

NEON

4WD MTC PRO CHASSIS

# TRACK SETTINGS

## RIDE HEIGHT

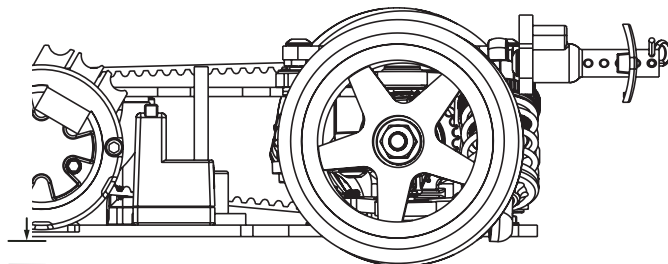
Use the spring adjusters on the shock absorbers to adjust the front and rear ride heights. We recommend setting the ride height to around 5.0mm on carpet/ high traction tarmac/asphalt and 5.5mm on tarmac/asphalt or low traction carpet tracks.

This is measured between the bottom of the chassis and the ground with the car in running trim. First press the car down on to the ground and release it once or twice to settle the suspension before adjusting the ride height.

In general:

High traction levels/Smooth tracks = Lower ride height (5.1mm-5.4mm)

Low traction levels/Bumpy tracks = Higher ride height (5.4mm-6.0mm)



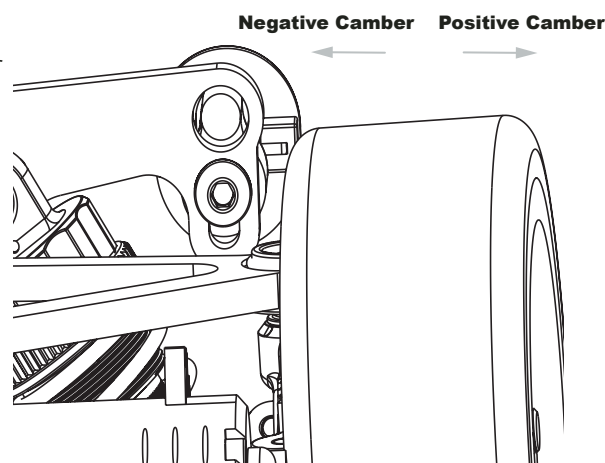
## CAMBER

The kit comes with a 1.5 degree front upper wishbone, 2.5 degree rear upper wishbone. This is signified by the notch's on the upper wishbones. There is an optional wishbone set (U8893) that can be used to set desired levels of camber and castor.

In general the aim is to run the correct amount of camber for the tyre being used and the track conditions. Typically this is between -1.5° and -2.5°.

Increasing the front and rear camber together will often result in more traction, but with a more sudden loss of grip when going beyond the limit. Less overall camber will offer a more progressive slide but may have less overall grip.

More camber may be applied to the front or rear, normally resulting in more grip at that end of the car. The team suggest a starting camber of 2.5° Rear and 1.5° Front, increasing to 2° Front camber if more front grip/steering is required.



## TRACK WIDTH

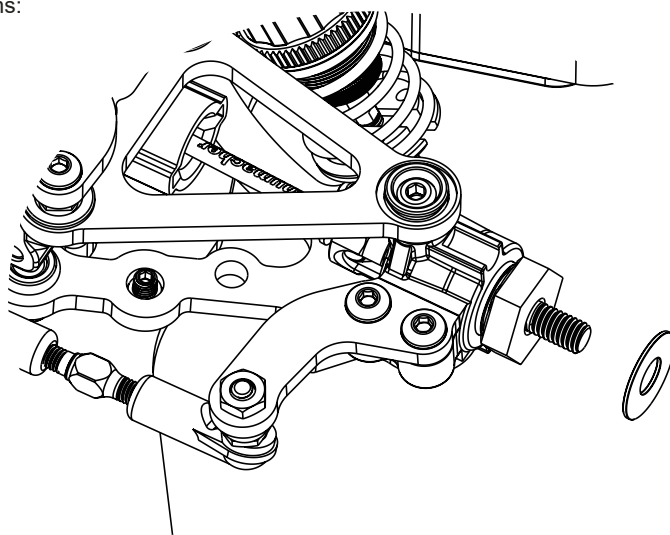
The track width may be adjusted using 2 different hex widths, or shims:

U8333 - Wheel hex spacers 0.25, 0.5, 0.75mm - pk12

U3570 - Alloy wheel hex ; Slim (pr)

U4577 - Alloy wheel hex ; Wide (pr)

Increasing the rear track width provides more rear stability/less rotation and vice versa. Increasing the front track width provides a less aggressive/less rotation and vice versa. A wider car is better suited to high traction conditions and a narrower car to low traction conditions.



# NEON

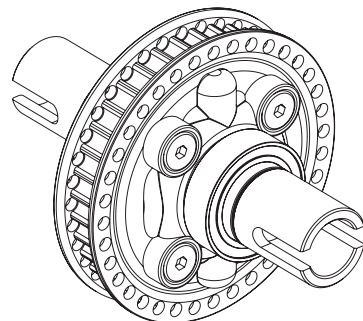
## 4WD MTC PRO CHASSIS

### GEAR DIFF

Gear diff oil can be changed to affect car handling.  
Generally, high traction conditions = thicker oil. ( 2k-5k)  
Low traction conditions = thinner oil. (1K-2K),

A thicker gear diff oil will have a much smoother off power, corner entry feeling, preventing corner entry over rotation. It will also make the car feel less likely to slide off power, in the corner. It will however have more on power steering, and can feel like on power oversteer.

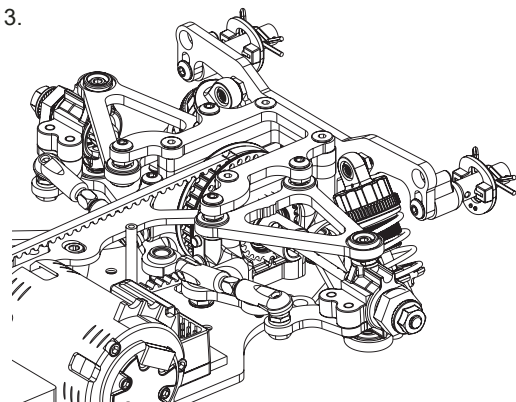
Thinner gear diff oil will create the opposite effect. More aggressive corner entry, and more steering off power in the corner. It will have less on power steering, but will feel much easier to put the power on without oversteering.



### REAR BODY POST OPTION

There is an included alternate rear body mounting bag included in the kit. See Page 13.  
This option allows for horizontally mounted body posts.

In doing this the rear of the car is far more lively but will provide much greater steering in the middle and exit of a corner.  
Horizontal body mounting should only be used when the track grip is high.  
For low grip use the vertically mounted rear body posts.

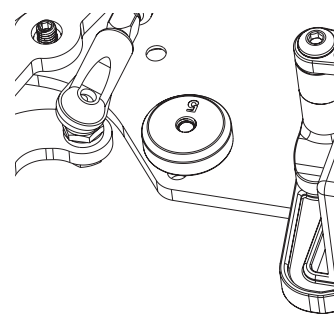


### WEIGHT DISTRIBUTION

There are several positions intended for weight placement in the front and rear of the car. Please see the setup sheet for suggested placements. We recommend the use of CR723 for this.

For the most neutral car balance, we recommend a 50:50 weight distribution. This is easily achieved with no weights and centrally placed electronics.

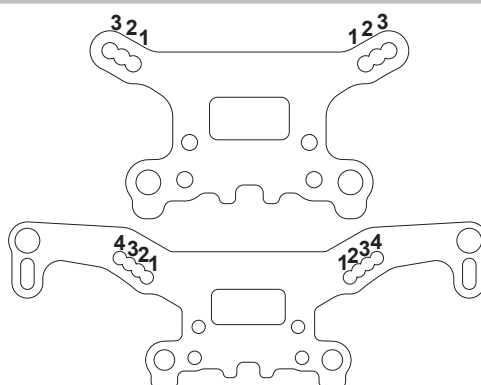
More rearwards weight generally gives a more aggressive car with more steering.  
More forwards weight generally gives a smoother car handling with less steering. A more forwards weight bias will make the car easier to drive in higher grip conditions.



### SHOCK ANGLES

The shock angles can provide fine tuning over the suspension stiffness.  
A more angled shock setup (lower number shock mount holes) creates a softer setup which is less responsive, often suited to high traction conditions.

A more upright shock setup (higher number shock mount holes) creates a stiffer setup which is more responsive, often suited to lower traction conditions.

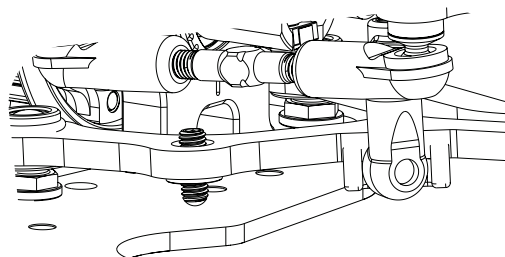


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## 4WD MTC PRO CHASSIS

### DROOP

The starting point for droop suggested by the team is 20mm rear, 21mm front. These numbers are checked on the Aerox droop gauge set. AX015. This is the measurement between the chassis underside and the axle centre. Droop is adjusted using the grub screw illustrated. This is identical to using 3.8mm Rear and 5.2mm Front by using a conventional droop gauge, that is being measured on the edge of the arm.



We suggest using a range between 20mm and 21mm depending on the track conditions. A lower number will give more grip and you can adjust the front and rear separately to adjust the balance of the car.

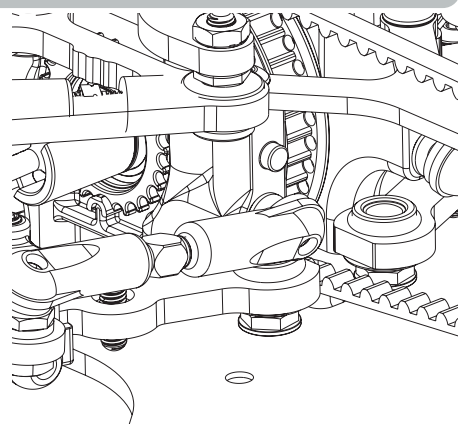
### LOWER WISHBONE SPACERS

The kit setting is 0.5mm under all 8 wishbone lower balls.

Increasing the height of the arms = increased roll centres  
lowering the height of the arms = decreased roll centres

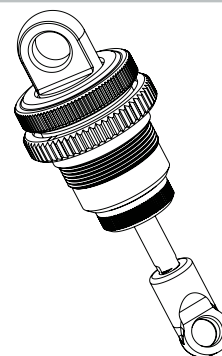
Increased roll centres help the car to be free and will rotate more. This helps when the traction is high or when the car has understeer. Decreasing the roll centres will make the car more stable and easier to drive, however on high grip tracks the car may have excessive understeer.

Anti-dive is commonly used to improve the cars handling going into corners as it makes the car more stable at lower speeds. You can achieve this by using a smaller washer at the front arms, this creates a downwards angle on the front arms.



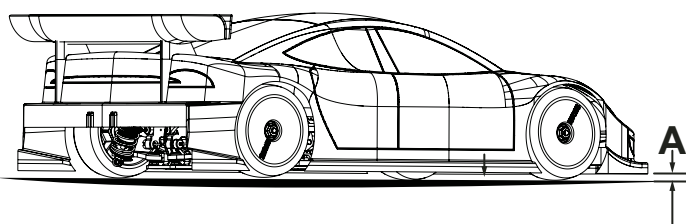
### SHOCK OIL

The aim is to achieve improved handling over bumps and control the weight transfer of the car. If the track is particularly bumpy, increase the shock oil viscosity to help handling over bumps. If the traction is low, lowering the shock oil to improve weight transfer and generate more grip. If the traction is high, increasing the shock oil to make the car smoother and less unpredictable. In higher temperature, increase the shock oil to maintain a consistent rate in damping as warmer temperatures lower the viscosity of the oil. Our suggested range is between 300cSt and 500cSt, when using Core-Rc shock oil with kit pistons.



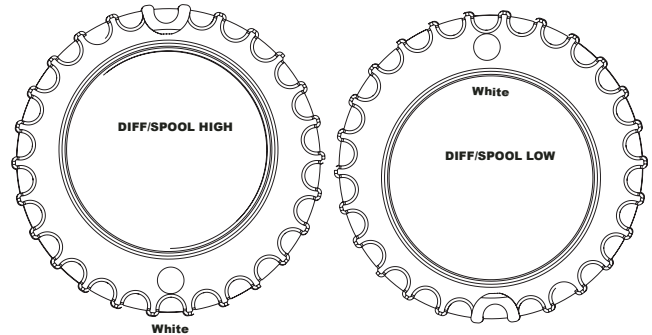
### BODY HEIGHT

Height 'A' Should be set by adjusting the body hangers. For big adjustments move the pin up or down a hole. For smaller adjustments change which body hanger you are using. The 1 dot hanger is the lowest and the 3 dot hanger is the highest. We recommend starting with 7mm at 'B'. On a bumpy track you may need to increase this as the bodyshell might catch on the track.



## DIFF/SPOOL HEIGHT

The low diff or spool position provides more grip at that end of the car, and is suited to low or medium traction conditions.  
Low diff is when the white circular marker is facing downwards in the car.  
The high diff or spool position is only suggested for very high grip conditions.  
High diff is when the white circular marker is facing upwards in the car.



## GEAR RATIO



We recommend long boss pinions for less risk of run out issues. We strongly advise not to use pinions with two m3 tapped holes such as U3421 - U3440.

### GEAR RATIO CALCULATIONS

Internal Ratio = 1.6363 : 1

Final Drive Ratio (FDR) =  $\frac{\text{SPUR} \times 1.6363}{\text{PINION}}$

SPUR =  $\frac{\text{FDR} \times \text{PINION}}{1.6363}$

PINION =  $\frac{\text{SPUR} \times 1.6363}{\text{FDR}}$

### GEAR RATIO CHART - 48DP

Maximum tooth sum = 123  
Minimum tooth sum = 107

	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42
76											4.01	3.88	3.76	3.65	3.55	3.45	3.36	3.27	3.18	3.1	3.03	2.96
77										4.2	4.06	3.93	3.81	3.7	3.6	3.5	3.4	3.31	3.23	3.15	3.07	3
78									4.4	4.25	4.11	3.98	3.86	3.75	3.64	3.54	3.44	3.35	3.27	3.19	3.11	3.03
79								4.61	4.45	4.3	4.17	4.03	3.91	3.8	3.69	3.59	3.49	3.4	3.31	3.23	3.15	3.07
80							4.84	4.67	4.51	4.36	4.22	4.09	3.96	3.85	3.74	3.63	3.53	3.44	3.35	3.27	3.19	3.11
81						5.09	4.9	4.73	4.57	4.41	4.27	4.14	4.01	3.89	3.78	3.68	3.58	3.48	3.39	3.31	3.23	3.15
82					5.36	5.16	4.96	4.79	4.62	4.47	4.32	4.19	4.06	3.94	3.83	3.72	3.62	3.53	3.44	3.35		
83				5.65	5.43	5.22	5.03	4.85	4.68	4.52	4.38	4.24	4.11	3.99	3.88	3.77	3.67	3.57	3.48	3.39		
84			5.97	5.72	5.49	5.28	5.09	4.9	4.73	4.58	4.43	4.29	4.16	4.04	3.92	3.81	3.71	3.61	3.52			
85		6.32	6.04	5.79	5.56	5.34	5.15	4.96	4.79	4.63	4.48	4.34	4.21	4.09	3.97	3.86	3.75	3.66				
86	6.7	6.39	6.11	5.86	5.62	5.41	5.21	5.02	4.85	4.69	4.53	4.39	4.26	4.13	4.02	3.9	3.8					