Race Preview Feature One: Regulation Changes for 2012

It wouldn't be a new Formula One season without a few new regulations to get our heads around. For 2012, they are relatively few in number, but have had a dramatic impact on the look of the current generation of Formula One cars – and also have the potential to alter the sporting outcome of races. Here are the most important new sections of the 2012 Sporting and Technical Regulations.

Sporting Regulations

- Maximum race time: Art. 5.3, no race may now last longer than a maximum of four hours. Last year's Canadian Grand Prix lasted a total of 4hrs 4min 39.537s, although only 57min 10s were actually spent at racing speed!
- Driving etiquette: Arts. 20.2 & 20.3, drivers may no longer leave the track without "justifiable reason", while the acceptable limits of defensive driving have now been formally written into the rules. Drivers may not make "more than one change of direction to defend a position" and, when moving back onto the racing line, must leave racing room "at least one car width" between their car and the edge of the track.
- Crash testing: Art. 22.2, all mandatory crash tests must be completed prior to a team conducting any track testing. This was previously only mandatory for race events.
- In-season testing: Art. 22.4 (i), provision has now been made for one three-day inseason test, to be held in Mugello from 1 to 3 May. MERCEDES AMG PETRONAS topped the tables for average daily mileage in pre-season testing, completing an average of 472 km per official test day with the F1 W03. The car completed a total of 4,250 km over nine official test days, plus a further 200 km during filming days.
- **Team curfew exemptions:** *Art. 30.19,* team catering, marketing and media personnel are now formally exempted from the curfew observed by other team members.
- New Safety Car rules: Art. 40.12, if it is considered safe to do so, cars that have been lapped by the leader will be allowed to unlap themselves under the Safety Car. This will have the effect of putting the field in position order at every restart and leaving all cars free to race, rather than the leaders having to pass backmarkers, thus improving the racing in 2011 in Singapore, after the Safety Car period, the presence of backmarkers allowed Sebastian Vettel to build a nine-second lead over second-placed Jenson Button in a single lap! The Safety Car was deployed a total of 12 times over seven races in 2011, compared to 21 times over 12 races in 2010.

Technical Regulations

- Lower nose height: Art. 3.7.9, "No bodywork situated more than 1950mm forward of the rear face of the cockpit entry template may be more than 550mm above the reference plane." This apparently anodyne sentence is at the root of the distinctive stepped-nose appearance of the majority of 2012 Formula One cars, as the maximum permitted chassis height remains at 625mm above the reference plane.
- **Reduced tolerances:** Art 3.12.6, permitted manufacturing tolerances for aerodynamic components have been reduced by some 40% to 3mm (from 5mm previously).
- Throttle and exhaust controls: Arts. 5.5, 5.6, 5.7, 5.8, the regulations covering these areas now amount to a total of 954 words (!) and regulate the use of engine throttles, engine torque demands and the positioning of exhaust outlets. This section of the rules is over ten times longer than it was 12 months ago: in 2011, the same regulations were totalled just 89 words, a reflection of the complexity of the 'blown diffuser' systems the new regulations aim to outlaw.
- Additional load test: Art. 18.9.2, an additional vertical load test on the lateral impact structures on the chassis brings to 18 the total number of load and impact tests a chassis must pass in order to receive FIA homologation.

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