

## 2021 UNITED STATES GRAND PRIX

21 - 24 October 2021

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<b>From</b>	The FIA Formula One Technical Delegate	<b>Document</b>	24
<b>To</b>	The Stewards	<b>Date</b>	22 October 2021
		<b>Time</b>	17:20

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### Technical Delegate's Report

#### **Before the first free practice session:**

The exhaust system components of car number 63 were checked against the declaration submitted by the relevant team before the Event.

#### **During the first free practice session:**

The tyre starting pressures of all cars during P1 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.

#### **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.

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 custom software versions were checked on all cars.

A fuel sample was taken from car number 47.

An engine oil sample was taken from car number 47.

**During the second free practice session:**

The tyre starting pressures of all cars during P2 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.

**After the second free practice session:**

Car number 55 was weighed.

Car number 55 was 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 2021 Formula One Technical Regulations prescribed front wing section was checked on car number 55.

The minimum distance between the adjacent rear wing sections at any longitudinal vertical plane was checked on car number 55.

It was confirmed for car number 55 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 number 55.

The front and rear brake air duct dimensions were checked on car 55.

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

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

The logged pressure within the engine cooling system during the second free practice session was 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 custom software versions were checked on all cars.

The ECU software versions were checked on all cars.

Chassis FIA checksum was checked on all cars.

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

A fuel sample was taken from car number 14.

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 14.

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 the above items were found to be in conformity with the 2021 FIA Formula One Technical Regulations.

**Jo Bauer**

**The FIA Formula One Technical Delegate**