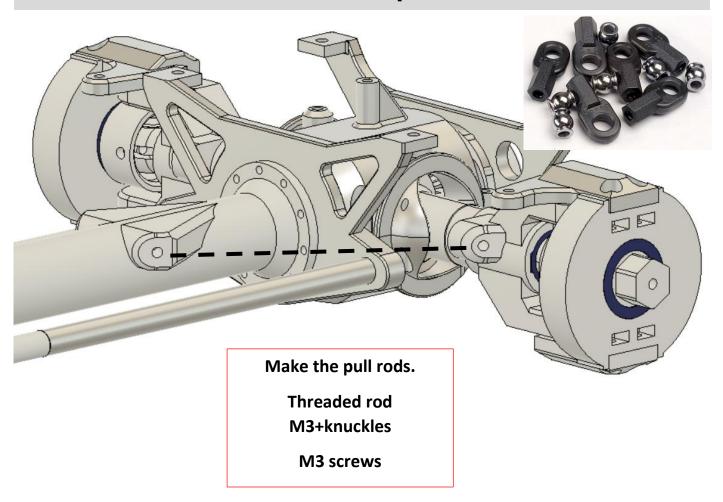


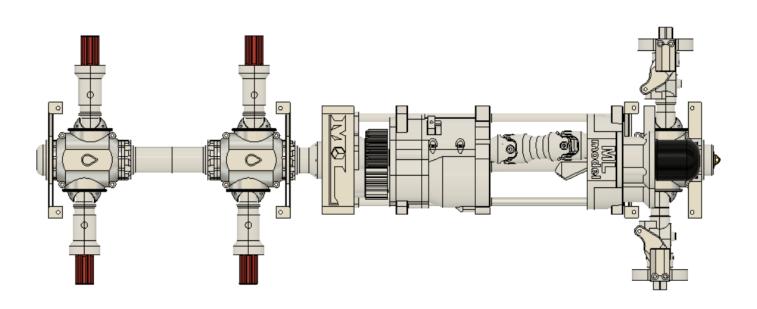


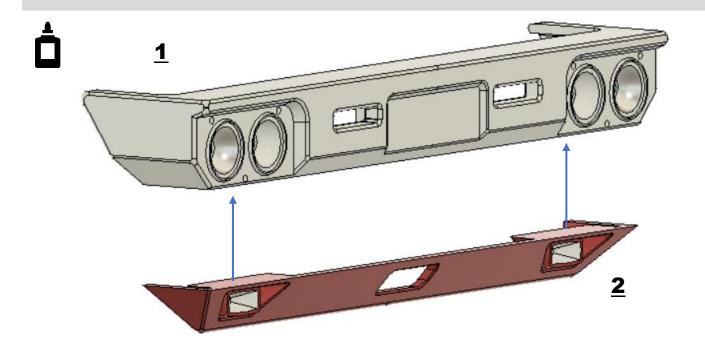


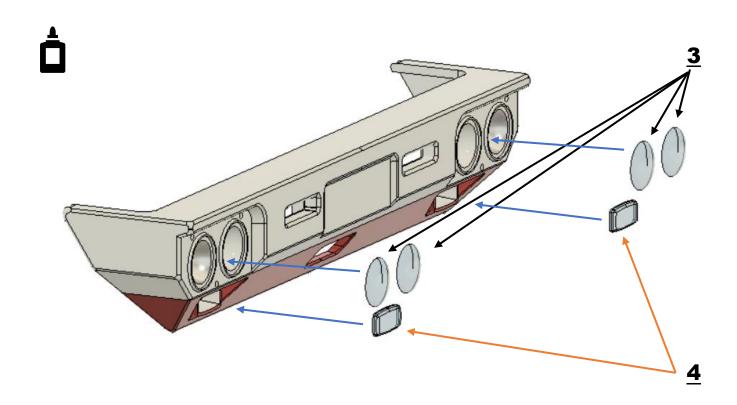


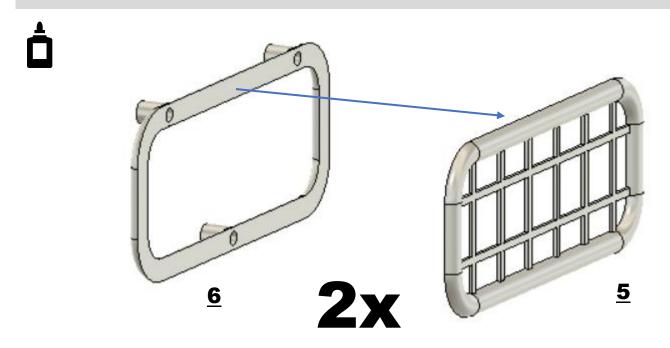


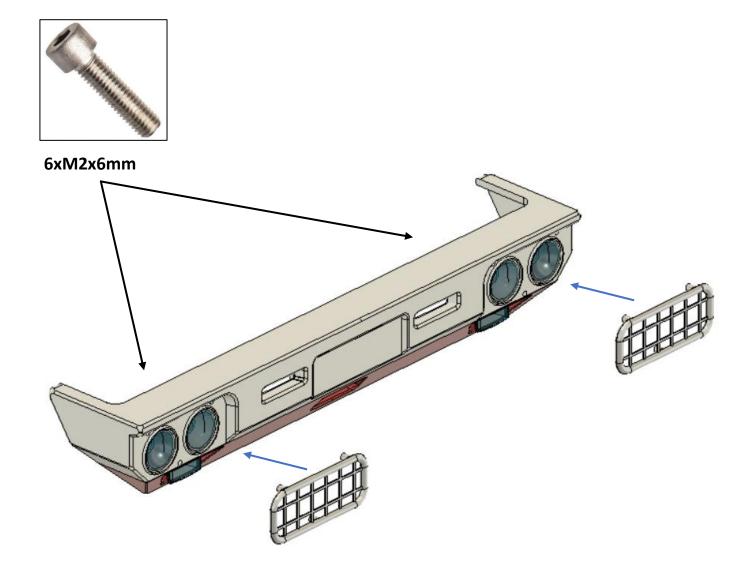


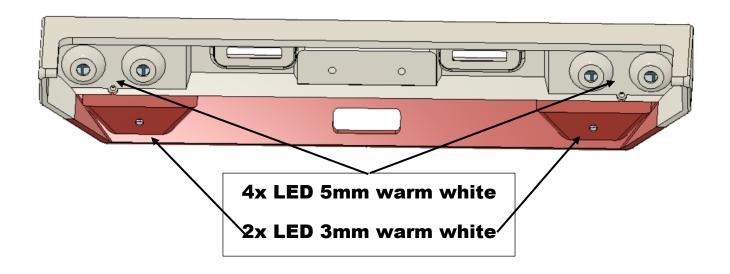


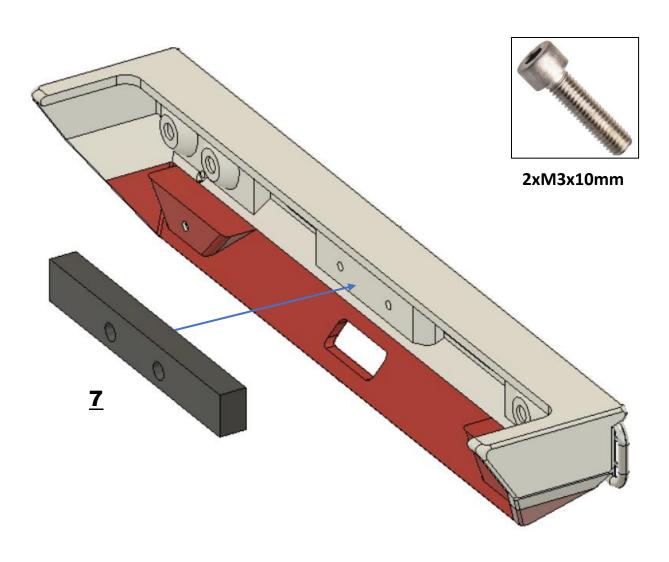




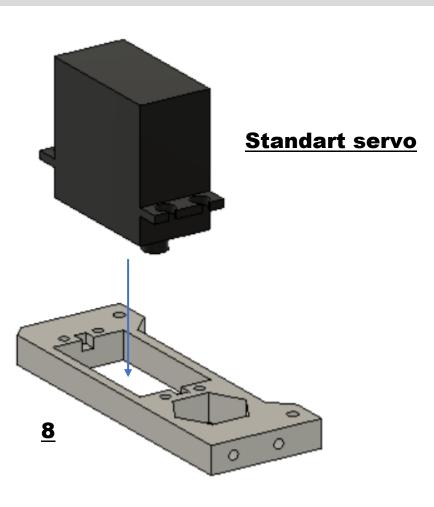


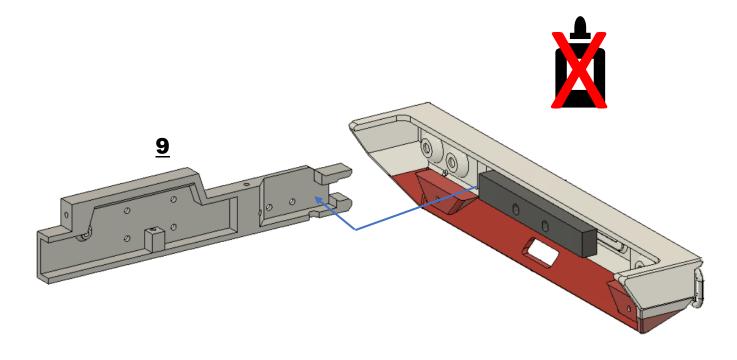


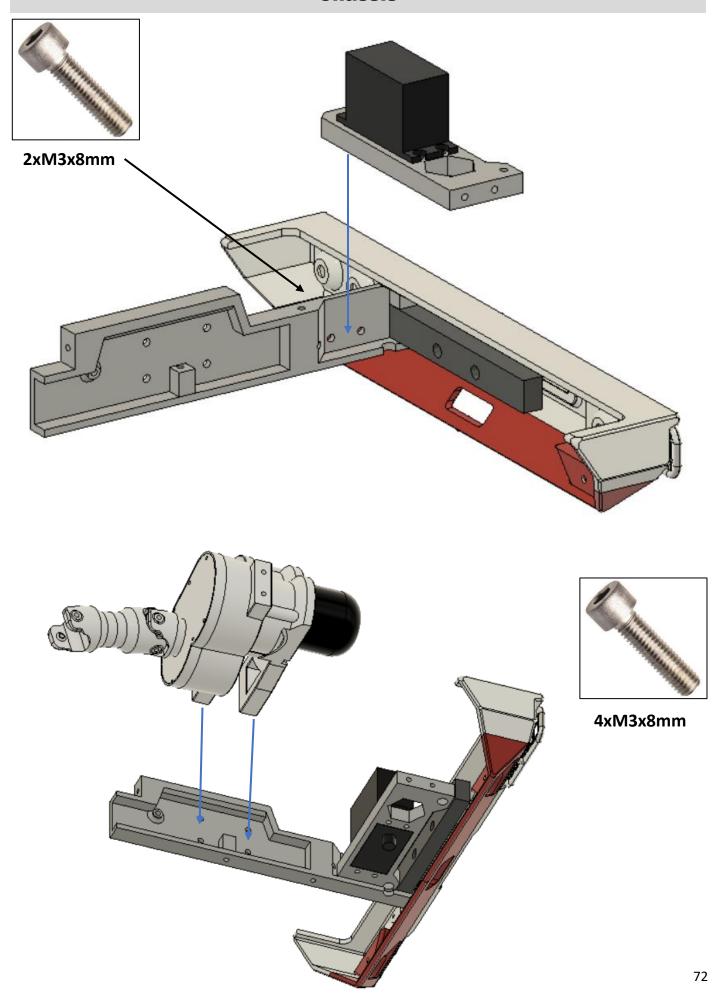


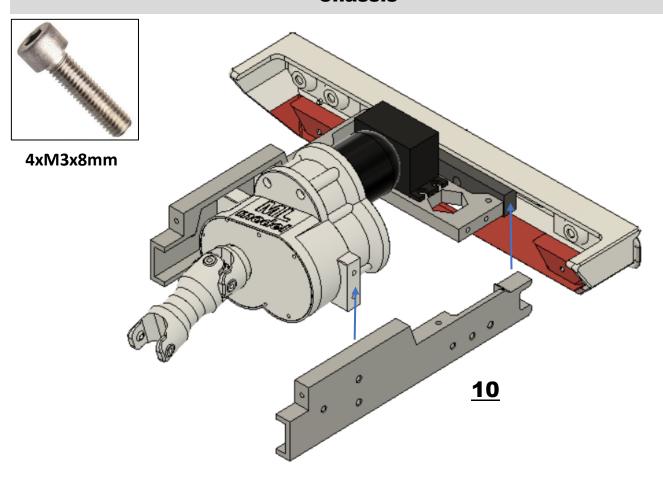


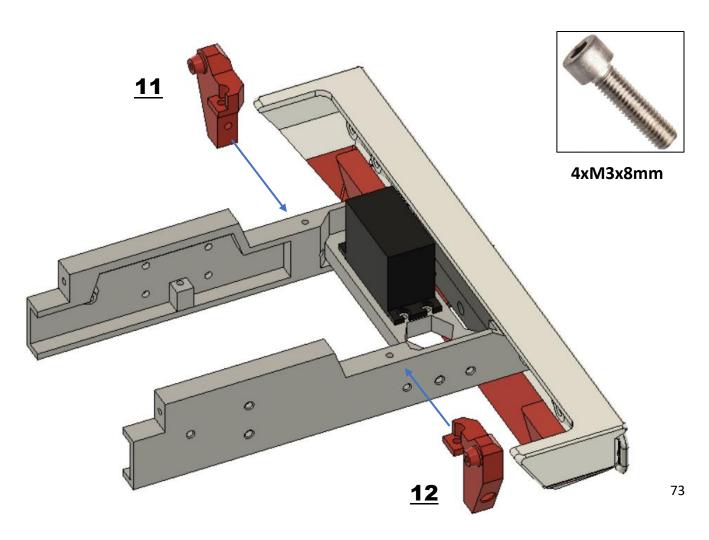


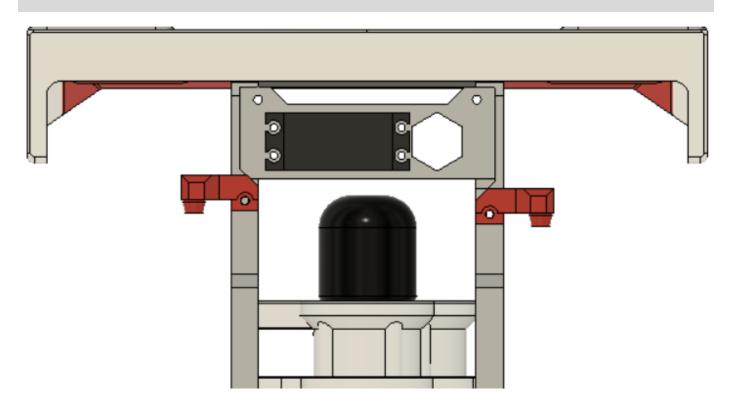


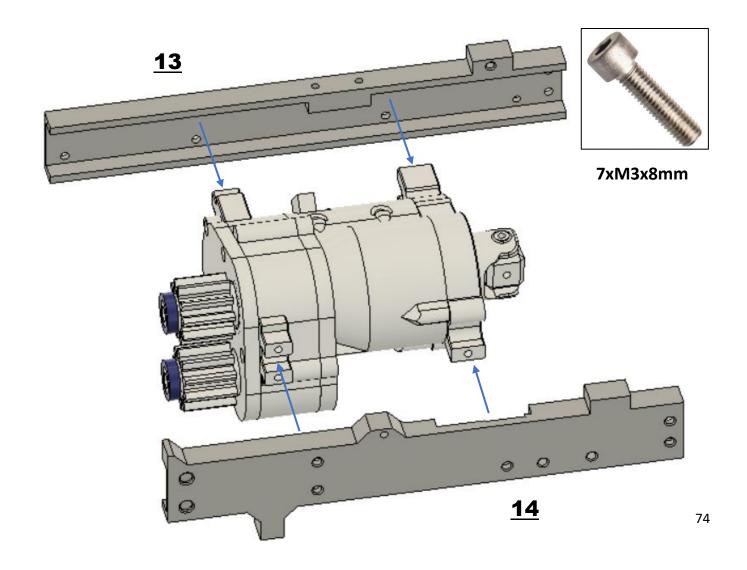


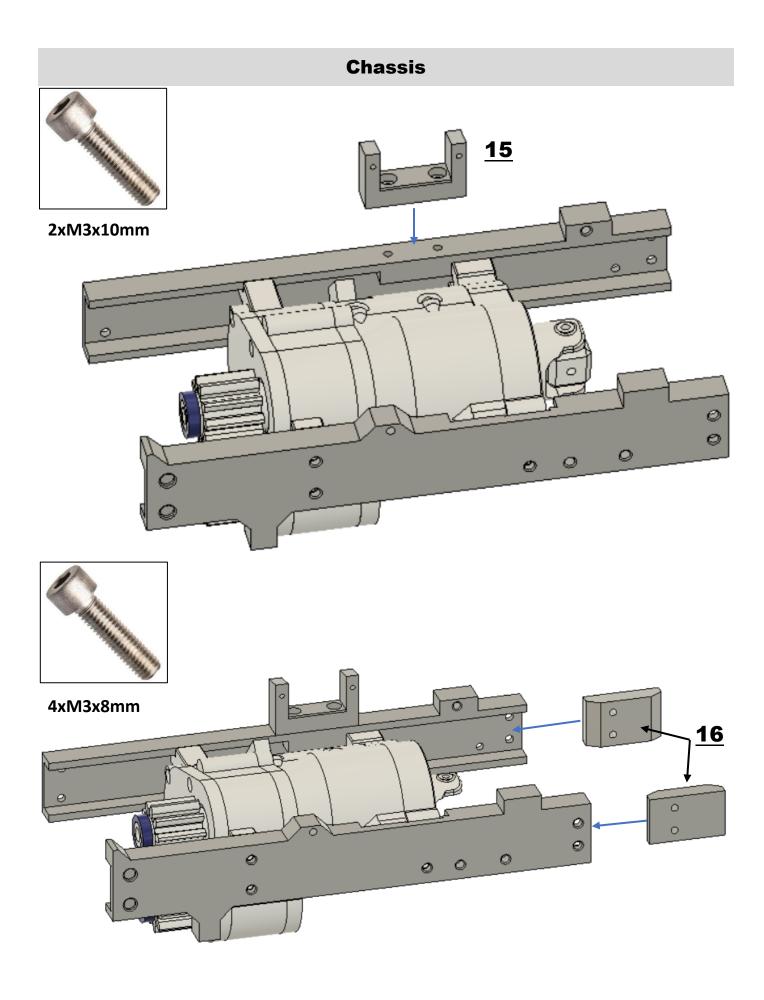


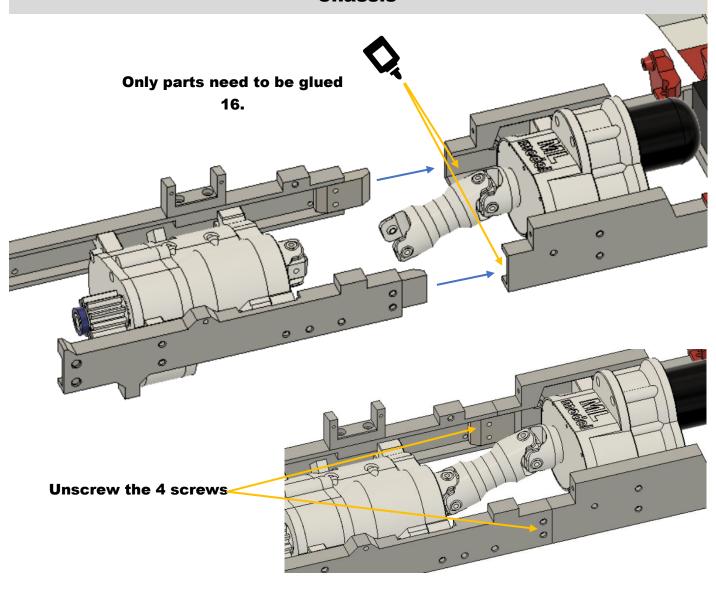




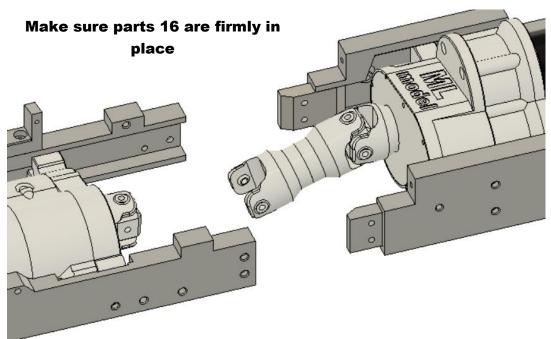


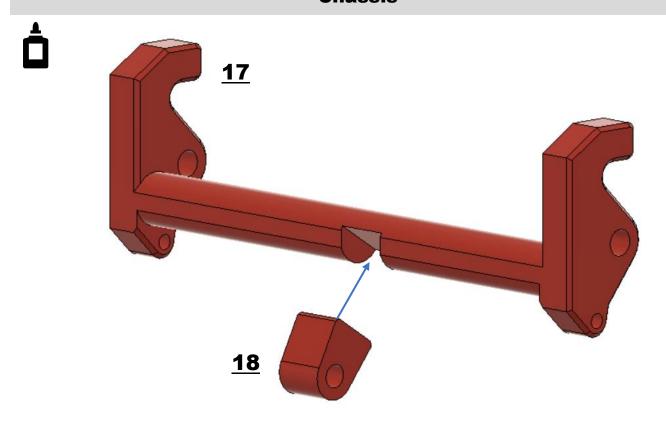


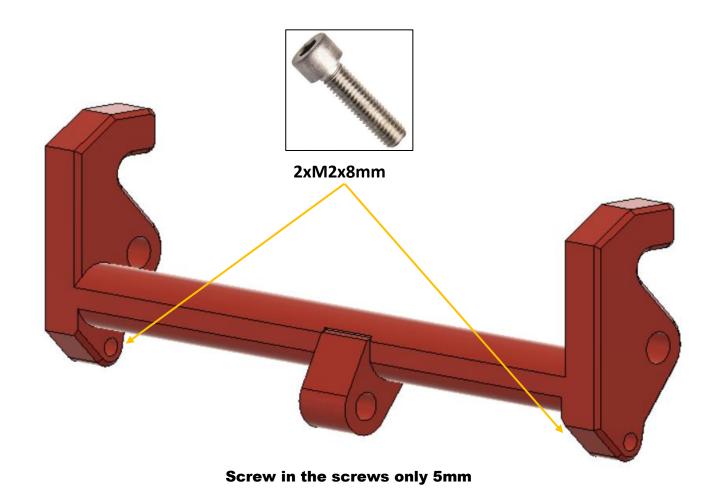


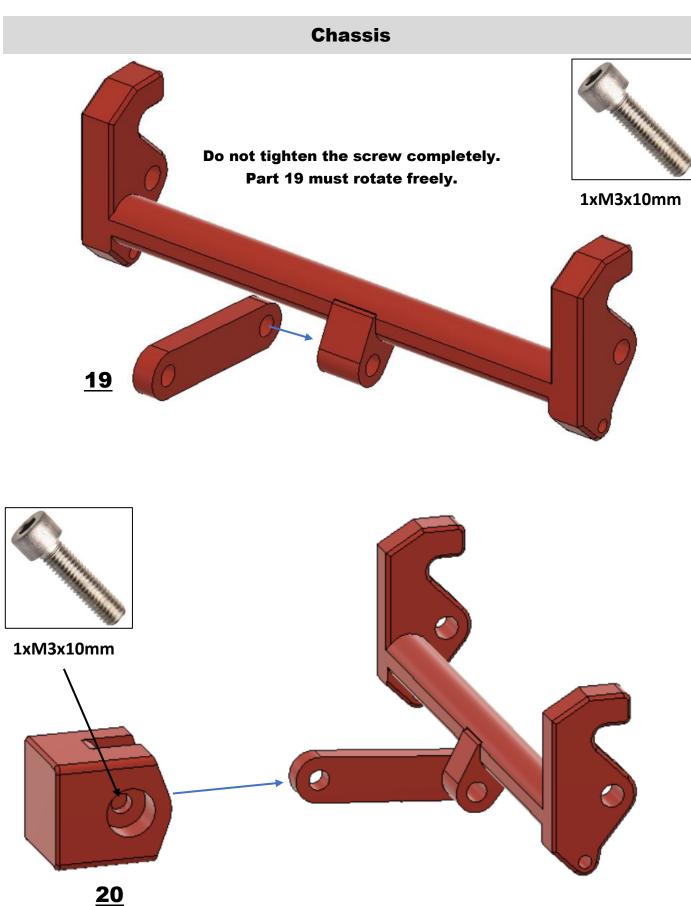


#### And share.



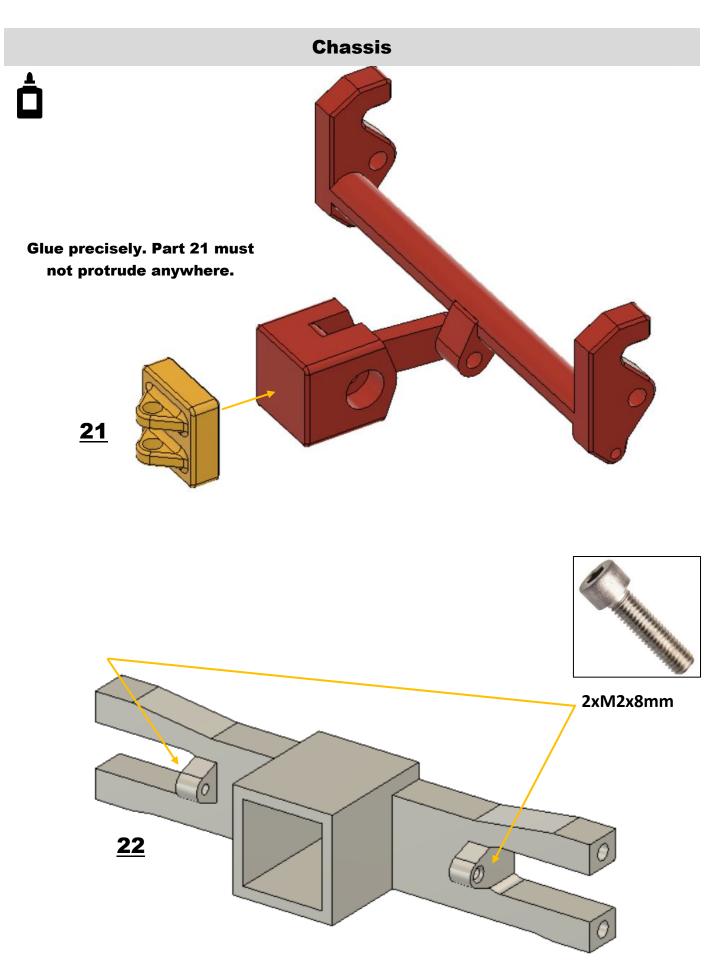




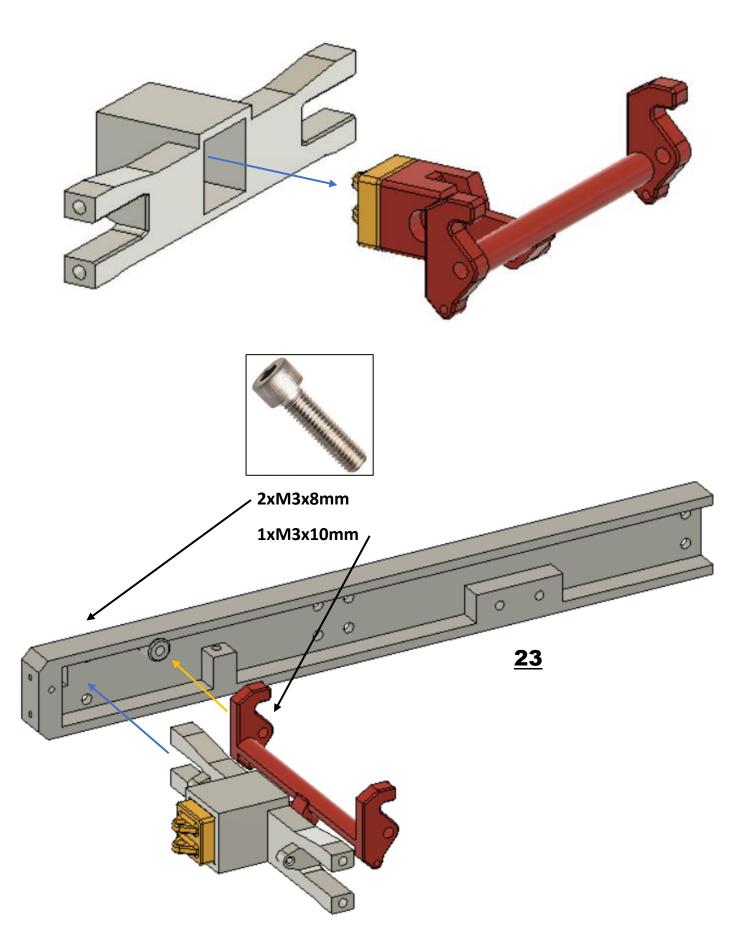


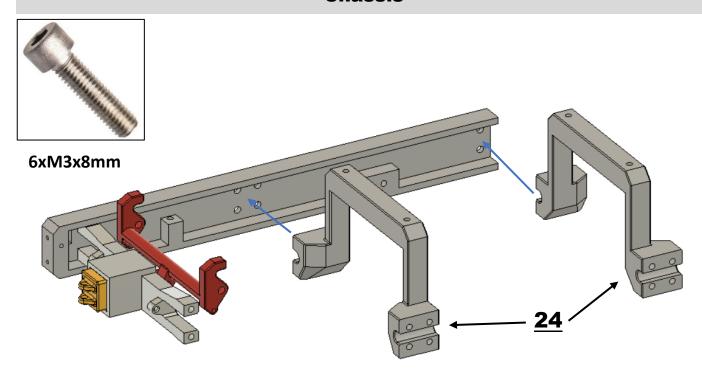
Do not tighten the screw completely.

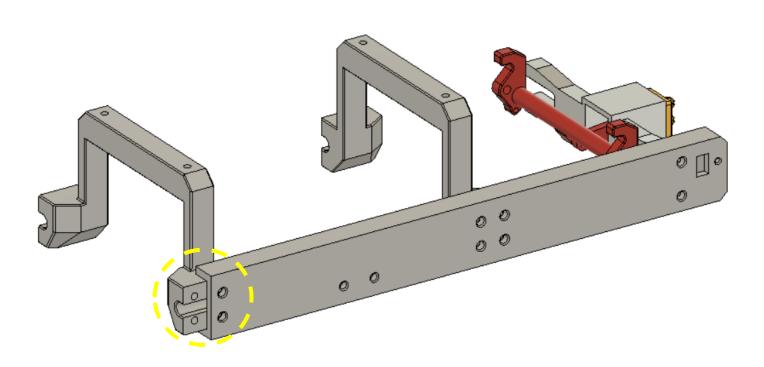
Part 20 must rotate freely.

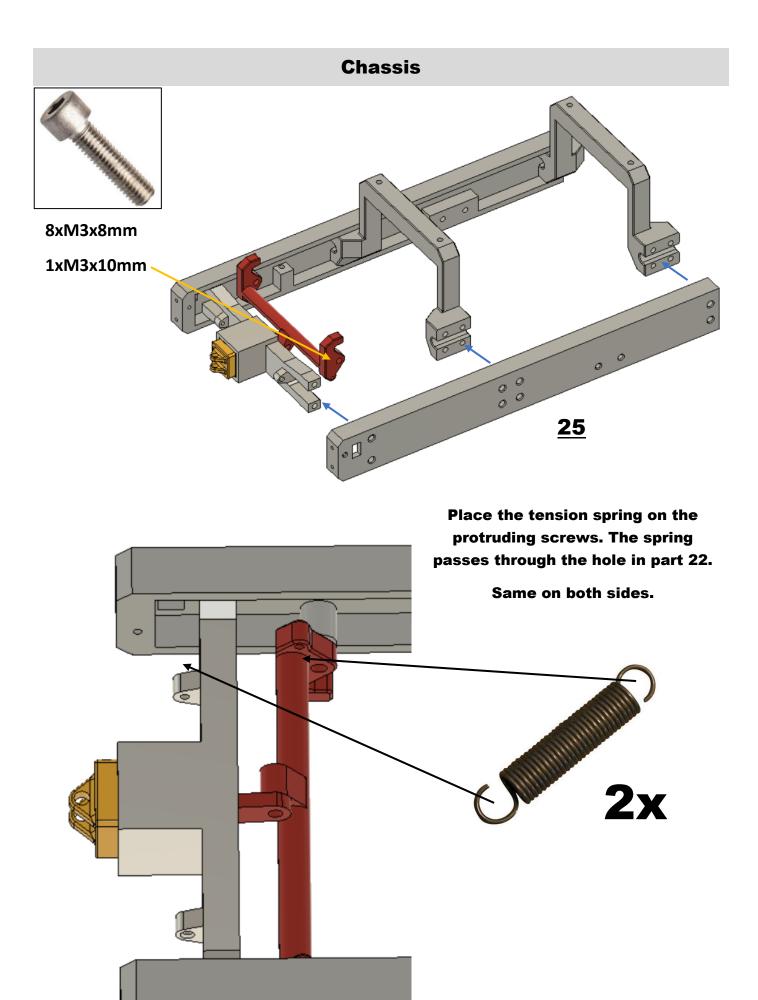


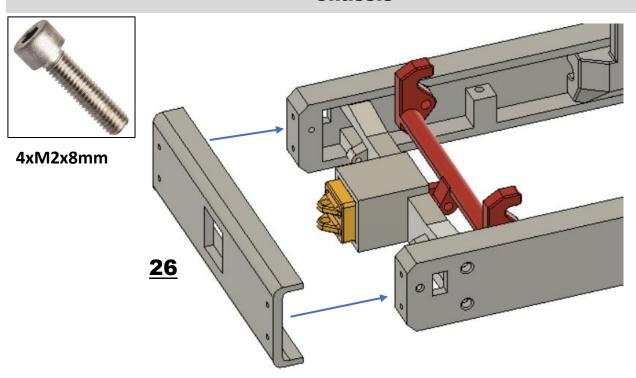
Only screw in the screws 4-5mm

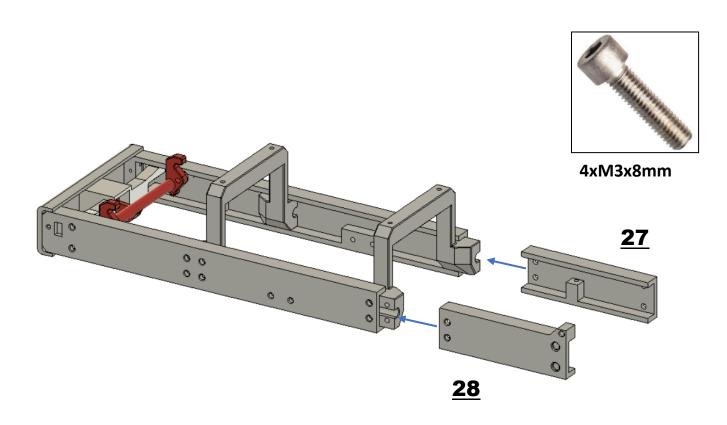


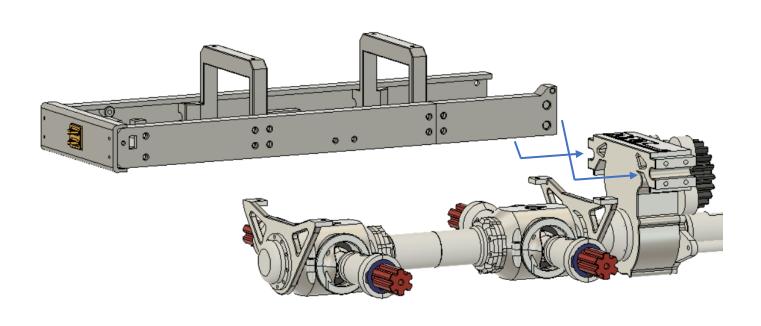


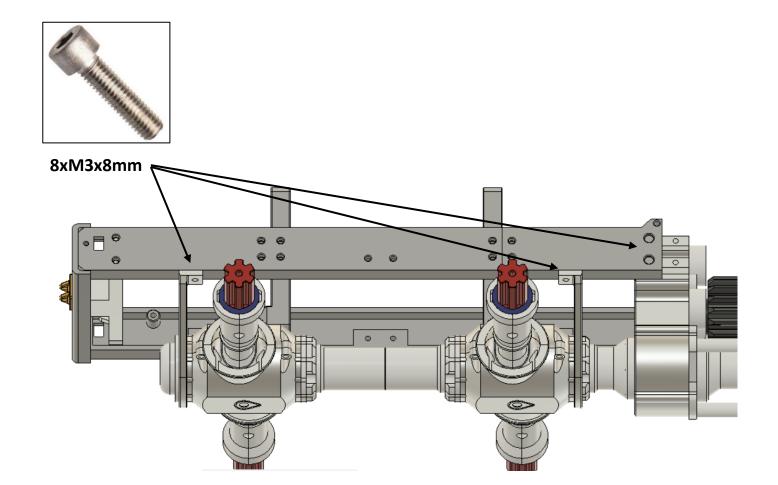


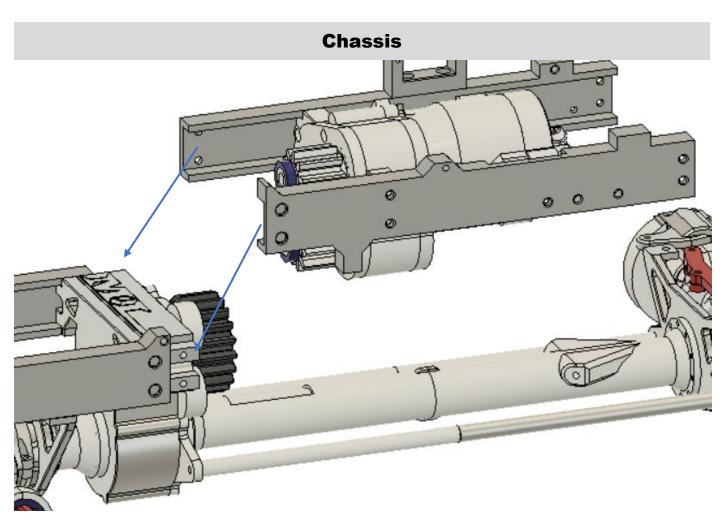




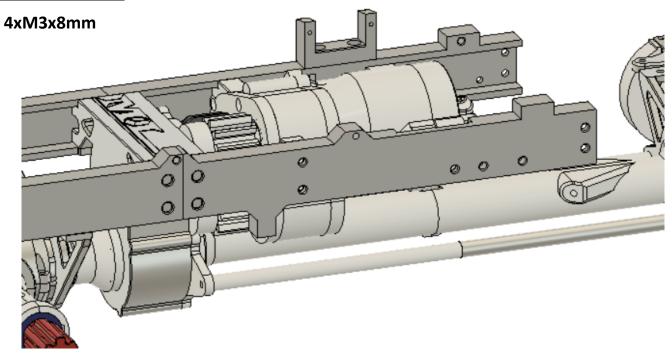


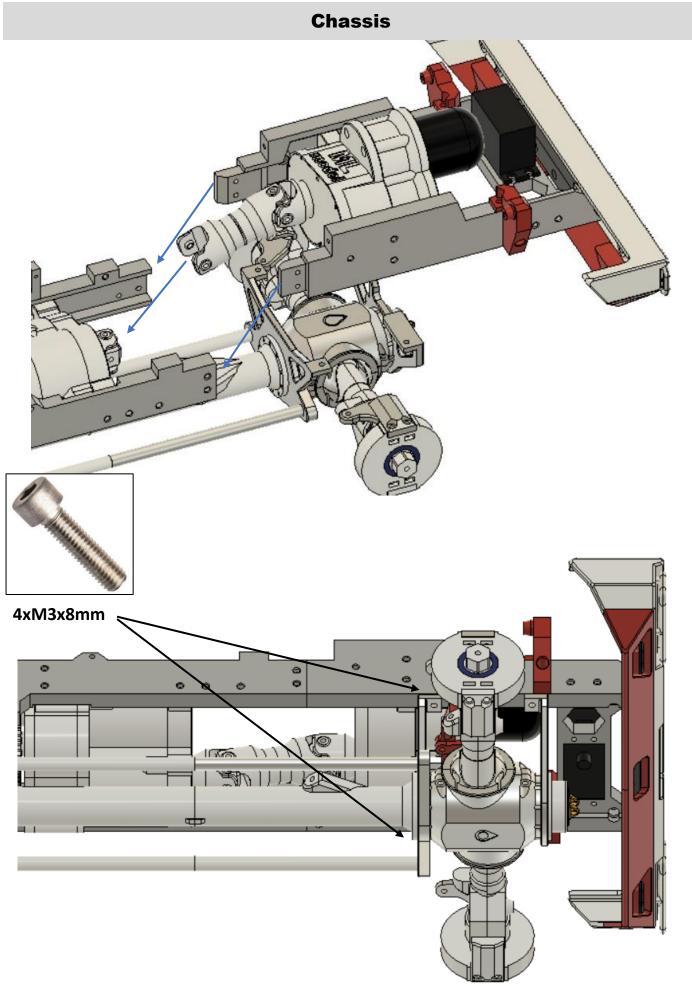


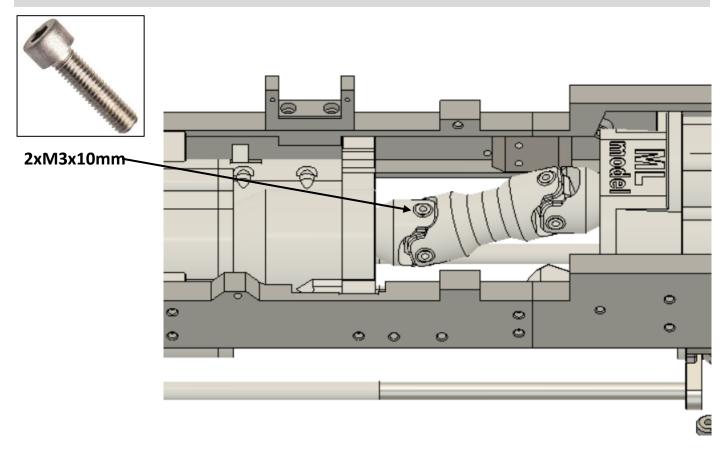


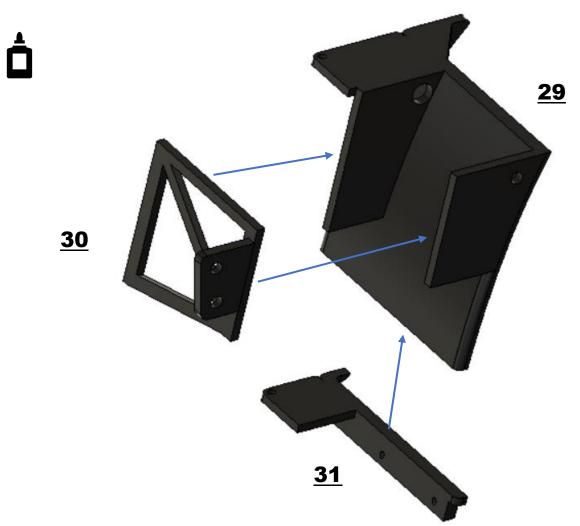


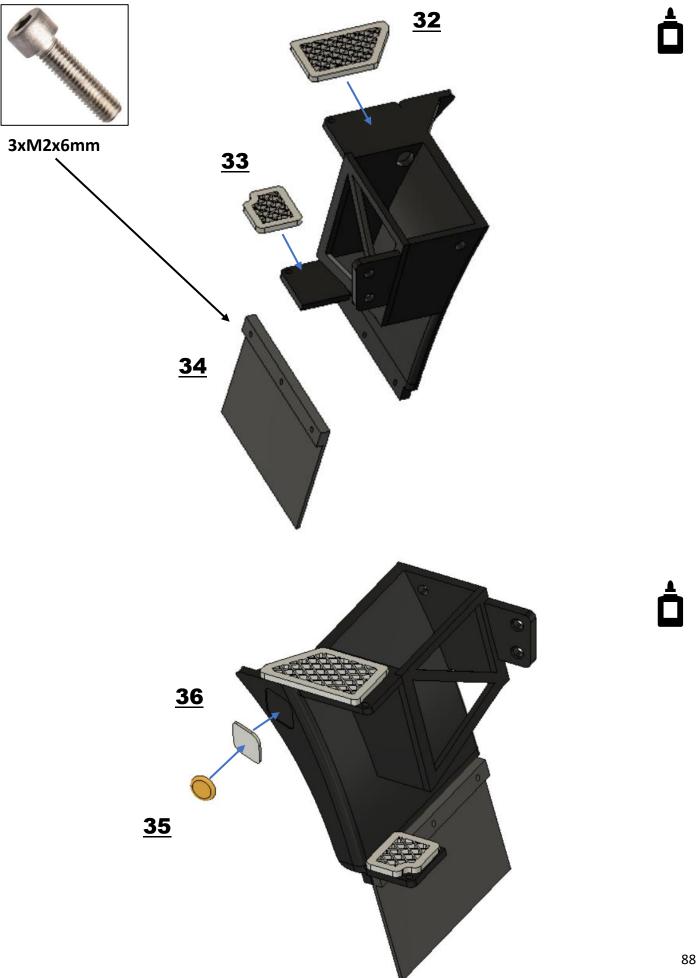














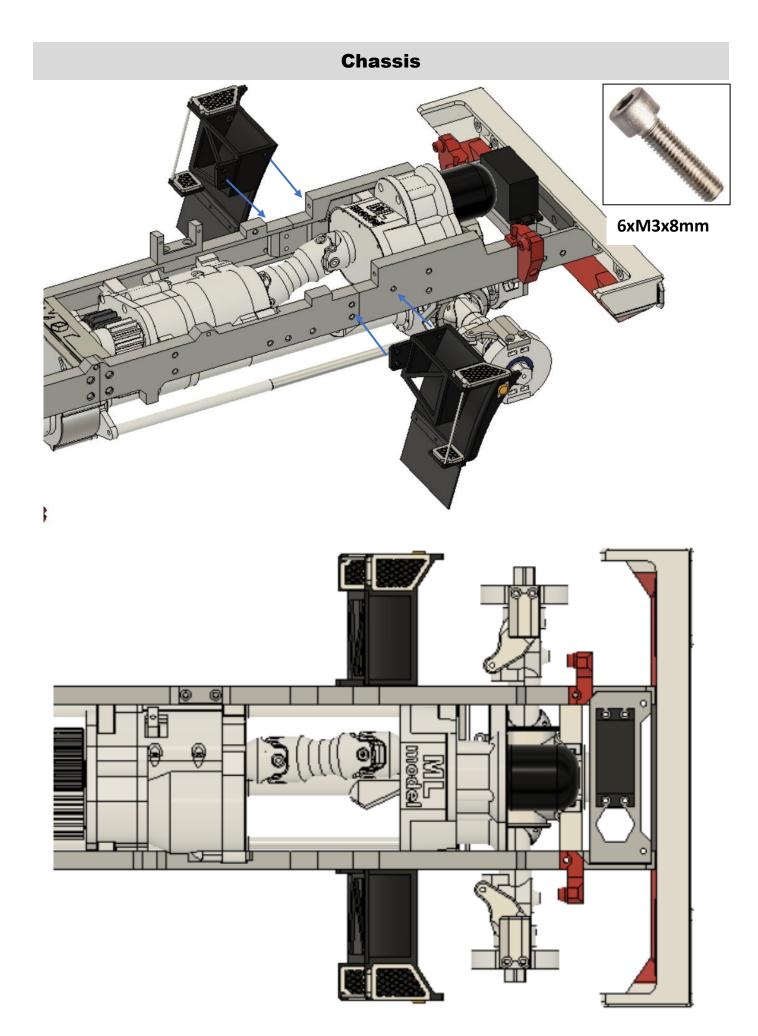
Bend the 2mm copper wire into a similar shape.

I recommend sanding the wire before painting so that the paint and glue hold better.

Glue the wire in place.

For the other side, proceed in the same way from the parts:37, 38, 39, 40, 41, 34, 35, 36





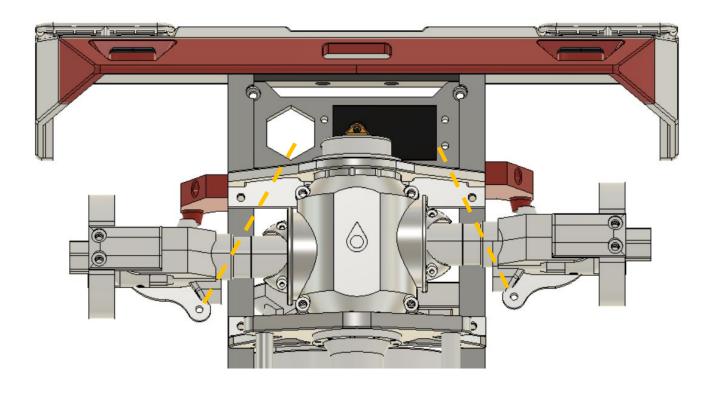
Make the steering rods. Select the longest lever from the servo, (as in the picture) and connect the rods to the furthest hole from the center

Threaded rod M3+knuckles

M3 screws



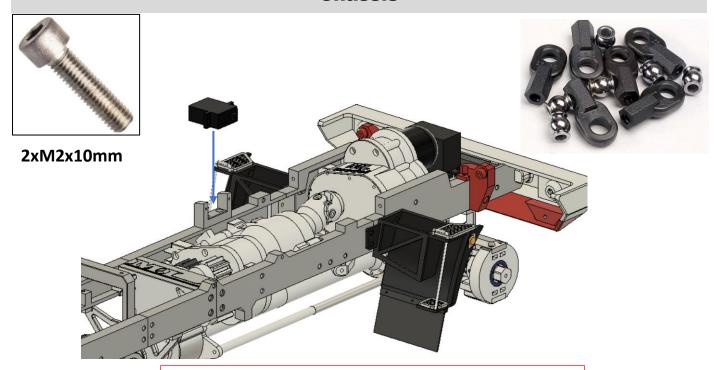




Set the toe/toe when the semi-axes are in a plane. As the semi-axis moves down/up, the geometry changes. The chosen set of turns allowed me to comply

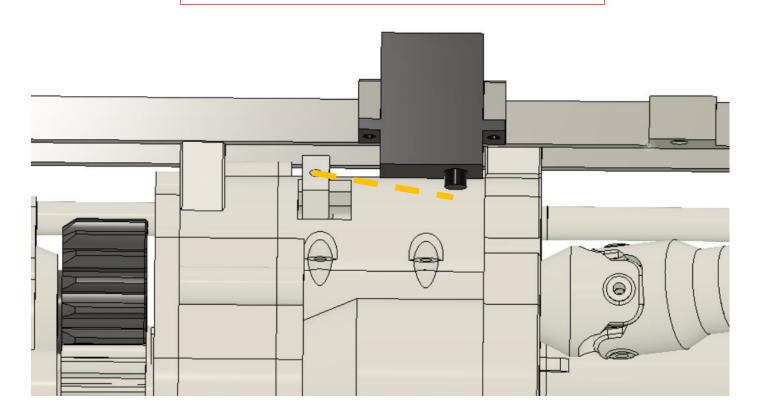
### **Ackermann's condition**

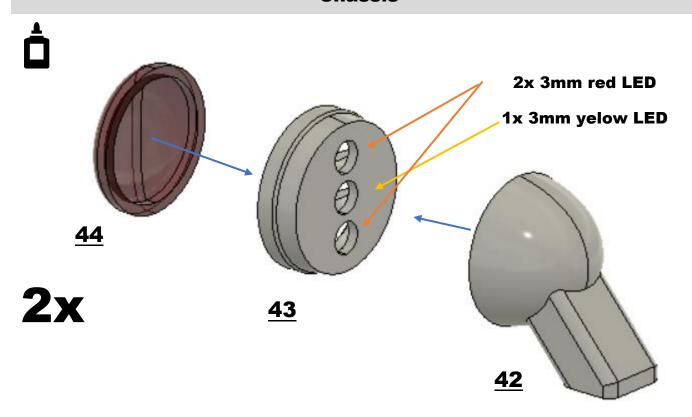
and minimize the unwanted phenomenon of changing geometry. The model behaves correctly in operation.

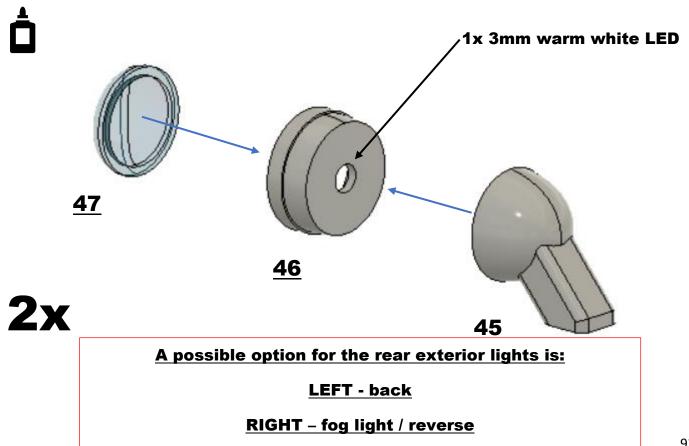


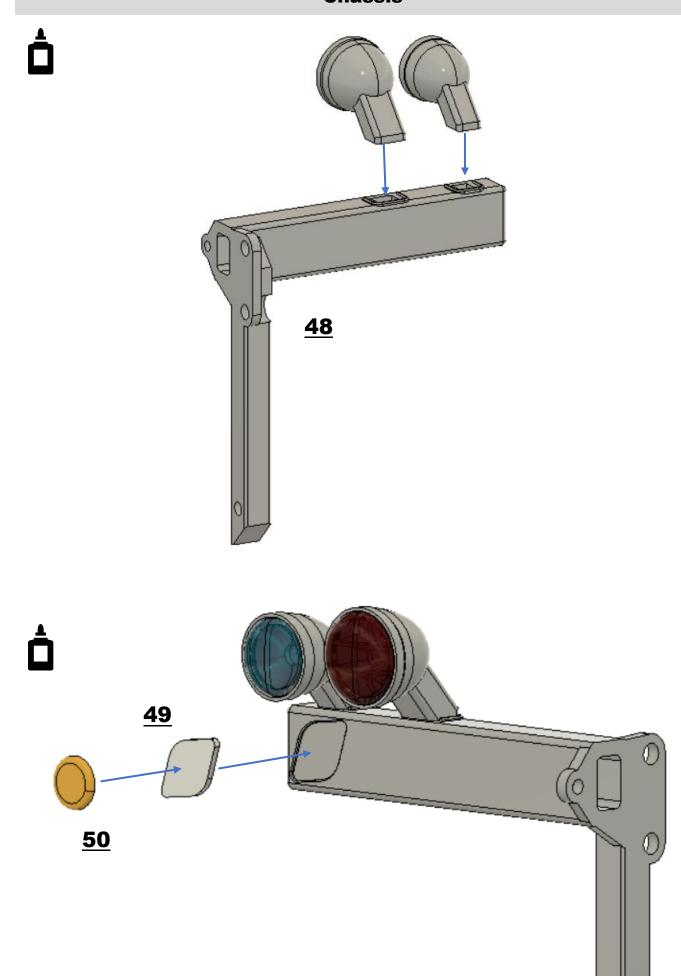
Place the microservo, select the appropriate lever, and craft the shifter.

Carefully set the range of servo movement in the transmitter.



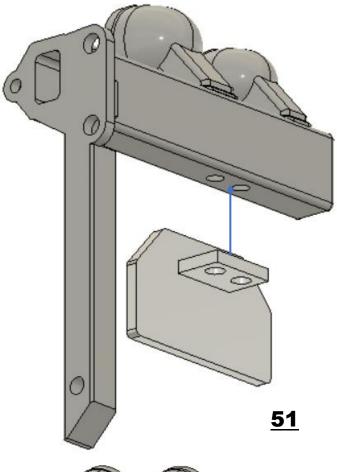




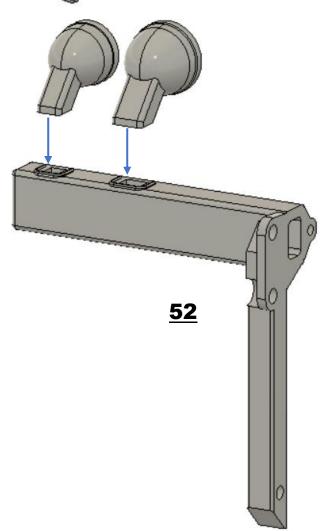


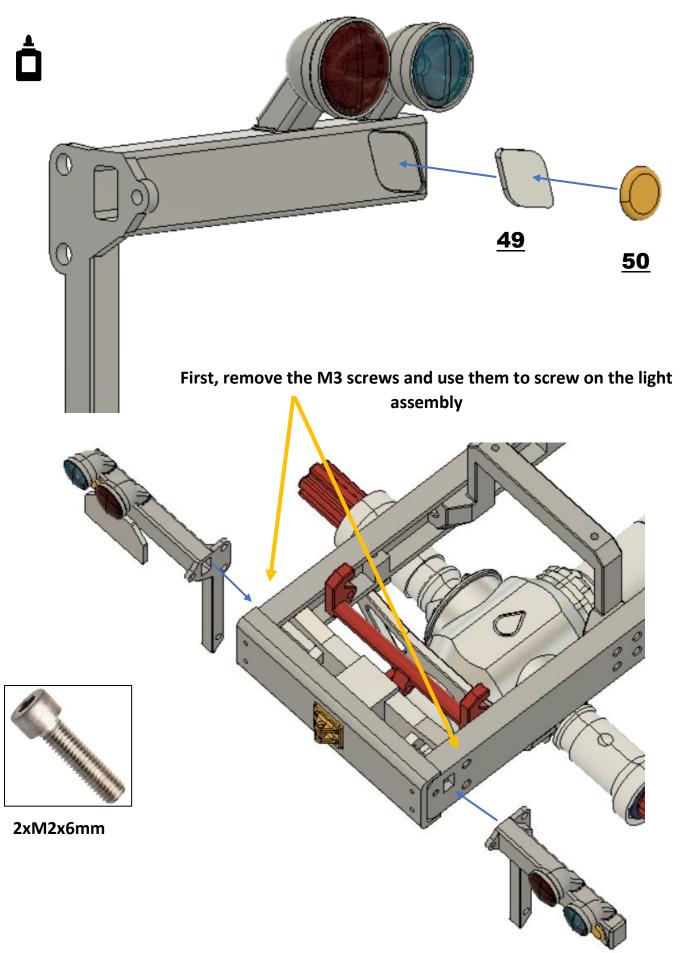


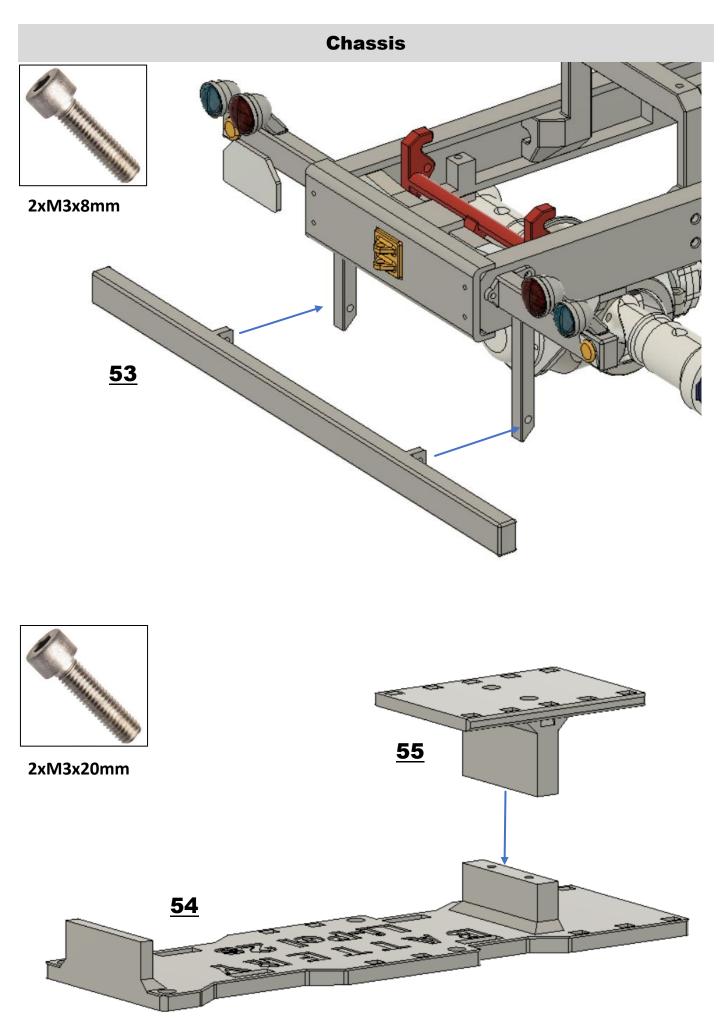
2xM3x6mm

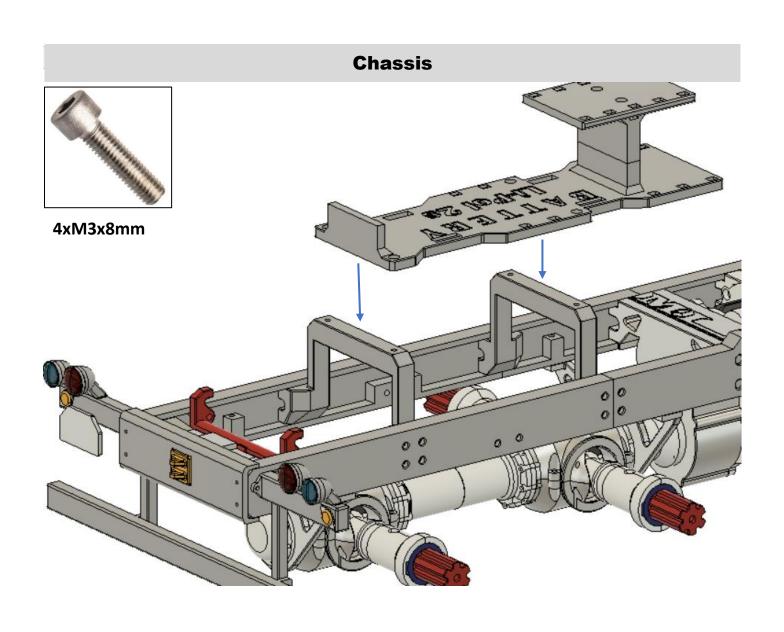


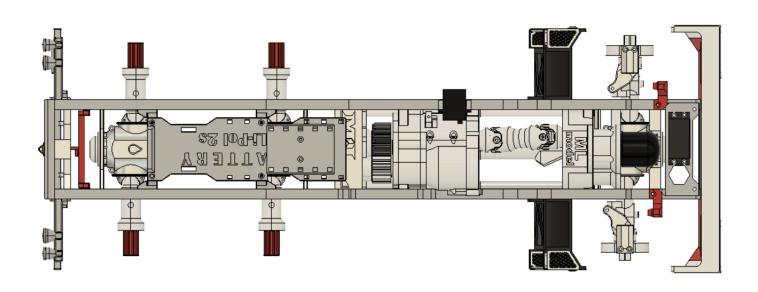


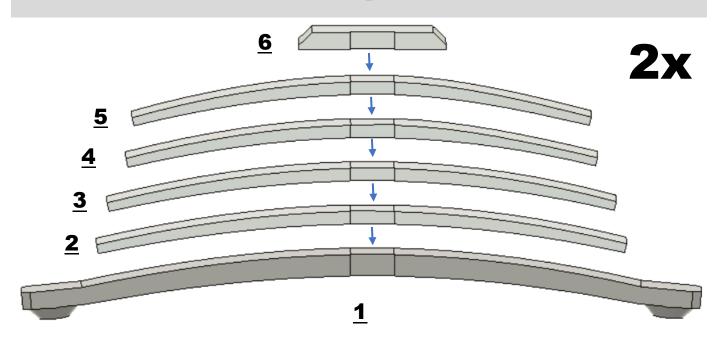


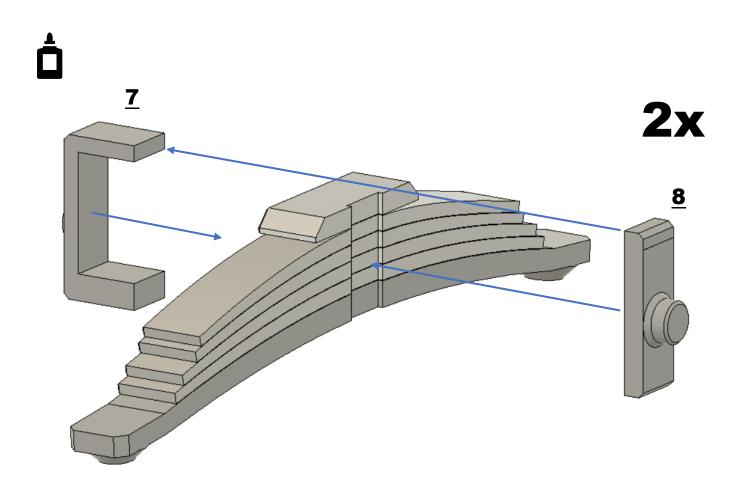


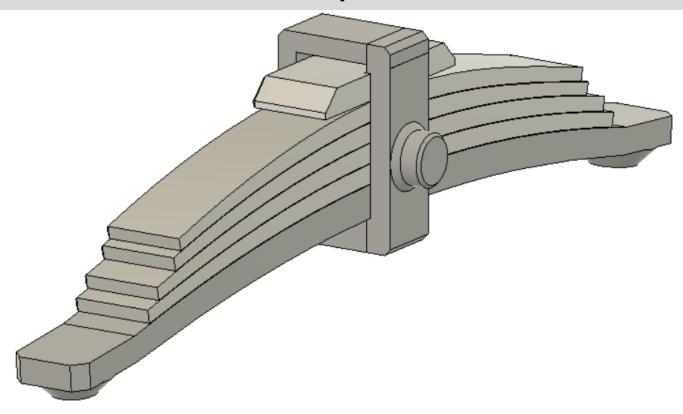


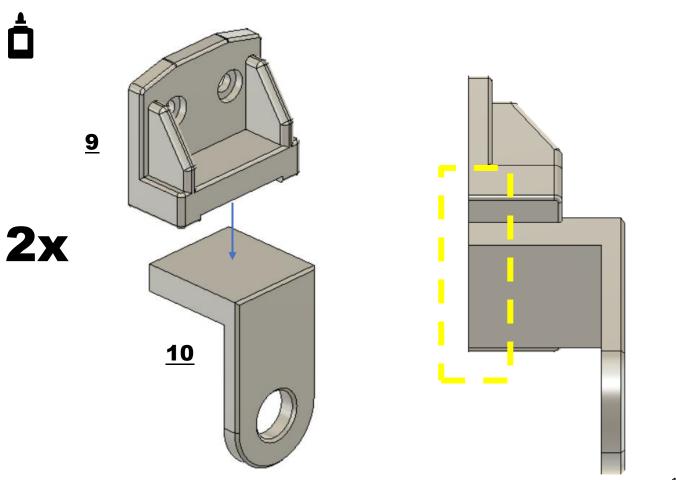


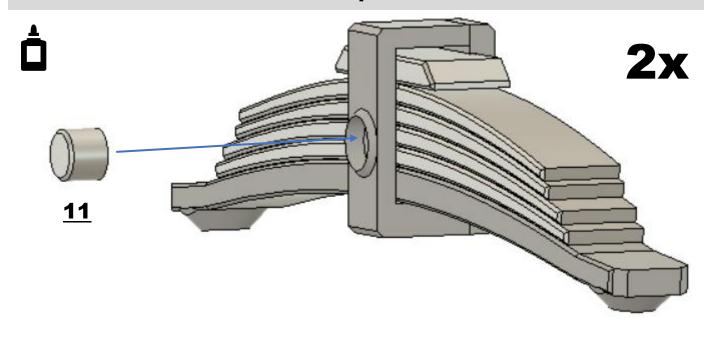


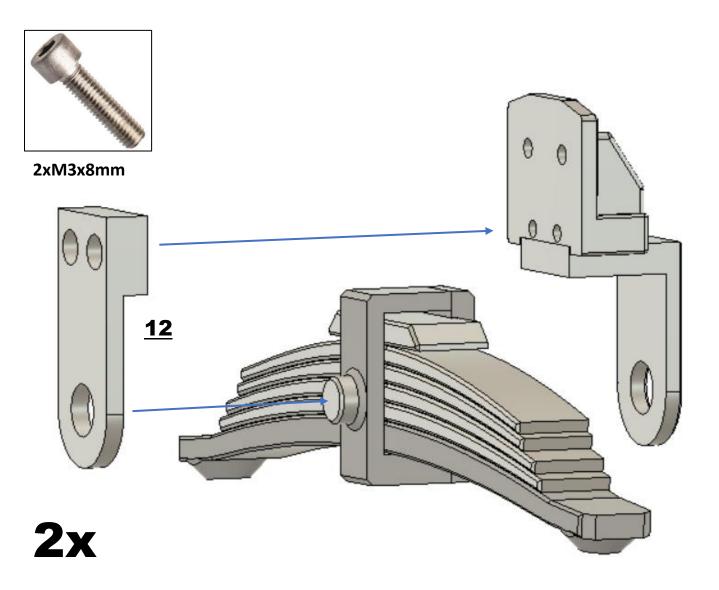


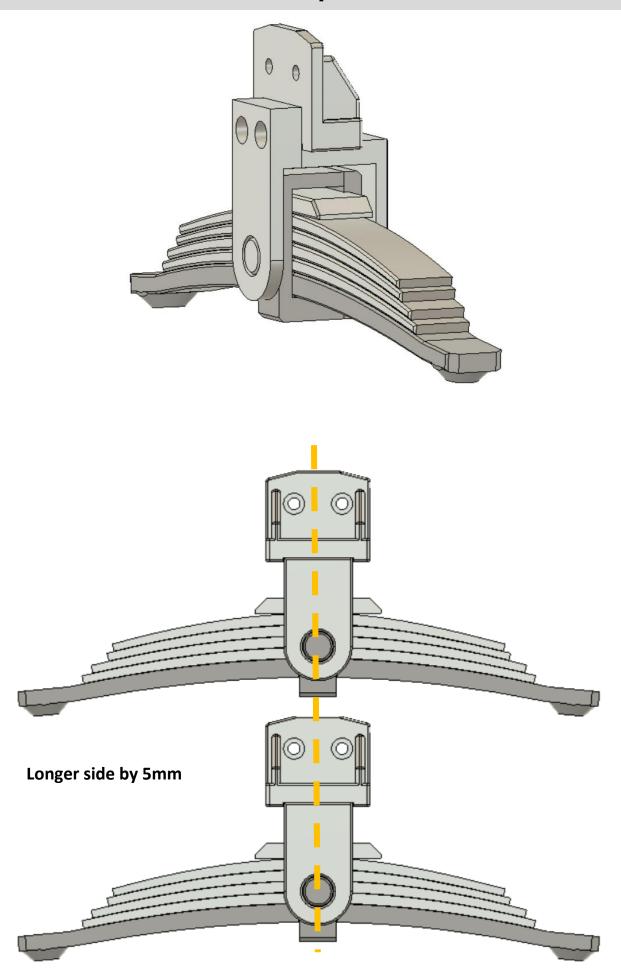


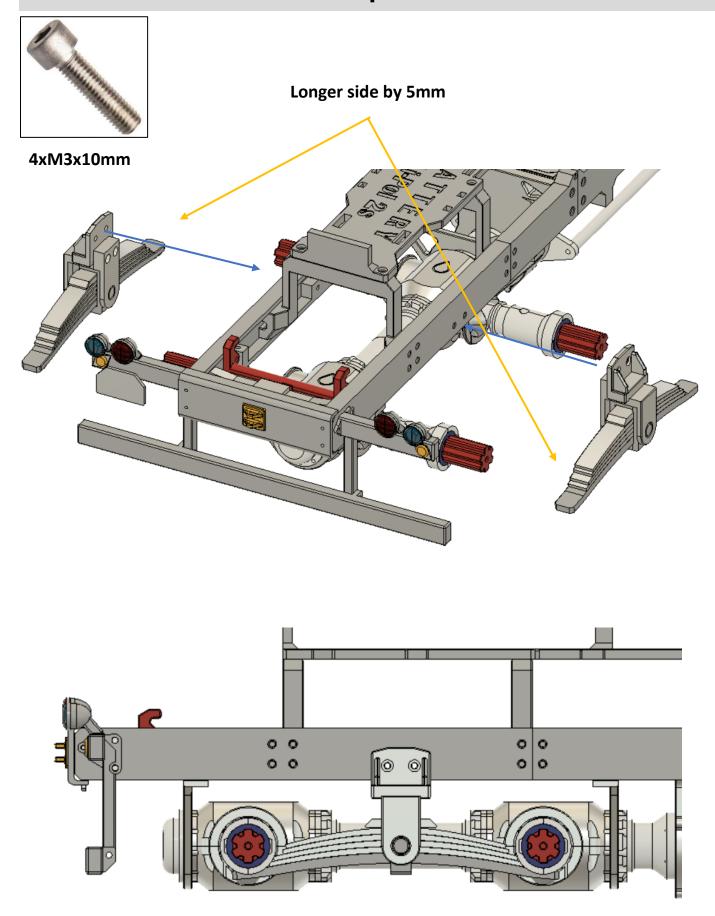


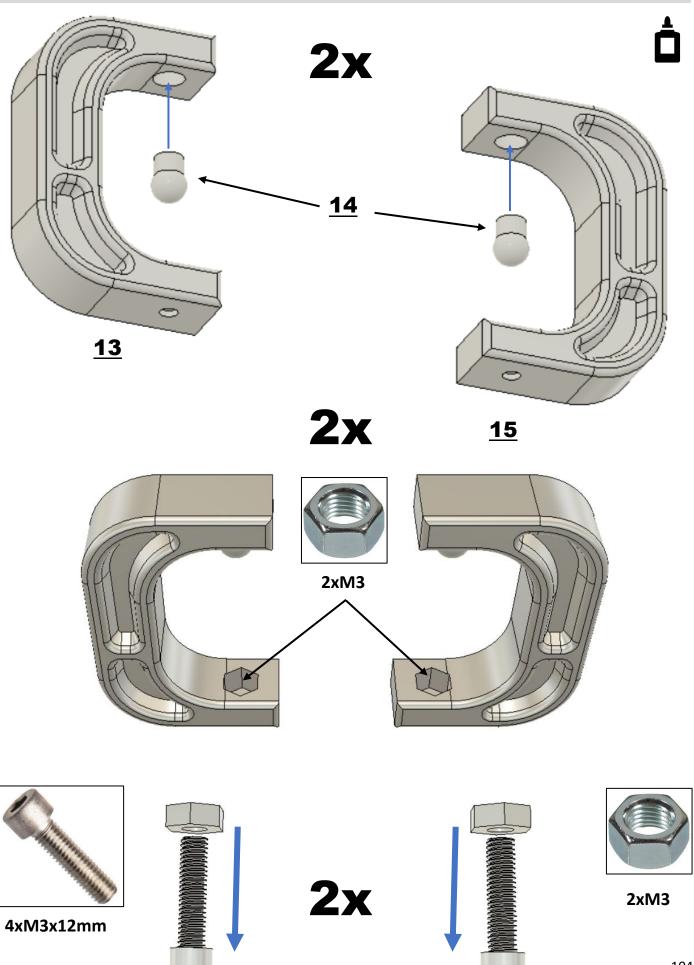


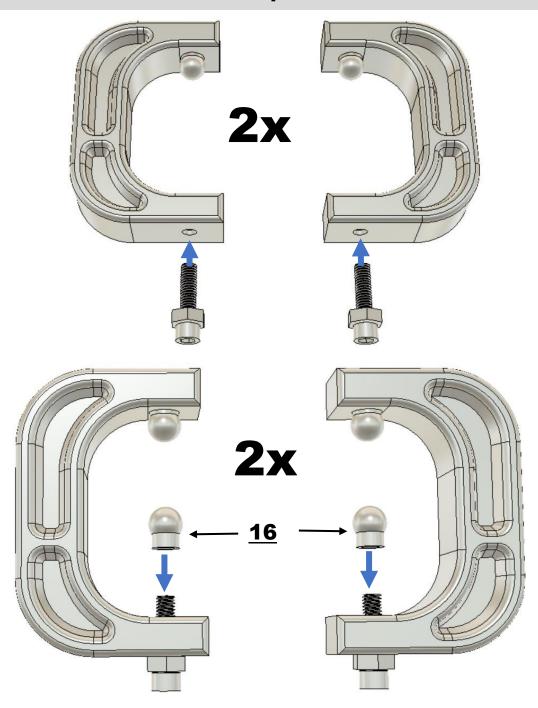






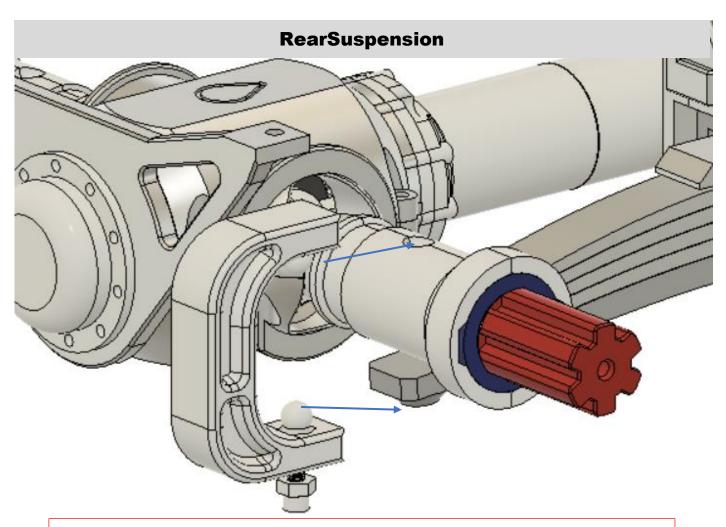






Screw parts 18 onto the screws. They are tiny parts, so you can help yourself carefully with pliers. When the parts are firmly held by the screws, loosen the screws as shown in the following figure.



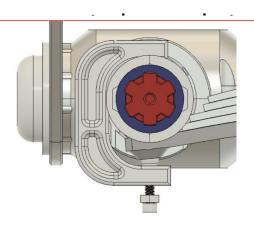


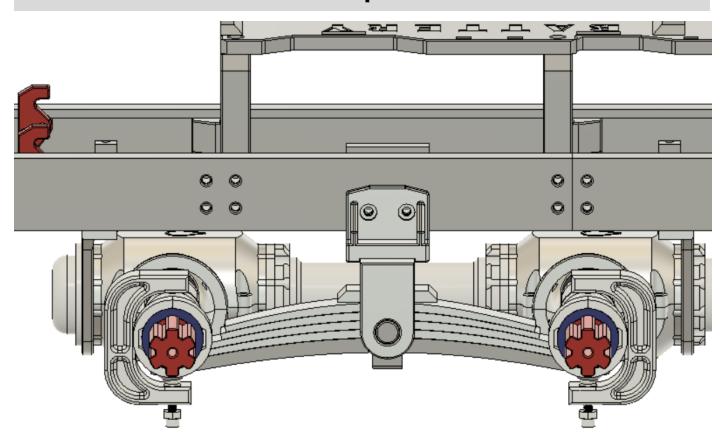
Fit "C" (part 13, 15. Hereinafter referred to as "C"). First, fit the top ball into the hole on the half axle. Press the leaf spring against the semi-axis. You have to get the bottom ball into the hole in the leaf springs. Put all 4 "C"s in their places one by one like this.

Then gradually tighten the M3 screws so that "C" does not fall out of its own accord, but that the half-axis swing is maintained as much as possible. If you tighten the screws too much, you will limit the swing of the semi-axis, if not enough, "C" will fall out by itself in a certain position.

When you find the correct position of the screws, butt the M3 nuts against each other.

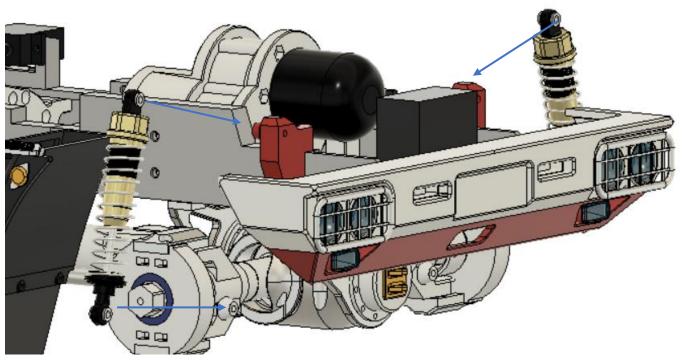
Try the half axis swing again.

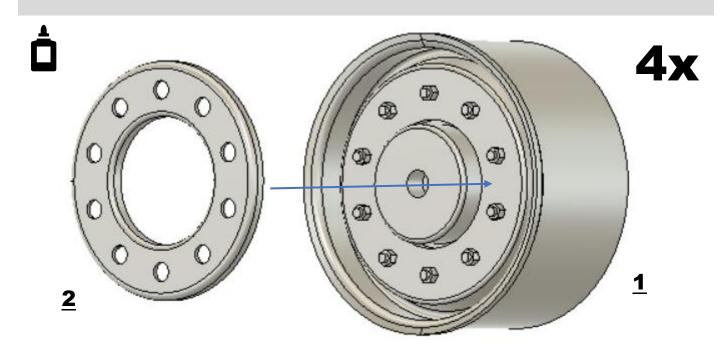


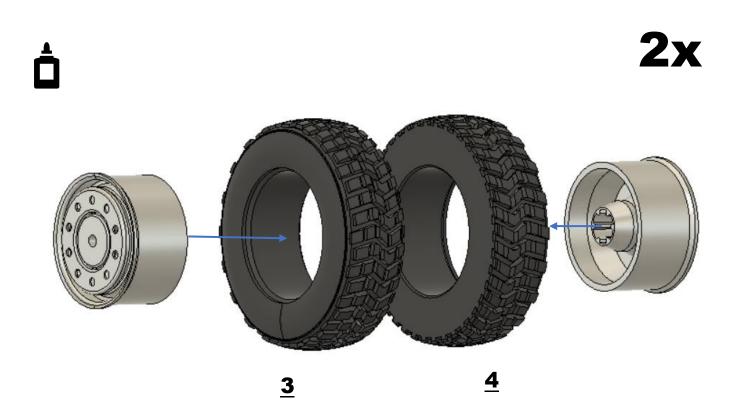


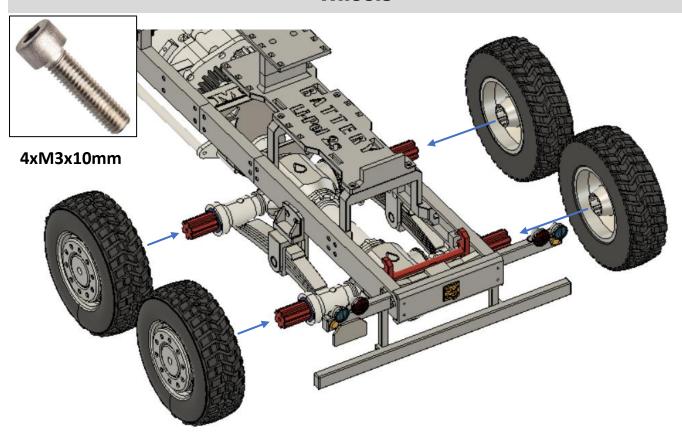
## **FrontSuspension**

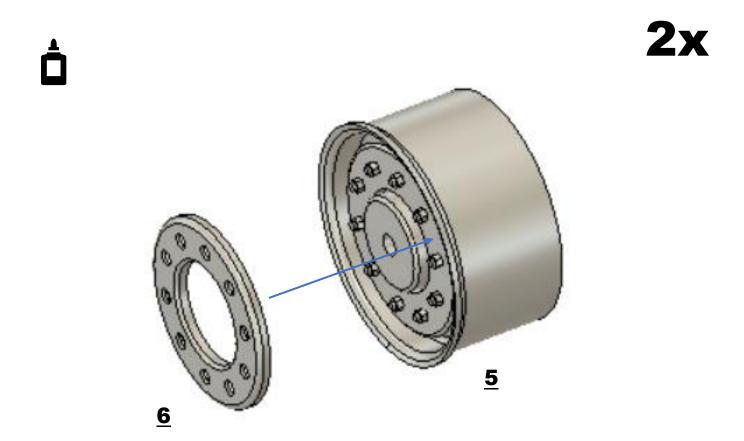
Screw the front dampers into place with M3 screws. Do not set them in any way yet. It will be set when the whole model is finished.

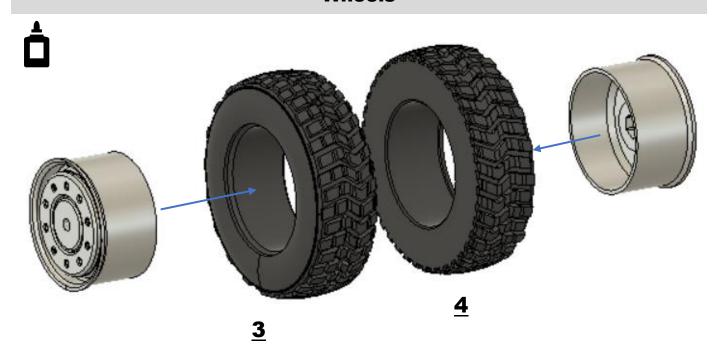


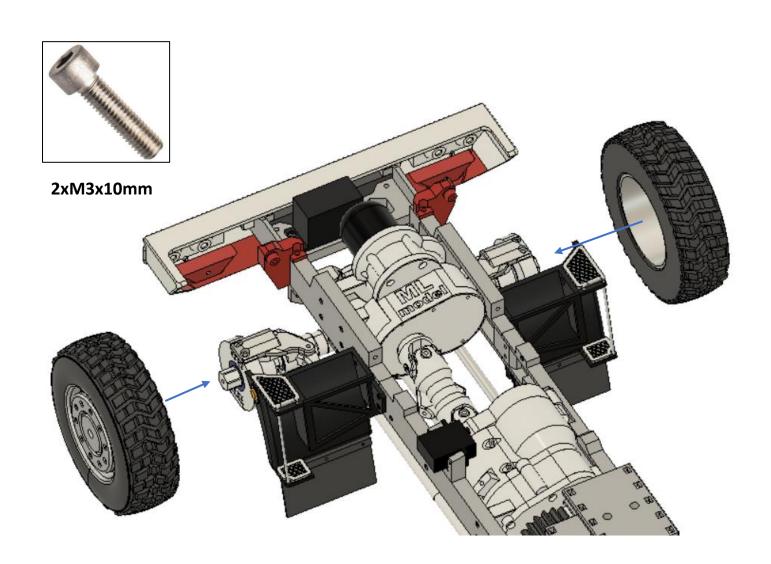


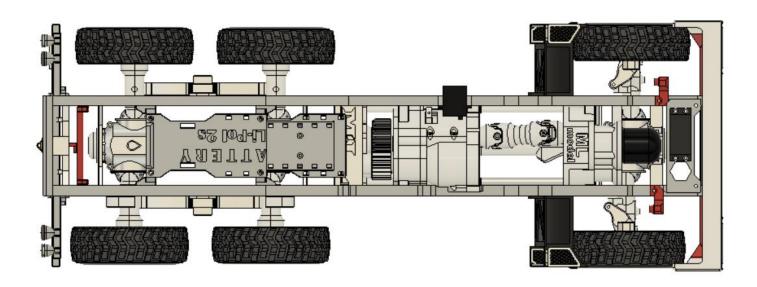


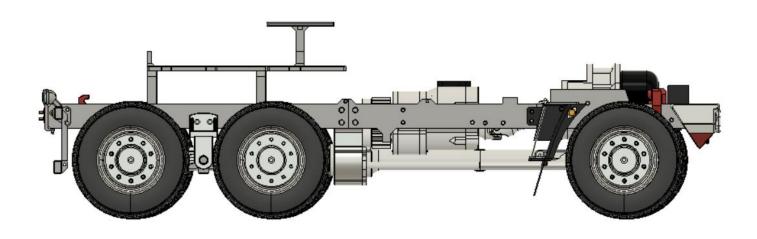




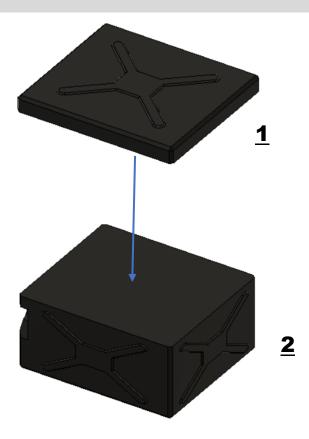




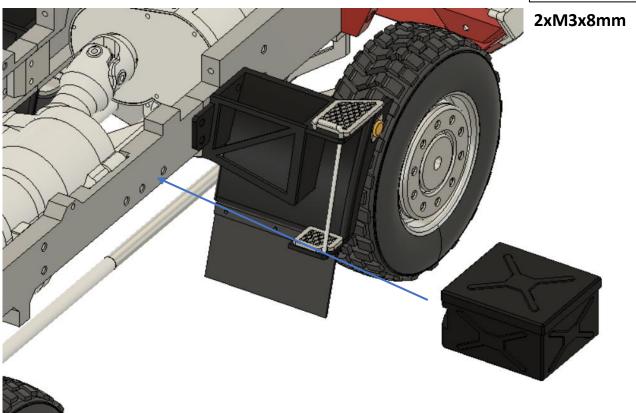


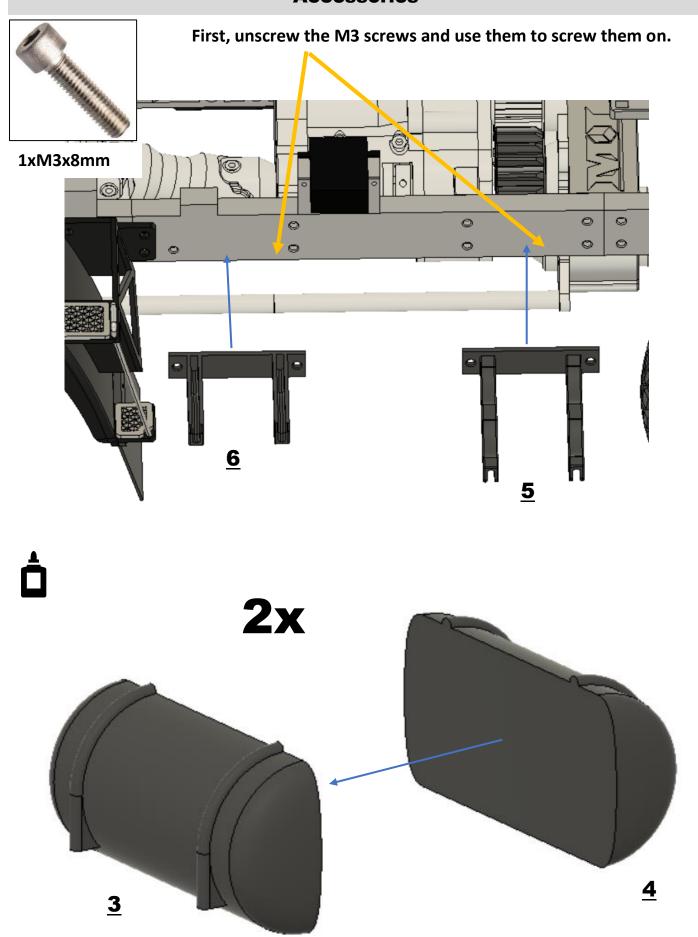


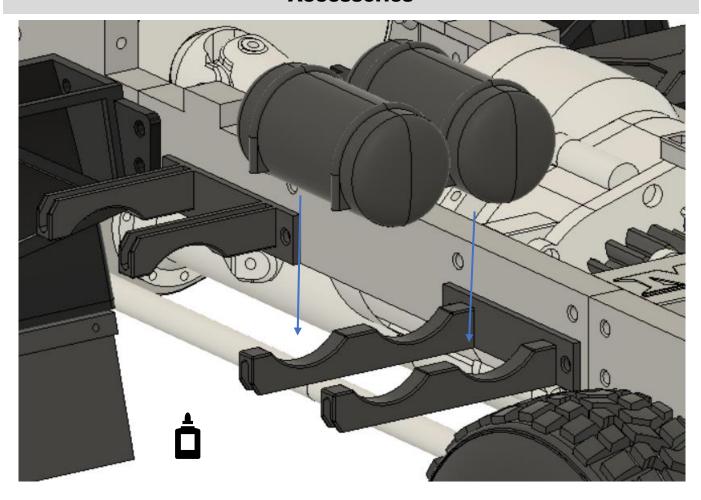


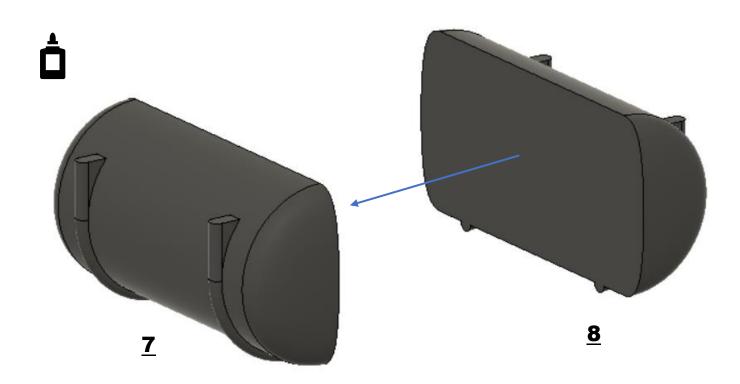


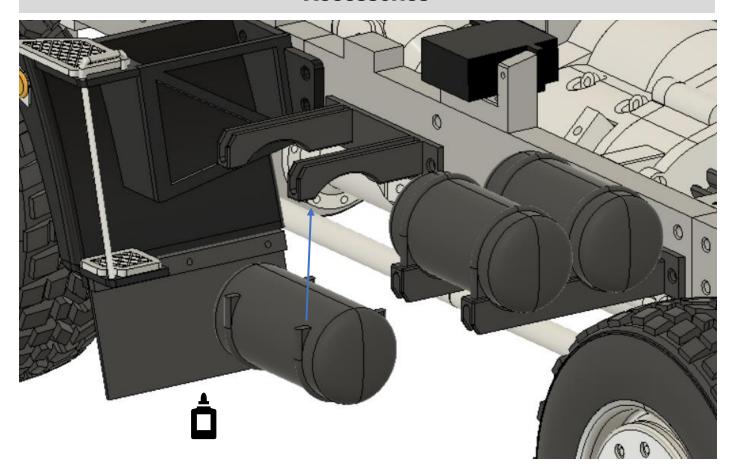


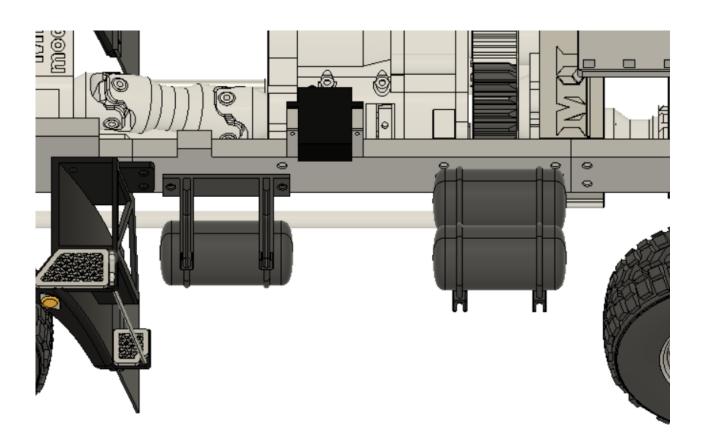


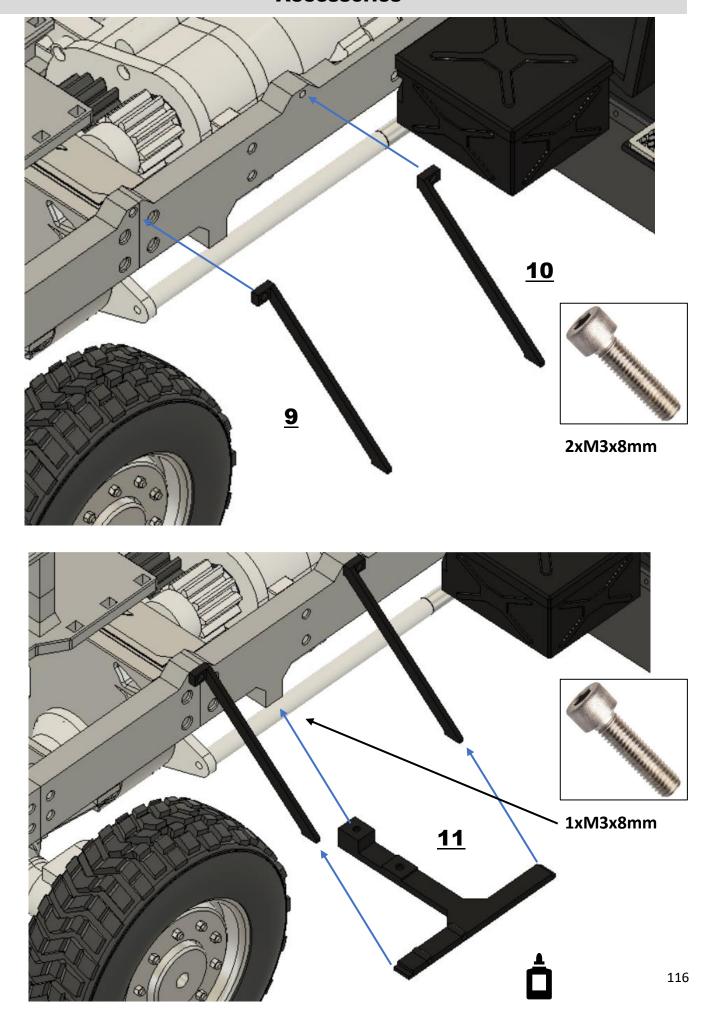


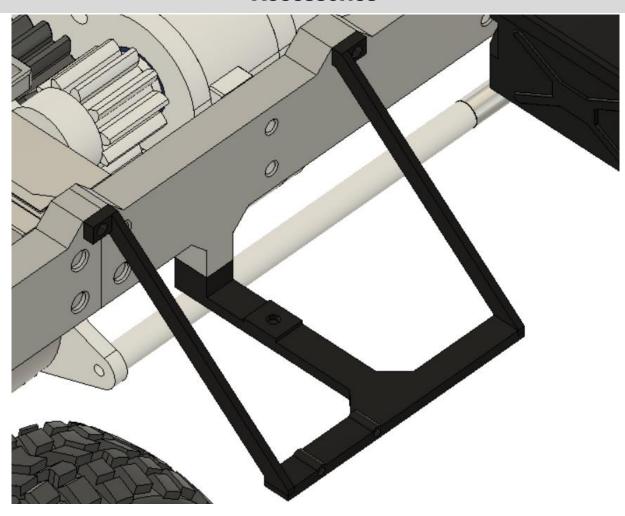


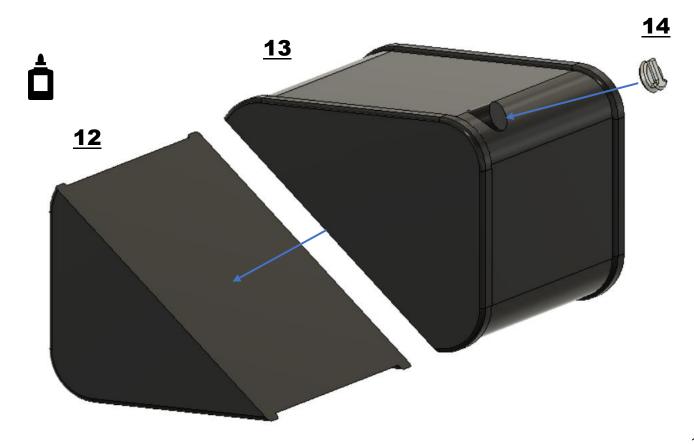


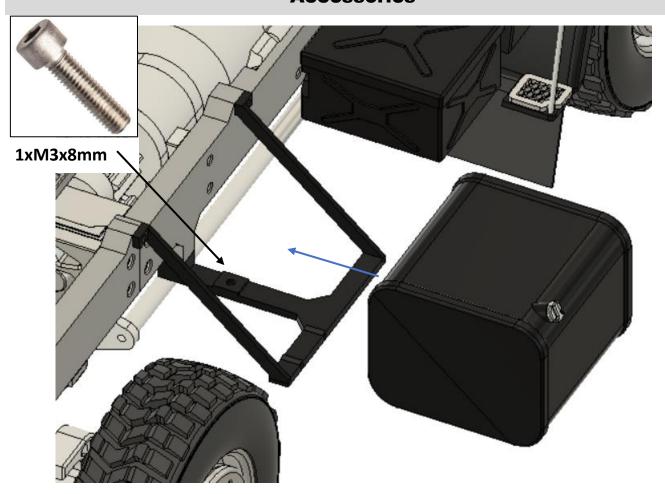


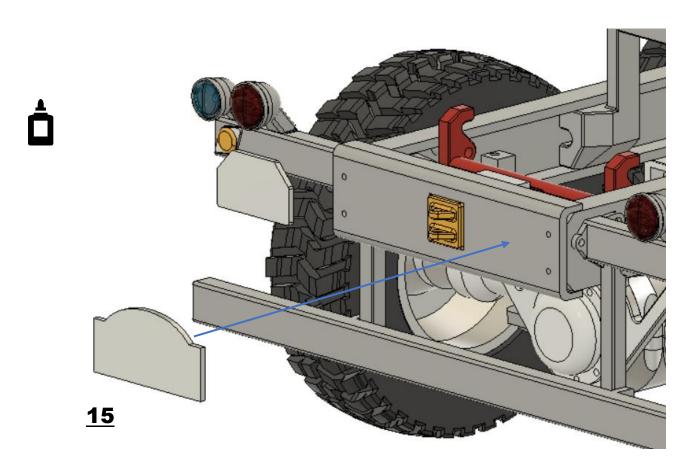




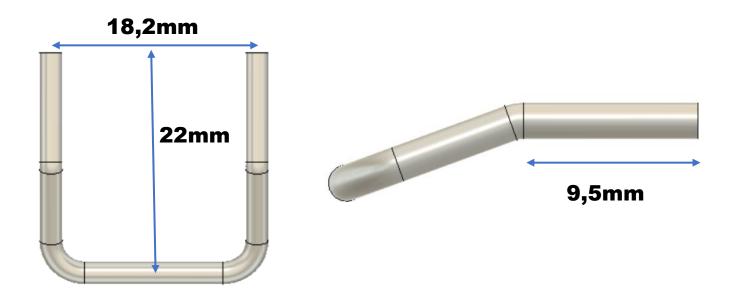


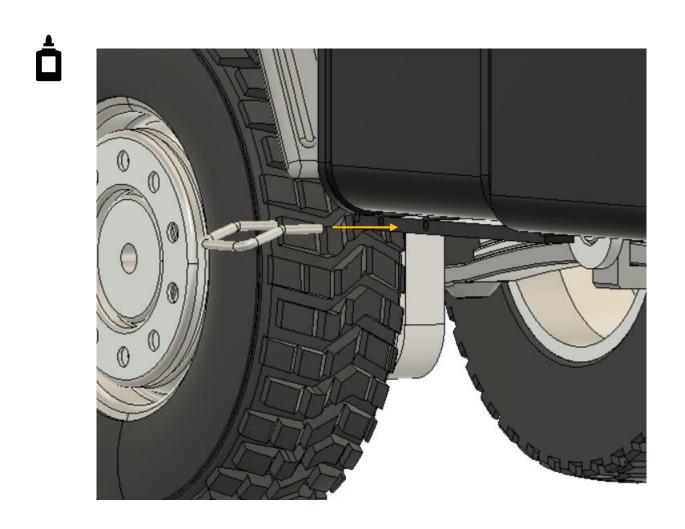


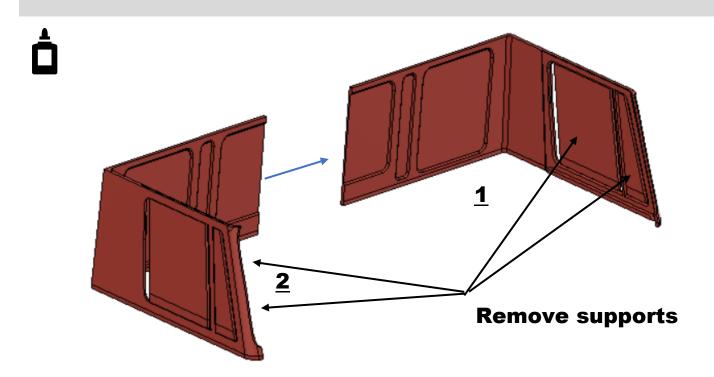


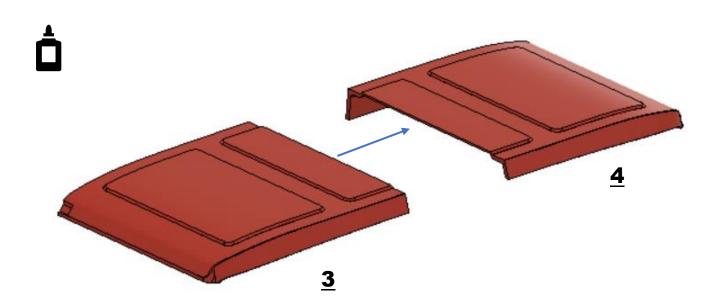


#### **Brass wire 2mm**

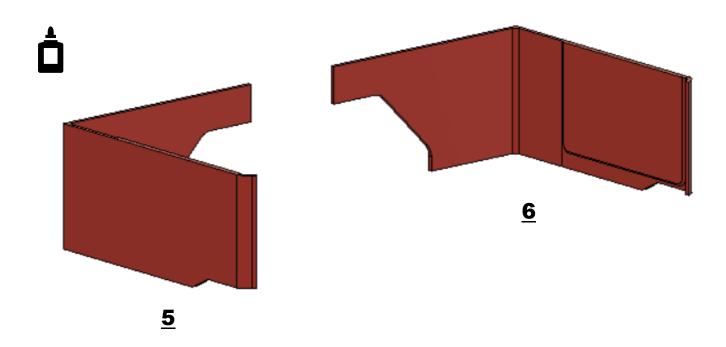


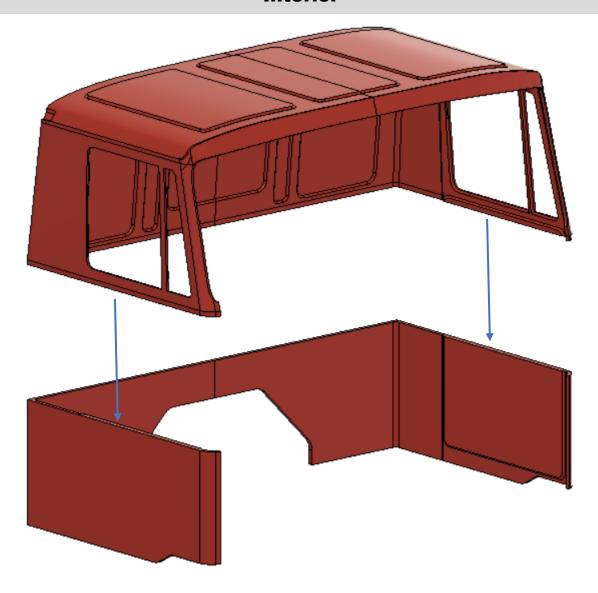


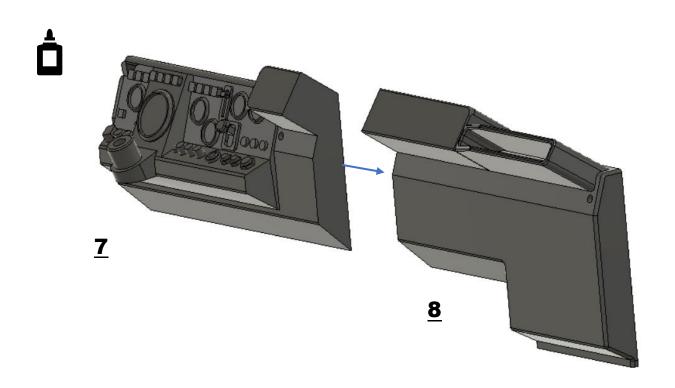


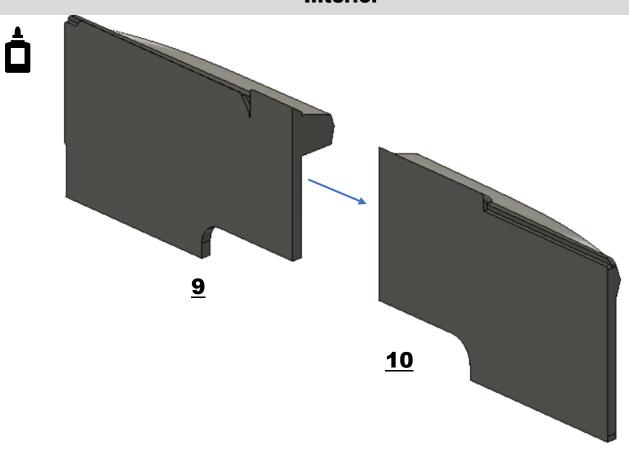


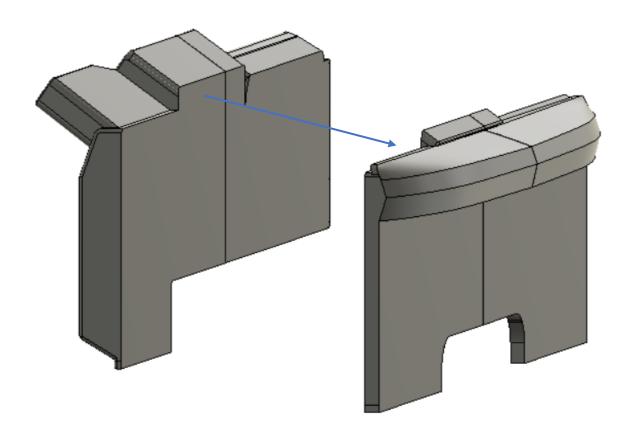




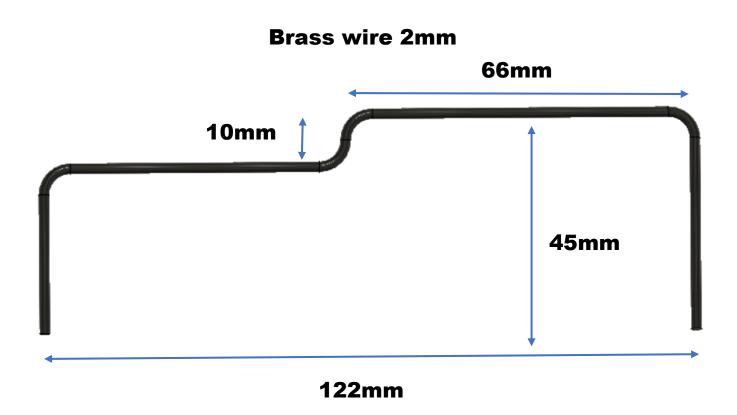


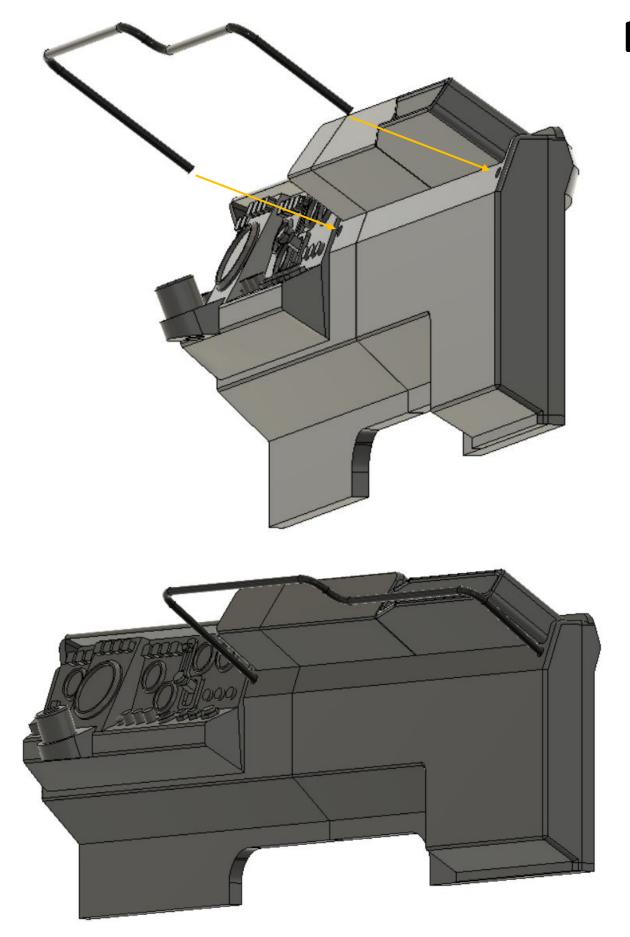






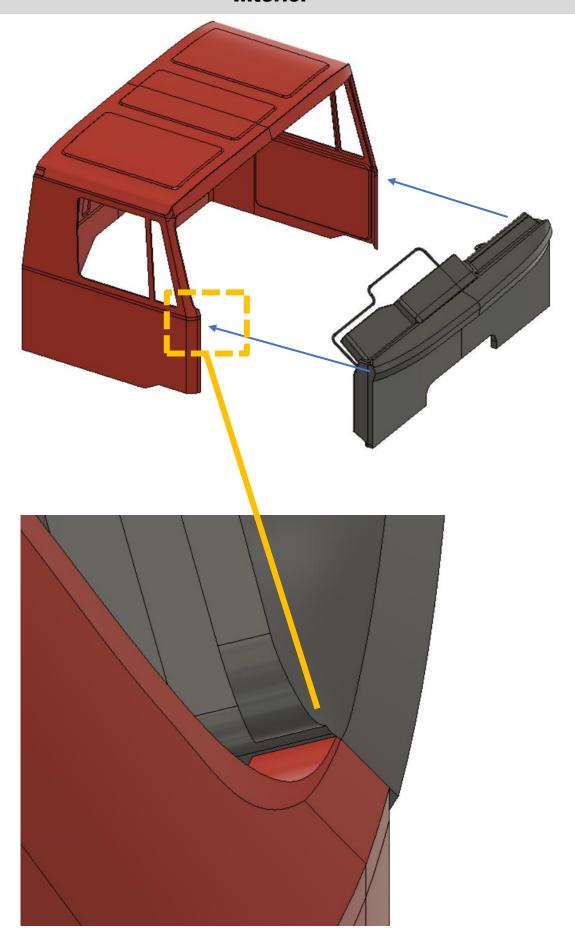


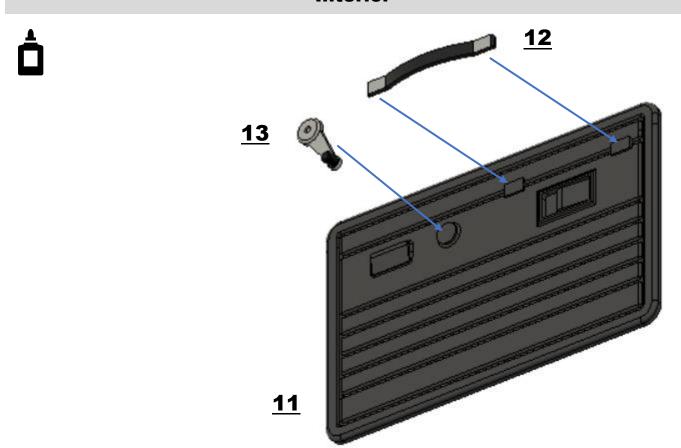


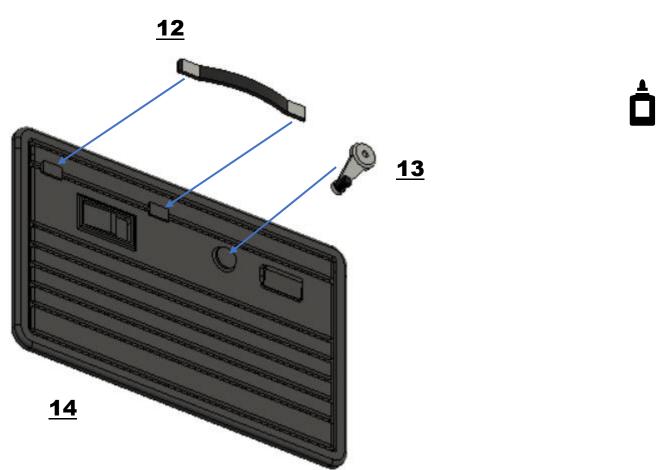


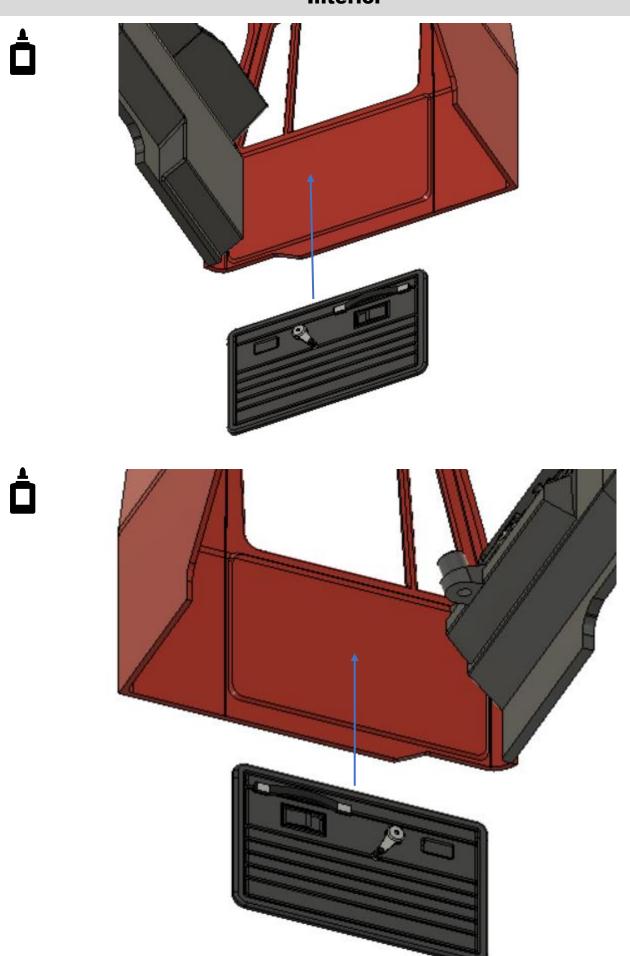


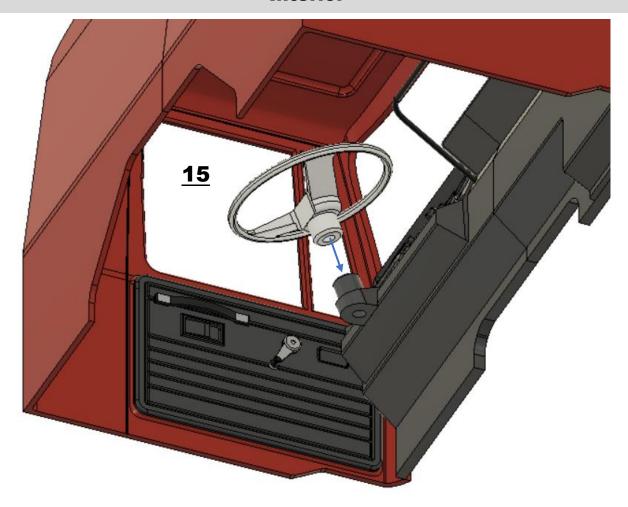


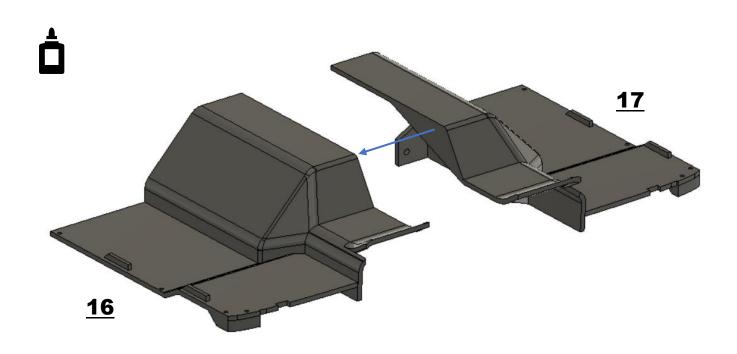


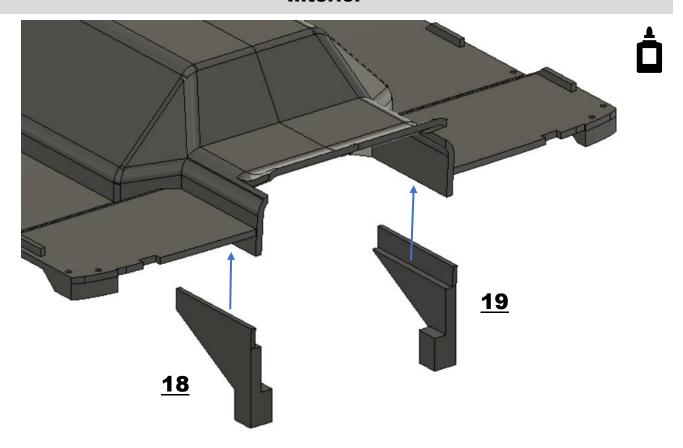


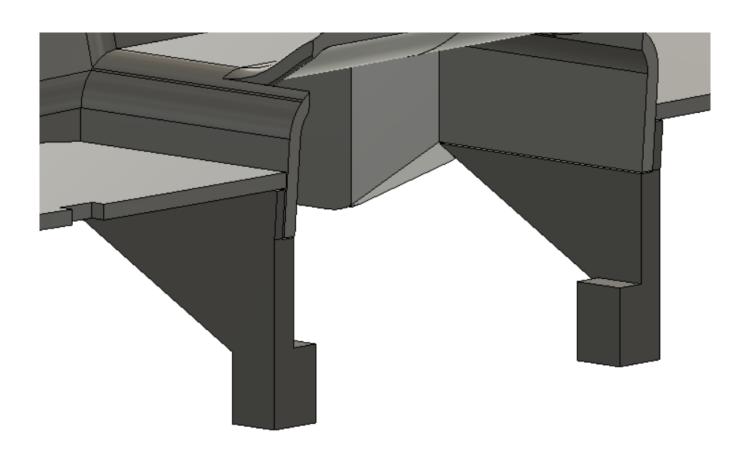


















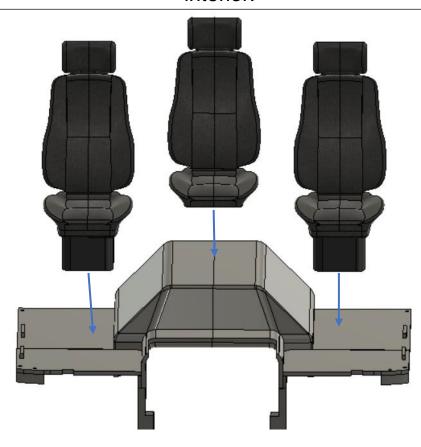




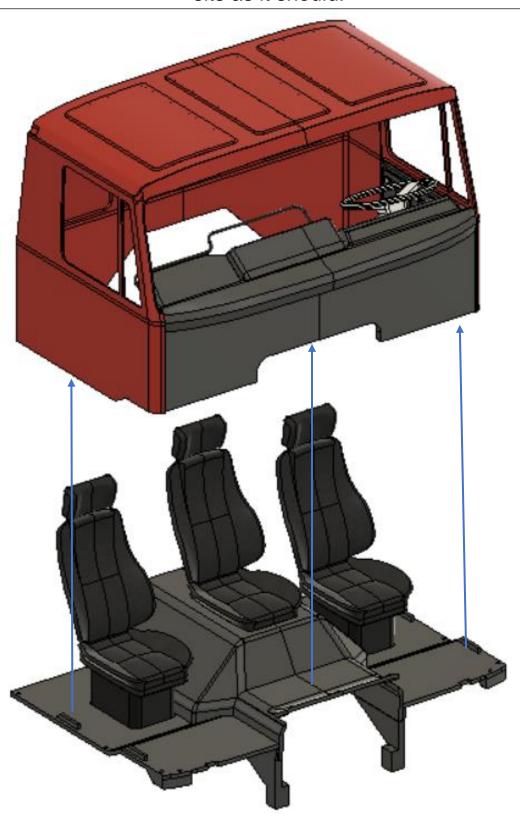


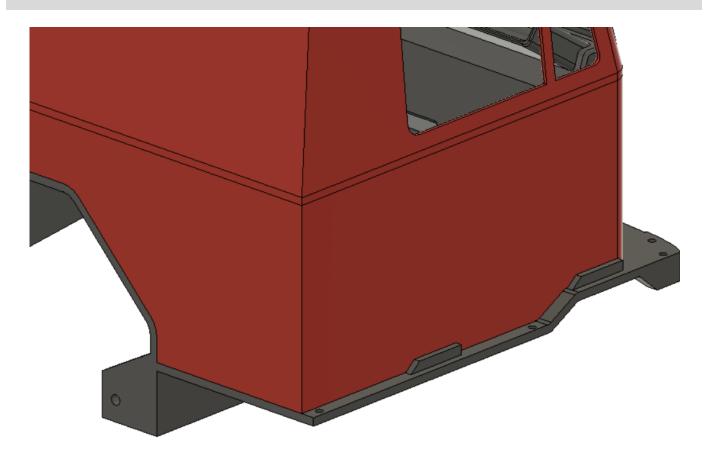
Be careful that the seats do not interfere with the fit with the rest of the interior.

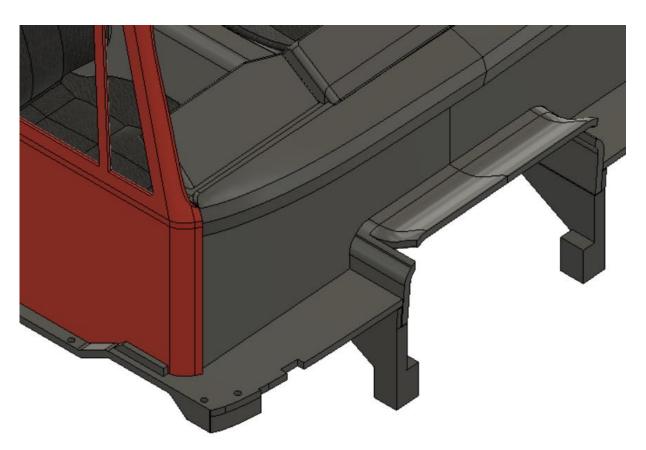


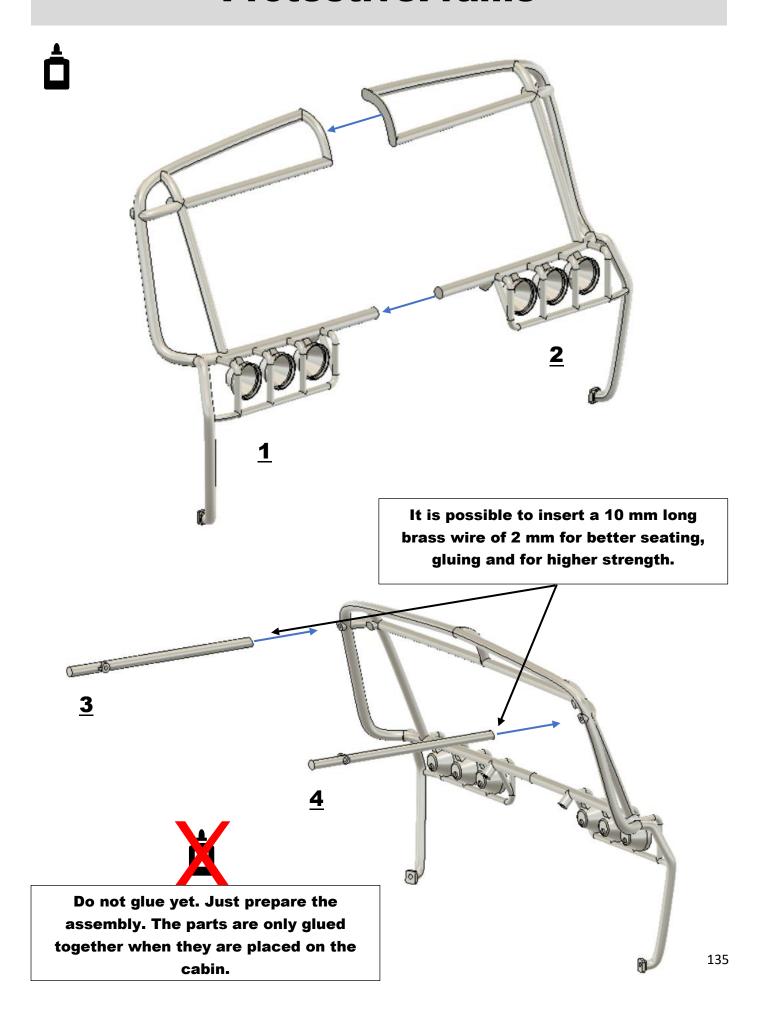


No need to glue. Just make sure that everything fits everywhere and sits as it should.

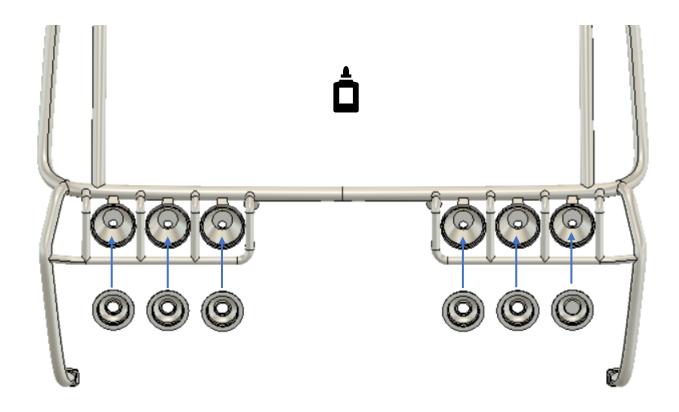


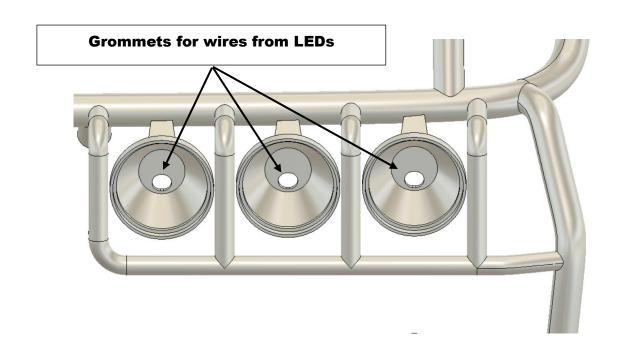






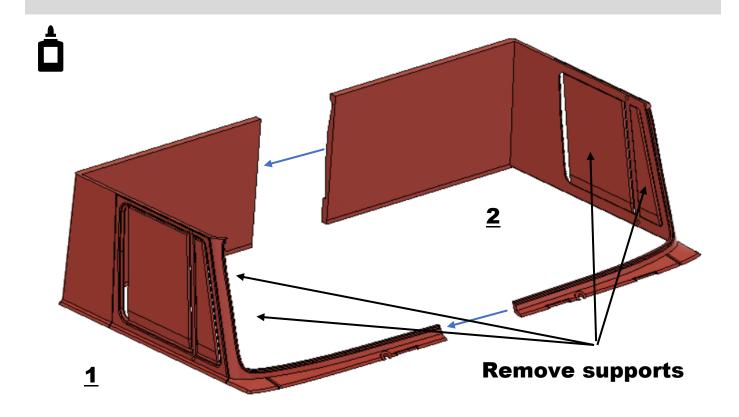


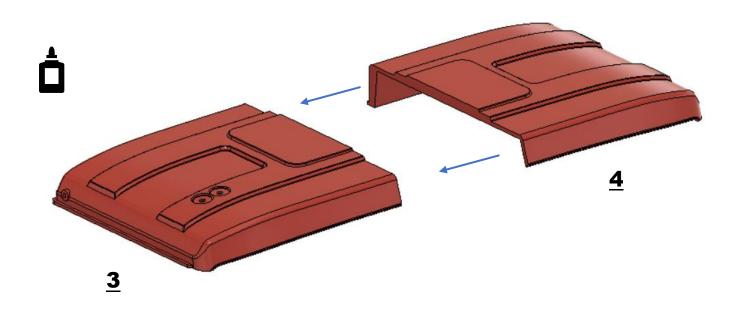




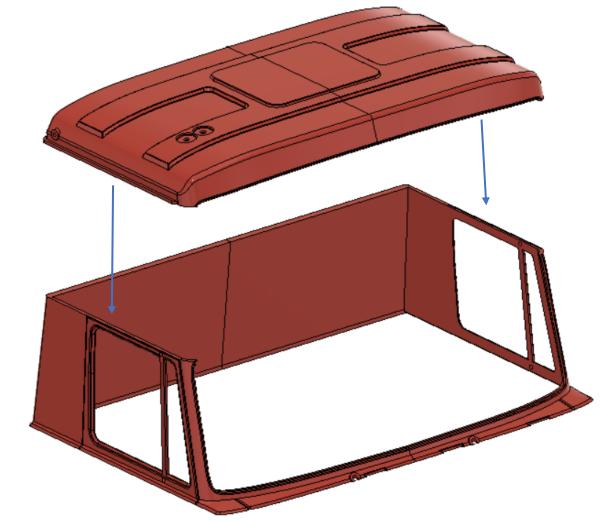


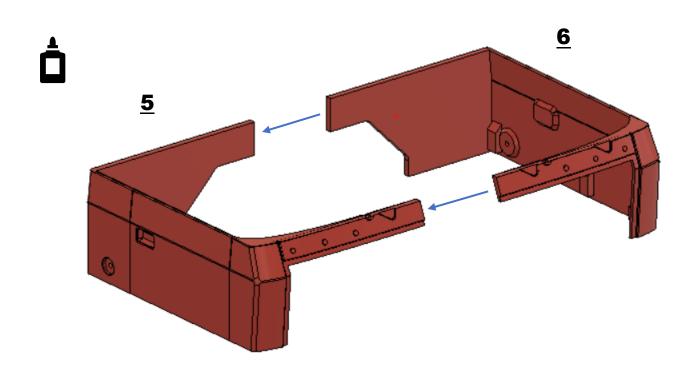




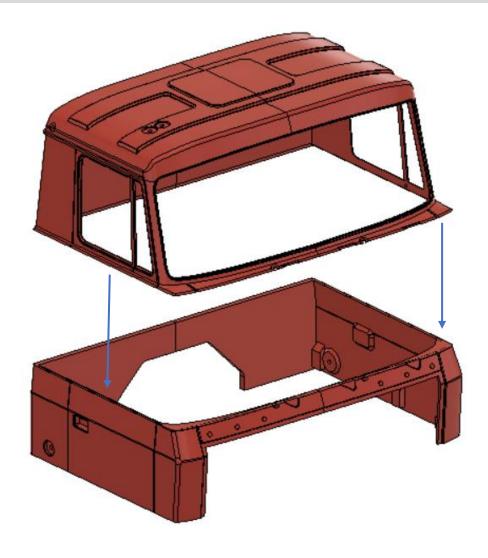




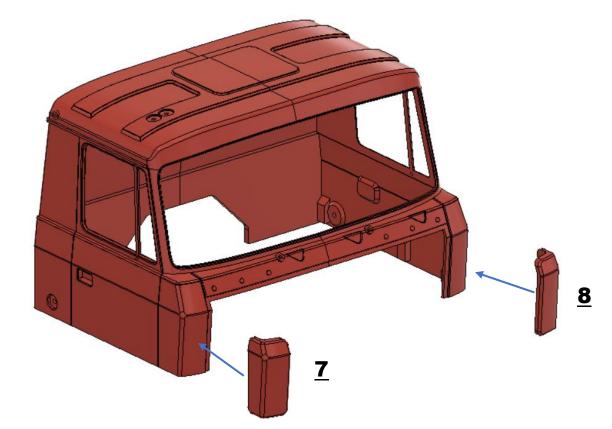


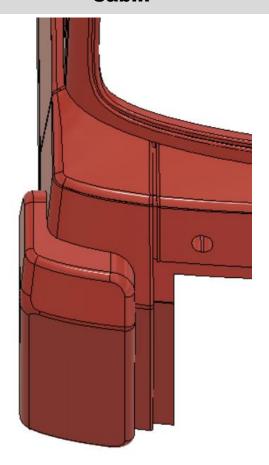




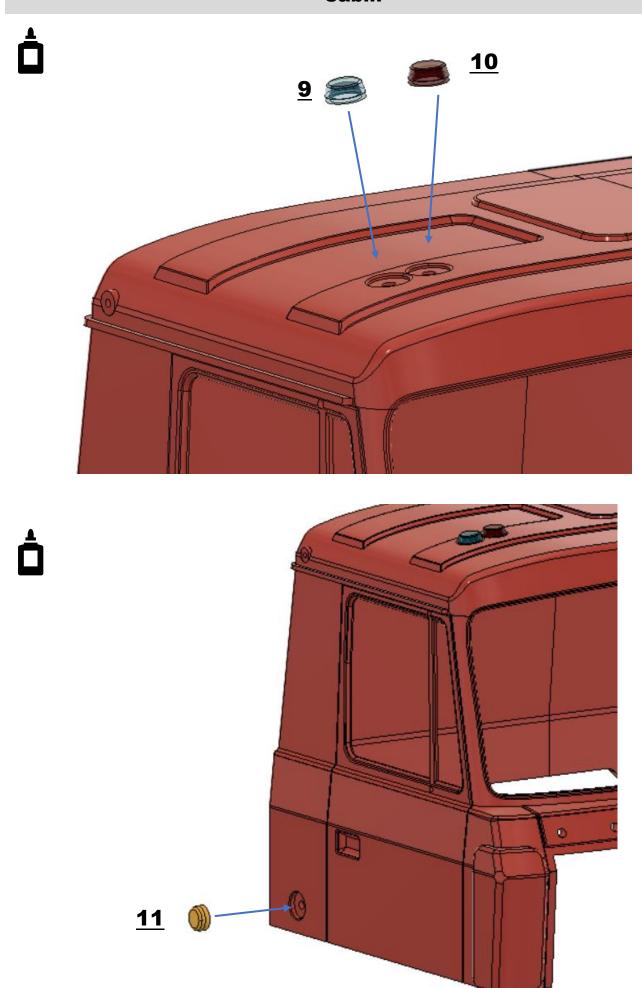


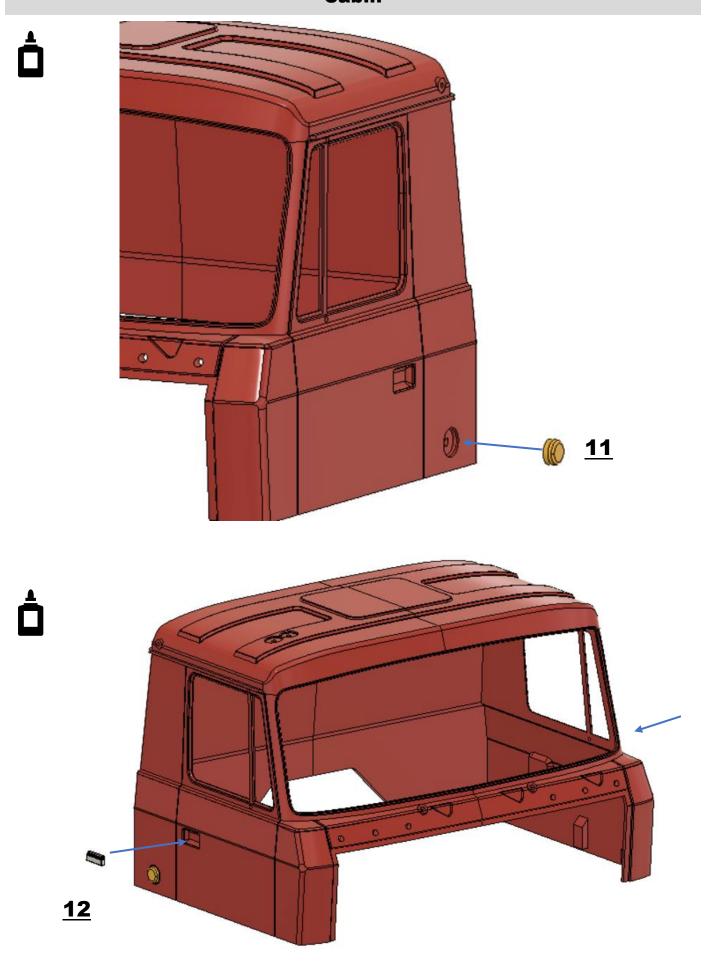












If you plan to paint the decals with clear varnish, now is a good time to do it. The next step is the windows and it would be very complicated to paint the decals later. If you don't plan to, continue with the next step.

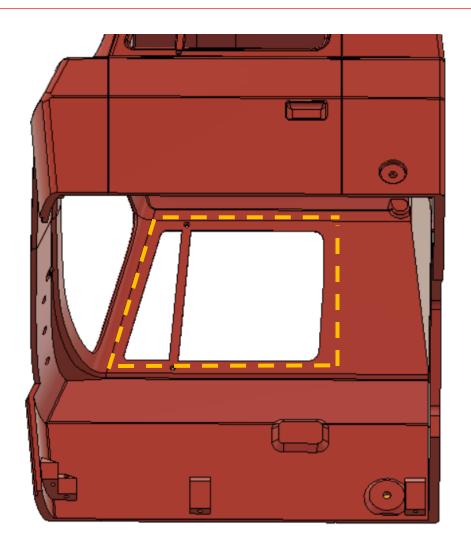
Tape the windows. Enjoy it

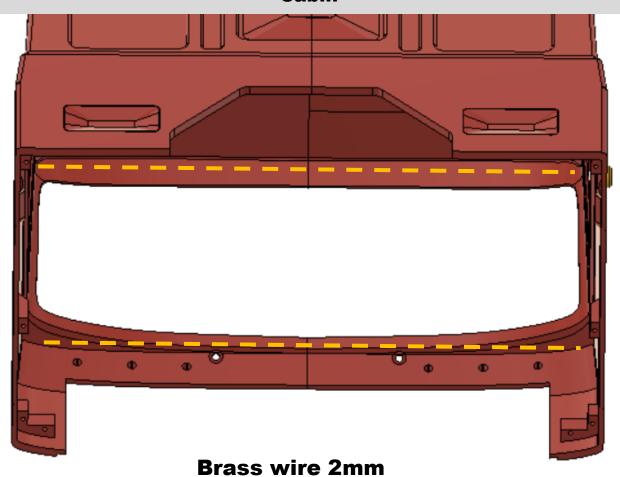
DUROFOL 0.2mm.

Glue points and precisely. Be careful.

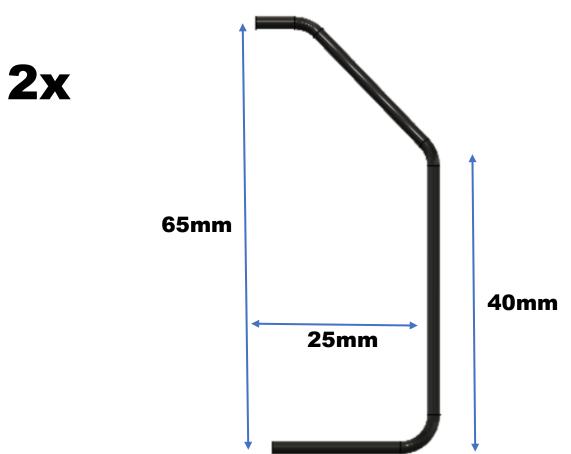
Try not to make any window

it didn't protrude unnecessarily and so that the glue didn't flow where it shouldn't.



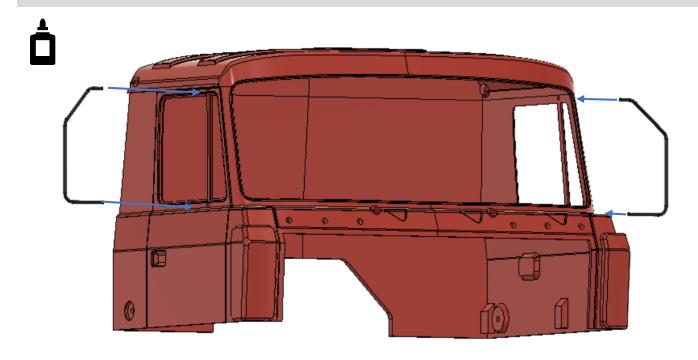


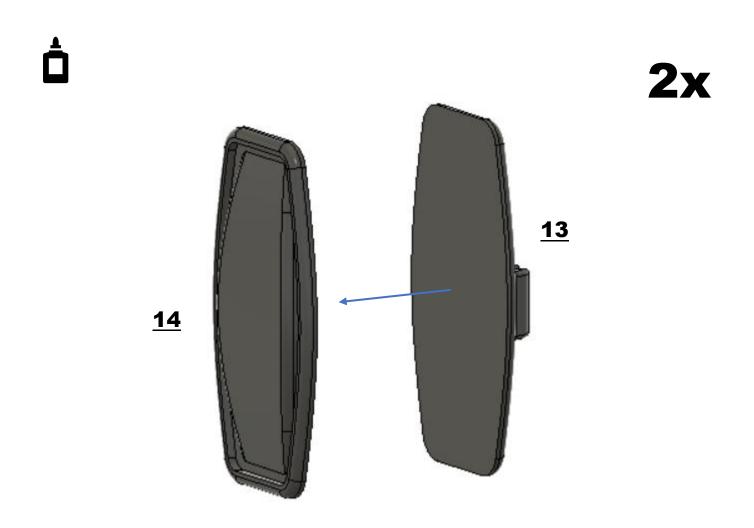
#### 210.00 Will 21111



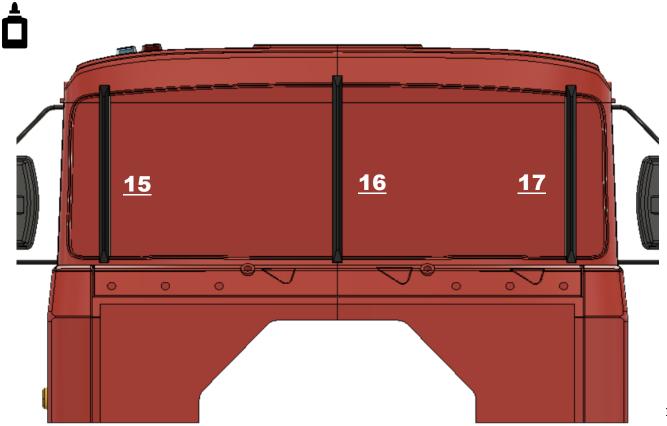


Passenger side

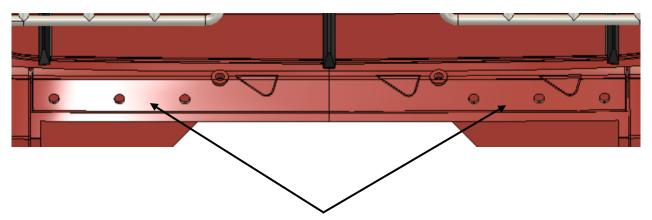








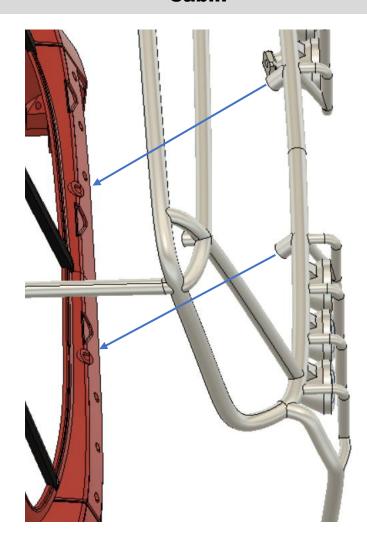


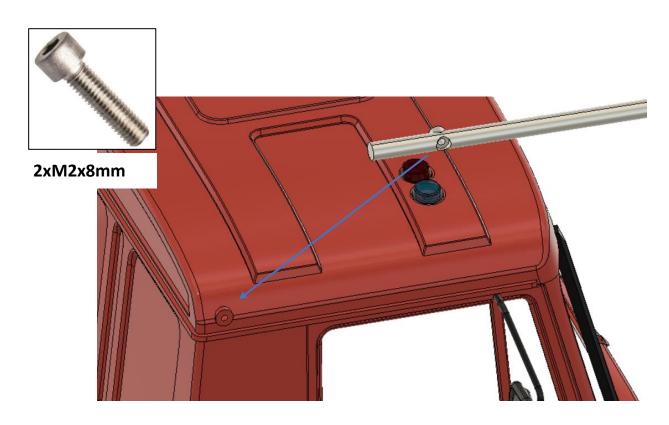


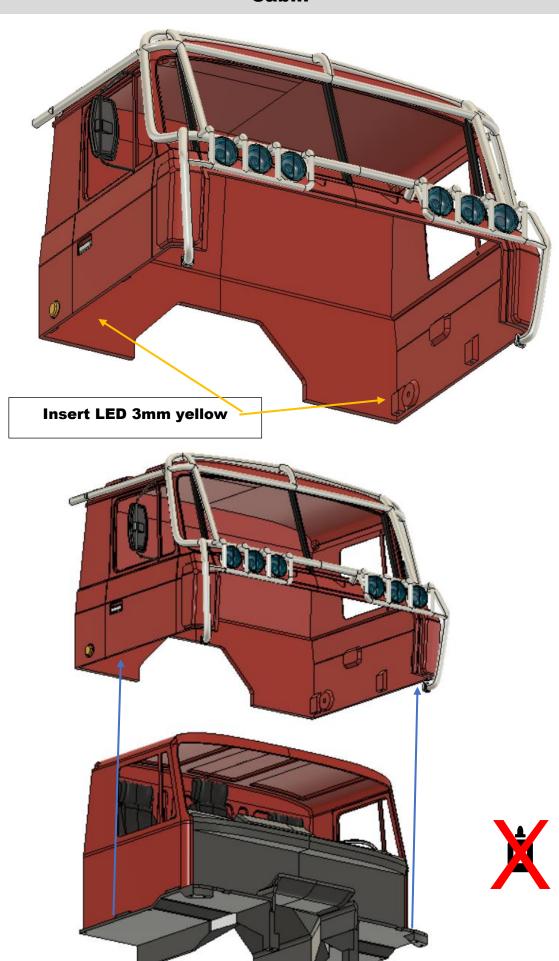
**Grommets for wires from LEDs** 

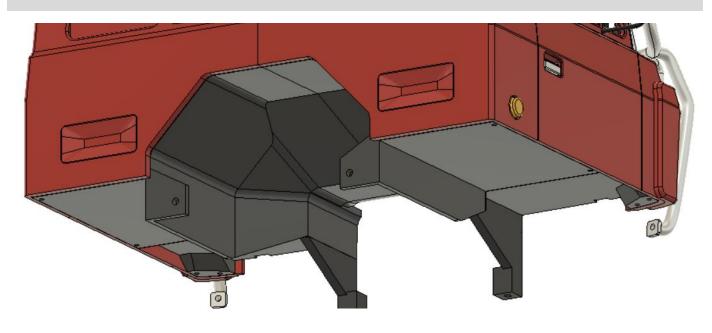


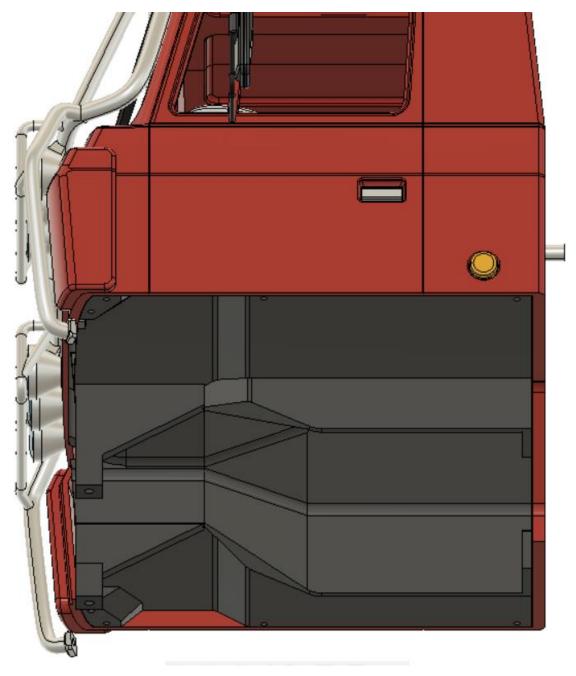
2xM3x8mm

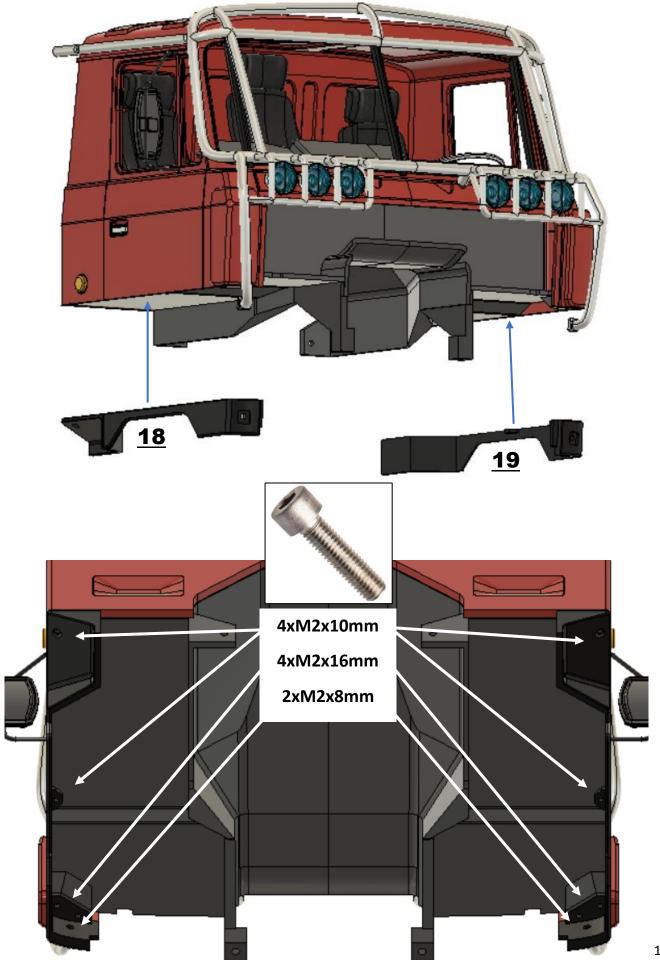


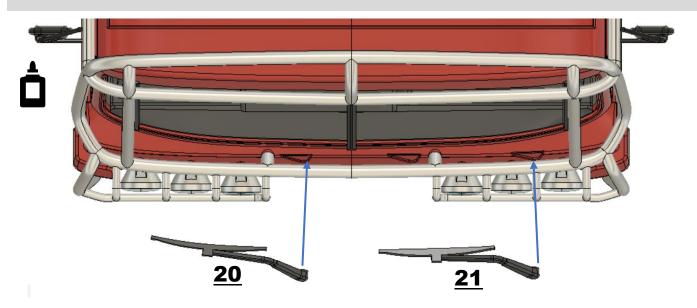




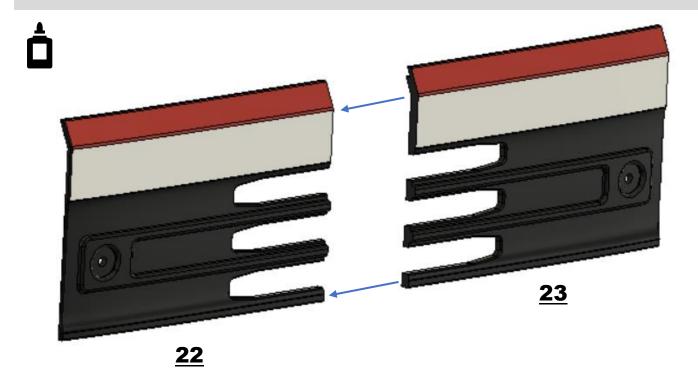


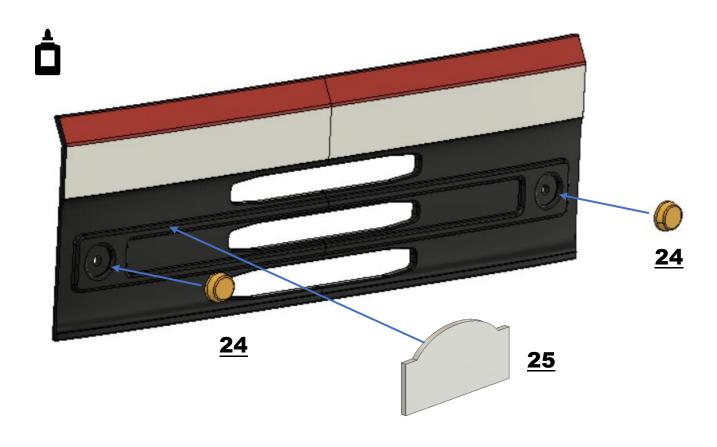


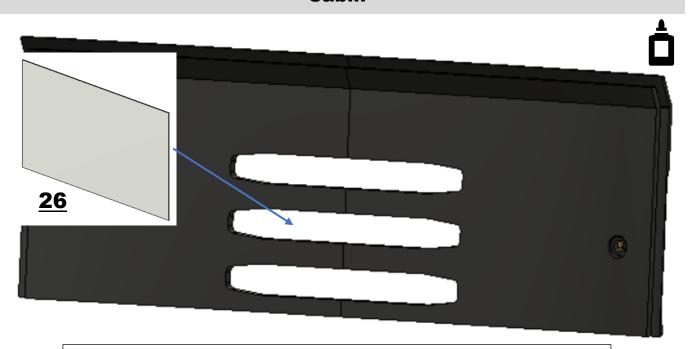










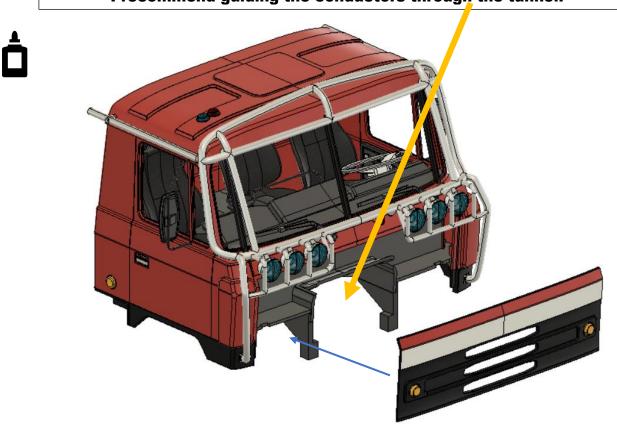


Insert LED 3mm yellow.

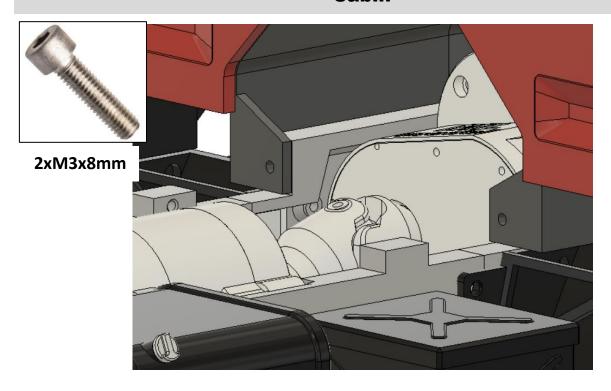
Leave the LED legs a little longer and bend them upwards or downwards. Place the part in place and check that the LED is not obstructing the seating.

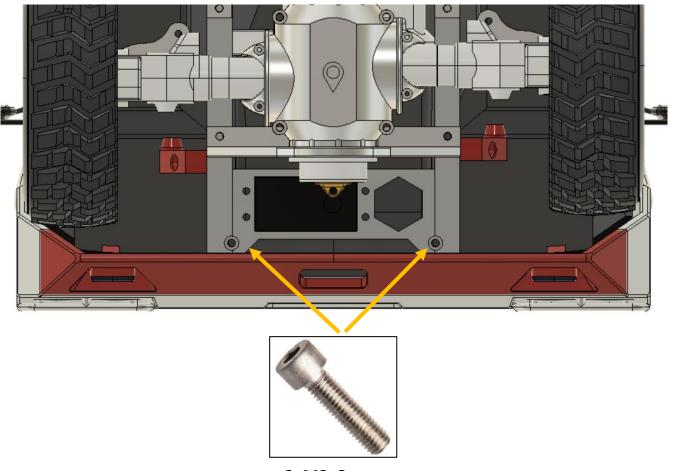
For better access to the wires, I recommend gluing the front mask when you think about where you will lead all the wires. And it is also a good idea to settle the stickers first (in the case of varnishing)

I recommend guiding the conductors through the tunnel.



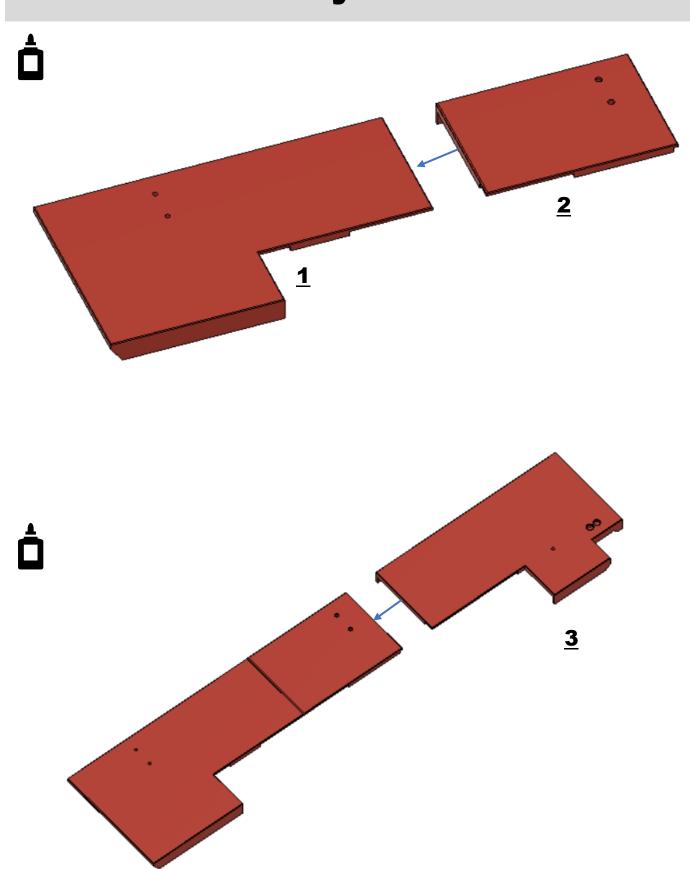


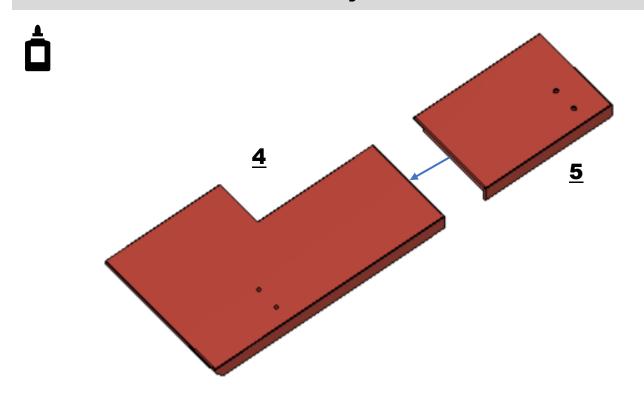


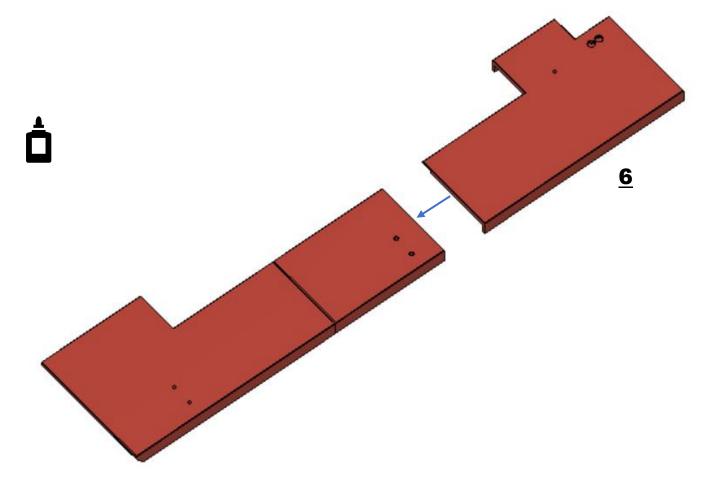


2xM3x8mm

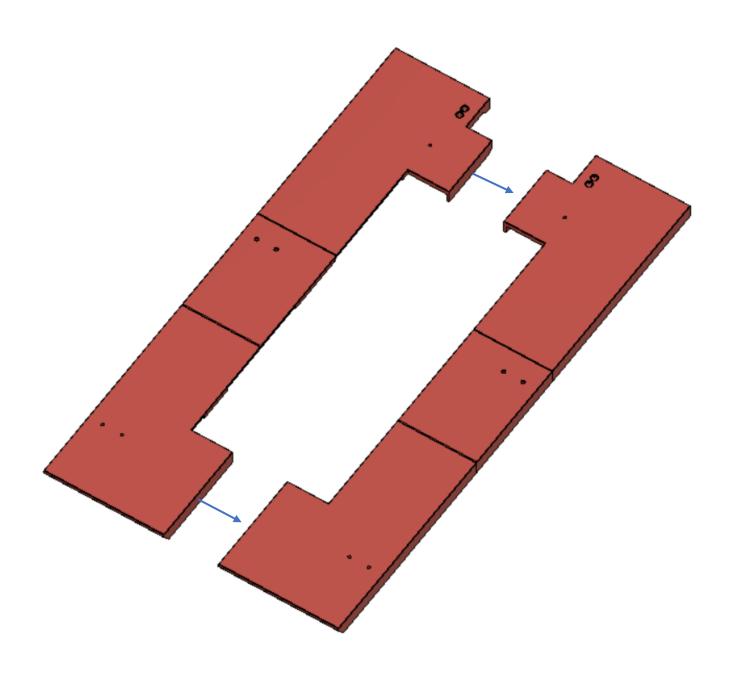




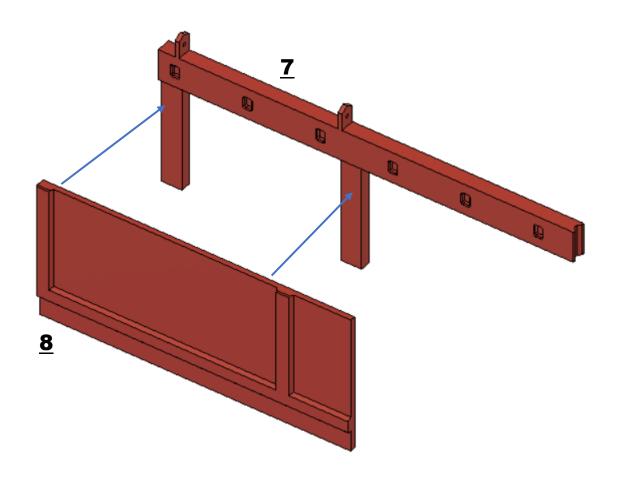


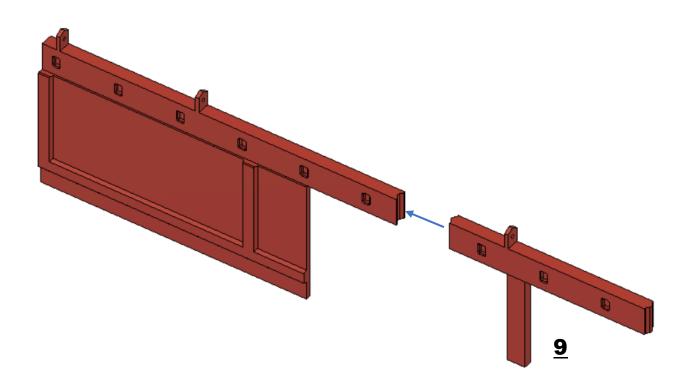


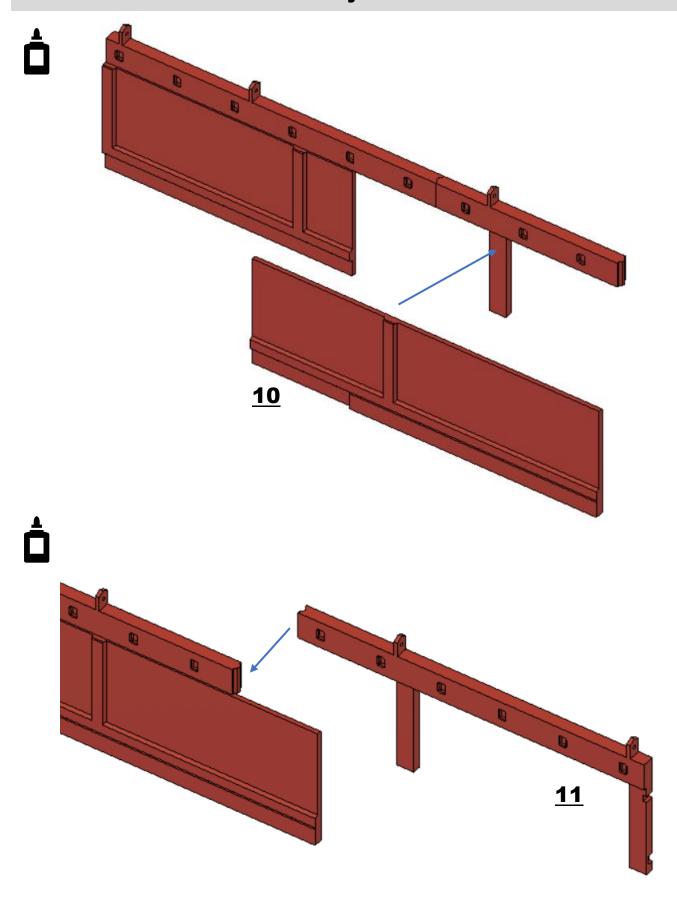


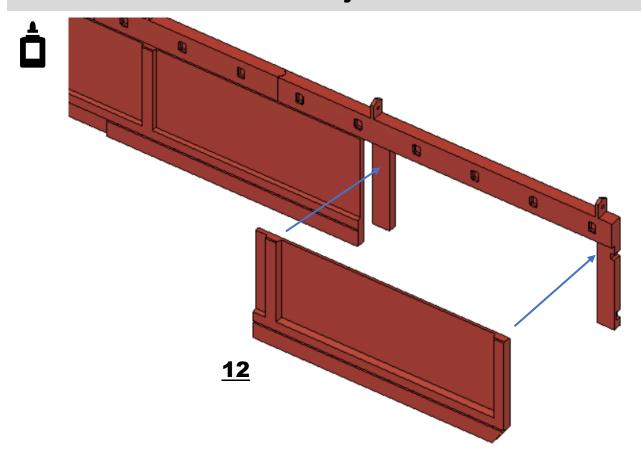


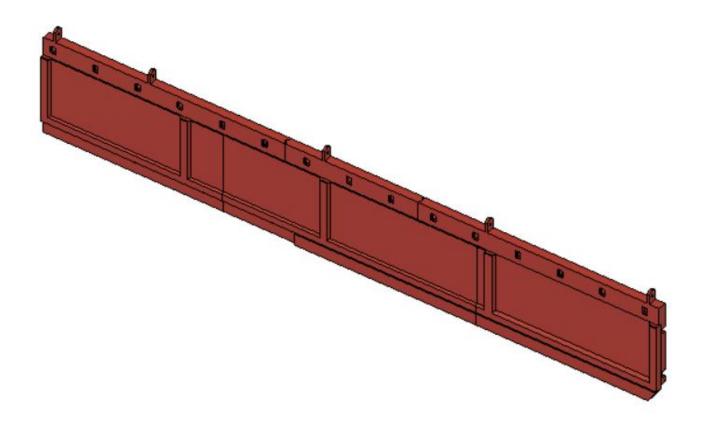




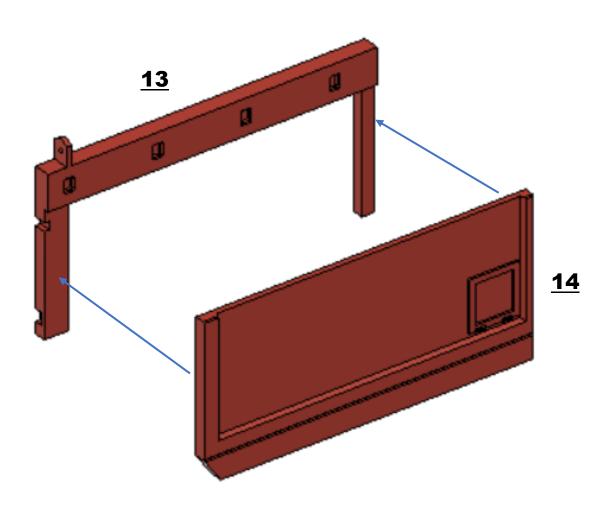


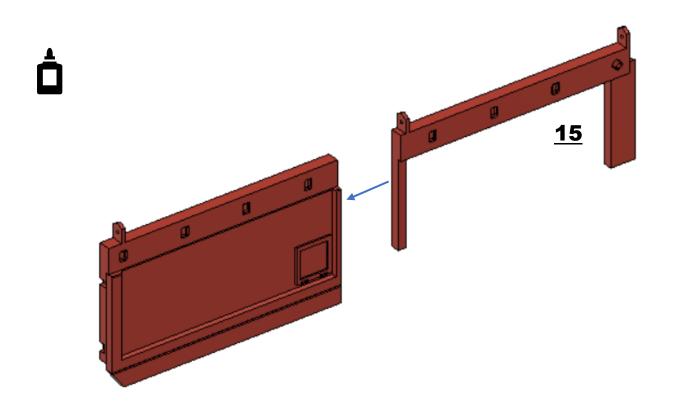


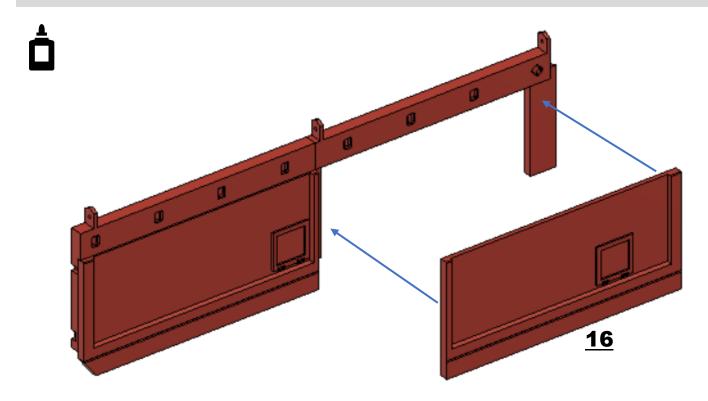


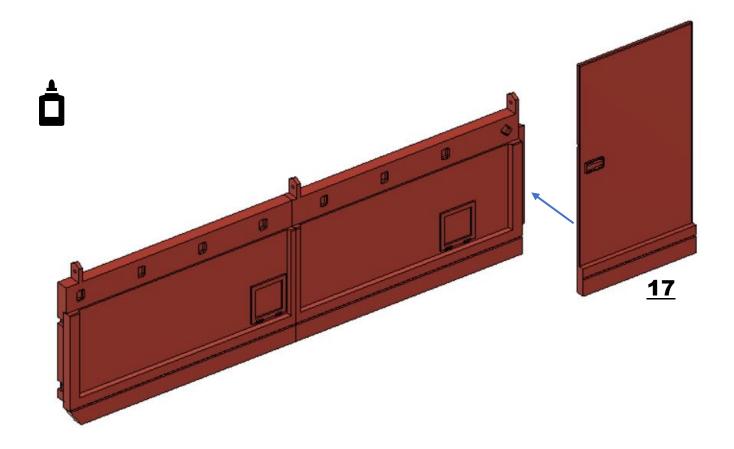


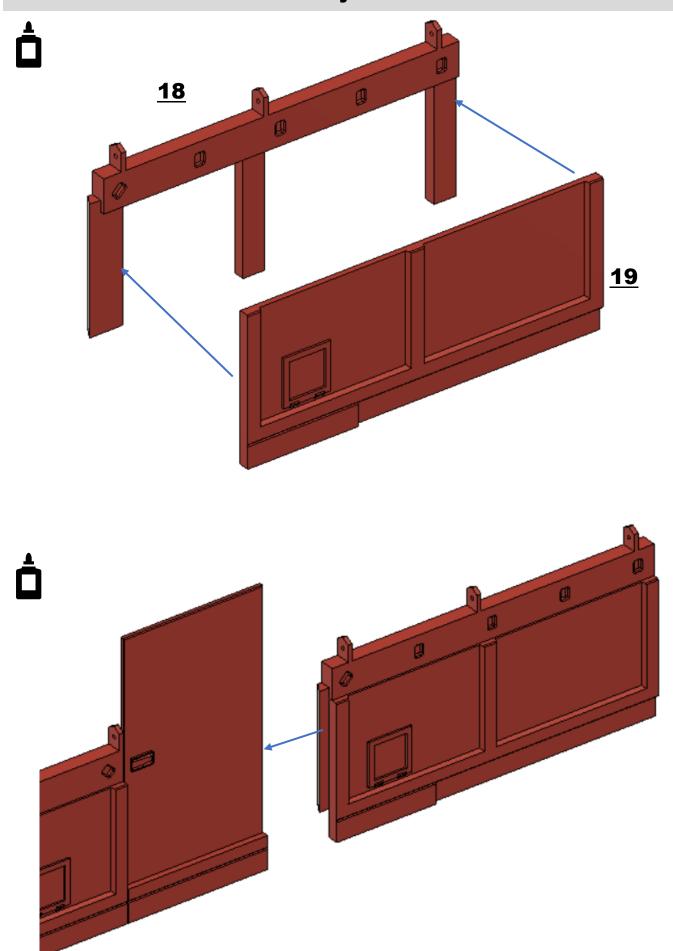


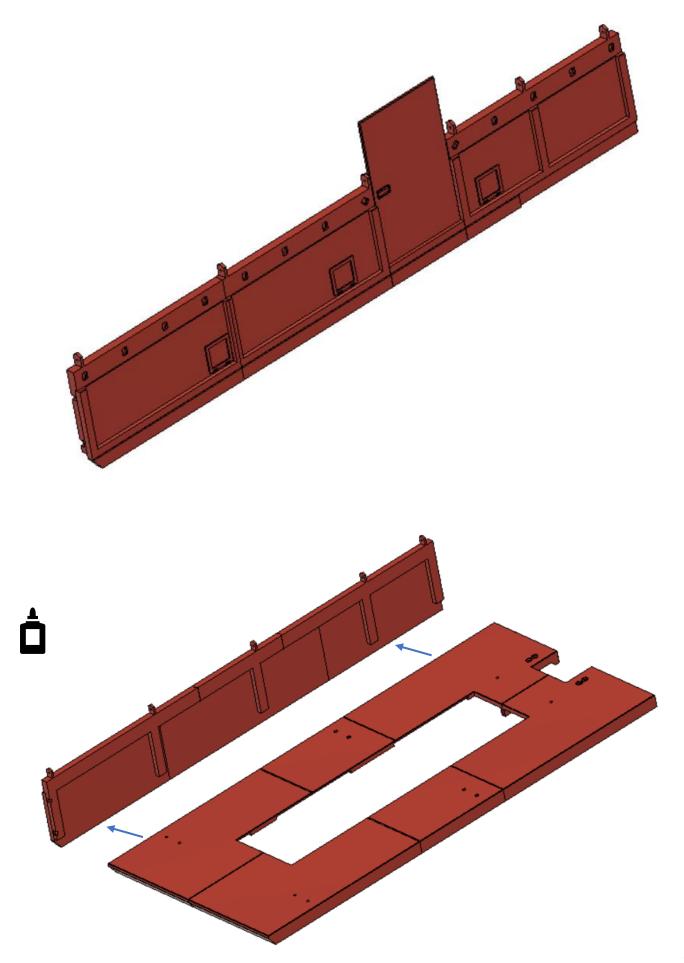


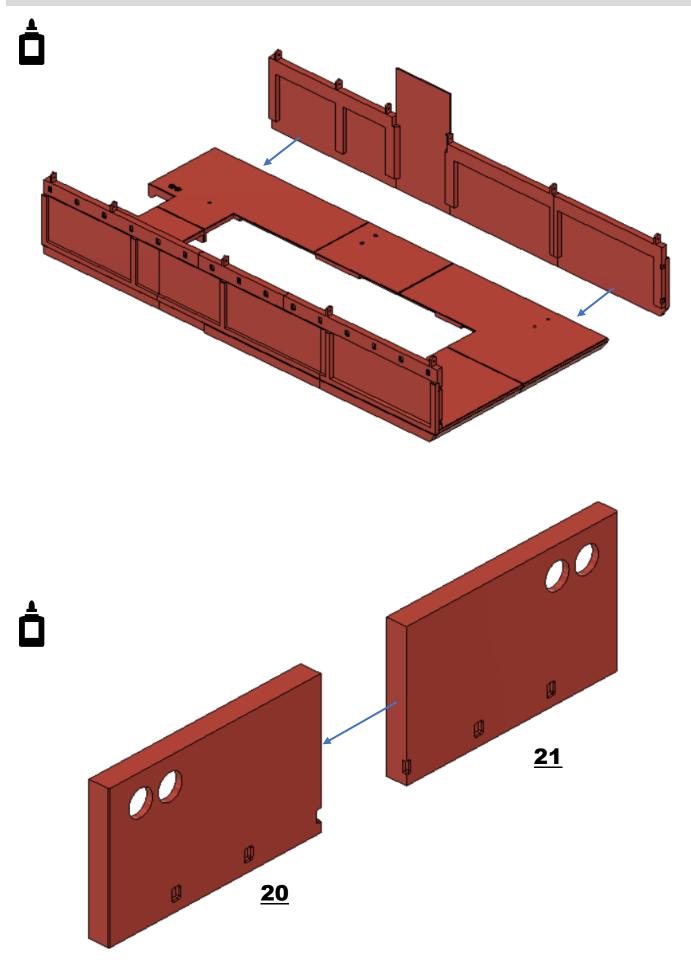




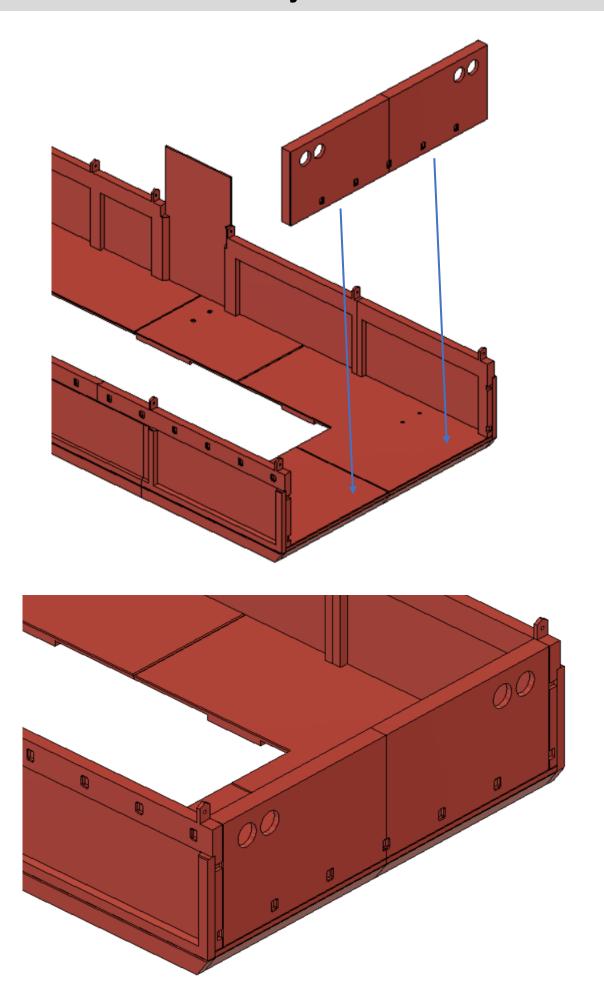


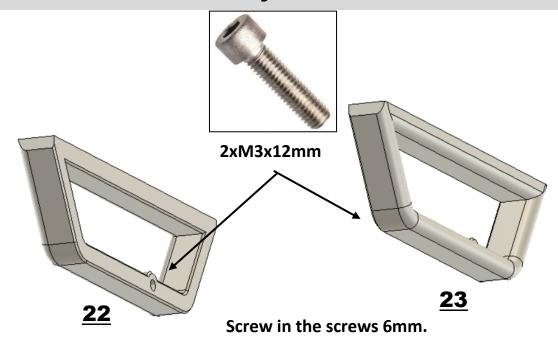


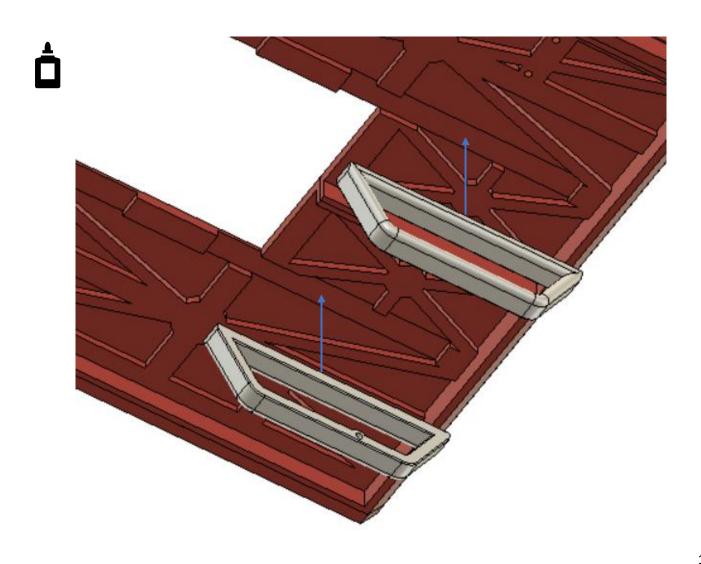




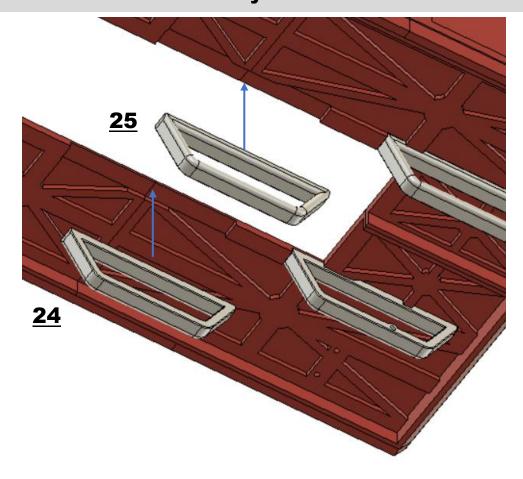




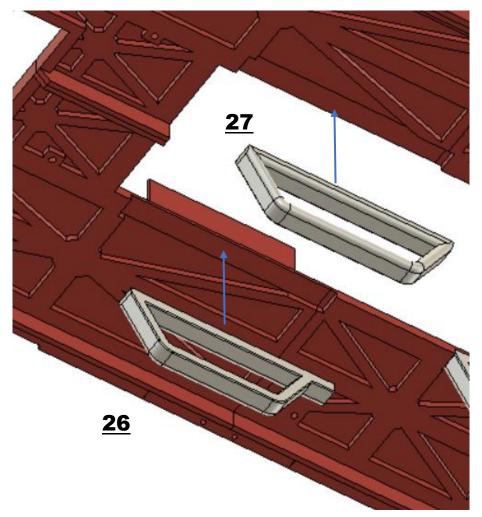






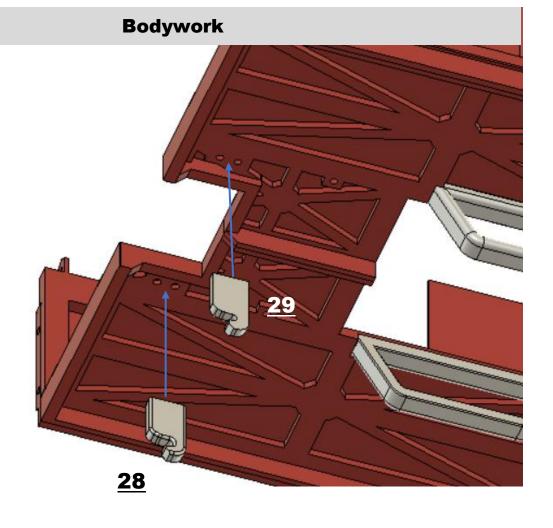






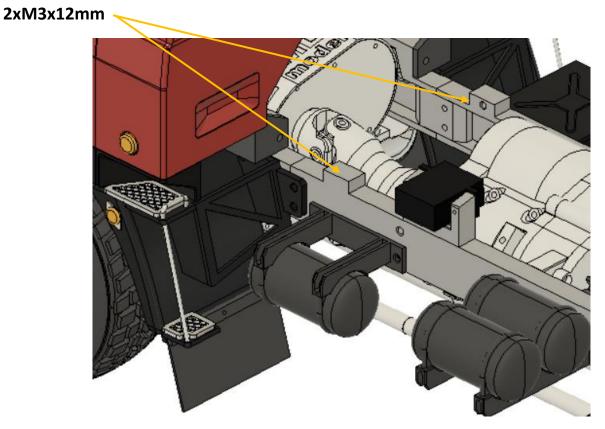


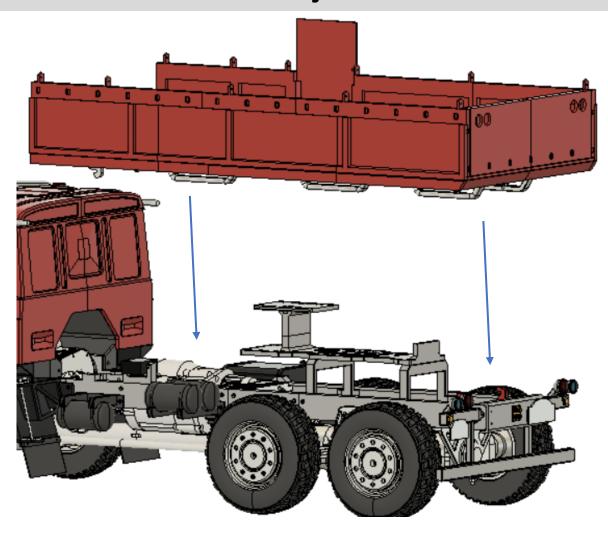
4xM3x10mm



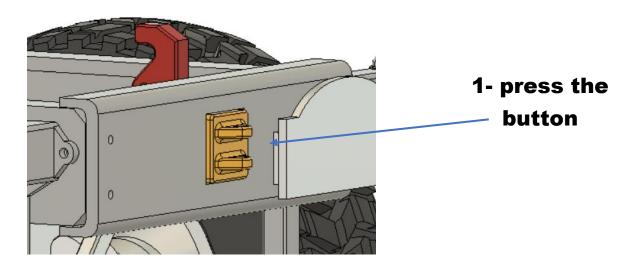


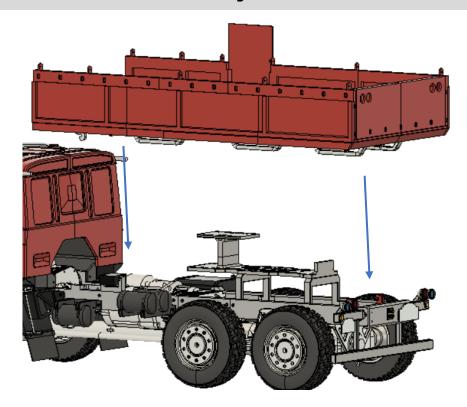
Screw in the screws 6mm.



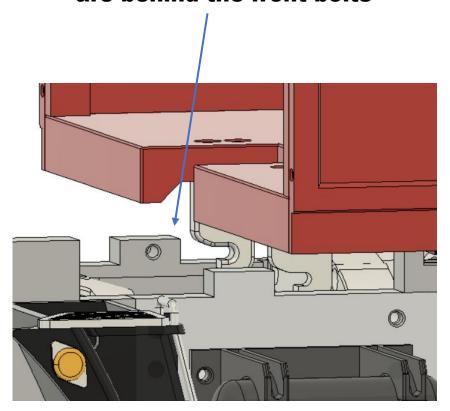


## **Method:**





# 2- Place the body on the chassis so that the front hooks are behind the front bolts



3- Slide the body towards the cab (still holding the button) until the screws engage the front hooks.

Thought about the threaded part. The screw heads prevent lateral movement.

Unscrew/screw in the screws as needed so that the bed is easy and free of snags

Release the button. This will lock the body in place.

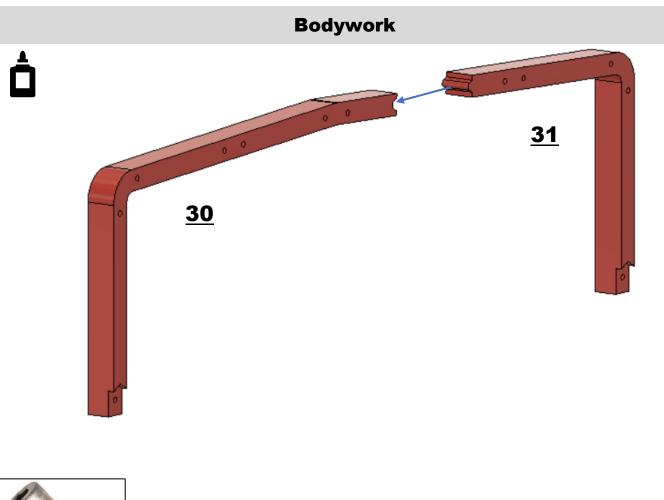
If there is a problem with this step or the hooks that are supposed to move do not fit, you will have to grind until everything is as intended.

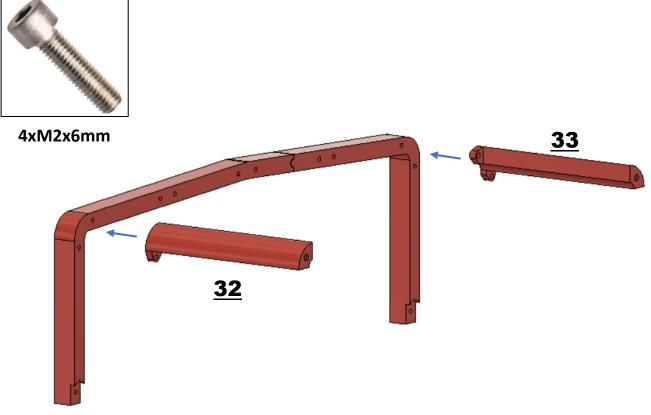
#### **Body removal:**

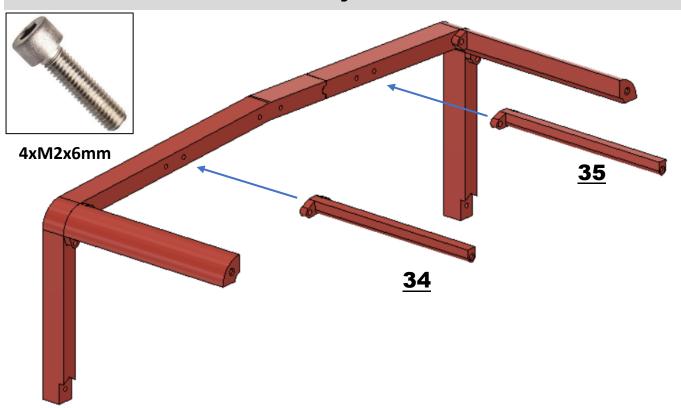
- 1- Press the button
- 2- Raise the back of the body
- 3- Move the body away from the cabin
  - 4- Remove the bed

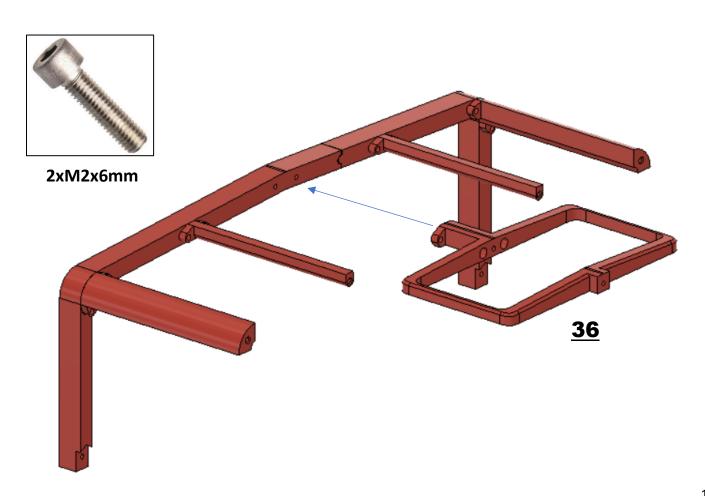
Make sure everything works easily and smoothly.

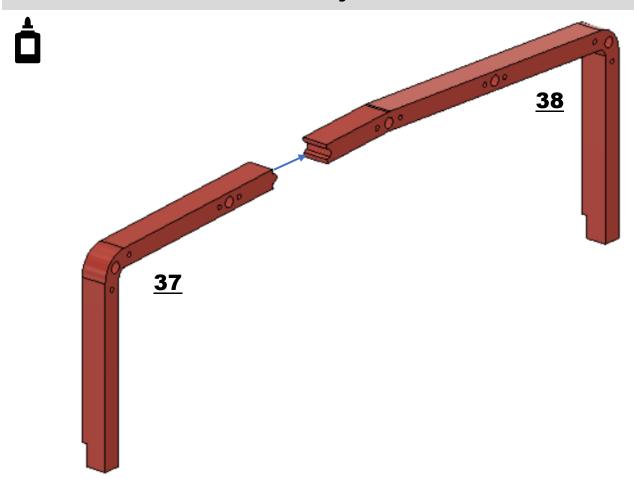
Master the griffin needed to take down/mount the body. Your diligence in this step will pay off when the body is complete.

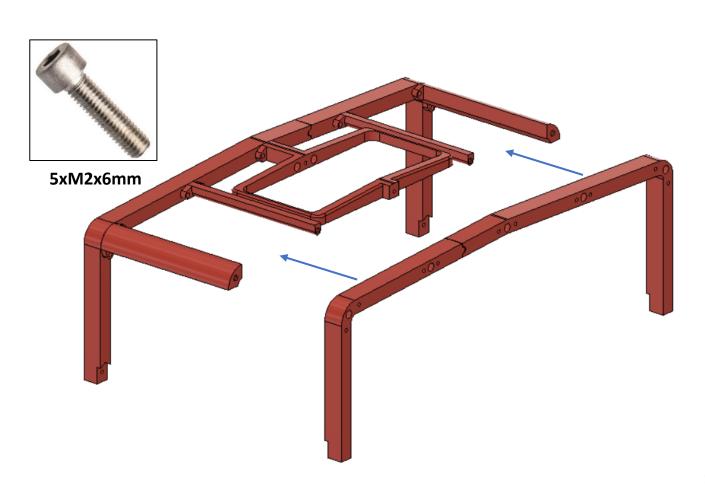


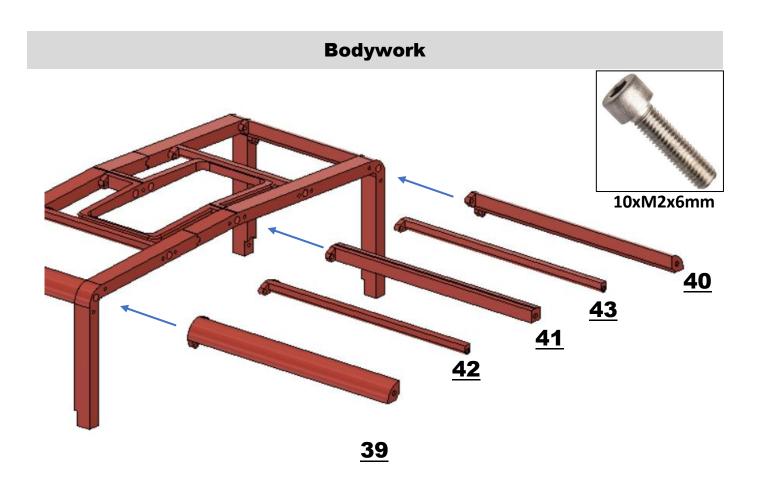


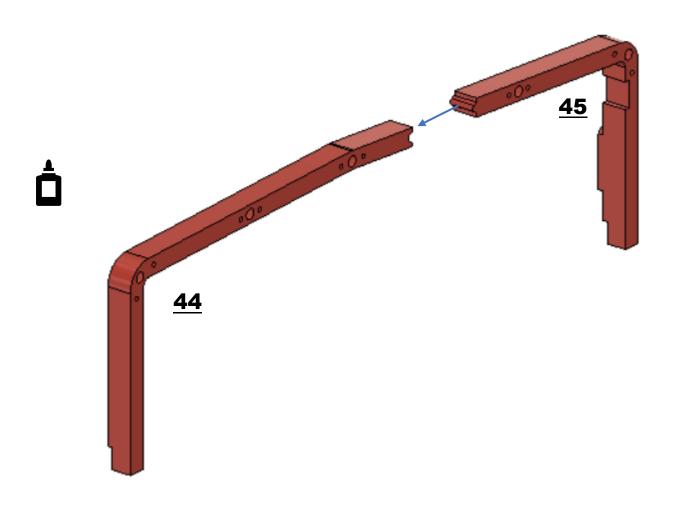


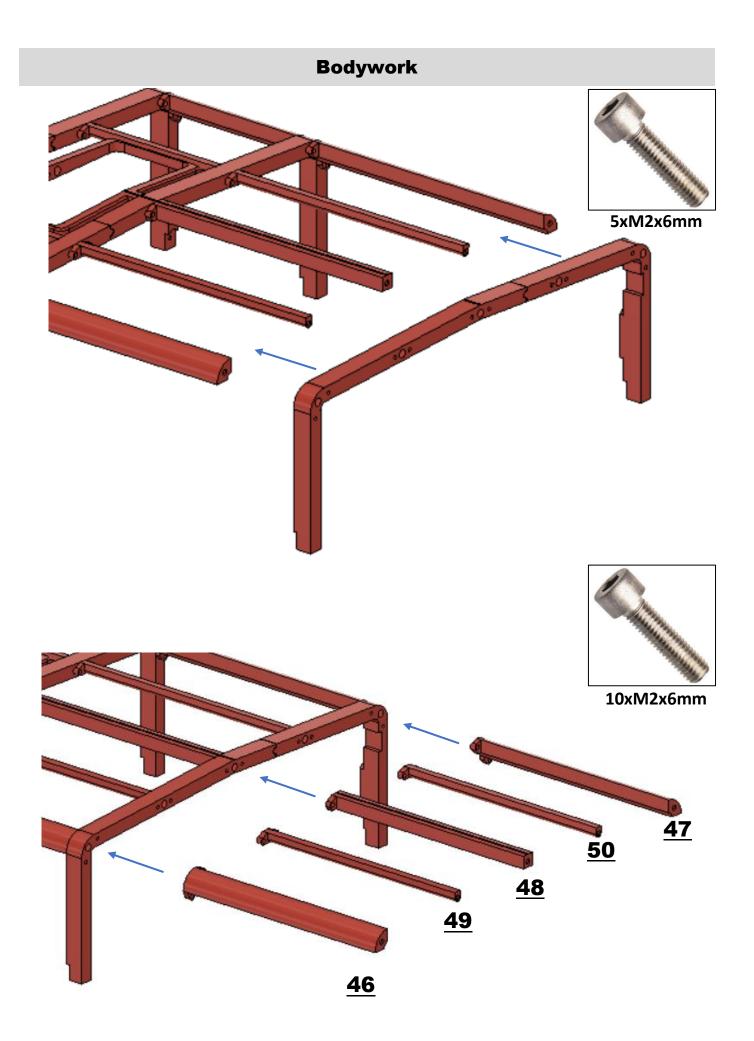




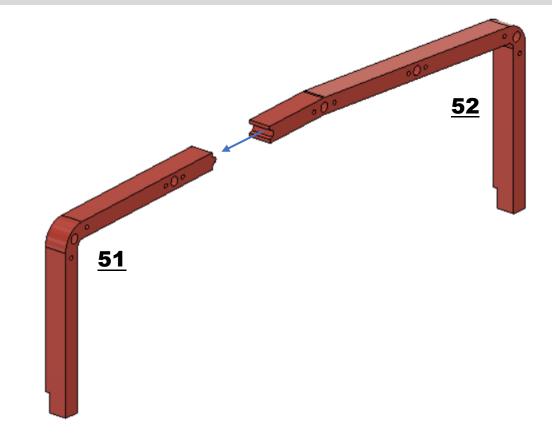


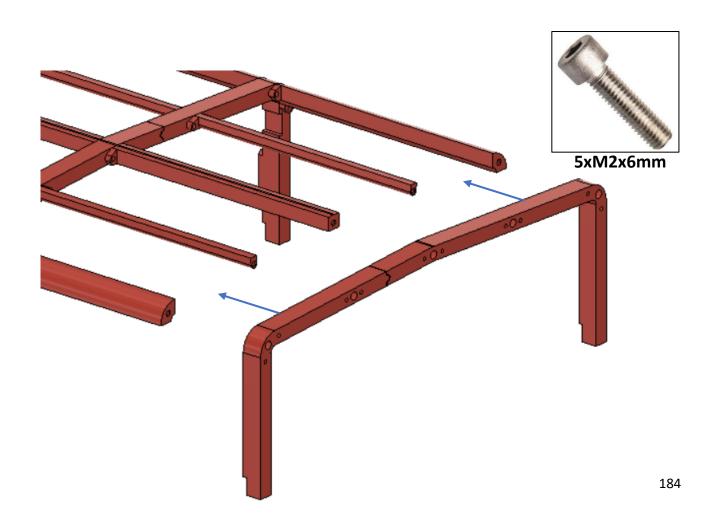


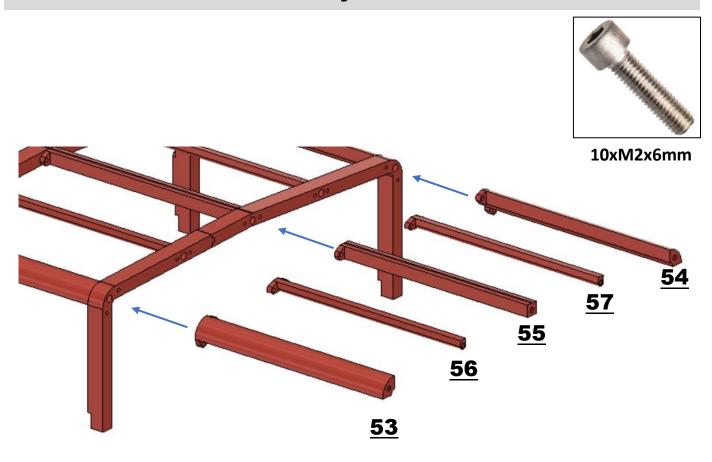


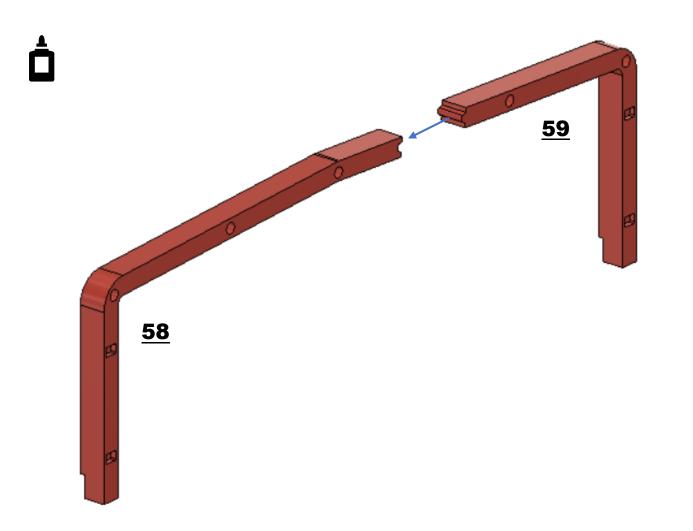


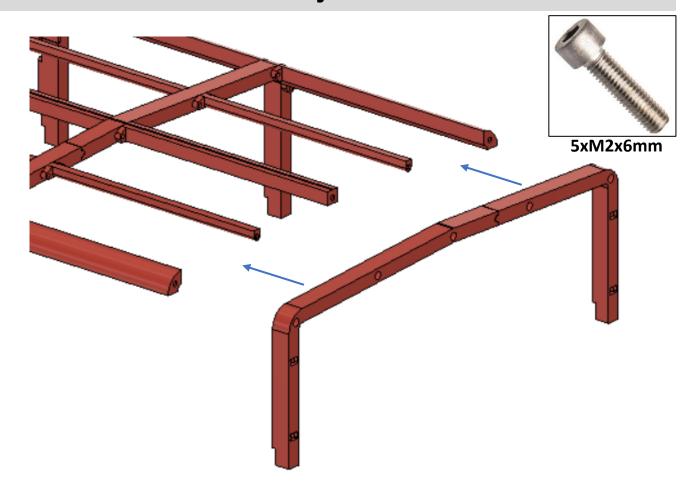




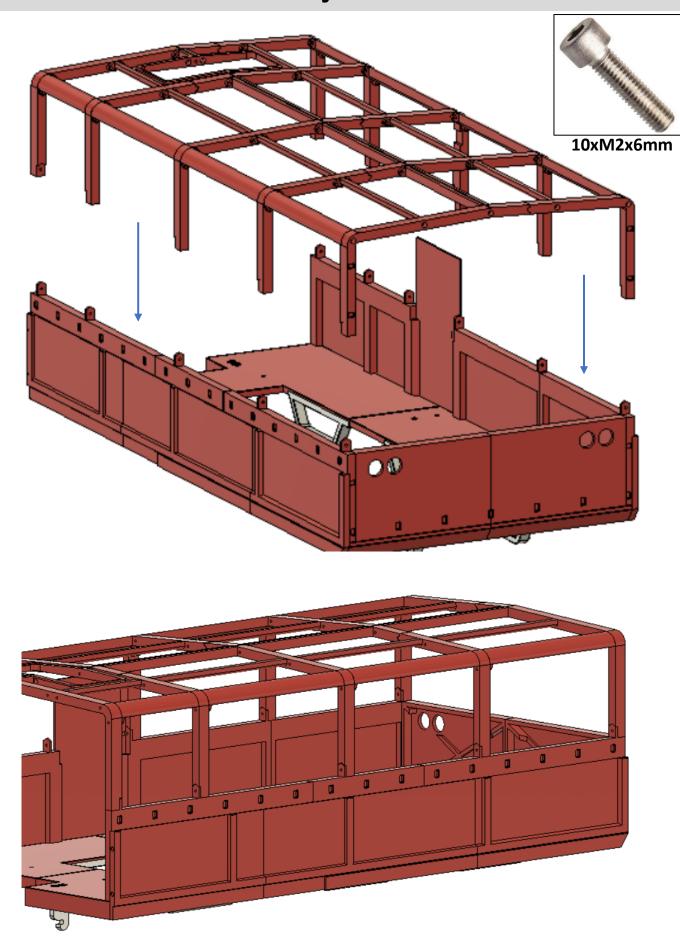


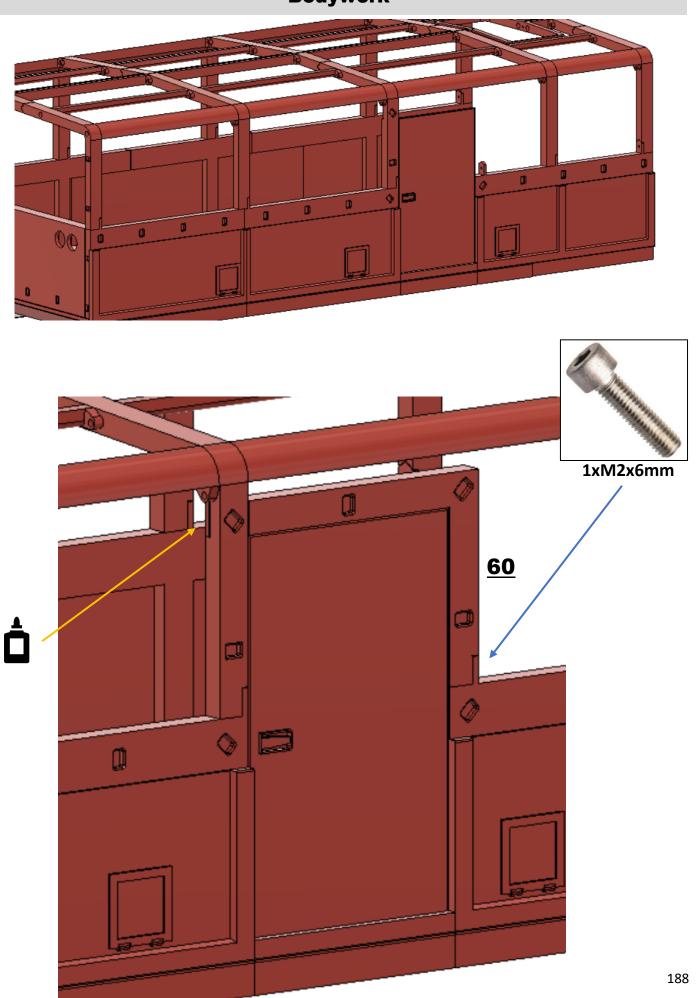


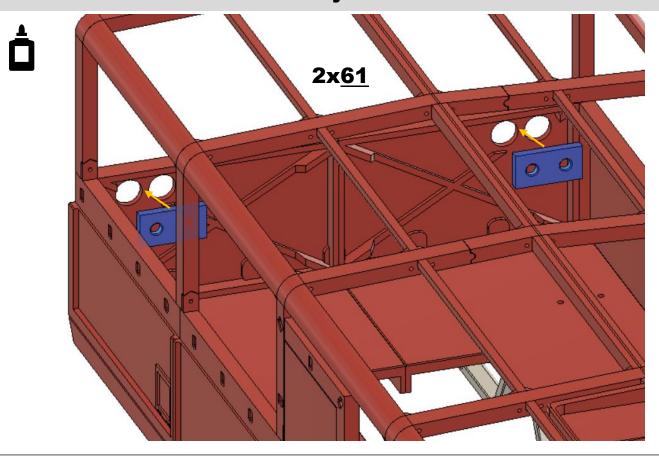










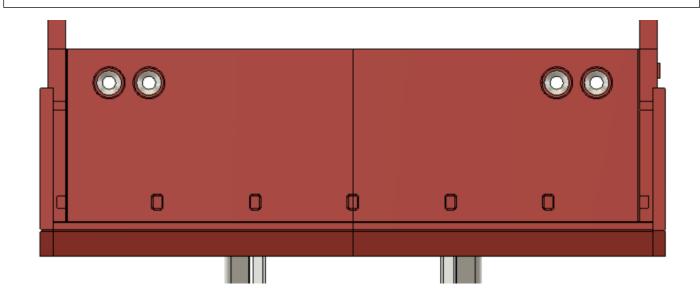


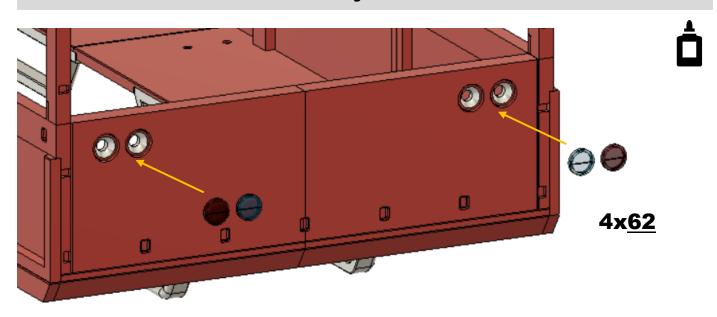
#### Insert 5mm LED 2xred 2xyellow or 4xred into parts 61

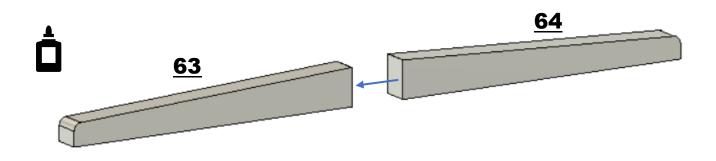
#### **Possible variants:**

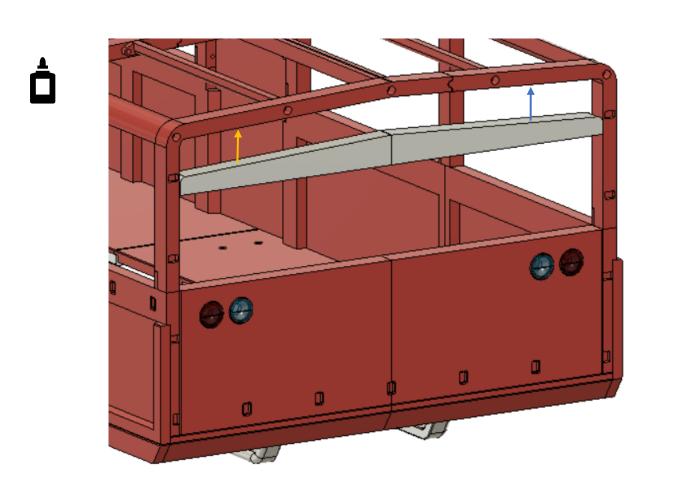
internal - blinkers external - outline

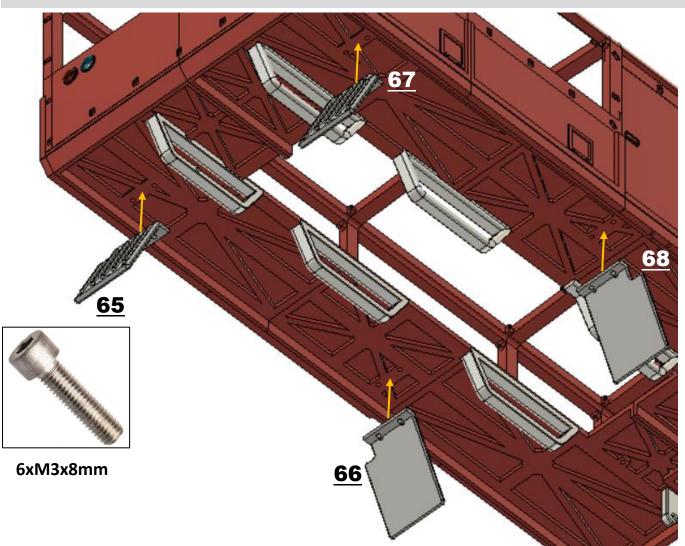
internal - brake external - contour

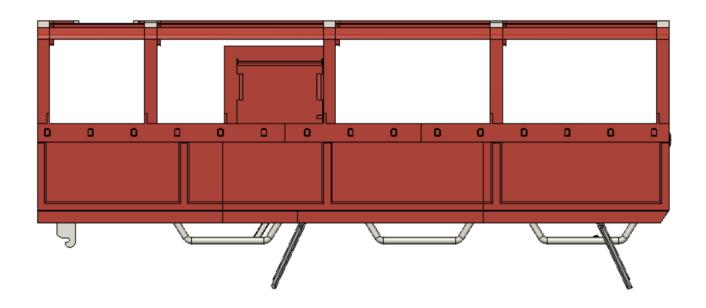




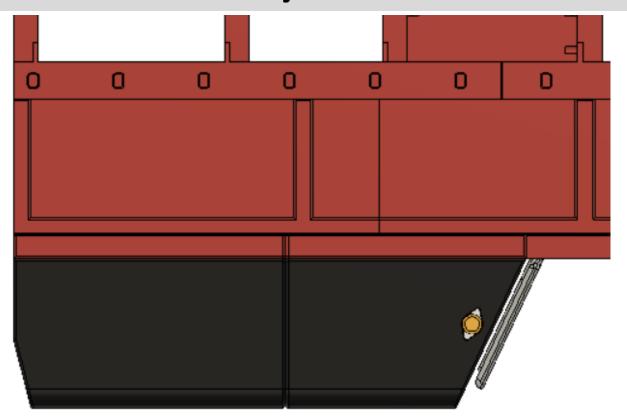


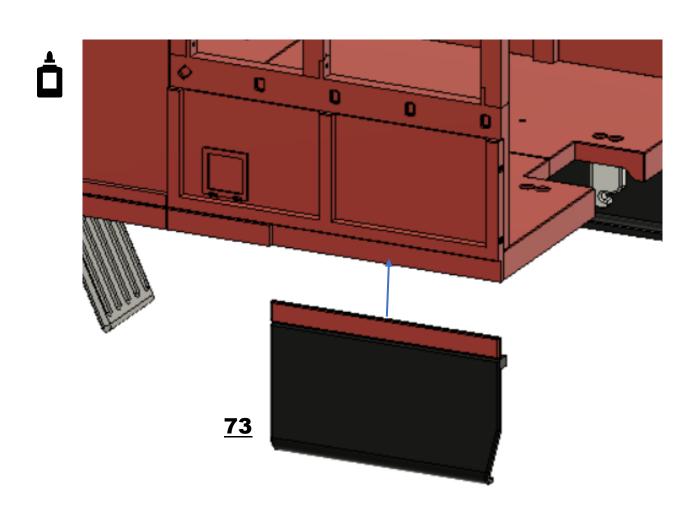


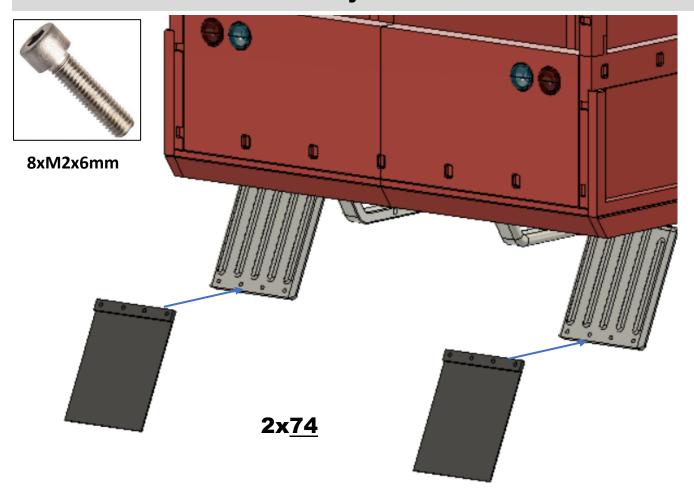




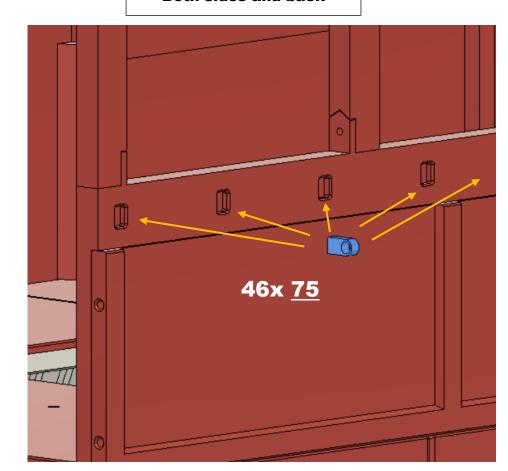
# Bodywork D 0 D O Q Q O <u>69</u> <u>70</u> <u>71</u> <u>72</u>



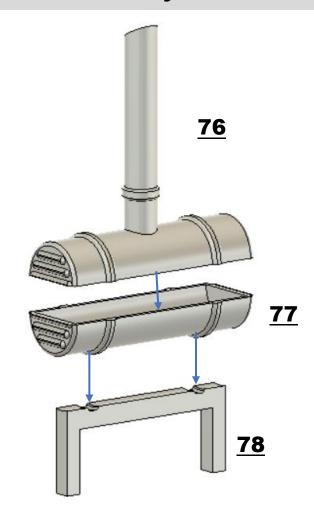




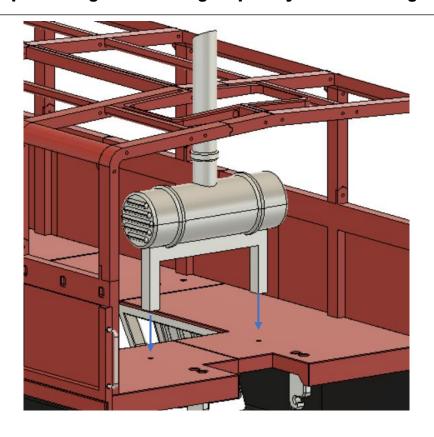
#### **Both sides and back**







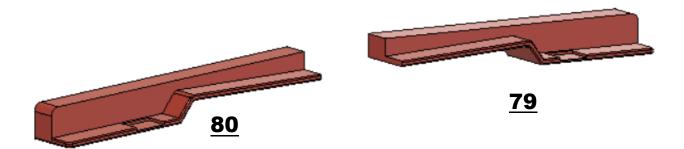
#### I recommend performing the following steps only after installing the tarpaulin.

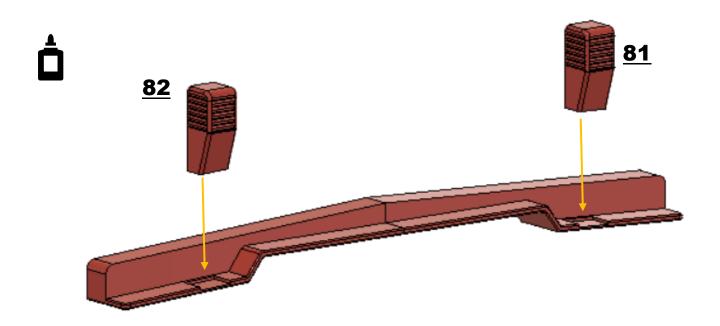




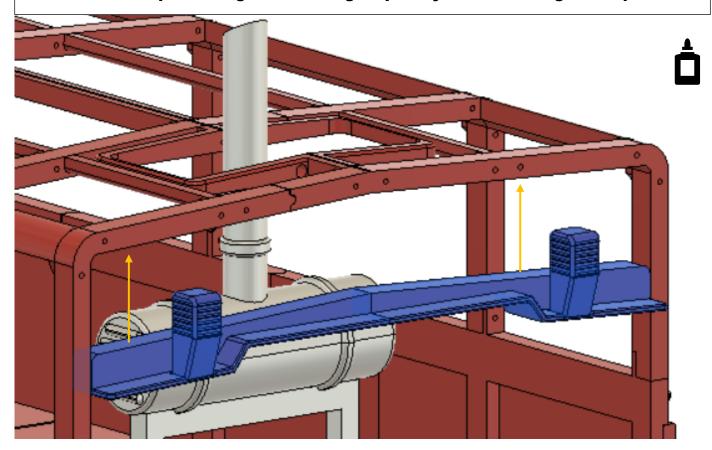
2xM3x10mm



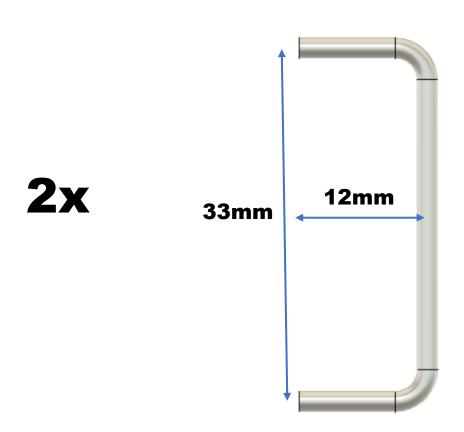




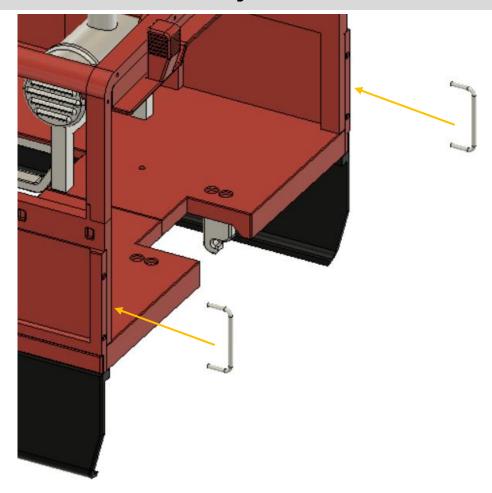
I recommend performing the following steps only after installing the tarpaulin.



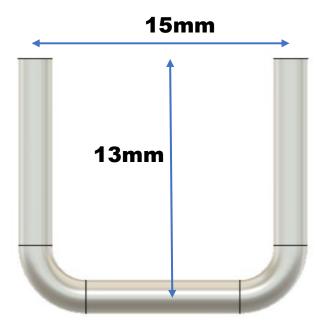
#### **Brass wire 2mm**



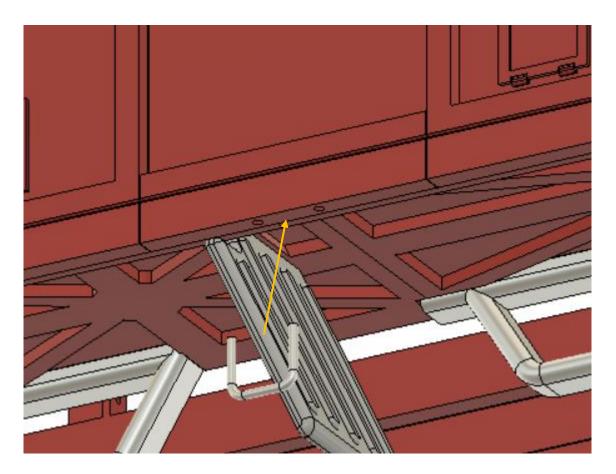




#### **Brass wire 2mm**









Adjust the dampers so that when the model is fully assembled and fitted, the half axes are level.

Adjust the servo stops carefully.

You only have to line up when the model is in motion. Slow down when shifting.

Limit the steering servo so that the wheels do not rub anywhere during full speed.

I recommend printing all stressed chassis parts from Prusament PC.

Now all you have to do is make the tarpaulin and apply the decals

The production of the sail has its own instructions, which are part of the model.

Decals have their own instructions, which are part of the model.

# **Enjoy the model**

