

# Bike Roll Out

<b><u>Must</u> do a bike Roll out</b>	<b><u>Don't need</u> to do a bike roll out</b>
✓ Tri- Star 2 athletes taking part in South West Triathlon Series	• <b><u>ALL</u></b> Tri Star 1 athletes
✓ Tri- Star 3 athletes taking part in South West Triathlon Series	• Tri- Star 2 athletes racing for Fun or not taking part in the South West Series
✓ Anybody racing who may take part in the South West Series in 2022 either Tri star 2 or Tri star 3	• Tri- Star 3 athletes racing for Fun or not taking part in the South West Series
	• Anybody racing on a mountain bike or none racing bike
	• <b><u>ALL</u></b> adults, youths and Junior athletes

## Ages

Tri Star 1 – Age 9-10

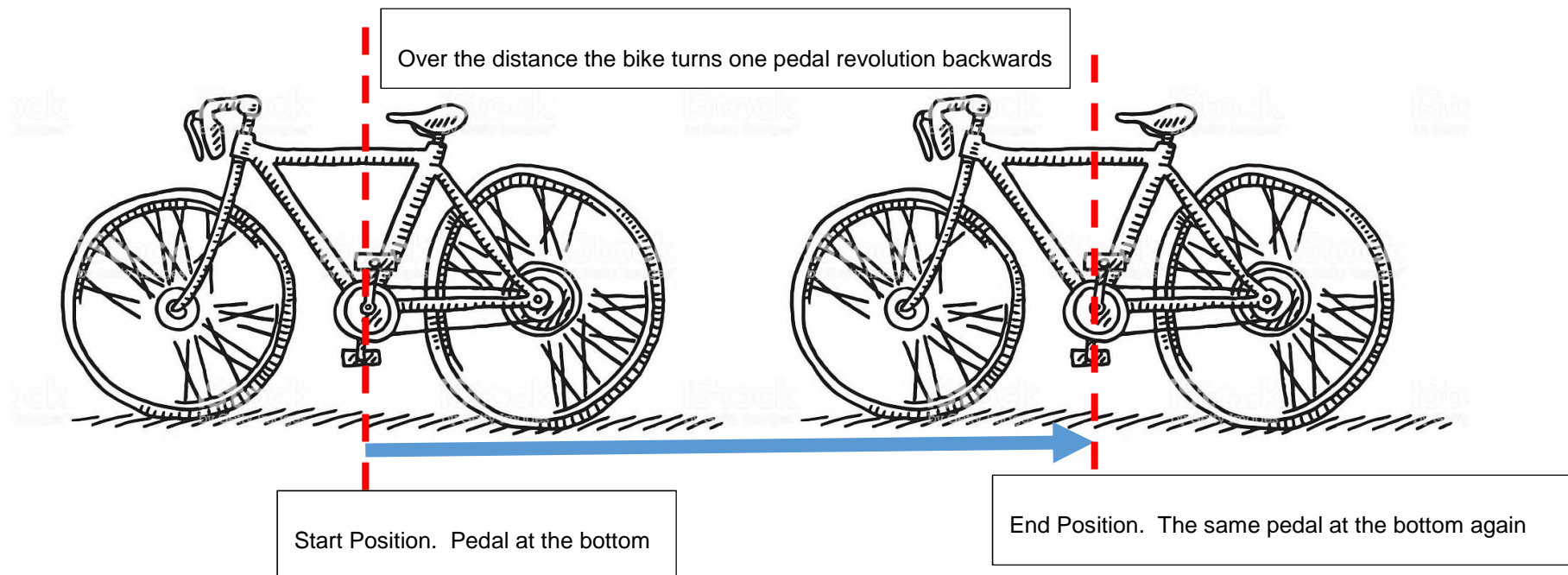
Tri Star 2 – Age 11-12

Tri Star 3 – Age 13-14

## Bike Roll Out procedure

**Q.** What is a bike roll out?

**A.** It is the distance the bike travels backwards in one pedal revolution in metres



**Q.** Why is the bike roll out needed?

**A.** It is required to ensure the athletes race using the same gears and levels the playing field between differing levels of maturity

## Bike Roll Out Distances for Age Categories

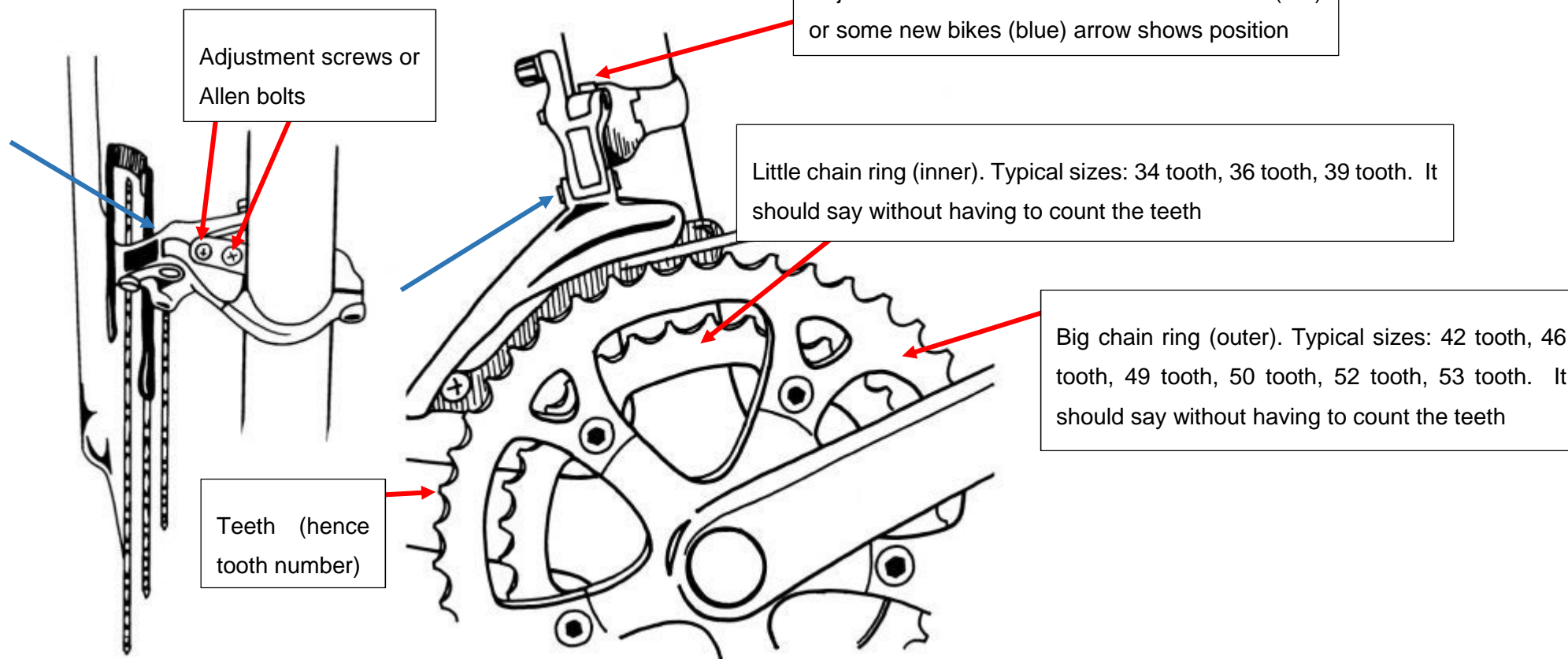
Age category	Maximum roll out distance allowed	Bath Duathlon Rules
Tri start – Age 8 and under	5.10 metres	Not Required Today
Tri Star 1 – Age 9-10	5.40 metres	Not Required Today
Tri Star 2 – Age 11-12	6.05 metres	Only required if in the South West Series
Tri Star 3 – Age 13-14	6.45 metres	Only required if in the South West Series
Youth A – Age 15-16	6.93 metres	Not Required Today
Youth B – Age 17	6.93 metres	Not Required Today
Junior – Age 18-19	Not applicable	Not Required Today

<https://www.britishtriathlon.org/south-west/junior-series/gear-restrictions>

**NOTE 1\*** You must be on or under the maximum allowed distance

**NOTE 2\*** Wider tyres make it roll a greater distance even with the same gears, see table page 6 based on 700x23c tyres

## How do you adjust the bikes gears – Front (derailleur) of the bike

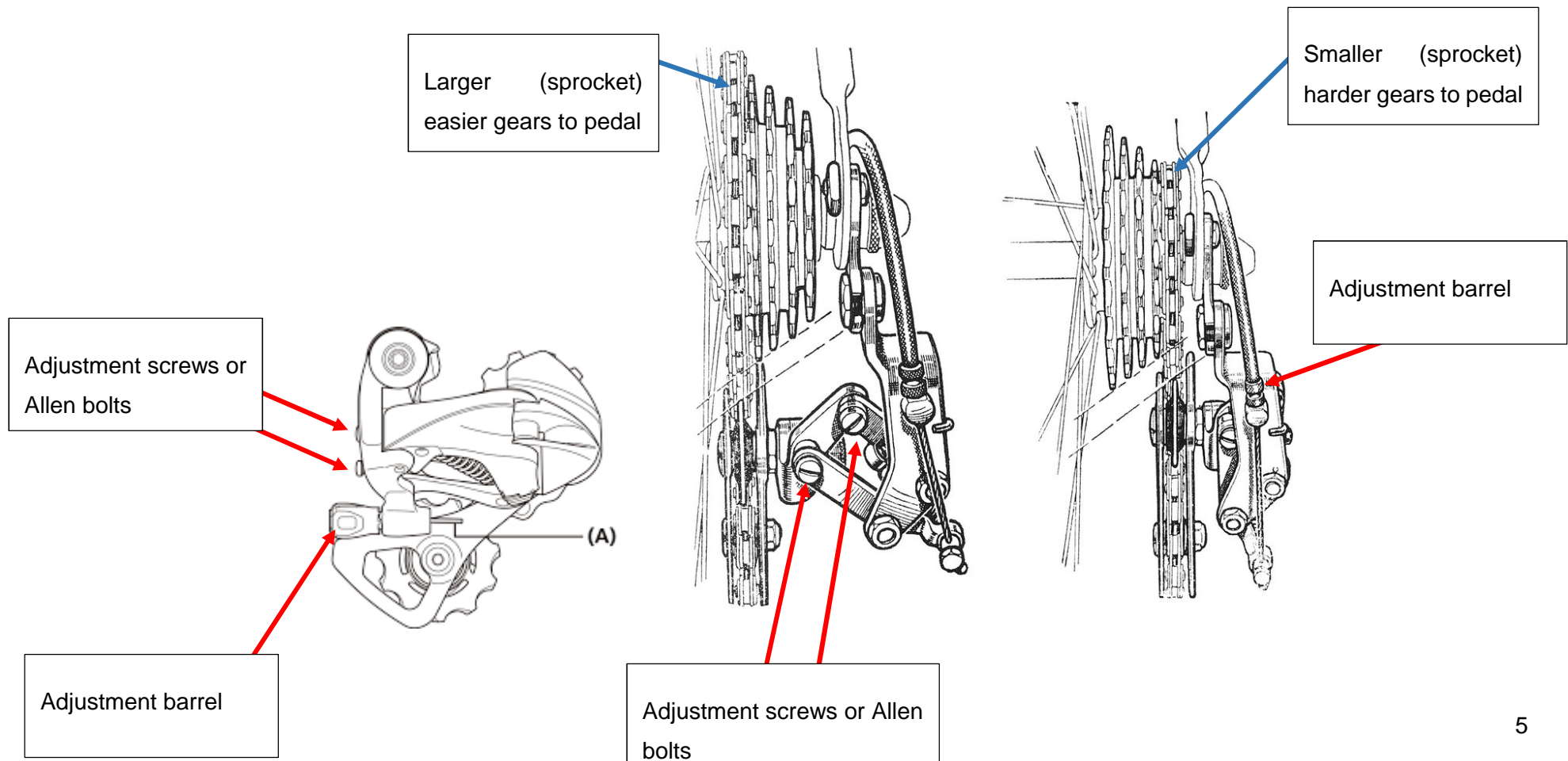


**NOTE\*** you can either race on the big (outer) or little (inner) chain ring on the front (some bikes have 3 chain rings eg left diagram so you have more choice which one to choose). The little one may give more gear selection the big chain ring may give less gear choice depending on the size. See gear table on page 6 for suggested choices.

## How to adjust the gears – Rear (derailleur) of the bike

Use adjustment screws (or Allen bolts) to restrict gears by screwing in to give less gear choice and therefore meet the roll out distance, generally this is the top screw but all makes and designs are slightly different so may need to experiment.

Adjustment barrel will tighten or slacken the cable to allow you to get different gears and may need to use it to make it run smooth





Suggested gear ratios that work for Triathlon but ensure it still passes the roll out test

## Standard 700c rim with 23mm racing tyre

### SPROCKET SIZE

CHAINRING SIZE	SPROCKET SIZE										
	11	12	13	14	15	16	17	18	19	20	21
	34	6.49	5.95	5.49	5.10	4.76	4.46	4.20	3.96	3.76	3.40
	35	6.68	6.12	5.65	5.25	4.90	4.59	4.32	4.08	3.87	3.50
	36	6.87	6.30	5.81	5.40	5.04	4.72	4.44	4.20	3.98	3.60
	37	7.06	6.47	5.97	5.55	5.18	4.85	4.57	4.31	4.09	3.70
	38	7.25	6.65	6.13	5.70	5.32	4.98	4.69	4.43	4.20	3.80
	39	7.44	6.82	6.30	5.85	5.46	5.12	4.81	4.55	4.31	3.90
	40	7.63	7.00	6.46	6.00	5.60	5.25	4.94	4.66	4.42	4.00
	41	7.82	7.17	6.62	6.15	5.74	5.38	5.06	4.78	4.53	4.10
	42	8.01	7.35	6.78	6.30	5.88	5.51	5.18	4.90	4.64	4.20
	43	8.20	7.52	6.94	6.45	6.02	5.64	5.31	5.01	4.75	4.30
	44	8.39	7.69	7.10	6.60	6.16	5.77	5.43	5.13	4.86	4.40
	45	8.59	7.87	7.26	6.75	6.30	5.90	5.56	5.25	4.97	4.50
	46	8.78	8.04	7.43	6.90	6.44	6.03	5.68	5.36	5.08	4.60
	47	8.97	8.22	7.59	7.05	6.58	6.16	5.80	5.48	5.19	4.70
	48	9.16	8.39	7.75	7.20	6.72	6.30	5.93	5.60	5.30	4.80
	49	9.35	8.57	7.91	7.35	6.86	6.43	6.05	5.71	5.41	4.90
	50	9.54	8.74	8.07	7.49	7.00	6.56	6.17	5.83	5.52	5.00
	51	9.73	8.92	8.23	7.64	7.14	6.69	6.30	5.95	5.63	5.10
	52	9.92	9.09	8.39	7.79	7.28	6.82	6.42	6.06	5.74	5.20
	53	10.11	9.27	8.56	7.94	7.41	6.95	6.54	6.18	5.85	5.30

Age Group	Roll Out
Tristar	5.10m
Tristar1	5.40m
Tristar 2	6.05m
Tristar 3	6.45m
Youth	6.93m
Junior	7.93m

NOTE\* Tyre widths will affect roll out distance adversely as the tyre width increase so does the distance it rolls. All distances above are calculated for a 700cx23mm tyre. For example a 700cx28mm tyres will roll out a greater distance than a 700cx23mm tyre

## Wheel regulations Tri star 2 and Tri star 3

Wheels <b><u>ALLOWED</u></b> for Tri Star 2 and Tri Star 3 athletes	Wheels <b><u>NOT ALLOWED</u></b> for Tri Star 2 and Tri Star 3 athletes
A wheel rim made of aluminium (for most bikes this is standard when bought)	<b><u>No</u></b> carbon wheels are permitted irrespective of dimensions
A maximum rim depth of 35mm (see diagram below) it can be less than 35mm. This excludes the tyre it's just the rim.	<b><u>No</u></b> disc wheels or tri-spoke wheels are permitted
Must have at least 16 spokes or more	<b><u>No</u></b> wheels with less than 16 spokes
Spokes must be 3mm in width or under 3mm	<b><u>No</u></b> wheels with spokes wider than 3mm

