

## 2018 CHINESE GRAND PRIX

12 - 15 April 2018

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<b>From</b>	The FIA Formula One Technical Delegate	<b>Document</b>	23
<b>To</b>	The Stewards	<b>Date</b>	14 April 2018
		<b>Time</b>	19:03

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### Technical Delegate's Report

#### **Before the third free practice session:**

An engine oil sample was taken from car number 08.

#### **During the third free practice session:**

The tyre starting pressures of all cars during P3 were checked.

The instantaneous fuel flow of all cars was checked.

#### **Before the qualifying practice session:**

An engine oil sample was taken from car numbers 31 and 16.

It was confirmed for all cars that the gear ratios used during the remainder of this Event belong to the gear ratios declared to the FIA technical delegate at or before the first Event of the 2018 Championship.

The thickness of the brake discs of all cars taking part in the qualifying session was checked.

#### **During the qualifying practice session:**

Car numbers 44, 07, 31, 18, 27 and 14 were weighed.

The weight distribution was checked on car numbers 44, 07, 31, 18, 27 and 14.

Car numbers 31 and 18 were checked for the following:

- 1) Bodywork around the front wheels
- 2) Front wing height and overhang
- 3) Rear wing height and overhang
- 4) Front and rear wing width
- 5) Rear wing configuration
- 6) Rear bodywork area
- 7) Rear winglet height
- 8) Stepped bottom
- 9) Diffuser height
- 10) Diffuser width
- 11) Overall height
- 12) Overall width

The profile of the prescribed front wing section in Article 3.3.2 of the 2018 Formula One Technical Regulations was checked on car numbers 31 and 18.

The minimum distance between the adjacent rear wing sections at any longitudinal vertical plane was checked on car numbers 31 and 18.

It was confirmed for car numbers 31 and 18 that any vertical cross section of bodywork normal to the car centre line and situated in the volumes defined in Article 3.5.7 form one tangent continuous curve on its external surface with a radius no less than 75mm.

The concave radius of sections of the two rear wing elements which are in contact with the external air stream was checked on car numbers 31 and 18.

The front and rear brake air duct dimensions were checked on car numbers 31 and 18.

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

Fuel samples were taken from car numbers 35 and 02.

#### **After the qualifying practice session:**

Car numbers 44, 77, 05, 07, 03, 33, 11, 27, 55 and 08 were weighed.

Car numbers 44, 77, 05, 07, 03, 33, 11, 27, 55 and 08 were checked for the following:

- 1) Bodywork around the front wheels
- 2) Front wing height and overhang
- 3) Rear wing height and overhang
- 4) Front and rear wing width
- 5) Rear wing configuration

- 6) Rear bodywork area
- 7) Rear winglet height
- 8) Stepped bottom
- 9) Diffuser height
- 10) Diffuser width
- 11) Overall height
- 12) Overall width

The chassis identification transponders have been confirmed for car numbers 44, 77, 05, 07, 03, 33, 11, 27, 55 and 08.

The profile of the prescribed front wing section in Article 3.3.2 of the 2018 Formula One Technical Regulations was checked on car numbers 44, 77, 05, 07, 03, 33, 11, 27, 55 and 08.

The minimum distance between the adjacent rear wing sections at any longitudinal vertical plane was checked on car numbers 44, 77, 05, 07, 03, 33, 11, 27, 55 and 08.

It was confirmed for car numbers 44, 77, 05, 07, 03, 33, 11, 27, 55 and 08 that any vertical cross section of bodywork normal to the car centre line and situated in the volumes defined in Article 3.5.7 form one tangent continuous curve on its external surface with a radius no less than 75mm.

The concave radius of sections of the two rear wing elements which are in contact with the external air stream was checked on car numbers 44, 77, 05, 07, 03, 33, 11, 27, 55 and 08.

The front and rear brake air duct dimensions were checked on car numbers 44, 77, 05, 07, 03, 33, 11, 27, 55 and 08.

The inclination, the diameter and the position of the last 150mm of the exhaust tailpipes were checked on car numbers 44, 77, 05, 07, 03, 33, 11, 27, 55 and 08.

A horizontal rear wing deflection test was carried out on car numbers 77, 05 and 03.

The uppermost rear wing element adjustable positions were checked on car numbers 77, 05 and 03.

The front axle ride height change with steer was checked on car numbers 27, 11 and 08.

The flexibility of bodywork lying on the step plane and visible from above was checked on car numbers 44, 77, 05, 07, 03, 33, 11, 27 and 08.

The units locking status was checked on all cars.

The session type has been confirmed for all cars.

Software version checks have been carried out on all cars.

Torque sensor software version checks have been carried out on all cars.

Torque sensor calibration checks have been carried out on all cars.

Chassis FIA checksum was checked on all cars taking part in the qualifying sessions.

Gear shift data checks have been carried out for car numbers 05, 07, 27 and 55.

The plenum temperature was checked on all cars.

The oil consumption was checked on car numbers 77, 05, 33, 11, 55 and 08.

The torque coordinator demands were checked on car numbers 44, 05, 03, 31, 55, 10, 08 and 14.

The torque control was checked on car numbers 44, 05, 03, 31, 55, 10, 08 and 14.

The rear brakes pressure control was checked on car numbers 44, 05, 03, 31, 55, 10, 08 and 14.

The ES state of charge on-track limits were checked on car numbers 44, 77, 05, 07, 03, 33, 31, 18, 35, 27, 55, 28, 10, 08, 20, 14, 02, 09 and 16.

The lap energy release and recovery limits were checked on car numbers 44, 77, 05, 07, 03, 33, 31, 18, 35, 27, 55, 28, 10, 08, 20, 14, 02, 09 and 16.

The MGU-K power limits were checked on car numbers 44, 77, 05, 07, 03, 33, 31, 18, 35, 27, 55, 28, 10, 08, 20, 14, 02, 09 and 16.

The maximum MGU-K torque was checked on car numbers 44, 77, 05, 07, 03, 33, 31, 18, 35, 27, 55, 28, 10, 08, 20, 14, 02, 09 and 16.

The maximum MGU-K speed was checked on car numbers 44, 77, 05, 07, 03, 33, 31, 18, 35, 27, 55, 28, 10, 08, 20, 14, 02, 09 and 16.

The maximum MGU-H speed was checked on car numbers 44, 77, 05, 07, 03, 33, 31, 18, 35, 27, 55, 28, 10, 08, 20, 14, 02, 09 and 16.

The ERS lap energy limits were checked on car numbers 44, 77, 05, 07, 03, 33, 31, 18, 35, 27, 55, 28, 10, 08, 20, 14, 02, 09 and 16.

It was checked that all cars did not exceed 15000 rpm during the qualifying practice session.

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.

The fuel temperature of all cars was checked.

The instantaneous fuel flow of all cars was checked.

Fuel flow meter calibration checksums were checked on all cars.

Fuel samples were taken from car numbers 07, 55 and 08.

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 Event.

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

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.

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

<b>Team</b>	<b>FIA Standard ECU system version</b>
Mercedes	SR1007
Ferrari	SR1009 + 3A07
Red Bull	SR1009 + 3A07
Force India	SR1007
Williams	SR1007
Renault	SR1009 + 3A07
Toro Rosso	SR1004
Haas	SR1009 + 3A07
McLaren	SR1007
Sauber	SR1009 + 3A07

All the above items were found to be in conformity with the 2018 FIA Formula One Technical Regulations.

**Jo Bauer**

**The FIA Formula One Technical Delegate**