

Cardiometabolic Bike Exercise Testing

The Fit Stop Human Performance Lab

Name: John Doe Fitness



Data: Test #1

Date: 12-Oct-05
 Age: 26 years
 Waist circ.: 33.5 inches
 Training Freq.: 7 days/wk
 Start VO2 at 80% Max: 4.4
 Mean VO2 at 80% Max: 4.55 L/min
 Power @ 80% VO2Max: 400 watts
 Ave. HR @ 80% of VO2Max: 168.8125 bpm
 RPM @ 80% of VO2Max: 87.0 rpm

Gross Mechanical Efficiency (GE)

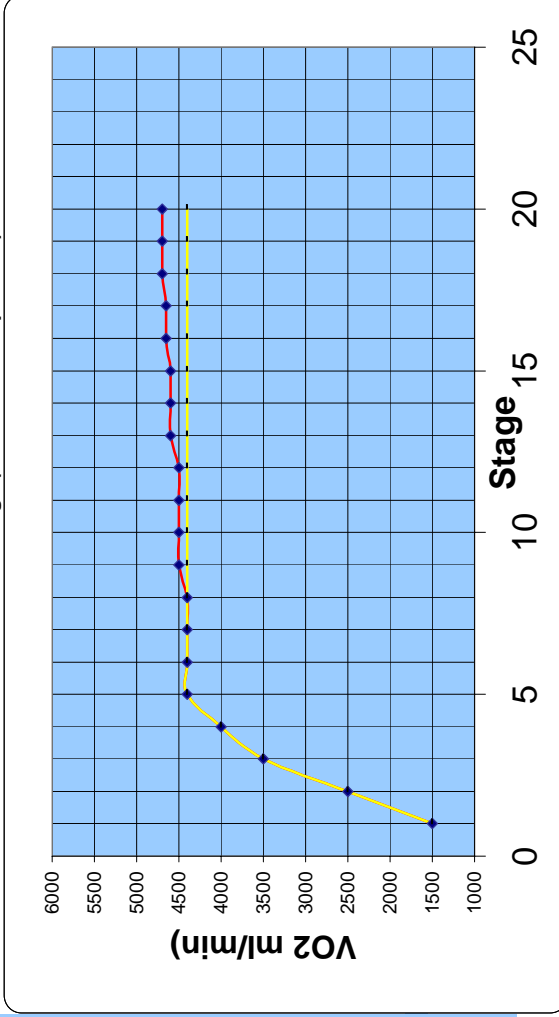
25%

Cycling Economy (CE)

87.9 Watts / Liter / min.

Time	VO2	Watts	HR	RPM
1	1.5	400	165	87
2	2.5	400	165	87
3	3.5	400	166	87
4	4	400	166	87
5	4.4	400	167	87
6	4.4	400	167	87
7	4.4	400	167	87
8	4.4	400	168	87
9	4.5	400	168	87
10	4.5	400	168	87
11	4.5	400	169	87
12	4.5	400	169	87
13	4.6	400	169	87
14	4.6	400	170	87
15	4.6	400	170	87
16	4.65	400	170	87
17	4.65	400	170	87
18	4.7	400	170	87
19	4.7	400	170	87
20	4.7	400	170	87
	4.55		168.813	87

VO2 Drift at Sub-Threshold Wattage ("the slow component")



GE = The Gross Mechanical Efficiency is the ratio of work accomplished to energy expended which describes whole body efficiency. Normal fit cyclists are typically around 20% while Pro Riders average closer to 25%.

CE = Cycling Economy refers to the actual power output generated at a cost of 1 L of oxygen (L= Liter). Highly trained amateurs generate approximately 75 W/L/min where as the pros are measured in the 85 W/L/min range.

VO2 drift = is commonly referred to as the VO2 slow component. Endurance performance can be enhanced by training to decrease the magnitude of the slow component. World class cyclists show increases of VO2 less than 130 ml over 20 minutes at a work rate of 80% of VO2 max. Unfit or normal fit cyclists will show 3-4 times this amount of drift for 20 minutes at the same relative intensity.