



## 2014 UNITED STATES GRAND PRIX

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<b>From</b>	The FIA Formula One Technical Delegate	<b>Document</b>	49
<b>To</b>	The FIA Stewards of the Meeting	<b>Date</b>	02 November 2014
		<b>Time</b>	17:38

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### Before the race:

The following parts have been replaced today after 12:55 and before the start of the race:

#### Red Bull Racing Renault:

Car 03: Driver's drink pump

#### Sauber Ferrari:

Car 21: RHS side pod

#### Toro Rosso Renault:

Car 26: Fuel fill dry-break male coupler

An asymmetric front wing deflection test was carried out on car numbers 06, 14, 99 and 77.

A fuel sample was taken from car numbers 44, 07 and 22 and analysed during the race.

On the grid it was checked that all cars had fitted their tyres when the "3-Minutes" signal was given.

On the grid it was checked that the top ten cars had fitted the tyres which they had used when doing their fastest lap in Q2.

### After the race:

The following cars were weighed:

<b>Number</b>	<b>Car</b>	<b>Driver</b>
01	Red Bull Racing Renault	Sebastian Vettel
03	Red Bull Racing Renault	Daniel Ricciardo
44	Mercedes	Lewis Hamilton
06	Mercedes	Nico Rosberg

14	Ferrari	Fernando Alonso
07	Ferrari	Kimi Räikkönen
08	Lotus Renault	Romain Grosjean
13	Lotus Renault	Pastor Maldonado
22	McLaren Mercedes	Jenson Button
20	McLaren Mercedes	Kevin Magnussen
21	Sauber Ferrari	Esteban Gutierrez
25	Toro Rosso Renault	Jean-Eric Vergne
26	Toro Rosso Renault	Daniil Kvyat
19	Williams Mercedes	Felipe Massa
77	Williams Mercedes	Valtteri Bottas

The steering wheel of all classified cars has been checked.

Car numbers 01, 11 and 25 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 2014 Formula One Technical Regulations was checked on car numbers 01, 11 and 25.

The minimum distance between the adjacent rear wing sections at any longitudinal vertical plane was checked on car numbers 01, 11 and 25.

It was confirmed for car numbers 01, 11 and 25 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 two rear wing elements which are in contact with the external air stream was checked on car numbers 01, 11 and 25.

The front and rear brake air duct dimensions were checked on car numbers 01, 11 and 25.

The inclination of the last 150mm of the exhaust tailpipe was checked on car numbers 01, 11 and 25.

The diameter of the last 150mm of the exhaust tailpipe was checked on car numbers 01, 11 and 25.

The clearance between any bodywork rearward of the last 150mm of the exhaust tailpipe and its axis was checked on car numbers 01, 11 and 25.

It was checked that car numbers 01, 03, 44, 06, 14, 07, 08, 13, 22, 20, 25, 26, 19 and 77 did not exceed 80 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 14 and 19 have been checked.

The ES state of charge on-track limit was checked on car numbers 03 and 44.

The ES use during the pit stops was checked for car numbers 03 and 44.

Lap energy release and recovery limits were checked on car numbers 03 and 44..

The maximum MGU-K torque was checked on car numbers 03 and 44.

The maximum MGU-K speed was checked on car numbers 03 and 44.

The maximum MGU-H speed was checked on car numbers 03 and 44.

It was checked on car numbers 03 and 44 that the MGU-K was not used below 100 km/h at the start.

The ERS lap energy limits were checked on all cars.

It was checked that car numbers 03, 44 and 07 did not exceed 15000 rpm during the race.

The fuel pressure of car numbers 03, 44 and 07 during the race was checked.

The logged pressure within the engine cooling system during the race was checked on car numbers 03, 44 and 07.

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

The fuel flow of all cars was checked.

The fuel temperature of all cars was checked.

The fuel consumption of all cars was checked.

A fuel sample was taken from car numbers 03 and 13.

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.

Further the density change of the fuel samples taken today was within the permitted limits.

All car weights and the items checked were found to be in conformity with the 2014 FIA Formula One Technical Regulations.

**Jo Bauer**

**The FIA Formula One Technical Delegate**