



INSTRUCTION MANUAL
& REFERENCE GUIDE



Welcome to Serpent

You are now part of the worldwide network of Serpent drivers, which gives you superior technical support and access to many benefits that only Serpent drivers can enjoy.

The Serpent Spyder offers state of the art specifications and leads the way in 1/10 buggy design, using all the knowledge we have gathered since 1980. Continuously pushing the performance envelope, Serpent's engineers have added many new and innovative features that can help take your Serpent Spyder into the winner's circle.

INSTRUCTIONS

Serpent's long tradition of excellence extends to their 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. A default set-up sheet is added to have a good base set-up. Following the instructions will result in a well-built, high-performance racecar that will soon be able to unleash its full potential at the racetrack.

This instruction manual has been divided into sections that will logically lead you through the assembly process of your Serpent Spyder. Follow the assembly steps in the order presented to ensure that no problems occur during assembly. Each step indicates all the fasteners and small

parts used. Bag numbers identify the kit bag(s) that contains the appropriate parts.

EXPLODED VIEWS AND PARTS LIST

In the back of this manual it is possible to find the exploded views for the Serpent Spyder. These exploded views show the standard parts of a particular assembly step along with the Serpent part number.

The parts list include the optionals, hardware and merchandising. It indicates the part number and name of each part for easy reference when ordering.

A full partslist in excel can be downloaded from the car-page on www.serpent.com.

Below you will find some information on safety; read those well before using the car. Also some info on how to use the manual best.

The worldwide network of Serpent drivers, dealers and distributors will help you to get the maximum out of your Serpent Spyder.

Join the free Serpent forum for support, use our social media like Twitter and Facebook to follow all info and meet other Serpent drivers, watch the Serpent Youtube channel for video's, the Serpent Teamblog for racereports around the globe and the Serpent website for all other info and news.

Enjoy racing !

Team Serpent

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.

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.

INSTRUCTIONS, HOW TO USE

The kit includes bags, with bag numbers, which refer to the same step in the manual. Open only the indicated bag(s) per step and finish that part of the assembly.

Remaining parts will be needed later on in

the assembly process.

SETUP

In many assembly steps you mount specific parts that suit the default set-up. We advice to keep the separate default set-up sheet alongside the manual, during all assembly.

Other finetuning of the set-up, must be done at the track.

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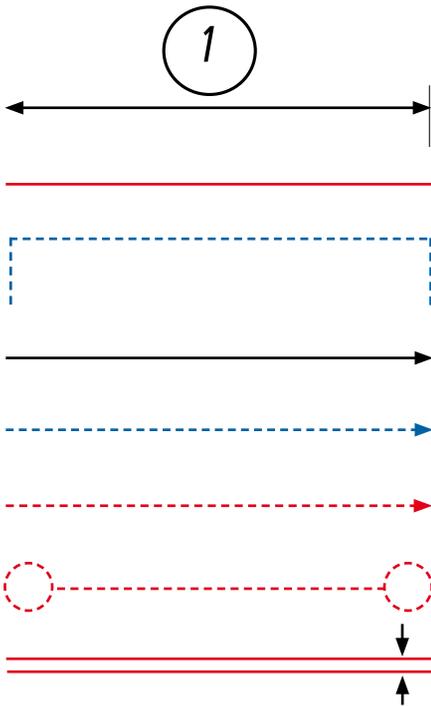
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Read this first!

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

USING THE MANUAL

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



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

Length after assembly

Assembly path of one item into another

Group of items (within lines) should be assembled first

Direction the item should be moved

Glue one item to another

Press/Insert one item into another

Connect one item to another

Gap between two items



Apply graphite grease (Grey),



Apply threadlock (Blue),



Apply silicone grease (Orange),

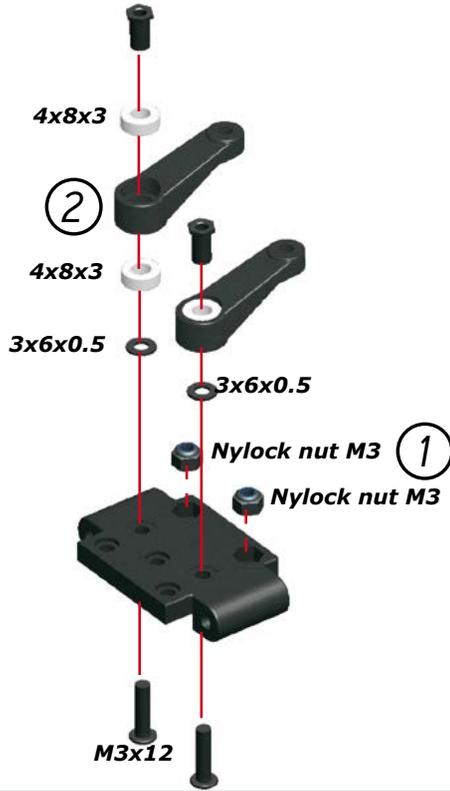


Apply silicone oil,

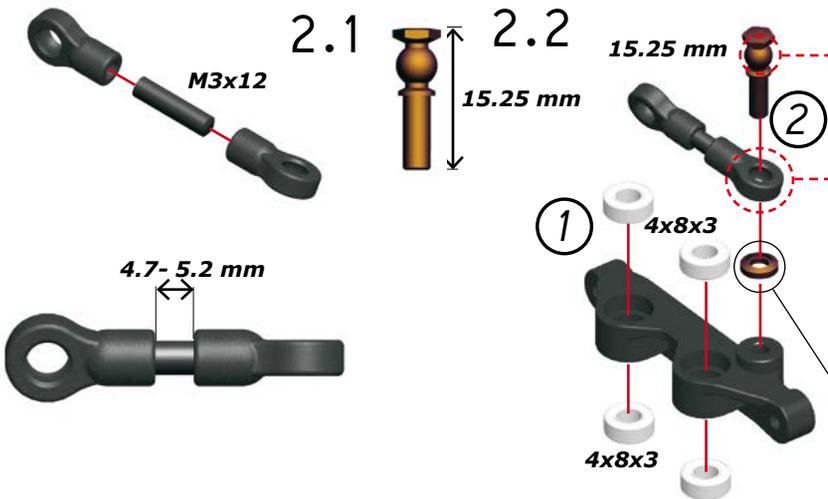
FRONT ASSEMBLY

STEP 1

Bag 1

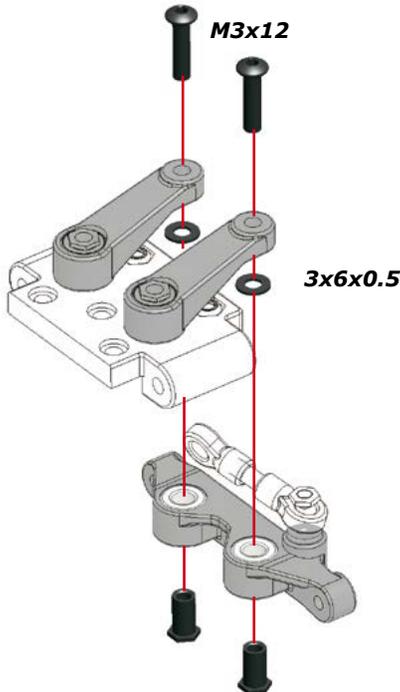


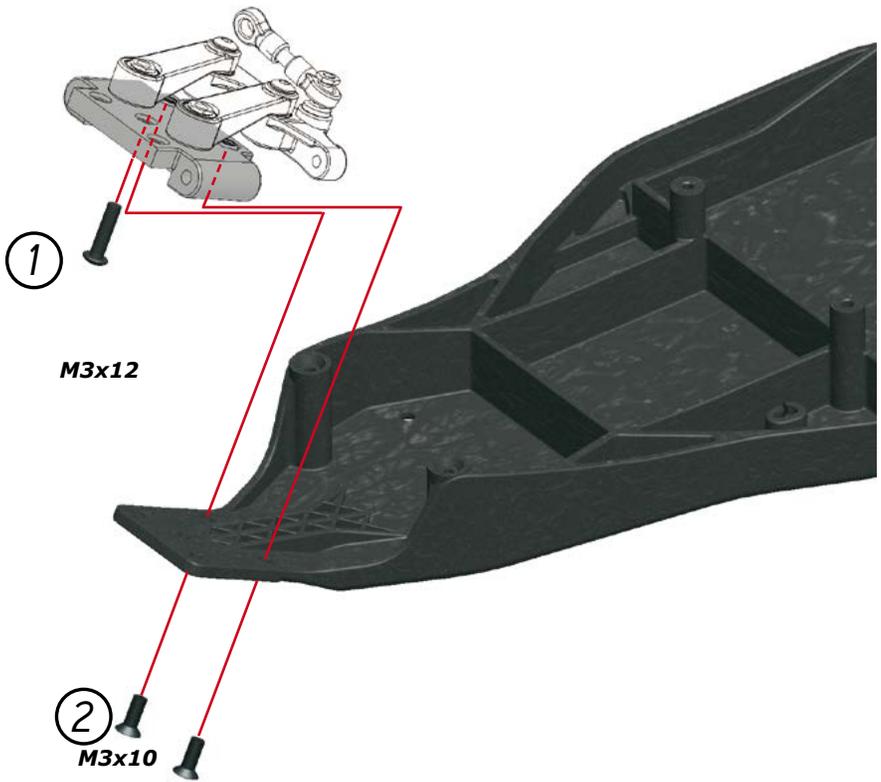
STEP 2



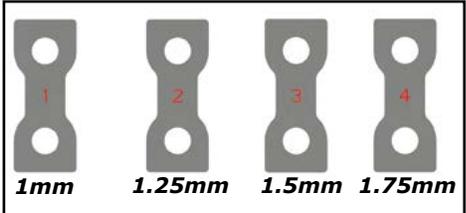
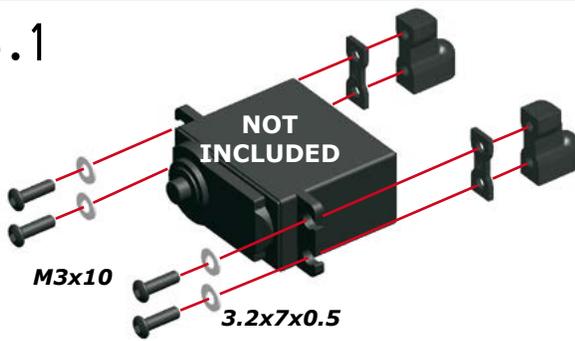
NOTE:
Make sure to assemble the ballstud through the conical shim in the direction indicated by the red arrow.

STEP 3





5.1

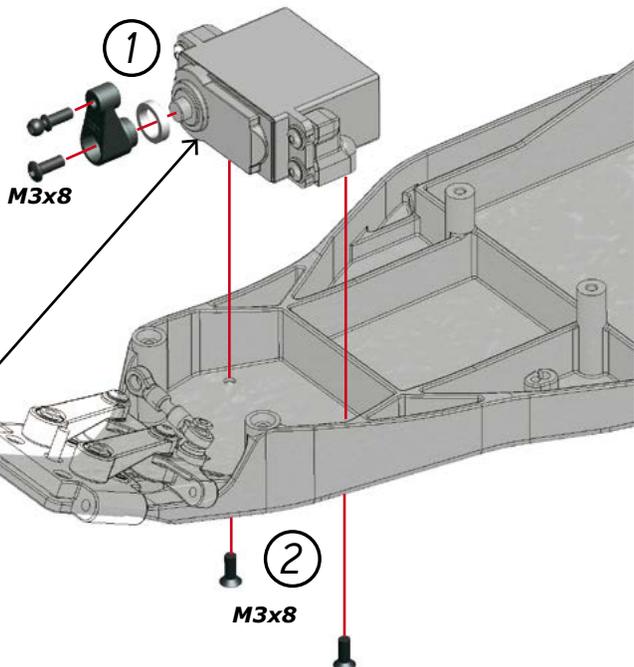


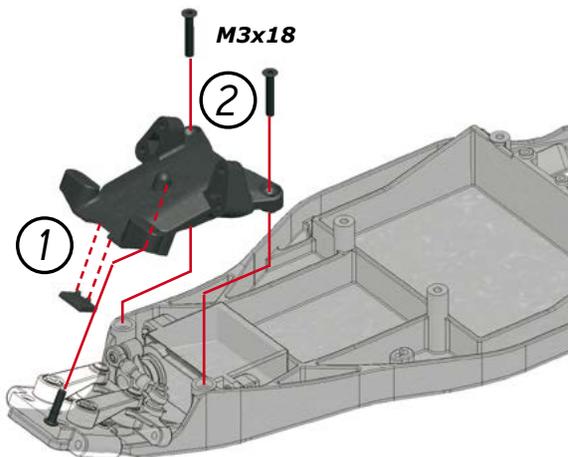
Servo Manufacturer	Spacer
Airtronics	1+3+4
Futaba	3+4
Hitec	2
JR	2
KO Propo	1+2
Spektrum	1+2+3

5.2

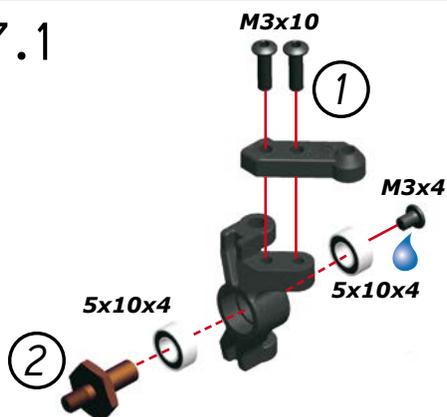
Use the following servo horns with this brand of servos:
 23 Sanwa / KO / JR
 24 Hitec
 25 Futaba / Hitec / Savox

NOTE:
 Make sure to put servo in neutral before mounting the steering lever



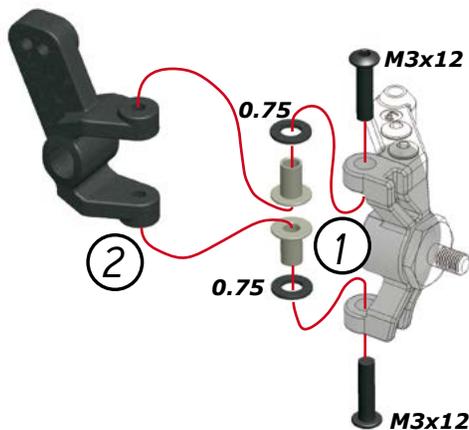


7.1



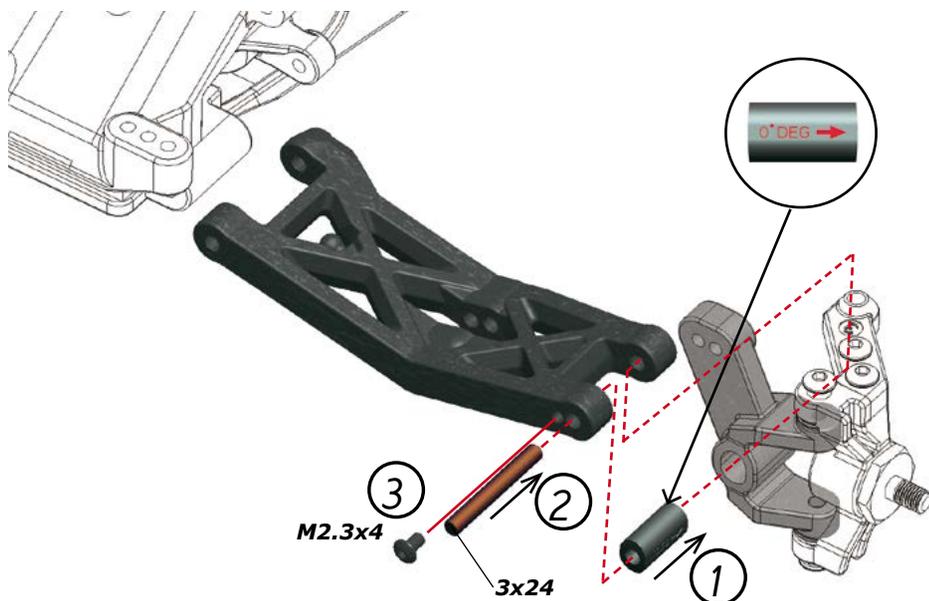
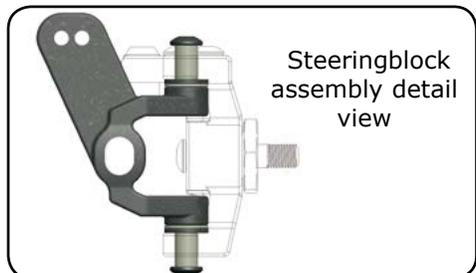
7.2

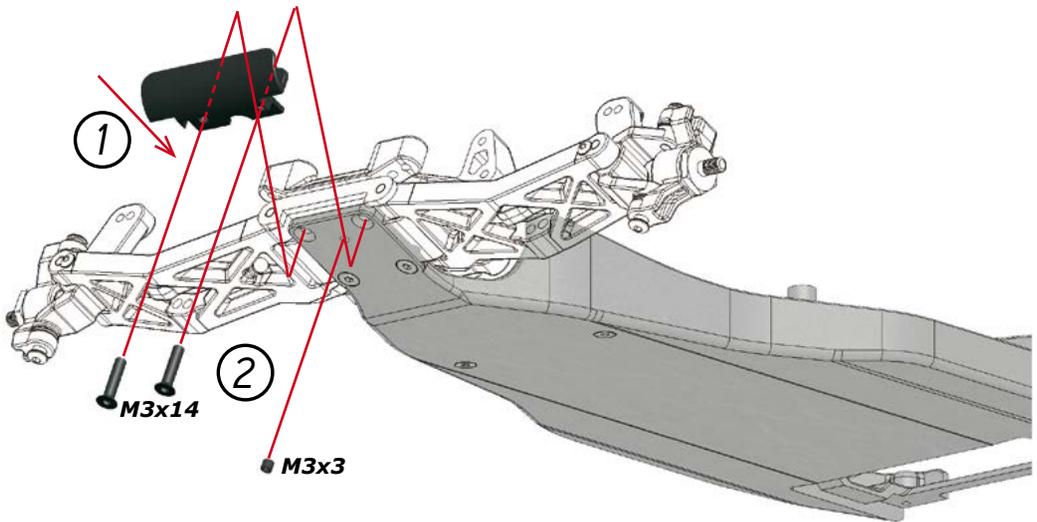
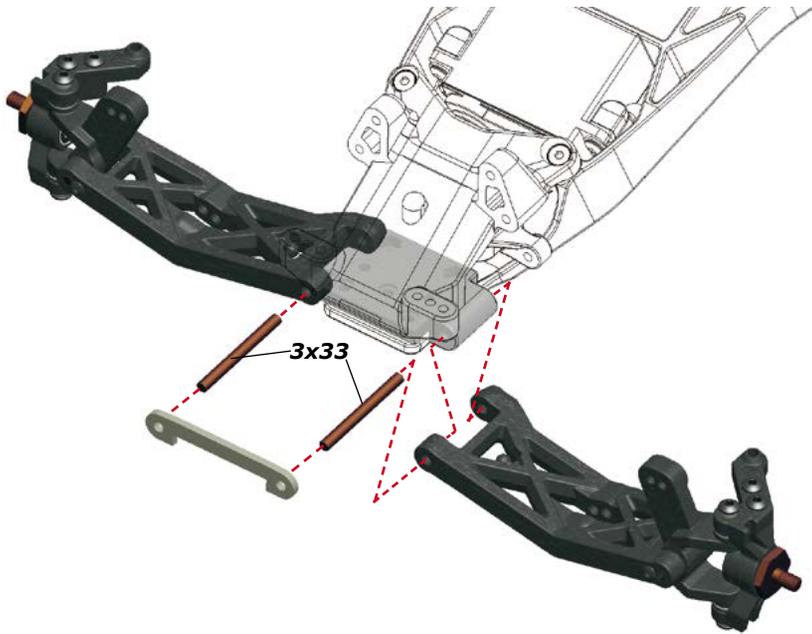
NOTE
Place the caster shims and the bushings in the steering block first. Then slide the assembly onto the casterblock



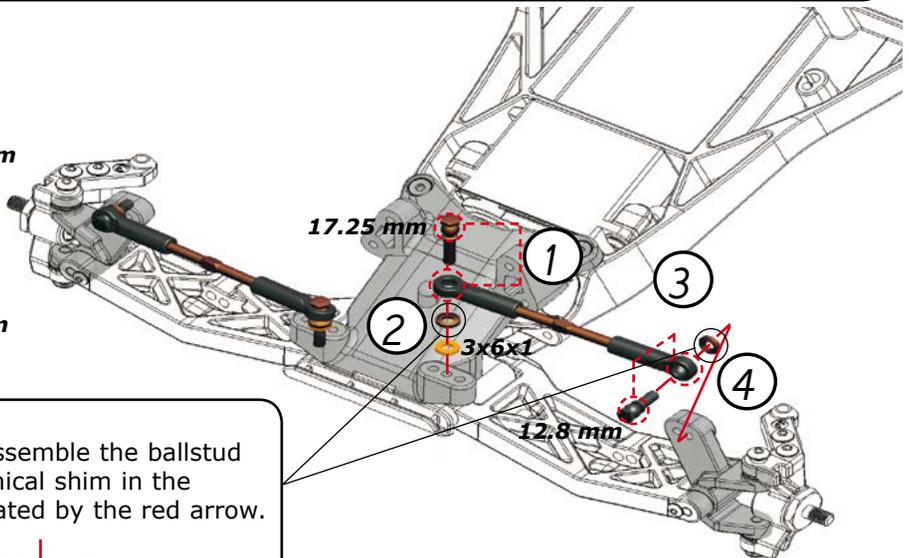
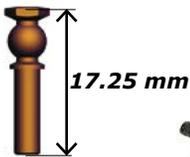
NOTE
There are three types of steering arms. Please, assemble number **2** as default

MORE ACKERMAN ← → LESS ACKERMAN

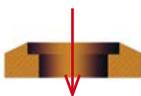


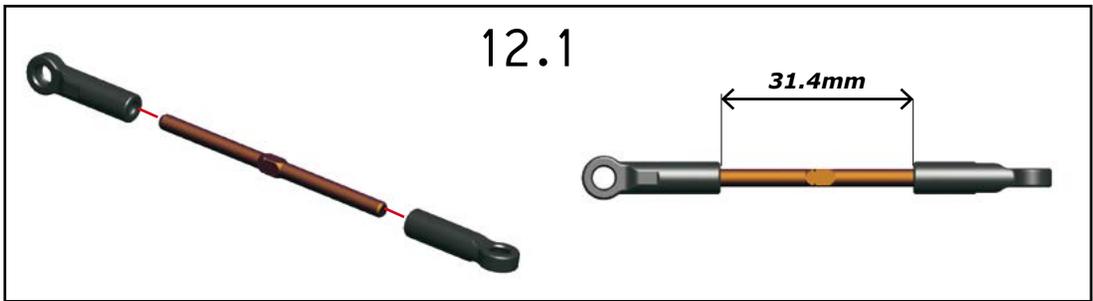


11.2



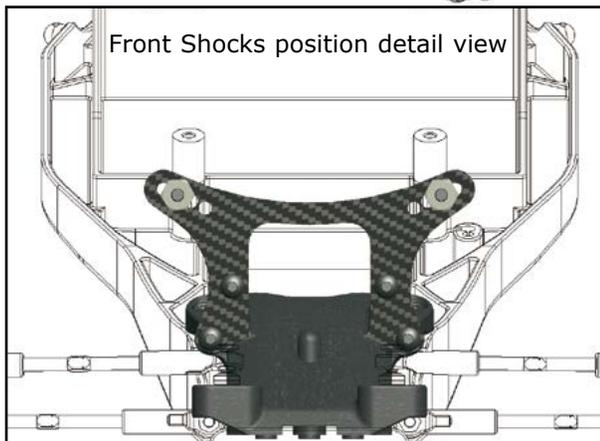
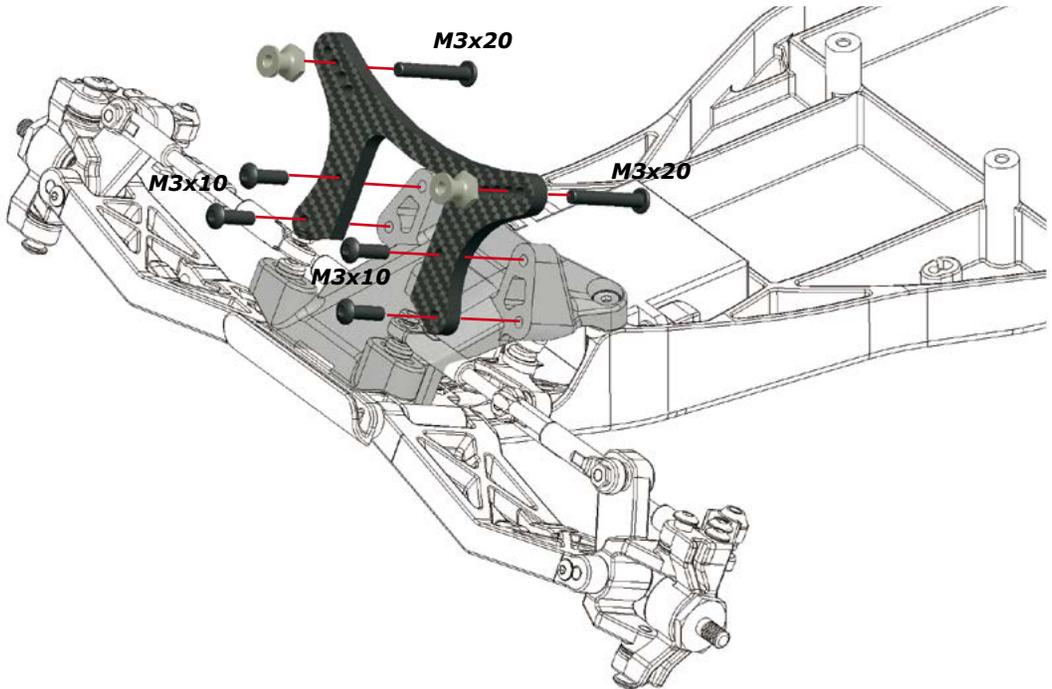
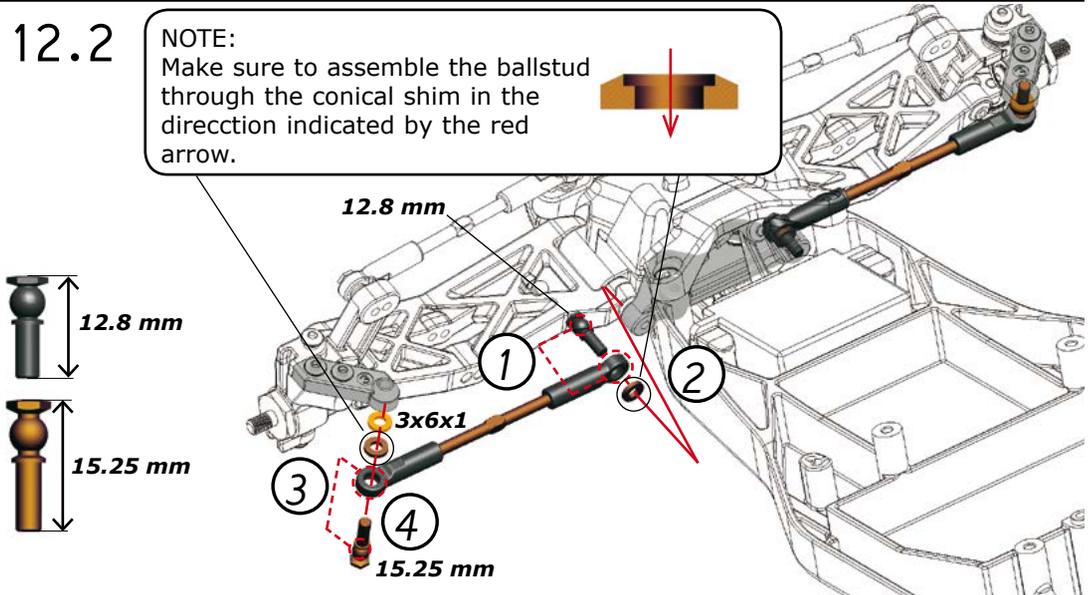
NOTE:
Make sure to assemble the ballstud through the conical shim in the direction indicated by the red arrow.





12.2

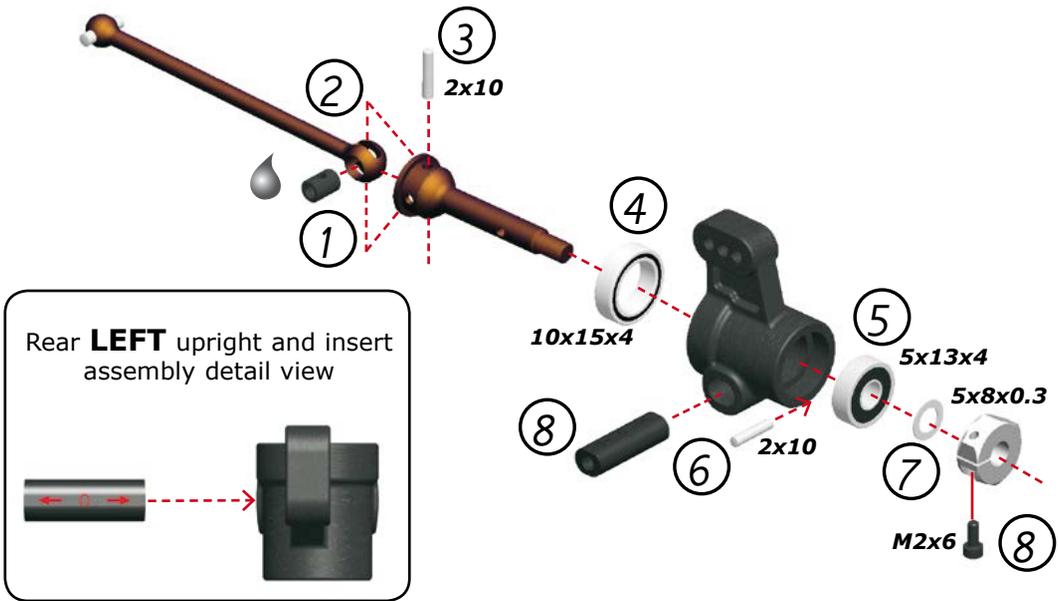
NOTE:
Make sure to assemble the ballstud through the conical shim in the direction indicated by the red arrow.



REAR ASSEMBLY

STEP
14

Bag
3



STEP
15



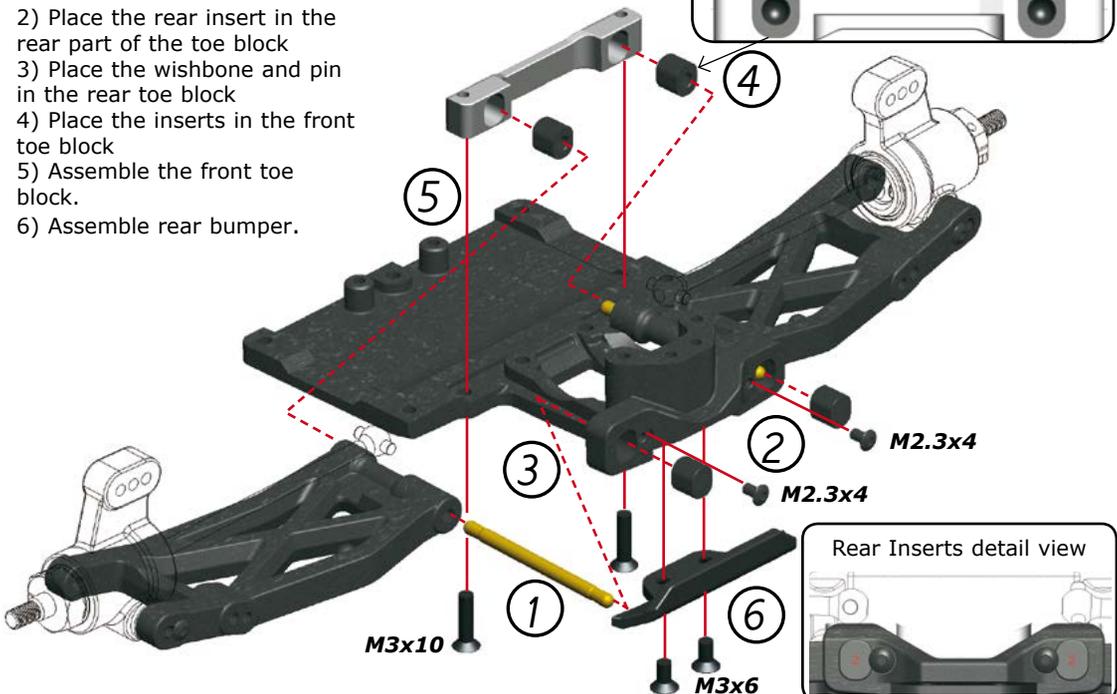
ASSEMBLY CORRECT ORDER:

- 1) Introduce the pin in the wishbone
- 2) Place the rear insert in the rear part of the toe block
- 3) Place the wishbone and pin in the rear toe block
- 4) Place the inserts in the front toe block
- 5) Assemble the front toe block.
- 6) Assemble rear bumper.

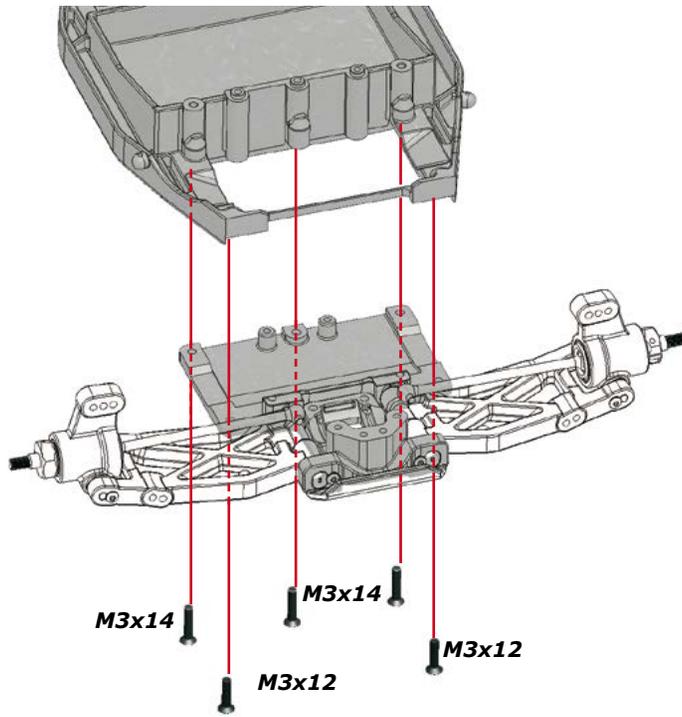
Front Inserts detail view (use number 2 also in the front block)



STEP
16



STEP
17

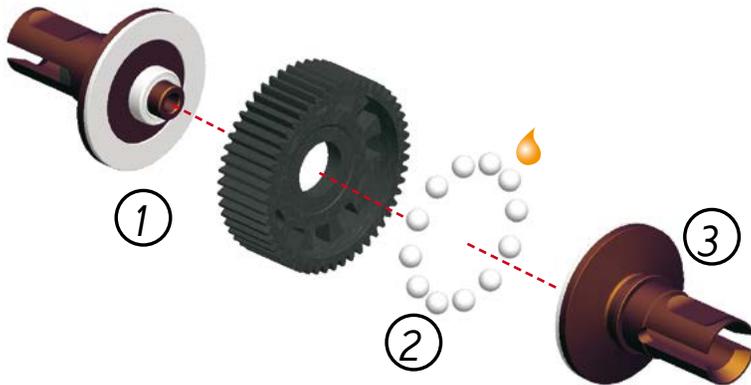


BALL DIFF ASSEMBLY

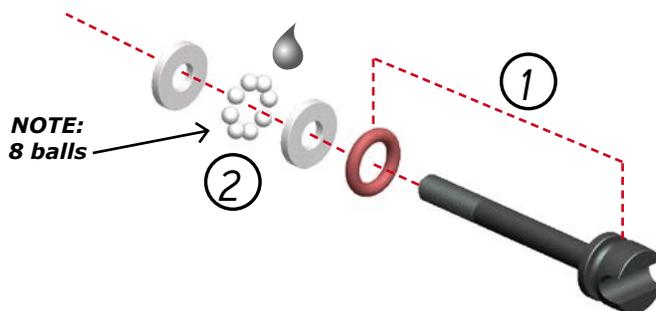
STEP
18

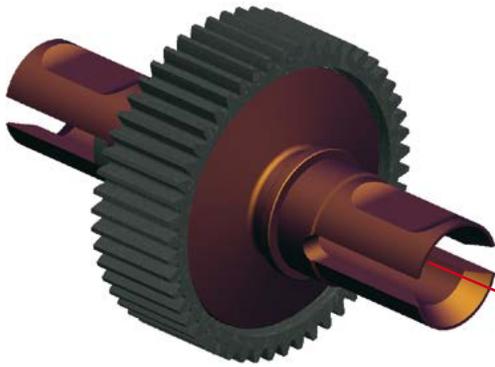


STEP
19



STEP
20

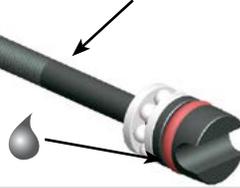




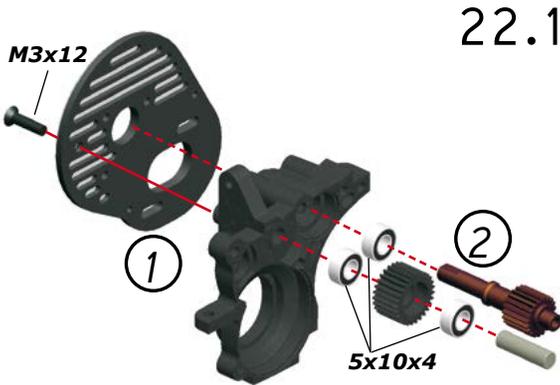
HOW TO ADJUST THE DIFF
As default setting screw all the way in, and back out ¼ turn.

Make small adjustments depending on the track condition.

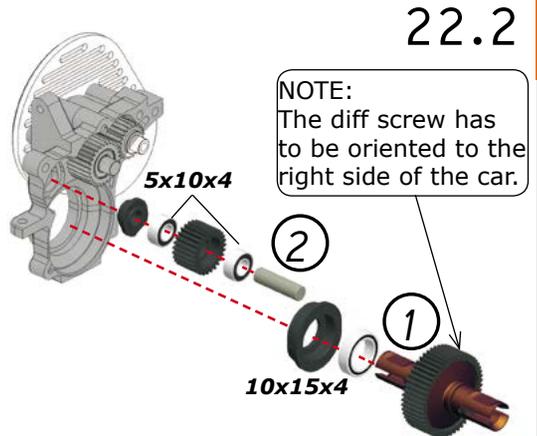
NOTE:
Lubricate o-ring with grease



TRANSMISSION ASSEMBLY

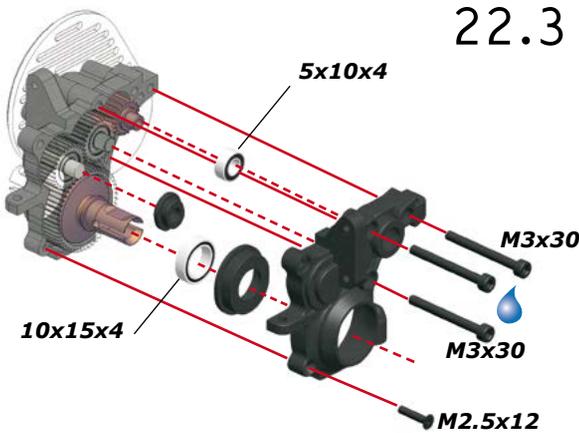


22.1



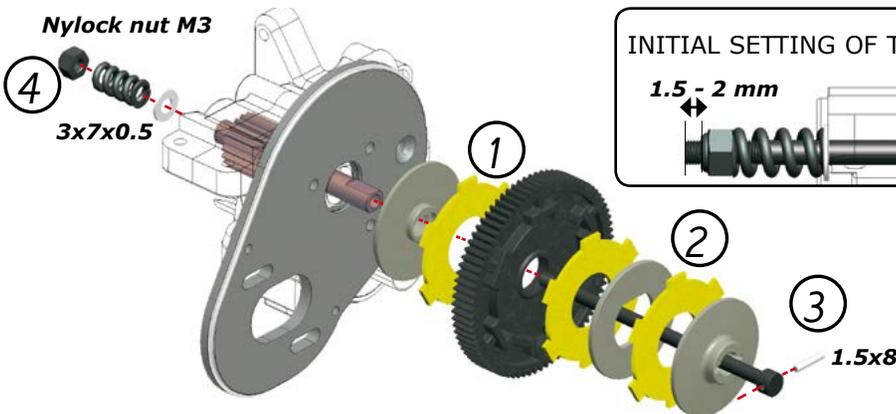
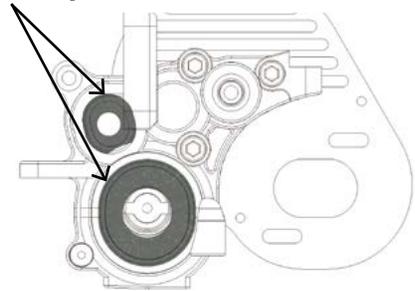
22.2

NOTE:
The diff screw has to be oriented to the right side of the car.



22.3

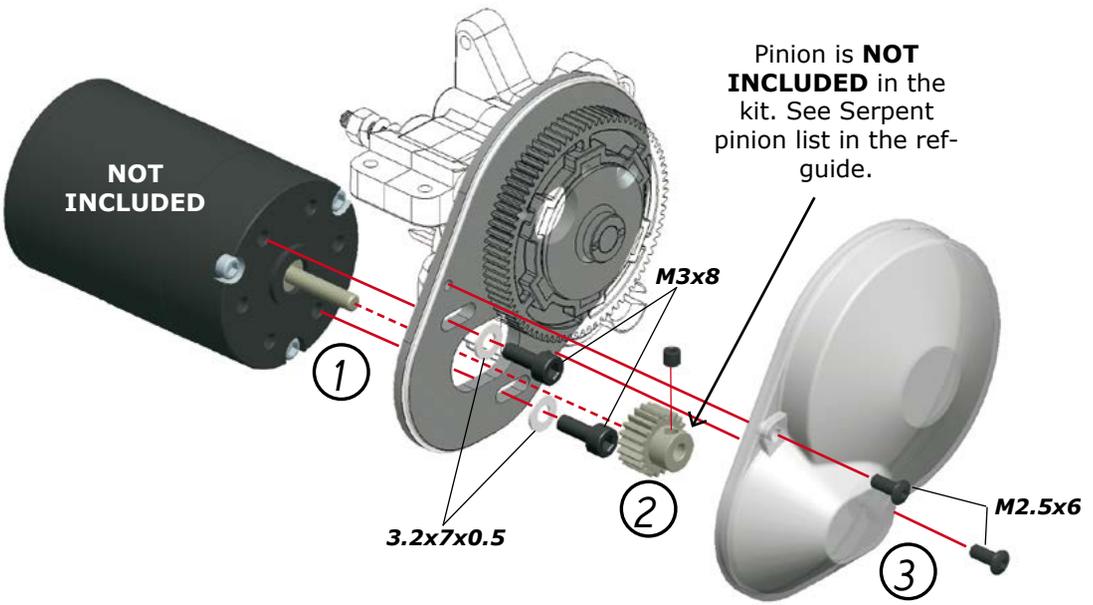
DIFF HEIGHT SETTING:
Change the indicated inserts to move the diff up or down. Adapt the diff and idler insert accordingly.
Default position mid diff.



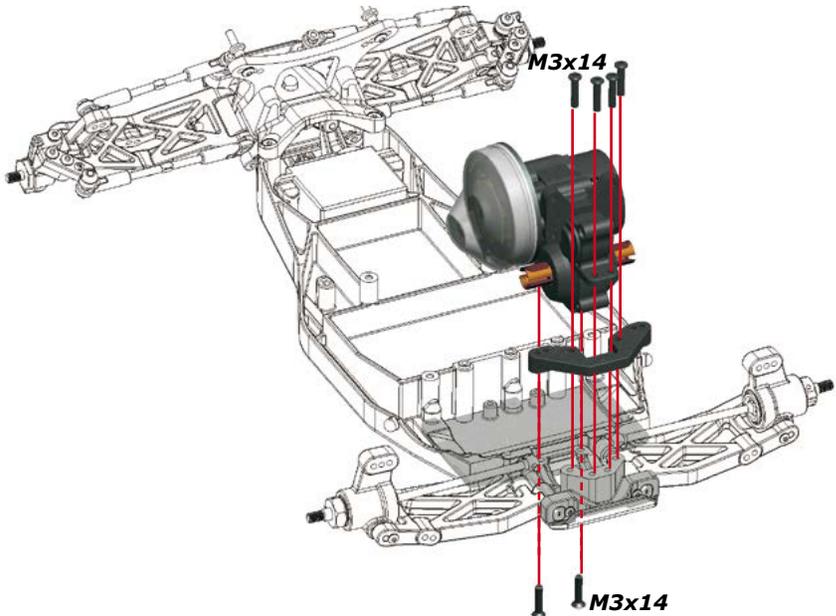
INITIAL SETTING OF THE SLIPPER

1.5 - 2 mm

STEP
24

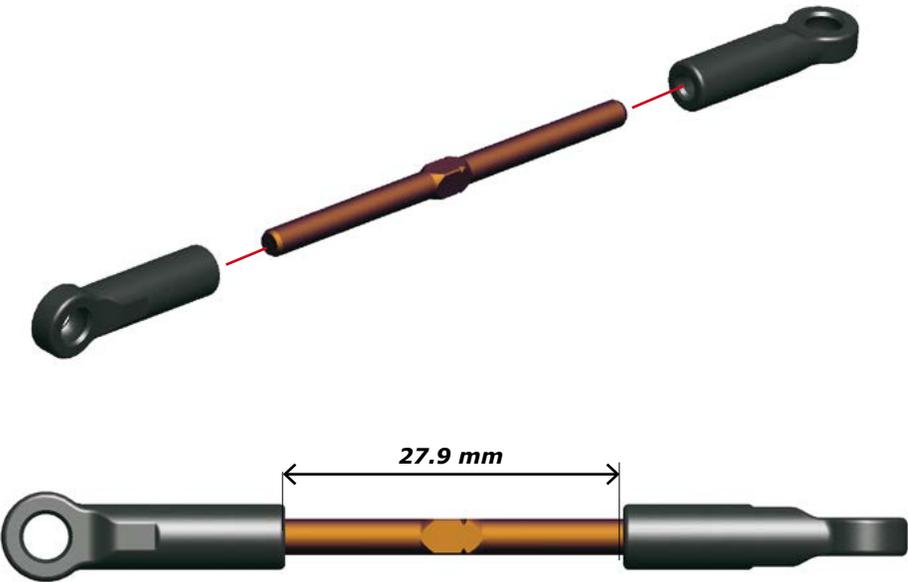


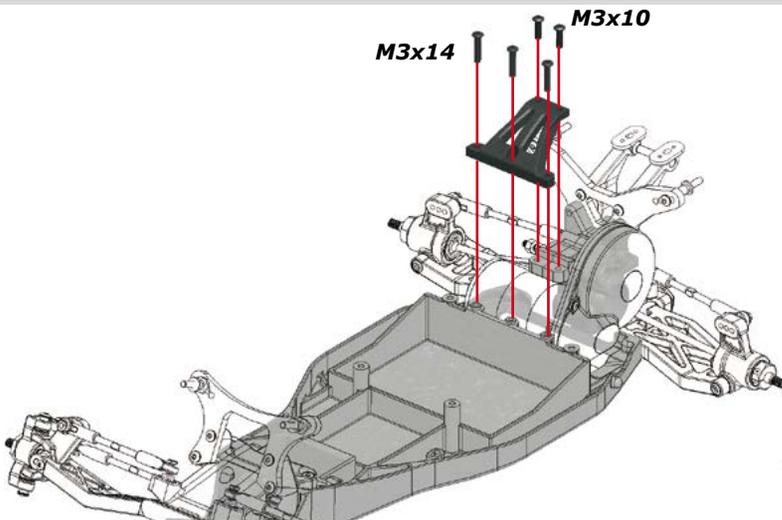
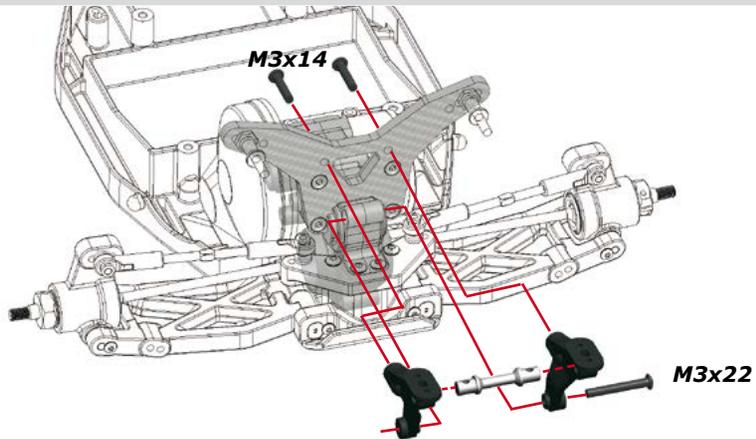
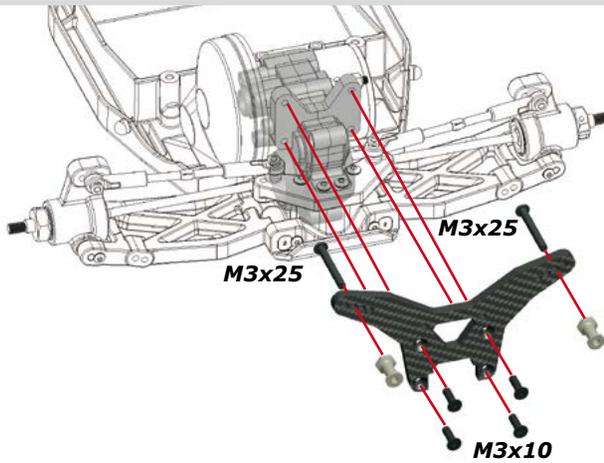
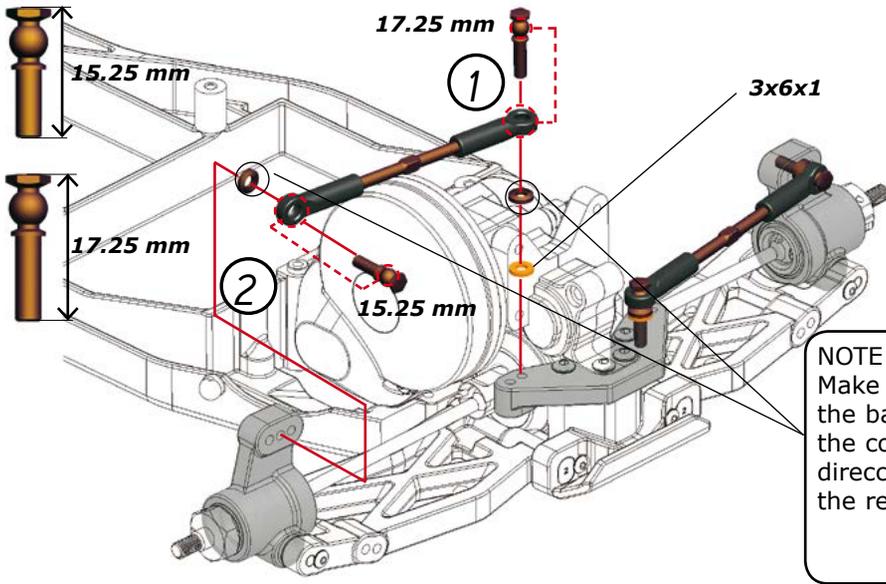
STEP
25



Bag
7

STEP
26





SHOCK ABSORBERS ASSEMBLY

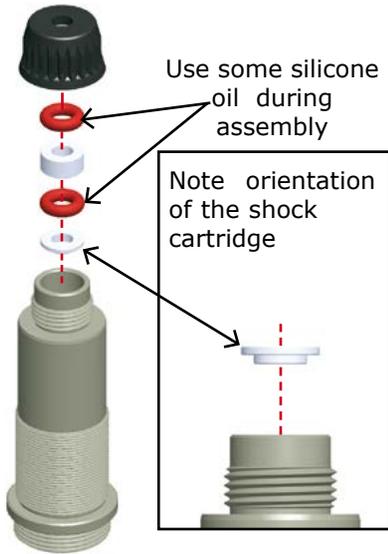
STEP
31

Bag
8
REAR
SHOCKS

Bag
9

FRONT
SHOCKS

31.1



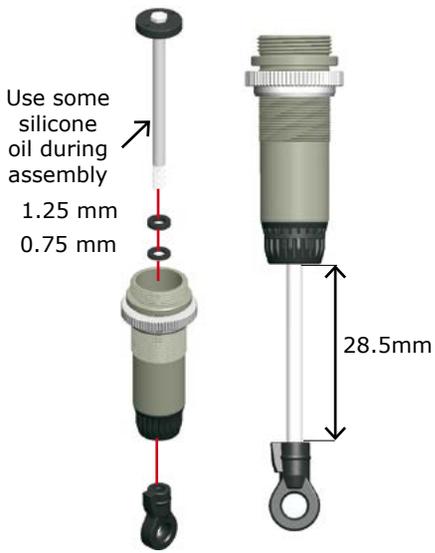
31.2



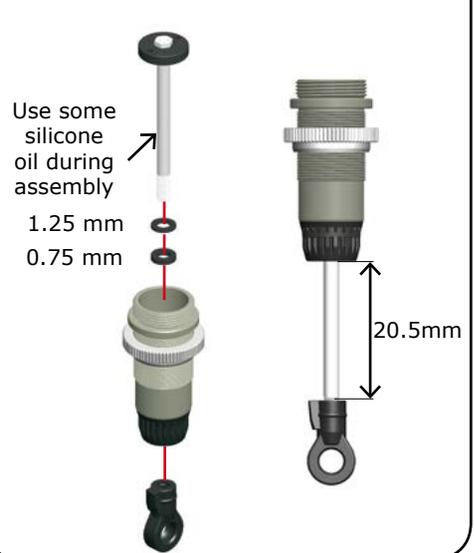
31.3



31.4 REAR SHOCKS



31.4 FRONT SHOCKS



31.5

Fill the shockbody with silicone oil fully.

Move the shockrod up and down slowly to let airbubles escape



31.6

Apply the gasket and cap and close fully.

Bleed: push the shockrod all the way in slowly, to allow excessive oil to escape.



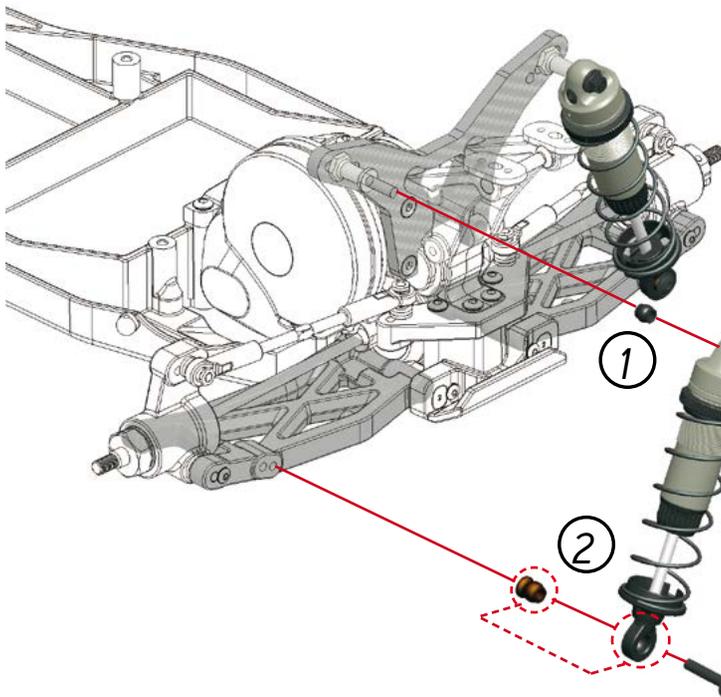
31.7

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



31.8

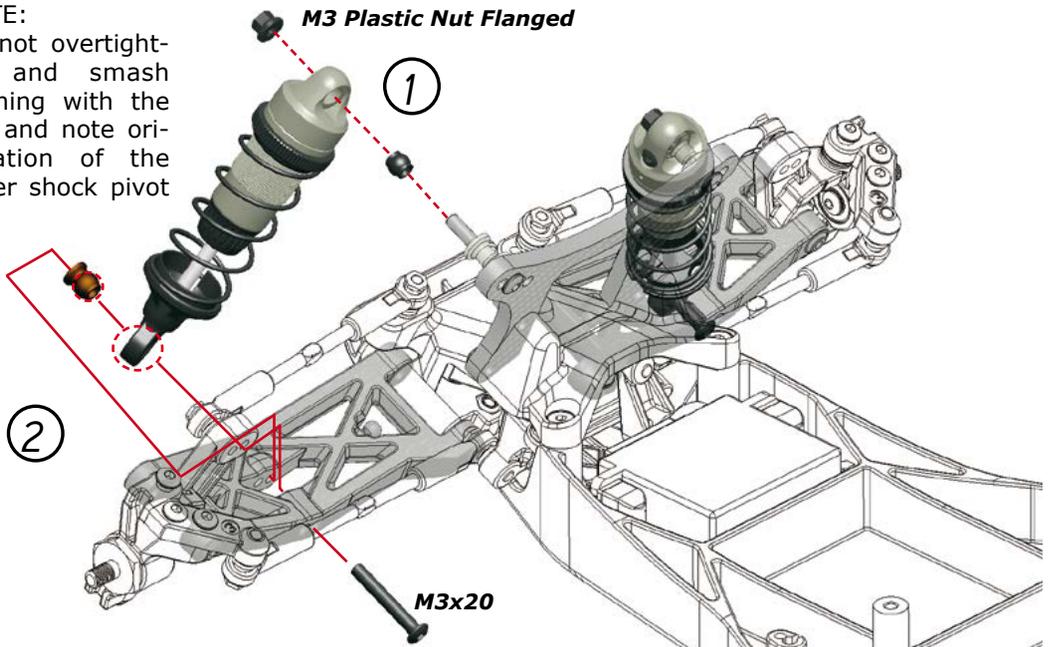
Assemble the spring and spring-cup (align correctly) to complete the shock.



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

STEP 32

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

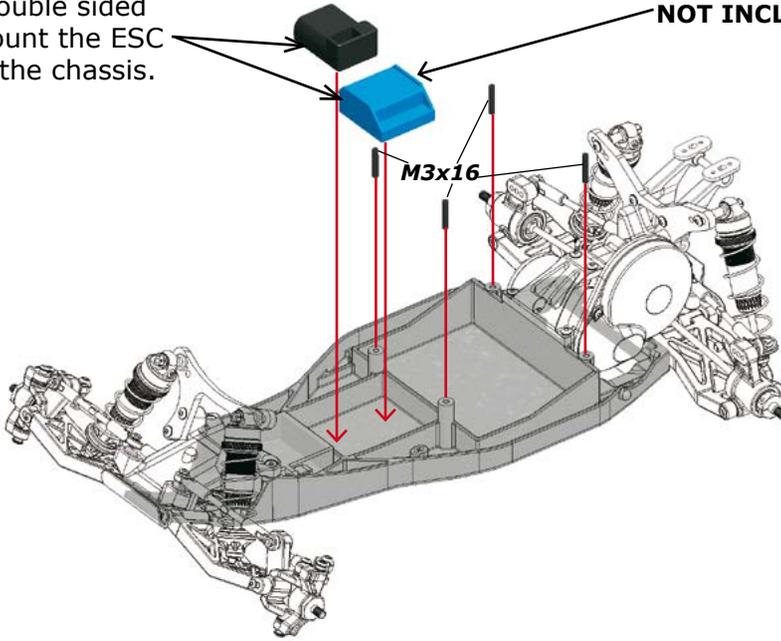


STEP 33

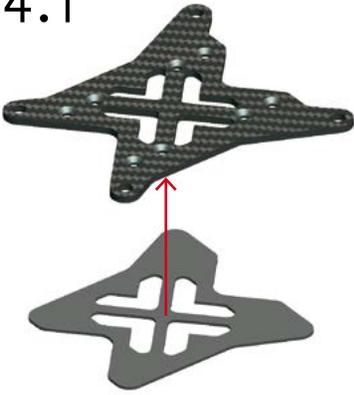
ELECTRONICS ASSEMBLY

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

NOT INCLUDED

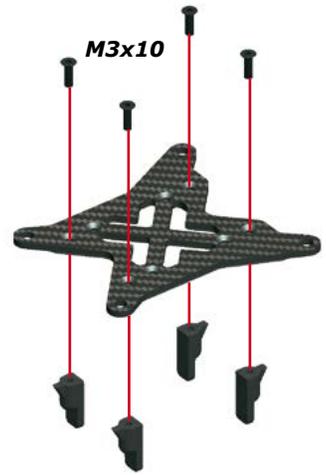


STEP 34.1

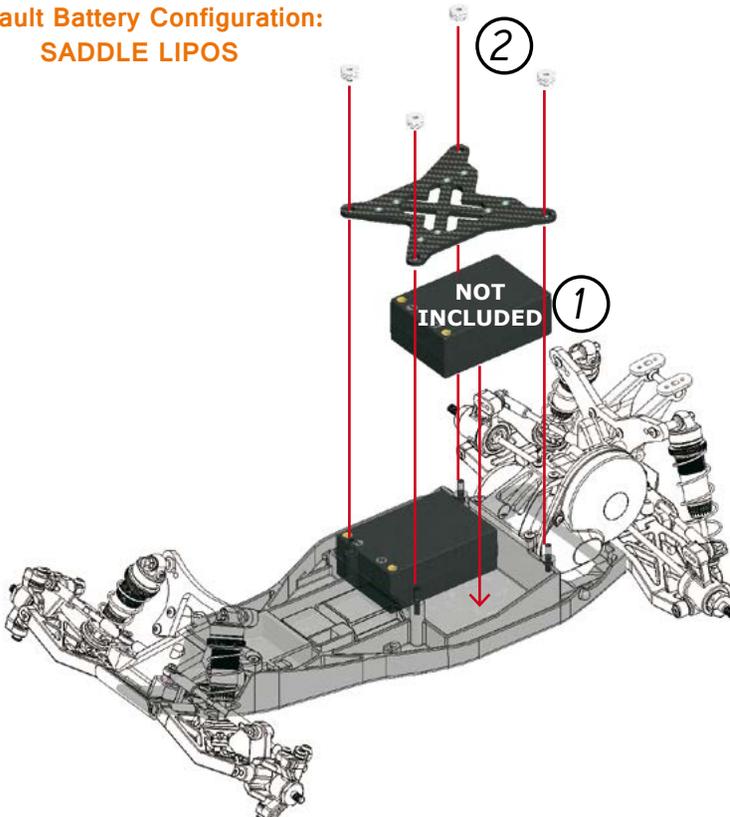


STEP 34.2

NOTE:
Only assemble this parts if you are going to use shorty lipos.

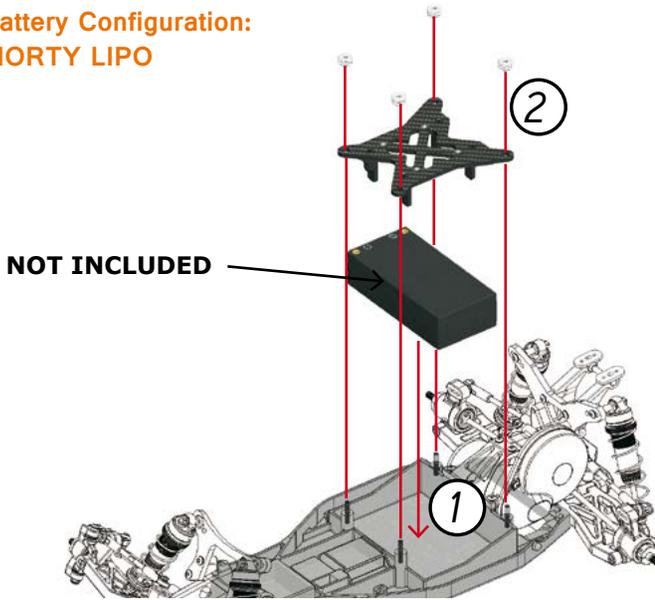


Default Battery Configuration:
SADDLE LIPOS



STEP 36A

**Optional Battery Configuration:
SHORTY LIPO**

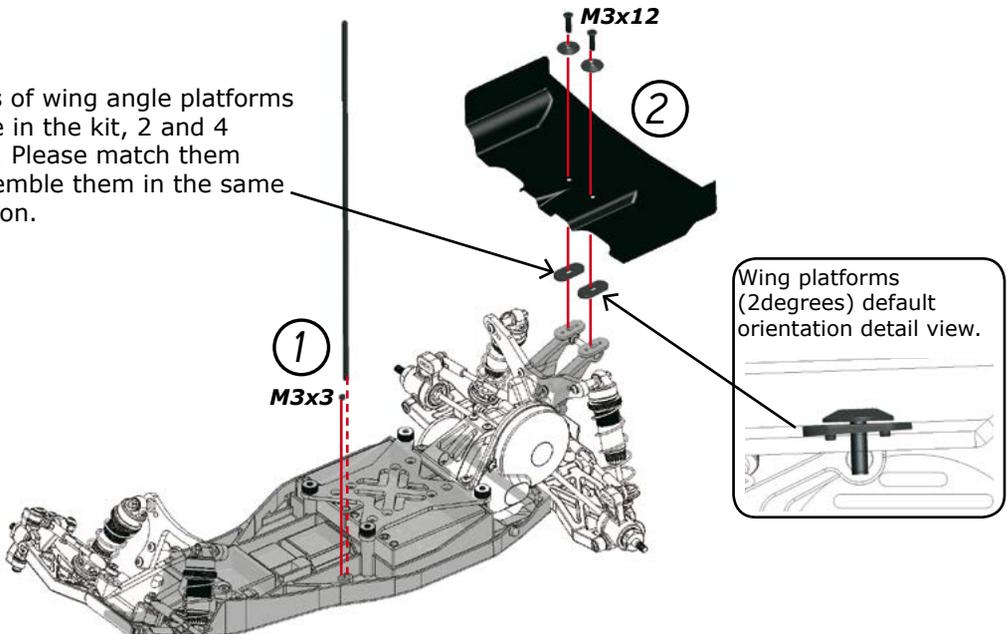


STEP
36B

FINAL ASSEMBLY

NOTE:

Two sets of wing angle platforms available in the kit, 2 and 4 degrees. Please match them and assemble them in the same orientation.



STEP
37

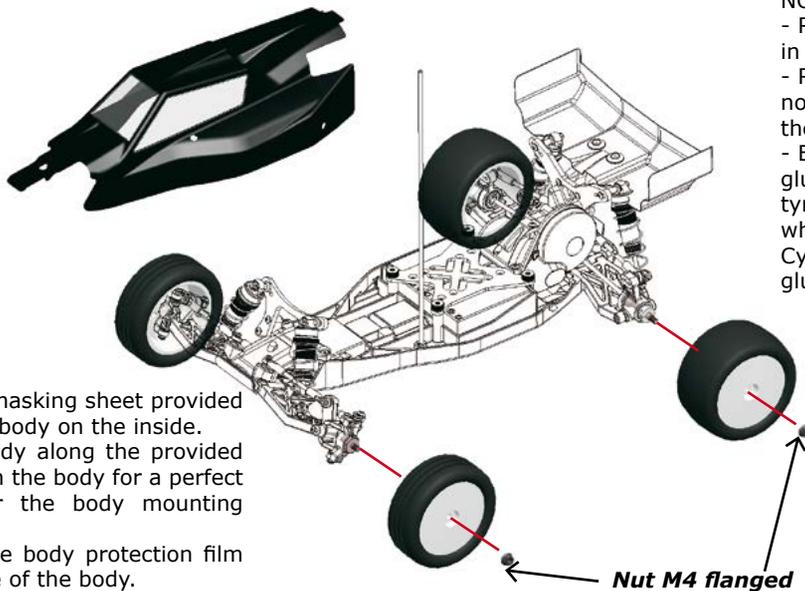
NOTE:

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

STEP
38

BODYSHELL:

- 1) Apply the masking sheet provided and paint the body on the inside.
- 2) Cut the body along the provided cuttinglines on the body for a perfect fit. Same for the body mounting holes.
- 3) Remove the body protection film on the outside of the body.
- 4) Apply the provided Serpent and Spyder decals, and mount the body on the bodyposts, with the provided bodyclips.



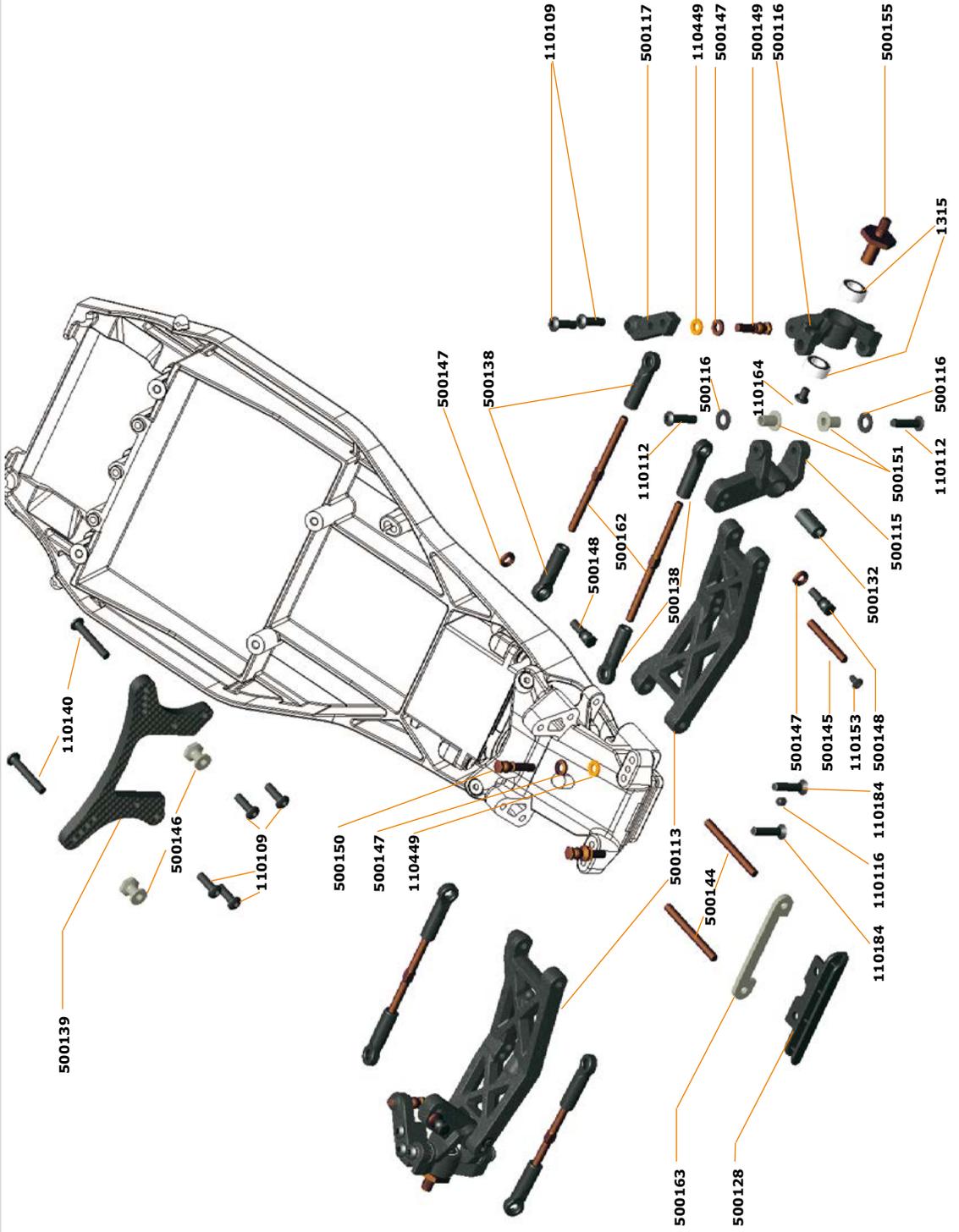
REF GUIDE:

EXPLODED VIEWS and PARTS-LIST

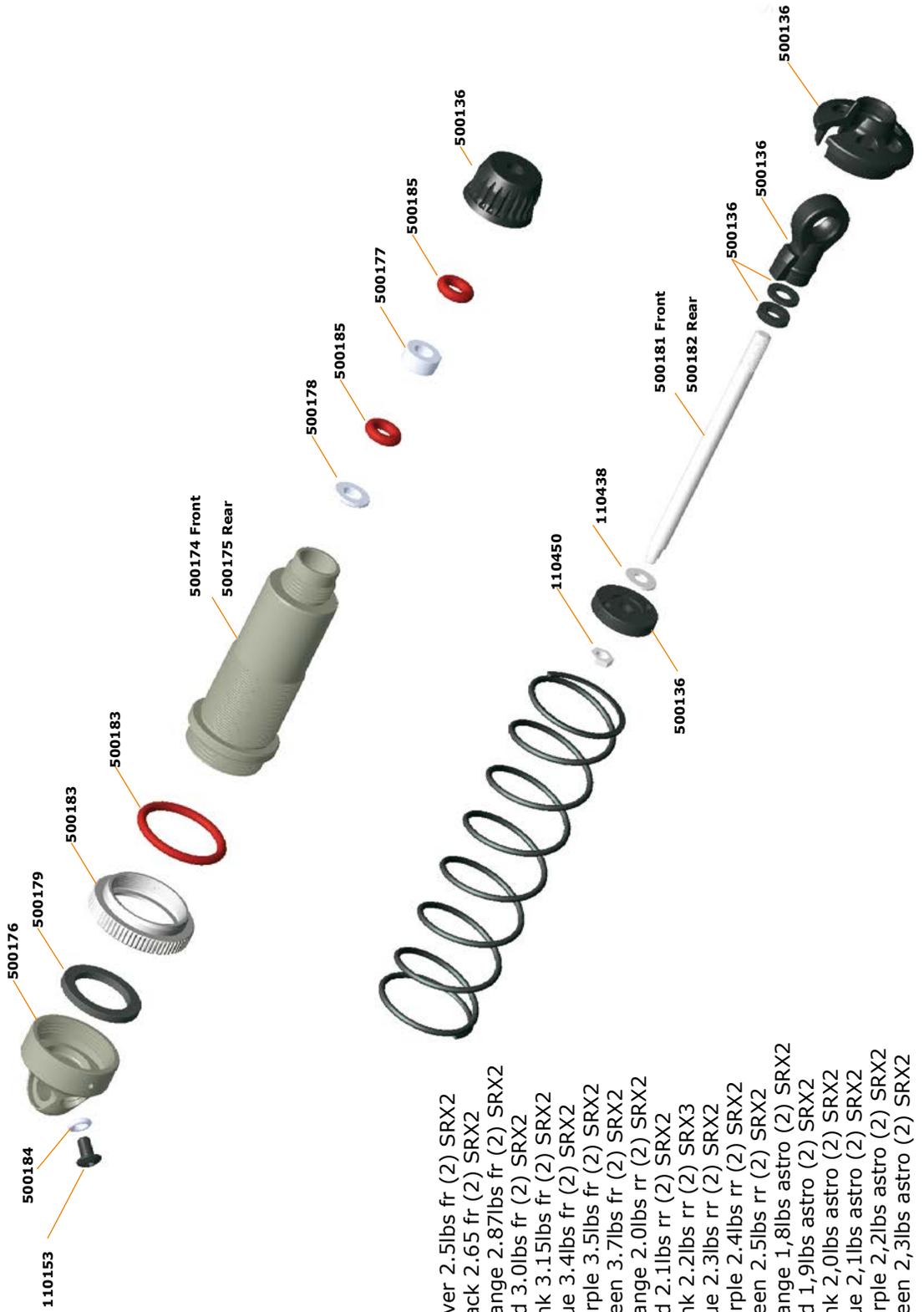
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FRONT ASSEMBLY II



SHOCKS ASSEMBLY

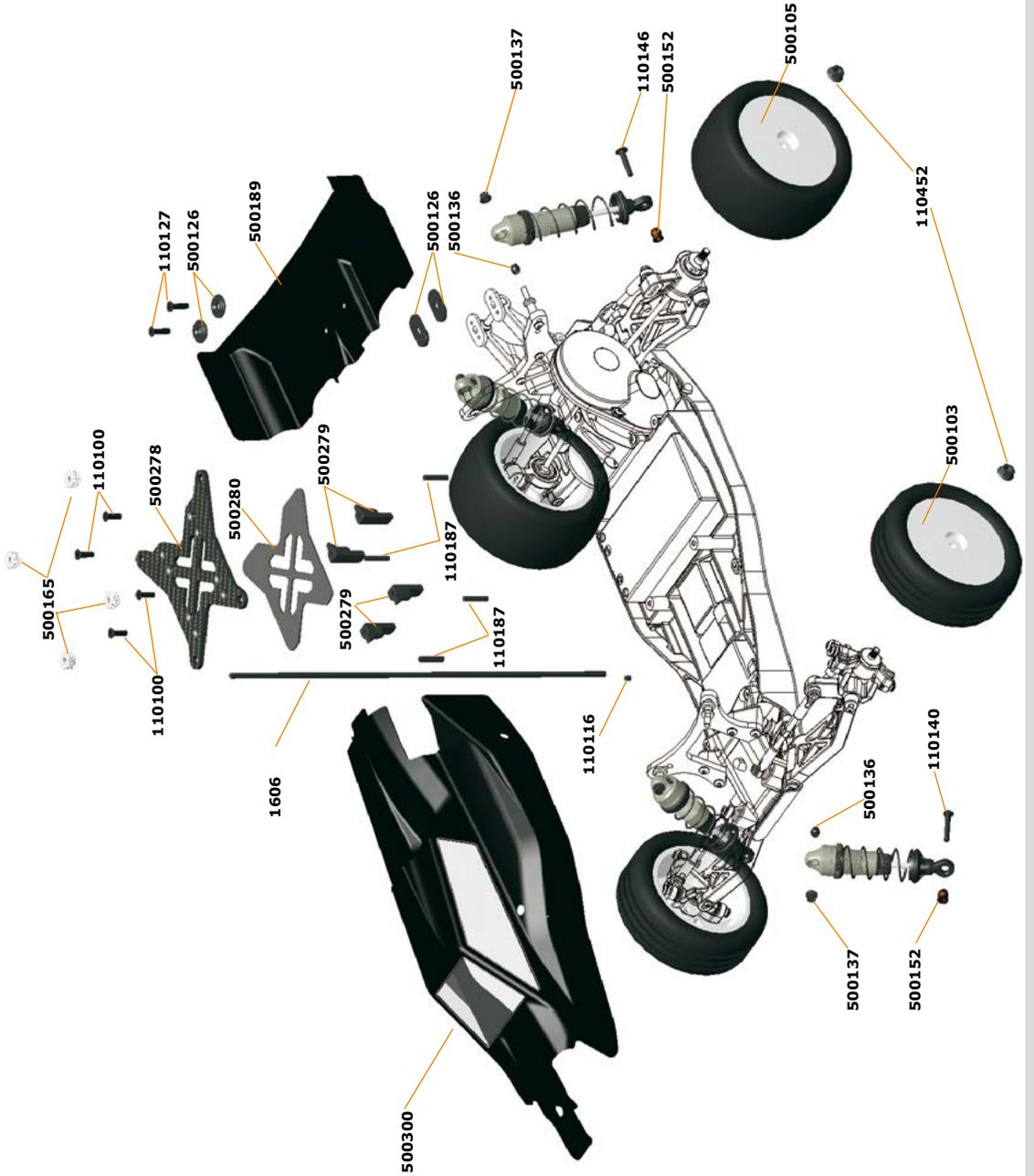


SHOCK SPRINGS

- 500222 Shock spring silver 2.5lbs fr (2) SRX2
- 500223 Shock spring black 2.65 fr (2) SRX2
- 500224 Shock spring orange 2.87lbs fr (2) SRX2
- 500225 Shock spring red 3.0lbs fr (2) SRX2
- 500226 Shock spring pink 3.15lbs fr (2) SRX2
- 500227 Shock spring blue 3.4lbs fr (2) SRX2
- 500228 Shock spring purple 3.5lbs fr (2) SRX2
- 500229 Shock spring green 3.7lbs fr (2) SRX2
- 500230 Shock spring orange 2.0lbs rr (2) SRX2
- 500231 Shock spring red 2.1lbs rr (2) SRX2
- 500232 Shock spring pink 2.2lbs rr (2) SRX3
- 500233 Shock spring blue 2.3lbs rr (2) SRX2
- 500234 Shock spring purple 2.4lbs rr (2) SRX2
- 500235 Shock spring green 2.5lbs rr (2) SRX2
- 500354 Shock spring orange 1,8lbs astro (2) SRX2
- 500355 Shock spring red 1,9lbs astro (2) SRX2
- 500356 Shock spring pink 2,0lbs astro (2) SRX2
- 500357 Shock spring blue 2,1lbs astro (2) SRX2
- 500358 Shock spring purple 2,2lbs astro (2) SRX2
- 500359 Shock spring green 2,3lbs astro (2) SRX2



FINAL ASSEMBLY



OPTIONALS AND MERCHANDISING

Spare parts:

The standard parts are shown in the exploded views. A full partslist in excel can be downloaded from the car-page on www.serpent.com.

Part no	Description
500003	Serpent Spyder Buggy SXR-2 MM 2wd 1/10

DECALS

1886	Decal Serpent black/white 1/10 (2)
1888	Decal Serpent chrome 1/10 (2)
500102	Decal sheet Spyder black/white (2)

Radio installation / battery options

500284	Battery case inserts foam (3) SRX2 MM
--------	---------------------------------------

Servo and steering options

500197	Servomount alu (2) SRX2
500236	Steeringrack alu (3) SRX2
500287	Steering arm nr 1 brass L+R
500288	Steering arm nr 2 brass L+R
500289	Steering arm nr 3 brass L+R

Shock absorbers options

500180	Shock membrane (4) SRX2
500199	Shock top bushing delrin (4) SRX2
500201	Shock shaft fr TiN coated (2) SRX2
500202	Shock shaft rr TiN coated (2) SRX2
500238	Shock piston conical 2 holes (4) SRX2
500239	Shock piston conical 3 holes (4) SRX3
500240	Shock piston conical 4 holes (4) SRX4

Springs

500222	Shock spring silver 2.5lbs fr (2) SRX2
500223	Shock spring black 2.65 fr (2) SRX2
500224	Shock spring orange 2.87lbs fr (2) SRX2
500225	Shock spring red 3.0lbs fr (2) SRX2
500226	Shock spring pink 3.15lbs fr (2) SRX2
500227	Shock spring blue 3.4lbs fr (2) SRX2
500228	Shock spring purple 3.5lbs fr (2) SRX2
500229	Shock spring green 3.7lbs fr (2) SRX2
500230	Shock spring orange 2.0lbs rr (2) SRX2
500231	Shock spring red 2.1lbs rr (2) SRX2
500232	Shock spring pink 2.2lbs rr (2) SRX3
500233	Shock spring blue 2.3lbs rr (2) SRX2
500234	Shock spring purple 2.4lbs rr (2) SRX2
500235	Shock spring green 2.5lbs rr (2) SRX2
500354	Shock spring orange 1,8lbs astro (2) SRX2
500355	Shock spring red 1,9lbs astro (2) SRX2
500356	Shock spring pink 2,0lbs astro (2) SRX2
500357	Shock spring blue 2,1lbs astro (2) SRX2
500358	Shock spring purple 2,2lbs astro (2) SRX2
500359	Shock spring green 2,3lbs astro (2) SRX2

Front section options

500104	1/10 buggy rim fr 2wd yellow (2)
500193	Front wing set SRX2
500194	Antiroll bar set fr SRX2
500198	Pivotball with shaft short (4) SRX2
500200	Front bulkhead inserts alu (6) SRX2
500203	Pivot pin brace 20 deg fr SRX2
500204	Pivot pin brace 30 deg fr SRX2
500208	Antiroll bar fr 0.9 SRX2
500209	Antiroll bar fr 1.0 SRX2
500210	Antiroll bar fr 1.1 SRX2
500237	C-hub L+R alu SRX2
500241	Front wing SRX2
500243	Front bulkhead alu SRX2
500250	Front bulkhead brass SRX2
500258	Antirollbar balljoints (2+2) SRX2

500262	Pivot pin fr inner / rr outer TiN coated (2)SRX2
500263	Pivot pin fr outer TiN coated (2) SRX2
500346	Antirollbar wire adaptors (2+2) SRX2
500347	Antirollbar spacer (2) SRX2
500348	Antirollbar mount FR SRX2

Middle section options

500284	Battery case inserts foam (3) SRX2 MM
500285	Ballast weight SRX2 MM

Rear section options

500106	1/10 buggy rim rr yellow (2)
500196	Upright L+R alu SRX2
500198	Pivotball with shaft short (4) SRX2
500205	Antiroll bar rr 1.1 SRX2
500206	Antiroll bar rr 1.3 SRX2
500207	Antiroll bar rr 1.5 SRX2
500211	Wheelhexagon +0.75mm offset (2)
500212	Wheelhexagon -0.75mm offset (2)
500244	Rear bulkhead weight SRX2
500251	Rear wing 6.0" SRX2
500252	Rear wing 7.0" SRX2
500255	Suspension insert rr 3deg alu (2) SRX2
500258	Antirollbar balljoints (2+2) SRX2
500262	Pivot pin fr inner / rr outer TiN coated (2) SRX2
500281	Antiroll bar set rr SRX2 MM
500282	Wingmount low SRX2 MM
500283	Suspension bracket rr fr brass SRX2 MM
500286	Bumper rear brass SRX2 MM
500374	Rear wing 6,5" (2) SRX
500375	Rear wing 7" (2) SRX
500376	Slide drive set SRX
500377	Slide drive set SC
500378	Slide drive driveshaft SRX (2)
500379	Slide drive driveshaft SC (2)
500380	Balldiff outdrive slide drive male
500381	Balldiff outdrive slide drive female
500382	Diff sliders (2)

Transmission options

411107	Diff balls. 1/8 ceramic (12)
500192	Geardiff set SRX2
500242	Slipper plates vented alu (3) SRX2
500246	Geardiff gears 14T(4)+28T(2) SRX2
500247	Diff pin 14T (2) SRX2
500248	Geardiff o-ring (4) SRX2
500249	Geardiff outdrive (2) SRX2
500253	Geardiff cap L+R SRX2
500254	Geardiff housing 51T SRX2
500256	Thrustbearing carbide balldiff SRX2
500257	Geardiff nut (4) SRX2
500259	Differential balls carbide 1/8" (12)
500260	Idler gear 27T alu SRX2
500344	Idler gear 27T SRX2 steel
500352	Top-shaft set 21T stock SRX2
500353	Top-shaft 21T stock SRX2

Body and wing options

500241	Front wing SRX2
500251	Rear wing 6.0" SRX2
500252	Rear wing 7.0" SRX2

Spurgear

500213	Spur gear 70T SRX2
500214	Spur gear 72T SRX2
500215	Spur gear 76T SRX2
500216	Spur gear 78T SRX2
500217	Spur gear 80T SRX2
500218	Spur gear 82T SRX2
500219	Spur gear 84T SRX2
500220	Spur gear 86T SRX2

500221 Spur gear 88T SRX2

Pinions

120156 Motor-pinion alu hard 48P / 18T
120157 Motor-pinion alu hard 48P / 19T
120158 Motor-pinion alu hard 48P / 20T
120159 Motor-pinion alu hard 48P / 21T
120160 Motor-pinion alu hard 48P / 22T
120161 Motor-pinion alu hard 48P / 23T
120162 Motor-pinion alu hard 48P / 24T
120163 Motor-pinion alu hard 48P / 25T
120164 Motor-pinion alu hard 48P / 26T
120165 Motor-pinion alu hard 48P / 27T
120166 Motor-pinion alu hard 48P / 28T
120167 Motor-pinion alu hard 48P / 29T
120168 Motor-pinion alu hard 48P / 30T

Tools

190506 Toolset for onroad (17pcs) with tools bag
190507 Toolset for ep (16pcs) with tools bag
190508 Toolset for offroad (20pcs) with tools bag
190509 Allen wrench 1.5 x 120mm
190510 Allen wrench 2.0 x 120mm
190511 Allen wrench 2.5 x 120mm
190512 Allen wrench 3.0 x 120mm
190513 Ball driver hex wrench 2.0 x120mm
190514 Ball driver hex wrench 2.5 x 120mm
190515 Ball driver hex wrench 3.0 x 120mm
190516 Tool tip allen wrench 1.5 x 120mm
190517 Tool tip allen wrench 2.0 x 120mm
190518 Tool tip allen wrench 2.5 x 120mm
190519 Tool tip allen wrench 3.0 x 120mm
190520 Tool tip ball driver hex wrench 2.0 x 120mm
190521 Tool tip ball driver hex wrench 2.5 x 120mm
190522 Tool tip ball driver hex wrench 3.0 x 120mm
190523 Turnbuckle wrench 3mm
190524 Turnbuckle wrench 4mm
190525 Turnbuckle wrench 5mm
190526 Flat head screwdriver 3.0 x 150mm
190527 Flat head screwdriver 4.0 x 150mm
190528 Phillips screwdriver 2.0 x 45mm
190529 Phillips screwdriver 3.5 x 120mm
190530 Phillips screwdriver 5.8 x 120mm
190531 Nut driver 4.5 x 100mm
190531 Nut driver 5.0 x 100mm
190532 Nut driver 5.5 x 100mm
190533 Nut driver 7.0 x 100mm
190534 Reamer with end cap for lexan body

Merchandising

1896 Cap serpent black-orange
190172 Winter jacket Serpent black-orange hooded (M)
190173 Winter jacket Serpent black-orange hooded (L)
190174 Winter jacket Serpent black-orange hooded (XL)
190175 Winter jacket Serpent black-orange hooded (2XL)
190176 Winter jacket Serpent black-orange hooded (3XL)
190208 Winter jacket Serpent black-orange hooded (4XL)
190156 Polo shirt Serpent black (S)
190157 Polo shirt Serpent black (M)
190158 Polo shirt Serpent black (L)
190159 Polo shirt Serpent black (XL)
190160 Polo shirt Serpent black (XXL)
190161 Polo shirt Serpent black (XXXL)
190182 T-shirt Serpent Splash white (S)
190183 T-shirt Serpent Splash white (M)
190184 T-shirt Serpent Splash white (L)
190185 T-shirt Serpent Splash white (XL)
190186 T-shirt Serpent Splash white (XXL)
190187 T-shirt Serpent Splash white (XXXL)
190188 T-shirt Serpent Splash orange (S)
190189 T-shirt Serpent Splash orange (M)
190190 T-shirt Serpent Splash orange (L)

190191 T-shirt Serpent Splash orange (XL)
190192 T-shirt Serpent Splash orange (XXL)
190193 T-shirt Serpent Splash orange (XXXL)
190194 T-shirt Serpent Splash black (S)
190195 T-shirt Serpent Splash black (M)
190196 T-shirt Serpent Splash black (L)
190197 T-shirt Serpent Splash black (XL)
190198 T-shirt Serpent Splash black (XXL)
190199 T-shirt Serpent Splash black (XXXL)
190201 Hoody sweater Serpent black-zip (S)
190202 Hoody sweater Serpent black-zip (M)
190203 Hoody sweater Serpent black-zip (L)
190204 Hoody sweater Serpent black-zip (XL)
190205 Hoody sweater Serpent black-zip (2XL)
190206 Hoody sweater Serpent black-zip (3XL)
190207 Hoody sweater Serpent black-zip (4XL)
190502 Pit-bag medium. 3 drawers

SPYDER SRX2 MID



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