



2013 SINGAPORE GRAND PRIX

From The FIA Formula 1 Technical Delegate

Document 33

To All Teams, All Officials

Date

23 September 2013

Time 00:12

Technical Report

Before the race:

An asymmetric front wing deflection test was carried out on car numbers 01, 04, 05, 08 and 09.

A fuel sample was taken from car numbers 06, 16 and 22 and analysed during the race.

On the grid it was checked that all cars had fitted their tyres when the 3-Minutes board was shown.

After the race:

The following cars were weighed:

<i>Number</i>	<i>Car</i>	<i>Driver</i>
01	Red Bull Racing Renault	Sebastian Vettel
03	Ferrari	Fernando Alonso
04	Ferrari	Felipe Massa
05	McLaren Mercedes	Jenson Button
06	McLaren Mercedes	Sergio Perez Mendoza
07	Lotus Renault	Kimi Räikkönen
09	Mercedes	Nico Rosberg
10	Mercedes	Lewis Hamilton
11	Sauber Ferrari	Nico Hülkenberg
12	Sauber Ferrari	Esteban Gutierrez
15	Force India Mercedes	Adrian Sutil
16	Williams Renault	Pastor Maldonado
17	Williams Renault	Valtteri Bottas
18	Toro Rosso Ferrari	Jean-Eric Vergne
20	Caterham Renault	Charles Pic
21	Caterham Renault	Giedo van der Garde
22	Marussia Cosworth	Jules Bianchi
23	Marussia Cosworth	Max Chilton

The steering wheel of all classified cars has been checked.

Car numbers 06, 07, 11 and 15 were checked for the following:

- 1) Bodywork around the front wheels
- 2) Front wing height and overhang
- 3) Rear wing height and overhang
- 4) Front and rear wing width
- 5) Rear wing configuration
- 6) Rear bodywork area
- 7) Rear winglet height
- 8) Skidblock thickness
- 9) Stepped bottom
- 10) Diffuser height
- 11) Diffuser area
- 12) Overall height
- 13) Overall width

The profile of the prescribed front wing section in Article 3.7.3 of the 2013 Formula One Technical Regulations was checked on car numbers 06, 07, 11 and 15.

It was confirmed for car numbers 06, 07, 11 and 15 that any vertical cross section of bodywork normal to the car centre line and situated in the volumes defined in Article 3.8.4 form one tangent continuous curve on its external surface with a radius no less than 75mm.

The concave radius of sections of the three rear wing elements which are in contact with the external air stream was checked on car numbers 06, 07, 11 and 15.

The front and rear brake air duct dimensions were checked on car numbers 06, 07, 11 and 15.

It was checked that no classified car exceeded 60 km/h when leaving the formation grid prior to the start of the race.

The units locking status was checked on all cars.

The session type has been confirmed for all cars.

Software version checks have been carried out on all cars.

Chassis FIA checksum was checked on all cars taking part in the race.

The start data of car numbers 01, 03, 04, 05, 07 and 09 have been checked.

The maximum throttle target was checked for car numbers 01, 03, 04, 05, 06, 07, 10, 11 and 15.

The driver torque demand map gradients were checked on car numbers 01, 03, 04, 05, 06, 07, 10, 11 and 15.

It was checked that car numbers 01, 03, 04, 05, 07, 09 and 10 did not exceed 18000 rpm during the race.

The fuel pressure of car numbers 01, 03, 04, 05, 07, 09 and 10 during the race was checked.

The logged pressure within the engine cooling system during the race was checked on car numbers 01, 03, 04, 05, 07, 09 and 10.

The tyres used by all drivers during the sessions today have been checked.

A fuel sample was taken from car numbers 01 and 15.

The fuel samples have been checked for density and analysed by gas chromatography.

The results of all the fuel analyses show that the fuels were the same as ones, which had been approved for use by the relevant competitors prior to the Event.

All car weights and the items checked were found to be in conformity with the 2013 FIA Formula One Technical Regulations.

Jo Bauer

The FIA Formula 1 Technical Delegate