



"WE DO WHAT WE WANT...  
...SO SHOULD YOU"

## THE WORDS

Producing THECar may seem like it has been a one man mission, but it would not have been possible to get done this successfully without the help of a lot of people. I really have to thank, in no particular order:

Ari Jyv , Aki Mertsola, Reijo Mattila, Ilias Arkoudaris, Teemu S il , Jimmy Storey, Philip M rtstedt, Ari and Arto Heinonen, Maurizio Fantinel, Tomi Jermalainen, Carl Magnus Fager, Mikko Meriluoto, Arttu Kauranne, Adam Lewis, Jess Saunders, Timo and Veikko Jalas, Kauko and Kalle Kyyr , Miika Korpela, Mikael Hellbom, Mikko Kaarela, Perttu Juntura, Samuele Lenzi, Paul Coleman, Eva Silva, J Smoker, THE M rt Family, Mervyn Muller, Stefan Scheuenpflug, Samart Khemthong, Thomas Schmuck, my grandparents, aunt, uncle and family, my parents, and my two sisters.

And finally a special thank you to YOU, for buying THECar. Without customers this would not work. I sincerely hope you enjoy THECar now and in the future. All feedback is welcome, good and bad. Lets make it even better, together.

*"Sometimes life  
is about risking  
everything for a  
dream no one  
can see but you."*



## WARNING

IMPROPER USE OF THE Car MAY CAUSE SEVERE INJURY OR DEATH!



**ALWAYS USE  
AN APPROVED  
HELMET AND  
PROTECTIVE  
GEAR**



**NEVER USE  
ON PUBLIC  
ROADS**



**NEVER CARRY  
PASSENGERS**



**NEVER USE  
WITH DRUGS  
OR ALCOHOL**

### NEVER:

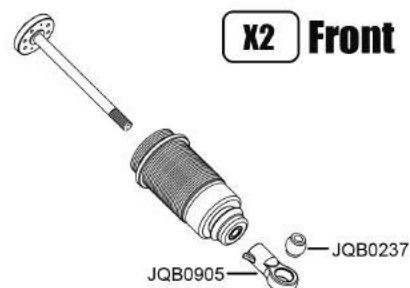
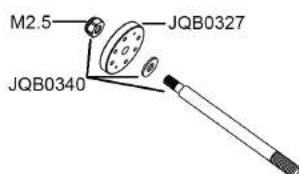
- \*Operate without proper training or instruction
- \*Operate at speeds too fast for your skills or the conditions
- \*On public roads, a collision can occur with another vehicle
- \*Operate with a passenger - passengers affect the balance of steering and increase risk of losing control
- \*Eat the parts
- \*Give up on your dreams

### ALWAYS:

- \*Use proper driving techniques to avoid vehicle overturns on hills and rough terrain and in turns
- \*Avoid paved surfaces - pavement may seriously affect handling and control
- \*Keep moving forward
- \*Take manual seriously

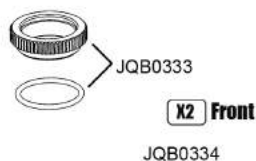
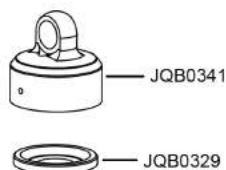
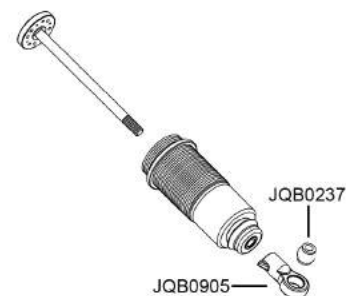
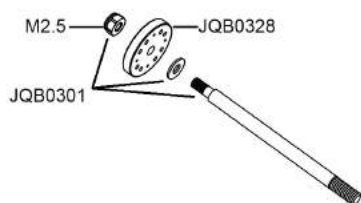
### REMEMBER:

- \*THE Manual may or may not contain humour

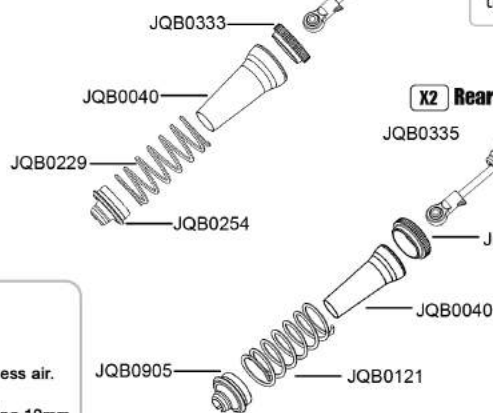


**X2 Front**

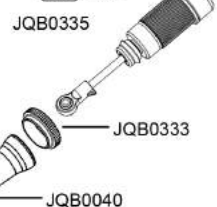
**X2 Rear**



**X2 Front**



**X2 Rear**



**THE ADVICE**

Oil:  
350 front  
300 rear

if weather is cold, try thinner oil, if it is very hot, try thicker oil.



N M2.5(4)



S 2.6x6x0.5(4)



S 7x3.5x1.5(4)



O 7x3x2(8)



O 10x1(4)

**Filling the shock:**

- First pull down the piston.
- Fill the shock to the brim.
- Then slowly move the piston up and down to remove excess air.
- Wait until you can't see airbubbles in the oil.
- Tighten the shock cap 1 turn, then push the shaft in leaving 10mm of the shaft exposed.
- Tighten the cap all the way, excess oil and air will exit through the hole in the cap.

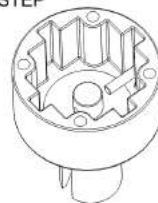
**THE BAG**

**A**

JQB0037	Shock Bushings	JQB0328	16mm Shock Pistons (Stock in Rear)
JQB0040	Shock Boots	JQB0329	16mm Shock Bladder
JQB0121	Rear Springs Medium, 8.5	JQB0330	16mm Shock O ring Set
JQB0229	Front Springs Hard, 7 Coils, 70mm Long	JQB0333	16mm Rideheight Adjustment Nut for Shocks and O-ring 2pcs (White Edition)
JQB0237	7mm Ball For Shocks	JQB0334	Complete Front 16mm Shocks with Springs (2pcs)
JQB0254	Complete Front Silk Shocks with Medium Springs (2pcs)	JQB0335	Complete Rear 16mm Shocks with Springs (2pcs)
JQB0301	Rear Shock Shafts (Long)	JQB0340	Front Shock Shafts (White Edition)
JQB0327	16mm Shock Pistons (Stock in Front)	JQB0341	Aluminium One-Piece Shock Cap for 16mm Shocks

# THE FRONT DIFF

STEP

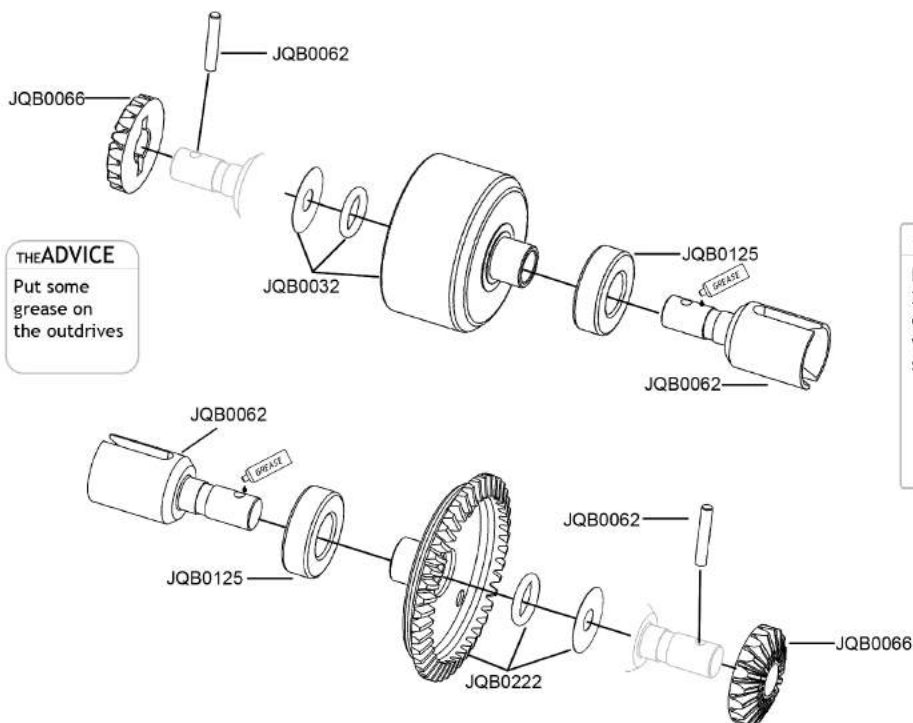


## THEADVICE

Put some grease on the outdrives

## THEADVICE

Fill about 2mm over cross pins with 5000wt silicon diff oil



P 2.5x11.8(2)



SFH M3x10(4)



O 8.5x1.5(2)



S 6x11.5x0.2(2)



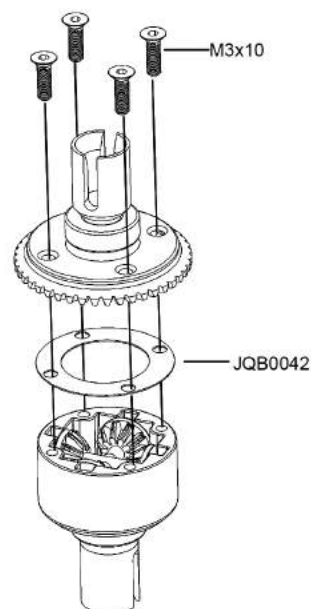
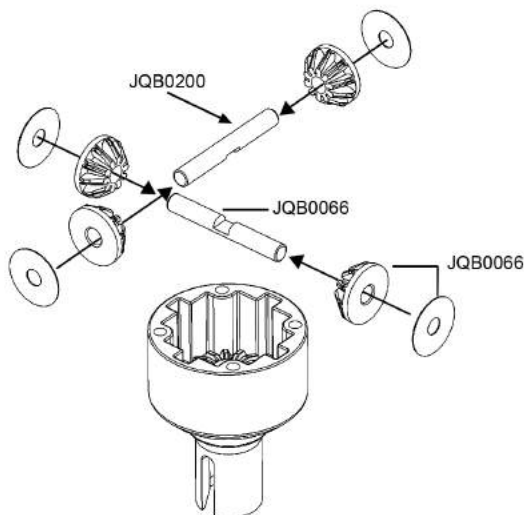
S 3.6x12x0.2(4)



BB 8x16x5(2)

**THEBAG**

**B**

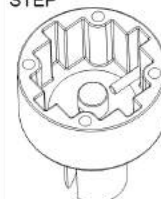


JQB0032	Diff Cup
JQB0042	Diff Gasket
JQB0062	F/R Diff Outdrive Pair
JQB0066	Diff Gear and Crosspin Set
JQB0125	Bearing 8x16x5 4pcs. For Wheels and Differentials
JQB0200	Differential Crosspins (2pcs)
JQB0222	43/13 Front Crown gear

...BEFORE CAREFULLY STUDYING THE MANUAL

# THE CENTRE DIFF

STEP

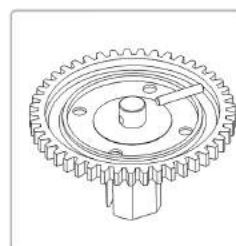
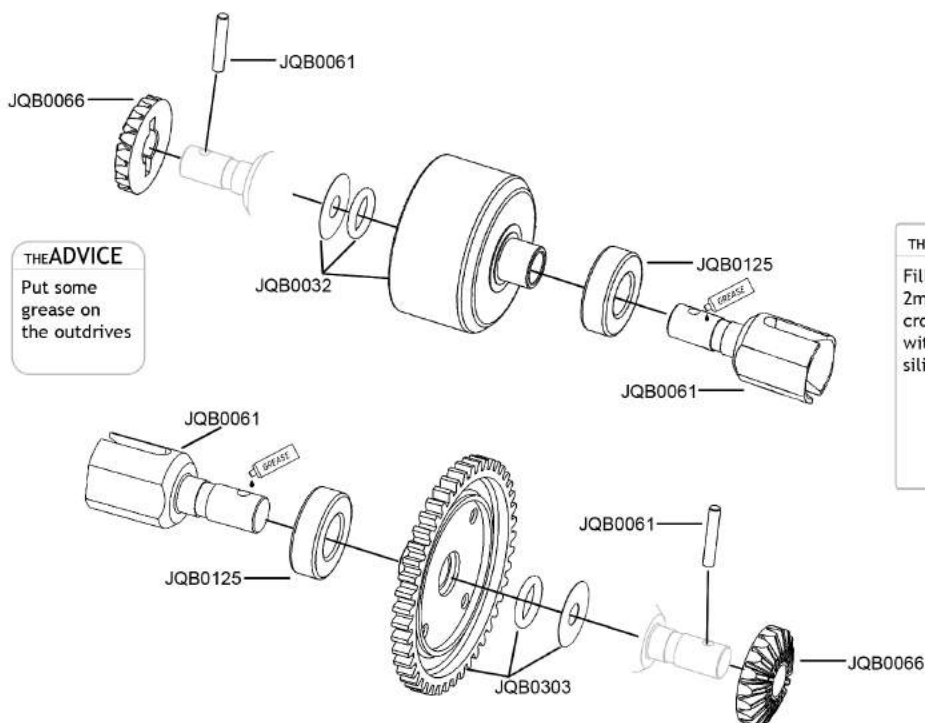


## THEADVICE

Put some grease on the outdrives

## THEADVICE

Fill about 2mm over cross pins with 5000wt silicon diff oil



P 2.5x11.8(2)



SBH M3x10(4)



O 8.5x1.5(2)



S 6x11.5x0.2(2)



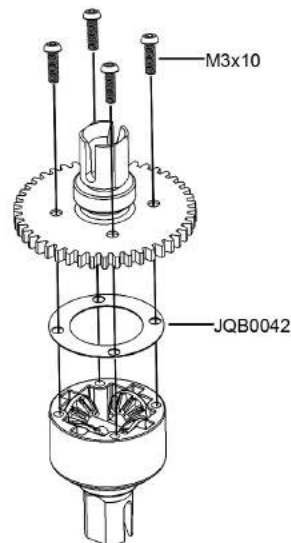
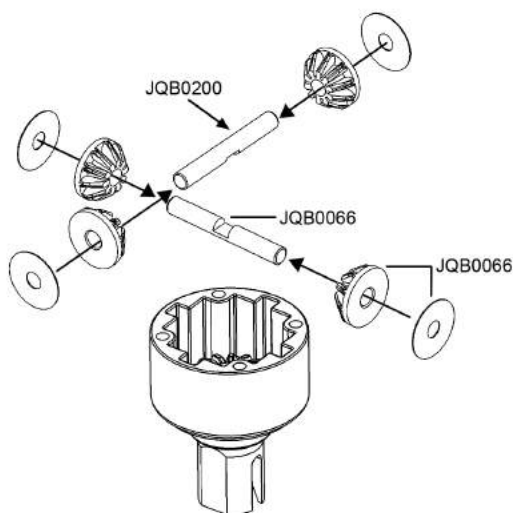
S 3.6x12x0.2(4)



BB 8x16x5(2)

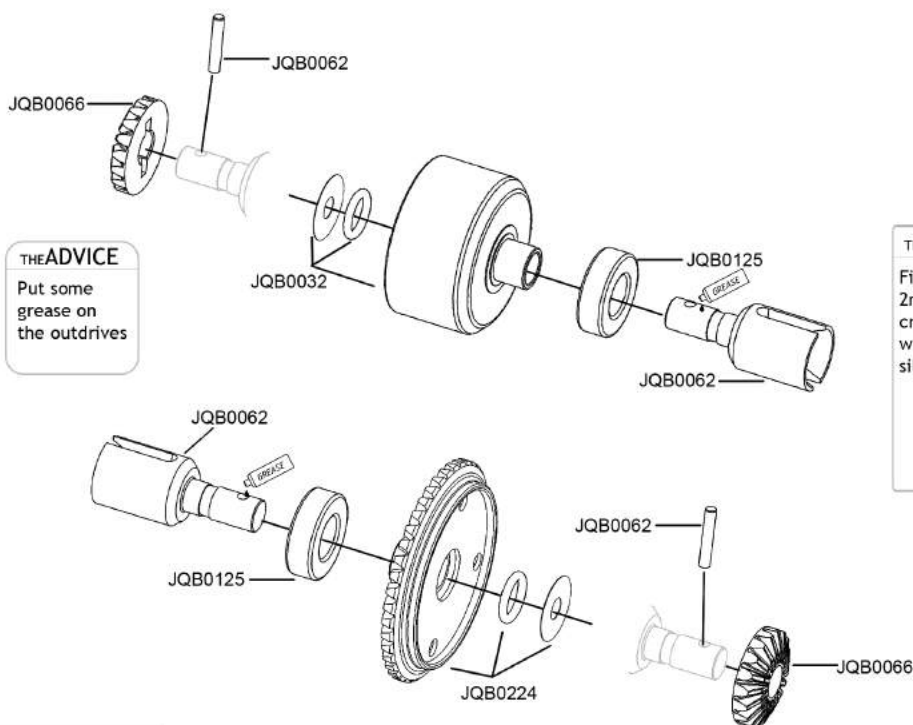
**THEBAG**

**B**



JQB0032	Diff Cup
JQB0042	Diff Gasket
JQB0061	Centre Diff Outdrive Pair
JQB0066	Diff Gear and Crosspin Set
JQB0125	Bearing 8x16x5 4pcs. For Wheels and Differentials
JQB0200	Differential Crosspins (2pcs)
JQB0303	47t Main gear

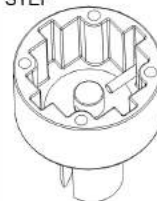
# THE REAR DIFF



## THE ADVICE

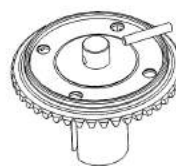
Put some grease on the outdrives

## STEP



## THE ADVICE

Fill about 2mm over cross pins with 3000wt silicon diff oil



P 2.5x11.8(2)



SFH M3x10(4)



O 8.5x1.5(2)



S 6x11.5x0.2(2)

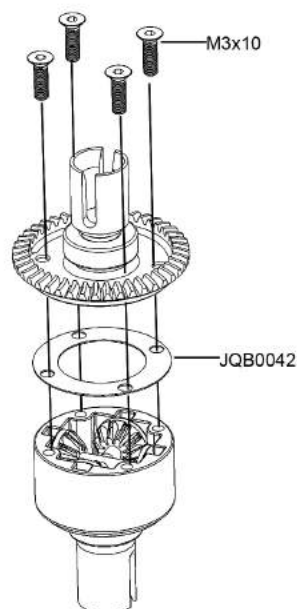
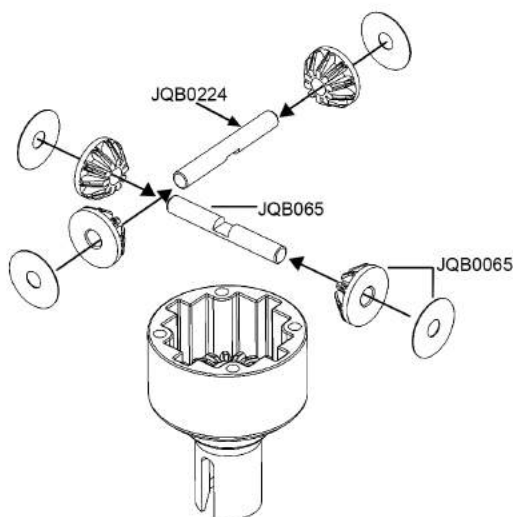


S 3.6x12x0.2(4)



BB 8x16x5(2)

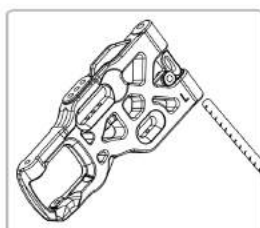
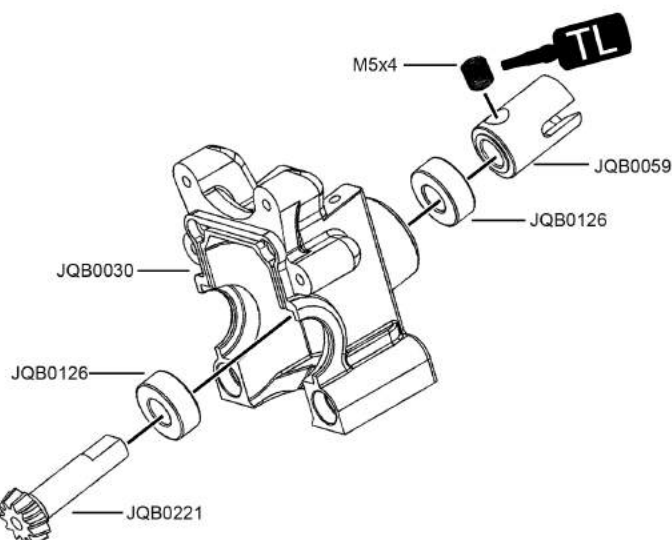
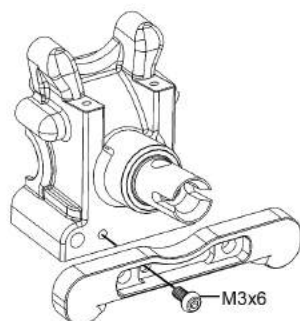
**THEBAG**  
**B**



JQB0032	Diff Cup
JQB0042	Diff Gasket
JQB0062	F/R Diff Outdrive Pair
JQB0066	Diff Gear and Crosspin Set
JQB0125	Bearing 8x16x5 4pcs. For Wheels and Differentials
JQB0200	Differential Crosspins (2pcs)
JQB0224	43/13 Rear Crown gear

...ATTEMPTING TO ASSEMBLE"

# THE FRONT GEARBOX



## THEADVICE

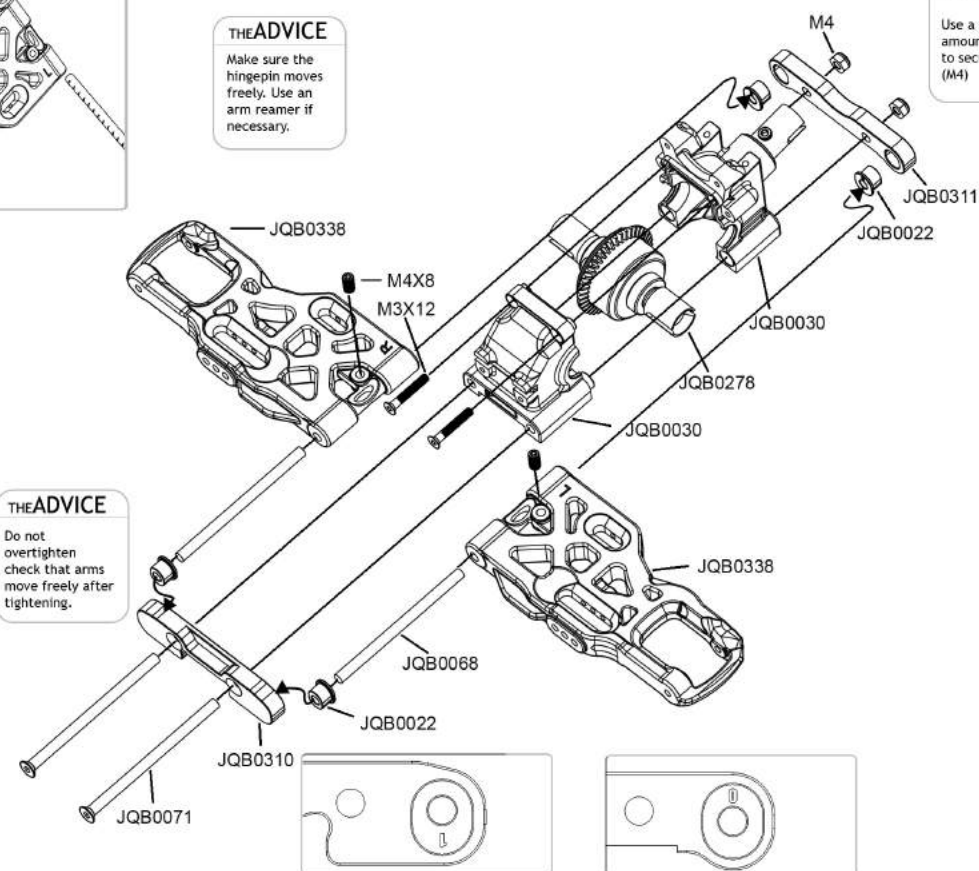
Make sure the hinge pin moves freely. Use an arm reamer if necessary.

## THEADVICE

Use a small amount of glue to secure the nut (M4)

- Set M4x8(2)
- Set M5x4(1)
- SFH M4x10(2)
- BB 6x13x5(2)
- SBH M3x6(1)
- SFH M3x12(2)
- N M4(2)

**THEBAG**  
**C**



## THEADVICE

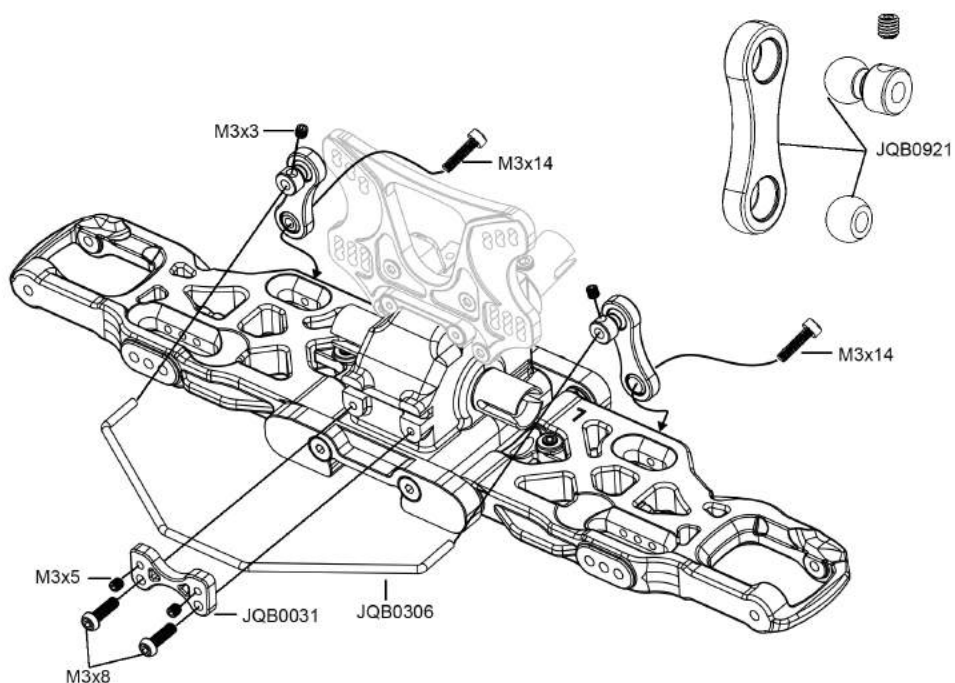
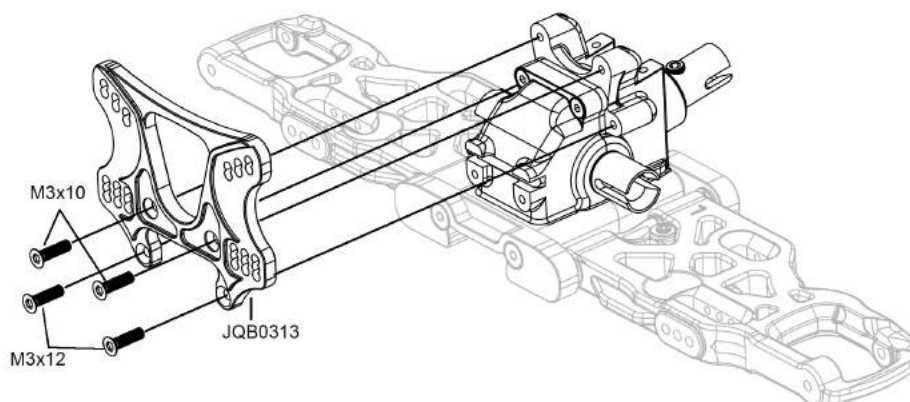
Do not overtighten check that arms move freely after tightening.





- JQB0022 Arm Holder Inserts
- JQB0030 Front Gearbox
- JQB0059 Centre Outdrive Pair
- JQB0068 Inner Hinge pins. 61.5mm Front 64.5mm Rear
- JQB0071 Gearbox Screws
- JQB0126 Bearing 6x13x5 2pcs. For diff pinion
- JQB0221 13t Pinion
- JQB0278 Complete Front Diff (43/13)

- JQB0310 Front-F Arm Holder (White Edition)
- JQB0311 Front-R Arm Holder (white Edition)
- JQB0338 Front Arms (White Edition)



# THE FRONT GEARBOX

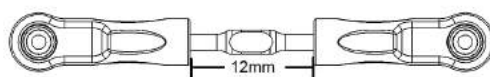
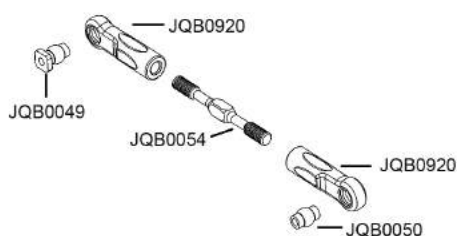
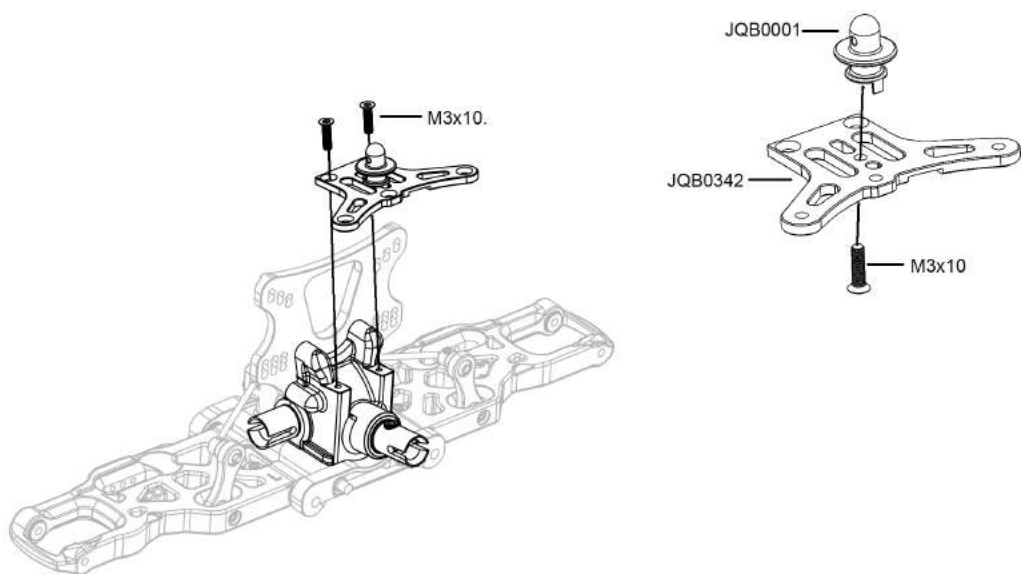


-    
Set M3x3(2)
-    
Set M3x5(2)
-    
SFH M3x10(2)
-    
SFH M3x12(2)
-    
SBH M3x8(2)
-    
BH M3x14(2)

- |         |                                     |
|---------|-------------------------------------|
| JQB0031 | Swaybar Holders                     |
| JQB0306 | Front Swaybar 2.3mm (White Edition) |
| JQB0313 | Front Shock Tower (White Edition)   |
| JQB0921 | Swaybar Links                       |

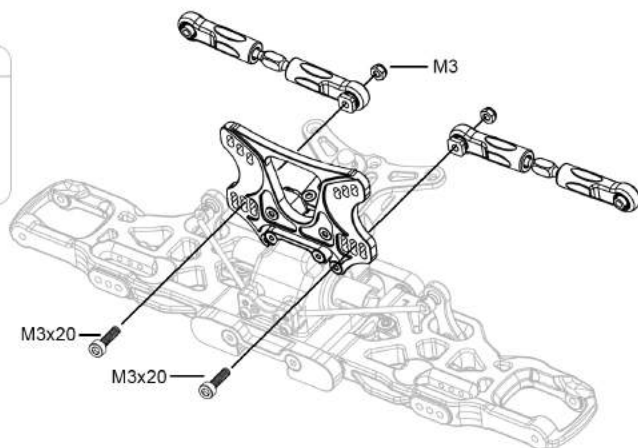
**THEBAG**  
**D**

# THE FRONT LINKS



## THE ADVICE

Fit the link, so the line on the turnbuckle is on the right. When you turn the link towards the back of the car, it becomes shorter.



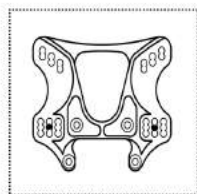
N M3(2)



SFH M3x10(3)



BH M3x20(2)

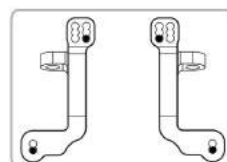
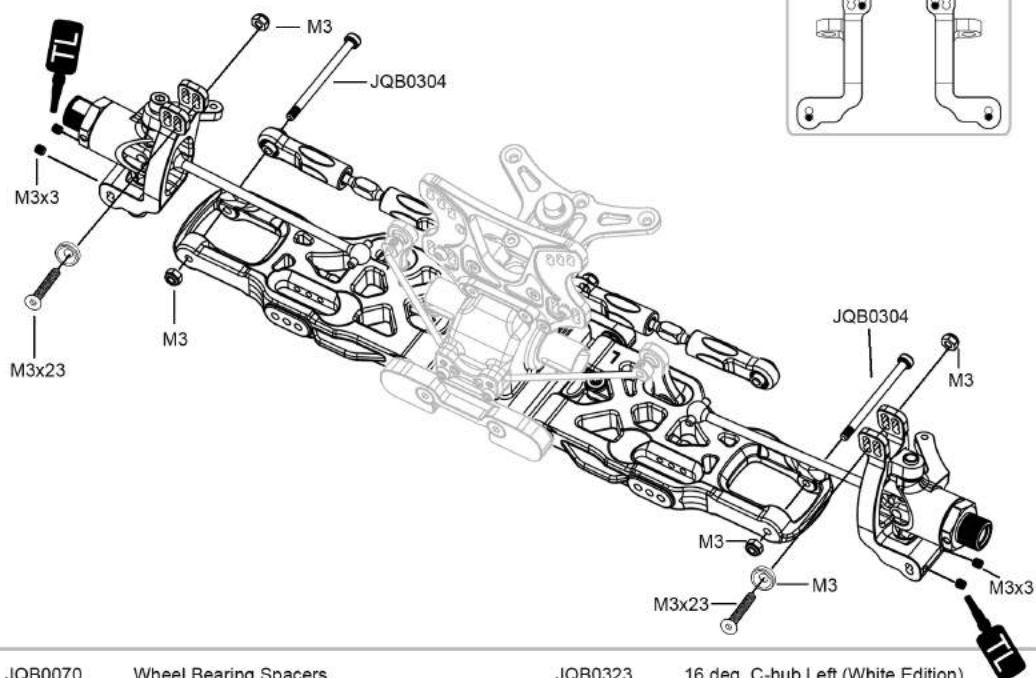
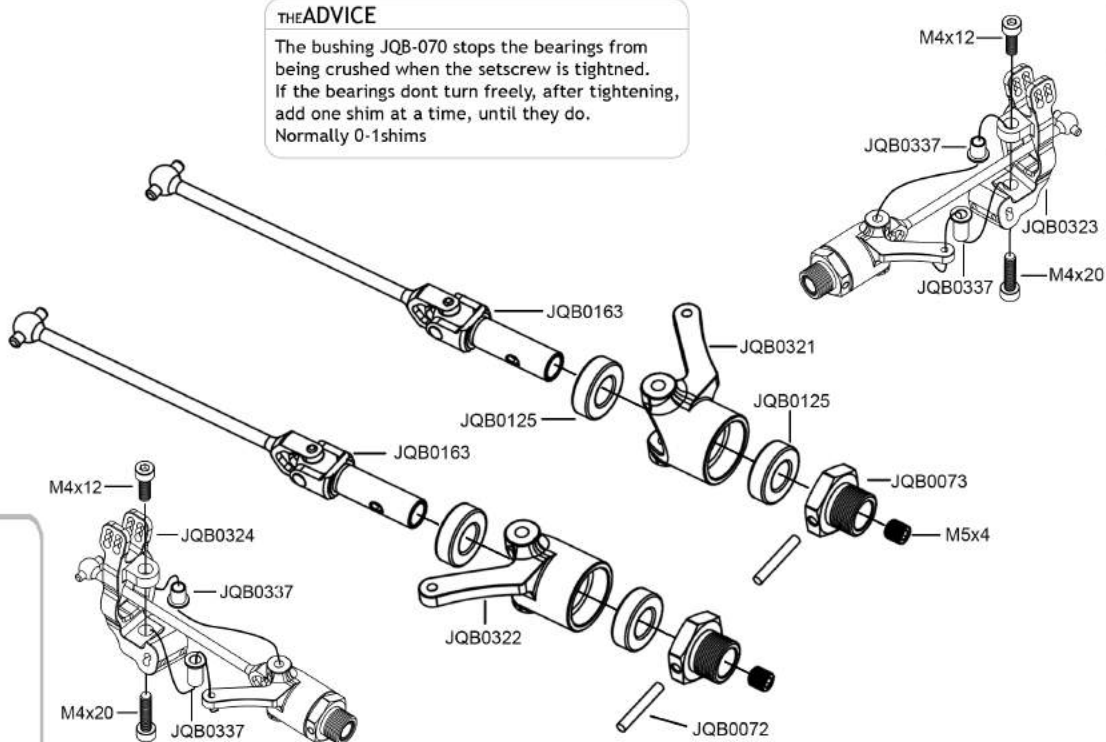


**THEBAG**  
**D**

JQB001	Body mounts
JQB049	7mm Ball with Nut
JQB050	7mm Ball for Upper Link
JQB054	Turnbuckles, Upper Link
JQB087	Servo Saver Top Plate
JQB920	Upper Links

## THE ADVICE

The bushing JQB-070 stops the bearings from being crushed when the setscrew is tightened. If the bearings don't turn freely, after tightening, add one shim at a time, until they do. Normally 0-1shims



M3x3(4)

M5x4(2)

S M3(2)

N M3(4)

BH M4x12(2)

BH M4x20(2)

SFH M3x23(2)

P 2.5x16.8(2)

S 8x12x0.1(4)

BB 8x16x5(4)

**THEBAG**  
**E**

JQB0070

Wheel Bearing Spacers

JQB0072

Hex Pin and Grubscrew

JQB0073

4.3mm Hex with Nut

JQB0125

Bearing 8x16x5 4pcs. For Wheels and Differentials

JQB0163

Rear Driveshaft Pair

JQB0304

Front Outer Hinge pins

JQB0321

Left CNC Steering Knuckle (White Edition)

JQB0322

Right CNC Steering Knuckle (White Edition)

JQB0323

16 deg. C-hub Left (White Edition)

JQB0324

16 deg. C-hub Right (White Edition)

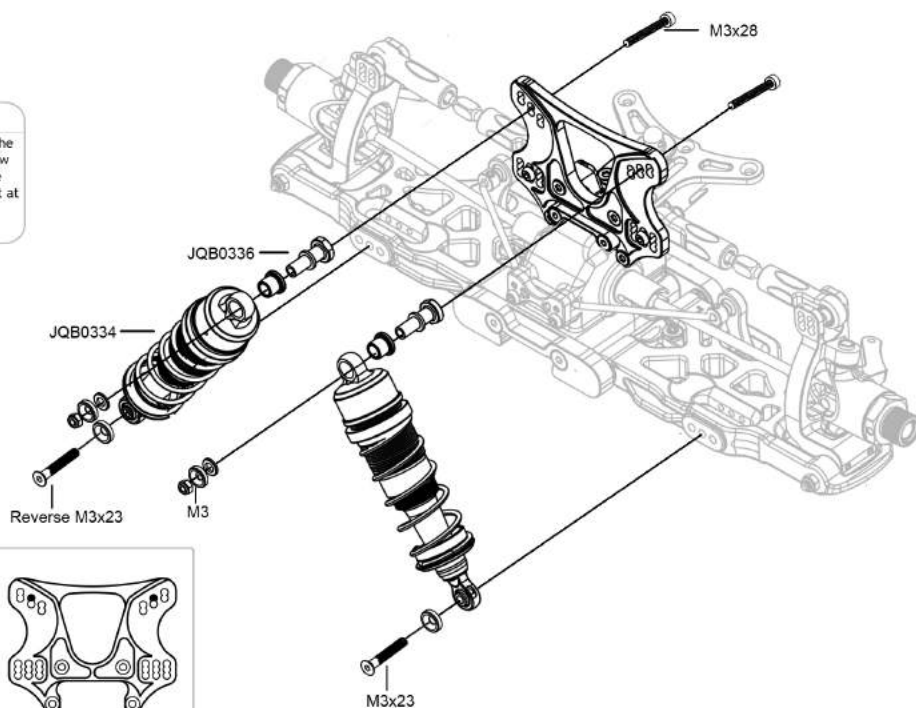
JQB0337

Steering Knuckle Bushings (White Edition)

# THE REAR GEARBOX

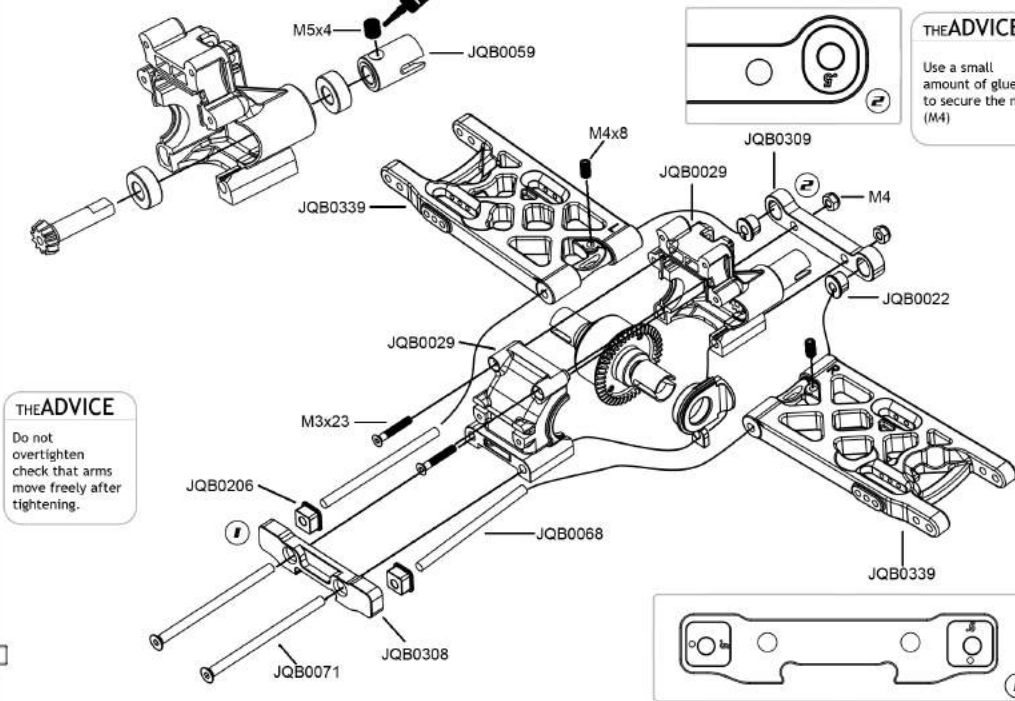
## THEADVICE

You can recognise the reverse thread screw by the fact that the threads do not start at the head, there is a 2mm gap.



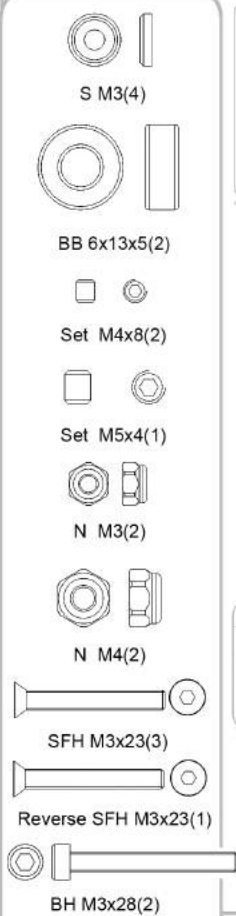
## THEADVICE

Use a small amount of glue to secure the nut (M4)



## THEADVICE

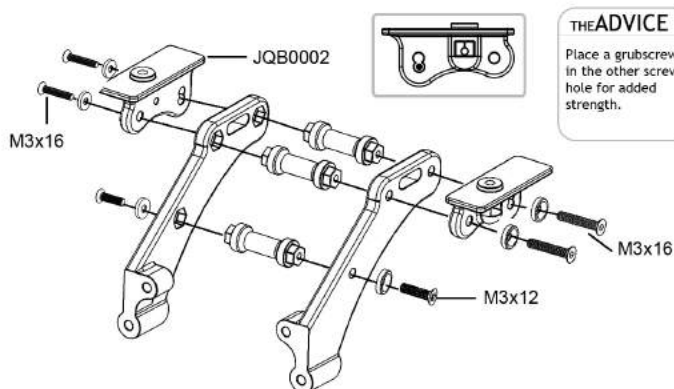
Do not overtighten check that arms move freely after tightening.



**THEBAG**  
**F**

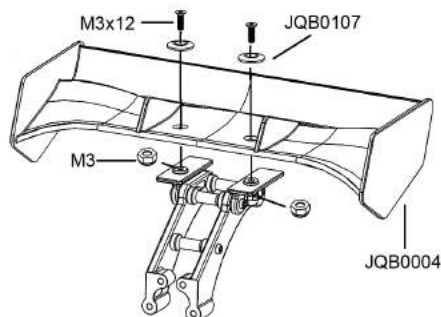
JQB0022	Arm Holder Inserts	JQB0309	Rear Low Antisquat Plate (White Edition)
JQB0029	Rear Gearbox	JQB0334	Complete Front 16mm Shocks with Springs (2pcs)
JQB0059	Centre Outdrive Pair	JQB0336	One Piece Shock Holder (White Edition)
JQB0068	Inner Hingepins. 61.5mm Front 64.5mm Rear	JQB0339	Rear Arms (White Edition)
JQB0071	Gearbox Screws		
JQB0126	13t Pinion		
JQB0206	Square Insert		
JQB0221	Bearing 6x13x5 2pcs. For diff pinion		

# THE WINGMOUNT



## THE ADVICE

Place a grub screw in the other screw hole for added strength.



S M3(8)



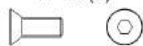
Set M3x3(4)



Set M3x5(2)



N M3(6)



SFH 3x8(1)



SBH 3x8(2)



SFH 3x12(4)



BH 3x14(2)



SFH 3x16(4)



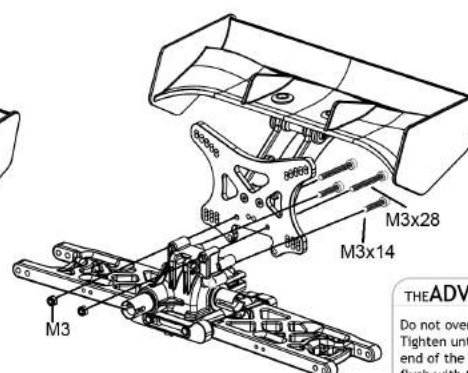
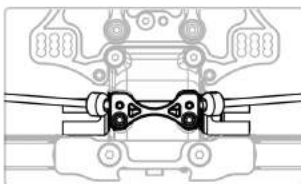
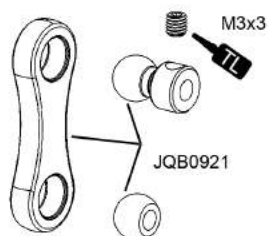
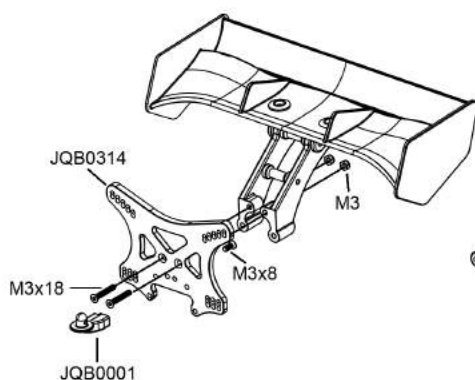
SFH 3x18(4)



BH 3x28(2)

**THE BAG**

**G**

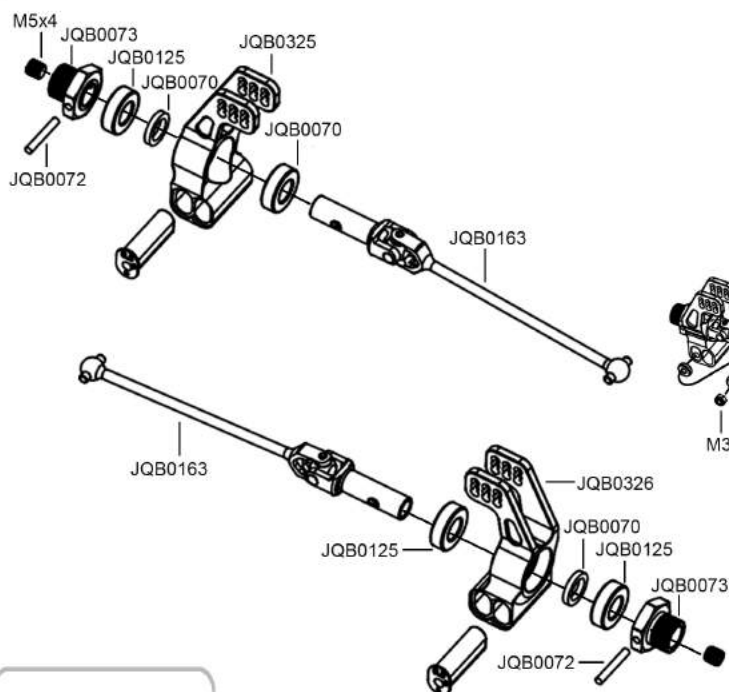


## THE ADVICE

Do not overtighten. Tighten until the end of the screw is flush with the nut.

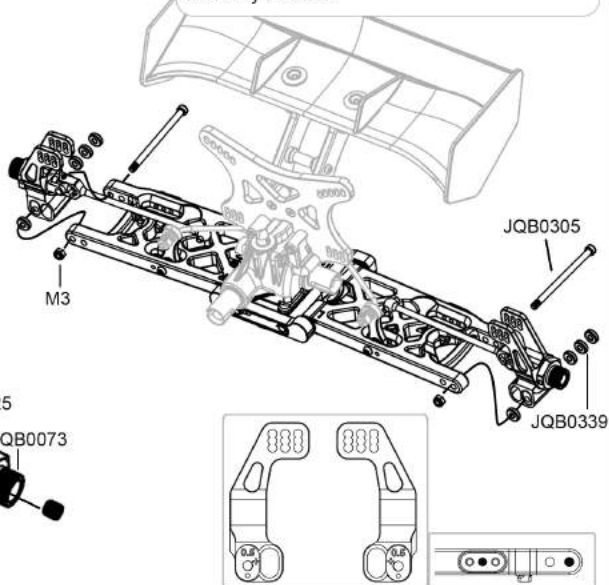
JQB0001	Body mounts
JQB0002	Wingmount
JQB0004	Wing (Black)
JQB0031	Swaybar Holders
JQB0107	Wing Shims
JQB0307	Rear Swaybar 2.5mm (White Edition)
JQB0314	Rear Shock Tower (White Edition)
JQB0921	Swaybar Links

# THE REAR HUBS



## THE ADVICE

The bushing JQB-070 stops the bearings from being crushed when the setscrew is tightened. If the bearings don't turn freely, after tightening, add one shim at a time, until they do. Normally 0-2shims



S M3(2)



Set M5x4(2)



N M3(6)



P 2.6x16.8(2)



S 8x12x0.1(4)



BB 8x16x5(4)

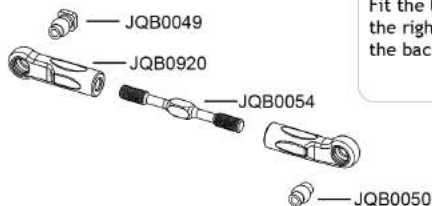


SFH M3x23(2)



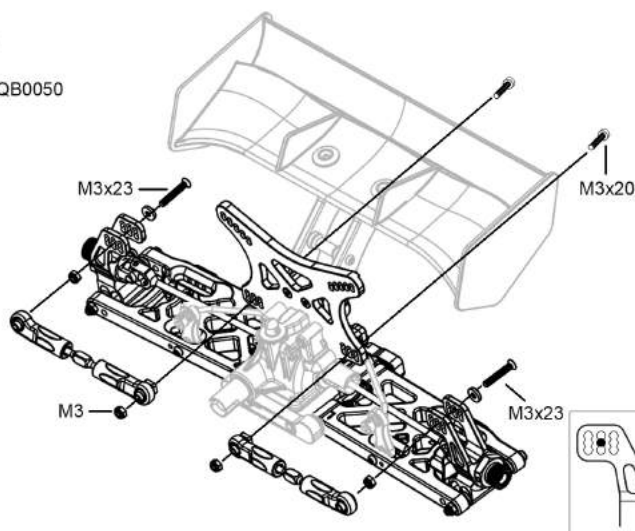
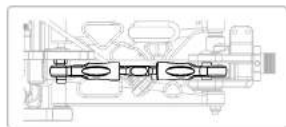
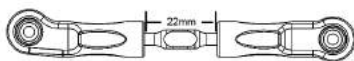
BH M3x20(2)

**THEBAG**  
**H**



## THE ADVICE

Fit the link, so the line on the turnbuckle is on the right. When you turn the link towards the back of the car, it becomes shorter.



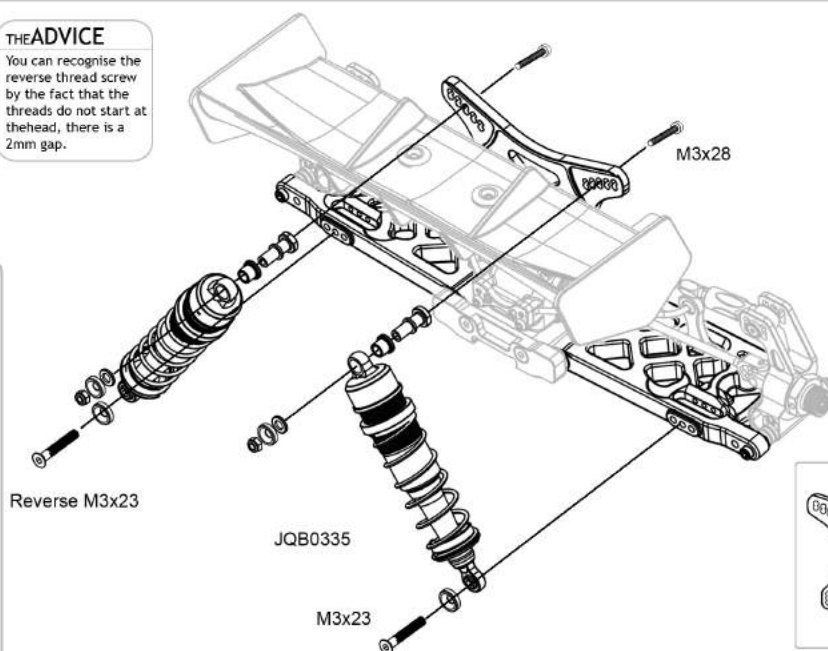
JQB0049	7mm Ball with Nut
JQB0050	7mm Ball for Upper Link
JQB0054	Turnbuckles, Upper Link
JQB0070	Wheel Bearing Spacers
JQB0072	Hex Pin and Grubscrew
JQB0073	4.3mm Hex with Nut
JQB0125	Bearing 8x16x5 4pcs. For Wheels and Differentials
JQB0163	Rear Driveshaft Pair

JQB0305	Rear Outer Hingepins
JQB0325	Rear Left CNC Hub (White Edition)
JQB0326	Rear Right CNC Hub (White Edition)
JQB0339	Rear Arms (White Edition)
JQB0920	Upper Links

# THE CENTRE DIFF MOUNT

## THEADVICE

You can recognise the reverse thread screw by the fact that the threads do not start at the head, there is a 2mm gap.



S M3(4)



Set M3x3(2)



Set M3x5(2)



N M3(2)



BB 5x8x2.5(2)



SBH M3x8(3)



SFH M3x6(3)



SFH M3x10(2)



SFH M3x23(1)



Reverse SFH M3x23(1)



SFH M3x35(2)



BH M3x28(2)



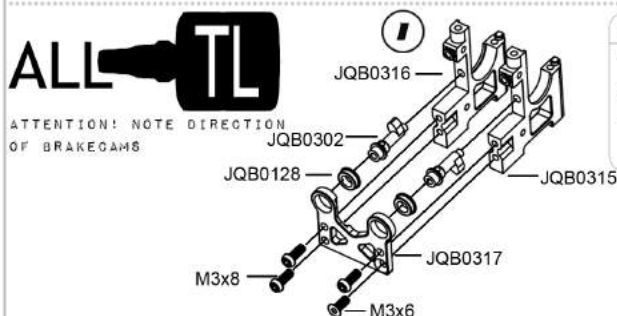
SBH M3x12(4)

**THEBAG**



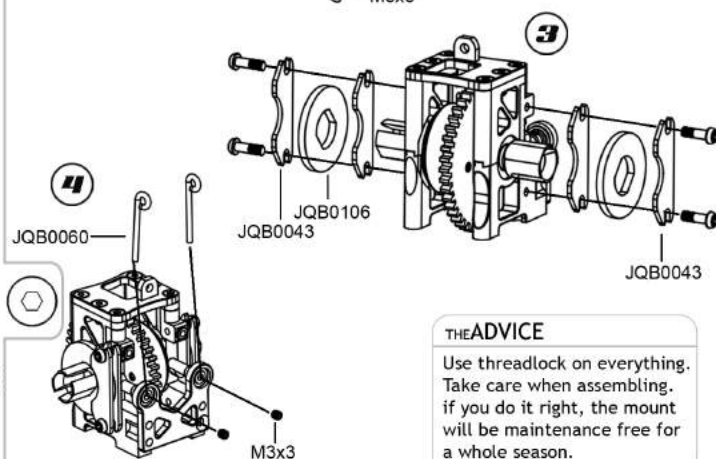
**ALL TL**

ATTENTION! NOTE DIRECTION OF BRAKECAMS



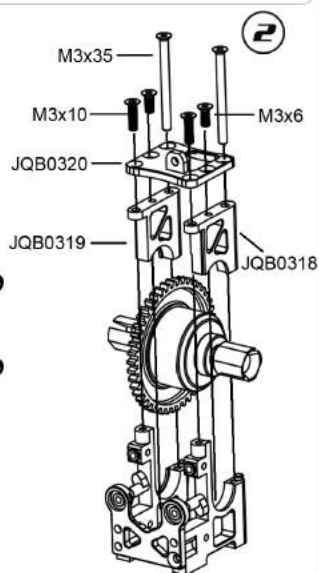
## THEADVICE

Tighten brakepad screw, then lock with setscrew. There should be 0.5-1mm play between pad and screw head.



## THEADVICE

Use threadlock on everything. Take care when assembling. if you do it right, the mount will be maintenance free for a whole season.



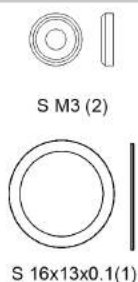
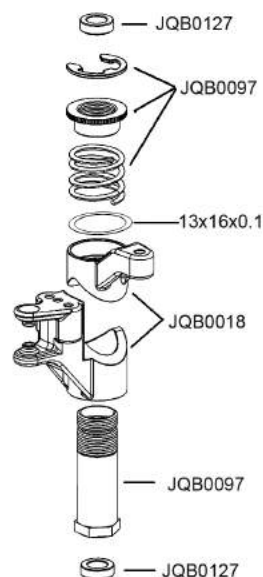
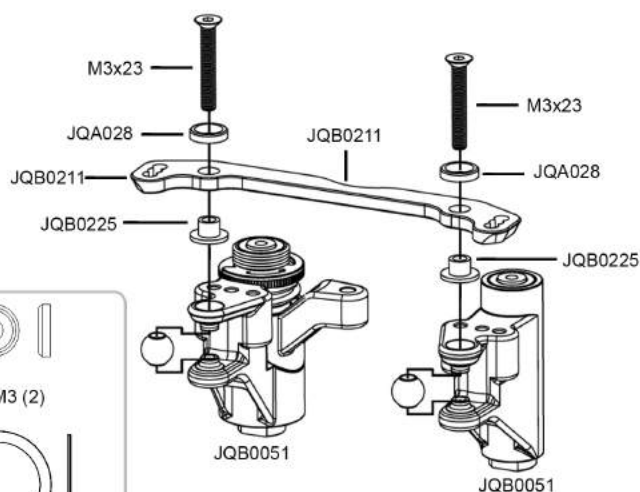
JQB0043	Brake Pad
JQB0106	Glass Fibre Brake Disks
JQB0128	Bearing 5x8x2.5 Flanged bearing
	2pcs for Brakes
JQB0302	Brake Cams and Levers (White Edition)
JQB0315	Centre Diff Mount Front (White Edition)
JQB0316	Centre Diff Mount Rear (White Edition)
JQB0317	Centre Diff Mount Plate (White Edition)

JQB0318	Centre Diff Mount Top Front (White Edition)
JQB0319	Centre Diff Mount Top Rear (White Edition)
JQB0320	Centre Diff Mount Top Cover (White Edition)
JQB0335	Complete Rear 16mm Shocks with Springs (2pcs)

"REMEMBER TO INSERT THE BRAKEDISKS"



# THE STEERING AND CHASSIS



S M3 (2)

S 16x13x0.1 (1)



N M3 (2)



BB 6x10x3 (4)



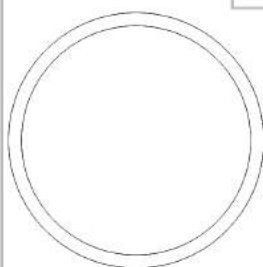
SFH M3x8 (1)



SFH M3x10 (3)



SFH M3x23 (2)



O 2x36 (2)

**THEBAG**

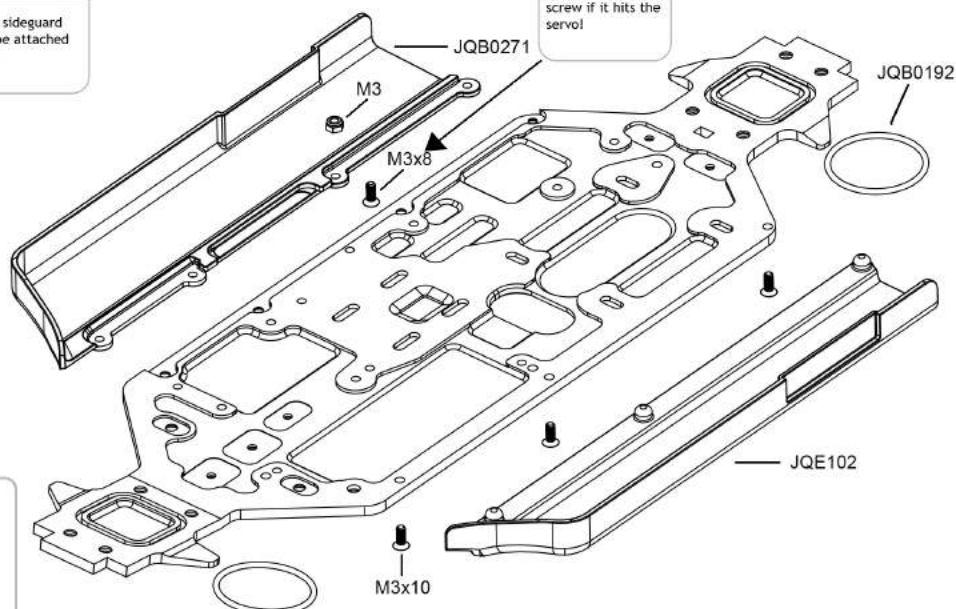


## THEADVICE

Right sideguard  
Will be attached  
later

## THEADVICE

Do not use this  
screw if it hits the  
servo!

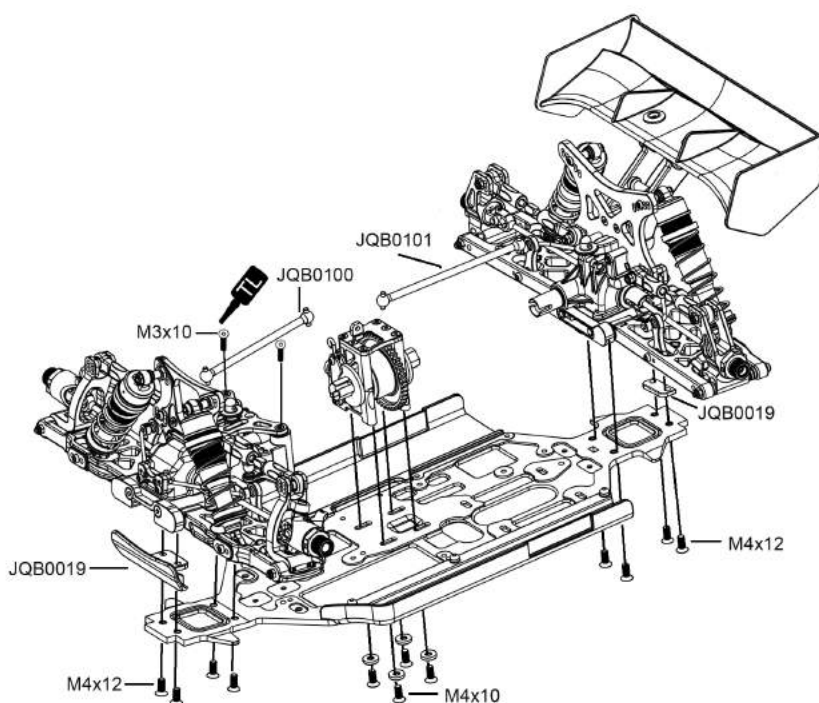
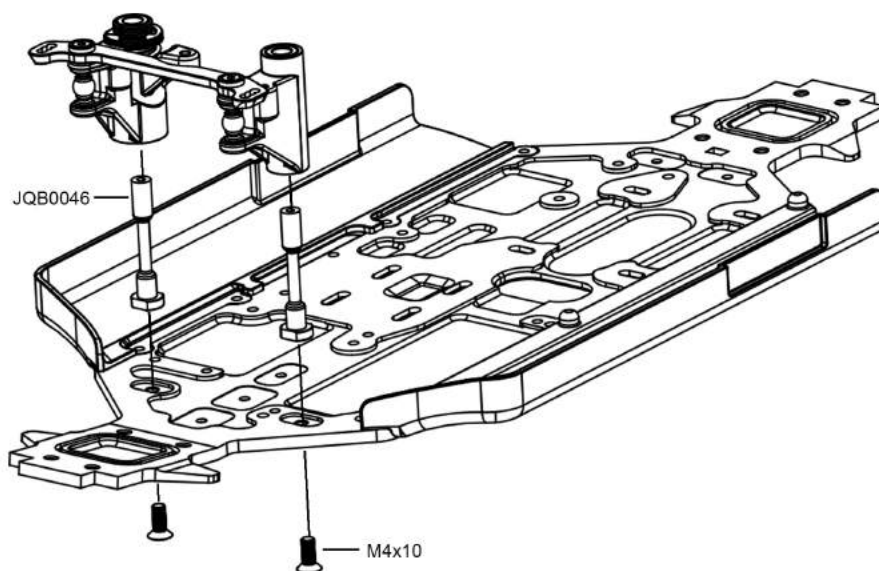


JQB0018 Plastic Steering Parts  
JQB0051 7mm Ball For Steering  
JQB0086 Long Ackermann Plate  
JQB0097 Servo Saver Parts  
JQB0127 Bearing 6x10x3 4pcs for Steering  
JQB0192 Chassis O-Ring  
JQB0211 Alternative Ackerman Plate Set  
JQB0225 Bushings for Alternative ackerman plate

JQB0251 THE Flex Chassis, includes 2 Chassis O-Rings  
JQB0271 THE Sideguards, for Flex Chassis

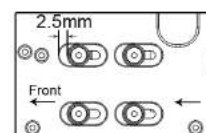


# THE CHASSIS



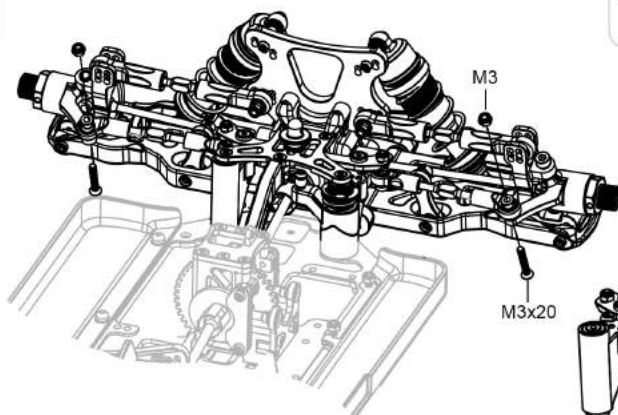
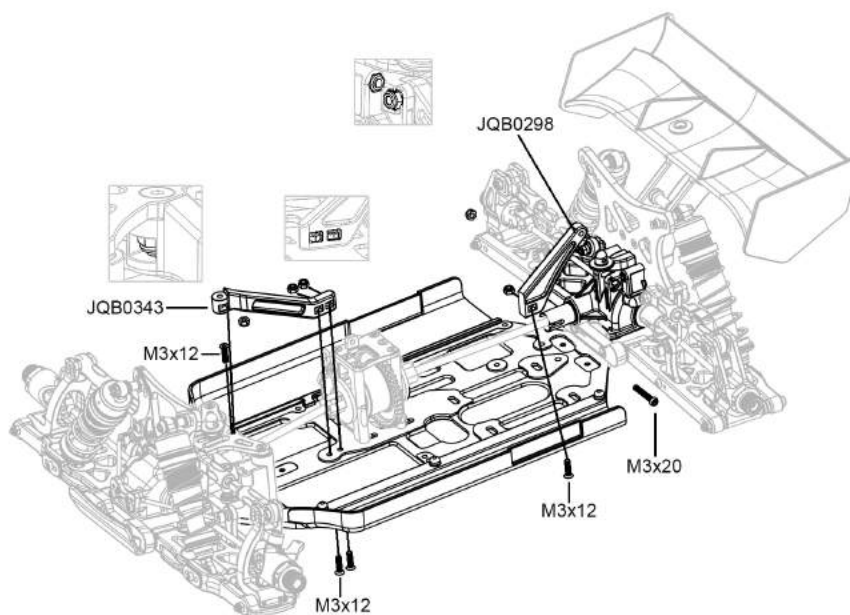
**THEBAG**  
**J**

JQB0019	Bumpers
JQB0046	Servo Saver Posts
JQB0100	86mm Centre Dogbone
JQB0101	110mm Centre Dogbone



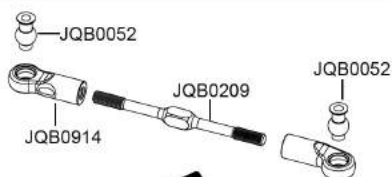
"REMEMBER THE DOGBONES"

# THE BRACES AND LINKS



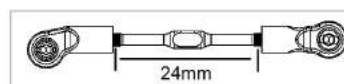
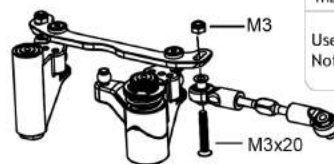
## THEADVICE

Fit the link, so the line on the turnbuckle is on the right. When you turn the link towards the back of the car, it becomes shorter.



## THEADVICE

Use middle hole. Note ball orientation



N M3(9)



SFH M3x12(4)



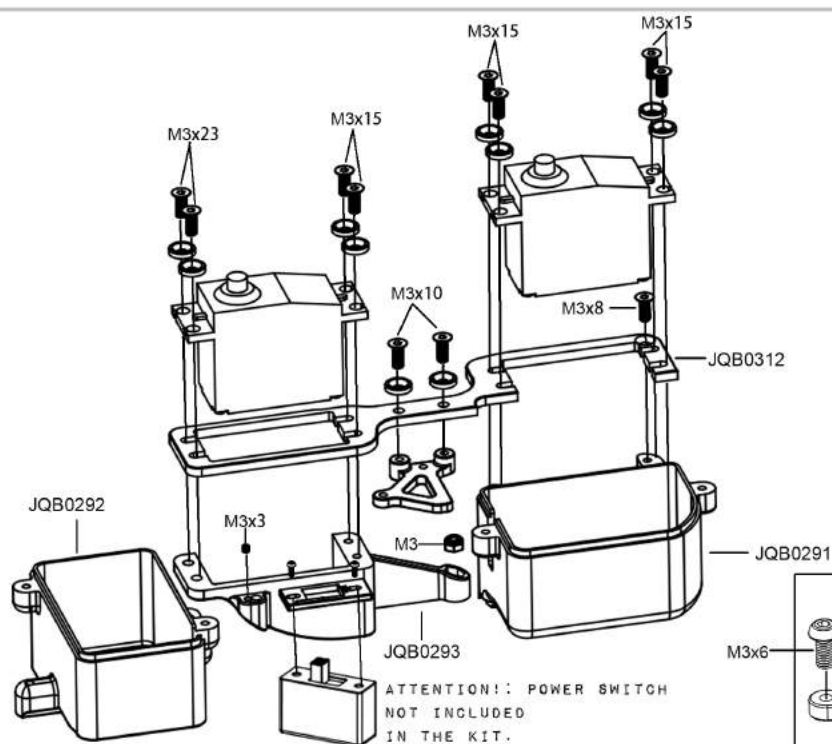
SFH M3x20(4)



BH 3x20(1)

**THEBAG**  
**K**

JQB0052	7mm Ball For Steering (Outer)
JQB0209	Steering Turnbuckle Short (Oldschool Ackerman Plate) 2Pcs
JQB0298	CNC Servo Arm for 2013 RadioTray (Hitec)
JQB0343	Front Chassis Brace
JQB0914	Steering Links



Set M3x3(1)



S M3 (10)



SFH M3x10(4)



SFH M3x8(1)



SBH M3x6(2)



SFH M3x12(3)



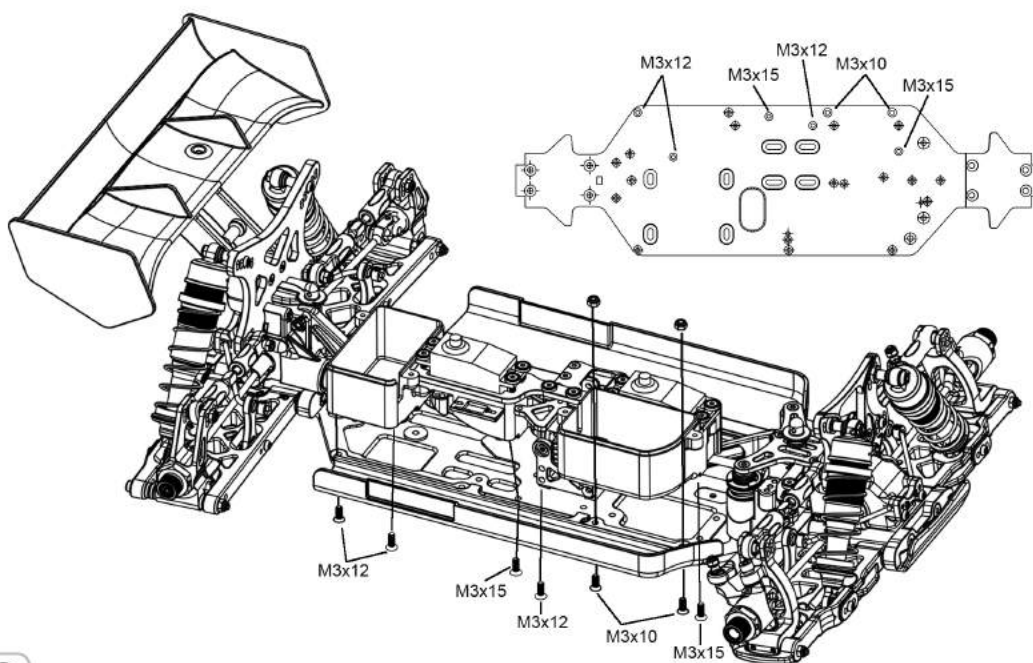
SFH M3x15(8)



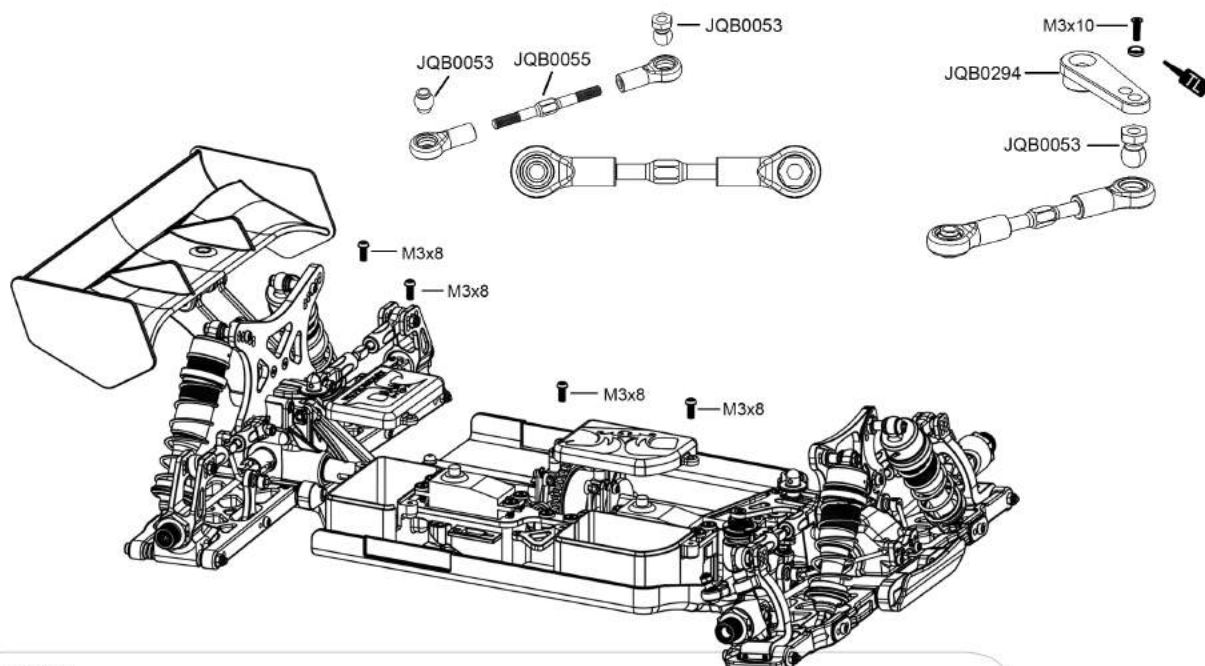
SFH M3x23(2)

**THEBAG**

**L**



JQB0032 Diff Cup  
JQB0291 2013 Front Radio Box  
JQB0292 2013 Rear Radio Box  
JQB0293 Throttle Servo Holder

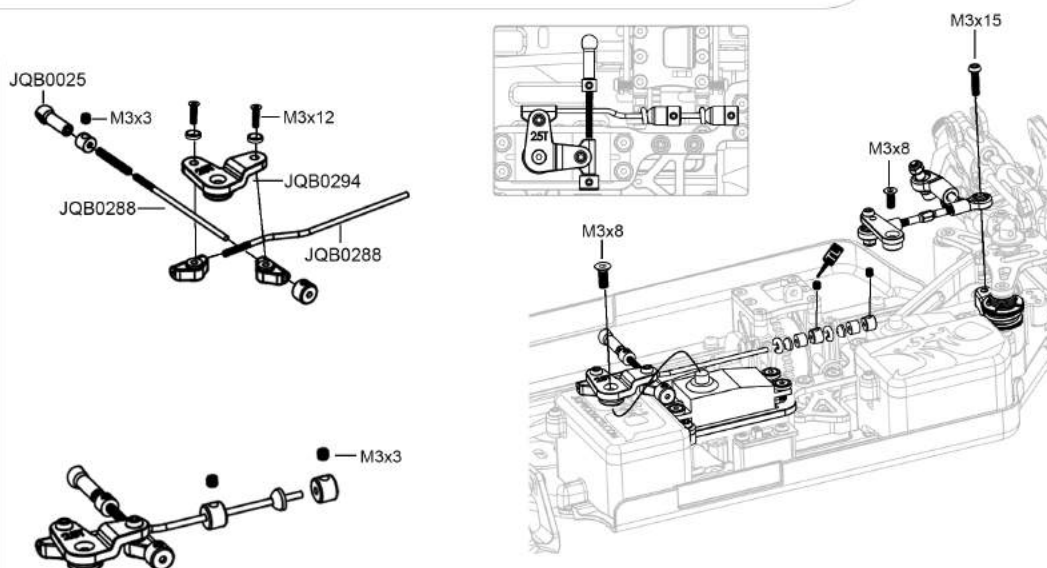


## THE ADVICE

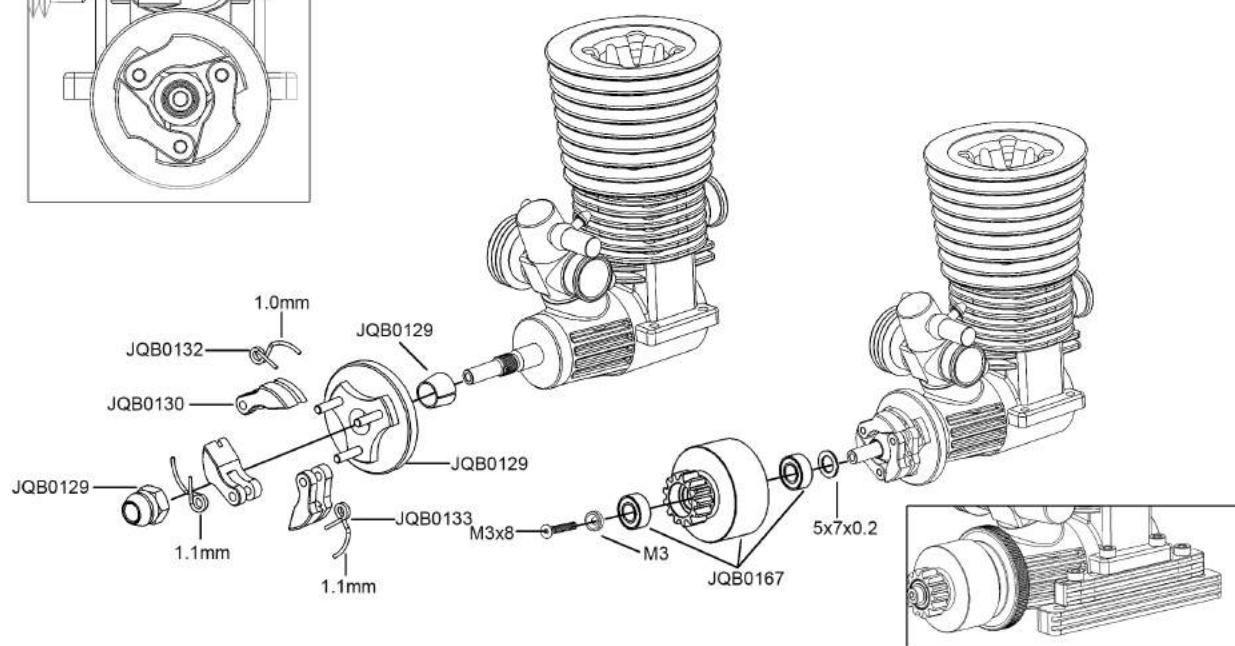
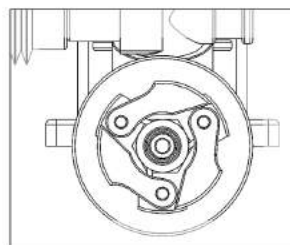
Cut a 5mm piece of fuel tubing to fit between the ball and the collet. When assembling, gently move the collet towards the lever until the caliper starts pushing on the brakepad, and tighten the setscrew in the collet. Brake bias is set by moving the aluminium collets. A good starting point is a 50/50 bias, where both front and rear wheels brake the same amount. For more steering and a more aggressive feel, try reducing the front brake so it doesn't lock the wheels, and run full lock on the rear.

- Set M3x3(4)
- S M3 (3)
- SFH M3x8(2)
- SFH M3x10(1)
- SFH M3x12(2)
- SBH M3x8(4)
- SBH M3x15(1)

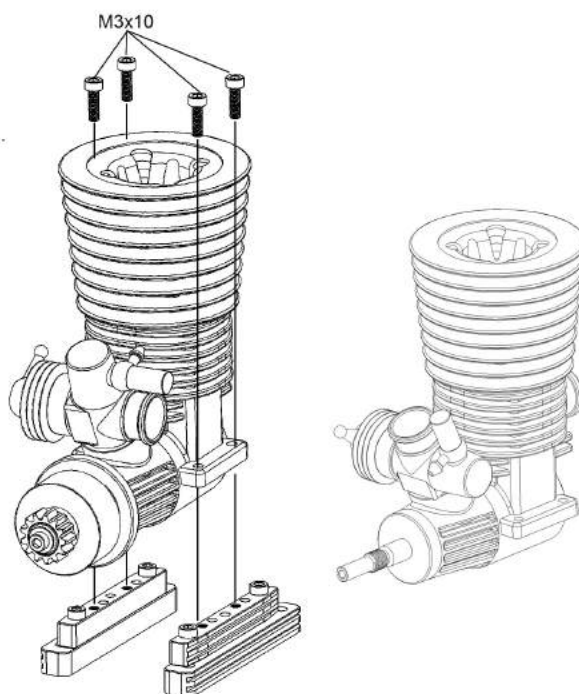
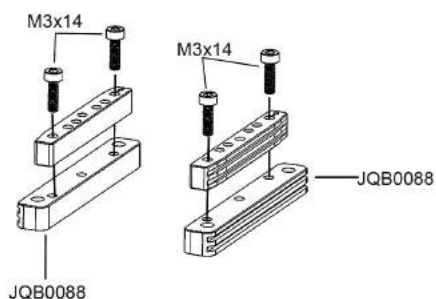
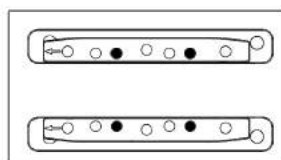
**THE BAG**  
**L**



- JQB0025 Throttle Linkage Kit
- JQB0053 6mm Balls for Steering Link
- JQB0055 Turnbuckles, Steering
- JQB0288 Long throttle linkage and Bent brake linkage
- JQB0294 2013 Throttle servo arm set
- JQB0914 Steering Links



MOUNT ENGINE IN FORWARD POSITION.  
FORWARD HOLES. WITH ARROWS POINTING BACK.



S 5x7X0.2(6)



BB 5x10X4



SFH M3x8(1)



BH M3x10(4)

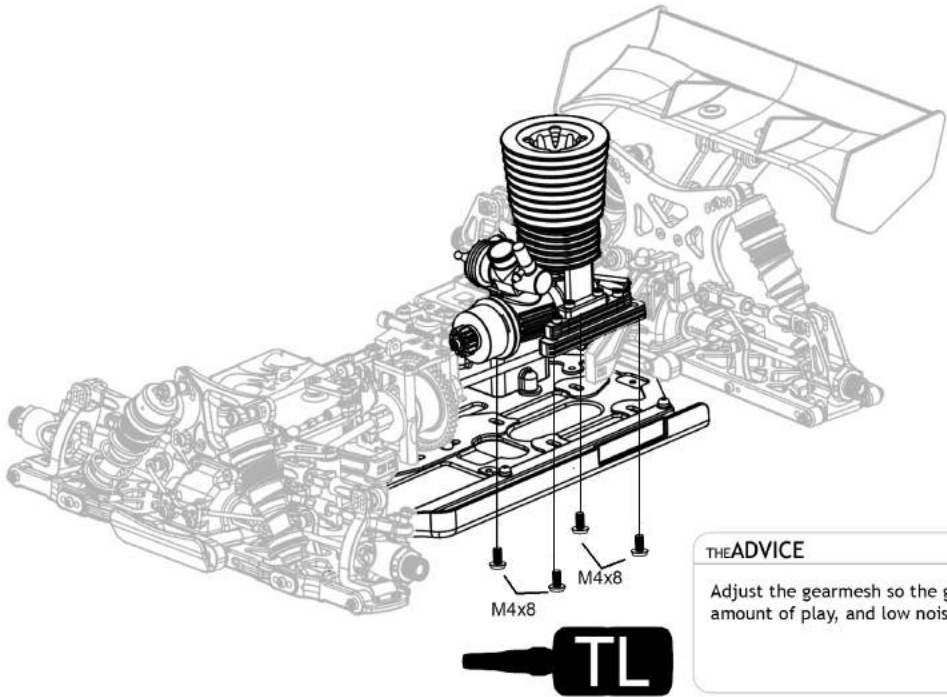


BH M3x14(4)

**THEBAG**  
**M**

- JQB0088 Engine Mount Set
- JQB0129 Flywheel with nut and collet
- JQB0130 7075 Black Clutch Shoes with springs, 3pcs for 3-shoe clutch
- JQB0133 1.1mm spring for 3-shoe clutch
- JQB0167 15t Clutchbell with 2pcs 5x10 bearing

# THE MOTOR AND FUELTANK

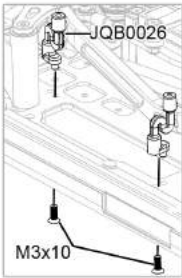
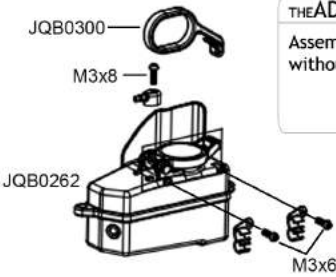


**THEADVICE**

Adjust the gearmesh so the gears have a small amount of play, and low noise when spinning.

**THEADVICE**

Assemble TankPull without screw!



S M3(2)



SFH M3x10(2)



SFH M3x15(2)



SBH M3x6(2)



SBH M3x8(1)

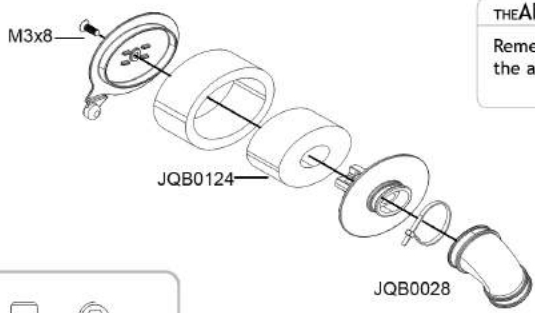
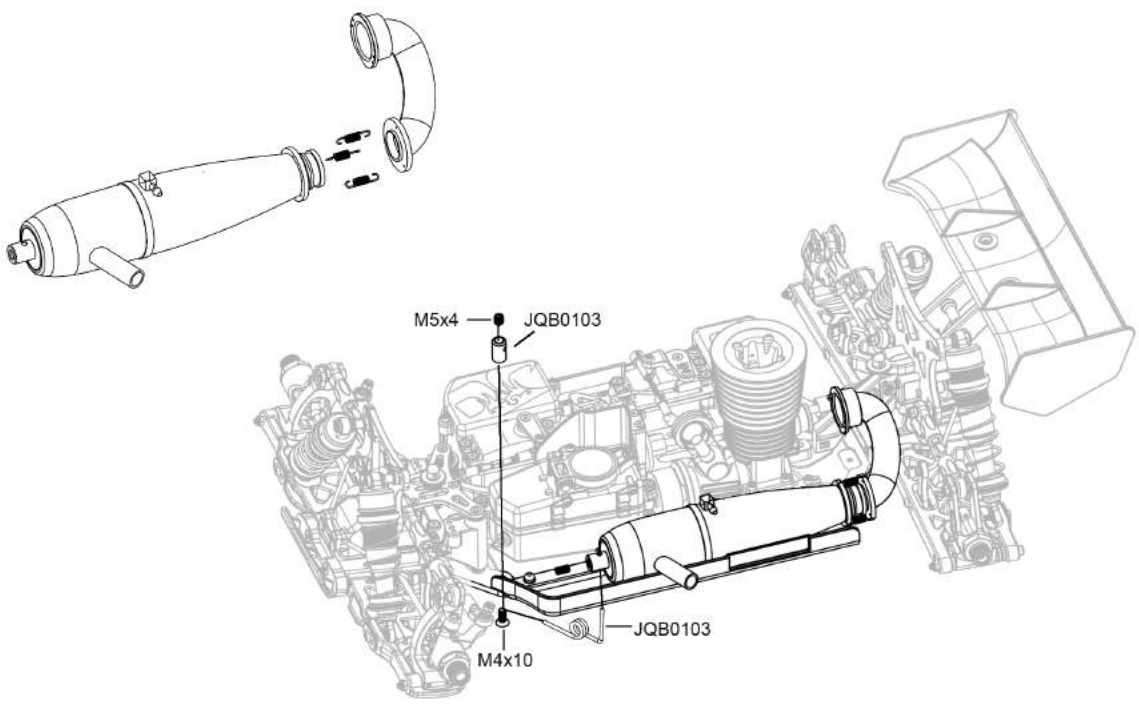


SBH M4x8(4)

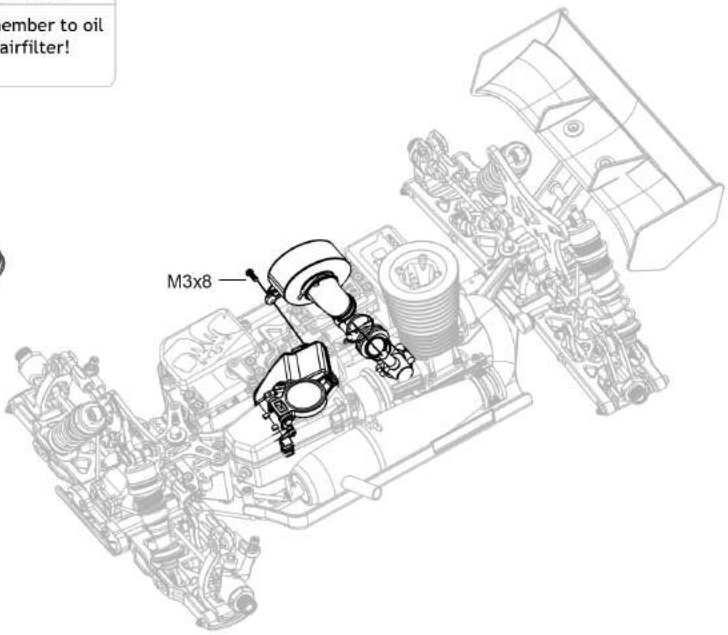
**THEBAG**  
**M**

JQB0026	Fueltank posts
JQB0039	Fueltank Grommet
JQB0262	Fueltank, with O-Ring Seal
JQB0300	Tank Puller Set (2Pcs)

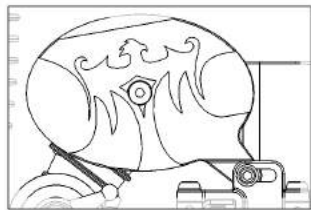
# THE AIRFILTER



THE ADVICE  
Remember to oil  
the airfilter!

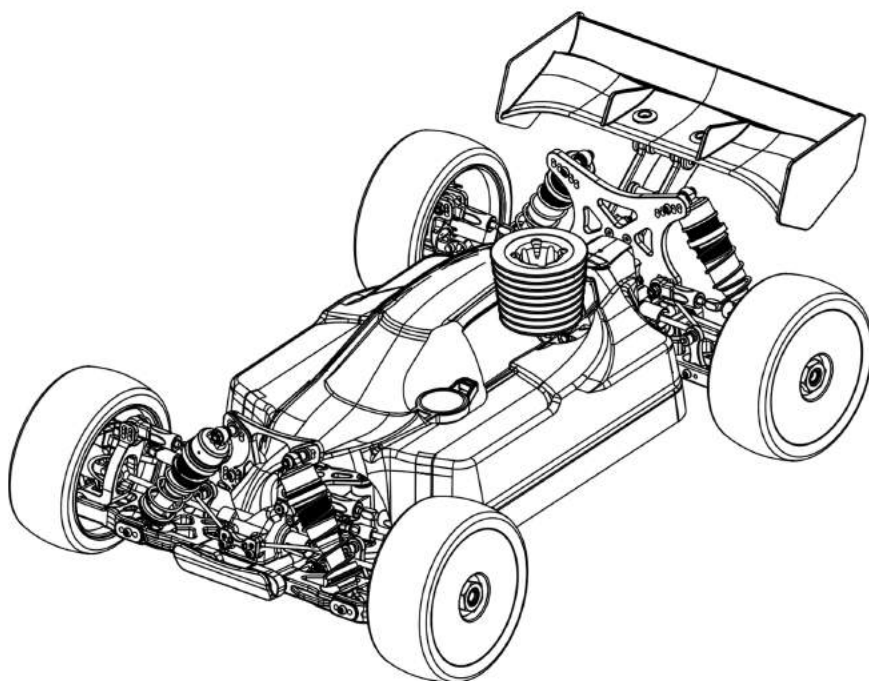
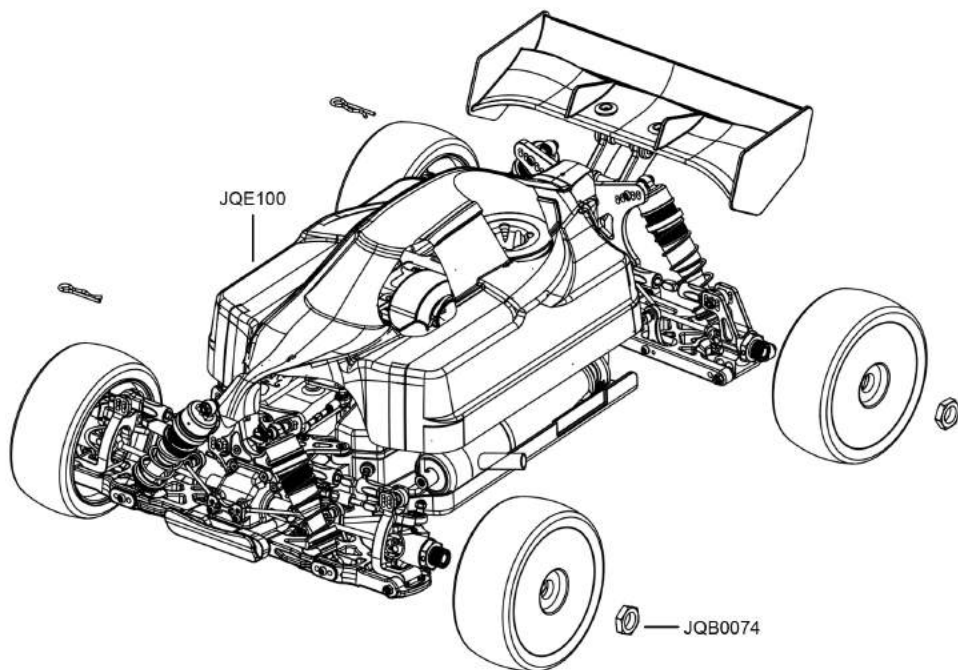


- Set M5x4(1)
- SFH M4x10(1)
- SBH M3x8(1)
- SFH M3x8(1)



- JQB0028 Airfilter Holder
- JQB0103 Pipe Holder
- JQB0124 Airfilter Foam Inner and Outer 4pcs

THEBAG  
N



THEBAG  
N

JQB0074 Wheel Nuts  
JQE100 Body, Window Sticker



# THE Car White Edition – SET UP ADVICE

Explaining to someone how to set up a car is extremely difficult, because the subject is very complicated, and no one can claim to know exactly what is going on at all times, and how things actually work. Car set up is constant searching, learning, and work-in-progress. We have tried to gather the most valuable information for you and compress it here into an as short as possible and as simple as possible set up guide. For more in depth explanations and theories please read our guides on our website.

One thing to keep in mind, is that the setup changes can have differing effects on the handling depending on traction levels of the track, and the driver's driving style and skill level. To truly get the most of this and other guides, and for you to understand how to set up the car, there are no shortcuts. You need to take the time to try changes one by one, record lap times, and note down what you feel happens. Repeat this over and over at different tracks. Read this and other guides over and over. Then repeat again. This is the only way. Good luck!

## THE Golden General Truths

\*There is no reason to feel overwhelmed with setup options. Just because they are there does not mean you have to try them all. Stick to the standard set up if you don't want to experiment. We have spent an enormous amount of time developing this car to where the standard set up will work well for anyone on any track. If you realise you want the car to do something different, check our Brainstorming section in this manual for a simple idea or two to try.

\*If you get lost, revert back to our standard set up. You will always find our most up to date standard setup on our website. We are constantly improving it.

\*Camber tends to work the best when it is 0.5-1.5 degrees on the front, and 1.5-3 degrees on the rear. If you want to really feel the effects of camber, and find your very own sweet spot, have your mechanic make changes quickly in pit lane, and keep on driving until you find a setting that you are most comfortable with. You just need to turn the link 90 degrees at a time.

## THECar White Edition – SET UP ADVICE

\*For the adjustable weight distribution, arrows back on mount, front mounting holes is a very good general setup (stock setting). It works everywhere. For a very "jumpy" tight track, moving the engine all the way forward (arrows and engine forward), may be better.

\*The upper links, with which you set the roll centre of the car, are arguably the most complicated to explain and to understand. Here track conditions and driver input play a large roll. A driver that pushes the car to the level "X" may prefer a certain setting, while another driver pushing it beyond level "X" may cause the car to do unexpected things due to the setting only being good to a certain point. The traction level of the track may also cause similar situations.

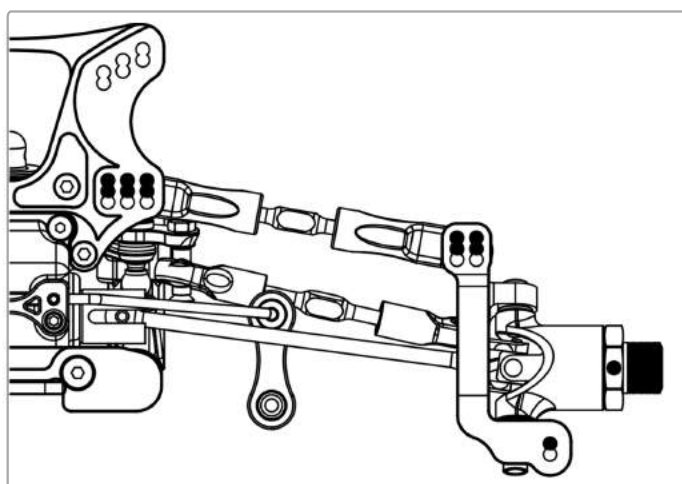
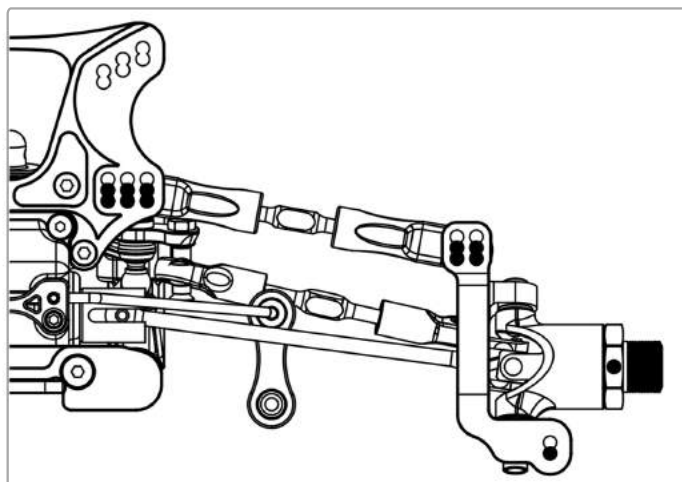
In general, a shorter, or more angled (lower on the inside than outside) link will make the car more aggressive, responsive, and will provide more traction up to a point, after which it goes away suddenly. A longer or less angled link will make the car more stable, and less responsive, and will provide more even traction, with the loss of traction happening more smoothly, but it will also be harder to save it, and get back in control.

A few tips: From the standard setup, on a high traction track, shorten the rear link to the middle column on the tower. It will help to keep the rear from squatting, leaning, or losing traction, you will be able to push the car harder. On a medium to low grip track, make it long on the tower.

On the front, for smoother steering, lengthen the front link, even to the point where it is inner column on the tower, and outer on the hub. When you do this, it is also a good idea to increase the angle of the link at least one hole from where you had it when it was short.

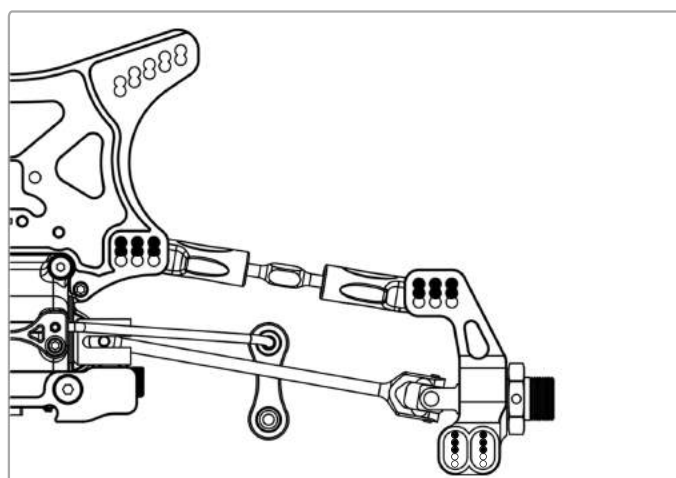
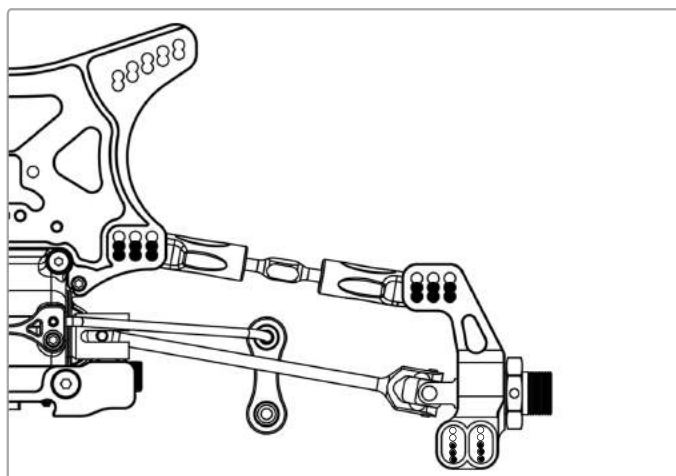
\*Whatever you need, just ask us. We are here to help you.

## THE FRONT END



The front end is designed to be set up a certain way. Please study the pictures to see which groups of holes are used together. When using the lower hole for the arm on the C-Hub, the lower two rows are used on the shock tower and the hub. When using the top holes, the top two rows are used.

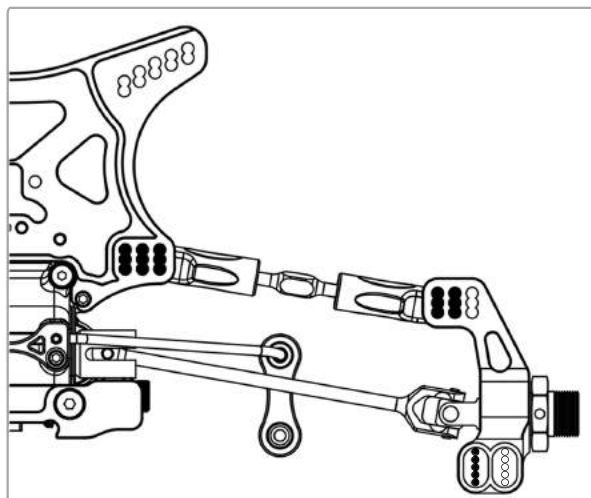
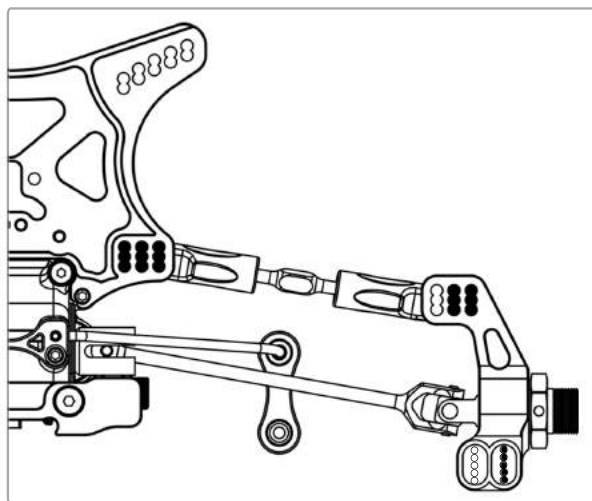
When using the lower hole on the C hub, the car is more stable, and it works specially well on difficult, bumpy or high traction tracks. The top hole is good for smooth, bluegroove tracks where you need more response and precision, but it may cause the car to turn aggressively or want to flip over more suddenly. It is advisable to try to keep the vertical distance between the upper link on the hub, and the outer hinge pin on the hub close to the stock setting. The gap between the top holes (upper link holes) is 2.5mm, as well as the gap between the two lower holes (for the arm hinge pin).



The rear end is designed in a similar fashion to the front. There are a lot of available options, but only part of them are normally used depending on the rear hub position. When the rear arm hinge pin is located in the middle-to-lowest locations, the middle and lowest rows are used on the tower and hub. When the rear arm is located in the middle-to-top holes, the top two rows are used on the tower and the hub

When using the lower holes on the rear hub, the car is smoother and less edgy, but it also has less overall rear traction. The suspension also soaks up bumps better. Using higher holes will provide more rear traction, but the car may become edgy, resulting in a peak of high traction, and either a crash, or a sudden loss of traction resulting in a spin out. It is advisable to try to keep the vertical distance between the upper link on the hub, and the outer hinge pin on the hub close to the stock setting. The gap between the top holes (upper link holes) is 2.5mm, and the gap between the different rear hub insert settings is 1mm.

## THE REAR ARM LENGTH



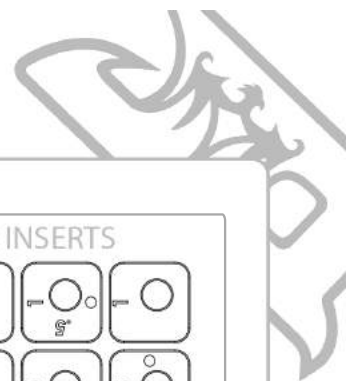
On the rear end it is possible to run the arm long or short. The track width stays the same. The stock setting is running the arm long. Once again, depending on which setting you use, different link holes are used. Please study the pictures. When using the long arm (outer hub hole for the insert), the outer and middle columns for the top link are used on the hub. When using the short arm (inner hub hole for the insert), the middle and inner columns for the top link are used on the hub.

The long arm makes the car more stable, less responsive, easier to drive with less steering, specially in hairpins. The short arm does the opposite, and may be the faster setting, but it is not guaranteed.

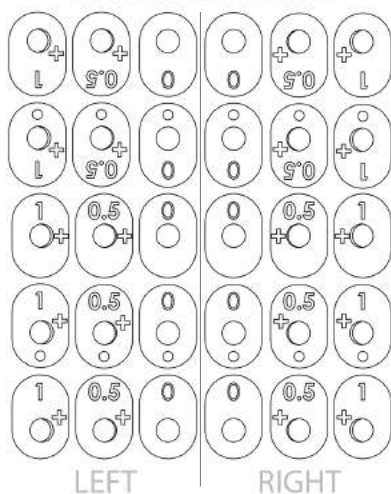
The preferred settings are middle column for the top link when using the long arm, and inner column for the link when using the short arm.

### Rear Hub Inserts

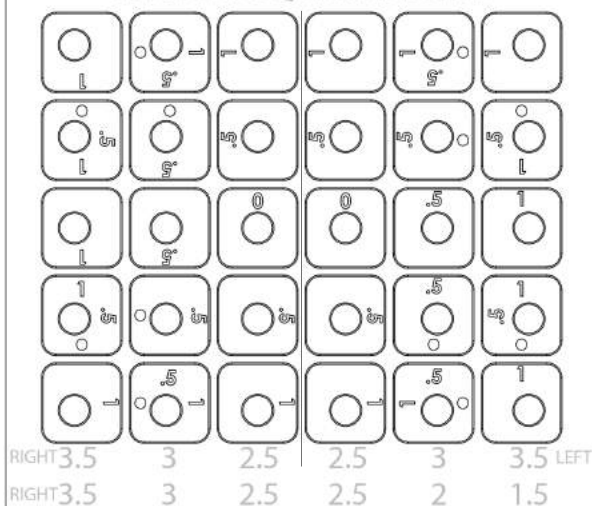
The rear hub inserts make it possible for you to set the height of the hinge pin, as well as the toe in amount. 0, 0.5 and 1 refer to the amount of toe in, in degrees. The + sign on the 0.5 and 1 degree inserts must always be placed towards the inside. This way toe in is increased. The dot in the insert means that the hole is placed halfway between the middle and the end. The gap between the different hole locations is 1mm, which gives a total movement of 4mm. The most commonly used locations are the middle hole, and the one on each side of this (insert with the dot). The stock location is the lowest of these three. The toe in increases the rear grip. The 0.5 degree insert really puts the rear end on rails. If you run too much rear toe in, it will noticeably slow the car down, as the rear tyres resist forward movement, and it may cause you to have a false sense of traction, where you have traction up to a point, and then suddenly loose it all. Most of the time 0 or 0.5 inserts are used.



## REAR HUB INSERTS



## REAR TOE SQUARE INSERTS



The idea of square toe in inserts is to be able to set the height of the rear arm while maintaining the same antisquat and toe angles. Lowering the arm will result in a softer car, that rolls more and has more rear traction. Raising the arm makes the rear end act stiffer, and lowers the grip level. The distance between a 0 and a 0.5 insert is 0.5mm, 0 and a 1 insert 1mm, and 0.5 and 1 insert 0.5mm. A change of 0.5mm in arm height is already noticeable! The most common settings are the middle row, and 0.5 above or below this.

With the 0 insert for antisquat, and the middle row of the toe in insert, the antisquat is 1 degree. Knowing this you will always be able to calculate the amount of antisquat you run, starting from the middle settings in each holder which result in 1 degree. For example, raising the antisquat insert to nr 1 hole up, increases the anti-squat to 2 degrees. If you then lower the square insert to 0.5 down, it makes it 2.5 degrees antisquat, and so on. The most common settings are 1, 1.5 and 2 degrees of antisquat.

For the toe in, the stock setting is 0.5 insert hole out. This results in 3 degrees of toe in. The angles/inserts work just like for antisquat, so going to nr 1 hole out, increases toe in to 3.5 degrees.

Unfortunately our knowitall designer had a bit of a bad day when designing the markings for the inserts, and they don't really make any sense at all. The best way to understand what is going on, is to either keep the manual handy, or look at the back side of the inserts, there you can easier see the placement of the hole, if it is in the middle, half way to one side, or all the way. We would like to apologise for the inconvenience, and would like to let you know that our knowitall designer has been punished.

# THE BRAINSTORMING SESSION



## More Overall Steering:

### White Edition

Front shock middle or inside on the arm.  
White front spring.  
5000 front diff oil.  
Short rear arm, with inside column for rear link on hub.  
0.5 square insert, middle row, hole towards inside.  
0 insert in F-F arm holder.

### General

Lower shock mounting in on arm.  
Thinner oil in front shocks.  
Softer front springs.  
Stiffer rear springs.  
Short rear upper link.  
Longer front upper link.  
Thinner or no front swaybar.  
Less rear toe in.

## More Steering Into the Corner:

### White Edition

Ackermann in middle or rear hole.  
3000 front diff.  
Less caster.  
Front shocks outer on tower.  
Front link in lowest hole in middle column on tower.  
Front link middle row, inner column on hub.

### General

Thinner oil in front diff.  
Less caster.  
Stand up front shocks on tower.  
Front upper link down on tower.  
Steering link back on Ackermann plate

## More Steering Mid-to-Exit of the Corner

### White Edition

7000 front diff.  
16 degree caster (stock).  
Steering link in front hole on ackermann plate.

### General

Thicker oil in front diff.  
More caster.  
Lean front shock position in on tower.  
Steering link forward on ackermann plate.

## Less Overall Steering:

### White Edition

Front shock, lower outer on tower, outer on arm.  
0.5 or 1 rear hub insert.  
2.5 front swaybar.  
Long rear arm. Link in middle column for average steering, link in outer column for minimum steering.  
Rear link top inside on tower.  
4000 rear diff.

### General

Front shock out on arm.  
Thicker front shock oil.  
Stiffer front spring.  
Thicker oil in front diff.  
Thicker front swaybar.  
More rear toe-in.  
Long rear upper link.  
Raise front upper link on tower.

## Less Steering Into The Corner:

### White Edition

7000 front diff oil.  
Front shock in outer hole on arm.  
Steering link in front hole of ackermann plate.  
Maximum front kick up.  
16 degree caster (stock)

### General

Thicker front diff oil.  
Thicker front swaybar.  
Front shock further out on arm.  
Steering link forward on ackermann plate.  
More kickup.

## Less Steering Out of The Corner

### White Edition

3000 front diff oil.  
0 insert F-F arm holder.  
Less caster

### General

Thinner front diff oil.  
Less kickup.  
Less caster.

## More Rear Traction:

### White Edition

0.5 or 1 rear hub insert. Even more grip if you raise the hole, so insert with dot at top.  
With above insert setting, run top row on tower (inside column) and hub, or middle row on tower (inside column) and hub.  
Long rear arm. Link in middle column for good grip, link in outer column for even more grip.  
0.5 or 1 square insert hole out for toe in (3 or 3.5 degrees).  
0.5 hole down square insert lowering rear arm 0.5 from middle, 0.5 hole down for antisquat.  
Lean rear shock in one hole from middle (stock).  
5000 or even 3000 in centre diff.

### General

Long rear upper link.  
Raise upper link on tower compared to hub, but never so that the vertical distance between inner hinge pin and upper link is bigger than the vertical distance between top link on hub and outer hinge pin.  
Lower complete upper link.  
More rear toe-in.  
Thinner diff oils.  
Lean rear shocks in on tower.  
Larger holes, or more holes in piston.

## Better Bump Handling:

### White Edition

Stock shock setup, but try 1 step softer springs.  
Lean shocks down one hole on towers (specially rear).  
Max droop.  
Lower hole for front arm on C hub  
Lower holes for rear hub insert (dot down, or no dot, hole lowest point).

### General

Adjust shock oil to temperature. (Read THE Guide).  
Lean shocks over on tower.  
Thinner diff oils.  
More rideheight.  
More downtravel.  
More kickup.  
Cut tyre pins inside and outside.

# THE BRAINSTORMING SESSION



## More Acceleration and Forward Traction:

### White Edition

7-7-3, or 10-10-4 diff oils.  
Upper hole for front arm on C hub.  
Upper holes for rear hub insert (middle, or dot up).  
On a high grip track, shorten the rear link on the tower.  
On a loose track, lengthen the rear link on the tower.

### General

Thicker oil in diffs.  
Longer upper links (except on high traction).  
Smaller clutchbell, larger main gear.  
Thicker clutchesprings.

## More Stability in Long Sweeping Corners:

### White Edition

2.5 front swaybar.  
2.6 or 2.7 rear swaybar.  
7-7-3 diff oils.

### General

Stiffer front springs.  
Stiffer swaybars.  
Thicker oils in diffs.

## Better Jumping Ability:

### White Edition

Raise rear shocks out to one hole out from middle (stock).  
Increase antisquat to 1 insert with hole up.  
400/350 shock oils.

### General

Stand up shocks.  
Stiffer shock springs.  
Thicker shock oil.  
Smaller piston holes.  
More antisquat.  
More downtravel (specially front).  
More kickup.

## What to do first on a high traction track:

### White Edition

Move front shock out on lower arm.  
Lower hole for front arm on C hub.  
Lower holes for rear hub insert (dot down, or no dot, hole lowest point).  
Shorten rear upper link to middle column rear tower.  
Reduce downtravel to 53mm/63mm with tyres on.  
2.5/2.6 or 2.7 swaybars.  
Rear toe on middle setting (0 insert hole in middle, 2.5 degrees) or 0.5 hole in.

### General

Front shock out on arm for calmer steering.  
Stiffer swaybars for reduced roll and less grip.  
Less rideheight for less grip and reduced chance of traction rolling.  
Smaller piston holes or thicker shockoil for less grip and calmer handling.

## What to do first on a low traction track:

### White Edition

Inner column for rear link on tower.  
0.5 or even 1 rear hub insert.  
0.5 hole out or even 1 hole out for toe in.  
Lean rear shocks over to 1 hole in from middle.

### General

Lean shocks over for more grip and easier handling.  
Larger piston holes, or thinner oil for more grip and less response that can break traction.  
Long upper links, for more roll and grip.  
More rideheight for more grip.



THE Next Chapter Begins...