2019 AUSTRALIAN GRAND PRIX
14 - 17 March 2019

From	The FIA Formula One Technical Delegate	**Document**	23
To	The Stewards	**Date**	16 March 2019
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Technical Delegate's Report

Before the third free practice session:

An engine oil sample was taken from car number 26.

During the third free practice session:

The tyre starting pressures of all cars during P3 were checked.

The fuel flow meter calibrations of all cars was checked.

The instantaneous fuel flow of all cars was checked.

The fuel temperature of all cars was checked.

The MGU-K power model was checked on car numbers 44, 77 ,05, 16, 33 and 10.

The custom software versions were checked on all cars.

Before the qualifying practice session:

An engine oil sample was taken from car number 44 and 05.

It was confirmed for all cars that the gear ratios used during the remainder of this Event belong to the gear ratios declared to the FIA technical delegate at or before the first Event of the 2019 Championship.

The thickness of the brake discs of all cars taking part in the qualifying session was checked.

During the qualifying practice session:

Fuel samples were taken from car numbers 99 and 63.

After the qualifying practice session:

Car numbers 44, 77, 05, 16, 33, 08, 20, 04, 11 and 07 were weighed.

Car numbers 44, 77, 05, 16, 33, 08, 20, 04, 11 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) Diffuser height
10) Diffuser width
11) Overall height
12) Overall width

The chassis identification transponders have been confirmed for car numbers 44, 77, 05, 16, 08, 20, 04, 11 and 07.

The profile of the prescribed front wing section in Article 3.3.2 of the 2019 Formula One Technical Regulations was checked on car numbers 44, 77, 05, 16, 33, 08, 20, 04, 11 and 07.

The minimum distance between the adjacent rear wing sections at any longitudinal vertical plane was checked on car numbers 44, 77, 05, 16, 33, 08, 20, 04, 11 and 07.

It was confirmed for car numbers 44, 77, 05, 16, 33, 08, 20, 04, 11 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 44, 77, 05, 16, 33, 08, 20, 04, 11 and 07.

The front and rear brake air duct dimensions were checked on car numbers 44, 77, 05, 16, 33, 08, 20, 04, 11 and 07.

The inclination, the diameter and the position of the last 150mm of the exhaust tailpipes were checked on car numbers 44, 77, 05, 33, 08, 20, 04, 11 and 07.

A horizontal rear wing deflection test was carried out on car numbers 44, 05, 08, 04 and 11.

It was confirmed for all drivers taking part in the qualifying session that they have used their sealed power unit.

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 qualifying sessions.

Torque sensor software version checks have been carried out on all cars.

Torque sensor calibration checks have been carried out on all cars.

The torque coordinator demands were checked on car numbers 44, 05, 33, 04 and 07.

The torque control was checked on car numbers 44, 05, 33 and 04.

The rear brakes pressure control was checked on car numbers 44, 05, 33, 04 and 07.

The IVT temperatures were checked on all cars.

The ES state of charge on-track limits were checked on car numbers 44, 77, 05, 16, 33, 08, 20, 04, 11 and 07.

The lap energy release and recovery limits were checked on all cars.

The maximum MGU-K speed was checked on car numbers 44, 77, 05, 16, 33, 08, 20, 04, 11 and 07.

The maximum MGU-K torque was checked on car numbers 44, 77, 05, 16, 33, 08, 20, 04, 11 and 07.

The MGU-K power limits were checked on car numbers 44, 77, 05, 16, 33, 08, 20, 04, 11 and 07.

The MGU-K power model was checked on car numbers 44, 77, 05, 16, 33, 08, 20, 04, 11 and 07.

The maximum MGU-H speed was checked on car numbers 44, 77, 05, 16, 33, 08, 20, 04, 11 and 07.

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

The fuel pressure of all cars during the qualifying session was checked.

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

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

Fuel flow meter calibration checksums were checked on all cars.

The instantaneous fuel flow of all cars was checked.

The fuel temperature of all cars was checked.

The oil consumption of all car numbers 44, 77, 05, 16, 33, 08, 20, 04, 11 and 07 during the qualifying sessions were checked.

Fuel samples were taken from car numbers 05 and 04.

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

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.

The following software versions have been used by the teams during the qualifying sessions:

Team	**FIA Standard ECU system version**
Mercedes	SR1011
Ferrari	SR1011
Red Bull	SR1011
Renault	SR1011
Haas	SR1011
McLaren	SR1011
Racing Point	SR1011
Alfa Romeo	SR1011
Toro Rosso	SR1011
Williams	SR1011

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