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The Cleaner – Can He Win the Cox Plate in 2014?

What does StrideMASTER tell us?

Tasmania is the only racing jurisdiction in the world to use StrideMASTER. This GPS performance measuring solution provides valuable insight for punters on every horse competing in Tasmania.

David Hawke, inventor of StrideMASTER reviews the race data from *The Cleaner's* recent summer campaign to see if he has what it takes to be competitive in a Cox Plate.

1. Gate Speed

Most horses take between 200m and 300m to reach their peak velocity after the start of a race. *The Cleaner* reaches his peak velocity less than 200m after the start, in some races as soon as 100m after the start! In the Newmarket Handicap at Mowbray in November 2013, *The Cleaner* showed just how fast he can get going. He reached his peak velocity of nearly 19m/sec (68 km/h) about 100m after the start. He then rattled off his next 600m (1,000m to the 400m) in 32.36secs with sectionals of 10.65, 11.06 and 10.65 respectively.

He also has fantastic leg speed. Most horses take between 0.40 secs and 0.44 secs to complete a stride. When he's accelerating, *The Cleaner* can complete a stride in as little as 0.39 secs.



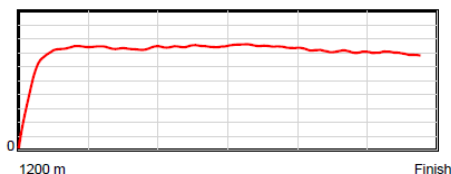
Race Results



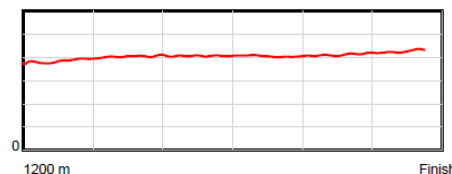
November 20, 2013, Race 6, NWMRKT HCP, Distance 1200m, Mowbray - Offset 0m

Result	TAB no.	Horse (Barrier)	1200 to 1000m	1000m to 800m	800m to 600m	600m to 400m	400m to 200m	200m to WP	Total or Average	Margin
3rd	2	The Cleaner (3)	-	6(6.2)	7(4.4)	1(0.0)	1(0.0)	2(0.1)		1.90
		Position in running (margin)								
		Sectional time (s)	13.87	10.65	11.06	10.65	11.80	12.16		
		Cumulative time (s)	70.20	56.33	45.68	34.62	23.96	12.16	1:10.20	
		Speed (m/s)	14.42	18.78	18.08	18.78	16.95	16.45	17.09	
		Stride length (m)	5.76	7.55	7.37	7.63	6.95	7.01	6.98	
		Stride duration (s)	0.392	0.402	0.408	0.406	0.410	0.426	0.409	
		Stride efficiency (%)	51.91	89.06	84.99	90.90	75.39	76.84	76.20	
		Stride count	34.70	26.49	27.12	26.22	28.79	28.52	171.84	

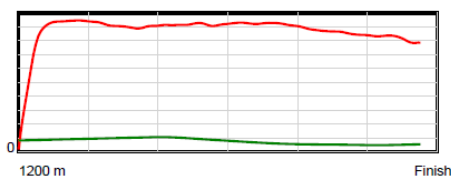
10 m Stride length



0.6 s Stride duration



20 m/sec Speed



100 % Stride efficiency

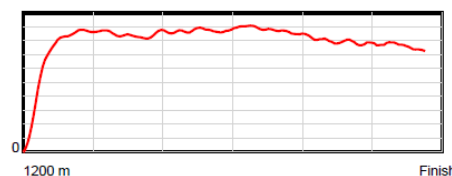




Figure 1: The “Speed” graph above, from the Newmarket Handicap, shows how quickly *The Cleaner* gets to peak velocity after the start. You can also see evidence of his high leg speed with “Stride duration” being less than 0.40 secs just after the start.

(Note: StrideMASTER captures the moment of “footfall” for each leg, i.e., the moment each hoof hits the ground. We measure the time it takes to complete a stride from the footfall of the trailing hind to the next footfall of the trailing hind, or one complete cycle. The complete cycle comprises trailing hind, leading hind, trailing fore and leading fore. This is then followed by “suspension time” when all four feet are off the ground, before the trailing hind comes down again to start the next stride).

Why is gate speed important? Being able to position yourself early in a race and control your own destiny is a great asset for a racehorse to have, particularly if you need to overcome an awkward barrier draw. In the Cox Plate, jockeys only have a little over 200m to position their mount for the rest of the race. If they get it wrong, it can be all over before the finish line the first time around. If they get it right, then the race can fall into place for them. Being on a horse with great gate speed, on a tight turning track like Moonee Valley, can be a huge advantage.

2. Ability to control race tempo

The ability to comfortably take up a forward position in a race gives a jockey the opportunity to control the tempo of the race. *The Cleaner* consistently demonstrates this attribute in his races. However, one of the risks of starting so quickly is that horses can over race and fail to settle in their runs. If this occurs, horses tend to fatigue very quickly. But what is most noticeable in *The Cleaner’s* racing pattern, is that he is able to back off the speed almost as soon as he reaches peak velocity after the start. The ability to immediately relax, off such a high speed, is a great asset and conserves considerable energy for later in the race.



Race Results



February 02, 2014, Race 4, WFA, Distance 2200m, Elwick Course Proper - Offset 0m

Result	TAB no.	Horse (Barrier)	2200 to 2000m	2000m to 1800m	1800m to 1600m	1600m to 1400m	1400m to 1200m	1200m to 1000m	1000m to 800m	800m to 600m	600m to 400m	400m to 200m	200m to WP	Total or Average	Margin
2nd	1	The Cleaner (7)	-	1(0.0)	1(0.0)	1(0.0)	2(0.3)	1(0.0)	1(0.0)	1(0.0)	1(0.0)	1(0.0)	1(0.0)		2.00
		Position in running (margin)	-	1(0.0)	1(0.0)	1(0.0)	2(0.3)	1(0.0)	1(0.0)	1(0.0)	1(0.0)	1(0.0)	1(0.0)		
		Sectional time (s)	14.89	11.32	12.40	12.91	13.08	12.13	11.75	11.65	11.54	12.73	13.55	2:17.94	
		Cumulative time (s)	137.95	123.06	111.75	99.34	86.43	73.35	61.22	49.48	37.83	26.28	13.55		
		Speed (m/s)	13.44	17.67	16.13	15.49	15.29	16.49	17.02	17.17	17.33	15.71	14.76	15.95	
		Stride length (m)	5.77	7.38	6.91	6.79	6.80	7.35	7.37	7.33	7.39	6.96	6.74	6.95	
		Stride duration (s)	0.402	0.418	0.428	0.438	0.445	0.446	0.433	0.427	0.427	0.443	0.457	0.436	
		Stride efficiency (%)	52.02	85.14	74.53	72.01	72.28	84.30	84.95	83.96	85.40	75.78	70.95	75.42	
		Stride count	34.66	27.10	28.96	29.46	29.41	27.23	27.13	27.28	27.05	28.72	29.68	316.68	

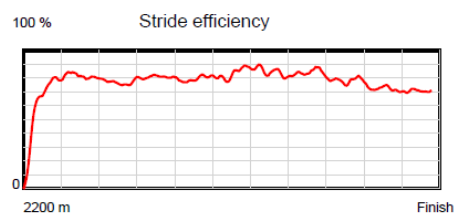
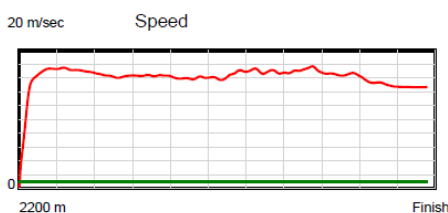
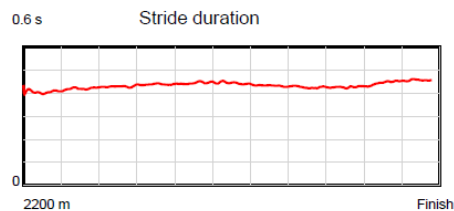
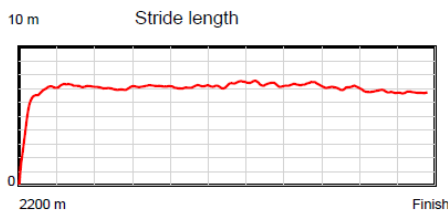




Figure 2: The “Speed” graph above demonstrates how *The Cleaner* can control race tempo. After reaching a velocity of nearly 18m/sec shortly after the start, he quickly drops back to around 16m/sec. This allows him to get away with some cheap sectionals in the first half of the race (sectional times from 1800m to 1200m were 12.40, 12.91 and 13.08).

3. Ability to settle mid-race

The “Speed” graphs from the distance race at Elwick (Figure 2 above) and the George Adams at Mowbray (Figure 3 below) demonstrate his ability to settle in the middle stages of a race. After reaching 19m/sec after the start of the George Adams, he quickly reduces speed to around 16m/sec mid-race whilst maintaining his leading position. *The Cleaner* also has an above average stride length. Most horses have an average stride length between 7.0m and 7.5m. When *The Cleaner* is at peak velocity his stride is between 7.6m and 7.7m. This makes him a very efficient galloper. It also means that when he backs off the tempo in the middle stages of a race, he is galloping well within himself and conserving considerable energy.



Race Results



February 26, 2014, Race 9, GEO ADAMS, Distance 1600m, Mowbray - Offset 3m

Result	TAB no.	Horse (Barrier)	1600 to 1400m	1400m to 1200m	1200m to 1000m	1000m to 800m	800m to 600m	600m to 400m	400m to 200m	200m to WP	Total or Average	Margin
1st	2	The Cleaner (8)	-	2(0.1)	1(0.0)	1(0.0)	1(0.0)	1(0.0)	1(0.0)	1(0.0)		0.00
		Position in running (margin)										
		Sectional time (s)	13.49	10.59	11.56	12.74	12.46	11.17	11.92	12.30		
		Cumulative time (s)	96.22	82.73	72.14	60.58	47.84	35.38	24.21	12.30	1:36.22	
		Speed (m/s)	14.83	18.89	17.30	15.70	16.05	17.91	16.78	16.26	16.63	
		Stride length (m)	5.92	7.63	7.31	6.73	6.78	7.51	7.16	7.12	6.98	
		Stride duration (s)	0.400	0.404	0.423	0.429	0.422	0.419	0.427	0.438	0.420	
		Stride efficiency (%)	54.83	90.88	83.61	70.72	71.84	88.12	80.14	79.20	76.14	
		Stride count	33.76	26.23	27.34	29.73	29.50	26.63	27.93	28.09	229.21	

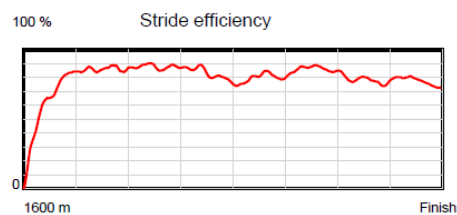
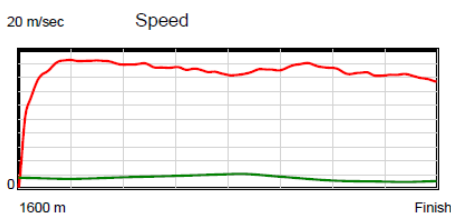
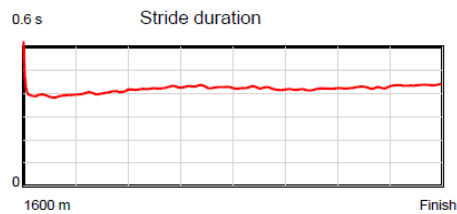
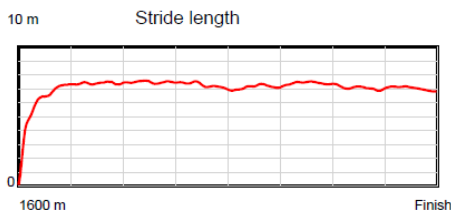


Figure 3: Data from the George Adams shows what a versatile runner *The Cleaner* is. After reaching a peak velocity of nearly 19m/sec shortly after the start he slows to 16m/sec mid-race only to accelerate again to nearly 18m/sec between the 600m and 400m.

4. He can sprint at the business end

Most horses reach their peak velocity within 300m of the start. Only the very elite horses are able to regain their peak velocity in the second half of a race. *The Cleaner* demonstrates this ability in his races time and time again. Figure 2 and Figure 3 both show how *The Cleaner* can accelerate in the latter stages of a race, reaching a similar velocity to that achieved immediately after the start. This is very unusual, as most horses tend to reach their peak velocity and then slowly show increasing fatigue from that point on.



He also has the ability to quicken his leg speed (reduce his stride duration) late in a race. The “Stride duration” graphs in Figure 2 and Figure 3 both show how he can increase his leg speed in the second half of a race. This is the mark of a good horse and could prove particularly devastating in the Cox Plate. If he is allowed to dictate the tempo from the 1400m to the 800m and then increase the tempo again, he may prove difficult to catch on a turning circuit like Moonee Valley.

5. “Horses for Courses” – winning form at Moonee Valley

Finally, *The Cleaner’s* record at Moonee Valley is impressive (5 starts: 3-1-1) and it is clear his pattern of racing is well suited to the track.

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