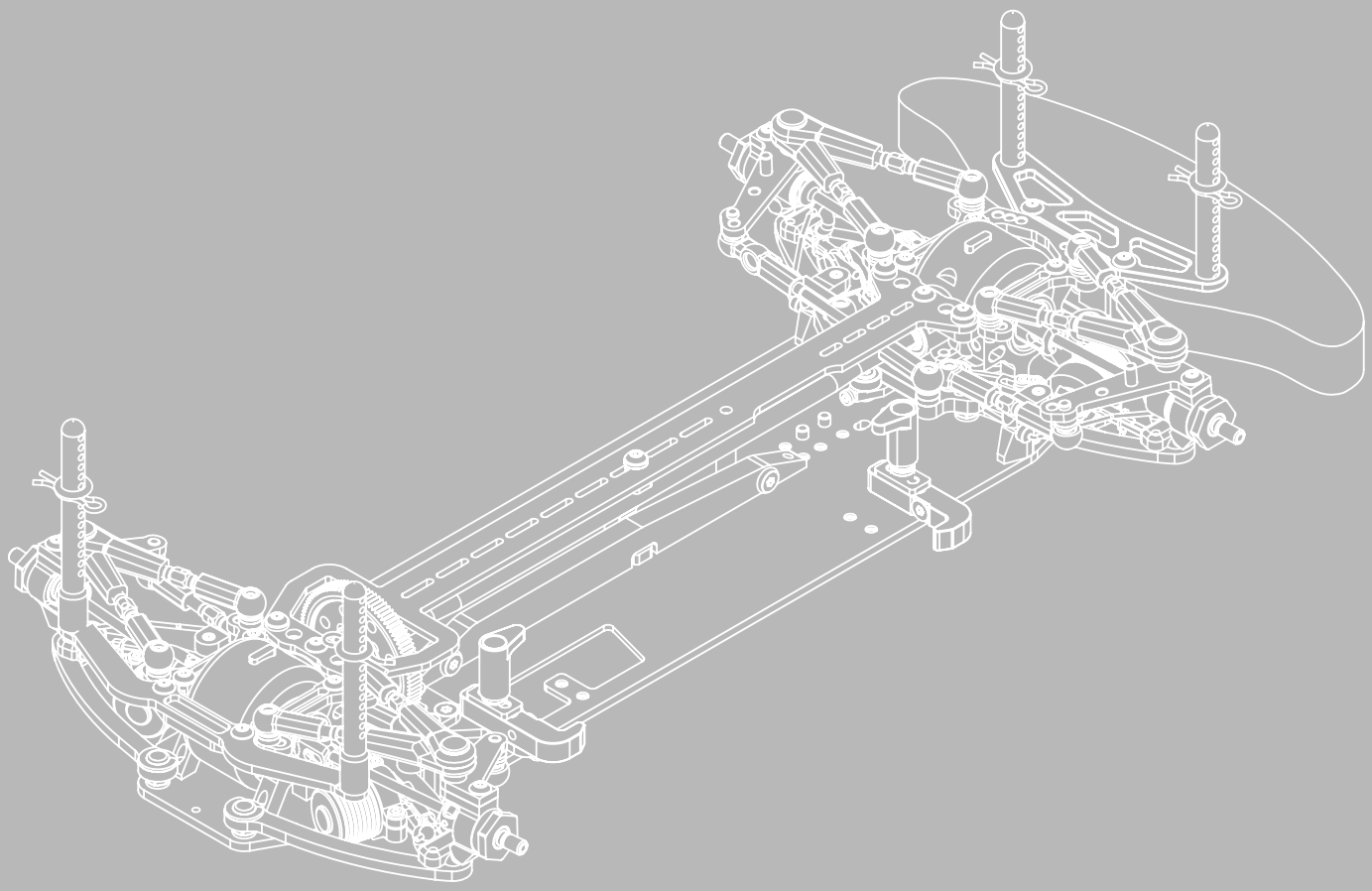
AWESOMATIX®

A700L2

1/10-SCALE TOURING CAR



INSTRUCTION MANUAL

INTRODUCTION

Congratulations on purchasing your Awesomatix car!
The A700L2 car was designed in Russia and produced by Awesomatix Innovations LLP registered in UK.
The A700L2 car utilises many unique features, including some patented innovations.

BEFORE YOU START

The A700L2 car is the high-quality, innovative 1/10-scale touring car and should be built only by persons with previous experience building R/C model racing cars. This is not a toy and is not intended for use by children without direct supervision of a responsible, knowledgeable adult. Read the instruction manual carefully and fully understand it before beginning assembly. If you have any problems or questions please do not hesitate to contact the Awesomatix team at support@awesomatix.com. If, for any reason, you decide that you do not want your A700L2 car you must not begin assembly. Your A700L2 car cannot be returned to Awesomatix Innovations LLP for a refund or exchange if it has been fully or partially assembled.

This kit is a radio controlled model racing product and could cause harm and personal injury.
The A700L2 car is designed for use on r/c car race tracks. It should not be used in general public areas.
Awesomatix Innovations LLP accept no responsibility for any injuries caused by making or using this kit.

Due to policy of continuous product development the exact specifications of the kit may vary.

ASSEMBLY NOTES

Before starting each build-stage check that you have the right quantity and size of items for the build-stage. To assist you with the assembly of your A700L2 car we have included full-size images of all the small hardware parts laid out so that you can place items on top of the images to check they are the correct size/length. You can find the useful tips and pictures of A700L2 assembling on the Internet sites: **www.awesomatix.info/en/tipps-tricks/aufbau/** , **www.awesomatixusa.com/p/tips.html** , **http://jdandracing.blogspot.gr** .

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 LLP 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.

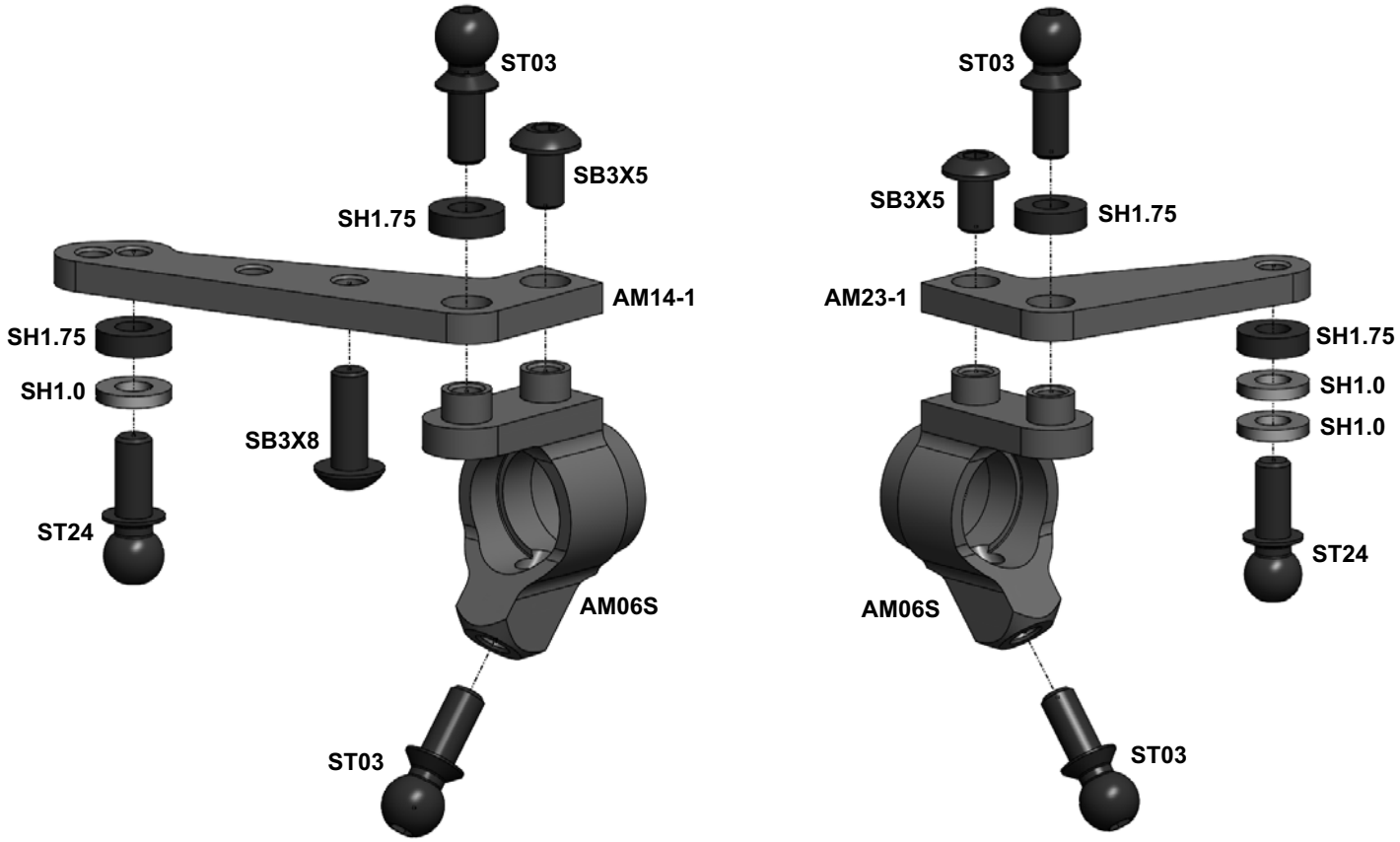
EQUIPMENT RECOMMENDED (NOT INCLUDED)

- Radio Transmitter
- Radio Receiver
- Electronic Speed Control
- Steering Servo
- Electric Motor
- Pinion Gear (64 or 48 Pitch)
- Spur Gear (64 or 48 Pitch)
- 7.4 V Li-Po Battery
- 190mm Body Shell
- M4mm Wheel Nuts
- Touring Car Wheels, Tires, Inserts

TOOLS RECOMMENDED (NOT INCLUDED)

- 1.5mm, 2.0mm Hex Driver
- 2.0mm Ball End Hex Driver
- 5.5mm, 7mm, 9mm, 10mm, 12mm Wrench
- 2.5mm Flat Screwdriver
- Callipers
- Hobby Knife
- Camber Gauge
- Ride Height Gauge
- Thin CA Glue
- Thread Lock
- Diff Silicone Oil
- Joint Grease

STEP 1

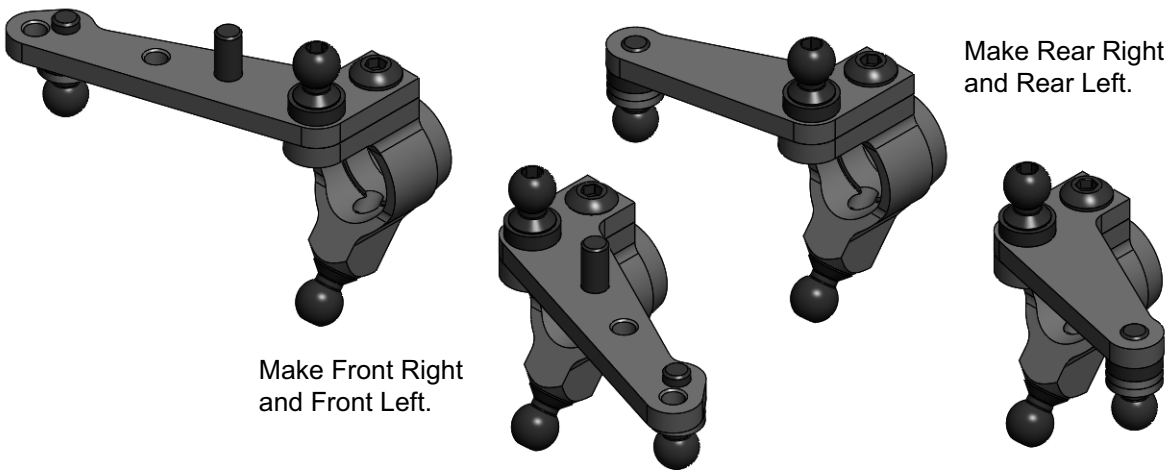


Notes: The last turns of the lower **ST03** Ball Studs and SB3X5 screws are tight. Screw them with force.

SB3X5	M3x5 Button Head Screw	x4	**ST03**	Ball Stud	x8
SB3X8	M3x8 Button Head Screw	x2	**AM06S**	Steering Block	x4
			AM14-1	Steering Arm	x2
SH1.0	6x3x1mm Spacer (Gray)	x6	**AM23-1**	Rear Steering Arm	x2
SH1.75	6x3x1.75mm Spacer (Black)	x8	**ST24**	4,8mm Ball Stud	x4

STEP 1 FINISHED

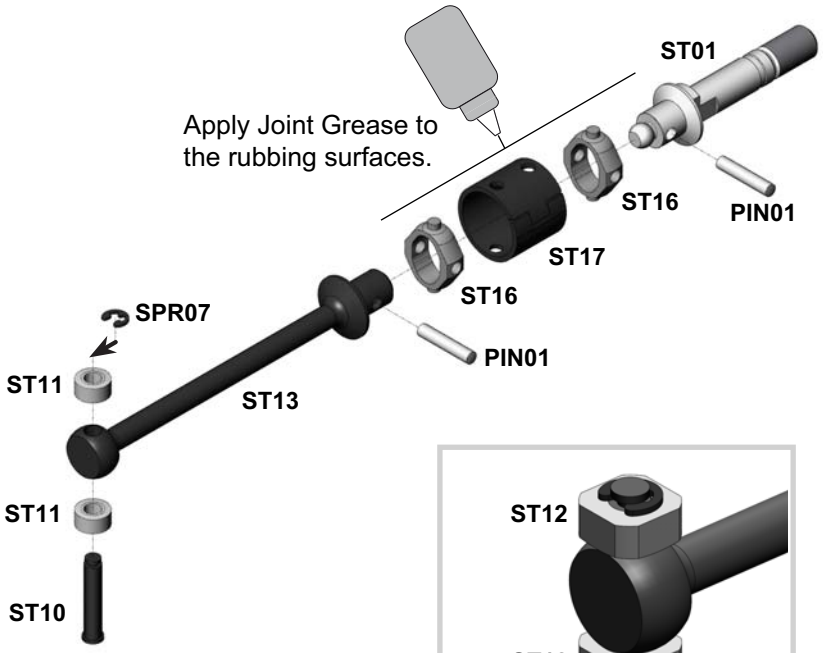
Notes: Use other combinations of **SH0.5, SH1.0** and **SH1.75** Spacers under appropriate Pivot Balls and Ball Studs to adjust your car set-up to better suit different track conditions.



Make Front Right and Front Left.

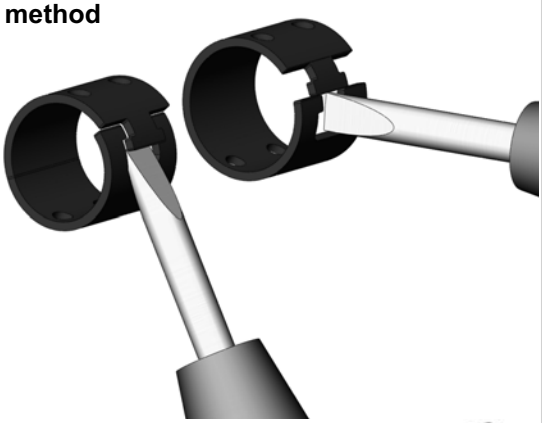
Make Rear Right and Rear Left.

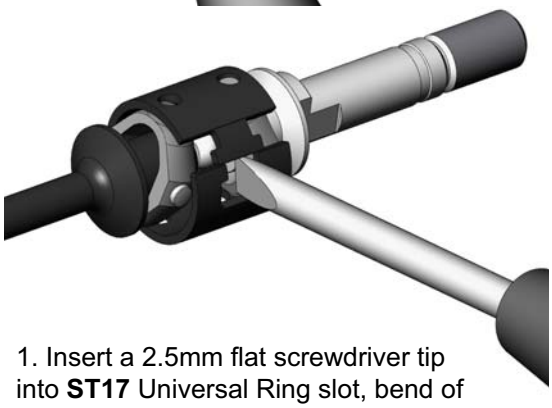
STEP 2



You can use optional **ST12** Bushings S or **UB1** Ball Bearings set instead of **ST11** Bushing R.

Assembling/disassembling method

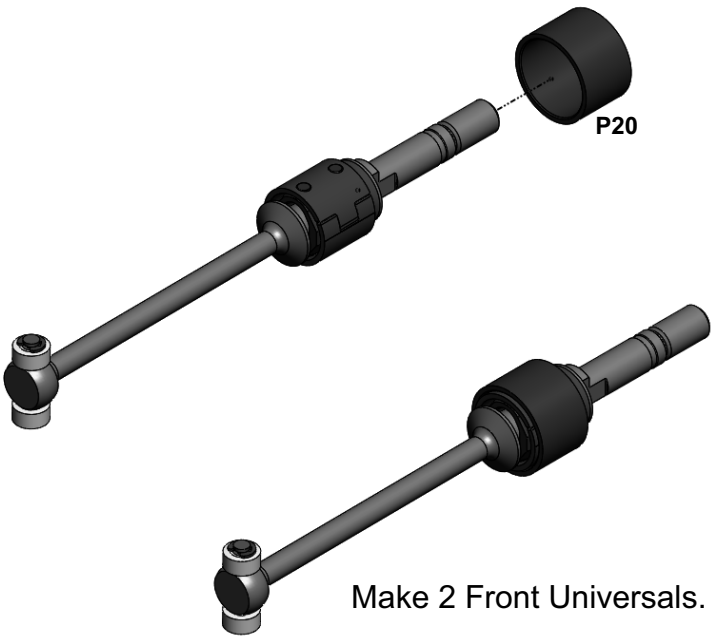




1. Insert a 2.5mm flat screwdriver tip into **ST17** Universal Ring slot, bend of the lug and turn screwdriver through 90 deg.
2. Take out/insert **ST16** U-Joint Cross from/into unclamped **ST17** Universal Ring.

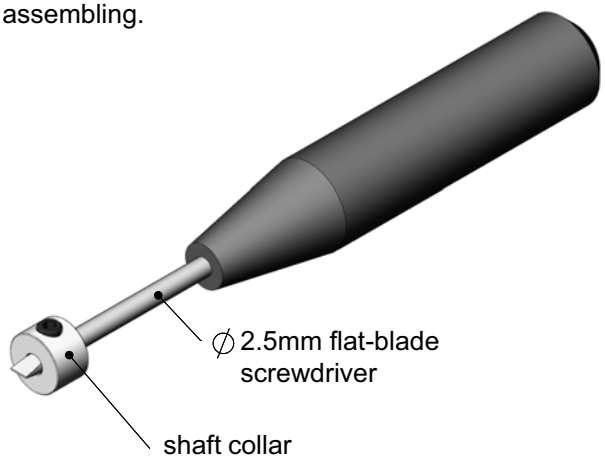
	PIN01 1.5x7.8 Pin	x4	**ST01** Front Axle	x2
	ST10 2.0mm Pin	x2	**ST16** U-Joint Cross	x4
	SPR07 E-Ring	x2	**ST17** Universal Ring	x2
	ST11 Bushing R	x4	**ST13** Front Universal Bone	x2
			P20 Front Universals Ring	x2

STEP 2 FINISHED

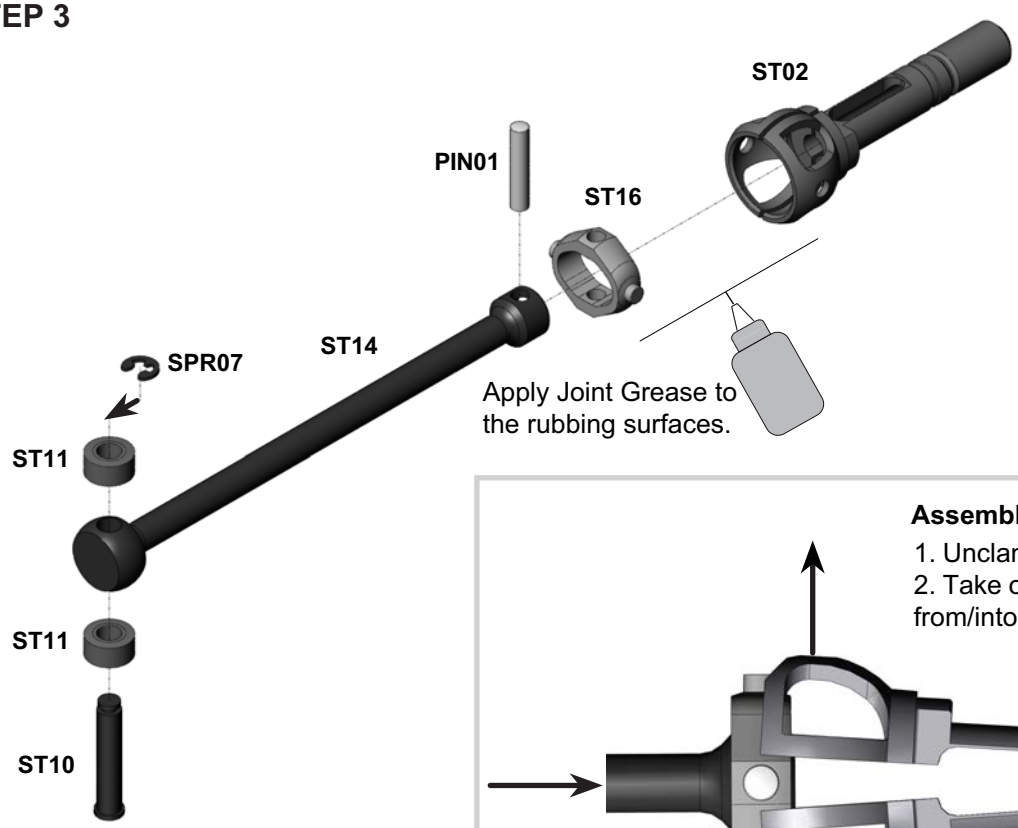


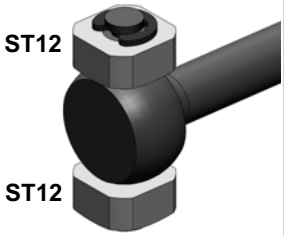
Make 2 Front Universals.

Tip:
Fix a appropriate shaft collar on 1-2mm distance from the screwdriver end.
It will help at the Front Universals assembling.



STEP 3

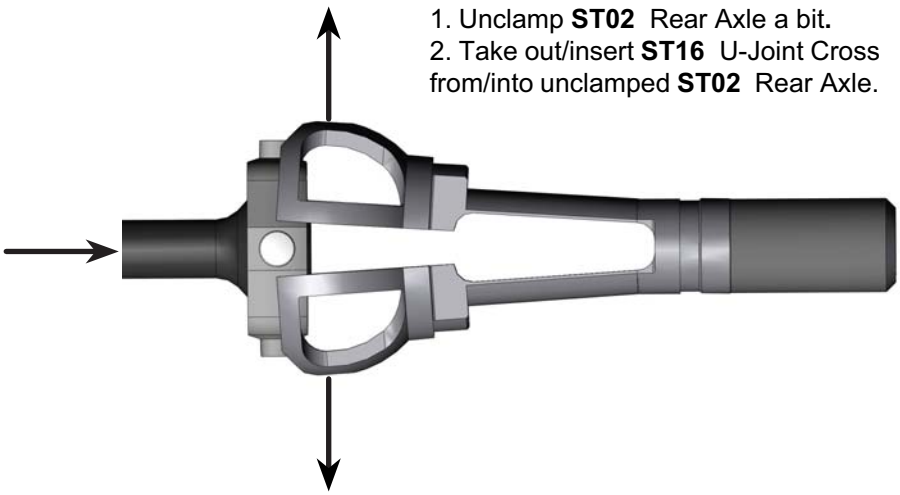




You can use optional **ST12** Bushings S or **UB1** Ball Bearings set instead of **ST11** Bushing R.

Assembling/disassembling method

1. Unclamp **ST02** Rear Axle a bit.
2. Take out/insert **ST16** U-Joint Cross from/into unclamped **ST02** Rear Axle.

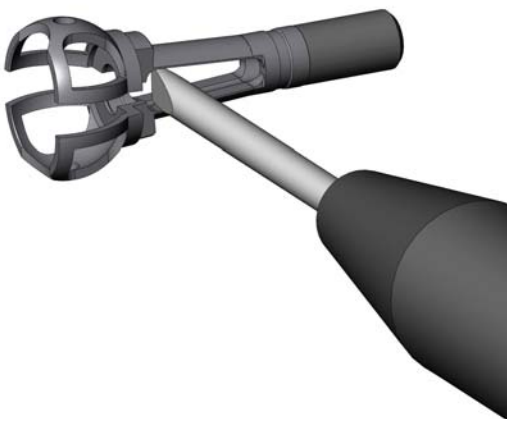


PIN01 1.5x7.8 Pin	x2		**ST02** Rear Axle	x2
ST10 2.0mm Pin	x2		**ST16** U-Joint Cross	x2
SPR07 E-Ring	x2		**ST14** Rear Universal Bone	x2
ST11 Bushing R	x4		**P08** C-Drive (optional)	x2

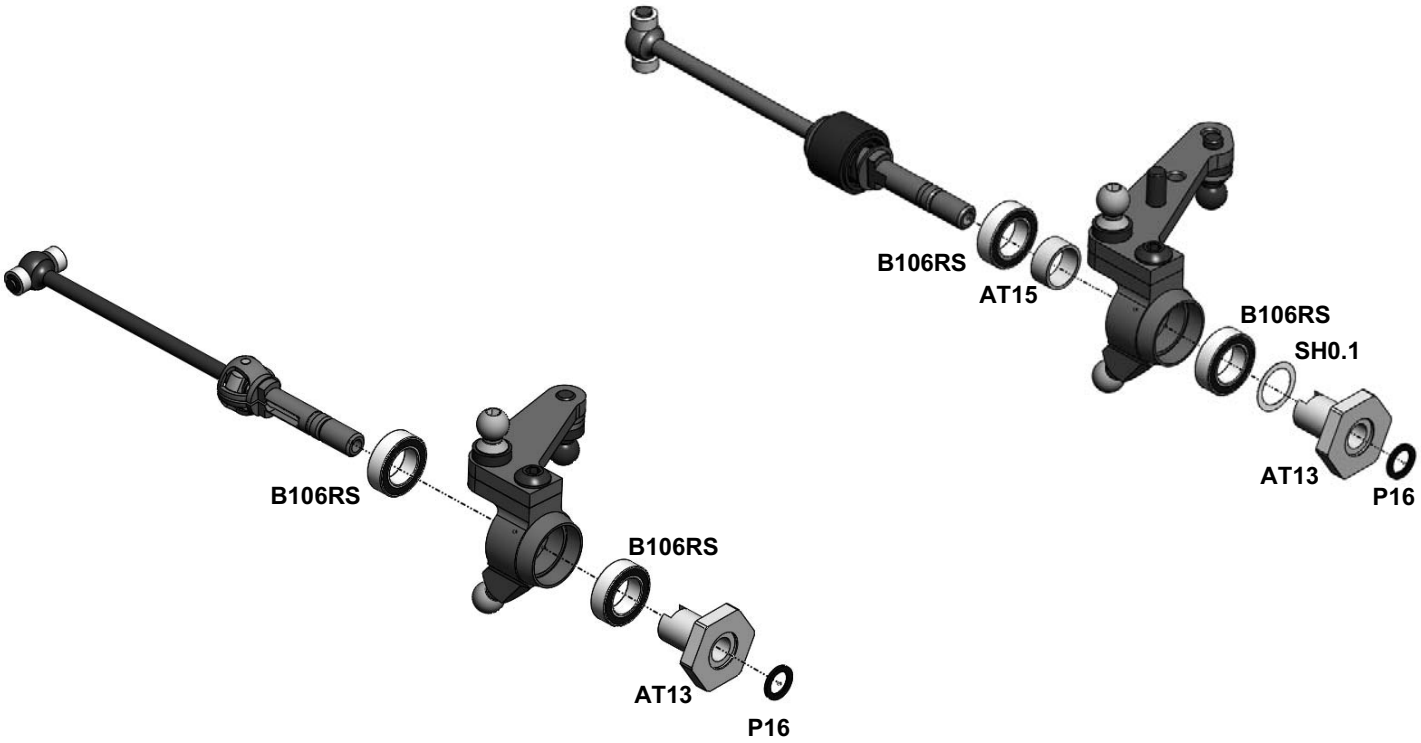
STEP 3
FINISHED

Make 2 Rear Universals.

Tip:
Use a 2.5mm flat screwdriver to unclamp **ST13** Rear Axle.

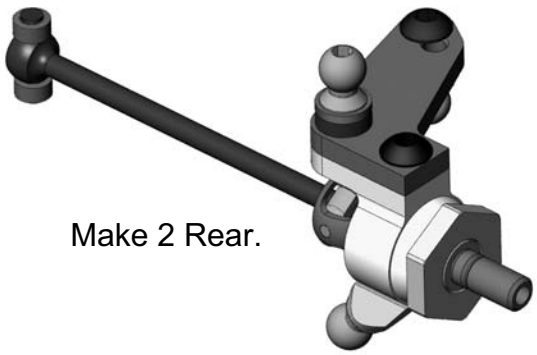


STEP 4



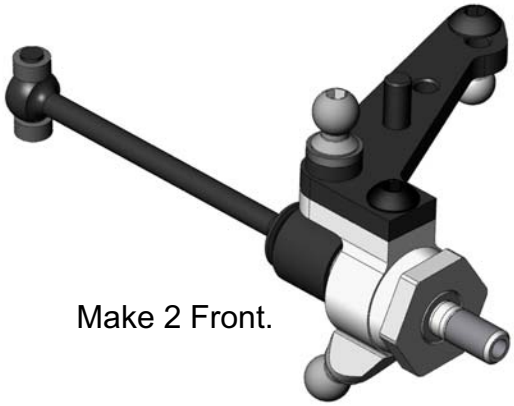
B106RS	MR106RS Bearing	x8	**AT15**	Bearing Spacer	x2
SH0.1	6x8x0.1mm Shim	x2	**AT13**	Wheel Hex	x4
P16	Lock Ring	x4			

STEP 4 FINISHED

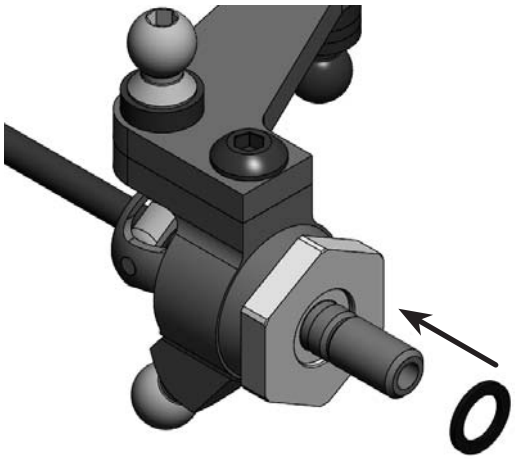


Make 2 Rear.

Note:
Rear Universals may be a bit tight at this stage.
But don't worry as the Rear Universals take its true position only after the wheels mounting.

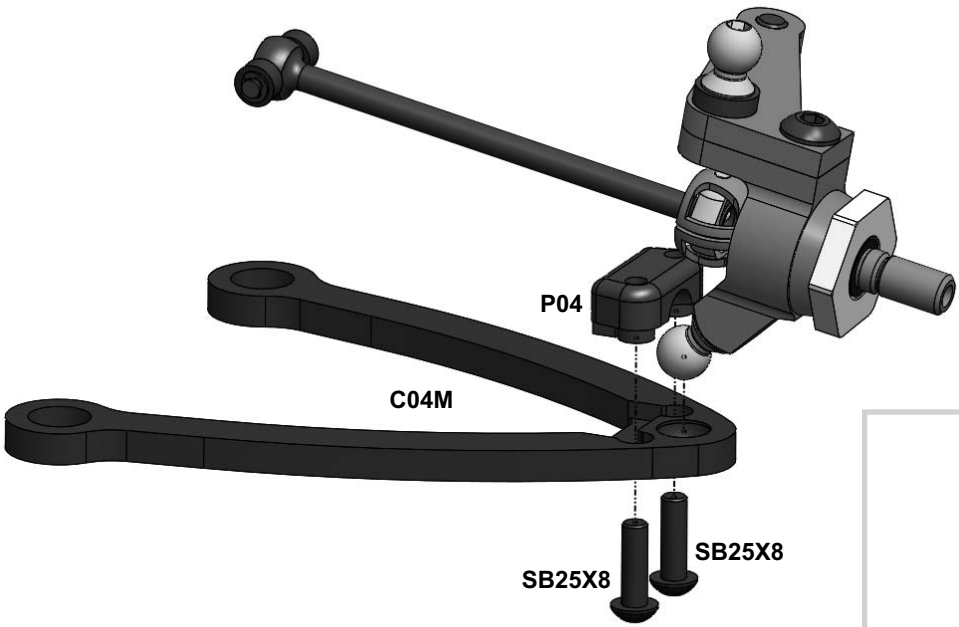


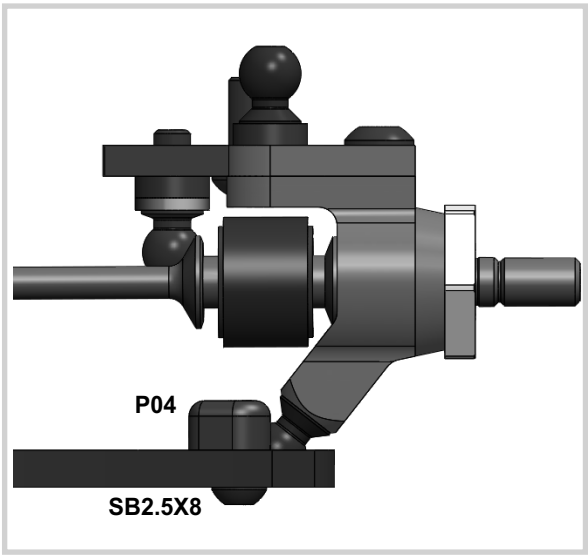
Make 2 Front.



Note: Press **P16** Lock Ring on the Axle to fix it. It will demand the appreciable efforts for the first time.
For disassembly hit to the end face of the Axle or press down on it.

STEP 5

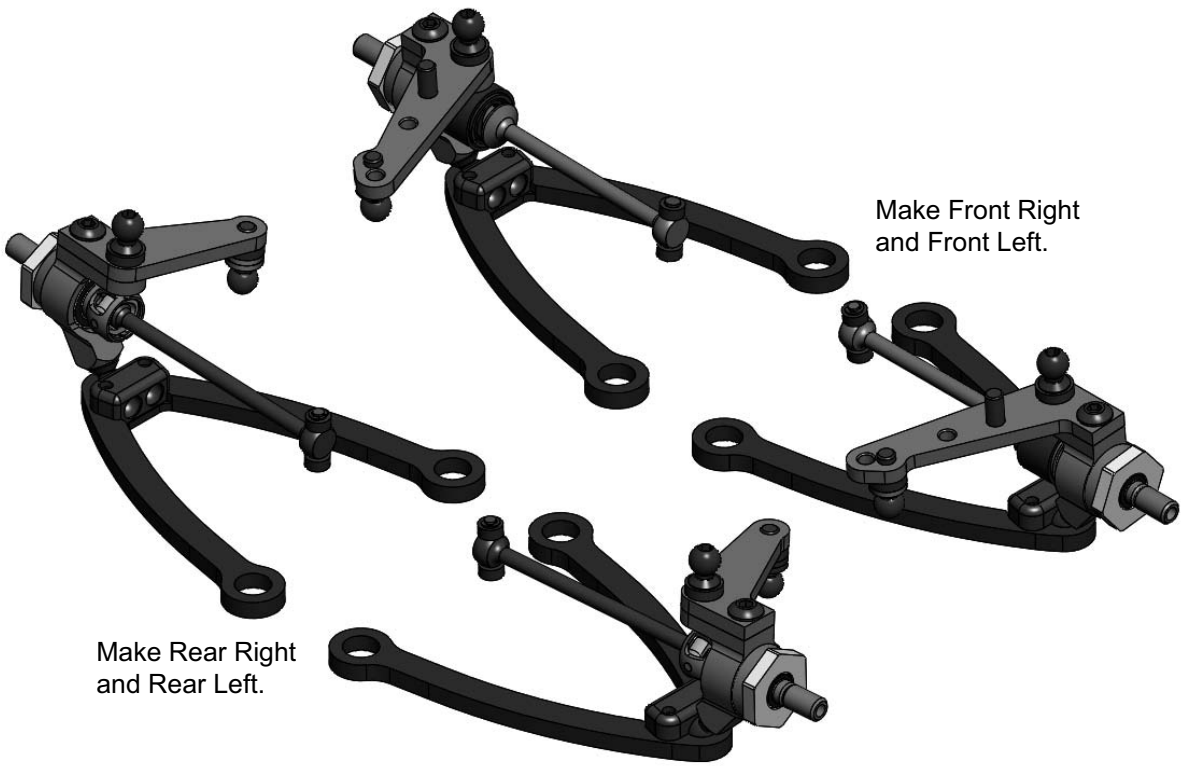




Note: Don't overtighten **SB25X8** Screws to avoid **ST03** Ball Stud binding. Achieve the free action of the ball joint with a minimal backlash.

SB25X8 M2.5x8 Button Head Screw	x8	**C04M** Suspension Arm	x4
		P04 Arm Hasp	x4

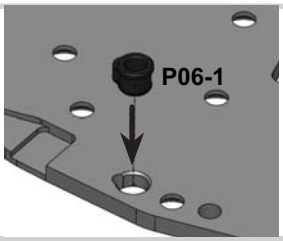
STEP 5 FINISHED

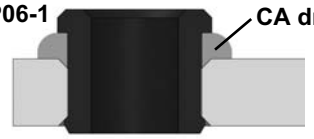


Note: Insert **P06** Downstop Collars and use CA glue for fixing them before **SS3x5** screwing.

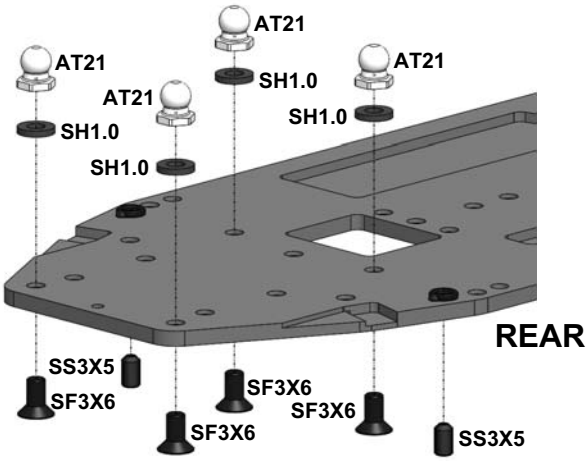
STEP 6

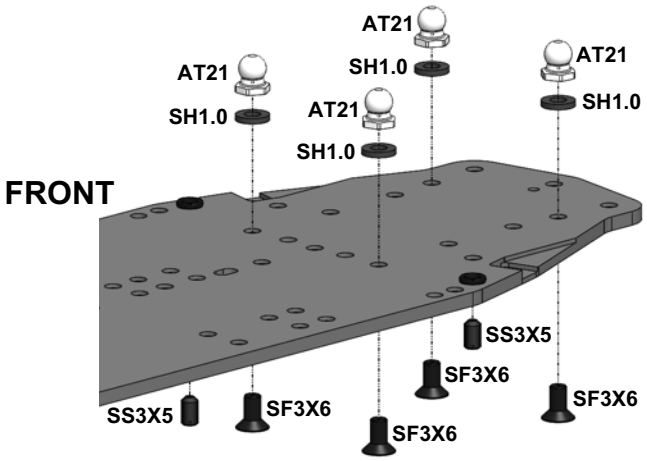
Press P06-1 into the chassis, push them upwards and leave the least possible material sticking out the underside.





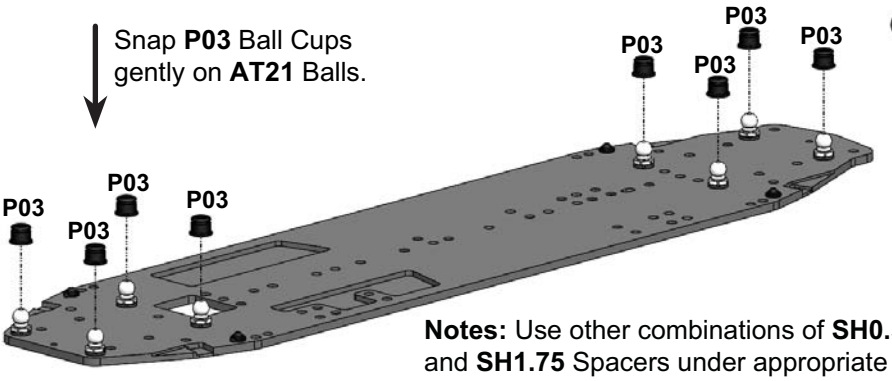
Apply a drop of CA glue and then cut out the part protruding.

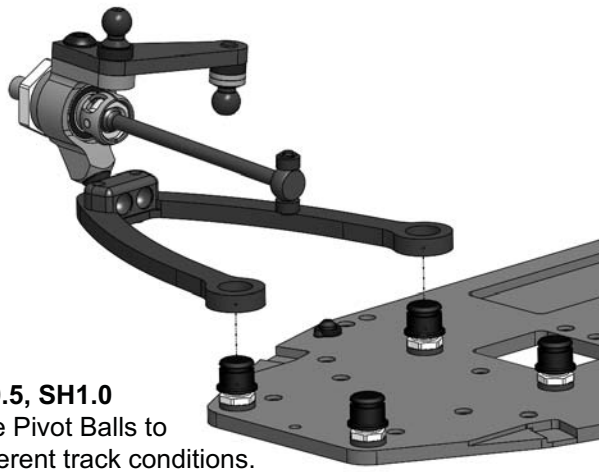




STEP 6 (cont'd)

Snap **P03** Ball Cups gently on **AT21** Balls.

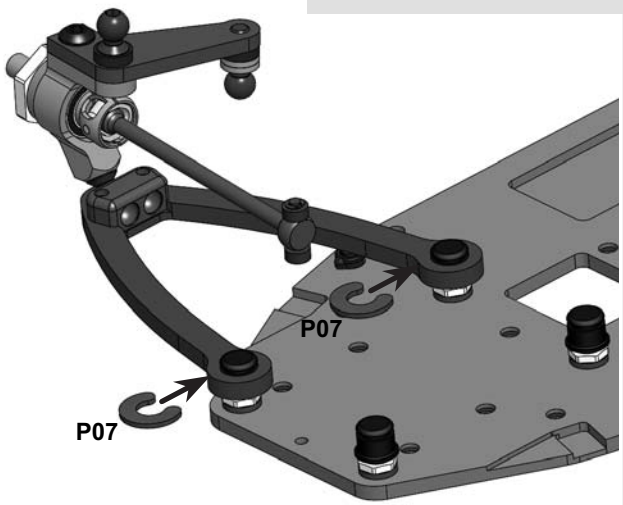




Notes: Use other combinations of **SH0.5, SH1.0** and **SH1.75** Spacers under appropriate Pivot Balls to adjust your car set-up to better suit different track conditions.

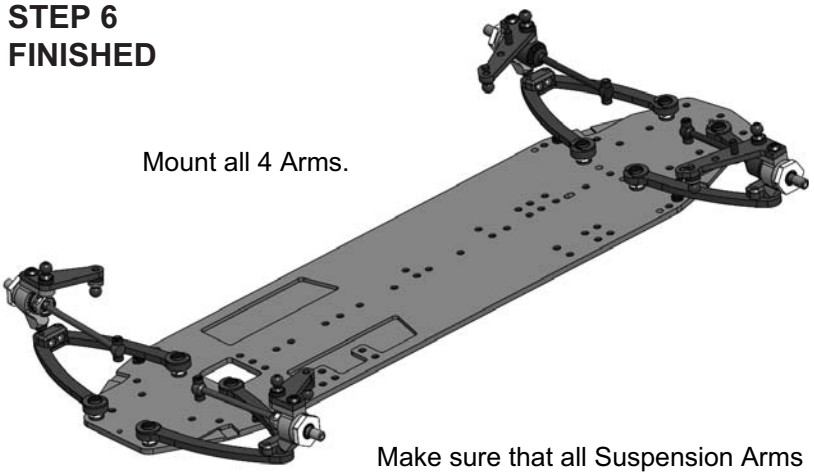
SF3X6	M3x6 Flat Head Screw	x8	**AT21**	Pivot Ball	x8
SS3X5	M3x5 Set Screw	x4	**P06-1**	Downstop Collar	x4
SH1.0	6x3x1mm Spacer (Gray)	x8	**P03**	Arm Ball Cap	x8
			P07	Arm Clip	x8

STEP 6 (cont'd)



STEP 6 FINISHED

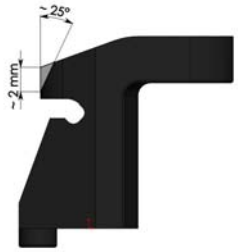
Mount all 4 Arms.

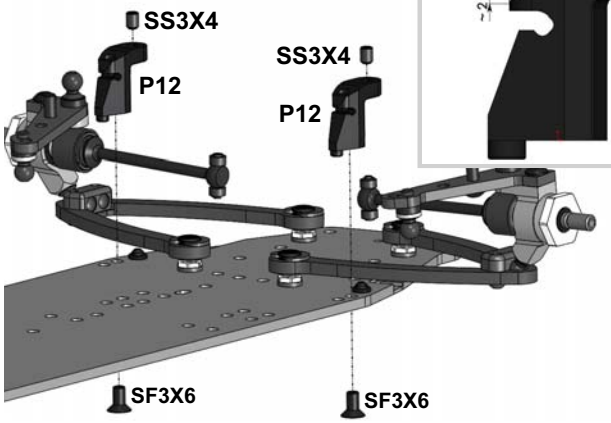


Make sure that all Suspension Arms swing freely.

STEP 7

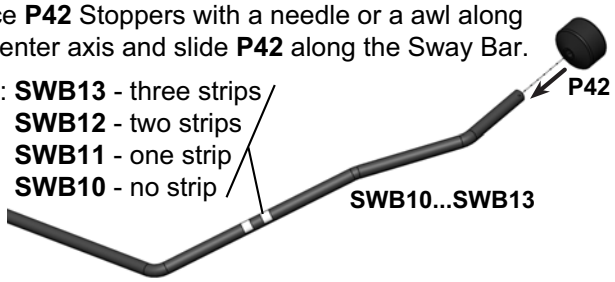
Attention! Cut two front P12 as on the picture.





Pierce **P42** Stoppers with a needle or a awl along the center axis and slide **P42** along the Sway Bar.

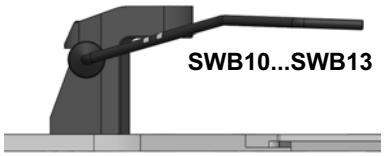
Note: **SWB13** - three strips
SWB12 - two strips
SWB11 - one strip
SWB10 - no strip

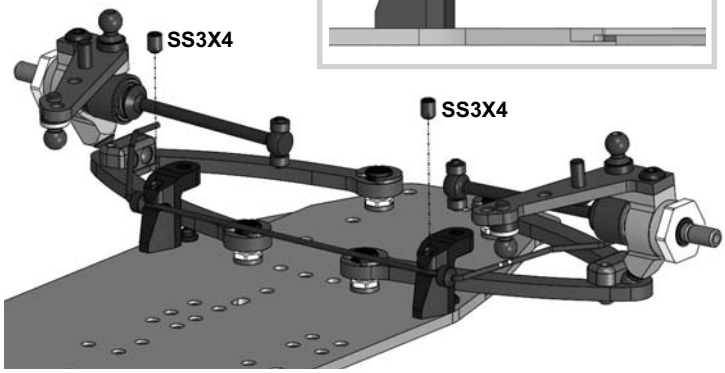


STEP 8

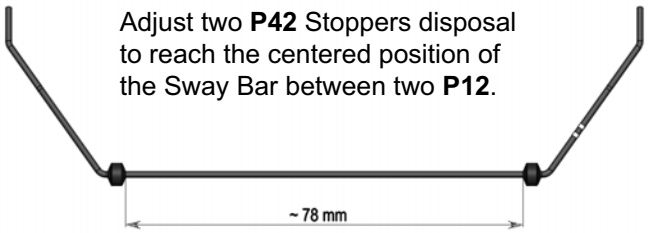
Do not over-tighten **SS3X4** Screws to avoid binding of Sway Bars.

Attention!
The deflected tips of Sway Bar should be directed downwards.





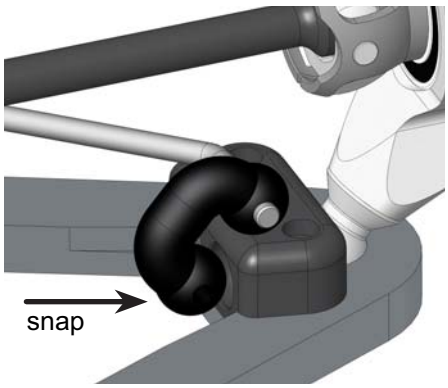
Adjust two **P42** Stoppers disposal to reach the centered position of the Sway Bar between two **P12**.

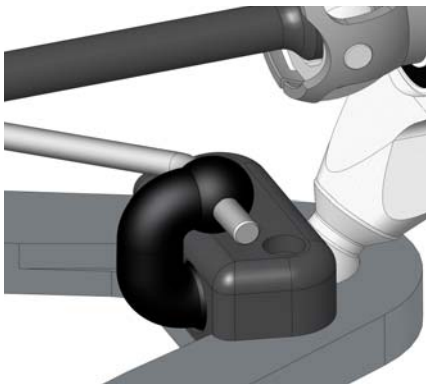


STEP 8 (cont'd)

Use bigger hole for **SB12** and **SB13** Sway Bars.

Use smaller hole for **SB10** and **SB11** Sway Bars.

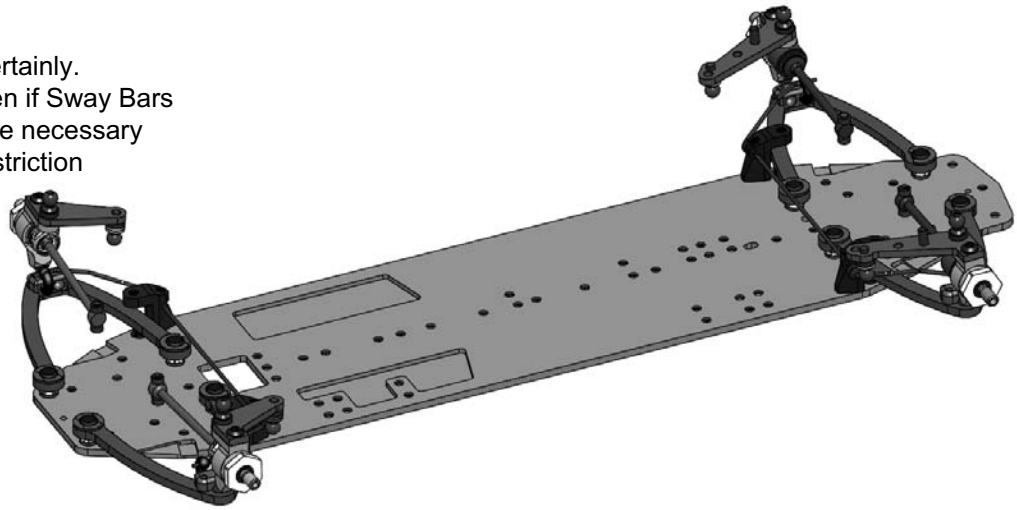




SF3X6	M3x6 Flat Head Screw	x4	**P12**	Sway Bar Holder	x4
SS3X4	M3x4 Set Screw	x8	**P05**	Sway Bar Joint	x4
			SWB10....SWB13	Sway Bar	x2

STEPS 7 and 8 FINISHED

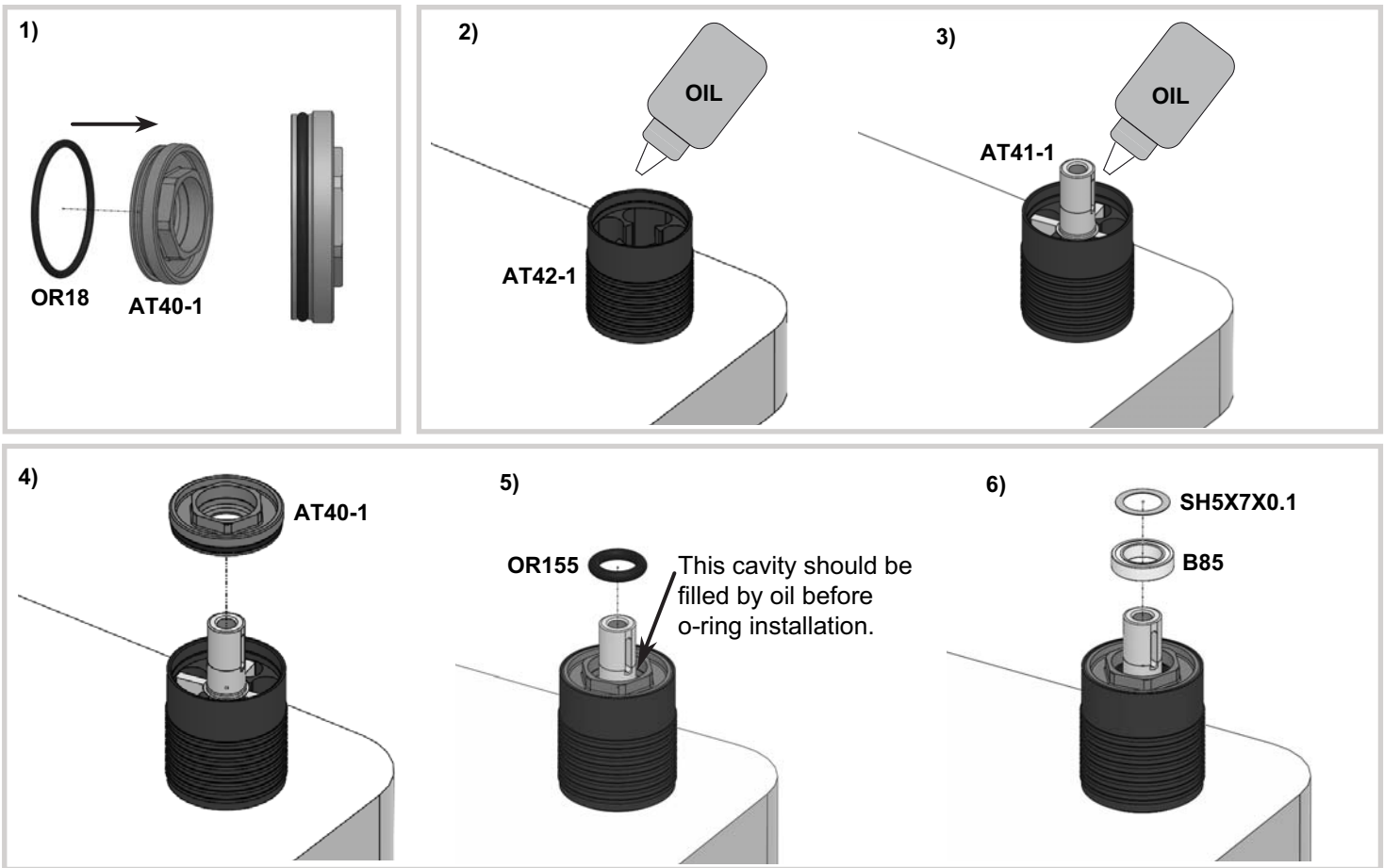
Attention!
Mount all 4 **P12** Sway Bar Holders certainly. They are obligatory for installation even if Sway Bars aren't used. **P12** Sway Bar Holders are necessary for suspension arms upward travel restriction and setting Upstop parameters.



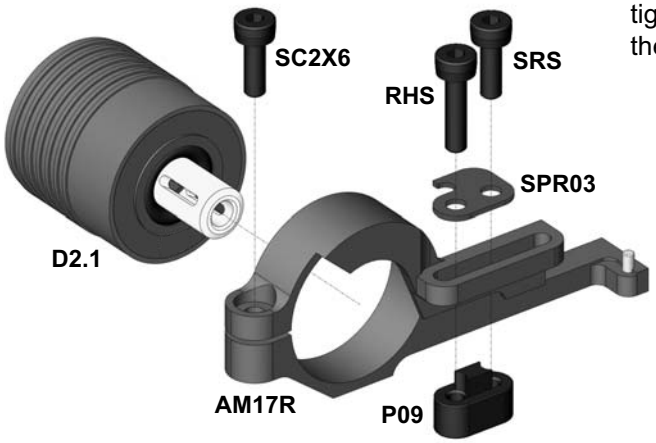
Rebuildable Damper Set

Note: Every **A700 Evo II** and **A700 Evo IIC** kit includes four factory assembled and oil filled **D2.1** Rebuildable Dampers. **D2.1** damper allows for both dampening adjustment via thicker silicon oil, and consistent performance since the racer can rebuild the shock.
The factory assembled and oil filled **D2.1** Rebuildable Dampers come with 500 cst pure silicone oil inside.
The build instructions for **D2.1** Rebuildable Dampers is on this page.
For disassembling please do all steps in the reverse order.

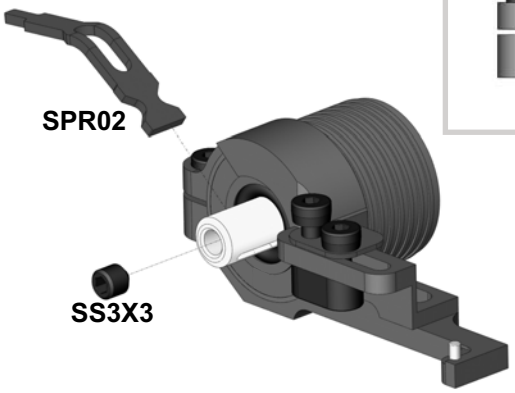
1) Stretch and place **OR18** O-ring in the groove of the **AT40-1** Cup.
2) Stand **AT42-1** Case up and fill ~1/2 of volume with the desirable silicone oil. Insert **AT41-1** Vane into **AT42-1** Case slowly full way down.
3) Add more silicone oil. Oil should cover the **AT41-1** Vane completely. It is highly recommend that damper be placed into a vacuum pump to remove air. Otherwise let the damper sit for 30m+ to allow air bubbles to escape.
4) With the damper still vertical (important !), screw **AT40-1** Cup into the **AT42-1** Case with a 9mm socket wrench until fully threaded. Do not force the **AT40-1** Cup - once aligned, it will screw on easily. The excessive oil should go out through the gap between **AT40-1** and **AT41-1** Vane. Please don't remove this oil from the bearing cavity of **AT40-1** Cup on this stage!
5) Place **OR155** O-ring into **AT40-1** Cup. You can use a piece of an appropriate tube to press o-ring slowly and fully into cavity.
6) Place **B85** bearing and one **SH5X7X0.1** shim onto **AT41-1** Vane output shaft.
7) Screw **SS3X3** Set Screw into **AT41-1** Vane with a 1.5mm hex driver full way down. Don't tighten this set screw too much!
Press on and hold **SH5X7X0.1** shim and **B85** bearing against an upward shift at **SS3X3** screwing.
8) Clean up oil off the outer surface of damper.



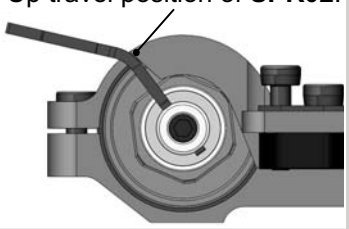
STEP 9



Inserting of **SPR02** into vane slot can be tight. Please grind the lower surface on the tip of **SPR02** a bit at this case.

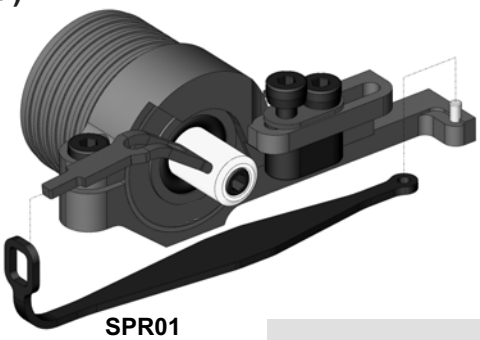


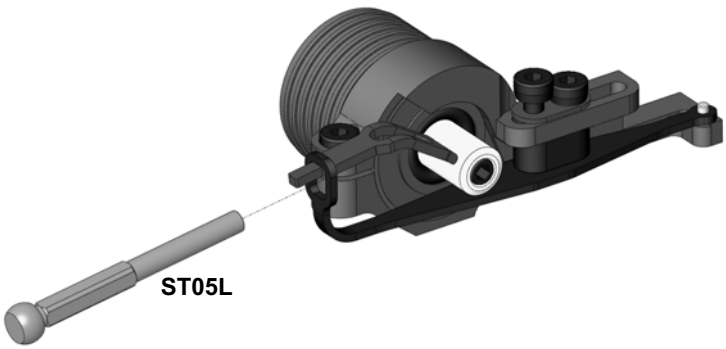
Up travel position of **SPR02**.



Attention! The damper's output shaft can't rotate more than 40 degrees. After installation of **SPR02** rotate the complete damper within **AM17** until the maximum up travel is reached and secure **SC2x6** screw in the **AM17** after that. At the max up travel position the **SPR02** should touch the stopper on **AM17** !!!

STEP 9 (cont'd)

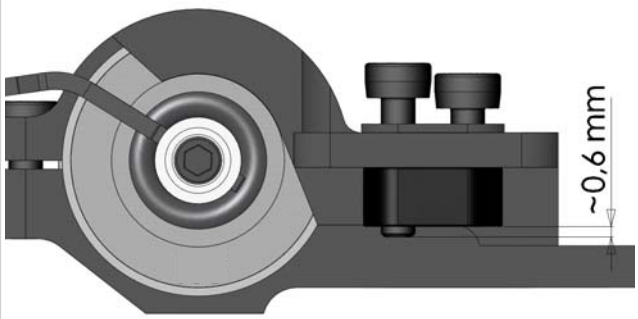




SC2X6	M2x6 Cap Head Screw	x4	**AM17R**	Damper Holder Right	x2
			AM17L	Damper Holder Left	x2
SRS	Spring Rating Screw	x4	**D2.1**	Damper	x4
RHS	Ride Height Screw	x4	**SPR01**	STD Shock Spring	x4
SPR03	Shock Pointer	x4	**SPR02**	Shock Rod Guide	x4
P09	Shock Screw Holder	x4	**ST05L**	Shock Rod Long	x4

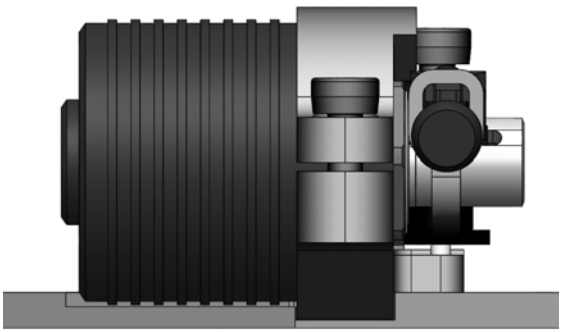
STEPS 9 FINISHED

Assemble 2 Right Shocks and 2 Left Shocks.

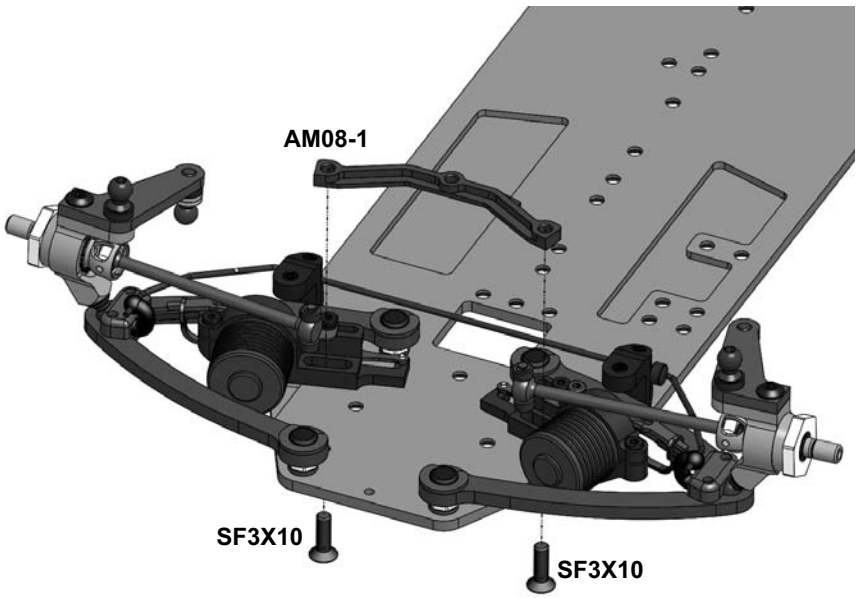


Note:
Initial position of **RHS** Ride Height Screw is ~0,6mm. Don't tighten **SRS** Spring Rating Screw too much to avoid P09 thread damage.

STEP 10

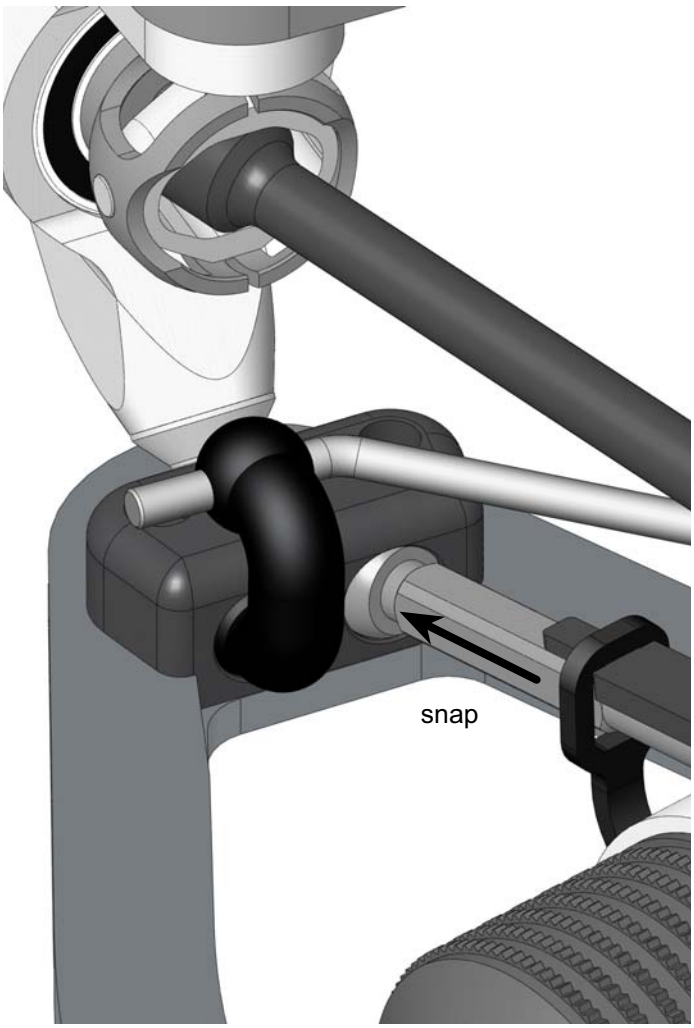


Note:
Lay down Dampers into grooves on the Chassis.

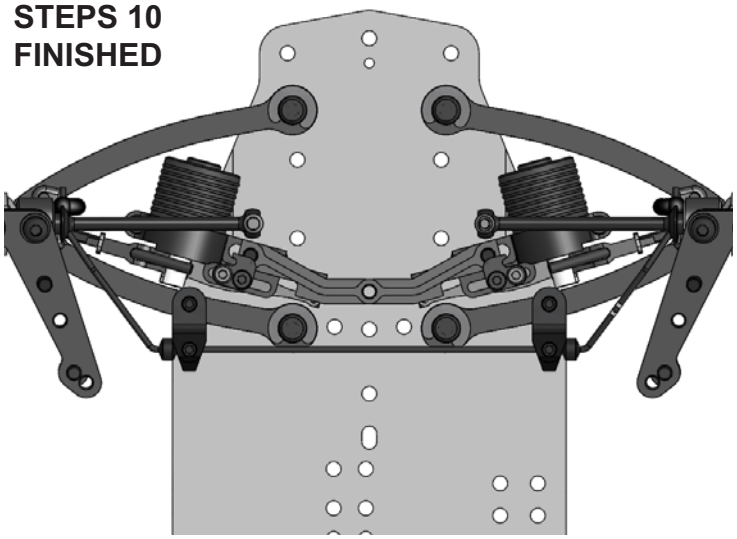


SF3X10	M3x10 Flat Head Screw	x4
AM08-1	Shocks Holder	x2

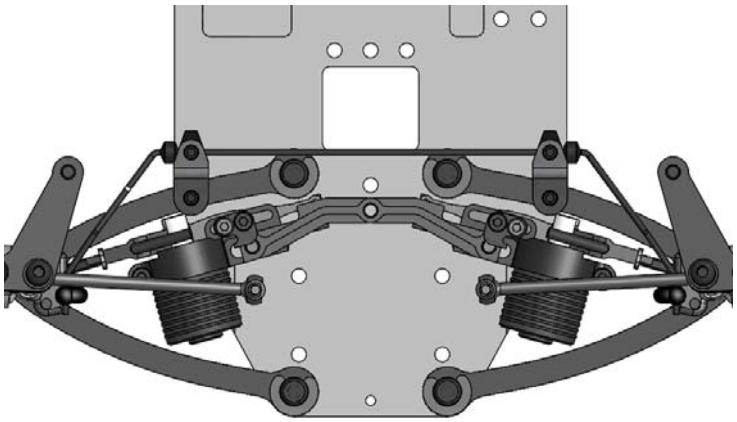
STEP 10 (cont'd)



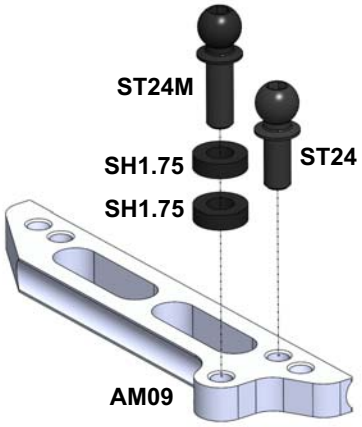
STEPS 10 FINISHED



Mount Front and Rear Shocks.



STEP 11

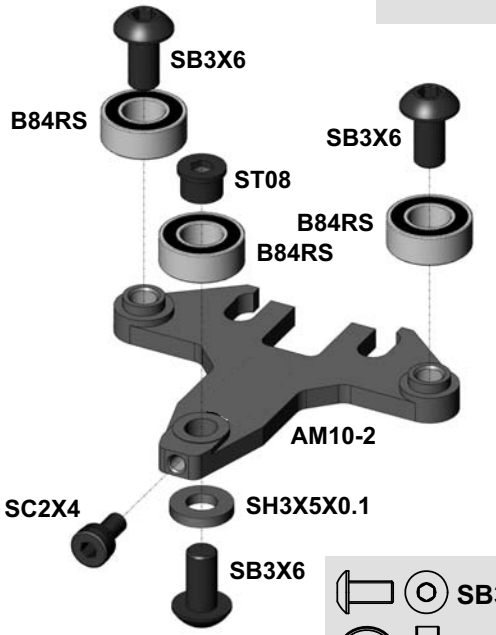


Note:
Please pay your attention on the correct amount of the spacers under **ST24M** Ball Stud !

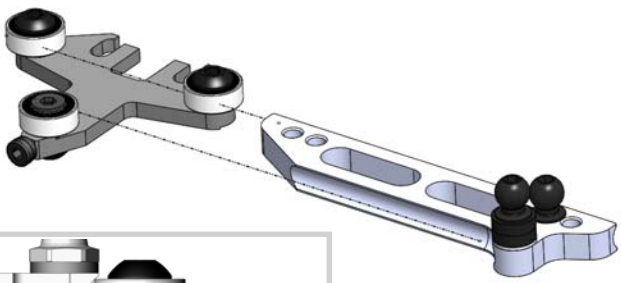
SH1.75 6x3x1.75mm Spacer (Black) x2
SH3X5X0.1 3x5x0.1mm Shim x1

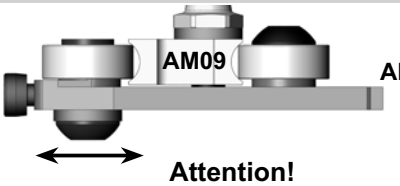
ST24 Ball Stud 6mm x2
ST24M Ball Stud 8mm x1
AM09 Steering Rod x1
AM10-2 Steering Plate x1

STEP 12



STEP 13

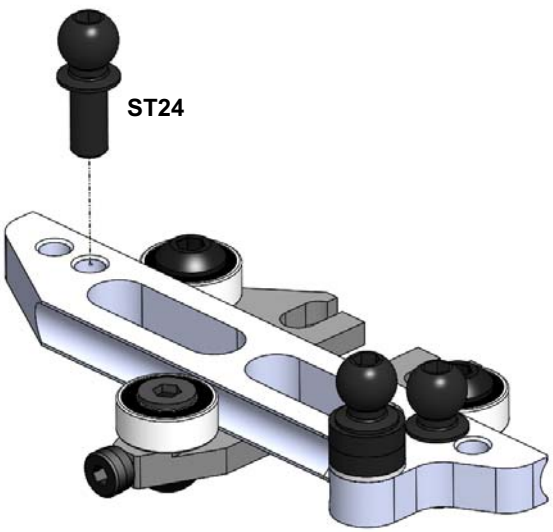




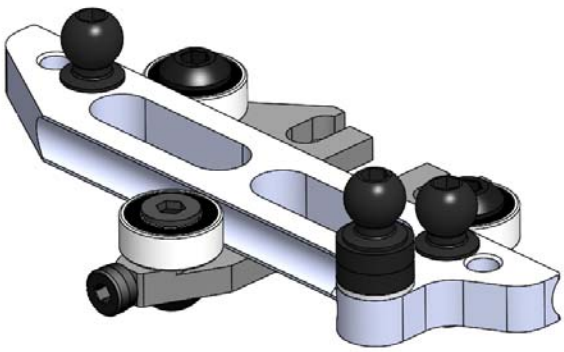
Attention!
Adjust **B84RS** bearing position to achieve free **AM09** Rod sliding at minimal clearance.

SB3X6 M3x6 Button Head Screw x3
B84RS MR84RS Bearing x3
ST08 Steering Nut x1
SC2X4 M2x4 Cap Head Screw x1

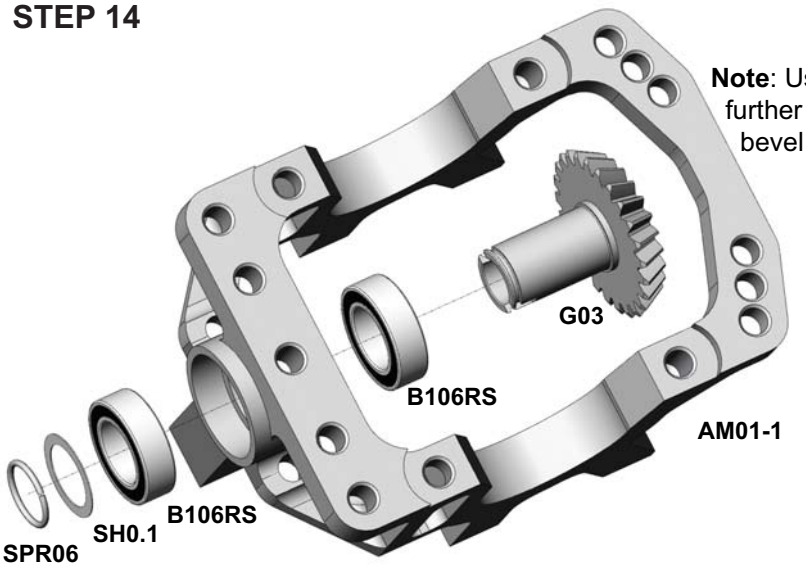
STEP 13 (cont'd)



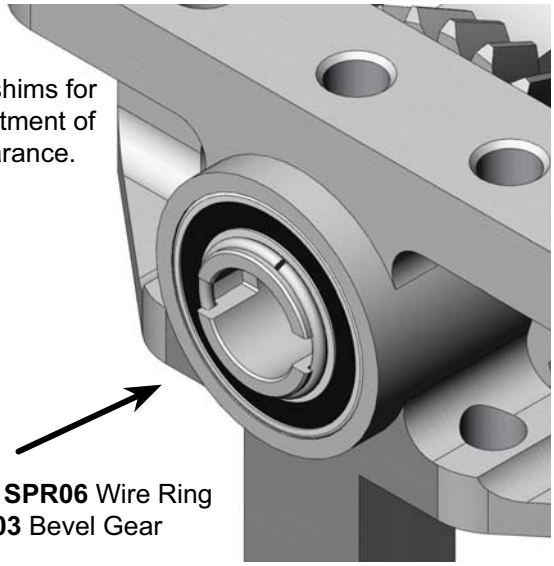
STEP 13 FINISHED



STEP 14



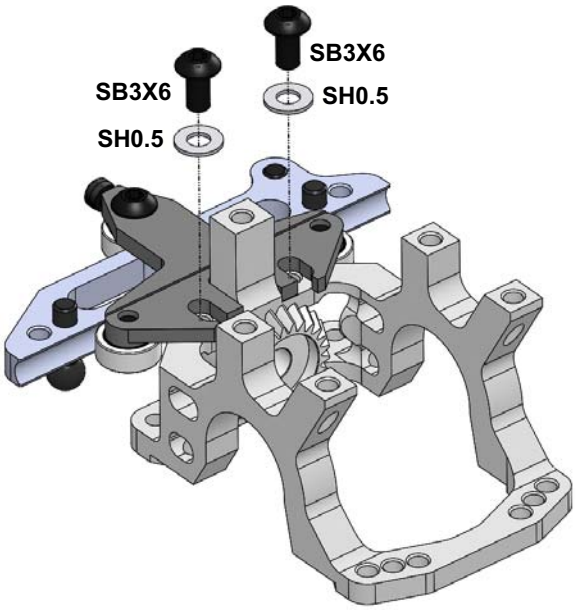
Note: Use **SH0.1** shims for further fine adjustment of bevel gears clearance.



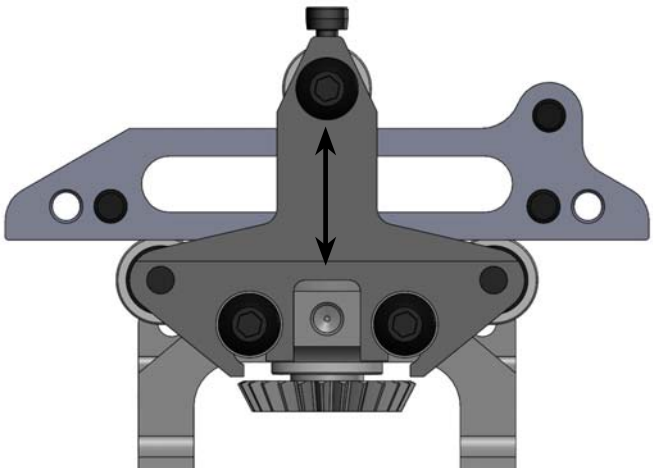
Snap **SPR06** Wire Ring on **G03** Bevel Gear

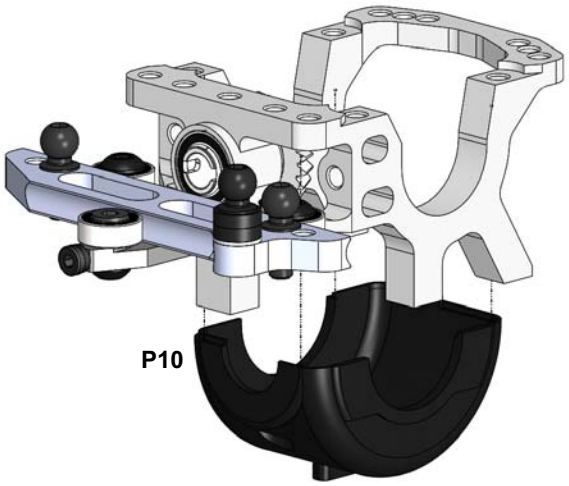
B106RS	MR106RS Bearing	x2	**AM01-1**	Gear Box	x1
SH0.5	6x3x0.5mm Spacer (Silver)	x2	**G03**	25T Bevel Gear	x1
SH0.1	6x8x0.1mm Shim	x1	**SPR06**	Wire Ring	x1
SB3X6	M3x6 Button Head Screw	x2	**P10**	Diff Cover	x1

STEP 15

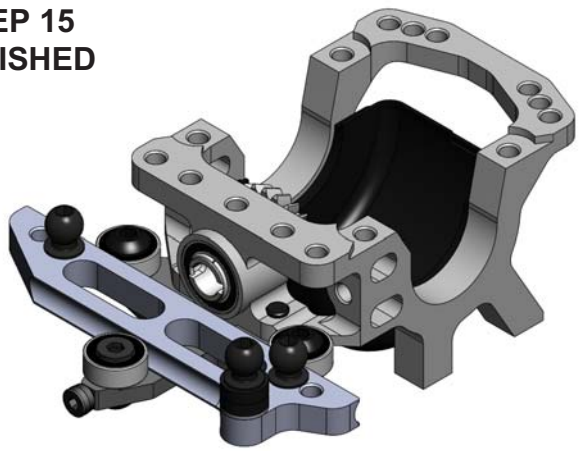


INNER ACKERMANN change:
Slide **AM10-2** Steering Plate to desired position.
Use **SB3X6** Screws to unlock/lock Steering Plate.

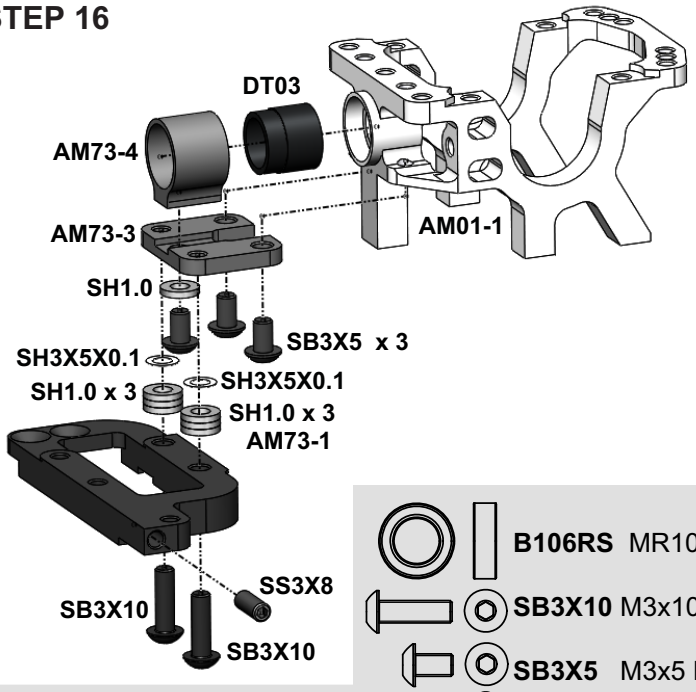




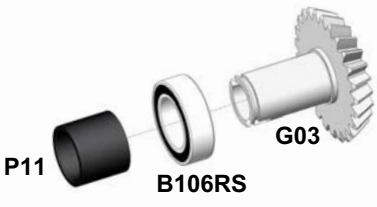
STEP 15 FINISHED

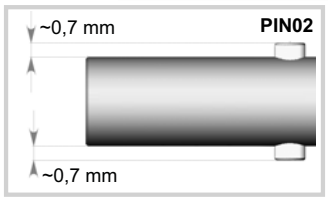


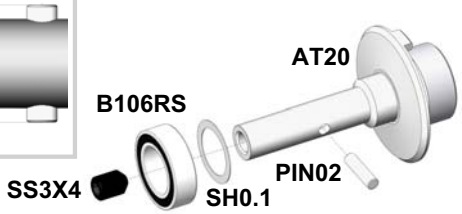
STEP 16



STEP 17

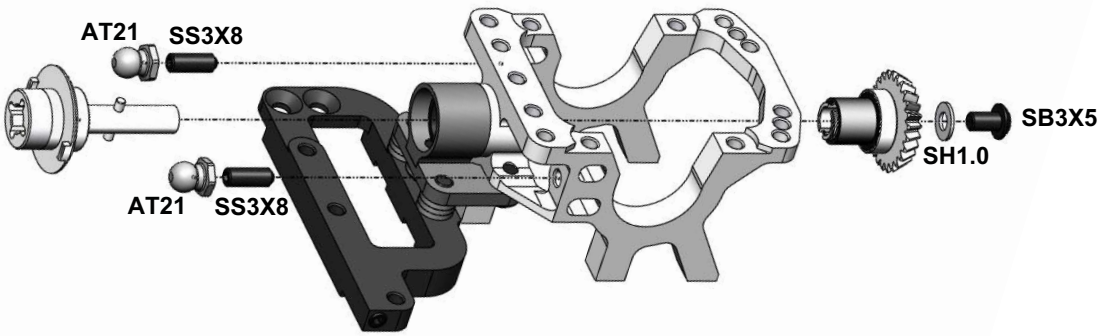




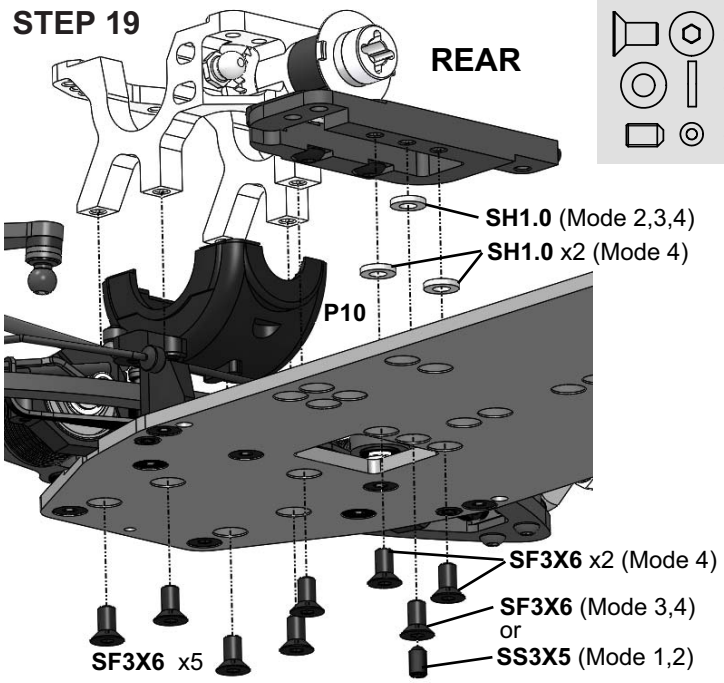


B106RS	MR106RS Bearing	x1	**AM01-1**	Gear Box	x1
SB3X10	M3x10 Button Head Screw	x2	**AM73-1**	MM2 Lower Plate	x1
SB3X5	M3x5 Button Head Screw	x4	**AM73-3**	MM2 Middle Plate	x1
SS3X4	M3x4 Set Screw	x1	**AM73-4**	MM2 Bearing Housing	x1
SS3X8	M3x8 Set Screw	x3	**AT21**	Pivot Ball	x2
PIN02	1.5x5.8 Pin	x1	**AT20**	Spur Axle	x1
SH1.0	6x3x1mm Spacer (Gray)	x8	**G03**	25T Bevel Gear	x1
SH3X5X0.1	3x5x0.1mm Shim	x2	**P11**	Gear Tube	x1
SH0.1	6x8x0.1mm Shim	x1	**DT03**	Motor Mount Collar	x1

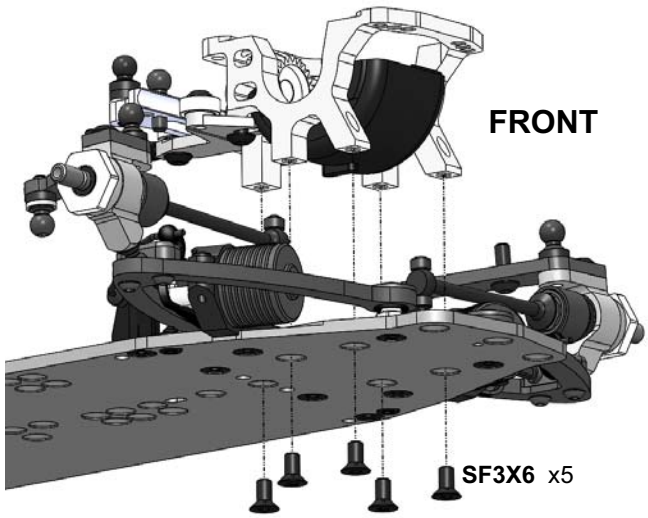
STEP 18



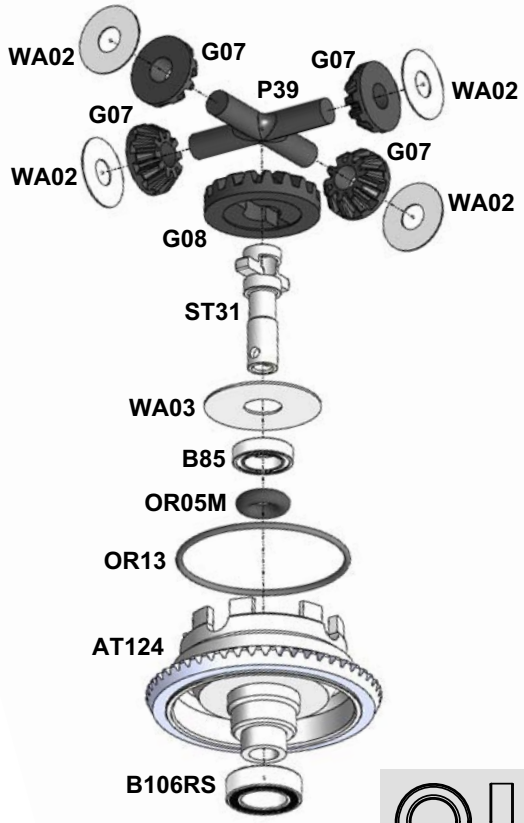
STEP 19



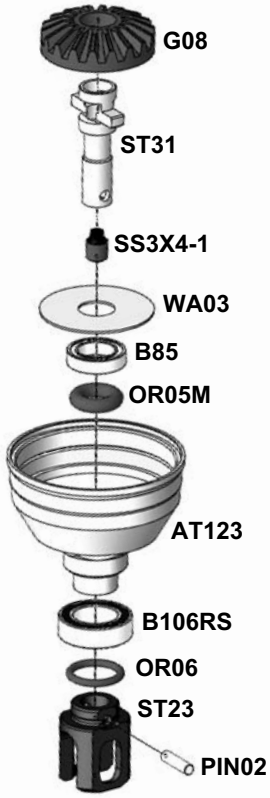
SF3X6	M3x6 Flat Head Screw	x10..13	**P10**	Diff Cover	x1
SH1.0	6x3x1mm Spacer (Gray)	x1...3			
SS3X5	M3x5 Set Screw	x0...1			



STEP 20



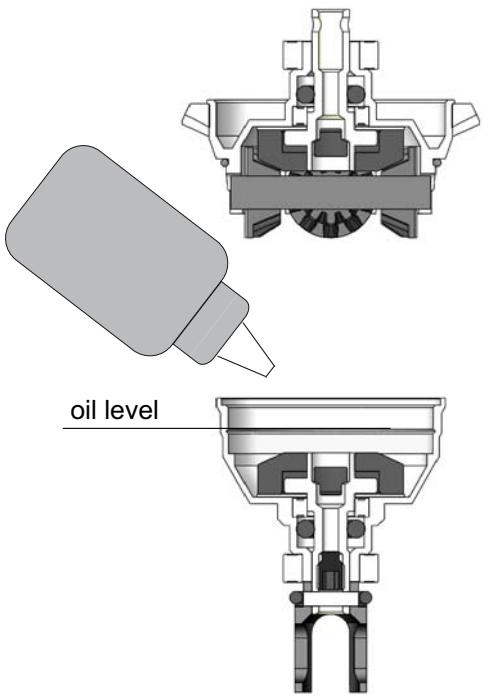
STEP 21



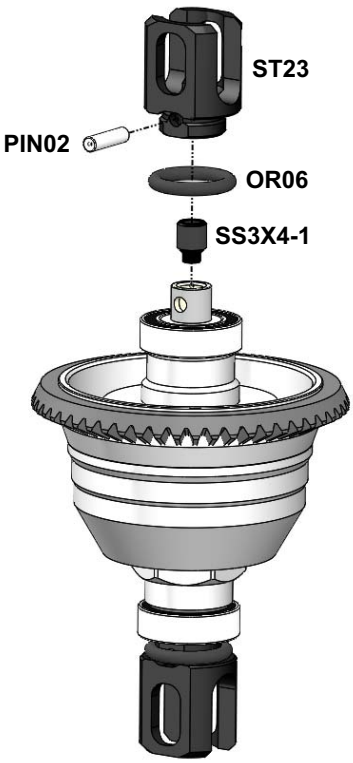
B106RS	MR106RS Bearing	x2	**AT123**	GD2 Case1	x1
			AT124	GD2 Case2	x1
B85	MR85 Bearing	x2	**ST23**	GD Outdrive	x2
			ST31	GD2 Output Axle	x2
OR05M	O-Ring	x2	**P39**	GD2 Cross Pin	x1
			OR13	13 mm O-Ring	x1
OR06	O-Ring	x2	**G07**	GD2 Satellite Gear	x4
			G08	GD2 Bevel Gear	x2
SS3X4-1	M3x4 DIN915 Screw	x2	**WA02**	3.5x9.5x0.2 Washer	x4
PIN02	1,5x5,8 Pin	x2	**WA03**	5x15.5x0.3 Washer	x2

STEP 22

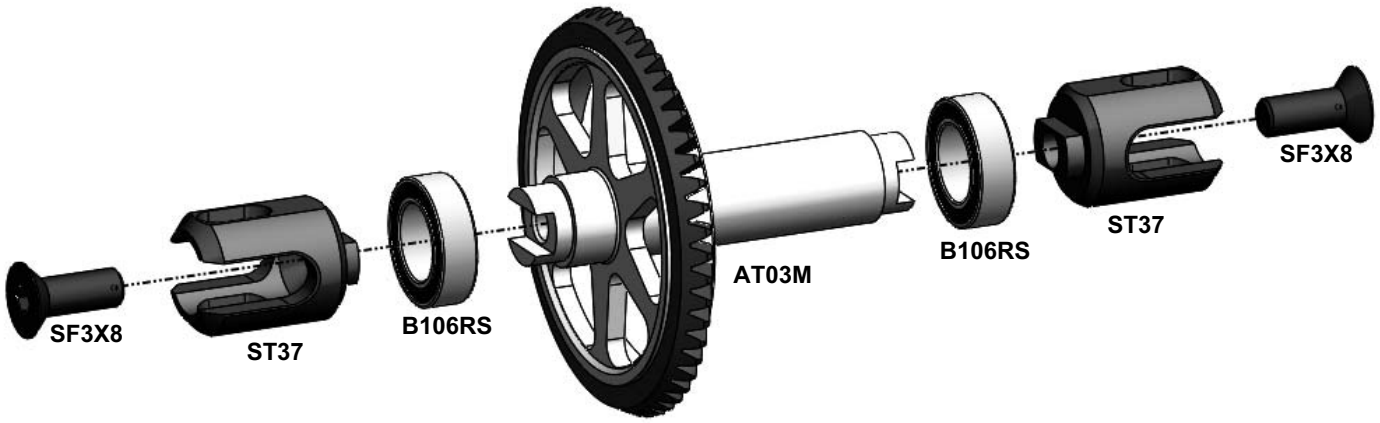
Fill with desirable silicone oil (not included).
Screw **AT123** GD Case with 10mm wrench slowly.
The excessive oil will go out through the **ST31** axial hole.



STEP 23

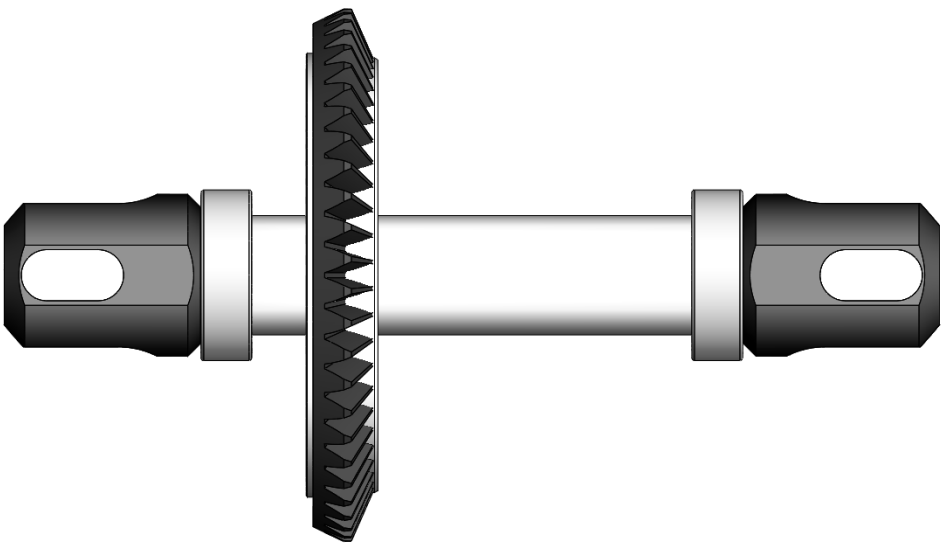


STEP 35



B106RS	MR106RS Bearing	x2	**AT03M**	Spool Axle	x1
SF3X8	M3x8 Flat Head Screw	x2	**ST37**	Spool Outdrive	x2

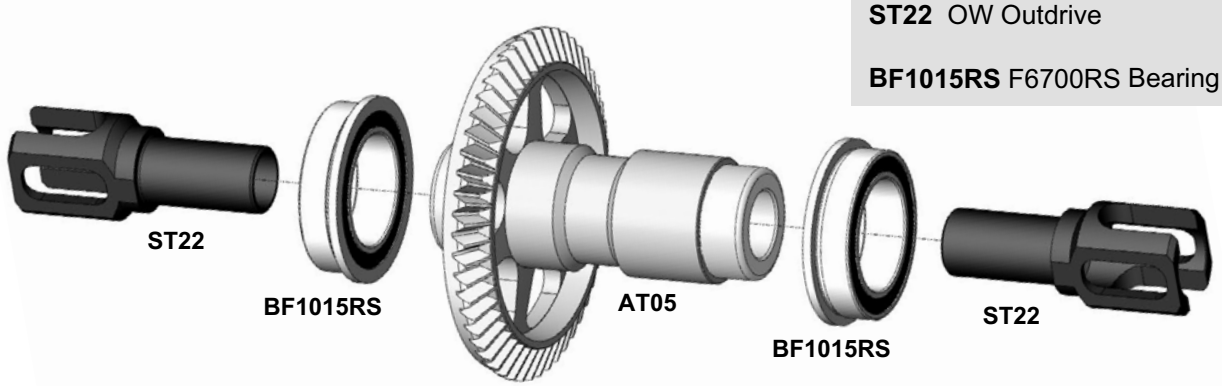
STEP 35 FINISHED



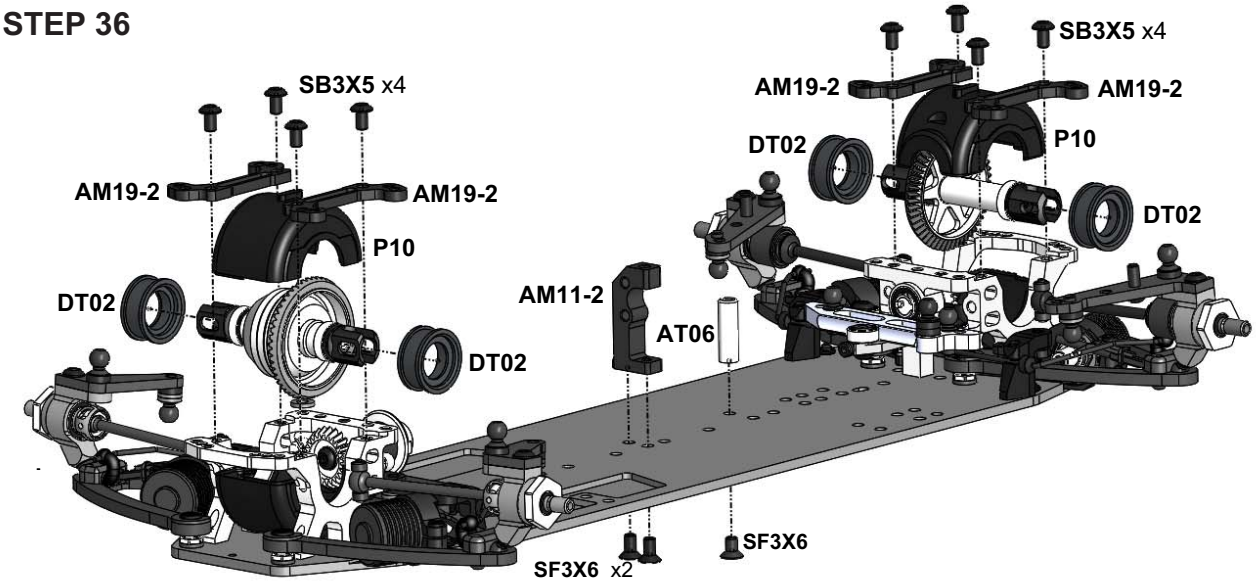
Front One-Way unit (optional)

OW1 One-Way Axle Set (not included)

AT05	OW Housing	x1
ST22	OW Outdrive	x2
BF1015RS	F6700RS Bearing	x2

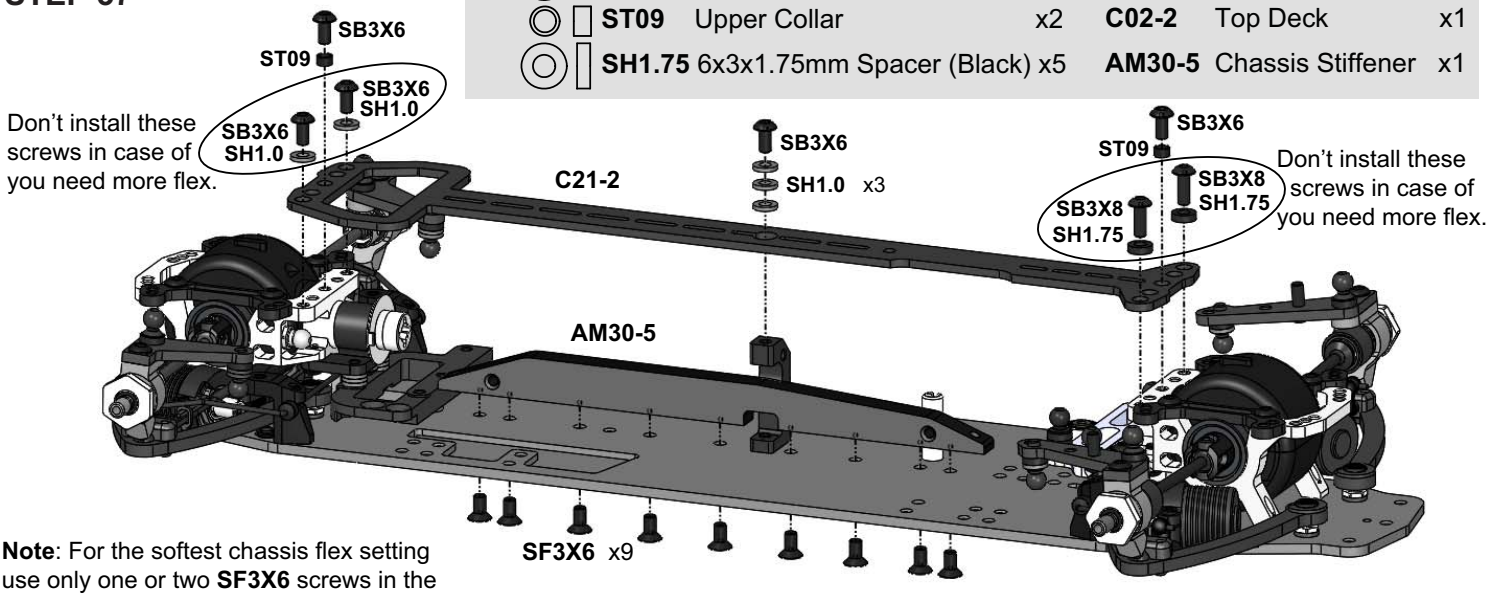


STEP 36



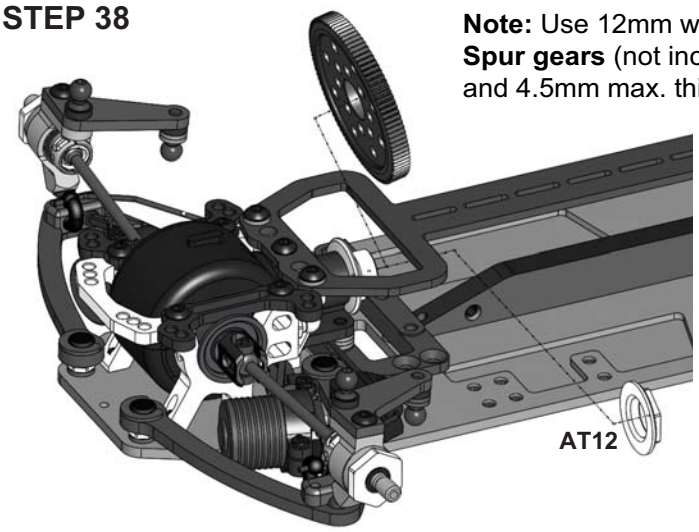
SF3X6	M3x6 Flat Head Screw	x12	**AM19-2**	Upper Arm Holder	x4
SB3X5	M3x5 Button Head Screw	x8	**AT06**	Antenna Holder	x1
SB3X6	M3x6 Button Head Screw	x3	**AM11-2**	Tower	x1
SB3X8	M3x8 Button Head Screw	x2	**DT02**	Bearing Housing	x4
SH1.0	6x3x1mm Spacer (Gray)	x5	**P10**	Diff Cover	x2
ST09	Upper Collar	x2	**C02-2**	Top Deck	x1
SH1.75	6x3x1.75mm Spacer (Black)	x5	**AM30-5**	Chassis Stiffener	x1

STEP 37

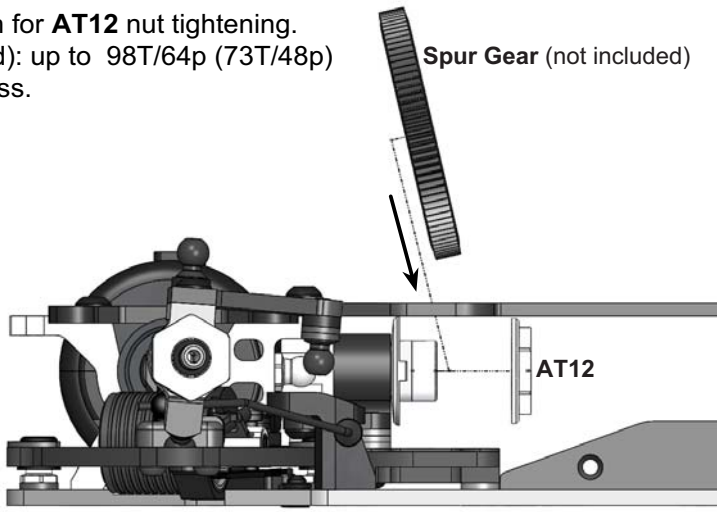


Note: For the softest chassis flex setting use only one or two **SF3X6** screws in the middle of **AM30-5** stiffener. Add screws for reducing of flex of the desirable chassis area.

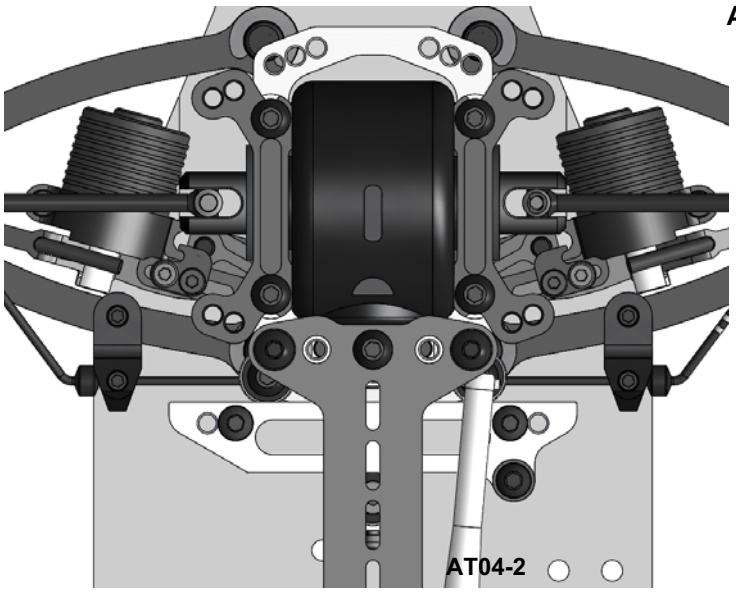
STEP 38



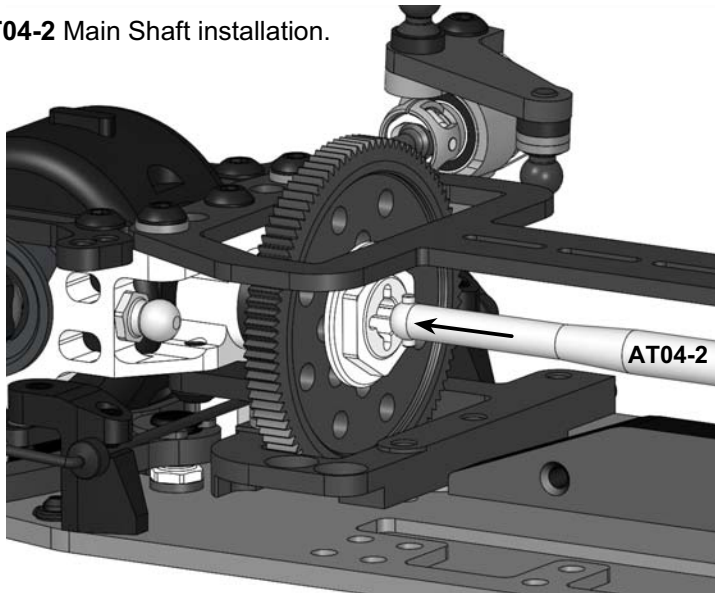
Note: Use 12mm wrench for **AT12** nut tightening.
Spur gears (not included): up to 98T/64p (73T/48p) and 4.5mm max. thickness.



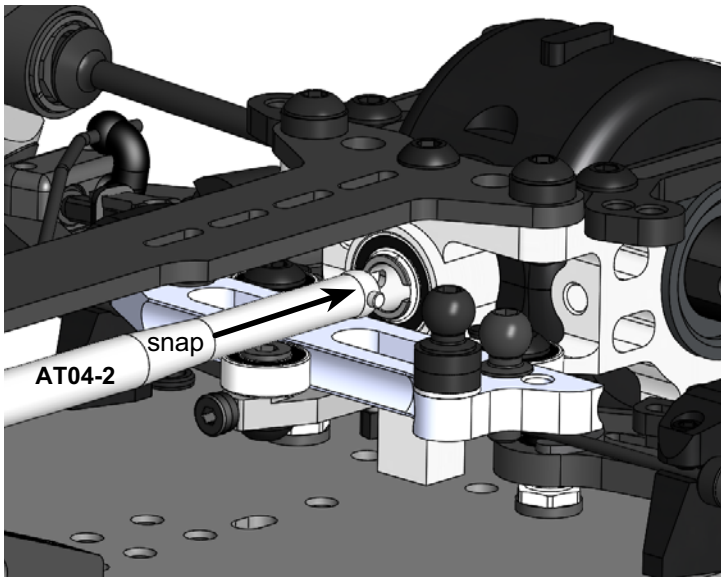
STEP 39



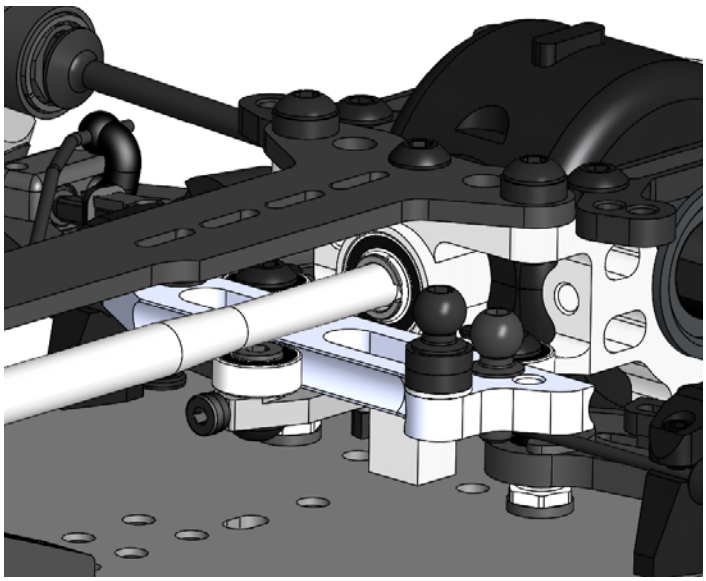
AT04-2 Main Shaft installation.



STEP 39 (cont'd)

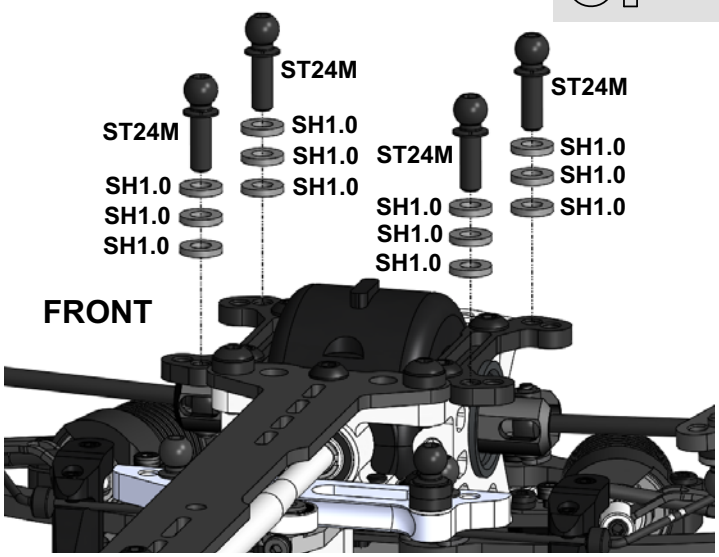


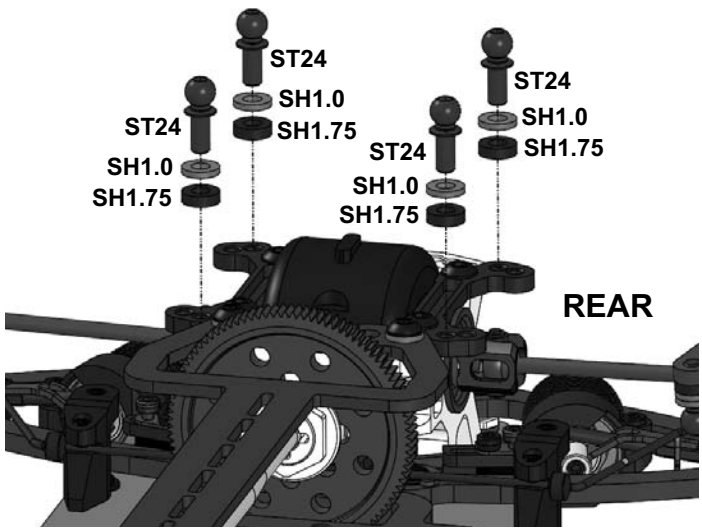
STEP 39 FINISHED



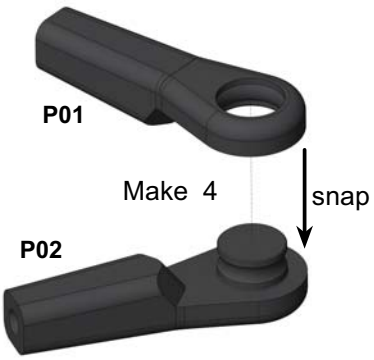
STEP 40

SH1.0 6x3x1mm Spacer (Gray)	x16	**ST24** Ball Stud 6mm	x4
SH1.75 6x3x1.75mm Spacer (Black)	x4	**ST24M** Ball Stud 8mm	x4

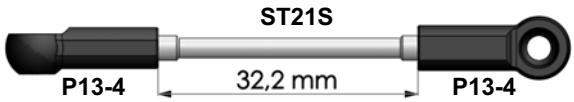




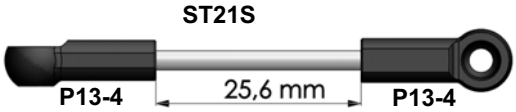
STEP 41



Servo rod for offset servo mounting



Servo rod for centered servo mounting

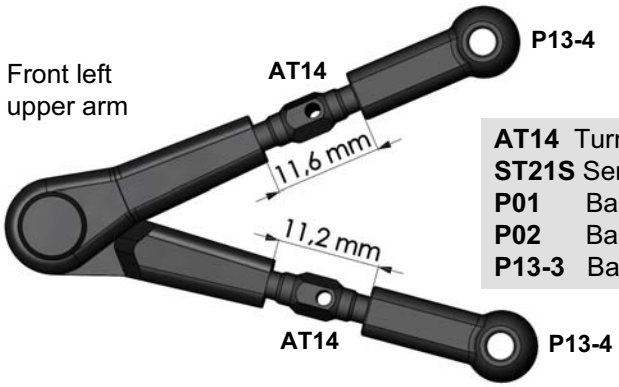


Make 2 front rods

Rear left rod

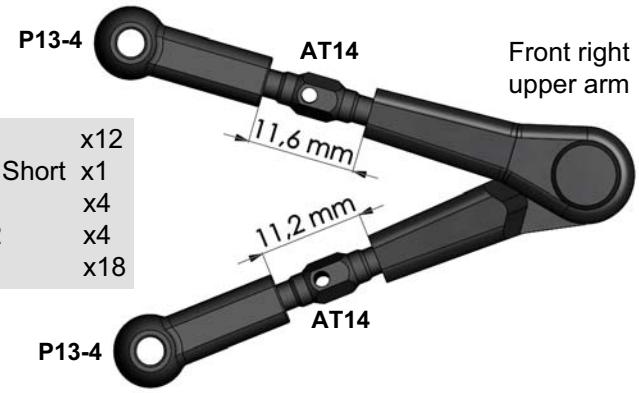
Rear right rod

Front left upper arm

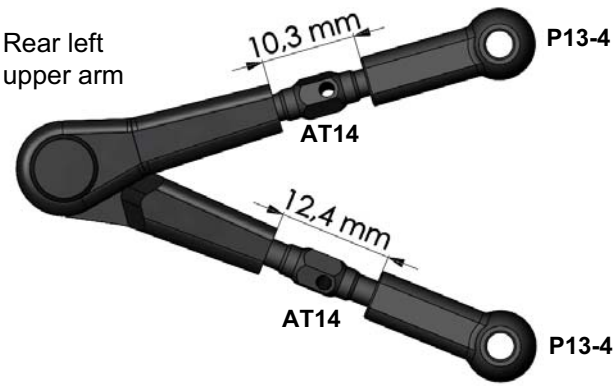


AT14	Turnbuckle	x12
ST21S	Servo Rod Short	x1
P01	Ball Joint 1	x4
P02	Ball Joint 2	x4
P13-3	Ball End	x18

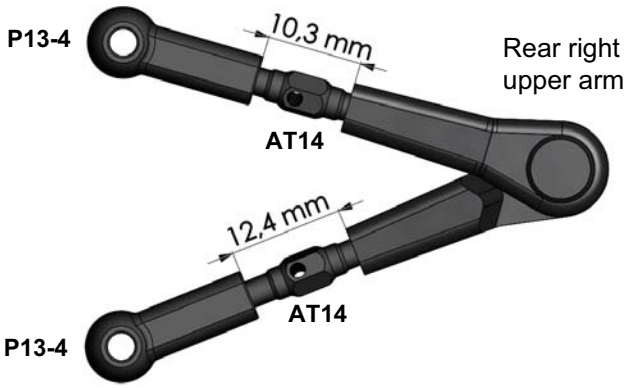
Front right upper arm



Rear left upper arm

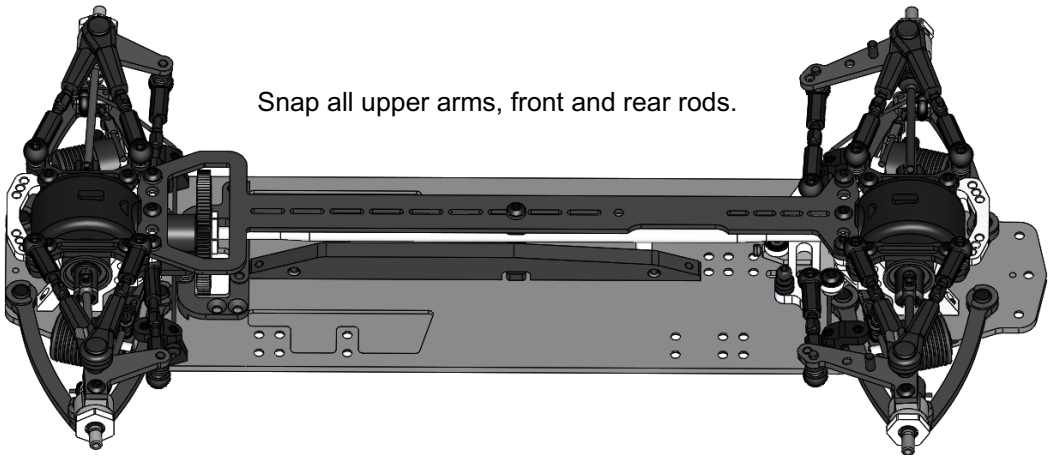


Rear right upper arm

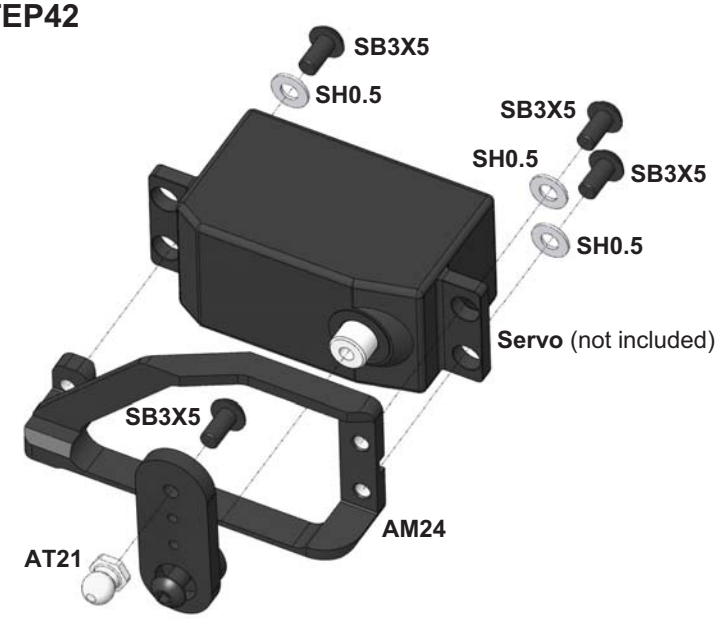


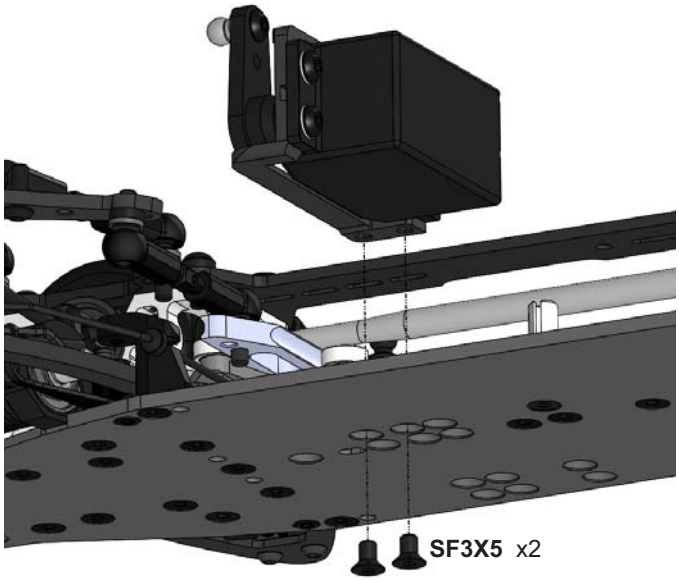
Notes: The given rods and arms sizes are approximately for 4° front caster and - 4° rear caster, 1.5° both front and rear cambers, 3° rear toe-in and 0° front toe angles. Use a setup station or angles gauge for further precise suspension geometry setting. See our recommendations on page #35 for quick and easy suspension geometry change.

Snap all upper arms, front and rear rods.



STEP42

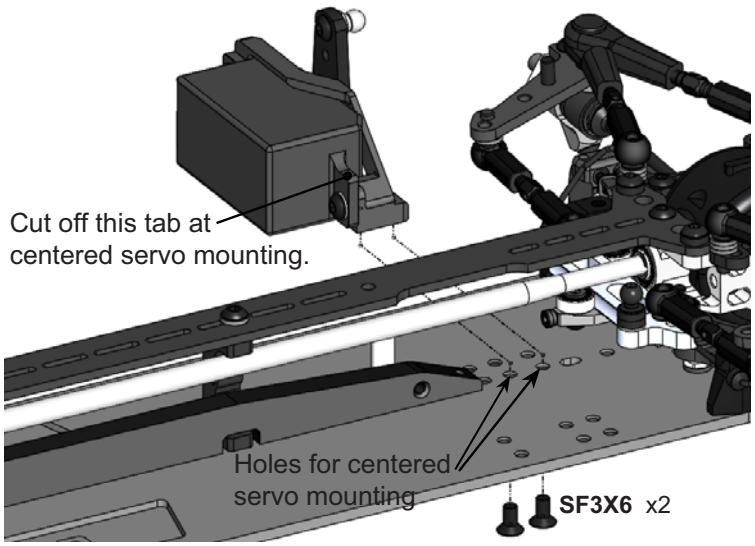




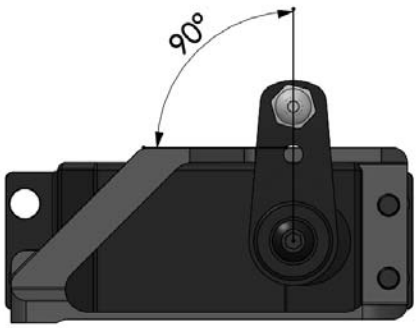
SF3X5 M3x5 Flat Head Screw	x2	**AT21** Pivot Ball	x1
SH0.5 6x3x0.5mm Spacer (Silver)	x3	**AM24** Central Servo Holder	x1
SB3X5 M3x5 Button Head Screw	x4	**ST21S** Servo Rod Short	x1

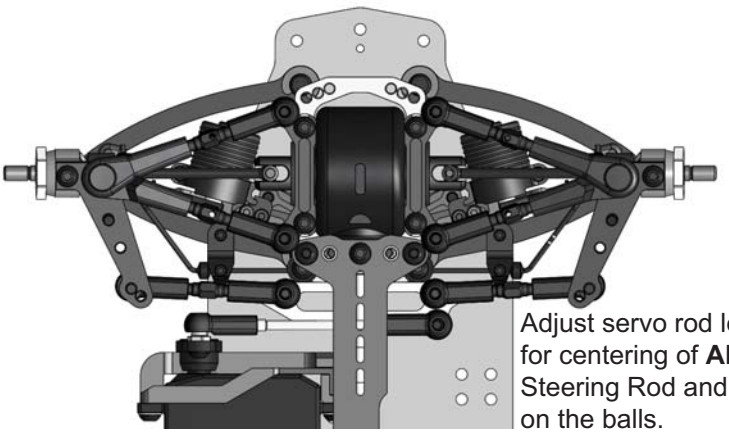
Note: Recommended length of servo arm is 17,5-18,5mm. We highly recommend our **P40F** and **P40K** Servo Arms. We also recommend our **AS-700L** Brushless Low-Profile Car Servo. Awesomatix **AS-700L** servo has an integrated servo holder and doesn't required **AM24** or any others servo holders for mounting on the chassis.

The centered servo mounting is possible.

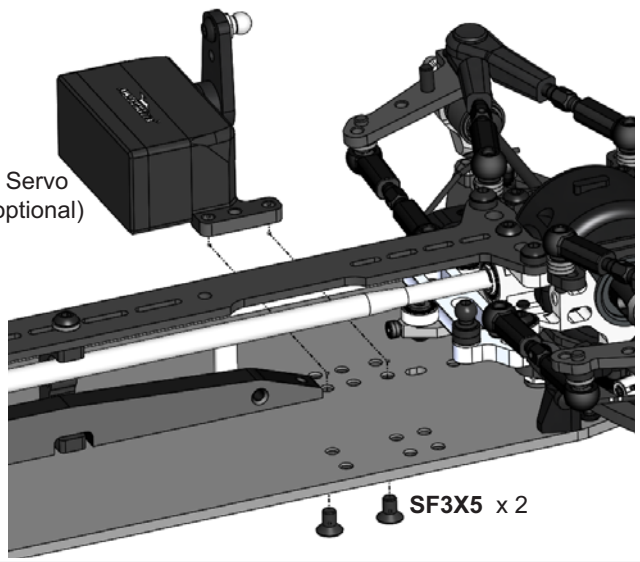


Attention! Neutral servo arm position should be 90 deg.

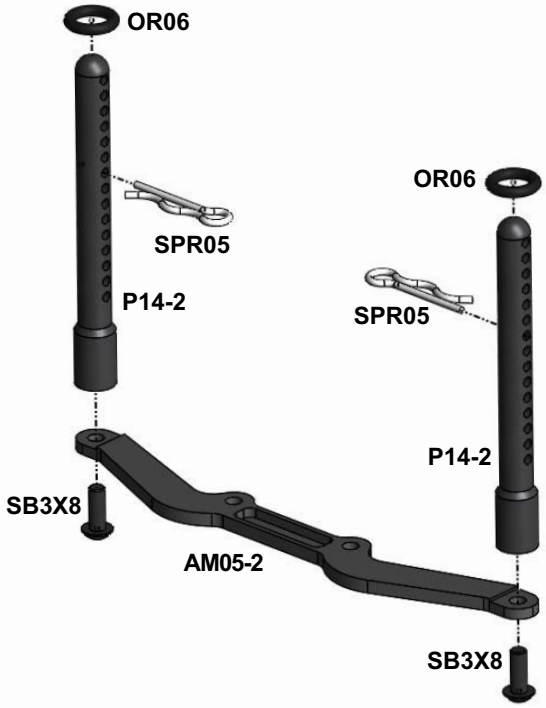


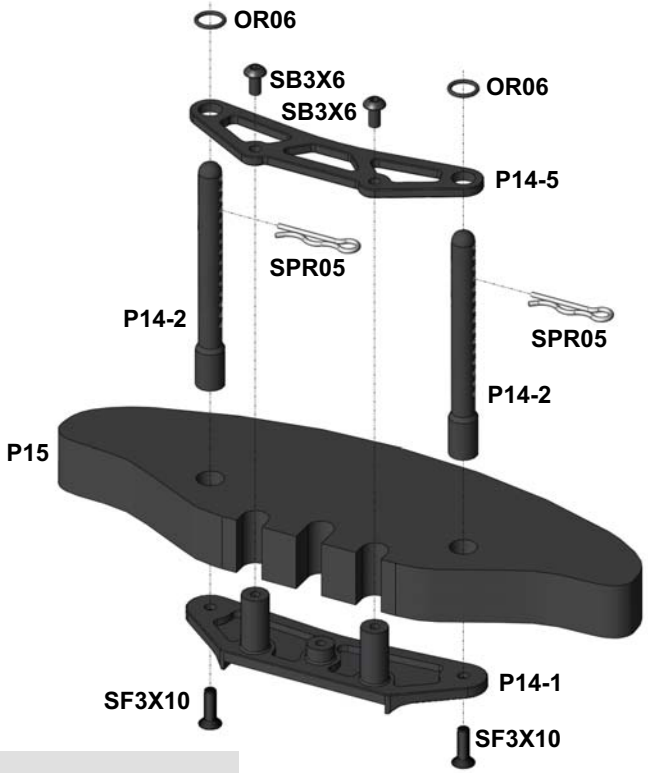


Adjust servo rod length for centering of **AM09** Steering Rod and snap on the balls.



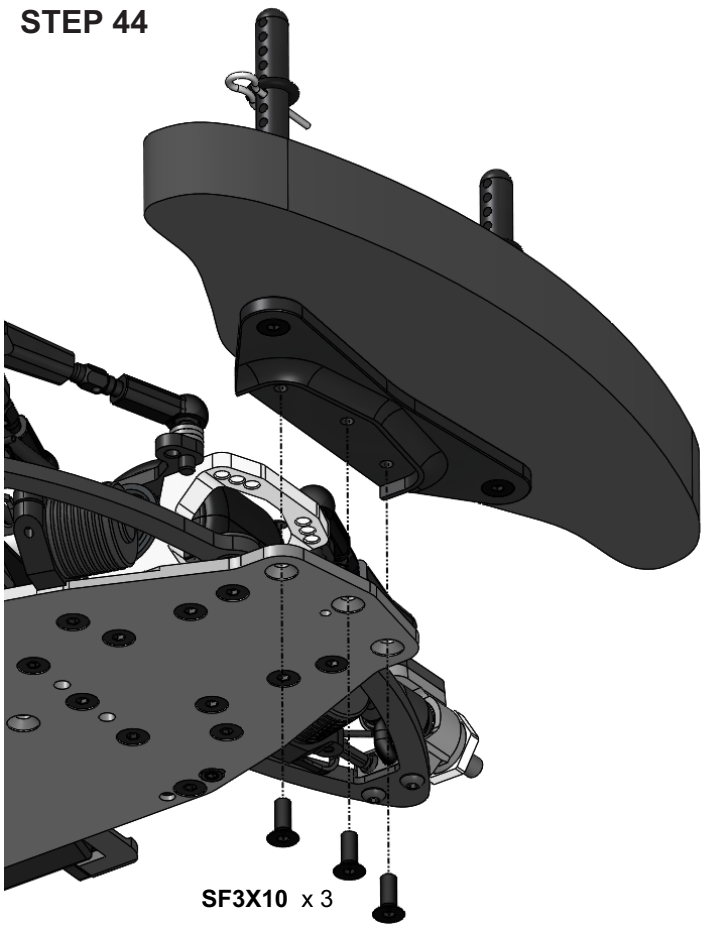
STEP 43

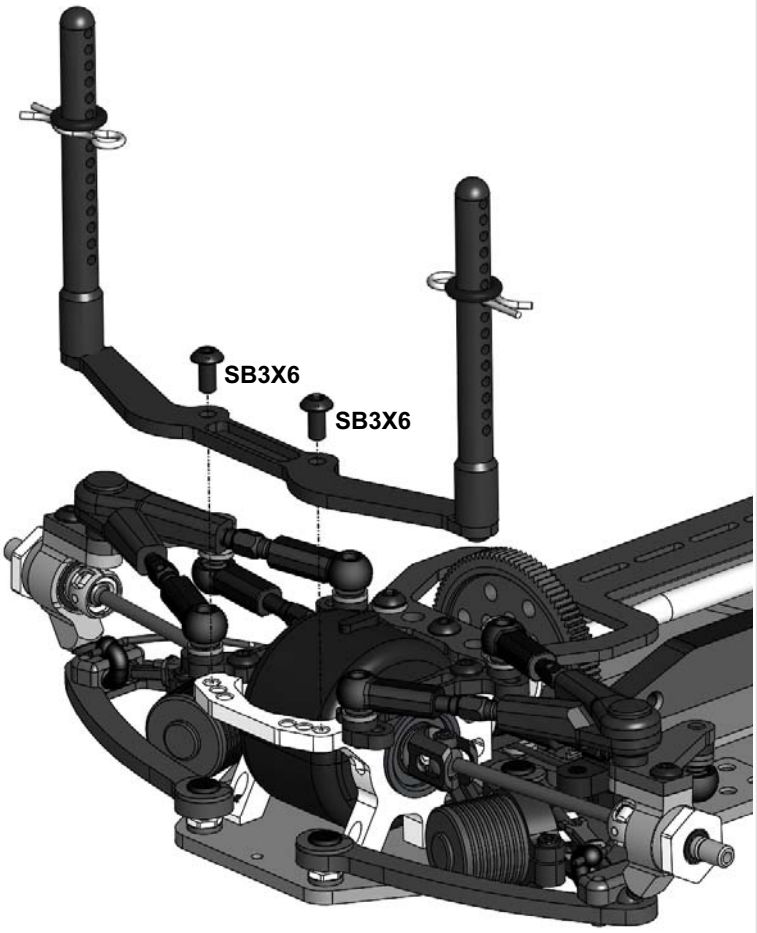




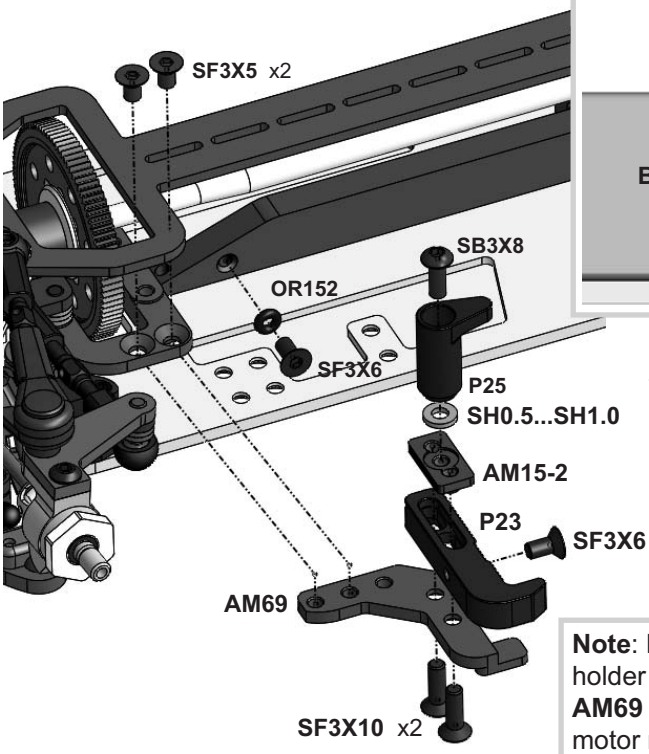
SF3X10 M3x10 Flat Head Screw	x5	**AM05-2** Rear Holder	x1
SB3X8 M3x8 Button Head Screw	x2	**P14-1** Lower Bumper	x1
SB3X6 M3x6 Button Head Screw	x4	**P14-2** Body Post	x4
OR06 5mm O-Ring	x4	**P14-5** Upper Bumper	x1
		P15 Foam Bumper	x1
		SPR05 Body Clip	x4

STEP 44

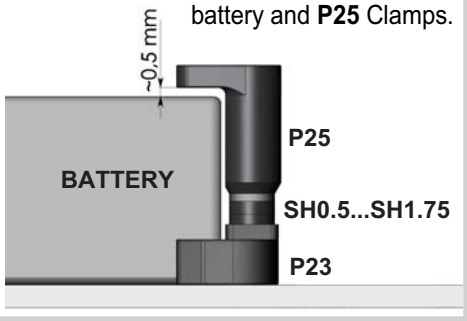




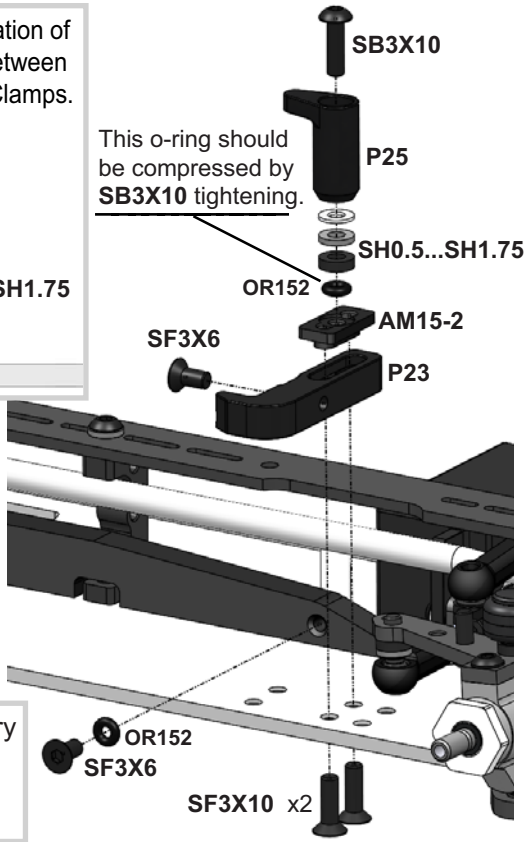
STEP 45



Note: Use the appropriate combination of **SH** spacers for sufficient gap between battery and **P25** Clamps.



Battery holders layout for **F1** battery position.



Note: Mounting of the rear battery holder on the lower deck without **AM69** is acceptable for motor mount Modes 3 and 4.

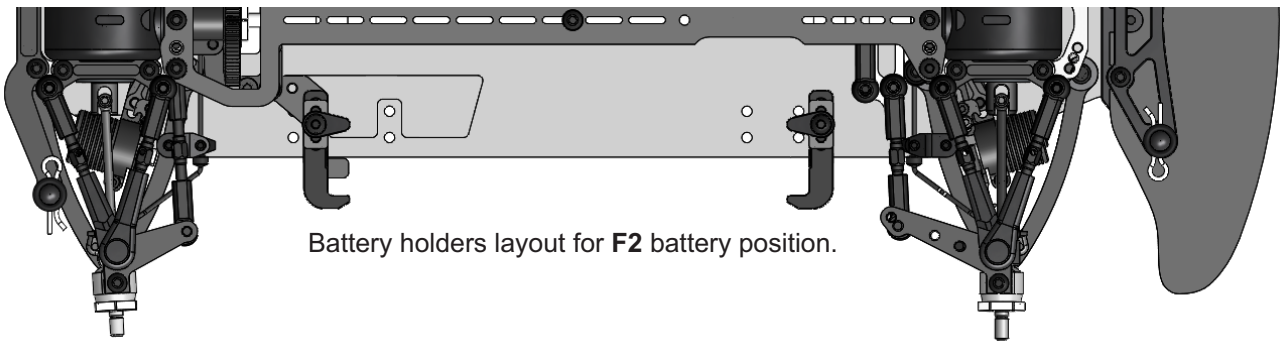
Battery Holders adjustment:

Choose the desirable battery position.

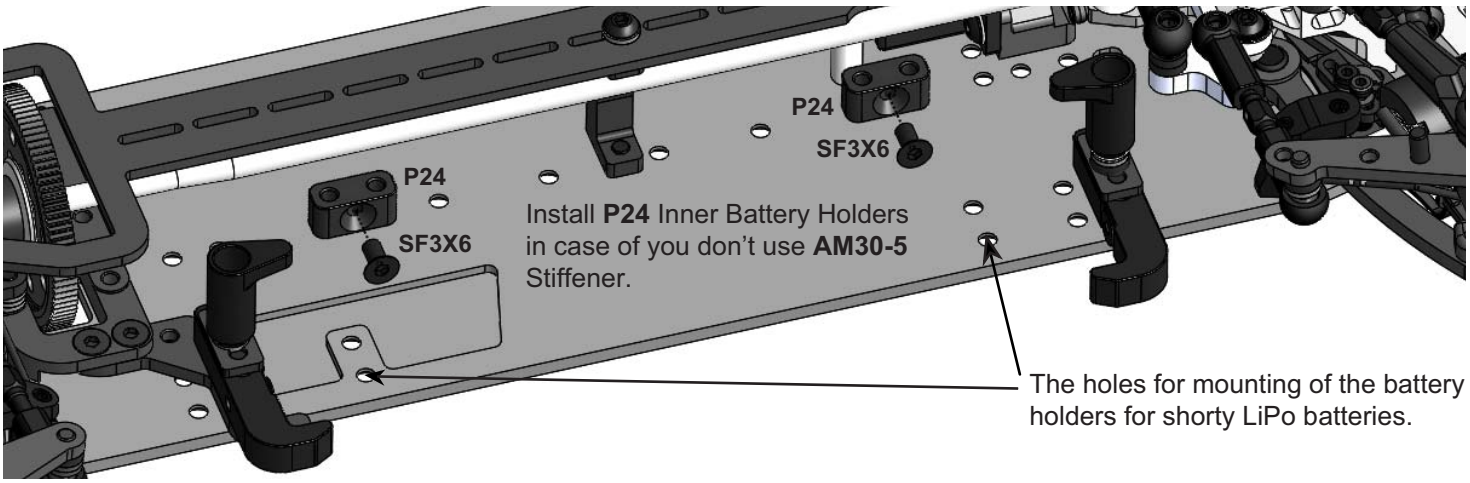
Tighten up **SF3X10** screws to fix **P23** Battery Holders.

Adjust **SF3X6** screws to achieve ~0.5mm clearance between them and the battery.

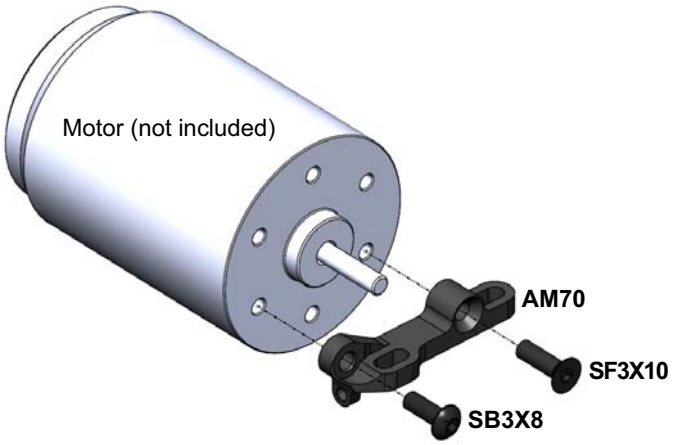
SF3X10 M3x10 Flat Head Screw	x4	**P23** Outer Battery Holder	x2
SF3X6 M3x6 Flat Head Screw	x4	**P25** Battery Clamp	x2
SF3X5 M3x5 Flat Head Screw	x2	**AM15-2** Battery Nut	x2
SB3X8 M3x8 Button Head Screw	x1	**AM69** MM2 Battery Support	x1
SB3X10 M3x10 Button Head Screw	x1	**SH0.5 SH1.0 SH1.75** Spacers	
OR152 2x1.5mm O-Ring	x3		

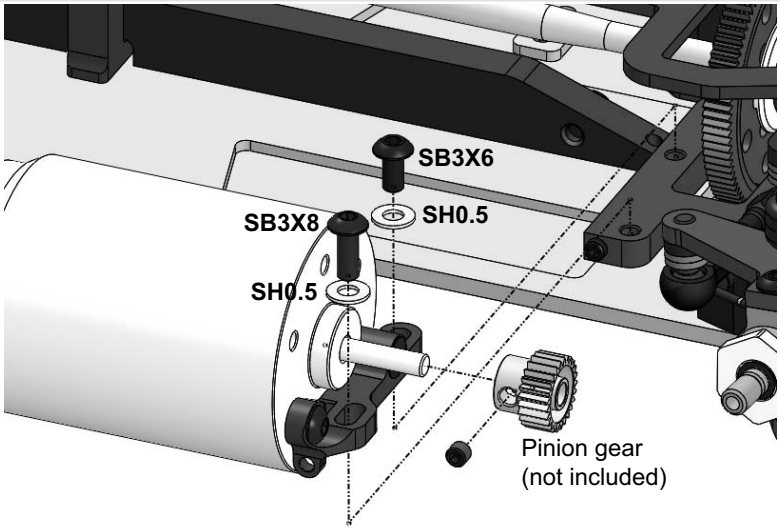


Battery holders layout for **F2** battery position.



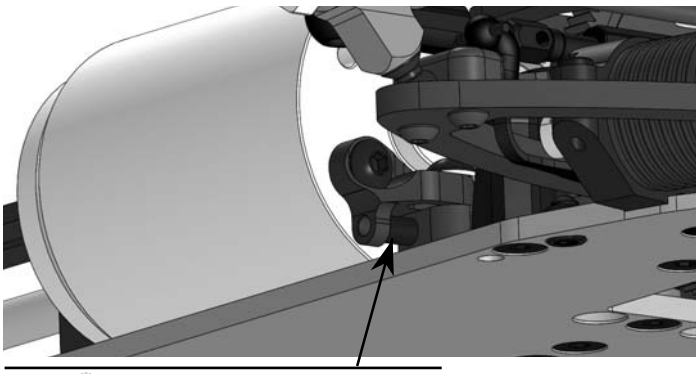
STEP 46





Check up **Drive Ratio Chart** (page 32) before pinion gear installation.

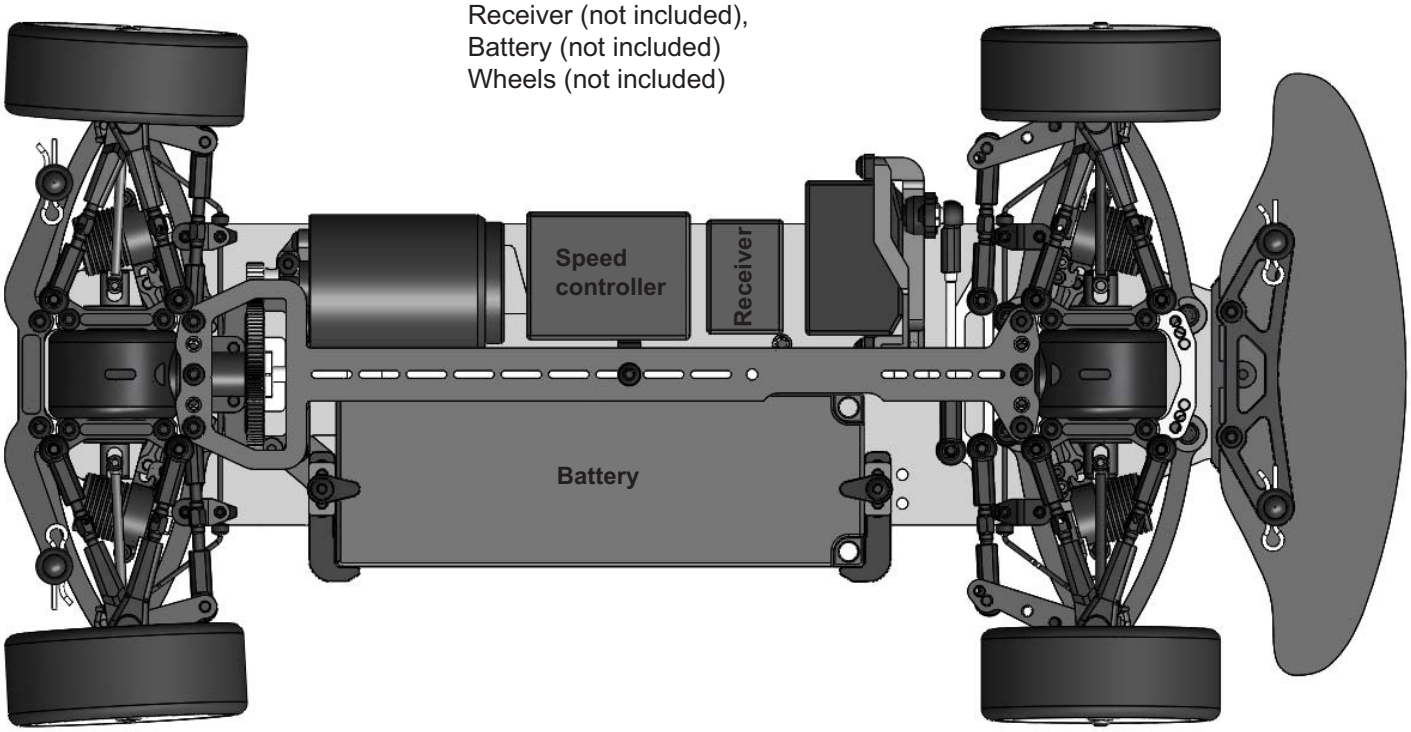
SB3X8	M3x8 Button Head Screw	x2
SB3X6	M3x6 Button Head Screw	x1
SF3X10	M3x10 Flat Head Screw	x1
SH0.5	6x3x0.5mm Spacer (Silver)	x2
AM70	MM2 Motor Locator	x1



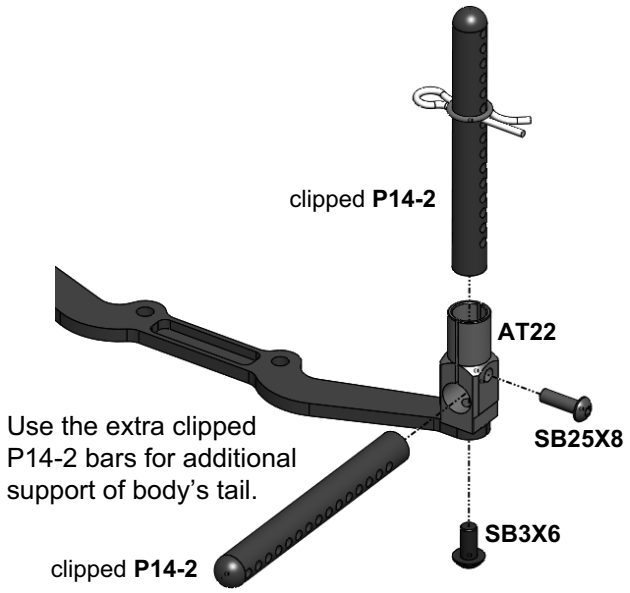
Use this **SS3X8** Set Screw as a stopper for pinion/spur gap precise setting before full tightening of **SB** screws.

STEP 47 FINAL ASSEMBLY

Install: Speed controller (not included),
Receiver (not included),
Battery (not included)
Wheels (not included)

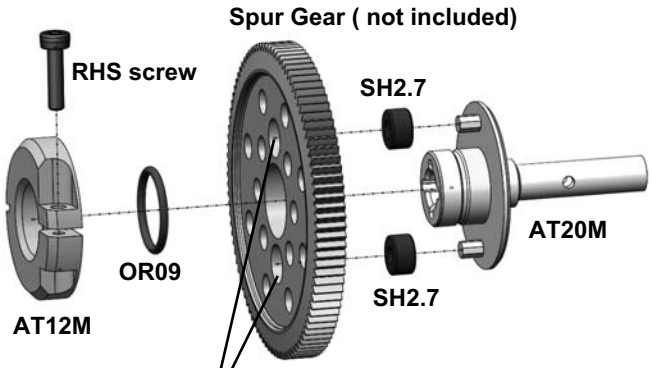


AT22 Rear Body Holder (optional)



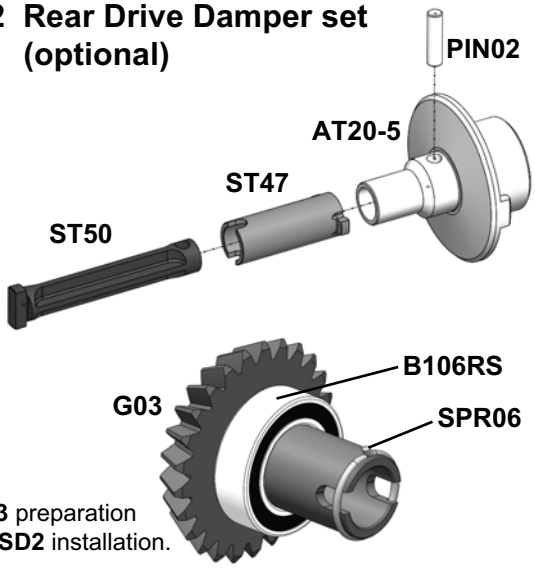
Use the extra clipped P14-2 bars for additional support of body's tail.

SD1 Spur Damper Set (optional)

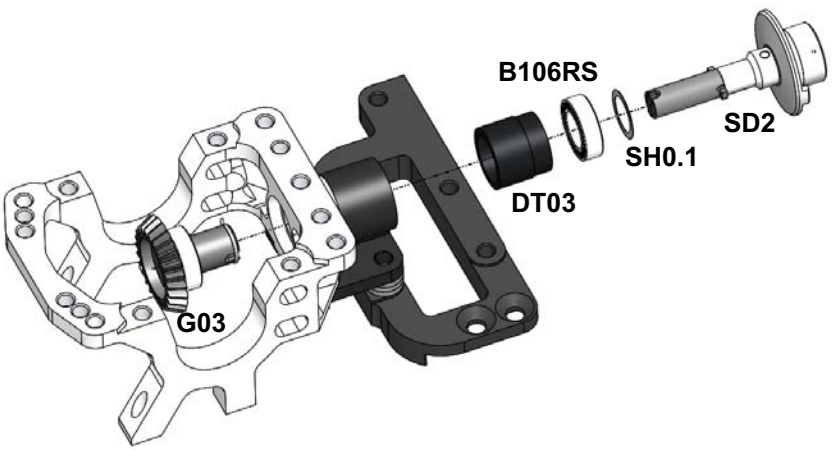


Increase two holes on spur gear to 5mm via reamer or a drill bit.

SD2 Rear Drive Damper set (optional)



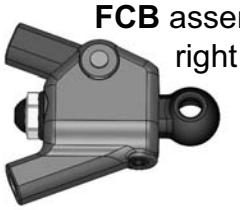
G03 preparation for **SD2** installation.

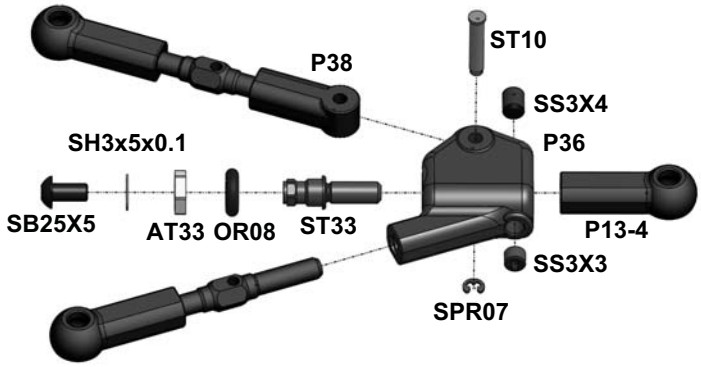


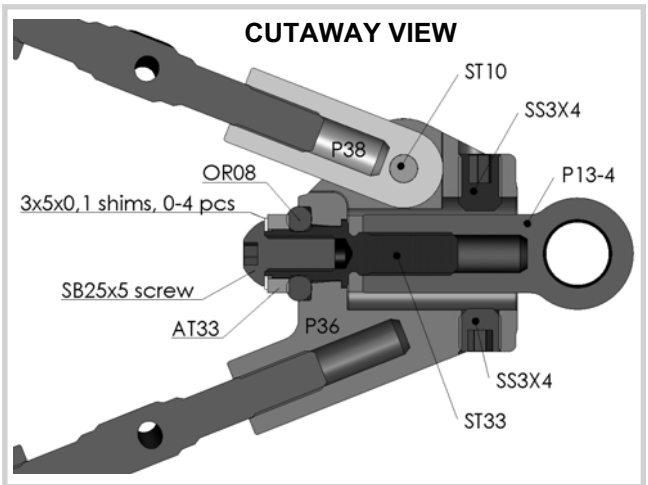
FCB Flexible Caster Block (optional)

FCB assembled for left side

FCB assembled for right side

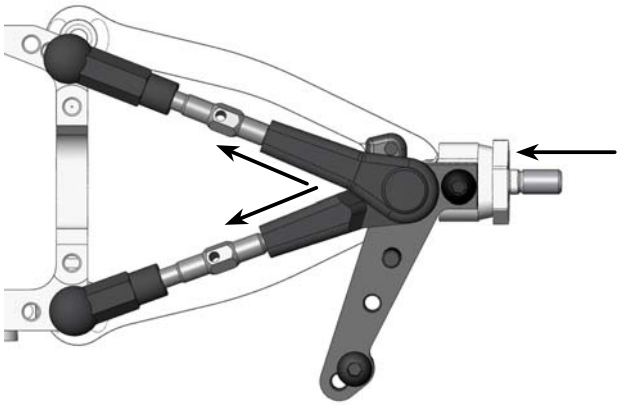




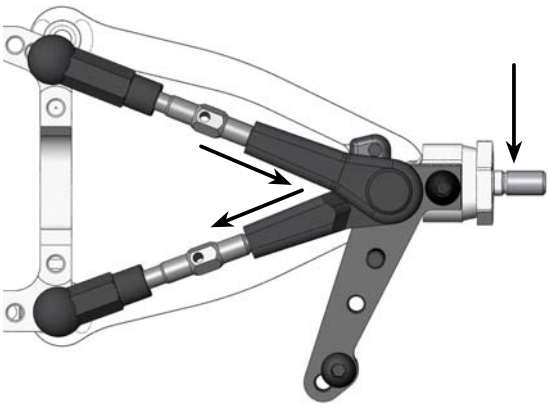


SUSPENSION SETTING TECHNIQUE

Camber adjustment rule: Simultaneous both upper rods 0.5mm shortening (1/2 turn of both turnbuckles) adds 1.0° of camber angle at constant caster.

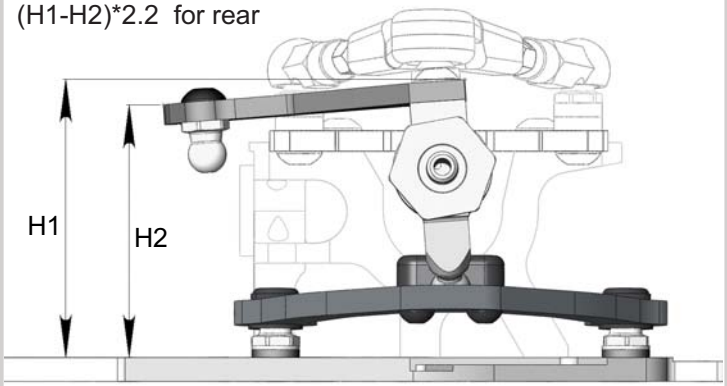


Caster adjustment rule: Simultaneous front upper rod 0.5mm elongation and rear upper rod 0.5mm shortening adds 2.5° of caster at constant camber.

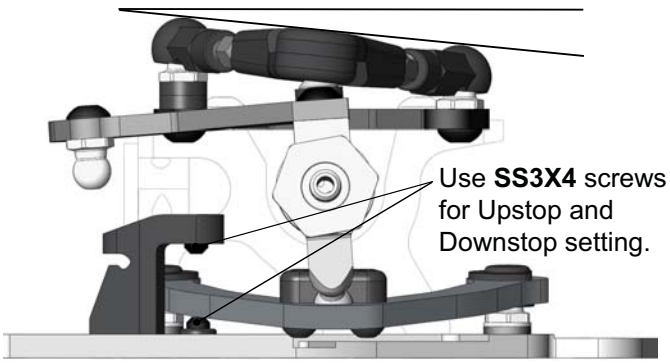


Caster measuring:

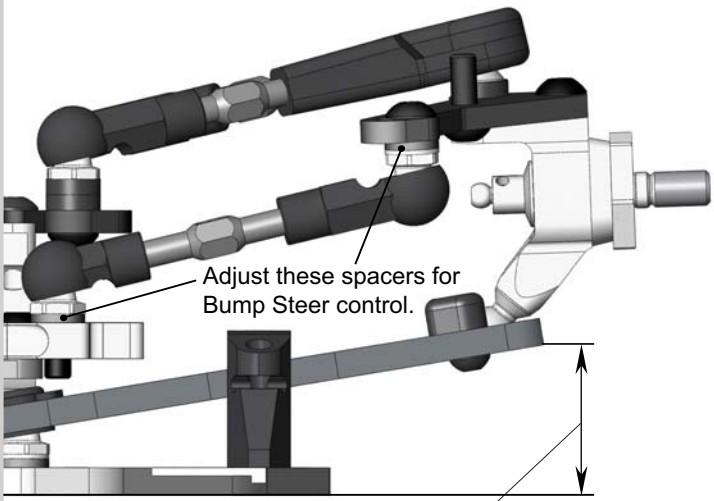
Caster angle° =
(H1-H2)*1.5 for front
(H1-H2)*2.2 for rear



Reactive Caster setting is possible.

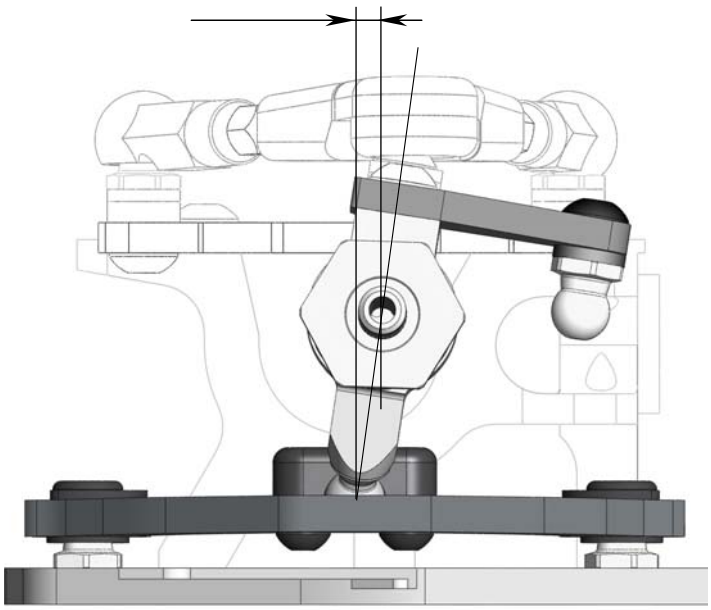


Roll Center adjustment:
Use combinations of **SH0.5, SH1.0** and **SH1.75** Spacers under appropriate Pivot Balls and Ball Studs for this adjustment.



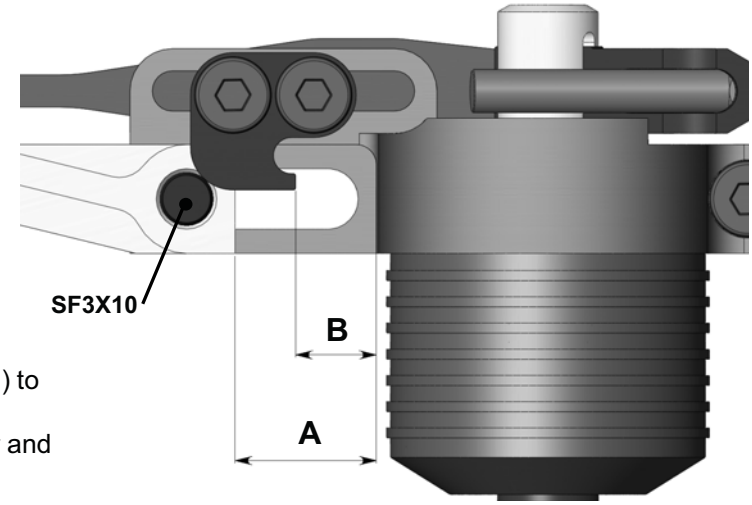
Use Ride Height Gauge for Upstop & Downstop measuring.

Wheelbase adjustment:
Use rear suspension caster change for this adjustment.
Adding 4°caster shortens wheelbase by 1mm.



SHOCK SETTING TECHNIQUE

Attention! These Shocks allow to adjust the Damping and Spring rates without replacement of the shock's fluid and spring.



1. Damping and Shock Spring rate setting

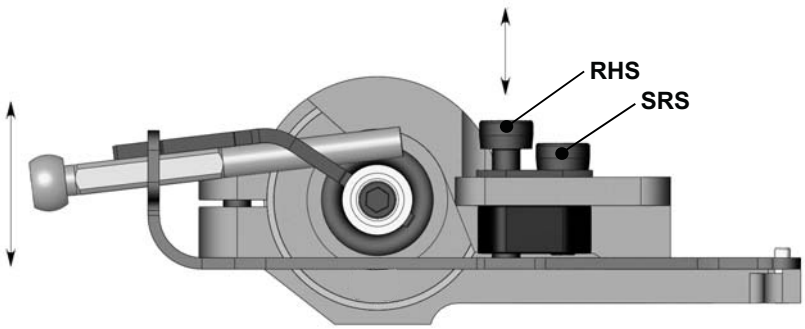
Increase **A**-distance (slide Shock outward) to increase Damping and Spring rates simultaneously and concordantly to each other. **A**-distance range is 0 - 4.4mm.
Use outer **SF3X10** Flat Head Screw to unlock Shock and to lock it at desirable position.
Decrease **B** distance (slide **P09** Shock Screw Holder outward) to increase Spring rate only at the fixed Damping rate value.
Use **SRS** Spring Rating Screw to unlock Shock Screw Holder and to lock it at desirable position.

2. Shock Spring preload setting

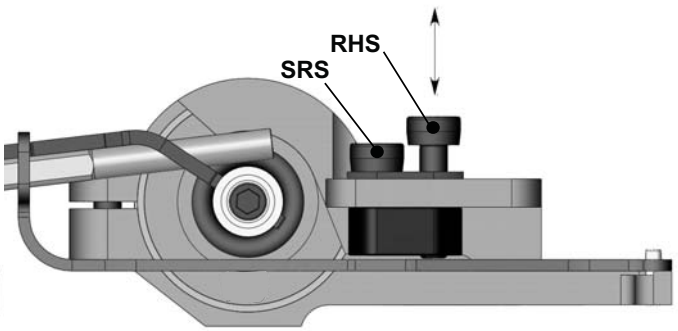
Turn IN (CW) **RHS** Screw to increase spring preload.
Turn OUT (CCW) **RHS** Screw to decrease spring preload.
Use Spring preload setting to adjust Ride Height value.

3. SRS/RHS Screws arrangements change

The reverse arrangement of these screws is possible also.

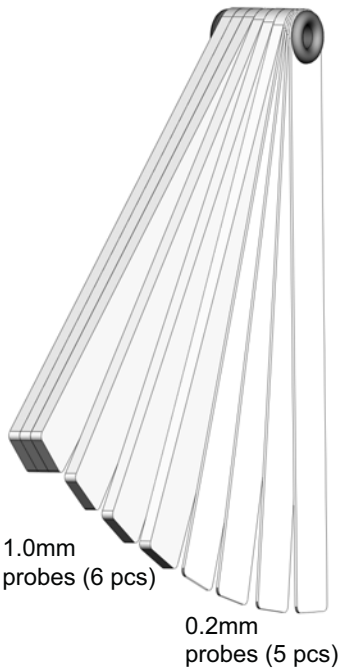


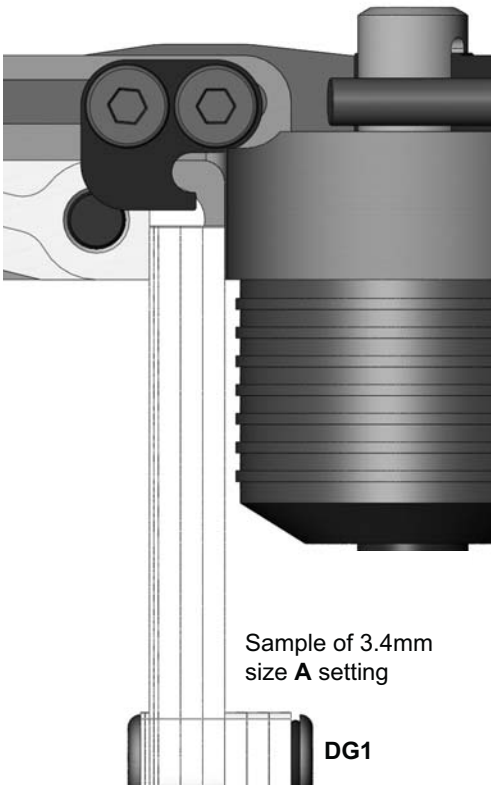
SRS/RHS Screws arrangement Ⅰ

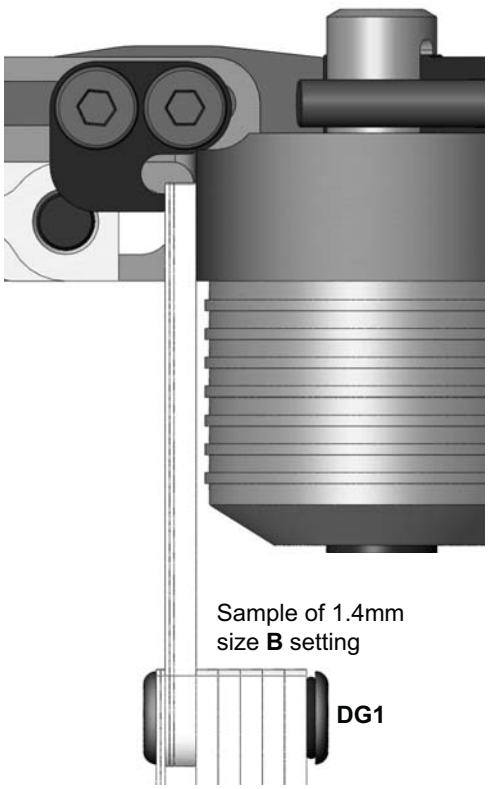


SRS/RHS Screws arrangement Ⅱ

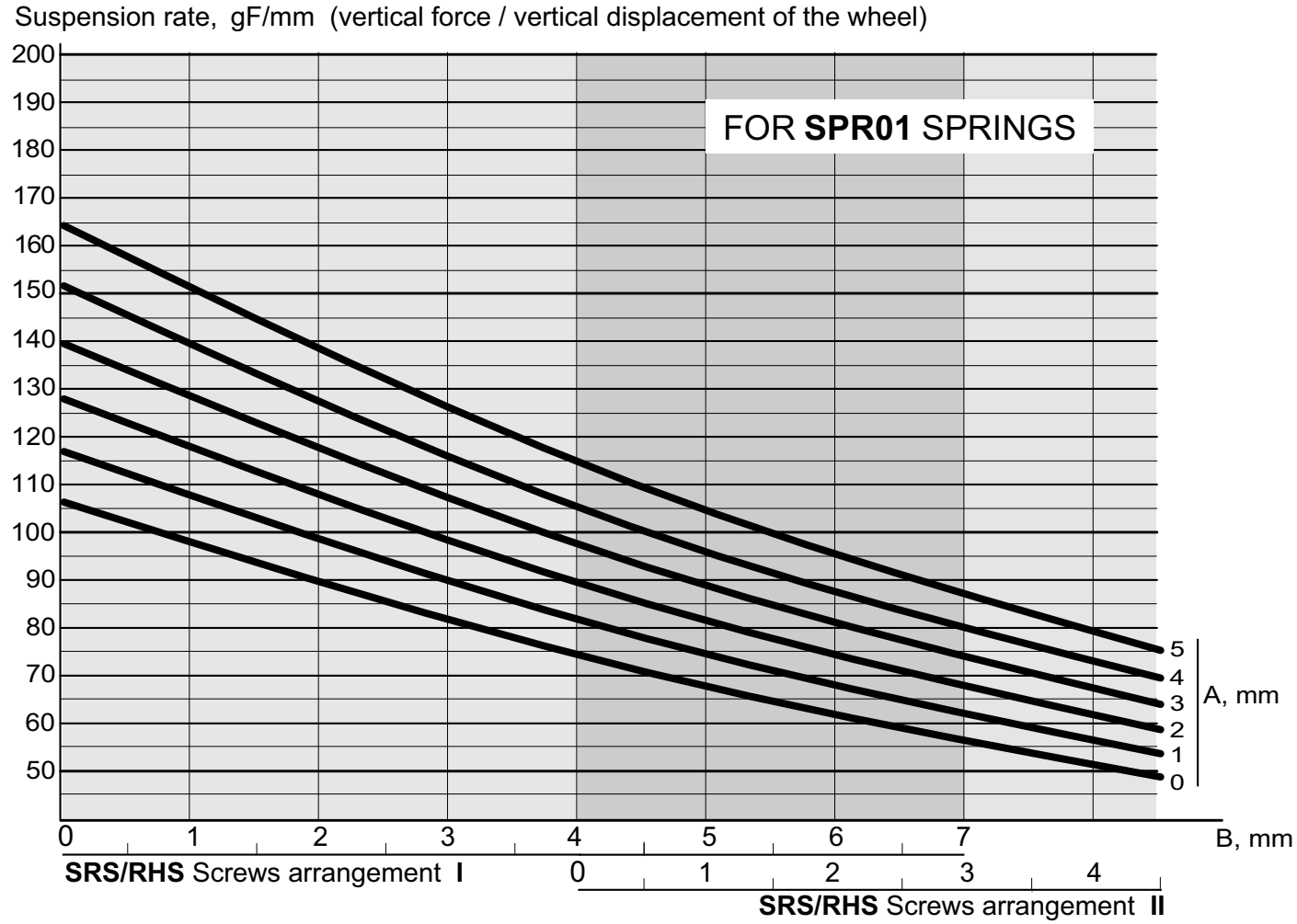
4. Using of DG1 Damper Gauge

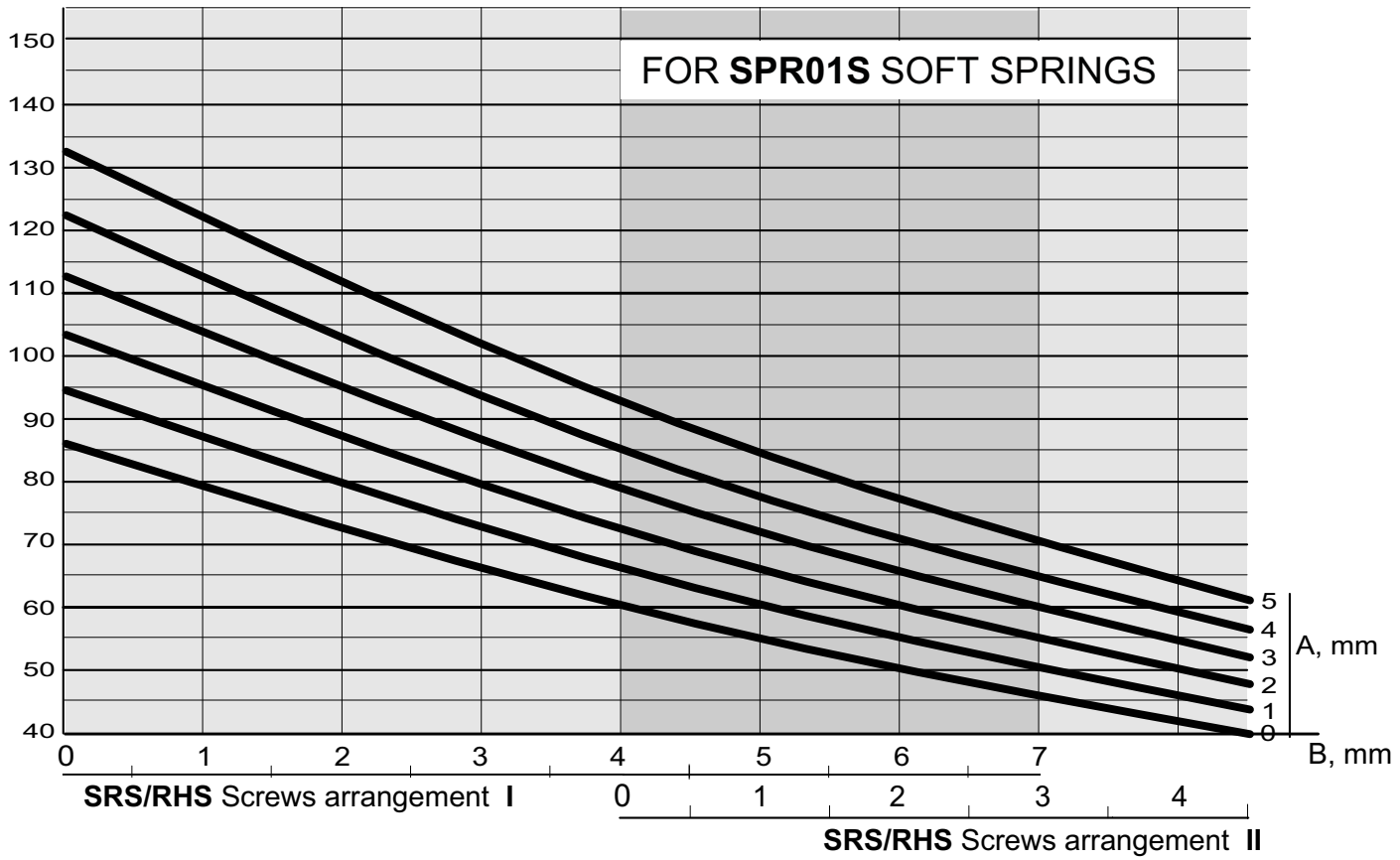






GRAPHS OF THE SUSPENSION STIFFNESS DEPENDING ON THE POSITION OF THE DAMPER (SIZE A) AND SHOCK SCREW HOLDER (SIZE B)





FINAL DRIVE RATIO CHART

DRIVE TRAIN RATIO IS 2,08

64 PITCH SPUR GEAR

PINION SIZE

	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98
18																													11,32
19																												10,62	10,73
20																											9,98	10,09	10,19
21																										9,41	9,51	9,61	9,71
22																									8,89	8,98	9,08	9,17	9,27
23																								8,41	8,50	8,59	8,68	8,77	8,86
24																							7,97	8,06	8,15	8,23	8,32	8,41	8,49
25																						7,57	7,65	7,74	7,82	7,90	7,99	8,07	8,15
26																					7,20	7,28	7,36	7,44	7,52	7,60	7,68	7,76	7,84
27																				6,86	6,93	7,01	7,09	7,16	7,24	7,32	7,40	7,47	7,55
28																			6,54	6,61	6,69	6,76	6,83	6,91	6,98	7,06	7,13	7,21	7,28
29																		6,24	6,31	6,38	6,46	6,53	6,60	6,67	6,74	6,81	6,89	6,96	7,03
30																	5,96	6,03	6,10	6,17	6,24	6,31	6,38	6,45	6,52	6,59	6,66	6,73	6,79
31																5,70	5,77	5,84	5,90	5,97	6,04	6,11	6,17	6,24	6,31	6,37	6,44	6,51	6,58
32															5,46	5,53	5,59	5,66	5,72	5,79	5,85	5,92	5,98	6,05	6,11	6,18	6,24	6,31	6,37
33														5,23	5,29	5,36	5,42	5,48	5,55	5,61	5,67	5,74	5,80	5,86	5,92	5,99	6,05	6,11	6,18
34													5,02	5,08	5,14	5,20	5,26	5,32	5,38	5,44	5,51	5,57	5,63	5,69	5,75	5,81	5,87	5,93	6,00
35												4,81	4,87	4,93	4,99	5,05	5,11	5,17	5,23	5,29	5,35	5,41	5,47	5,53	5,59	5,65	5,71	5,76	
36											4,62	4,68	4,74	4,80	4,85	4,91	4,97	5,03	5,08	5,14	5,20	5,26	5,32	5,37	5,43	5,49	5,55		
37										4,44	4,50	4,55	4,61	4,67	4,72	4,78	4,83	4,89	4,95	5,00	5,06	5,12	5,17	5,23	5,28	5,34			
38									4,27	4,32	4,38	4,43	4,49	4,54	4,60	4,65	4,71	4,76	4,82	4,87	4,93	4,98	5,04	5,09	5,15				
39								4,11	4,16	4,21	4,27	4,32	4,37	4,43	4,48	4,53	4,59	4,64	4,69	4,75	4,80	4,85	4,91	4,96					
40							3,95	4,00	4,06	4,11	4,16	4,21	4,26	4,32	4,37	4,42	4,47	4,52	4,58	4,63	4,68	4,73	4,78						
41						3,80	3,86	3,91	3,96	4,01	4,06	4,11	4,16	4,21	4,26	4,31	4,36	4,41	4,46	4,52	4,57	4,62							
42					3,66	3,71	3,76	3,81	3,86	3,91	3,96	4,01	4,06	4,11	4,16	4,21	4,26	4,31	4,36	4,41	4,46								
43				3,53	3,58	3,63	3,68	3,72	3,77	3,82	3,87	3,92	3,97	4,01	4,06	4,11	4,16	4,21	4,26	4,31									
44			3,40	3,45	3,50	3,55	3,59	3,64	3,69	3,73	3,78	3,83	3,88	3,92	3,97	4,02	4,07	4,11	4,16										
45		3,28	3,33	3,37	3,42	3,47	3,51	3,56	3,61	3,65	3,70	3,74	3,79	3,84	3,88	3,93	3,98	4,02											
46	3,17	3,21	3,26	3,30	3,35	3,39	3,44	3,48	3,53	3,57	3,62	3,66	3,71	3,75	3,80	3,84	3,89												
47	3,10	3,14	3,19	3,23	3,27	3,32	3,36	3,41	3,45	3,50	3,54	3,58	3,63	3,67	3,72	3,76													
48	3,03	3,08	3,12	3,16	3,21	3,25	3,29	3,34	3,38	3,42	3,47	3,51	3,55	3,60	3,64														
49	2,97	3,01	3,06	3,10	3,14	3,18	3,23	3,27	3,31	3,35	3,40	3,44	3,48	3,52															
50	2,91	2,95	3,00	3,04	3,08	3,12	3,16	3,20	3,24	3,29	3,33	3,37	3,41																

48 PITCH SPUR GEAR

PINION SIZE

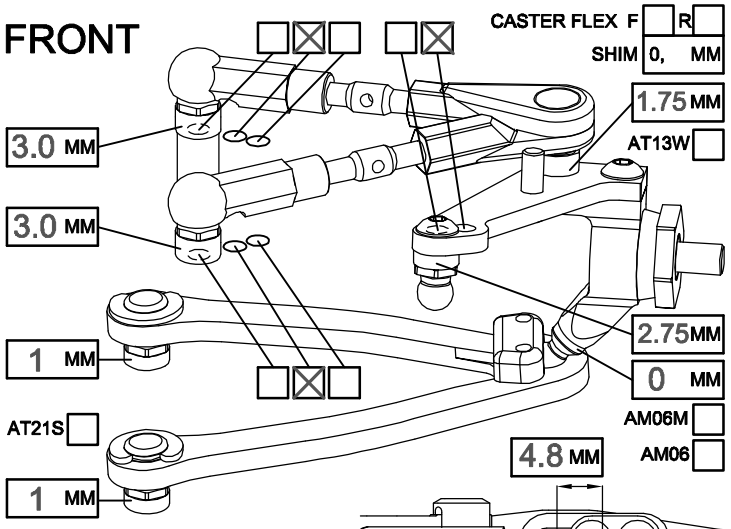
	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73
14																								10,85
15																							9,98	10,12
16																						9,23	9,36	9,49
17																					8,56	8,69	8,81	8,93
18																				7,97	8,09	8,20	8,32	8,44
19																			7,44	7,55	7,66	7,77	7,88	7,99
20																		6,97	7,07	7,18	7,28	7,38	7,49	7,59
21																	6,54	6,64	6,74	6,83	6,93	7,03	7,13	7,23
22																6,15	6,24	6,33	6,43	6,52	6,62	6,71	6,81	6,90
23															5,79	5,88	5,97	6,06	6,15	6,24	6,33	6,42	6,51	6,60
24														5,46	5,55	5,63	5,72	5,81	5,89	5,98	6,07	6,15	6,24	6,33
25													5,16	5,24	5,32	5,41	5,49	5,57	5,66	5,74	5,82	5,91	5,99	6,07
26												4,88	4,96	5,04	5,12	5,20	5,28	5,36	5,44	5,52	5,60	5,68	5,76	
27											4,62	4,70	4,78	4,85	4,93	5,01	5,08	5,16	5,24	5,32	5,39	5,47		
28										4,38	4,46	4,53	4,61	4,68	4,75	4,83	4,90	4,98	5,05	5,13	5,20			
29									4,16	4,23	4,30	4,38	4,45	4,52	4,59	4,66	4,73	4,81	4,88	4,95				
30								3,95	4,02	4,09	4,16	4,23	4,30	4,37	4,44	4,51	4,58	4,65	4,71					
31							3,76	3,82	3,89	3,96	4,03	4,09	4,16	4,23	4,29	4,36	4,43	4,50						
32						3,58	3,64	3,71	3,77	3,84	3,90	3,97	4,03	4,10	4,16	4,23	4,29							
33					3,40	3,47	3,53	3,59	3,66	3,72	3,78	3,84	3,91	3,97	4,03	4,10								
34				3,24	3,30	3,36	3,43	3,49	3,55	3,61	3,67	3,73	3,79	3,85	3,92									
35			3,09	3,15	3,21	3,27	3,33	3,39	3,45	3,51	3,57	3,63	3,68	3,74										
36		2,95	3,00	3,06	3,12	3,18	3,24	3,29	3,35	3,41	3,47	3,52	3,58											
37	2,81	2,87	2,92	2,98	3,04	3,09	3,15	3,20	3,26	3,32	3,37	3,43												

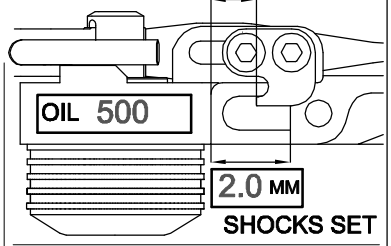
AWESOMATIX® A700 L2

SETUP SHEET

NAME	STANDARD INITIAL SETUP	DATE	TEMP.°C AIR / TRACK /
COUNTRY			CARPET ☒ ASPHALT ☐
RACE		TRACK CONDITION TECHNICAL ☐	MIXED ☒ FAST ☐
TRACK		TRACTION LOW ☐	MEDIUM ☒ HIGH ☐

FRONT





CAMBER ANGLE / °	1.5
CASTER ANGLE / °	5.0
TOE ANGLE / °	1.0 out
RIDE HEIGHT / MM	5.2
DOWNSTOP / MM	6
UPSTOP / MM	15
STABILIZER Ø / MM	1.2
LOW ARM C04M ☒	☐
STEERING ARM STD ☒	☐
WHEEL SPACER / MM	0

SHOCKS SET

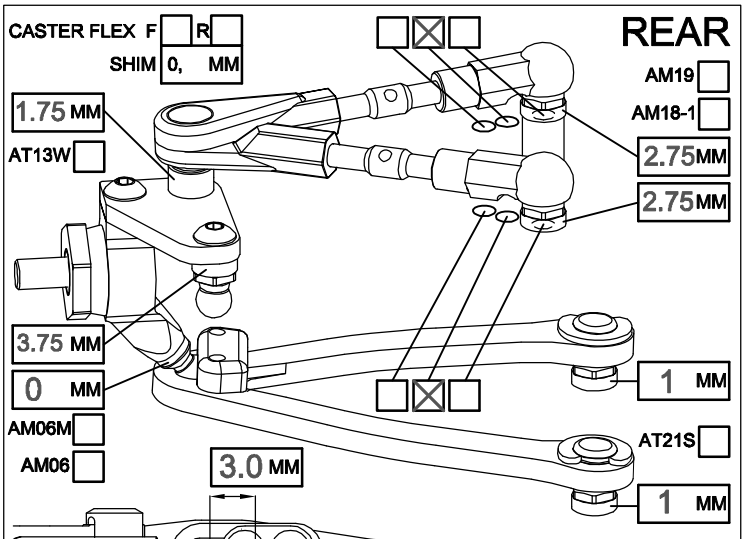
ROTOR	STD ☒	☐
SPRING	STD ☒	S ☐
DAMPER	D2.1 ☒	☐
ACTION	SYM. ☒	ASYM. ☐
SRS/RHS ARR.	I ☒	II ☐

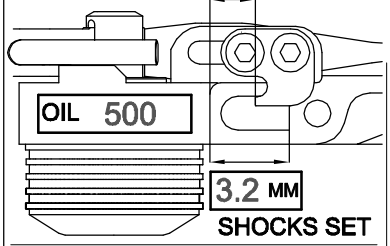
FRONT DRIVE BALL DIFF ☐ GD3 ☐ SPOOL ☒ GD2 ☐

DIFF OIL | DIFF WASHERS

DOGBONE DRIVE ST17-1 ☐ ST11 ☒ ST12 ☐ BB ☐ ST02 ☐

REAR





CAMBER ANGLE / °	2.0
CASTER ANGLE / °	-4.0 short
TOE ANGLE / °	2.5
RIDE HEIGHT / MM	5.4
DOWNSTOP / MM	4.8
UPSTOP / MM	15
STABILIZER Ø / MM	1.1
LOW ARM C04M ☒	☐
STEERING ARM STD ☒	☐
WHEEL SPACER / MM	0

SHOCKS SET

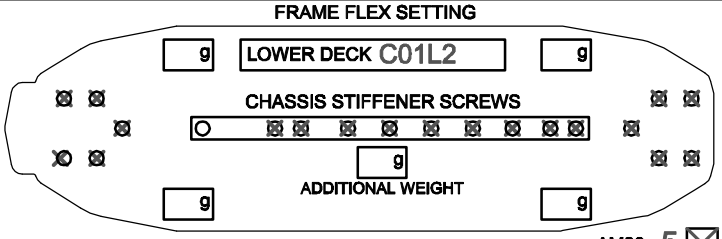
ROTOR	STD ☒	☐
SPRING	STD ☒	S ☐
DAMPER	D2.1 ☒	☐
ACTION	SYM. ☒	ASYM. ☐
SRS/RHS ARR.	I ☒	II ☐

REAR DRIVE BALL DIFF ☐ GD3R ☐ GD2 ☒

DIFF OIL 7000 | DIFF WASHERS standard WA03

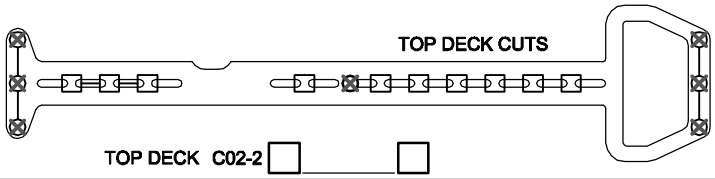
DOGBONE DRIVE ST11 ☒ ST12 ☐ BB ☐ ST17-1 ☐ EVD ☐

FRAME FLEX SETTING



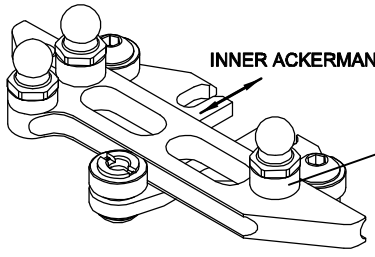
AM30- 5 ☒

AM33- ☐



TOP DECK C02-2 ☐

STEERING POST



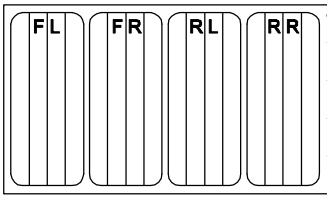
INNER ACKERMANN REARWARD ☐ FORWARD ☒

0 MM

SERVO OFFSET ☒

SERVO CENTERED ☐

AWESOMATIX SERVO ☒



TIRES	FRONT	REAR
BRAND		
INSERTS		
WHEELS		
ADDITIVE		

MOTOR MOUNT MODE	3		MOTOR
BAT. LAYOUT AM69 ☒	F1 ☒	F2 ☐	SERVO Awesomatix AS700L
SD1 ☐ SD2 ☐ SD3 ☐	DRIVE RATIO		ESC
SPUR	PINION		BATTERY
BODY			RECEIVER
WING			MOTOR OFFSET / MM

BEST LAPTIME	QUALIF. / FINAL POSITION /
ESC SETTING	
COMMENTS / IMPRESSIONS	
CONTACT	

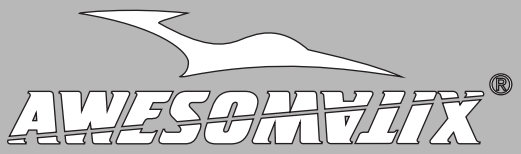
Standard Spare Parts

Parts#	Description
AM01-1	Gear Box
AM05-2	Rear Holder
AM06S	Steering Block
AM08-1	Shocks Holder
AM09	Steering Rod
AM10-2	Steering Plate
AM11-2	Tower
AM14-1	Steering Arm
AM15-2	Battery Nut
AM17L	Damper Holder Left
AM17R	Damper Holder Right
AM19-2	Upper Arm Holder
AM23-1	Rear Steering Arm
AM24	Central Servo Holder
AM30-5	Chassis Stiffener
AM69	MM2 Battery Support
AM70	MM2 Motor Locator
AM73-1	MM2 Lower Plate
AM73-3	MM2 Middle Plate
AM73-4	MM2 Bearing Housing
AT03M	Spool Axle
AT04-2	Main Shaft
AT06	Antenna Holder
AT12	Spur Nut
AT13	Wheel Hex
AT14	Turnbuckle
AT15	Bearing Spacer
AT20	Spur Axle
AT21	Pivot Ball
AT123	GD2 Case1
AT124	GD2 Case2
DT02	Bearing Housing
DT03	Motor Mount Collar
ST01	Front Axle
ST02	Rear Axle
ST03	Ball Stud
ST05L	Shock Rod Long
ST08	Steering Nut
ST09	Upper Collar
ST10	2mm Pin
ST11	Bushing R
ST13	Front Universal Bone
ST14	Rear Universal Bone
ST16	U-Joint Cross
ST17	Universal Ring
ST21S	Servo Rod Short
ST23	GD Outdrive
ST24	Ball Stud 6mm
ST24M	Ball Stud 8mm
ST31	GD2 Output Axle
ST37	ST37 Spool Outdrive
P01	Ball Joint1
P02	Ball Joint2
P03	Arm Ball Cap
P04	Arm Hasp
P05	Sway Bar Joint
P06-1	Downstop Collar
P07	Arm Clip
P09	Shock Screw Holder
P10	Diff Cover
P11	Gear Tube
P12	Sway Bar Holder
P13-4	Ball Ends Set

Parts#	Description
P14	Bumper Set
P15	Foam Bumper
P16	Lock Ring
P20	Front Universals Ring
P23	Outer Battery Holder
P25	Battery Clamp
P39	GD2 Cross Pin
DG1	Damper Gauge
C01L2	Lower Deck L2
C02-2	Top Deck
C04M	Suspension Arm
SWB10	Sway Bar 1.0mm
SWB11	Sway Bar 1.1mm
SWB12	Sway Bar 1.2mm
SWB13	Sway Bar 1.3mm
D2.1	Damper
SPR01	Shock Spring
SPR02	Shock Rod Guide
SPR03	Shock Pointer
SPR05	Body Clip
SPR06	Wire Ring
SPR07	E-Ring
G03	25T Bevel Gear
G07	GD2 Satellite Gear
G08	GD2 Bevel Gear
B106RS	MR106RS Bearing
B85	MR85 Bearing
B84RS	MR84RS Bearing
PIN01	1.5x7.8 Pin
PIN02	1.5x5.8 Pin
OR05M	GD O-Ring
OR06	5mm O-Ring
OR13	13mm O-Ring
OR152	2x1.5mm O-Ring
SH0.1	6x8x0.1mm Shim
SH3x5x0.1	3x5x0.1mm Shim
SH5x7x0.1	5x7x0.1mm Shim
SH0.5	6x3x0.5mm Spacer (Silver)
SH1.0	6x3x1.0mm Spacer (Gray)
SH1.75	6x3x1.75mm Spacer (Black)
WA02	3.5x9.5x0.2 Washer
WA03	5x15.5x0.3 Washer
SRS	Spring Rating Screw
RHS-1	Ride Height Screw
SS3X3	M3x3 Set Screw
SS3X4	M3x4 Set Screw
SS3X4-1	M3x4 DIN915 Screw
SS3X5	M3x5 Set Screw
SS3X8	M3x8 Set Screw
SC2X4	M2x4 Cap Head Screw
SC2X6	M2x6 Cap Head Screw
SB25X8	M2.5x8 Button Head Screw
SB3X5	M3x5 Button Head Screw
SB3X6	M3x6 Button Head Screw
SB3X8	M3x8 Button Head Screw
SB3X10	M3x10 Button Head Screw
SF3X5	M3x5 Flat Head Screw
SF3X6	M3x6 Flat Head Screw
SF3X8	M3x8 Flat Head Screw
SF3X10	M3x10 Flat Head Screw
INS-L2	A700L2 Instruction Manual
STS	A700 Stickers Sheet

Optional Parts

D2.1-S	Damper Set
C01AL-S	Alloy Lower Deck S
C01L2H	Lower Deck L2 Hard
C07	Carbon Bumper
C32	Carbon Main Shaft
AT13W	Wheel Hex Wide
AT21S	Pivot Ball Short
AT22	Rear Body Holder
AM06M	Steering Block
AM12-1	Alloy Battery Holder
AM18-1	Front Holder
AM19	Upper Arm Holder
AM26	Rear Ball Holder
AM30-5	Chassis Stiffener
ST24L	Ball Stud 10mm
P15H	Foam Bumper Hard
P40F	Servo Arm (Futaba)
P40K	Servo Arm (KO)
FCB	Flexible Caster Block Set
P36	FCB Body
P38	FCB Link
OR08	FCB O-Ring
AM28	Alloy FCB Link
ST33	FCB Screw
AT33	FCB Hex Shim
SB25X5	M2.5x5mm Button Head Screw
SD1	Spur Damper Set
AT12M	SD1 Spur Nut
AT20M	SD1 Spur Axle
SH2.7R	5x2x2.7mm Rubber Collar
SD2	Rear Drive Damper Set
AT20-5	SD2 Spur Axle
ST47	SD2 Drive Tube
ST50	SD2 Torsion
SD3	Transmission Damper Set
SPR01S	Shock Spring Soft
ST17-1-S	Universal Ring Set
ST17-1	Universal Ring
ST38	Universal Nut
BC1	Battery Clamps Set
AT26	BC1 Alloy Battery Post
P21S	BC1 Battery Pad
BD1	Ball Diff Set
OW1	One-Way Axle set
IAS	Increased Ackermann Set
AM20	IAS Steering Rod
AM21	IAS Steering Plate
AM22	IAS Steering Arm
UB1	Universals Bearings Set
B415	4x1.5mm ball bearing
ST10	1.5/2mm Pin
GD3	Diff Set
AS-700L	Brushless Low-Profile Servo
AS-700L-GS	Gear Set for AS700L Servo



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