

Why have gear restrictions?

- It ensures all riders compete together on a fair and equal standing
- It helps to reduce the risk of overuse injuries and avoid strength imbalances in young riders; it may also help riders to develop good pedalling technique
- It encourages young riders to race using tactics as opposed to using bigger gears to go faster. This will help to support the riders in learning new techniques which they will need throughout their competitive career

What are the restrictions in triathlon?

Regulations consistent with those used in British Cycling will be introduced into the Triathlon Rule Book in 2014 with the proviso that they are “recommended for implementation” in the first season. Therefore triathlonscotland have decided to use the first year as a familiarisation period to establish what difficulties (if any) would need to be overcome before we fully adopt the guidelines in 2015. **Important** - no competitors will be prevented from racing in 2014 if their equipment is found to be outside the guidelines.

Rule 33.4.g

In all events, Young, TriStart, TriStars 1,2, & 3, Youths & Junior B shall be restricted to maximum gears as shown as follows:

Category	Age Cat.	Gearing Restriction
Young	Age 5 – 7	5.10m
TriStars Start	Age 8	5.10m
TriStars 1	Age 9 - 10	5.40m
TriStars 2	Age 11 - 12	6.05m
TriStars 3	Age 13 - 14	6.45m
Youths	Age 15 - 16	6.93m
Junior B	Age 17– 18	7.93m

How to check your gears

A roll out is the technique used to check whether a bike is within the regulations. The maximum gear restriction is the distance the bike travels in a straight line through one full revolution of the cranks, when in the biggest gear available on the bike. It is always best to have a go at the roll out rather than just relying on metric gear tables as tyres* and wheels do vary.

To perform a roll out you will need

- A bike
- Metal tape measure
- Marker pen
- Flat surface of at least 8m
- Narrow marking tape

Performing a roll out

- Lay a straight line of tape out to 8m
- Mark the distance for the relevant categories out and make sure they are easily distinguishable
- Ensure your bike is in its highest configuration and that the gears are engaged correctly
- Make sure the chain is engaged in the smallest possible rear sprocket and take all the slack out of the bike
- Inflate the tyres to racing pressure
- Position the bike at the starting point on the rollout, ensure that the crank is in bottom dead centre position and aligned with the zero point on the measure
- Roll the bike backwards, ensuring to stay in a straight line, following the marked area
- Stop the bike once the crank has completed a full revolution and back at the bottom - dead centre
- Assess whether the crank is within or over the gear restrictions relative to the distances marked out.

Things to consider:

All bikes will be checked by technical officials prior to an event. Thereafter, the first three riders, any selected at random and those bikes with gears restricted (locked) by officials will be rechecked as soon as the event finishes.

Please note that the sprocket and chain ring combination cannot be used in isolation to assess gear size. The absolute measure for gear restriction is the distance travelled in one complete revolution of the cranks.

*Tyre dimensions: please be aware that although the manufacturer may detail their tyres as a standard dimensions, there will be variations from brand to brand. For example because it says “23” on the side does not mean it’s the same as another tyre with “23” on the side.

How to restrict your gears:

Bikes can be restricted to a lower gear. To do this you need to adjust the limit screw on the rear derailleur as shown in the picture below. This will prevent the chain dropping onto the smaller sprockets. This can also be done with the front derailleur to restrict the big chain ring if required.



If you have any questions about any of the information contained within this guide, or if you require a ‘bike jargon buster’ please contact events@triathlonscotland.org