

# 2021 BRAZILIAN GRAND PRIX

## 11 - 14 November 2021

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<b>From</b>	The FIA Formula One Technical Delegate	<b>Document</b>	36
<b>To</b>	The Stewards	<b>Date</b>	13 November 2021
		<b>Time</b>	19:00

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### Technical Delegate's Report

#### 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 oil consumption was checked on all cars.

The plenum temperature of all cars was checked.

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.

Custom software version checks have been carried out on all cars.

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.

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

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

**After the second free practice session:**

A fuel sample was taken from car number 99.

An engine oil sample was taken from car number 99.

**Before the sprint qualifying session:**

A fuel sample was taken from car number 04 and analysed during the race.

An engine oil sample was taken from car number 04.

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

On the grid the temperature of the LHS and RHS front and rear tyre was checked on car numbers 44, 77, 33, 03, 05, 14, 31, 55, 22, 10, 07, 99, 09, 47, 63 and 06.

On the grid the minimum tyre starting pressure of the LHS and RHS front and rear tyre was checked on all cars.

**After the sprint qualifying session:**

All cars were weighed.

The steering wheel of all cars has been checked.

The uppermost rear wing element adjustable positions were checked on car numbers 44 and 33.

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

The oil consumption was checked on car numbers 77, 33, 04, 18, 05, 31, 55, 10, 99, 47 and 06.

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 sprint qualifying.

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 PCU dash board display configuration was not changed in Parc Fermé.

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.

It was checked that all cars did not exceed 15000 rpm during the race.

The fuel pressure of all cars during the race was 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 number 05.

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 05.

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 2021 FIA Formula One Technical Regulations.

**Jo Bauer**

**The FIA Formula One Technical Delegate**