

MSX1

4WD 1/10 ELECTRIC BUGGY

Rev.2601



●Items required for operation

- 2-ch radio system (Transmitter, receiver and servo)
- Transmitter batteries
- Motor
- ESC (Electronic Speed Controller)
- RC car batteries
- Battery charger
- Body painting supplies
- Tires, wheels and inner foam

●Tools required

- Hex wrenches (1.5mm/2.0mm/2.5mm)
- Box wrenches (5.0mm/5.5mm/7.0mm)
- Needle-nose pliers
- Wire cutters
- Hobby knife
- Scissors
- Vernier calipers
- Soldering iron and solder
- Instant adhesive (cyanoacrylate)

●Neutral setting of transmitter

*Read the instruction manuals supplied with the transmitter and ESC before setup

1. Turn on the transmitter.
2. Set the transmitter trims to the neutral position.
3. Set the throttle on the transmitter according to the ESC instruction manual.
4. Turn on the ESC according to its instruction manual and set it to the default settings.
5. Check that the servo moves properly in response to the transmitter controls.
6. Turn off the ESC.
7. Turn off the transmitter.



SiG2x4



SJG2x6



SK3x3



A2601 (3x6x2.5)



SiG2.5x6



SJG2.5x8



SK3x5



C0602 (5x8x2.5)



SiG3x6



SJG3x6



SK3x10



E0602 (5x10x4)



SiG3x8



SJG3x8



SK3x18



B2905 (5x13x4)



SiG3x10



SJG3x10



OW2.6x6x0.5



SiG3x12



SJG3x12



OW3x7x0.5



H2602 (8x14x4)



SiG3x14



SJG3x14



DSW2.7x6x0.5



SiG3x16



SJG3x18



OW10x12x0.1



B2907 (10x15x4)



SiG3x22



SG3x10



OW10x12x0.2



SN2.6



SNF3



OW10x12x0.3



H2605 (12x18x4)



SN3



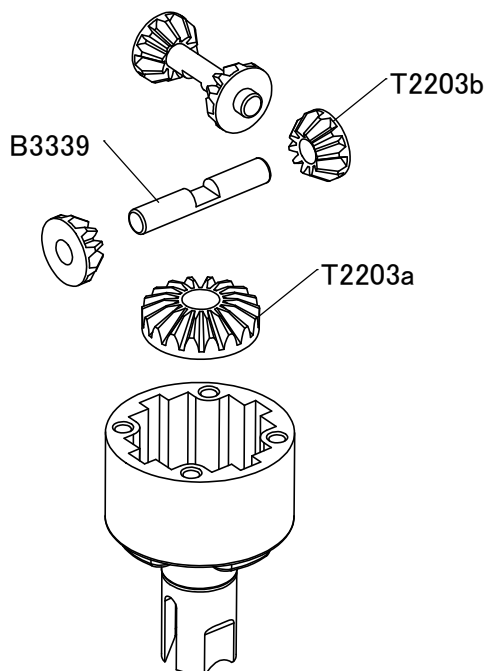
B3341



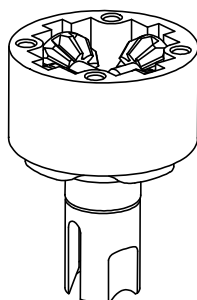
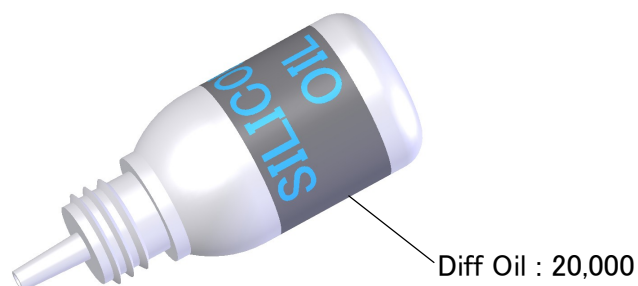
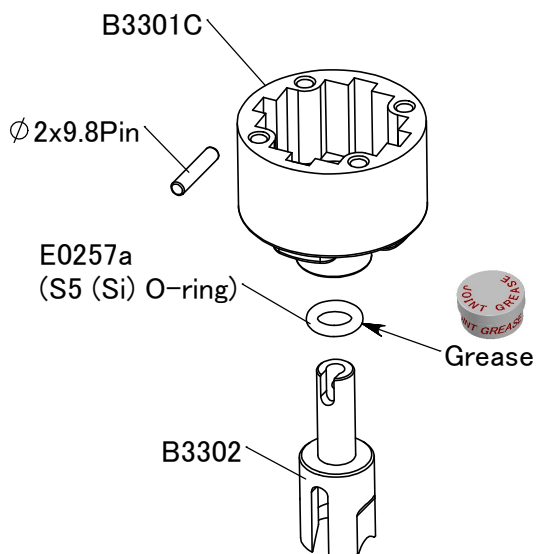
OW10x12x0.3



Soak the silicone **X-rings** in shock oil for 1 hour to ensure a proper fit.
Continue assembling the shock from **step 8-1**

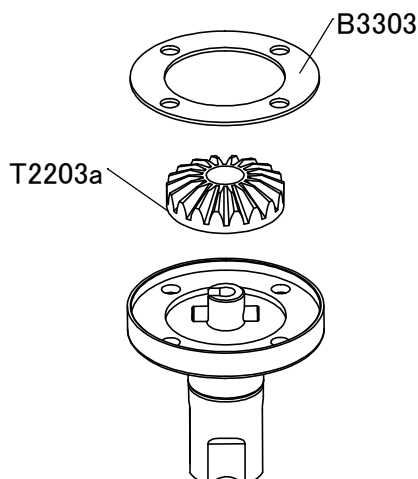
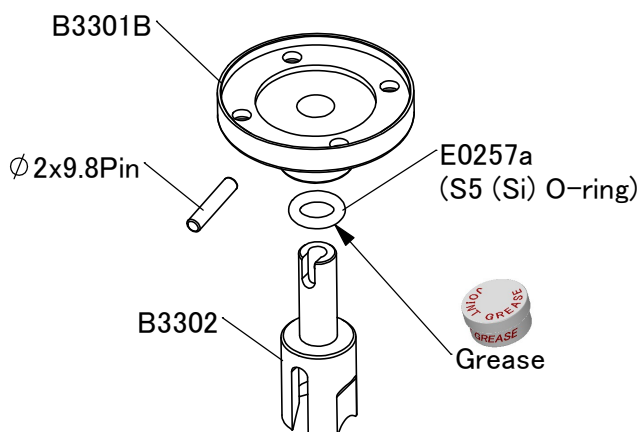


Front & Rear Diff assembly



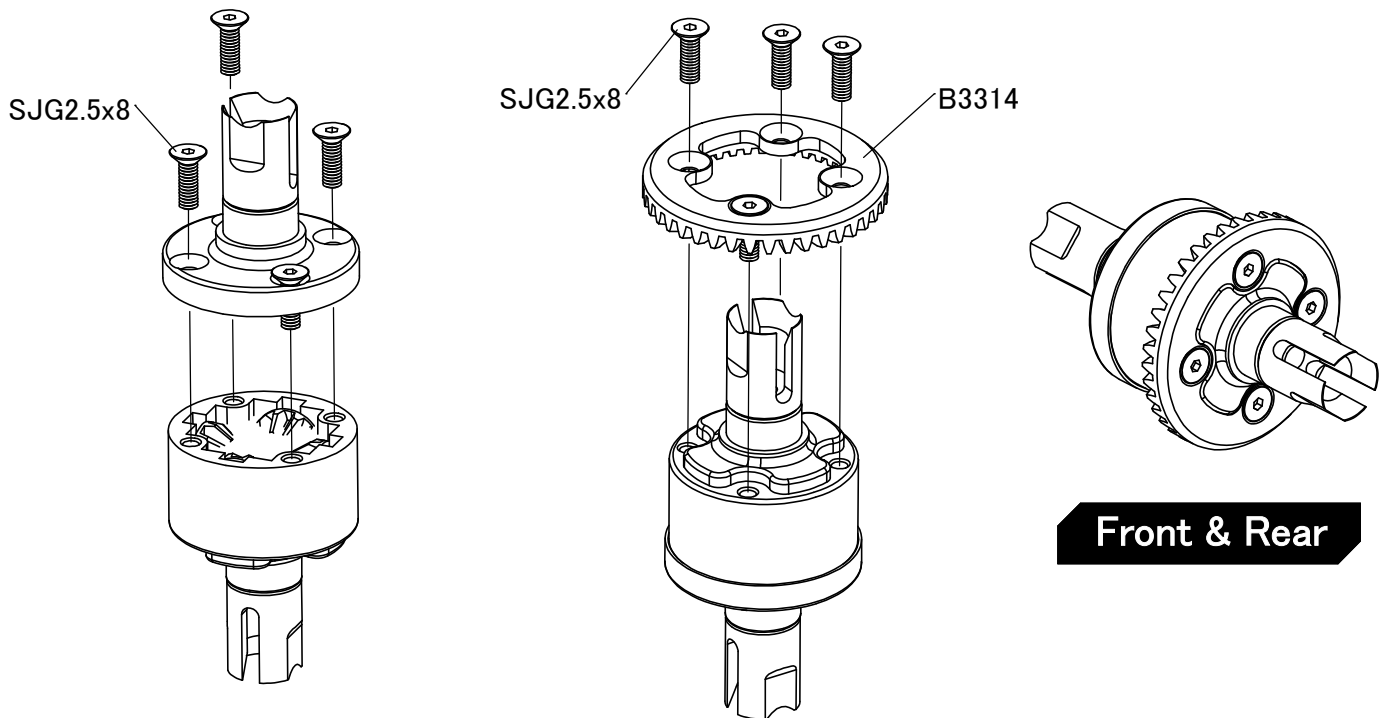
Fill the case with differential oil up to the level of the cross pin.
Alternatively, adjust the amount by weight (grams).

F/R : 22.4g

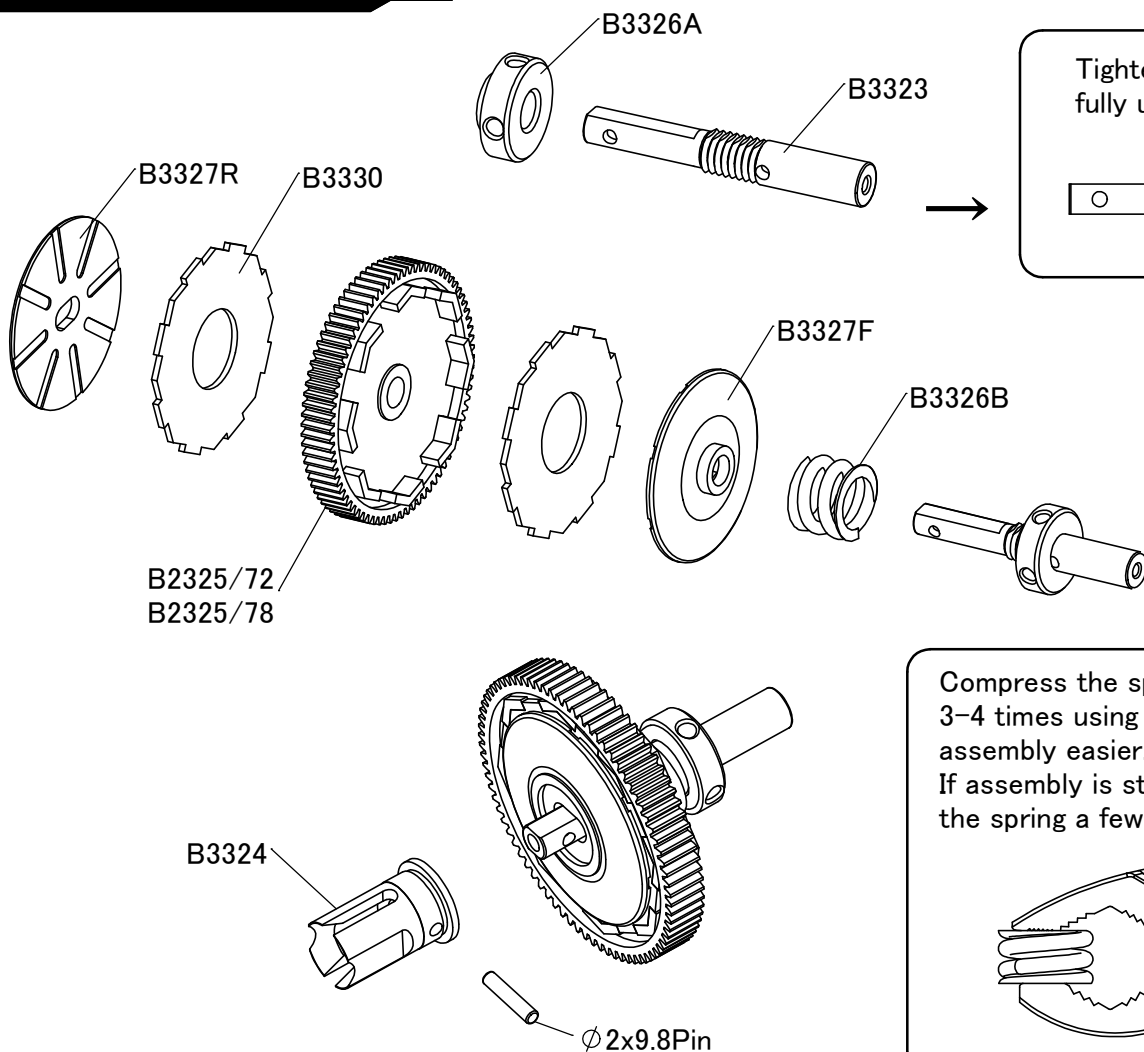


Step 1-2 / Bag A1

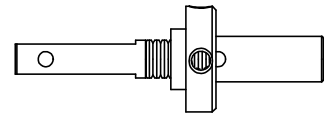
 SJG2.5x8 16pcs.



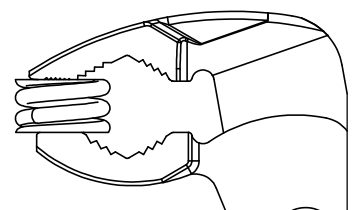
Step 1-3 / Bag A1, A2



Tighten the slipper nut fully until it stops.

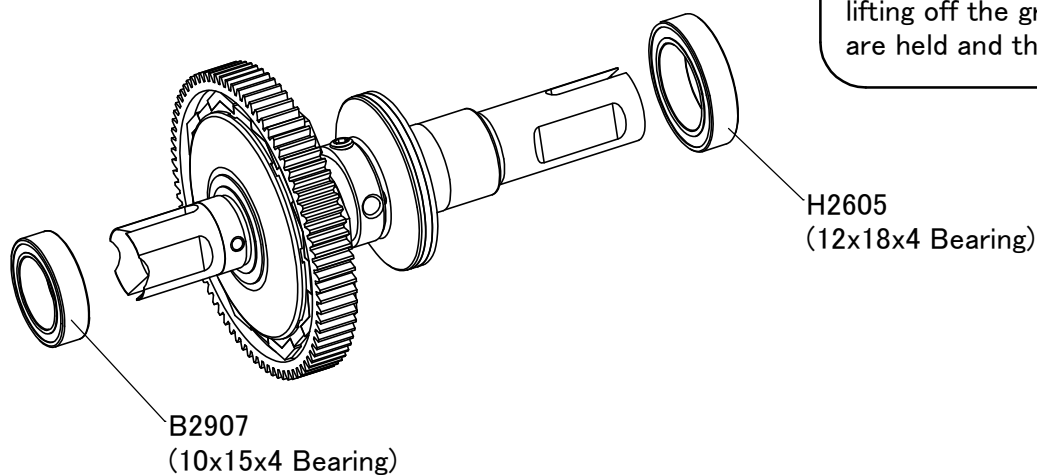
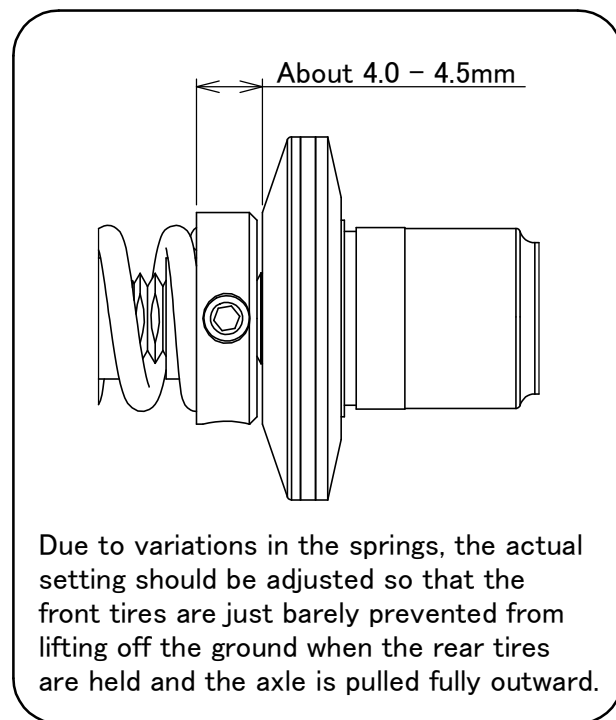
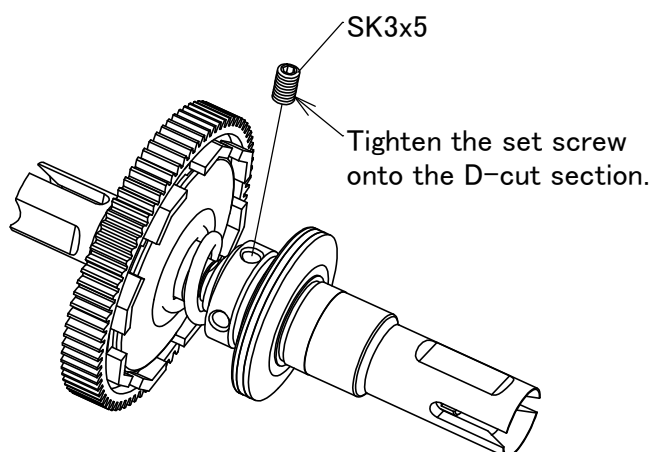
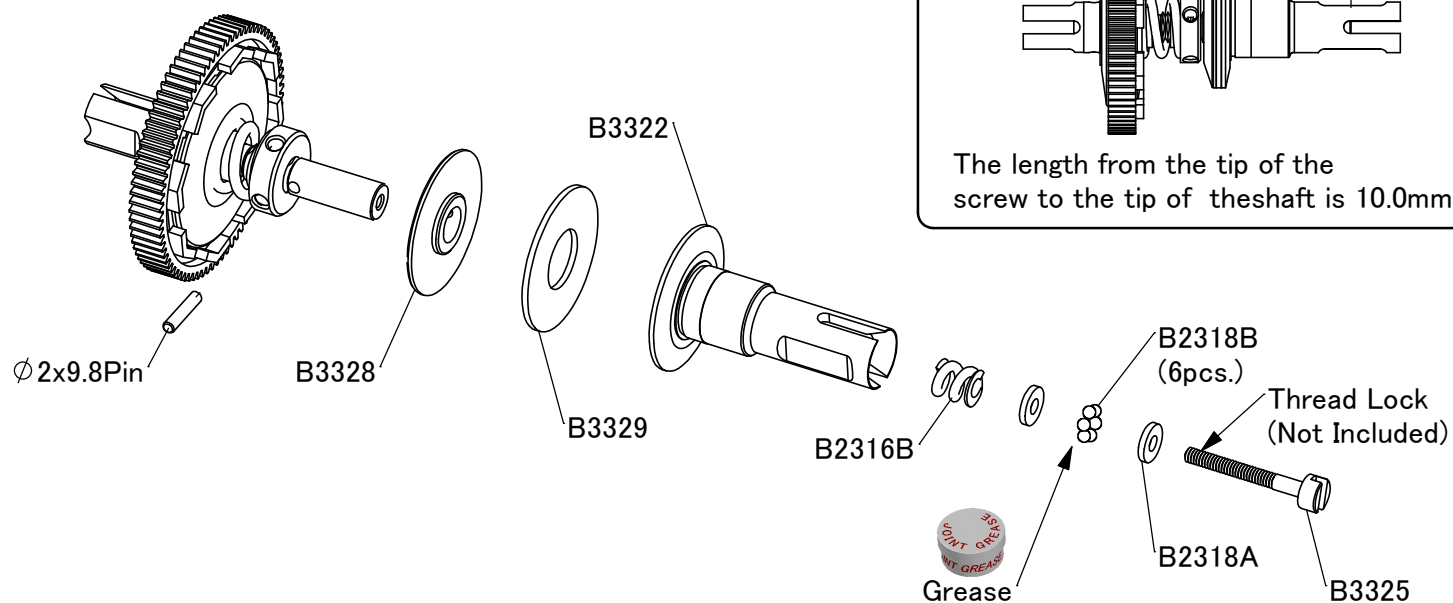


Compress the spring 3-4 times using pliers to make assembly easier.
If assembly is still difficult, compress the spring a few more times.



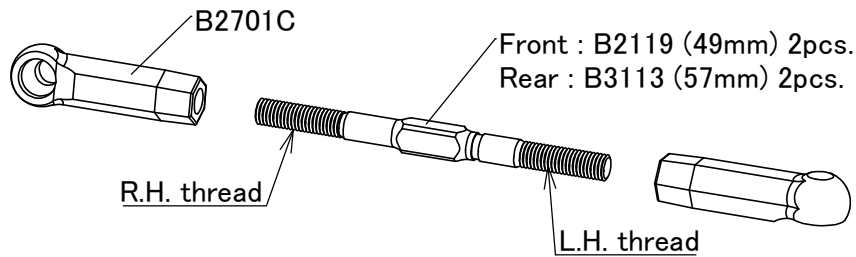
Step 1-4 / Bag A1, A2

SK3x5 1pc.



Step2-1 / Bag B1

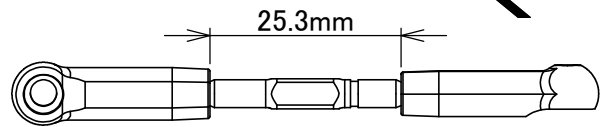
 SK3x10 4pcs.



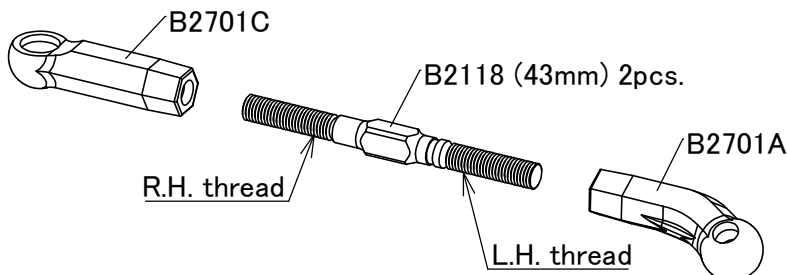
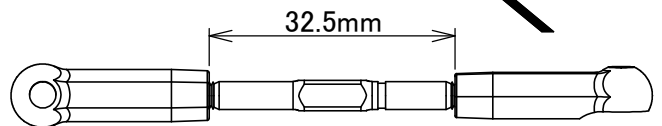
Front Left

Rear Left

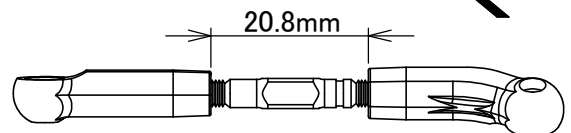
2x Front Link



2x Rear Link

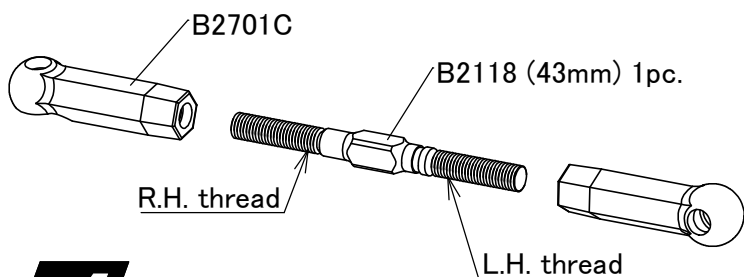
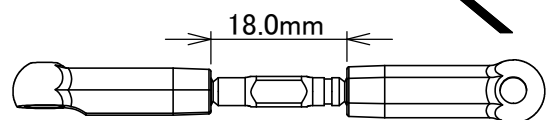


2x Steering Link



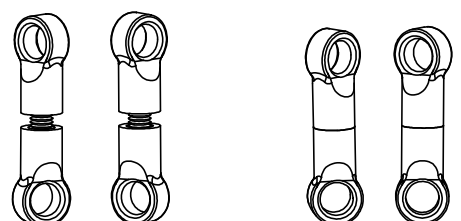
Left

Servo Link

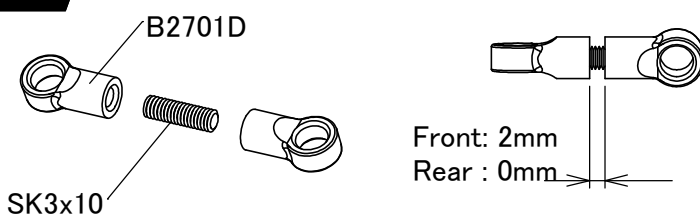


Anti-roll Bar Link

FL FR RL RR



x4

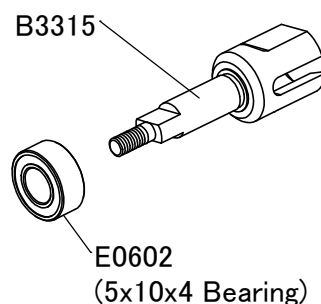
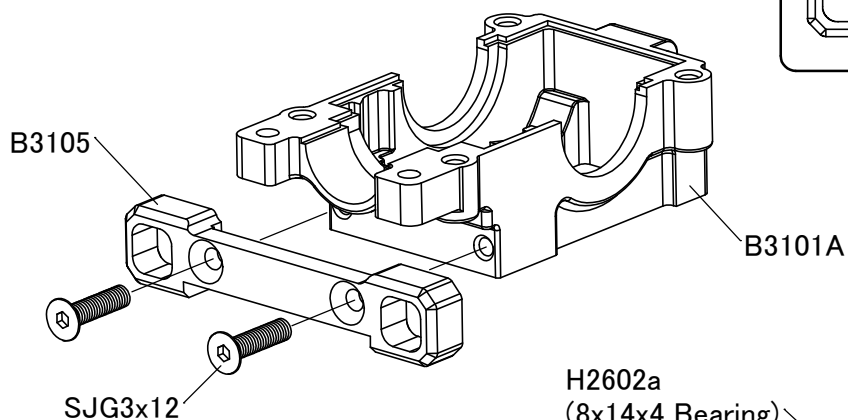
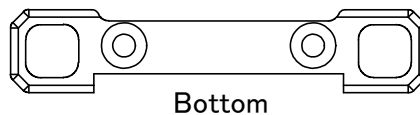


Step2-2 / Bag B1

 SJG3x12 2pcs.

 SN2.6 1pc.

Pay attention on the orientation



DSW2.7x6x0.5
(Serrated Cuntersunk Washer)

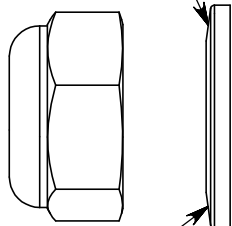
SN2.6

H2602a
(8x14x4 Bearing)

B3313

B3102C

Pay attention
to the orientation



Install the serrated side
facing the lock nut.

B2907 (10x15x4 Bearing)

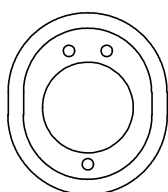
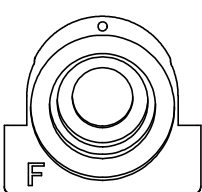
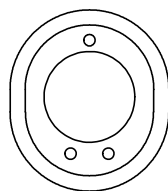
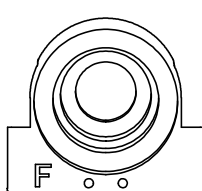
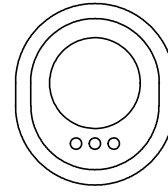
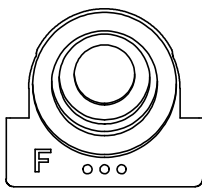
Sim10x12x0.2

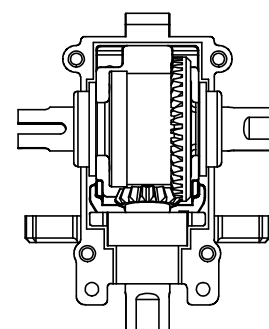
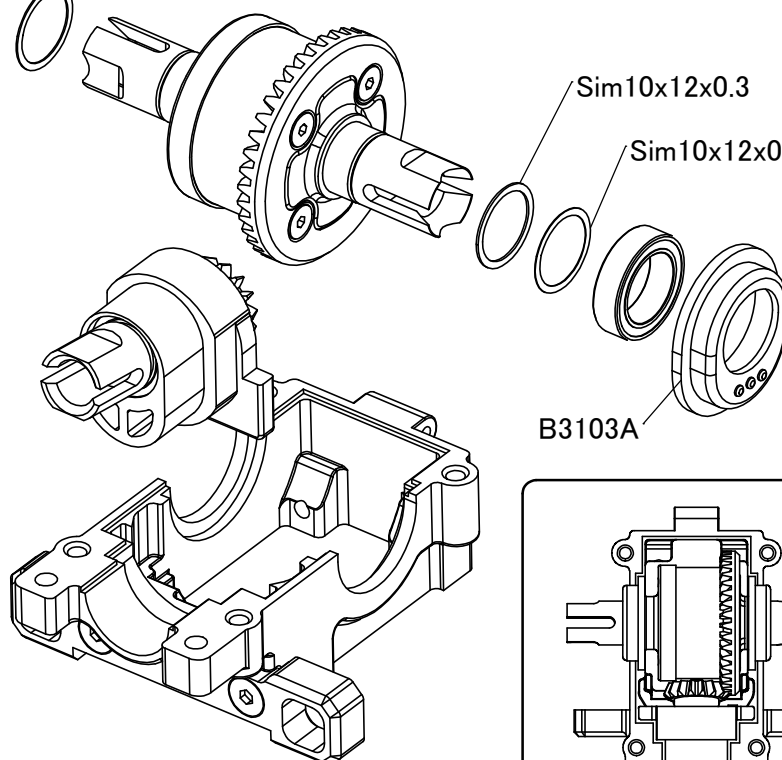
Sim10x12x0.3

Sim10x12x0.1

B3103A

Front Diff Height Table

1		
	B3103B	B3102A
2		
	B3103B	B3102B
3		
	B3103A	B3102C

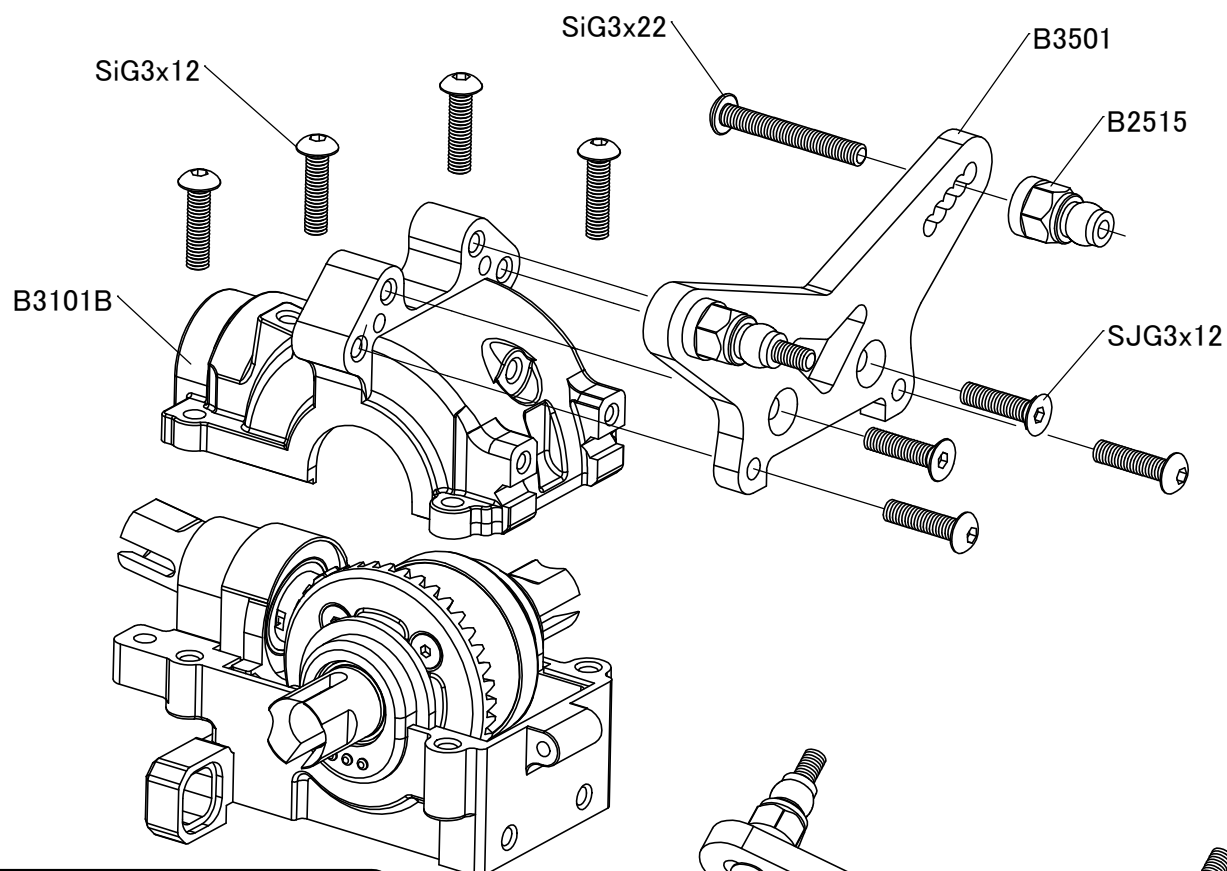


Note the direction of
the differential.

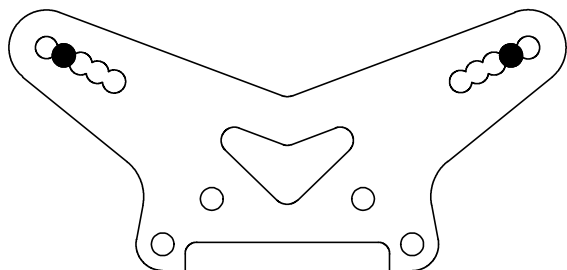
Step2-3 / Bag B1

SiG3x12 6pcs. SiG3x22 2pcs. SJG3x12 4pcs.

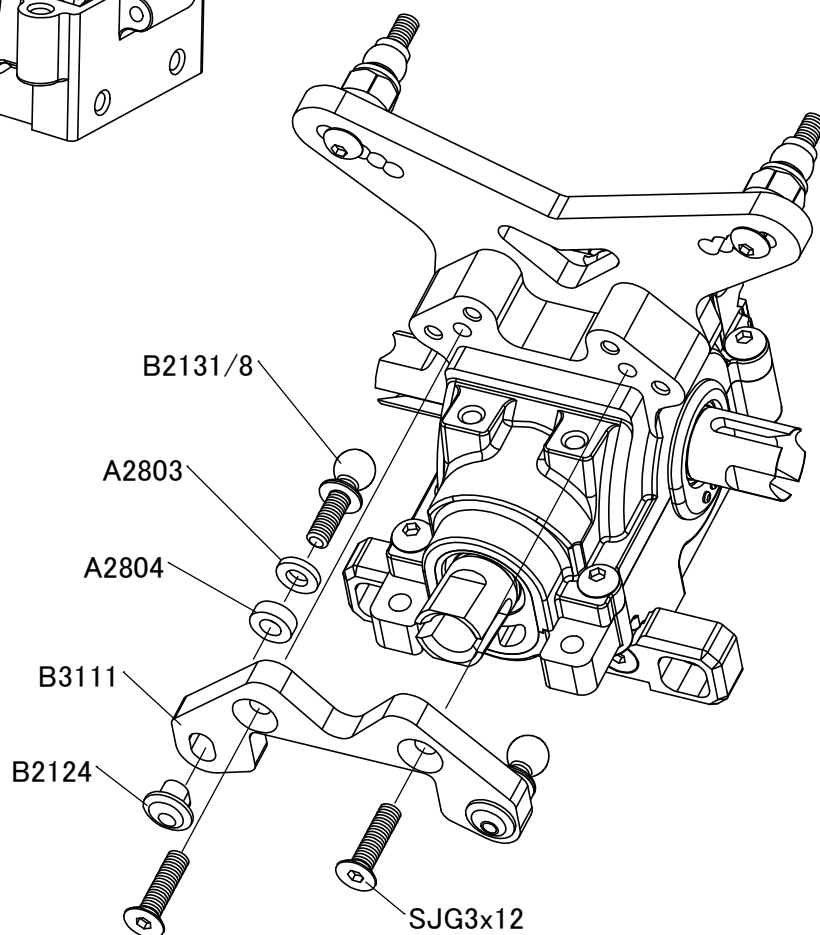
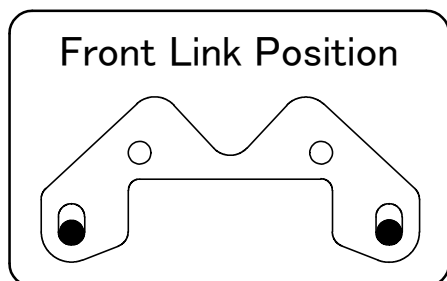
A2803(1mm) 2pcs. A2804(2mm) 2pcs.



Shock Position

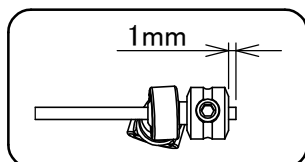
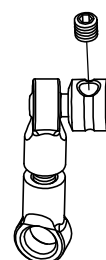
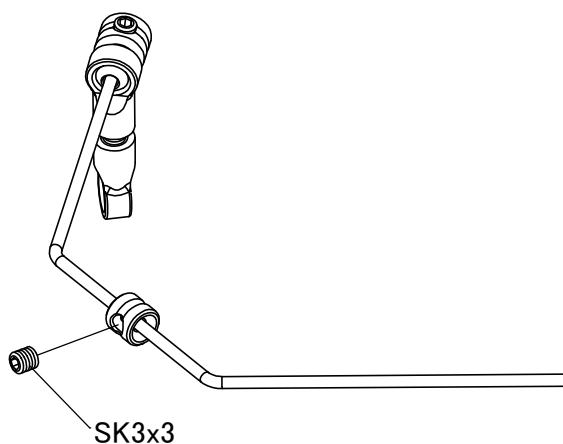
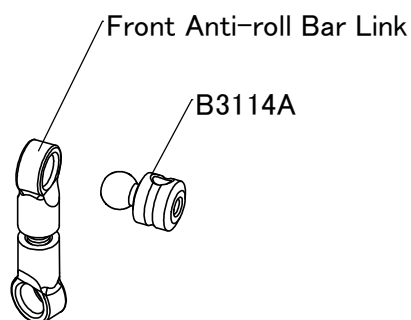
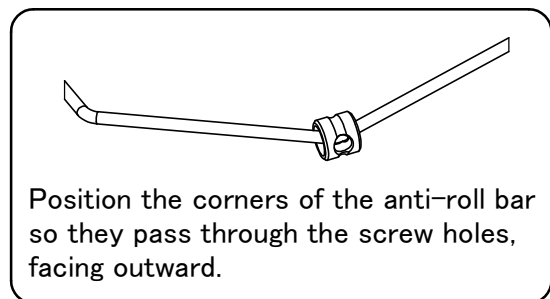
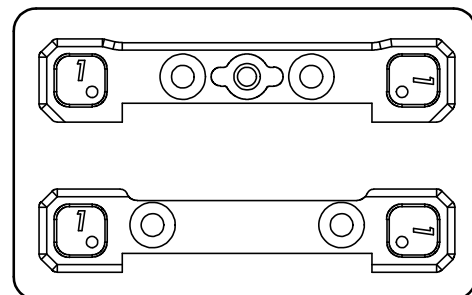
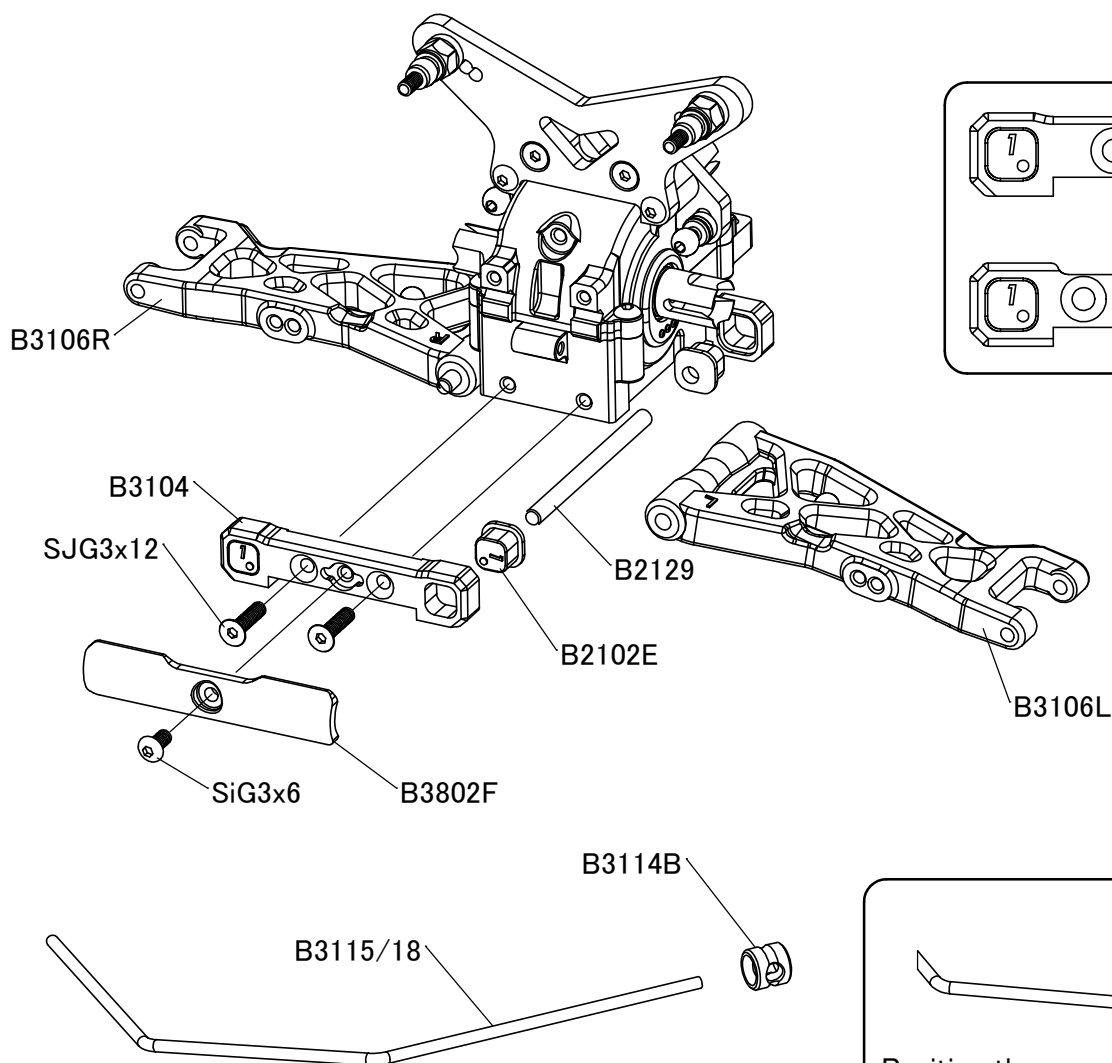


Front Link Position



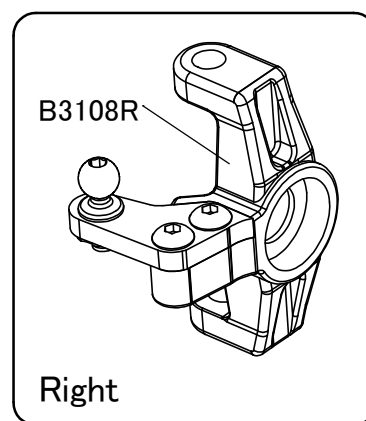
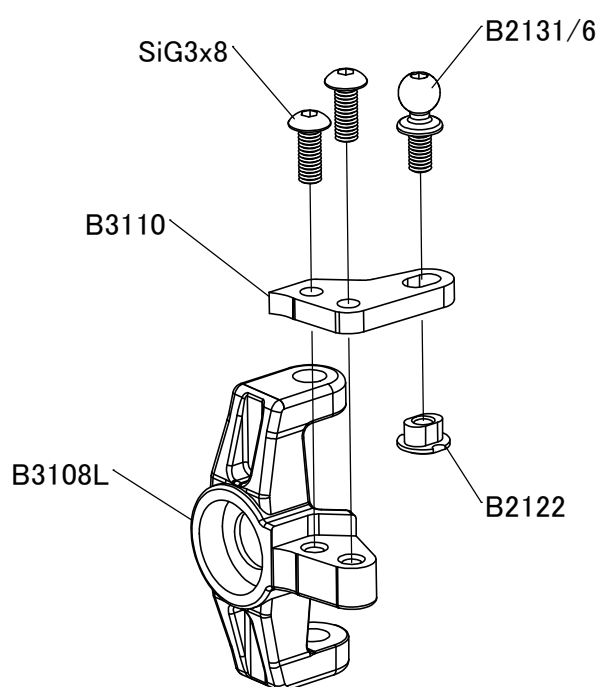
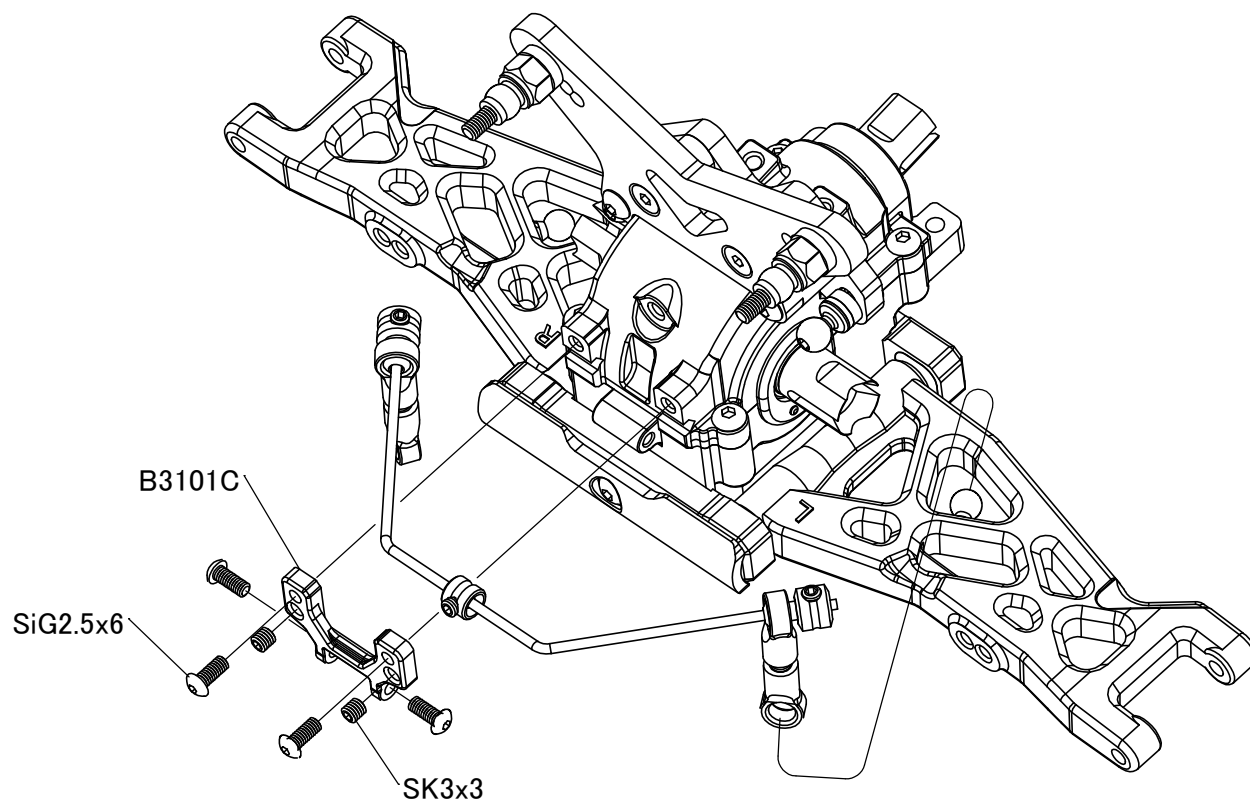
Step3-1 / Bag B1, C1

 SiG3x6 1pc.
  SJG3x12 2pcs.
  SK3x3 3pcs.



Step3-2 / Bag C1

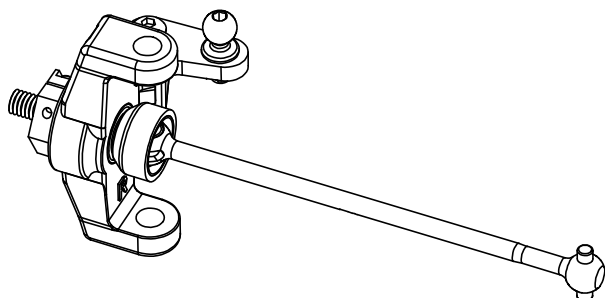
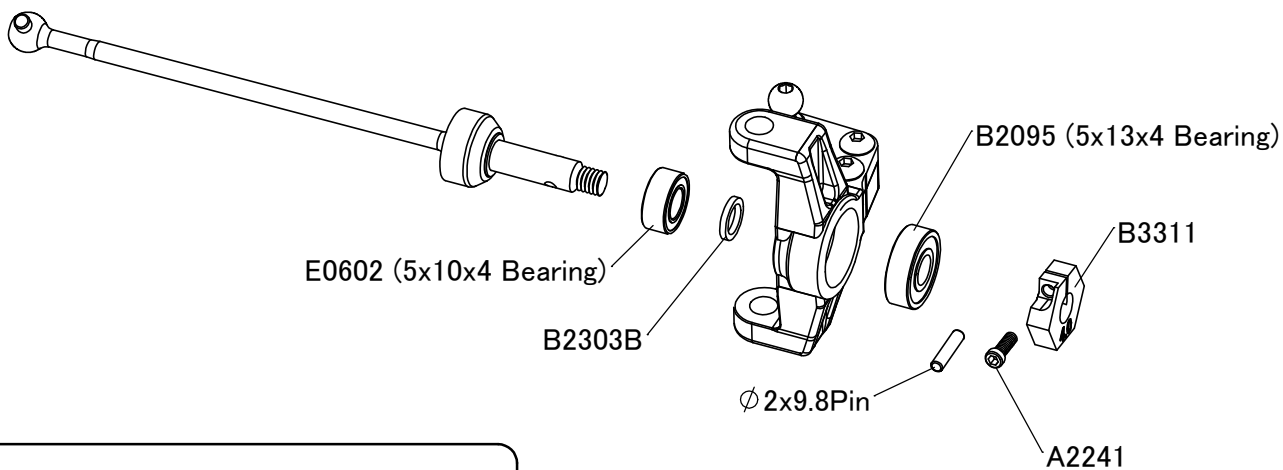
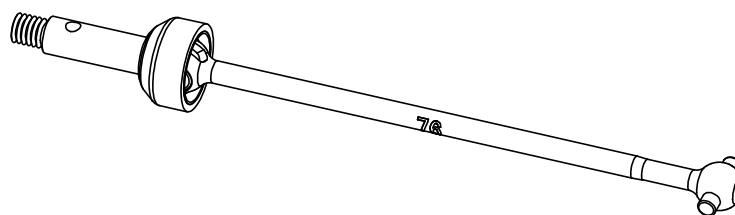
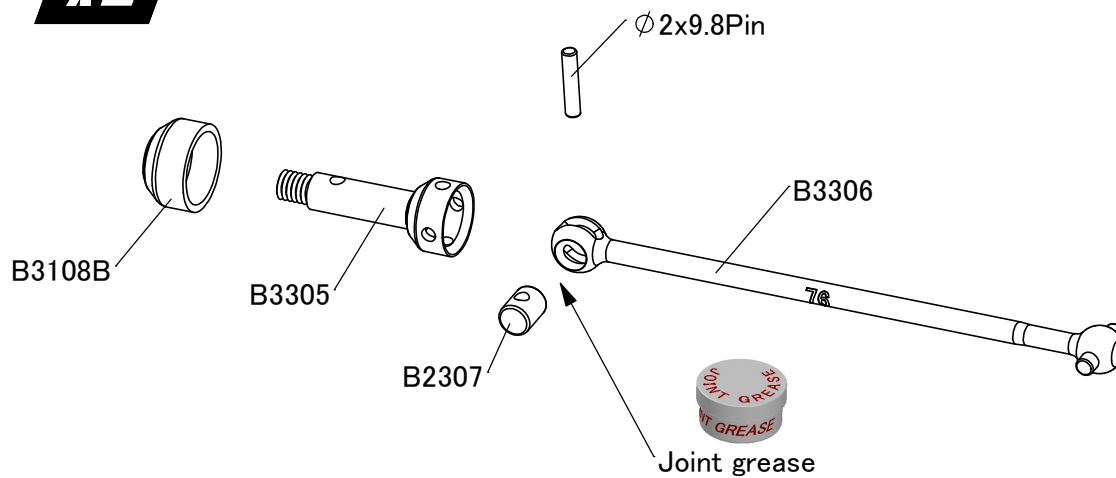
 SiG2.5x6 4pcs.
  SiG3x8 4pcs.
  SK3x3 2pcs.



Step3-3 / Bag C1

 A2241 2pcs.

x2



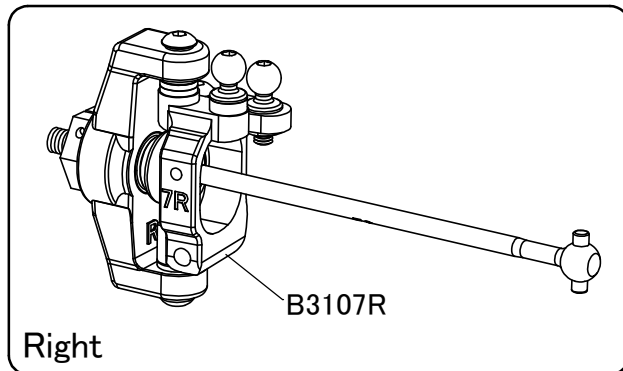
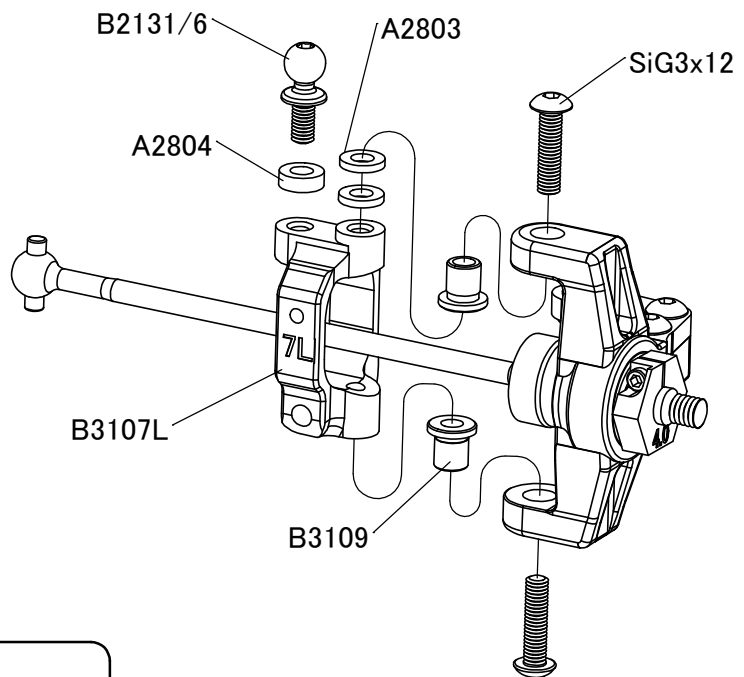
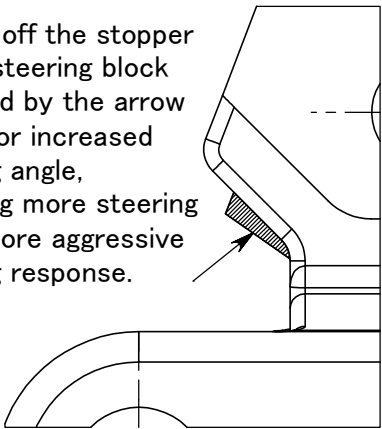
Right

Step3-4 / Bag B1, C1

 SiG3x12 4pcs.
  SN3 2pcs.
  A2803(1mm) 4pcs.
  A2804(2mm) 2pcs.

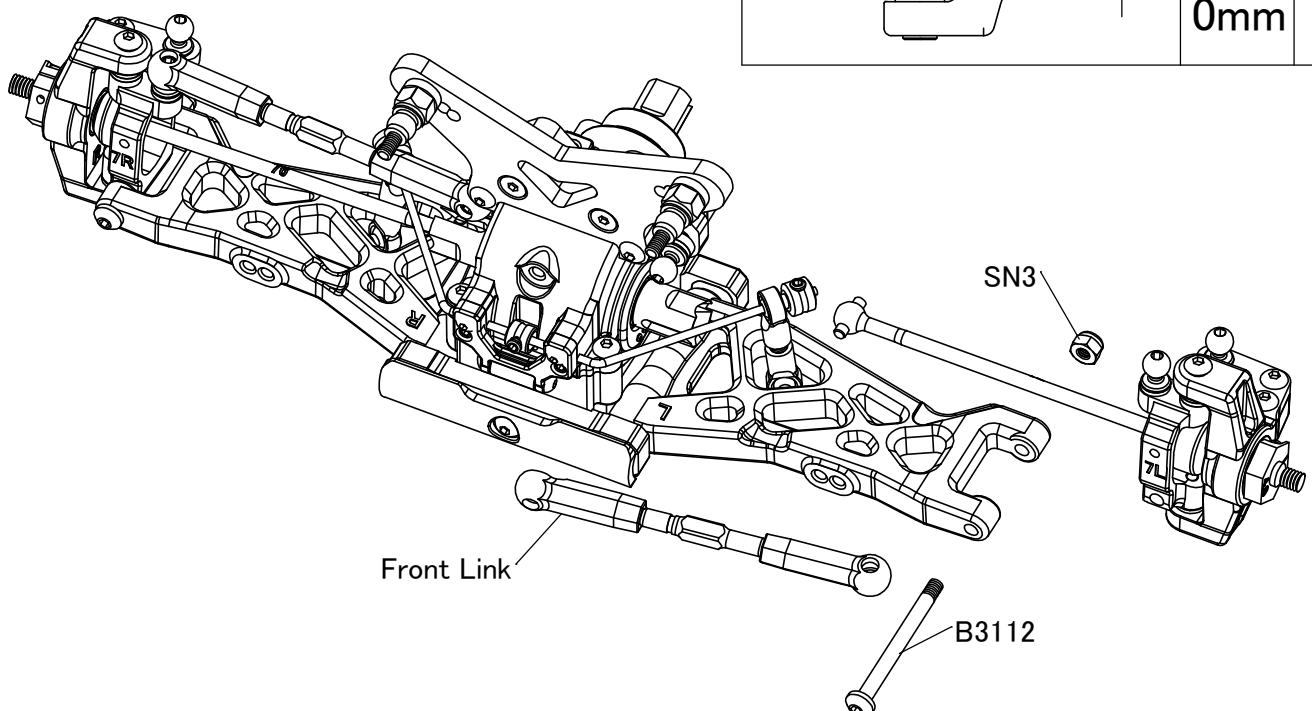
TIPS

Cutting off the stopper
 on the steering block
 indicated by the arrow
 allows for increased
 steering angle,
 providing more steering
 and a more aggressive
 steering response.



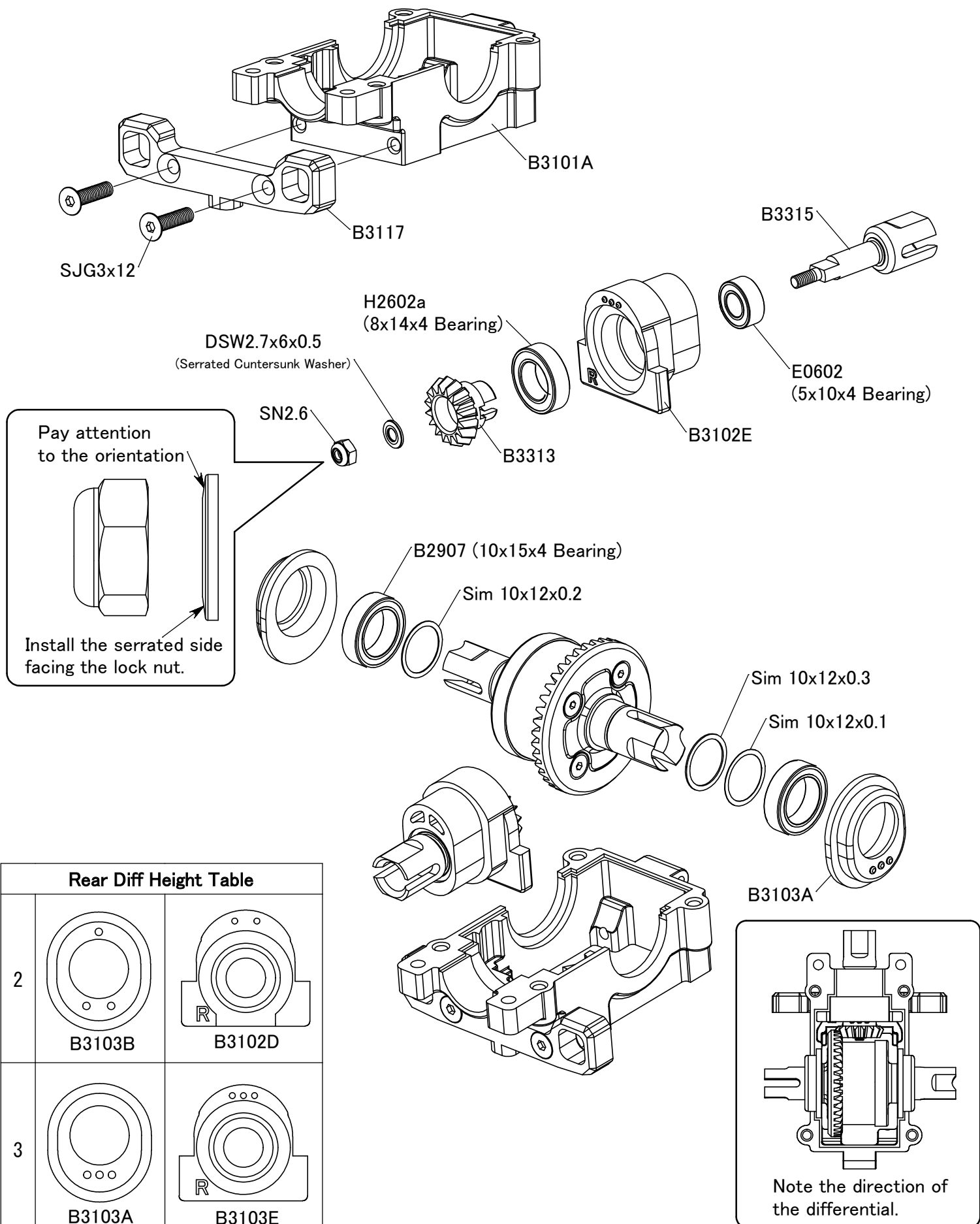
Front Axle Height

	A	B
	2mm	+2
	1mm	+1
	0mm	0

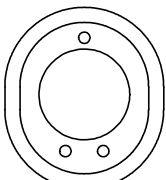
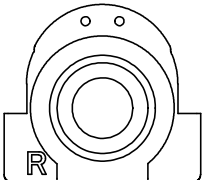
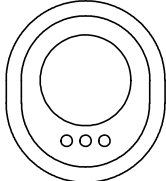
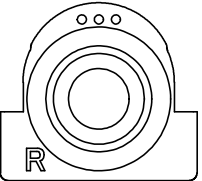


Step4-1 / Bag D1

 SJG3x12 2pcs.  SN2.6 1pc.



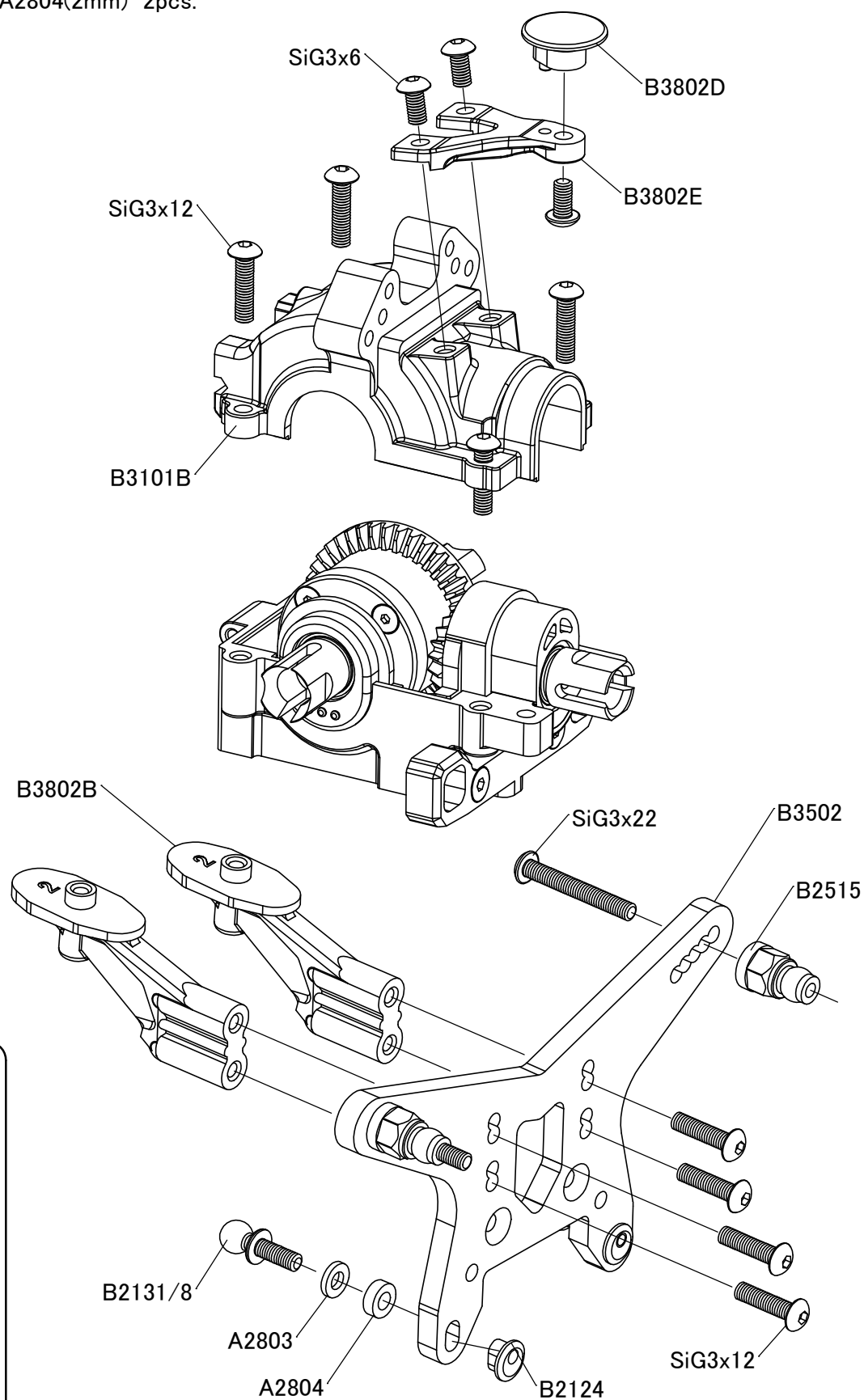
Rear Diff Height Table

2	 B3103B	 B3102D
3	 B3103A	 B3103E

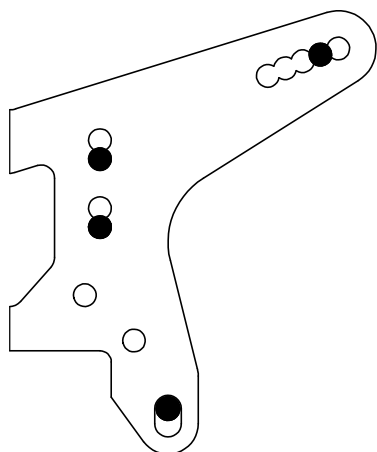
Step4-2 / Bag D1

SiG3x6 3pcs. SiG3x12 8pcs. SiG3x22 2pcs.

A2803(1mm) 2pcs. A2804(2mm) 2pcs.

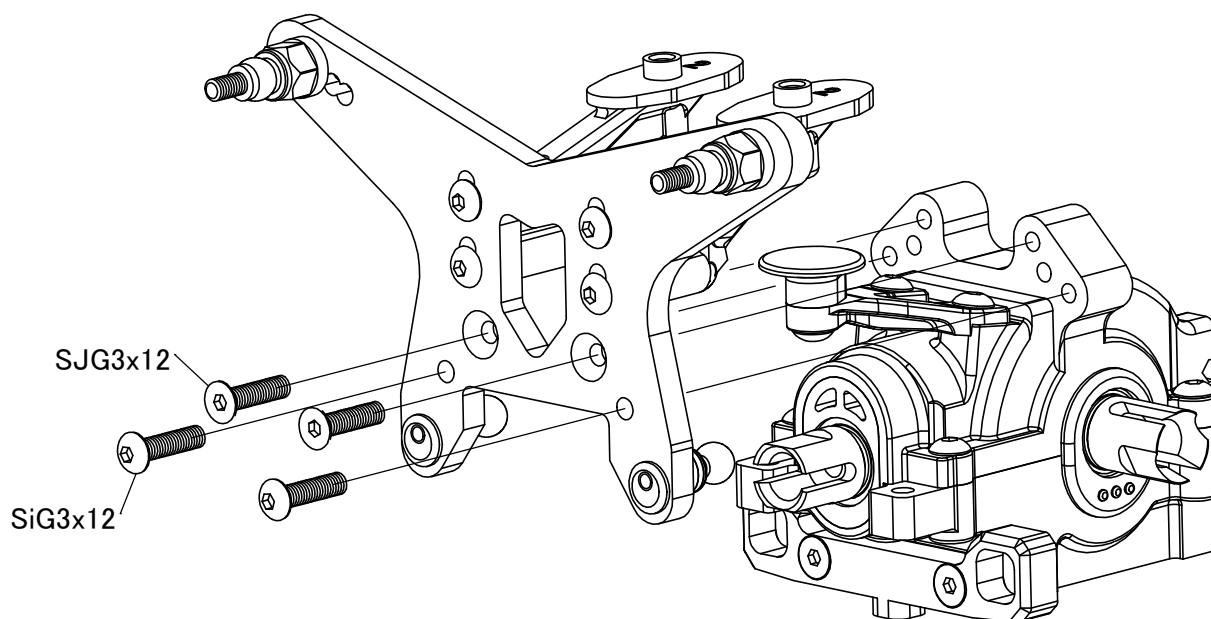


Shock, Wing and Link position



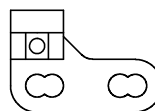
Step4-3 / Bag D1

 SiG3x12 2pcs.  SJG3x12 2pcs.

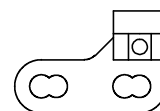


Step5-1 / Bag E1

 SiG3x10 4pcs.  SK3x18 2pcs.

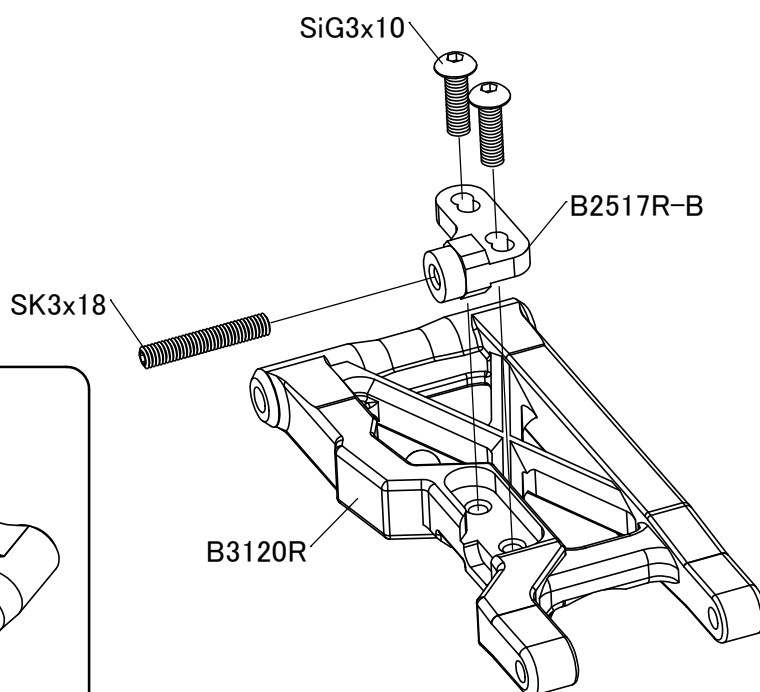
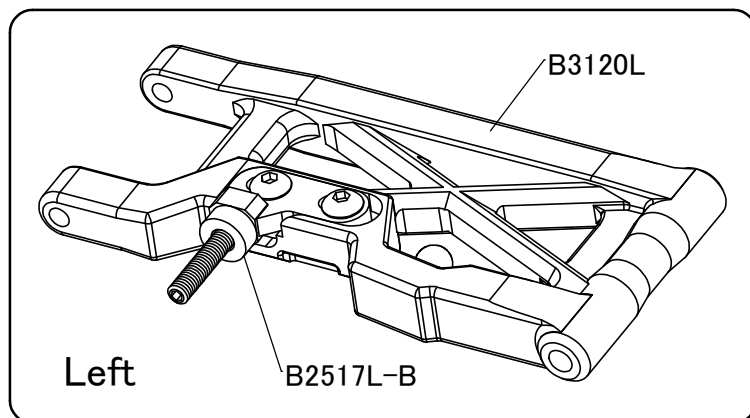
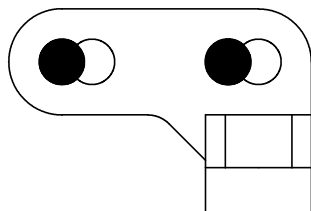


B2517L-B 1pc.



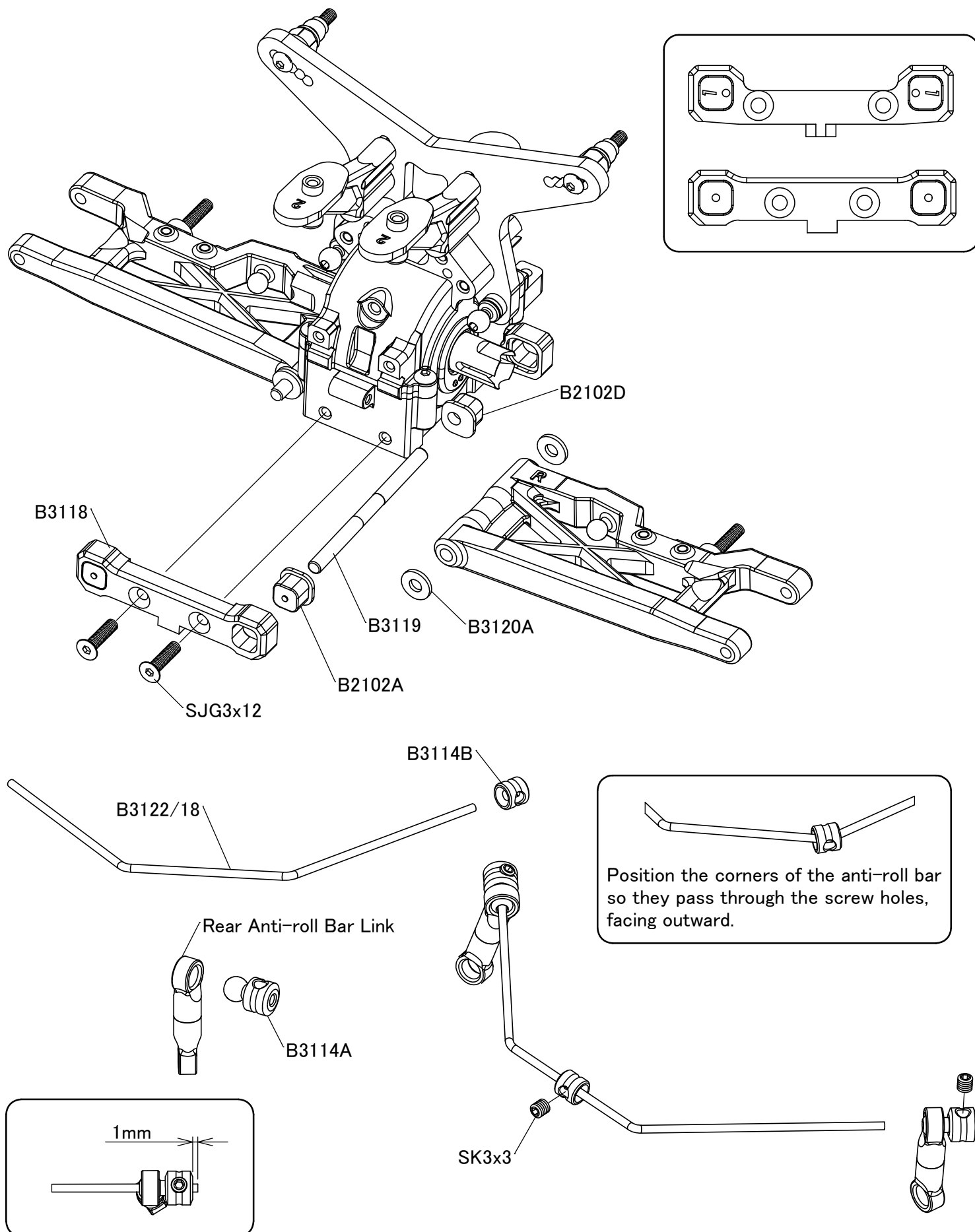
B2517R-B 1pc.

Shock Position



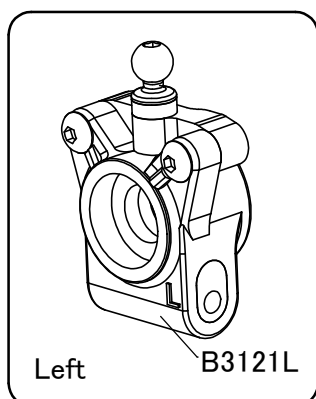
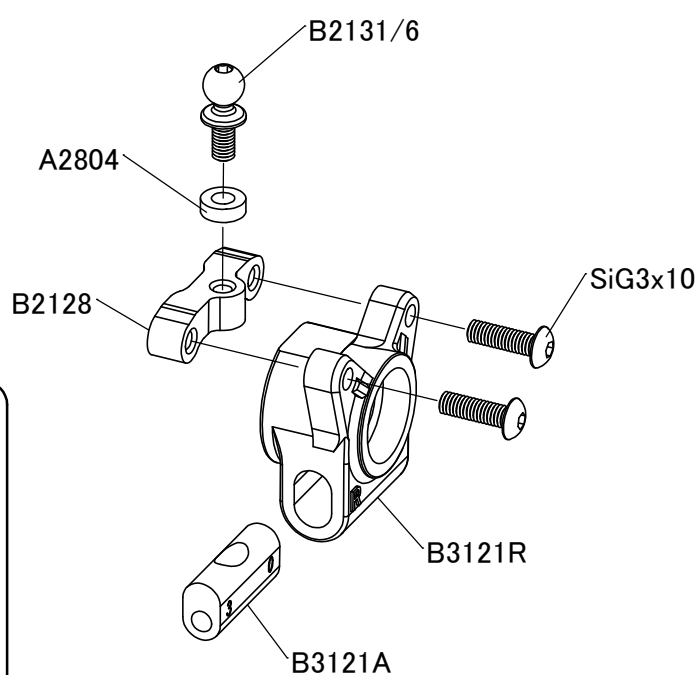
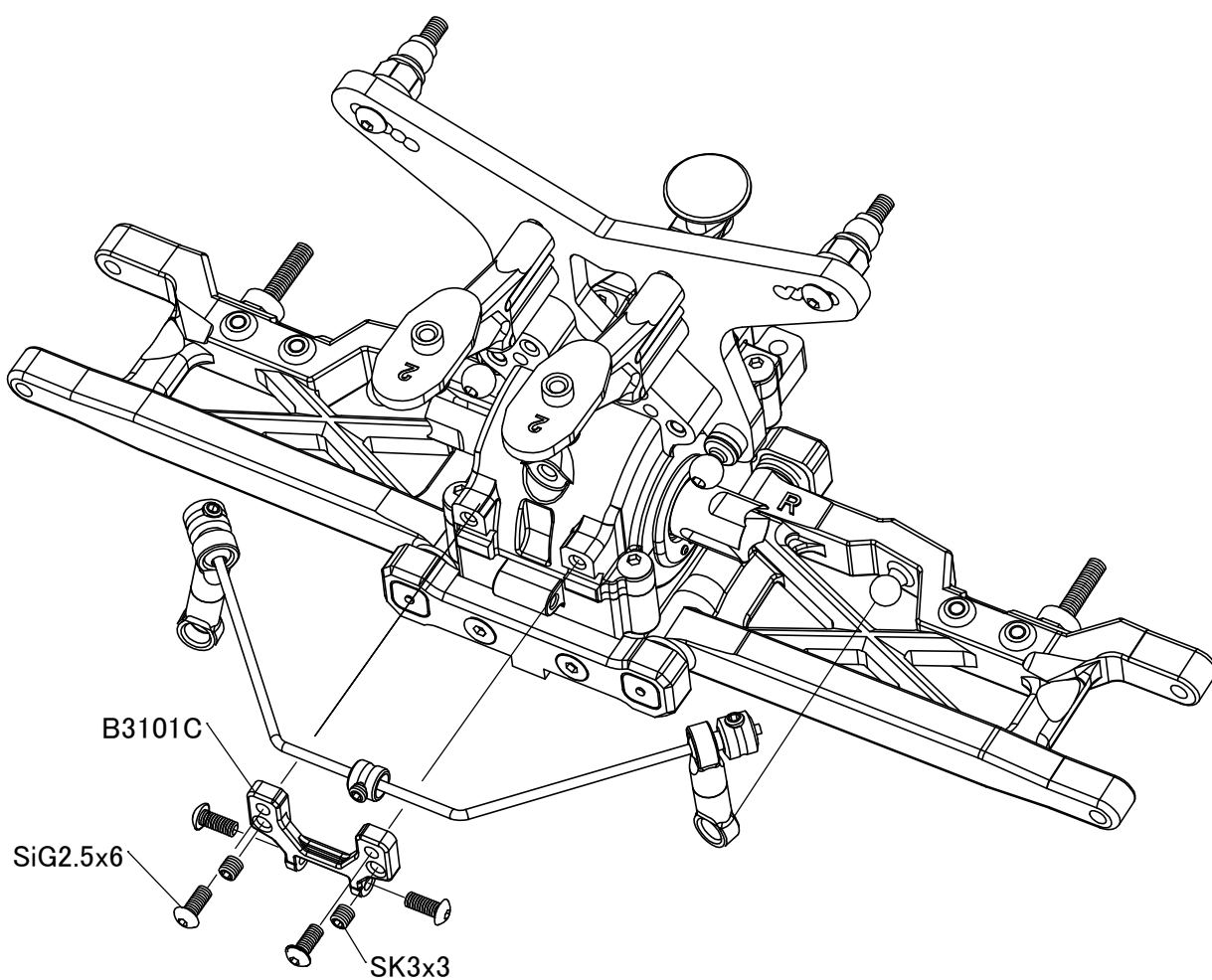
Step5-2 / Bag B1, E1

 SJG3x12 2pcs.  SK3x3 3pcs.

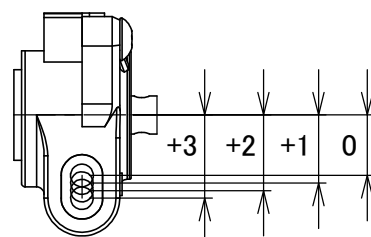


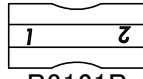
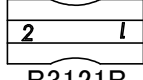
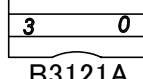
Step5-3 / Bag E1

 SiG2.5x6 4pcs.
  SiG3x10 4pcs.
  SK3x3 2pcs.
  A2804(2mm) 4pcs.



Rear Axle Height

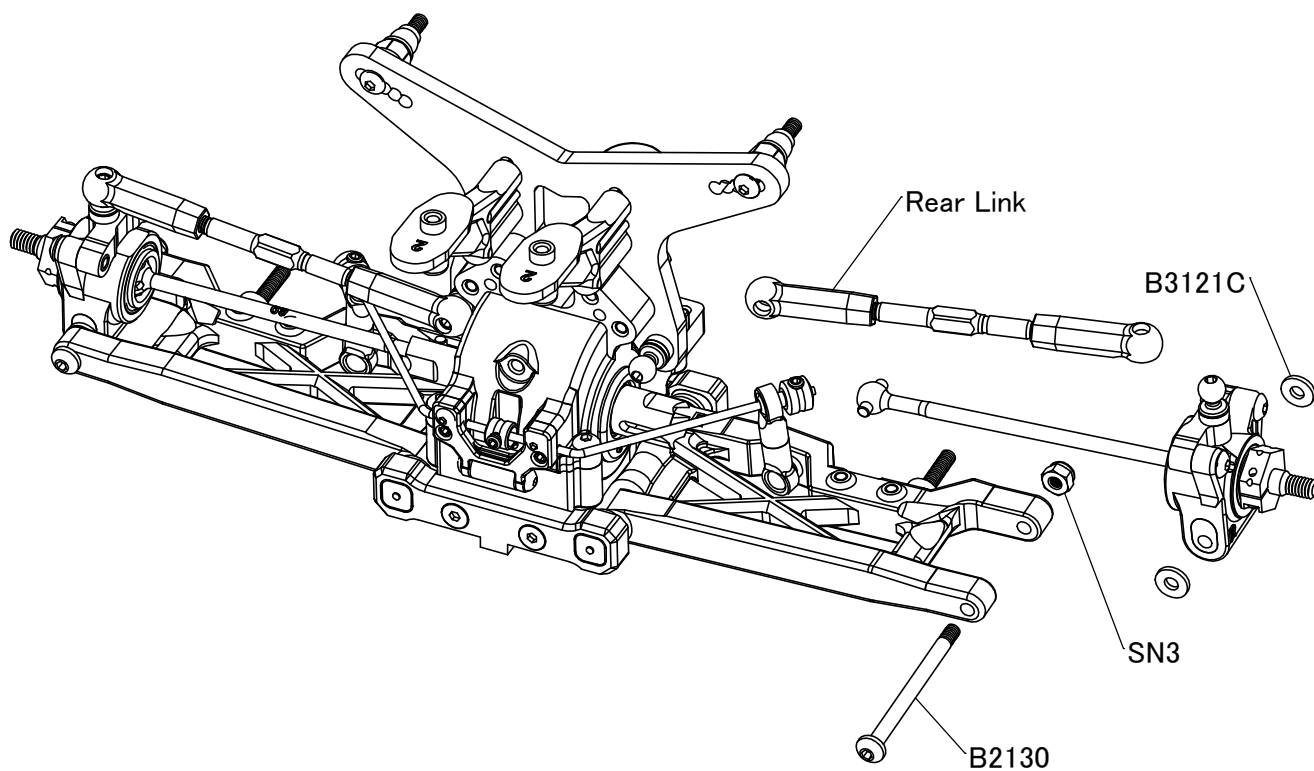
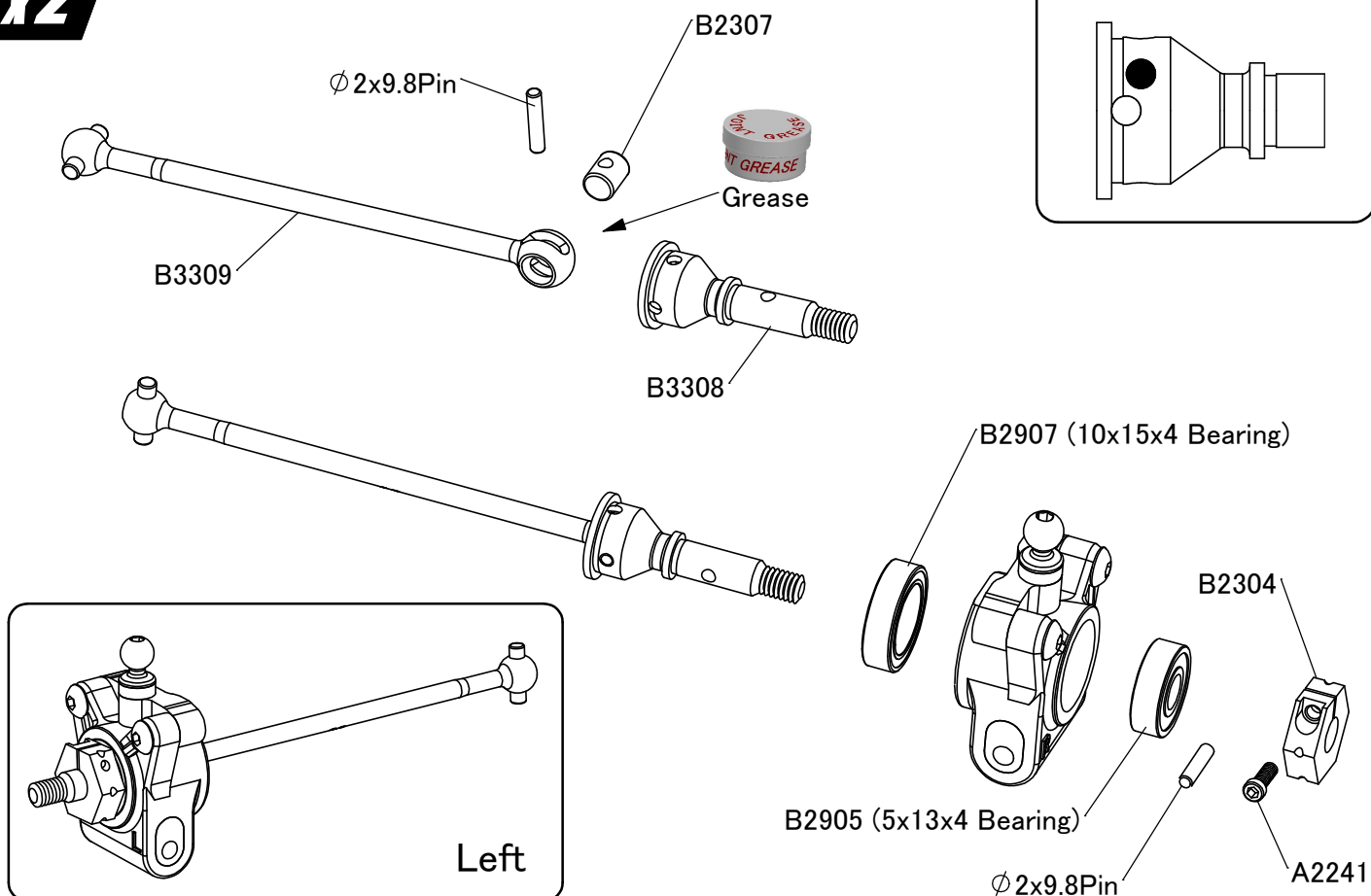


		0
B3121A		
		+1
B3121B		
		+2
B3121B		
		+3
B3121A		

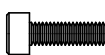
Step5-4 / Bag B1, E1

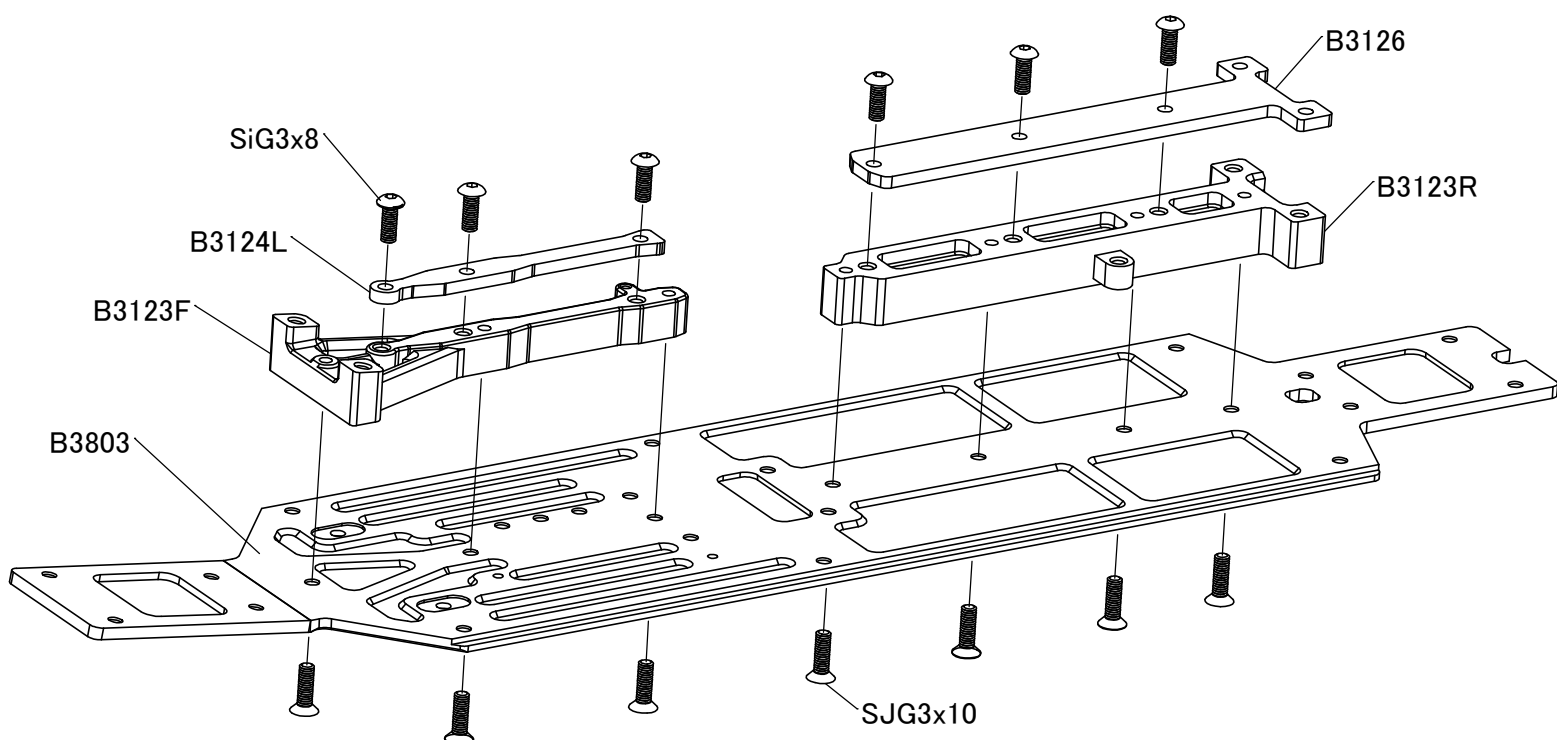
 SN3 2pcs.  A2241 2pcs.

x2

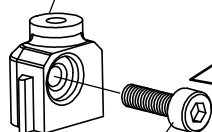


Step6-1 / Bag F1, J1

 SiG3x8 6pcs.
  SJG3x8 5pcs.
  SJG3x10 8pcs.
  SG3x10 1pc.

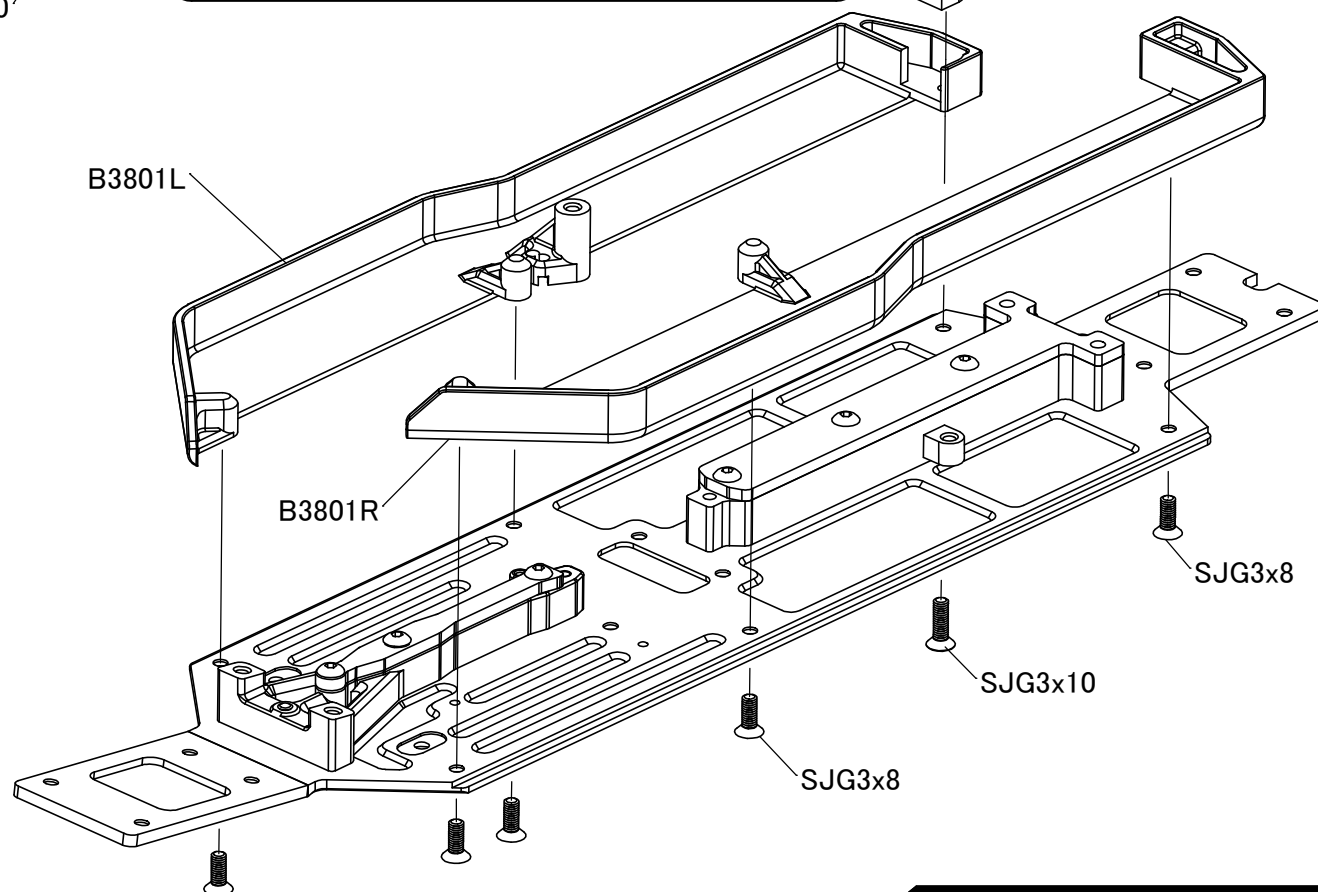


B3702A



SG3x10

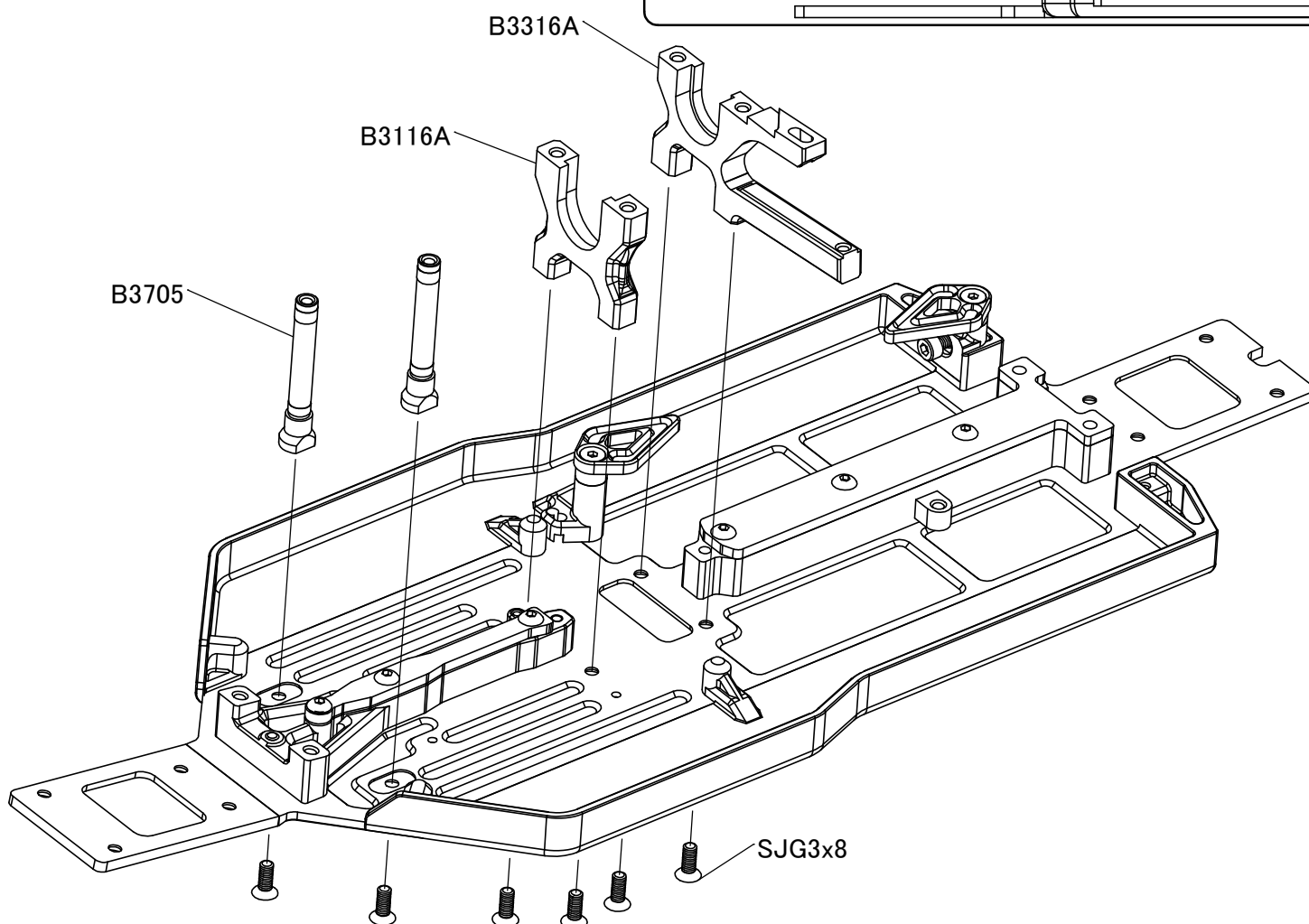
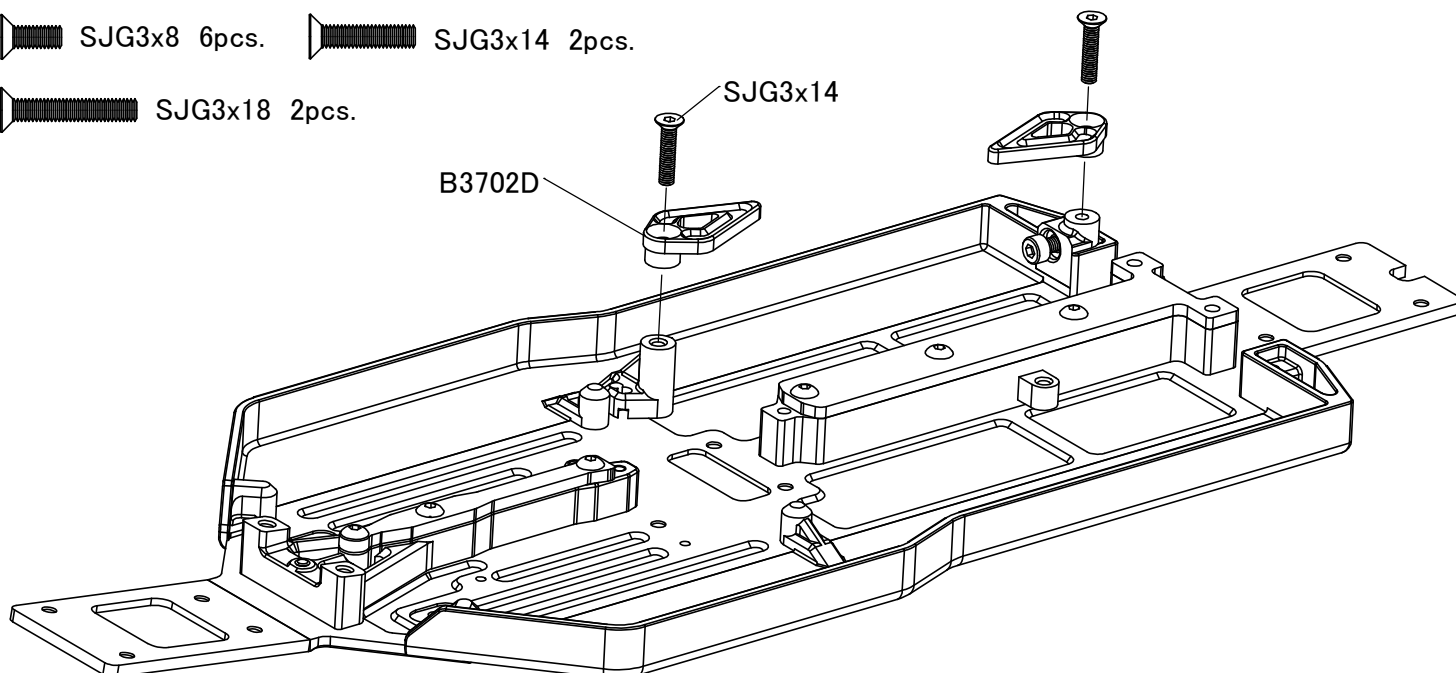
Adjust the screw tightness according to the length of the battery you are using. The included screw are designed for batteries up to 95mm in length. If using a battery longer than 95mm, replace them with shorter screws.



Step6-2 / Bag F1

 SJG3x8 6pcs.  SJG3x14 2pcs.

 SJG3x18 2pcs.



Step6-3 / Bag F1



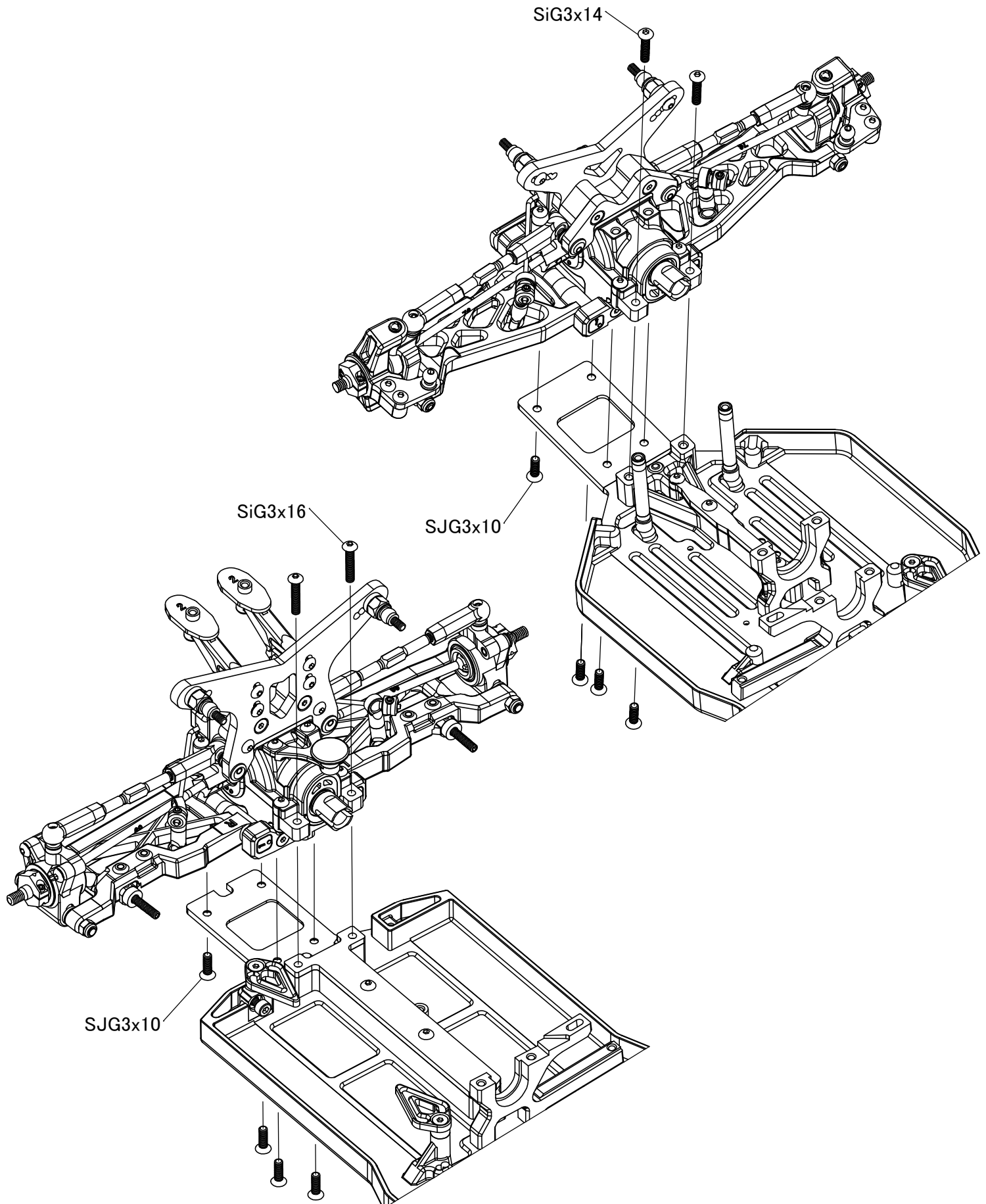
SiG3x14 2pcs.



SiG3x16 2pcs.

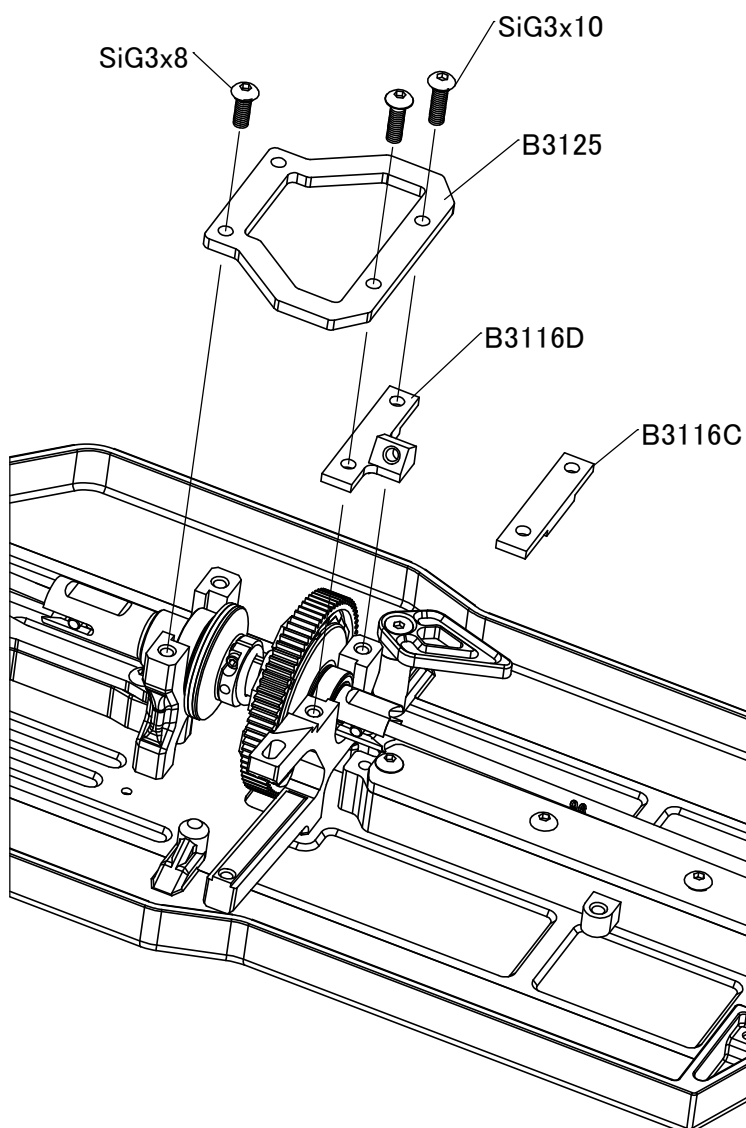
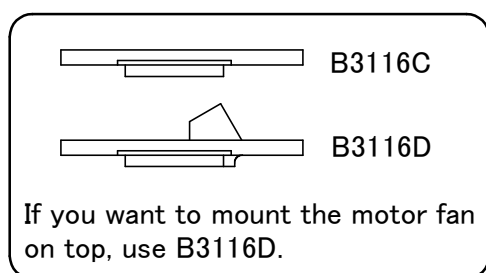
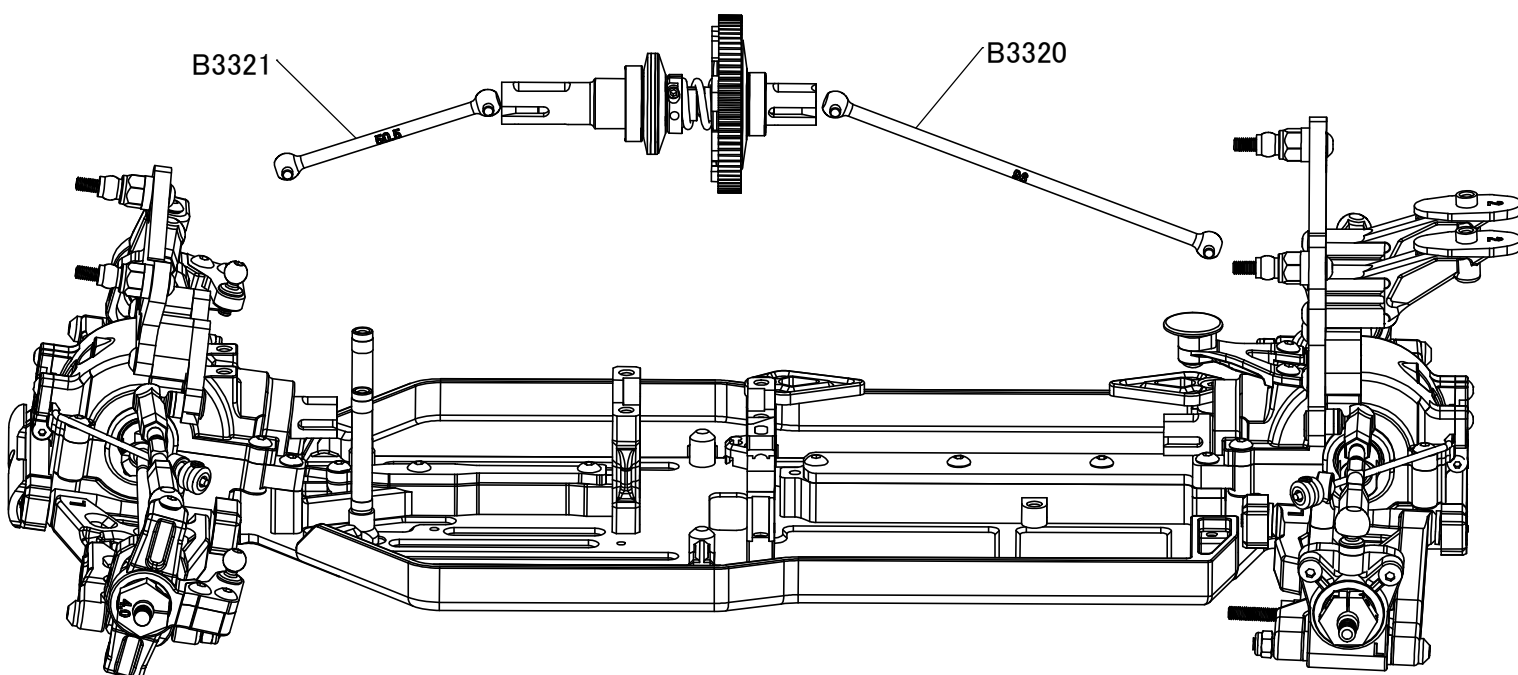


SJG3x10 8pcs.



Step7-1 / BagG1

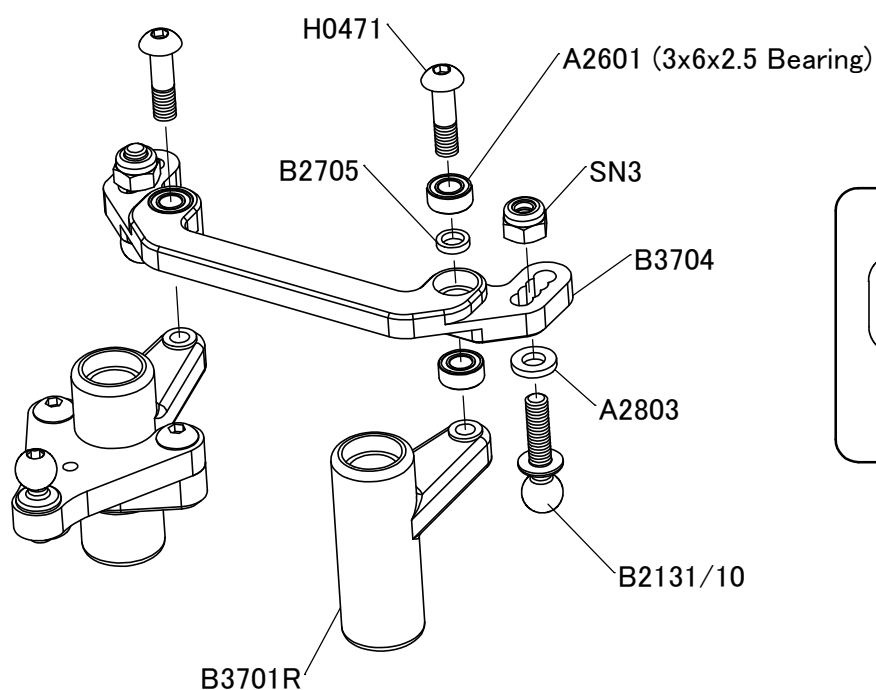
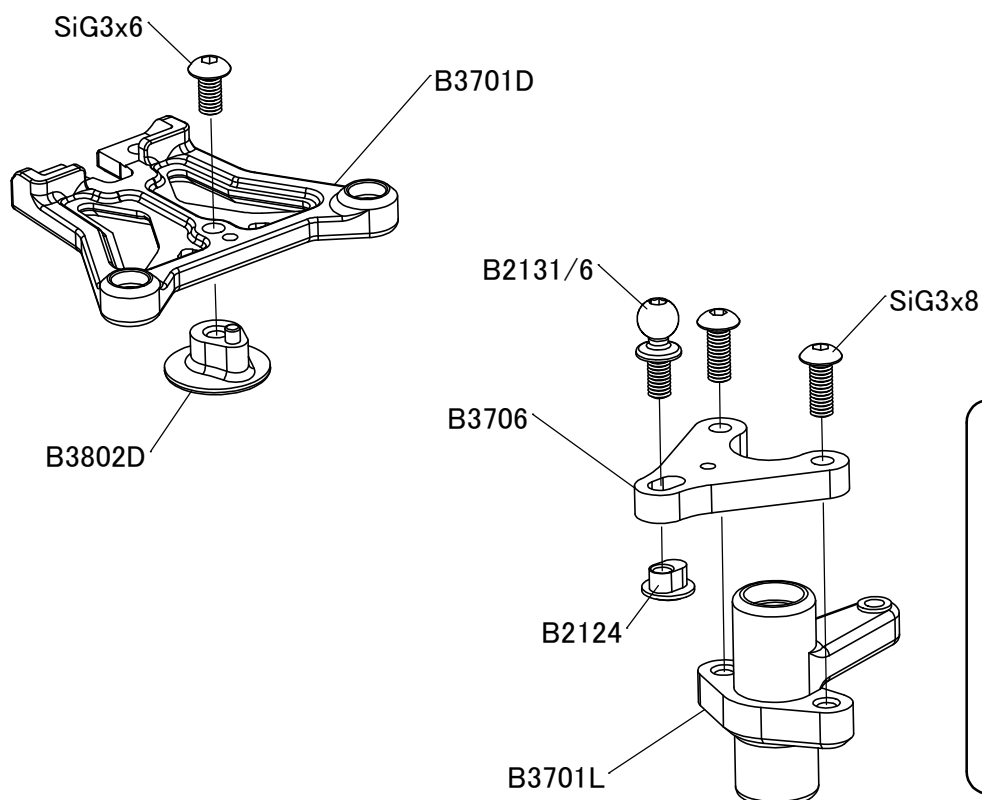
SiG3x8 1pc. SiG3x10 2pcs.



Step7-2 / Bag G1

SiG3x6 1pc. SiG3x8 2pcs. SN3 2pcs. A2803(1mm) 2pcs.

H0471 2pcs.

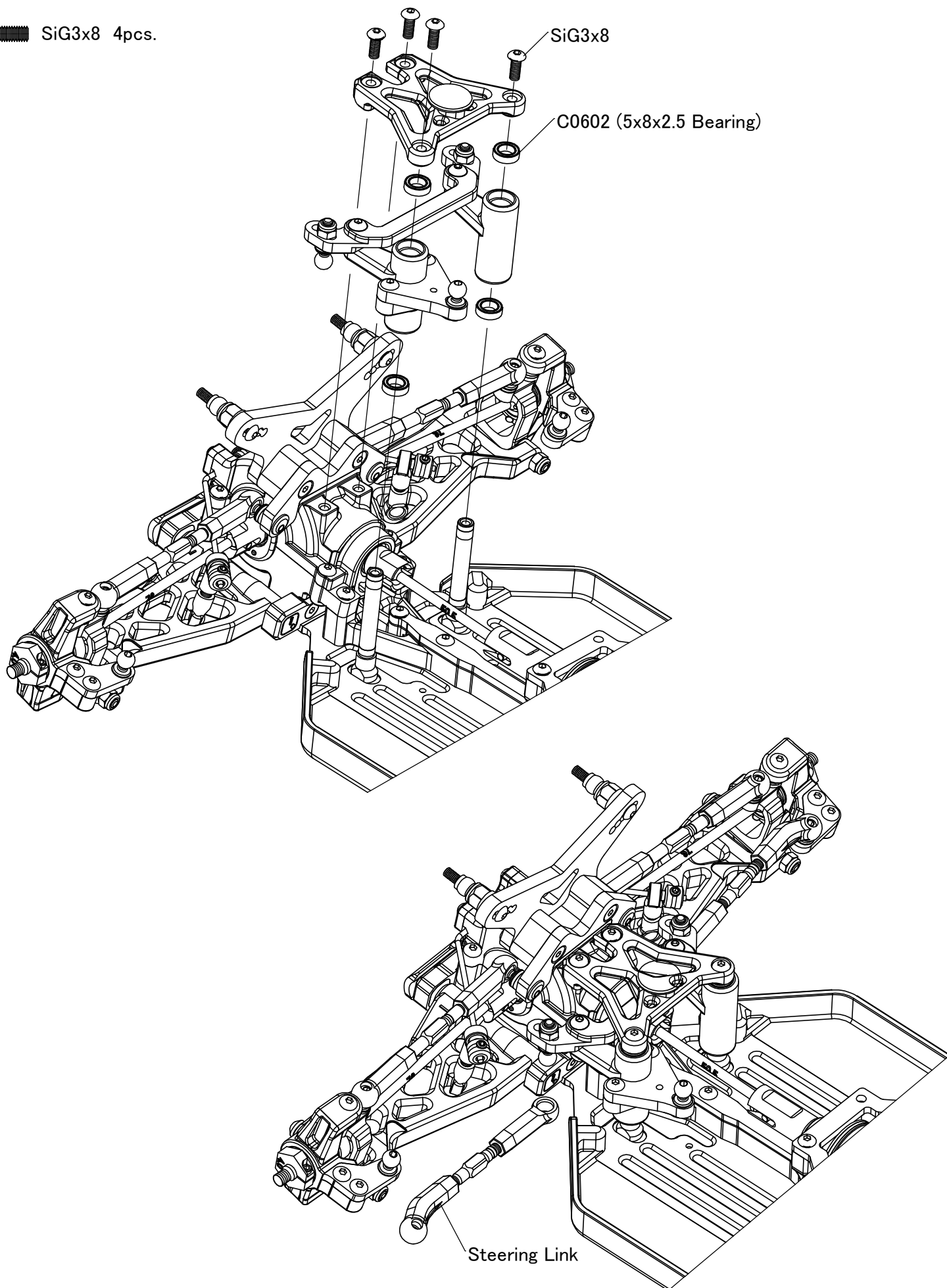


Step7-3 / Bag B1, G1

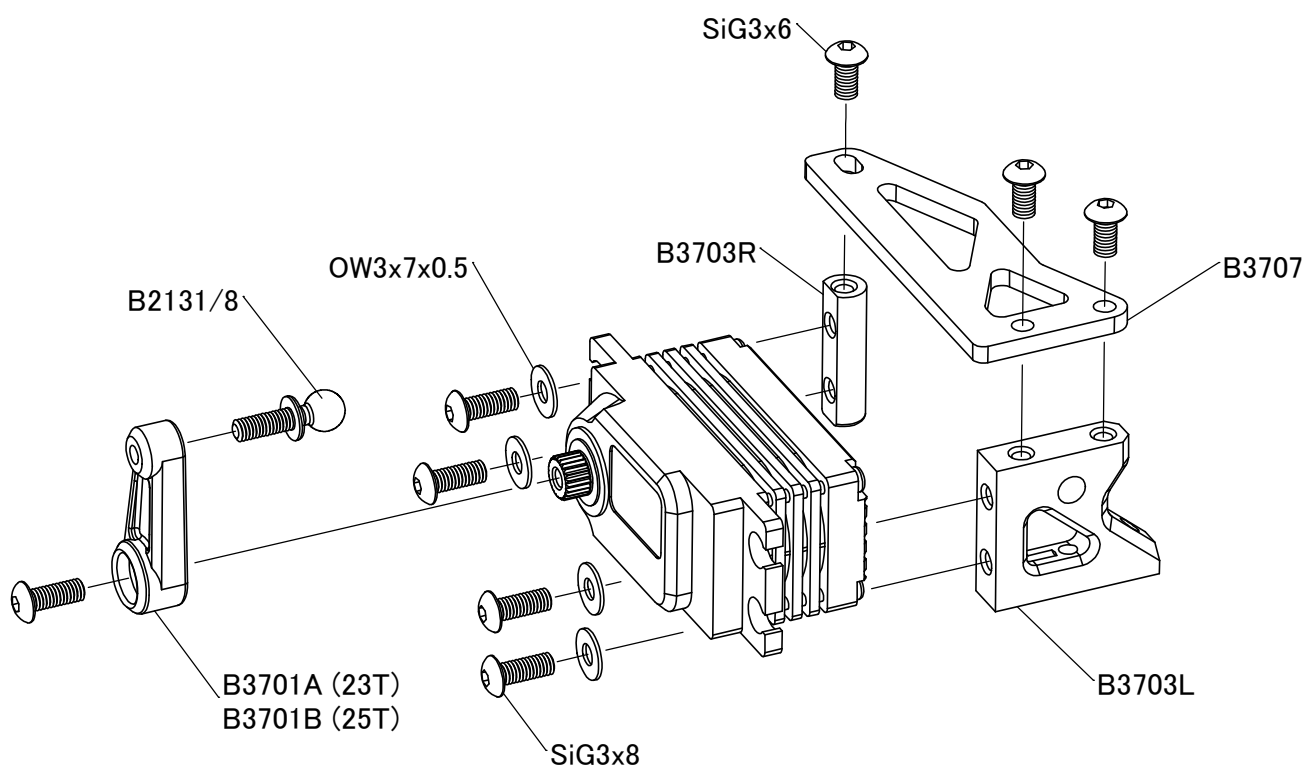
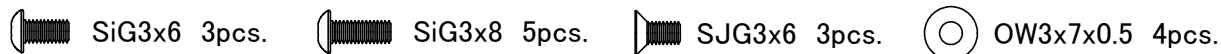
 SiG3x8 4pcs.

SiG3x8

C0602 (5x8x2.5 Bearing)

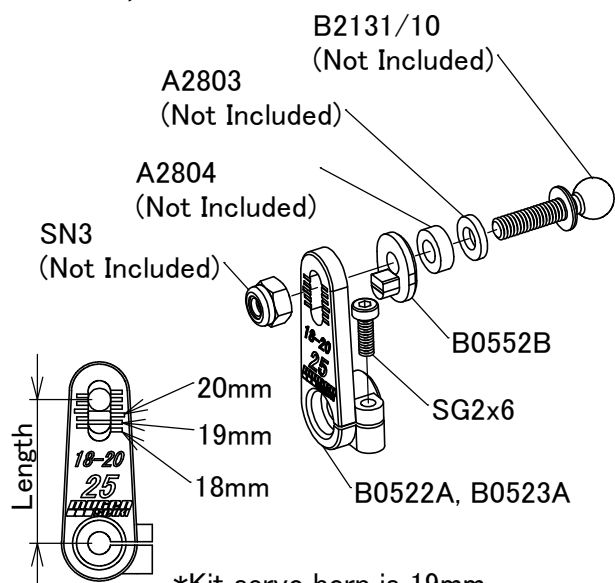


Step7-4 / Bag G1

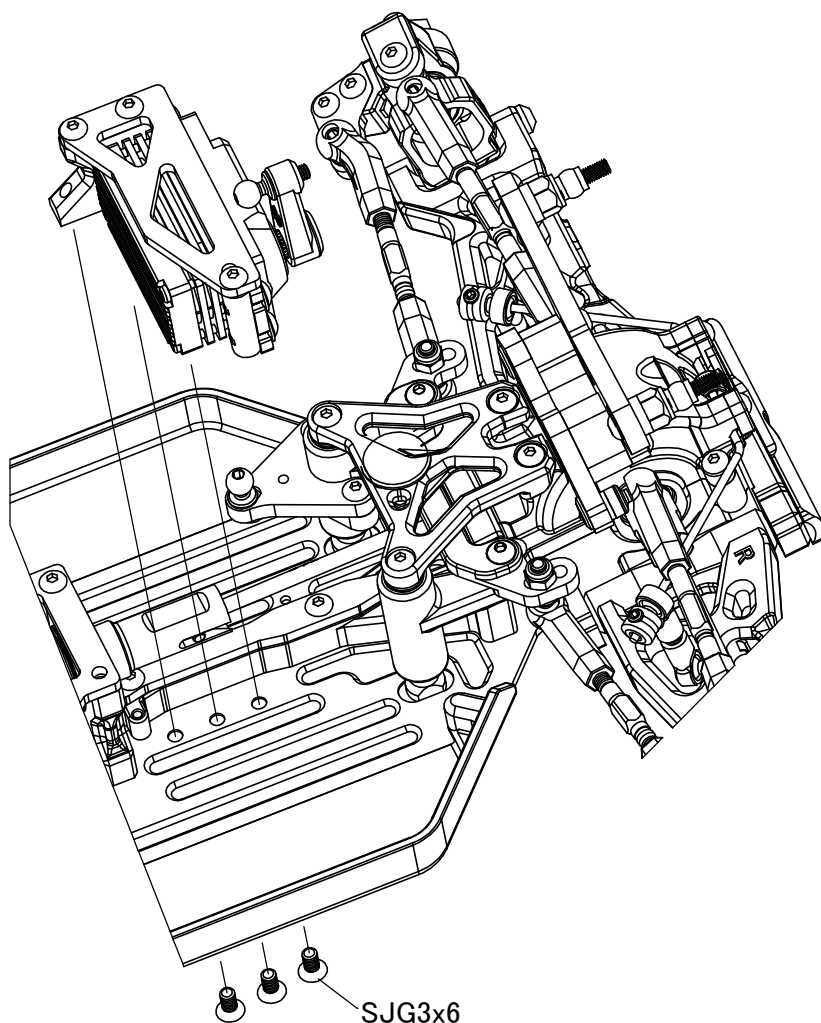


Option Parts

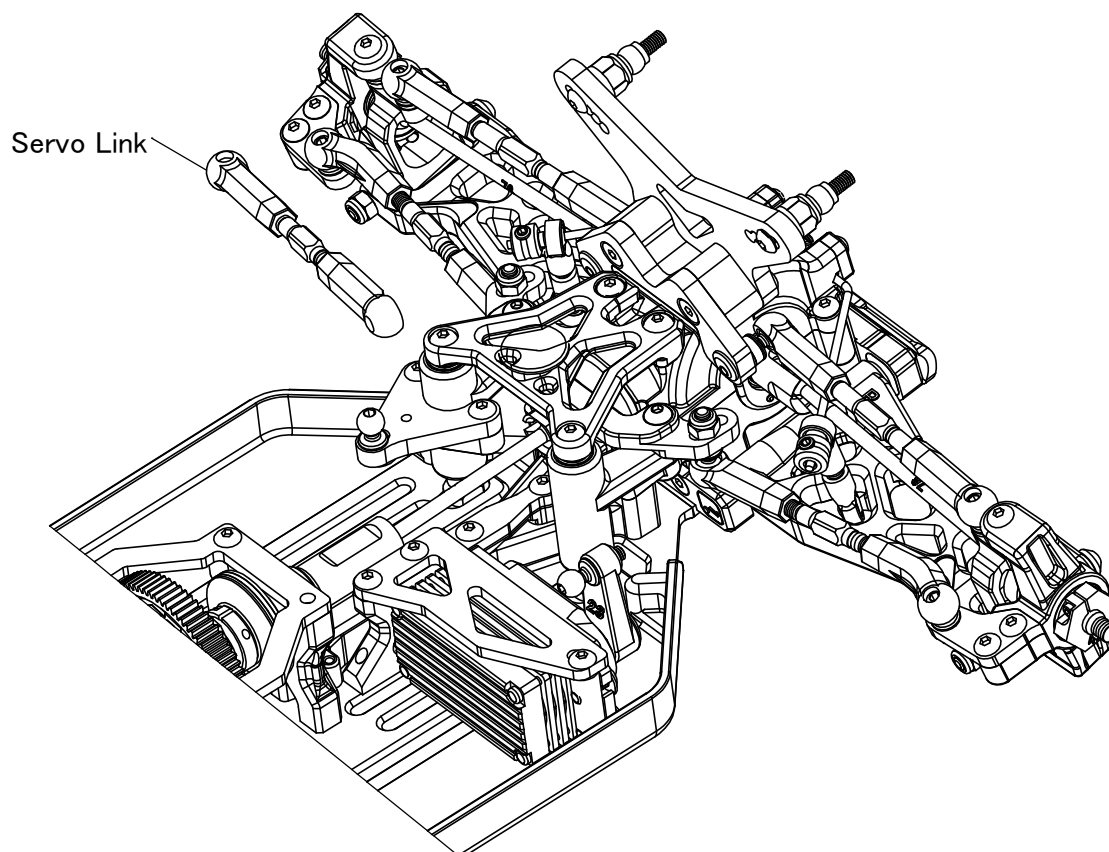
Adjustable Aluminum Servo Horn B0552, B0553



*Kit servo horn is 19mm.
Adjust to your preferred length.

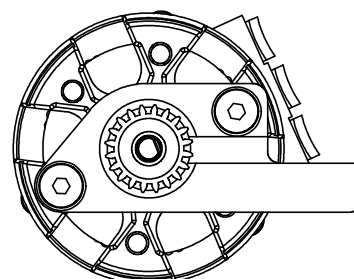
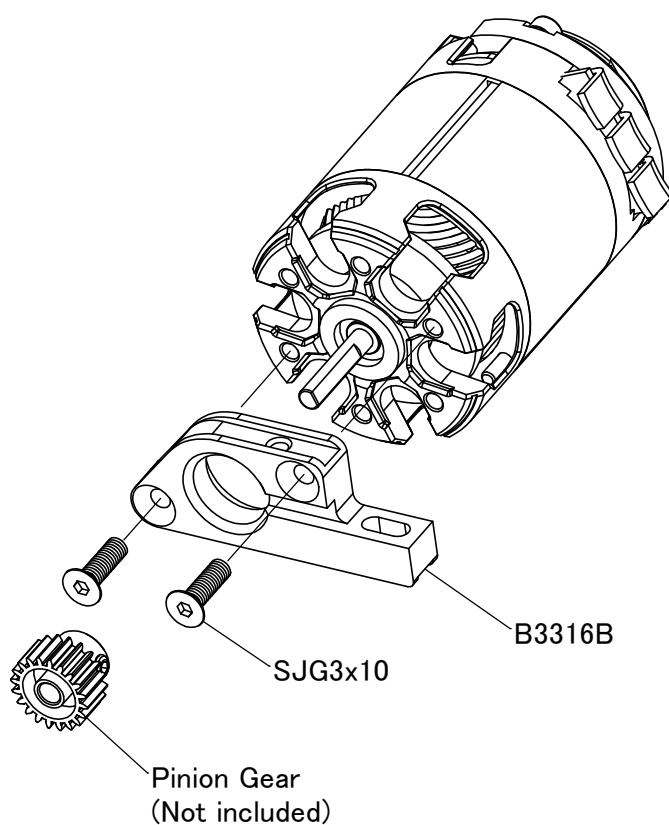


Step7-5 / B1



Step8-1 / Bag H1

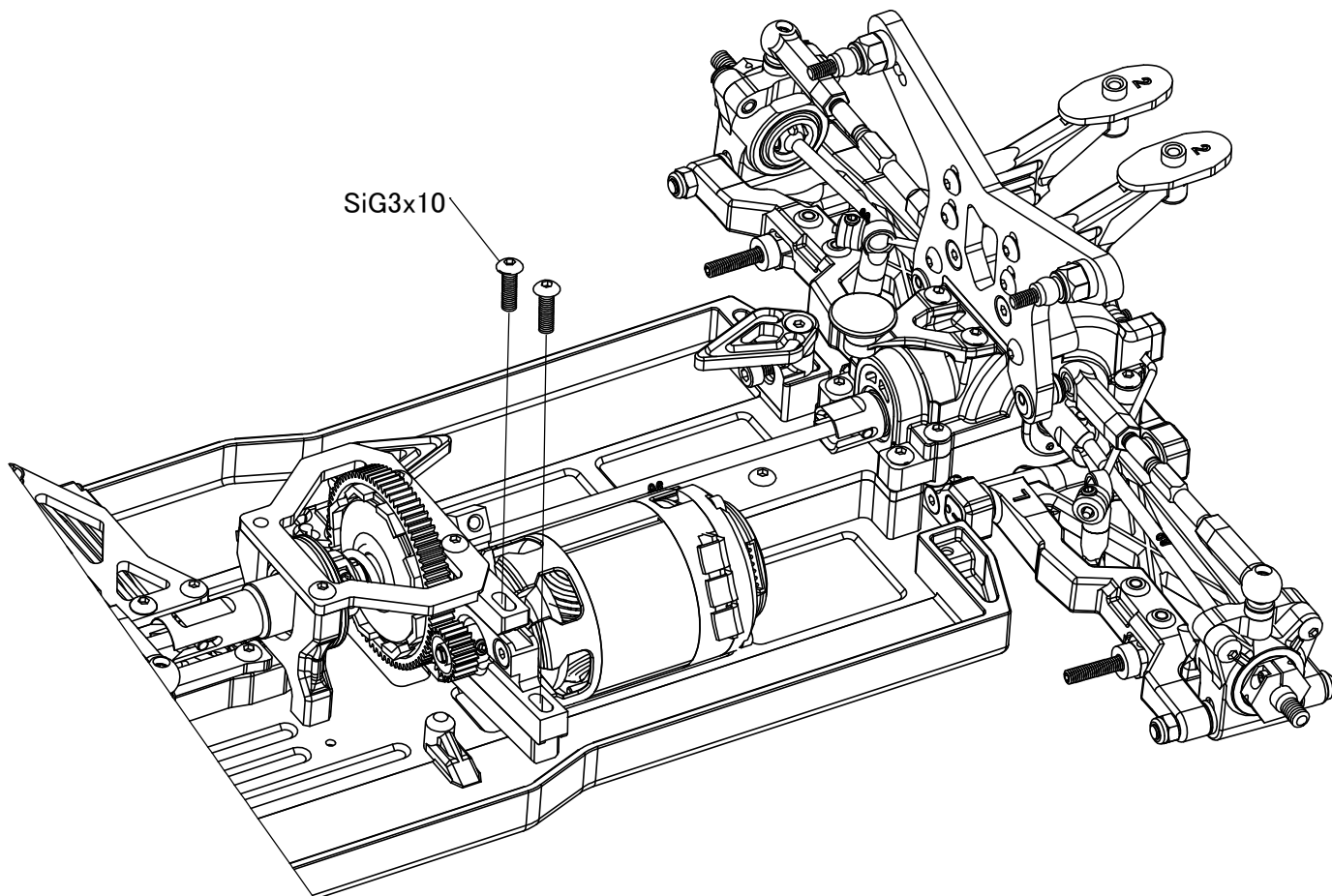
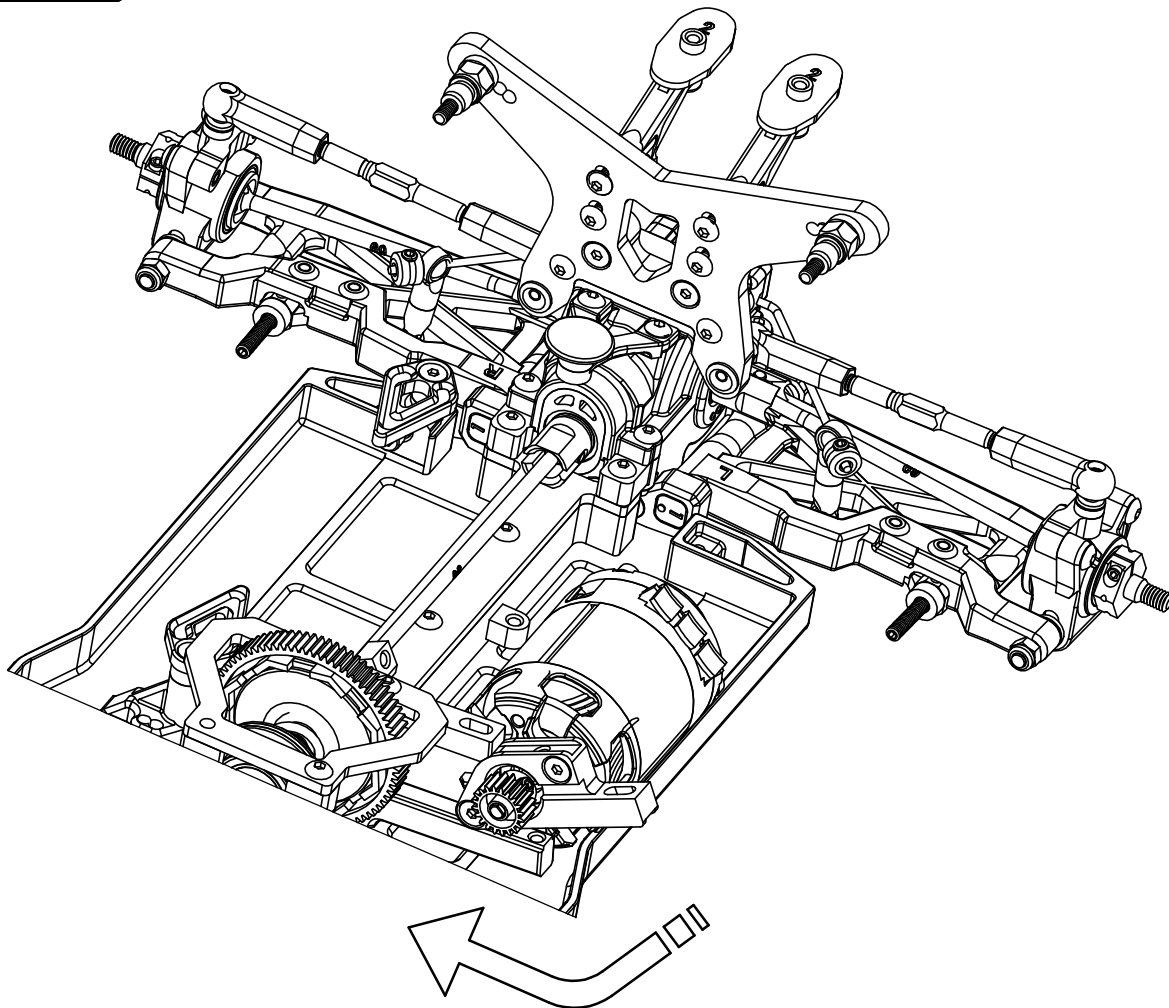
 SJG3x10 2pcs.



The motor terminals should be laid flat as much as possible.

Step8-2 / Bag H1

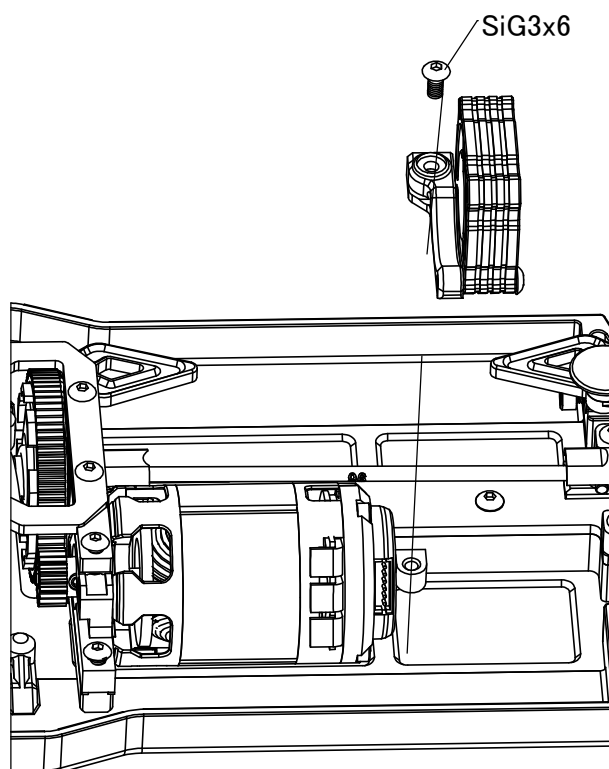
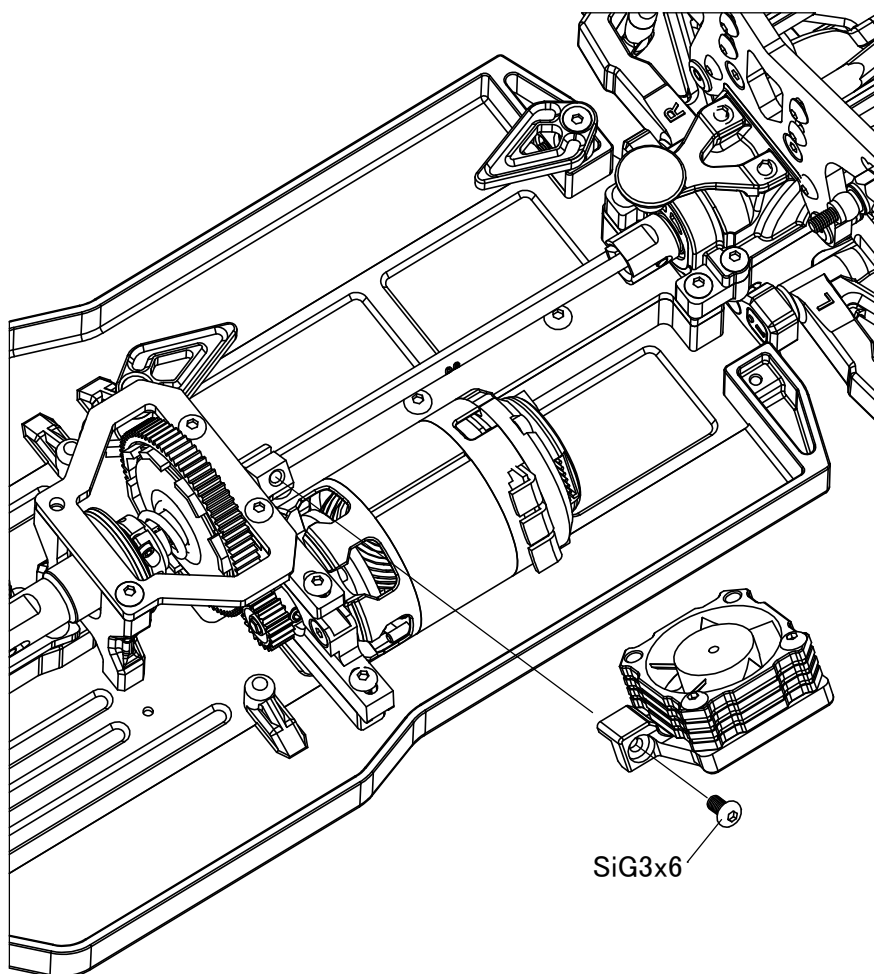
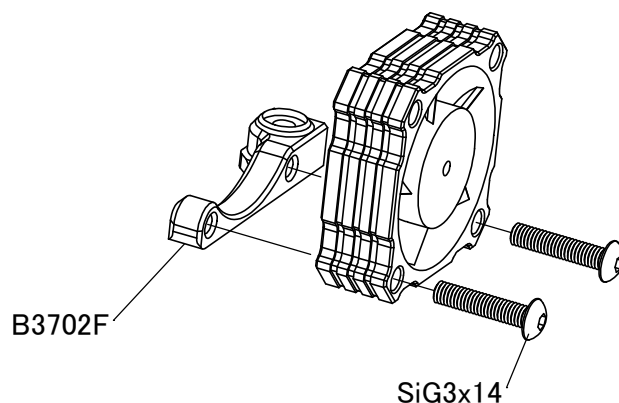
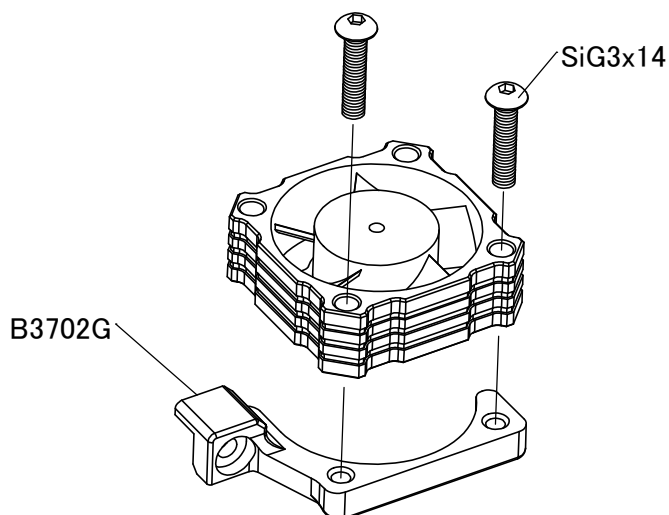
 SiG3x10 2pcs.



Step8-3 / Bag H1

SiG3x6 1pc. SiG3x14 2pcs.

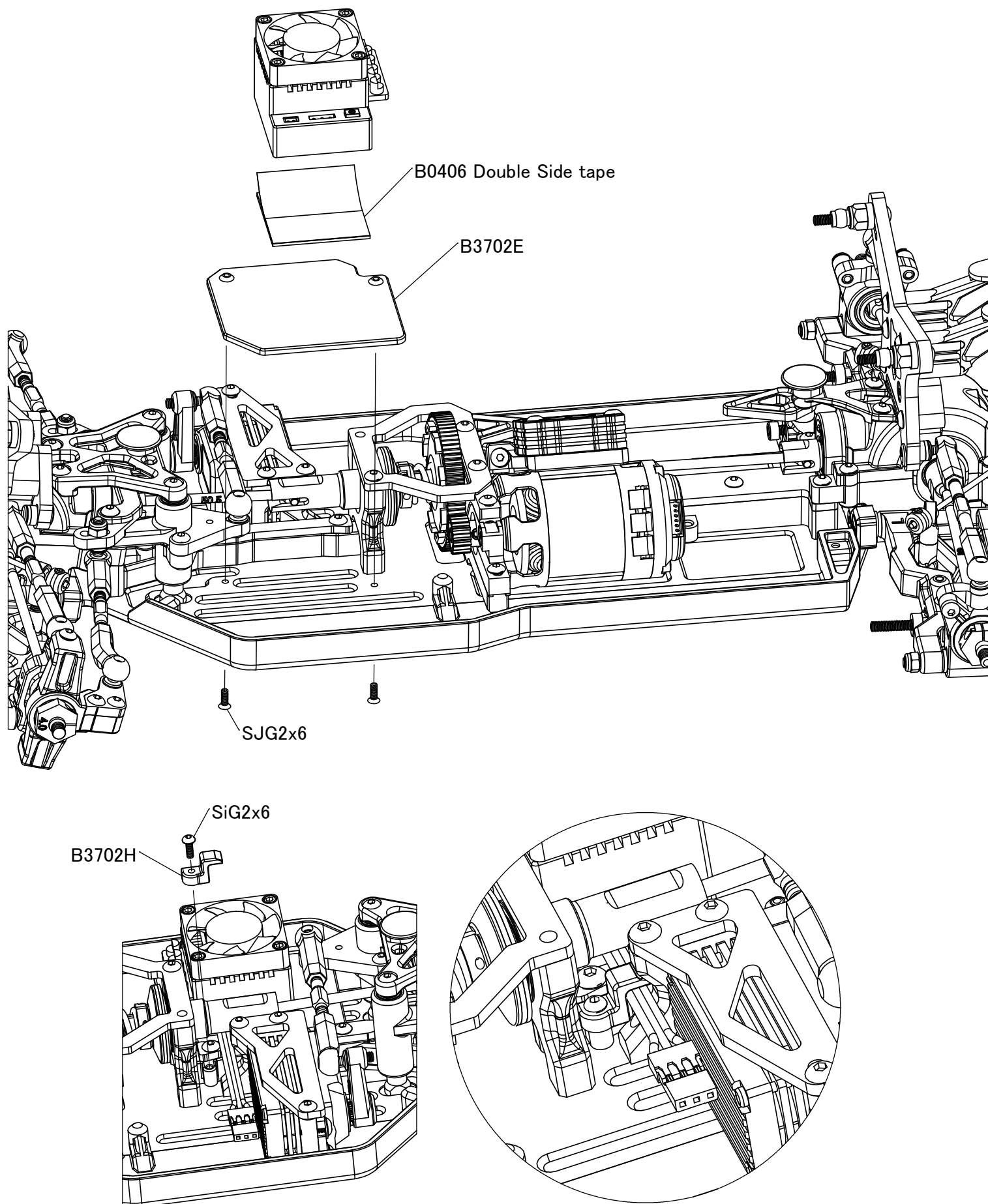
* The fan can be mounted in either a low or high position.



Step8-4 / Bag H1

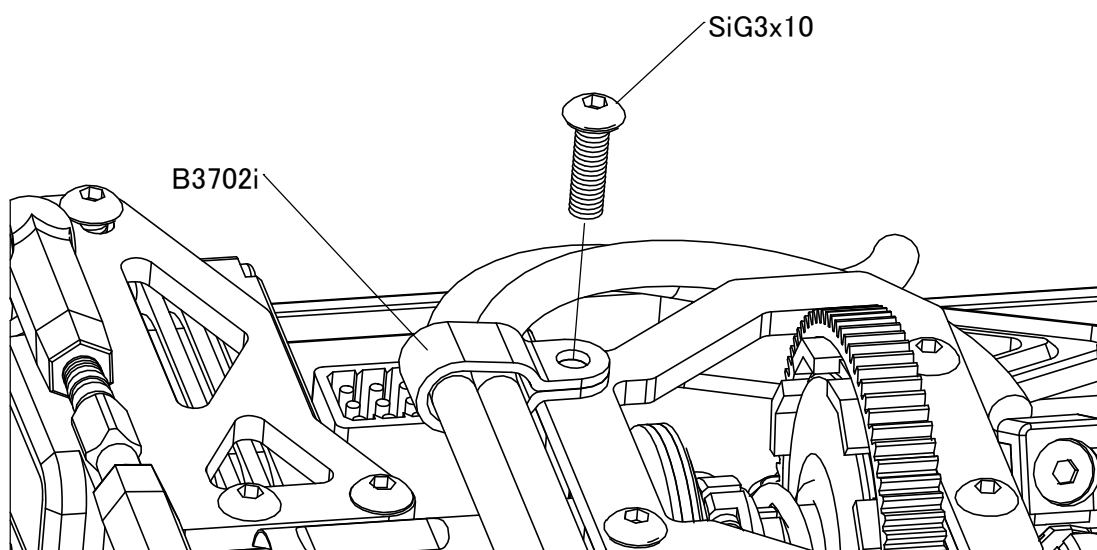
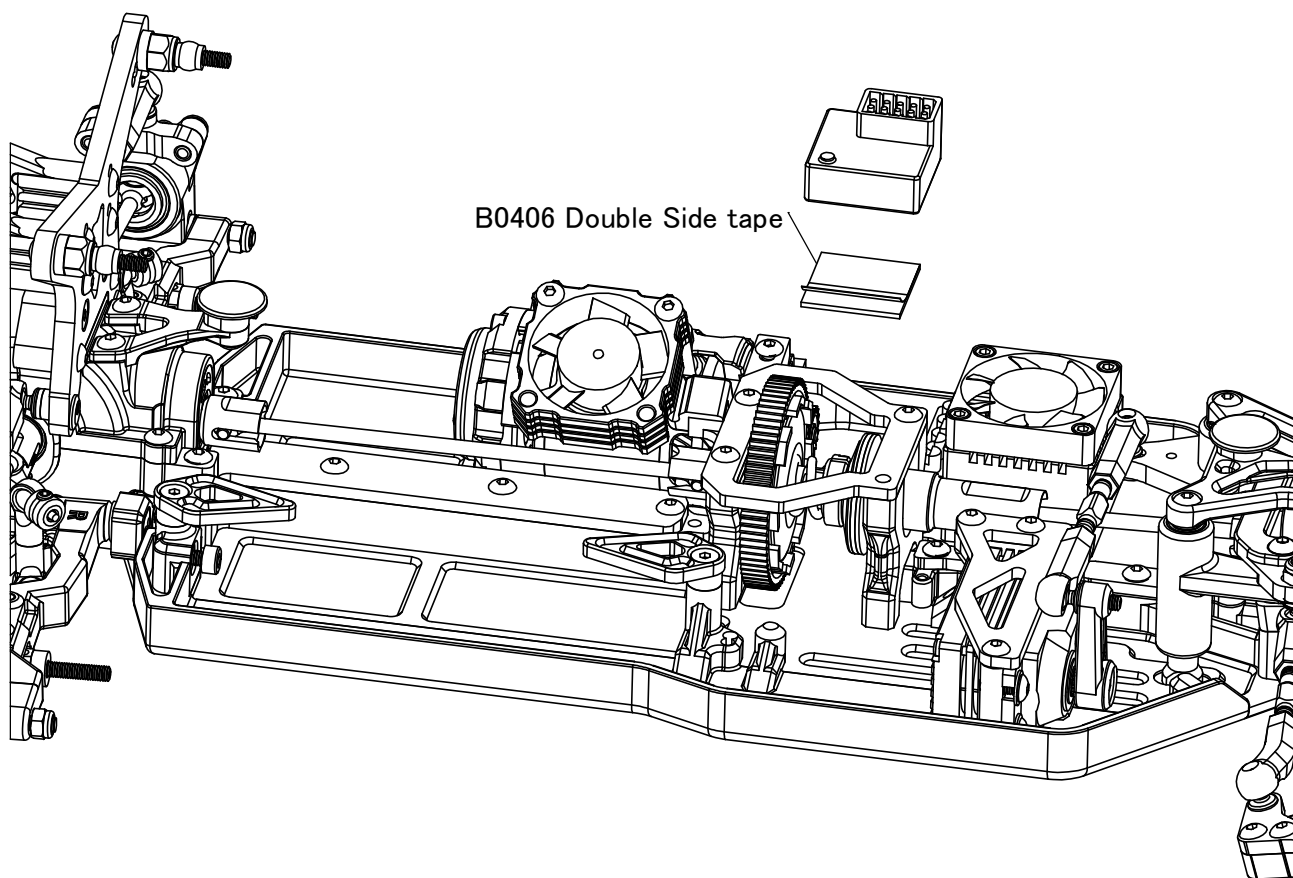
SiG2x6 1pc.

SJG2x6 2pcs.



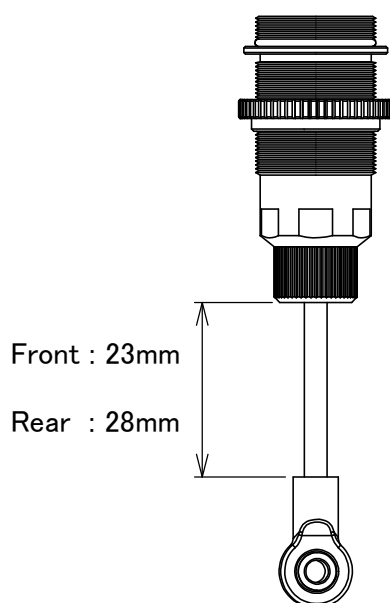
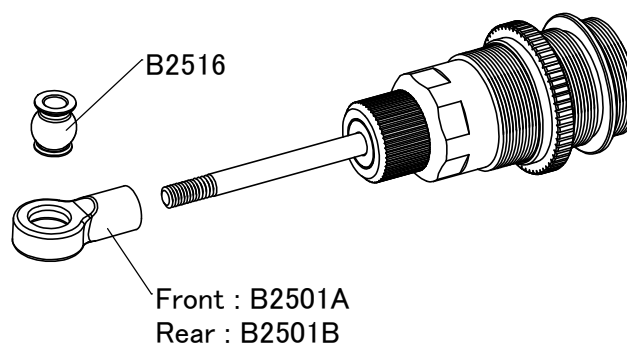
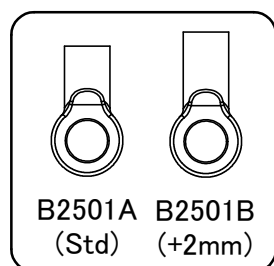
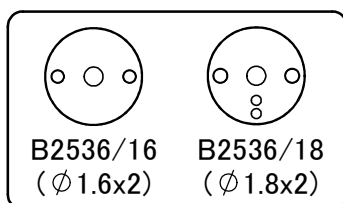
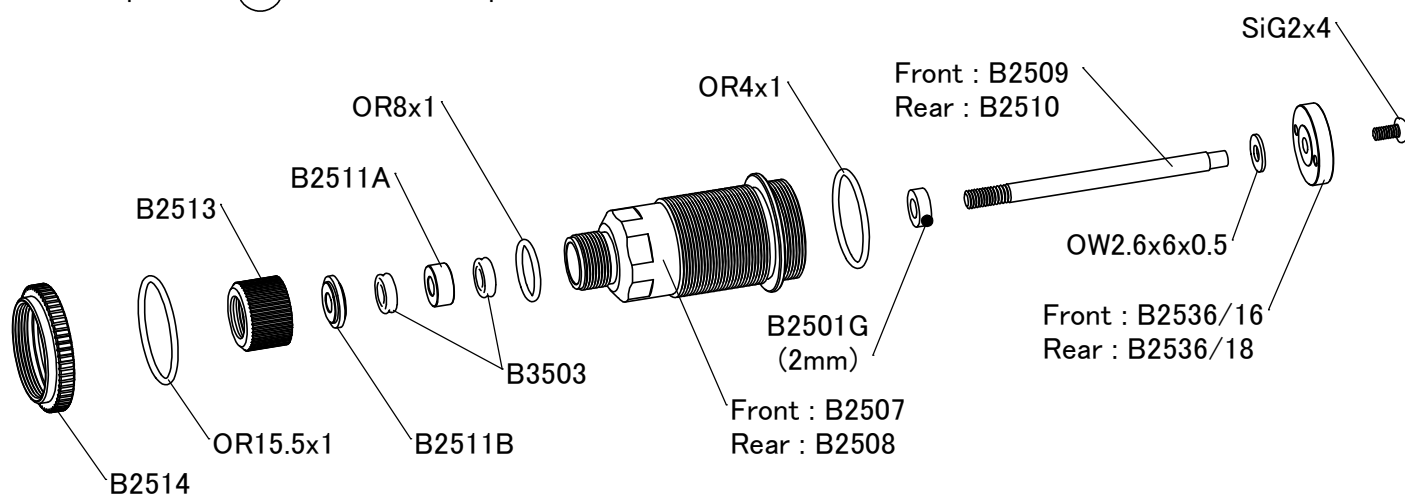
Step8-5 / Bag H1

 SiG3x10 1pc.



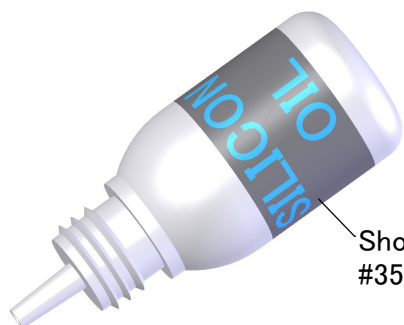
Step9-1 / BagA1, i1

SiG2x4 4pcs. OW2.6x6x0.5 4pcs.

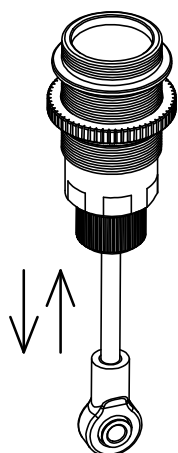


Step9-2 / Bag A2, i1

SiG2x4 4pcs.



Shock Oil
#350



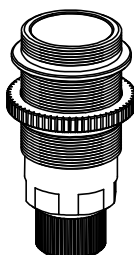
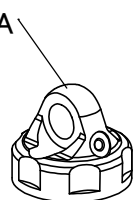
1) Fill the shock case with oil, then move the shock shaft up and down several times and wait until all air bubbles are released.

2) Lower the shock shaft fully, fill the shock case up to the rim with oil, and install the shock cap.

1) ショックケースにオイルを満たし、ショックシャフトを数回上下させ気泡が抜けるまで待ちます。

2) ショックシャフトを一番下まで下げ、ショックケースの淵までオイルを入れ、ショックキャップを取り付けます。

B2502A

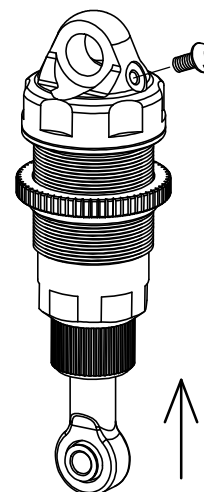


3) Quickly pull the shock shaft up to the top, then wipe off any oil that comes out of the screw holes.

4) With the shock shaft in the fully raised position, install SiG2 x 4.

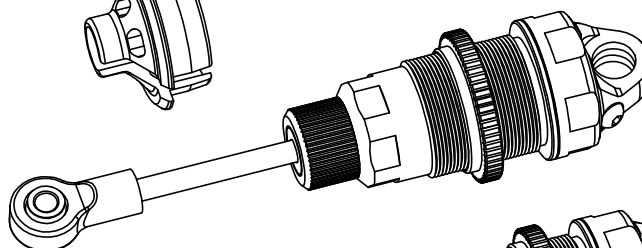
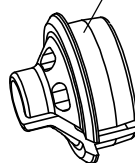
3) ショックシャフトを素早く最上部まで上げ、ネジ穴から出てくるオイルを拭き取ります。

4) ショックシャフトが最上部の位置でSiG2x4を取り付けます。



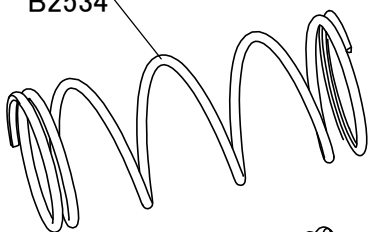
SiG2x4

B2501D

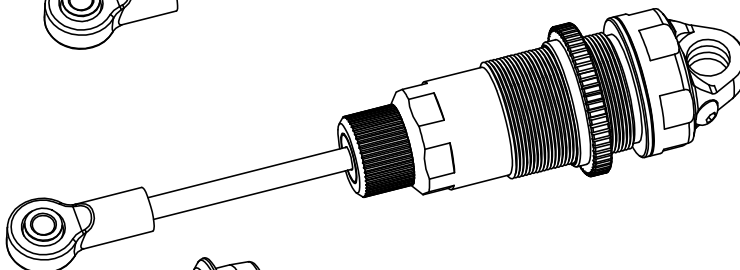


Front

B2534



B2531



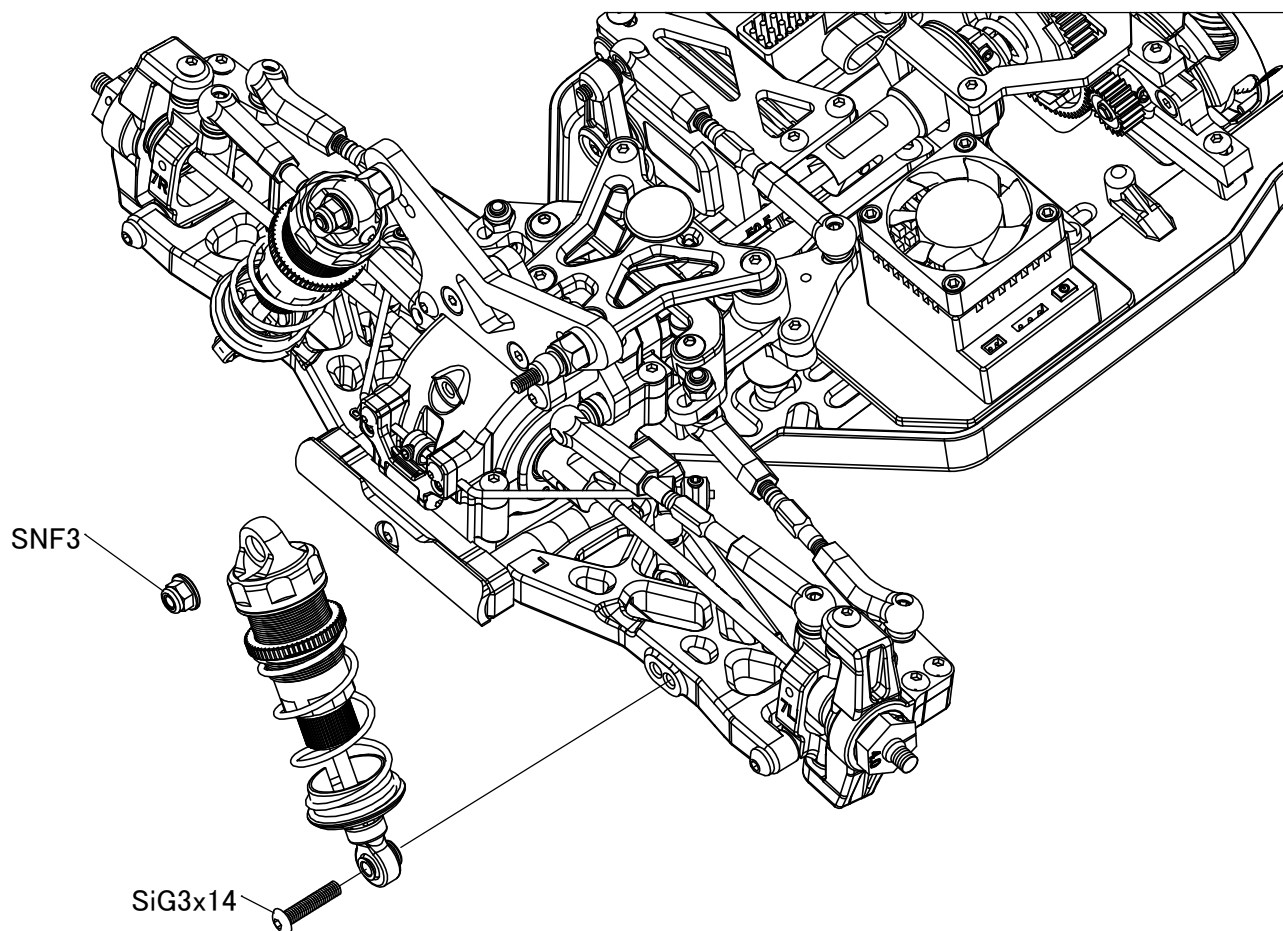
Rear

B2501C

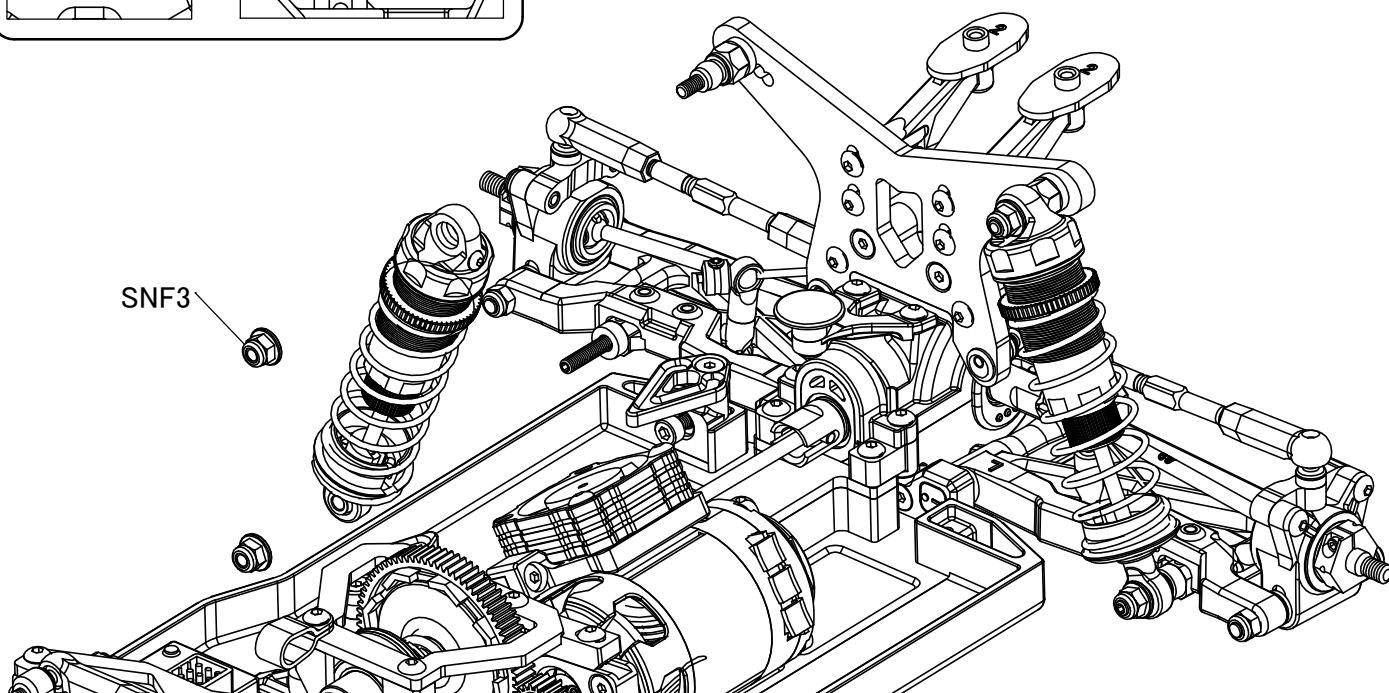
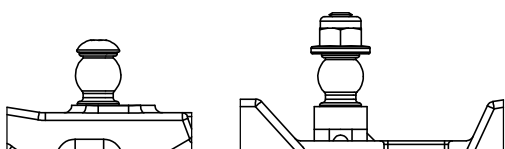


Step9-3 / Bag i1

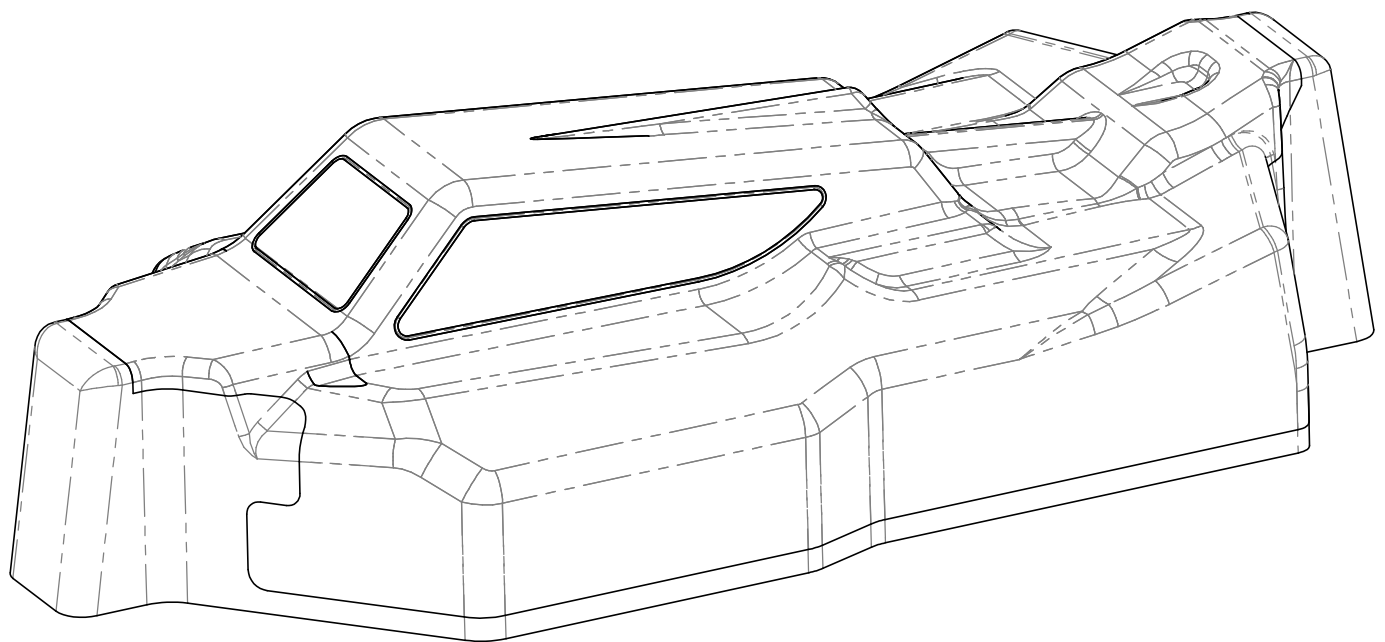
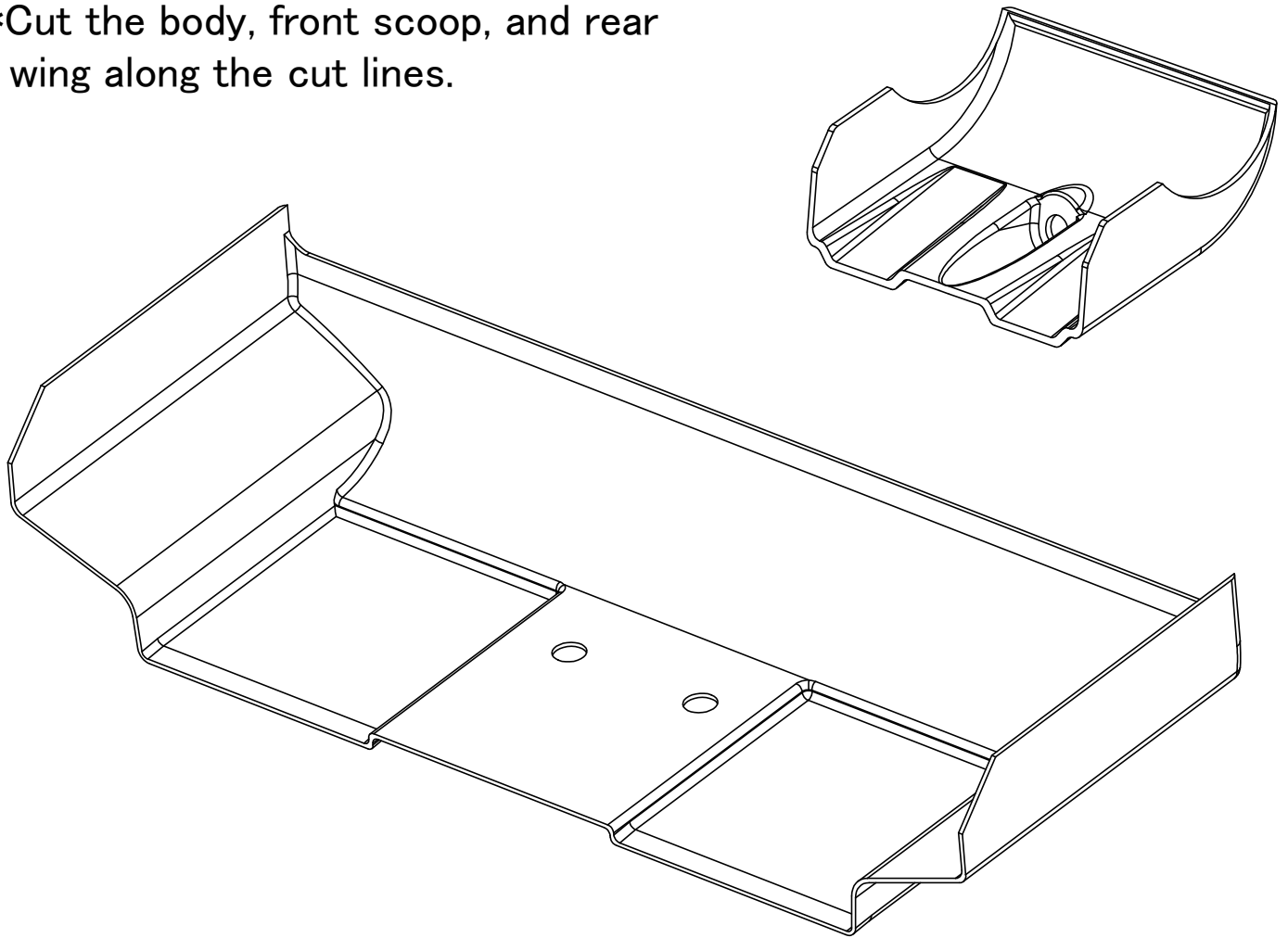
 SiG3x14 2pcs.  SNF3 6pcs.



Set the pivot balls facing forward on both the front and rear.



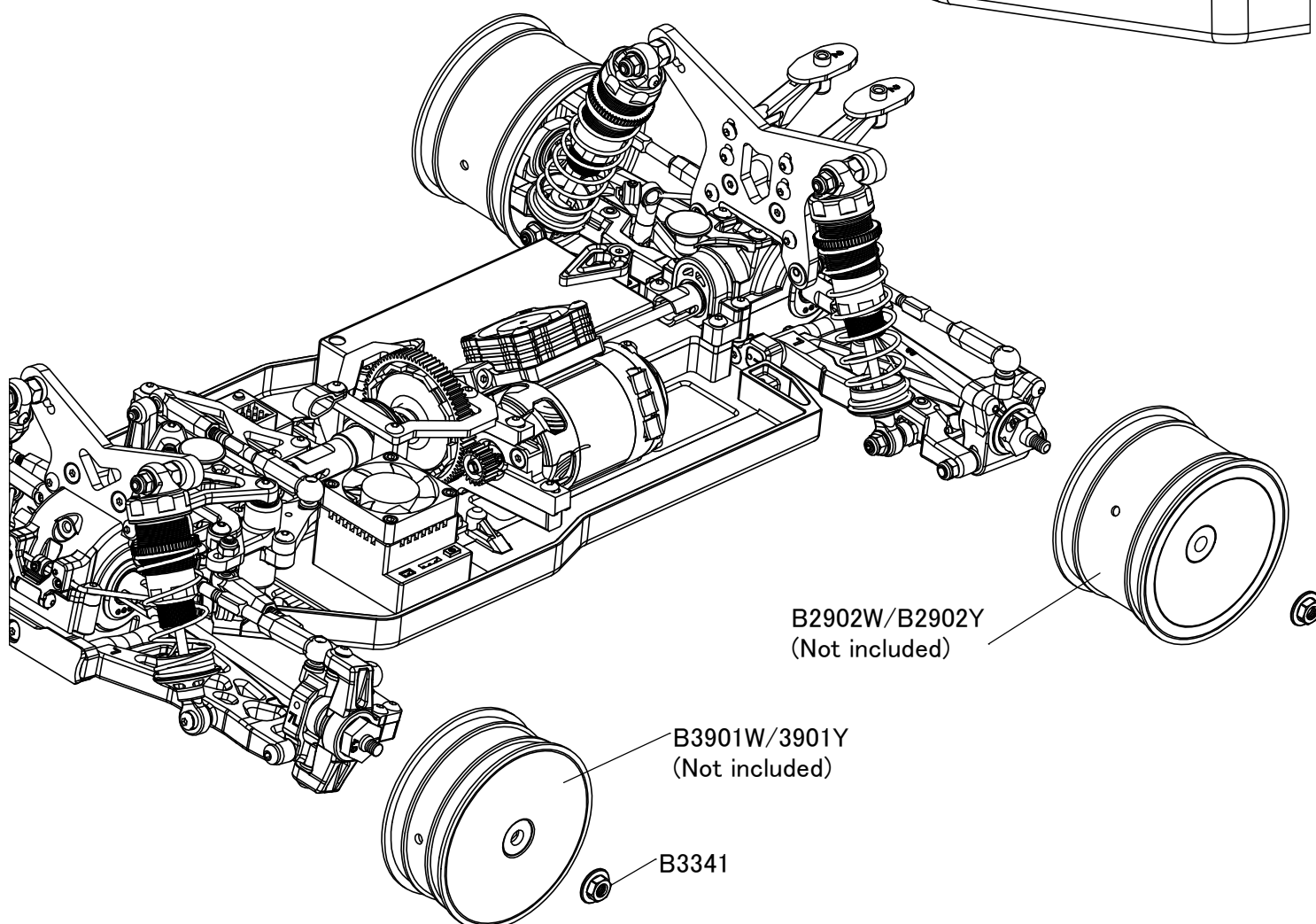
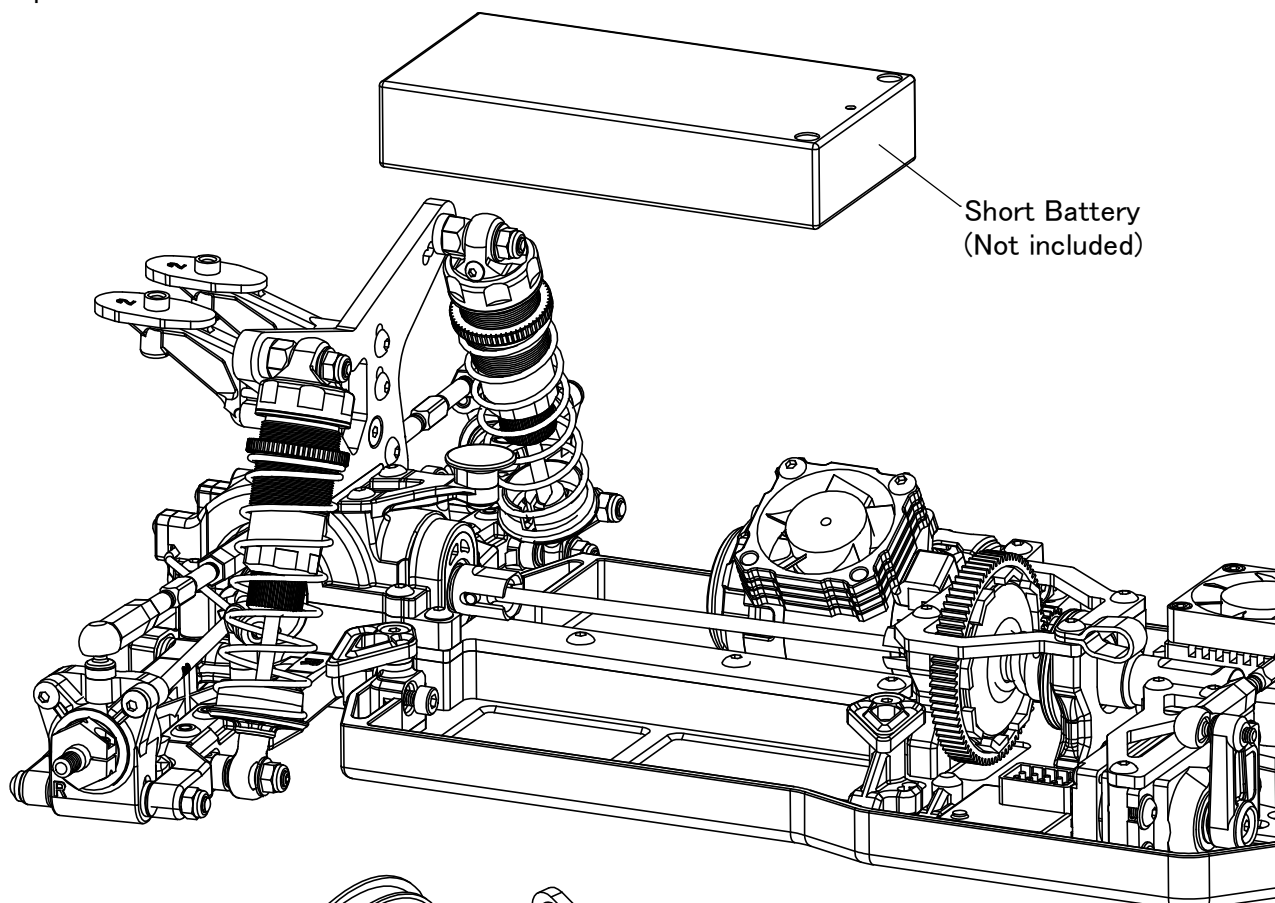
*Cut the body, front scoop, and rear wing along the cut lines.



Step10-2 / Bag H1



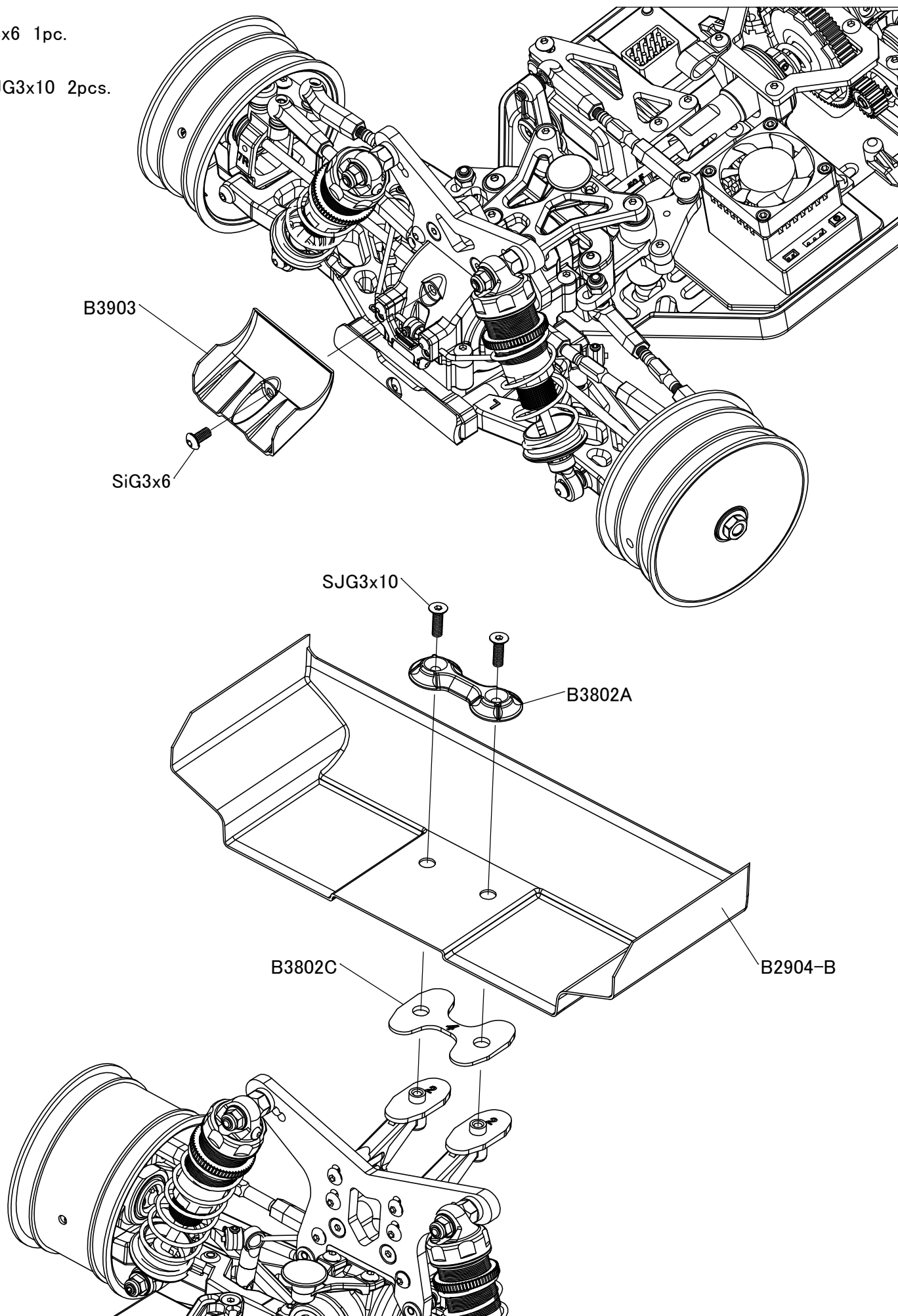
B3341 4pcs.

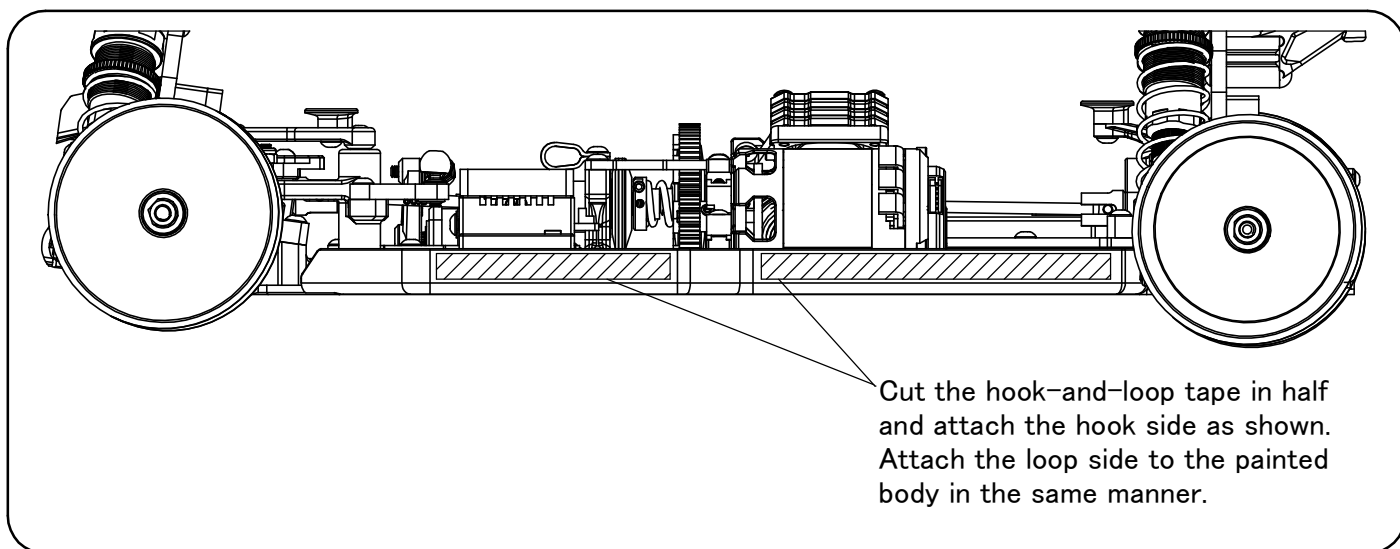
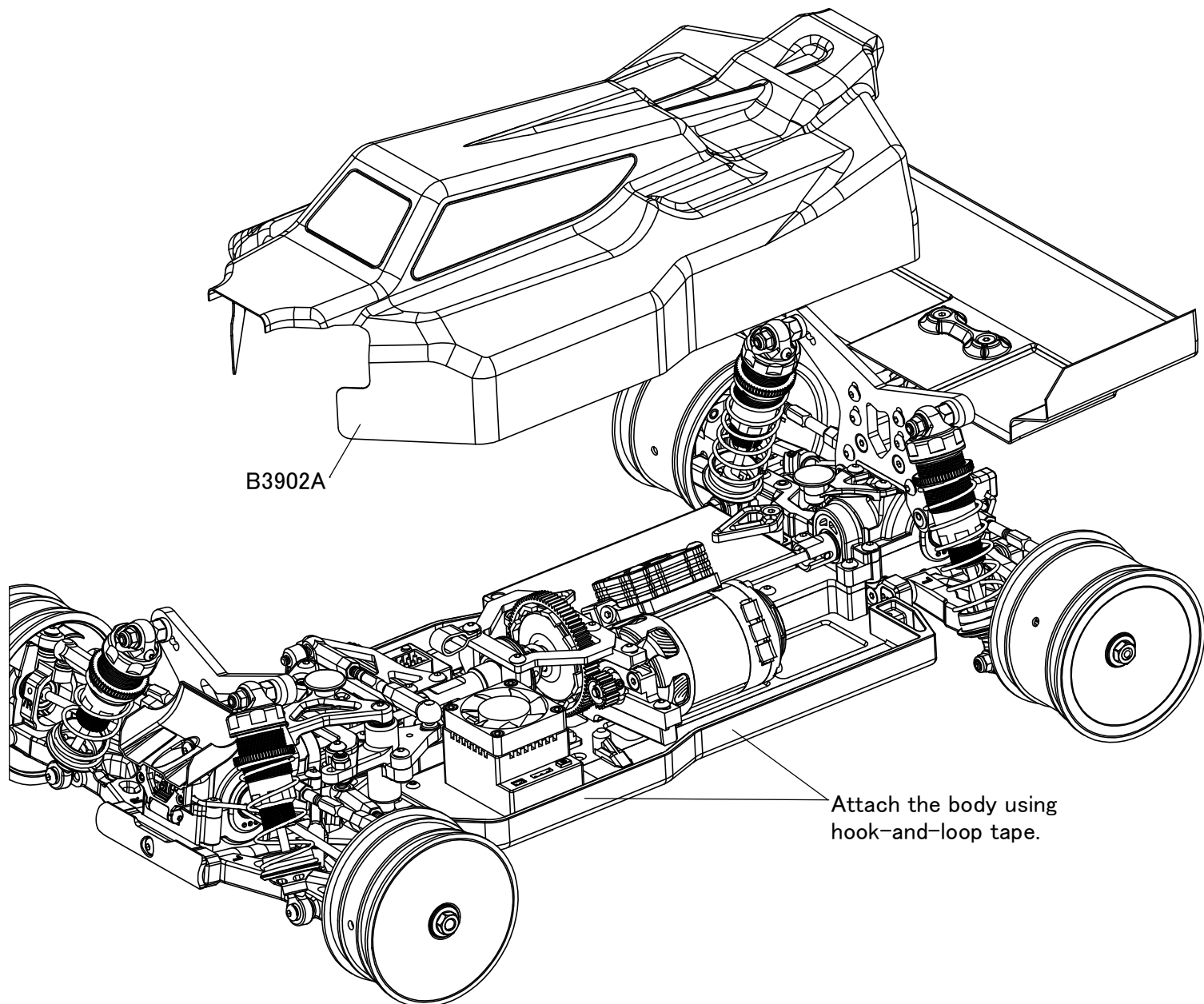


Step10-3 / Bag H1, K1

SiG3x6 1pc.

SJG3x10 2pcs.





Before / After Operating

- 1. Place the model on a car stand so that the tires are off the ground.
- 2. Turn on the transmitter.
- 3. Connect the fully charged battery and turn on the ESC.
- 4. Check that the model is functioning correctly and make sure that the motor does not rotate in the neutral position.
- 5. Check that the steering operates the front tires correctly.
- 6. Start operation only after confirming that all parts of the model move properly in accordance with the transmitter operation.
- 7. Always disconnect or remove the batteries when the model is not in use.

Trouble Shooting

PROBLEM	CAUSE	SOLUTION
Model doesn't move	Battery is not charged. The wiring is short-circuited. Motor failure. ESC failure. Assembly mistake in rotation part.	Charge it correctly/ Insulating and repair the wiring. Repair or exchange the motor. Repair or exchange the ESC. Re-assemble it according to the instruction manual
The model is hard to control	Weak transmitter and/or car batteries. Servo linkage is not adjusted properly. Assembly mistake in rotation part, wrong adjustment.	Recharge or replace batteries. Reassemble it according to the instruction manual.

SAFETY PRECAUTIONS *Please read carefully before assembling and operating your model

- This product is a high-performance radio control model car. Follow the rules and enjoy your drive.
- To enjoy this model to its fullest, prepare the necessary equipment and useful tools for assembly in advance.
- Improper use of batteries in a radio control model car may not only damage the car’s electronics and/or radio, but also cause excessive heat or even fire, resulting in serious accidents.

In order to avoid accidents and personal injury, adhere to following instructions:

Handling of Radio Control Car

This model car can reach very high speeds and cannot be stopped quickly.
Operate your model only in designated areas, race tracks, or other spacious areas.
Be sure to operate the model car safely to avoid serious personal injury, property damage, and unforeseen accidents.

Before Assembling

Before you begin, read the instruction manual thoroughly.
Also read the instruction manuals supplied with the transmitter, ESC, and motor, and understand how to use them beforehand.
Keep out of reach of children.
All tools require careful handling to avoid injury.
Painting must be done only in a well-ventilated area.
Feel free to contact us if you have any questions.

Check Before Operation

Be sure to tighten all screws, nuts, etc. securely and install all parts properly.
Make sure that all movable parts operate smoothly.
Fully charge the batteries of the transmitter and the model.
Turn on the transmitter and then the ESC to check if the steering servo and ESC work properly.
With weak batteries, the transmitter signal and reception may become unstable.
The model may become out of control under such conditions, which may cause serious accidents.
Stop the model car immediately if the signal is interrupted and control is lost.

Cautions During Operation

Always use your car with the body shell mounted.
Do not put fingers or any objects into rotating or moving parts (tires, shafts, gears).
Stop the model car and check immediately if it behaves or sounds unusual.

Do not operate in:

- Crowded places
- Near children
- Near residential areas, schools, or hospitals
- Near roads or railroads
- Indoors or in limited spaces
- At nighttime or early in the morning
- Places where running radio-controlled model cars is prohibited

Cautions after operation

Always switch off the speed controller first, and then the transmitter. The car may lose control if the order is incorrect.
Do not touch the motor, ESC, or battery, as they may be very hot after use.
Failure to do so may cause damage to the battery due to excessive discharge or leakage.
Perform proper maintenance after running to maintain performance, check for damage or wear, and avoid further trouble.
Do not store the model car in hot or humid conditions, or in direct sunlight.

Handling of the battery

Handle the battery with care.
Ensure the plugs are connected firmly.
When using rechargeable batteries, carefully read and follow the instructions provided with the battery and charger.

MUGEN SEIKI CO., LTD.

1395 Takene-cho, Funabashi, Chiba
274-0817, Japan
E-mail : support@mugenseiki.com
www.mugenseiki.co.jp
www.mugenseiki.com

MUGEN SEIKI RACING LTD.

20525 Crescent Bay Drive
Lake Forest, CA 92630, USA
E-mail : support@mugenracing.com
www.mugenracing.com

MSE MUGEN SEIKI Europe Vertriebs GmbH

Auf'm Wasserkamp 3
45881 Gelsenkirchen
E-mail : mugen.eu
www.mugen.eu