

MotoGP set-up report – Brno

Brno, Czech Republic
16/8/2004



Round 10: Czech Republic, Brno
Track length: 5403 m
Opened: 1987
Fastest Lap Ever: 1'58.769 (Valentino Rossi, 2003)
MotoGP lap record: 1'59.966 (Valentino Rossi, 2003)
Last year MotoGP winner: Valentino Rossi
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2003 Race Summary

In one of the closest races and the most unpredictable this season so far – with the top five covered by only 1.171 seconds at mid race distance, and the race win claimed by a mere 0.042 seconds – Yamaha rider Carlos Checa produced a consistent 22-lap performance to finish fourth at today's Czech Grand Prix. The 30-year-old was elated with the result following a difficult start to the weekend, which placed the Spaniard on the second row of the grid for today's main event. With tactics thrown out the window from the outset, except for the desire to win, the leading pack put on a show that saw positions changing not only every lap, but virtually every corner.

Checa's start placed the factory YZR-M1 sixth into turn one, before the top seven set a pace that saw a gap build over the remaining MotoGP field. Then, as the intensity grew, 'El Toro' literally took the bull by the horns and, lap by lap, closed in on a podium result – powering past Max Biaggi (Honda) on lap 12, before taking advantage of Loris Capirossi's floundering Ducati. The latter retiring with two laps remaining, leaving Checa to claim fourth on the day, and sixth place in the championship standings.

Although Valentino Rossi (Honda) took his fourth win of the year it has become increasingly clear the Italian will have to work hard to defend his MotoGP World Championship title this season after a determined effort by Sete Gibernau (Honda) – who has also claimed four wins in 2003 – and third placed Troy Bayliss (Ducati).

Alex Barros (Yamaha) completed the tenth round of the 2003 season with an admirable seventh place after tough qualifying sessions, during which he crashed on his final hot lap, and was left with a less than ideal start position. The Brazilian currently lies eighth in the championship, behind Tohru Ukawa (Honda) and Checa.

Set-up report YZR-M1

Visually Brno appears challenging with many long radius medium-speed turns and medium-length straights which lends the Brno Automotodrom to being one of the easier circuits – technically speaking – on the 16 round MotoGP calendar. Combined with the wide, smooth, track surface, it's a venue which also allows a variety of competitive racing lines and passing opportunities – majority of the time this takes place under brakes. Far from being a flat circuit the elevation changes are quite varied in the second half, while the corners themselves often feature a typically positive camber. The Brno tarmac also offers a surprising amount of grip, without the reputation for tearing up tyres. All in all, a perfect venue to test the limits on everything a bike has to offer regarding handling.

Due its nature Brno is not overly demanding on any specific area of chassis set-up except on front end feel and the need to concentrate on the overall balance. The main target is a good, stable, turn in character and a set-up that offers easy changes in direction; supported by a high level of feel from both the front and rear. Yamaha engineers will ensure that the weight bias is as neutral as possible to prevent the front Michelin overloading in the midpoint of the turn while also ensuring good drive off the sides of the rear hoop. This will build the rider's confidence, therefore encouraging him to keep a high rolling speed – a key to making up time at this particular venue. And since the track surface is relatively smooth and the top speeds only just nudge 300kmh, straight-line stability can be sacrificed to some degree in order to support this.

The M1 will run a slightly lower center of gravity in an effort to improve the rate of pitching and the bike's ability to change direction quickly. It will also reduce the risk of the front folding under the rider while entering the downhill sweepers – caused when excess weight transfers onto the front tyre under deceleration. Exaggerate further with the amount of trail braking that takes place on this circuit.

With no real specific hard braking anywhere on the five kilometer layout, fork springs will be chosen to maximise rider feedback, although biased slightly towards the softer side. It will also be a similar case on the rear with the monoshock's spring rate. This is possible due to the circuit's design, which allows the rider to keep up his corner speed, and is therefore unlikely to load the rear shock under power to the same extent as riding the stop-and-go Le Mans layout.

The long radius corners, and consistent, progressive, throttle action needed to ride them quickly, has proven a much simpler task on the four-strokes, which is why the race times have dropped so dramatically since the introduction of the new MotoGP regulations last year. Although power is always a must have, throttle connection and a linear power delivery play a prime part in any successful result.



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