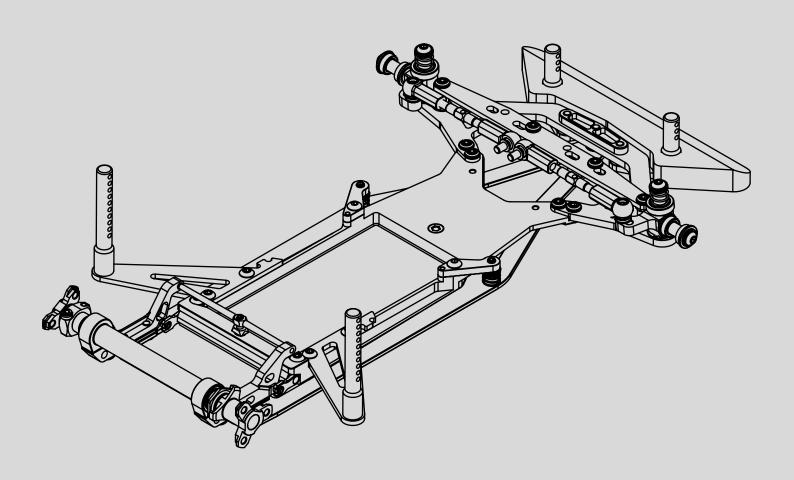


1/12-SCALE ELECTRIC ON-ROAD CAR



INSTRUCTION MANUAL



INTRODUCTION

Congratulations on purchasing your Awesomatix car!
The A12X car was produced by UAB Awesomatix company.

BEFORE YOU START

The A12X car is a high-quality, innovative 1/12-scale on-road car and should only be built by those with previous experience of building R/C model racing cars.

This is not a toy and is not intended for use by children without the direct supervision of a responsible, knowledgeable adult. Please read the instruction manual carefully and fully understand it before beginning assembly. If you encounter any problems or have any questions, please do not hesitate to contact the Awesomatix team at **support@awesomatix.com**.

Ensure that you are happy with your kit purchase and are committed to use of it prior to beginning the assembly of your A12X. Your car cannot be returned to UAB Awesomatix for a refund or exchange once it has been fully or partially assembled.

This kit is a radio controlled model racing product and could cause personal injury or harm if not used as intended. The A12X car is designed for use on r/c car race tracks; it should not be used in areas primarily intended for use by the general public. UAB Awesomatix accept no responsibility for any injury caused by making or using this product.

Due to our policy of continuous product development, the exact specifications of the kit may vary. UAB Awesomatix reserve all rights to modify or change product specifications without prior notice. All rights reserved.

ASSEMBLY NOTES

You can find useful tips for assembly of the A12X and an editable setup sheet on the Internet website: http://site.petitrc.com/reglages/awesomatix/setupa12/

GENERAL PRECAUTIONS

- Many of the items in this kit are small enough to be accidentally swallowed and are therefore potential choking hazards, making them potentially fatal. Please ensure that when assembling the kit you do so out of the reach of small/young children.
- Take care when building, as some parts may have sharp edges.
- Please read this manual carefully to understand which ancillary items (tools, electrics, electronics etc) are used with this kit.
 Awesomatix Innovations accept no responsibility for the operation of any such ancillary items.
- · Exercise care when using tools and sharp instruments.
- Follow the operating instructions for the radio equipment at all times.
- · Never touch rotating parts of the car as this may cause injury.
- · Keep the wheels of the model off the ground when checking the operation of the radio equipment.
- · To prevent any serious personal injury and/or damage to property, be responsible when operating all remote controlled models.
- · The model car is not intended for use on roads or areas where its operation can conflict with or disrupt pedestrian or vehicular traffic.
- Do not run your car in poor light or if it goes out of sight. Any impairment to your vision may result in damage to your car or, worse, injury to others or their property.
- As a radio controlled device, your car is subject to radio interference from things beyond your control. Any such interference may cause a loss of control of your car so please consider this possibility at all times.
- · When not using RC model, always disconnect and remove battery.
- Insulate any exposed electrical wiring to prevent dangerous short circuits.

Take maximum care in wiring, connecting and insulating cables. Make sure cables are always connected securely.

Check connectors for if they become loose and if so reconnect them securely. Never use R/C models with damaged wires.

A damaged wire is extremely dangerous and can cause short-circuits resulting in fire.

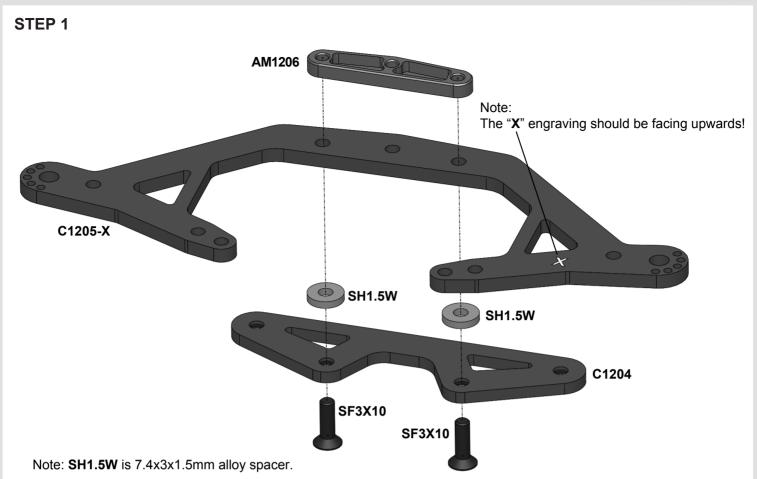
EQUIPMENT RECOMMENDED (NOT INCLUDED)

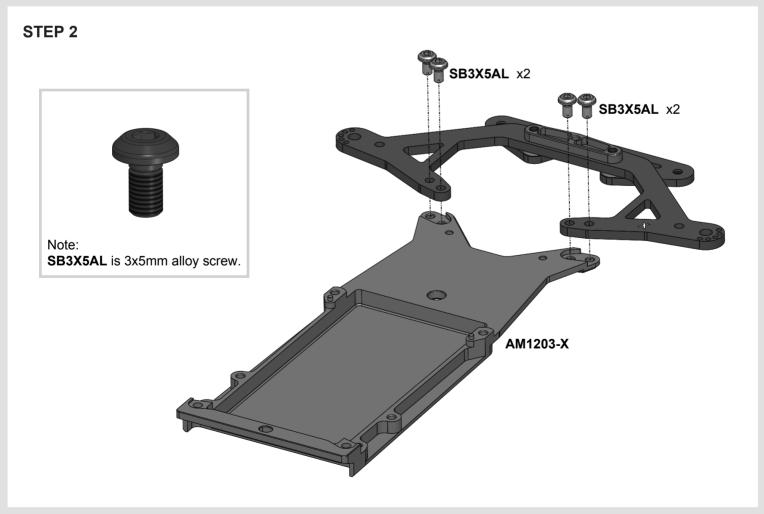
- Radio Transmitter
- · Radio Receiver
- · Electronic Speed Control
- · Steering Servo
- · Servo Saver
- · Electric Motor
- Pinion Gear (64 or 48 Pitch)
- Spur Gear (64 or 48 Pitch)
- 1S Li-Po Battery
- 1/12 scale Body Shell
- 1/12 scale Wheels and Tires

TOOLS RECOMMENDED (NOT INCLUDED)

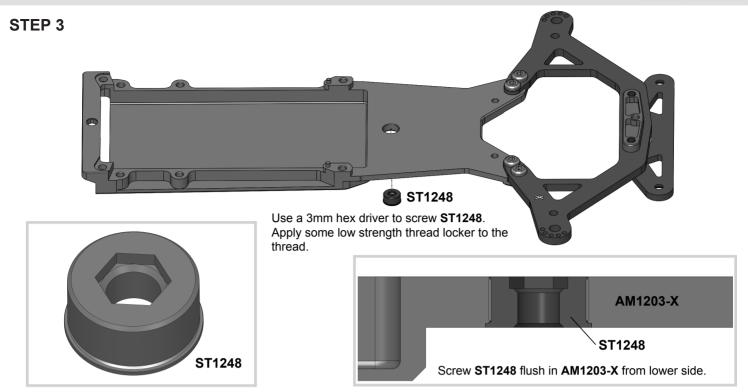
- 1.5 mm, 2.0 mm, 2.5 mm, 3.0 mm Hex Drivers
- 12mm Wrench
- · Sewing Needle or Sharp Pin
- · Hobby Knife
- · Ride Height Gauge
- · Thin CA Glue
- Thread Lock
- · Double Side Tape
- · Silicone Grease
- Joint Grease

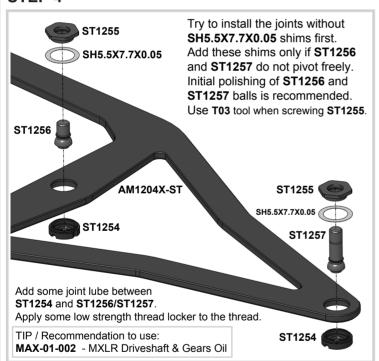




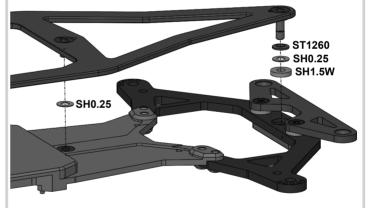






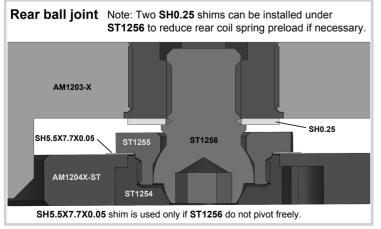


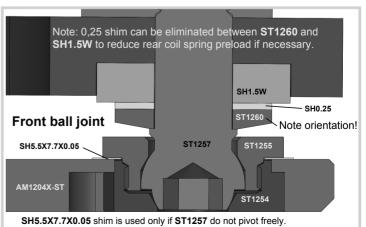
Note: The kit's rollcenter set is **LRC** (Low Roll Center) set. Optional rollcenter sets are available (not kit included): **ELRC** - Extra Low Roll Center set (-1mm lower rollcenter) **HRC** - High Roll Center set (+1mm higher rollcenter) **EHRC** - Extra High Roll Center set (+2,8mm higher rollcenter)



Use a 2mm hex driver to screw **ST1256** and **ST1257**. Apply some low strength thread locker to the thread.

After assembly make sure that **AM1203-X** pivots freely relative to **AM1204X-ST**.



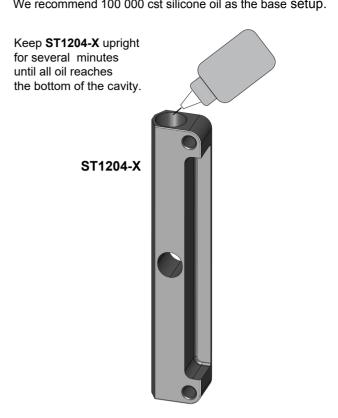


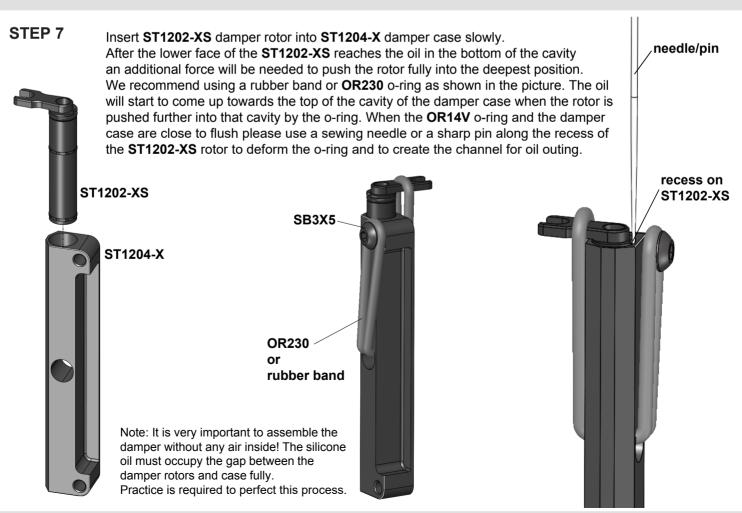




Add \sim 0,3 g of 50 000...100 000 cst silicone oil into the cavity of **ST1204-X** damper case. We recommend 100 000 cst silicone oil as the base setup.

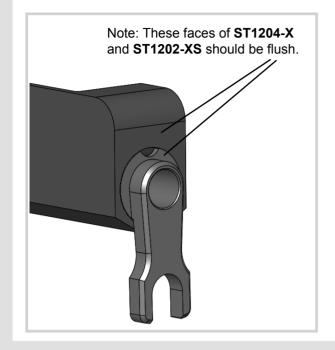
STEP 6

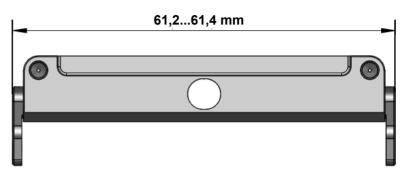




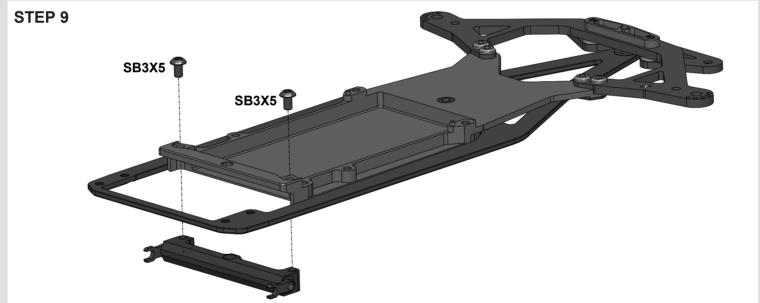


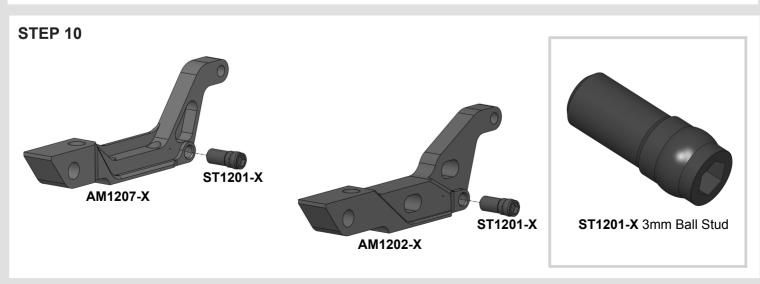
Repeat STEPS 5,6 &7 for other side of **ST1204-X** and check that both **ST1202-XS** rotors are correctly installed (flush with the **ST1204-X** face)



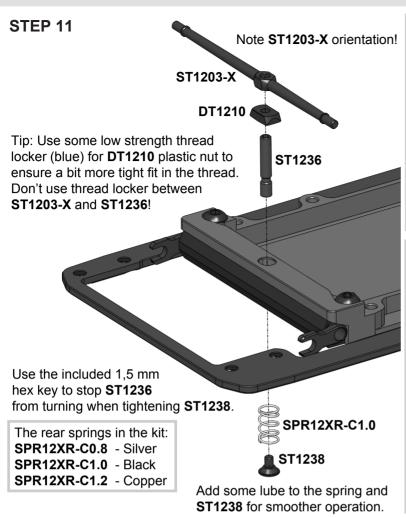


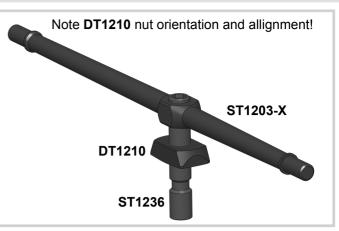
Note: Check this recommended size.

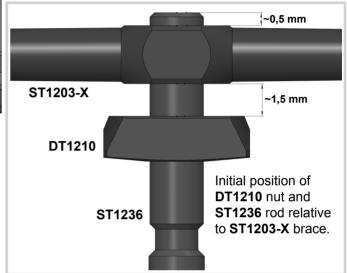


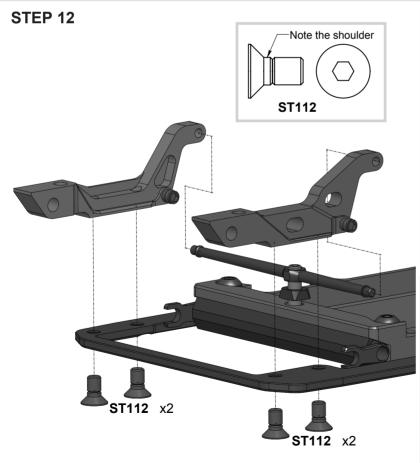


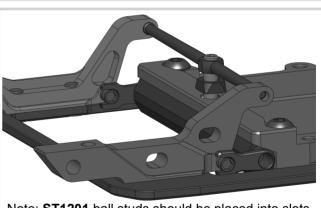






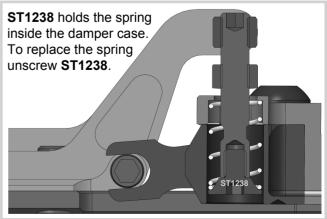




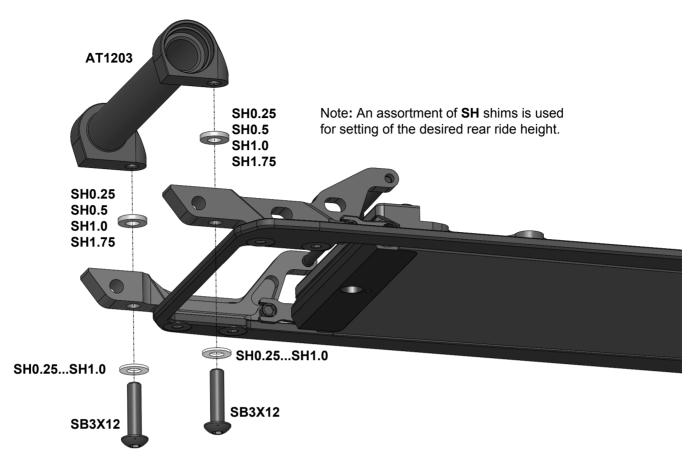


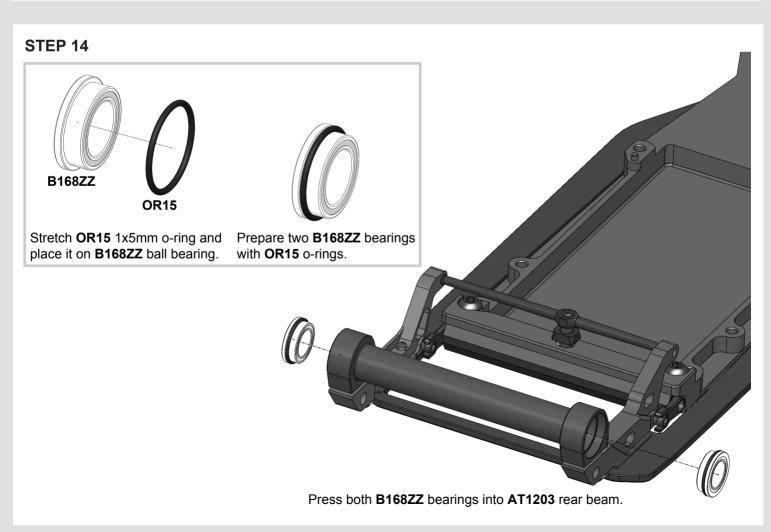
Note: **ST1201** ball studs should be placed into slots of **ST1202-XA** rotors.

The tips of **ST1203-X** brace should be placed into holes of **AM1202-X** and **AM1207-X**.



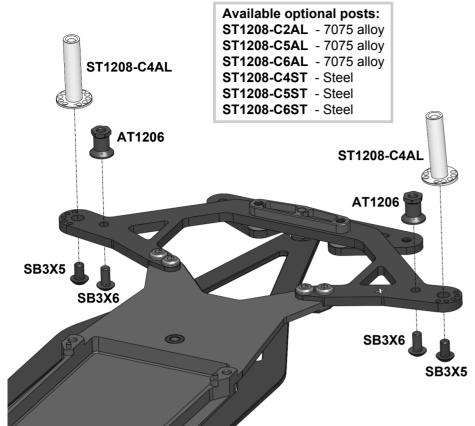






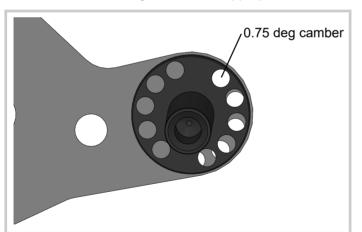


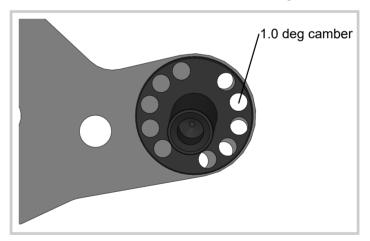
Note: ST1208-C4AL steering block posts provide 4 deg caster.

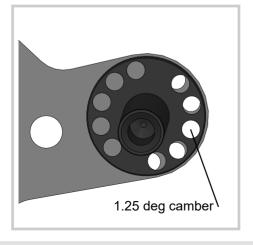


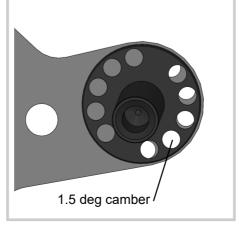


Alignment of the appropriate holes between ST1208-C4AL and C1205-X for camber settings.





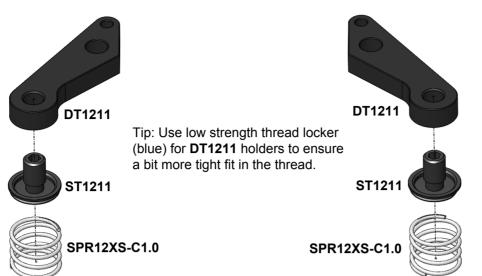








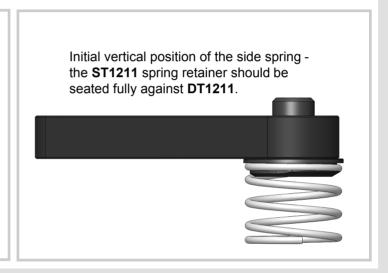


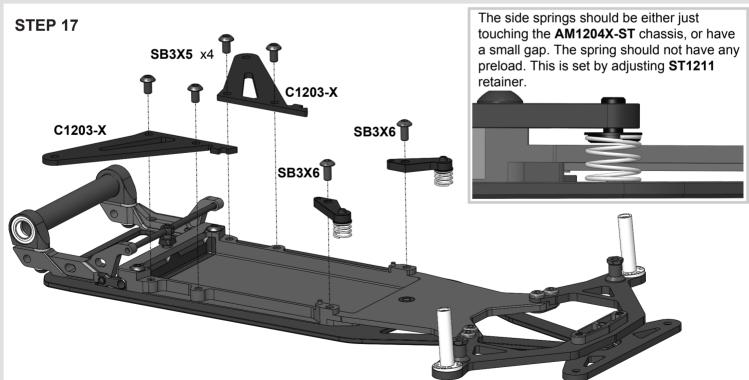


The side springs in the kit: SPR12XS-C0.8 - Silver SPR12XS-C1.0 - Black SPR12XS-C1.2 - Copper



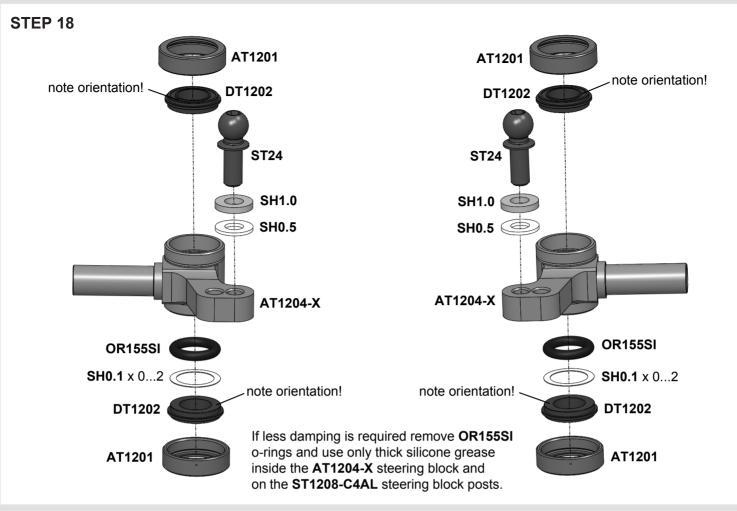
Snap the spring into the groove on **ST1211** retainer and rotate the spring to find the position that provides a perfect alignment of the spring and retainer.

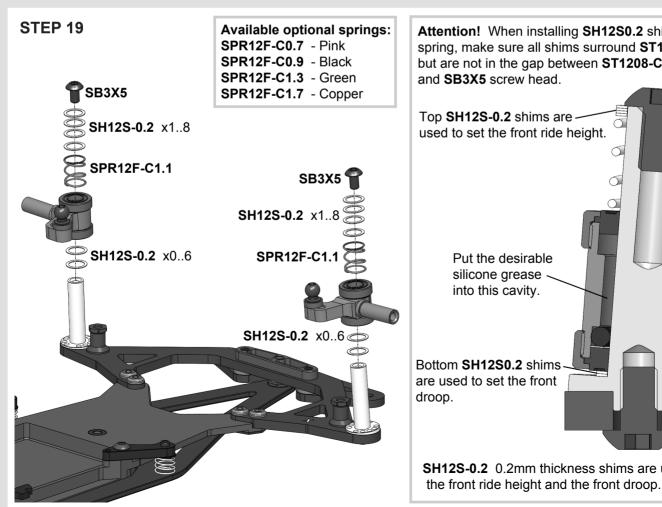


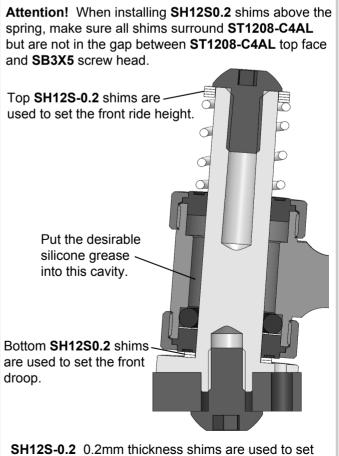


Note: Optional long springs SPR12S0.4, SPR12S0.5, SPR12S0.6 can be used with additional SH0.5 or SH1.0 spacers installed under the DT1211 holders. The left and right long side springs - both must always contact the AM1204X-ST chassis during side roll. The effective anti-roll rate of these long side springs is 2 times the specified spring rate. For example, the effective anti-roll rate of SPR12S0.4 long springs is actually equal to 0.8.

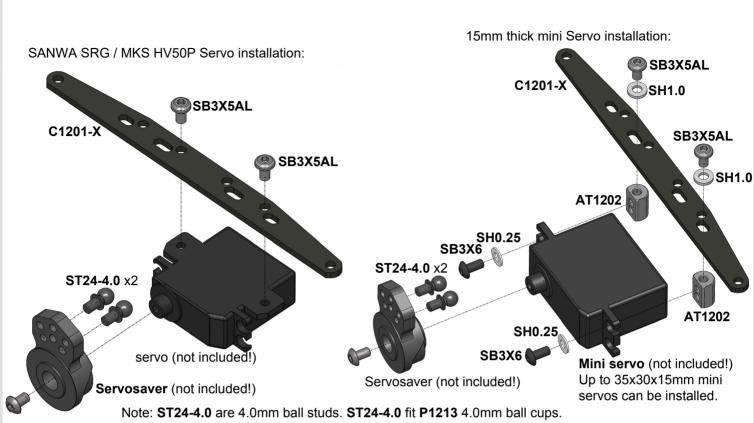




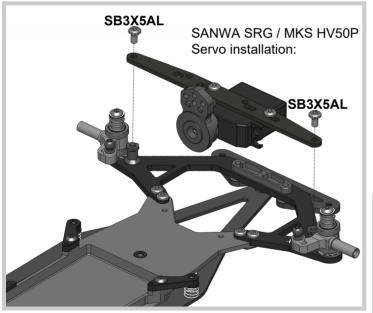


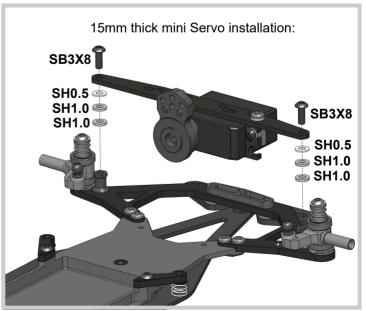






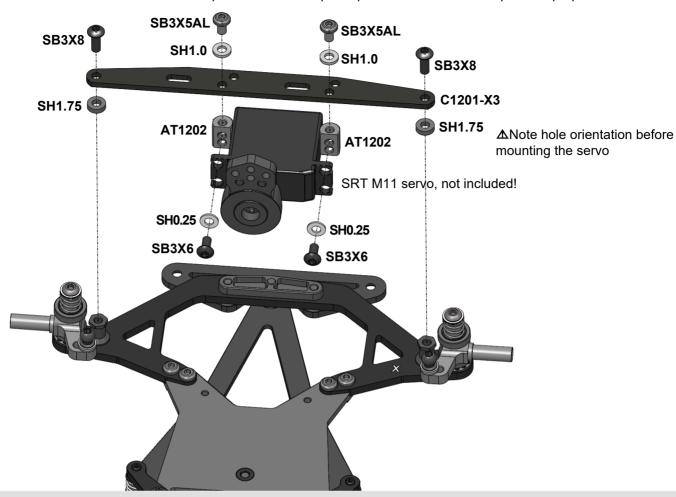
STEP 21





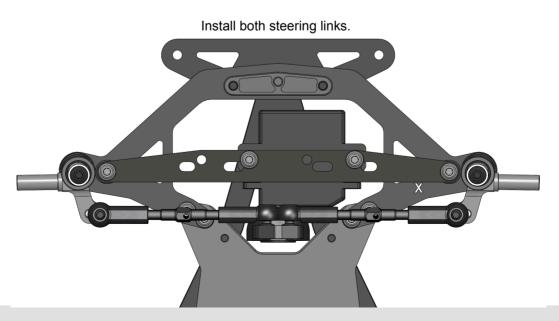


STEP 20-21Bis SRT M11 Servo's unique dimensions require optional C1201-X3 servo plate for proper installation

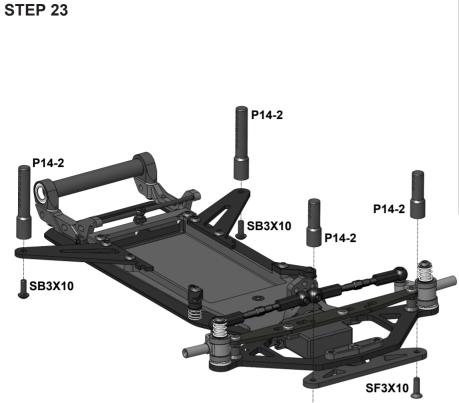




Note: P1213 4.0mm ball cups are used for the inner steering joints.

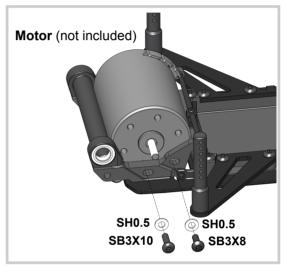


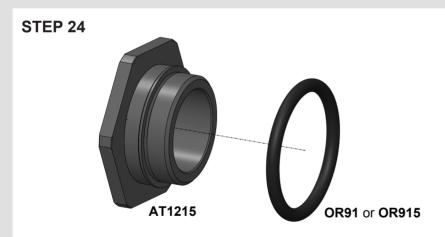


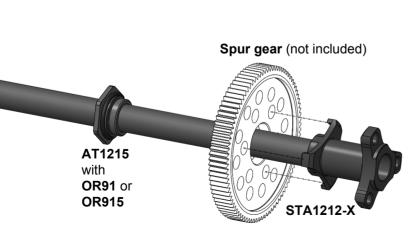


SF3X10

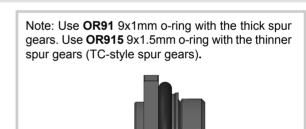


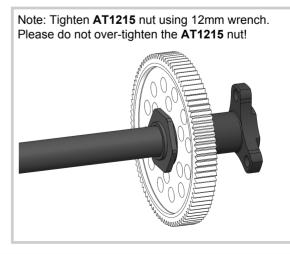




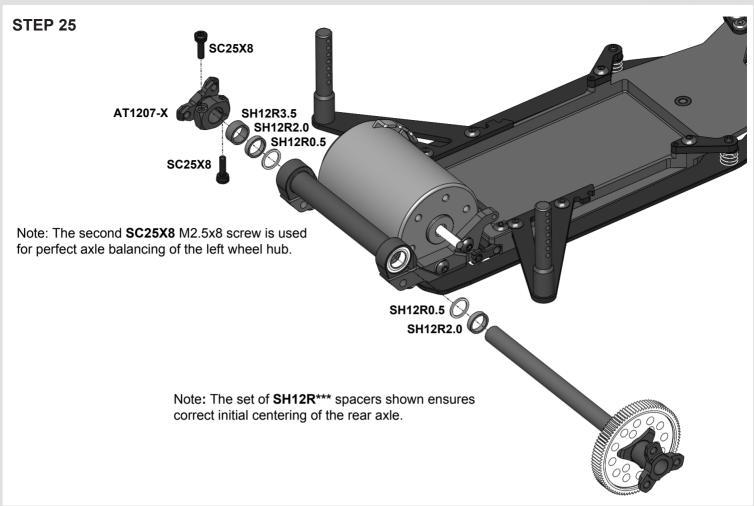


Note: The sum of the 64DP spur+pinion teeth should be within the range 112-120.

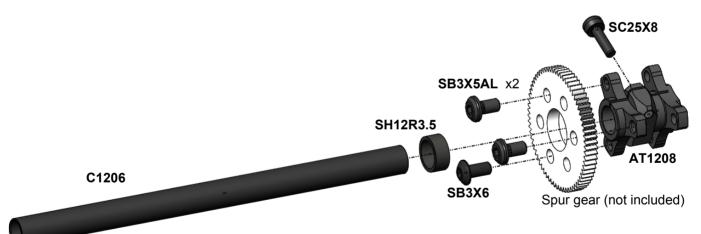








Carbon Spool set CS-1 (optional).



Note: Optional **ST1212** steel axle can be used instead of **C1206** carbon axle.

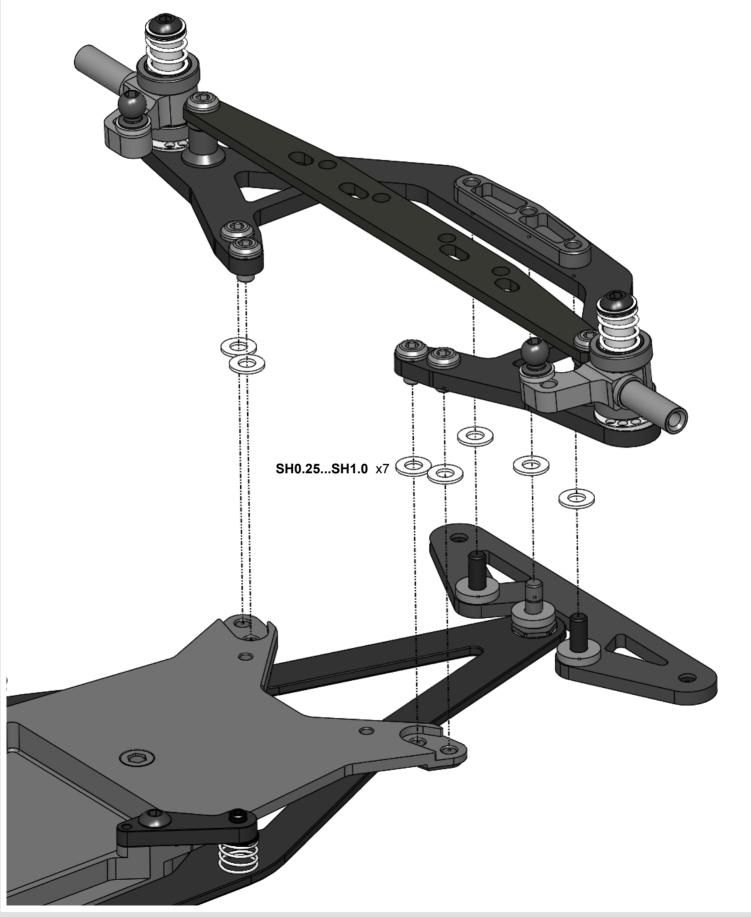
Note: Two SB3X5AL M3x5 alloy screw with one SB3X6 M3x6 steel screw are used for perfect axial balancing of the right wheel hub.

SB3X5AL x2

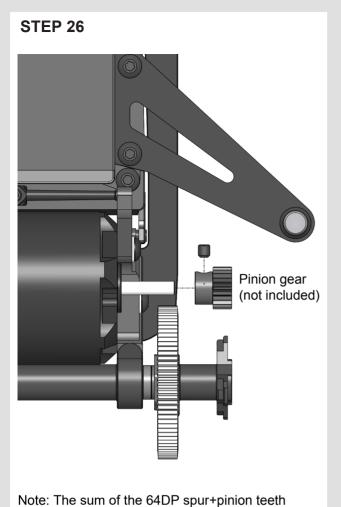
SB3X6



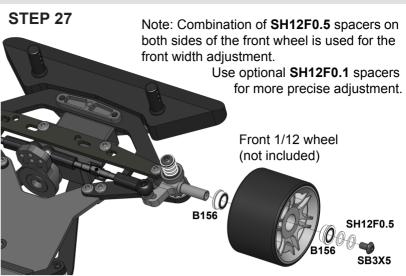
Note: When using larger diameter tires, it maybe necessary to use spacers under the **C1205-X** to obtain the desired ride height. Adjusting the number or thickness of shims under and above the steering block will not be sufficient to lower the ride height to a desirable setting.

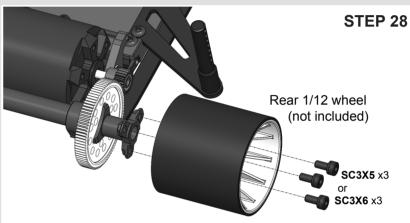




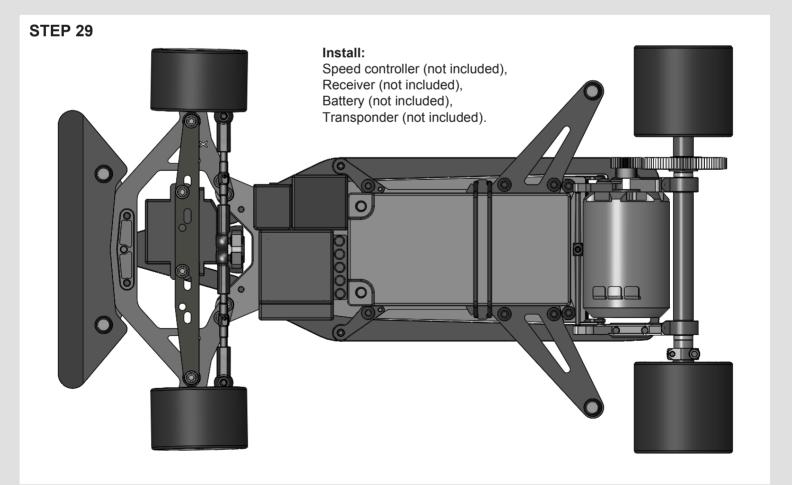


should be within the range 112-120.





Note: Use **SC3X5** or **SC3X6** depending of the rear rims chosen. Some rims may need optional 3x8 mm screws (not included).



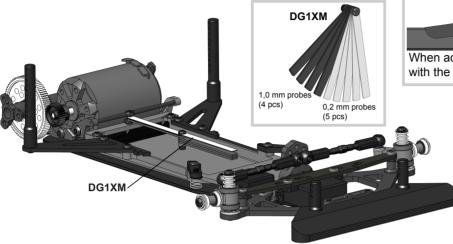


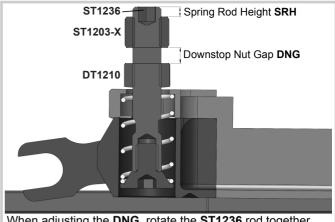
Setting of the Rear Downstop (RD).

Rear Downstop - the **RD** value in the A12X car indicates how far the motor pod can drop below the bottom surface of the rear damper. In the A12X car the **RD** directly depends on the gap between the nut **DT1210** and the rod **ST1203-X** - Downstop Nut Gap **DNG**. Therefore, to determine **RD**, it is nessary to measure the **DNG** value.

Equation for the Rear Downstop **RD**: **RD** = 3 mm - **DNG**.

When measuring the Downstop Nut Gap **DNG**, insert the **DG1XM** gauge into the gap between the brace **ST1203-X** and the nut **DT1210**.





When adjusting the **DNG**, rotate the **ST1236** rod together with the **DT1210** nut using a 1,5 mm hex driver.



After installing the **DNG**, orient the **DT1210** nut with its long face along the motor.

Setting of the Gap Under Damper (GUD).

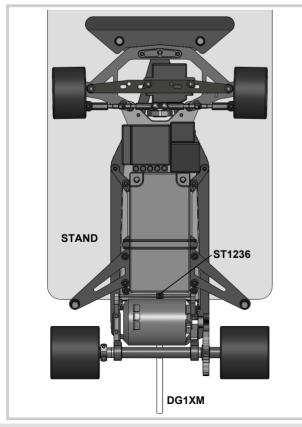
Gap Under Damper - the **GUD** value indicates how far the bottom surface of the rear damper is above the chassis level. We strongly recommend installing the **GUD** after installing the rear downstop **RD**!!!

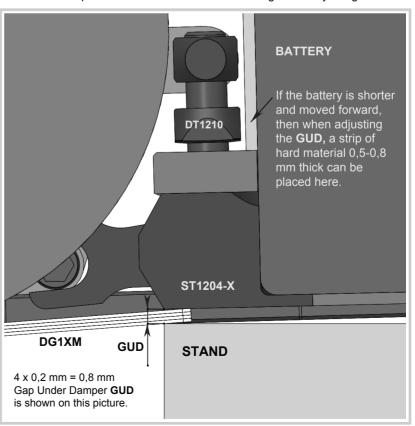
The **GUD** value can be measured using the **DG1XM** gauge when the fully equipped car is placed on the flat stand like on the picture. When measuring the **GUD**, insert the **DG1XM** gauge in the gap between the **ST1204-X** body and the stand.

The **GUD** is set via preload of the rear spring **SPRXR**. Rotate the rod **ST1236** using 1,5 mm hex driver; turn clockwise to reduce the rear spring preload and to decrease the **GUD**; turn counterclockwise to increase the rear spring preload and to increase **GUD**.

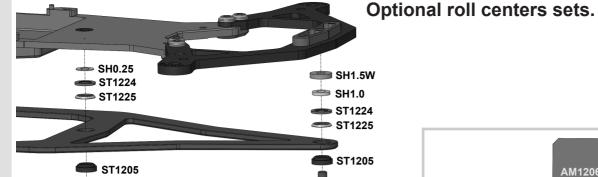
The battery prevents the **DT1210** nut from rotating in most cases and the previously set rear downstop setting is not changed. Note: If the battery case is slightly shorter, always secure the battery in the rearmost position or place a strip of hard material

(plastic, metal) 0,5-0,8 mm thick between the battery and the DT1210 nut to prevent the DT1210 nut from turning when adjusting the GUD.

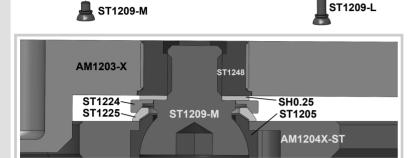


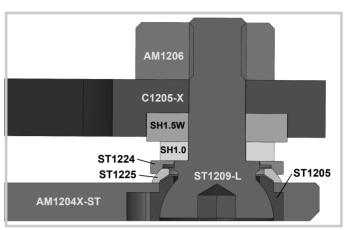


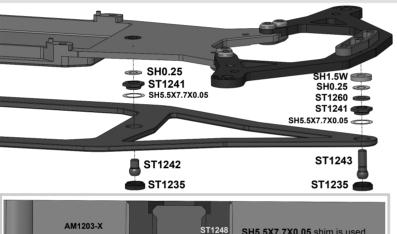


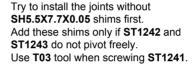


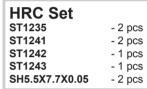
ELRC Set ST1205 - 2 pcs ST1209-M - 1 pcs ST1209-L - 1 pcs ST1224 - 2 pcs ST1225 - 2 pcs

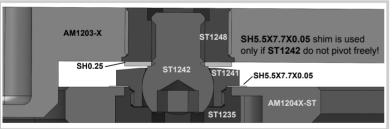


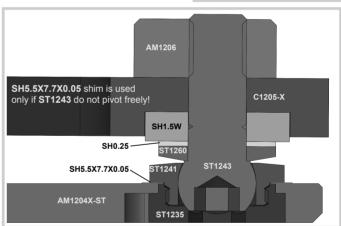


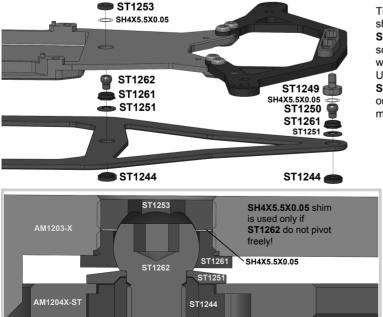








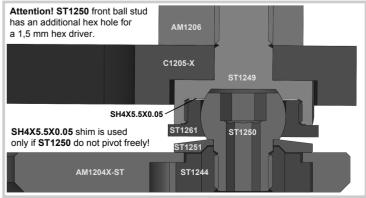




Try to install the joints without SH4X5.5X0.05 shims first. Add these shims only if ST1250 or ST1262 do not pivot freely. Use T03 tool when screwing ST1261. Use 1,5 or 2 mm hex driver when screwing ST1250 and ST1262. Use the 1,5 mm Allen key in the recess of

Use the 1,5 mm Allen key in the recess of ST1204-ST to secure ST1244 when tightening or unscrewing ST1250 and ST1262. Use 2,5 mm hex driver when screwing ST1253.

EHRC Set	
ST1244	 2 pcs
ST1249	- 1 pcs
ST1250	- 1 pcs
ST1251	 2 pcs
ST1261	 2 pcs
ST1262	 1 pcs
ST1253	 1 pcs
SH4X5.5X0.05	- 2 pcs





Spare parts

Spare parts			
Parts # AM1202-X AM1203-X AM1204X-ST AM1206 AM1207-X AT1201 AT1202 AT1203 AT1204-X AT1206 AT1207-X AT1215 AT25-2 DT1202 DT1211 DT1210 ST1201-X ST1201-X ST1203-X ST1204-X ST1204-X ST1236 ST1238	Description Motor Mount Battery Plate Chassis Plate Front Nut Left Bulkhead Steering Block Nut Servo Post Rear Beam Steering Block Servo Plate Post Left Hub Spur Nut Turnbuckle 39mm Steering Washer Side Spring Holder Downstop Nut 3mm Ball Stud Damper Rotor Downstop Rod Damper Case Rear Spring Rod Rear Spring Seat Steering Block Poet	OR155SI OR230 OR14V OR15 OR91	Description Rear Spring C1.0 Rear Spring C0.8 Rear Spring C1.2 Body Clip 3/16x5/16x1/8 Flanged Bearing 1/4x3/8x1/8 Flanged Bearing Spring Shim 0.2mm Front Axle Spacer 0.5mm Rear Axle Spacer 0.5mm 7.4x3x1.5mm Spacer Rear Axle Spacer 2.0mm Rear Axle Spacer 3.5mm 6x8x0.1mm Shim 6x3x0.25mm Spacer 6x3x0.5mm Spacer (Gray) 5.5x7.7x0.05mm Shim 1.5x5mm O-Ring Silicone 2x30mm O-Ring 1x4mm O-Ring 9x1mm O-Ring 9x1mm O-Ring
ST1236	Rear Spring Rod	OR15	1x5mm O-Ring
C1204 C1205-X SPR12F-C1.1 SPR12XS-C1.0 SPR12XS-C0.8 SPR12XS-C1.2	Bumper Plate Suspension Plate Front Spring C1.1 Side Spring C1.0 Side Spring C0.8 Side Spring C1.2	T03 AK1.5	6/7 mm Wrench 1.5 mm Allen Key

Optional Parts

-			
Parts #	Description	Parts #	Description
RHG 4.2X	Ride Height Gauge	C1205-6.0	Suspension Plate
CS-1	Carbon Spool Set	C1201-6.0	Servo Plate
AT1204-ZTL	Steering Block Zero Trail	C1201	Servo Plate
ST1208-C5AL	Steering Hub Post 5 Deg	C1201-X3	Servo Plate
ST1208-C6AL	Steering Hub Post 6 Deg	C1205-ZT	Suspension Plate Zero Trail
ST1208-C2AL	Steering Hub Post 2 Deg	C1205-X-1.5	Suspension Plate
ST1208-C6	Steering Hub Post 6 Deg	C1201-ZT	Servo Plate Zero Trail
ST1216	Balance Weight 5 g	AM1204WC	Chassis Plate
ST1212	Spring Steel Axle	ST1208-C2ST	Steering Hub Post 2 Deg
C1206	Carbon Axle	ST1208-C4ST	Steering Hub Post 4 Deg
OR155PU	1.5x3mm O-Ring PU	ST1208-C5ST	Steering Hub Post 5 Deg
SH12R5.5	Rear Axle Spacer 5.5mm	ST1208-C6ST	Steering Hub Post 6 Deg
SC25X7AL	2.5x7 Cap Head Screw Alloy	SPR12S-C0.4	Side Spring Long C0.4
AT1208	Right Hub	SPR12S-C0.5	Side Spring Long C0.5
SPR12F-C1.7	Front Spring C1.7	SPR12S-C0.6	Side Spring Long C0.6
SPR12F-C1.3	Front Spring C1.3	ELRC	Extra Low Roll Center Set
SPR12F-C0.9	Front Spring C0.9	HRC	High Roll Center Set
SPR12F-C0.7	Front Spring C0.7	EHRC	Extra High Roll Center Set
		SH12F0.1	Front Axle Spacer 0.1mm
		SPR12XR-C1.0L	Rear Spring Long C1.0
		AM1204X-STS	Steel Soft Chassis Plate
		ST112-5	Centering Screw
		AFS	Adjustable Front Suspension Set

