

## 2022 UNITED STATES GRAND PRIX

20 - 23 October 2022

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<b>From</b>	The FIA Formula One Technical Delegate	<b>Document</b>	59
<b>To</b>	The Stewards	<b>Date</b>	23 October 2022
		<b>Time</b>	19:16

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### Technical Delegate's Report

#### Before the race:

The following parts have been replaced today after 11:55 and before the start of the race:

#### Mercedes:

Car 44: Front brake friction material

A front floor deflection test was carried on car numbers 55, 04 and 18.

The inclination, the diameter and the position of the last 150mm of the exhaust tailpipes were checked on car numbers 55, 04 and 18.

The minimum distance between the adjacent rear wing sections at any longitudinal vertical plane was checked on car numbers 55, 04 and 18.

A fuel sample was taken from car numbers 16, 03 and 14 and analysed during the race.

An engine oil sample was taken from car numbers 03 and 14.

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, 01, 16, 55, 18, 06, 77, 24 and 47.

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

## After the race:

The following cars were weighed:

<b>Number</b>	<b>Car</b>	<b>Driver</b>
63	Mercedes	George Russell
44	Mercedes	Lewis Hamilton
01	Red Bull Racing RBPT	Max Verstappen
11	Red Bull Racing RBPT	Sergio Perez
16	Ferrari	Charles Leclerc
03	McLaren Mercedes	Daniel Ricciardo
04	McLaren Mercedes	Lando Norris
14	Alpine Renault	Fernando Alonso
31	Alpine Renault	Esteban Ocon
10	AlphaTauri RBPT	Pierre Gasly
22	AlphaTauri RBPT	Yuki Tsunoda
05	Aston Martin Mercedes	Sebastian Vettel
23	Williams Mercedes	Alexander Albon
06	Williams Mercedes	Nicholas Latifi
24	Alfa Romeo Racing Ferrari	Zhou Guanyu
20	Haas Ferrari	Kevin Magnussen
47	Haas Ferrari	Mick Schumacher

The steering wheel of all classified cars has been checked.

The following aerodynamic component or bodywork areas were checked on car numbers 11, 04, 14 and 20:

- Floor Body - TR Article 3.5.1
- Floor Fences - TR Article 3.5.2
- Floor Edge Wing - TR Article 3.5.3
- Nose - TR Article 3.6.1
- Forward Chassis - TR Article 3.6.2
- Mid Chassis - TR Article 3.6.3
- Sidepod - TR Article 3.7.1
- Engine Cover - TR Article 3.7.3
- Front Wing Endplate body - TR Article 3.9.2
- Front Wing Diveplane - TR Article 3.9.4
- Front Wing Endplate - TR Article 3.9.5
- Rear Wing Profiles - TR Article 3.10.1
- Rear Wing Beam - TR Article 3.10.3
- Rear Wing Endplate Body - TR Article 3.10.4
- Rear Wing Tip - TR Article 3.10.5
- Rear Wing Endplate - TR Article 3.10.7

The floor construction and plank thickness were checked on car number 44.

It was checked that the front brake friction material of car number 44, which got changed on the grid, was of the same specification as the one used during the qualifying sessions.

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

The oil consumption was checked on car numbers 63, 44, 01, 11, 16, 04, 14, 22, 05 and 20.

The plenum temperature was 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 car numbers 63, 44, 01, 11, 16, 04, 14, 22, 05 and 20.

The torque control was checked on car numbers 63, 44, 01, 11, 16, 04, 14, 22, 05 and 20.

The rear brakes pressure control was checked on car numbers 63, 44, 01, 11, 16, 03, 04, 14, 31, 10, 22, 05, 23, 06, 24, 20 and 47.

The brake temperature warnings were checked on all cars.

The race start data of all cars have been checked.

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 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 display configuration was not changed during 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.

The fuel pressure of all cars during the race was checked.

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

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 04.

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 63.

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 2022 FIA Formula One Technical Regulations.

**Jo Bauer**

**The FIA Formula One Technical Delegate**