

# New plans for 2019 Formula 1 season

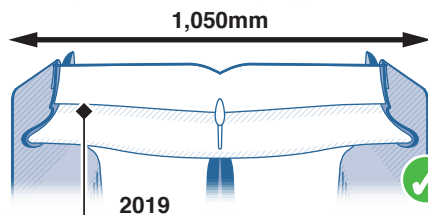
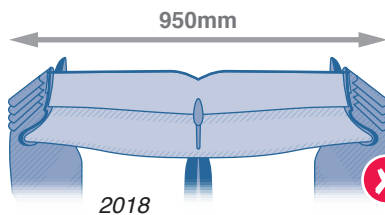
Rule changes for 2019, laying the groundwork for wholesale changes due in 2021, make the cars look noticeably different – with aerodynamic alterations intended to improve overtaking opportunities

## ► New rear wing

Higher, wider, simpler wing to promote closer racing

Height increase: **20mm**  
Width increase: **100mm**

*Larger wing creates bigger hole in air – benefits cars trying to slipstream behind*



## ► Rear wing endplate lights

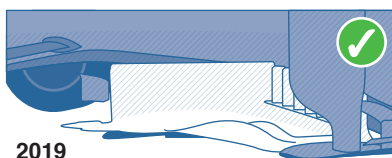
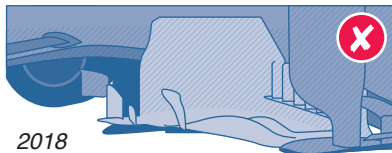
Additional LED on either side of traditional rear central light, to increase visibility of cars in poor weather. Must be illuminated when driver using intermediate or wet tyres

## ► New barge boards

Repositioned, smaller, less powerful and less aerodynamically disruptive

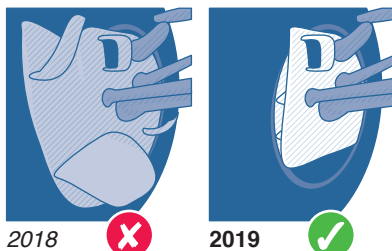
Height reduction: **150mm**  
Moved forward: **100mm**

*Improves airflow from front wing and reduces turbulent airflow from rear of car*



## ► New brake ducts

Simplified design reduces complex aerodynamic features – less downforce from disturbed air means less choppy wake for cars close behind

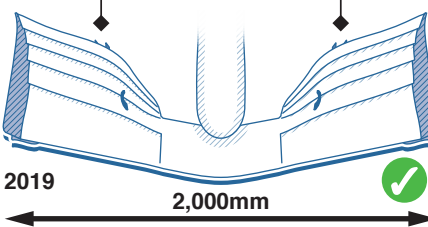
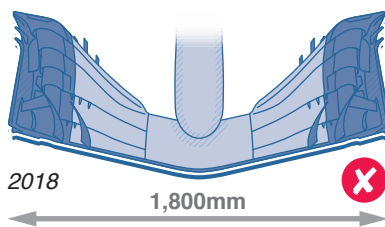


## ► New front wing

As rear wing – higher, wider, simpler structure

Width increase: **200mm**  
Height increase: **20mm**  
Moved forward: **25mm**

*Complex endplates that outwash airflow around front tyres, banned. Simpler design means almost full width of wing is given to generating downforce*



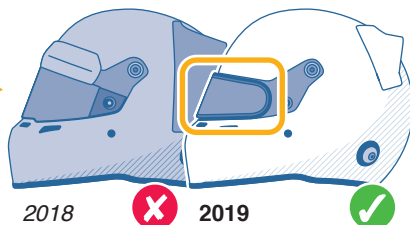
DRS opening increased by **20mm**  
*Boosts potential power by 25%*

## ► Stronger helmet

Vital safety benefits include advanced ballistic protection and increased energy absorption

Front visor lowered: **10mm**  
*To reduce risk of injury from impact debris*

**Shell:** Advanced composite materials ensure improved resistance to crushing and penetration



## ADDITIONAL CHANGES

**Biometric gloves:** Sensors monitor driver's pulse rate and blood oxygen levels in event of crash

**Increased fuel allowance:** Up from 105kg to **110kg** – allows engine to run at full power at all times

**Weight:** Driver's weight considered separately to car. Minimum car weight (without fuel) up from 733kg to **740kg**. At least **80kg** of that must be made up of driver, seat and driving equipment

**Tyre colours:** Range of nine tyre colours used in 2018 are gone (fans found it hard to follow). Pirelli have cut it back to just three:

- **Red:** Soft
- **Yellow:** Medium
- **White:** Hard

Multiple under-wing strakes limited to two each side