



captured 14 Sept 2026, 20:46 · demo-subject

## NOTES

[FICTIONAL]: 27 y/o male sprinter (100m/200m), referred for sprint mechanics assessment following a right hamstring strain (grade I, mid-belly biceps femoris) sustained 5 weeks ago during a competition.

Completed structured return-to-run progression under physiotherapy guidance; currently pain-free during submaximal running and cleared to progress toward full-speed sprinting. No pain at rest or with daily activity.

Athlete reports feeling "cautious" at speeds above 90% effort and has not yet attempted maximal sprints since the injury.

Isokinetic hamstring strength testing at 4 weeks showed the right side at 85% of the uninvolved limb. No prior history of hamstring injury on either side. Training load was noted to have increased sharply in the two weeks preceding the injury, with reduced recovery time between sessions.

Goal for this session is to assess sprint mechanics and limb symmetry approaching top-end speed, and to determine readiness to progress to unrestricted maximal-velocity sprinting.

## METRIC OVERVIEW

Maximum speed (m/s)

7.05 m/s



Final 10 m split (s)

1.52 s



Contact time (s)

L R  
0.15 s 0.15 s



Step length (m)

L R  
2.00 m 1.96 m



Thigh separation at initial contact (deg)

L R  
-11.4° -14.2°



Peak thigh angular switching speed (deg/s)

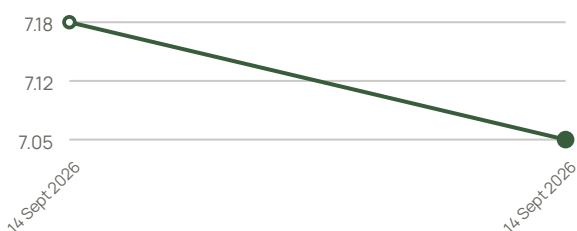
L R  
983.0°/s 1069.0°/s



## METRIC TREND CHART

Maximum speed (m/s)

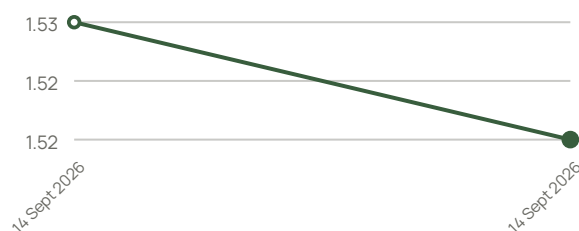
Trend vs last 3



## METRIC TREND CHART

Final 10 m split (s)

Trend vs last 3



## DETAILED RESULTS

| METRIC                                                           | LEFT     | RIGHT    | ASYMMETRY |
|------------------------------------------------------------------|----------|----------|-----------|
| Contralateral hip extension at toe-off (deg)                     | -29 °    | -27 °    | 6.3%      |
| Contact time (s)                                                 | 0.15 s   | 0.15 s   | 0.0%      |
| Step length (m)                                                  | 2.00 m   | 1.96 m   | 2.0%      |
| Maximum speed (m/s)                                              | 7.05 m/s |          |           |
| Final 10 m split (s)                                             | 1.52 s   |          |           |
| Back kick at maximal vertical projection (deg)                   | 6 °      | -3 °     | 146.4%    |
| Longitudinal torso rotation at maximal vertical projection (deg) | -12 °    | -7 °     | 41.5%     |
| Contralateral hip extension at late swing (deg)                  | -1 °     | -4 °     | 73.8%     |
| Forward torso lean at initial contact (deg)                      | 24 °     | 24 °     | 0.4%      |
| Thigh separation at initial contact (deg)                        | -11 °    | -14 °    | 19.7%     |
| Foot-COM distance at initial contact (m)                         | 0.05 m   | 0.08 m   | 37.5%     |
| Shin angle at initial contact (deg)                              | -2 °     | -9 °     | 73.6%     |
| Foot inclination at initial contact (deg)                        | -0 °     | 1 °      | 110.0%    |
| Peak swing thigh angular speed (deg/s)                           | 567 °/s  | 655 °/s  | 13.4%     |
| Peak stance thigh angular speed (deg/s)                          | -416 °/s | -415 °/s | 0.2%      |
| Peak thigh angular switching speed (deg/s)                       | 983 °/s  | 1069 °/s | 8.0%      |
| Frontal plane pelvis drop at midstance (deg)                     | 1 °      | 3 °      | 79.4%     |

MEDIA

