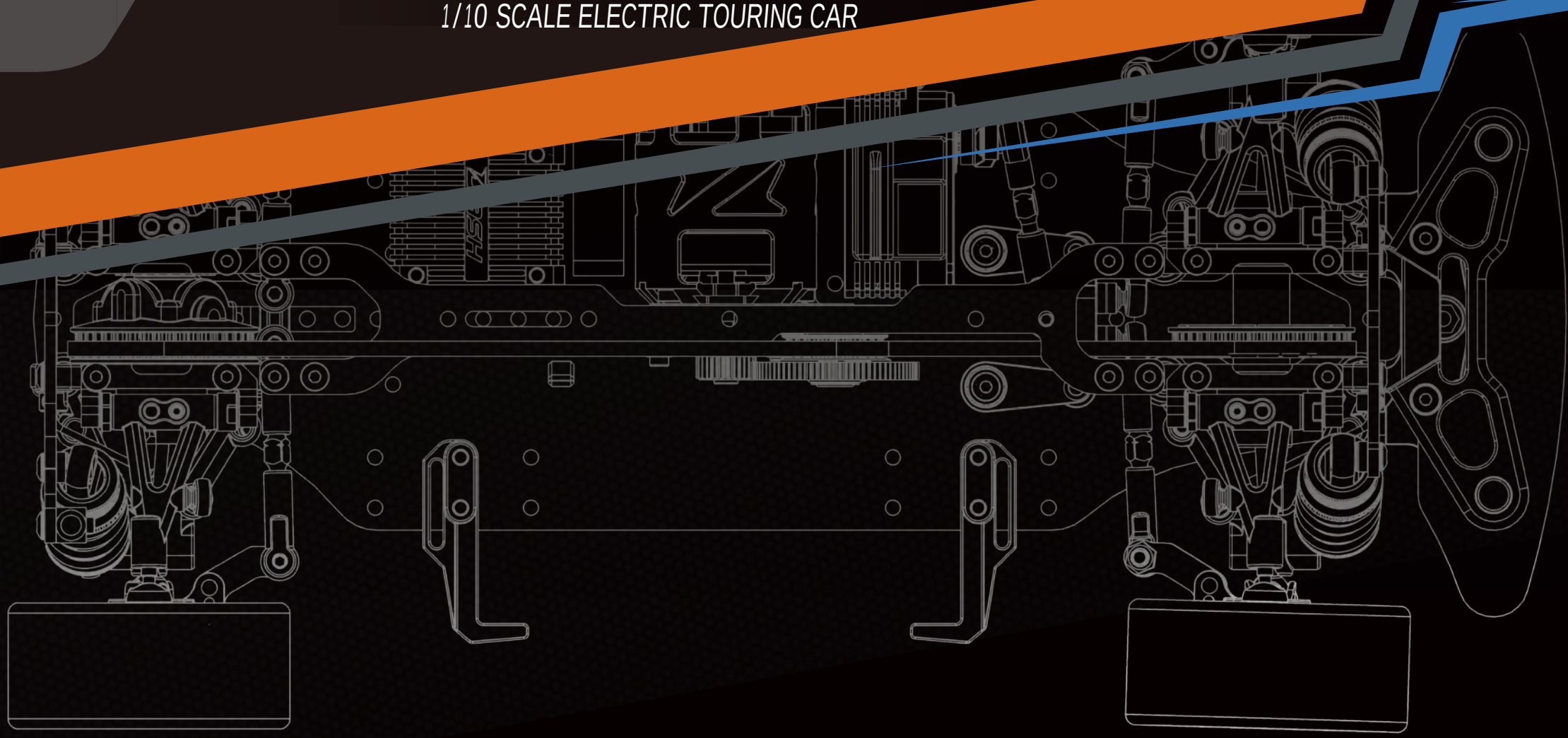
X20 mini

1/10 SCALE ELECTRIC TOURING CAR



SERPENT

INTRODUCTION

Thank you very much for selecting this Serpent rc car and thus become a member of the ever growing worldwide Serpent racing family. Serpent started in 1980 and has been growing its product-line and fan -base ever since.

The Serpent Medius X20 Mini is a state of the art 1/10 scale 4WD touringcar which will give you the true Serpent racing experience. The assembly manual will guide you through all the steps to complete the car, so you can hit the track with a good base-set-up soonest. The Serpent design department succeeded to create a superbly performing car combined with eas of assembly and maintenance. The high quality standards of all parts and hardware will make racing your Serpent car a very rewarding activity!

Through our team, website and social media we will keep you up-to-date on all developments of the Serpent cars. We hope to meet you on the track and through our various media! Enjoy the drive!

Team Serpent
Multiple World Champions

INSTRUCTIONS

Serpent's long tradition of excellence extends to the instruction manuals, and this instruction manual is no exception. The easy-to-follow layout is richly illustrated with 3D-rendered full-color images to make your building experience quick and easy. Following the instructions will result in a well-built, high-performance race-car that will soon be able to unleash its full potential at the racetrack. The kit includes bags, with bagnumbers, which refer to the same step in the manual. Open only the indicated bag(s) per step and finish that part of the assembly. Remaining parts will be needed lateron in the assembly process.

PLASTIC PARTS

The Serpent moulded parts are very durable and hard. When assembling longer screws in new composite parts, make sure to use new hex bits in your (power) tools. Pre-threading also helps to avoid screw damage.

SETUP

In certain assembly steps you need to make basic adjustments, which will give you a good initial setup for your Serpent Medius X20 Mini Fine-tuning the initial setup is an essential part of building a high-performance racecar like your Serpent

EXPLODED VIEWS AND PARTS LIST

The exploded views and parts lists for the Medius X20 Mini are presented in the Reference Guide section in the back of this manual. The exploded views show all the parts of a particular assembly step along with the Serpent part number and hotlink to the Serpent website. Partnumbers in orange indicates that this part is an optional. Optionals part names and numbers are showed below.

CUSTOMER SERVICE

Serpent has made a strong effort to make this manual as complete and clear as possible. Additional info may be published in our website: www.serpent.com or you may ask your dealer or the Serpent distributor for advice, or email Serpent direct: info@serpent.com. The Serpent Facebook, Twitter and Youtube pages give additional means of support and communications.

SAFETY

Read and take note of the 'Read this First section' before proceeding to assemble the car-kit. This car-kit is intended for persons aged 16 or older.

READ THIS FIRST!

- This is a highly technical hobby product, intended to be used in a safe racing environment. This car is capable of speeds in excess of 80 km/h or 50mph. Please follow these guidelines when building and operating this model.
- Parental guidance is required when the builder/user of this car is under 16.
- Follow the building instructions. If in doubt, contact your dealer or importer.
- Be sure to use the proper tools when assembling the car. Always exercise caution when using electric tools, knives and other sharp objects.
- Be careful when using liquids like lubrication oil, fuel or glue. Do not swallow.
- Follow the manufacturer's instruction in case you experience irritation after using the product.
- Be careful when operating the car. Stay away from any rotating parts such as wheels, gears and transmission. Stay away from motor, engine and exhaust pipe system or speedo during and immediately after use, as these parts may be very hot. We advise to use protective hand cloves.
- Only operate this car in a safe environment, like a special racing track or a closed parking lot. Avoid using this car on public roads, crowded places or near infants.
- Before operating this car, always check the mechanical status of the car. Also check that the transmitter and receiver frequencies correspond and are not used by any other racer at the same time. Check that the batteries of the transmitter and receiver- are fully charged.
- After use, always check all the mechanics of the car. We advise to clean the car immediately after use, and inspect the parts for wear or fractures. Replace when necessary. Do not use water, methanol, thinner or other solvents to clean the car.
- Empty the fuel tank (depending on model) if needed and disconnect the receiver battery.
- Store the car in a dry and heated place to avoid corrosion of metal parts.
- Avoid using this car in wet conditions as the water will cause corrosion on the metal parts and bearings and these parts will cease to function properly. If driven in the wet, ensure that all the electric equipment is waterproofed and after use, that all moving parts are dried immediately.

CONTENTS

- DIFF ASSEMBLY.....4
- CVD ASSEMBLY.....6
- FRONT & REAR ASSEMBLY.....8
- MOTORMOUNT ASSEMBLY.....11
- REAR ASSEMBLY.....15
- FRONT ASSEMBLY.....18
- ANTIROLLBAR ASSEMBLY.....22
- STEERING ASSEMBLY.....23
- CENTRAL ASSEMBLY.....27
- SHOCK ASSEMBLY.....29
- BUMPER ASSEMBLY.....31
- FINAL ASSEMBLY.....33
- EXPLODE VIEWS.....54

LINES DESCRIPTION

Each step contains a variety of numbers, lines, and symbols. The numbers represent the order in which the parts should be assembled. The lines are described below.



Step number; the order in which you should assemble the indicated parts



Length after assembly

Assembly path of one item into another



Group of items (within lines) should be assembled first

Direction the item should be moved

Glue one item to another

Press/Insert one item into another



Connect one item to another



Gap between two items

ICONS DESCRIPTION

Each step contains a variety of symbols described below.



Carefull, read and check very well.



Apply a small amount of cyano glue. Use wear protection for eyes and hands.



Detail view to explain assembly or order of parts better.



Default set-up: This symbol indicates the default setup.



Grease: apply a small amount of grease to the parts shown.



Left and right parts should be assembled in the same way.



Thread lock: apply a small amount on the parts shown. Before to apply the threadlock, make sure to degrease the parts very well, as otherwise the threadlock will not work.



Silicone oil: use the indicated silicone oil for the shocks and differentials.



Parts or items not included in the kit.

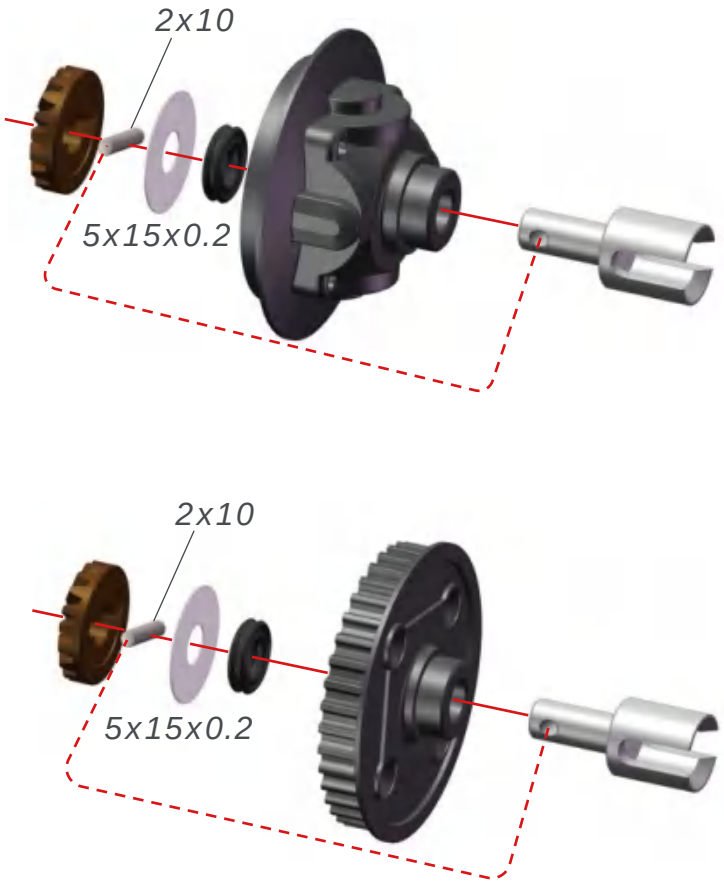


Optional part, not standard in the kit.

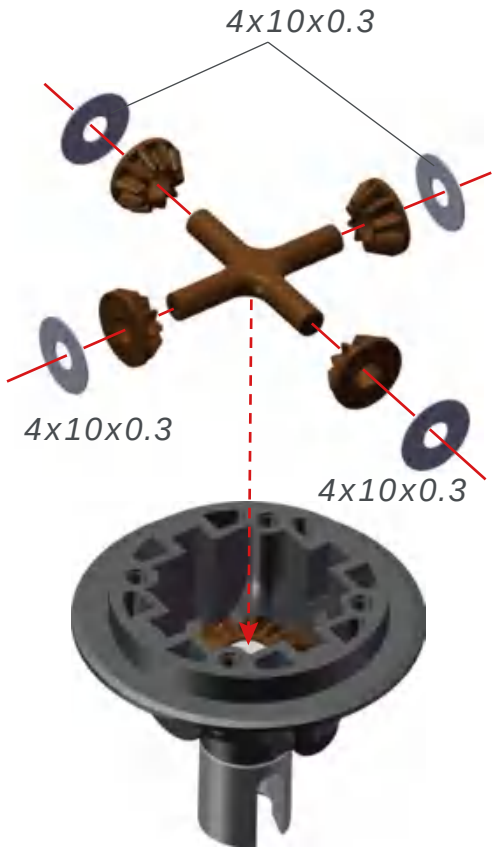
DIFF ASSEMBLY

STEP 1 DIFF BAG

1.1



1.2



Fill the differential with silicone oil 1 mm above the crosspin, do NOT overfill. Use the silicone oil supplied in the kit. For the correct cst value please check the default setupsheet.

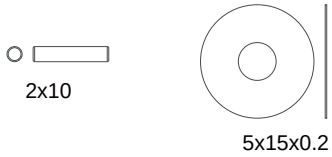


AMOUNT OF OIL IN THE DIFFS

Use a digital scale to measure the exact amount of oil in the diff.

Differential weight with volume compensators = 11.5 grams



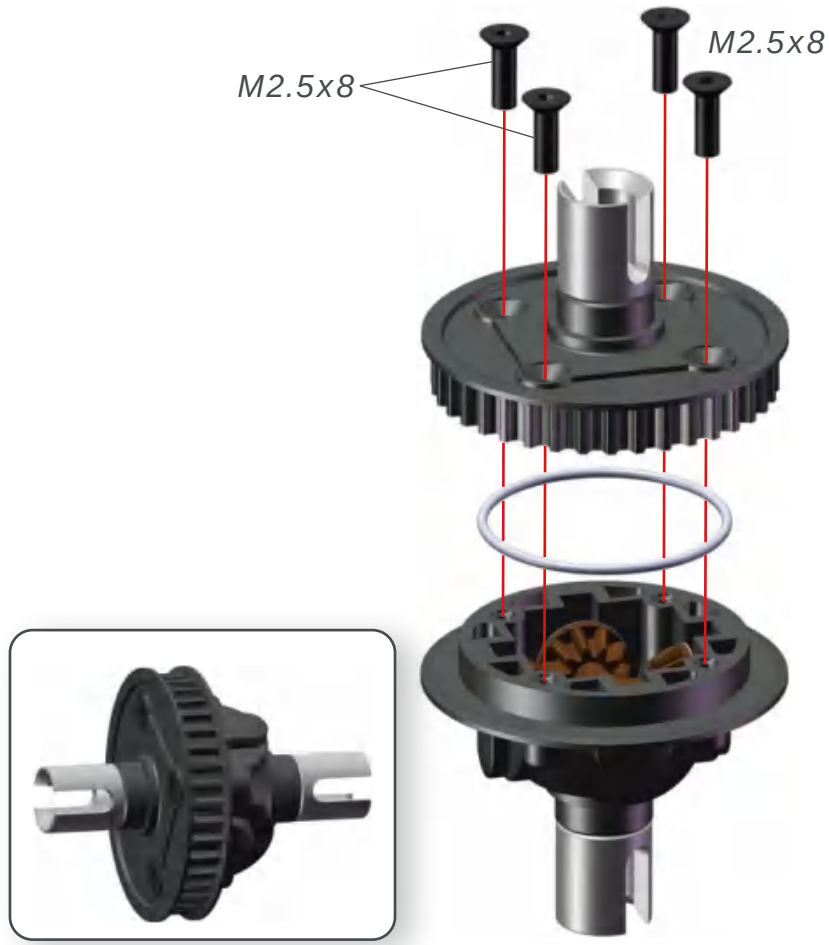




STEP 1

STEP 1 SOLID AXLE BAG

1.3

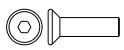


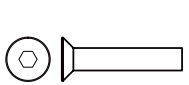
1.4

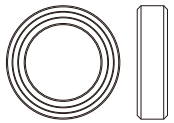


1.5




M2.5x8

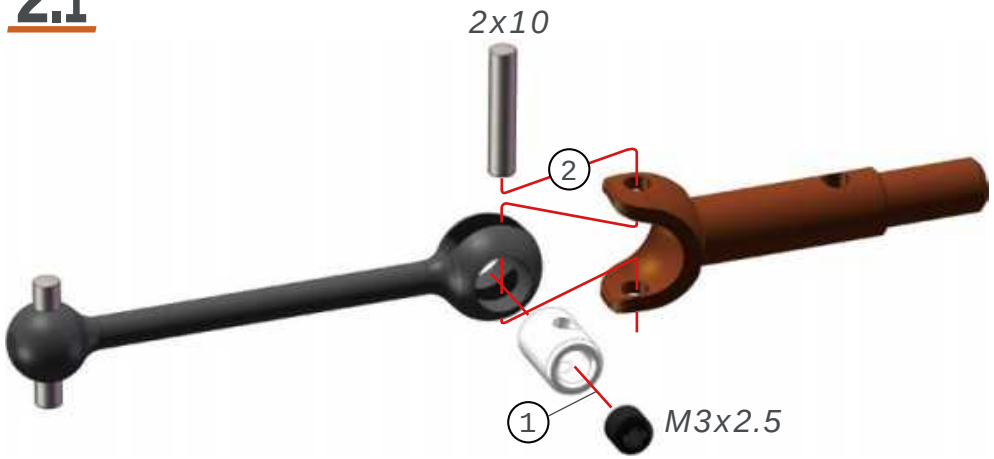

M3x16


10x15x4

CVD ASSEMBLY

STEP 2 CVD BAG

2.1



2.2 FRONT



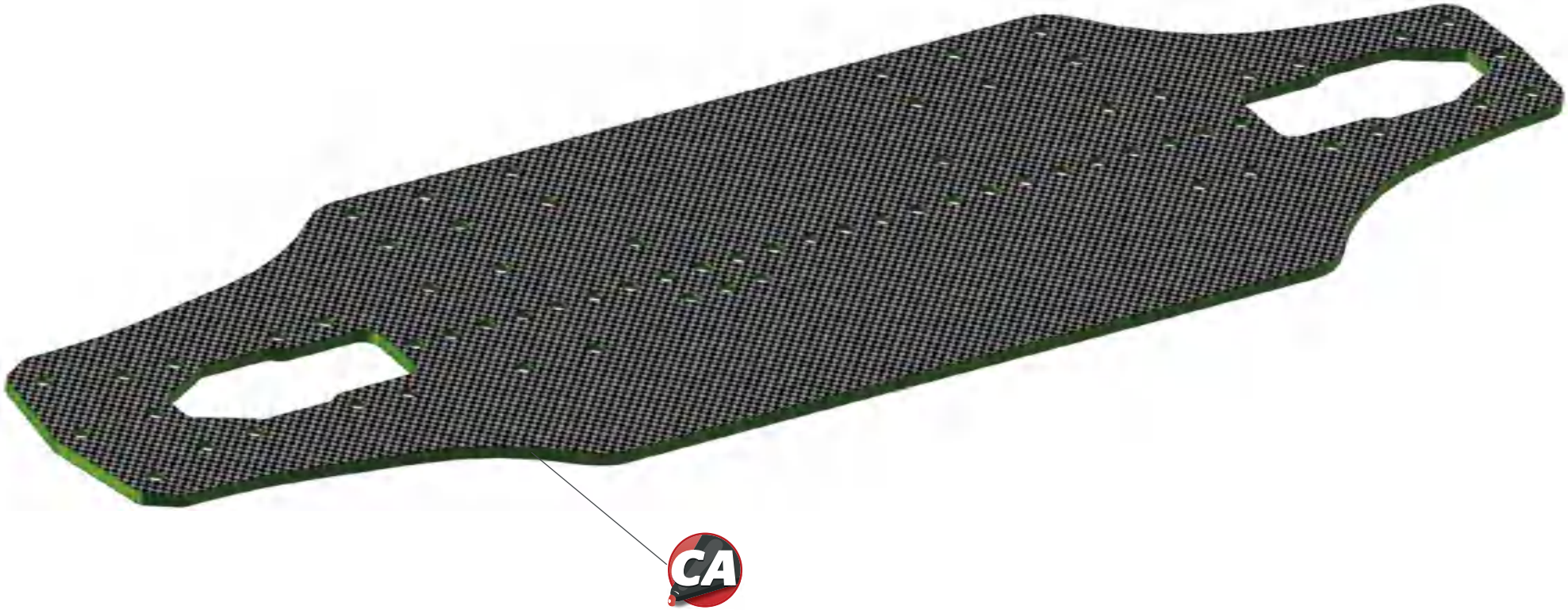
2.3 REAR



2.4

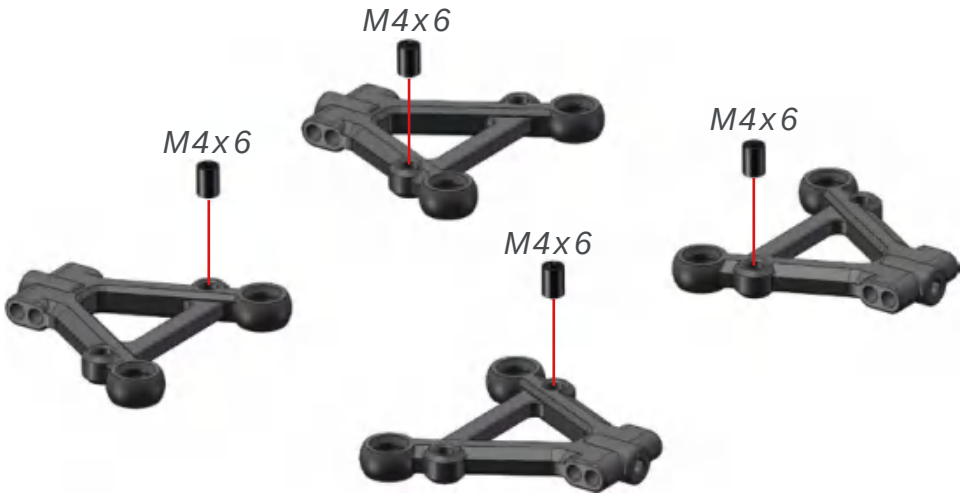


M3x2.5 2x10


CA

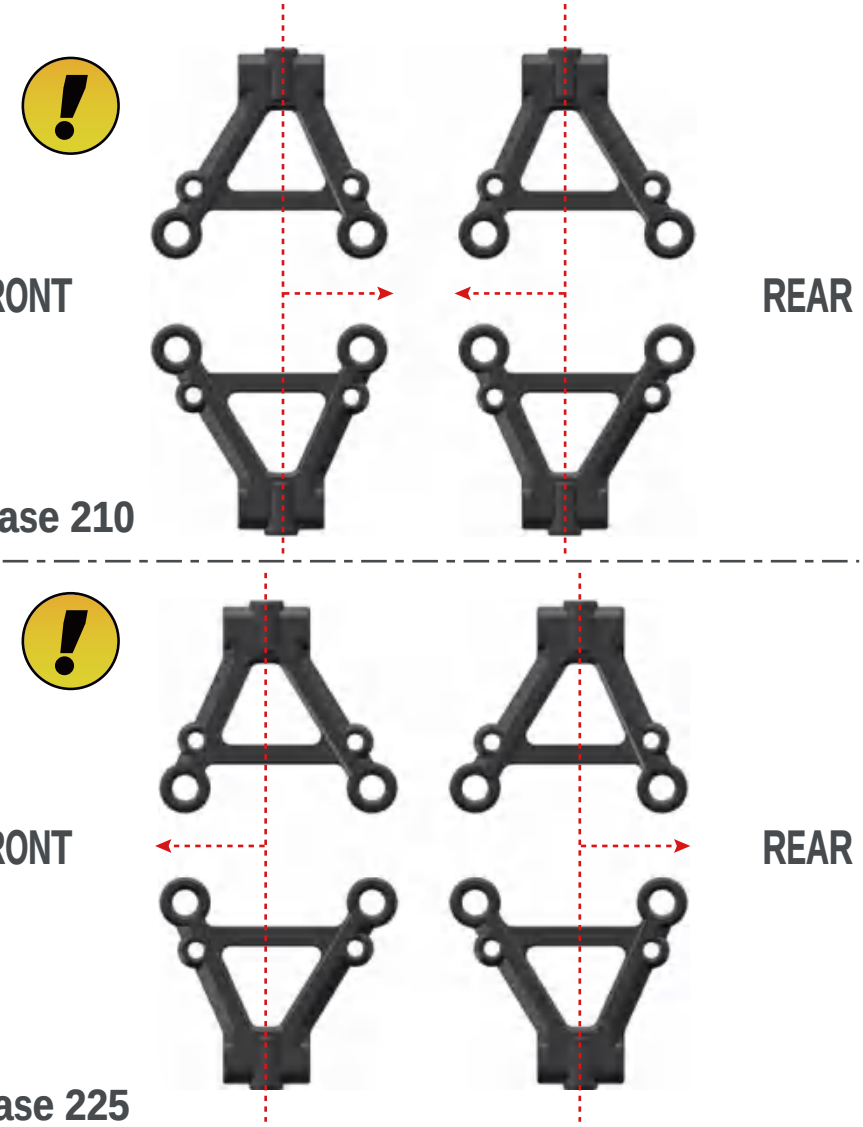
STEP 3 BAG 1

3.1



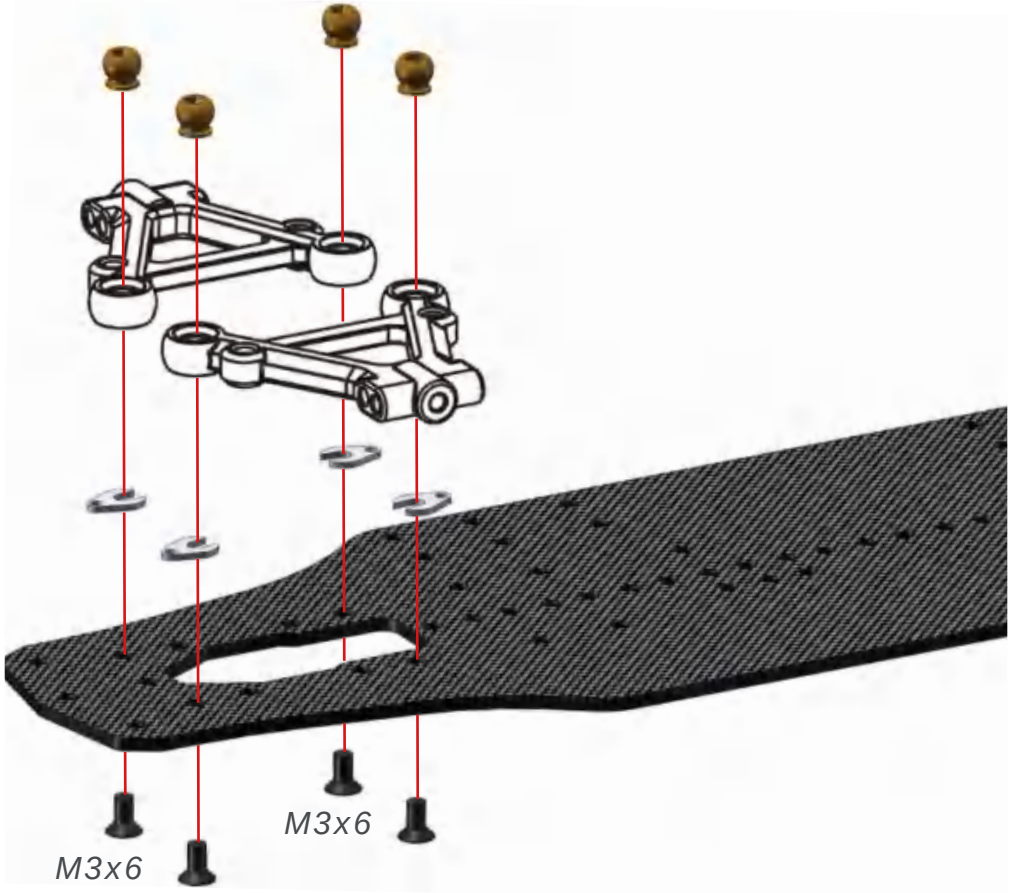
M4x6

3.2

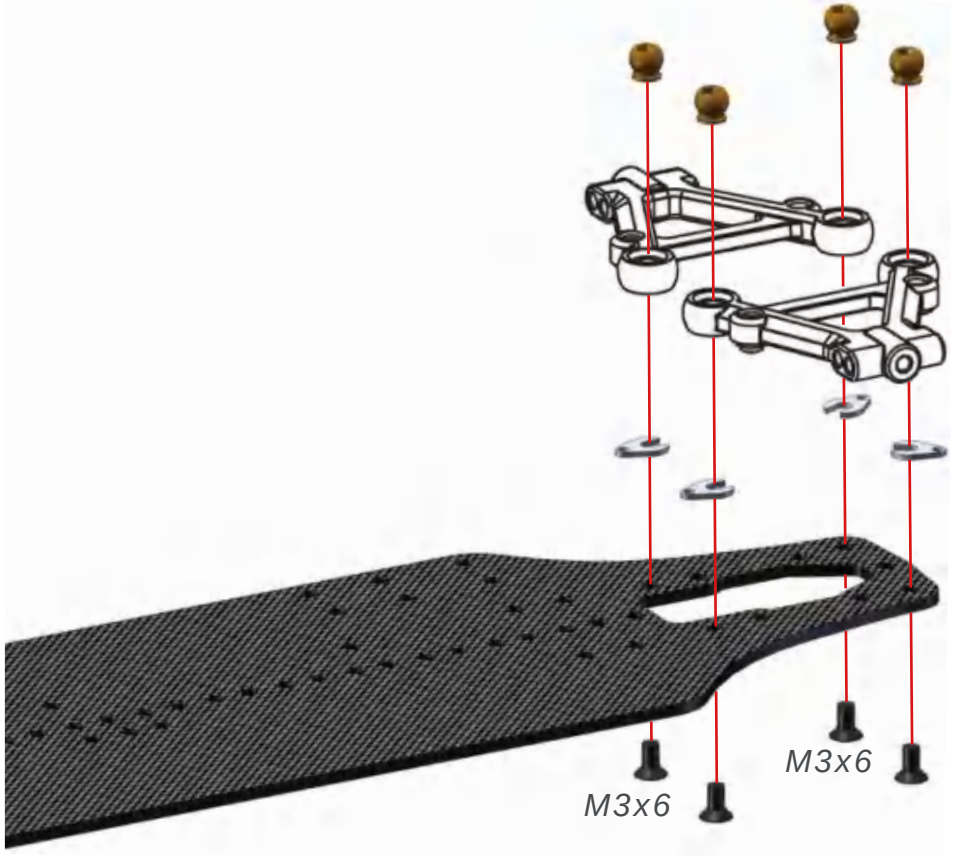


STEP 4

4.1 FRONT



4.2 REAR

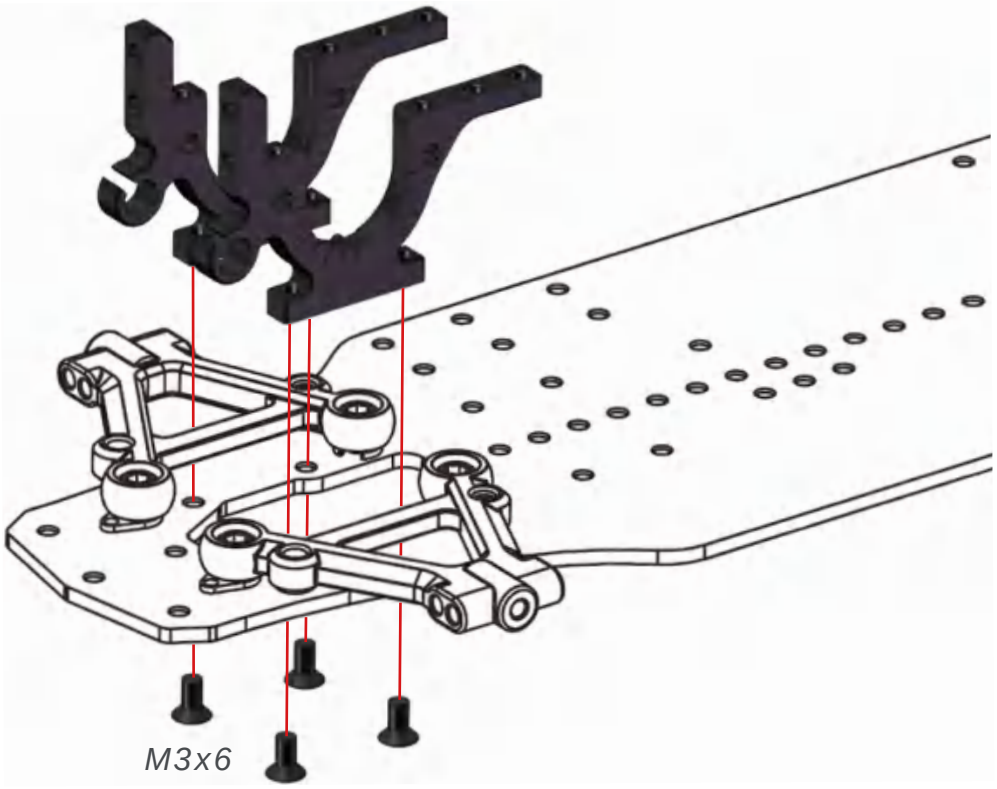



M3x6

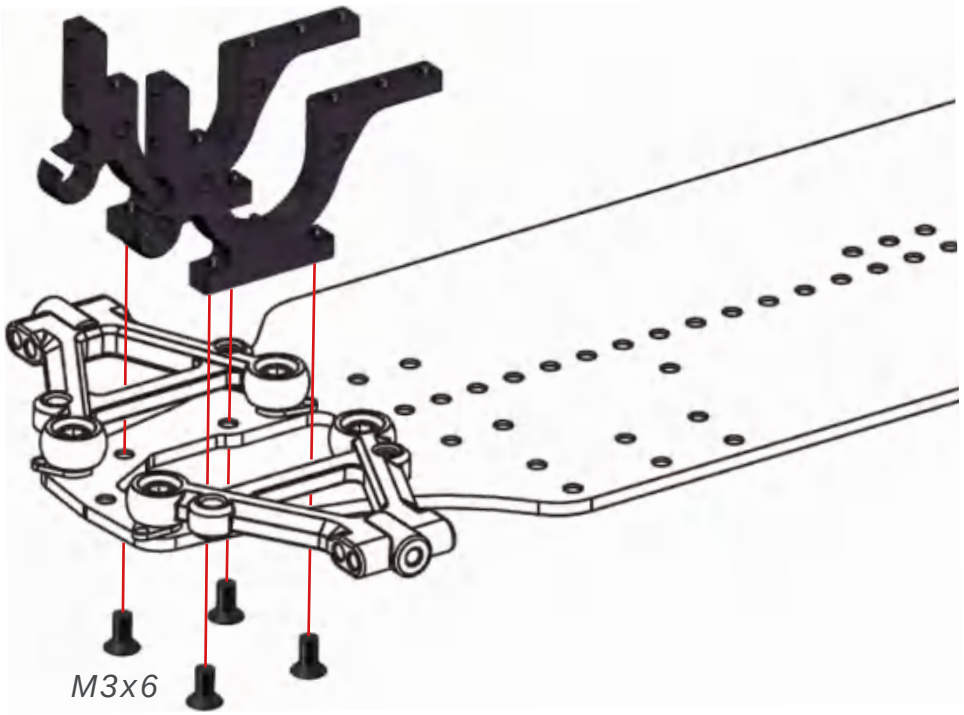

M3x6

STEP 5

5.1 FRONT



5.2 REAR



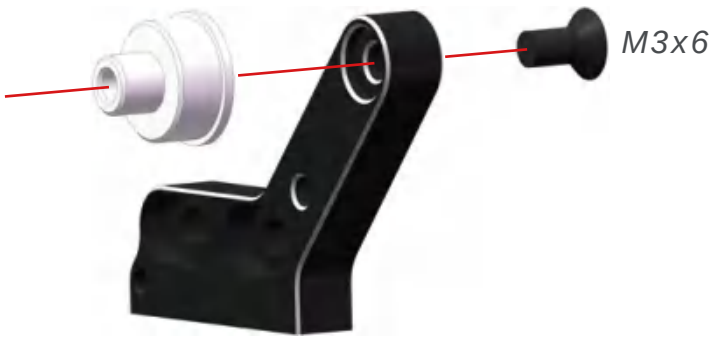

M3x6


M3x6

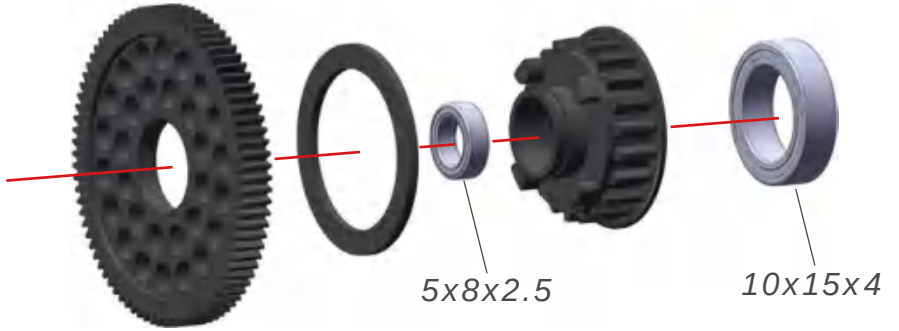
MOTORMOUNT ASSEMBLY

STEP 6 BAG 2

6.1



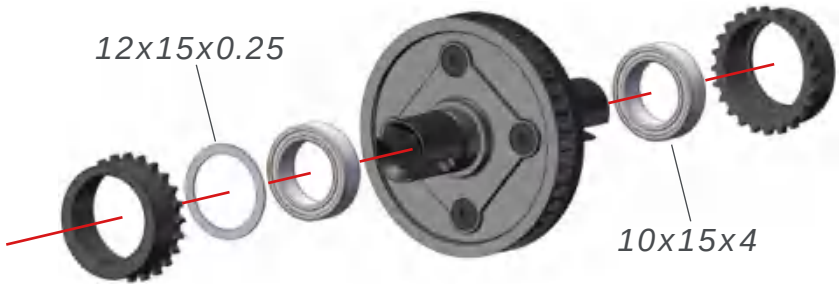
6.2

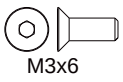


6.3 FRONT



6.4 REAR

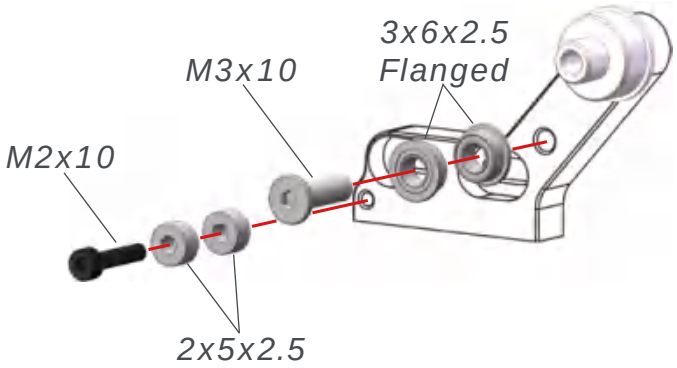




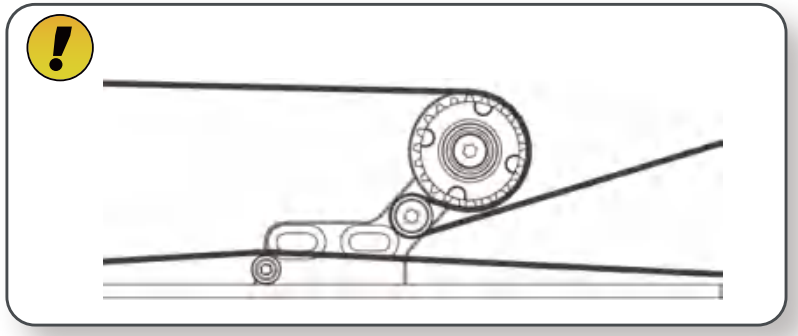


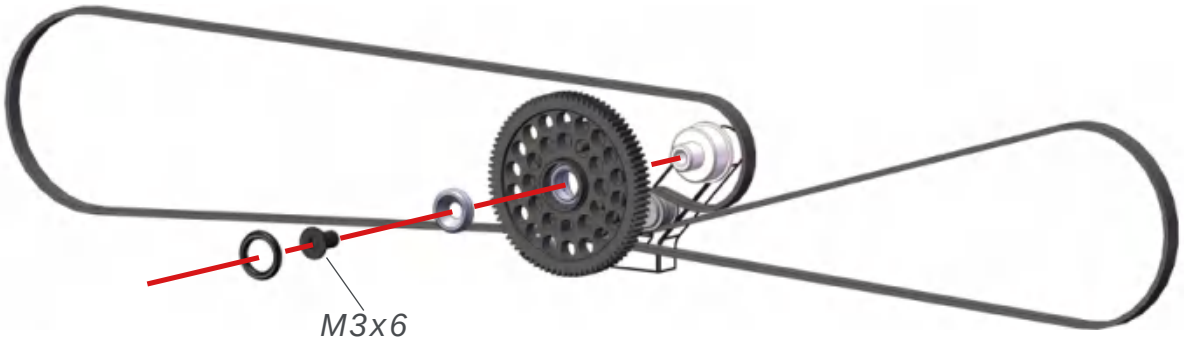
STEP 6

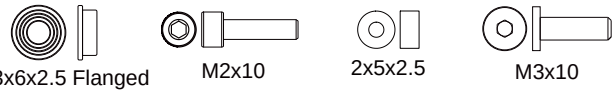
6.5



6.6 4WD



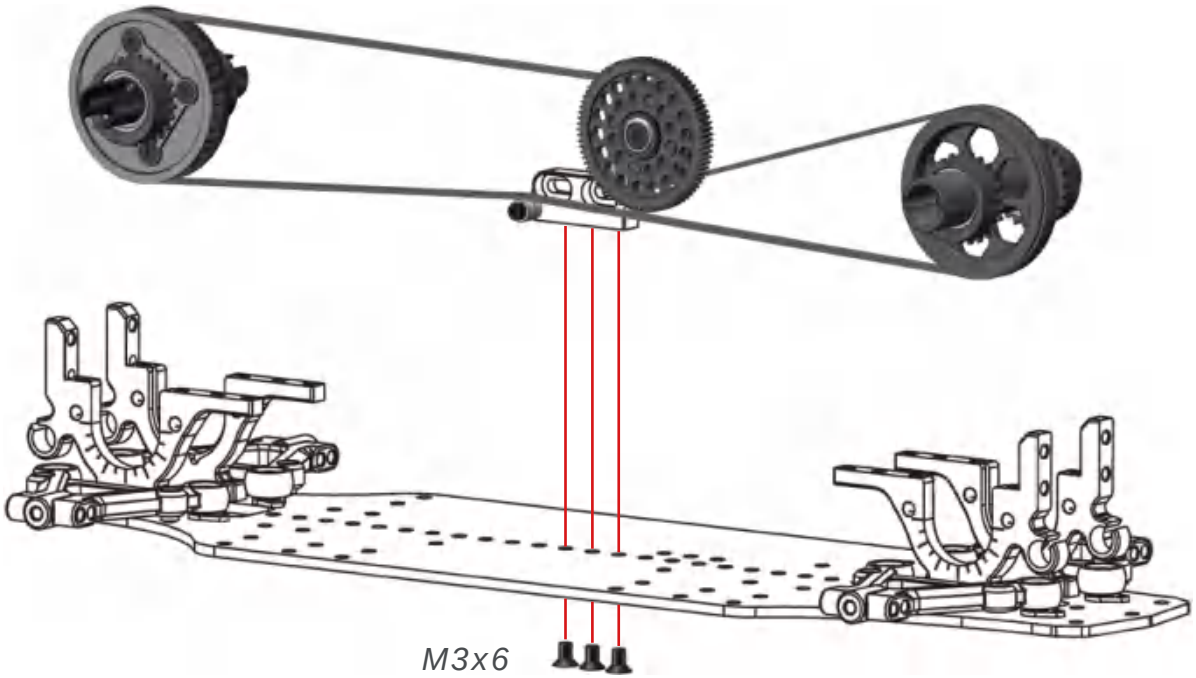






STEP 6

6.7 4WD

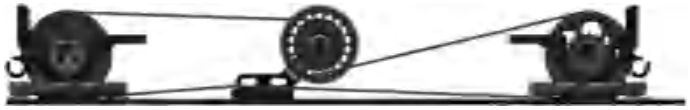




4WD 5:5



4WD 6:4



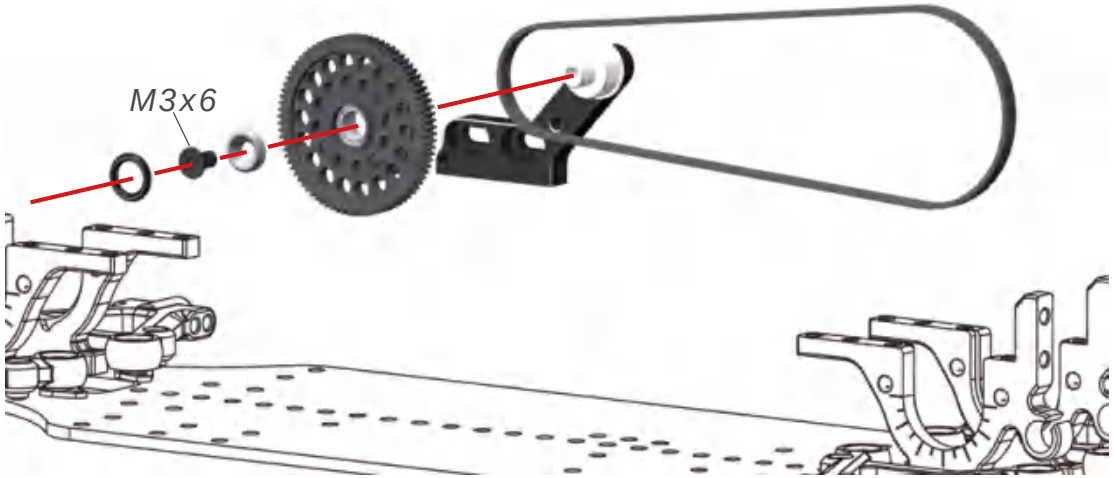
4WD 7:3



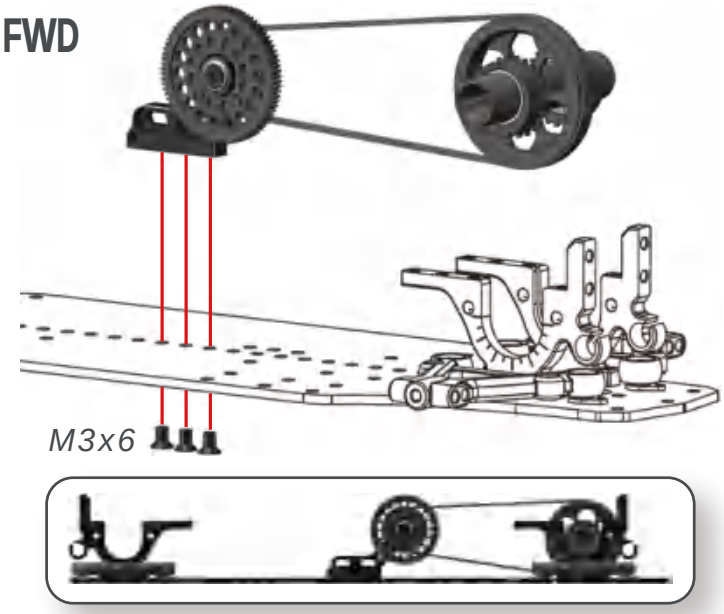
M3x6

STEP 6

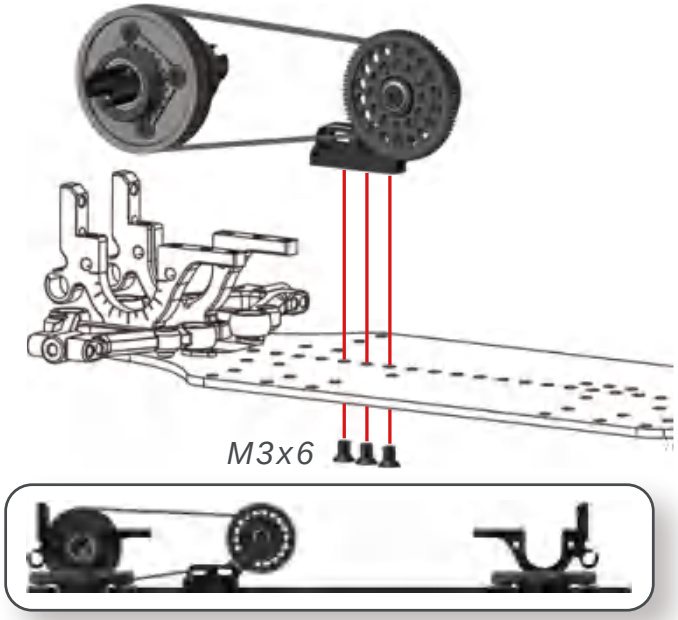
6.6 FWD &RR

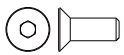


6.7 FWD



6.7 RR

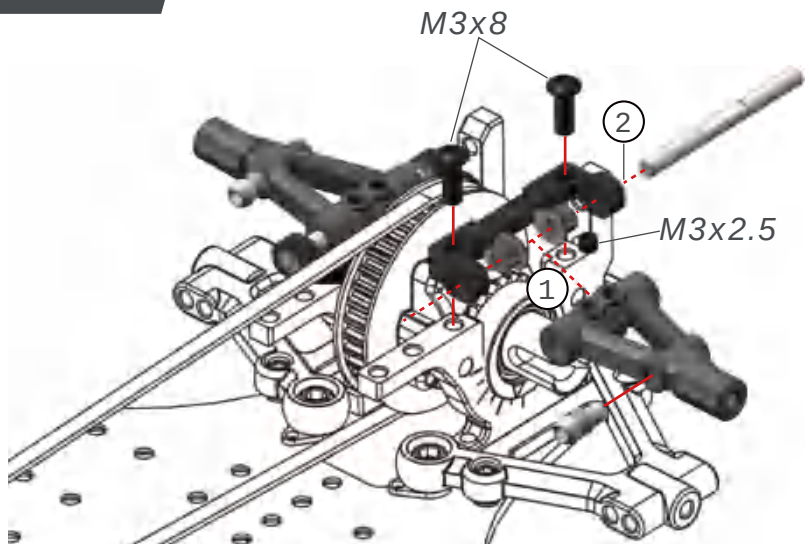



M3x6

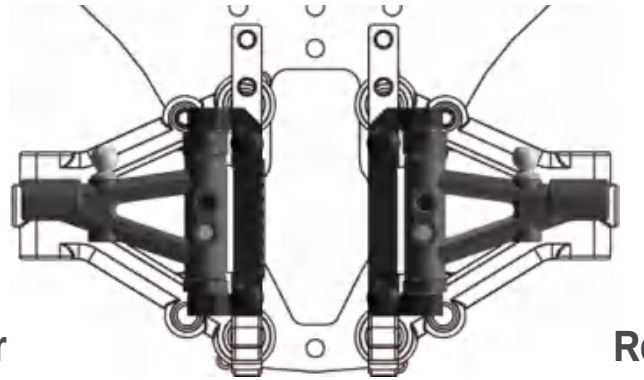

M3x6

STEP 7 BAG 3

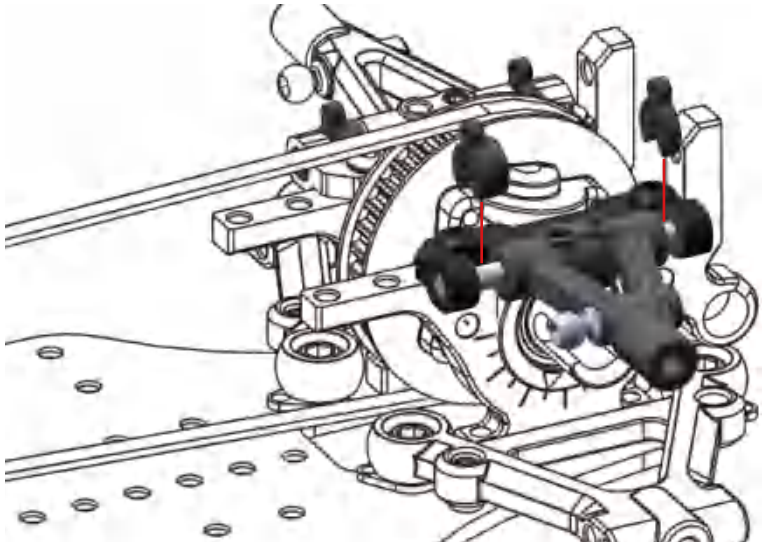
7.1 REAR



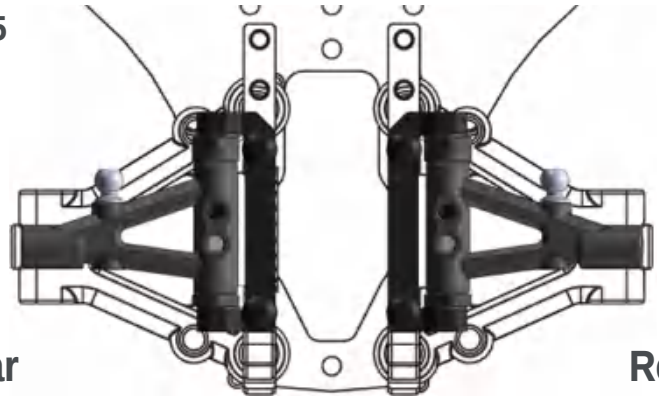
WB210

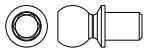


7.2



WB225



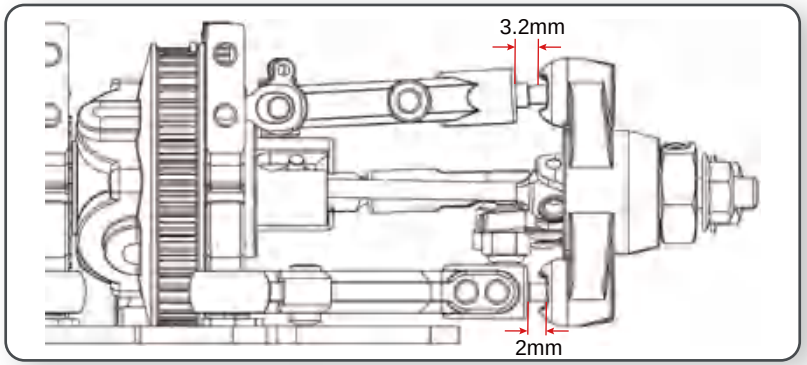

PIVOTBALL M3x4

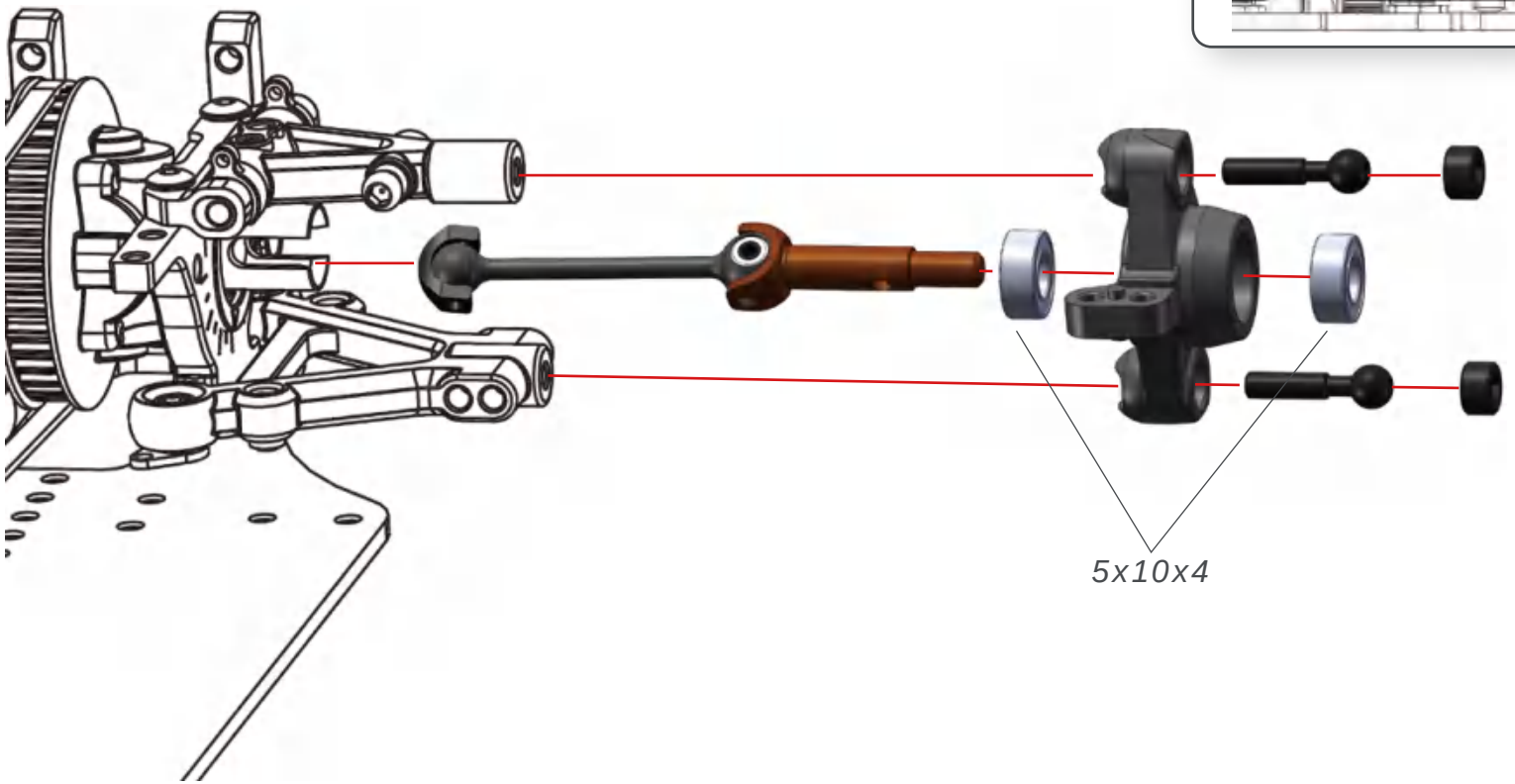

M3x8


M3x2.5

STEP 7

7.3 REAR



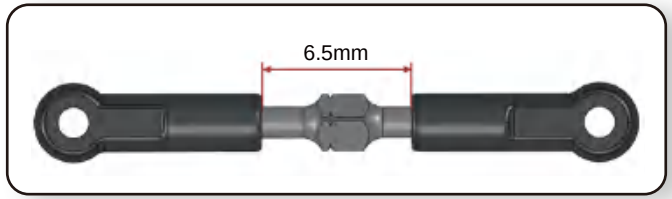


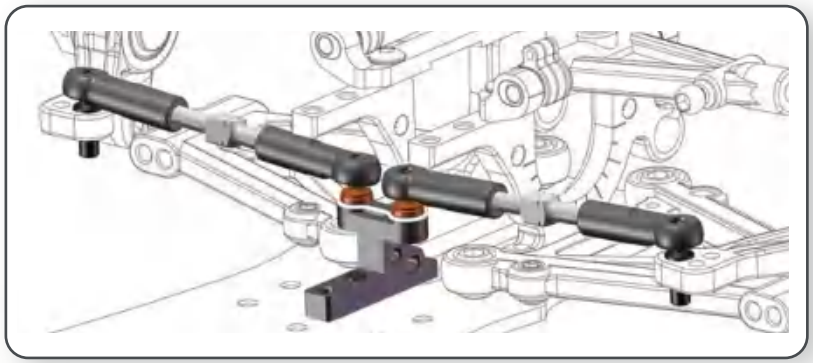


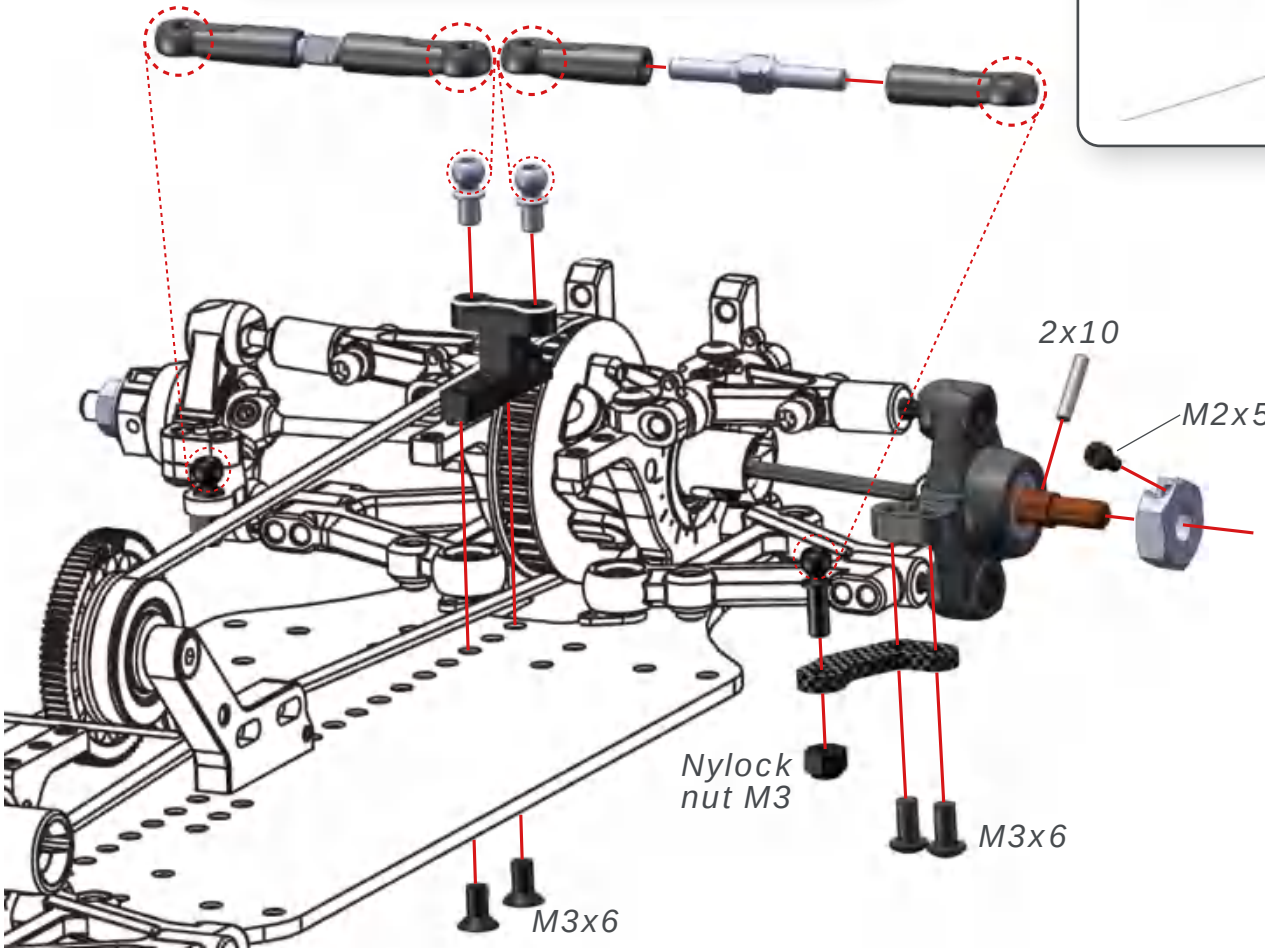
5x10x4

STEP 7

7.4 REAR



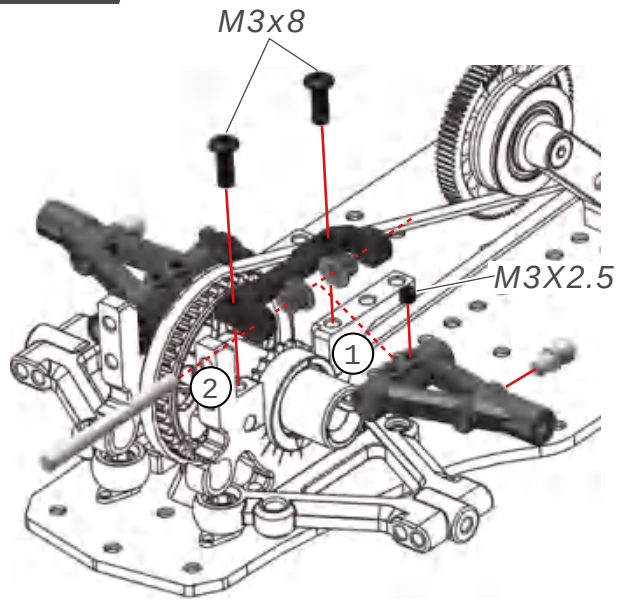


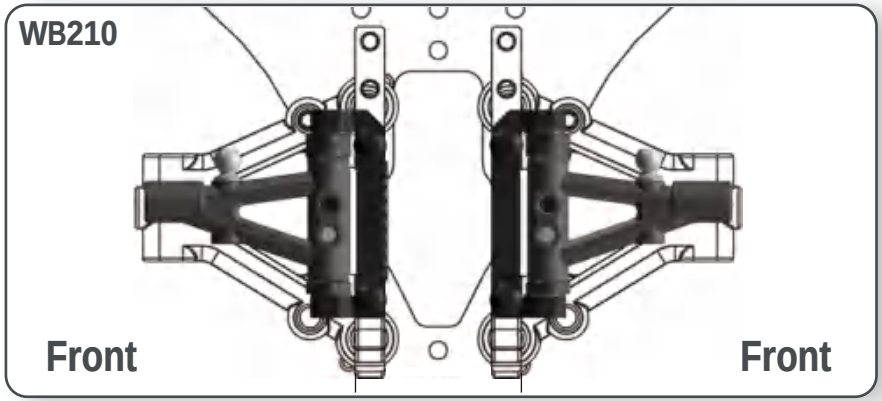




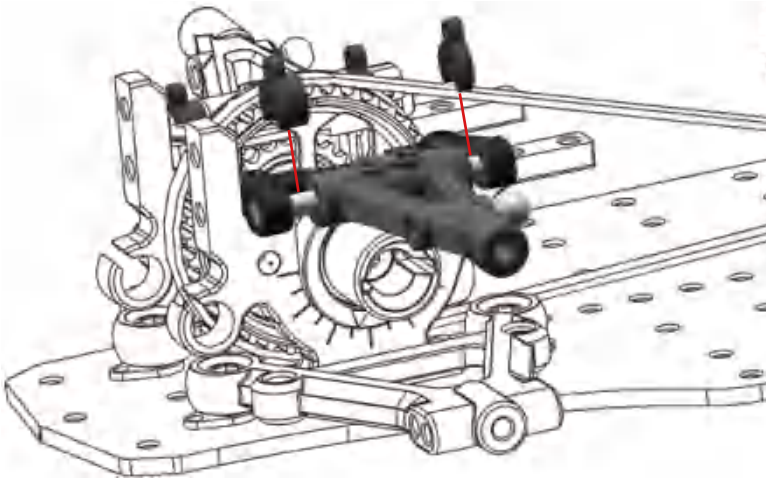
STEP 8 BAG 4

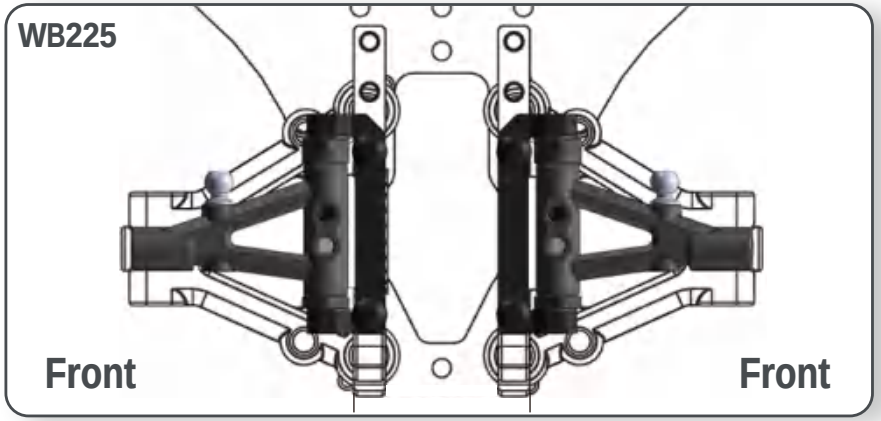
8.1 FRONT





8.2

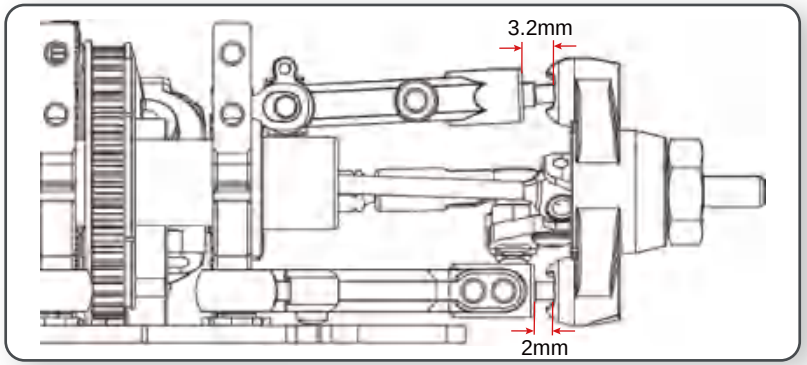


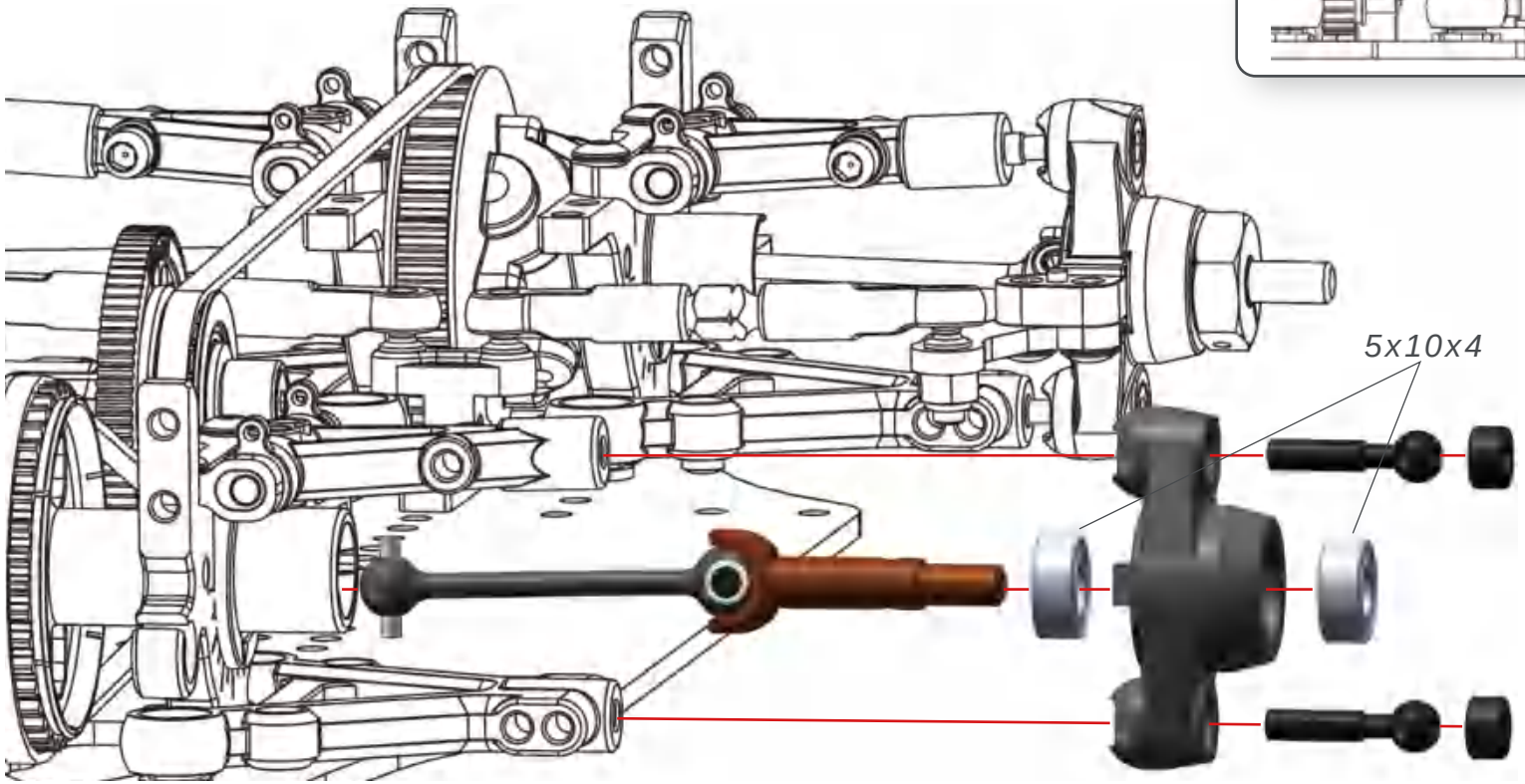




STEP 8

8.3 FRONT



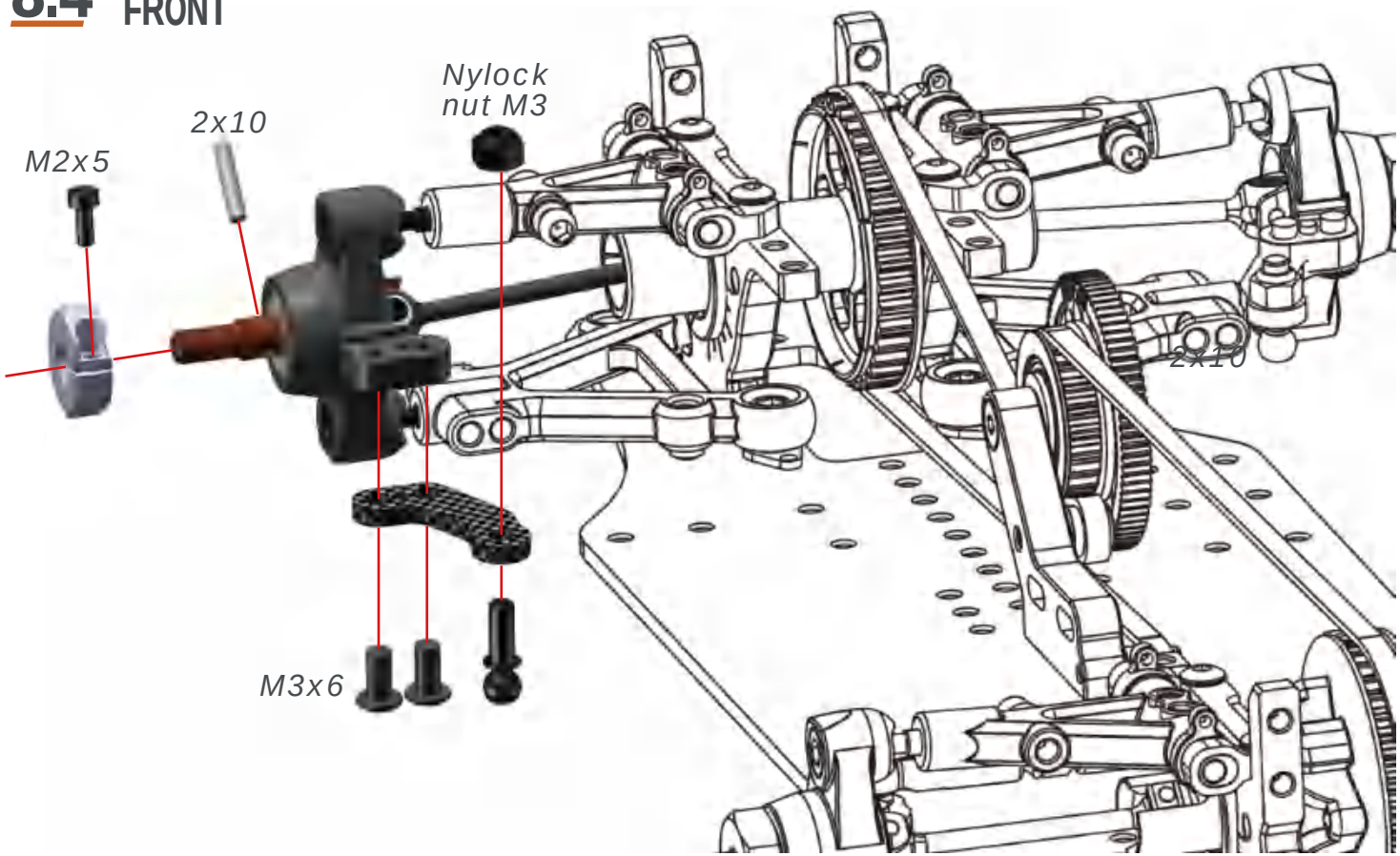


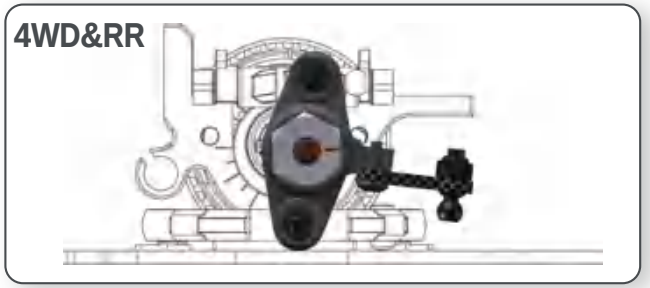


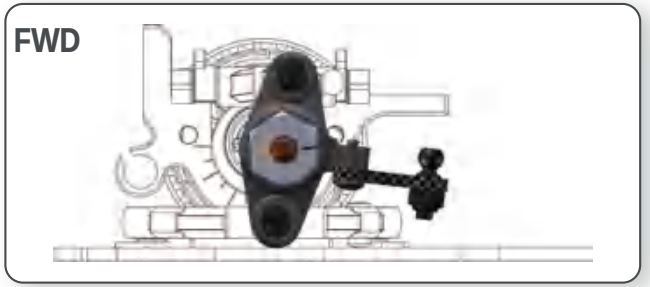
5x10x4

STEP 8

8.4 FRONT









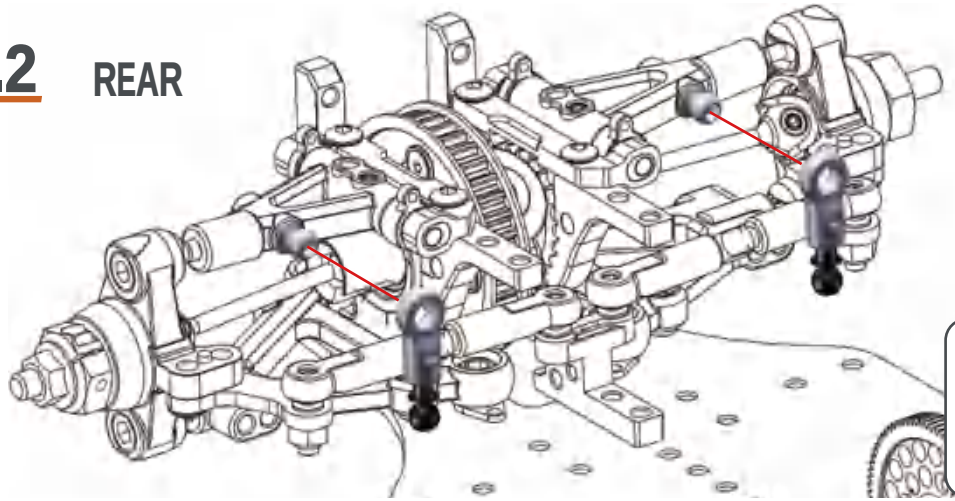
STEP 9 BAG 5

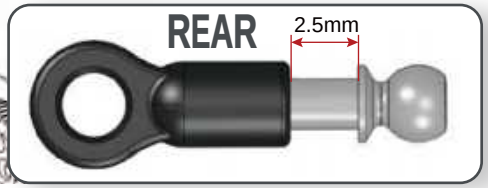
9.1 FRONT & REAR



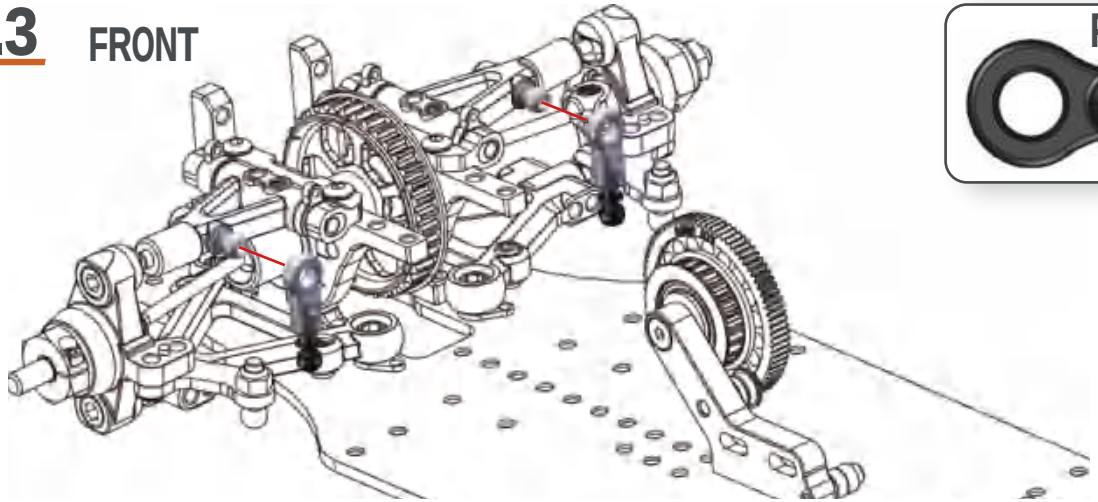


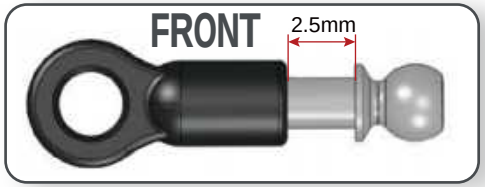
9.2 REAR





9.3 FRONT



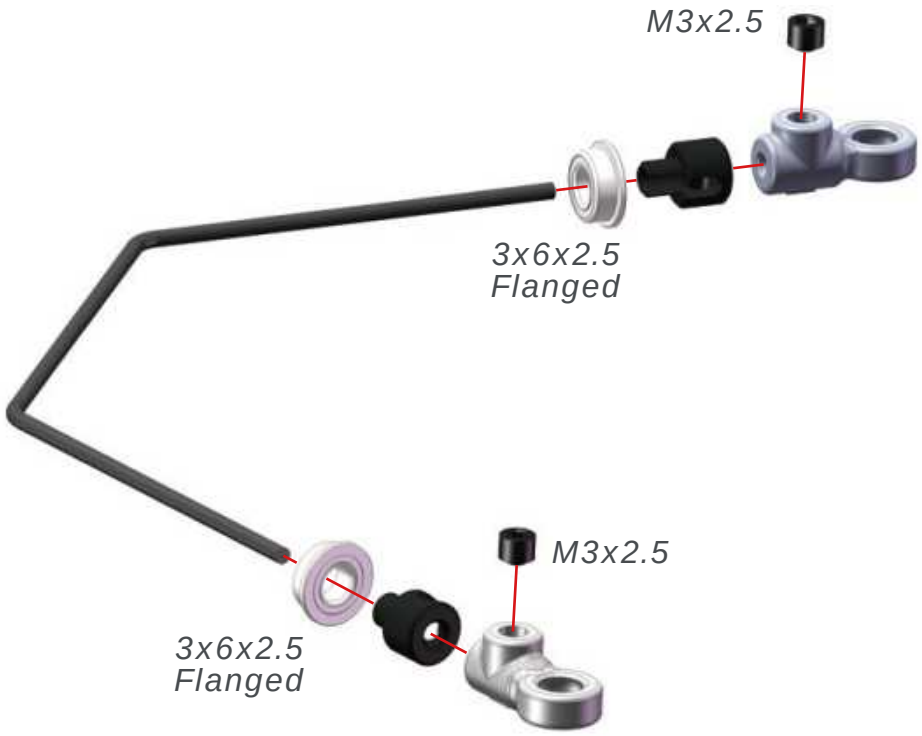




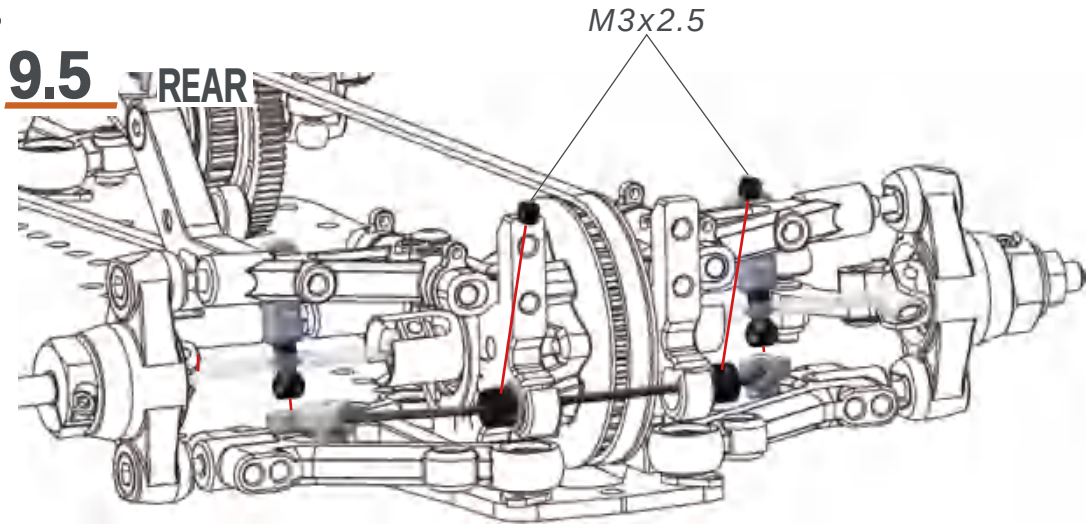
PIVOTBALL M3x7

STEP 9

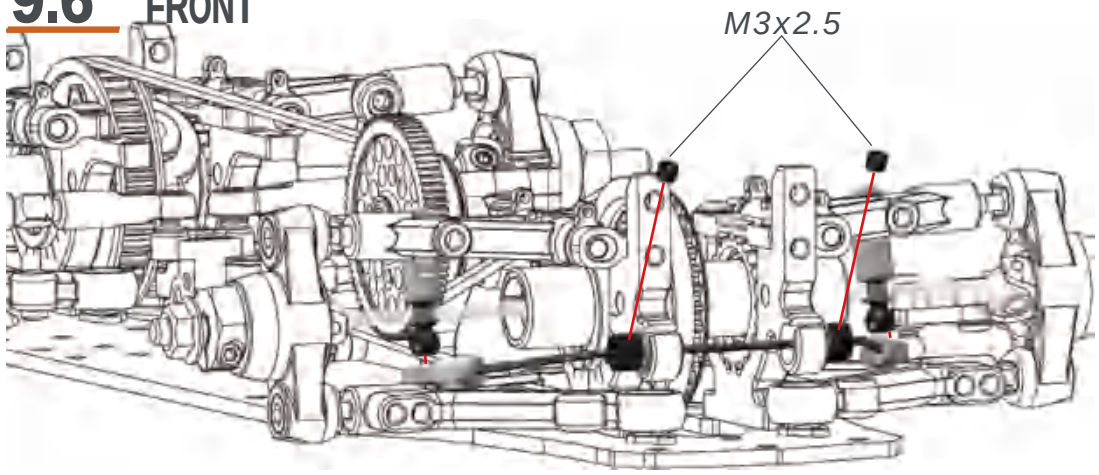
9.4 FRONT & REAR



9.5 REAR



9.6 FRONT



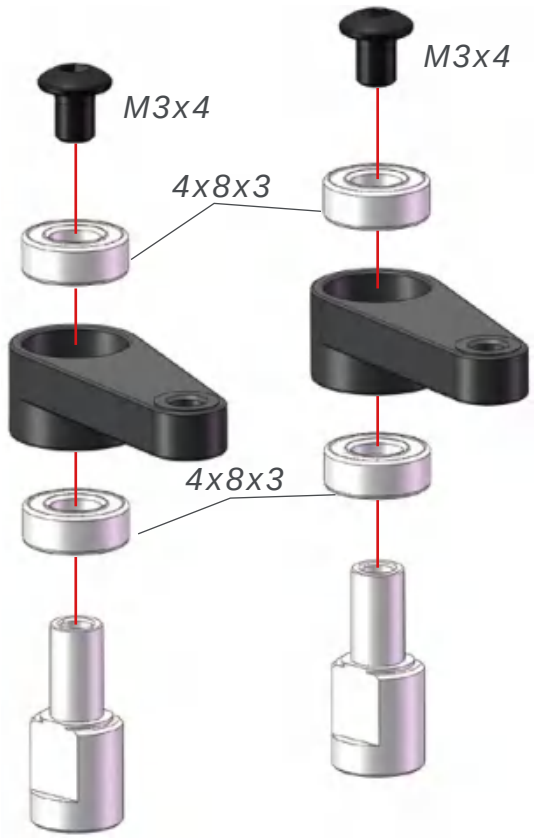
3x6x2.5 Flanged

M3x2.5

M3x2.5

STEP 10

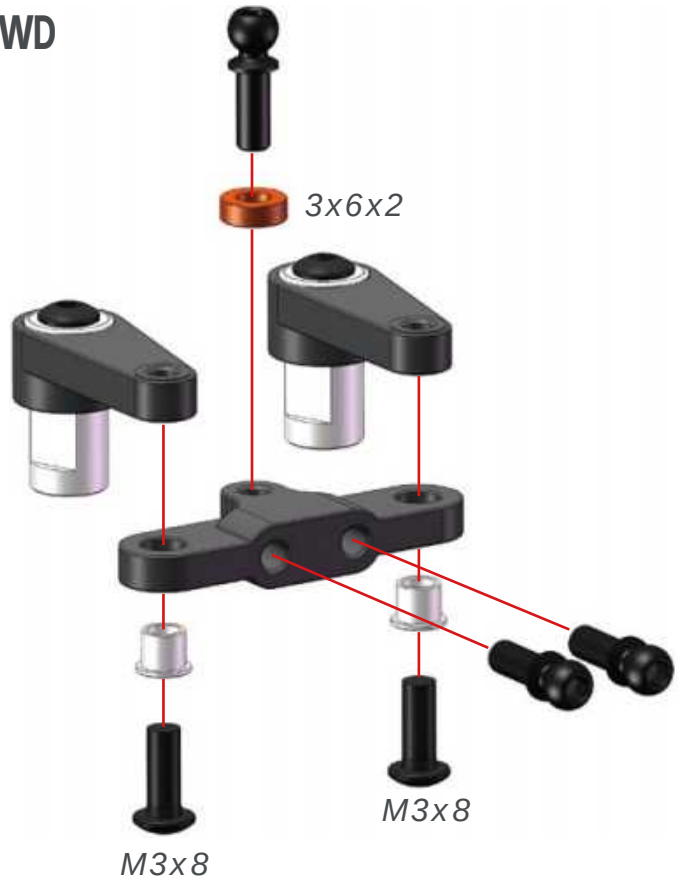
10.1



M3x4 4x8x3

10.2

4WD



PIVOTBALL M3x7 M3x8 3x6x2

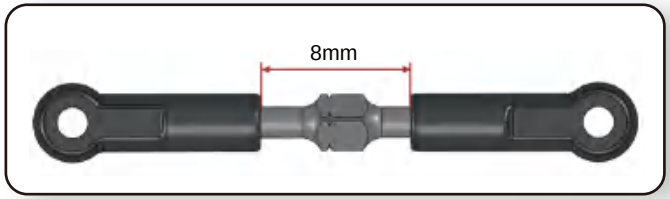
10.2

FWD

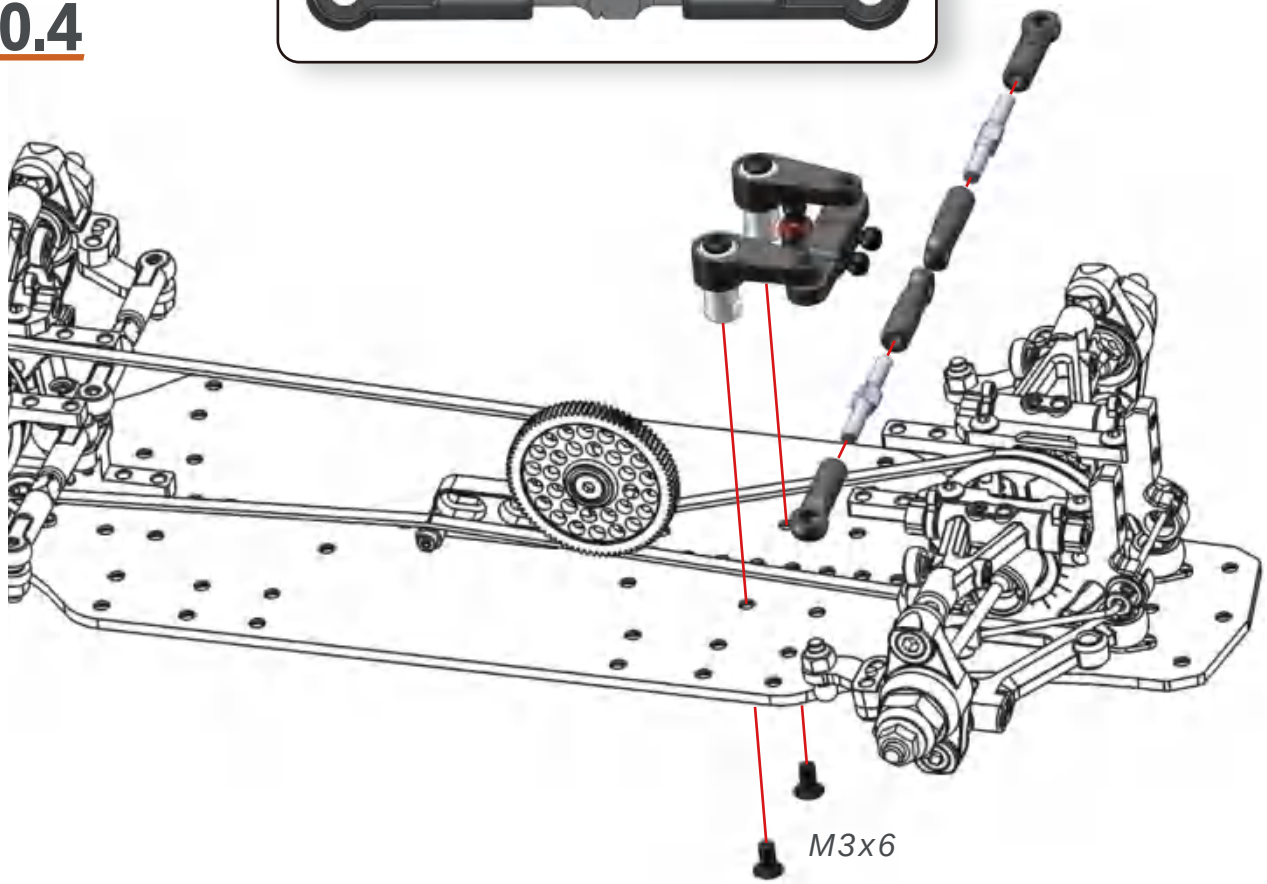


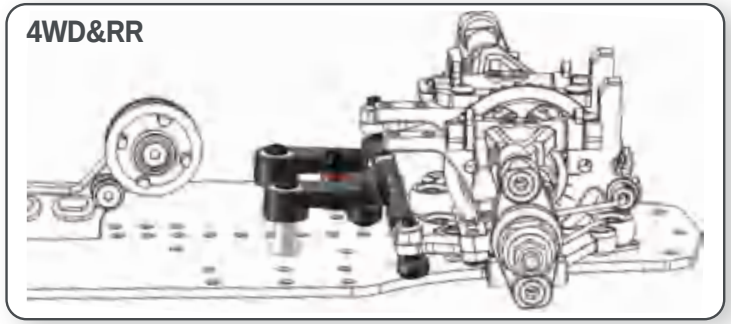
M3x4 3x6x2 PIVOTBALL M3x7

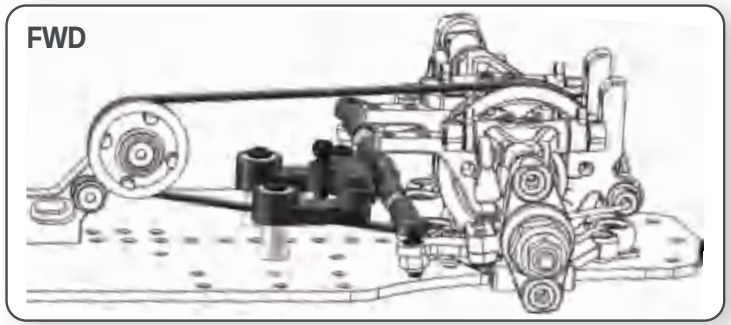
STEP 10

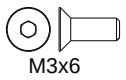


10.4

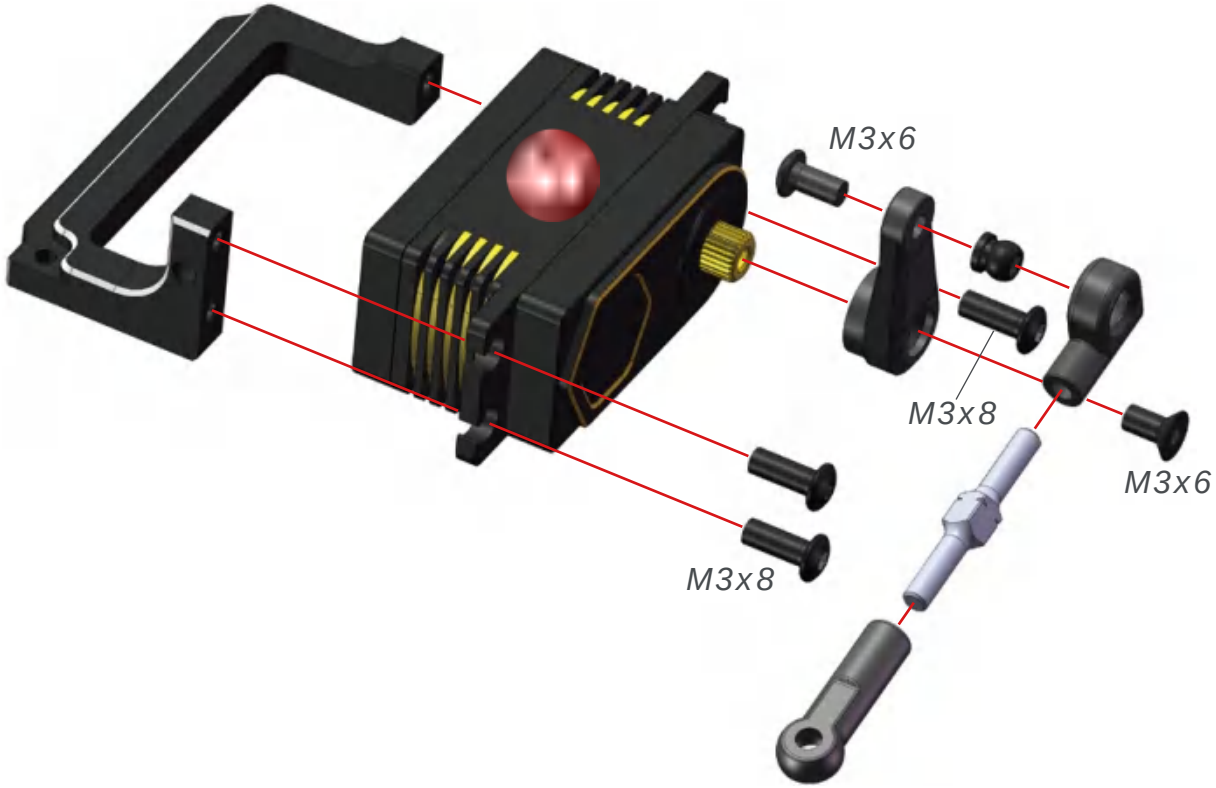








11.1



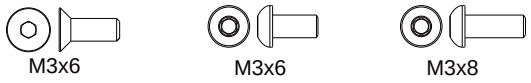
OPT



600290 Servo lever steering 23T alu

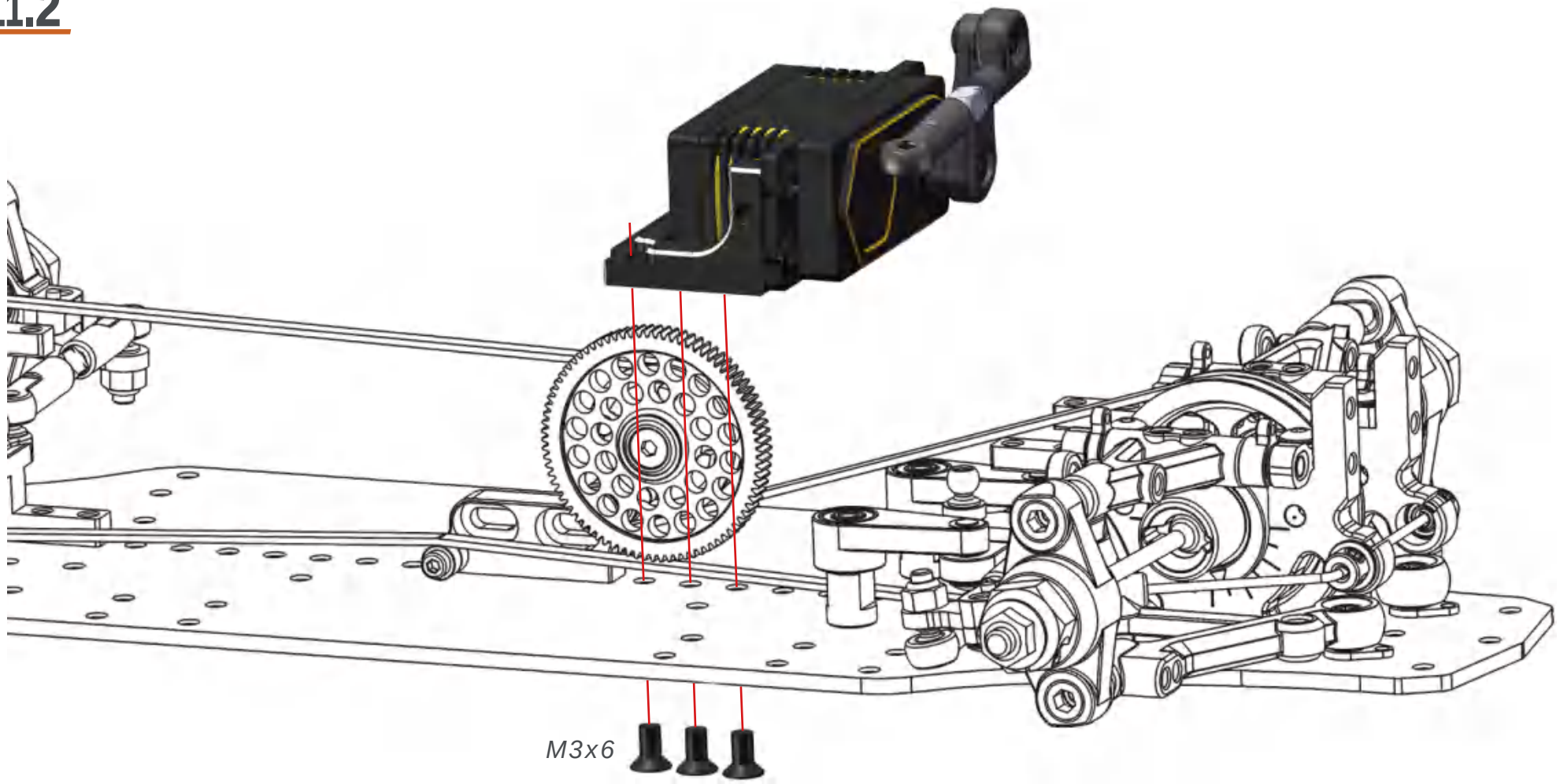
600291 Servo lever steering 24T alu





STEP 11

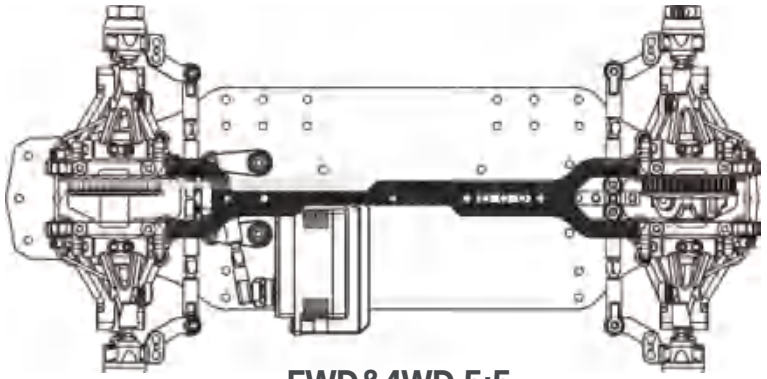
11.2



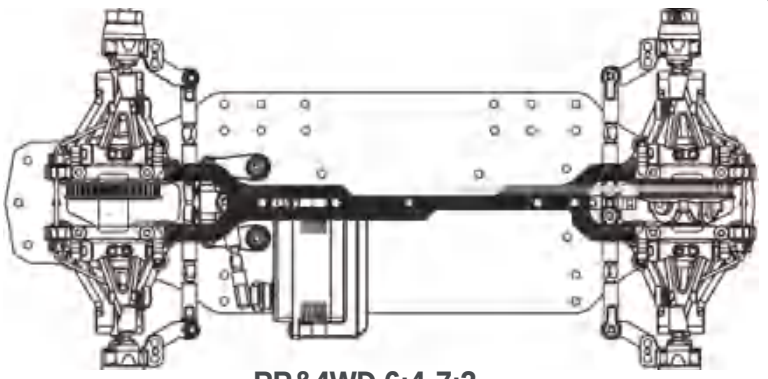


STEP 11

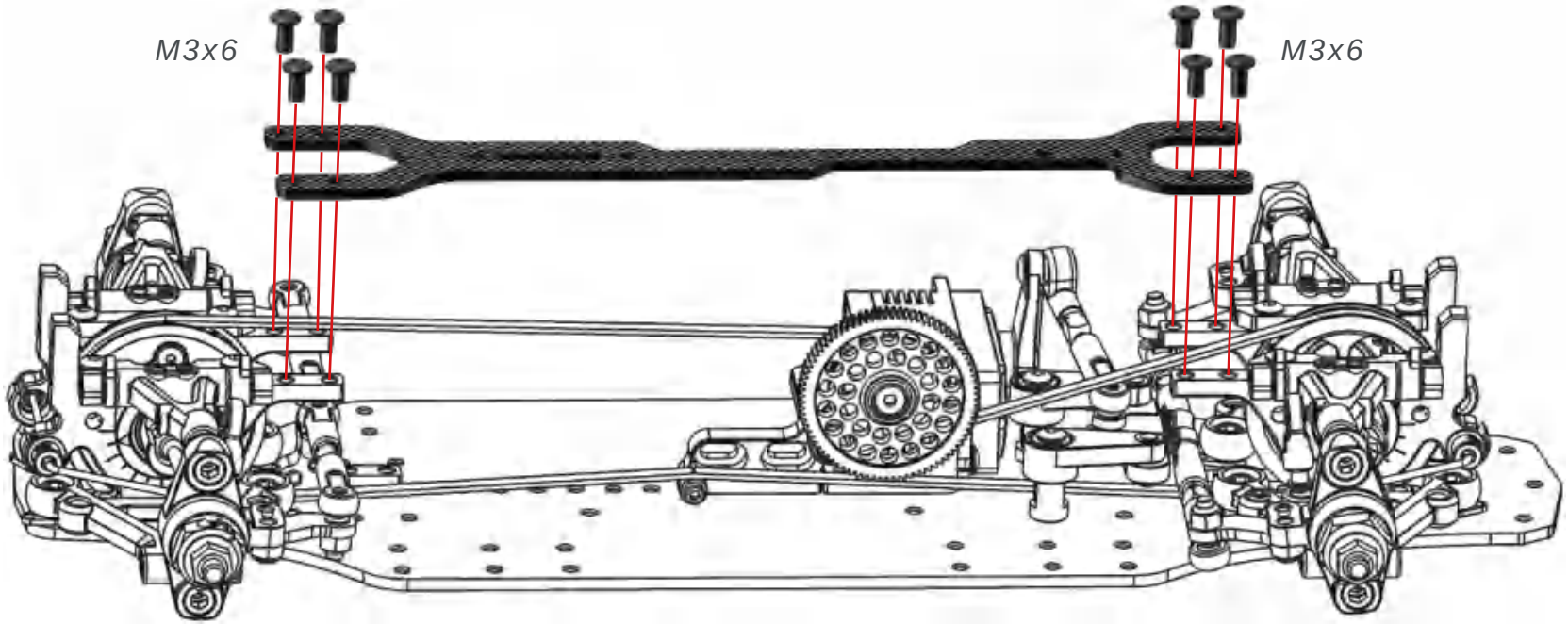
11.3



FWD&4WD 5:5



RR&4WD 6:4-7:3

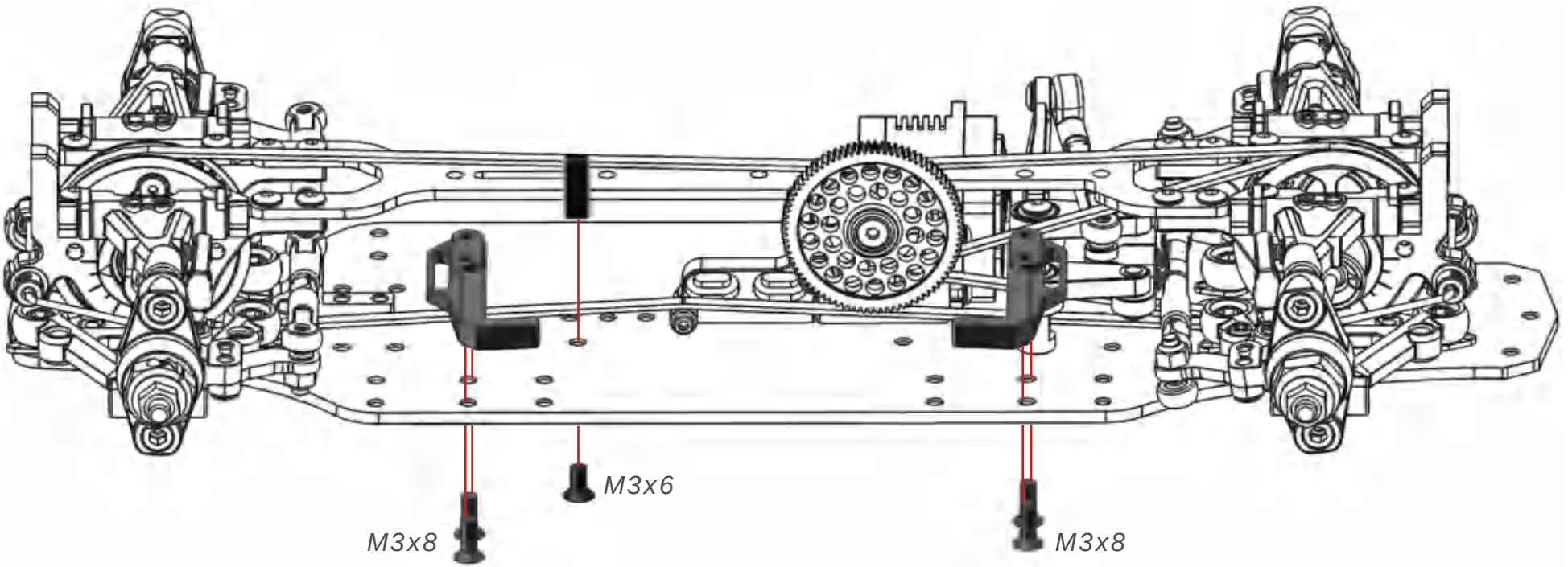




M3x6

STEP 11

11.4





SHOCKS ASSEMBLY

STEP12 SHOCK BAG

12.1



12.2



12.3



12.4



12.5

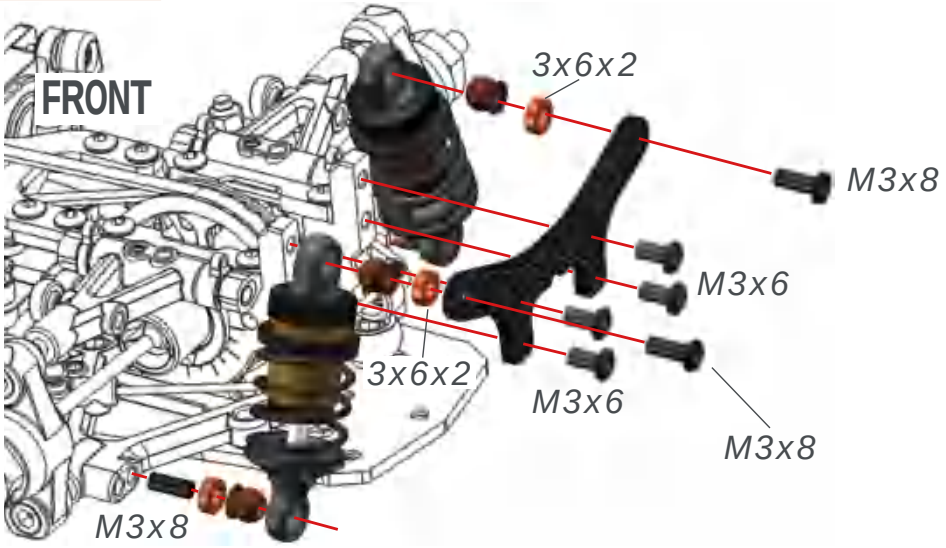




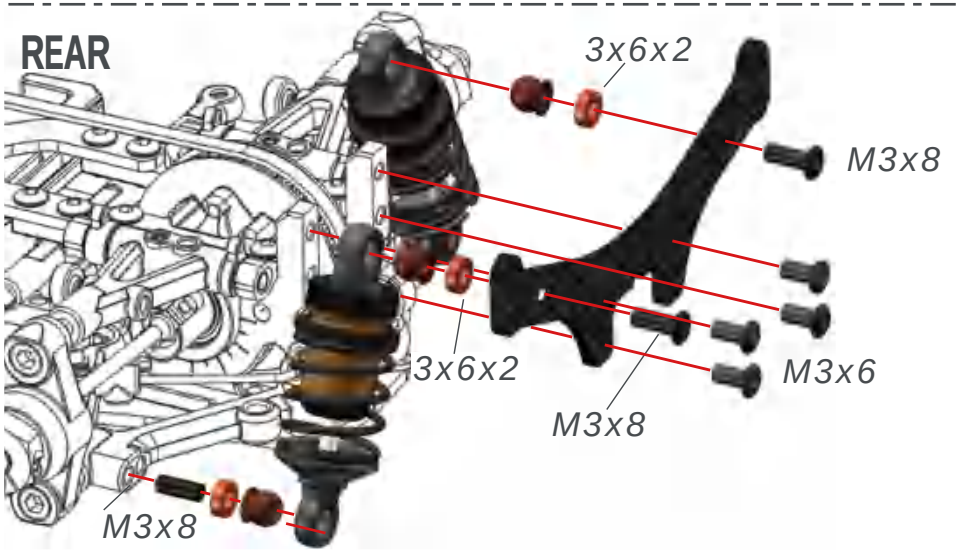
E-CLIP 2.3

STEP 13 BAG 7

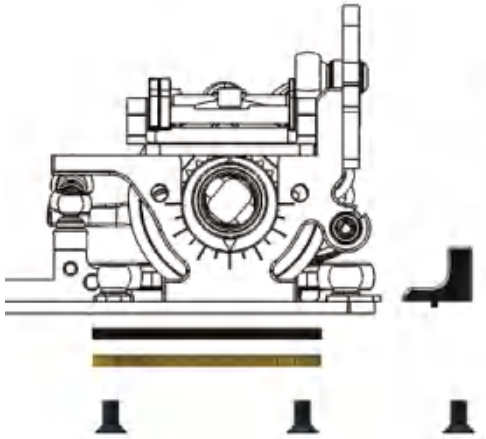
13.1 FRONT



13.2 REAR



OPT





401964 Chassis brace set fr X20 '21
401965 Chassis brace set rr X20 '21
401966 Front stiffner set X20 '21
401967 Rear stiffner set X20 '21



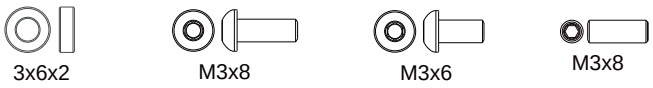
401960 Lower chassis weight 5gr (2) X20 '21



401963 Chassis brace fr/rr alu X20

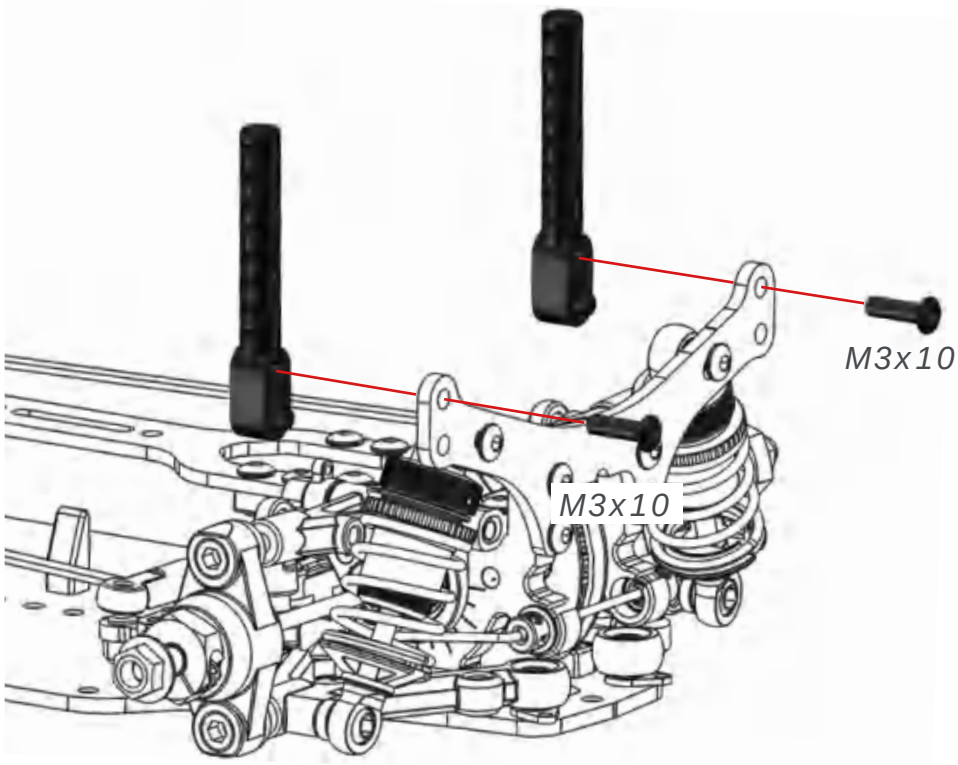


401866 Chassis stiffner center mount mid X20

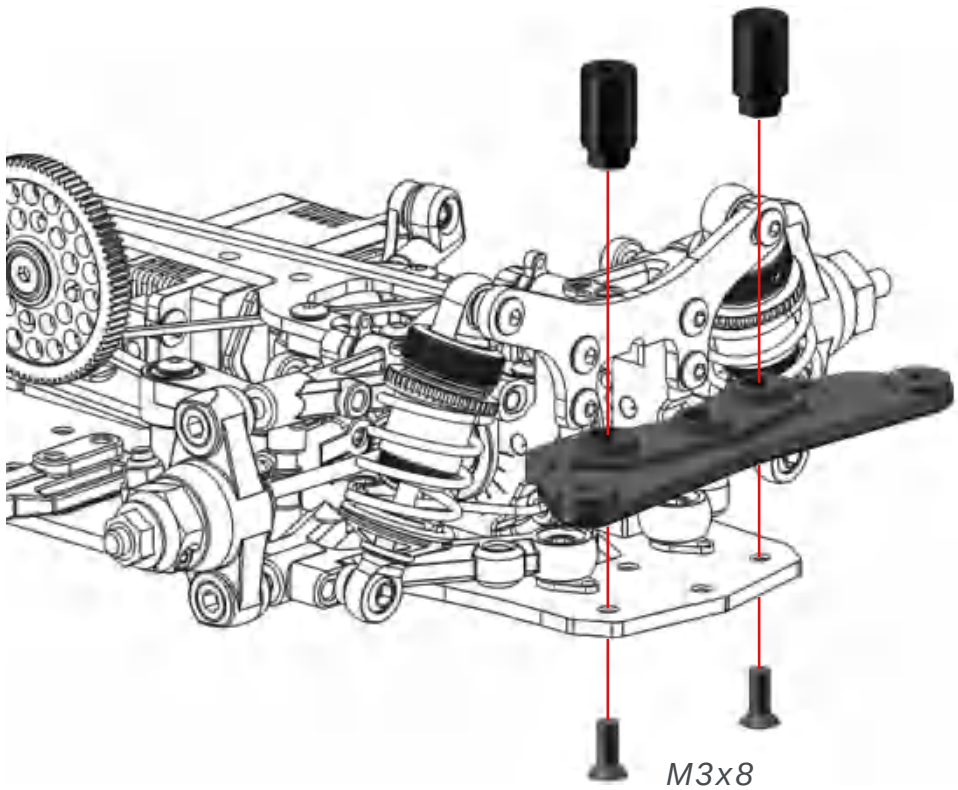


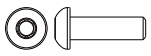
STEP 14

14.1



14.2

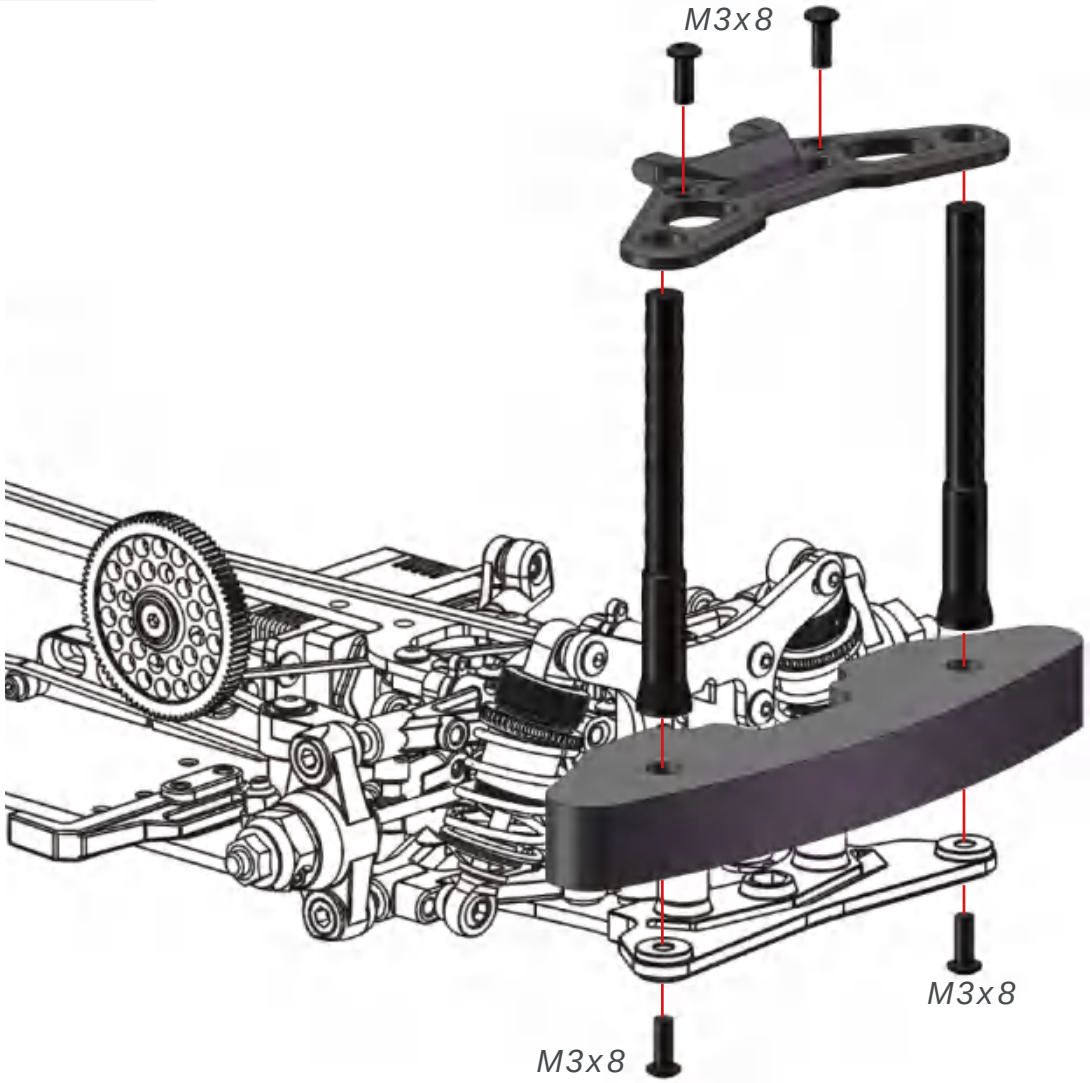



M3x10


M3x8

STEP 14

14.3



OPT



401602 Body-height fine-tuner alu (4)

OPT



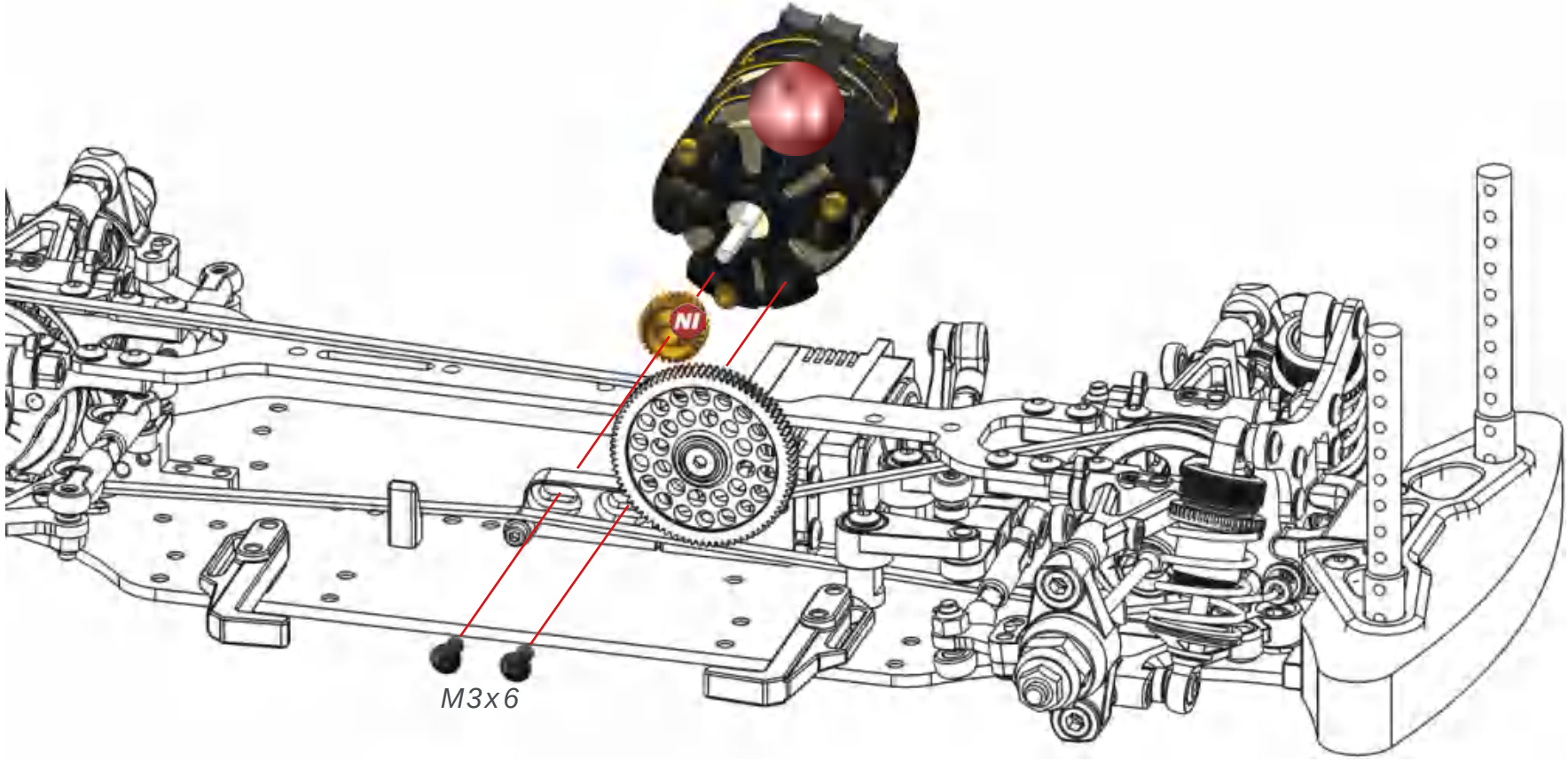
401954 Bumper top carbon X20 '21



M3x8

STEP 15

15.1

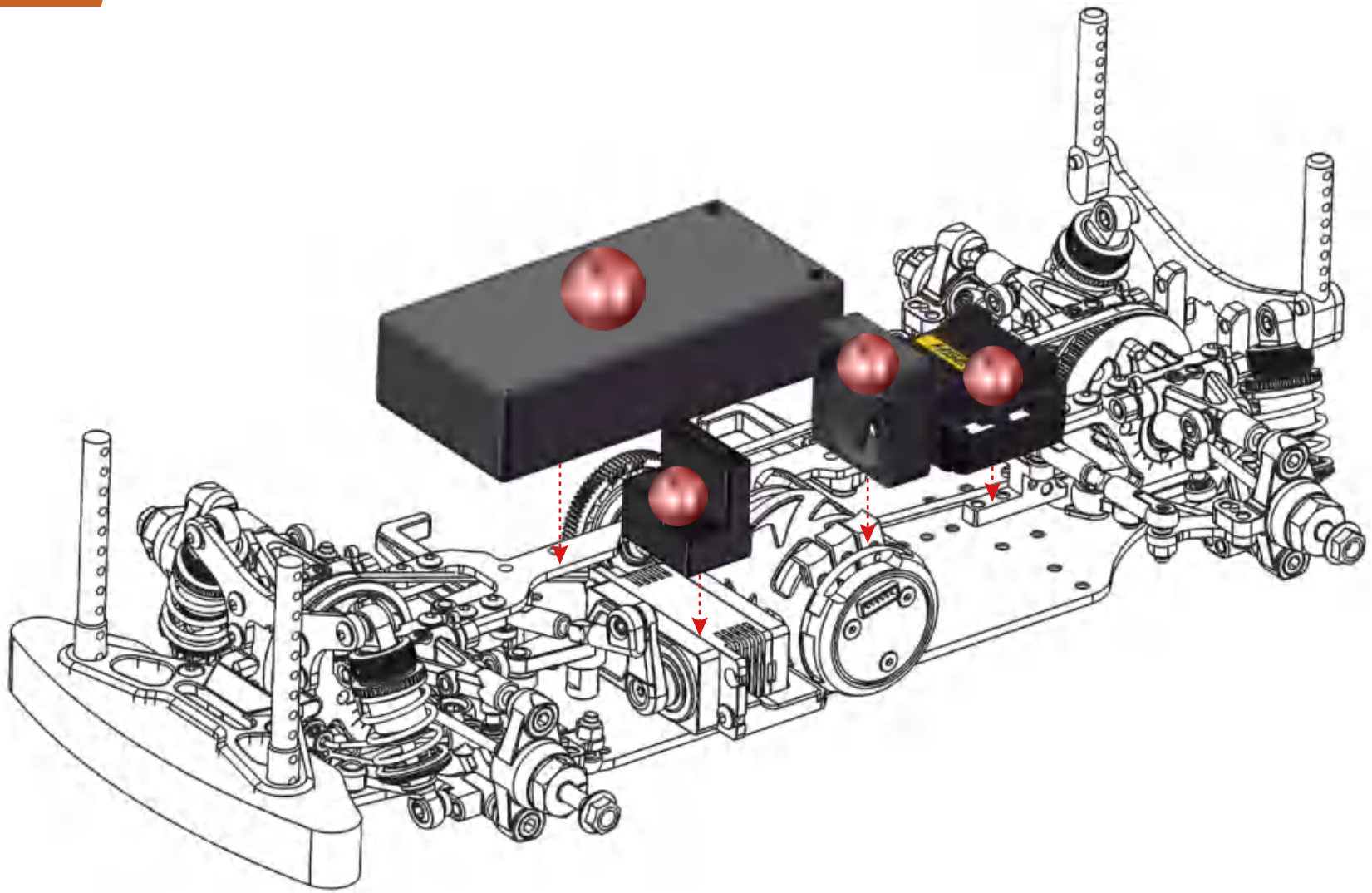




M3x6

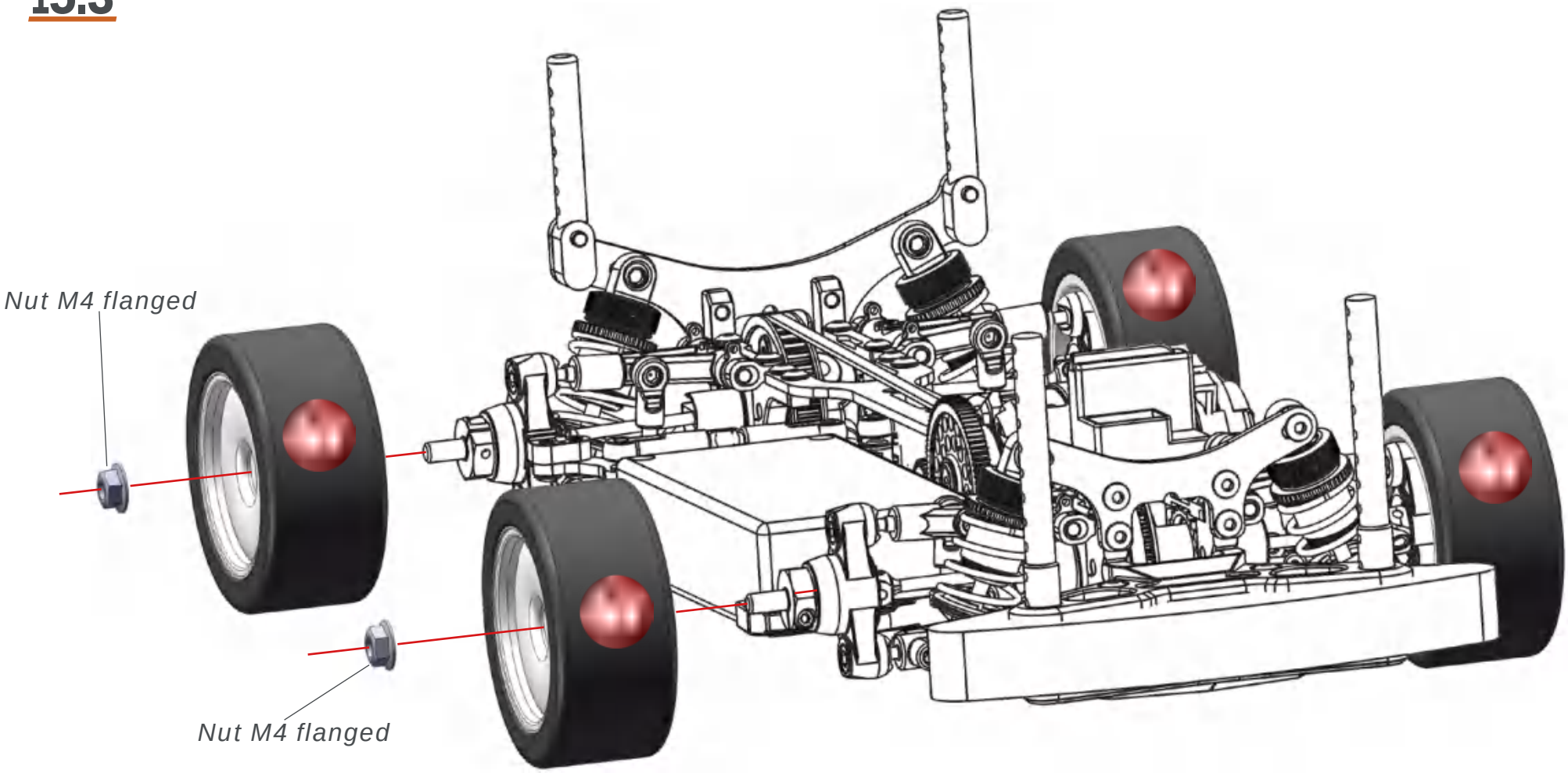
STEP 15

15.2



STEP 15

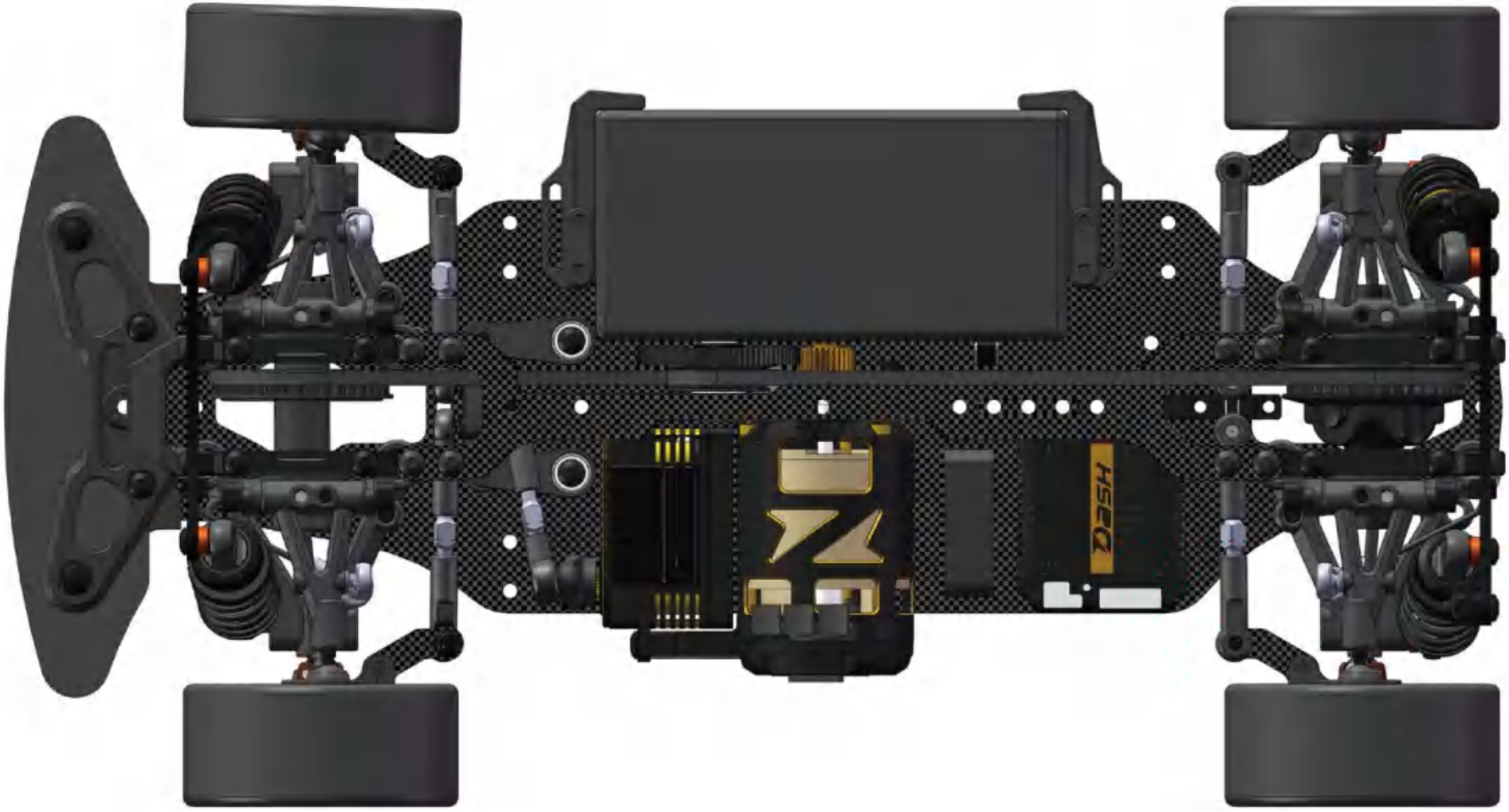
15.3



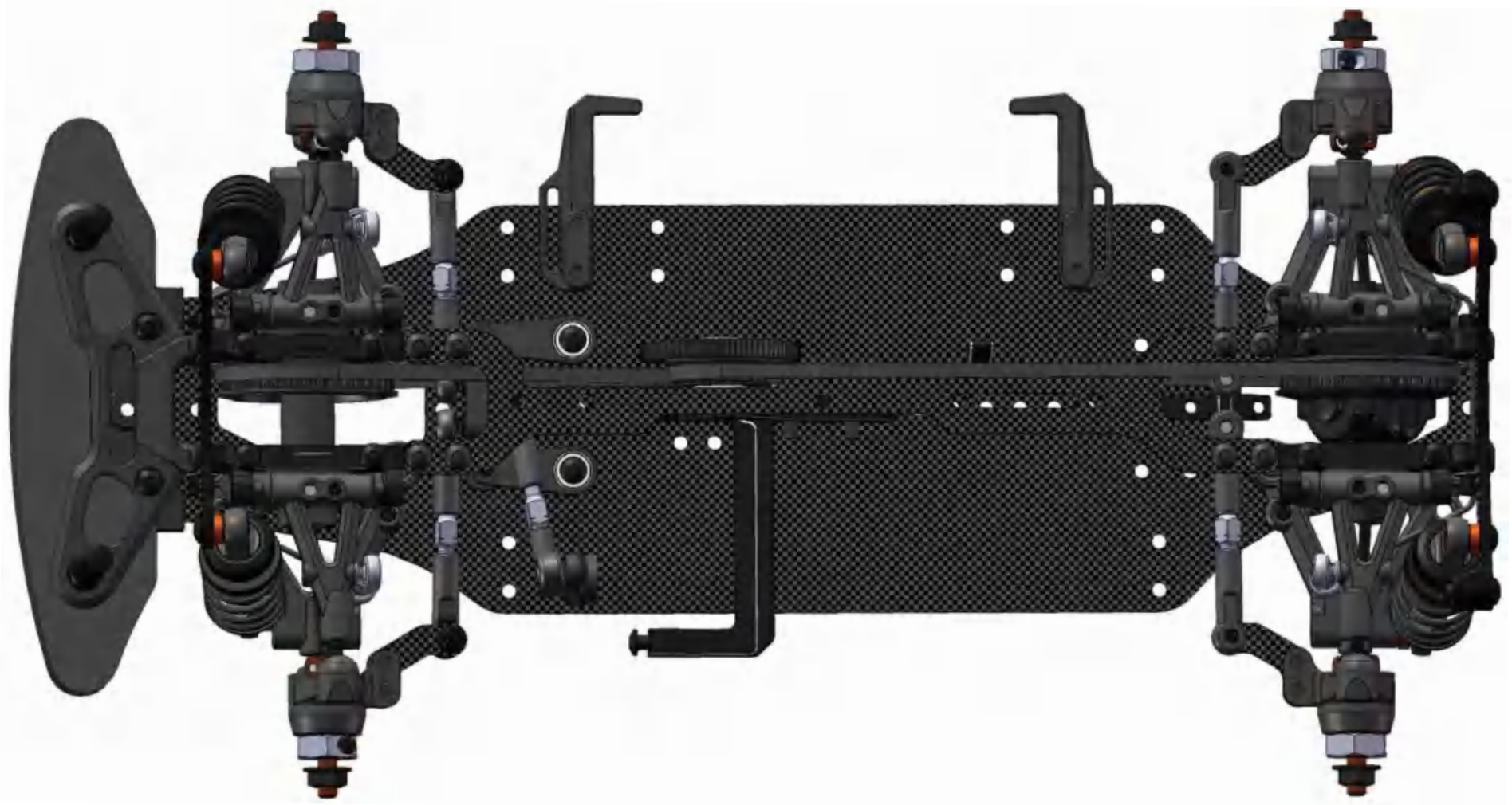


Nut M4
Flanged

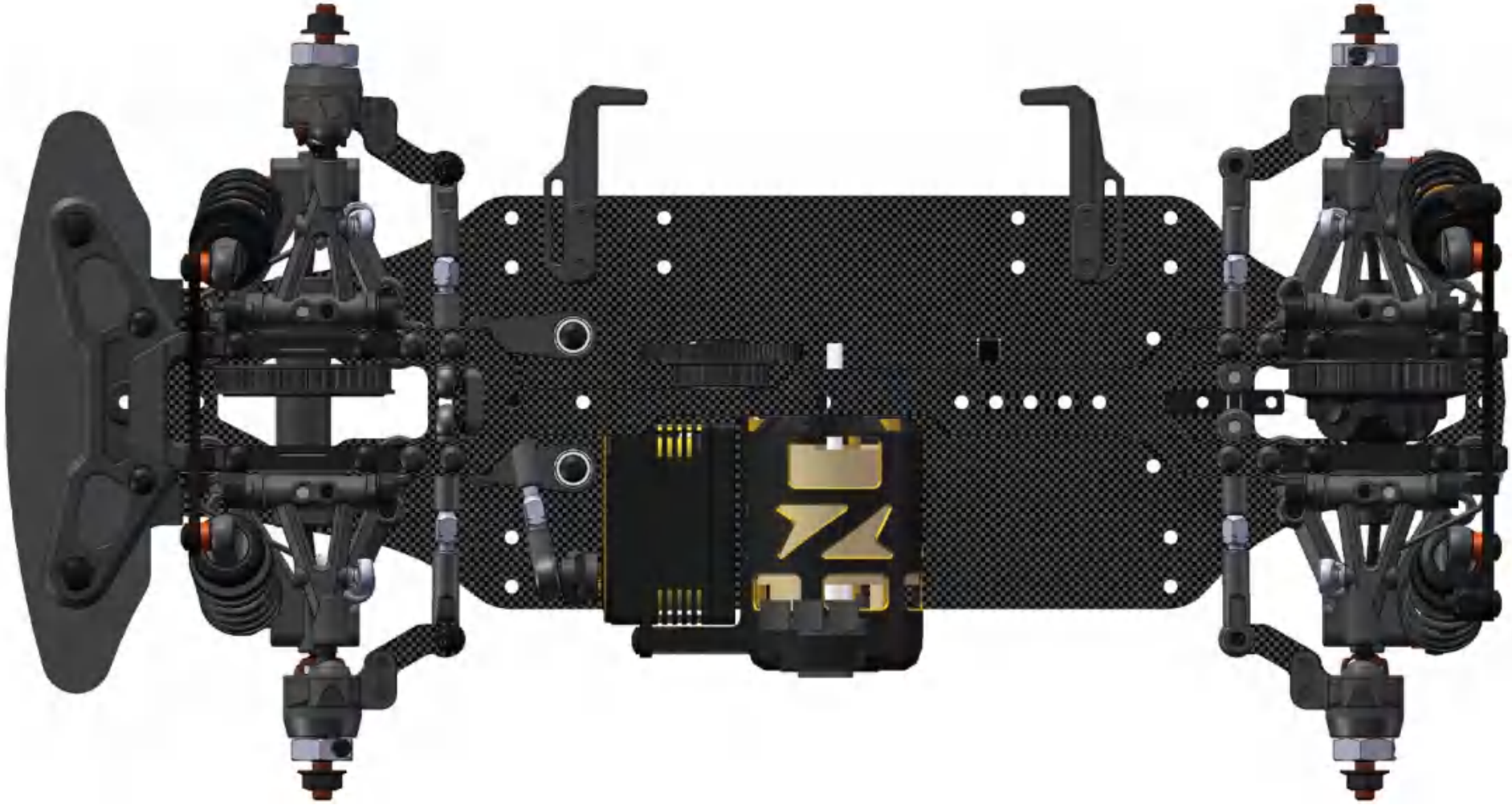
X20mini WB210



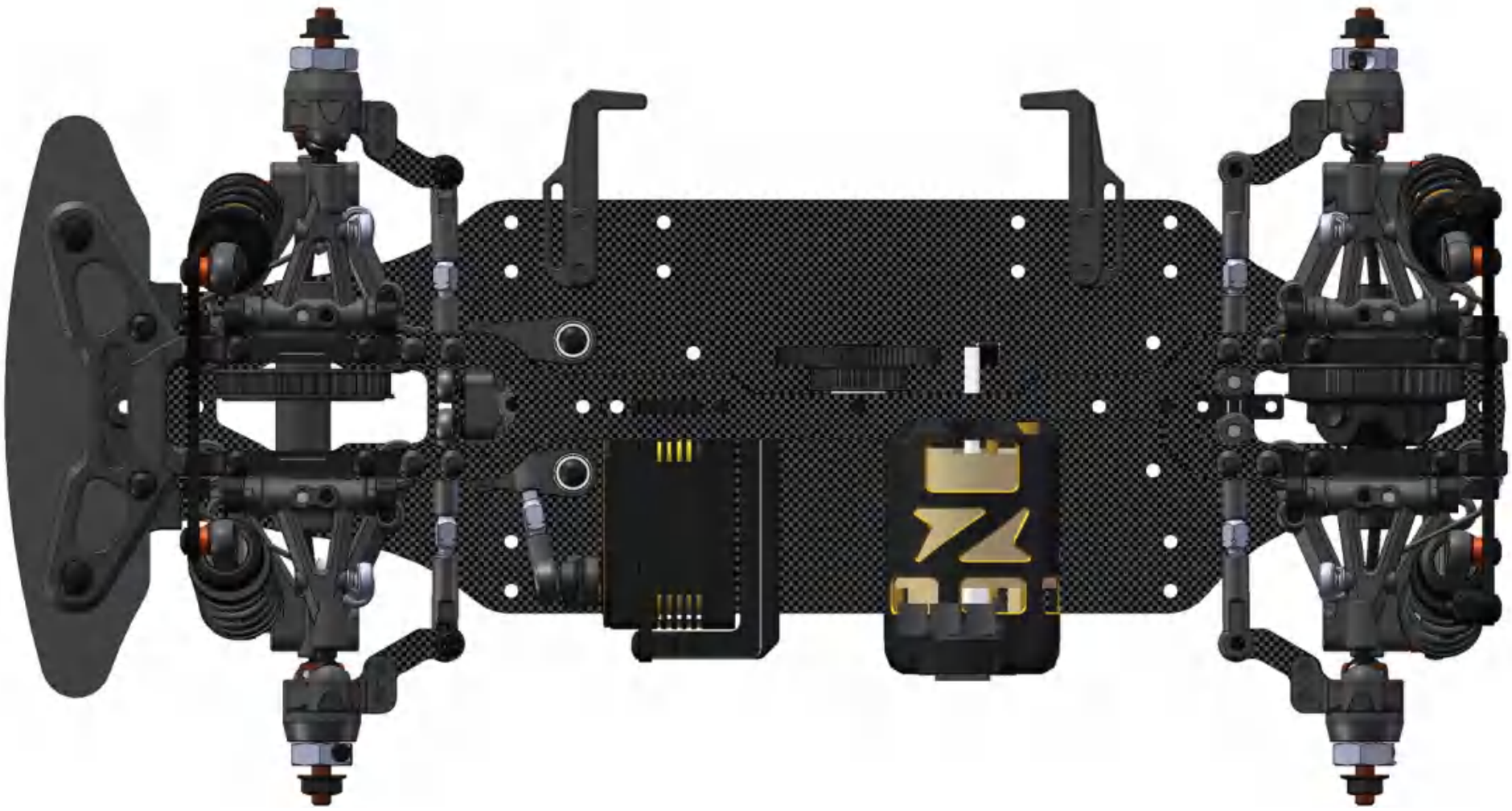
X20mini WB210



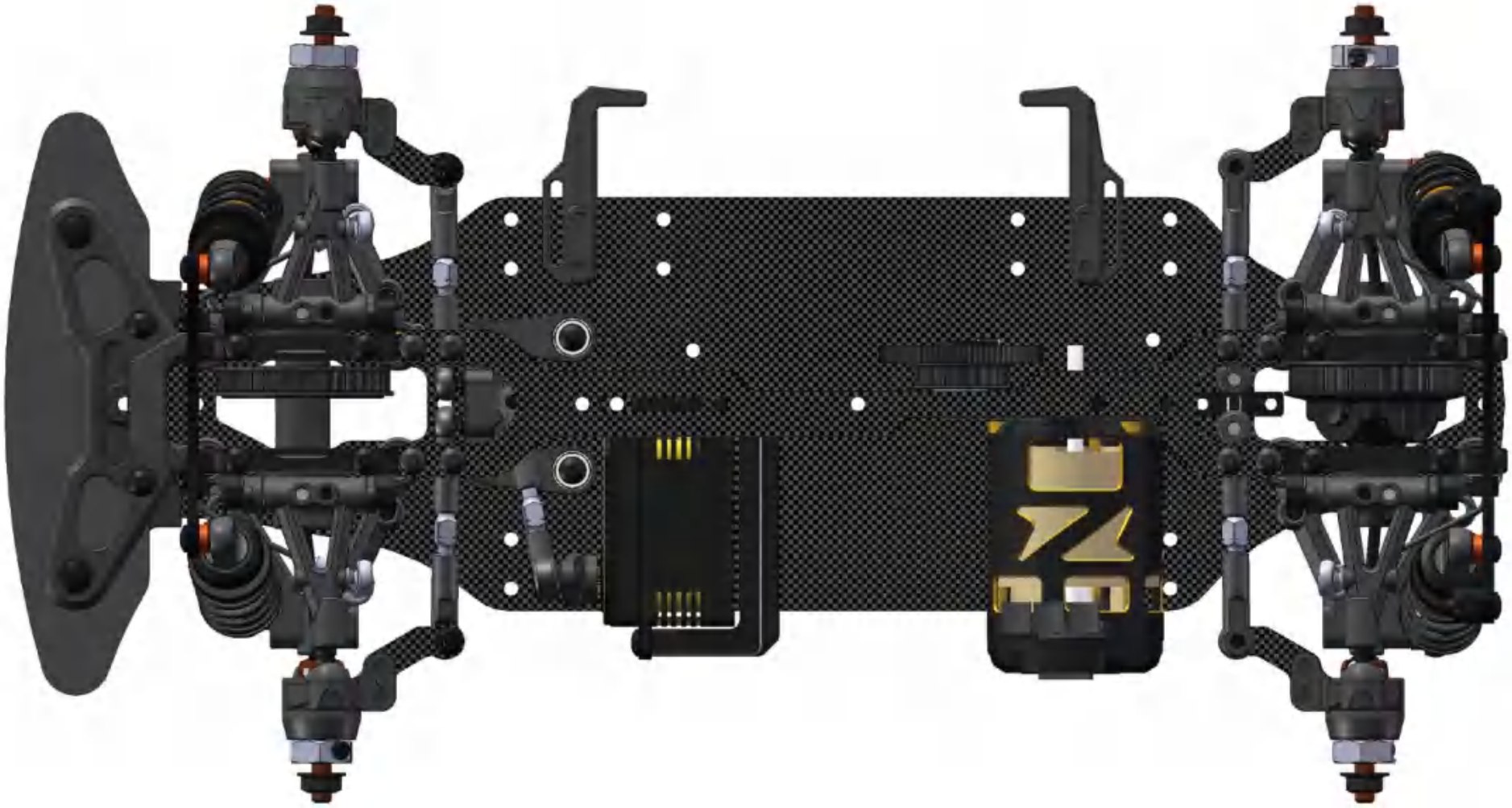
X20mini 4WD 5:5



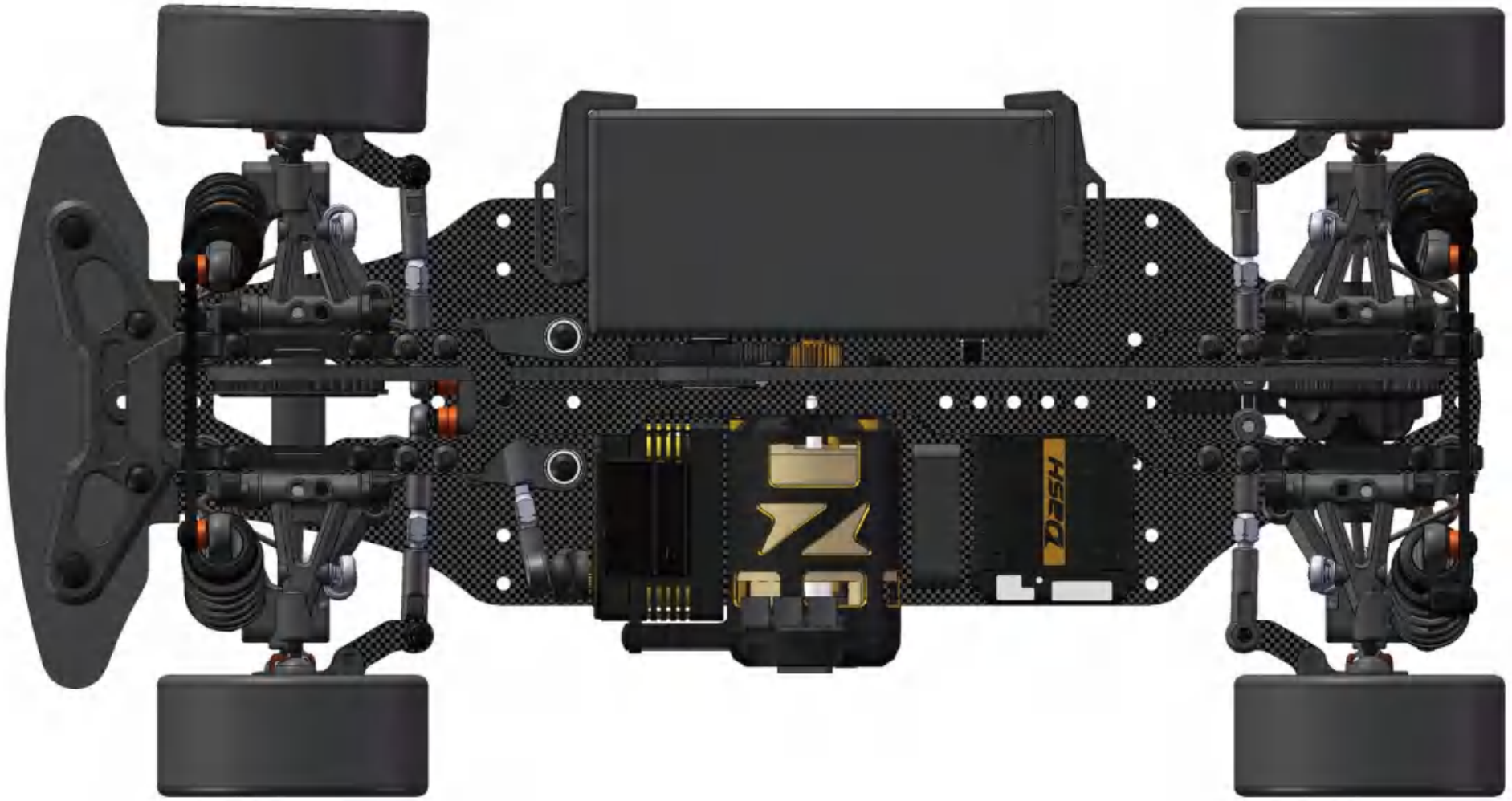
X20mini 4WD 6:4



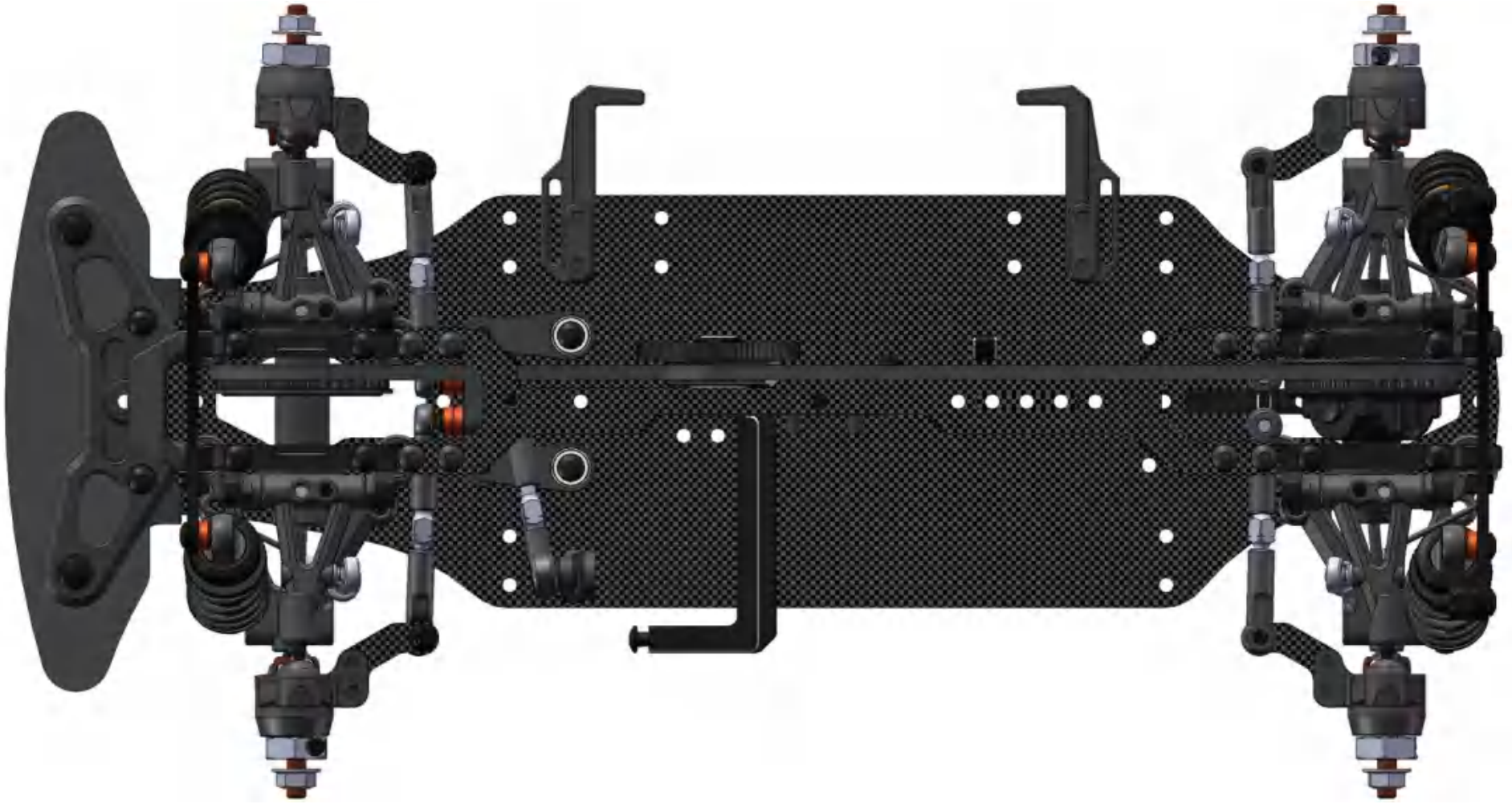
X20mini 4WD 7:3



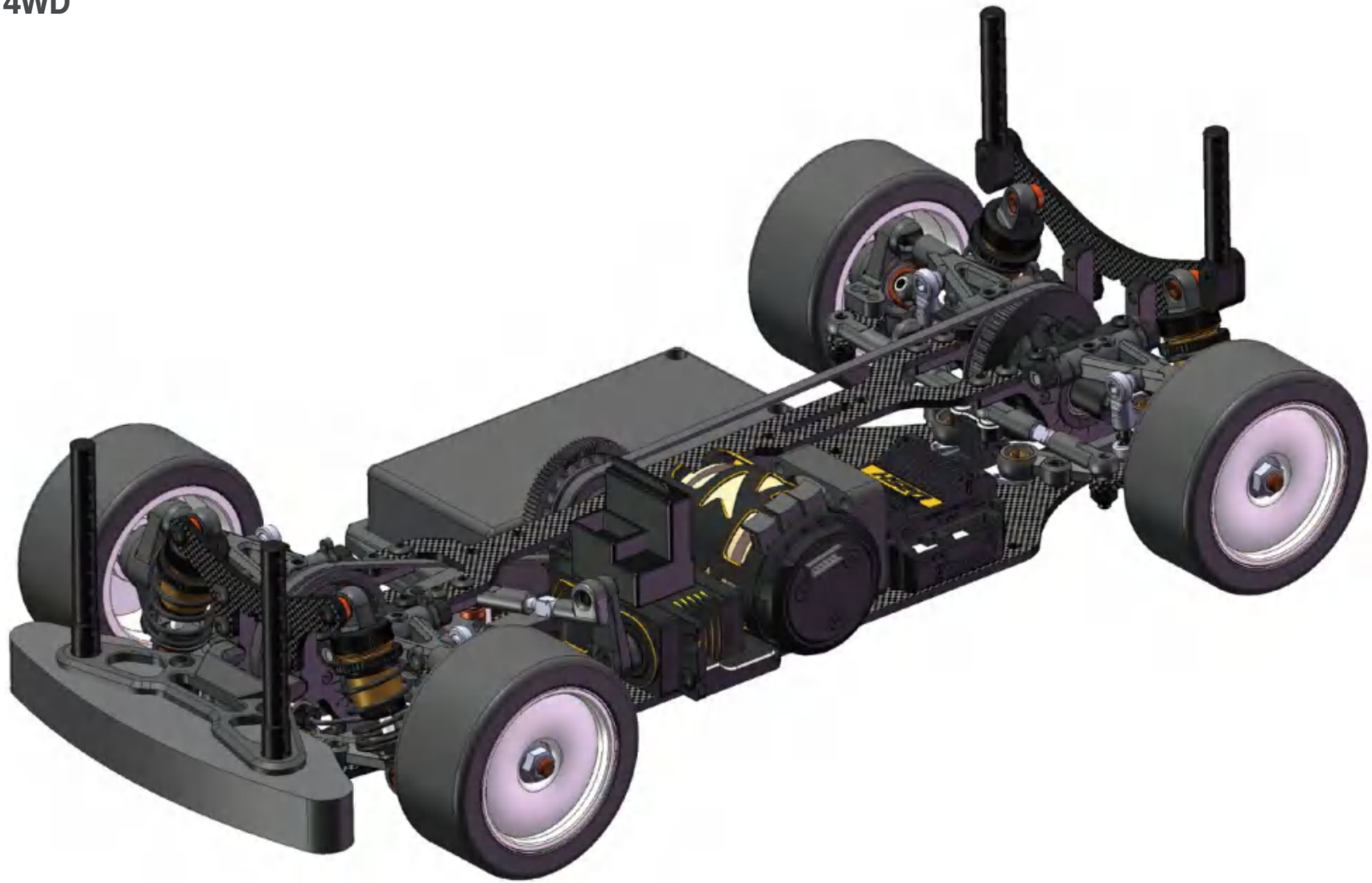
X20mini WB225



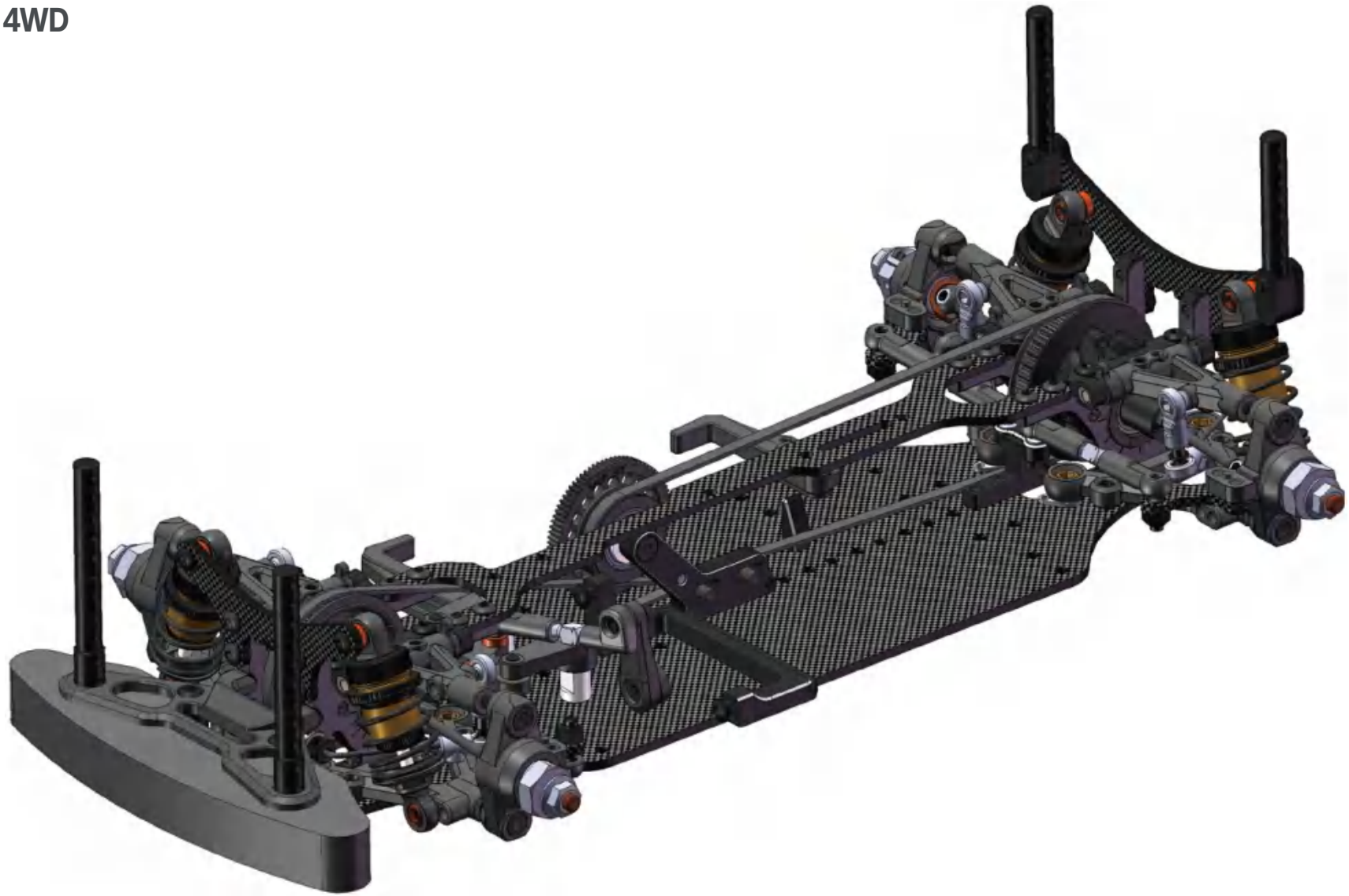
X20mini WB225



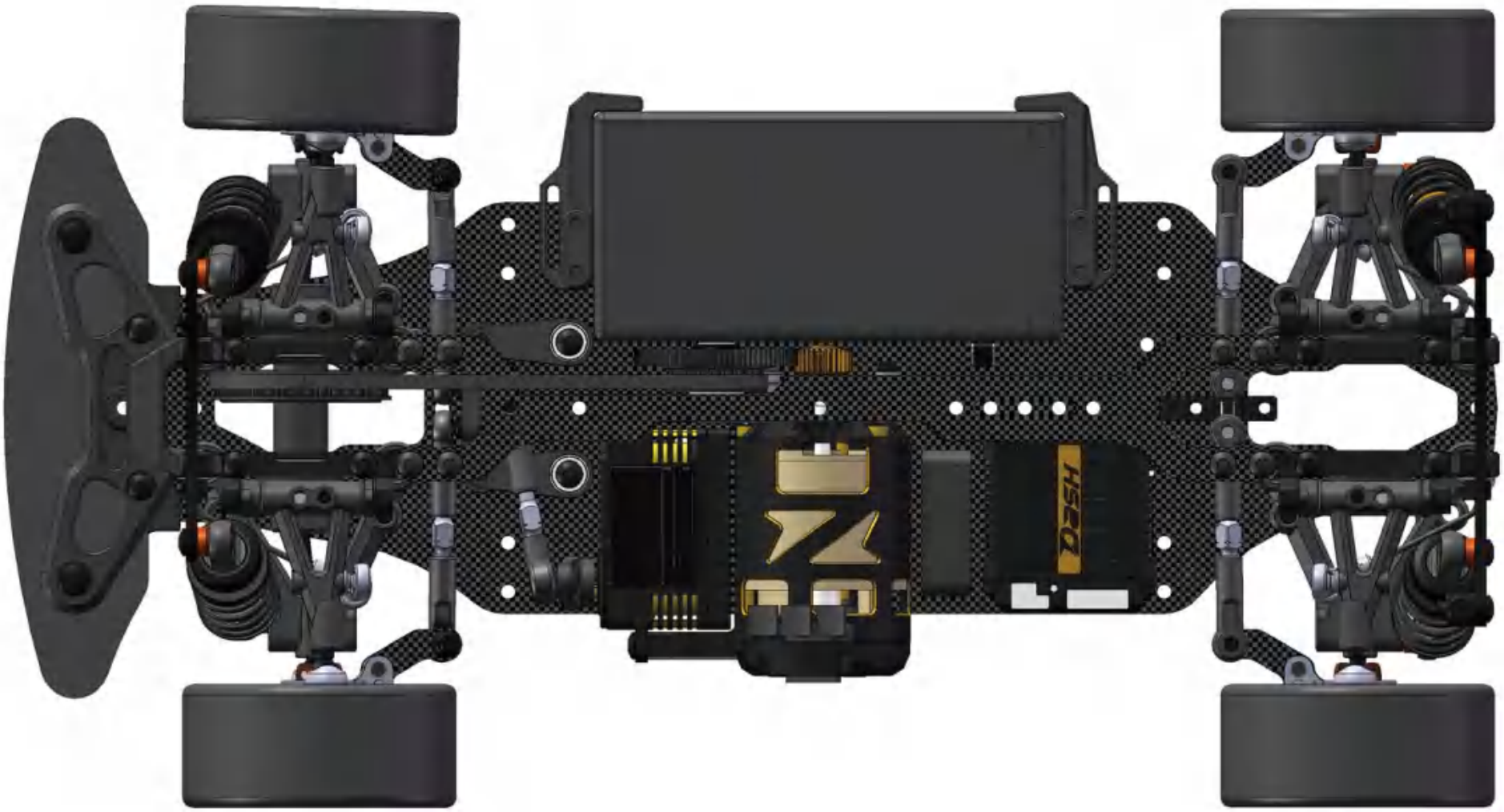
X20mini 4WD



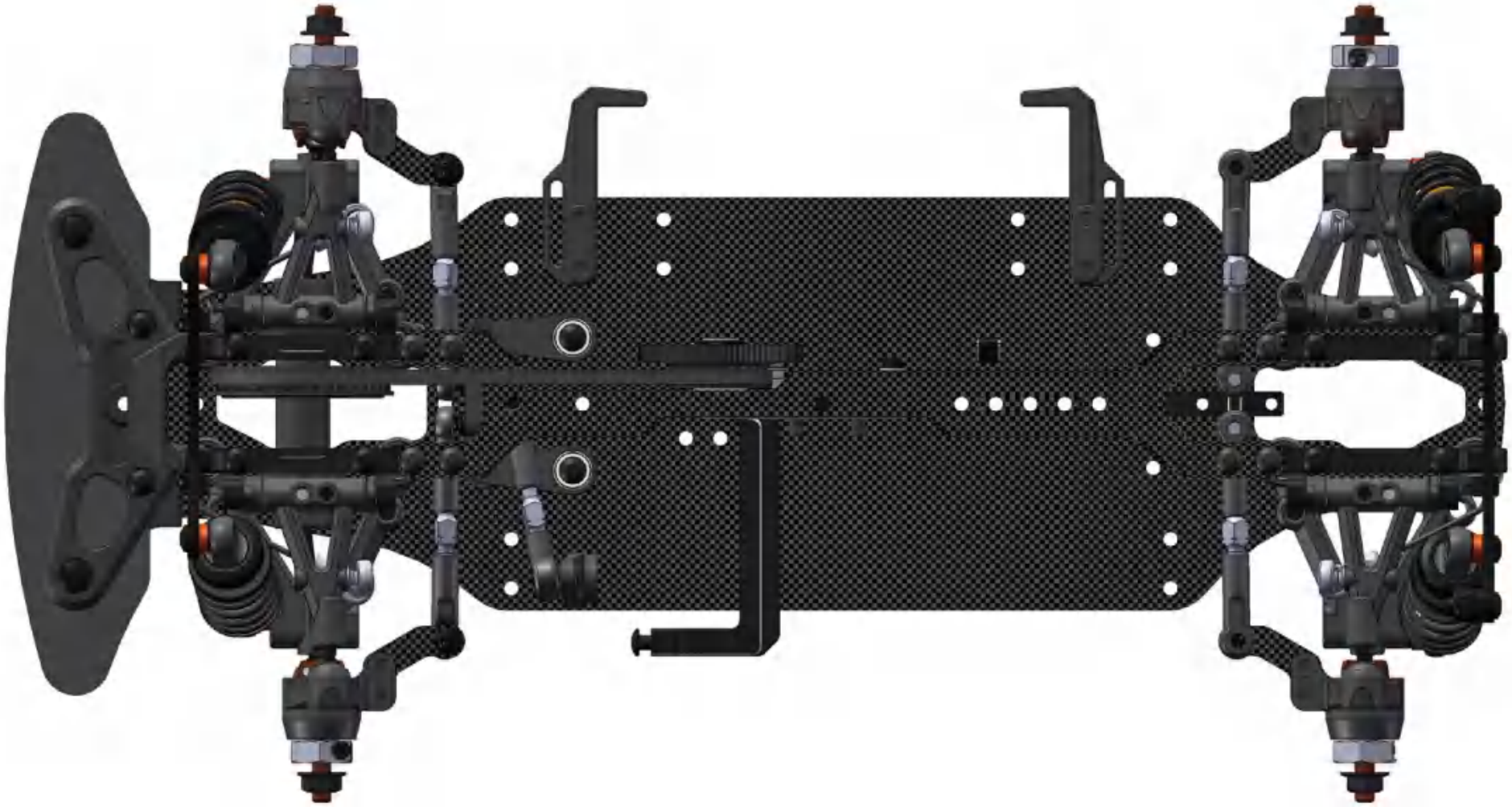
X20mini 4WD



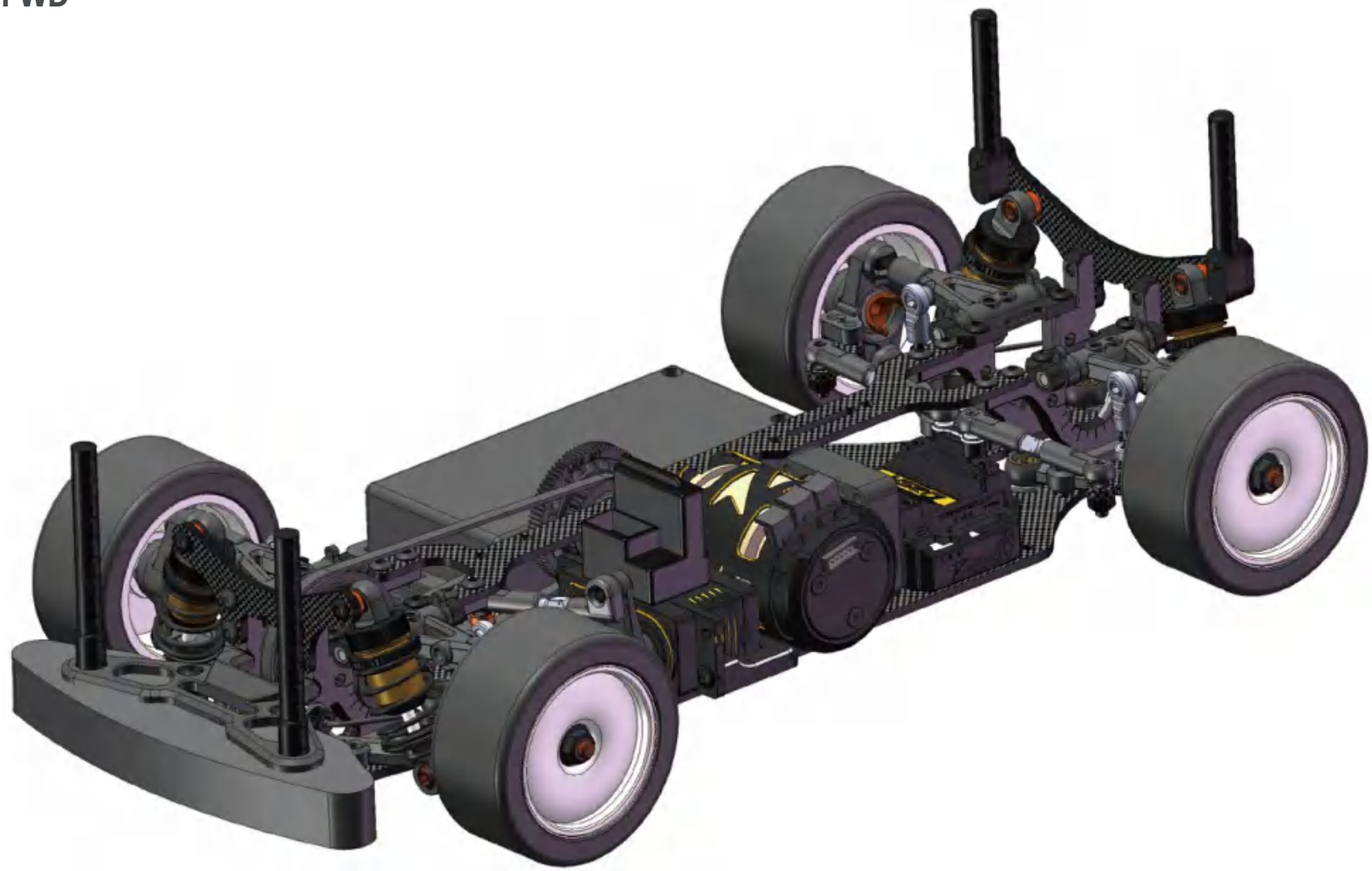
X20mini FWD



X20mini FWD



X20mini FWD



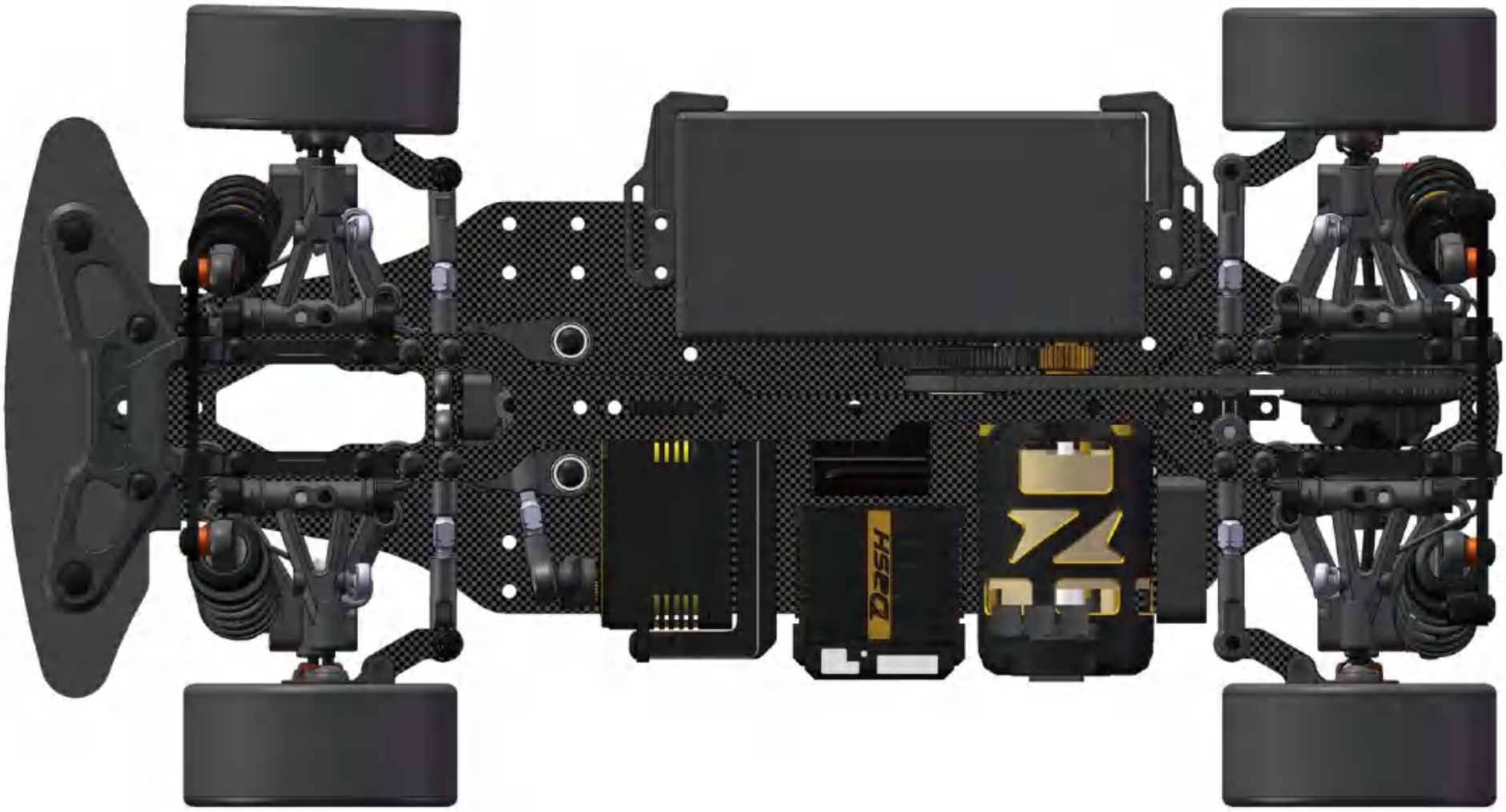
X20mini FWD



X20mini FWD



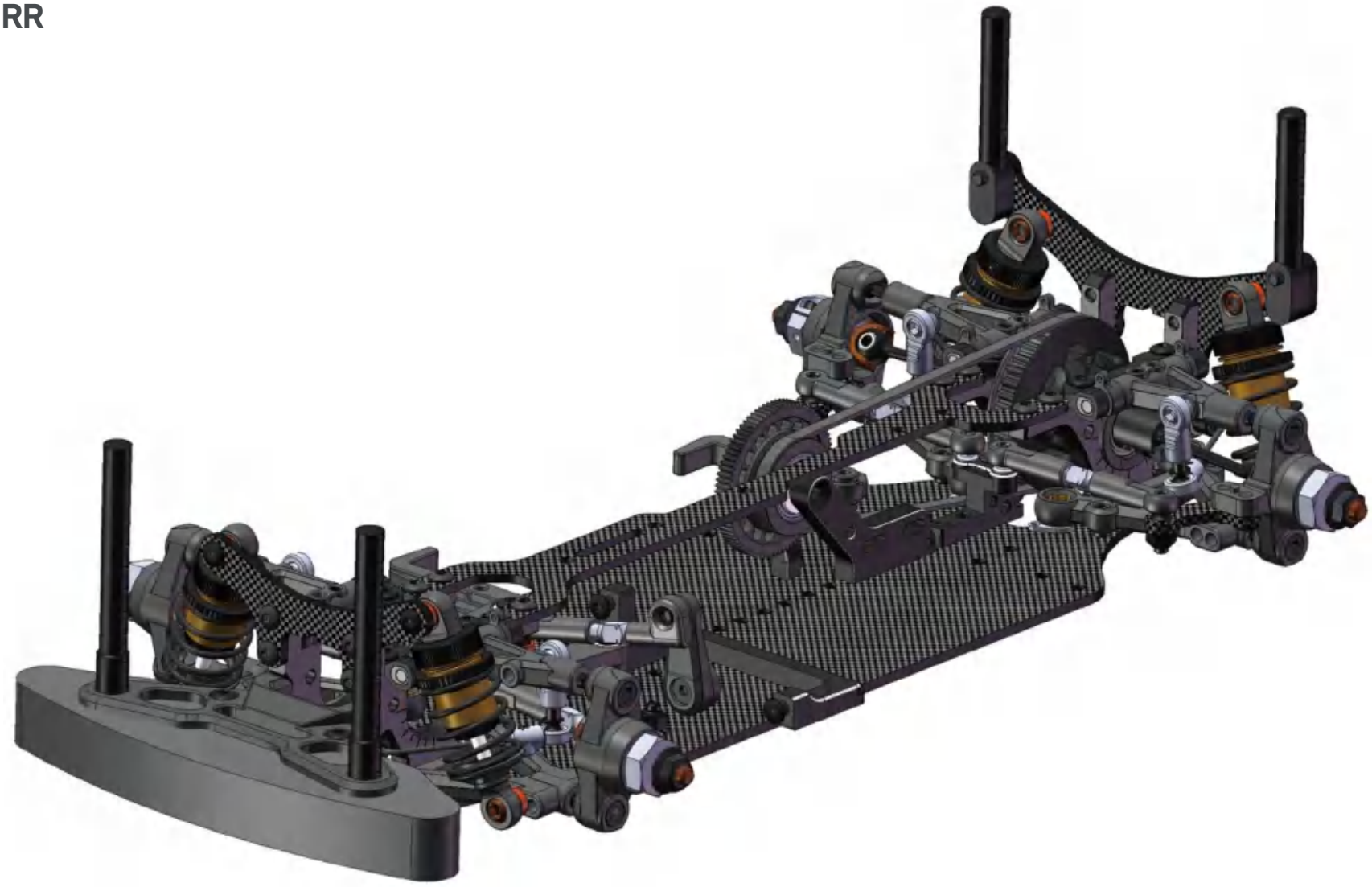
X20mini RR



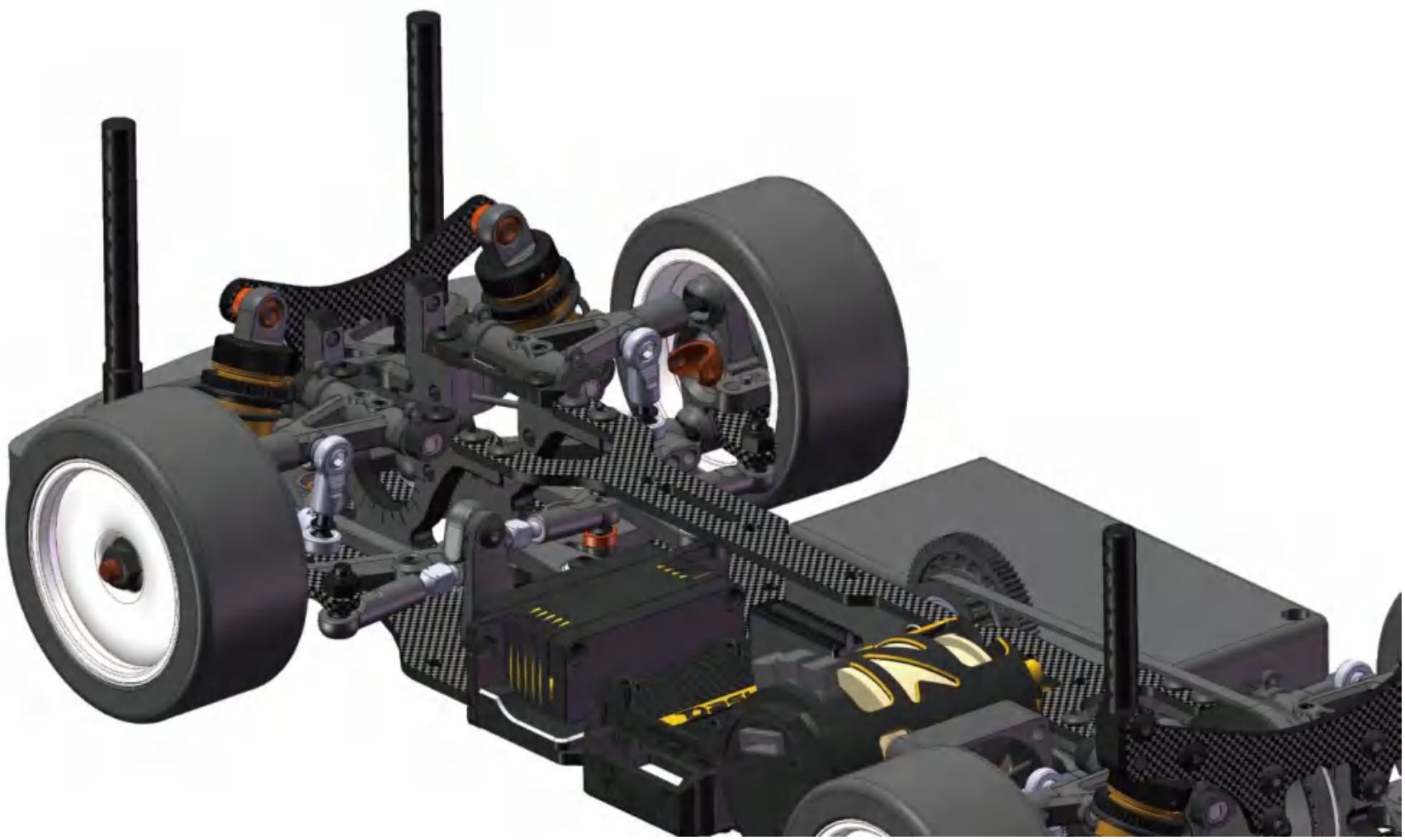
X20mini RR

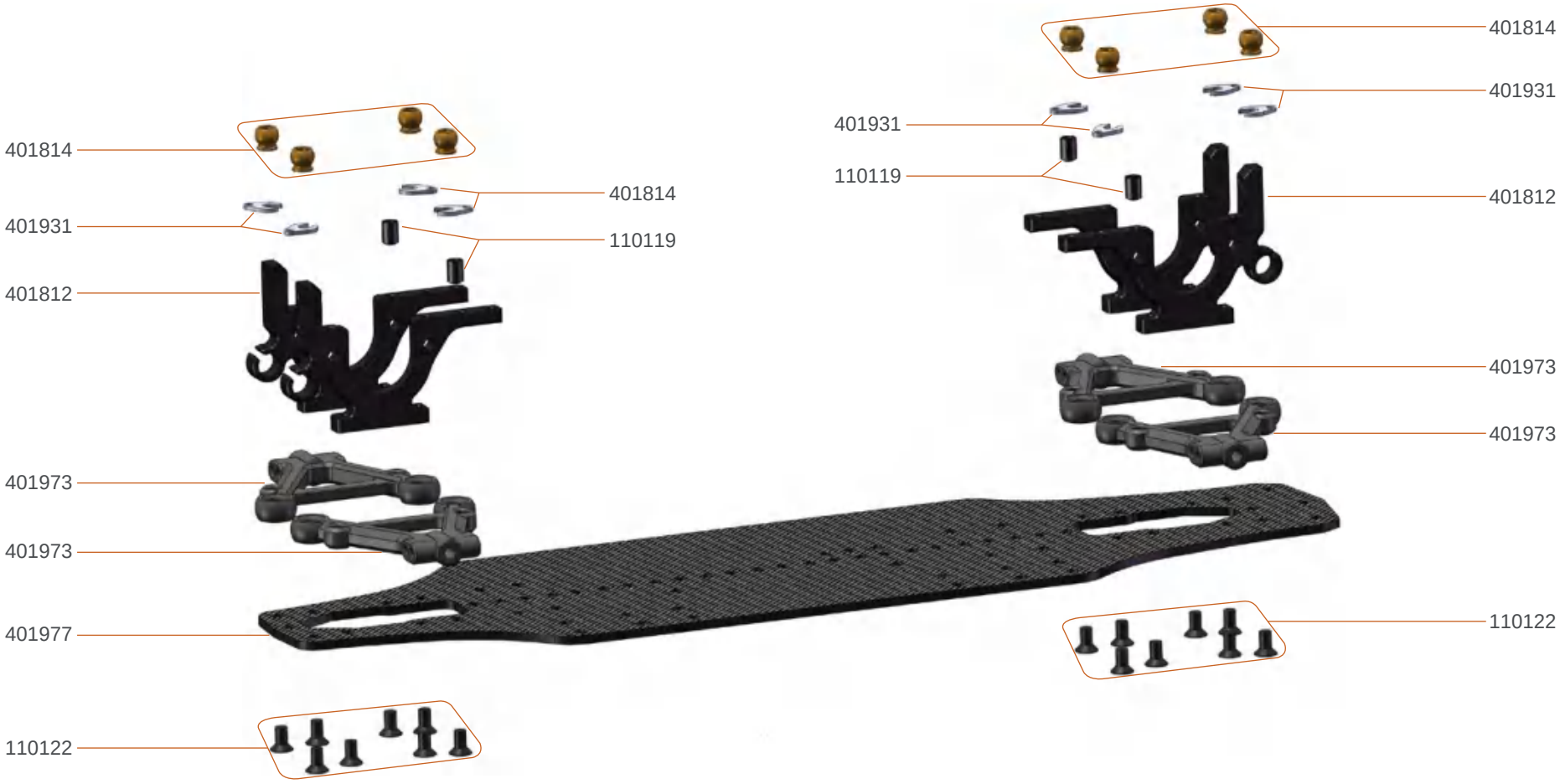


X20mini RR



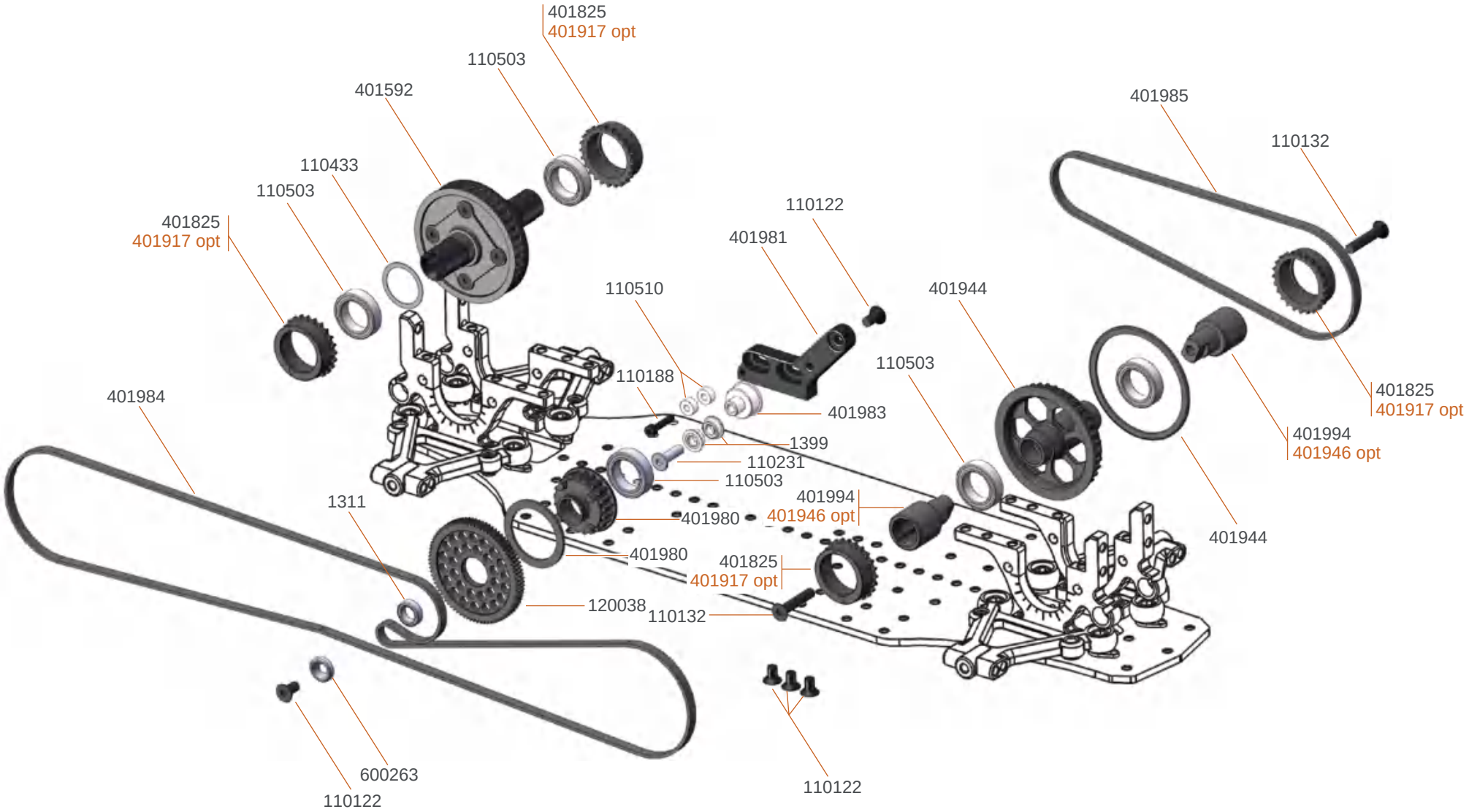
X20mini RR





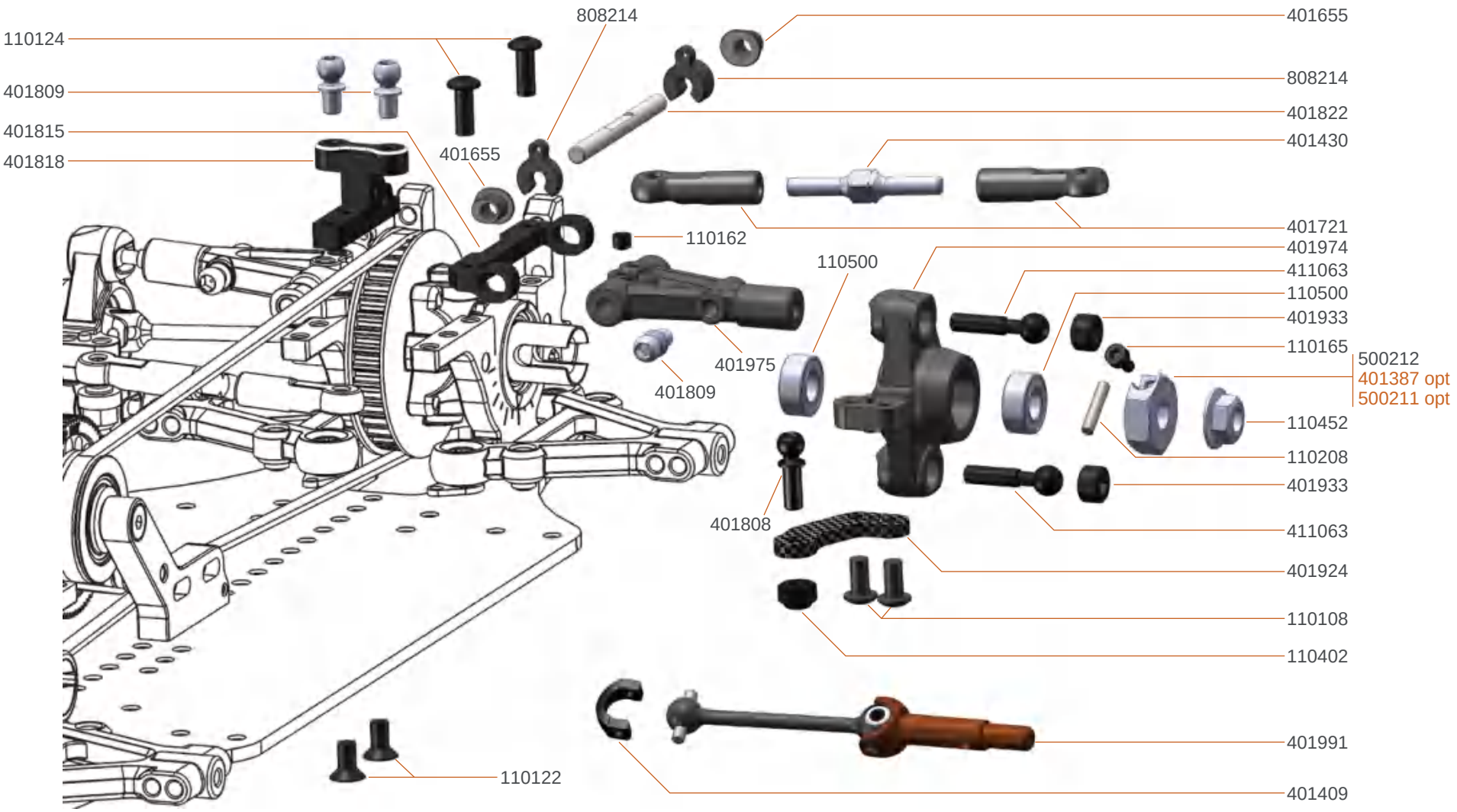
OPT

401958 Chassis weight 10gr X20 '21
401961 Chassis weight RX 5gr X20 '21
401964 Chassis brace set fr X20 '21
401965 Chassis brace set rr X20 '21
401966 Front stiffner set X20 '21
401967 Rear stiffner set X20 '21



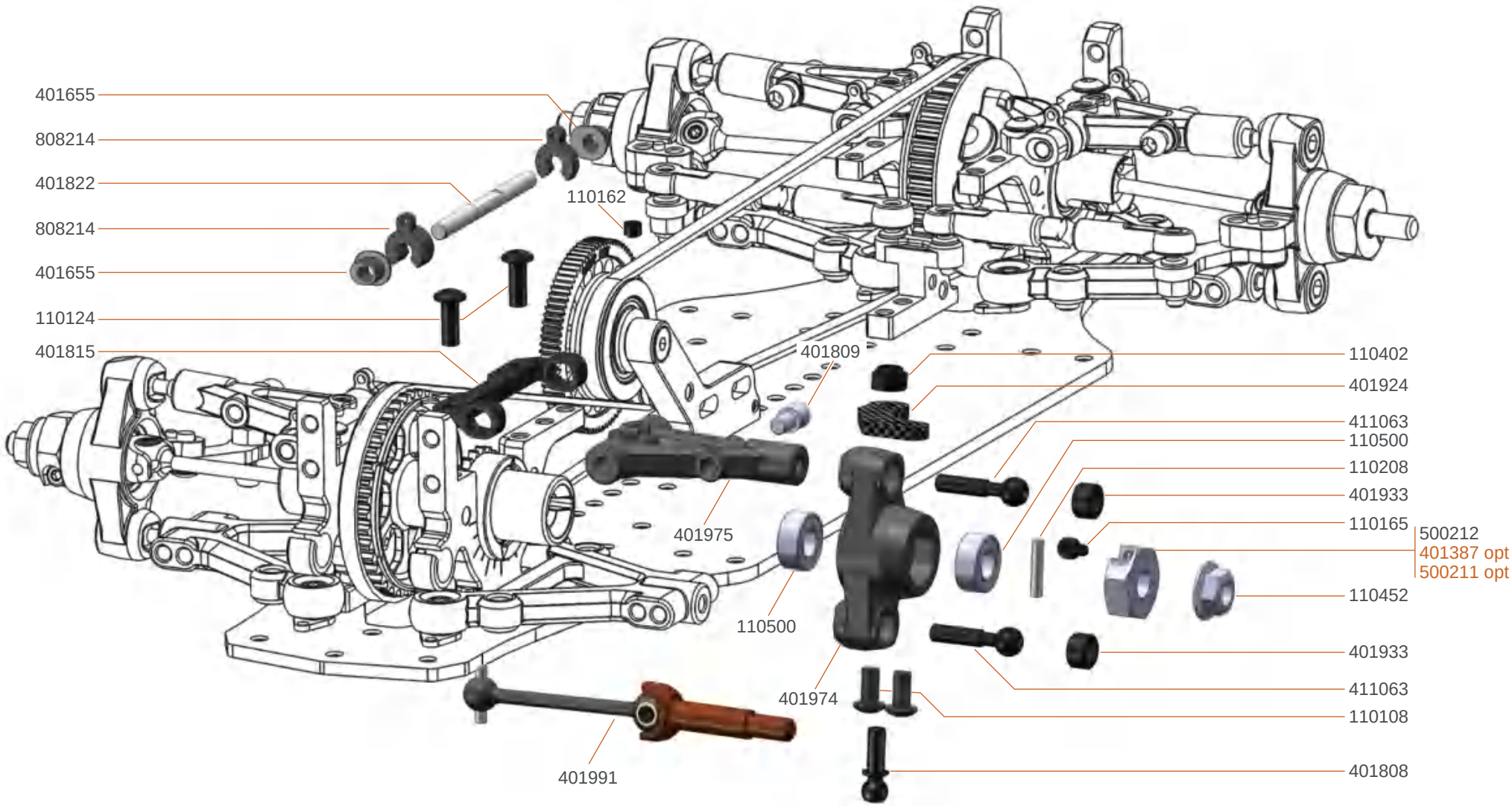
OPT

401866	Chassis stiffner center mid carbon X20
401913	Adjustable chassis brace rr X20
401917	Bearing excenter fr/rr (4) alu X20
401946	Outdrive solid axle (2) X20
120024	Spur diff gear 64P/86T
120041	Spur diff gear 64P/80T
120049	Spur diff gear 64P/78T



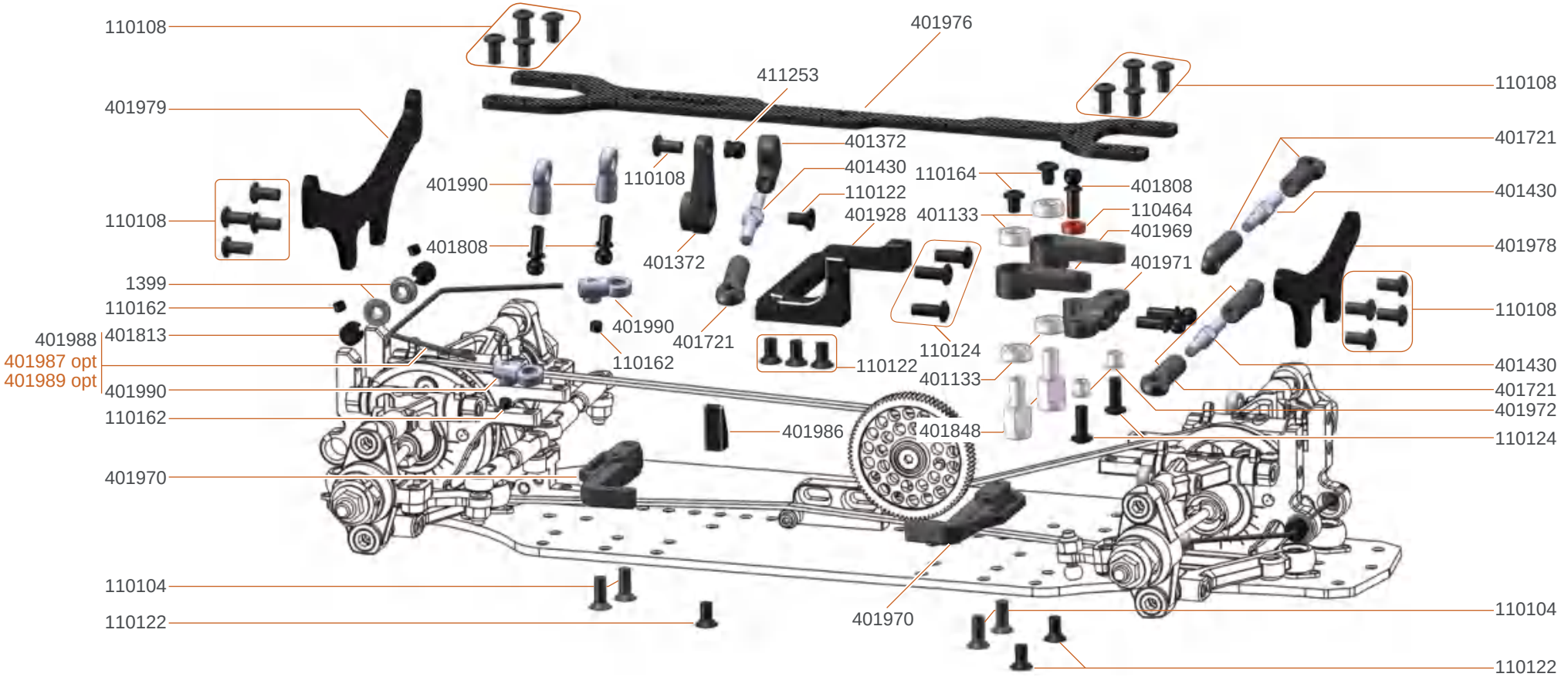
OPT

401387 Wheelhexagon 1mm offset (2)
401816 Suspension bracket spacer 1mm (4) X20
500211 Wheelhexagon +0.75mm offset (2)



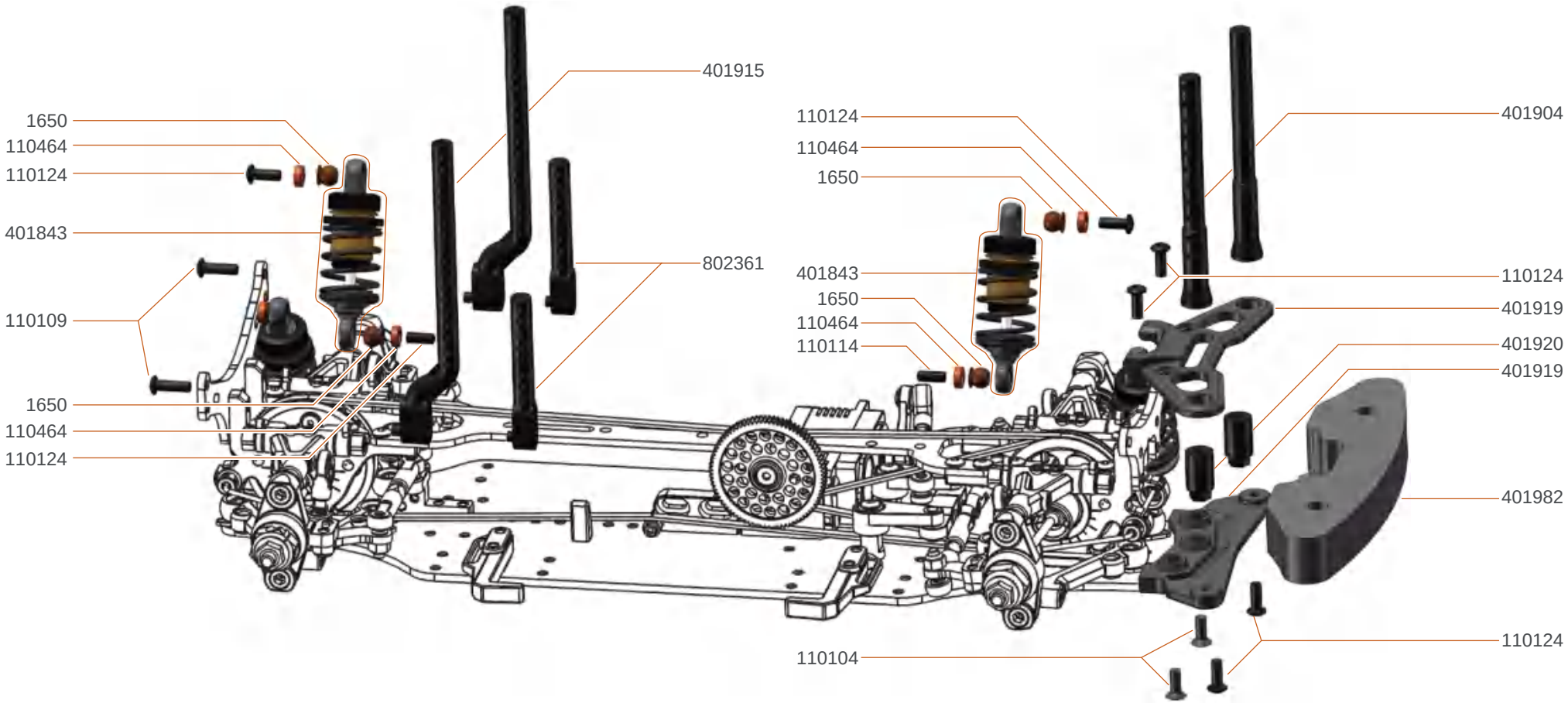
OPT

401387 Wheelhexagon 1mm offset (2)
401816 Suspension bracket spacer 1mm (4) X20
500211 Wheelhexagon +0.75mm offset (2)



401987	Antirollbar 1.2mm X20M	600290	Servo lever steering 23T alu
401989	Antirollbar 1.4mm X20M	600291	Servo lever steering 24T alu
401849	Steering lever alu (2) X20	600292	Servo lever steering 25T alu
401850	Steeringrack alu X20		

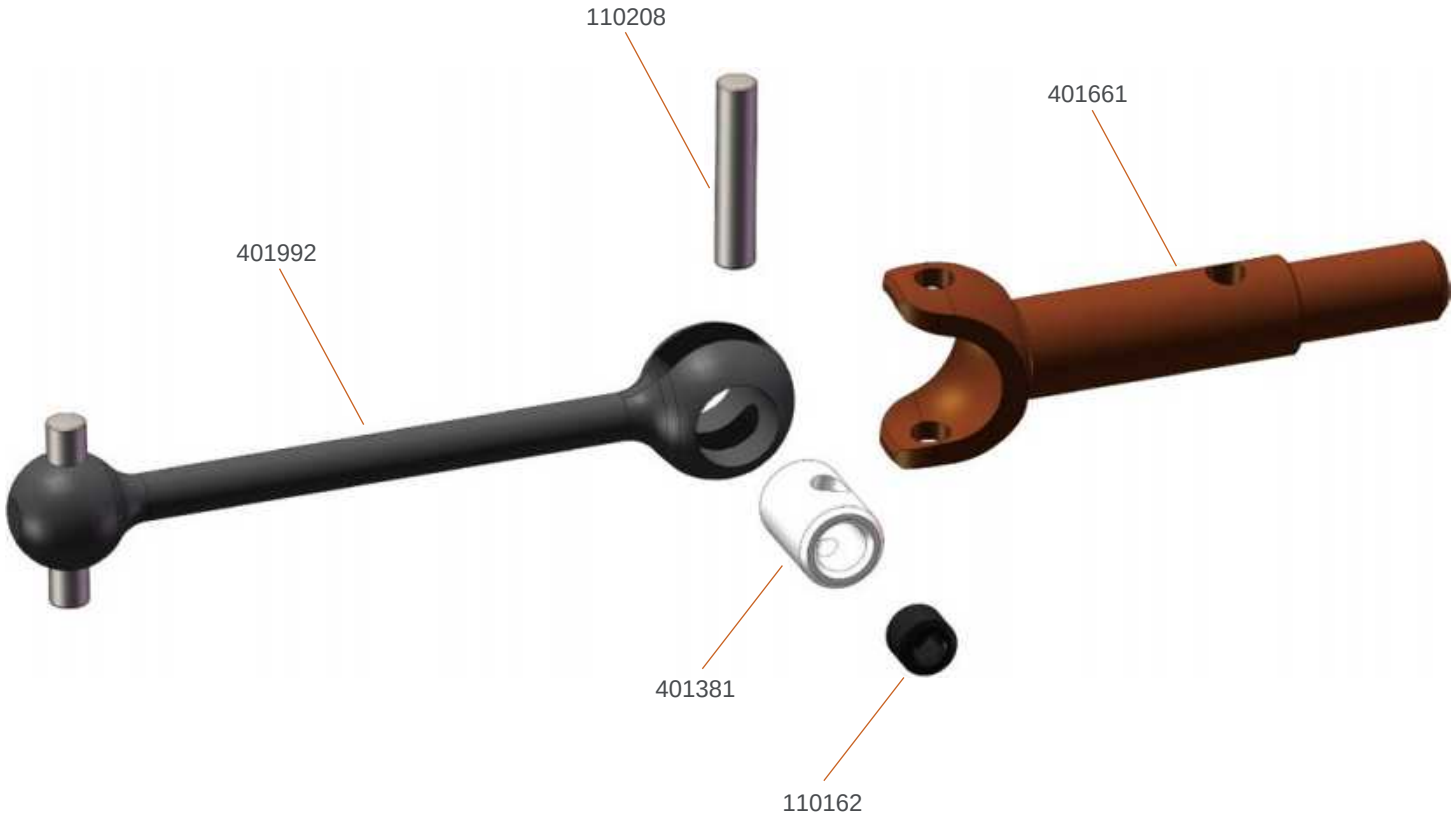
OPT



OPT

401954 Bumper top carbon X20 '21
401602 Body-height fine-tuner alu (4)
804293 Body support washers med + high (5+5)

401991 CVD driveshaft set (2) X20M



OPT

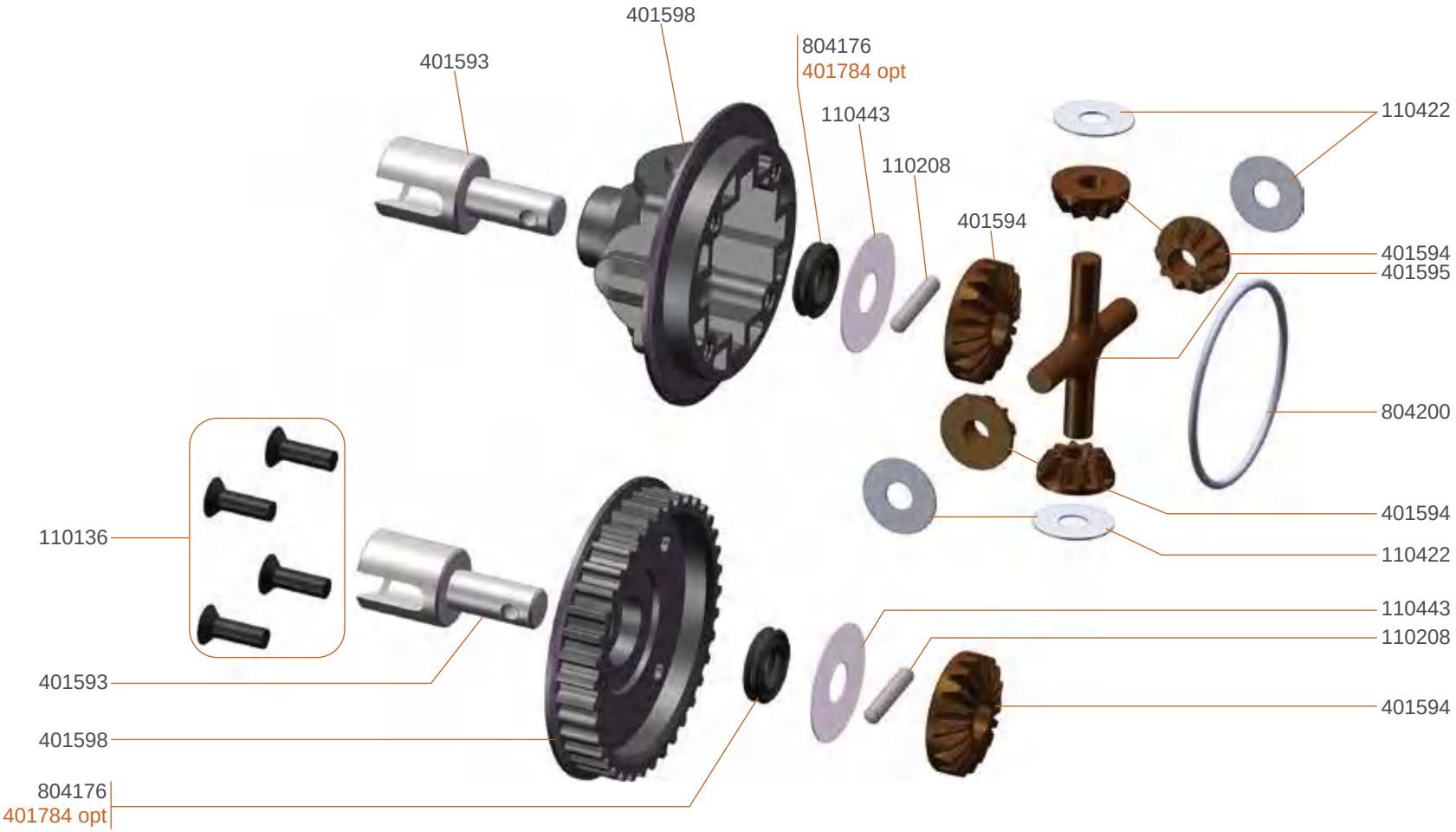


401843 Shockset (2) X20

OPT

401840 Shock piston 3-holes (4) X20
401852 Spring fr/rr 2,5 (2)
401854 Spring fr/rr 2,7 (2)
401855 Spring fr/rr 2,8 (2)

401592 Geardiff V3 composite



401784 Seal 5x9x2 diff (2)

OPT

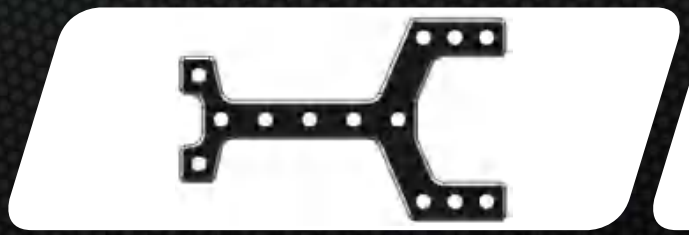
TEAM SERPENT NETWORK

X20 mini SPARE PARTS www.serpent.com/400020/spares/





X20 mini OPTIONALS PARTS www.serpent.com/400020/Optionals/





SERPENT TOOLS www.serpent.com/product/Tools/





SERPENT MERCHANDISING www.serpent.com/product/Merchandising/



SERPENT WEBSITE AND BLOG

www.serpent.com
www.teamserpent.com
www.dragon-rc.com

SERPENT PROMO PAGES http://promo.serpent.com
SERPENT FACEBOOK GROUPS http://promo.serpent.com/indexfb.htm
SERPENT ADVANCED MANUALS http://promo.serpent.com/sam/

SERPENT SOCIAL MEDIA


www.facebook.com/SerpentMRC



www.youtube.com/user/SerpentMRC


www.twitter.com/SerpentMRC


www.plus.google.com/+SerpentModelcars/posts


www.weibo.com/teamserpent

INSTRUCTION MANUAL



Manual X20M #98597-1

SERPENT