

2023 UNITED STATES GRAND PRIX

20 - 22 October 2023

From	The FIA Formula One Technical Delegate	Document	19
To	The Stewards	Date	20 October 2023
		Time	18:58

Technical Delegate's Report

Before the first free practice session:

The exhaust system components of all cars were checked against the declaration submitted by the relevant team before the start of the Competition.

The front wing flap adjustable range was checked on car number 81.

The seatbelts of car numbers 11, 55, 44, 31, 04, 77, 14, 27, 03, 23 and 02 were checked

During the first free practice session:

The tyre starting pressures of all cars during P1 were checked.

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:

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 oil consumption 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.

An engine oil sample was taken from car number 27.

Before the Qualifying practice session:

A fuel sample was taken from car numbers 10 and 77.

An engine oil sample was taken from car numbers 10 and 77.

It was confirmed for all cars that the gear ratios used during the remainder of this Competition belong to the gear ratios declared to the FIA technical delegate at or before the first Competition of the 2023 Championship.

During the Qualifying practice session:

Car numbers 01, 11, 16, 55, 44, 31, 10, 24, 14, 27, 22 and 23 were weighed.

The weight distribution was checked on car numbers 01, 11, 16, 55, 44, 31, 10, 24, 14, 27, 22 and 23.

The uppermost rear wing element adjustable positions were checked on car numbers 77, 27, 03 and 23.

The minimum distance between the adjacent rear wing sections at any longitudinal vertical plane was checked on car numbers 77, 27, 03 and 23.

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

After the Qualifying practice session:

Car numbers 01, 11, 16, 55, 63, 44, 31, 10, 81 and 04 were weighed.

The following aerodynamic component or bodywork areas were checked on car numbers 44, 31 and 81:

- 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
- Mirror Housing - TR Article 3.6.4
- Sidepod - TR Article 3.7.1
- Coke Panel - TR Article 3.7.2
- Engine Cover - TR Article 3.7.3
- Front Wing Profiles - TR Article 3.9.1
- Front Wing Endplate body - TR Article 3.9.2
- Front Wing Tip - TR Article 3.9.3
- Front Wing Diveplane - TR Article 3.9.4
- Front Wing Endplate - TR Article 3.9.5
- Rear Wing Profiles - TR Article 3.10.1
- Pylons - TR Article 3.10.2
- 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 uppermost rear wing element adjustable positions were checked on car numbers 01, 11, 16, 55, 63, 44 and 04.

The minimum distance between the adjacent rear wing sections at any longitudinal vertical plane was checked on car numbers 01, 11, 16, 55, 63, 44 and 04.

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

The plenum temperature 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 MGU-K power model was checked on all cars.

The ES power model 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 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.

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.

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

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

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

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

The fuel temperature of all cars was checked.

A fuel sample was taken from car numbers 01 and 44.

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 Competition.

Further the density change of the fuel samples taken today was within the permitted limits.

An engine oil sample was taken from car number 01.

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 Competition.

The following SECU software versions have been used by the teams during the qualifying sessions:

Team	FIA Standard ECU system version
Oracle Red Bull Racing	SR1511
Scuderia Ferrari	SR1510
Mercedes-AMG PETRONAS Formula One Team	SR1511
BWT Alpine F1 Team	SR1511
McLaren Formula 1 Team	SR1511
Alfa Romeo F1 Team Stake	SR1511
Aston Martin Aramco Cognizant Formula One Team	SR1511
MoneyGram Haas F1 Team	SR1510
Scuderia AlphaTauri	SR1511
Williams Racing	SR1511

All the above items were found to be in conformity with the 2023 FIA Formula One Technical Regulations.

Jo Bauer

The FIA Formula One Technical Delegate