SRX2 gen3



EP

1/10 2WD - Buggy

INSTRUCTION MANUAL

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 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 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. 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 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.

CONTENTS

- CHASSIS ASSEMBLY 4
- STEERING ASSEMBLY 5
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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.

1 2 3	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

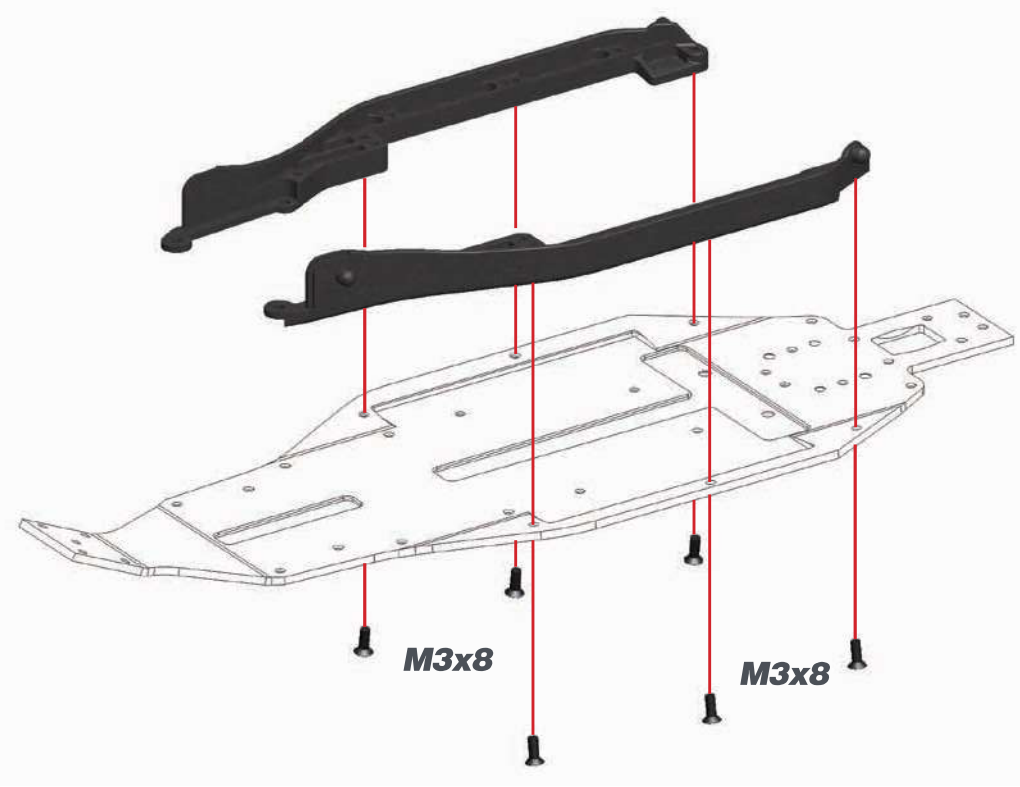
ICONS DESCRIPTION

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.

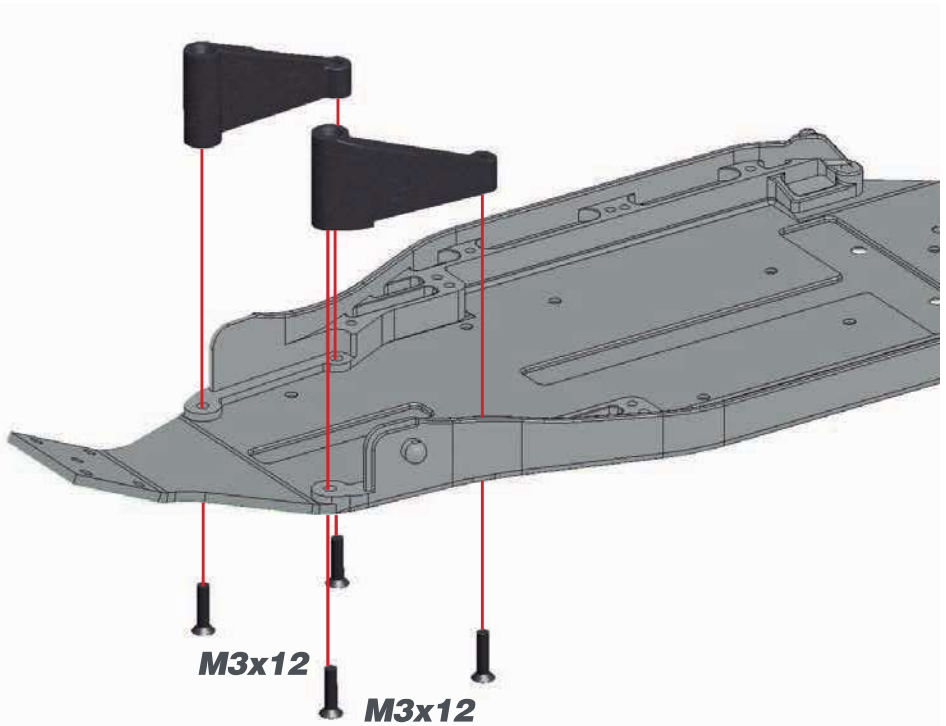
STEP 1

BAG 1



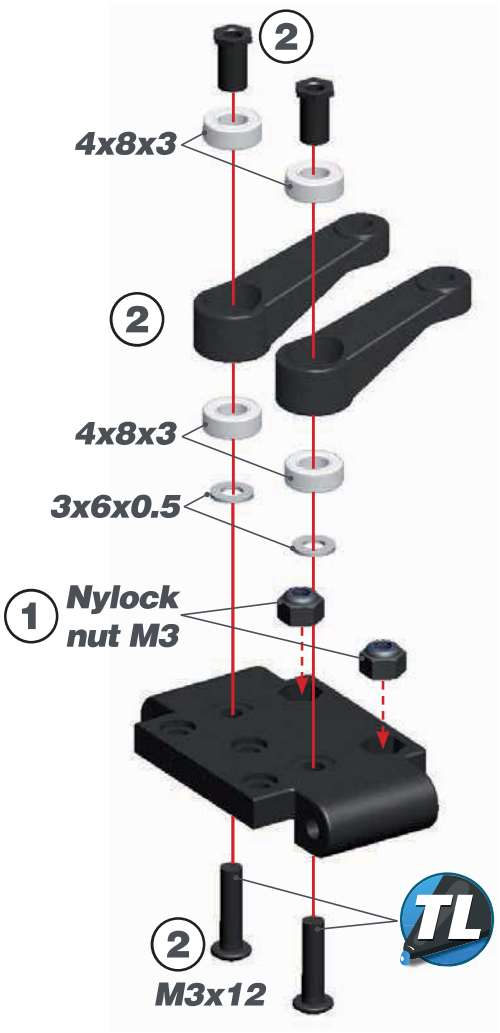


STEP 2



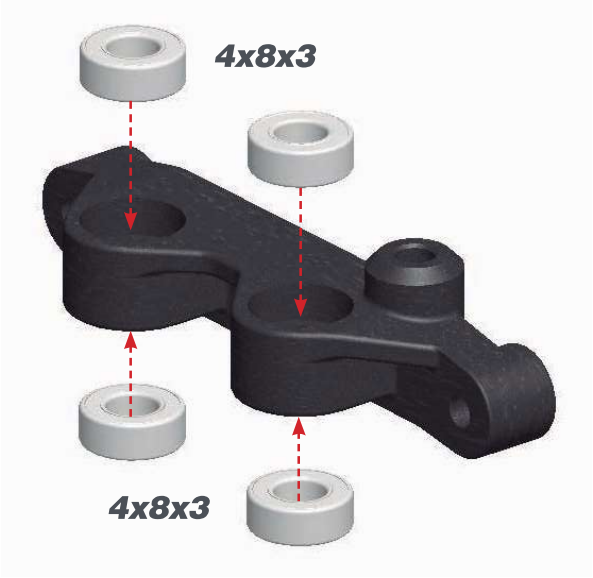


STEP 3



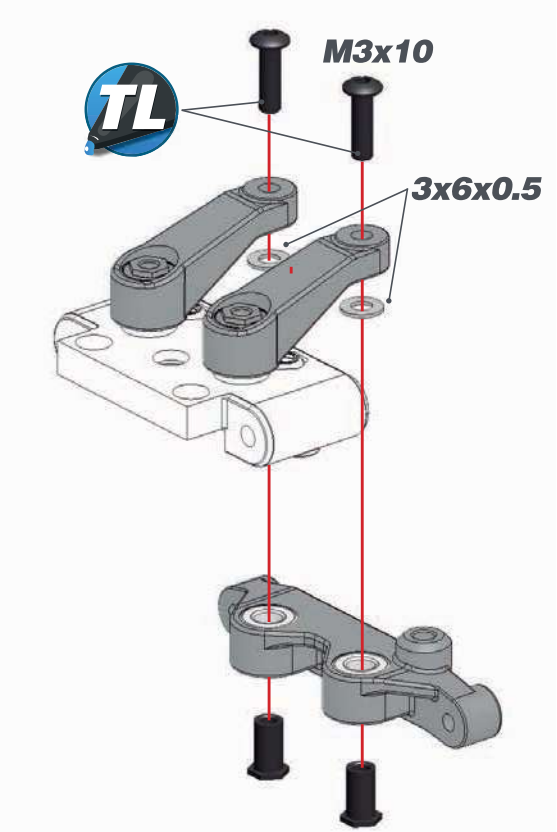
M3x12 | 4X8X3 | 3x6x0.5 | Nylock Nut M3

STEP 4



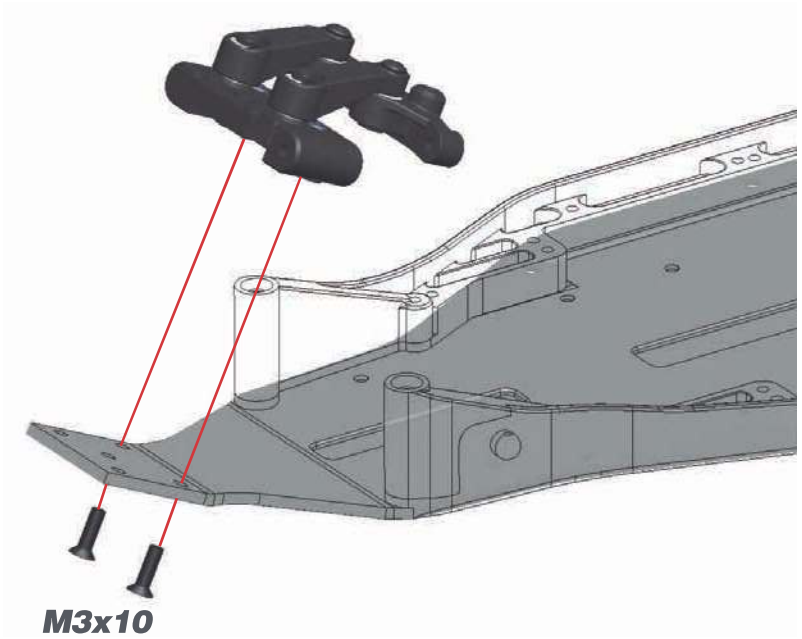
4X8X3

STEP 5



M3x10 | 3x6x0.5

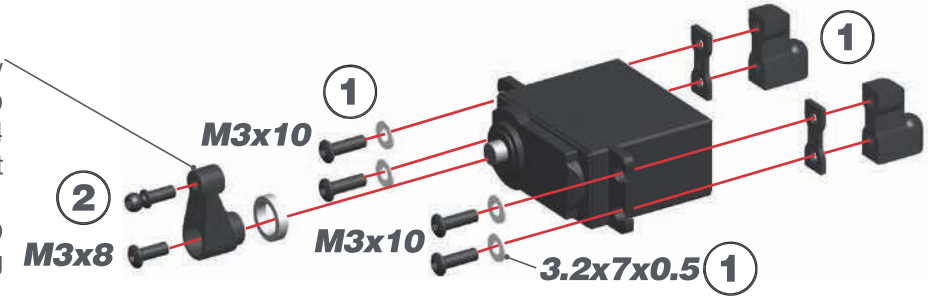
STEP 6



STEP 7 BAG 2

7.1

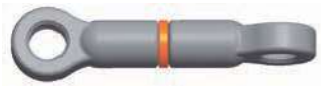
1- Check how many teeth your servo spline has (23, 24 or 25) and use the right lever.
2- Make sure tu put the servo in neutral before mounting the lever.



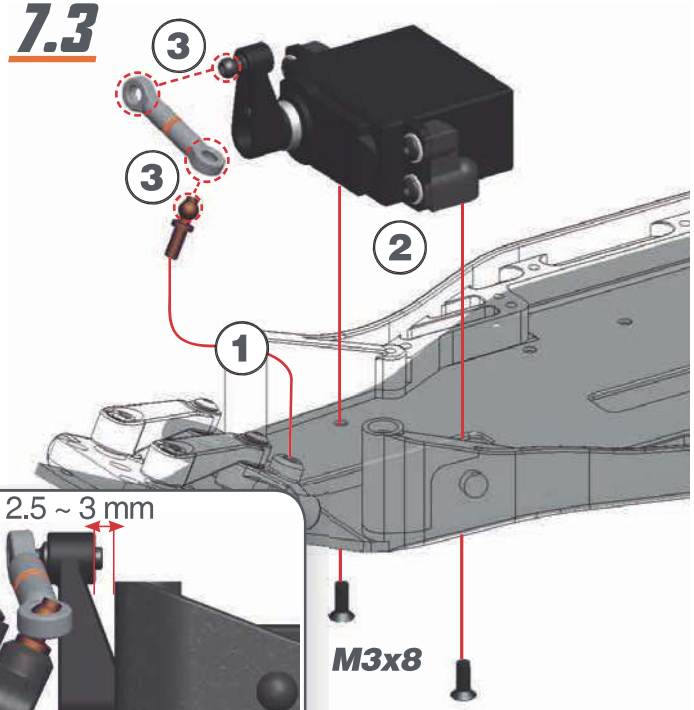
7.2

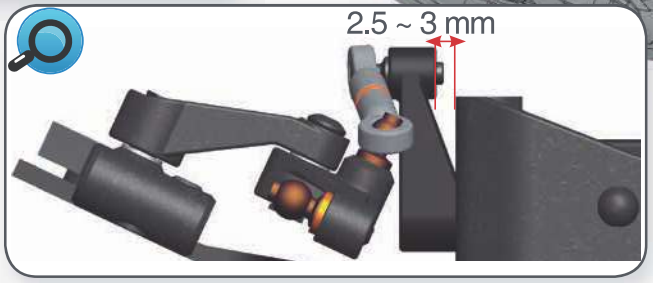


STEERING LINK LENGTH
The length may differ slightly per servo-brand.



7.3

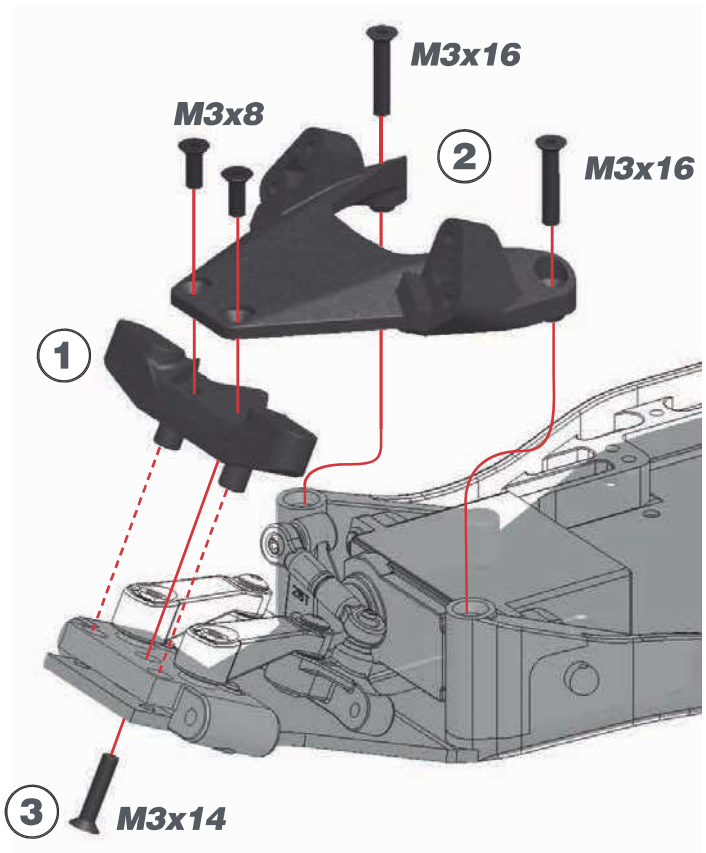




M3x10

3x5x1 M3x12 M3x8 M3x10 3.2x7x0.5 M3x8

STEP 8



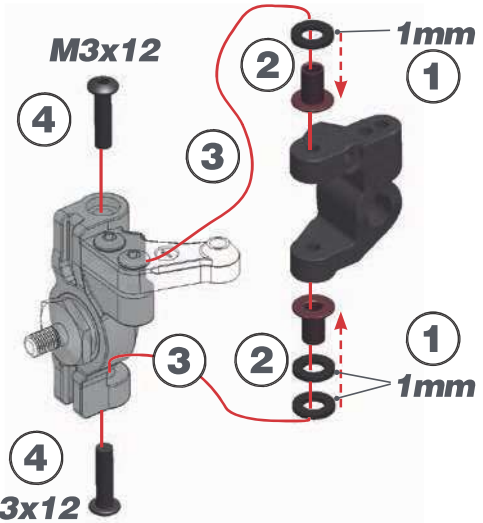
STEP 9 BAG 3

9.1



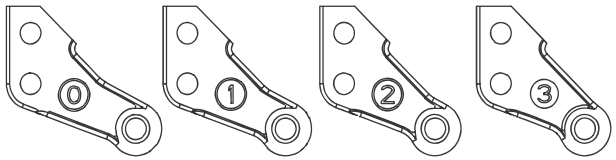
9.2

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



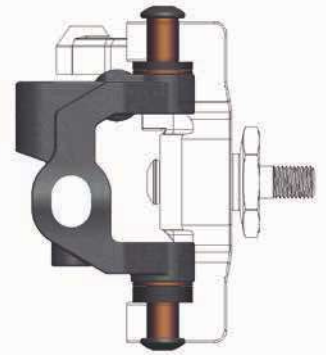
L=R STEERING ARMS CHART

MORE ACKERMANN ⟷ LESS ACKERMANN



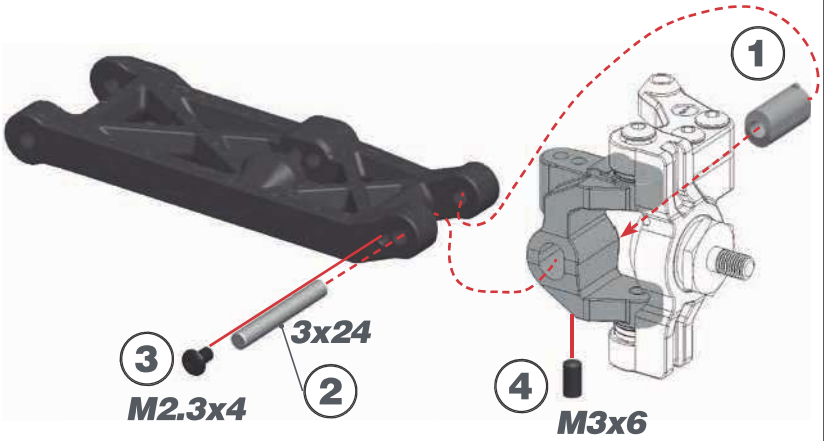
DEF. SETUP

STEERINGBLOCK ASSEMBLY





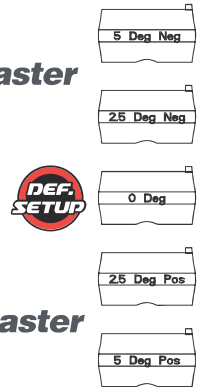
STEP 10 BAG 4



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.

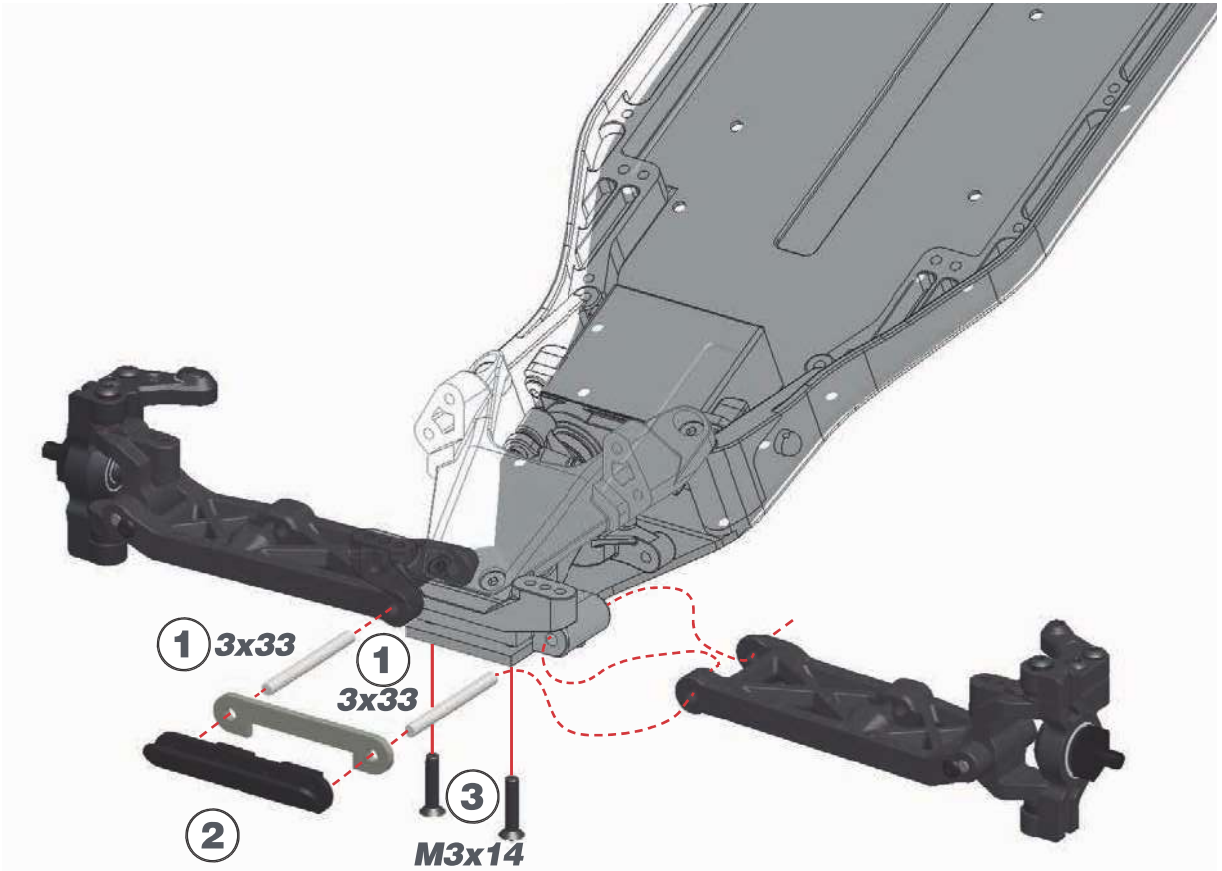
It is possible to adjust the caster angle from 20° to 30° in 2.5° steps according the the chart shown below:



M2.3x4

M3x6

STEP 11

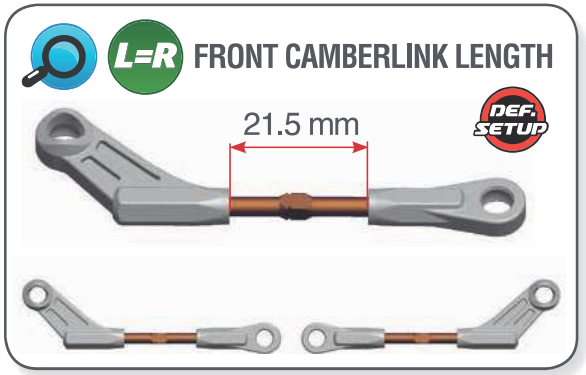


M3x14

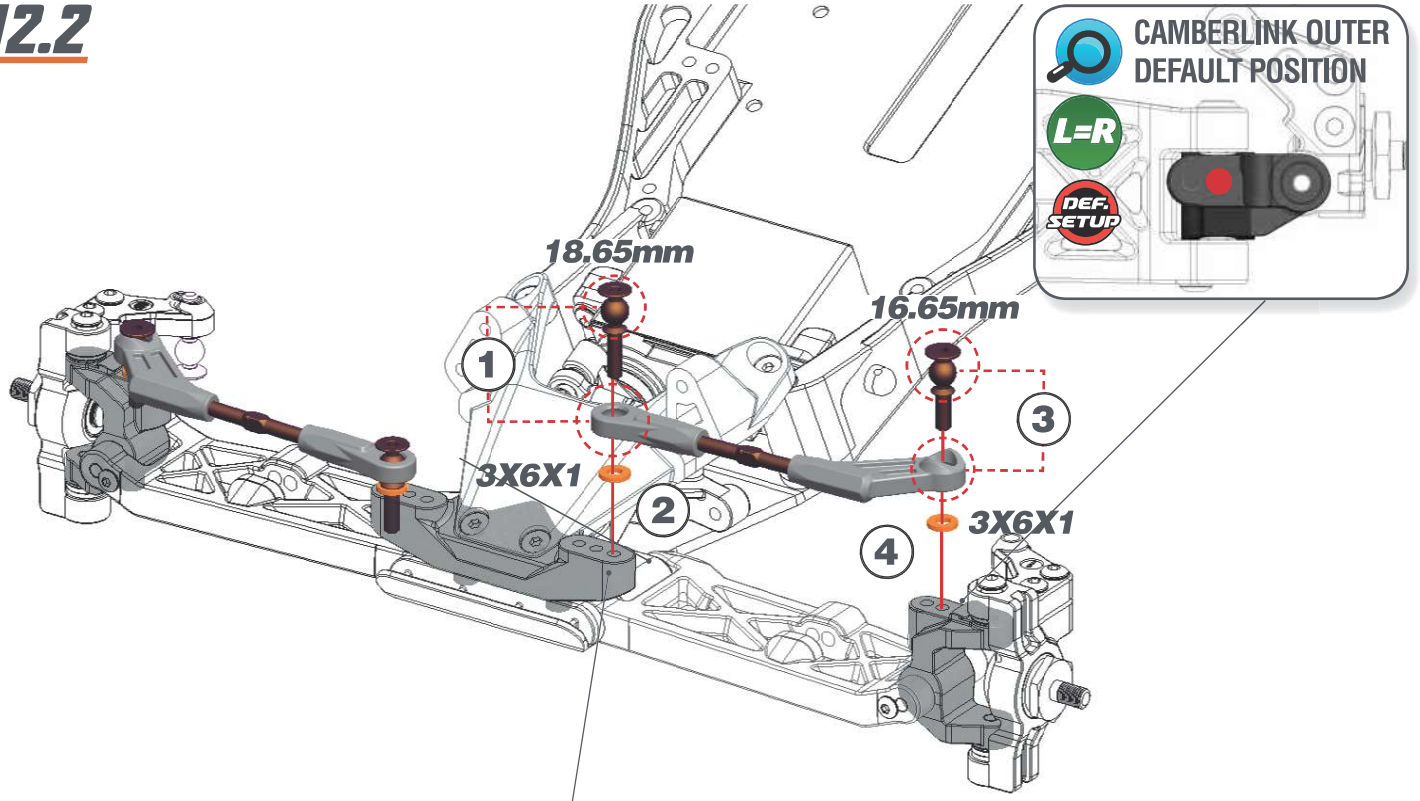
STEP 12

12.1





12.2

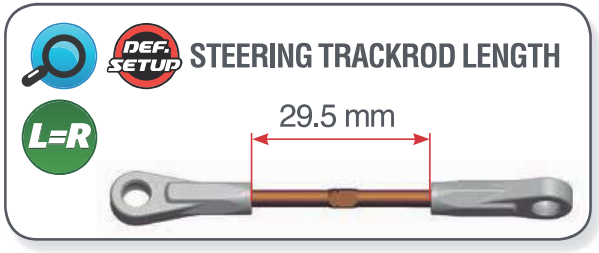


3x6x1

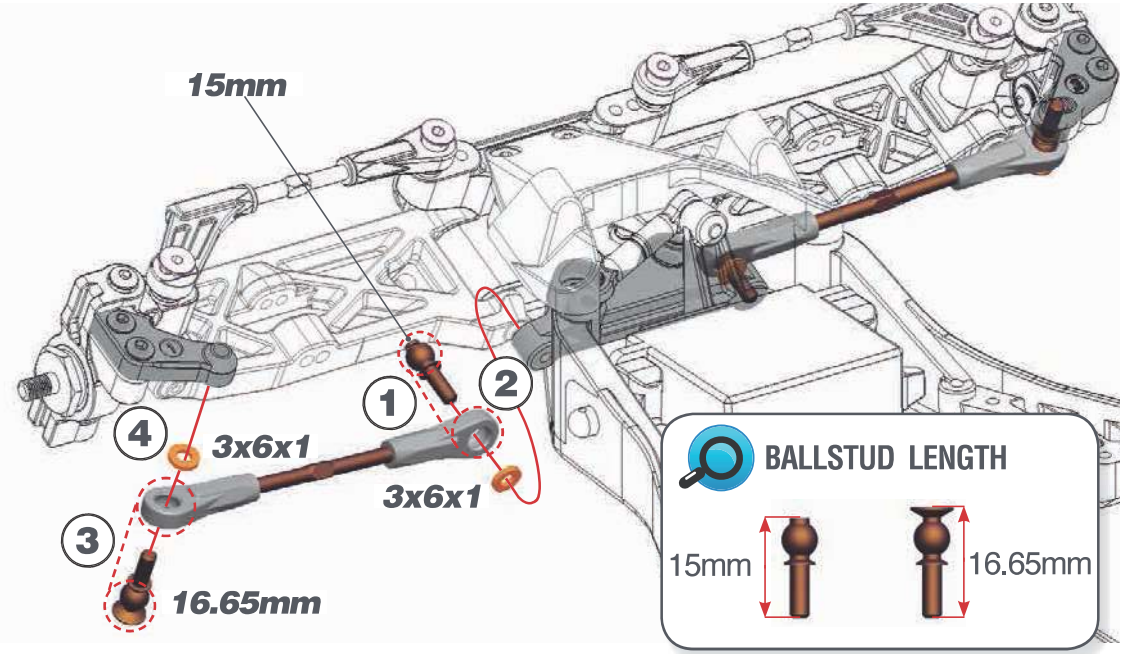
STEP 13

13.1

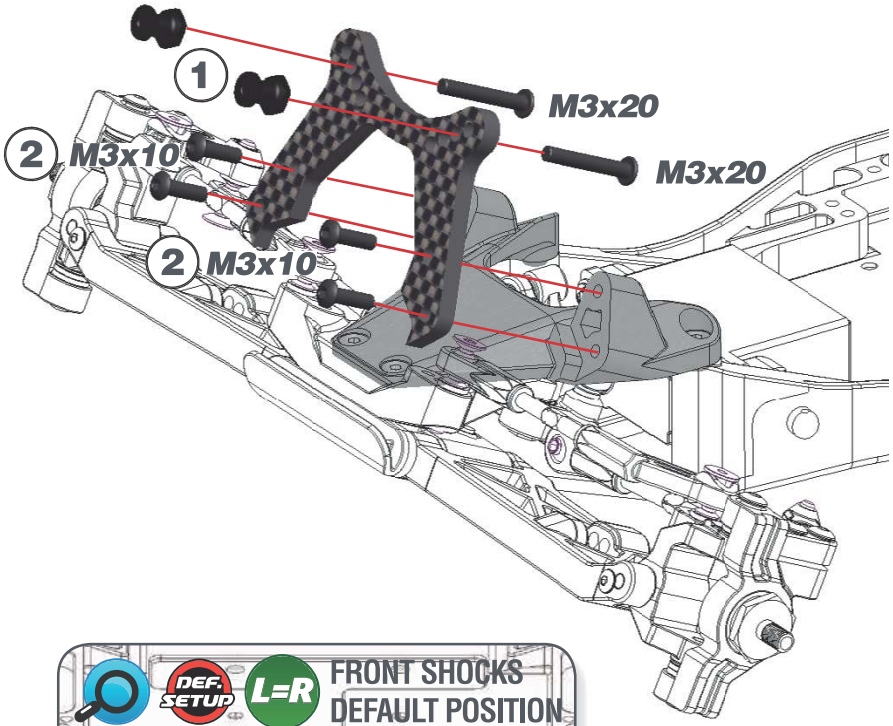


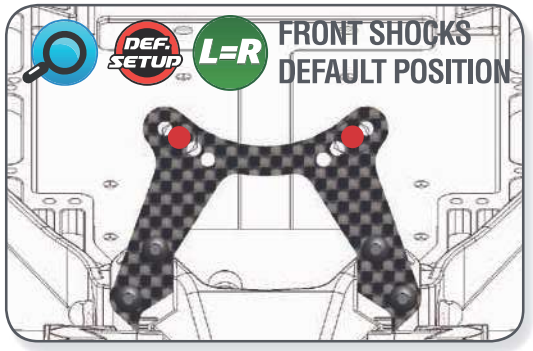


13.2

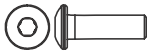


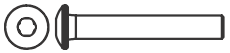
STEP 14



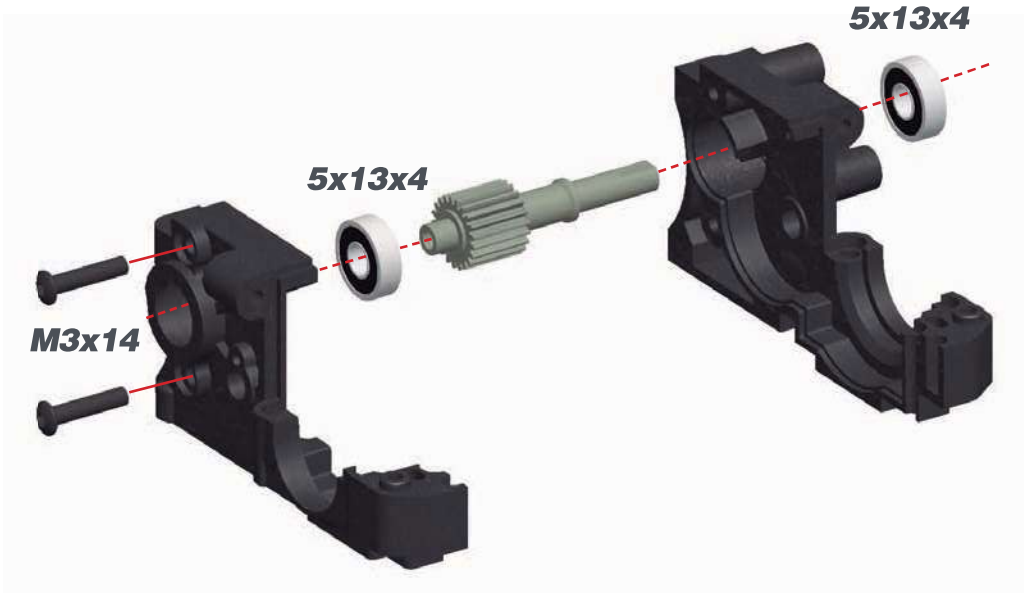



3x6x1


M3x10

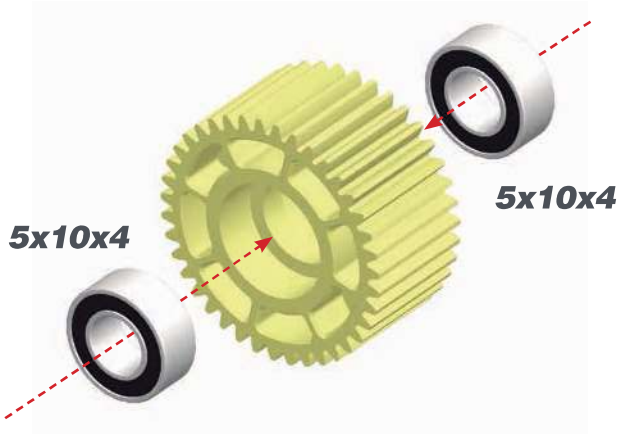

M3x20

STEP 15 BAG 5

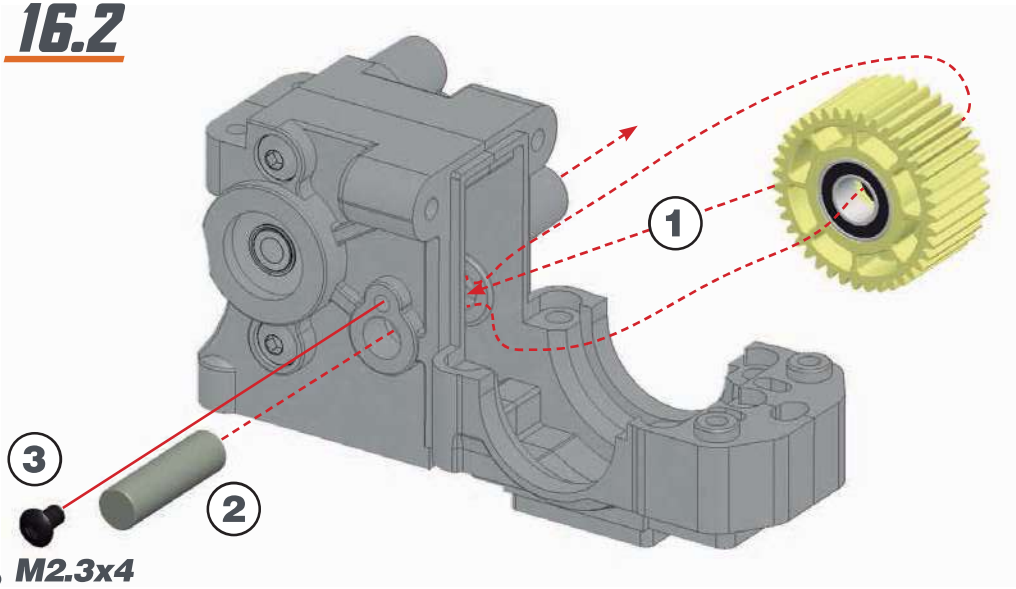


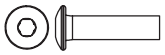
STEP 16

16.1



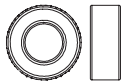
16.2



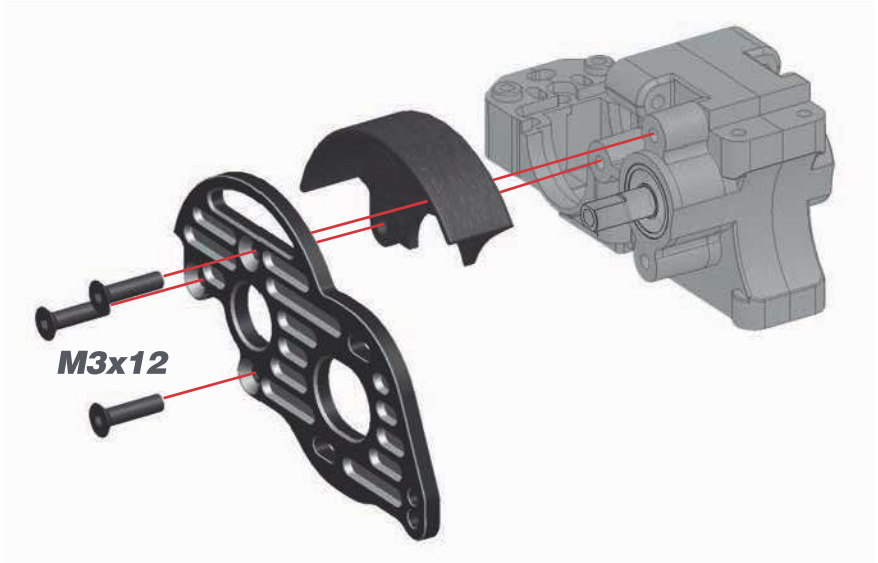

M3x14


5x13x4

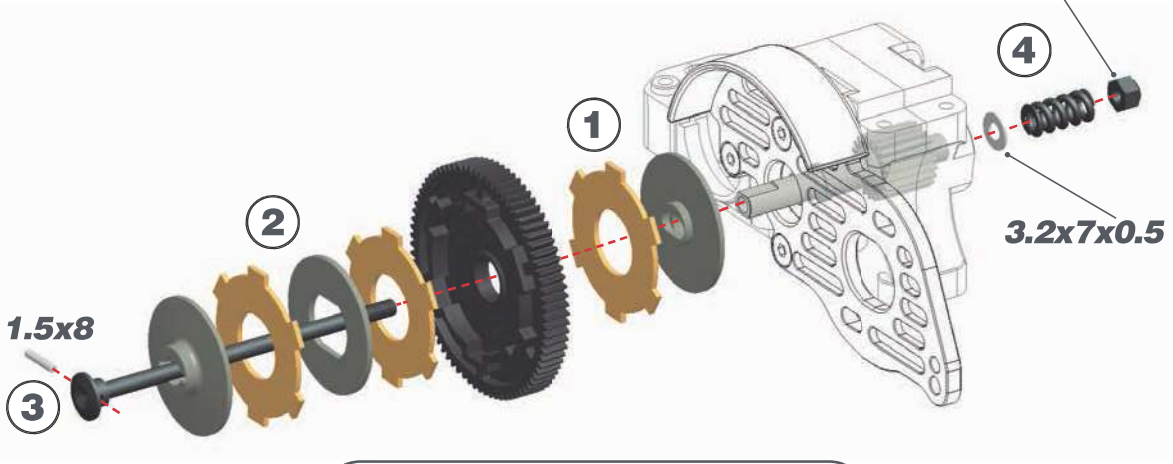

M2.3x4

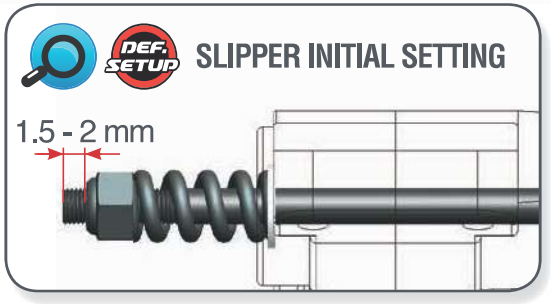

5x10x4

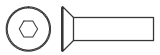
STEP 17



STEP 18





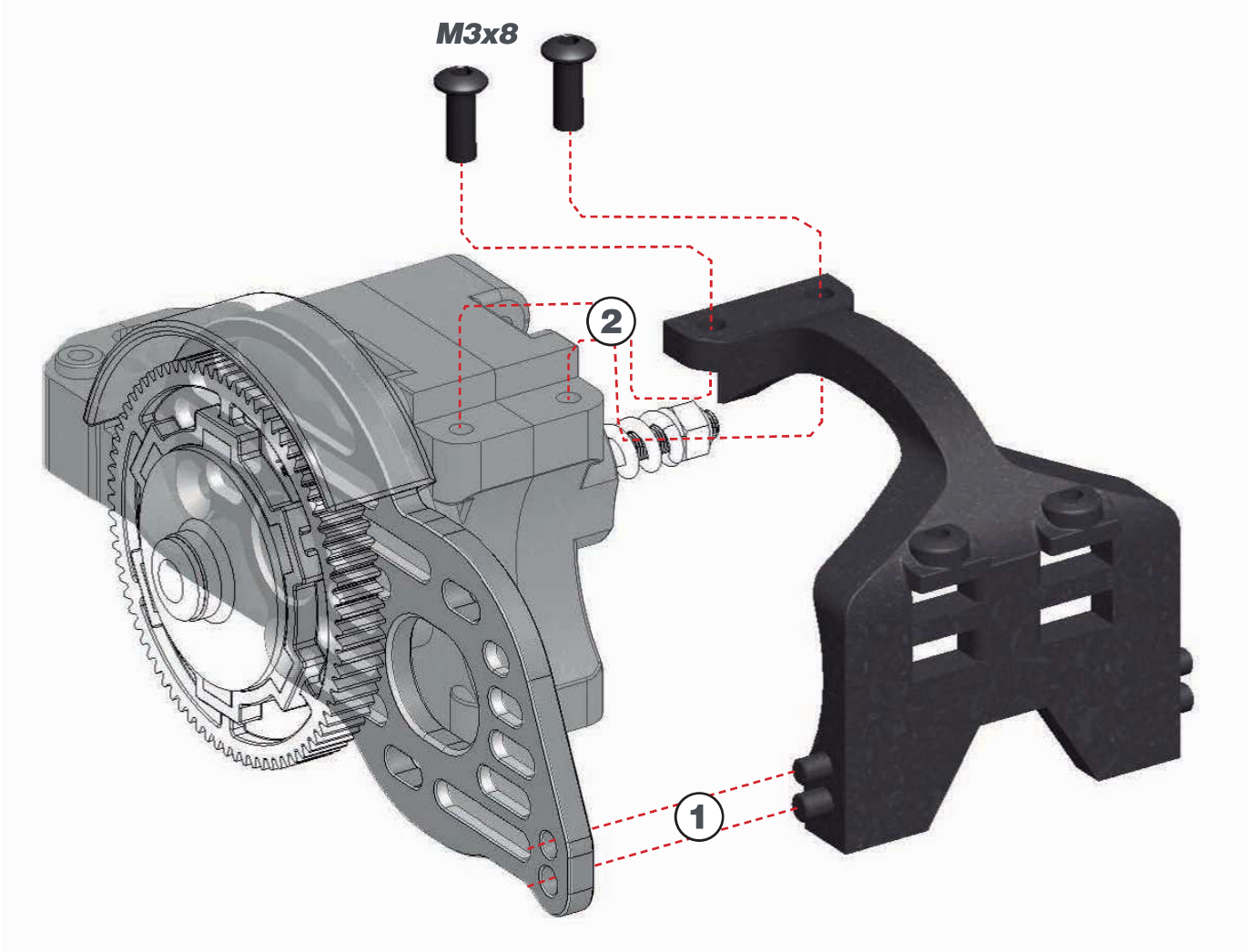

M3x12

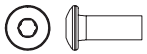

Nylock Nut M3


3.2x7x0.5


1.5x8

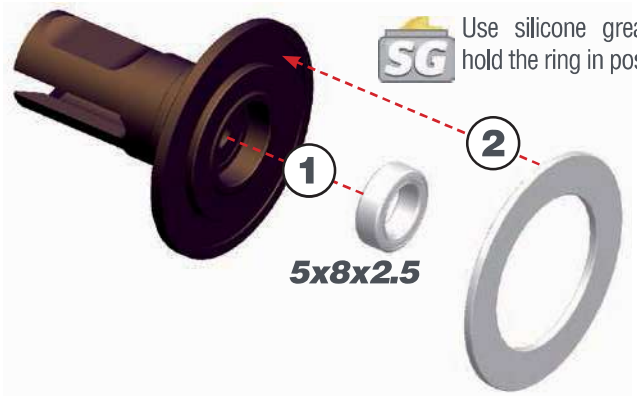
STEP 19



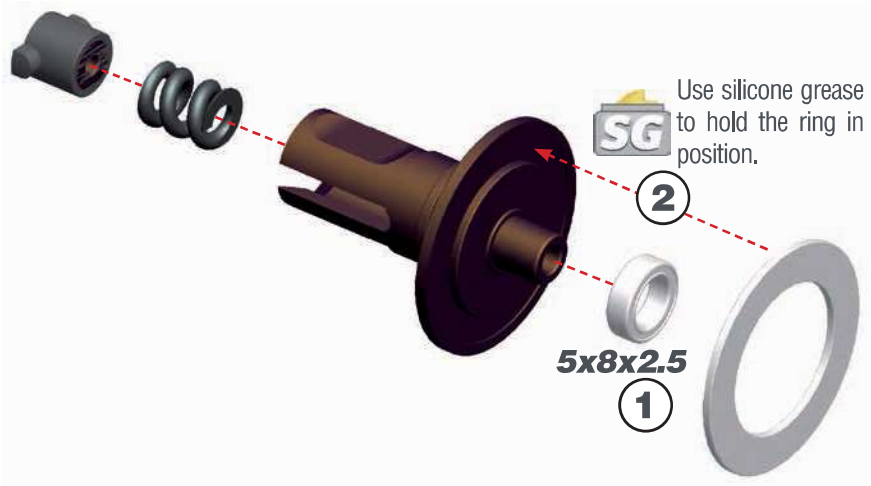


STEP 20 BAG 6

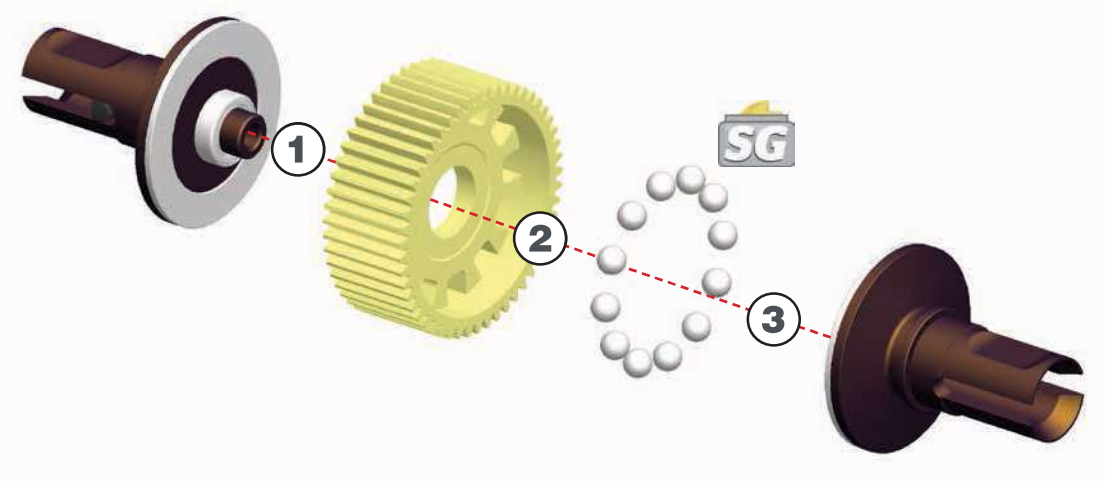
20.1



20.2



STEP 21

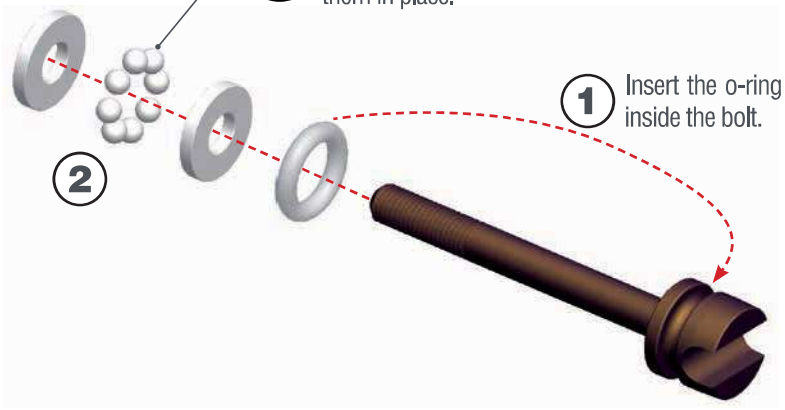



5x8x2.5

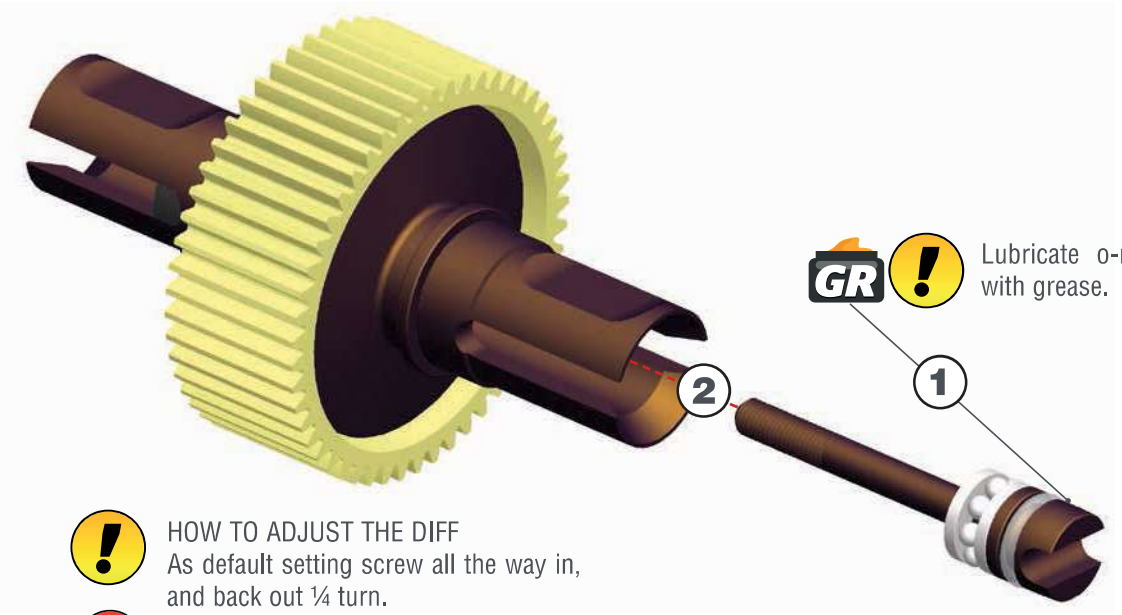
STEP 22

GR

8 balls should be assembled using some grease to hold them in place.



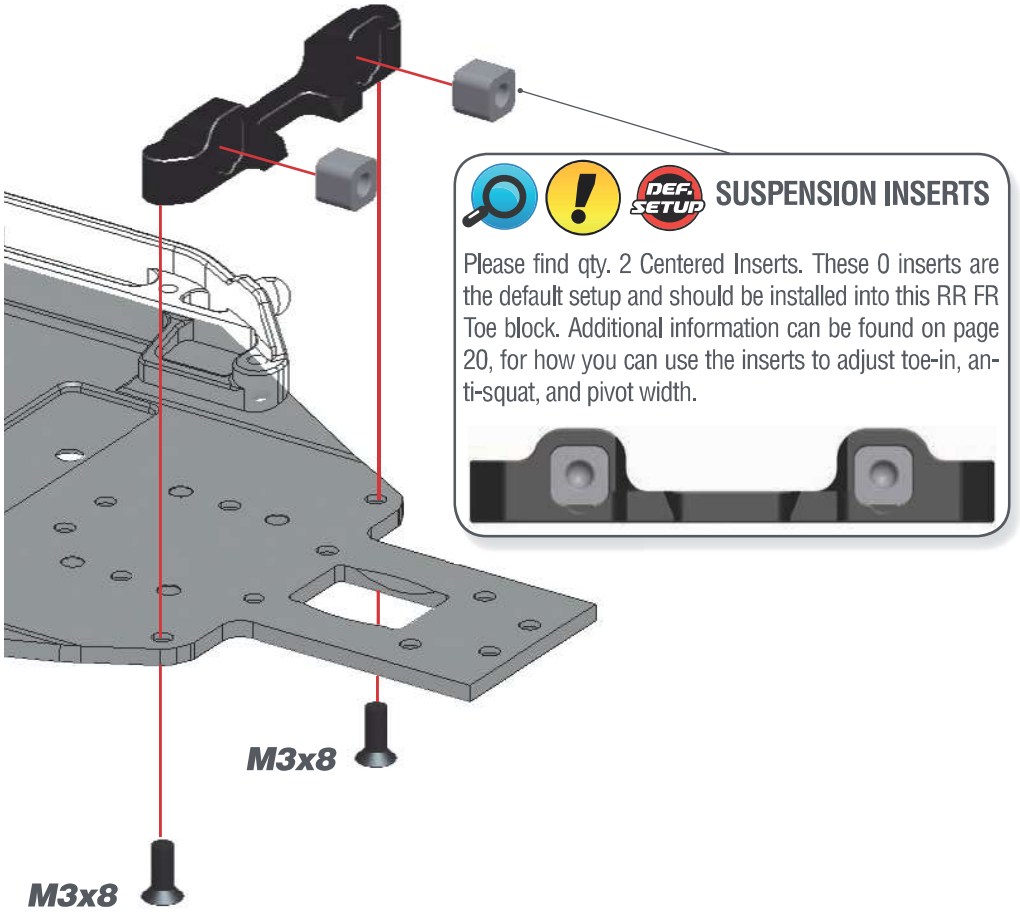
STEP 23



HOW TO ADJUST THE DIFF
As default setting screw all the way in, and back out ¼ turn.
Make small adjustments depending on the track condition.

DEF. SETUP

STEP 24 BAG 7

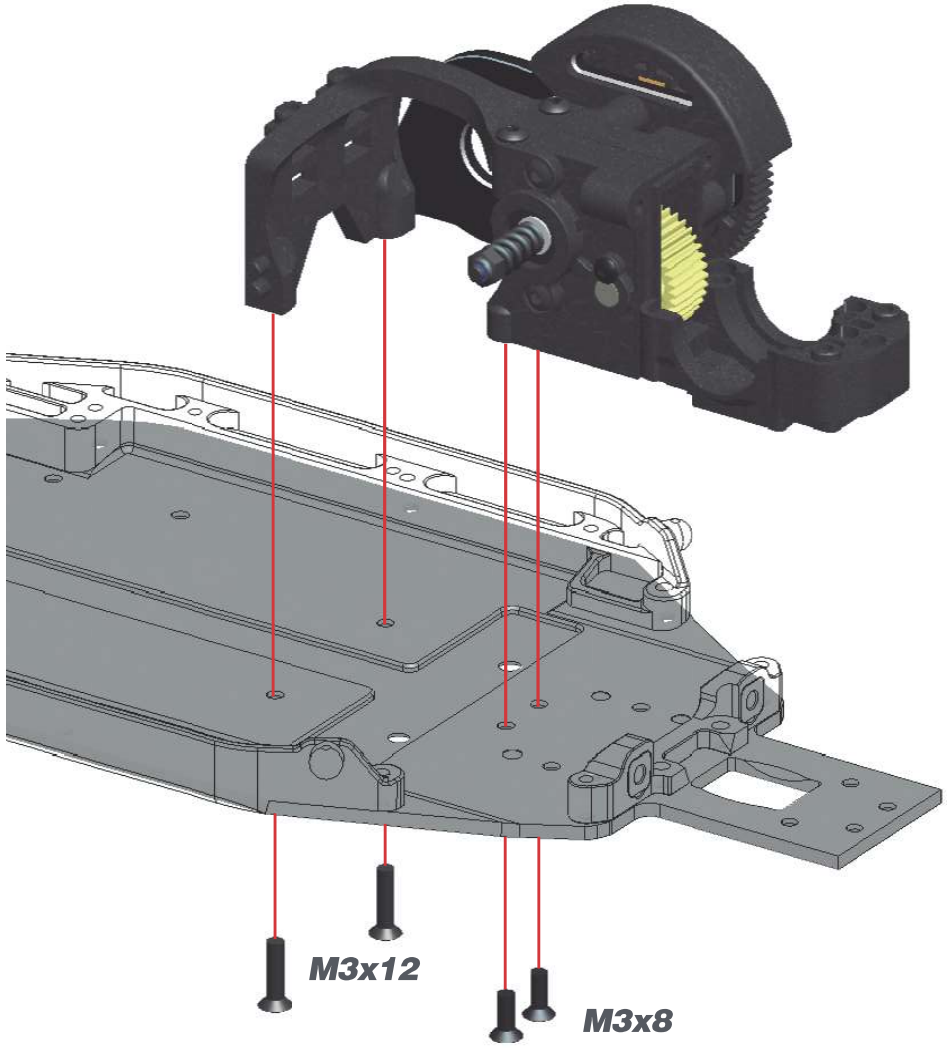


SUSPENSION INSTALLS

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.

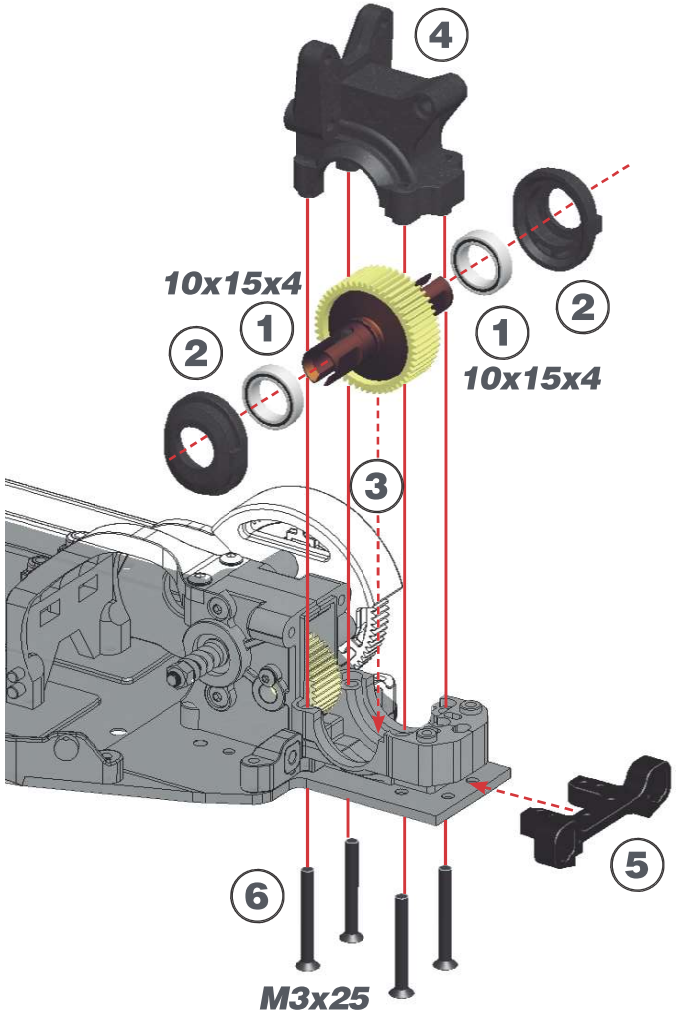
M3x8

STEP 25



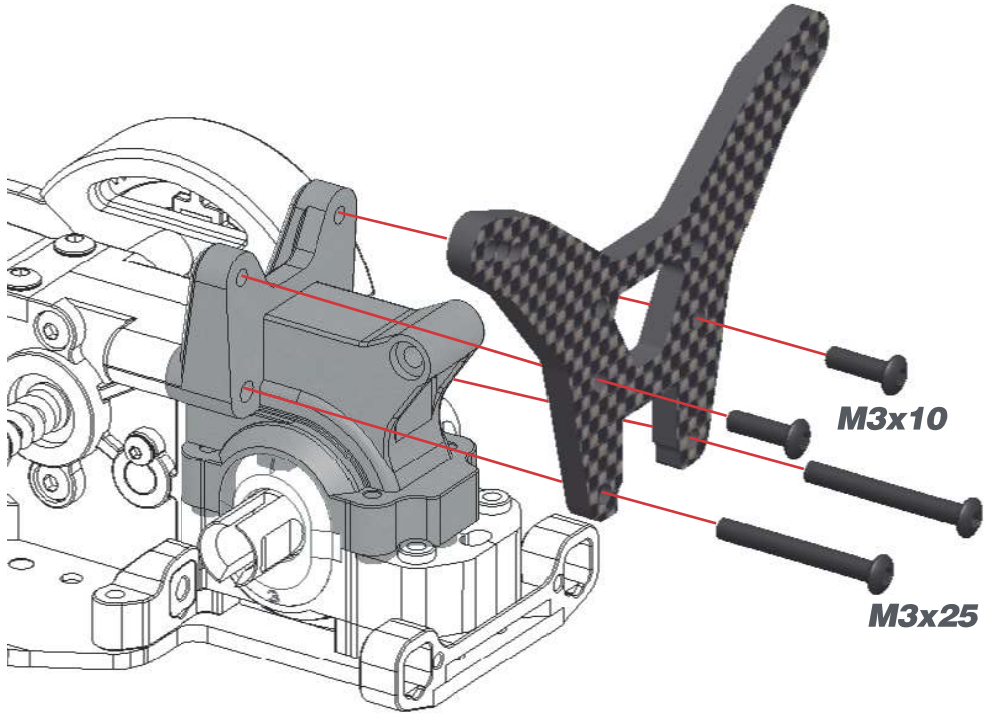
M3x8 M3x12

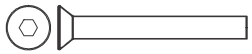
STEP 26



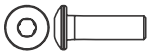


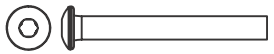
STEP 27



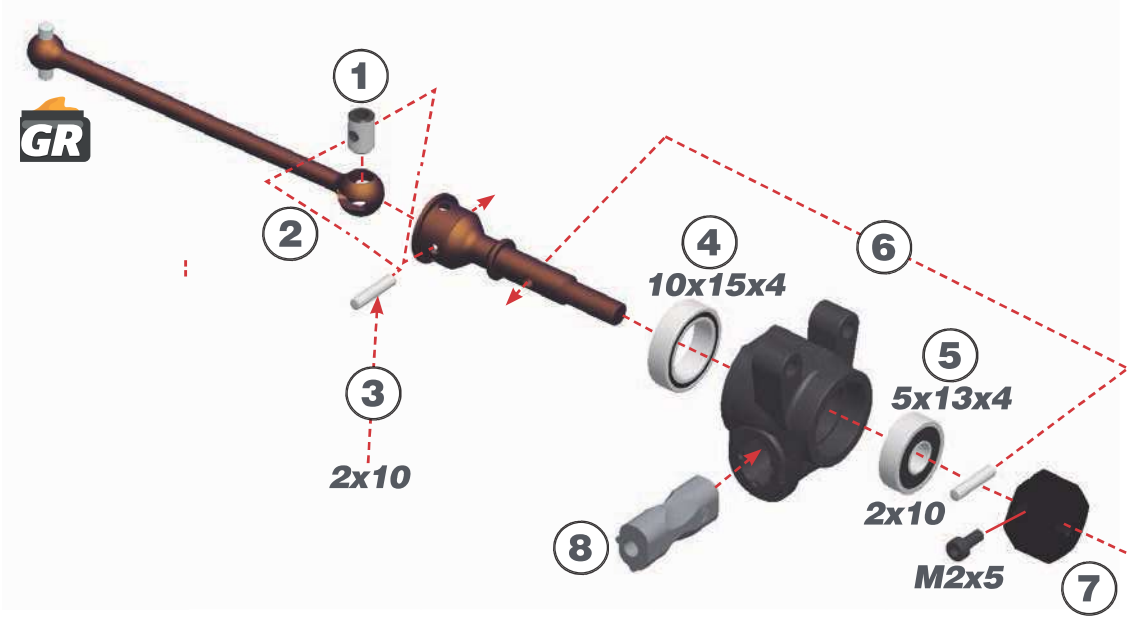

M3x25


10x15x4


M3x10


M3x25

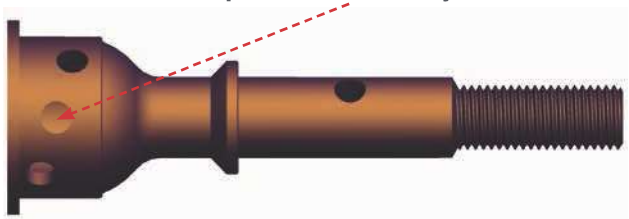
STEP 28 BAG 8 L=R



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.

Mount pin in middle hole by default

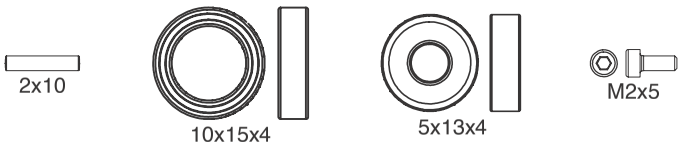


L=R REAR AXLE HEIGHT AND OFFSET INSERTS

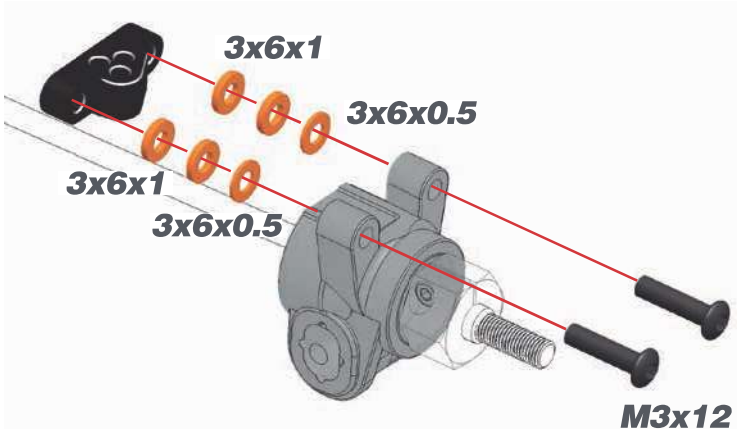
Wide Offset L	Wide Offset R		Narrow L	Narrow R
		0mm	0mm	
		0.5mm	0.5mm	
		1mm	1mm	
		1.5mm	1.5mm	
DEF. SETUP		2mm	2mm	
		2.5mm	2.5mm	
		3mm	3mm	

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.

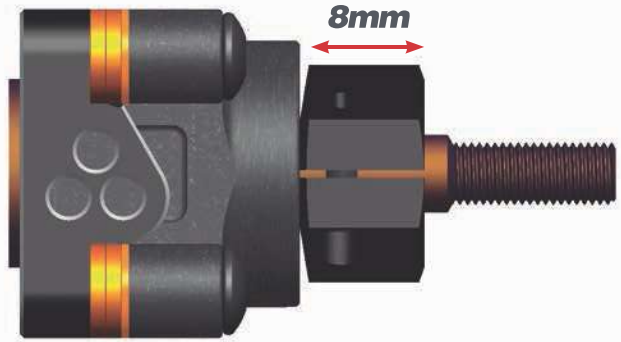
2) The width offset will give you more versatility to adjust the track width, axle location and hex width. Especially useful when using Longer rear arm.



STEP 29



L=R REAR DEFAULT
2.5 mm SHIMS



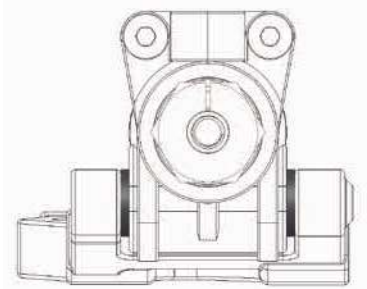
STEP 30 BAG 9

Notice, the uprights are symmetrical, but the camber link mount has to have the proper orientation for Left and Right. Please check below the proper orientation.





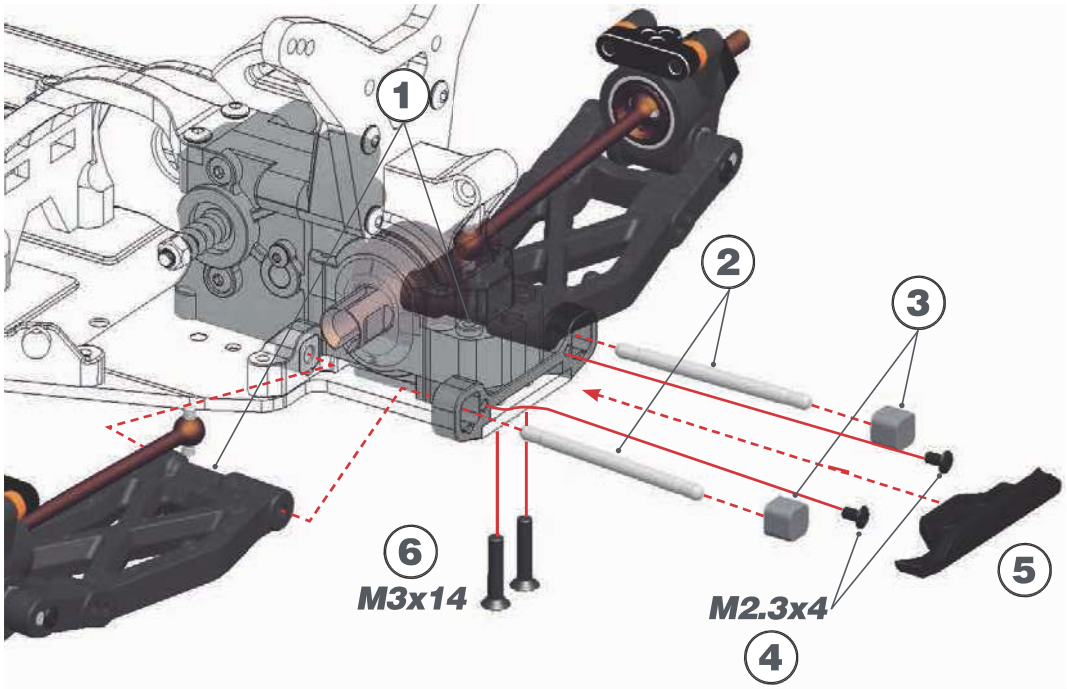
DEF. SETUP L=R REAR DEFAULT
WHEELBASE SHIMS







STEP 31



SIMPLIFIED EXPLANATION OF SUSPENSIONSION 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.

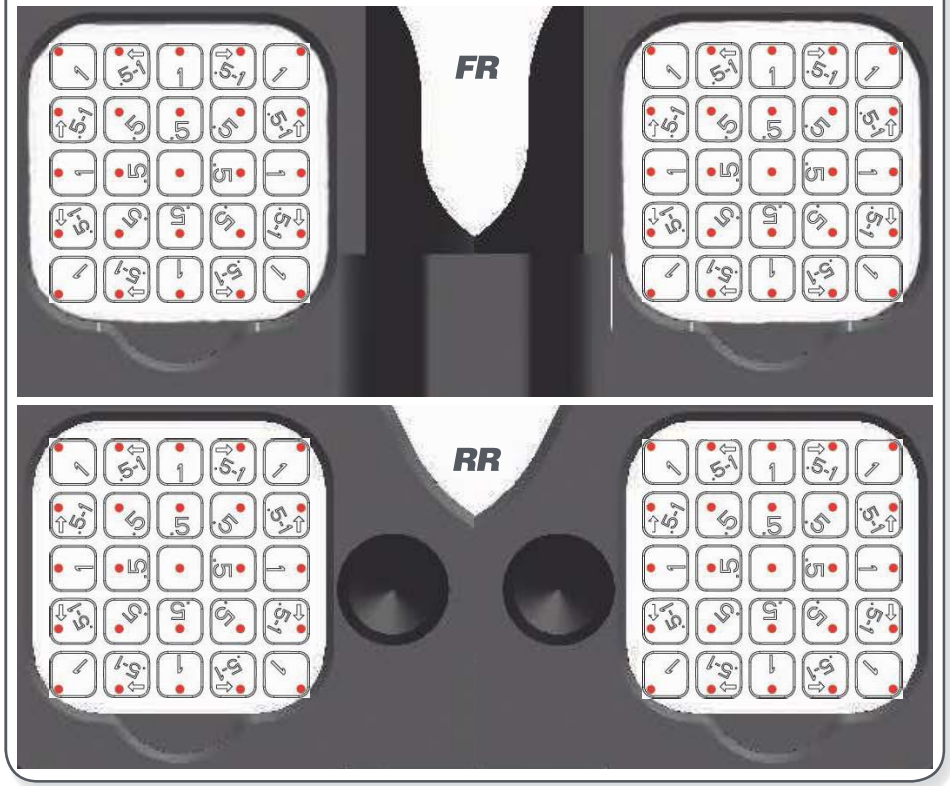
Example C: RR FR toe block inserts remain 0°. The RR RR toe block inserts have been changed to 0.5° centered inward. This will product 2.5° toe in and 1° anti-squat.



L=R SUSPENSION INSERTS

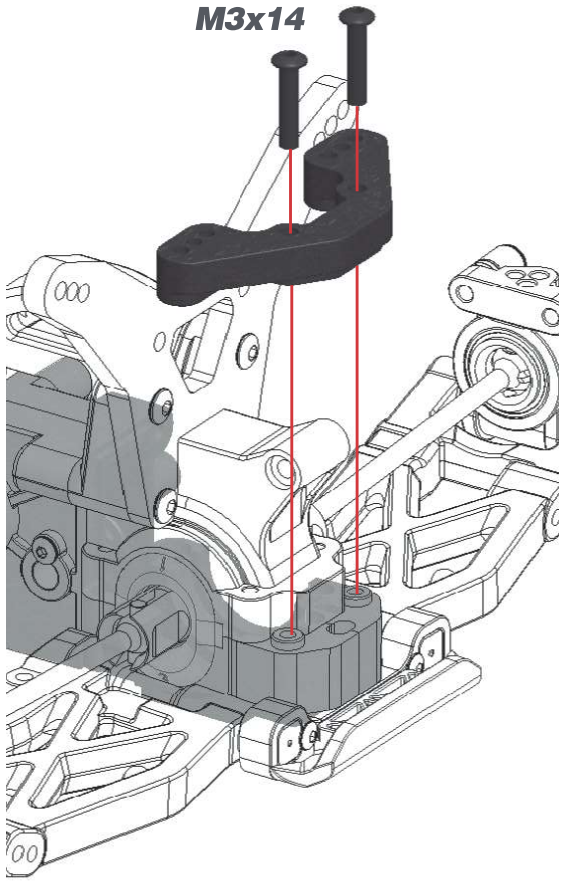
Below is a diagram of every possible orientation of the compete 7 inserts system. You are able to move 0.5 or 1 degree in any direction from center. We also have 2 special inserts to fill 0.5° left and right offset, by 1° height, as seen in the diagram. Depending on your setup, the range of toe in is 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.





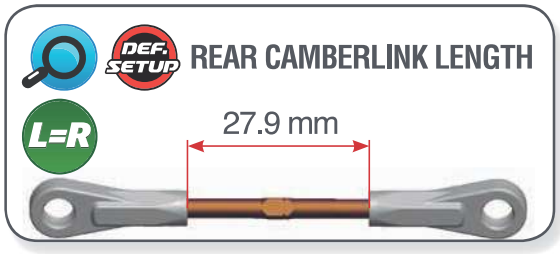
STEP 32



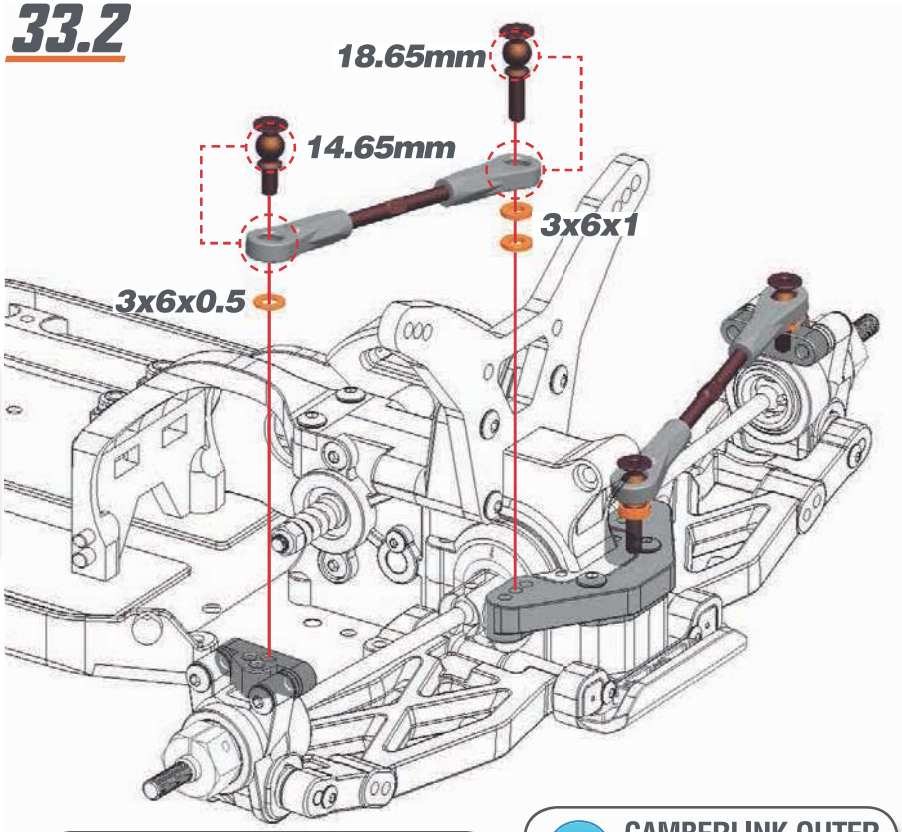
STEP 33

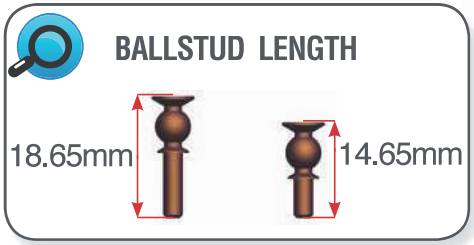
33.1

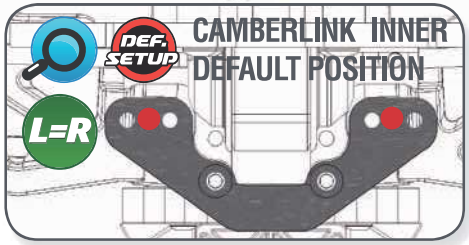


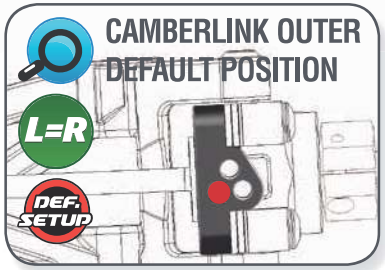


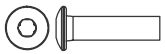
33.2







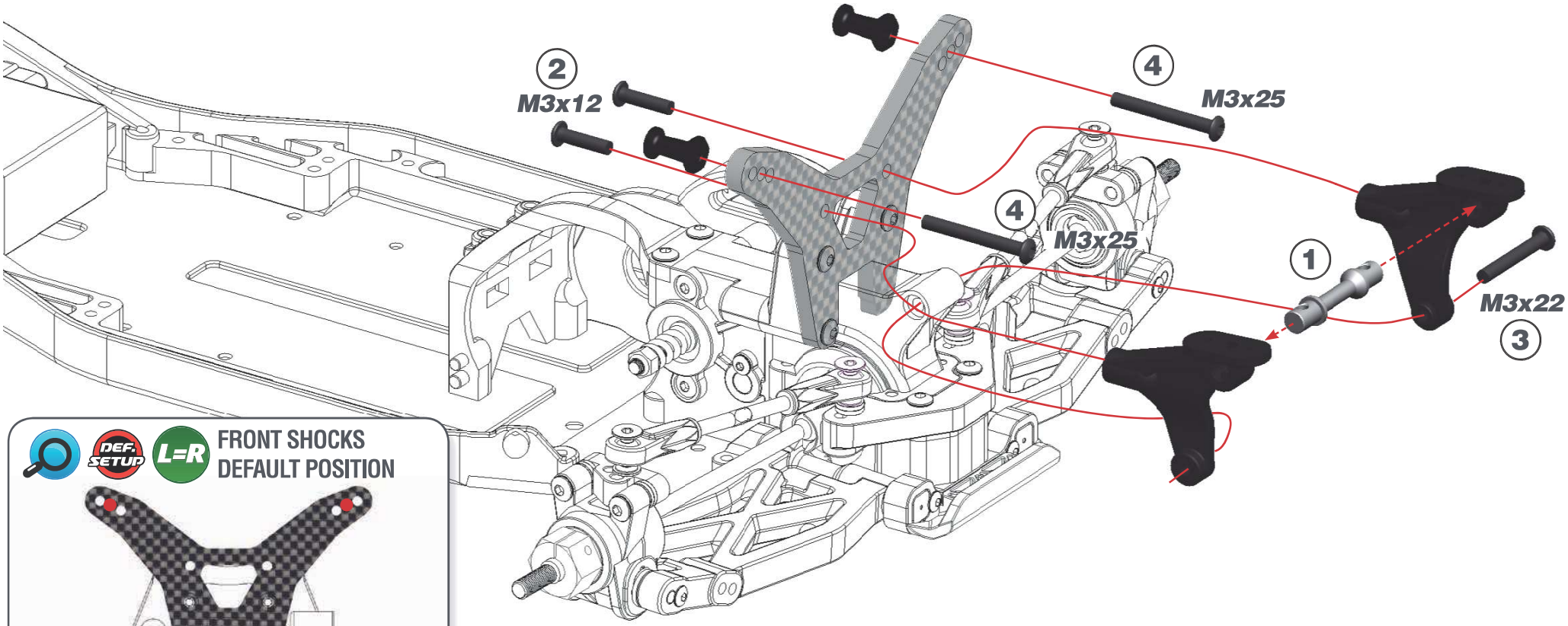


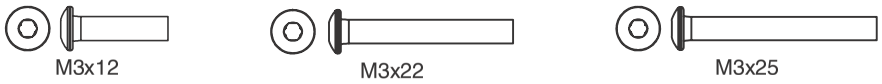

M3x14


3x6x0.5


3x6x1

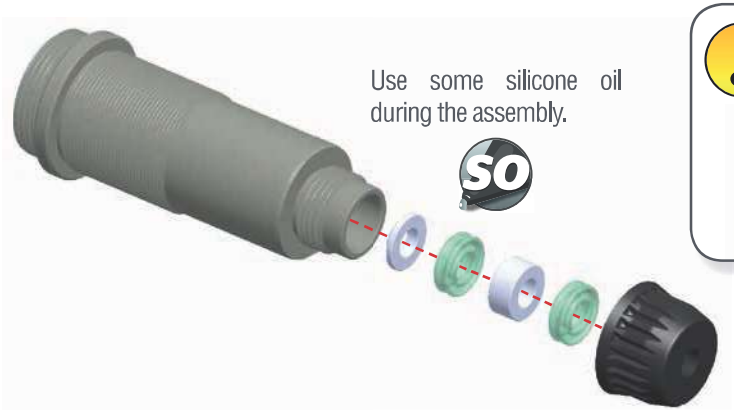
STEP 34


2
M3x12
4
M3x25
4
M3x25
1
M3x22
3
DEF. SETUP
L=R
FRONT SHOCKS
DEFAULT POSITION

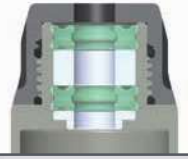

M3x12
M3x22
M3x25

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

35.1



Note the correct orientation of the shock spacers .



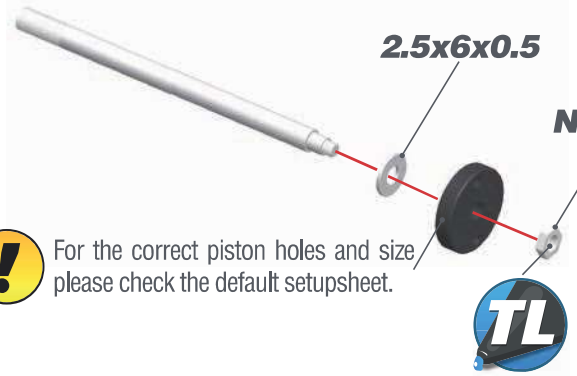
35.2



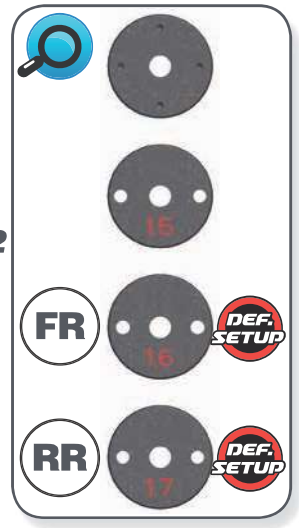
Note the correct position of the o-ring .



36.1



For the correct piston holes and size please check the default setupsheet.



36.2



2.5x6x0.5

Nut M2

STEP 37

37.1

1- Fill up with sillicone 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

STEP 38

SHOCKS LENGTH: Measure the shock length fully extended.

FRONT **REAR**



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

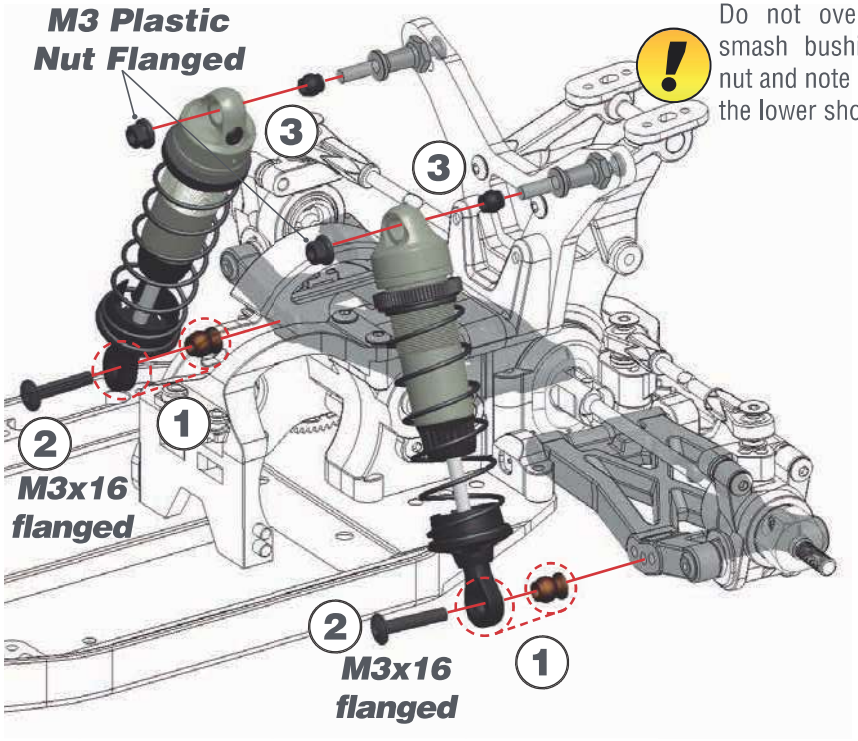


SPRINGS CUPS

FRONT HIGH **REAR LOW**

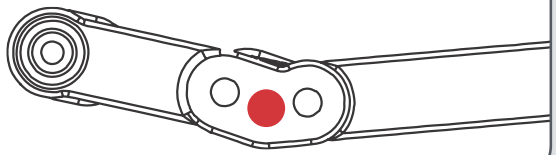


STEP 39 BAG 12



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

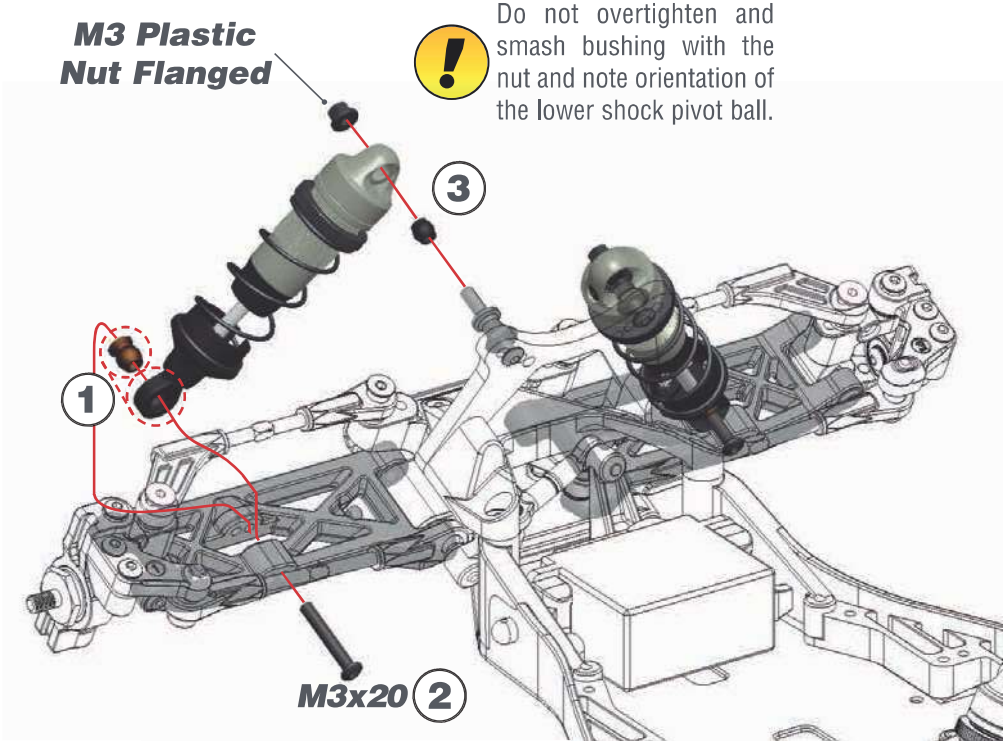
DEF. SETUP L=R REAR SHOCKS DEFAULT POSITION



M3x16 Flanged

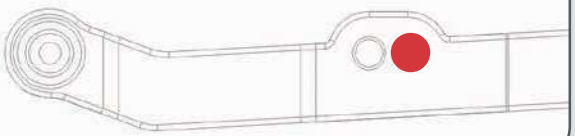
M3 Plastic Nut Flanged

STEP 40



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

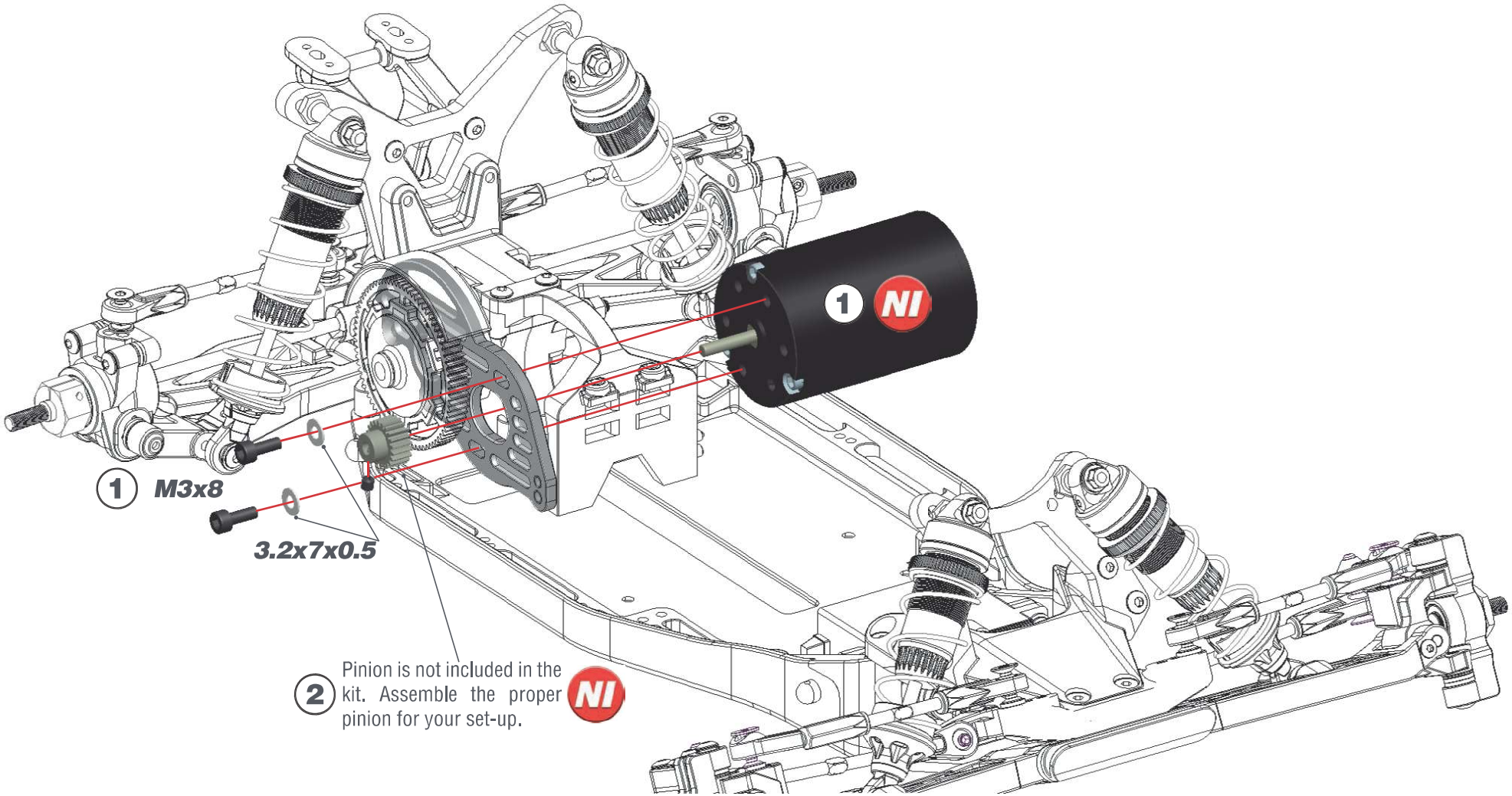
DEF. SETUP L=R FRONT SHOCKS DEFAULT POSITION



M3x20

M3 Plastic Nut Flanged

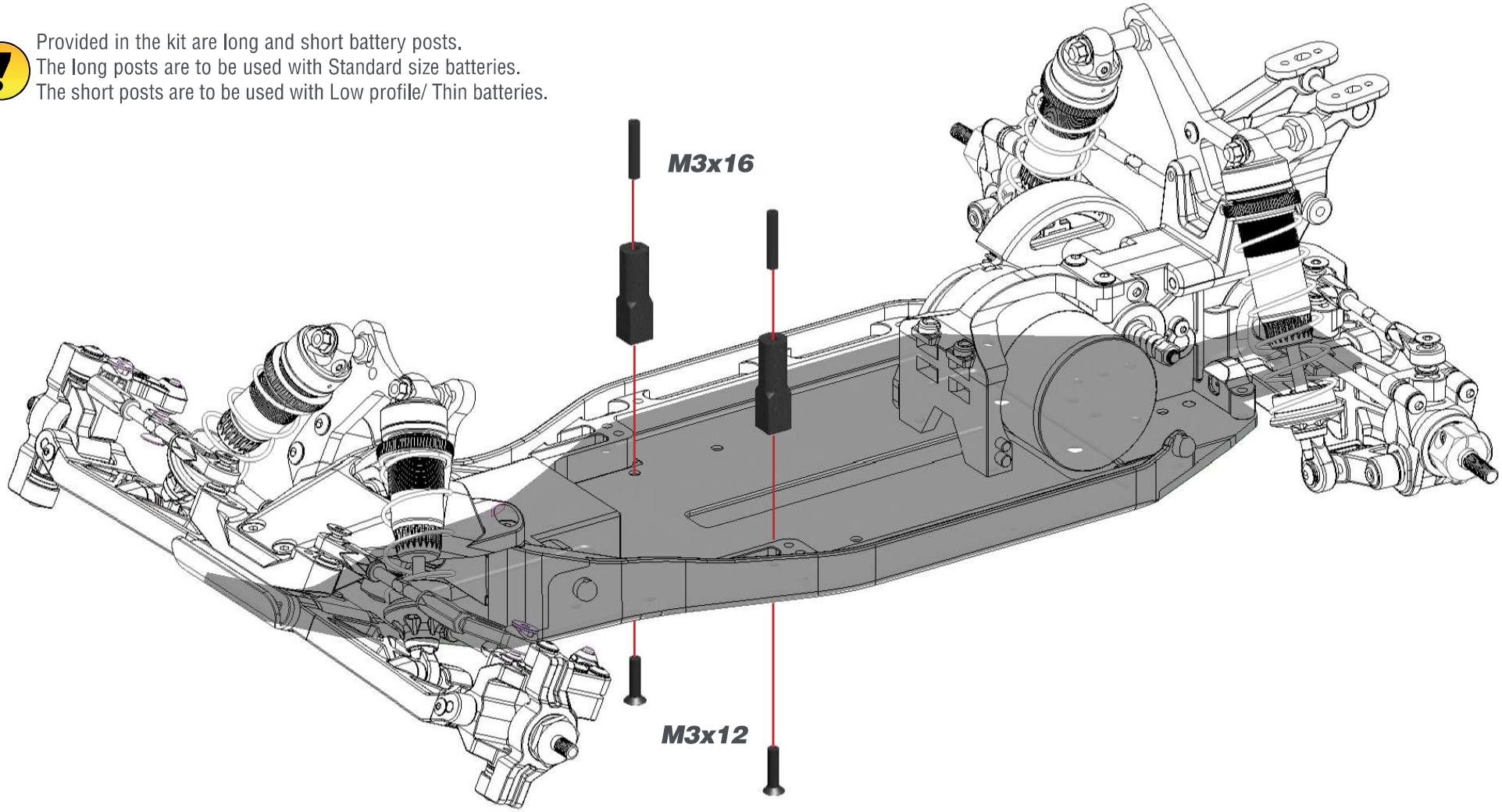
STEP 41


1 NI
1 M3x8
3.2x7x0.5
2 Pinion is not included in the kit. Assemble the proper pinion for your set-up.
NI


M3x8
3.2x7x0.5

STEP 42

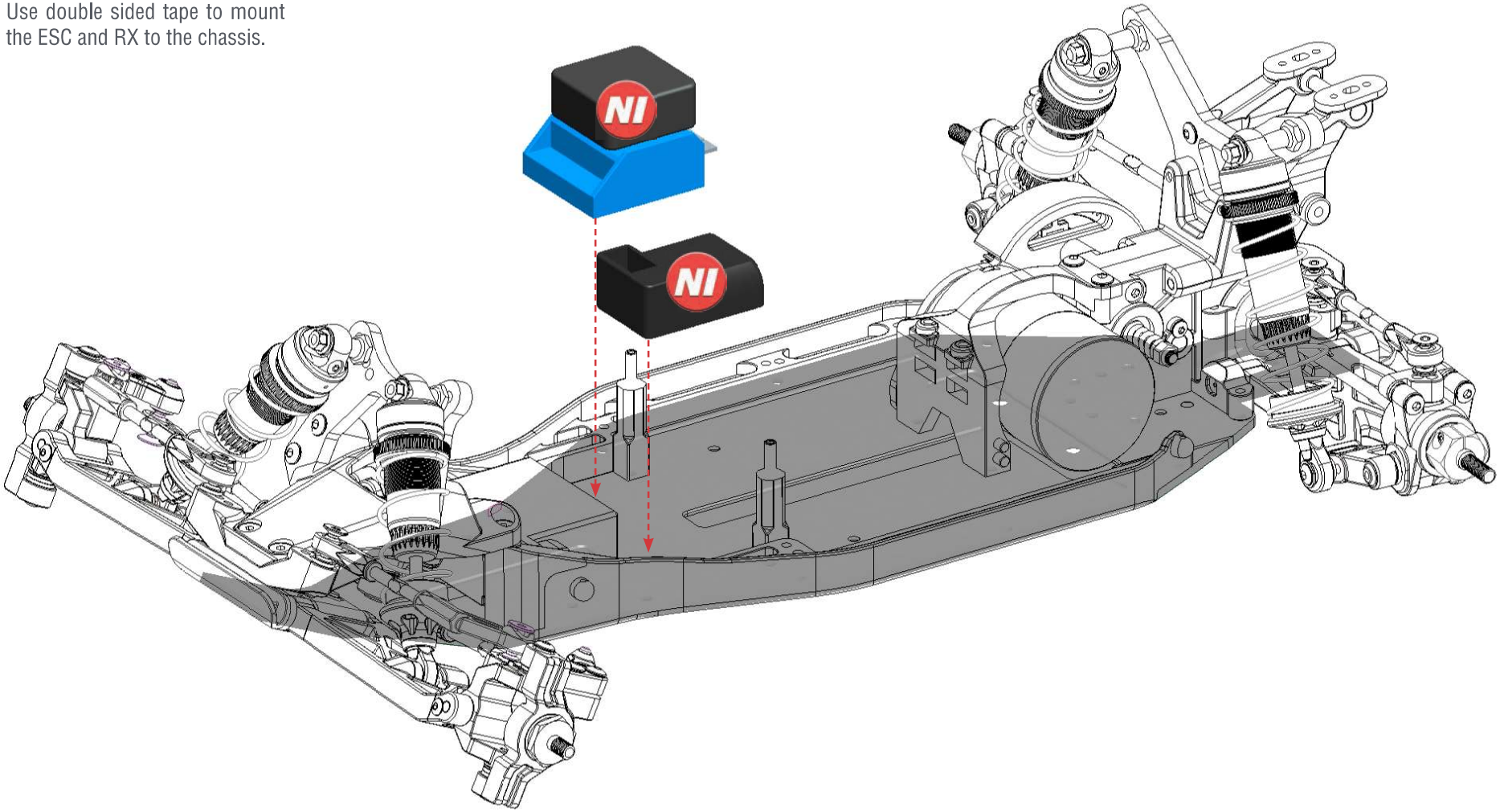
Provided in the kit are long and short battery posts.
The long posts are to be used with Standard size batteries.
The short posts are to be used with Low profile/ Thin batteries.



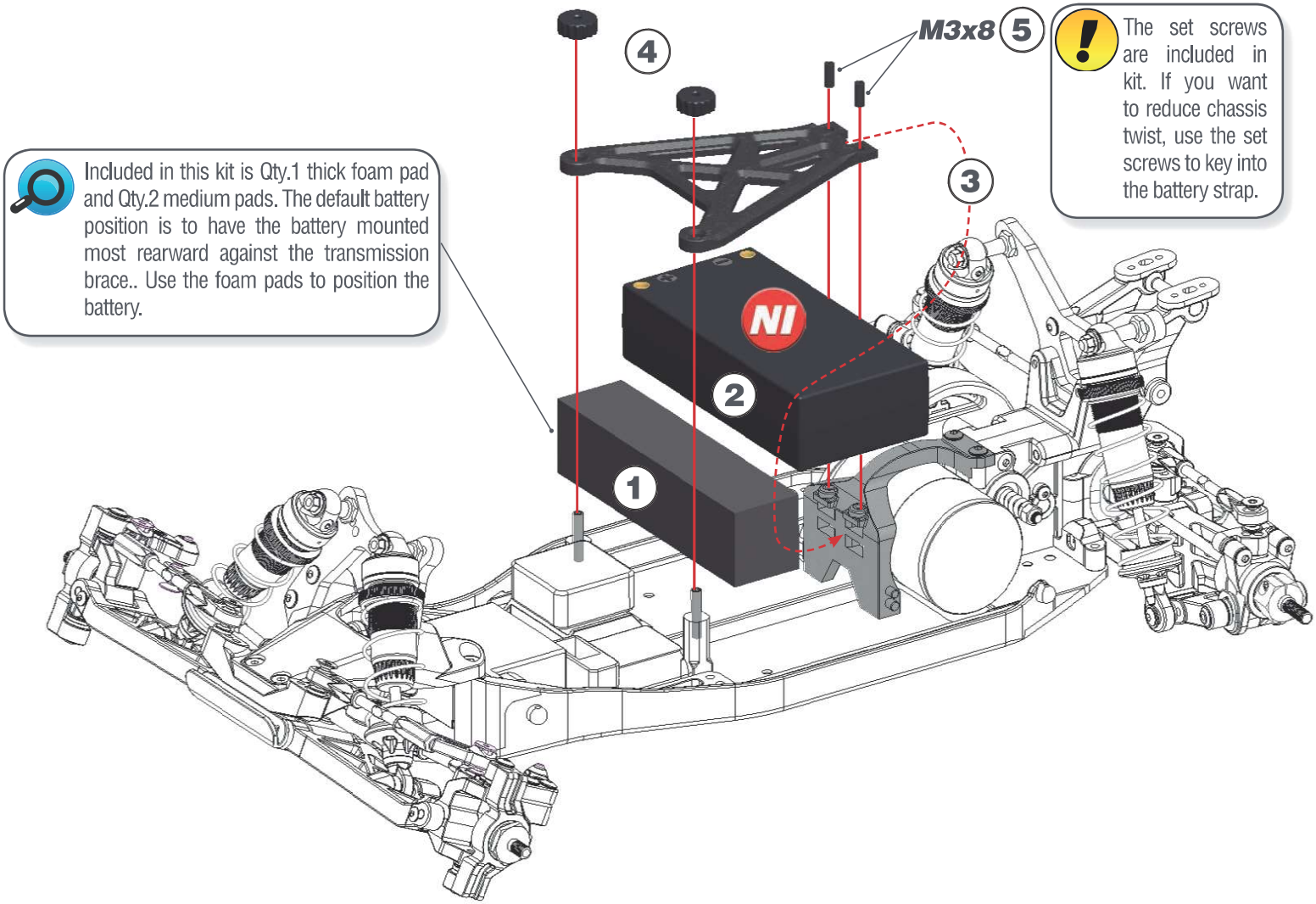


STEP 43

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



STEP 44

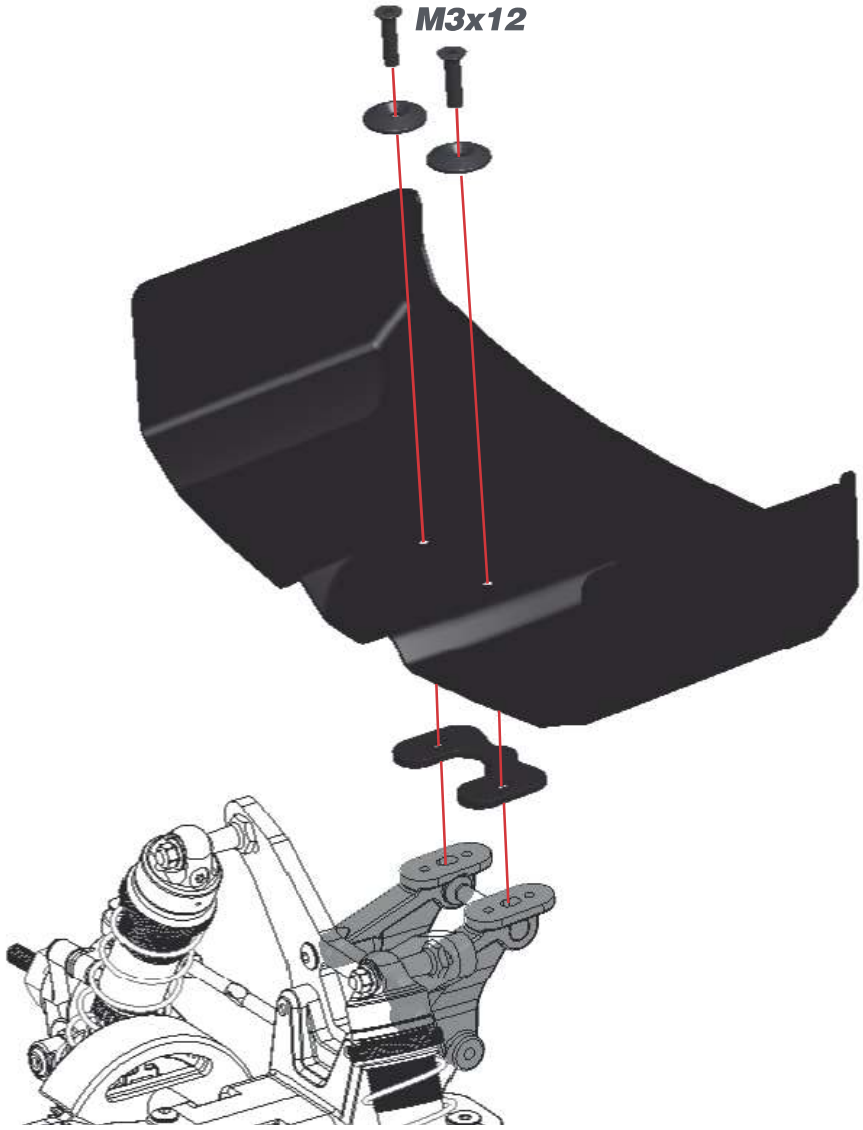


Included in this kit is Qty.1 thick foam pad and Qty.2 medium pads. The default battery position is to have the battery mounted most rearward against the transmission brace.. Use the foam pads to position the battery.

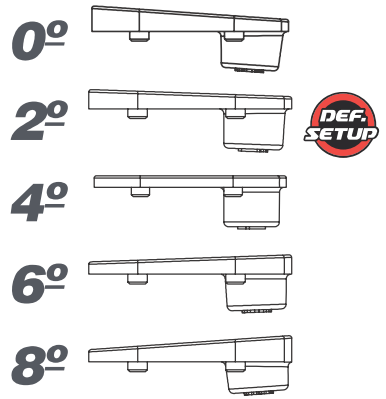
The set screws are included in kit. If you want to reduce chassis twist, use the set screws to key into the battery strap.

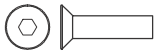


STEP 45 BAG 13



ANGLED WING SPACERS CHART

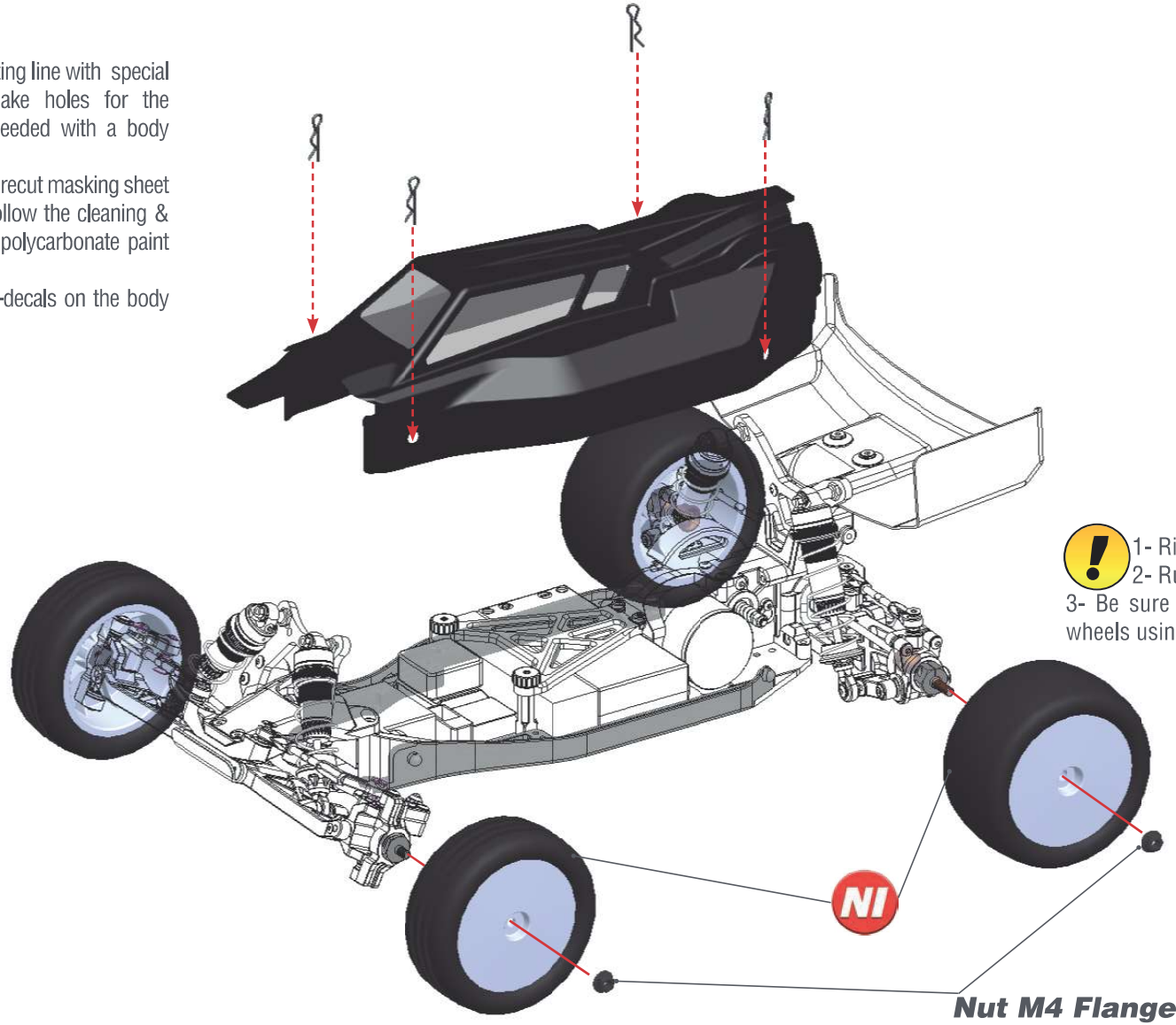




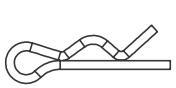
M3x12

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 Cobra 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.

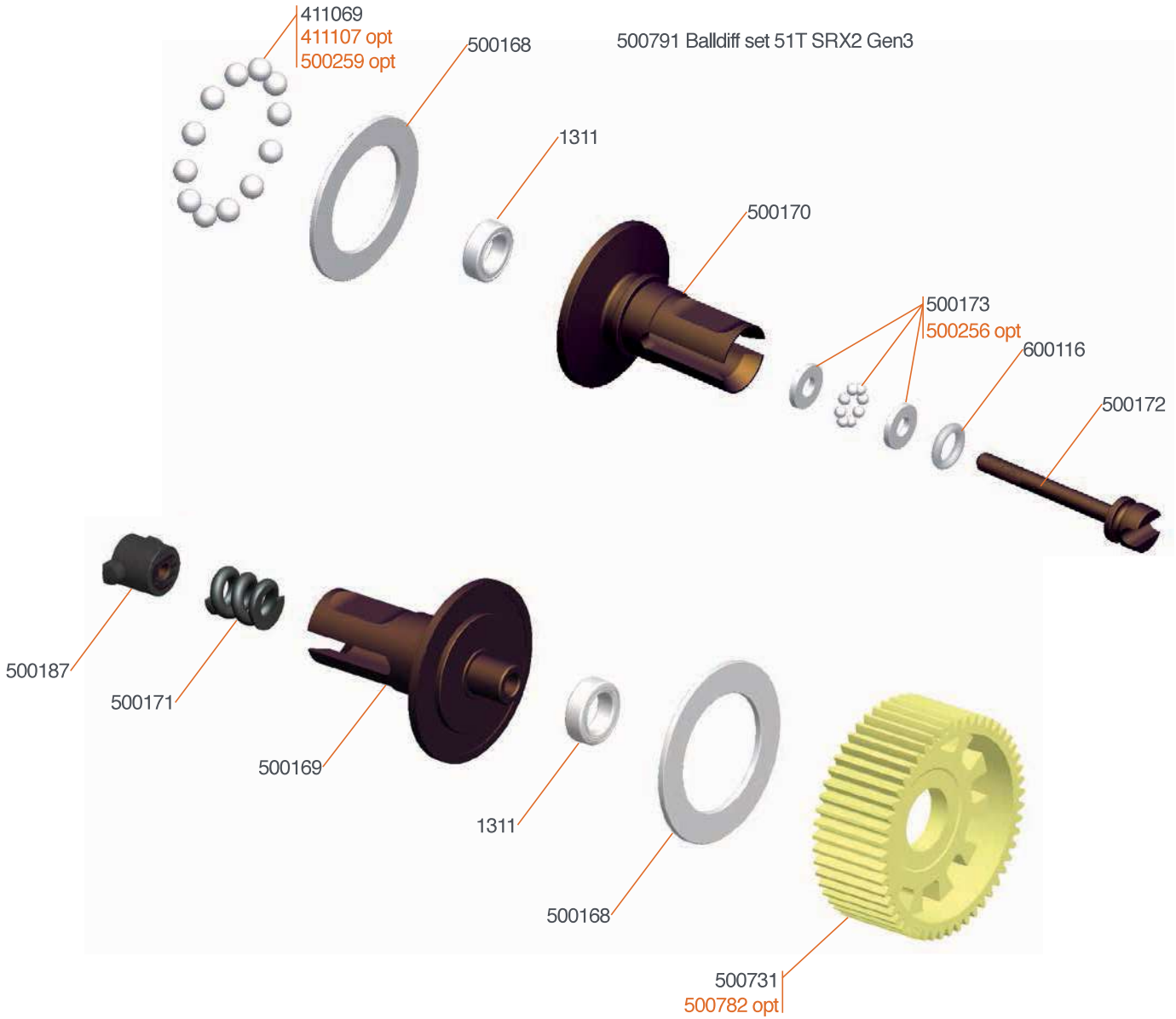

Body Clip


Nut M4 Flanged

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DIFFERENTIAL EXPLODED VIEW

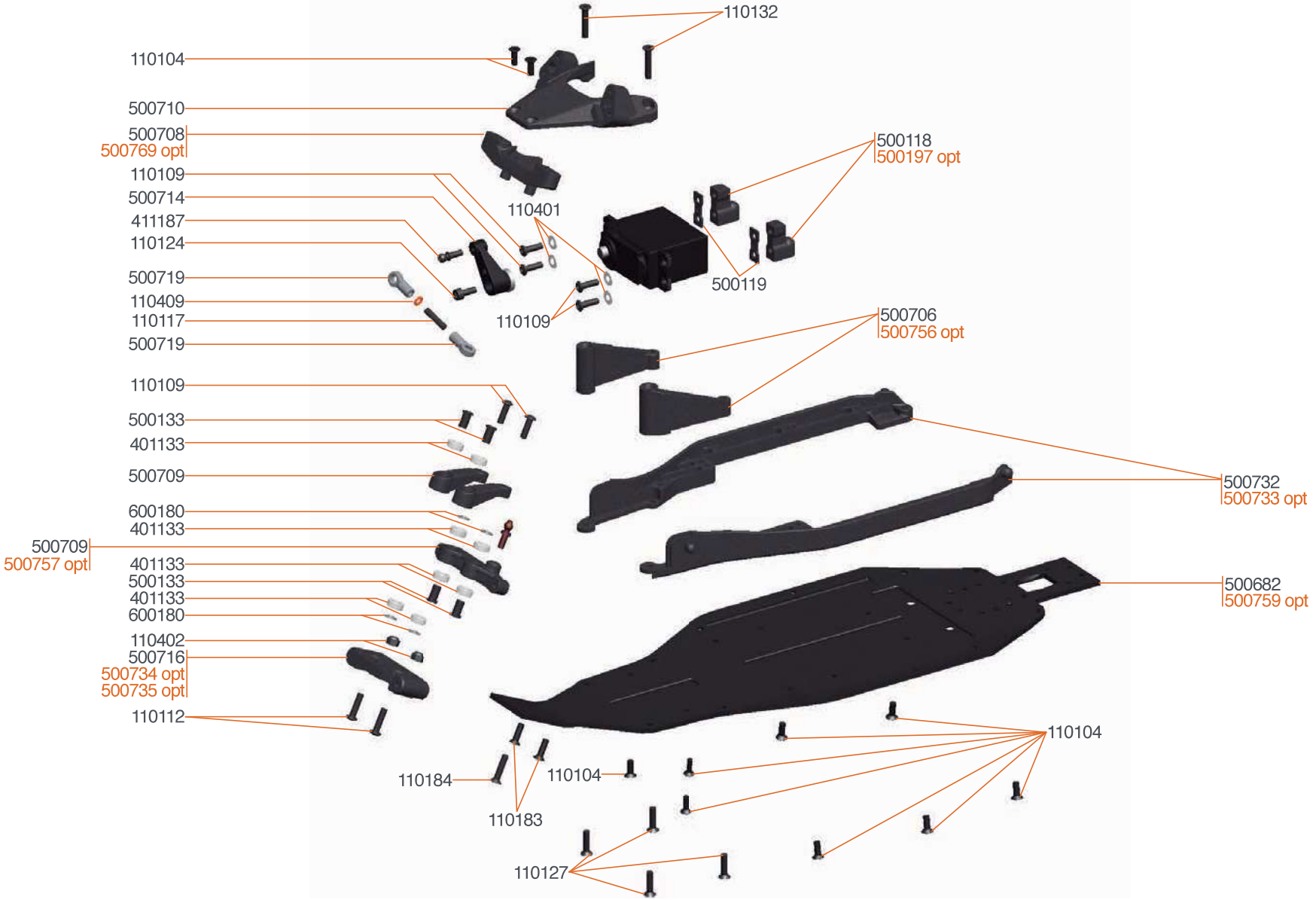


OPT

411107 Diff balls. 1/8 ceramic (12)
500259 Differential balls carbide 1/8
500256 Thrustbearing carbide balldiff SRX2
500782 Geardiff 51T LF SRX2 Gen3

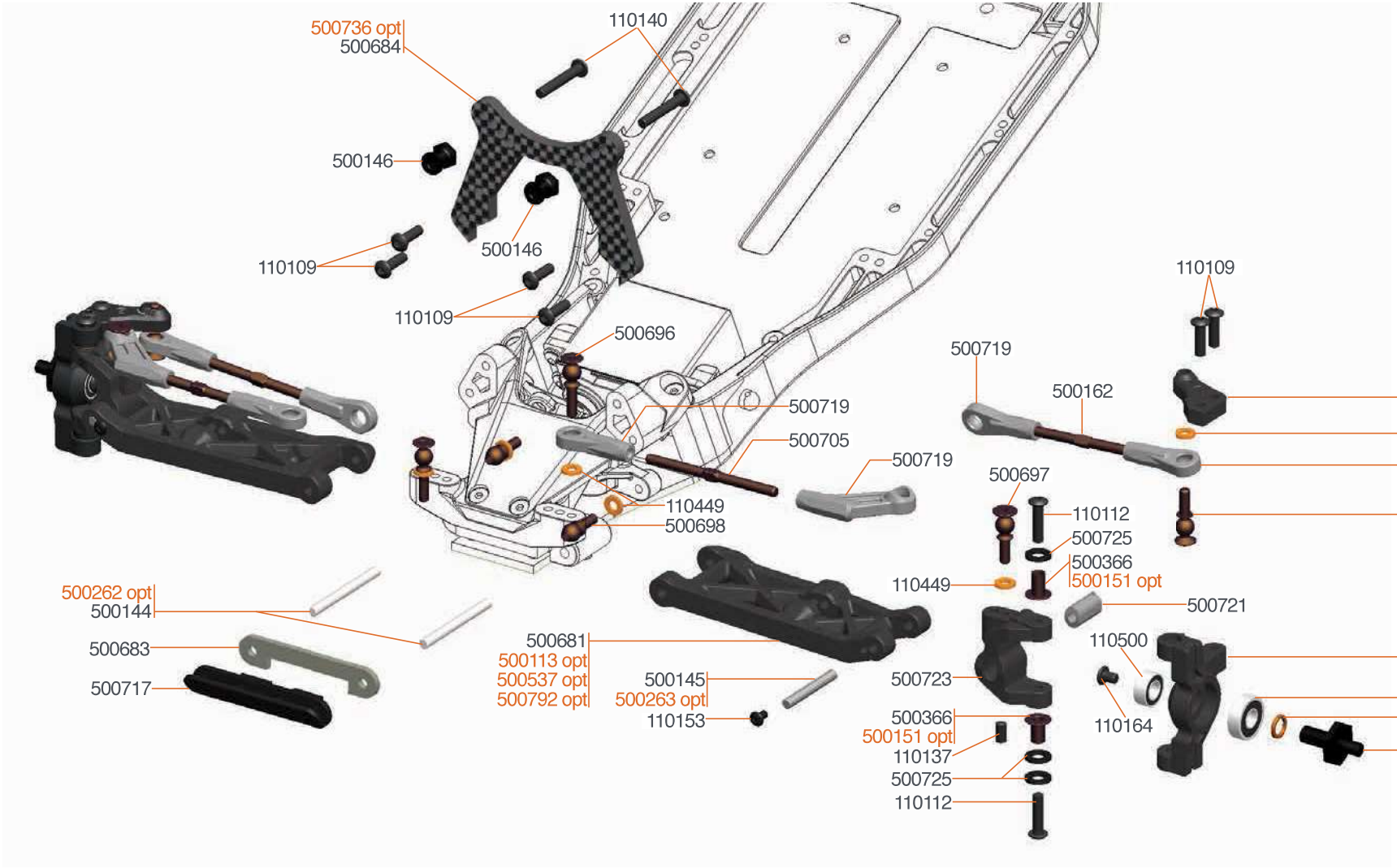
500790 Geardiff set 51T SRX2 Gen3

FRONT I EXPLODED VIEW



500197 Servomount alu (2) SRX2
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
500742 Antiroll bar 1.0 fr SRX2 Gen3
500743 Antiroll bar 1.1 fr SRX2 Gen3
500756 Bulkhead support fr L+R alu SRX2 Gen3
500757 Steeringrack alu SRX2 Gen3
500759 Chassis lightweigt 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
500769 Camberlink mount arb fr SRX2 Gen3
500771 Wing fr straigth arm SRX2 Gen3
500772 Wing fr gull arm SRX2 Gen3
500786 Front arb set

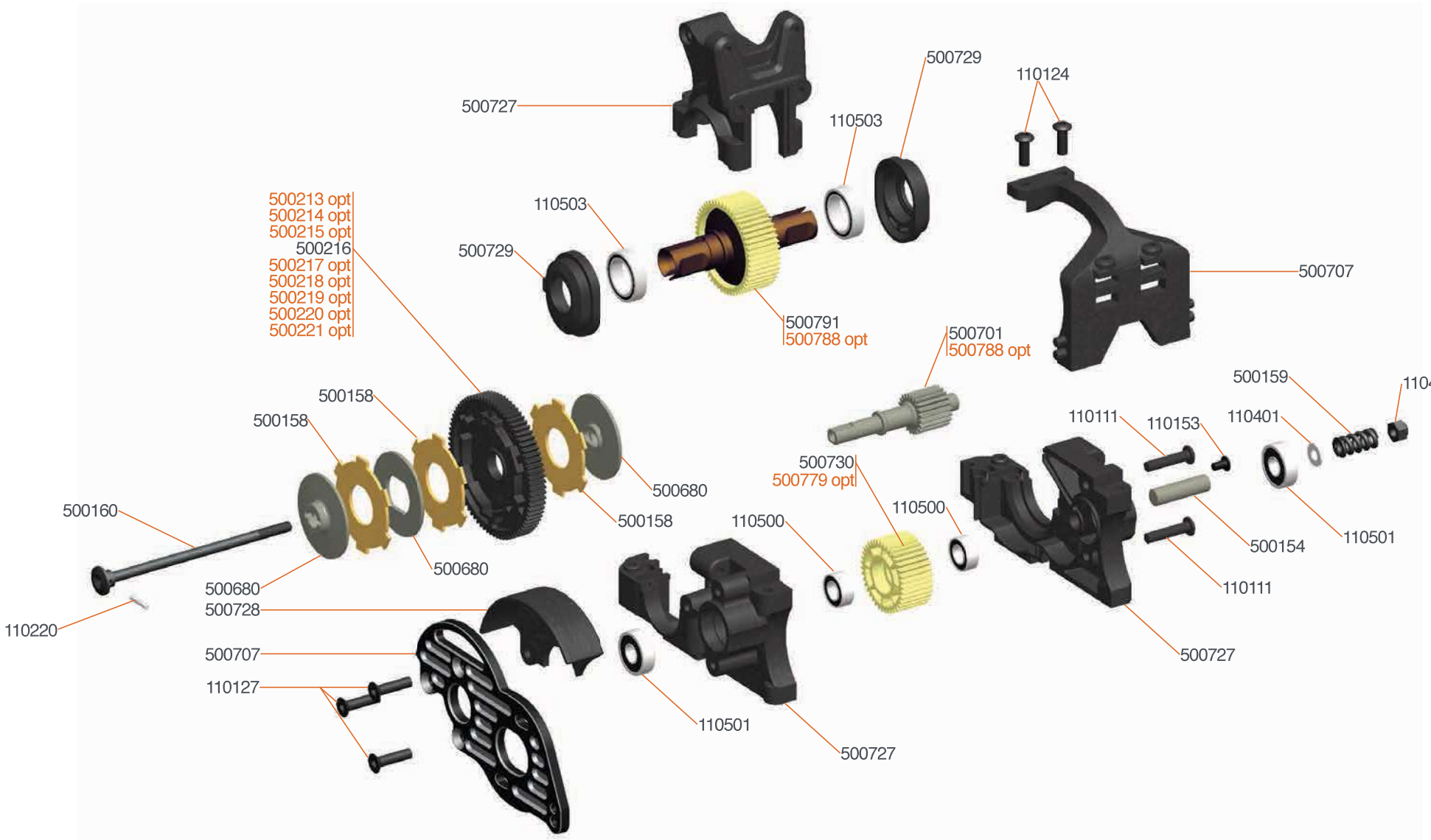
FRONT II EXPLODED VIEW



OPT

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

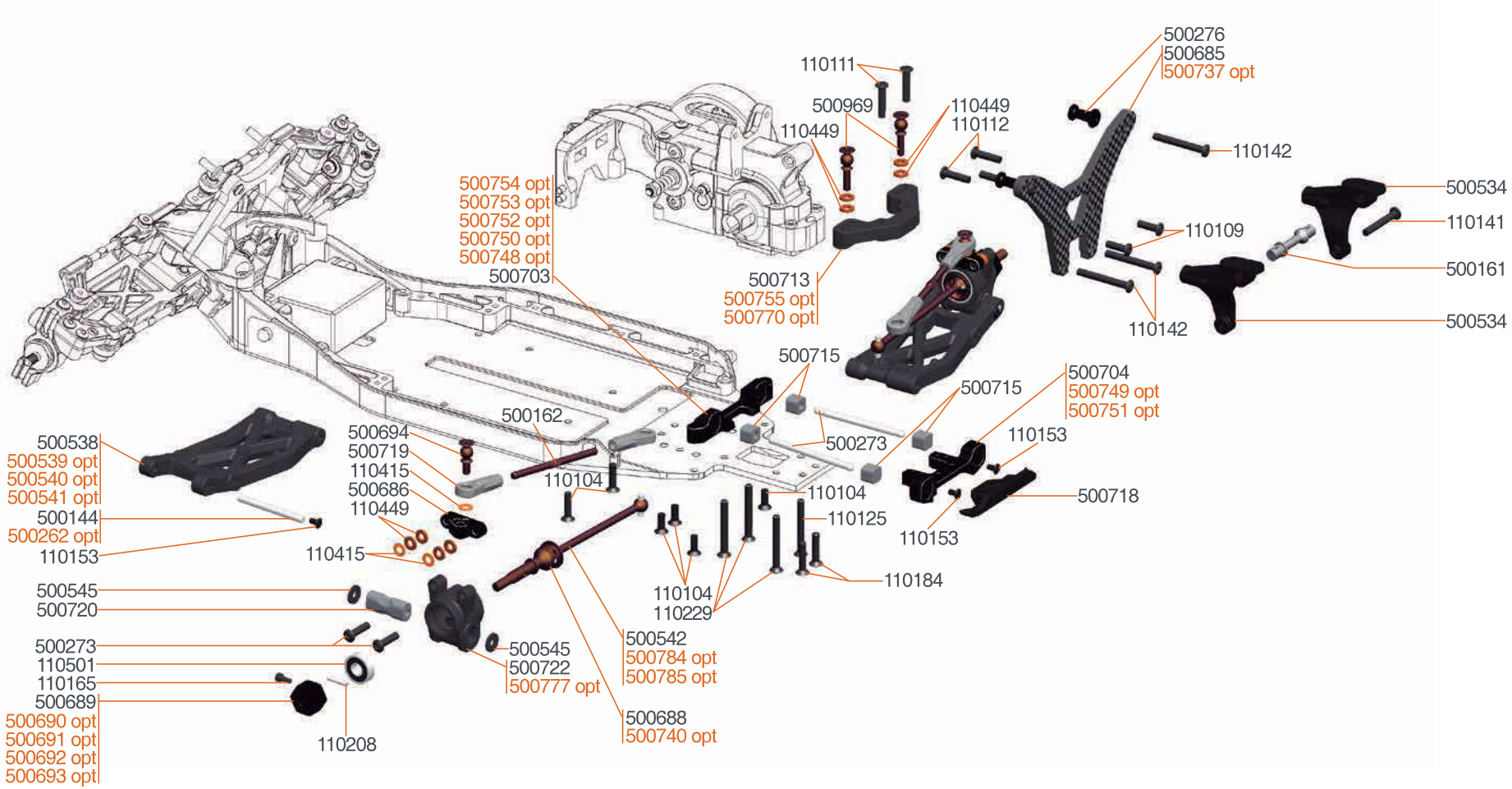
TRANSMISSION EXPLODED VIEW



OPT

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
500790 Geardiff set 51T SRX2 Gen3

REAR EXPLODED VIEW

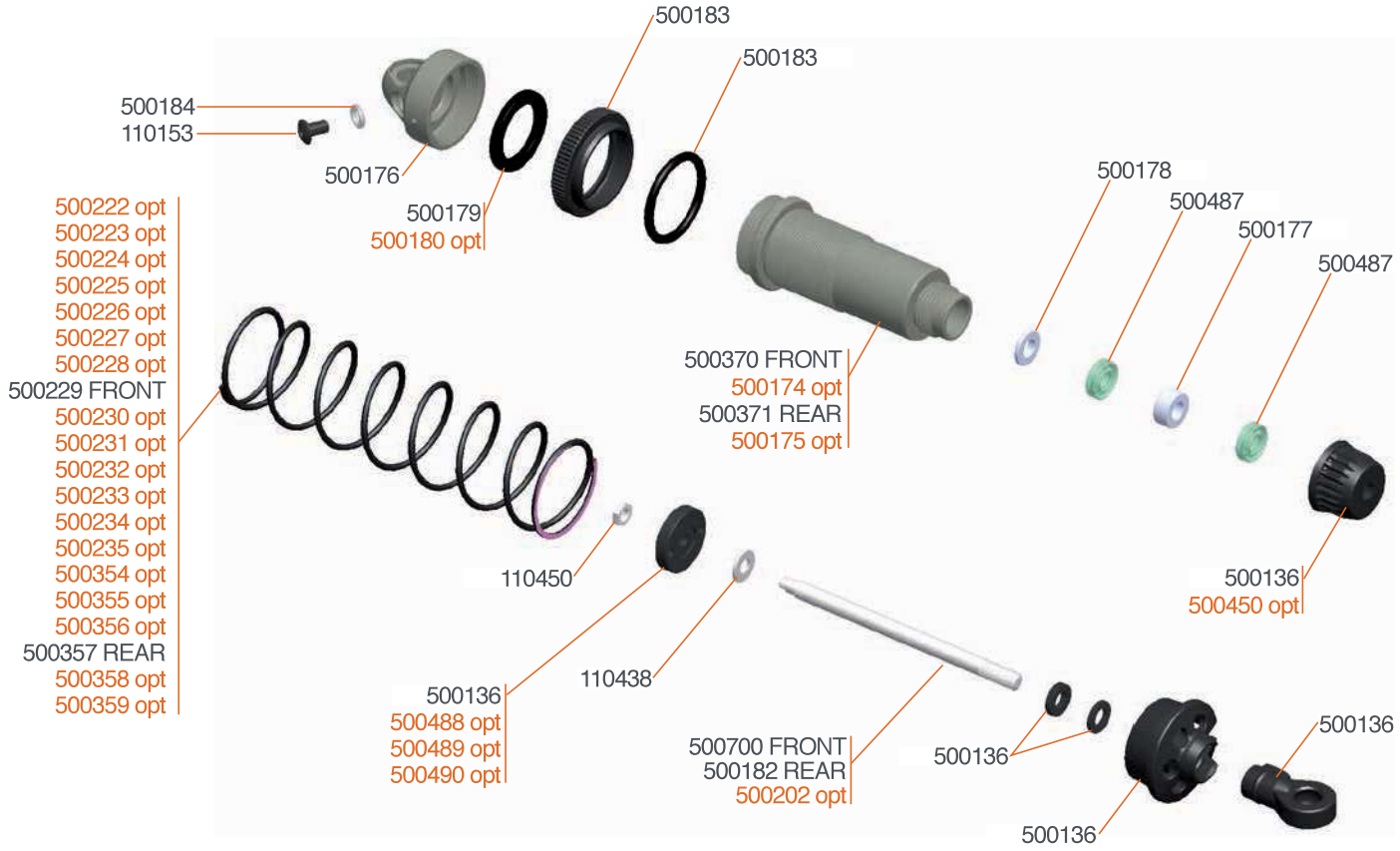


OPT

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

500737 Shocktower rr low carbon SRX2 Gen3
500740 Wheelaxle short (2) 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

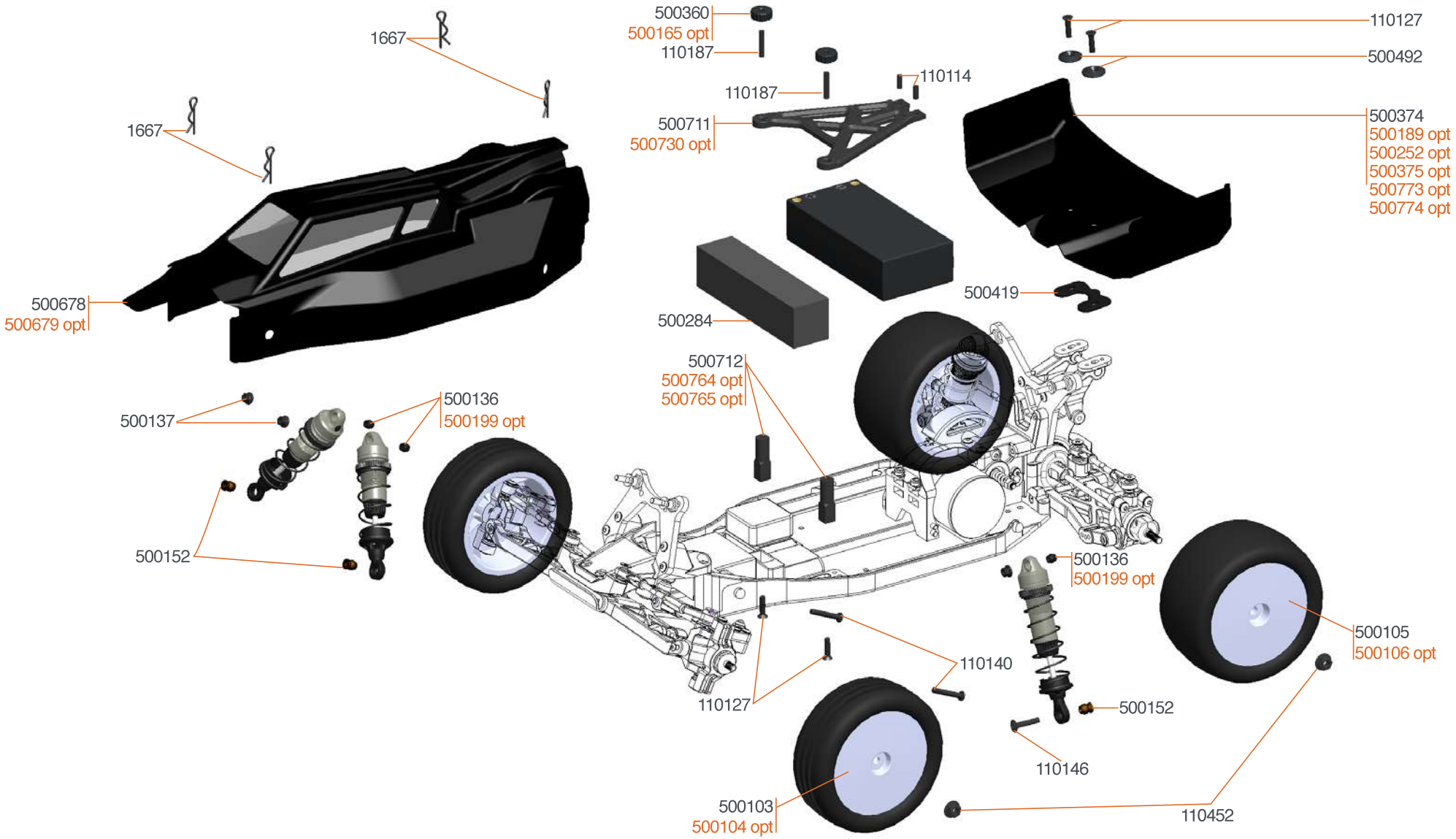
500770 Camberlink mount arb rr SRX2 Gen3
500784 Driveshaft rr 69mm SRX2 Gen3
500785 Driveshaft rr 68mm SRX2 Gen3
500787 Rear arb set
500755 Camberlink mount rr alu SRX2 Gen3
500777 Upright offset (2) SRX2 Gen3



500450 Shock bottom cap alu (4) SRX
500488 Shock piston square machined 2-hole 1.3 (4)
500489 Shock piston square machined 3-hole 1.2 (4)
500490 Shock piston square machined 4-hole 1.1 (4)
500202 Shock shaft rr TiN coated (2) SRX2
500180 Shock membrame (4) SRX2
500222 Shock spring silver 2,5lbs fr (2) SRX2
500223 Shock spring black 2,65 fr (2) SRX2
500224 Shock spring orange 2,87lbs fr (2) SRX2
500225 Shock spring red 3,0lbs fr (2) SRX2
500226 Shock spring pink 3,15lbs fr (2) SRX2
500227 Shock spring blue 3,4lbs fr (2) SRX2
500228 Shock spring purple 3,5lbs fr (2) SRX2
500229 Shock spring green 3,7lbs fr (2) SRX2
500230 Shock spring orange 2,0lbs rr (2) SRX2
500231 Shock spring red 2,1lbs rr (2) SRX2
500232 Shock spring pink 2,2lbs rr (2) SRX3
500233 Shock spring blue 2,3lbs rr (2) SRX2
500234 Shock spring purple 2,4lbs rr (2) SRX2
500235 Shock spring green 2,5lbs rr (2) SRX2
500354 Shock spring orange 1.8lbs rr astro (2) SRX2
500355 Shock spring red 1.9lbs rr astro (2) SRX2
500356 Shock spring pink 2.0lbs rr astro (2) SRX2
500357 Shock spring blue 2.1lbs rr astro (2) SRX2
500358 Shock spring purple 2.2lbs rr astro (2) SRX2
500359 Shock spring green 2.3lbs rr astro (2) SRX2

OPT

FINAL EXPLODED VIEW

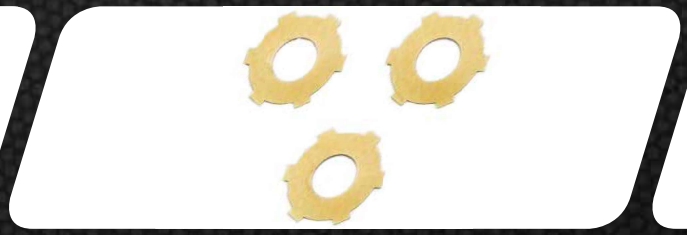


OPT

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 Batterypost high (2+2) alu SRX2 Gen3
500765 Batterypost low (2+2) alu SRX2 Gen3
500773 Wing rr low SRX2 Gen3
500774 Wing rr low wide SRX2 Gen3

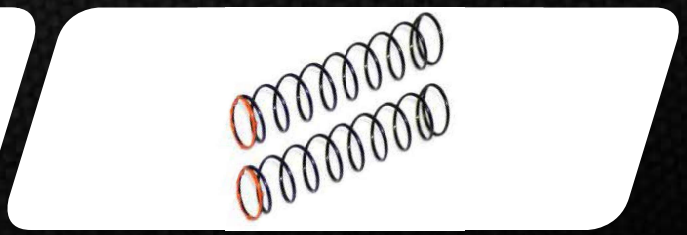
TEAM SERPENT NETWORK

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

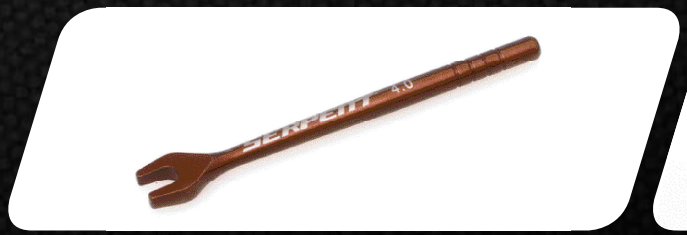
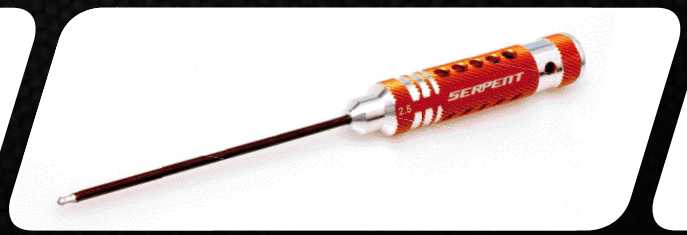




SRX2 Gen3 OPTIONALS PARTS www.serpent.com/500013/Optionals/





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SRX2 gen3

INSTRUCTION MANUAL

Manual SRX2 Gen3 #89587-1



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