

# 2024 SAUDI ARABIAN GRAND PRIX

## 07 - 09 March 2024

From	The FIA Formula One Technical Delegate	Document	43
To	The Stewards	Date	09 March 2024
		Time	22:47

### Technical Delegate's Report

#### Before the Race:

Components of all cars were checked and compared with the information supplied by the relevant team ~~Used~~ Inventory Incremental List (UIIL).

A central floor deflection test was carried on car number 63.

A front floor deflection test was carried on car numbers 01, 63 and 14.

A symmetric and asymmetric front wing deflection test was carried out on car numbers 16, 81, 31 and 23.

A front wing flap deflection test was carried out on car numbers 16, 81, 31 and 23.

Clutch paddle linearity checks have been carried out on cars 22 and 20.

A fuel sample was taken from car numbers 01, 44 and 27 and analysed during the race.

An engine oil sample was taken from car numbers 31 and 27.

On the grid it was checked that all cars had fitted their tyres and the tyre heating blankets were disconnected, 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 01, 38, 81, 10, 22 and 77.

On the grid the minimum tyre starting pressure of the LHS and RHS front and rear tyre was checked on car numbers 01, 11, 63, 44, 16, 38, 81, 04, 18, 14, 31, 10, 23, 02, 03, 22, 24, 20 and 27.

#### After the Race:

The following cars were weighed:

<b>Number</b>	<b>Car</b>	<b>Driver</b>
01	Red Bull Racing Honda RBPT	Max Verstappen
11	Red Bull Racing Honda RBPT	Sergio Perez
63	Mercedes	George Russell
44	Mercedes	Lewis Hamilton
16	Ferrari	Charles Leclerc
38	Ferrari	Oliver Bearman
81	McLaren Mercedes	Oscar Piastri
04	McLaren Mercedes	Lando Norris
14	Aston Martin Aramco Mercedes	Fernando Alonso
31	Alpine Renault	Esteban Ocon
23	Williams Mercedes	Alexander Albon
02	Williams Mercedes	Logan Sargeant
03	VISA Cash App RB Honda RBPT	Daniel Ricciardo
22	VISA Cash App RB Honda RBPT	Yuki Tsunoda
77	Kick Sauber Ferrari	Valtteri Bottas
24	Kick Sauber Ferrari	Zhou Guanyu
20	Haas Ferrari	Kevin Magnussen
27	Haas Ferrari	Nico H     Ikenberg

The following aerodynamic component or bodywork areas were checked on car numbers 11, 38 and 27:

- 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 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 race was checked.

The logged pressure within the engine cooling system during the race 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 oil consumption was checked on car numbers 01, 11, 63, 44, 16, 38, 81, 04, 14 and 27.

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 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.

The torque coordinator demands were checked on all cars.

The torque control 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 rear brakes pressure control was checked on all cars.

The brake temperature warnings were checked on all cars.

The steering wheel of all cars has been checked.

The race start data of all cars have been checked.

Single clutch paddle use for the race start has been checked on all cars.

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.

A fuel sample was taken from car number 63.

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 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 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 Competition.

All car weights and the items checked were found to be in conformity with the 2024 FIA Formula One Technical Regulations.

**Jo Bauer**

**The FIA Formula One Technical Delegate**