

# Project 4X

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

•	DIFF ASSEMBLY	4
•	SHOCKS ASSEMBLY	6
•	ROLL DAMPER ASSEMBLY	8
•	CENTRAL AND REAR I ASSEMBLY	10
•	FRONT I ASSEMBLY	15
•	TRANSMISSION ASSEMBLY	21
•	FRONT II ASSEMBLY	23
•	REAR II ASSEMBLY	29
•	FINAL ASSEMBLY	32
•	EXPLODED VIEWS	39
•	TEAM SERPENT NETWORK	48

## 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

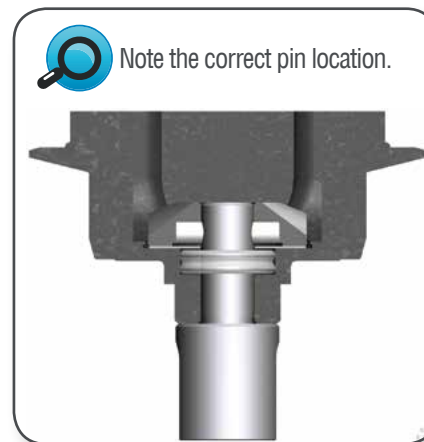
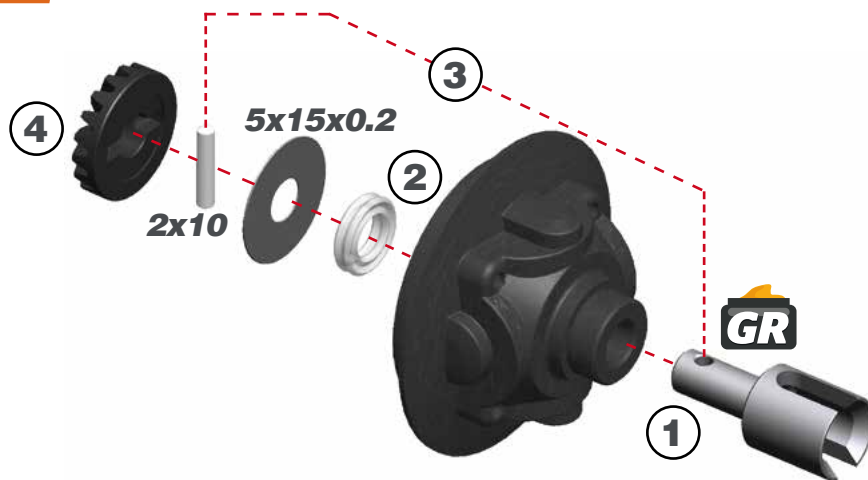
Project  
4X

Serpent

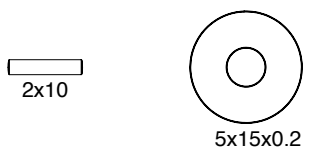
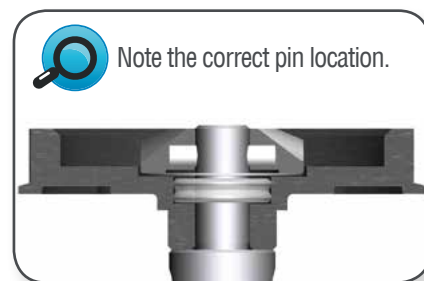
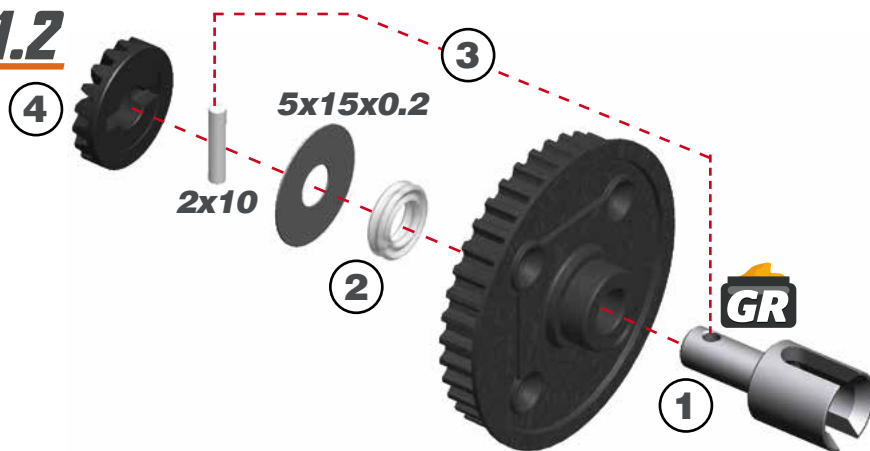
## STEP 1

### DIFF BAG

#### 1.1



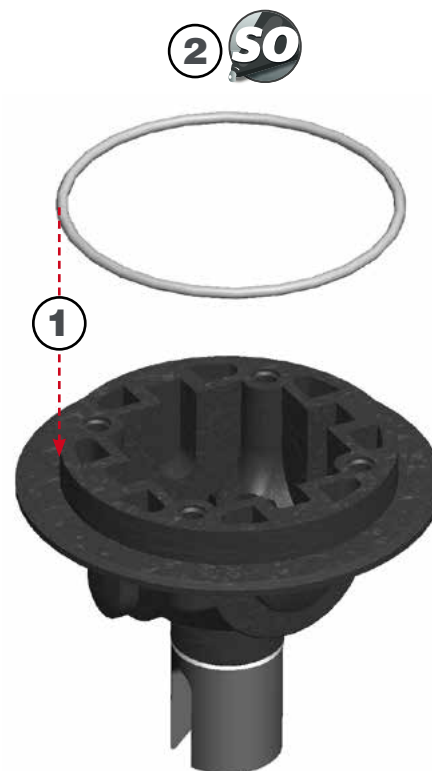
#### 1.2



## STEP 2

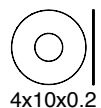
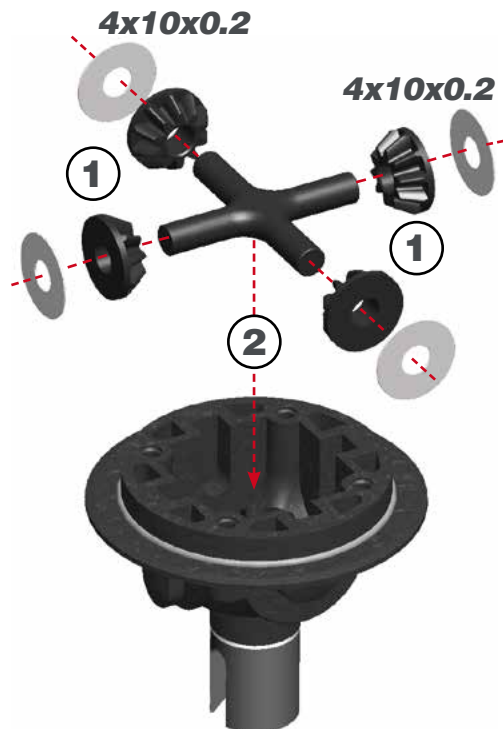
1- Fit the o ring before filling the diff with silicone oil.

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.

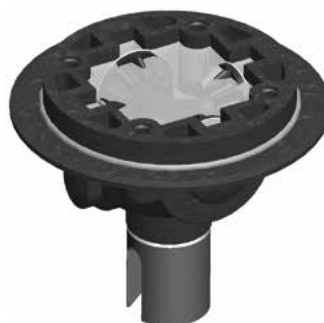
50



### 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

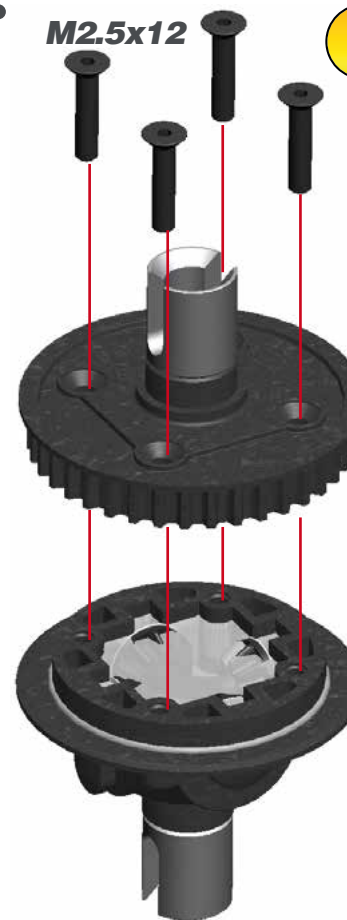


## STEP 5

M2.5x12



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



### COMPLETE DIFF ASSEMBLY



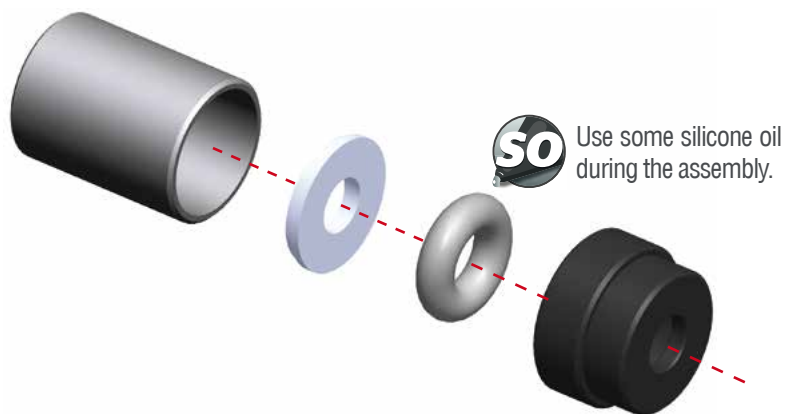
## STEP 6

BAG 1



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

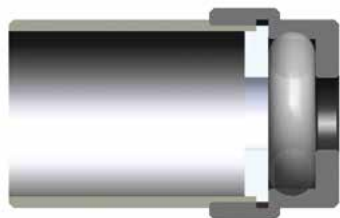
Check the default set-up sheet to find the right values for piston, spring and silicone oil. Be aware that front and rear shock-settings may differ.



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



Note the correct orientation of the shock spacers.



## STEP 7

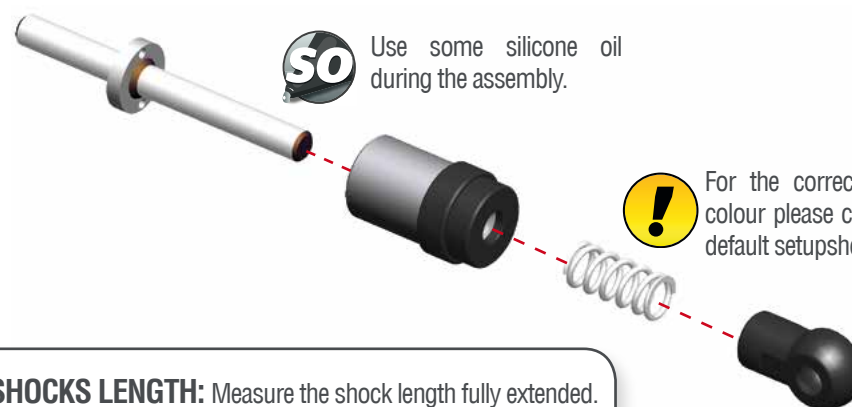
### 7.1



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



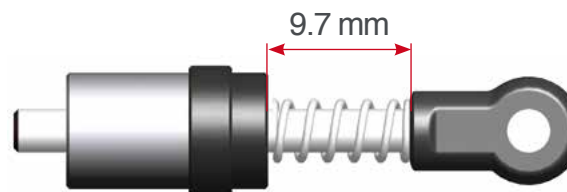
Use some silicone oil during the assembly.



For the correct spring colour please check the default setupsheet.



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



## STEP 8

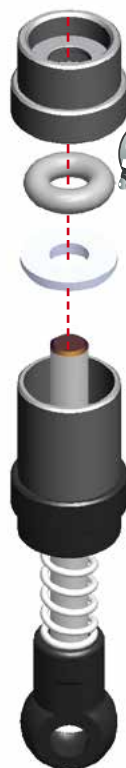
1- Fill up with silicone oil FULLY using the silicone oil supplied in the kit. For the correct cst value please check the default setupsheet.

2- Extend the shockrod fully

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



## STEP 9



SO

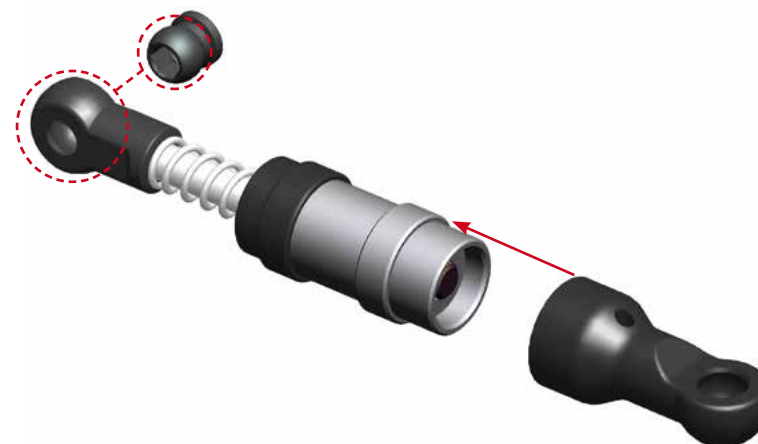
Use some silicone oil during the assembly.



Note the correct orientation of the shock spacers .



## STEP 10



COMPLETE SHOCK ASSEMBLY





## STEP 11 BAG 2



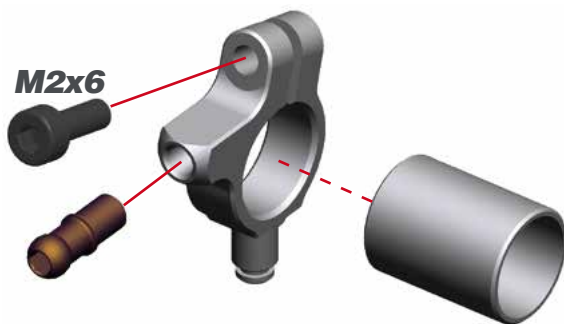
Follow step 11 to 15 twice to assemble 2 roll dampers, 1 for the front and 1 for the rear.

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.

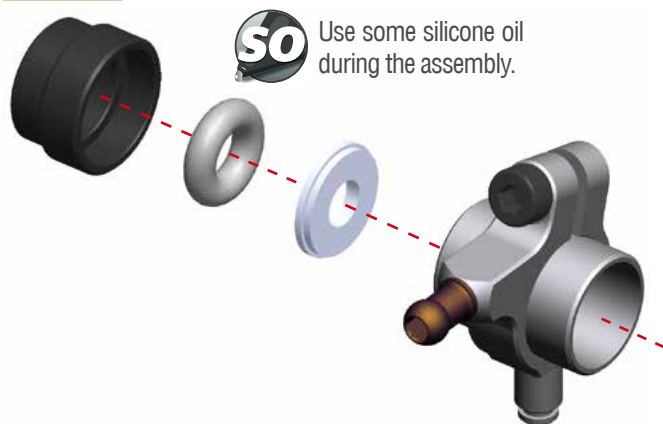
### 11.1



Do not overtighten the M2x6 screw.



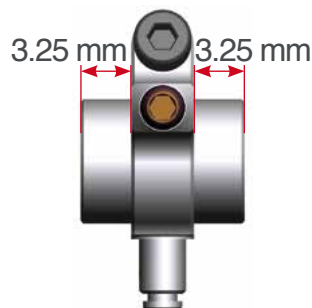
### 11.2



Use some silicone oil during the assembly.



Default position is centered. Off centre influences the tweak of the car.



Note the correct orientation of the shock spacer.



M2x6

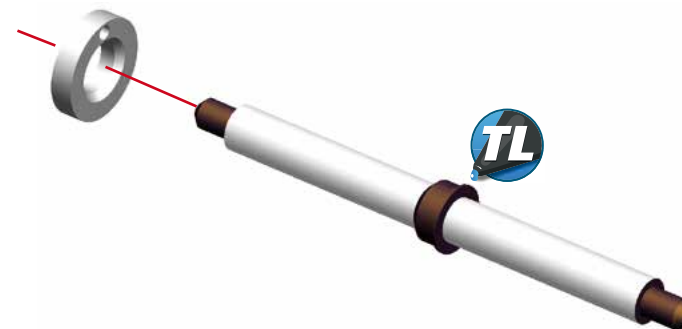
## STEP 12

### 12.1

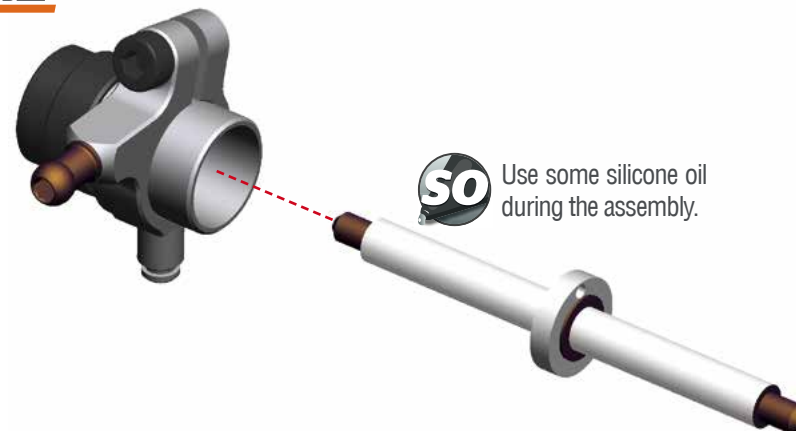


1- Notice that the piston is not symmetrical. The side with the chamfer should be assembled oriented to the shock shaft.

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



### 12.2



Use some silicone oil during the assembly.

## 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

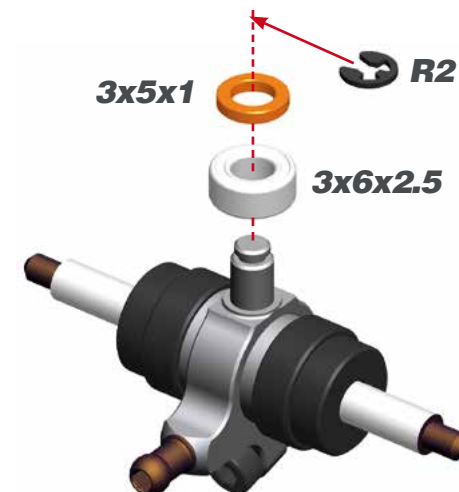
Use some silicone oil during the assembly.



Note the correct orientation of the shock spacers.



## STEP 15



3x5x1

R2

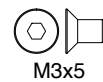
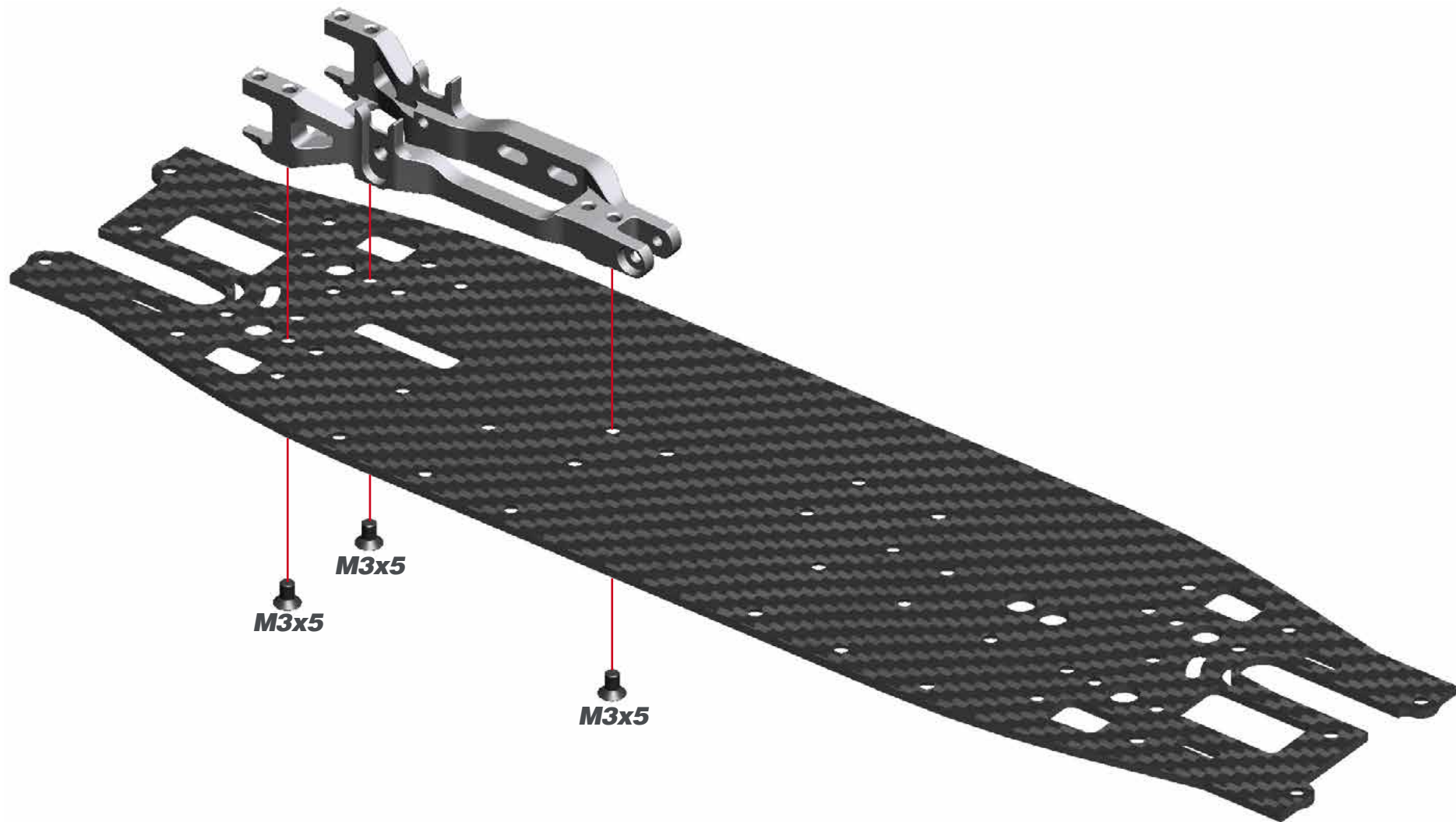
3x6x2.5



COMPLETE ROLL DAMPER ASSEMBLY

  
3x5x1  
3x6x2.5  
R2

## STEP 16 BAG 3



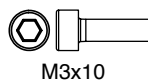
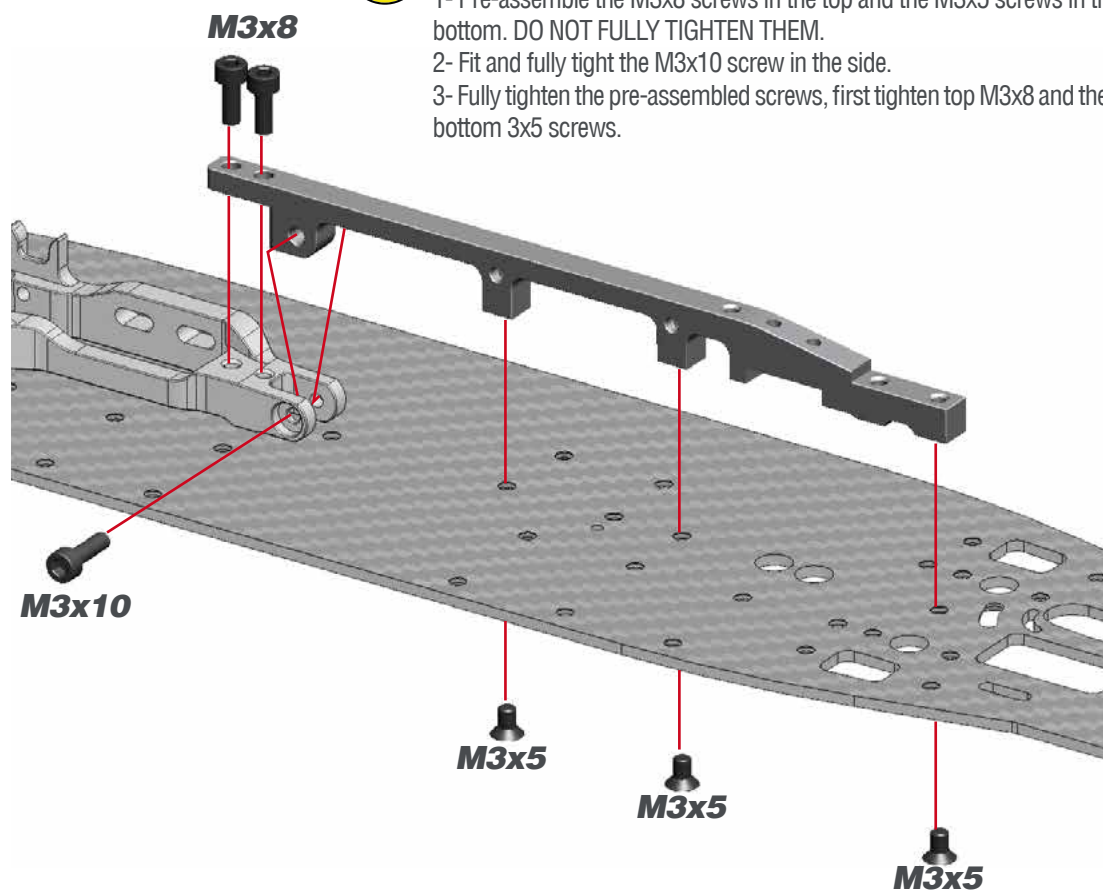


## STEP 17



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.

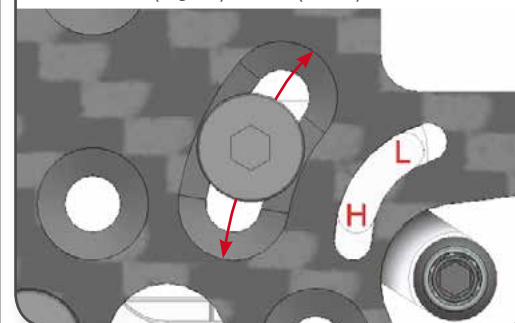


## STEP 18



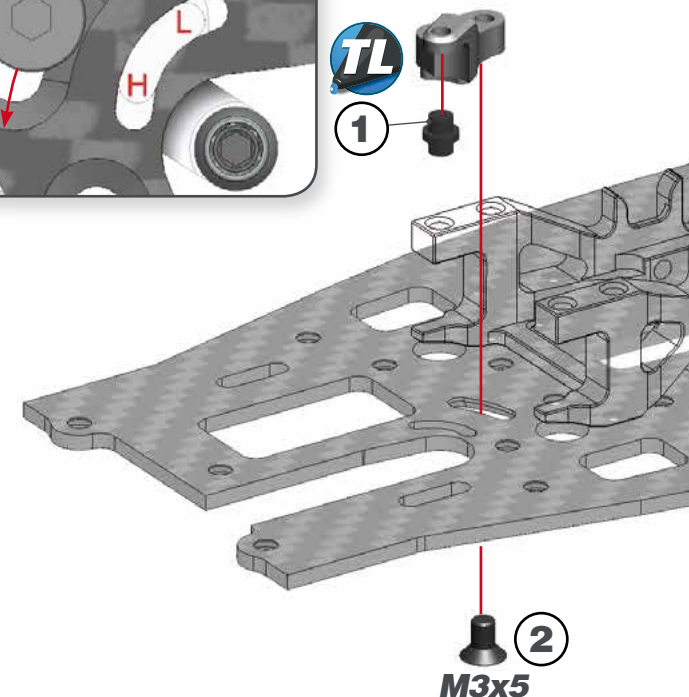
## REAR RIDE HEIGHT ADJUSTER

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



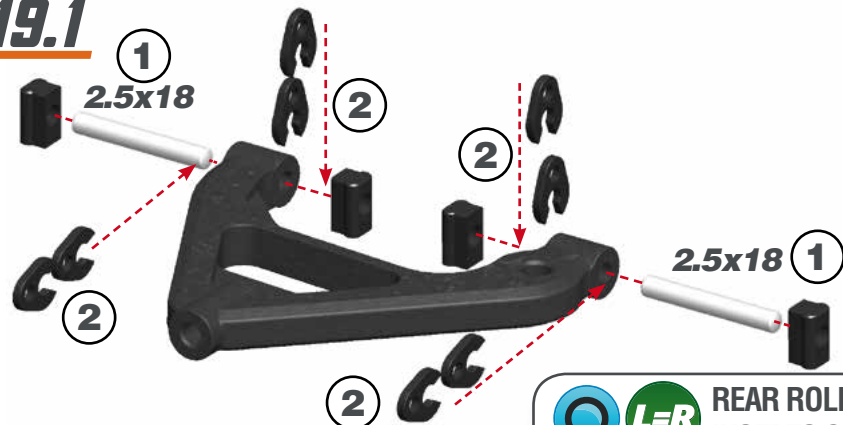
TL

1

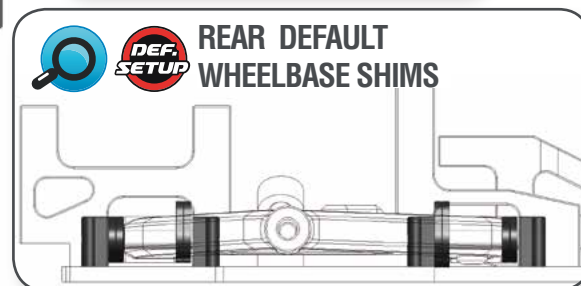
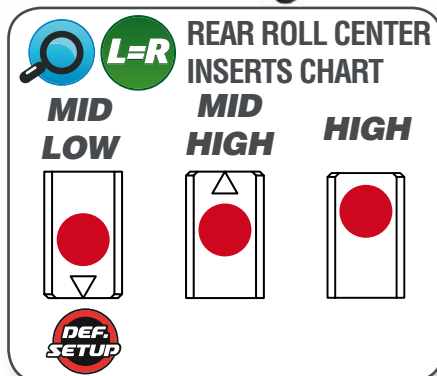
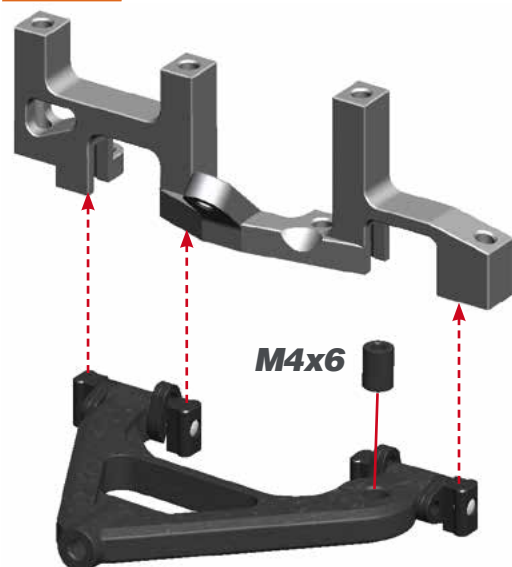
2  
M3x5

# STEP 19 BAG 4

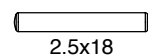
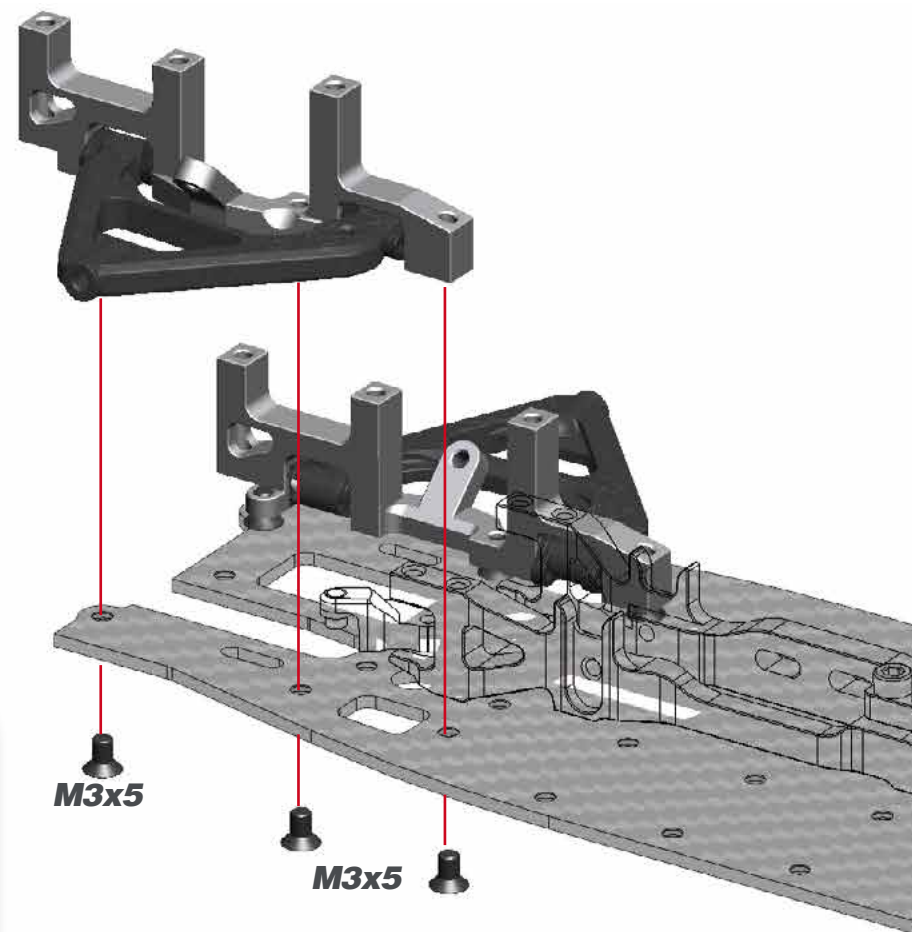
19.1



19.2



19.3



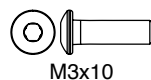
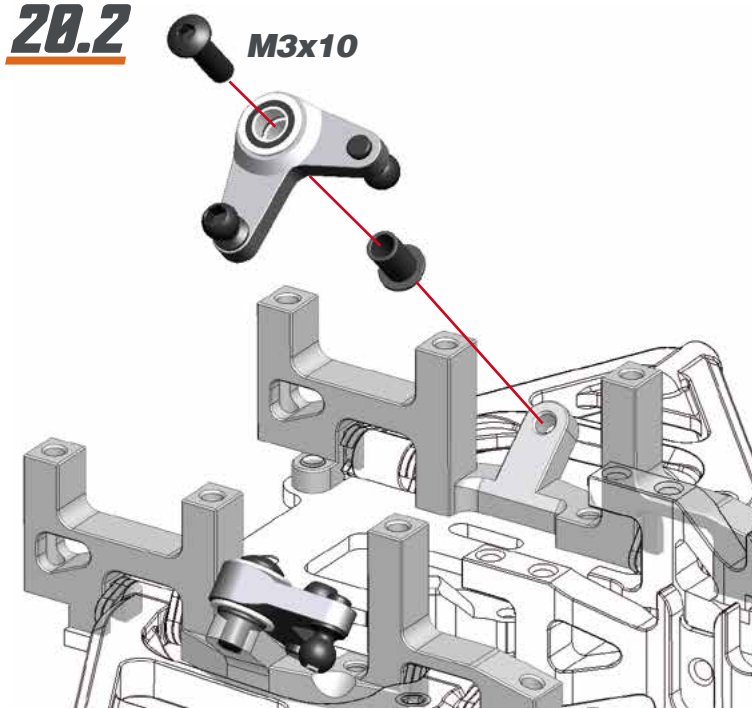
## STEP 20 BAG 5

20.1



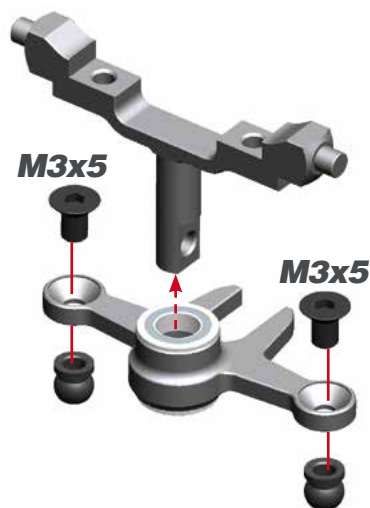
Note the right orientation of the rocker-legs.

20.2

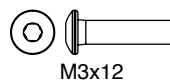
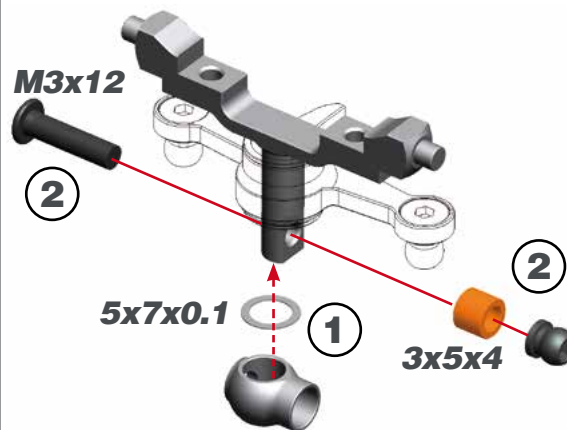


## STEP 21

21.1

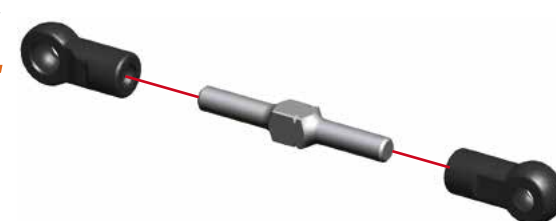


21.2



## STEP 22

22.1

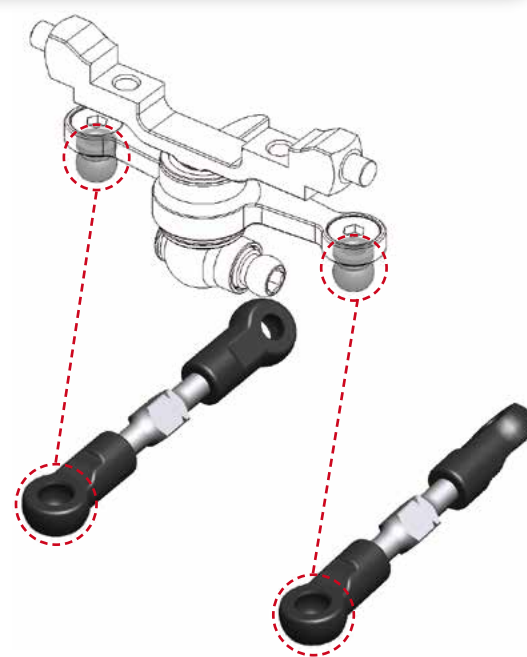


CONNECTING ROD LENGTH

14 mm

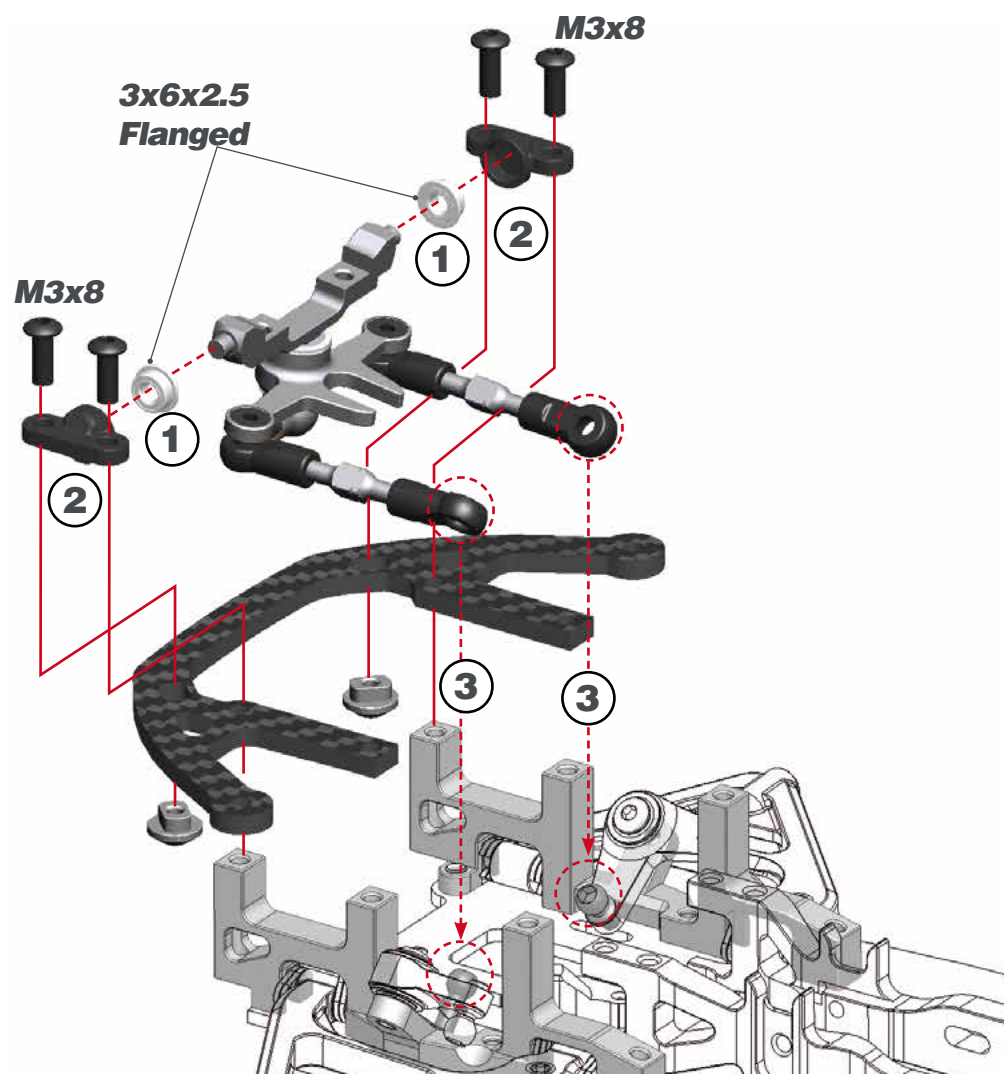


22.2






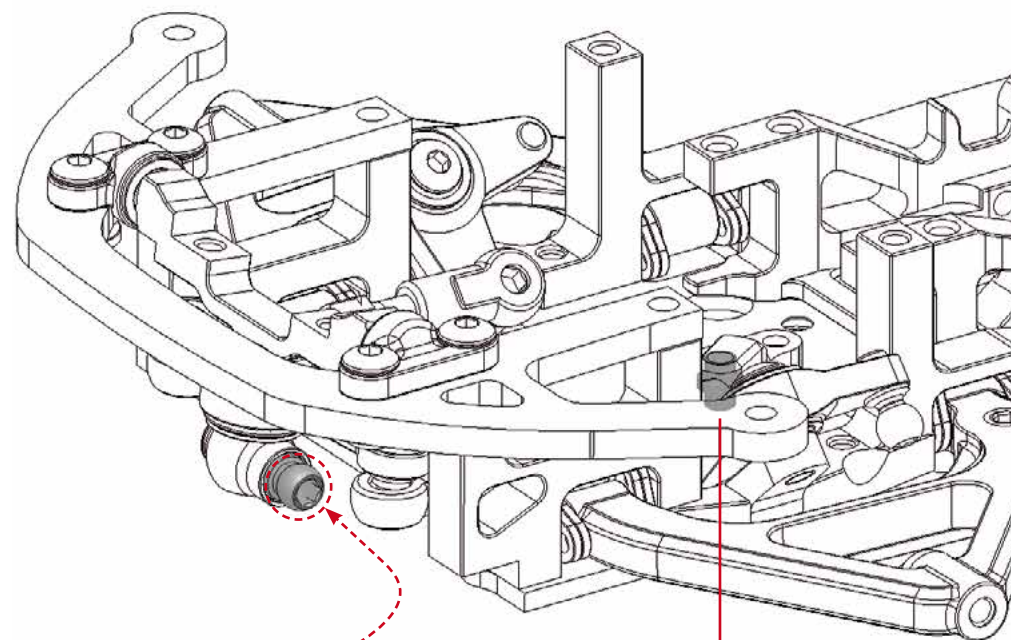
## STEP 23



  
3x6x2.5 Flanged

  
M3x8

## STEP 24



Assemble the  
REAR shock.

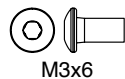
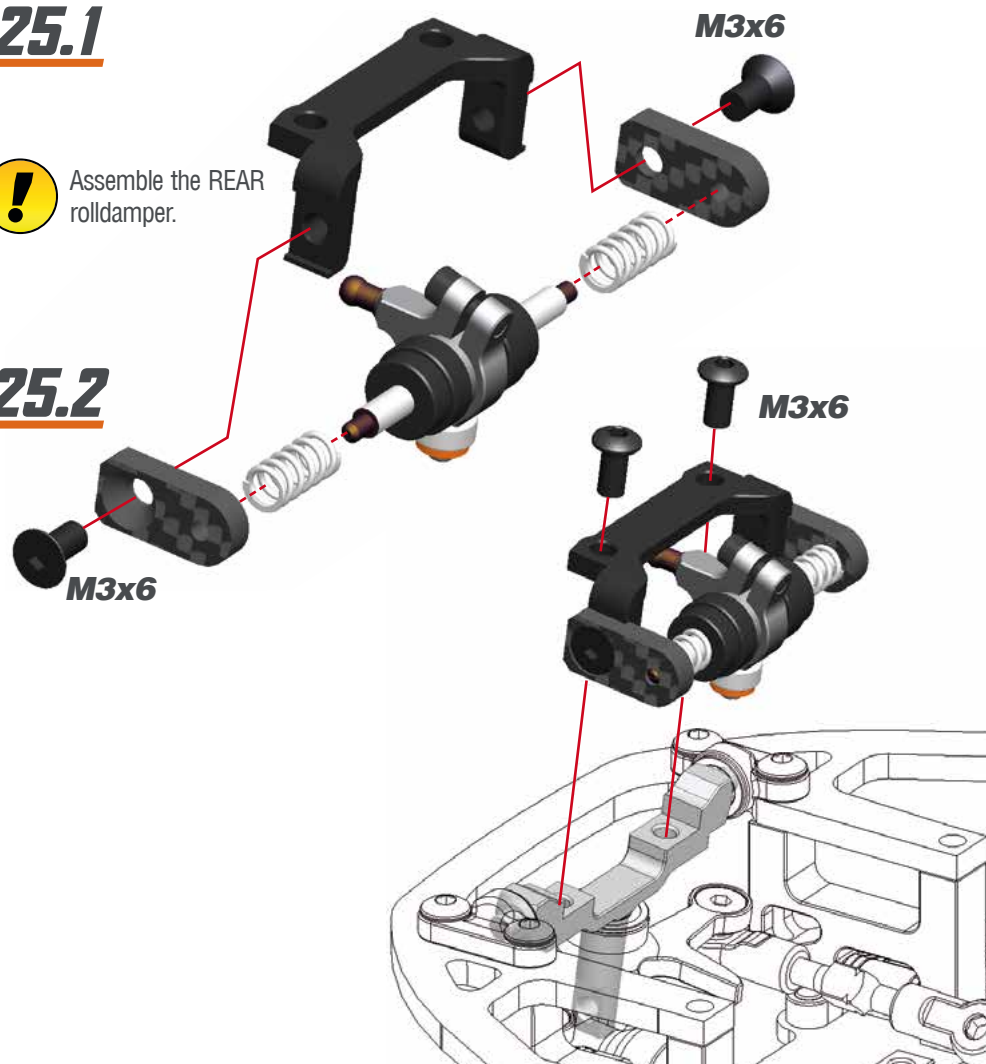


## STEP 25

25.1

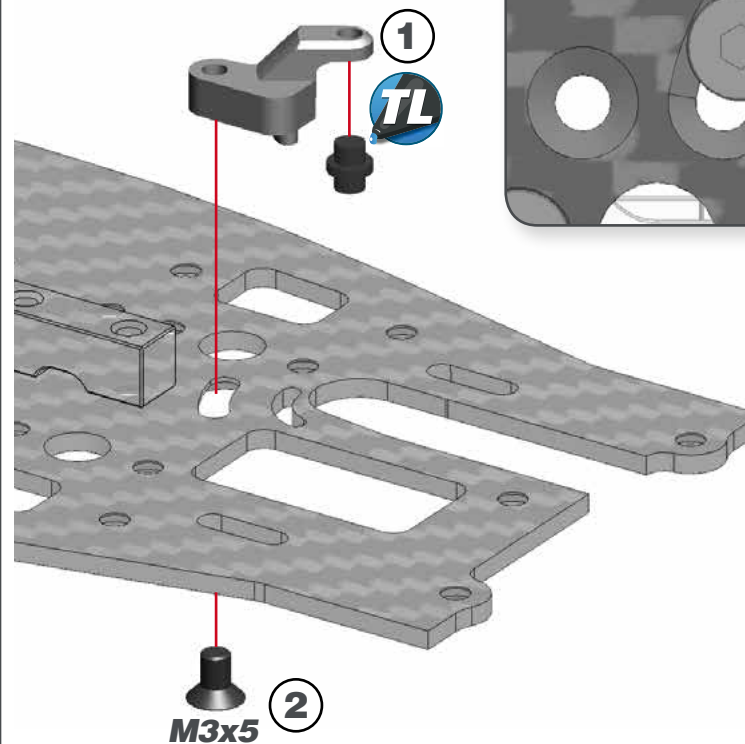
! Assemble the REAR rolldamper.

25.2



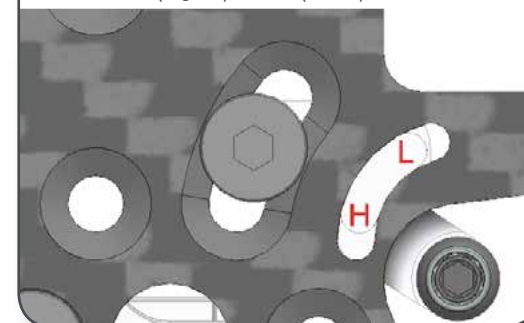
## STEP 26

BAG 6

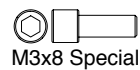
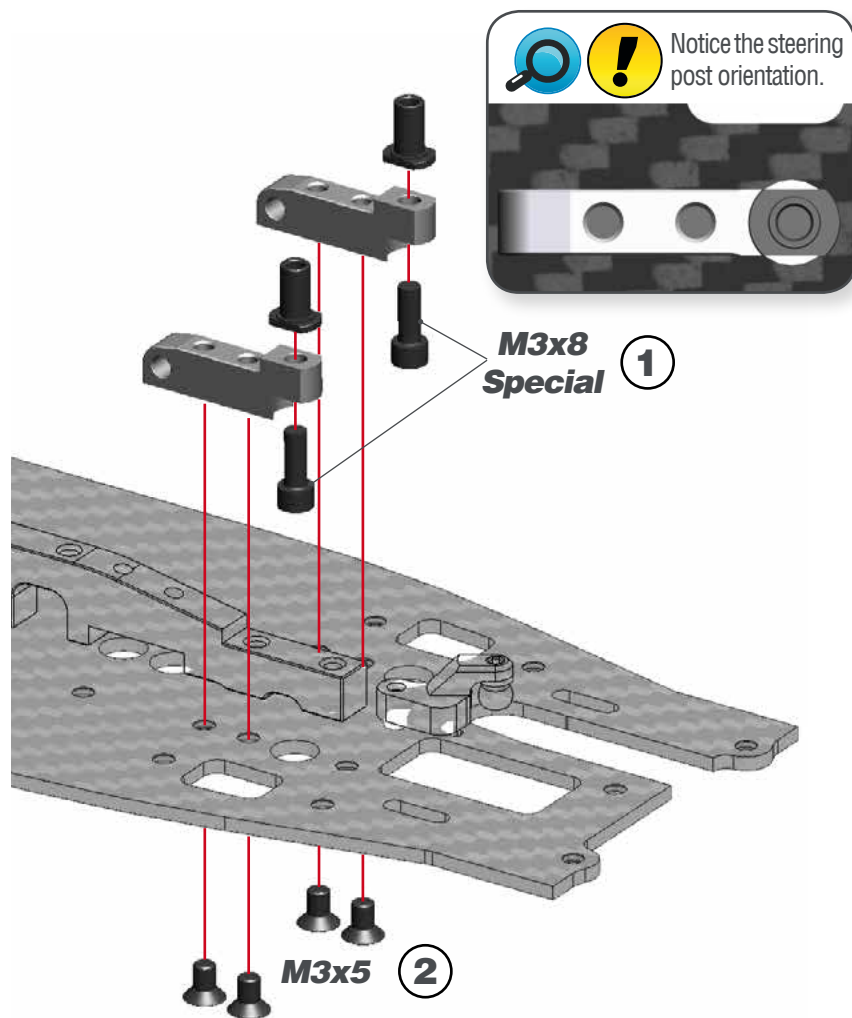


### FRONT RIDE HEIGHT ADJUSTER

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

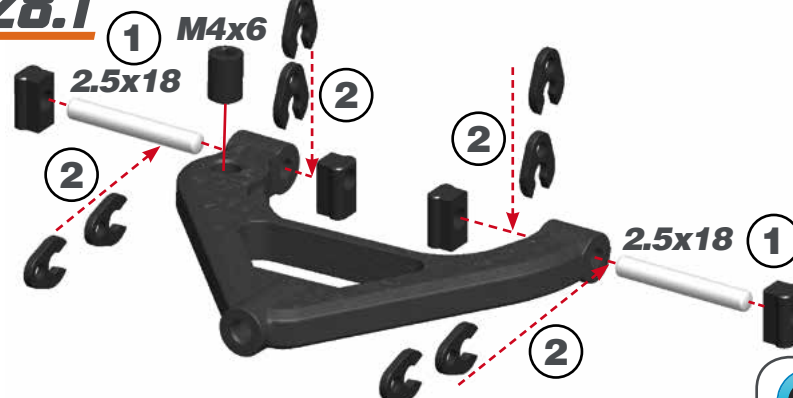


## STEP 27

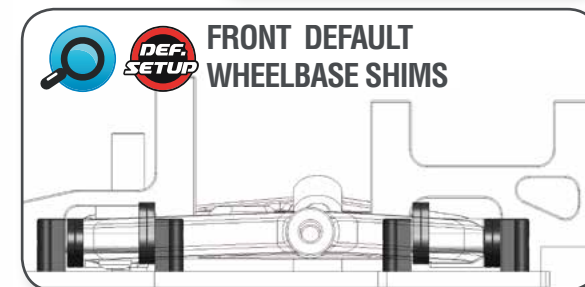
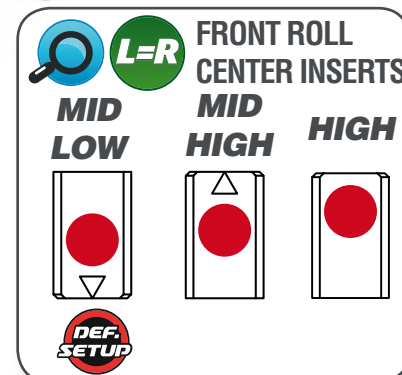
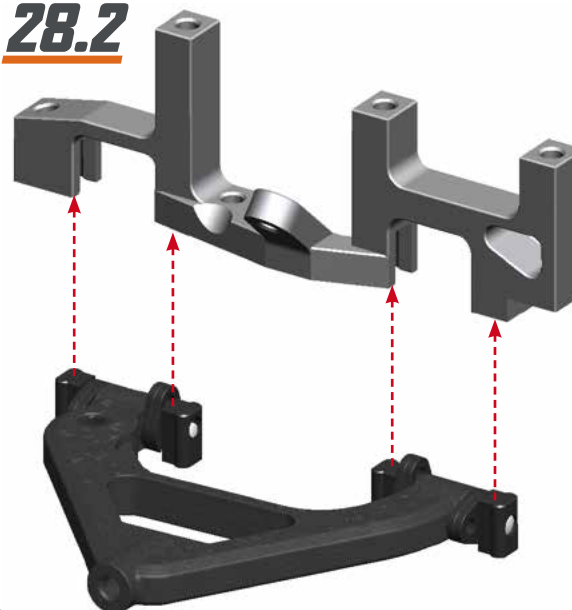


## STEP 28

### 28.1

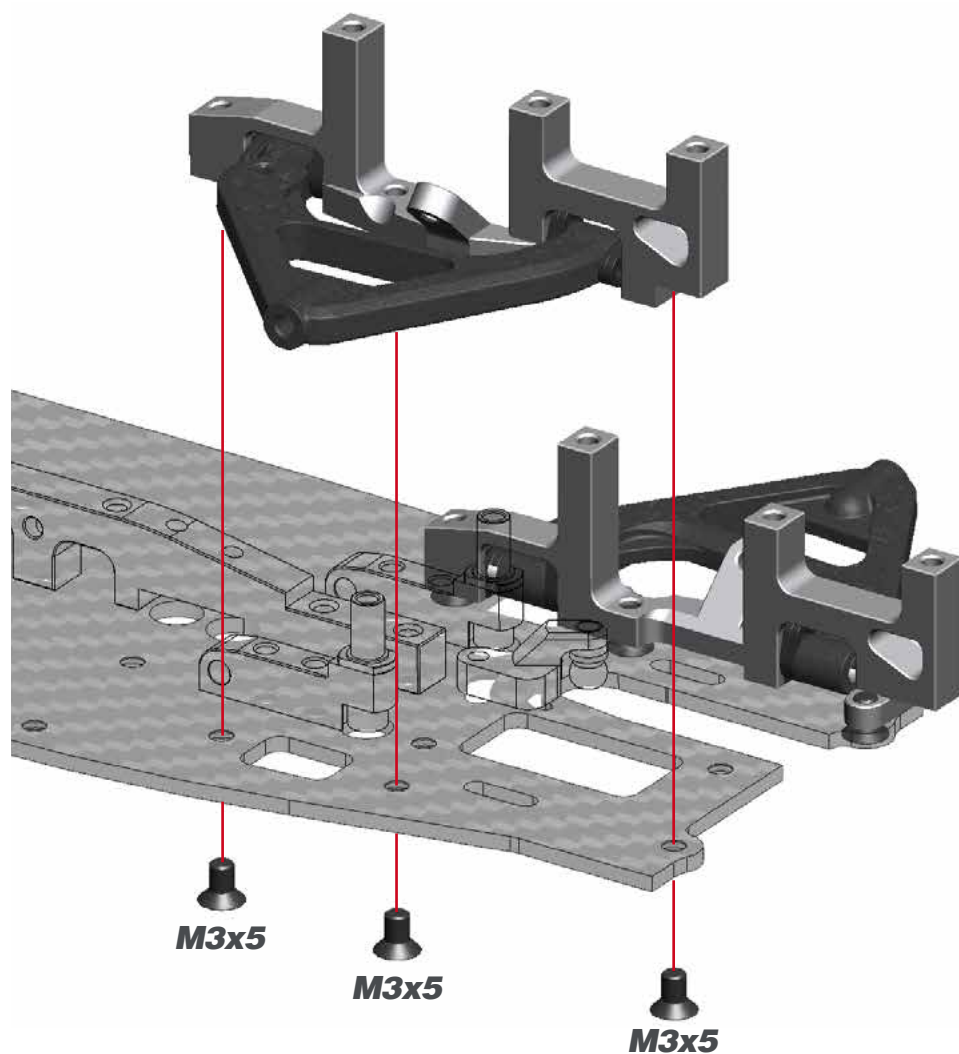


### 28.2





## STEP 29



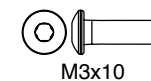
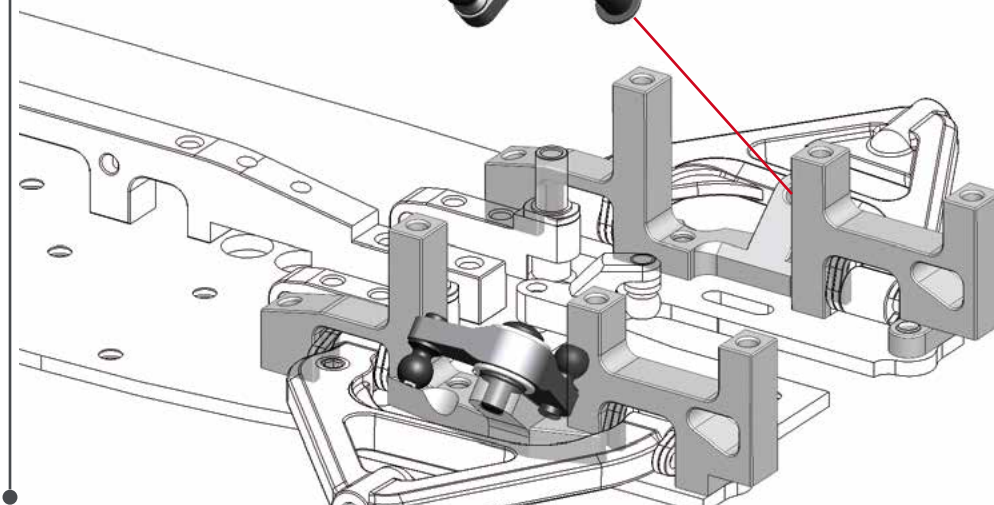
## STEP 30 **BAG 7**

### 30.1



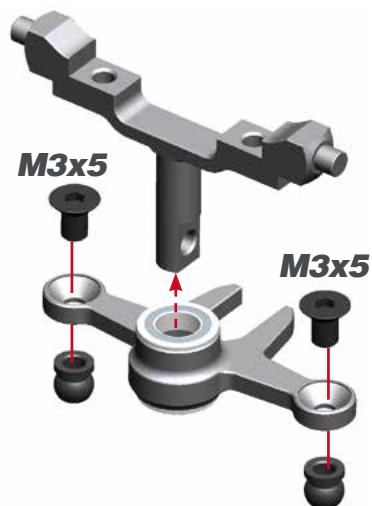
Note the right orientation of the rocker-legs.

### 30.2

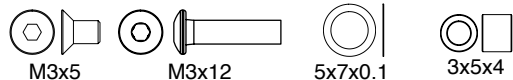
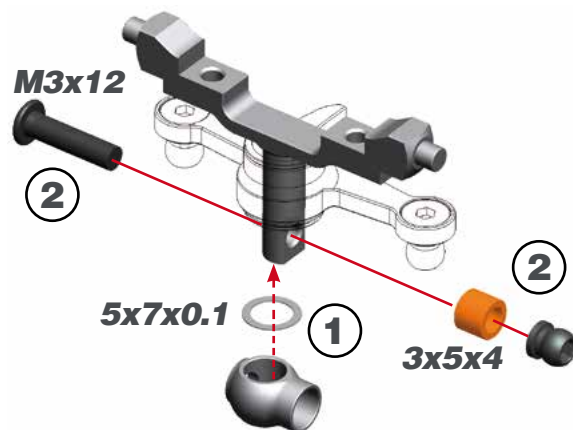


## STEP 31

31.1



31.2

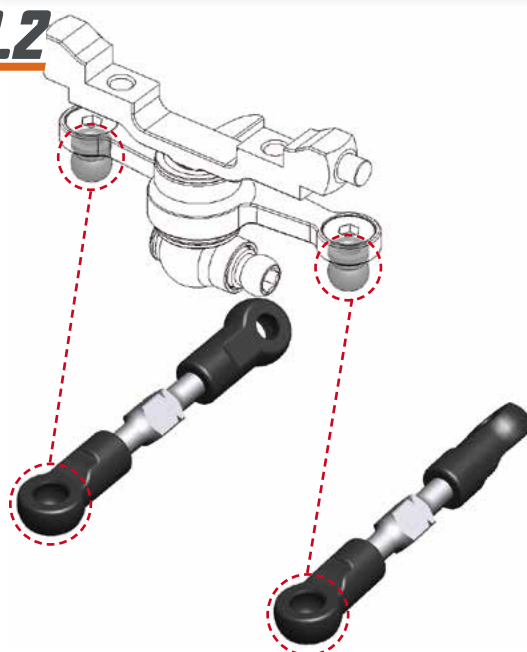


## STEP 32

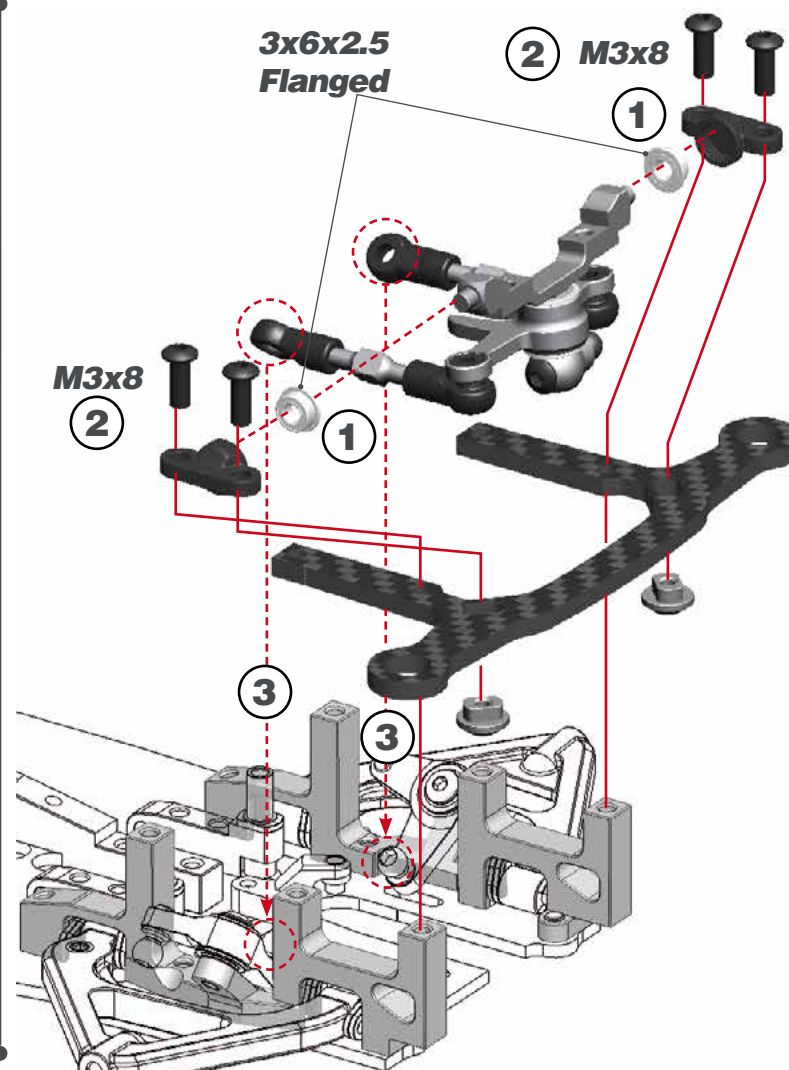
32.1



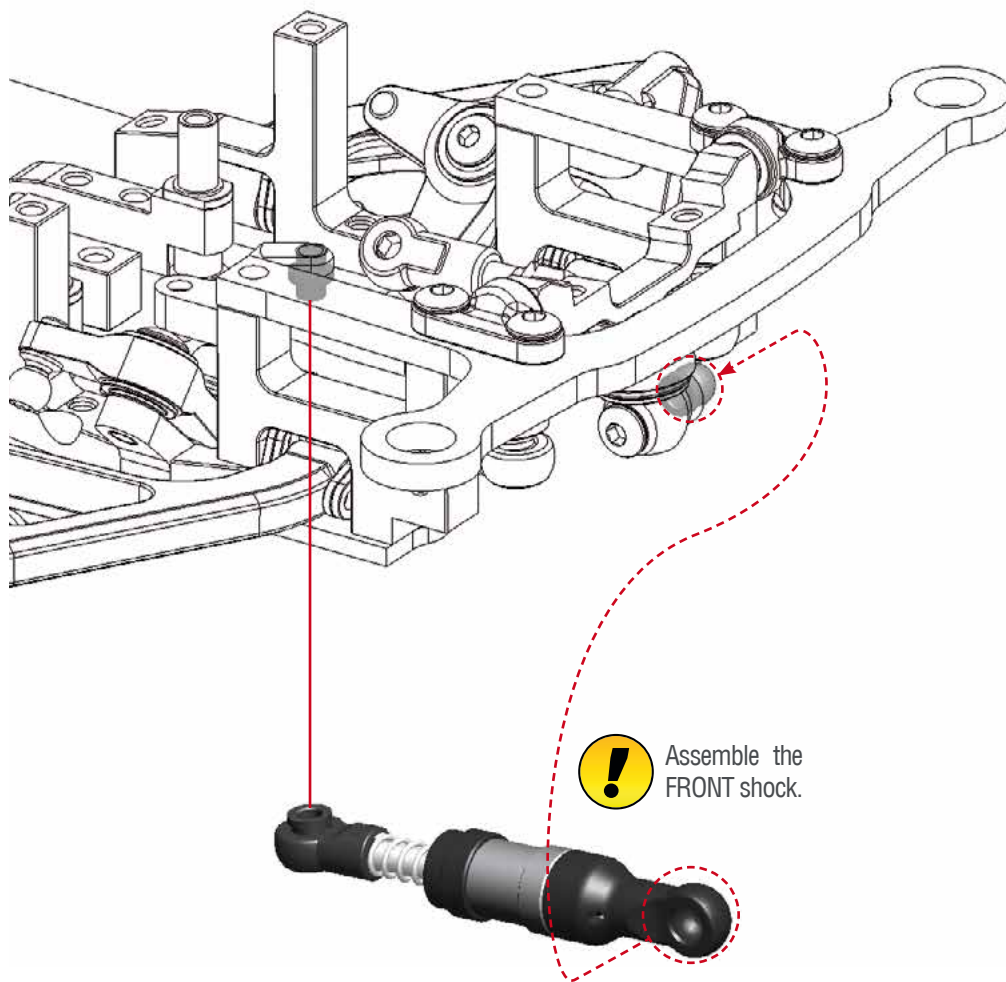
32.2



## STEP 33



## STEP 34

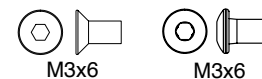
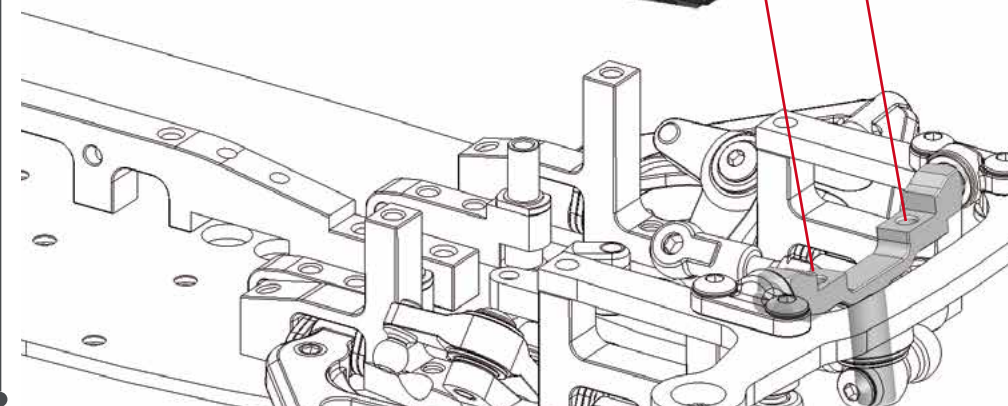
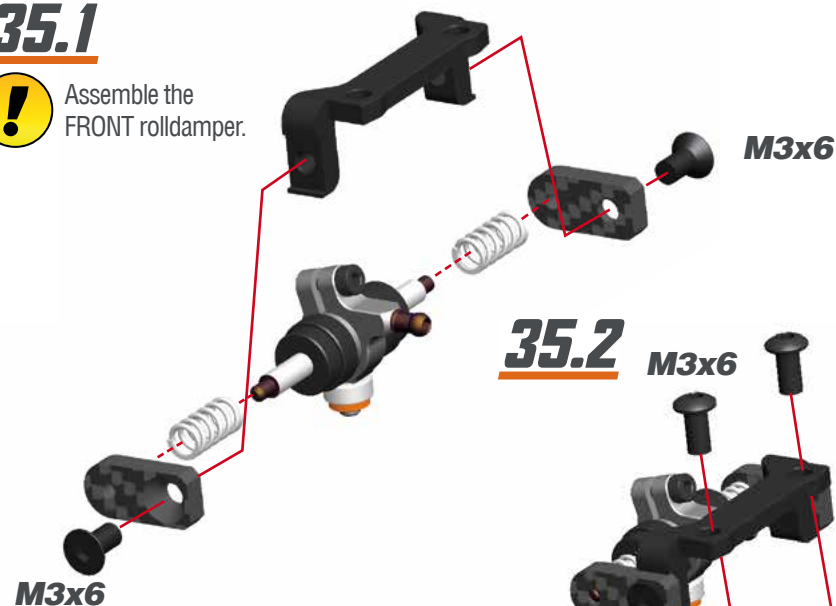


## STEP 35

## 35.1

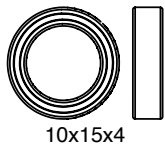
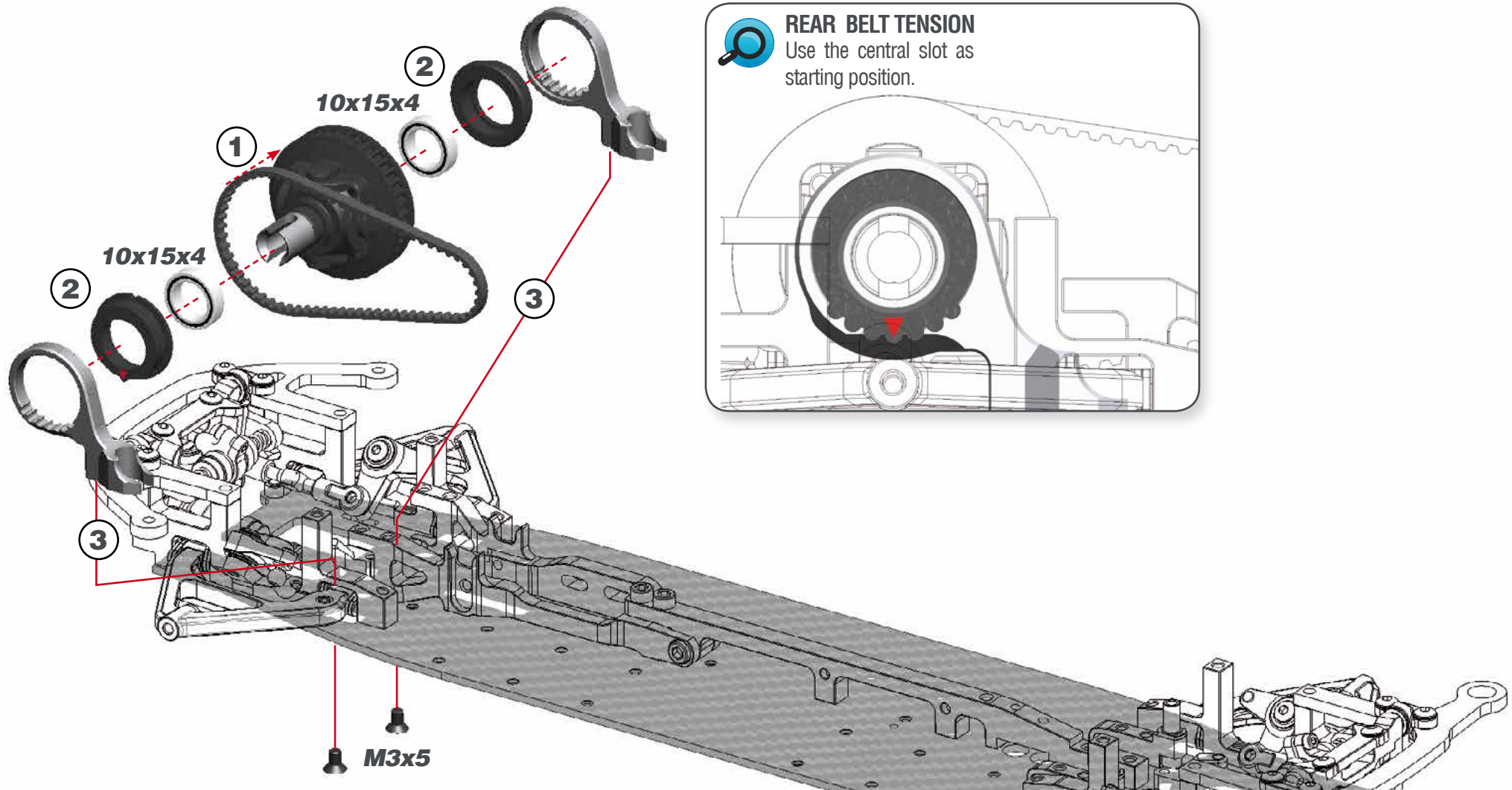


Assemble the FRONT rolldamper.





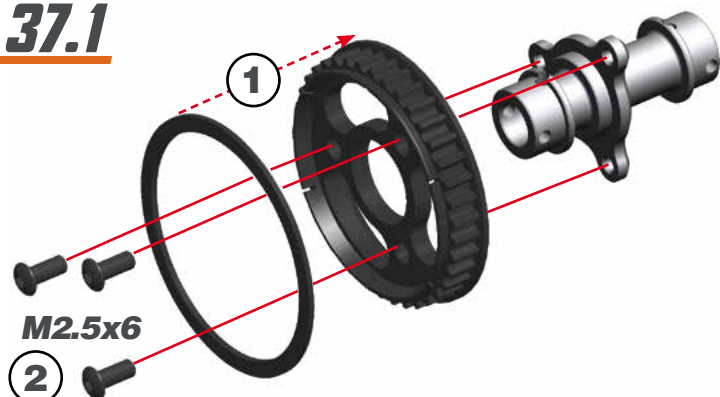
## STEP 36 BAG 8





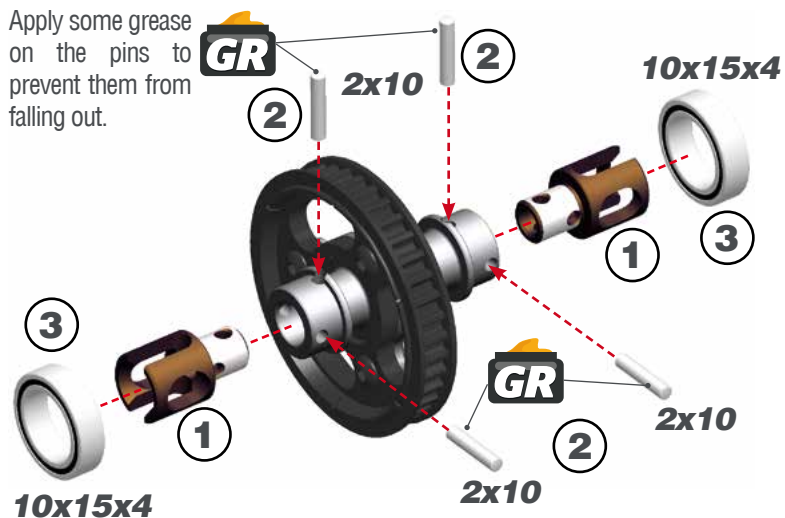
## STEP 37

### 37.1

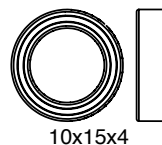
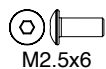
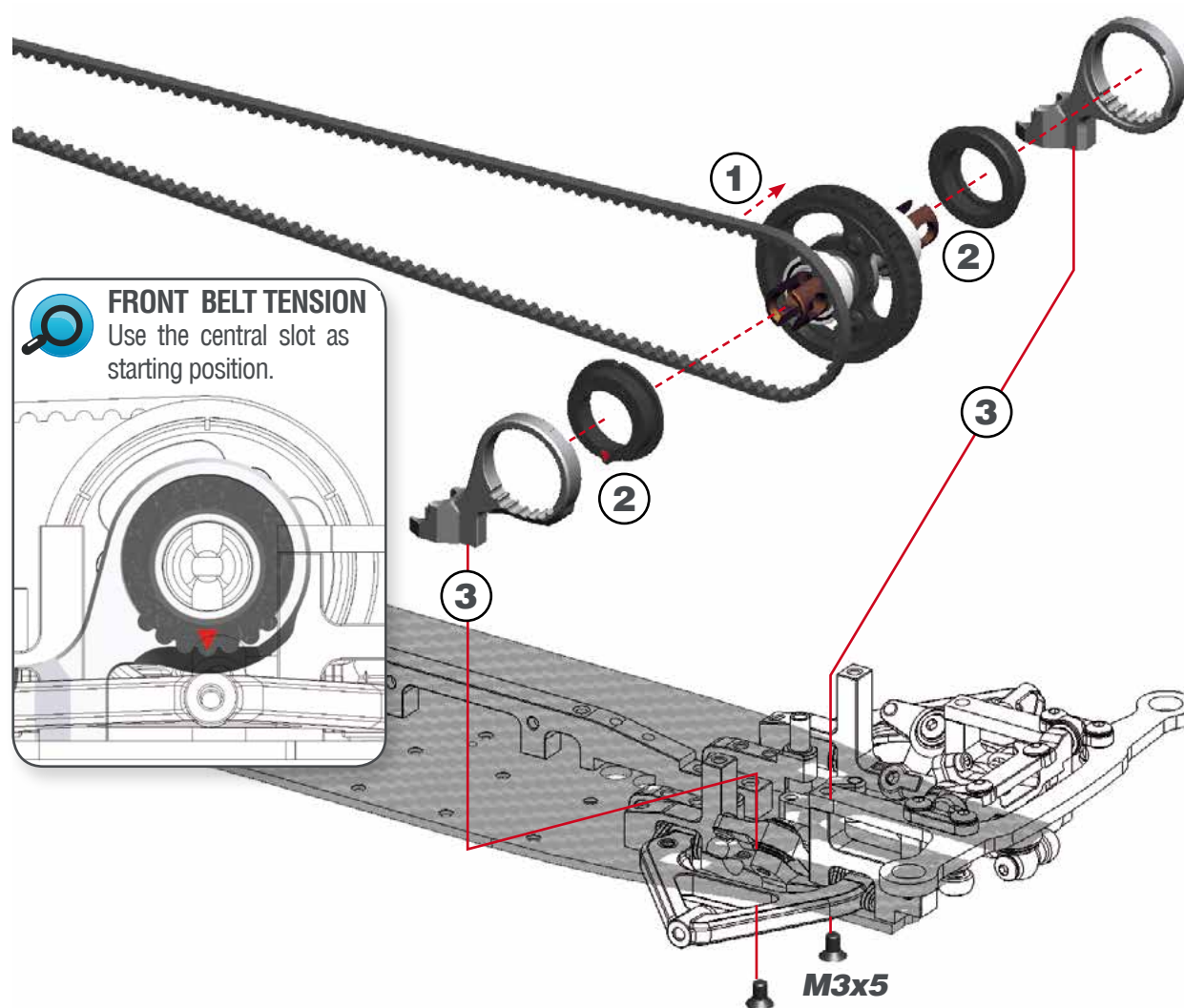


### 37.2

Apply some grease on the pins to prevent them from falling out.

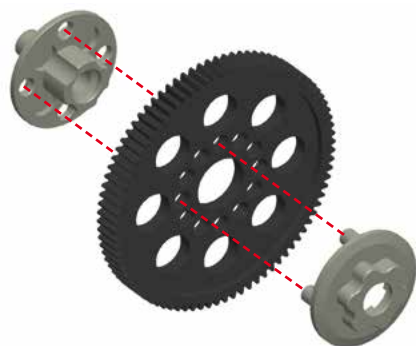


## STEP 38

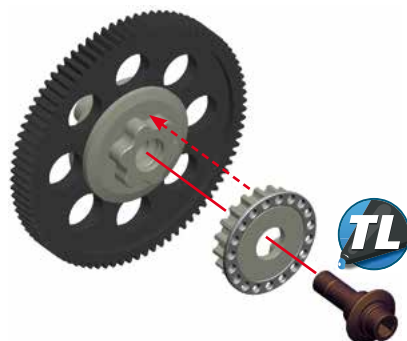


## STEP 39

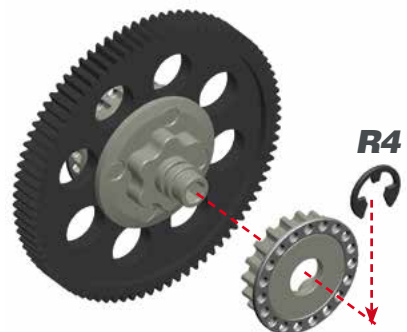
**39.1**



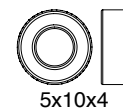
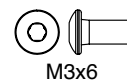
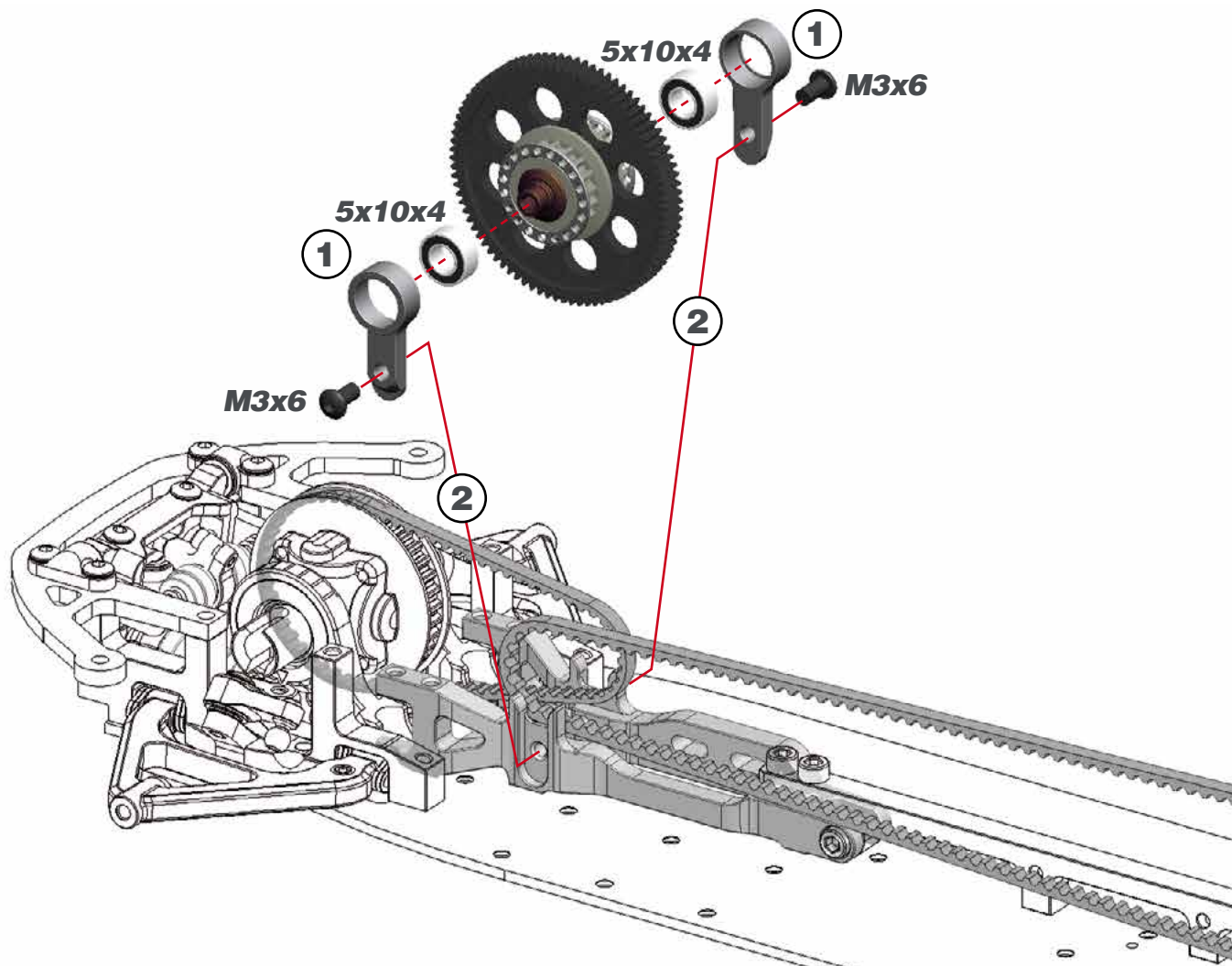
**39.2**



**39.3**

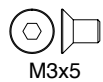
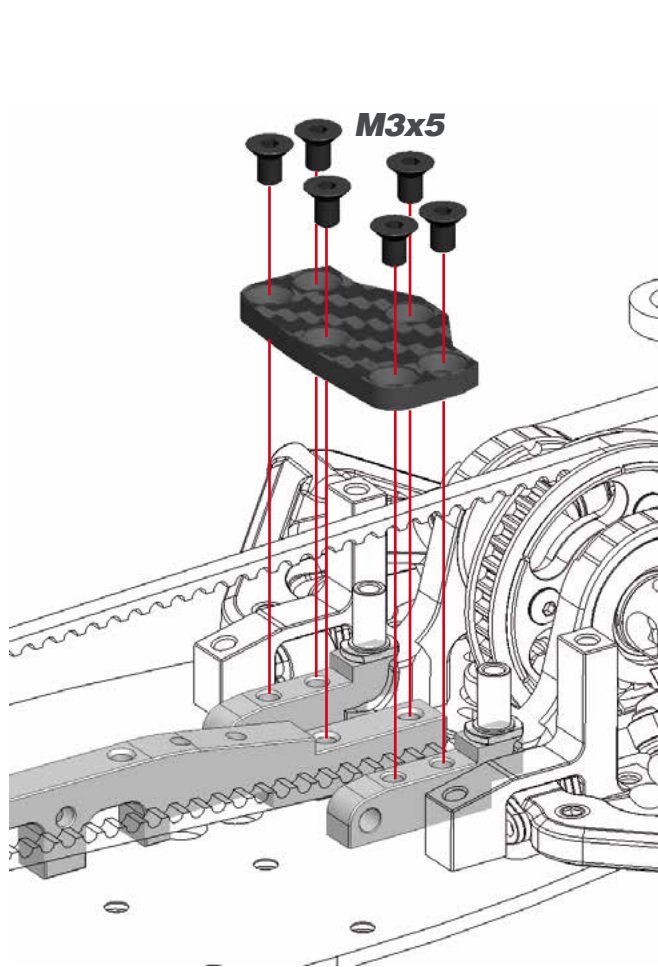


## STEP 40



## STEP 41

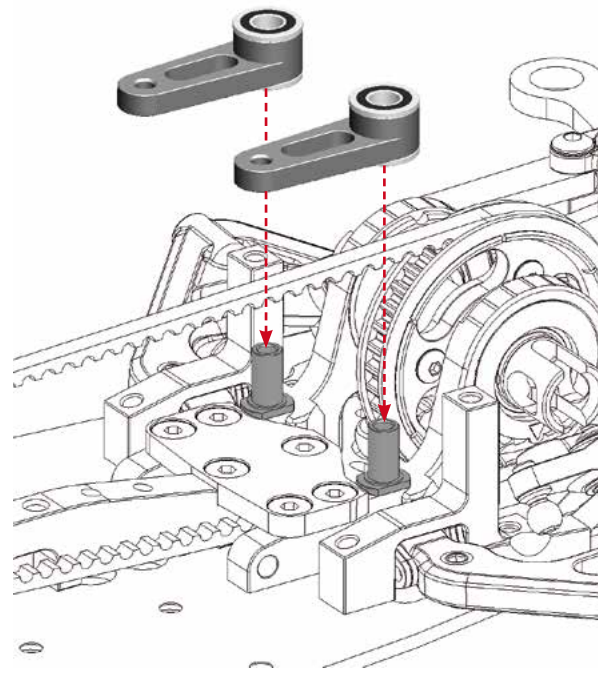
BAG 9



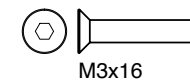
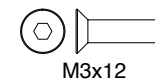
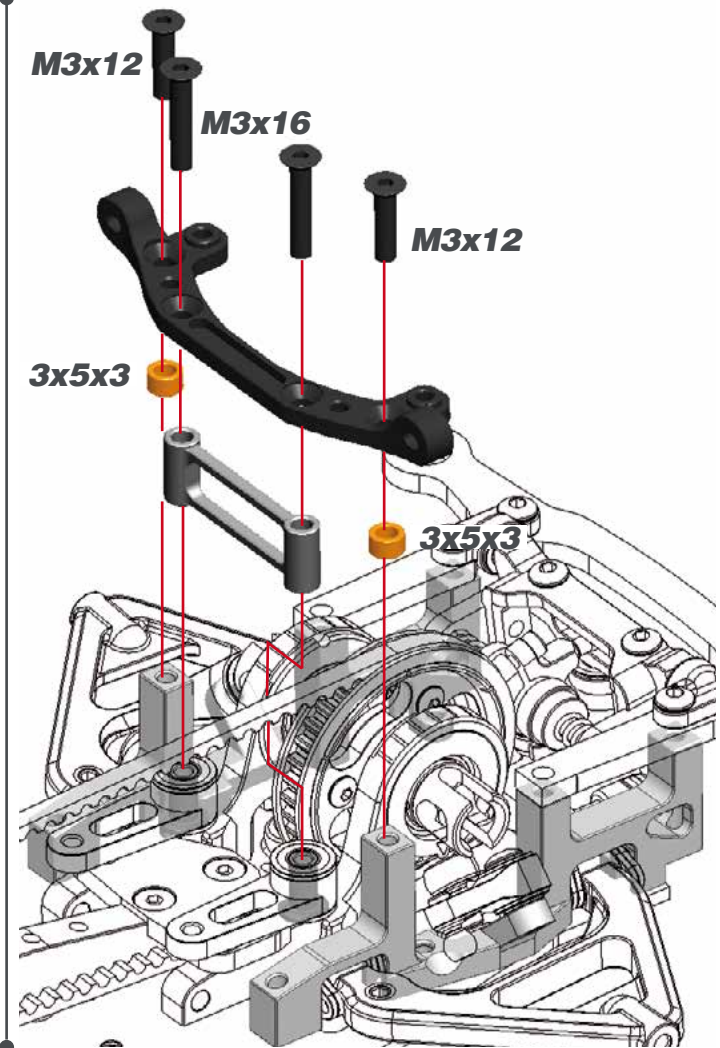
## STEP 42



Note the right orientation of the steering-levers.

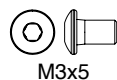
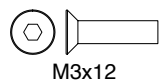
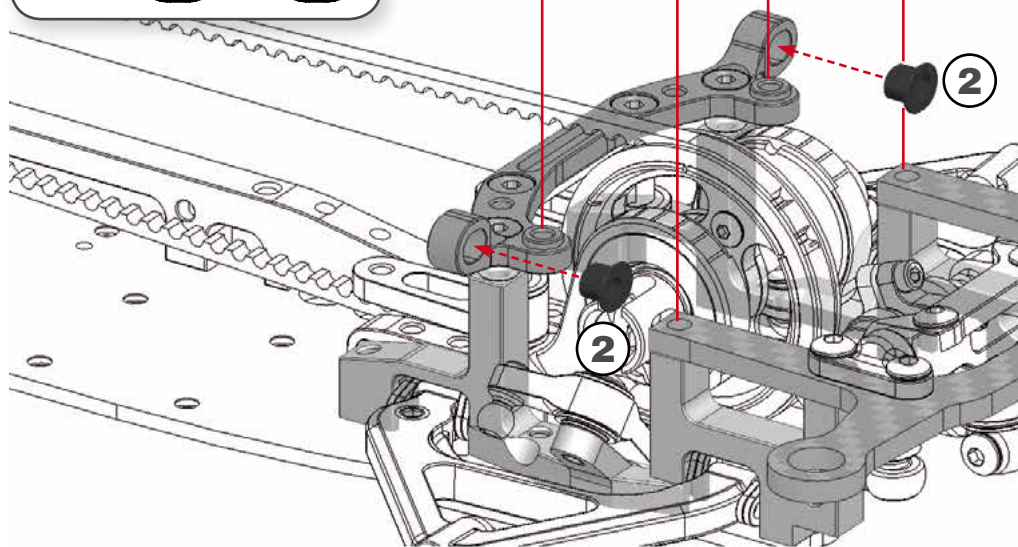
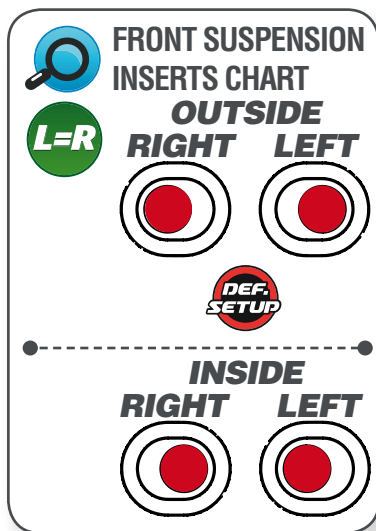


## STEP 43



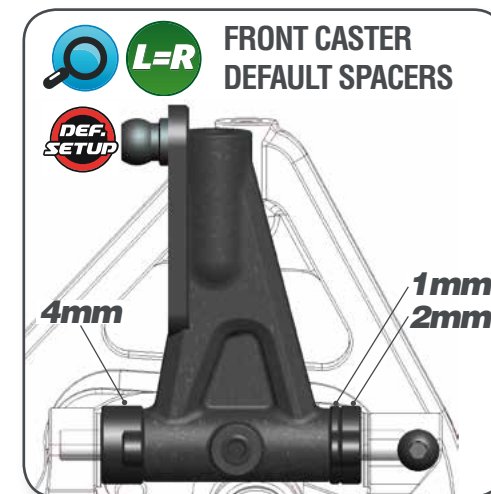
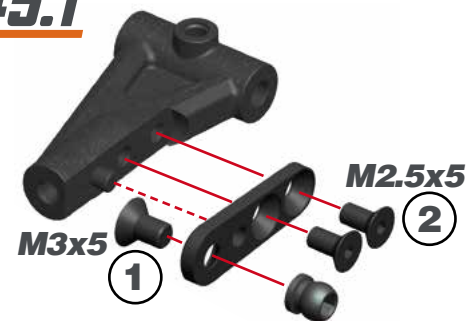


## STEP 44

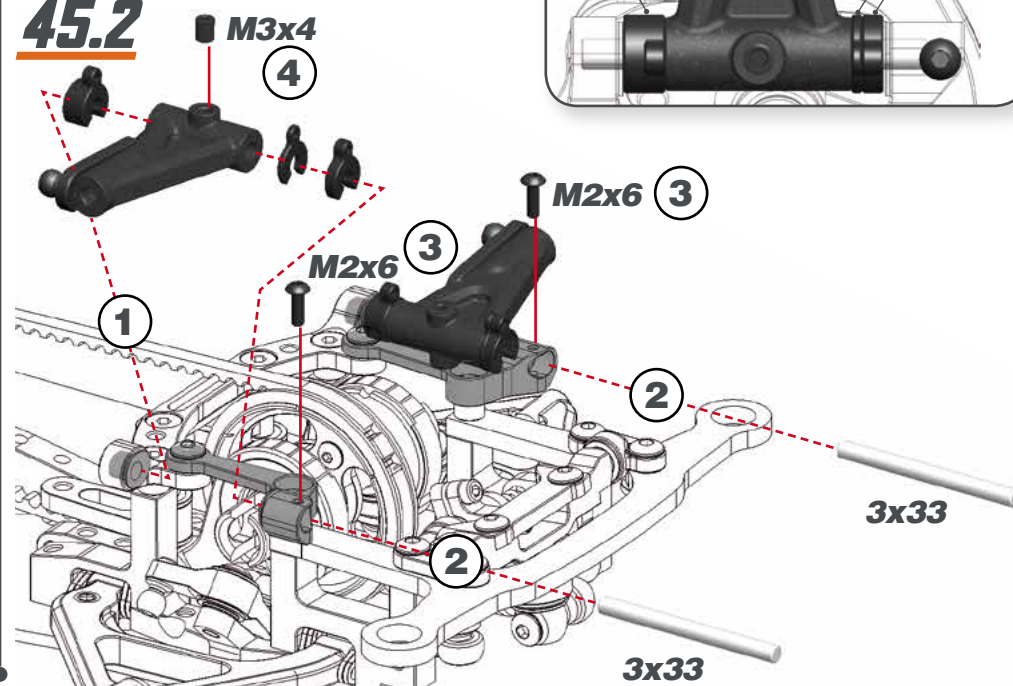


## STEP 45 BAG 10

### 45.1



### 45.2



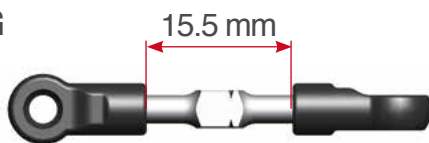


## STEP 46

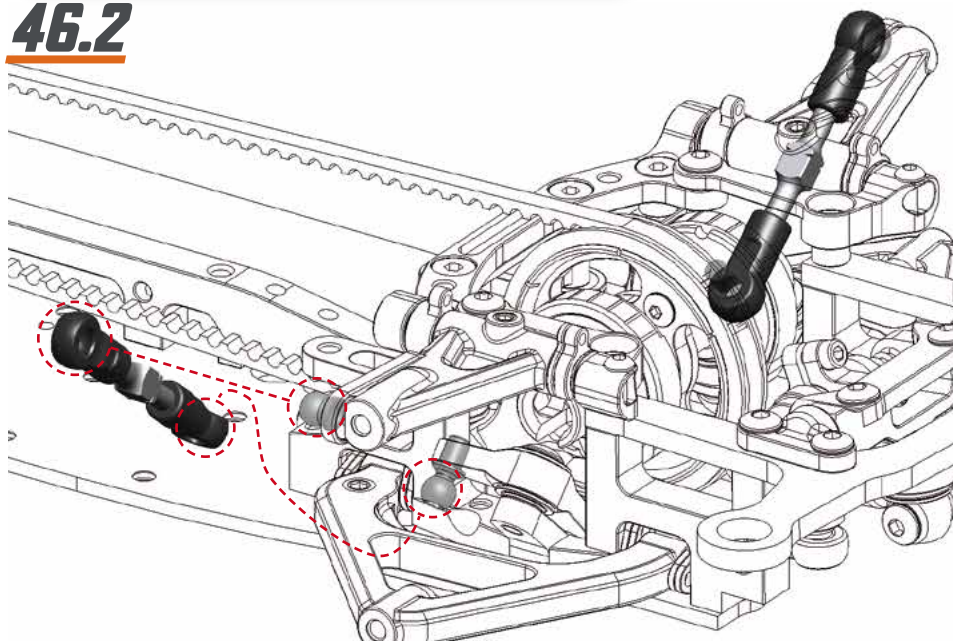
46.1



CONNECTING  
ROD LENGTH

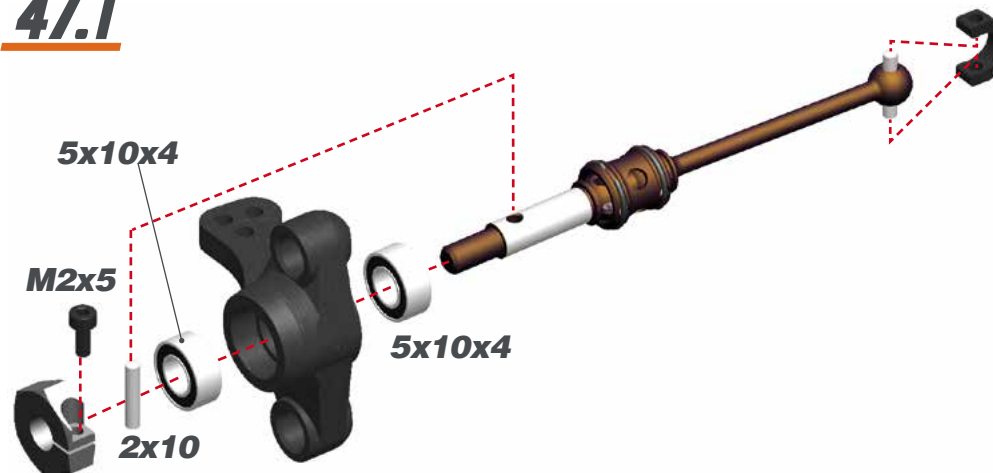


46.2



## STEP 47

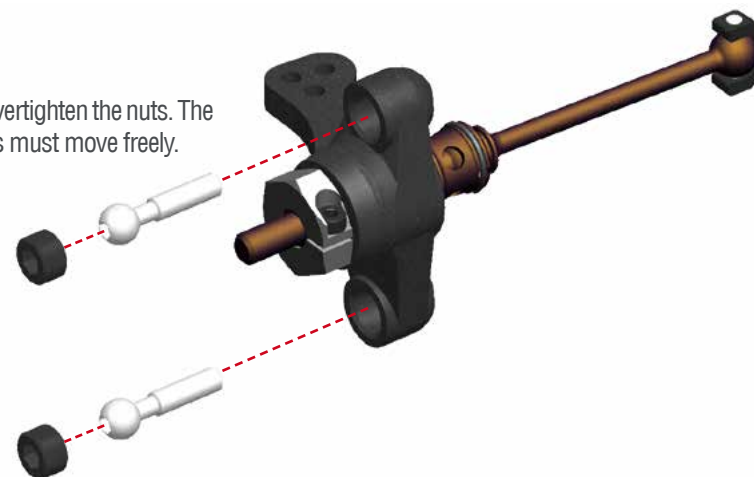
47.1



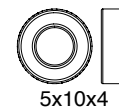
47.2



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



2x10

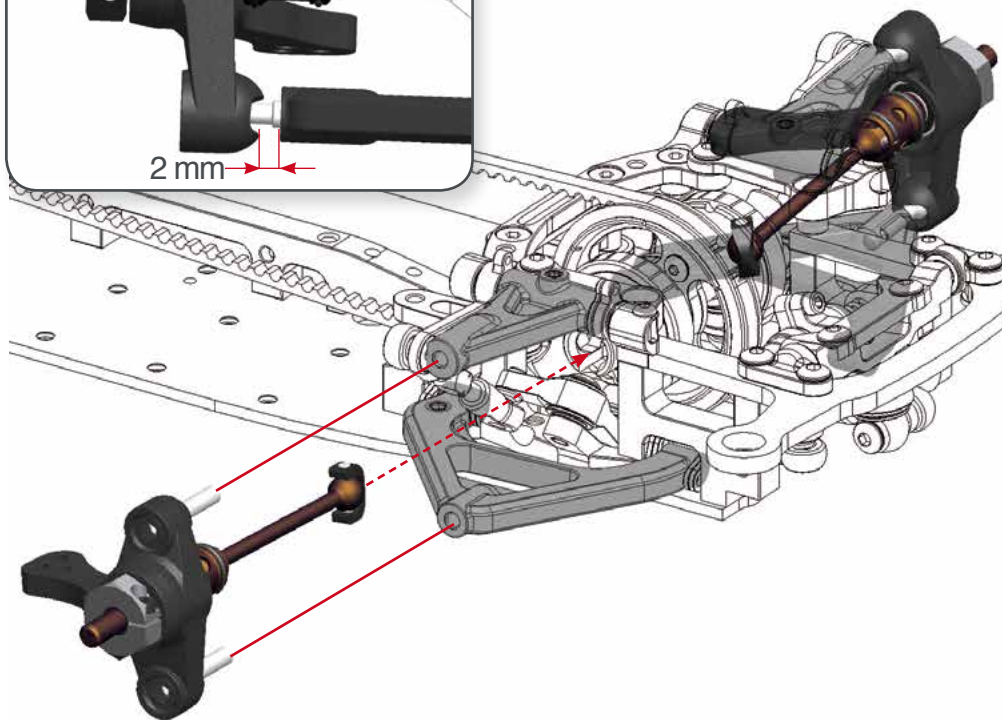
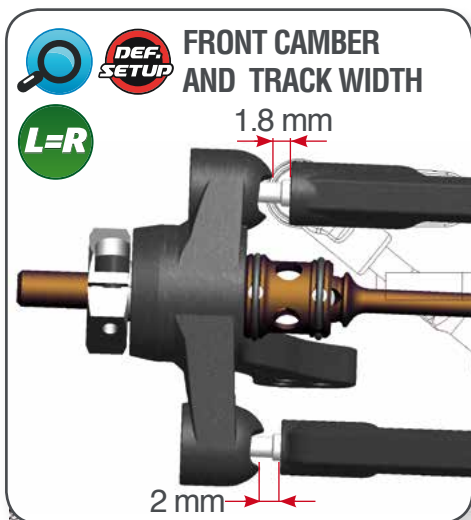


5x10x4



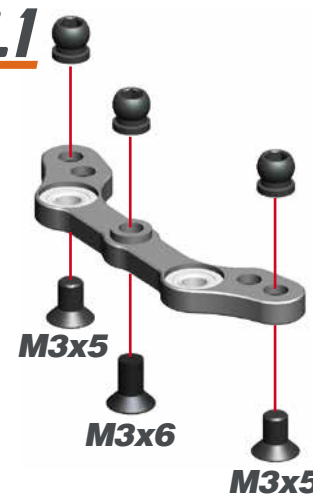
M2x5

## STEP 48

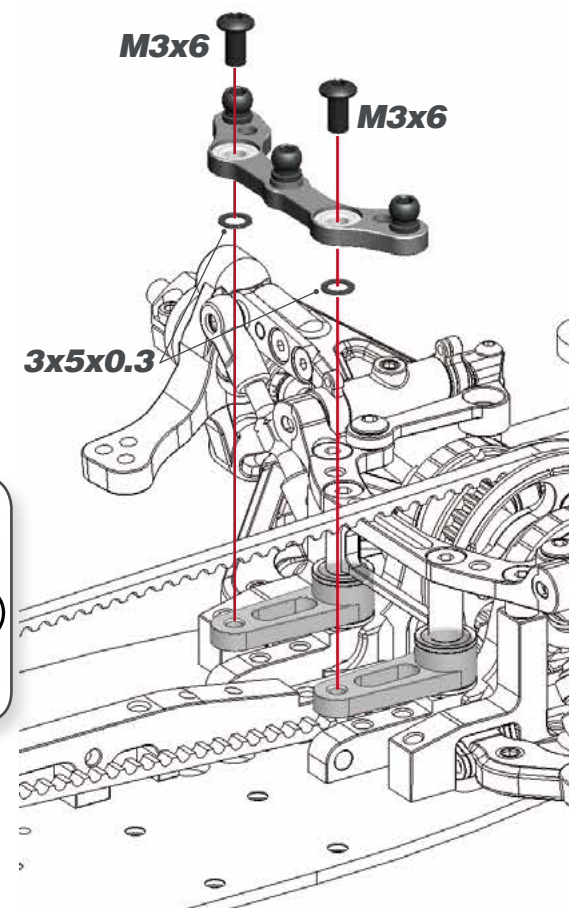


## STEP 49 BAG 11

49.1

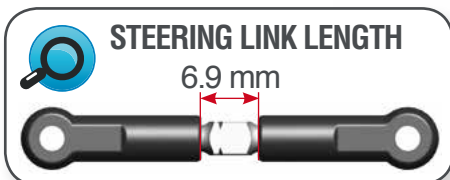


49.2

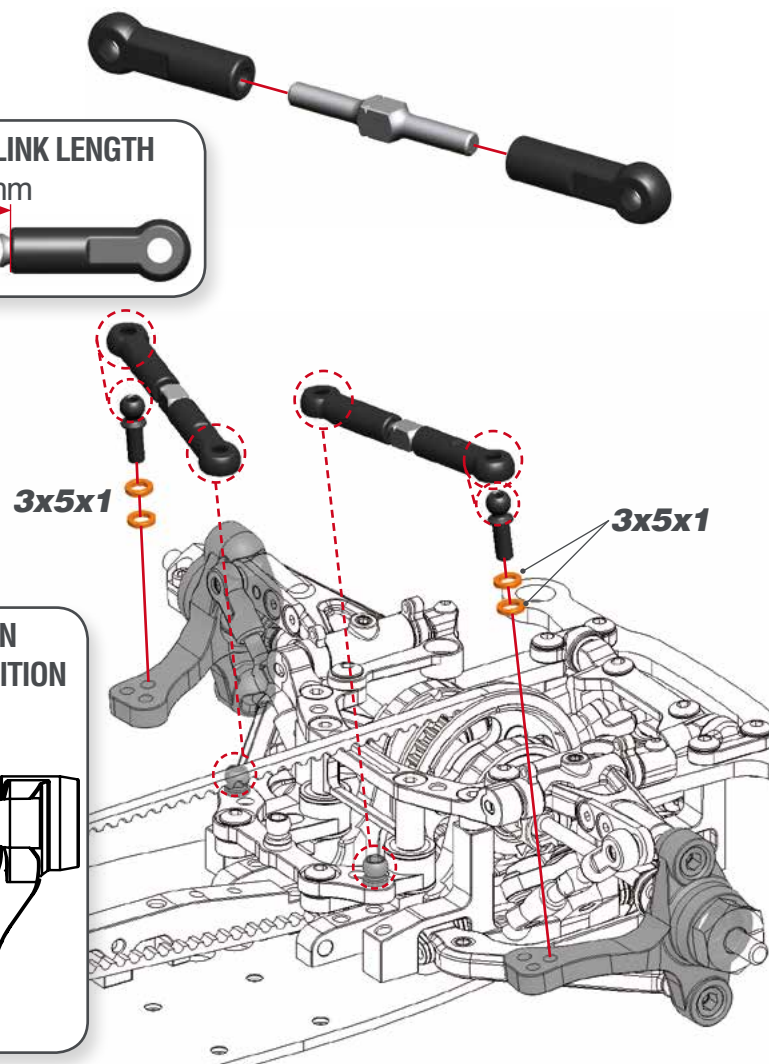
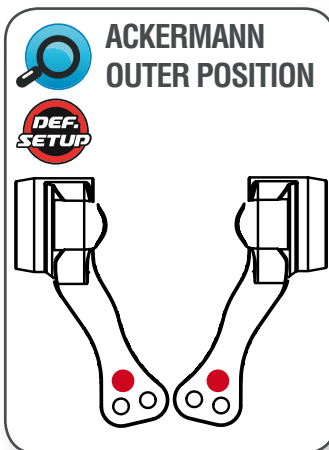


## STEP 50

### 50.1

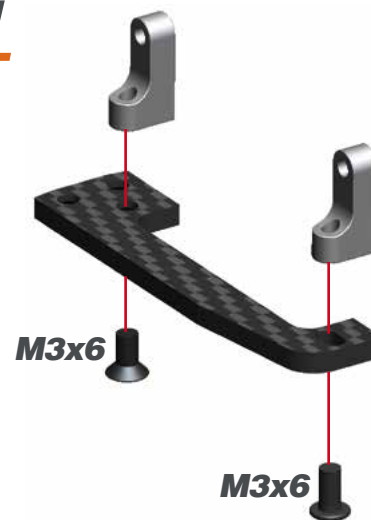


### 50.2

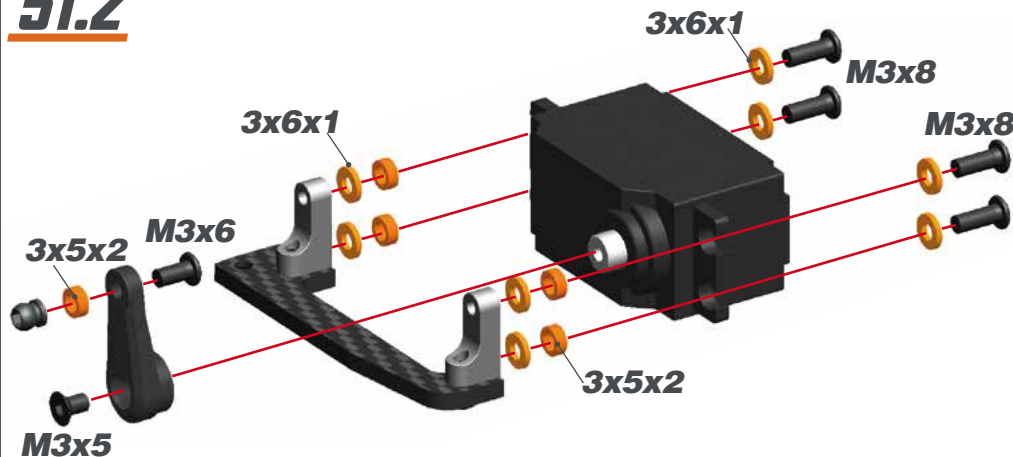


## STEP 51

### 51.1

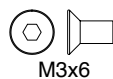
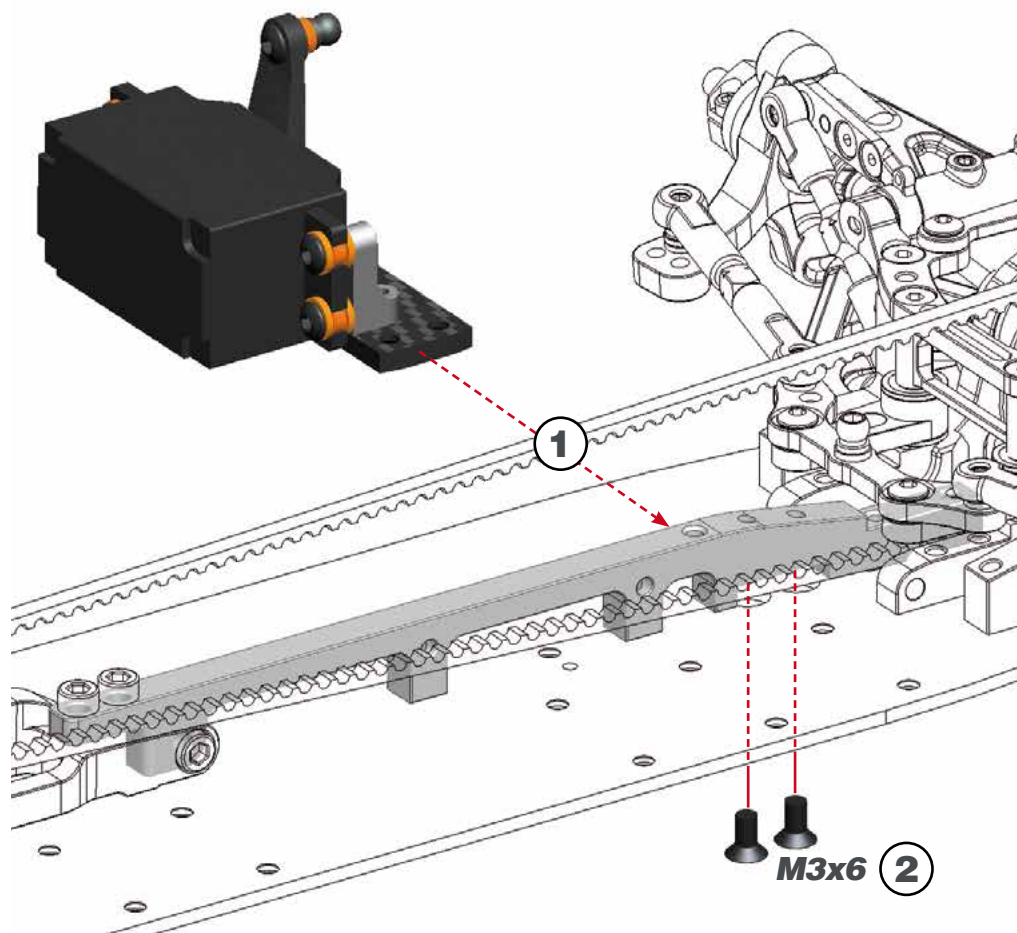


### 51.2





## STEP 52



## STEP 53

### 53.1

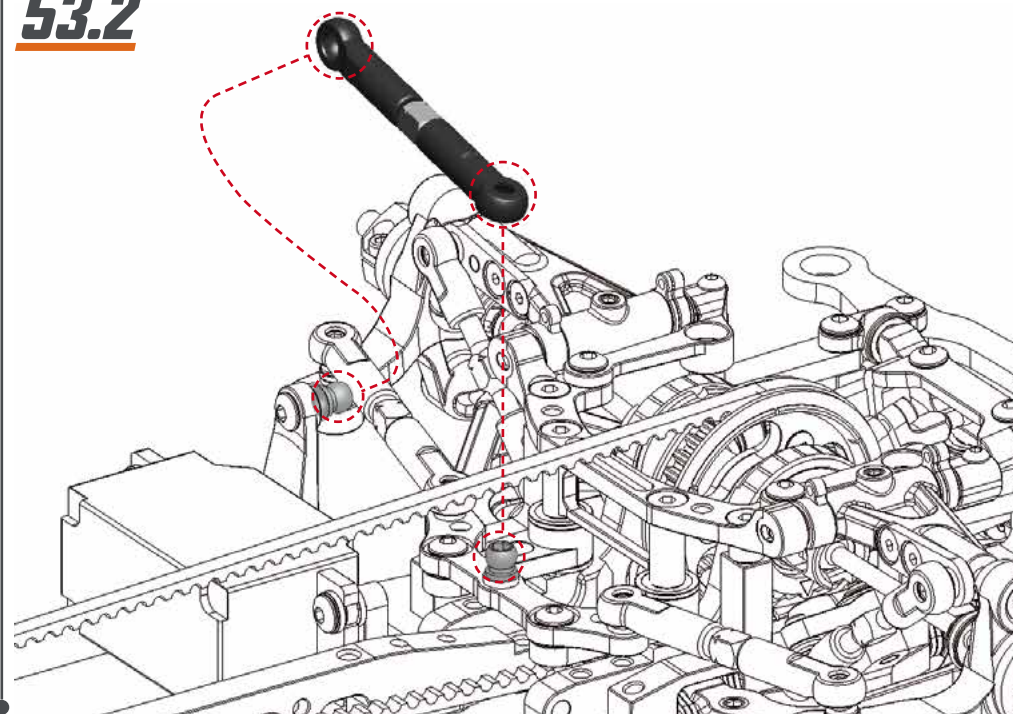


STEERING LINK LENGTH

5.5 mm

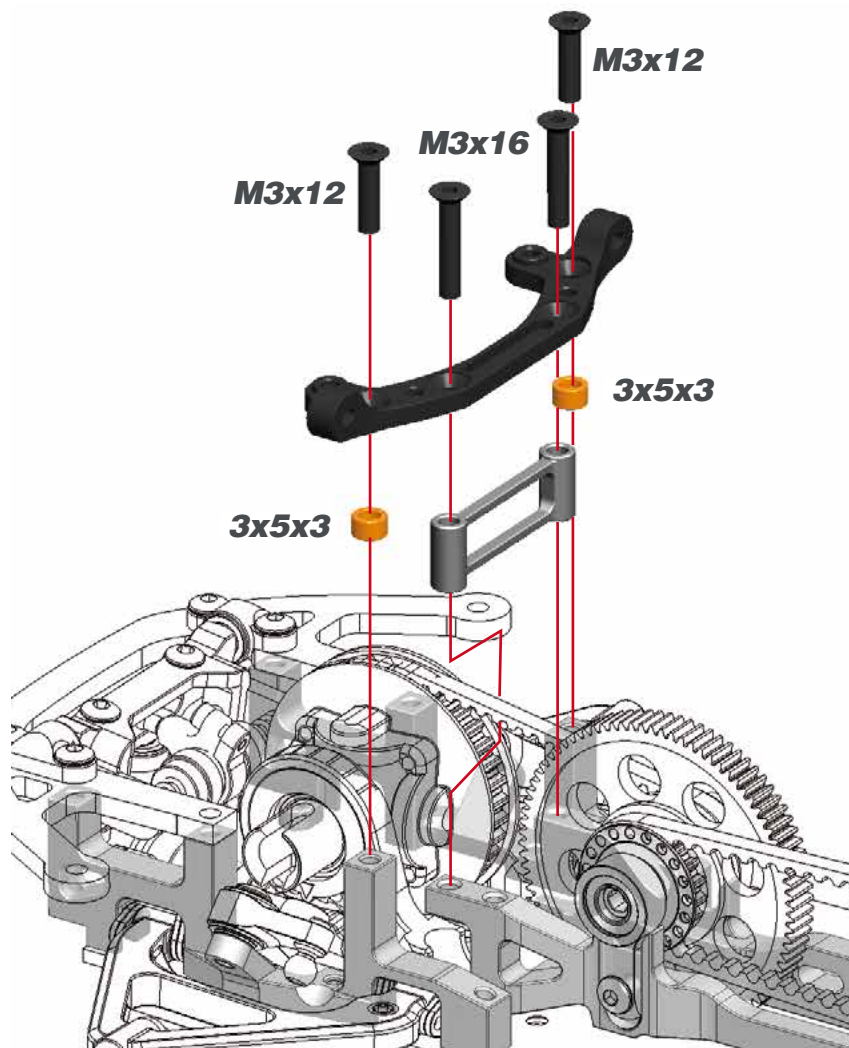


### 53.2

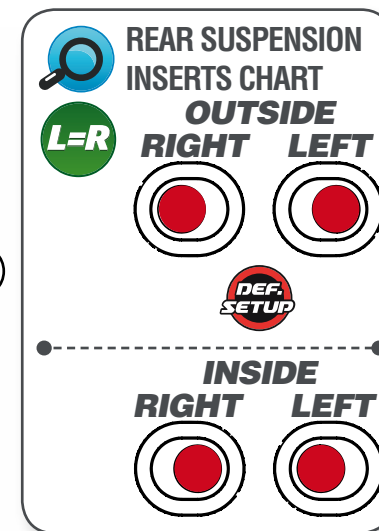
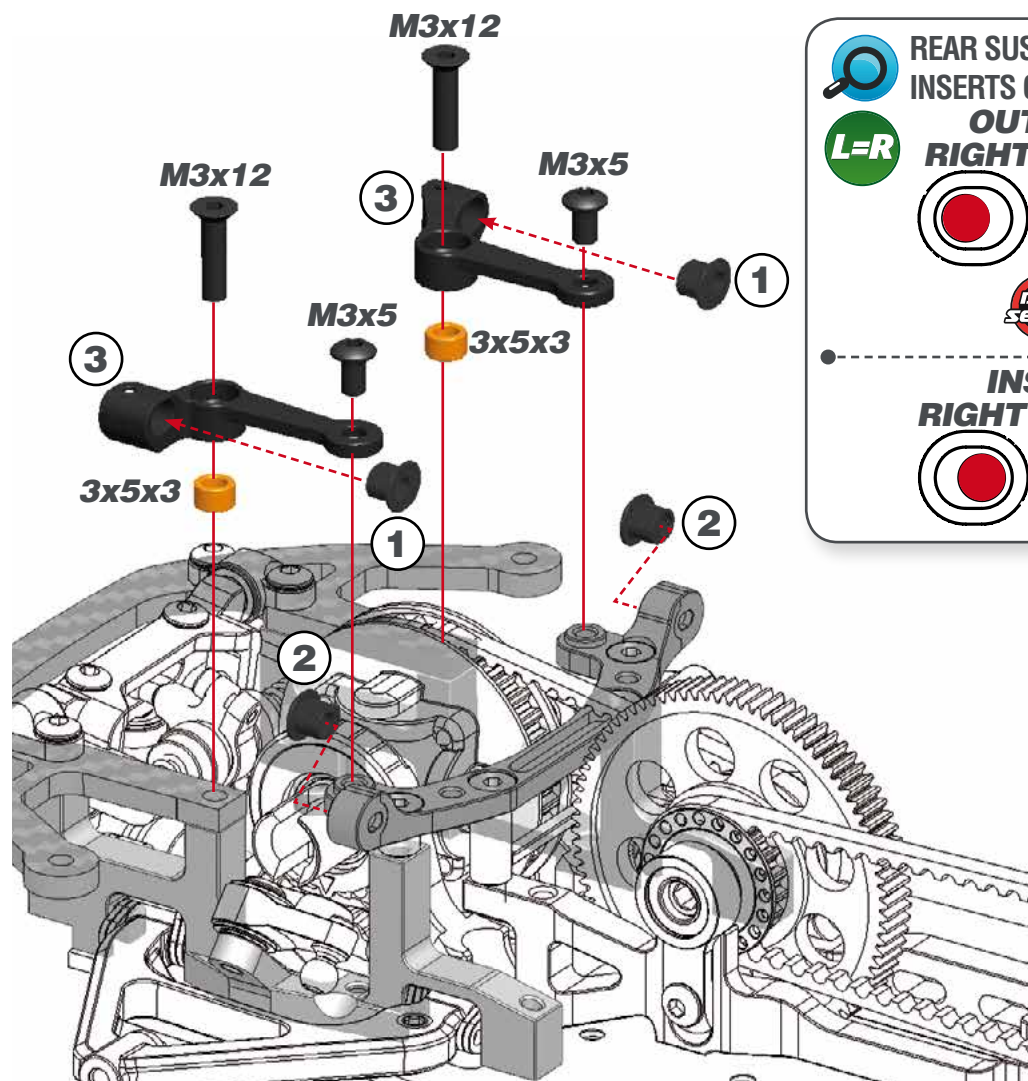




## STEP 54 BAG 12

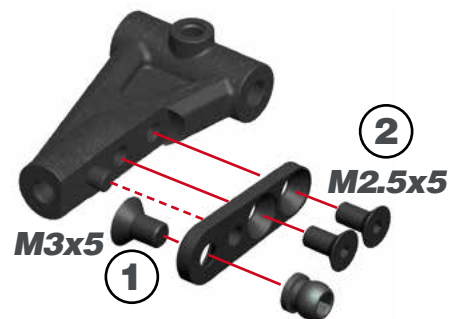


## STEP 55

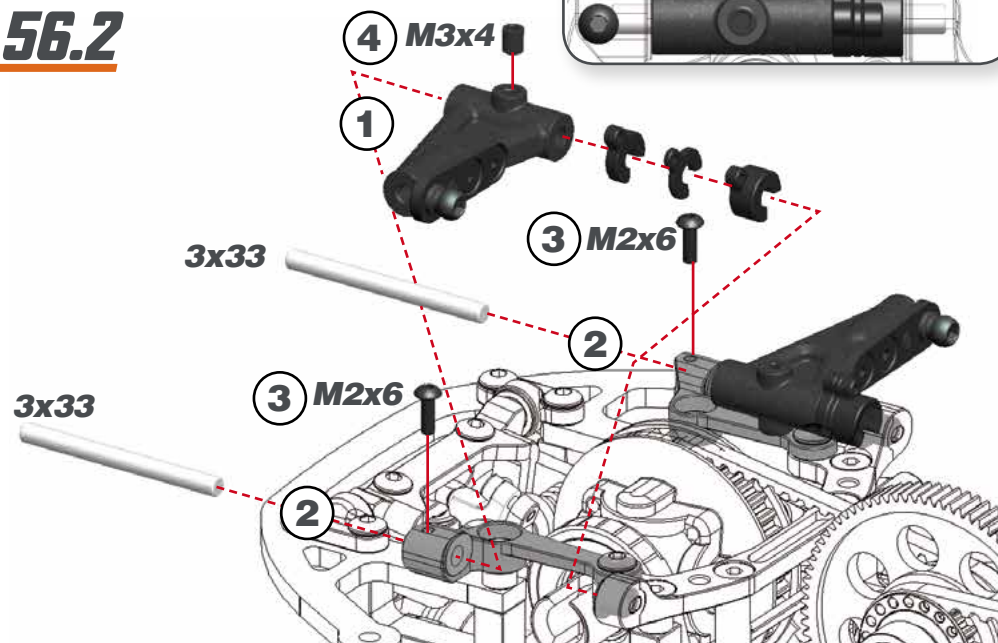


## STEP 56 BAG 13

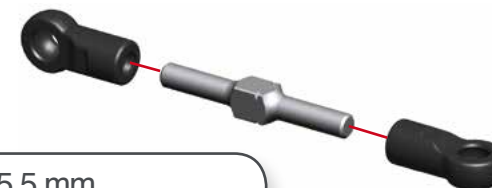
### 56.1



### 56.2



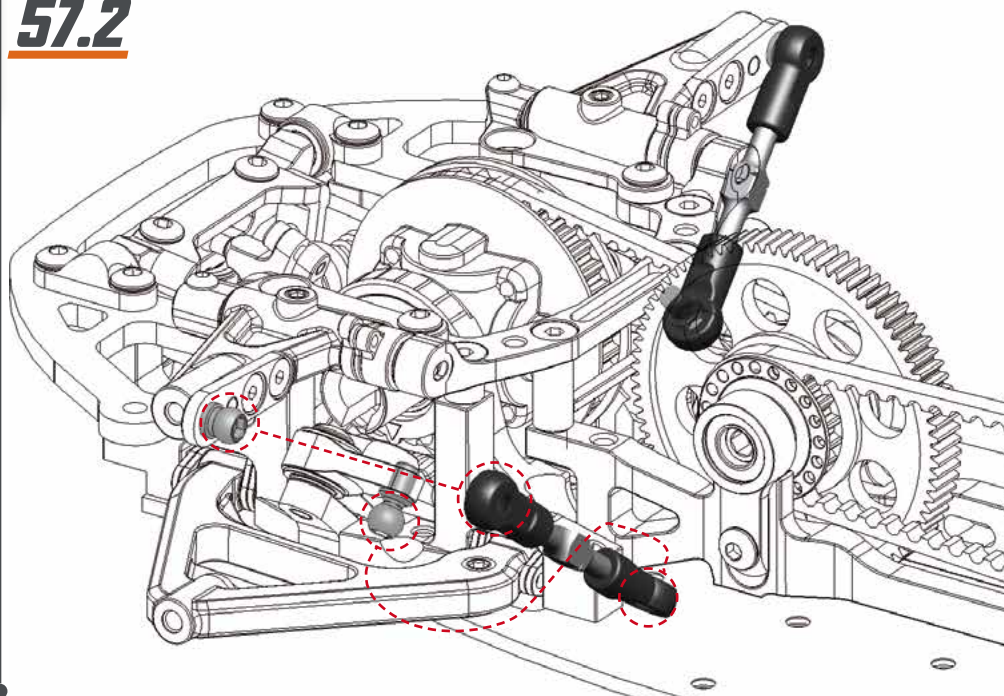
### 57.1



CONNECTING  
ROD LENGTH

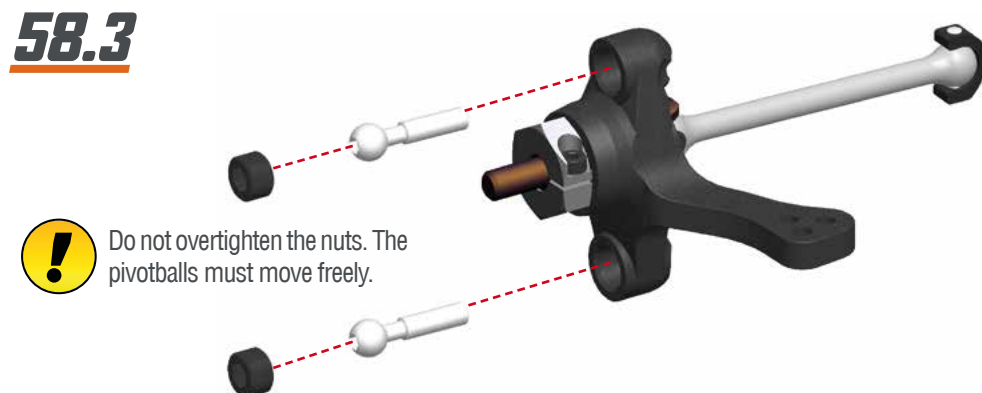
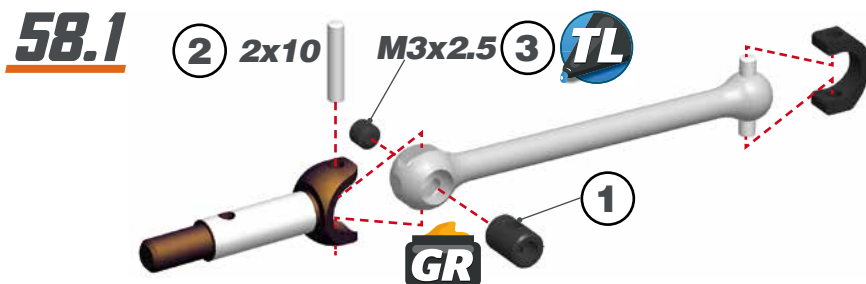


### 57.2





## STEP 58



M3x2.5

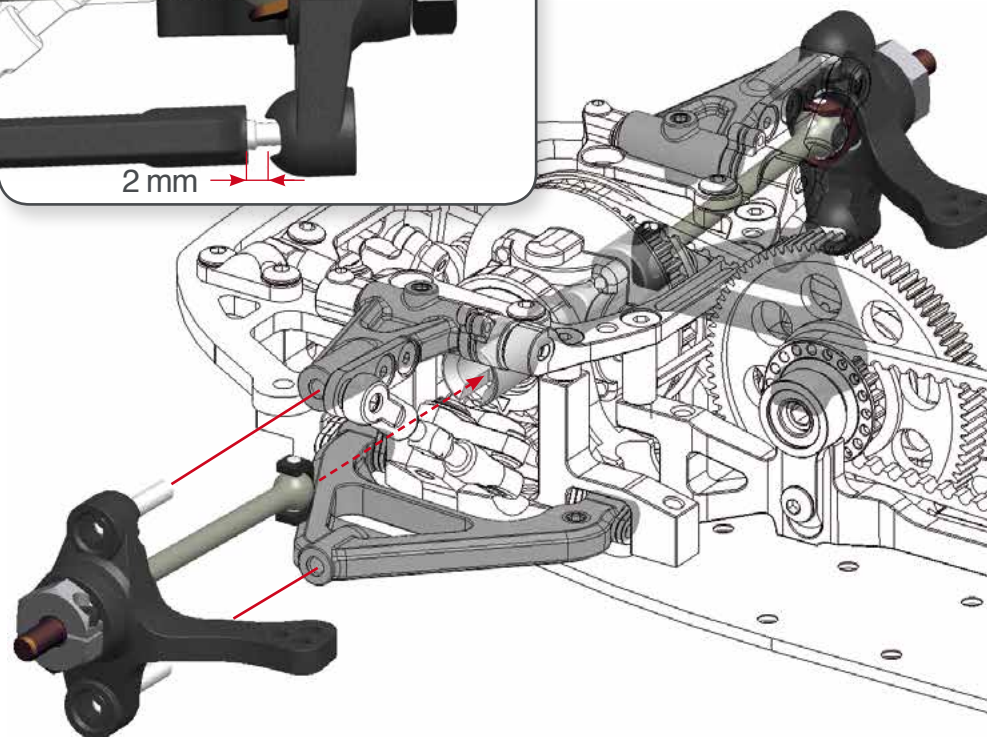
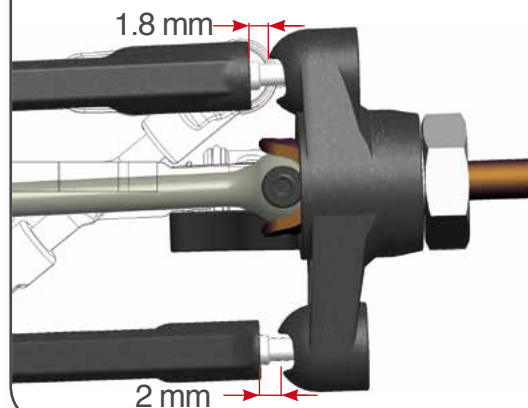
2x10

5x10x4

M2x5

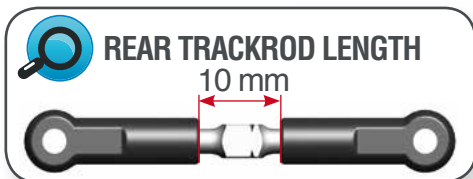
## STEP 59

DEF. SETUP L=R REAR CAMBER AND TRACK WIDTH

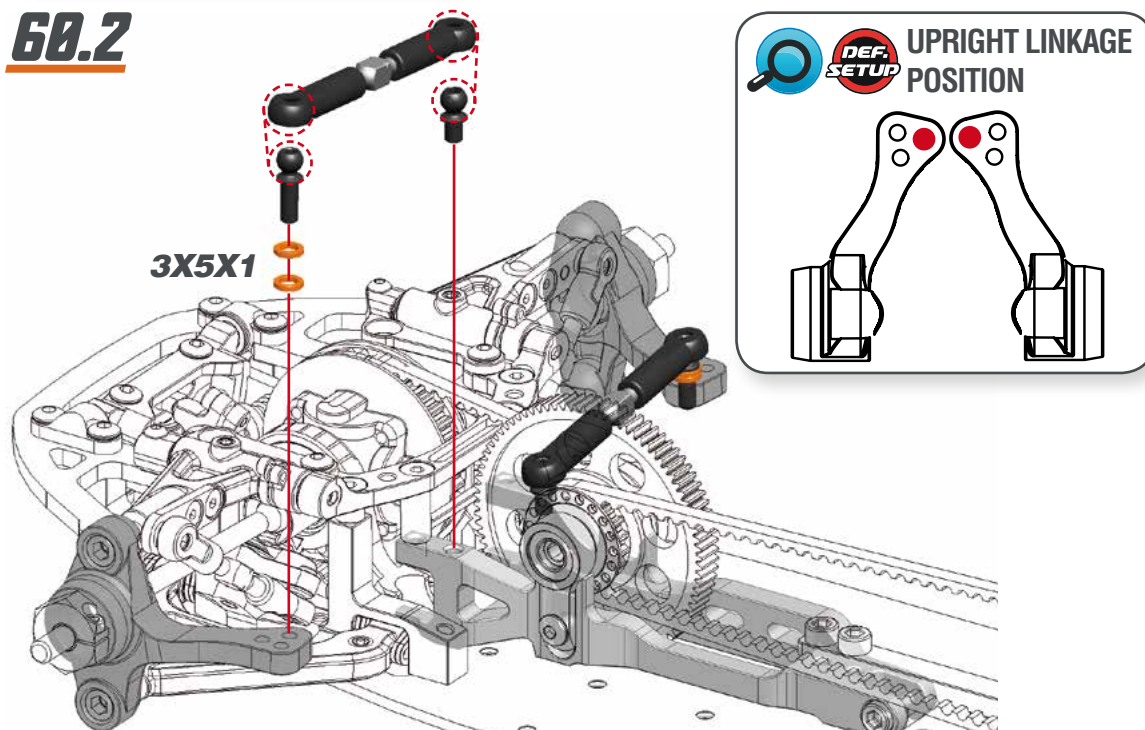


## STEP 60

60.1

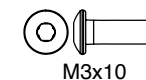
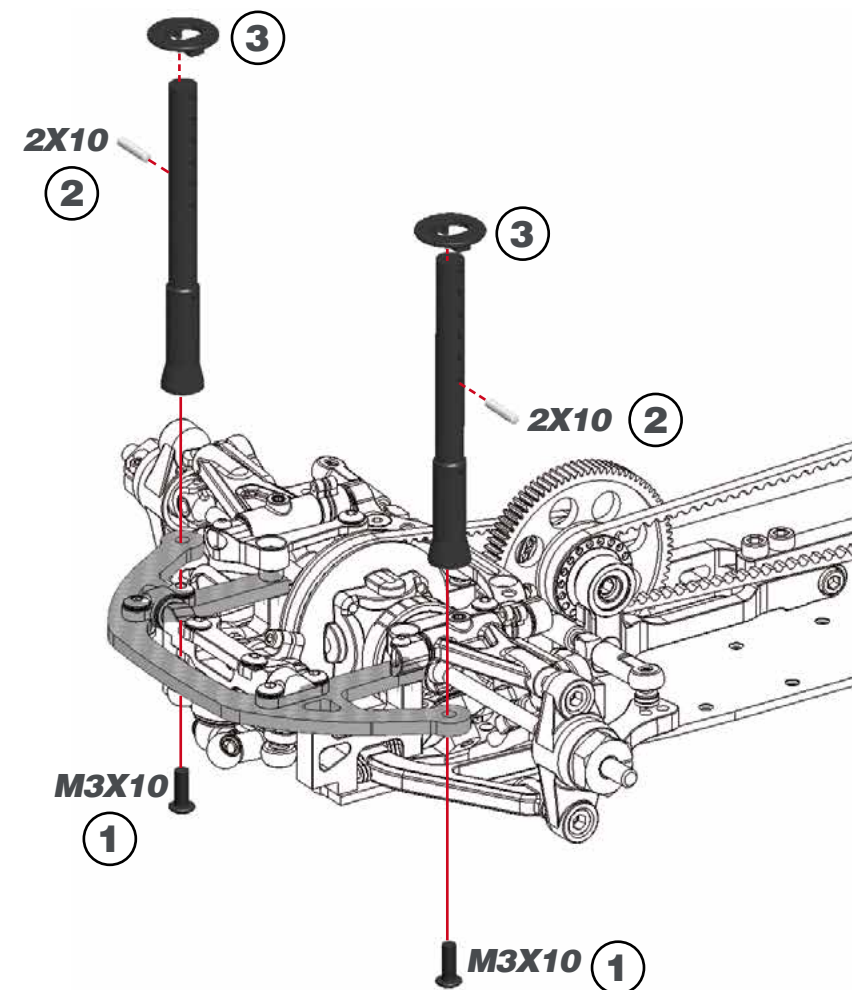


60.2



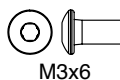
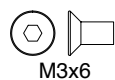
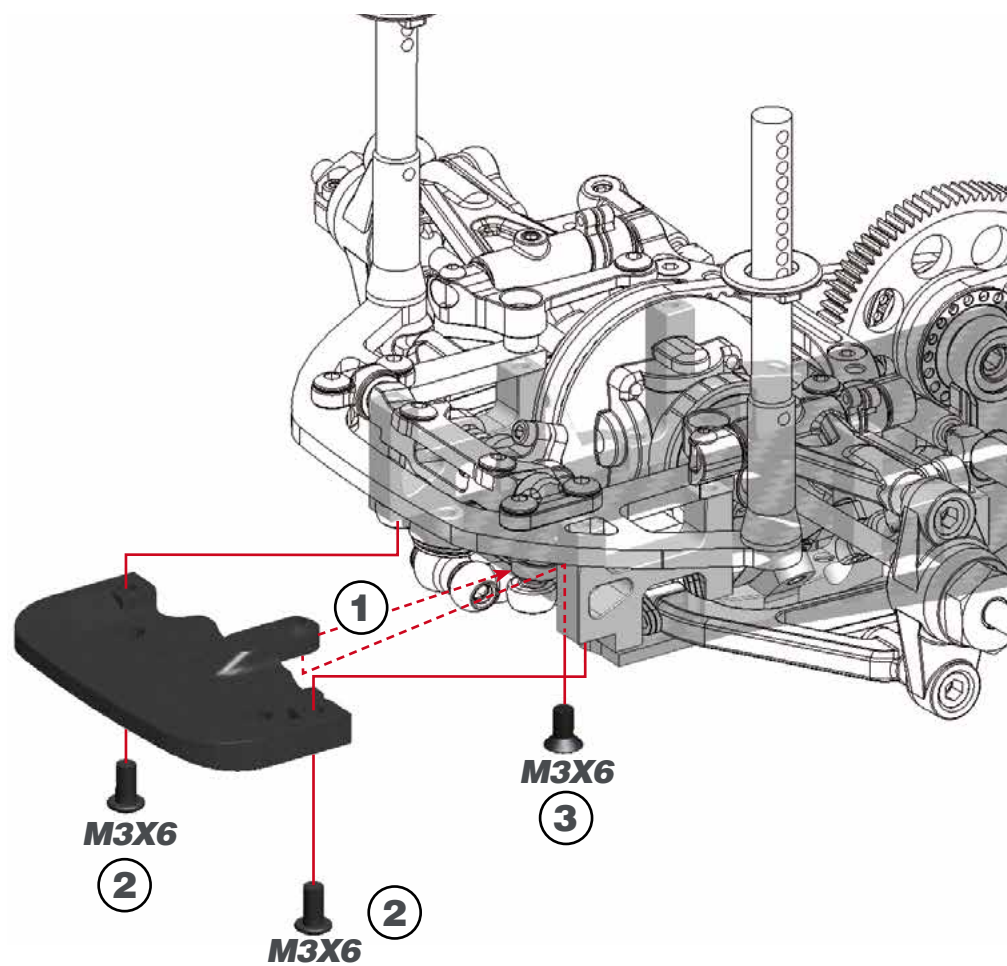
## STEP 61

BAG 14

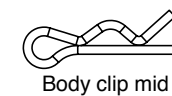
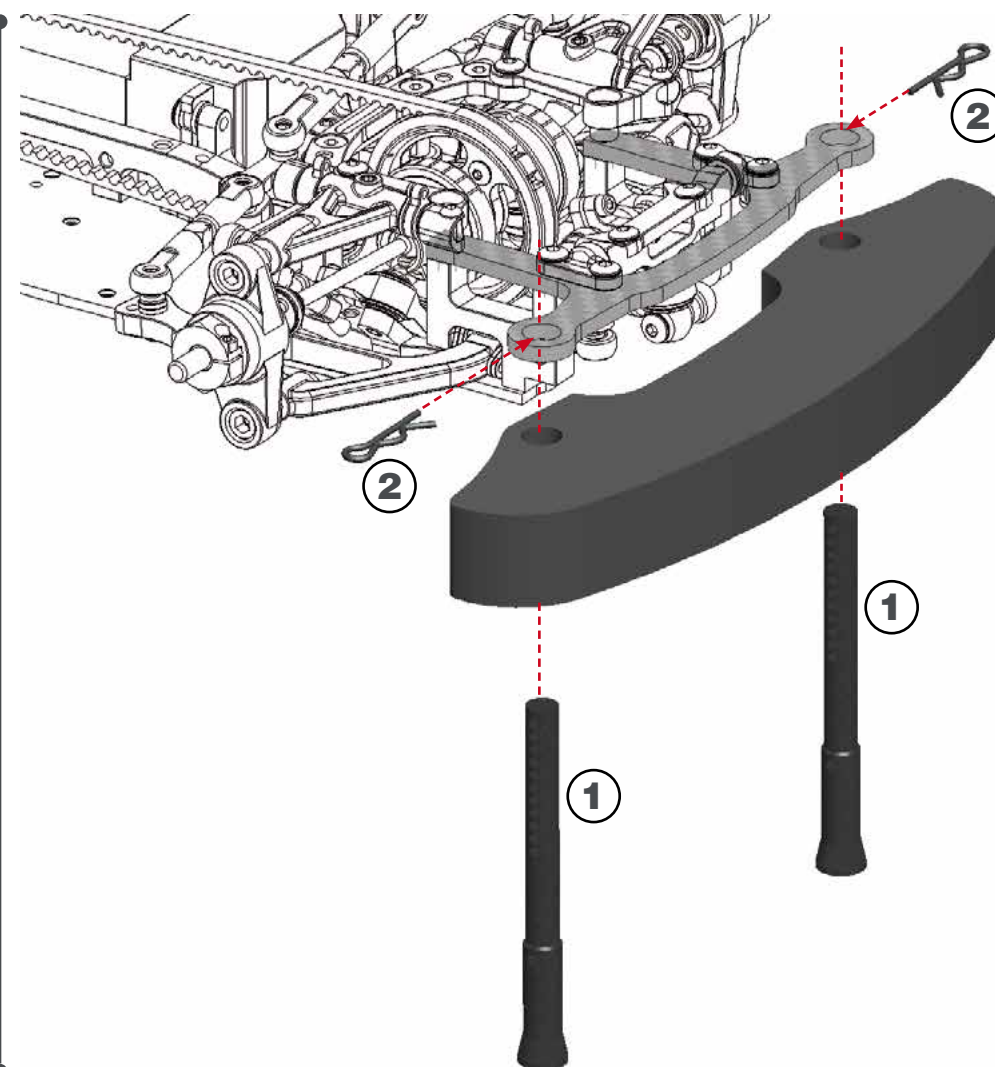




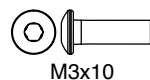
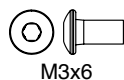
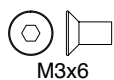
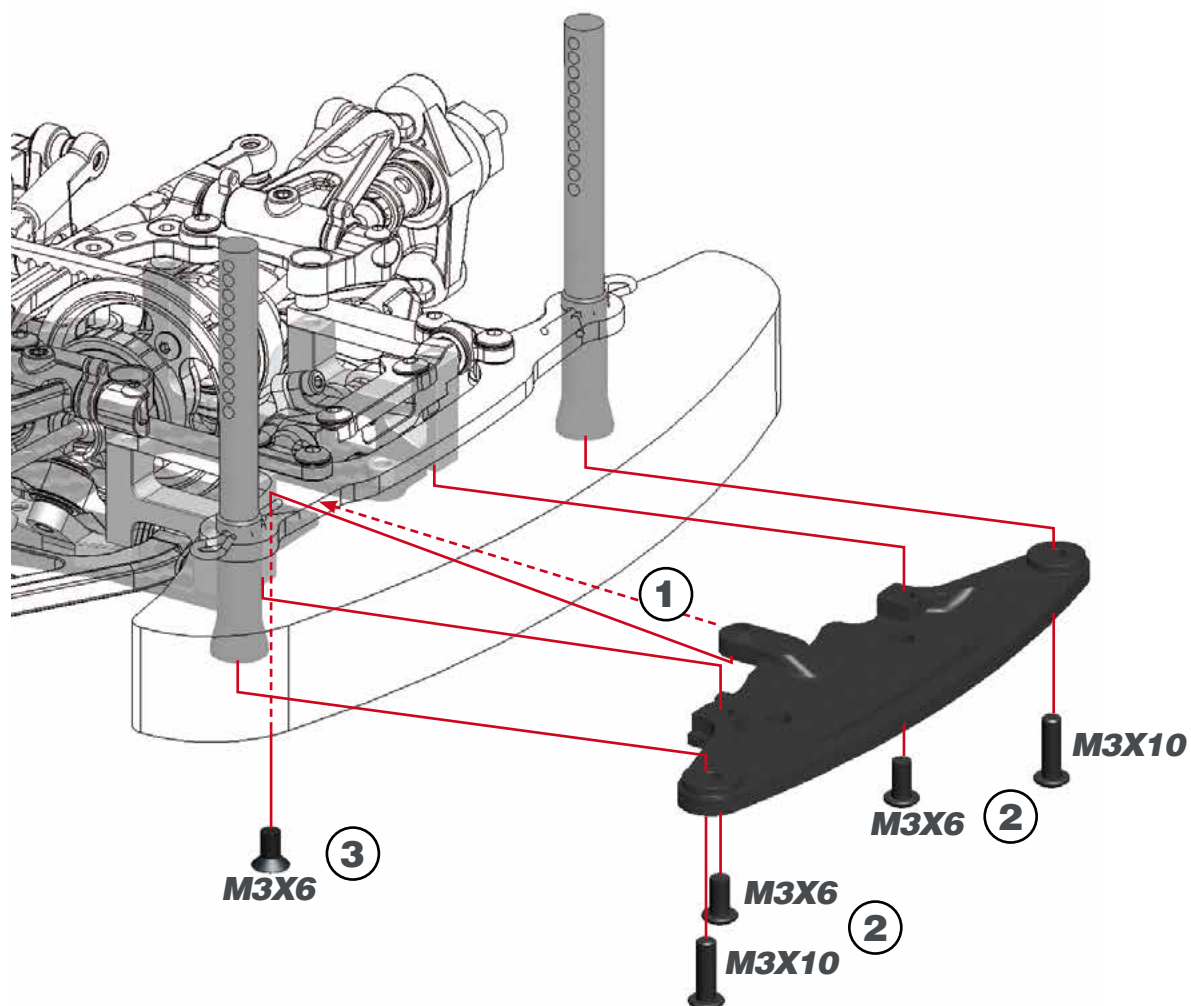
## STEP 62



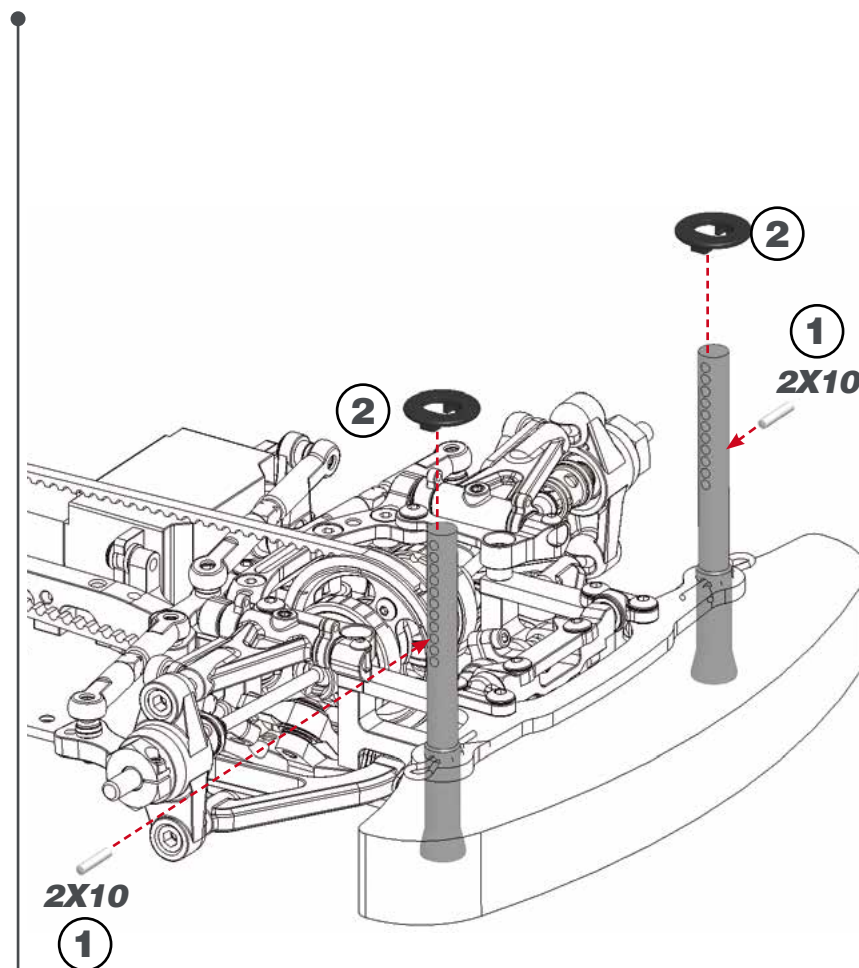
## STEP 63



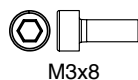
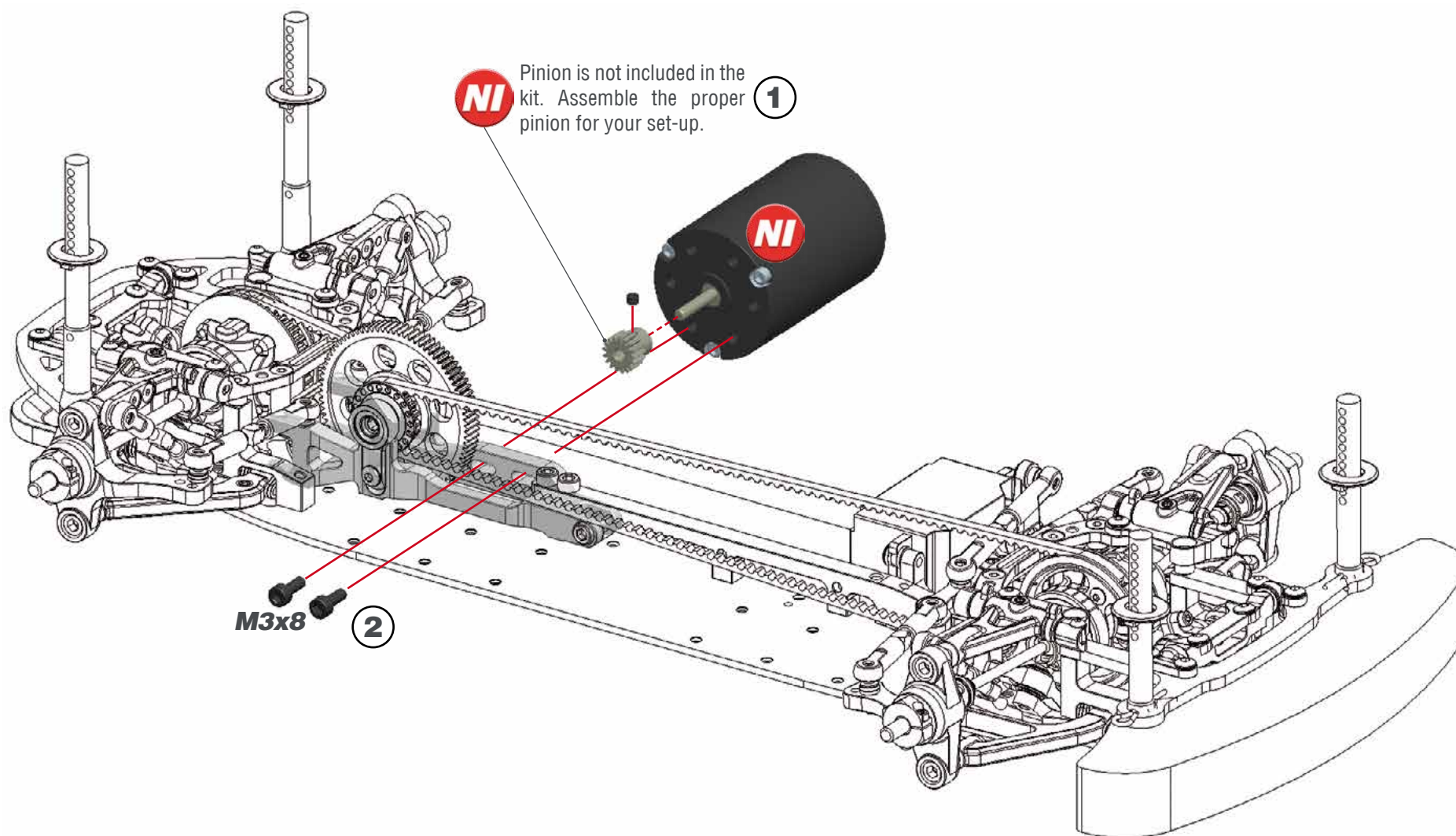
## STEP 64



## STEP 65



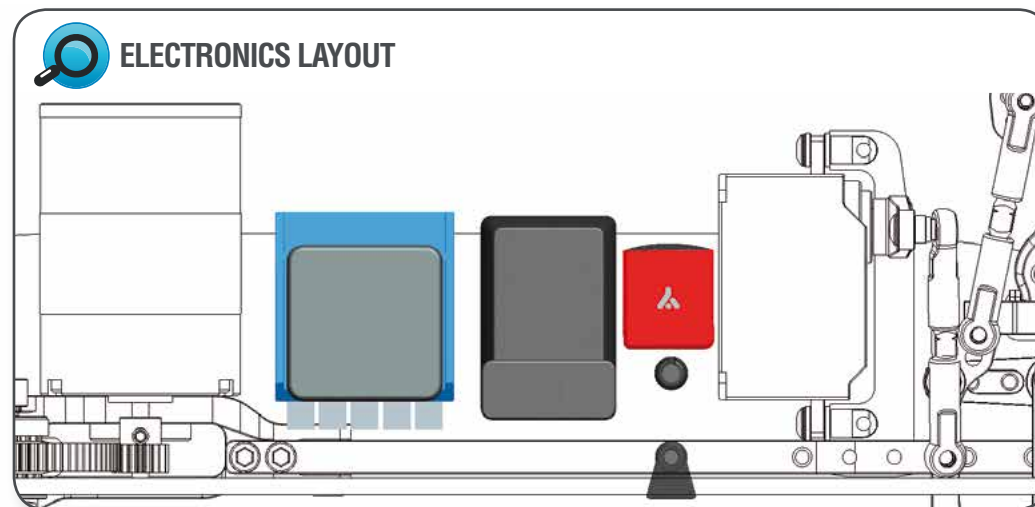
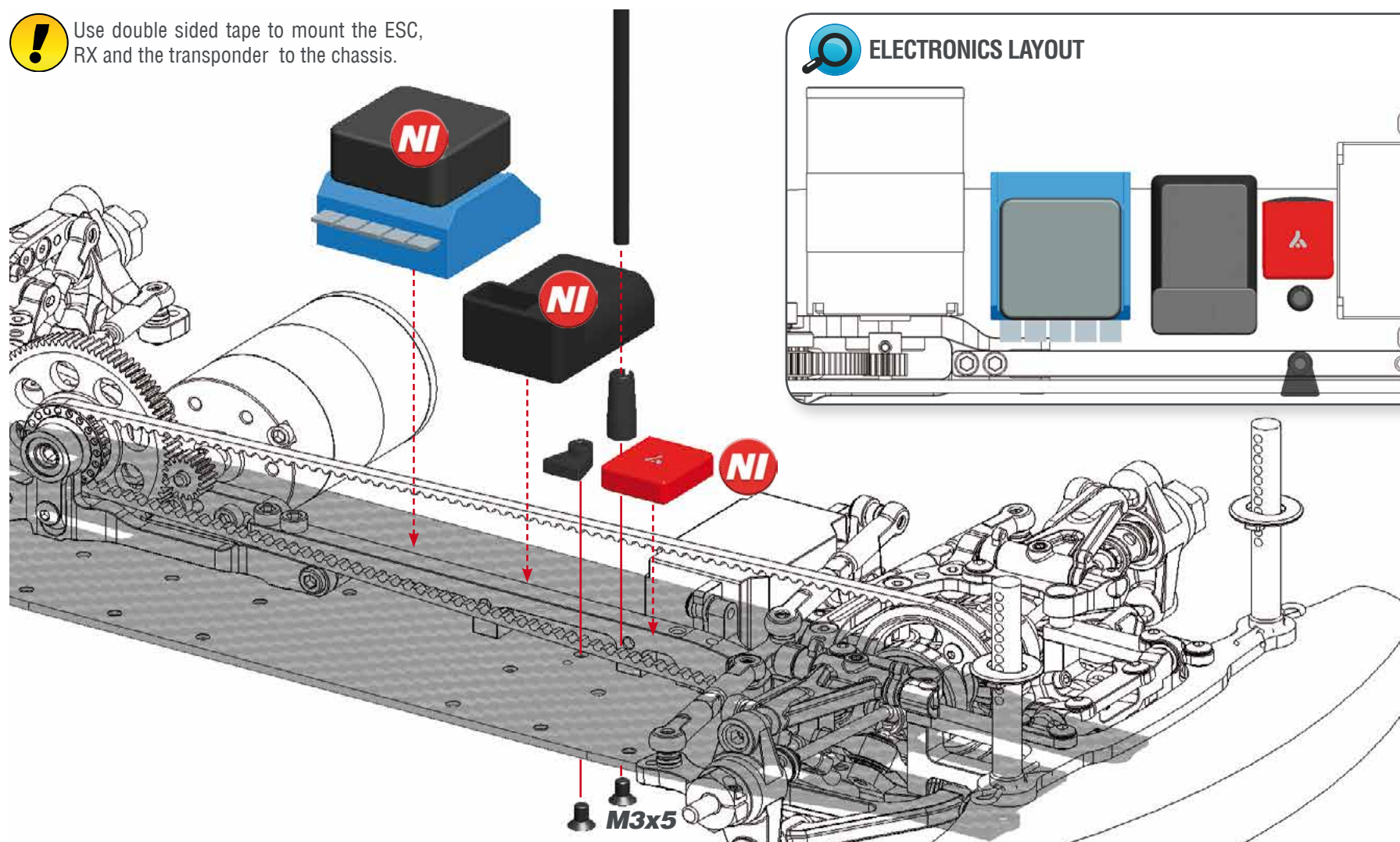
## STEP 66 BAG 15





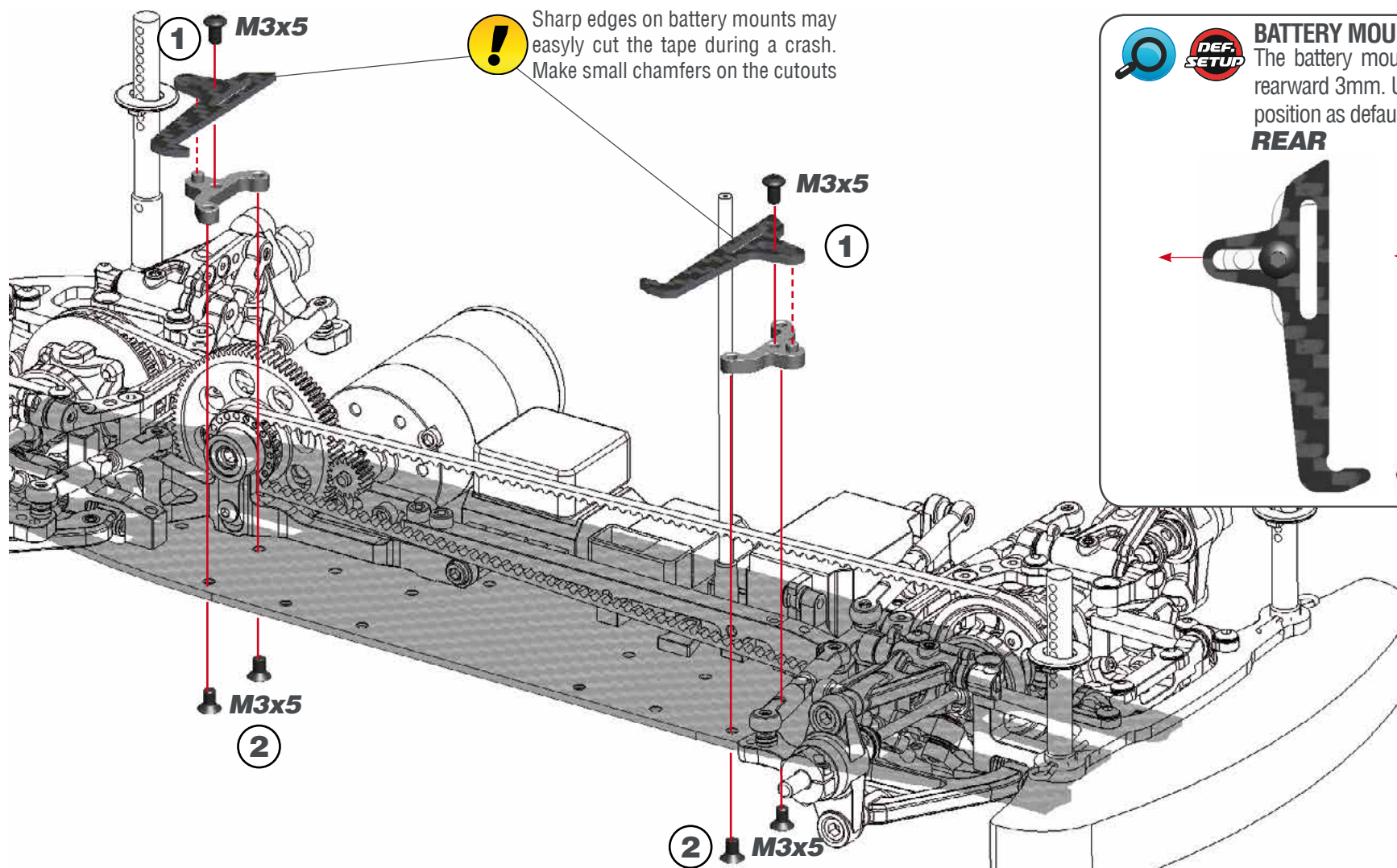
## STEP 67

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





## STEP 68

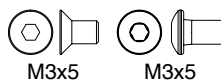
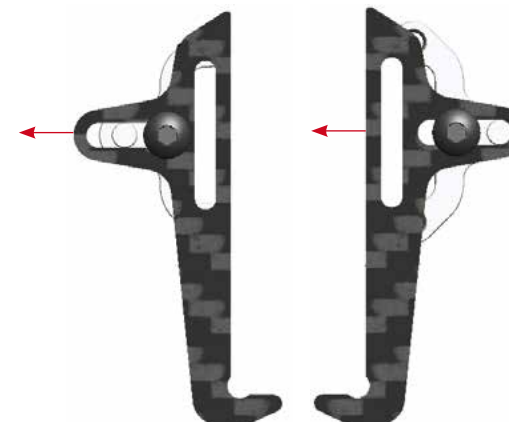


## BATTERY MOUNT POSITION

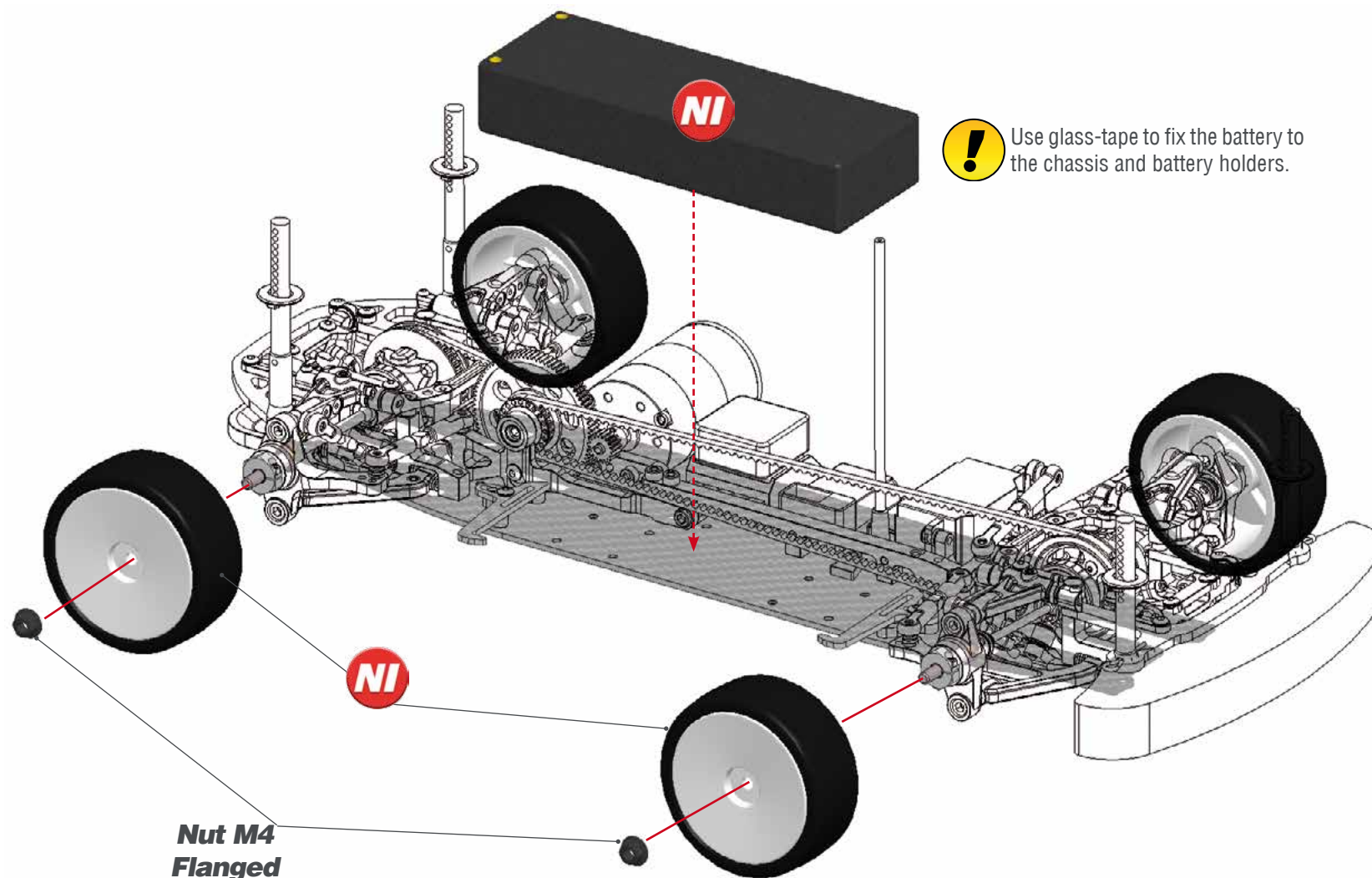
The battery mount can be moved forward or rearward 3mm. Use the battery in the rearward position as default.

REAR

FRONT



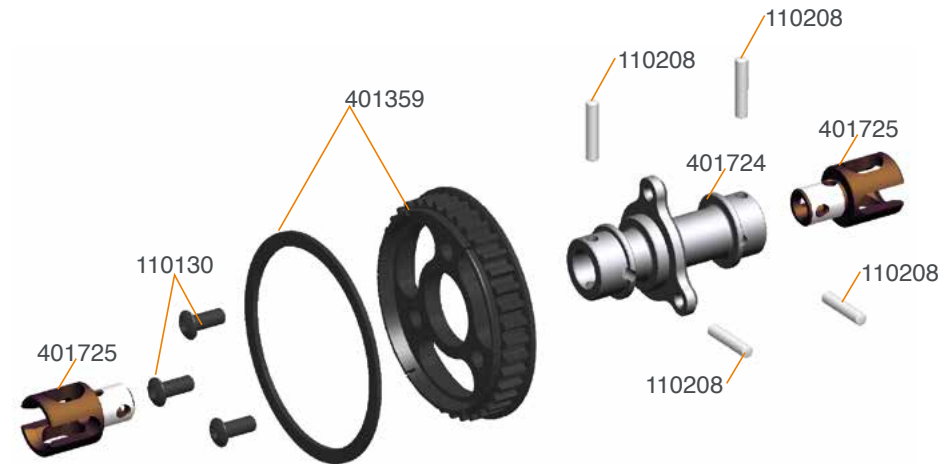
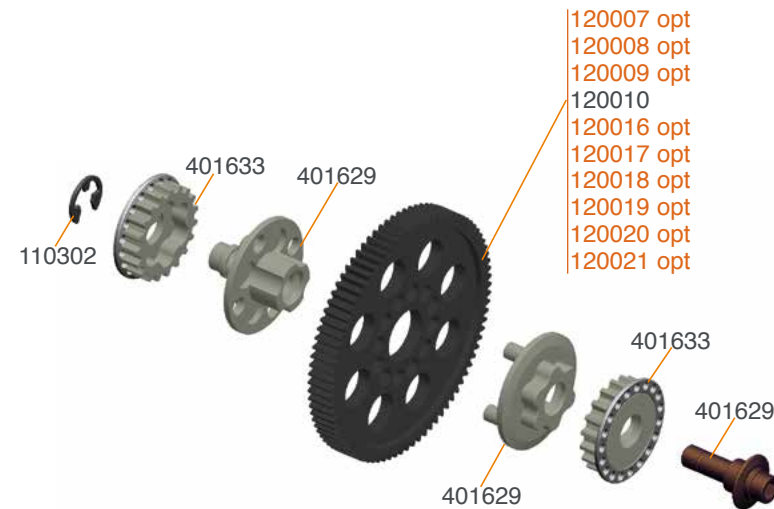
## STEP 69



## INDEX

<b><i>DIFF, MID AND FRONT SHAFTS EXPLODED VIEW</i></b>	<b><i>40</i></b>
<b><i>SHOCKS AND ROLL DAMPER EXPLODED VIEW</i></b>	<b><i>41</i></b>
<b><i>REAR I EXPLODED VIEW</i></b>	<b><i>42</i></b>
<b><i>FRONT I EXPLODED VIEW</i></b>	<b><i>43</i></b>
<b><i>TRANSMISSION EXPLODED VIEW</i></b>	<b><i>44</i></b>
<b><i>FRONT II EXPLODED VIEW</i></b>	<b><i>45</i></b>
<b><i>REAR II EXPLODED VIEW</i></b>	<b><i>46</i></b>
<b><i>FINAL EXPLODED VIEW</i></b>	<b><i>47</i></b>
<b><i>TEAM SERPENT NETWORK</i></b>	<b><i>48</i></b>





401723 Solid axle set

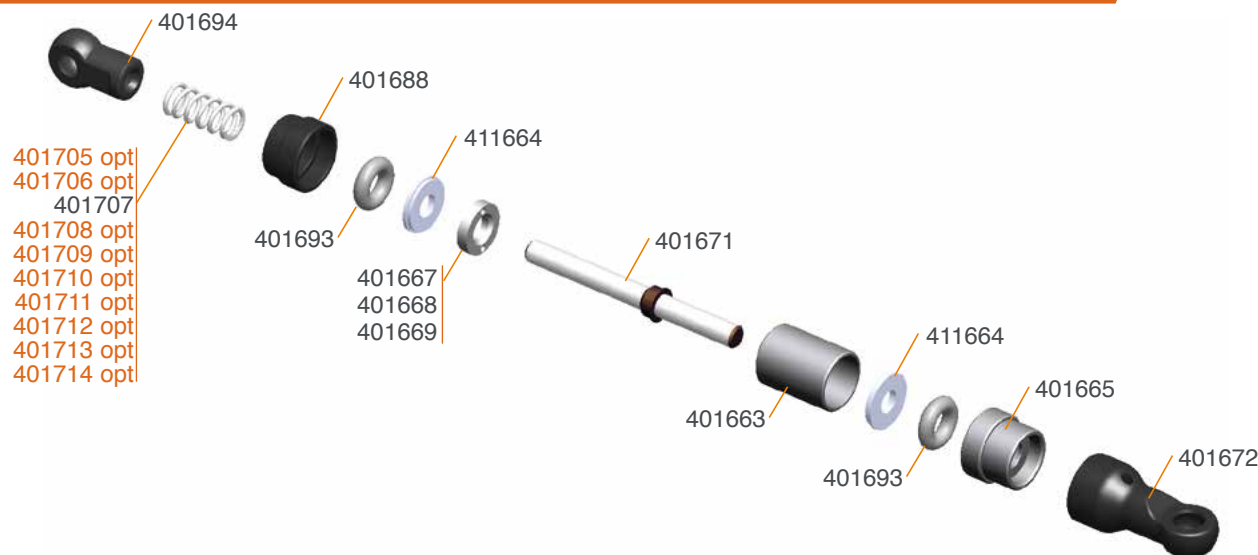


# SHOCK AND ROLL DAMPER EXPLODED VIEW

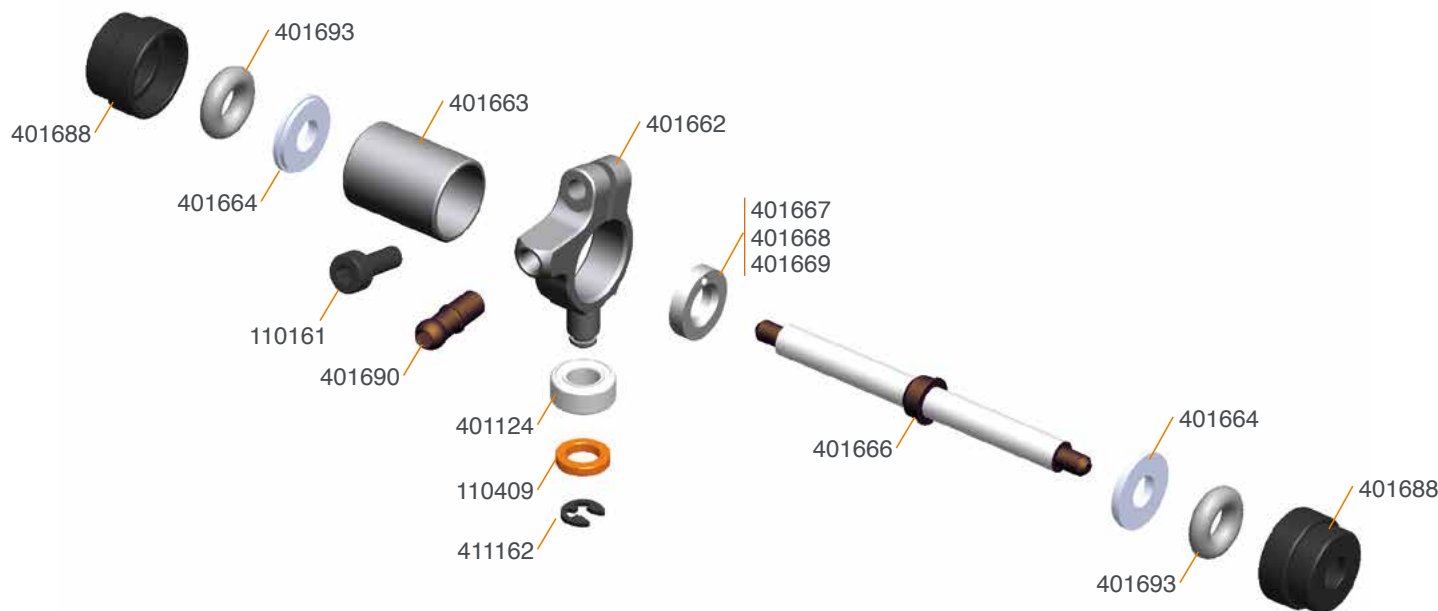
Project  
4X

Serpent

401704 Shock set 4-X



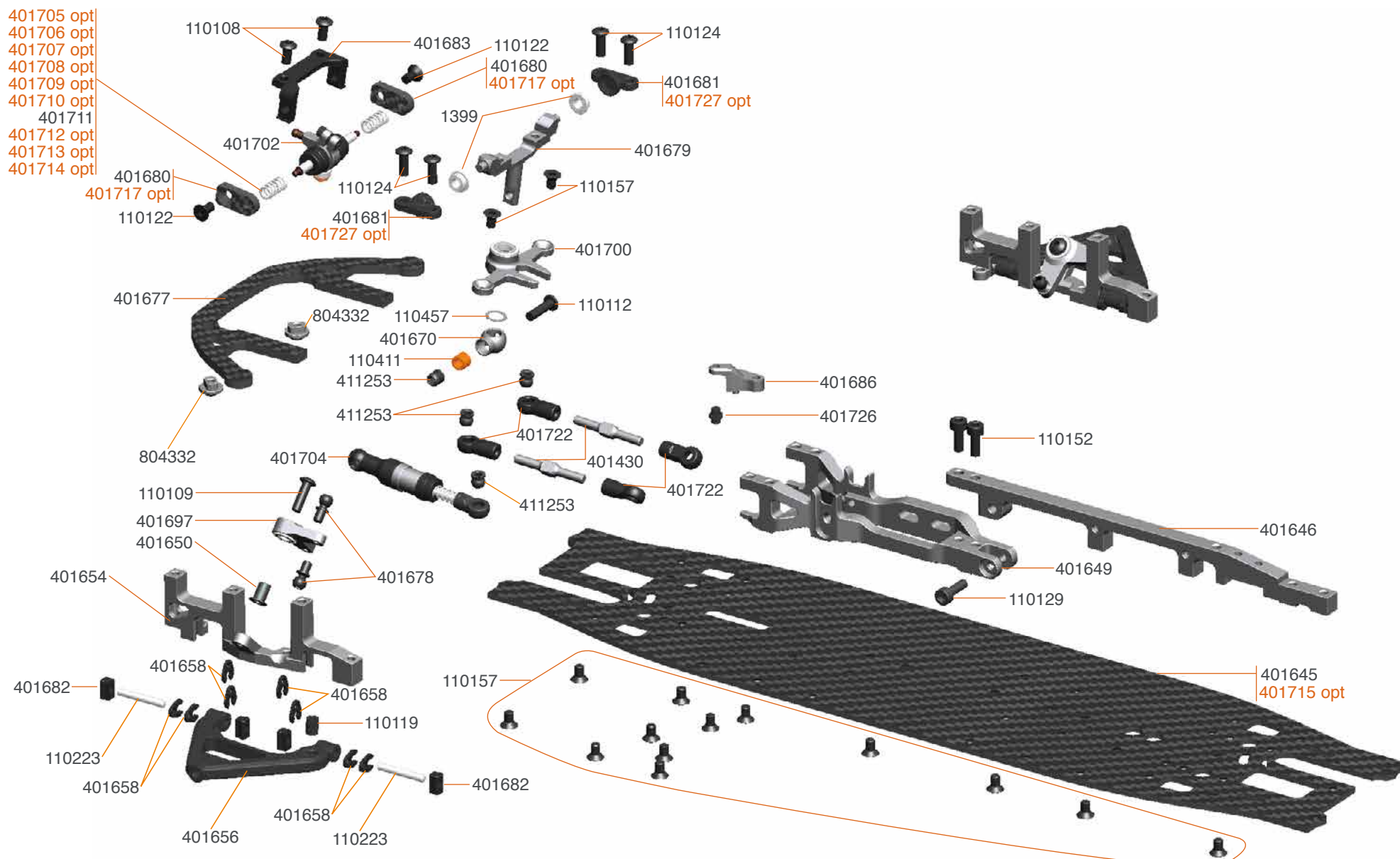
401702 Roll damper 4-X



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)



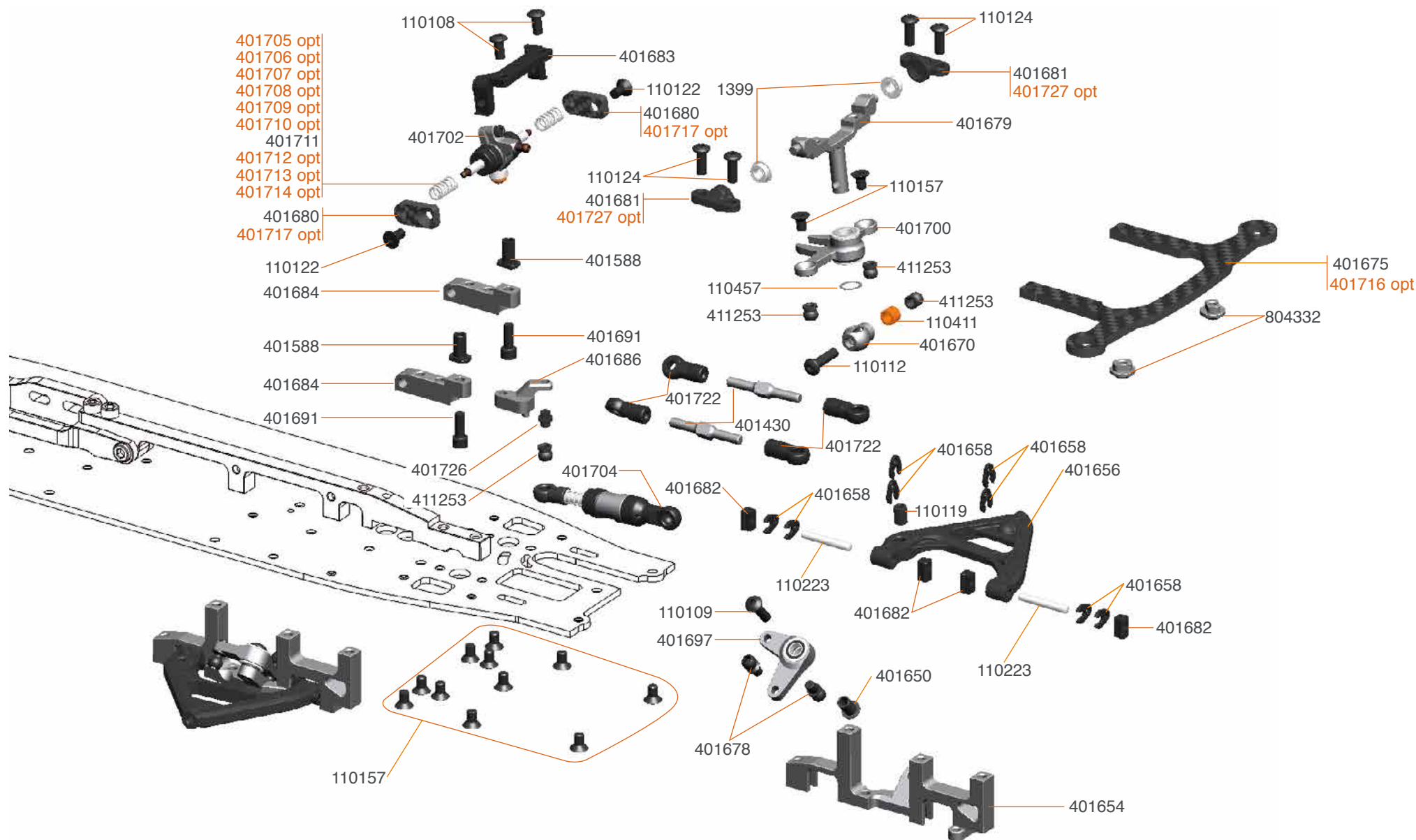
401701 Roll damper set 4-X  
401705 Spring white C4.4 4-X (2)  
401706 Spring yellow C4.9 4-X (2)  
401707 Spring orange C5.5 4-X (2)  
401708 Spring red C6.3 4-X (2)

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  
401717 Roll damper support -7mm carbon 4-X (2)  
401727 Bearing holder central rocker alu 4-X (2)





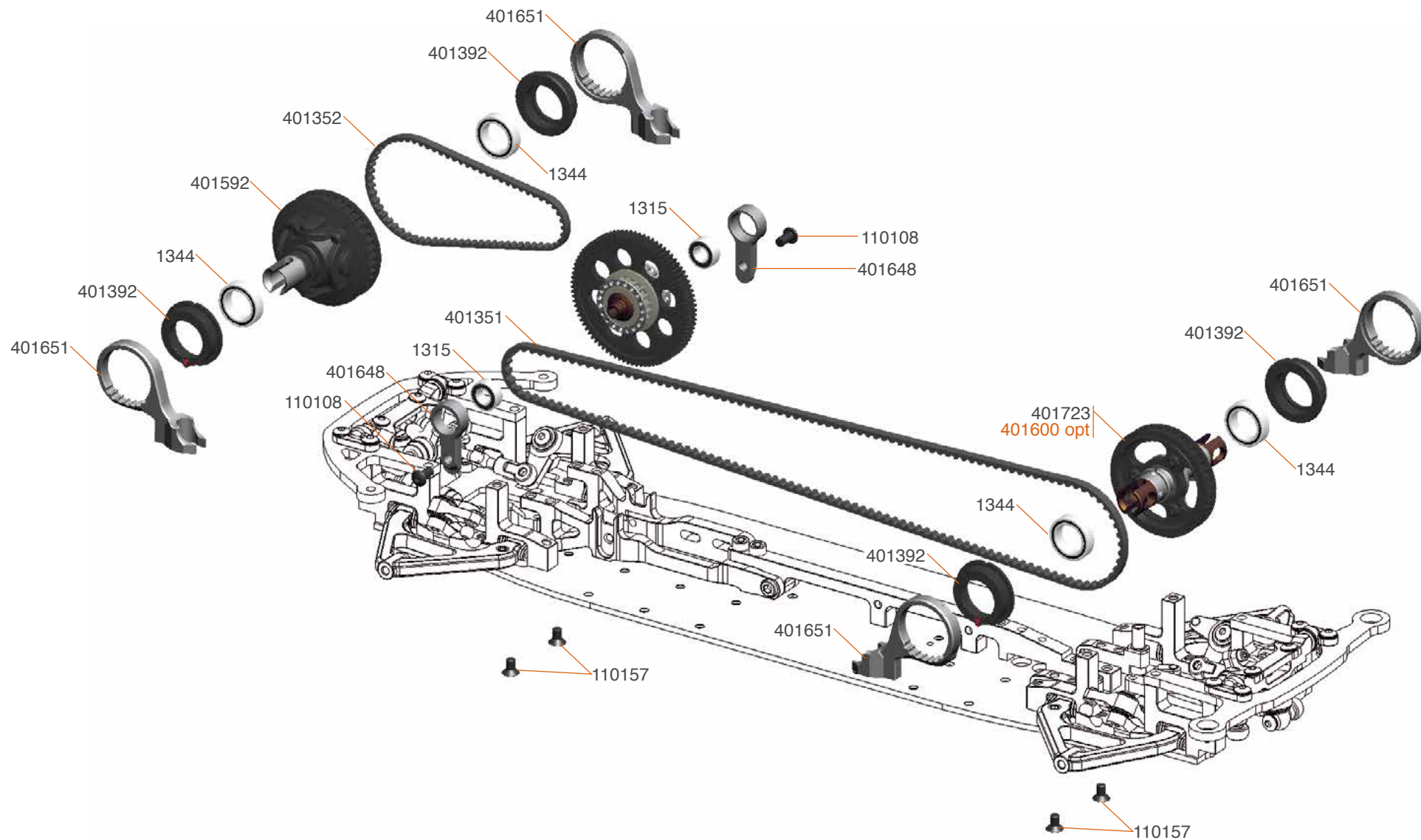


**OPT**

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)

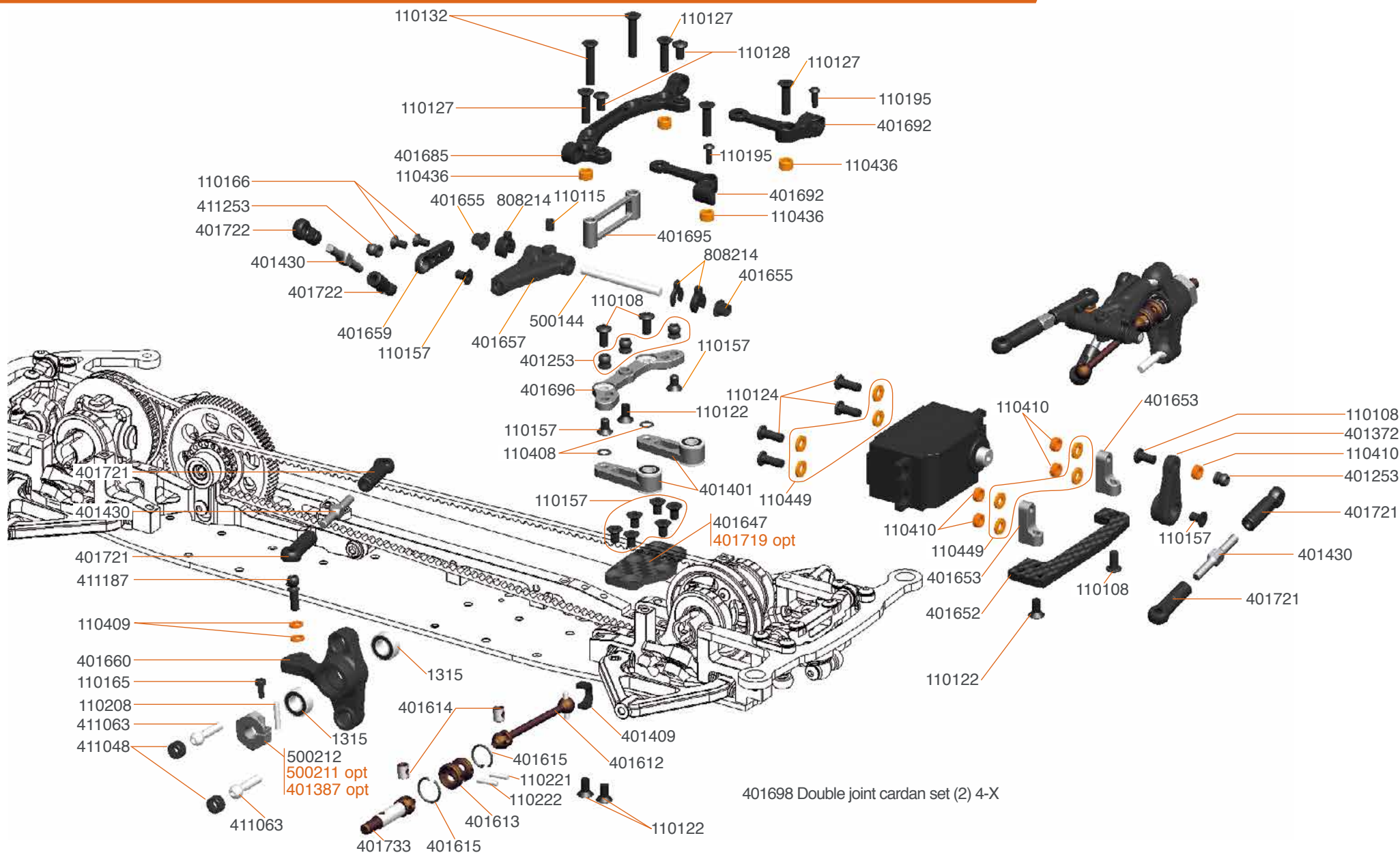
401709 Spring pink C6.9 4-X (2)  
401710 Spring blue C7.6 4-X (2)  
401712 Spring green C9.5 4-X (2)  
401713 Spring grey C10.9 4-X (2)  
401714 Spring black C12 4-X (2)

401716 Bumper top plate narrow front carbon 4-X  
401717 Roll damper support -7mm carbon 4-X (2)  
401727 Bearing holder central rocker alu 4-X (2)



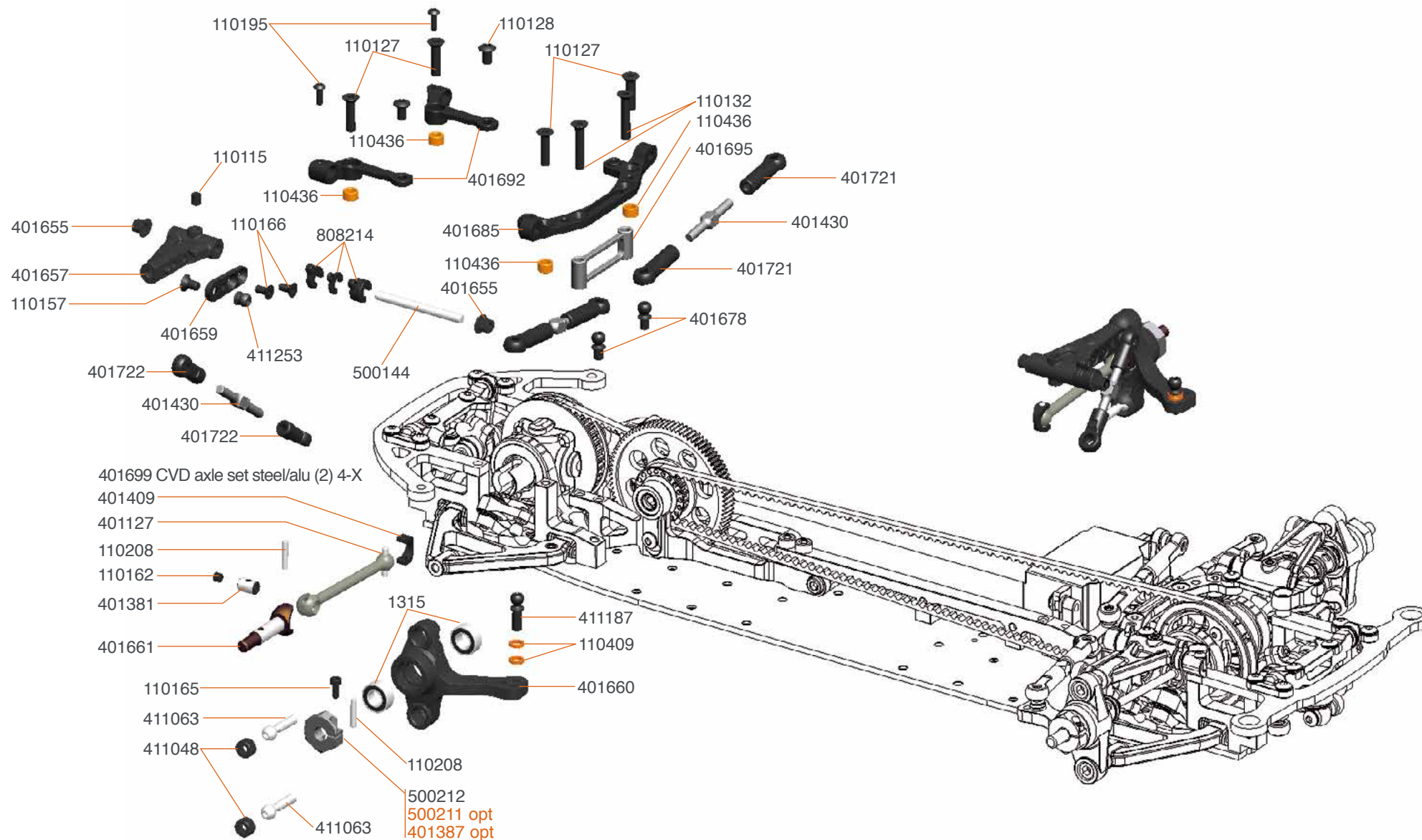
401600 Solid axle alu S411 mono for blades



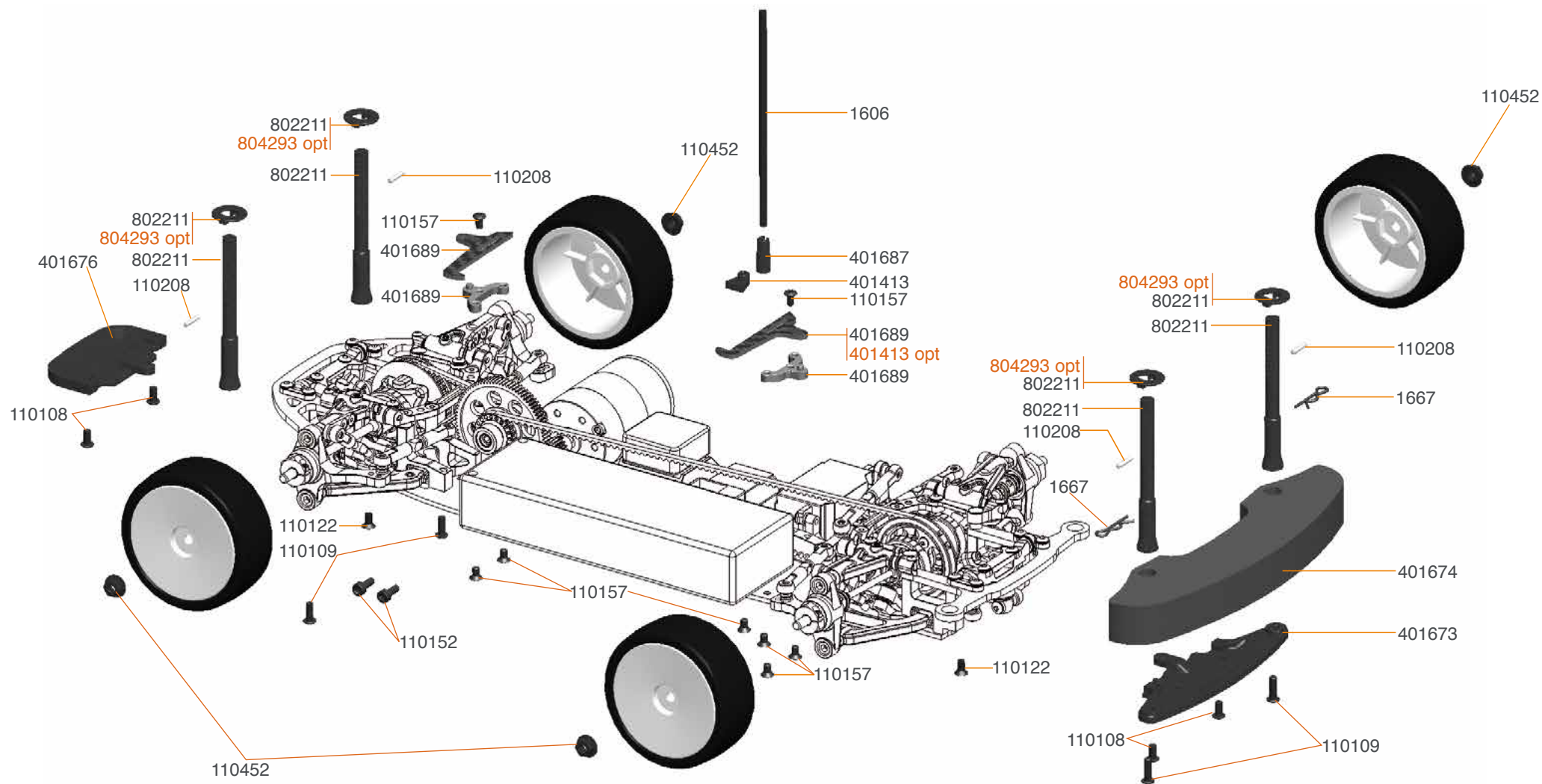


- 401387 Wheelhexagon 1mm offset (2)
- 500211 Wheelhexagon +0.75mm offset (2)
- 401719 Stiffenerplate fr alu 4-X





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



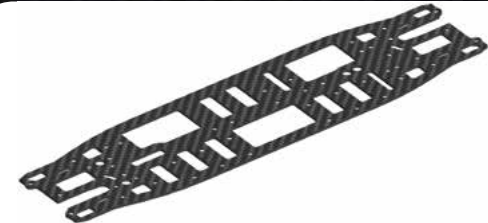
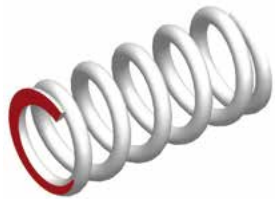
401413 Battery mount (4)  
401621 Motor fan mount S411

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# **Project 4X**

1/10 scale electric touringcar



98108 1 Manual Project 4X