

2019 SINGAPORE GRAND PRIX

19 - 22 September 2019

From	The FIA Formula One Technical Delegate	Document	19
To	The Stewards	Date	21 September 2019
		Time	00:15

Technical Delegate's Report

Before the first free practice session:

An engine oil sample was taken from car number 07.

During the first free practice session:

The tyre starting pressures of all cars during P1 were checked.

The fuel flow meter calibration checksum was checked on all cars.

The instantaneous fuel mass flow of all cars was checked.

The fuel temperature of all cars was checked.

The plenum temperature of car numbers 44, 77, 05, 16, 33, 23, 03, 08, 20, 55, 04, 11, 18, 07, 99, 26, 10, 63 and 88 was checked.

After the first free practice session:

It was checked that all cars did not exceed 15000 rpm during the first free practice session.

The fuel pressure of all cars during the first free practice session was checked.

The logged pressure within the engine cooling system during the first free practice session was checked on all cars.

The IVT code and calibration checksums were checked on all cars.

A fuel sample was taken from car number 08.

Before the second free practice session:

An engine oil sample was taken from car number 27.

During the second free practice session:

The tyre starting pressures of all cars during P2 were checked.

The fuel flow meter calibration checksum was checked on all cars.

The instantaneous fuel mass flow of all cars was checked.

The fuel temperature of all cars was checked.

The plenum temperature of all cars was checked.

After the second free practice session:

Car numbers 03 and 07 were weighed.

Car numbers 03 and 07 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) Stepped bottom
- 9) Overall height
- 10) Overall width

The profile of the in Article 3.3.1 of the 2019 Formula One Technical Regulations prescribed front wing section was checked on car number 07.

The minimum distance between the adjacent rear wing sections at any longitudinal vertical plane was checked on car numbers 03 and 07.

It was confirmed for car numbers 03 and 07 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 03 and 07.

The front and rear brake air duct dimensions were checked on car numbers 03 and 07.

The IVT code and calibration checksums were checked on all cars.

The IVT temperatures were checked on all cars.

The ES state of charge on-track limits were checked on car numbers 44, 16, 33, 03, 27, 08, 55, 04, 11, 99, 26, 10 and 63.

The lap energy release and recovery limits were checked on car 44, 16, 33, 03, 27, 08, 55, 04, 11, 99, 26, 10 and 63.

The MGU-K power limits were checked on car numbers 44, 16, 33, 03, 27, 08, 55, 04, 11, 99, 26, 10 and 63.

The maximum MGU-K speed was checked on car numbers 44, 16, 33, 03, 27, 08, 55, 04, 11, 99, 26, 10 and 63.

The maximum MGU-K torque was checked on car numbers 44, 16, 33, 03, 27, 08, 55, 04, 11, 99, 26, 10 and 63.

The maximum MGU-H speed was checked on car numbers 44, 16, 33, 03, 27, 08, 55, 04, 11, 99, 26, 10 and 63.

The MGU-K power model was checked on car numbers 33, 03 and 04.

The ES power model was checked on car numbers 33, 03 and 04.

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

A fuel sample was taken from car number 04.

The results of 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.

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.

Apart from the fuel temperature of car number 44 during P1 (see Document 10), all the above items were found to be in conformity with the 2019 FIA Formula One Technical Regulations.

Jo Bauer

The FIA Formula One Technical Delegate