LORD CLOVER

Biomechanical, Physiological and Performance Report

Complete Analysis of His First Three Career Starts

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The Diagnostic Objective

1600m Miler

2000m Classic

The purpose of this report is not to assign a simple visual rating or a conventional handicap value, but to identify Lord Clover's true biomechanical identity through:

Stride pattern analysis → Stride length vs frequency → Energy & metabolic response → Locomotor evolution → Surface, pace & speed interaction

To determine whether Lord Clover is an elite miler capable of stretching out in distance, or a genuine 2000–2100m classic horse (Prix du Jockey Club profile).

Fundamental Physiological Principle

In the Thoroughbred racehorse at full gallop, a fundamental physiological synchronization exists.

A horse producing speed through massive stride extension tends to remain aerobic for longer.

Increasing stride frequency automatically increases respiratory frequency, and therefore cardiovascular and anaerobic demand.

A horse producing speed through increased turnover enters anaerobic demand earlier.

1 Stride ≈ 1 Breath

This is exactly where the biomechanical key of Lord Clover lies.

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Methodology: The Three Stress Tests

1

PSF
Debut

Analysis of the natural engine.

2

Mile Race on
Holding Ground

Analysis of energetic cost.

3

Group 3
over 1800m

High-level validation test.

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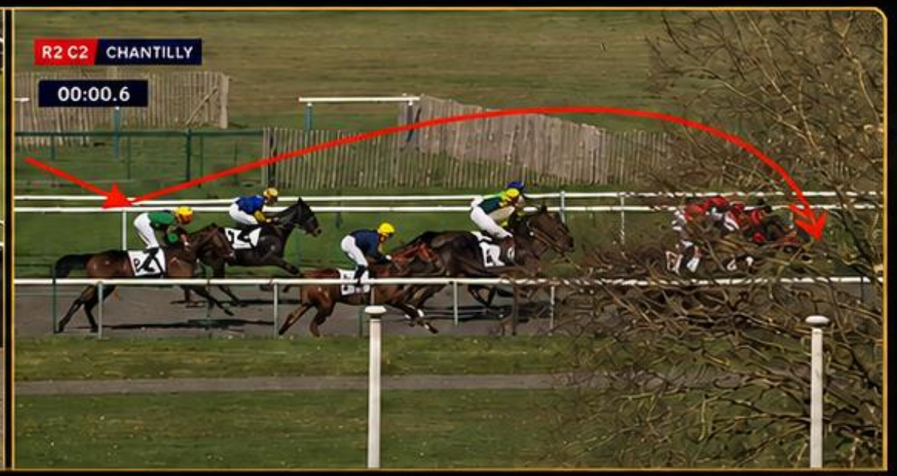
TEST 1: WINNING DEBUT (THE START)

CHANTILLY — FEBRUARY 25TH, 2026 | WINNING MARGIN: 6½ LENGTHS | FINAL TIME: 1:36.77

1600M — PSF / ALL WEATHER | MARGIN OVER RUNNER-UP: APPROX. 1 SECOND



MISSED THE BREAK, REMAINED INSIDE THE STALLS, IMMEDIATELY CONCEDED APPROXIMATELY 10 METRES.

	SECTION	TIME	STRIDES
	1600-1400	14.98	35

THESE 35 STRIDES DO NOT REPRESENT THE HORSE'S NATURAL BIOMECHANICAL MODEL. THEY ARE THE RESULT OF ACCELERATION FROM A STANDING START, IMMEDIATE RECOVERY OF LOST GROUND, AND EARLY USE OF STRIDE FREQUENCY.

LORD CLOVER USED HIS CHANGE OF GEAR WITHIN THE FIRST 200 METRES SIMPLY TO ERASE THE MISTAKE.

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DISCOVERY OF THE NATURAL ENGINE

Once position was recovered, his biomechanical profile completely changed.

For six consecutive sections: **26 strides (200/26 = 7.69m).**

Section	Time	Strides	Stride Length	Frequency
1400–1200	11.51s	27	7.41m	2.35 sps
1200–1000	11.42s	26	7.69m	2.28 sps
1000–800	11.62s	26	7.69m	2.24 sps
800–600	12.15s	26	7.69m	2.14 sps
600–400	12.11s	26	7.69m	2.15 sps
400–200	11.88s	26	7.69m	2.19 sps
200–finish	12.43s	27	7.41m	2.17 sps

THE KEY DATA POINT

7.69m

(NATURAL CRUISING STRIDE)

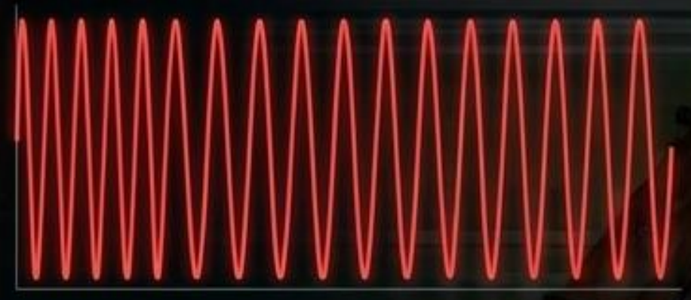
- Lord Clover is not a short-striding horse.
- He is not a horse producing speed exclusively through turnover.
- Possesses a naturally long and extremely economical stride.

MOST IMPORTANTLY: this stride length is produced without pressure, without being asked, with exceptional biomechanical fluidity.

The Change of Gear: Frequency as a Weapon

The horse is genuinely asked only once, at the 200m pole.

Segment 200 → 100



Distance: 100m
Avg Stride: 7.14m
Strides: 14
Frequency: 2.80 sps

Analysis: Increases frequency sharply, slightly compresses stride length, enters peak neuromuscular acceleration. Speed increases because he increases turnover, not extension.

Segment 100 → Finish

Distance: 100m
Avg Stride: 7.69m
Strides: 13
Frequency: 2.61 sps

Analysis: Immediately relaxes again, re-extends the stride, stops driving. Continues in complete biomechanical control.

Summary: Frequency is his acceleration tool; not his permanent locomotion model. Short but devastating acceleration without entering real metabolic stress.

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Test 2: The Load Test (Prix de la Croix de Pontarme)

The Environmental Variable: The Ground Changes Everything.

Chantilly
1600m
Holding Ground 4.3

Final time: 1:43.03

Result: 2nd, beaten by 0.02 seconds.

This race must not be interpreted as a normal mile. The holding ground massively increases the metabolic cost of locomotion, reduces elastic energy return, and makes high stride frequency significantly more expensive.

Key Takeaway: In practical terms: the mile becomes biomechanically longer.

Test 2 Data & True Cruising Stride

Section	Time	Strides	Stride Length	Frequency
1600–1400	15.32	32	6.25m	2.09 sps
1400–1200	13.12	28	7.14m	2.13 sps
1200–1000	12.95	28	7.14m	2.16 sps
1000–800	12.87	27	7.41m	2.10 sps
800–600	13.10	27	7.41m	2.06 sps
600–400	11.81	28	7.14m	2.37 sps
400–200	11.44	28	7.14m	2.45 sps
200–finish	12.40	27	7.41m	2.18 sps

Cruising Math:
Excluding the first 200m.

28 + 28 + 27 + 27 = 110 strides over 800m.

7.27m

(Cruising frequency: 2.06-2.16 sps)

Insight: On holding ground this is a very strong figure. Follows the pace without immediately increasing frequency. Behaviour of a biomechanically relaxed horse.

The Cost of the Gear Change

Final 600m Analysis

Section	Time	Strides	Frequency
600–400	11.81s	28	2.37 sps
400–200	11.44s	28	2.45 sps
200–finish	12.40s	27	2.18 sps

THE CENTRAL BIOMECHANICAL ISSUE

Lord Clover accelerates by increasing frequency. He does not produce acceleration through massive stride extension, but through increased turnover.

On holding ground, this turnover carries a massive energetic penalty.

The Hidden Data: The Virtual Track

This is not simple ground slowness. It is a dramatic increase in energetic cost. The holding surface biomechanically stretches the mile, increases the number of “expensive” locomotor cycles, and makes the anaerobic phase substantially heavier.

Conclusion: This 1600m carried an energetic load closer to a 1700m race than to a true mile.

Why He Lost the Race (And Why It Matters)

The Margins: Lost by 0.02 seconds.

Lord Clover Final 600m:

35.66

Winner Final 600m:

36.10

Analysis: He finishes stronger and produces the best closing section of the race, but pays for the energetic cost accumulated earlier.

The Decisive Point

Lord Clover loses preciselry because the holding ground transformed the mile into a a virtually longer distance. He sustains the effort, maintains biomechanical structure, and closes stronger than any rival. The anaerobic cost of the ‘virtual extra 100 metres’ became decisive.

Verdict: This performance does not weaken the stamina argument: it confirms it.

Test 3: High-Level Validation (Prix de Guiche G3)

- Chantilly
- 1800m
- Good 3.3
- Final time: 1:52.02
- Result: 2nd. First true Pattern-level test.
- Race Structure Observations:
  - Breaks from outside, immediately restrained, settles covered at rear of field.
  - Does not fight rider, wastes no energy, remains biomechanically relaxed.

Complete Data Phase Breakdown

Start:	Cruising:	Acceleration:	Finish:
32 strides	27, 26, 27 strides	29 strides	27, 27 strides

Cruising Stride Calculation: **27+26+27 = 80.**
600/80 = 7.50m Cruising Stride.

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The Definitive Biomechanical Key

The Engine Holds Under Pressure

Final 600m Breakdown:
600–400: 29 strides; 400–200: 27 strides;
200–finish: 27 strides; Total: 83 strides.
Average stride length: 600/83 = 7.23m.

Central Issue Analysis

When acceleration is required, stride length does not open to extreme levels; the horse increases turnover.

The Crucial Insight

After the acceleration phase, he immediately returns to 27/27. He does not collapse. He does not lose
He does not lose structural balance.

Verdict

Stamina is genuine. The horse does not mechanically fall apart under elite Pattern-level pressure.

The Biomechanical Phase Line

Phase 1

Start Phase: Required early energy expenditure only due to starting errors.

Phase 2

Cruising Phase: Consistent, relaxed 7.50m+ extensions. Aerobic preservation.

Phase 3

Acceleration Phase: The deliberate, controlled spike in turnover (anaerobic burn).

Phase 4

Recovery Phase: Immediate structural recovery. The hallmark of elite mechanics.

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Synthesis: Comparison of the Three Races

Race	PSF Debut	Croix de Pontarme	Prix de Guiche
Ground	Synthetic	Holding 4.3	Good 3.3
Cruising Stride	7.69m	7.27m	7.50m
Change of Gear	Short and devastating	Costly high frequency	Sustained frequency
Profile	Complete ease	Stretched mile	Pattern confirmation

Definitive Biomechanical Profile

What He Is NOT

- A short-striding high-frequency horse.
- A horse permanently dependent on turnover.

His Natural Model

A long-striding, relaxed cruising horse.

Principal Characteristics Checklist

1. Naturally long stride.	2. Major locomotor economy.	3. Ability to follow strong pace without immediately increasing frequency.	4. Biomechanical stability under stress.

The Physiological Identity: His change of gear is produced through increased stride frequency, and therefore increased respiratory and anaerobic cost.

The Metabolic Threshold

The relationship between pace and the anaerobic engine.

Mechanism Explanation: Lord Clover uses a long, relaxed and economical stride during the cruising phase, remaining aerobic longer than many nervous milers. He concentrates his increase in frequency only during the decisive phase of the race.

The 2000m Challenge: Over longer distances, he can stay 2000m; his biomechanical structure allows it, and his metabolic stamina is genuine. However, extending distance changes the competitive context. To sustain longer acceleration phases, he must maintain increased respiratory and locomotor frequency for a longer period, progressively increasing anaerobic cost.

Final Verdict: The Competitive Advantage

2000m Verdict (Group 3 Limit)

- He can stay 2000m.
- He can still be competitive.
- However, to express his maximum efficiency while sustaining longer frequency-based acceleration, he would likely need to drop in class to Group 3 level.

1600m Verdict (Group 1 Optimized)

- At 1600m, especially on good ground, his biomechanical model becomes perfectly optimized for elite-level competition (Group 1).
- He arrives at the decisive stage without unnecessary energy expenditure.
- He can deploy his frequency-based acceleration against rivals who are already under metabolic pressure.

Final Statement: He does something extremely rare: travels relaxed at high speed, breathes economically during the cruise, and changes gear by increasing frequency only at the decisive moment.