

2018 BRAZILIAN GRAND PRIX

8 - 11 November 2018

From	The FIA Formula One Technical Delegate	Document	39
To	The Stewards	Date	11 November 2018
		Time	18:45

Technical Delegate's Report

Before the race:

The following parts have been replaced today after 14:05 and before the start of the race:

Sauber Ferrari:

Car 09: Diffuser fence

A front floor deflection test was carried on car numbers 44, 07 and 33.

A fuel sample was taken from car numbers 33, 35 and 27 and analysed during the race.

An engine oil sample was taken from car numbers 33 and 18.

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.

On the grid the temperature of the LHS and RHS front and rear tyre was checked on car numbers 03, 33, 08 and 20.

On the grid the minimum tyre starting pressure of the LHS and RHS front and rear tyre was checked on all cars.

After the race:

The following cars were weighed:

Number Car

Driver

44	Mercedes	Lewis Hamilton
77	Mercedes	Valtteri Bottas
05	Ferrari	Sebastian Vettel
07	Ferrari	Kimi Räikkönen
03	RBR TAG Heuer	Daniel Ricciardo
33	RBR TAG Heuer	Max Verstappen
11	Force India Mercedes	Sergio Perez
35	Williams Mercedes	Sergey Sirotkin
55	Renault	Carlos Sainz
28	Toro Rosso Honda	Brendon Hartley
08	Haas Ferrari	Romain Grosjean
20	Haas Ferrari	Kevin Magnussen
02	McLaren Renault	Stoffel Vandoorne
16	Sauber Ferrari	Charles Leclerc

The steering wheel of all classified cars has been checked.

Car numbers 11 and 20 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 in Article 3.3.2 of the 2018 Formula One Technical Regulations prescribed front wing section was checked on car numbers 11 and 20.

The minimum distance between the adjacent rear wing sections at any longitudinal vertical plane was checked on car numbers 11 and 20.

It was confirmed for car numbers 11 and 20 that any vertical cross section of bodywork normal to the car centre line and situated in the volumes defined in Article 3.5.7 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 11 and 20.

The front and rear brake air duct dimensions were checked on car numbers 11 and 20.

It was confirmed for car number 05 that the minimum weight of 733 kg was respected at all times

during the race.

It was checked that no car exceeded 80 km/h when leaving the formation grid prior to the start of the race.

The race start data of all cars have been checked.

The units locking status was checked on all cars.

The session type has been confirmed for all cars.

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

Single clutch paddle use for the race start has been checked on all cars.

The brake temperature warnings were checked on car numbers 44, 05, 03, 11, 35, 55, 10, 08, 20, 14 and 16.

The plenum temperature was checked on all cars.

The oil consumption was checked on car numbers 44, 77, 05, 07, 03, 33, 11, 08 and 16.

It was checked on car numbers 44, 77, 05, 07, 03, 33, 11, 08 and 16 that the MGU-K was not used below 100 km/h at the race start.

It was checked on car numbers 44, 77, 05, 07, 03, 33, 11, 08 and 16 that the ES was not charged while the car was stationary in the pits.

The ES state of charge on-track limits were checked on car numbers 44, 77, 05, 07, 03, 33, 11, 08 and 16 .

The lap energy release and recovery limits were checked on car numbers 44, 77, 05, 07, 03, 33, 11, 08 and 16.

The maximum MGU-K speed was checked on car numbers 44, 77, 05, 07, 03, 33, 11, 08 and 16.

The maximum MGU-K torque was checked on car numbers 44, 77, 05, 07, 03, 33, 11, 08 and 16.

The MGU-K power limits were checked on car numbers 44, 77, 05, 07, 03, 33, 11, 08 and 16.

The maximum MGU-H speed was checked on car numbers 44, 77, 05, 07, 03, 33, 11, 08 and 16.

It was verified on all cars that the MD5 checksum of the PCU8 (dash board display) used on the car matched the configuration lodged with the FiA prior to the qualifying session.

Fuel flow meter calibration checksums were checked on all cars.

The instantaneous fuel flow of all cars was checked.

The total fuel mass consumed by all cars during the race was checked.

The fuel temperature of all cars was checked.

A fuel sample was taken from car number 44.

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.

An engine oil sample was taken from car number 44.

The engine oil samples have been analysed by FTIR spectroscopy and viscometry.

The results of the FTIR analyses show that the sampled oils were consistent with reference engine oil samples 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 2018 FIA Formula One Technical Regulations.

Jo Bauer

The FIA Formula One Technical Delegate