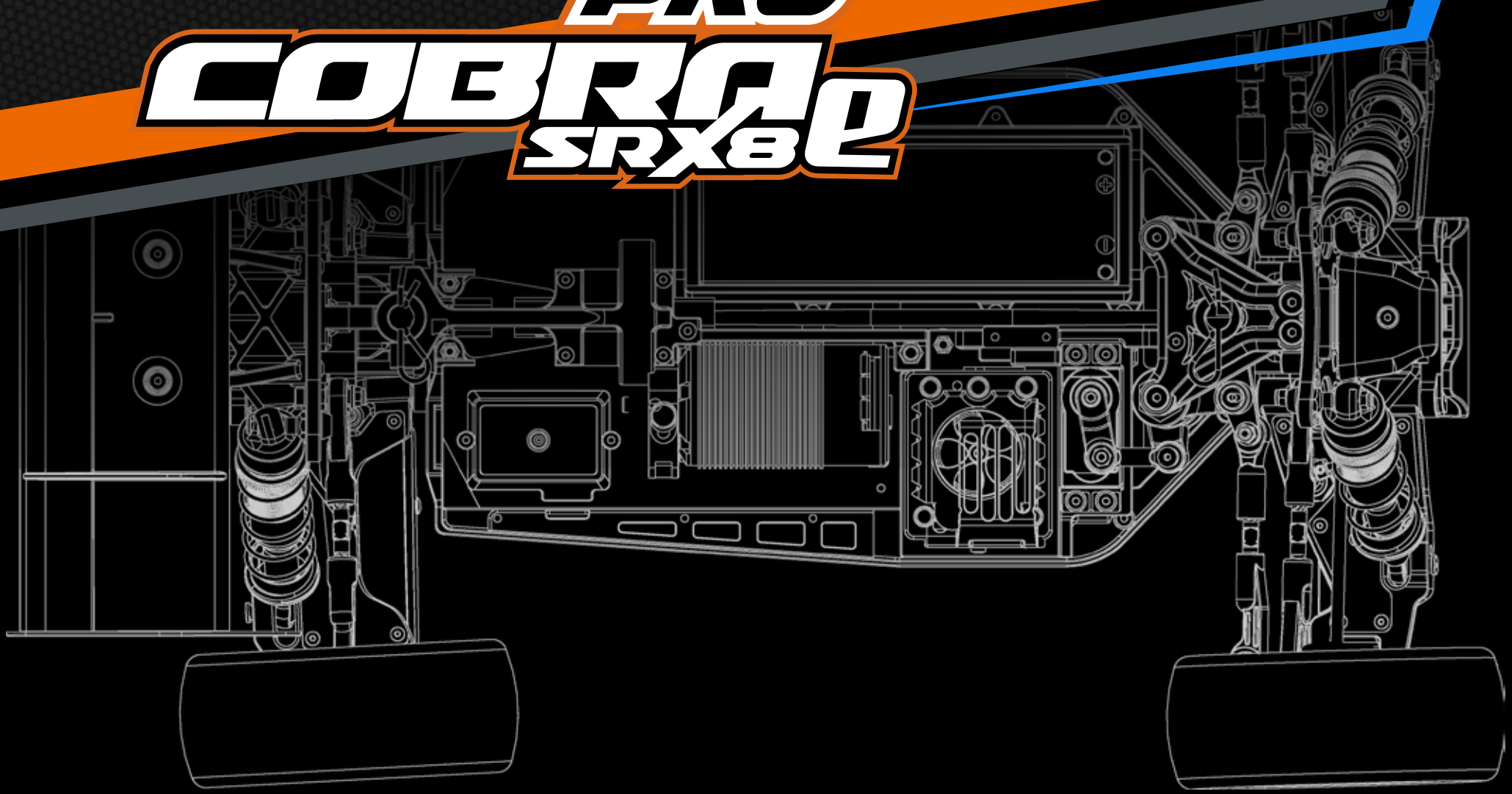
INSTRUCTION MANUAL

PRO COBRA SRX8E



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 Cobra SRX8-E PRO is a state of the art 1/8 scale 4wd 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 easy 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.Openonly 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 Cobra SRX8-E PRO. Fine-tuning the initial setup is an essential part of building a high-performance racecar like your Serpent Cobra SRX8-E PRO.

EXPLODED VIEWS AND PARTS LIST

The exploded views and parts lists for the Serpent Cobra SRX8-E PRO 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 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.

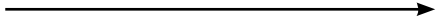
READ THIS FIRST!

- 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.
- After your session, disconnect the main battery from the speed control.
- 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

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

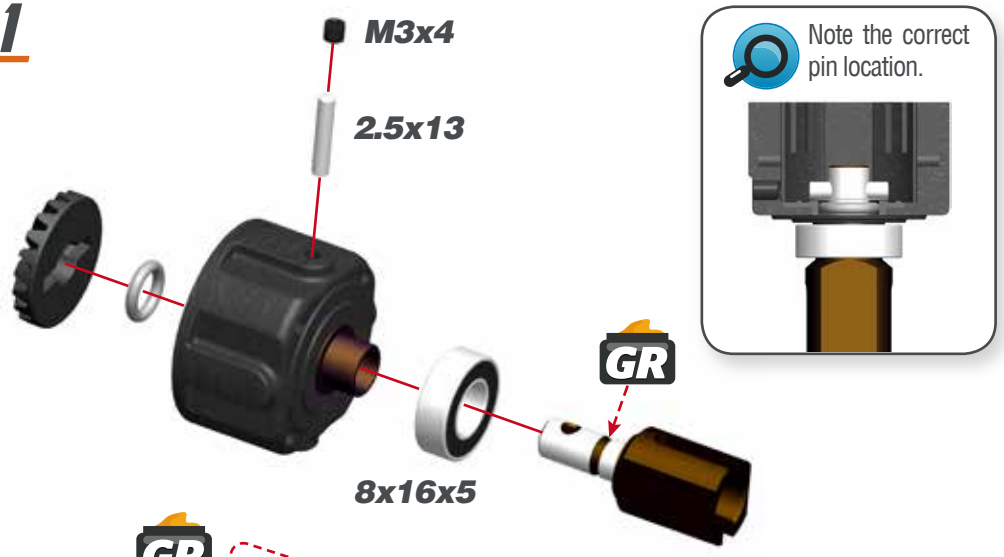
Each step contains a variety of symbols described below.

	Carefully read and check thoroughly.
	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.
	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.

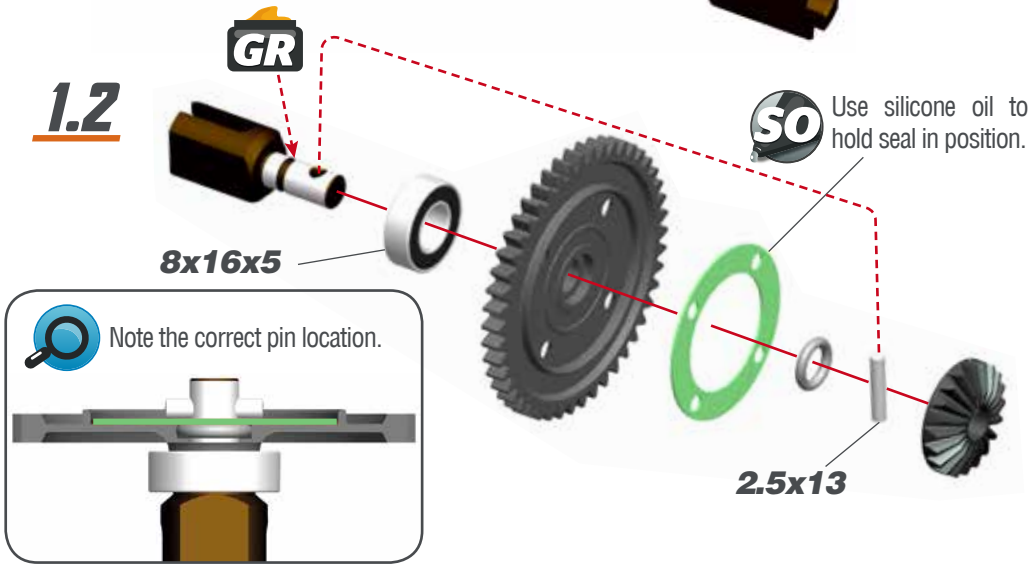
CENTER DIFF ASSEMBLY

STEP 1 CENTER DIFF BAG

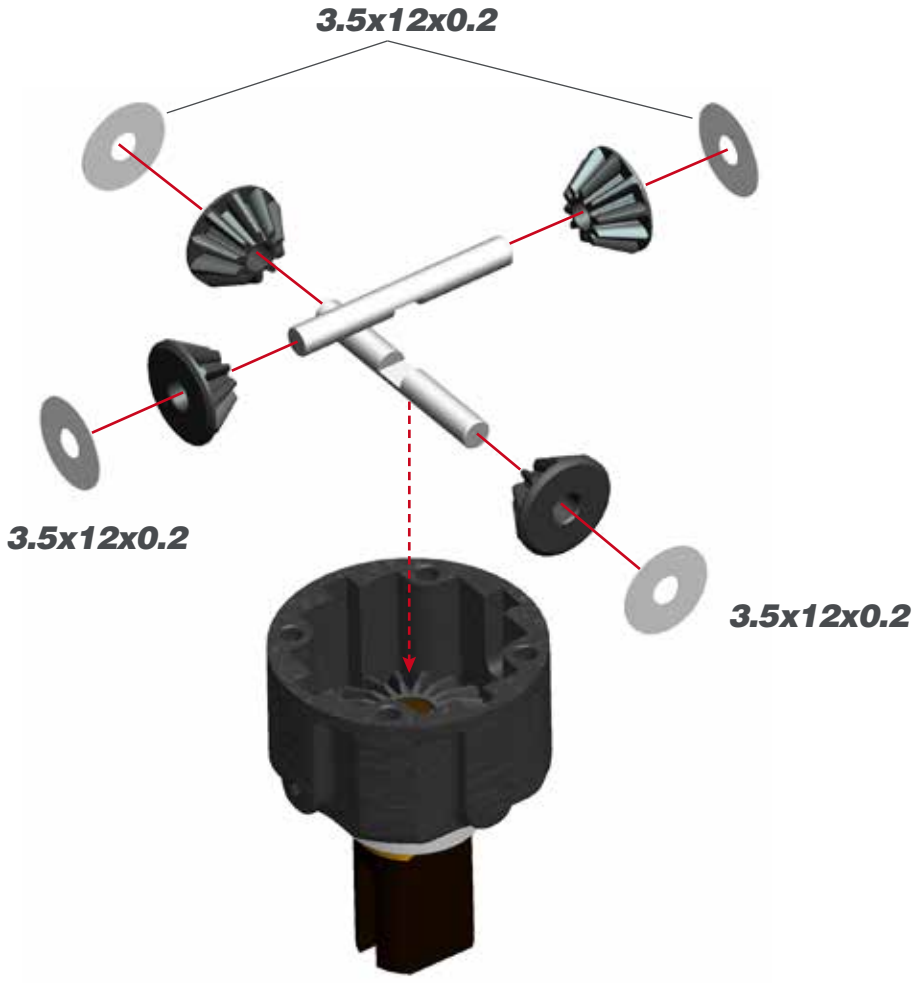
1.1

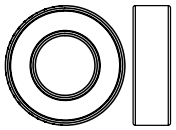


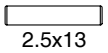
1.2



STEP 2




8x16x5


2.5x13

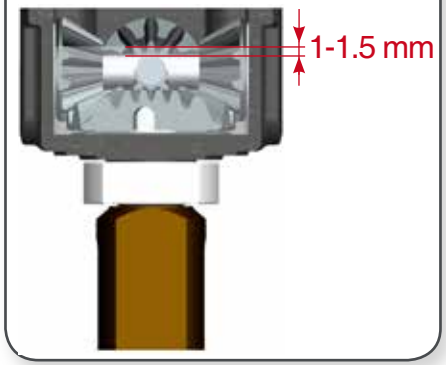

M3x4


3.5x12x0.2

STEP 3

Fill the differential with silicone oil 1 mm above the crosspin, do NOT overfill. Use the silicone oil supplied in the kit. For the correct cst value please check the default setupsheet.

OIL LEVEL

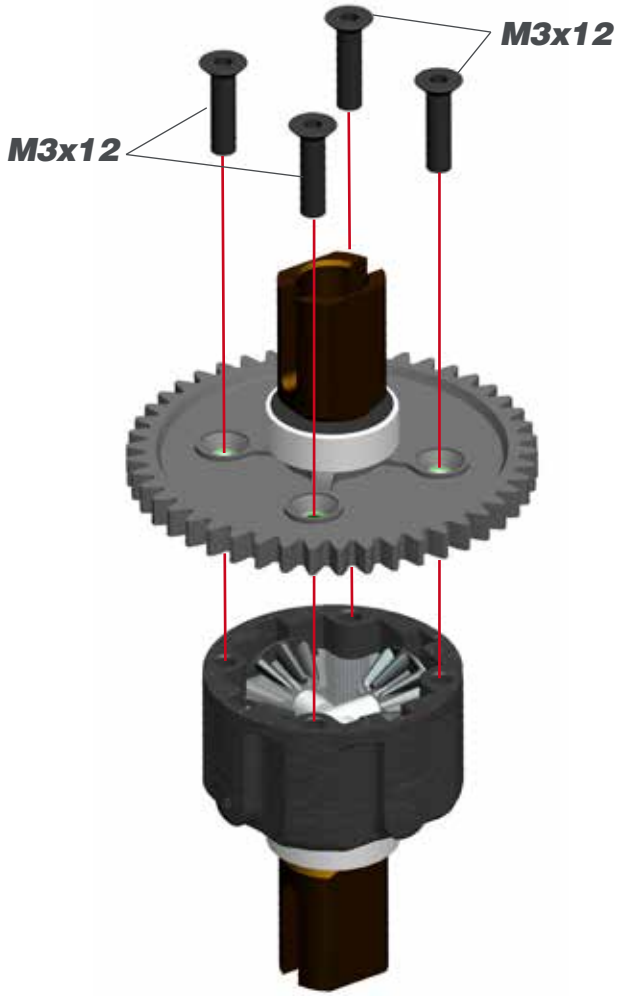


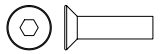
AMOUNT OF OIL IN THE DIFFS

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

Differential Weight= 44.00 +/- 0.10 Gram

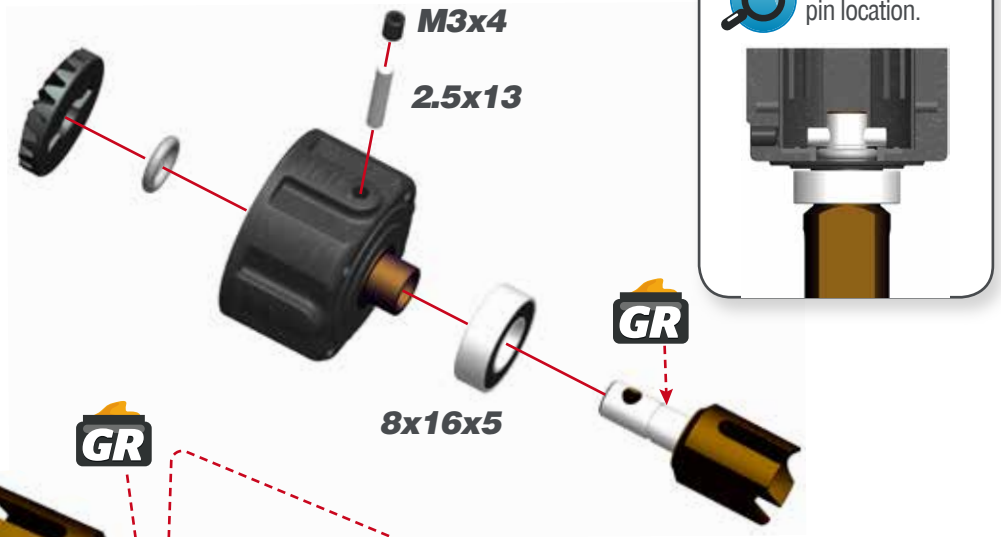
STEP 4



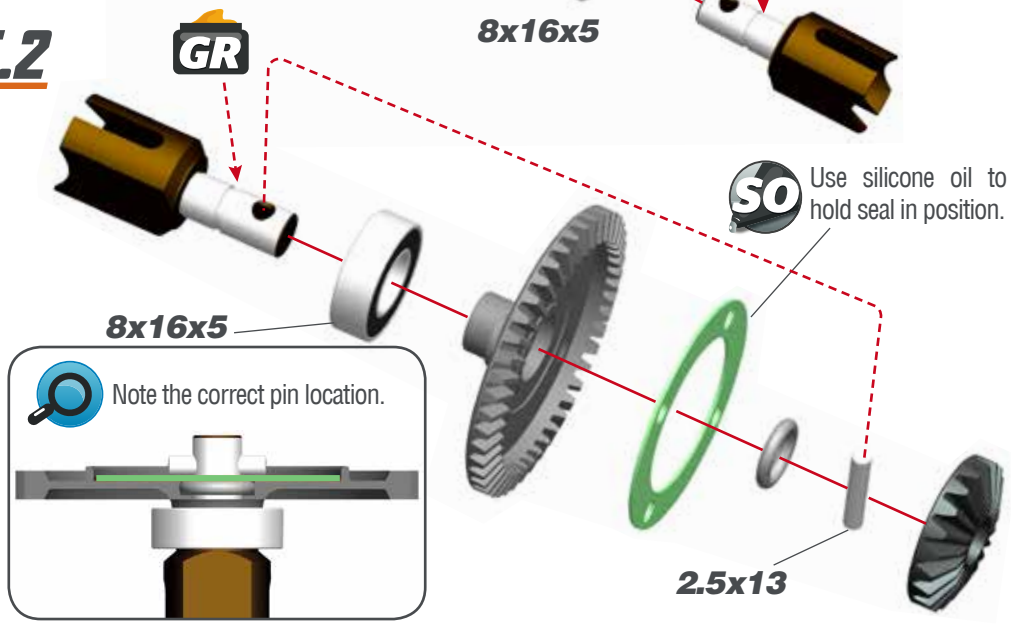


STEP 5 FR/RR DIFF BAG

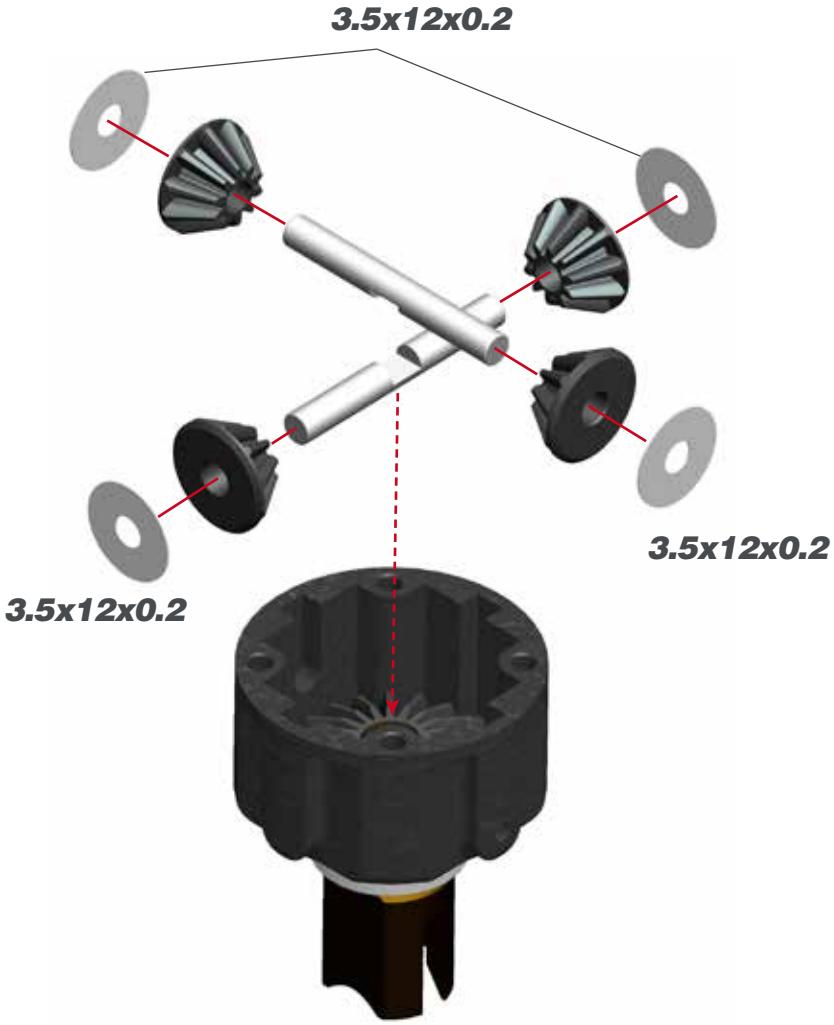
5.1



5.2



STEP 6




8x16x5


2.5x13

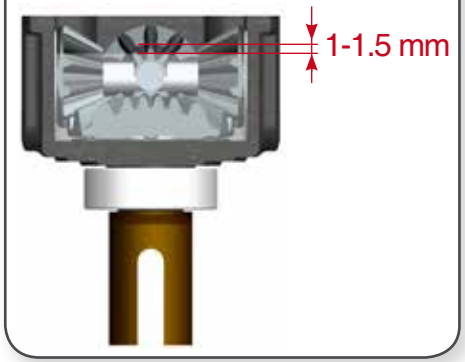

M3x4


3.5x12x0.2

STEP 7

Fill the differential with silicone oil 1 mm above the crosspin, do NOT overfill. Use the silicone oil supplied in the kit. For the correct cst value please check the default setupsheet.

OIL LEVEL

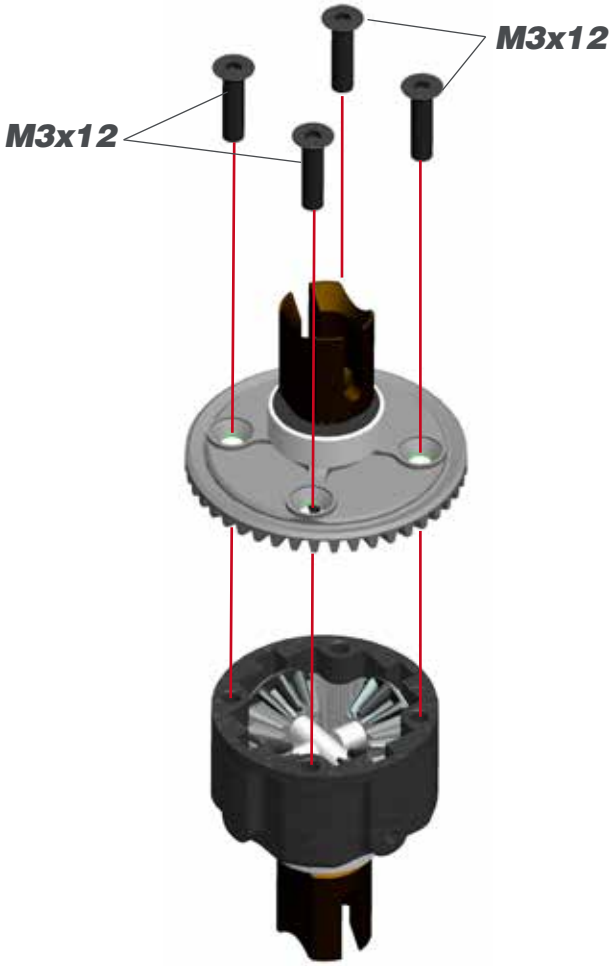


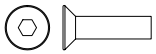
AMOUNT OF OIL IN THE DIFFS

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

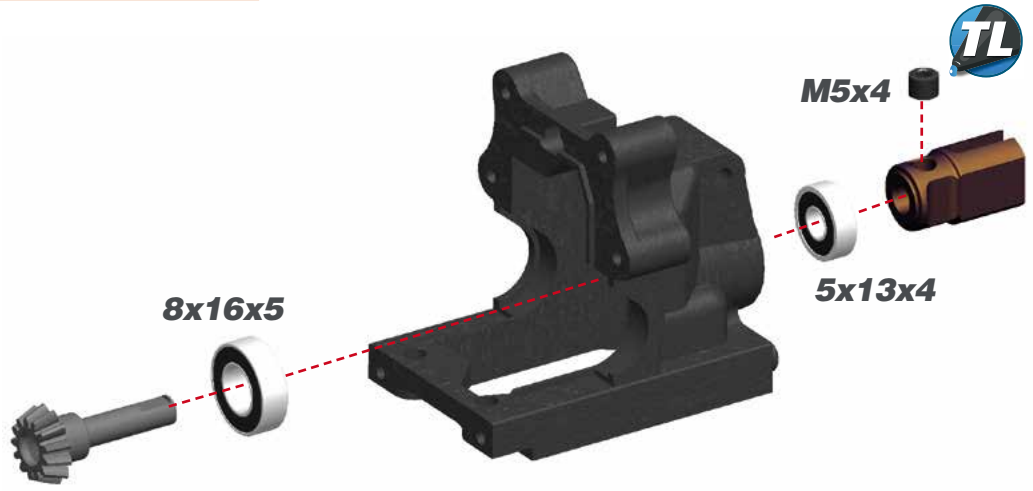
Differential Weight= 43.50 +/- 0.10 Gram

STEP 8

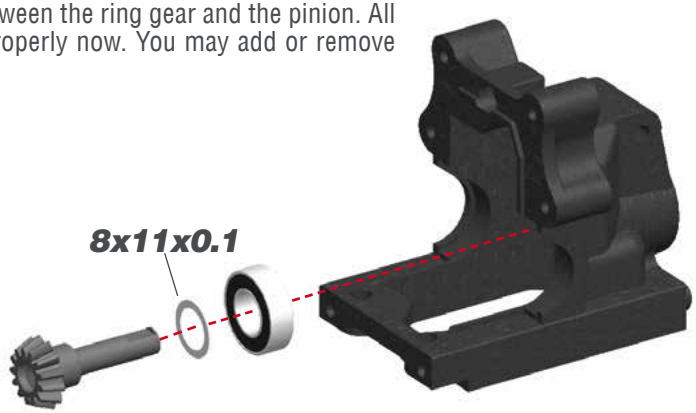




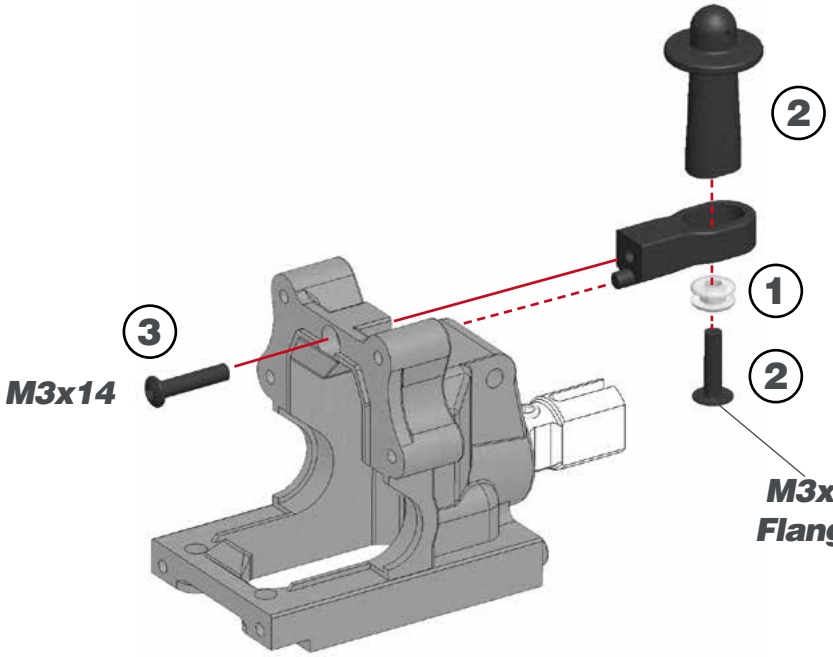
STEP 9 BAG 1



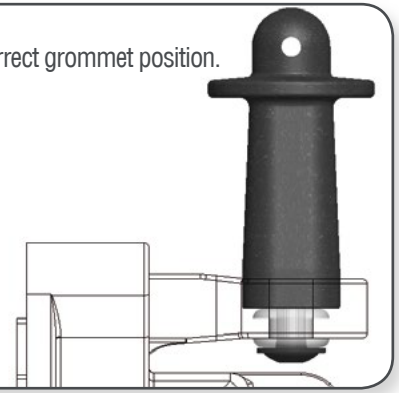
After building the differential with new gears, new differential case and bearings, the diff may feel a little tight. The connected parts need at least an hour run-time to create a perfect match. Attention: When you assemble the diff with too much initial play, the gears will not run-in properly and may wear quickly. After 1 or 2 hours of running the car, re-check the gear-mesh between the ring gear and the pinion. All parts should have run-in properly now. You may add or remove 8x11x0.1 shims as needed.

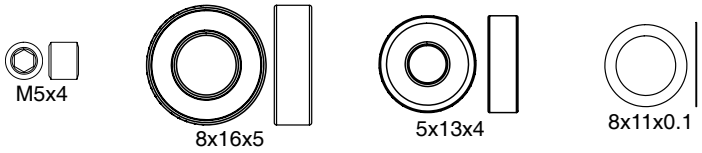


STEP 10



Note the correct grommet position.

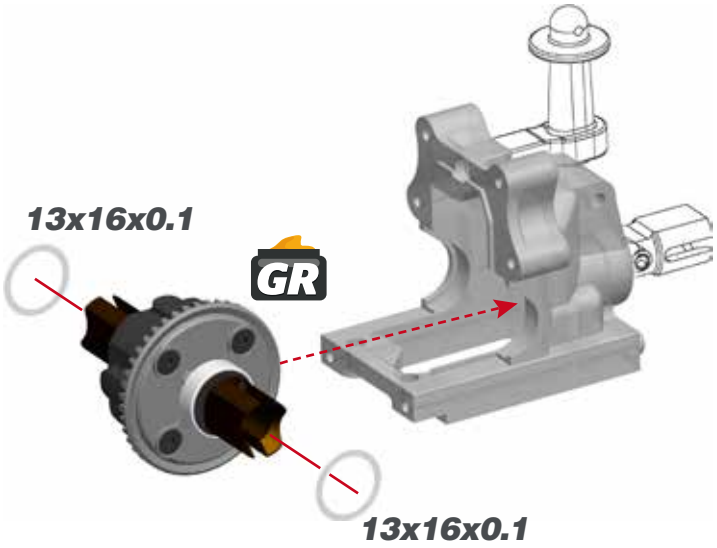




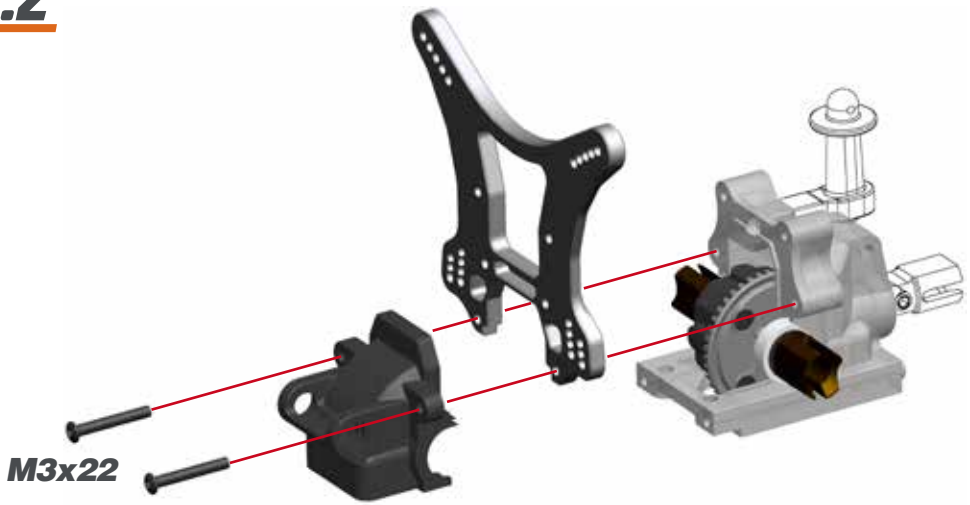
STEP 11

11.1

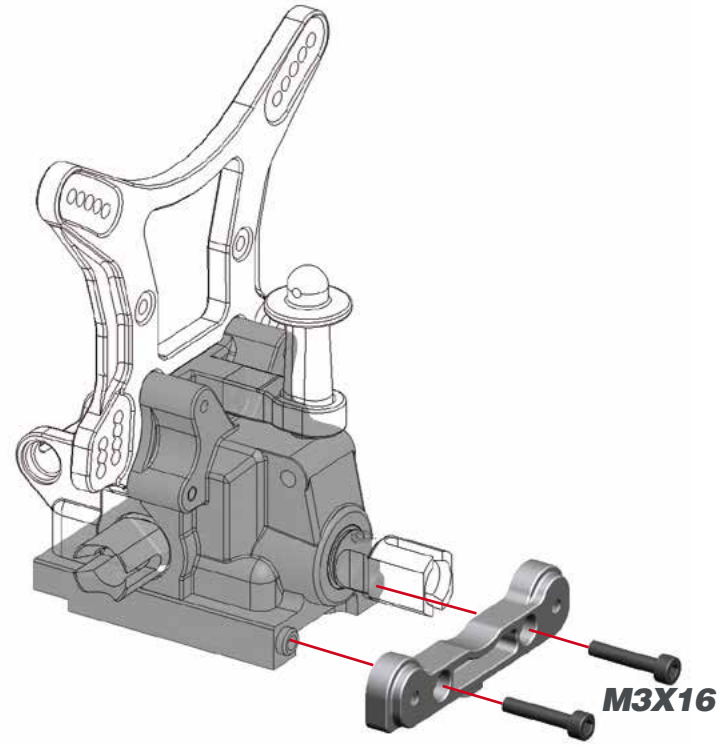
After 1 or 2 hours of running the car, re-check the gear-mesh between the ring gear and the pinion. All parts should have run-in properly. You may add or remove 13x16x0.1 shims as needed.

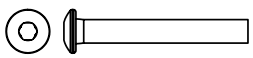


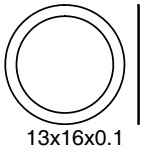
11.2

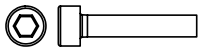


STEP 12







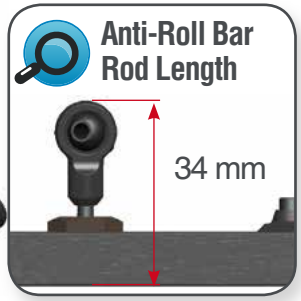


STEP 13 BAG 2

13.1

L=R

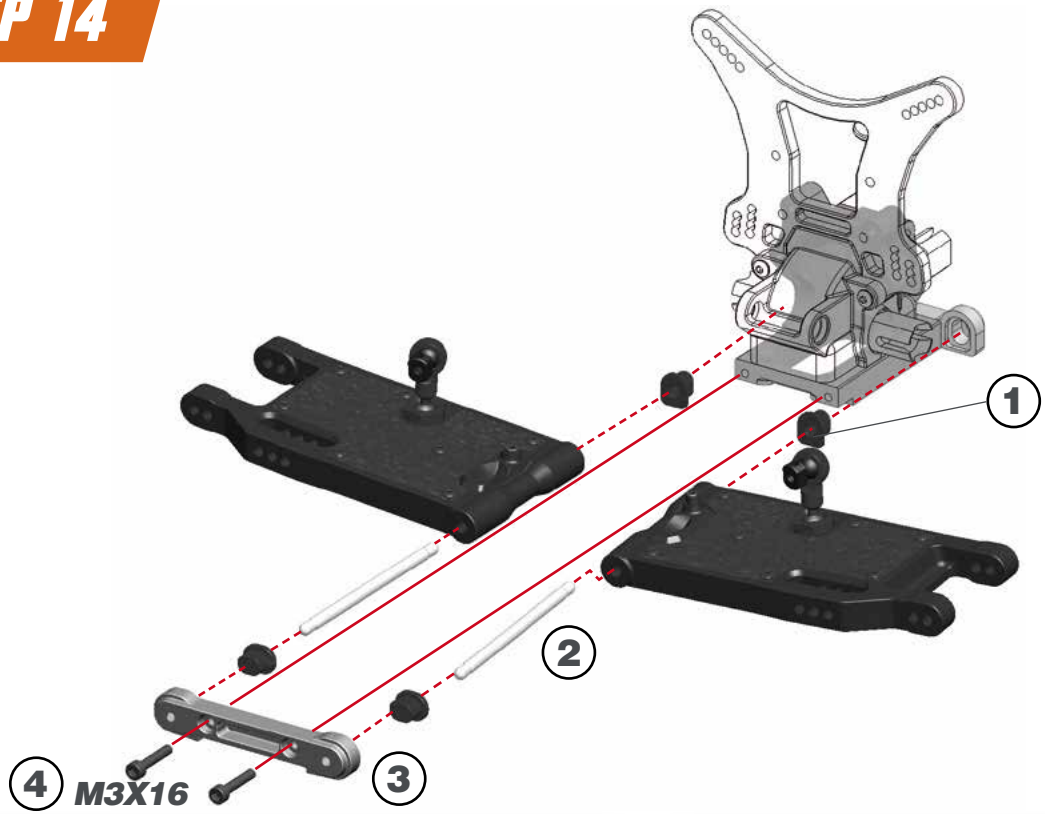
Tighten anti-roll bar cap until there is no play, and it moves freely.

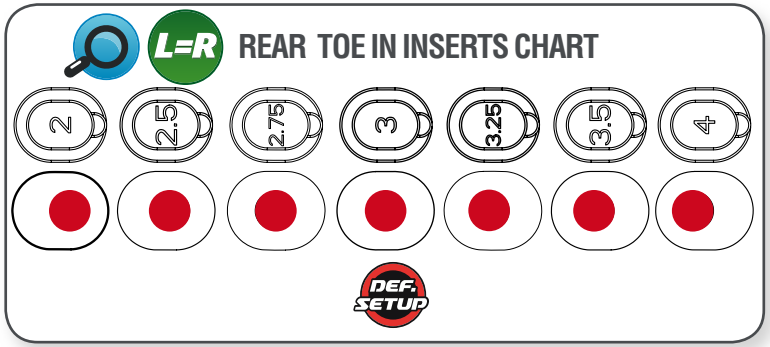


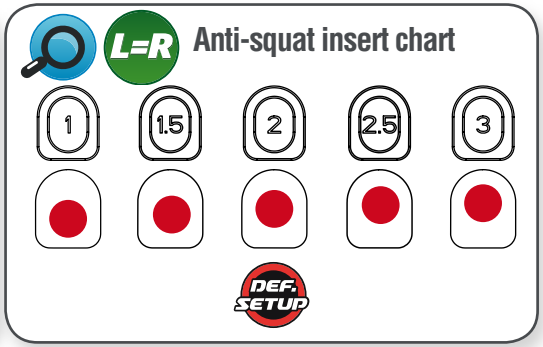
13.2

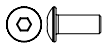
M2.5X6

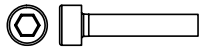
STEP 14



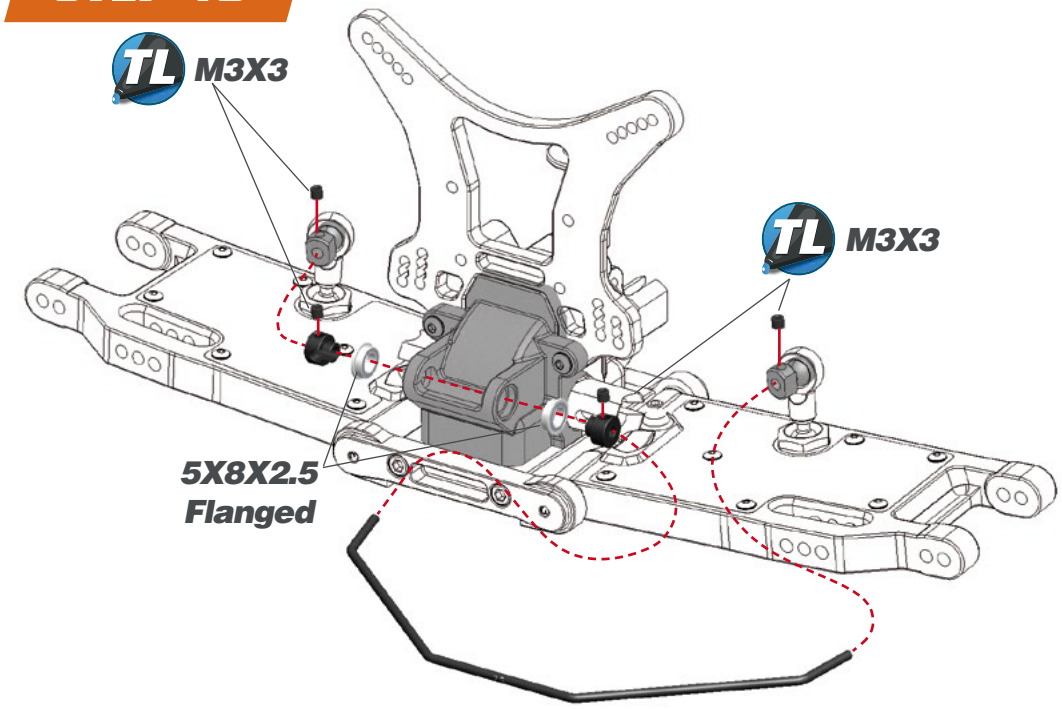




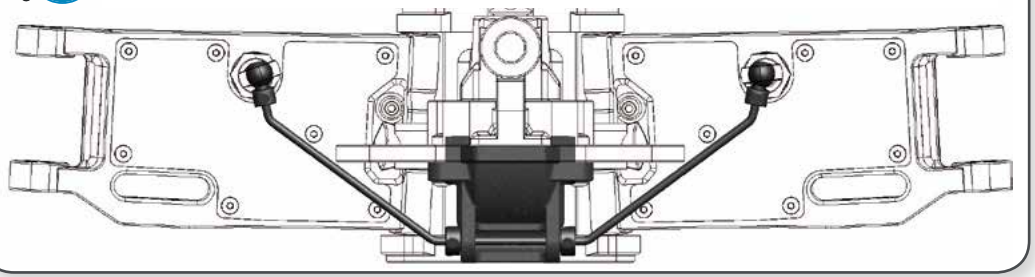

M2.5x6


M3x16

STEP 15

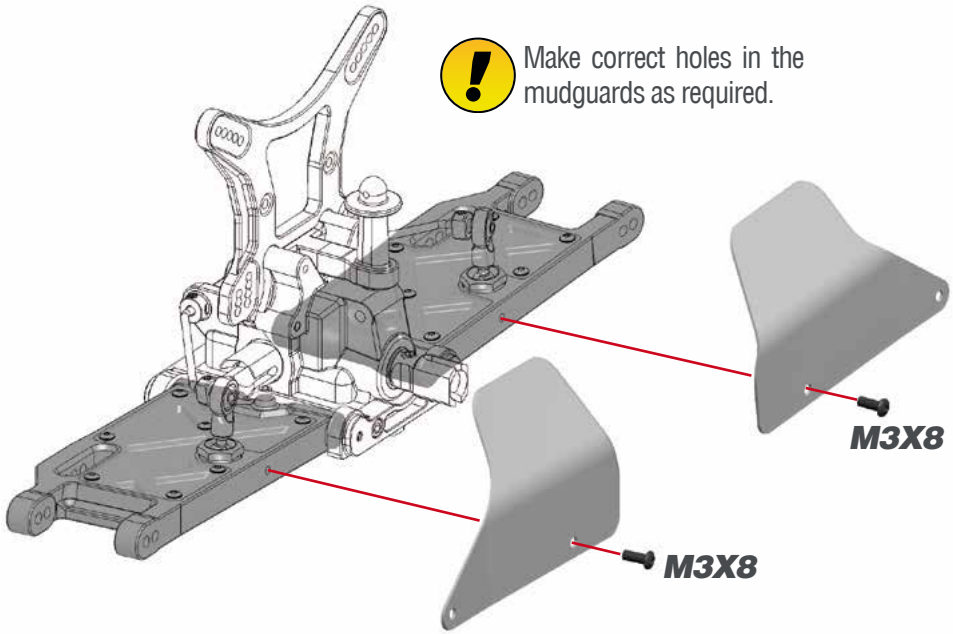


REAR ANTI-ROLL BAR ASSEMBLY



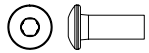
STEP 16

Make correct holes in the mudguards as required.



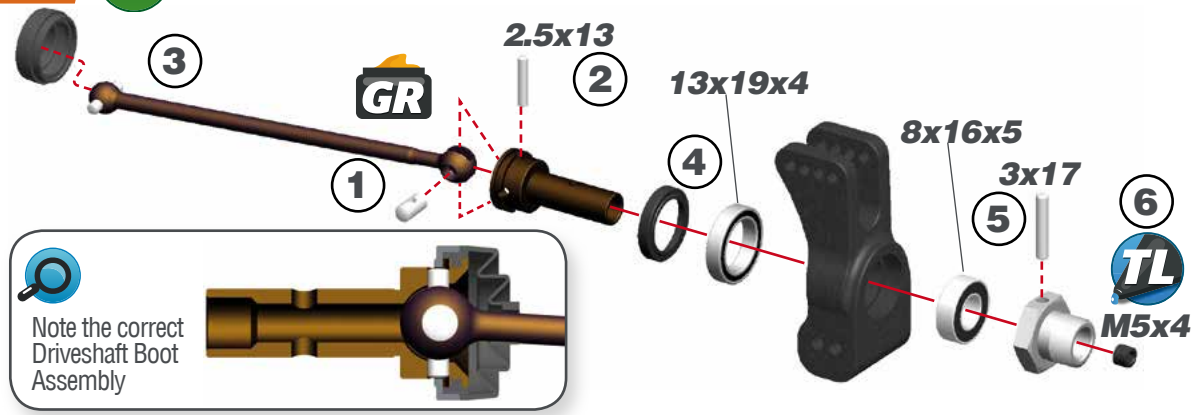

5X8X2.5 Flanged


M3x3


M3x8

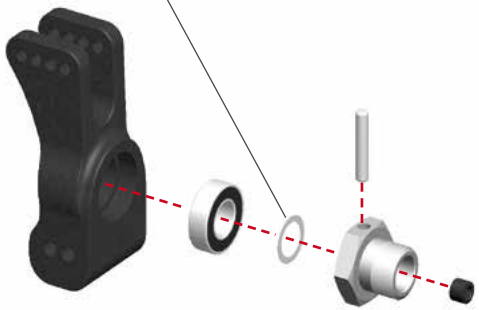
STEP 17 BAG 3

17.1 L=R

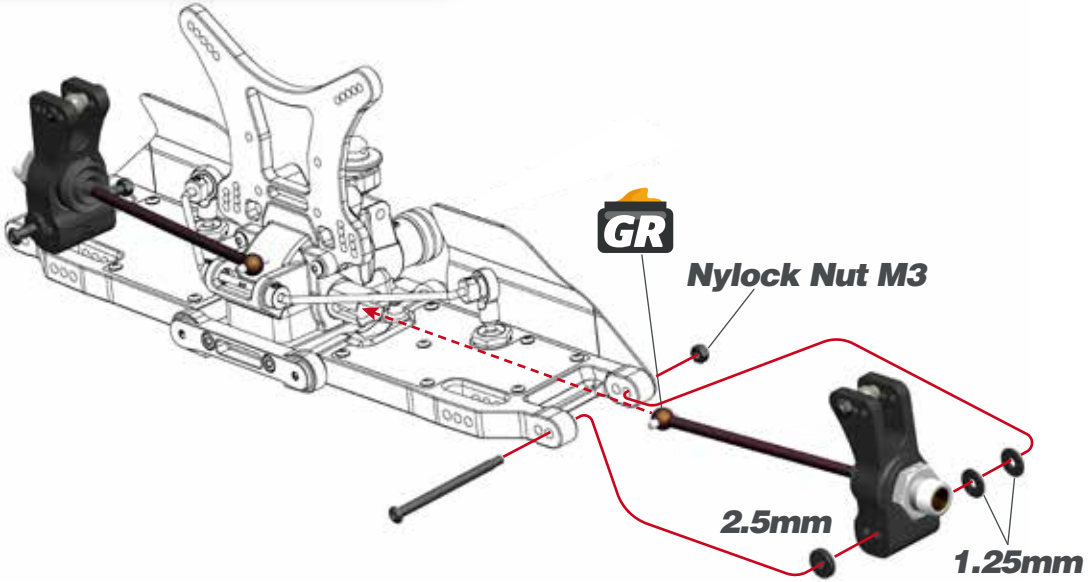


Note the correct Driveshaft Boot Assembly

Apply shims size 8x11x0.1 and/or 8x11x0.2mm as needed to remove play.

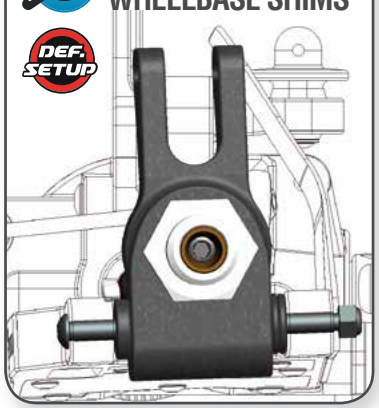


17.2



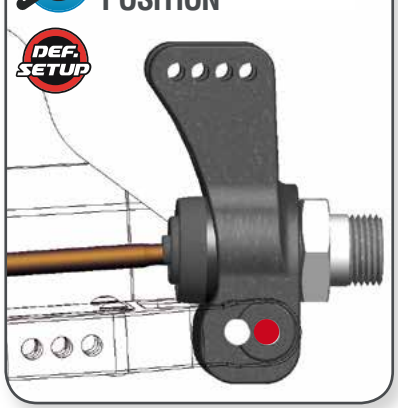
REAR DEFAULT WHEELBASE SHIMS

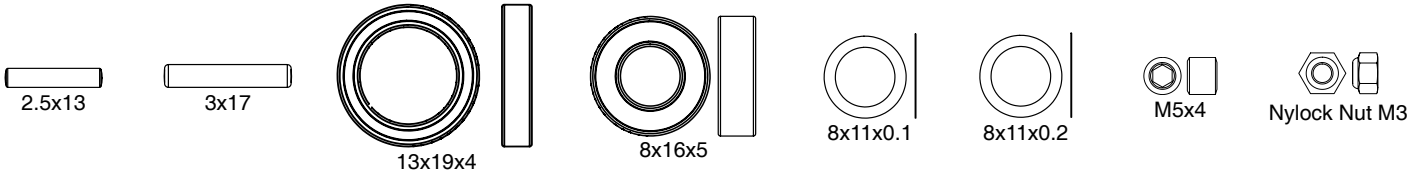
DEF. SETUP



REAR UPRIGHT POSITION

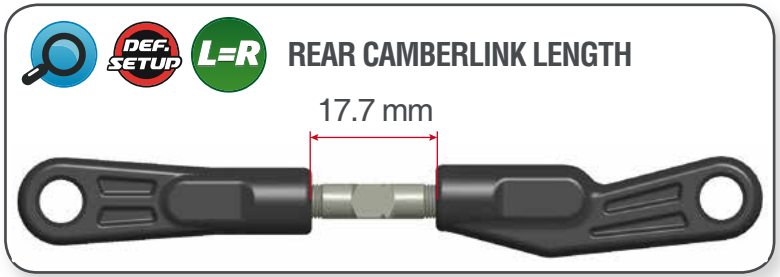
DEF. SETUP



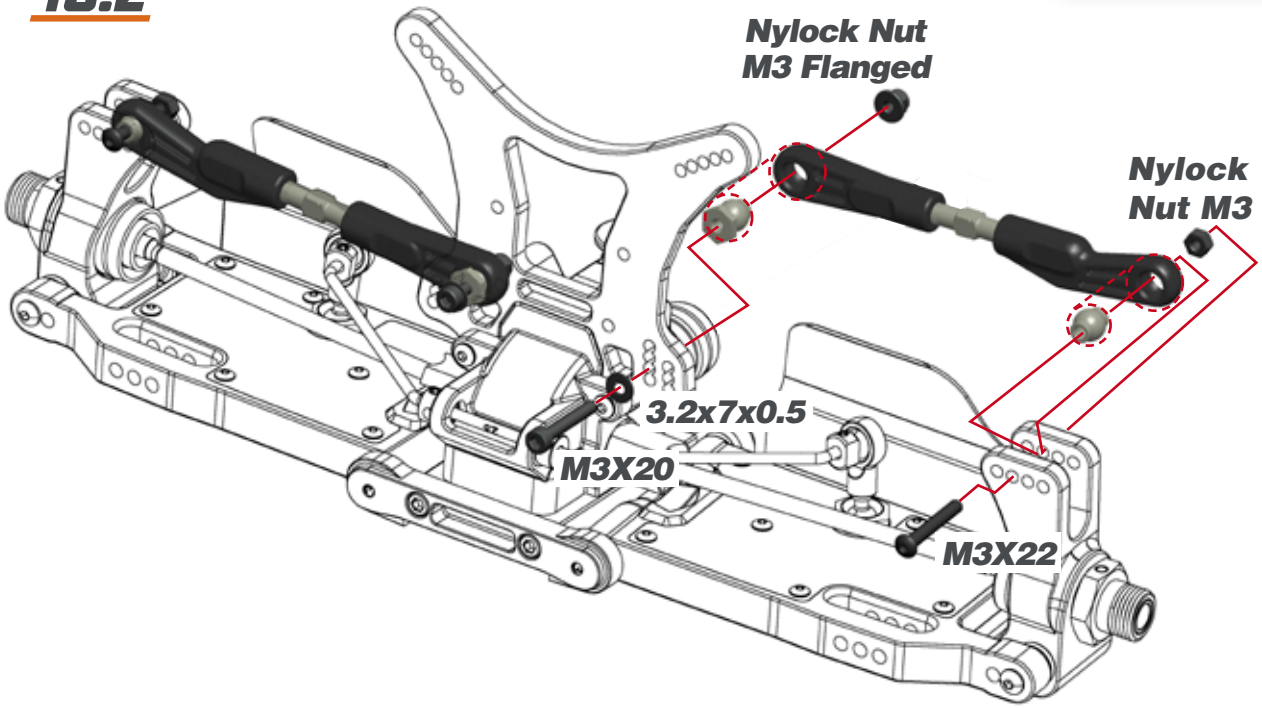


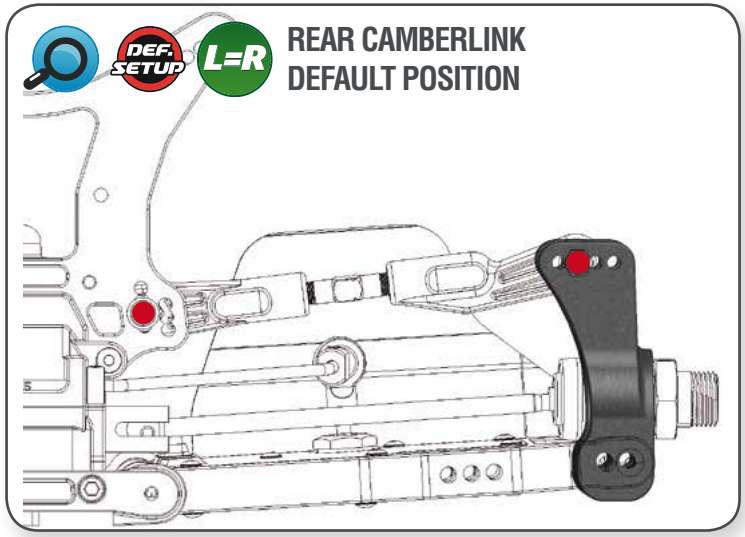
STEP 18 BAG 4

18.1

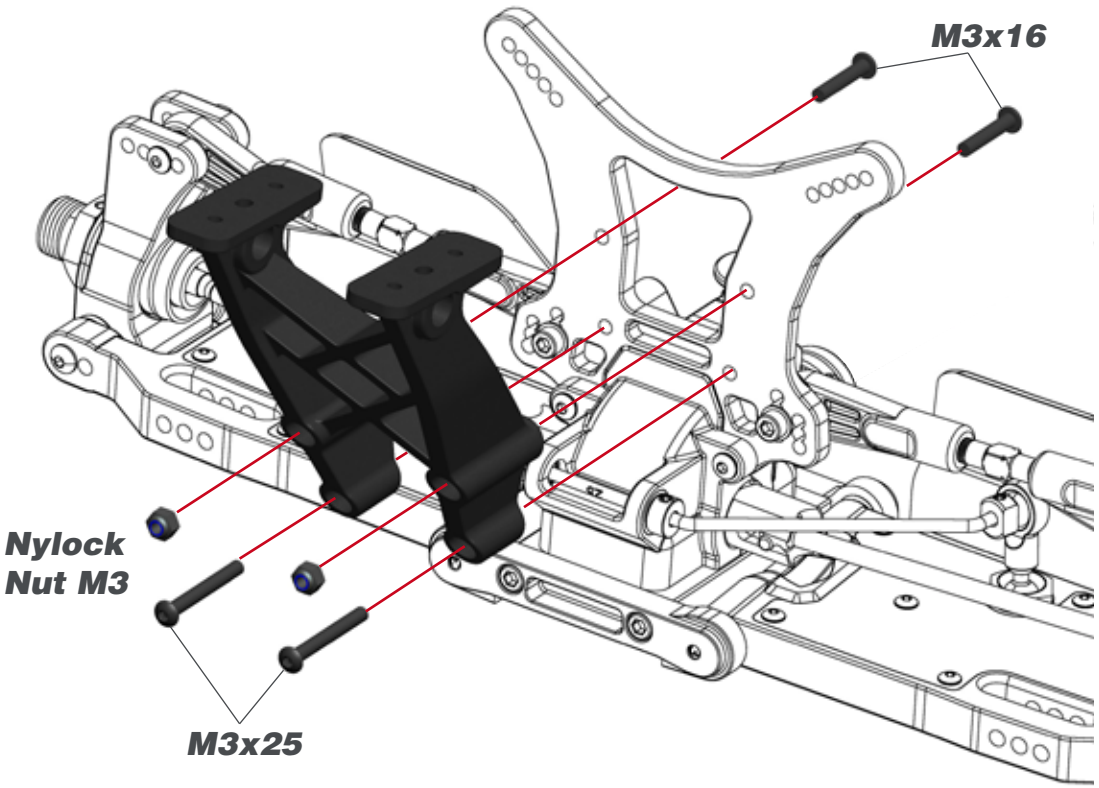


18.2

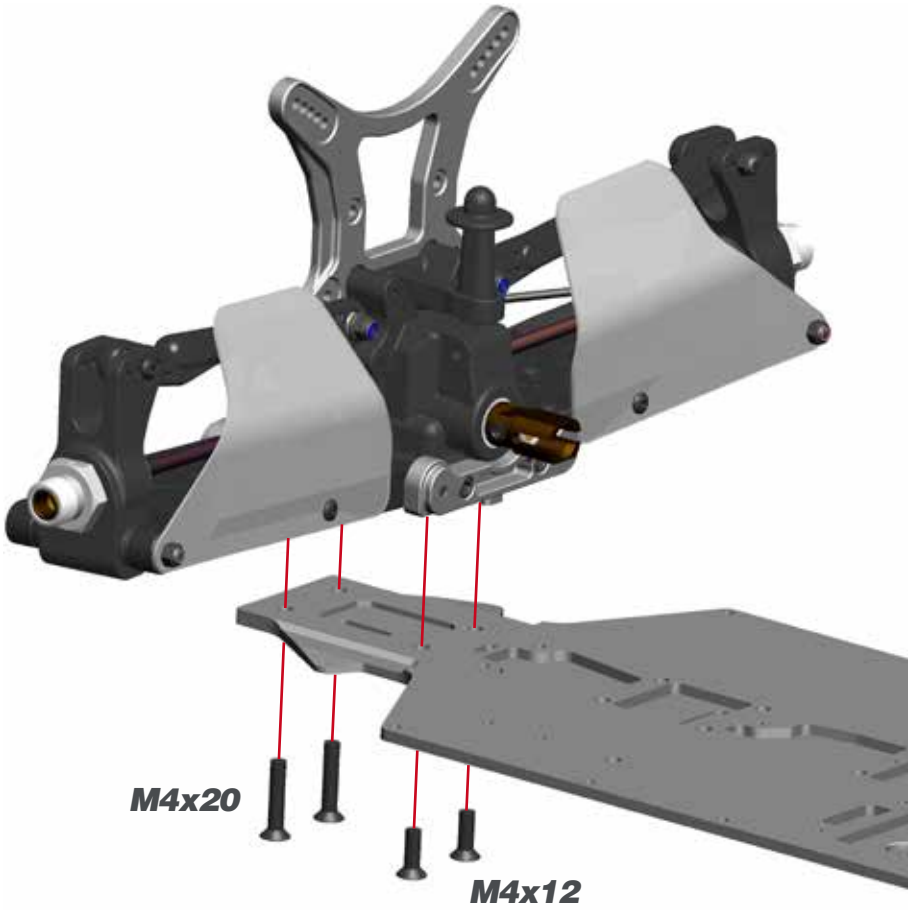


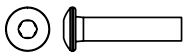


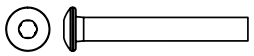
STEP 19



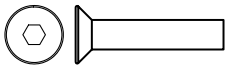
STEP 20

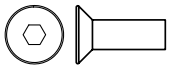



M3x16

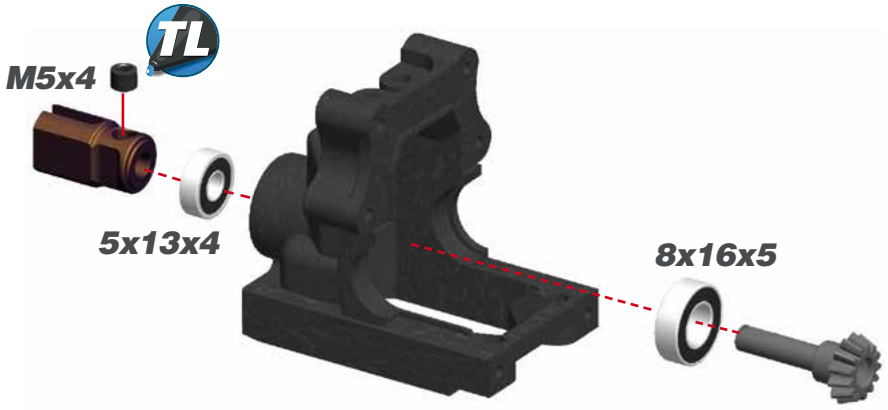

M3x25

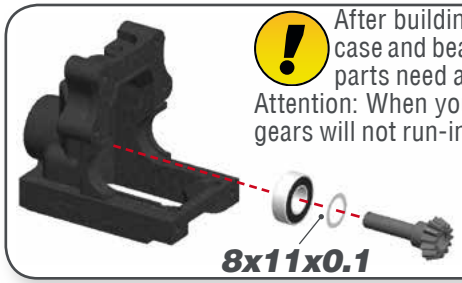

Nylock Nut M3


M4x20


M4x12

STEP 21 BAG 5

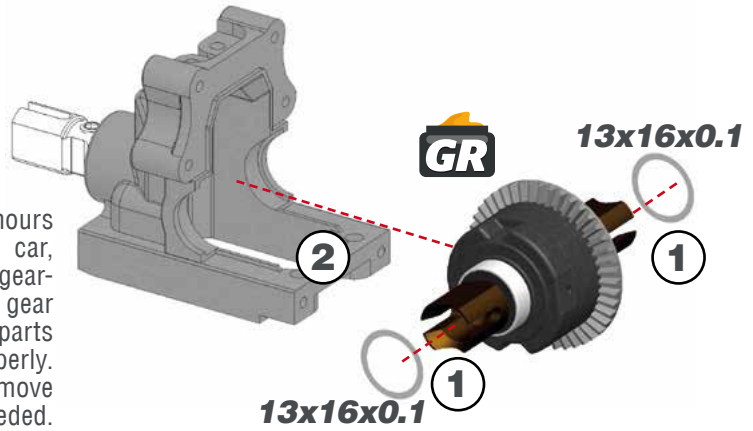




After building the differential with new gears, new differential case and bearings, the diff may feel a little tight. The connected parts need at least an hour run-time to create a perfect match. Attention: When you assemble the diff with too much initial play, the gears will not run-in properly and may wear quickly. After 1 or 2 hours of running the car, re-check the gear-mesh between the ring gear and the pinion. All parts should have run-in properly now. You may add or remove 8x11x0.1 shims as needed.

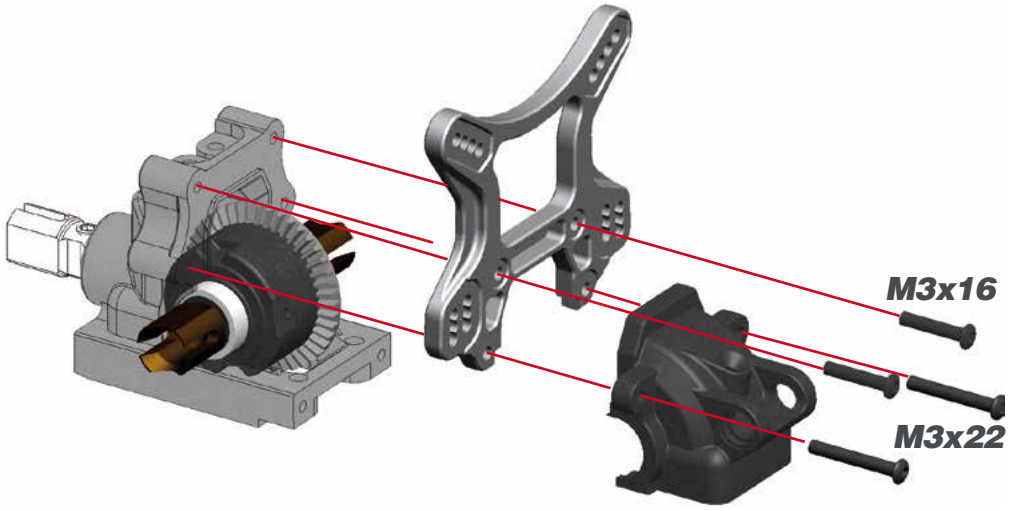
STEP 22

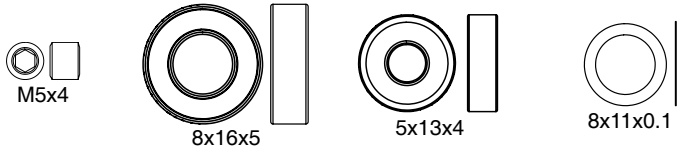
22.1

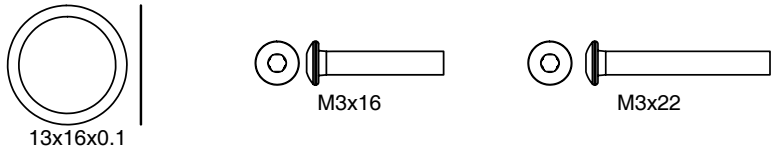


After 1 or 2 hours of running the car, re-check the gear-mesh between the ring gear and the pinion. All parts should have run-in properly. You may add or remove 13x16x0.1 shims as needed.

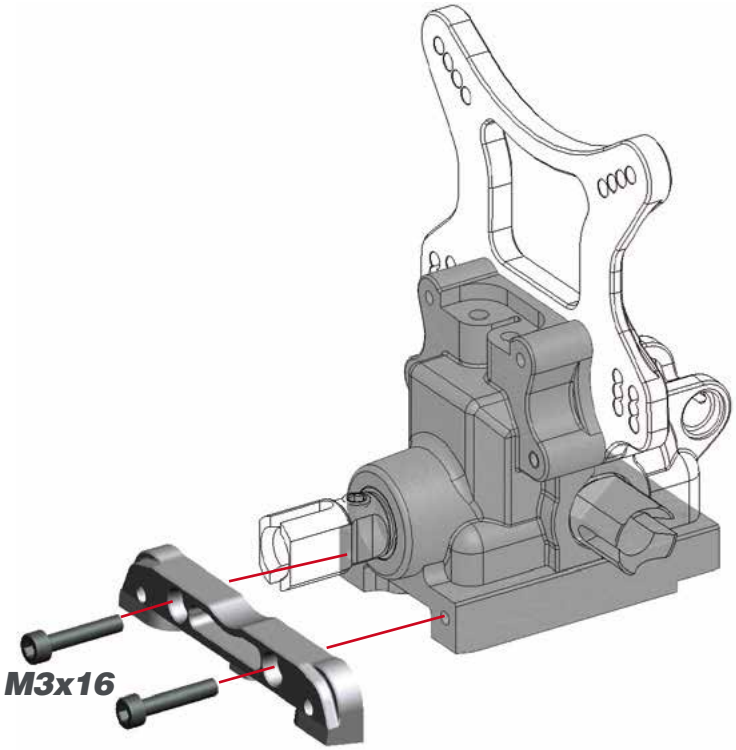
22.2







STEP 23

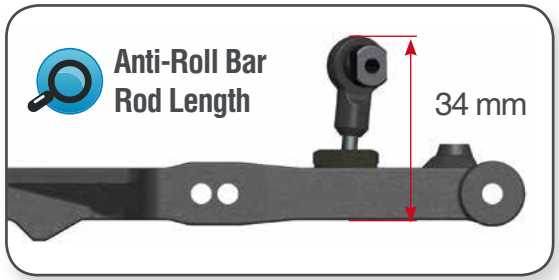


STEP 24 BAG 6

24.1

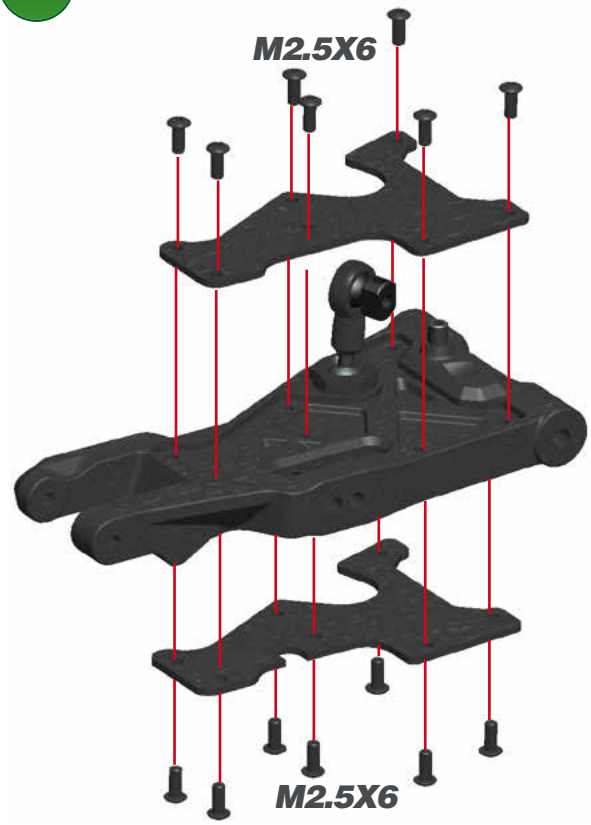
L=R

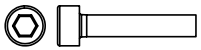
Tighten anti-roll bar cap until there is no play, and it moves freely.



24.2

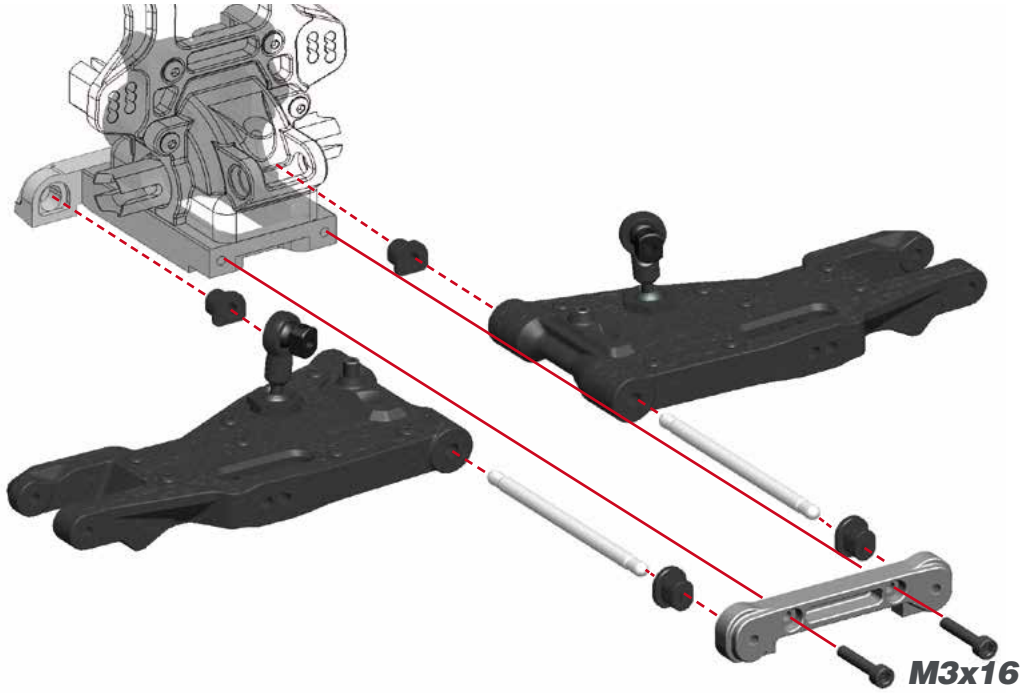
L=R



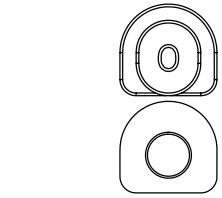

M3x16


M2.5x6

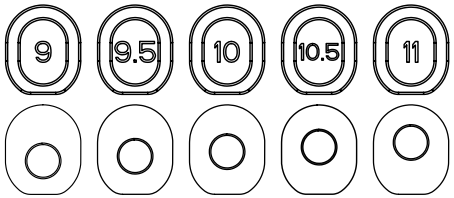
STEP 25



L=R FRONT REAR INSERTS



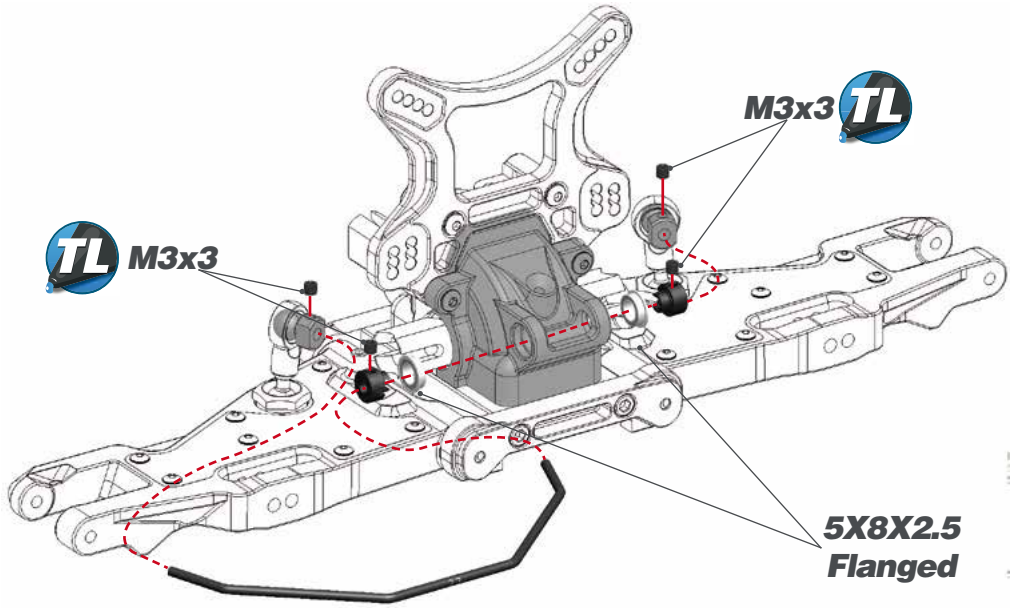
L=R FRONT SUSPENSION KICKUP INSERTS



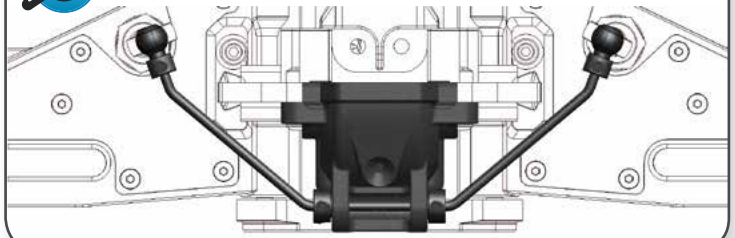
DEF. SETUP

M3x16

STEP 26



FRONT ANTI-ROLL BAR ASSEMBLY

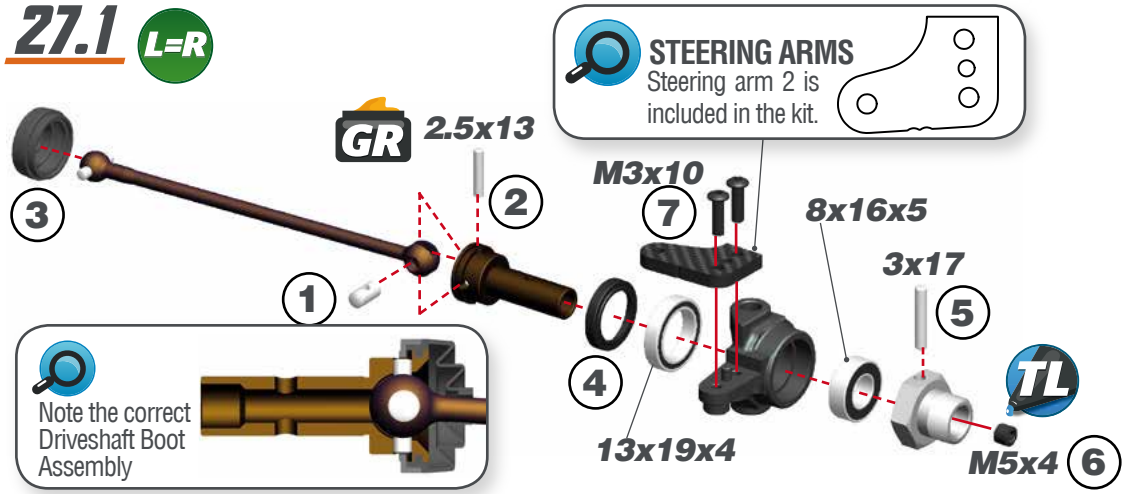


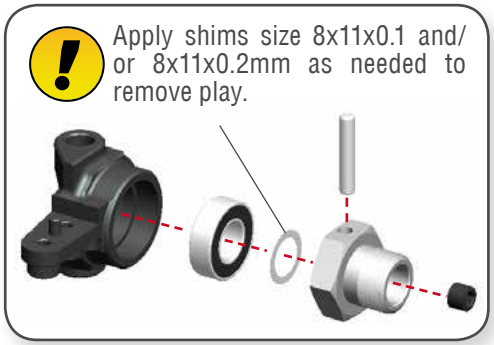
5X8X2.5 Flanged

M3x3

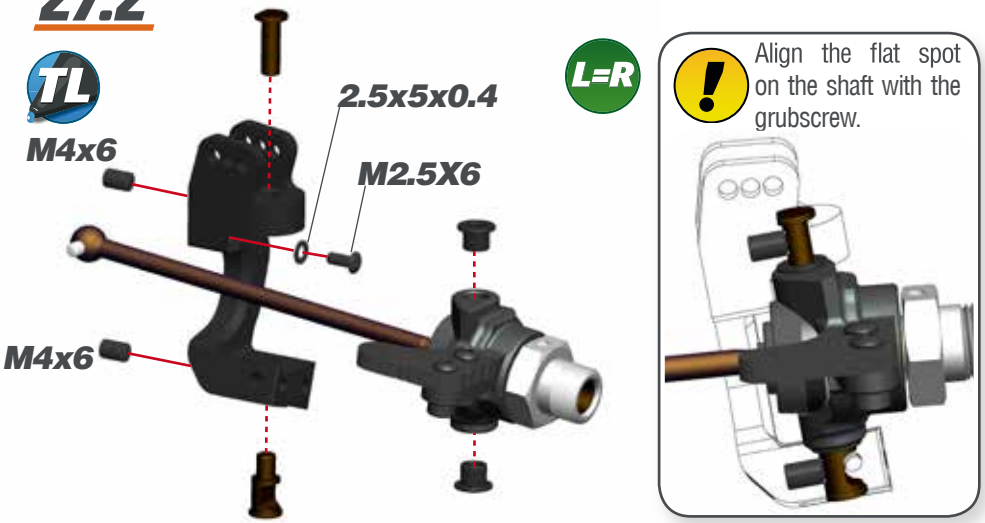
STEP 27 BAG 7

27.1 L=R

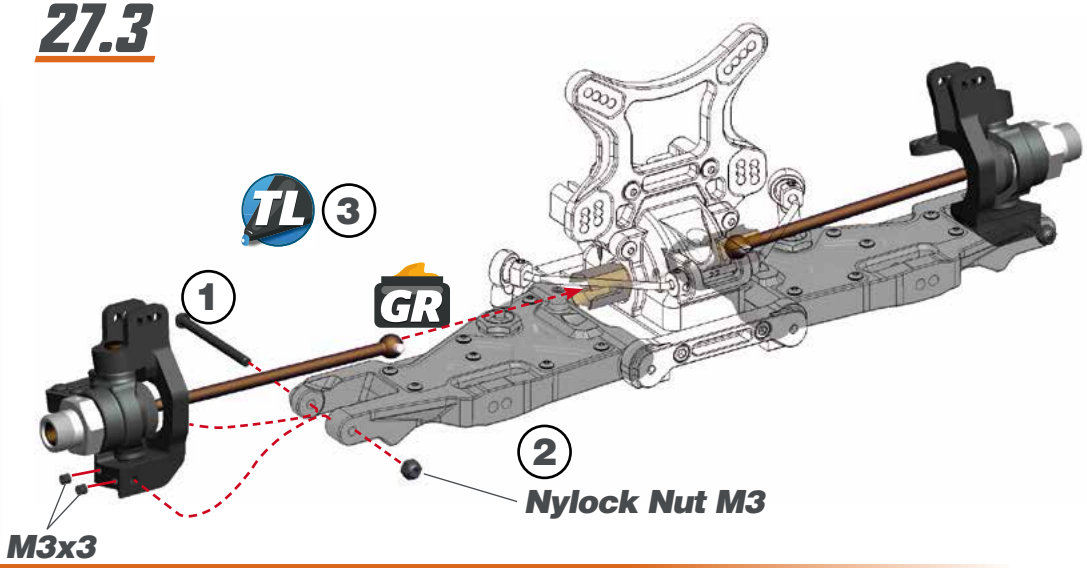


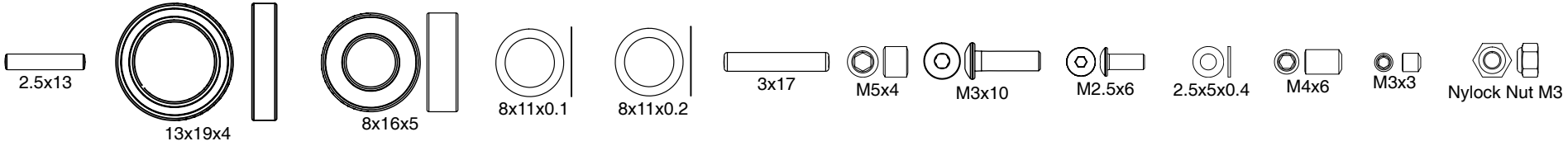


27.2



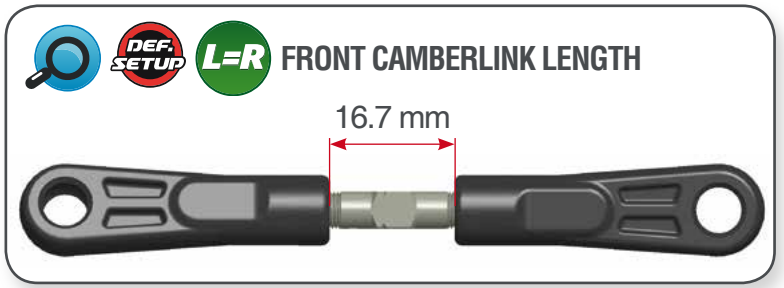
27.3



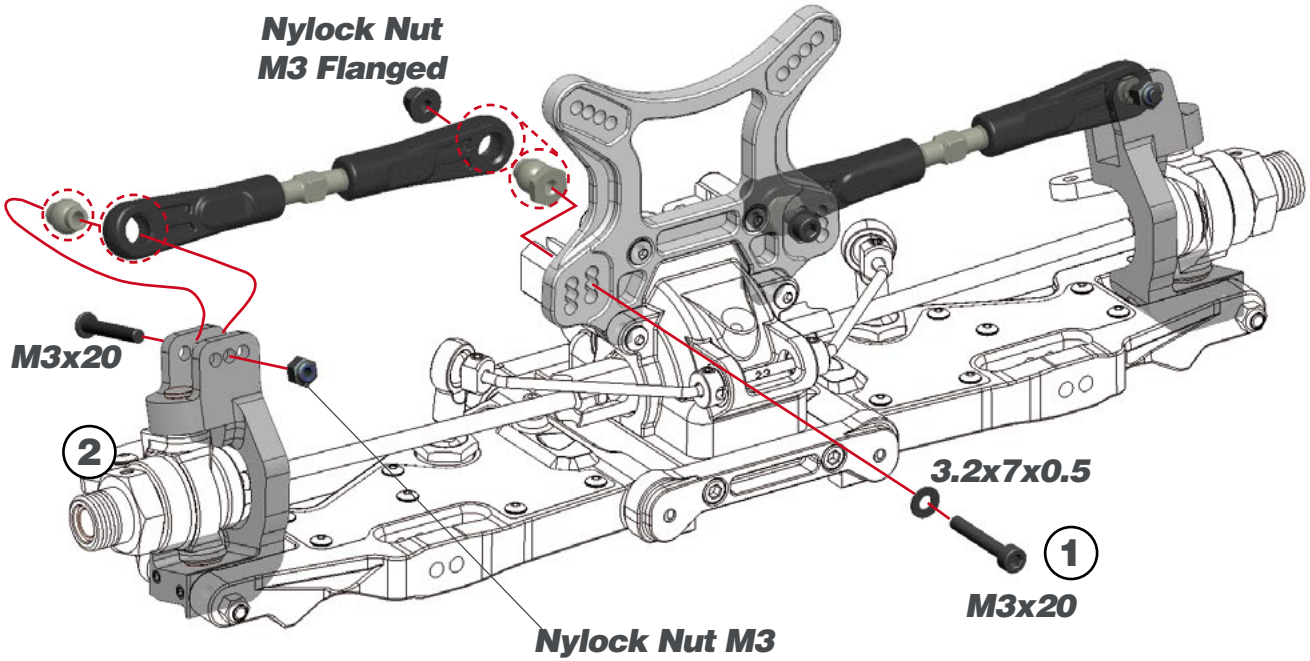


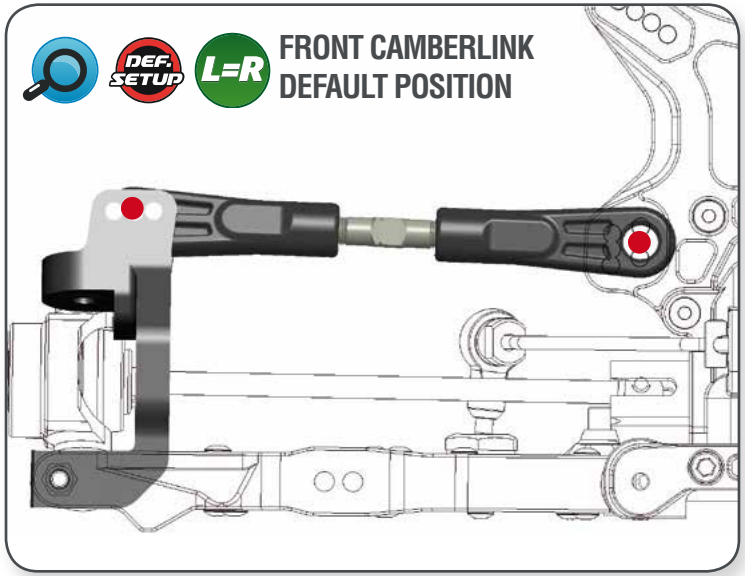
STEP 28 BAG 8

28.1

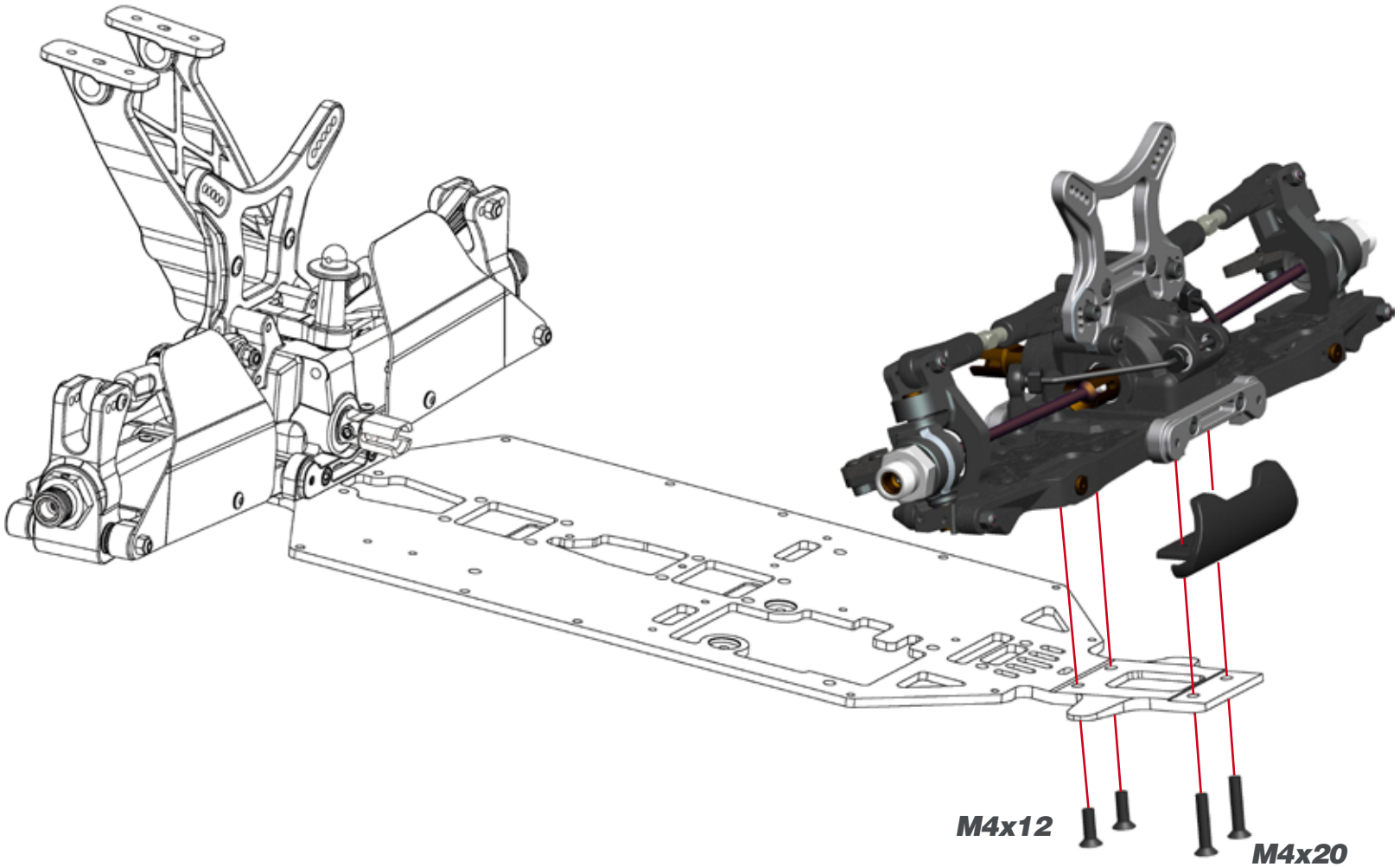


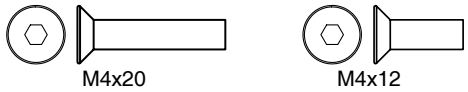
28.2



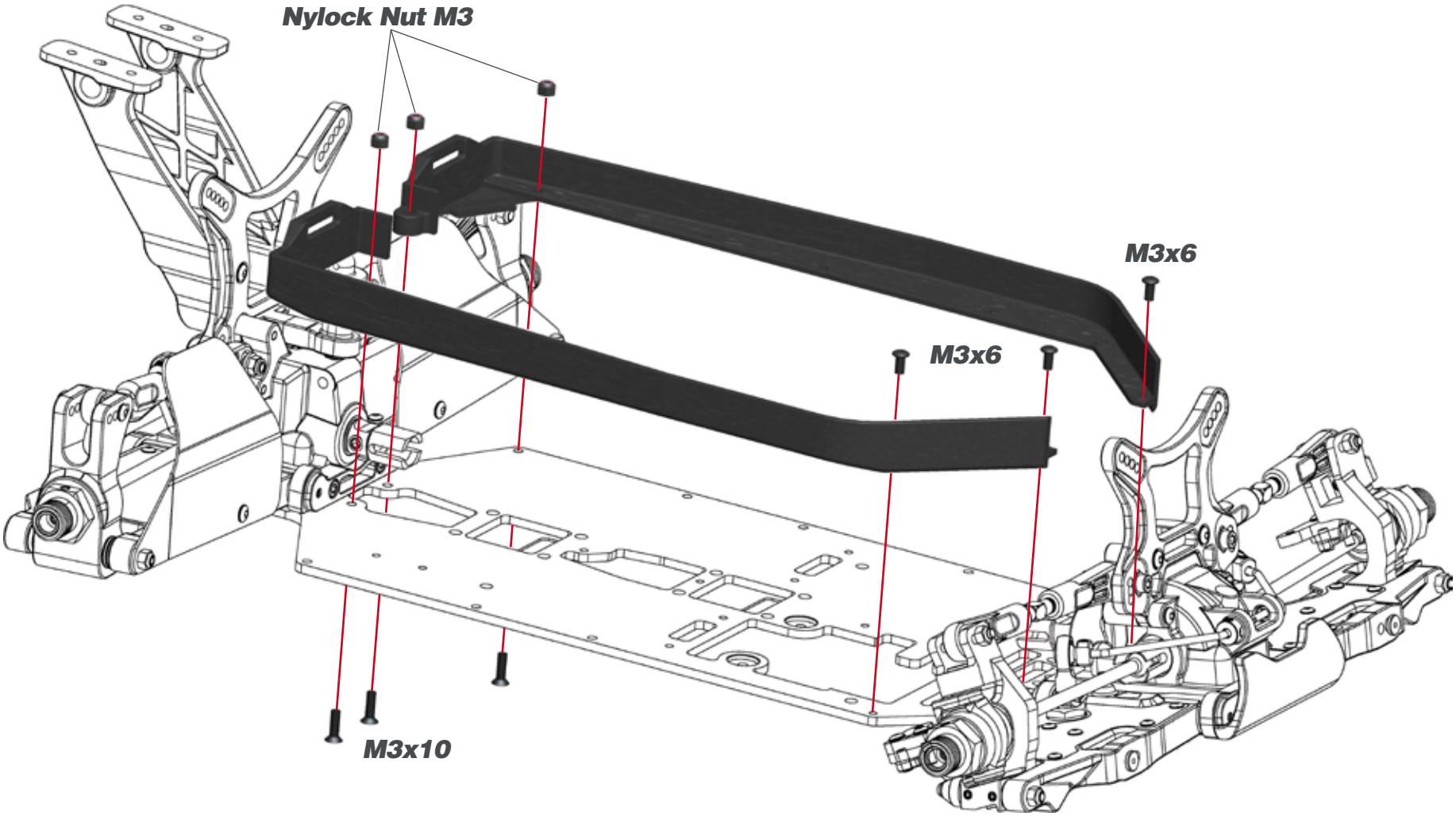


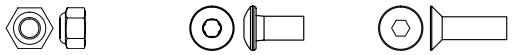
STEP 29



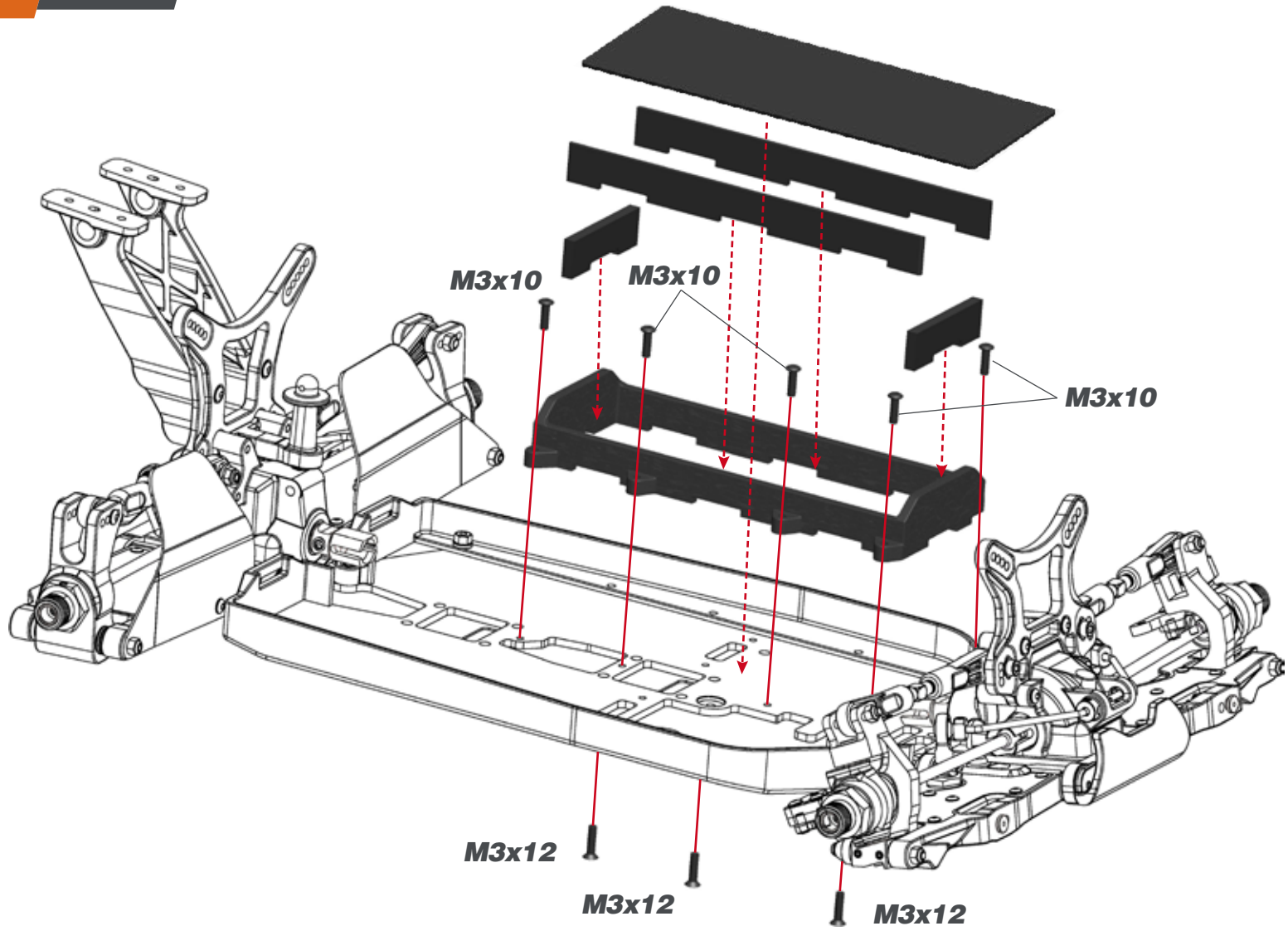


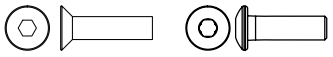
STEP 30





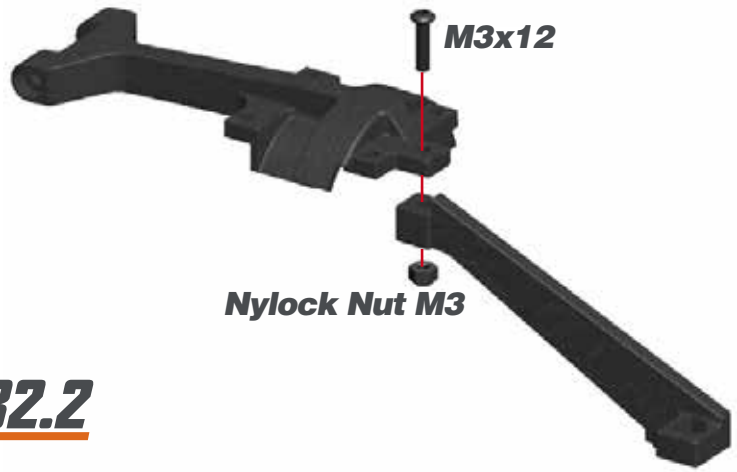
STEP 31 BAG 9



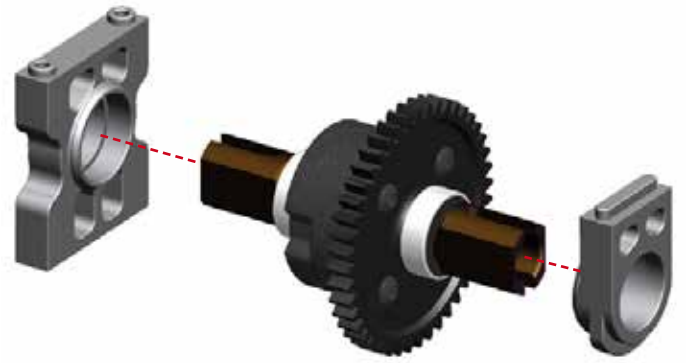


STEP 32

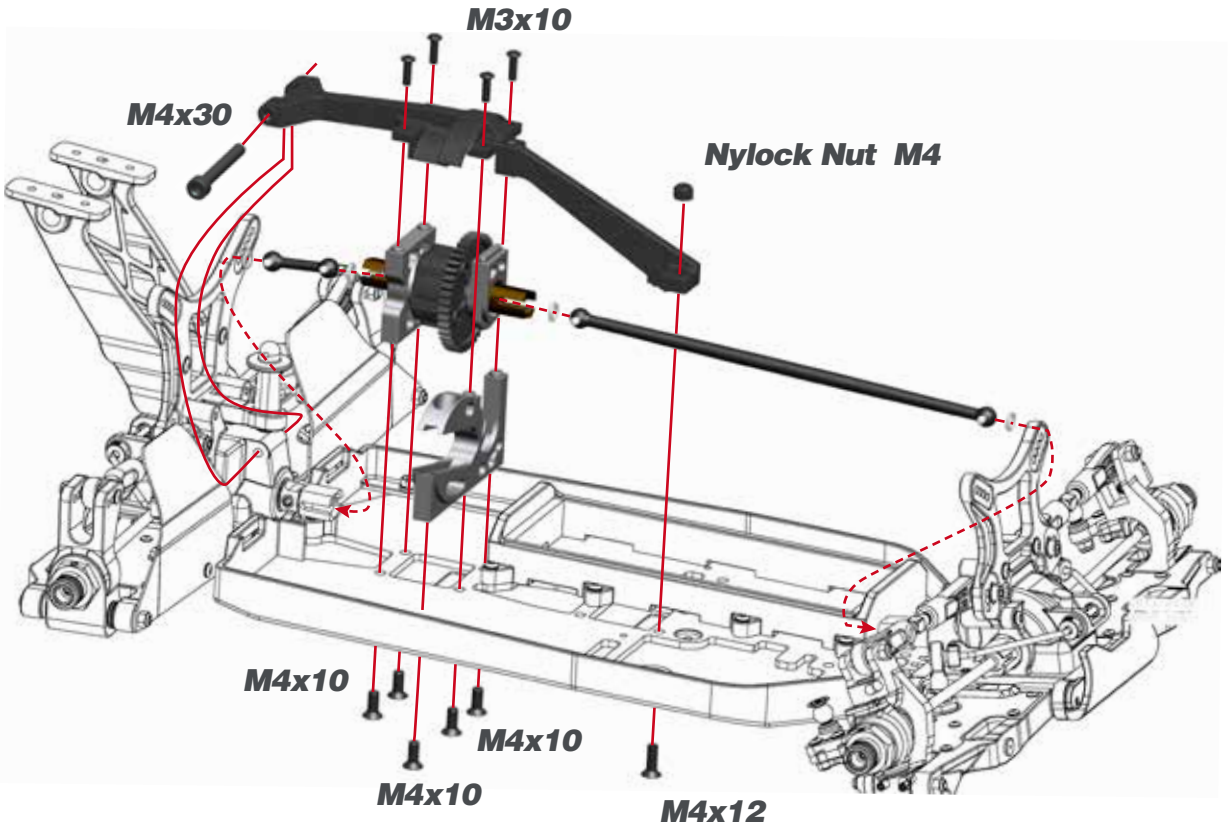
32.1

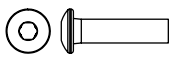


32.2

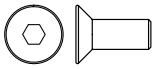


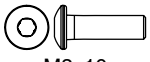
STEP 33

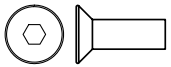


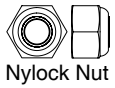

M3x12

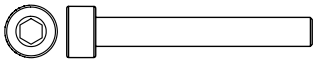

Nylock Nut M3


M4x10

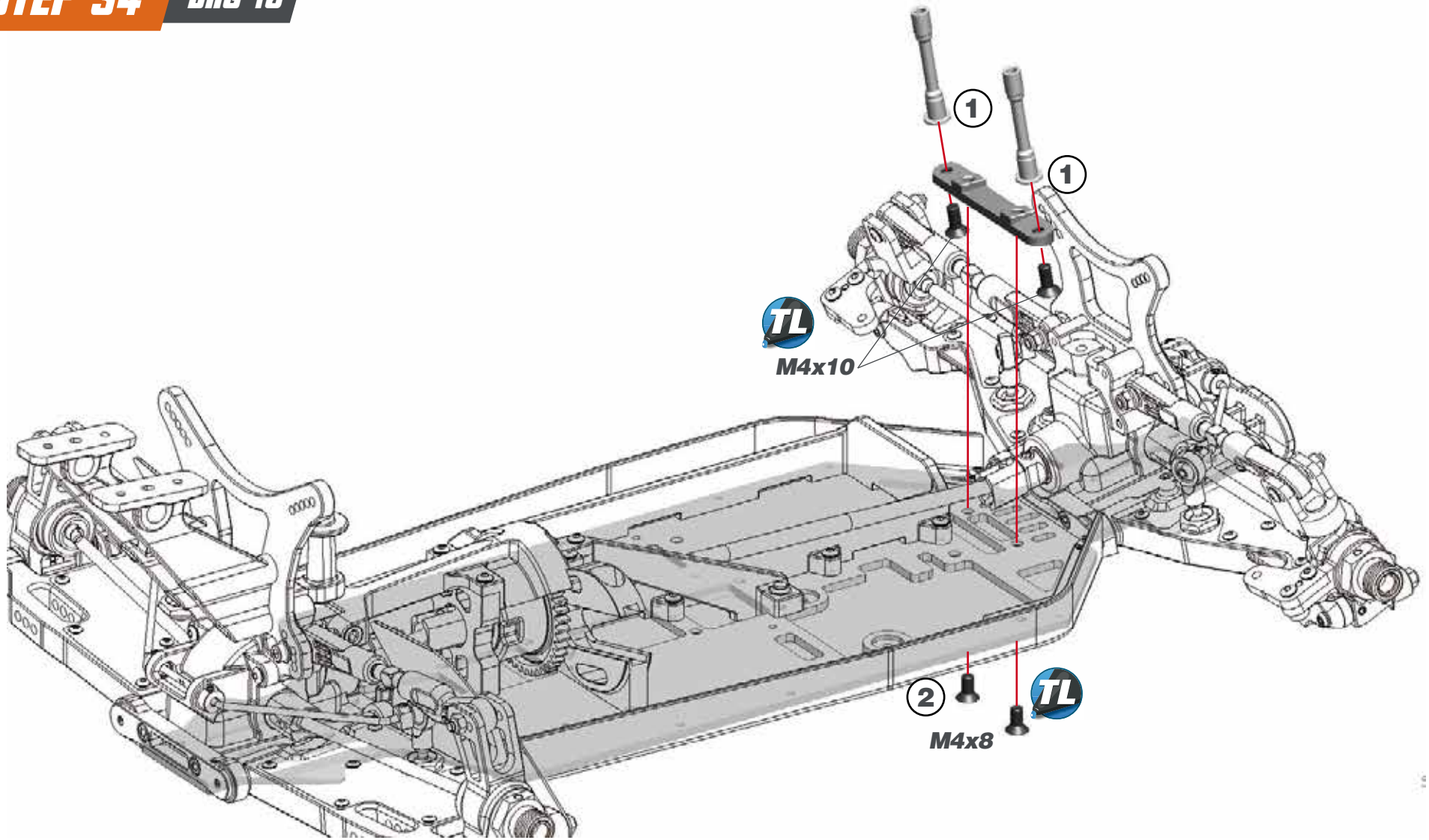

M3x10

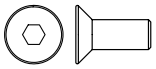

M4x12

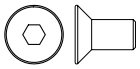

Nylock Nut M4


M4x30

STEP 34 BAG 10



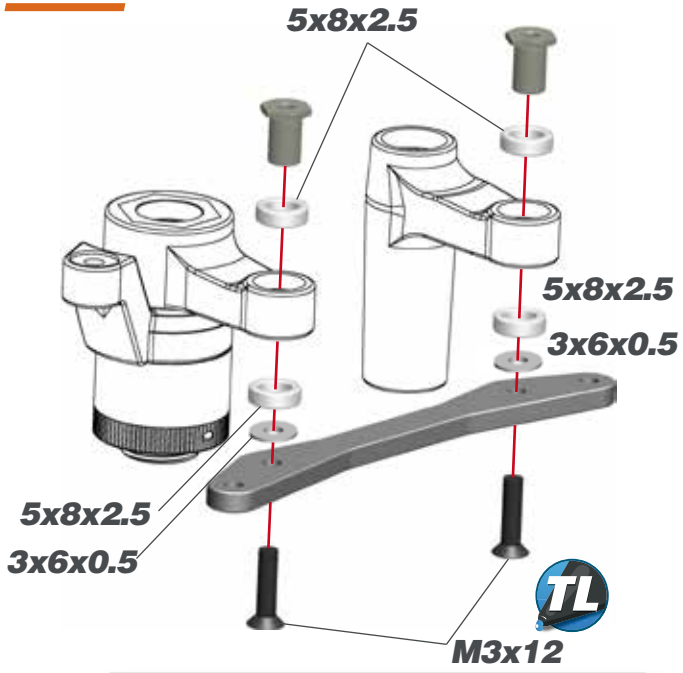

M4x10


M4x8

STEP 35

35.1

35.2

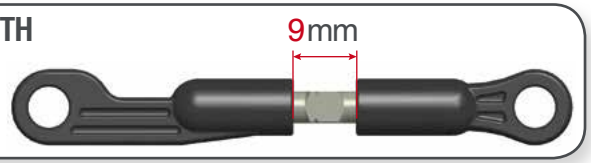


The servo saver spring should be preloaded 4.5mm. Also notice the correct orientation of the collar.

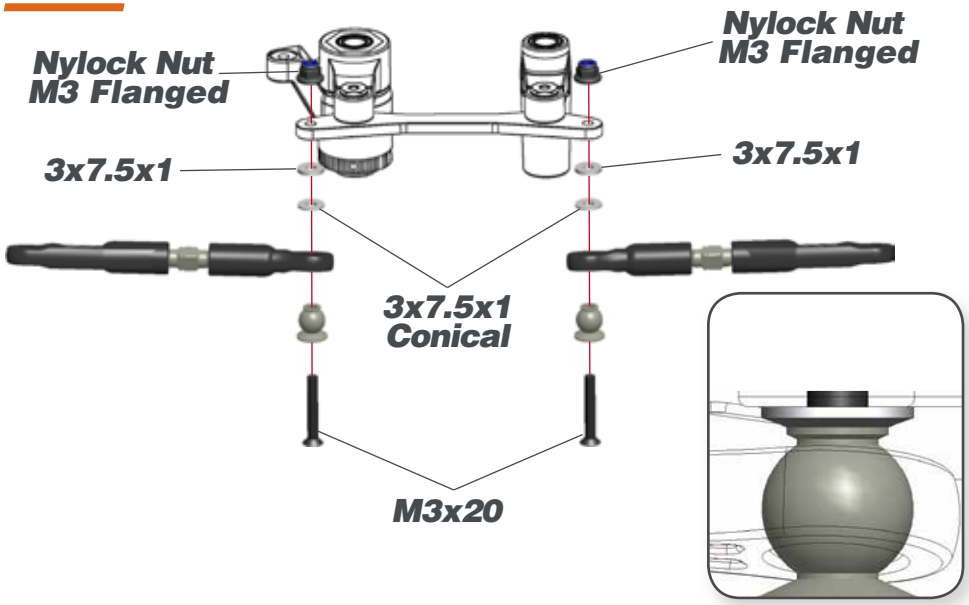
STEP 36

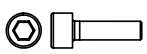
36.1

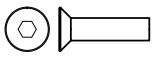
STEERING TRACKROD LENGTH



36.2

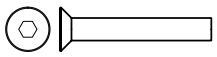



M2x10


M3x12


3x6x0.5


5x8x2.5

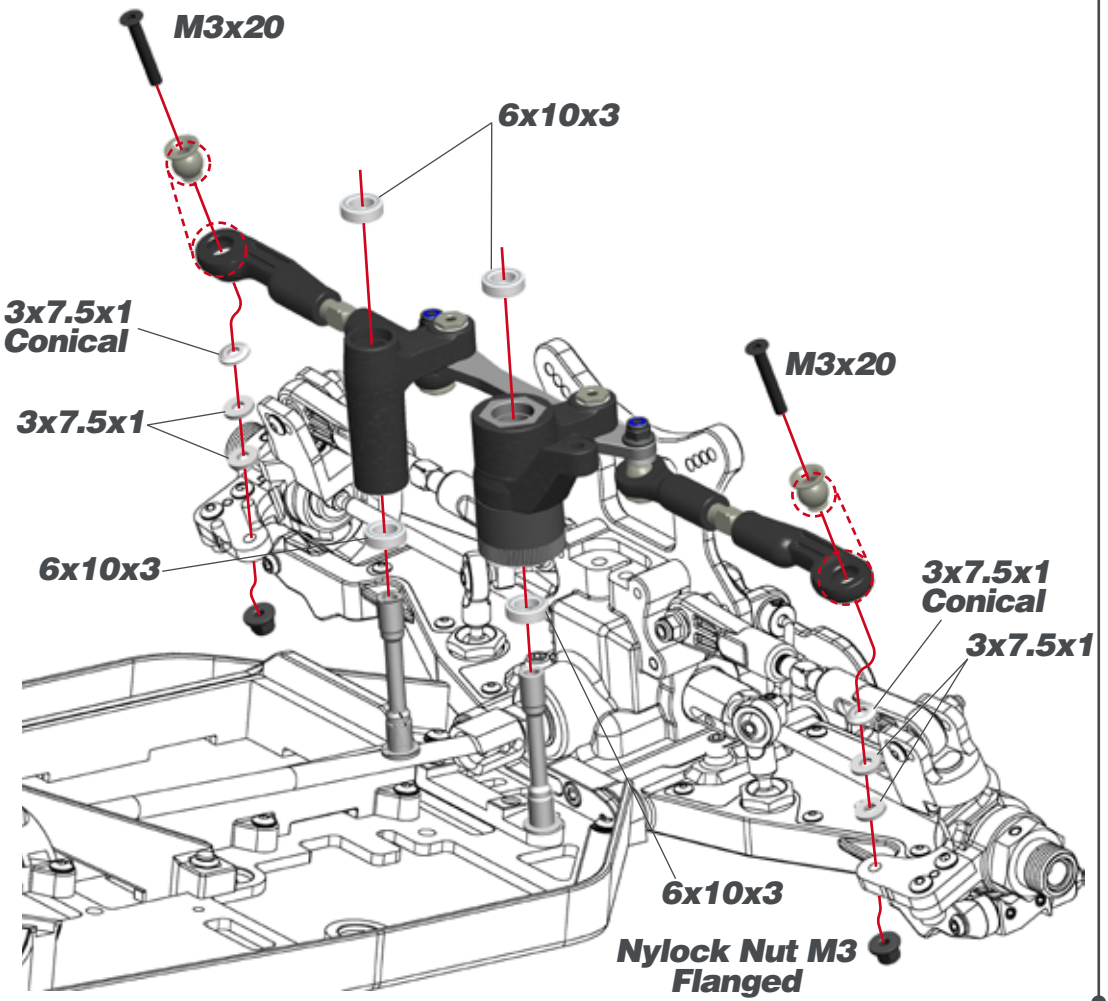

M3x20


3x7.5x1

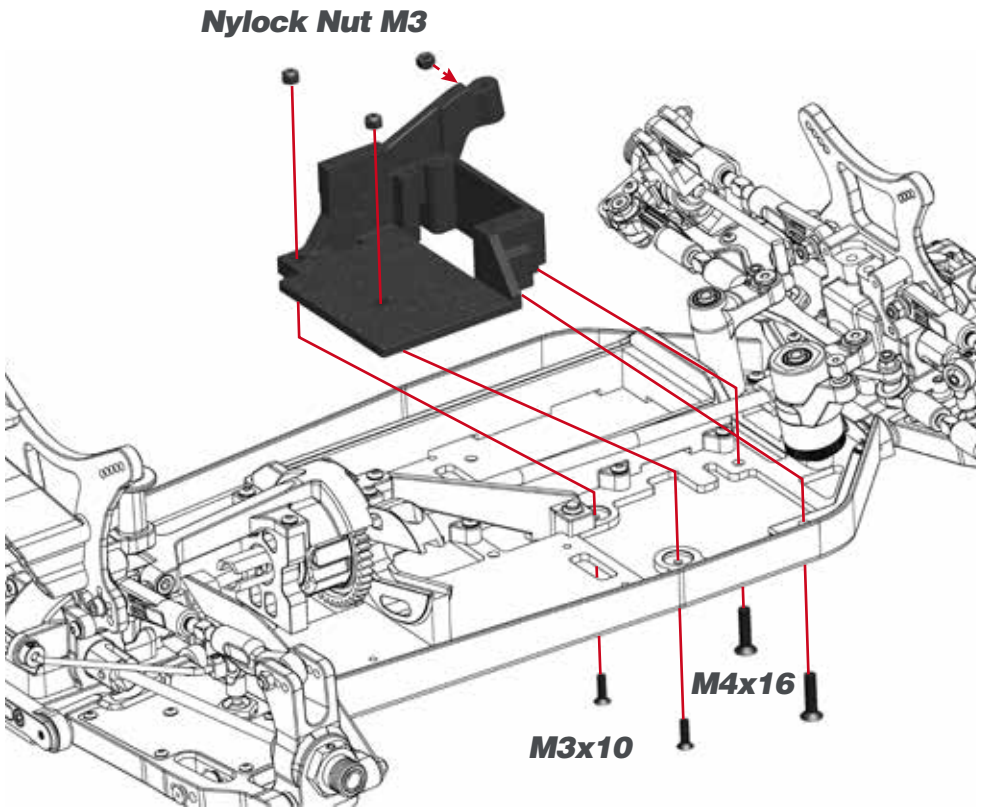

3x7.5x1 Conical

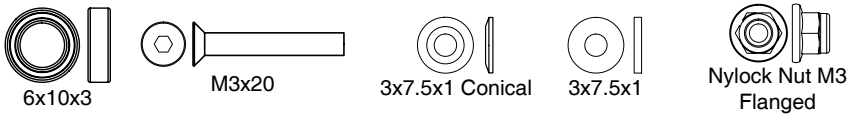

Nylock Nut
M3 Flanged

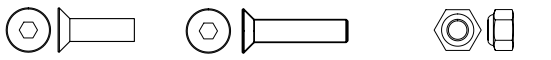
STEP 37



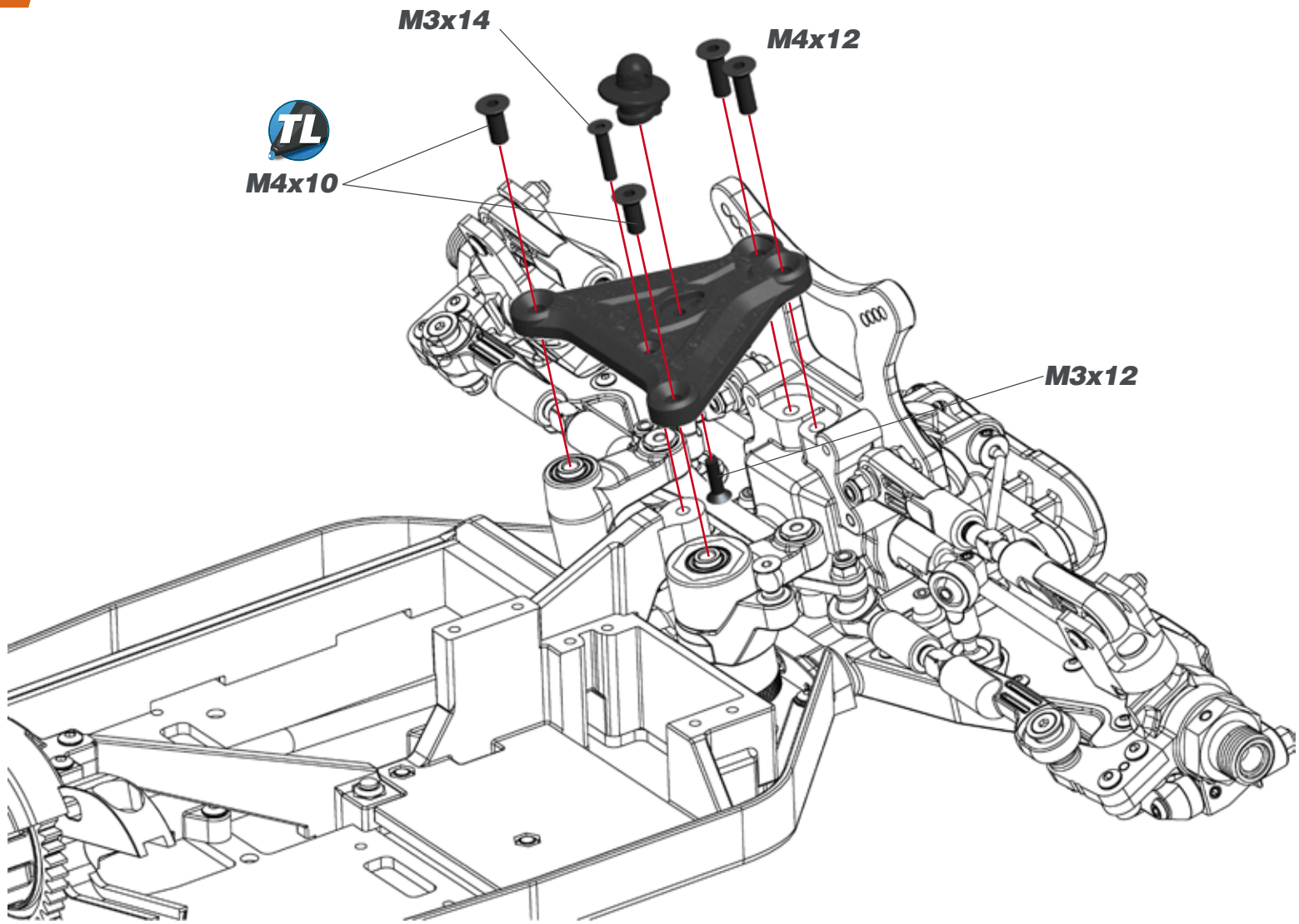
STEP 38 BAG 11





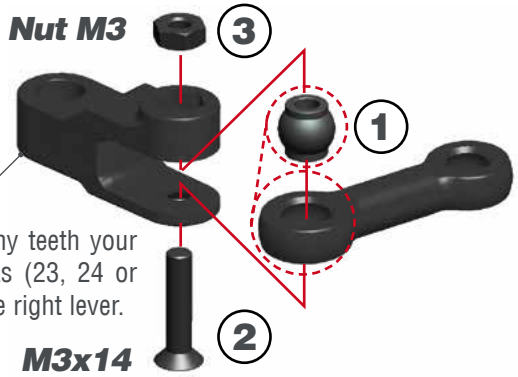


STEP 39



STEP 40

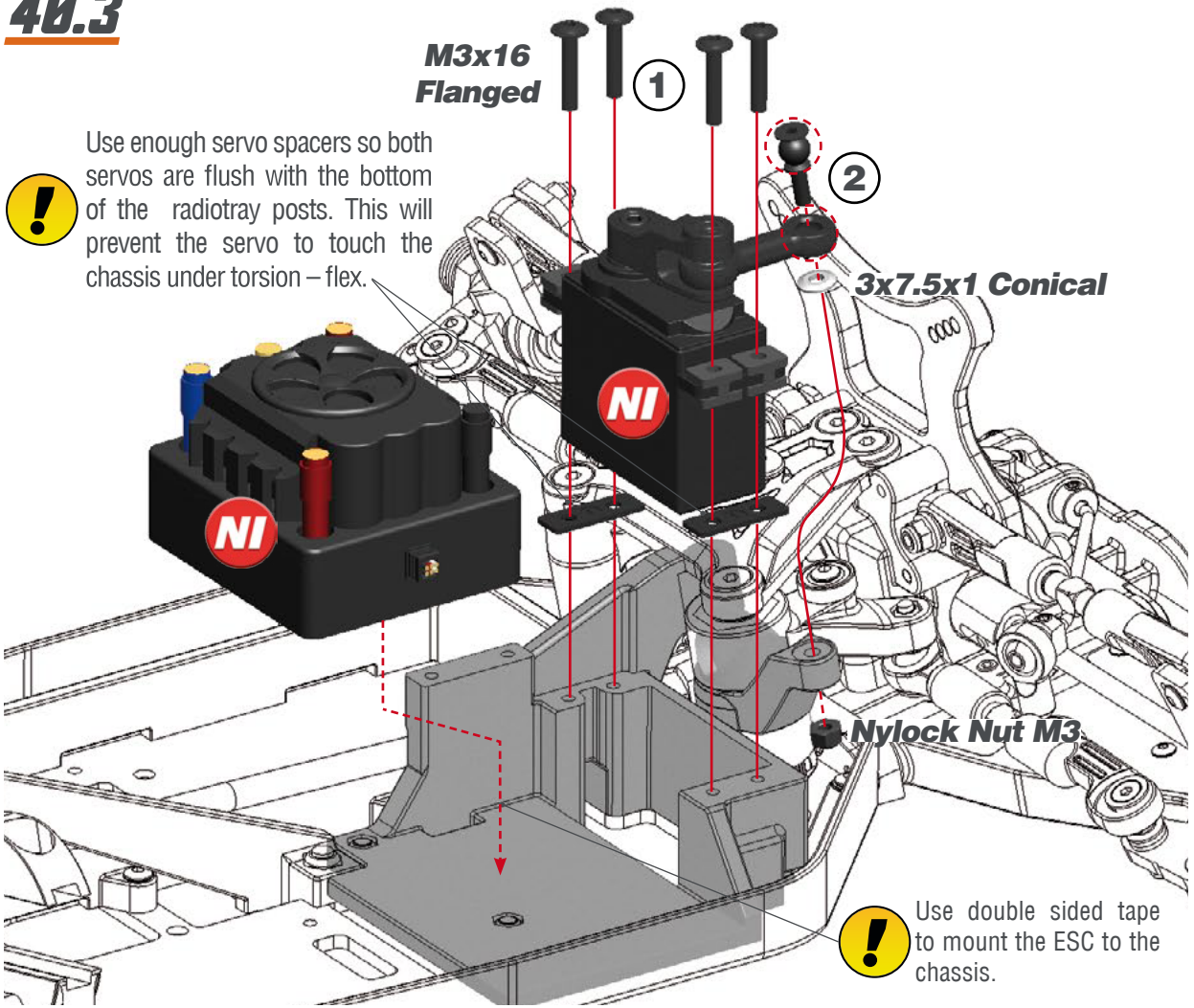
40.1



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

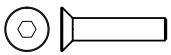
40.2

40.3

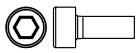


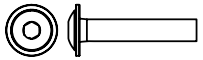
Use enough servo spacers so both servos are flush with the bottom of the radiotray posts. This will prevent the servo to touch the chassis under torsion – flex.

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


M3x14


Nut M3

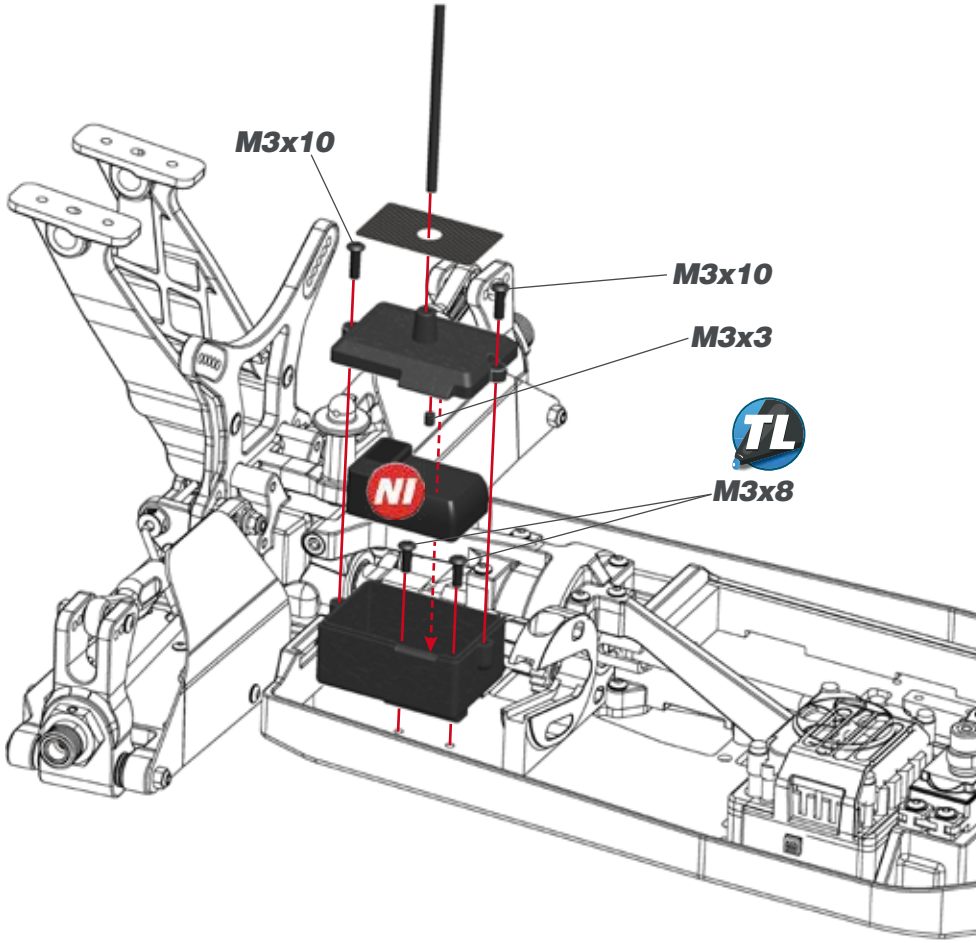

M3x8


M3x16 Flanged

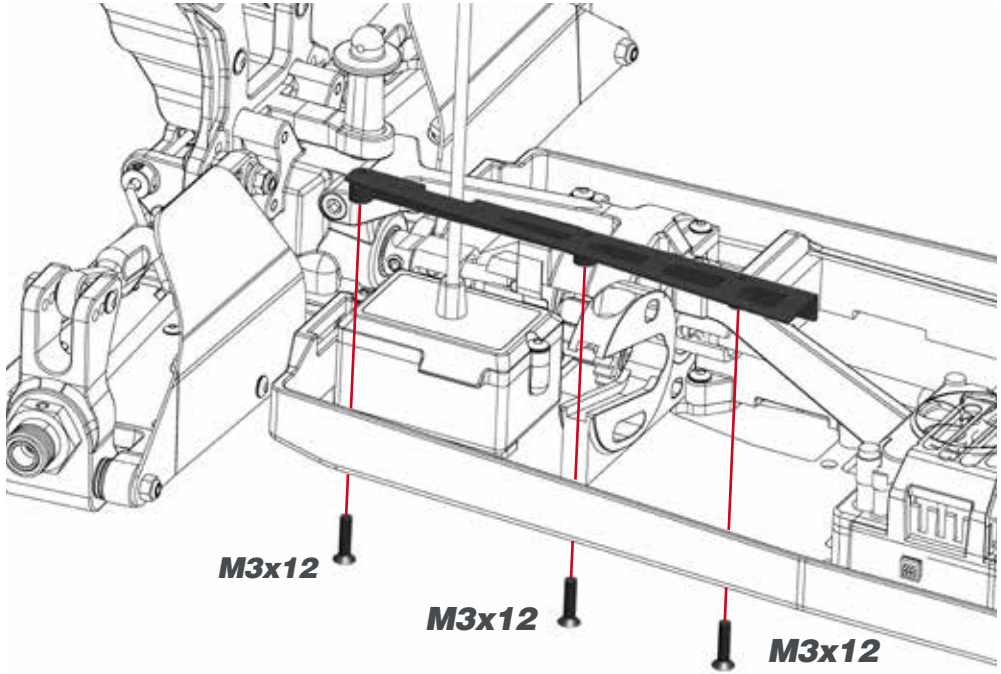

3x7.5x1 Conical

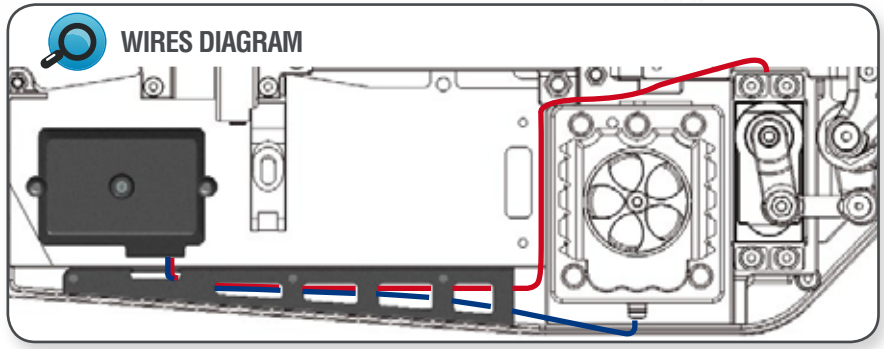

Nylock Nut M3

STEP 41 BAG 12



STEP 42

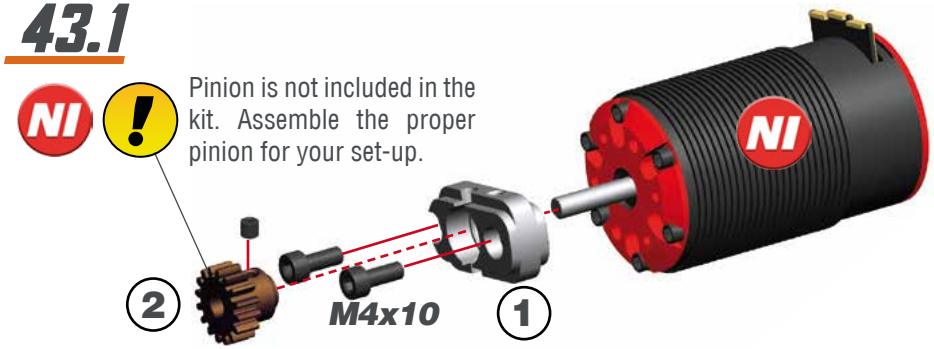




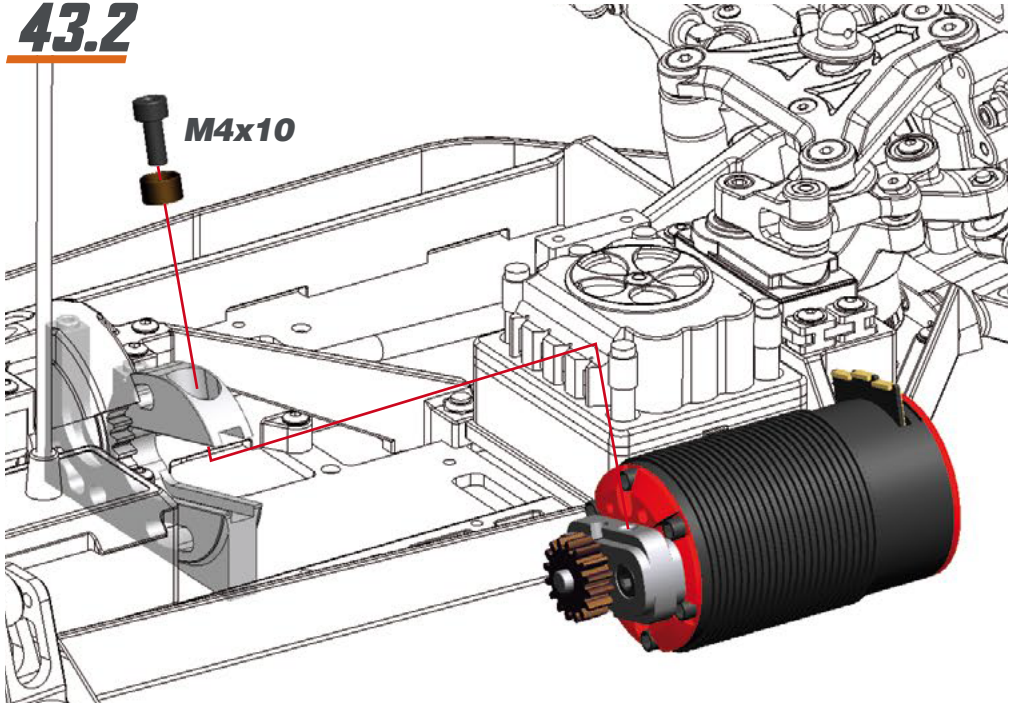
STEP 43

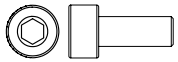
43.1

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

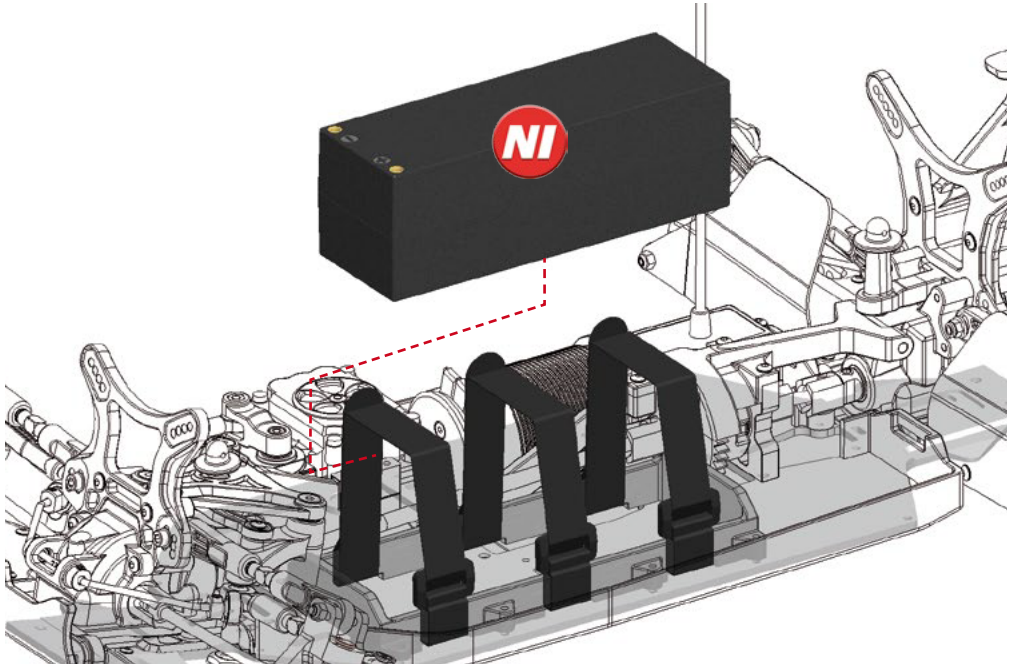


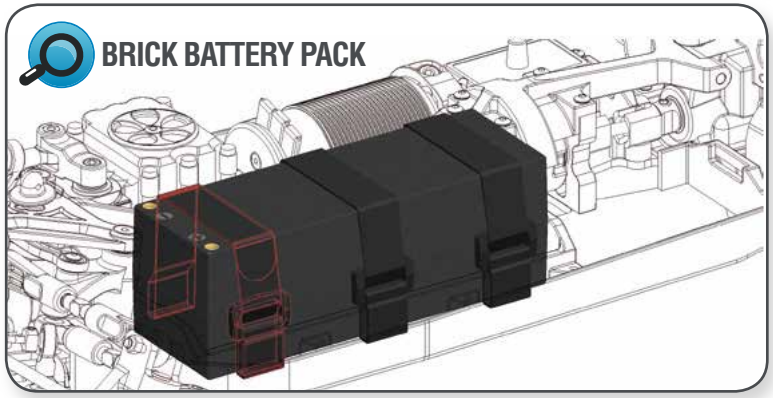
43.2




M4x10

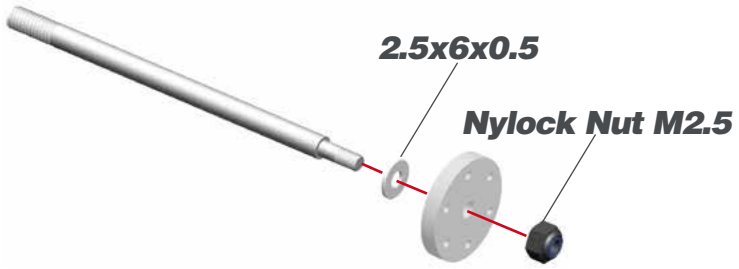
STEP 44



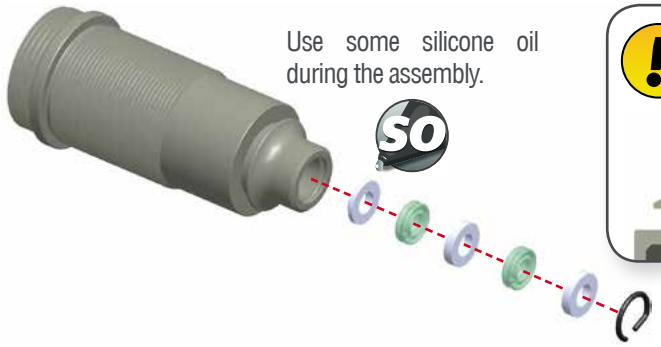


STEP 45 BAG 13 FR SHOCKS / BAG 14 RR SHOCKS

45.1

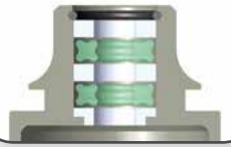


45.2

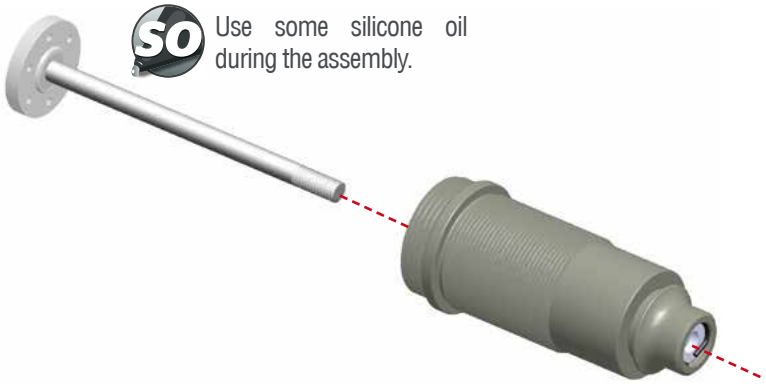


Use some silicone oil during the assembly.

Note the correct orientation of the shock spacers .



45.3



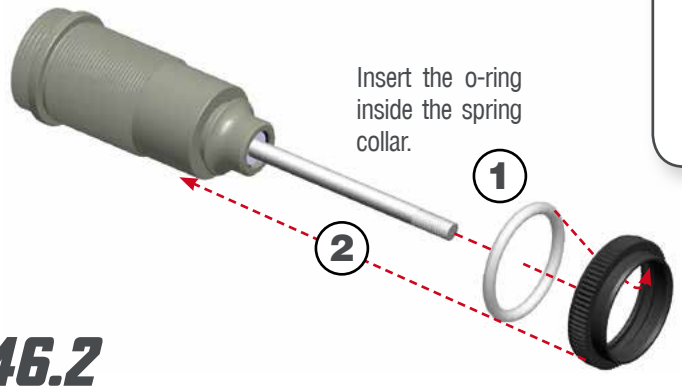
Use some silicone oil during the assembly.


2.5x6x0.5


Nylock Nut M2.5

STEP 46

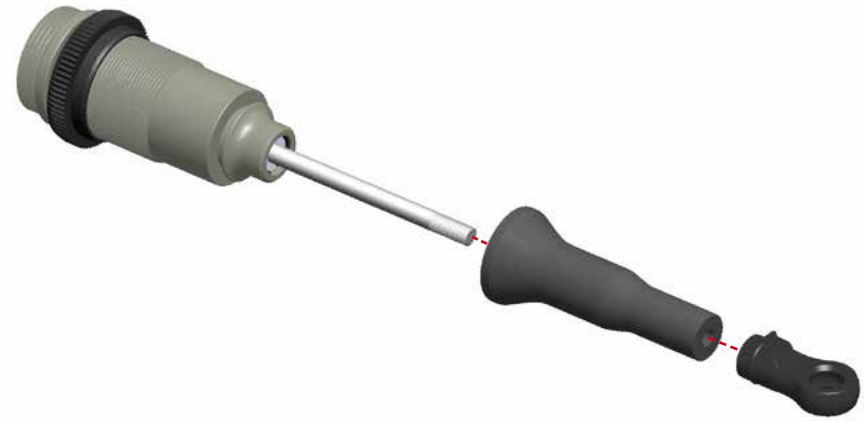
46.1



Insert the o-ring inside the spring collar.

Note the correct position of the o-ring .

46.2



STEP 47

47.1

Push the membrane into the shock cap.

47.2

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.

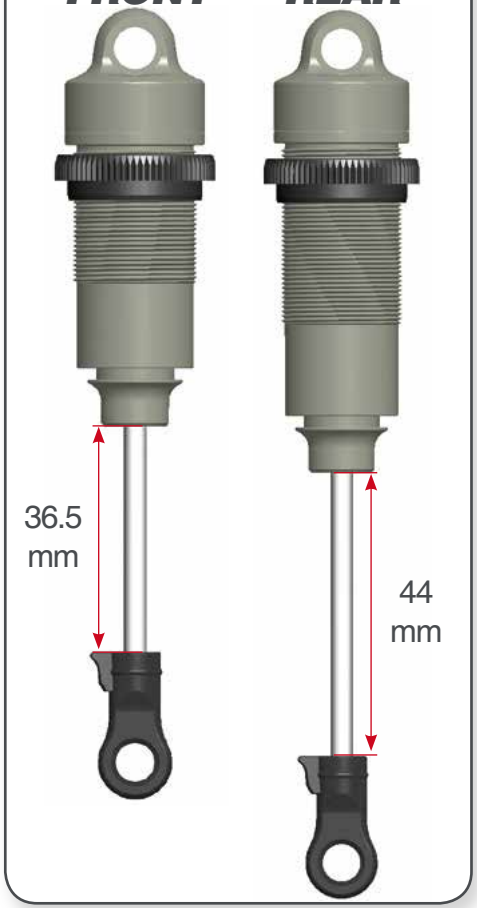
4- Apply the gasket and cap and close fully.

47.3

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.

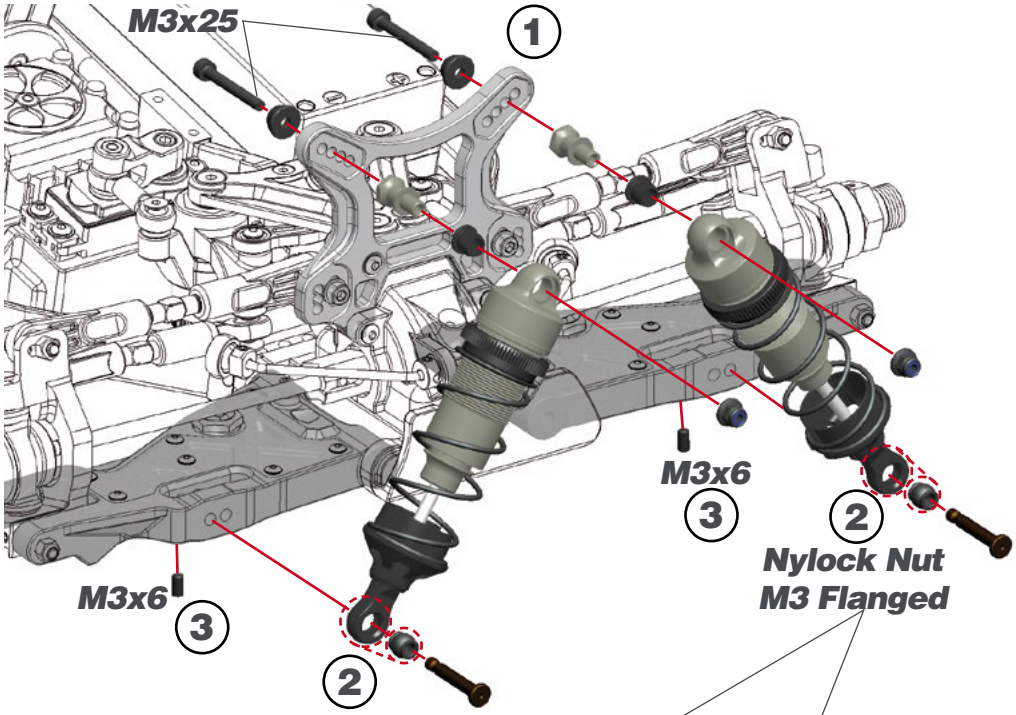
SHOCKS LENGTH: Measure the shock length fully extended.

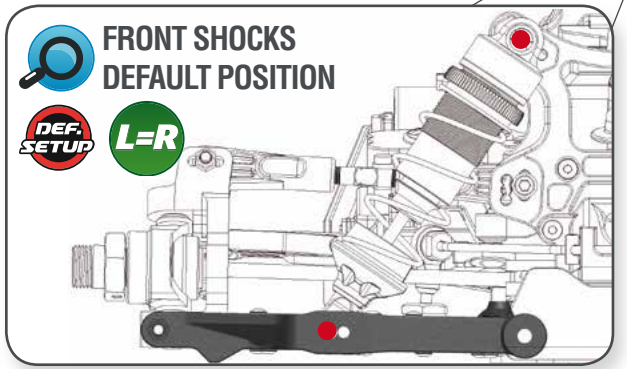


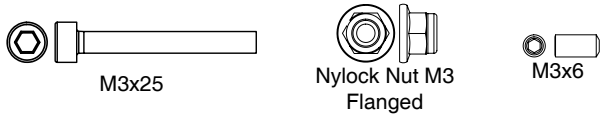
STEP 48

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

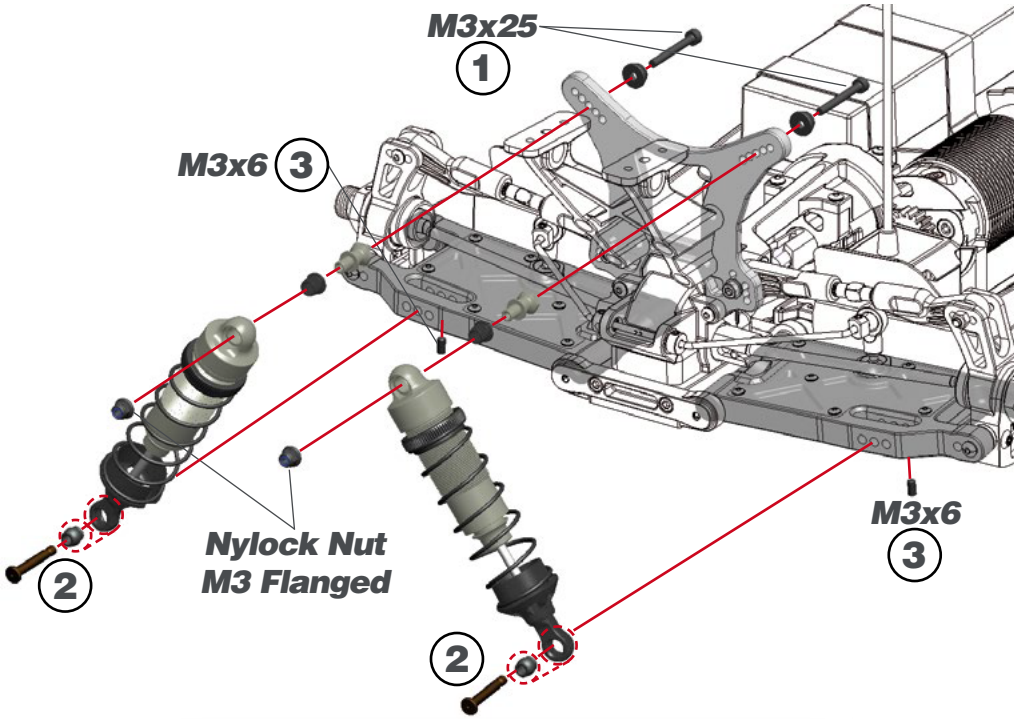
STEP 49 BAG 15

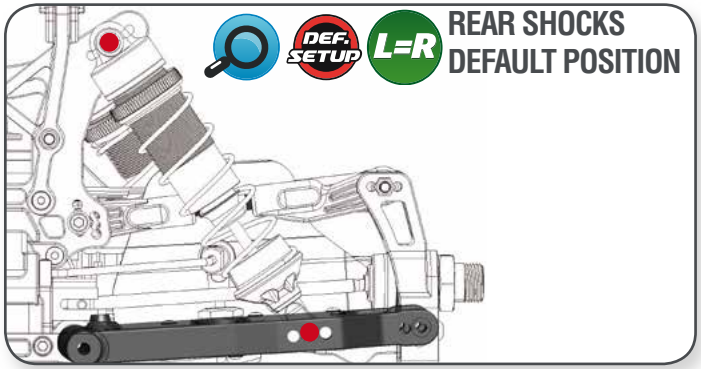


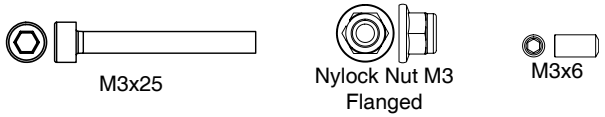




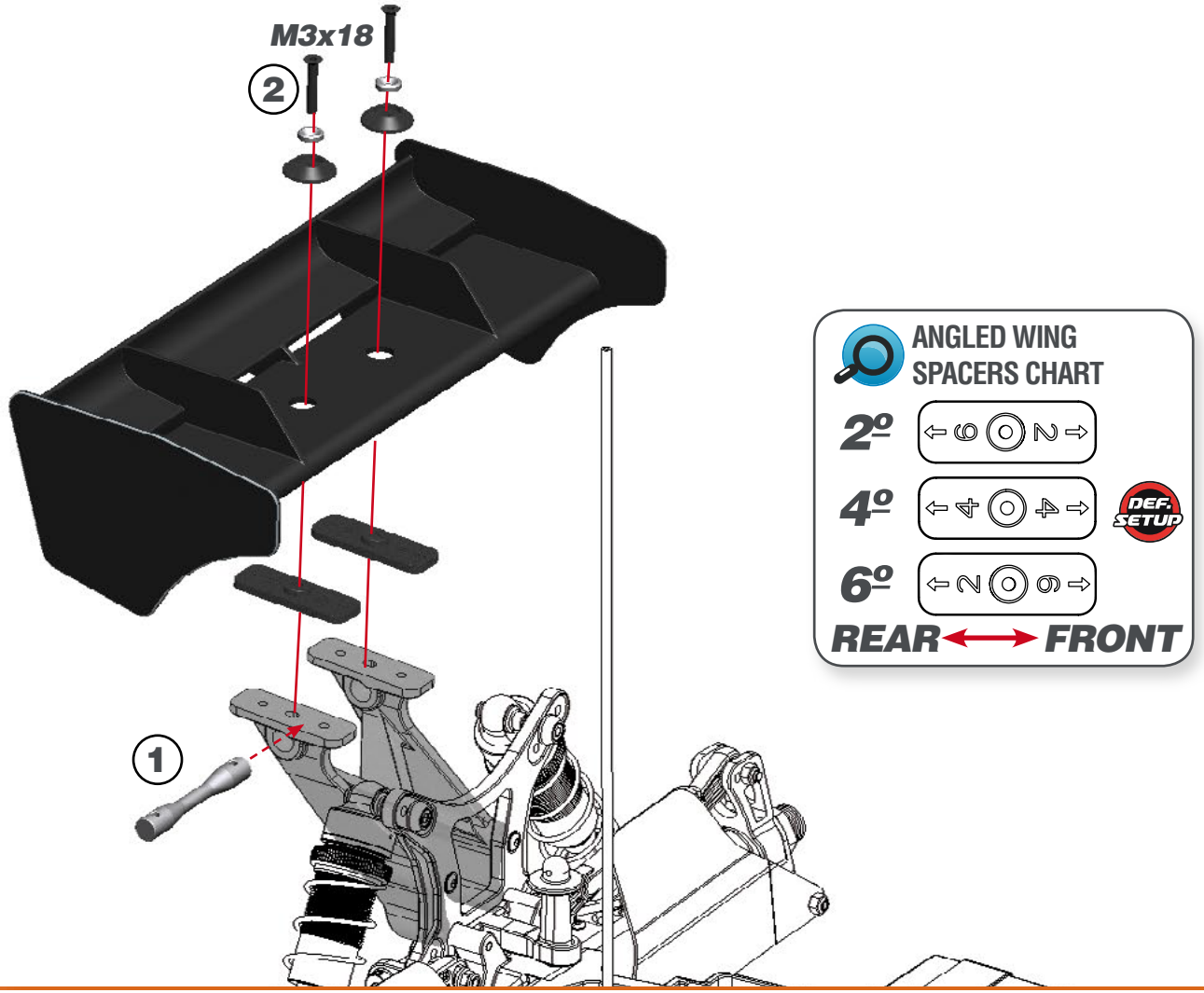
STEP 50

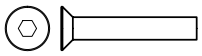






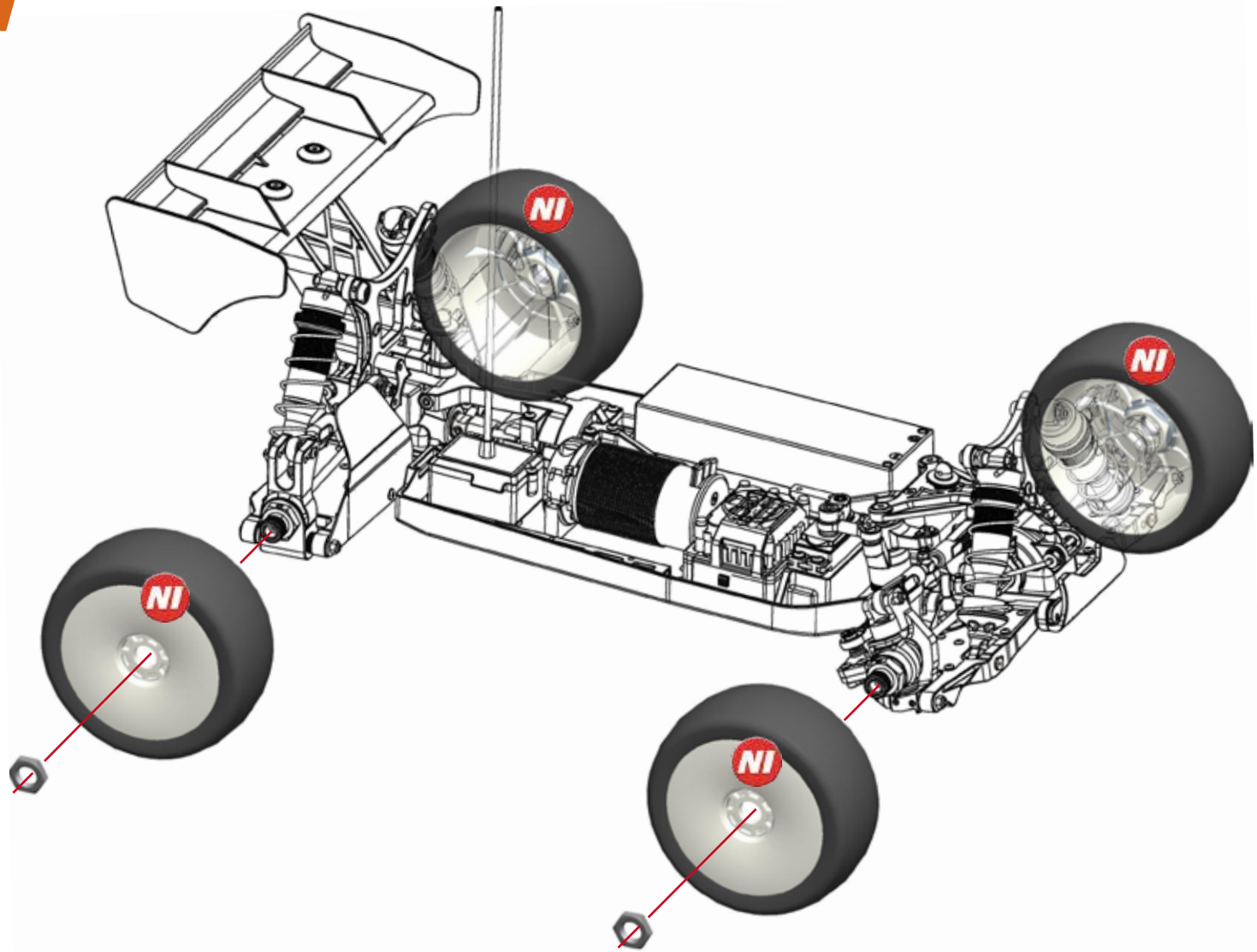
STEP 51





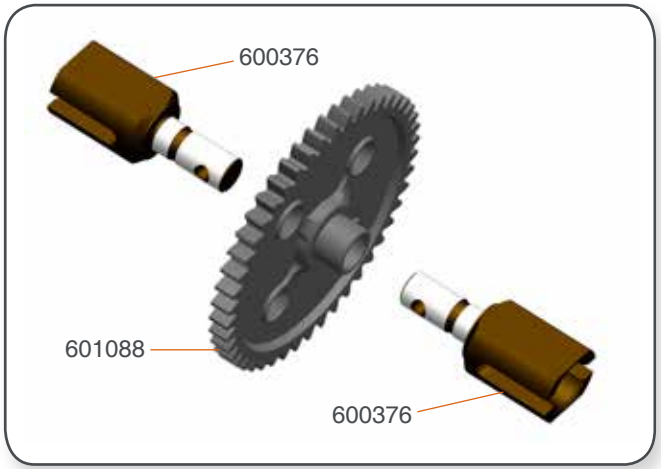
M3x18

STEP 52



INDEX

DIFFERENTIRL EXPLODED VIEW

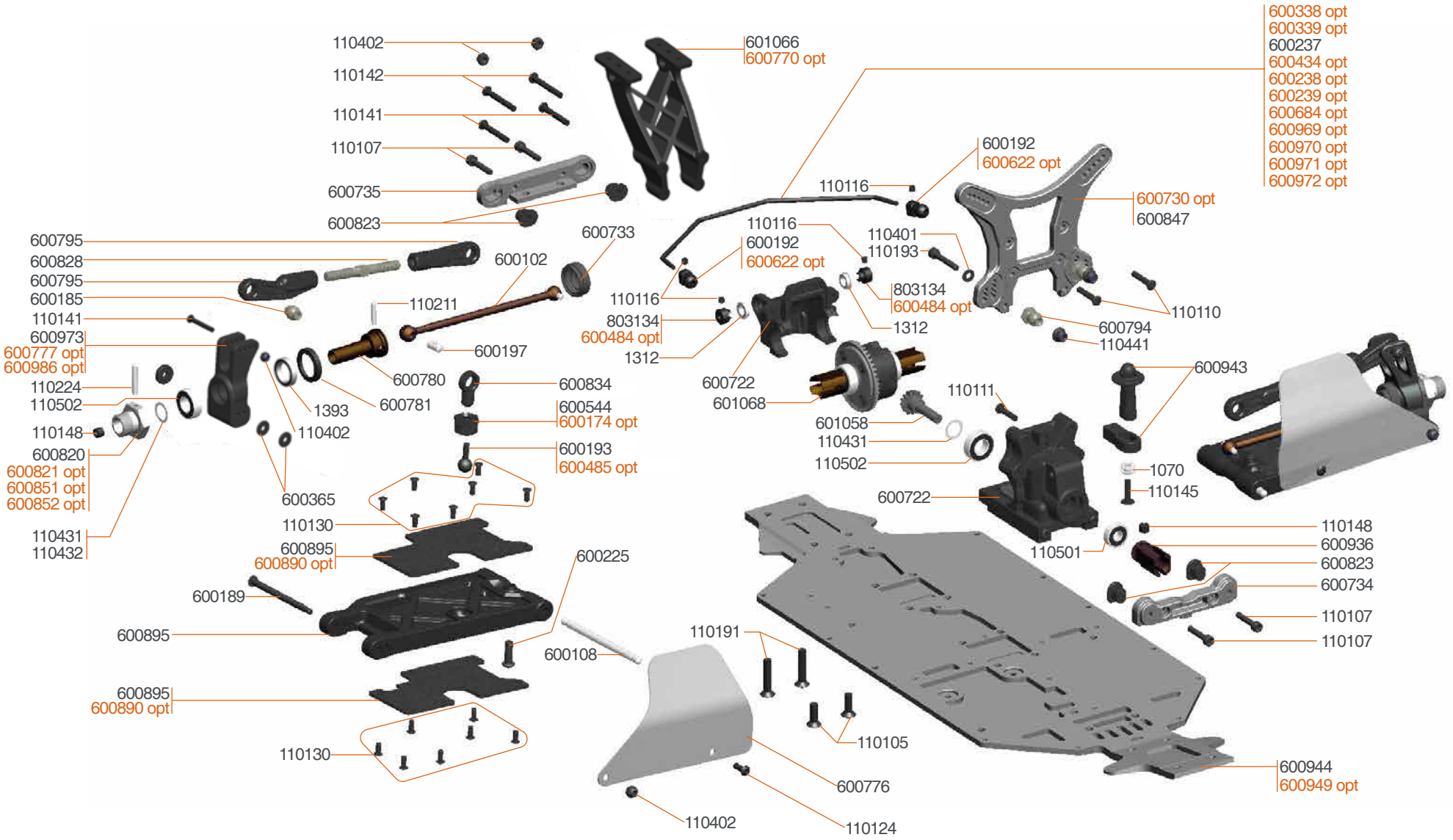


601089 HTD diff set 44T center SRX8

601072 HTD diff pin 10T alu (2) SRX8

OPT

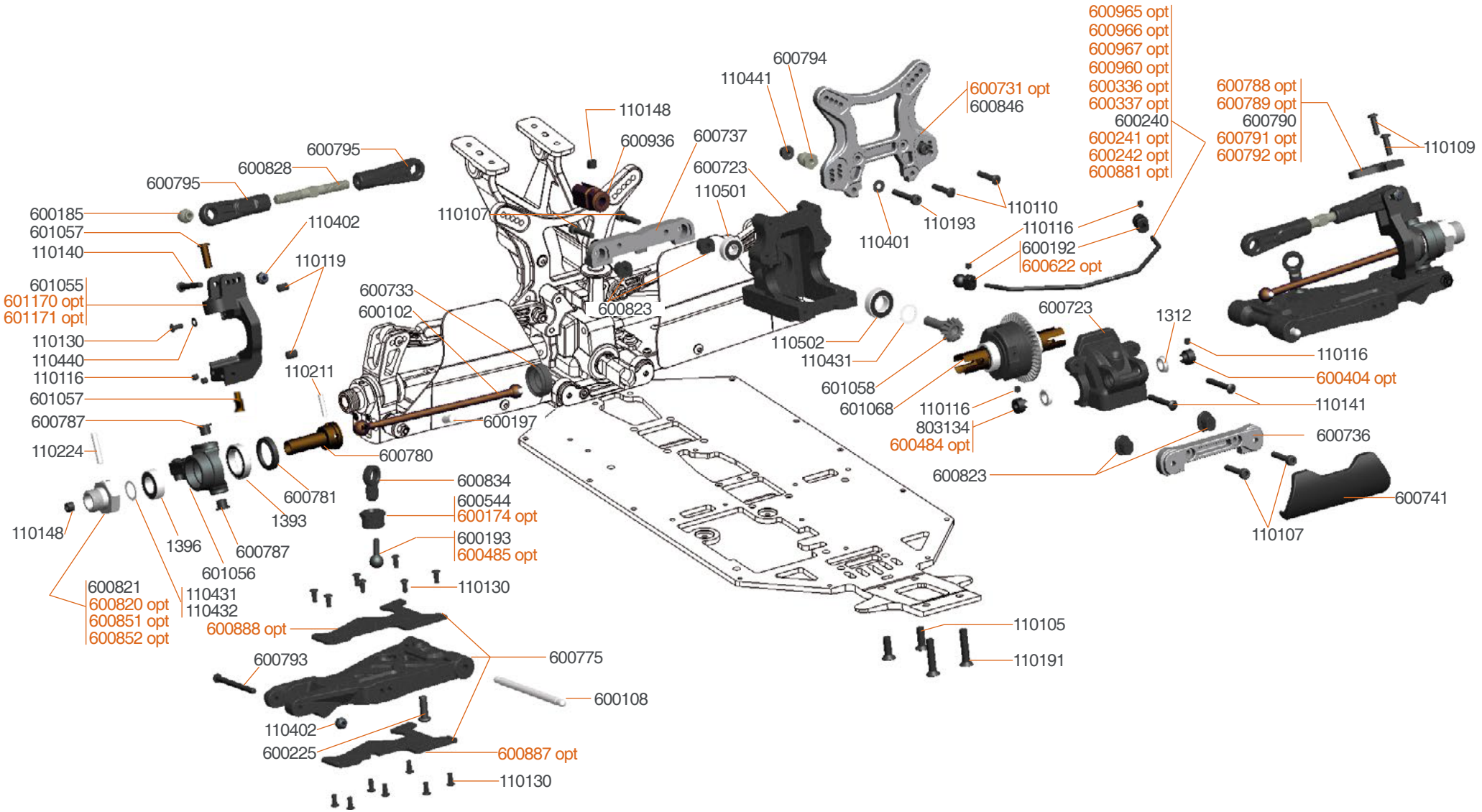
REAR EXPLODED VIEW



OPT

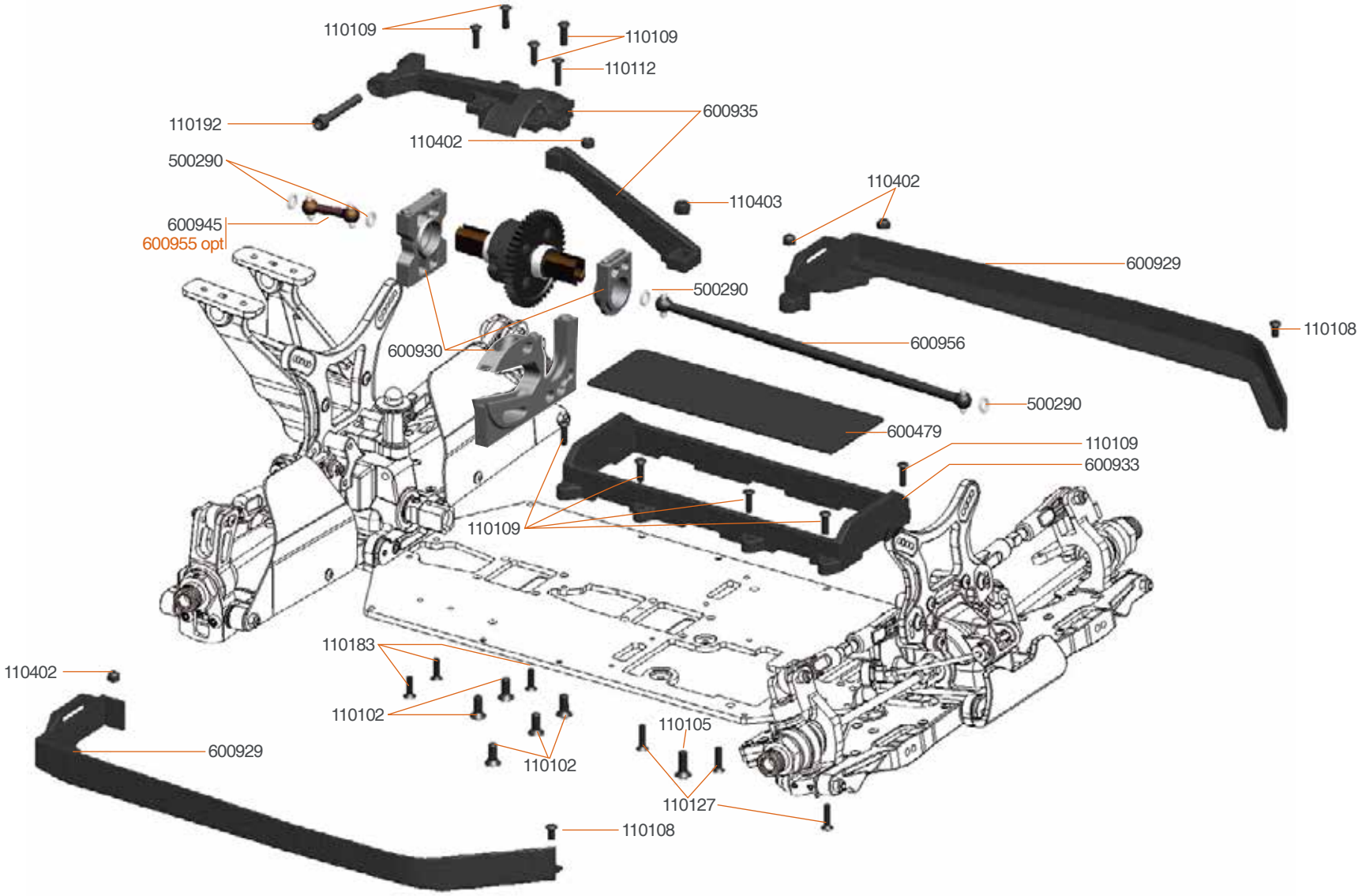
600338 Antiroll bar rear 1.8mm
600339 Antiroll bar rear 2.0mm
600434 Antiroll bar rear 2.4mm
600238 Antiroll bar rear 2.5mm
600239 Antiroll bar rear 2.7mm
600684 Antiroll bar rear 3.0mm
600484 Antirollbar spacer 3mm alu (2)
600485 Pivotball threaded anti roll bar alu (2)
600622 Pivotball antirollbar alu (4)
600730 Shocktower RR carbon SRX8
600770 Wing mount set SRX8
600821 Wheelhexagon +1mm (2) SRX8
600838 Upright weight brass 15gr (2) SRX8
600851 Wheelhexagon 0mm light (2) SRX8
600852 Wheelhexagon +1mm light (2) SRX8
600890 Wishbone insert carbon RR Upper
600174 Antirollbar nut (2)
600890 Wishbone insert carbon RR Upper SRX8 (2)
SRX8 (2)
600896 Wishbone insert carbon RR Lower V2
SRX8 (2)
600949 Chassis LW SRX8E
600777 Upright alu (2) SRX8
600986 Upright alu V2 with inserts SRX8

FRONT EXPLODED VIEW



OPT

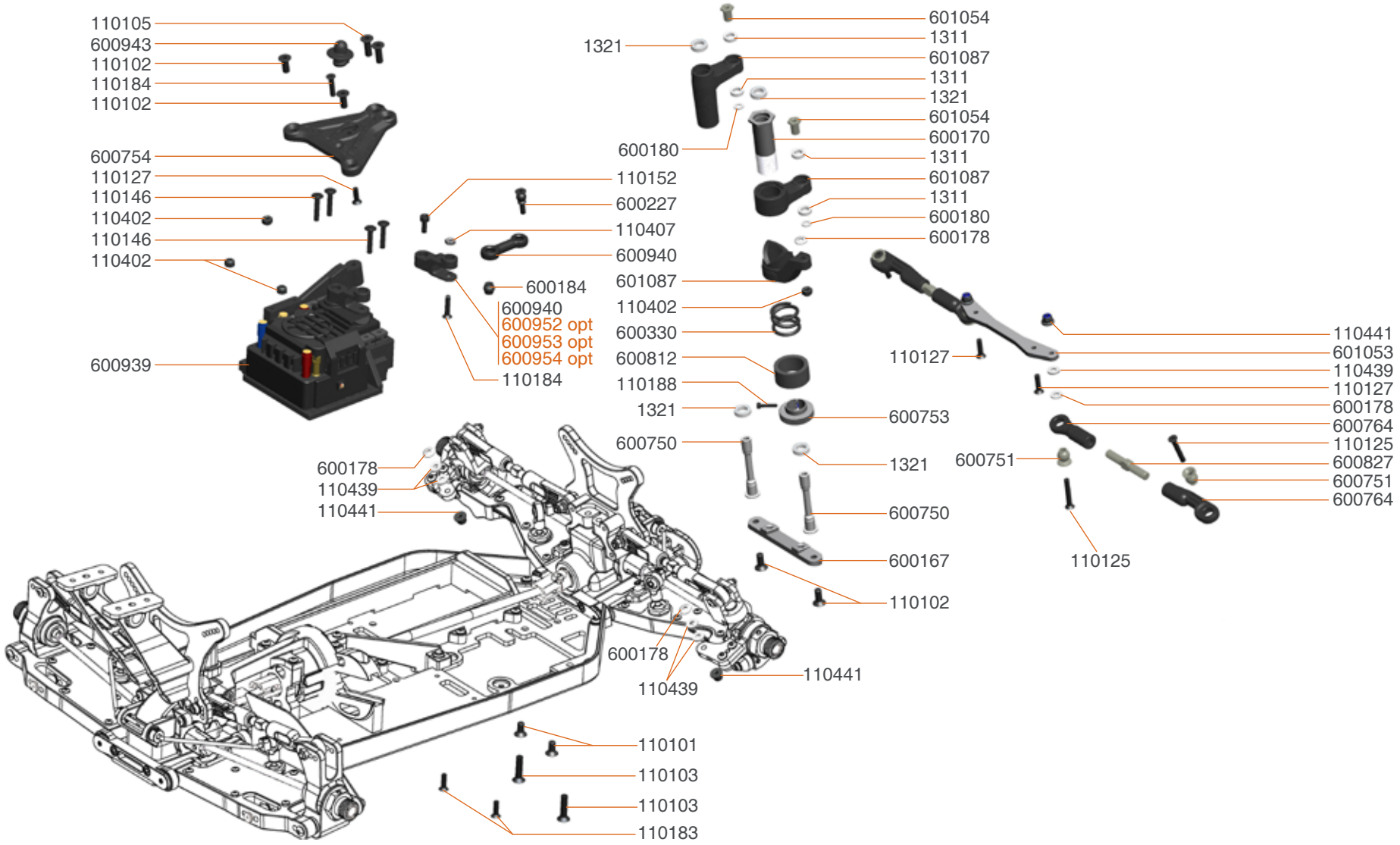
600336 Antiroll bar front 1.8mm
600337 Antiroll bar front 2.0mm
600241 Antiroll bar front 2.5mm
600242 Antiroll bar front 2.7mm
600881 Antiroll bar front 3.0 mm
600484 Antirollbar spacer 3mm alu (2)
600485 Pivotball threaded anti roll bar alu (2)
601170 C-hub 15deg KPI L+R alu SRX8
601171 C-hub 19deg KPI L+R alu SRX8
600174 Antirollbar nut (2)
600788 Steering arm 0 carbon (2) SRX8
600789 Steering arm 1 carbon (2) SRX8
600791 Steering arm 3 carbon (2) SRX8
600792 Steering arm 4 carbon (2) SRX8
600820 Wheelhexagon 0mm (2) SRX8
600846 Shocktower FR alu SRX8
600851 Wheelhexagon 0mm light (2) SRX8
600965 Antiroll bar front 2.2 mm
600966 Antiroll bar front 2.4 mm
600967 Antiroll bar front 2.6 mm
600622 Pivotball antirollbar alu (4)
600852 Wheelhexagon +1mm light (2) SRX8
600887 Wishbone insert carbon FR Lower SRX8 (2)
600888 Wishbone insert carbon FR Upper SRX8 (2)



OPT

600955 Driveshaft center rr alu block layout SRX8E
600959 Saddle pack layout set SRX8E

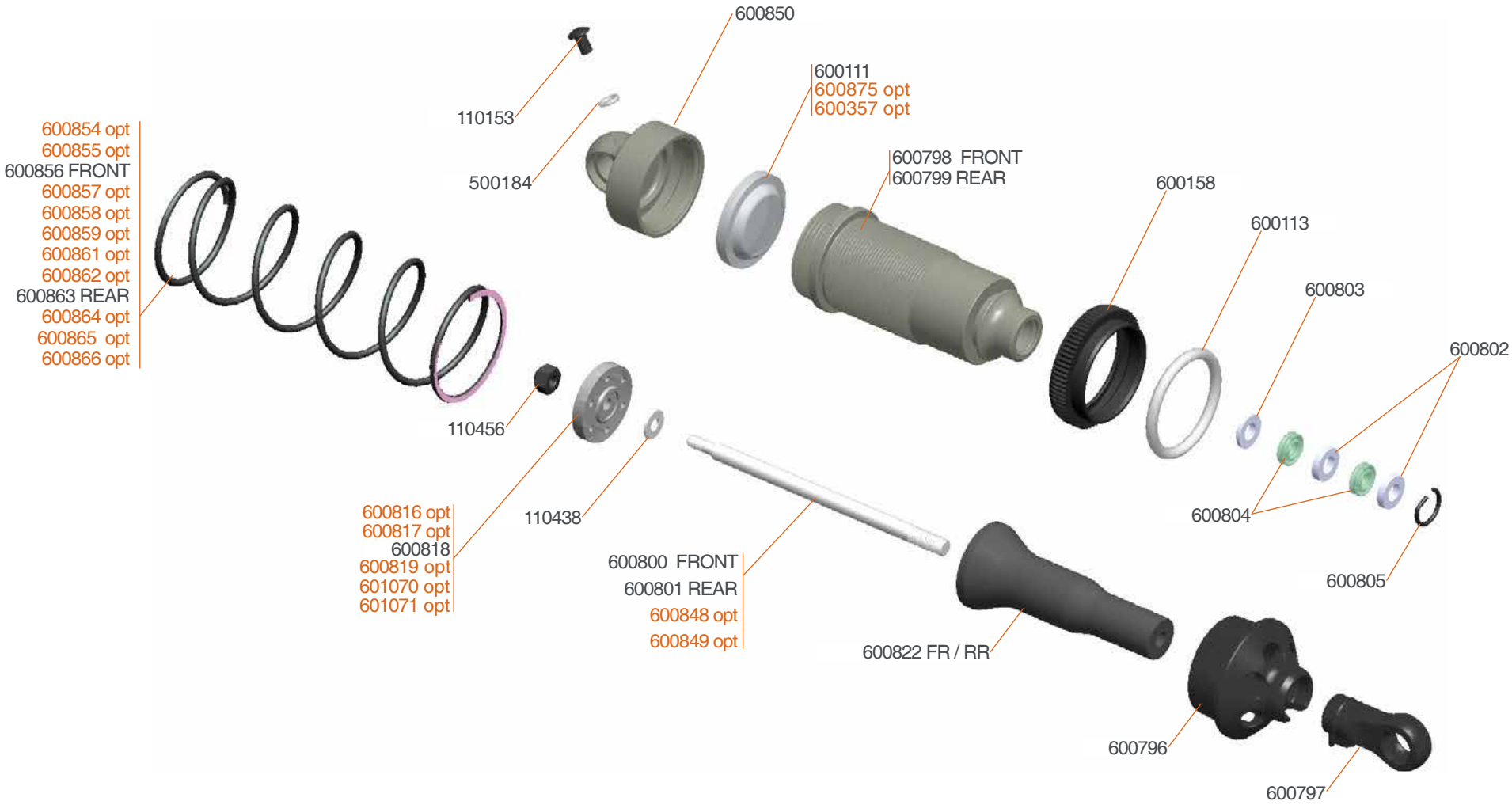
STEERING EXPLODED VIEW



OPT

600952 Servo lever alu 23T SRX8E
600953 Servo lever alu 24T SRX8E
600954 Servo lever alu 25T SRX8E

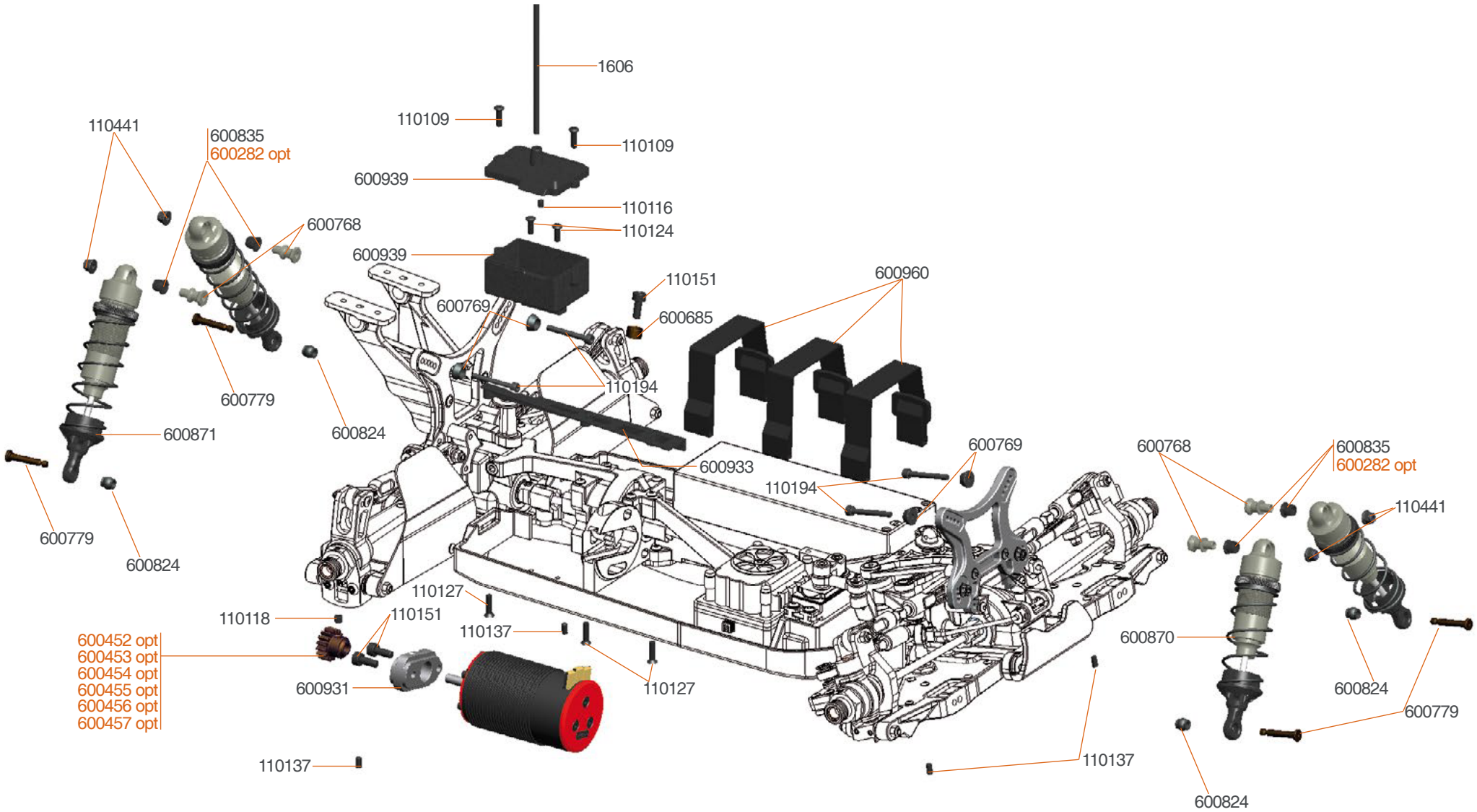
SHOCKS EXPLODED VIEW



OPT

600854	Shockspring FR 4.5 lbs orange (2)	600861	Shockspring RR 3.0 lbs orange (2)	600357	Membrane webbed silicone (4)	600870	Shock set Pro front (2) SRX8
600855	Shockspring FR 4.7 lbs red (2)	600862	Shockspring RR 3.2 lbs red (2)	600816	Shock piston blank (4) SRX8	600871	Shock set Pro rear (2) SRX8
600857	Shockspring FR 5.1 lbs blue (2)	600864	Shockspring RR blue 3.6lbs (2)	600817	Shock piston 5 holes (4) SRX8	600875	Shock top gasket (4) SRX8
600858	Shockspring FR 5.3 lbs purple (2)	600865	Shockspring RR 3.8 lbs purple (2)	600819	Shock piston 8 holes (4) SRX8	601070	Shock piston angled 1.2mm 8holes (4) SRX8
600859	Shockspring FR 5.5 lbs green (2)	600866	Shockspring RR 4.0 lbs green (2)	600848	Shock shaft FR TiN coated (2) SRX8	601071	Shock piston angled 1.3mm 8holes (4) SRX8
600860	Shockspring set FR (6x2)	600867	Shockspring set RR (6x2)	600849	Shock shaft RR TiN coated (2) SRX8		

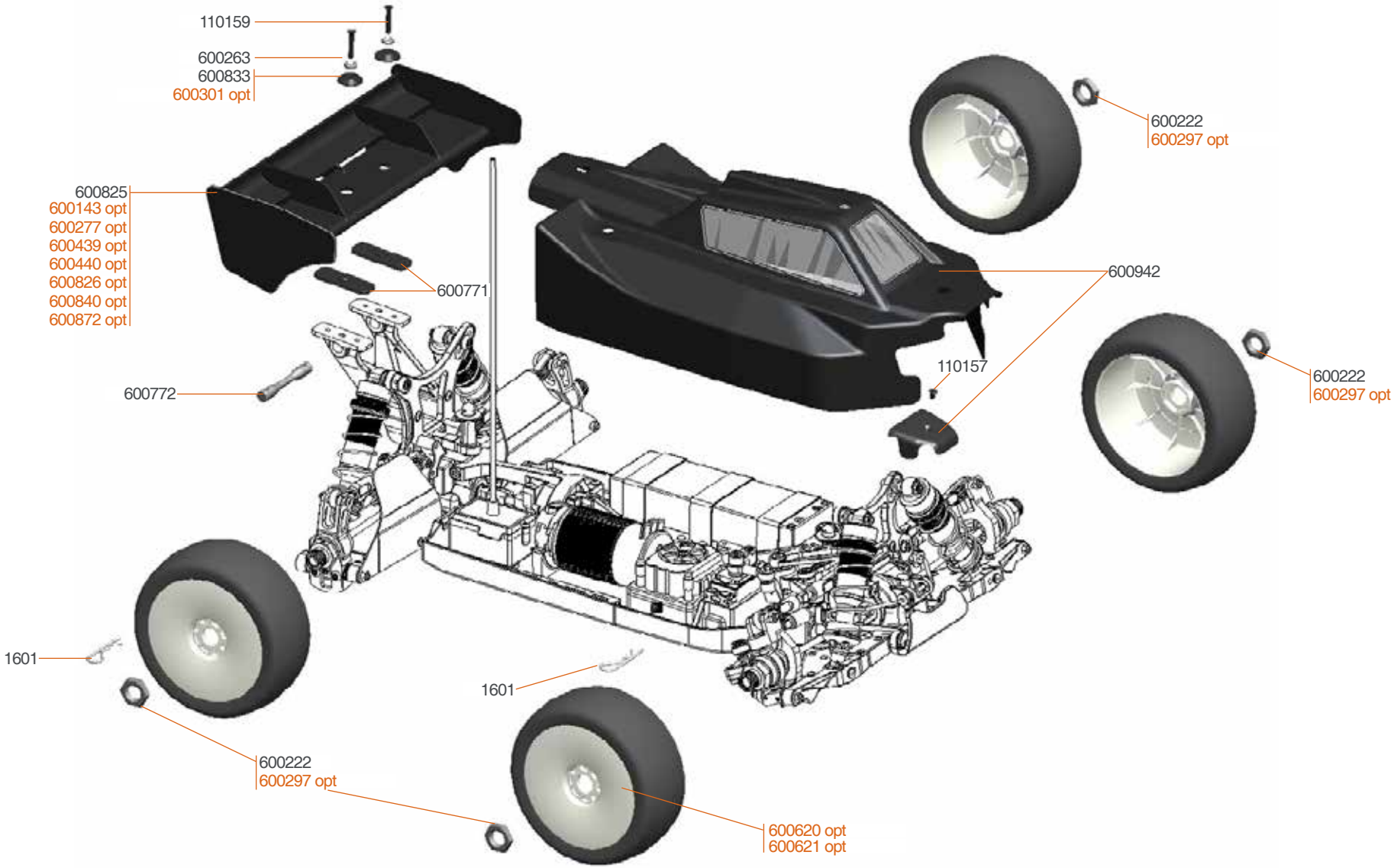
FINAL 1 EXPLODED VIEW



OPT

600282 Shock-pivot bushing delrin (4)
600452 Pinion 12T
600453 Pinion 13T
600454 Pinion 14T
600455 Pinion 15T
600456 Pinon 16T
600457 Pinion 17T
600870 Shock set Pro front (2) SRX8
600871 Shock set Pro rear (2) SRX8

FINAL 2 EXPLODED VIEW



OPT

600297 Wheel-nut17mm flanged/light (4)
600143 Wing white nylon
600277 Wing black nylon
600439 Wing white low 811
600440 Wing black low 811
600826 Wing straight MD white 1/8
600840 Wing lexan HD with gurney 1/8
600872 Wing gurney
600620 Rim 1/8 buggy White (4)
600621 Rim 1/8 buggy Yellow (4)

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