

# 2024 QATAR GRAND PRIX

## 29 November - 01 December

<b>From</b>	The FIA Formula One Technical Delegate	<b>Document</b>	48
<b>To</b>	The Stewards	<b>Date</b>	30 November 2024
		<b>Time</b>	23:45

### Technical Delegate's Report

#### Before the Qualifying practice session:

A fuel sample was taken from car numbers 24 and 27.

An engine oil sample was taken from car numbers 24 and 27.

The thickness of the brake discs of car numbers 01, 11, 63, 44, 16, 55, 81, 04, 31, 10, 23, 43, 03, 22, 77, 24, 20 and 27 was checked.

#### During the Qualifying practice session:

Car numbers 01, 11, 44, 55, 81, 18, 31, 10, 23, 30, 22, 77, 24 and 27 were weighed.

The weight distribution was checked on car numbers 01, 11, 44, 55, 81, 18, 31, 10, 23, 30, 22, 77, 24 and 27.

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

#### After the Qualifying practice session:

Car numbers 01, 11, 63, 44, 16, 55, 81, 04, 14 and 20 were weighed.

The following aerodynamic component or bodywork areas were checked on car numbers 01, 63 and 14:

- |                   |                    |
|-------------------|--------------------|
| - 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
- Tail	- TR Article 3.8.1
- 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 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 engine high rev limit bands were 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 partial load fuel mass flow of all cars was checked.

The fuel temperature of all cars was checked.

The plenum temperature was checked on all cars.

The exhaust fluid mass flow of all cars was checked.

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.

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

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 rear brakes pressure control was checked on all cars.

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

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

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

A fuel sample was taken from car numbers 44 and 55.

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 44.

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	SR1609
Mercedes-AMG PETRONAS Formula One Team	SR1606

Scuderia Ferrari	SR1607
McLaren Formula 1 Team	SR1606
Aston Martin Aramco Formula One Team	SR1606
BWT Alpine F1 Team	SR1606
Williams Racing	SR1609
VISA Cash App RB Formula One Team	SR1609
Kick Sauber F1 Team	SR1607
MoneyGram Haas F1 Team	SR1607

All the above items were found to be in conformity with the 2024 FIA Formula One Technical Regulations.

**Jo Bauer**

**The FIA Formula One Technical Delegate**