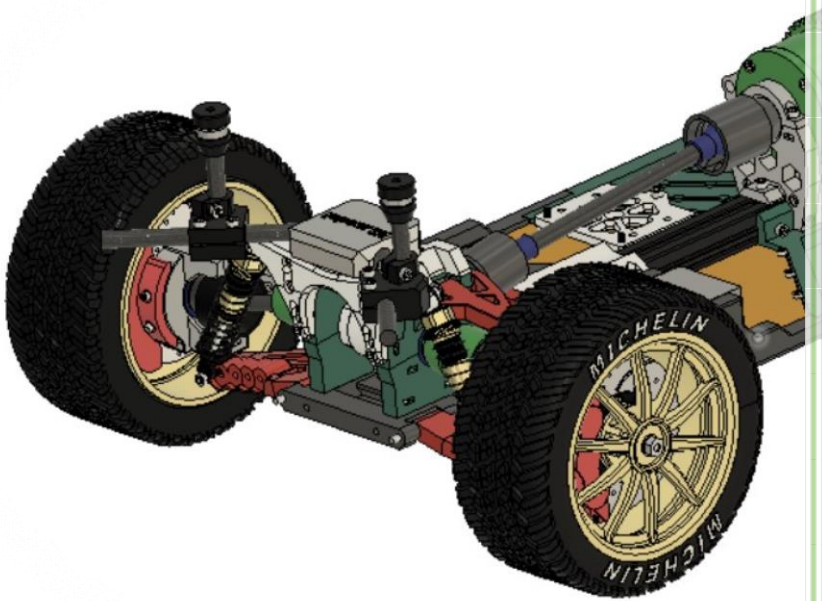
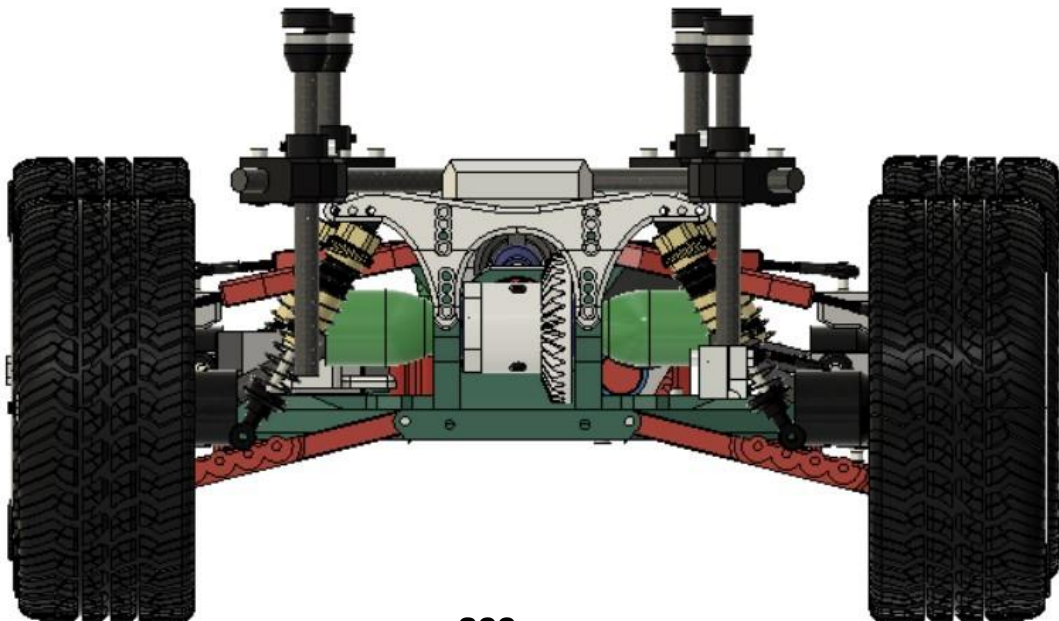
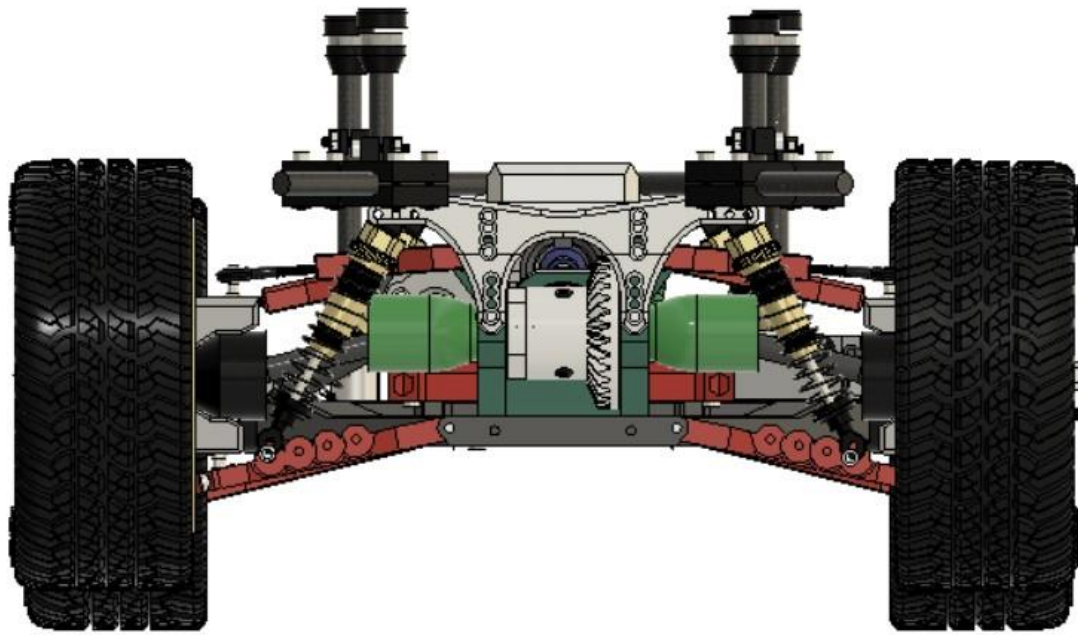


Instructions „Chassis 4x4 1:5“

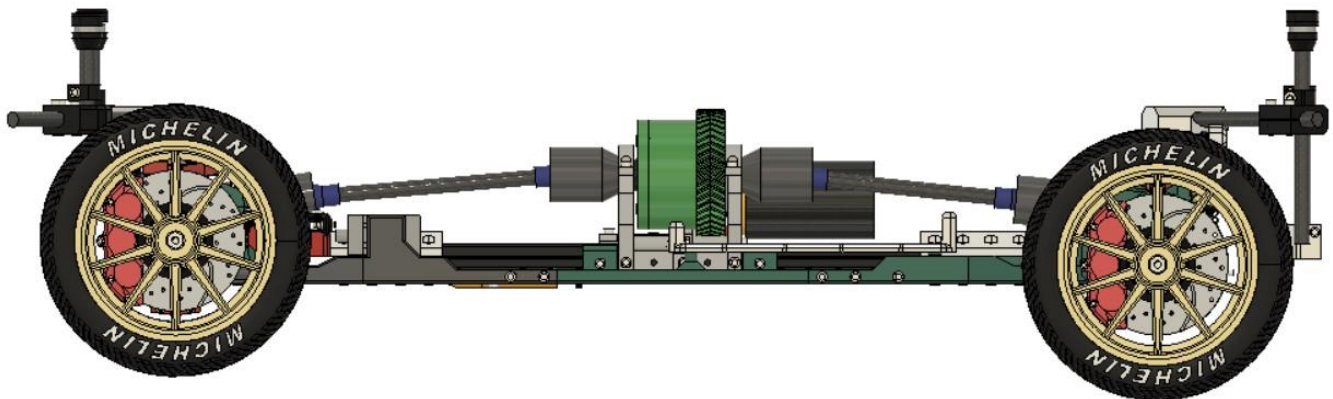
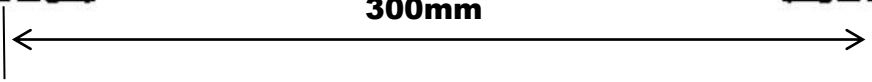


Miroslav Liesner

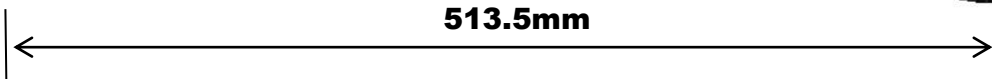
MLmodel



300mm



513.5mm



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 illustrations in this manual.

These are later modified or improved parts.

Please follow the updates: <http://www.mlmodel.webnode.cz>

Before printing, check the calibration of your printer, it is very important that it prints accurately. This will avoid problems when fitting the body.

For construction you will need:

3D printer with a printing area of 25x20 cm

About 2kg of quality PLA

Flex filament - parts are marked "Flex" in the manual

Medium cyanoacrylate glue + activator

Ball bearings 10x15x4 - 9pcs

Ball bearings 15x21x4 - 8pcs

Ball bearings 12x24x6 - 8pcs

Aluminum profile 20x20x360mm - 1pc

Hemispherical head screws

M3x6mm - 6pcs

M3x10mm - 8pcs

Cylindrical head screws

M2x6mm - 42pcs

M2x10mm - 34pcs

M3x8mm - 4pcs

M3x10mm - 49pcs

M3x12mm - 13pcs

M3x14mm - 42pcs

M3x20mm - 19pcs

M3x25mm - 2pcs

M3x30mm - 3pcs

M3x35mm - 2pcs

Nut M3 - 79pcs

T nut for aluminum profile M3 - 12

Adjusting screw M3x6mm - 2pcs

M4x50mm - 4pcs

Washer M4 - 4pcs

Self-locking nut M4 - 4pcs

Threaded rod M3x20mm - 2pcs

Threaded rod M3x25mm - 2pcs

Threaded rod M3x28mm - 1pc

Threaded rod M3x31mm - 2pcs

Polished bar with a diameter of 3 mm (round drawn steel, stainless steel bar)

3x23mm - 2pcs

3x23.5mm - 4pcs

3x26mm - 2pcs

3x30mm - 2pcs

3x45mm - 4pcs

3x48mm - 2pcs

3x75mm - 4pcs

3x109mm - 2pcs

Carbon tube 8x6mm

[4ks 3K trubka z uhlíkových vláken OD 8mm 30mm vysoká tvrdost kompozitní podpěrná trubka z uhlíkových vláken Model ojnice modelu uhlíkových vláken | Díly a příslušenství | - AliExpress](#)

70mm – 2ks

100mm – 2ks

120mm – 2ks

140mm – 1ks

150mm – 2ks

144.5mm – 1ks

Standard servo - at least 20 kg (I recommend 30-35 kg)

Battery 2S

Vaseline PTFE

Transmitter + receiver

Shock absorbers:

[Reely 1:8 hliníkový olejový tlumič modrá \(metalíza\) s peřím černá 109 mm 2 ks | Conrad.cz](#)

Neodymium magnets diameter 14x5mm with a hole for M4 screw - 4pcs:

[KR-14-8/4-05-N - Unimagnet.cz](#)

Neodymium magnets diameter 14x3mm - 4pcs:

[KT-14-03-N - Unimagnet.cz](#)

Joints:

[Kulový čep V1, pr.7, M3/M3 dlouhý \(mpjet.com\)](#) – 7ks

[\(TRA2742\) Traxxas kulový čep dlouhý \(6ks\) | mz-racing.net](#) – 5ks

It is very important that the joints have identical dimensions if you are going to buy different ones.

Other:**I used this gold filament for the rims:**

[Filament DEVIL DESIGN / PLA SILK / ZLATÁ / 1,75 mm / 1 kg. | Smart3D.cz - prodej materiálu pro 3D tisk](#)

I recommend the following for all gears and stressed parts:

[Prusament PC Blend | 3D tiskárny Original Prusa přímo od Josefa Průši \(prusa3d.com\)](#)

If you have any questions, please contact me at: ssiforum58@gmail.com

Please also provide feedback. It is possible that I forgot something or I recalculated, and I will find out mostly thanks to your feedback.

The chassis will be universal for other bodies, so it is a separate project.

Recommended print settings:

Nozzle: 0.4 mm

Extrusion width: 0.45-0.50 mm

Layer height: 0.25 mm

Filling: 25%, gears and shafts 100%

Perimeters: 2-3

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

Printing speed: 70 mm / s, outdoor perimeters 30 mm / s

Temperatures: 220 ° C HE, 50 ° C HB

Parts printed with support are called "support".

Engine:

Choosing the right engine for such an atypical chassis was quite a problem.

The requirements were clear: -must not warm

-must not be too big / heavy

-It can't be too expensive

-best combo

-must have enough power

-must run on 2S battery

I called several "professionals" for help with choosing an engine, where I was told that although they sell parts for RC cars and deal with RC cars, they don't really understand that, so they can't advise me. Yes, this is what the salesman, who writes on his e-shop, is an expert in RC cars. I kept looking, and eventually I came across real professionals in the field of RC cars.

www.rchobbyracing.cz

They willingly discussed my problem with me and I was immediately offered an engine that fulfilled everything.

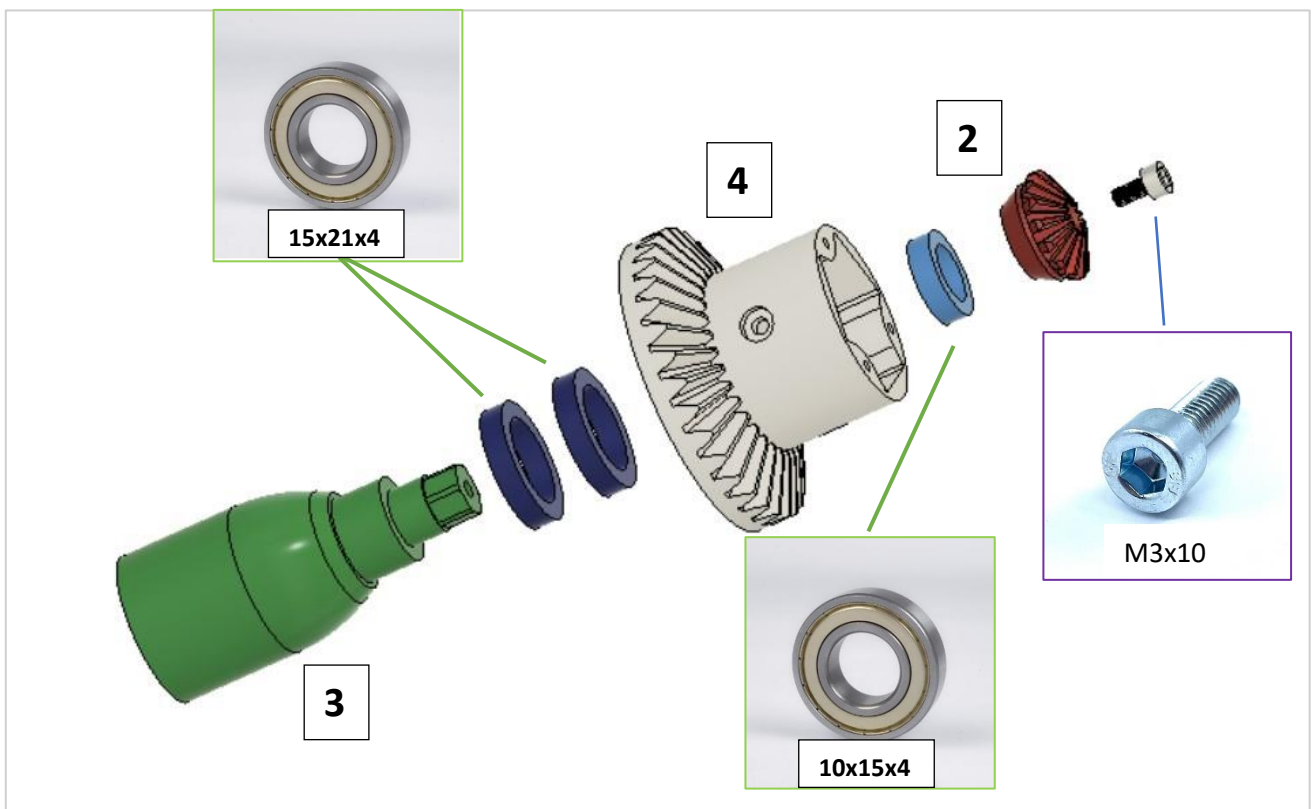
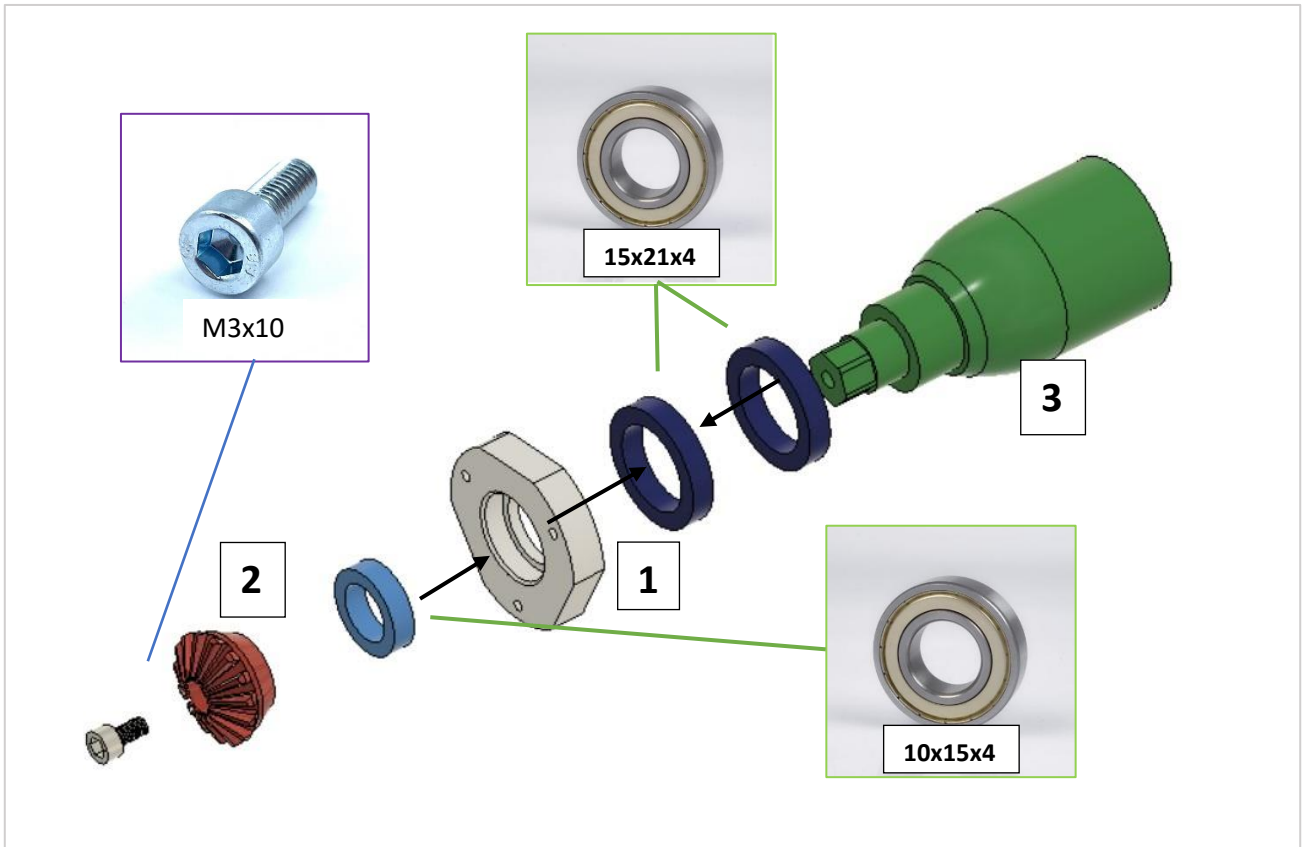
This is a KONECT 4268SL / 1900Kv motor in a set with a controller and a programming card for a pleasant CZK 4,084 and a warranty in the Czech Republic.

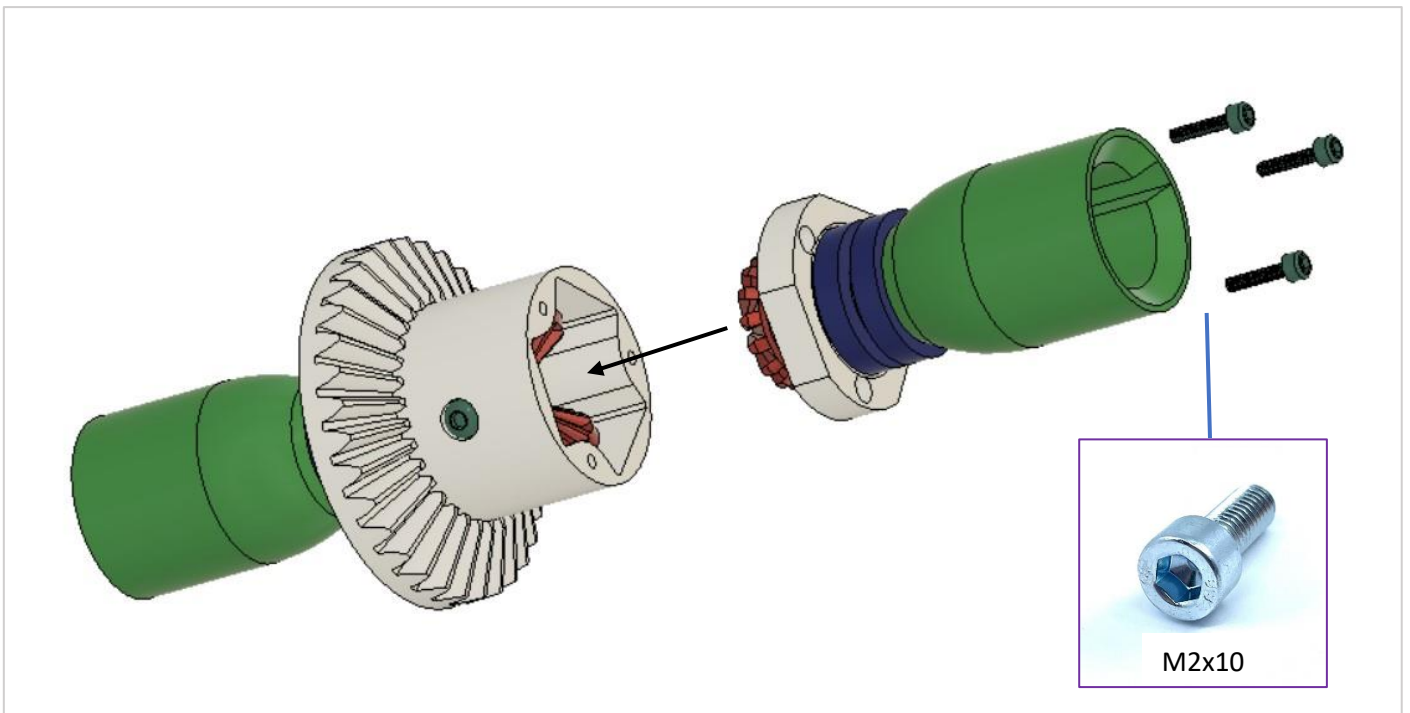
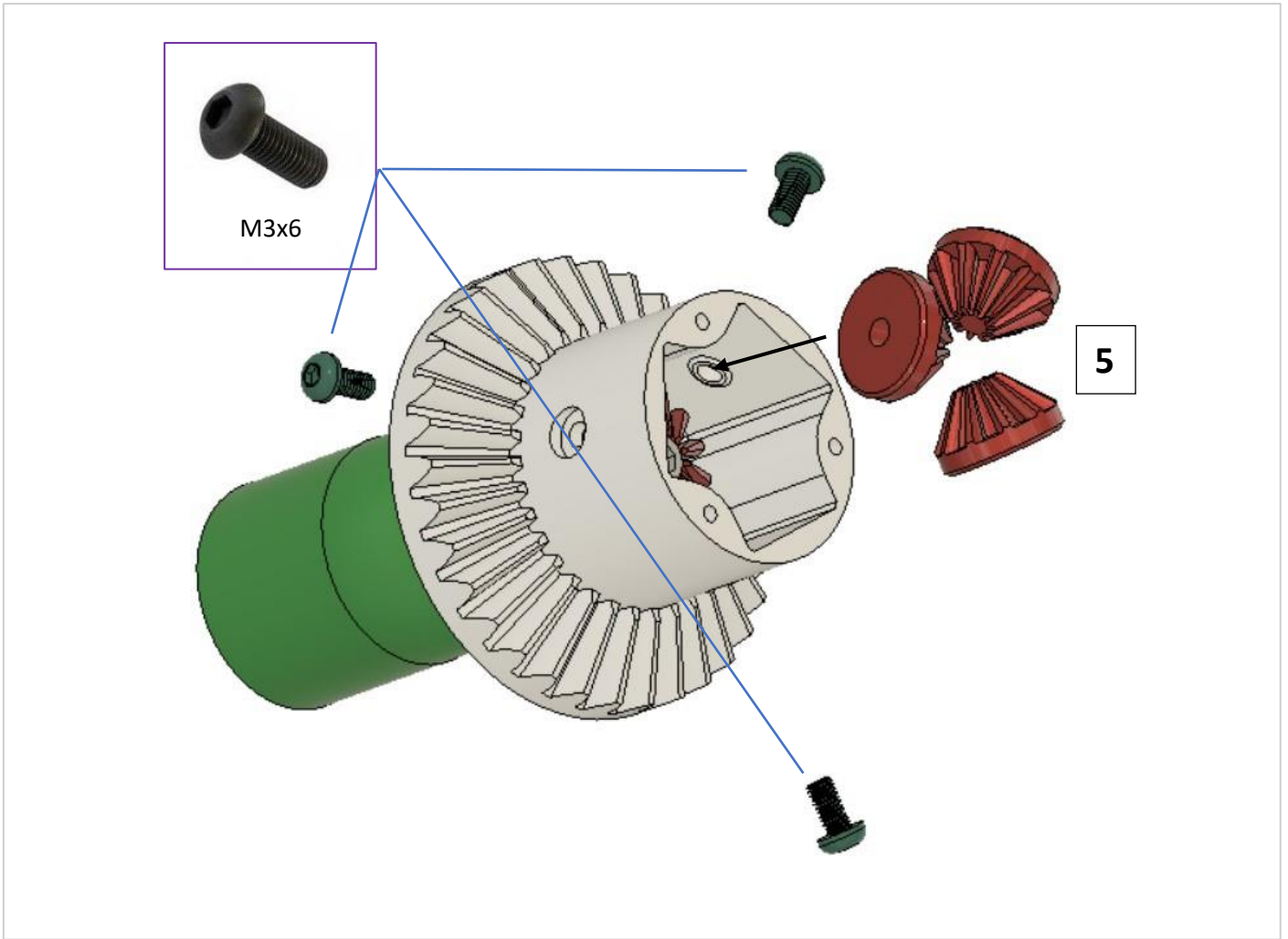
Thank you for the help that made this project possible, and I ask you, dear customers, to support real professionals and buy an engine from them. Thank you

(The company rchobbyracing.cz has nothing in common with MLmodel and they do not sponsor MLmodel in any way)

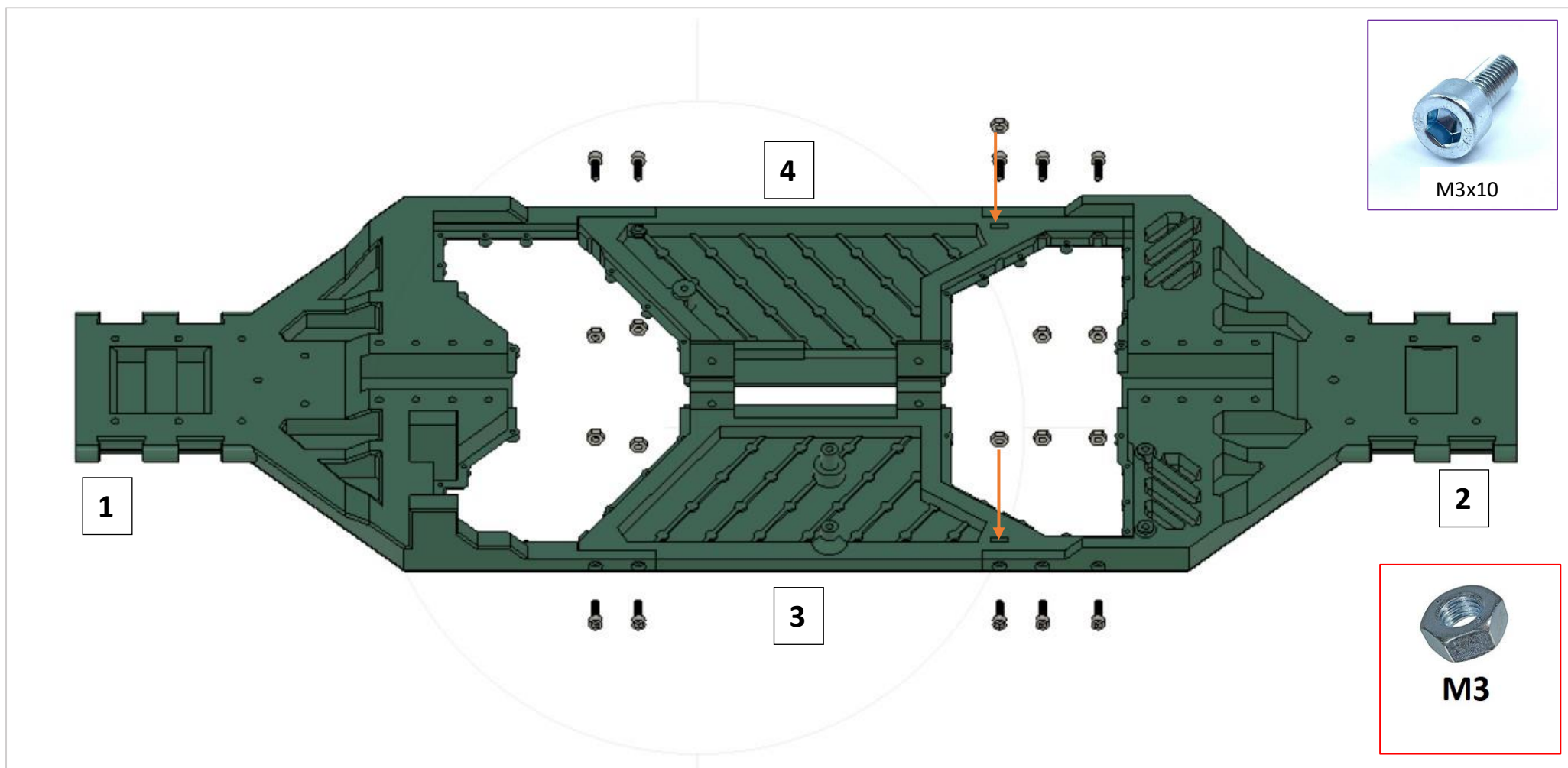


Differential 2x

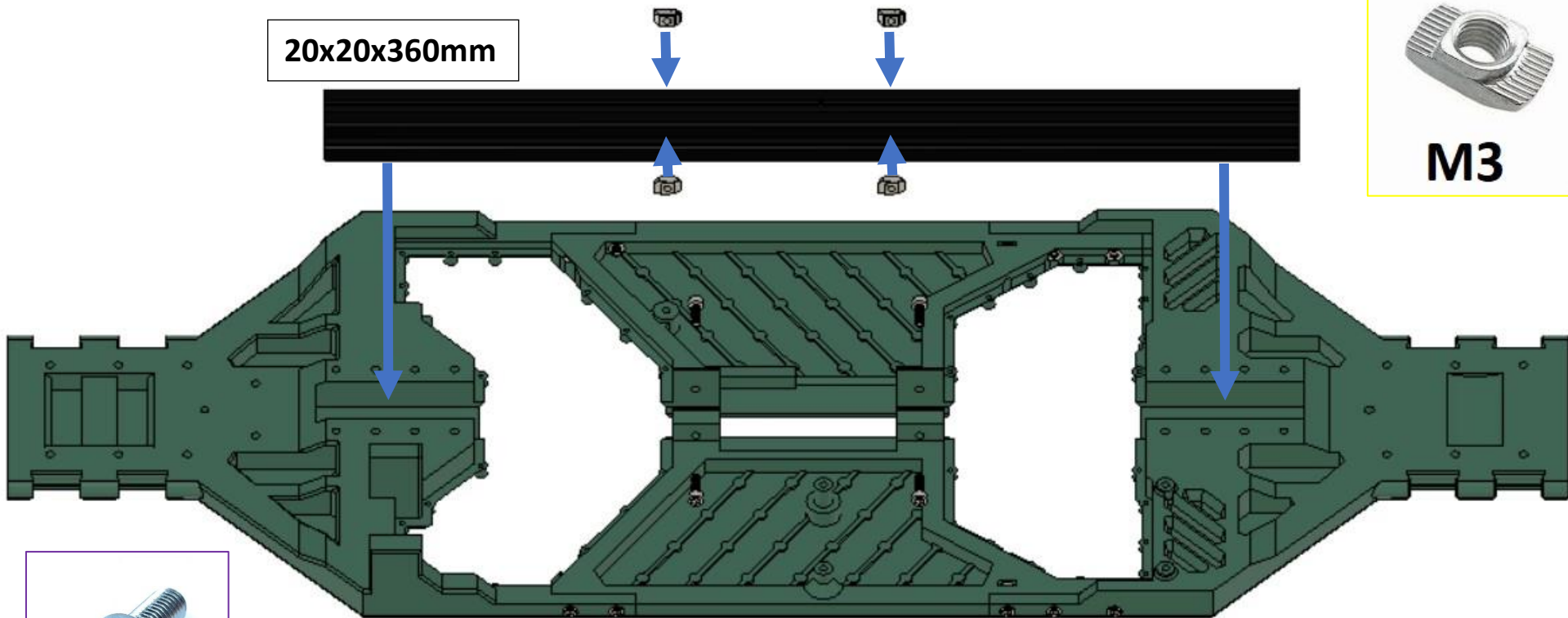


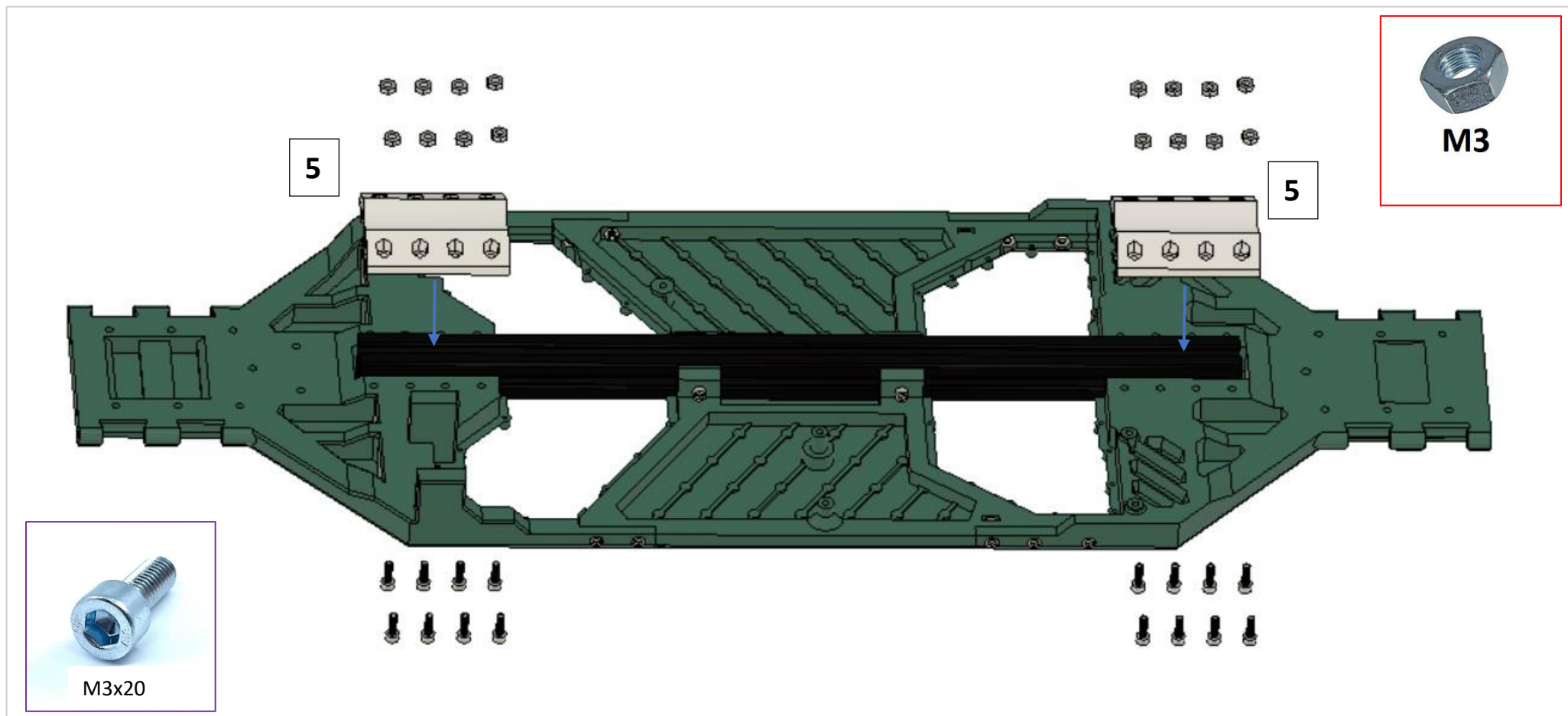


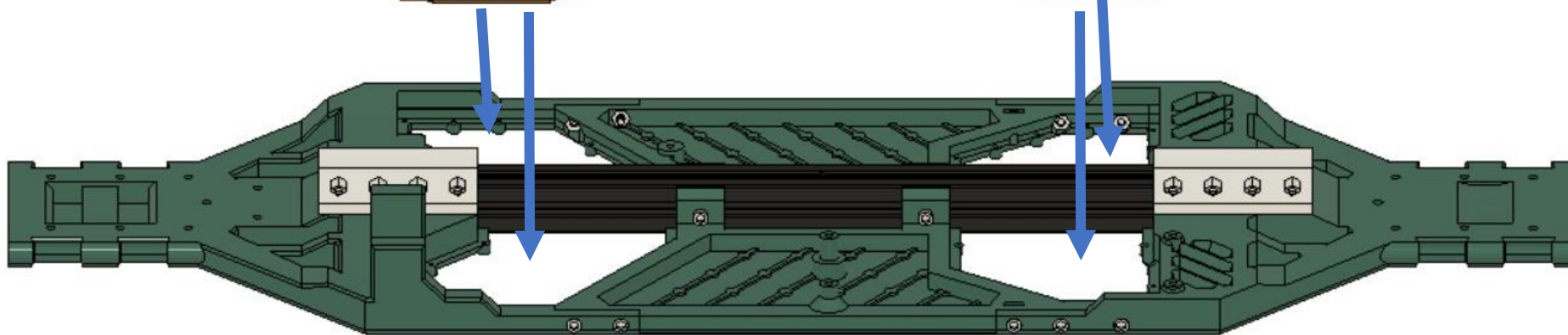
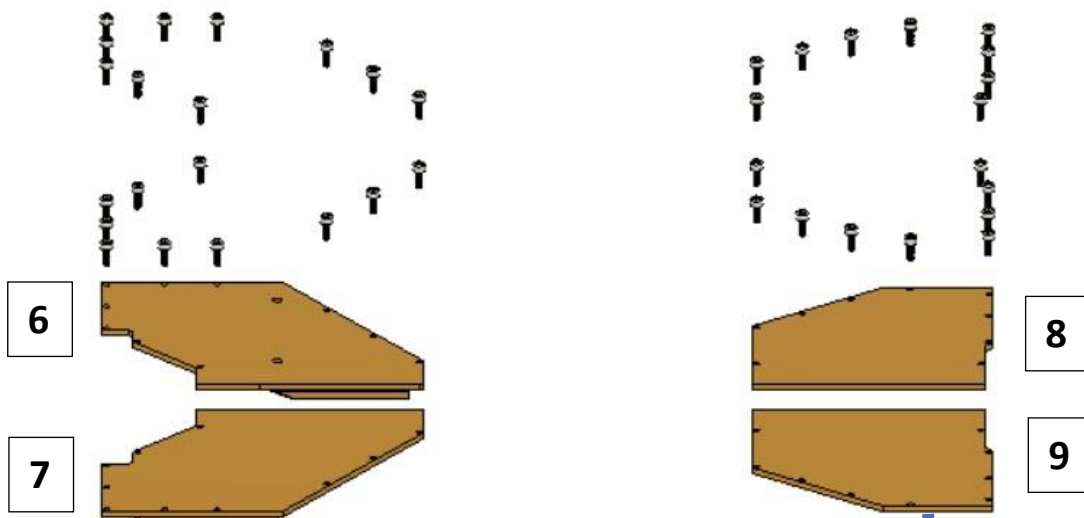
Chassis

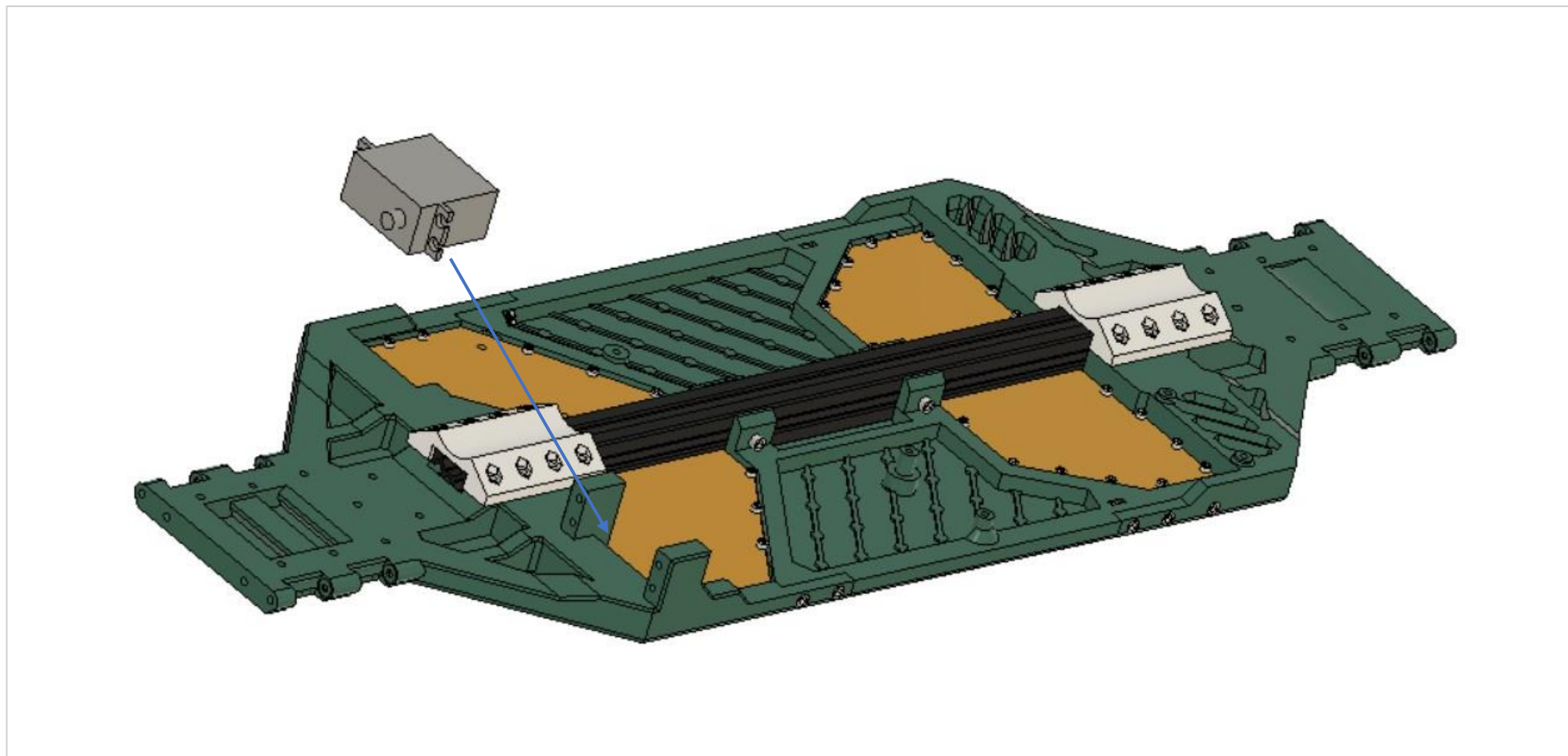


20x20x360mm





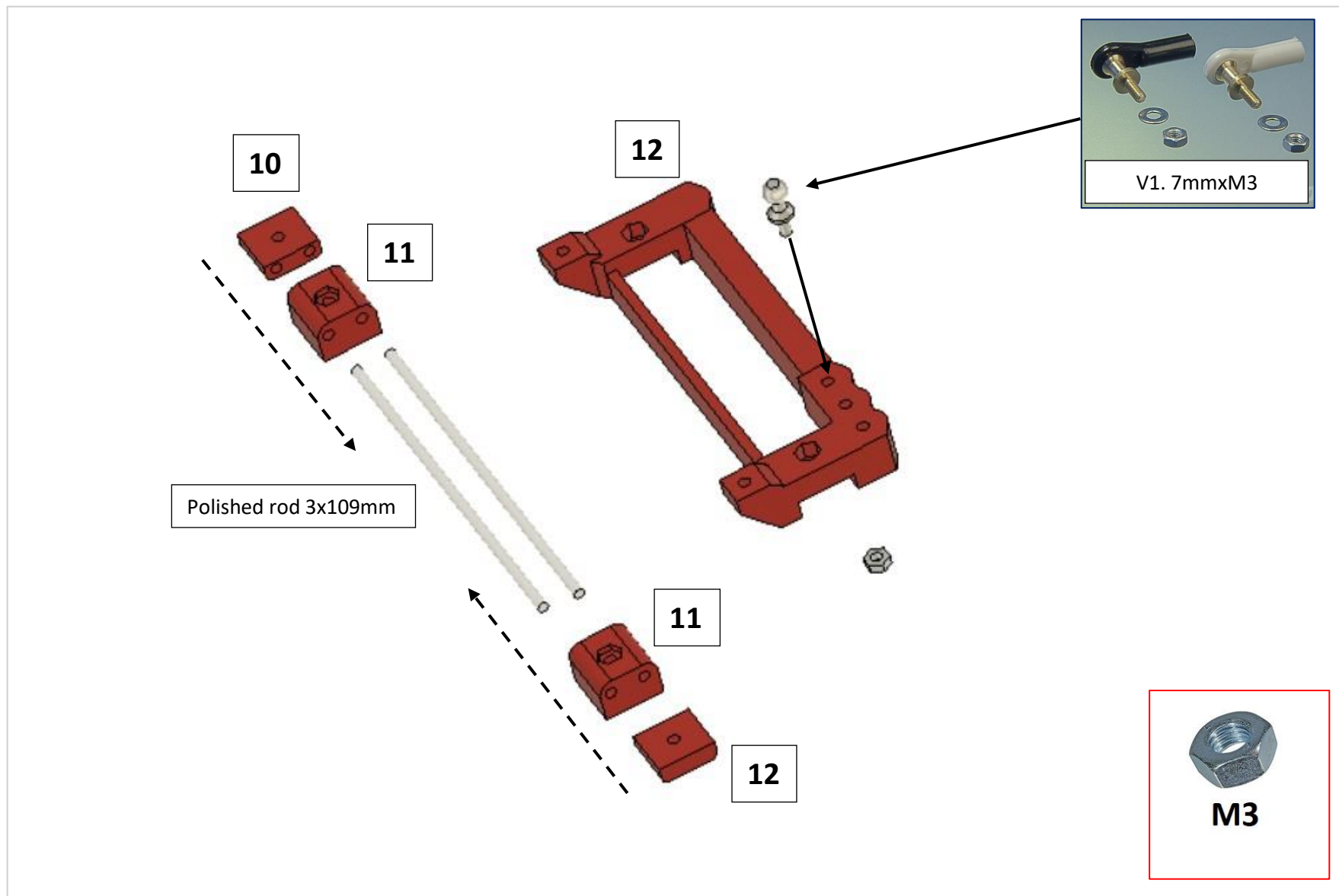




First drill part 11 with a 3mm drill bit and then clamp the appropriate smooth rod into the drill bit.

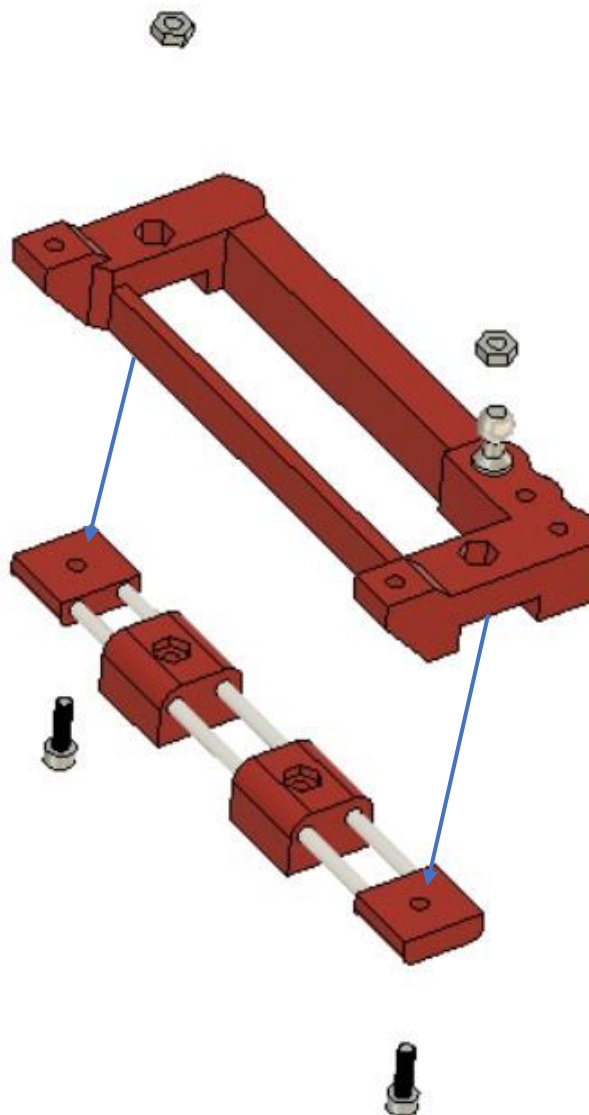
With the drill on, insert the smooth rod through the holes in the part11. Drive in and out until the part moves freely on the smoothed bar. Due to the heat created by friction, the holes in the part expand and "polish". The goal is for the part to move freely but for there to be no play between the part and the bar.

After assembling the steering assembly and tightening all the bolts, check this again or repeat the procedure.





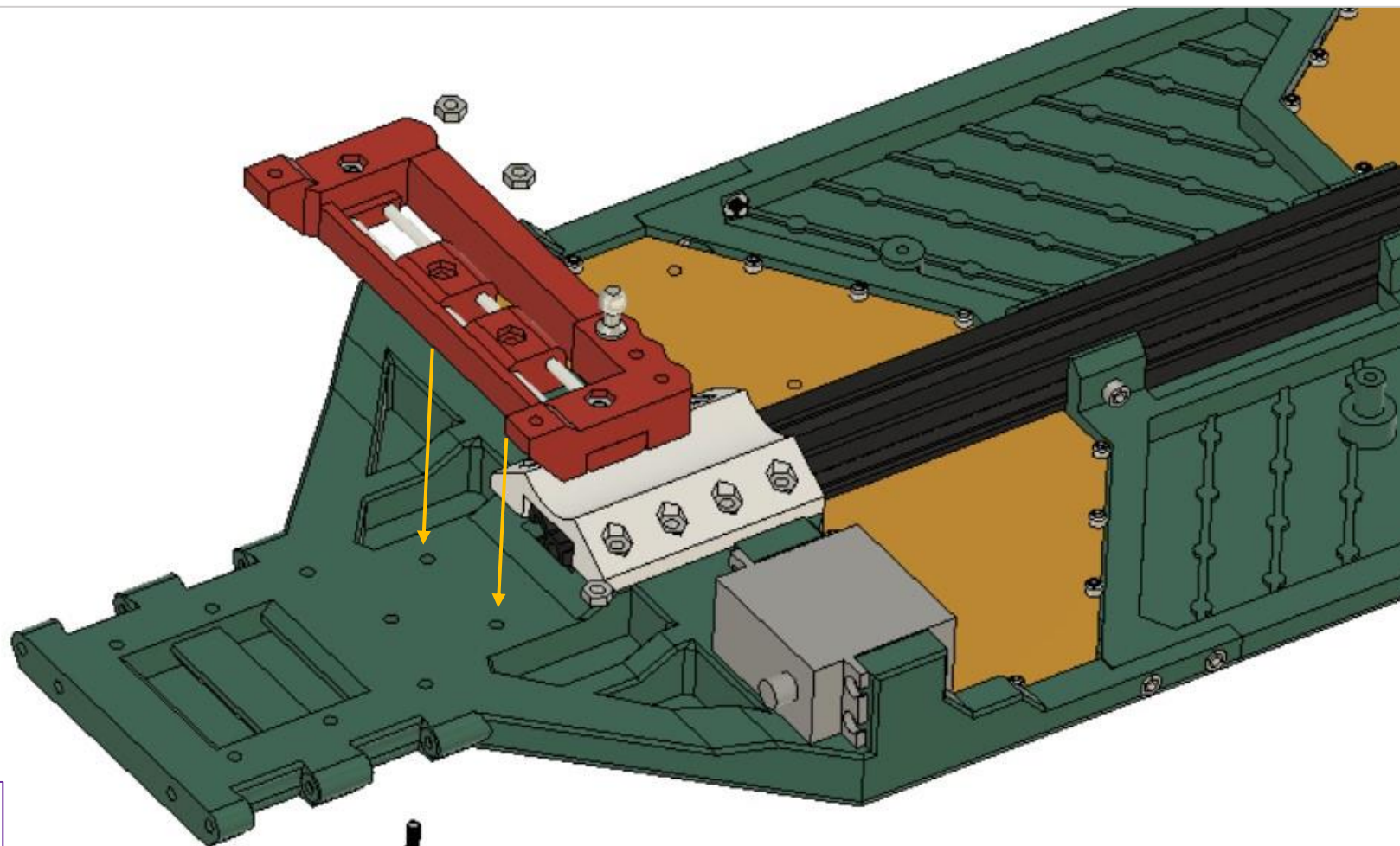
M3



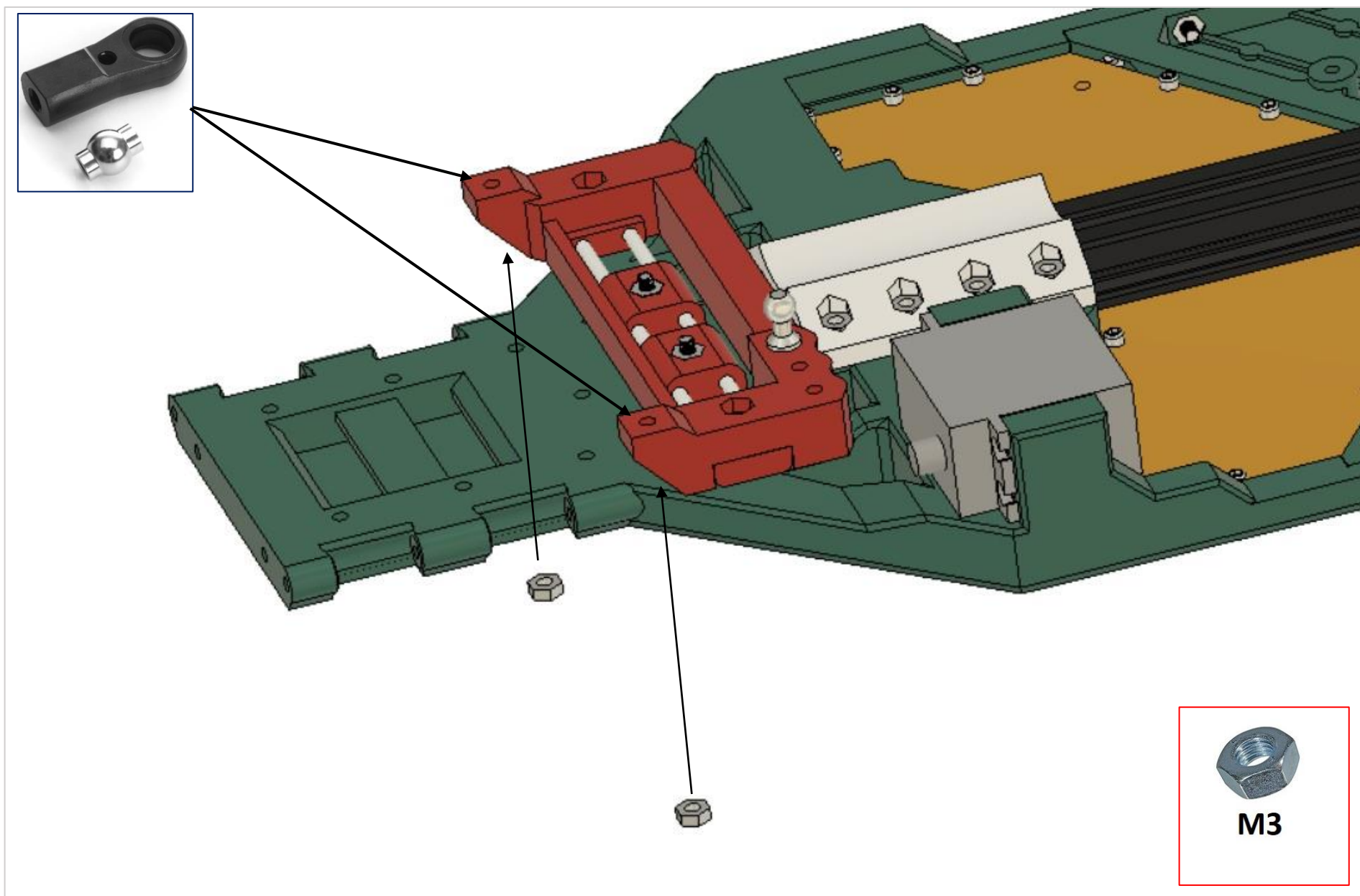
M3x12

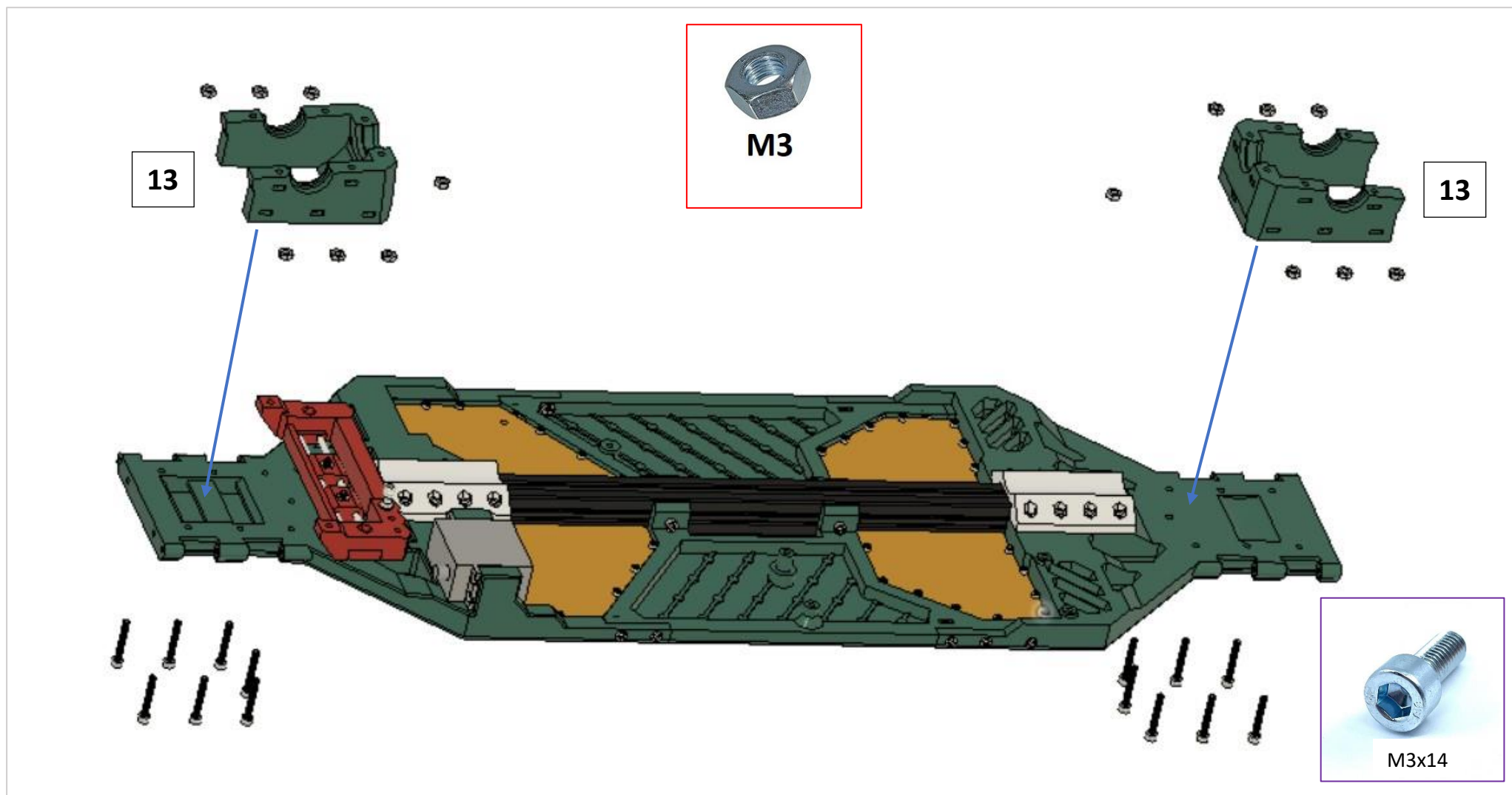


M3



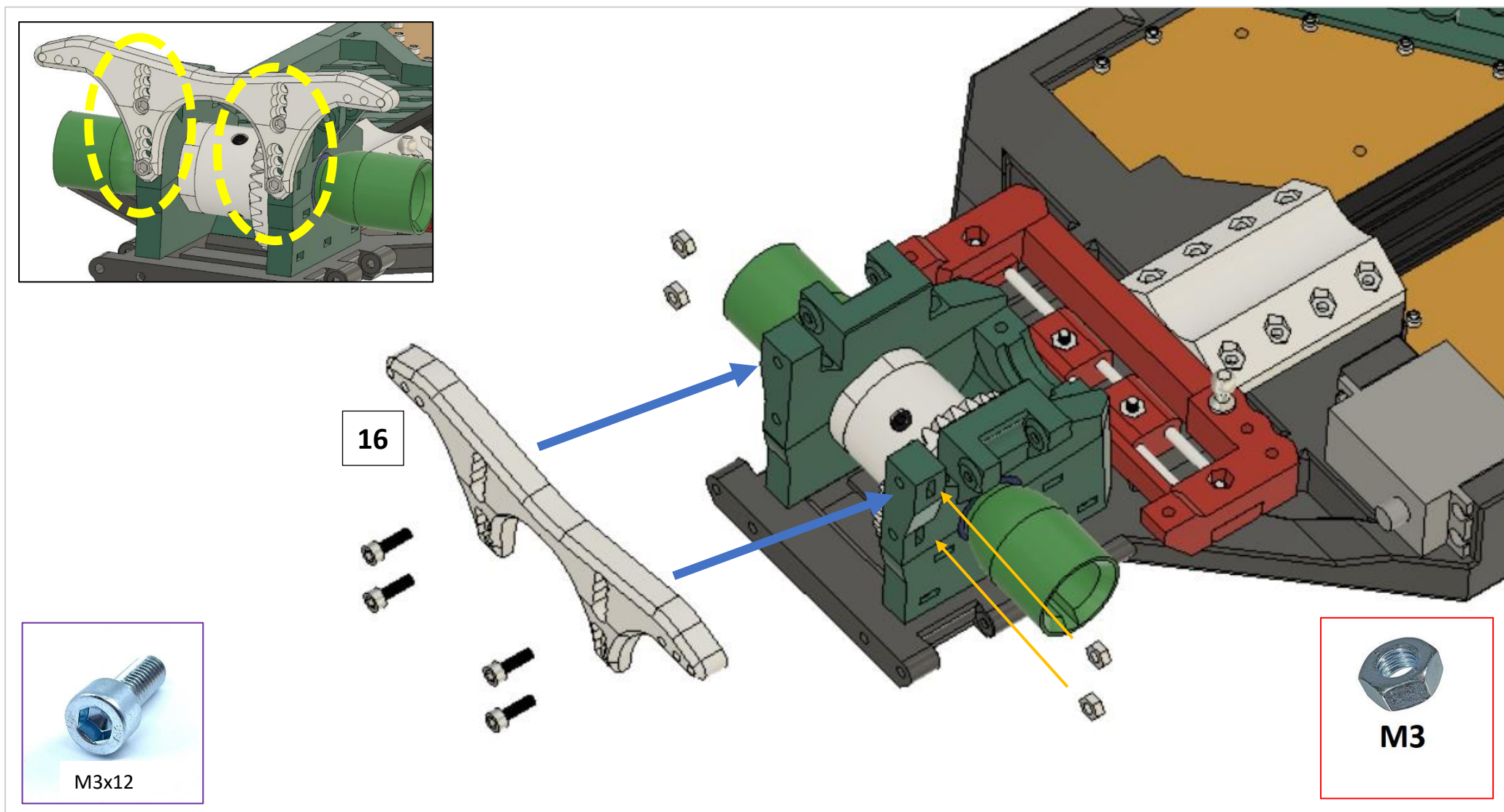
M3x12

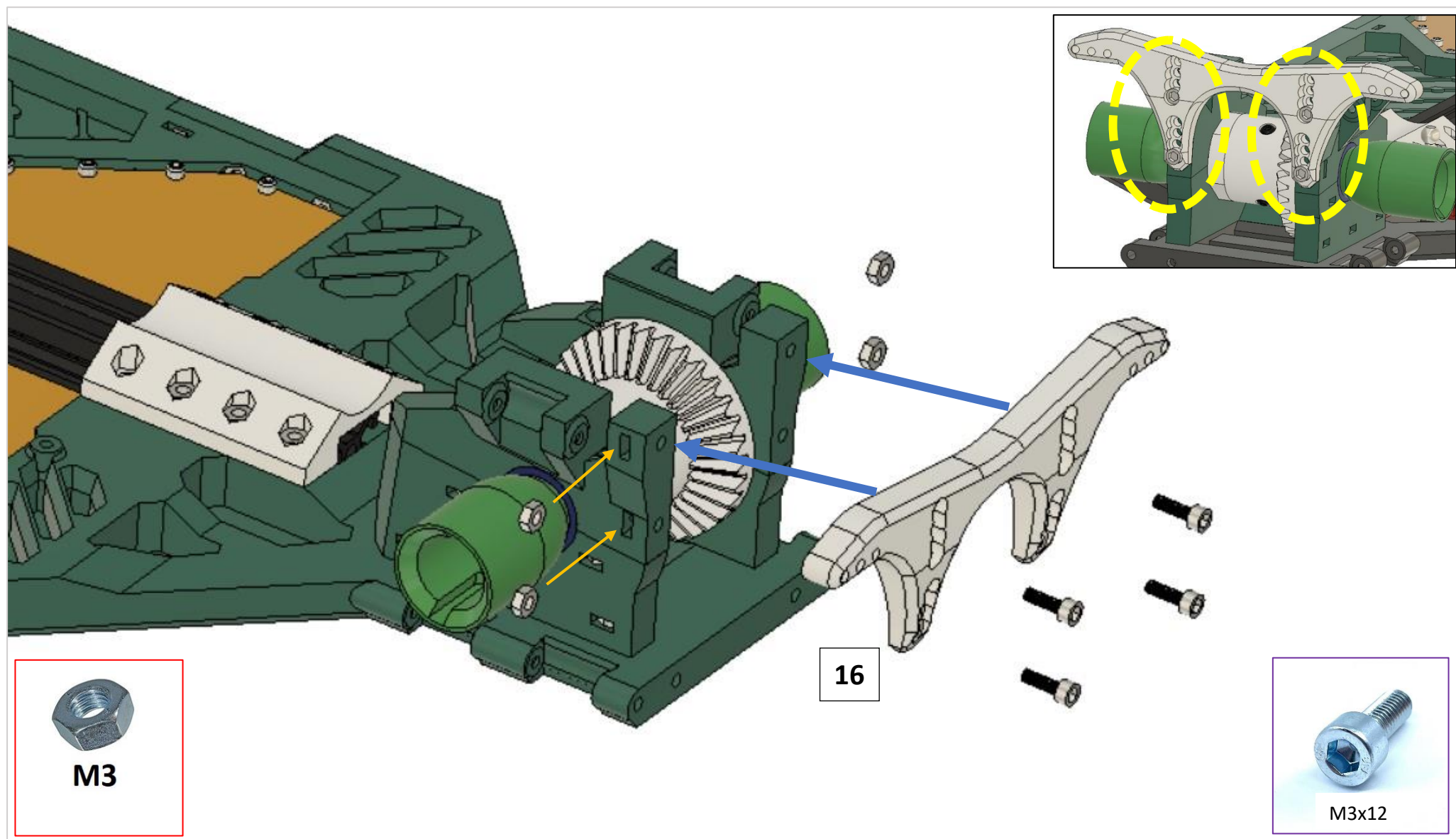








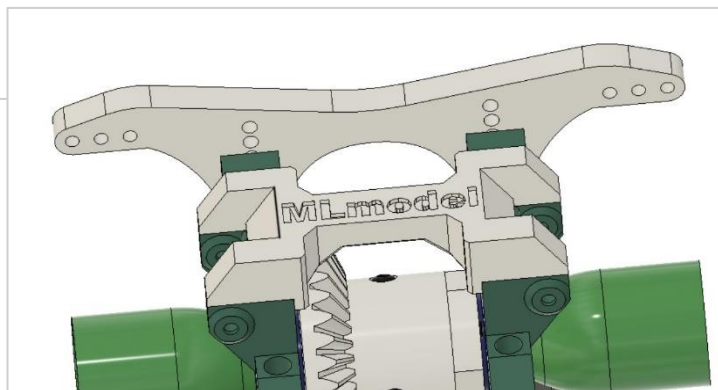




M3

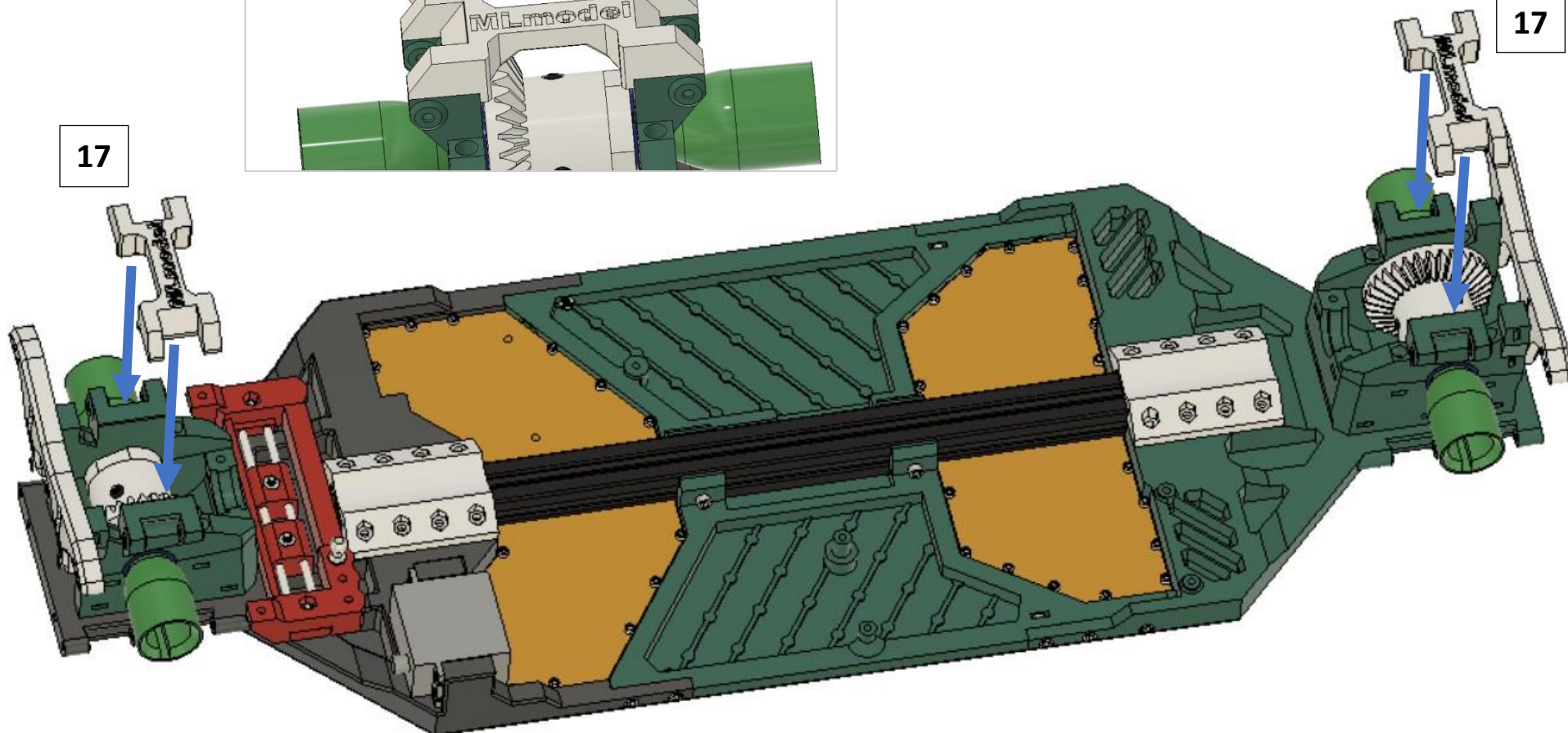


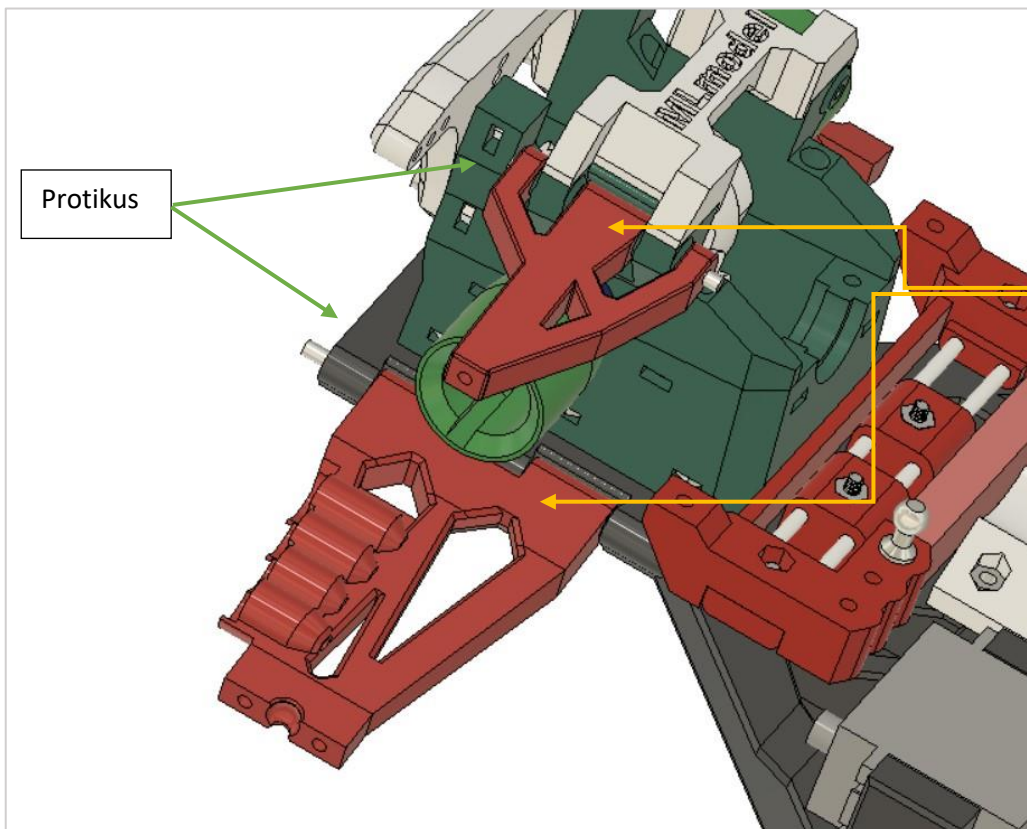
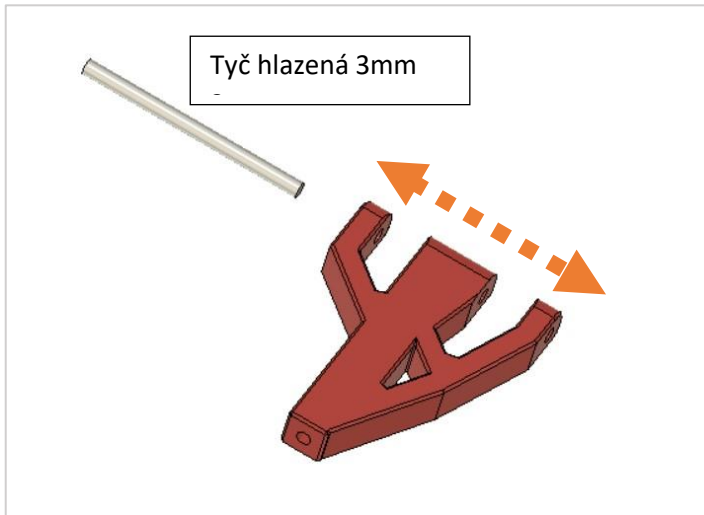
M3x12



17

17





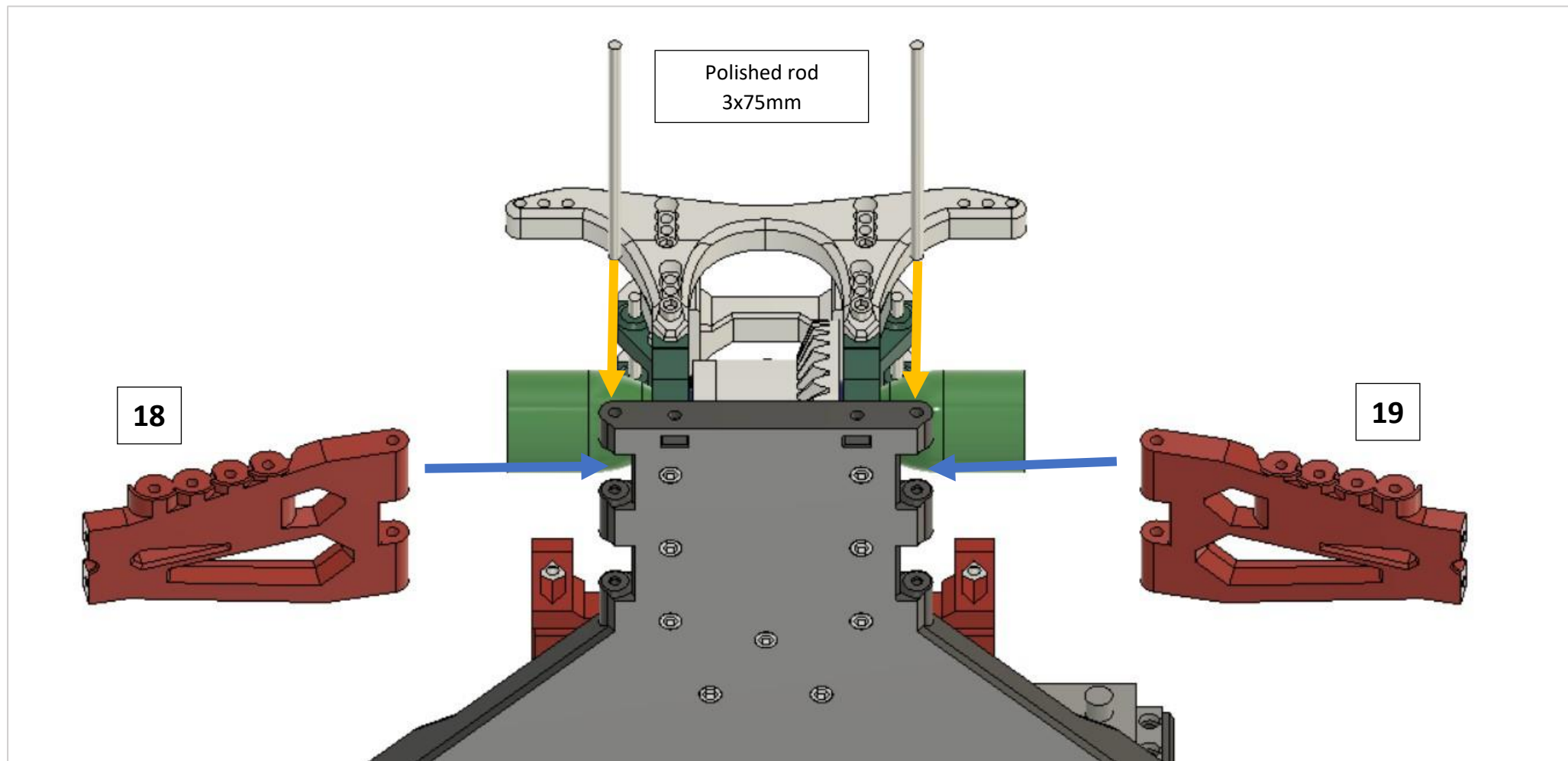
First drill the part with a 3mm drill and then clamp the appropriate smoothing rod into the drill. With the drill on, insert the smooth rod through the holes in the part. Drive in and out until the part rotates freely on the polished bars. Due to the heat created by friction, the holes in the part expand and "polish".

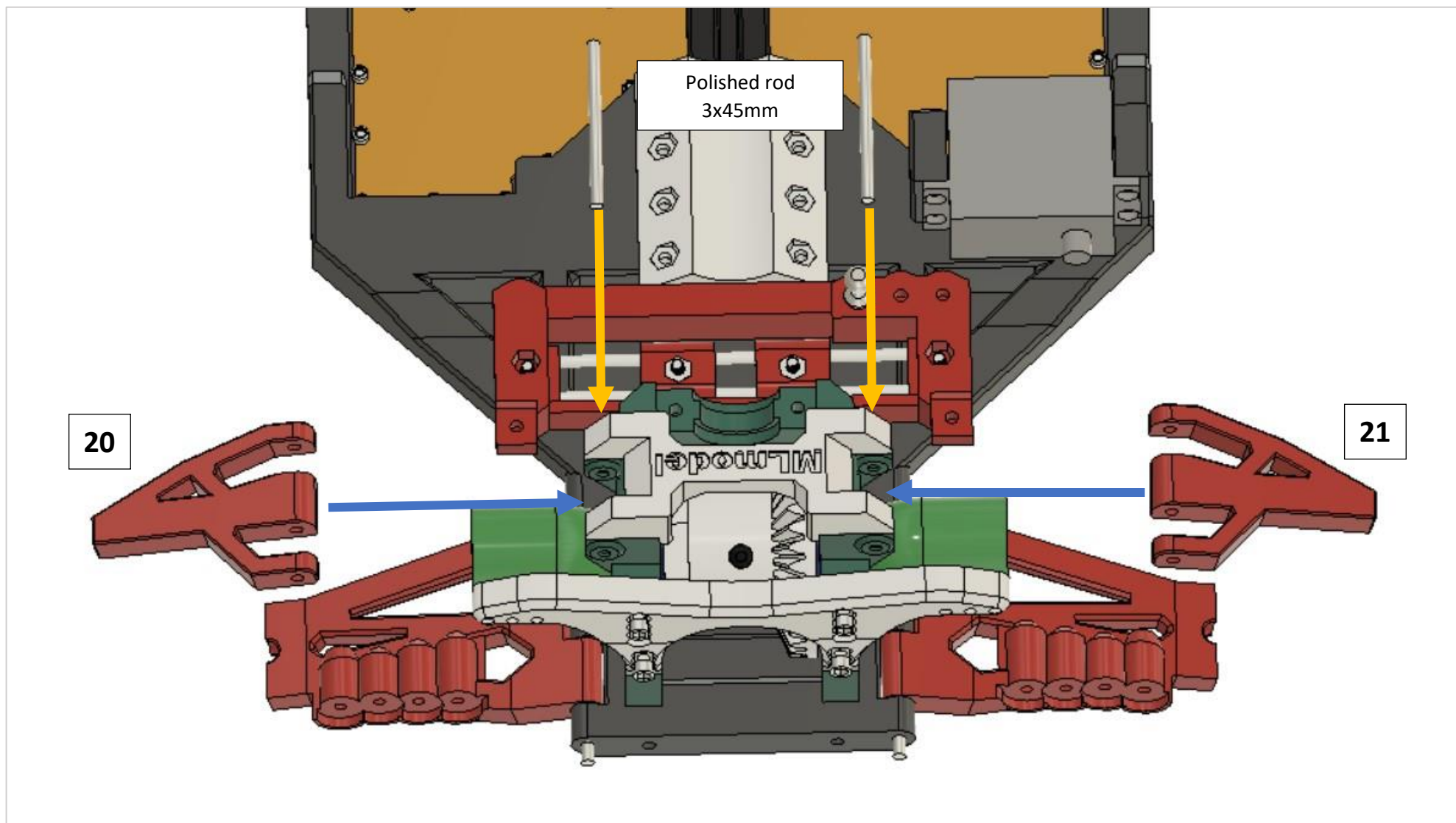
The goal is for the part to rotate freely, but for there to be no play between the part and the bar.

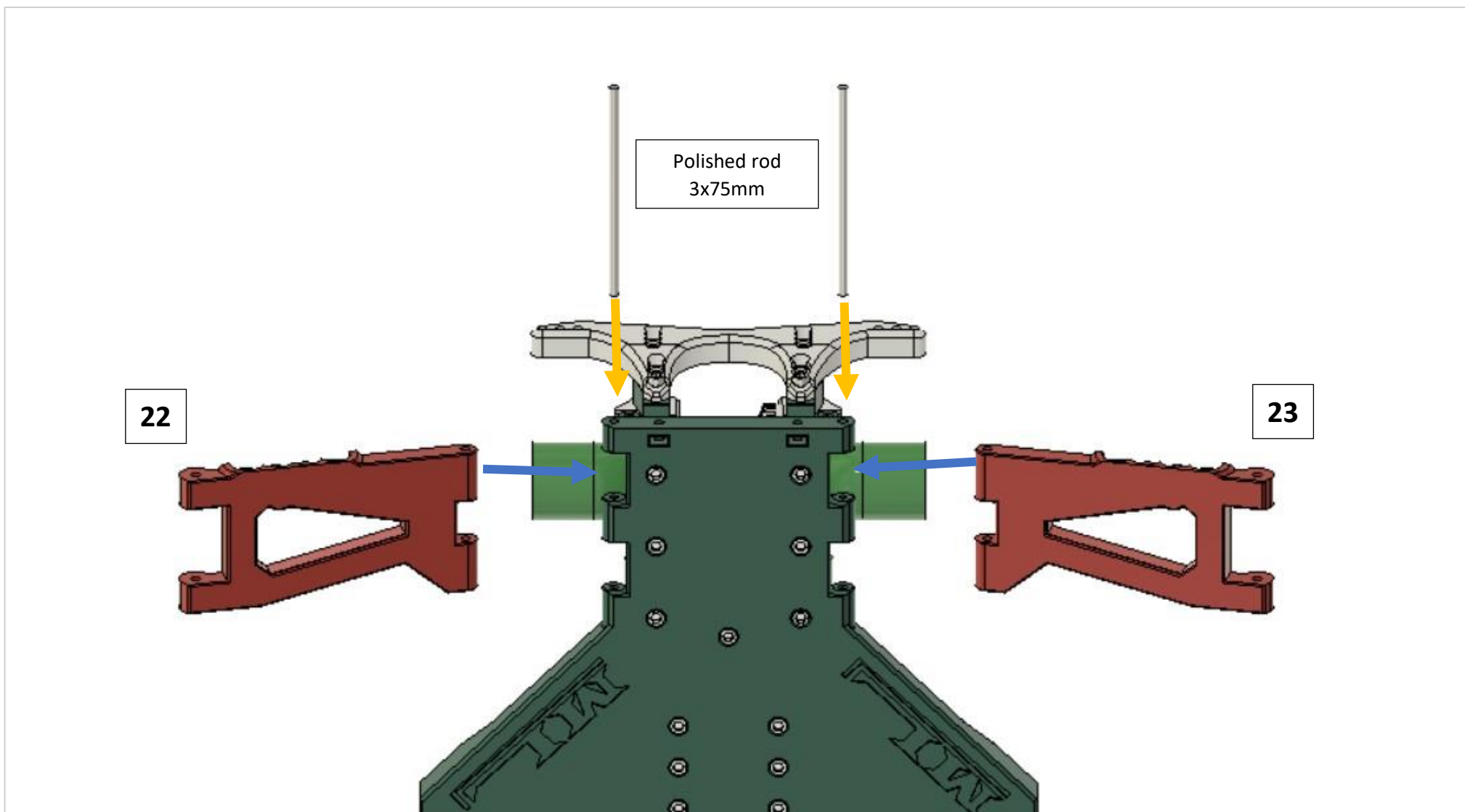
Do this for each part that is to rotate or move on the smoothed bar.

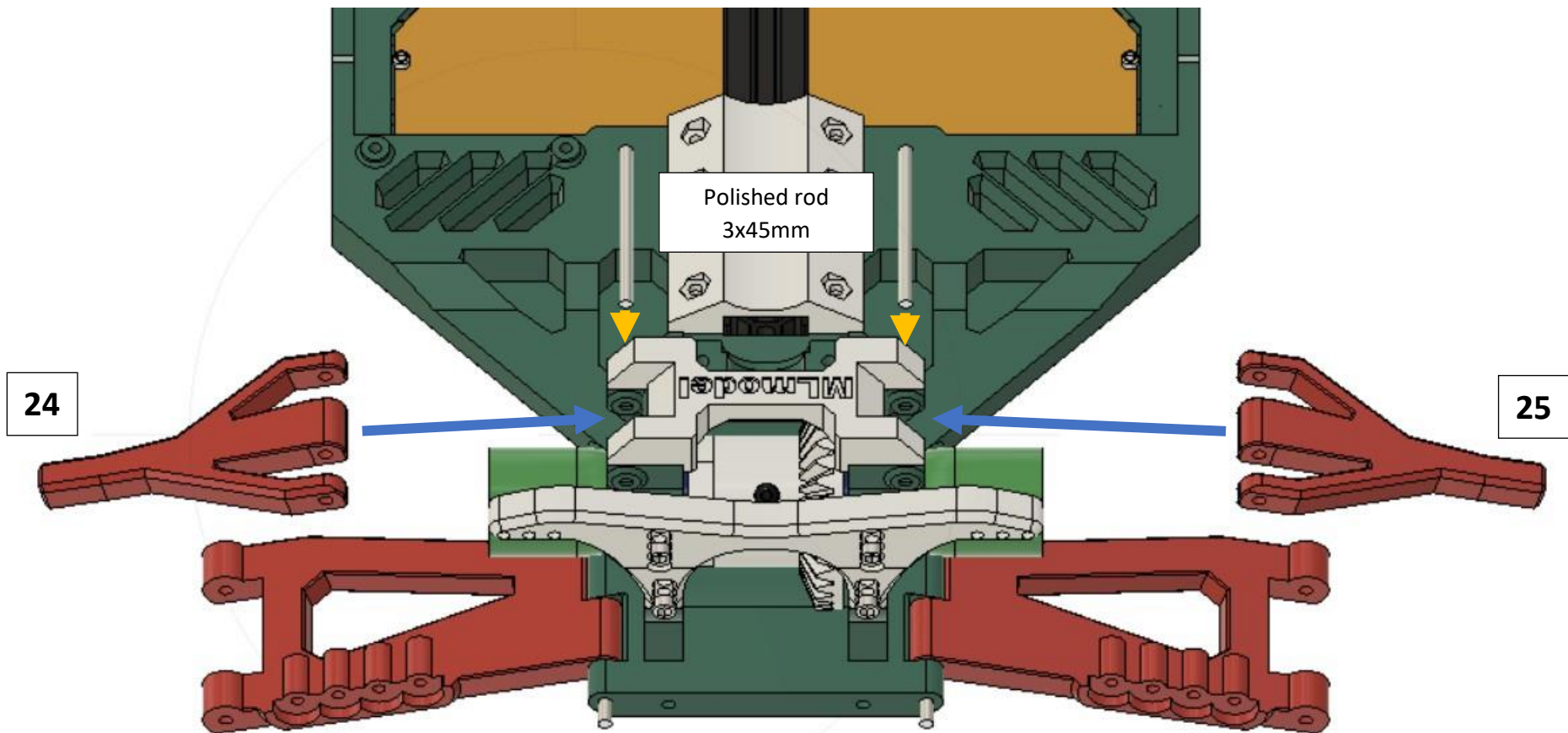
ONLY FOR PARTS WHAT MOVE.
THE COUNTERCONS MUST HOLD THE BAR.

Next, set the part in place and use a drill to insert the smooth rod as far as it will go.



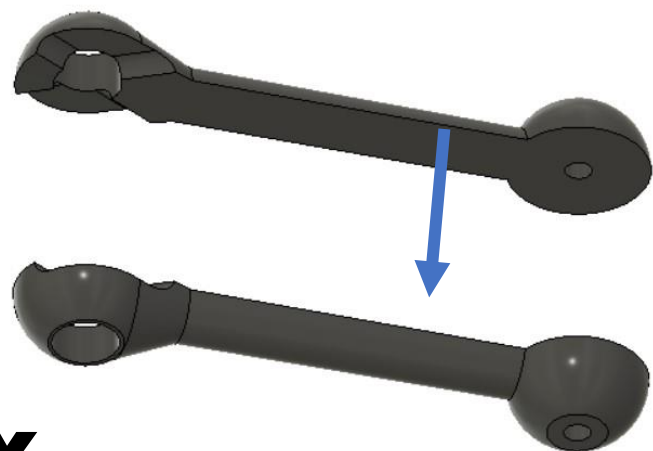






2x





28

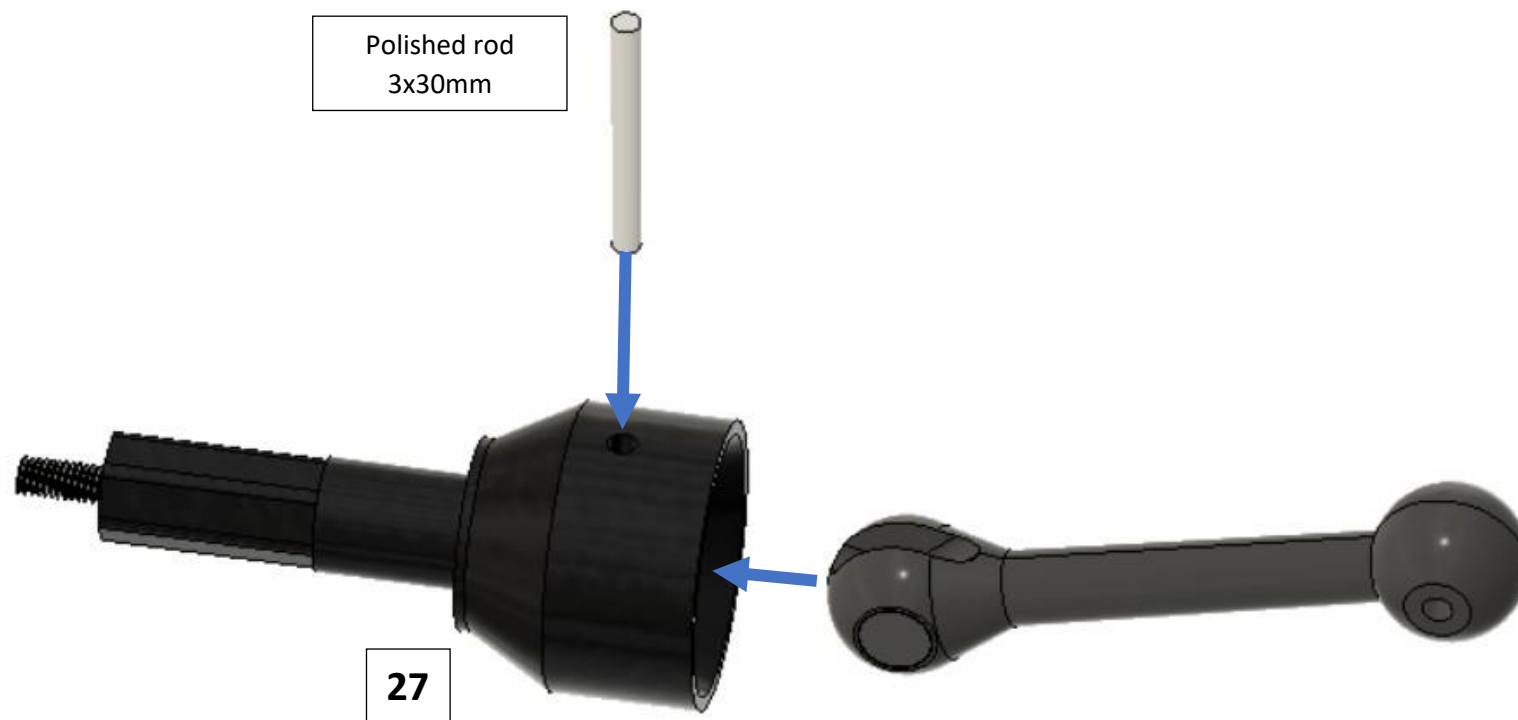
4x



29

4x

2x

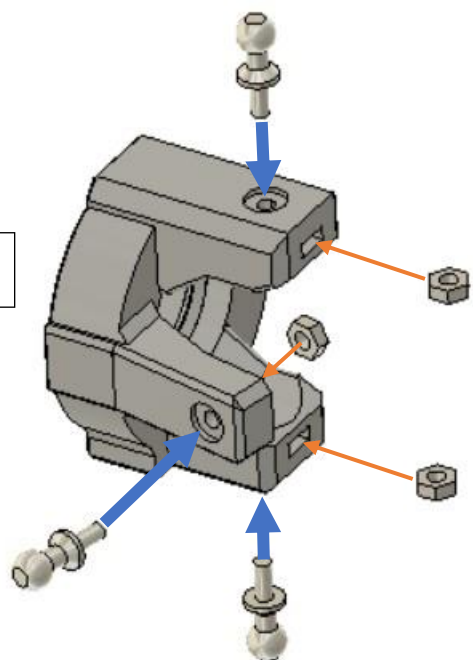


2x

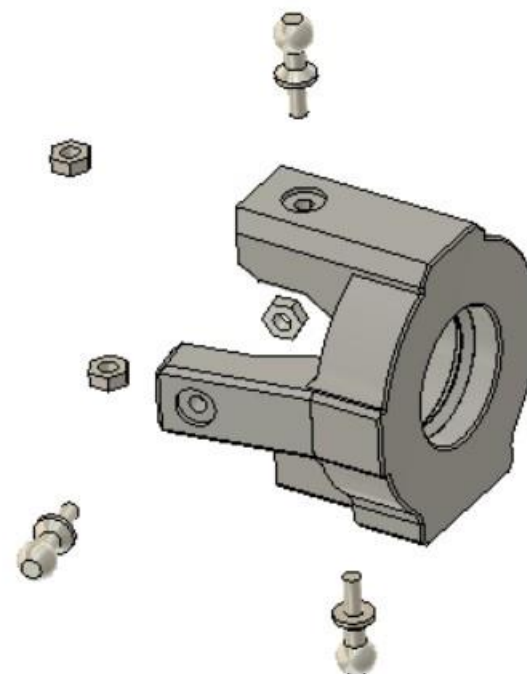


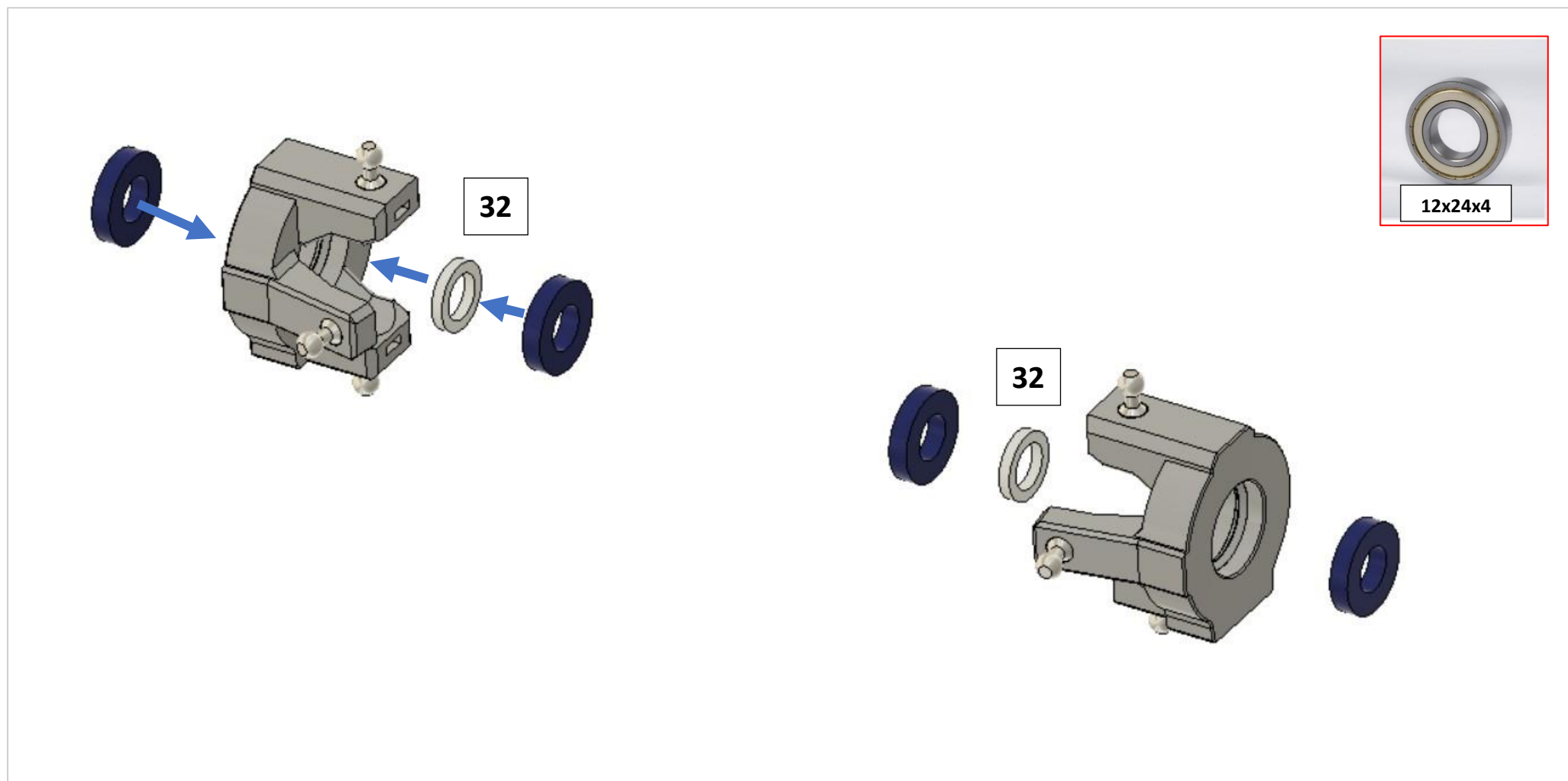


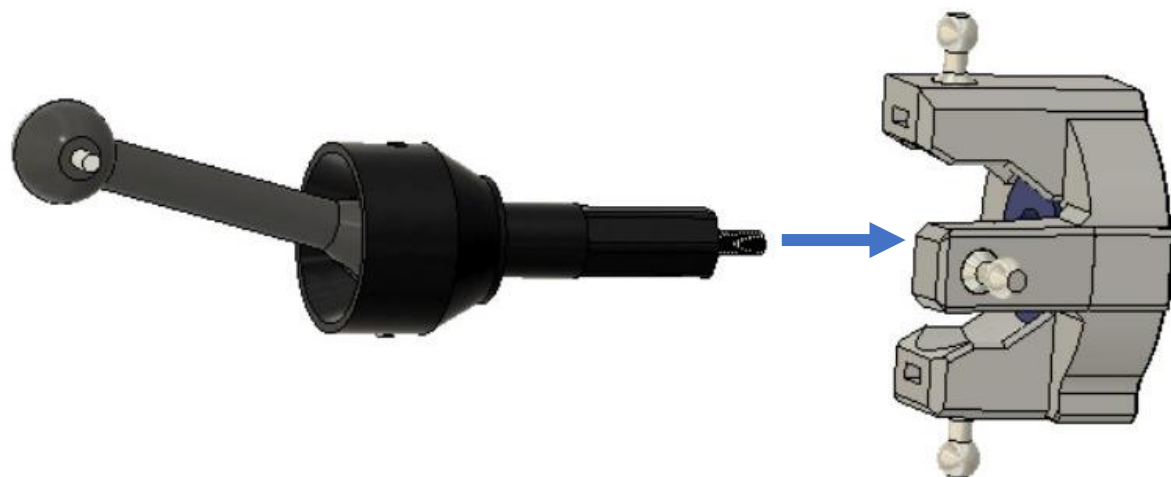
30



31



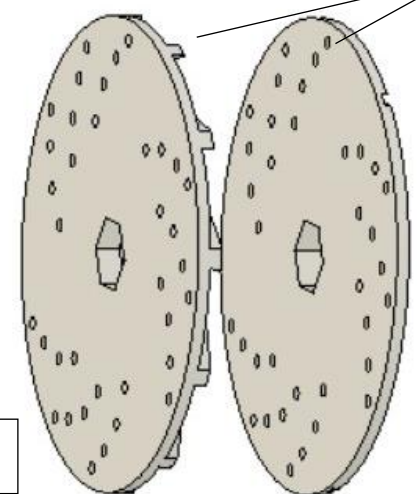




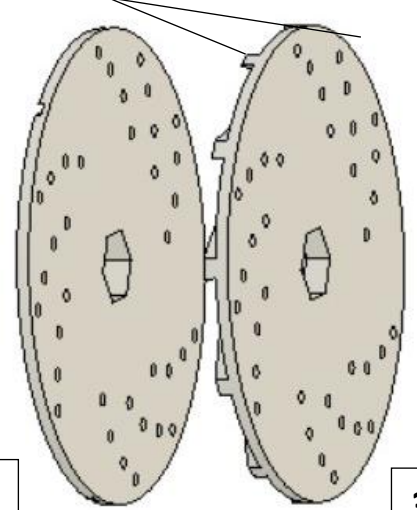
35



34



33

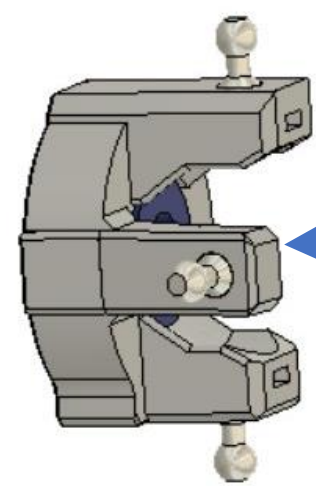


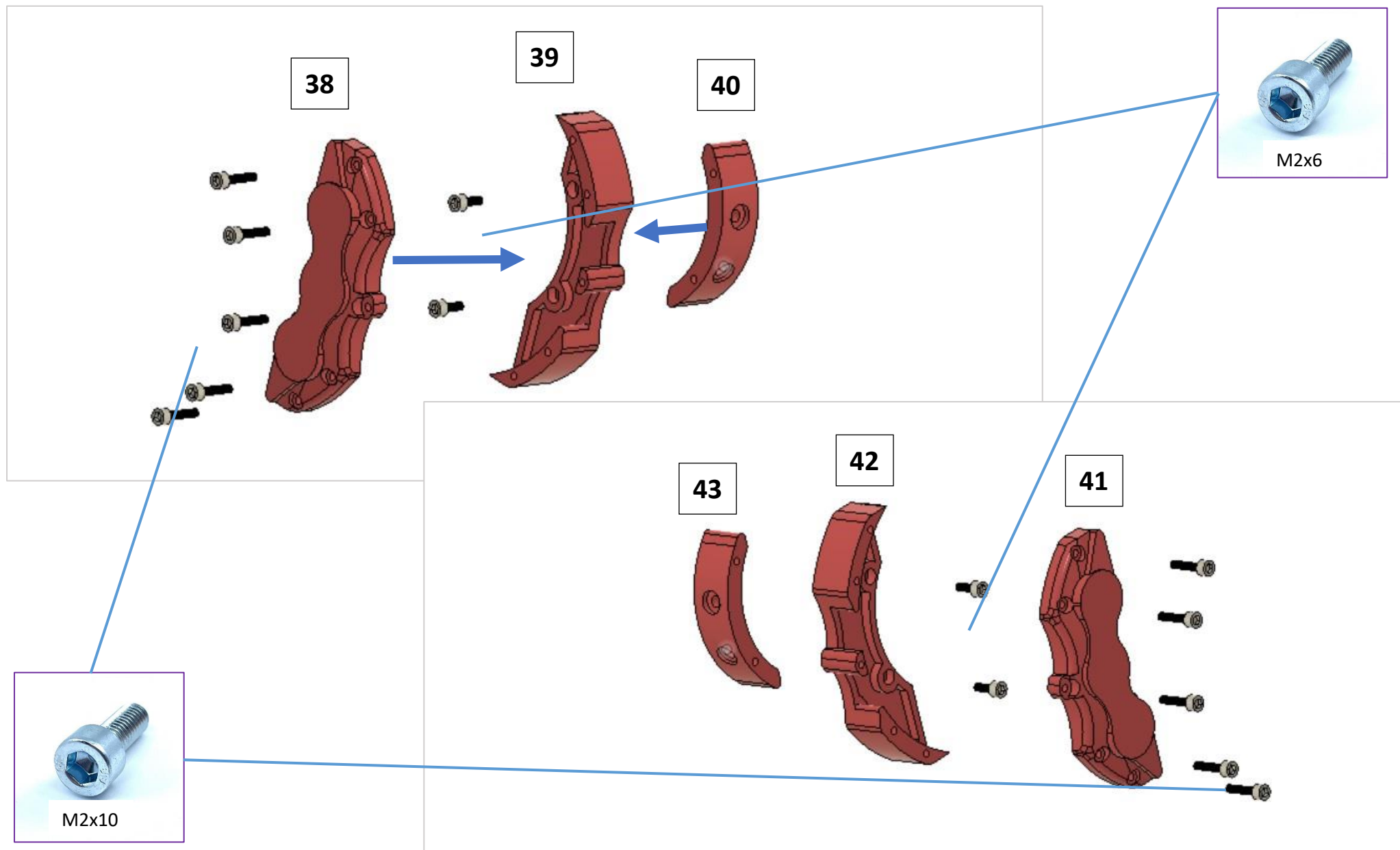
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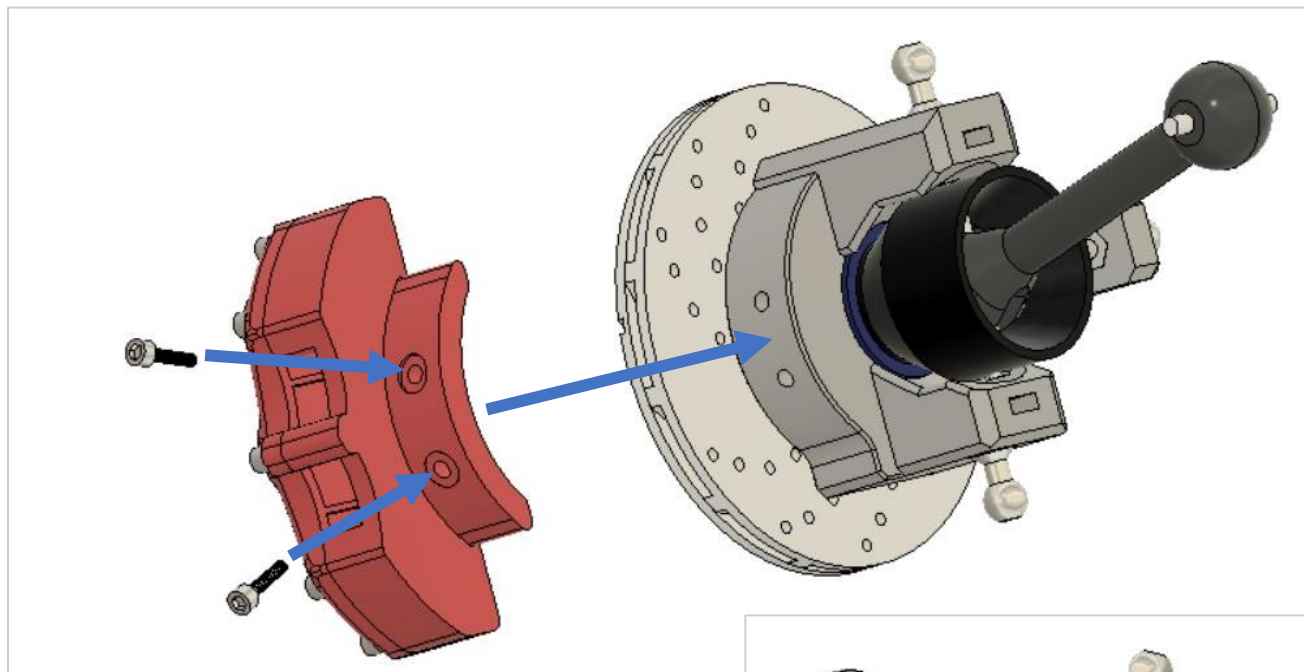
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36



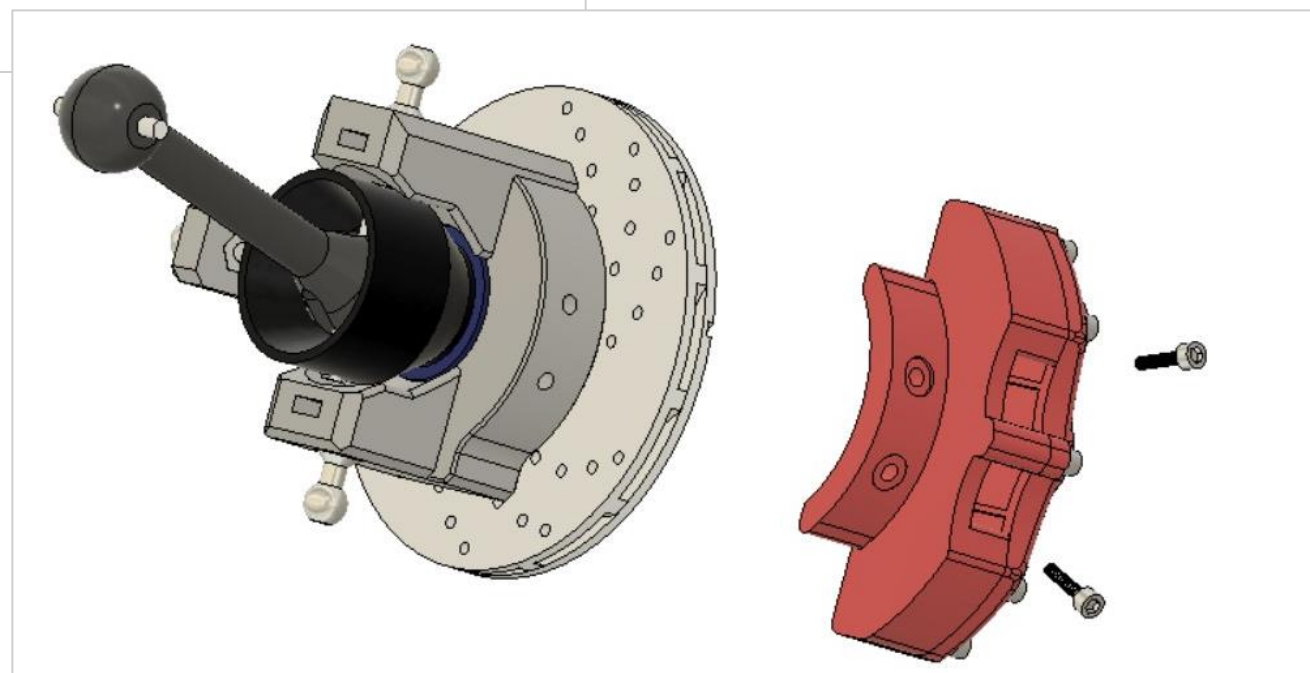


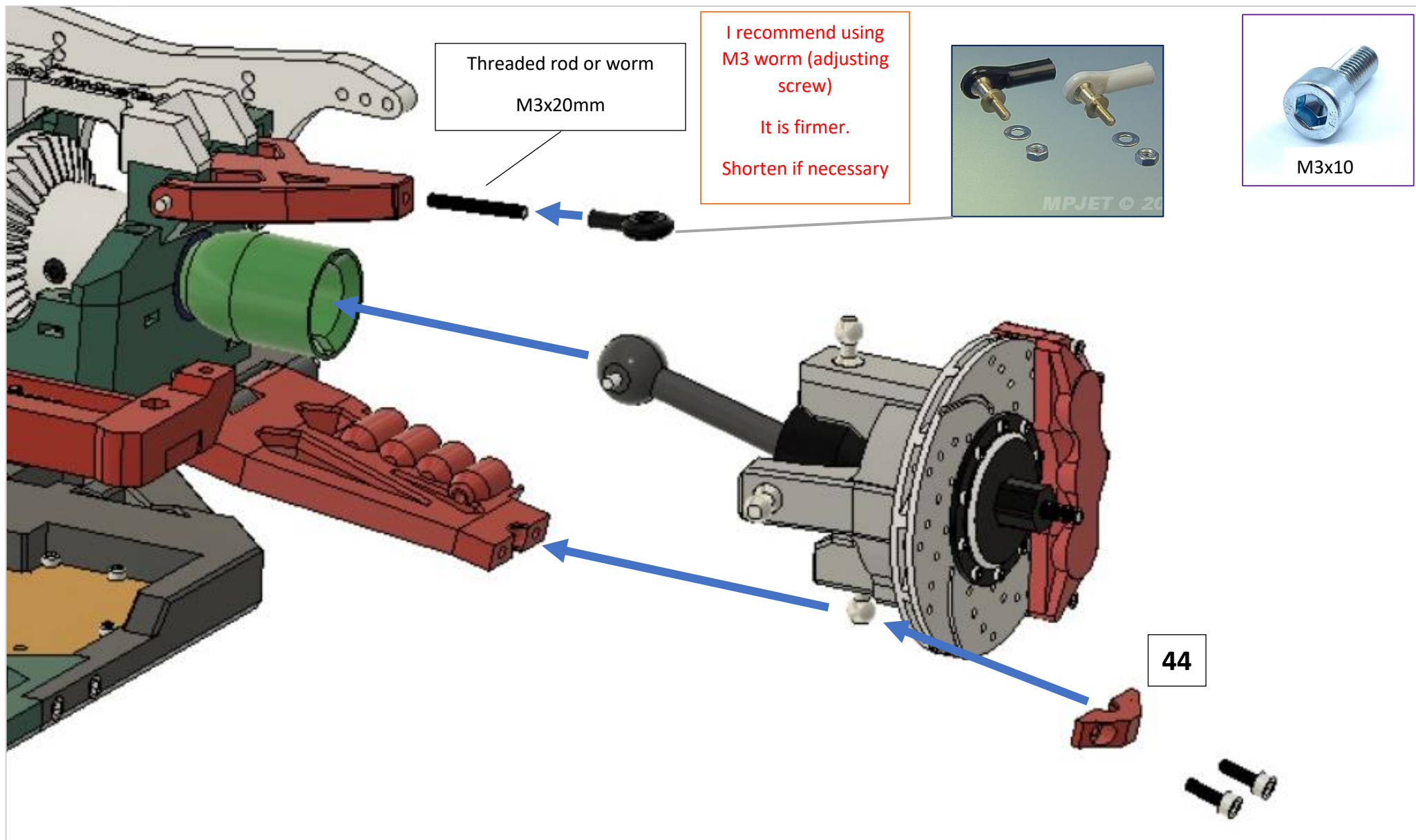


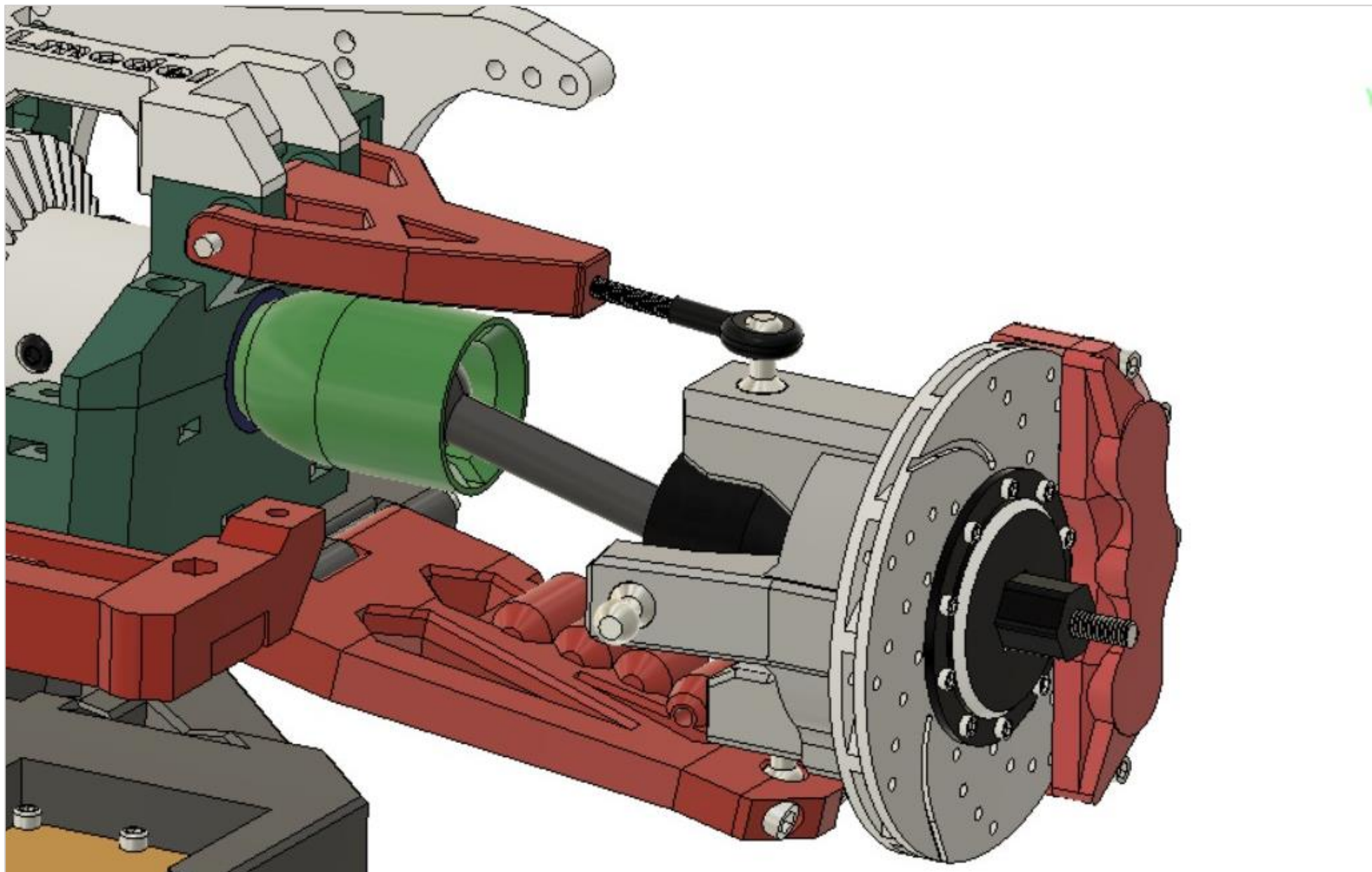
M2x10

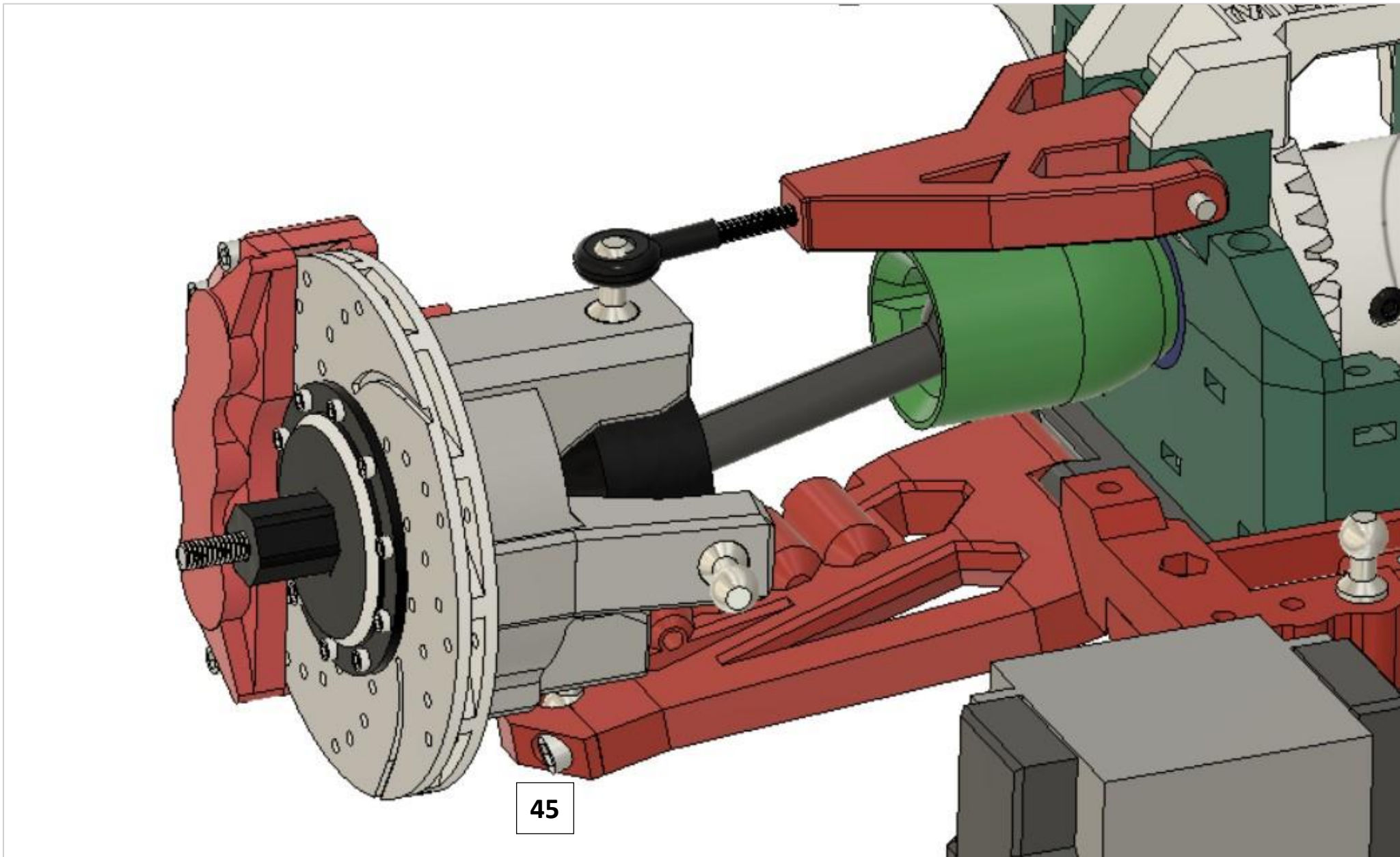


M2x10



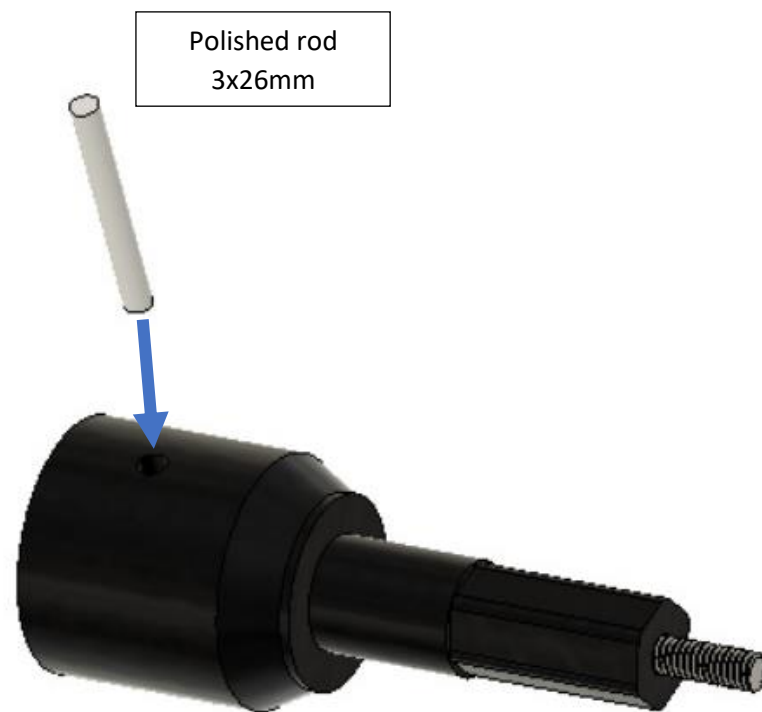




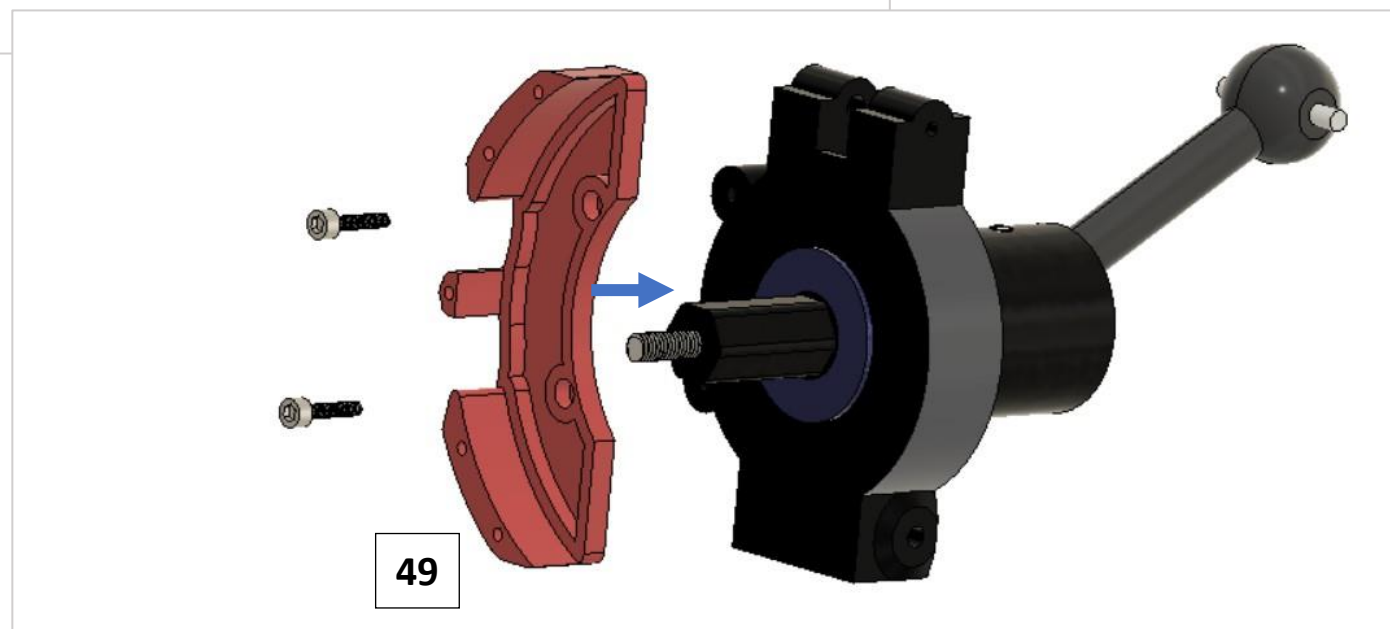
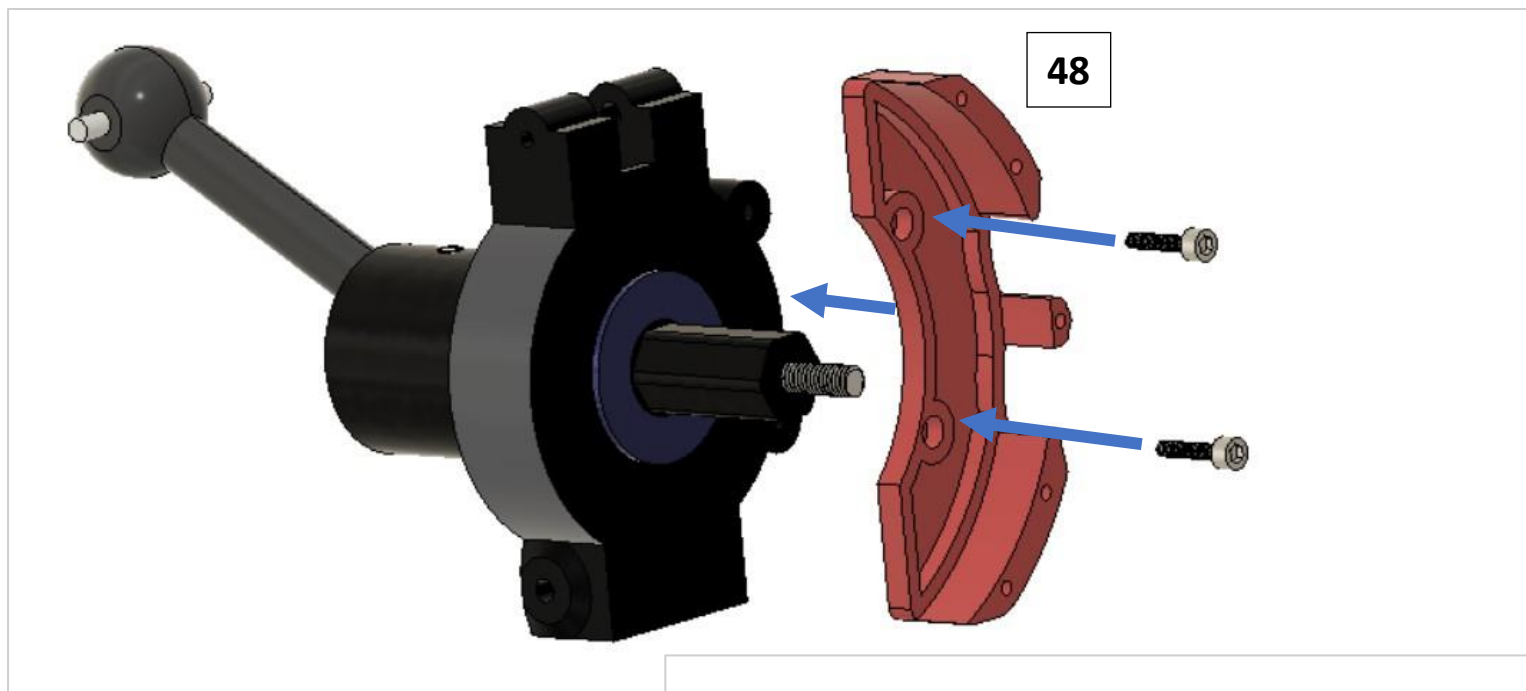


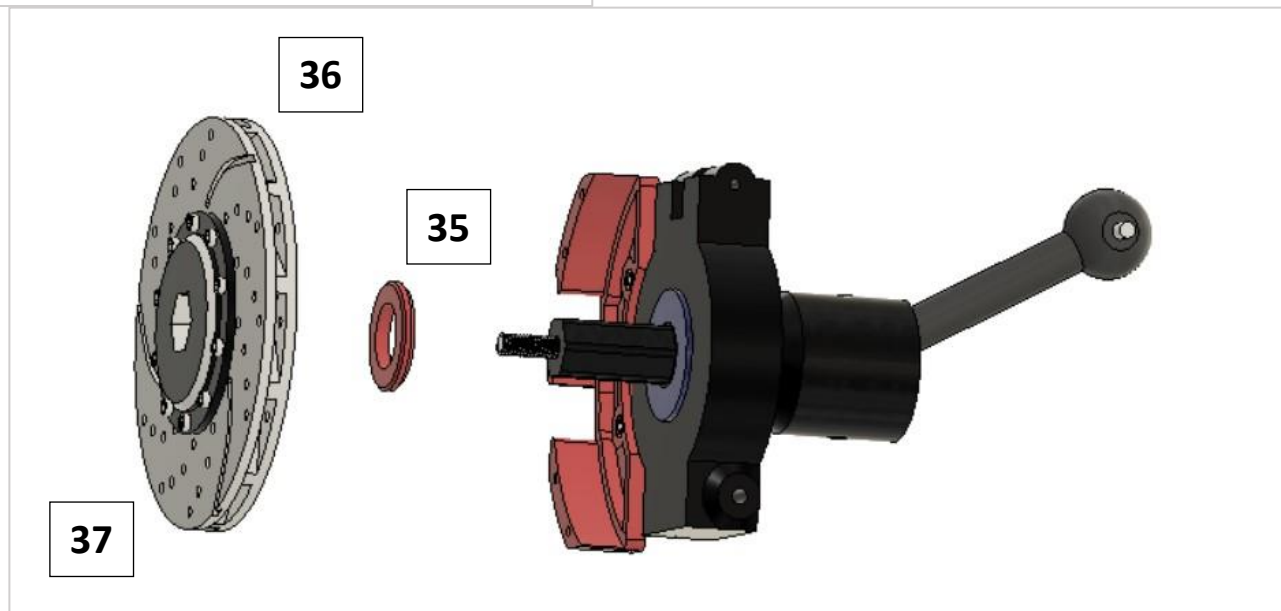
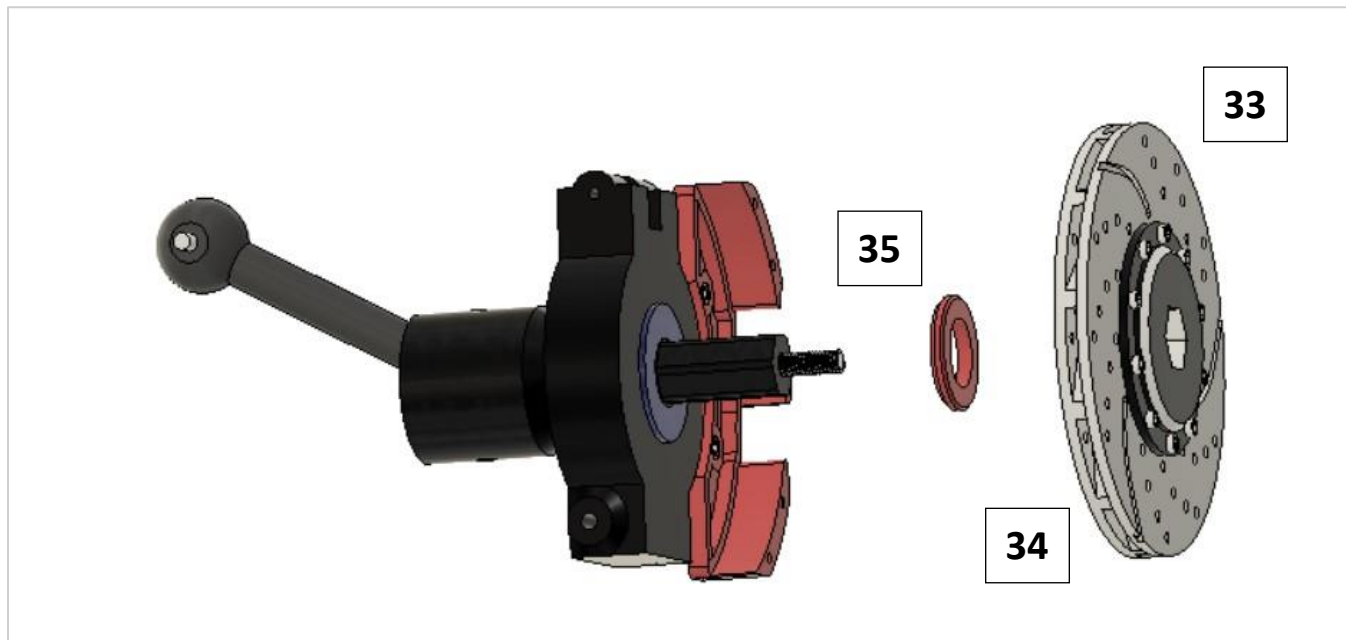
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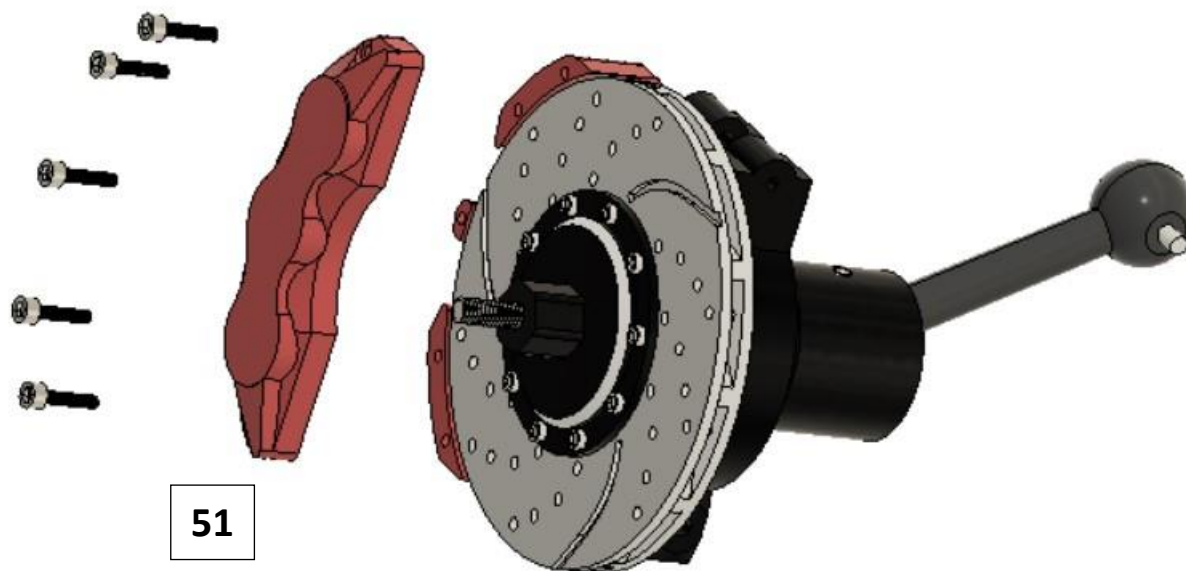
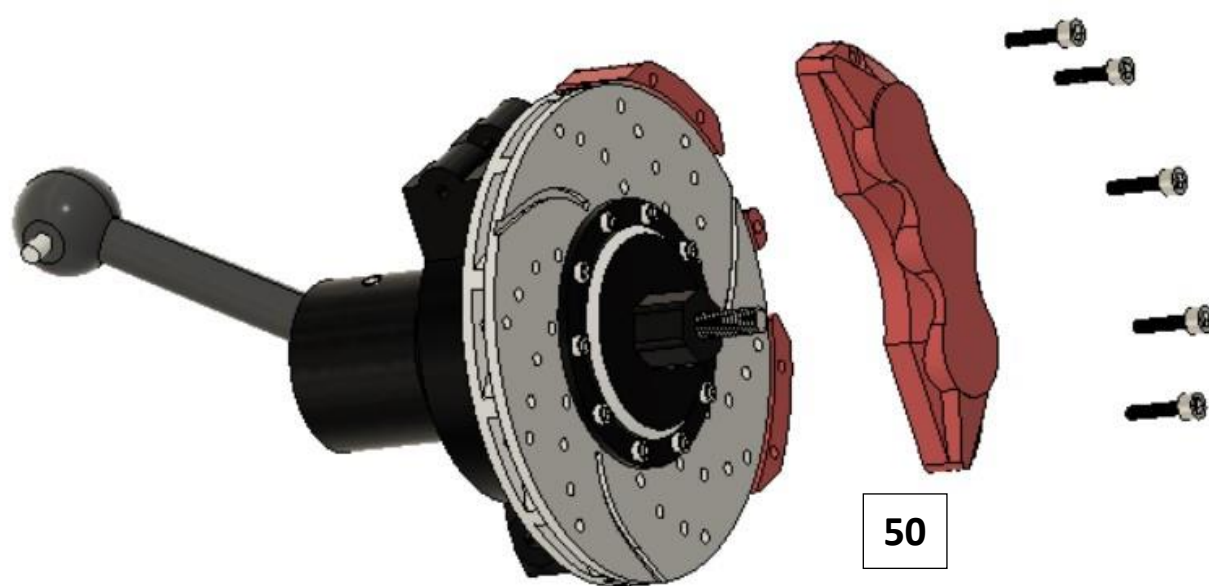
2x

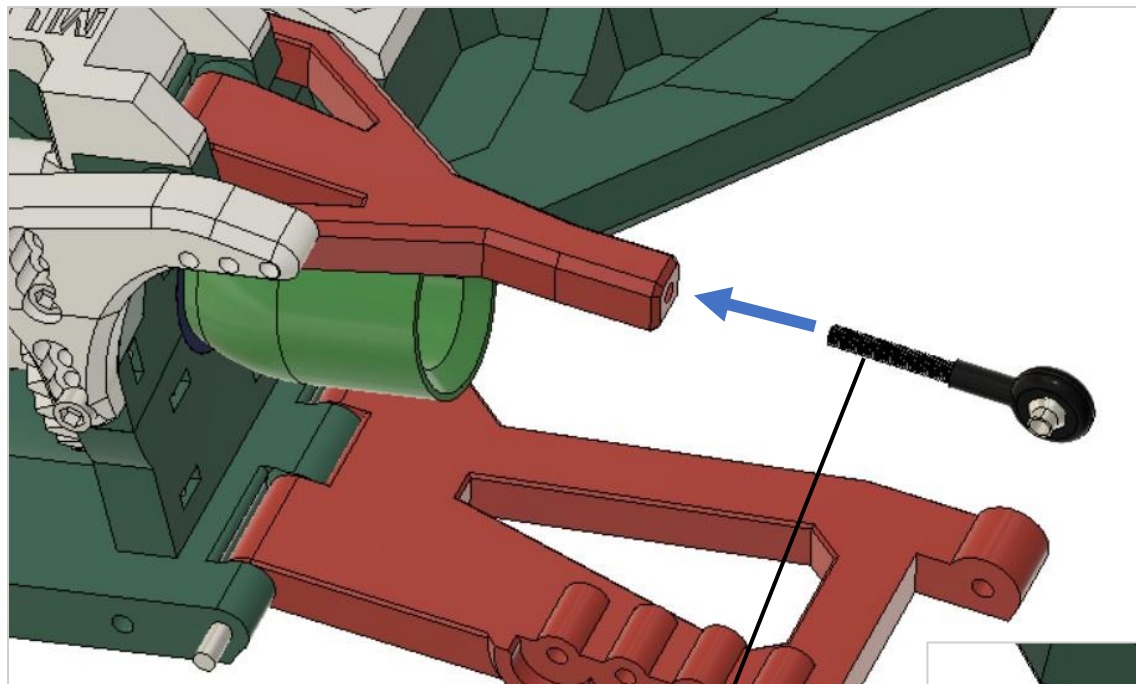




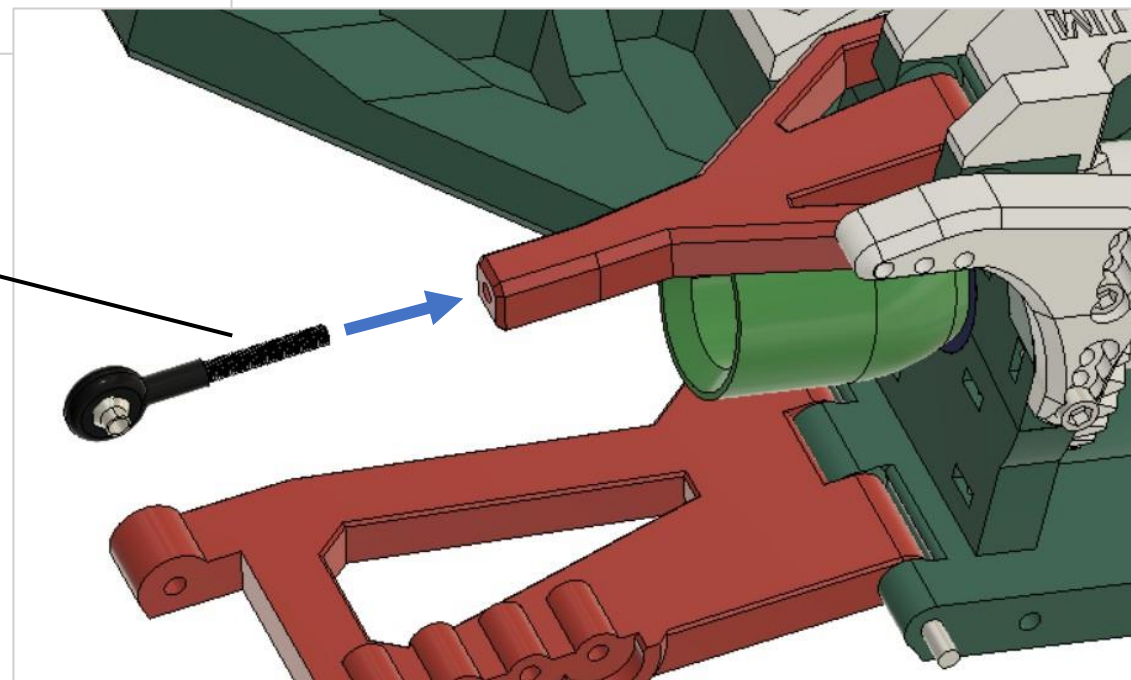


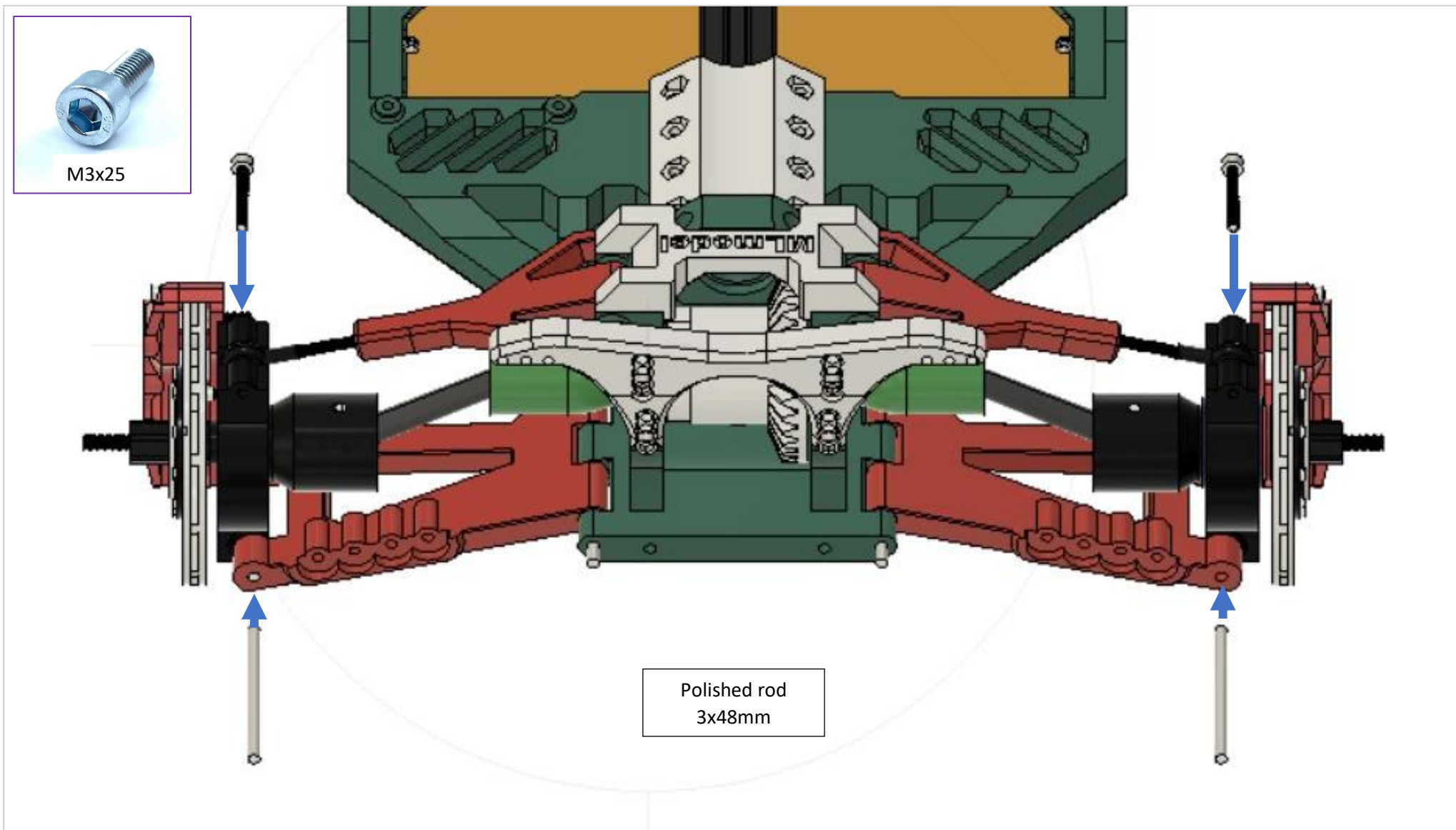


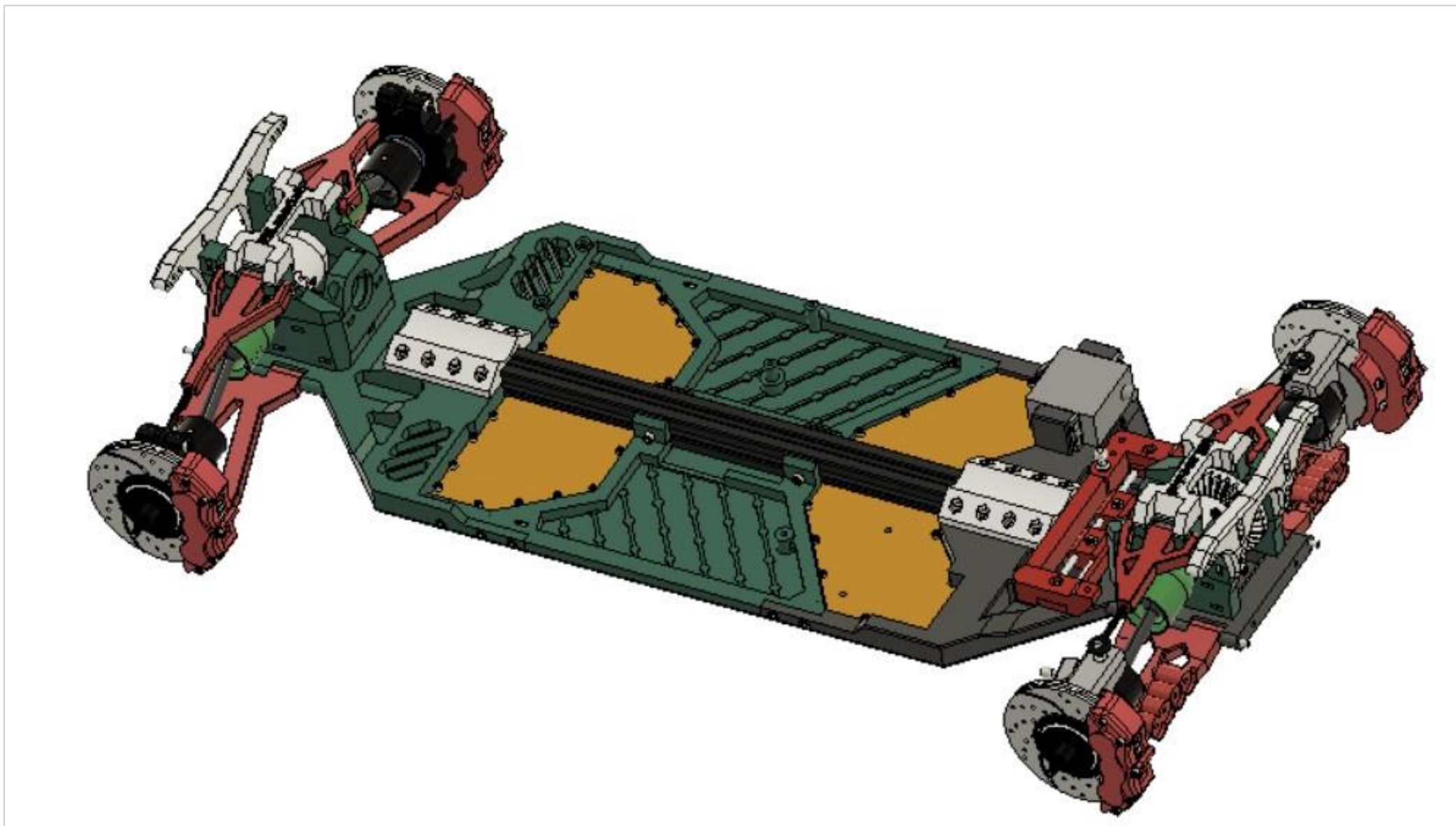


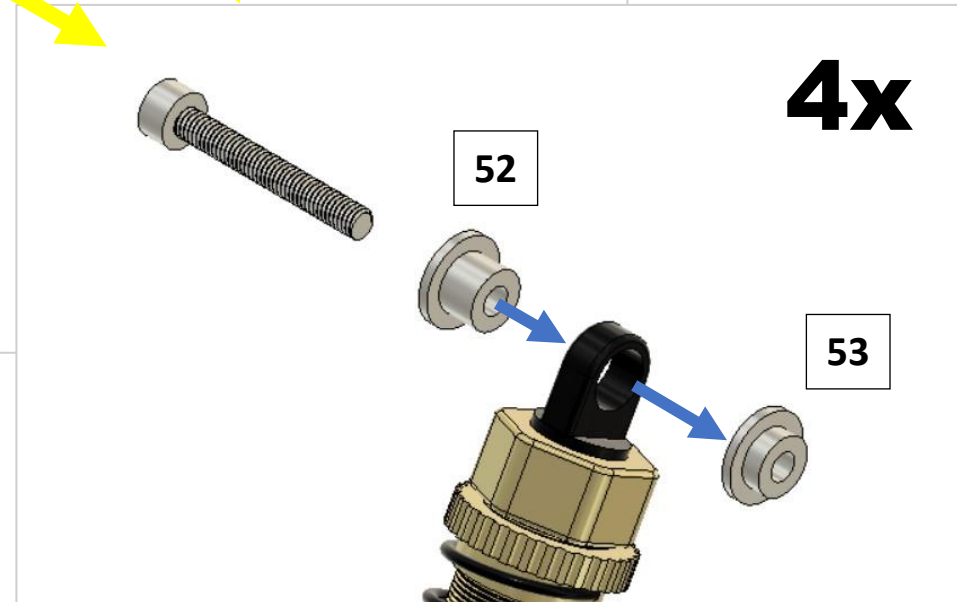
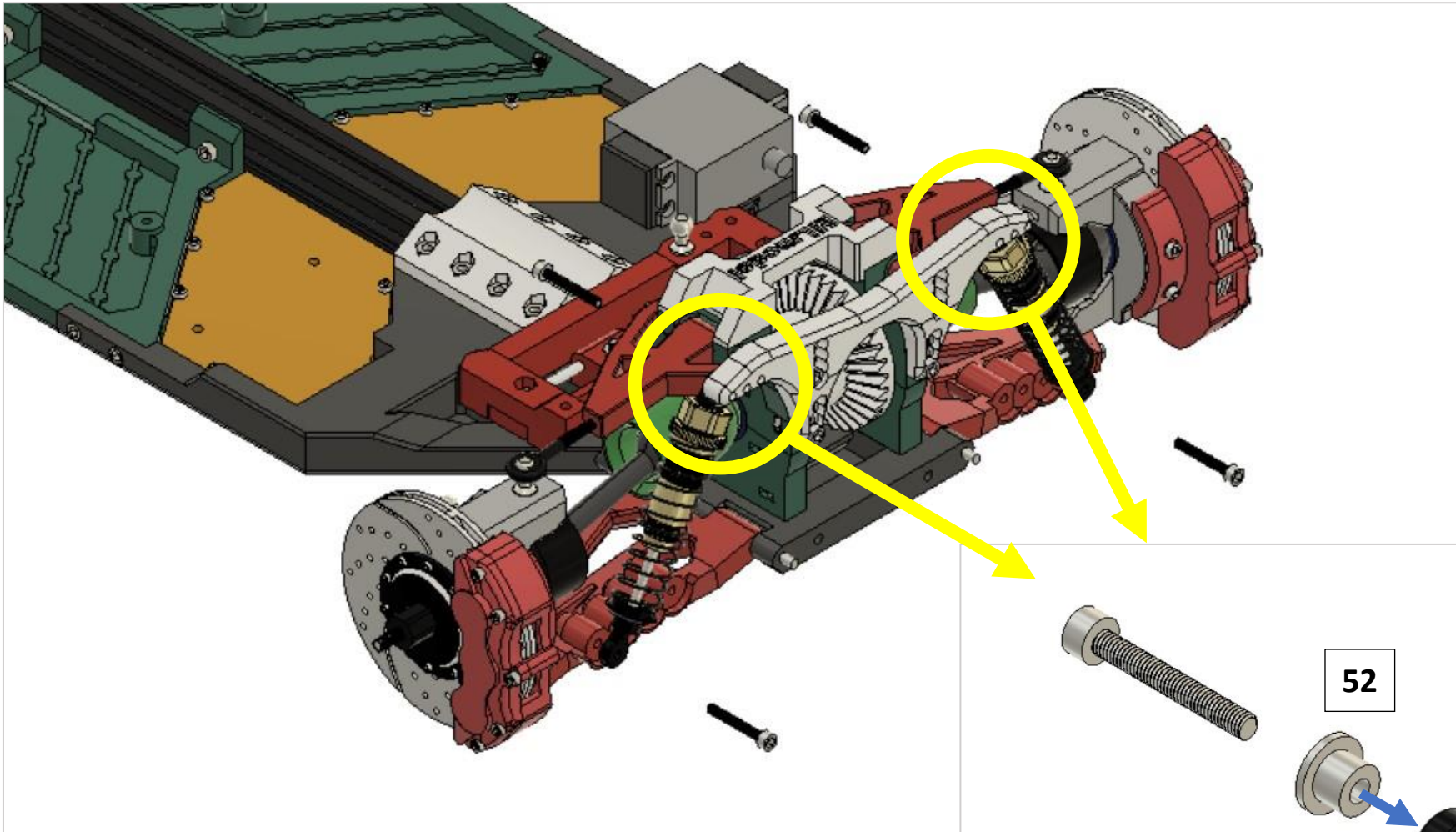


Threaded rod or worm
M3x25mm









Same procedure for rear shock absorbers.

The position of the shock absorbers is at your discretion. My choice is:

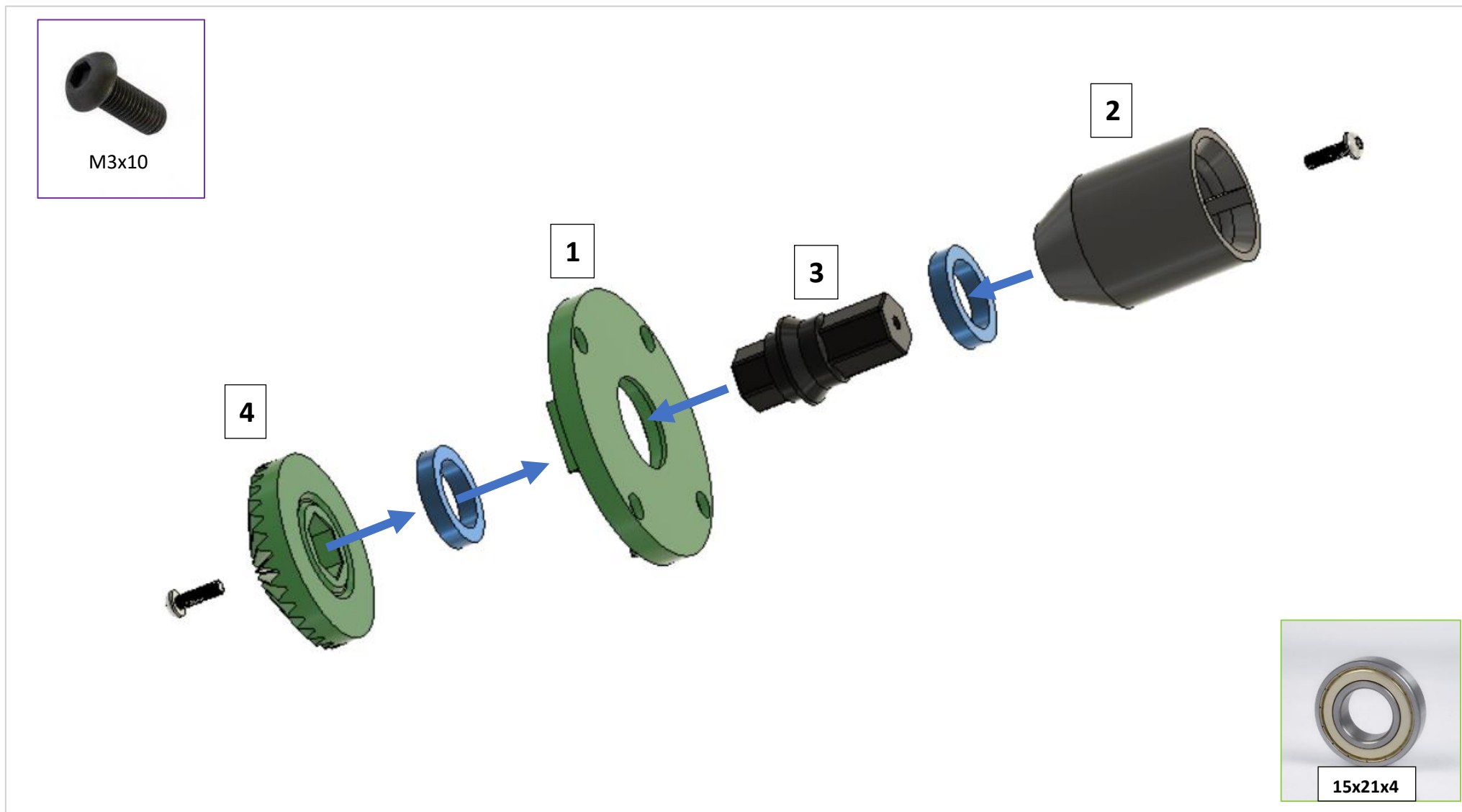
Above - middle hole

Bottom- 2 hole from the outside

2x

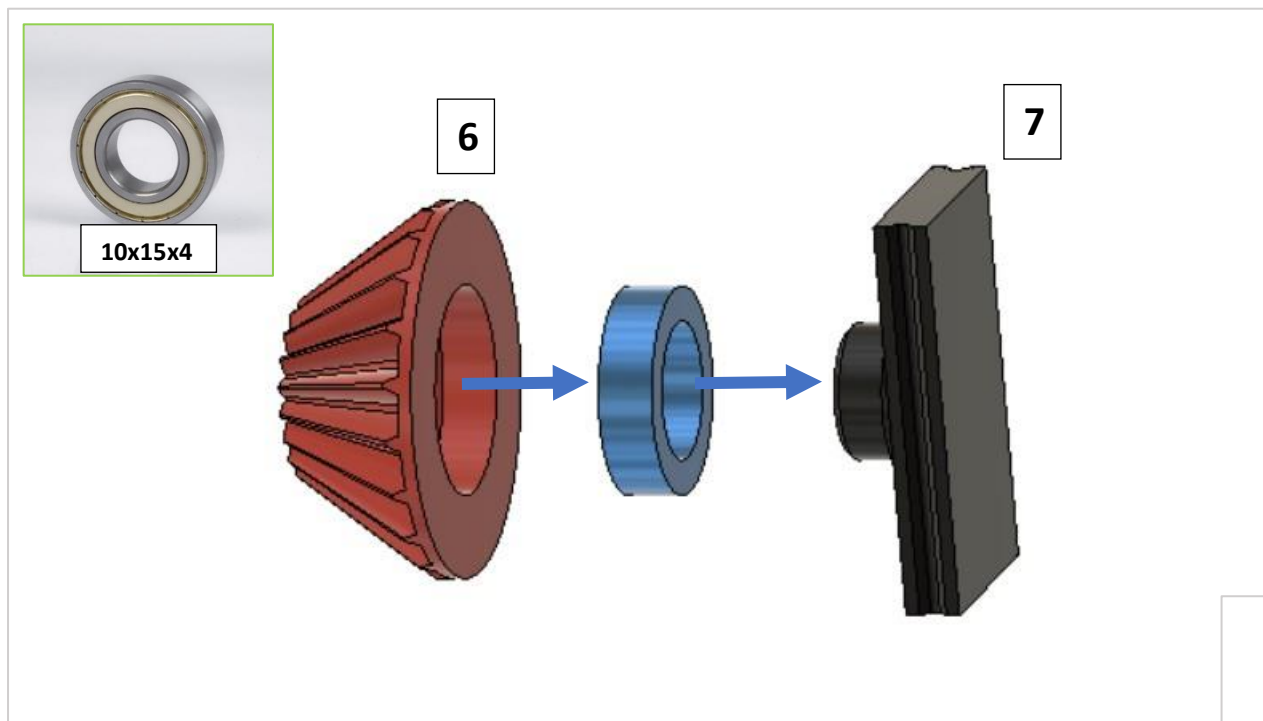


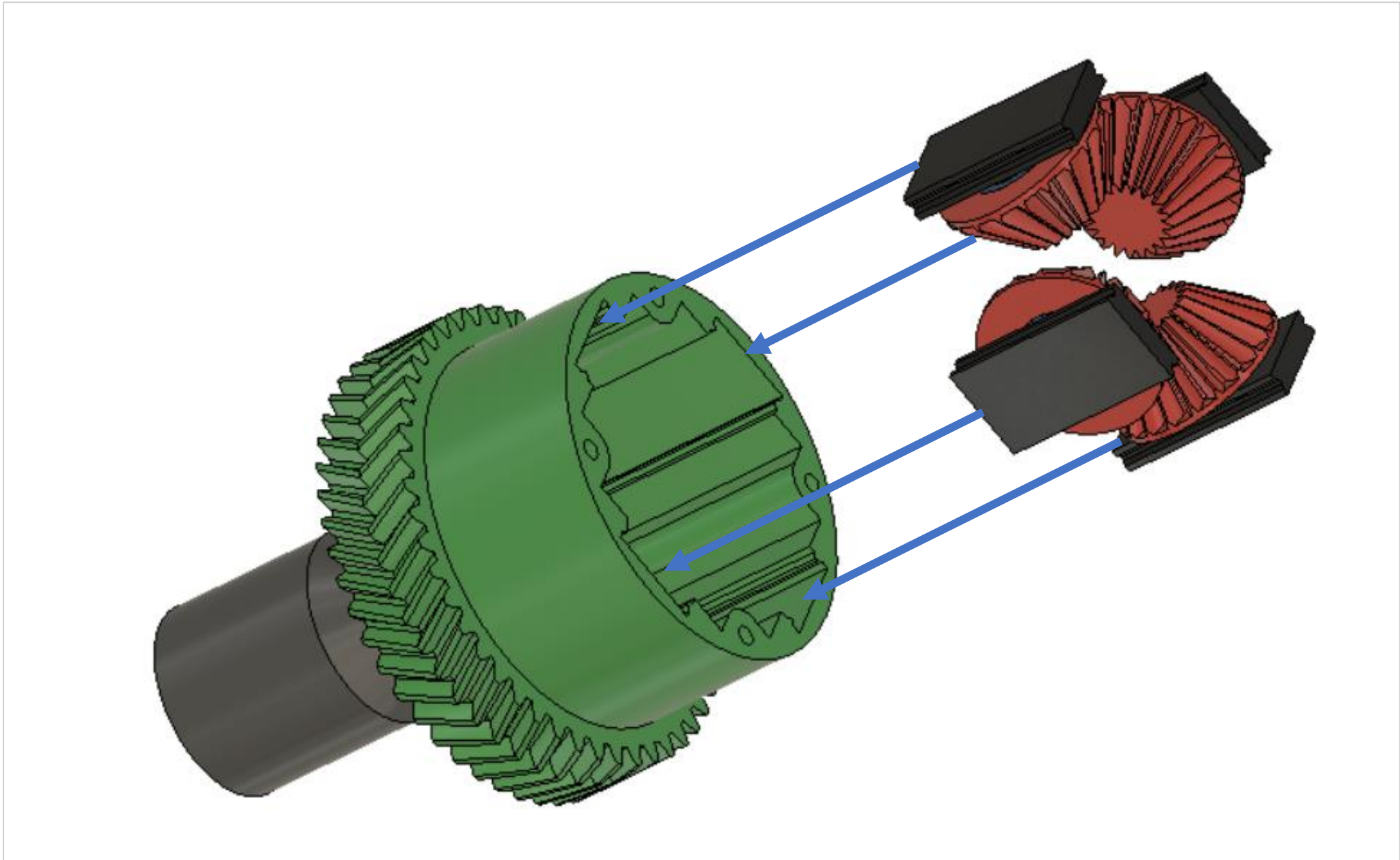
Central differential

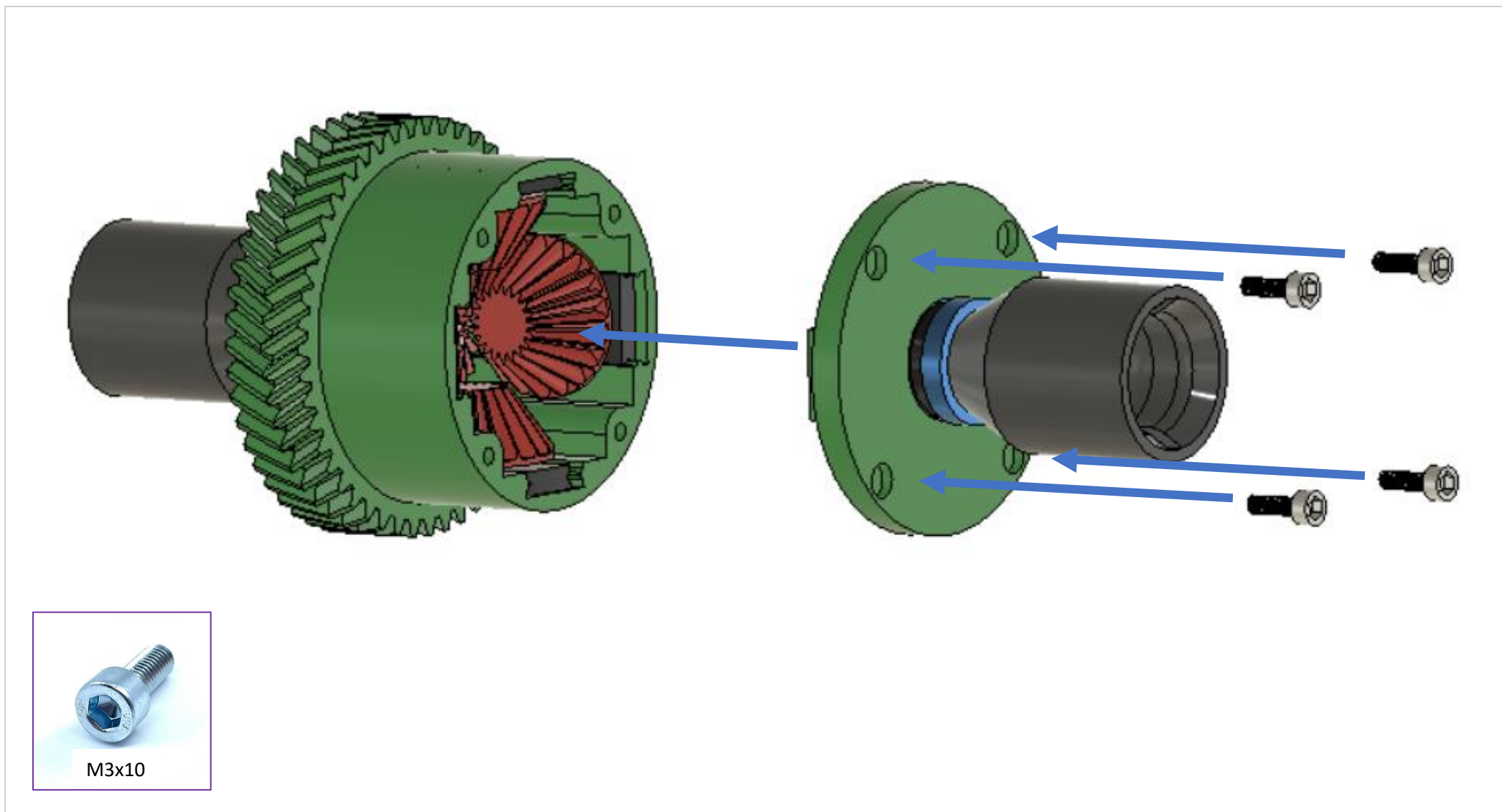


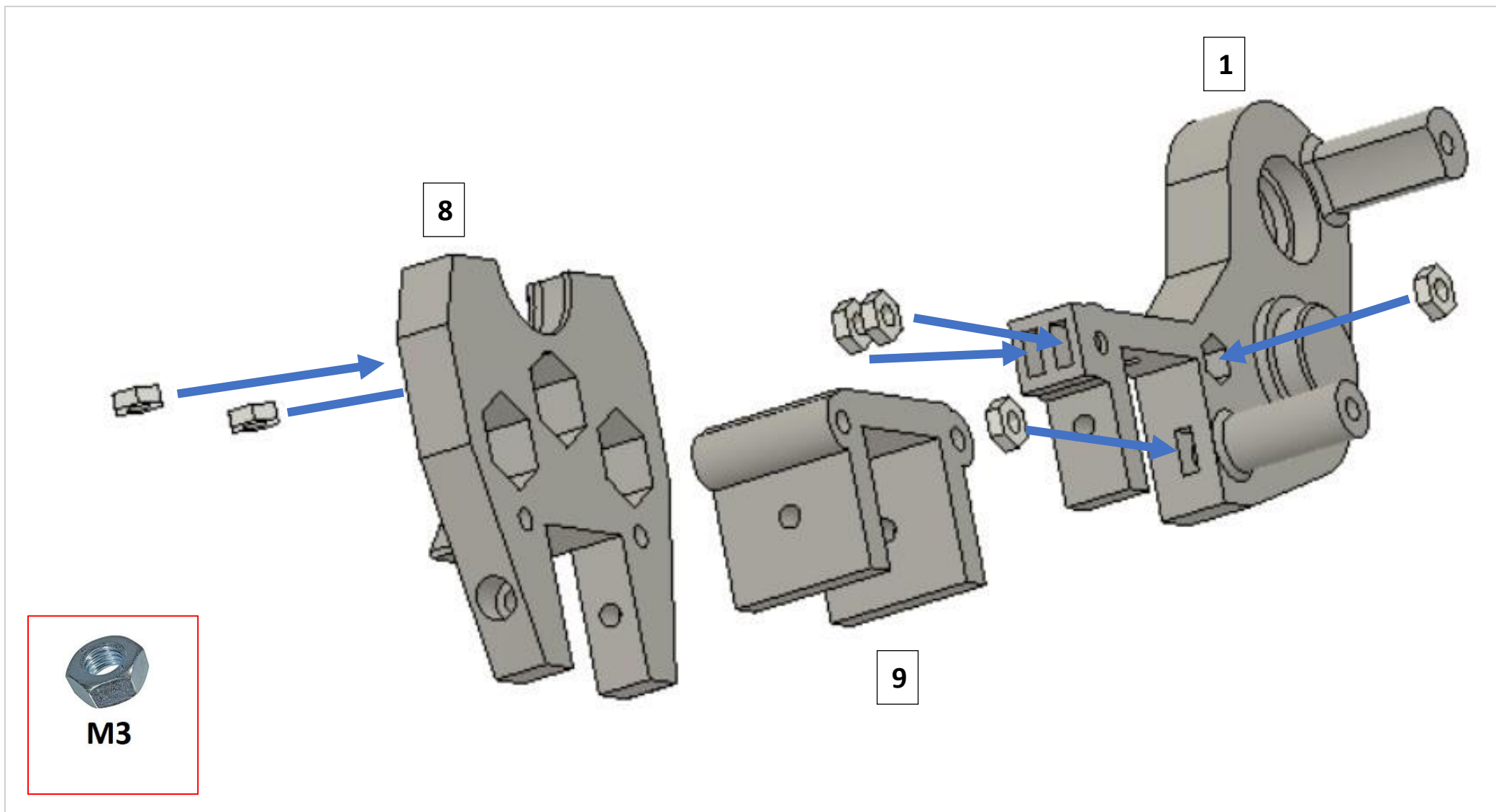


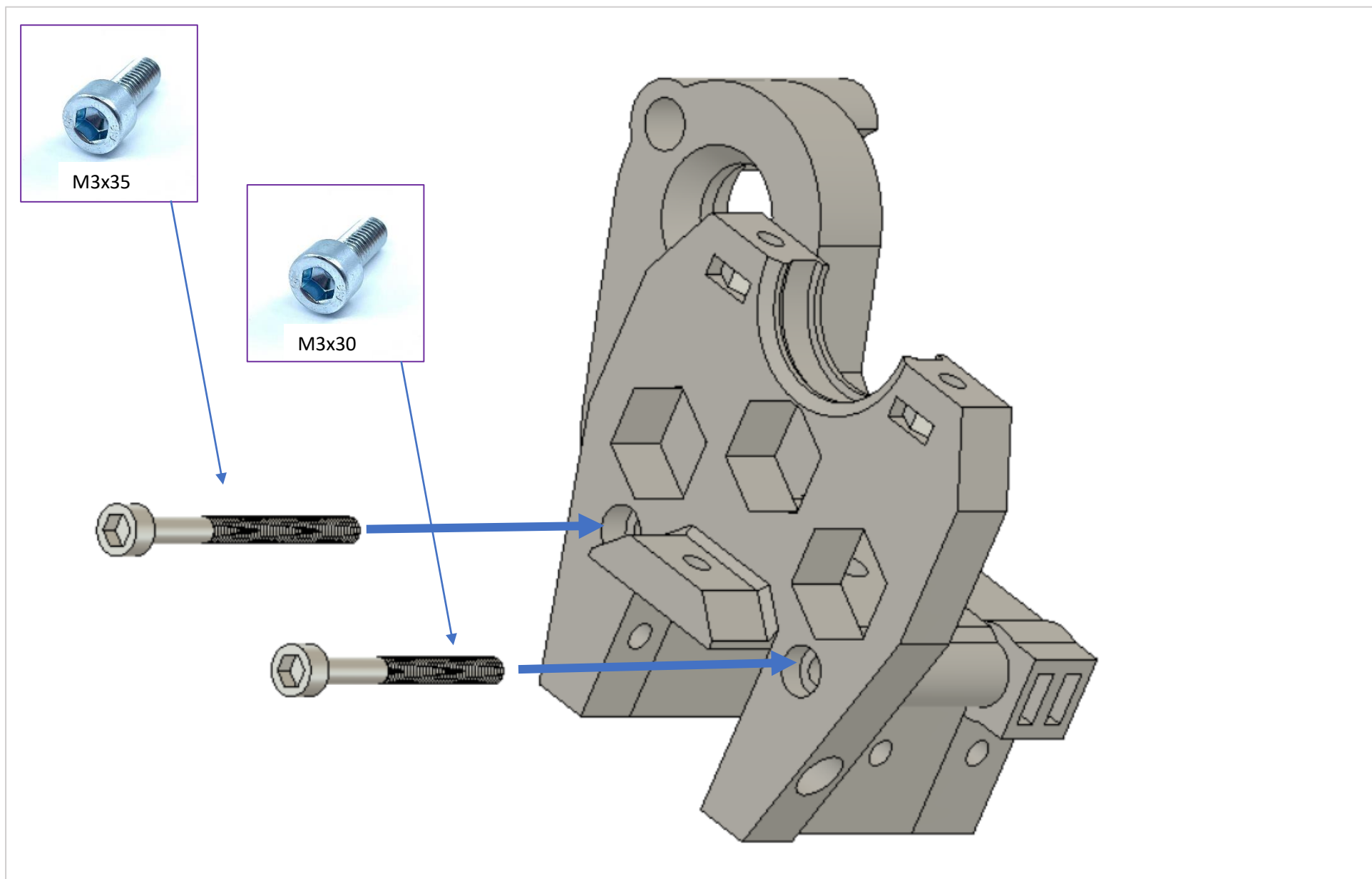
4x





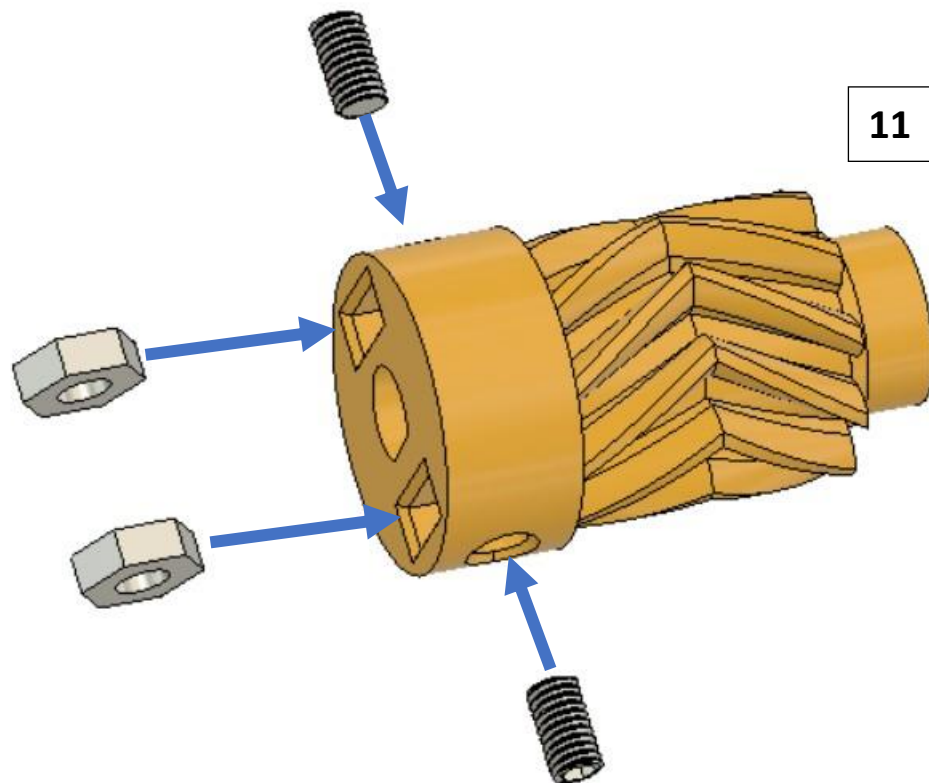








M3

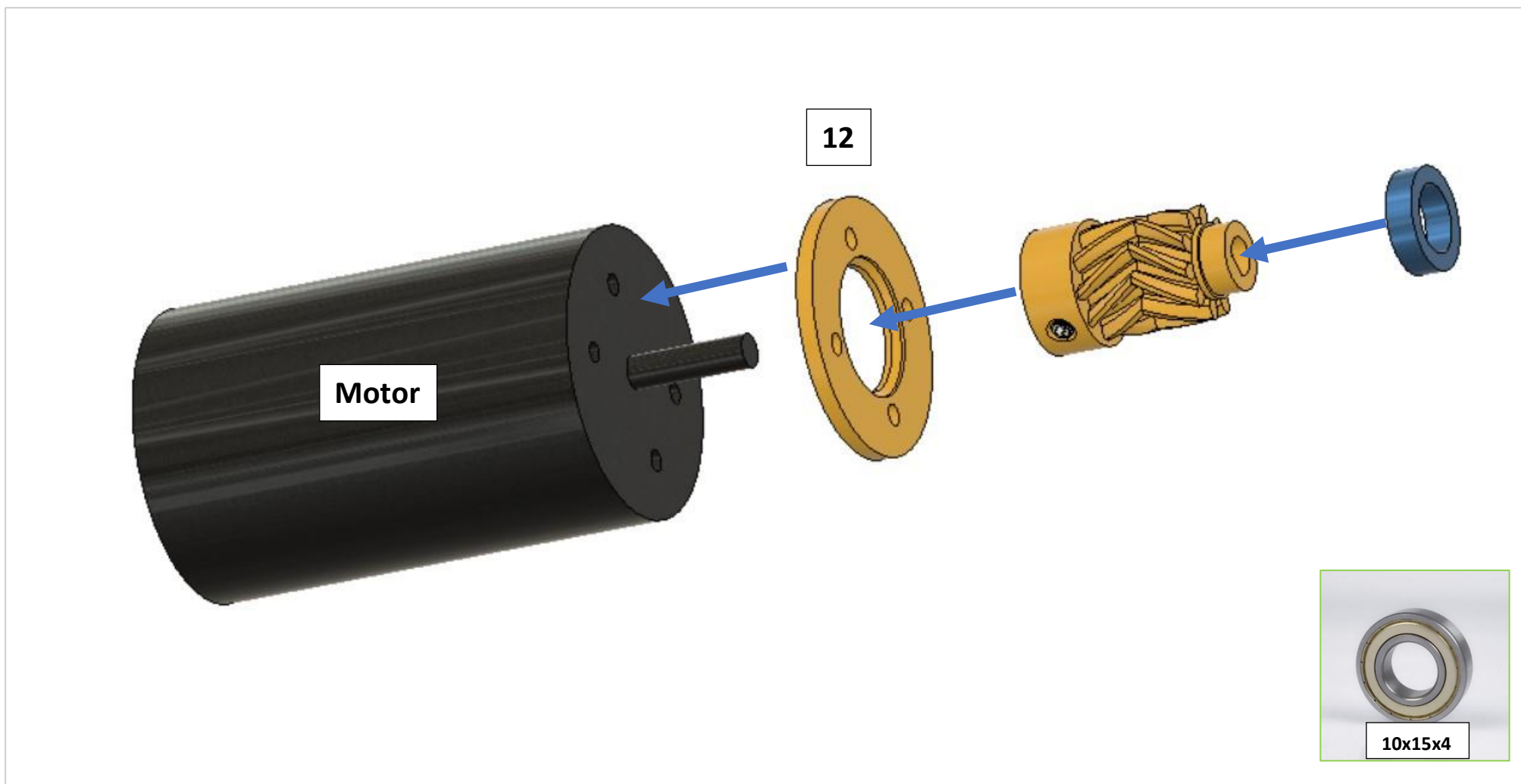


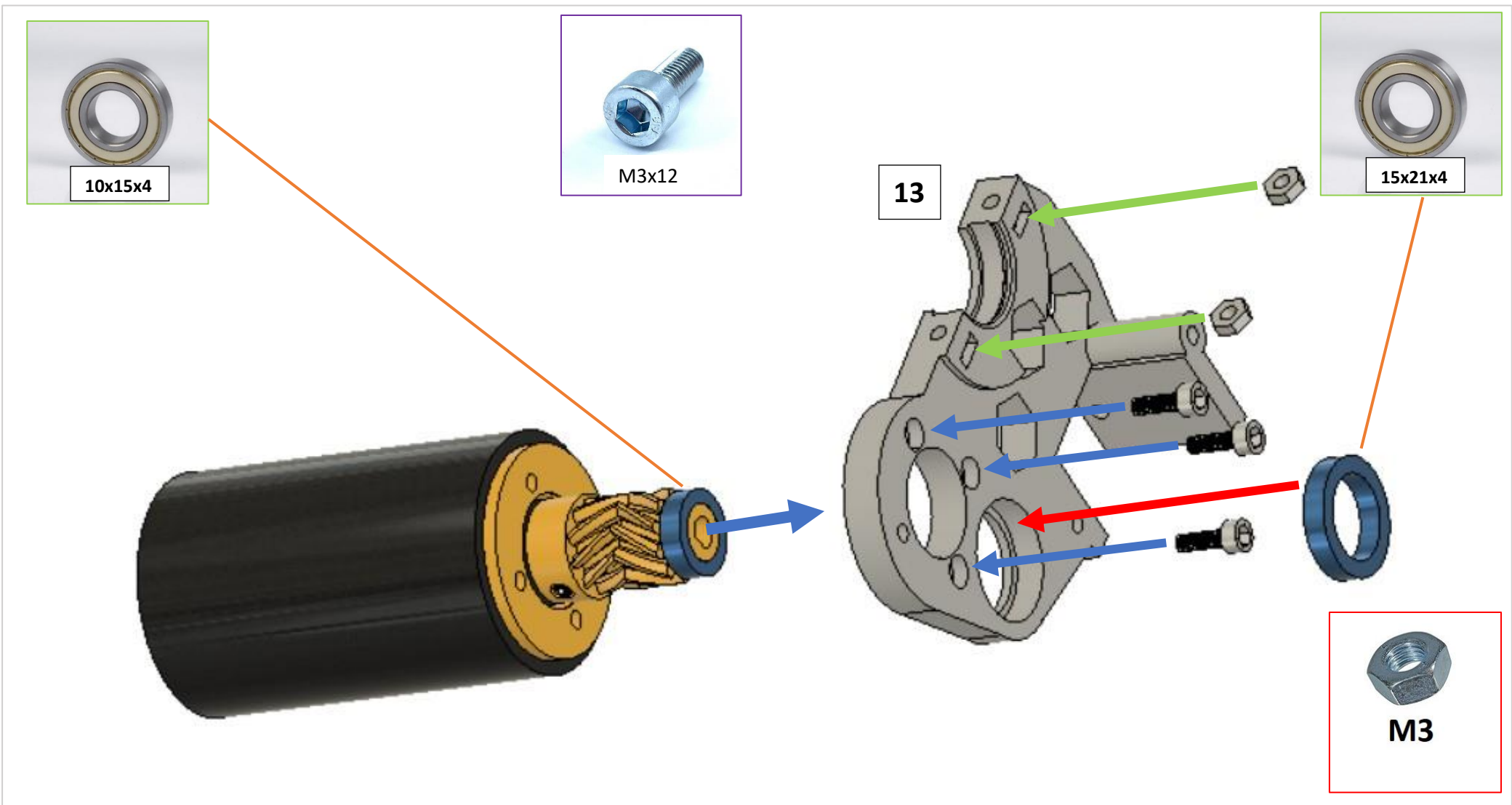
11

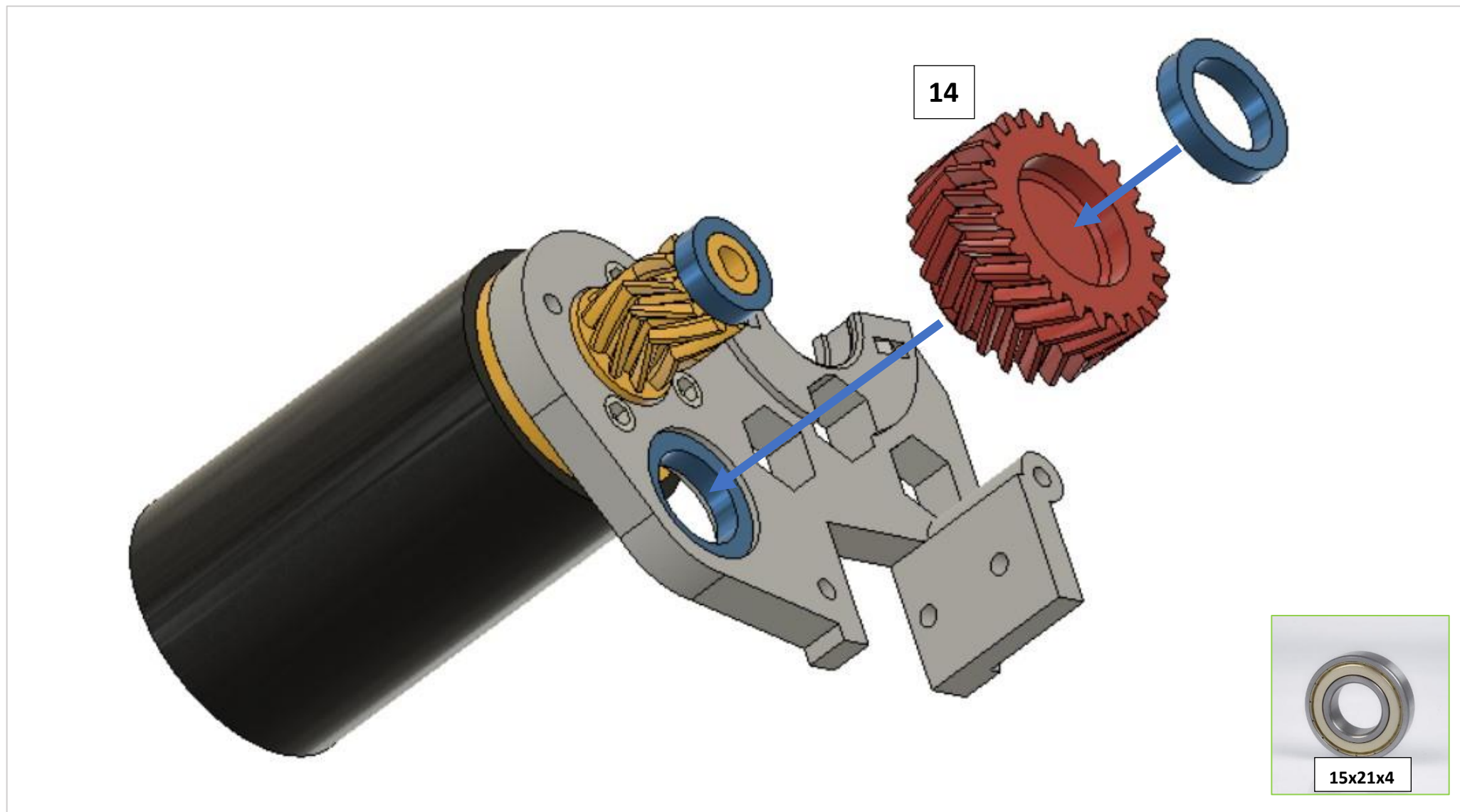
**Use ABS,
CpHG100 or
similar heat
resistant for
parts 11 and 12
filament.**

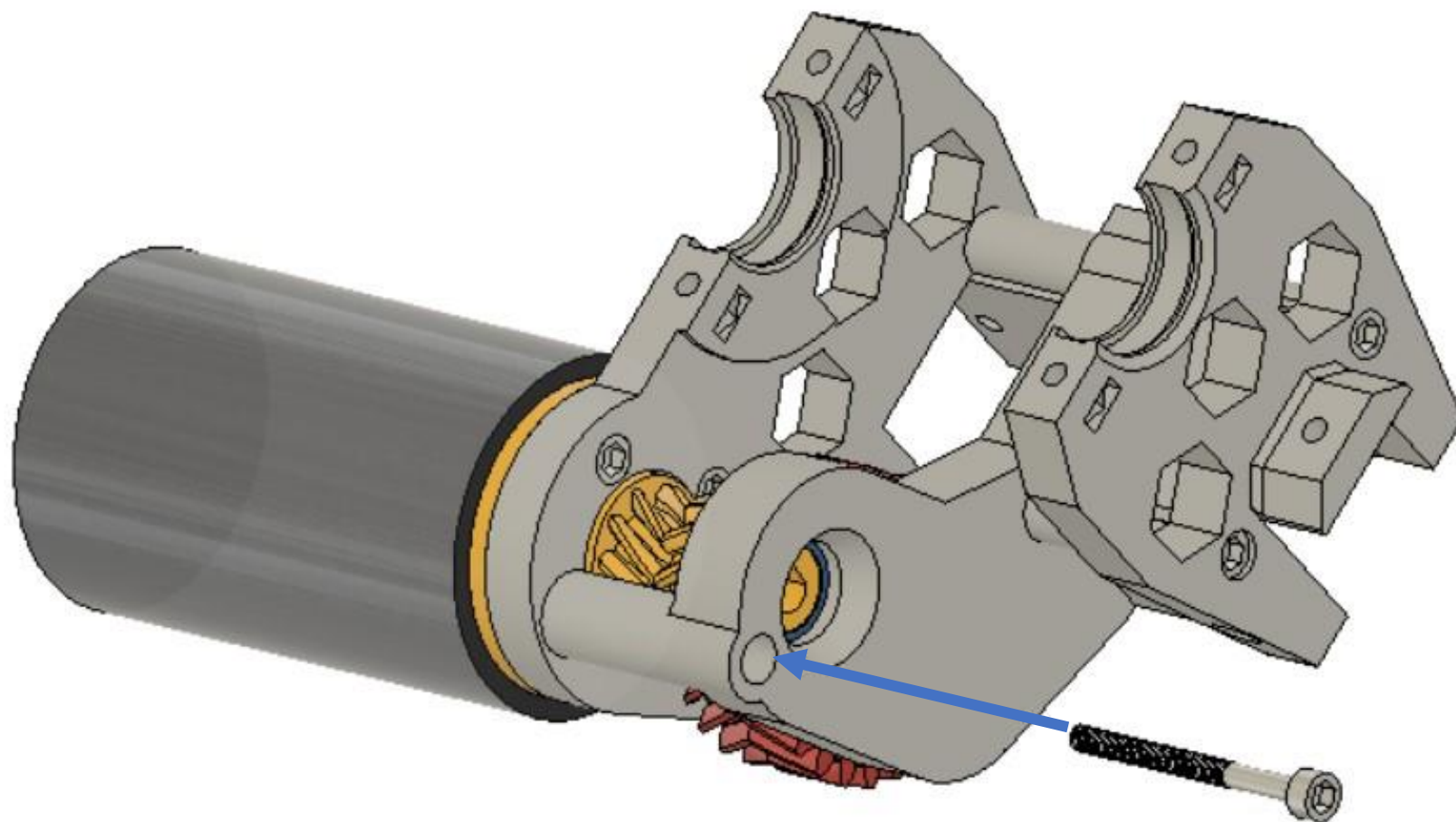


M3x6

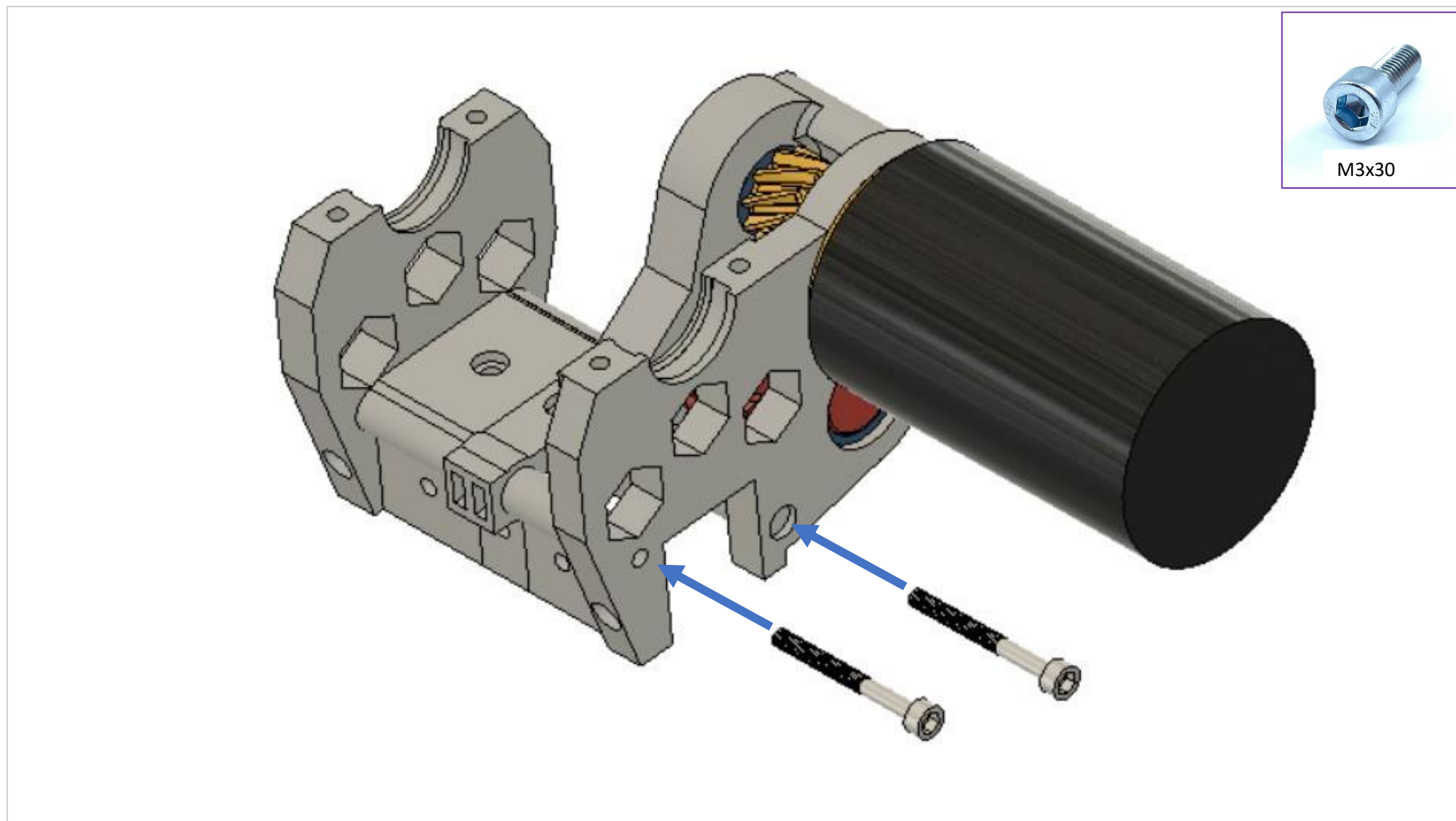


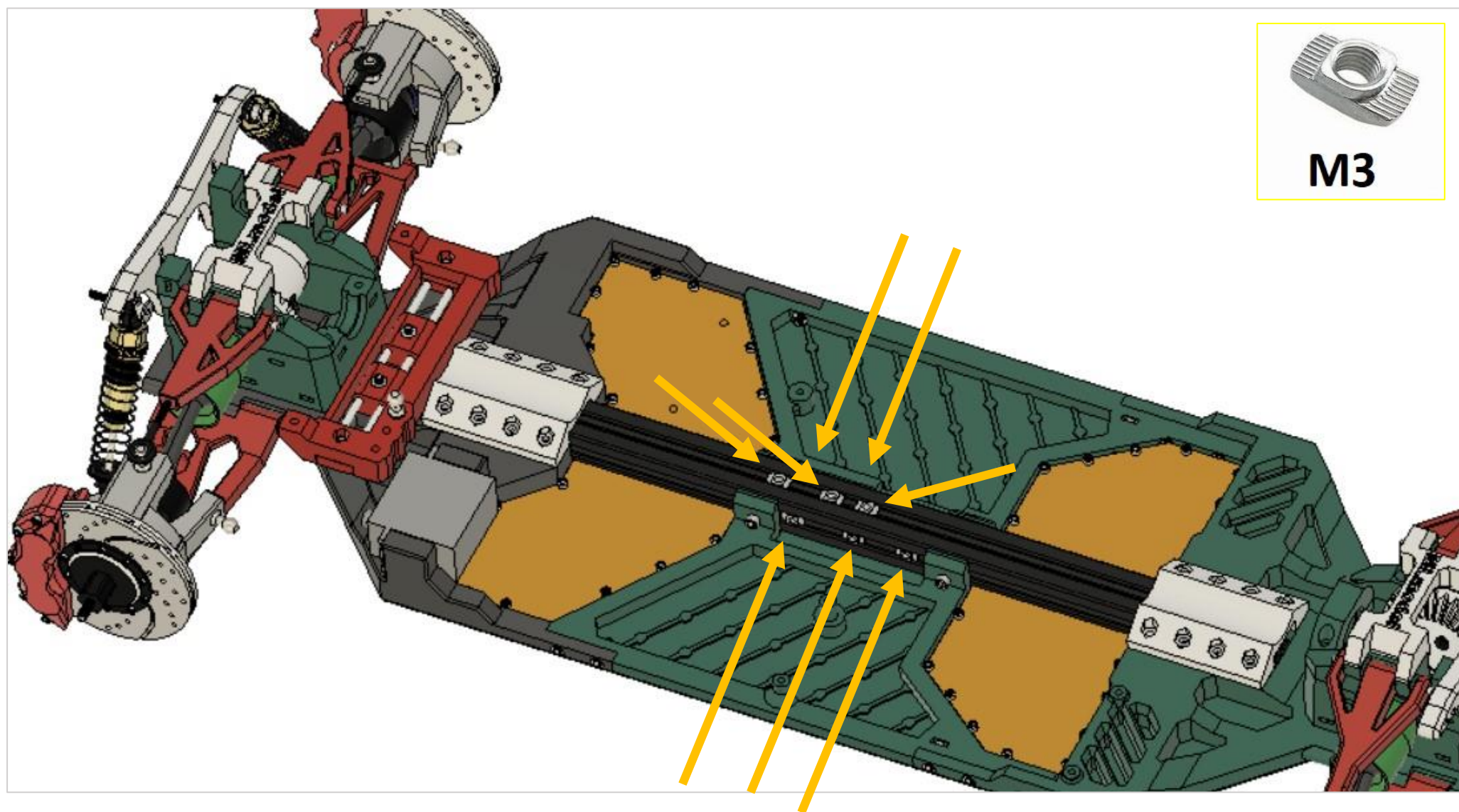




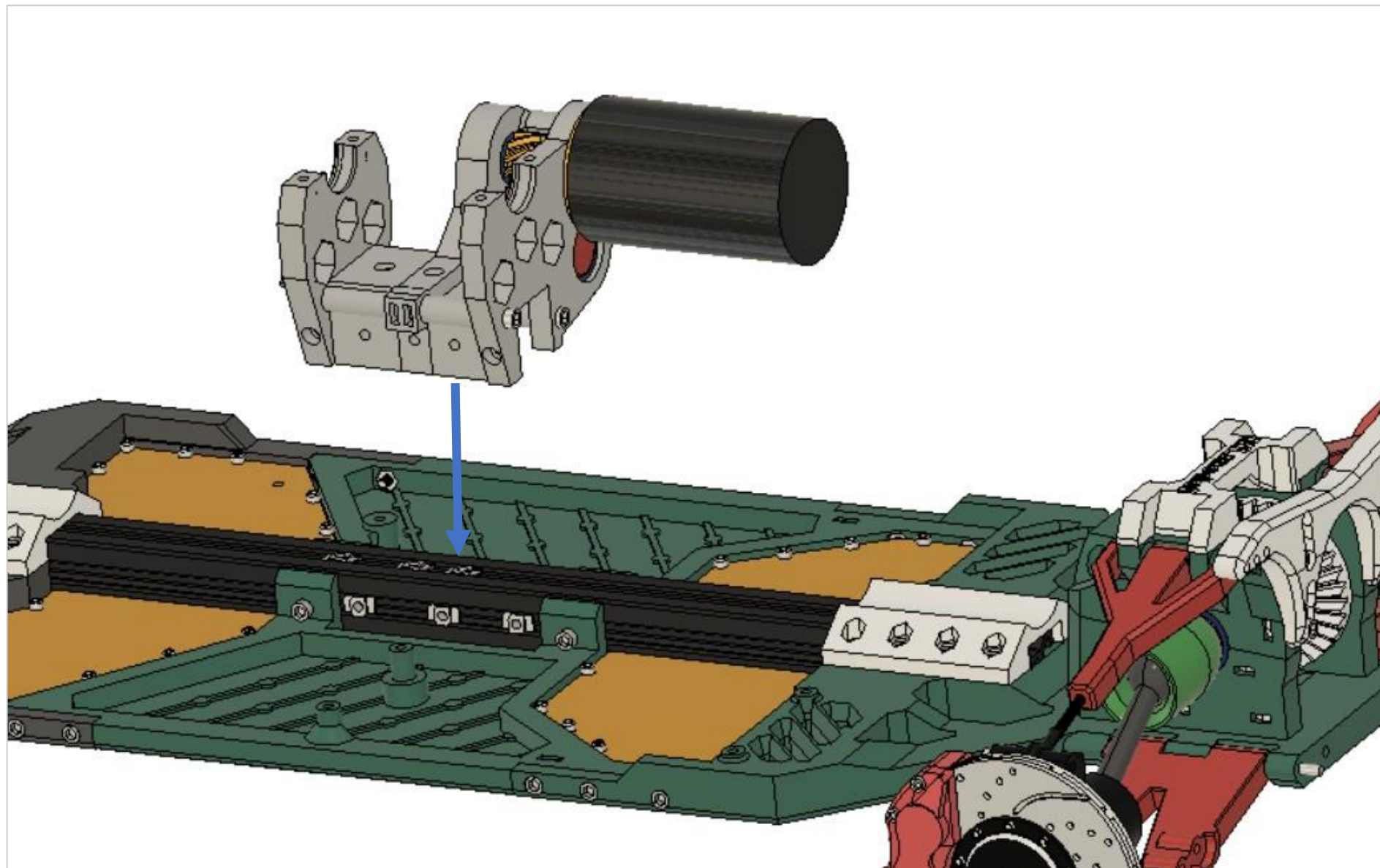


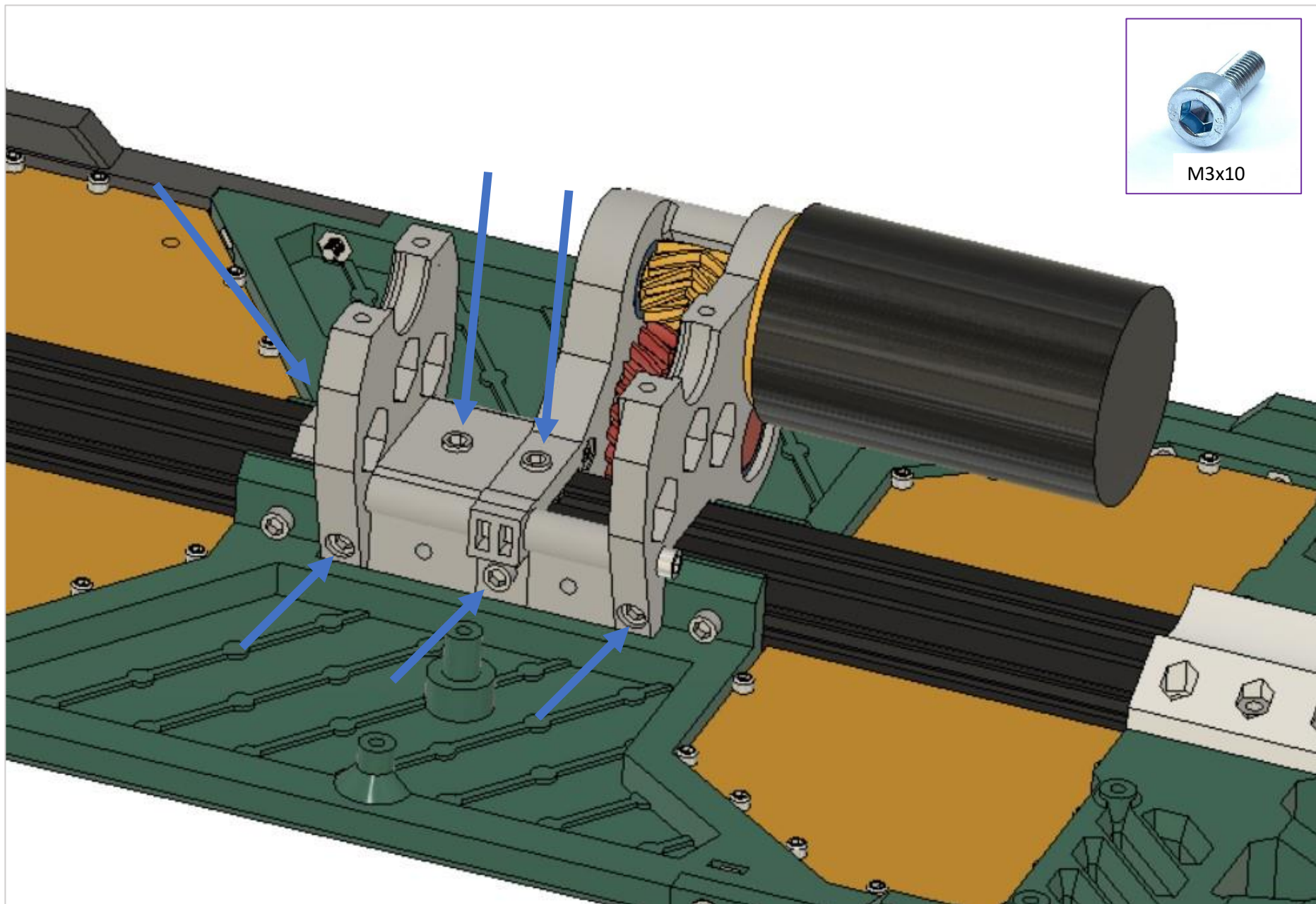
M3x35

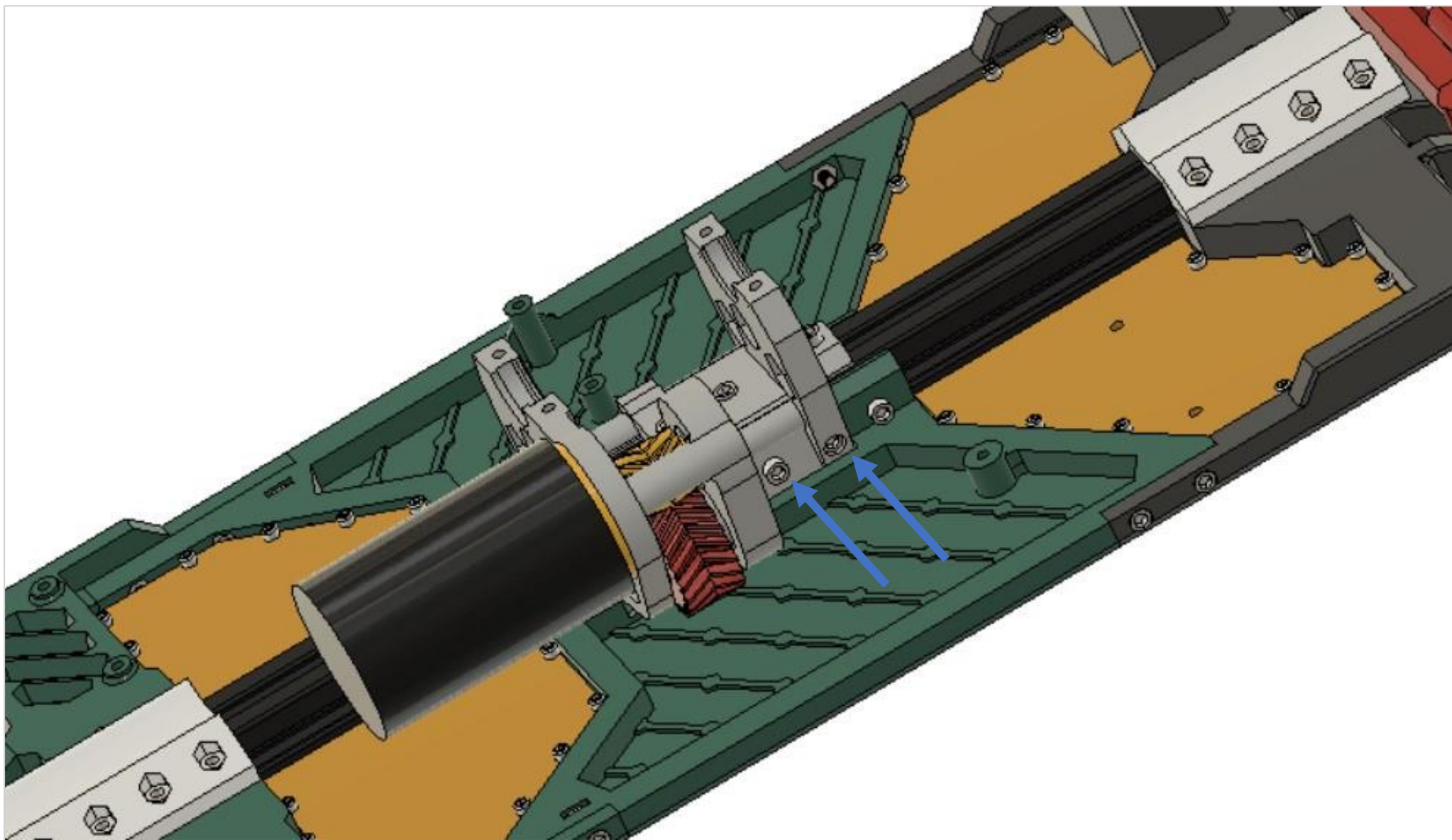


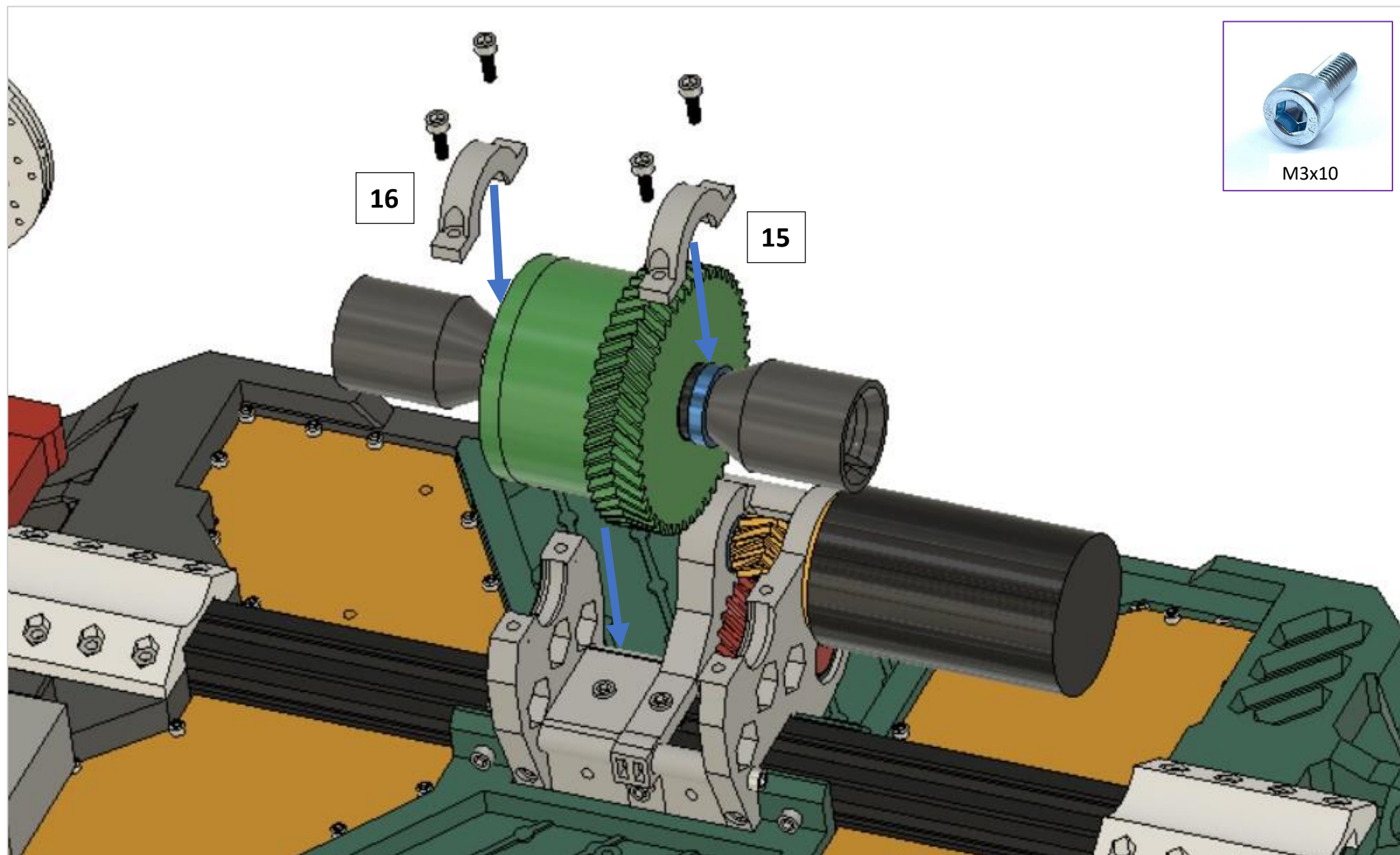


M3



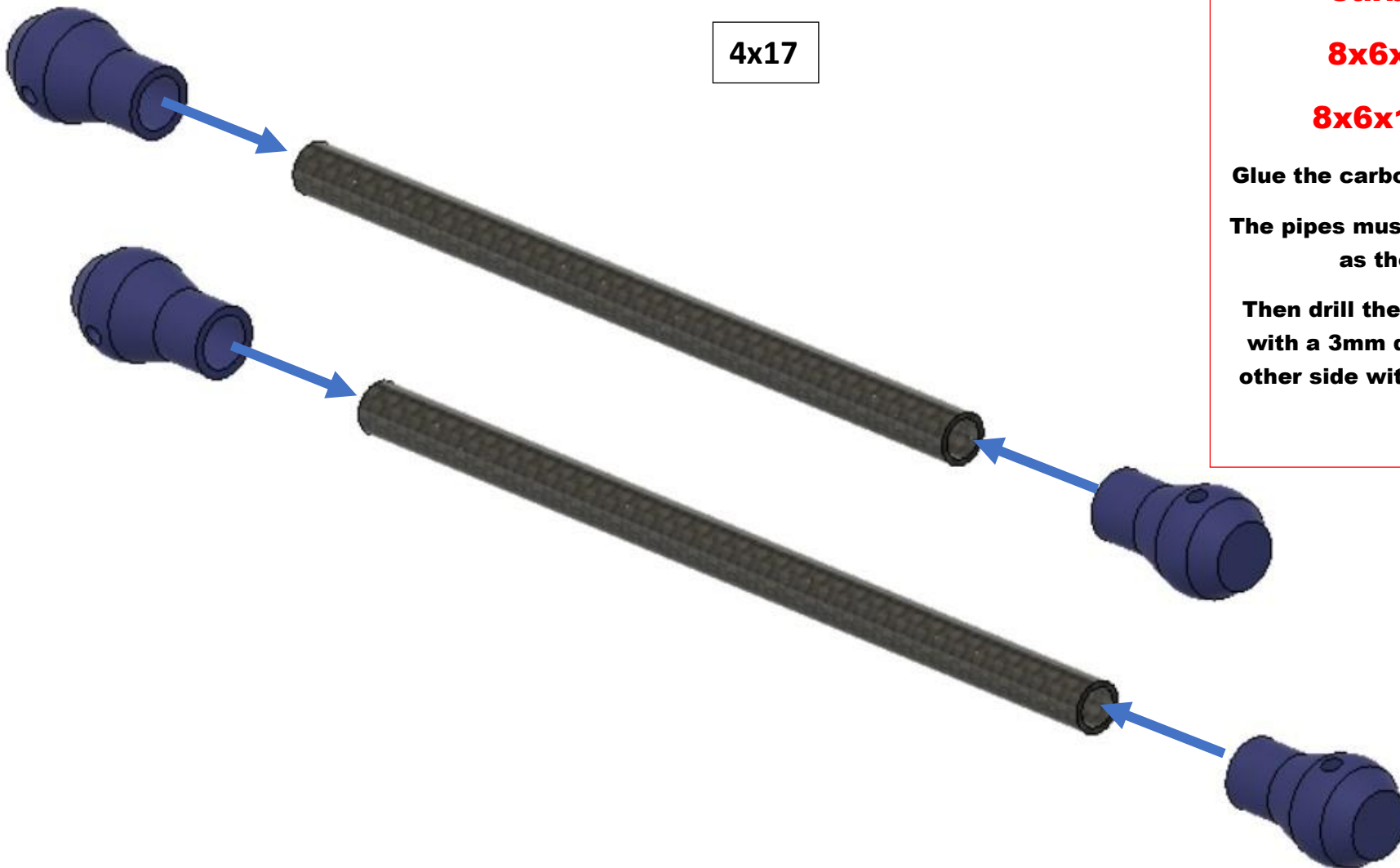








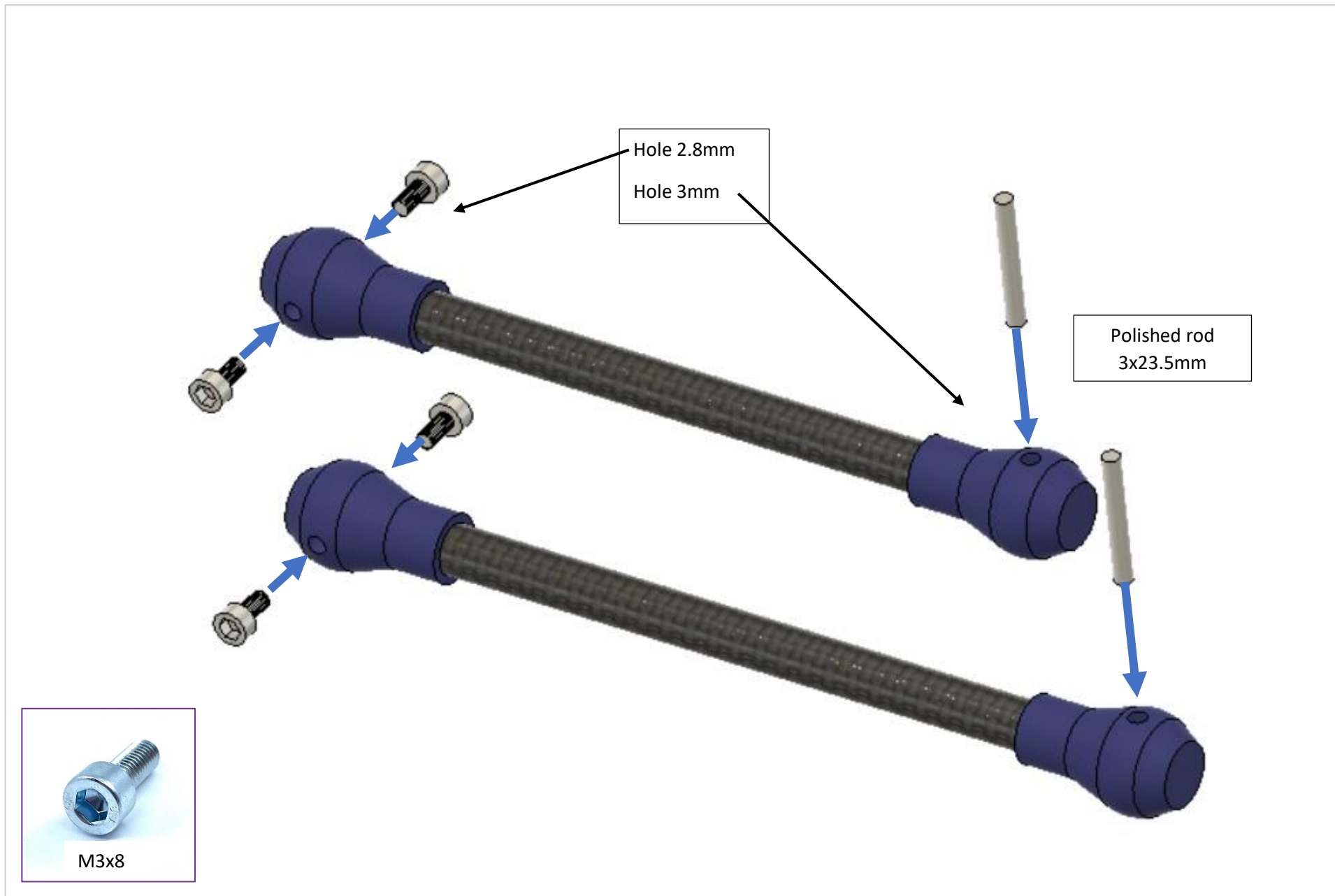
4x17

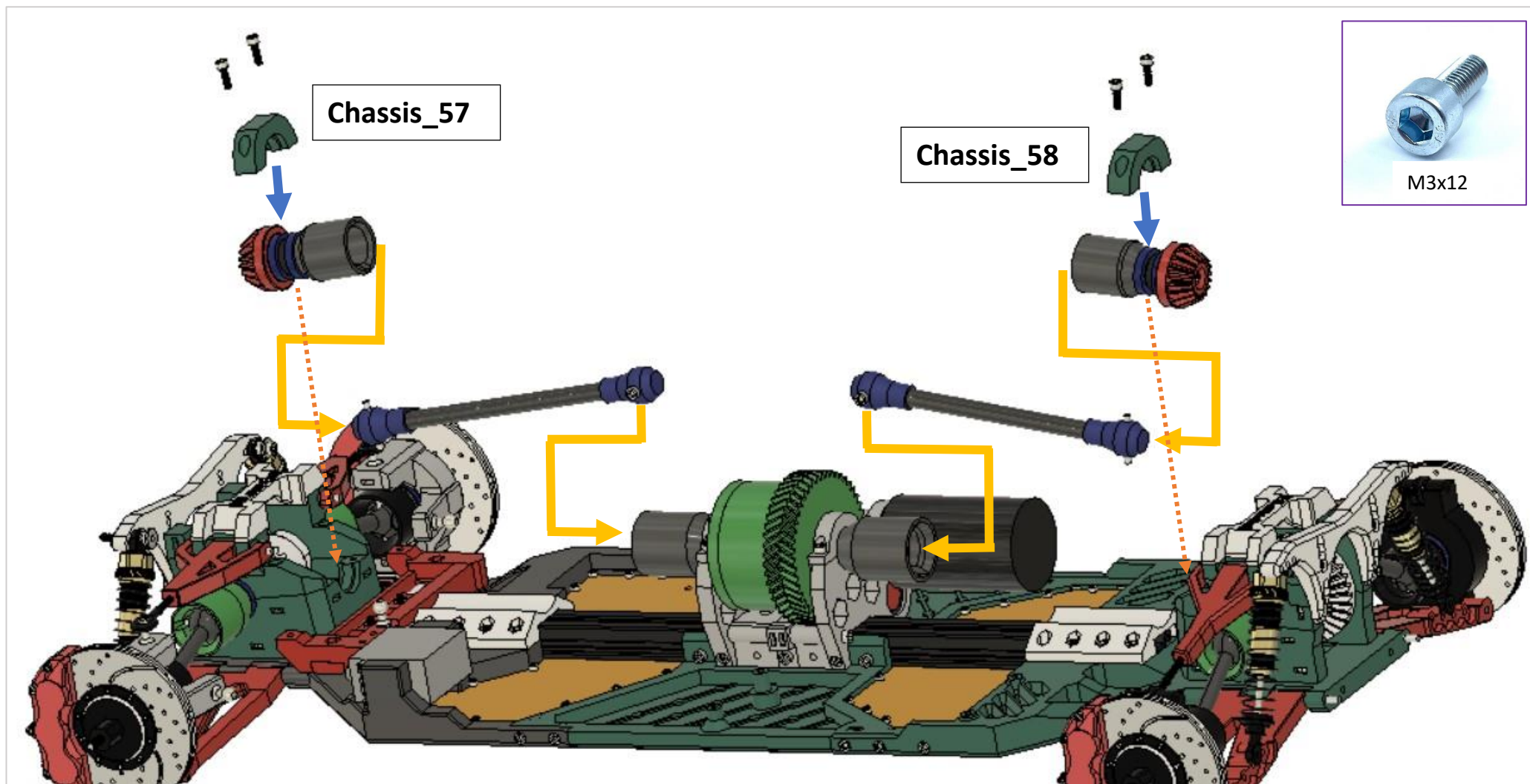


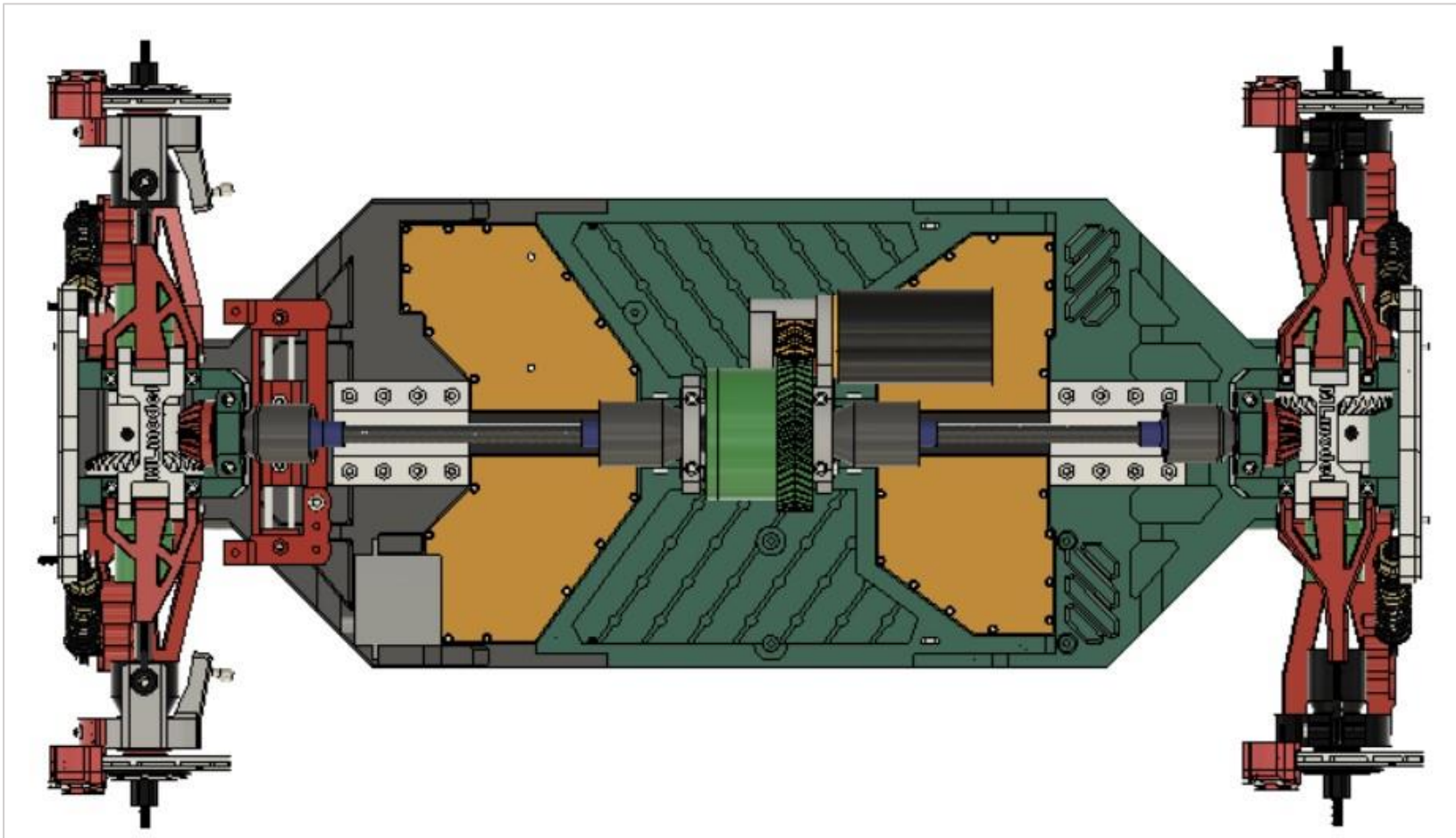
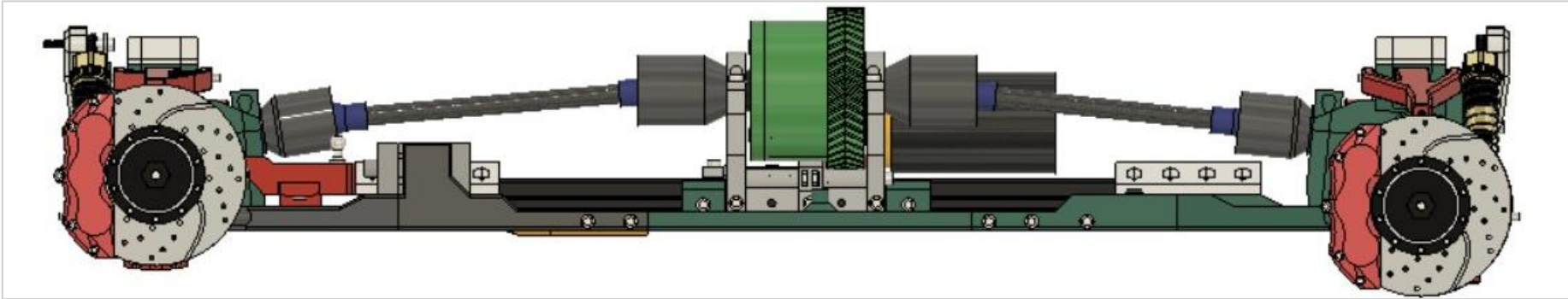
Carbon tube
8x6x140mm
8x6x144.5mm

Glue the carbon tube to parts 17.
The pipes must be inserted as far as they will go.

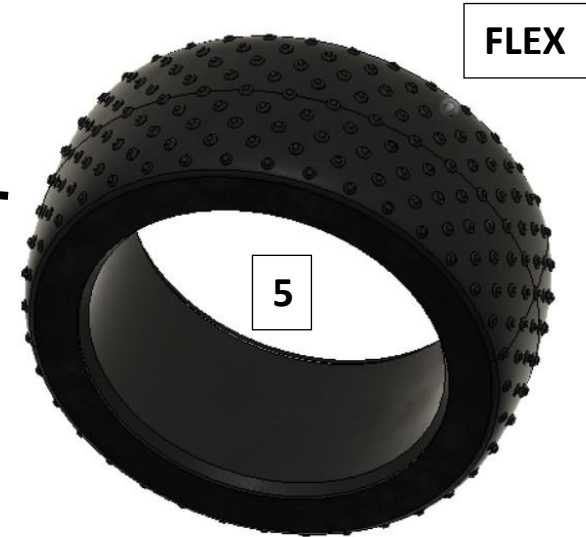
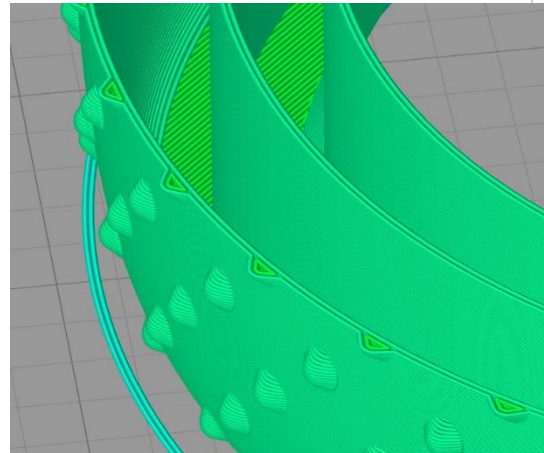
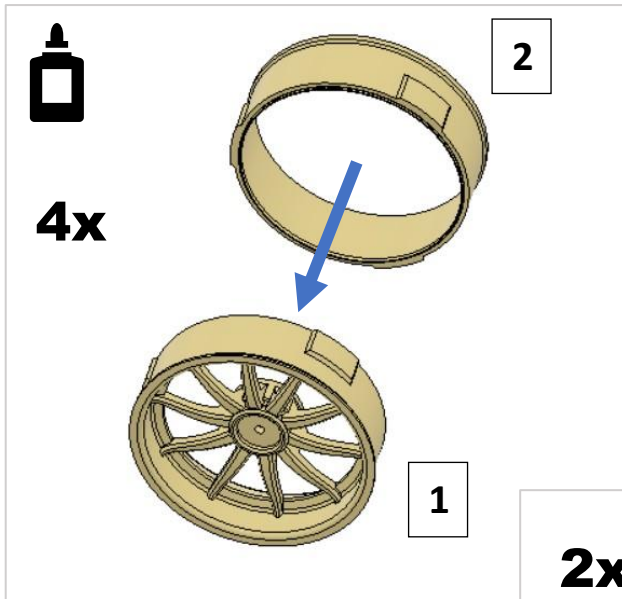
Then drill the pipes on one side with a 3mm drill bit and on the other side with a 2.8mm drill bit







Wheels



Typ v.1
 These tires are designed rather in the field (grass, sand, clay, etc.)
 On hard surfaces (asphalt, concrete) the tires are more suitable for drift.

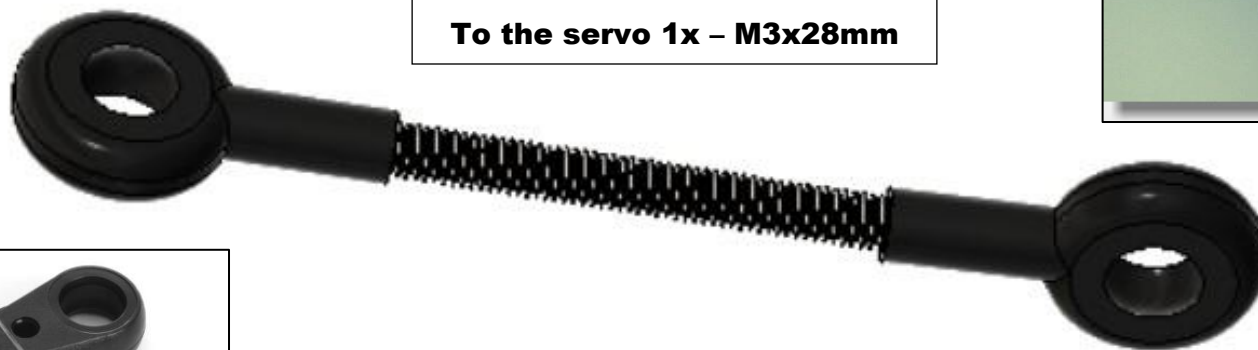
Typ v.2
 These tires are designed for hard surfaces (asphalt, concrete).
 They are very soft.
Printing:
 0 fill
 2 perimeters
 0.50 extrusion width

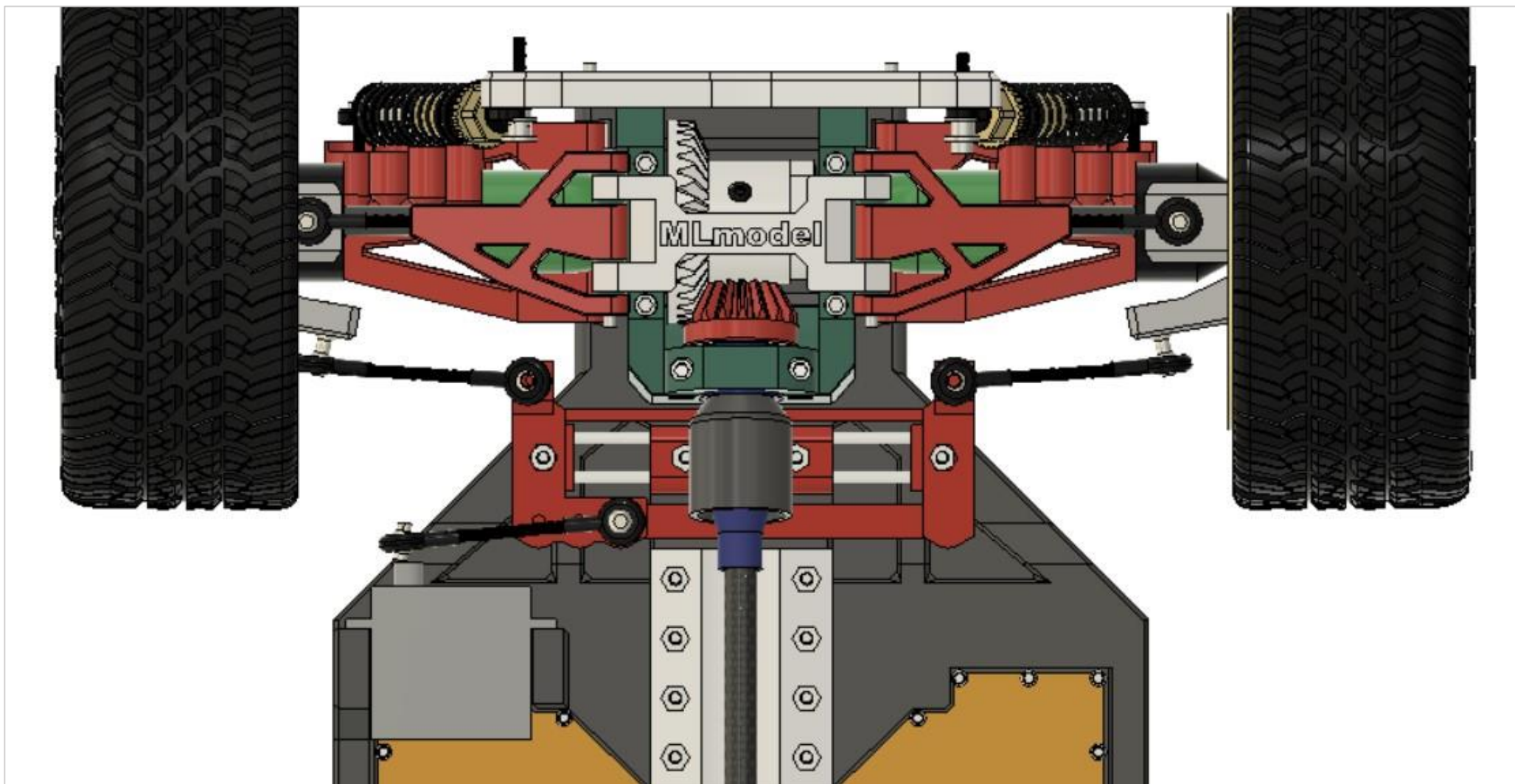


3x

Steering rod

Threaded rod 2x - M3x31mm
To the servo 1x - M3x28mm





Accessories

Carbon tube
2x-8x6x70mm
2x-8x6x120mm

4x



1

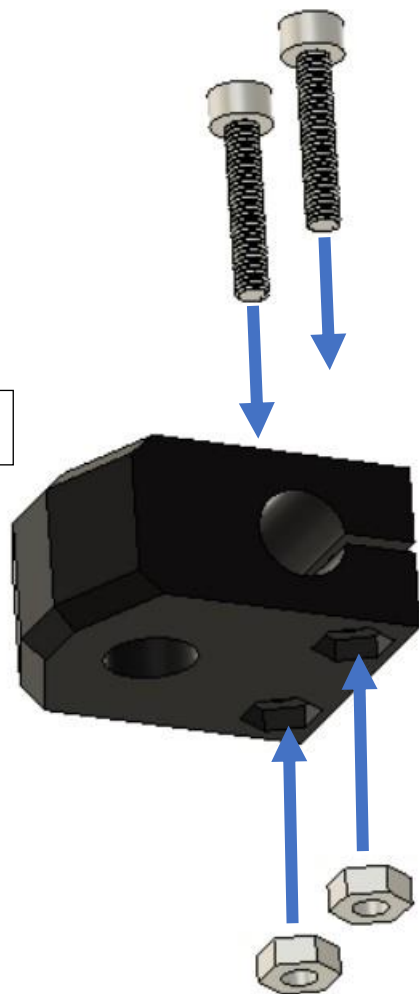
• Neodymium magnets
..
Round magnet Ø 14x5mm
for M4 screw
Secure the magnet with a screw
with countersunk head M4x10mm
or
stick the magnet
Round magnet Ø 14x3mm



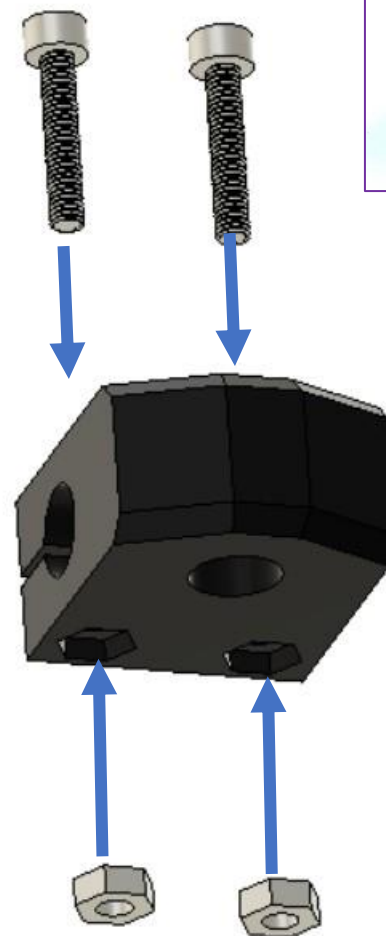
2x

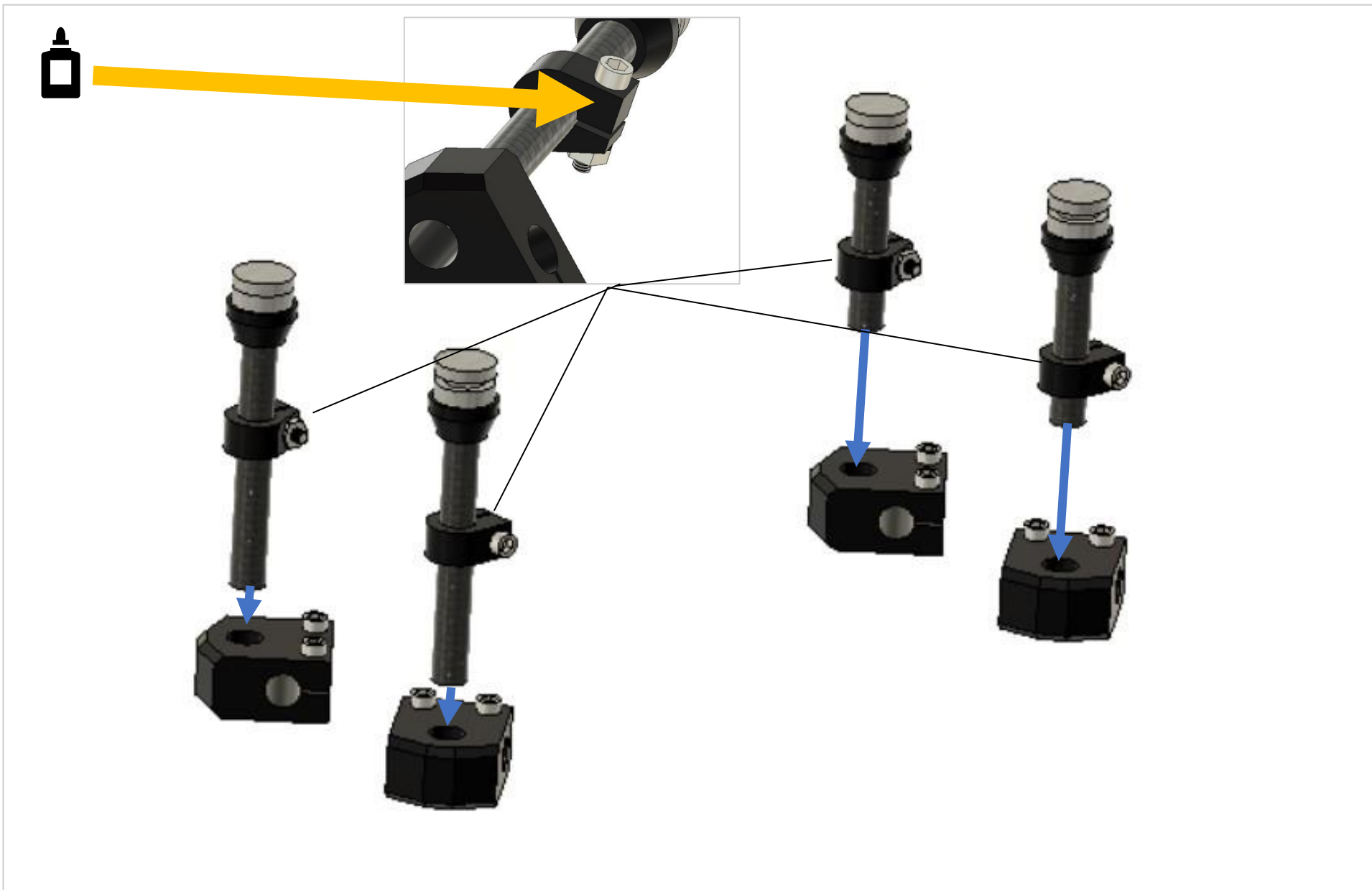


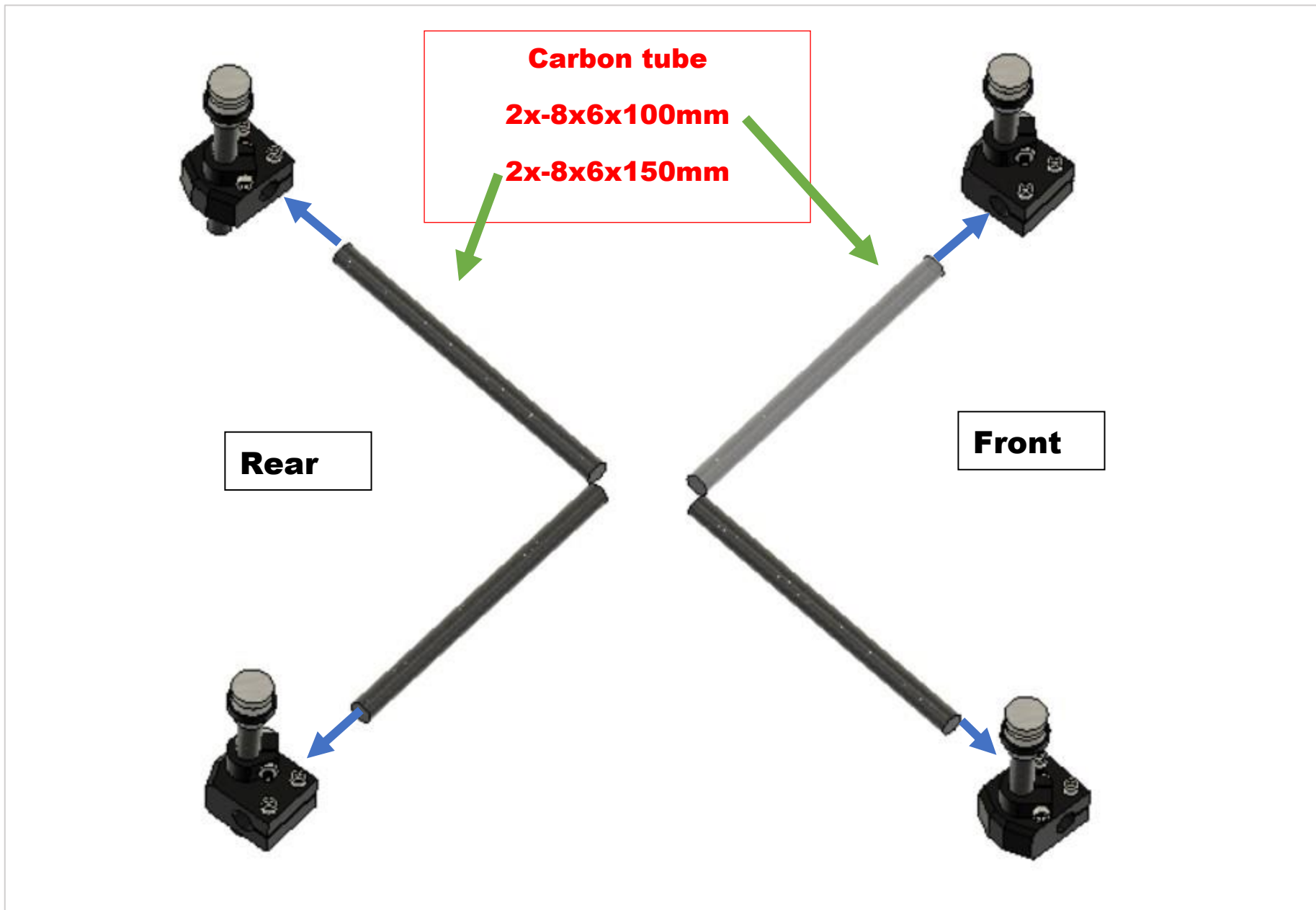
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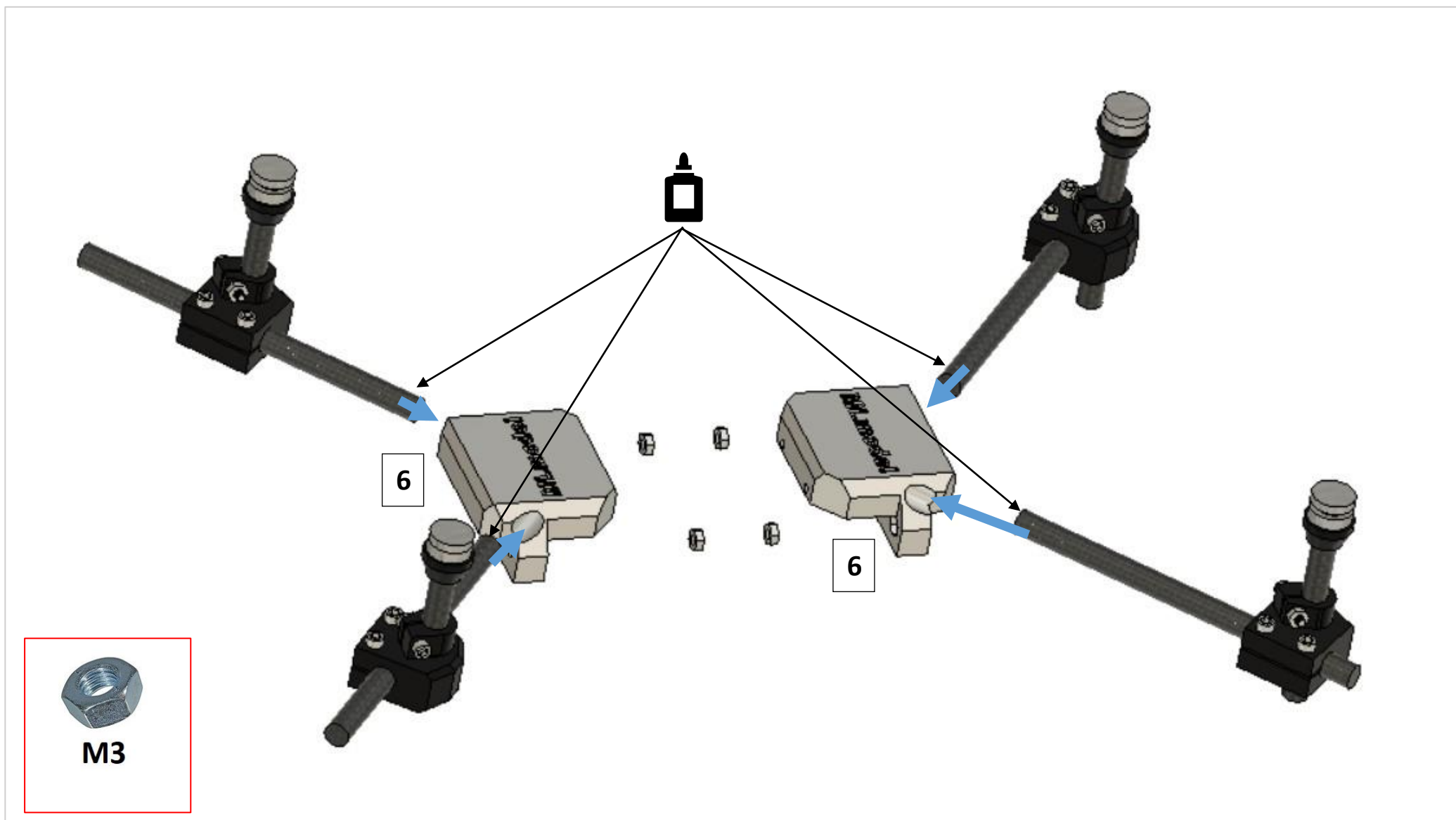


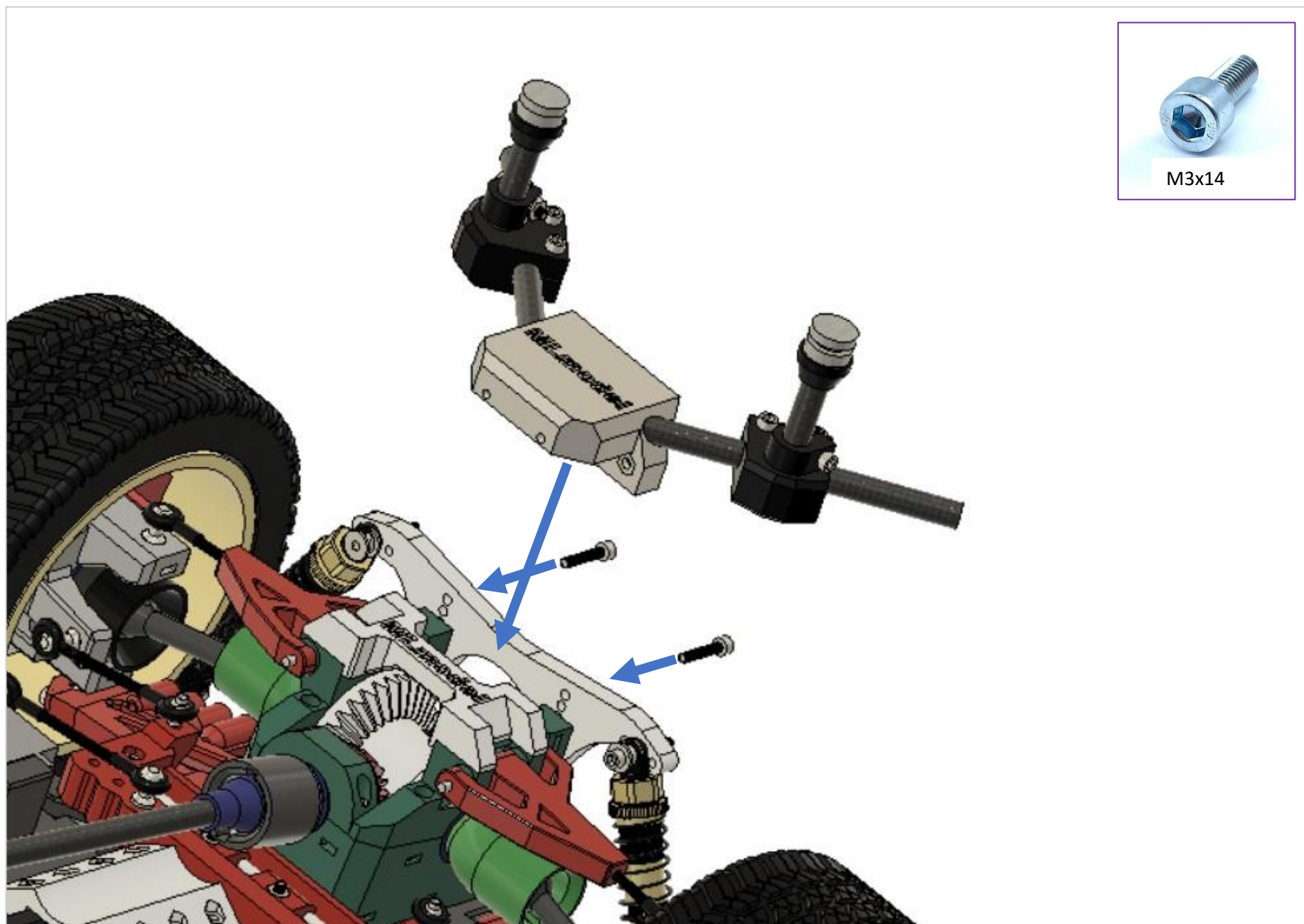
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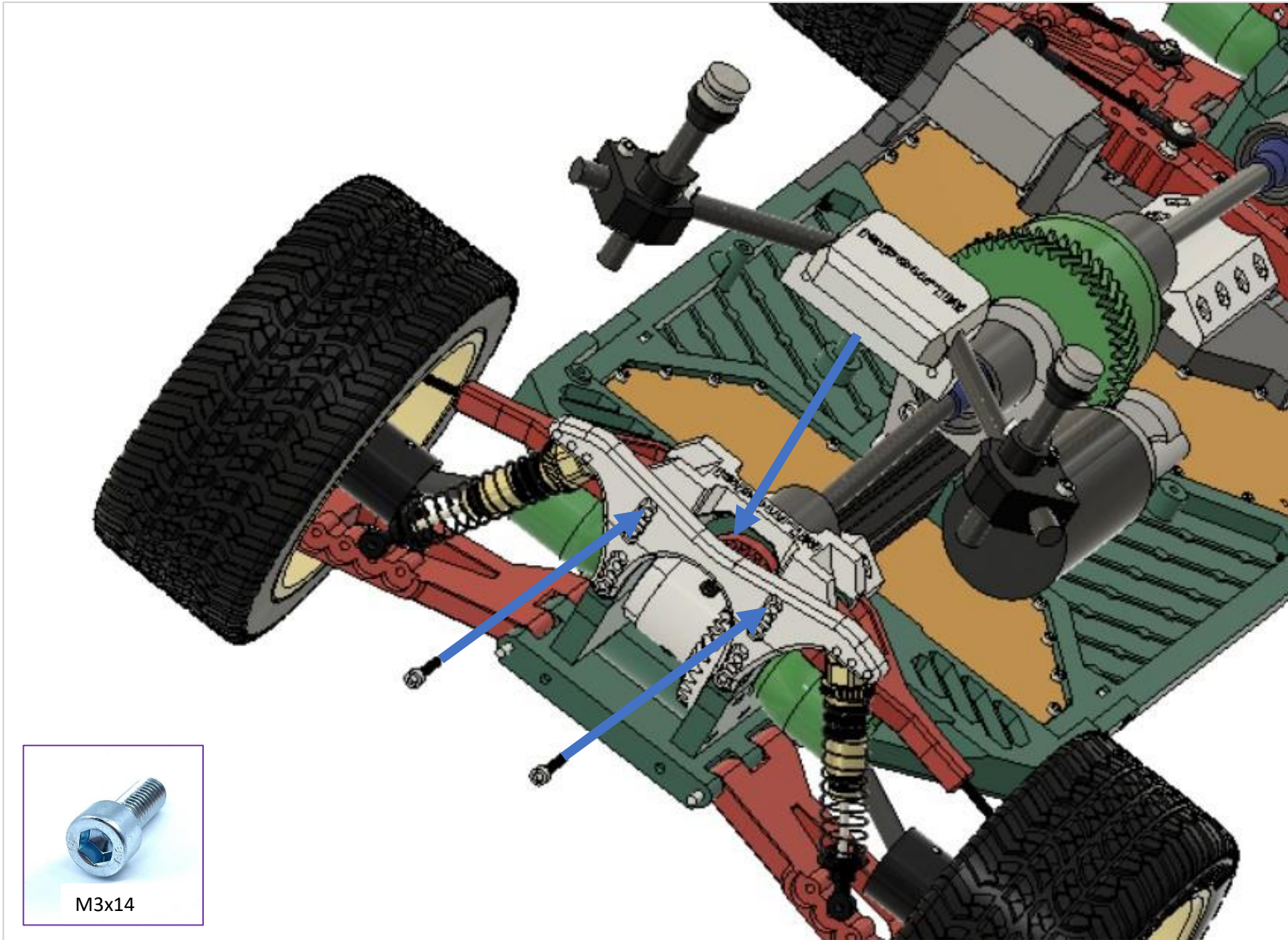


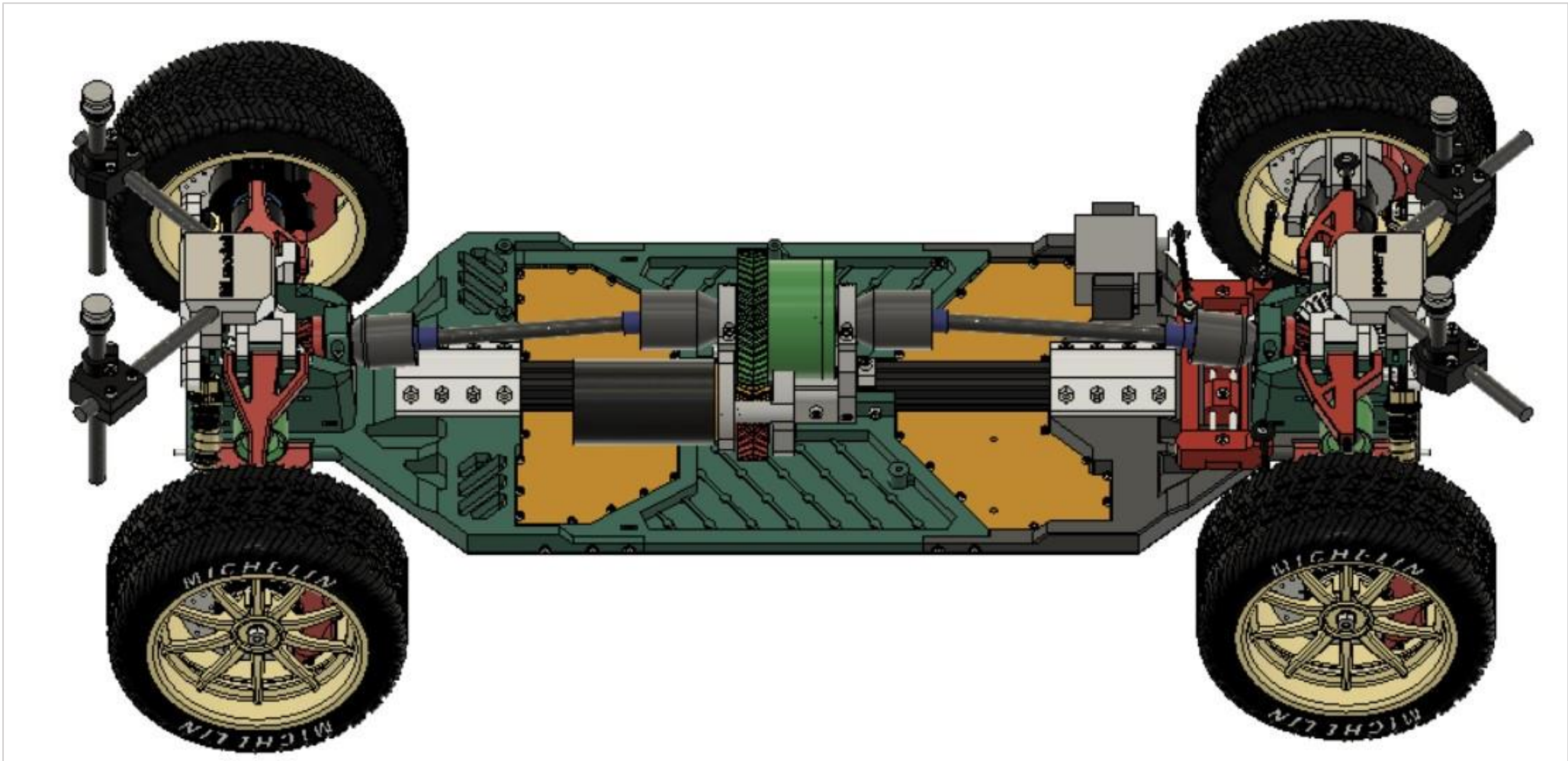


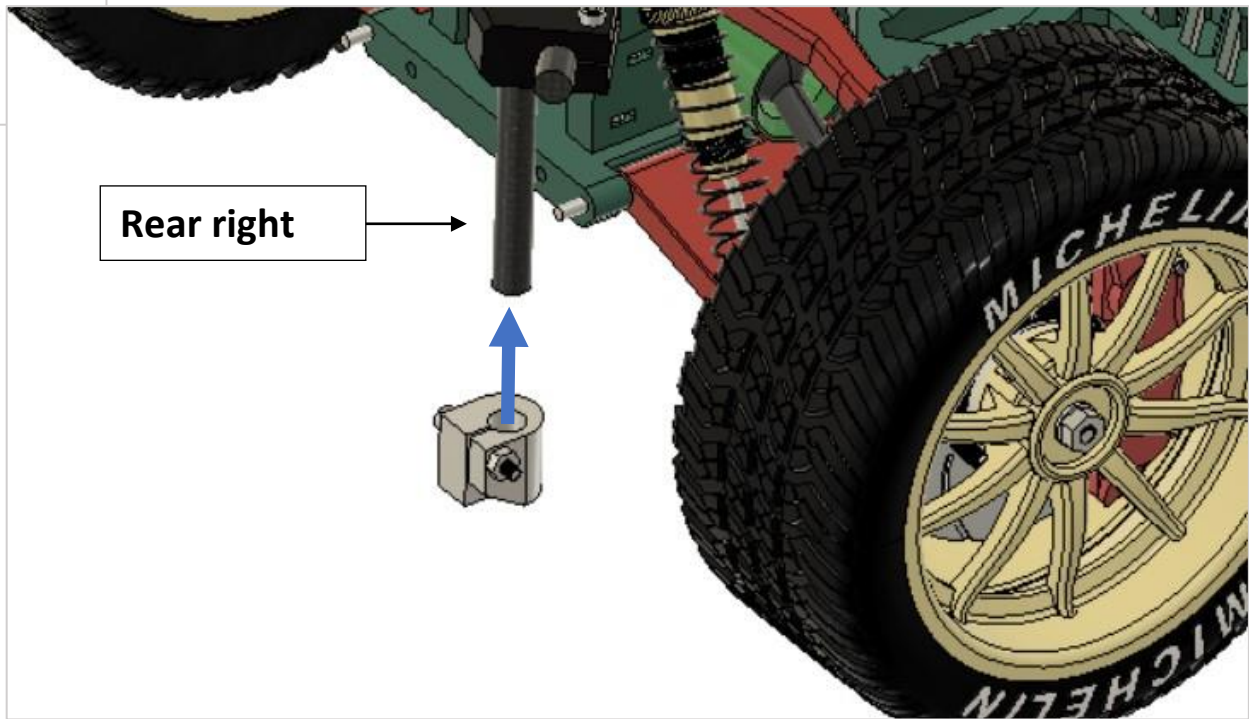
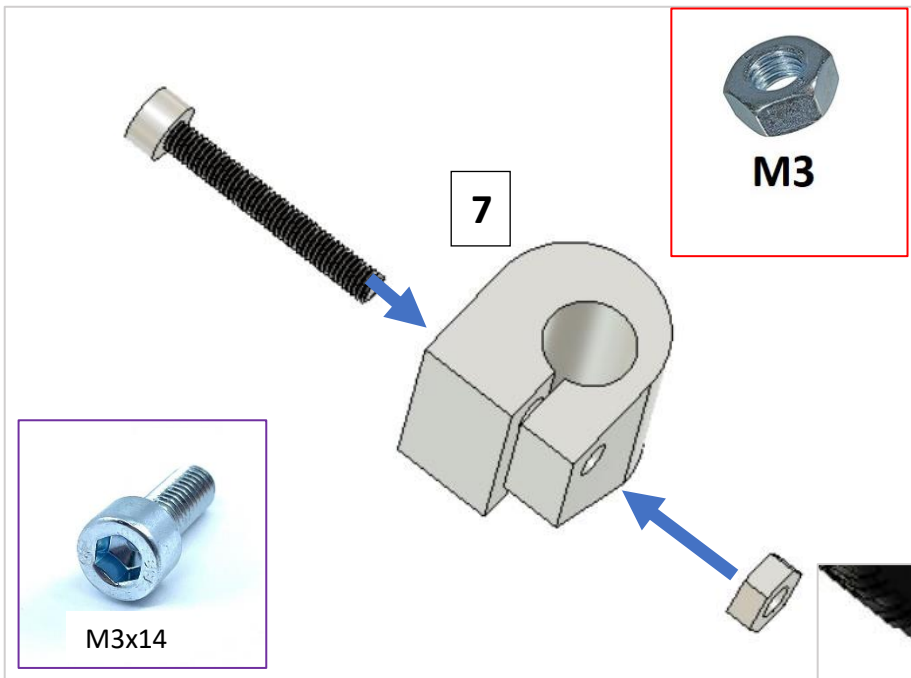




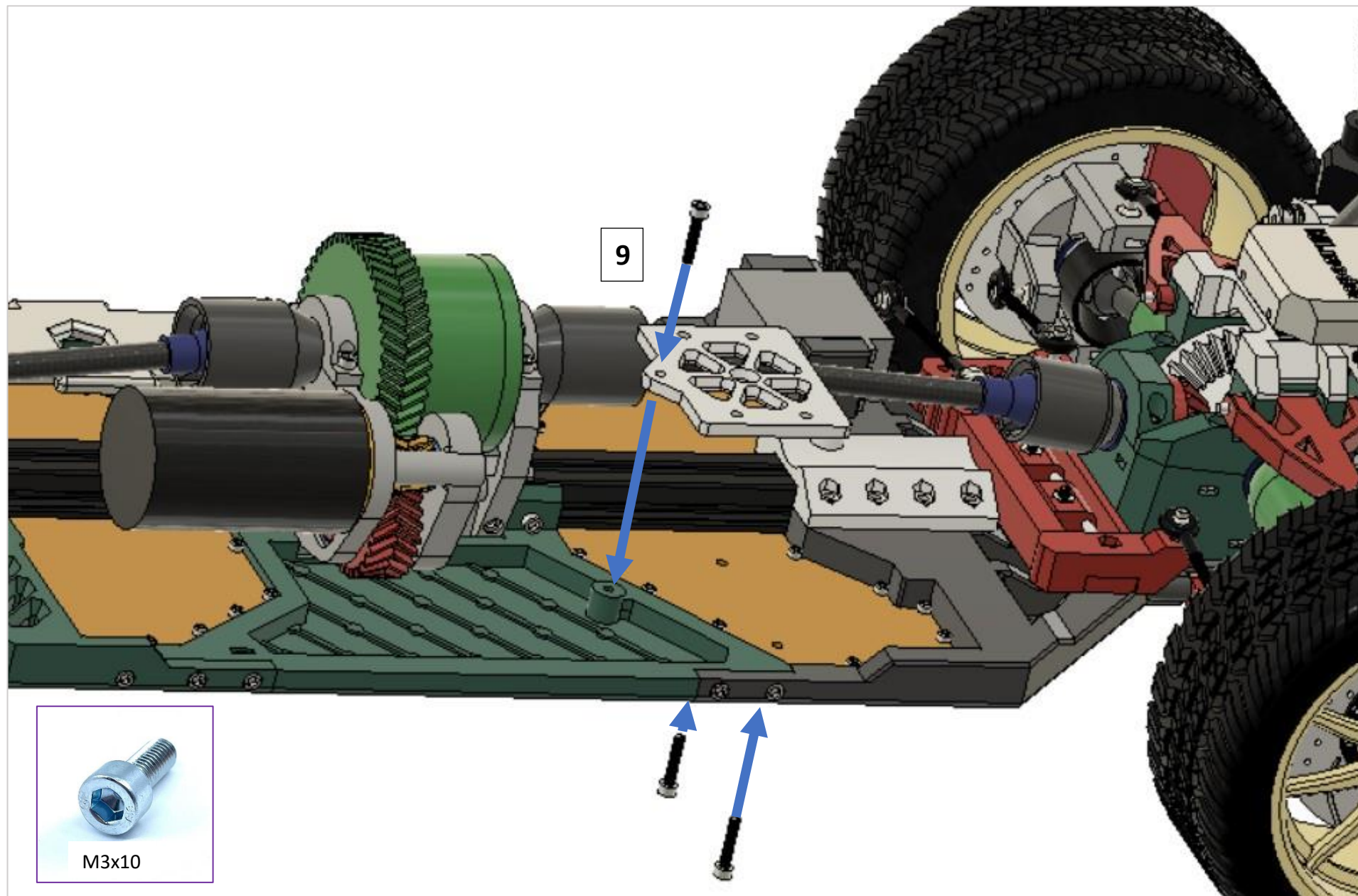


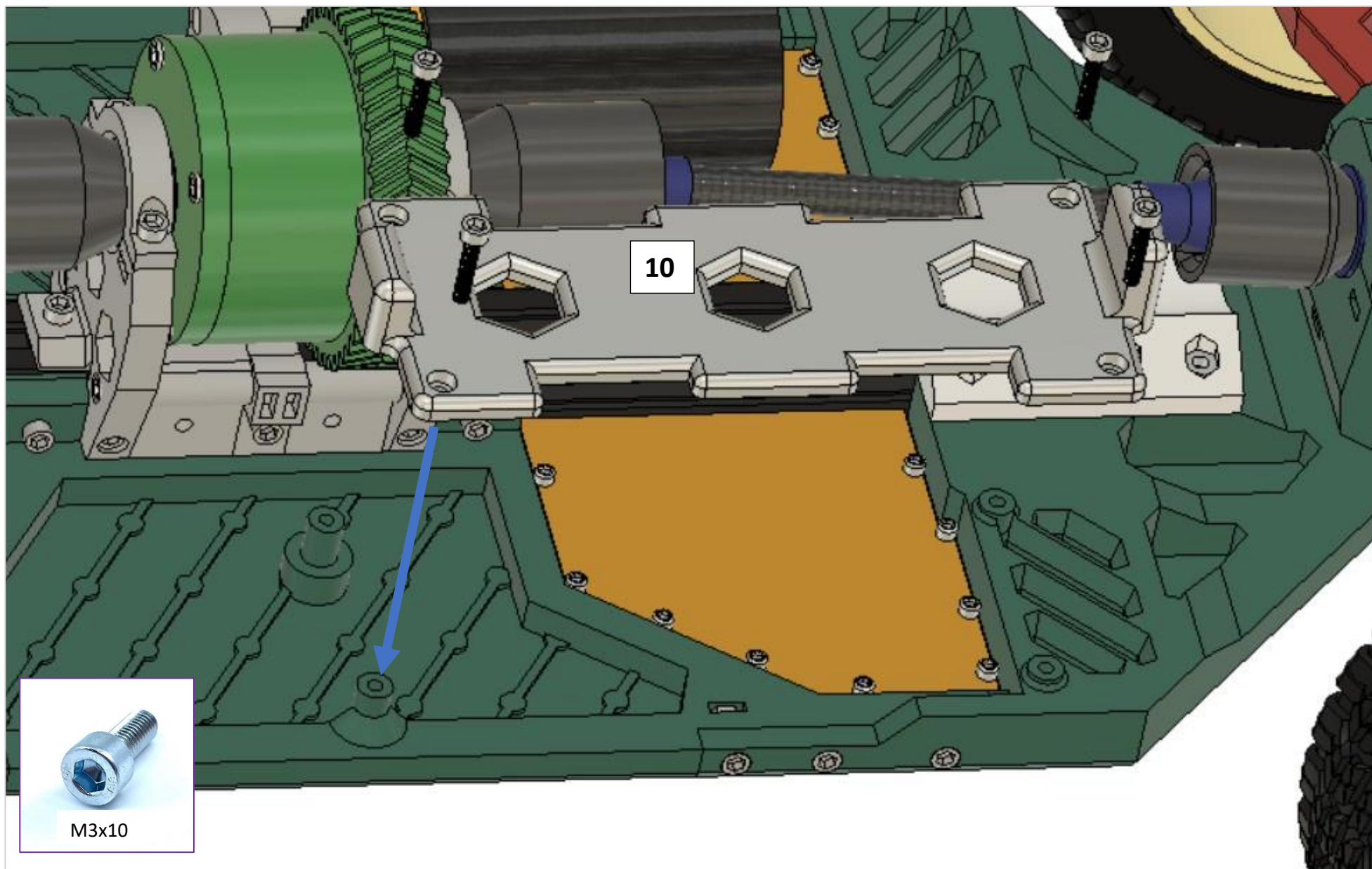


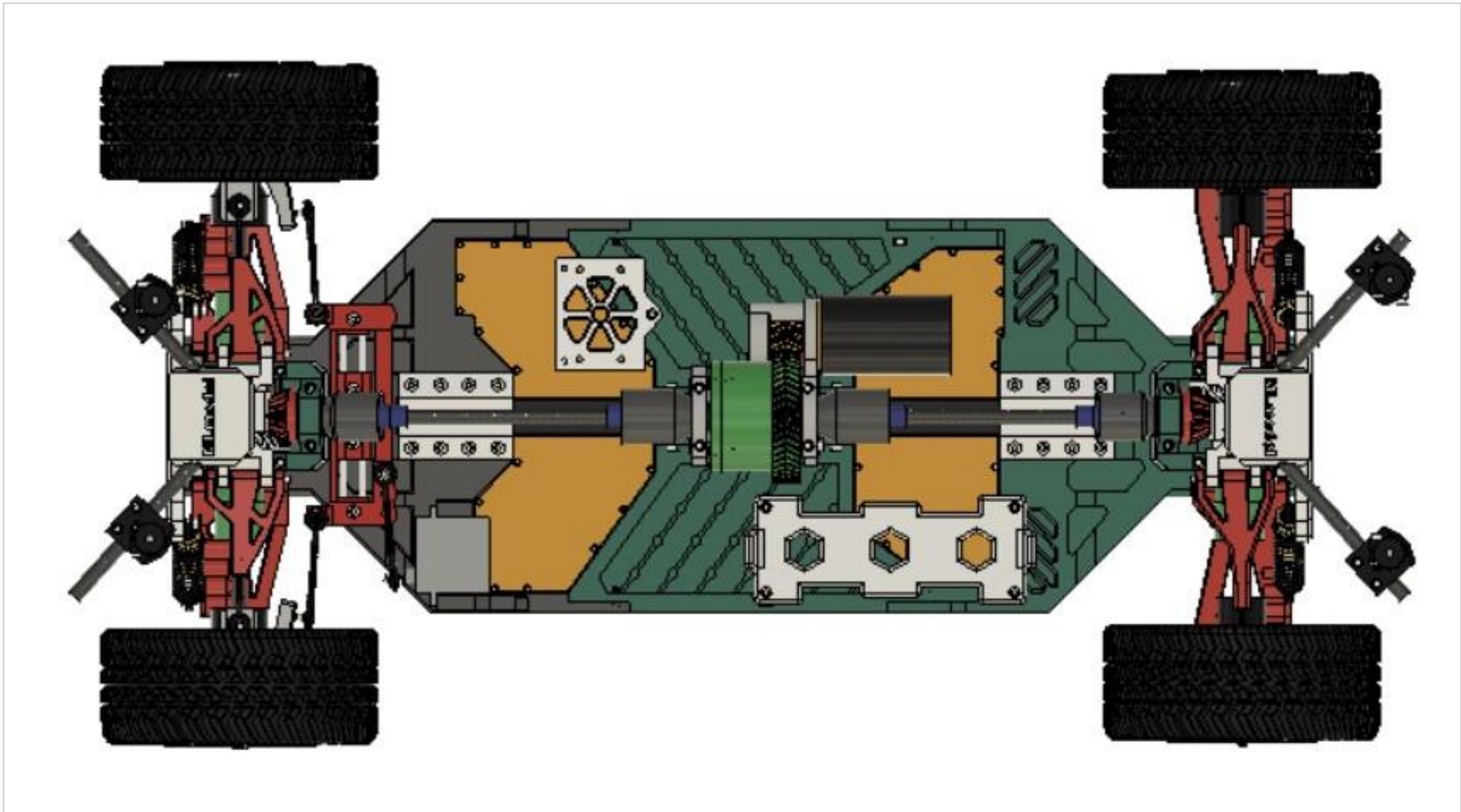












And it is done!

Set the servo range in the transmitter to approx. 90%.

Set the start on the controller to the softest

Enjoy the model 😊