



Inside Track – 2008 Season Review

Christine: Hello and welcome to Inside Track. Let's get the bad news out of the way first. Inside Track won't be returning as you know and love it. We've done race previews for two years now, and let's be honest, if you don't know your way around the tracks by now, we're not doing our job properly.

Instead, though, we'll be producing longer, better, more interesting specials, focusing on specific themes and going behind the racing action. We're gonna start that right now, with the 2009 Season Preview.

[Cut to Glock and Trulli in Toyota video]

Timo: Are you ready?

Jarno: Yea.

Christine – Voiceover

Going into the season, McLaren are the team to watch. With a defending champion in Hamilton, they'll want to retain the title, and bring home the constructor's trophy with it. Lewis is all fired up, Heikki is all beefed up, and the pair are ready for action.

Meanwhile, Ferrari continue on as they always do, fast, consistent and determined, they say their KERS is ready to rock and roll in Melbourne. They'll face some competition though, with BMW also sitting on a KERS device that is ready to hit the track. They haven't decided whether to use it or not yet, but the option is there. Renault will be running theirs, and from testing, it looks like Alonso will completely outperform Piquet. No surprises there.

Toyota have less competition than expected, now that their long-running battle with Honda has come to an end. Brawn GP have picked up where Honda Racing left off, although probably higher up the grid, but Toyota can effectively concentrate on their own performance now.

Force India seem to have made vast improvements on their 2008 car but will still likely be running towards the lower end of the grid. Their main rivals are probably Toro Rosso – who can't possibly match their success of last year. Vettel has moved on to Red Bull, Buemi needs to gain some experience, and now that the team are under full ownership by Mateschitz, chances are he won't let the A team be overshadowed again.

In the first few races, it'll be all about the cars, as the regulation changes have been so dramatic.

[Cut to Sebastien Bourdais]

Sebastien: Yea, I think it's actually one of the nicest cars in the field. Obviously, with the new regulations, the difference of sizes between the front and the rear wing is quite dramatic but I think everybody will get used to it. It's just like a... it's just like a shock when you first see the cars like this. But I think Adrian and his team did a great job and the car's really looking nice. Personally, I like the new design of the car.

[Cut to Williams animation]



Christine - Voiceover

We've said that the pressure will be all on the teams, but the drivers have some extra work to do as well. The boost button gives added power, and with great power comes great responsibility.

Although to us it will seem like a simple push of a button, there's a lot going on under the hood. It all starts with the rear wheels. Instead of being lost as friction, the braking energy is transmitted through the driveshaft to the gearbox, where there is a special KERS cog. This directs the energy away to the teams chosen storage system. Williams have gone for a mechanical flywheel, whilst we believe the others have all chosen batteries. The main difference is the sheer number of moving parts. Whilst the flywheel rotates at 65,000 revolutions per minute, the battery has a simple generator to turn mechanical energy into electrical and store it. Both have their drawbacks, but the flywheel system can charge and release energy faster than a battery, whilst a battery can be situated anywhere in the car, making weight distribution easier.

At an opportune moment – usually on a long straight before the next big braking zone – the driver will push his boost button. The stored energy is returned back through the driveshaft to the wheels to give an extra 80bhp for 6.5 seconds per lap. Obviously this is designed to improve overtaking, but the driver's decision when and where to push the button adds an entirely new strategic element to racing.

[Cut to Kazuki Nakajima]

Kazuki: It's going to be very busy for the driver. Firstly, we have the active front flap and also we may have the KERS system, so yea, we have... Actually, when we have the KERS system, we have to use it for every lap. And also for the front flap, once we've decided where to use it, basically we have to hit it every lap, and we have to change the numbers, so there will be a lot of things happening in racing, I think.

[Cut to Nick Heidfeld]

Nick: Well, I think this is the biggest rule changes we have had in a long time. Hopefully, the target to reduce costs and even more, to make racing more fun with more overtaking will work out, but we will only see in the future if the slicks and the aerodynamics will just do that.

[Cut to Adrian Newey]

Adrian: Slick tyres, first of all, means more mechanical grip and to best suit that we need to put more weight on the front axel, and that means changing the architecture of the car to get more weight on the front. And then on top of that, this big aerodynamic change, which has changed the architecture of the car further. So, we spent a lot of time trying to understand the flow physics that result from these new aerodynamic changes, and then try to change the shape of the chassis, the rear suspension, and so forth, to suit that.

[Cut to Christine]

Christine: We're almost at the end of our first video for 2009, then, and all that remains to be said is: I can't wait for the season to start. It's just moments away, and it's going to be great.

To help explain the enormous changes from 2008, Red Bull produced a supreme animation showing the differences between the two cars. If you haven't already seen it, it's worth watching, and if you have, it's worth watching again.

[Cut to Red Bull animation]



Christine – Voiceover

As we have already seen, the new cars are vastly different from 2008. FIA President Max Mosley once said that a lot of the development work that went into F1 was things that the armchair fan would never recognise. Engines, suspension, rear diffusers. Anyway, this year, the changes are definitely visible. Remember how good those '08 cars looked? Gorgeous curves. Well, forget it. This year, it's all about simplicity.

Gone are the aero flip ups and wings, the front wing is lower, and wider, the rear wing is higher and narrower. This year the front wing is also allowed to move slightly, six degrees up and down, just two adjustments per lap. This is intended to help the car cope better in the wake of another's dirty air. Yet another button the drivers have to think about as they navigate each circuit.

Engines must last a lot longer, with only eight allowed per driver per season. Once you swap in that ninth engine, the penalties start. The engine freeze continues to be in full force, with only Renault (and we therefore assume Red Bull) benefiting from an agreed upgrade.

We've looked at KERS already, and in the Red Bull, we can see the battery system rather than the flywheel. The same principal applies, braking energy through the driveshaft to the KERS device. In this example, which is not necessarily the finished product, the energy must travel all the way through the engine to get to the battery for storage. Although allowing for better weight distribution, some of the energy must be lost along the way. It's another compromise to be made when deciding which system to use.

Push to pass will be fascinating to watch, as drivers can use it for blocking, for overtaking, for generally making a nuisance of themselves, or simply to clear their KERS device for more storage on the next lap.

Slick tyres make a welcome return, with almost everyone on the grid looking forward to some proper racing rubber. The compounds are also taking an extra step apart, so in Melbourne we'll be racing with super softs and mediums, rather than the two soft compounds.

Everything is different and it's going to be unmissable.