

## **Junior Riders in Senior Categories**

Junior riders who compete in the ability-based categories with older riders will not be subject to gear restrictions, but ambitious Juniors should understand that national-caliber Junior racing is faster than any of our local races and that they would do well to remain accustomed to Junior gearing.

Canada Games Selection Races Junior gear restrictions will not be in place for Canada Games selection races, as the CG age ceiling stretches beyond the Junior category. Junior racers are advised to consider both whether any advantage stands to be gained by standard gearing, and the interests of their long-term development and preparation for other Junior competitions, such as the National Championships, where gear restrictions will be in effect. It's not about the bike!

Cycling is a technical sport, and equipment can be important, but most important is skill and character development. Don't obsess over equipment details; rather, keep competition fun and enjoyable. Be progressive in your training and strive to take opportunities to compete out-of-province. Cycling is tough, but hard work and experience will be rewarded by opportunities to grow as an athlete, as numerous local racers have demonstrated!

## **Junior gears? What are those?**

“Junior” refers to the Under-19 age category set by the Union Cycliste Internationale (UCI), the world-wide governing body regarding the sport of cycling. Cycling Canada, to which Cycling BC is affiliated, is in turn affiliated with the UCI and follows their rules, some of which place limits on the largest gear roll-out young riders can compete with. In the Junior category, riders are limited by the UCI to a maximum roll-out distance of 7.93 metres; for Under-17s the maximum is 6.94m; for Under-15s, 6.00m; and for Under-13s, 5.60m.\* \*See UCI rule No. 2.2.024. [www.uci.ch](http://www.uci.ch)

## **Junior gears? Why?**

There are a number of reasons for ensuring young riders don't “mash” “big gears,” as they're often called. A slow speed/high force cadence places much stress on the knees of a cyclist, and is especially harmful to a developing rider. Additionally, the speeds attainable with standard gearing may approach 75km/h in ideal sprint conditions, which may be unmanageable and unsafe for young racers. Lastly, the UCI, Cycling Canada, and CBC want to facilitate the long-term development of successful racers, and part of success in cycling is the honing of an efficient, fast and smooth pedal stroke.

## **What do you mean, “roll-out”?**

A gear roll-out is a procedure whereby a rider's bike is placed in its largest (read: hardest) gear combination - big chainring, smallest rear cog - and aligned over a distance (eg. 7.93m) marked on the ground. One pedal is set exactly at the 0m mark while perpendicular to the ground in the 6 o'clock position; the bike is then wheeled slowly backwards allowing the motion of the rear

wheel to pull the chain and rotate the crankset. If the pedal completes 360 degrees within the roll-out distance, the bike passes the test.

All young competitors in British Columbia will only be required to meet the U-19 roll-out distance of 7.93m. In other words, for in-province competition, all riders under nineteen years of age may race with the same gearing. Other provinces (eg. Quebec) may enforce all age-based roll-out requirements, and young riders are advised to ready their bikes should they compete out-of-province.

## **Testing of Bicycles by CBC**

CBC endeavors to avoid repeated and time-consuming roll-out testing, recognizing that it is stressful for both competitors and commissaires alike. In lieu of regular roll-outs, a rep from CBC's Road Competition Committee or the Race & Event Coordinator and/or a commissaire will inspect young riders' bicycles before and/or after competition for compliance with the 7.93m roll-out requirement, based on the following chart of compliant gearing combinations, in conjunction with a 700x23c rear tire.

Bicycles that arrive at inspection with no larger than (or the equivalent of) a 52-tooth chainring and 14-tooth smallest rear cassette cog, combined with a 23mm rear tire, will be quickly approved without a roll-out. Gear Combinations < 7.93m.

The table below details roll-out distances for varying gear combinations. Chainring sizes run along the top most row while smallest cassette cog size runs along the left column.

Cassette Cog below	Chainring Size 46	Chainring Size 47	Chainring Size 48	Chainring Size 49	Chainring Size 50	Chainring Size 51	Chainring Size 52	Chainring Size 53
13	7.470	7.633	7.795	X	X	X	X	X
14	6.937	7.087	7.238	7.389	7.540	7.691	7.841	X
15	6.474	6.615	6.756	6.896	7.037	7.178	7.319	7.459
16	6.070	6.202	6.333	6.456	6.597	6.729	6.861	6.993

## **Do I Need to Purchase a New Cassette?**

No. In most cases "locking out" the offending small cog(s) using the rear derailleur high limit (range of motion) adjustment will be possible. It must be demonstrated to a commissaire or other CBC representative that appropriate locking out has been performed, and this may be checked before and/or after competition. Commissaires and/or CBC representatives will be pleased to offer technical assistance in this regard, if required.