

# Project 4-X

1/10 scale electric touringcar

**Instruction  
Manual**



## **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 Project 4X 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 Project 4X. Fine-tuning the initial setup is an essential part of building a high-performance racecar like your Serpent Project 4X.

## **EXPLODED VIEWS AND PARTS LIST**

The exploded views and parts lists for the Serpent Project 4X 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](http://www.serpent.com) or you may ask your dealer or the Serpent distributor for advice, or email Serpent direct: [info@serpent.com](mailto: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**

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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



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.



Silicone 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.

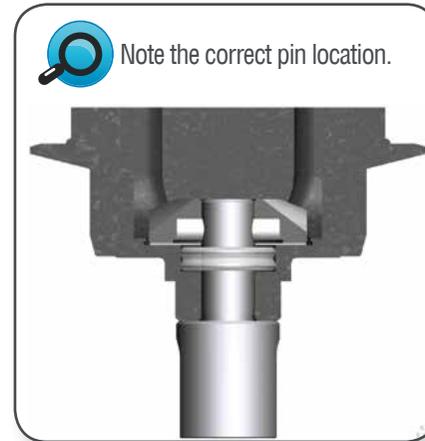
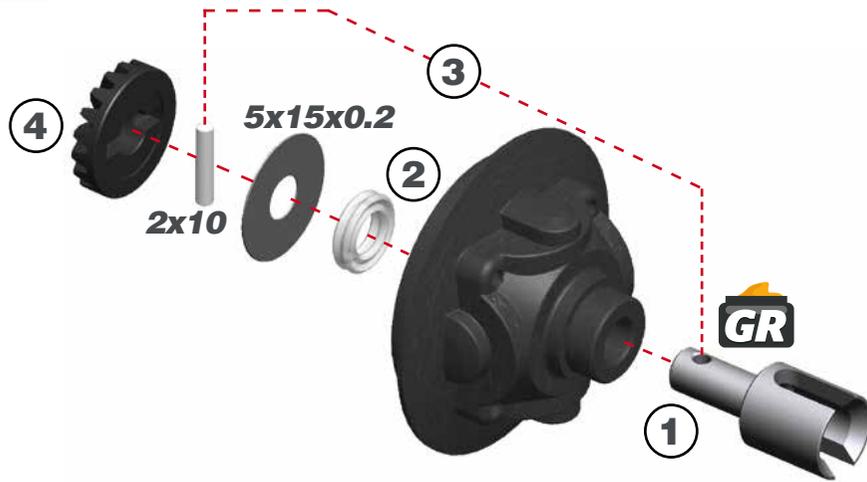


Optional part, not standard in the kit.

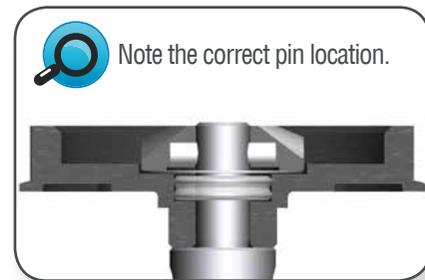
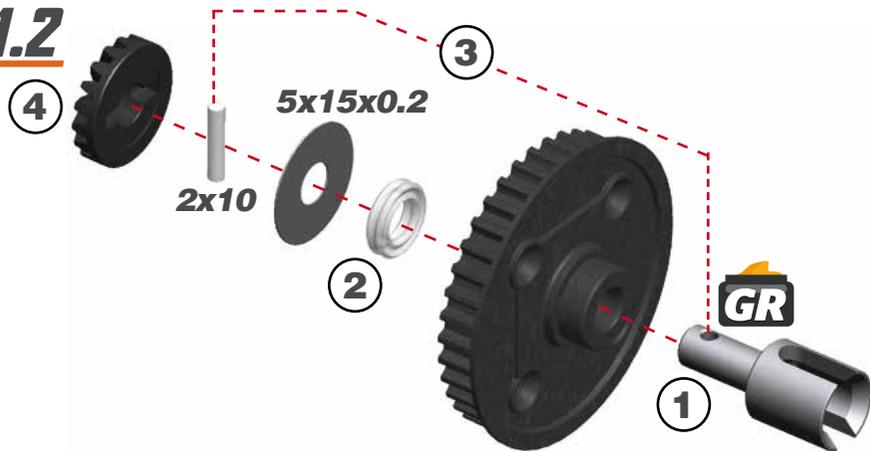
# REAR DIFF ASSEMBLY

## STEP 1 REAR DIFF BAG

### 1.1

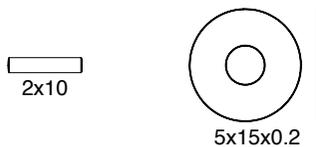


### 1.2

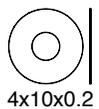
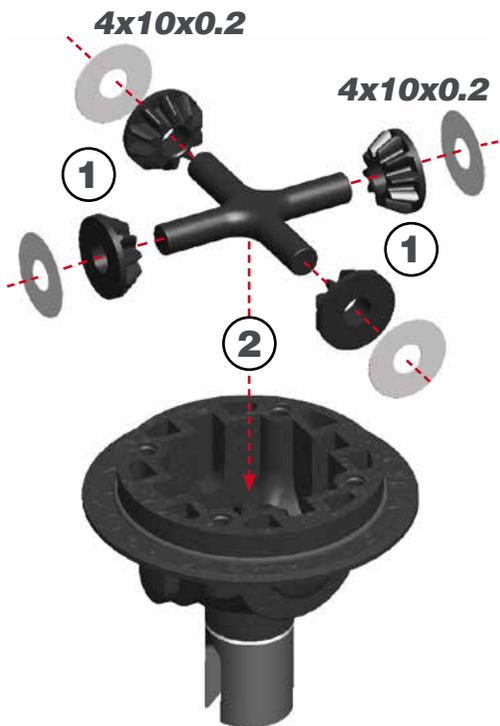


## STEP 2

- 1- Fit the o ring before filling the diff with silicone oil.
- 2- Add just enough oil to cover the large gear before assembling the small satellite gears and cross pins. Use the silicone oil supplied in the kit. For the correct cst value please check the default setupsheet.



### STEP 3



### STEP 4



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.

50



#### AMOUNT OF OIL IN THE DIFFS

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

Differential weight = 11.4 grams

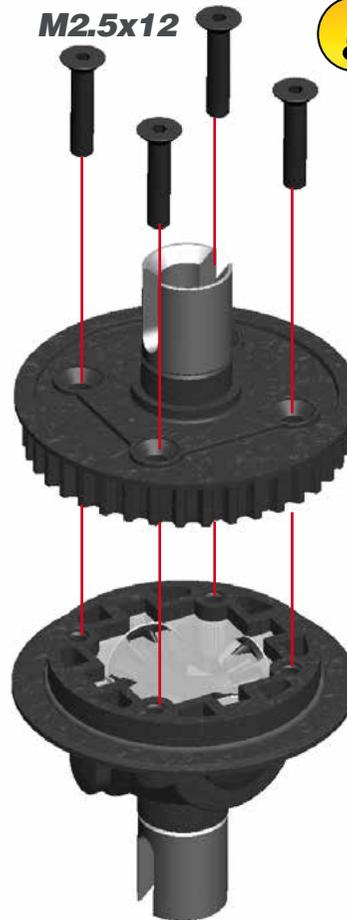


### STEP 5

M2.5x12



Do not overtighten the screws. There is always a gap between both sides of the diff housing.



#### COMPLETE DIFF ASSEMBLY



## STEP 6

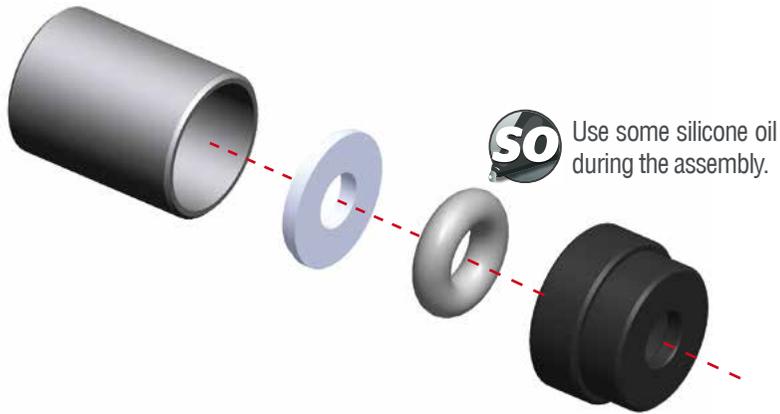
BAG 1

## STEP 7

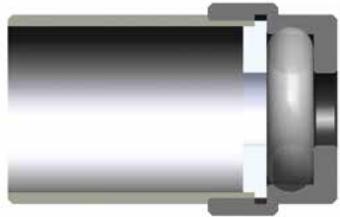


Follow step 6 to 10 twice to assemble 2 shocks, 1 for the front and 1 for the rear.

Check the default set-up sheet to find the right values for piston, spring and silicone oil. Be aware that front and rear shock-settings may differ.



Note the correct orientation of the shock spacers.



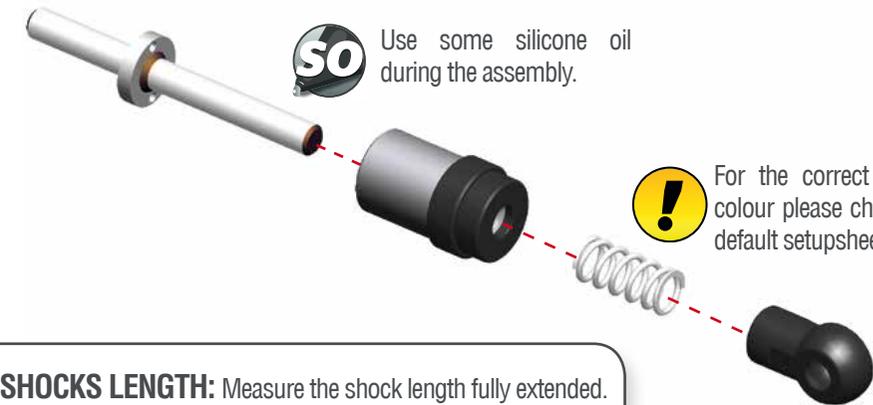
### 7.1



1- Notice that the piston is not symmetrical. The side with the chamfer should be assembled oriented to the shock shaft.

2- For the correct spring colour please check the default setupsheet.

### 7.2



Use some silicone oil during the assembly.

For the correct spring colour please check the default setupsheet.



**SHOCKS LENGTH:** Measure the shock length fully extended.



## STEP 8

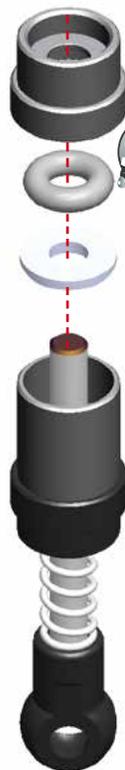
1- Fill up with silicone oil FULLY using the silicone oil supplied in the kit. For the correct cst value please check the default setupsheet.

2- Extend the shockrod fully

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



## STEP 9



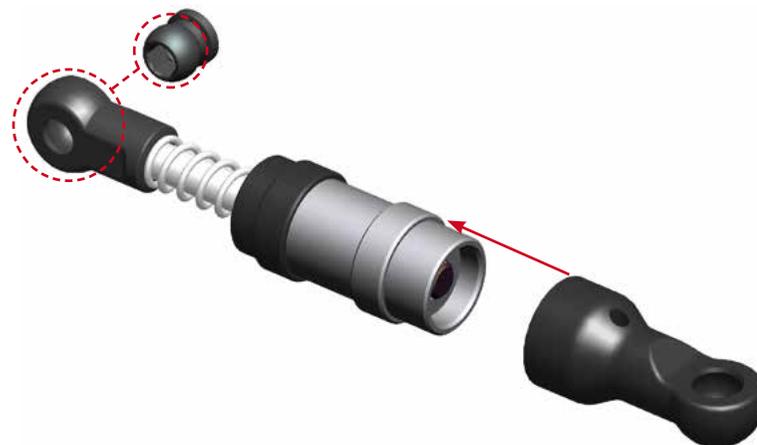
SO Use some silicone oil during the assembly.



Note the correct orientation of the shock spacers .



## STEP 10



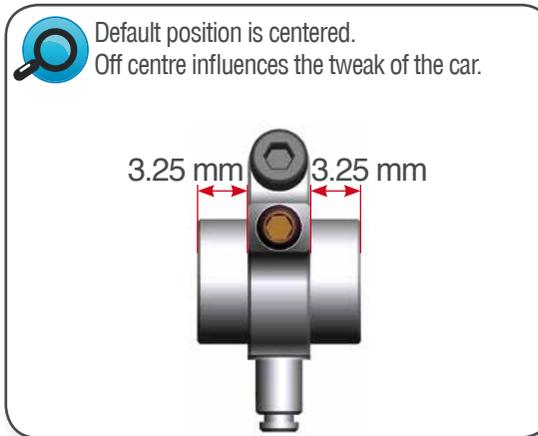
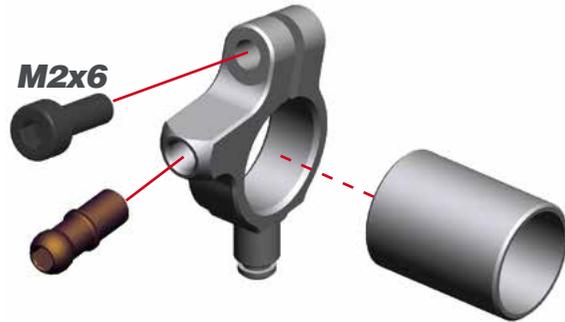
COMPLETE SHOCK ASSEMBLY



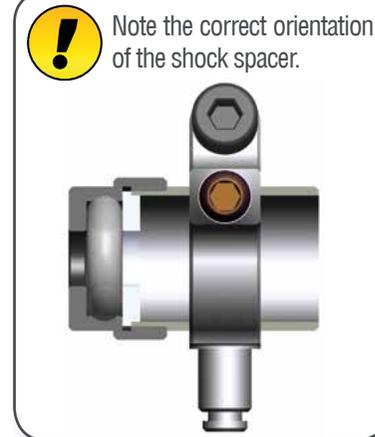
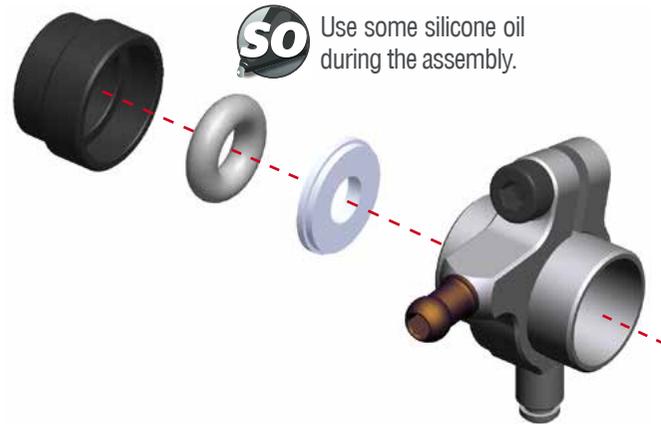
## STEP 11 BAG 2

**!** Follow step 11 to 15 twice to assemble 2 roll dampers, 1 for the front and 1 for the rear.  
 Check the default set-up sheet to find the right values for piston, spring and silicone oil. Be aware that front and rear roll damper-settings may differ.

**11.1** **!** Do not overtighten the M2x6 screw.



**11.2** **SO** Use some silicone oil during the assembly.



## STEP 12

**12.1** **!** 1- Notice that the piston is not symmetrical. The side with the chamfer should be assembled oriented to the shock shaft.  
 2- For the correct spring colour please check the default setupsheet.



## 12.2



## STEP 13

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.



## STEP 14

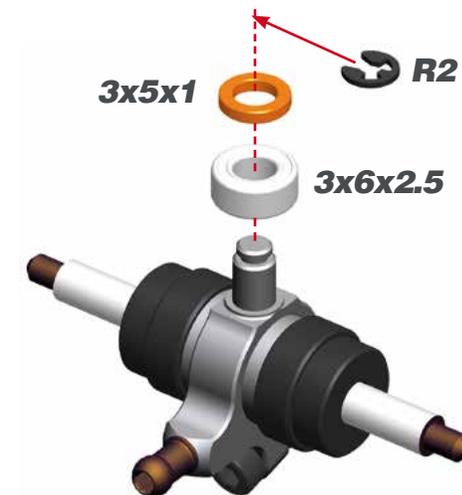


**SO** Use some silicone oil during the assembly.

**!** Note the correct orientation of the shock spacers.



## STEP 15



**COMPLETE ROLL DAMPER ASSEMBLY**



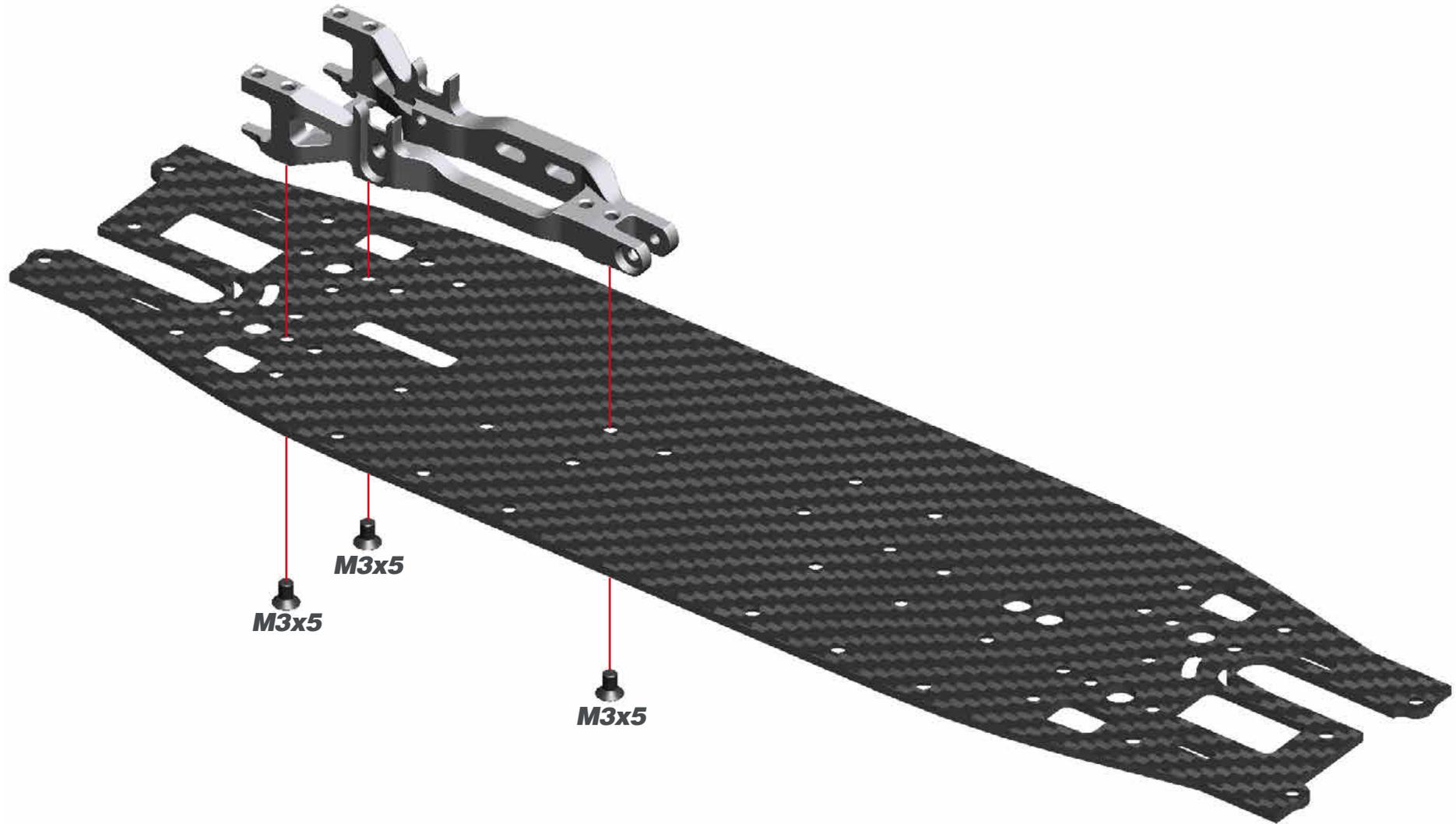
3x5x1

3x6x2.5

R2

## STEP 16

BAG 3



M3x5

M3x5

M3x5



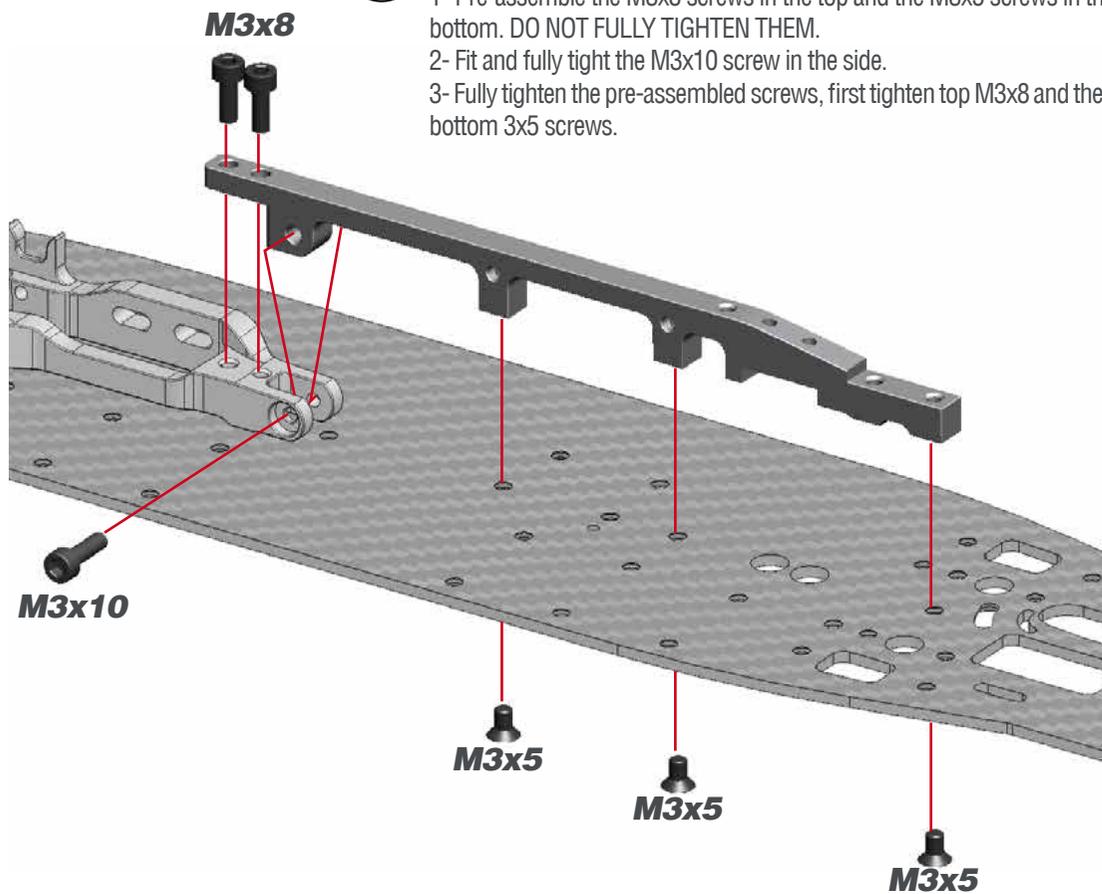
M3x5

# STEP 17



To avoid any tweak in your chassis please follow next instructions:

- 1- Pre-assemble the M3x8 screws in the top and the M3x5 screws in the bottom. **DO NOT FULLY TIGHTEN THEM.**
- 2- Fit and fully tight the M3x10 screw in the side.
- 3- Fully tighten the pre-assembled screws, first tighten top M3x8 and then bottom 3x5 screws.

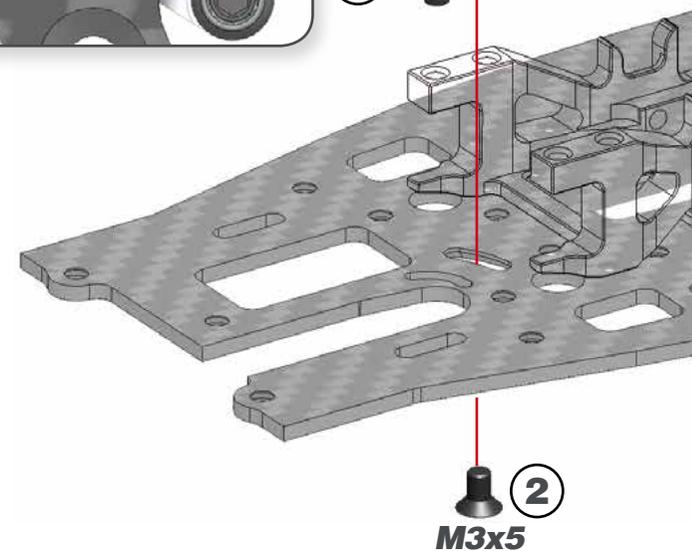
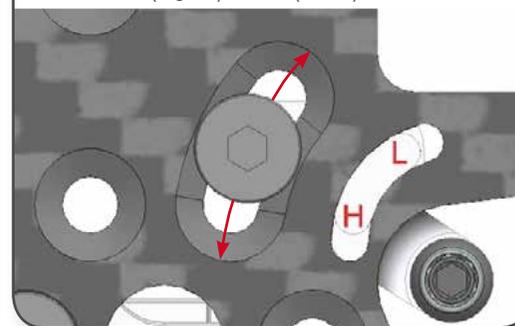


# STEP 18

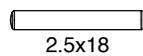
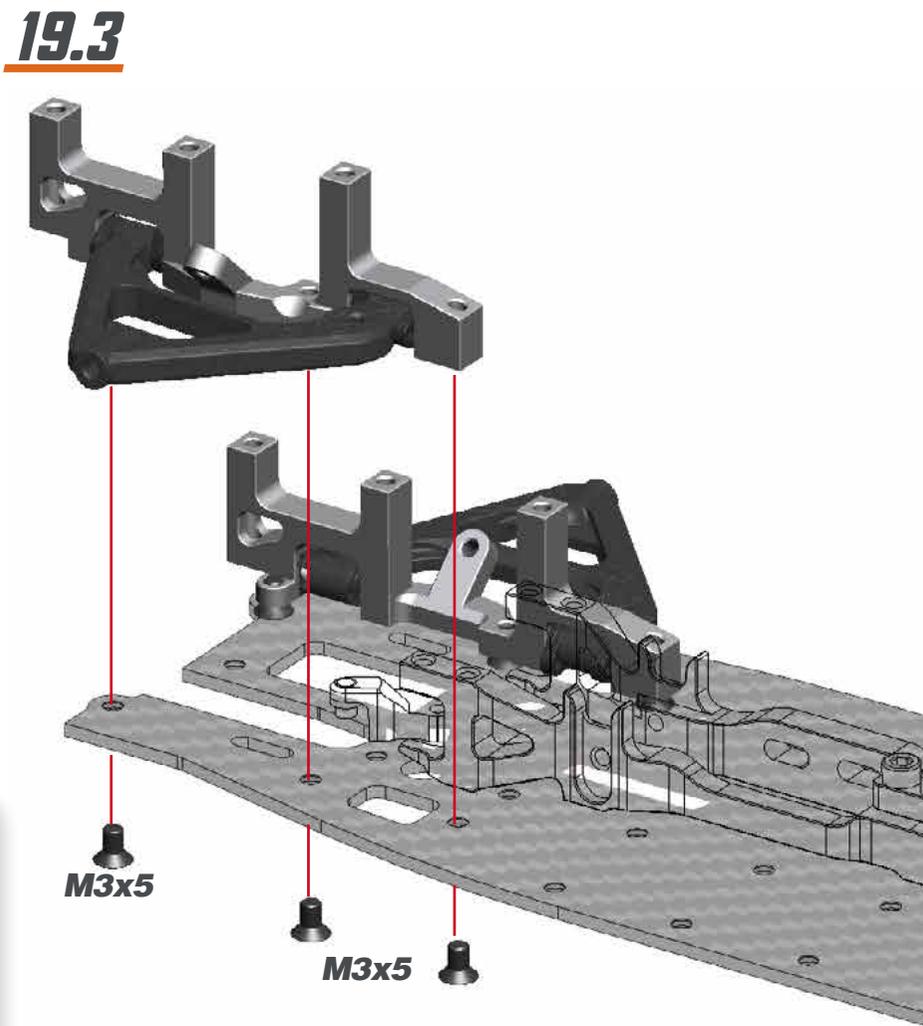
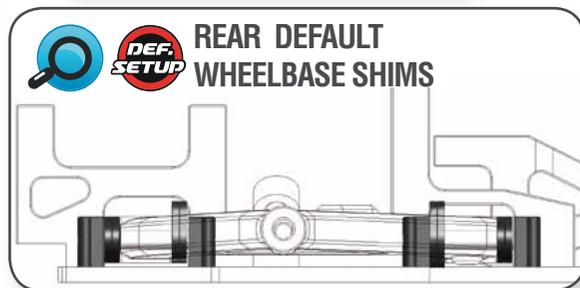
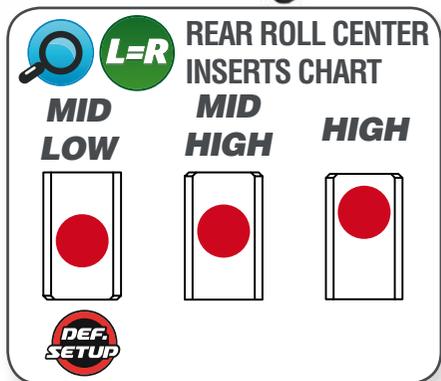


## REAR RIDE HEIGHT ADJUSTER

For initial setup, assemble the height adjuster in the center. To adjust the rideheight later, turn the adjuster towards "H" (higher) or "L" (lower).



**STEP 19** **BAG 4**



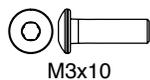
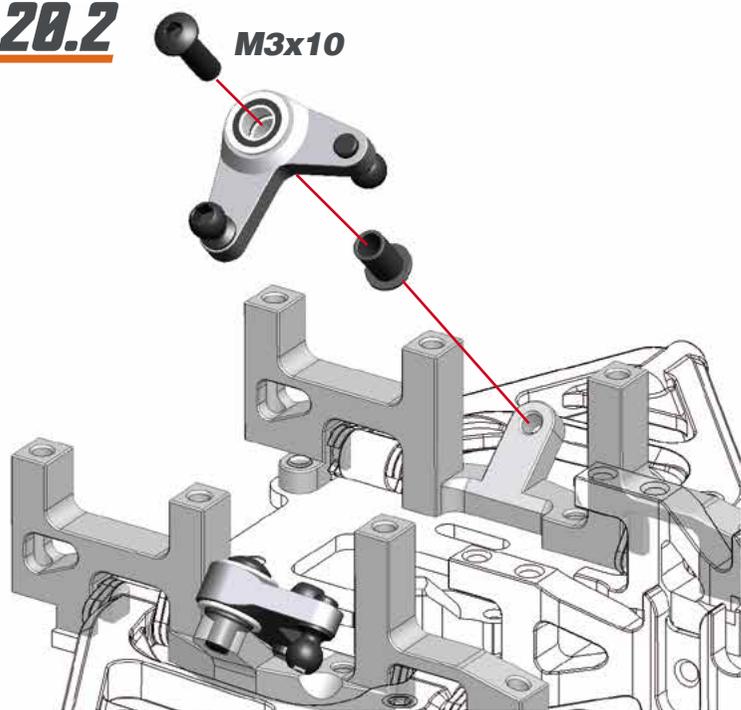
**STEP 20** **BAG 5**

**20.1**



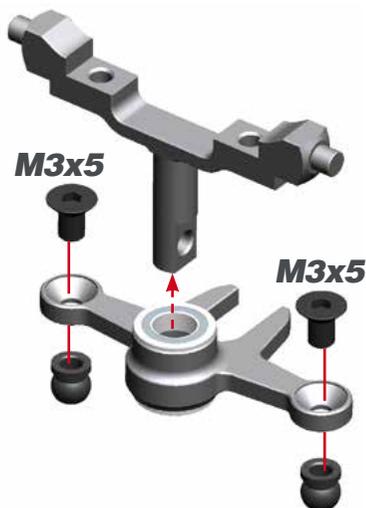
Note the right orientation of the rocker-legs.

**20.2**

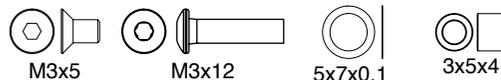
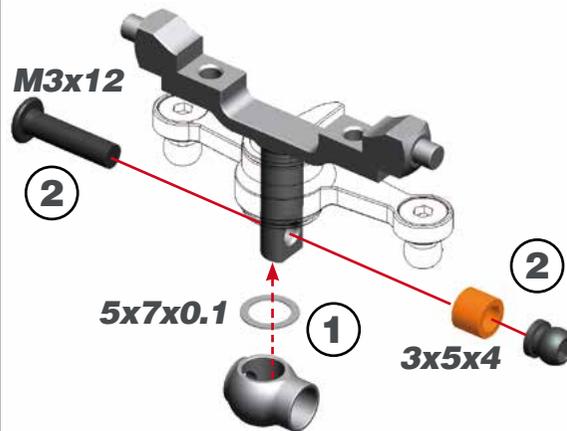


**STEP 21**

**21.1**

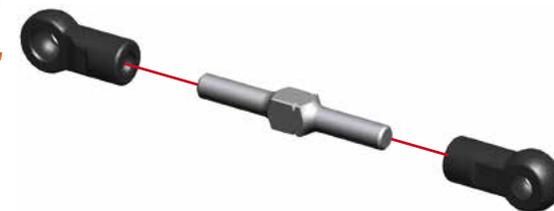


**21.2**



**STEP 22**

**22.1**

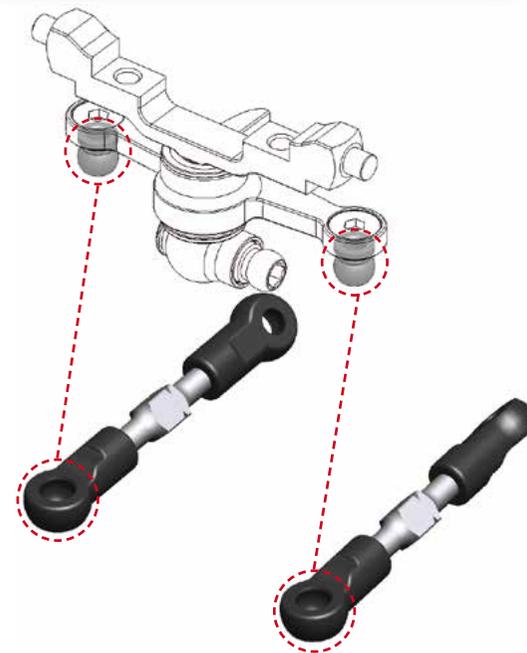


CONNECTING ROD LENGTH

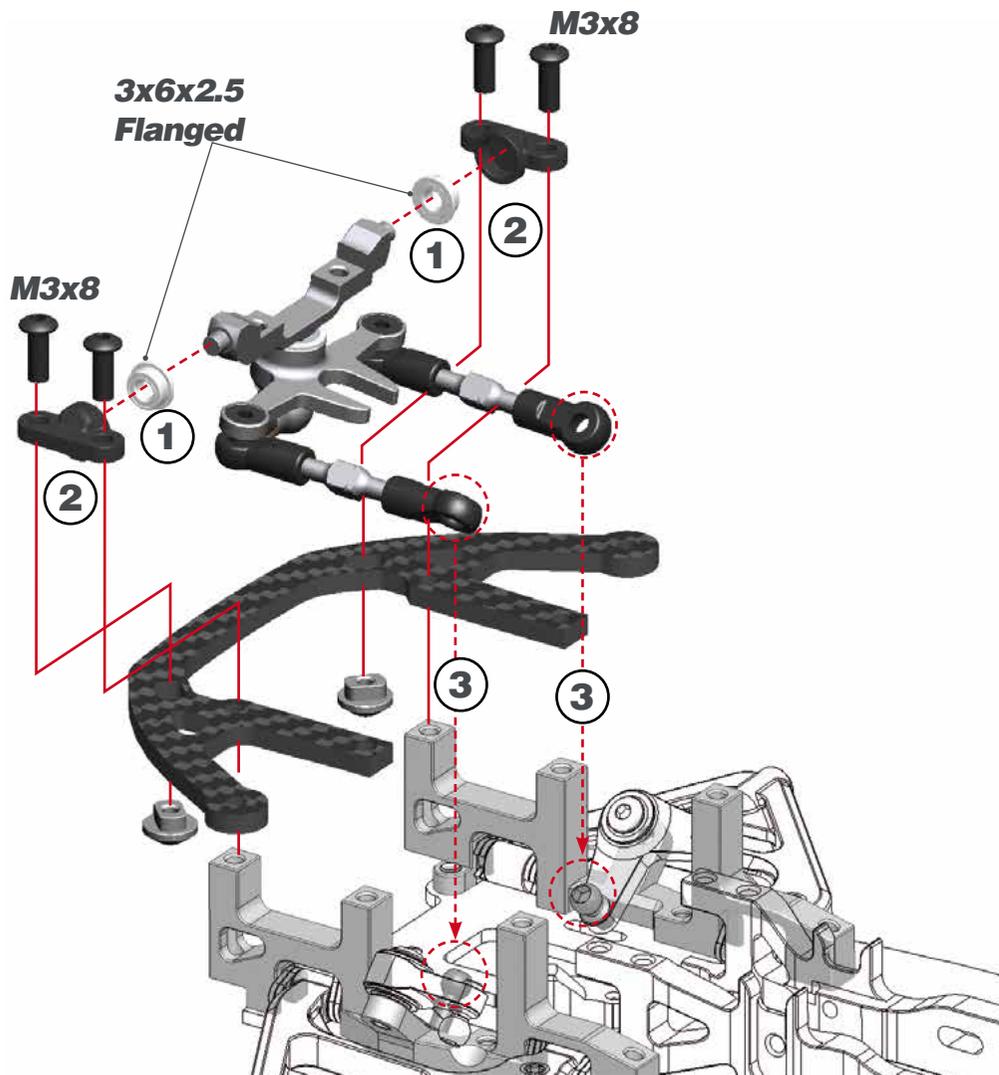
14 mm



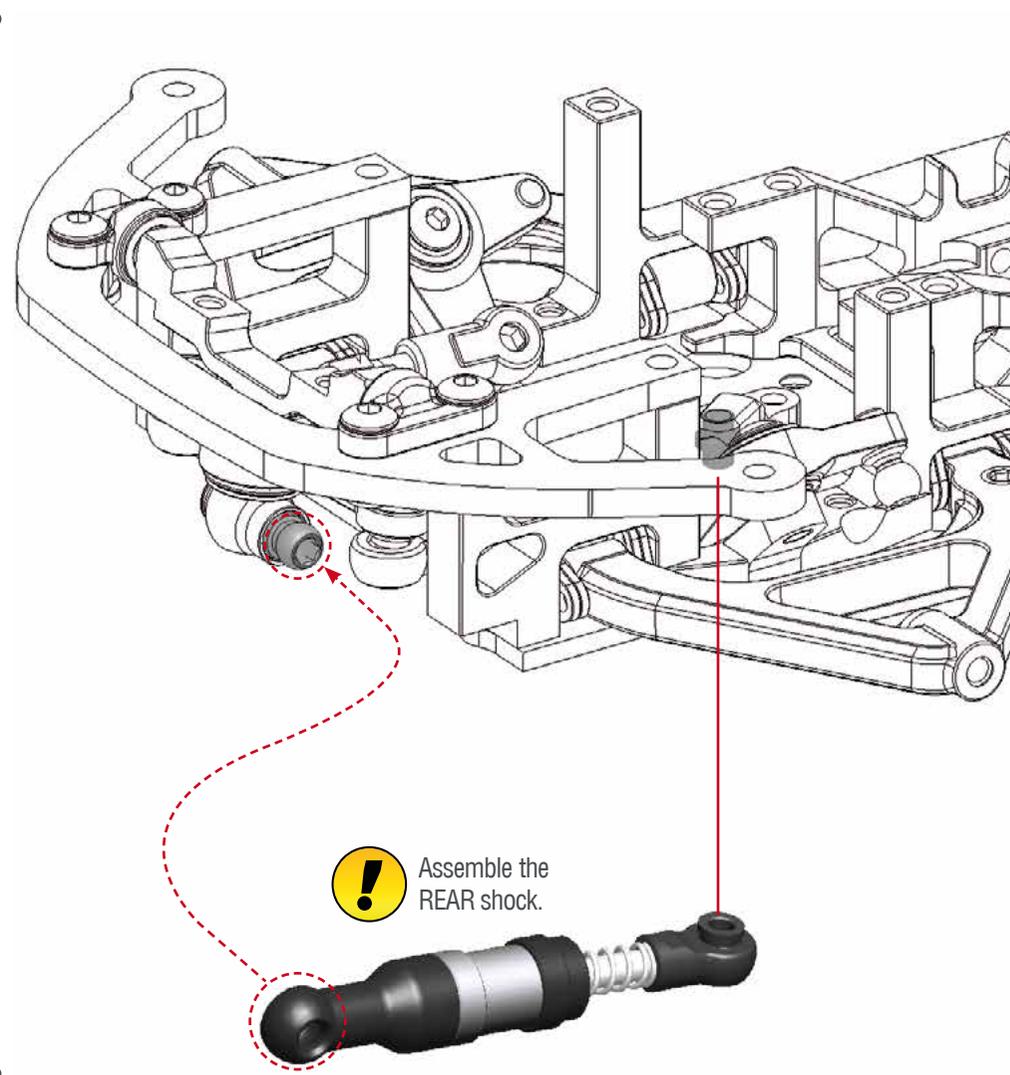
**22.2**



# STEP 23



# STEP 24

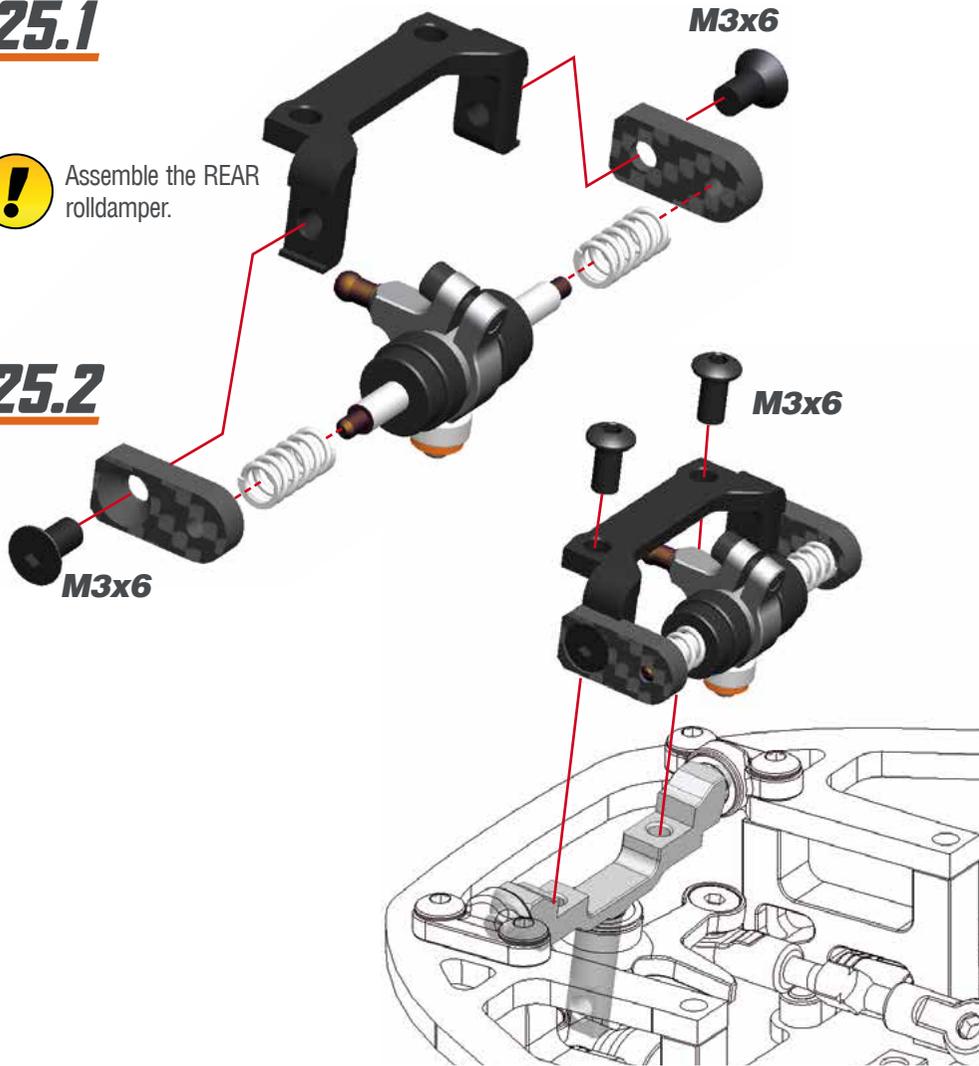


## STEP 25

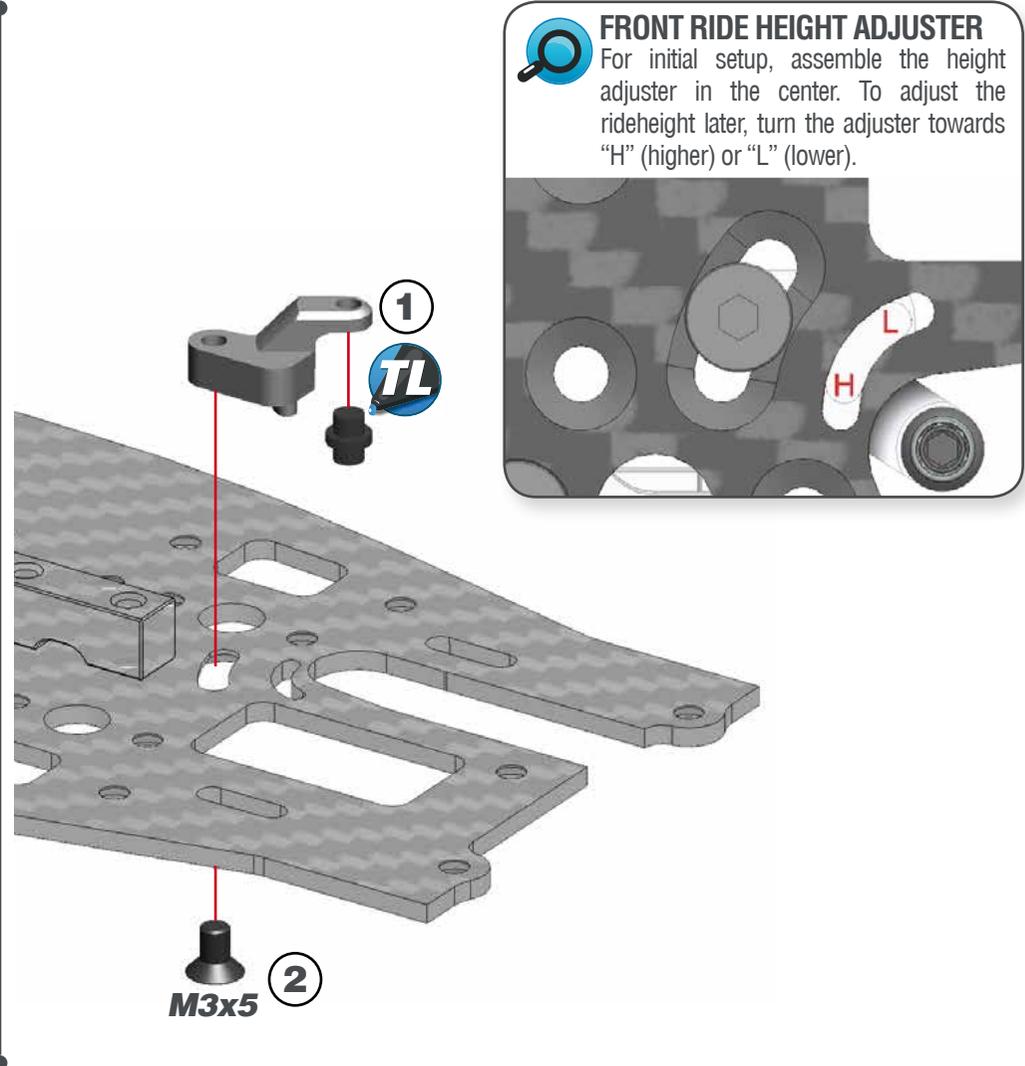
### 25.1

**!** Assemble the REAR rolldamper.

### 25.2



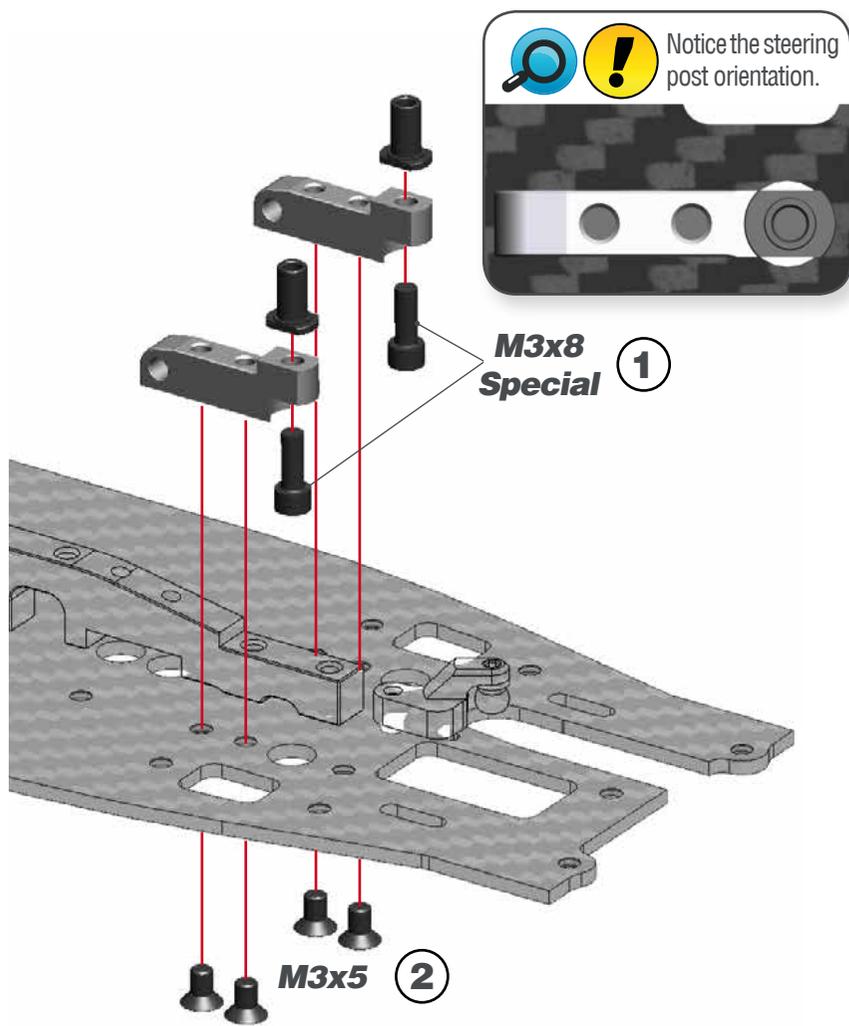
## STEP 26 BAG 6



**FRONT RIDE HEIGHT ADJUSTER**  
 For initial setup, assemble the height adjuster in the center. To adjust the rideheight later, turn the adjuster towards "H" (higher) or "L" (lower).

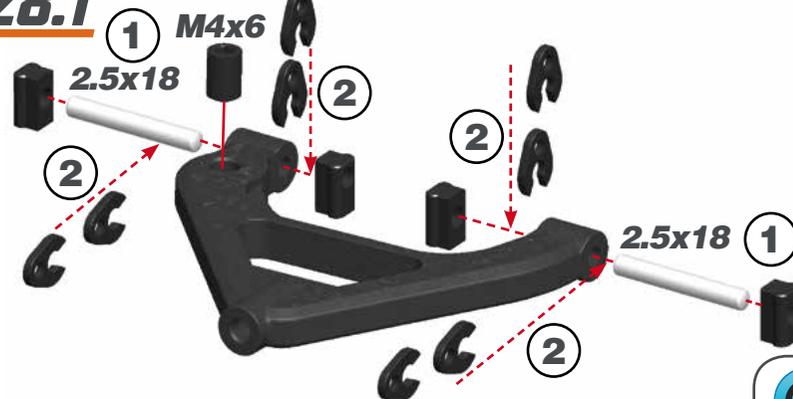


# STEP 27



# STEP 28

## 28.1



## 28.2



**L-R** FRONT ROLL CENTER INSERTS

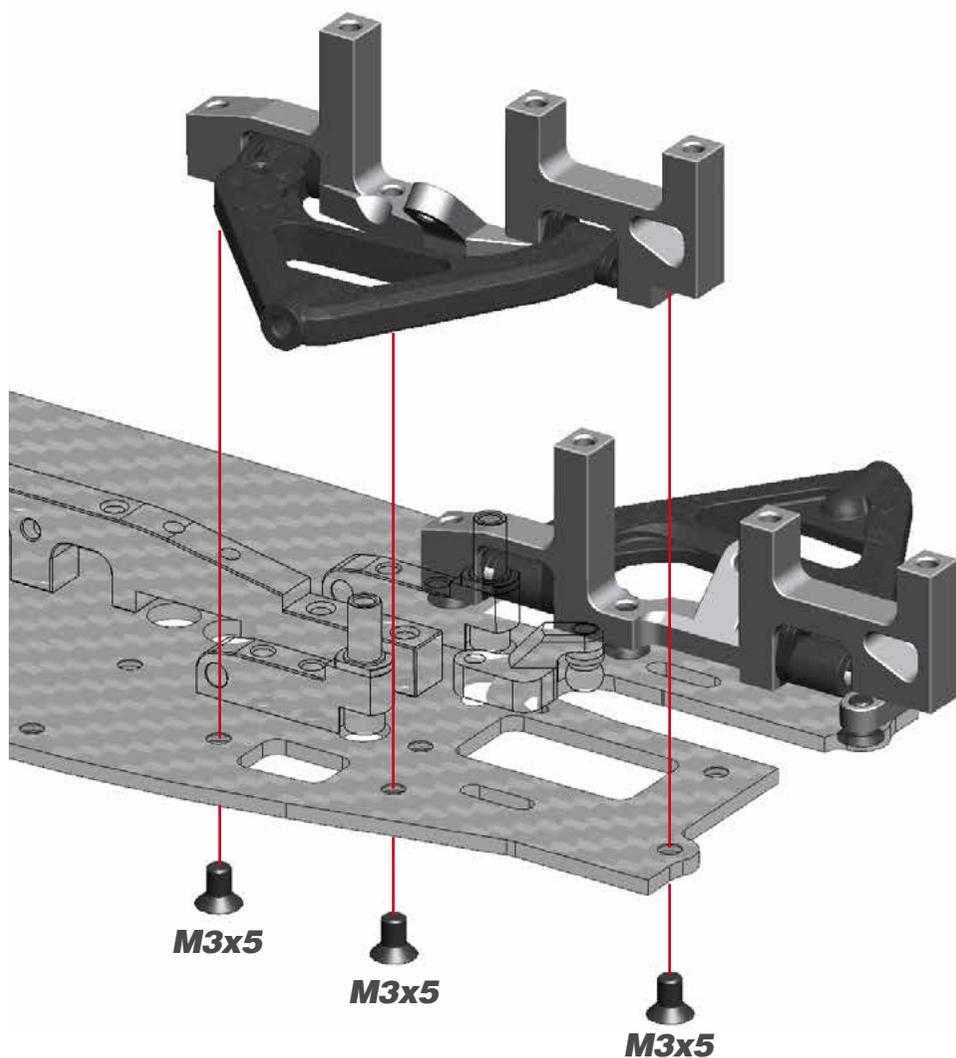
MID	MID	HIGH
LOW	HIGH	HIGH

DEF. SETUP

**DEF. SETUP** FRONT DEFAULT WHEELBASE SHIMS



# STEP 29



M3x5

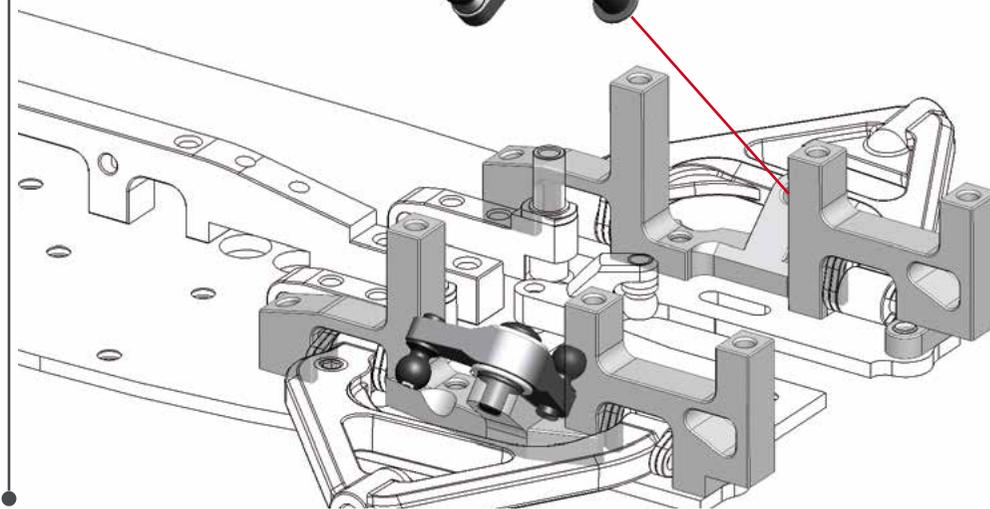
# STEP 30 BAG 7

## 30.1



Note the right orientation of the rocker-legs.

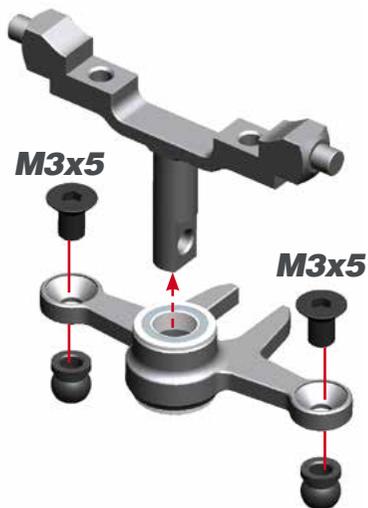
## 30.2



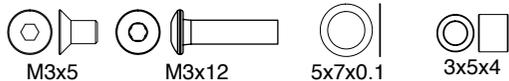
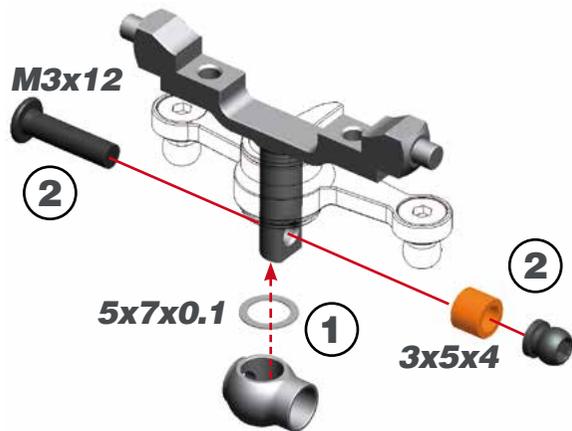
M3x10

**STEP 31**

**31.1**

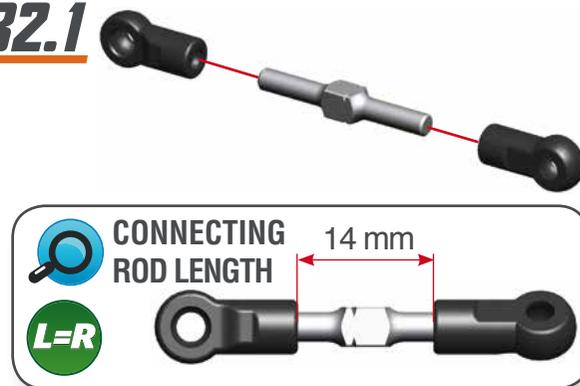


**31.2**

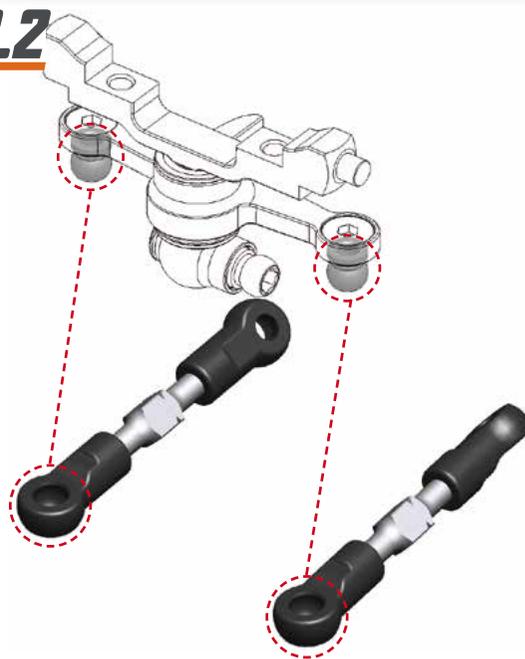


**STEP 32**

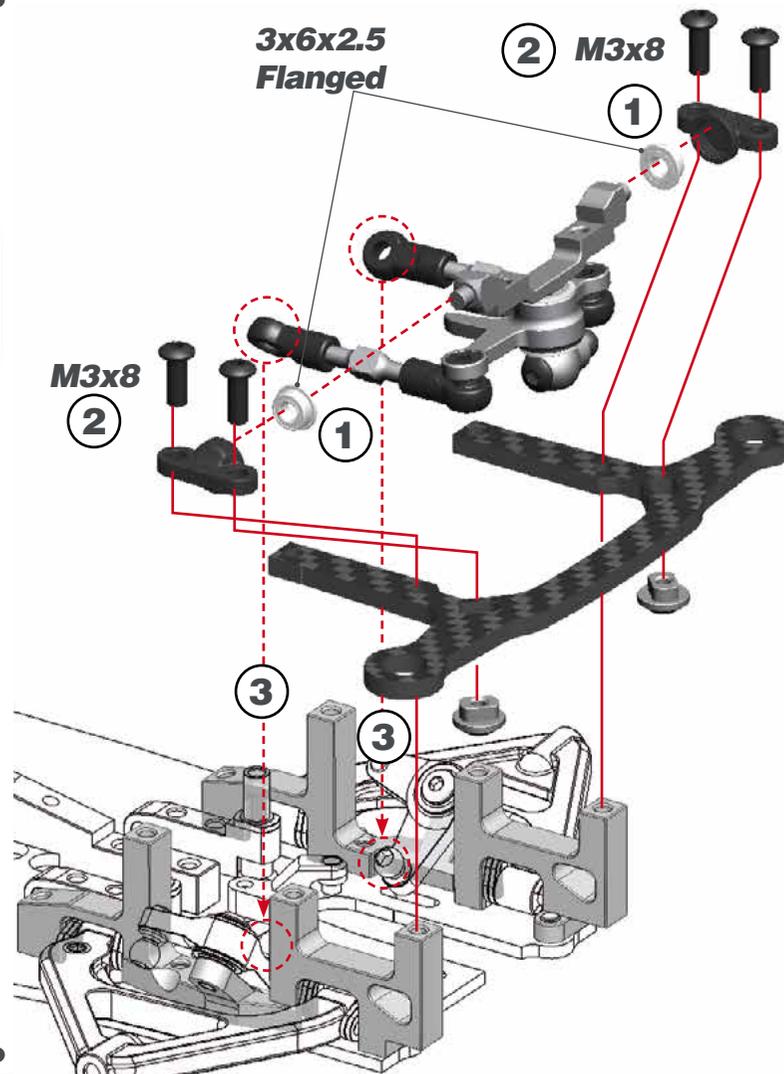
**32.1**



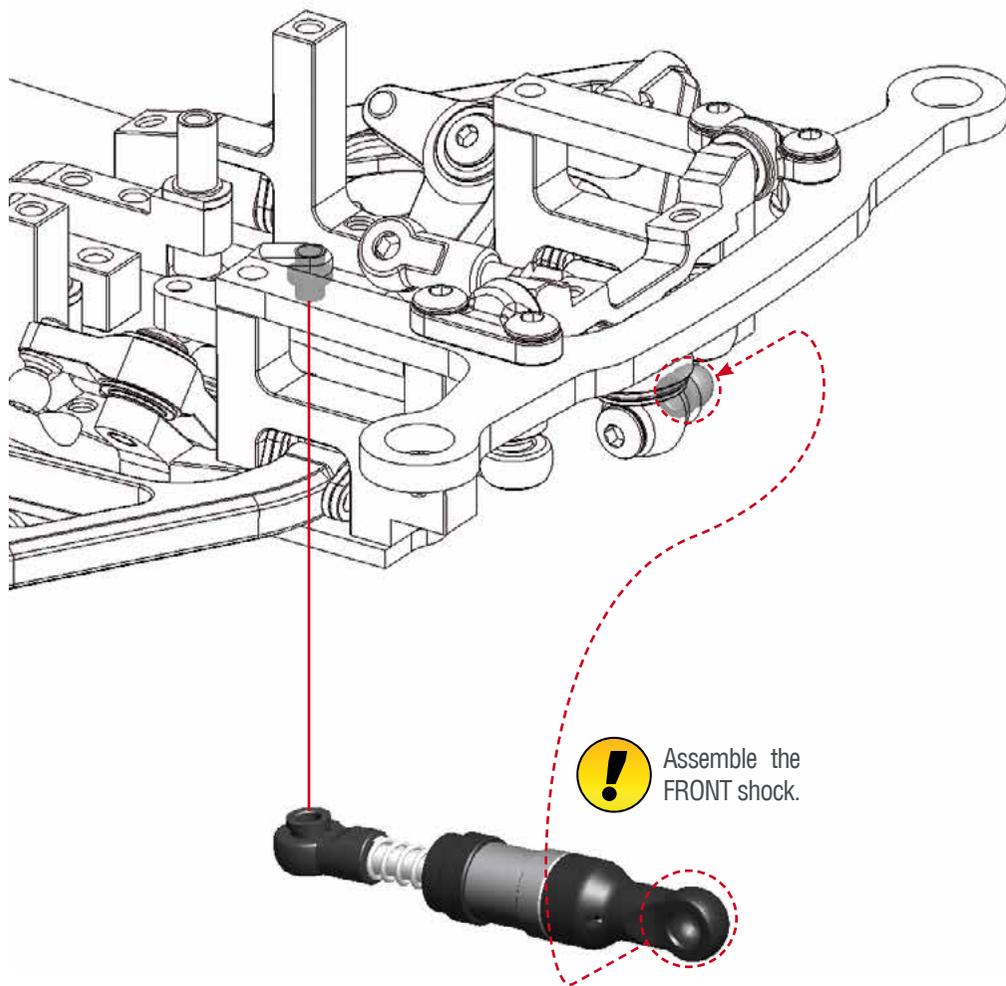
**32.2**



**STEP 33**



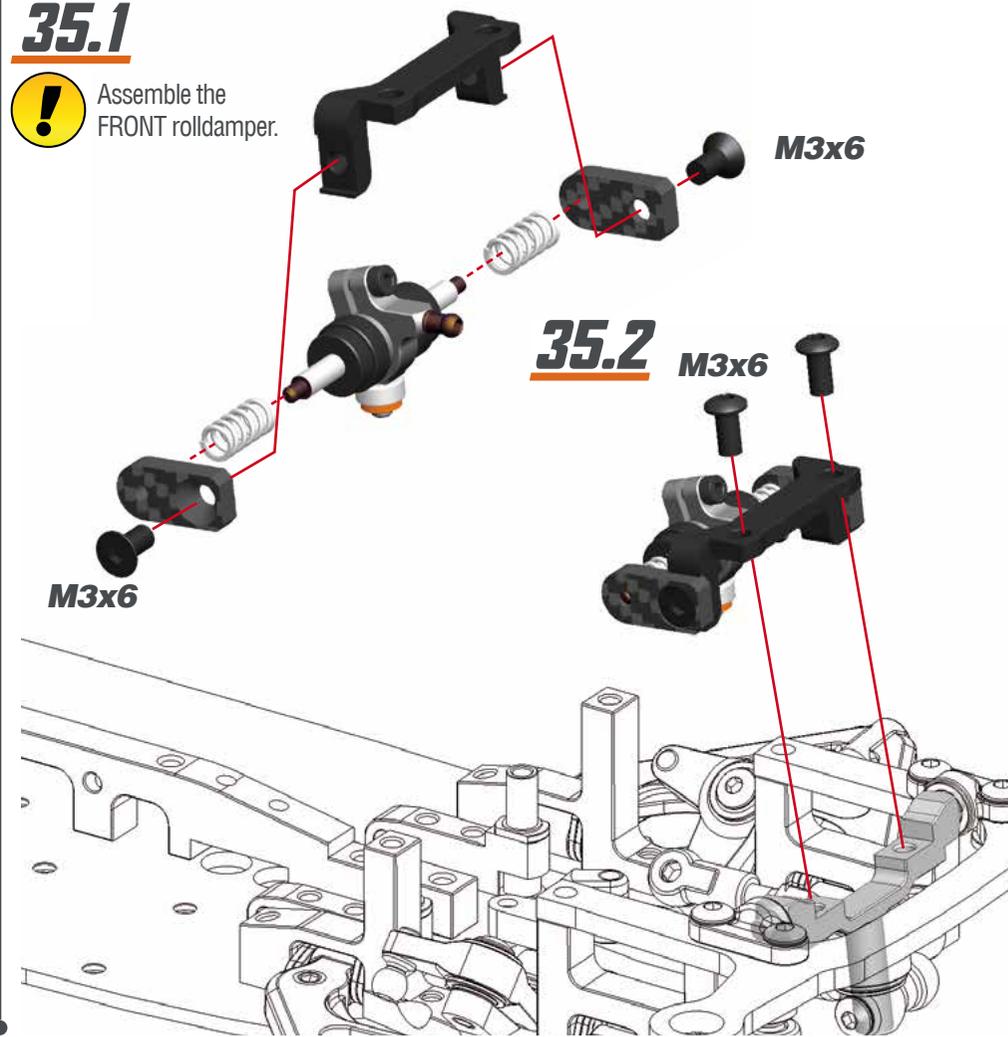
# STEP 34



# STEP 35

## 35.1

Assemble the FRONT rolldamper.



## 35.2

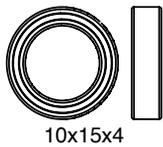
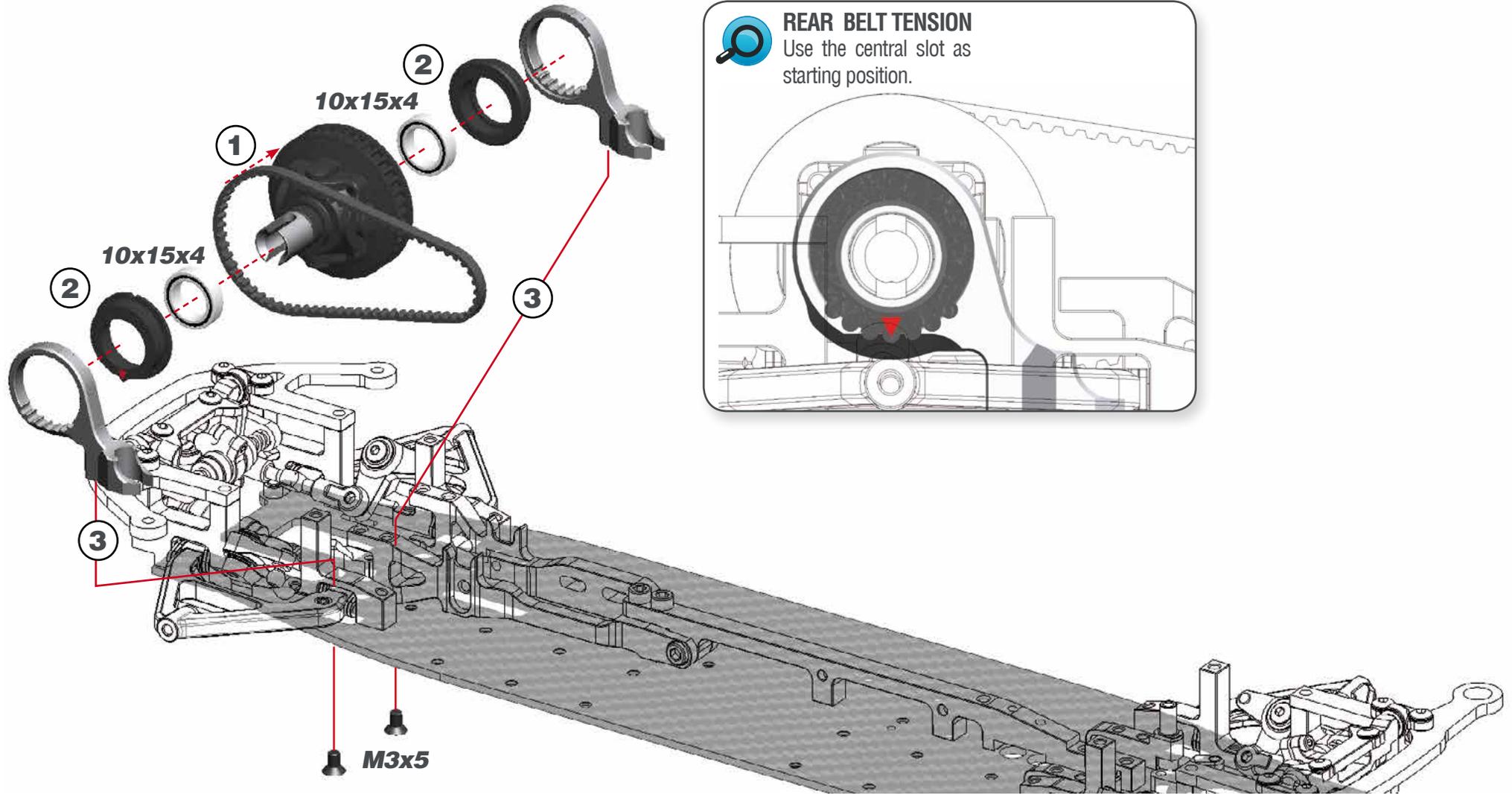
M3x6

M3x6

M3x6



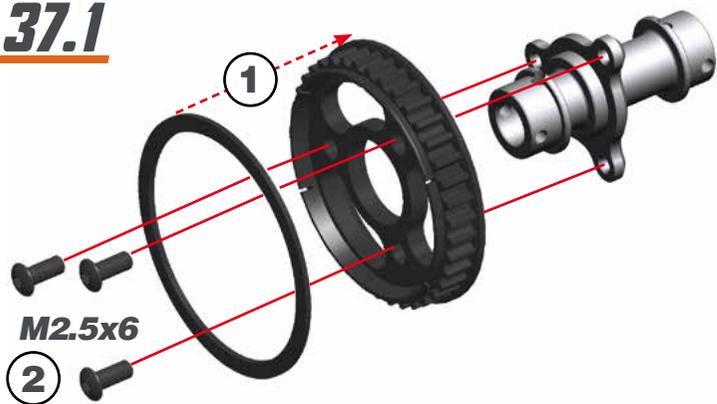
## STEP 36 BAG 8



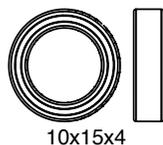
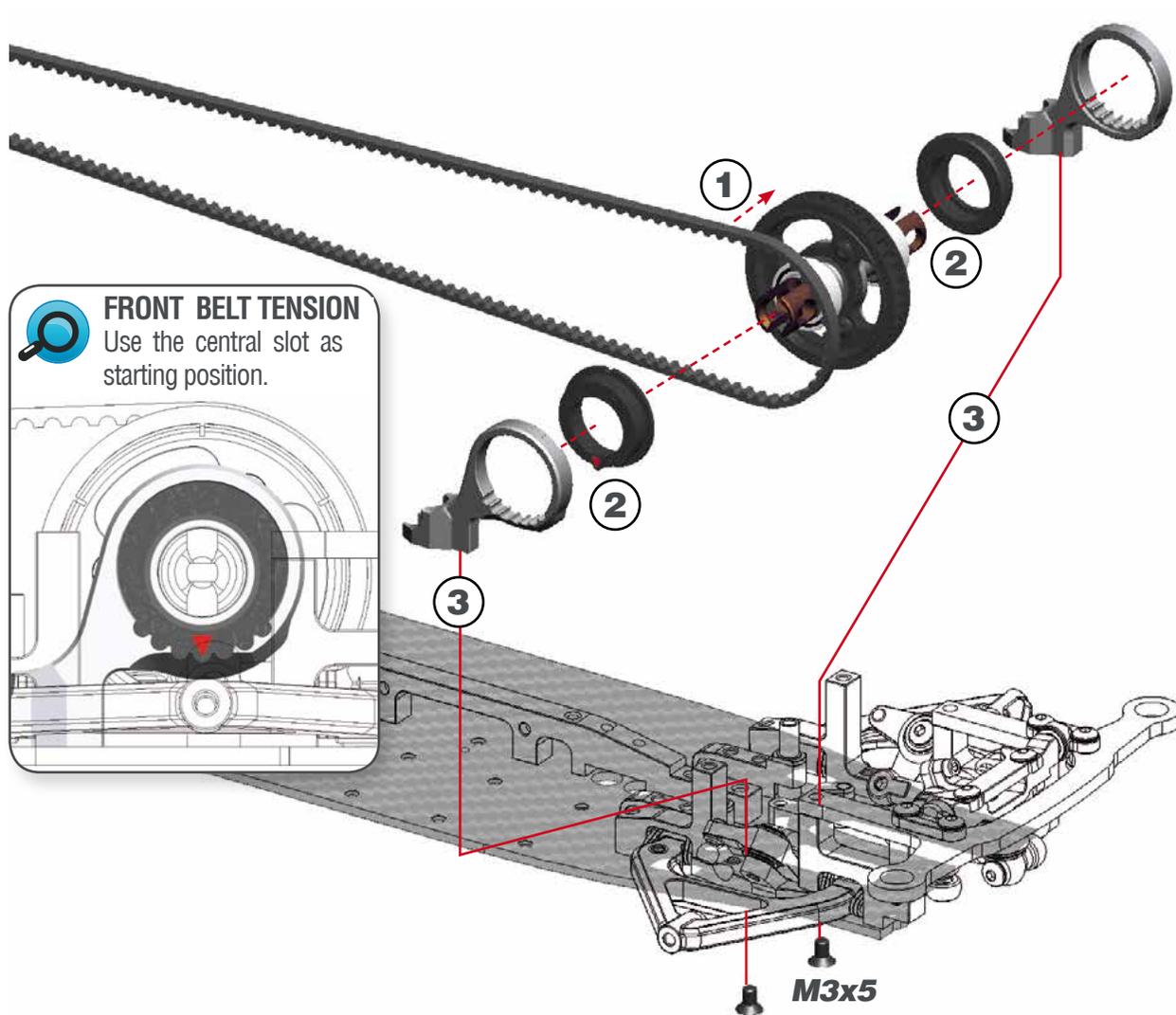
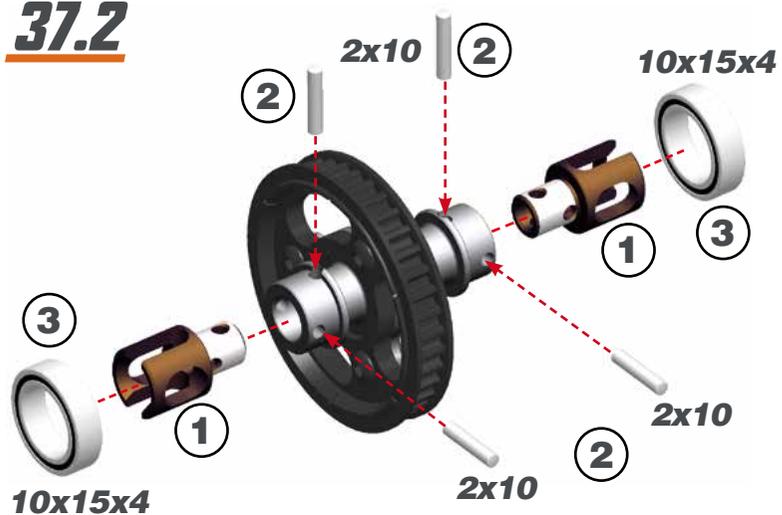
# STEP 37

# STEP 38

## 37.1



## 37.2



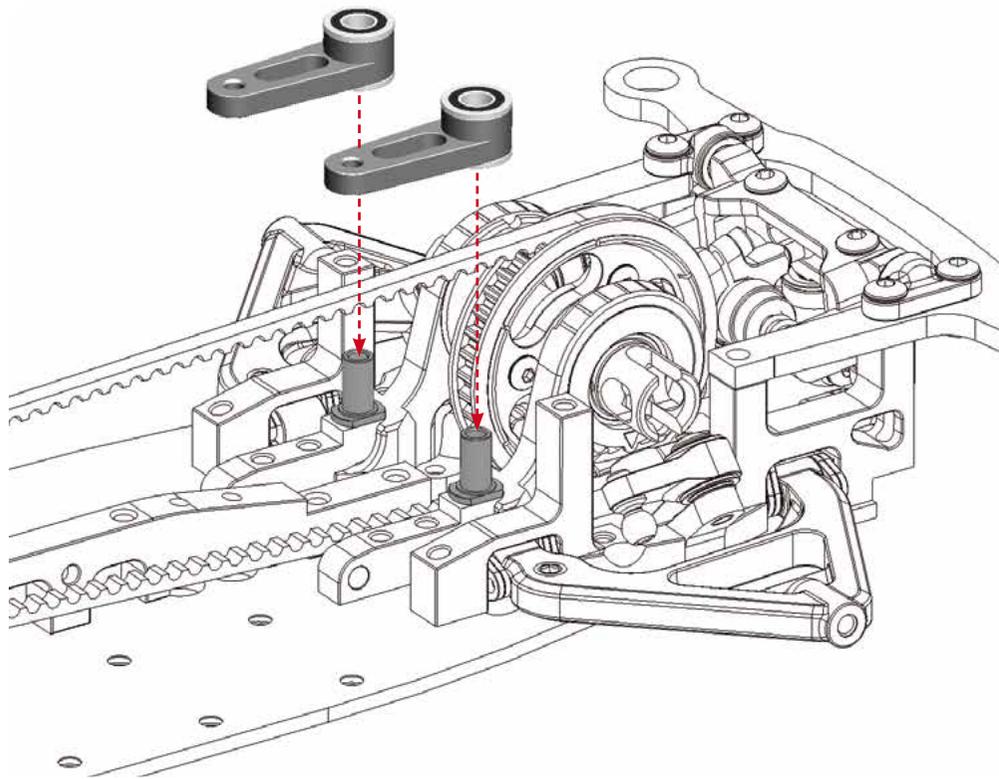


## STEP 41

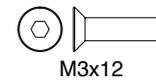
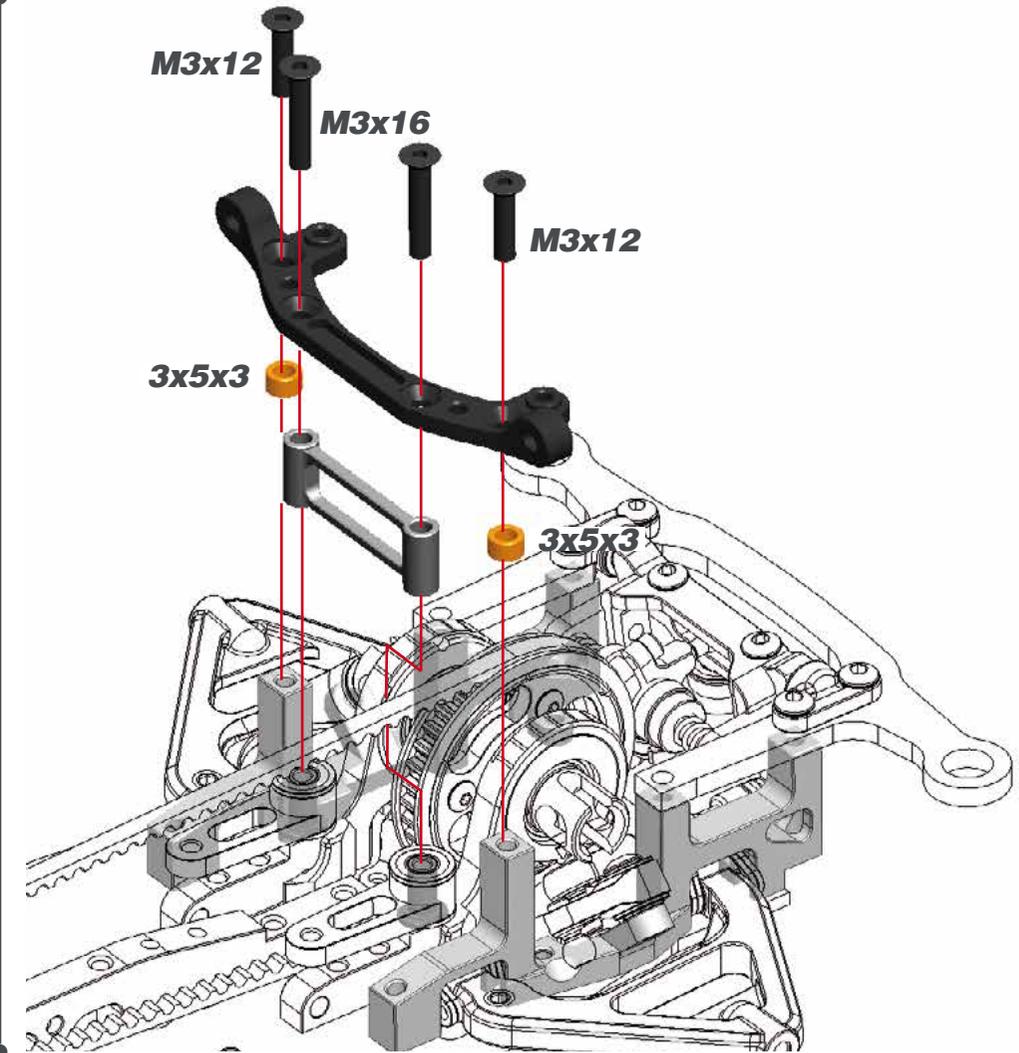
BAG 9



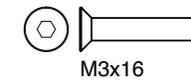
Note the right orientation of the steering-levers.



## STEP 42



M3x12



M3x16



3x5x3

# STEP 43

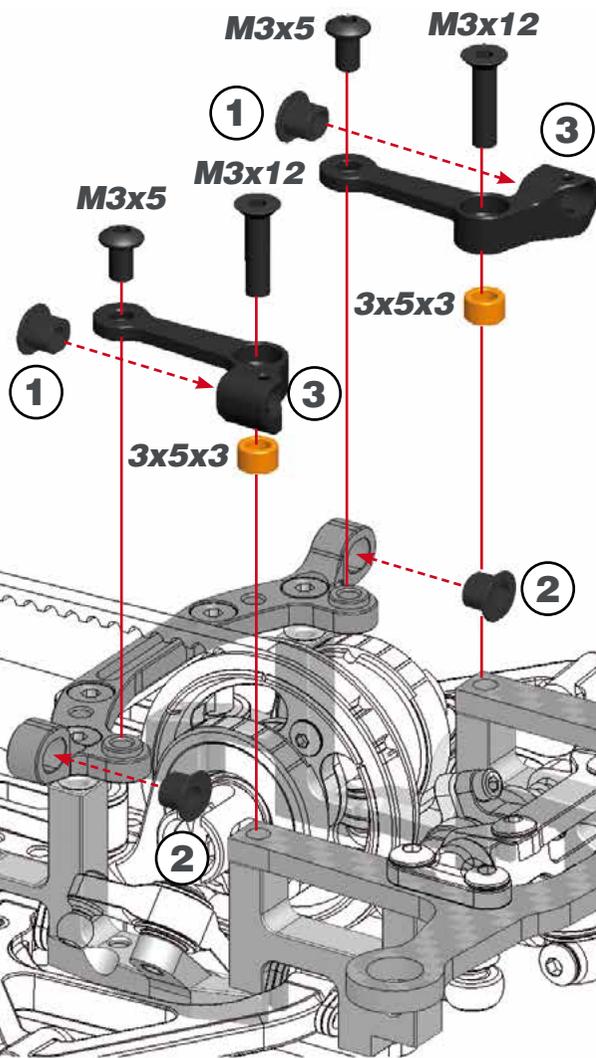
FRONT SUSPENSION  
INSERTS CHART

**L=R**

**OUTSIDE**  
RIGHT LEFT

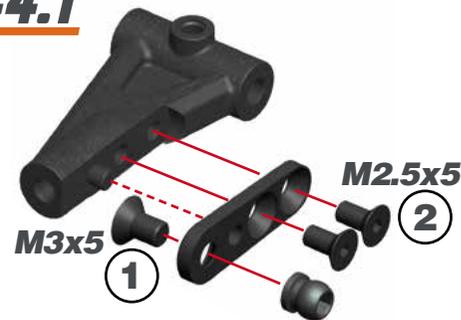
**INSIDE**  
RIGHT LEFT

DEF. SETUP



# STEP 44 BAG 10

## 44.1

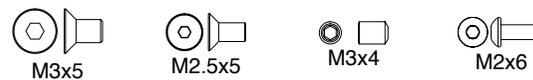
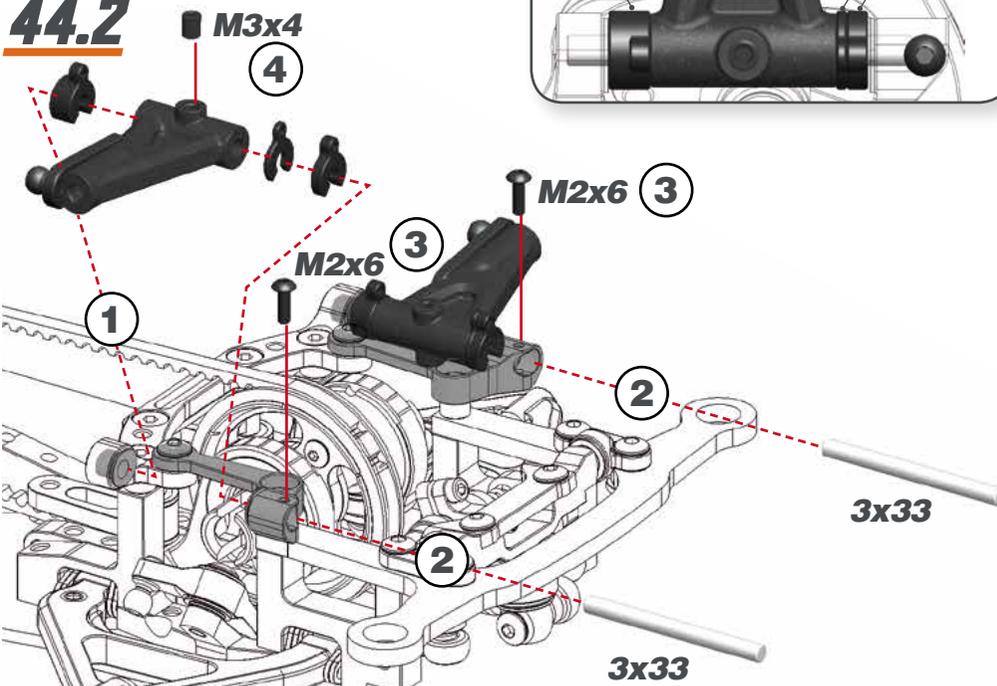


**L=R** FRONT CASTER  
DEFAULT SPACERS

DEF. SETUP

4mm 1mm 2mm

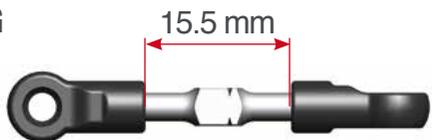
## 44.2



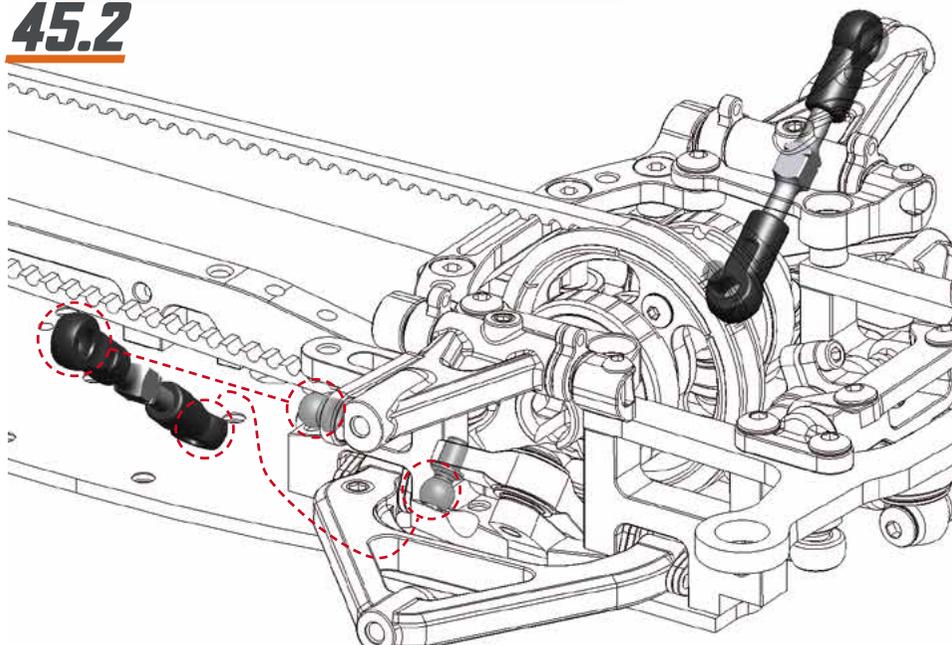
## STEP 45



CONNECTING  
ROD LENGTH

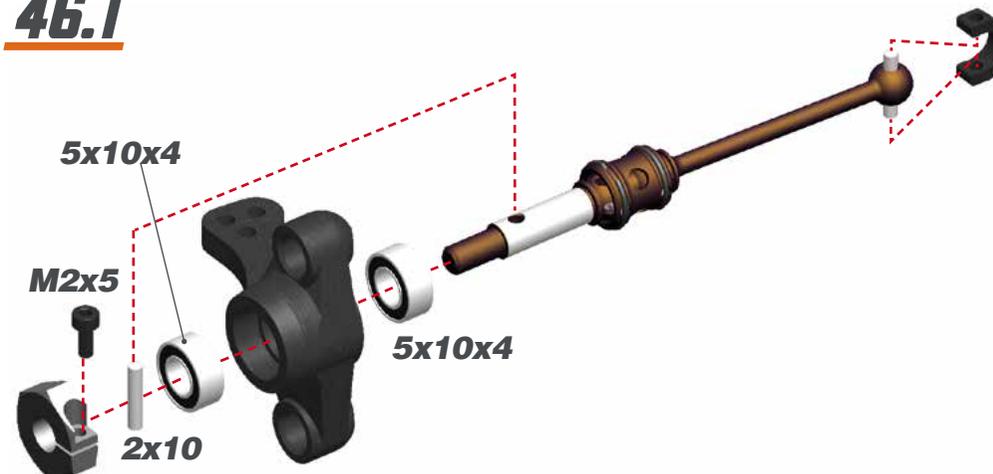


## 45.2



## STEP 46

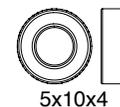
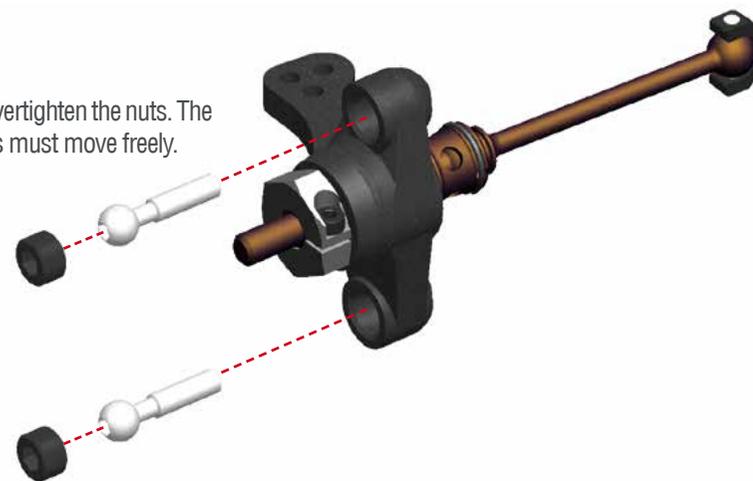
### 46.1



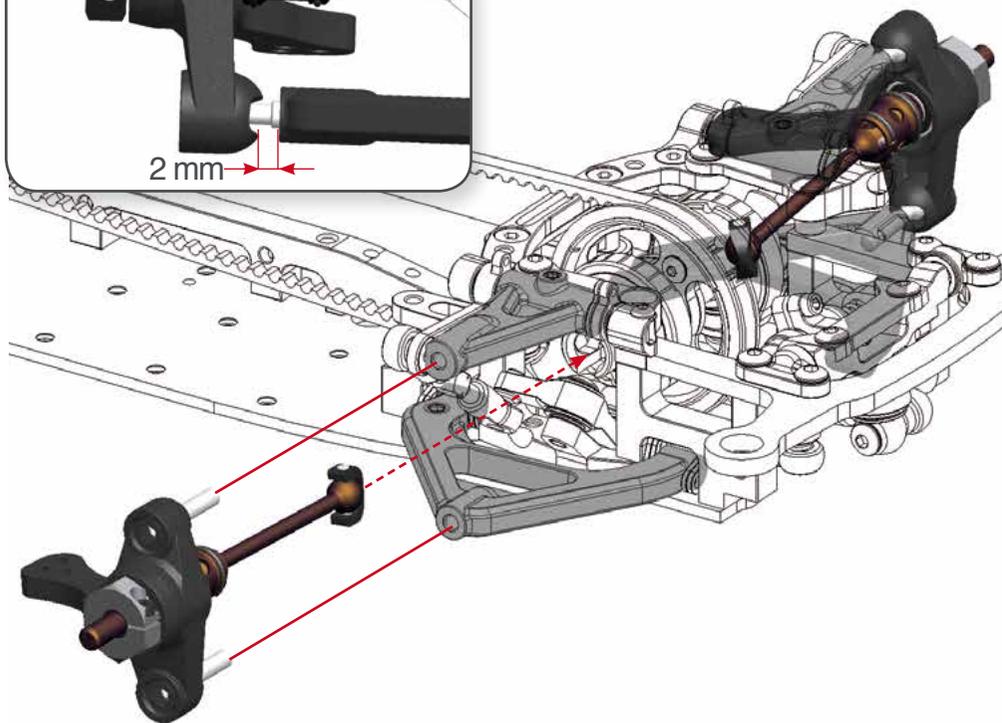
### 46.2



Do not overtighten the nuts. The pivotballs must move freely.



# STEP 47

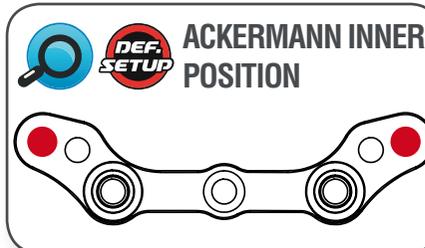
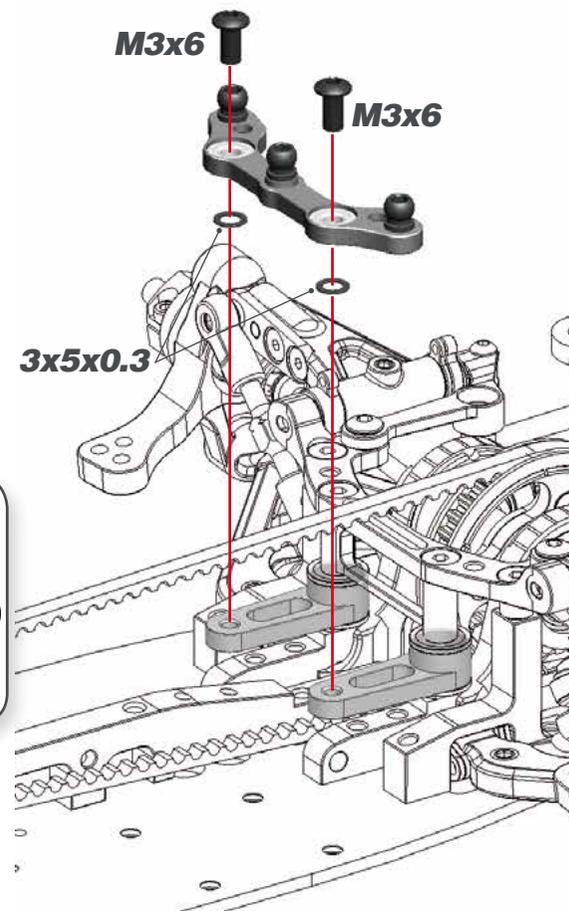


# STEP 48 BAG 11

## 48.1

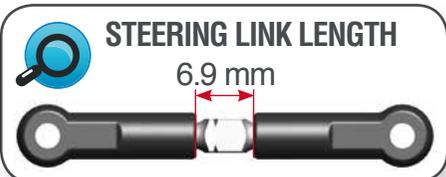


## 48.2

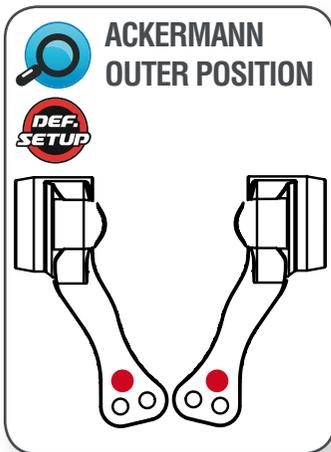
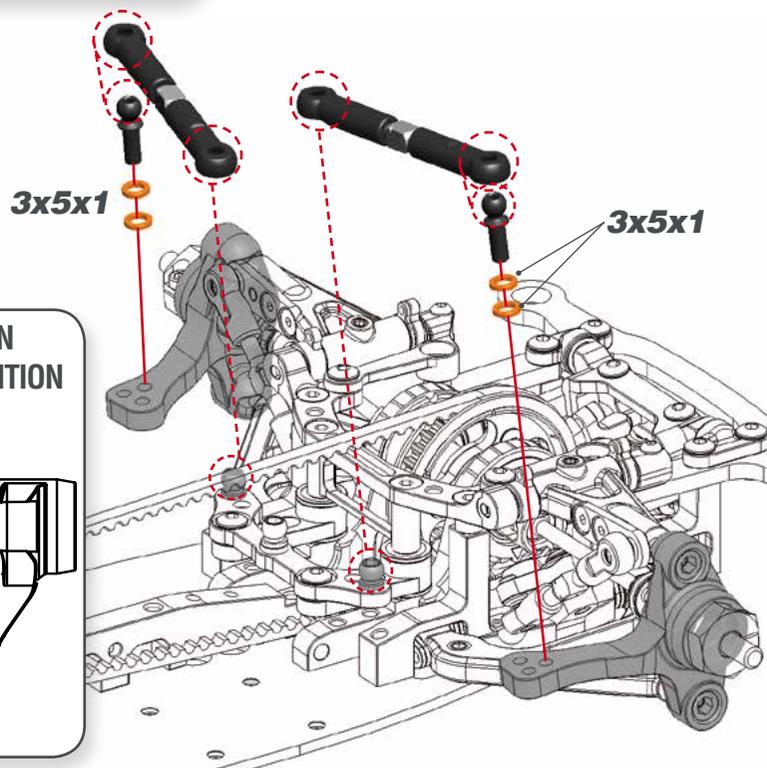


# STEP 49

## 49.1

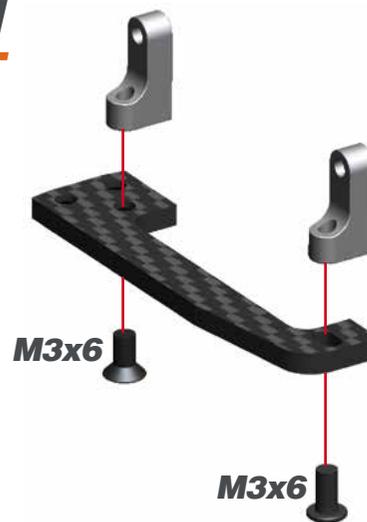


## 49.2

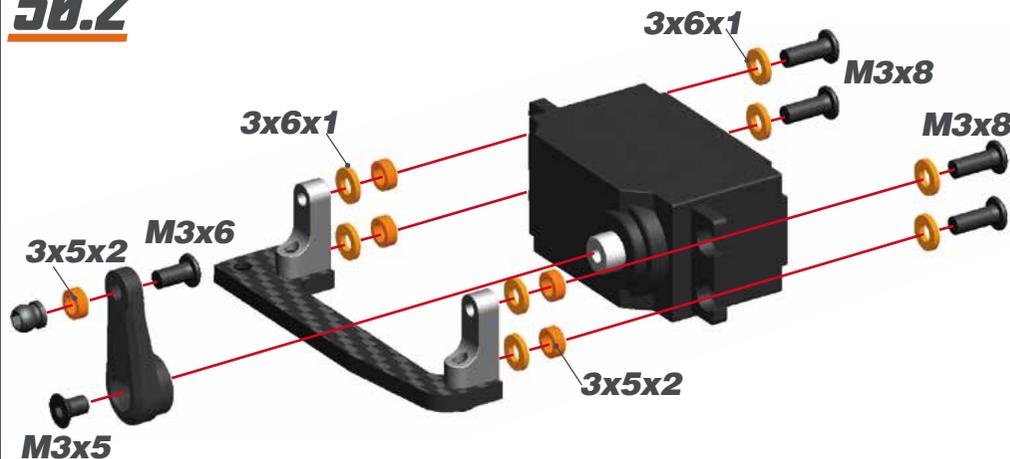


# STEP 50

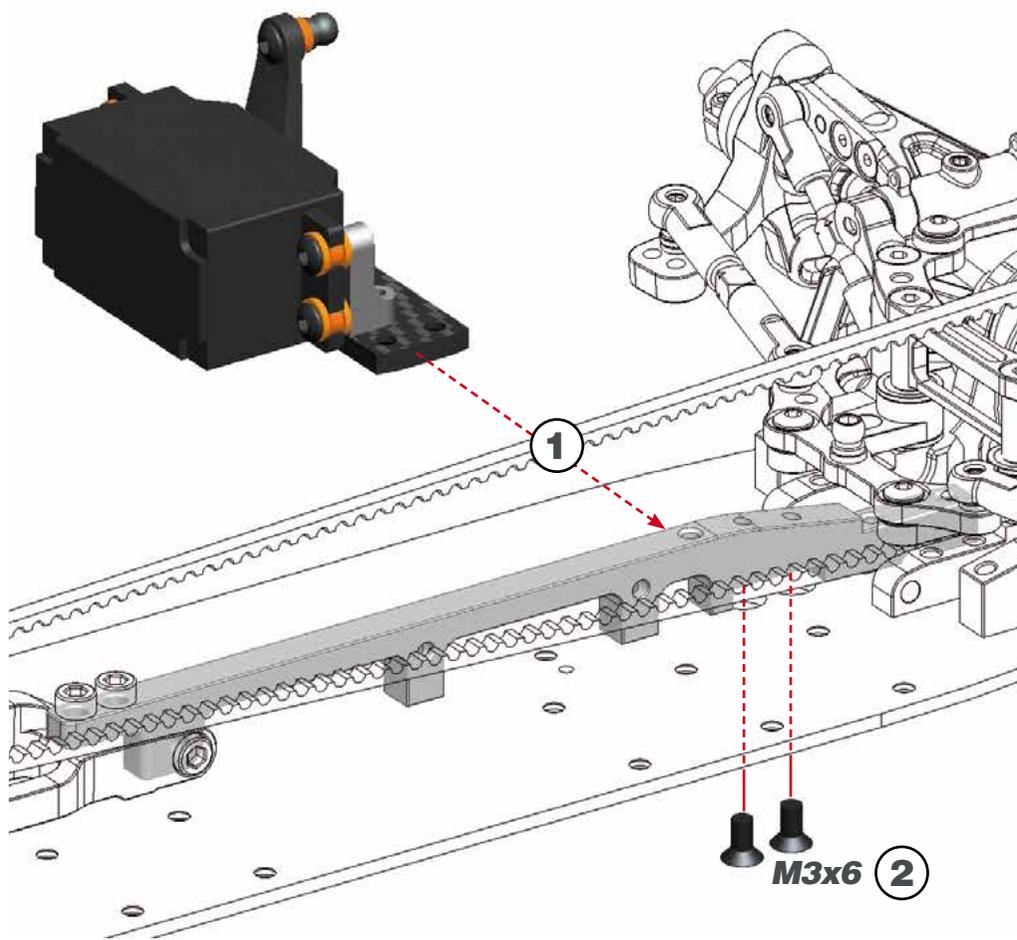
## 50.1



## 50.2



# STEP 51

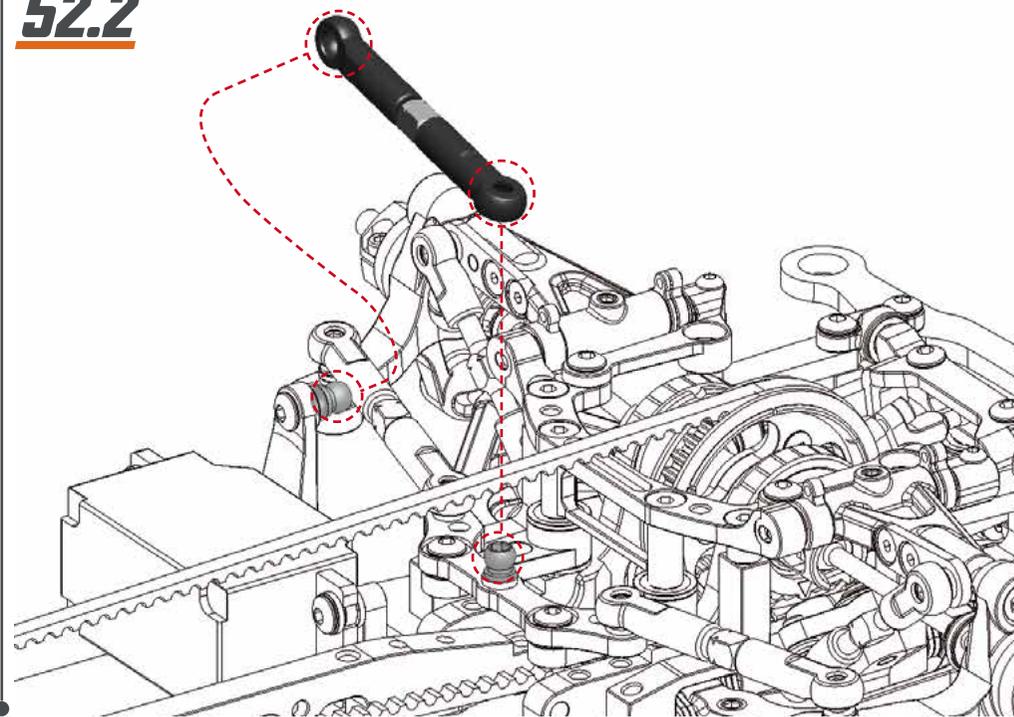


# STEP 52

## 52.1

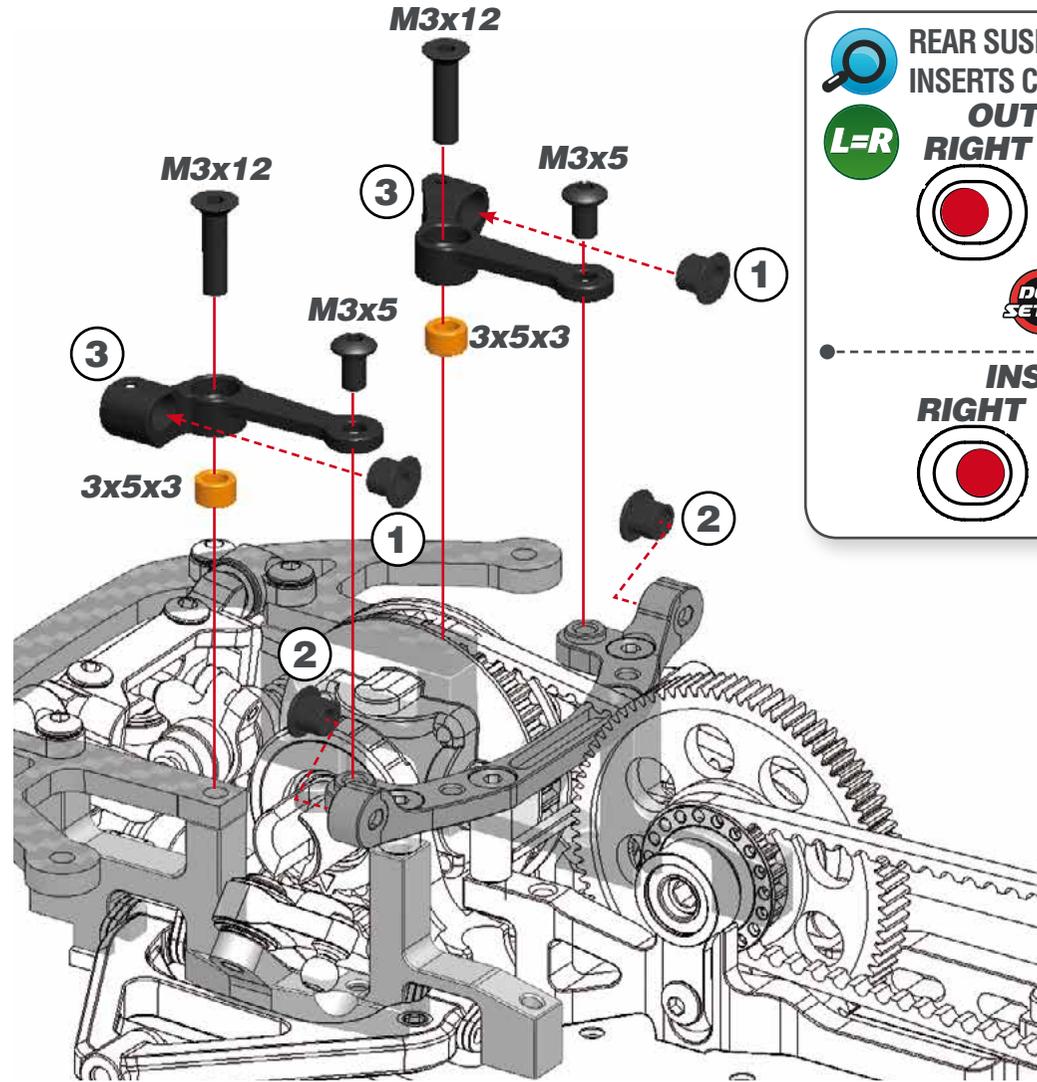
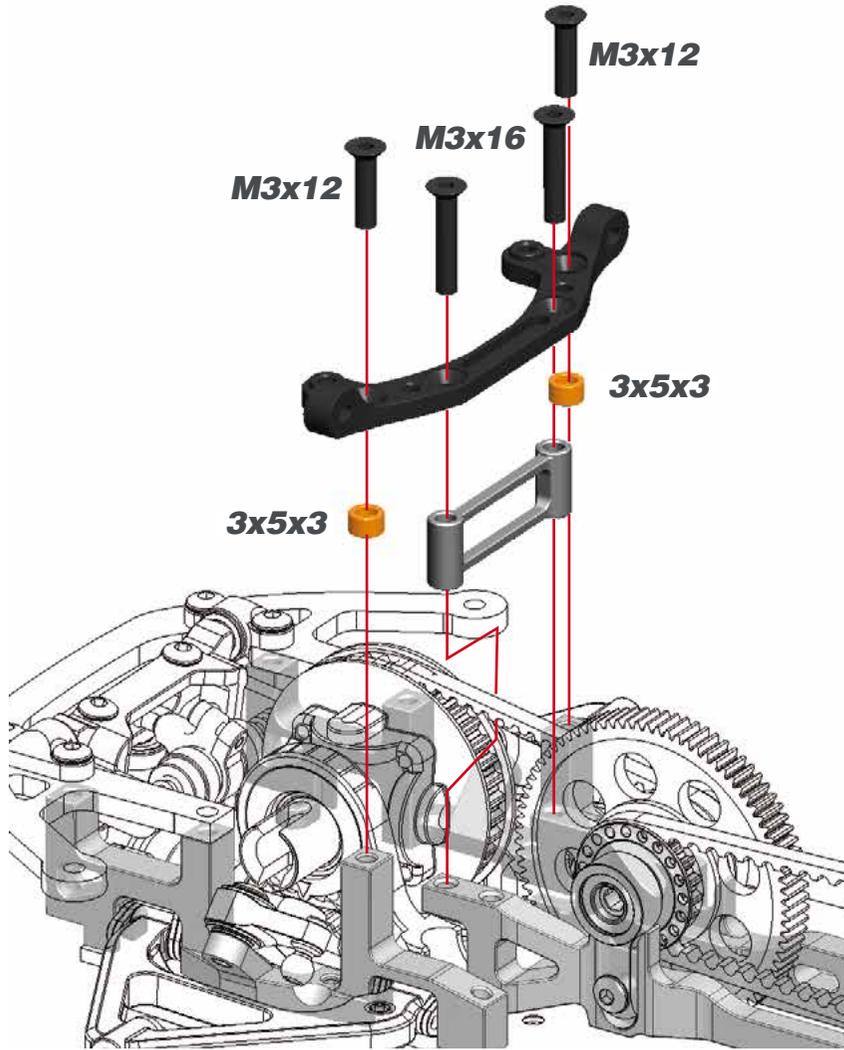


## 52.2



## STEP 53 BAG 12

## STEP 54



**REAR SUSPENSION  
INSERTS CHART**

**L=R**

**OUTSIDE**

**RIGHT LEFT**

**DEF. SETUP**

---

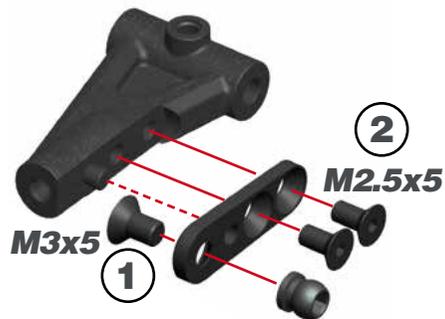
**INSIDE**

**RIGHT LEFT**

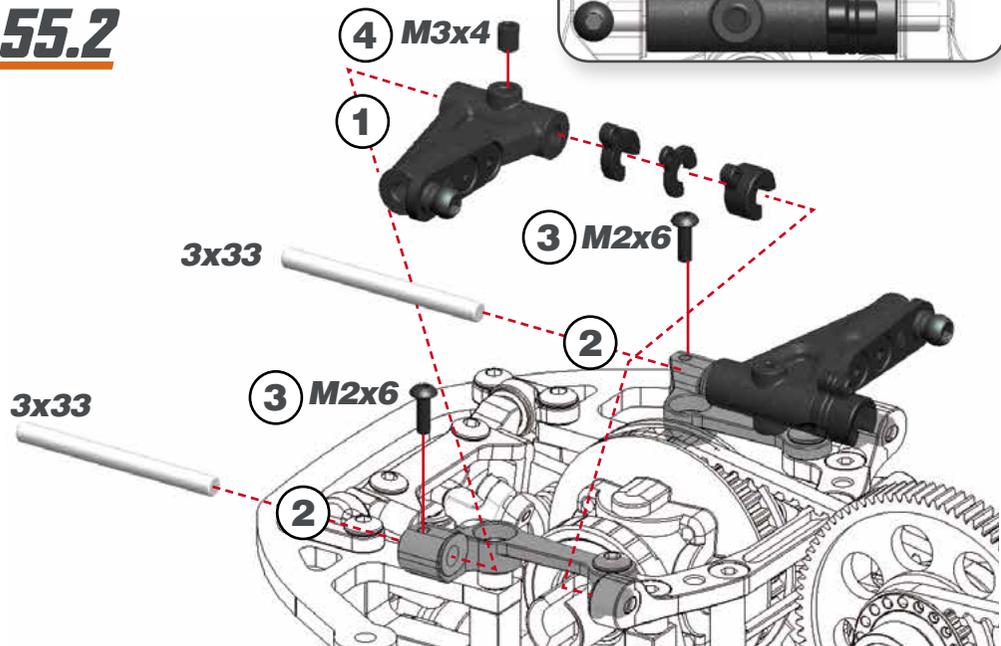


STEP 55 BAG 13

55.1

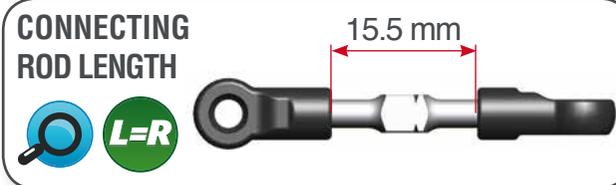


55.2

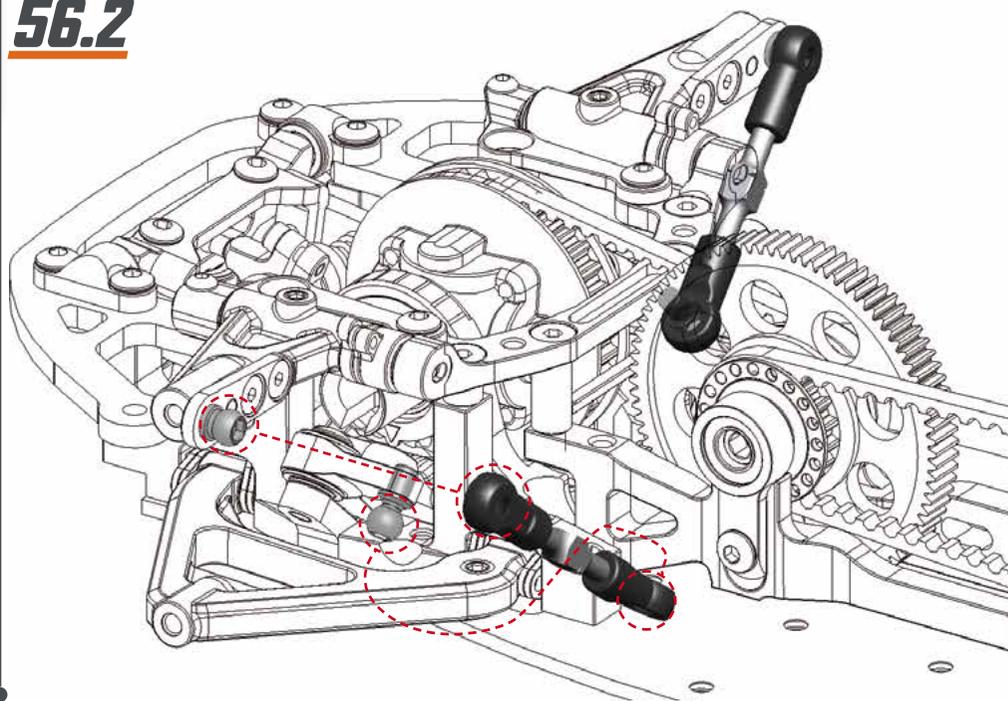


STEP 56

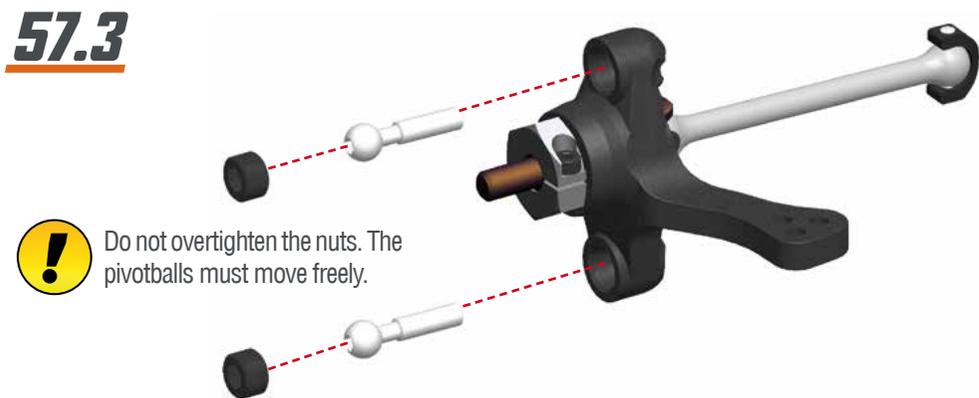
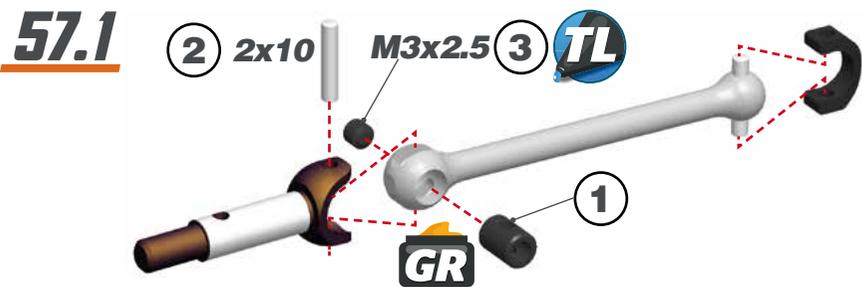
56.1



56.2



## STEP 57



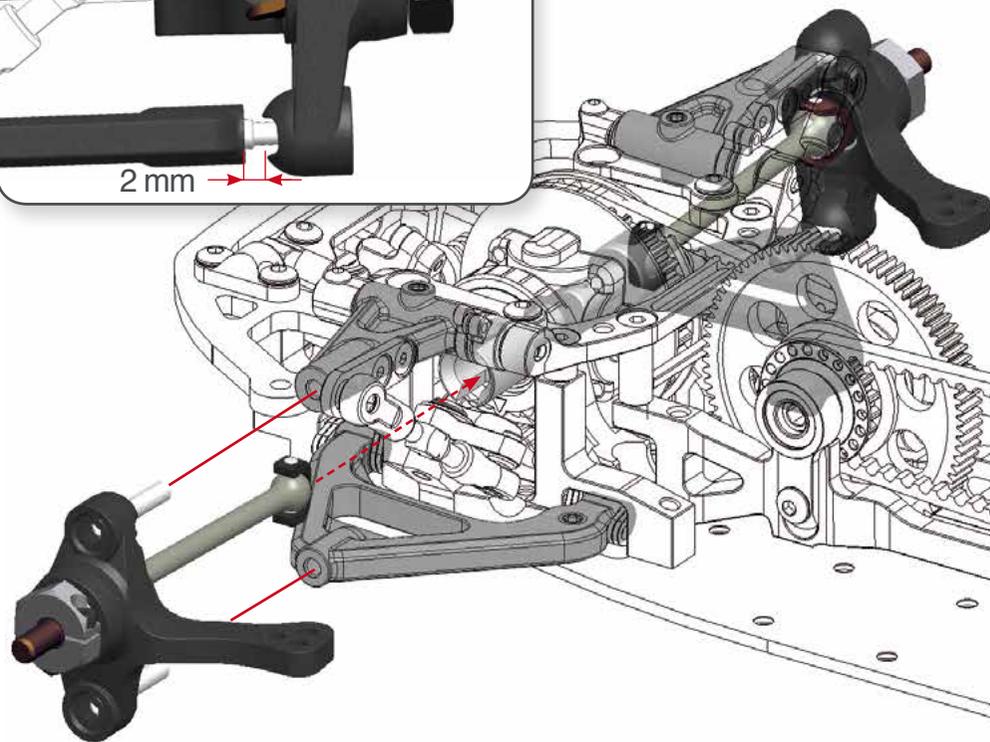
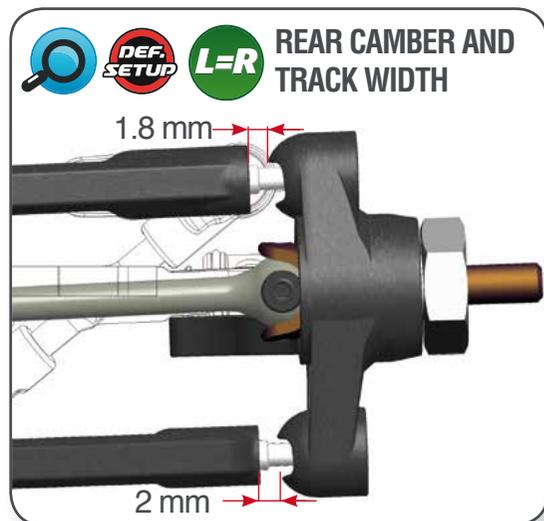
M3x2.5

2x10

5x10x4

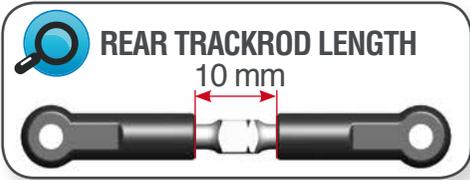
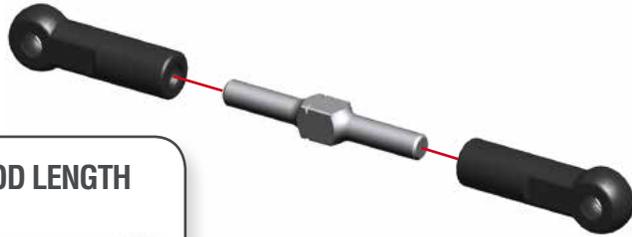
M2x5

## STEP 58

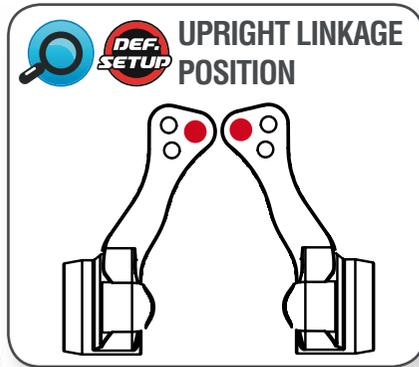
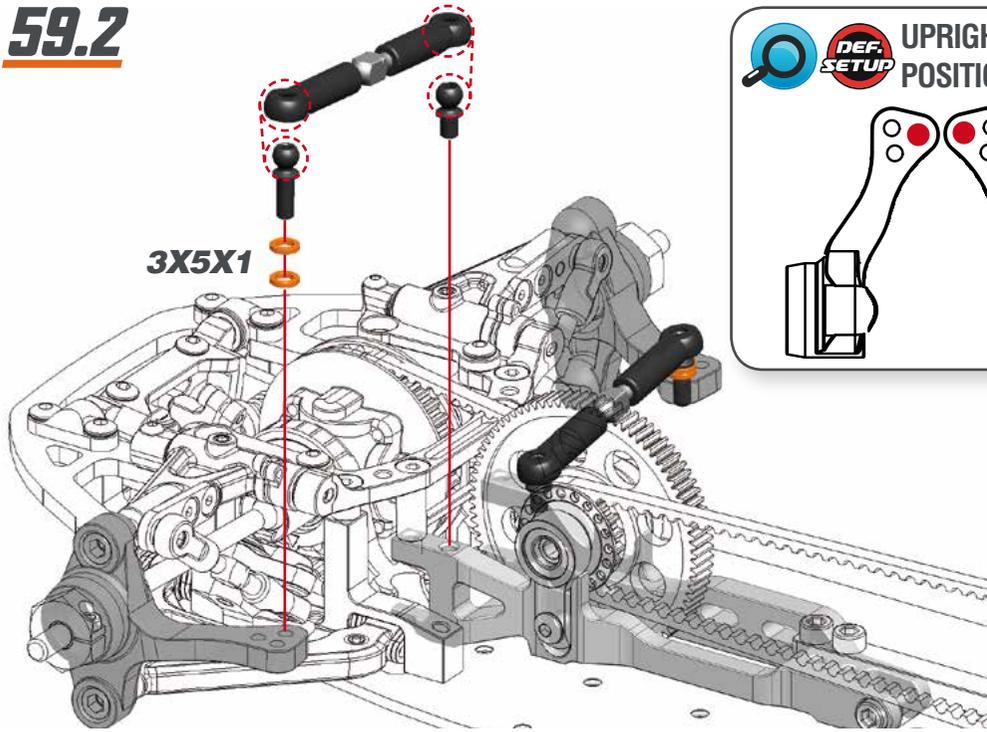


## STEP 59

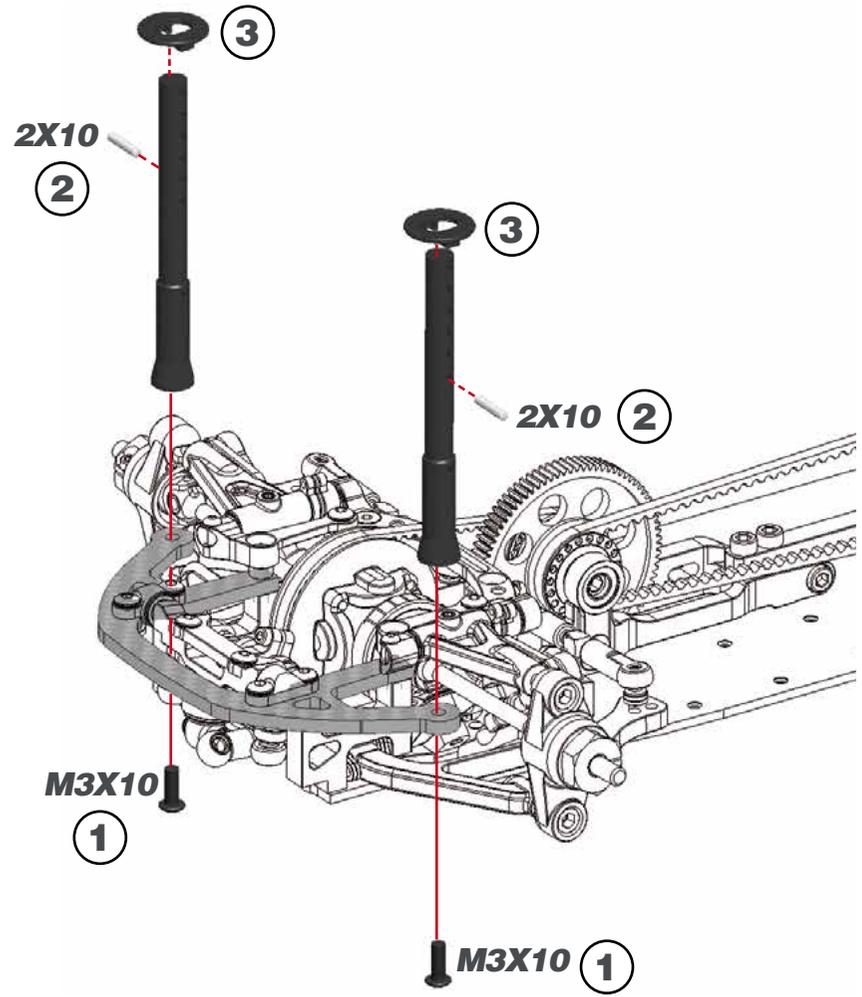
### 59.1



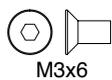
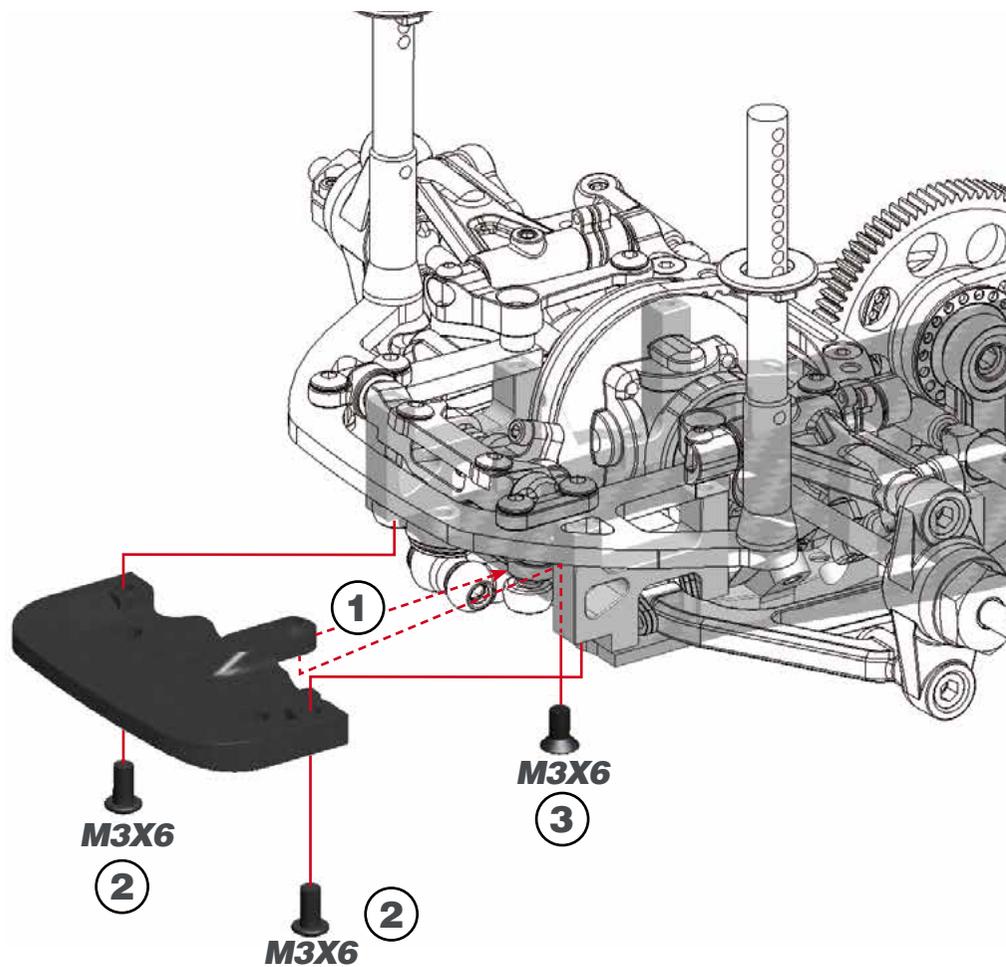
### 59.2



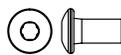
## STEP 60 BAG 14



# STEP 61

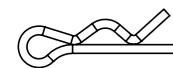
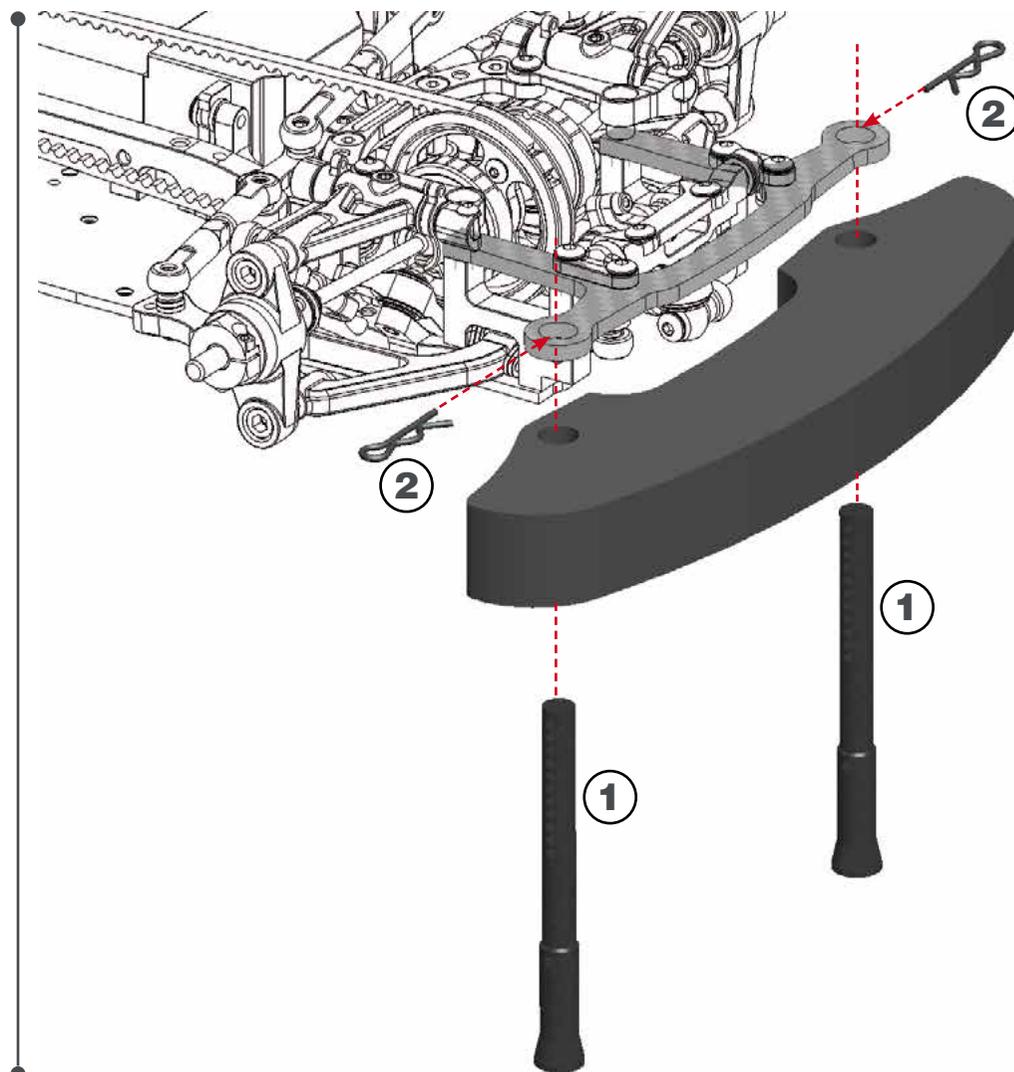


M3x6



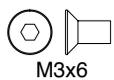
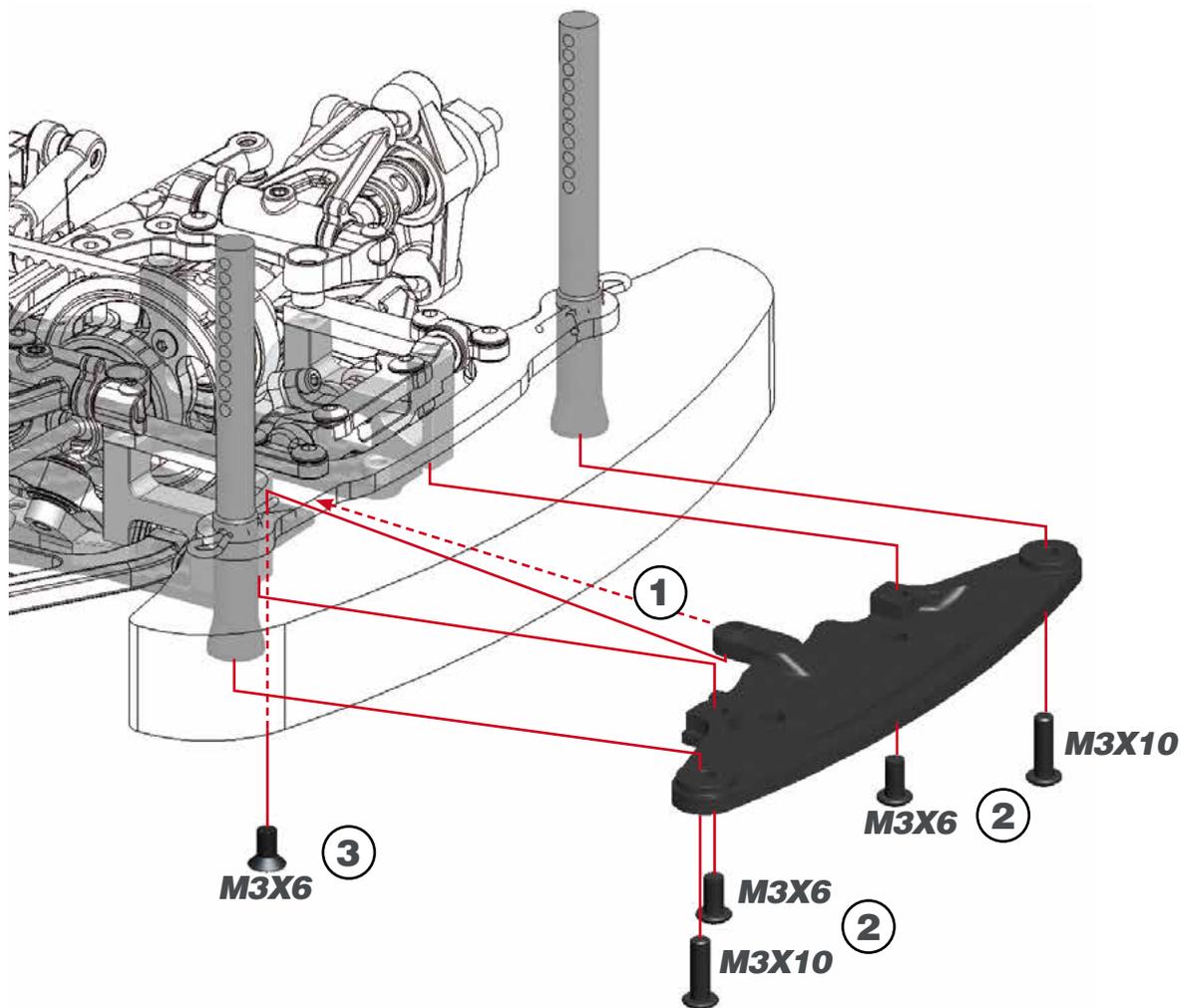
M3x6

# STEP 62

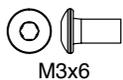


Body clip mid

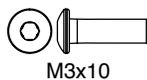
# STEP 63



M3x6

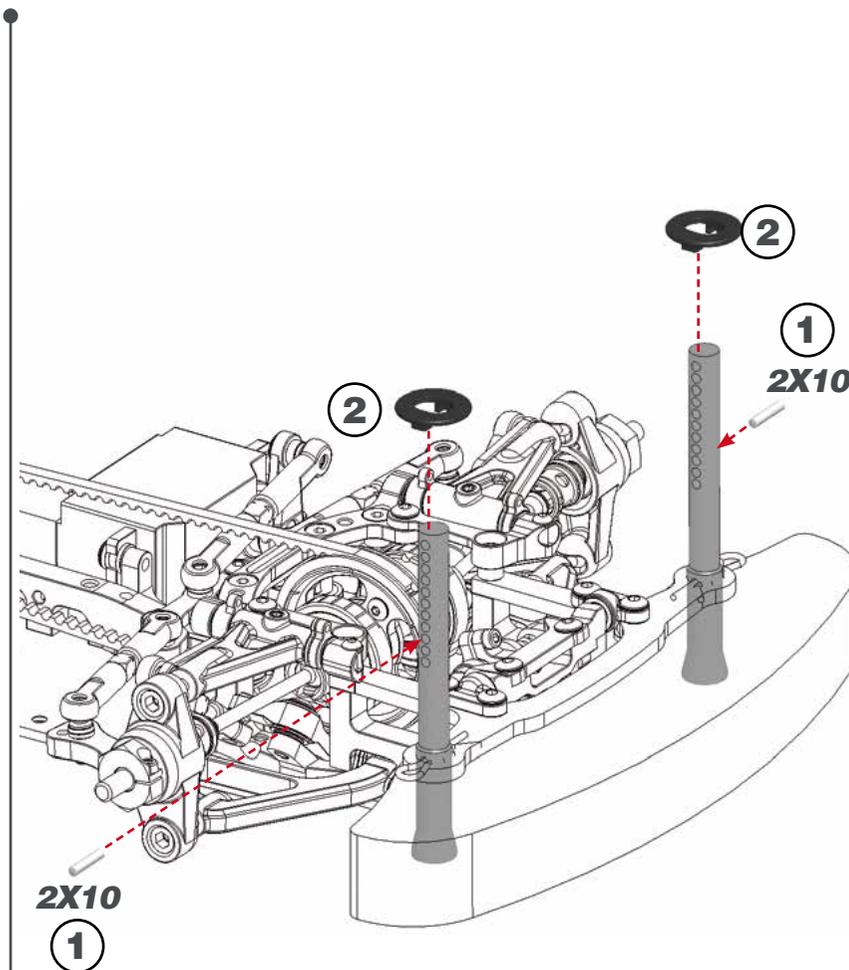


M3x6



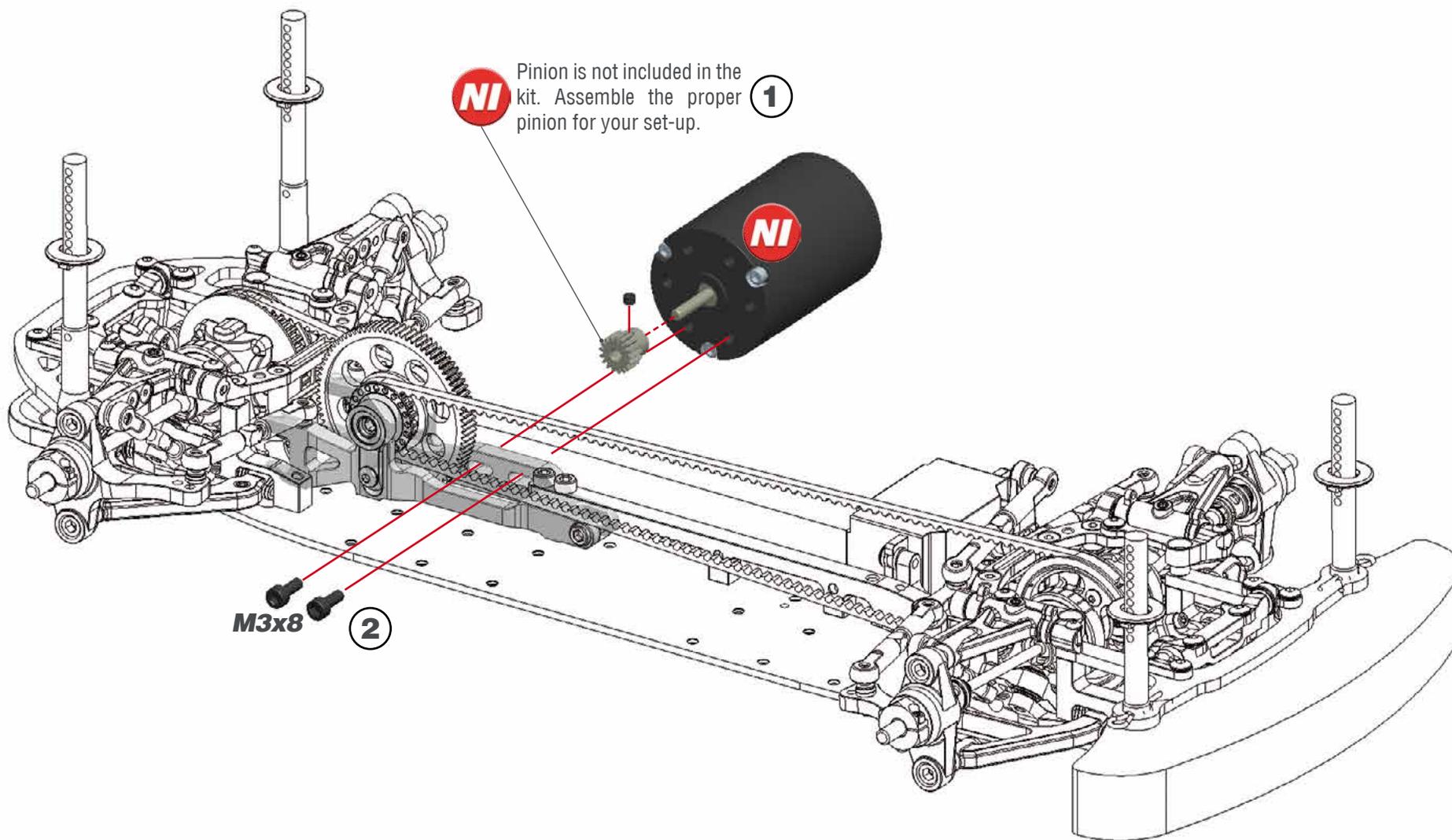
M3x10

# STEP 64



2x10

STEP 65 BAG 15



NI

Pinion is not included in the kit. Assemble the proper pinion for your set-up.

1

NI

M3x8

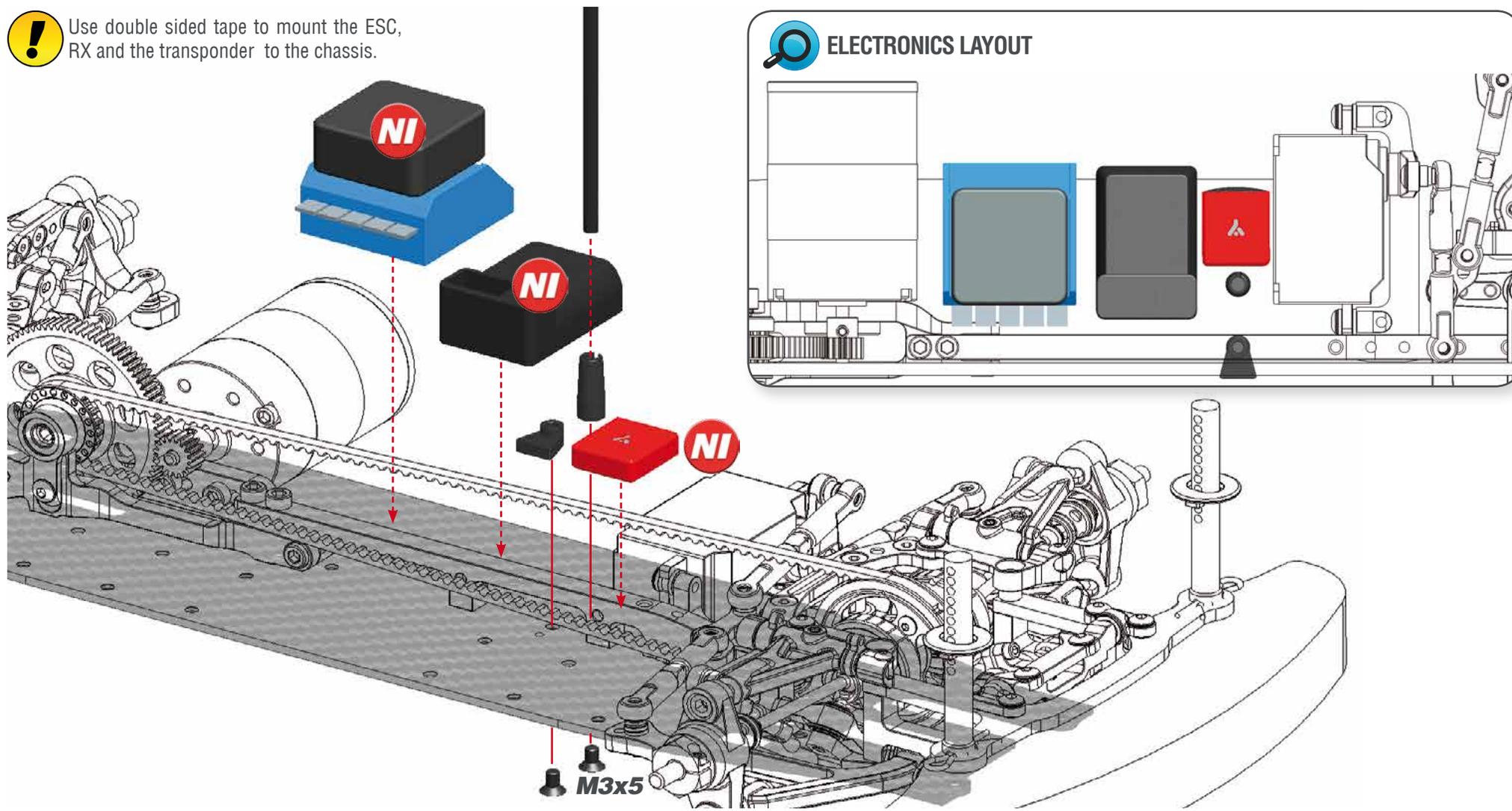
2



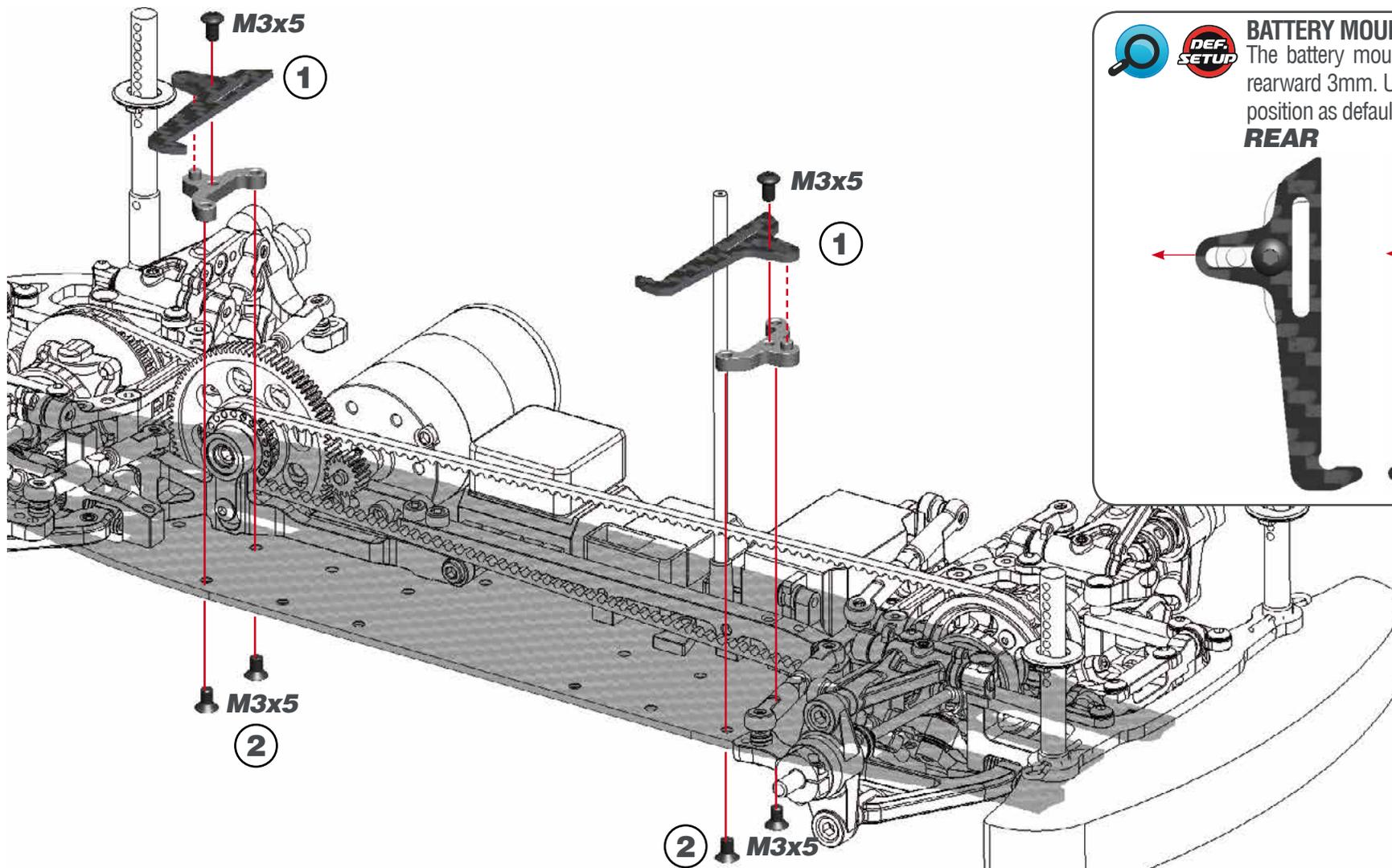
M3x8

## STEP 66

**!** Use double sided tape to mount the ESC, RX and the transponder to the chassis.



# STEP 67

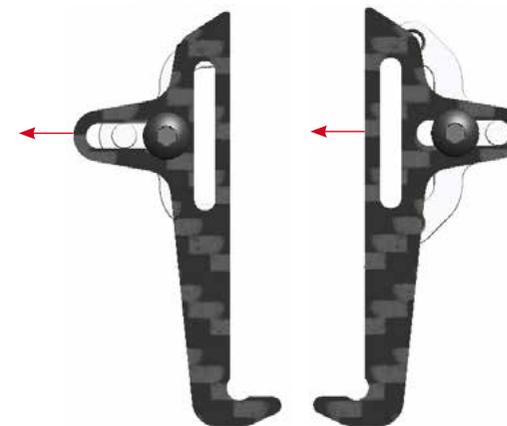


### BATTERY MOUNT POSITION

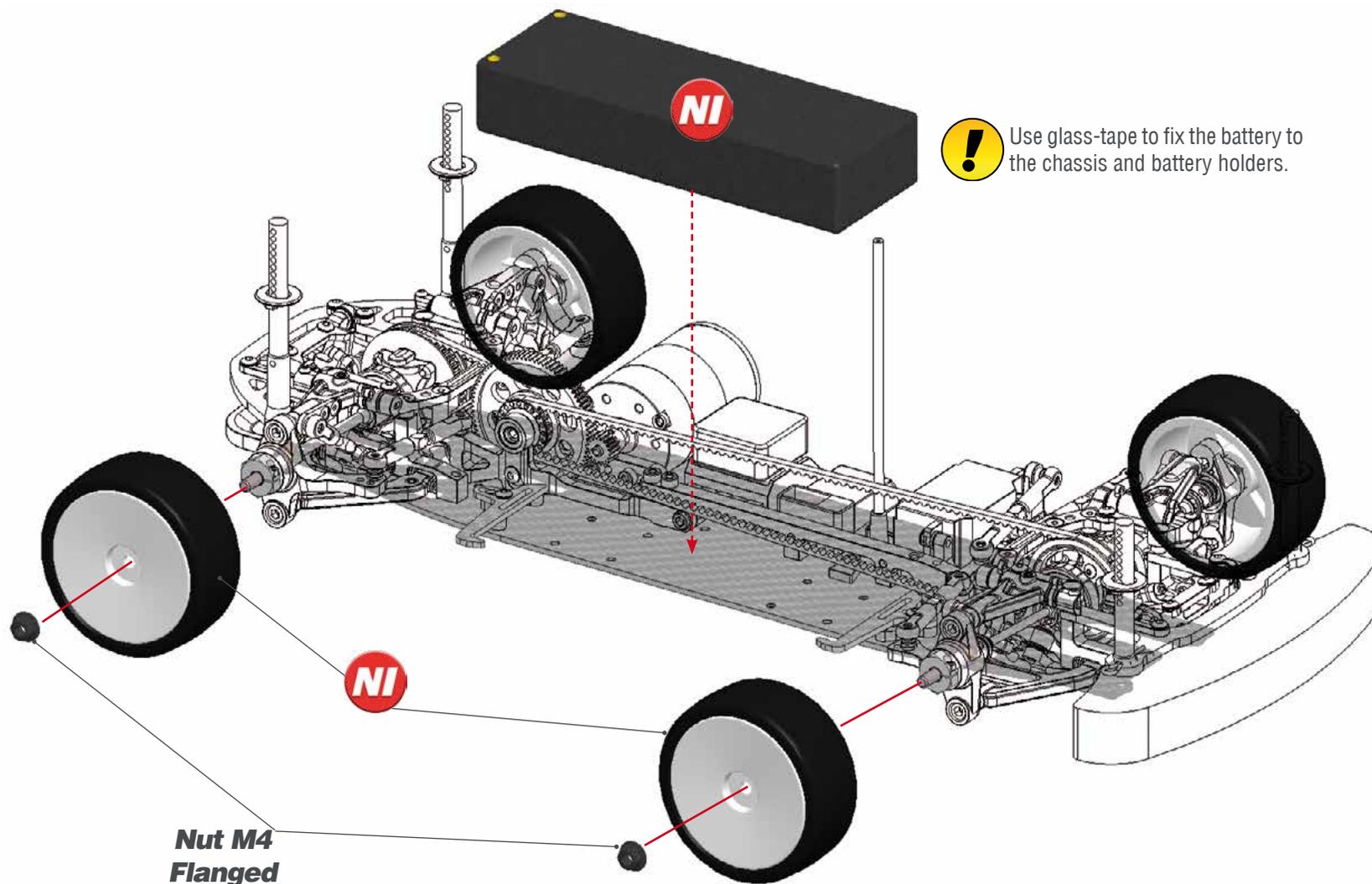
The battery mount can be moved forward or rearward 3mm. Use the battery in the rearward position as default.

REAR

FRONT

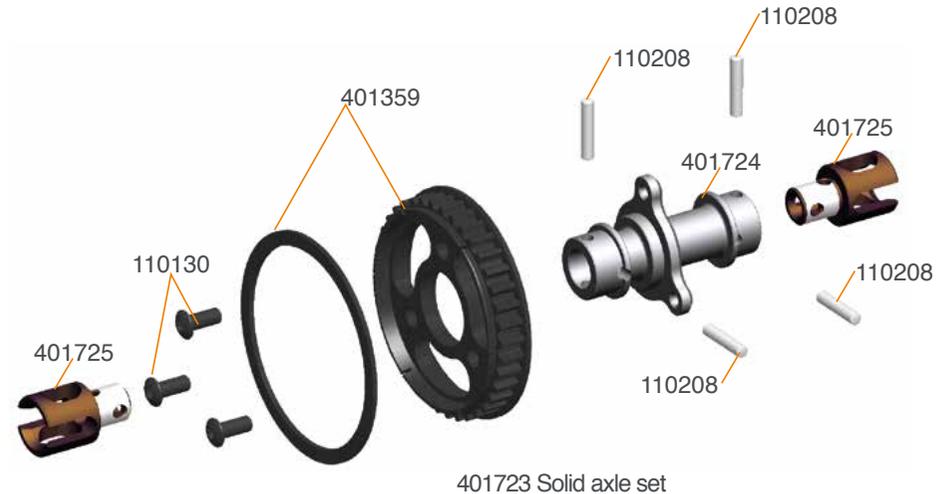
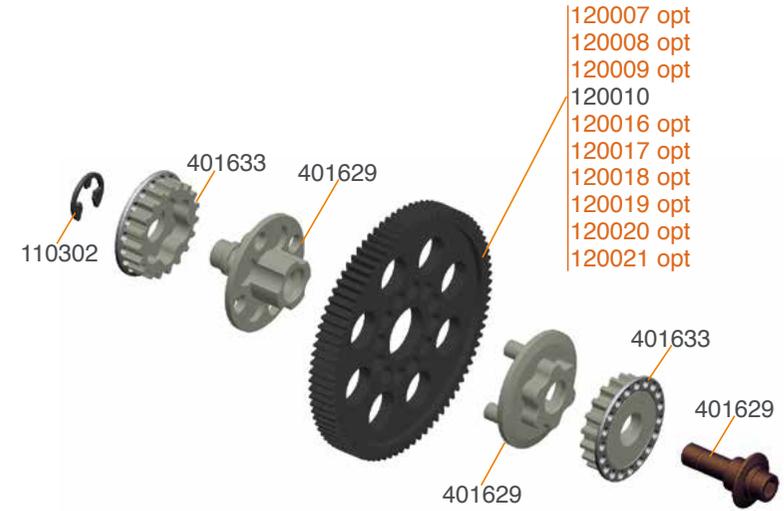
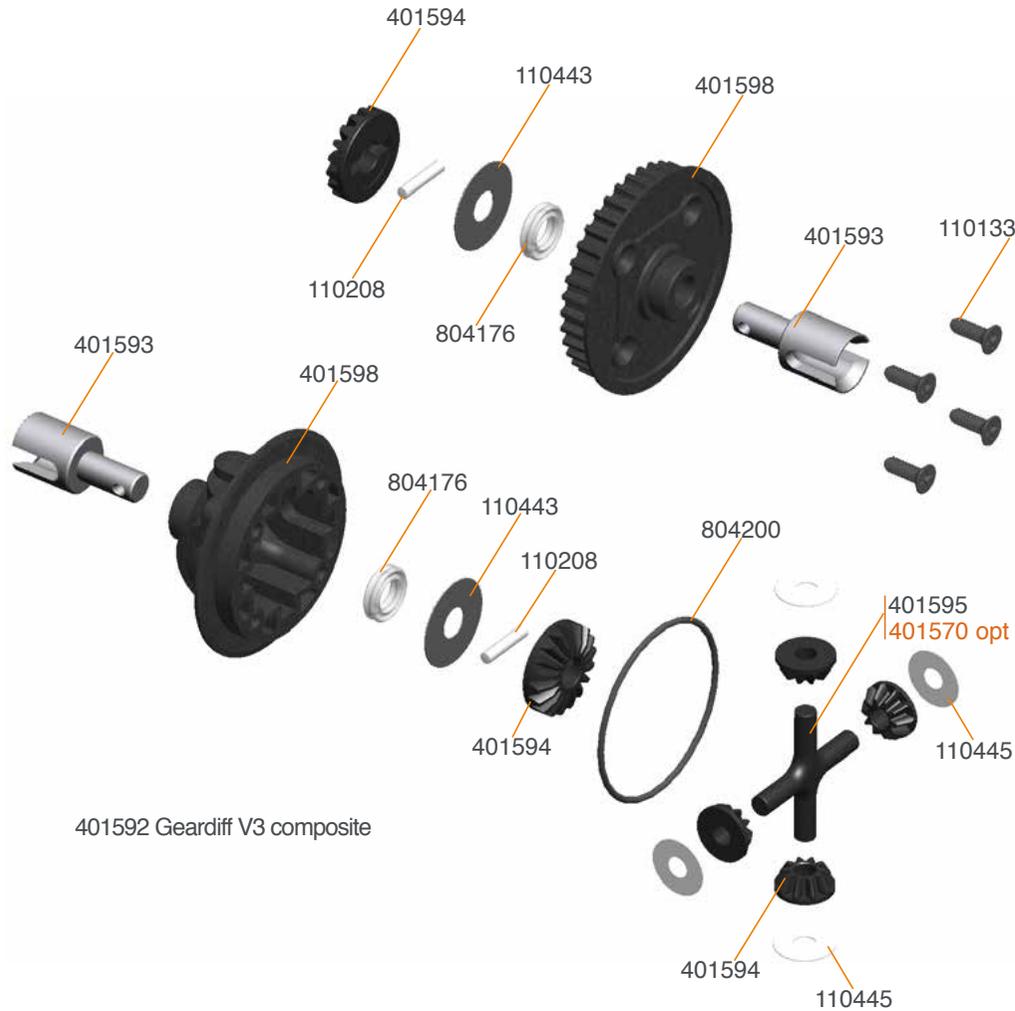


STEP 68



## INDEX

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401570 Gerdiff 1/10 V2 shaft alu (2)z  
 120007 Spur-gear Super-True 64P / 100T  
 120008 Spur-gear Super-True 64P / 104T

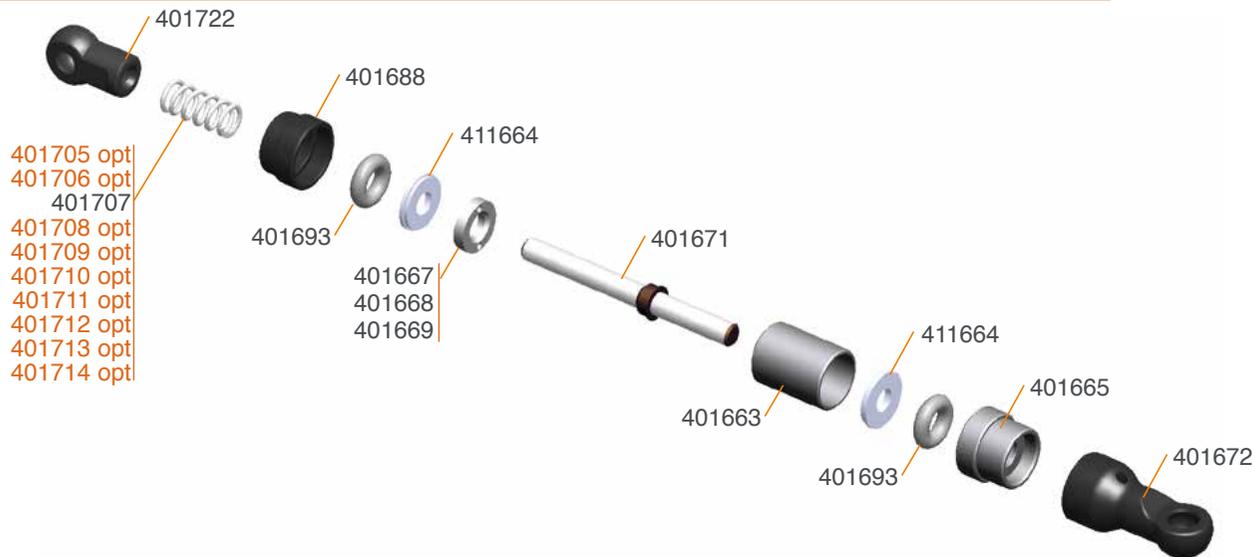
120009 Spur-gear Super-True 64P / 108T  
 120016 Spur-gear Super-True 48P / 72T  
 120017 Spur-gear Super-True 48P / 75T

120018 Spur-gear Super-True 48P / 78T  
 120019 Spur-gear Super-True 48P / 81T  
 120020 Spur-gear Super-True 48P / 84T

120021 Spur-gear Super-True 48P / 87T

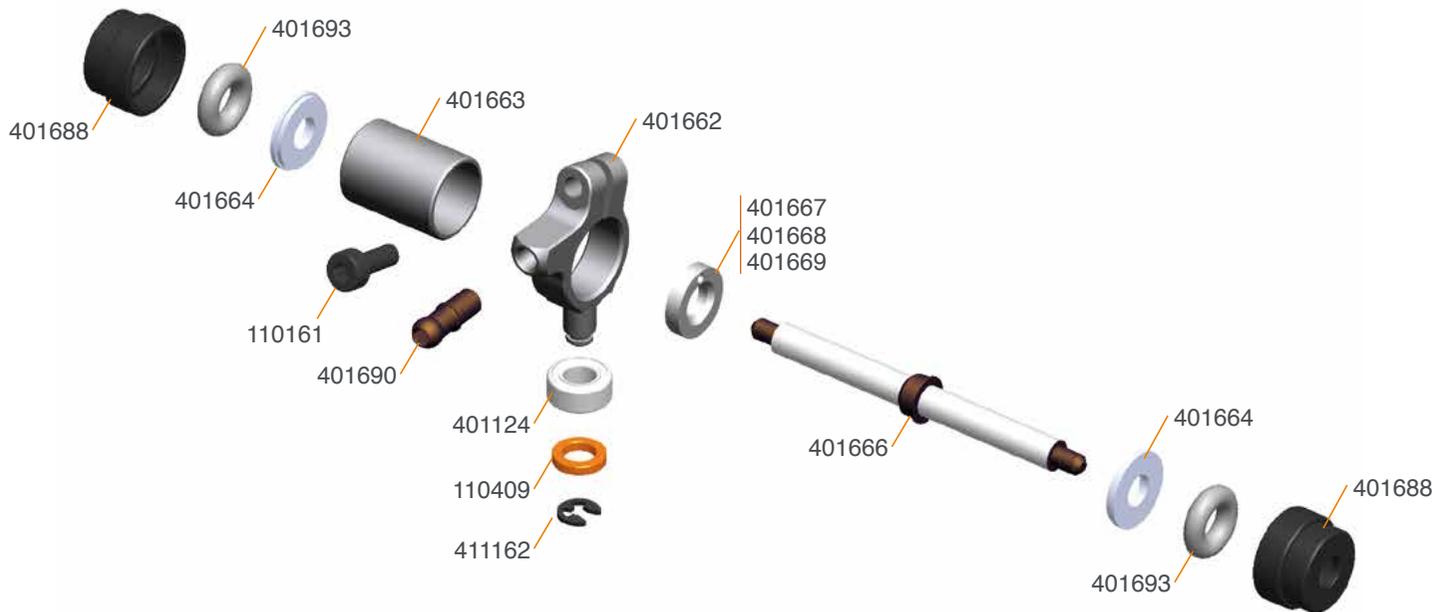
# SHOCK AND ROLL DAMPER EXPLODED VIEW

401704 Shock set 4-X



- 401705 opt
- 401706 opt
- 401707
- 401708 opt
- 401709 opt
- 401710 opt
- 401711 opt
- 401712 opt
- 401713 opt
- 401714 opt

401702 Roll damper 4-X

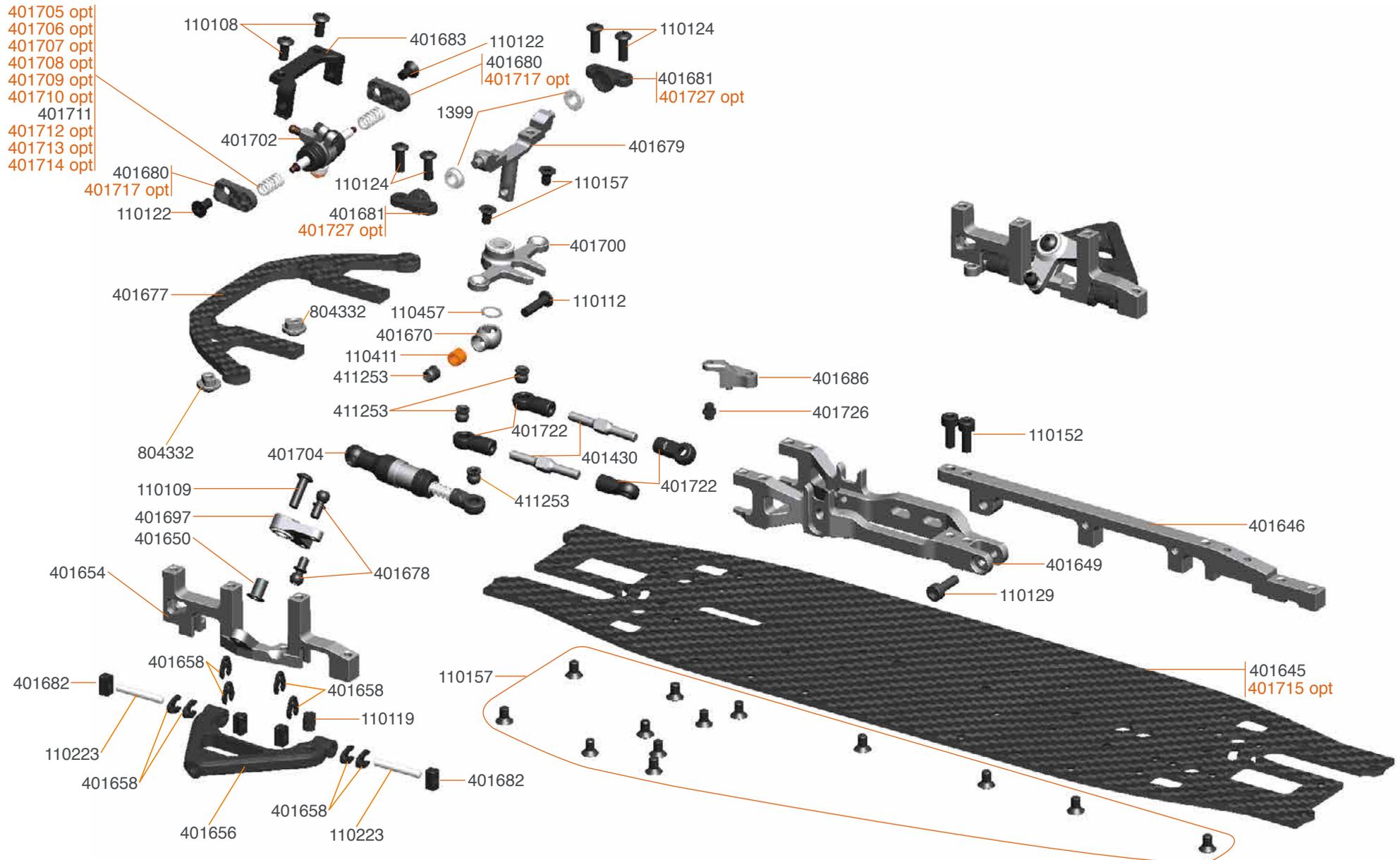


- 401705 Spring white C4.4 4-X (2)
- 401706 Spring yellow C4.9 4-X (2)
- 401708 Spring red C6.3 4-X (2)

- 401709 Spring pink C6.9 4-X (2)
- 401710 Spring blue C7.6 4-X (2)
- 401711 Spring purple C8.4 4-X (2)

- 401712 Spring green C9.5 4-X (2)
- 401713 Spring grey C10.9 4-X (2)
- 401714 Spring black C12 4-X (2)

# REAR / EXPLODED VIEW

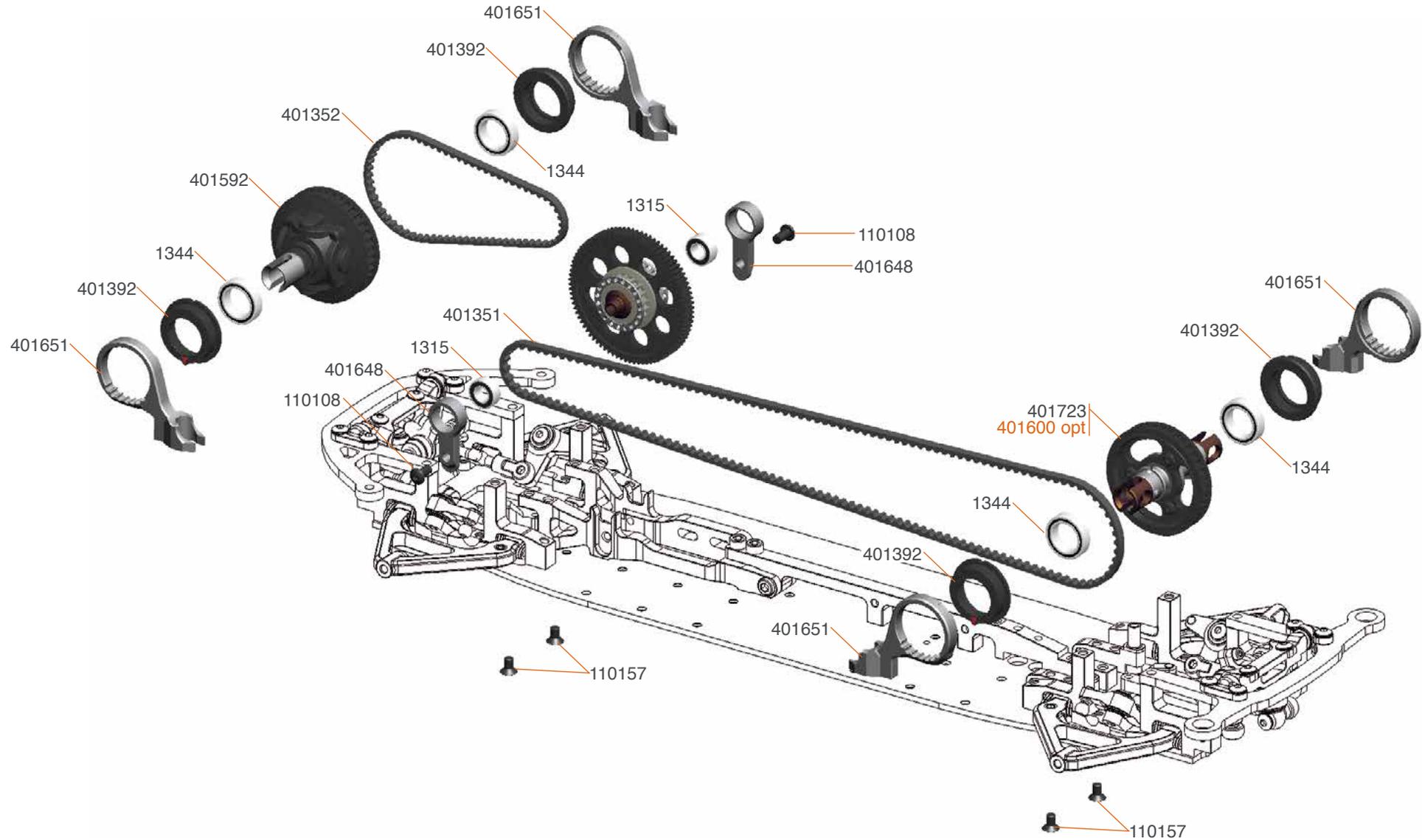


- 401701 Roll damper set 4-X
- 401705 Spring white C4.4 4-X (2)
- 401706 Spring yellow C4.9 4-X (2)
- 401707 Spring orange C5.5 4-X (2)

- 401708 Spring red C6.3 4-X (2)
- 401709 Spring pink C6.9 4-X (2)
- 401710 Spring blue C7.6 4-X (2)
- 401712 Spring green C9.5 4-X (2)

- 401713 Spring grey C10.9 4-X (2)
- 401714 Spring black C12 4-X (2)
- 401715 Chassis carbon light 4-X
- 401727 Bearing holder central rocker alu 4-X (2)

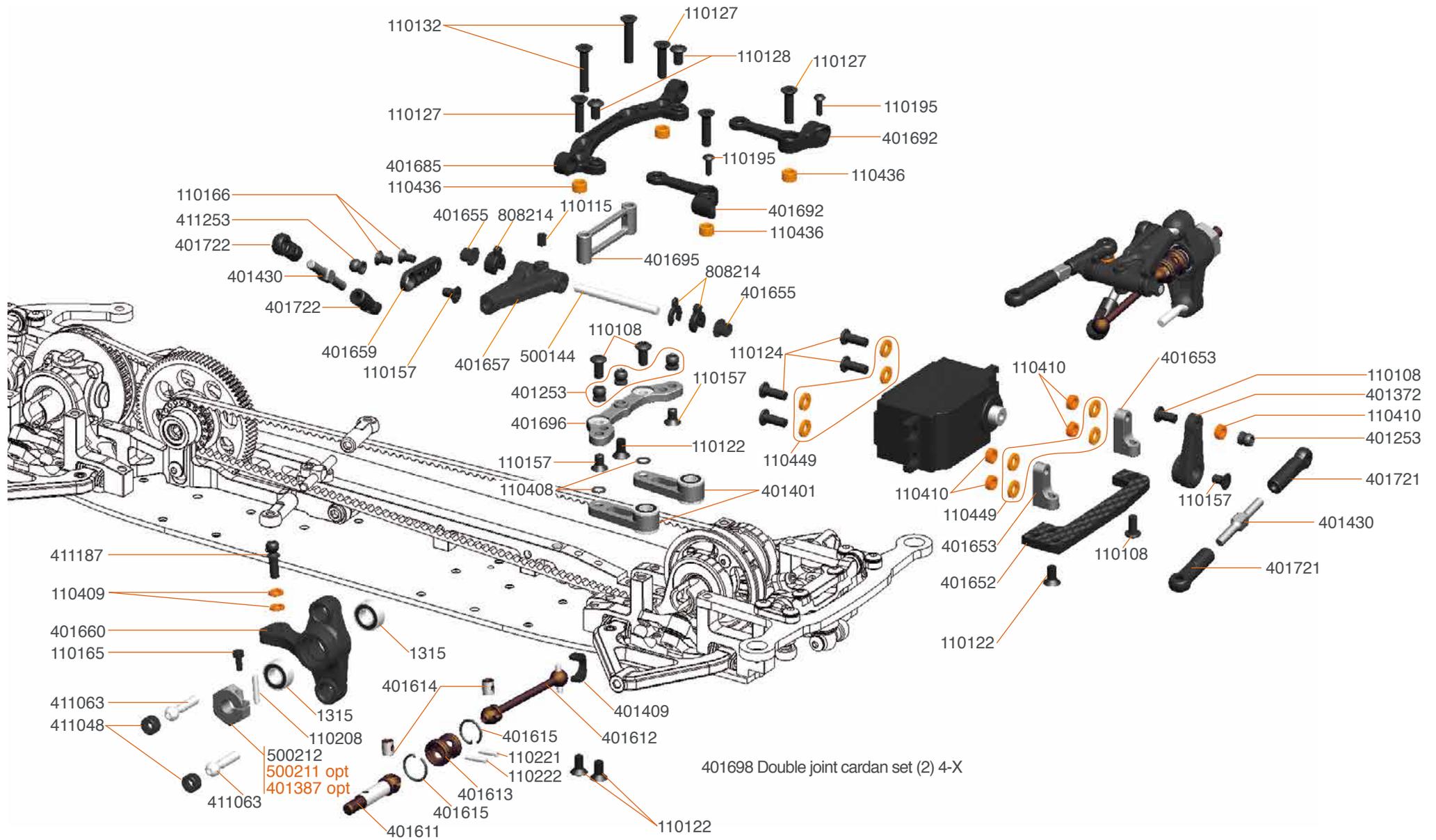




401600 Solid axle alu S411 mono for blades

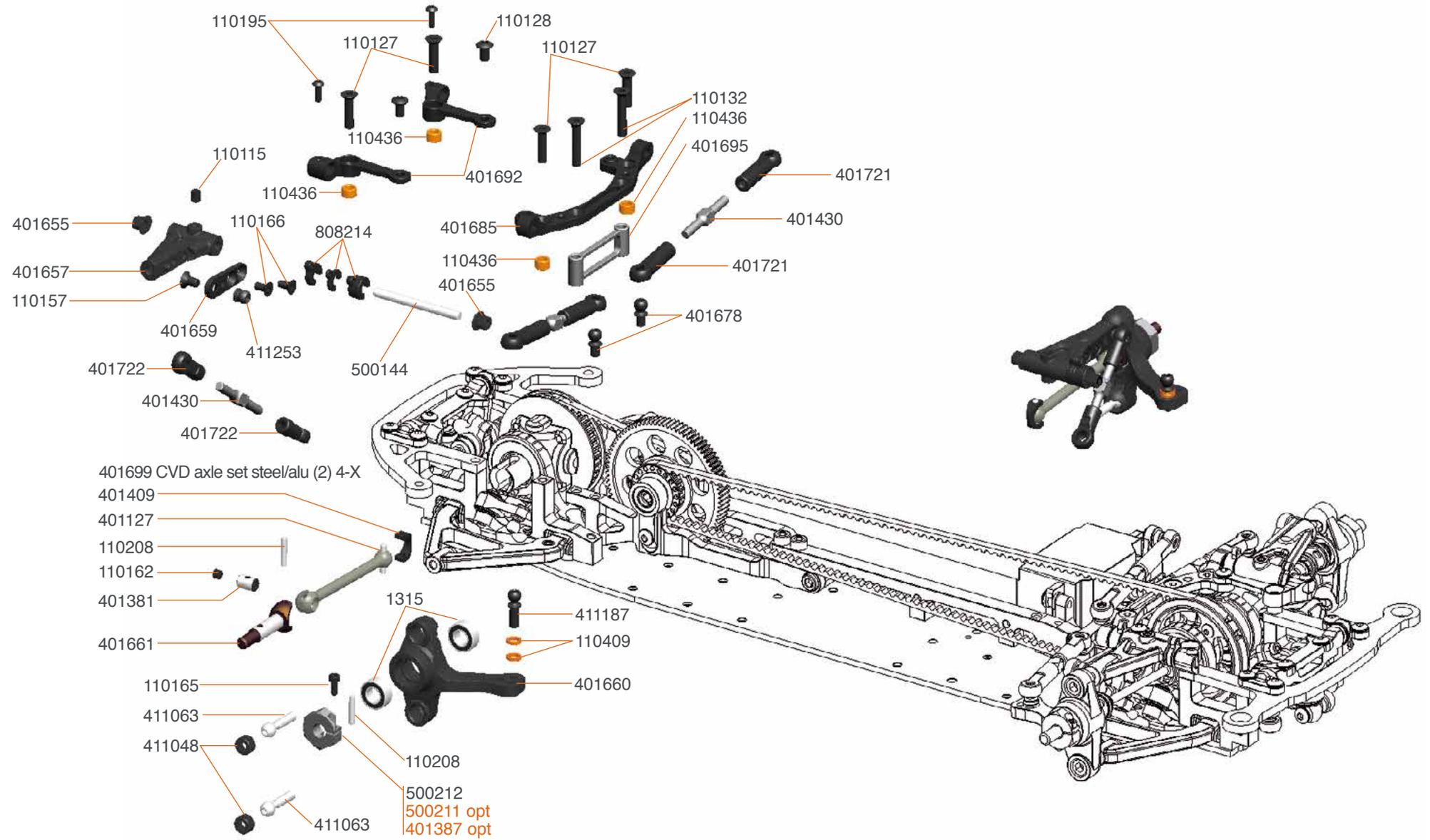


# FRONT II EXPLODED VIEW



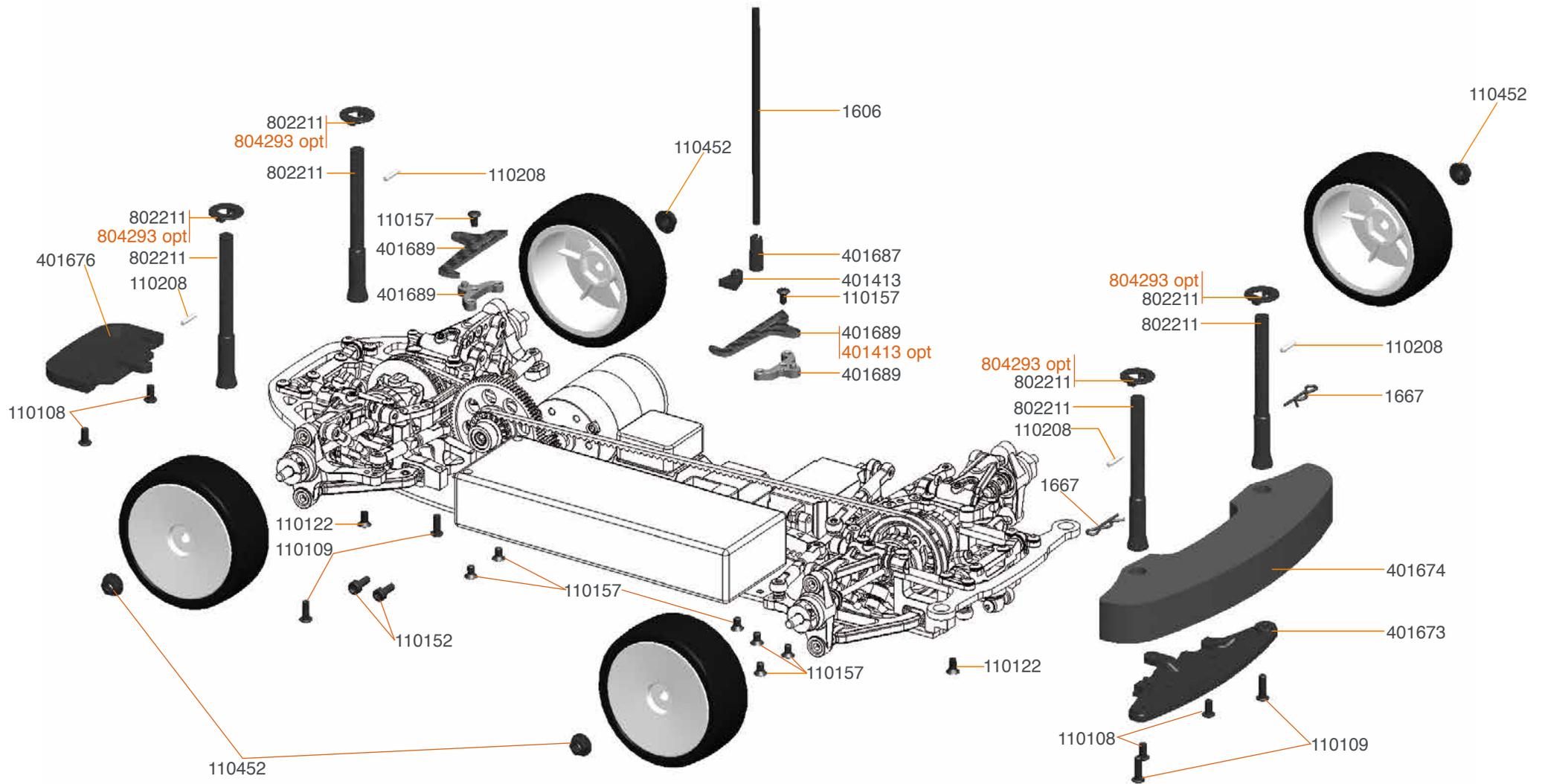
401387 Wheelhexagon 1mm offset (2)  
500211 Wheelhexagon +0.75mm offset (2)

# REAR II EXPLODED VIEW



- 401387 Wheelhexagon 1mm offset (2)
- 500211 Wheelhexagon +0.75mm offset (2)





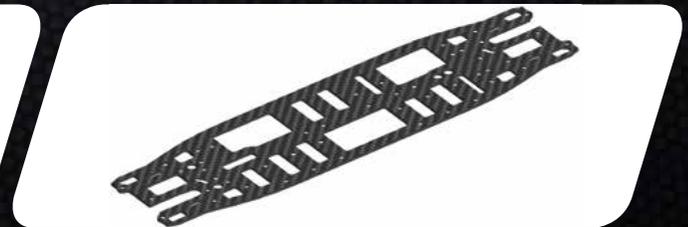
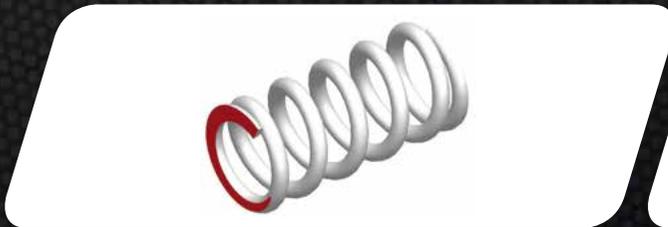
401413 Battery mount (4)  
401621 Motor fan mount S411

# TEAM SERPENT NETWORK

## PROJECT 4X SPARE PARTS [www.serpent.com/400030/spares/](http://www.serpent.com/400030/spares/)



## PROJECT 4X OPTIONALS PARTS [www.serpent.com/400030/Optionals/](http://www.serpent.com/400030/Optionals/)



## SERPENT TOOLS [www.serpent.com/product/Tools/](http://www.serpent.com/product/Tools/)



## SERPENT MERCHANDISING [www.serpent.com/product/Merchandising/](http://www.serpent.com/product/Merchandising/)



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[www.teamserpent.com](http://www.teamserpent.com)  
[www.dragon-rc.com](http://www.dragon-rc.com)

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**SERPENT ADVANCED MANUALS** <http://promo.serpent.com/sam/>

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[www.plus.google.com/+SerpentModelcars/posts](http://www.plus.google.com/+SerpentModelcars/posts)



[www.weibo.com/teamserpent](http://www.weibo.com/teamserpent)

# **Project 4X**

1/10 scale electric touringcar



98108 1 Manual Project 4X