



F1 Advent Calendar 2009 – Day Four

Hello and welcome to our F1 Advent Calendar 2009. We're doing a sort of extended mini-series, where for each day of advent, we talk about another key moment in the 2009 season. So far we've looked at fast cars and controversy, and as ever, there is more politics to come, I'm afraid. Today we'll find out what's behind the window for Day Four - Back to Front.

From the earliest tests with the 2009 cars, there was a clear divide between the teams - those that had the so-called double diffuser and those that didn't. It was only a select few that had come up with the double diffuser - Williams, Toyota and Brawn - and the rest were worried about the performance advantage.

So what was this strange new diffuser device? Without going into crazy engineering detail beyond the scope of the show, the device exploited a loophole in the regulations, without actually breaking any of the rules. Instead of having one single channel at the back of the car, the three teams had rather cleverly split the diffuser into 3 channels, using the crash structure as part of the fun. They also added the extra layer of carbon fibre, hence the double decker diffuser nickname.

No one would deny that it lent those three teams some performance when it came to lap times, and after the pre-season testing, some of those left behind were a little concerned. Red Bull and Ferrari in particular weren't impressed, and went to the FIA for a clarification. Horner and Domenicali insisted they had stuck to the spirit of the regulations, and were sure this new fancy diffuser wasn't legal.

The FIA confirmed it was fine. Just ahead of the first race of the season in Australia, an official protest was lodged against the Diffuser Three - Williams, Toyota and Brawn. Again, the FIA analysed the cars and decided that it was a legal interpretation of the regulations. The teams appealed the decision, and that was to go before the World Motor Sport Council after the Malaysian Grand Prix. That meant the first two races were held under appeal and although Brawn fans were celebrating Button's back to back victories, they couldn't know for sure that his car would be deemed legal until after the appeal was heard.

The appeal went in favour of the double diffuser. Brawn, Toyota and Williams had come up with a perfectly legal component. After the verdict was confirmed, BBC commentator David Croft said: "The decision comes as no great surprise. Already this season two sets of stewards, and FIA president and an FIA race director have thought that the diffuser design... was OK." He added. "Seven teams are now playing catch up and have to do something about it very, very quickly."

And that is what they did. They weren't happy about it. Flavio Briatore complained bitterly about the fact Renault would have to redesign their car - that this would cost them money and they were having to develop fundamental parts all over again. Adrian Newey got right down to work, designing Red Bull's new part, whilst McLaren were ready to go for the next race. It was only an interim version, and the team had run the same piece during a pre-season test, so they had a step up on the others.

Despite Adrian Newey's best efforts, the unique and complex rear suspension layout of the Red Bull meant it took them a long time to bring the new diffuser to the car, but once they did, they could really bring the fight to the Brawn boys.

That's all for today. I hope you're enjoying this series so far. I will be back tomorrow with a look through Door Five to see what F1 joy is hiding behind there.