

SFRX2

gen3

CARPET



**INSTRUCTION
MANUAL**

EP

1/10 2WD - Buggy

SERPENT

INTRODUCTION

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

The Serpent SRX2 Gen3 is a state of the art 1/10 scale 2wd buggy 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. The Serpent design department succeeded to create a superbly performing car combined with ease 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 bag numbers, which refer to the same step in the manual. Open only the indicated bag(s) per step and finish that part of the assembly. Remaining parts will be needed later on in the assembly process.

PLASTIC PARTS

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

SETUP

In certain assembly steps you need to make basic adjustments, which will give you a good initial setup for your Serpent SRX2 Gen3. Fine-tuning the initial setup is an essential part of building a high-performance racecar like your Serpent SRX2 Gen3.

EXPLODED VIEWS AND PARTS LIST

The exploded views and parts lists for the Serpent SRX2 Gen3 are presented in the Reference Guide section in the back of this manual. The exploded views show all the parts of a particular assembly step along with the Serpent part number and hotlink to the Serpent website. Part numbers in orange indicate that this part is an optional. Optionals part names and numbers are showed below.

CUSTOMER SERVICE

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

SAFETY

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

READ THIS FIRST!

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

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LINES DESCRIPTION

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



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



Length after assembly



Assembly path of one item into another



Group of items (within lines) should be assembled first



Direction the item should be moved



Glue one item to another



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.



Carefully, read and check extensively.



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.



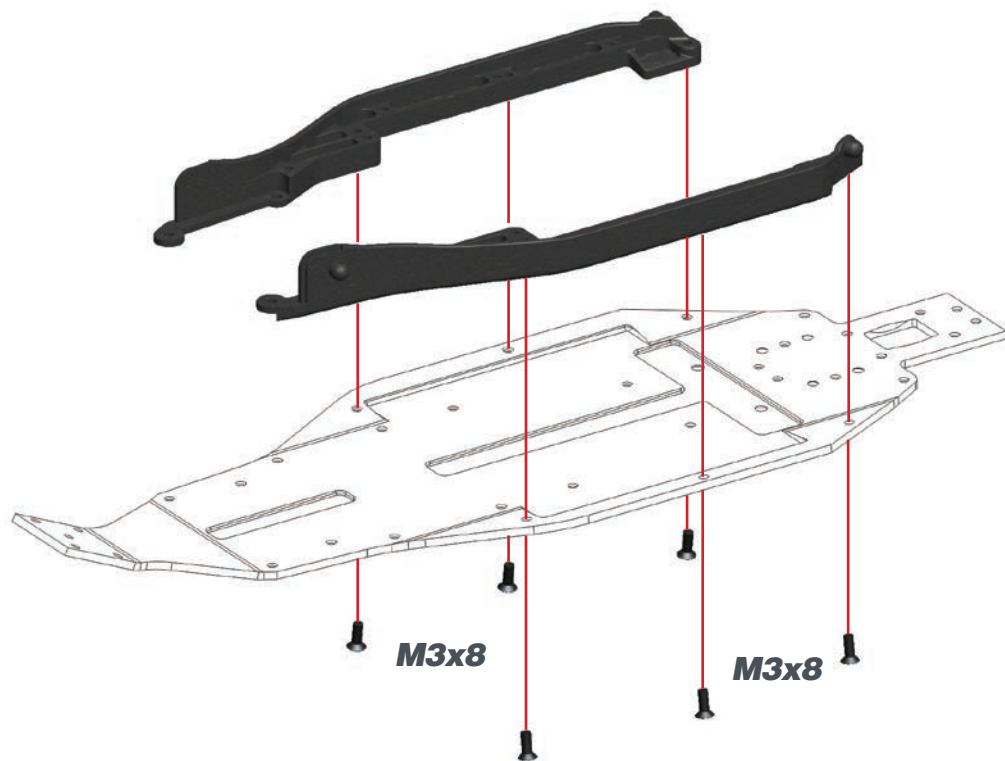
Parts or items not included in the kit.



Optional part, not standard in the kit.

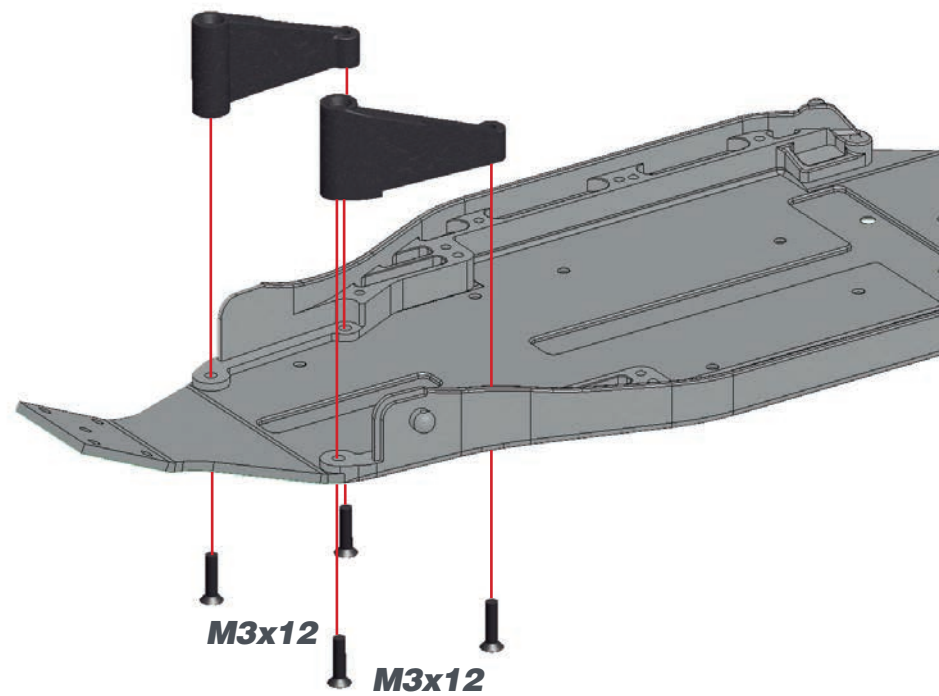
STEP 1

BAG 1



M3x8

STEP 2

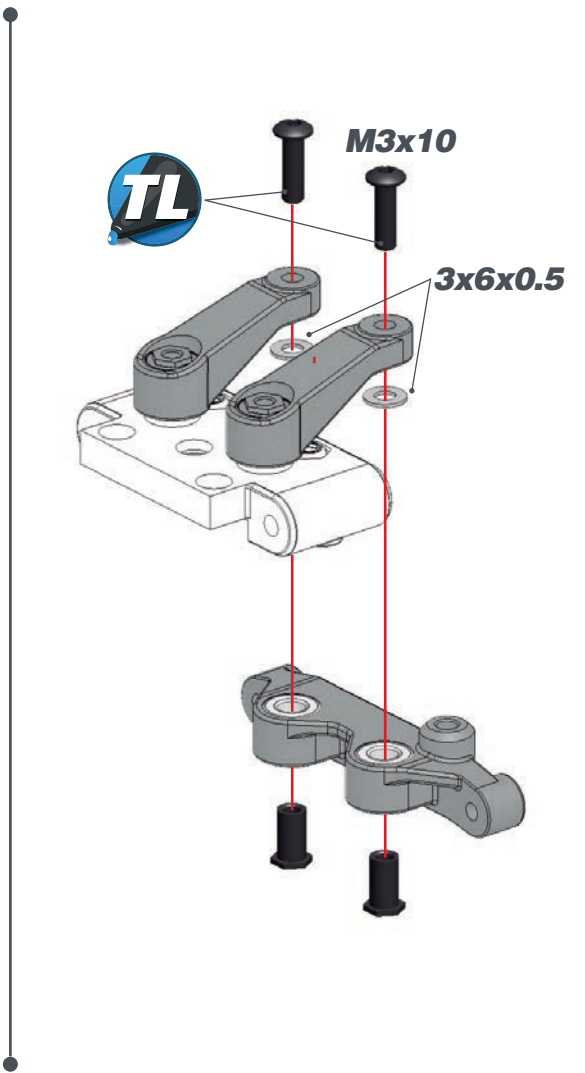
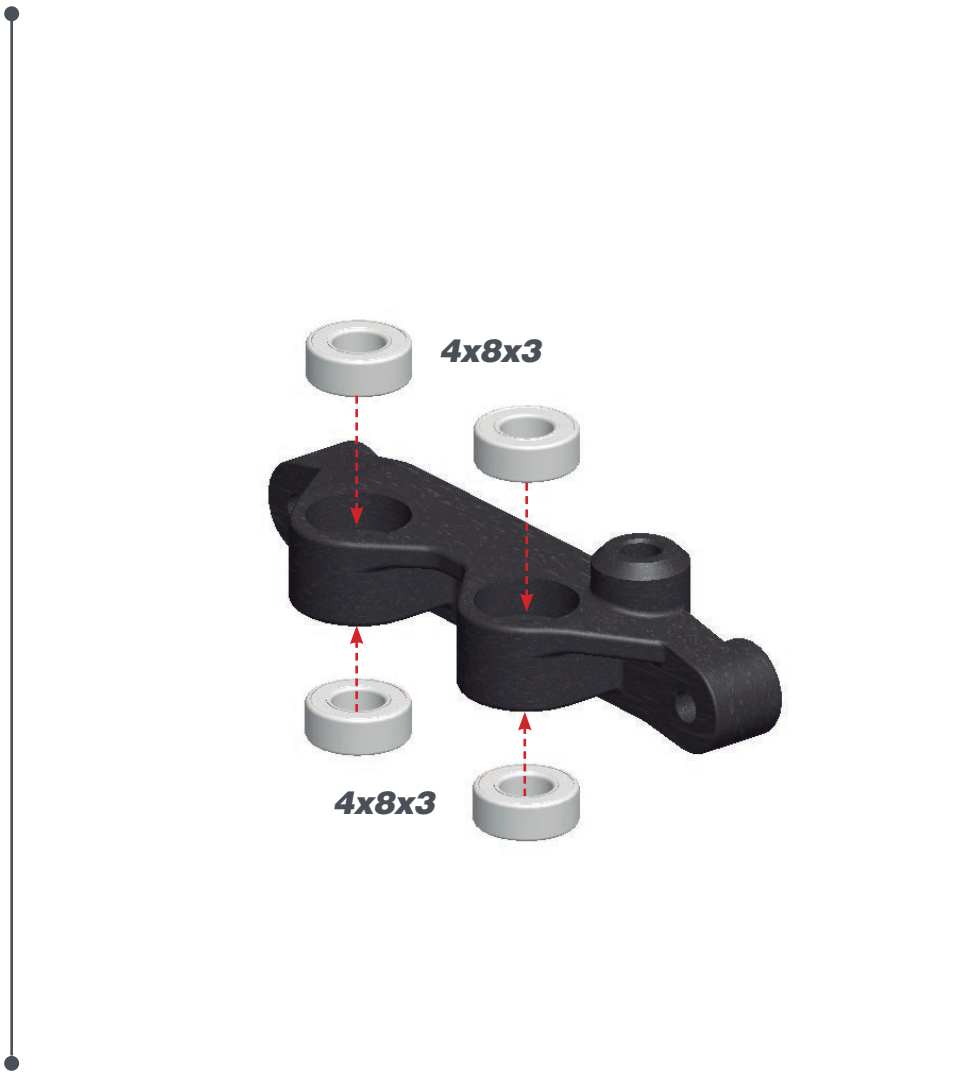
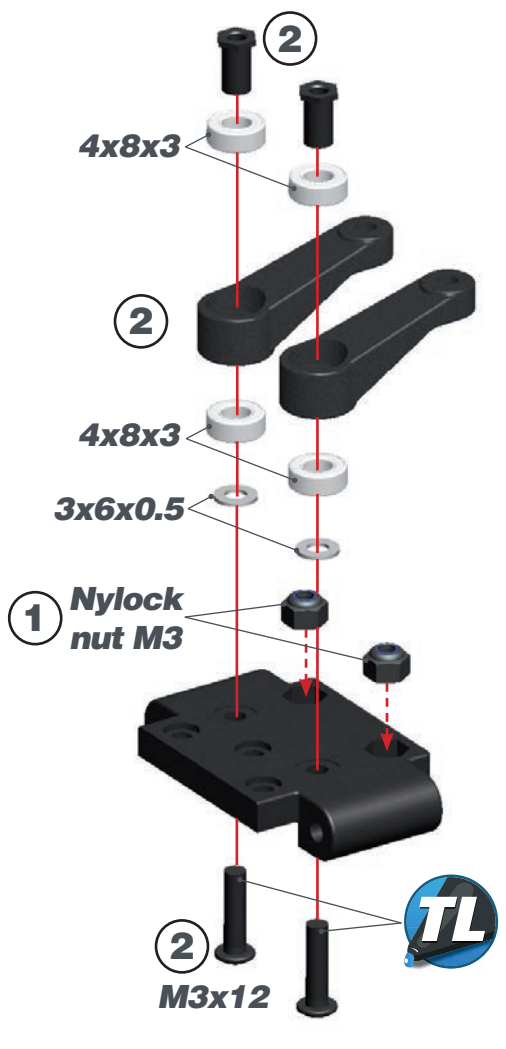


M3x12

STEP 3

STEP 4

STEP 5



- M3x12
- 4x8x3
- 3x6x0.5
- Nylock Nut M3

- 4x8x3

- M3x10
- 3x6x0.5

STEP 6

STEP 7 BAG 2

7.1



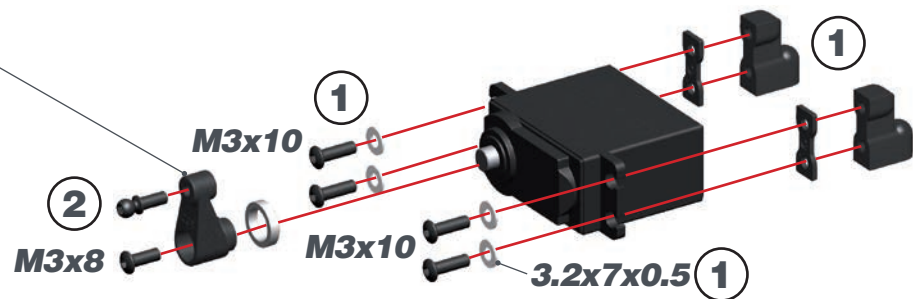
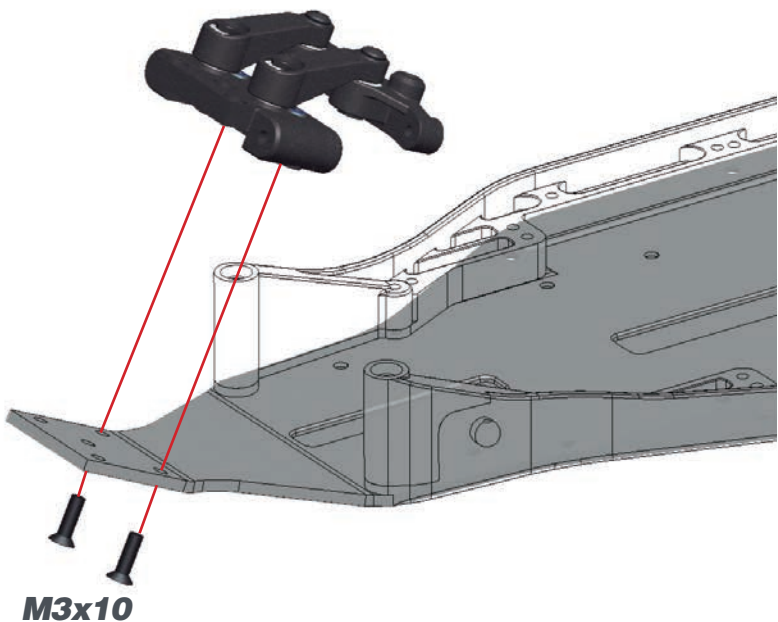
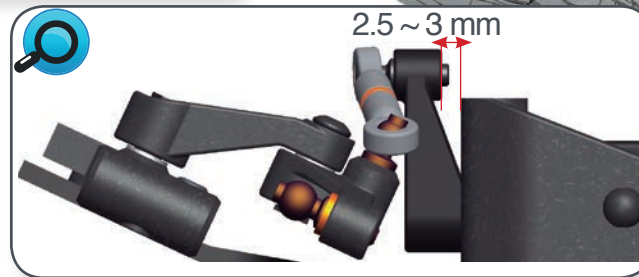
1- Check how many teeth your servo spline has (23, 24 or 25) and use the right lever.

2- Make sure to put the servo in neutral before mounting the lever.

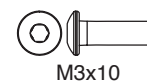
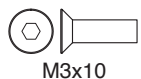
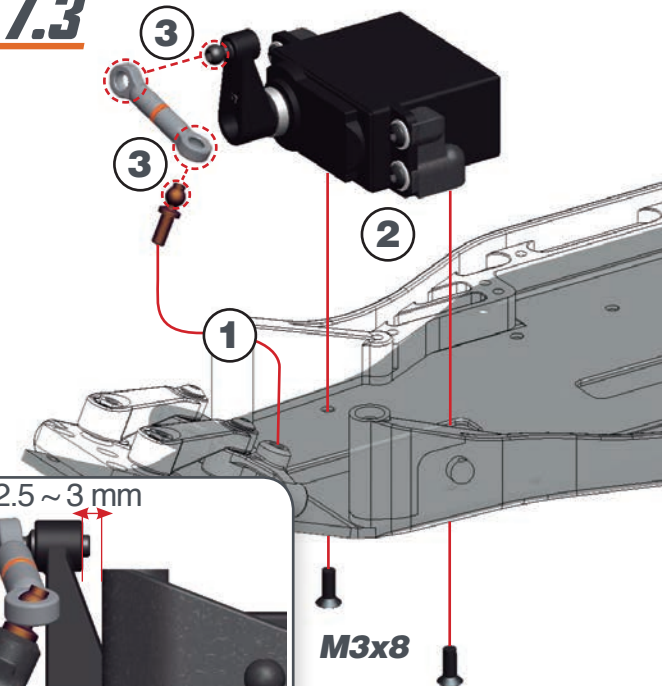
7.2



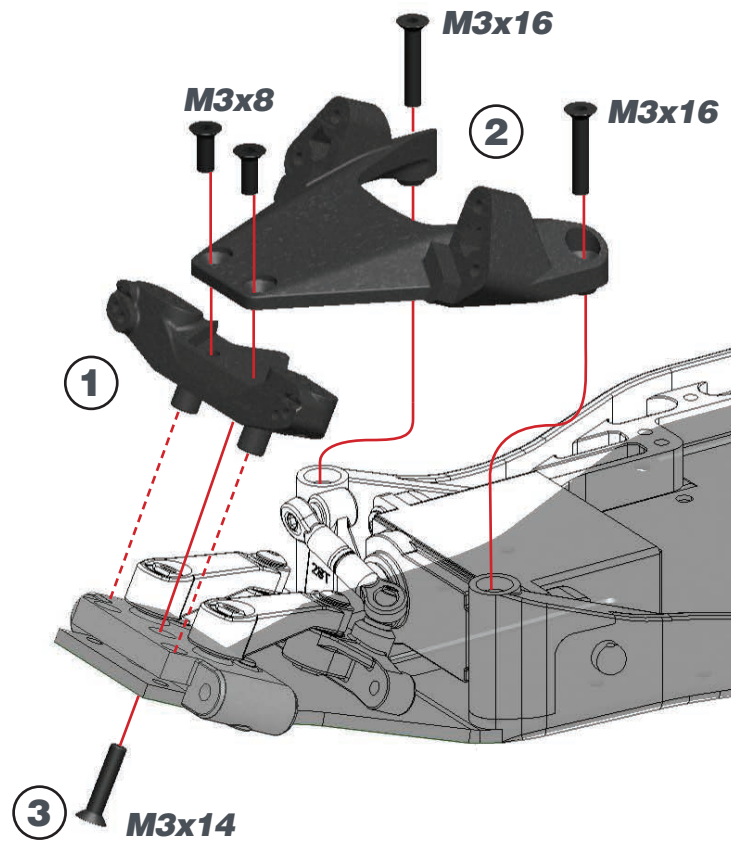
STEERING LINK LENGTH
The length may differ slightly per servo-brand.



7.3



STEP 8



STEP 9 BAG 3

9.1



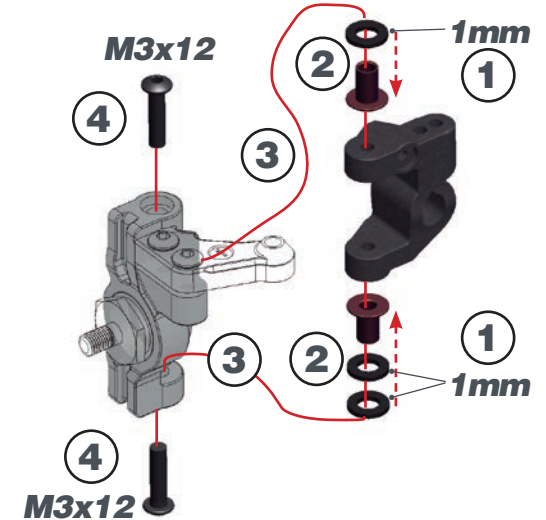
L-R STEERING ARMS CHART

MORE ACKERMANN ← → LESS ACKERMANN

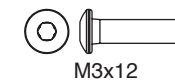
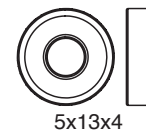
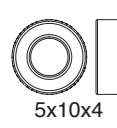
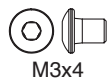
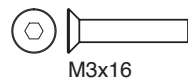
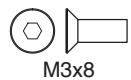
DEF. SETUP

9.2

! Place the caster shims and the bushings in the steering block first. Then slide the assembly onto the casterblock.



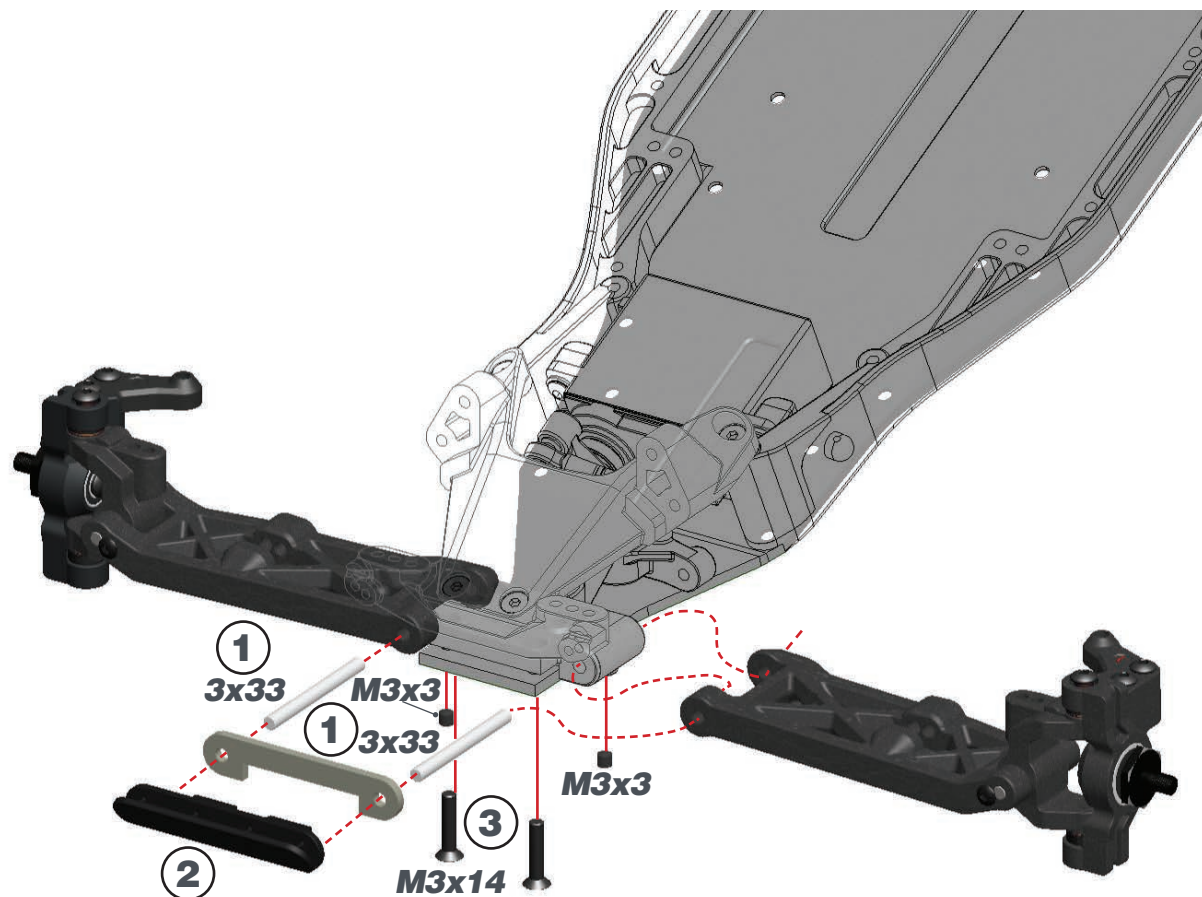
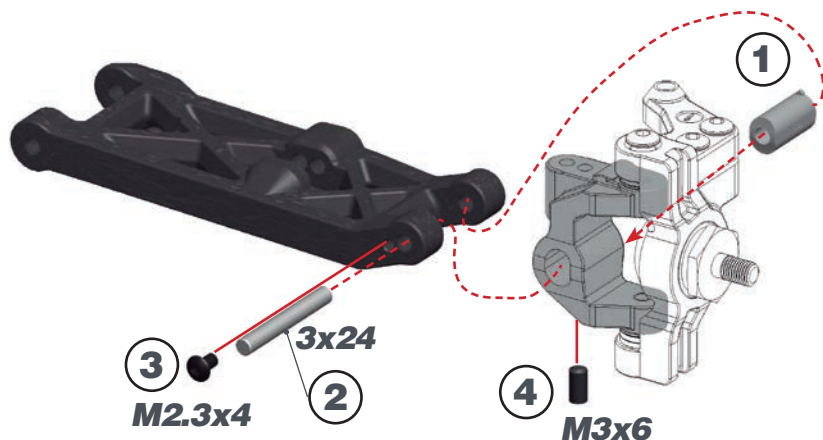
STEERINGBLOCK ASSEMBLY



STEP 10

BAG 4

STEP 11



L=R CASTER BLOCK INSERTS CHART

Front default caster angle is 25° using the 0° default insert. You can add or remove caster using the different inserts included in the kit.

It is possible to adjust the caster angle from 20° to 30° in 2.5° steps according to the chart shown below:

- Caster	
+ Caster	



STEP 12

12.1



L=R FRONT CAMBERLINK LENGTH

25 mm

DEF. SETUP

12.2

18.65mm

16.65mm

1

2

3

4

3X6X1

3X6X1

**CAMBERLINK OUTER
DEFAULT POSITION**

L=R

DEF. SETUP

BALLSTUD LENGTH

18.65mm

16.65mm

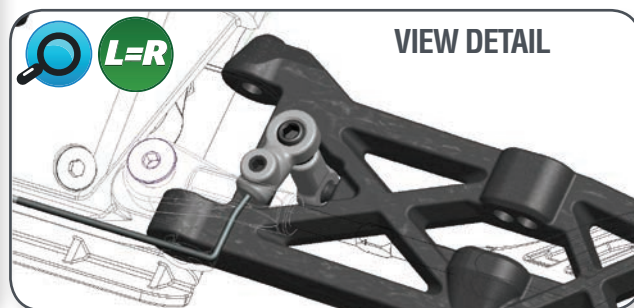
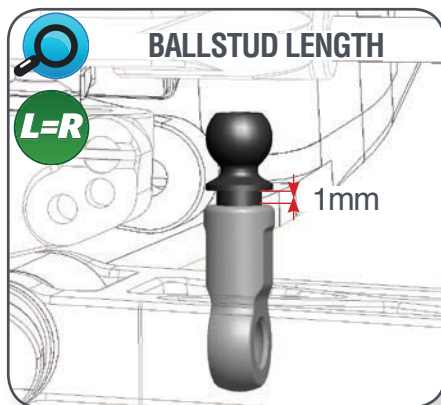
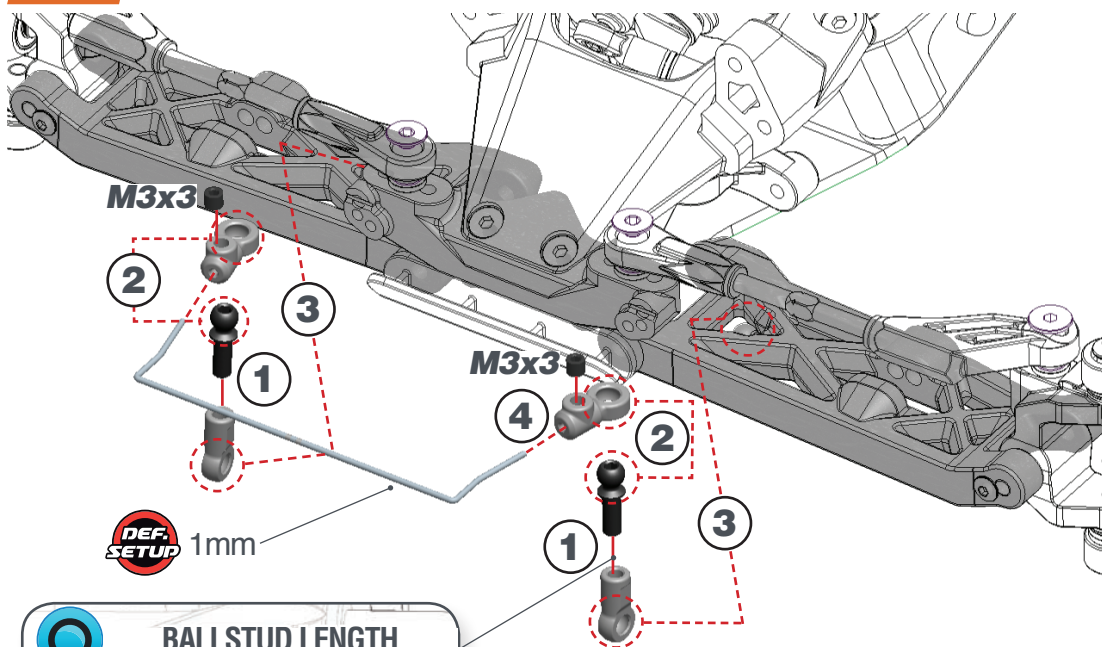
**L=R CAMBERLINK INNER
DEFAULT POSITION**

DEF. SETUP



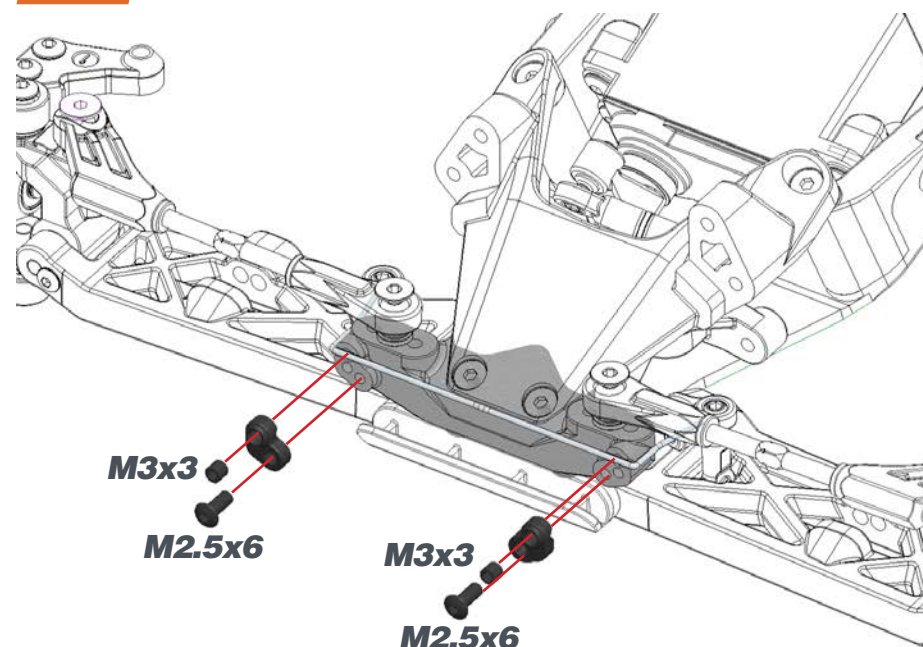
STEP 12

12.3



⊙ □
M3x3

12.4



⊙ □ ⊙ □
M3x3 M2.5x6

STEP 13

13.1



DEF. SETUP **STEERING TRACKROD LENGTH**

L=R

29.5 mm

13.2

15mm

3x6x1

3x6x1

16.65mm

BALLSTUD LENGTH

15mm

16.65mm



STEP 14

1

M3x20

M3x20

2 M3x10

2 M3x10

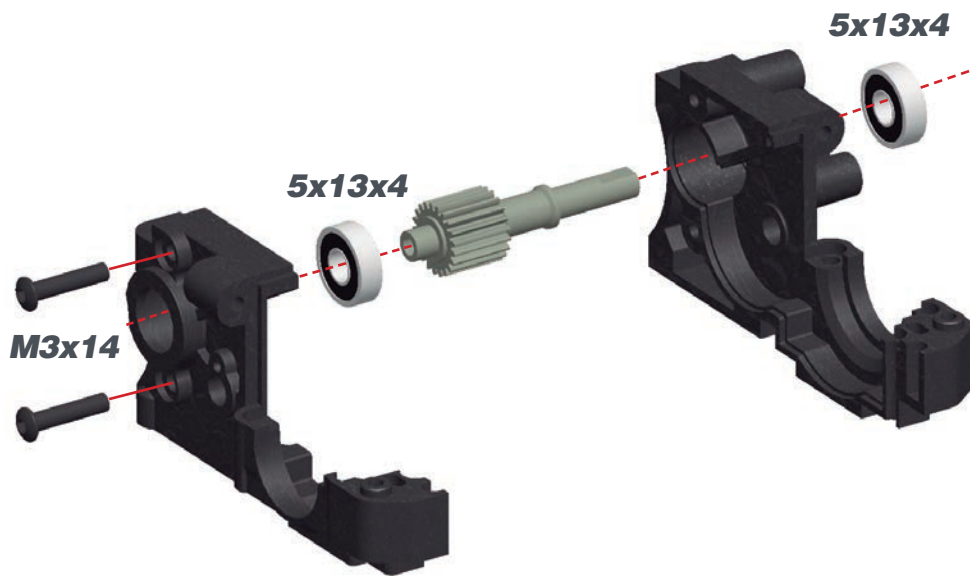
DEF. SETUP **L=R** **FRONT SHOCKS**
DEFAULT POSITION



STEP 15

BAG 5

STEP 16

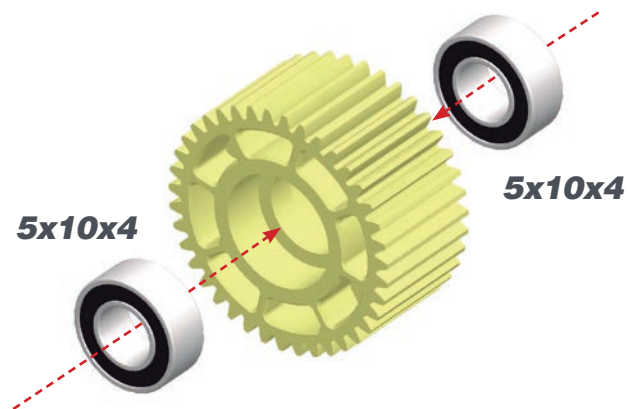


M3x14

5x13x4

5x13x4

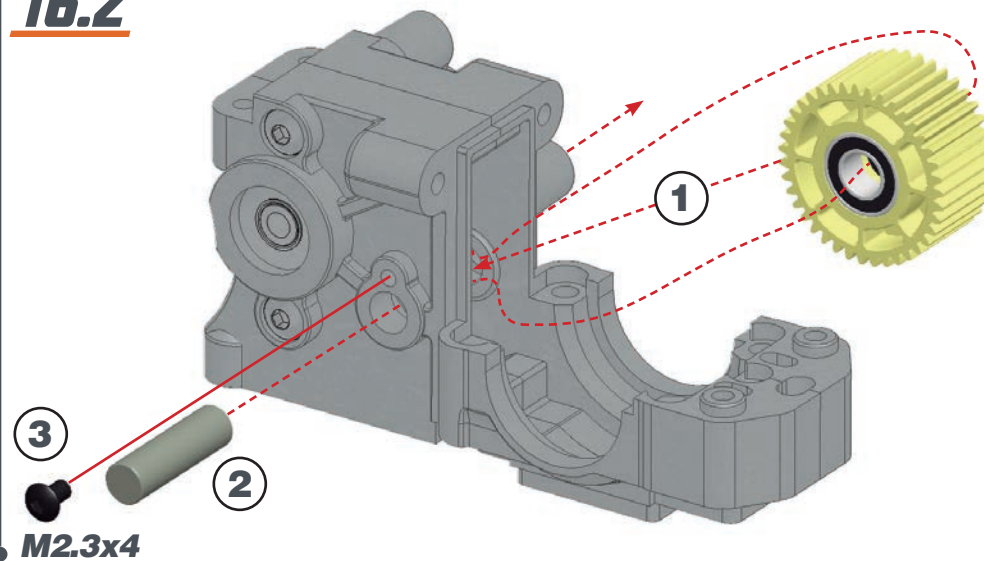
16.1



5x10x4

5x10x4

16.2

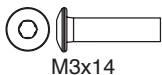


3

2

1

M2.3x4



M3x14



5x13x4

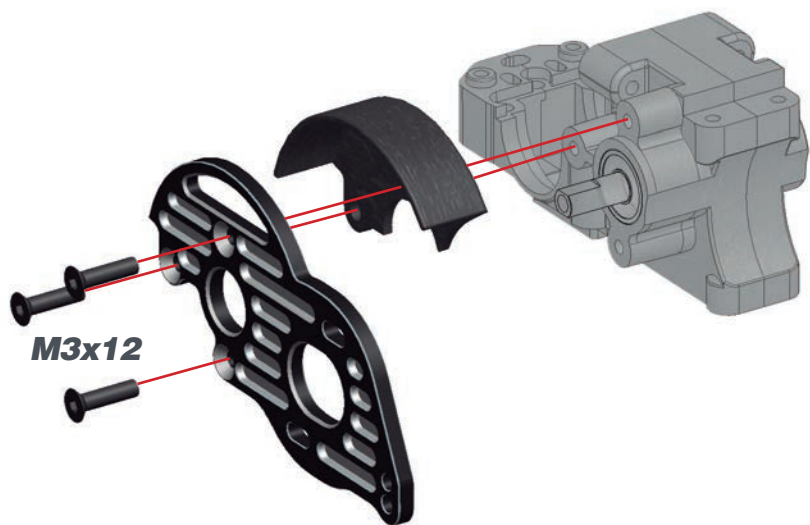


M2.3x4

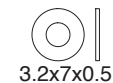
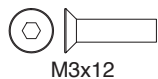
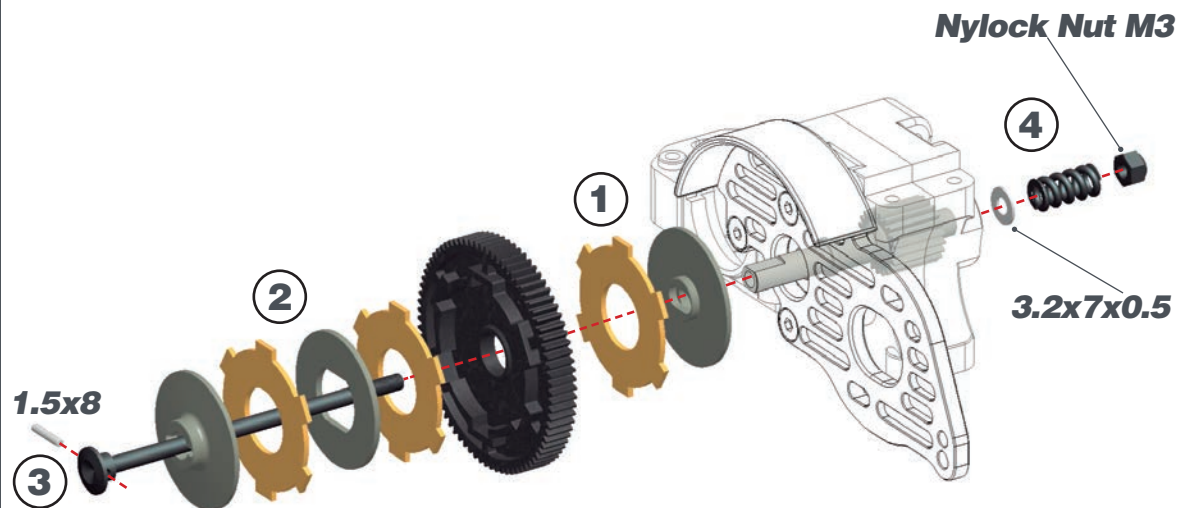


5x10x4

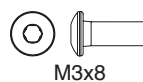
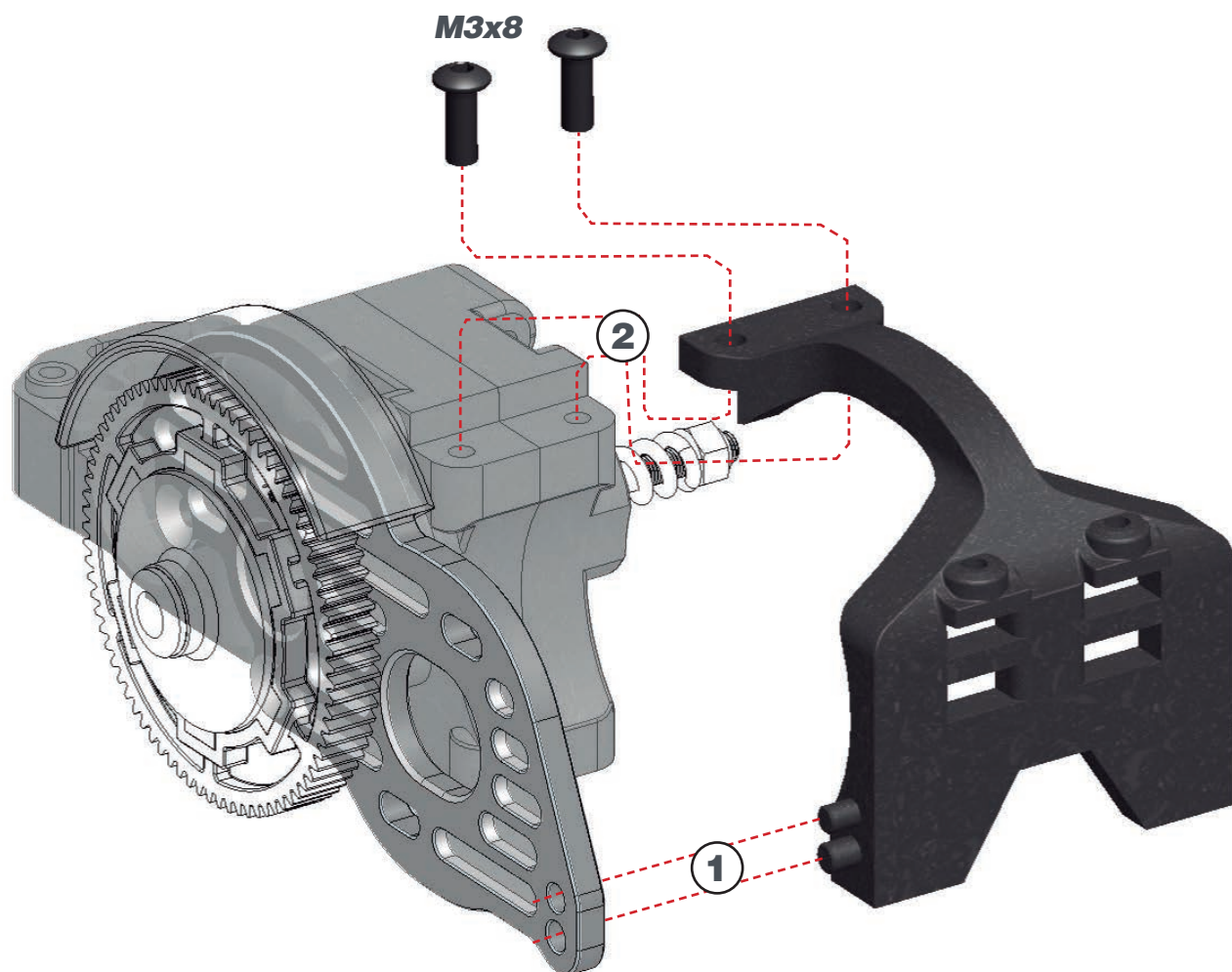
STEP 17



STEP 18

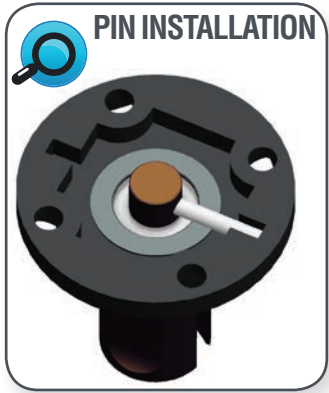
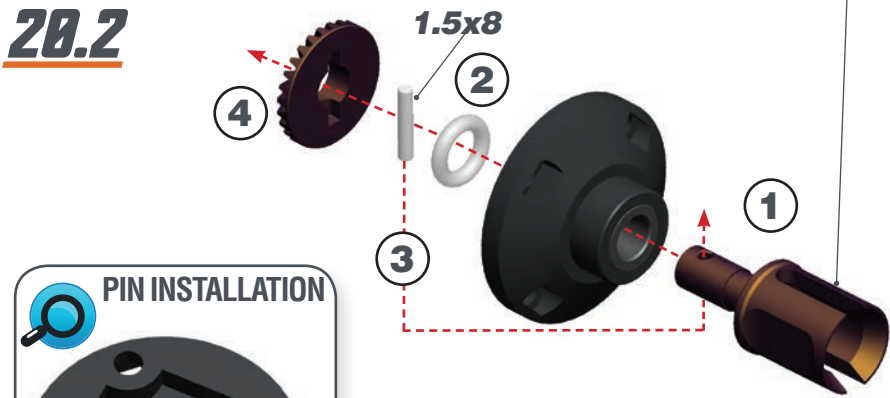
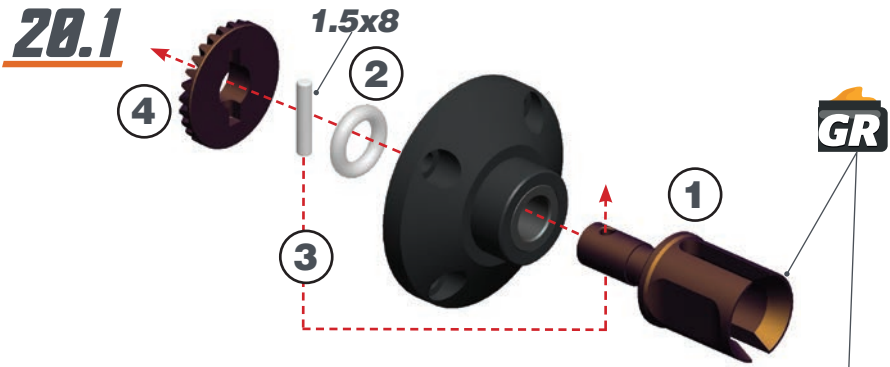


STEP 19

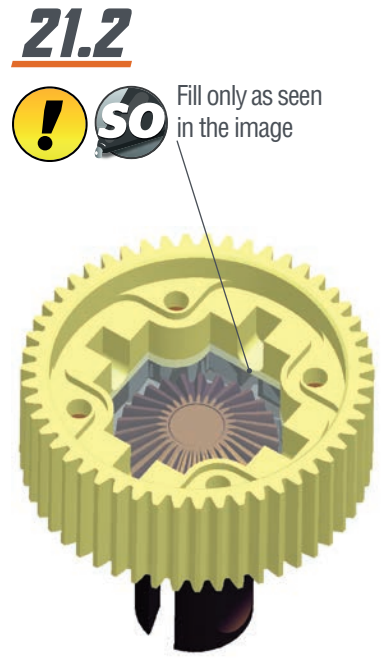
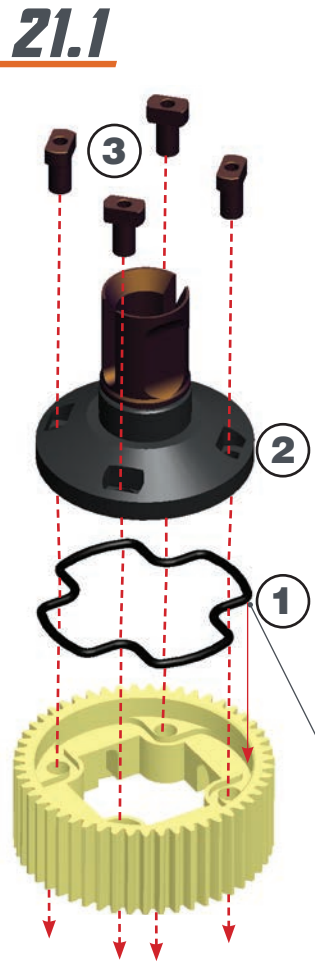


STEP 20 BAG 6

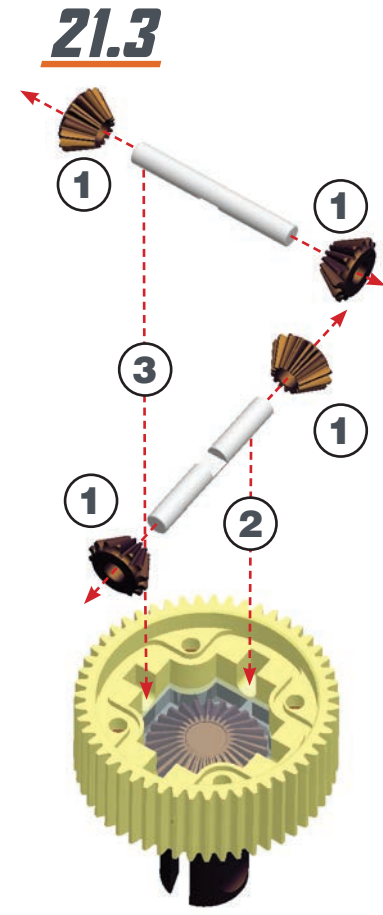
STEP 21



1.5x8

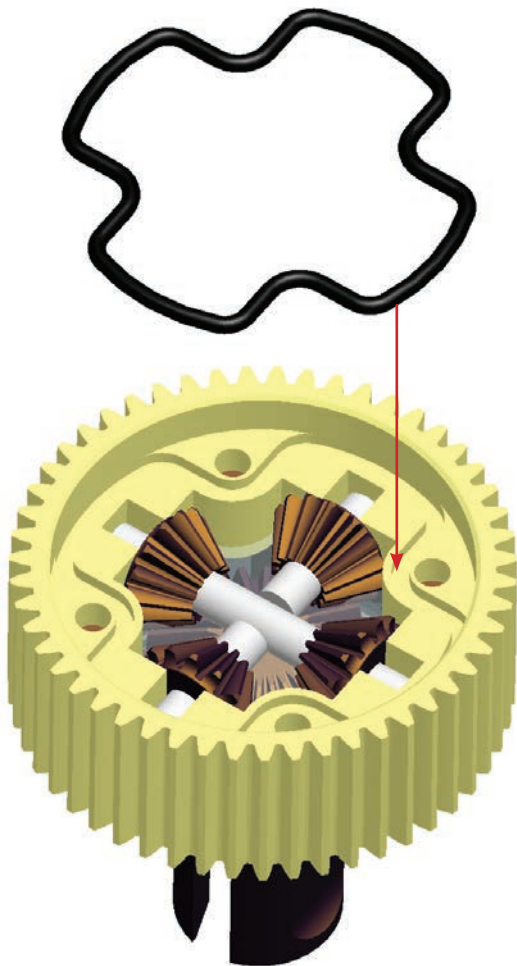


! Please insert o-ring in the crown groove first



STEP 22

22.1



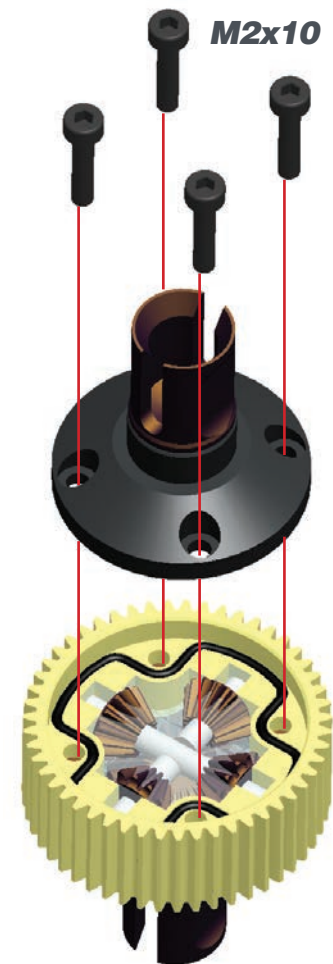
22.2



Finish filling to the brim

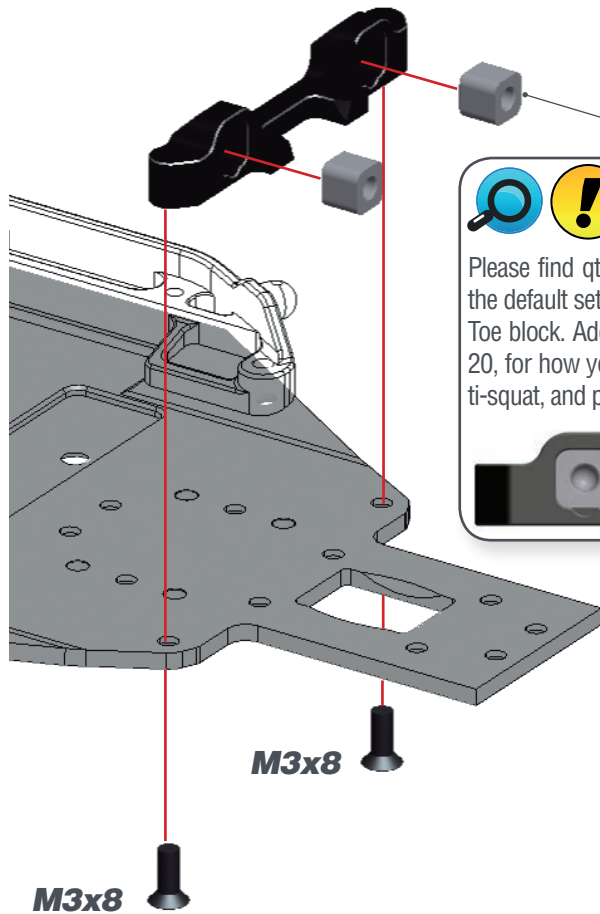


STEP 23



M2x10

STEP 24 BAG 7



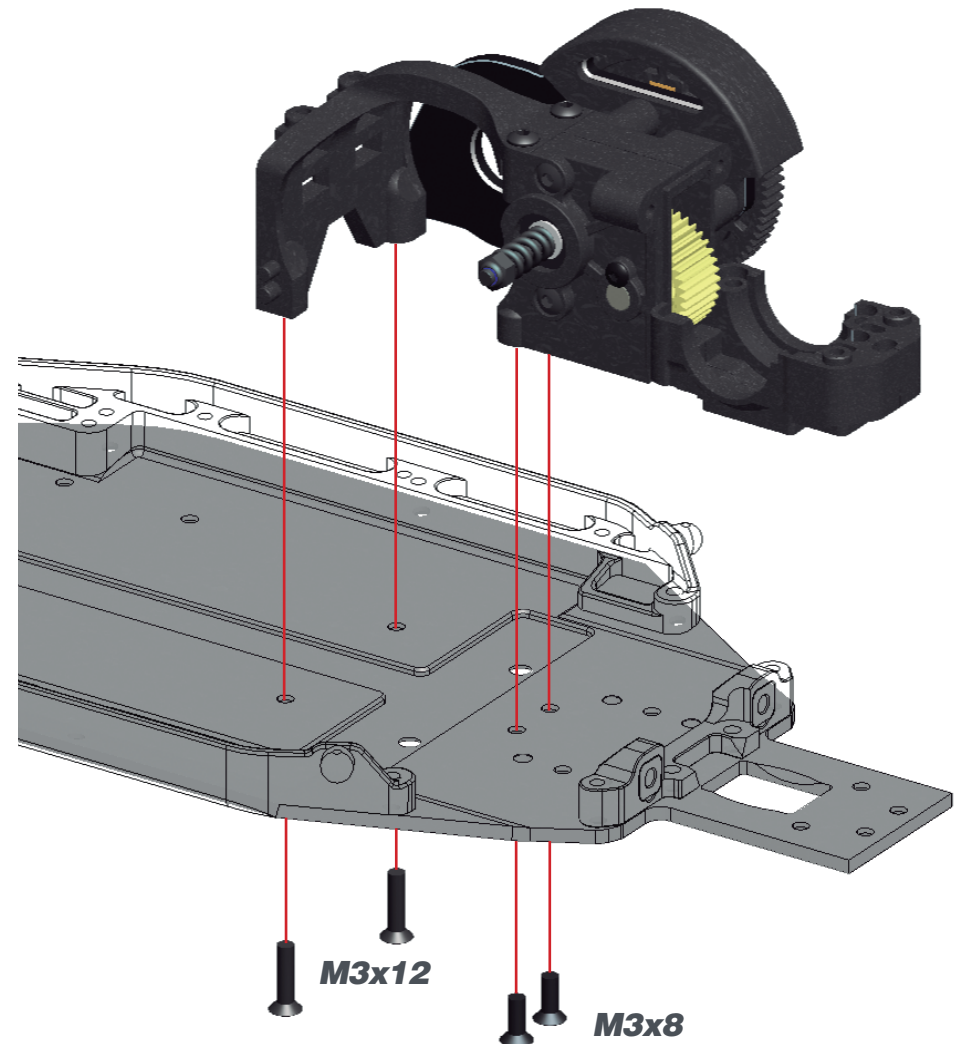
SUSPENSION INSERTS

Please find qty. 2 Centered Inserts. These 0 inserts are the default setup and should be installed into this RR FR Toe block. Additional information can be found on page 20, for how you can use the inserts to adjust toe-in, anti-squat, and pivot width.



M3x8

STEP 25

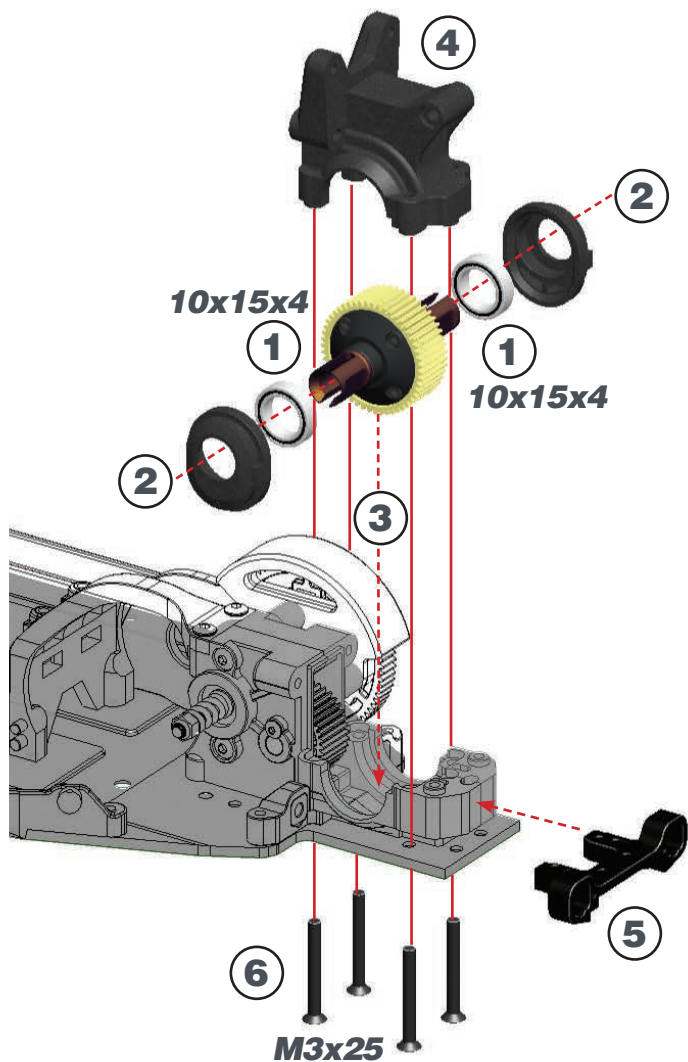


M3x8

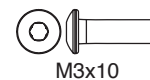
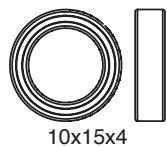
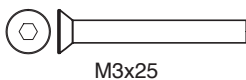
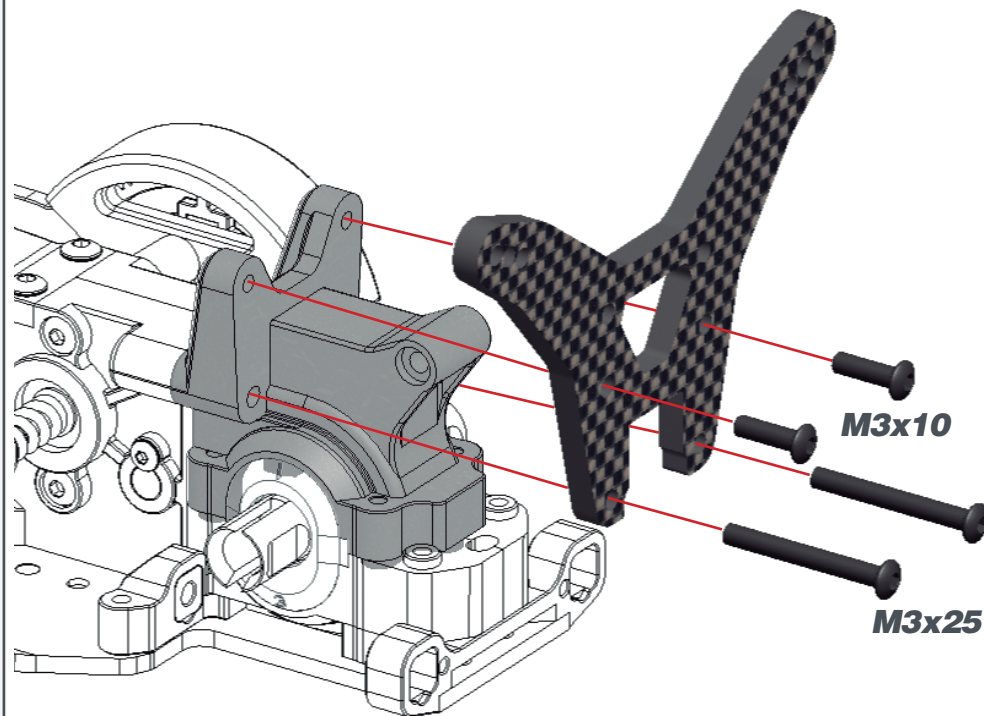


M3x12

STEP 26



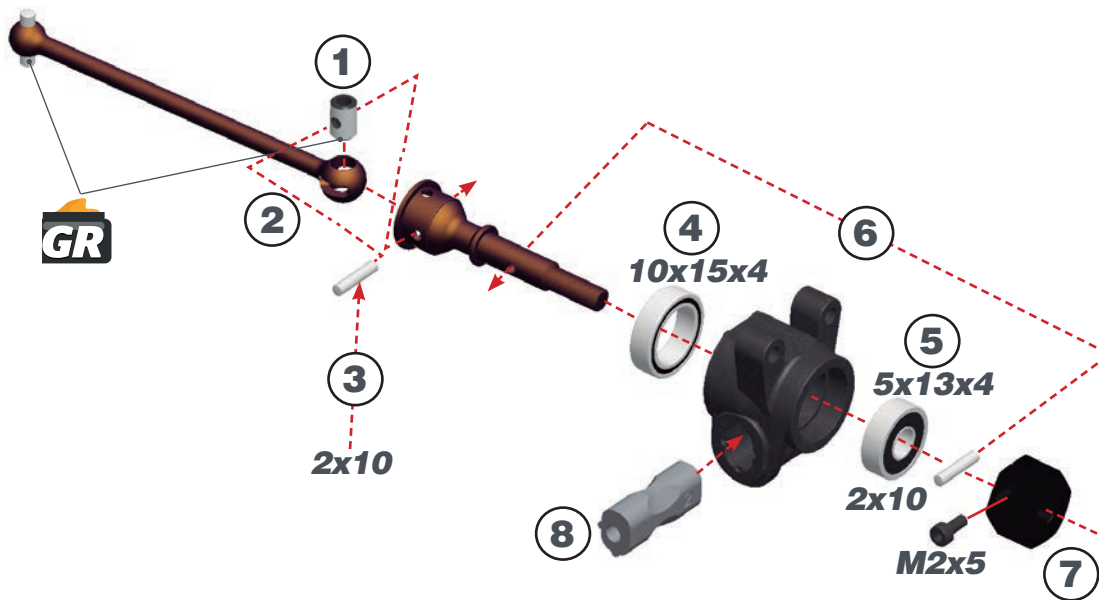
STEP 27



STEP 28

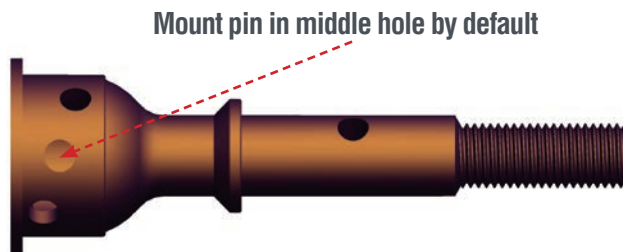
BAG 8

L=R



L=R REAR WHEEL-AXLE PIN FOR DRIVESHAFT POSITION

The axle has 3 pivoting choices. The shallowest hole will provide more chassis roll / less roll stiffness. The deepest hole will reduce chassis roll / increase roll stiffness. The center hole is recommended as its neutral.



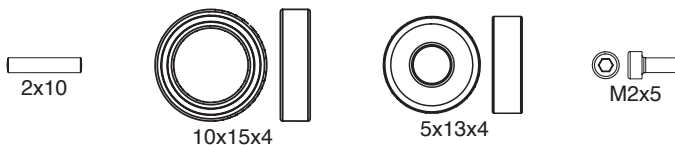
L=R REAR AXLE HEIGHT AND OFFSET INSERTS

Wide Offset		Narrow			
L	R	L	R		
		0mm	0mm		
		0.5mm	0.5mm		
		1mm	1mm		
		1.5mm	1.5mm		
		2mm	2mm		
		2.5mm	2.5mm		
		3mm	3mm		

DEF. SETUP

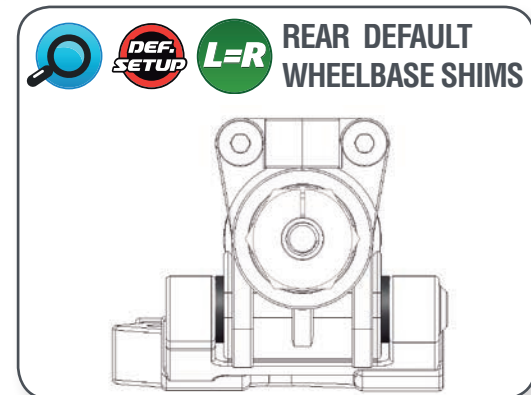
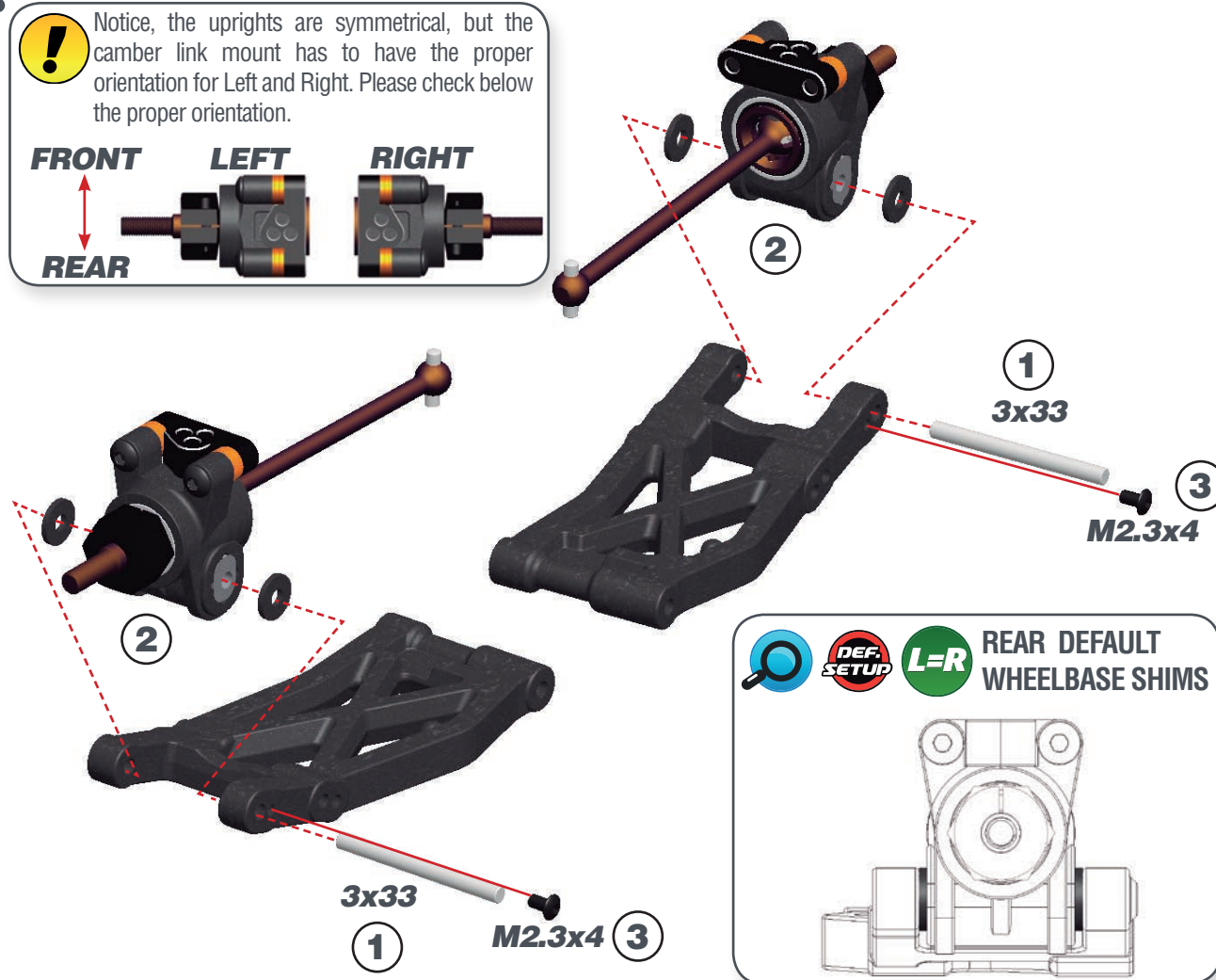
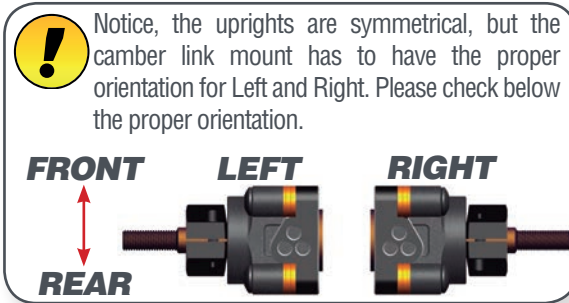
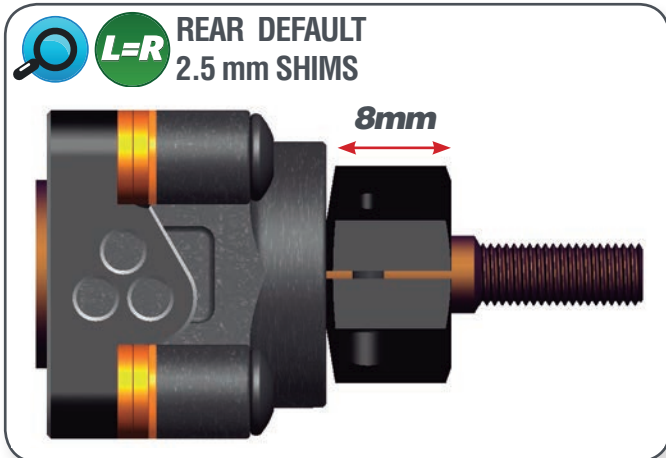
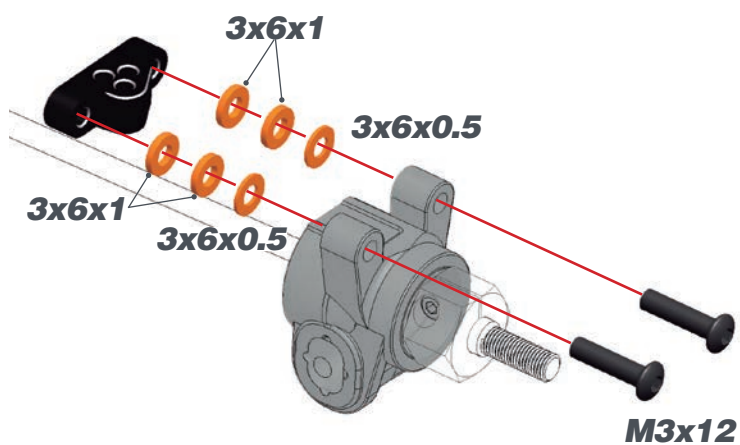
1) The axle height adjustment will give you the ability to adjust the roll center for various traction conditions. Typically in lower grip, you will run 0,+0.5,1 or 1.5mm / lower roll centers. In higher grip conditions you will want to use +2,2.5,3mm / higher roll centers.

2) The width offset will give you more versatility to adjust the track width, axle location and hex width. Especially useful when using Longer rear arm.

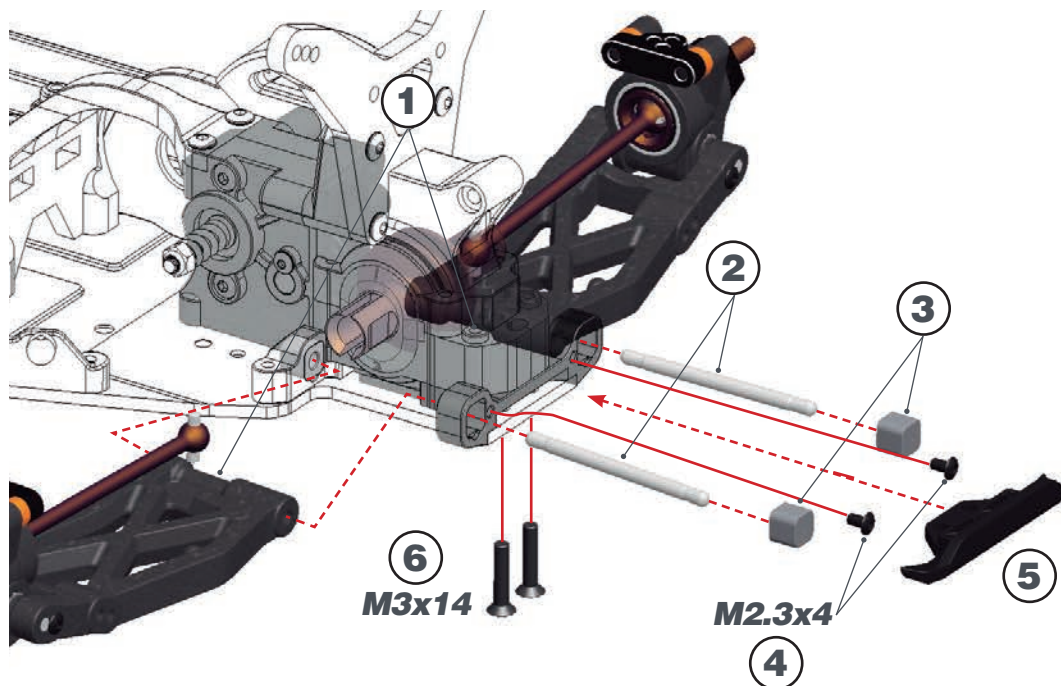


STEP 29

STEP 30 BAG 9

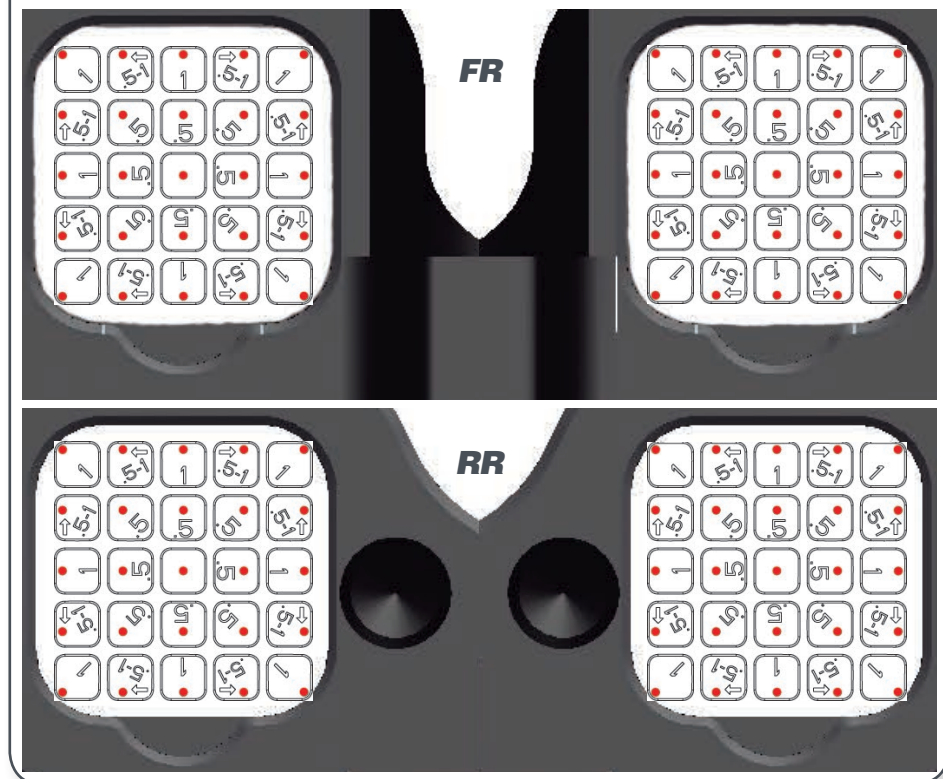


STEP 31



L=R SUSPENSION INSERTS

Below is a diagram of every possible orientation of the complete 7 inserts system. You are able to move 0.5 or 1 degree in any direction from center. We also have 2 special inserts to fill 0.5° left and right offset, by 1° height, as seen in the diagram. Depending on your setup, the range of toe in is 1°, up to 5°. The anti squat range is -1 (pro Squat) up to 3° anti-squat. The default is centered inserts in both the FR FR toe block and RR RR toe block. This produces 3° toe in and 1° anti squat.



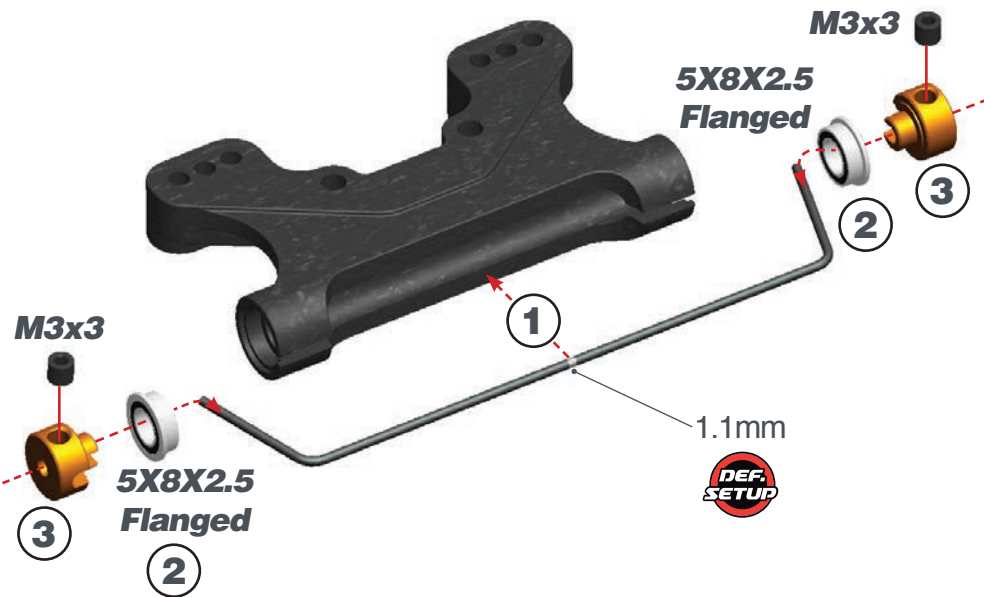
SIMPLIFIED EXPLANATION OF SUSPENSION INSERTS

Example A: RR FR toe block inserts are 0°, RR RR toe block inserts are also 0°. This instance will produce 3° toe in and 1° anti-squat. This is default setting.
 Example B: RR FR toe block inserts have been changed to centered 0.5° UP. The inserts in the RR RR toe block remain 0°. This will produce 3° toe in and 1.5° anti-squat.
 Example C: RR FR toe block inserts remain 0°. The RR RR toe block inserts have been changed to 0.5° centered inward. This will product 2.5° toe in and 1° anti-squat.

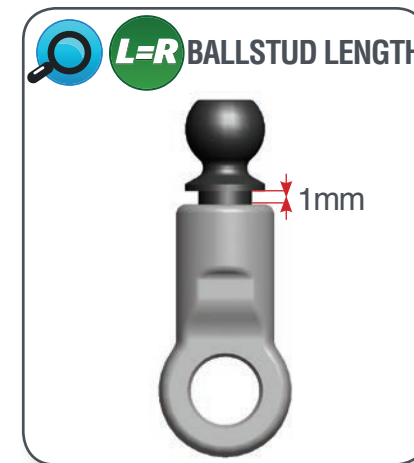
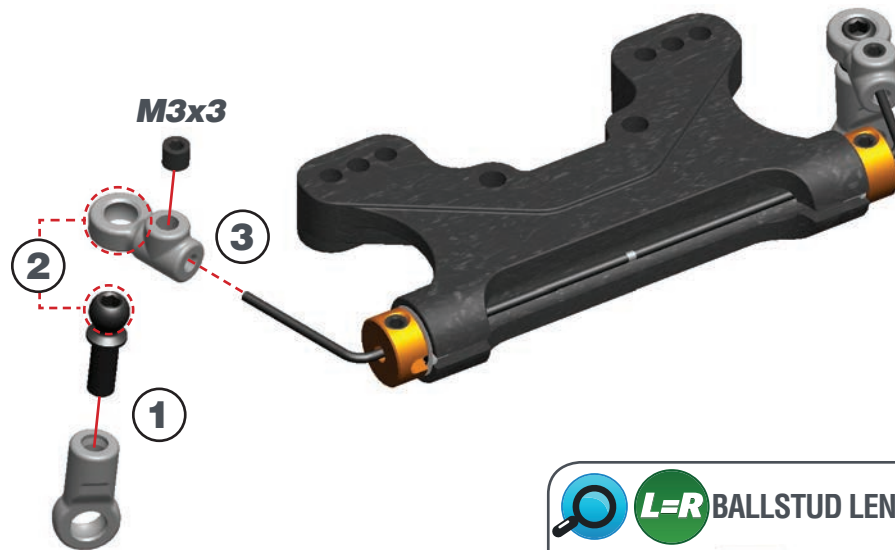


STEP 32

32.1

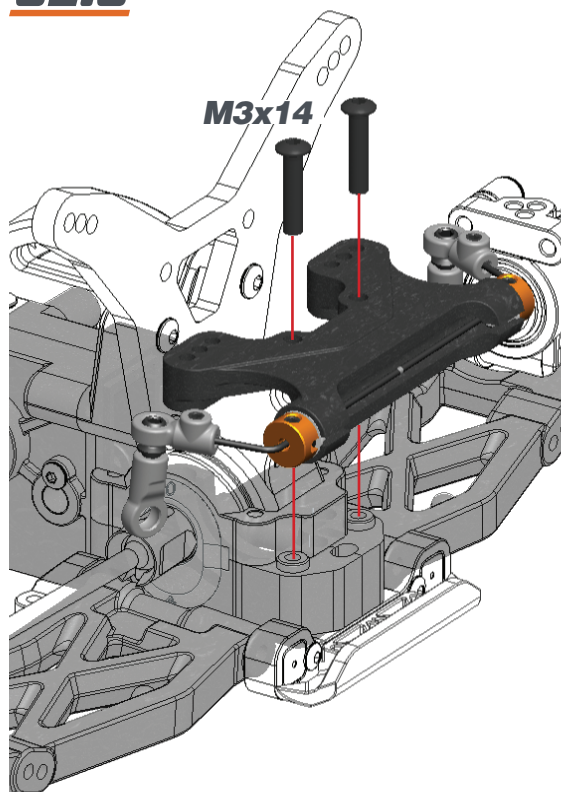


32.2

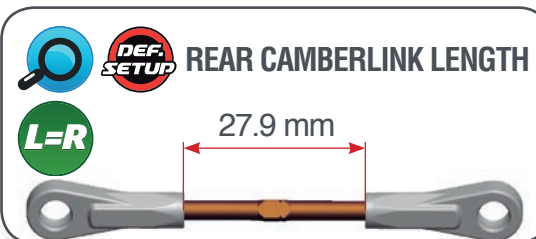


STEP 33

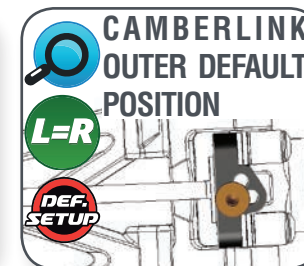
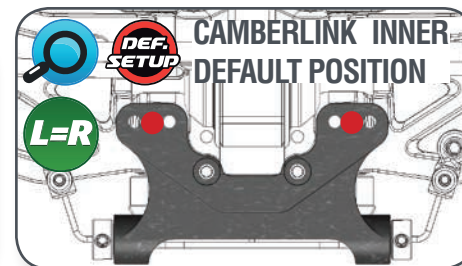
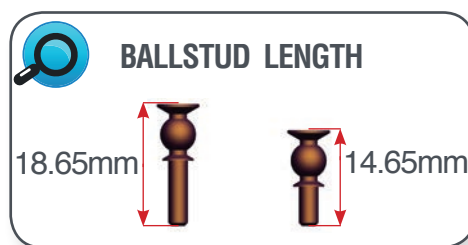
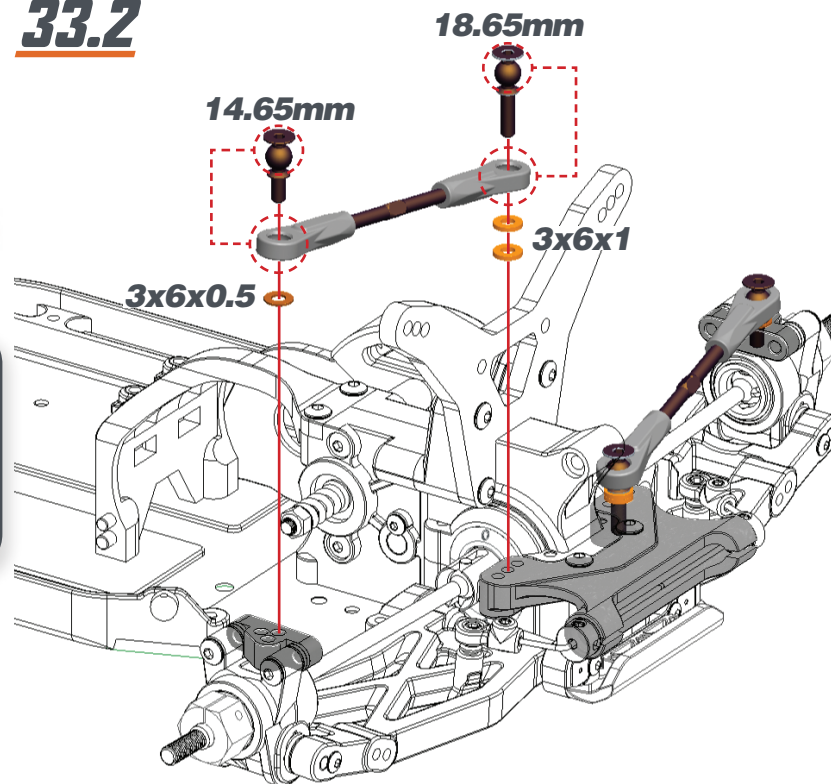
32.3



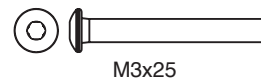
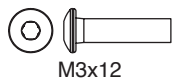
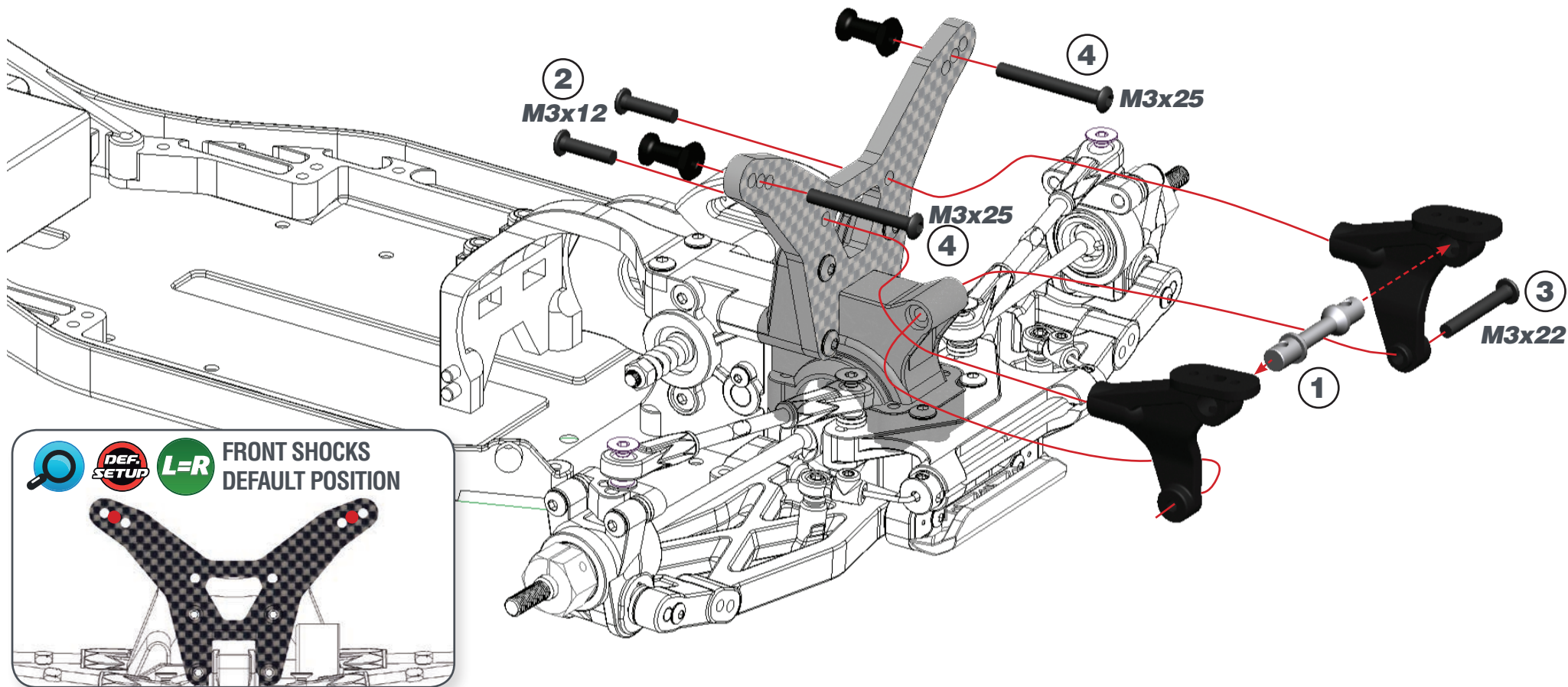
33.1



33.2



STEP 34

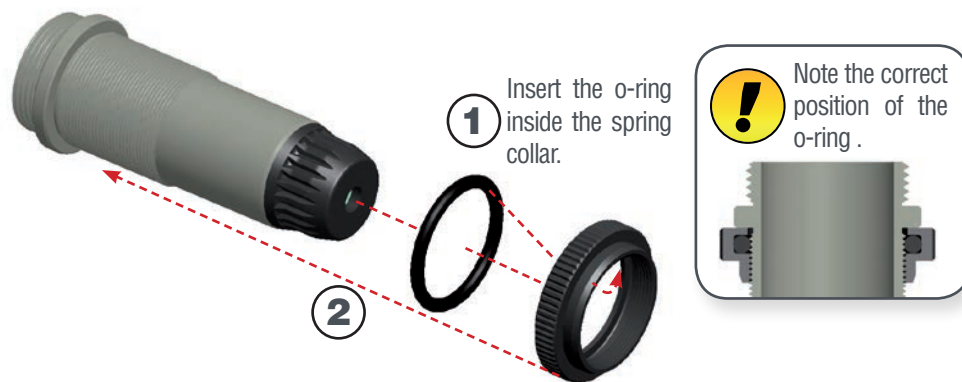


STEP 35 BAG 10 FR SHOCKS / BAG 11 RR SHOCKS / STEP 36

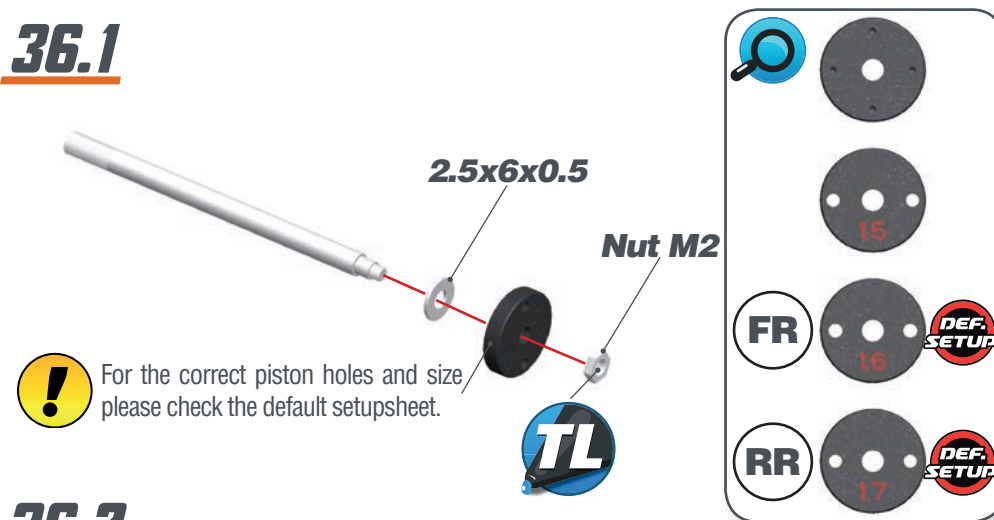
35.1



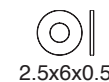
35.2



36.1



36.2



STEP 37

37.1

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

2- Extend the shockrod fully

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

4- Apply the gasket and cap and close fully.



37.2

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

2- With shockrod fully in, mount the o-ring and screw.

M2.3x4



SHOCKS LENGTH: Measure the shock length fully extended.

FRONT REAR

23.5 mm

28 mm

STEP 38

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



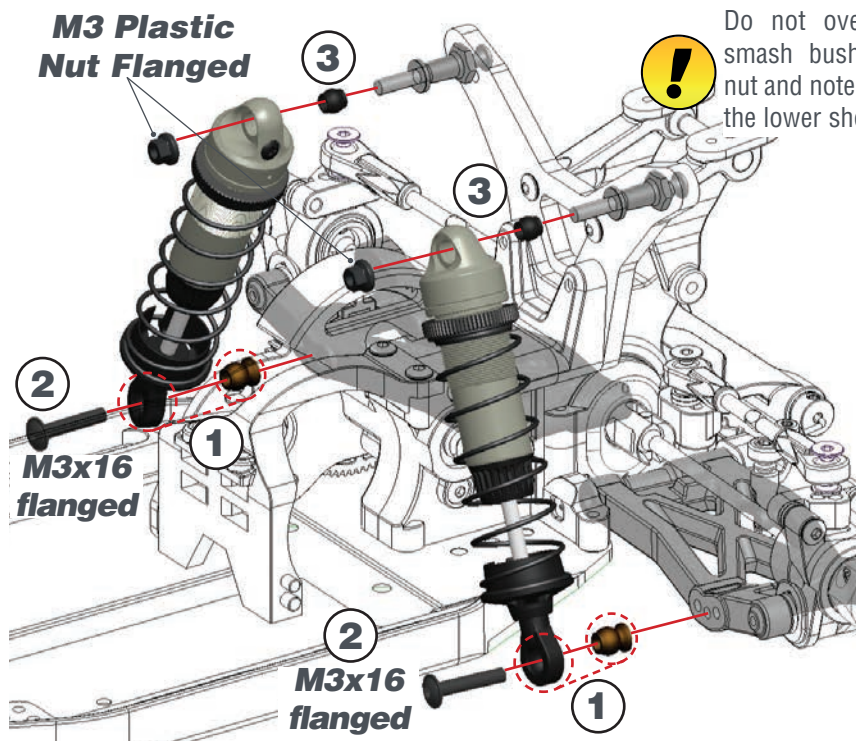
SPRINGS CUPS

FRONT HIGH REAR LOW

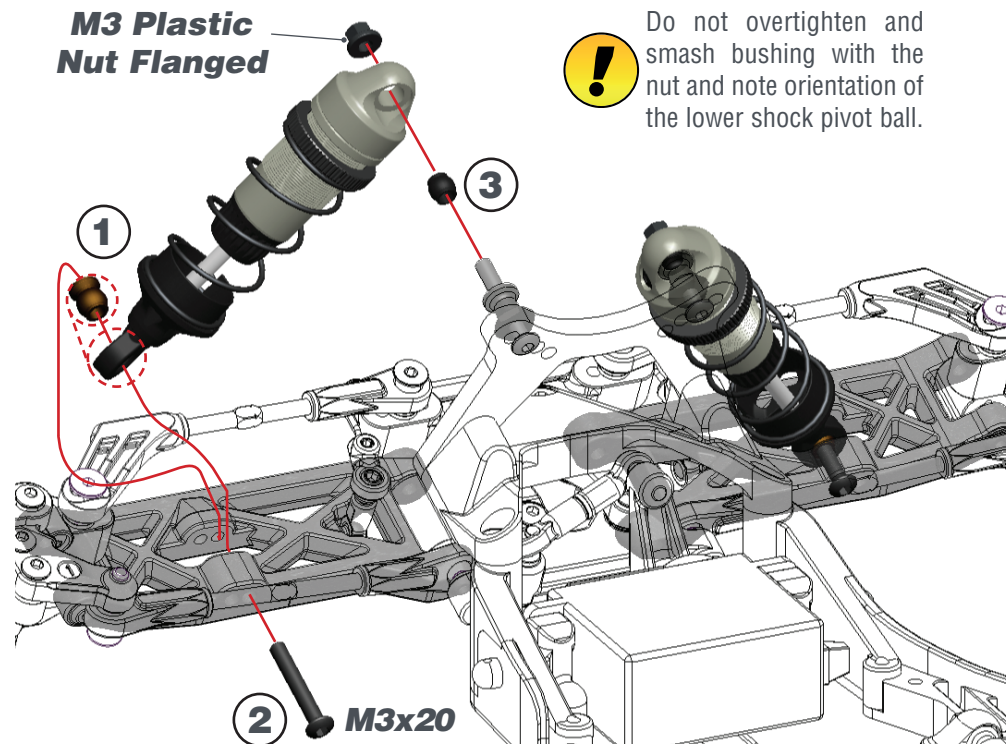
STEP 39

BAG 12

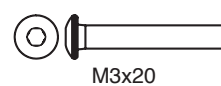
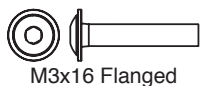
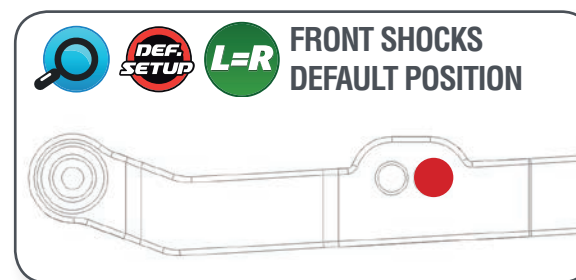
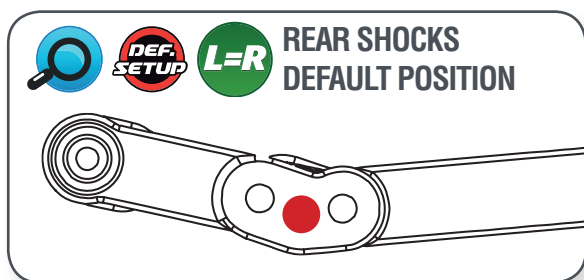
STEP 40



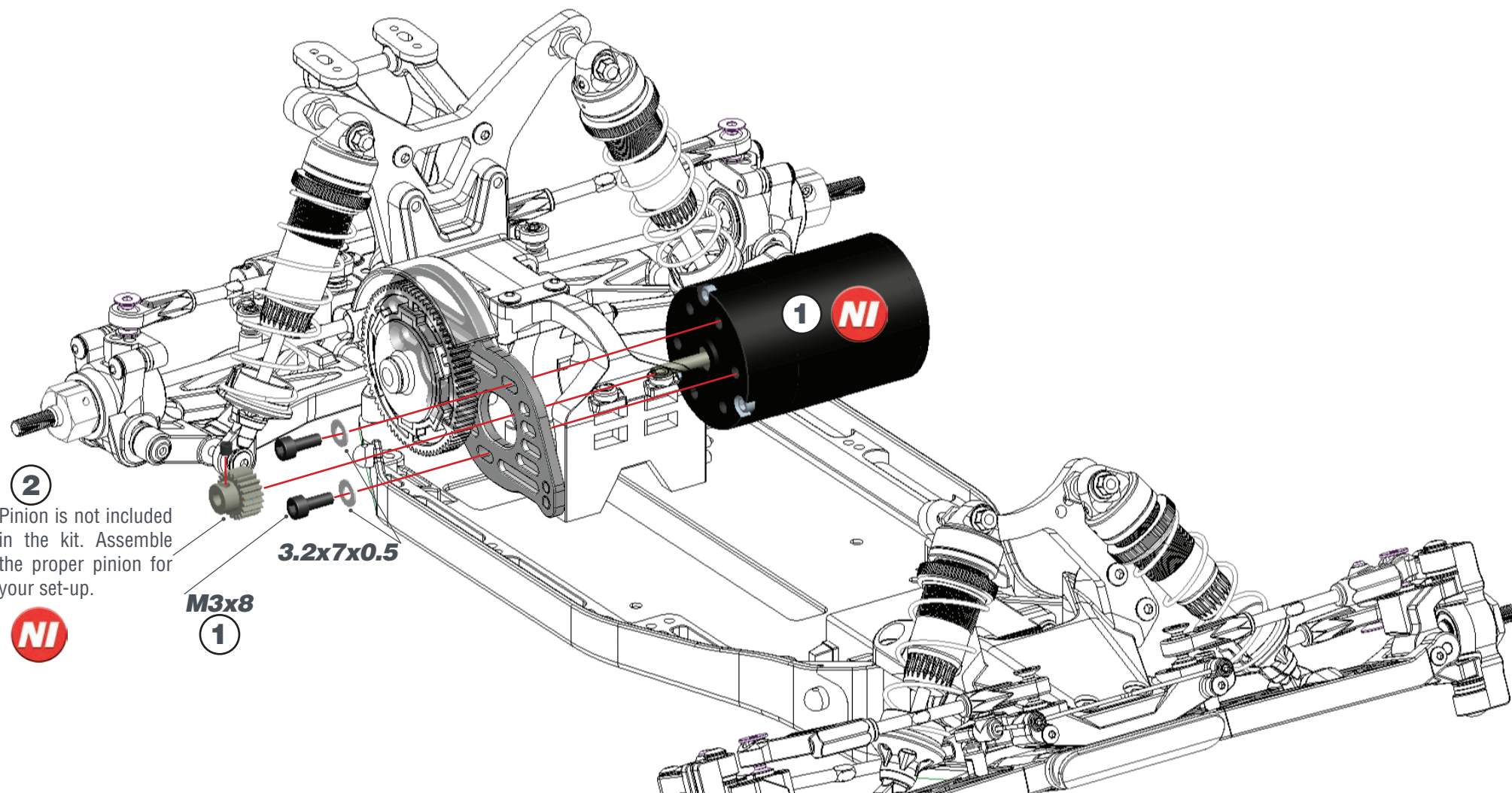
Do not overtighten and smash bushing with the nut and note orientation of the lower shock pivot ball.



Do not overtighten and smash bushing with the nut and note orientation of the lower shock pivot ball.



STEP 41



②
Pinion is not included
in the kit. Assemble
the proper pinion for
your set-up.



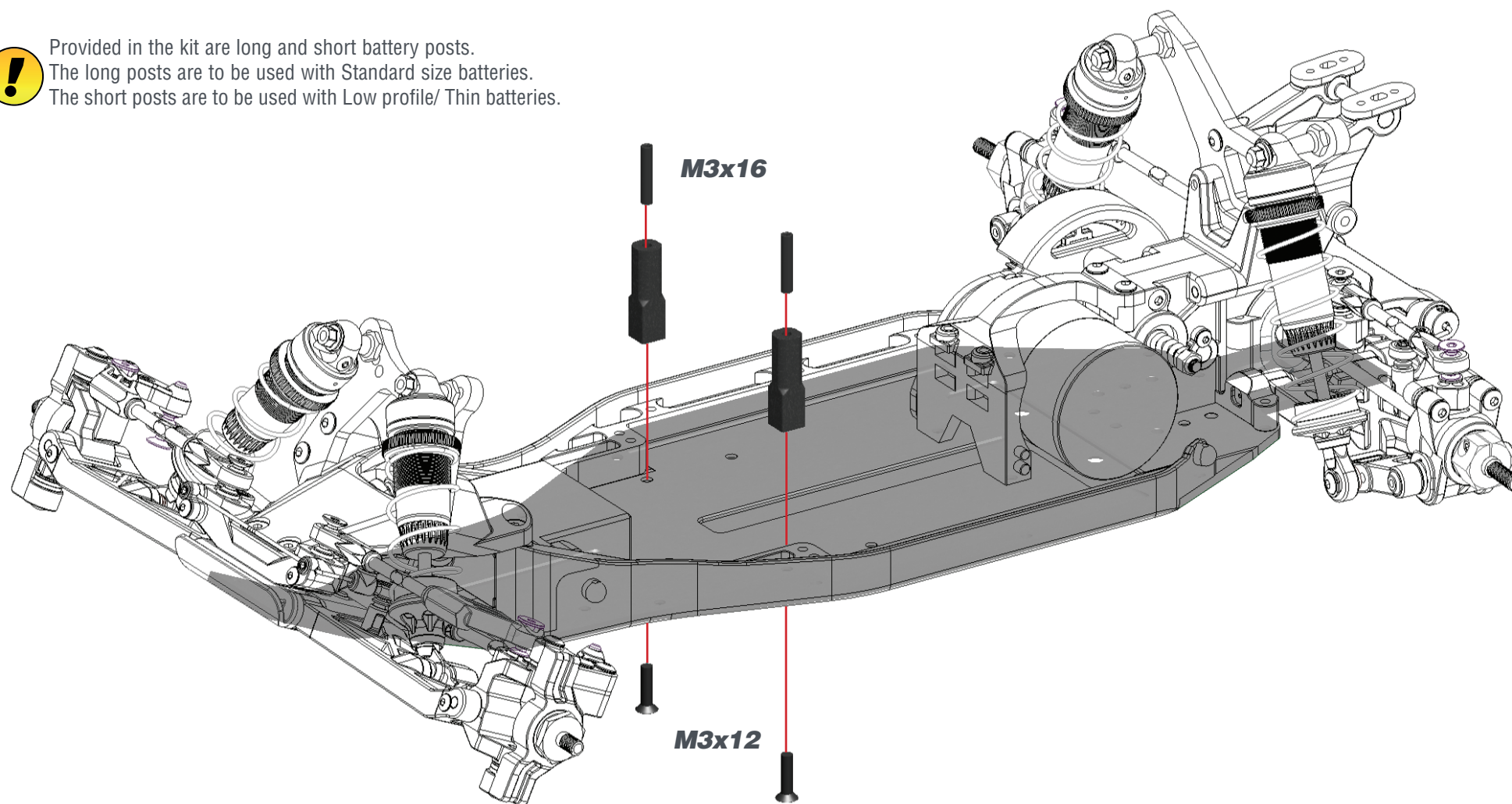
M3x8
①

3.2x7x0.5

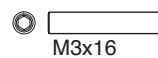


STEP 42

Provided in the kit are long and short battery posts.
The long posts are to be used with Standard size batteries.
The short posts are to be used with Low profile/ Thin batteries.



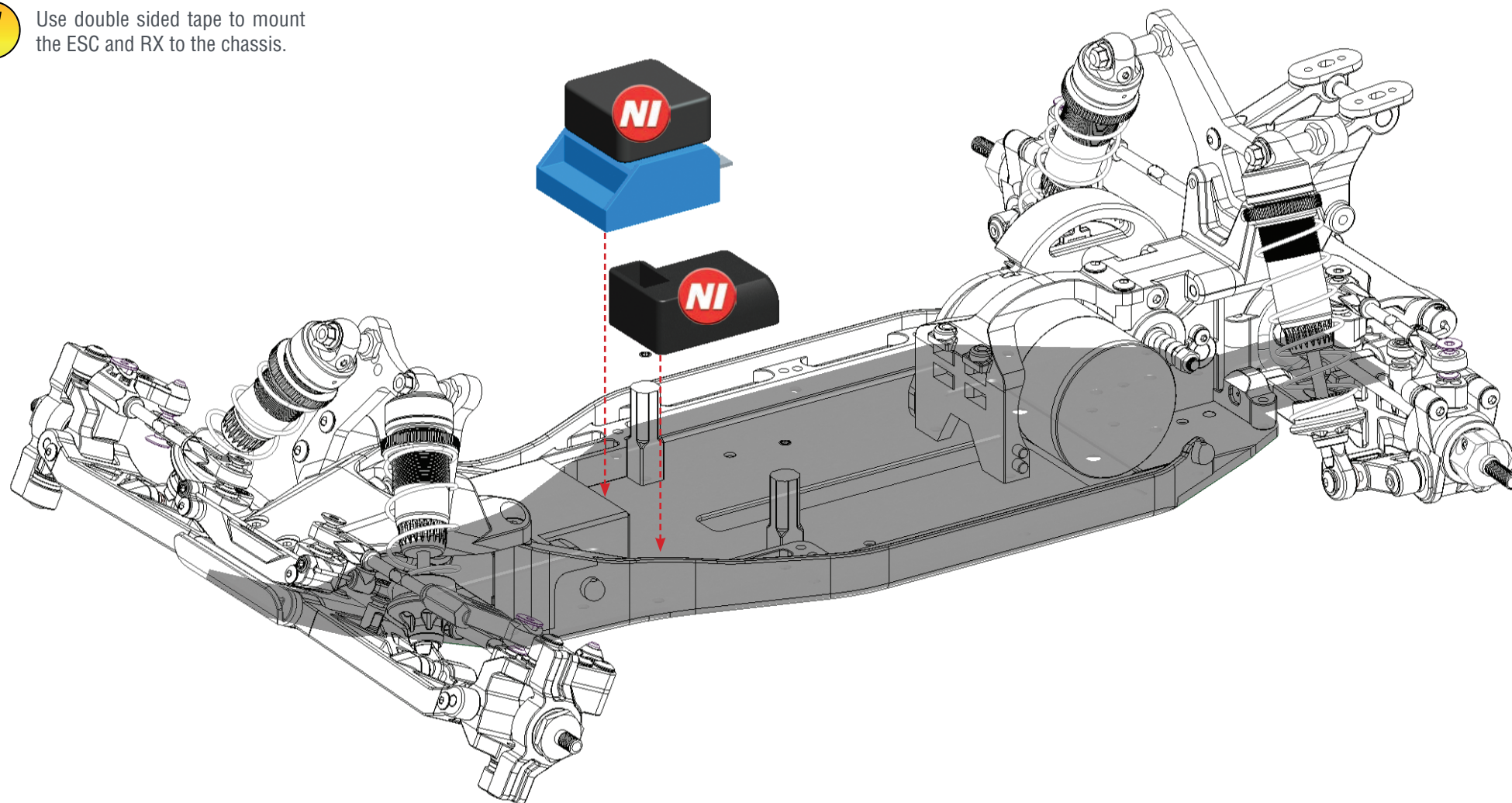
M3x12




M3x16

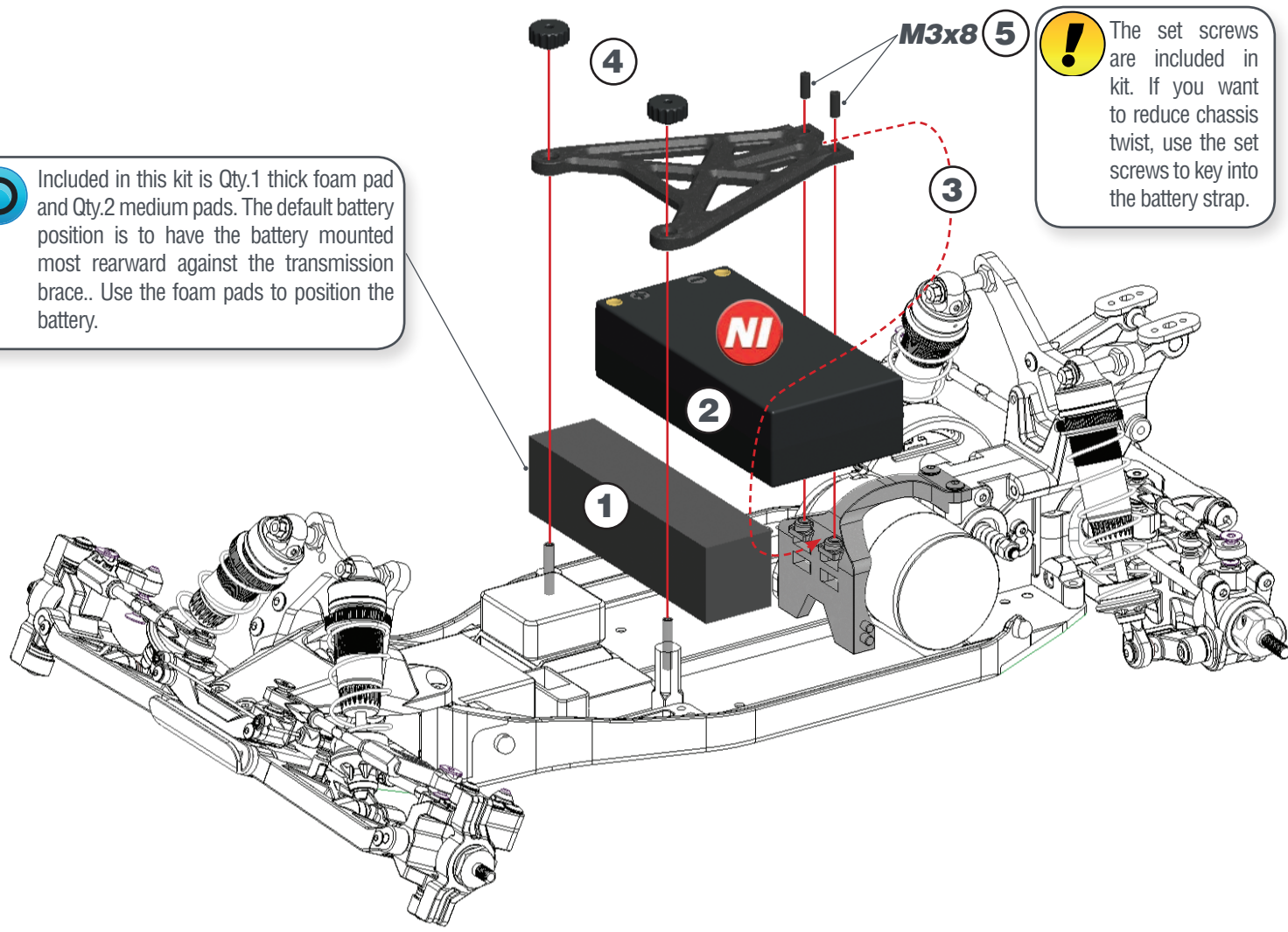
STEP 43


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



STEP 44

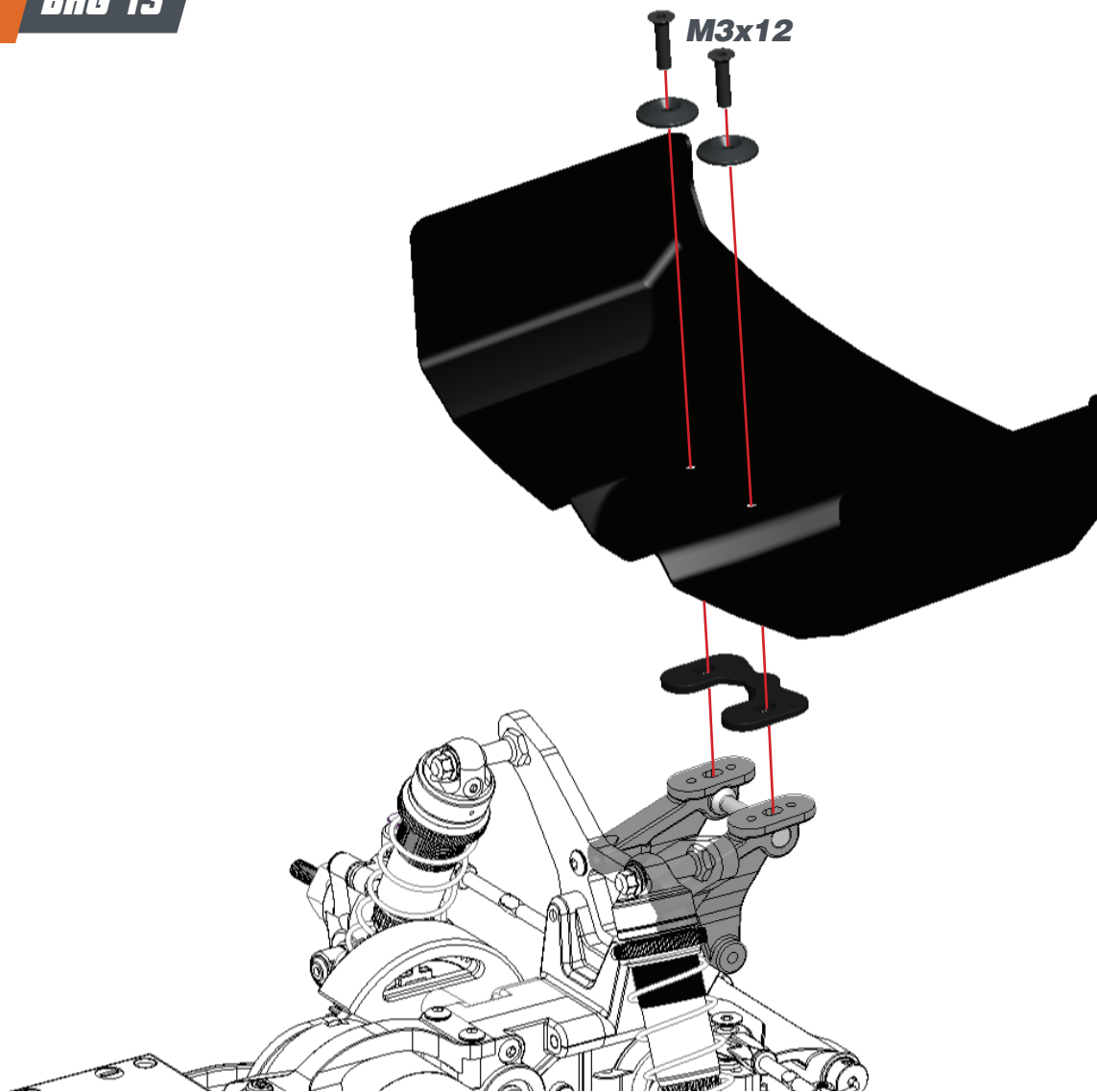
 Included in this kit is Qty.1 thick foam pad and Qty.2 medium pads. The default battery position is to have the battery mounted most rearward against the transmission brace.. Use the foam pads to position the battery.



 The set screws are included in kit. If you want to reduce chassis twist, use the set screws to key into the battery strap.

 M3x8

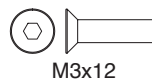
STEP 45 **BAG 13**



ANGLED WING SPACERS CHART

0°		
2°		DEF. SETUP
4°		
6°		
8°		

FRONT ↔ **REAR**

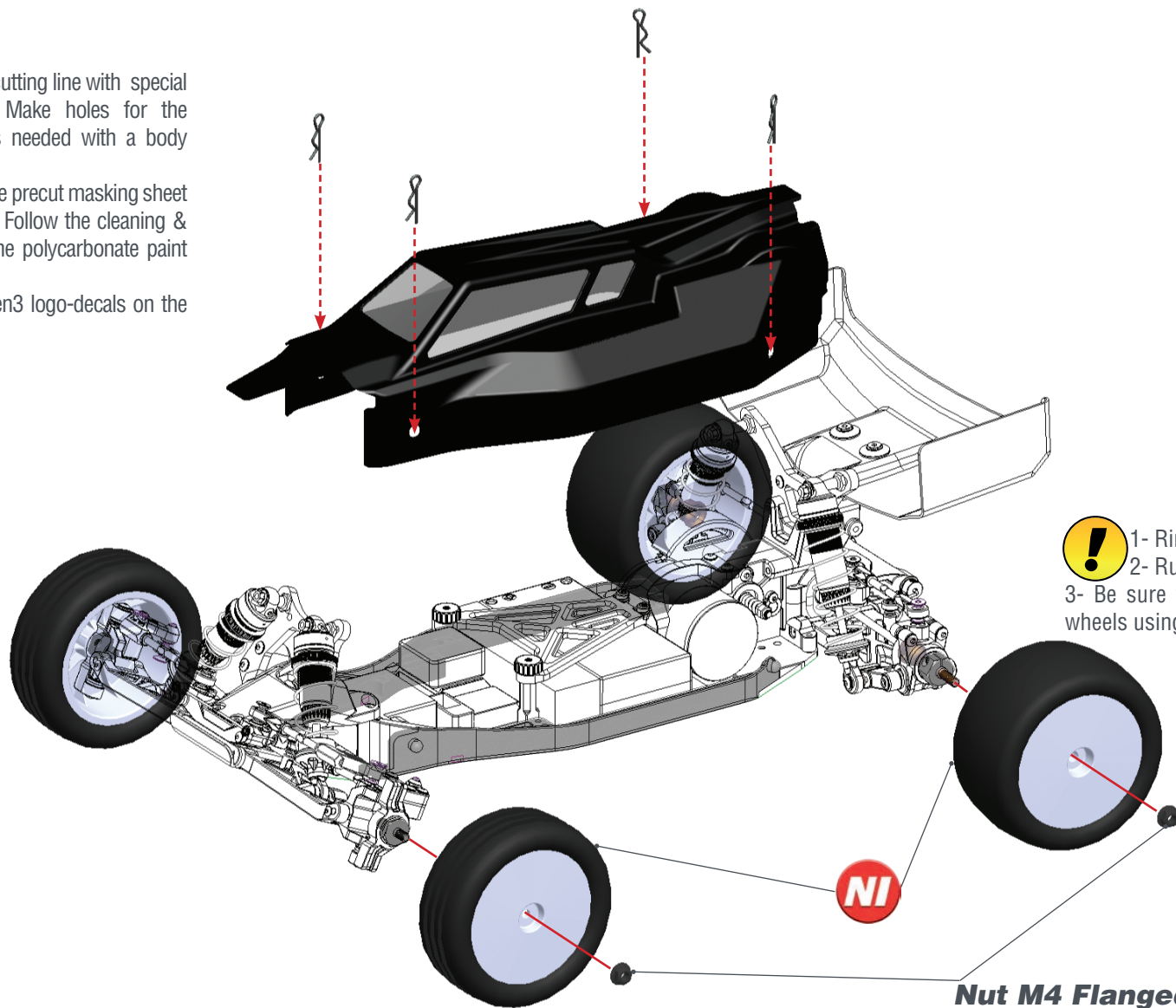


STEP 46

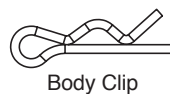
! 1- Cut the body along the cutting line with special scissors (not included). Make holes for the bodypost and antenna as needed with a body reamer (not included).

2- Before painting the body, apply the precut masking sheet elements to the inside of the body. Follow the cleaning & painting instructions supplied by the polycarbonate paint supplier you choose.

3- Apply the Serpent and SRX2-Gen3 logo-decals on the body and wing.

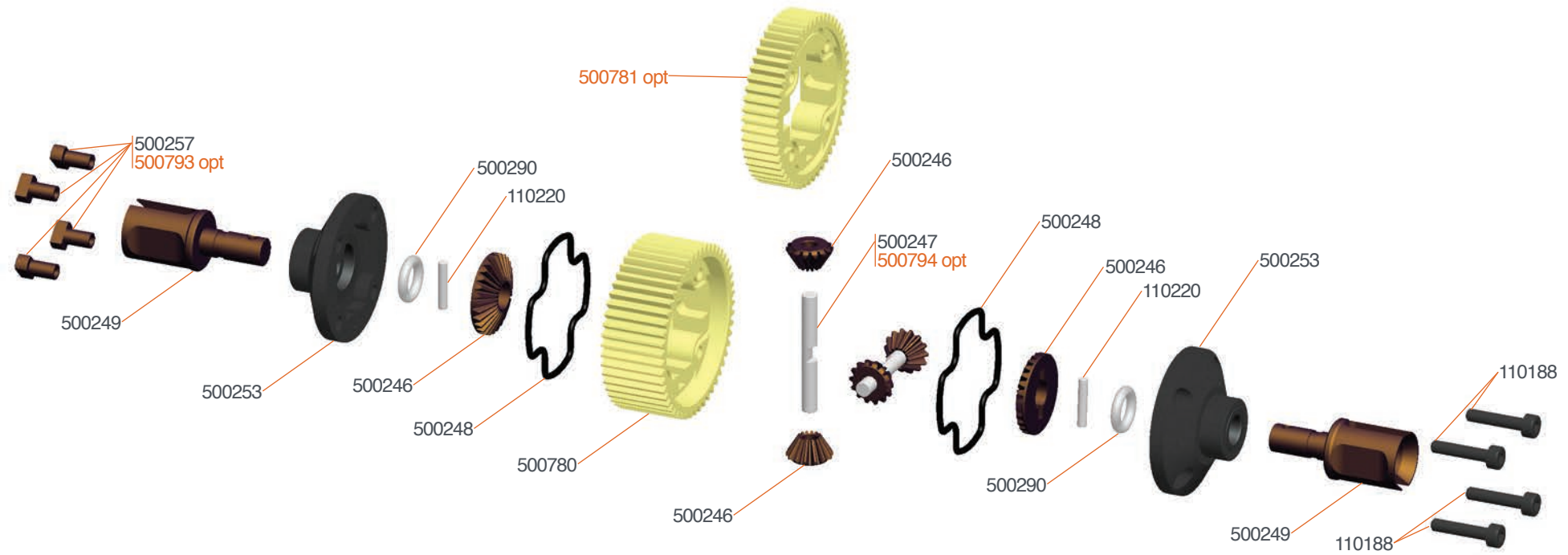


! 1- Rims included in the kit.
2- Rubber tyres not included in the kit.
3- Be sure to glue your rubber tyres to the wheels using Cyanoacrylate glue.



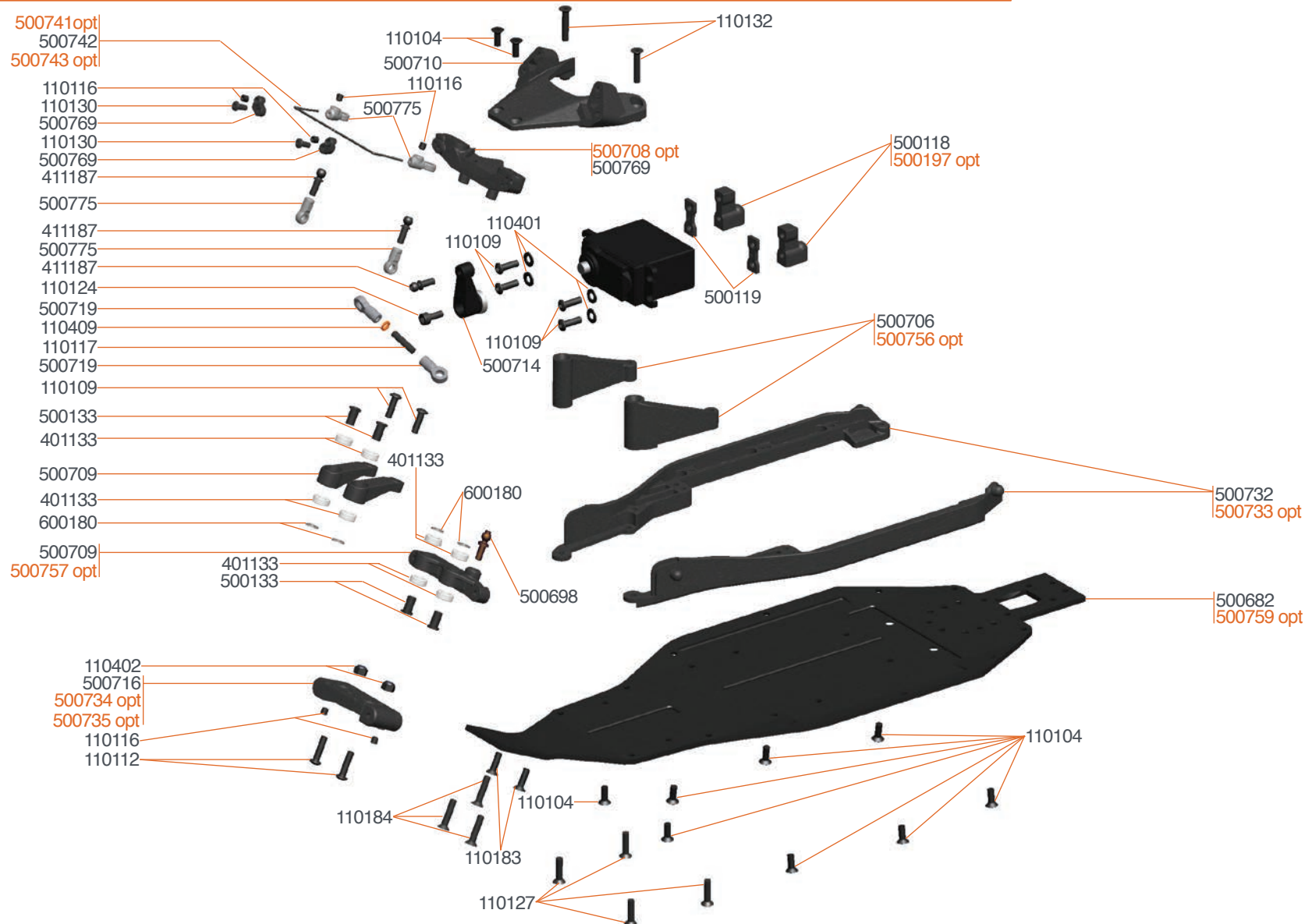
CHASSIS ASSEMBLY	4
STEERING ASSEMBLY	5
FRONT ASSEMBLY	7
TRANSMISSION ASSEMBLY	12
DIFF ASSEMBLY	15
REAR SUSPENSION ASSEMBLY	17
REAR ASSEMBLY	19
SHOCK ASSEMBLY	25
FINAL ASSEMBLY	28
WING INSTALLATION	32
BODY INSTALLATION	33
DIFFERENTIAL EXPLODED VIEW	35
CENTRAL AND STEERING EXPLODED VIEW	36
FRONT EXPLODED VIEW	37
TRANSMISSION EXPLODED VIEW	38
REAR EXPLODED VIEW	39
SHOCKS EXPLODED VIEW	40
FINAL EXPLODED VIEW	41
TEAM SERPENT NETWORK	42

DIFFERENTIAL EXPLODED VIEW



411107 Diff balls. 1/8 ceramic (12)
 500259 Differential balls carbide 1/8
 500256 Thrustbearing carbide balldiff SRX2
 500781 Geardiff housing 51T LF SRX2 Gen3

500782 Diff pully balldiff 51T LF SRX2 Gen3
 500791 Balldiff set 51T SRX2 Gen3
 500793 Geardiff nut alu (4) SRX2
 500794 Diff pin 14T alu (2) SRX2



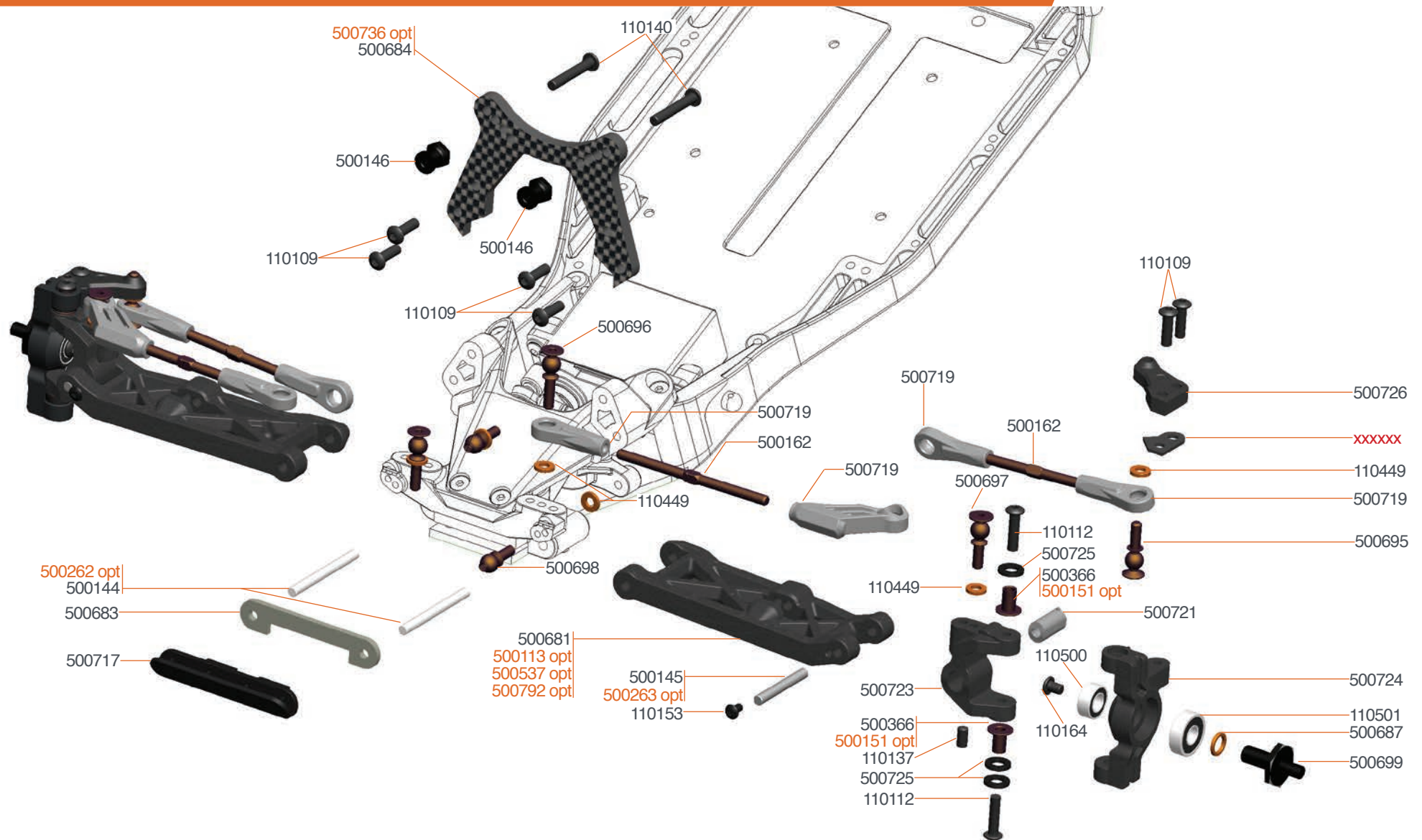
- 500197 Servomount alu (2) SRX2
- 500708 Camberlink mount fr SRX2 Gen3
- 500733 Sidestiffner carbon (2) SRX2 Gen3
- 500734 Front bulkhead insert alu SRX2 Gen3
- 500735 Front bulkhead insert brass SRX2 Gen3
- 500741 Antiroll bar 0.9 fr SRX2 Gen3

- 500743 Antiroll bar 1.1 fr SRX2 Gen3
- 500756 Bulkhead support fr L+R alu SRX2 Gen3
- 500757 Steering rack alu SRX2 Gen3
- 500759 Chassis lightweight alu SRX2 Gen3
- 500760 Servo weight alu SRX2 Gen3
- 500761 Servo weight brass SRX2 Gen3

- 500762 Electronics weight alu SRX2 Gen3
- 500763 Electronics weight brass SRX2 Gen3
- 500771 Wing fr straight arm SRX2 Gen3
- 500772 Wing fr gull arm SRX2 Gen3
- 500786 Front arb set

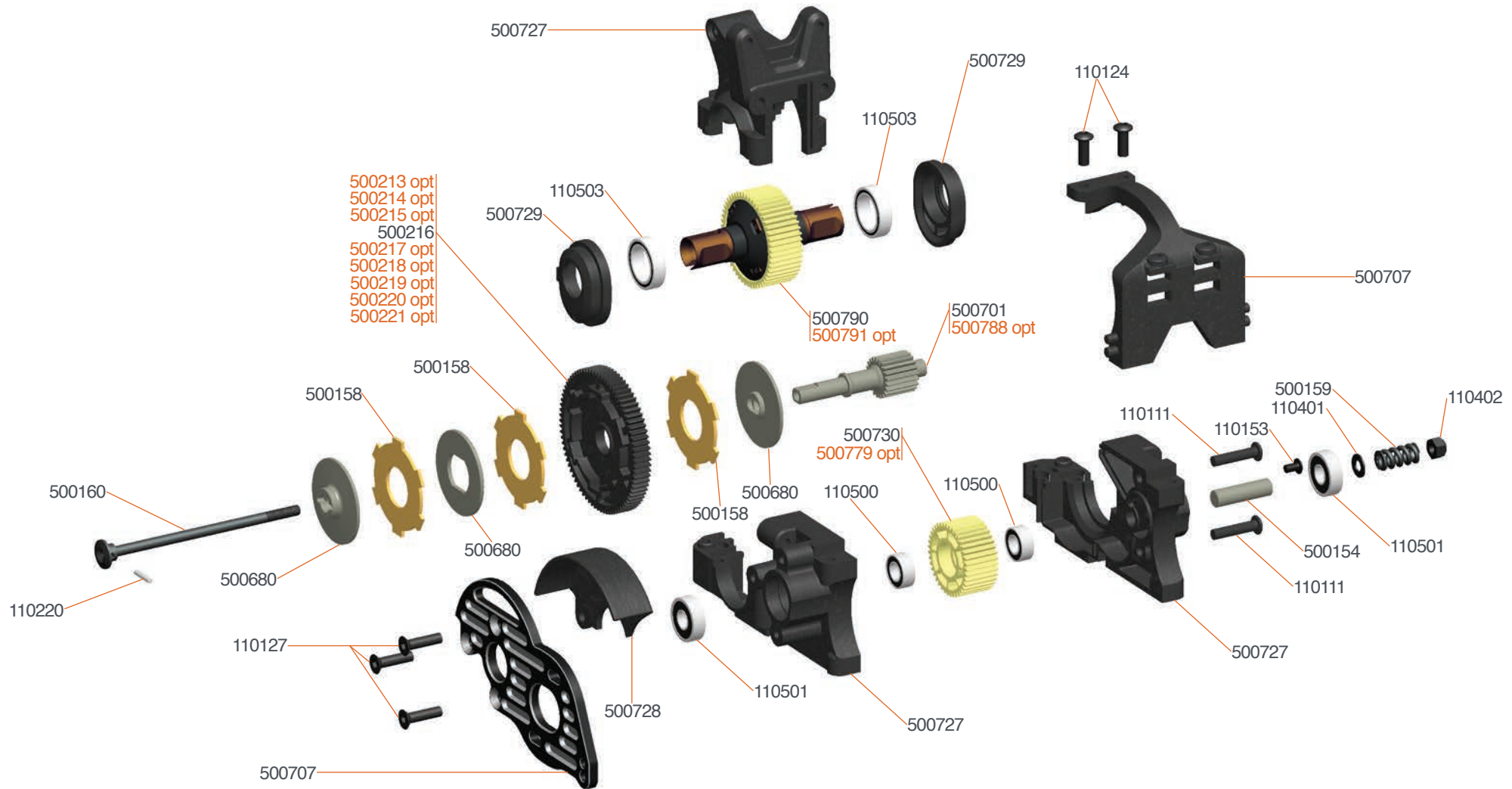


FRONT II EXPLODED VIEW



500113 Wishbone fr L+R SRX2
 500151 Casterblock bushing (4) SRX2
 500262 Pivot pin fr inner / rr outer TiN coated (2) SRX2
 500263 Pivot pin fr outer TiN coated (2) SRX2

500537 Wishbone fr L+R SRX2 hard
 500736 Shocktower fr gull arm carbon SRX2 Gen3
 500792 Wishbone straight fr L+R hard SRX2 Gen3

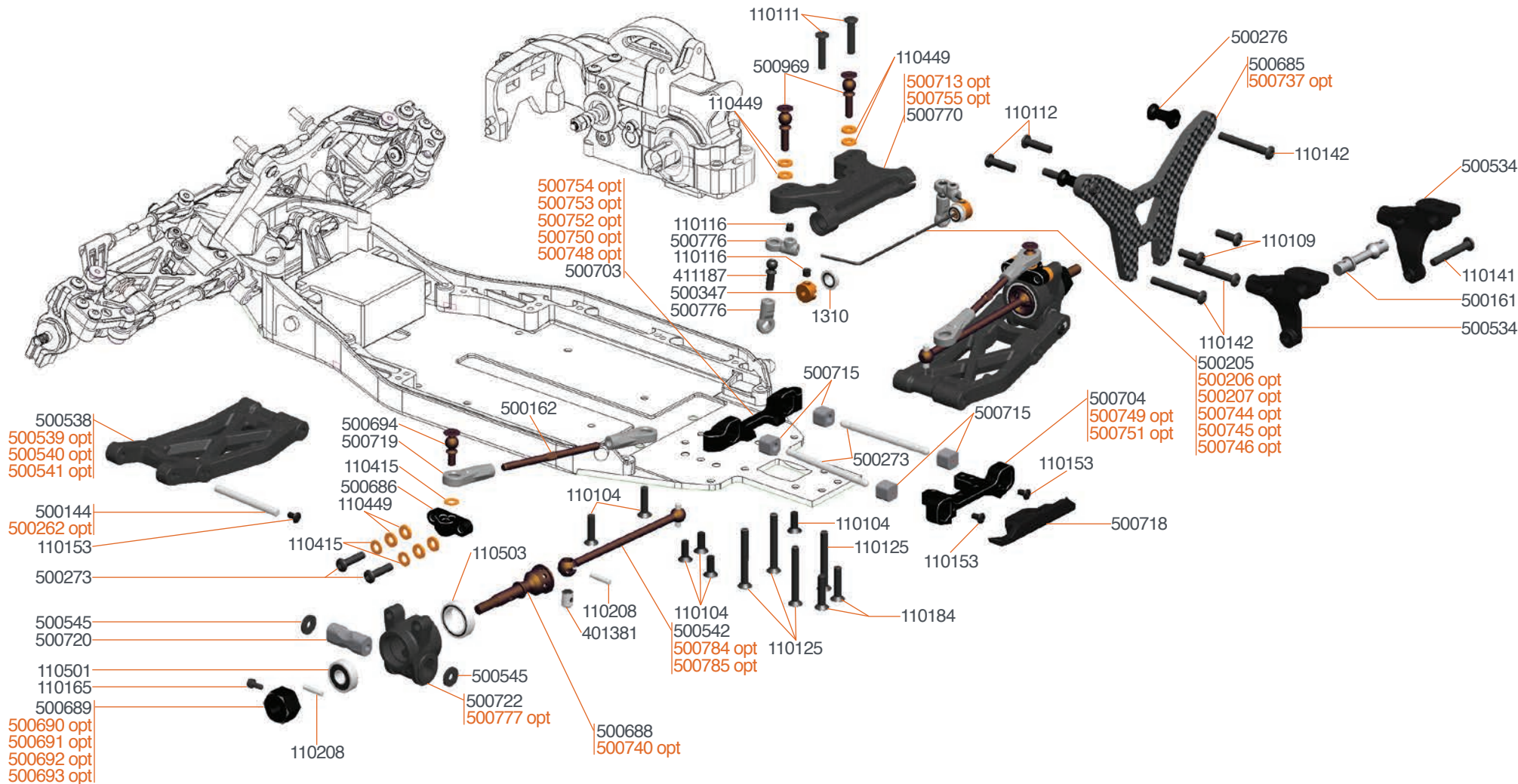


500213 Spur gear 70T SRX2
 500214 Spur gear 72T SRX2
 500215 Spur gear 76T SRX2
 500217 Spur gear 80T SRX2

500218 Spur gear 82T SRX2
 500219 Spur gear 84T SRX2
 500220 Spur gear 86T SRX2
 500221 Spur gear 88T SRX2

500779 Idler gear 39T LF SRX2 Gen3
 500788 Topshaft 21T alu stock SRX2 Gen3
 500789 Spurgear adaptor stock SRX2 Gen3
 500791 Balldiff set 51T SRX2 Gen3

REAR EXPLODED VIEW

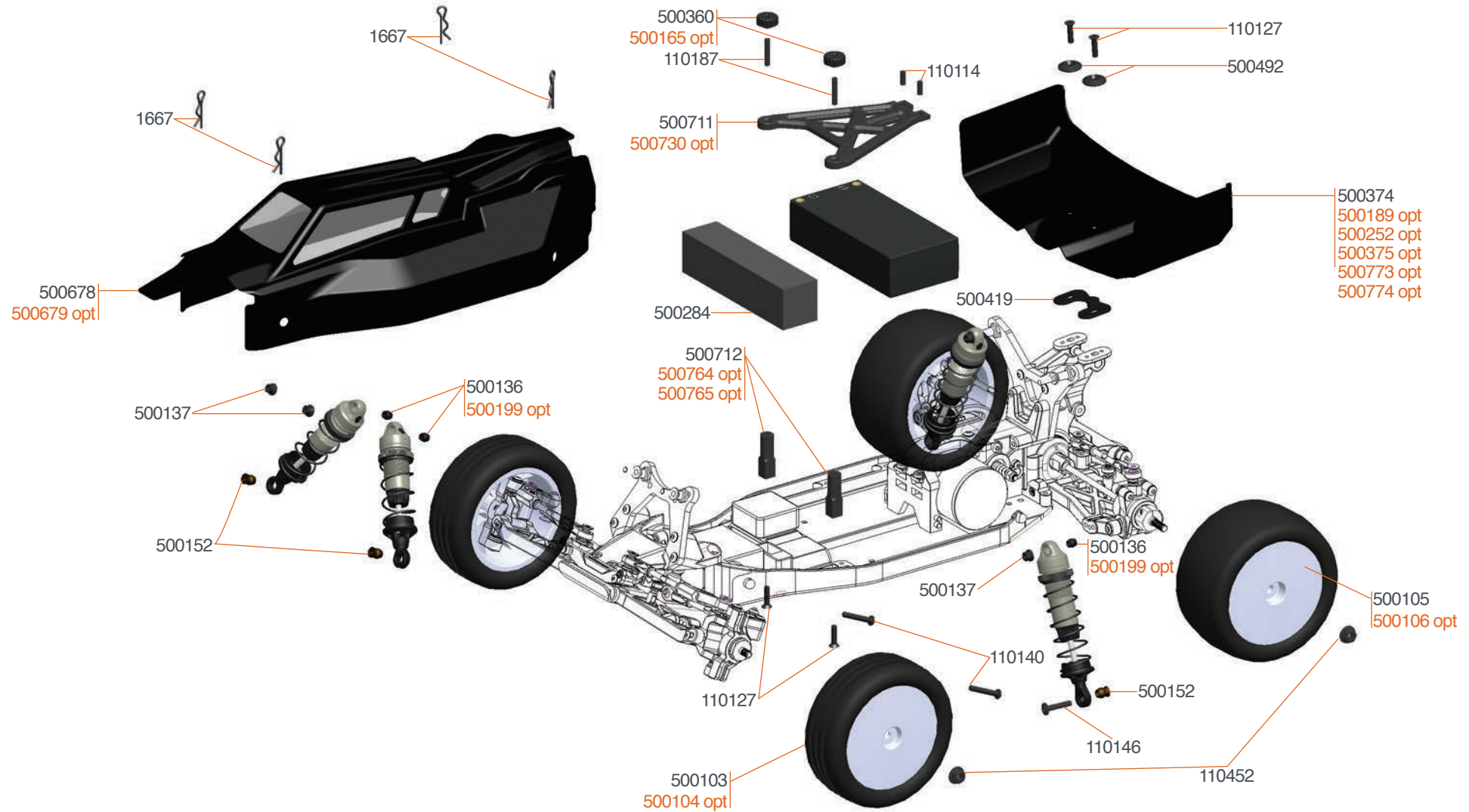


- 500206 Antiroll bar rr 1.3 SRX2
- 500207 Antiroll bar rr 1.5 SRX2
- 500262 Pivot pin fr inner / rr outer TiN coated (2) SRX2
- 500538 Wishbone rr L+R SRX2 MM V2
- 500539 Wishbone rr L+R SRX2 MM V2 hard
- 500541 Wishbone rr L+R long SRX2 MM hard
- 500690 Wheelhexacon +2mm (2) SRX2 Gen3
- 500691 Wheelhexacon 0mm (2) SRX2 Gen3
- 500692 Wheelhexacon -1mm (2) SRX2 Gen3

- 500693 Wheelhexacon -2mm (2) SRX2 Gen3
- 500713 Camberlink mount rr SRX2 Gen3
- 500737 Shocktower rr low carbon SRX2 Gen3
- 500740 Wheelaxle short (2) SRX2 Gen3
- 500744 Antiroll bar 1.0 rr SRX2 Gen3
- 500745 Antiroll bar 1.2 rr SRX2 Gen3
- 500746 Antiroll bar 1.4 rr SRX2 Gen3
- 500749 Suspension bracket mid RR-RR alu SRX2 Gen3
- 500750 Suspension bracket wide RR-FR alu SRX2 Gen3

- 500751 Suspension bracket wide RR-RR alu SRX2 Gen3
- 500752 Suspension bracket RR-FR brass SRX2 Gen3
- 500753 Suspension bracket mid RR-FR brass SRX2 Gen3
- 500754 Suspension bracket wide RR-FR brass SRX2 Gen3
- 500784 Driveshaft rr 69mm SRX2 Gen3
- 500785 Driveshaft rr 68mm SRX2 Gen3
- 500787 Rear arb set
- 500755 Camberlink mount rr alu SRX2 Gen3
- 500777 Upright offset (2) SRX2 Gen3





- 500492 Wing washer alu srx 1/10 (2)
- 500104 1/10 buggy rim fr 2wd yellow (2)
- 500106 1/10 buggy rim rr yellow (2)
- 500189 Rear wing 6.5
- 500199 Shock top bushing delrin (4) SRX2

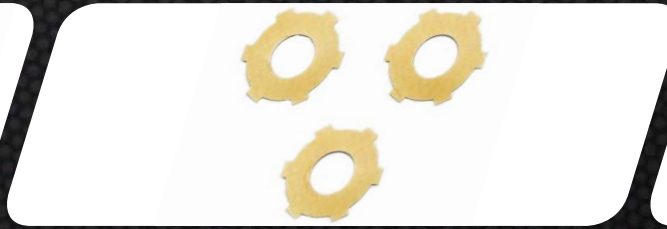
- 500252 Rear wing 7.0
- 500375 Rear wing 7.0 (2)
- 500165 Battery plate nut (4) SRX2
- 500679 Body Spyder gen3 2wd lightweight 1/10
- 500764 Battery post high (2+2) alu SRX2 Gen3

- 500765 Battery post low (2+2) alu SRX2 Gen3
- 500773 Wing rr low SRX2 Gen3
- 500774 Wing rr low wide SRX2 Gen3



TEAM SERPENT NETWORK

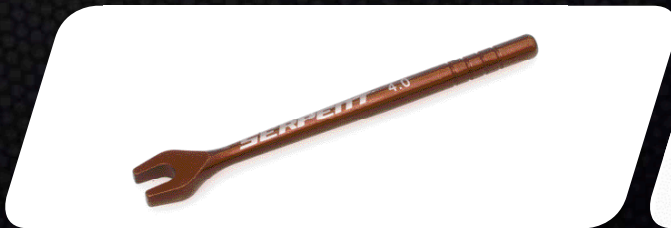
SRX2 Gen3 carpet SPARE PARTS www.serpent.com/500013/spares/



SRX2 Gen3 carpet OPTIONALS PARTS www.serpent.com/500013/Optionals/



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



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



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SRX2 gen3

**INSTRUCTION
MANUAL**
Manual SRX2 Gen3 carpet #89591-1



SERPENT