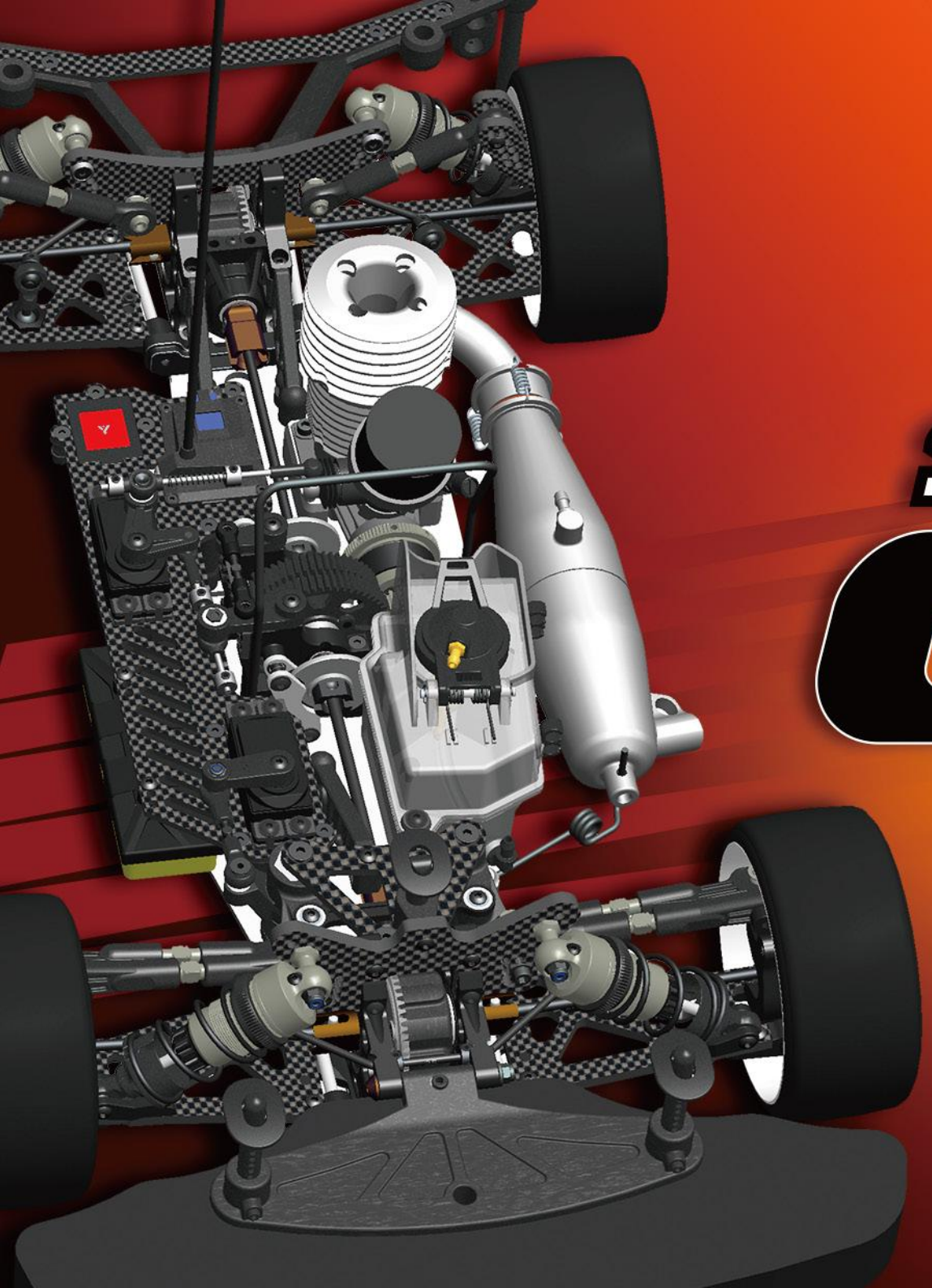


INSTRUCTION MANUAL

SRX8 GT R EC

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 SRX8GT R is a state of the art 1/8 scale 4wd GT 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 ease of assembly and maintenance. The high quality standards of all parts and hardware will make racing your Serpent car a very rewarding activity!

Through our team, website and social media we will keep you up-to-date on all developments of the Serpent cars. We hope to meet you on the track and through our various media! Enjoy the drive !

Team Serpent
Multiple World Champions

INSTRUCTIONS

Serpent's long tradition of excellence extends to the instruction manuals, and this instruction manual is no exception. The easy-to-follow layout is richly illustrated with 3D-rendered full-color images to make your building experience quick and easy. Following the instructions will result in a well-built, high-performance race-car that will soon be able to unleash its full potential at the racetrack. The kit includes bags, with bag numbers, which refer to the same step in the manual. Open only the indicated bag(s) per step and finish that part of the assembly. Remaining parts will be needed 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 SRX8GT R. Fine-tuning the initial setup is an essential part of building a high-performance race car like your Serpent SRX8GT R.

EXPLODED VIEWS AND PARTS LIST

The exploded views and parts lists for the Serpent SRX8GT R 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.
- 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

- FR/RR DIFF ASSEMBLY 4
- GEARBOX ASSEMBLY 6
- CENTRAL ASSEMBLY 8
- REAR ASSEMBLY 10
- FRONT ASSEMBLY 21
- STEERING ASSEMBLY 31
- CLUTCH ASSEMBLY 34
- RADIO ASSEMBLY 37
- SHOCKS ASSEMBLY 42
- FINAL ASSEMBLY 48
- EXPLODED VIEWS 52
- TEAM SERPENT NETWORK 66

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

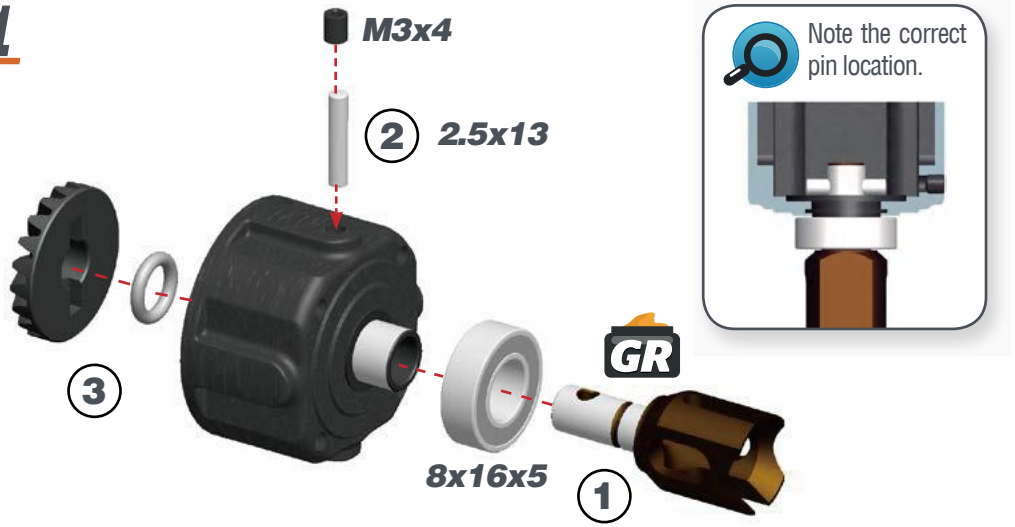
Each step contains a variety of symbols described below.

	Carefully, read and check 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.
	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.

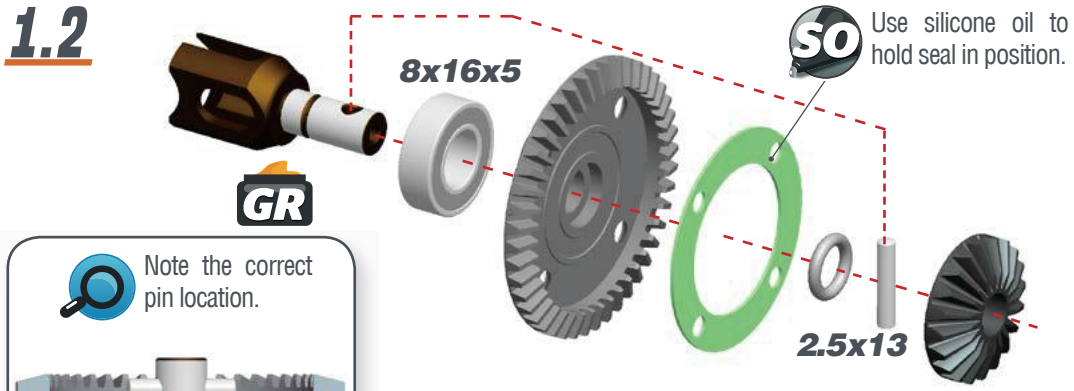
FR/RR DIFF ASSEMBLY

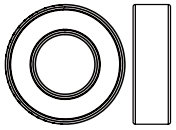
STEP 1 DIFF BAG FR/RR

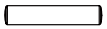
1.1



1.2




8x16x5


2.5x13


M3x4

STEP 2

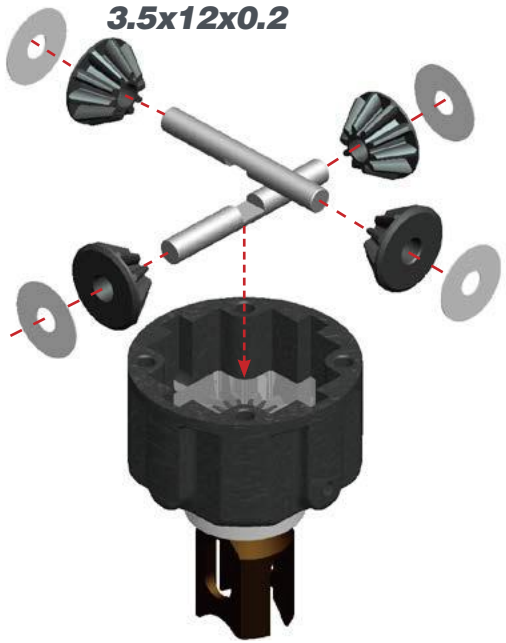
2.1

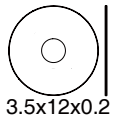
Add just enough oil to cover the large gear before assembling the small satellite gears and cross pins.

Use the silicone oil supplied in the kit. For the correct cst value please check the default setupsheet.



2.2



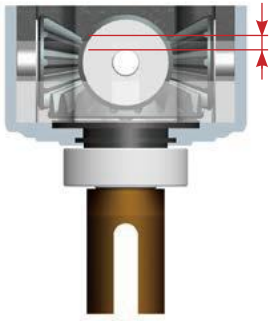

3.5x12x0.2

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



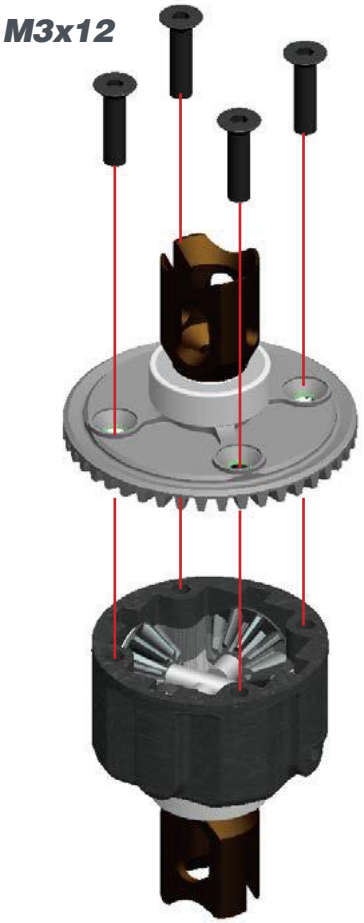
AMOUNT OF OIL IN THE DIFFS

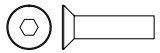
Use a digital scale to measure the exact amount of oil in the diff.

Differential weight should be 45.7-45.8 grams.



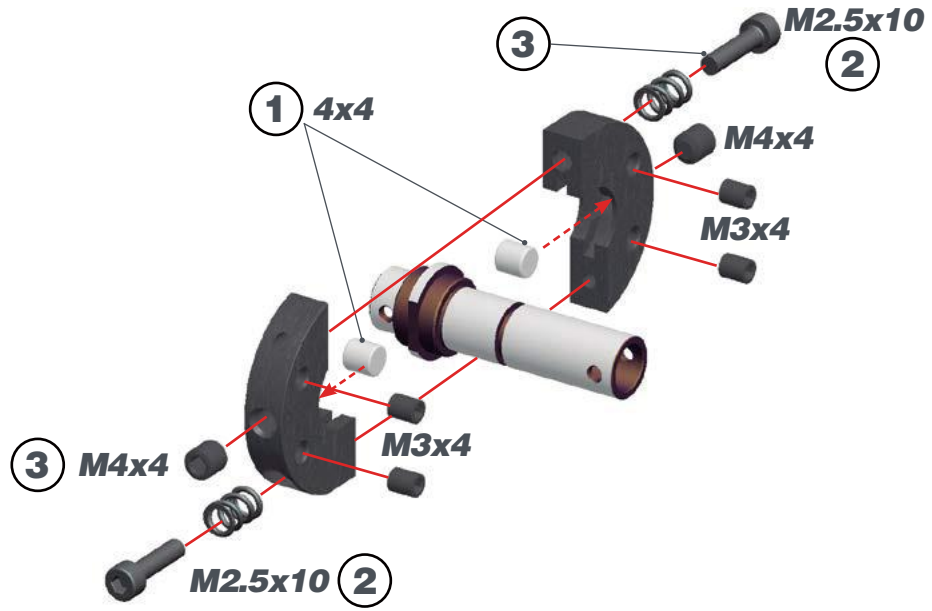
STEP 4





STEP 5

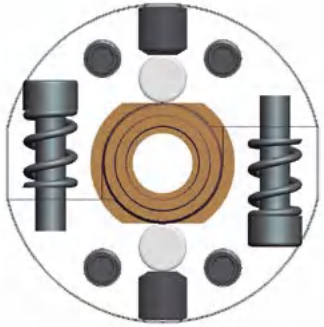
BAG 1



1- The M2.5x10 screws adjust the SHIFT POINT. As default adjustment screw them untill the screws will be be leveled with the hole as in the right pictures.

2- Adjust the M4x4 screw to minimise the gap between the shoes and the bell, but still spinning free without touching. Check after each run.

Note the correct gearbox assembly



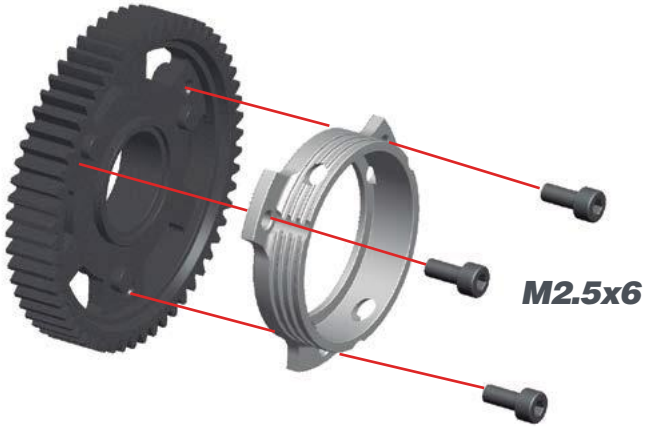
Note the correct default M2.5x10 screws adjusting point.



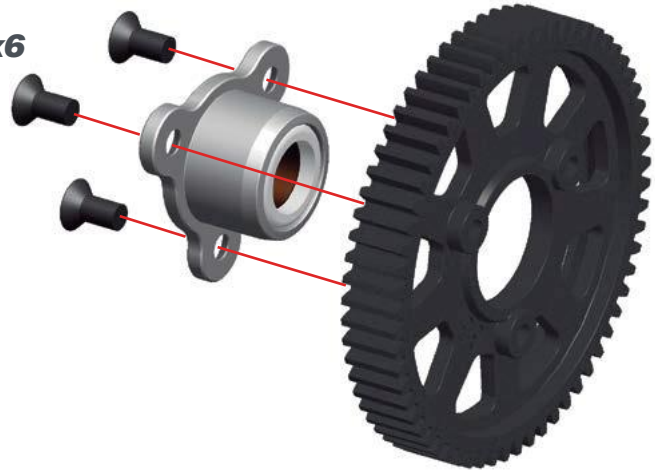
M3x4 4x4 M4x4 M2.5x10

STEP 6

6.1



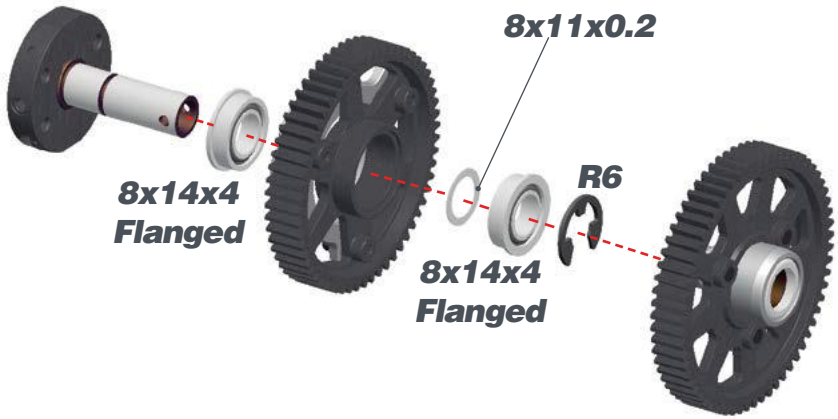
6.2



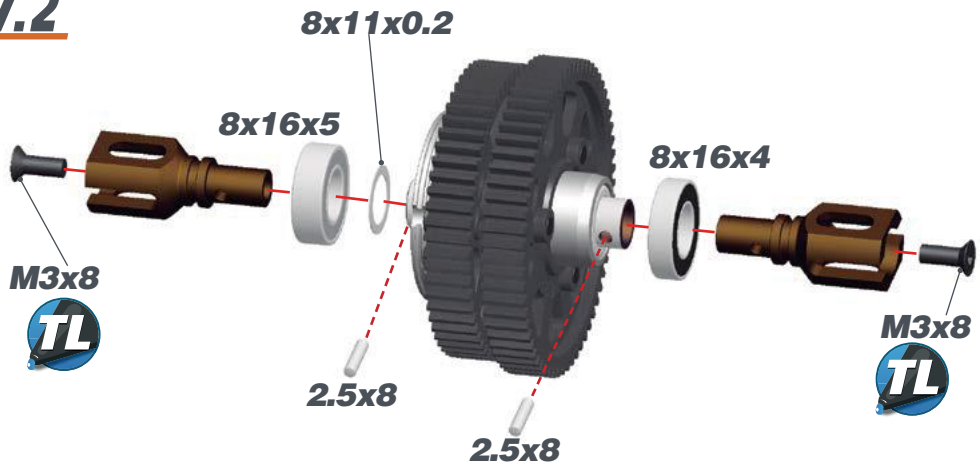
M3x6 M2.5x6

STEP 7

7.1

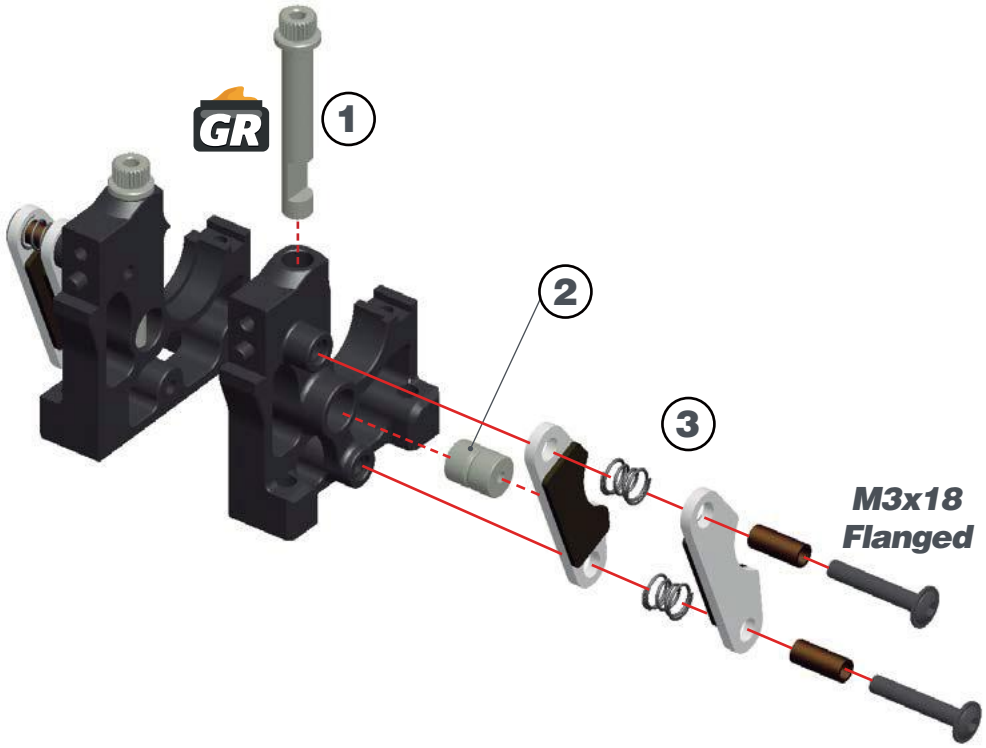


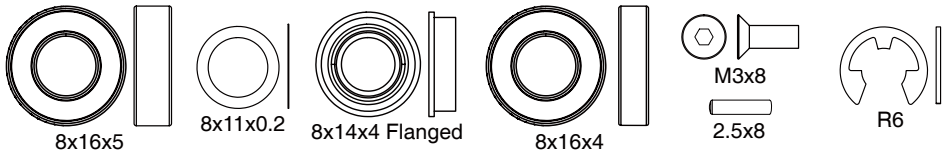
7.2

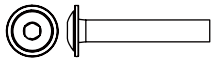


STEP 8

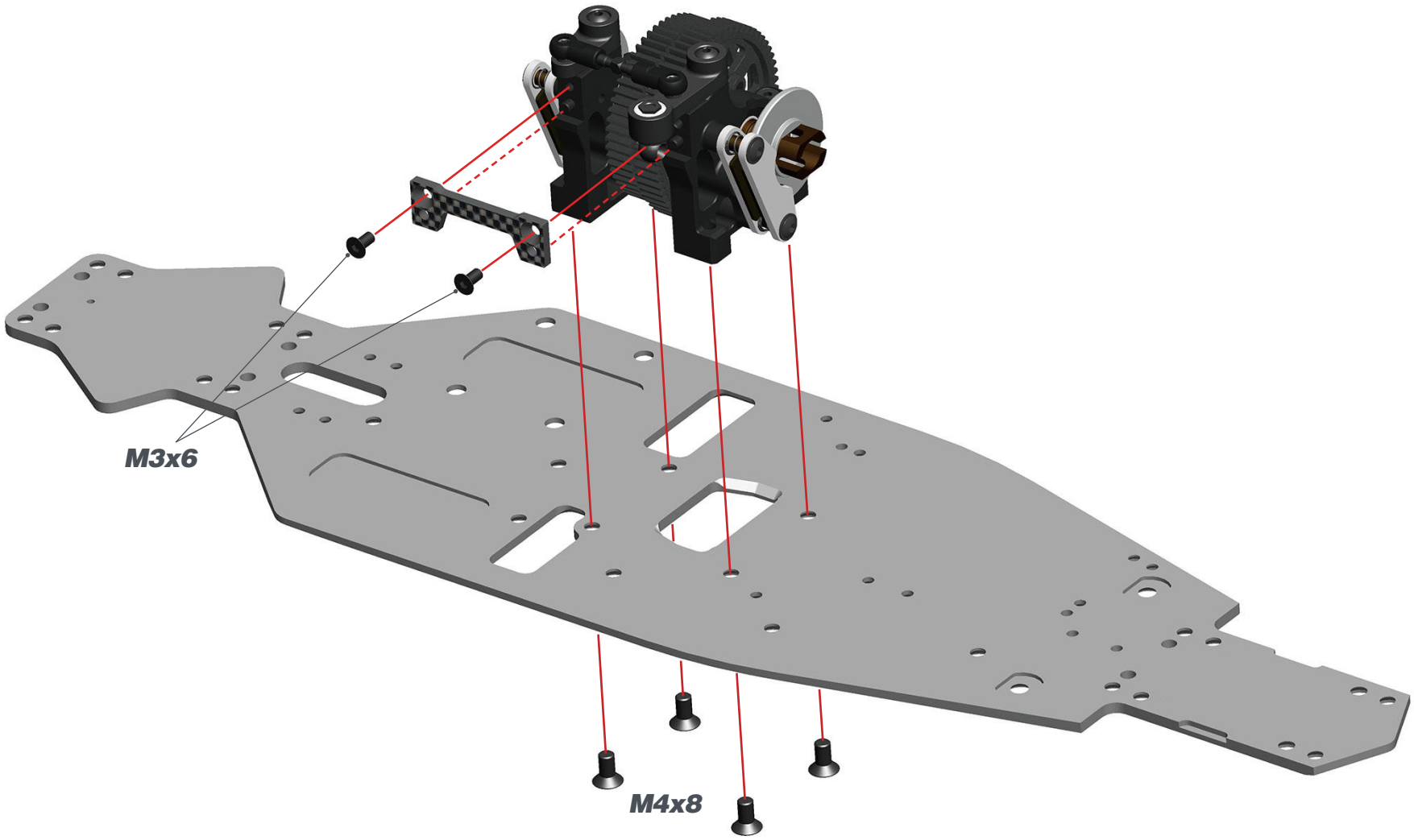
BAG 2





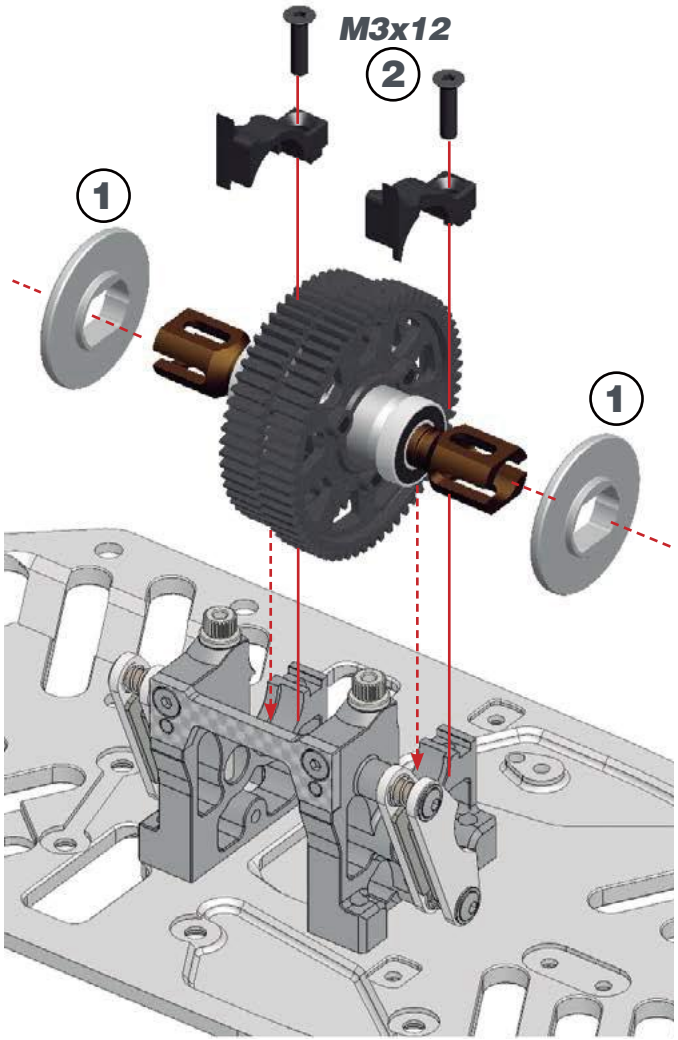


STEP 9



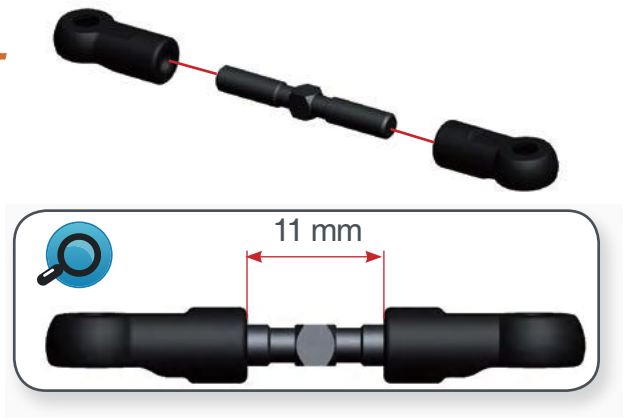


STEP 10

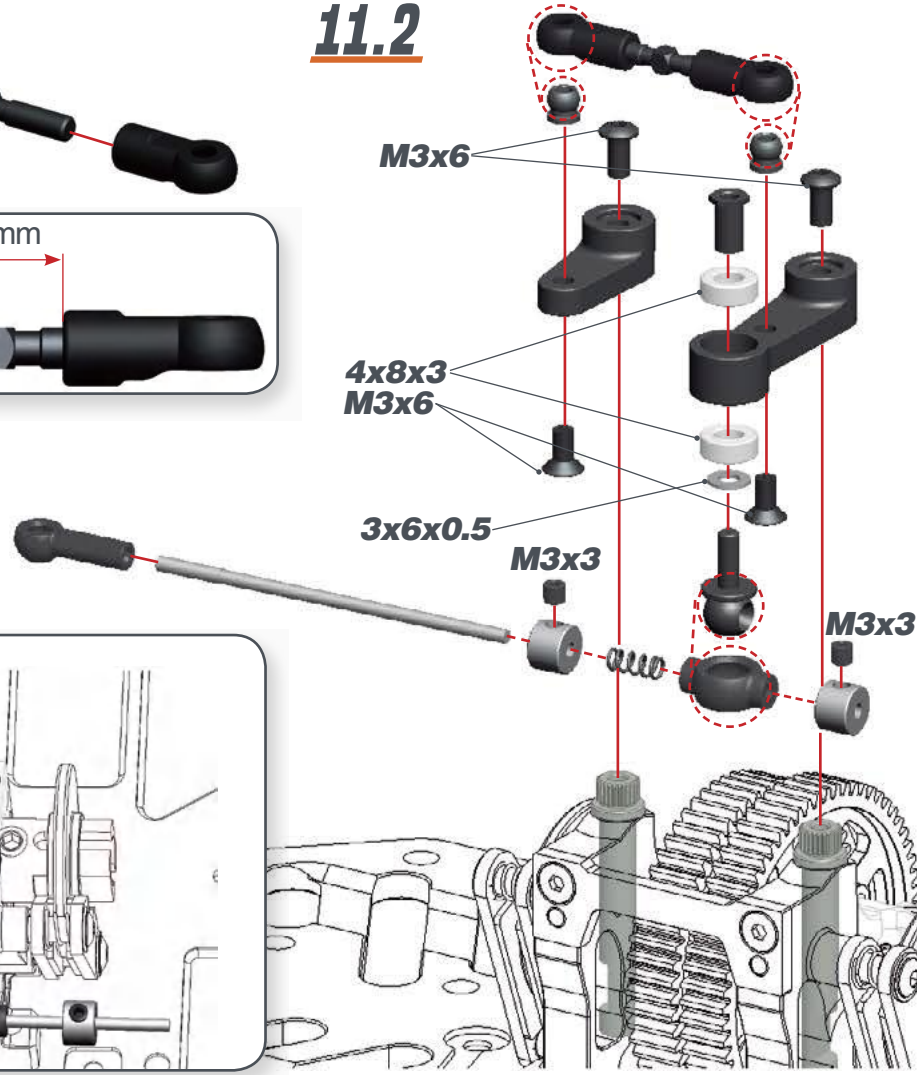


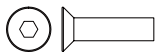
STEP 11

11.1

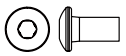


11.2




M3x12


4x8x3

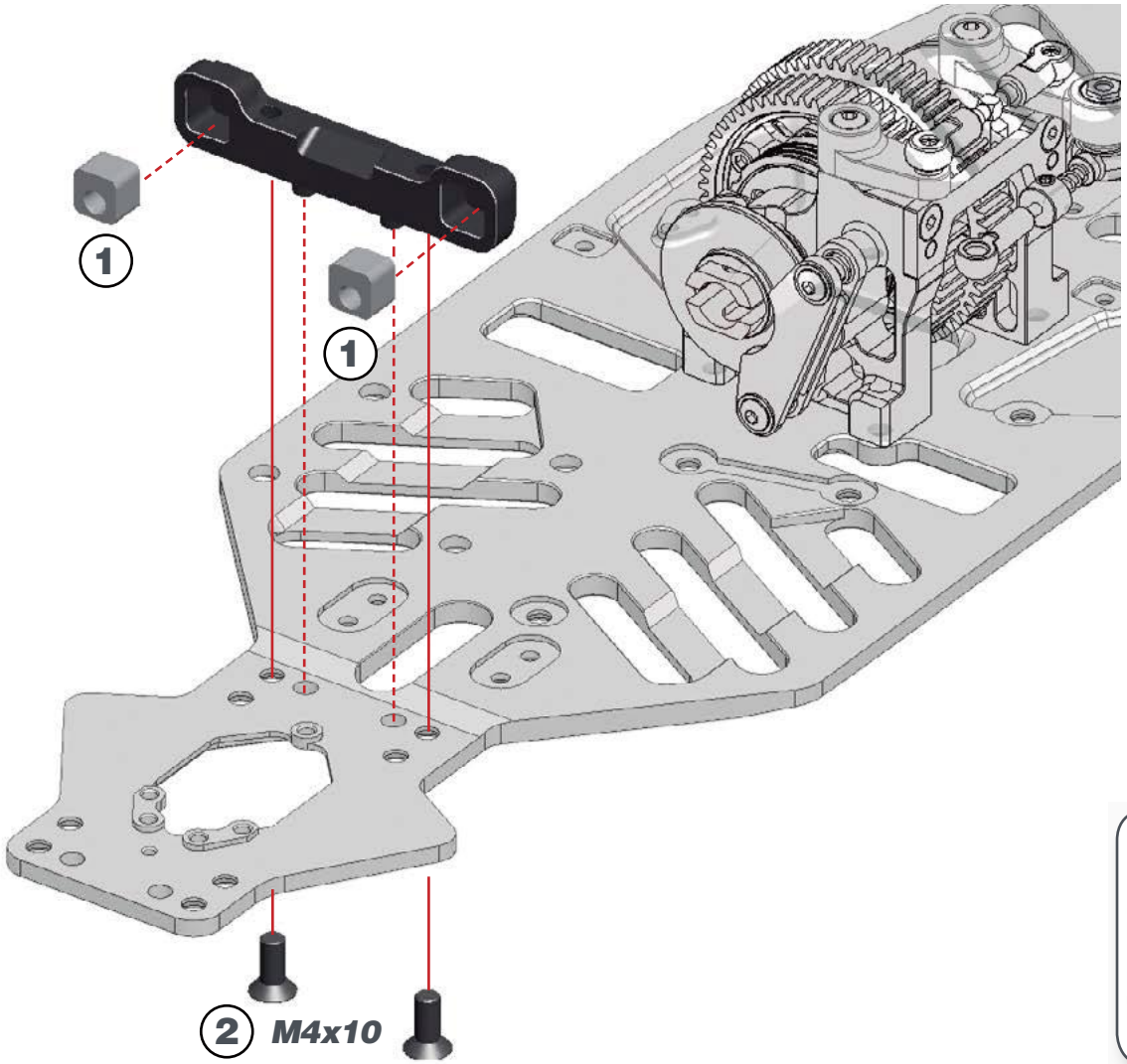

M3x6

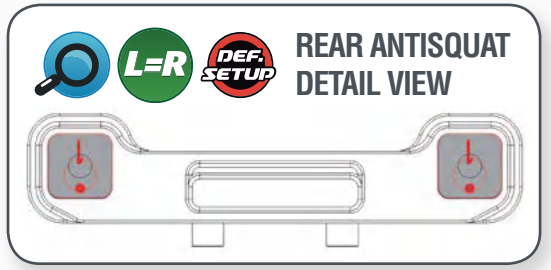

M3x6

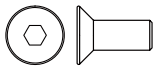

M3x3


3x6x0.5

STEP 12 BAG 3

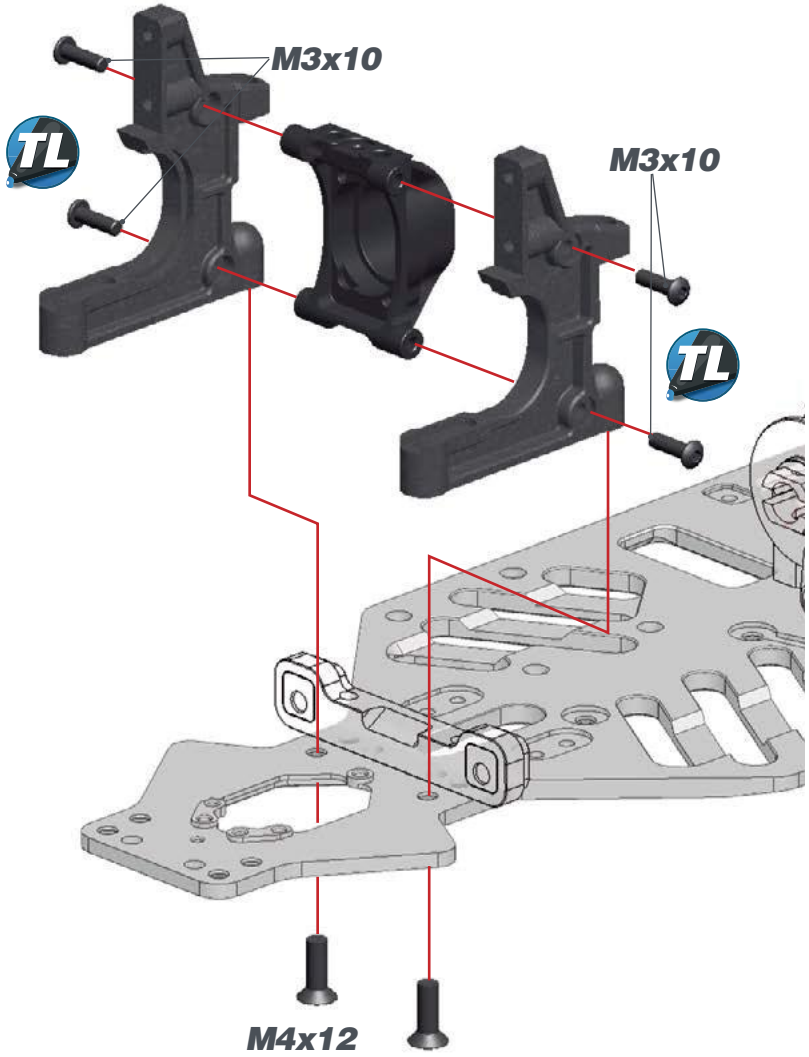


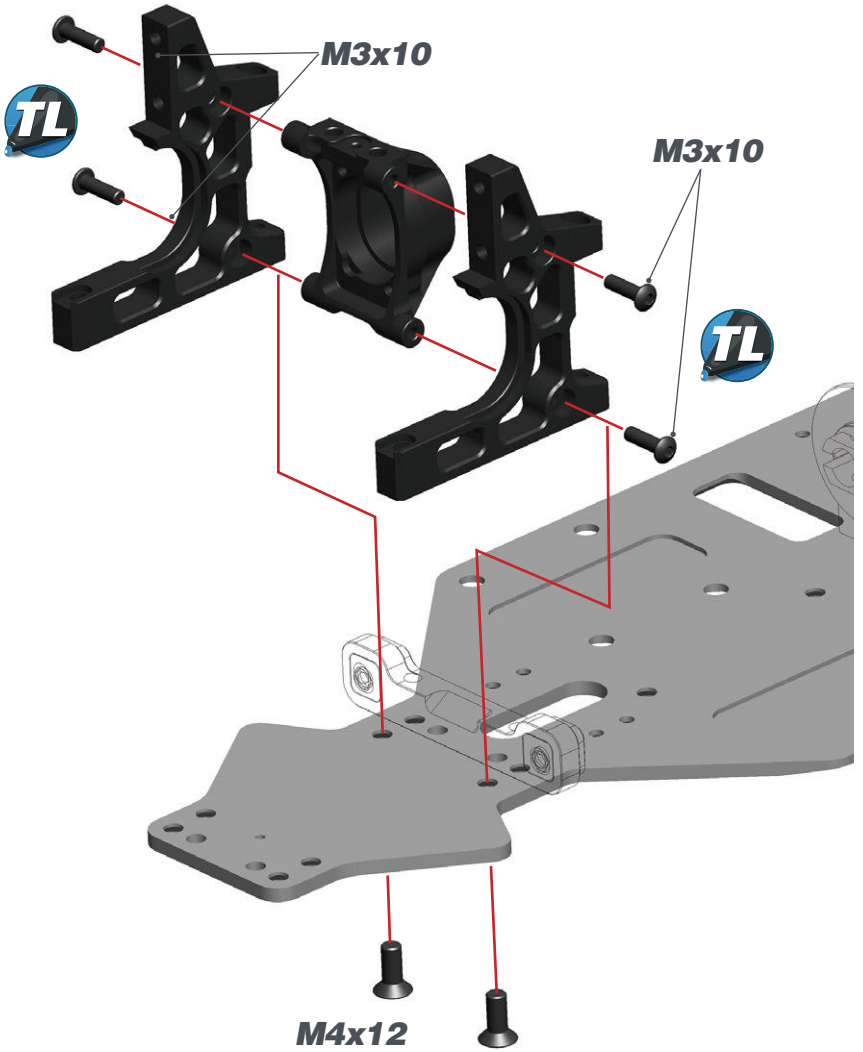


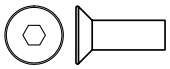

M4x10

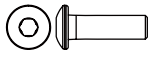
STEP 13

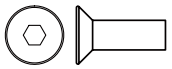
BAG 3/4

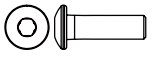





M4x12

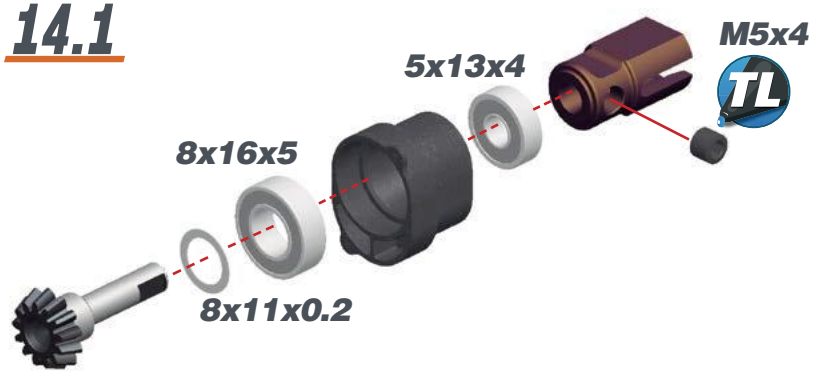

M3x10


M4x12


M3x10

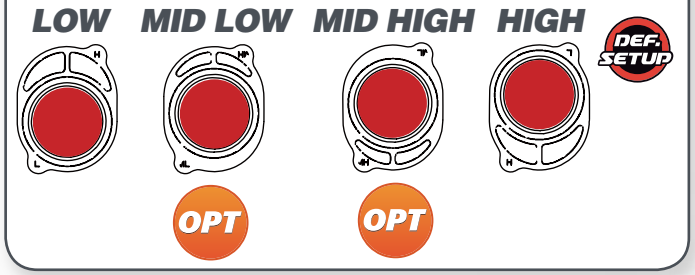
STEP 14

14.1



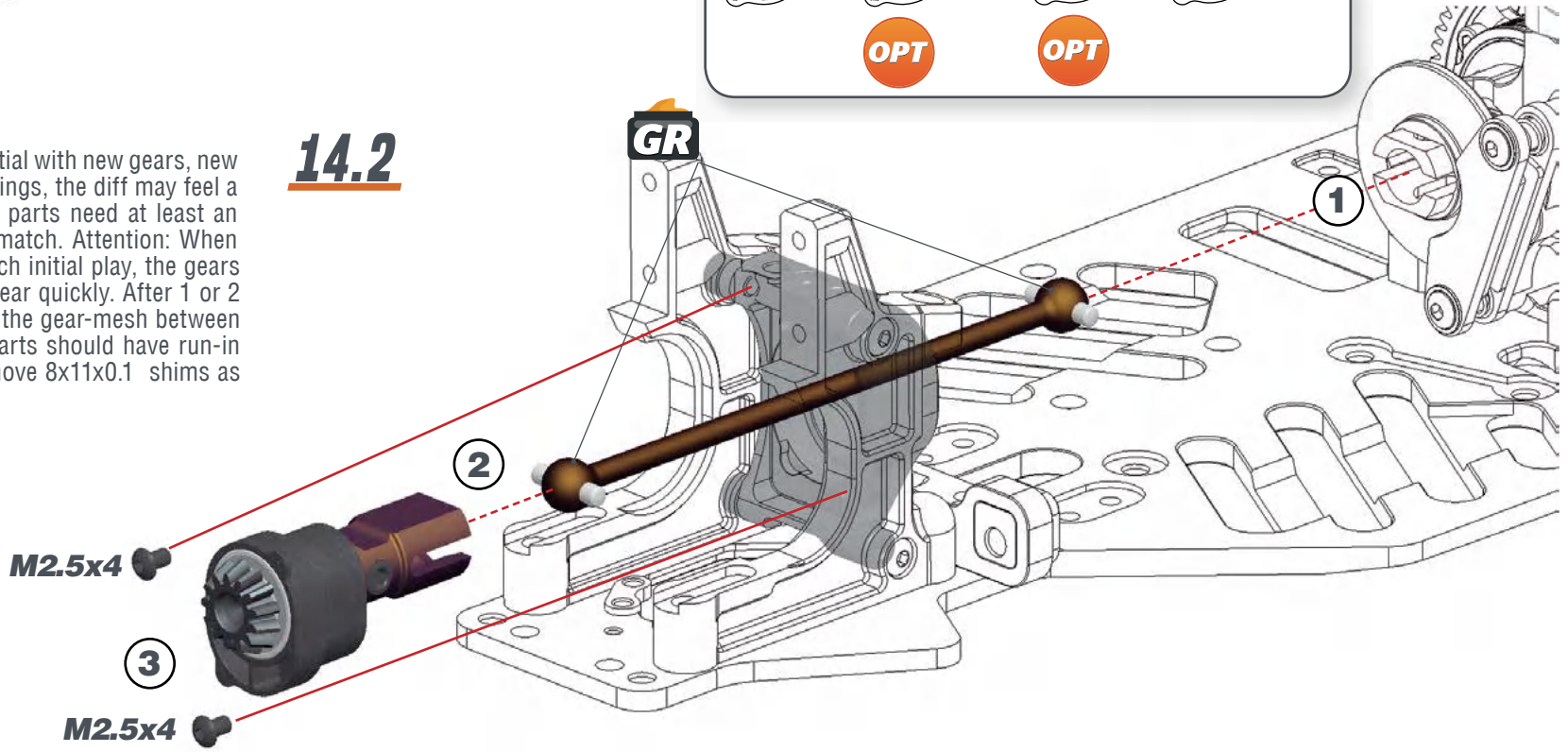
INDRIVE BRACKETS CHART

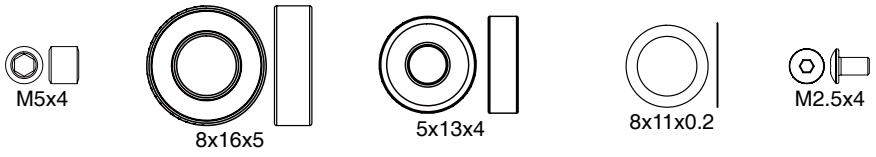
Assemble the indrive bracket accordingly to the diff insert assert mouted in the step 18.



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.

14.2





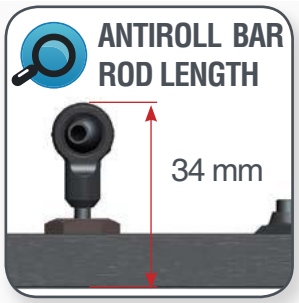
STEP 15

BAG 4

15.1 L=R



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

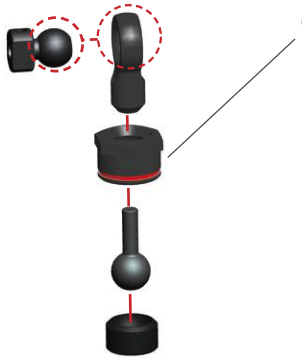


15.2

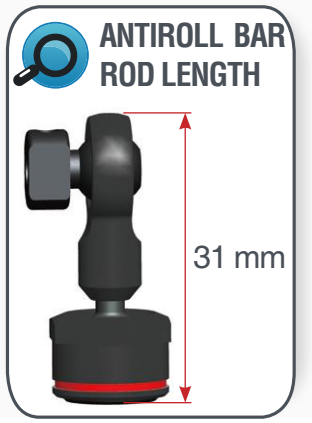


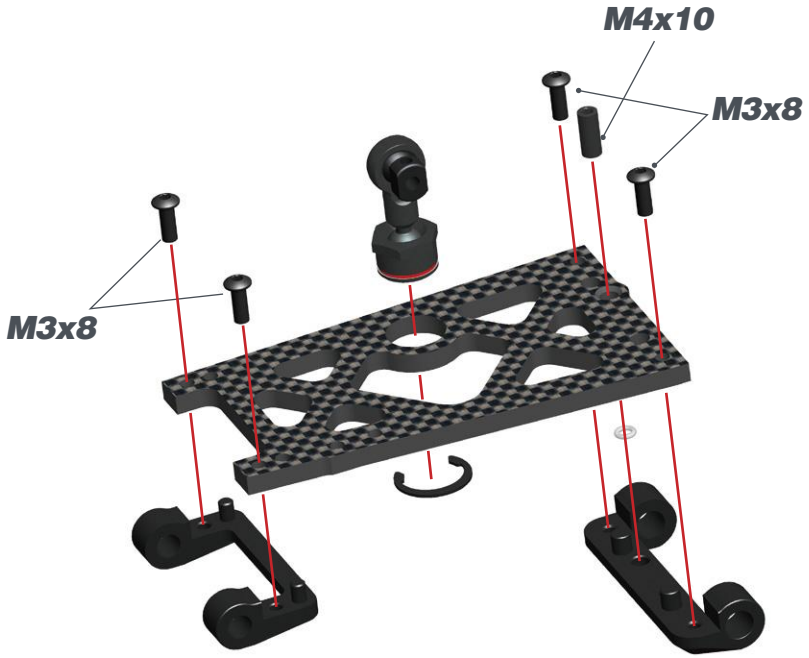


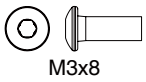
BAG 3/4



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



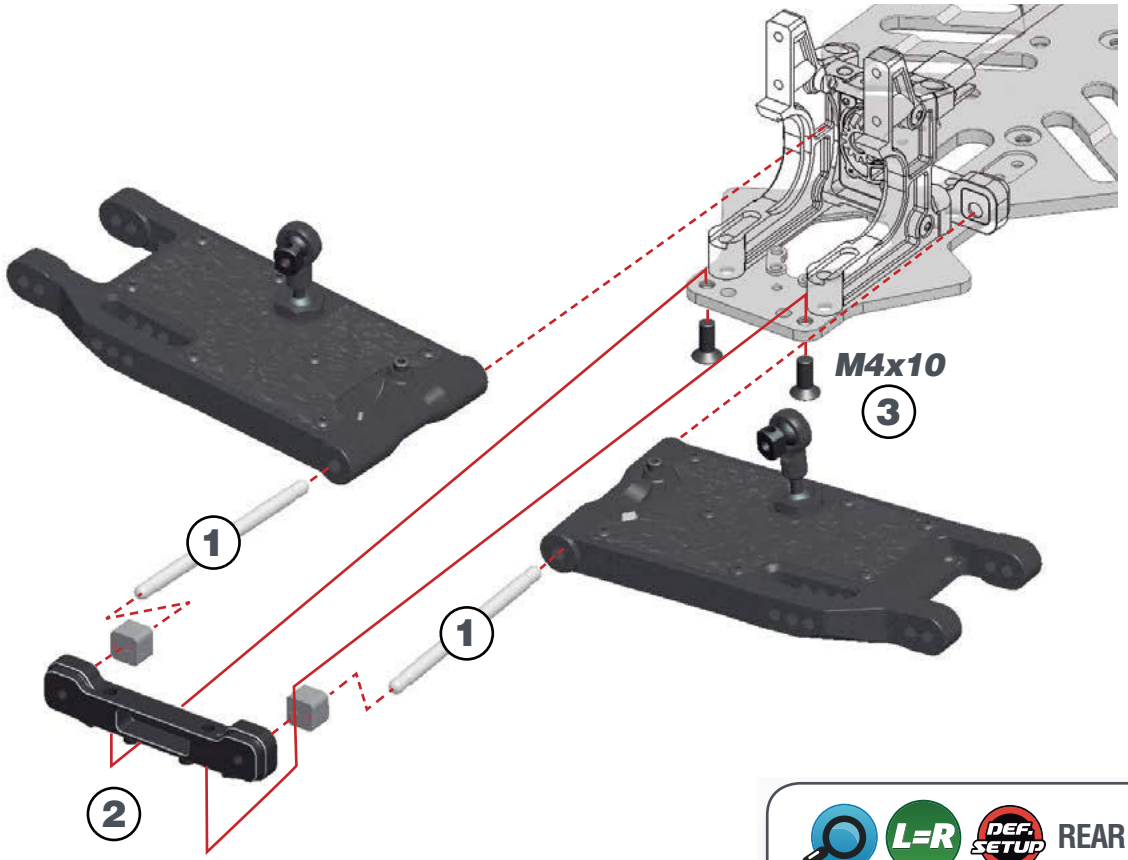


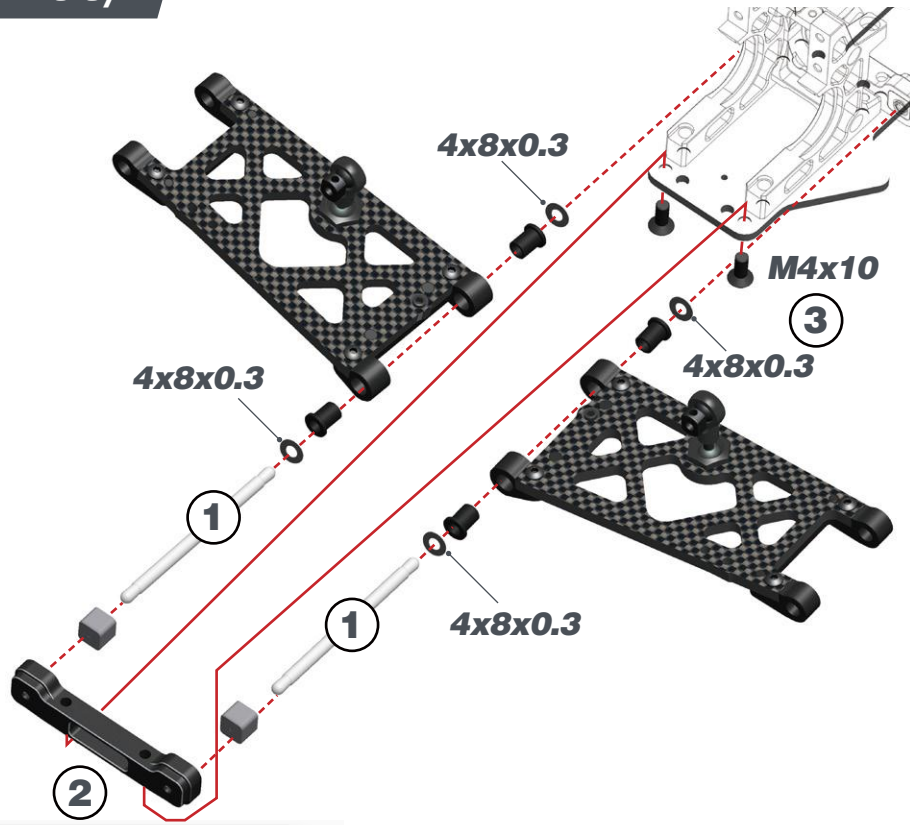




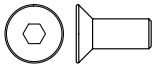
STEP 16

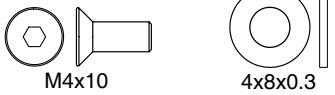
BAG 3/4







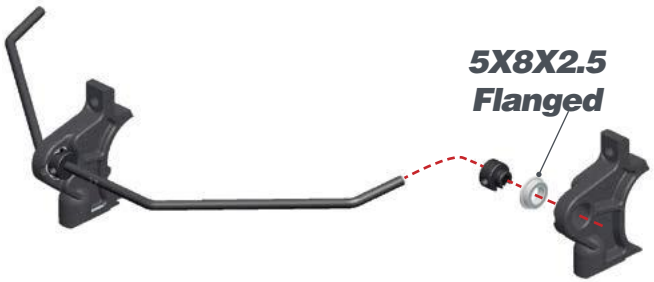

M4x10

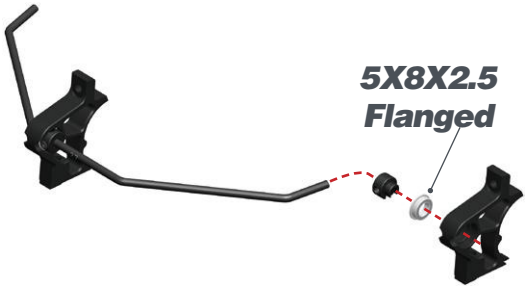

M4x10 4x8x0.3

STEP 17

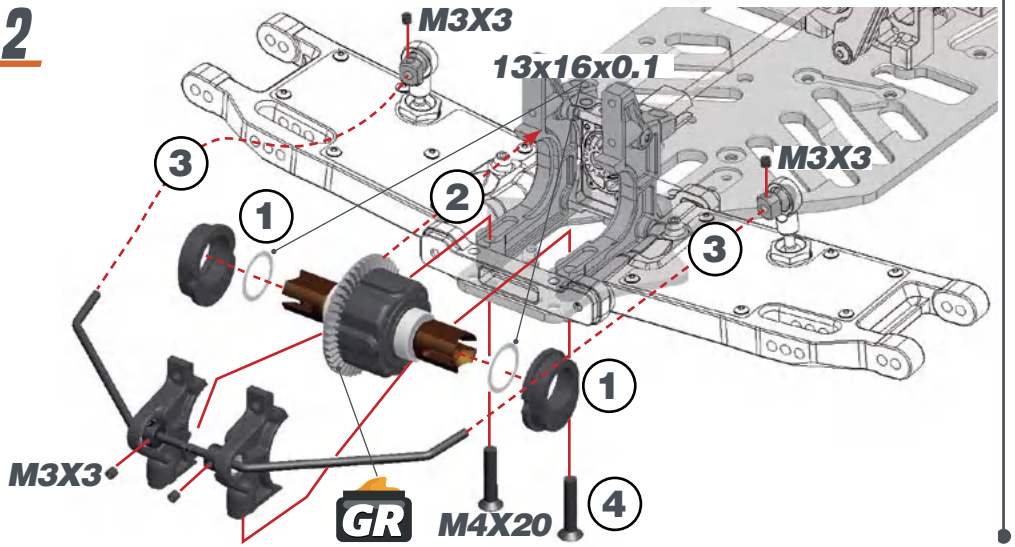
BAG 3/4

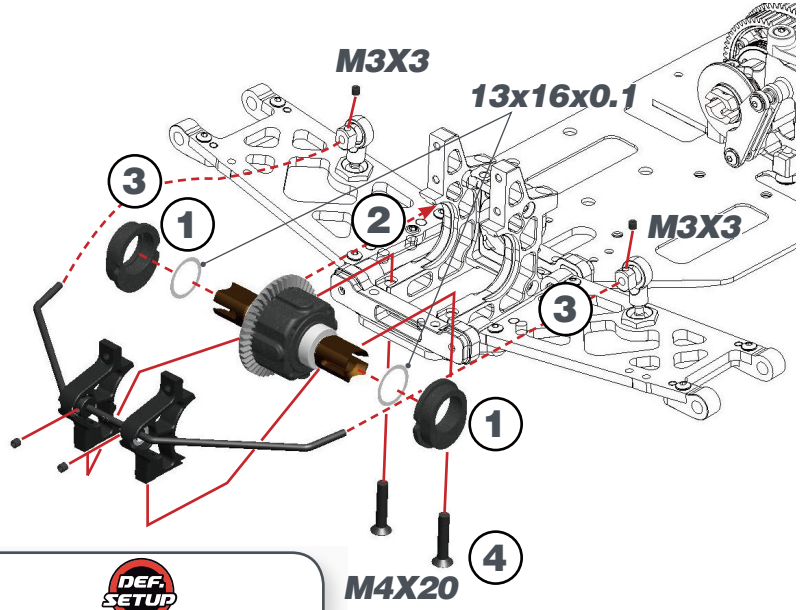
17.1

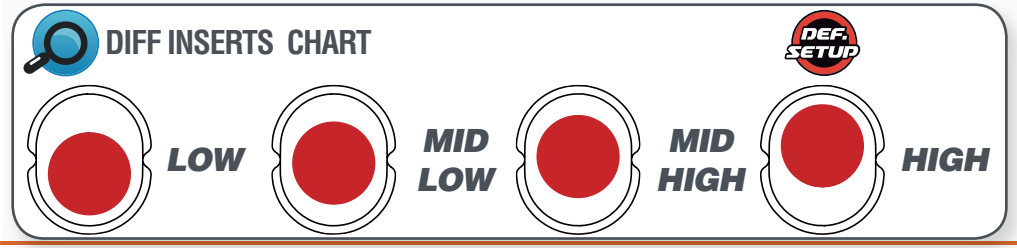




17.2

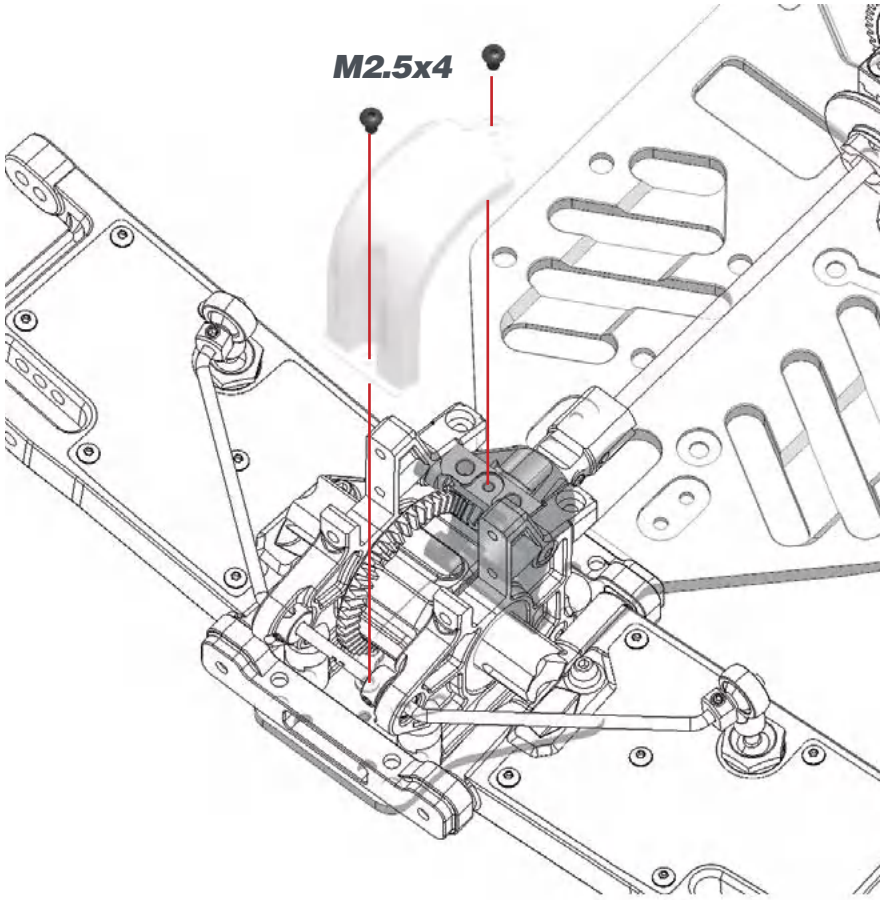








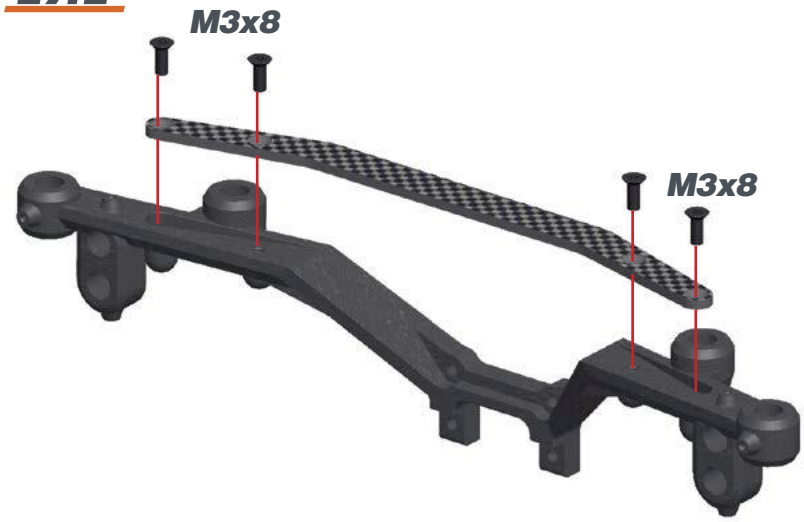
STEP 18 BAG 5



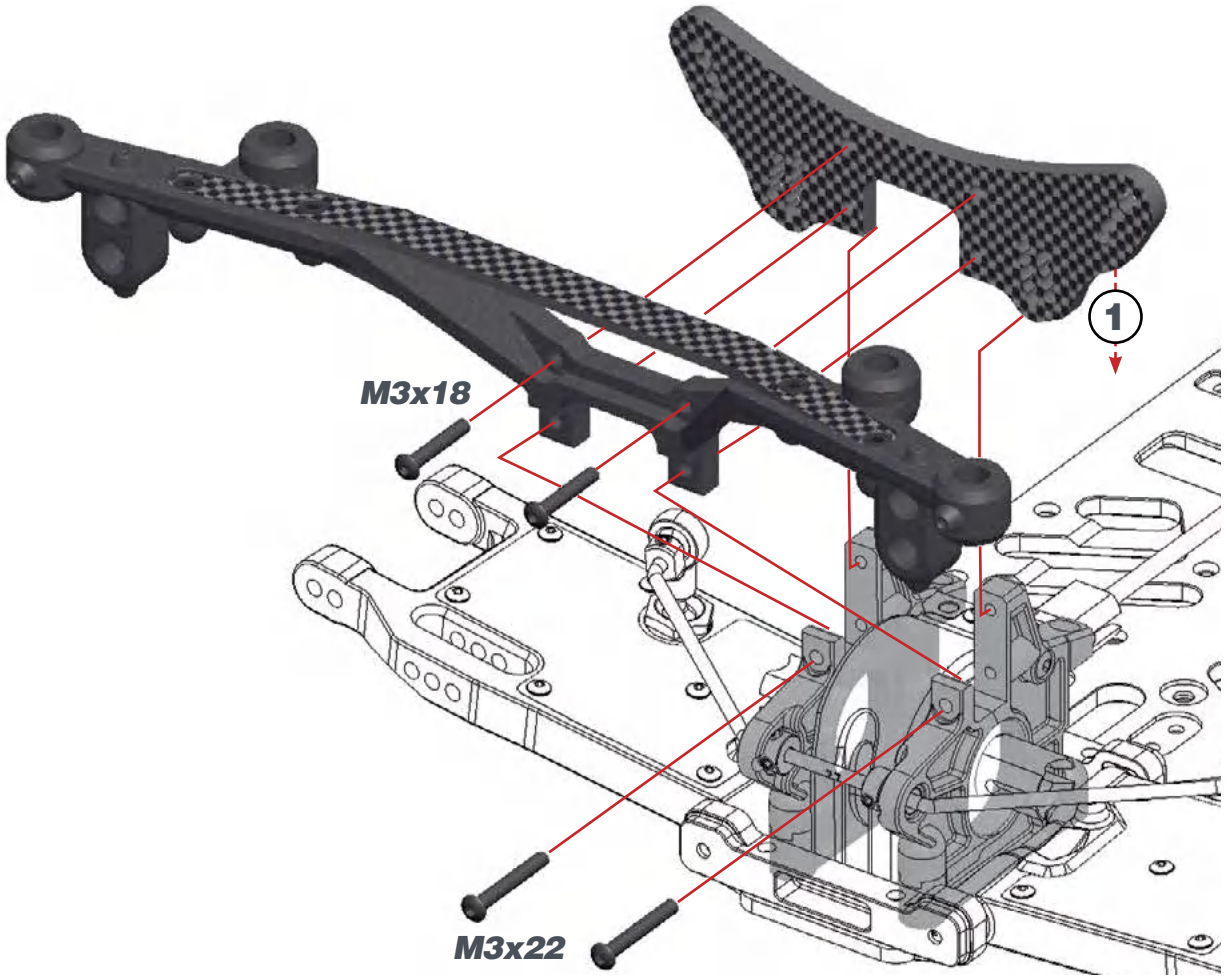

M2.5x4

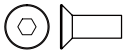
STEP 19

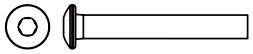
19.1

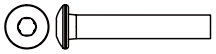


19.2




M3x8


M3x22

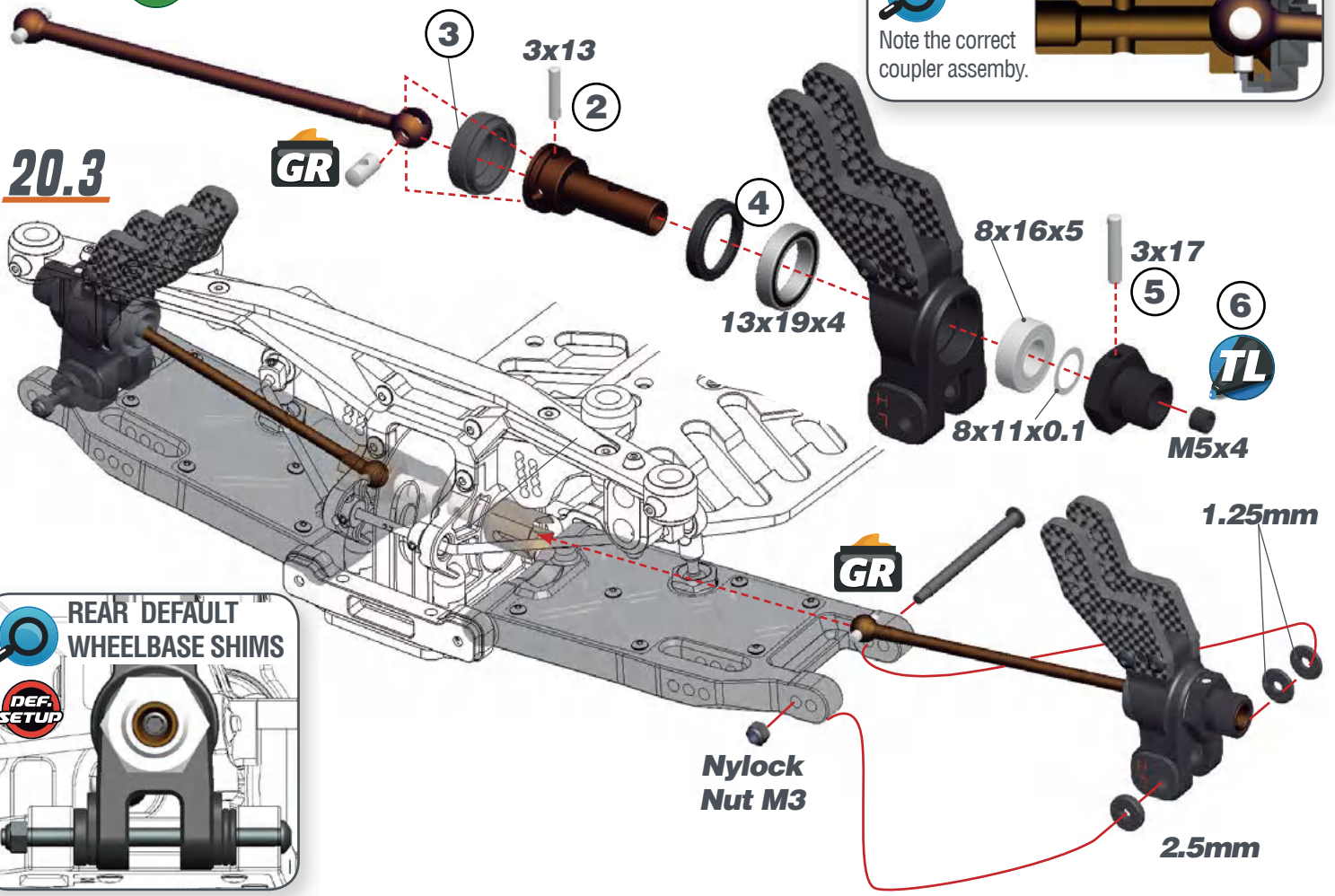

M3x18

STEP 20 BAG 6

20.1 L=R



20.2 L=R



Note the correct coupler assemby.

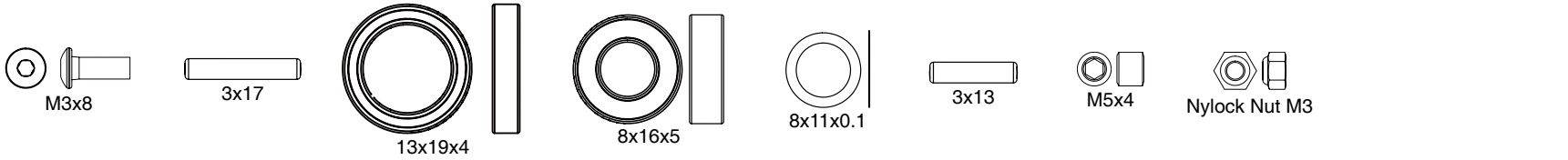
20.3

REAR UPRIGHT ROLL CENTER INSERTS CHART

NARROW		WIDE	
L H	L H	L H	L H
ML HW	ML HW	ML HW	ML HW
MH ML	MH ML	MH ML	MH ML
H	H	H	H

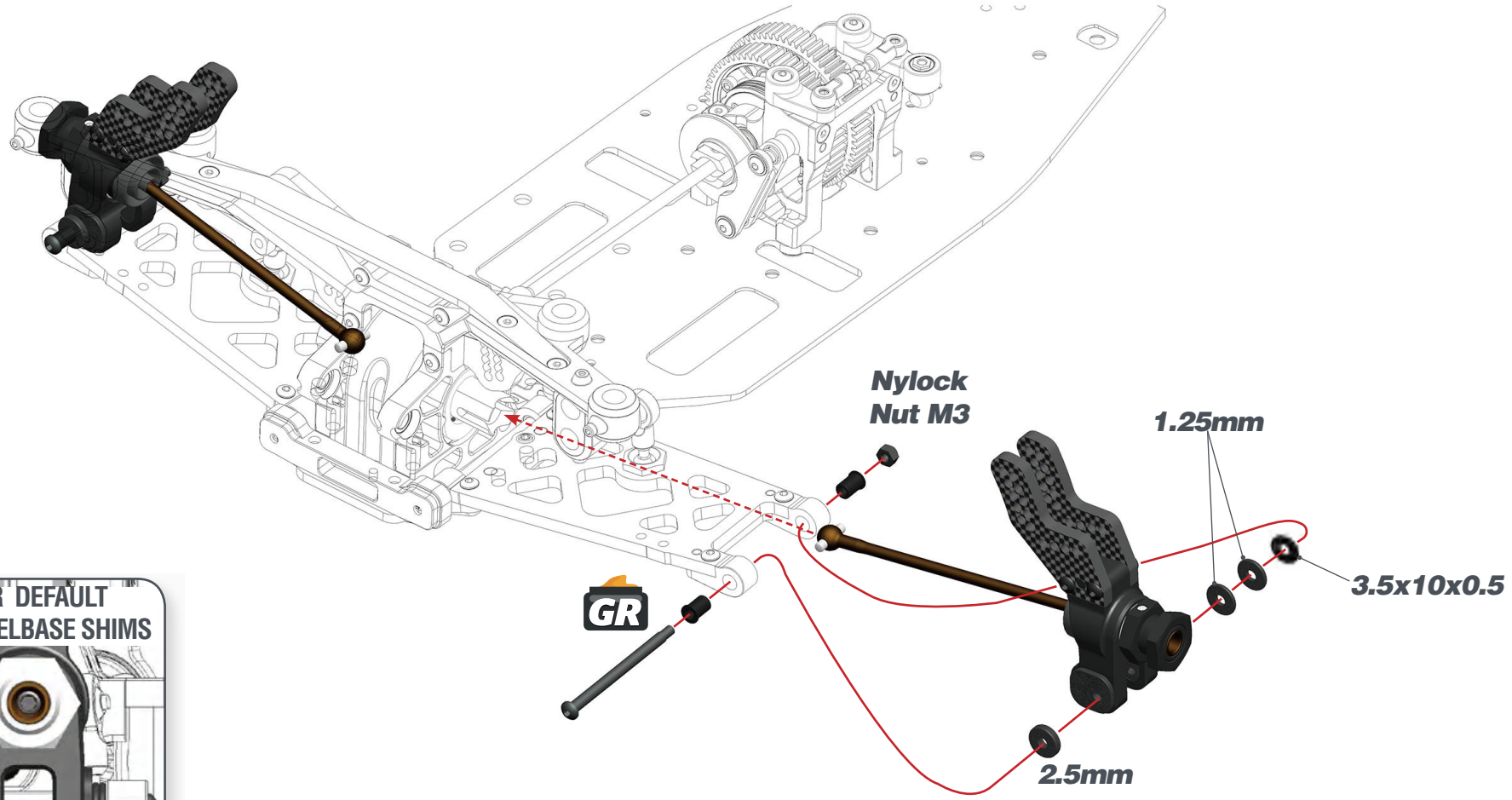
DEF. SETUP

REAR DEFAULT WHEELBASE SHIMS



STEP 20

BAG 3/4





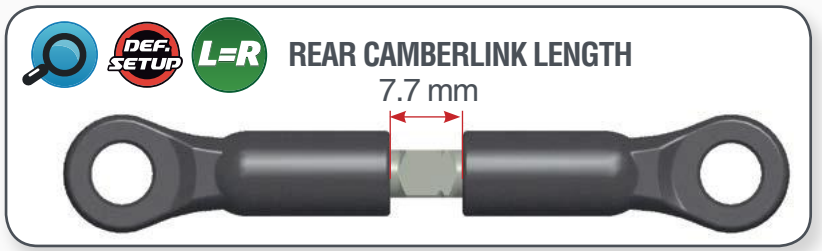

Nylock Nut M3


3.5x10x0.5

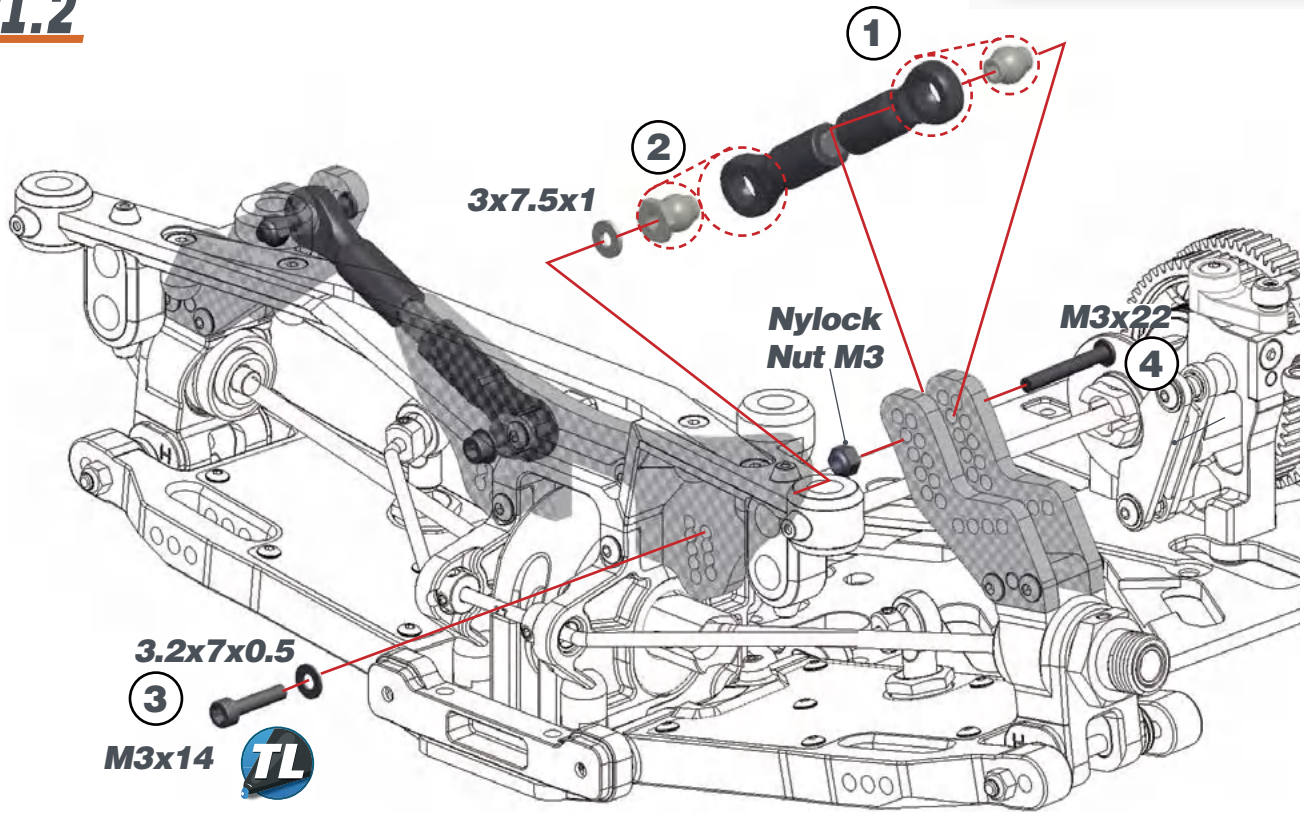
STEP 21

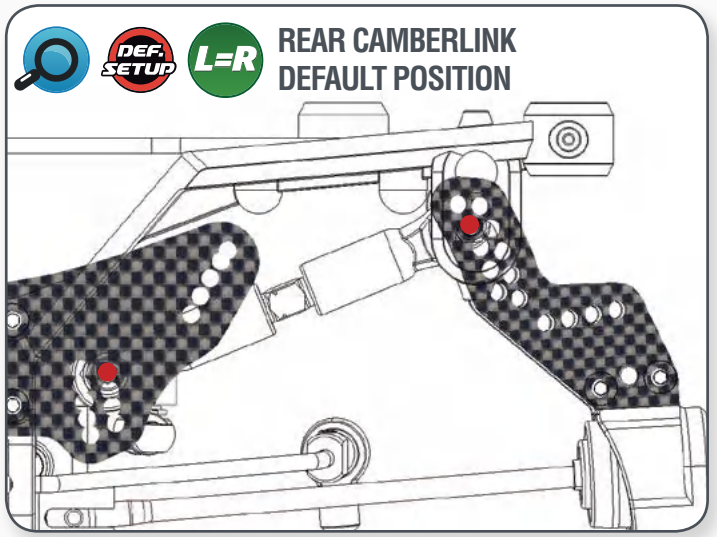
21.1

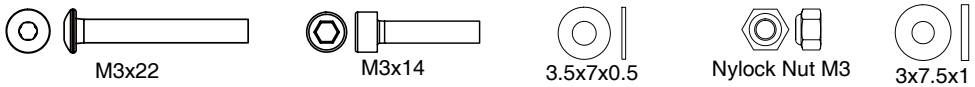




21.2

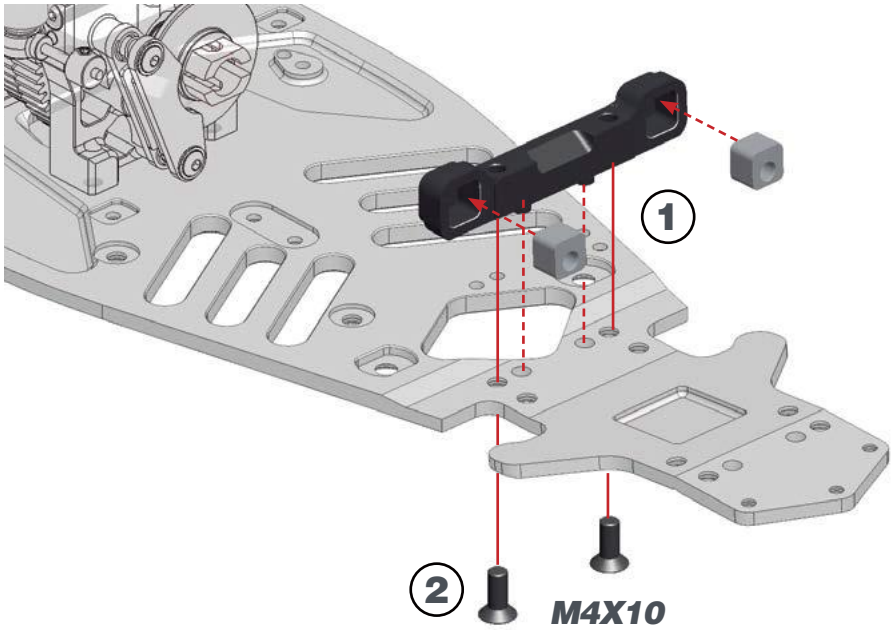


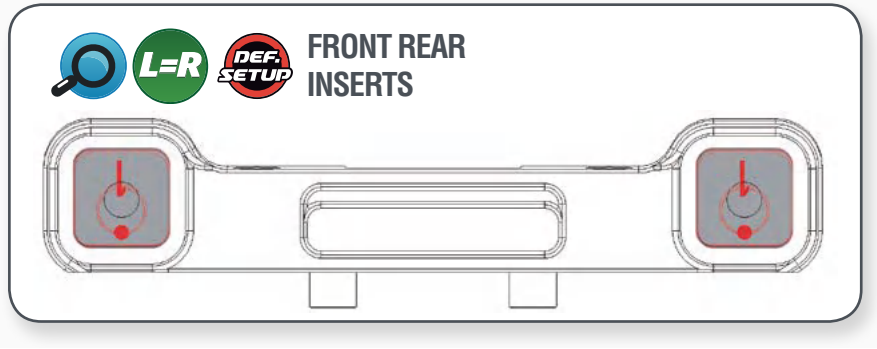


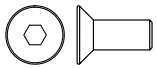


STEP 22

BAG 7

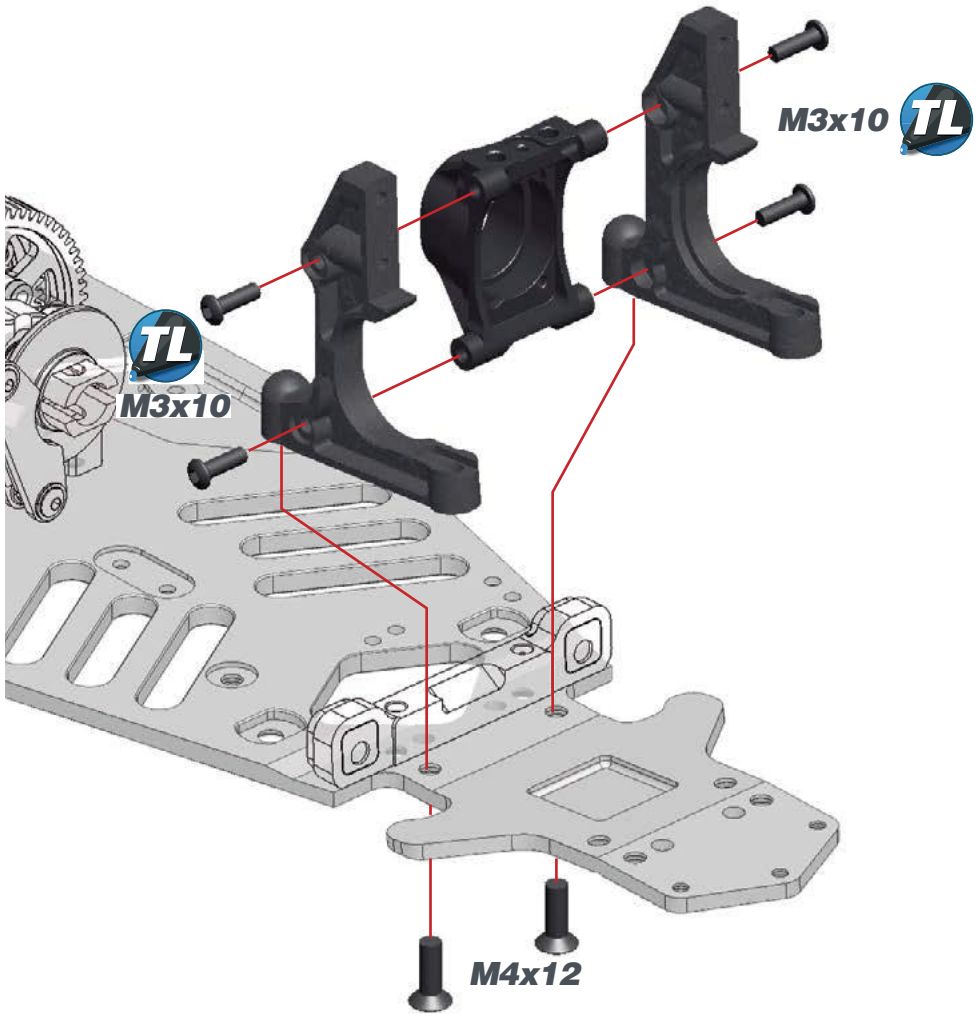


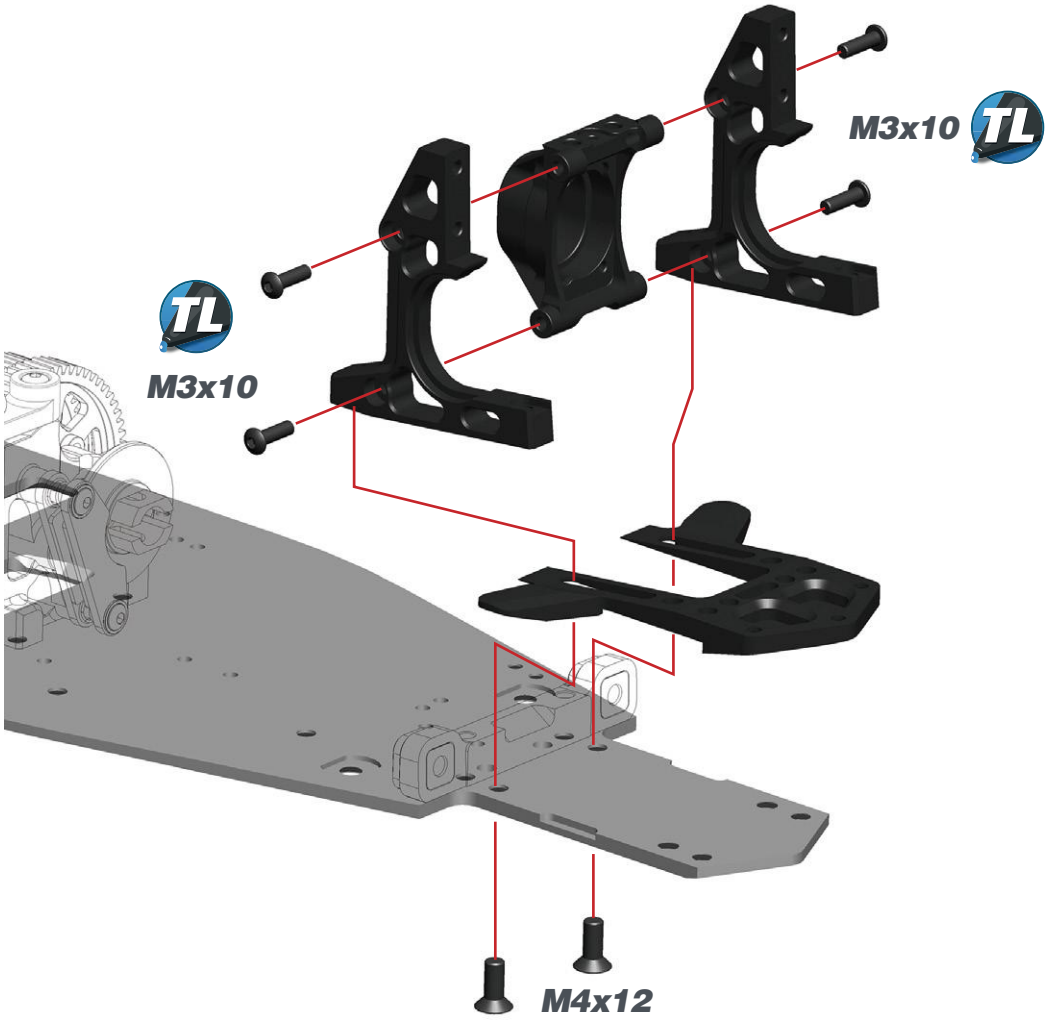




STEP 23

BAG 7/8

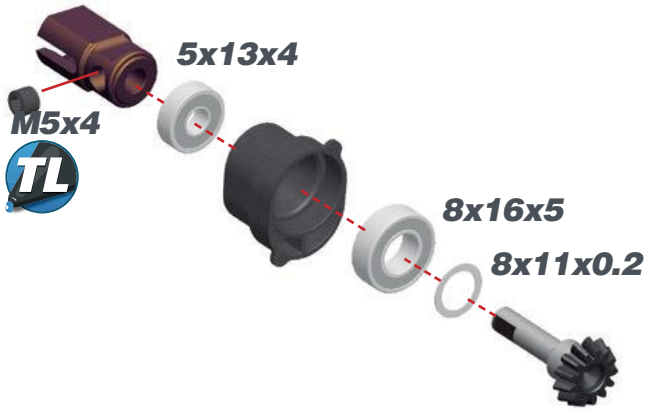






STEP 24

24.1

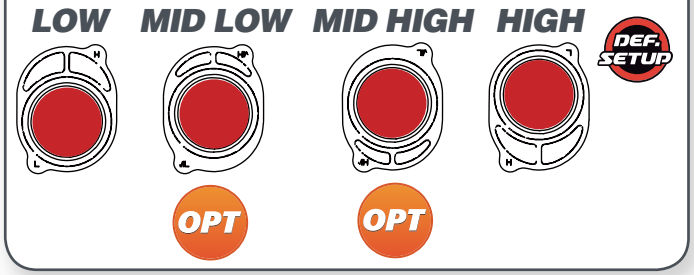


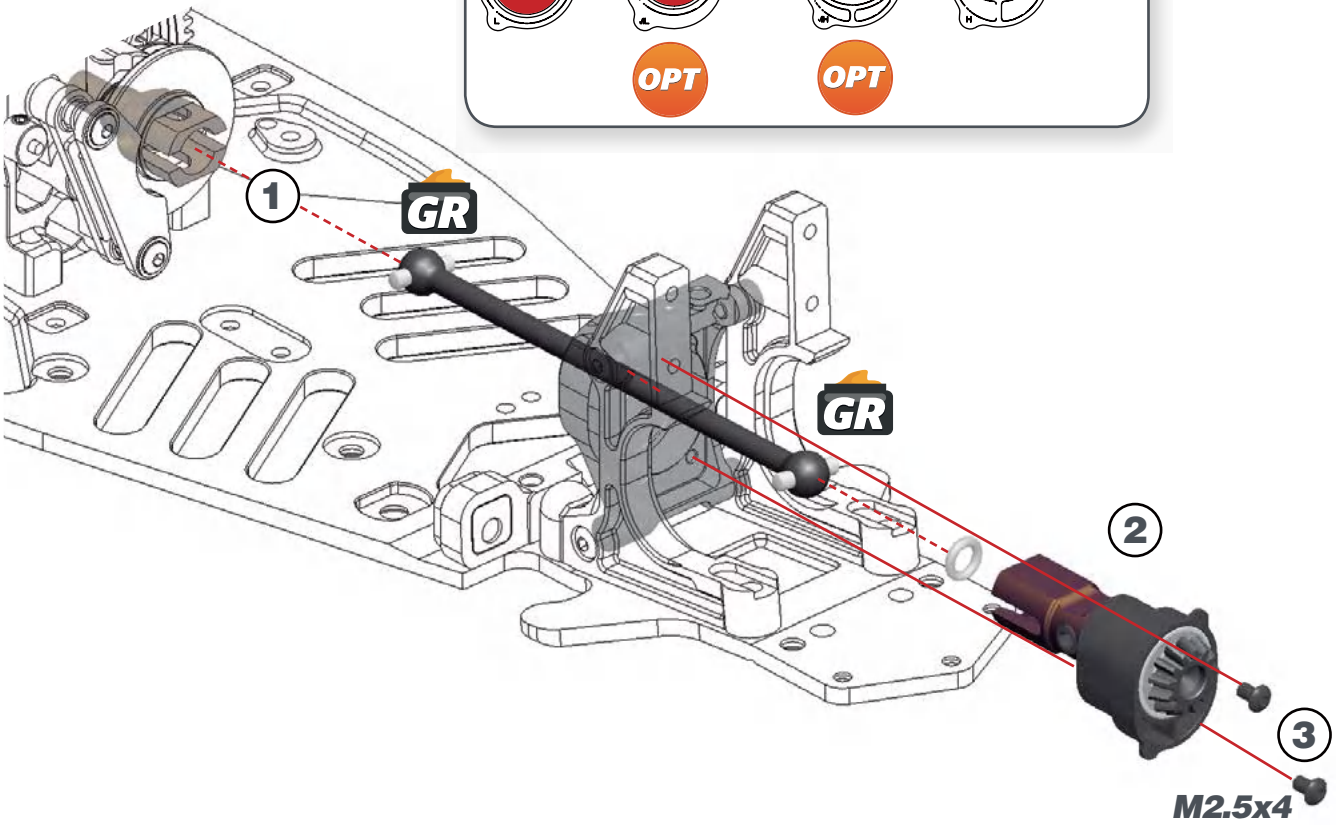
After building the differential with new gears, new differential case and bearings, the diff may feel a little tight.The connected parts need at least an hour run-time to create a perfect match. Attention: When you assemble the diff with too much initial play, the gears will not run-in properly and may 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.

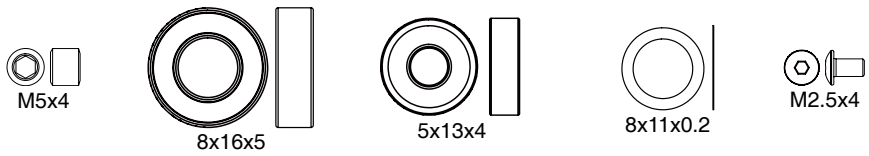
24.2

INDRIVE BRACKETS CHART

Assemble the indrive bracket accordingly to the diff insert assert mouted in the step 18.







STEP 25

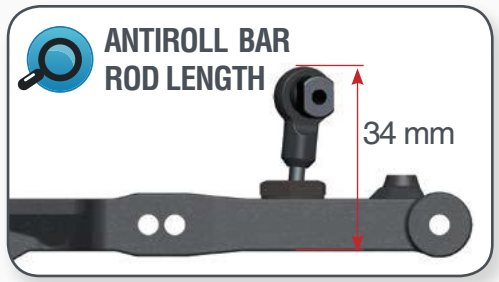
BAG 8

25.1

L=R

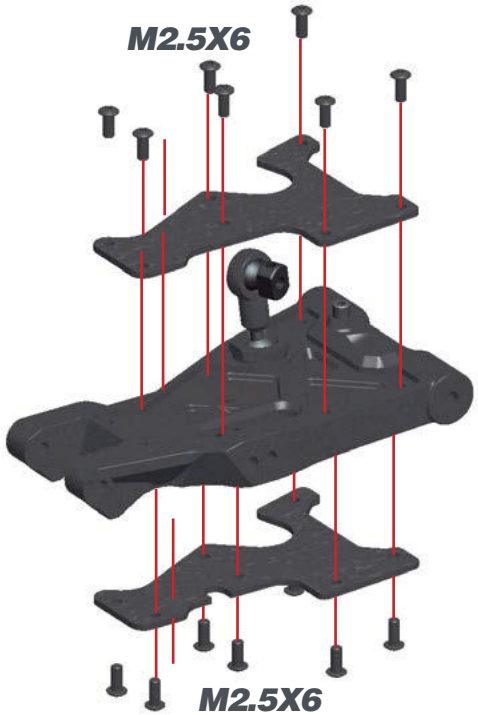
Tighten anti-roll bar cap until there is no play, and it moves freely.





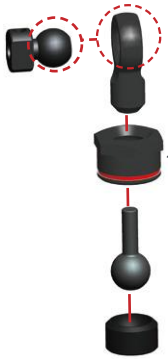
25.2

L=R

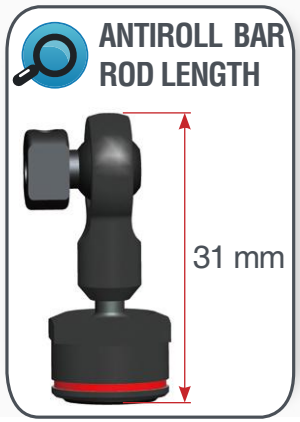


BAG 7/8

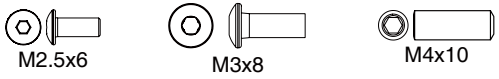
L=R



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

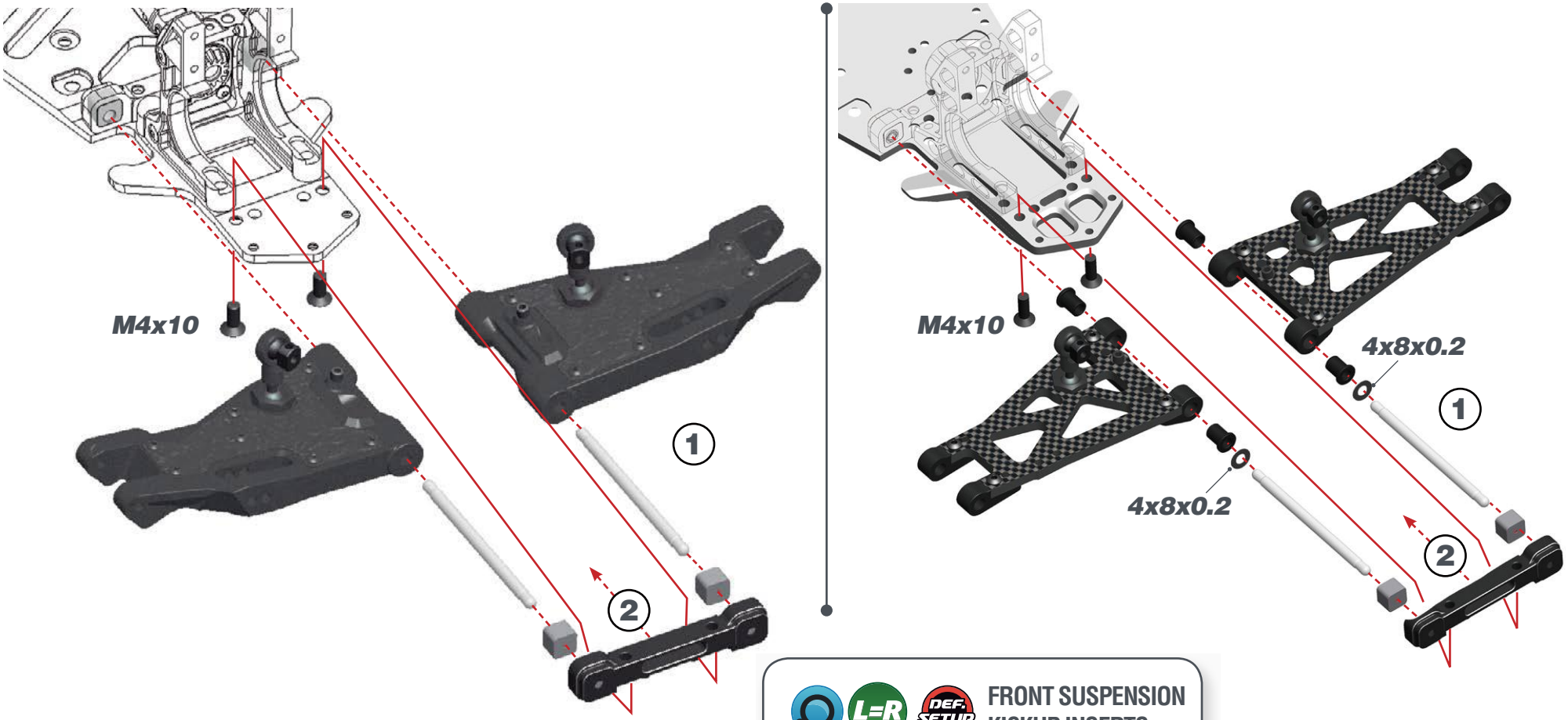




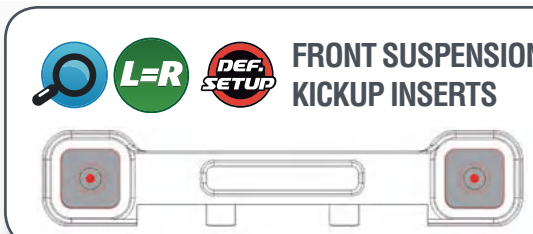


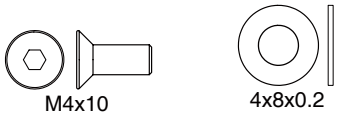
STEP 26

BAG 7/8



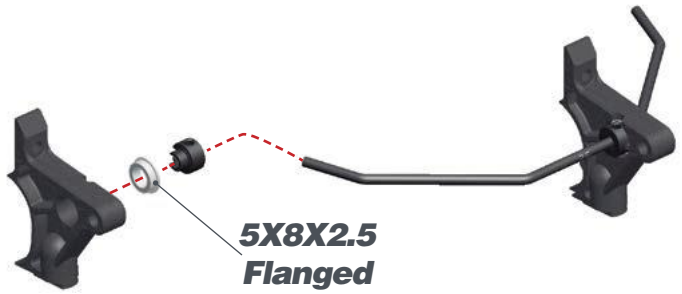
L=R DEF. SETUP FRONT SUSPENSION KICKUP INSERTS



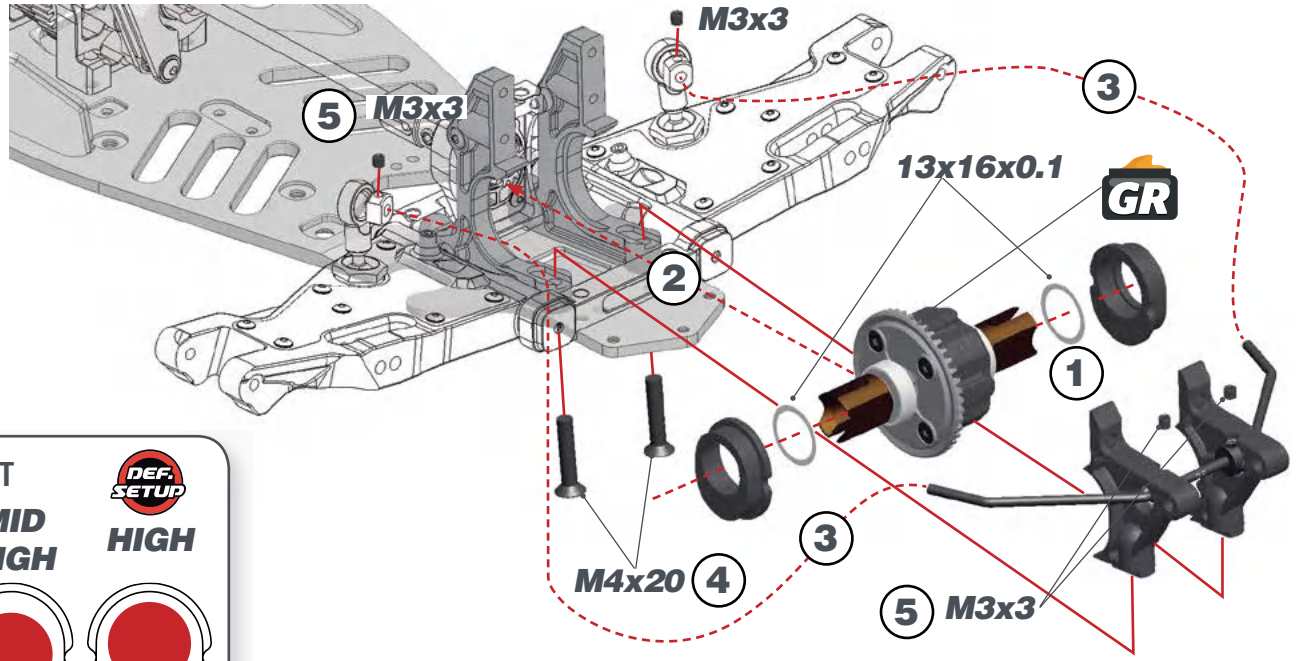


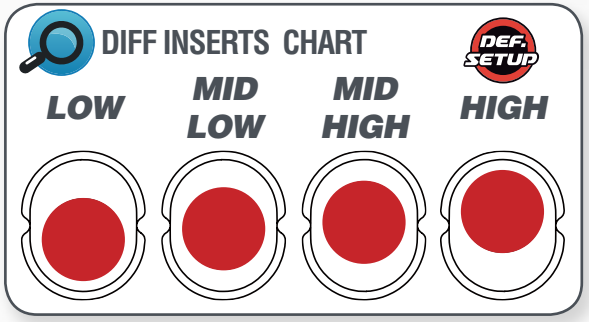
STEP 27

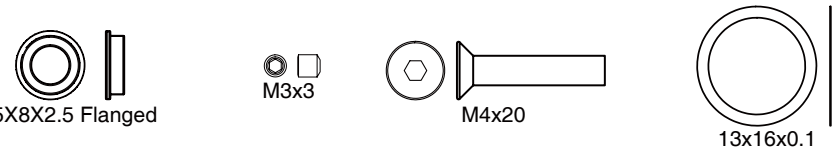
27.1



27.2

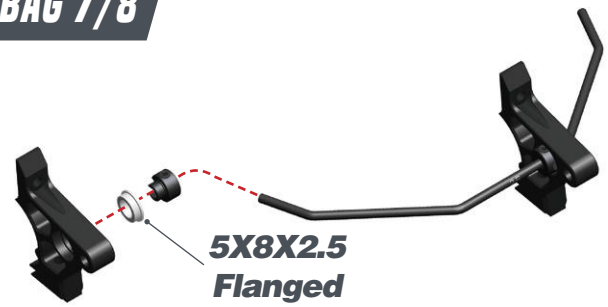


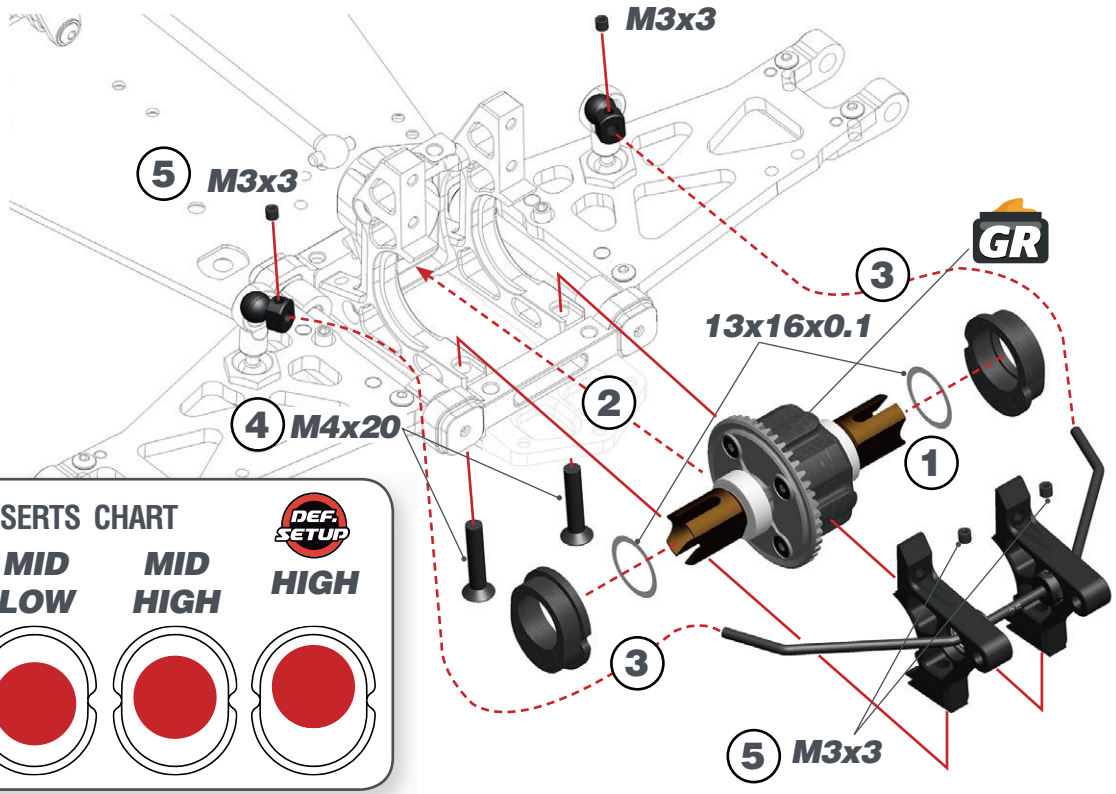




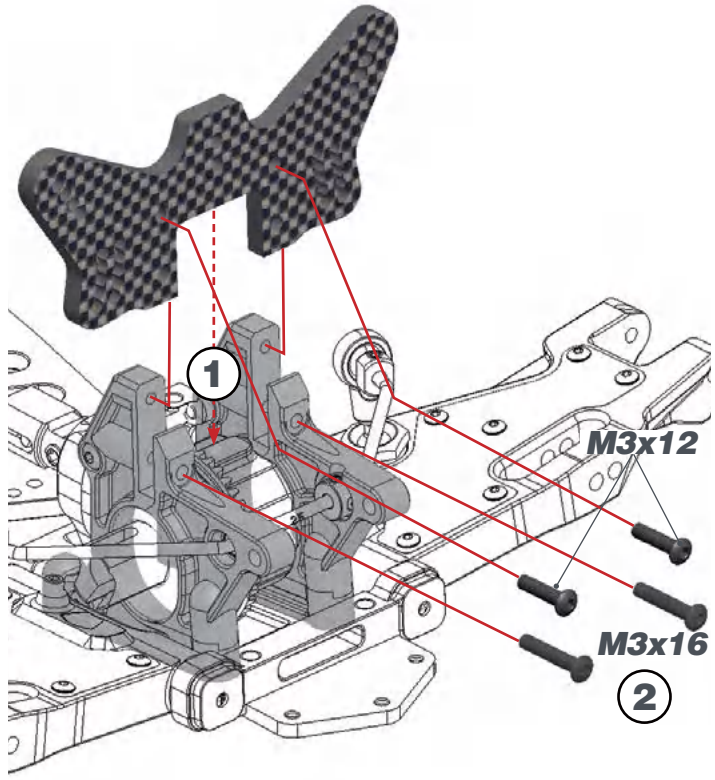
STEP 27

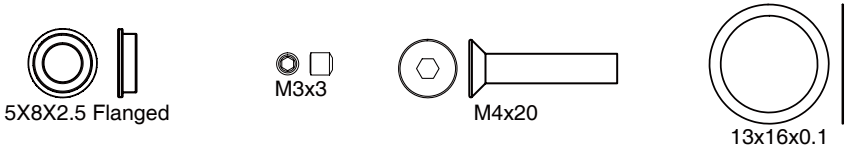
BAG 7/8





STEP 28







STEP 29 BAG 9

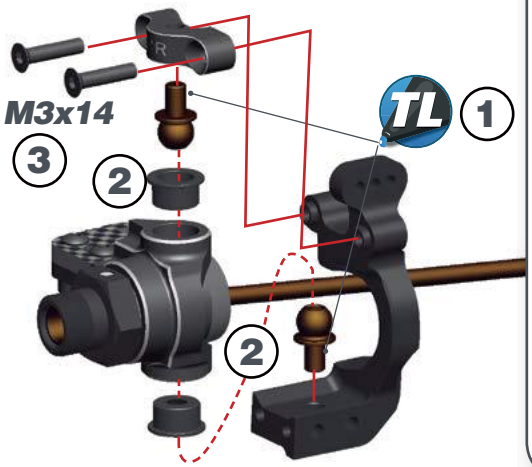
29.1 L=R



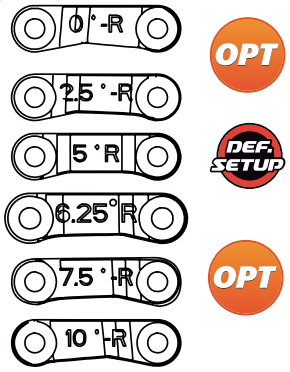
STEERING ARMS
Steering arm 4 is included in the kit.

Note the correct coupler assemby.

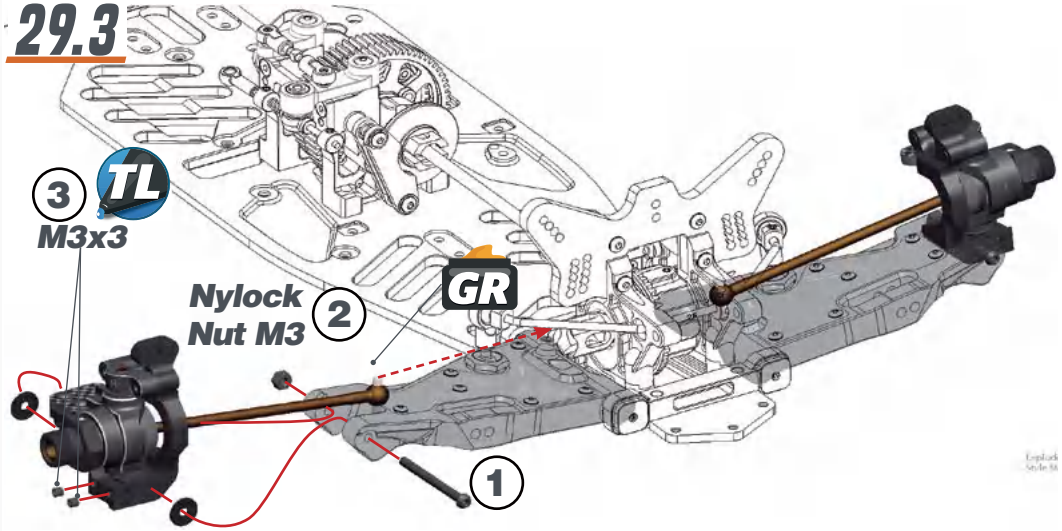
29.2 L=R

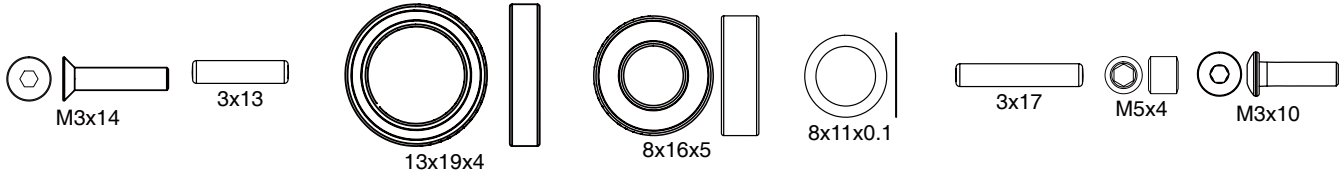


CASTER INSERTS
Caster angle is easily adjustable changingf the caster insters showed below from 0 to 10 degrees of caster.



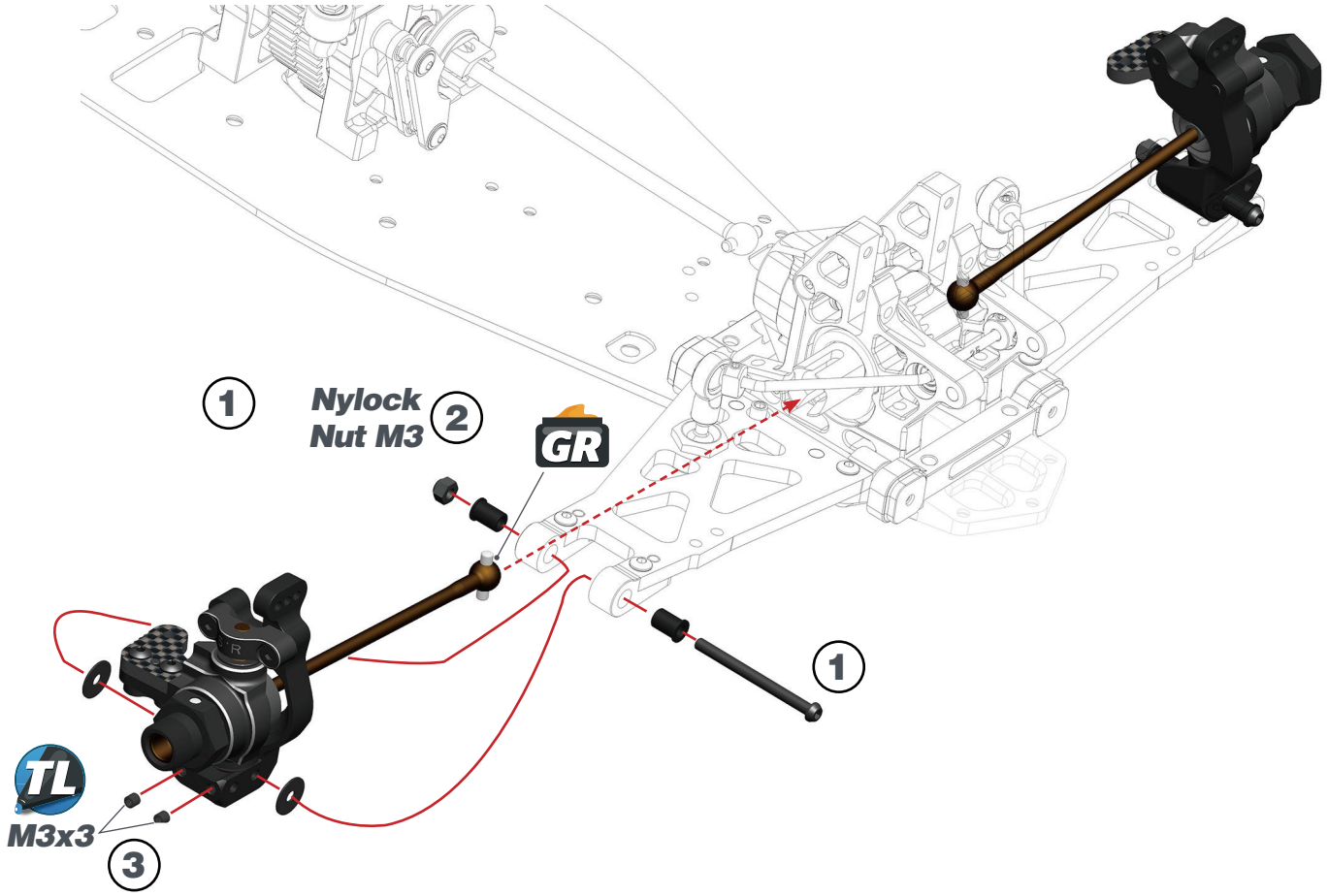
29.3





STEP 29

BAG 7/8



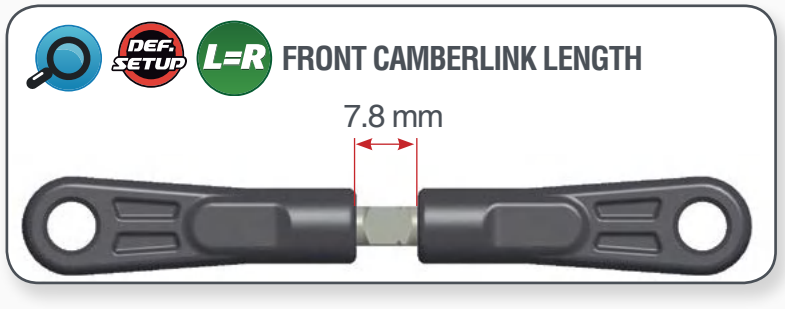
M3x3

Nylock Nut M3

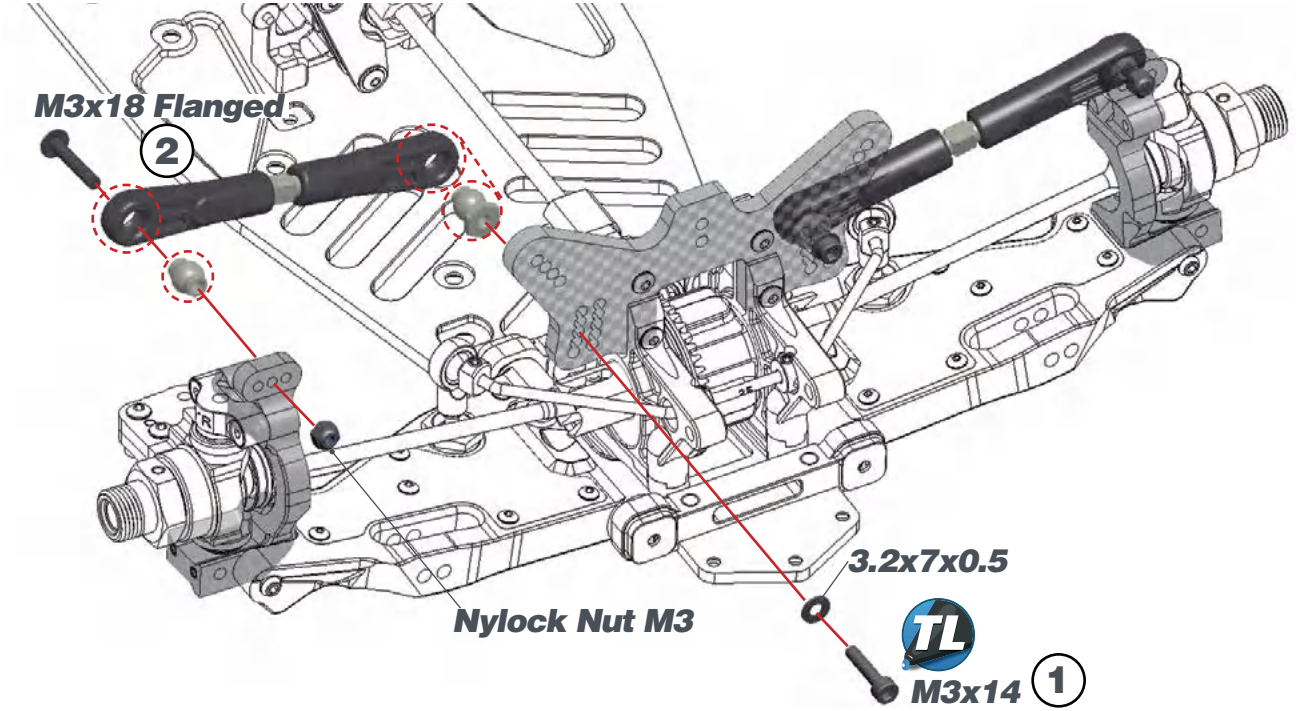
STEP 30

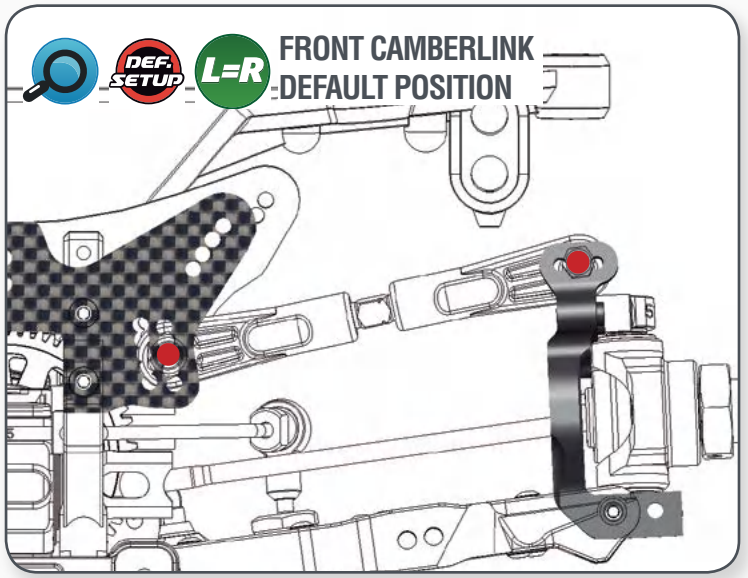
30.1

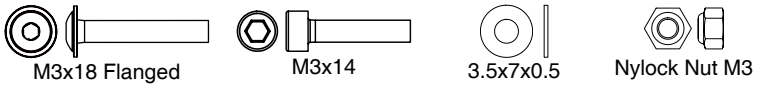




30.2







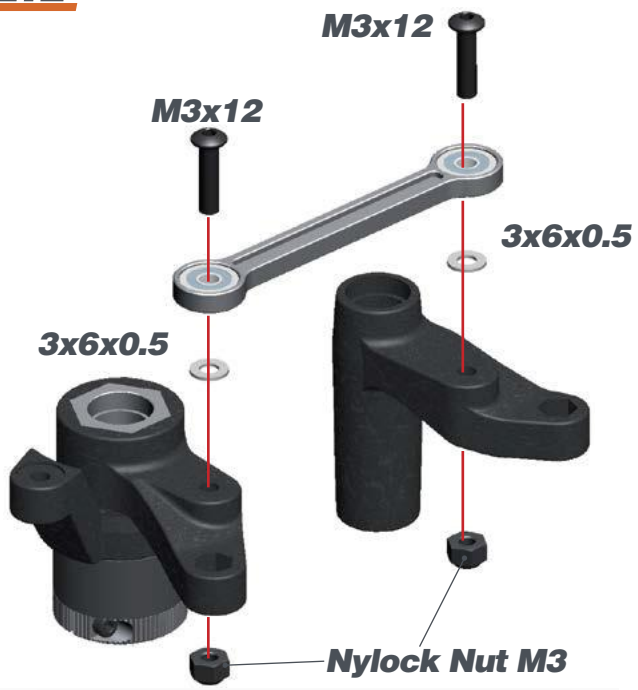
STEP 31

BAG 10

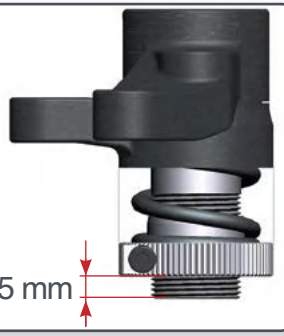
31.1



31.2



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



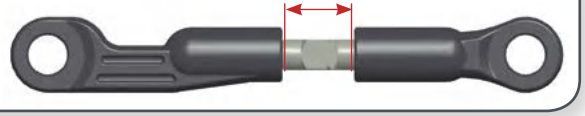
STEP 32

32.1

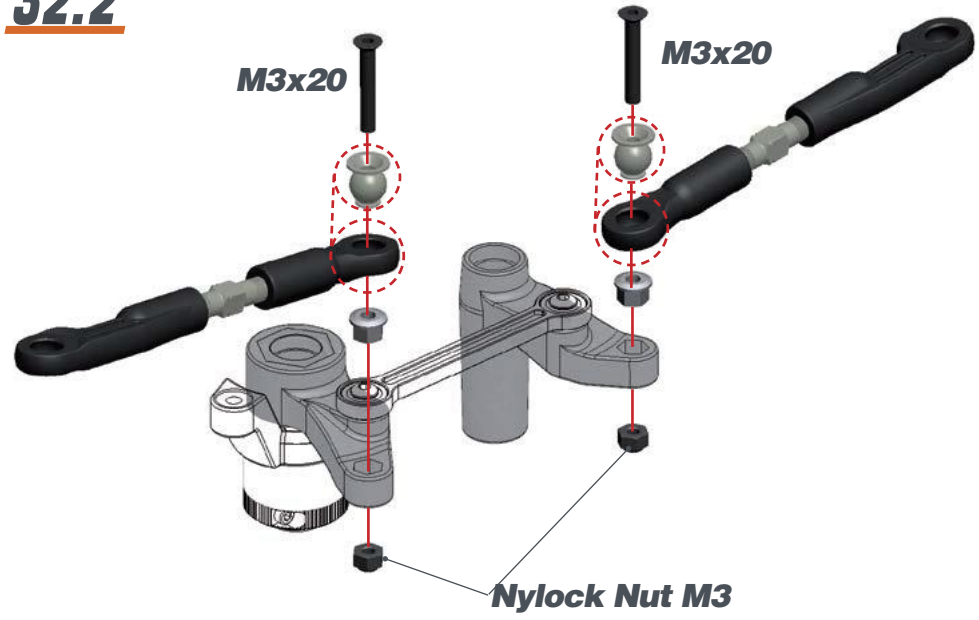


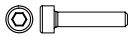
STEERING TRACKROD LENGTH

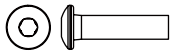




32.2

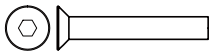



M2x10


M3x12

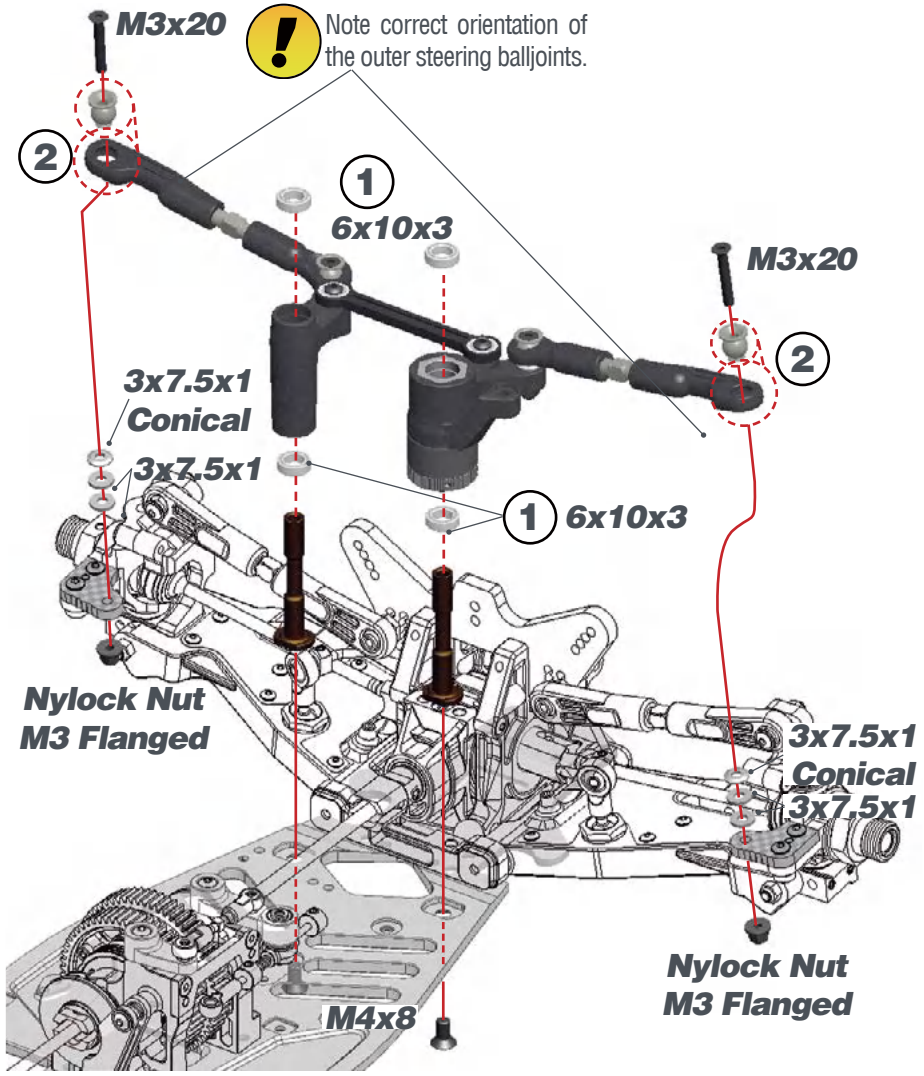

3x6x0.5


Nylock Nut M3


M3x20

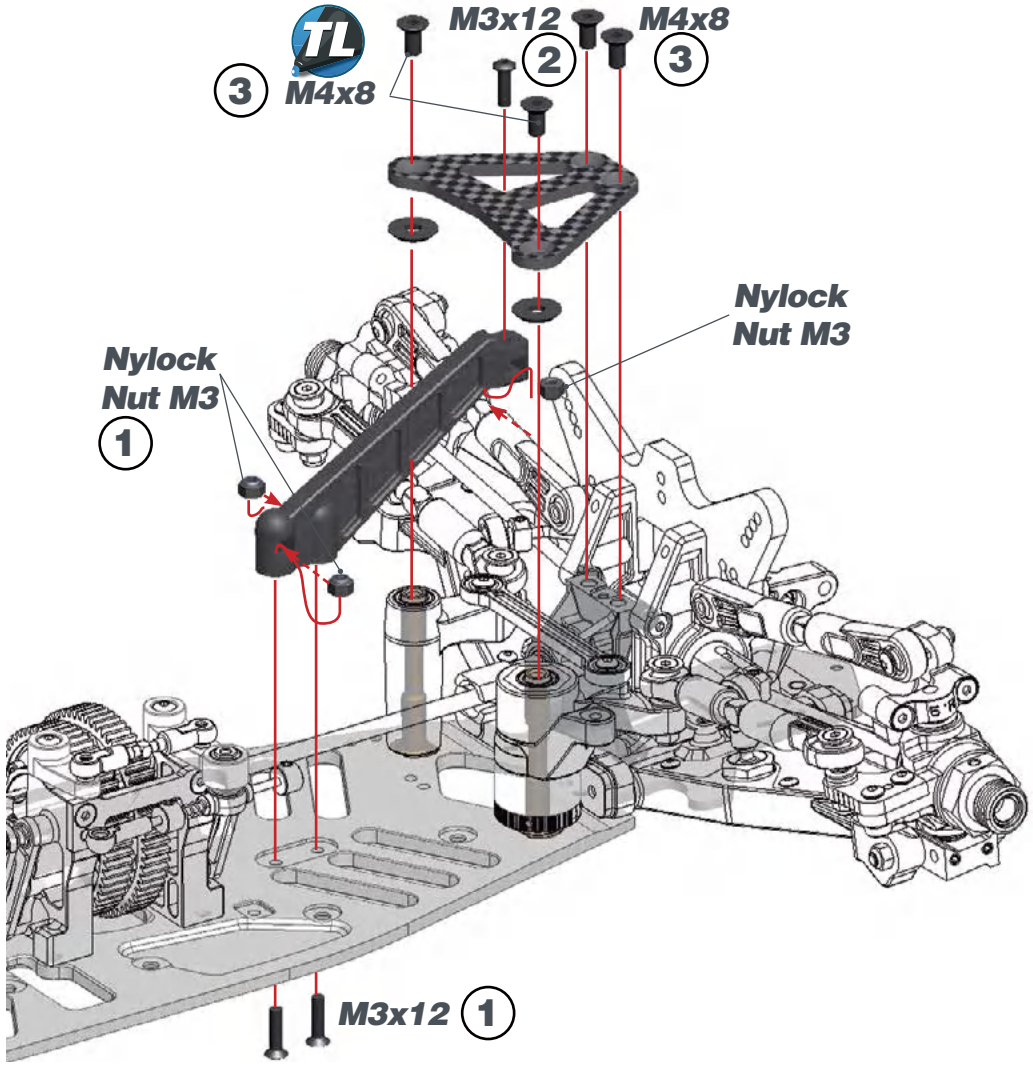

Nylock Nut M3

STEP 33

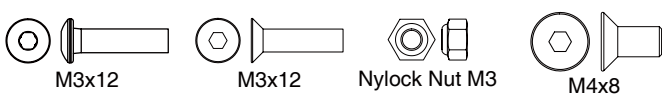


STEP 34

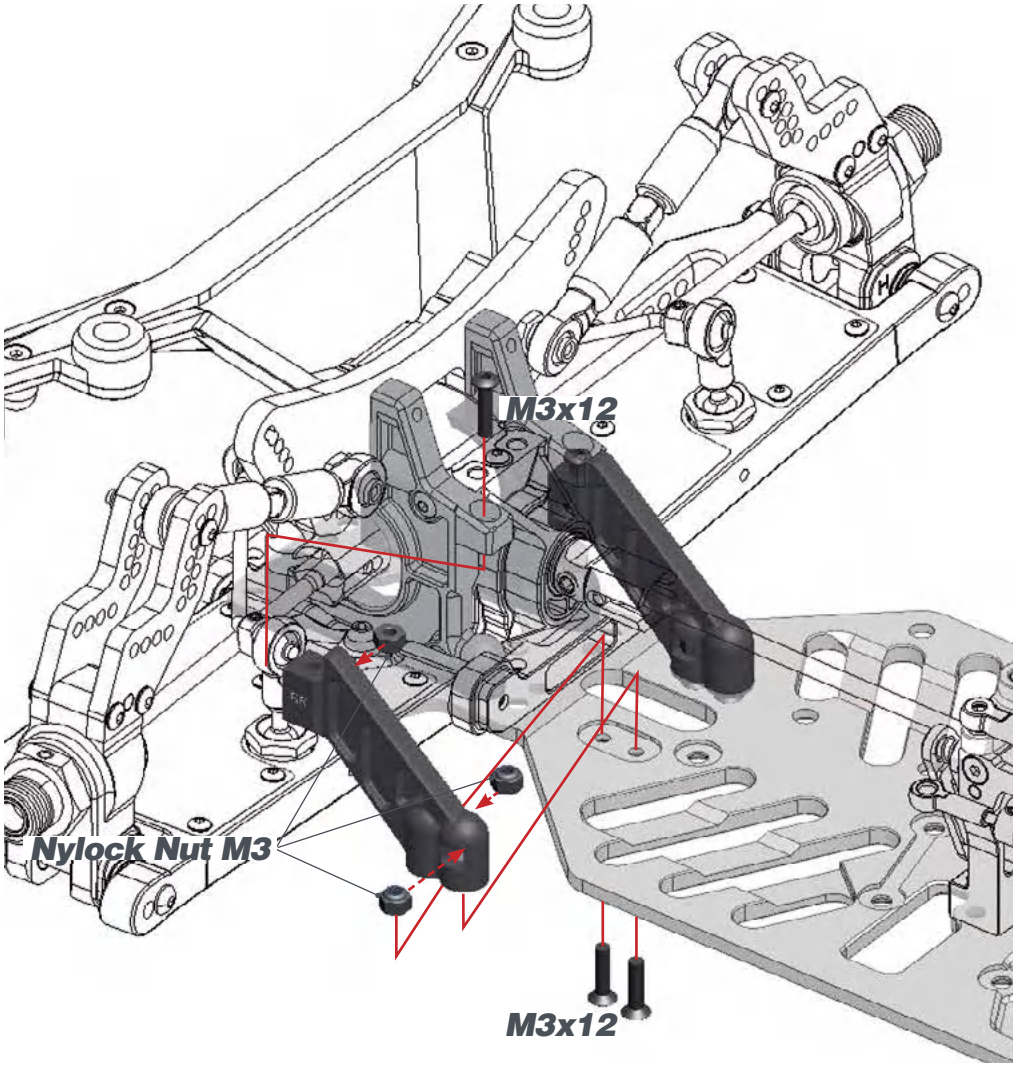
BAG 11



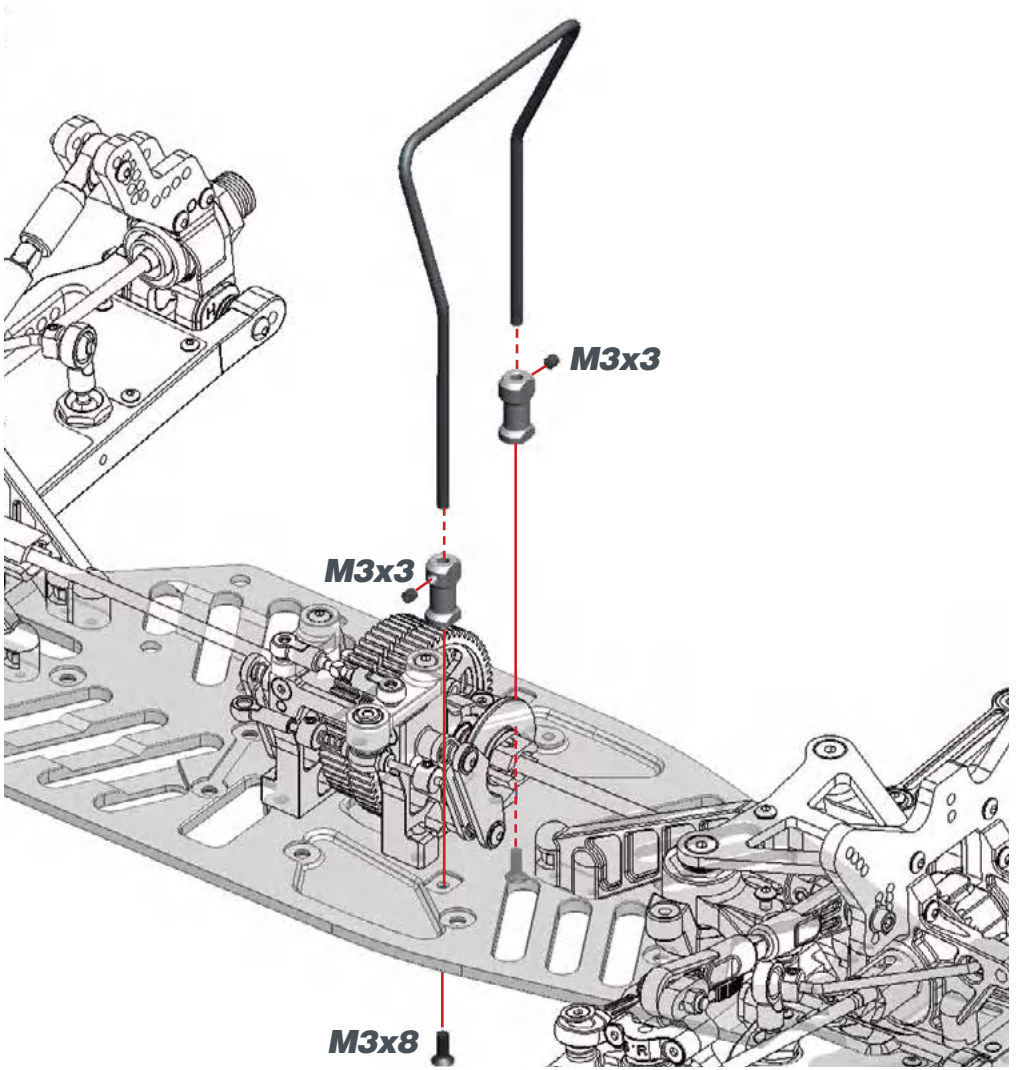




STEP 35



STEP 36

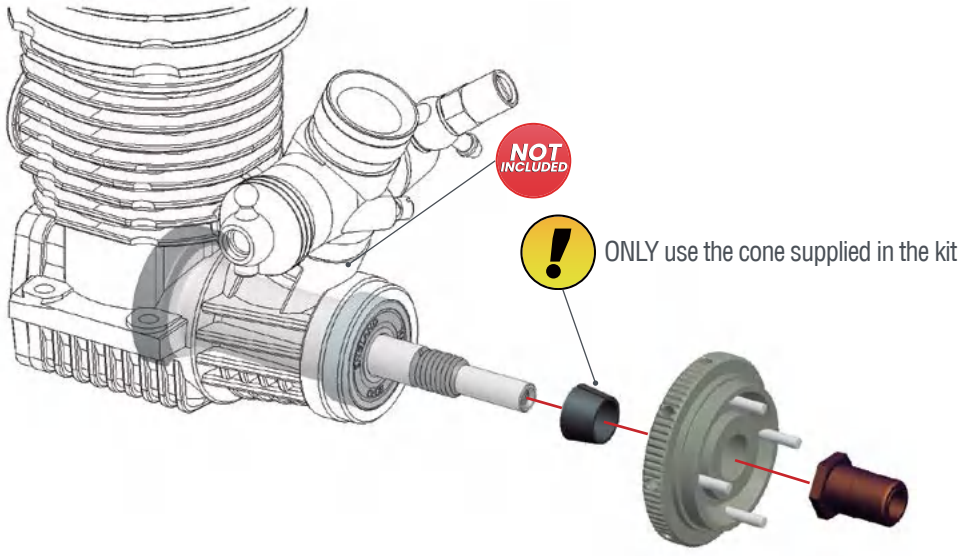






CLUTCH ASSEMBLY

STEP 37 BAG 12

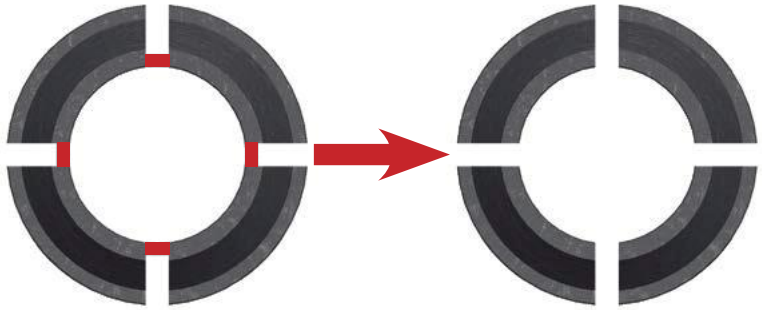


ONLY use the cone supplied in the kit

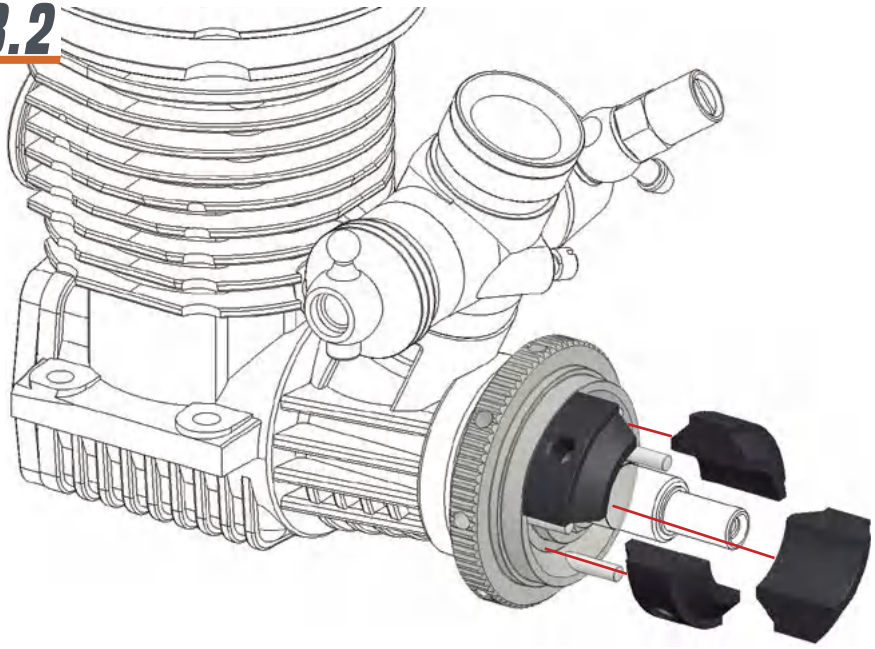
1- To align the clutchgears with the 2-speed gears, it may be needed to use shim(s) 6x8x0.5mm (for 6mm shaft) or 7x8x0.5 (for 7mm shaft) behind the cone. This you can see only after assembling the clutch.
2- The holes in the side of the flywheel can be used to block the flywheel (with short allen tool) through the bottom of the chassis, when the engine/clutch is mounted in the car. It's easier to tighten or loosen the pre-load on the clutch spring that way.

STEP 38

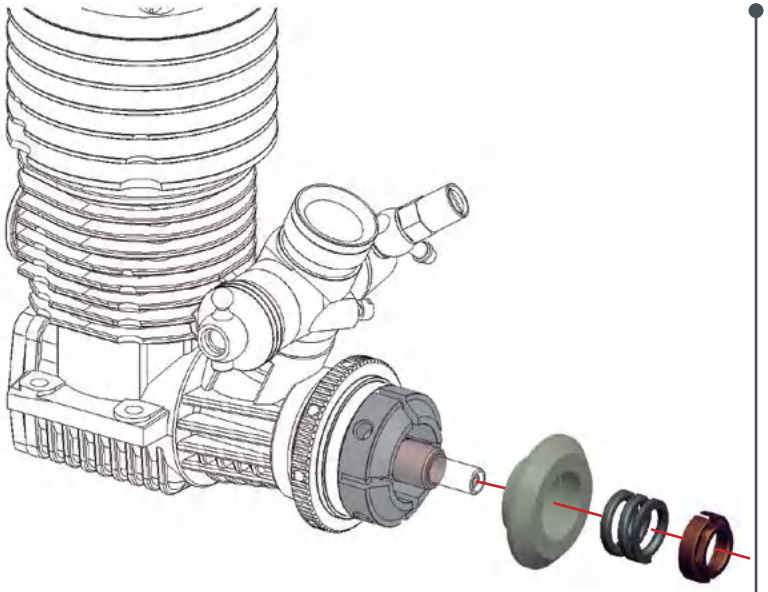
38.1 Before to assemble clutch shoes, carefully remove the red area and smoothen the cut surface in order to have four clutch shoes with the same shape.



38.2



STEP 39



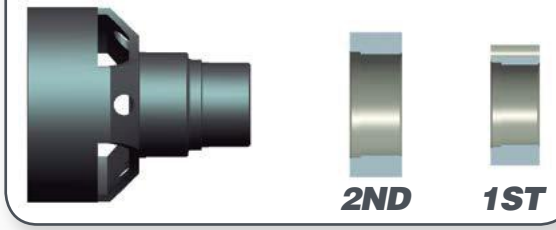
For adjusting the default clutch spring tension:
1- Screw in the adjusting nut all the way.
2- Unscrew it one and a half turns.
3- Fine tune the setup of your clutch on the track according to your driving style, track and weather conditions.

STEP 40

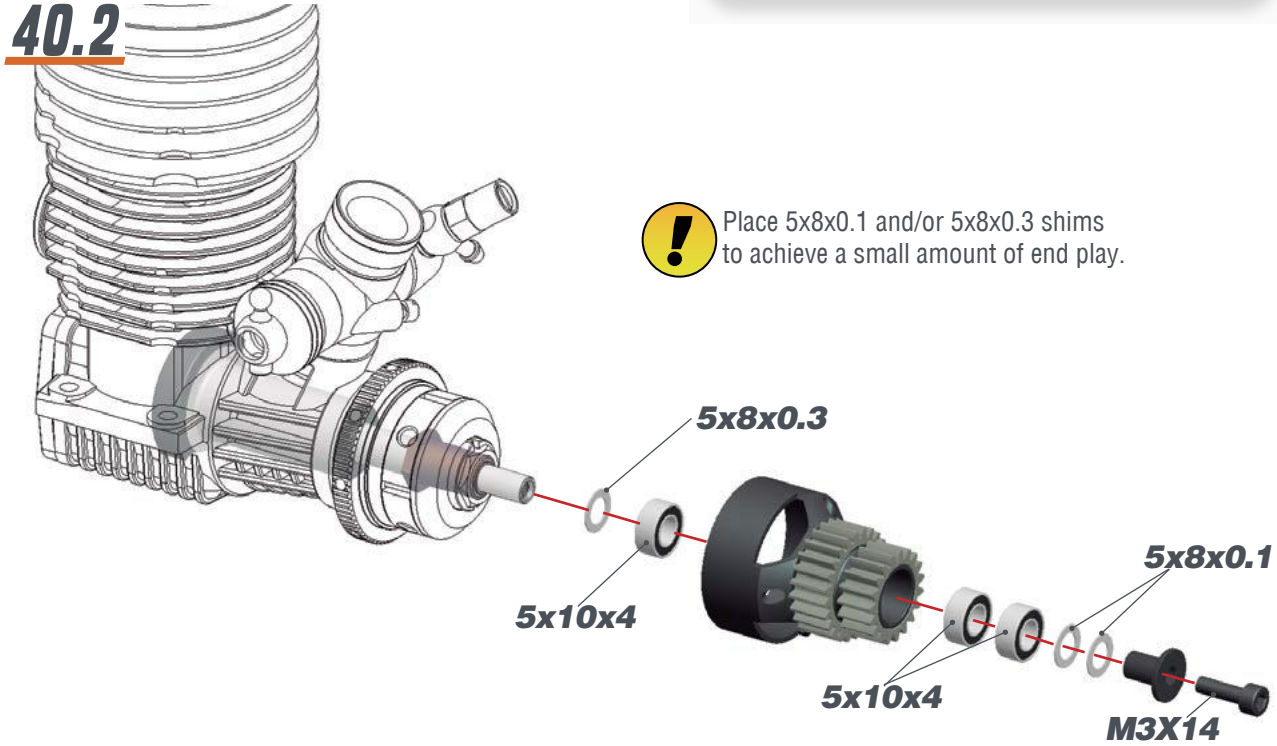
40.1



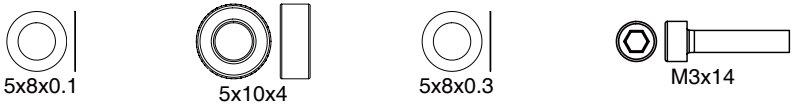
Note the orientaion of the gears



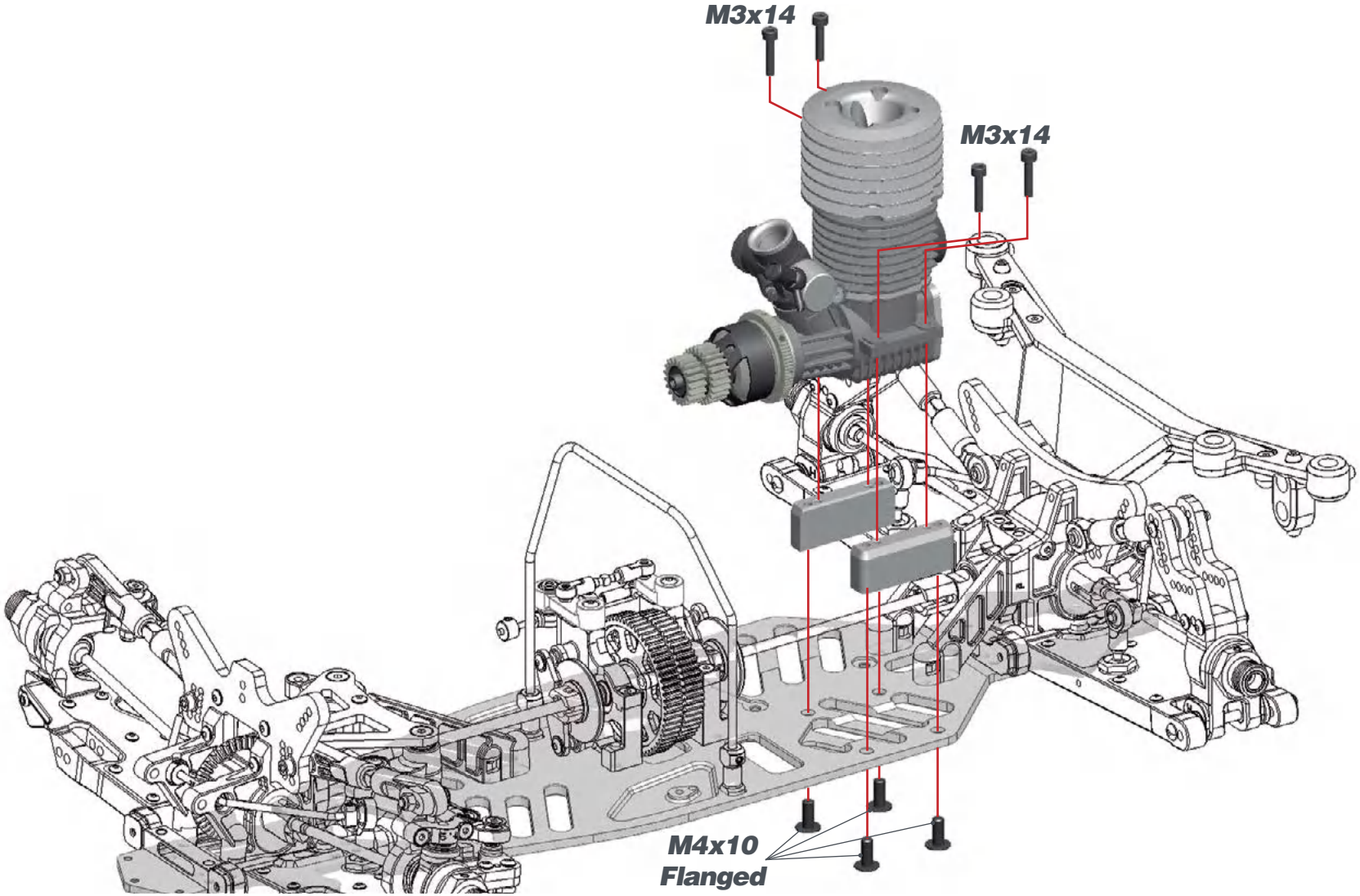
40.2

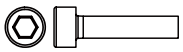


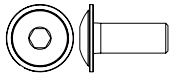
Place 5x8x0.1 and/or 5x8x0.3 shims to achieve a small amount of end play.



STEP 41

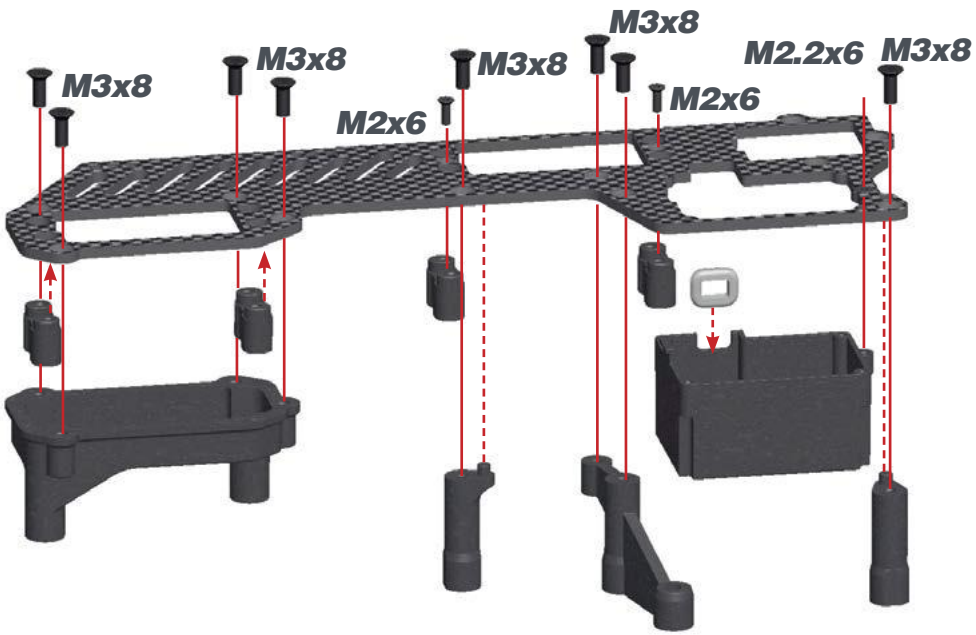



M3x14

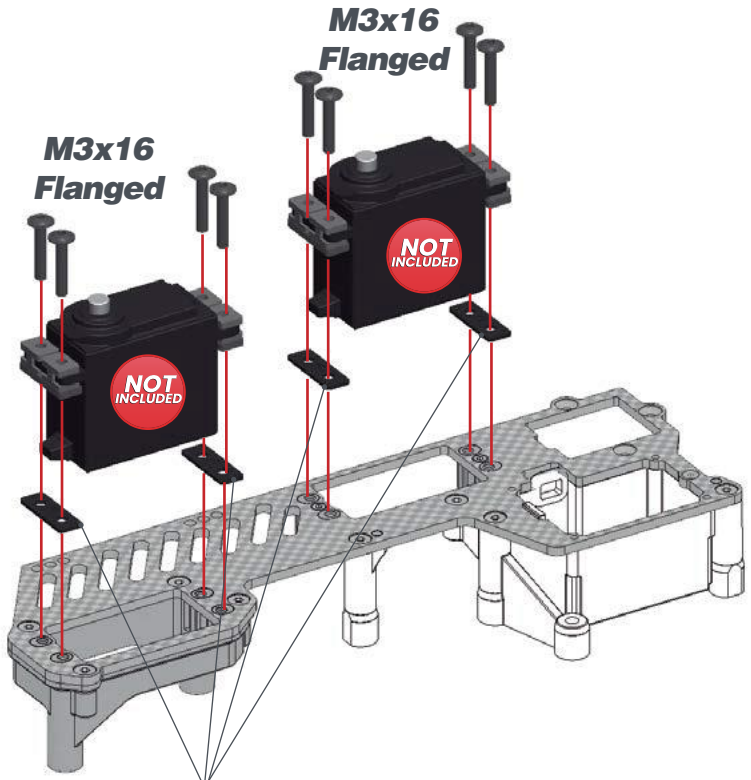

M4X10 Flanged

STEP 42

BAG 13

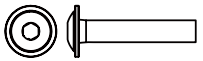


STEP 43

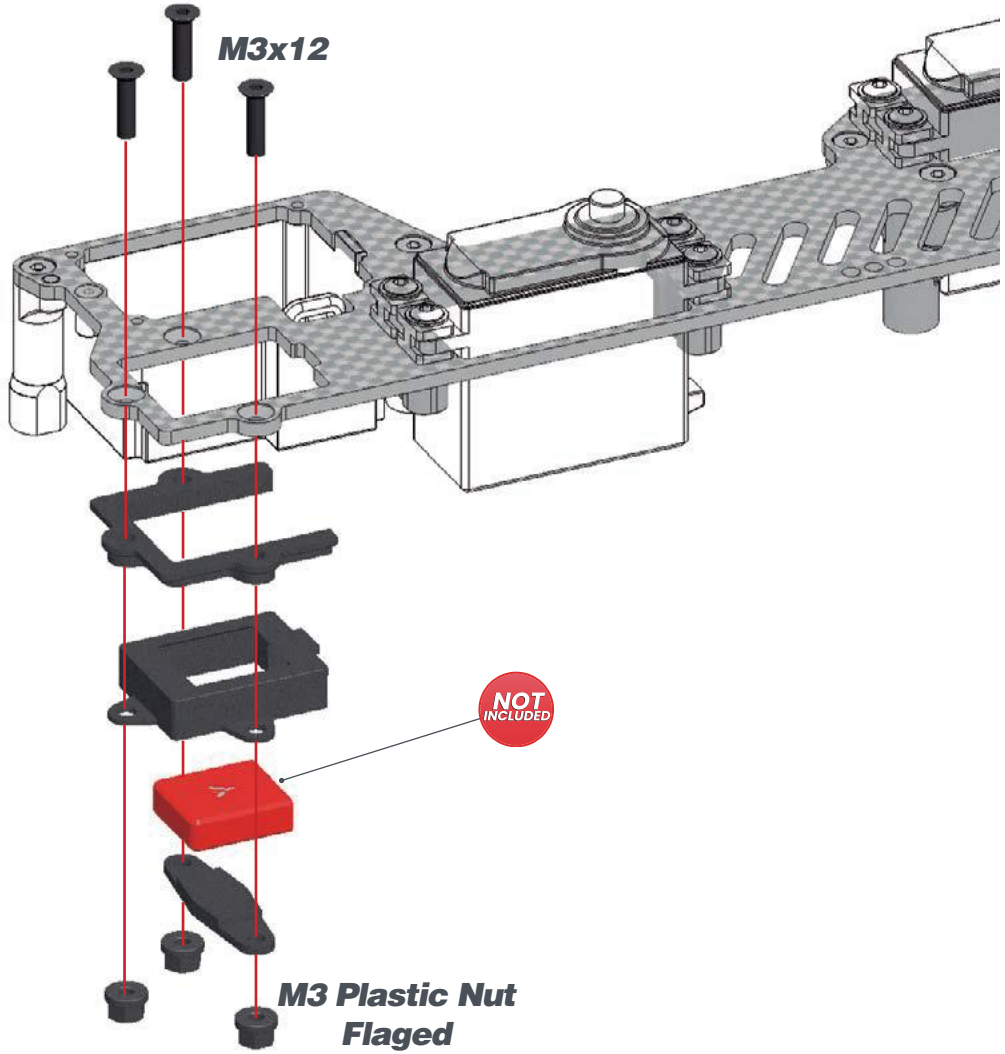


Use enough servo spacers so both servos are flush with the bottom of the radiotray posts. This will prevent the servo to touch the chassis under torsion – flex.



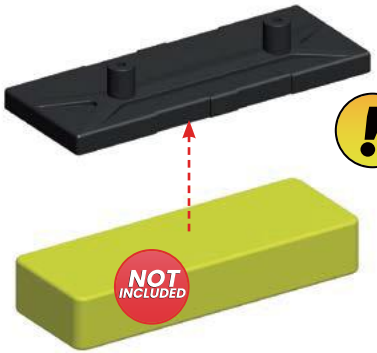


STEP 44



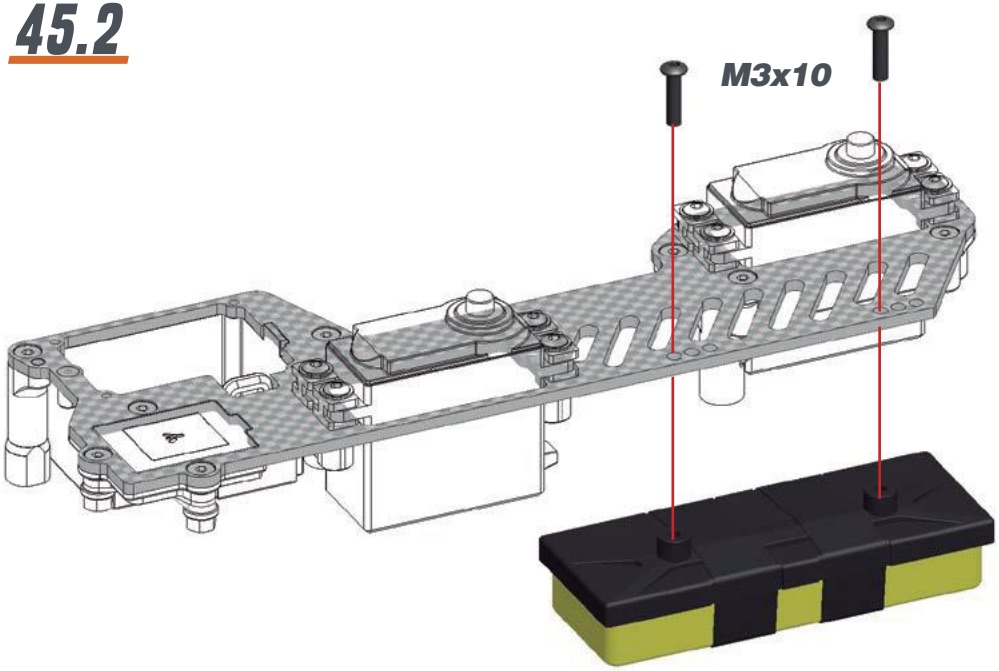
STEP 45

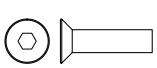
45.1



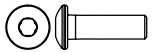
Use tape to mount the battery to the plastic support.

45.2




M3x12


M3 Plastic Nut Flanged

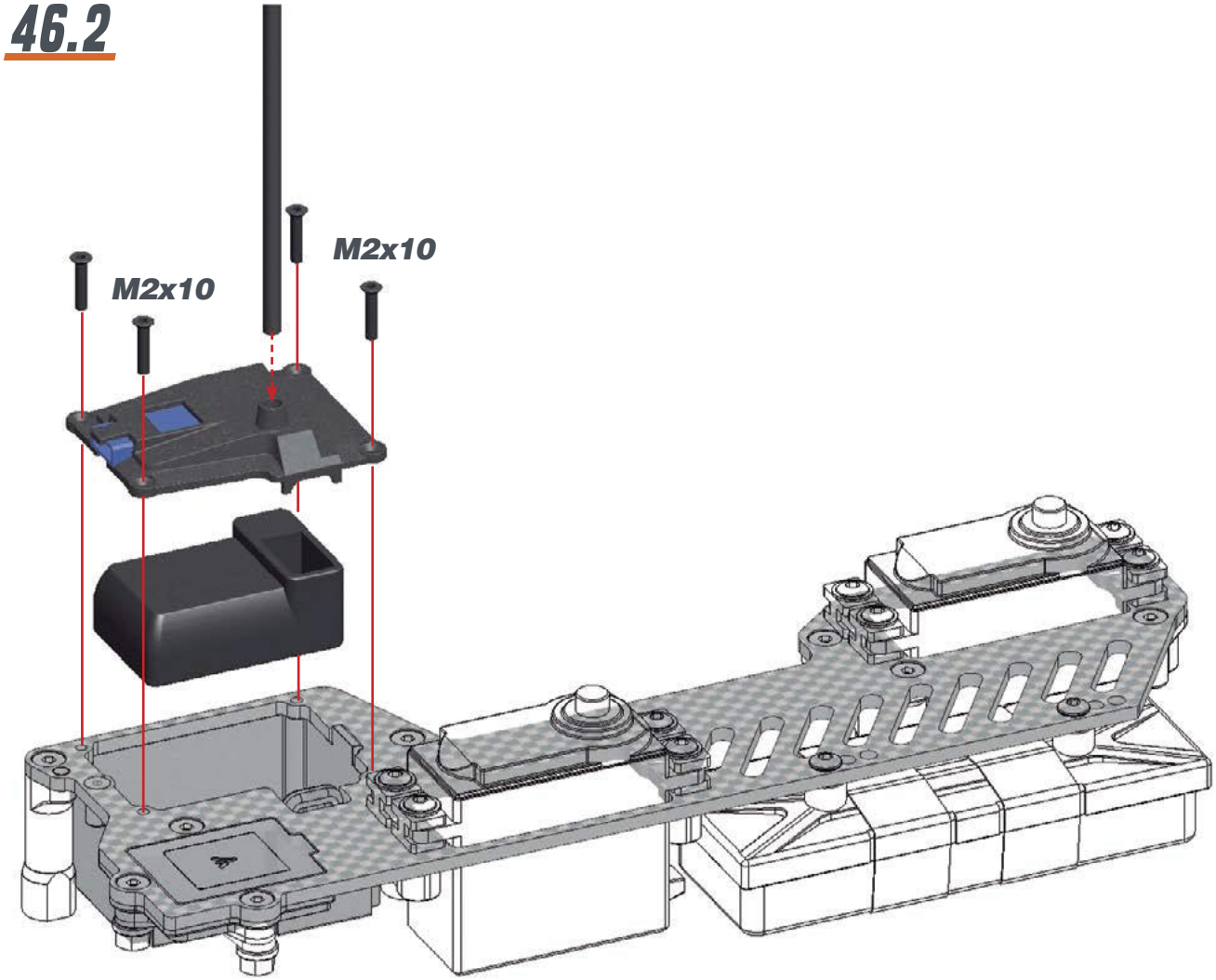

M3x10

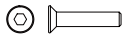
STEP 46

46.1

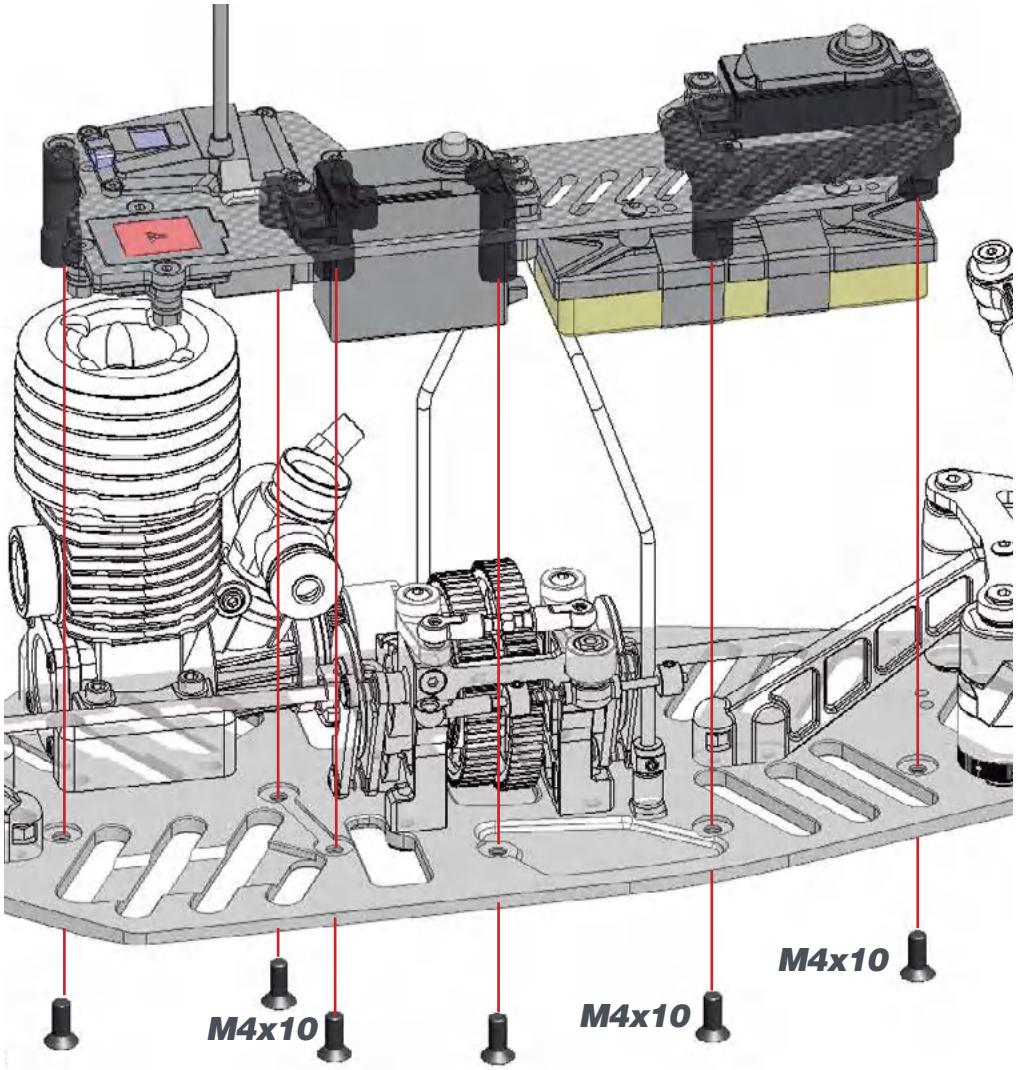


46.2




M2x10

STEP 47



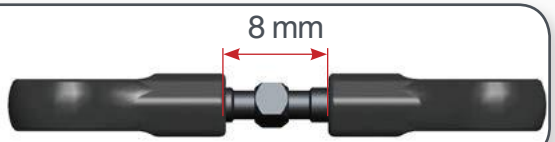
M4x10

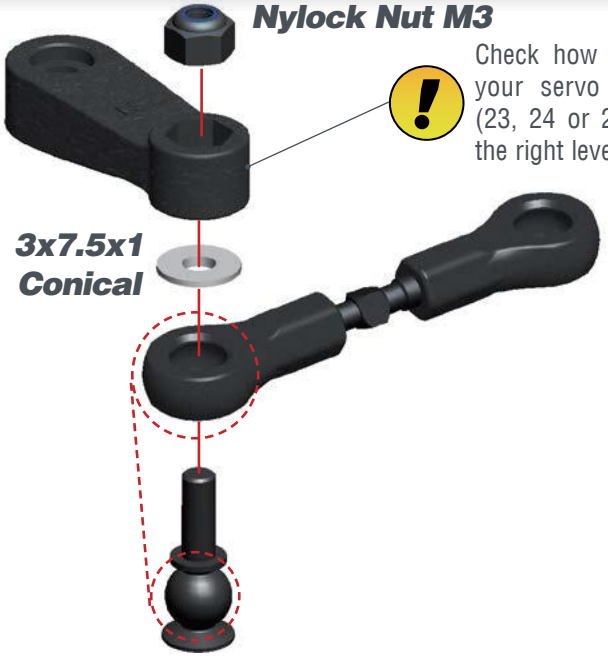
STEP 48



STEERING LINK LENGTH

Between differnet servo brands there could be slight differences.



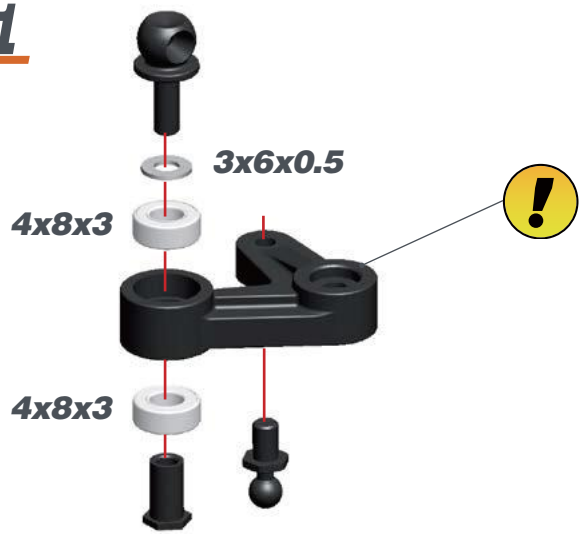


3x7.5x1 Conical

Nylock Nut M3

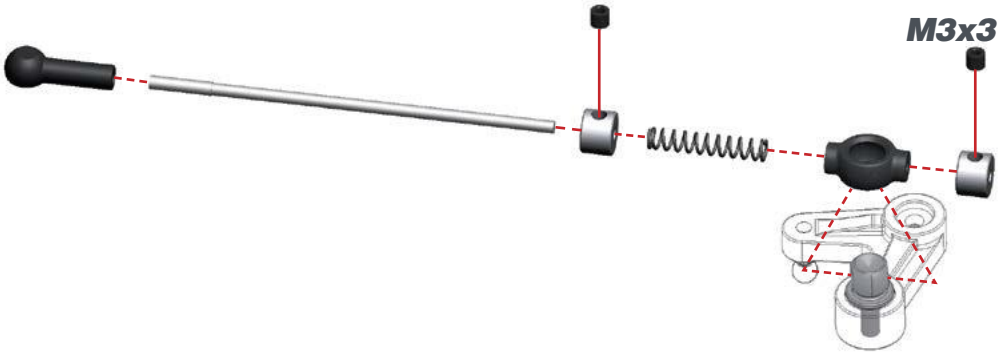
STEP 49

49.1

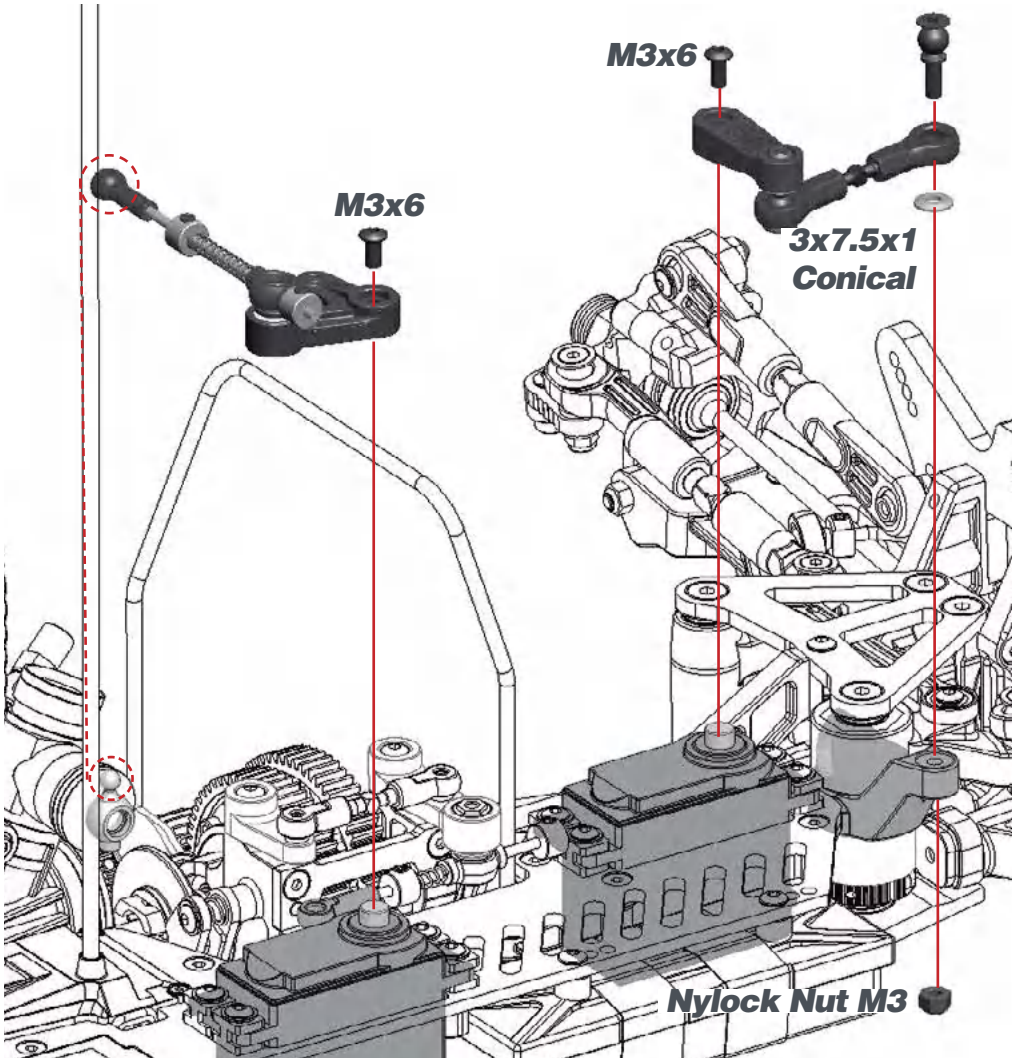


Check how many teeth your servo spline has (23, 24 or 25) and use the right lever.

49.2



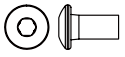
STEP 50




4x8x3


M3x3


3x6x0.5


M3x6

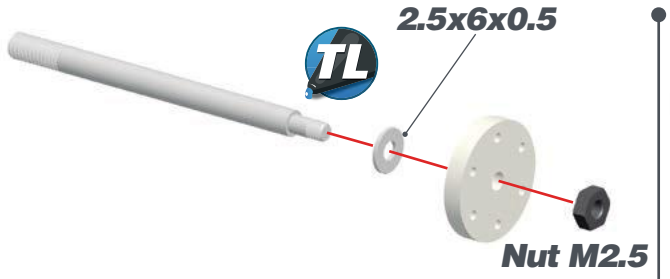

3x7.5x1 Conical


Nylock Nut M3

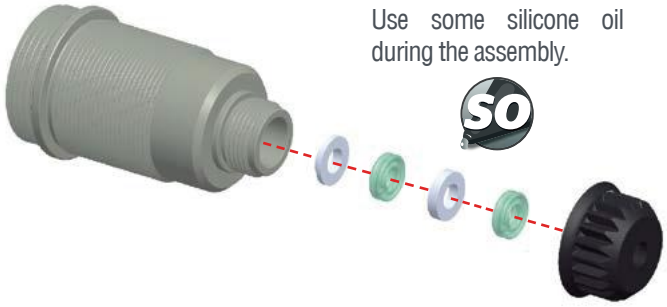
STEP 51

SHOCK BAG

51.1



51.2



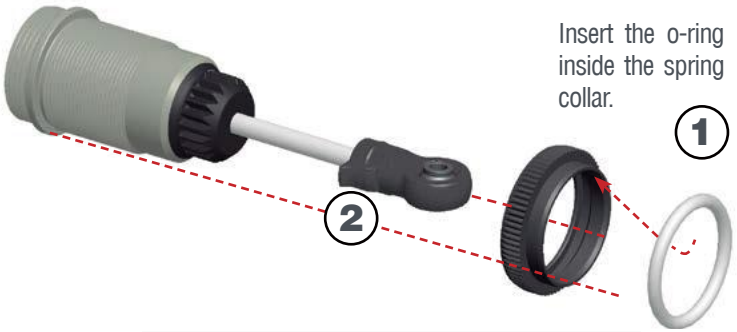
Use some silicone oil during the assembly.

51.3



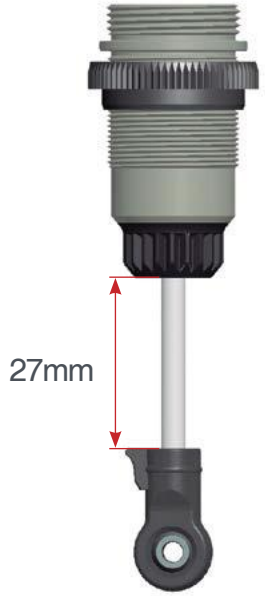
Use some silicone oil during the assembly.

STEP 52



Insert the o-ring inside the spring collar.

SHOCKS LENGTH: Measure the shock length fully extended.



STEP 53

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.





STEP 54

54.1

Push the membrane into the shock cap.



54.2

Close top step by step only 3/4



STEP 55

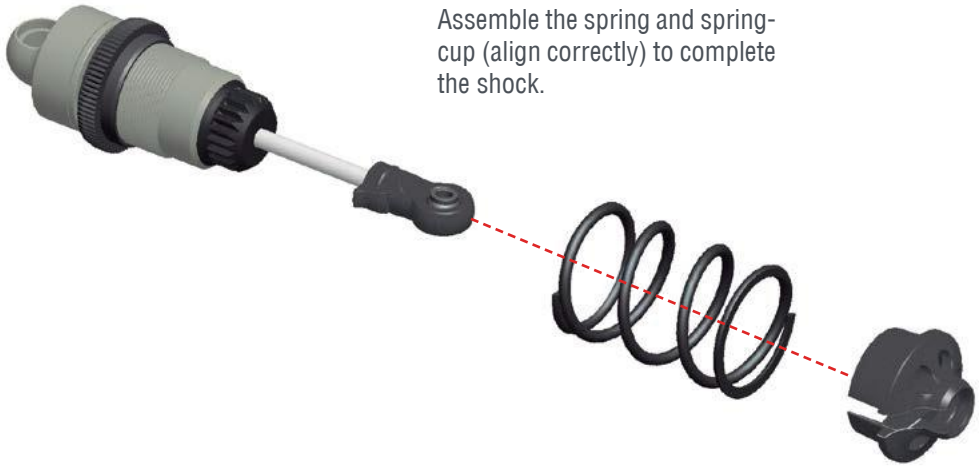
1-Bleed: push the shock-rod all the way in slowly, to allow excessive oil to escape.

2- With shockrod fully in, close fullu the shock cap.



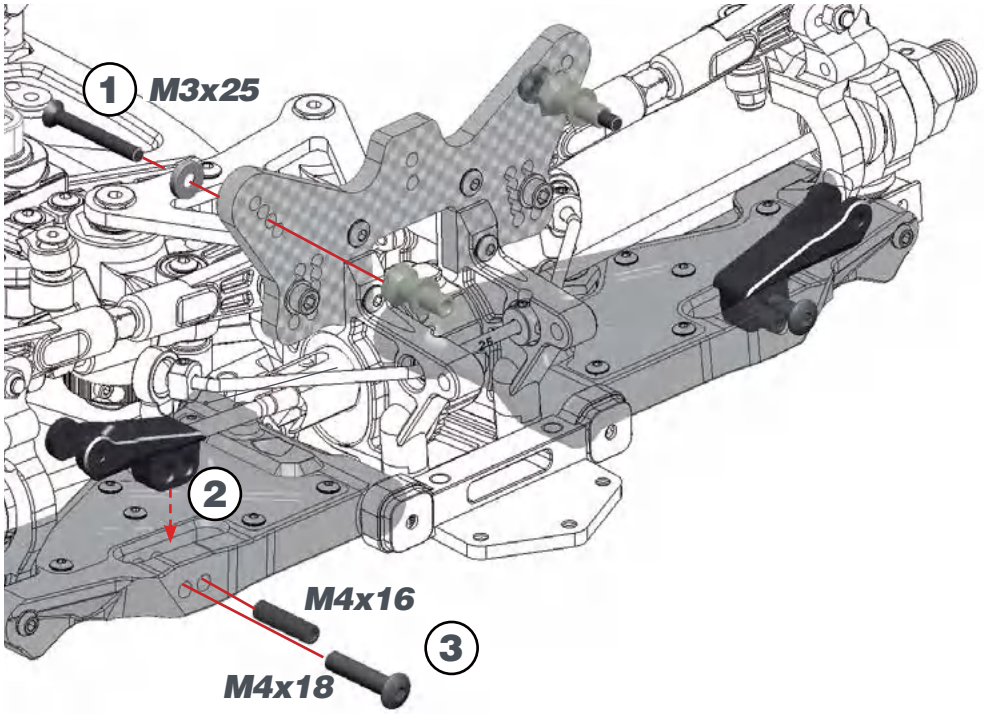
STEP 56

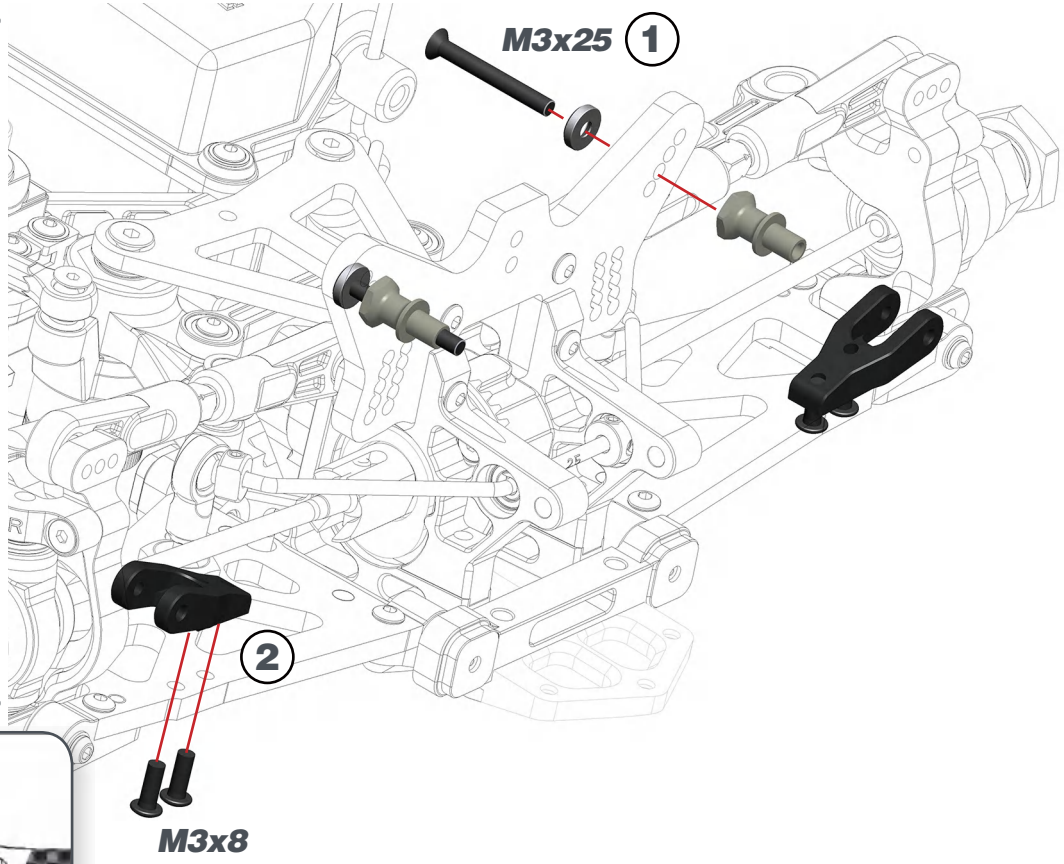
Assemble the spring and spring-cup (align correctly) to complete the shock.

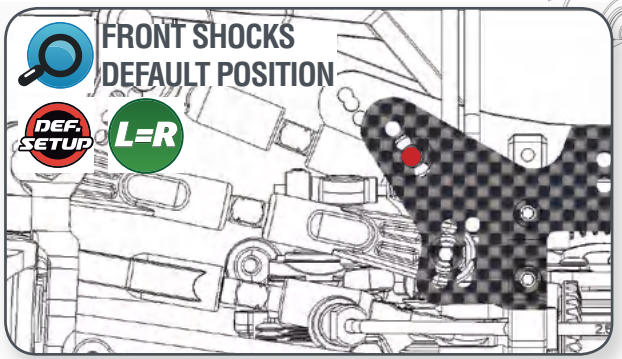


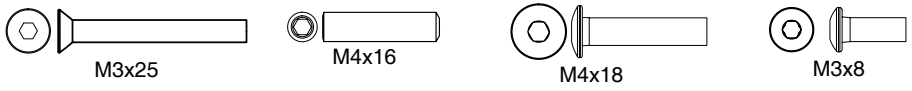


STEP 57

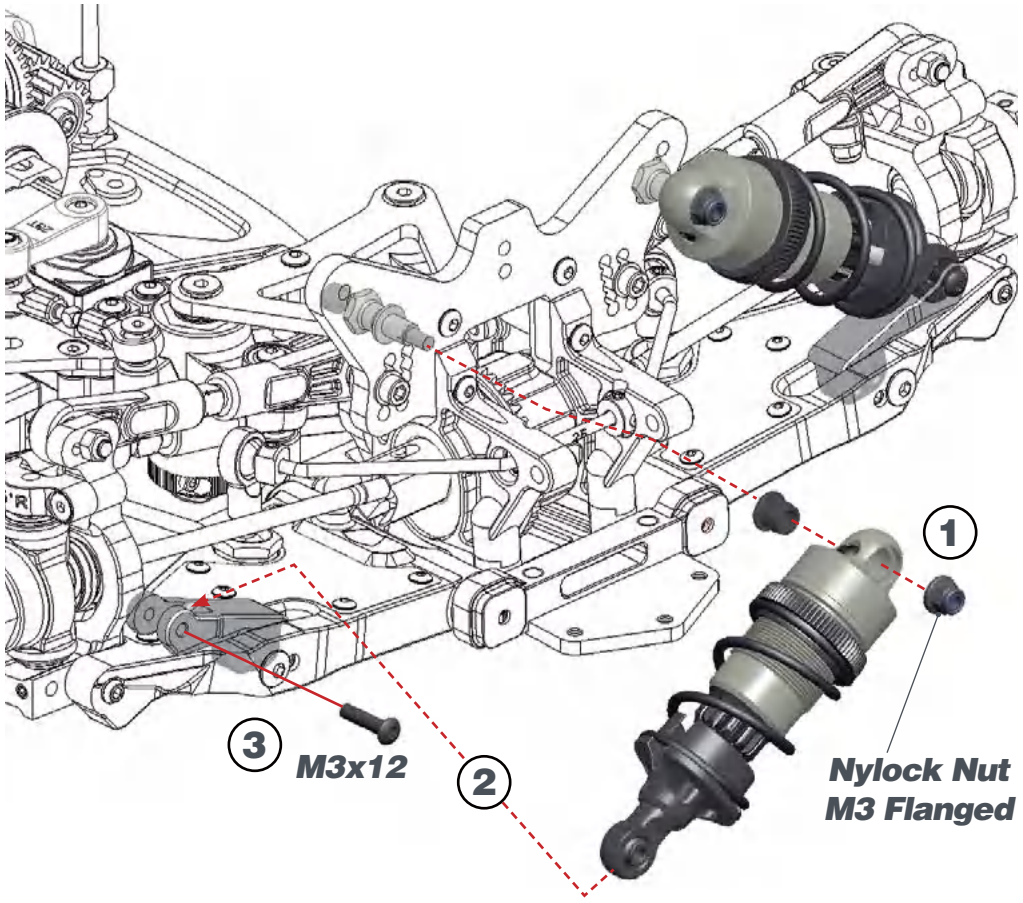

1 M3x25
2
M4x16
3
M4x18

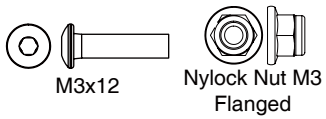

M3x25 1
2
M3x8


FRONT SHOCKS
DEFAULT POSITION
DEF. SETUP
L=R

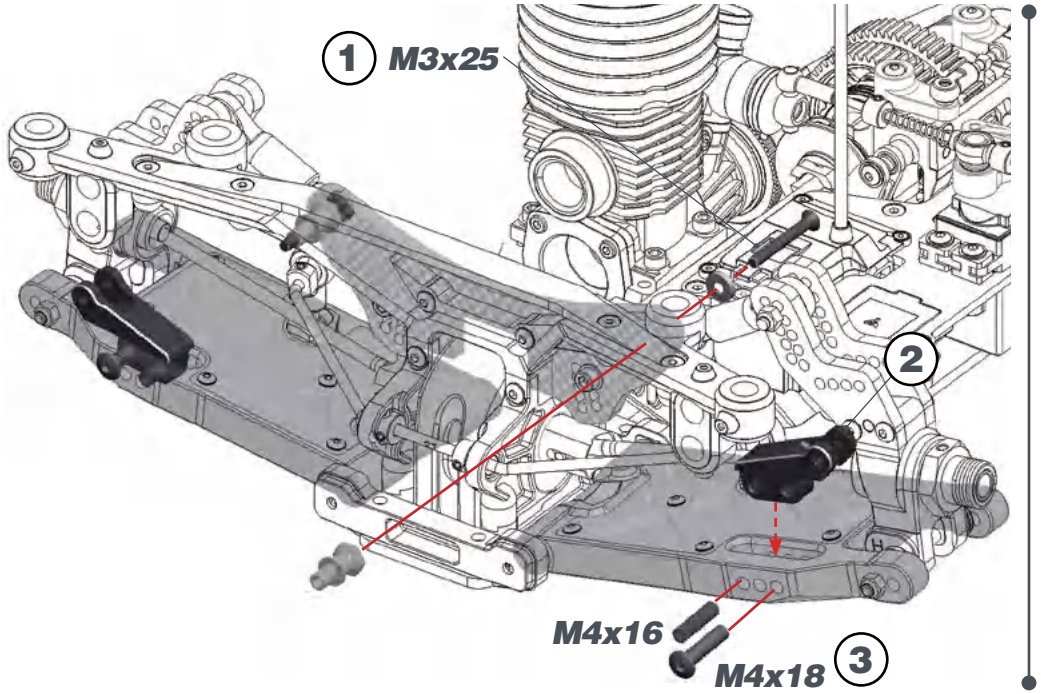

M3x25
M4x16
M4x18
M3x8

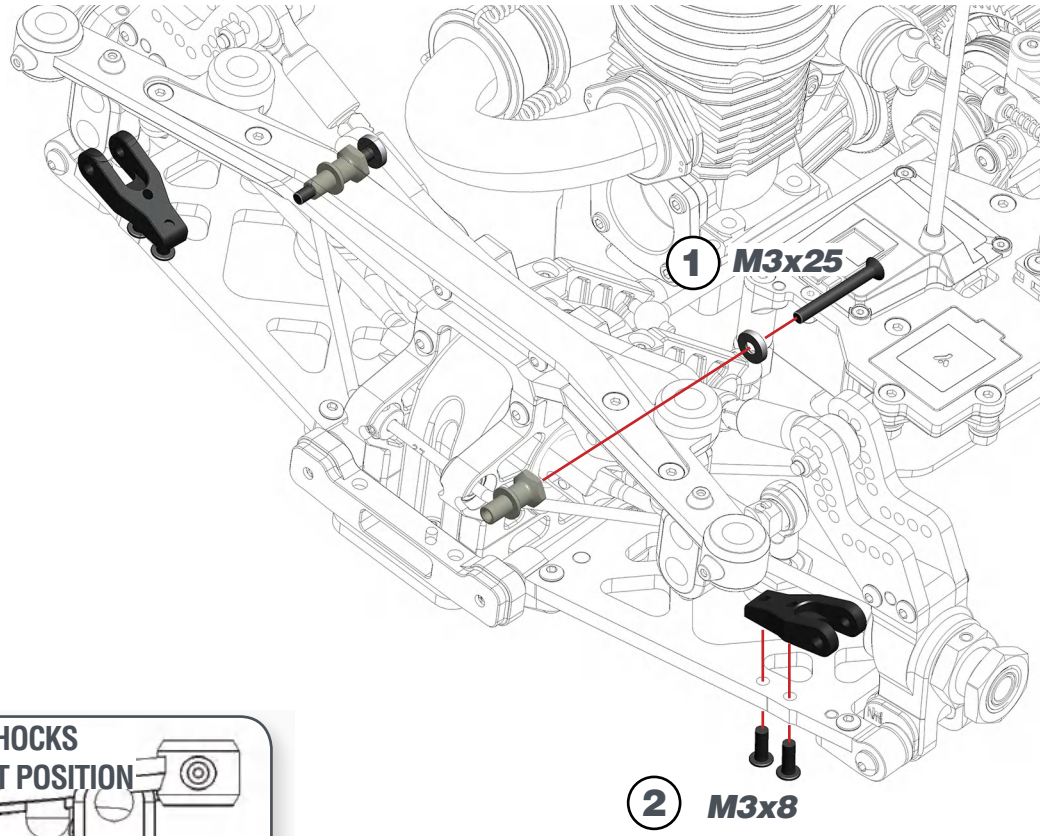
STEP 58

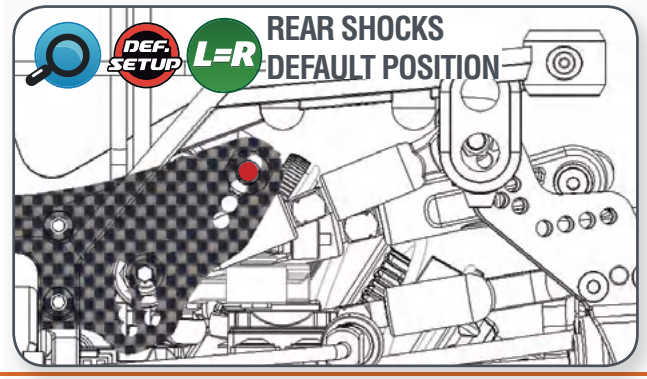


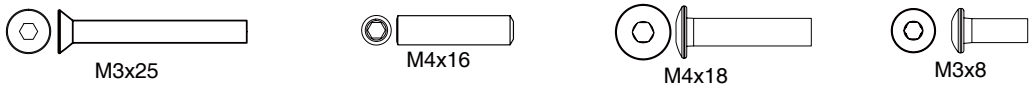


STEP 59

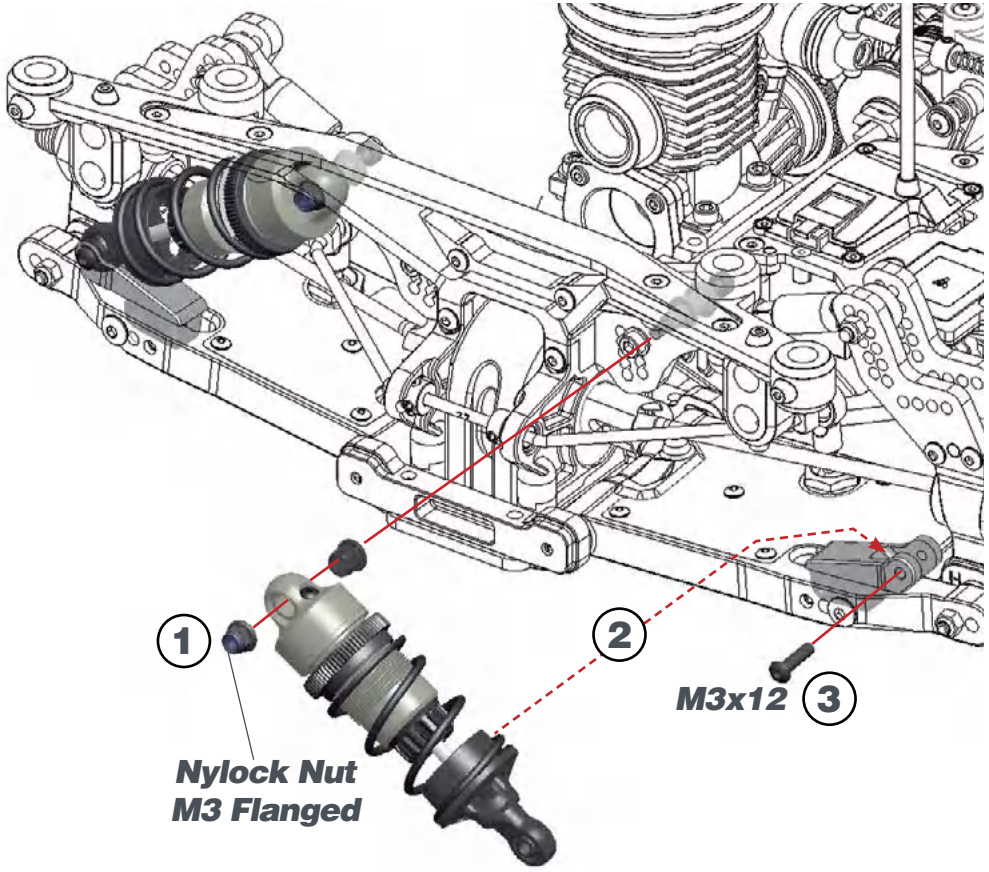

1 M3x25
2
M4x16
M4x18
3

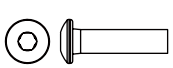

1 M3x25
2 M3x8

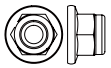

DEF. SETUP
L=R
REAR SHOCKS
DEFAULT POSITION


M3x25
M4x16
M4x18
M3x8

STEP 60




M3x12


Nylock Nut M3
Flanged

SRX8 GTR SERPENT

STEP 61

BAG 14

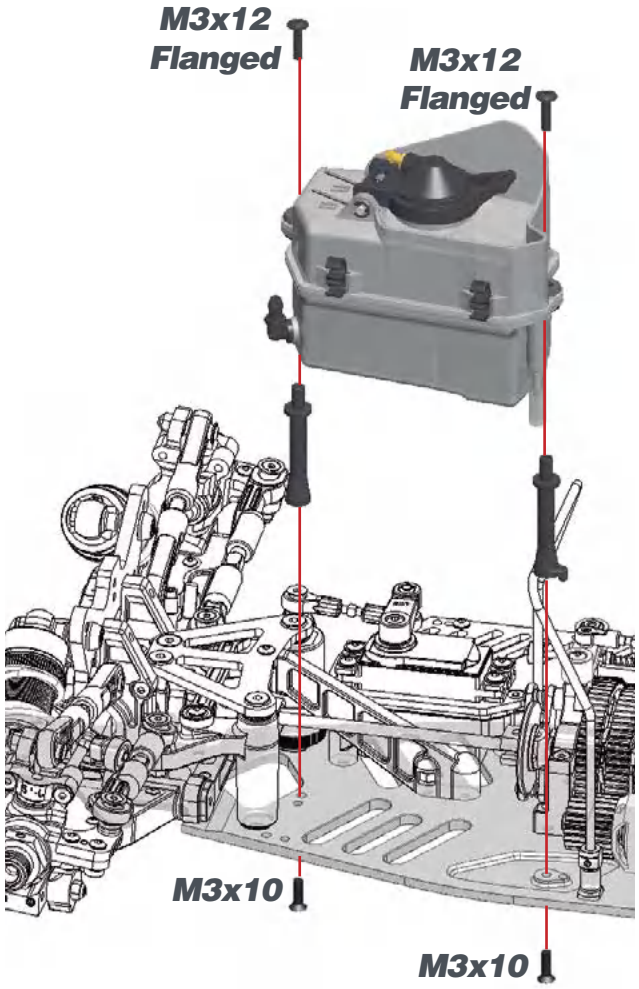
61.1



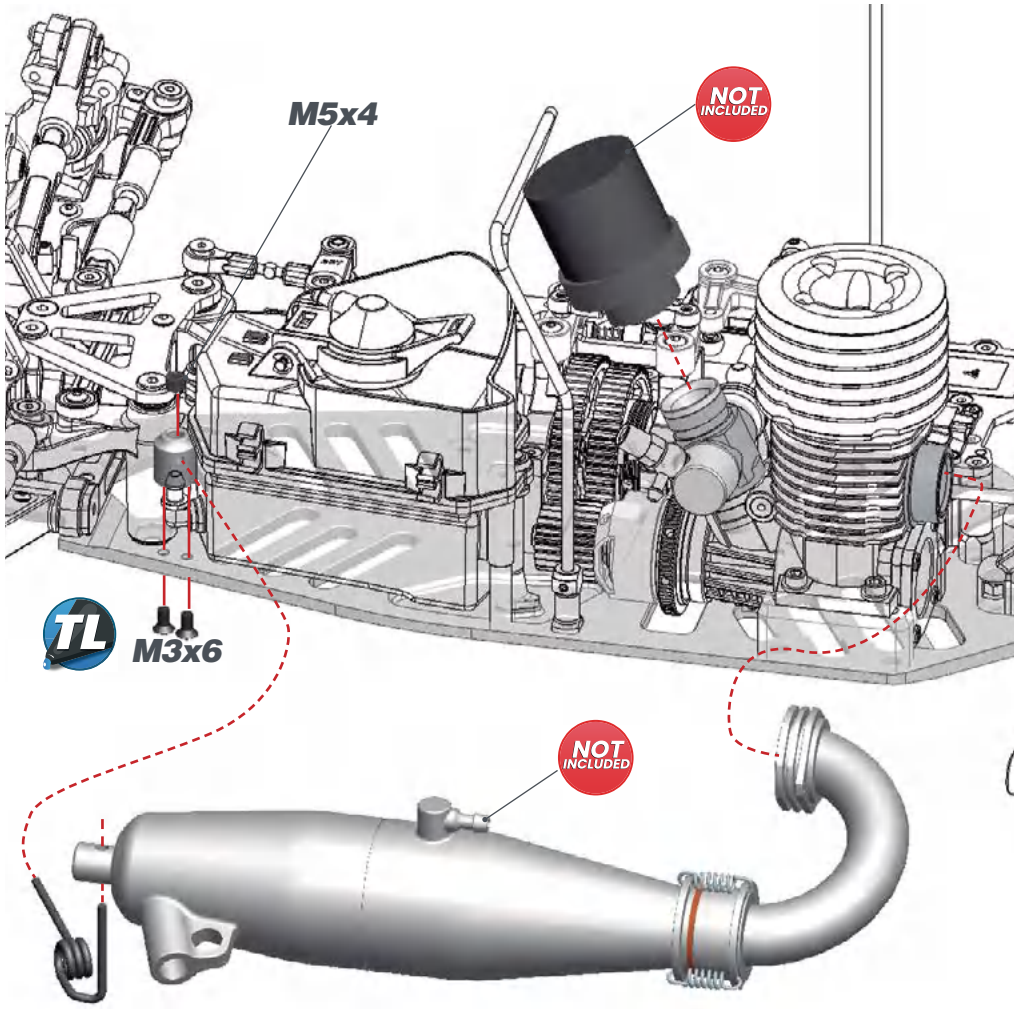
62.2

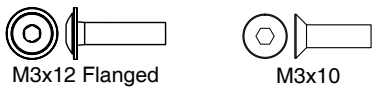


61.3



STEP 62

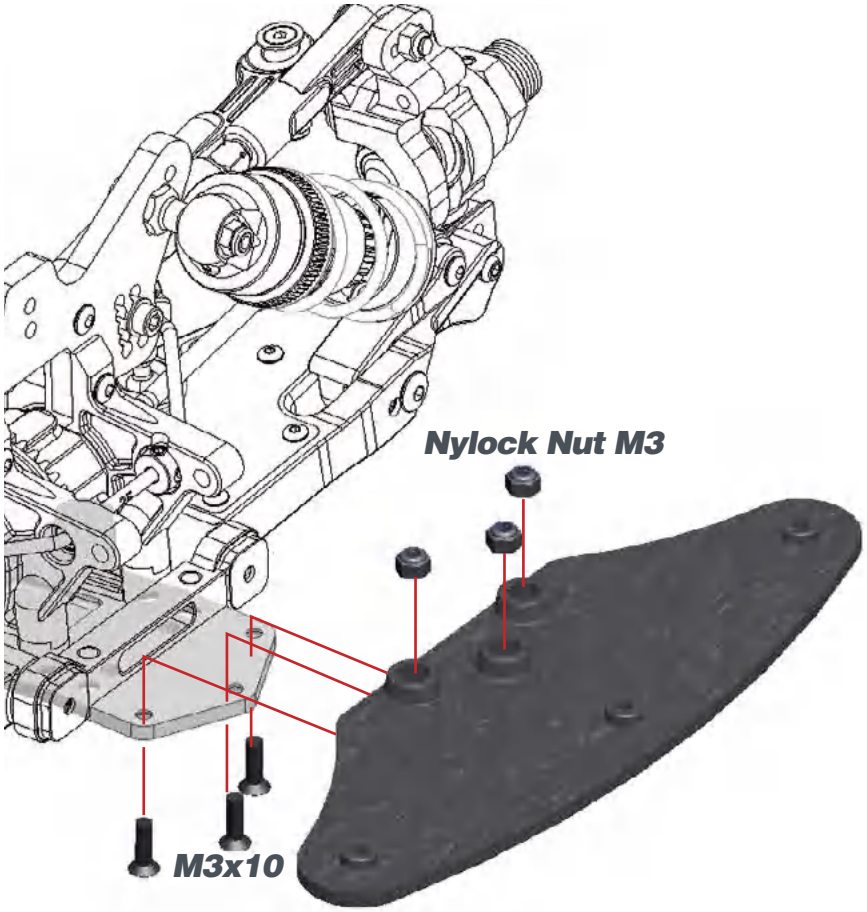






STEP 63

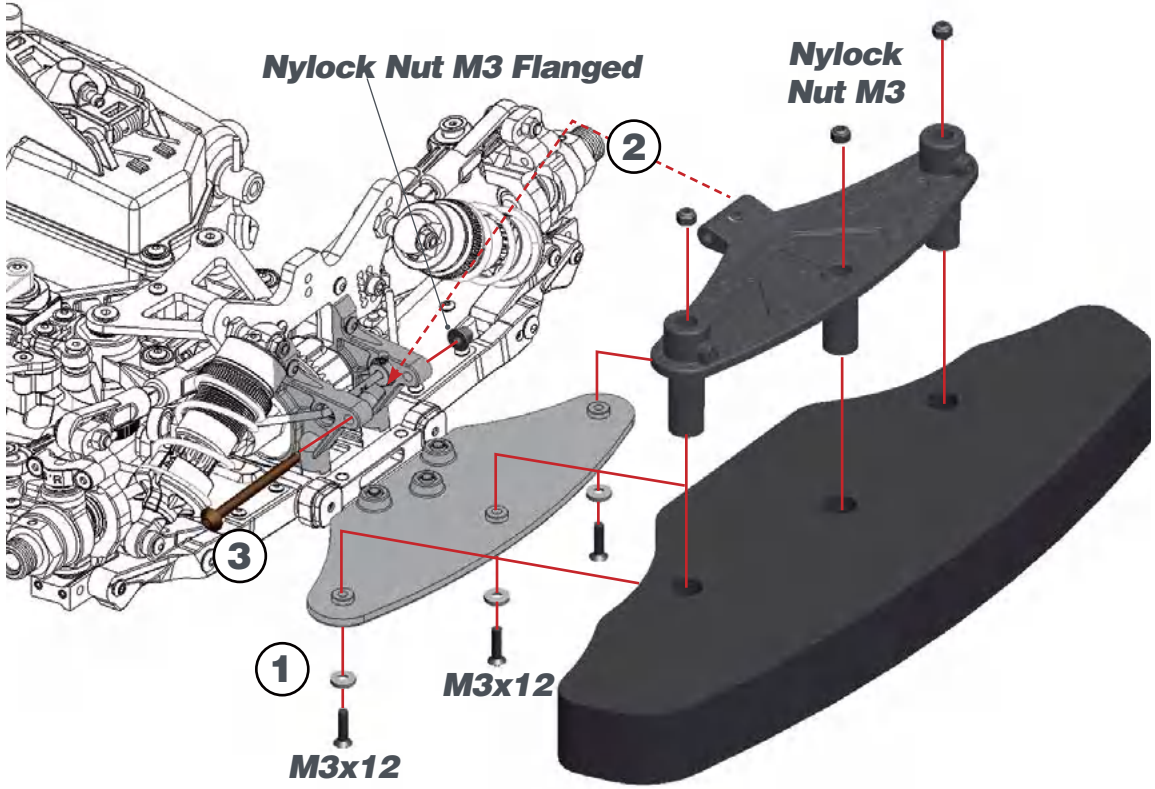
BAG 15



M3x10

Nylock Nut M3

STEP 64

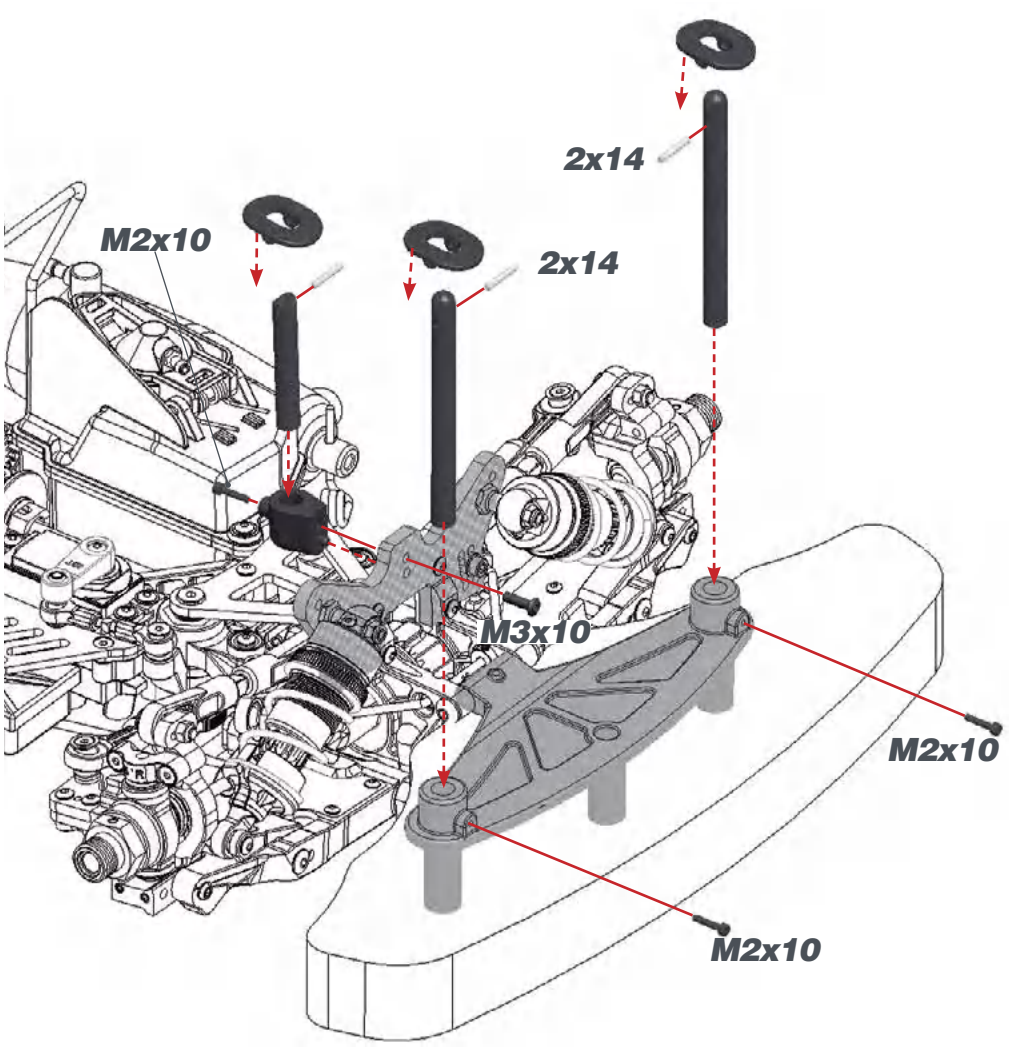


M3x12

Nylock Nut M3

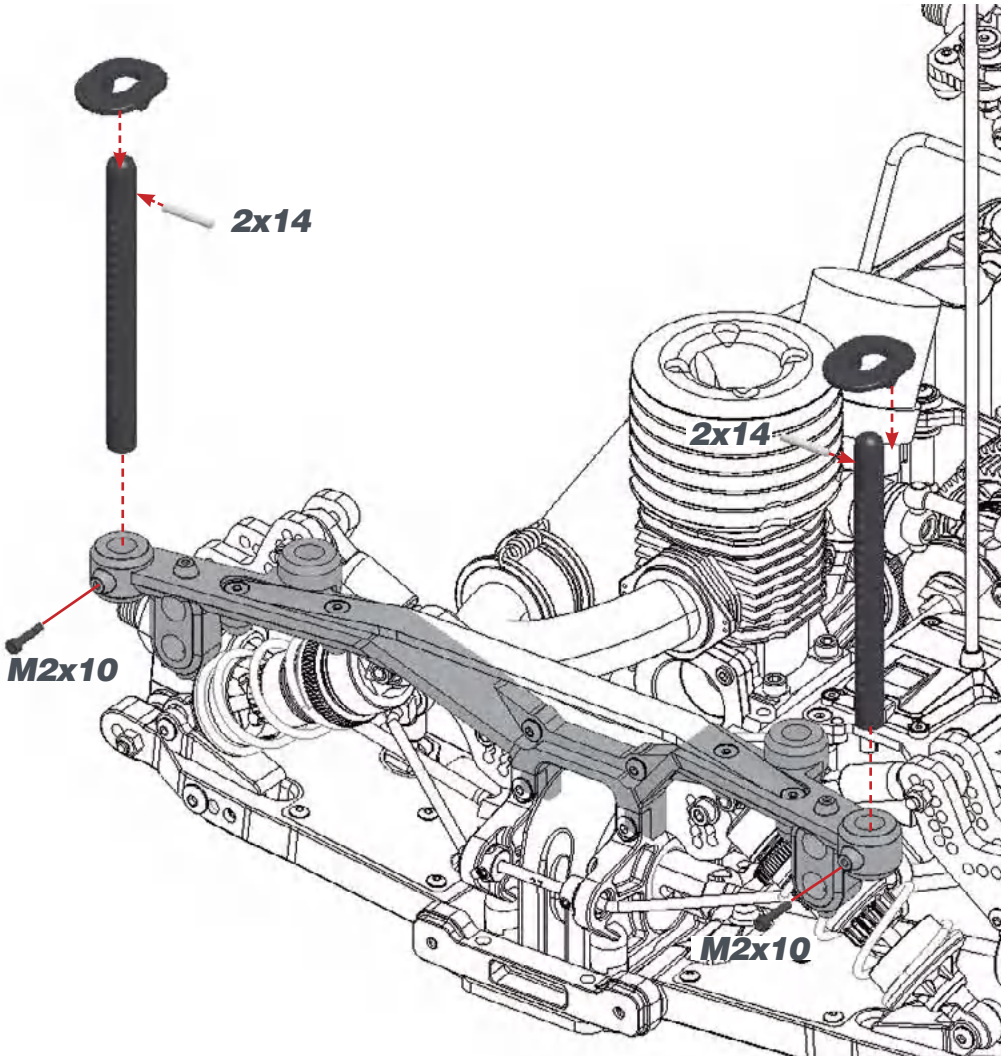
Nylock Nut M3 Flanged

STEP 65



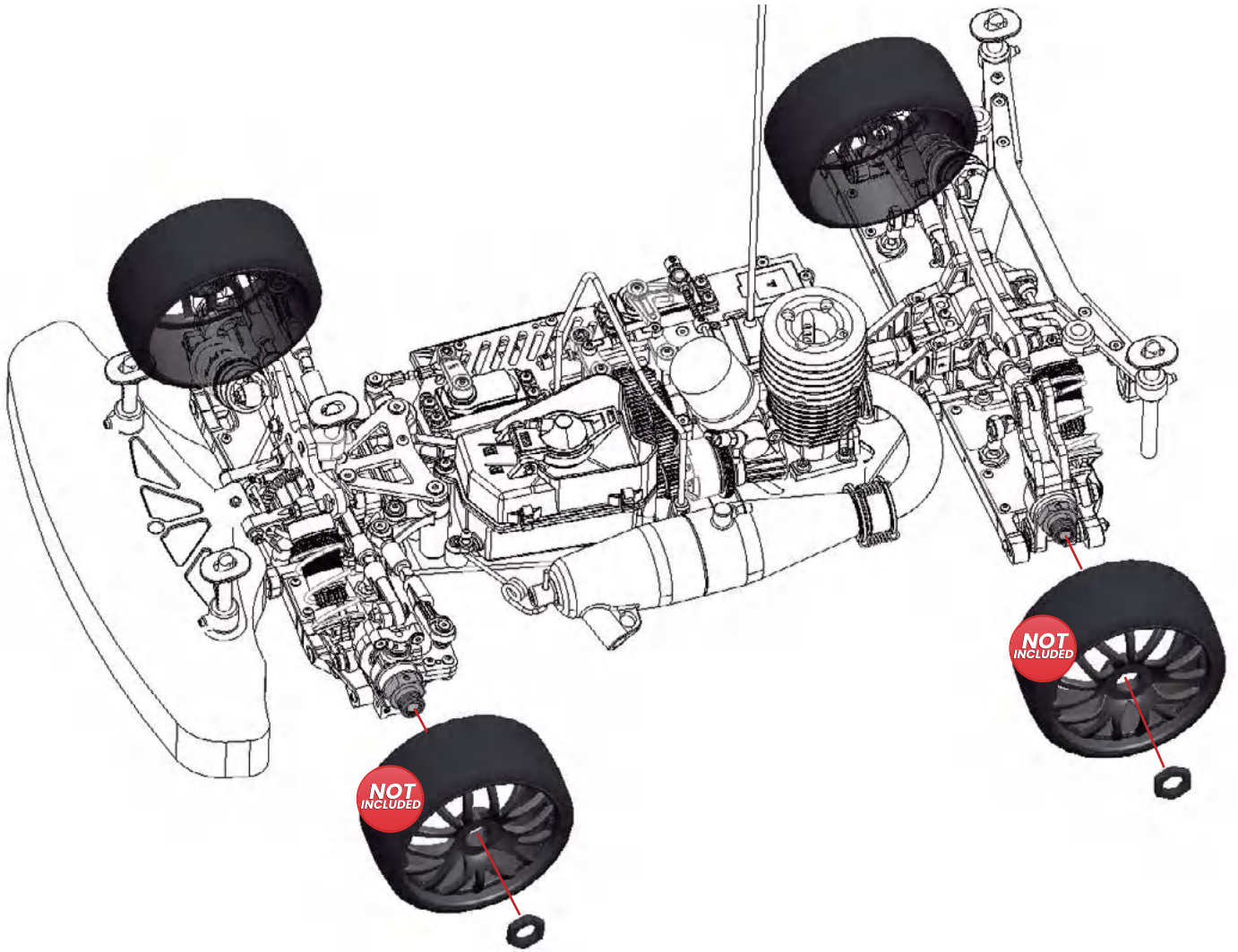
M3x10 2x14 M2x10

STEP 66



2x14 M2x10

STEP 67

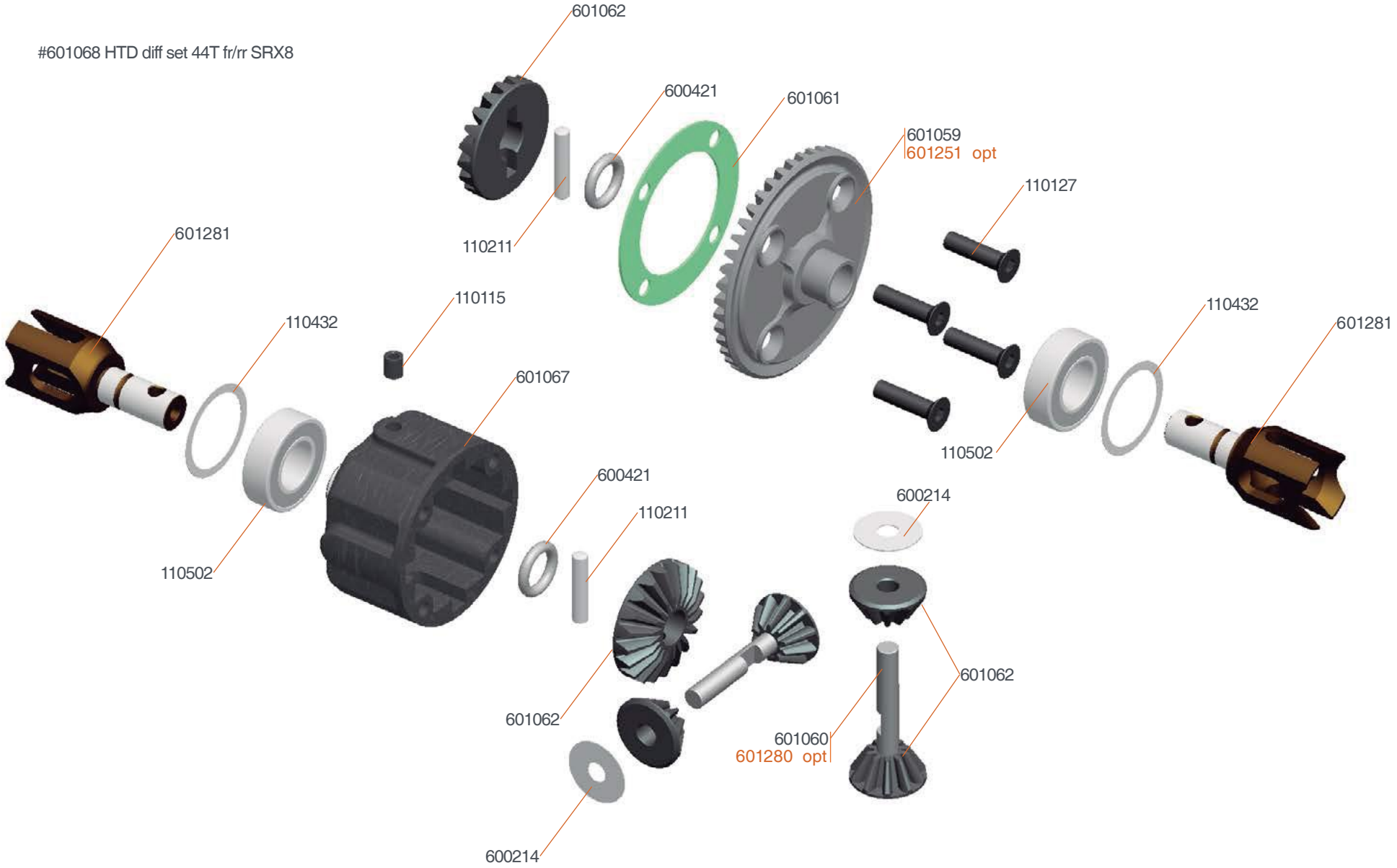


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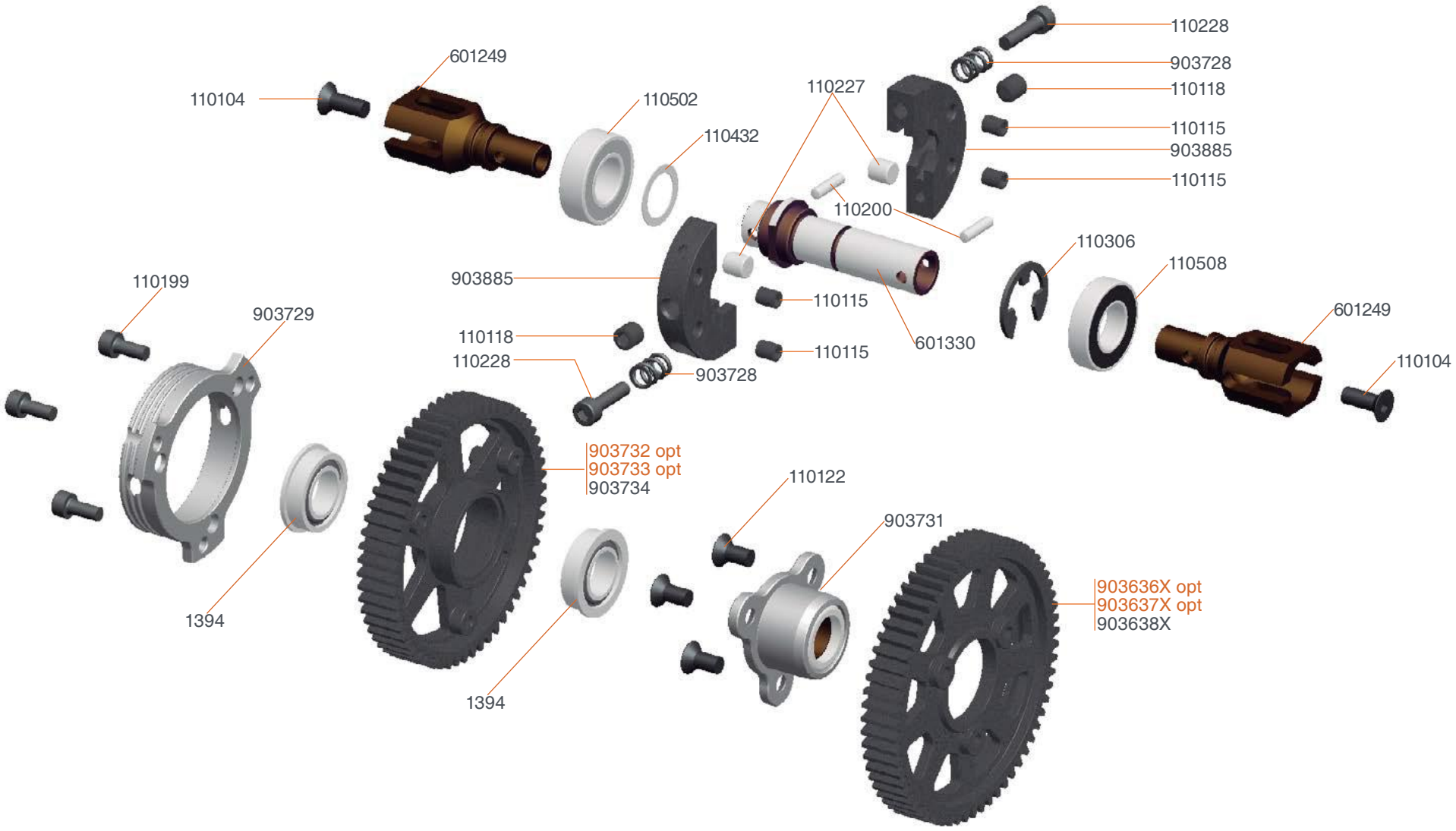
DIFFERENTIAL EXPLODED VIEW

#601068 HTD diff set 44T fr/rr SRX8



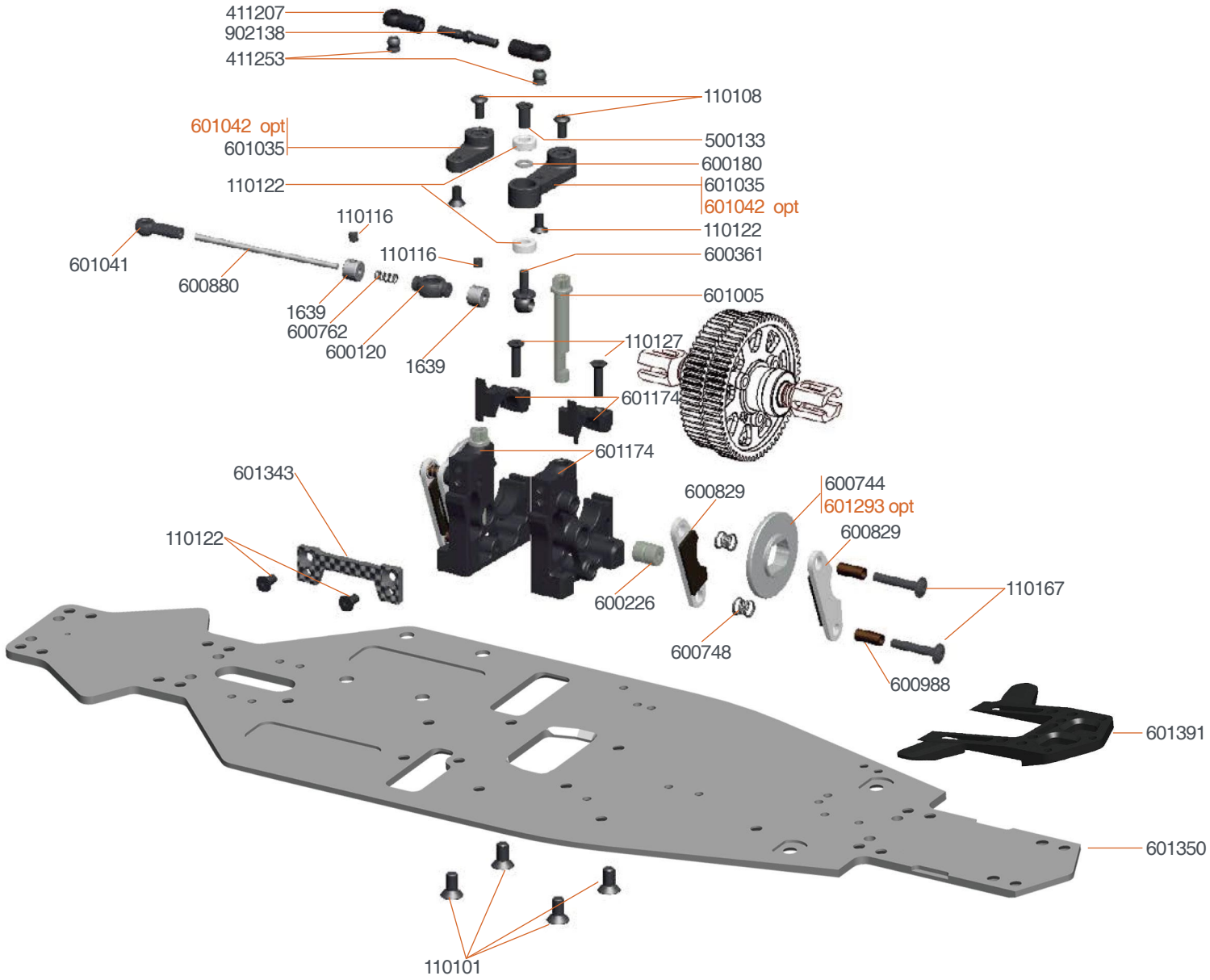
OPT

601250 HTD diff set 44T SRX8 GT V2
601251 HTD diff gear 44T SRX8 GT V2
601280 HTD diff X-shaft alu SRX8



OPT

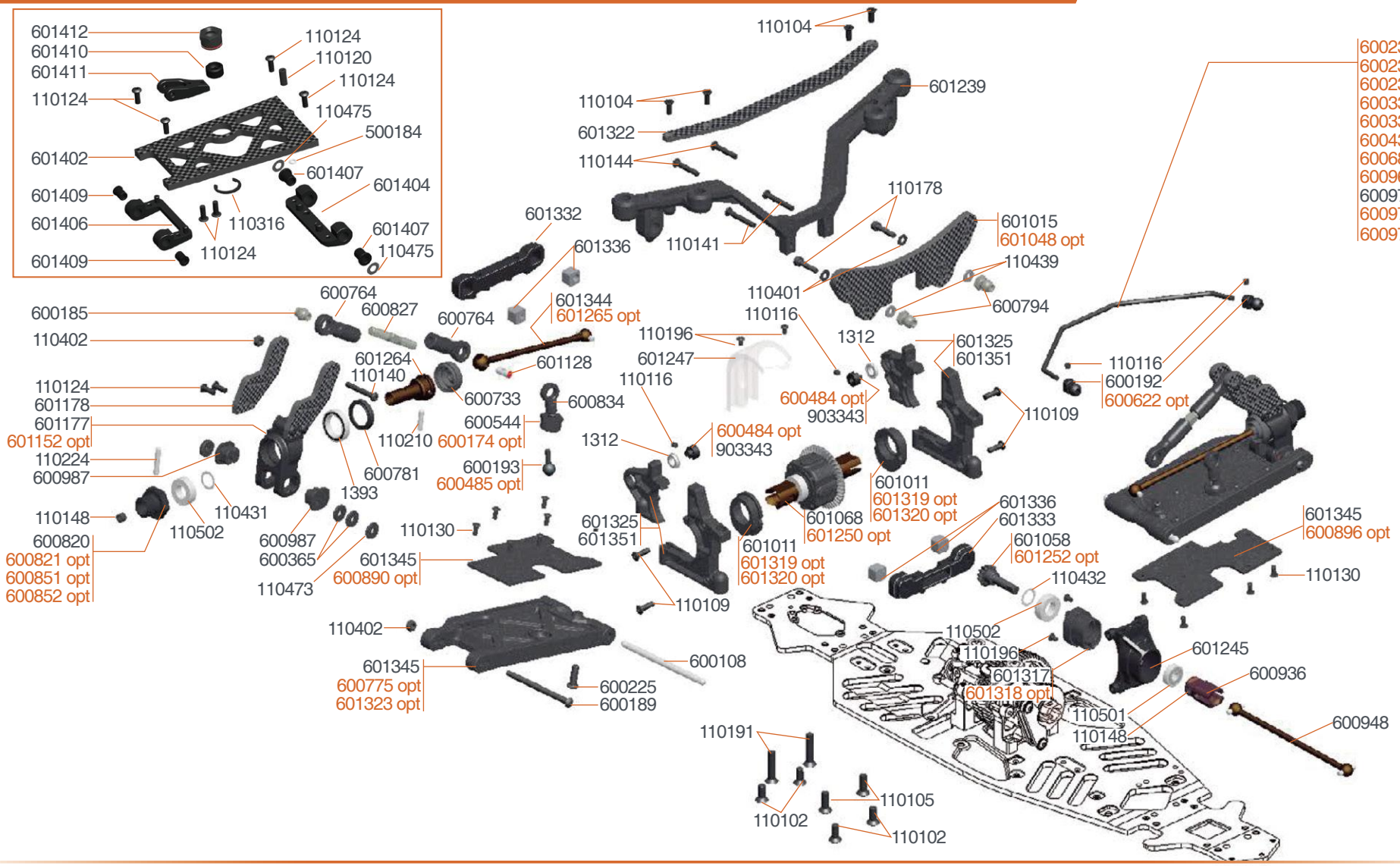
903636X	2-speed gear 61T SL8 XLI V2	903771	2-speed gear set (6) XLI Gen2
903732	2-speed gear 56T XLI Gen2		
903637X	2-speed gear 62T SL8 XLI		
903733	2-speed gear 57T XLI Gen2		



OPT

601042 Brake lever fr / rr alu SRX8 GT
601293 Brakedisk pro (2) SRX8

REAR EXPLODED VIEW



OPT

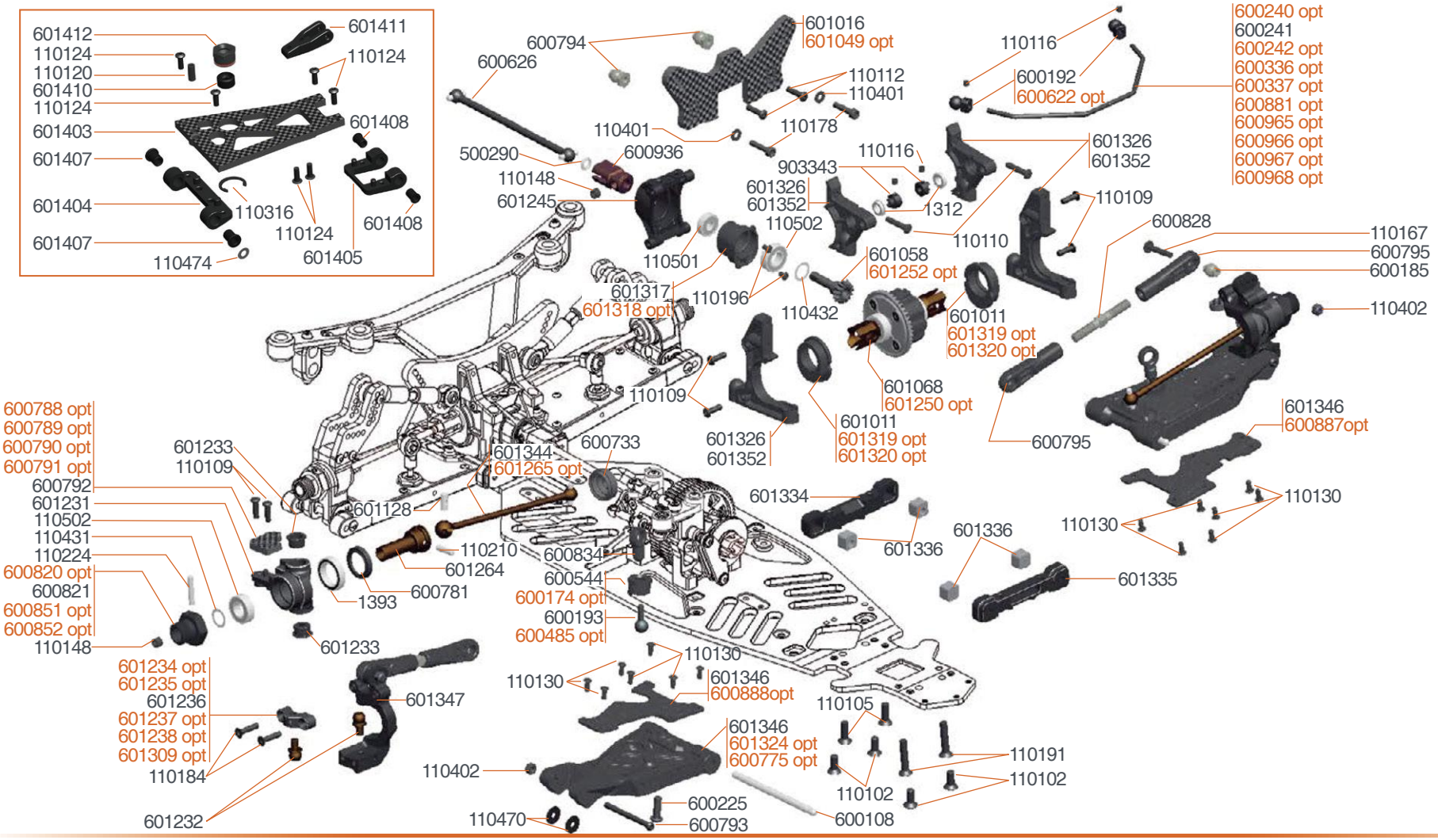
600174 Antirollbar nut (2)
600338 Antiroll bar rear 1.8mm
600339 Antiroll bar rear 2.0mm
600434 Antiroll bar rear 2.4mm
600237 Antiroll bar rear 2.3mm
600238 Antiroll bar rear 2.5mm
600239 Antiroll bar rear 2.7mm
600684 Antiroll bar rear 3.0mm

600484 Antirollbar spacer 3mm alu (2)
600485 Pivotball threaded anti roll bar alu (2)
600896 Wishbone insert carbon RR Lower V2 SRX8
600851 Wheelhexagon 0mm light (2) SRX8
600852 Wheelhexagon +1mm light (2) SRX8
600890 Wishbone insert carbon RR Upper SRX8 (2)

600969 Antiroll bar rear 2.2 mm
600971 Antiroll bar rear 2.6 mm
600972 Antiroll bar rear 2.8 mm
601048 Shock Tower RR Straight arm SRX8-GT
600821 Wheelhexagon +1mm (2) SRX8
601152 Upright magnesium SRX8 GT (2)
601250 HTD diff set 44T SRX8 GT V2
601252 HTD diff pinion 12T SRX8 GT V2

600895 Wishbone RR L+R SRX8
601265 Driveshaft 98mm (2) V2
601323 Wishbone rr L+R SRX8 hard
601318 Pinion mount insert MH/ML alu SRX8 GT V2
601319 Diff excenters fr/rr H/L alu (2) SRX8 GT
601320 Diff excenters fr/rr alu MH/ML (2) SRX8 GT

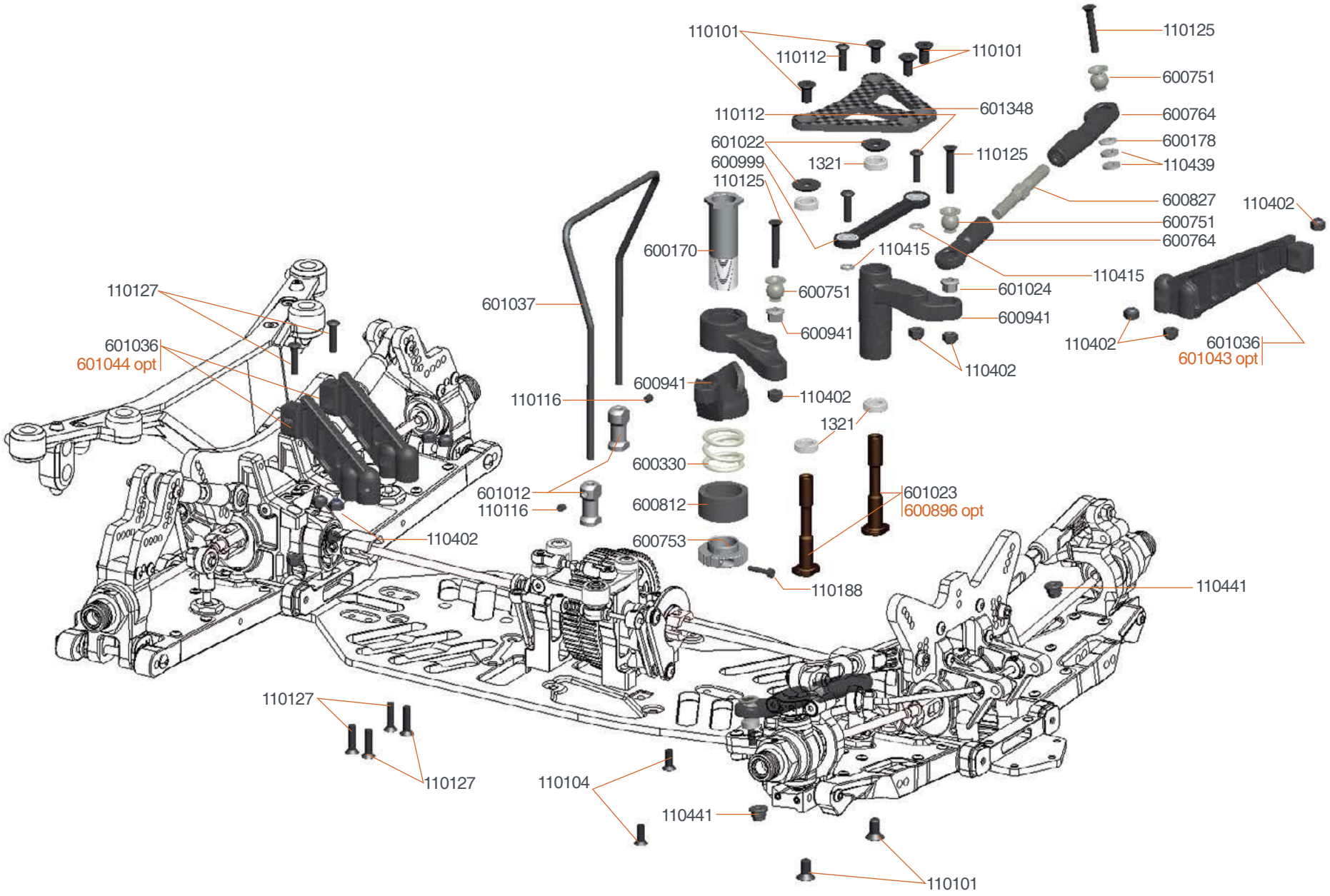
FRONT EXPLODED VIEW



600174	Antirollbar nut (2)	600792	Steering arm 4 carbon (2) SRX8	600821	Wheelhexagon +1mm (2) SRX8		Wishbone FR L+R SRX8
600336	Antiroll bar front 1.8mm	600851	Wheelhexagon 0mm light (2) SRX8	01234	Adjustable casterblock mount 0deg L+R SRX8	601265	Driveshaft 98mm (2) V2
600337	Antiroll bar front 2.0mm	600852	Wheelhexagon +1mm light (2) SRX8	GT		601309	Adjustable casterblock mount 6.25 deg L+R
600240	Antiroll bar front 2.3mm	600881	Antiroll bar front 3.0 mm	601235	Adjustable casterblock mount 2,5deg L+R	SRX8 GT	
600242	Antiroll bar front 2.7mm	600887	Wishbone insert carbon FR Lower SRX8	SRX8 GT		601318	Pinion mount insert MH/ML alu SRX8 GT V2
600484	Antirollbar spacer 3mm alu (2)	600888	Wishbone insert carbon FR Upper SRX8	601237	Adjustable casterblock mount 7,5deg L+R	601319	Diff excenters fr/rr H/L alu (2) SRX8 GT
600485	Pivotball threaded anti roll bar alu (2)	600965	Antiroll bar front 2.2 mm	SRX8 GT		601320	Diff excenters fr/rr alu MH/ML (2) SRX8 GT
600622	Pivotball antirollbar alu (4)	600966	Antiroll bar front 2.4 mm	601238	Adjustable casterblock mount 10deg L+R	601324	Wishbone fr L+R SRX8 hard
600788	Steering arm 0 carbon (2) SRX8	600967	Antiroll bar front 2.6 mm	SRX8 GT		600775	Wishbone FR L+R SRX8
600789	Steering arm 1 carbon (2) SRX8	600968	Antiroll bar front 2.8 mm	601250	HTD diff set 44T SRX8 GT V2		
600791	Steering arm 3 carbon (2) SRX8	601049	Shock Tower FR Straight arm SRX8	601252	HTD diff pinion 12T SRX8 GT V2 600775		

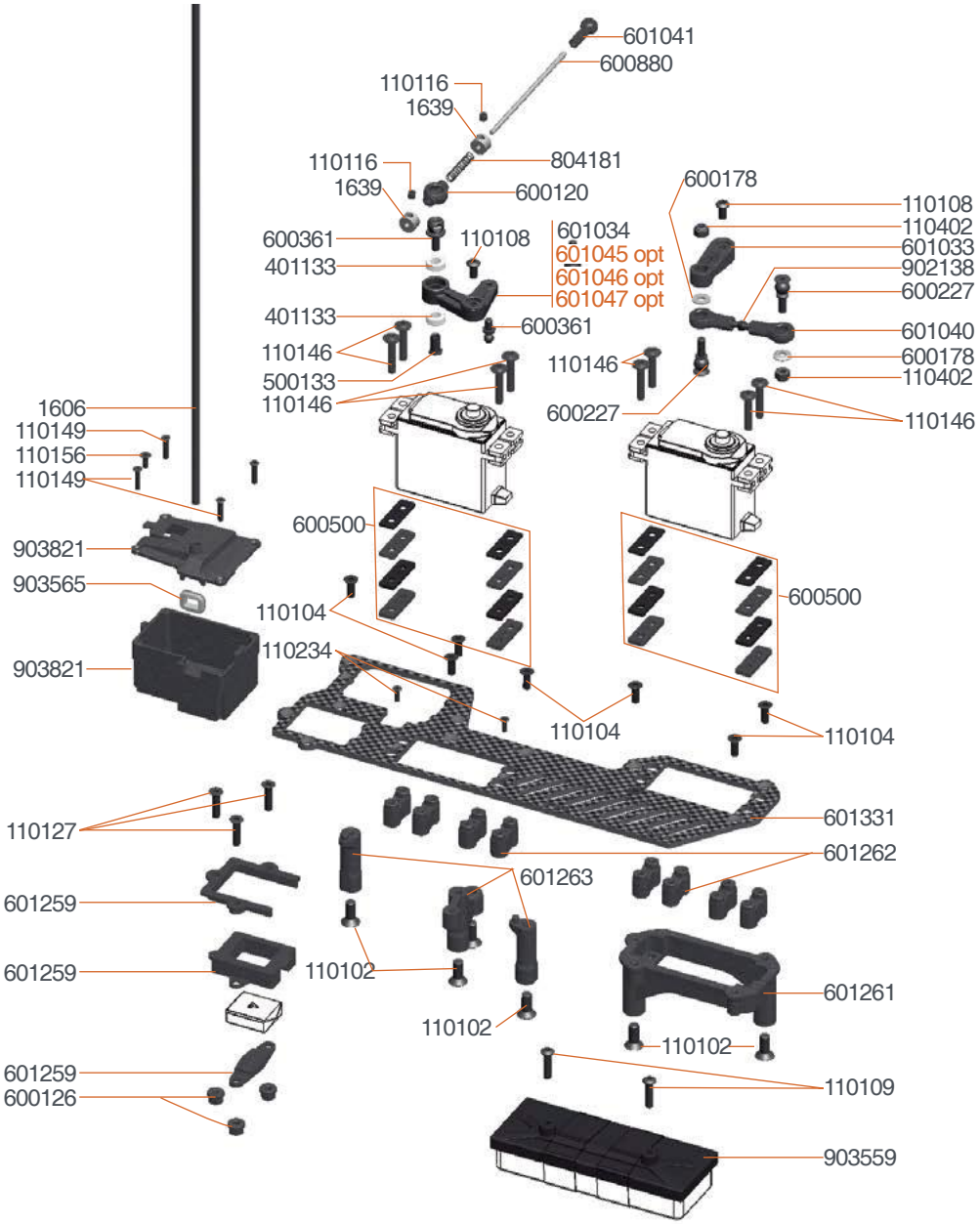
OPT

STEERING EXPLODED VIEW



OPT

601044 Transmission brace rr alu SRX8 GT (2)
601043 Transmission brace fr alu SRX8 GT
601157 Steering post alu SRX8 GT (2)



OPT

601045 Servo lever throttle 23T alu SRX8 GT
601046 Servo lever throttle 24T alu SRX8 GT
601047 Servo lever throttle 25T alu SRX8 GT

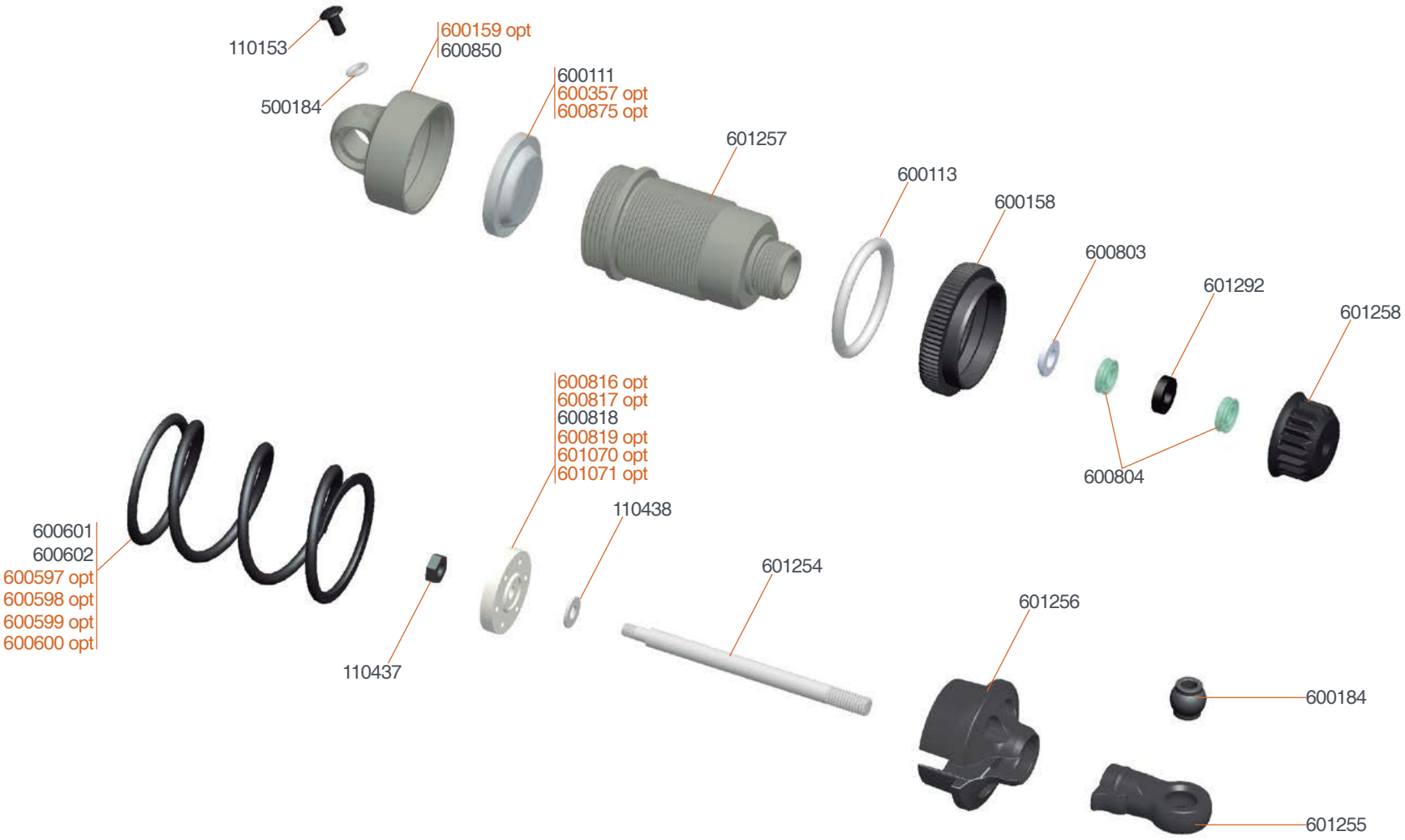
#601163 ADJUSTABLE GT CLUTCH SET



OPT

903643 Centax gear-pinion alu 23T XLI
903645 Centax gear-pinion alu 25T XLI
601169 Adjustable GT clutchshoe yellow
903796 Centax spring XX-hard
903799 Centax gear-pinion alu 18T XLI Gen2
903801 Centax gear-pinion alu 20T XLI Gen2
903805 Centax gear-pinion alu set XLI Gen2 (6)
601166 Adjustable GT clutchbell alu coated

SHOCKS EXPLODED VIEW



601253 Shock set (2) SRX8 GT V2

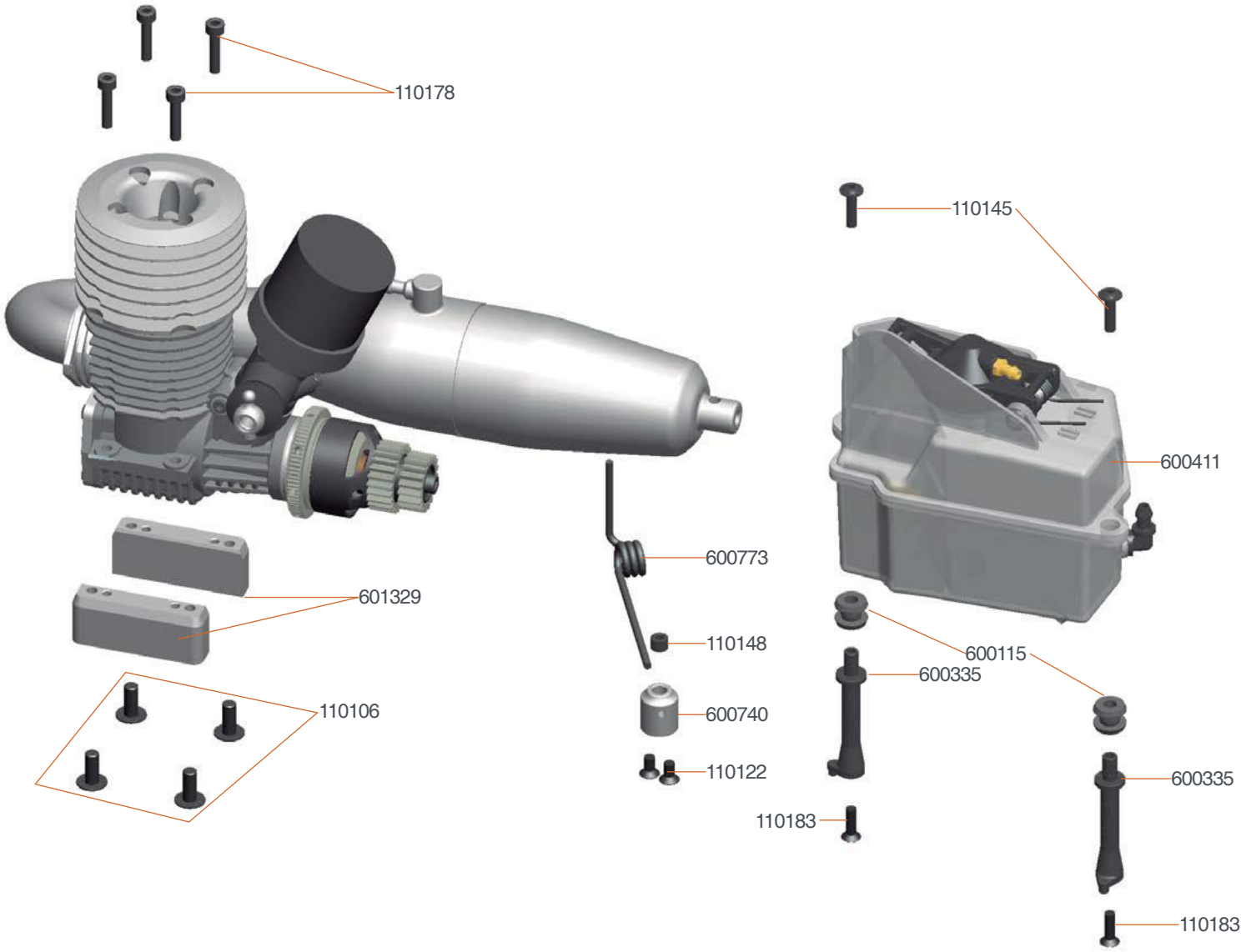
OPT

600597 Spring Fr/Rr Red 811GT 18lbs (2)
600598 Spring Fr/Rr Purple 811GT 21lbs
600599 Spring Fr/Rr Yellow 811GT 29lbs
600600 Spring Fr/Rr White 811GT 31.5lbs

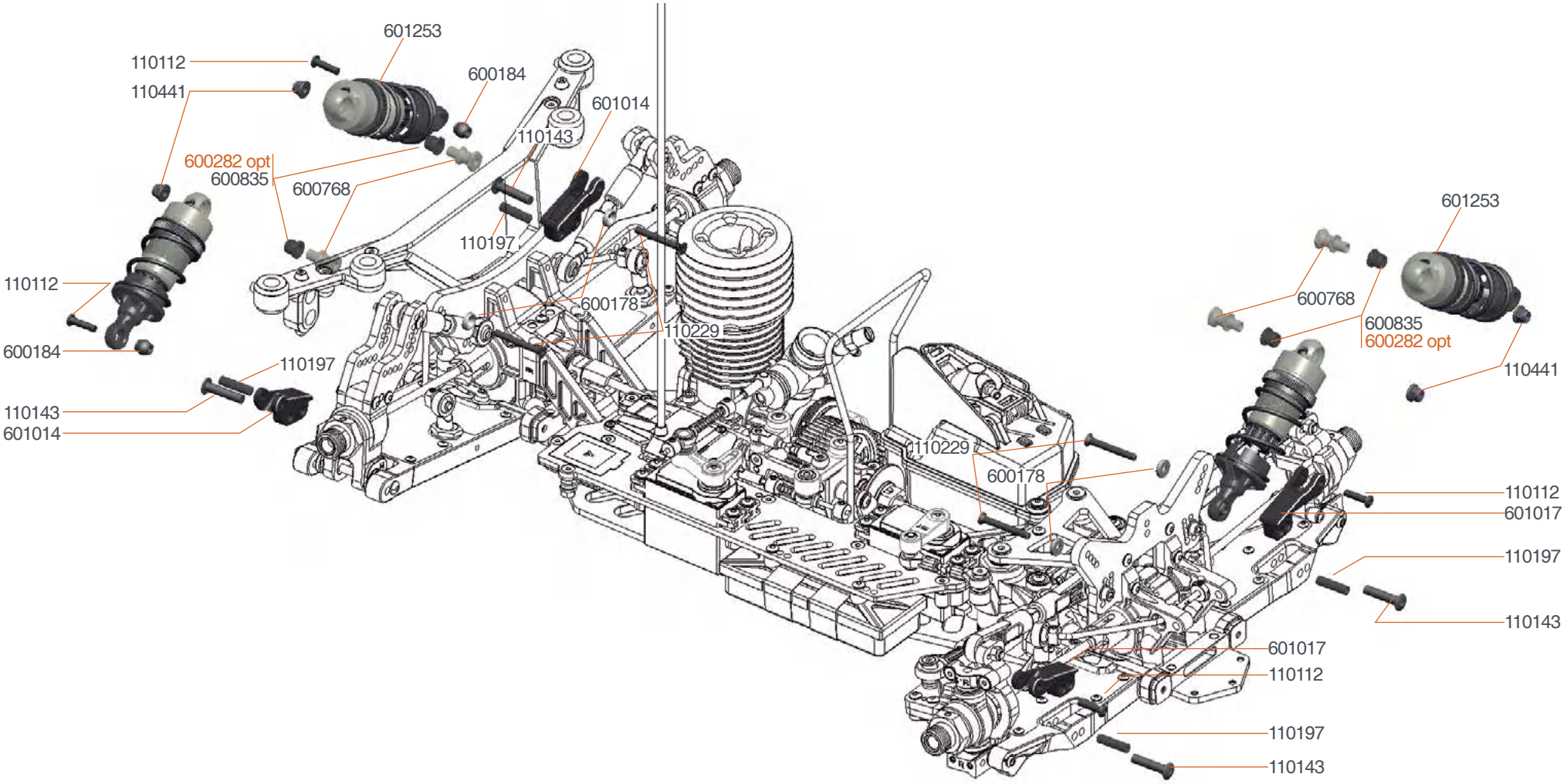
600357 Membrane webbed silicone (4)
600875 Shock top gasket (4) SRX8
600816 Shock piston blank (4) SRX8
600817 Shock piston 5 holes (4) SRX8

600819 Shock piston 8 holes (4) SRX8
601070 Shock piston angled 1.2mm 8holes (4) SRX8

601071 Shock piston angled 1.3mm 8holes (4) SRX8
600159 Shock top alu (2)

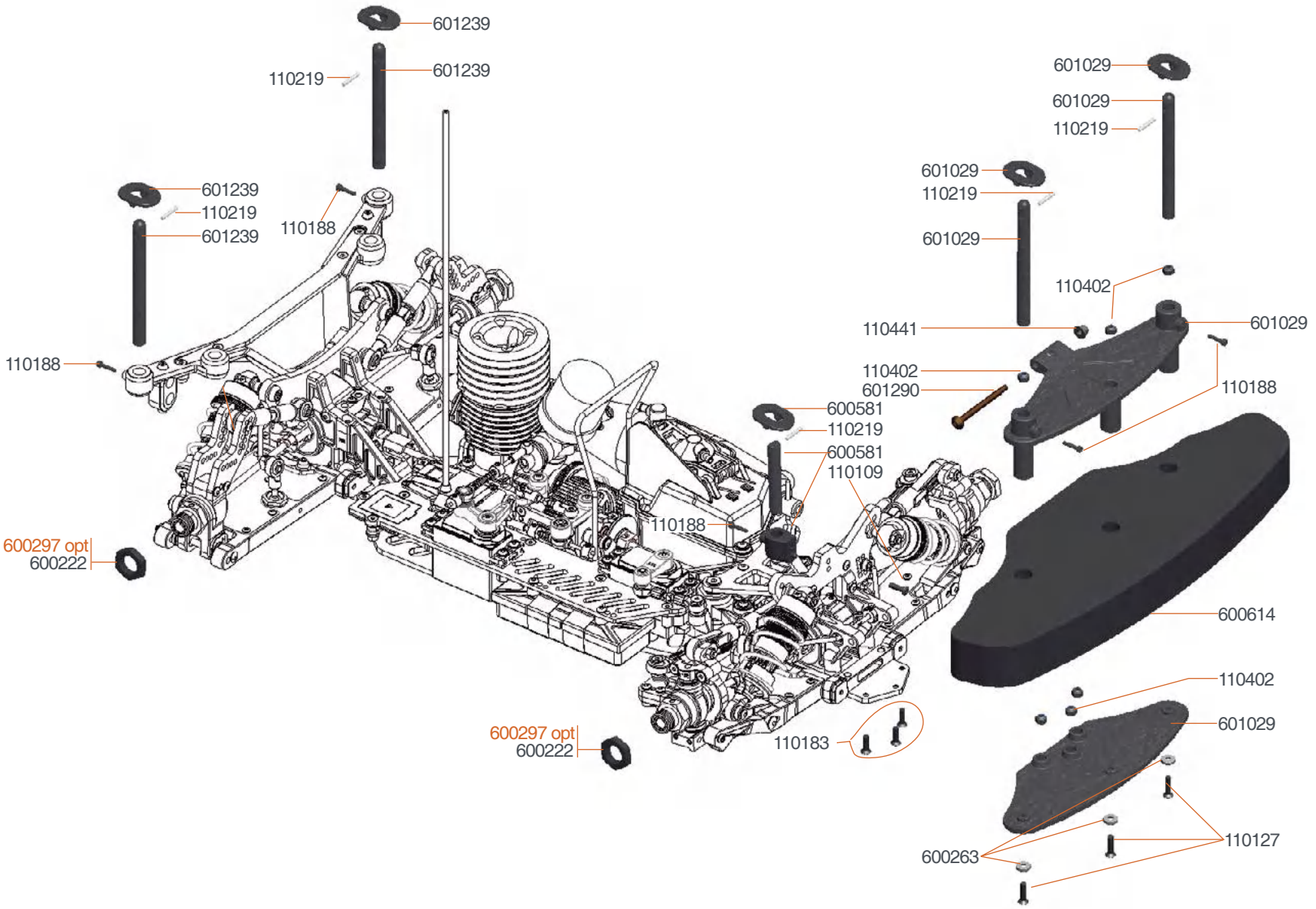

110178
601329
110106
600773
110148
600740
110122
110183
110145
600411
600115
600335
600335
110183

OPT



OPT

600282 Shock-pivot bushing delrin (4)



OPT

600297 Wheel-nut 17mm flanged/light (4)
601050 Bumperplate carbon set SRX8 GT
601051 Bodypost brace carbon fr/rr SRX8 GT
601269 Aero bumper set SRX8 GT

NOTES:

TEAM SERPENT NETWORK

SRX8GT R SPARE PARTS



SRX8GT R OPTIONALS PARTS



SERPENT TOOLS



SERPENT MERCHANDISING



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SRX8 GTR EC



Manual SRX8GTR EC # 83861-1

SERPENT