

**Supplementary Item 5:**

Stance duration statistics of motion capture (lateral heel and lateral toe markers) versus 'gold standard' force plate (FP; n = 7 horses); Accuracy (ms): the mean difference in milliseconds between IMU and motion capture stance duration accuracy; Precision (ms): the s.d. of the mean difference between the IMU and motion capture stance duration Accuracy; Error (%): the relative mean difference between motion capture and force plate stance duration Accuracy as % of force plate measured stance duration. Accuracy, Precision and Error are deemed better if closer to zero.

		<b>Stance event</b>	<b>Accuracy (ms)</b>	<b>Precision (ms)</b>	<b>Lower limits of agreement</b>	<b>Upper limits of agreement</b>	<b>Error (%)</b>
<b>Walk</b>	<b>Fore</b>	Toe-on – Toe-Off	-31.1	57.2	-143.3	81.0	<b>-4.2 %</b>
		Toe-on – Heel-off	-136.1	51.3	-236.6	-35.6	<b>-17.5 %</b>
		Heel-on – Toe-off	-22.0	21.6	-64.4	20.4	<b>-2.9 %</b>
		Heel-on –Heel-off	-127.0	25.0	-176	-78	<b>- 16.2%</b>
	<b>Hind</b>	Toe-on – Toe-off	-76.1	36.0	-146.8	-5.4	<b>-9.9 %</b>
		Toe-on – Heel-off	-154.8	17.6	-189.3	-120.4	<b>-20.1%</b>
		Heel-on – Toe-off	-41.9	48.7	-137.3	53.6	<b>-5.5 %</b>
		Heel-on –Heel-off	-120.6	21.5	-162.7	-78.5	<b>-15.7%</b>
<b>Trot</b>	<b>Fore</b>	Toe-on – Toe-off	-38.7	23.3	-84.4	7.0	<b>-11.6 %</b>
		Toe-on – Heel-off	-91.3	15.5	-121.6	-61.0	<b>-27.4%</b>
		Heel-on – Toe-off	-27.2	19.7	-65.7	11.3	<b>-8.0%</b>
		Heel-on –Heel-off	-79.9	14.5	-108.2	-51.5	<b>- 23.9%</b>
	<b>Hind</b>	Toe-on – Toe-off	-41.8	25.3	-91.3	7.7	<b>- 14.0%</b>
		Toe-on – Heel-off	-93.4	8.3	-109.7	-77.1	<b>-31.3%</b>
		Heel-on – Toe-off	-34.6	26.0	-85.5	16.4	<b>-11.5%</b>
		Heel-on –Heel-off	-86.2	16.4	-118.3	-54.1	<b>- 28.8%</b>

