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DATA ANALYSIS

Event Data Analysis Report

Rider: **Russell**
Bike: **Suzuki GSXR 750 SRAD (1996)**
Track: **Phillip Island Grand Prix Circuit**
Category: Period 7 - Superbike
Date: Wednesday, December 17, 2025
Sessions: 6 | Flying Laps: 41
Total Distance: 182.2 km

TODAY'S BEST LAP

2:00.229

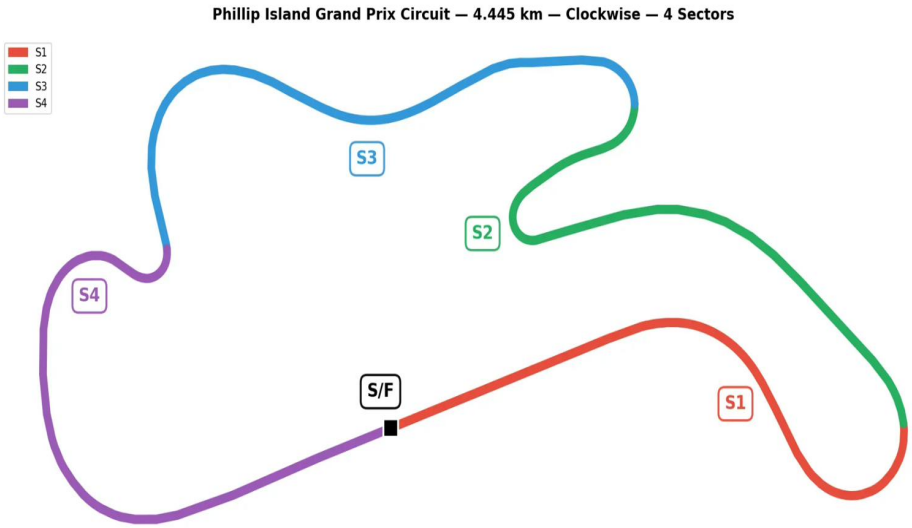
Session 2 - Lap 8

PREVIOUS BEST

2:03.000

April 25, 2025

NEW PERSONAL BEST! Improved by 2.771 seconds



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Executive Summary

This track day at Phillip Island delivered a **new personal best of 2:00.229**, improving on the previous PB of 2:03.000 by **2.771 seconds**. The data reveals a theoretical best of 1:58.200, indicating **2.029 seconds** of additional potential by combining best sector times from different laps.

Across 6 sessions and 41 flying laps, the data shows consistent pace with the best lap coming in Session 2 during the mid-morning. **S1 (Doohan → Southern Loop)** shows the highest variability (σ = 3.55s), indicating this as the primary focus area for finding consistent lap time.

Day Highlights

✓ **New PB achieved:** 2:00.229 (Session 2, Lap 7) — 2.771s improvement

✓ **Consistent sub-2:02 pace:** Multiple sessions with laps under 2:02

✓ **Strong progression:** Best times came after warm-up laps, showing good track adaptation

Areas to Monitor

⚠️ **Sector consistency:** S1 shows 3.55s variability — focus area for next session

⚠️ **Session 3 lambda:** Lean condition detected at high RPM + WOT (λ = 0.945 vs 0.96+ in other sessions)

⚠️ **Theoretical gap:** 2.029s available by combining best sectors — no single perfect lap yet

Vehicle Health Summary

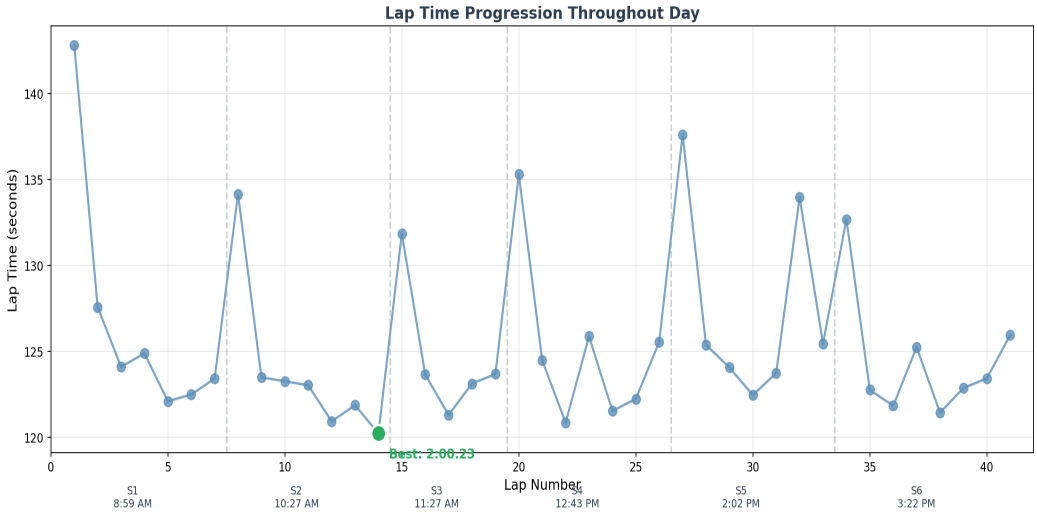
All monitored parameters remained within normal operating ranges throughout the day. Water temperature, oil pressure, and battery voltage showed no concerns.

Session Breakdown

Summary of all sessions recorded during the day with key performance metrics.

Session	Time	Laps	Best Lap	Avg Lap	Consistency
Session 1	8:59 AM	7	2:02.103	2:06.771	±6.8s
Session 2	10:27 AM	7	**2:00.229**	2:03.852	±4.4s
Session 3	11:27 AM	5	2:01.302	2:04.725	±3.7s
Session 4	12:43 PM	7	2:00.854	2:05.117	±4.5s
Session 5	2:02 PM	7	2:02.458	2:07.522	±5.4s
Session 6	3:22 PM	8	2:01.439	2:04.525	±3.4s

Lap Time Progression



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Session Detail

Session 1 - 8:59 AM

7 flying laps | Best: 2:02.103 | Full Throttle coaching with ted

Lap	Time	Delta to Best
2	2:22.814	+22.585s
3	2:07.582	+7.353s
4	2:04.099	+3.870s
5	2:04.887	+4.658s
6	2:02.103	+1.874s
7	2:02.488	+2.259s
8	2:03.424	+3.195s

Session 2 - 10:27 AM

7 flying laps | Best: 2:00.229 | Full Throttle coaching with ted

Lap	Time	Delta to Best
2	2:14.150	+13.921s
3	2:03.487	+3.258s
4	2:03.263	+3.034s
5	2:03.033	+2.804s
6	2:00.930	+0.701s
7	2:01.872	+1.643s
8	**2:00.229**	0.000s

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Session 3 - 11:27 AM

5 flying laps | Best: 2:01.302 | Full Throttle coaching with ted

Lap	Time	Delta to Best
2	2:11.860	+11.631s
3	2:03.650	+3.421s
4	2:01.302	+1.073s
5	2:03.129	+2.900s
6	2:03.683	+3.454s

Session 4 - 12:43 PM

7 flying laps | Best: 2:00.854 | Full Throttle coaching with ted

Lap	Time	Delta to Best
2	2:15.288	+15.059s
3	2:04.483	+4.254s
4	2:00.854	+0.625s
5	2:05.872	+5.643s
6	2:01.540	+1.311s
7	2:02.238	+2.009s
8	2:05.544	+5.315s

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Session 5 - 2:02 PM

7 flying laps | Best: 2:02.458 | Full Throttle coaching with ted

Lap	Time	Delta to Best
2	2:17.604	+17.375s
3	2:05.376	+5.147s
4	2:04.064	+3.835s
5	2:02.458	+2.229s
6	2:03.740	+3.511s
7	2:13.965	+13.736s
8	2:05.450	+5.221s

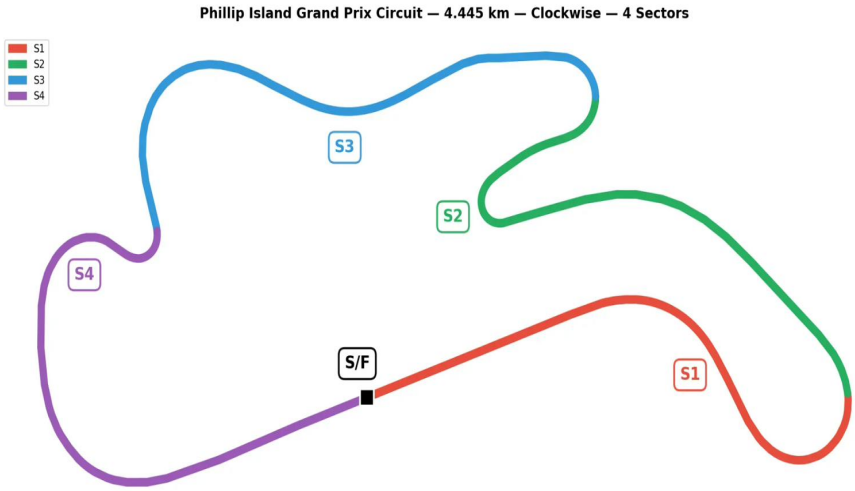
Session 6 - 3:22 PM

8 flying laps | Best: 2:01.439 | Full Throttle coaching with ted

Lap	Time	Delta to Best
2	2:12.680	+12.451s
3	2:02.761	+2.532s
4	2:01.834	+1.605s
5	2:05.249	+5.020s
6	2:01.439	+1.210s
7	2:02.867	+2.638s
8	2:03.426	+3.197s
9	2:05.948	+5.719s

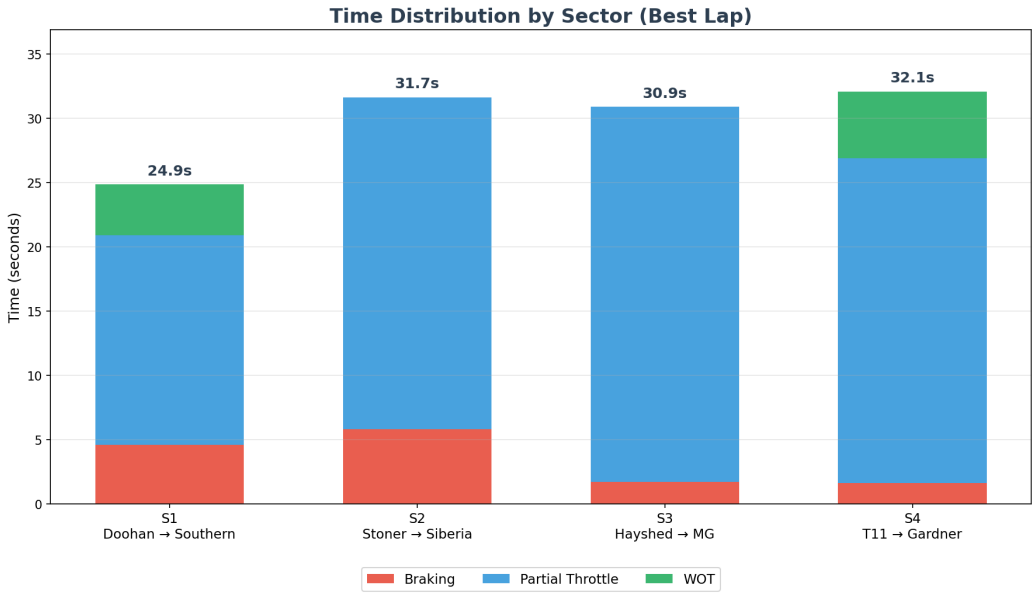
Sector Analysis

Performance breakdown across the four track sectors showing consistency and theoretical best calculation.



Sector	Best Time	Avg Time	Std Dev	Gap to Best
S1: Doohan → Southern Loop	**25.100s**	27.595s	3.553s	+2.495s
S2: Stoner → Siberia	**30.500s**	32.066s	1.214s	+1.566s
S3: Hayshed → MG	**30.850s**	32.221s	0.856s	+1.371s
S4: Turn 11 → Gardner	**31.750s**	33.307s	0.901s	+1.557s
THEORETICAL BEST	**118.200s**	-	-	-

Time Distribution by Sector (Best Lap)



Priority Improvement Areas

Priority 1: S1 - Doohan → Southern Loop

High variability (σ = 3.553s) indicates inconsistent execution.

Potential gain of 2.495s by matching best sector time consistently.

Priority 2: S2 - Stoner → Siberia

High variability (σ = 1.214s) indicates inconsistent execution.

Potential gain of 1.566s by matching best sector time consistently.

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Theoretical Best Lap

Calculated from the best sector times achieved across all laps during the day.

THEORETICAL BEST

1:58.200

GAP TO THEORETICAL

+2.029s

Best Sector Composition

Sector	Best Time	Name
S1	**25.100s**	Doohan → Southern Loop
S2	**30.500s**	Stoner → Siberia
S3	**30.850s**	Hayshed → MG
S4	**31.750s**	Turn 11 → Gardner
TOTAL	**1:58.200**	-

Analysis

Biggest opportunity: S1 with 2.495s available between average and best.

Best sectors came from different laps - no single perfect lap yet

Vehicle Health

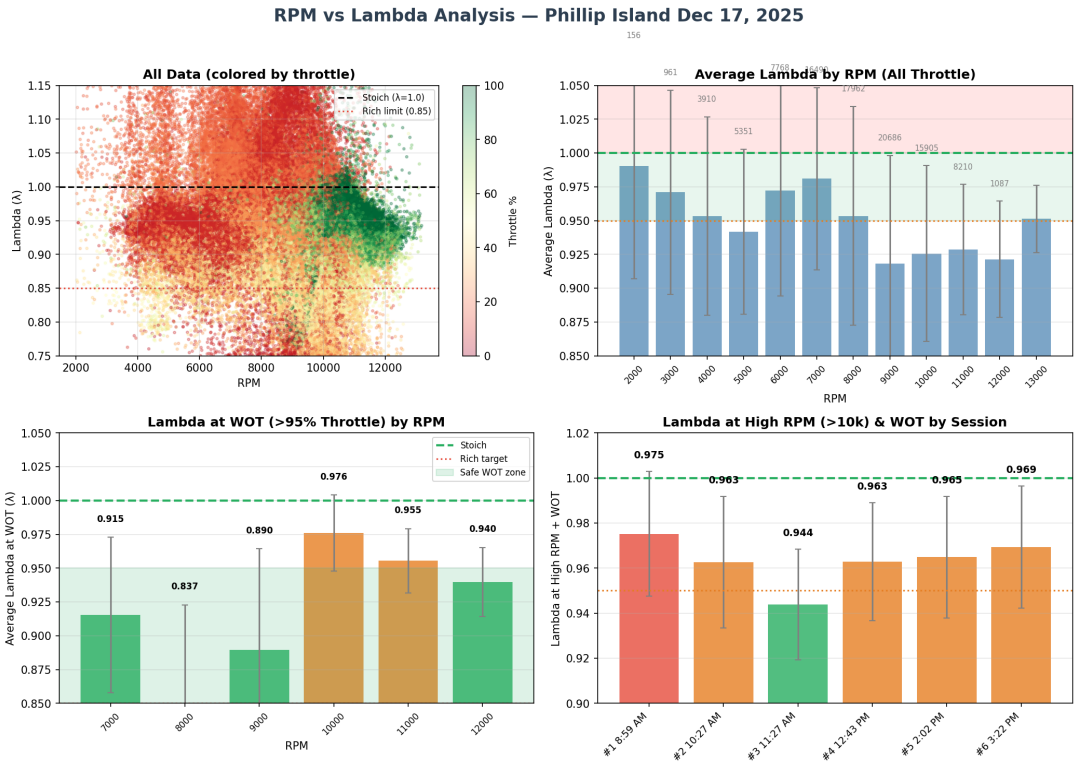
Analysis of critical vehicle parameters to ensure safe and optimal operation.

Parameter	Min	Max	Average	Status
Water Temp	13.99°C	83.44°C	64.16°C	Normal
Oil Pressure	0bar	6.8bar	3.15bar	Normal
Battery Voltage	2.97V	12.86V	12.1V	Normal

Lambda Analysis

Air-fuel ratio analysis across throttle positions and RPM to assess fuelling consistency and safety.

RPM vs Lambda Overview



⚠ Session 3 Lean Condition

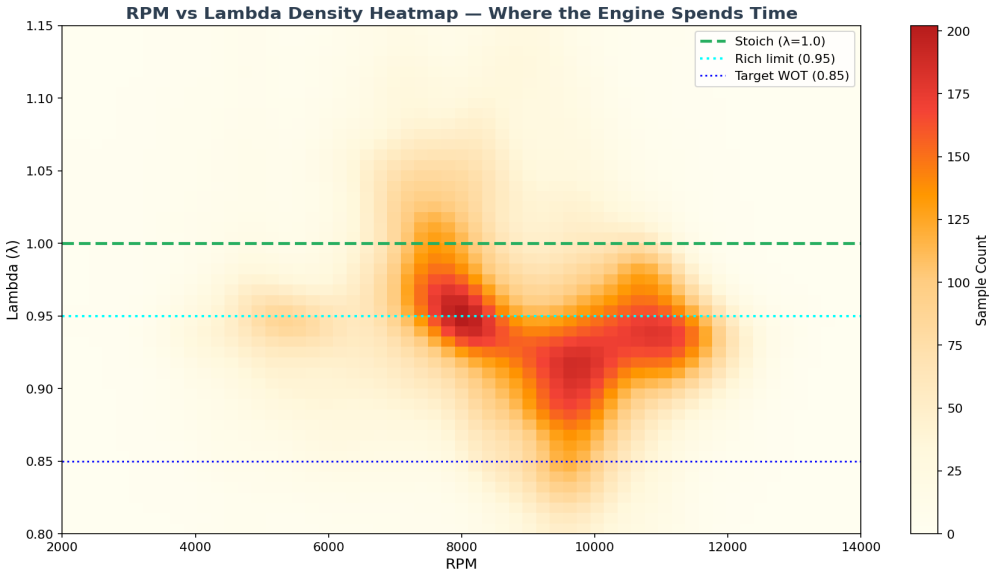
The data shows Session 3 (11:27 AM) recorded the leanest lambda values at high RPM + WOT:

- Session 3 average: Lambda = 0.945 at >10,000 RPM with WOT
- Other sessions ranged from Lambda = 0.963 to 0.978

While still within acceptable range, this is worth monitoring. Possible causes include:

- Higher ambient temperature during mid-morning session
- Engine heat soak from previous sessions

Engine Operating Density



Lambda Statistics Summary

WOT Average Lambda: 0.958

WOT Range: 0.759 - 1.525

WOT Std Dev: 0.0540

Total WOT Samples: 7,048

Report Summary

This Mega Data Analysis Report provides comprehensive insights from your track day data.

Key Findings

- Best lap time: 2:00.229 (Session 2)
- Previous PB: 2:03.000 — Improvement: 2.771 seconds
- Theoretical best: 1:58.200 (Gap: +2.029s)
- Total flying laps: 41 across 6 sessions
- Distance covered: 182.2 km

What the Data Shows You Did Well

✓ **New personal best achieved:** 2.771s improvement shows continued progression

✓ **Consistent pace:** Multiple sub-2:02 laps across different sessions

✓ **Good session management:** Best lap came mid-morning after track familiarization

✓ **Vehicle reliability:** All health parameters stayed in safe ranges across 182km

Areas for Improvement

→ **S1 consistency:** 3.55s variability indicates inconsistent execution

→ **S2 consistency:** 1.21s variability — second priority area

→ **Theoretical gap:** 2.029s available by combining best sectors from different laps

Next Session Focus Areas

Based on this analysis, the data suggests prioritizing sector consistency. The 2.029s theoretical gap shows the pace is there — the opportunity is in replicating best sectors consistently within the same lap.