



FIA FORMULA 1 WORLD CHAMPIONSHIP



2024 MIAMI GRAND PRIX

03 - 05 May 2024

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To	All Teams, All Officials	Date	03 May 2024
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Title Car Presentation Submissions

Description Car Presentation Submissions

Enclosed 2024 Miami Grand Prix - Car Presentation Submissions.pdf

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The FIA Formula One Media Delegate



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Car Presentation – Miami Grand Prix ORACLE RED BULL RACING

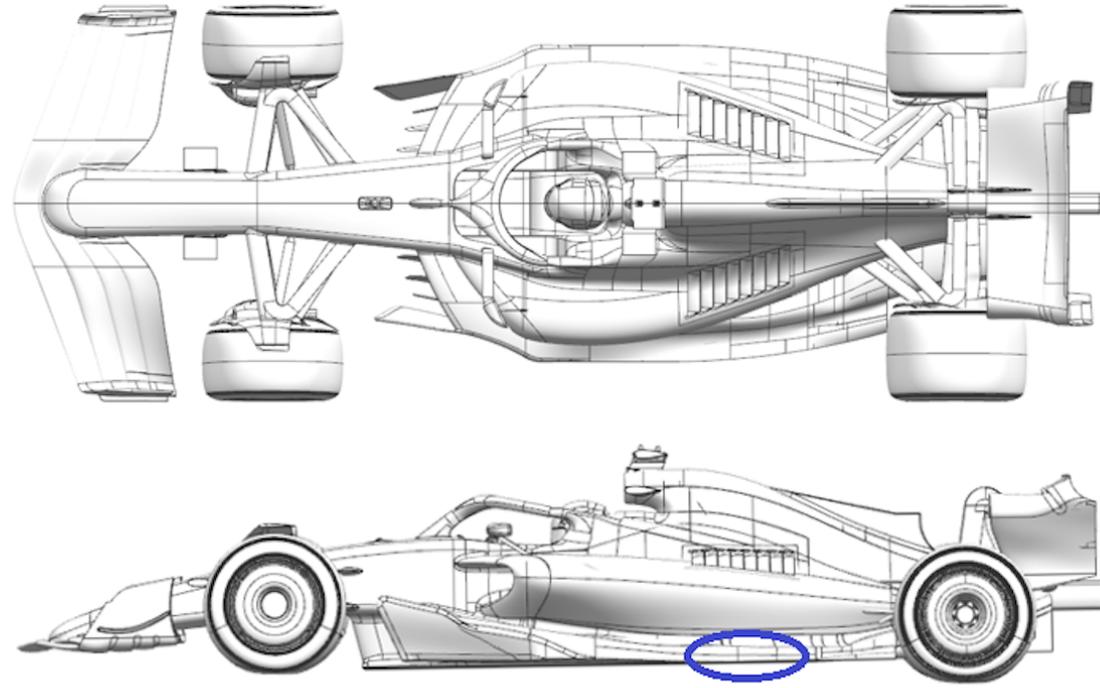
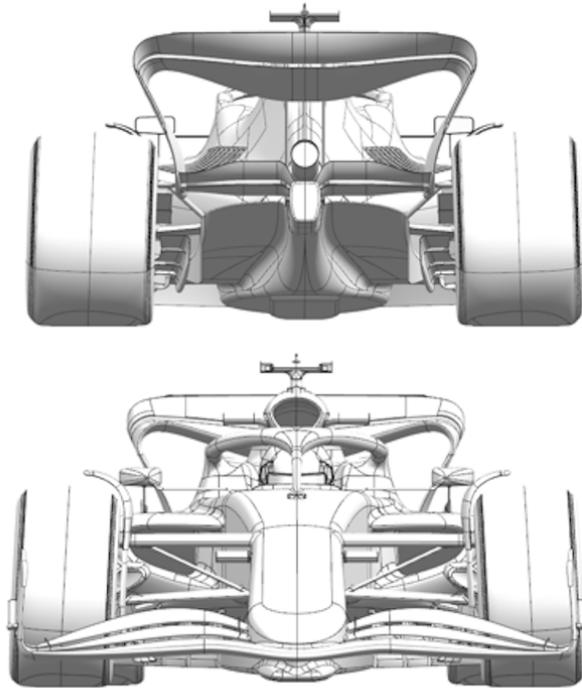
	Updated component	Primary reason for update	Geometric differences compared to previous version	Brief description on how the update works
1	Floor Edge	Reliability	A support for the FEW has been removed in order to save weight.	Not pursued for aerodynamic reasons, but in order to save weight given adequate stiffness, one for the edge wing supports has been removed.



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Red Bull Racing



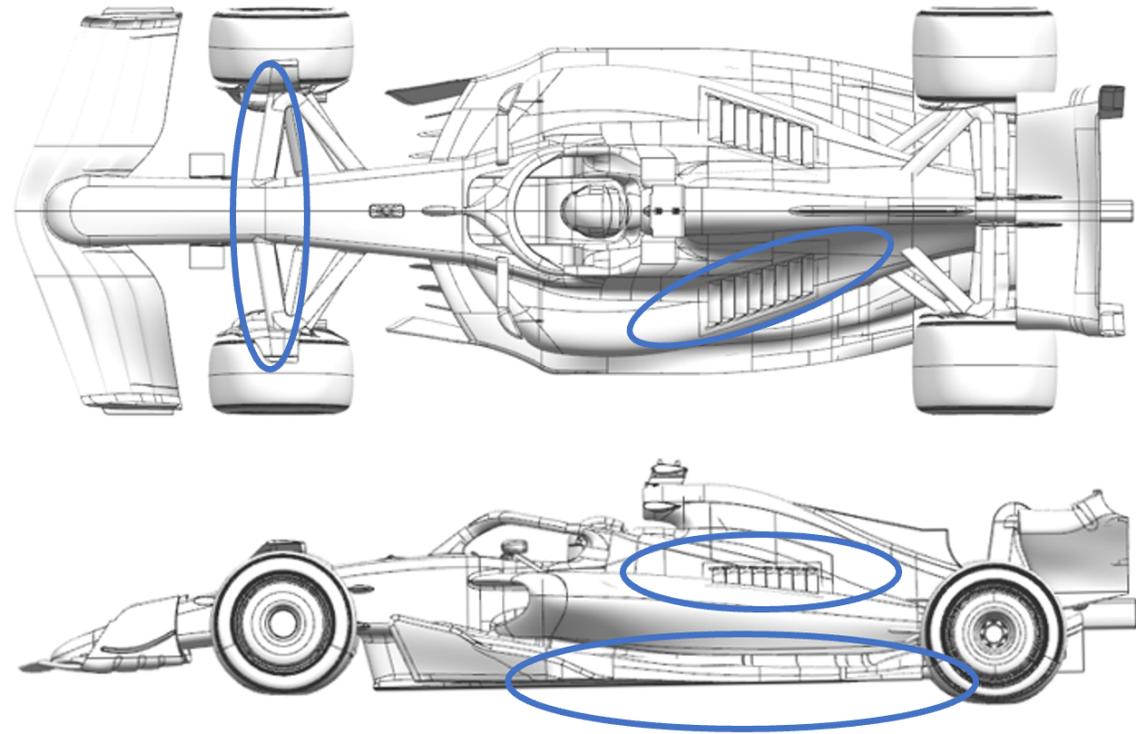
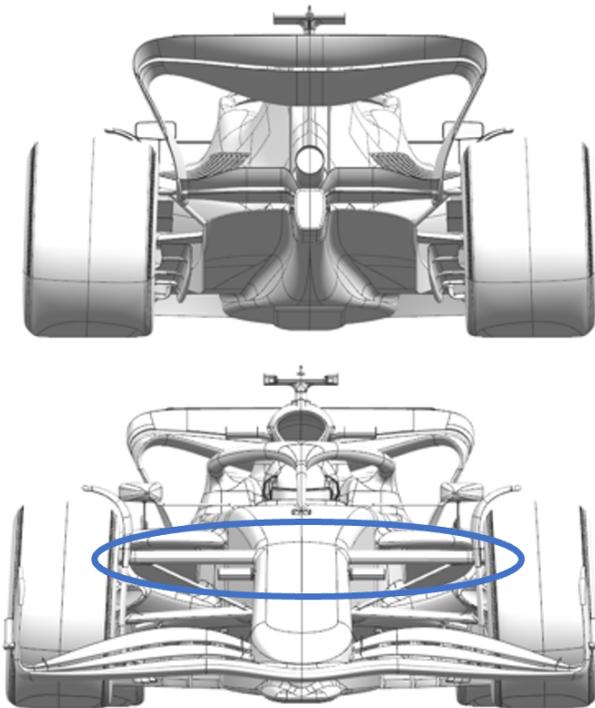


MERCEDES-AMG PETRONAS F1 TEAM

	Updated component	Primary reason for update	Geometric differences compared to previous version	Brief description on how the update works
1	Floor Body	Performance - Local Load	Changes to floor roof volume and floor edge detail (more vanes added to the floor edge wing).	Floor roof changes increase local floor load and also improve flow to the rear of the car and diffuser. Floor edge changes drop the pressure locally, in turn increasing fwd floor load.
2	Cooling Louvres	Circuit specific - Cooling Range	More cooling louvres added to engine cover panel.	More louvres to increase exit area and allow more mass flow through the sidepods, increasing the cooling range for Miami.
3	Front Wing	Circuit specific - Balance Range	Reduce chord front wing flap.	Reducing the flap chord reduces front wing load, allowing us to run and balance and a smaller (low drag) rear wing.
4	Front Suspension	Performance - Flow Conditioning	Small tweak to track rod angle of attack.	Realignment of the track rod faring to the local flow, reducing the local pressure peak and improve flow to the rear of the car.



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SCUDERIA FERRARI

No updates submitted for this event.



MCLAREN FORMULA 1 TEAM

	Updated component	Primary reason for update	Geometric differences compared to previous version	Brief description on how the update works
1	Front Wing	Performance - Flow Conditioning	New, completely revised Front Wing.	The completely revised Front Wing Geometry results in a significant improvement of flow control which in conjunction with the updated Front Corner and Front Suspension, results in an overall load gain.
2	Front Suspension	Performance - Flow Conditioning	New Front Suspension Geometry	The new front suspension has been designed to suit the new front wing and to support and enhance the improvement in flow condition.
3	Front Corner	Performance - Flow Conditioning	Revised Front Brake Duct and Winglet	The new front brake duct has been designed to suit the new front wing and to support and enhance the improvement in flow condition.
4	Floor Body	Performance - Local Load	Completely revised Floor	The revised floor has been designed in conjunction with the new Sidepod Inlet and Bodywork to increase overall load in all conditions.
5	Sidepod Inlet	Performance - Flow Conditioning	Revised Sidepod Inlet	The revised Sidepod Inlet has been designed to complement the change in onset flow and in conjunction with the bodywork results in an improved flow to the rear of the car.
6	Coke/Engine Cover	Performance - Flow Conditioning	New Bodywork and Engine Cover	The new Bodywork and Engine Cover results in an improvement in efficiency and flow conditioning in conjunction with the Sidepod Inlet.
7	Cooling Louvres	Performance - Flow Conditioning	Updated Louvre Range	With the revised Bodywork Shape, the cooling louvre range has been updated, to suit the change in overall flow field.



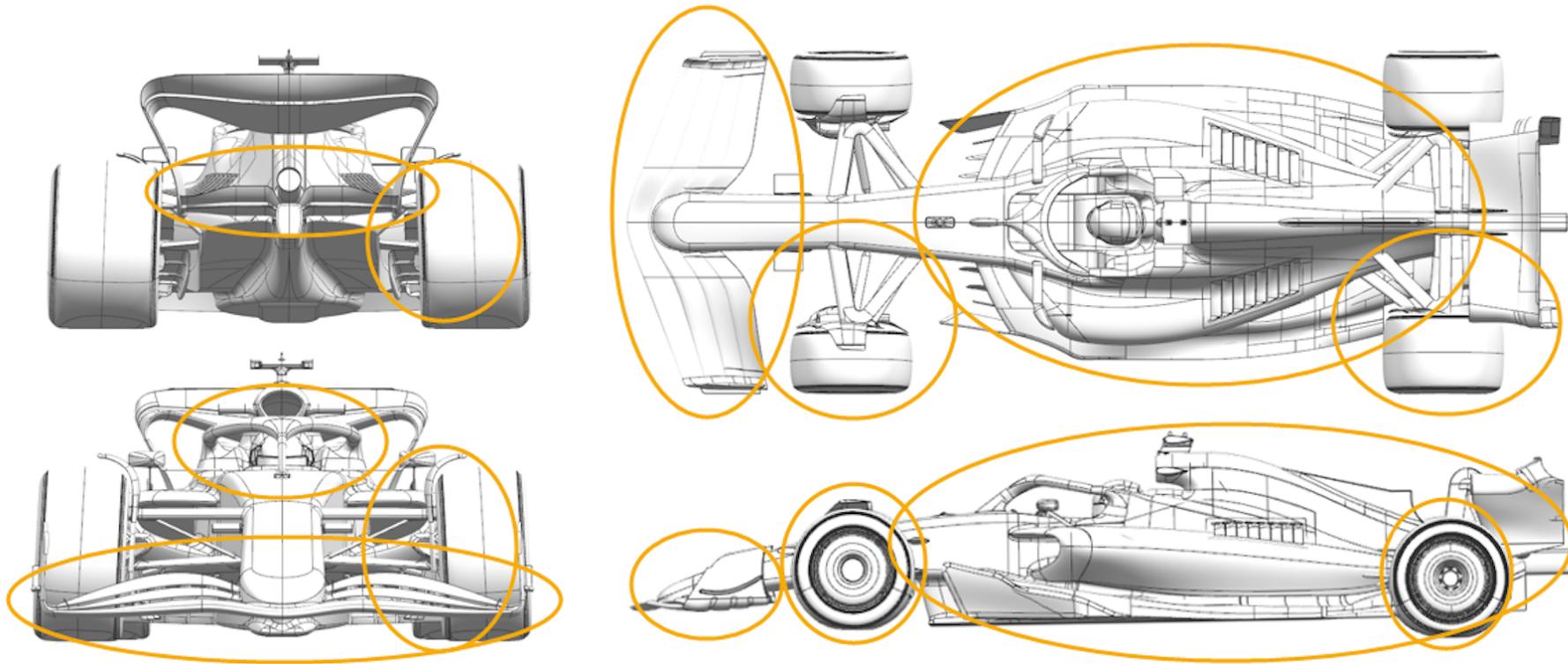
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8	Rear Suspension	Performance - Flow Conditioning	Updated Rear Suspension	The Rear Suspension has been updated to suit the change in onset flow condition and to improve load generation through the new Rear Brake Duct Geometry.
9	Rear Corner	Performance - Local Load	Revised Rear Brake Duct and Winglets	The new Rear Brake Duct geometry benefits from an improvement in onset flow and results in an overall gain in load.
10	Beam Wing	Circuit specific - Drag Range	Offloaded Beamwing	A new, offloaded Beamwing has been designed, which trades loading between Beamwing and Rear Wing efficiently, suitable to the track characteristics.



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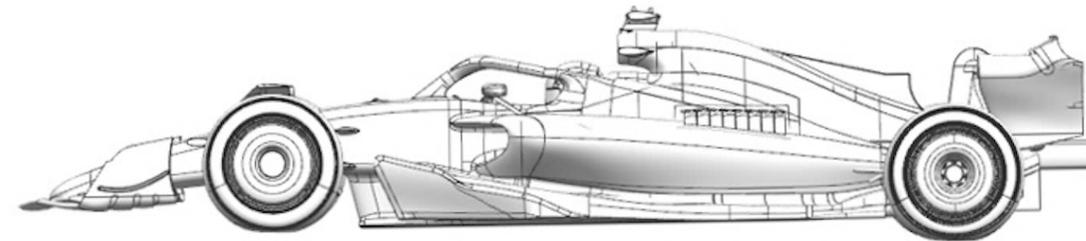
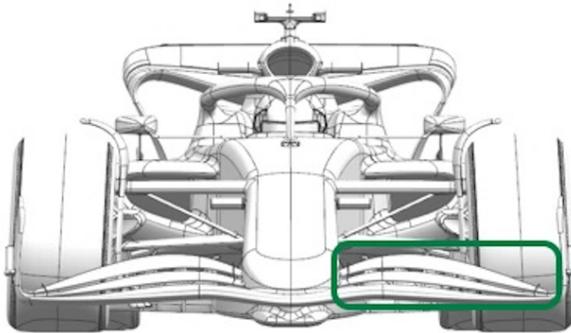
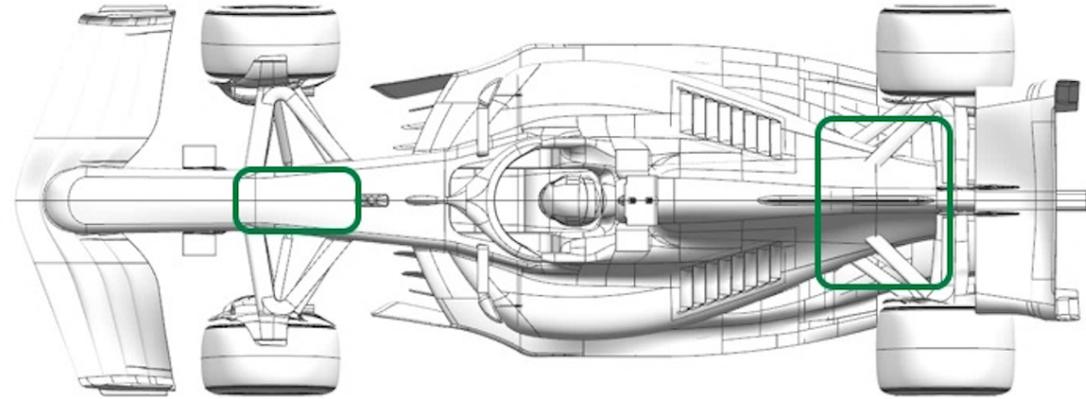
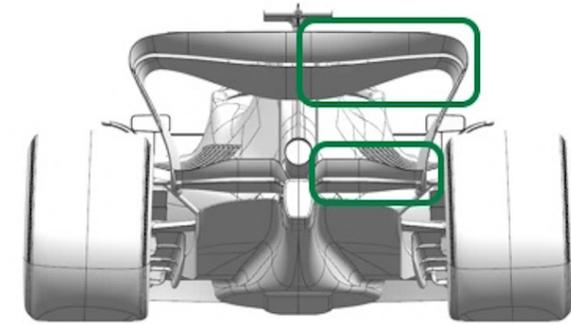


ASTON MARTIN ARAMCO FORMULA ONE TEAM

	Updated component	Primary reason for update	Geometric differences compared to previous version	Brief description on how the update works
1	Front Wing	Circuit specific - Balance Range	Front wing flap with less aggressive profiles.	This flap is lower loaded to reduce the amount of front downforce in proportion to the lower level rear wings typically run at this track.
2	Coke/Engine Cover	Circuit specific - Cooling Range	Engine cover with larger exit area at the rear of the bodywork.	The larger exit area increases the massflow inside the bodywork and hence through the coolers to allow operation in higher ambient conditions. Setup option so will depend on conditions.
3	Rear Wing	Circuit specific - Drag Range	Rear wing with reduced front view area and less aggressive profiles.	This rear wing is part of the rear wing assy that positions the car in the drag range required for optimum performance at this circuit.
4	Beam Wing	Circuit specific - Drag Range	Single element beam wing.	This beam wing is part of the rear wing assy that positions the car in the drag range required for optimum performance at this circuit.
5	Chassis Scoop	Driver Cooling	Adding a driver cooling inlet to the top of the legbox, this is larger than the one evaluated in winter testing.	Captures external air and feed this through the chassis into the internal legbox to provide a cooling airflow over the driver.



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BWT ALPINE F1 TEAM

No updates submitted for this event.



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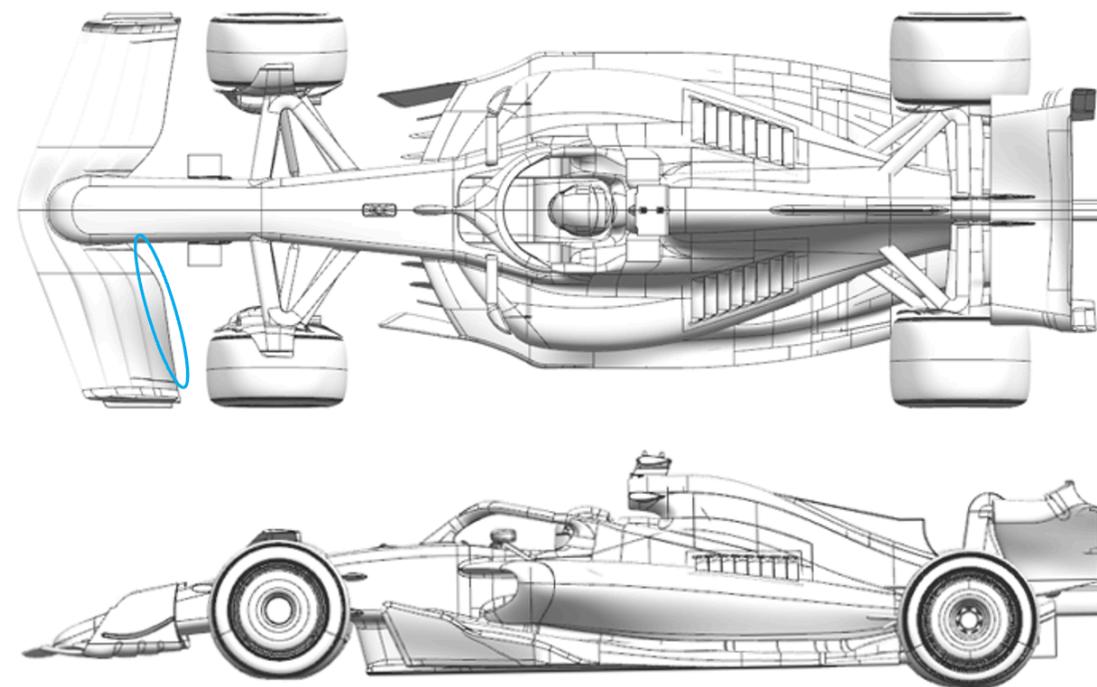
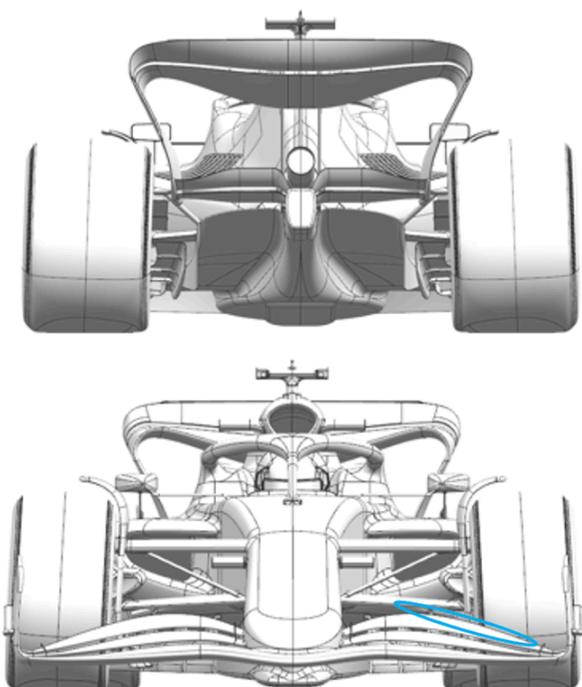


WILLIAMS RACING

	Updated component	Primary reason for update	Geometric differences compared to previous version	Brief description on how the update works
1	Front Wing	Performance - Local Load	There is a new option to trim the trailing edge of the rearward element of the front wing cascade. This simply makes the chord shorter. There is a further option to modify the upper surface of the same trailing edge region by fitting a small packer.	These geometry options both reduce the local load produced by the front wing and are optional items to tune the aerobalance of the car. They can be used independently or together, depending on the load reduction required to balance the car.



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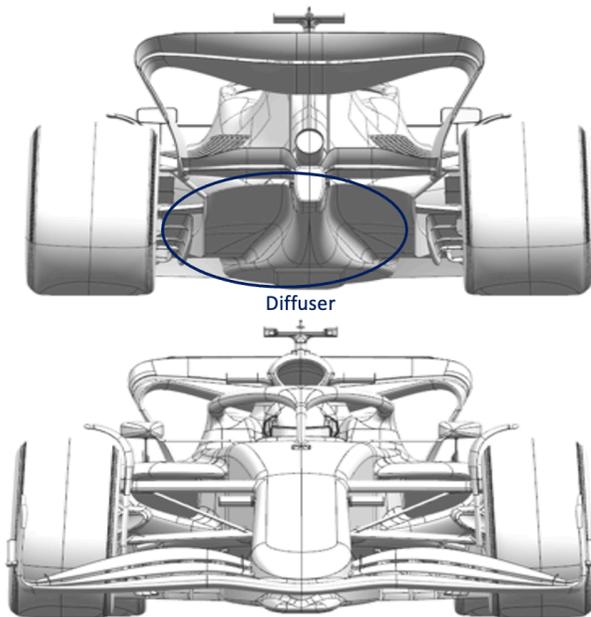


VISA CASH APP RB FORMULA ONE TEAM

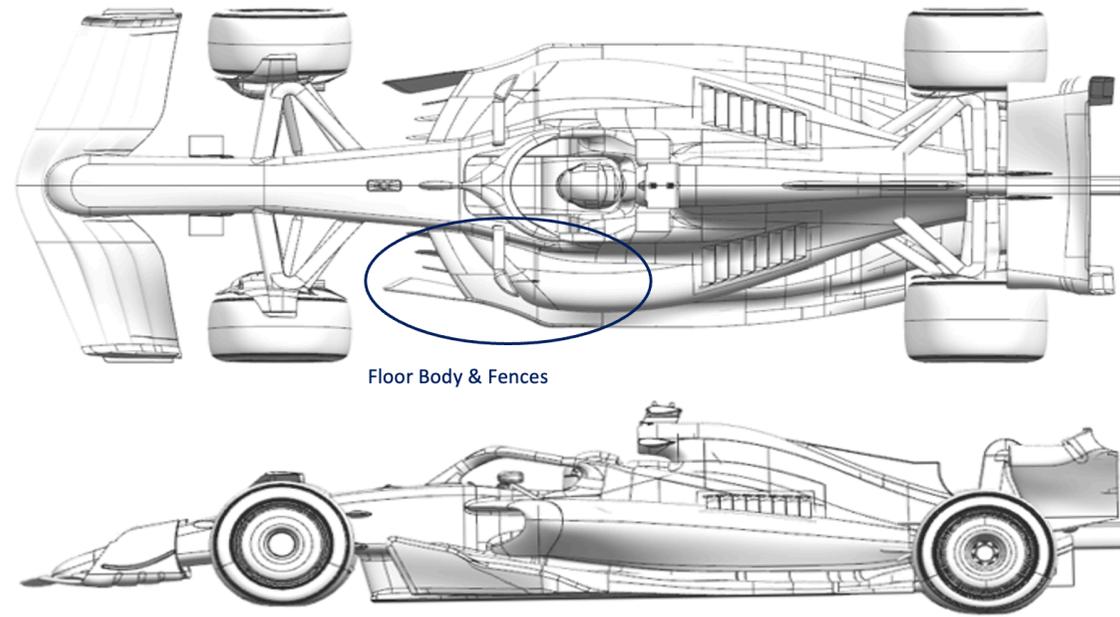
	Updated component	Primary reason for update	Geometric differences compared to previous version	Brief description on how the update works
1	Floor Body	Performance - Local Load	The height and shape of the forward floor has been updated, with the fences modified to suit.	The changes made across the forward floor and fences modify the load distribution of the forward floor, generating additional local load whilst minimising negative effect on downstream flow quality.
2	Diffuser	Performance - Local Load	The diffuser has been reshaped in the inlet area.	Local flow quality around the diffuser inlet is improved, giving a local load increase and better flow quality in to the diffuser.



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Diffuser



Floor Body & Fences

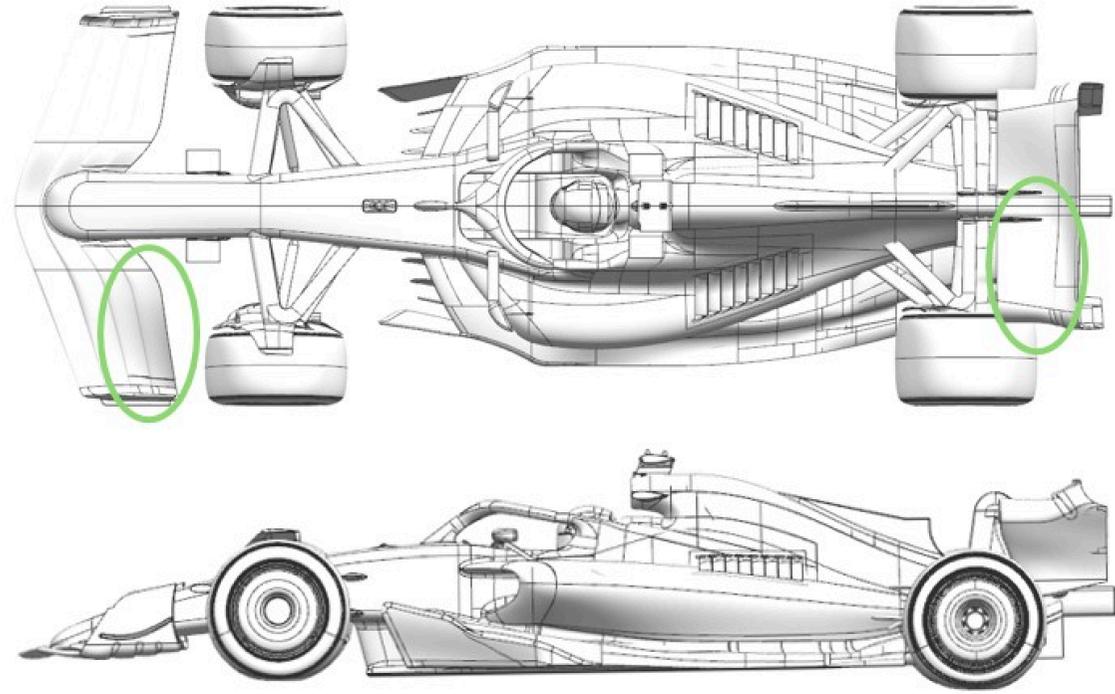
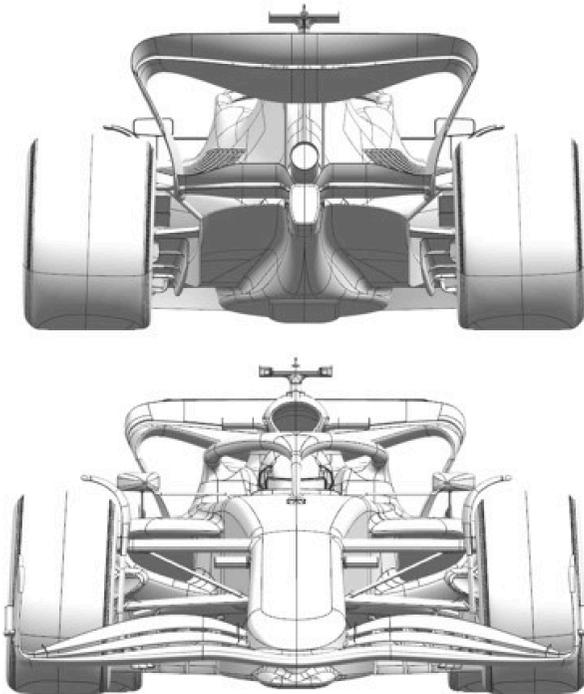


STAKE F1 TEAM KICK SAUBER

	Updated component	Primary reason for update	Geometric differences compared to previous version	Brief description on how the update works
1	Front Wing	Circuit specific - Balance Range	Reduced-profile top two flaps for the front wing	Working with the low-profile rear wing flap, this combination adapts the car to the low-drag requirements of this specific circuit, maximising the package's performance.
2	Rear Wing	Circuit specific - Balance Range	Low-profile flap trim	Working with the low-profile front wing flaps, this combination adapts the car to the low-drag requirements of this specific circuit, maximising the package's performance.



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MONEYGRAM HAAS F1 TEAM

	Updated component	Primary reason for update	Geometric differences compared to previous version	Brief description on how the update works
1	Floor Body	Performance - Local Load	More aggressive diffuser expansion with a small Gurney-flap on the trailing edge.	This new geometry increases floor extraction and allows as well a better control of the local flow features, resulting overall in more downforce.



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