

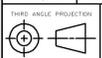
**Standard CarbonX PRO chassis  
Tuning System**

**Parts in Optional Tuning Kit  
KC Racing p/n KCR-CFTK**

-  Red O-Rings x3 (Soft)
-  Brown O-Rings x3 (Hard)
-  0.5mm Thick Shims x3
-  M2x4mm Flathead Screws x3
-  Black O-Rings x3 (Medium)
-  0.2mm Thick Shims x3

The tuning kit enables the racer to adjust the amount of freedom of the chassis side areas relative to the chassis center for various tracks and conditions.

We do not have recommendations of settings relative to your track.  
Test Test Test

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<b>CarbonX PRO Tuning Chart</b>			
DATE	REV	REV	REV
KCL	2/22/26		
THIRD ANGLE PROJECTION	SIZE	NUMBER	REV
	<b>B</b>	<b>KCR-PRO.TUNE</b>	1 OF 1



## CarbonX PRO Series Tuning Instructions

Detailed **o-ring compression tuning** on the CarbonX PRO Series BRUSHLESS Flexi Chassis centers on the **adjustable o-ring suspension mechanism** integrated into the CNC-machined anodized aluminum torque bar. This feature allows precise, repeatable control of chassis bias—specifically balancing rear traction (for better corner exit drive under brushless torque) against front grip (for turn-in and stability).

### How the O-Ring Compression Works

The torque bar mounts to the rear of the carbon fiber base plate and reacts to motor torque (the twisting force from the brushless motor during acceleration). The o-ring(s) act as a tunable damper/suspension element:

- **Compression increases** → The o-ring(s) stiffen, limiting how much the torque bar (and thus the rear chassis) can twist/flex under torque load. This increases rear traction/bite, reduces wheel hop, and improves power delivery on corner exits—ideal for high-torque brushless setups or tracks with long straights leading into fast sweepers.
- **Compression decreases** → The o-ring(s) allow more compliance/flex, letting the rear chassis twist more freely. This can enhance overall chassis roll/flex for better mid-corner traction or help on tighter, twisty tracks where more front-end bite is needed to prevent understeer.

The adjustment is typically via **torque bar shims** that compress the torque bar against the o-ring(s) or sandwich them between the bar and chassis base. This pre-loads the o-ring(s) incrementally for fine control.

### Step-by-Step Tuning Process

#### 1. Baseline Setup:

- Assemble the chassis per factory specs (torque bar bolted on, o-rings and o-ring shims installed in their default position).
- Install the motor, axles, guide, and test on a flat surface or track with no body to check four-wheel contact and neutral bias.
- Note initial handling: e.g., excessive rear slip on exit? Too much front push? Wheel hop under hard acceleration?

#### 2. Initial Adjustment:

- Use a small screwdriver, remove the O-ring posts (refer to the product's dimensional drawing or tuning data sheet for exact locations—available on [KCRacing.net/Tech](http://KCRacing.net/Tech)).
- Start with small changes: Tighten (compress) the o-ring(s) by inserting additional or thicker shims above the torque bar in small increments.
- Test on track: Accelerate out of corners to feel rear traction gain; note if exit speed improves or if the car becomes too “locked” (over-grippy rear, understeer).



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### 3. Fine-Tuning Guidelines:

- **More rear traction needed** (e.g., hoppy exits, wheel-spin on power): Increase compression → Stiffer rear response, better hookup.
- **More front bite/turn-in needed** (e.g., push/understeer in corners): Decrease compression → Allow more chassis flex/twist for dynamic weight transfer.
- **Track-specific tweaks:**
  - High-grip, smooth tracks: Moderate to high compression for stability under full power.
  - Bumpy/uneven tracks: Lower compression to let flex absorb imperfections.
  - High-torque motor setups: Increase compression to control torque reaction.
- Combine with other tunable parts: Gear ratio (higher numerical for torque emphasis), tire compounds, ride height (via axle shims KCR-ASM, KCR-ASM3 or KCR-ASM4), guide support/weight bumper (KCR-BGB), guide spacer (KCR-CGS) or body float (brass pin tubes/collars).

### 4. Measurement & Repeatability:

- Log your settings (e.g., “shims and o-rings used”) for different tracks/motors.
- Re-test after changes—small shim adjustments often yield noticeable differences due to the precision nature.

### Advantages Over Traditional Flexi Tuning

- Unlike the stamped flexi (adjustment by bending the chassis), this is **non-destructive** and **quickly reversible**.
- More precise than weights or fixed torsion bars—o-ring durometer (hardness) and size can also be swapped for broader range (though stock setup uses factory-matched o-rings).
- Brushless-optimized: Handles higher torque loads without excessive hop, unlike older brushed flexi designs.

### Practical Tips

- Use the quality o-rings available in the KC Racing tuning kit (KCR-CFTK) for durability.
- Clean/lube lightly the suspension posts for smooth action using a drop of KC Racing Rotor Juice.
- Test iteratively: **One** change at a time, then run consistent laps.
- Refer to KC Racing’s **CarbonX PRO Tuning Data Sheet** (linked on product page) for recommended starting points with baseline components installed.

This o-ring torque bar system makes the CarbonX PRO highly tunable for competitive brushless racing—turning what could be a “set it and forget it” chassis into one that adapts precisely to driver style, motor, and track.