

Junior Gear Restrictions

Summary: One revolution of the pedals may not propel the bike further than 26'.

Why:

- This limits the top end speed keeping the race a bit safer.
- It also promotes a higher cadence which is a more efficient way to ride.
- Somewhat levels the playing field for athletes who may have physical advantages and are able to push a harder gear.

Who: Anyone with a racing age of 18 or younger
**note: racing age is the athlete's age as of December 31st.*
**note: this rule still applies if the junior athlete is racing in adult categories*
Example: 18 year old racing in cat 4 division still has to abide by junior gear restrictions

How is this tested: The bike is rolled backward from one point to another point measured 26' away. According to page 136 of the 2006 rulebook, the following gear combinations along with 700c wheels typically lead to a roll out of:

- 53/15 for an expected rollout of 24'6";
- 52/14 for an expected rollout of 25'9";
- 48/13 for an expected rollout of 25'7"
- 45/12 for an expected rollout of 26'0"

**Note: different tire sizes can affect the rollout test, so the rollout test must be performed.*

How to fix:

1. Change front chain ring to a smaller configuration. (less teeth)
2. Block out the smallest gears in the back by adjusting the rear derailleur.
**note: blocking of gears is not allowed at national championships*
3. Change the rear cassette (gears in the back) to match junior gear requirements