



## **Gear Restrictions for Riders Under 19 Years of Age**

The international governing body for cycling is the Union Cycliste Internationale (UCI). The UCI rules are the basis for the Canadian Cycling Association (CCA) Rule Book. The UCI has specific limits on the gears used by young riders. The main reasons for restricted gearing are to prevent injury and to encourage development of good pedalling technique (although this is subject to great debate!).

The OCA will be enforcing gear restrictions for young riders at all OCA sanctioned races. For the Junior (U19) category the restrictions will be as defined by the UCI. For all other riders (cadets (U17), U15, U13, etc) the U19 gear restrictions will be applied. This means that bikes for all riders under 19 year of age will be checked before and after every race to insure that they are not using illegal gears. Please note that the OCA strongly advises that all young riders chose their gearing with care.

### **What are the restrictions?**

Directly from the CCA Rule Book:

***2.2.024 For Junior Men and Junior Women, the authorized maximum chain gear ratio is 7.93 metres.***

### **What does this mean?**

When the bike is in the largest gear (big ring on the front, smallest gear on the back) it must travel less than 7.93 m when the pedals are turned exactly one full circle. This is tested by doing what is called a “roll-out”. At the race, the commissaire will shift your bike into the largest gear available (biggest front, smallest back), and then roll it backwards watching one pedal. When the pedal goes around exactly one time, the distance will be marked. If it is more than 7.93 meters the bike will be illegal, and you will not be able to ride. At the end of the race the same check will be done, and if your bike fails, you will be disqualified.

### **So how do I comply?**

The best way to insure that your bike will pass the test is to make sure that your “big ring” has 52 teeth, and that your smallest rear gear is 14 teeth. This combination is by far the most commonly used. In large, junior-only races, the neutral support mechanics will assume that you have this set-up if you need help with a flat or require other mechanical support during a race. These are standard

parts that are readily available from your local bike shop, and should be provided at no extra cost on a new bike.

The other way to pass the test is to “block out” some of the gears on the back. If you have a 52 tooth "big ring" on the front you must block off all gears smaller than 14 on the back. If you have a 53 tooth "big ring" you must block off all gears smaller than 15. The best way to do this is to adjust the limit screw on your rear derailleur to prevent the use of the smaller gears. Some commissaires may also require you to make the illegal gears unusable by wrapping them with tape and/or cable ties. Remember that your bike will be checked after the race – if the adjustments slip during the race, or if you get a spare wheel that has different gearing, you could be disqualified.

## **Special Note for Younger Riders**

The CCA Rule Book states that gear restrictions may be applied to younger riders as follows:

**Under 17: 6.94 m or 52 X 16**

**Under 15: 6,00 m or 45 X 16**

**Under 13: 5.60 m or 42 X 16**

These restrictions will not be enforced in Ontario at this time. Riders entering races in other provinces may find that these restrictions are enforced there. This is especially true for cadets (U17) who travel to Quebec for major races as part of OCA development projects. If you plan to race outside of Ontario make sure you find out if gear restrictions are enforced, and that you have the correct equipment on your bike.

## **What if I have permission to ride in Senior races?**

Some very advanced juniors are given permission to ride in senior races to enhance their development through exposure to better competition. When competing in national or international level races like the Canadian or World Championships, or le Tour de l'Abitibi, junior gear restrictions will apply, regardless of the level of competition. The OCA has decided that juniors must ride with restricted gears at all times, even if they are riding in a senior race.

## **Additional Notes**

Both Shimano and Campagnolo manufacture suitable components for all available systems, although in some cases they are unfortunately expensive. Other companies, including one called Miche, also makes compatible parts that may be slightly cheaper. It is unlikely that these parts will be in stock at your local bike shop - they can be ordered but may take a while to obtain.

Please note that the size of the wheel matters. The gear choices identified are only correct for a standard 700c wheel, with a standard tire. If you are riding other size wheels (650, 27 inch, etc) or if you have unusually thin or thick tires you may have to use different set-ups to achieve the 7.93 meter limit. For example, 650 wheels have a smaller diameter than 700's, and so slightly higher ratios are possible. A 53-13 may be legal and may not, depending on tire diameter. A 52-13 should be fine with all 650 tires.