

2020 PORTUGUESE GRAND PRIX

22 to 25 October

From	The FIA Formula One Technical Delegate	Document	43
To	The Stewards	Date	24 October 2020
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Technical Delegate's Report

During the third free practice session:

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

The engine high rev limit bands were checked on all cars.

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.

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

The ES state of charge on-track limits were checked on all cars.

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

The MGU-K power limits were checked on all cars.

The maximum MGU-K speed was checked on all cars.

The maximum MGU-K torque was checked on all cars.

The maximum MGU-H speed was checked on all cars.

After the third free practice session:

An engine oil sample was taken from car number 18.

Before the qualifying practice session:

A fuel sample was taken from car numbers 10 and 20.

An engine oil sample was taken from car numbers 03 and 10.

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 2020 Championship.

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

During the qualifying practice session:

Car numbers 77, 05, 33, 55, 03, 31, 26, 10, 11, 18, 20 and 06 were weighed.

The weight distribution was checked on car numbers 77, 05, 33, 55, 03, 31, 26, 10, 11, 18, 20 and 06.

The uppermost rear wing element adjustable positions were checked on car numbers 05, 31, 99 and 08.

It was checked on car numbers 05, 31, 99 and 08 that the reverse gear was in working order.

The tyre starting pressures of all cars during the qualifying sessions were checked.

After the qualifying practice session:

Car numbers 44, 77, 16, 33, 23, 55, 04, 03, 10 and 11 were weighed.

Car numbers 44, 77, 16, 33, 23, 55, 04, 03, 10 and 11 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, 16, 33, 23, 55, 04, 03, 10 and 11.

The profile of the prescribed front wing section in Article 3.3.1 of the 2020 Formula One Technical Regulations was checked on car numbers 44, 77, 16, 33, 23, 55, 04, 03, 10 and 11.

The minimum distance between the adjacent rear wing sections at any longitudinal vertical plane was checked on car numbers 44, 77, 16, 33, 23, 55, 04, 03, 10 and 11.

It was confirmed for car numbers 44, 77, 16, 33, 23, 55, 04, 03, 10 and 11 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, 16, 33, 23, 55, 04, 03, 10 and 11.

The front and rear brake air duct dimensions were checked on car numbers 44, 77, 16, 33, 23, 03, 10 and 11.

The inclination, the diameter and the position of the last 150mm of the exhaust tailpipes were checked on car numbers 44, 77, 16, 33, 23, 55, 04, 03, 10 and 11.

A horizontal rear wing deflection test was carried out on car numbers 77, 16 and 33.

The uppermost rear wing element adjustable positions were checked on car numbers 44, 16, 33, 55, 10 and 11.

It was checked on car numbers 44, 16, 33, 55, 10 and 11 that the reverse gear was in working order.

The engine high rev limit bands were checked on all cars.

The plenum temperature was checked on all cars.

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

The ES state of charge on-track limits were checked on all cars.

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

The MGU-K power limits were checked on all cars.

The maximum MGU-K speed was checked on all cars.

The maximum MGU-K torque was checked on all cars.

The maximum MGU-H speed was checked on all cars.

The MGU-K power model was checked on car numbers 05, 31, 99, 20 and 06.

The ES power model was checked on car numbers 05, 31, 99, 20 and 06.

The session type has been confirmed for 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 all cars.

The torque control was checked on all cars.

The rear brakes pressure control was checked on all cars.

Gear shift data checks have been carried out for car numbers 44, 16 and 33.

The steering wheel of all cars has been checked.

It was verified on all cars that the PCU dash board display configuration was not changed.

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

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

The logged pressure within the engine cooling system during the qualifying session was checked on car numbers 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 mass flow of all cars was checked.

The fuel temperature of all cars was checked.

A fuel sample was taken from car numbers 16, 23 and 11.

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.

An engine oil sample was taken from car number 23.

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-AMG Petronas Formula One Team	SR1209
Scuderia Ferrari	SR1209
Aston Martin Red Bull Racing	SR1209
McLaren F1 Team	SR1209
Renault DP World F1 Team	SR1209
Scuderia AlphaTauri Honda	SR1209
BWT Racing Point F1 Team	SR1209
Alfa Romeo Racing ORLEN	SR1209
Haas F1 Team	SR1209
Williams Racing	SR1209

All the above items were found to be in conformity with the 2020 FIA Formula One Technical Regulations.

Jo Bauer

The FIA Formula One Technical Delegate