

MUGEN
SEIKI



1/8TH SCALE 4WD NITRO POWERED RACE CAR

Rev.2601

ITEMS REQUIRED FOR OPERATION

- 2CH RADIO SET FOR RC CAR (TRANSMITTER, RECEIVER, SERVO 2pcs.)
- MOTOR & EXHAUST
- BATTERIE FOR RECEIVER
- CHARGER
- BODYSHELL (1/8 onroad)
- TIRES
- SERVO HORN

TOOLS REQUIRED

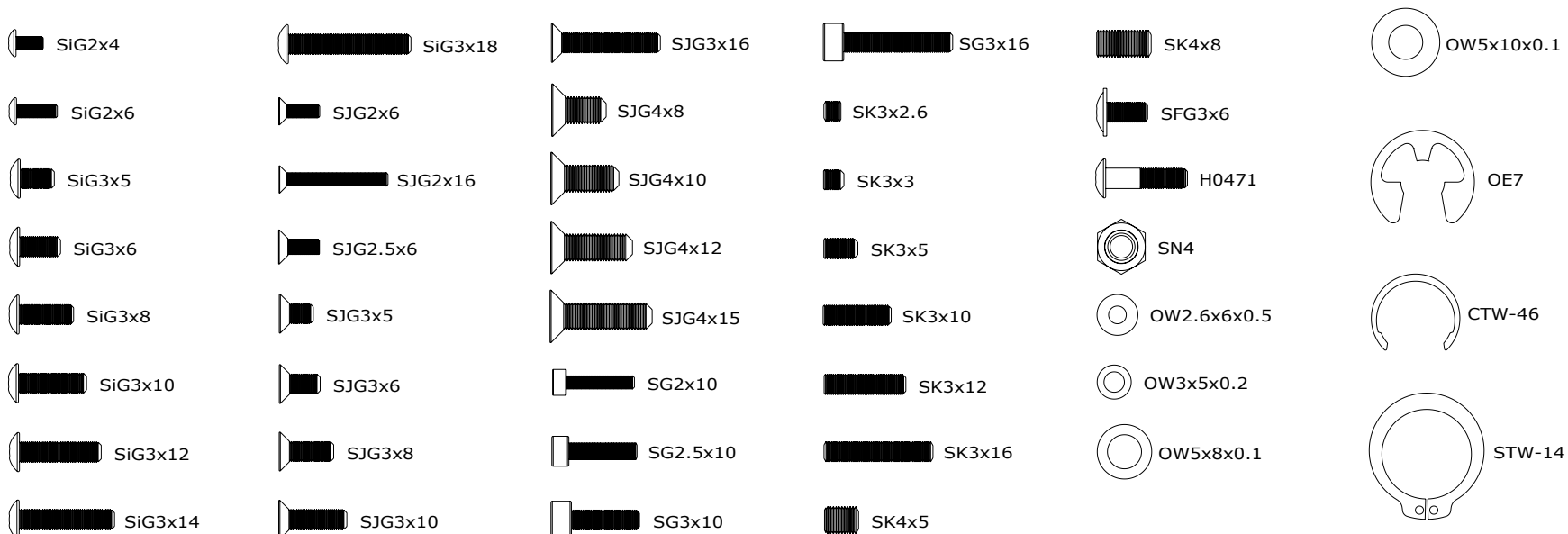
- HEXAGON WRENCHES (1,5mm/2mm/2,5mm)
- NEEDLE NOSE PLIERS
- WIRE CUTTERS
- SHARP HOBBY KNIFE
- SCISSORS
- VERNIER CALIPERS
- INSTANT GLUE
- TURNBUCKLE WRENCH

SYMPOLS EXPLAINED



SCREW CHART

THESE ARE THE ACTUAL SIZES OF THE SCREWS & OTHER HARDWARE INCLUDED WITH THIS KIT



SiG3x8 8pcs.

SiG3x14 2pcs.

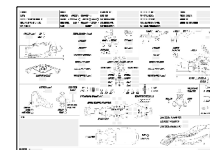
SK3x3 2pcs.

SiG3x12 2pcs.

SK4x8 2pcs.



Always use your selected setup
with this symbol to incorporate
the correct values & positions



Bag
A1

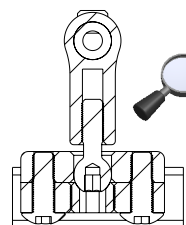
Do not tighten
(it will follow on page 7)

T2158

A2802C

H2118D

T2116



Cutaway view

SK4x8

H2118C

L
Front

H0108B

H2127B

T2117

SiG3x8

H2127A

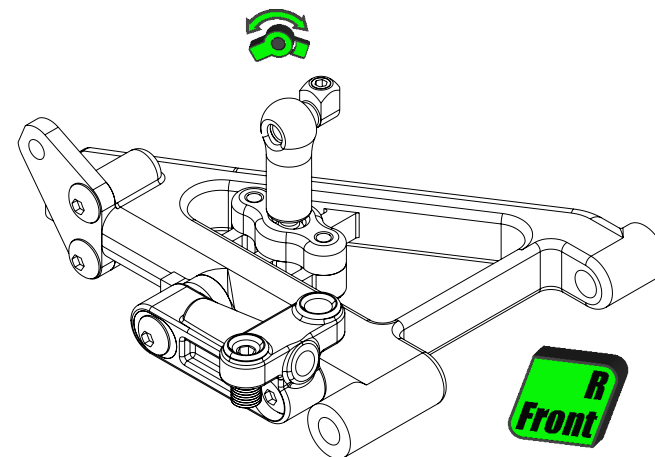
SiG3x12

H2179

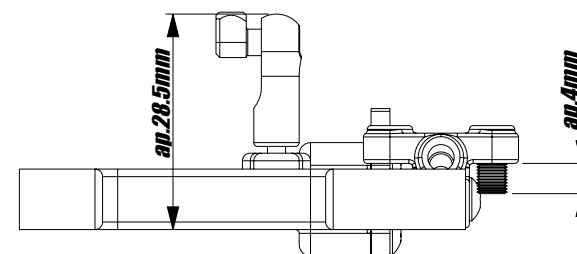
SiG3x8

H2127C

SiG3x14



R
Front



MRX7
1/18th SCALE 4WD NITRO POWERED RACE CAR

SiG2x4 4pcs.

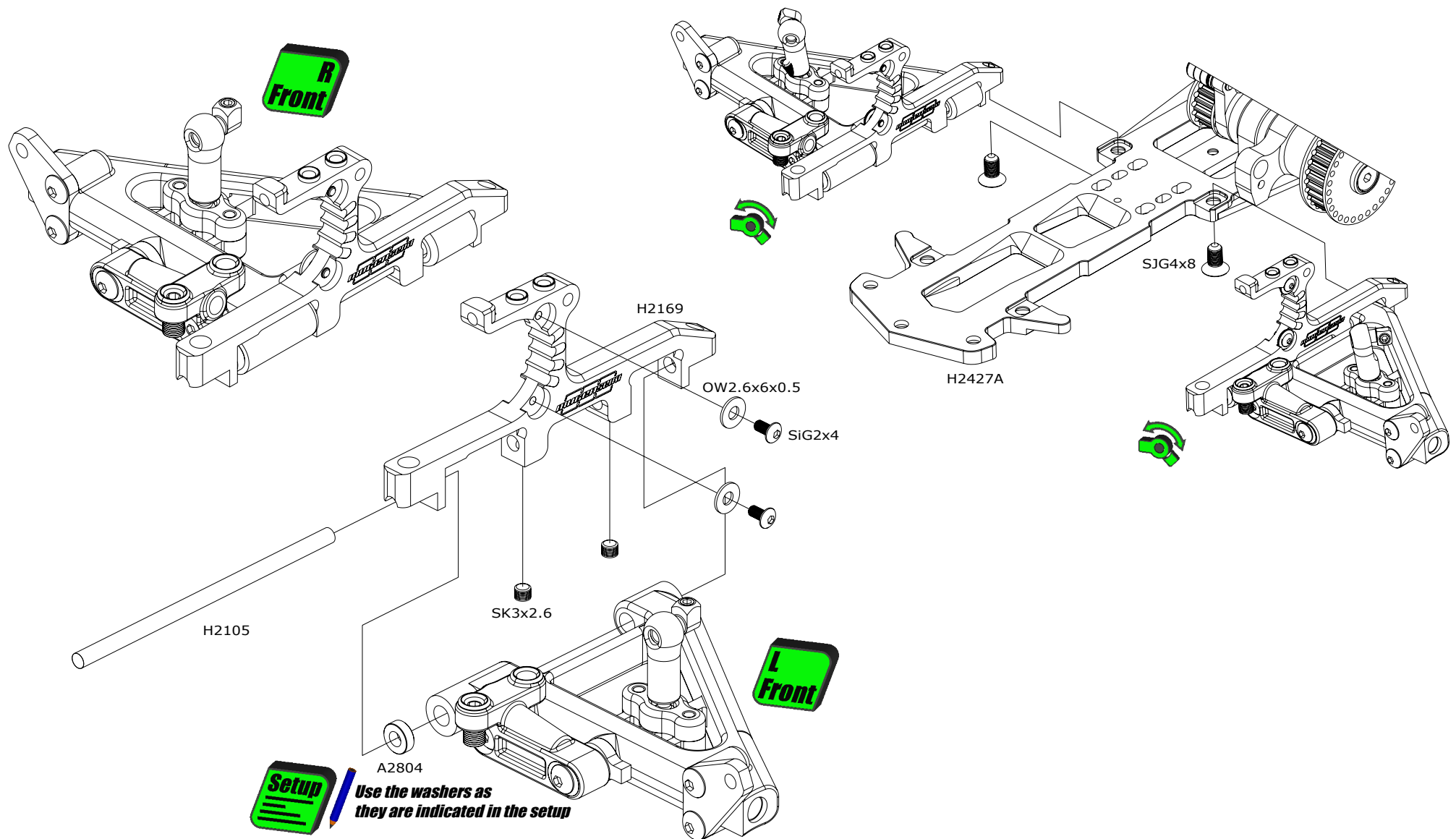
SJG4x8 2pcs.

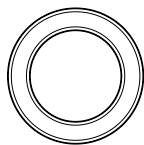
SK3x2.6 4pcs.

OW2.6x6x0.5 4pcs.

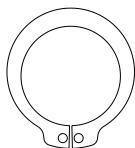
A2804 (2mm) 2pcs.

Bag
A1





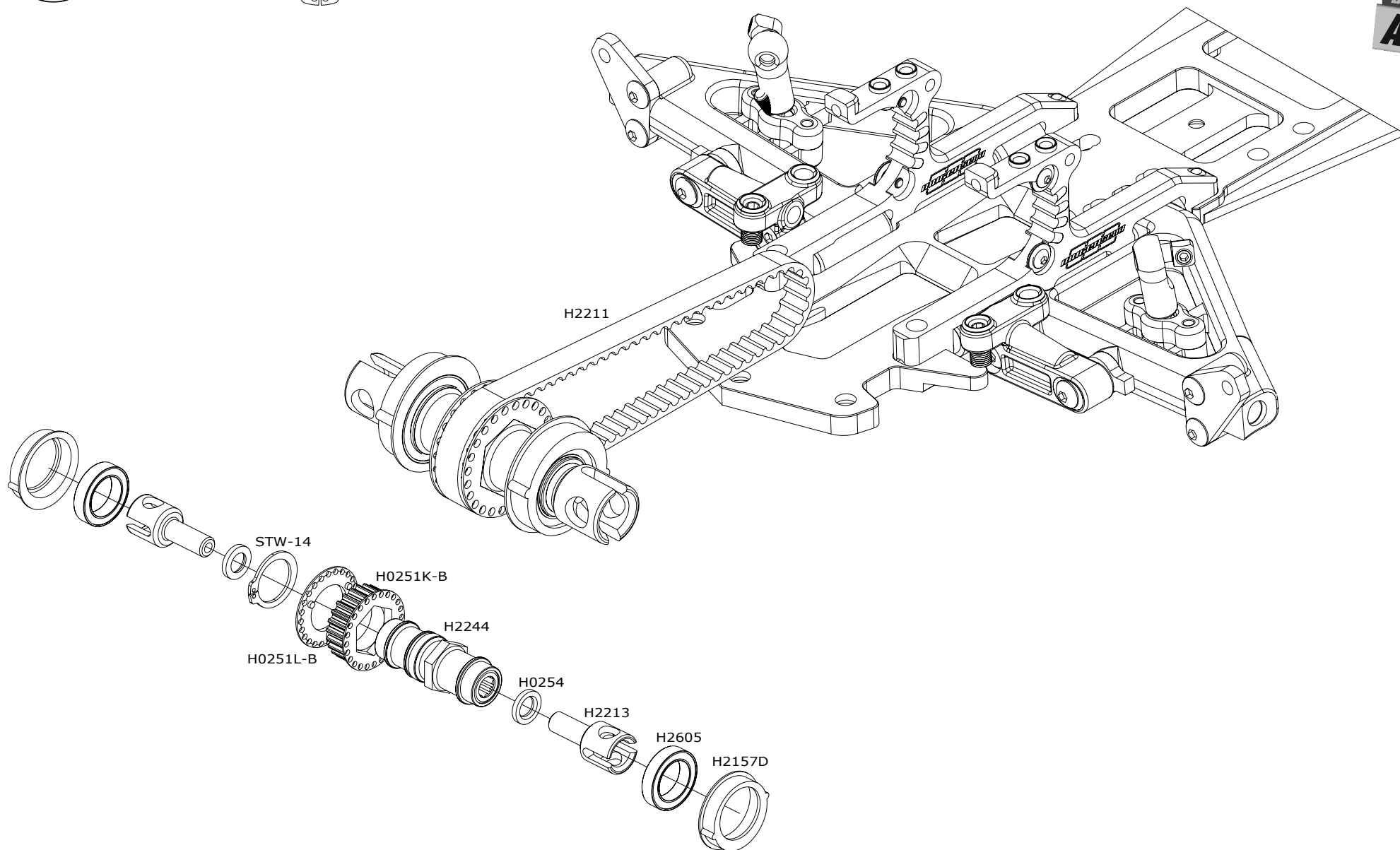
H2605 2pcs.
(bearing 12x18x4)



STW-14 1pc.

Bag
A₁

Bag
A₂



SiG2x4 6pcs.

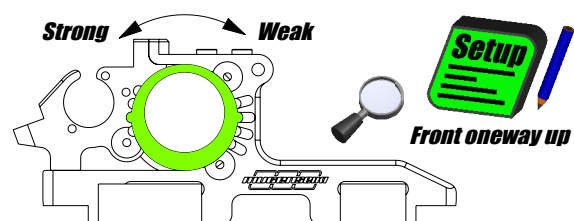
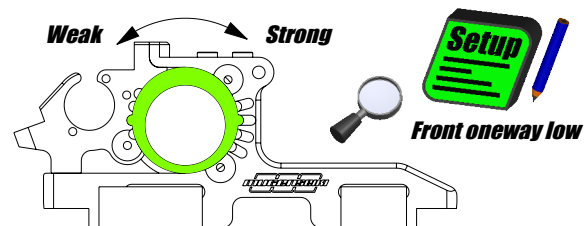
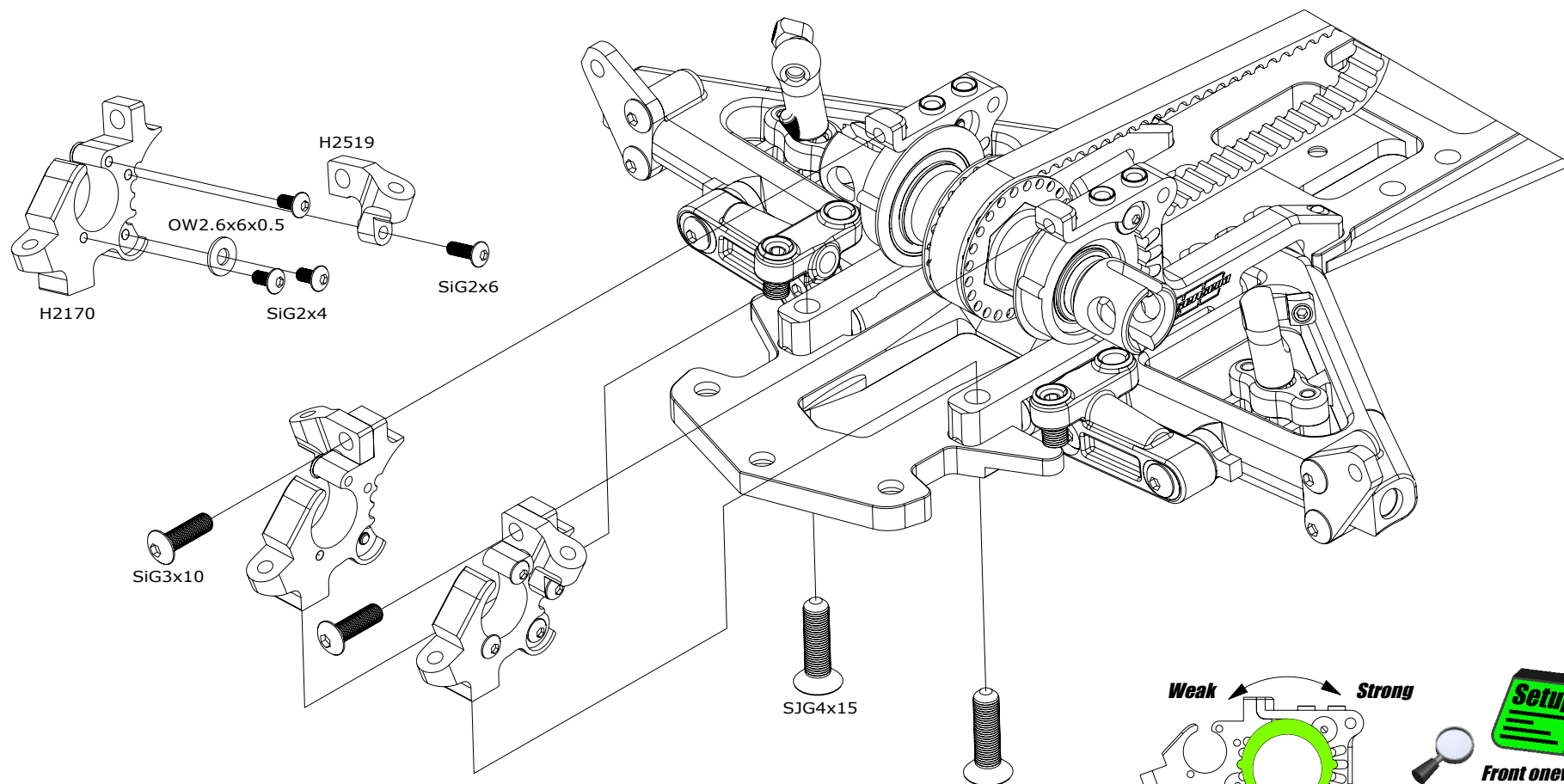
SiG2x6 2pcs.

SiG3x10 2pcs.

SJG4x15 2pcs.

OW2.6x6x0.5 2pcs.

Bag
A1

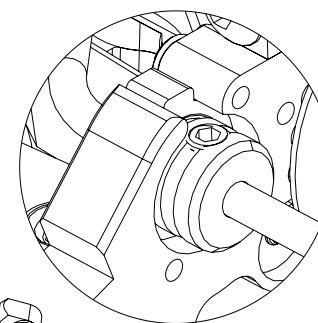
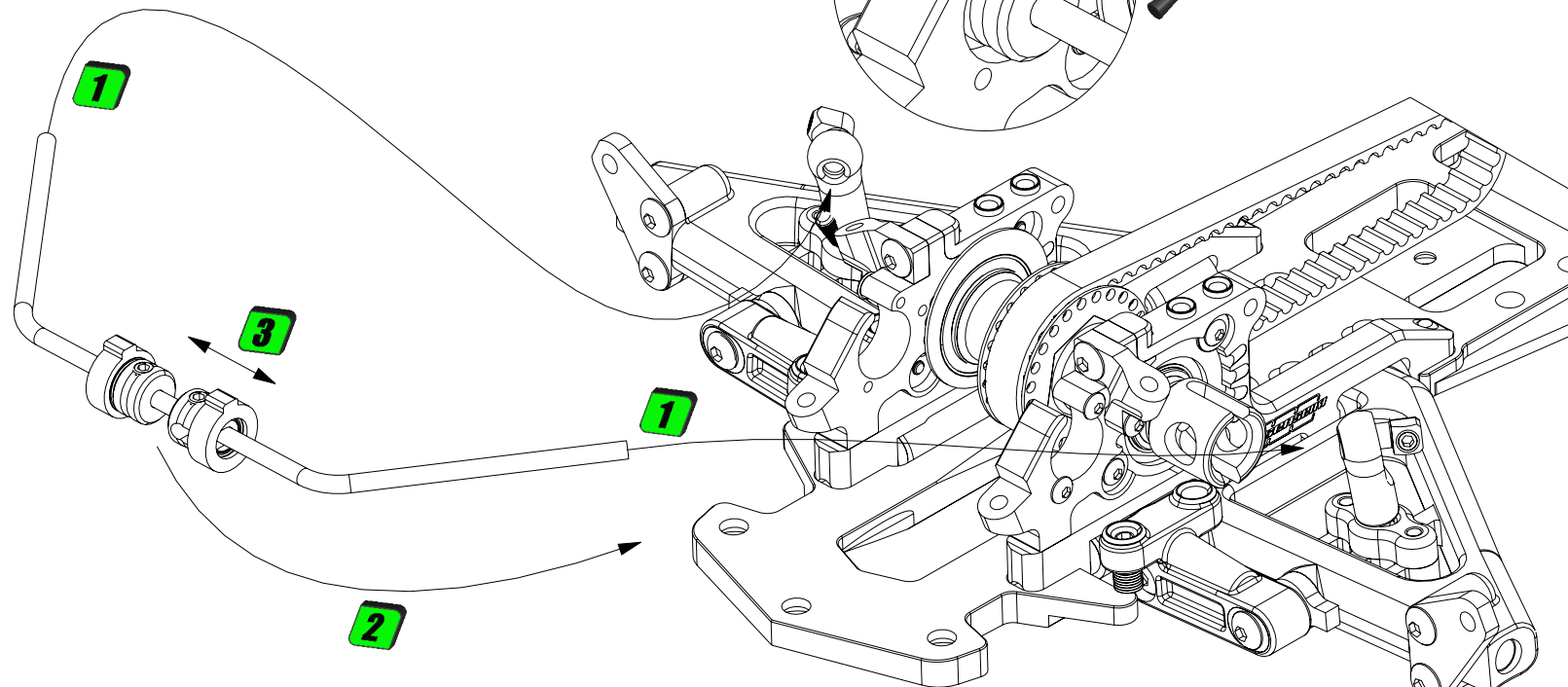
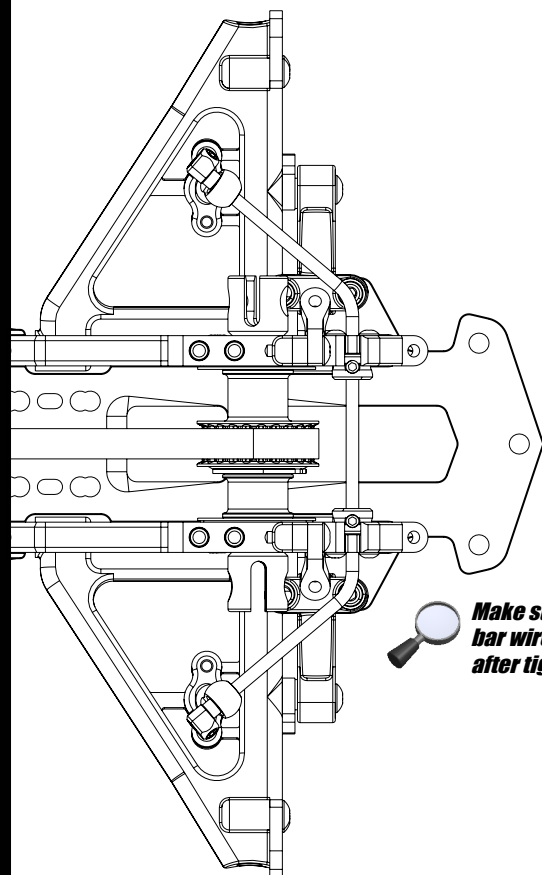
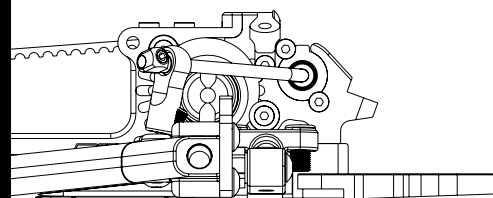


MRX7
1/18TH SCALE 4WD NITRO POWERED RACE CAR

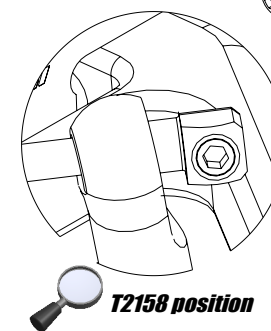
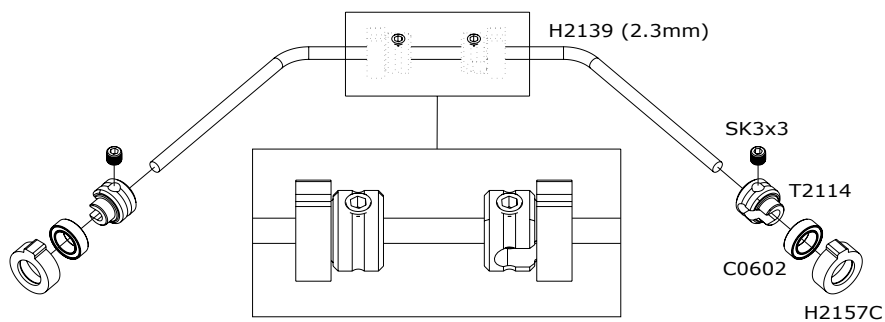
■ SK3x3 2pcs.

○ C0602 2pcs. (bearing 5x8x2.5)

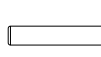
Bag
A1



Set screw position

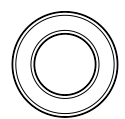


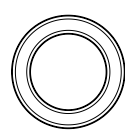
MRX7
1/18TH SCALE 4WD NITRO POWERED RACE CAR

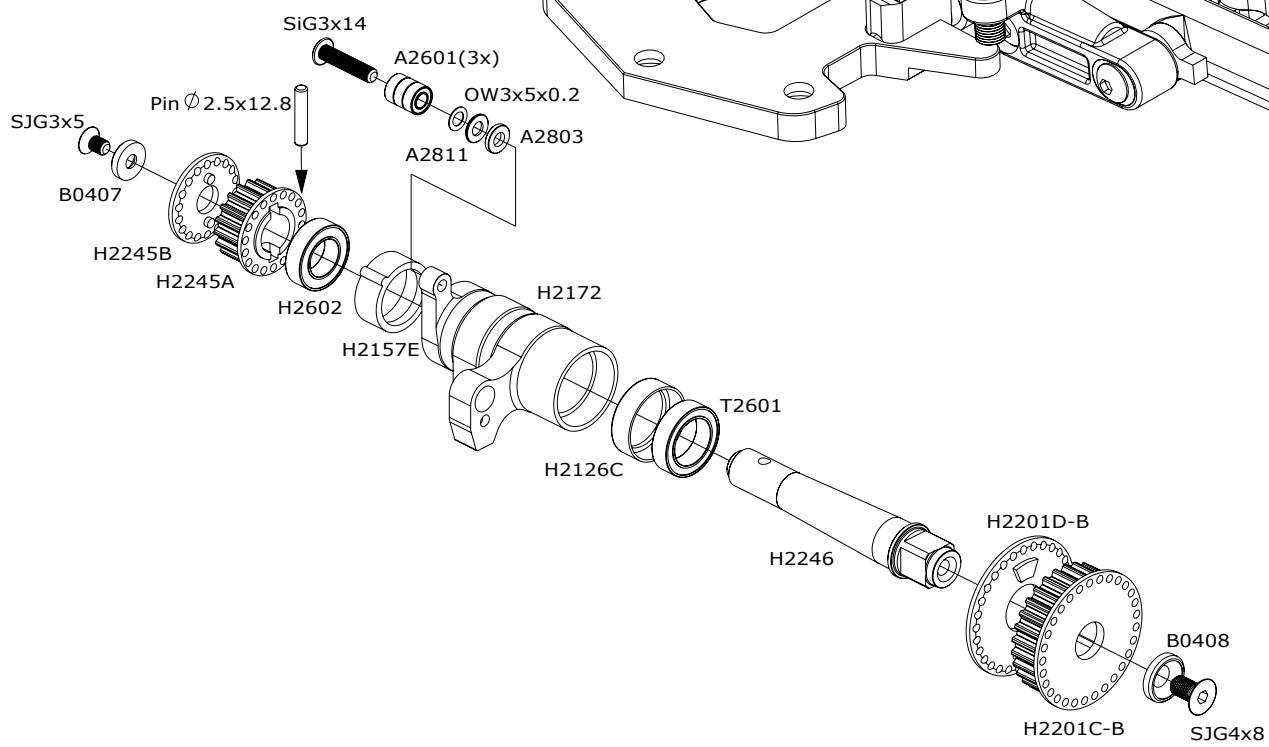
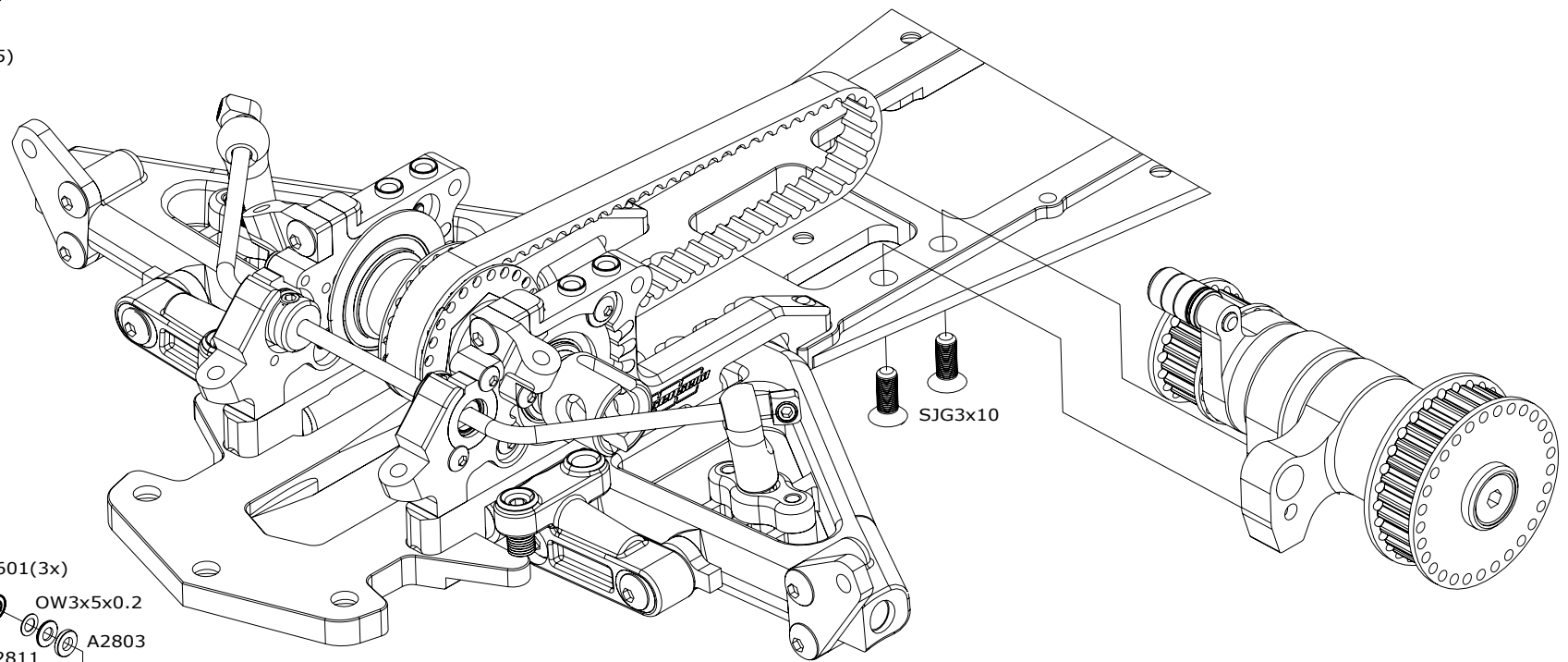
 SiG3x14 1pc.
  SJG3x5 1pc.
  SJG3x10 2pcs.
  SJG4x8 1pc.
  OW3x5x0.2 1pc.
  Pin $\varnothing$ 2.5x12.8 1pc.

 A2803 (1mm) 1pc.
  A2811 (0.5mm) 1pc.

 A2601 3pcs. (bearing 3x6x2.5)

 H2602 1pc.
(bearing 8x14x4)

 T2601 1pc.
(bearing 10x15x4)



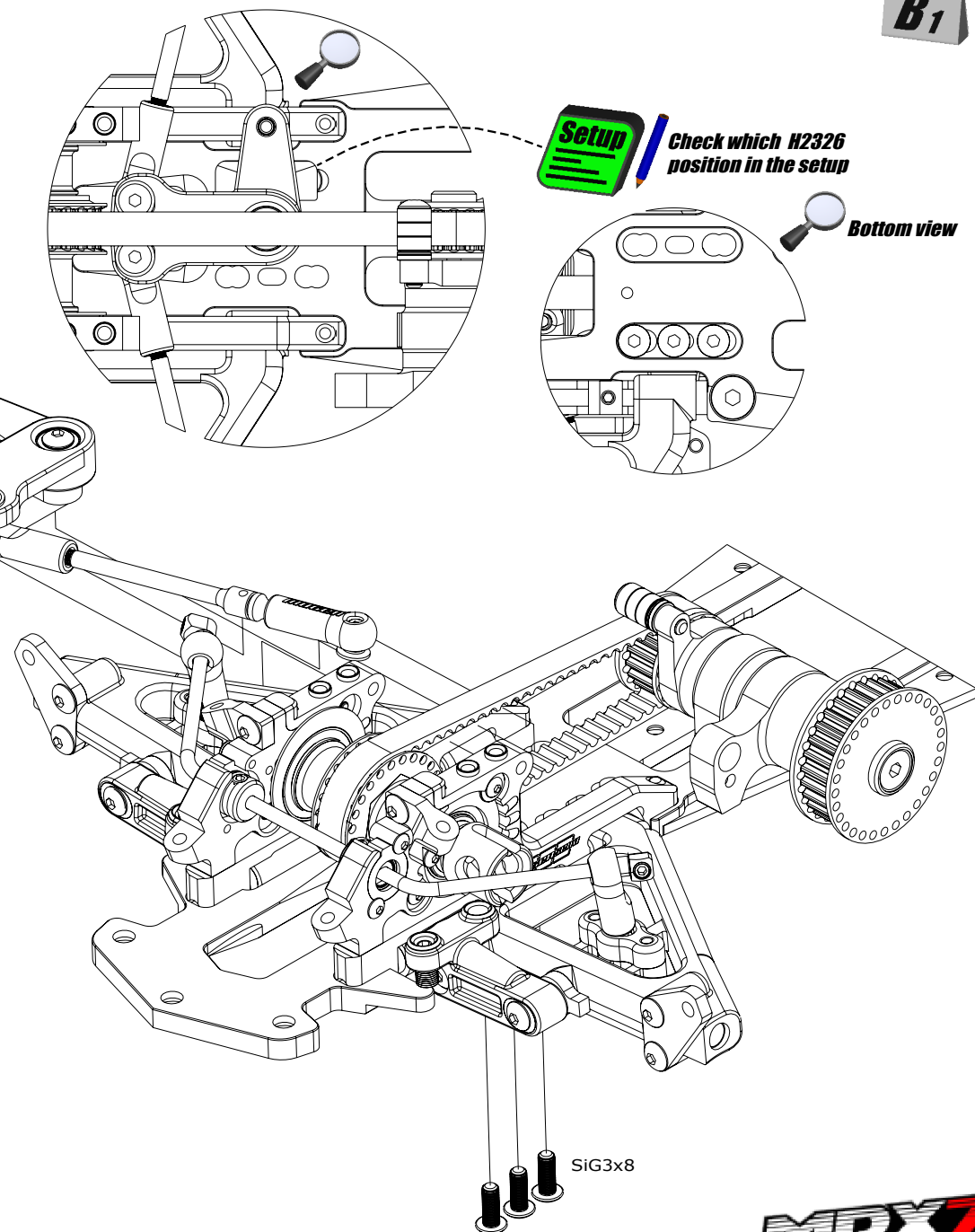
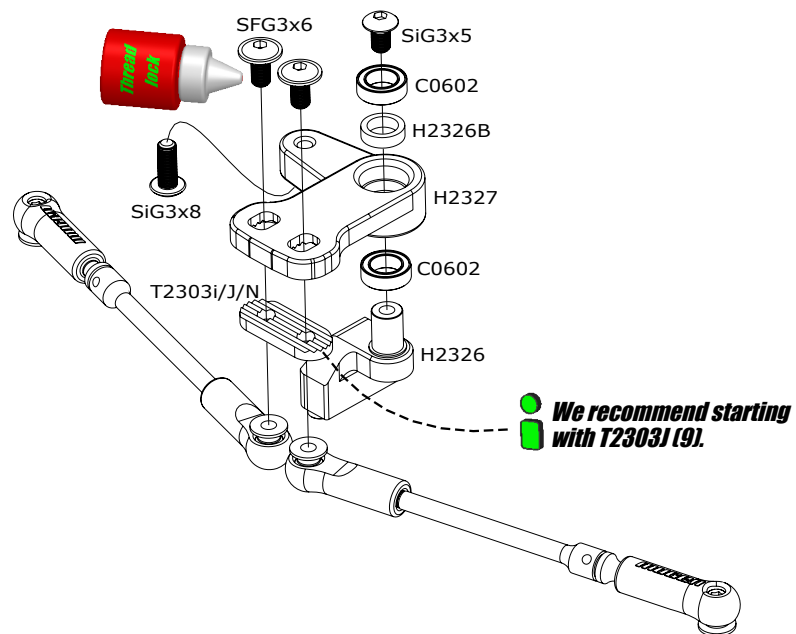
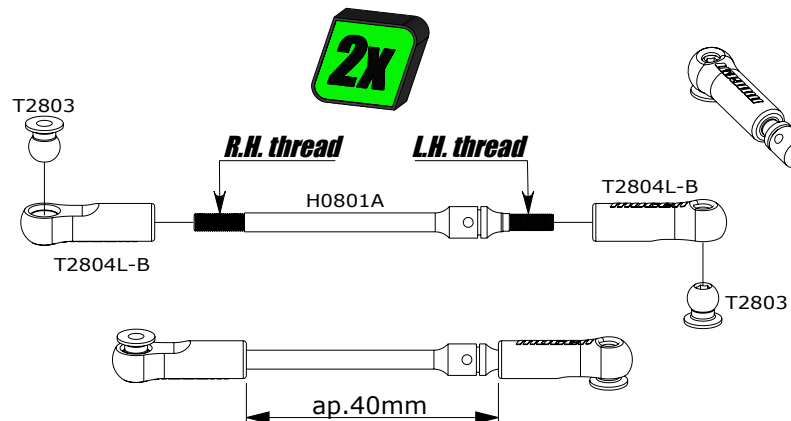
SiG3x5 1pc. SiG3x8 4pcs. SFG3x6 2pcs.

C0602 2pcs. (bearing 5x8x2.5)

Bag
B1

Setup Check which H2326 position in the setup

Bottom view



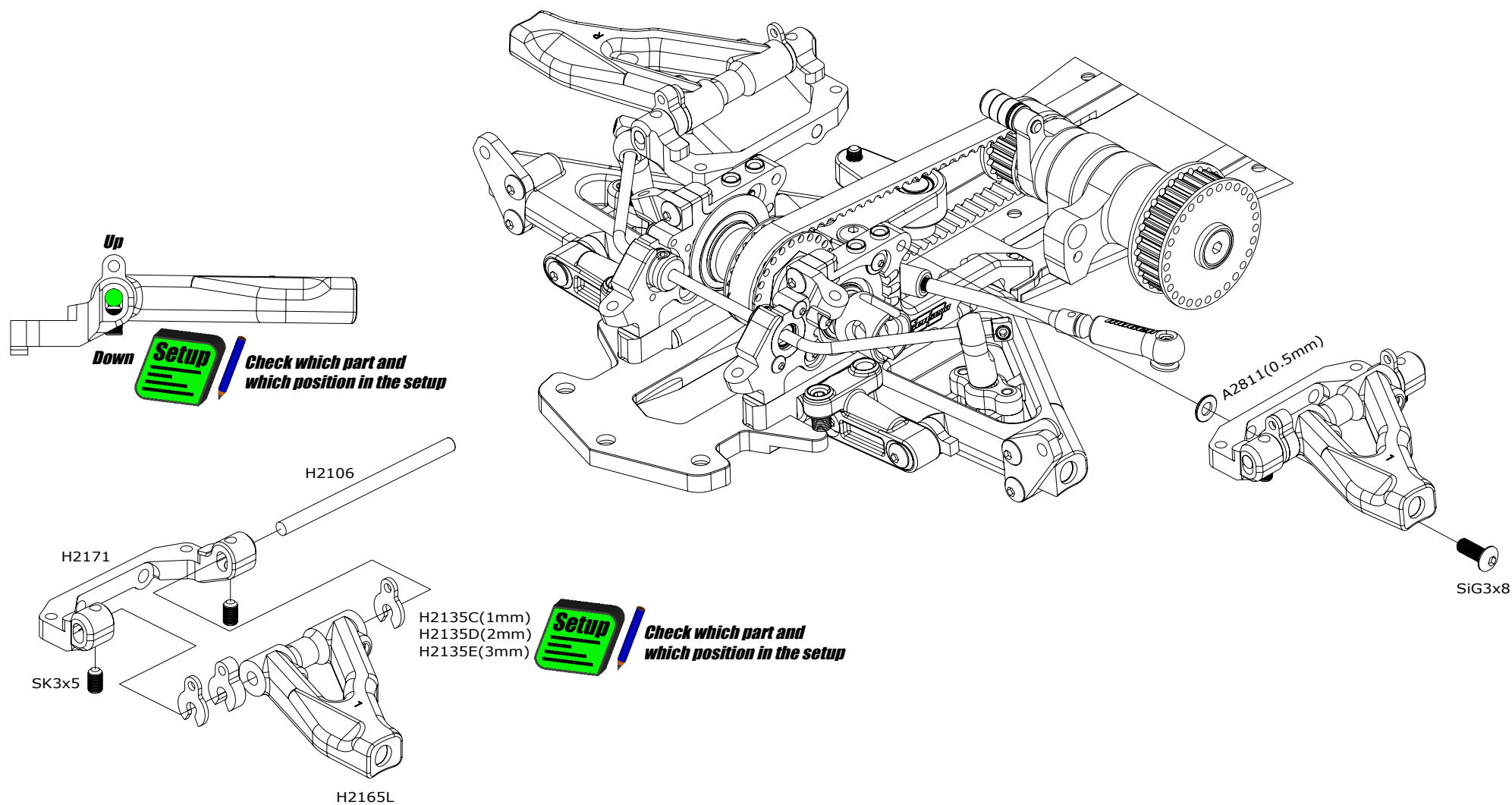
MRX7
1/10TH SCALE 4WD NITRO POWERED RACE CAR

 SiG3x8 2pcs.

 SK3x5 4pcs.

 A2811 (0.5mm) 2pcs.

Bag
B1



SiG3x18 1pc.

SJG3x6 4pcs.

SJG3x8 2pcs.

SJG4x10 2pcs.

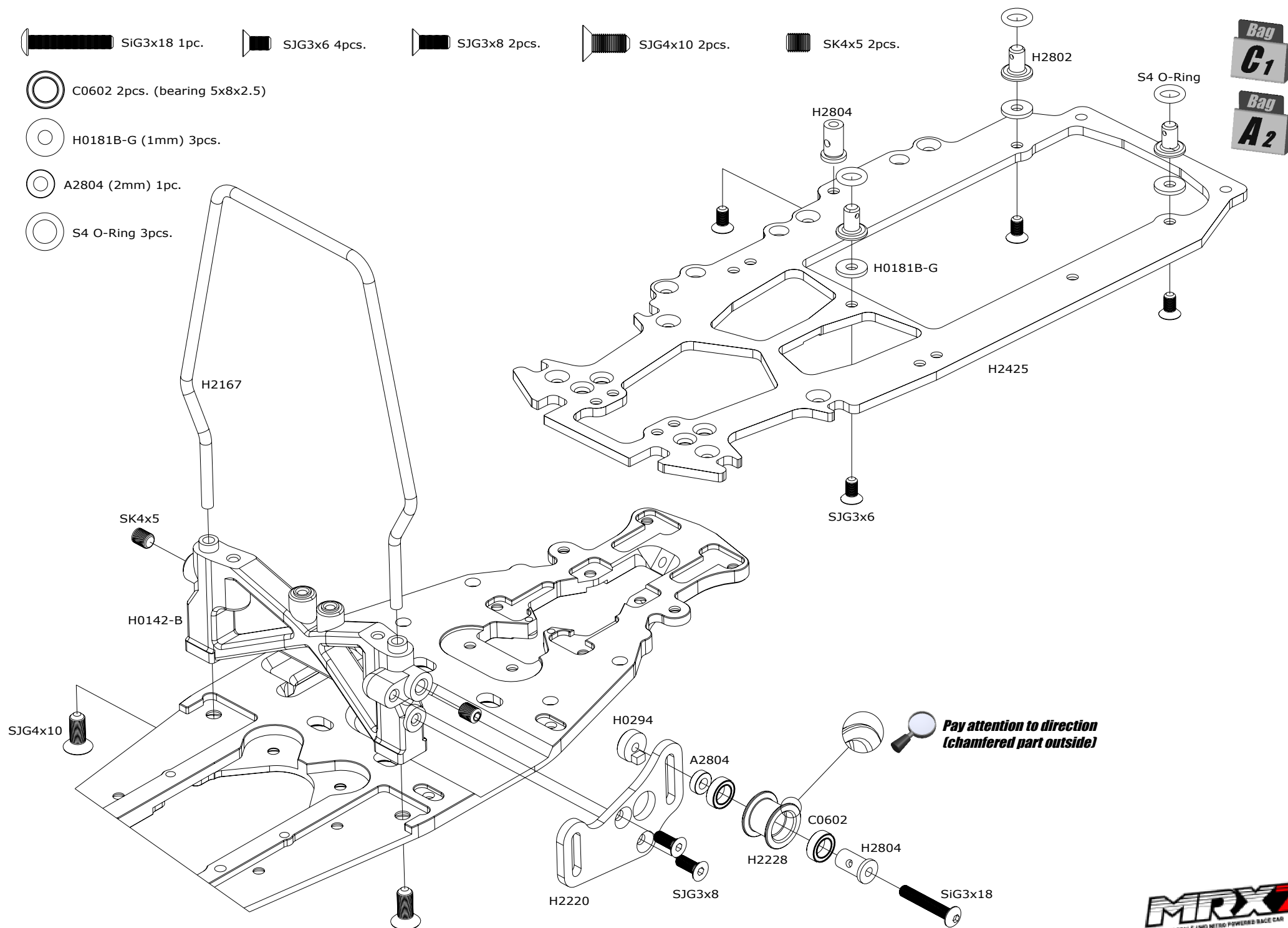
SK4x5 2pcs.

C0602 2pcs. (bearing 5x8x2.5)

H0181B-G (1mm) 3pcs.

A2804 (2mm) 1pc.

S4 O-Ring 3pcs.



SiG3x8 1pc.

SiG3x10 4pcs.

SiG3x14 4pcs.

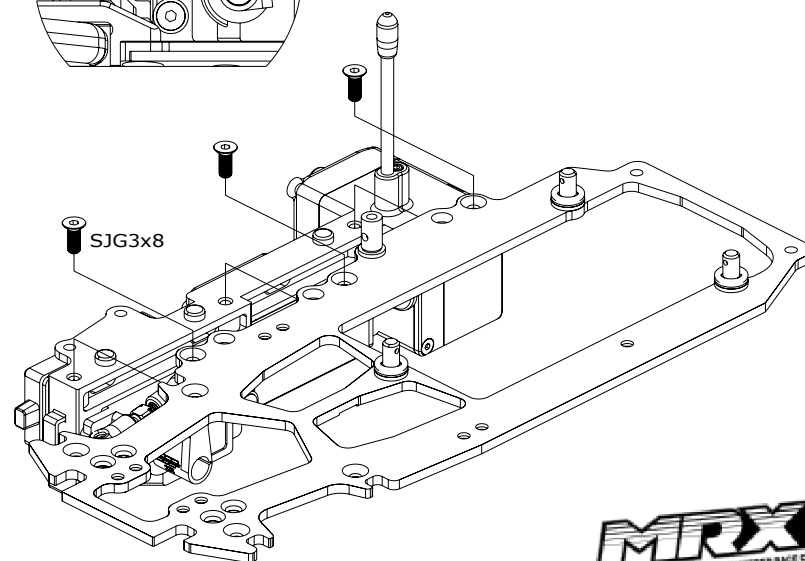
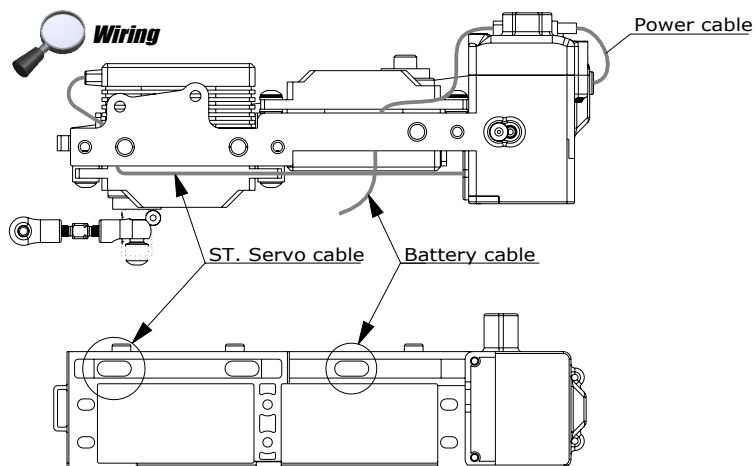
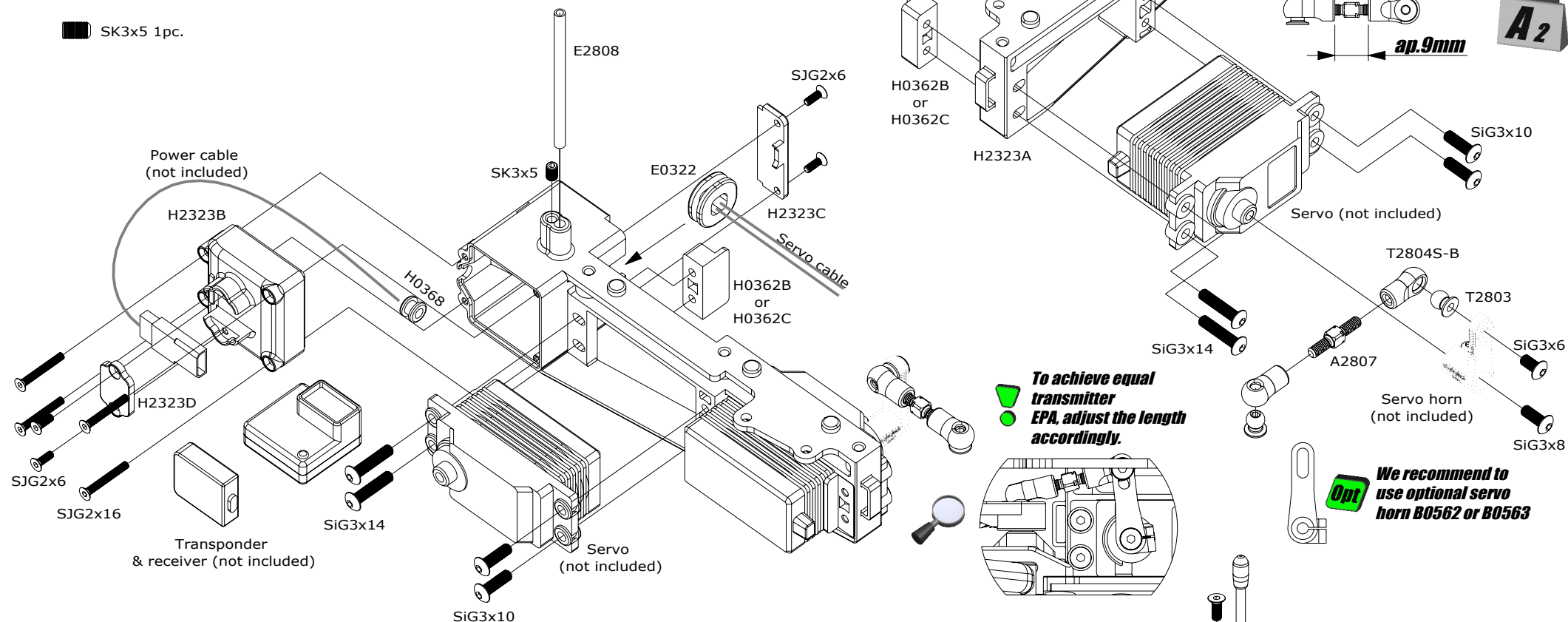
SJG3x8 3pcs.

SJG2x6 4pcs.

SJG2x16 4pcs.

B0432

SK3x5 1pc.

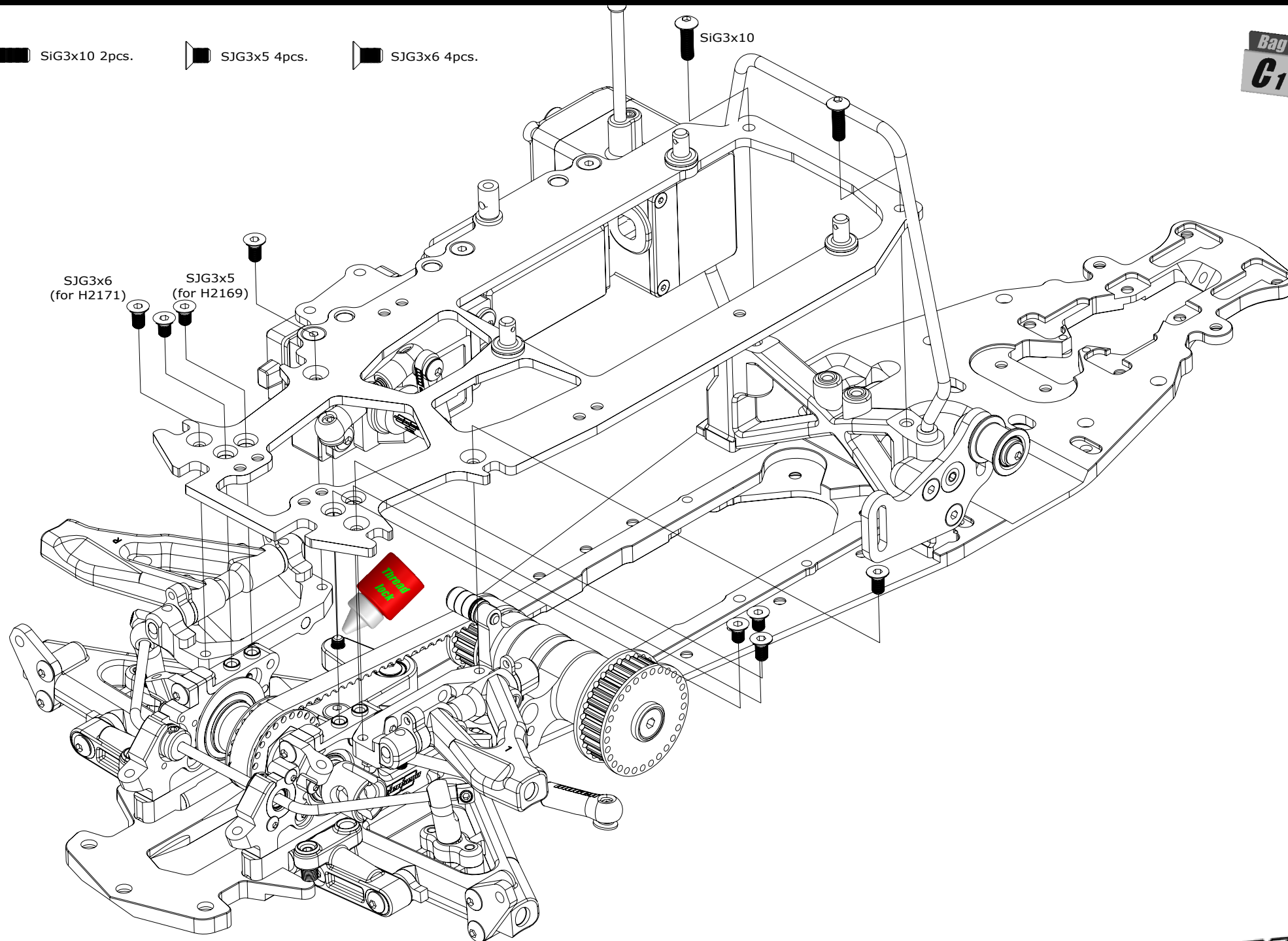


SiG3x10 2pcs.

SJG3x5 4pcs.

SJG3x6 4pcs.

Bag
C1

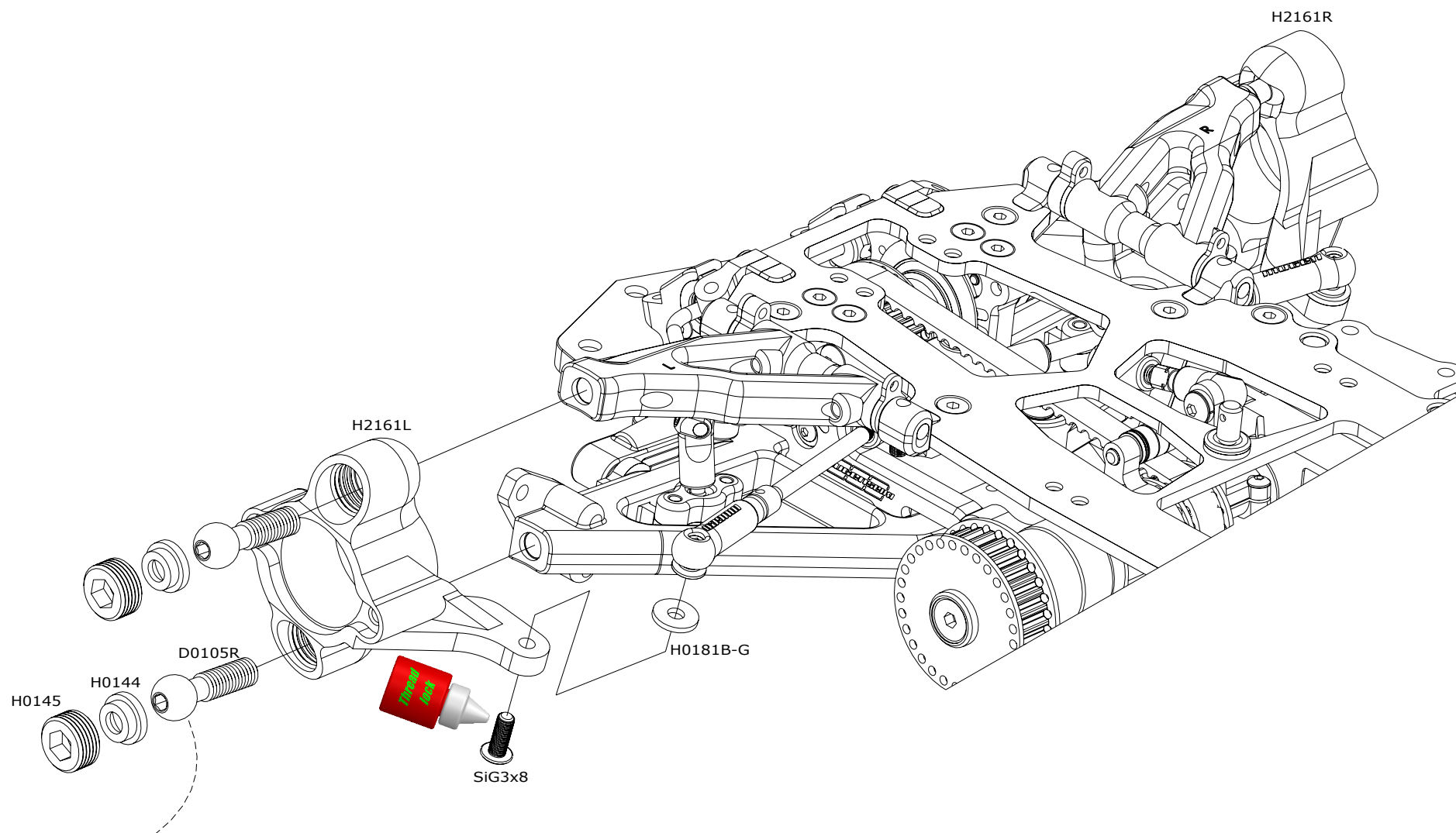


MRX7
1/10TH SCALE 4WD NITRO POWERED RACE CAR

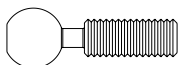
 SiG3x8 2pcs.

 H0181B-G (1mm) 2pcs.

Bag
C1



 Use T2159 for more steering angle



MRX7
1/10TH SCALE 4WD NITRO POWERED RACE CAR

SiG2x4 6pcs.

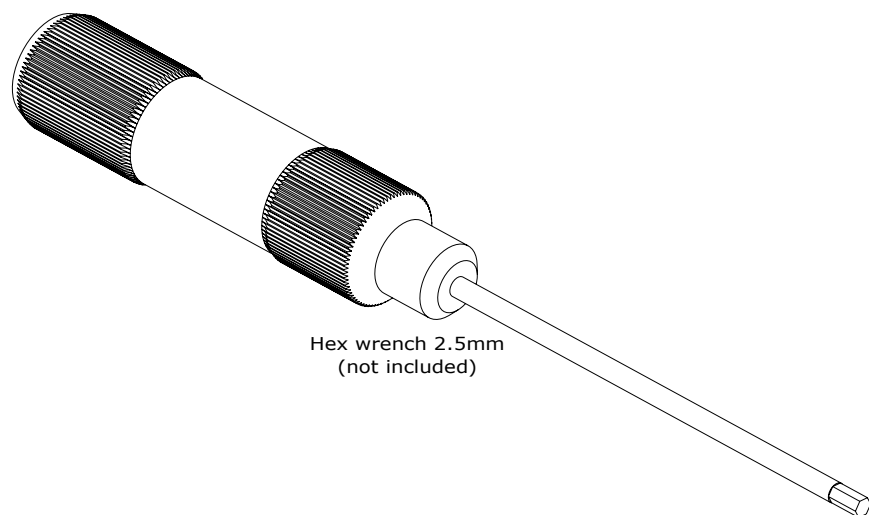
SiG3x6 1pc.

SiG3x10 2pcs.

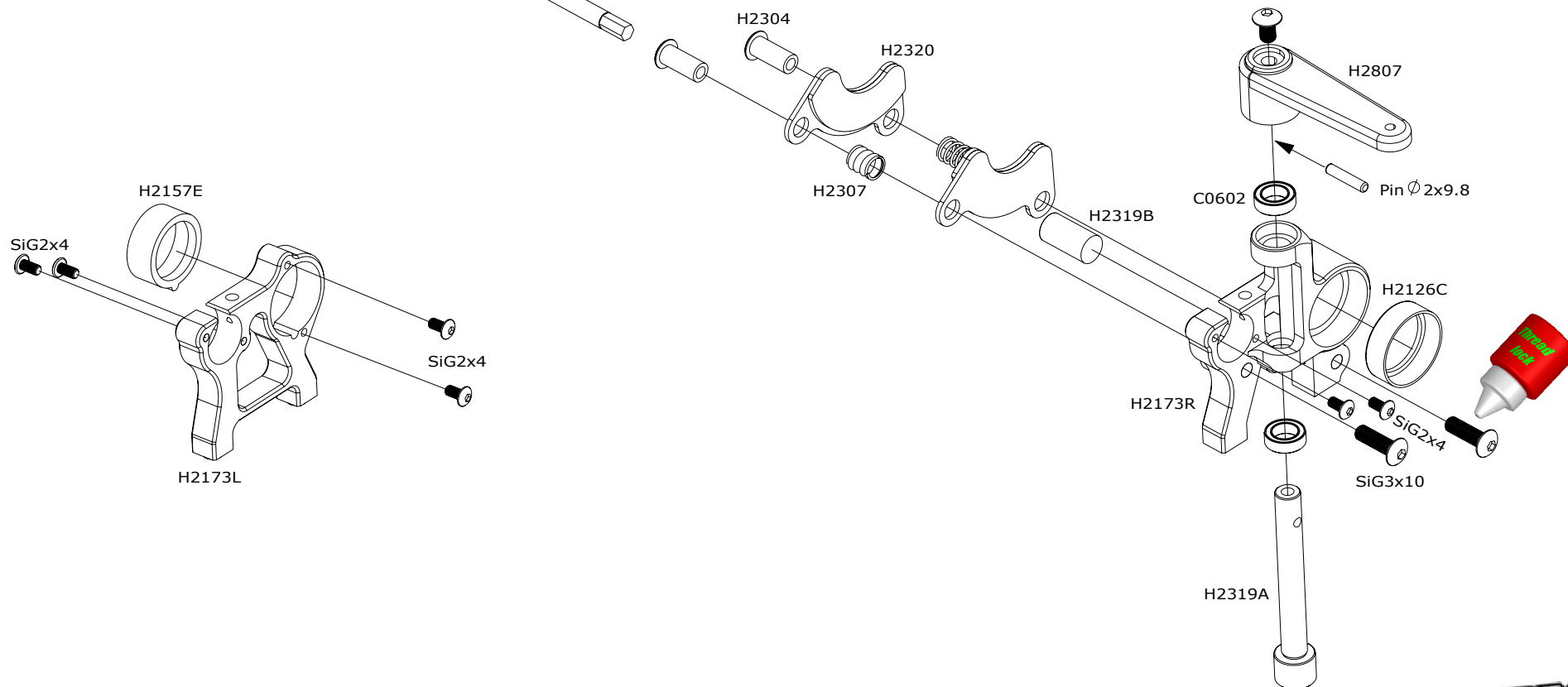
C0602 2pcs. (bearing 5x8x2.5)

Pin $\varnothing$ 2x9.8 1pc.

Bag
D1



Hex wrench 2.5mm
(not included)



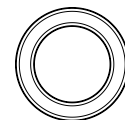
MRX7
1/18TH SCALE 4WD NITRO POWERED RACE CAR

 SJG3x10 4pcs.

 SG3x10 1pc.

 SK3x3 2pcs.

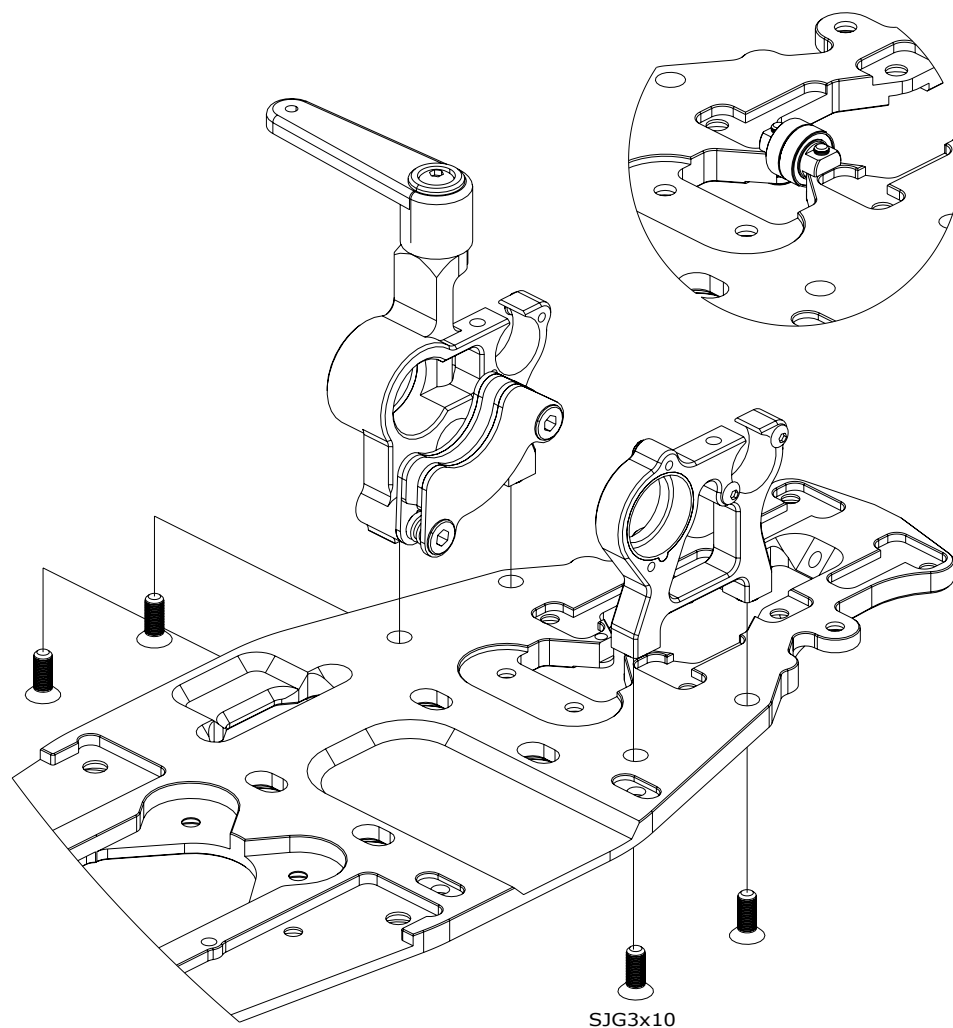
 SG2.5x10 2pcs.

 T2601 1pc.
(bearing 10x15x4)

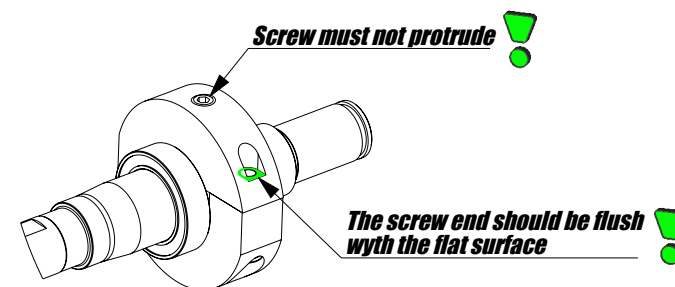
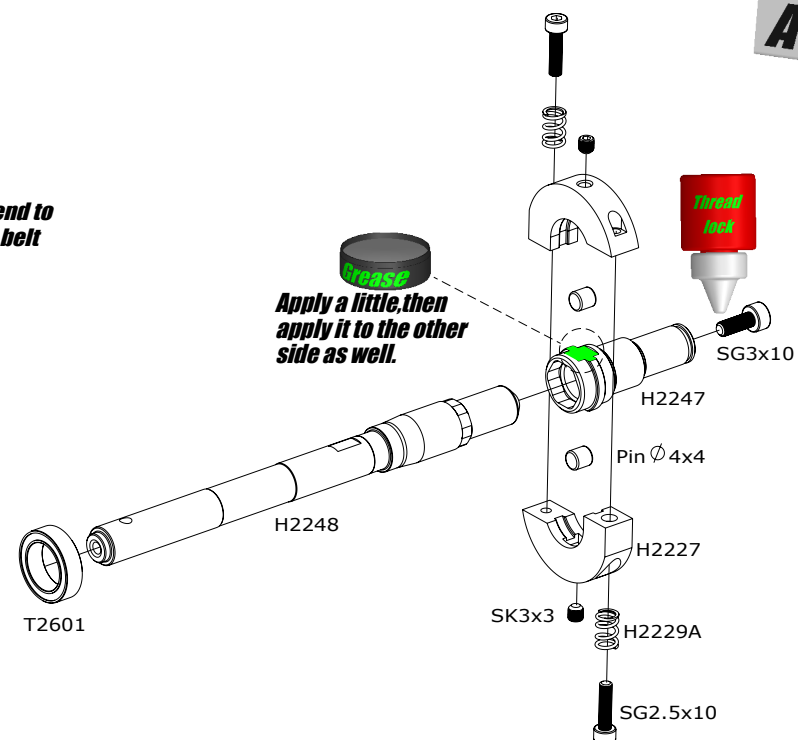
 Pin $\varnothing$ 4x4 2pcs.

Bag
D₁

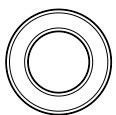
Bag
A₂



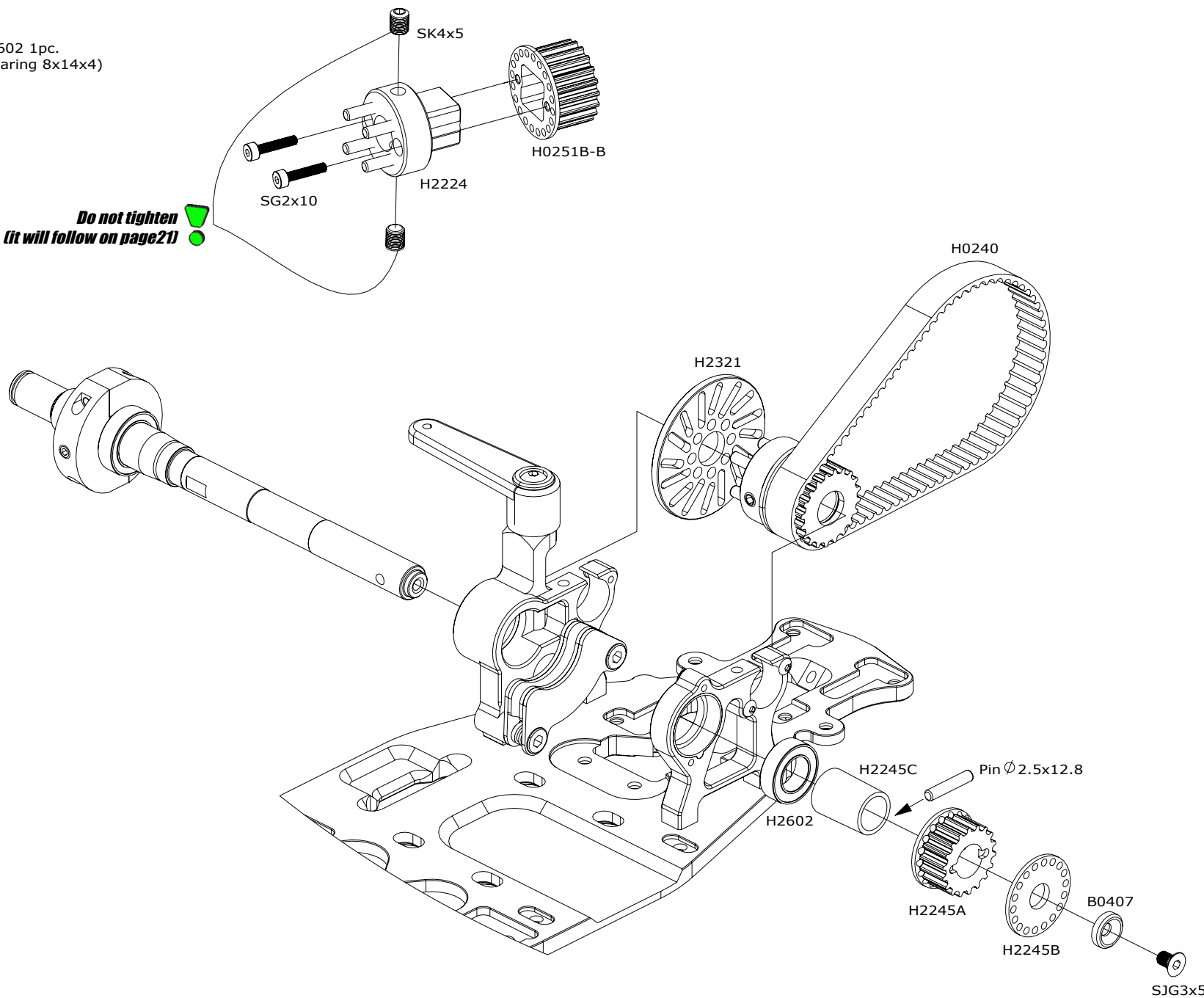
 We recommend to
use optional belt
guide H2251



 SJG3x5 1pc.
  SiG2x10 2pcs.
  SK4x5 2pcs.
  Pin Ø2.5x12.8 1pc.

 H2602 1pc.
 (bearing 8x14x4)

Do not tighten
(it will follow on page21)



Bag
D₁
 Bag
A₂

MRX7
 1/18TH SCALE 4WD NITRO POWERED RACE CAR

SiG3x6 2pcs.

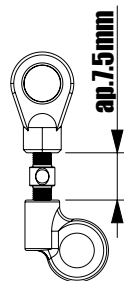
SiG3x8 8pcs.

SFG3x6 2pcs.

SK4x8 2pcs.

Bag
E1

Bag
A2



Rear
R

SK4x8

SiG3x8

H2506

E0829

H0858

R.H. thread

H2178

L.H. thread

H2177

SiG3x6

H2159-B

T2805

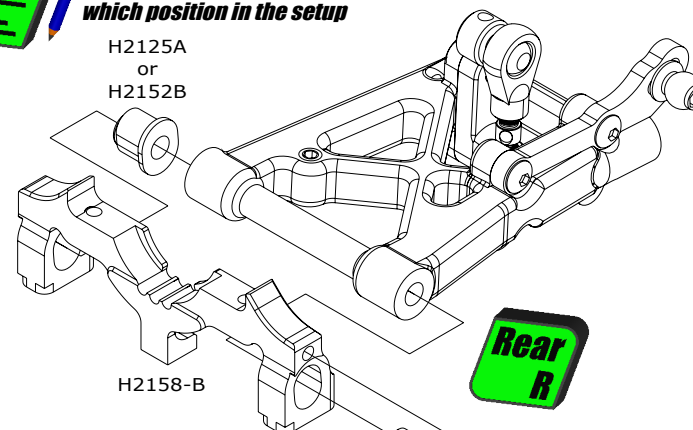
SiG3x8

H2123-C

Setup

Check which part and
which position in the setup

H2125A
or
H2152B



Rear
R

H2158-B

D0104R

H2125C
or
H2152D

SFG3x6

Setup

Check which part and
which position in the setup

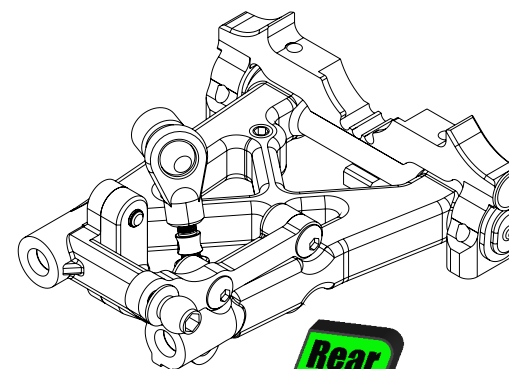


Setup

Check which part and
which position in the setup

Rear
L

The ARB linkage can be adjusted
from below with a 1.5mm hex. wrench



Rear
L

MRX7
1/18th Scale 4WD Nitro Powered Race Car

SiG3x5 2pcs.

SiG3x8 2pcs.

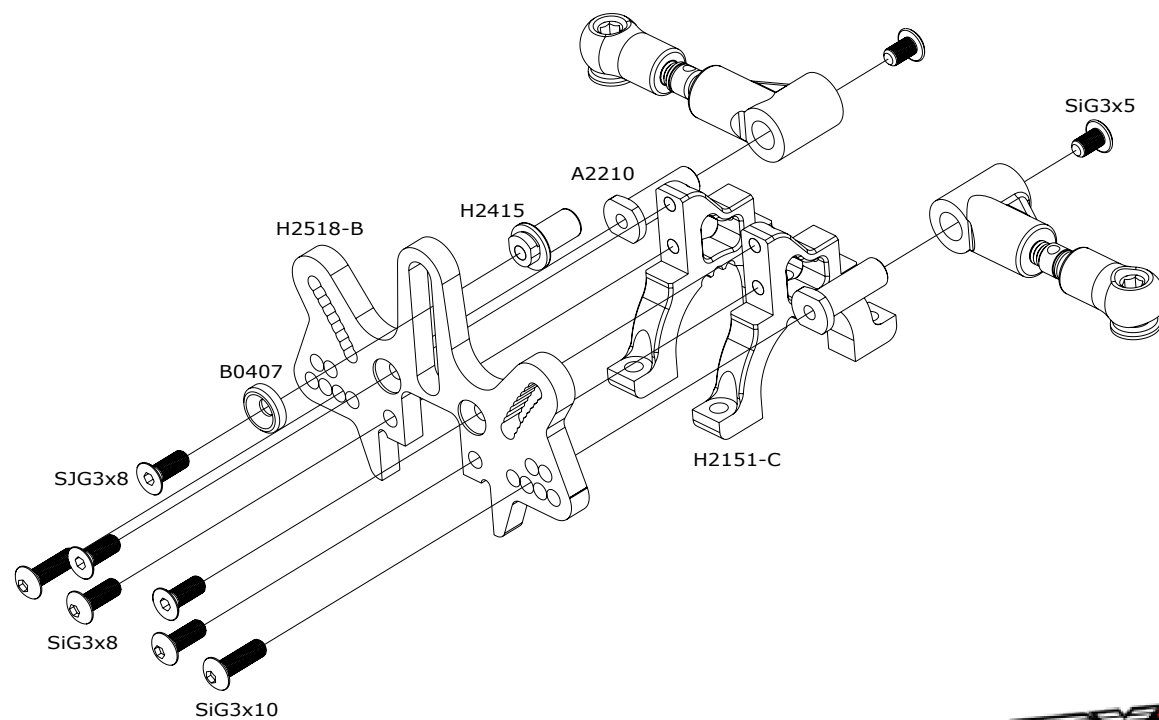
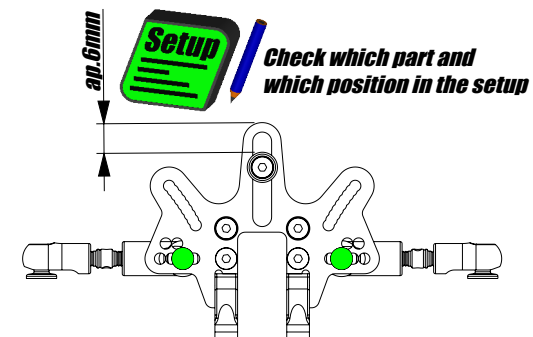
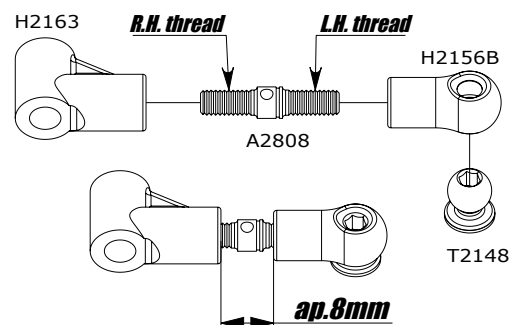
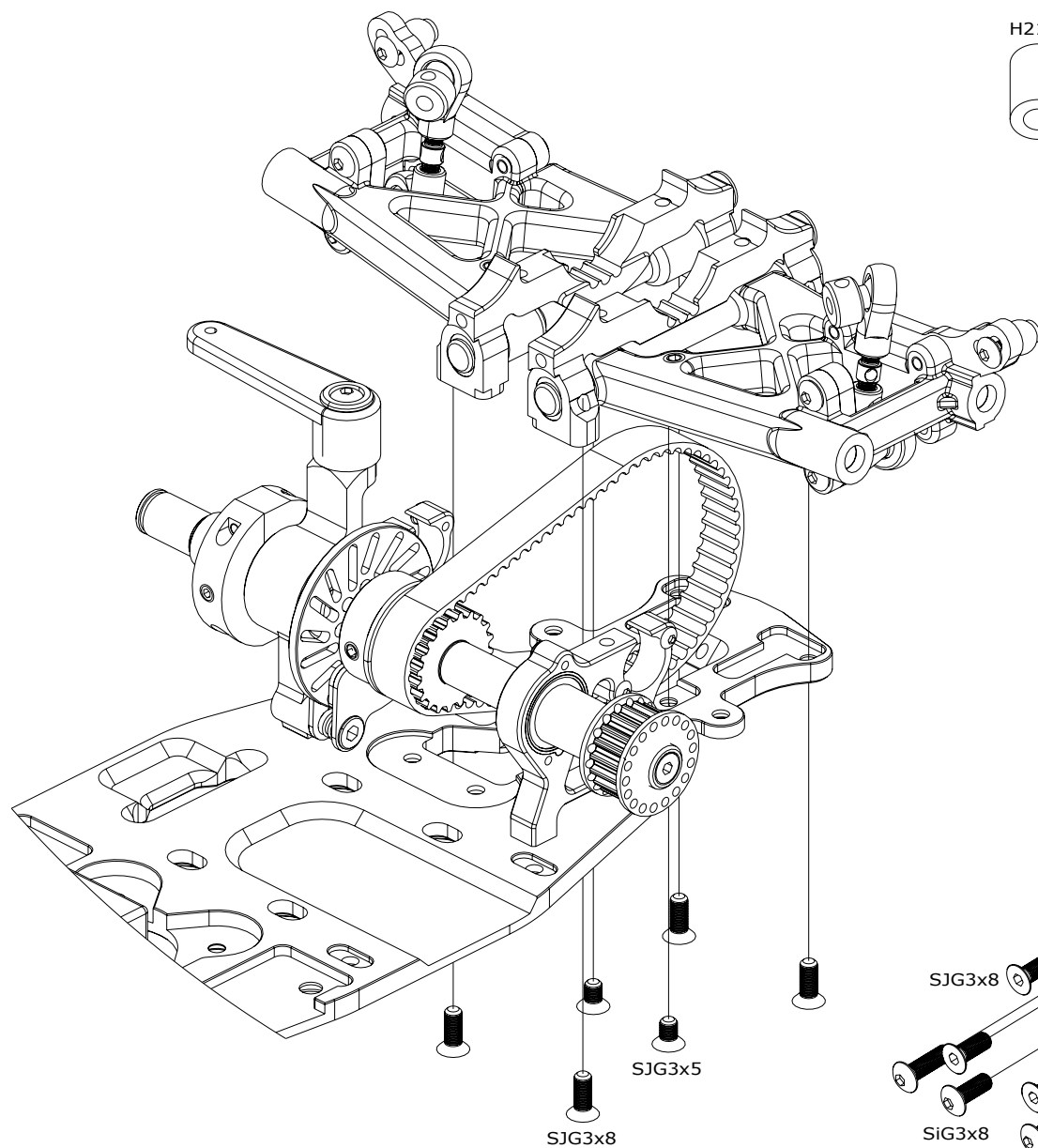
SiG3x10 2pcs.

SJG3x5 2pcs.

SJG3x8 7pcs.

Bag
E₁

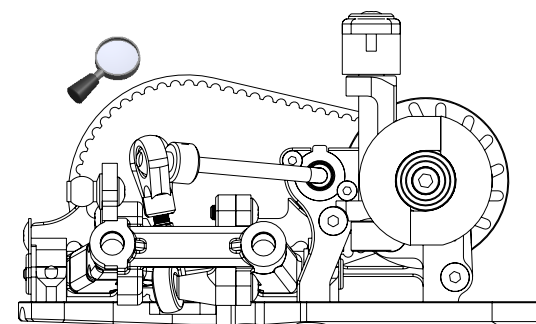
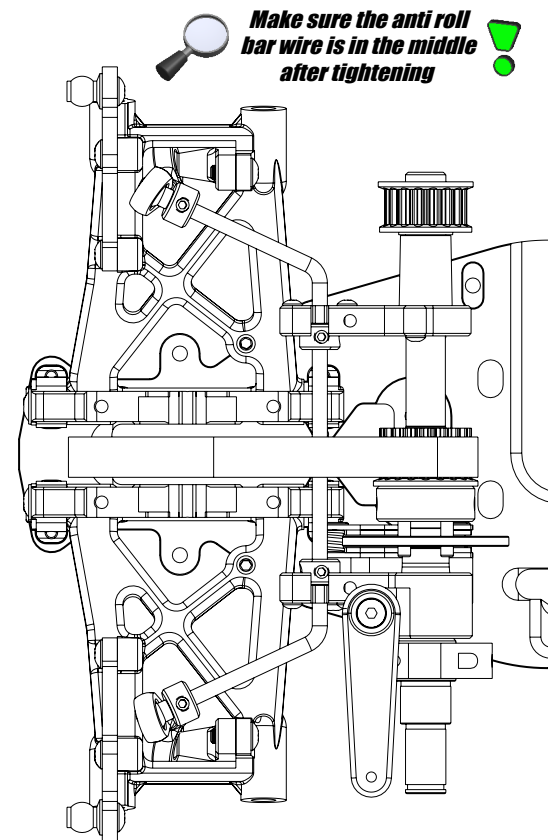
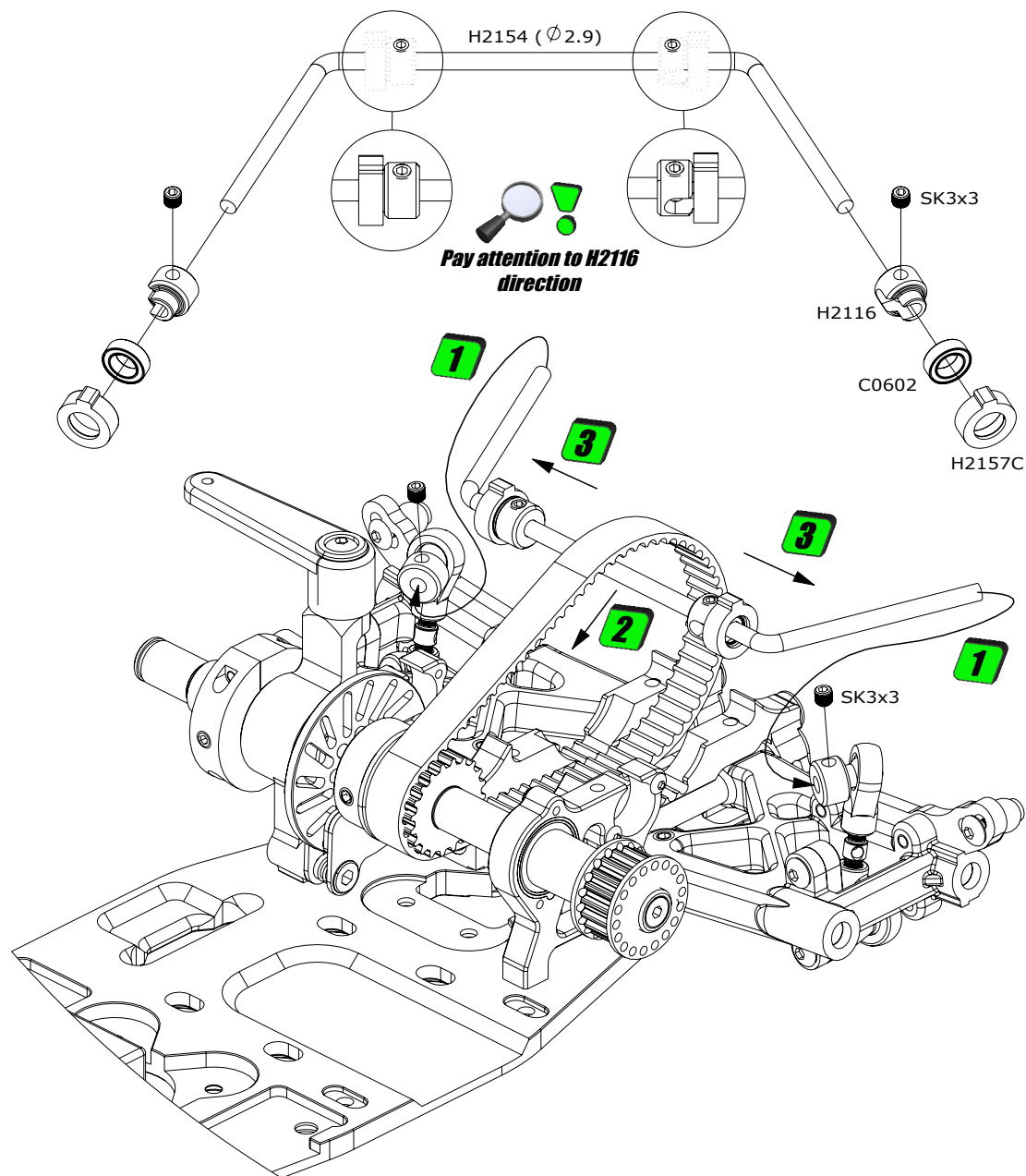
Bag
A₂



■ SK3x3 4pcs.

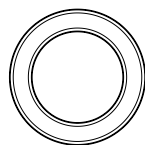
○ C0602 2pcs. (bearing 5x8x2.5)

Bag
E1



SiG3x10 4pcs.

Pin $\varnothing$ 3x23.8

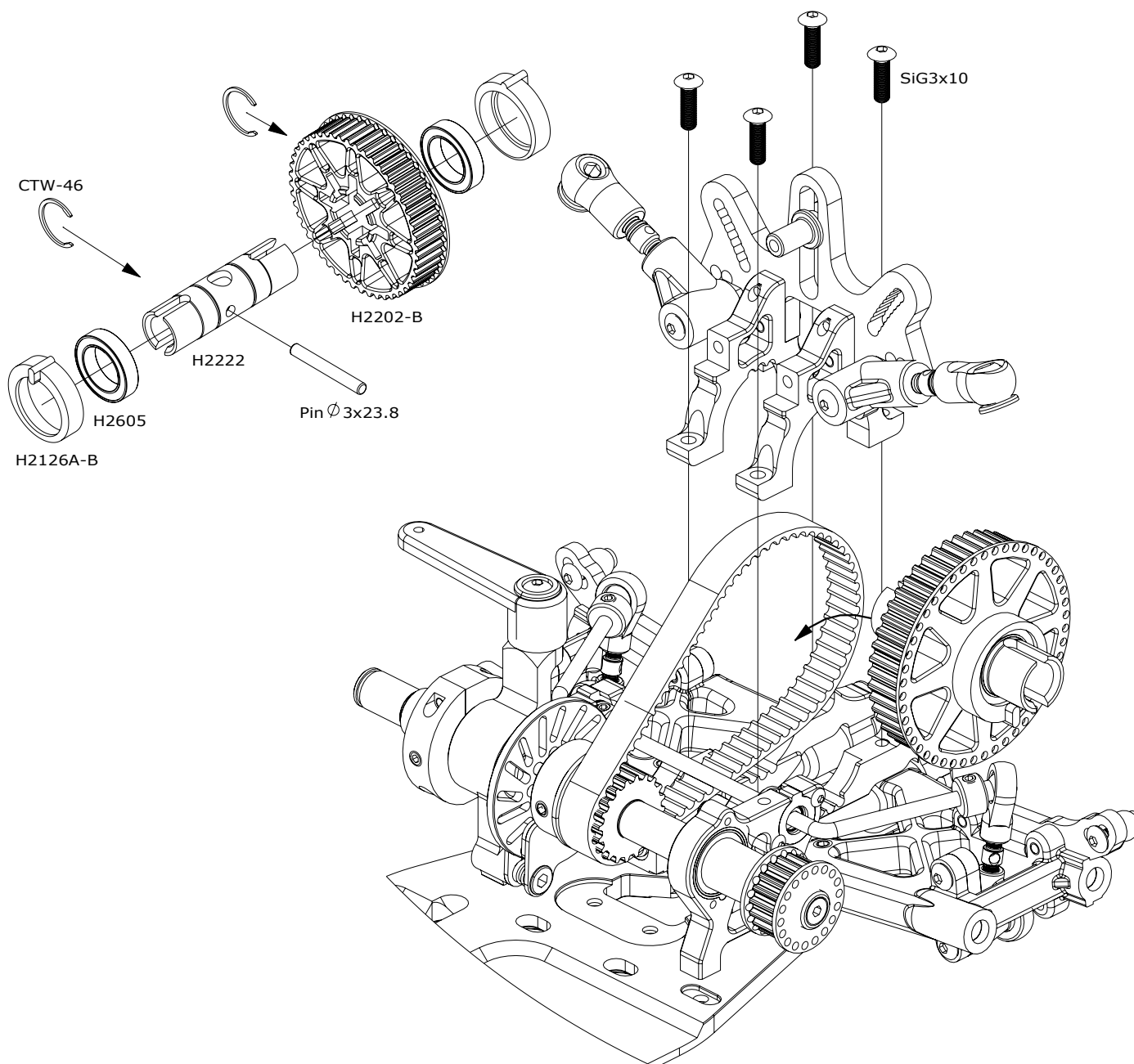


H2605 2pcs.
(bearing 12x18x4)

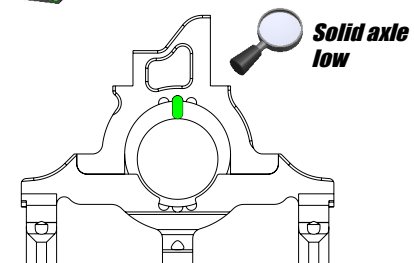


CTW-46 2pcs.

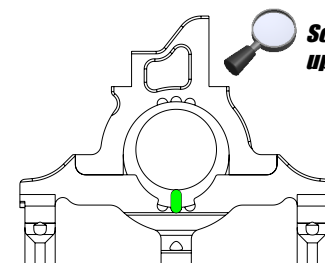
Bag
E1



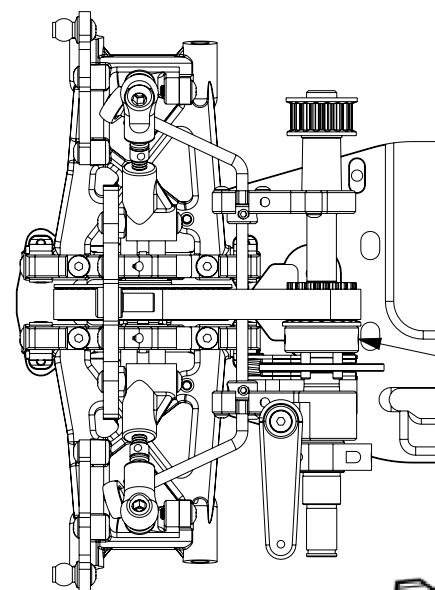
Check which position in the setup



**Solid axle
low**



**Solid axle
up**



**Tighten both
SK4x5 set screws
with the pulley
in its right position**

MRX7
1/10TH SCALE 4WD NITRO POWERED RACE CAR

SiG3x5 2pcs.

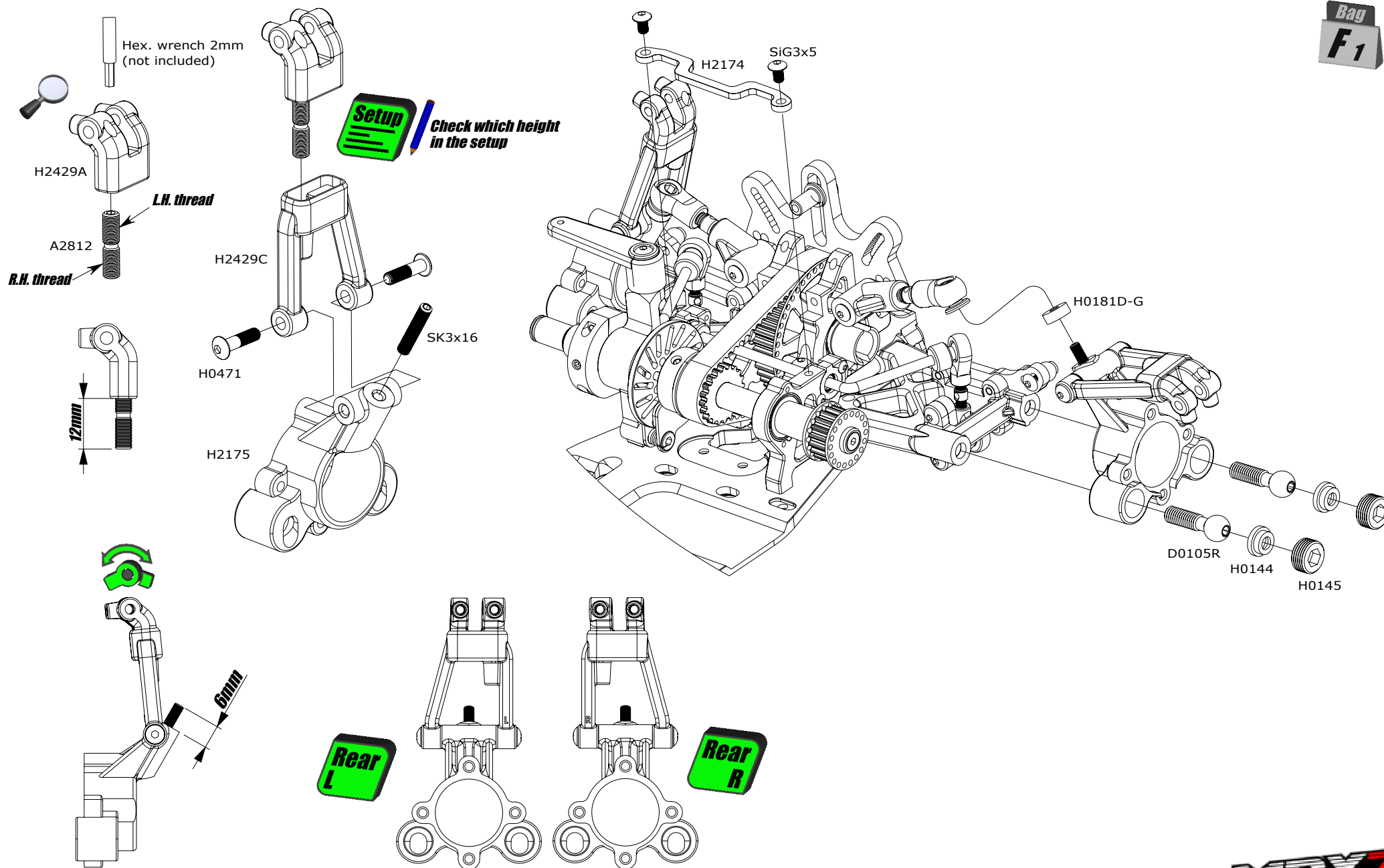
SK3x16 2pcs.

H0471 4pcs.

H0181D-G (3mm) 2pcs.

Bag
E₁

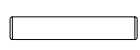
Bag
F₁

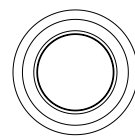


 SJG3x6 3pcs.

 SJG2.5x6 3pcs.

 SK3x5 4pcs.

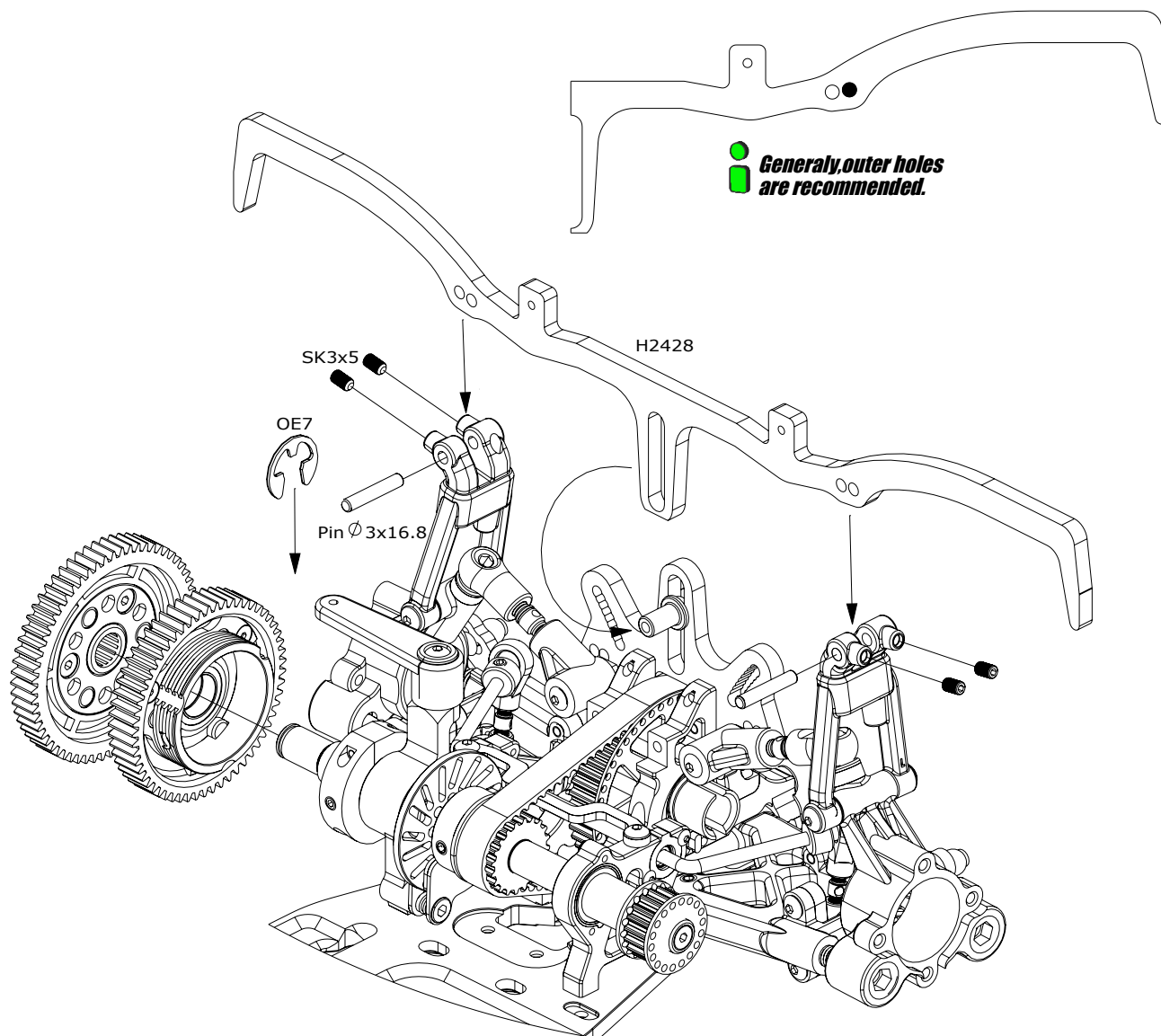
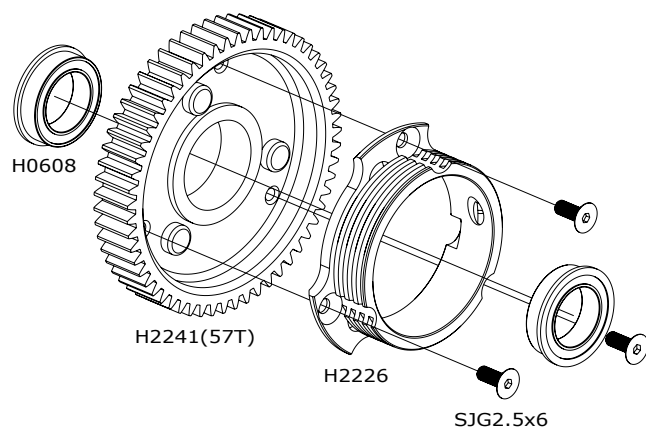
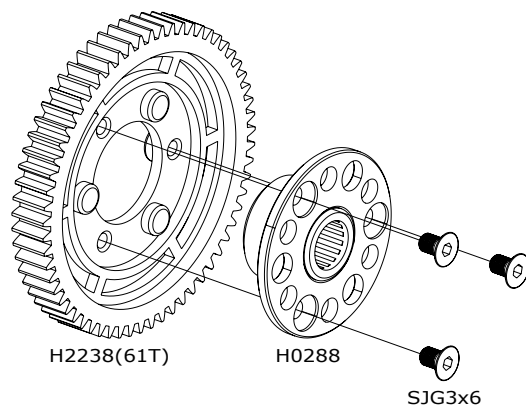
 Pin $\varnothing 3 \times 16.8$



H0608 2pcs.
(bearing 10x15x4 flanged)



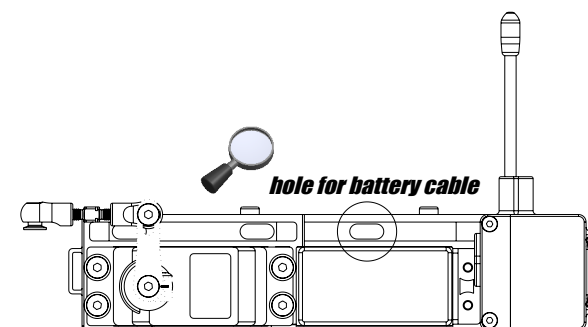
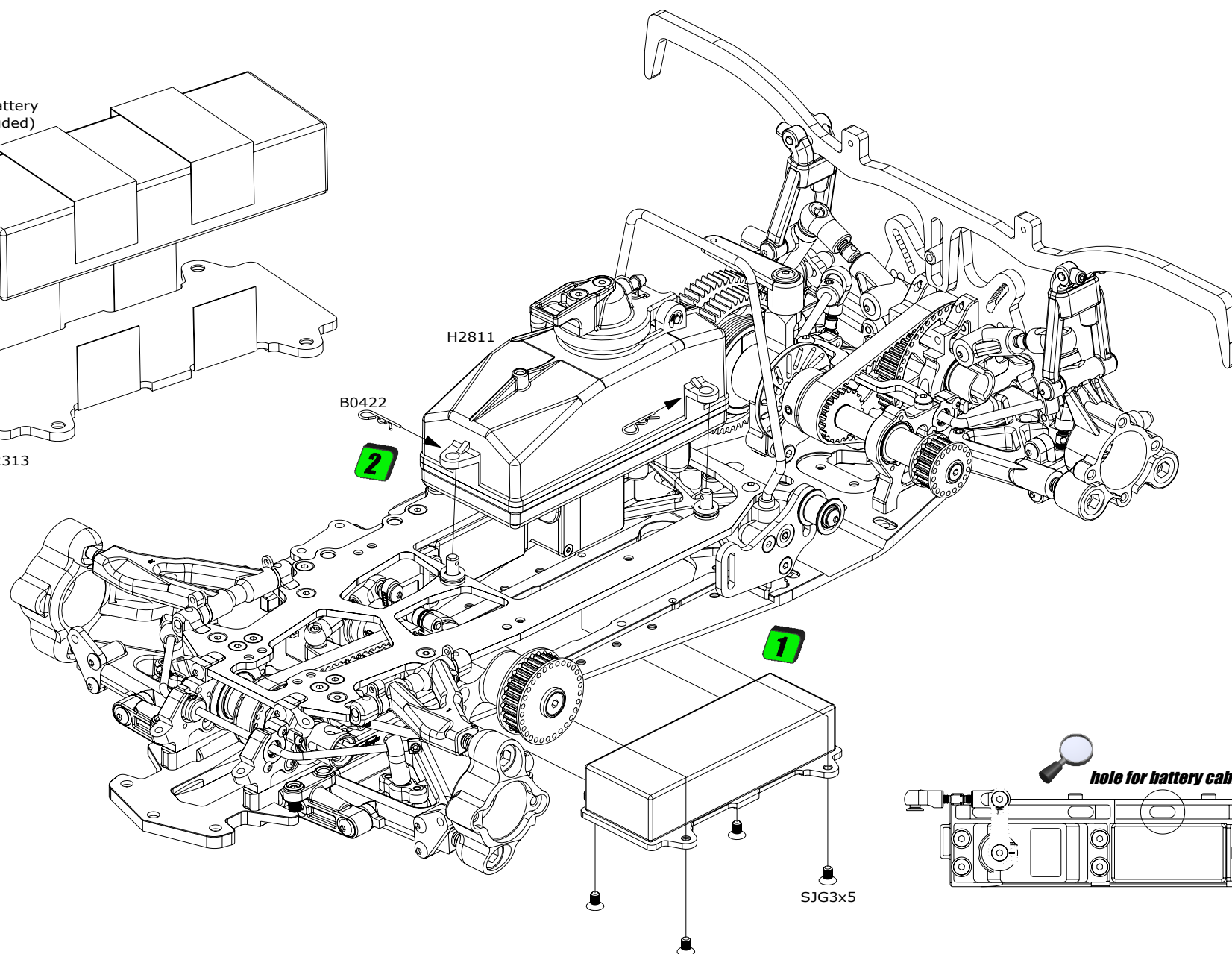
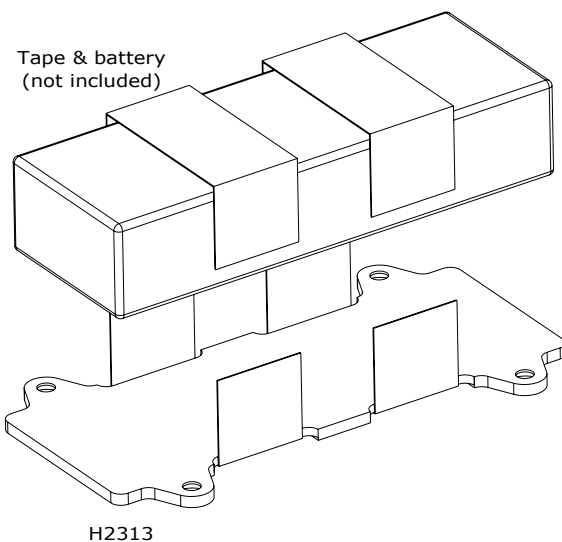
OE7 1pc.



Bag
F1

 SJG3x5 4pcs.

Bag
F1



MRX7
1/18TH SCALE 4WD NITRO POWERED RACE CAR

SiG3x6 3pcs.

SJG3x6 2pcs.

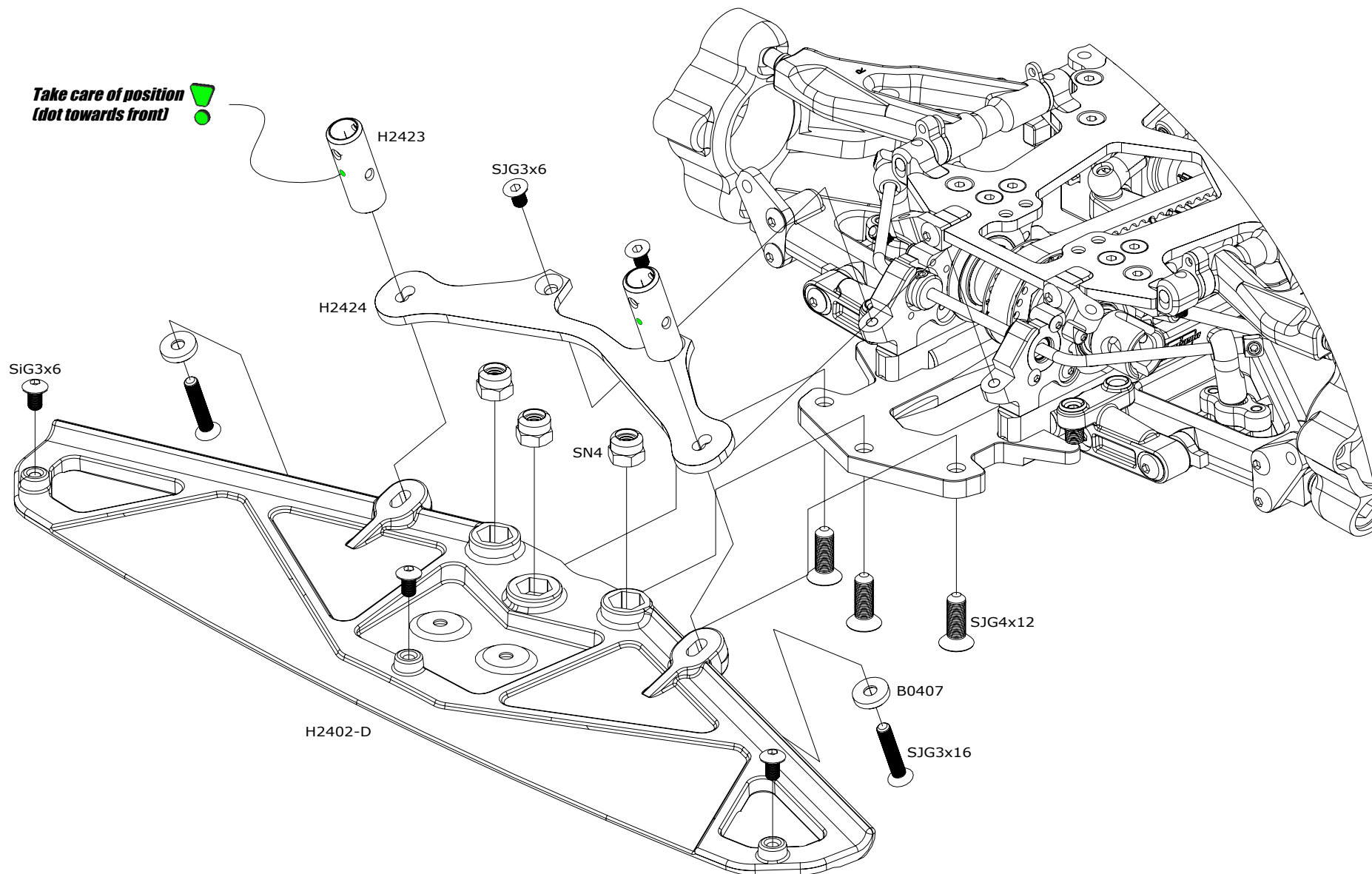
SJG3x16 2pcs.

SJG4x12 3pcs.

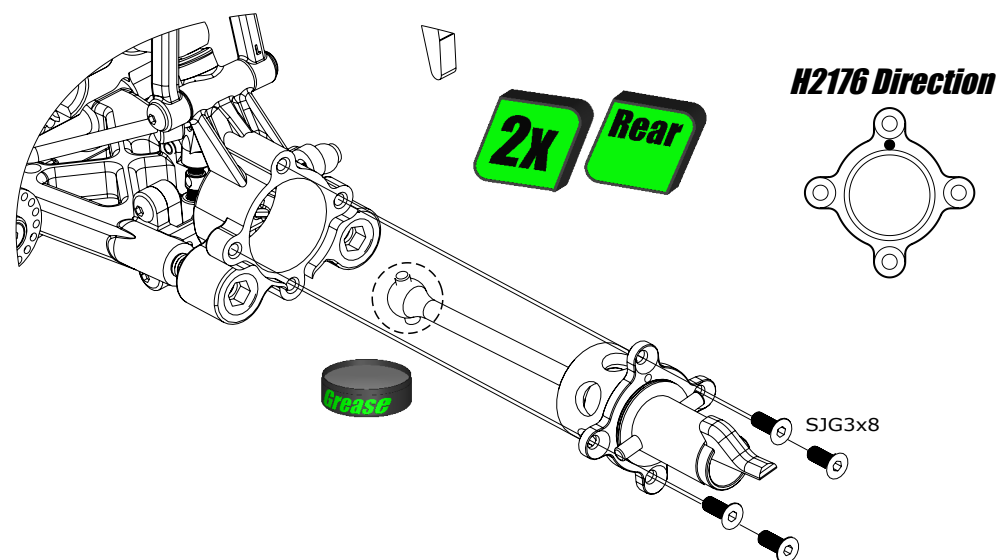
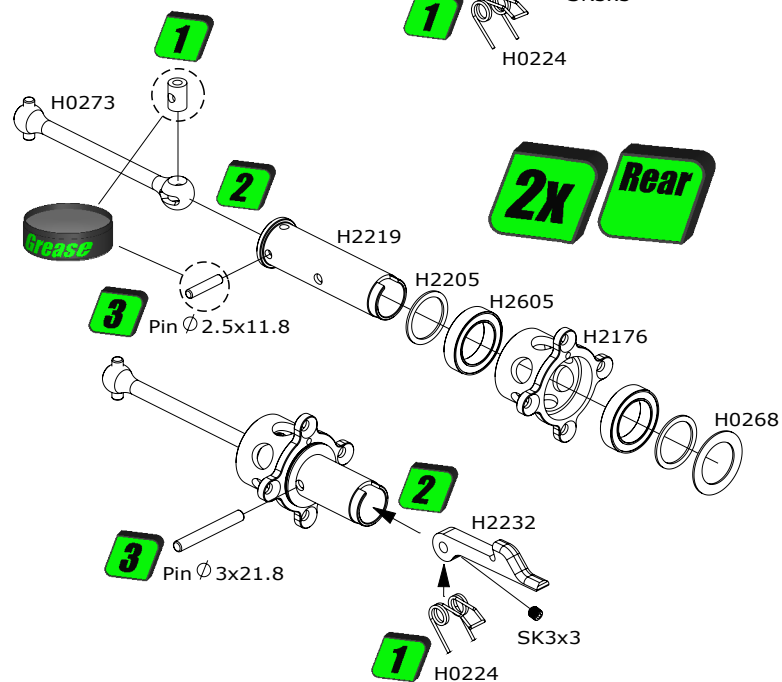
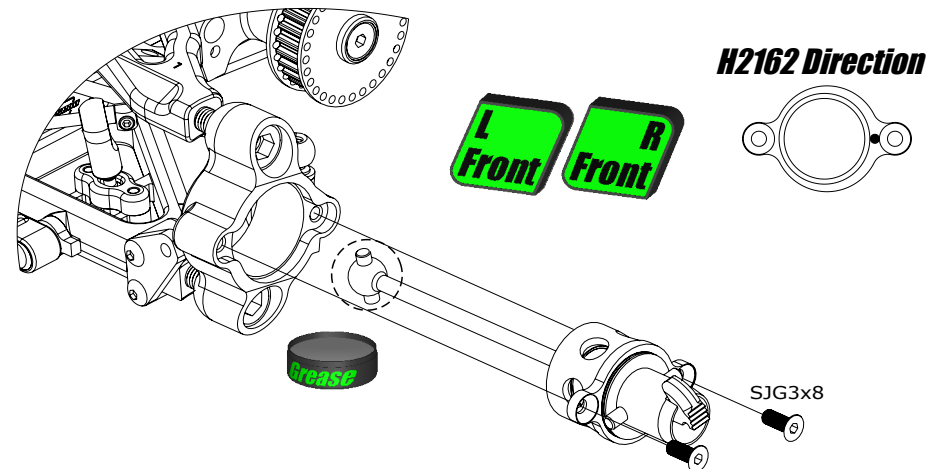
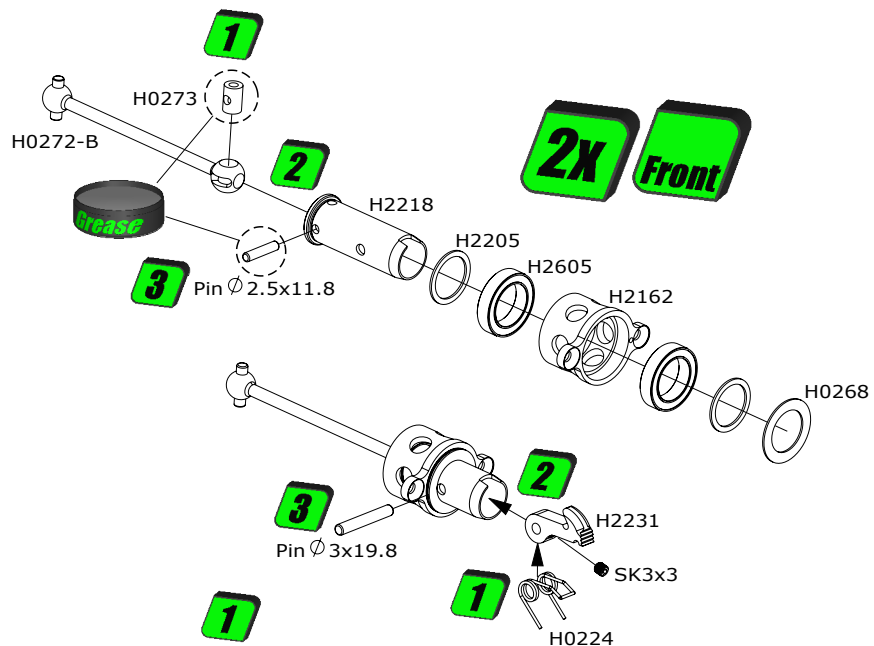
SN4

Bag
F1

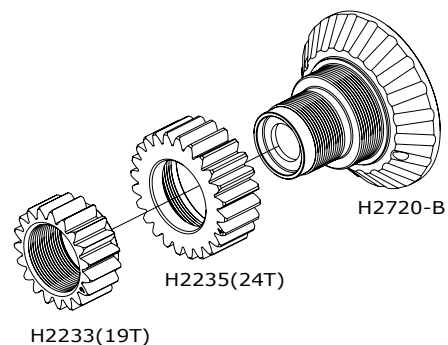
Take care of position
(dot towards front)



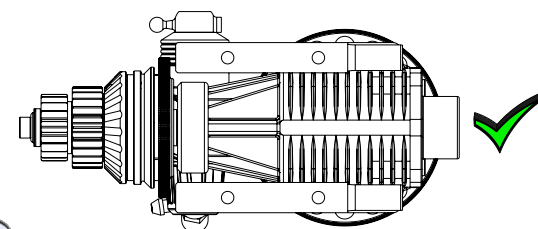
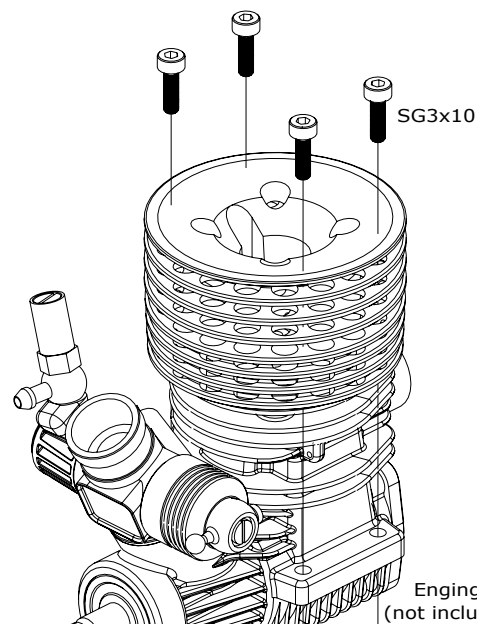
 SJG3x8 12pcs.
  SK3x3 4pcs.
  Pin $\varnothing$ 2.5x11.8 4pcs.
  Pin $\varnothing$ 3x19.8 2pcs.
  Pin $\varnothing$ 3x21.8 2pcs.



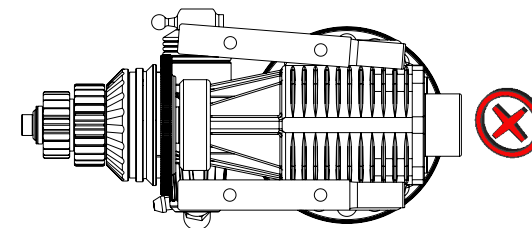
SG3x10 4pcs.



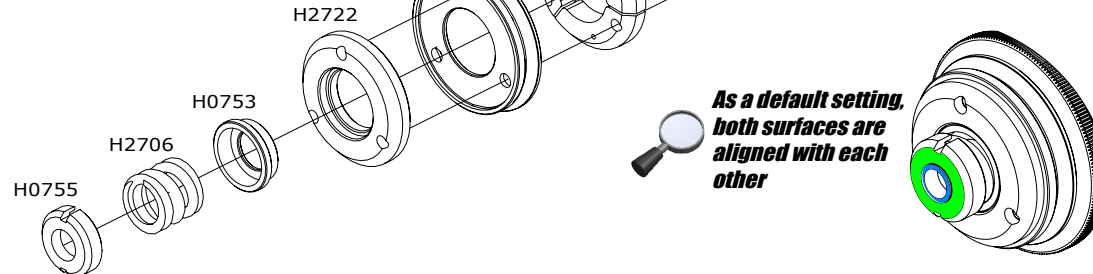
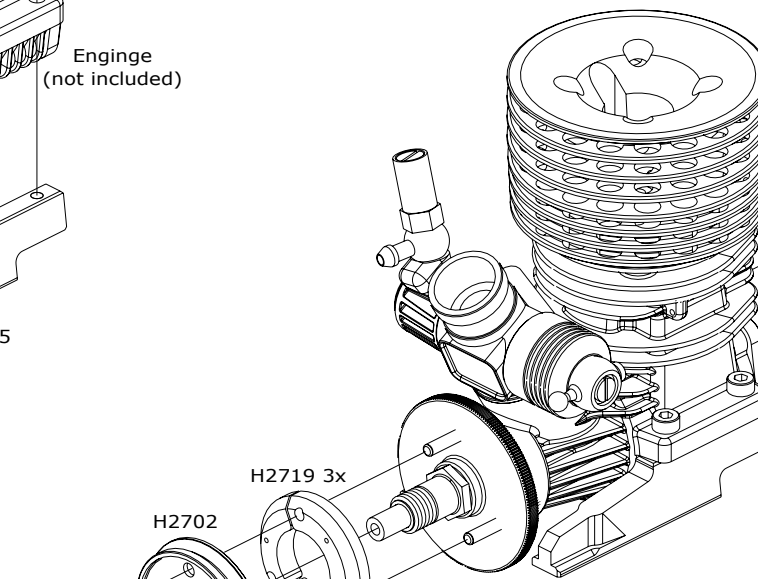
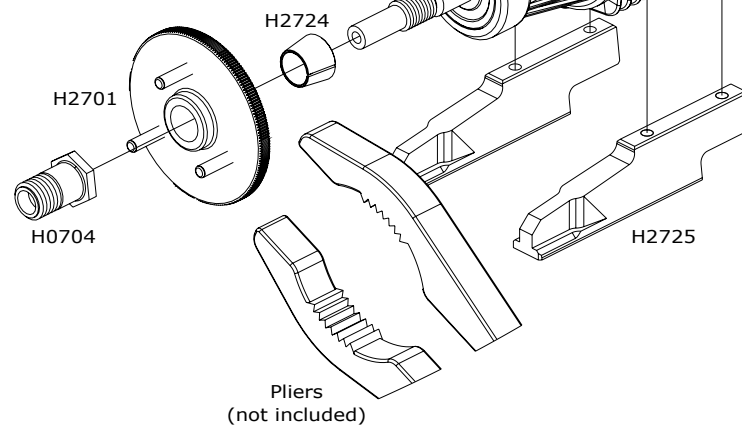
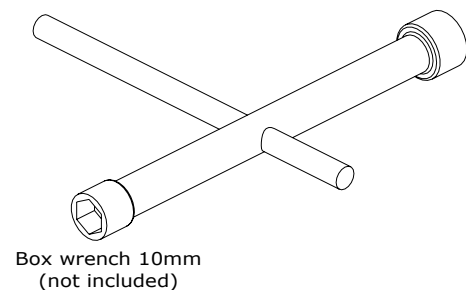
Tip Use clutch tool B0554a



Motormount



Bag
G1
Bag
A2



**As a default setting,
both surfaces are
aligned with each
other**

Tip Use clutch spring tool B0514

MRX7
1/18TH SCALE 4WD METRO POWERED RACE CAR

SG3x16 1pc.

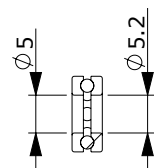
C0602 4pcs.
(bearing 5x8x2.5)

H2604
(thrust bearing 5x10x4)

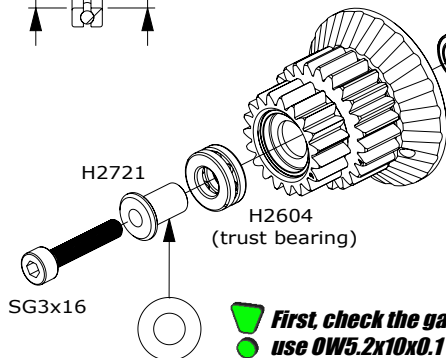
OW5x8x0.1 10pcs.

OW5x10x0.1 10pcs.

CLUTCH GAP ADJUSTMENT



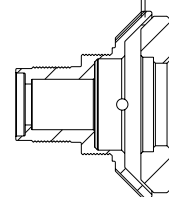
H2604 direction:
● engine side



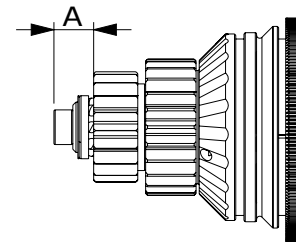
C0602 3x
● Use only 3 bearings
as the first step

● First, check the gap without washers. Then
use OW5.2x10x0.1 to achieve a gap of 0.6mm

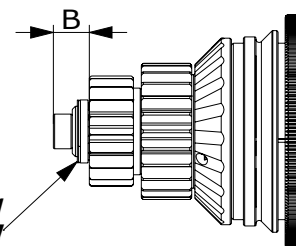
0.6mm gap &
0.1-0.2mm axial play



● The number of OW5.2x10x0.1
will adjust the gap!



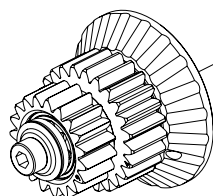
1. Push H2720 and check
dimension A (use a caliper)



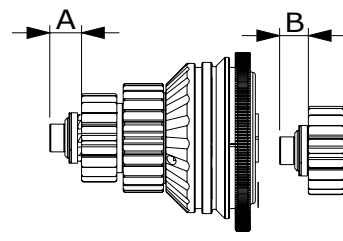
2. Pull H2720 and check
dimension B (use a caliper)

● A - B = Gap

To achieve 0.1-0.2mm axial
play, use OW5x8x0.1 behind
the ball bearings C0602



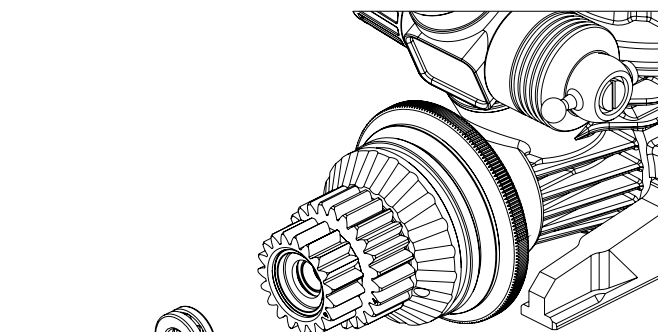
C0602 4x
● Now use all 4
ball bearings



1. Push

2. Pull

Check axial play!
It should be 0.1-0.2mm
and H2720 should be
able to rotate freely.
Again A - B = Axial play



Lastly add grease
on trust bearing!

Tip

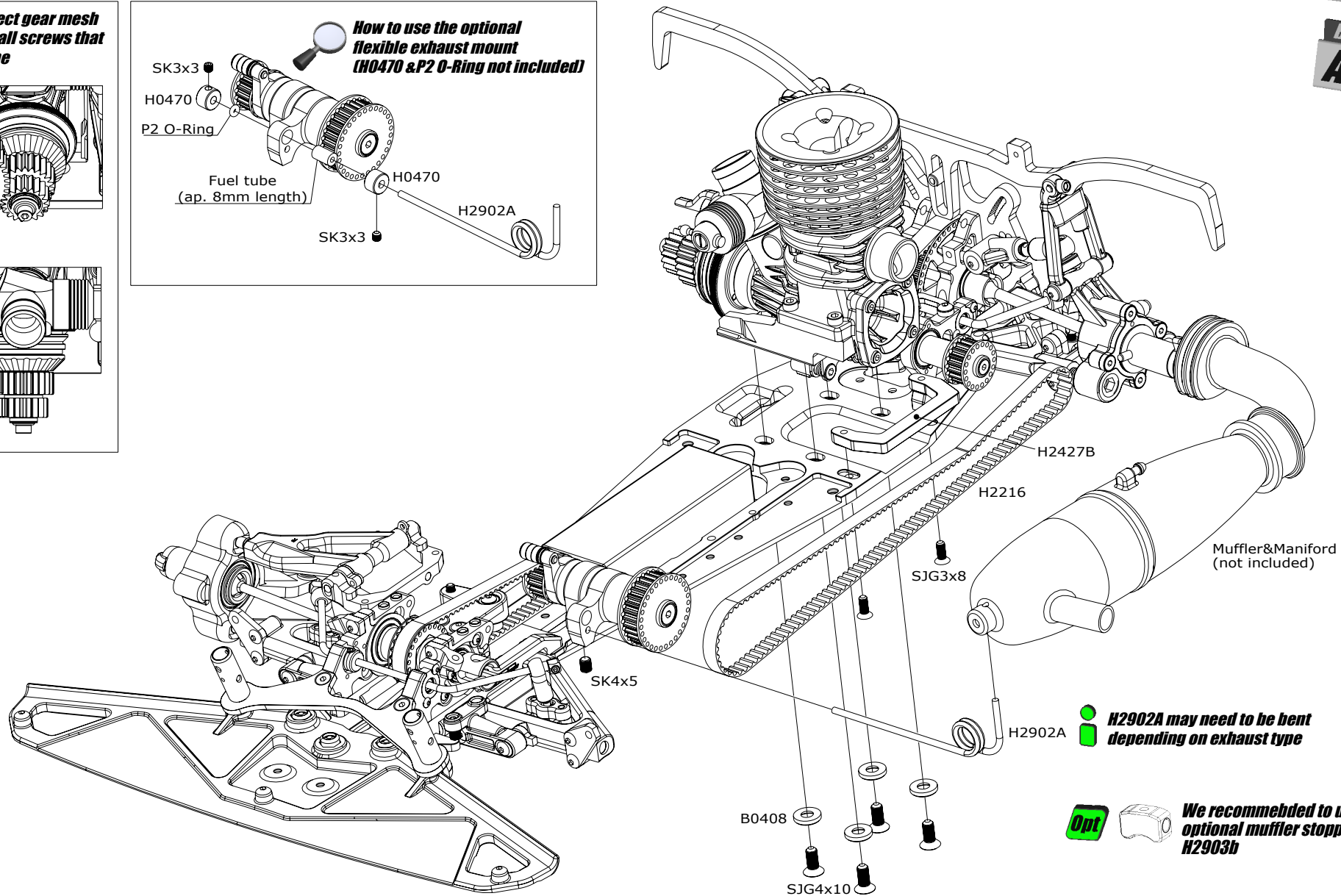
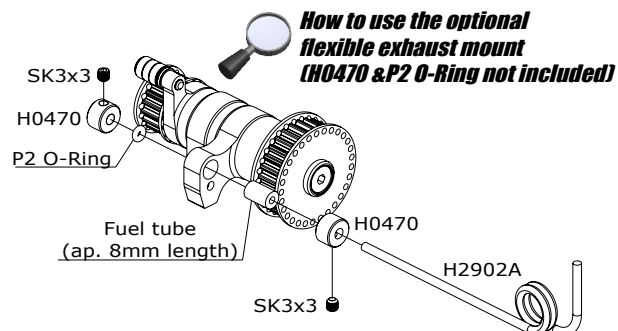
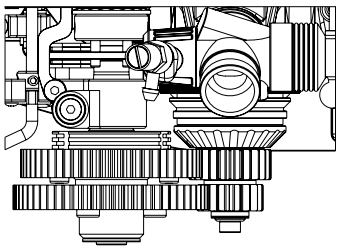
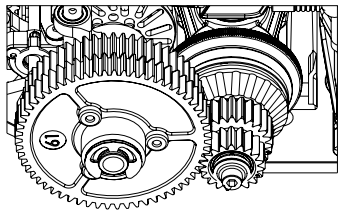
To adjust the coupling
later, increase the
spring preload with
H0755

 SJG3x8 2pcs.

 SK4x10 4pcs.

 SK4x5 1pc.

 **Set the correct gear mesh and tighten all screws that fix the engine**



 **H2902A may need to be bent depending on exhaust type**

  **We recommended to use optional muffler stopper H2903b**

Bag
G1

Bag
A2

MRX7
1/10TH SCALE 4WD RTRC POWERED RACE CAR

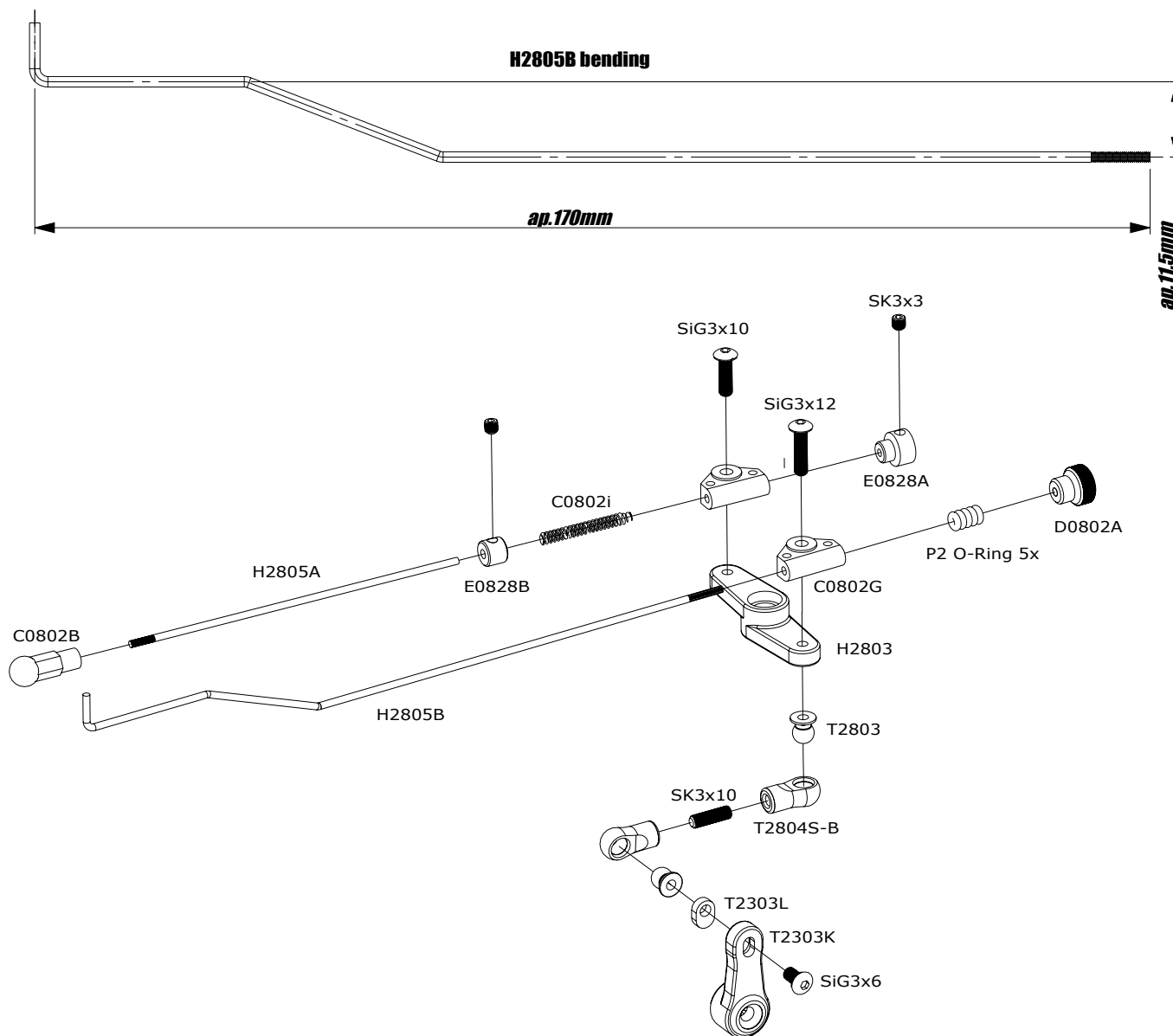
SiG3x6 1pc.

SiG3x10 1pc.

SiG3x12 1pc.

SK3x3 2pcs.

SK3x10 1pc.



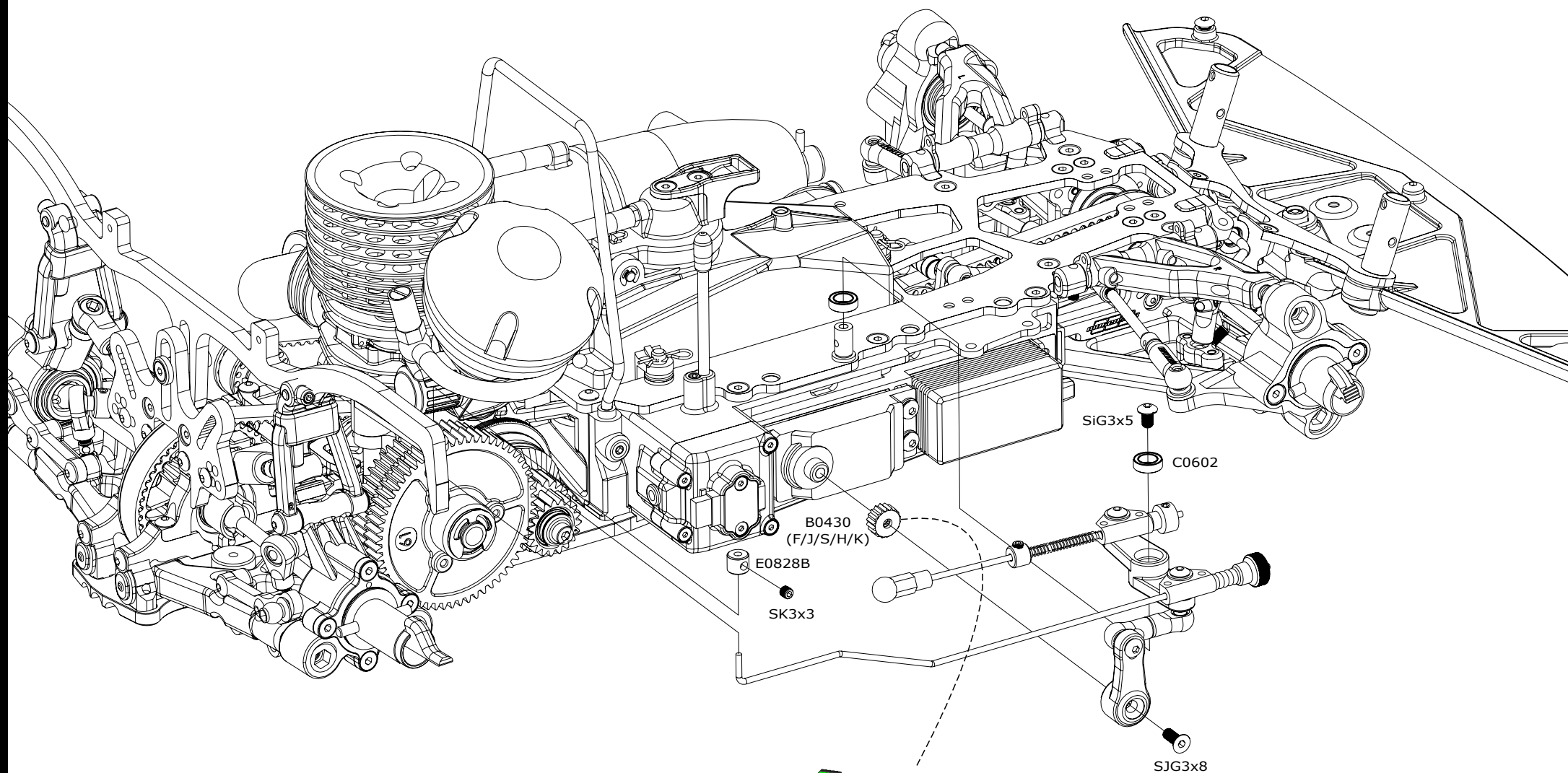
SiG3x5 1pc.

SJG3x8 1pc.

SK3x3 1pc.

C0602 2pcs. (bearing 5x8x2.5)

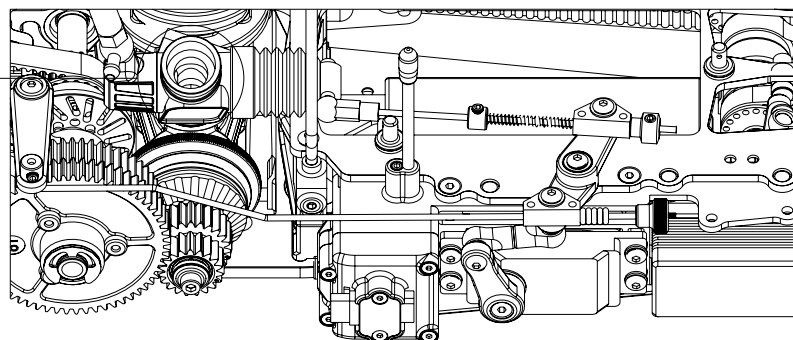
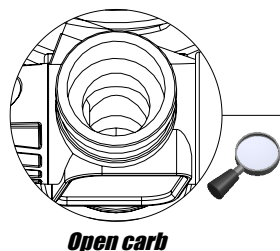
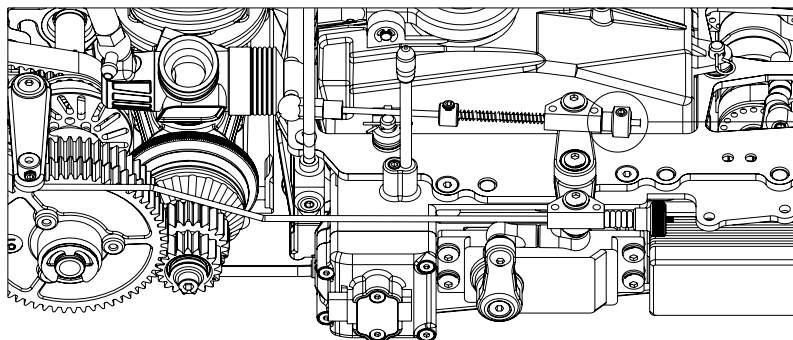
Bag
G1



 Use the correct part
according to servo type

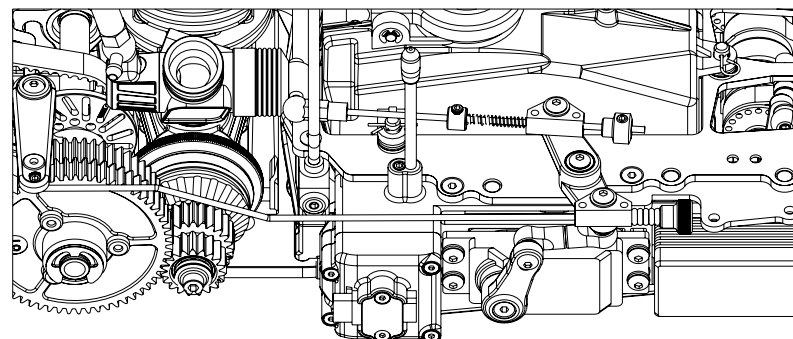
MRX7
1/10TH SCALE 4WD NITRO POWERED RACE CAR

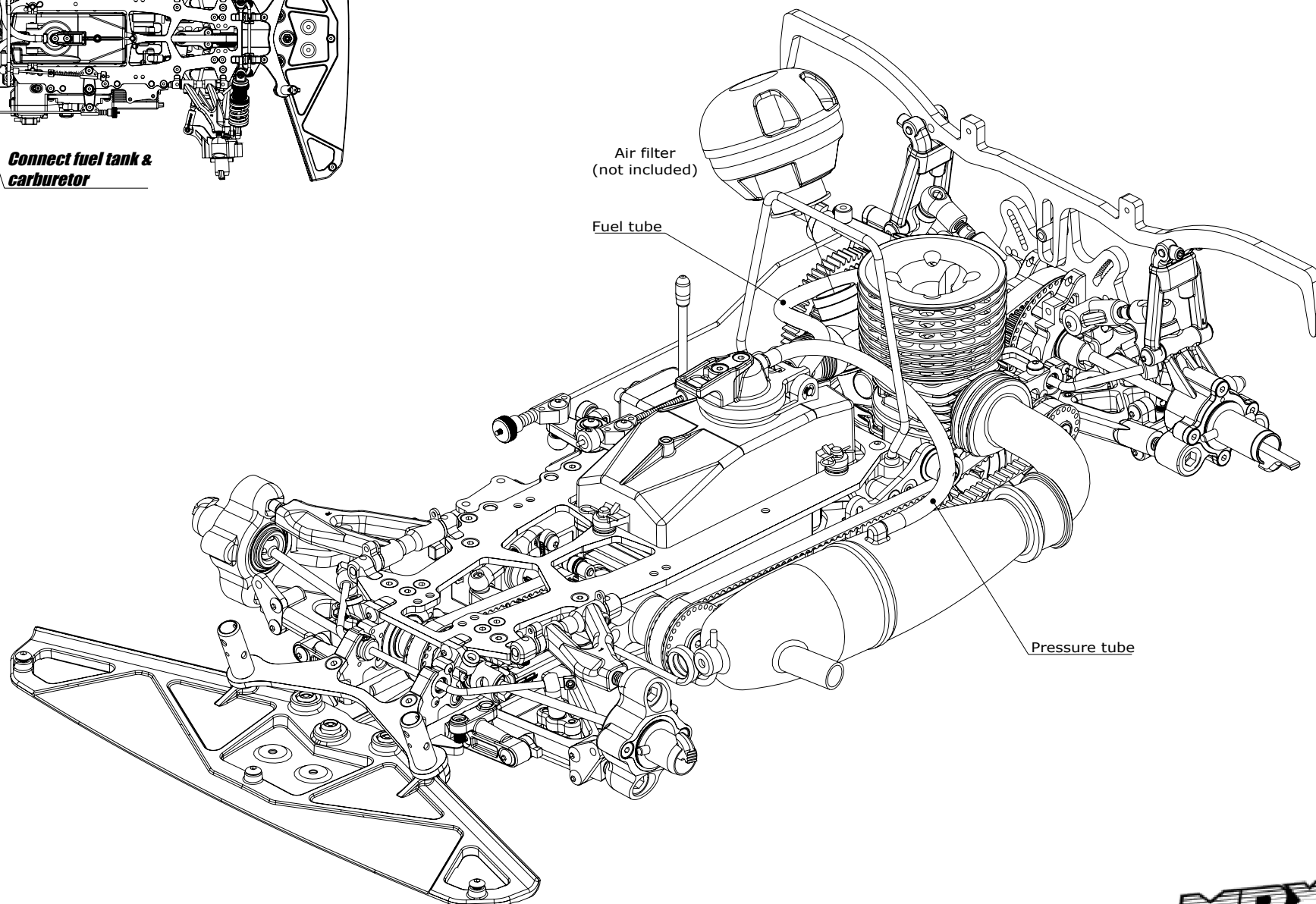
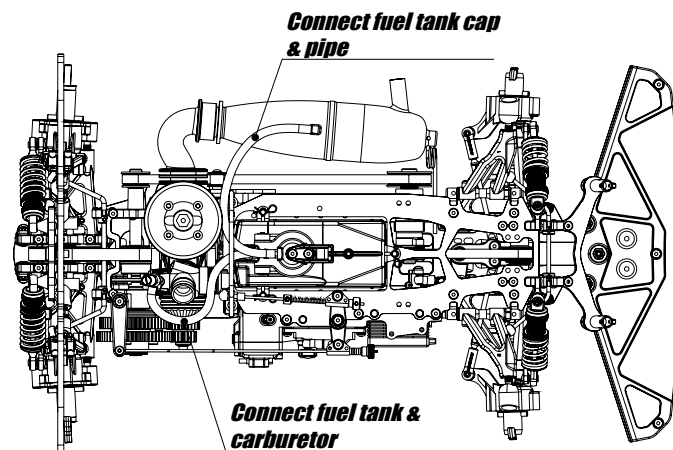
1. **Turn on transmitter and receiver and set the engine control servo trim to the neutral position**
2. **Adjust the idling adjusting screw on the carburetor to be open approx. 1mm**
3. **Adjust the position of E0828B.**
4. **Adjust the movement of each part to move smoothly.**

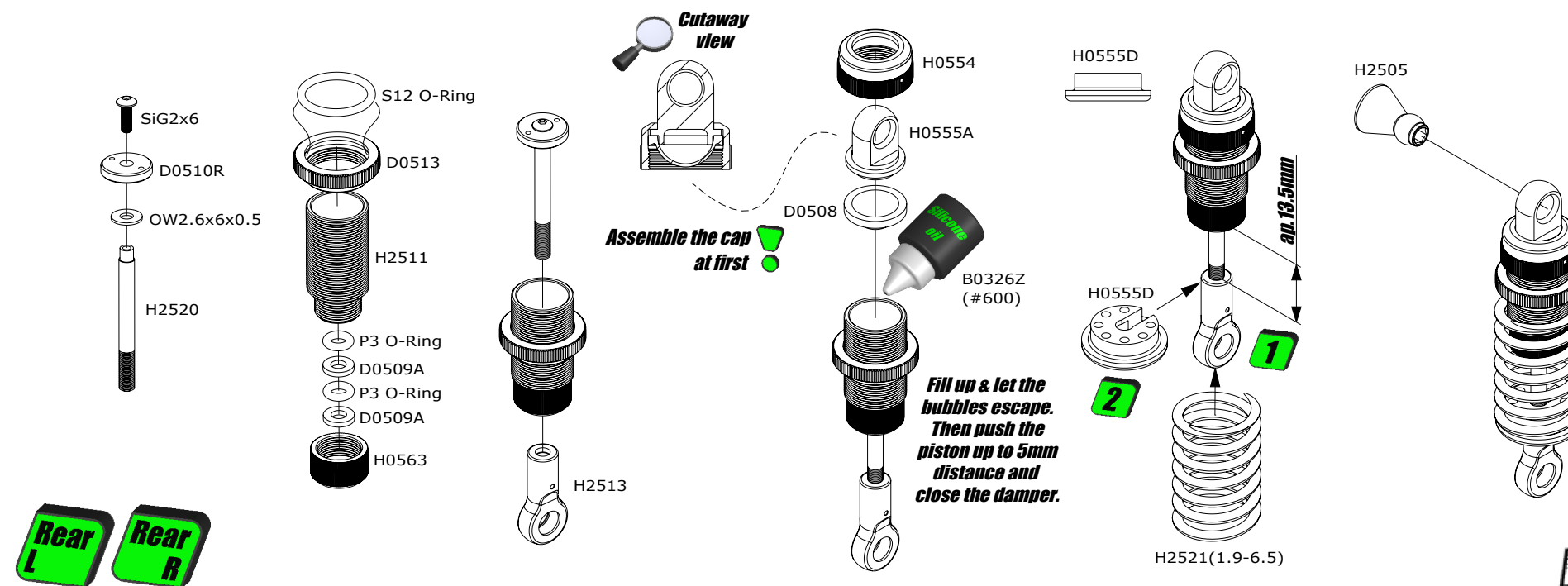
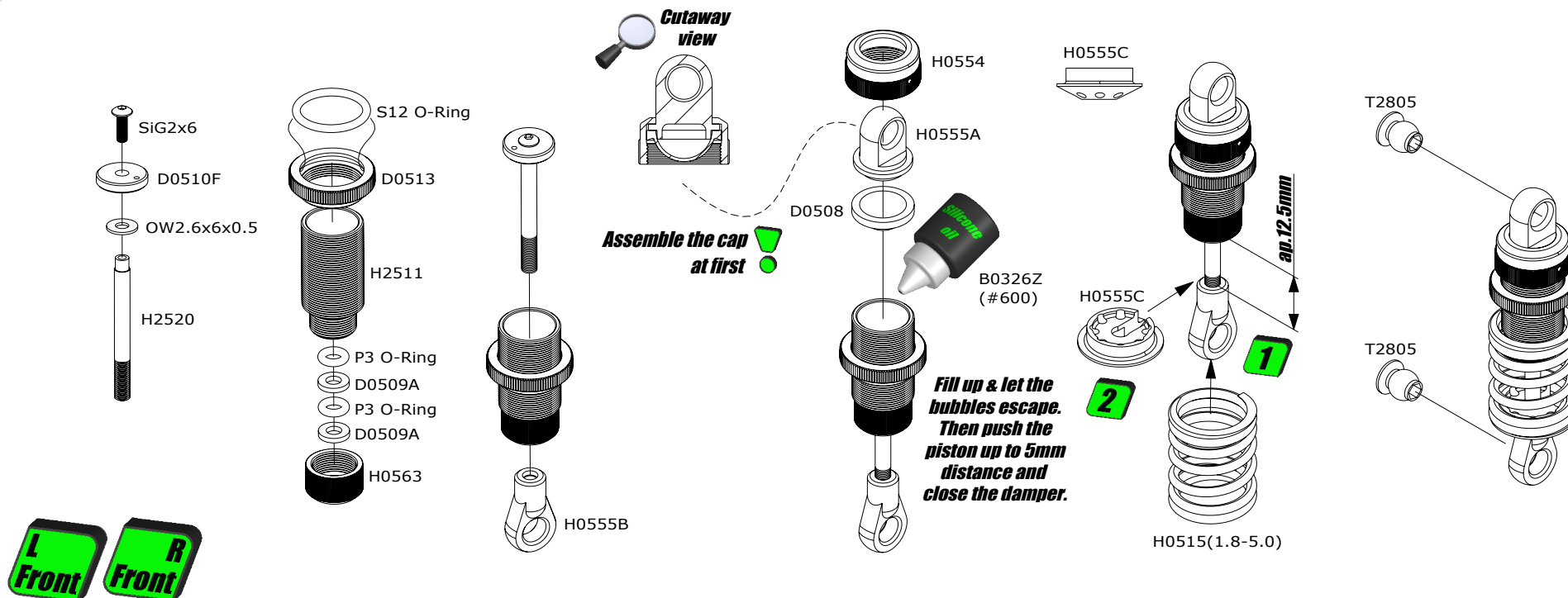


1. **Adjust the throttle high end point to be fully open.**
2. **The servo should not have excessive strain at full throttle.**

1. **Adjust D0802A so the brake works smoothly.**
2. **Adjust the high end point of the transmitter to apply the right amount of brake strength.**







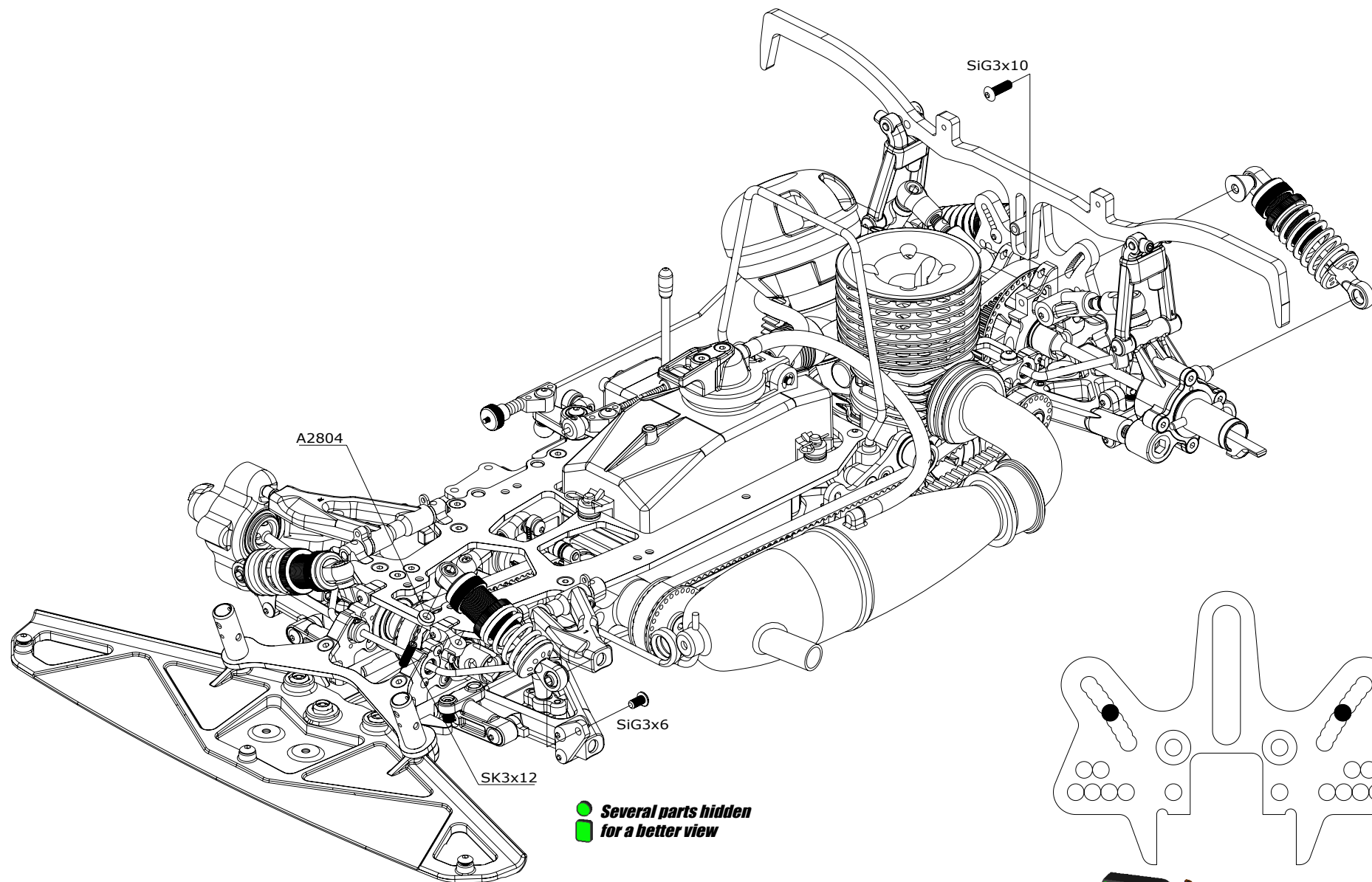
SiG3x6 2pcs.

SiG3x10 2pcs.

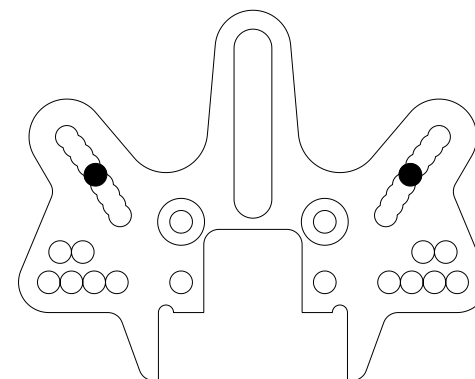
SK3x12 2pcs.

A2804 (2mm) 2pcs.

Bag
H1

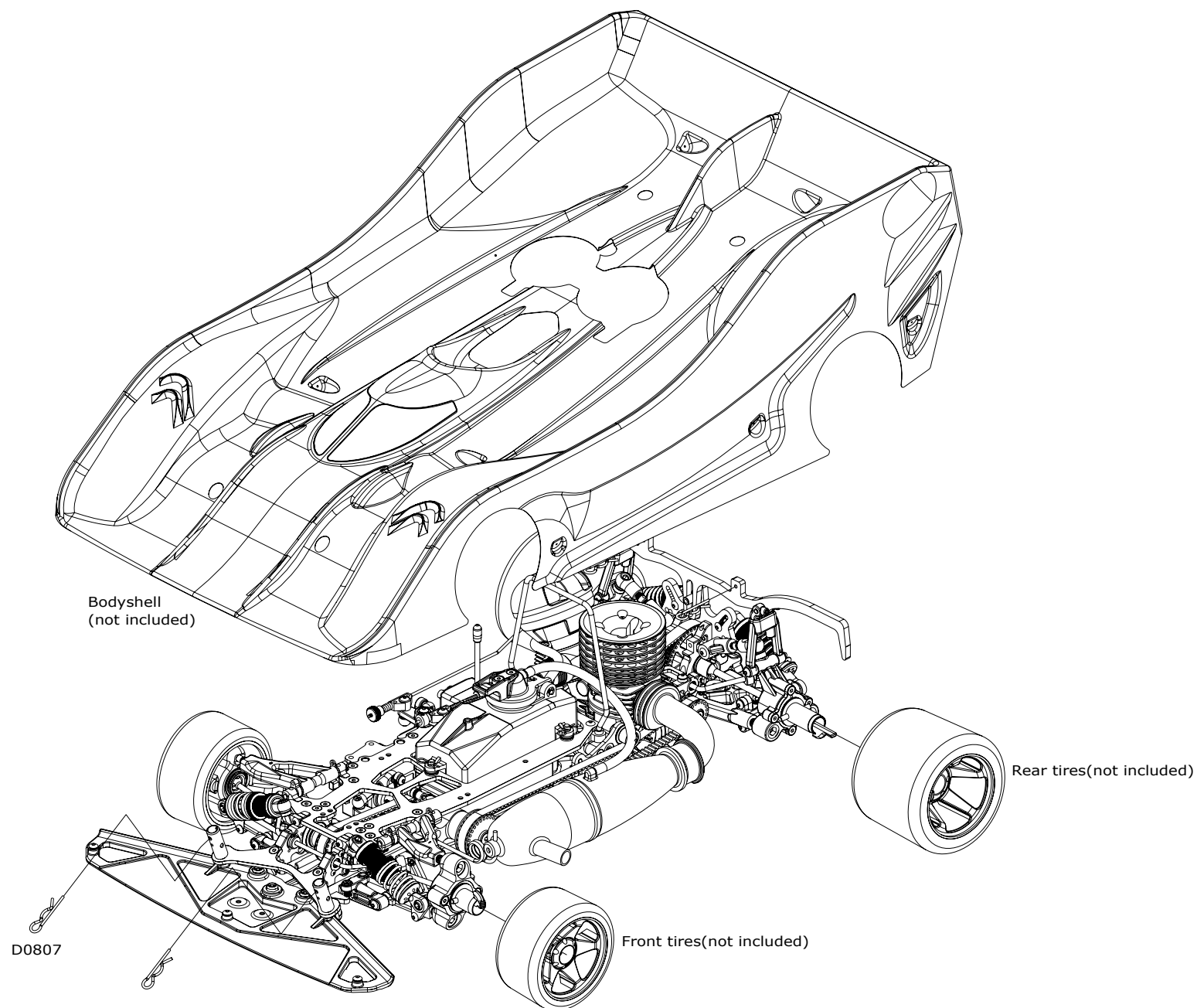


Several parts hidden
for a better view



Check which part and
which position in the setup

MRX7
1/10TH SCALE 4WD NITRO POWERED RACE CAR

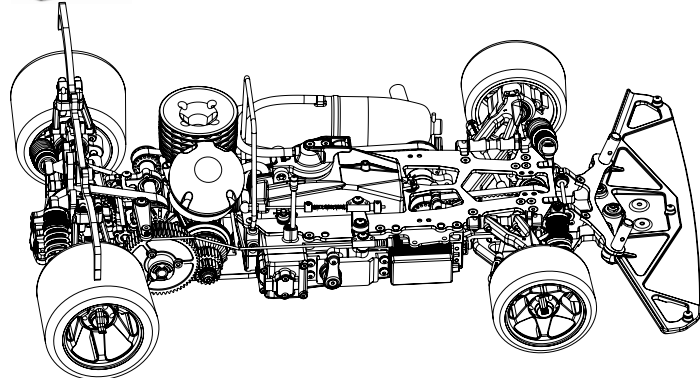




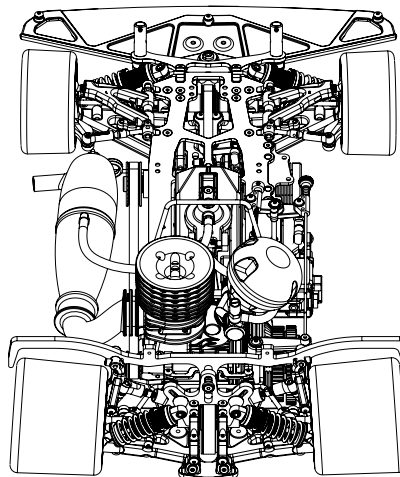
1

Switching on radio and receiver

When the transmitter and receiver are switched on, make sure that the carburetor and steering are in neutral position.



- Check if the throttle moves smoothly.
- If not, check batteries of transmitter and receiver.



- Check if the steering moves smoothly.
- If not, check batteries of transmitter and receiver.

2

Starting Engine

Fasten tank cap tightly, after filling fuel.

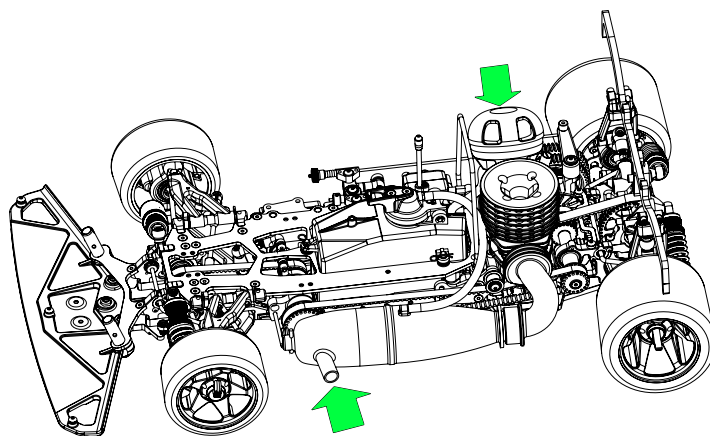
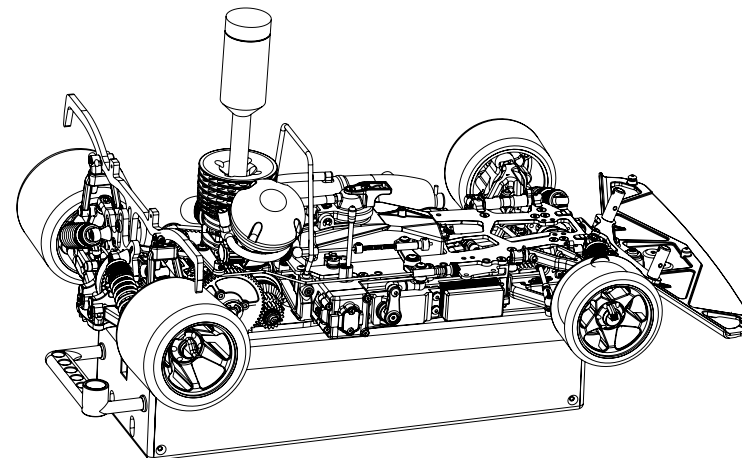
Apply glow engine fuel prepared only models.

Heat the plug with booster cord or pocked booster.

Align the starter's ring with the flywheel of the car, and try to push the car into the starter and start the engine.

Increase throttle trim 2 or 3 graduations for easy starting. When successfully started, increase RPM until idling stabilize. Then return trim to normal.

Note: Put the car on car stand so all four wheels are off the ground and rotate freely for the idling, but do not rev the engine to full throttle.



3

Stopping Engine

Placing idling position, use a rag to cover the exhaust tip. Or, bumping the flywheel for instance with the shoes to stop the engine forcibly.

Note: Use gloves to protect your hands from high temperature exhaust pipe.

CAUTION

HANDLING OF THE ENGINE RC CAR:

Engine RC car runs at a very fast, and uses expensive flammable glow fuel for the model. Exhaust sound becomes noise sometimes for the other people. Operate the model in the area with safety, no troublesome, no personal injury, no property damage, and no accident.

After assembling

Be sure to tight screws securely and install all parts.

Make sure whether the movable parts work smoothly.

Turn on the switch of the receiver and transmitters, and make sure whether the steering servo and engine control servo work normally.

Do not operate in:

Crowded place

Near children

Near residential districts, schools and hospitals

Near roads and railroads

Indoors and limited space

Nighttime and early morning

Place where running of radio control model car is prohibited

When the battery of receiver and transmitter is weak

When the model behaves strangely

Start to operate

Be sure to observe the following process. Non-observance will make RC car start suddenly, and may lead to damage and unexpected accident.

1. Make sure the batteries are charged fully.
2. Put the RC car on the starter box and float the tires from the ground.
3. Turn on the switch of the transmitter.
4. Turn on the switch of the receiver.
5. Make sure the steering servo and engine control servo work normally and adjust them correctly.
6. Put the fuel in the tank, and close the cap securely.
7. Heat the glow plug.
8. Push the back of RC car on the starter box and start the engine.
(If the engine is new, follow the instruction manual and be sure to smooth the new engine. If not, engine will break suddenly by the high rotation.)

Finish to operate

1. Stop the engine. (Use up the fuel in the tank or force to stop the flywheel that is seen from the bottom of the chassis by the sole of shoe etc.)
 2. Turn off the switch of receiver.
- Turn off the switch of transmitter.

Maintenance after running

Do care after running to keep performance, and to notice the damage and wear.

3. Do not leave the fuel in the tank
4. Exhaust oil inside the muffler should go outside.
5. Clean up the sand and mud.
6. Put the oil on the movable parts such as shaft carrier, suspension etc. and the bearing.
7. Put the rustproof oil (maintenance oil) inside of the engine.

CAUTION FUEL

The glow fuel for radio control models that is used for the engine RC car is made of the combination of methyl alcohol, the oil or composition oil, nitro methane etc.

The flammability of these elements is to be very high, have volatility, be fully careful of handling and the storage.

- Only use the glow fuel for radio control models the model shop sells. Other fuels such as the gasoline and kerosene may break engine, and there is fear of explosion and accident such as fire. Never use it.
- The flammability of the fuel is very high. Don't do the fuel lubrication and the preparation for operation near the fire.
- Never do handling of the lubrication in the inside and mixing of the fuel in the place where ventilation is bad.
- Fuel is harmful. It is dangerous to drink and to inhale the volatile element of the fuel and exhaust. Never do.
- Avoid fire, direct sunlight, high temperature, near battery and store fuel in the cool dry and dark places out of children's reach.
- Don't leave fuel in the fuel pump and the fuel tank. There is danger that fuel leaks out.
- Wipe out the spilled fuel with the useless cloth completely.
- Remove a cap first and throw the empty fuel can away. Don't throw an empty can into the fire. There is danger of explosion.

CAUTION ENGINE

Confirm the position of needle and idling before running. Be sure to smooth new engine.

- Never remodel engine and muffler.
- There is danger that it gets burned because around the engine and the muffler generate high temperature for a while after use.
- Do not touch the rotating parts at high speed such as clutch bell and flywheel. There is danger that it gets hurt.
- If the fuel pipe is choked or deteriorates, the engine may not start and there is danger the fuel leaks out.
- Be sure to put the air filter. Use the filter that is soaked in air filter oil.
- Engine may not start if the air filter is dirty, choked with the sand and dust.

FIRST AID

- If you drink fuel by accident, drink large quantities of water and spit it out and right after that, see a doctor.
- If fuel is within eyes, wash it away with the water well, and right after that, see a doctor.
- If fuel is stuck to the skin, wash it with soap and water.

TROUBLE SHOOTING GUIDE

PROBLEM	CAUSE	SOLUTION
ENGINE DOES NOT START	Fuel tank is empty or carburettor is not primed. Bad glow plug or dead plug booster battery. Fuel lines, air cleaner, or muffler is clogged. Engine is flooded due to over-priming. Carburettor is not adjusted properly. Servo linkage is not adjusted properly	Fill fuel tank with fuel and prime throttle. Replace glow plug and recharge battery. Clean or replace clogged part(s). Restart after removing glow plug and discharging fuel. Also check if the glow plug is not dead. Set idle and main/slow needle adjusting screw to standard starting position. Move servo to neutral then re-adjust.
ENGINE START BUT THEN STALLS	Fuel tank is empty. Fuel lines, air cleaner, or muffler is clogged. Carburettor is not adjusted properly. Engine is overheated.	Fill fuel tank with fuel. Clean or replace clogged part(s). Re-adjust idle and main/slow needle adjusting screw. Allow engine to thoroughly cool down and open main needle adjusting screw 30° turns.
BAD REACTION AND RESPONSE FROM ENGINE	Carburettor is not adjusted properly. Low fuel pressure from muffler.	Re-adjust main/slow needle adjusting screw. Properly install pressure line from muffler to fuel tank.
CAR IS HARD TO CONTROL	Weak transmitter and/or receiver batteries. Servo linkage is not adjusted properly.	Recharge or replace batteries. Move servo to neutral then re-adjust.

MUGEN SEIKI CO.,LTD.
1395 Takane-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: info@mugen.eu
www.mugen.eu

