

INSTRUCTION MANUAL

& REFERENCE GUIDE

INTRODUCTION

Serpent developed the S120 LTR model car for demanding racers in the highly competitive electric 1/12th scale pan car market, which like all our previous cars, has been designed to win straight from the box.

Featuring a number of very effective features such as a fully adjustable front end, machined aluminium rear pod, side-links combined with ball-link tube-system to control chassis roll and grip, top-mounted shock-absorber, quick and easy tweak adjustment and top quality materials throughout, the S120–LTR should see you in the winners circle in no time. In fact everything associated with this car is of the highest quality, from the packaging and supplied manuals, right through to the product and race support.

For latest information about S120-LTR check on:
www.serpent.com/410006

Enjoy racing !

Team Serpent

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.

INSTRUCTIONS, HOW TO USE

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.

SETUP

In certain assembly steps you need to make basic adjustments, which will give you a good initial setup for your Serpent S120–LTR. Fine-tuning the initial setup is an essential part of building a high-performance racecar like yourS120–LTR.

EXPLODED VIEWS AND PARTS LIST

The exploded views and parts lists for the Serpent S120–LTR 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. The parts lists indicate the part number andname of each part for easy reference when ordering.

CUSTOMER SERVICE

Serpent has made a strong effort to make this manual as complete and clear as possible. Additional info may be published in our website: www.serpent.com or you may ask your dealer or the Serpent distributor for advice, or email Serpent direct: info@serpent.com

The Serpent Facebook, Twitter and Youtube pages give additional means of support and communications.

SAFETY

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

Read this first!

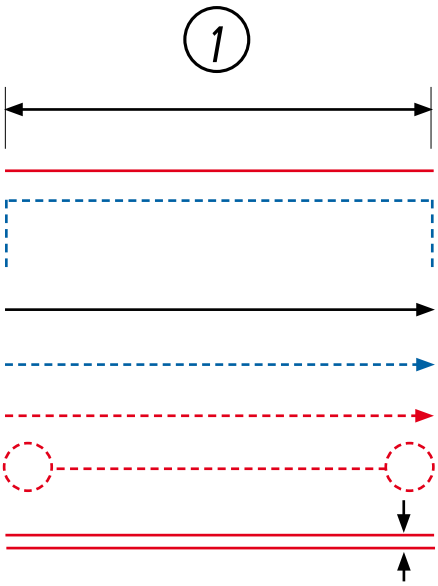
- This is a highly technical hobby product, intended to be used in a safe racing environment. This car is capable of speeds in excess of 80 km/h or 50mph. Please follow these guidelines when building and operating this model.
- Parental guidance is required when the builder/user of this car is under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

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USING THE MANUAL

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

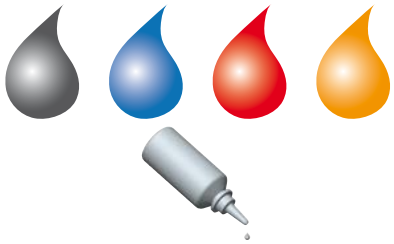
Direction the item should be moved

Glue one item to another

Press/Insert one item into another

Connect one item to another

Gap between two items



Apply transmission grease (Grey), threadlock* (Blue), CA glue* (Red) or silicone grease (Orange). (*Items not included.)

Apply silicone oil,

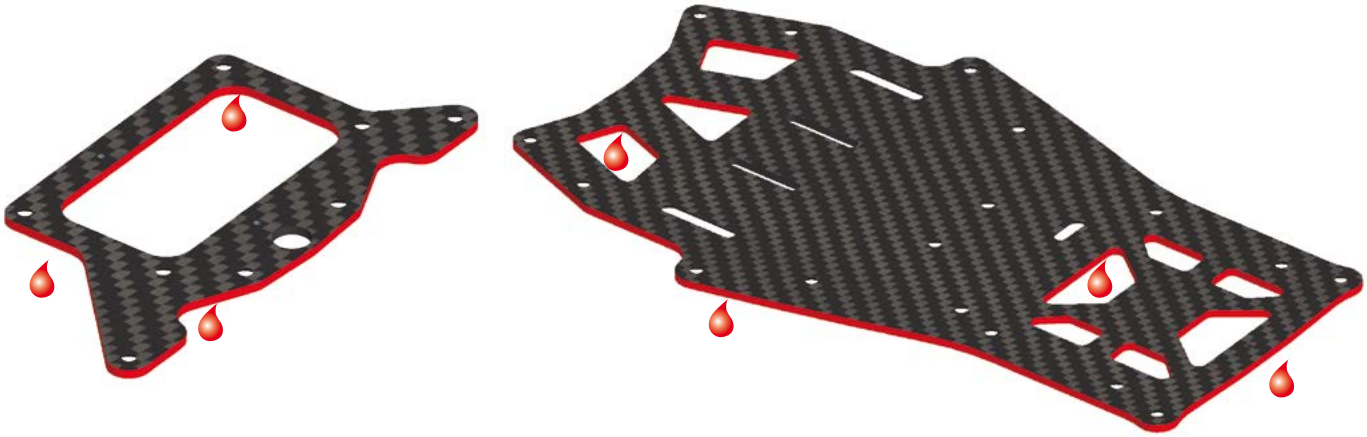
ASSEMBLY INSTRUCTIONS

STEP 1

KIT

CA Glue

To prevent the risk of the carbon fibre splitting in the event of a crash you should apply CA Glue around the chassis' edge and the power pod plate external and internal edge as shown in red below.



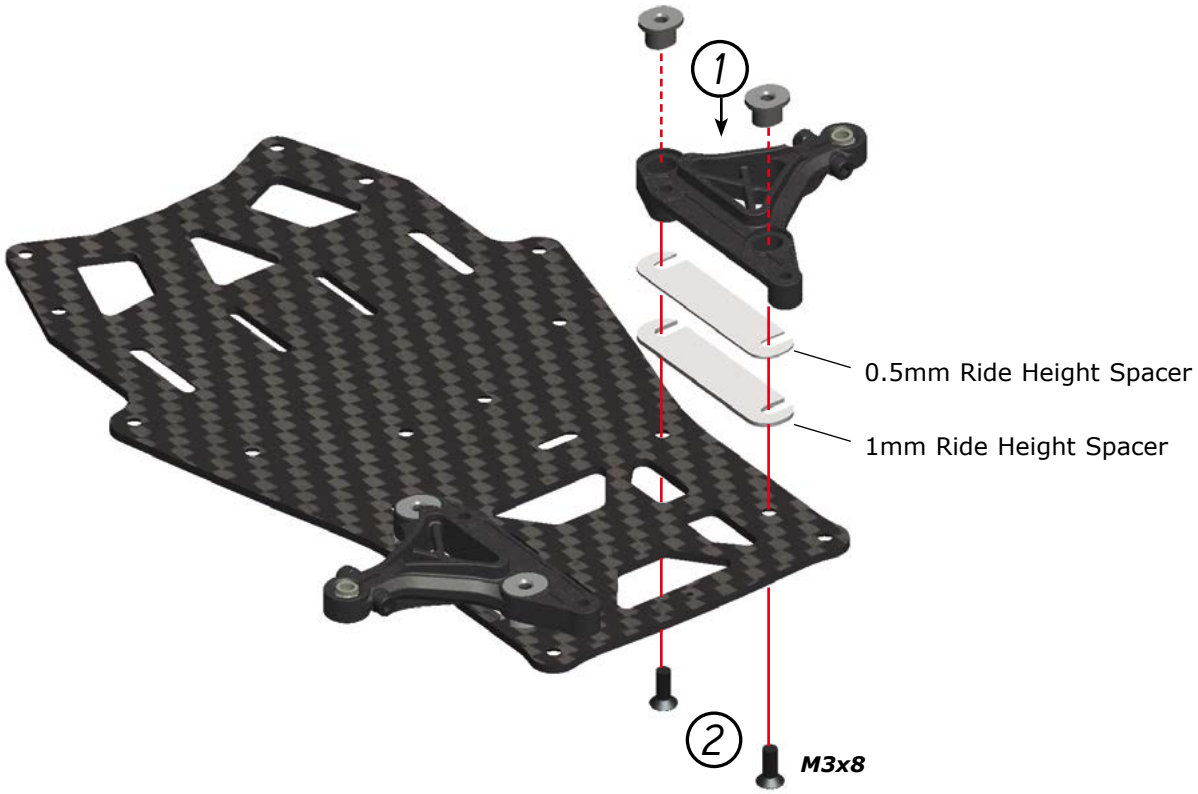
FRONT ASSEMBLY

STEP 2

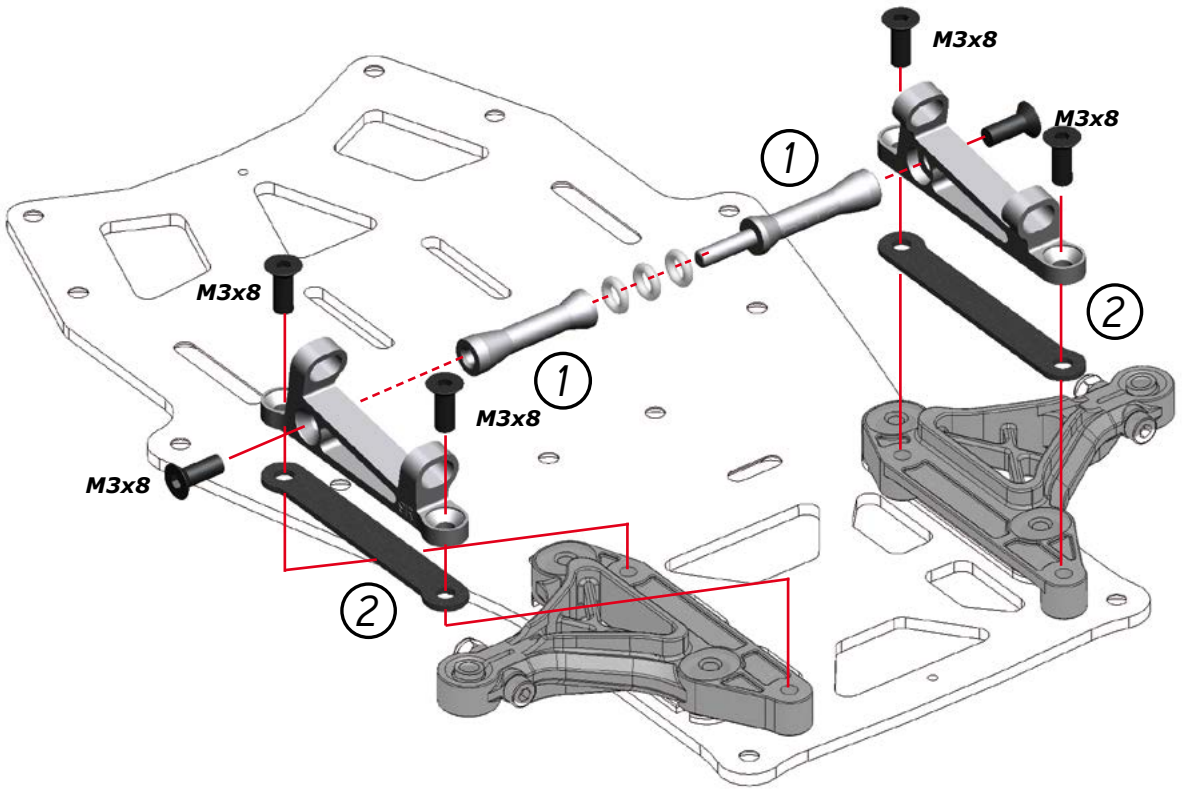
Bag 1



STEP 3

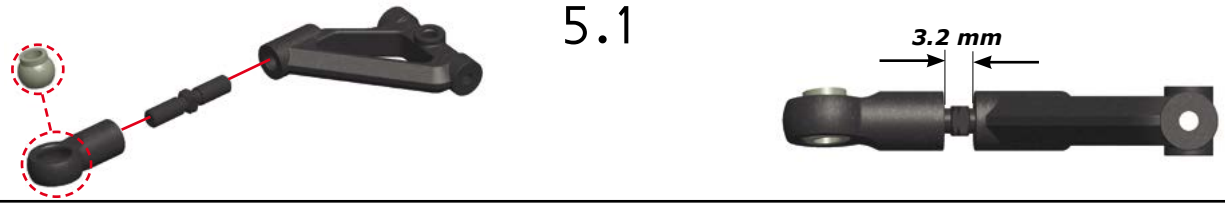


STEP 4



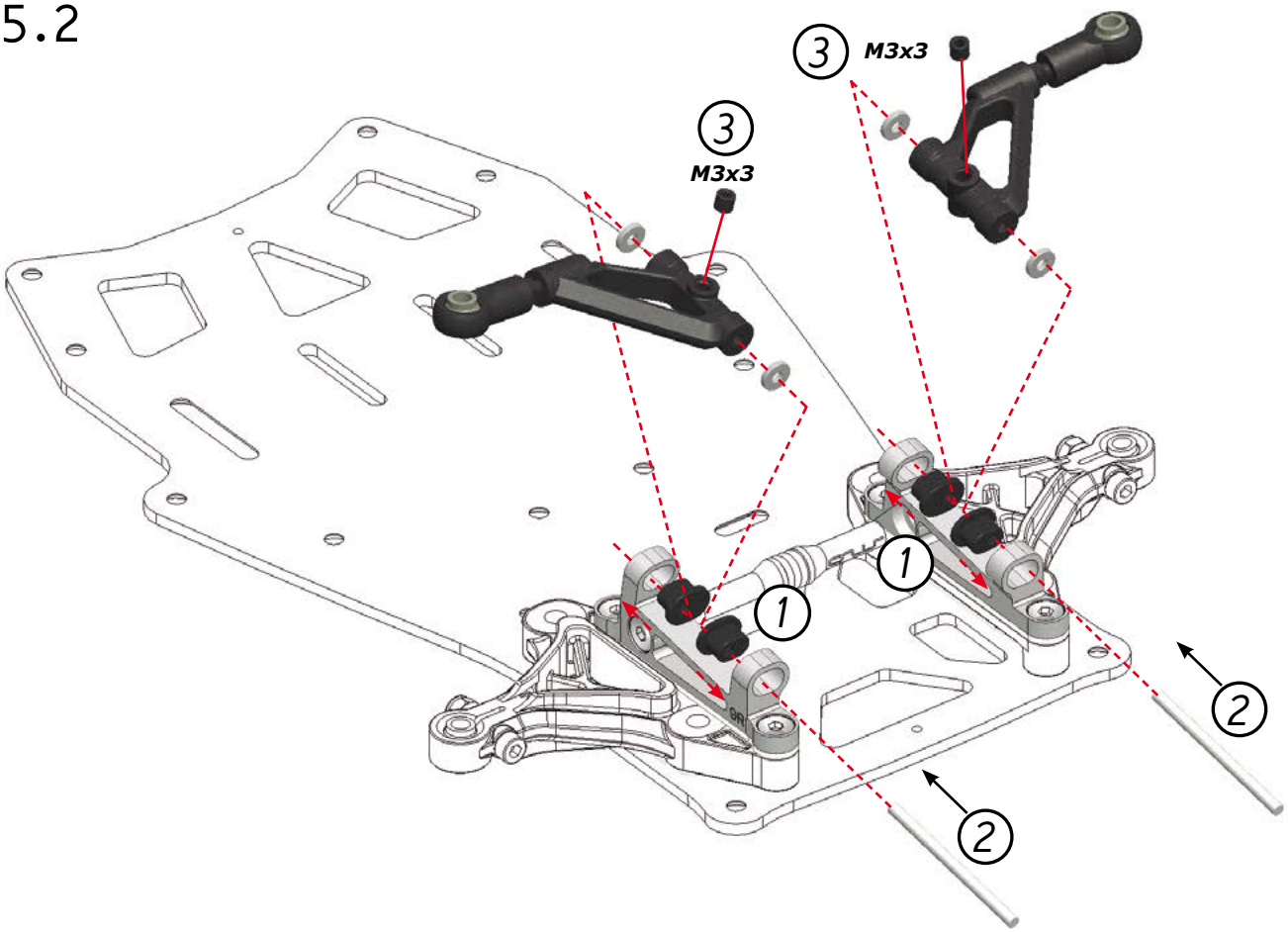
STEP 5

5.1

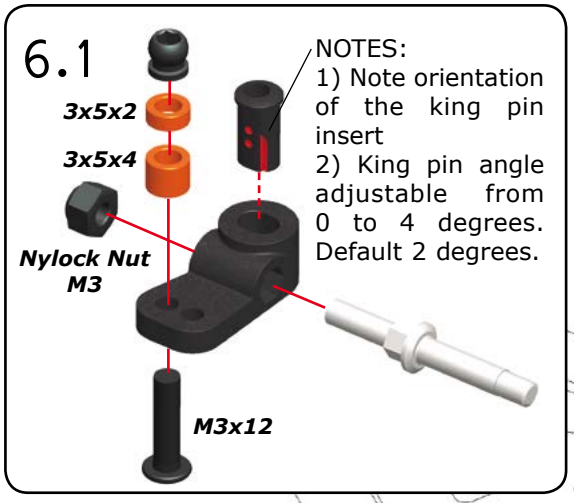


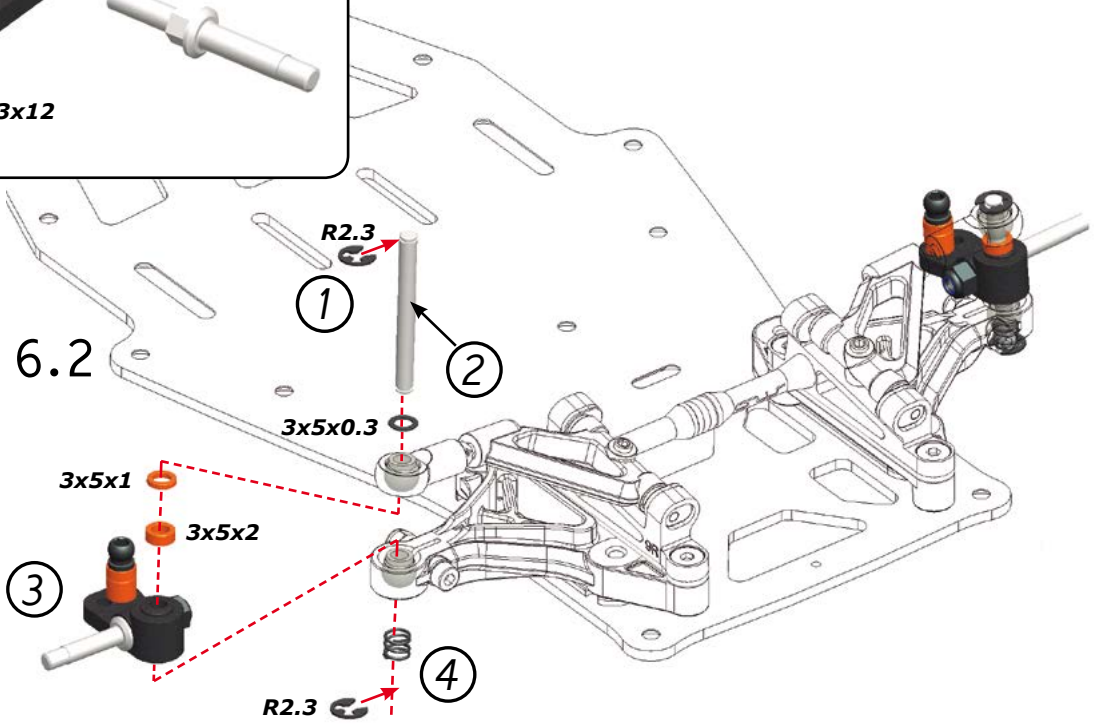
Bag 2

5.2



STEP 6

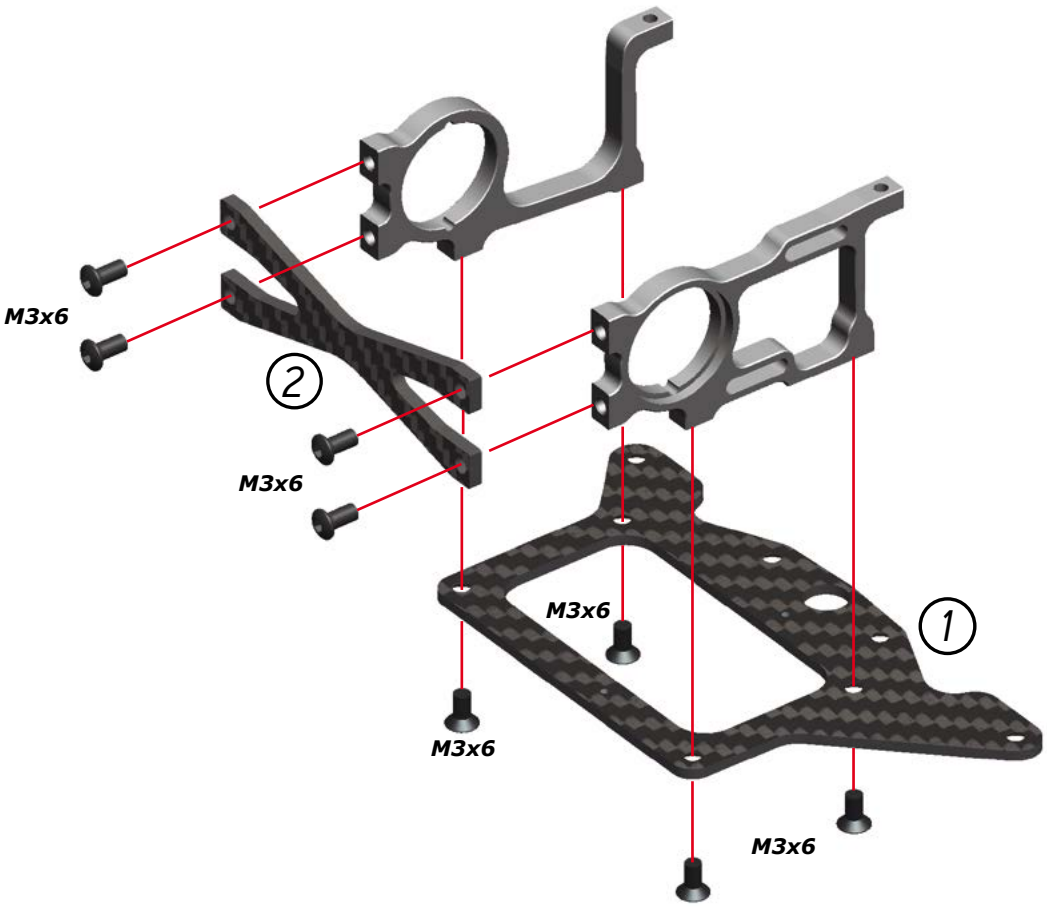




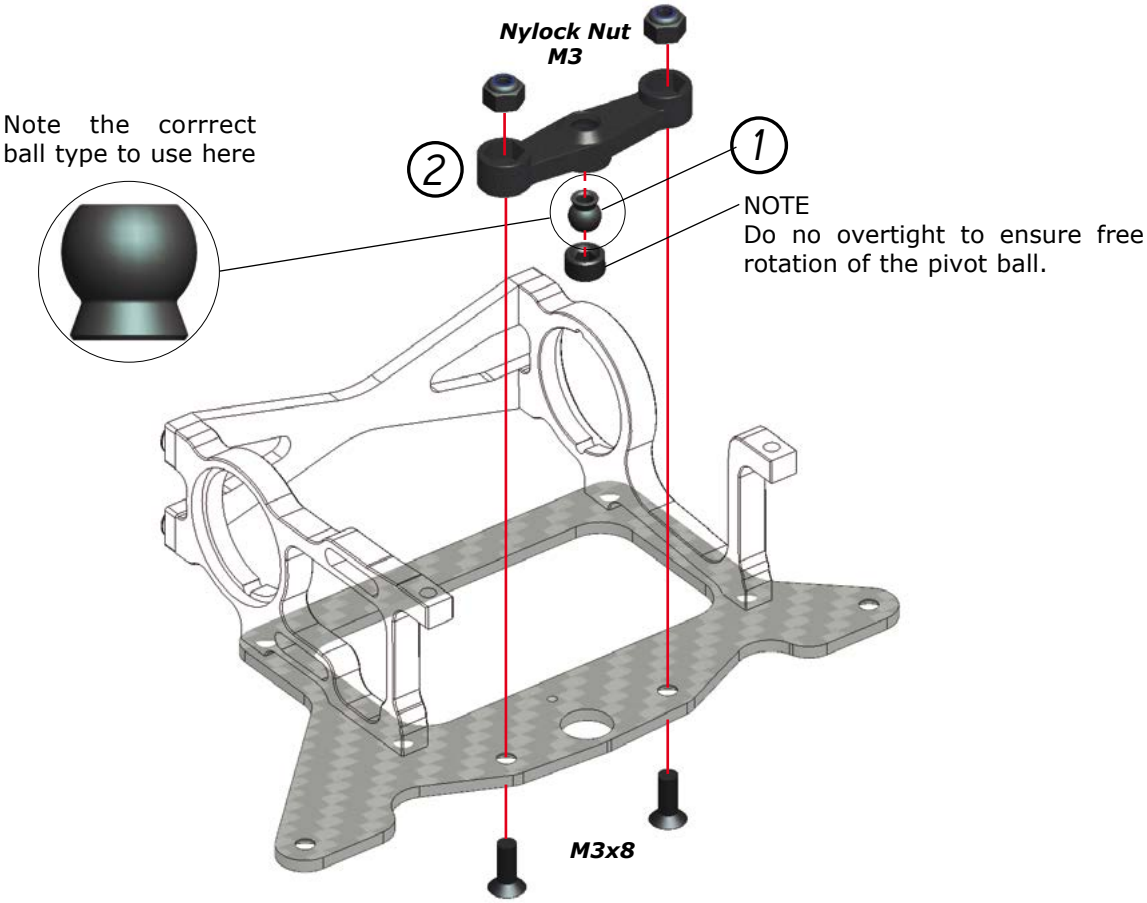
STEP 7

Bag 3

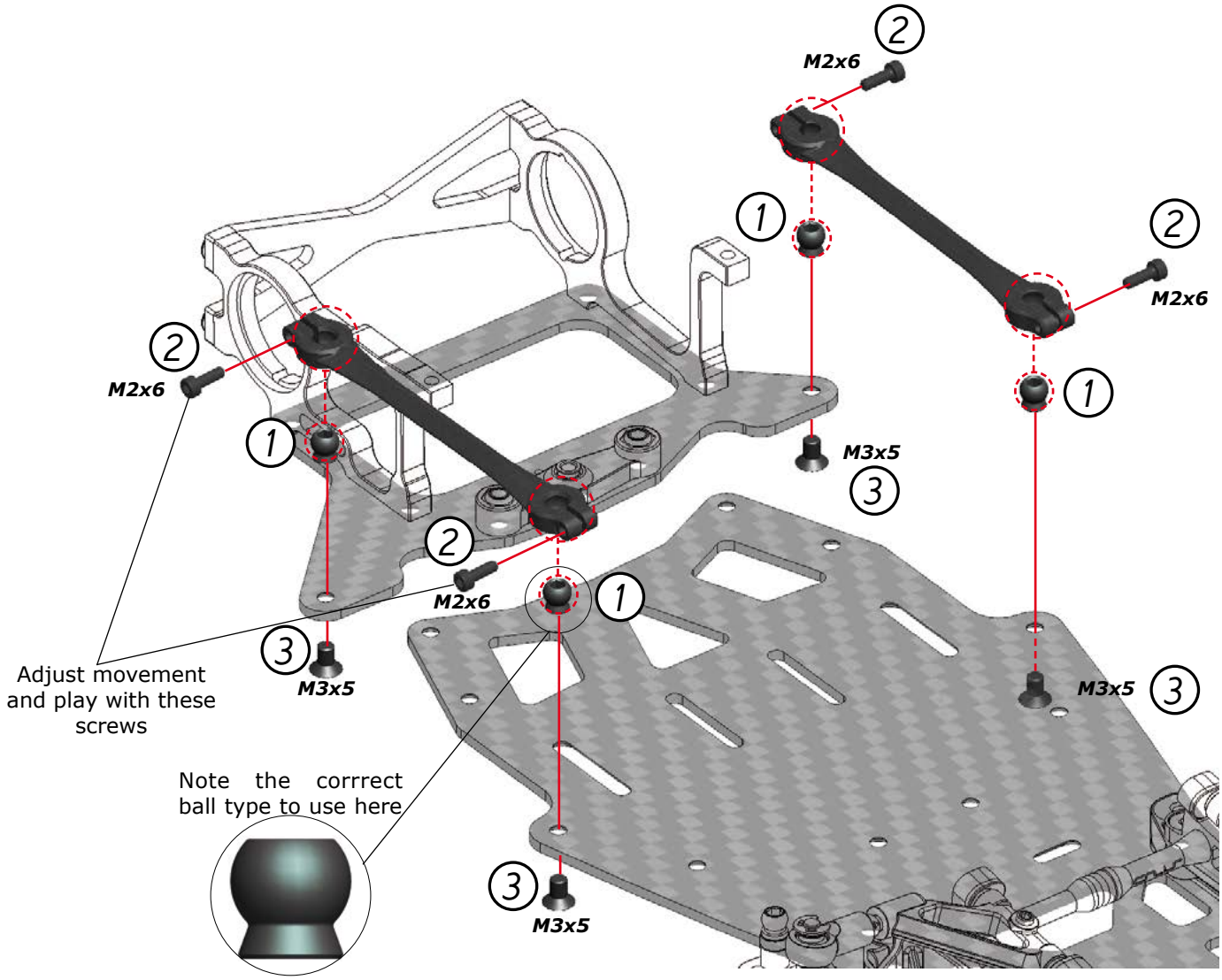
REAR ASSEMBLY



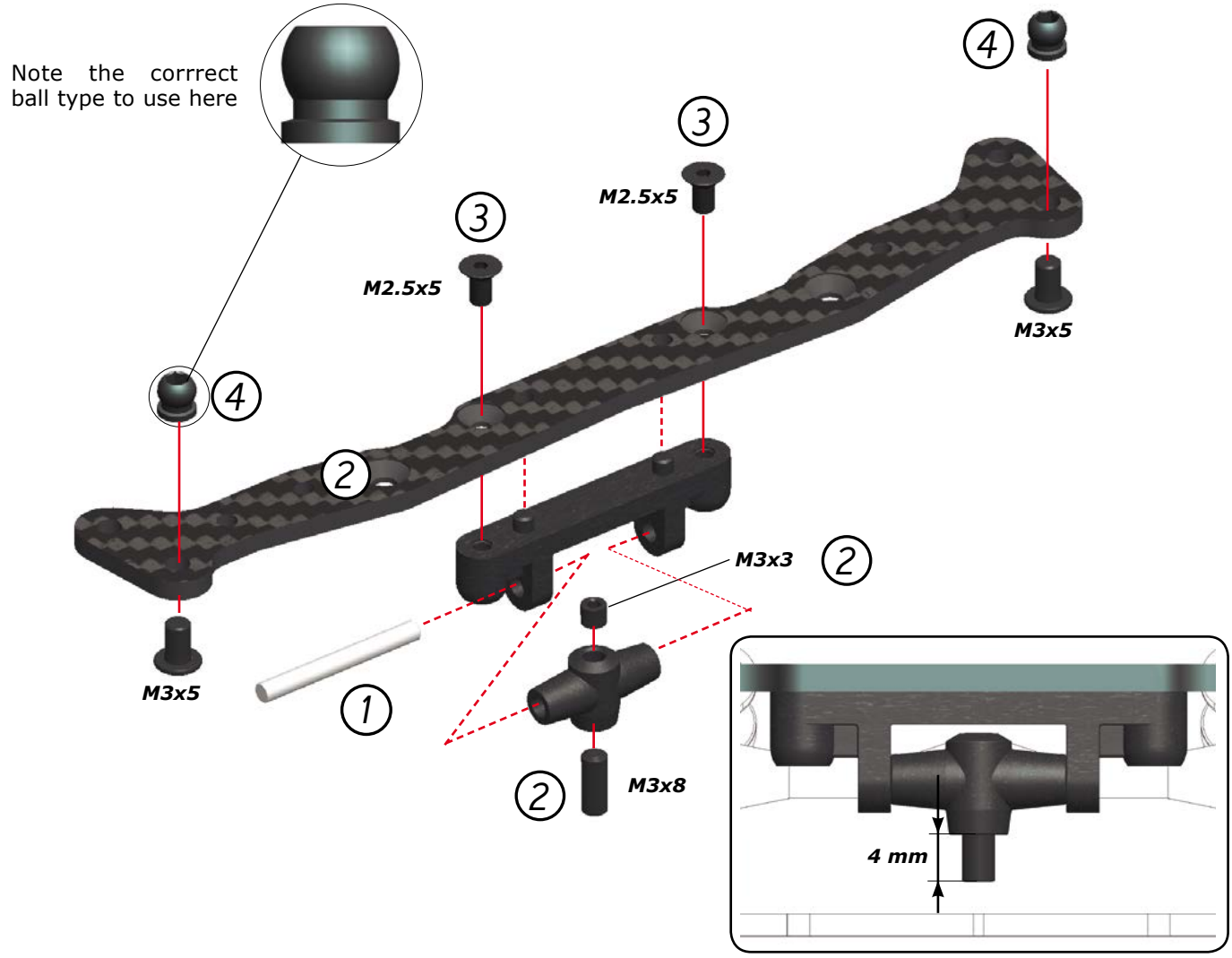
STEP 8


Nylock Nut
M3
Note the corrrect ball type to use here
2
1
NOTE
Do no overtight to ensure free rotation of the pivot ball.
M3x8

STEP 9

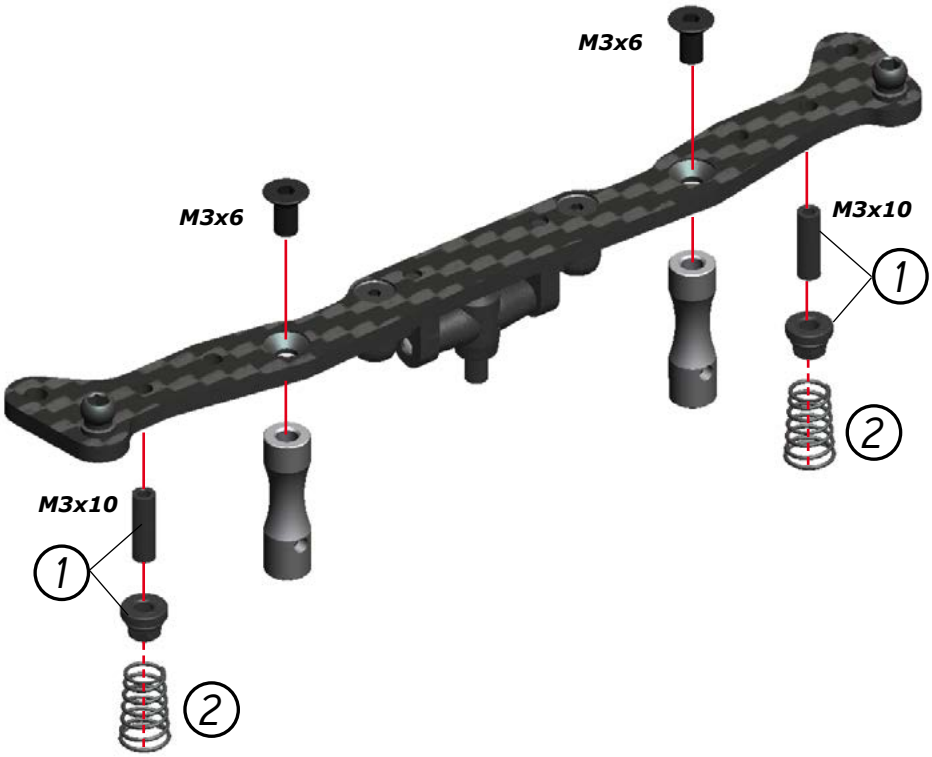

2
M2x6
1
2
M2x6
2
M2x6
1
1
M3x5
3
2
M2x6
1
3
M3x5
Adjust movement and play with these screws
M3x5
3
Note the corrrect ball type to use here
3
M3x5

STEP 10



STEP 11A

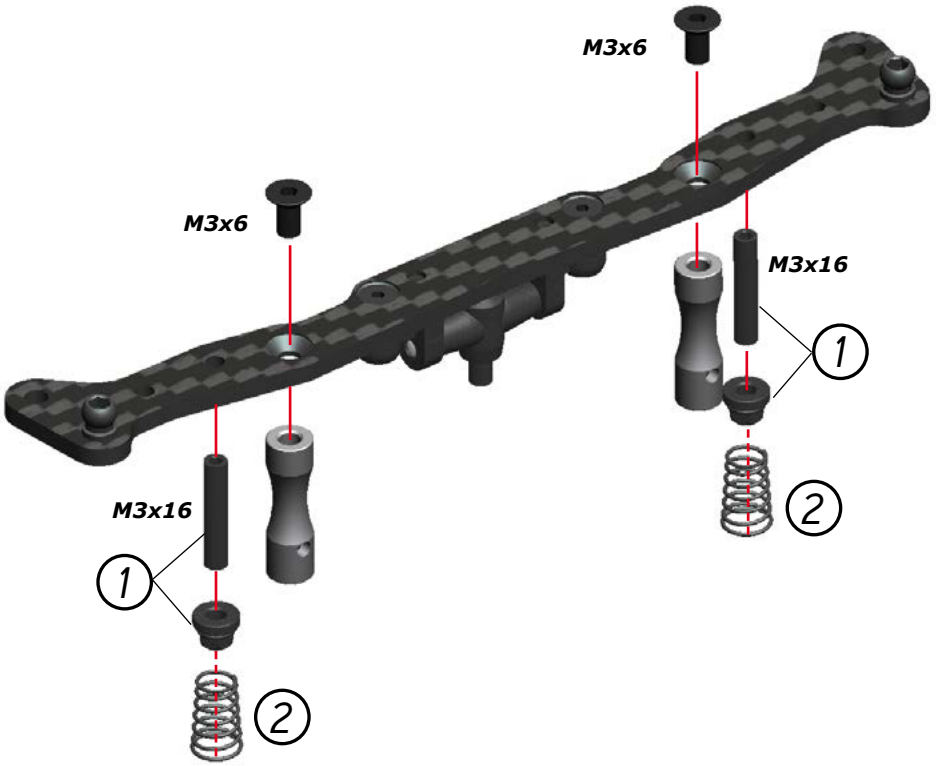
A) OUTSIDE SIDE SPRING CONFIGURATION (DEFAULT)



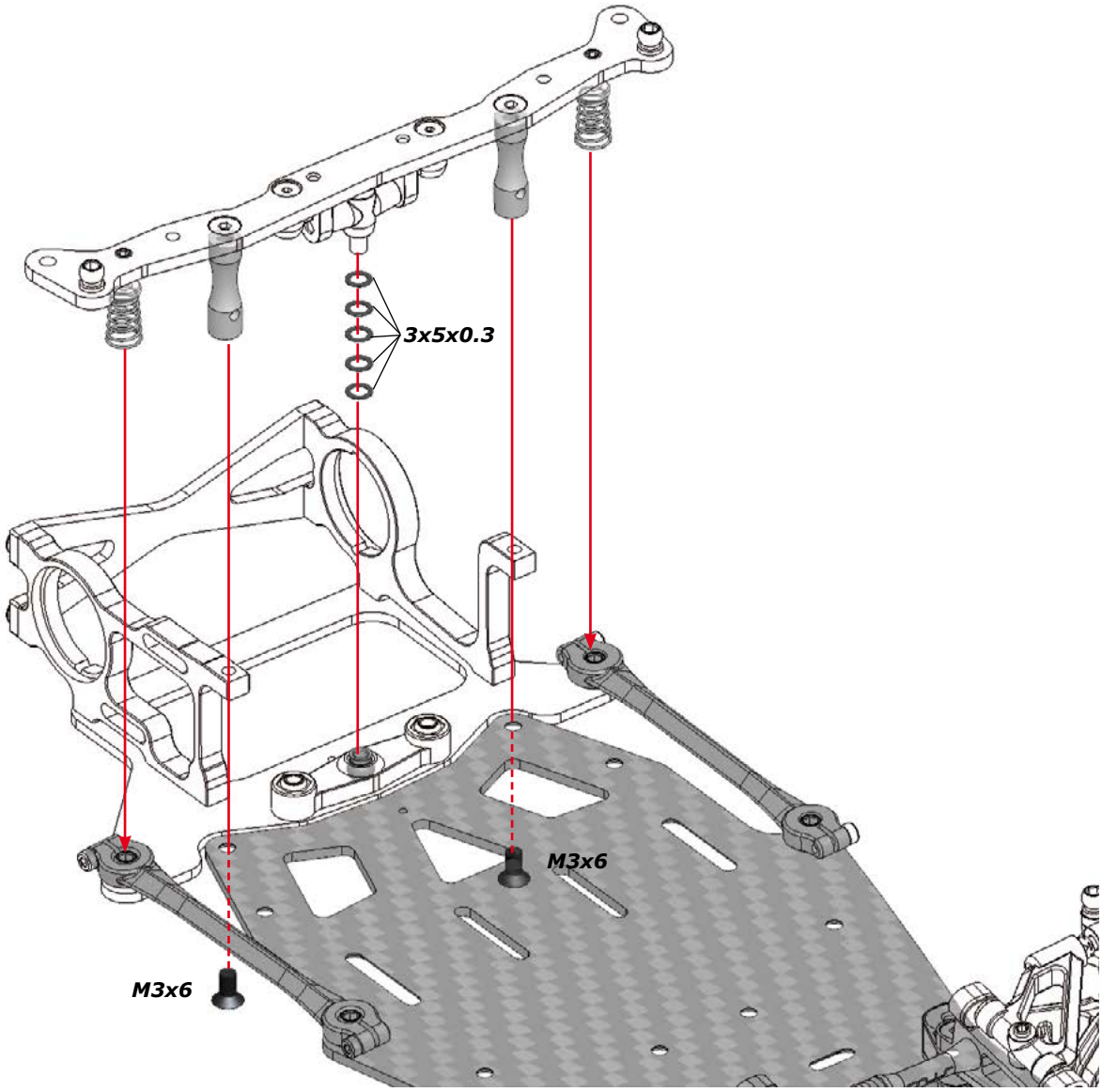
Bag 4

STEP
11B

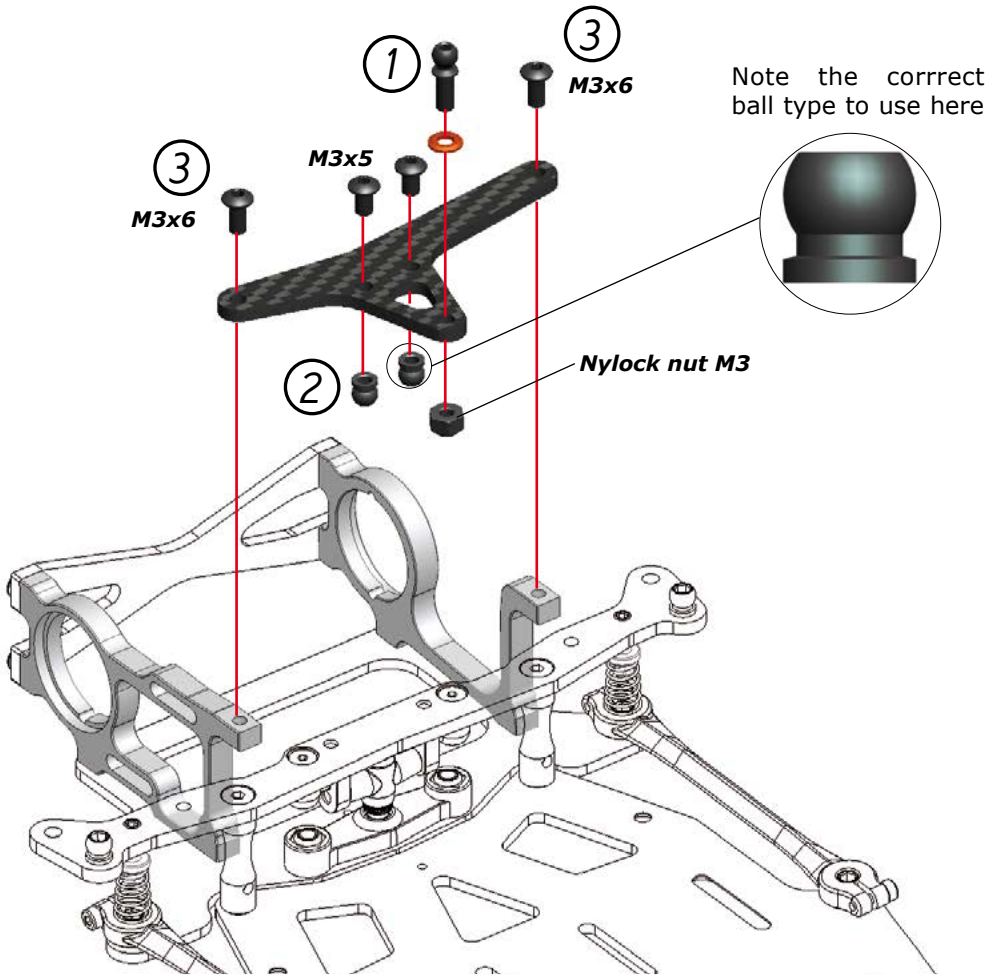
B) INSIDE SIDE SPRING CONFIGURATION



STEP
12

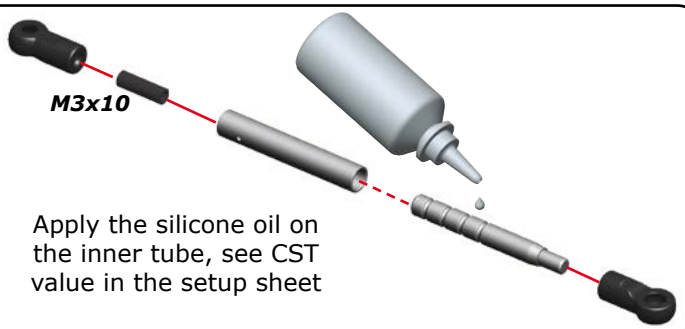


STEP 13



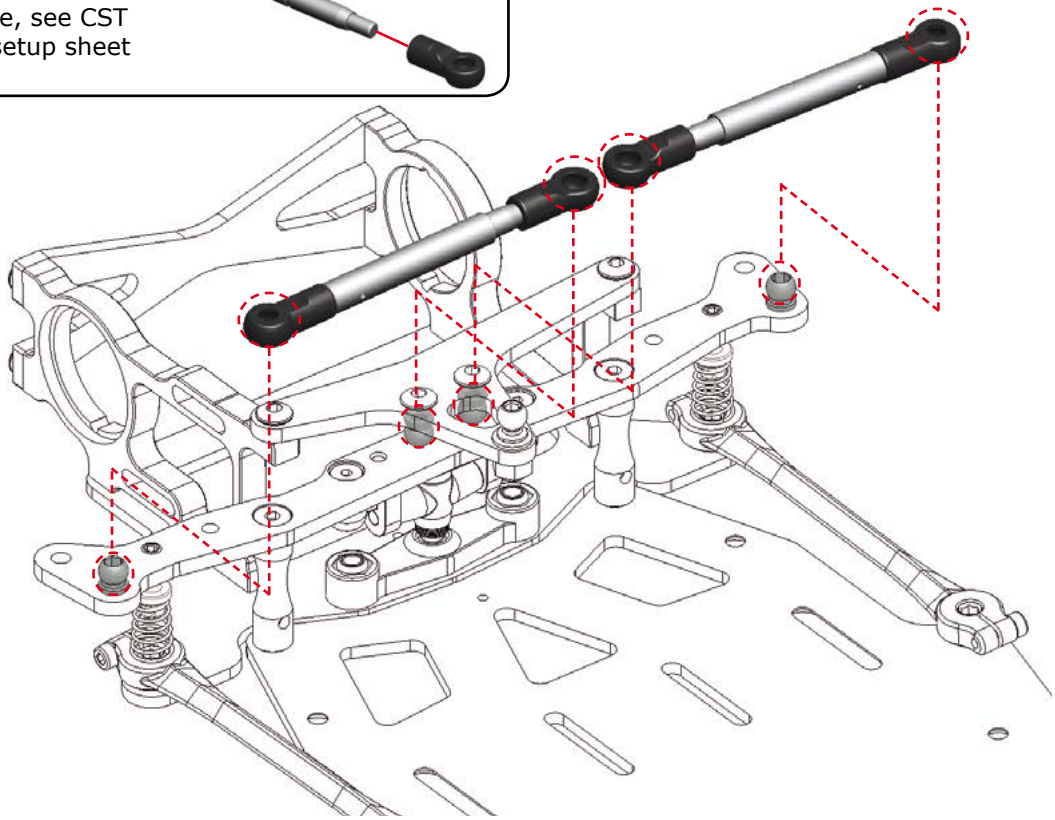
STEP 14

14.1



Apply the silicone oil on the inner tube, see CST value in the setup sheet

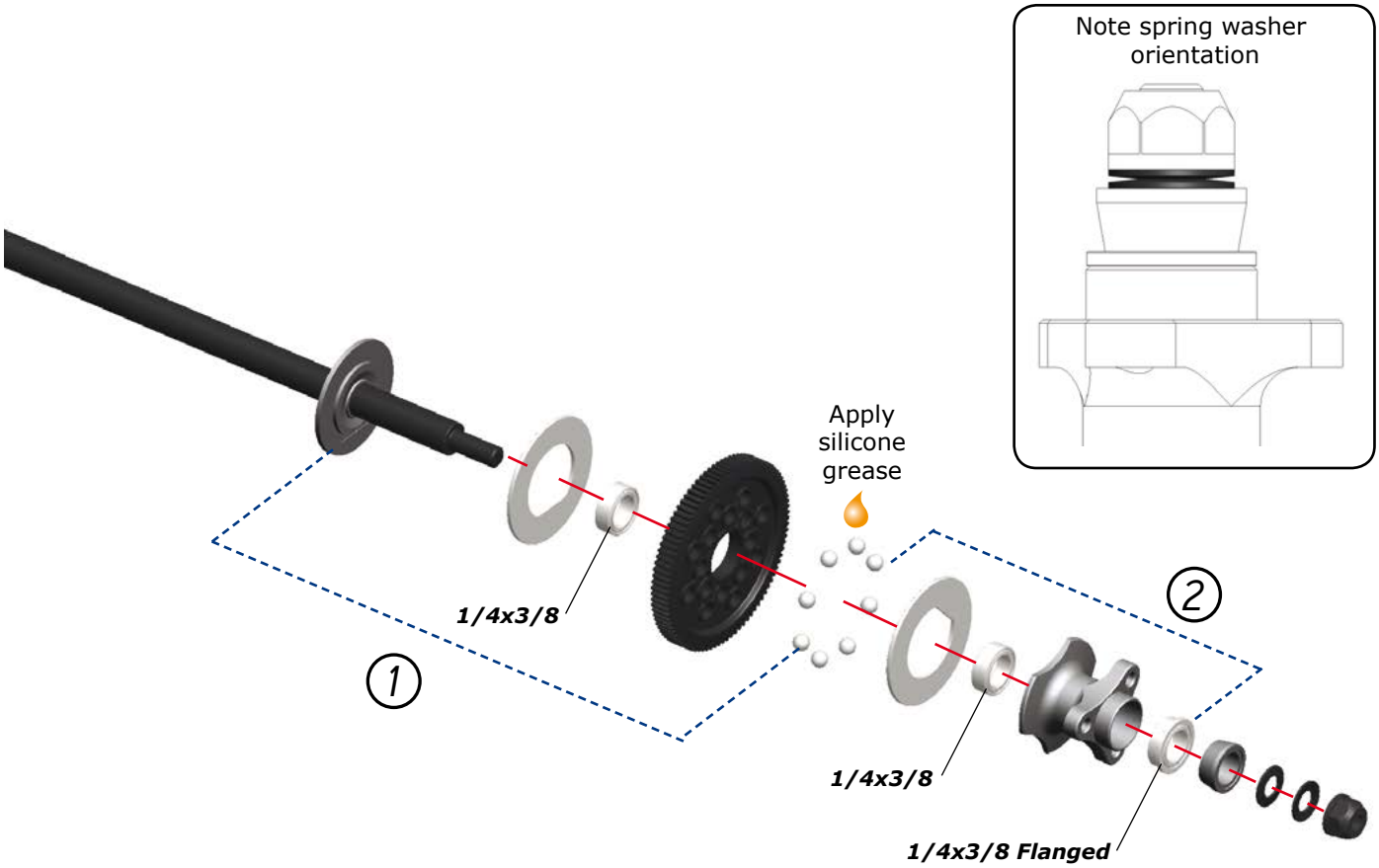
14.2



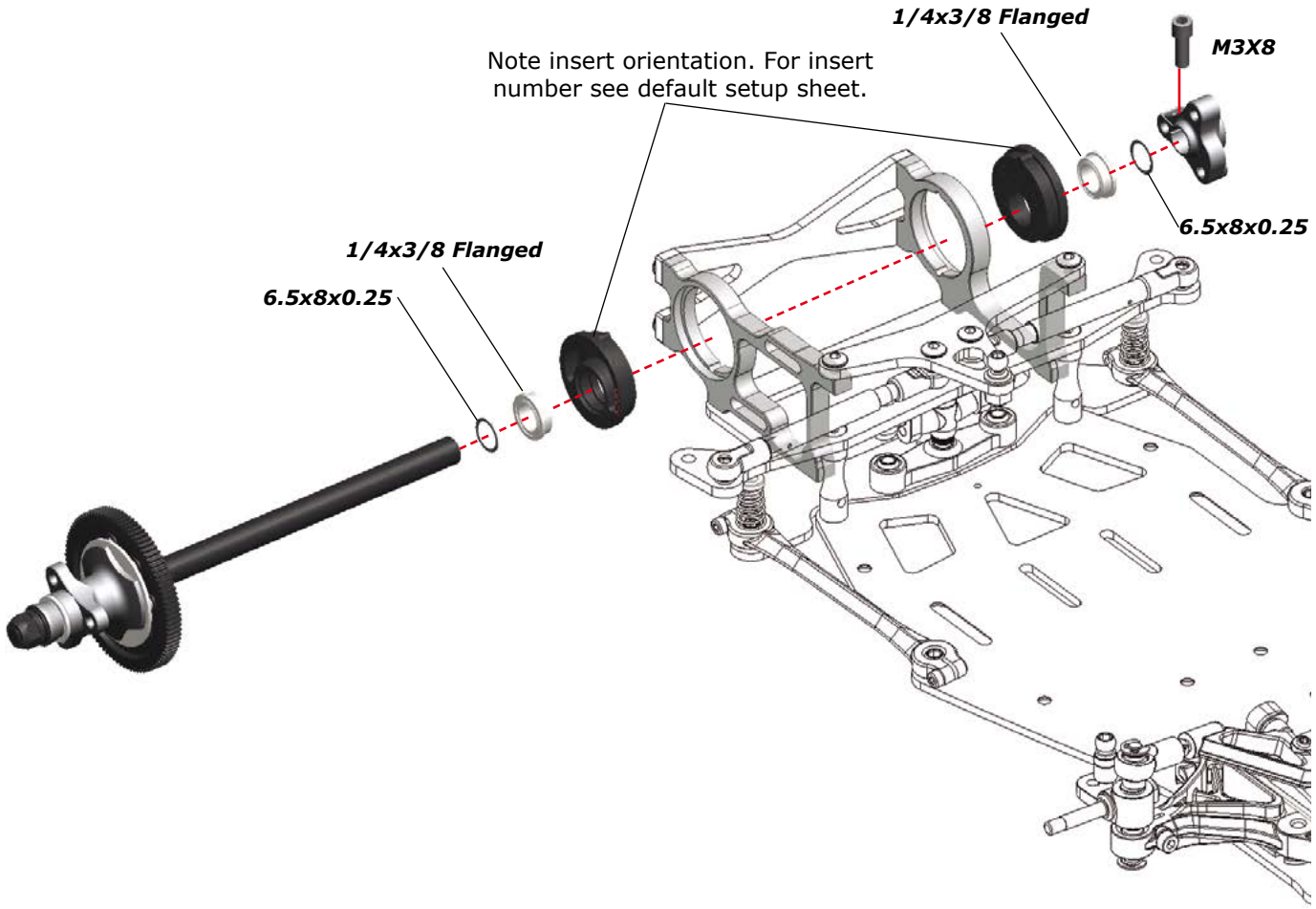
BALL DIFF ASSEMBLY

STEP 15

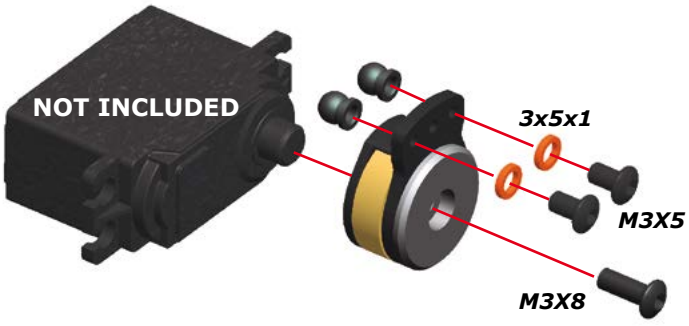
Bag 5



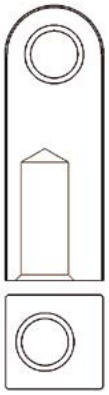
STEP 16



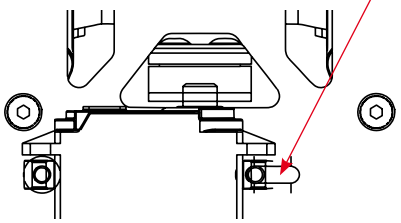
17.1 Check how many teeth your servo spline has (23, 24 or 25) and use the right inserts.



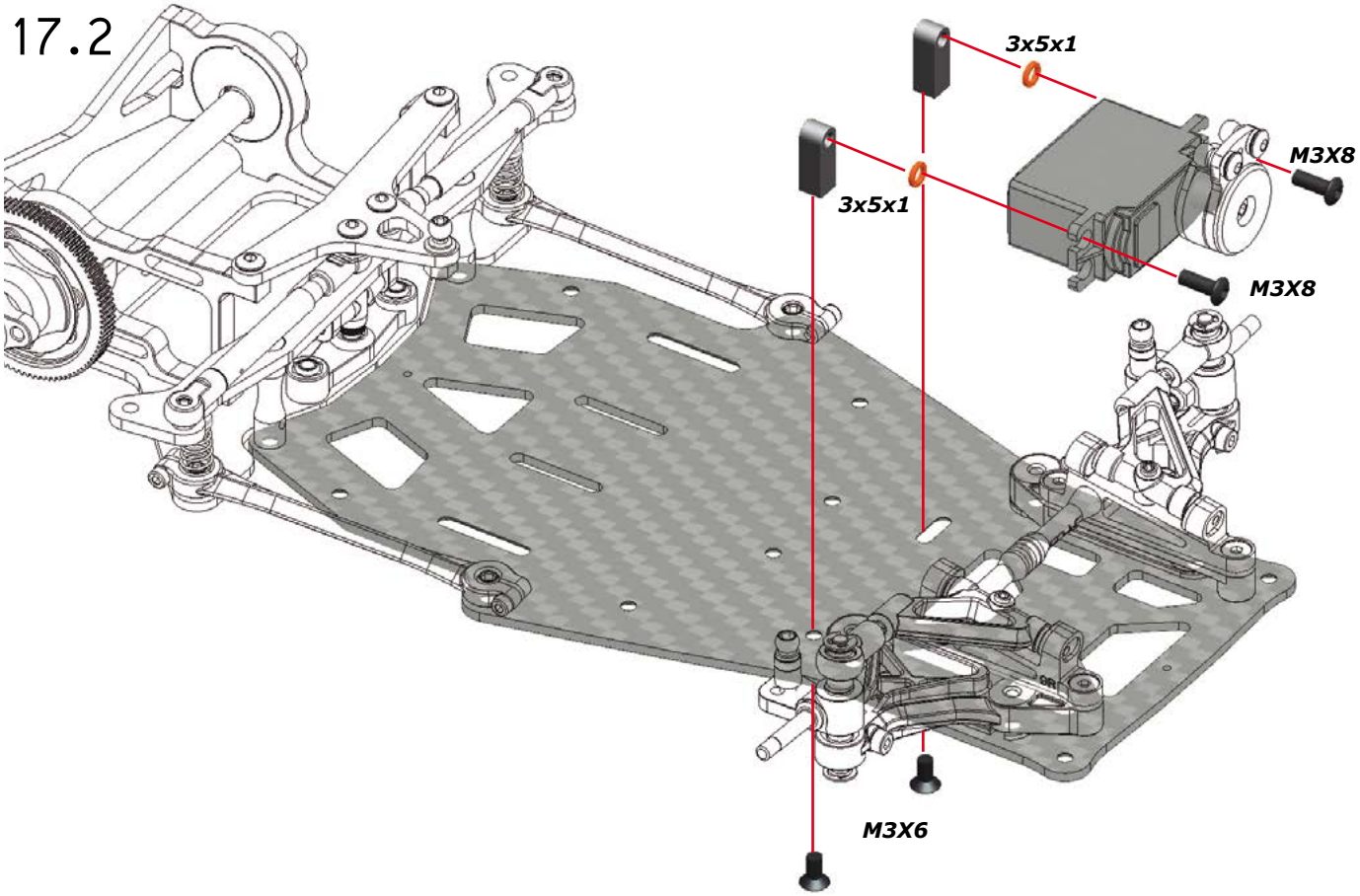
NOTE:
1) Servo mounts are excentric for ensuring that steering servo could be assembled perfecly centerd.



2) Use chassis slot to center the steering servo



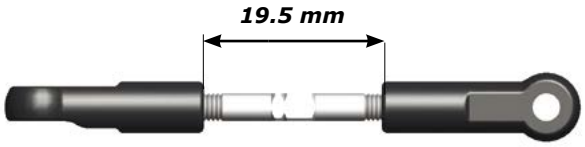
17.2



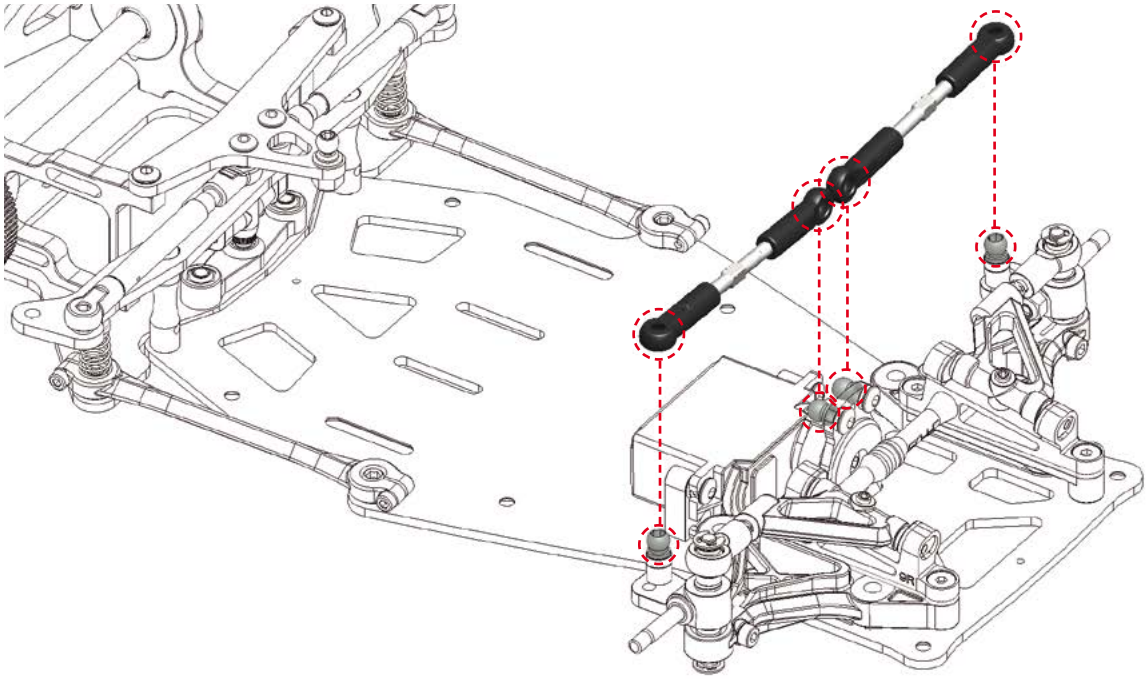
STEP 18

18.1



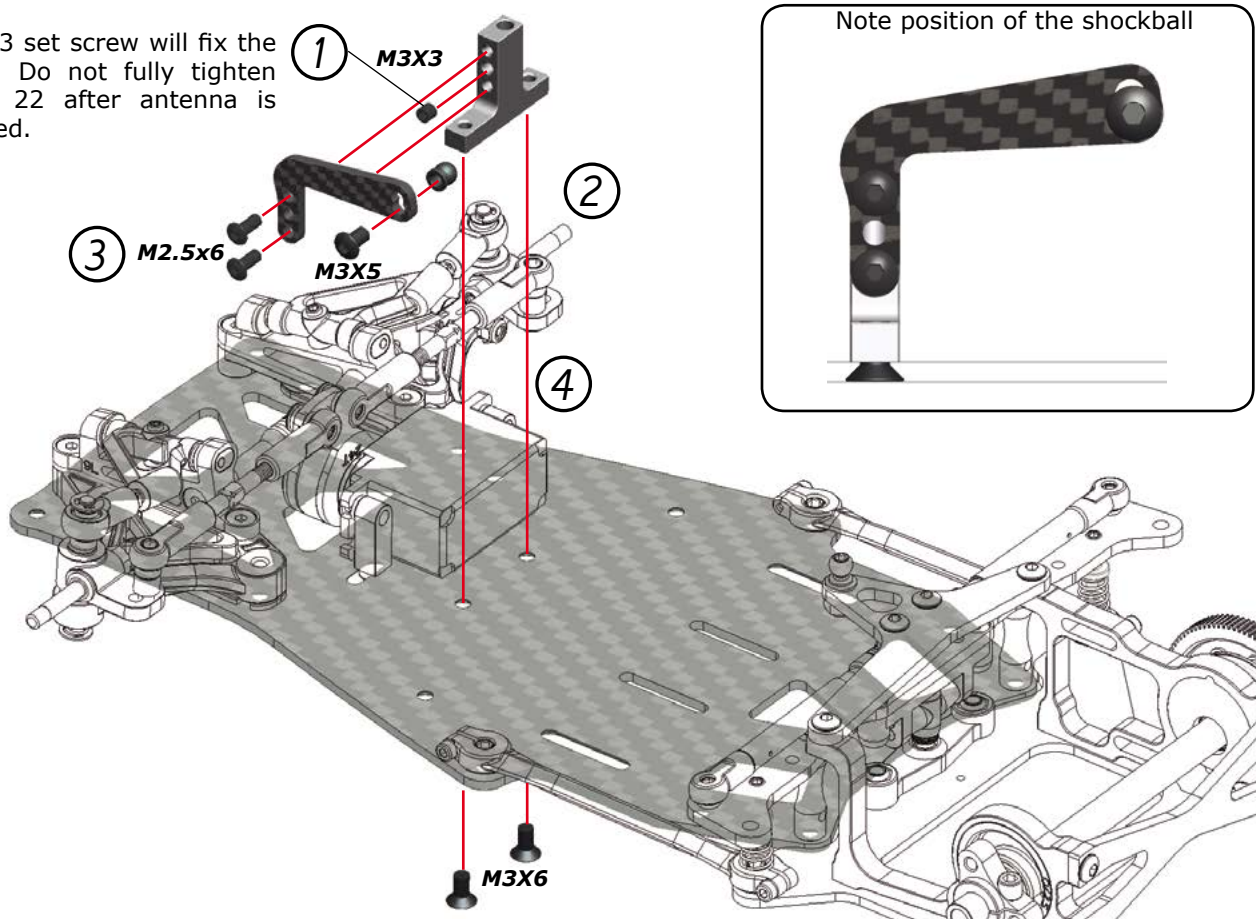


18.2



STEP 19

NOTE
The M3x3 set screw will fix the antenna. Do not fully tighten till step 22 after antenna is assembled.



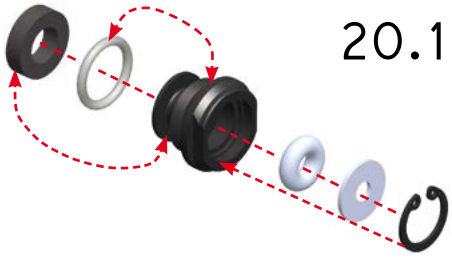
Note position of the shockball

SHOCK ASSEMBLY

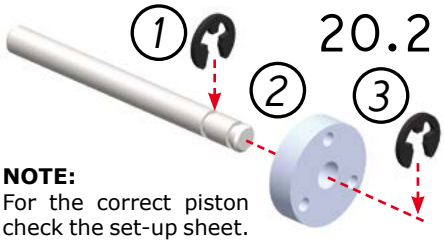
STEP 20

Bag 7

20.1

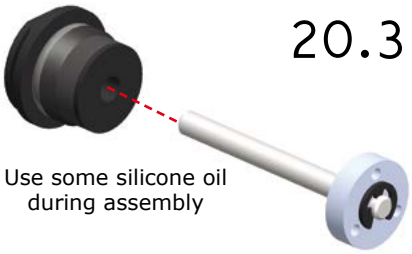


20.2



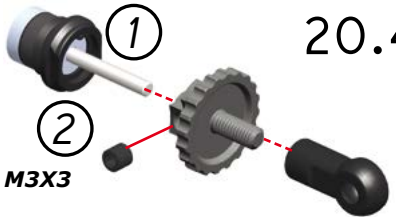
NOTE:
For the correct piston check the set-up sheet.

20.3

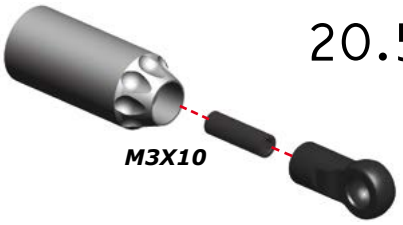


Use some silicone oil during assembly

20.4



20.5



20.6



Filling:
Fill the shock body with shock absorber oil. Check the oil CST value in the setup sheet.

Bleeding:
Let the oil settle and allow the air to escape.

20.7

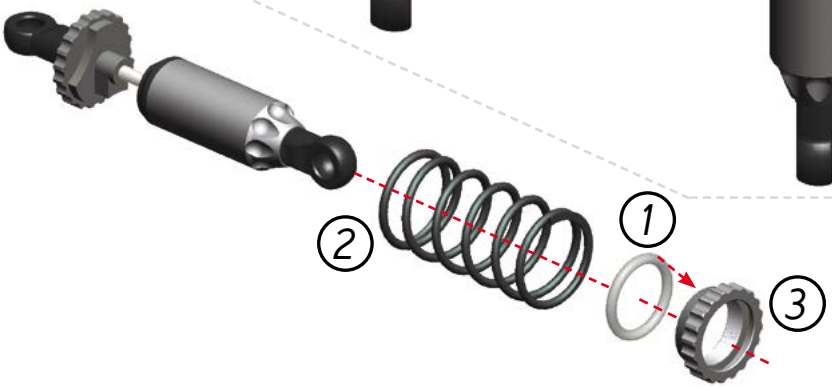
Close the shock slowly.

Important: do not crossthread! Oil will overflow through the built-in bleed channel.

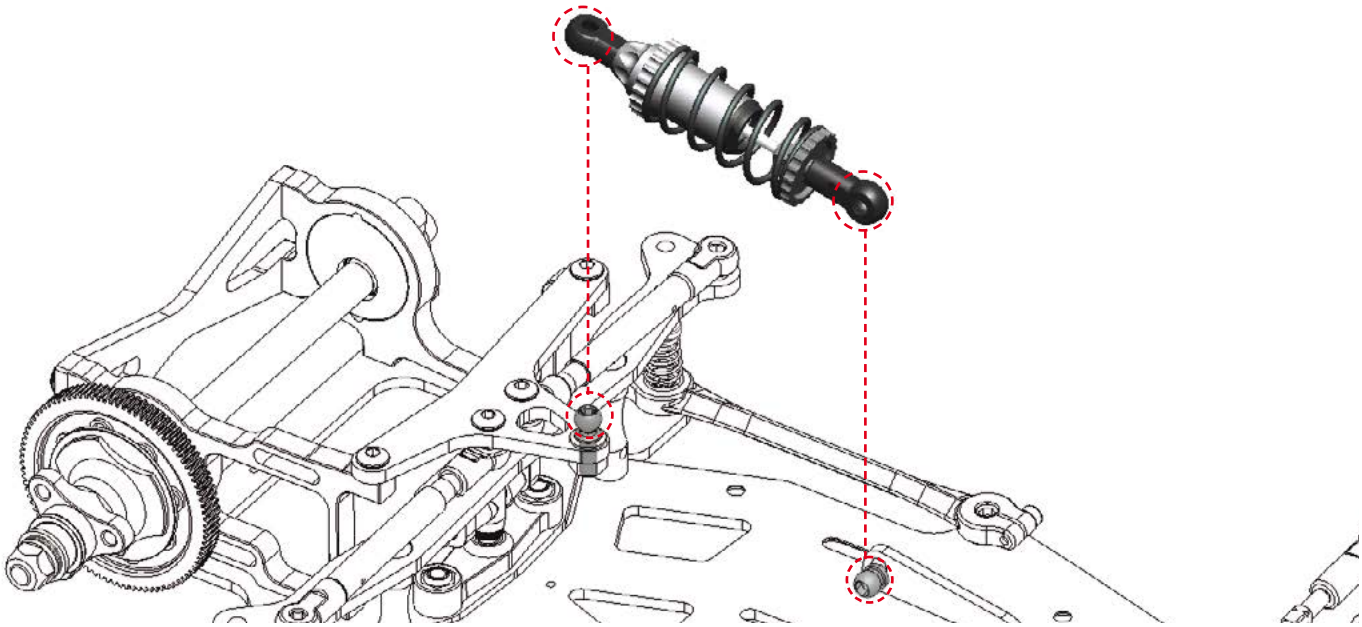
Tighten carefully until the bottom half sits against the shock body

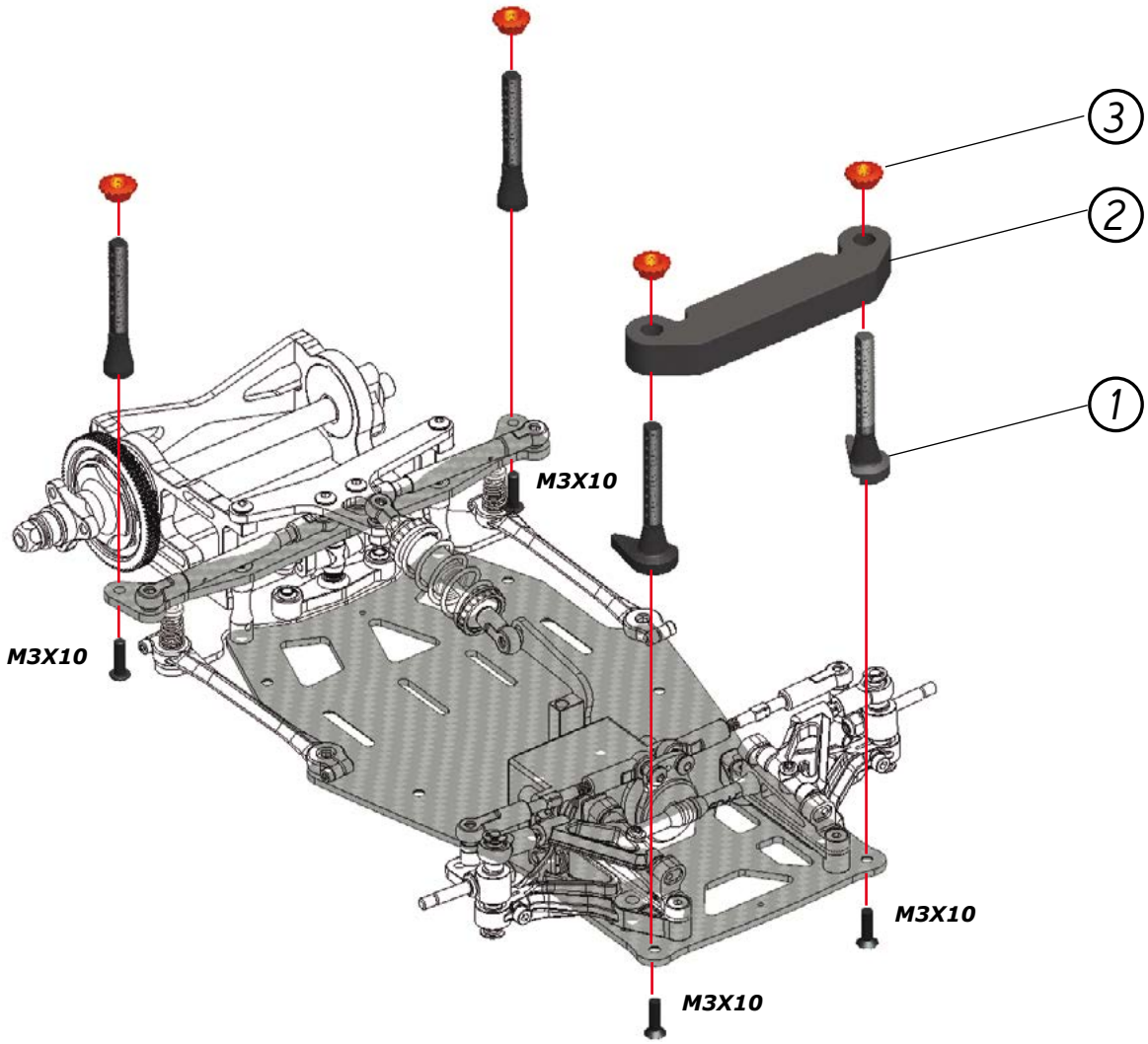


20.8

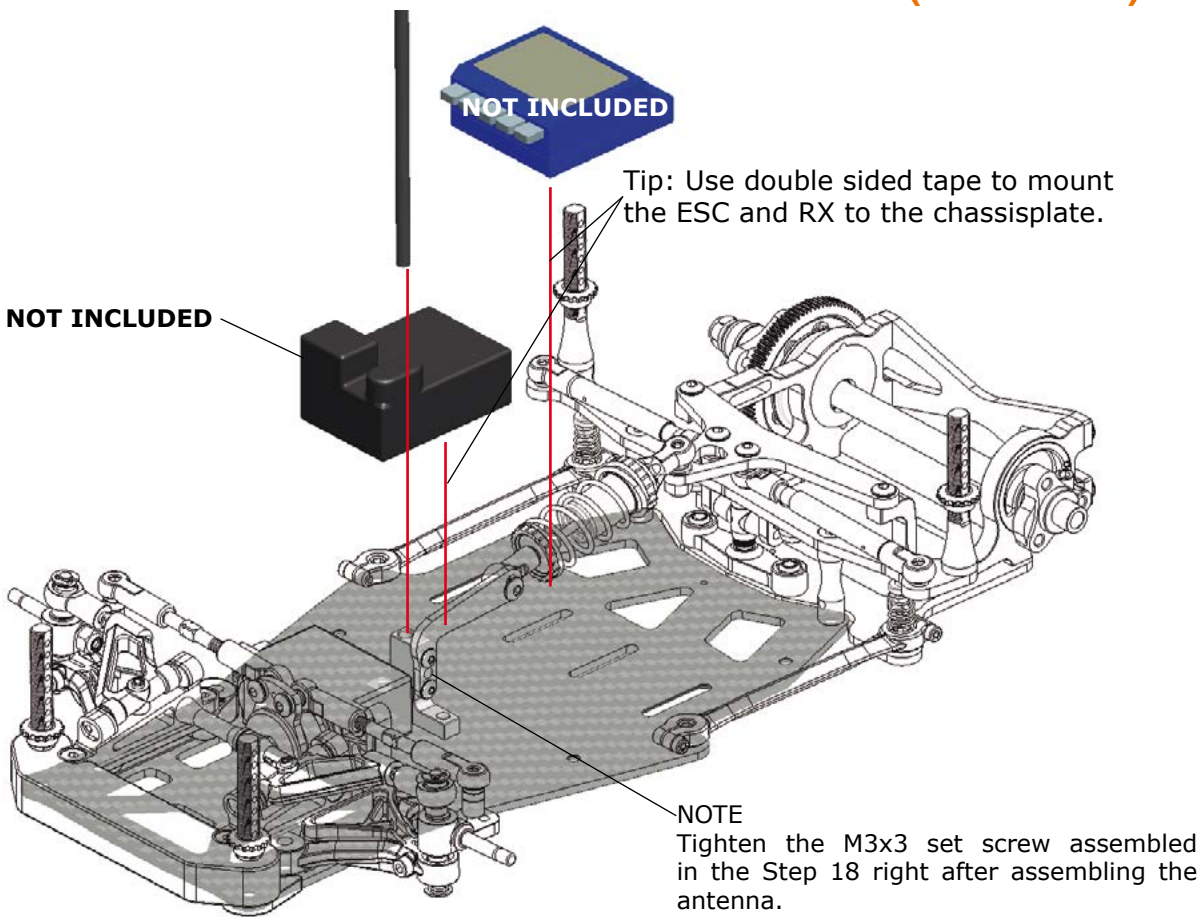


STEP 21



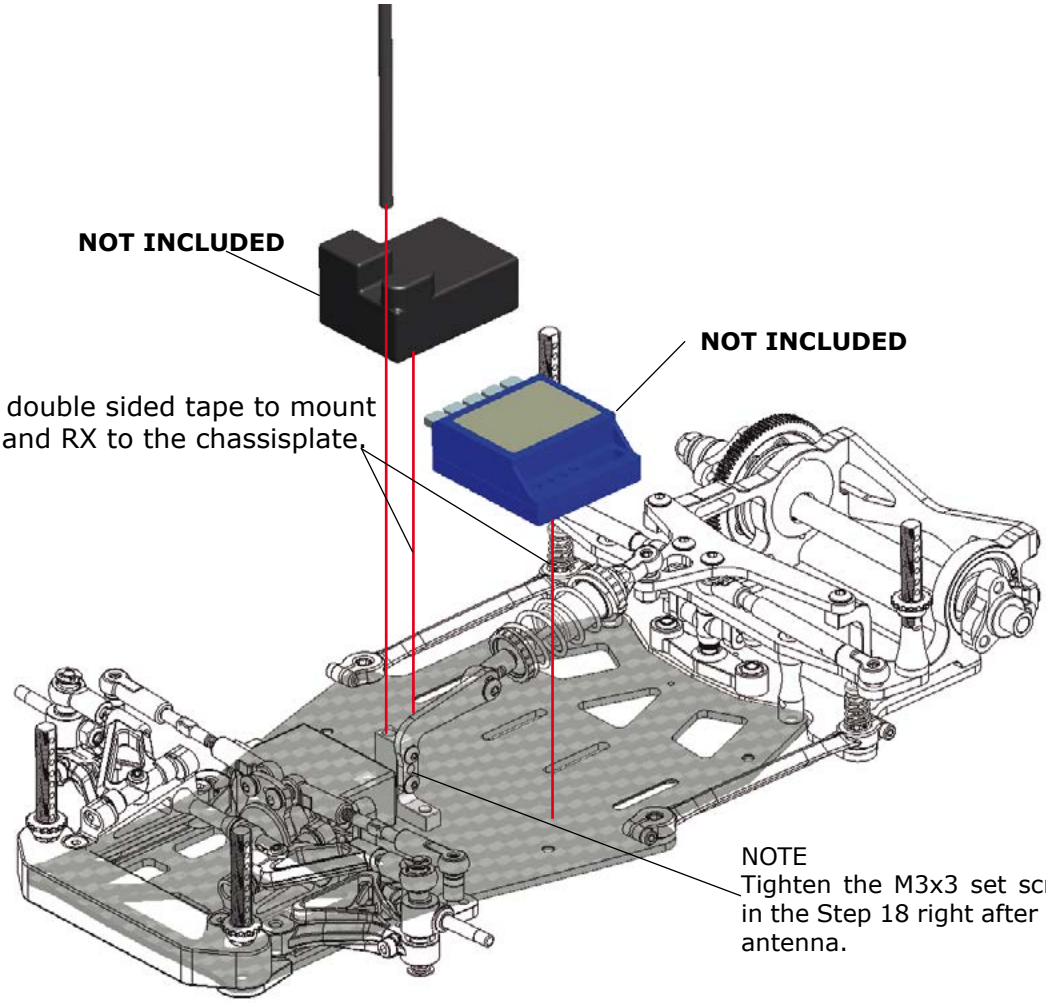


A) LONGITUDINAL BATTERY CONFIGURATION (DEFAULT)



STEP 23B

B) TRANSVERSAL BATTERY CONFIGURATION



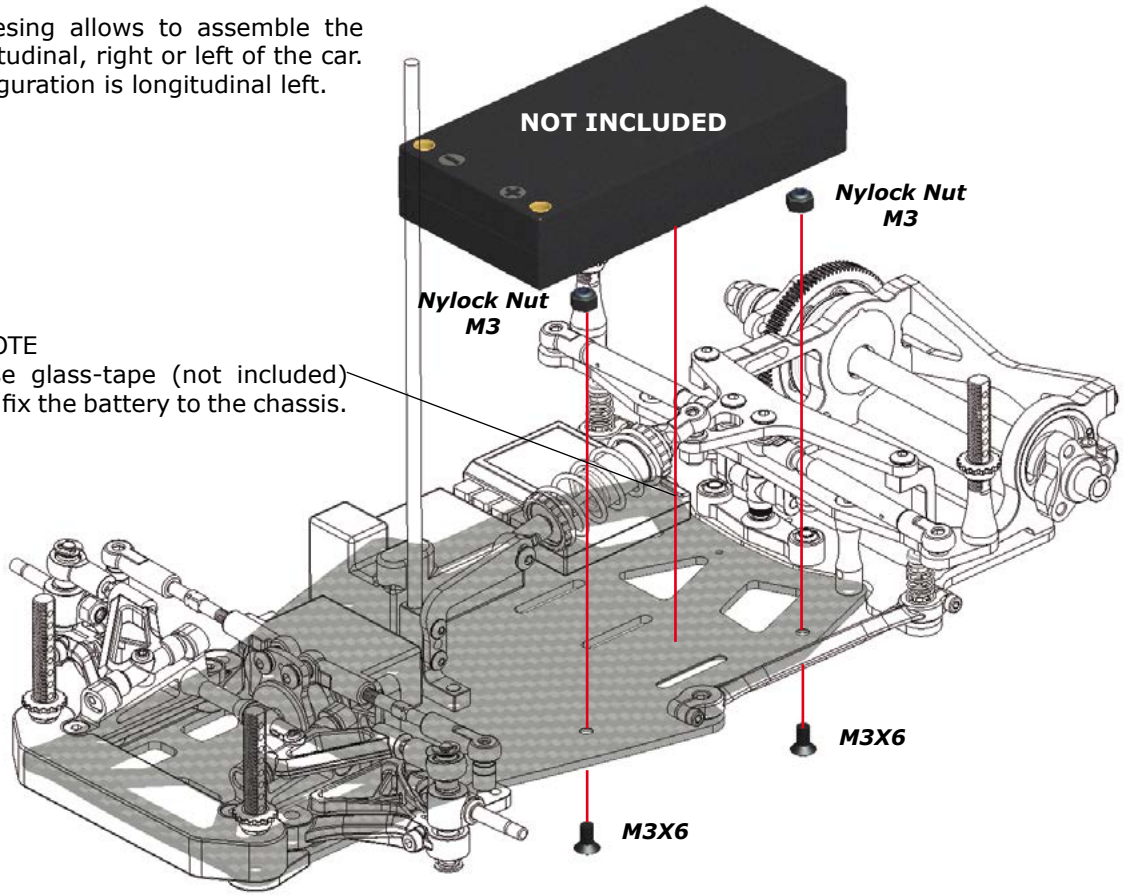
Tip: Use double sided tape to mount the ESC and RX to the chassisplate.

NOTE
Tighten the M3x3 set screw assembled in the Step 18 right after assembling the antenna.

STEP 24A

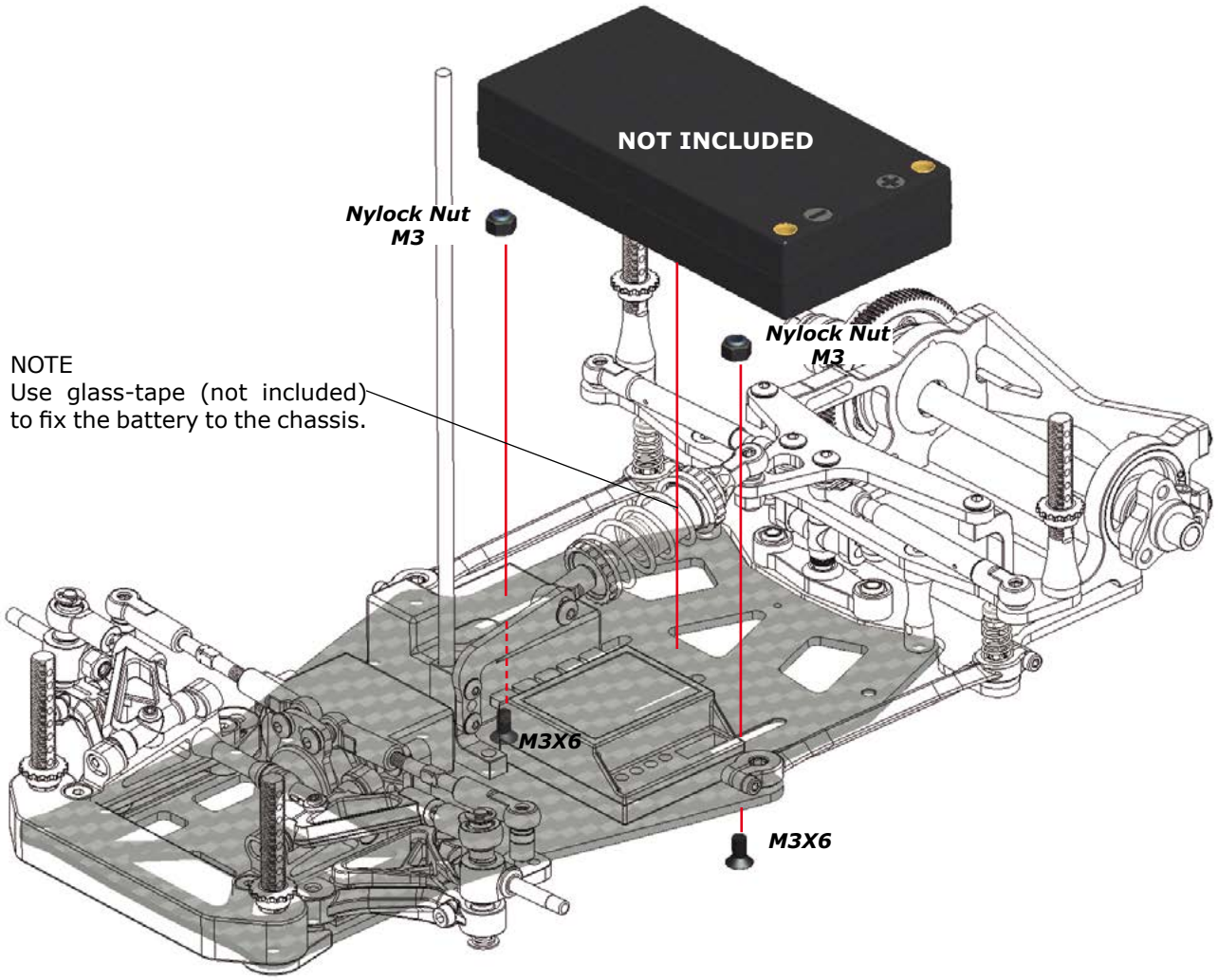
A) LONGITUDINAL BATTERY CONFIGURATION (DEFAULT)

NOTE
S120 LTR desing allows to assemble the battery longitudinal, right or left of the car. Default configuration is longitudinal left.

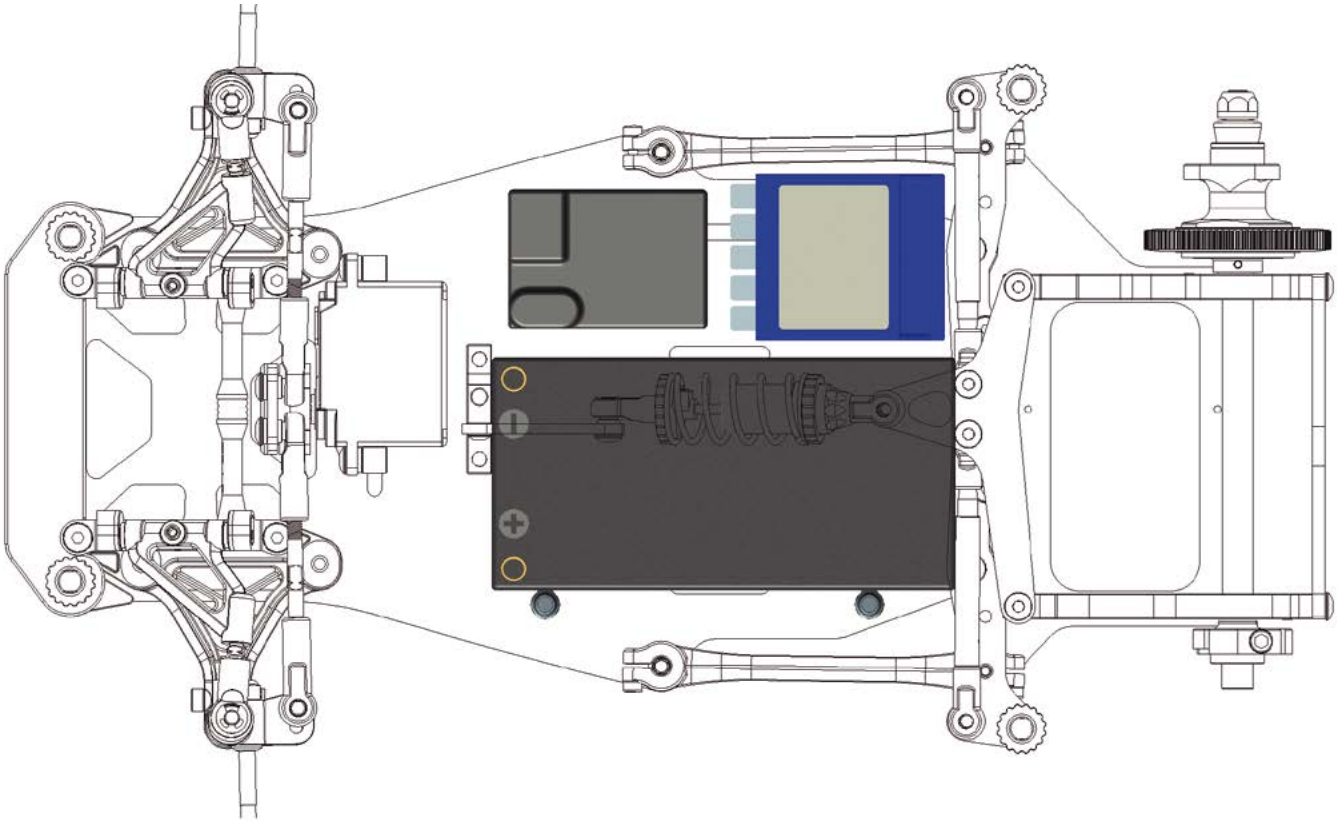


NOTE
Use glass-tape (not included) to fix the battery to the chassis.

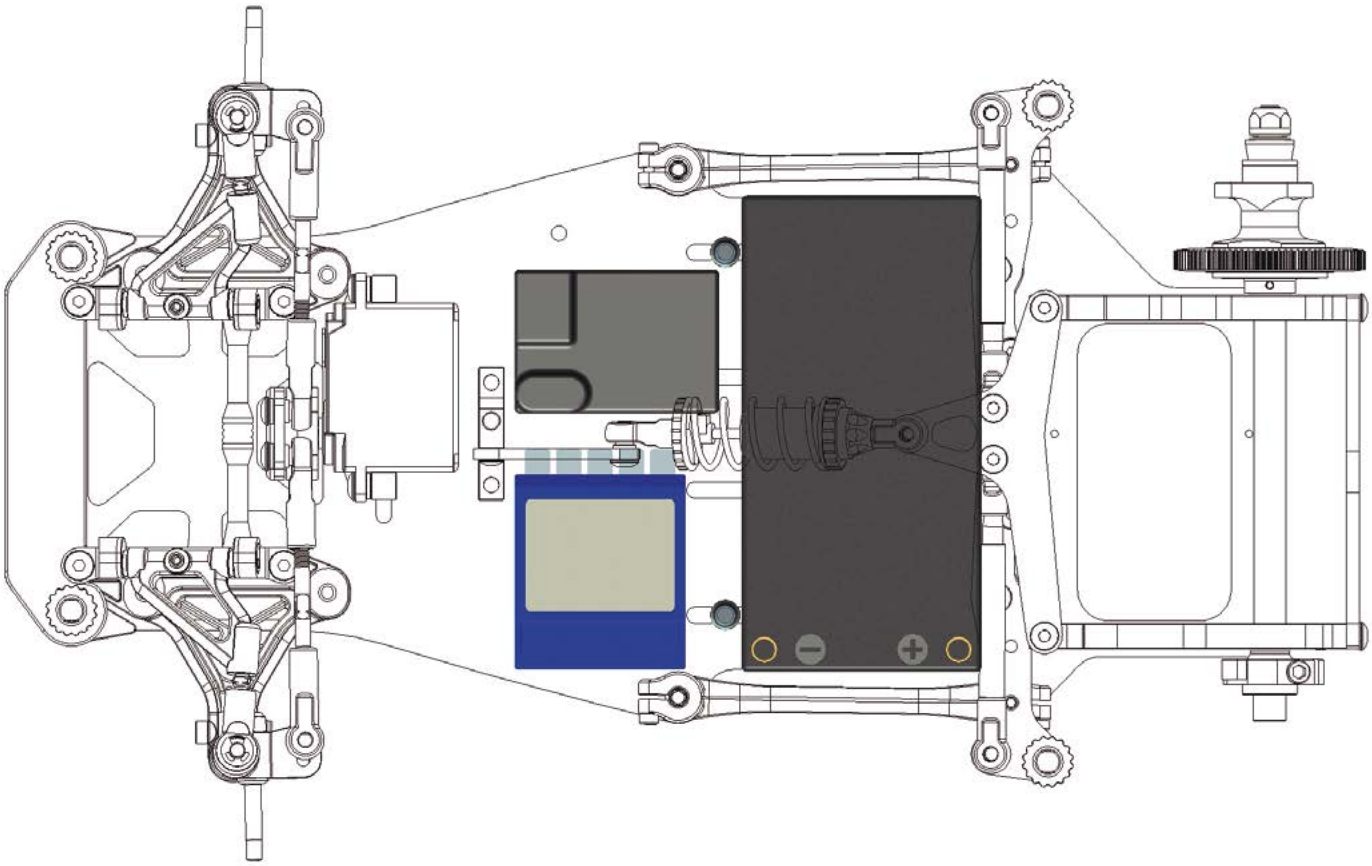
B) TRANSVERSAL BATTERY CONFIGURATION



Detail view longitudinal battery configuration (default)

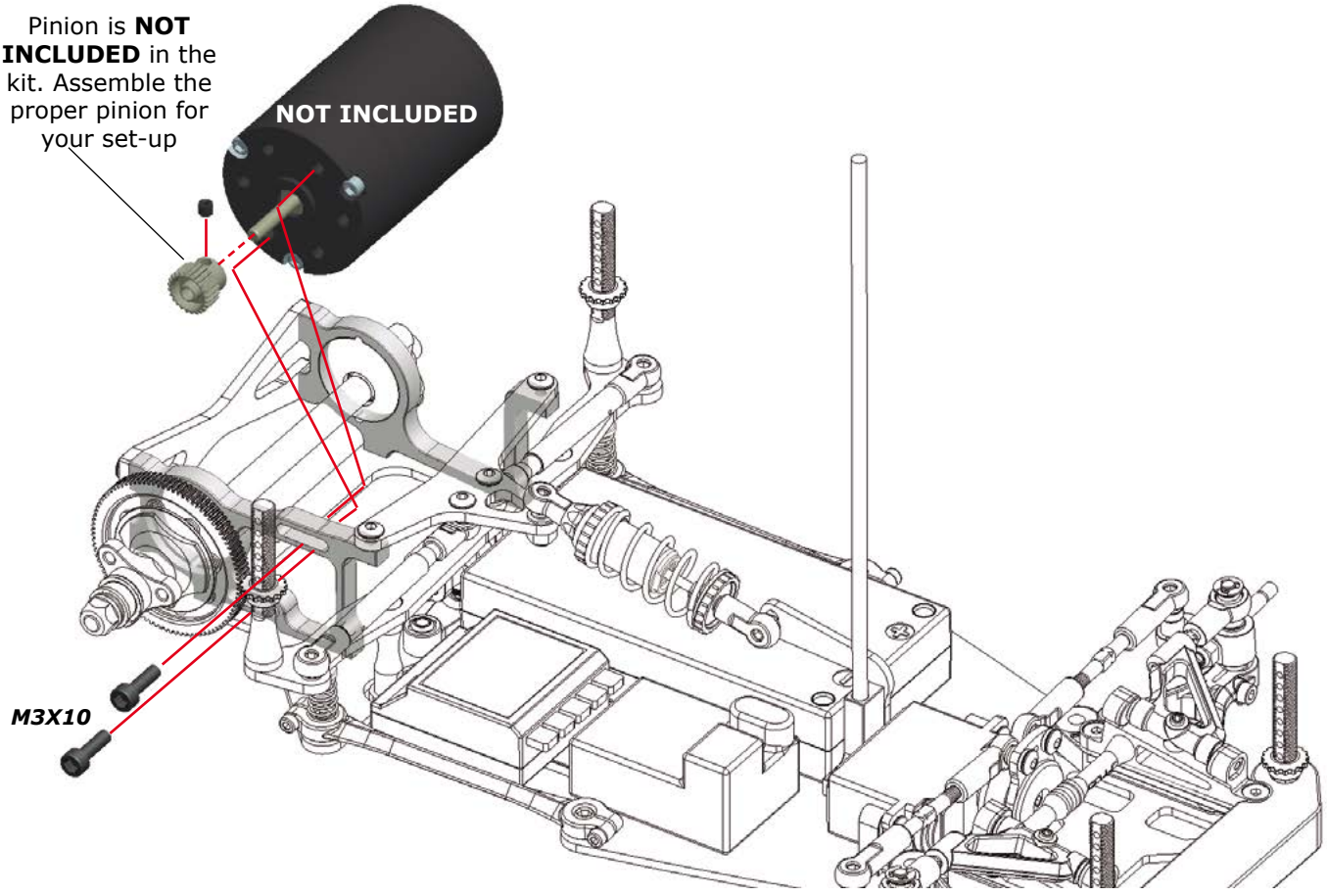


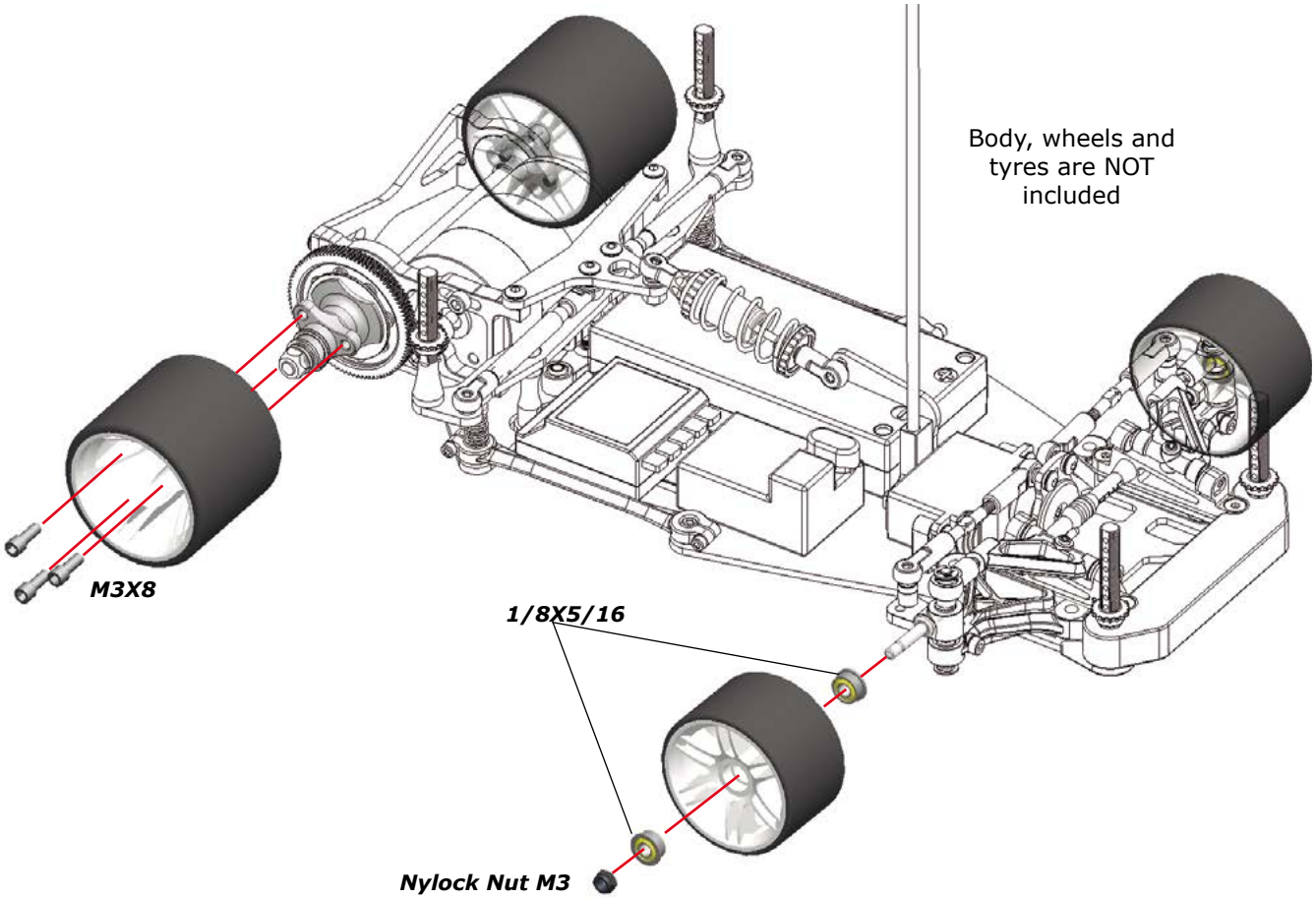
Detail view transversal battery configuration



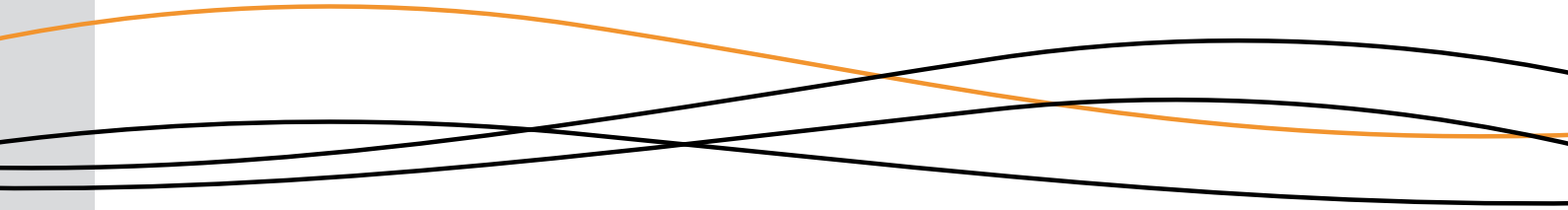
FINAL ASSEMBLY

STEP 25

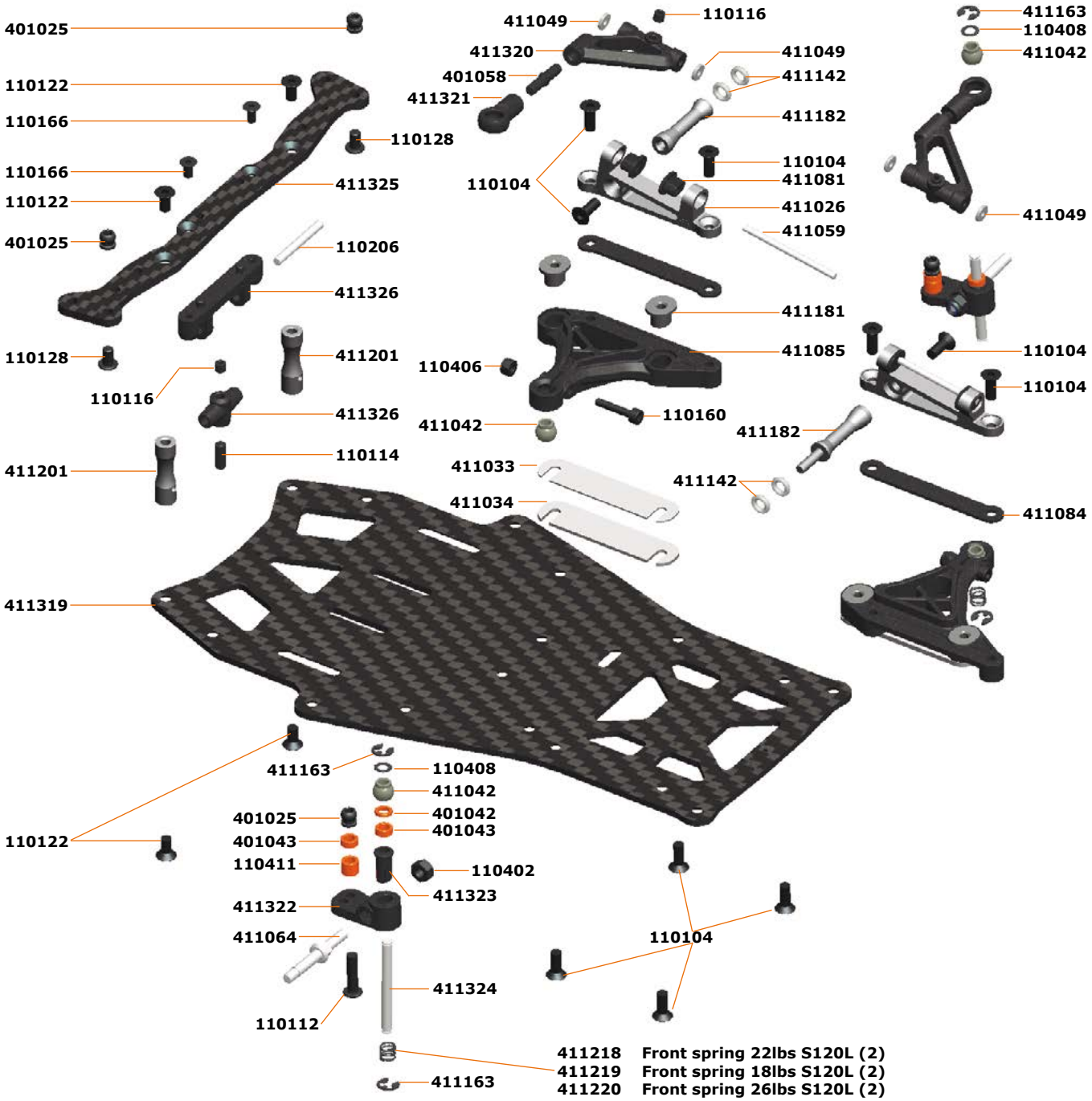



Body, wheels and tyres are NOT included
M3X8
1/8X5/16
Nylock Nut M3

REFERENCE GUIDE

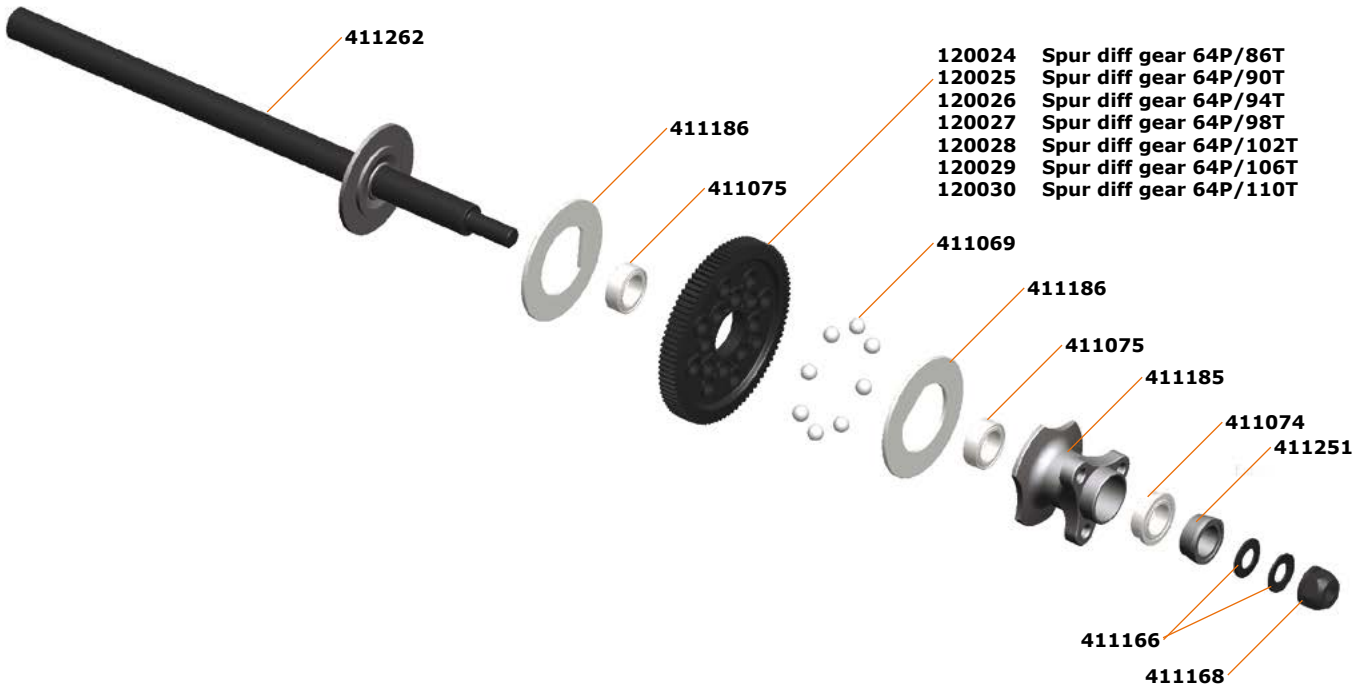


FRONT ASSEMBLY



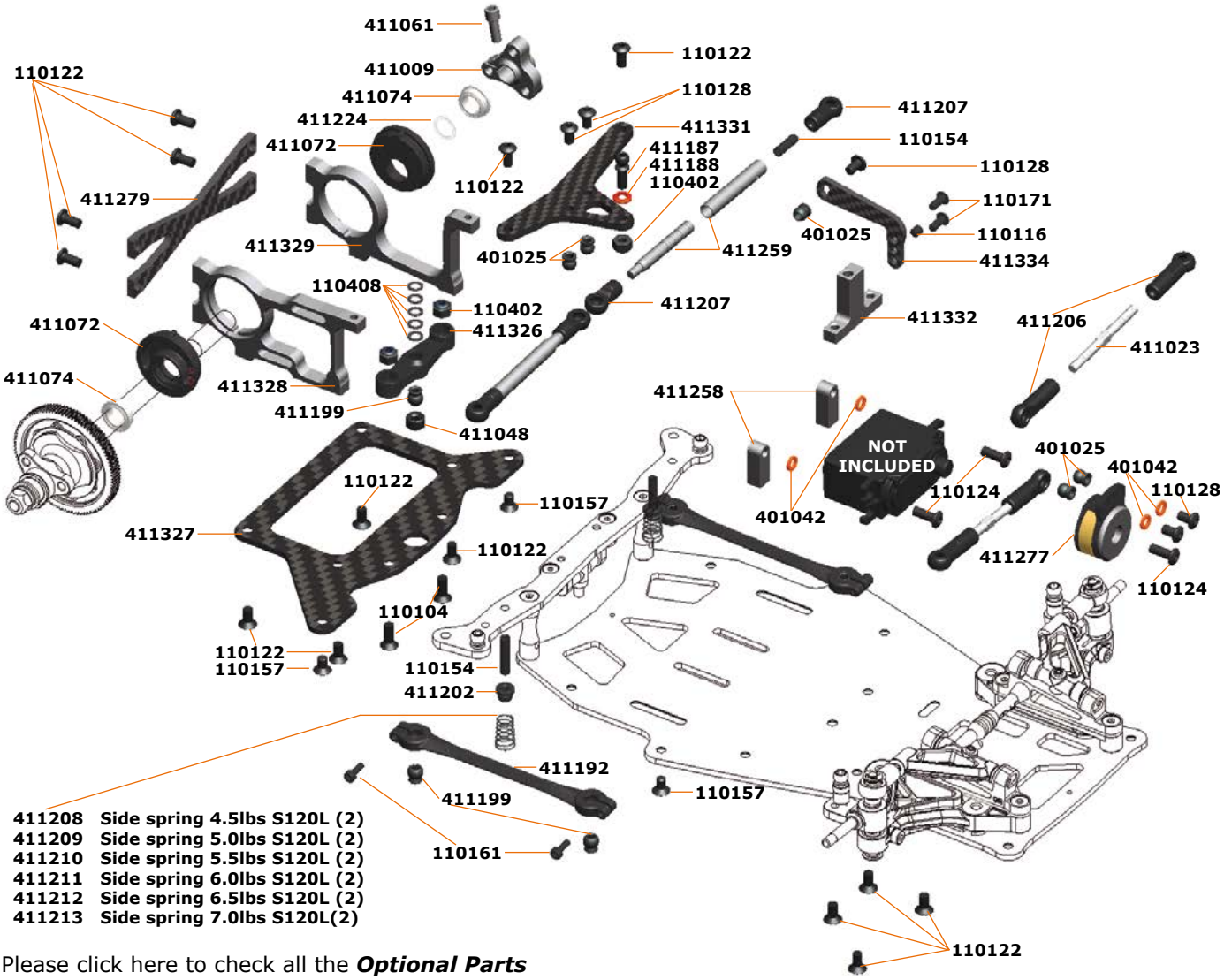
Please click here to check all the ***Optional Parts***

BALL DIFF ASSEMBLY



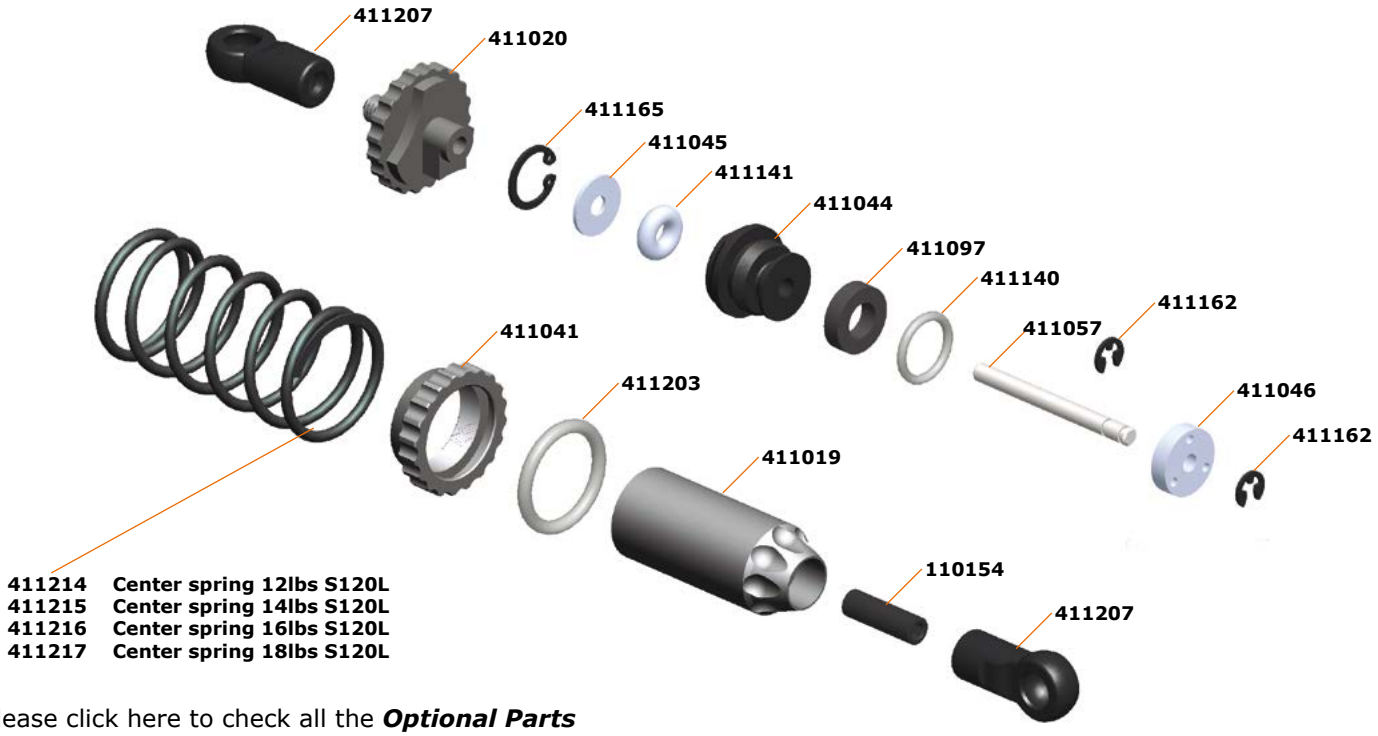
Please click here to check all the ***Optional Parts***

REAR ASSEMBLY



Please click here to check all the ***Optional Parts***

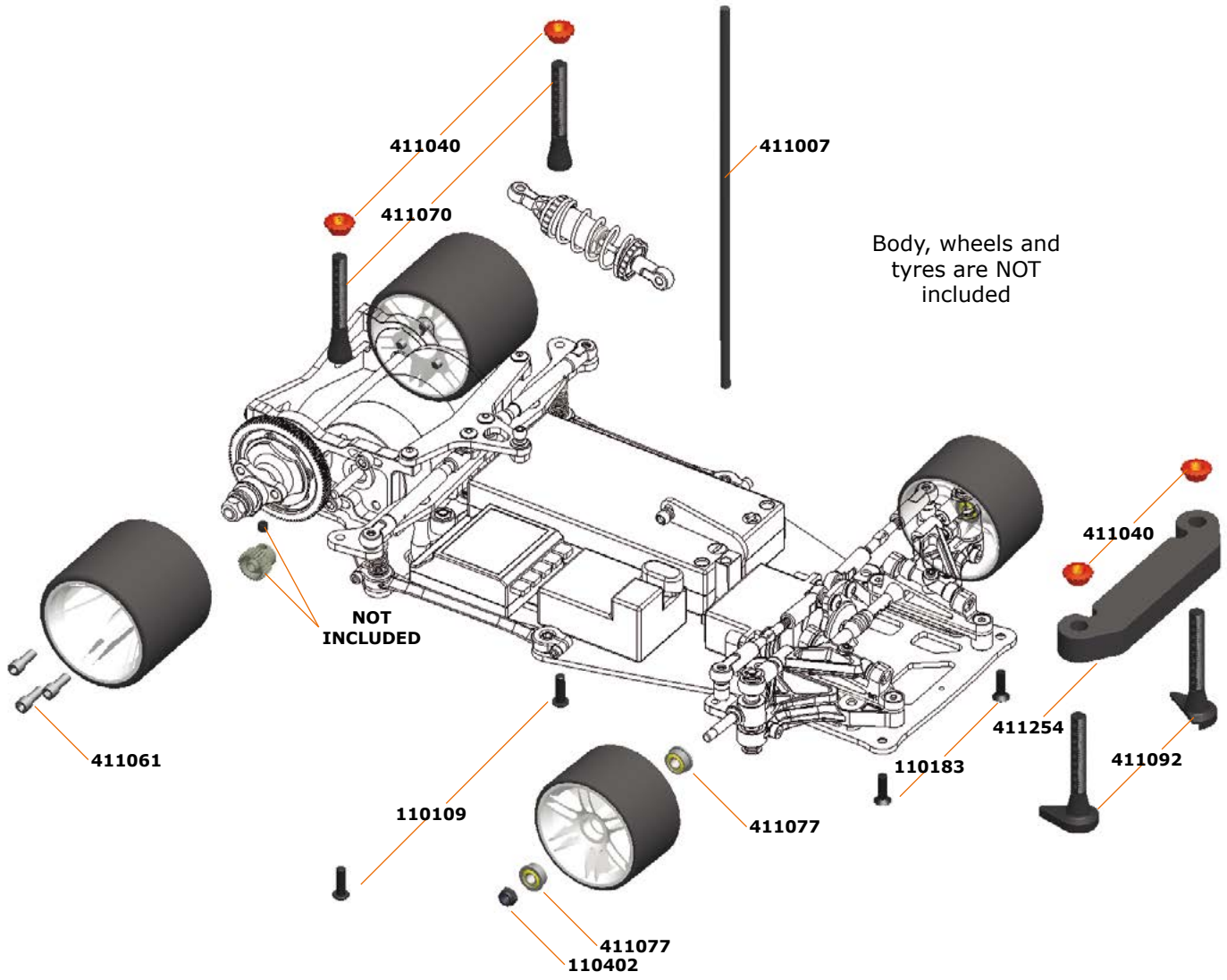
SHOCK ABSORBER ASSEMBLY



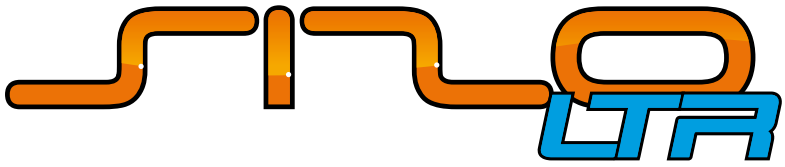
411214 Center spring 12lbs S120L
411215 Center spring 14lbs S120L
411216 Center spring 16lbs S120L
411217 Center spring 18lbs S120L

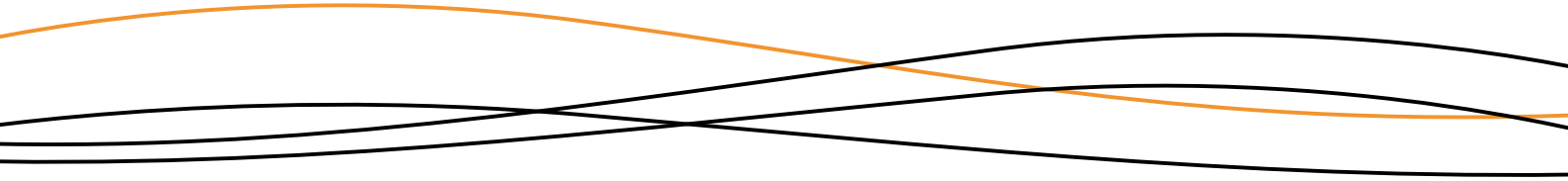
Please click here to check all the ***Optional Parts***

FINAL ASSEMBLY



Please click here to check all the ***Optional Parts***







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