2020 HUNGARIAN GRAND PRIX
16 - 19 July 2020

From	The FIA Formula One Technical Delegate	**Document**	51
To	The Stewards	**Date**	19 July 2020
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Technical Delegate's Report

Before the race:

The following parts have been replaced today after 13:05 and before the start of the race:

Red Bull Racing Honda:

Car 33: Front wing/nose assembly
LHS front track rod
LHS pushrod

McLaren Renault:

Car 55: Headrest

Haas Ferrari:

Car 08: Front turning vane

A front floor deflection test was carried on car numbers 05, 33 and 63.

A fuel sample was taken from car numbers 05, 18 and 20 and analysed during the race.

An engine oil sample was taken from car numbers 05 and 18.

On the grid it was checked that all cars had fitted their tyres when the "5-Minutes" signal was given.

After the race:

The following cars were weighed:

Number	***Car***	***Driver***
44	Mercedes	Lewis Hamilton
77	Mercedes	Valtteri Bottas
05	Ferrari	Sebastian Vettel
16	Ferrari	Charles Leclerc
33	Red Bull Racing Honda	Max Verstappen
23	Red Bull Racing Honda	Alexander Albon
55	McLaren Renault	Carlos Sainz
03	Renault	Daniel Ricciardo
26	AlphaTauri Honda	Daniil Kvyat
11	Racing Point Mercedes	Sergio Perez
18	Racing Point Mercedes	Lance Stroll
07	Alfa Romeo Ferrari	Kimi Räikkönen
20	Haas Ferrari	Kevin Magnussen
63	Williams Mercedes	George Russell

The steering wheel of car numbers 44, 77, 05, 16, 33, 23, 55, 04, 03, 31, 26, 10, 11, 18, 07, 99, 20, 63 and 06 has been checked.

Car numbers 23, 03 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 3.3.1 of the 2020 Formula One Technical Regulations prescribed front wing section was checked on car numbers 23, 03 and 20.

The minimum distance between the adjacent rear wing sections at any longitudinal vertical plane was checked on car numbers 23, 03 and 20.

It was confirmed for car numbers 23, 03 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 23, 03 and 20.

The front and rear brake air duct dimensions were checked on car numbers 23, 03 and 20.

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

The oil consumption was checked on car numbers 44, 77, 05, 16, 33, 23, 55, 03, 11, 18 and 20.

The plenum temperature was checked on all cars.

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 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 session type has been confirmed for all cars.

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

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.

The brake temperature warnings were checked on all cars.

The race start data of all cars have been checked.

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

The MGU-K use at the race start was checked on all cars.

It was checked on all cars that the ES was not charged while the car was stationary in the pits.

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

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.

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

The tyres used by all drivers during the race 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.

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

A fuel sample was taken from car number 23.

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 77.

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 2020 FIA Formula One Technical Regulations.

Jo Bauer

The FIA Formula One Technical Delegate