

# **Pre-Event Automobile Display – Belgian Grand Prix**

### ORACLE RED BULL RACING

|   | Updated<br>component | Primary reason for<br>update        | Geometric differences compared to previous version        | Brief description on how the update works   |
|---|----------------------|-------------------------------------|---|---|
| 1 | Coke/Engine<br>Cover | Circuit specific -<br>Cooling Range | Reduced cooling exit area ahead of the rear top wishbones | A minor revision to change the cooling exits on each<br>side ahead of the upper rear wishbones. The geometric<br>consequences suit the cooling requirements in<br>relatively cool ambient conditions typically encountered<br>at the Belgian circuit. |













# Scuderia Ferrari

|   | Updated<br>component | Primary<br>reason for<br>update | Geometric differences compared to previous version | Brief description on how the update works  |
|---|----------------------|---------------------------------|--|--|
| 1 | Rear Wing            | Performance -<br>Drag reduction | Lower Downforce Top and Lower Rear Wing designs    | Specific to lower downforce tracks, this update features<br>depowered Top and Lower Rear Wing profiles in order<br>to adapt to Spa-Francorchamps layout peculiarities and<br>efficiency requirements |













## Mercedes-AMG Petronas F1 Team

|   | Updated<br>component | Primary<br>reason for<br>update       | Geometric differences<br>compared to previous<br>version | Brief description on how the update works  |
|---|----------------------|---------------------------------------|--|--|
| 1 | Sidepod Inlet        | Reliability                           | Taller sidepod inlet                                     | Taller inlet improves flow quality to sidepod radiators,<br>improving engine cooling and allowing less louvres for a given<br>cooling level. |
| 2 | Coke/Engine Cover    | Performance -<br>Flow<br>Conditioning | Sideview coke tube camber increased                      | Increased coke side view camber improves onset flow to the rear of the car, notably the rear wing which gains downforce and drag.            |
| 3 | Floor Body           | Performance -<br>Local Load           | Small changes to floor underside volume distribution     | Volume distribution adjusted to extract more local load from forward floor vortex system, which in turn improves flow to the diffuser.       |
| 4 | Rear Wing            | Performance -<br>Drag reduction       | Small chord upper rear wing                              | Reduced camber and reduced chord upper rear wing with less<br>downforce and drag than standard - suited to low drag track<br>such as Spa.    |













# **BWT Alpine F1 Team**

|   | Updated<br>component | Primary<br>reason for<br>update  | Geometric differences compared to previous version                             | Brief description on how the update<br>works   |
|---|----------------------|----------------------------------|--|--|
| 1 | Front Wing           | Circuit specific -<br>Drag Range | Larger scale cut out on the front wing flap                                    | Reduced aerodynamic load front wing flap to suit<br>the lower downforce level of Circuit Spa-<br>Francorchamps |
| 2 | Floor Body           | Performance -<br>Local Load      | Revised forward fences, canoe ramps and smoother diffuser wall cut out profile | Gains downforce through the accumulation of several small local gains resulting from the revised geometries    |







#### McLaren F1 Team

|   | Updated<br>component  | Primary reason for<br>update     | Geometric differences compared to previous version | Brief description on how the update works  |
|---|-----------------------|----------------------------------|--|--|
| 1 | Beam Wing             | Circuit specific -<br>Drag Range | Offloaded Biplane Beamwing                         | A new offloaded Beamwing geometry, which efficiently<br>trades load from Beamwing to Rear Wing Main Plane<br>and thus reduces aerodynamic Drag and Load.                       |
| 2 | Rear Wing<br>Endplate | Circuit specific -<br>Drag Range | Rear Wing Endplate Infill                          | A modified Rear wing endplate featuring a different<br>sideview shape, which reduces Rear Wing Mainplane<br>loading and thus efficiently reduces aerodynamic Drag<br>and Load. |
| 3 | Rear Wing             | Circuit specific -<br>Drag Range | Rear Wing Flap Trims                               | Two different Trims to the Trailing edge of the Rear<br>Wing Flap Element, which result in a reduction of<br>aerodynamic Drag and Load.  |













# Alfa Romeo

|   | Updated<br>component | Primary<br>reason for<br>update     | Geometric differences compared to previous version          | Brief description on how the update<br>works  |
|---|----------------------|-------------------------------------|---|---|
| 1 | Front Wing           | Circuit specific -<br>Balance Range | Reprofiled front wing flaps.                                | The updated front wing flaps (available in two trim<br>options) are designed to balance the rear wings<br>listed below to answer the characteristics of the<br>Spa circuit.                                       |
| 2 | Rear Wing            | Circuit specific -<br>Drag Range    | Reduced profile rear wing                                   | A low-drag rear wing, featuring both main plane<br>and endplates, that allows the team to minimise<br>drag around the Spa circuit   |
| 3 | Beam Wing            | Circuit specific -<br>Drag Range    | Profile of the beam wing (version with and version without) | As part of the updated, circuit-specific rear wing,<br>the beam wing is available in two versions - with<br>and without an upper element. This is to prepare<br>for the specific requirements of the Spa circuit. |











#### Aston Martin Aramco Cognizant Formula One Team

|   | Updated<br>component | Primary<br>reason for<br>update  | Geometric differences compared to previous version                      | Brief description on how the update<br>works   |
|---|----------------------|----------------------------------|---|--|
| 1 | Floor Edge           | Performance -<br>Local Load      | Floor edge updated to subtly revise the geometry, conceptually similar. | Small changes to the features generated from the floor edge to improve their interaction and hence local load on the lower surface of the floor. |
| 2 | Rear Wing            | Circuit specific -<br>Drag Range | New rear wing flap with reduced chord on the low drag rear wing.        | Reduced wing loading and hence drag to suit the characteristics of the circuit, may be used but defined by the chosen setup.                     |
| 3 | Beam Wing            | Circuit specific -<br>Drag Range | Single element beam wing.   | Reduced wing loading and hence drag to suit the<br>characteristics of the circuit, may be used but<br>defined by the chosen setup.               |













# MoneyGram Haas F1 Team

No updates submitted for this event.



#### SCUDERIA ALPHATAURI

|   | Updated<br>component | Primary<br>reason for<br>update | Geometric differences compared to<br>previous version   | Brief description on how the update works  |
|---|----------------------|---------------------------------|---|--|
| 1 | Rear Wing            | Performance<br>- Local Load     | Compared to the previous assembly at this<br>drag level, the rear wing tips have been<br>modified to increase the size of the cut-outs. | The increased size of the cut-outs gives an efficient increase in local load of the upper wing assembly by increasing the tip loading. |





the state of the s









### Williams

|   | Updated<br>component | Primary reason<br>for update        | Geometric differences compared to previous version  | Brief description on how the update works  |
|---|----------------------|-------------------------------------|---|--|
| 1 | Rear Corner          | Circuit specific -<br>Drag Range    | New, shorted winglets on the rear brake ducts   | These work with the rear wing assembly to efficiently change the downforce/drag range of the car for the Belgian Grand Prix. |
| 2 | Front Wing           | Circuit specific -<br>Balance Range | Optional trim to the rearward most element of the front wing to give a shorter chord length | This reduces the front wing loading to suit the lower drag rear wing setup at the Belgian Grand Prix circuit.                |



