

998
VIPER

**INSTRUCTION
MANUAL**



**WORLD
CHAMPIONS
10X**

SERPENT

INTRODUCTION

The Serpent Viper 988e is designed to be a world champion, while still being easy to use, assemble, and set up. The Serpent Viper 988e offers state of the art specifications and leads the way in chassis design, using all the knowledge we have from 1/8 scale racing into this design too. Continuously pushing the performance envelope, Serpent's engineers have added new and innovative features that help take your Serpent Viper 988e into the winner's circle.

Designed by Michael Salven

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 bag numbers, 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 later on 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 Viper 988e. Fine-tuning the initial setup is an essential part of building a high-performance racecar like your Serpent Viper 988e.

EXPLODED VIEWS AND PARTS LIST

The exploded views and parts lists for the Serpent Viper 988e 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. Part numbers 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 gloves.
- 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.

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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



Connect one item to another



Gap between two items



Press/Insert one item into another

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.



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



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.



Oil: apply a small amount of oil to the parts shown.



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



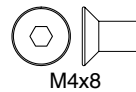
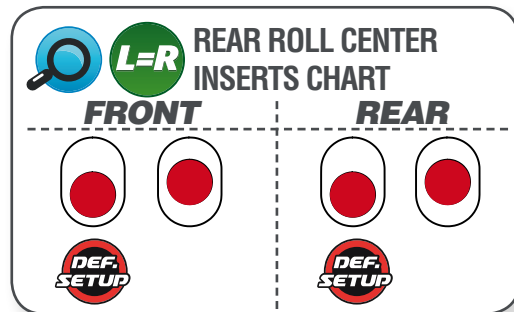
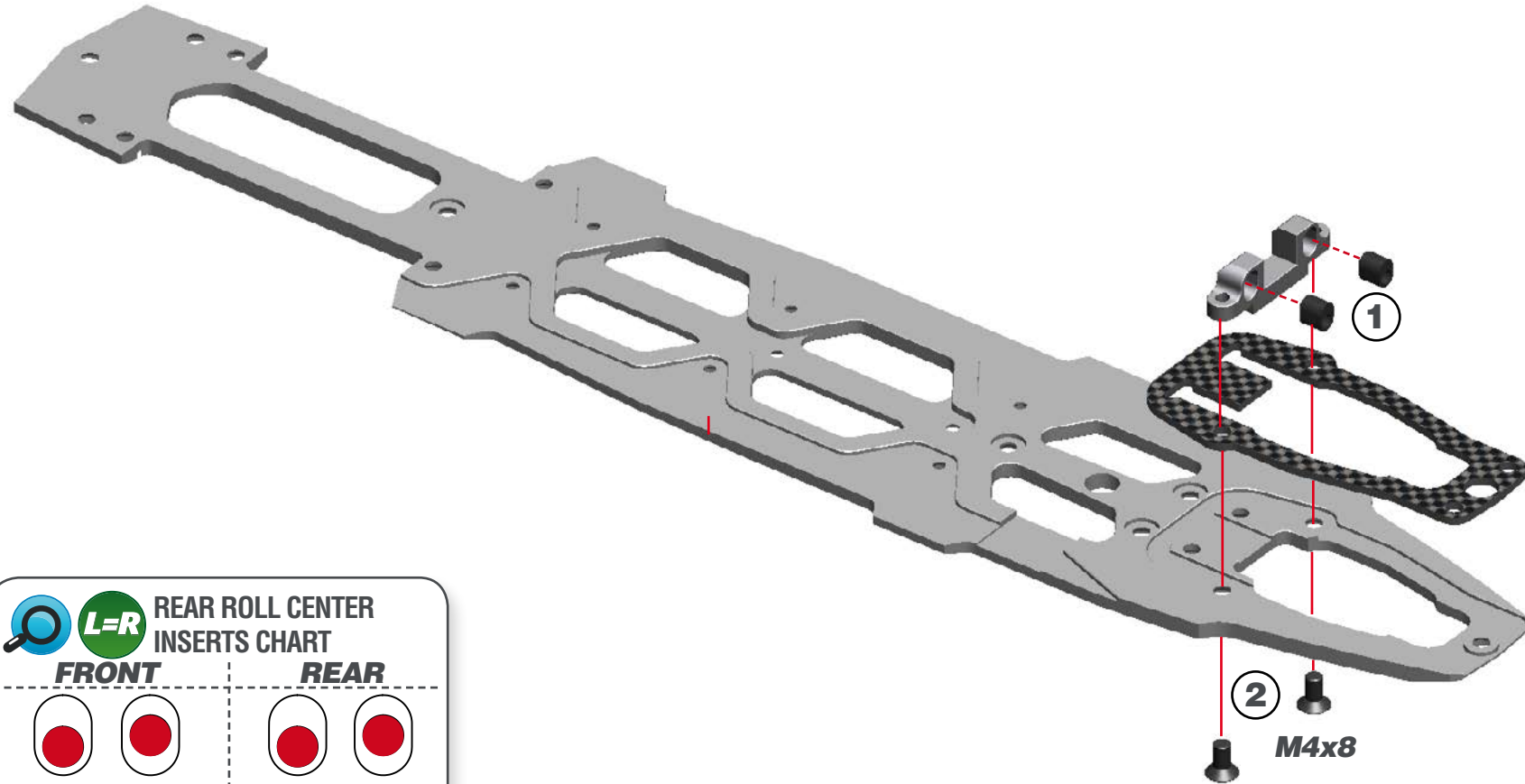
Parts or items not included in the kit.



Optional part, not standard in the kit.

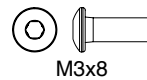
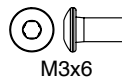
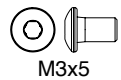
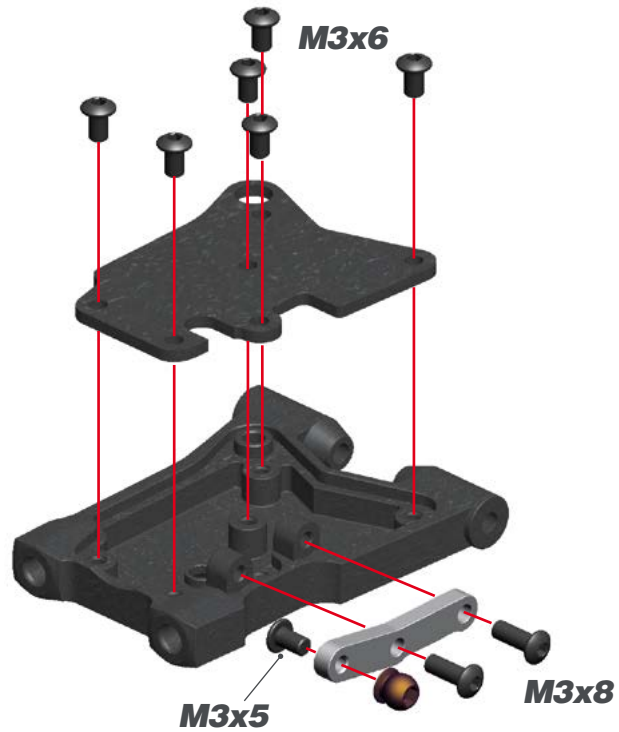
STEP 1

BAG 1



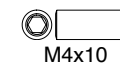
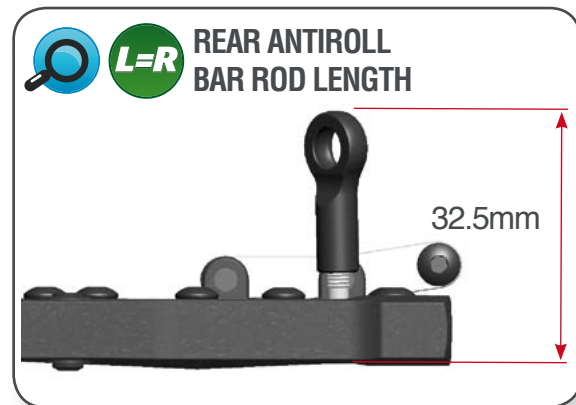
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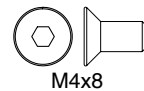
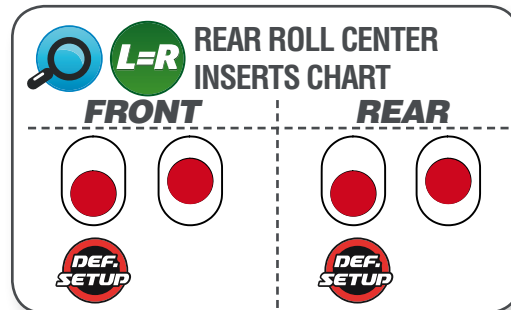
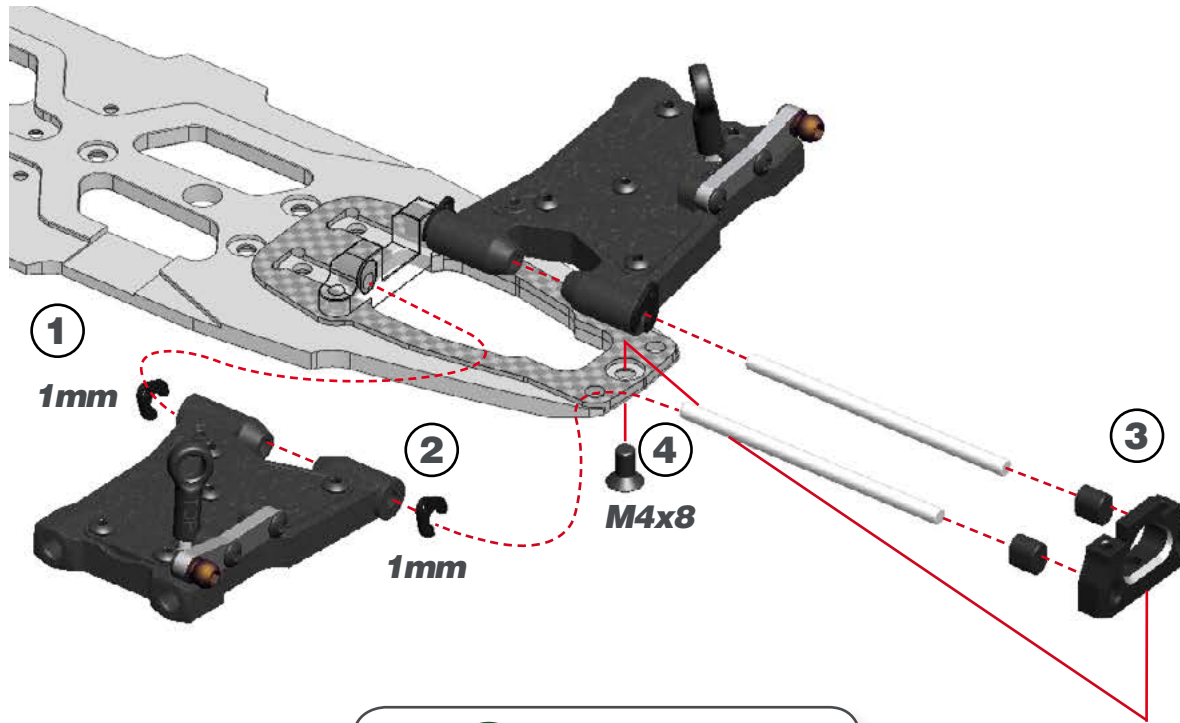


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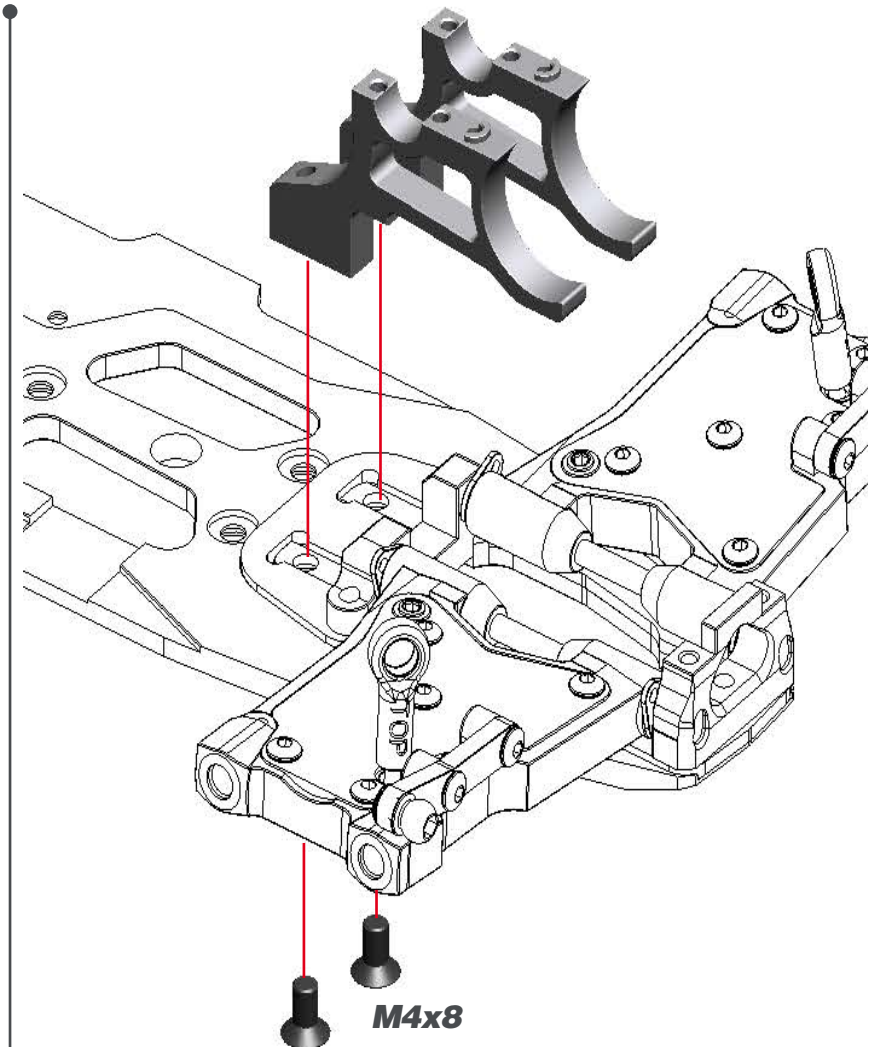


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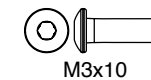
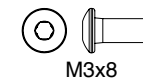
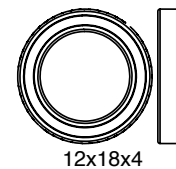
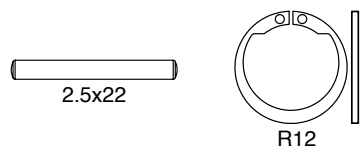
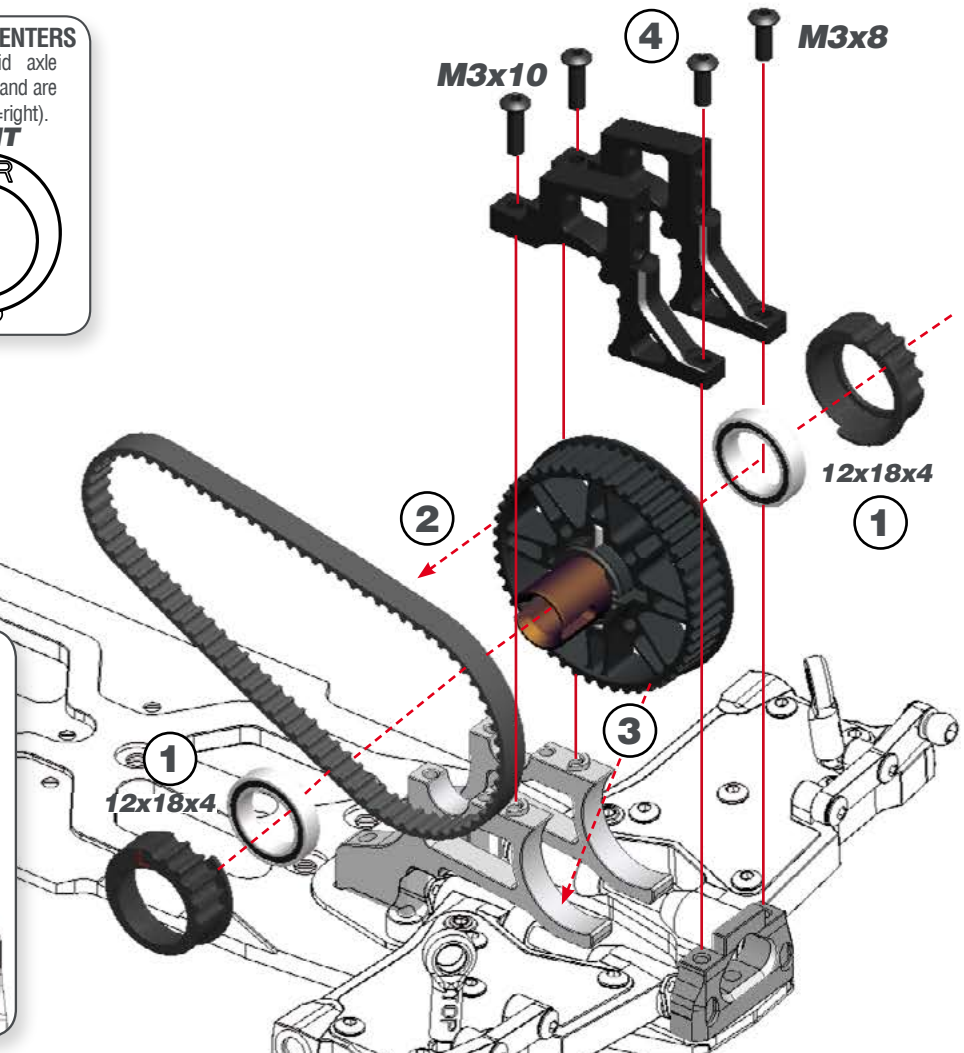
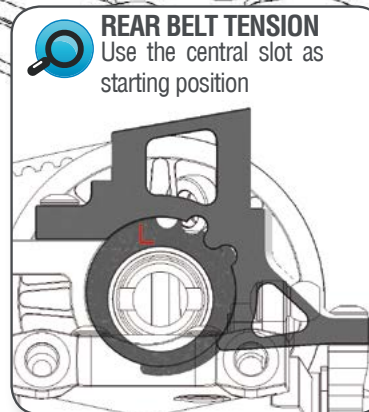
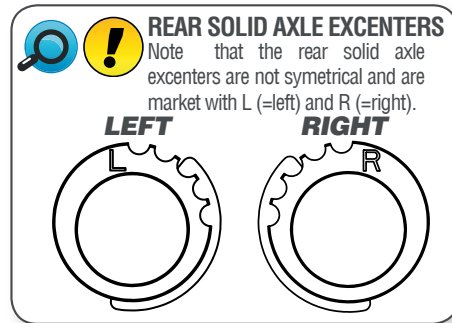
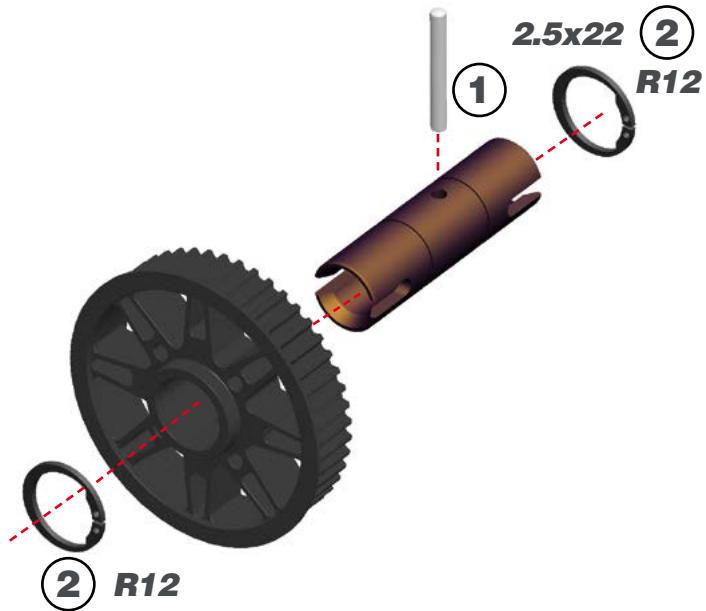
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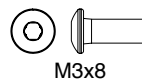
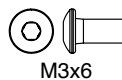
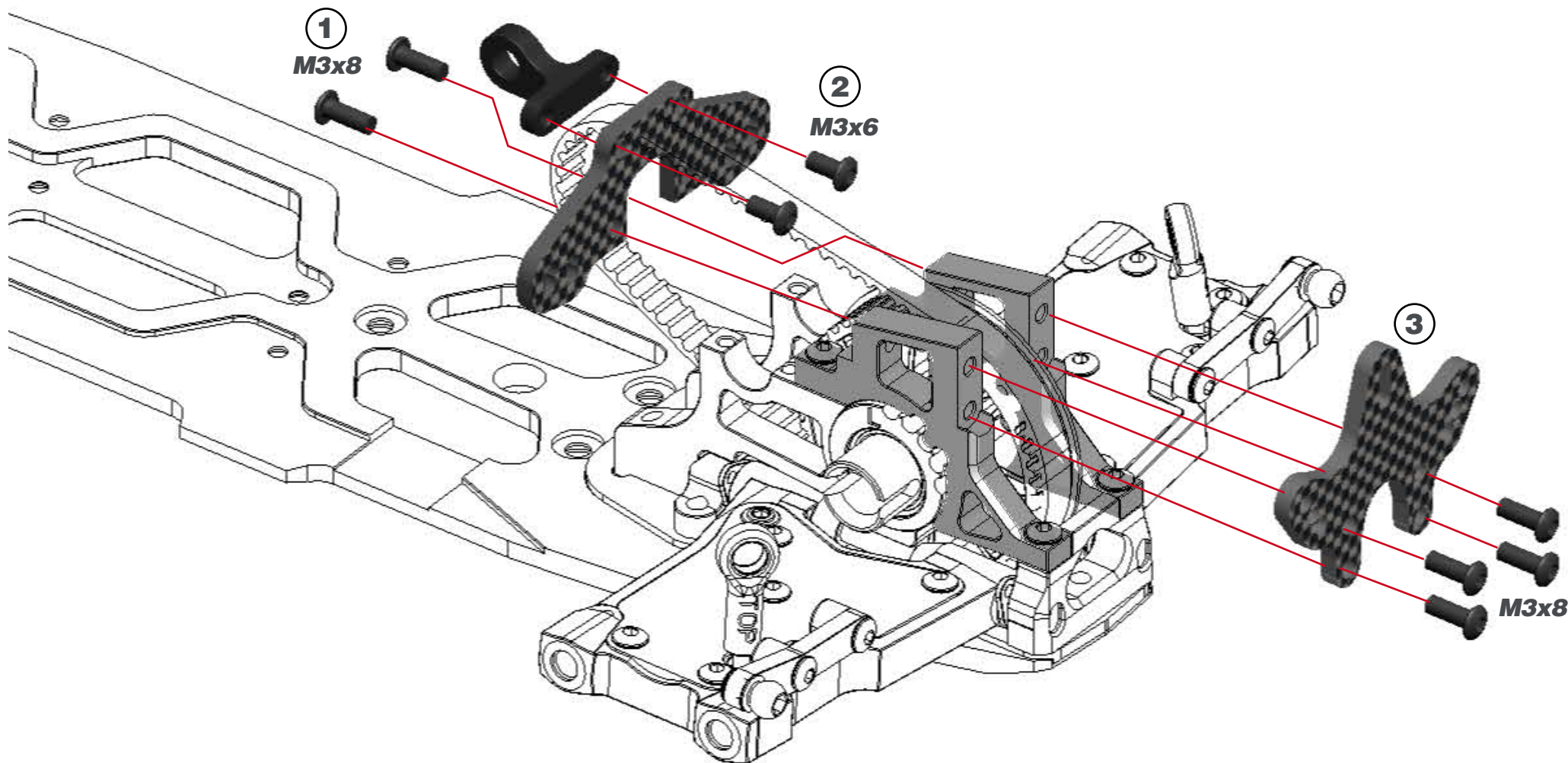


STEP 6

STEP 7

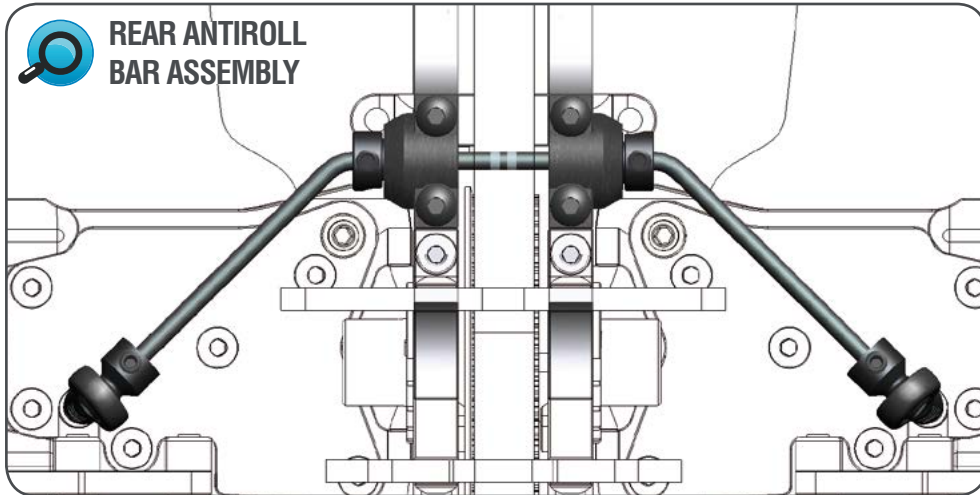
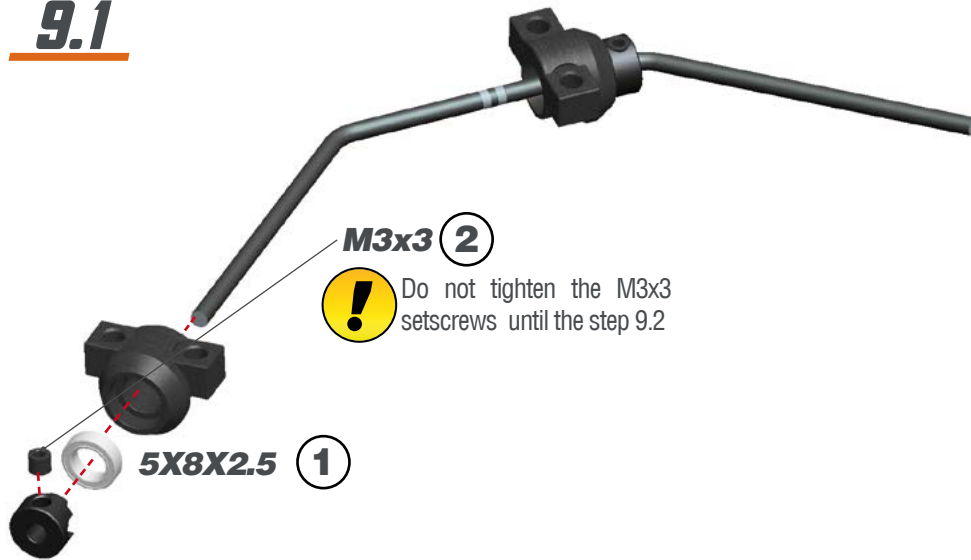


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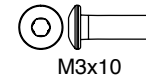
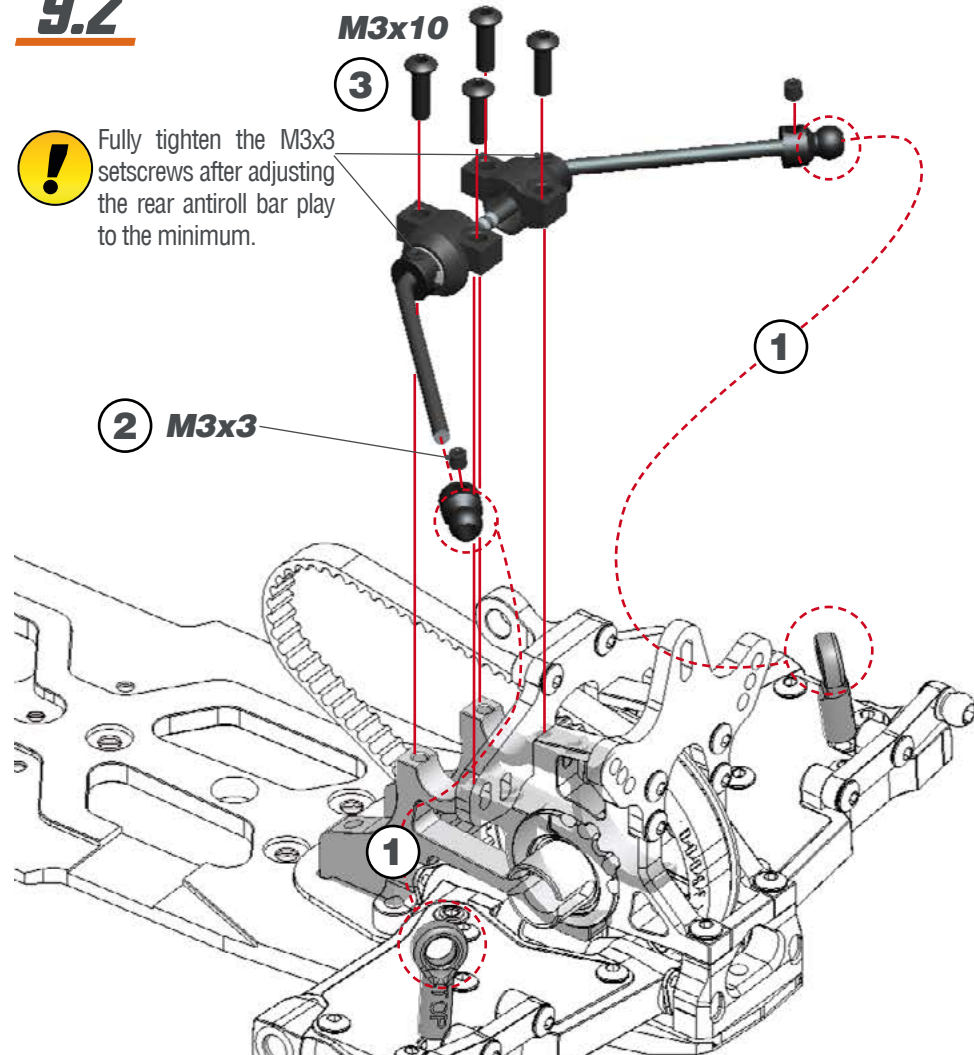


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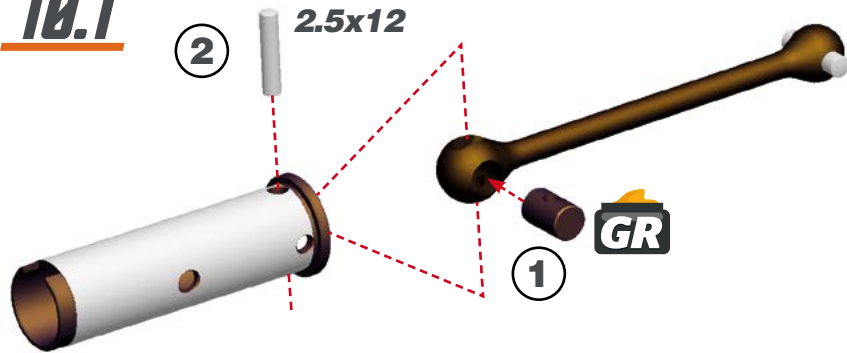


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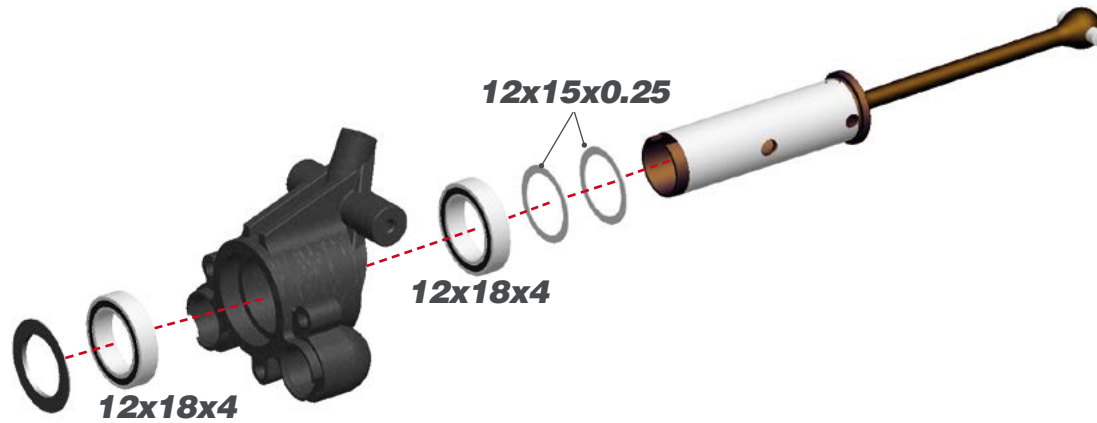


STEP 10 **BAG 3**

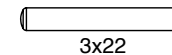
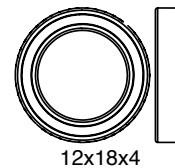
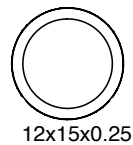
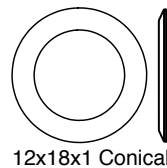
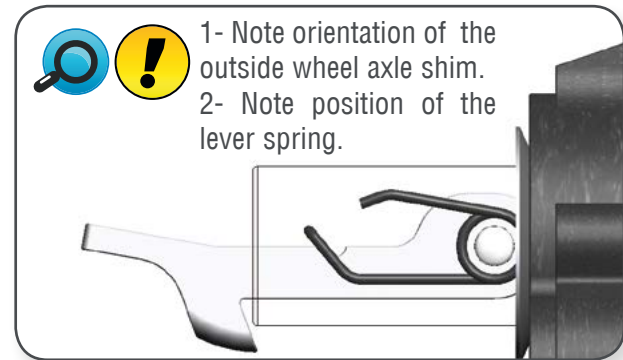
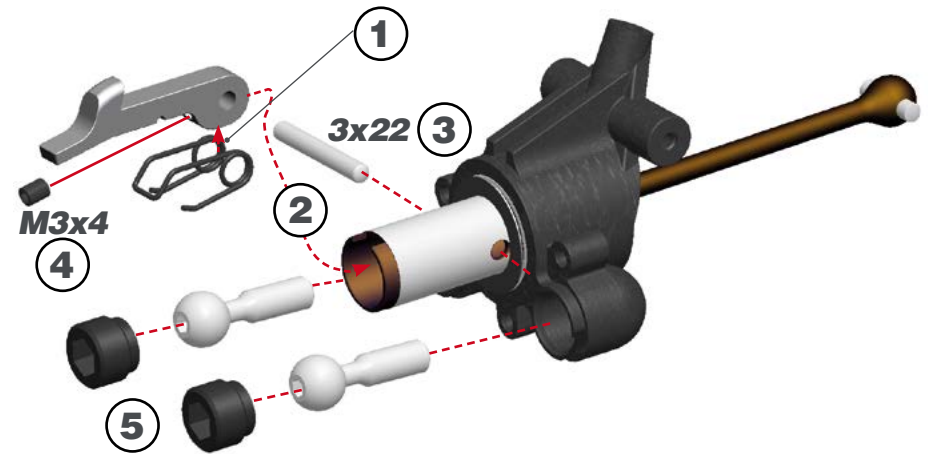
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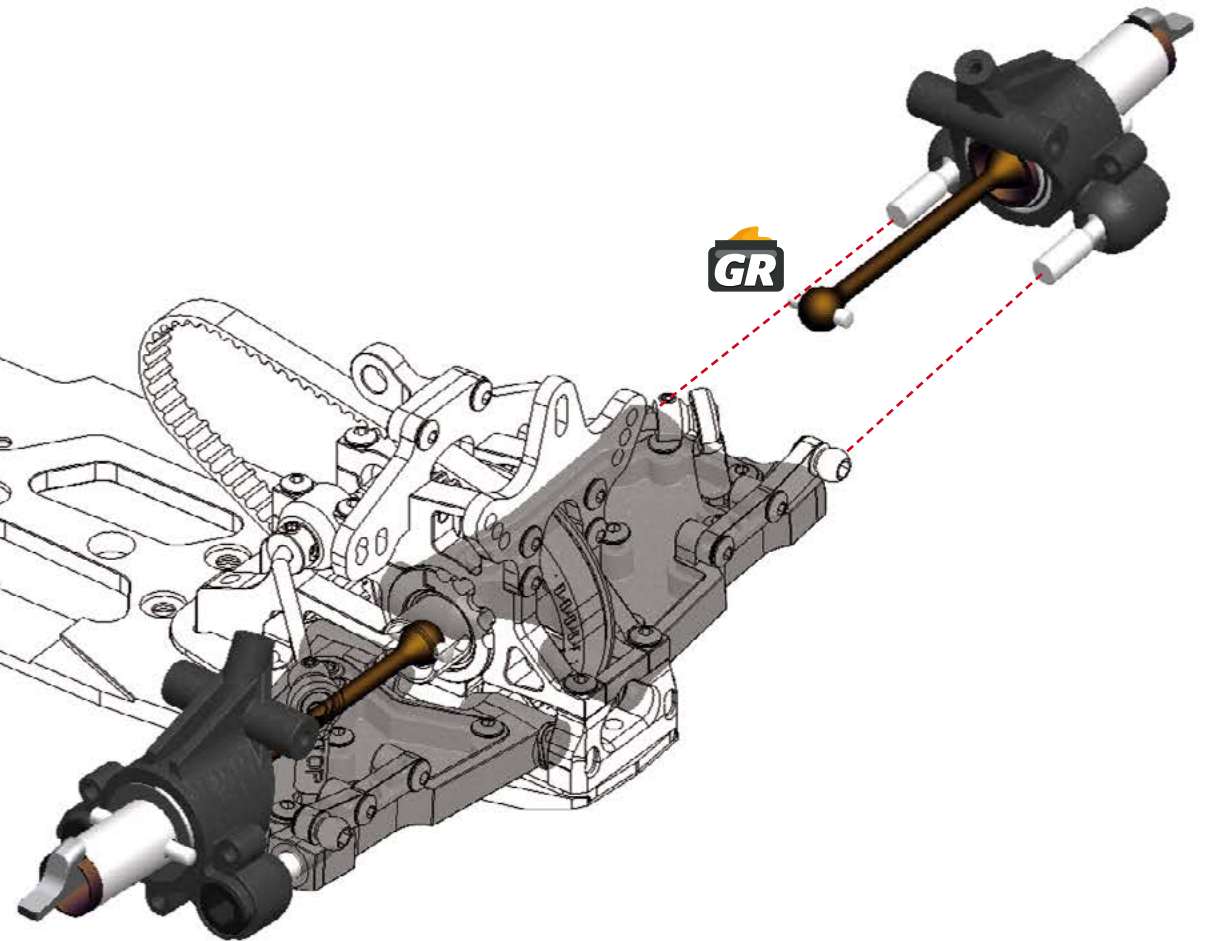
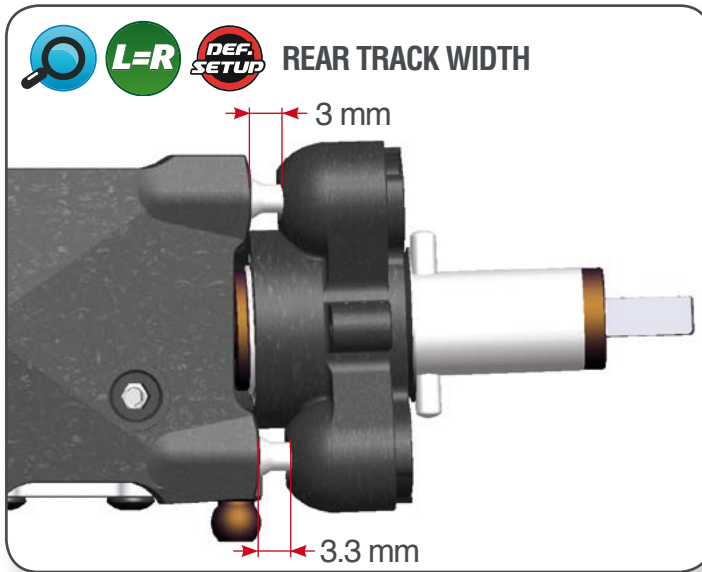
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10.3

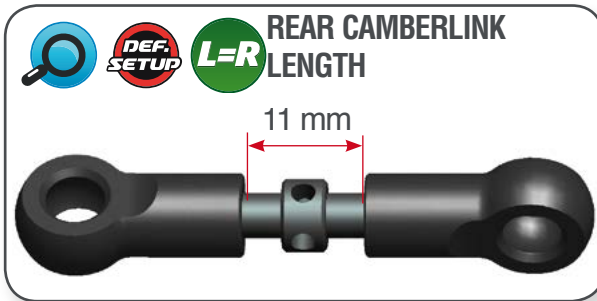
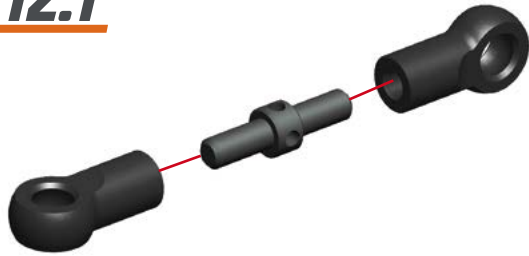


STEP 11

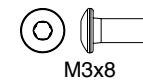
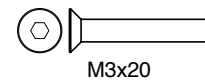
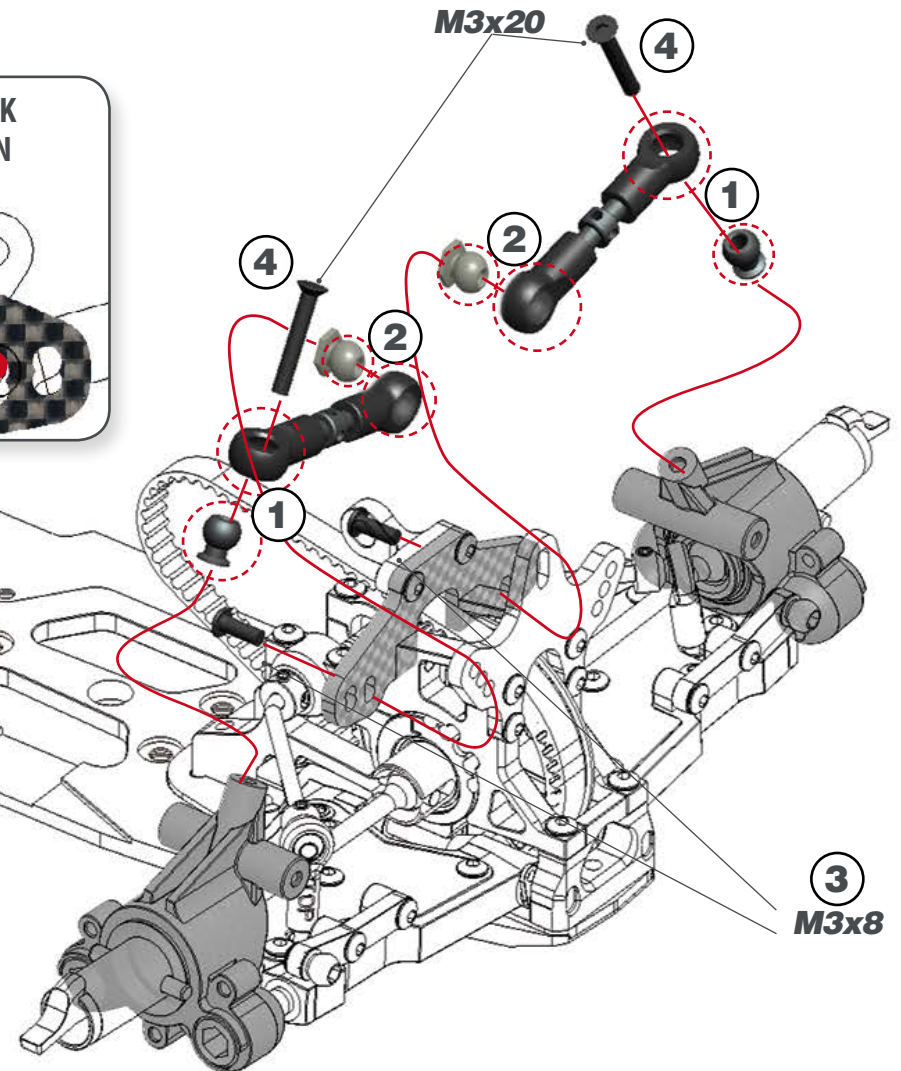
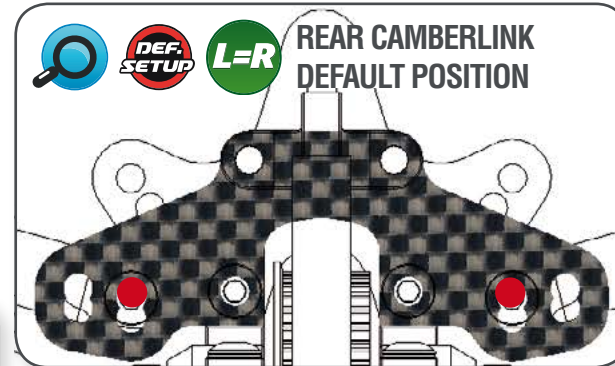


STEP 12

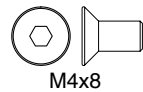
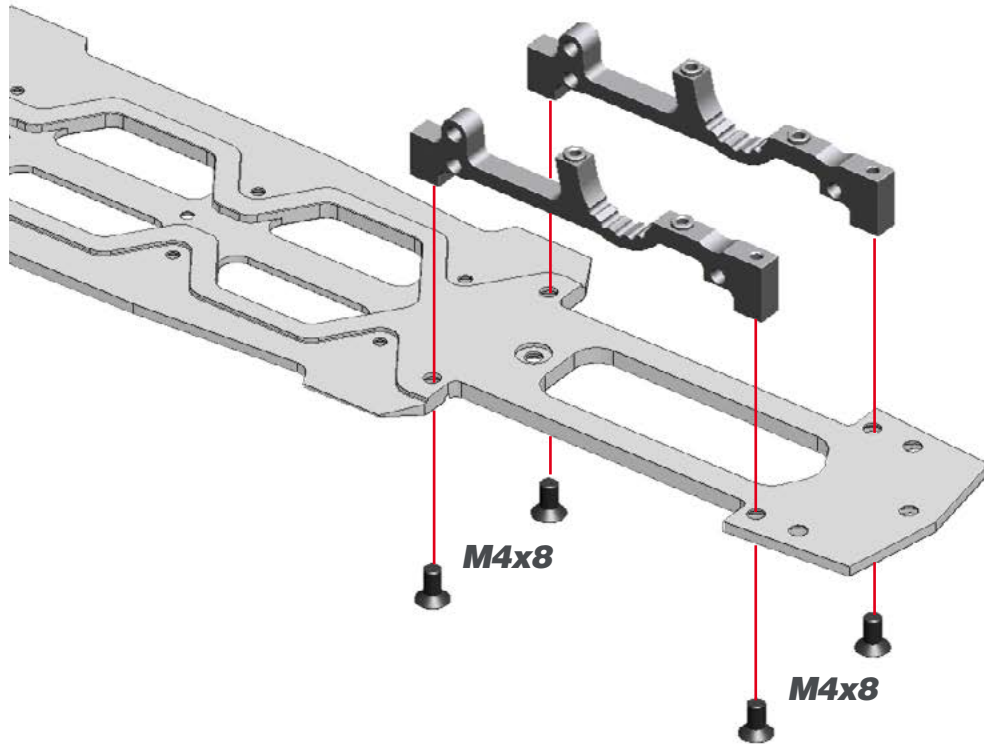
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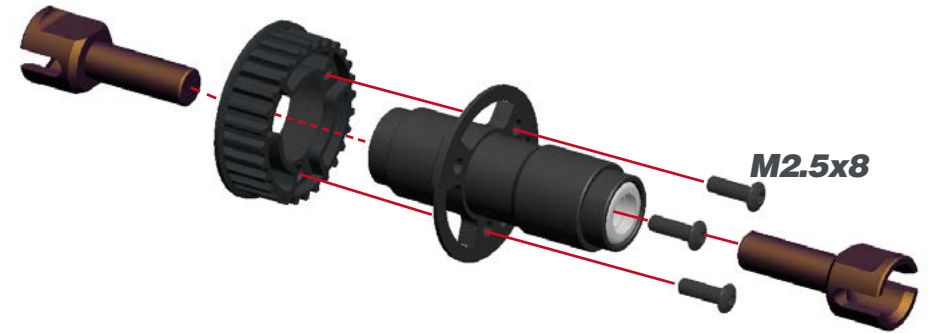


STEP 13 BAC 4

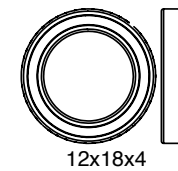
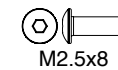
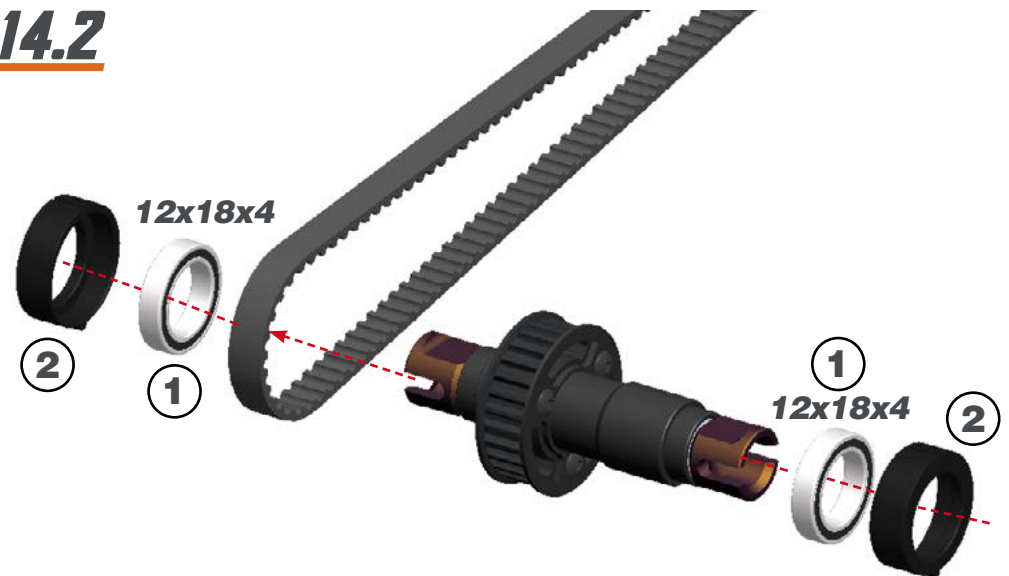


STEP 14

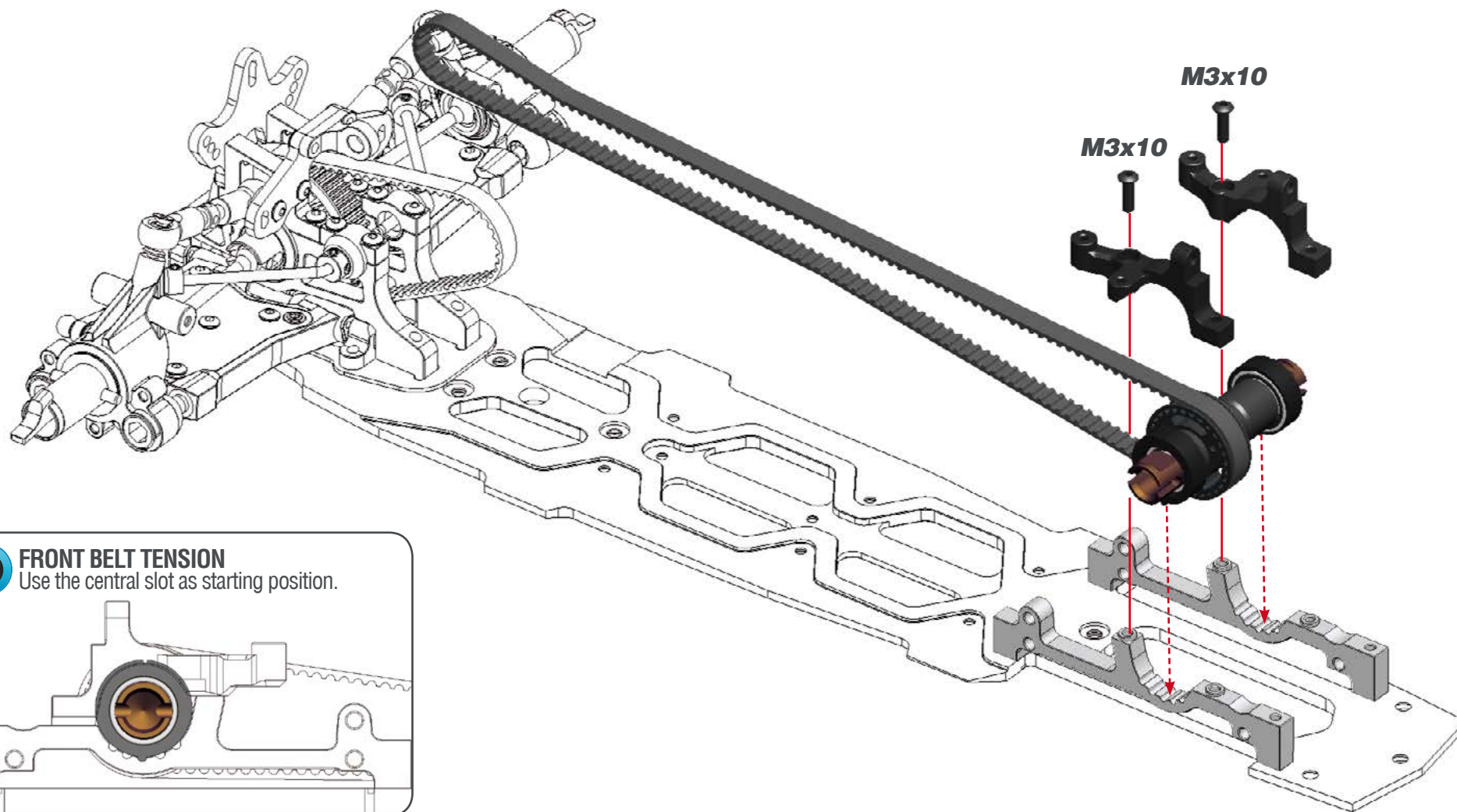
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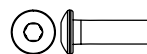
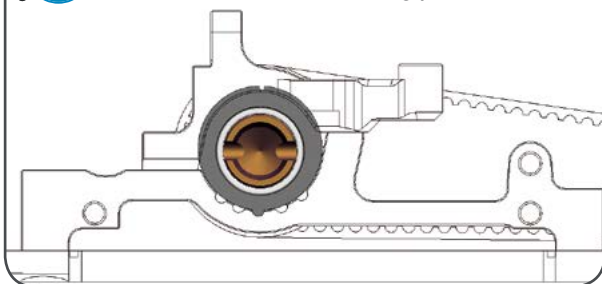


STEP 15



FRONT BELT TENSION

Use the central slot as starting position.



M3x10

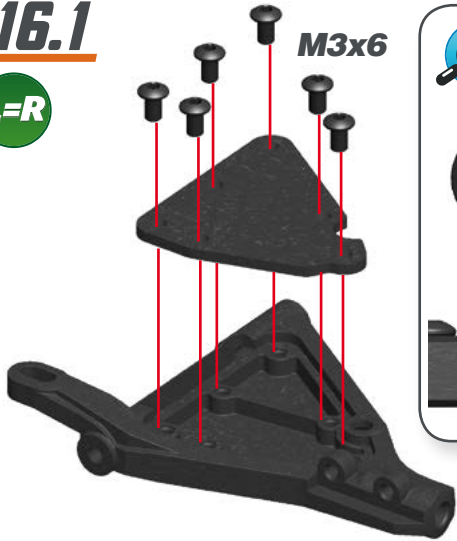
STEP 16

BAG 5

16.1

L=R

M3x6



16.3

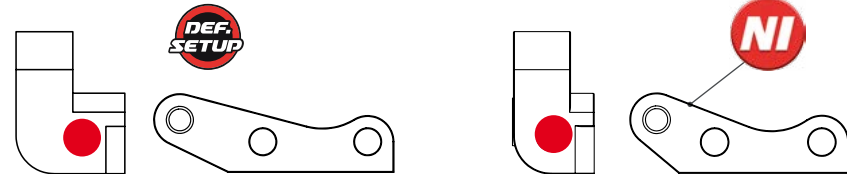


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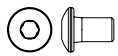
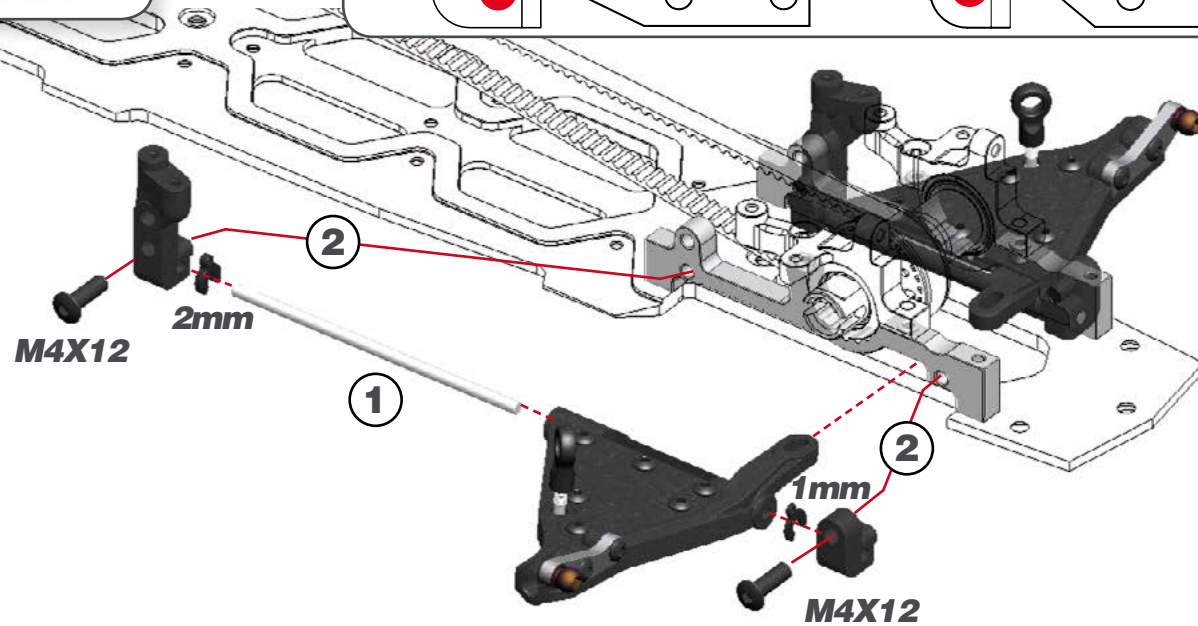
Serpent 988 allows to move front bottom arms 3 mm in (NARROW) and out (WIDE). To maintain the same shock angle, use the suspension bracket and shock bracket as shown here.

NARROW

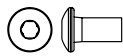
WIDE



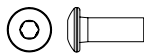
16.2



M3x5



M3x6



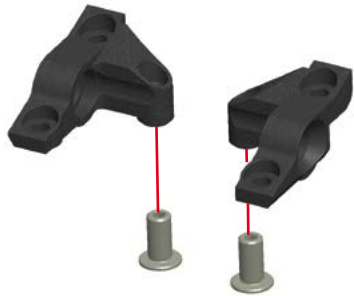
M3x8



M4x12

STEP 17

17.1

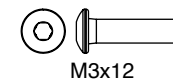
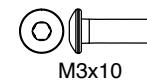
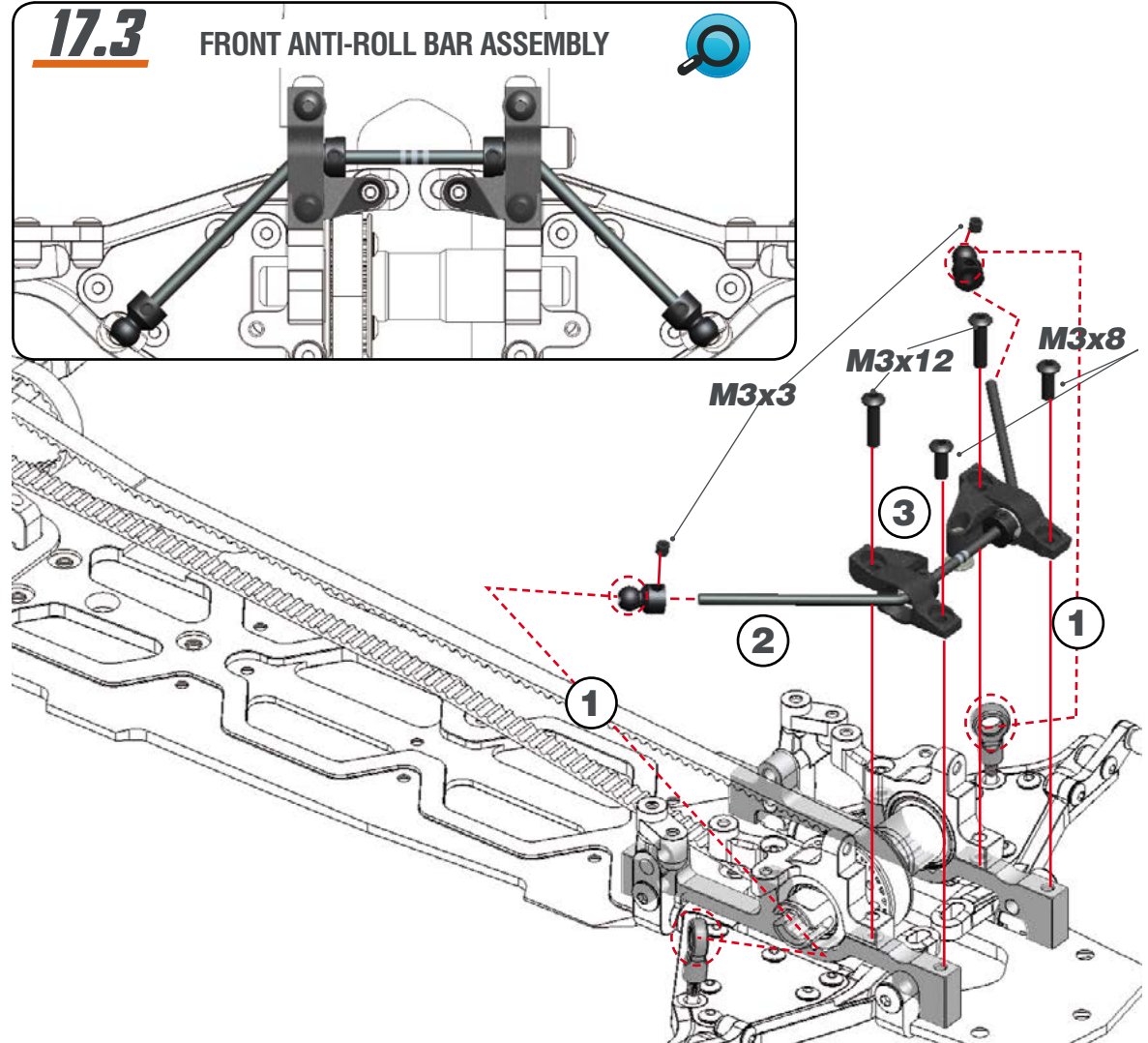


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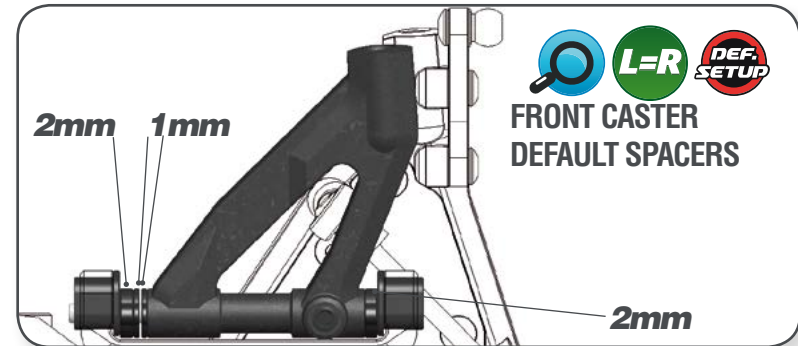
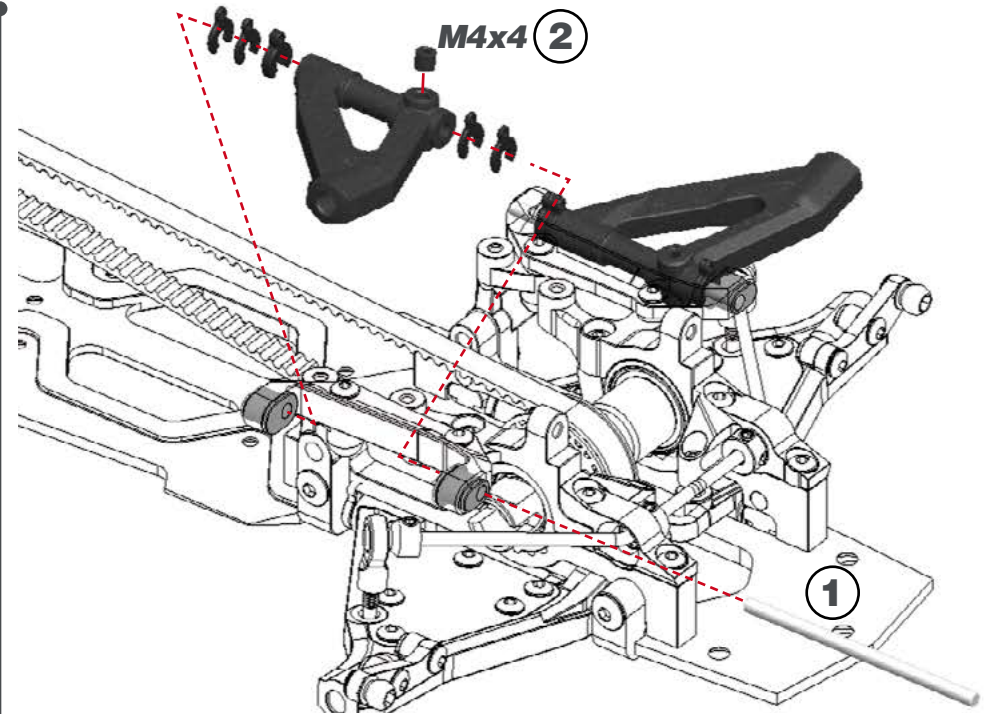
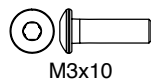
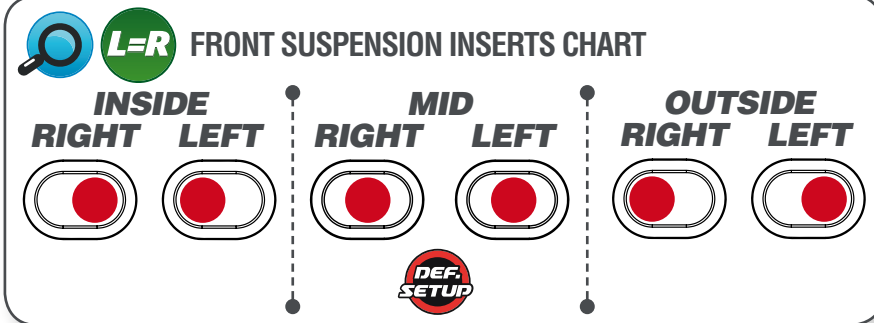
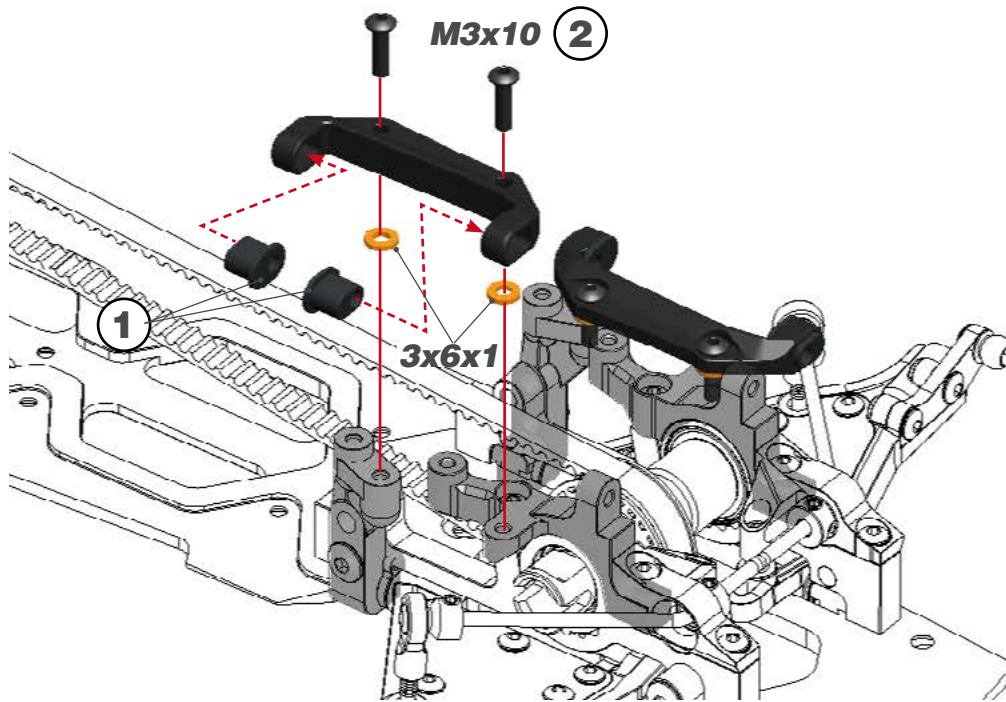


17.3

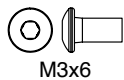
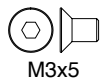
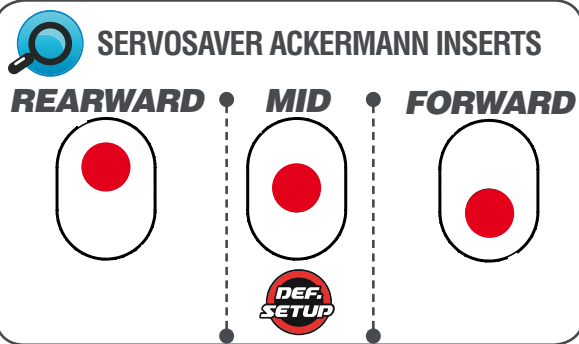
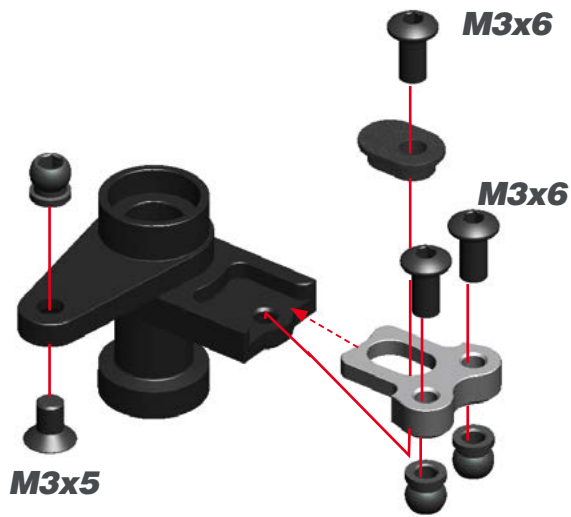
FRONT ANTI-ROLL BAR ASSEMBLY



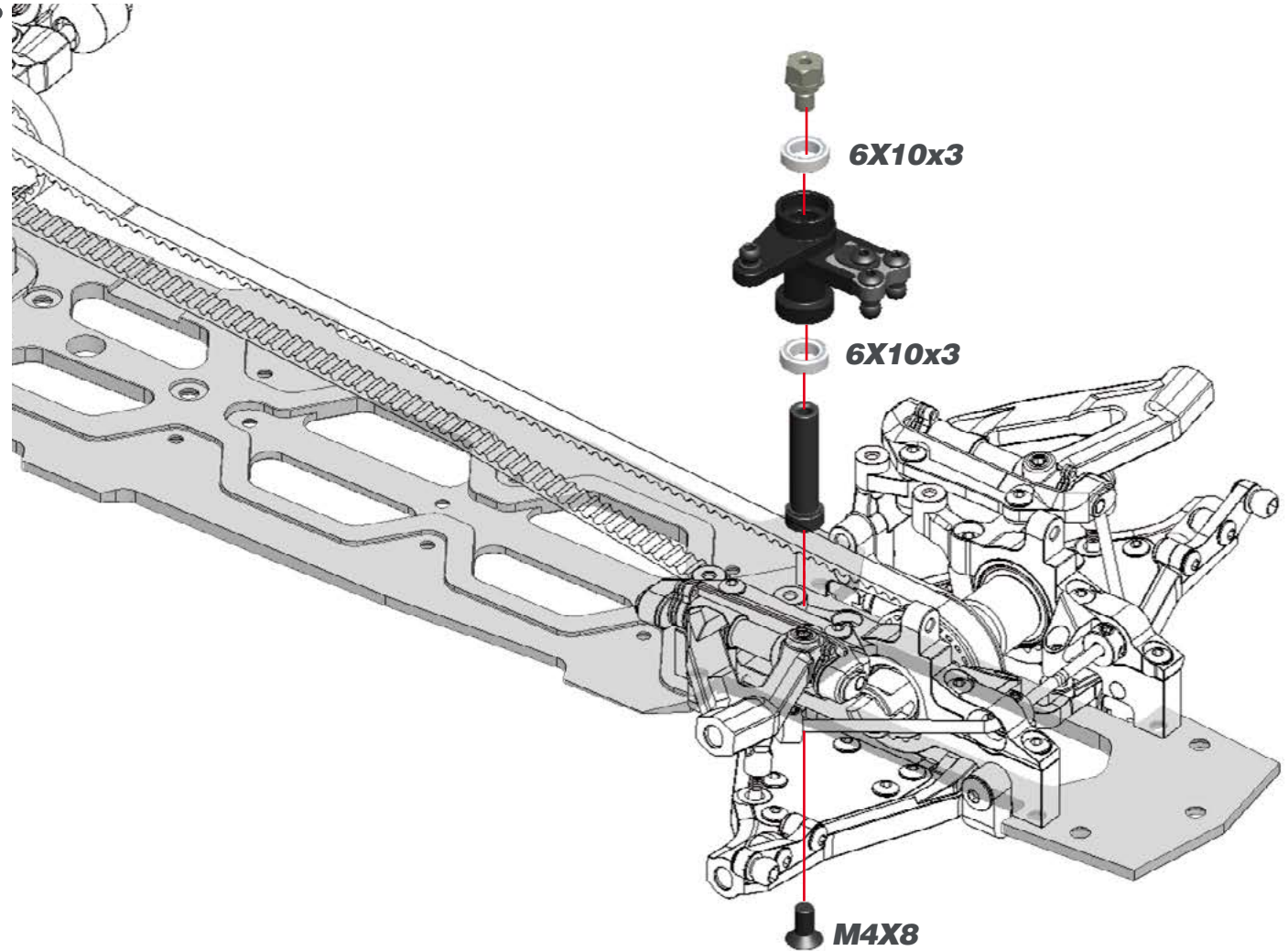
STEP 18 **BAG 6**




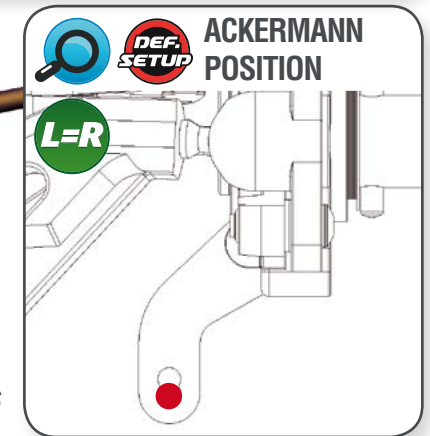
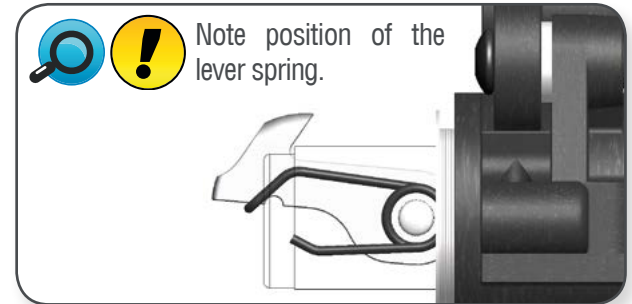
STEP 19



STEP 20

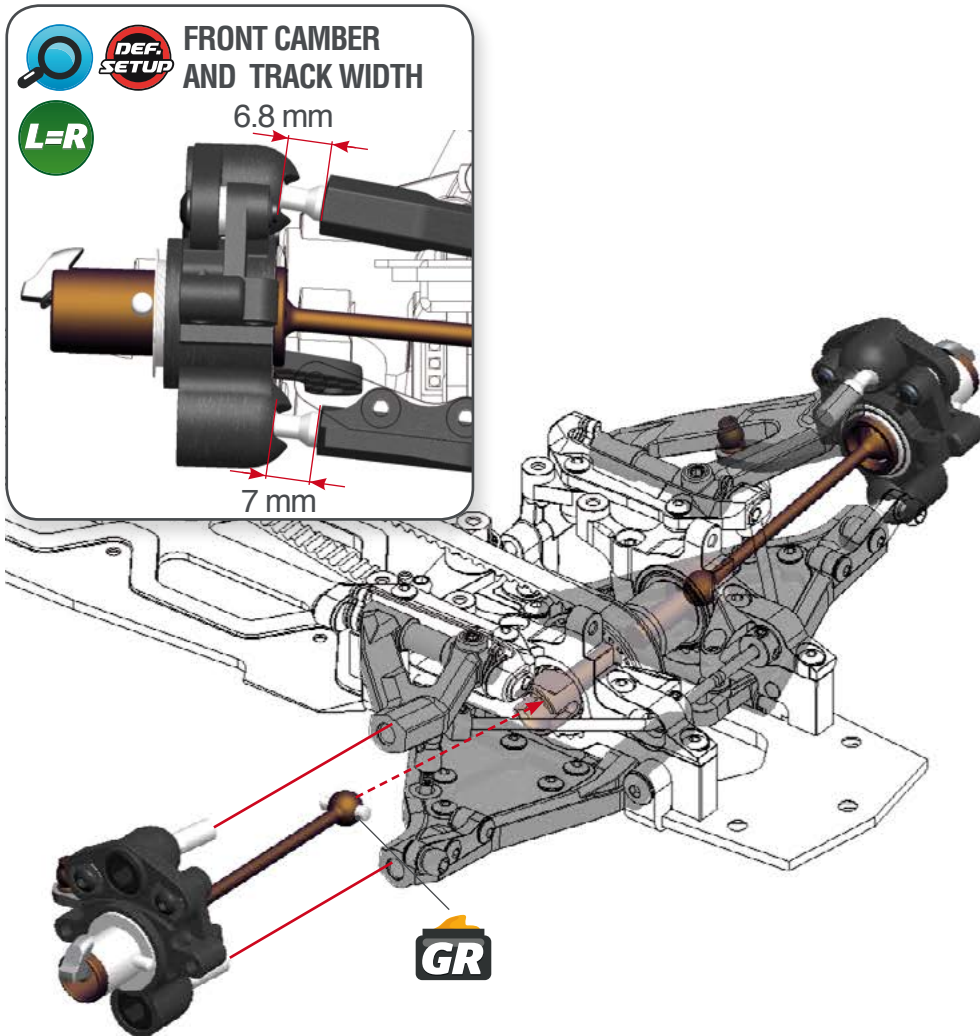


21.1



M3x8

STEP 22



STEP 23

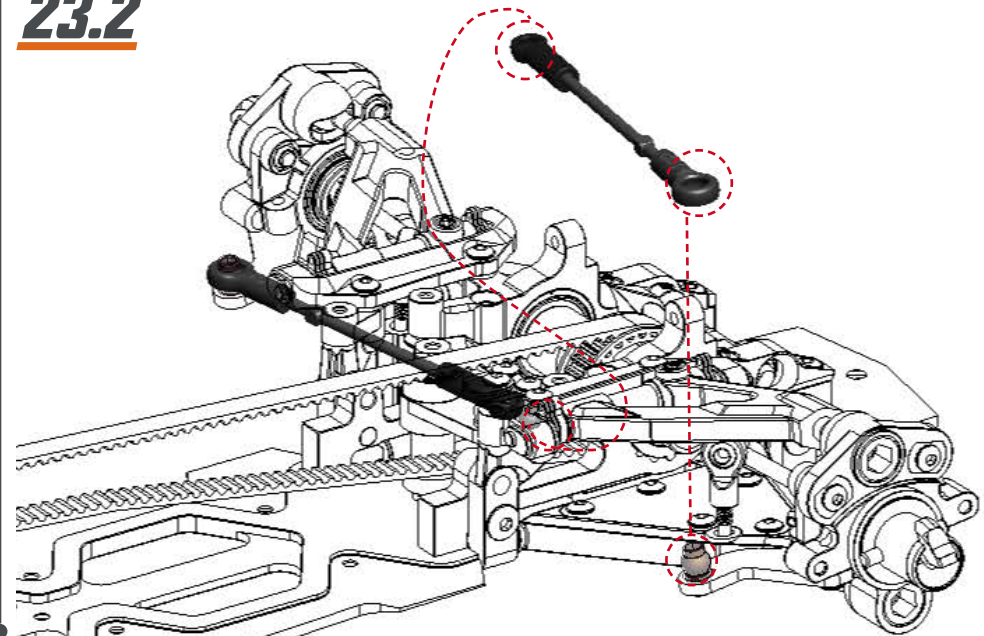
23.1



STEERING TRACKROD LENGTH

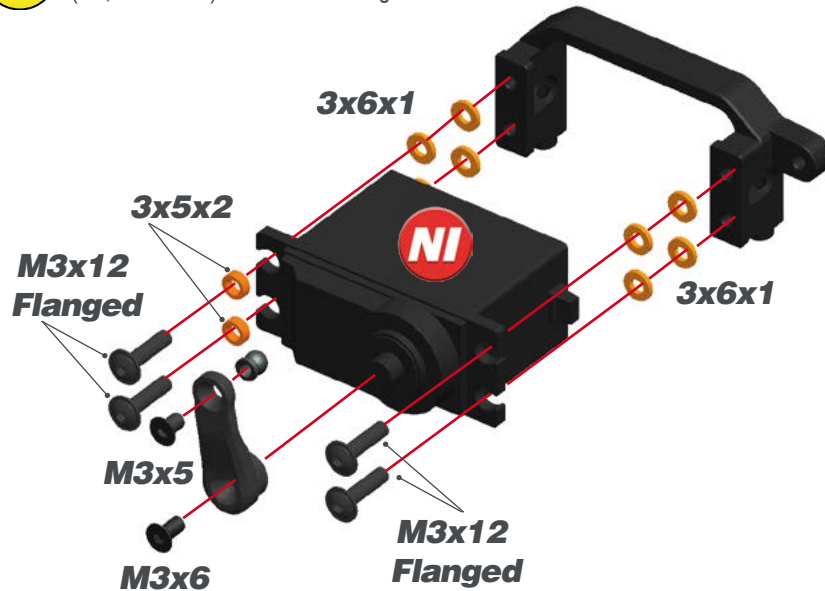


23.2



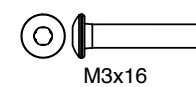
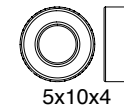
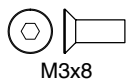
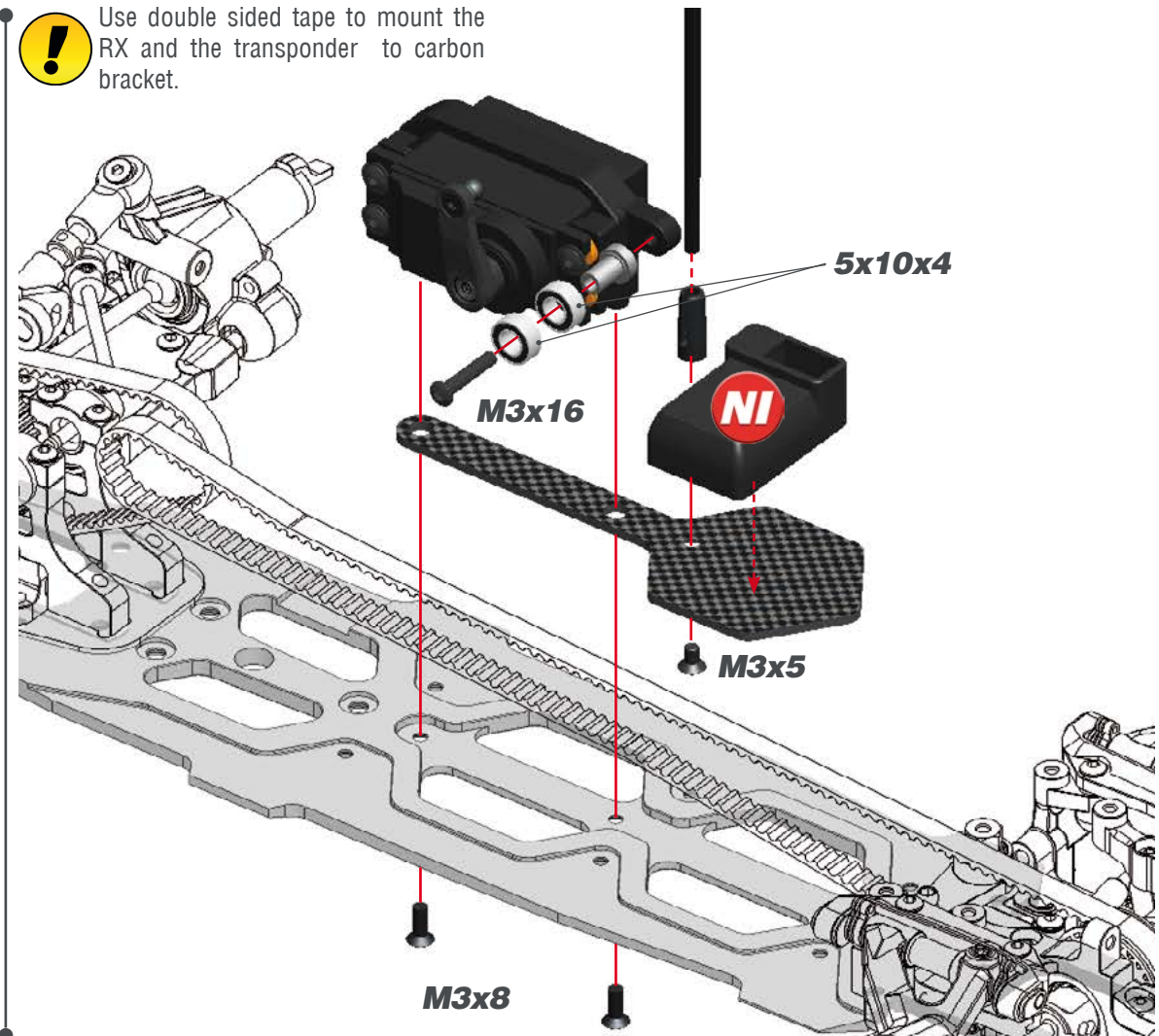
STEP 24 BAG 8

! Check how many teeth your servo spline has (23, 24 or 25) and use the right lever.



STEP 25

! Use double sided tape to mount the RX and the transponder to carbon bracket.



STEP 26

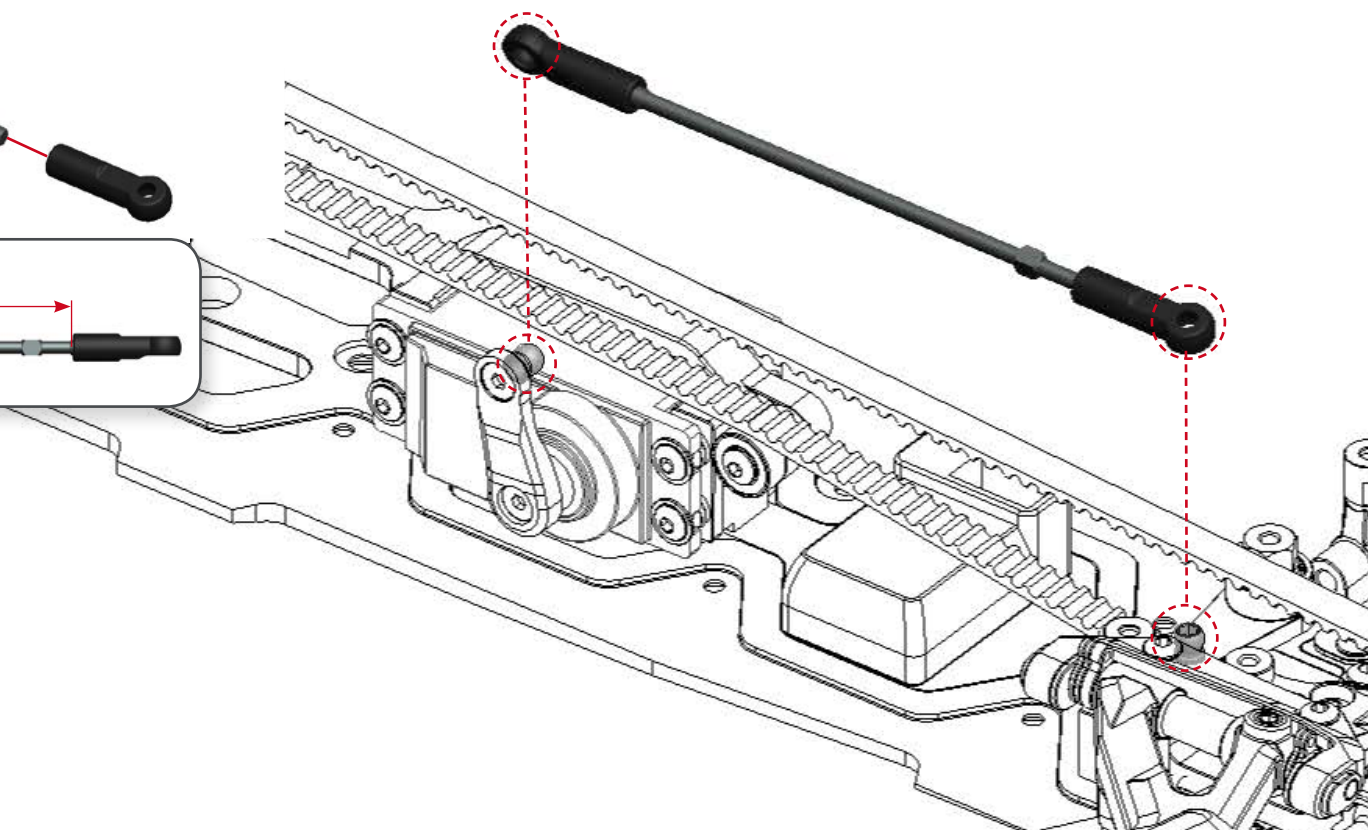
26.1



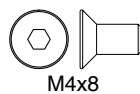
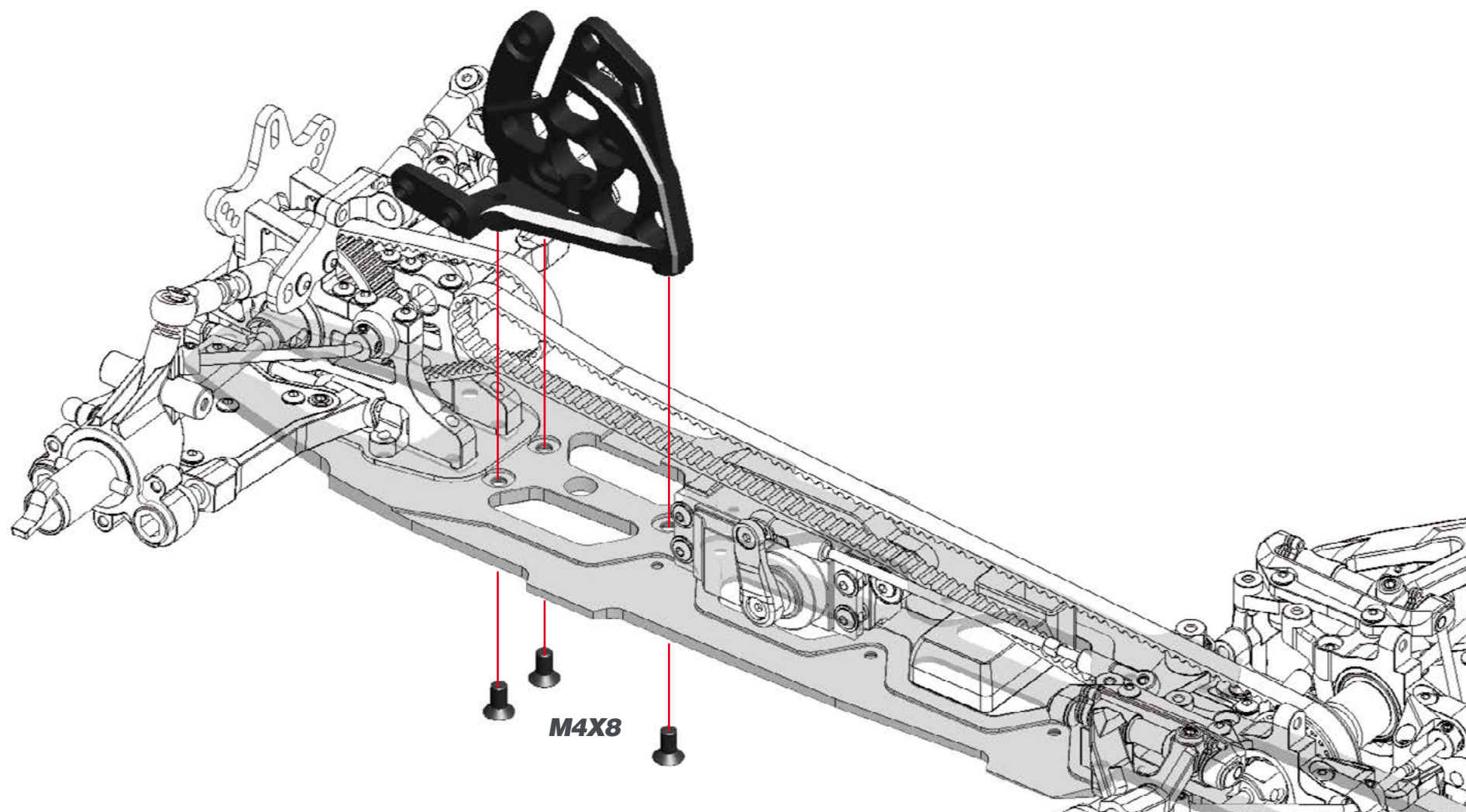
26.2

STEERING TRACKROD LENGTH

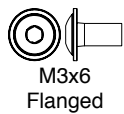
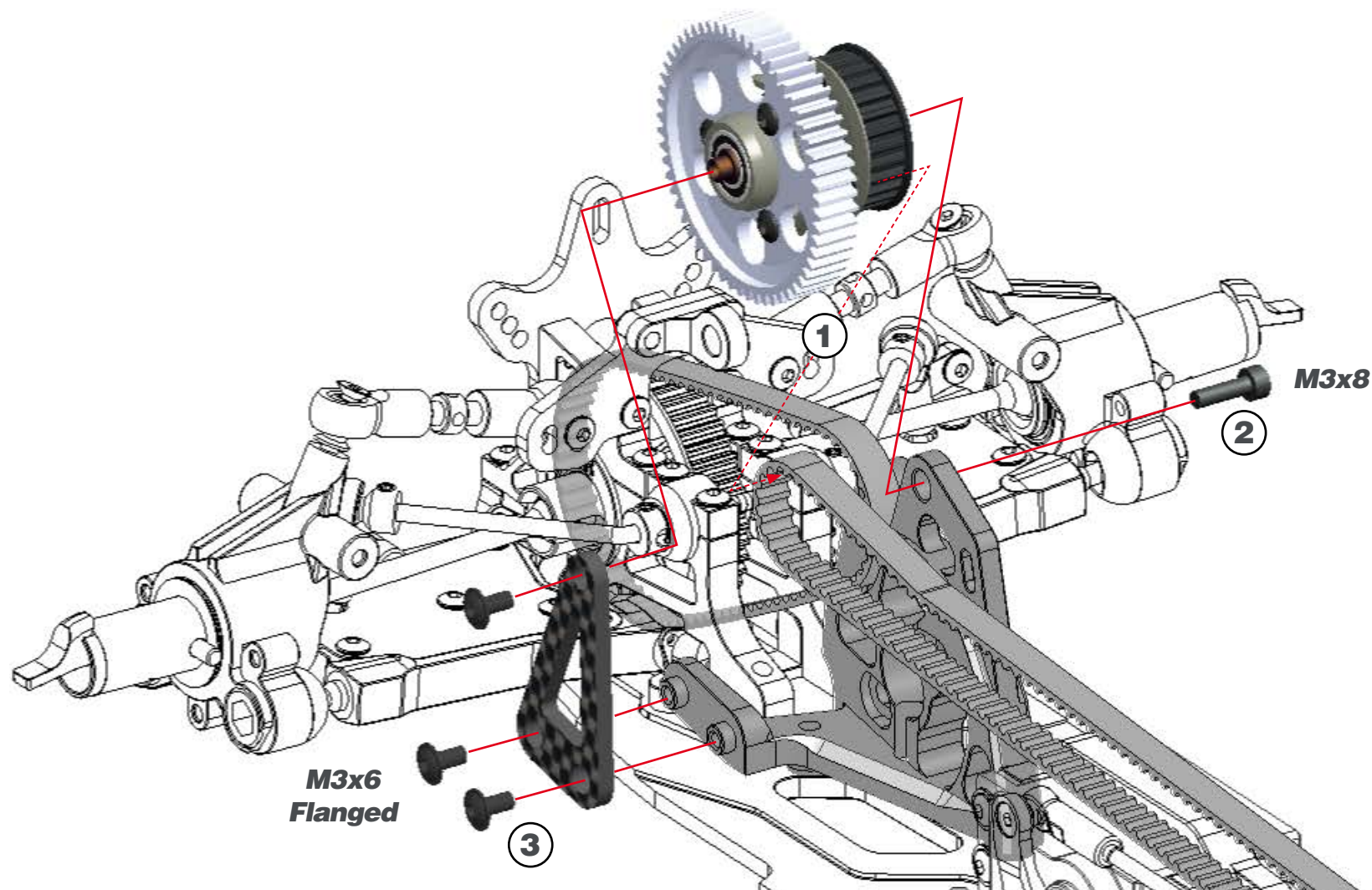
73.5 mm



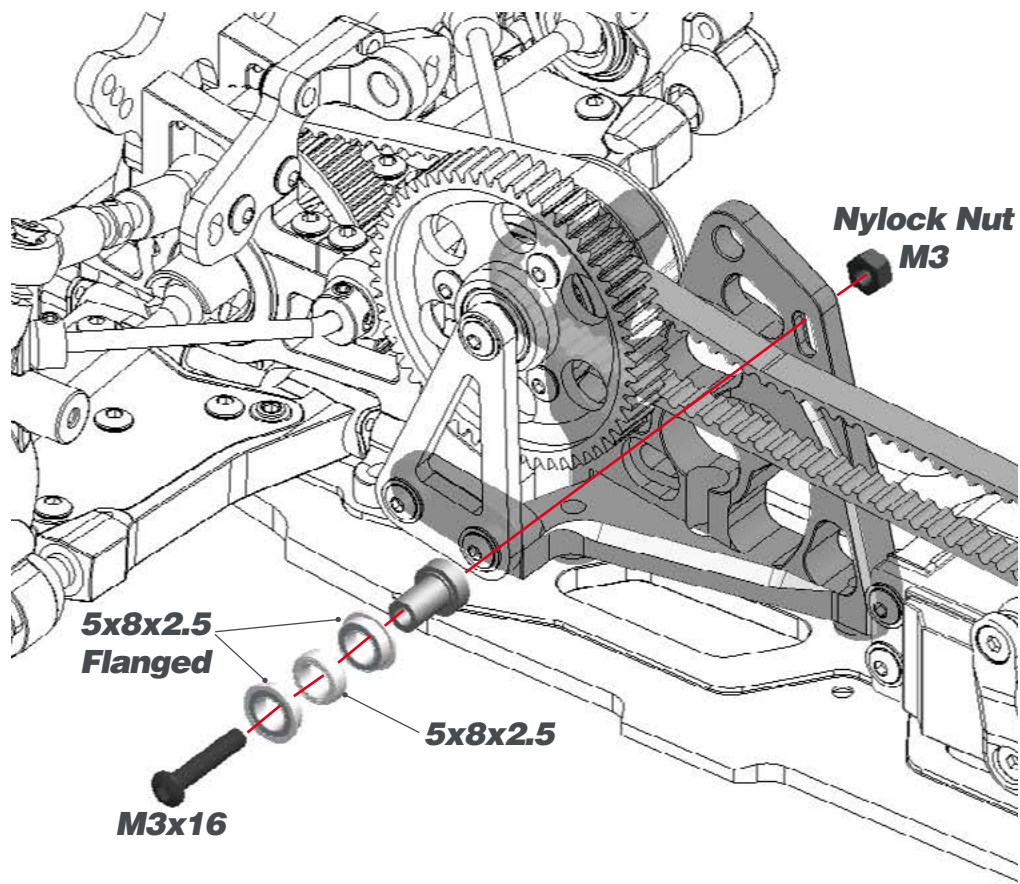
STEP 27 **BAG 9**



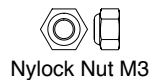
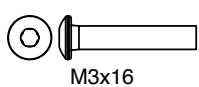
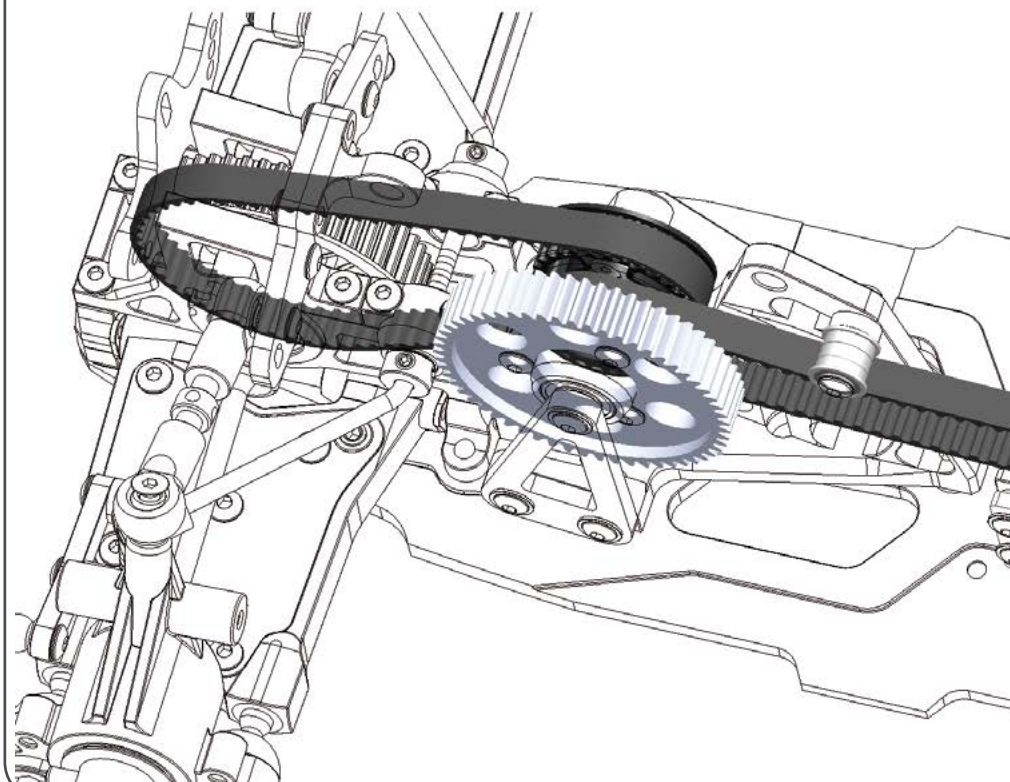
STEP 29



STEP 30



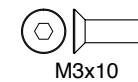
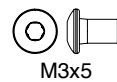
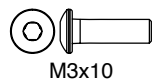
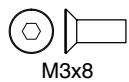
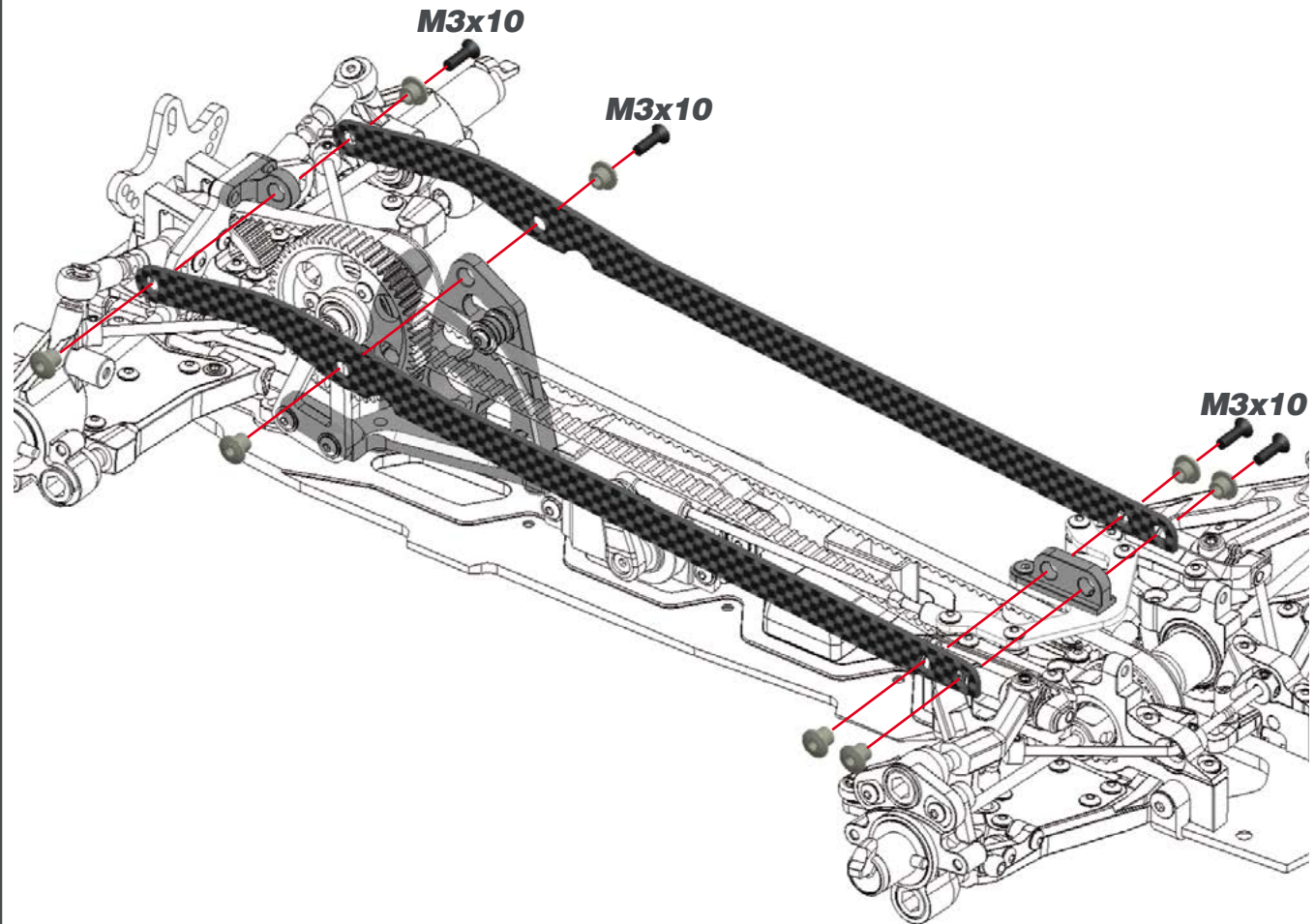
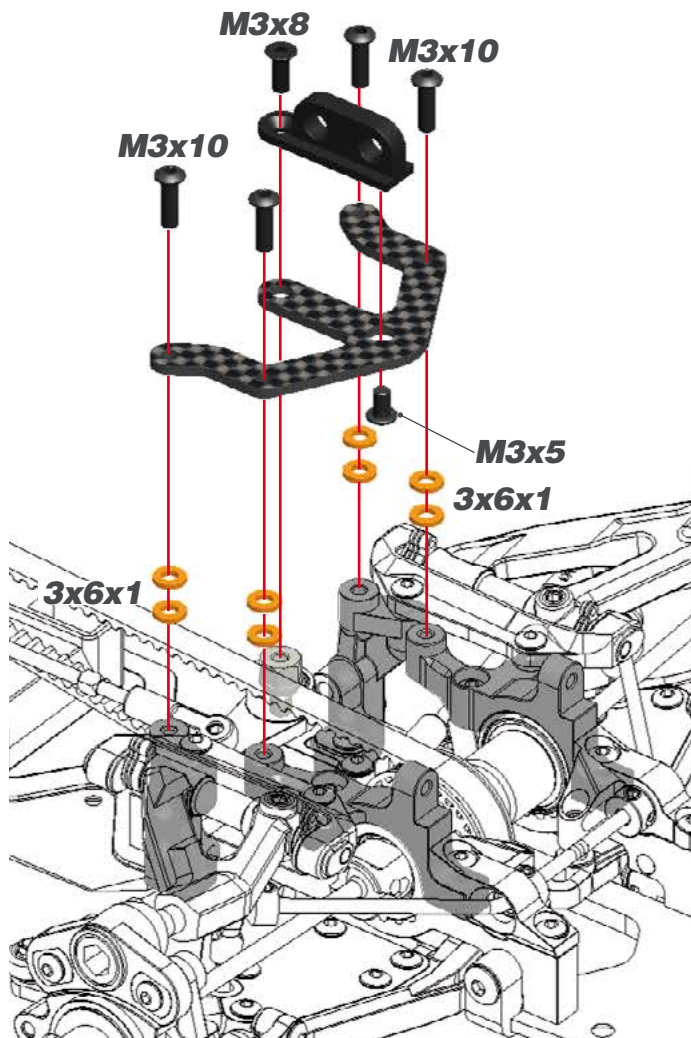
BELTS ASSEMBLY DETAIL VIEW



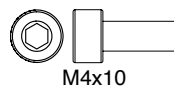
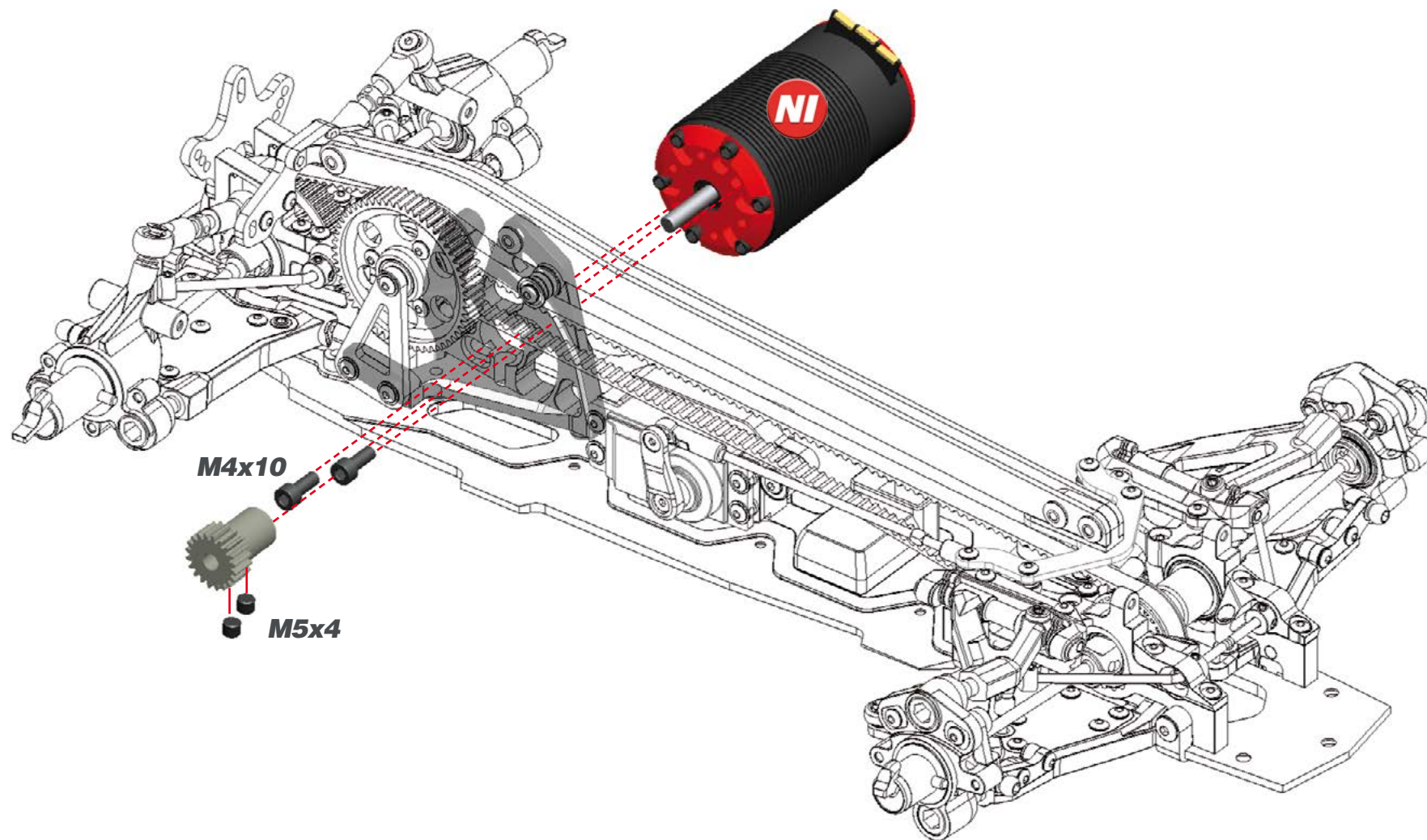
STEP 31

BAG 10

STEP 32

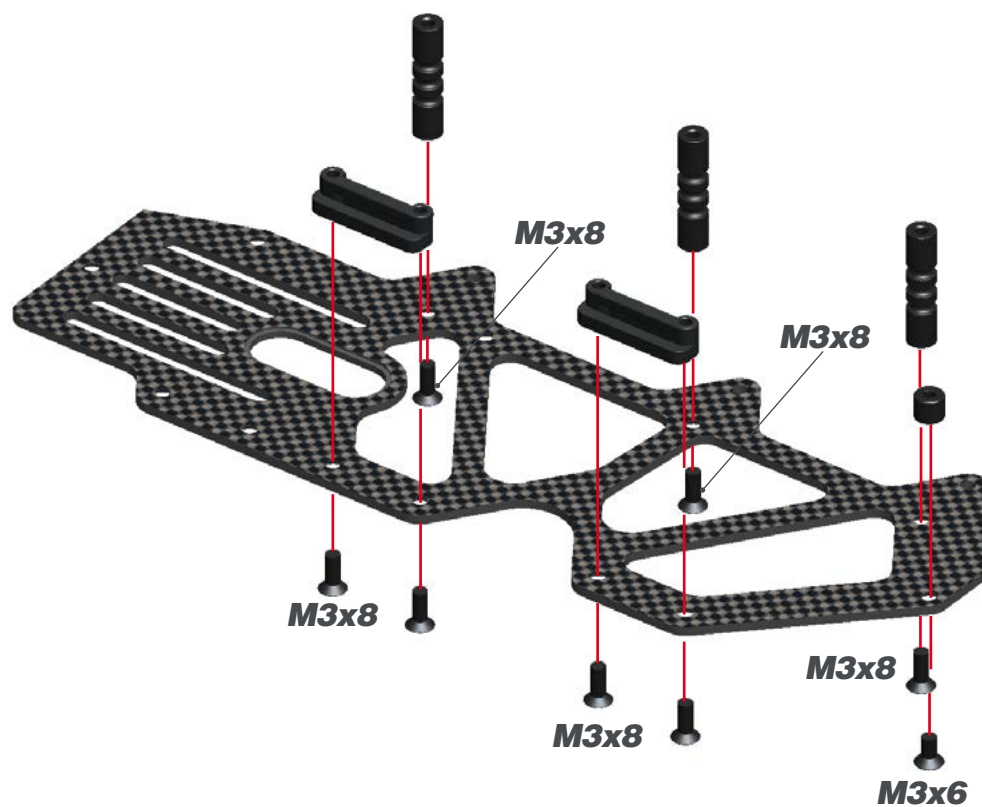


STEP 33

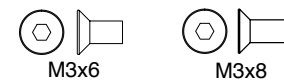
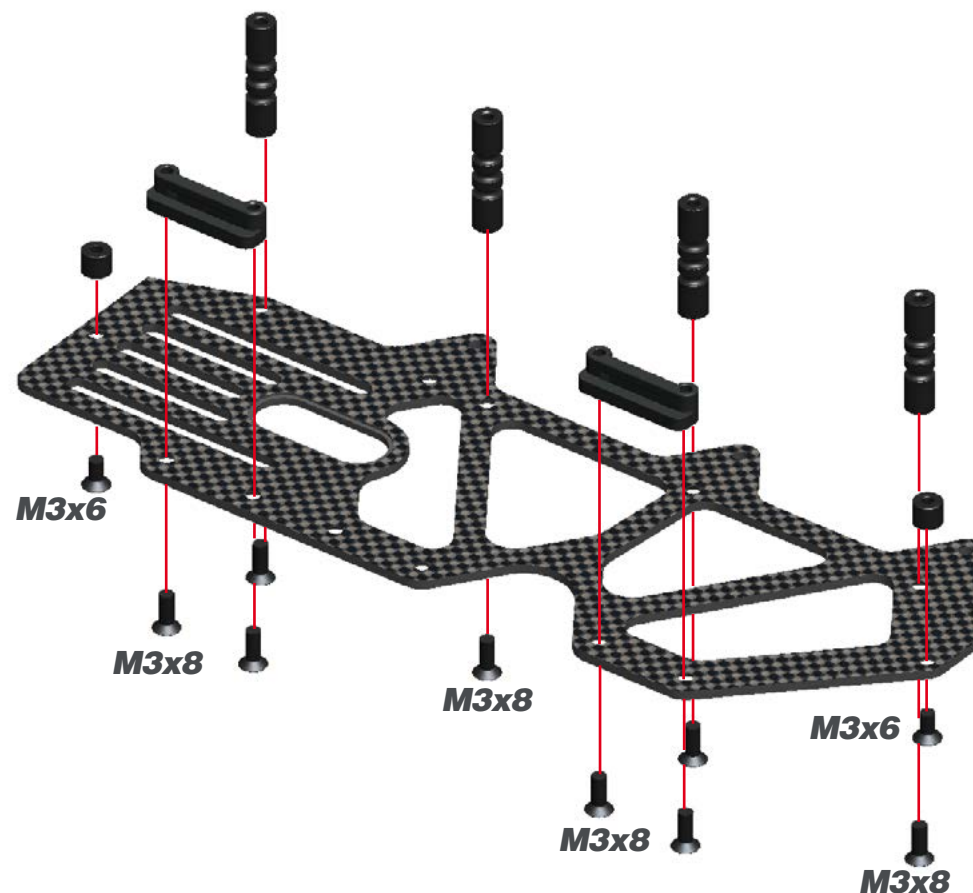


STEP 34 BAG 11

4S BATTERY CONFIGURATION **DEFAULT**

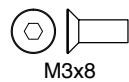
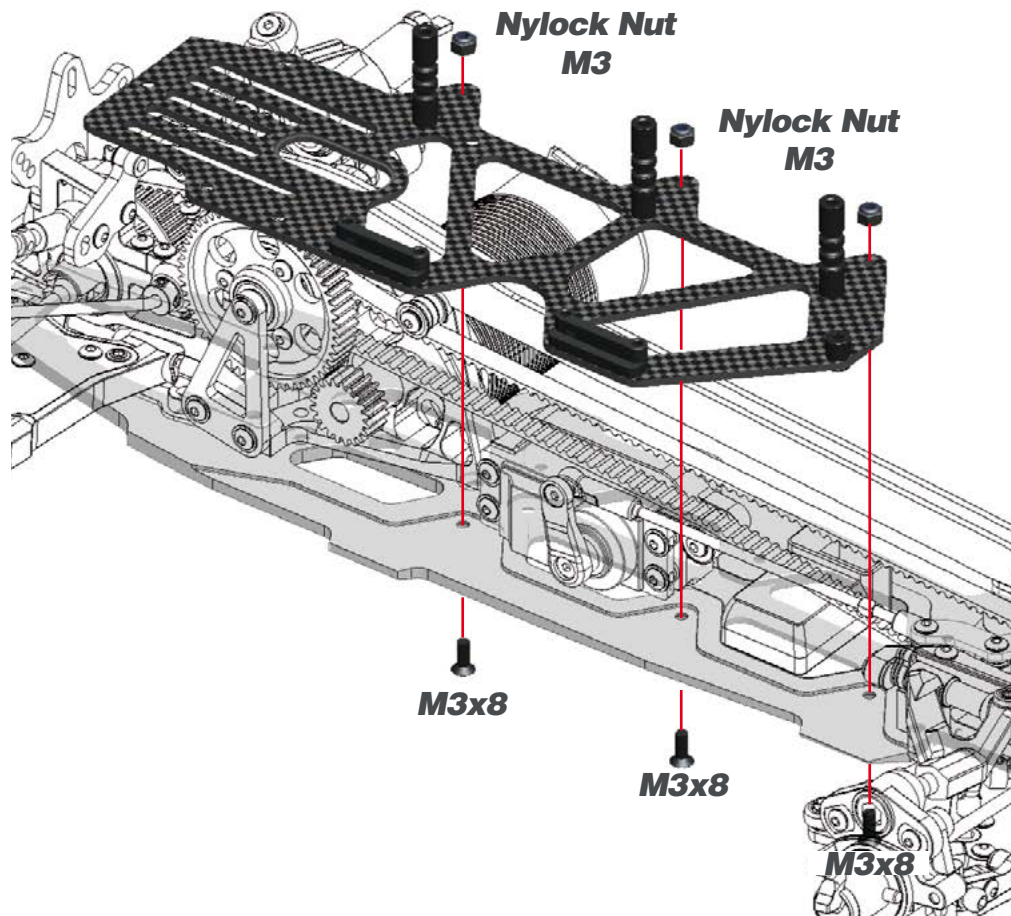


6S BATTERY CONFIGURATION **OPTIONAL**

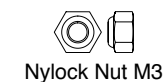
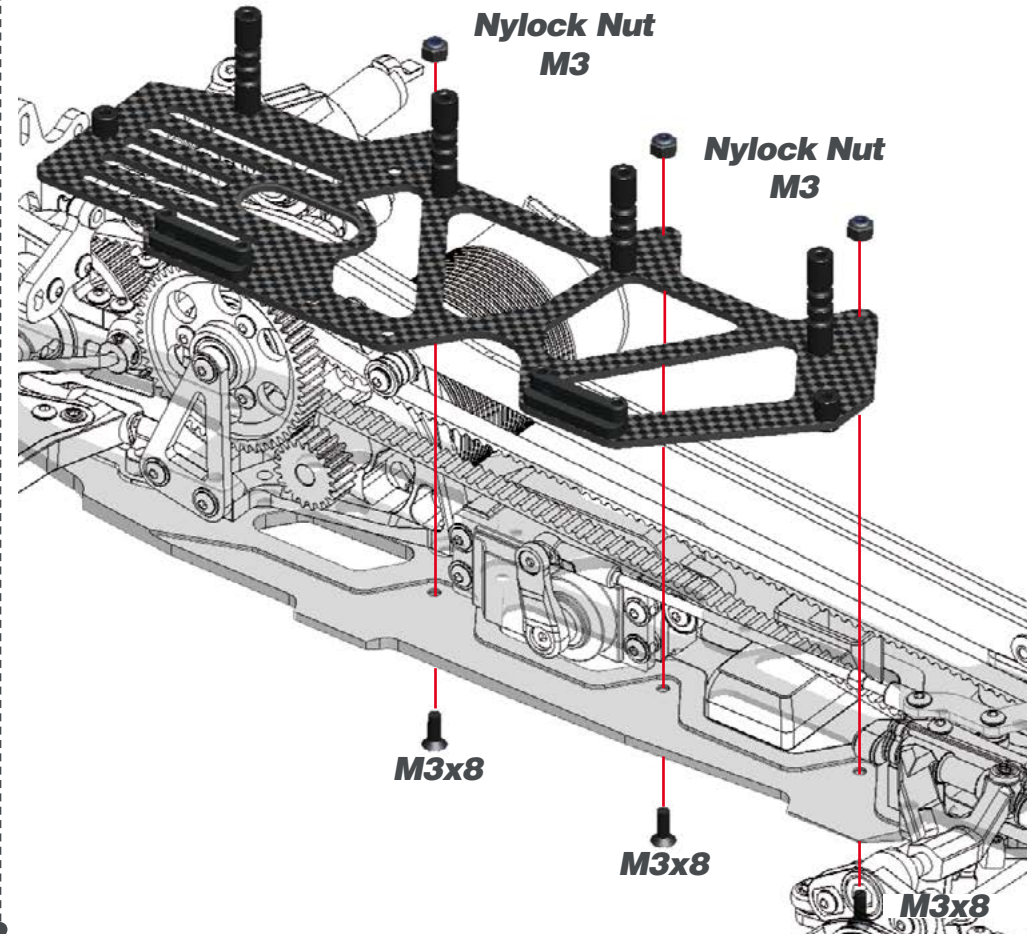


STEP 35

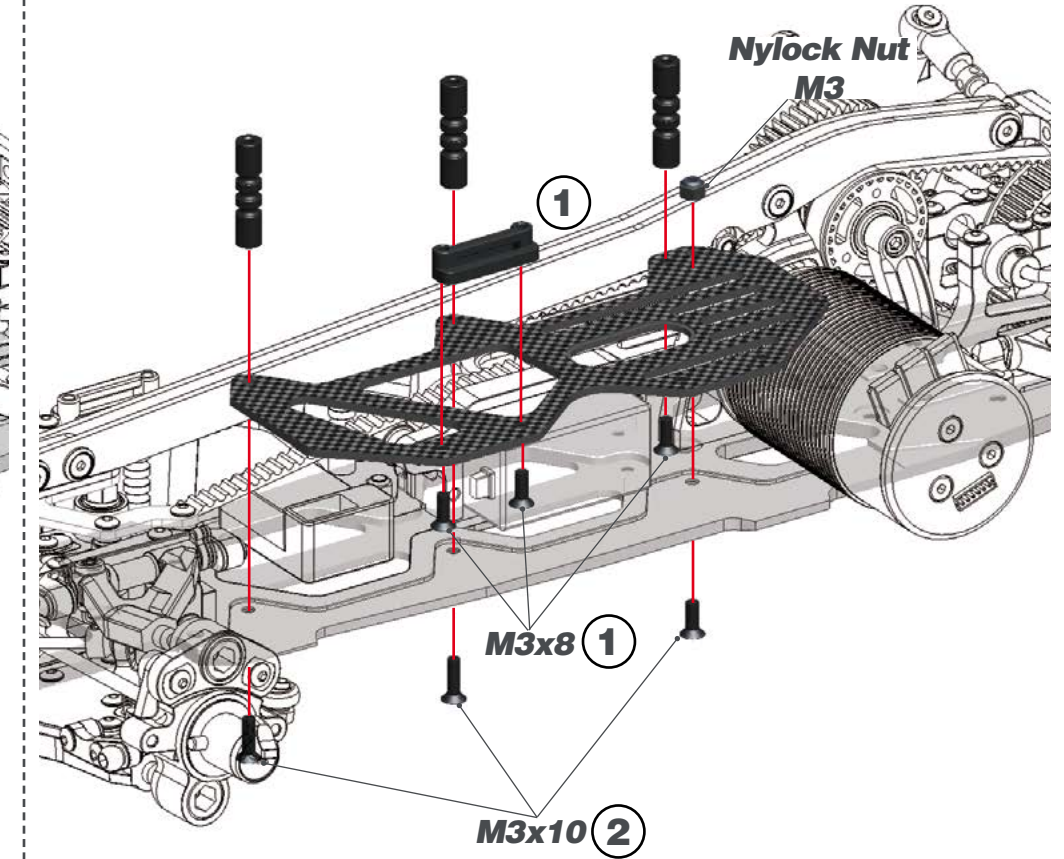
4S BATTERY CONFIGURATION **DEFAULT**



6S BATTERY CONFIGURATION **OPTIONAL**

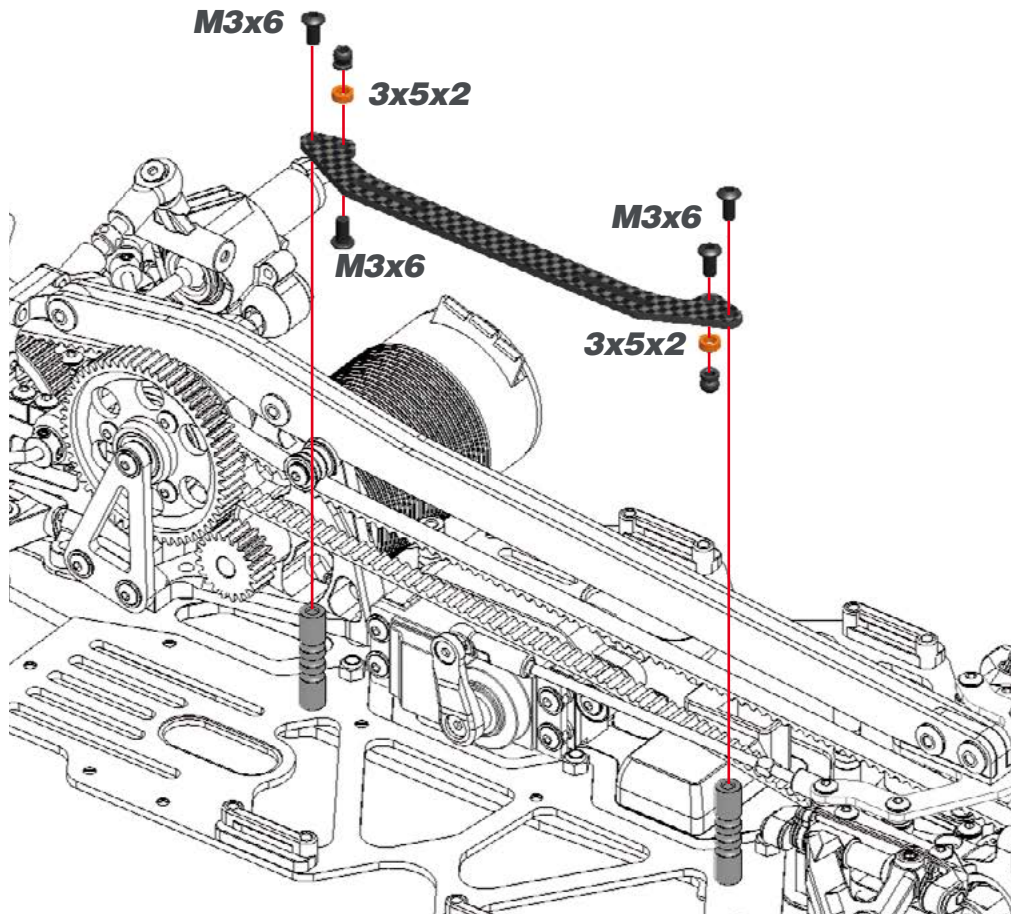


6S BATTERY CONFIGURATION *OPTIONAL*

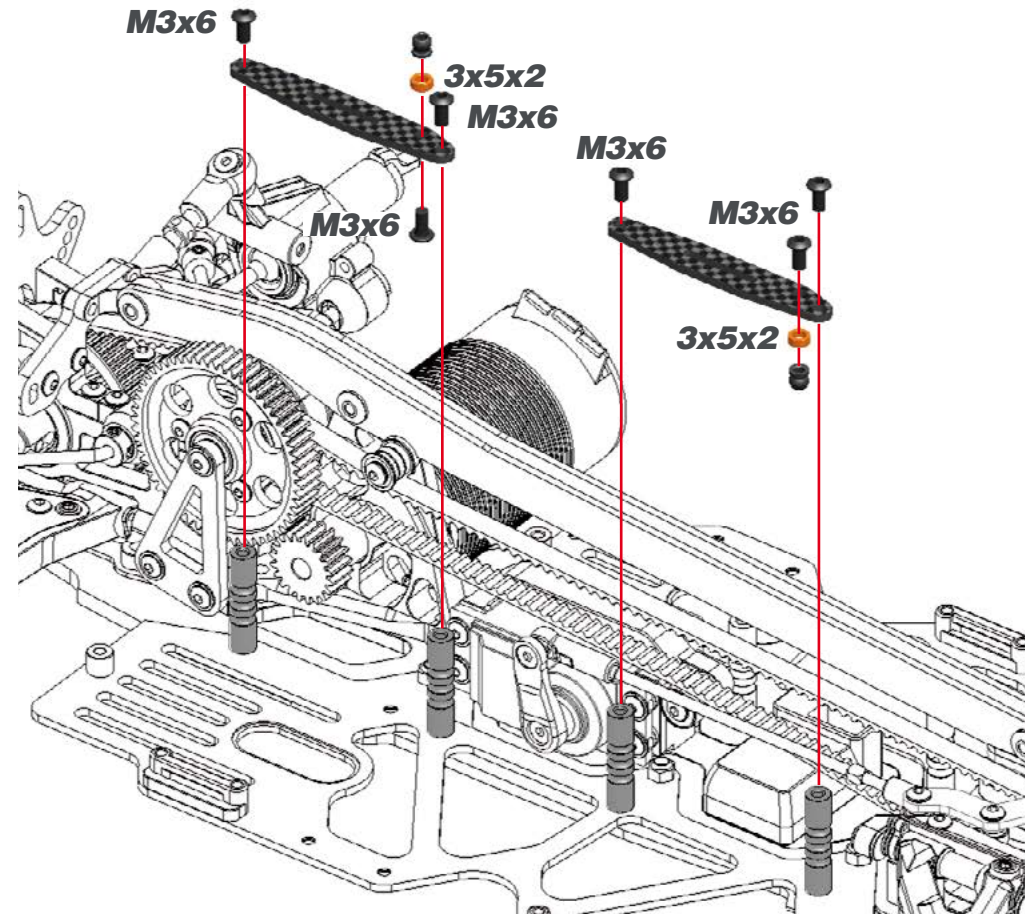


STEP 37

4S BATTERY CONFIGURATION *DEFAULT*

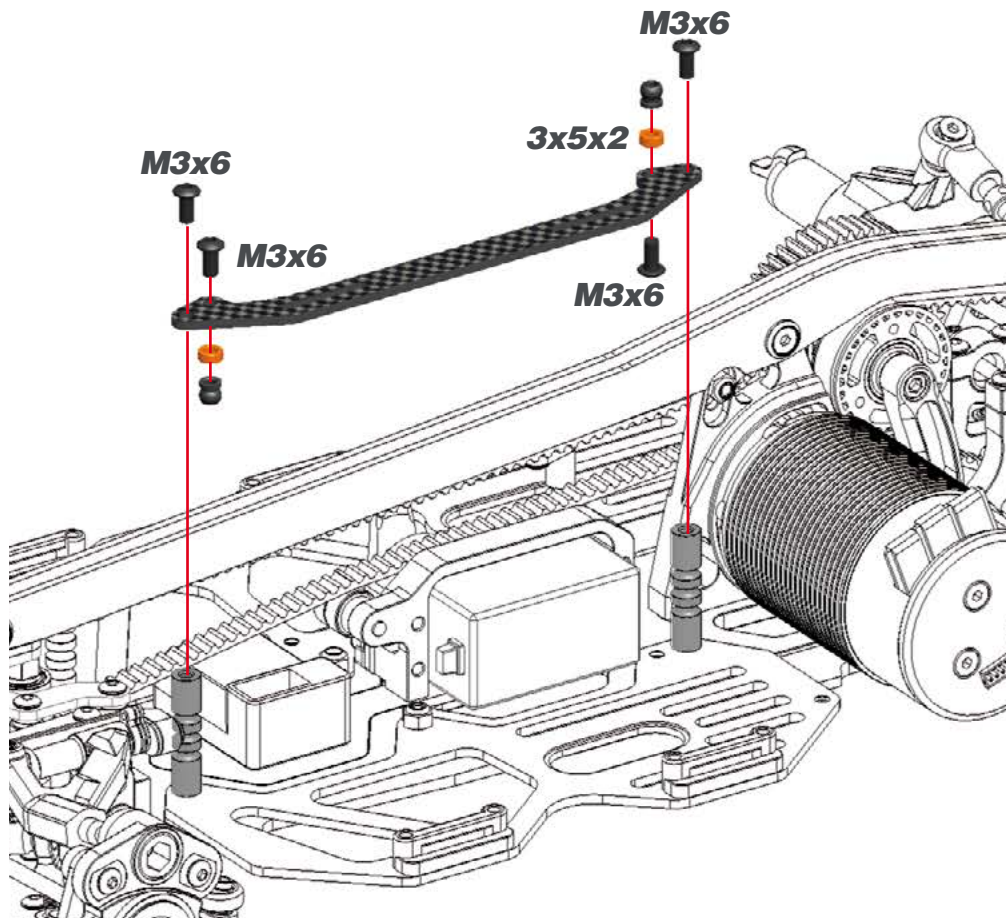


6S BATTERY CONFIGURATION *OPTIONAL*

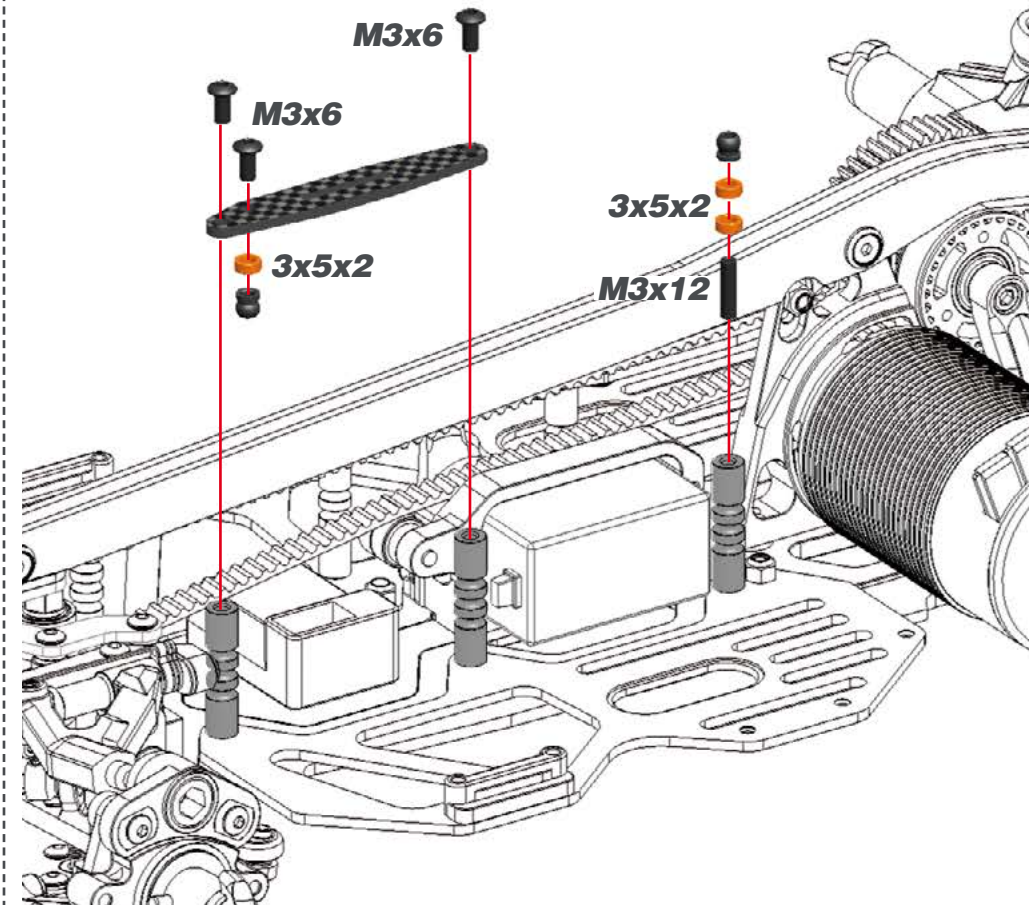


STEP 38

45 BATTERY CONFIGURATION *DEFAULT*



65 BATTERY CONFIGURATION *OPTIONAL*



STEP 39

4S BATTERY CONFIGURATION **DEFAULT**

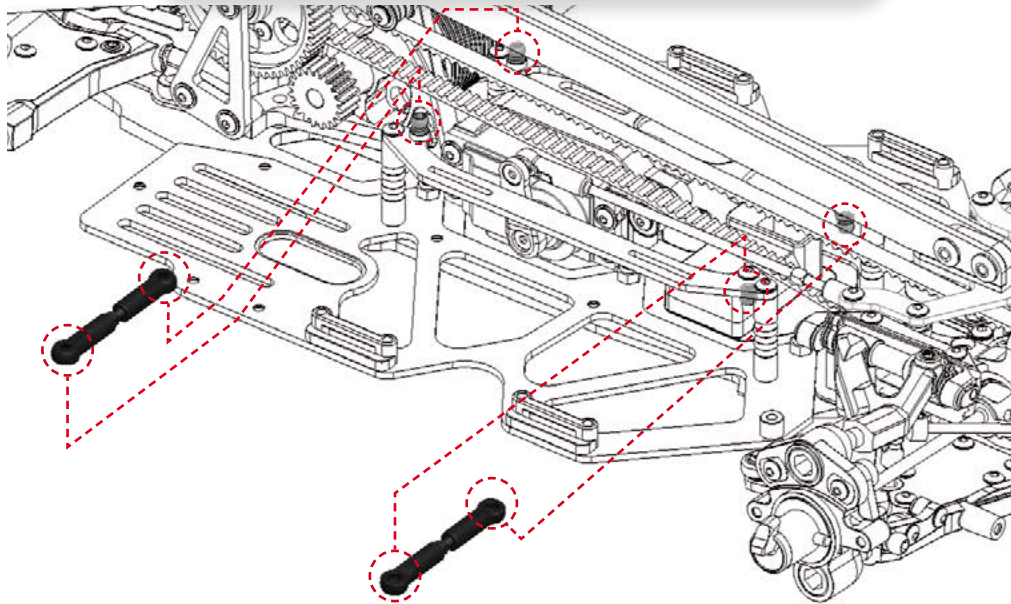
39.1



39.2

BATTERY ROD LENGTH

5 mm



6S BATTERY CONFIGURATION **OPTIONAL**

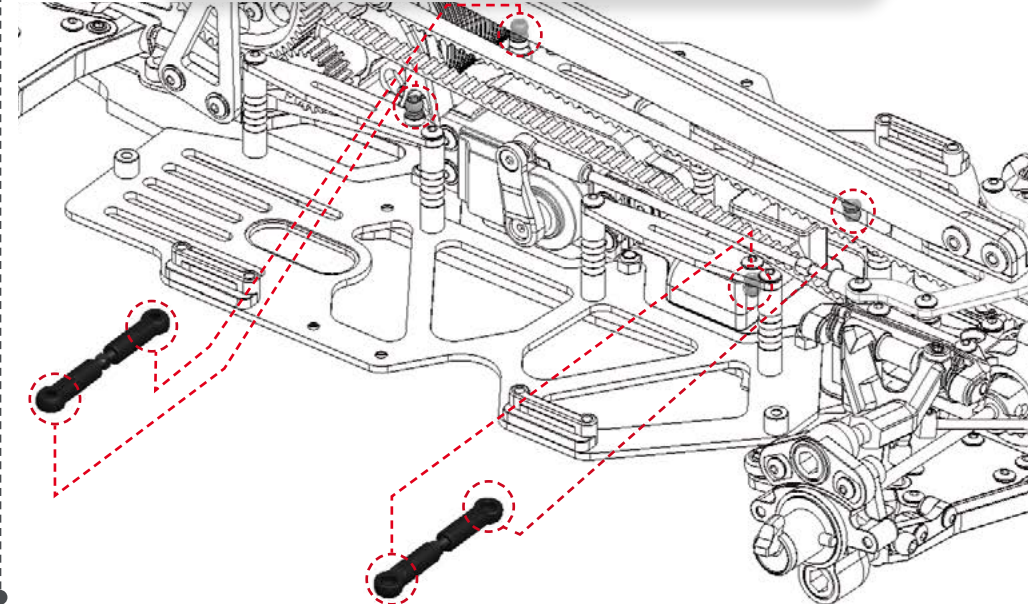
39.1



39.2

BATTERY ROD LENGTH

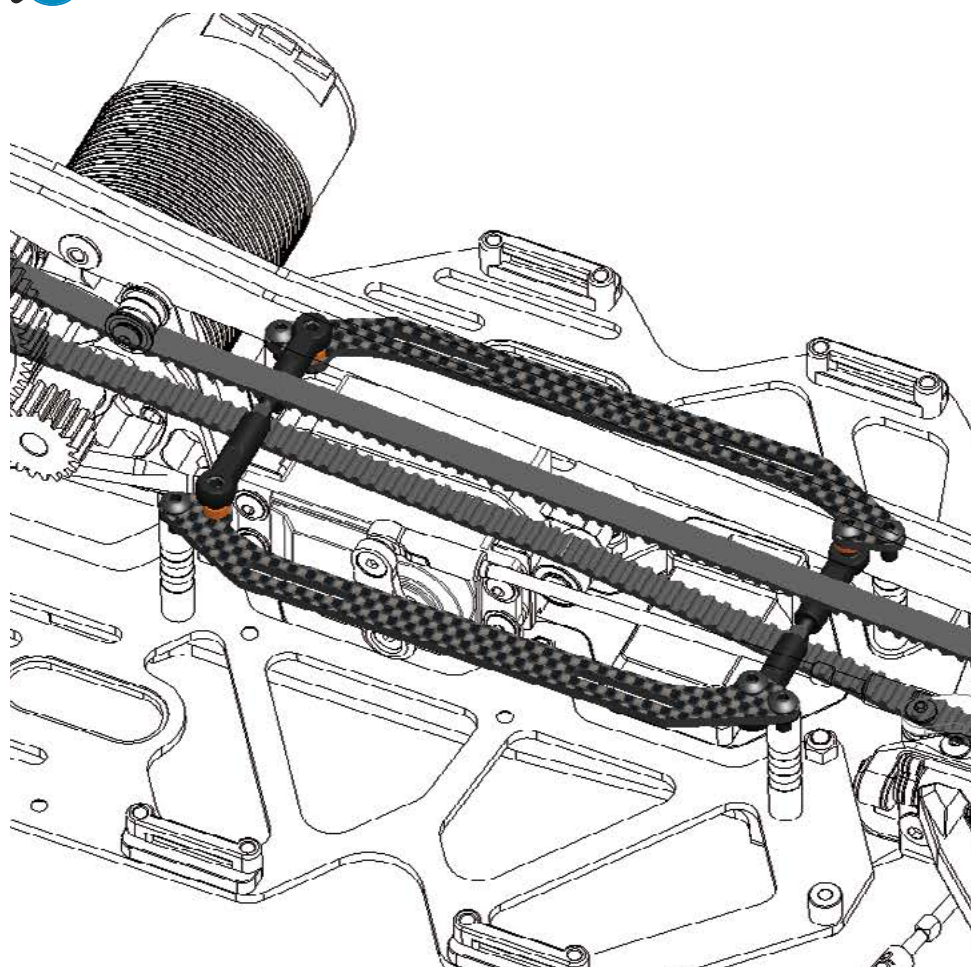
7 mm



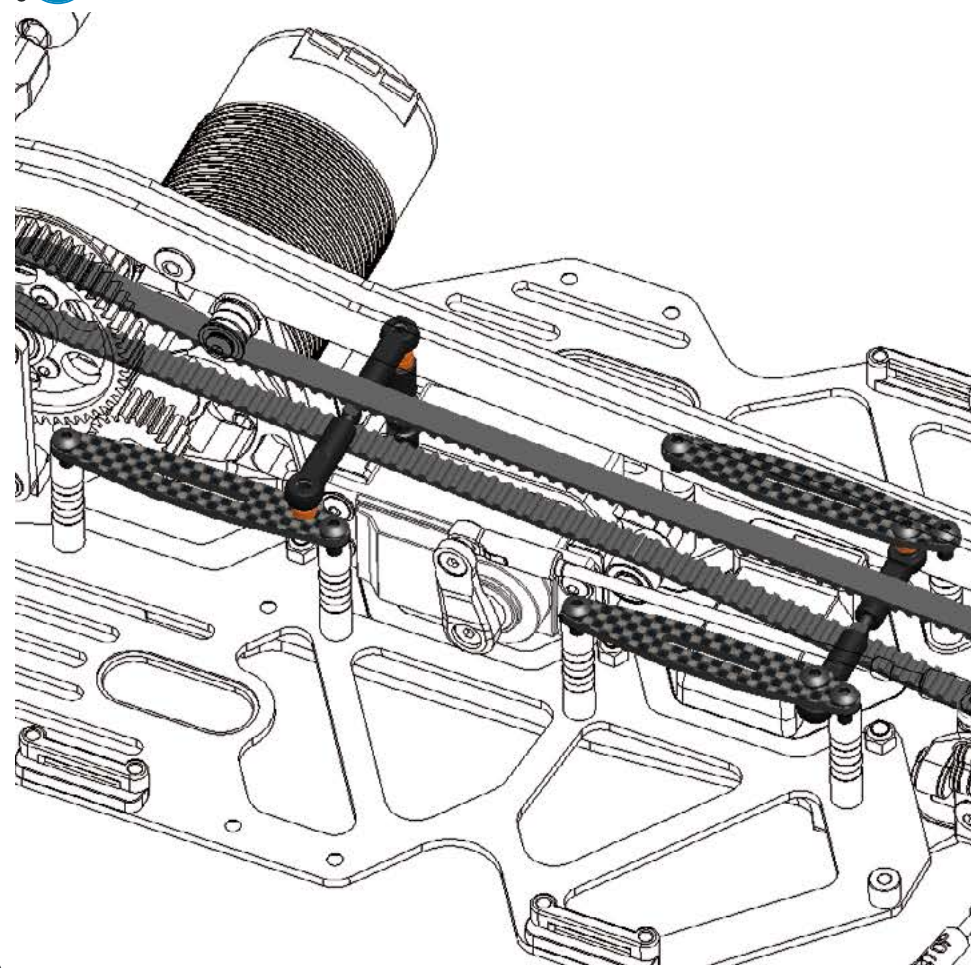
STEP 39



4S BATTERY CONFIGURATION DETAIL VIEW **DEFAULT**



6S BATTERY CONFIGURATION DETAIL VIEW **OPTIONAL**

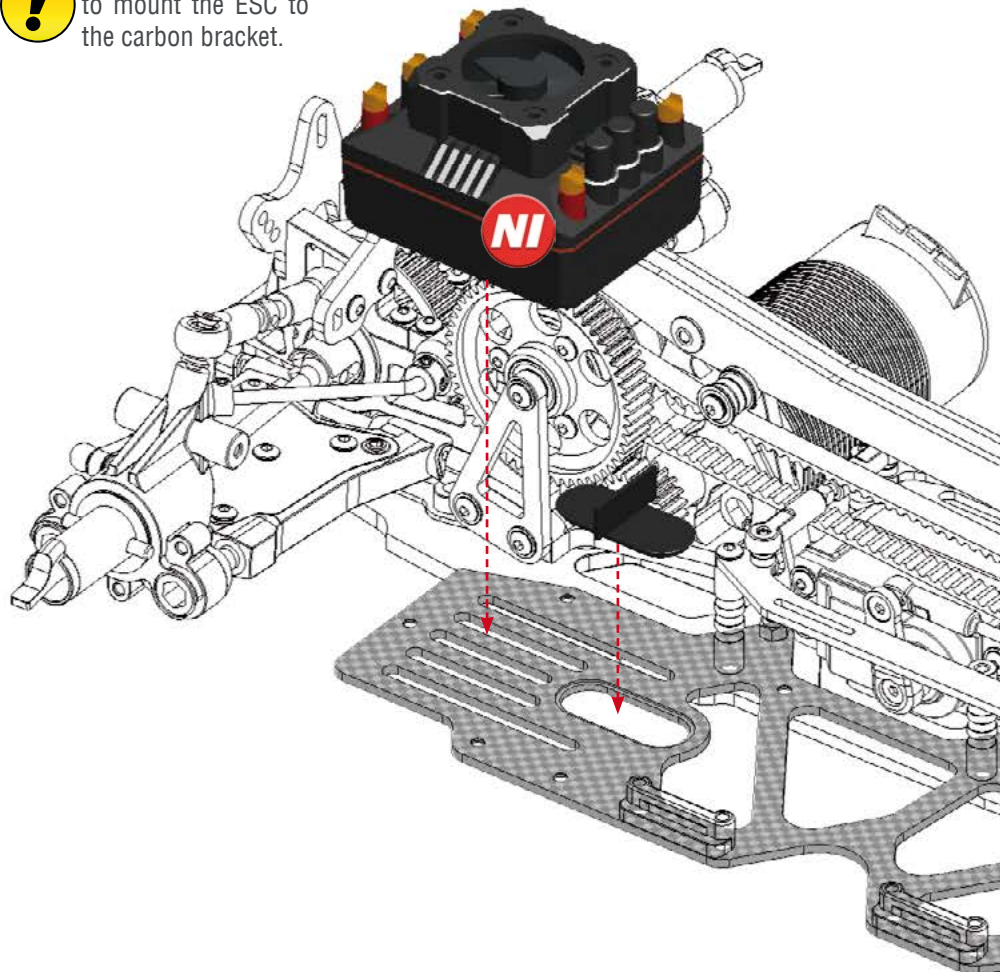


STEP 40

4S BATTERY CONFIGURATION **DEFAULT**



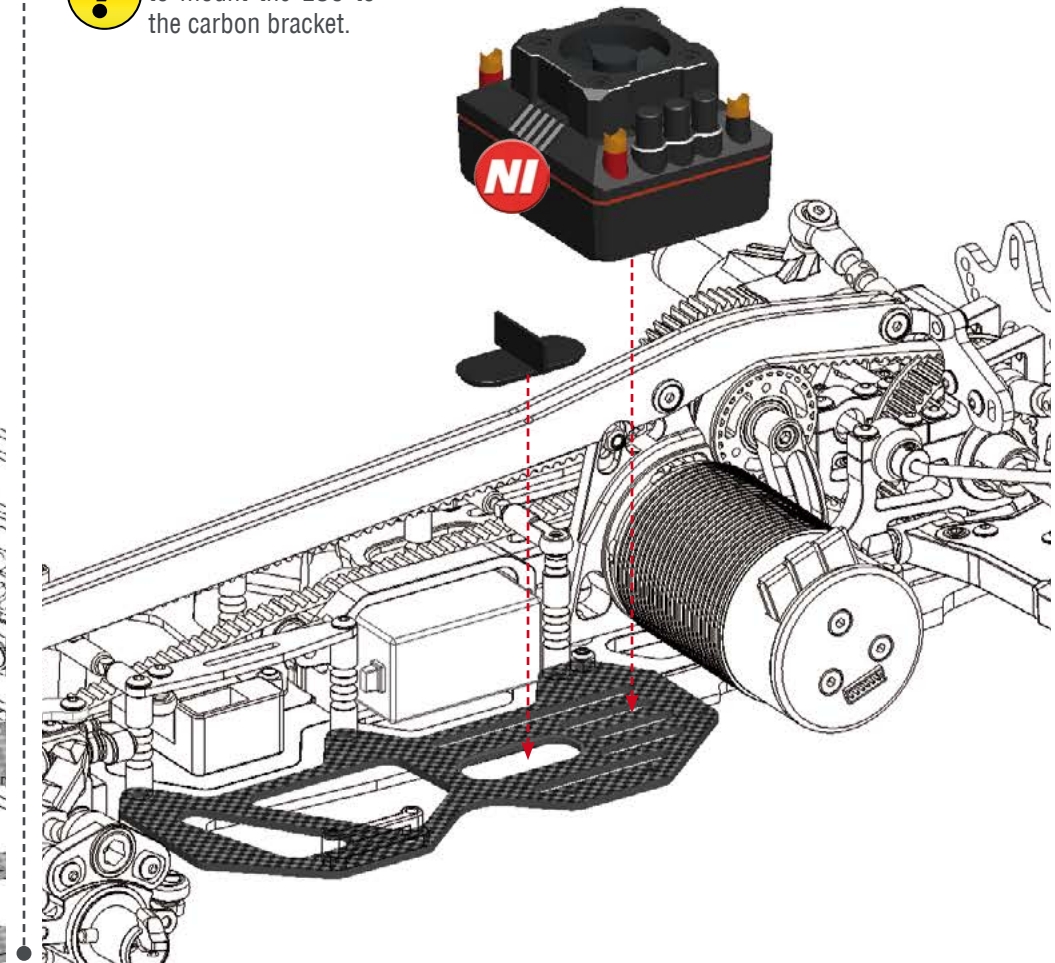
Use double sided tape to mount the ESC to the carbon bracket.



6S BATTERY CONFIGURATION **OPTIONAL**

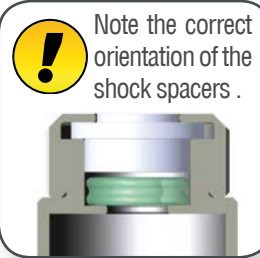
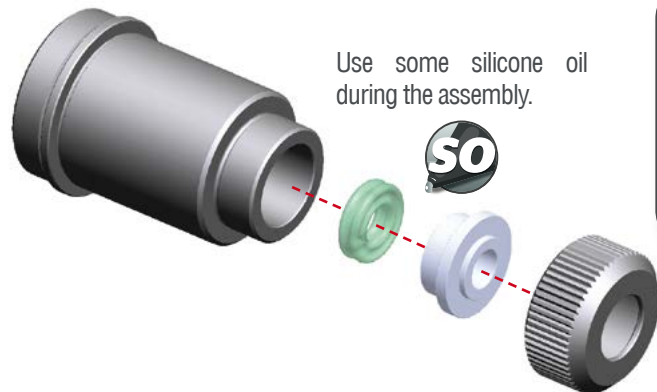


Use double sided tape to mount the ESC to the carbon bracket.

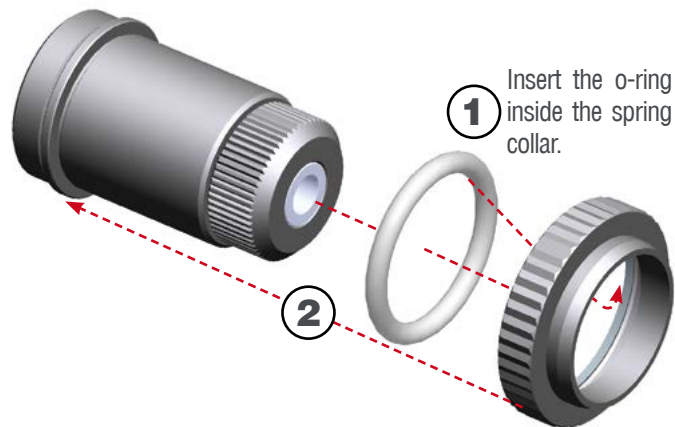


STEP 41 SHOCKS BAG

41.1



41.2

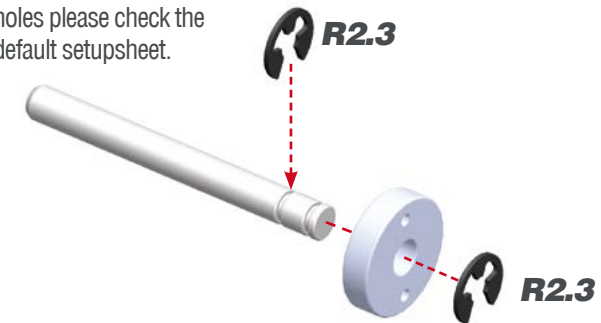


STEP 42

42.1



For the correct piston holes please check the default setupsheet.



42.2



FRONT



REAR



R2.3

STEP 43

43.1

Push the shock top and the membrane into the shock cap.



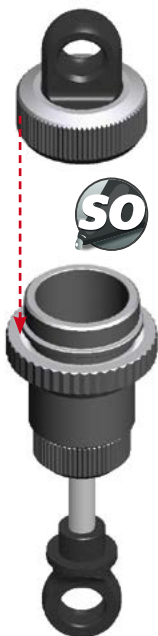
43.2

1- Fill up with silicone oil fully using the silicone oil supplied in the kit. For the correct cst value please check the default setupsheet.

2- Extend the shockrod fully

3- Move the shockrod slowly up and down to let ALL air bubbles escape.

4- Close top only 3/4.



43.3

1-Bleed: push the shockrod all the way in slowly, to allow excessive oil to escape.

2- Close the shock cap completely.



SHOCKS LENGTH:

Measure the shock length fully extended.

FRONT

14 mm

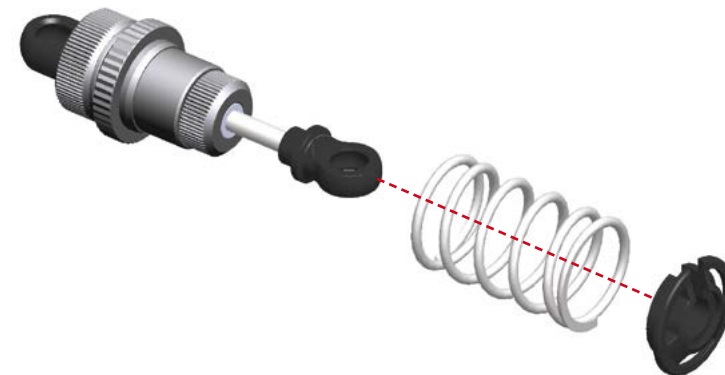
REAR

14.5 mm

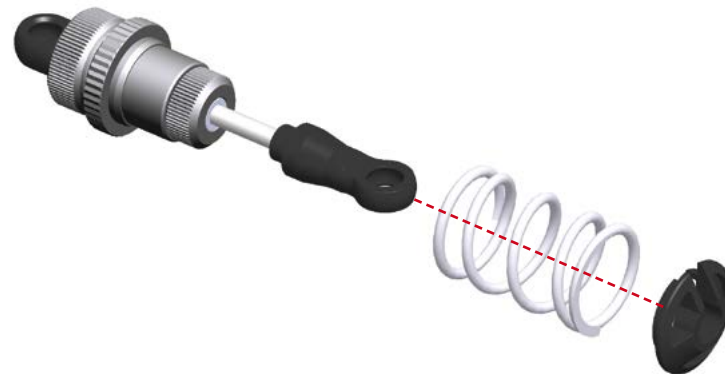
STEP 44

Assemble the spring and spring-cup (align correctly) to complete the shock.

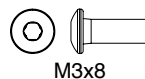
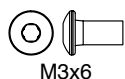
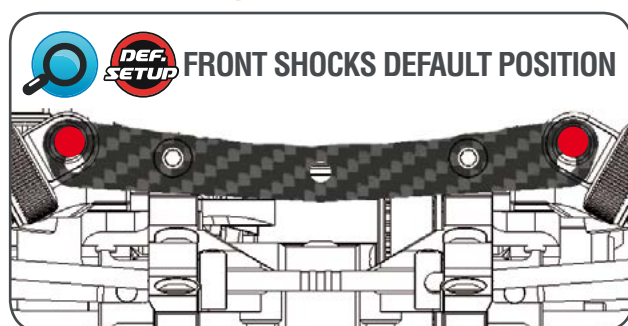
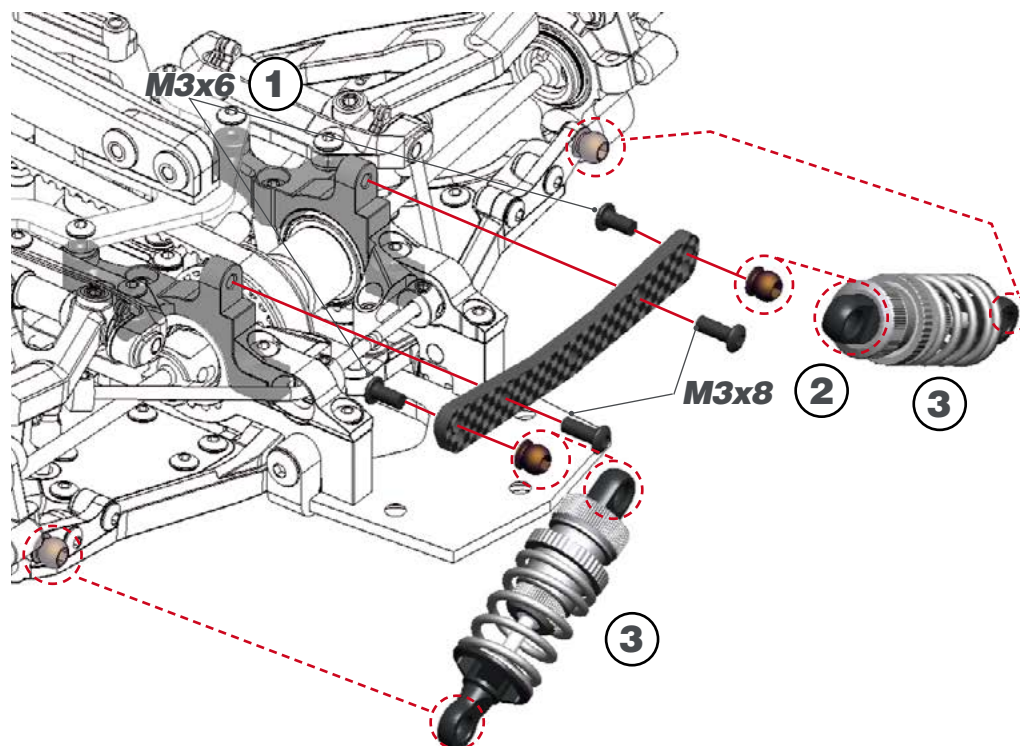
FRONT



REAR

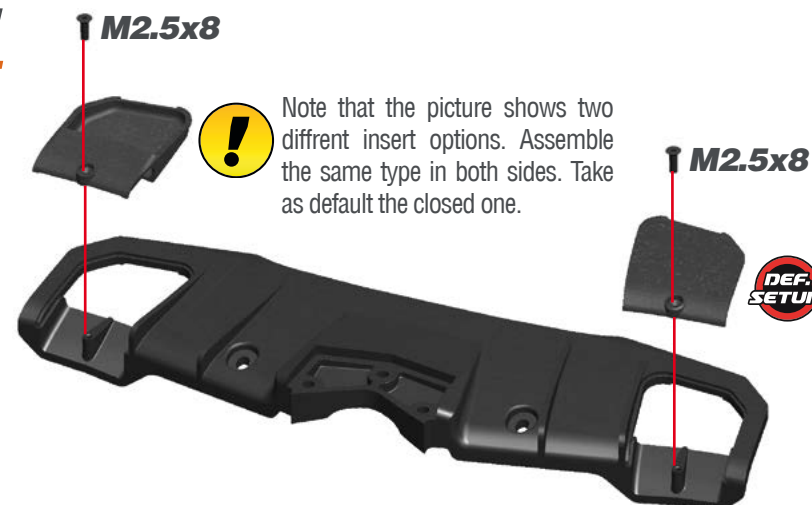


STEP 45 BAG 12

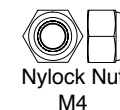
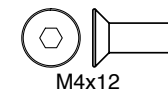
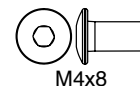
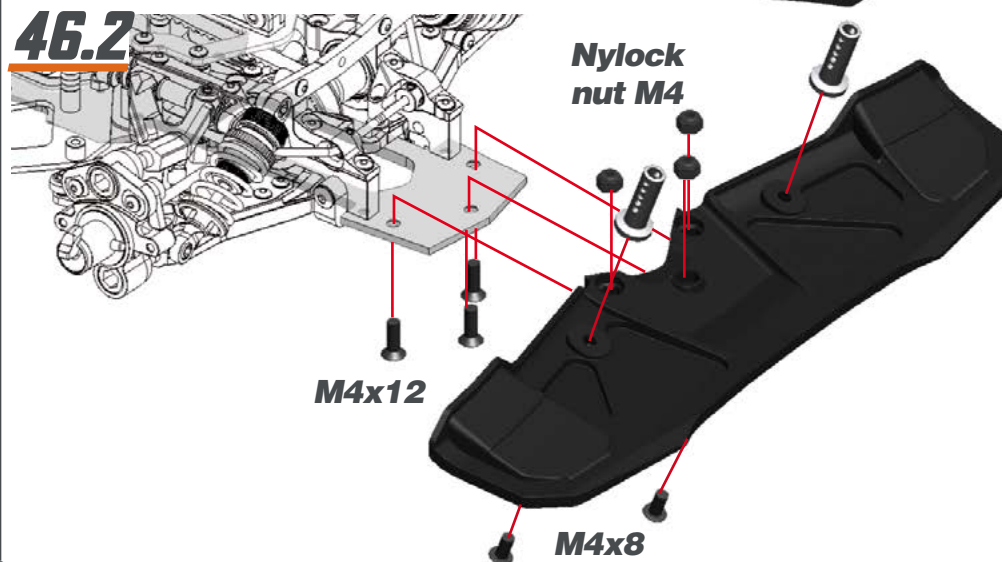


STEP 46

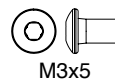
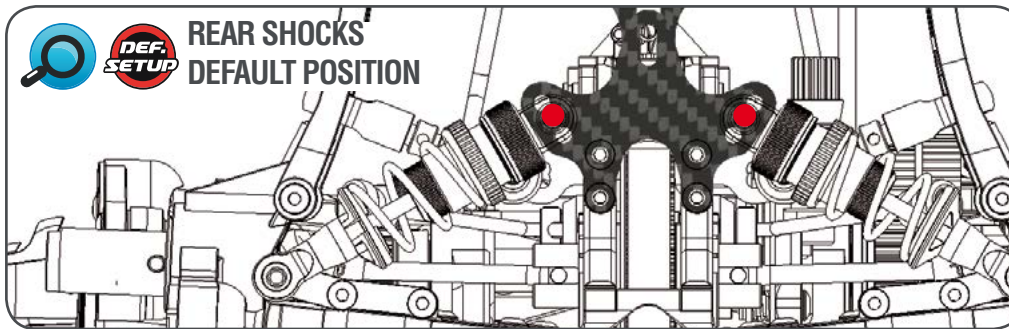
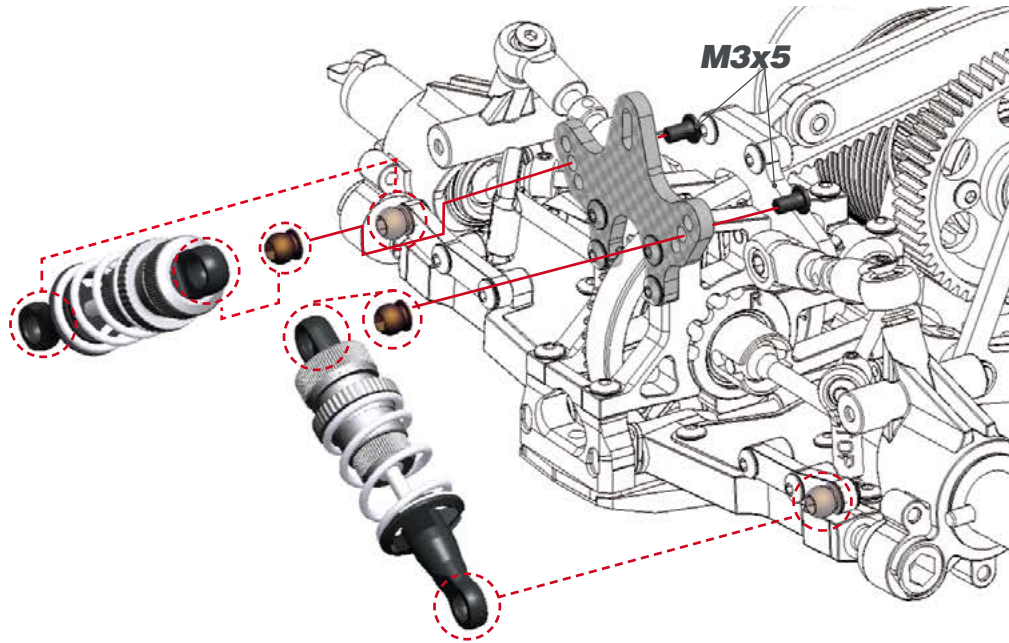
46.1



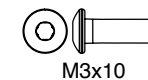
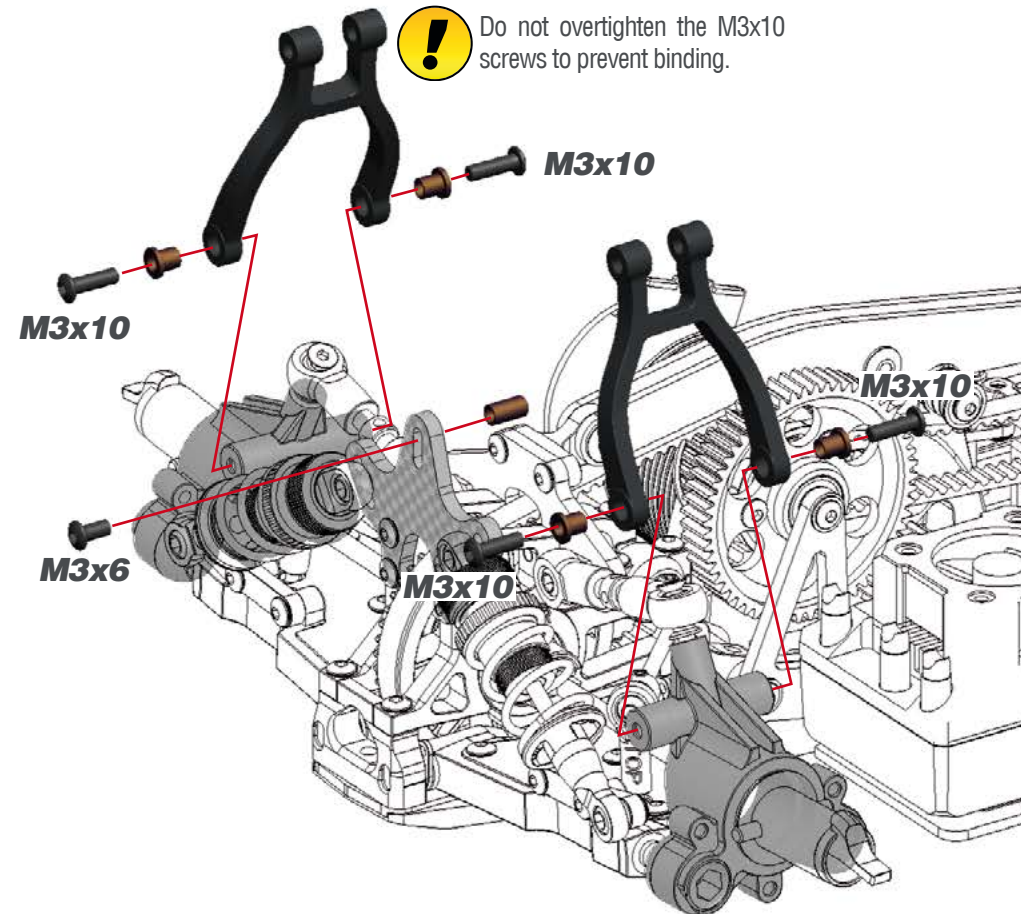
46.2



STEP 47

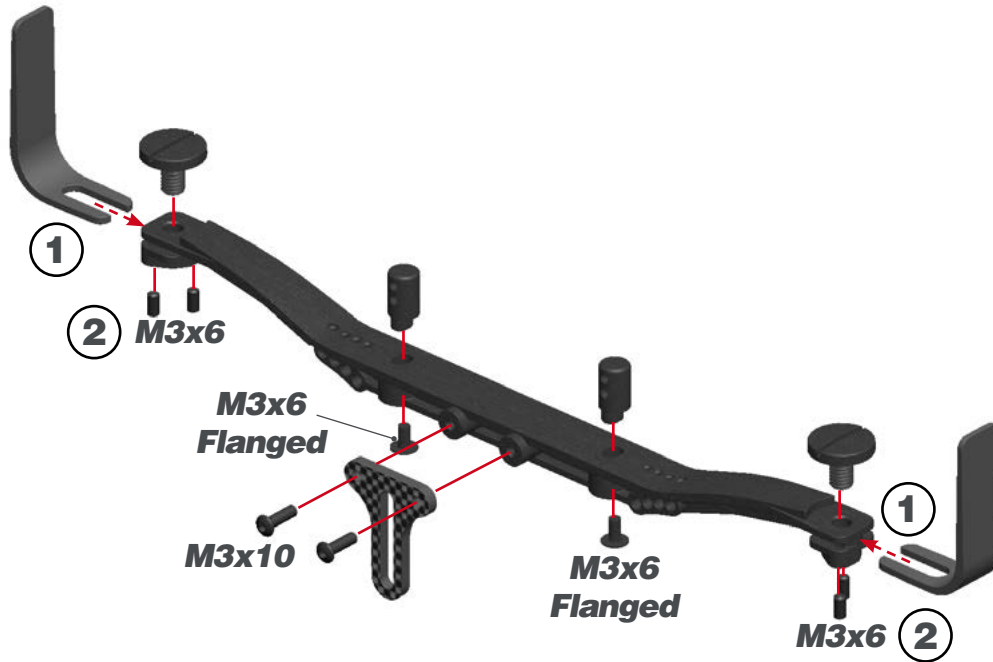


STEP 48

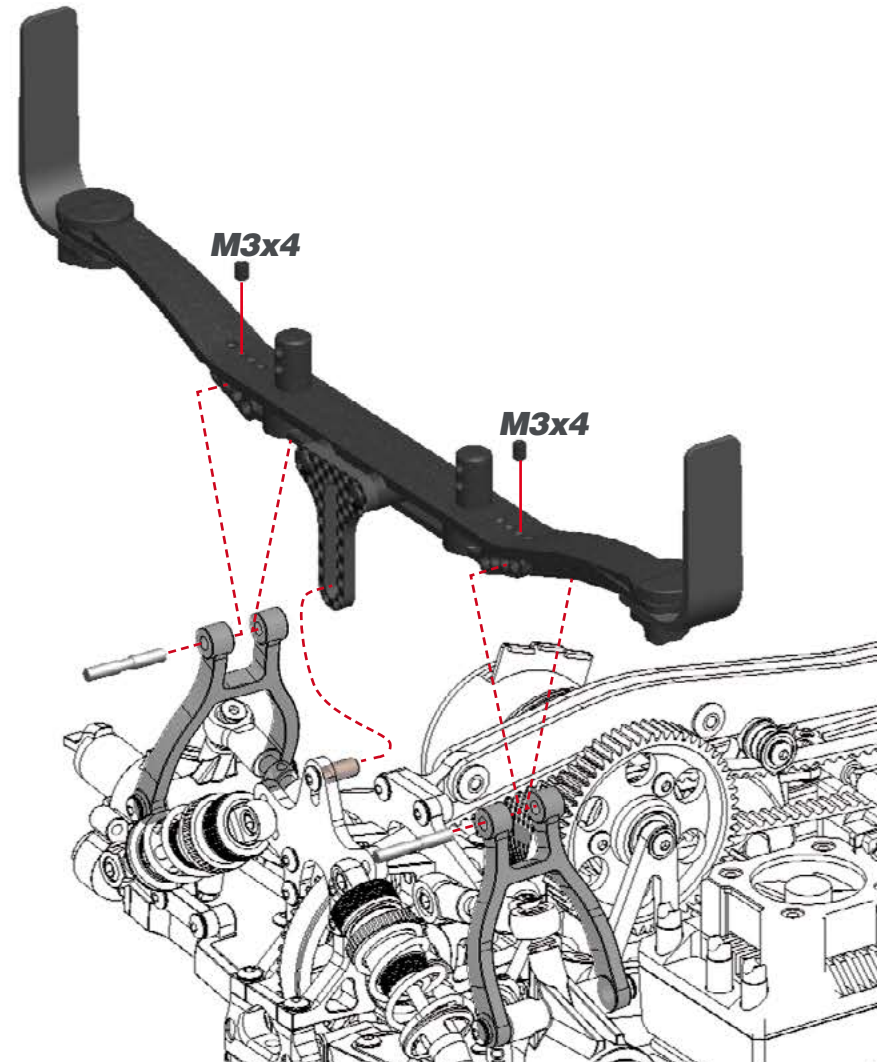


STEP 49

49.1

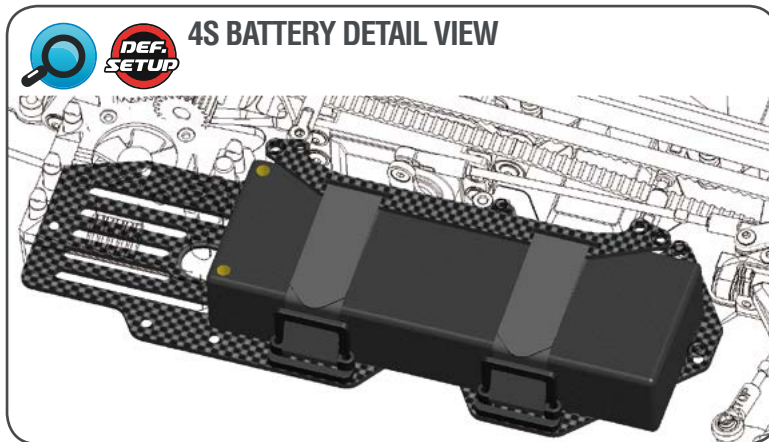
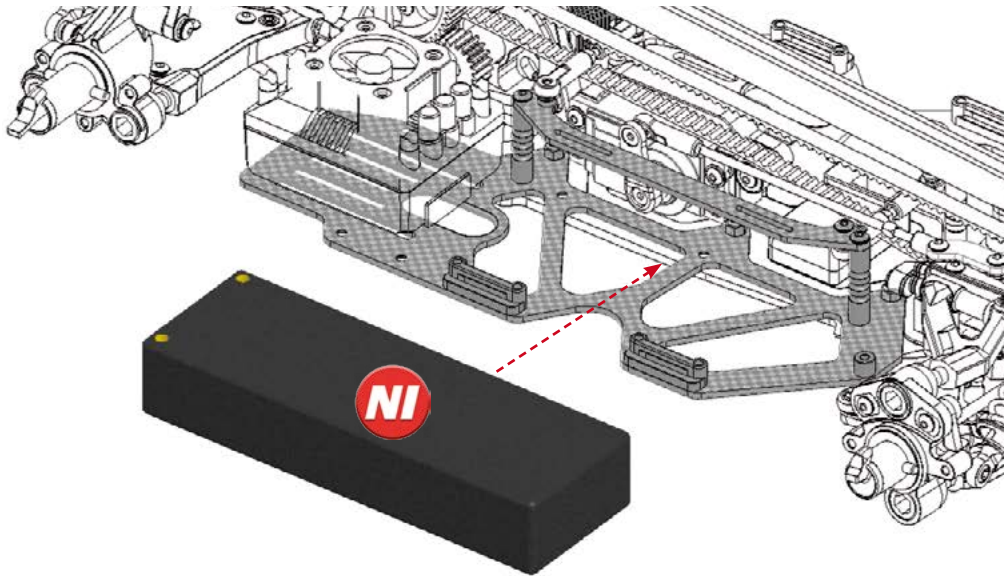


49.2

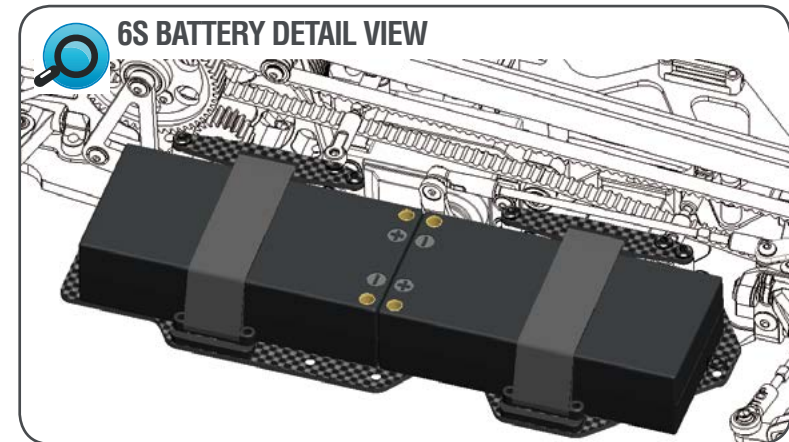
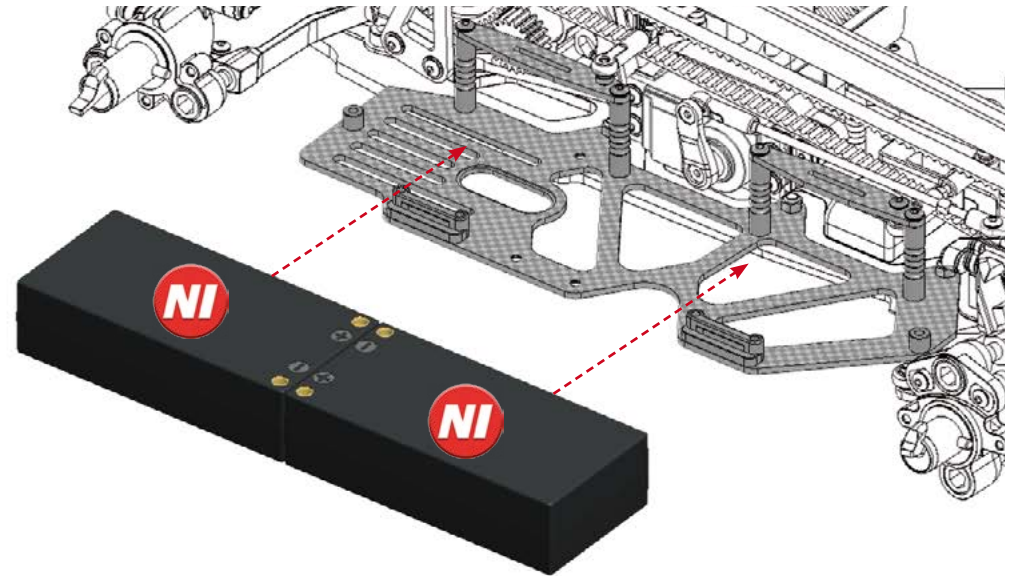


STEP 50

4S BATTERY CONFIGURATION **DEFAULT**

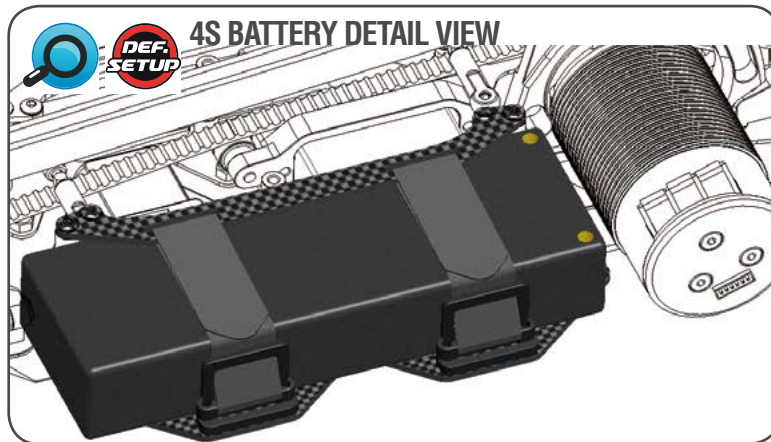
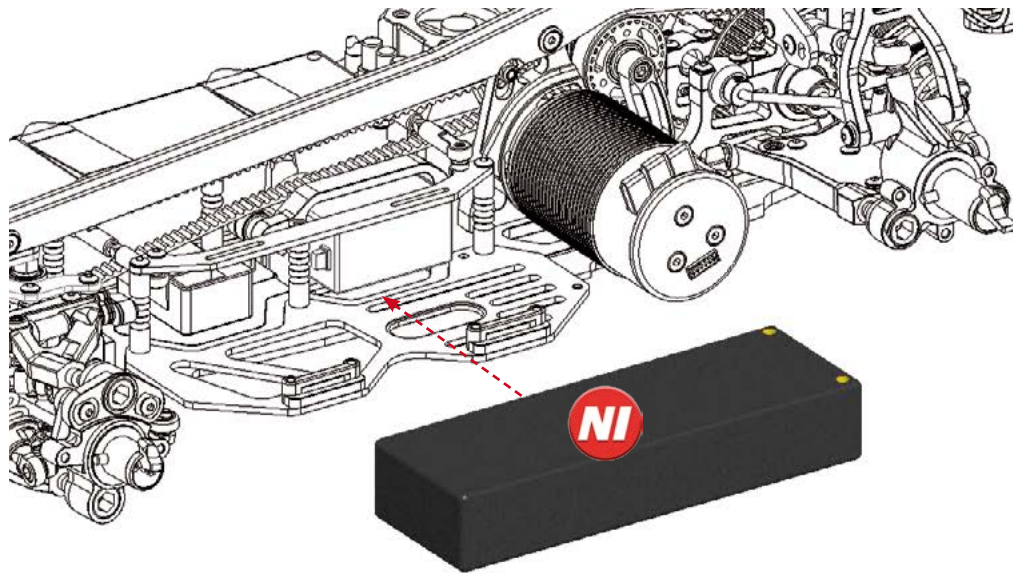


6S BATTERY CONFIGURATION **OPTIONAL**

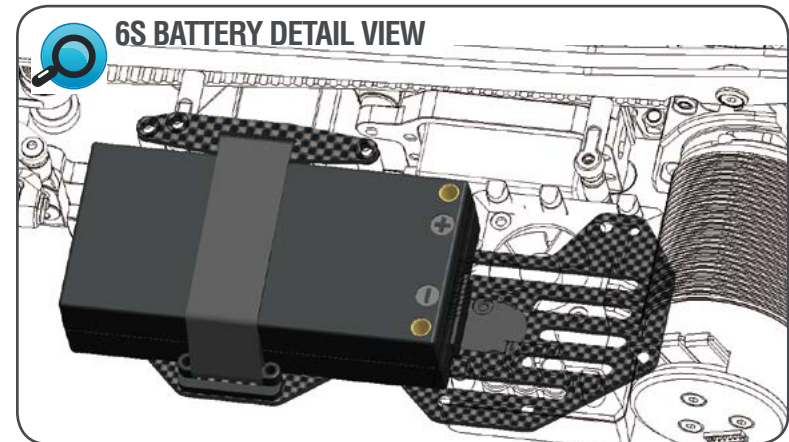
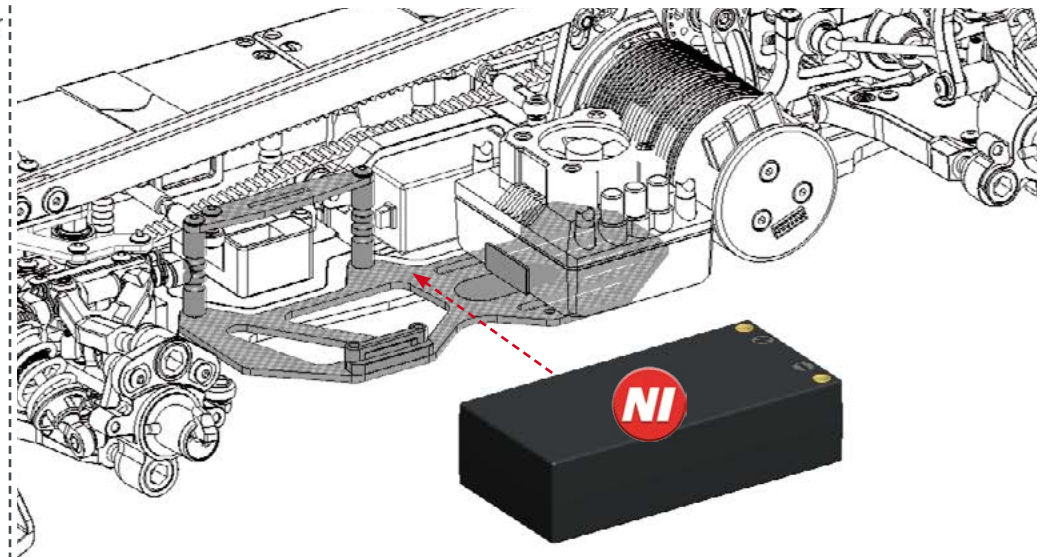


STEP 51

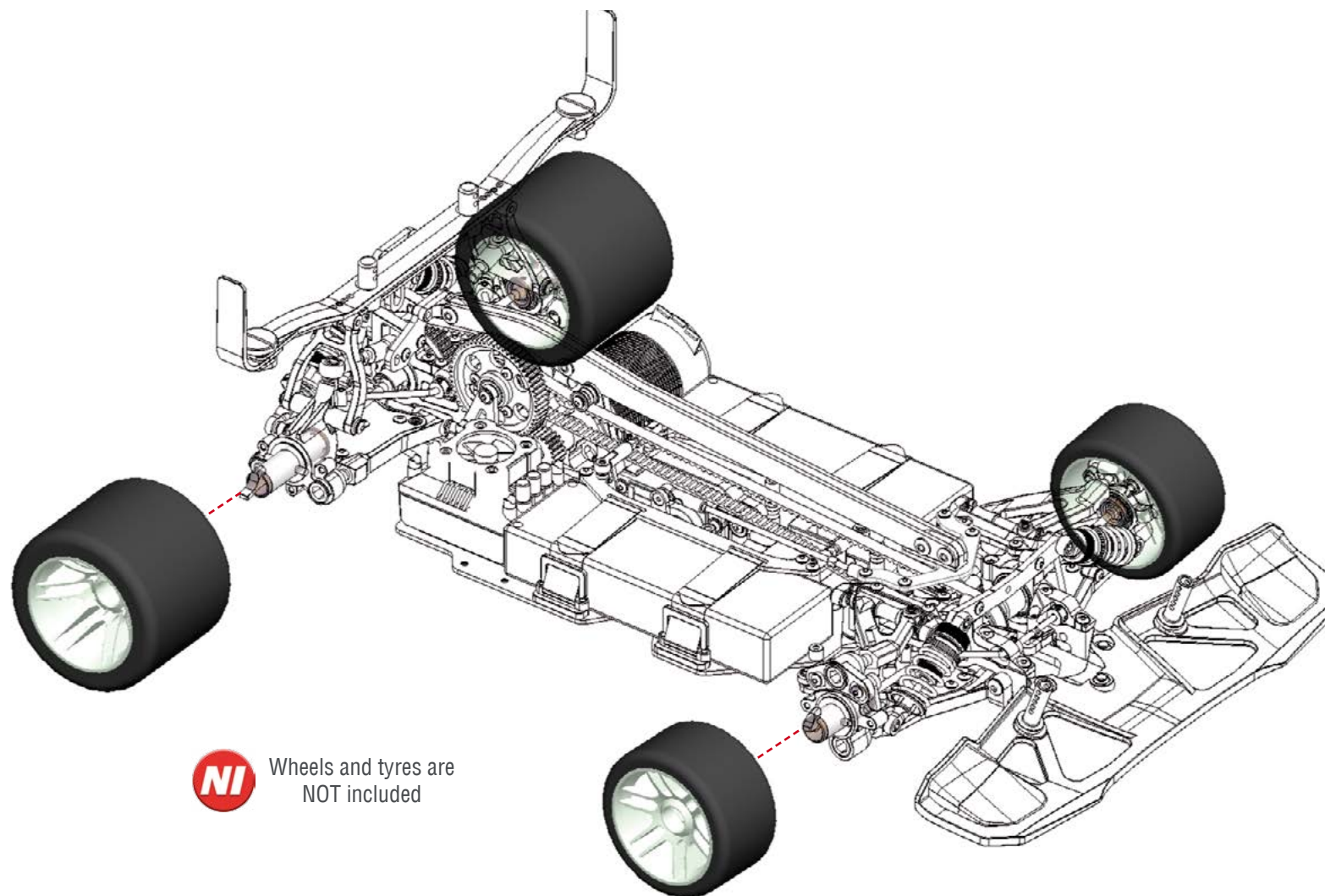
4S BATTERY CONFIGURATION **DEFAULT**



6S BATTERY CONFIGURATION **OPTIONAL**



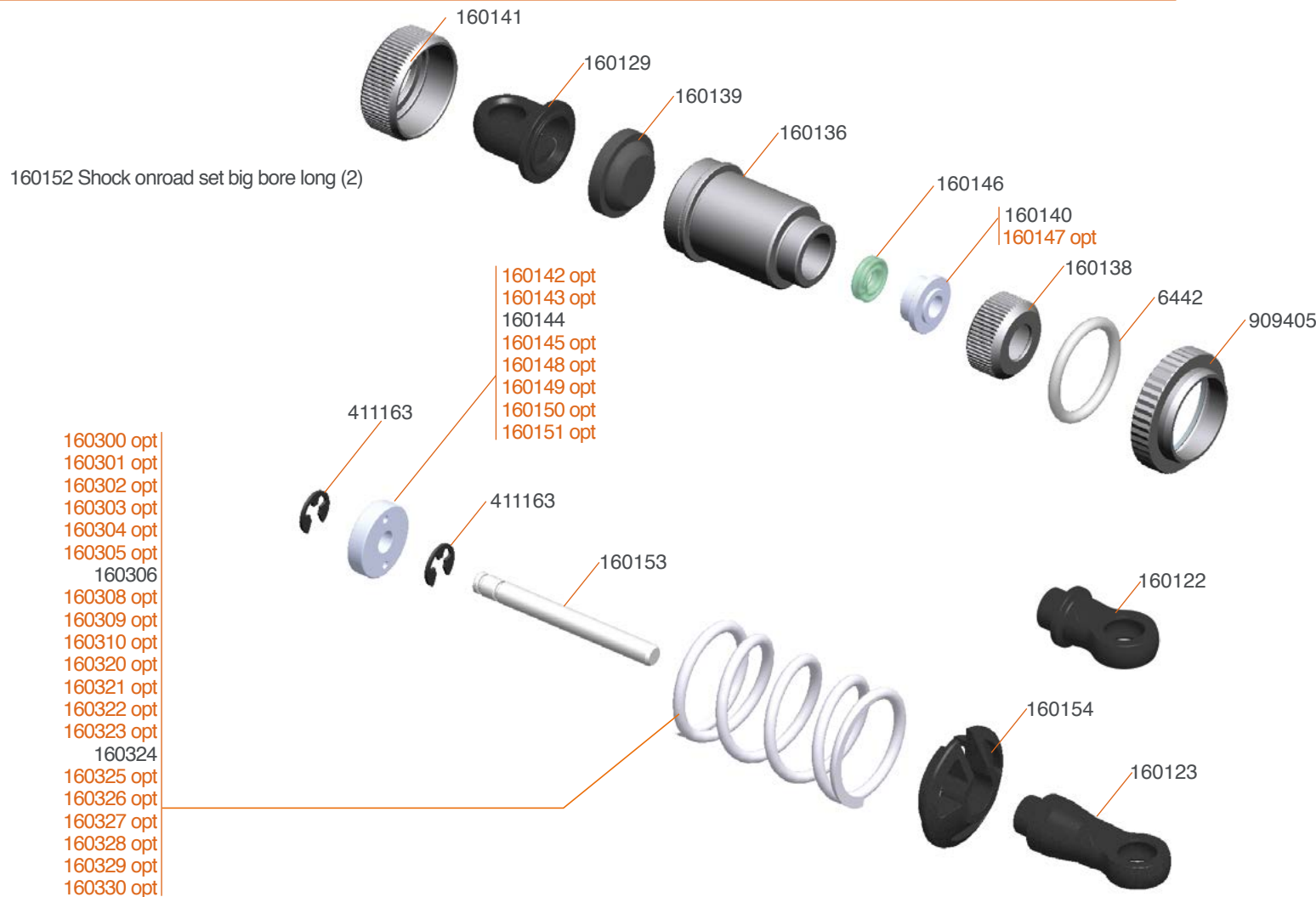
STEP 52



Wheels and tyres are
NOT included

INDEX

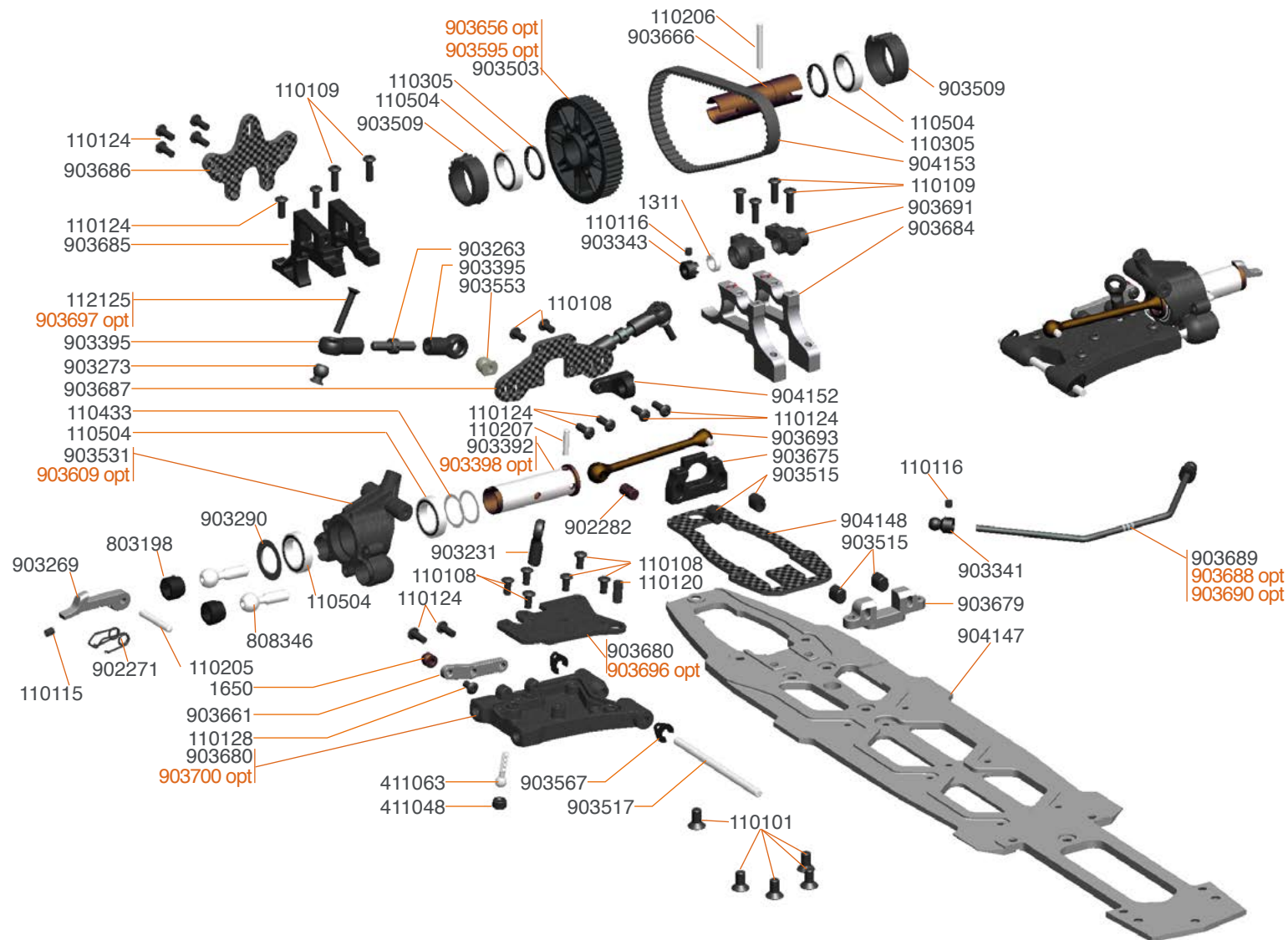
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FRONT II EXPLODED VIEW	49
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160142 Shock onroad big bore piston 1 hole (4)
160143 Shock onroad big bore piston 2 hole (4)
160145 Shock onroad big bore piston 4 hole (4)
160148 Shock onroad big bore piston 1 hole LF (2)
160149 Shock onroad big bore piston 2 hole LF (2)
160150 Shock onroad big bore piston 3 hole LF (2)
160151 Shock onroad big bore piston 4 hole LF (2)
160147 Shock onroad big bore bushing LF (4)
160300 Spring white L23 (2.3/13) (2)
160301 Spring yellow L23 (2.8/16) (2)

160302 Spring orange L23 (3.4/19.5) (2)
160303 Spring red L23 (4.1/23.5) (2)
160304 Spring pink L23 (4.0/28) (2)
160305 Spring blue L23 (5.8/33) (2)
160307 Spring green L23 (8/45.5) (2)
160308 Spring grey L23 (9/51.5) (2)
160309 Spring black L23 (10/57) (2)
160310 Spring-set short (5x2)
160320 Spring white L27 (2.3/13) (2)
160321 Spring yellow L27 (2.8/16) (2)

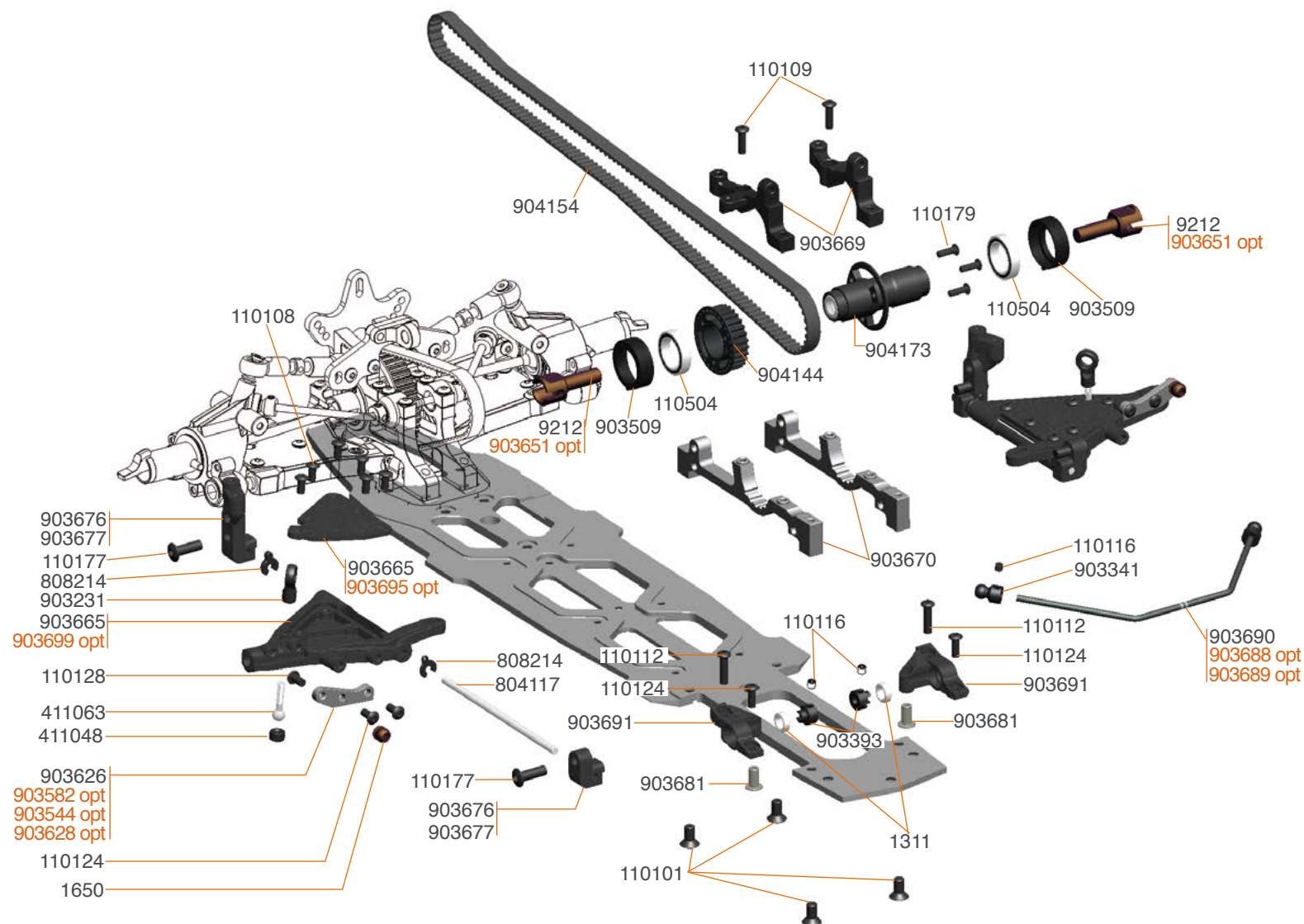
160322 Spring orange L27 (3.4/19.5) (2)
160323 Spring red L27 (4.1/23.5) (2)
160325 Spring blue L27 (5.8/33) (2)
160326 Spring purple L27 (6.8/39) (2)
160327 Spring green L27 (8/45.5) (2)
160328 Spring grey L27 (9/51.5) (2)
160329 Spring black L27 (10/57) (2)
160330 Spring-set L27 (5x2)



903398 Rear wheelaxle cvd alu (2)
 903688 Antiroll bar FR/RR soft S988
 903690 Antiroll bar FR/RR hard S988

903595 Pulley rear axle 48T alu
 903609 Upright (2) hard
 903697 Camberlink riser 1/8 (2)

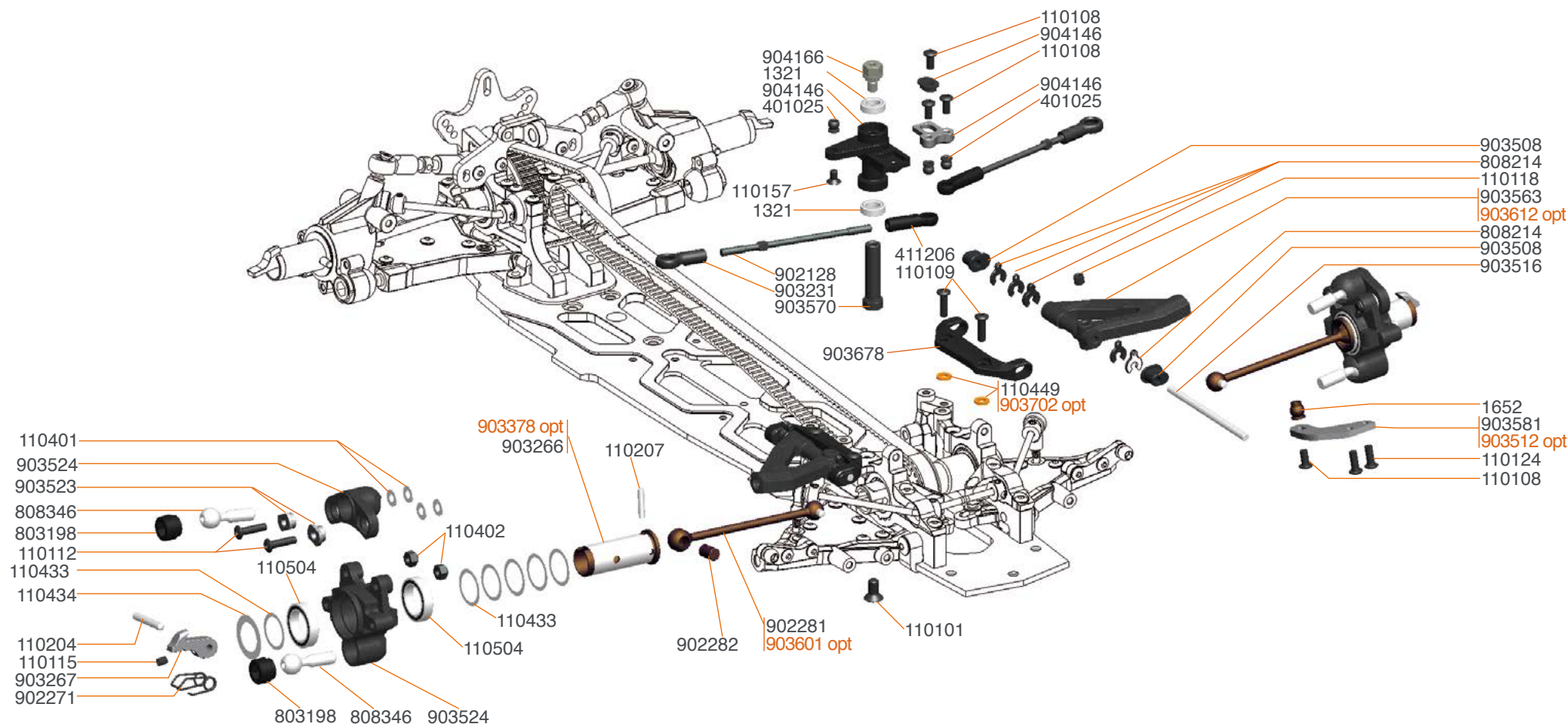
903696 Wishbone insert carbon RR lw (2)
 903700 Wishbone RR lw L+R hard S988



903544 Shock extension bracket FR alu (2)
903582 Shock extension bracket FR carbon (2)
903628 Shock extension bracket FR wide carbon (2)
903651 Inner driveshaft adapter light

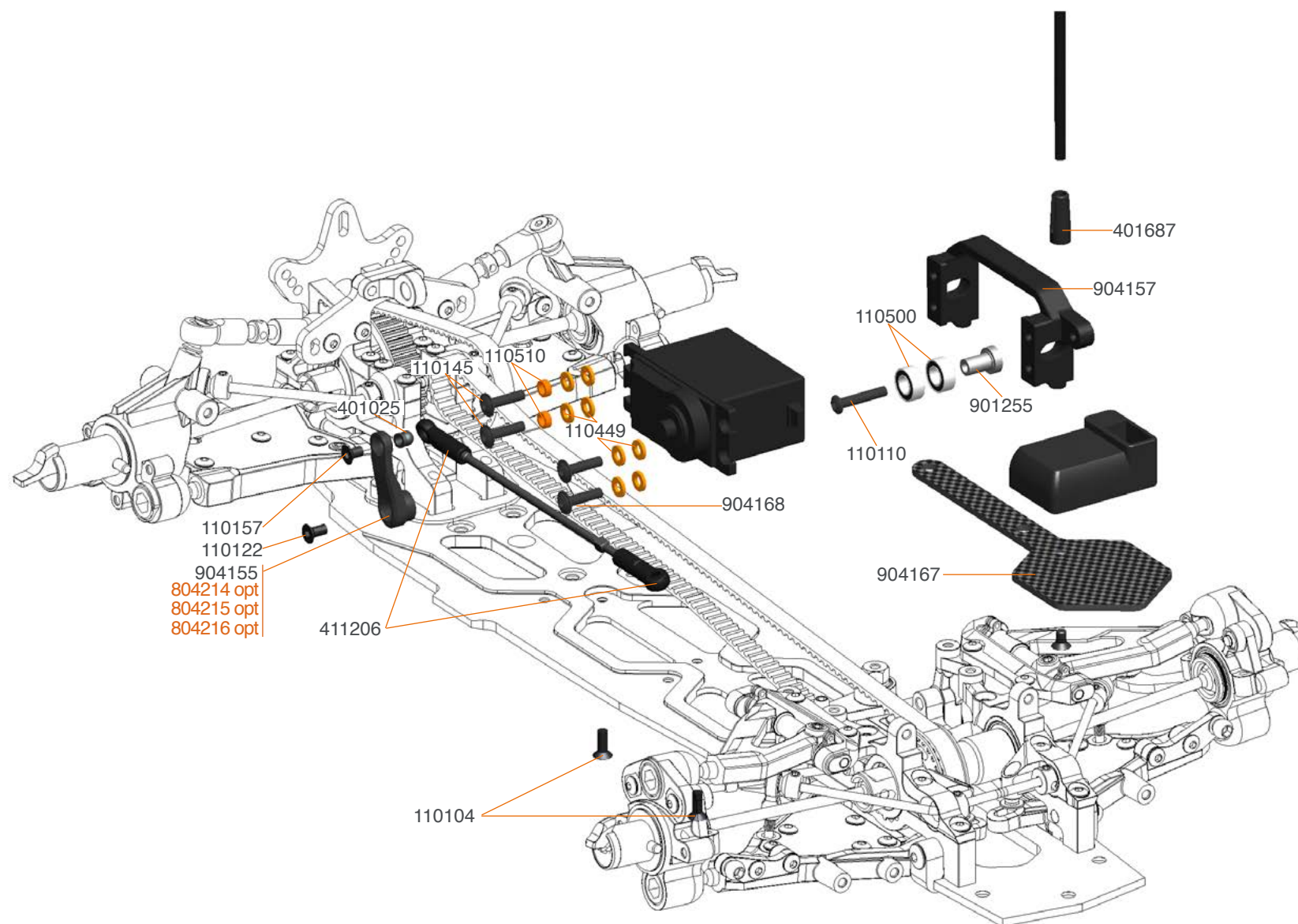
903688 Antiroll bar FR/RR soft S988
903689 Antiroll bar FR/RR medium S988
903695 Wishbone insert carbon FR lw (2)
903699 Wishbone FR lw L+R hard S988

FRONT II EXPLODED VIEW

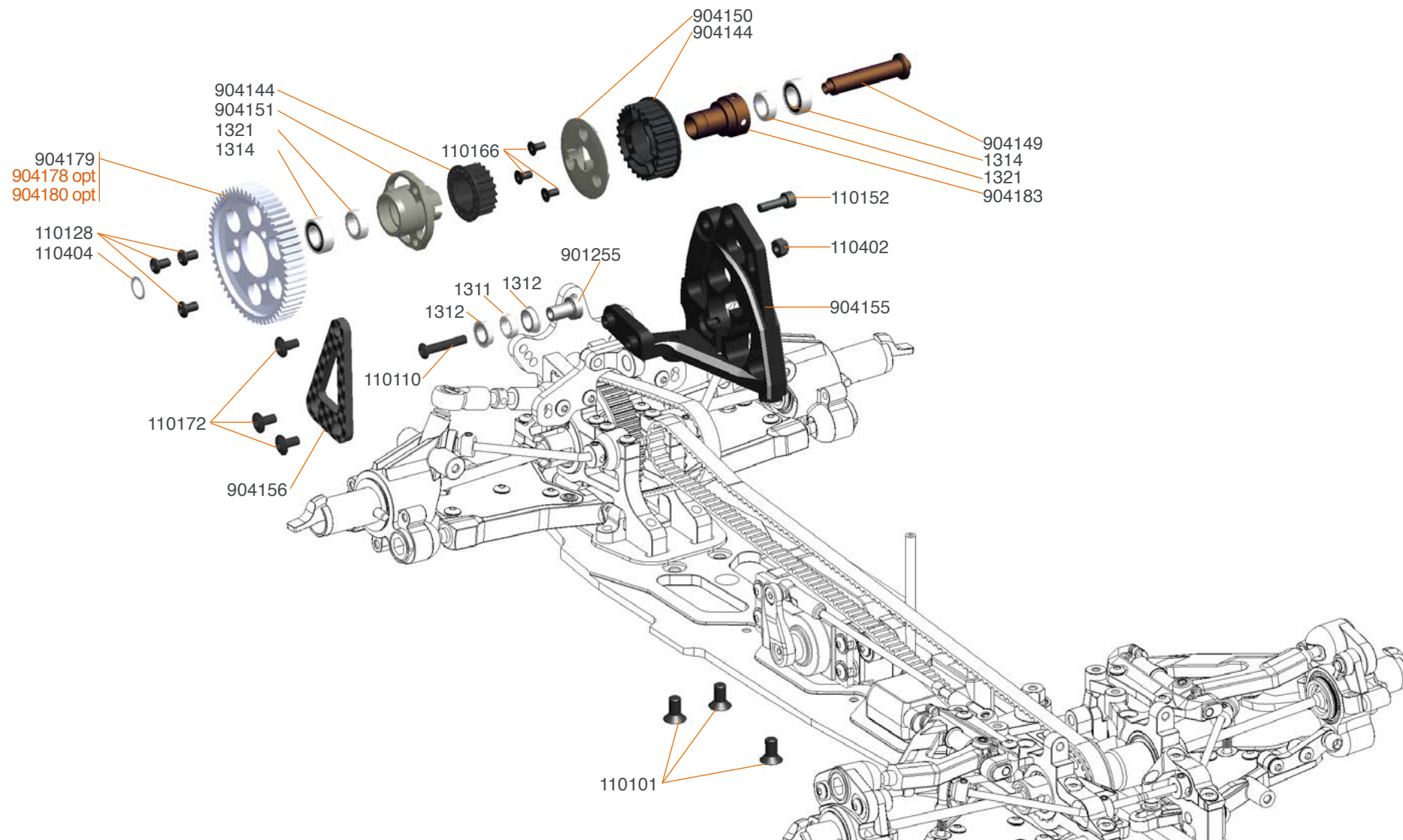


903378 Wheelaxle front OS2 Alu (2)
903512 Steeringblock lever alu (2)
903601 Driveshaft cvd FR alu (2)

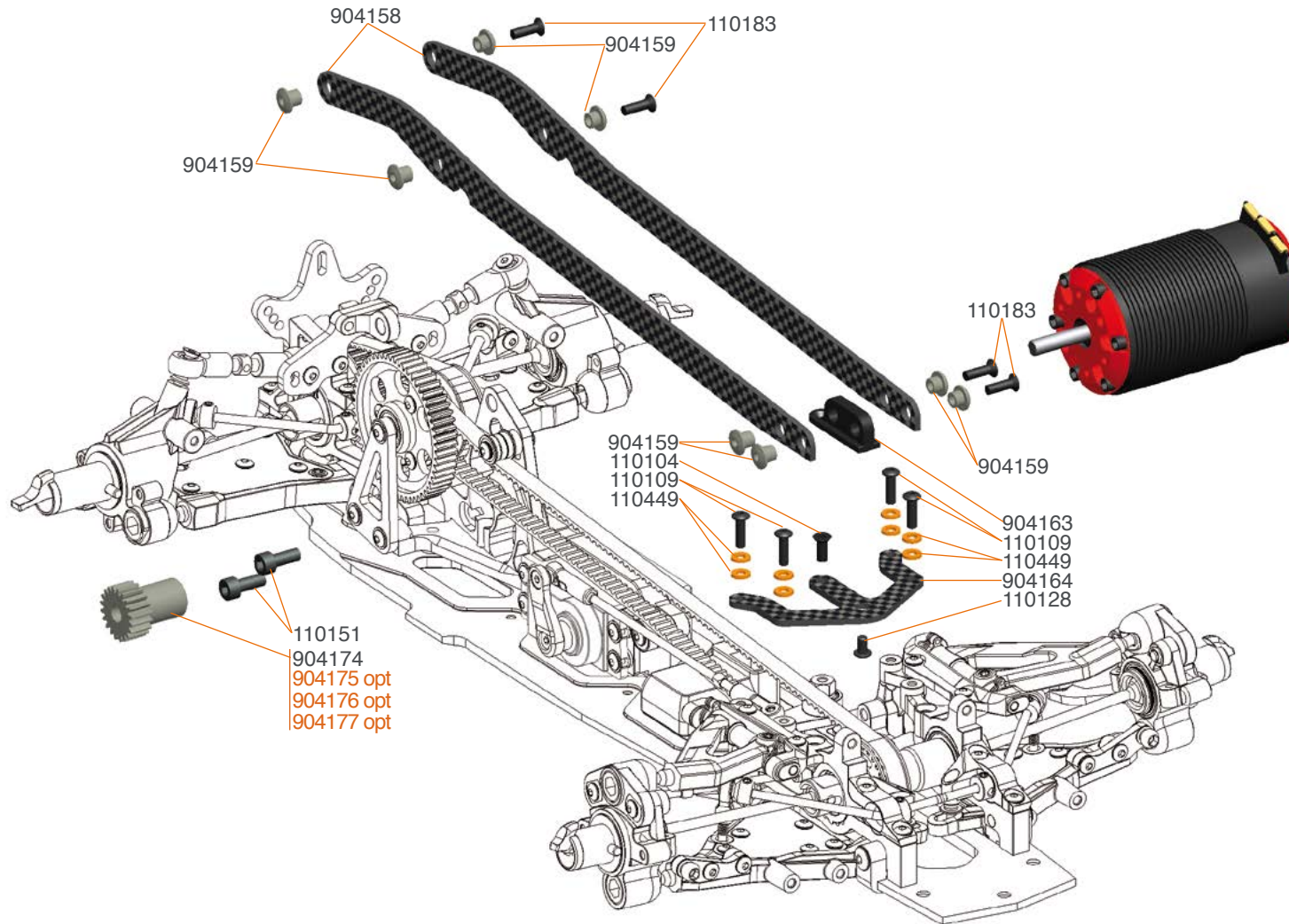
903612 Wishbone FR up (2) hard
903702 Rollcenter spacer fr (2) S988



- 804214 Steering lever 23T alu
- 804215 Steering lever 24T alu
- 804216 Steering lever 25T alu

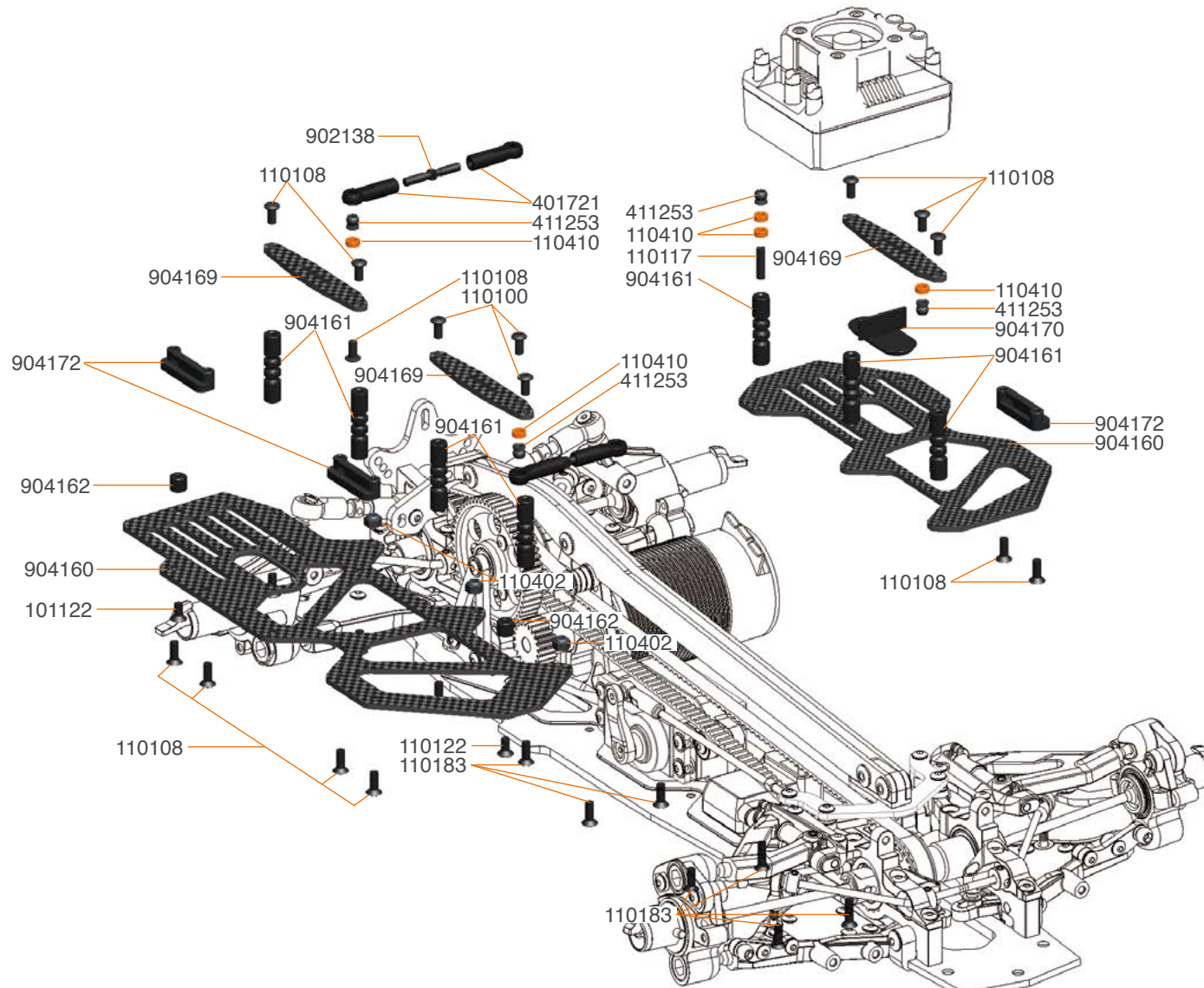


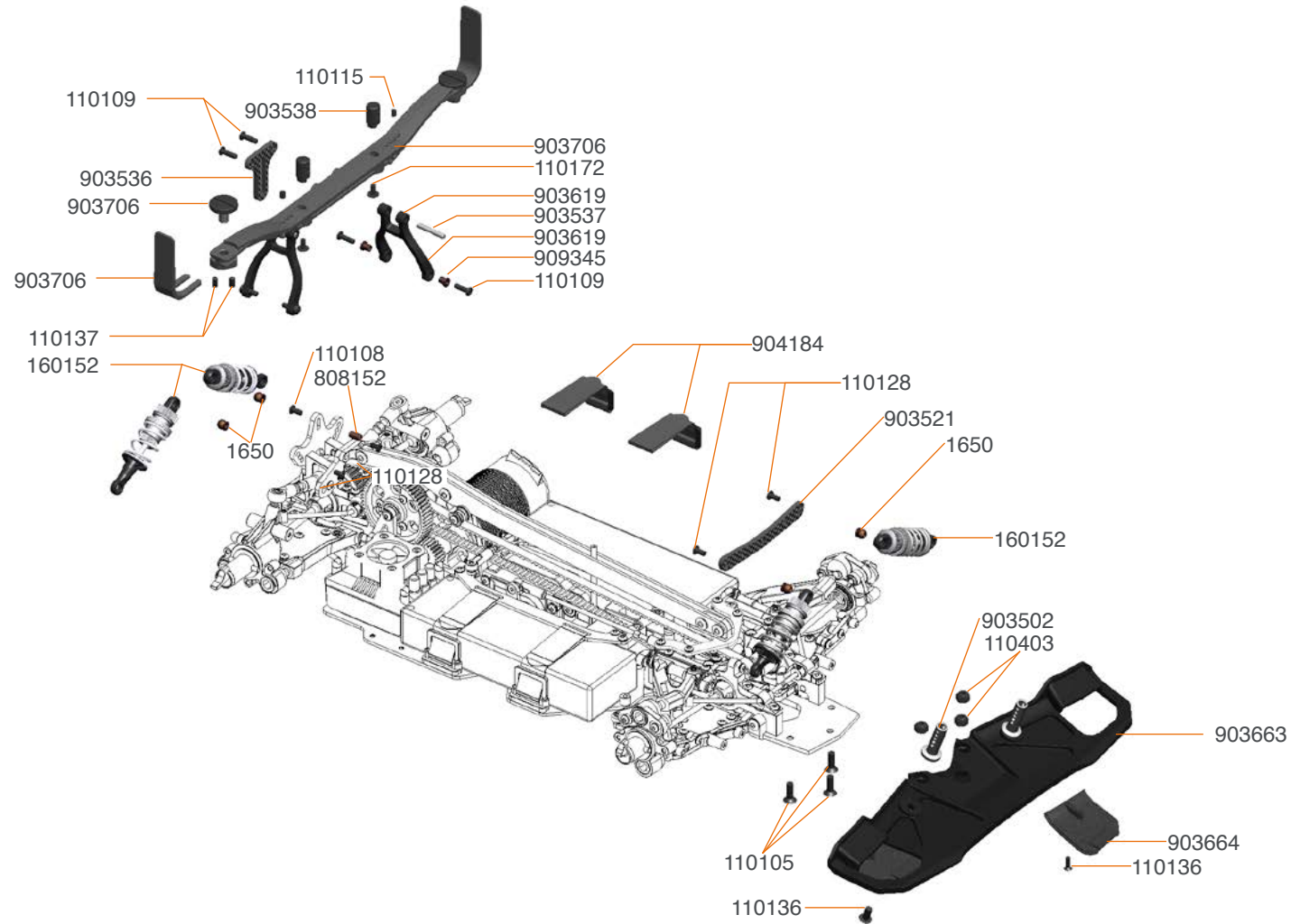
904178 Spurgear 56T 988E
904180 Spurgear 58T 988E



904175 Pinion 20T 988E
904176 Pinion 21T 988E
904176 Pinion 22T 988E







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