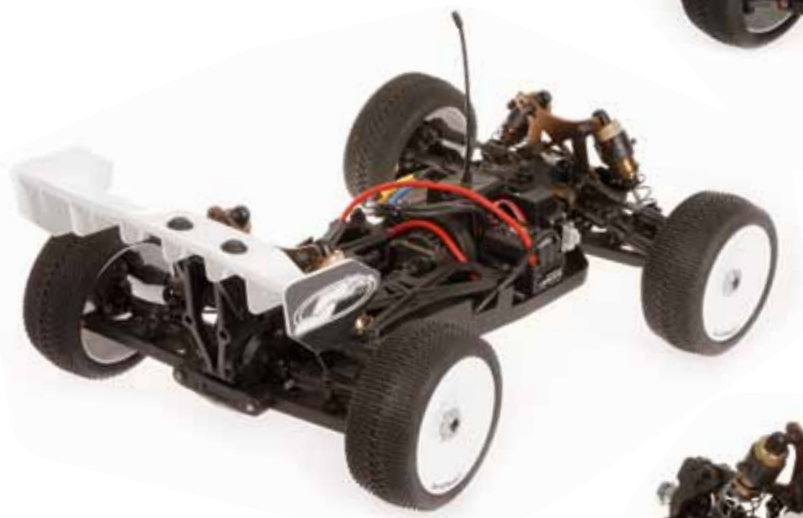




*1/8 scale Ready To Race electro Buggy*

USER MANUAL & REFERENCE GUIDE

# COBBLE 811 RTR



Powered by  DRAGON-RC





## Introduction

Thank you very much for buying this Serpent rc car. You are now member of a large following of Serpent fans worldwide. This Serpent car will bring you many hours and weekends of racing excitement. Serpent started as rc racing company in 1980, and has developed many modelcars since. This wealth of experience and know how is used in our todays cars and that shows!

The Serpent S811-Be Cobra RTR is the best entry in the world of rc offroad racing. Affordable and very good basis to start your racing carreer. The Serpent S811 Cobra *RTR*, is based on the high-end competition version of the Cobra and shares geometry and many parts. Still its easy to use, assemble, and set up. The *RTR* Cobra is fully upgradable to high end competition spec. The details can be found in our website. 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 S811-B Cobra *RTR* offers state of the art specifications and leads the way in 1/8 scale electro offroad chassis design, using all the knowledge our designers have gathered from racing offroad cars for over 15 years, into this design too. Continuously pushing the performance envelope. Designed, tested and raced by Billy Easton, USA. World Champion.

This manual contains a number of steps you need to follow to operate the Serpent cars in the right way. This manual also contains a quick-start section, a partslist and exploded views, and a FAQ section. A full assembly manual can be found online in the **Serpent.com** website. So read this manual with great attention before racing this car. For your own safety as well as for others, and to ensure you can enjoy your Serpent car a long time, even if you are an experienced user. Serpent is not only about the car itself. Serpent as company, and the worldwide network or distributors and dealers are here to help you out. The Serpent website, social media and forum are available for assistance and additional information as well.

*Enjoy your Serpent, the racing experience!*

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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 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 speedo during and immediately after use, as these parts may be very hot. We advise to use protective handgloves.
- 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. 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.
- 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.

## Safety matters

All instructions in this manual must be followed to ensure safe use of the car. This model is not intended for use by children under 14 years .

### Important pre-cautions

- Only run the car in designated areas or areas with very few people, so no-one can get hurt.
- The car has a lot of power and the turning parts on the car can cause damage, also some parts of the car like transmission and motorparts can become very hot. So wear protective clothing both as driver and helper and be careful when picking up the car.
- Do not operate the car under dark conditions, as both you and others may not see the car properly and can get hurt, due to lack of car control.
- Use good common sense while operating the car so you can fully enjoy your car.

### Battery and battery-charging

- The battery and battery-charger are not included with this model. We advise to use good quality NimH or Lipo rechargeable battery-packs with 4000 mA or more. Check carefully to buy batteries with the correct connector for the speedcontroller, or also purchase and mount other fitting ones.
- Use proper battery-charger specifically designed for that type batteries and follow the instructions of the battery supplier and the charger correctly. Keep the battery and charger always in dry places only and never leave un-attended during charging.
- When the batteries are at their end of life, dispose them at a recycling-place, check [www.call2recycle.org](http://www.call2recycle.org) for more info.

## Quick-start

The quick-start section is not a replacement for the full instructions. To be able to use the model to its best take the time to read the full manual.

1. Read the manual and safety pre-cautions ( page 3)
2. Buy and install the batteries in the transmitter ( see Transmitter manual)
3. Install battery packs in the model, make sure the speedo is switched off, connect the cables (avoid reversed polarity) and securely fasten the battery-pack.
4. Turn on the transmitter ( see Transmitter manual). Always turn on the transmitter first before to switch on the car and only turn off the transmitter after you switched off the car.
5. Check servo operation. Check that the servo works correctly and check that the car runs straight in neutral position, trim as needed.
6. Perform a range test with the radio system
7. Personalise the body of your car by applying more decals if required.
8. Drive your modelcar.
9. Maintain your modelcar (page 9)



# Equipment



## Included with your model

- Serpent modelcar, factory assembled and set-up
- Dragon-RC DTS-1 transmitter (as shown or similar)
- Dragon-RC DESC speedcontroller
- Dragon-RC brushless motor
- Dragon-RC racing tyres, pre-mounts
- Dragon-RC digital servo MG
- Dragon-RC prepainted and pre-cut bodyshell



Powered by  **DRAGON-RC**



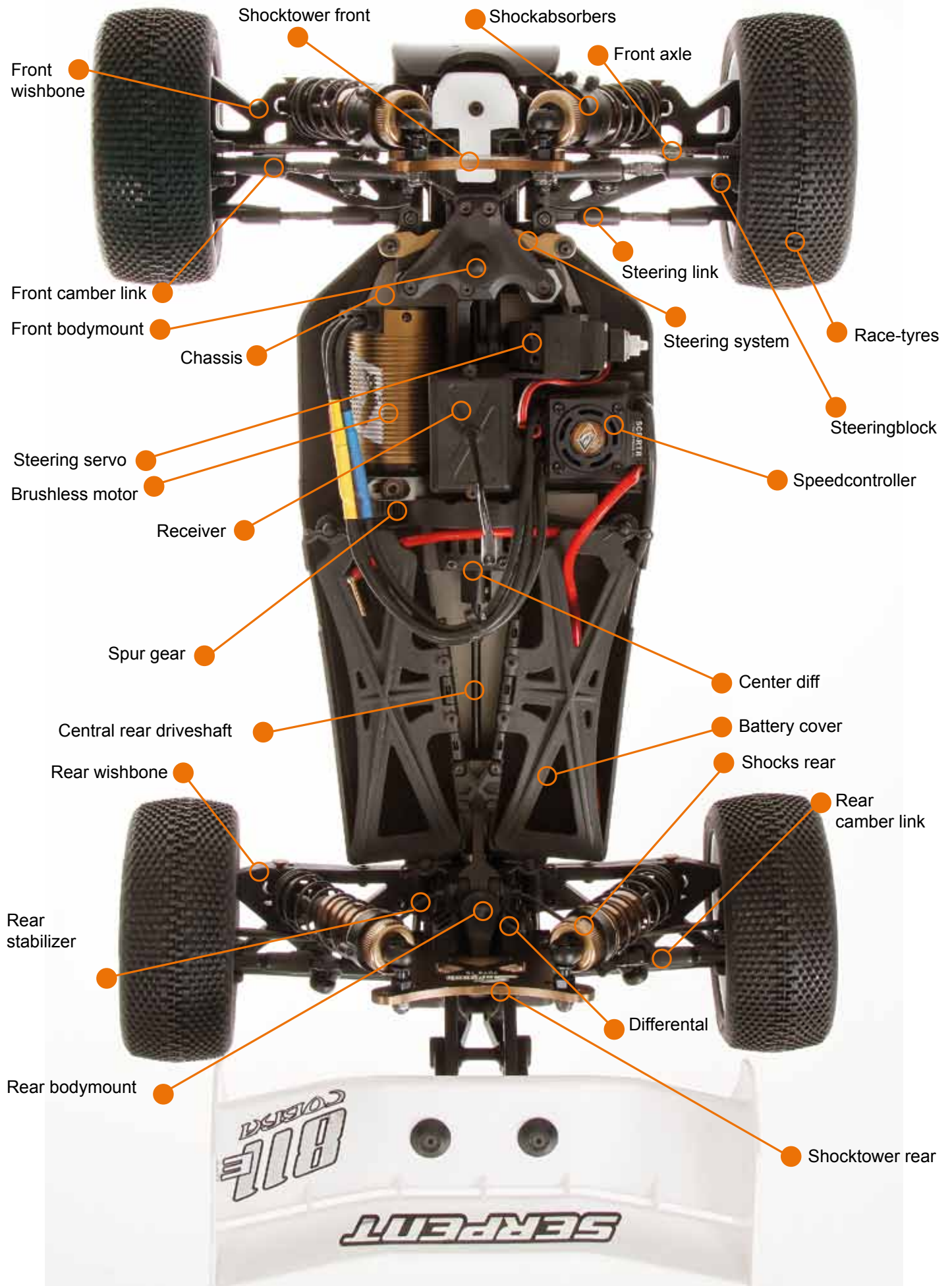
## Required for your model

- Multi Charger; to charge transmitter battery and car battery
- Battery pack 2-S Lipo x 2
- Battery AA x 4 to operate the transmitter
- Tools: selection of allen tools and screw- drivers
- Hobby knife
- Camber gauge

## Recommended materials

- Side cutter and nose plier
- Cleaning brush and towel
- Safety glasses and gloves
- Cleaning gum
- Thin bearing oil
- Transmission grease
- CA glue
- Degreaser

# Model specs/overview





# Basic Tuning

- **Springs:** by using a softer spring you will have more sag, more chassis roll/lean, more dive and a less responsive car this might be better on low-grip surfaces; by using a harder spring you have less sag, less body lean, less dive and a more responsive car. What to apply depends on driving style and grip-level surface. This is more suitable on high-grip surfaces.
- **Shock-angle:** the angle at which the shocks are mounted create a different suspension feel; the more vertical, the harder it feels, the more horizontal, the softer it feels.
- **Oil:** the viscosity of the shock-oil defines the dampening of the shockabsorber. Thinner oil will be softer, with slower response, thicker oil will be harder dampening with faster response. The dampening can also be fine-tuned by fitting other pistons with more or less holes, which is an optional.
- **Differential:** you can make the gear differential harder or softer by using a different oil viscosity. Lighter oil will create a looser diff which increases rear traction on acceleration, but also more understeer, and a harder differential will decrease rear traction on acceleration, but also more on-throttle steering
- **Front anti-roll bar:** by using a softer anti-roll bar you will have more sag, more chassis roll/lean, more dive and a less responsive car. But you will have more steering once you have entered the corner
- **Rear anti-roll bar:** by using a softer anti-roll bar you will have more sag, more chassis roll/lean, more dive and a less responsive car. But you will have more rear traction and a more stable car
- **Toe adjustment: Front:** adjusted with the track-rods, make longer or shorter. More toe-in will create more steering, but less stability; toe-out will create a more stable car, with less steering.
- **Toe adjustment: Rear:** adjusted with suspension blocks (optional). More toe-in will create more traction, more stability, but less speed. Less toe in will create a less stable car, with less traction but higher speed.
- **Front camber:** using more negative camber in the front will give you more steering but also increases possible traction roll.
- **Rear camber:** using more negative camber in the rear will create more grip in the rear meaning also creating more understeer.
- **Front caster:** use optional caster blocks to change caster, more caster will create more steering but also increases possible traction roll. And less caster will create less steering but also decreases possible traction roll.
- **Wheel-base length:** a longer car will be more stable and react slower, a shorter car will be more nervous and more direct.
- **Gear-ratio:** spur and pinion: for correct gearmesh keep a piece of notebook paper at hand, to put between the spur and pinion for correct mesh.
- **Ride-height:** you can change the ride-height of the car, by applying more or less pre-load on the springs, turn the pre-load adjusters to set the desired height and keep left and right the same.



Springs



Shock-angle



Front anti roll-bar



Rear anti roll-bar



Ackermann



Front camber



Rear camber



Ride-height



Rear caster



Front caster



Gear-ratio



# COBBA RTR

## SET UP

### DIFFERENTIAL OIL

FRONT	CENTER	REAR
12000 CST	12000 CST	7000 CST

### TRANSMISSION SET UP

PINION		16 T	SPUR GEAR		46 T
FINAL DRIVE RATIO			ROLLOUT		mm
MOTOR			TIMING		
ROTOR			ARMATURE		
ESC			BATTERIES		
BRUSHLESS		PROGRAM	PUNCH	INITIAL BRAKE	AUTO BRAKE

### BODY - WING

BODY	SERPENT
WING	STOCK

### SHOCKS

FRONT	SPRING	REAR
C= 4.8 <input checked="" type="checkbox"/>	PINK	C= 2.8 <input type="checkbox"/>
C= 5.0 <input type="checkbox"/>	BLUE	C= 3.0 <input type="checkbox"/>
C= 5.2 <input type="checkbox"/>	PURPLE	C= 3.2 <input type="checkbox"/>
C= 5.4 <input type="checkbox"/>	GREEN	C= 3.4 <input type="checkbox"/>
C= 5.6 <input type="checkbox"/>	GREY	C= 3.6 <input type="checkbox"/>
C= 5.8 <input type="checkbox"/>	YELLOW	C= 3.8 <input type="checkbox"/>
C= 6.0 <input type="checkbox"/>	WHITE	C= 4.0 <input checked="" type="checkbox"/>
C= <input type="checkbox"/>	OTHER	C= <input type="checkbox"/>
300	OIL/CST	300
	REBOUND %	
<b>PISTON</b>		
HOLES SIZE		
<input type="radio"/> OPEN		<input type="radio"/> CLOSED
<input type="checkbox"/>	1.1MM	<input type="checkbox"/>
<input type="checkbox"/>	1.2MM	<input type="checkbox"/>
<input checked="" type="checkbox"/>	1.3MM	<input checked="" type="checkbox"/>
<input type="checkbox"/>	1.4 MM	<input type="checkbox"/>
KIT		
OTHER		
KIT		

### TYRES

BRAND	
TYPE	
INSERT	
WHEELS	

### COMMENTS

### NAME DEFAULT

#### TRACK

TRACK SIZE	<input type="checkbox"/> OPEN
TRACK TRACTION	<input type="checkbox"/> HIGH
TRACK SURFACE	<input type="checkbox"/> SMOOTH
TRACK TYPE	<input type="checkbox"/> HARD PACKED
	<input type="checkbox"/> BLUE GROOVE
TRACK CONDITION	<input type="checkbox"/> DRY

### RACE

#### CITY/COUNTRY

<input type="checkbox"/> MEDIUM
<input type="checkbox"/> MEDIUM
<input type="checkbox"/> MEDIUM
<input type="checkbox"/> SOFT DIRT
<input type="checkbox"/> ASTRO TURF
<input type="checkbox"/> DUSTY

### DATE

#### CONTACT

TEMP: F ° / ° C	
AIR	TRACK
LAPS	
BEST LAPTIME	in LAP
RACE LENGTH	
RACE RESULT	

<b>STEERING BLOCK</b> <input checked="" type="checkbox"/> PLASTIC <input type="checkbox"/> ALU	<b>CASTER BLOCK</b> <input checked="" type="checkbox"/> PLASTIC <input type="checkbox"/> ALU	<b>UPRIGHT</b> <input checked="" type="checkbox"/> PLASTIC <input type="checkbox"/> ALU
<b>HEX ADAPTER</b> <input type="checkbox"/> -2MM <input type="checkbox"/> -1MM <input checked="" type="checkbox"/> 0MM		<b>HEX ADAPTER</b> <input type="checkbox"/> -2MM <input type="checkbox"/> -1MM <input checked="" type="checkbox"/> 0MM

<b>CASTER</b> <input checked="" type="checkbox"/> 10° <input type="checkbox"/> 12°	<b>SPINDLE</b> <input checked="" type="checkbox"/> HIGH <input type="checkbox"/> LOW	<b>BRACE</b> <input checked="" type="checkbox"/> PLASTIC <input type="checkbox"/> ALU
78	<b>BRACE</b> <input checked="" type="checkbox"/> PLASTIC <input type="checkbox"/> ALU	<b>BRACE</b> <input checked="" type="checkbox"/> PLASTIC <input type="checkbox"/> ALU
INSERT NR. 0 <input type="checkbox"/> UP <input type="checkbox"/> DOWN	INSERT NR. 0 <input type="checkbox"/> UP <input type="checkbox"/> DOWN	INSERT NR. 4 <input checked="" type="checkbox"/> UP <input type="checkbox"/> DOWN
INSERT NR. 0 <input type="checkbox"/> UP <input type="checkbox"/> DOWN	INSERT NR. 0 <input type="checkbox"/> UP <input type="checkbox"/> DOWN	INSERT NR. 6 <input checked="" type="checkbox"/> IN <input type="checkbox"/> OUT
<input checked="" type="checkbox"/> STANDARD BRACKET	<input checked="" type="checkbox"/> STANDARD BRACKET	<input checked="" type="checkbox"/> STANDARD BRACKET
<input type="checkbox"/> OPTIONAL TYPE	<input type="checkbox"/> OPTIONAL TYPE	<input type="checkbox"/> OPTIONAL TYPE

<b>ANTI ROLLBAR</b> <input type="checkbox"/> 1.8MM <input type="checkbox"/> 2.0MM <input type="checkbox"/> 2.3MM <input checked="" type="checkbox"/> 2.5MM <input type="checkbox"/> 2.7MM	<b>WHEELBASE SHIMS</b> <input type="checkbox"/> 1.25 <input type="checkbox"/> 2.5 <input type="checkbox"/> 3.75 <input checked="" type="checkbox"/> 5MM	<b>WING LOCATION</b> IN MM STD.
<b>STEERING BAR</b> <input type="checkbox"/> OPT 1 <input type="checkbox"/> OPT 2 <input checked="" type="checkbox"/> OPT 3	<b>ANTI ROLLBAR</b> <input type="checkbox"/> 1.8MM <input type="checkbox"/> 2.0MM <input type="checkbox"/> 2.3MM <input checked="" type="checkbox"/> 2.5MM <input type="checkbox"/> 2.7MM	

<b>FRONT CAMBER</b> + ° - 1 ° + -	<b>REAR CAMBER</b> - 2.5 ° + ° - +
<b>SHOCKLENGTH</b> AT FULL DROOP 98 MM	<b>SHOCKLENGTH</b> AT FULL DROOP 112 MM
<b>ADJUST SHOCKLENGTH</b> WITH THIS SCREW	<b>ADJUST SHOCKLENGTH</b> WITH THIS SCREW
<b>ADJUST RIDE HEIGHT</b> WITH SPRING COLLAR	<b>ADJUST RIDE HEIGHT</b> WITH SPRING COLLAR
<b>RIDE HEIGHT</b> 28 MM	<b>RIDE HEIGHT</b> 28 MM



# Maintenance

## Shockabsorbers

- Check for smooth operation of the shockabsorbers, and check for airbubbles by pushing the shock up and down fast after removal of the spring. Clean the shockabsorbers as needed and refill with fresh **100% pure silicone oil** as needed.

## Tyres

- Replace tyres if case worn or damaged, and clean the surface in case dirty to obtain better grip.

## Wheel-axles and driveshafts

- Remove the wheels, and check the wheel-axles, driveshafts and adaptors for dirt, play and pins. Clean thoroughly as needed and lubricate the touching parts with a small amount of grease or oil.

## Differentials

- Check the differentials and gears for wear and dirt and clean as needed. Check the functioning of the diff by turning the wheels in opposite direction and feel if still smooth or 'gritty'. In case of gritty feel, the silicone oil may need replacement.

The full assembly manual of this model is available online; check on **www.serpent.com** and type your modelnumber, partnumber, or select your car from the car-page; go to the download section in the menu and download the full manual.



Shockabsorbers



Tyres



Wheel-axles and driveshaft front



Differential



# Partslist and Optionals list

## Manual & Decals

- 600629 Manual 811 E-S
- 600329 Decal sheet S811 black/white (2)
- 600332 Decal sheet S811 chrome (2)

## Ball Bearings

- 1312 Ballbearing 5x8 flanged SS (2)
- 1321 Ballbearing 6x10x3 SS (2)
- 1337 Ballbearing 15x21x4 SS (2)
- 1393 Ballbearing 13X19X4 SS (2)
- 1394 Ballbearing 8x14x4 flanged SS (2)
- 1395 Ballbearing 8x19x6 SS (2)
- 1396 Ballbearing 8x16x5 SS (2)
- 600466 Bearingset 811-E (26)
- 600617 Bearingset 811 V2 small (12)

## Radio Installation / Battery

- 1606 Antenna rod black (2)
- 600131 Balljoint set (19)
- 600436 Battery radiobox 811-E
- 600437 Steering balljoint + lever 811-E
- 600479 Battery foam pad (2)
- 600499 Pivotball double straight (3)
- 600500 Servo spacers (8)

## Radio Installation / Battery option

- 600463 Servo lever 23T 811-E alu
- 600464 Servo lever 24T 811-E alu
- 600465 Servo lever 25T 811-E alu

## Servo Saver & Steering

- 600105 Servosaver spring
- 600109 O-ring servosaver nut (4)
- 600128 Servo saver set nylon (3)
- 600131 Balljoint set (19)
- 600554 Pivot ball steering short 811-S (2)
- 600167 Steeringrack mount
- 600169 Servosaver adjust nut
- 600170 Servosaver shaft outer
- 600557 Steeringrack alu 811-S
- 600558 Topdeck front 811-S
- 600556 Servo saver post 811-S (2)
- 600555 Pivot ball steering long 811-S (4)
- 600437 Steering balljoint + lever 811-E
- 600499 Pivotball double straight (3)
- 600500 Servo spacers (8)

## Servo Saver & Steering option

- 600153 Topdeck front carbon
- 600171 Steeringrack option 1
- 600172 Steeringrack option 2
- 600173 Steeringrack option 3
- 600182 Bolt steeringrack (2)
- 600278 Servo saver post alu (2)
- 600296 Servosaver alu coated (3)
- 600330 Servo saver spring hard
- 600463 Servo lever 23T 811-E alu
- 600464 Servo lever 24T 811-E alu
- 600465 Servo lever 25T 811-E alu

## Shock Absorbers

- 600111 Shock membrane (10)
- 600112 O-ring shock bottom (10)
- 600113 O-ring shock nut (10)
- 600118 Shock part frame nylon (10)
- 600145 Shock pistons (4x4)
- 600180 Washer shock shaft (4)
- 600184 Pivotball 6.75 double (4)

- 600194 Shockshaft FR (2)
- 600195 Shockshaft RR (2)
- 600234 Shock cartridge stepped (4)
- 600235 Shock cartridge (4)
- 600319 Shock revision set (20)
- 600568 Shock mount 811-S (2)
- 600570 Shock set FR 811-S (2)
- 600571 Shock set RR 811-S (2)
- 600572 Shock spacers 811-S (14)
- 600573 Shock top 811-S (2)
- 600574 Shock top nut 811-S (2)
- 600575 Shock body FR 811-S (2)
- 600576 Shock body RR 811-S (2)
- 600577 Shock shim 811-S (10)

## Shock Absorbers option

- 600317 Shockset fr (2)
- 600318 Shockset rr (2)
- 600357 Membrane webbed silicone (4)
- 600287 Shock spring support alu (4)
- 600306 Shock shaft FR TiN coating (2)
- 600307 Shock shaft RR TiN coating (2)

## Shock Springs

- 600245 Spring set FR pink 4.8lbs (2)
- 600246 Spring set FR blue 5.0lbs (2)
- 600247 Spring set FR purple 5.2lbs (2)
- 600248 Spring set FR green 5.4lbs (2)
- 600249 Spring set FR grey 5.6lbs (2)
- 600250 Spring set FR yellow 5.8lbs (2)
- 600251 Spring set FR white 6.0lbs (2)
- 600252 Spring set RR pink 2.8lbs (2)
- 600253 Spring set RR blue 3.0lbs (2)
- 600254 Spring set RR purple 3.2lbs (2)
- 600255 Spring set RR green 3.4lbs (2)
- 600256 Spring set RR grey 3.6lbs (2)
- 600257 Spring set RR yellow 3.8lbs (2)
- 600258 Spring set RR white 4.0lbs (2)
- 600259 Spring set FR (7x2)
- 600260 Spring set RR (7x2)

## Chassis / Guards

- 600141 Bumper
- 600436 Battery radiobox 811-E
- 600442 Chassis brace FR + RR 811-E
- 600624 Chassis 811 E-S

## Chassis / Guards Optional

- 600445 Chassis 811-E
- 600461 Chassis brace front alu 811-E
- 600462 Chassis brace rear alu 811-E
- 600470 Chassis S811E hard anodized
- 600489 Transmission brace tube alu

## Front Section

- 600124 Bodymount FR+RR
- 600126 Washer/nut nylon M3 (12+15)
- 600129 Diff case front set
- 600131 Balljoint set (19)
- 600135 Wishbone front L+R
- 600136 C-Hub 10 L+R
- 600167 Steeringrack mount
- 600183 Bushing suspensionarm (4)
- 600193 Pivotball threaded antirollbar (2)
- 600197 Driveshaft insert (2)
- 600222 Wheelnut 17mm (4)
- 600223 Wheelhexagon (4)
- 600240 Antiroll bar front 2.3mm
- 600365 Spacers 1.25mm + 2.5mm wheelbase (4+2)

600481 Steeringblock L+R V2  
 600530 Shocktower front alu 811-S  
 600532 Gear coupler 811-S  
 600626 Driveshaft center FR 811 E-S  
 600535 Driveshaft FR 811-S (2)  
 600537 Wheelaxle FR 811-S (2)  
 600539 Pin steeringblock 811-S (4)  
 600540 Track rod FR 811-S (2)  
 600542 Track rod steering 811-S (2)  
 600543 Hinge pin 811-S (2)  
 600544 Antirollbar nut 811-S (4)  
 600545 Antirollbar bushing 811-S (4)  
 600546 Pivot ball antiroll bar 811-S (2)  
 600548 Suspension bracket FR-FR 811-S  
 600549 Suspension bracket FR-RR 811-S  
 600553 Pivot ball 7.5 double 811-S (4)  
 600554 Pivot ball steering short 811-S (2)  
 600558 Topdeck front 811-S  
 903343 Antirollbar Spacer 3mm (2)

#### Front Section Optional

600151 Shocktower front carbon  
 600153 Topdeck front carbon  
 600176 Suspension bracket alu FR RR std  
 600177 Suspension bracket alu FR FR std  
 600241 Antiroll bar front 2.5mm  
 600242 Antiroll bar front 2.7mm  
 600263 Washer M3 alu (12)  
 600284 Shocktower FR alu light  
 600297 Lightweight wheel nut 17mm (4)  
 600303 C-hub 10 L+R alu  
 600304 C-hub 12 L+R alu  
 600336 Antiroll bar front 1.8mm  
 600337 Antiroll bar front 2.0mm  
 600497 Steeringblock L+R V2 alu  
 600503 Steeringblock-wheelaxle set 811 V2

#### Middle Section

600131 Balljoint set (19)  
 600197 Driveshaft insert (2)  
 600381 Gear coupler rubber boot (2)  
 600443 Center diff cover 811-E  
 600446 Motormount set 811-E  
 600447 Motor slider 811-E  
 600532 Gear coupler 811-S  
 600559 Spur gear 46T 811-S  
 600625 Driveshaft center RR 811 E-S  
 600626 Driveshaft center FR 811 E-S

#### Middle Section Option

600197 Driveshaft insert (2)  
 600198 Spurgear 46T  
 600279 Spur gear 44T  
 600280 Spur gear 48T  
 600444 Driveshaft center FR 811-E  
 600471 Driveshaft center RR 811-E  
 600472 Gear coupler V3  
 600473 Gear coupler sleeve (2)

#### Rear Section

600124 Bodymount FR+RR  
 600126 Washer/nut nylon M3 (12+15)  
 600130 Diff case rear set  
 600131 Balljoint set (19)  
 600133 Wing mount set  
 600134 Wishbone rear L+R  
 600193 Pivotball threaded antirollbar (2)  
 600222 Wheelnut 17mm (4)  
 600223 Wheelhexagon (4)  
 600237 Antiroll bar rear 2.3mm  
 600365 Spacers 1,25mm + 2,5mm for wheelbase (4+2)  
 600365 Spacers 1.25mm + 2.5mm wheelbase (4+2)

600439 Wing white low 811  
 600476 Upright L+R V2  
 600499 Pivotball double straight (3)  
 600502 Upright set V2 811  
 600531 Shocktower rear alu 811-S  
 600536 Driveshaft RR 811-S (2)  
 600538 Wheelaxle RR 811-S (2)  
 600541 Track rod RR 811-S (2)  
 600543 Hinge pin 811-S (2)  
 600544 Antirollbar nut 811-S (4)  
 600545 Antirollbar bushing 811-S (4)  
 600546 Pivot ball antiroll bar 811-S (2)  
 600547 Hinge pin RR outer 811-S (2)  
 600550 Suspension bracket RR-FR 811-S  
 600551 Suspension bracket RR-RR 811-S  
 600552 Transmission brace mount RR 811-S  
 600553 Pivot ball 7.5 double 811-S (4)  
 600625 Driveshaft center RR 811 E-S  
 903343 Antirollbar Spacer 3mm (2)

#### Rear Section option

600152 Shocktower rear carbon  
 600155 Suspension bracket RR RR 3  
 600156 Suspension bracket RR FR 2  
 600238 Antiroll bar rear 2.5mm  
 600239 Antiroll bar rear 2.7mm  
 600263 Washer M3 alu (12)  
 600265 Suspension bracket RR FR 2.5 - 4.5  
 600266 Suspension bracket RR RR HR 3  
 600267 Suspension bracket RR RR LR 3  
 600285 Shocktower RR alu light  
 600297 Lightweight wheel nut 17mm (4)  
 600300 Post wingmount alu (2)  
 600301 Wing washer alu (2)  
 600338 Antiroll bar rear 1.8mm  
 600339 Antiroll bar rear 2.0mm  
 600434 Antiroll bar rear 2.4mm  
 600496 Upright L+R V2 alu

#### Differential

110431 Shim 8x11x0.2 (10)  
 600147 Diff gasket (3)  
 600205 Shim 13x16x0.2 (10)  
 600209 Diff pin 10T (2)  
 600210 Diff pin outdrive (2)  
 600421 Oring centerdiff V2 (10)  
 600425 Diff housing V2  
 600501 Complete FR/RR 44T diff  
 600495 Diff pinion 13T  
 600480 Diff gear 44T  
 600559 Spur gear 46T 811-S  
 600561 Diff outdrive center 811-S (2)  
 600562 Diff outdrive FR-RR 811-S (2)  
 600627 Diff gear 10T + 20T (4+2) V2

#### Differential Optional

600560 Diff gear 43T 811-S  
 600514 Diff pinion 10T 811 V3

#### Pinions

600458 Pinion 18T

#### Pinions Optional

600452 Pinion 12T  
 600453 Pinion 13T  
 600454 Pinion 14T  
 600455 Pinion 15T  
 600456 Pinion 16T  
 600457 Pinion 17T  
 600459 Pinion 19T  
 600460 Pinion 20T



**Body**

- 1667 Body-clip medium (10)
- 600438 Body + nosecone 811-E
- 600439 Wing white low 811

**Body Optional**

- 600143 Wing white nylon
- 600277 Wing black nylon
- 600440 Wing black low 811

**Merchandising**

- 1897 Towel Serpent large
- 1898 Lanyard Serpent orange
- 1900 Cap flat-brim Serpent black
- 1998 Cap serpent black-orange
- 190137 T-shirt Serpent offroad orange (S)
- 190138 T-shirt Serpent offroad orange (M)
- 190139 T-shirt Serpent offroad orange (L)
- 190140 T-shirt Serpent offroad orange (XL)
- 190141 T-shirt Serpent offroad orange (XXL)
- 190142 T-shirt Serpent offroad black (S)
- 190143 T-shirt Serpent offroad black (M)
- 190144 T-shirt Serpent offroad black (L)
- 190145 T-shirt Serpent offroad black (XL)
- 190146 T-shirt Serpent offroad black (XXL)
- 190162 T-shirt Serpent offroad white (S)
- 190163 T-shirt Serpent offroad white (M)
- 190164 T-shirt Serpent offroad white (L)
- 190165 T-shirt Serpent offroad white (XL)
- 190166 T-shirt Serpent offroad white (XXL)
- 190172 Winter jacket Serpent (S)
- 190173 Winter jacket Serpent (M)
- 190174 Winter jacket Serpent (L)
- 190175 Winter jacket Serpent (XL)
- 190176 Winter jacket Serpent (XXL)
- 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)
- 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)

**Pit equipment**

- 190501 Tool-bag
- 190502 Pit-bag medium. 3 drawers
- 190504 Ballcup tool

**Fastners**

- 110100 Screw allen countersunk m3x10 (10)
- 110101 Screw allen countersunk m4x8 (10)
- 110102 Screw allen countersunk m4x10 (10)
- 110103 Screw allen countersunk m4x16 (10)
- 110104 Screw allen countersunk M3x8 (10)
- 110105 Screw allen countersunk m4x12 (10)
- 110106 Screw allen flanged roundhead m5x12 (10)
- 110107 Screw allen cilinderhead m3x16 (10)
- 110108 Screw allen roundhead m3x6 (10)
- 110109 Screw allen roundhead m3x10 (10)
- 110110 Screw allen roundhead m3x16 (10)
- 110111 Screw allen roundhead m3x14 (10)
- 110112 Screw allen roundhead m3x12 (10)
- 110113 Screw allen roundhead m4x8 (10)
- 110114 Setscrew allen m3x8 (10)
- 110115 Setscrew allen m3x4 (10)
- 110116 Setscrew allen m3x3 (10)
- 110117 Setscrew allen m3x12 (10)

- 110118 Setscrew allen m4x4 (10)
- 110119 Setscrew allen m4x6 (10)
- 110120 Setscrew allen m4x10 (10)
- 110121 Setscrew allen m5x6 (10)
- 110122 Screw allen countersunk m3x6 (10)
- 110123 Screw philips roundhead 3.5x13 (10)
- 110124 Screw allen countersunk m3x8 (10)
- 110125 Screw allen countersunk m3x20 (10)
- 110126 Screw allen countersunk m2.5x12 (10)
- 110127 Screw allen countersunk m3x12 (10)
- 110128 Screw allen roundhead m3x5 (10)
- 110129 Screw allen cilinderhead m3x10 (10)
- 110130 Screw allen roundhead m2.5x6 (10)
- 110131 Screw allen roundhead m2.5x10 (10)
- 110132 Screw allen countersunk m3x16 (10)
- 110133 Screw philipshead countersunk 2.5x8 wide (10)
- 110134 Screw philipshead countersunk 2.5x10 wide (10)
- 110135 Screw allen countersunk M2.5x10 (10)
- 110136 Screw allen countersunk M2.5x8 (10)
- 110137 Setscrew allen M3x6 (10)
- 110138 Screw allen countersunk M4x14 (10)
- 110139 Screw allen countersunk M3x40 (10)
- 110140 Screw allen roundhead M3x20 (10)
- 110141 Screw allen roundhead M3x22 (10)
- 110142 Screw allen roundhead M3x25 (10)
- 110143 Screw allen roundhead M4x18 (10)
- 110144 Screw allen roundhead M3x18 (10)
- 110145 Screw allen roundhead flanged M3x12 (10)
- 110146 Screw allen roundhead flanged M3x16 (10)
- 110147 Screw ph roundhead widethread 2.5x5 (10)
- 110148 Setscrew allen M5x4 (10)
- 110149 Screw allen countersink M2x10 (10)
- 110150 Screw M6x12 nylon black (2)
- 110151 Screw allen cilinderhead M4x10 (10)
- 110152 Screw allen cilinderhead M3x8 (10)
- 110153 Screw allen roundhead M2.3x6 (10)
- 110154 Setscrew allen M3x10 (10)
- 110155 Setscrew allen M3x5 (10)
- 110156 Screw allen countersunk M2.2x6 (10)
- 110157 Screw allen countersunk M3x5 (10)
- 110158 Screw allen countersunk M3x15 (10)
- 110159 Screw allen countersunk M3x18 (10)
- 110160 Screw allen cilinderhead M2.2x12 (10)
- 110161 Screw allen cilinderhead M2x6 (10)
- 110162 Setscrew allen M3x2.5 (10)
- 110163 Setscrew allen M3x2 (10)
- 110164 Screw allen roundhead M3x4 (10)
- 110165 Screw allen cilinderhead M2x5 (10)
- 110166 Screw allen countersunk M2.5x5 (10)
- 110167 Screw allen roundhead flanged M3x18 (10)
- 110168 Screw allen roundhead flanged M3,5x10 (10)
- 110169 Screw allen roundhead flanged M4x10 (10)
- 110170 Screw allen roundhead flanged M3x28 (10)
- 110171 Screw ph countersunk widethread 2.5x15 (10)
- 110200 Pin 2.5x8 (10)
- 110201 Pin 3x12 (10)
- 110202 Pin 5x5 (10)
- 110203 Pin 3x14 (10)
- 110204 Pin 3x20 (10)
- 110205 Pin 3x22 (10)
- 110206 Pin 2.5x22 (10)
- 110207 Pin 2.5x12 (10)
- 110208 Pin nra 2x9.8 (4)
- 110209 Pin nra 2x18 (4)
- 110210 Pin 3x13 (10)
- 110211 Pin 2.5x13 (10)
- 110212 Pin 2.5x17 (10)
- 110213 Pin 2.5x10 (10)
- 110214 Pin 3x15 (10)
- 110215 Pin 2x12 (10)
- 110216 Pin 2.5x15 (10)

- 110417 Shim 3x6x3 (10)  
110418 Shim 4x8x0.1 (10)  
110419 Shim 4x9.5x1 (10)  
110420 Shim 4x9.5x2(10)  
110421 Shim 4x9.5x4(10)  
110422 Shim 4x10x0.3 (10)  
110423 Shim 5x8x0.1 (10)  
110424 Shim 5x8x0.3 (10)  
110425 Shim 5x10x0.3 (10)  
110426 Shim 5x10x0.5 (10)  
110427 Shim 5x15x0.3 (10)  
110428 Shim 6.5x8x0.25 (10)  
110429 Shim 6x11.75x0.2 (10)  
110430 Shim 6x12x0.5 (10)  
110431 Shim 8x11x0.1 (10)  
110432 Shim 8x11x0.2 (10)  
110433 Shim 12x15x0.25 (10)  
110434 Shim 12x18x0.3 (10)  
110435 Shim 13x16x0.2 (10)  
110436 Shim 3x5x3 (10)  
110437 Nut M2.5 (10)  
110438 Shim 2,5x6x0,5 (10)  
110439 Shim 3x7,5x1 (10)  
110440 Shim 2,5x5x0,4 (10)  
110441 Nut nylock M3 flanged (10)  
110442 Shim 4x8x0.6 (10)



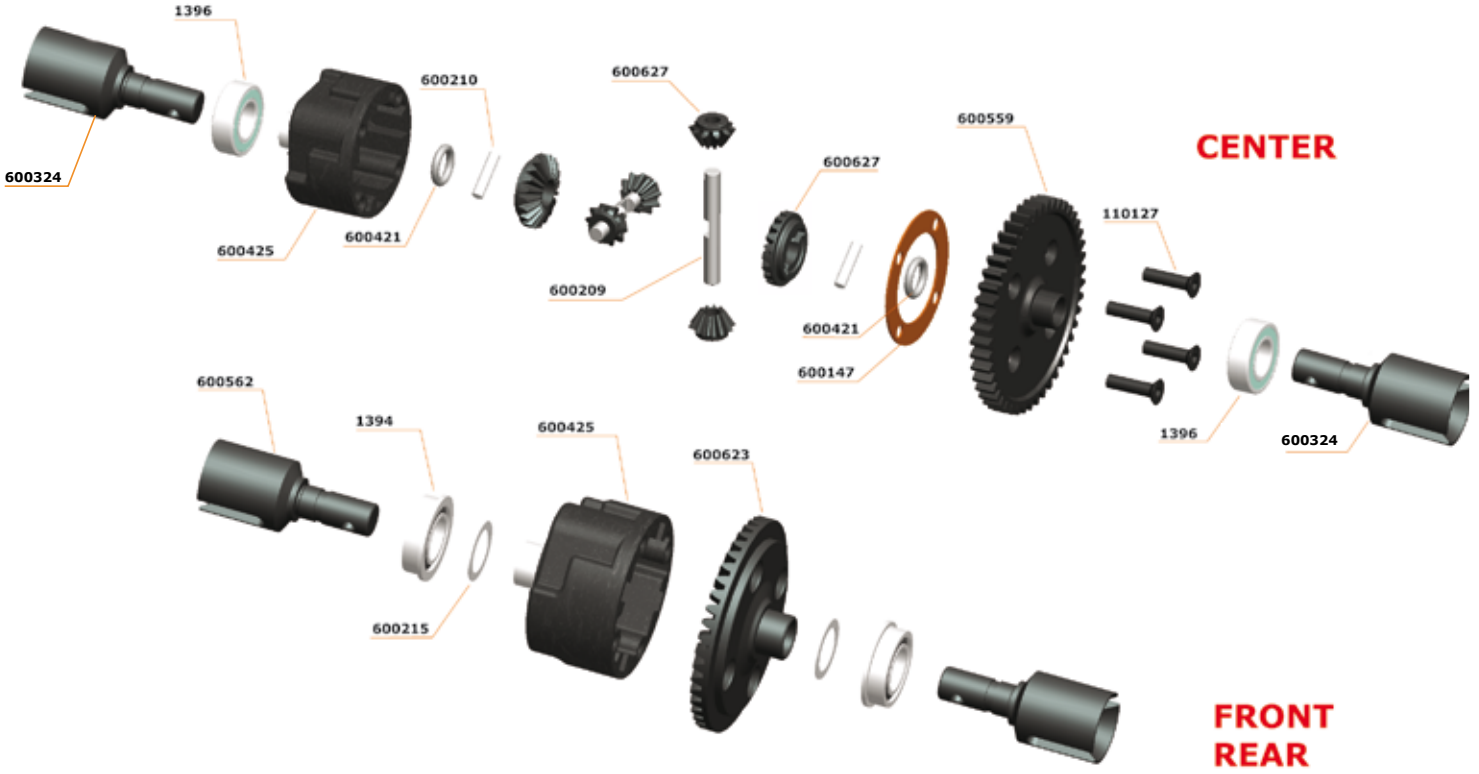
- ## Speed controller, motors, parts

- ## Tyres rubber offroad and wheels

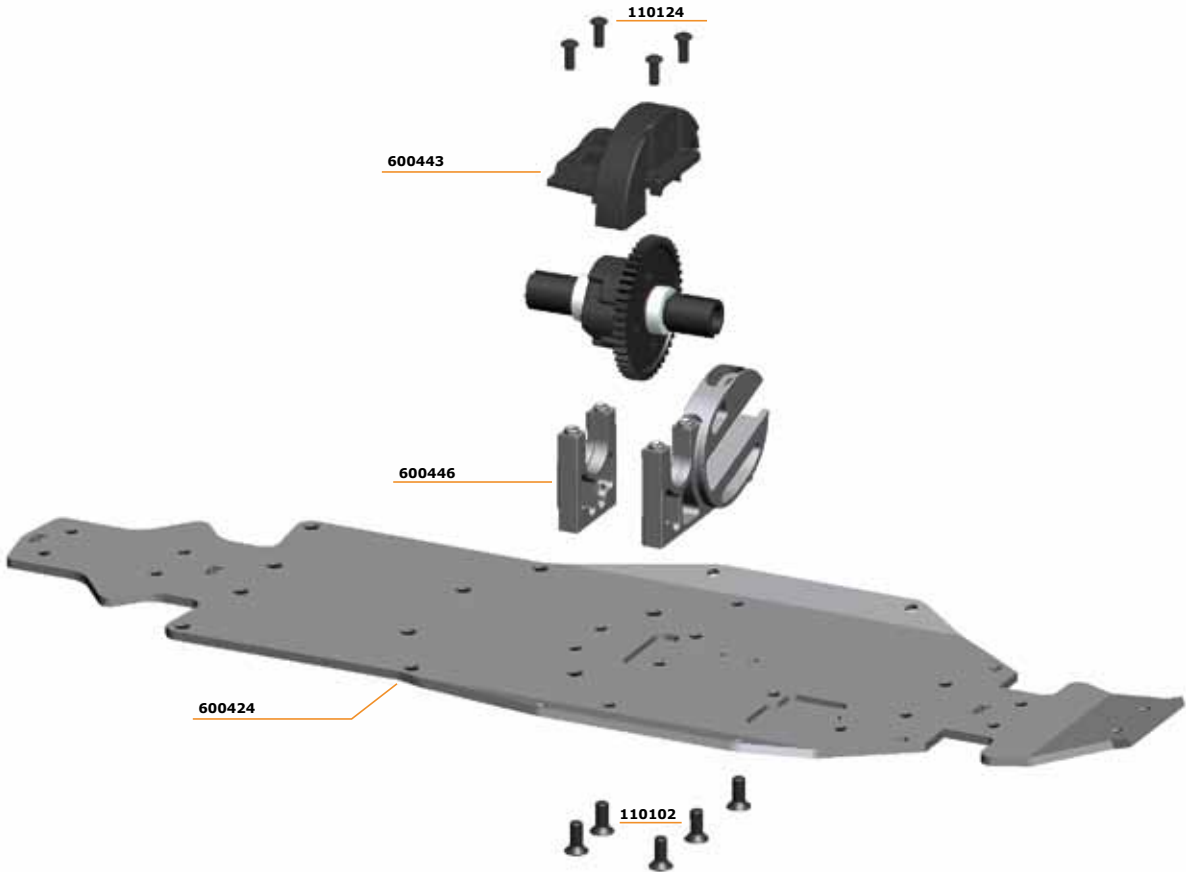
- ### Additions / notes

This image shows a full page of blank, lined paper. It features approximately 20 evenly spaced horizontal grey lines across the entire width of the page, providing a guide for writing. The background is a clean, solid white color.

# DIFFERENTIAL ASSEMBLIES



## TRANSMISSION CENTER





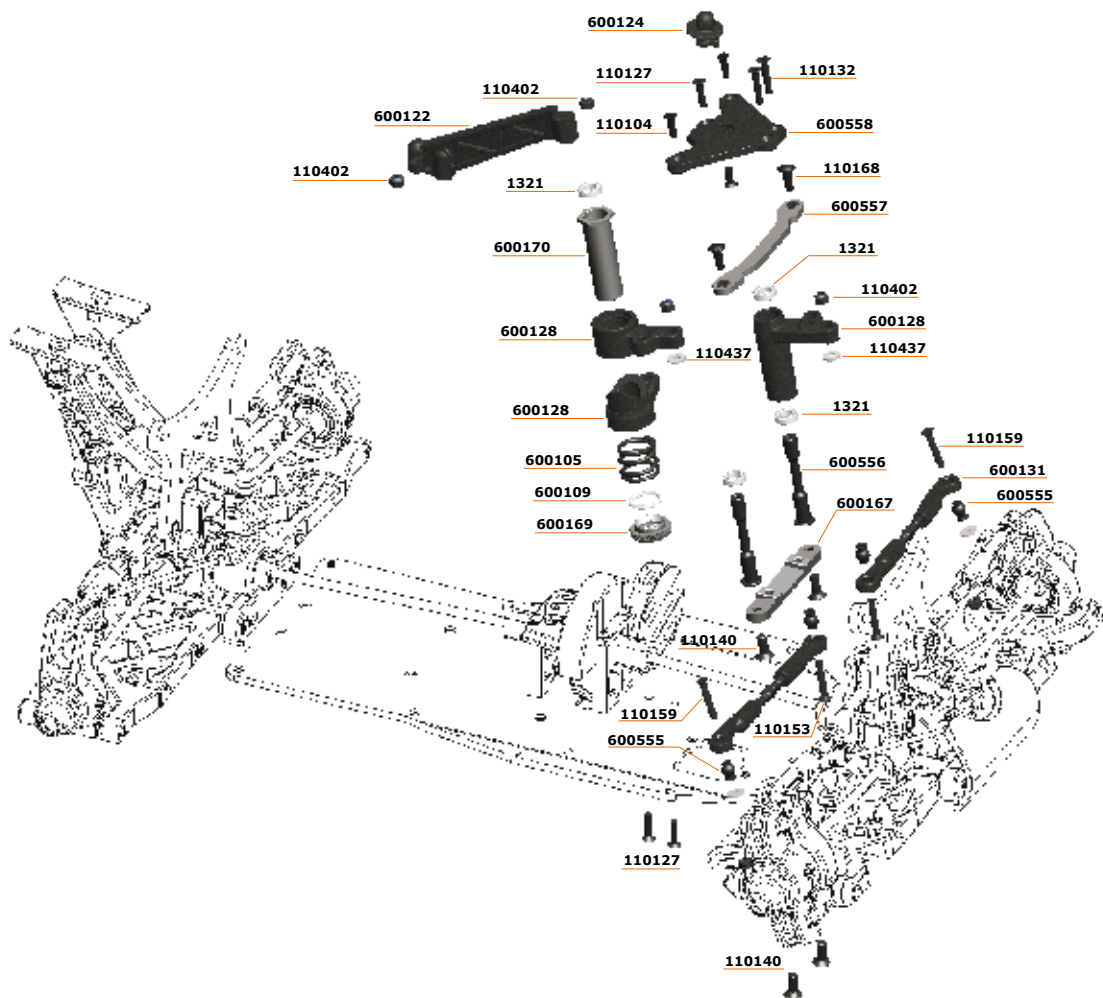
# REAR ASSEMBLY



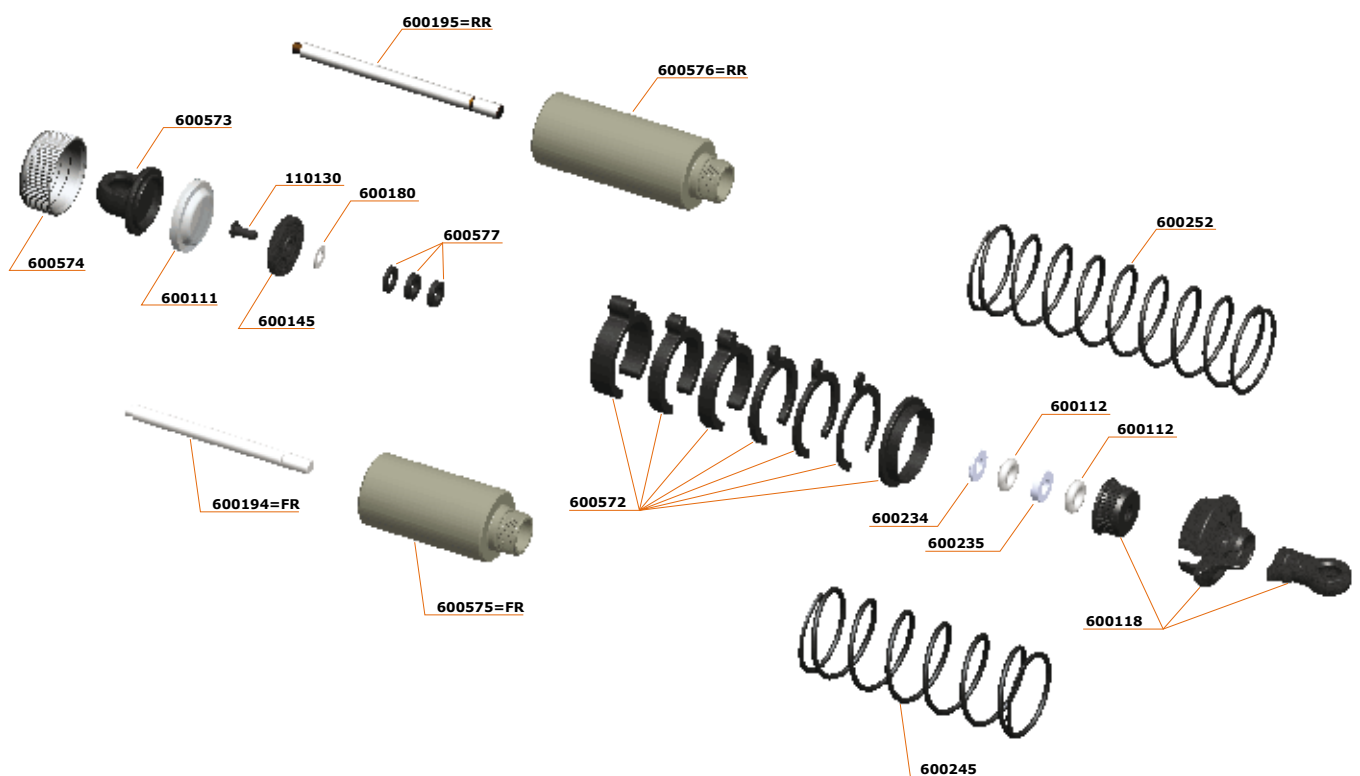
# FRONT ASSEMBLY



# STEERING ASSEMBLY



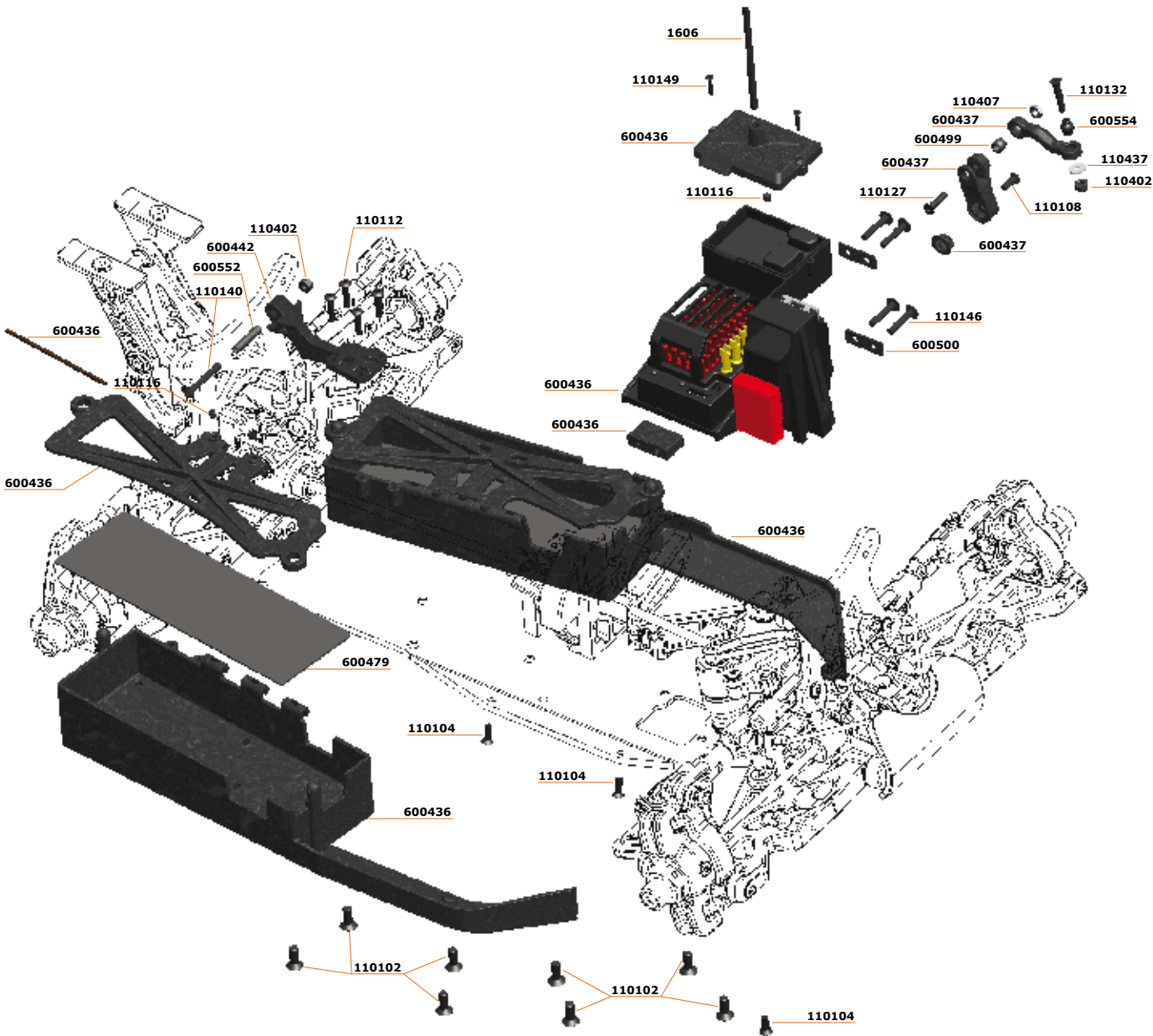
# SHOCK ASSEMBLY



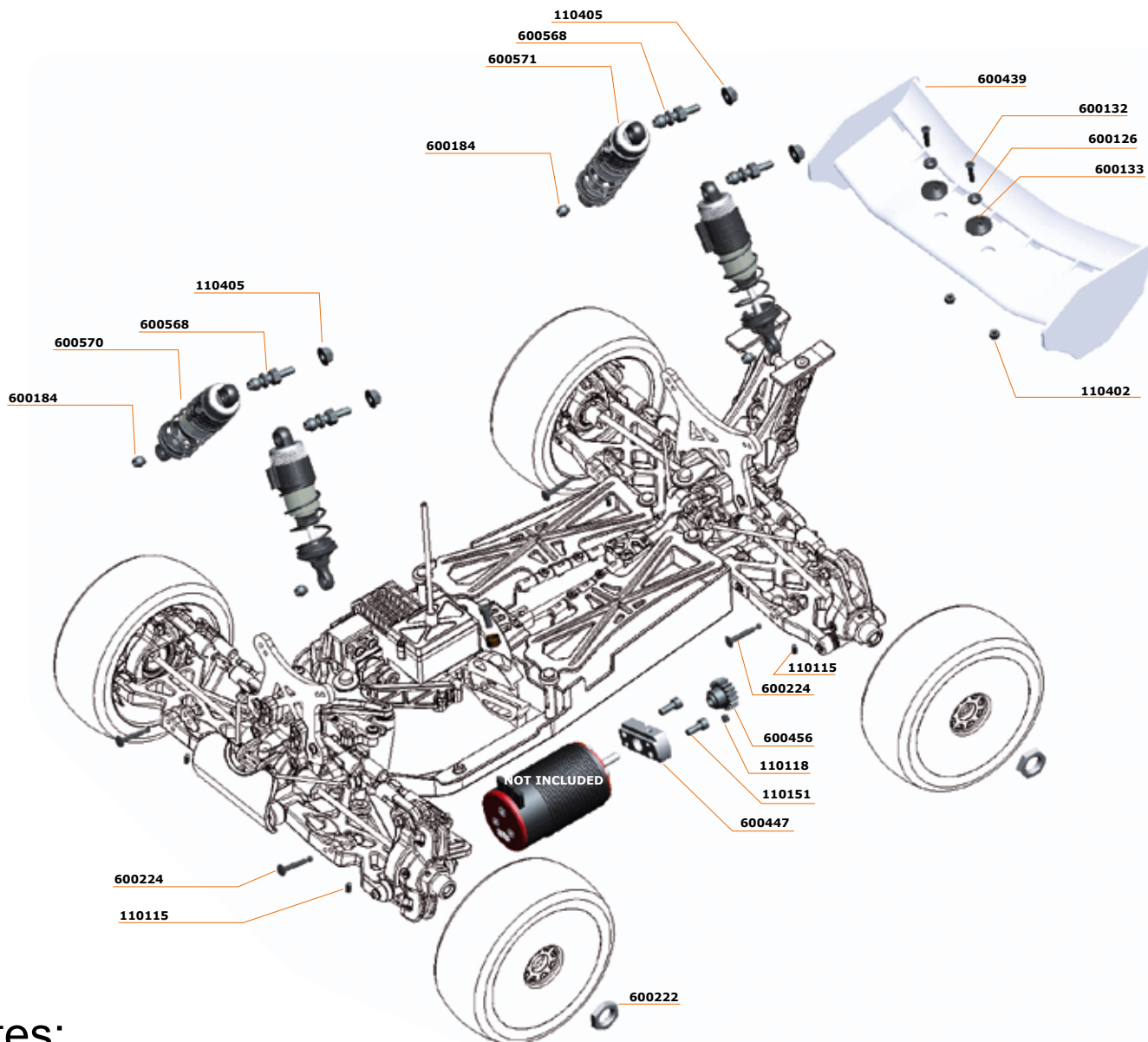
600570: SCHOCK SET FR  
600571: SCHOCK SET RR



# RADIO ASSEMBLY



# FINAL ASSEMBLY



## Notes:

**COBBLE**  
811 RTR



[www.serpent.com](http://www.serpent.com)  
[info@serpent.com](mailto:info@serpent.com)



[www.serpent.com/600006](http://www.serpent.com/600006)

#82354-1 Manual / ref guide 811Be RTR