

2024 UNITED STATES GRAND PRIX

18 - 20 October 2024

From	The FIA Formula One Technical Delegate	Document	72
To	The Stewards	Date	20 October 2024
		Time	18:12

Technical Delegate's Report

Before the Race:

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

Red Bull Racing Honda RBPT:

Car 11: Windscreen

The floor of car number 43 was digitally scanned and the scanned data were compared with the team declared CAD drawings. Further the team declared CAD drawings were also compared with previously submitted versions and checked for conformance with the 2024 Formula One Technical Regulations.

A floor edge deflection test was carried on car number 55.

The front wing gurneys of car numbers 04, 81, 20 and 27 were checked.

The uppermost rear wing element adjustable positions were checked on car numbers 01, 16, 55, 04, 14 and 22.

The minimum distance between the adjacent rear wing sections at any longitudinal vertical plane was checked on car numbers 01, 16, 55, 04, 14 and 22.

A front floor deflection test was carried on car numbers 01, 16 and 04.

Clutch paddle linearity checks have been carried out on car number 01.

A fuel sample was taken from car numbers 63, 55 and 14 and analysed during the race.

An engine oil sample was taken from car numbers 63 and 55.

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 81, 04, 18, 14, 43, 30, 24 and 27.

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:

<i>Number</i>	<i>Car</i>	<i>Driver</i>
01	Red Bull Racing Honda RBPT	Max Verstappen
11	Red Bull Racing Honda RBPT	Sergio Perez
63	Mercedes	George Russell
16	Ferrari	Charles Leclerc
55	Ferrari	Carlos Sainz
81	McLaren Mercedes	Oscar Piastri
04	McLaren Mercedes	Lando Norris
18	Aston Martin Aramco Mercedes	Lance Stroll
14	Aston Martin Aramco Mercedes	Fernando Alonso
31	Alpine Renault	Esteban Ocon
10	Alpine Renault	Pierre Gasly
23	Williams Mercedes	Alexander Albon
43	Williams Mercedes	Franco Colapinto
30	RB Honda RBPT	Liam Lawson
22	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 16, 30 and 27:

- | | |
|----------------|--------------------|
| - Floor Body | - TR Article 3.5.1 |
| - Floor Fences | - TR Article 3.5.2 |

- Floor Edge Wing - TR Article 3.5.3
- Bib - TR Article 3.5.4
- Nose - TR Article 3.6.1
- Forward Chassis - TR Article 3.6.2
- Mid Chassis - TR Article 3.6.3
- Driver Cooling Scoop - TR Article 3.6.5
- 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 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 all cars.

The exhaust fluid mass flow 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.

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.

Cold tyre pressure checks were carried out on car number 81.

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 01.

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 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.

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