



FIA FORMULA 1 WORLD CHAMPIONSHIP



# **2024 JAPANESE GRAND PRIX**

**05 - 07 April 2024**

<b>From</b>	The FIA Formula One Media Delegate	<b>Document</b>	12
<b>To</b>	All Teams, All Officials	<b>Date</b>	05 April 2024
		<b>Time</b>	08:47

## Title Car Presentation Submissions

## Description Car Presentation Submissions

**Enclosed** Japanese GP - Car Presentation Submissions.pdf

Roman De Lauw

The FIA Formula One Media Delegate



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## Car Presentation – Japanese Grand Prix ORACLE RED BULL RACING

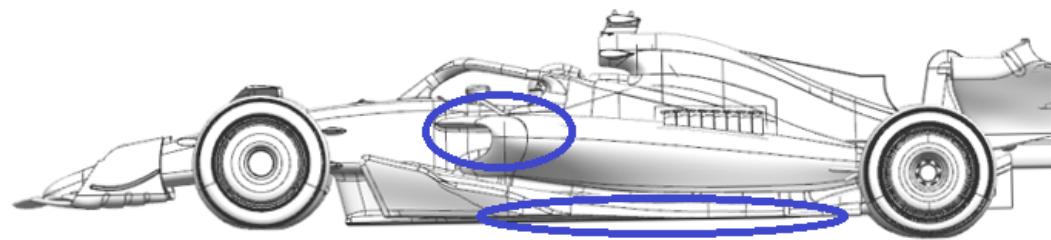
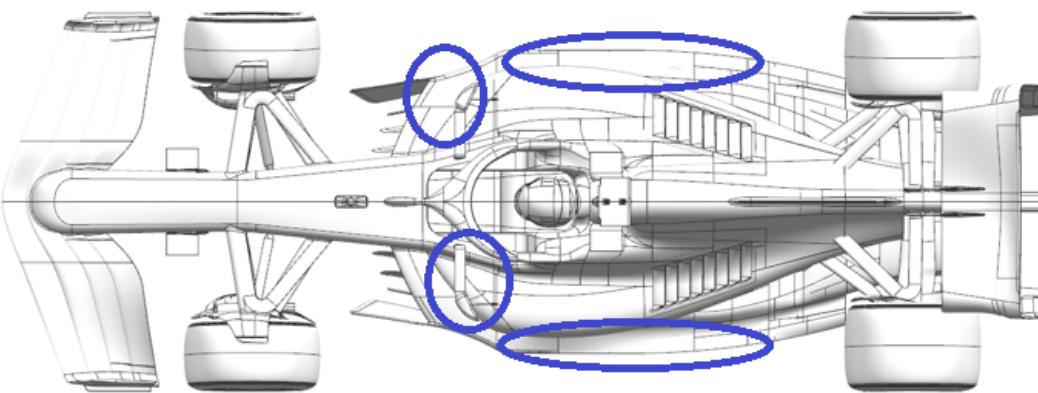
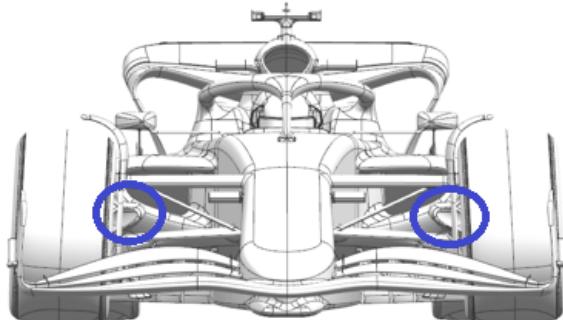
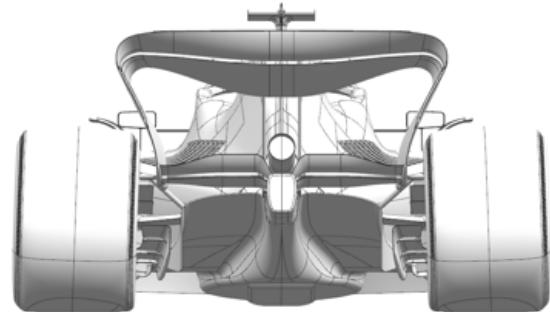
	<b>Updated component</b>	<b>Primary reason for update</b>	<b>Geometric differences compared to previous version</b>	<b>Brief description on how the update works</b>
1	Sidepod Inlet	Performance - Local Load	Redistributed inlet areas for the sidepod mounted primary heat exchangers	seeking the most efficient locations in terms of pressure inlet for the area, we then need less exit area which is beneficial downstream.
2	Floor Body	Performance - Local Load	further optimisation of the floor surface incurring no mechanical changes above the floor	with better understanding of the pressure distribution, subtle surface changes have exploited the flow characteristics to extract more load locally whilst maintaining flow stability
3	Floor Edge	Performance - Local Load	Increased camber and plan view area.	given knowledge of the flow and pressure feeding the floor edge wing, more camber has been applied to generate more local load whilst maintaining an adequate level of stability.
4	Front Corner	Circuit specific - Cooling Range	Smaller inlet and exit ducts for the front brakes with re-optimised locally geometries to accommodate	The low brake energy demands of Suzuka allow a reduction of inlet and therefore exit ducts which is more efficient than blanking the ducts used at earlier events.



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Red Bull Racing





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**MERCEDES-AMG PETRONAS F1 TEAM**

No updates submitted for this event.



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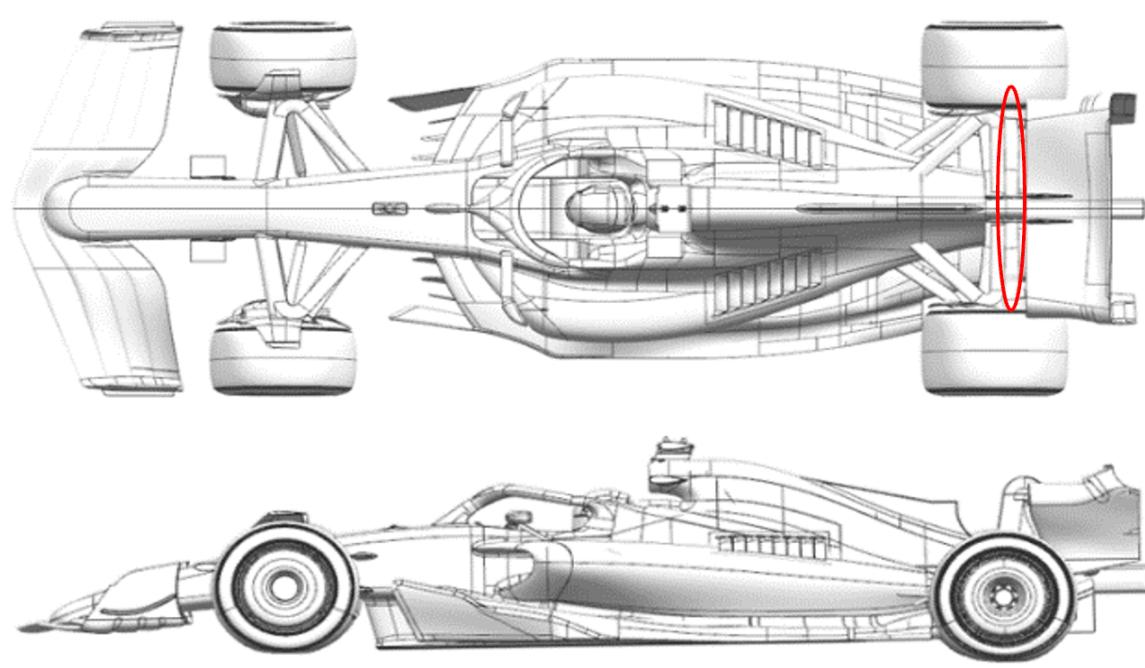
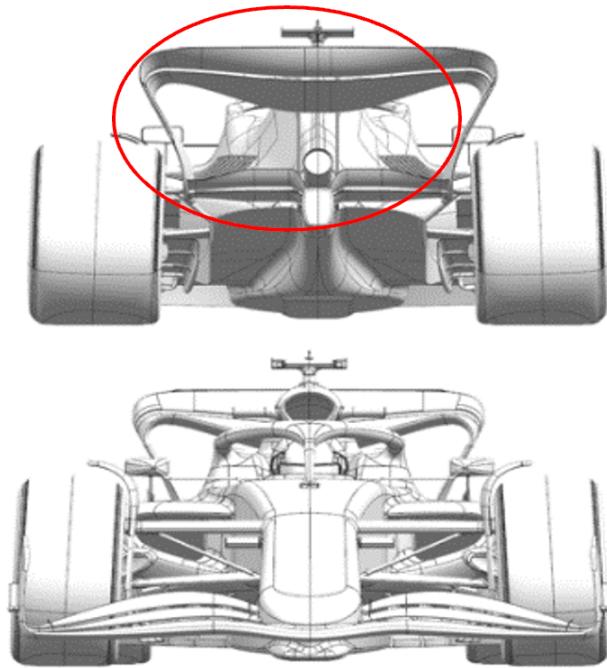


## SCUDERIA FERRARI

	<b>Updated component</b>	<b>Primary reason for update</b>	<b>Geometric differences compared to previous version</b>	<b>Brief description on how the update works</b>
1	Rear Wing	Circuit specific - Drag Range	Higher Downforce Top Rear Wing and Lower Beam Wing designs	Anticipating possible rain and low grip conditions, a more loaded top rear wing together with a more loaded lower beam wing, fully carried over designs from 2023, will be part of the downforce selection pool for this event.
2	Rear Suspension	Performance - Flow Conditioning	Reprofiled rear top wishbone rearward leg fairing	Not specific to the Suzuka circuit layout, this minor rear suspension fairing upgrade features a longer chord profile, with local flow conditioning improvements and positive interaction with surrounding components, bringing a small efficiency increase.



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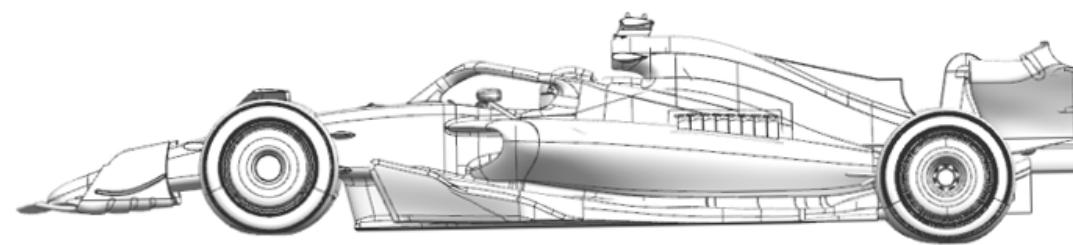
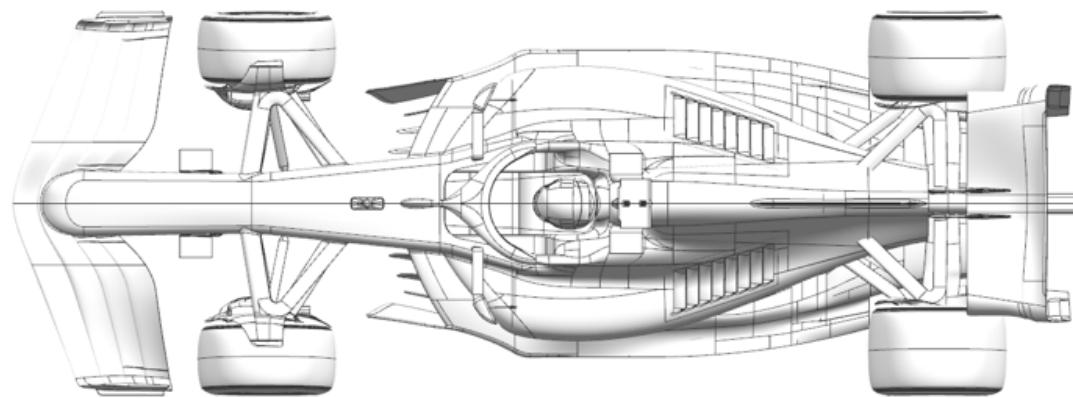
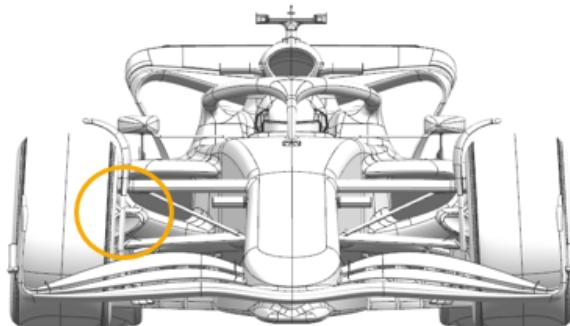
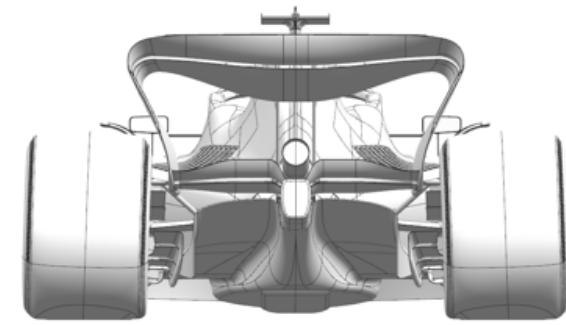


## MCLAREN FORMULA 1 TEAM

	<b>Updated component</b>	<b>Primary reason for update</b>	<b>Geometric differences compared to previous version</b>	<b>Brief description on how the update works</b>
1	Front Corner	Circuit specific - Cooling Range	Low Cooling Front Brake Duct	As this circuit features reduced brake cooling requirements, the front brake duct geometry has been modified trading brake cooling massflow for aerodynamic performance.



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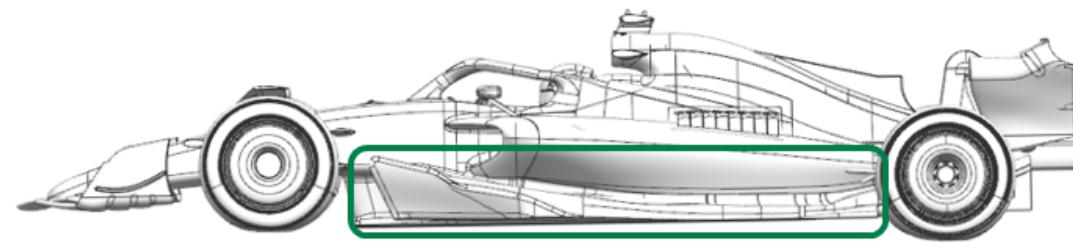
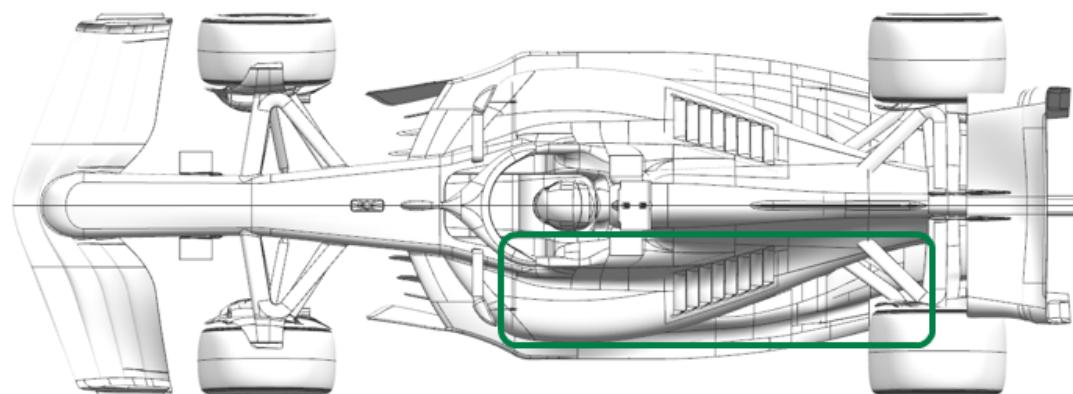
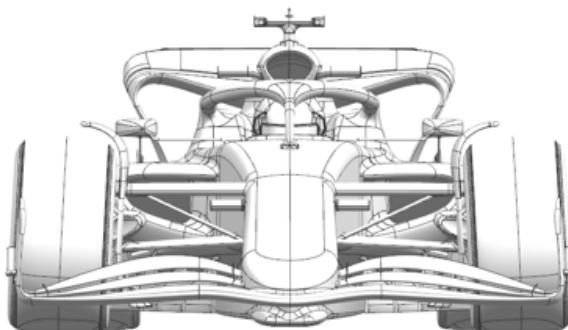
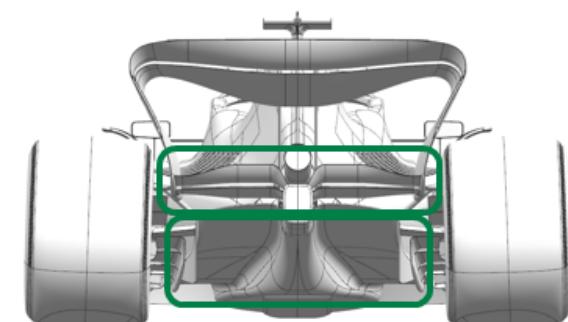


### ASTON MARTIN ARAMCO FORMULA ONE TEAM

	<b>Updated component</b>	<b>Primary reason for update</b>	<b>Geometric differences compared to previous version</b>	<b>Brief description on how the update works</b>
1	Floor Body	Performance - Local Load	The main body of the floor has evolved slightly with the fences and floor edge.	The revised shapes improve the flowfield under the floor increasing the local load generated on the lower surface and hence performance.
2	Floor Fences	Performance - Local Load	The fences are redistributed across the LE of the floor with revised curvature.	The revised shapes improve the flowfield under the floor increasing the local load generated on the lower surface and hence performance.
3	Floor Edge	Performance - Local Load	The chord of the floor edge wing is reduced compared to the previous version.	The revised shapes improve the flowfield under the floor increasing the local load generated on the lower surface and hence performance.
4	Diffuser	Performance - Local Load	The diffuser is a slightly modified shape with revised top surface.	The changes to the shape modify the expansion in the diffuser to improve flow characteristics and the load generated on the surfaces.



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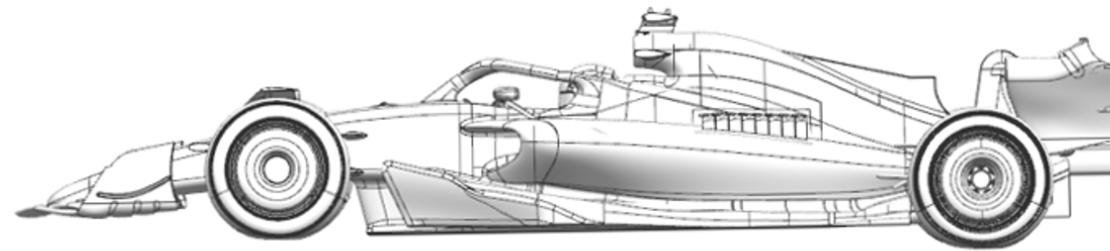
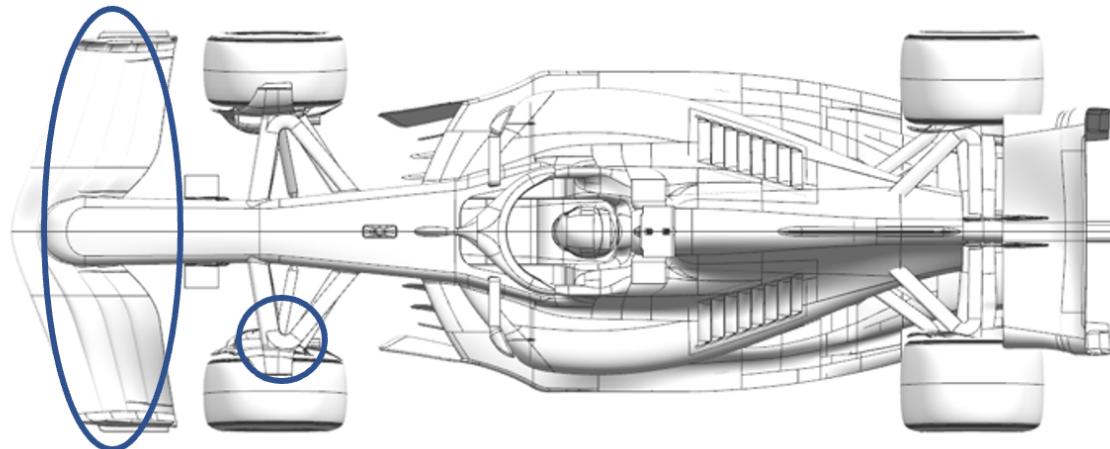
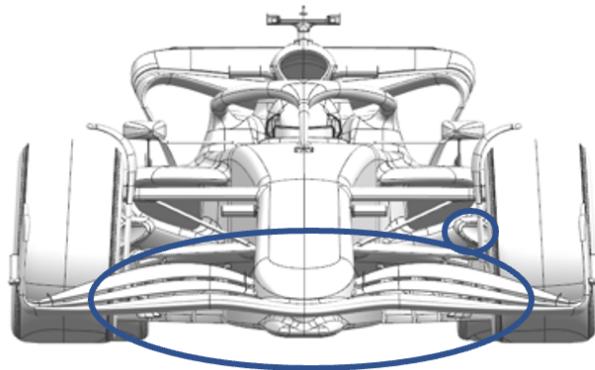
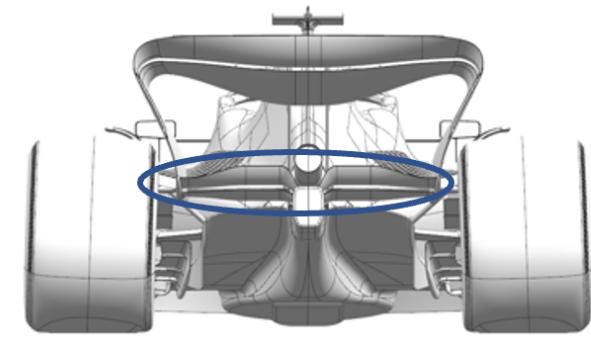


### BWT ALPINE F1 TEAM

	<b>Updated component</b>	<b>Primary reason for update</b>	<b>Geometric differences compared to previous version</b>	<b>Brief description on how the update works</b>
1	Front Wing	Performance - Drag reduction	New shape of all front wing elements and new end plate arrangement.	More offloaded outboard front wing which gives an efficient drag saving compared to the previous wing.
2	Front Corner	Performance - Flow Conditioning	Revised ducting arrangement of the front brake drum.	Makes better use of the inlet flow in conjunction with the aforementioned new front wing compared to the previous version.
3	Beam Wing	Performance - Local Load	Traditional non-biplane rear beam wing.	Offloads the beam wing and top rear wing to increase load in the floor compared to the previous version.



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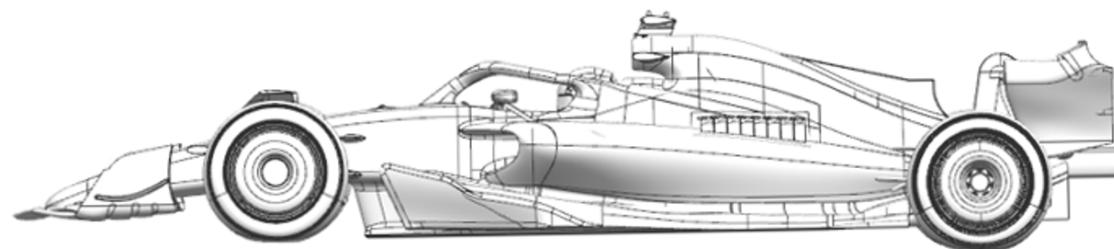
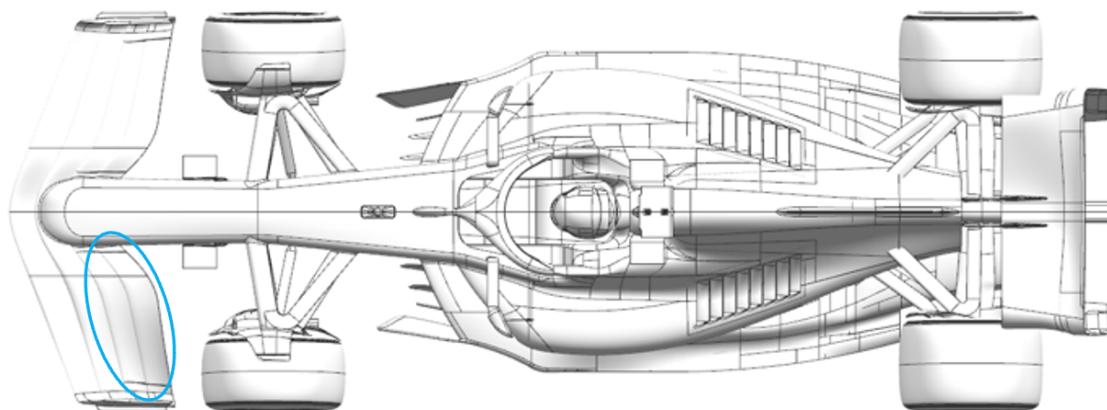
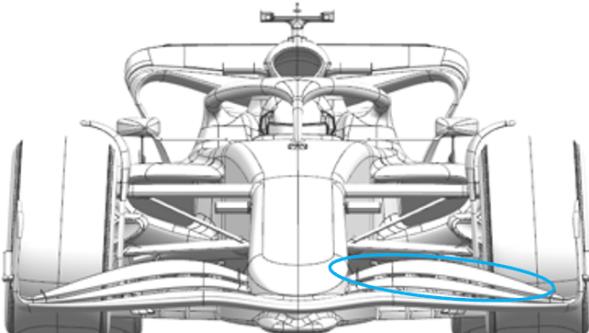
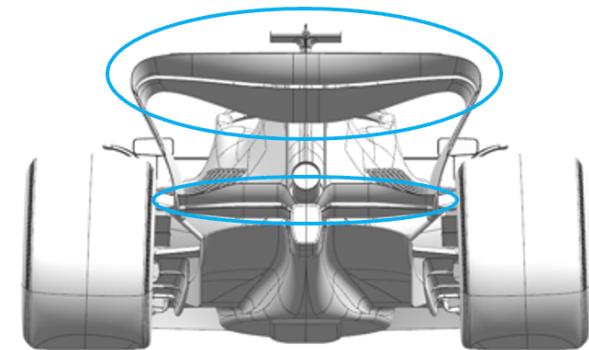


## WILLIAMS RACING

	<b>Updated component</b>	<b>Primary reason for update</b>	<b>Geometric differences compared to previous version</b>	<b>Brief description on how the update works</b>
1	Front Wing Endplate	Performance - Flow Conditioning	The rearmost 2 elements are reprofiled and their junction with the endplate is heavily modified.	The updated geometry changes the control of the front tyre flow structures. This affects the flow field further rearward on the car, improving both the overall downforce of the car and the characteristics of the downforce delivery.
2	Rear Wing	Circuit specific - Drag Range	This rear wing has smaller upper elements.	These revised wing elements provide an efficient drop in downforce and drag. They work with the new beam wing to directly lower the load generated by the rear wing assembly. This is an optional setup for this weekend.
3	Beam Wing	Circuit specific - Drag Range	The new beam wing has a small area than the previous version.	These revised beam wing provides an efficient drop in downforce and drag. It works with the new upper wing elements to directly lower the load generated by the rear wing assembly. This is an optional setup for this weekend.



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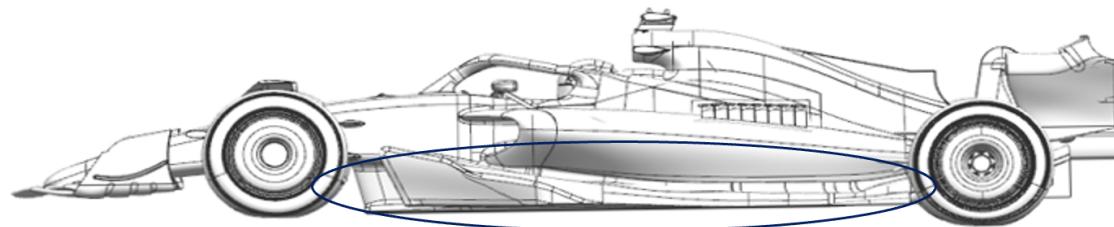
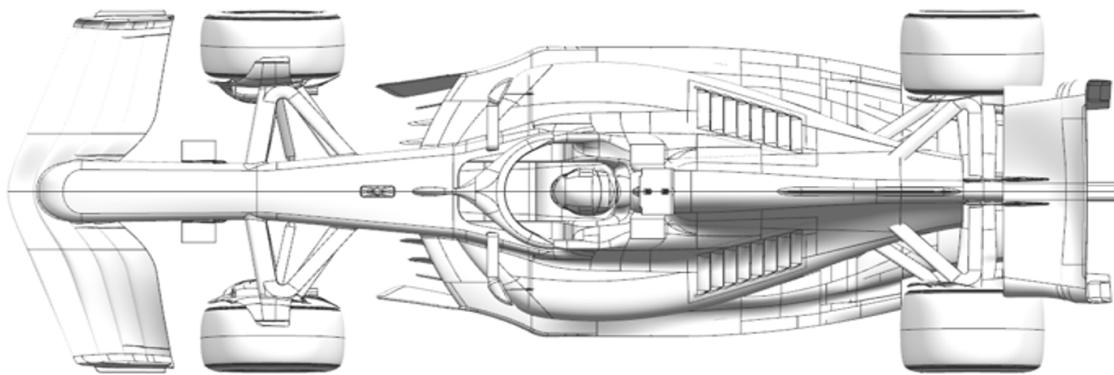
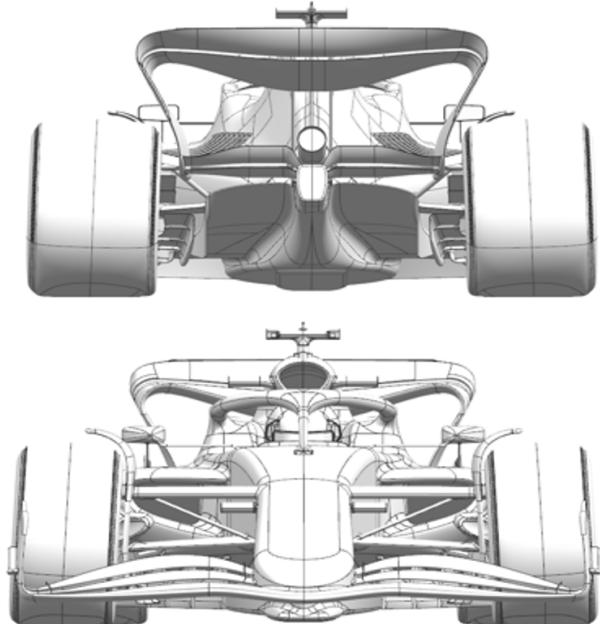


## VISA CASH APP RB FORMULA ONE TEAM

	<b>Updated component</b>	<b>Primary reason for update</b>	<b>Geometric differences compared to previous version</b>	<b>Brief description on how the update works</b>
1	Floor Body	Performance - Local Load	The profiles of the floor fences and the shape of the underfloor have been updated.	All of the underfloor changes achieve greater local load from the underfloor whilst maintaining or improving the flow quality downstream.
2	Floor Edge	Performance - Local Load	The profile & incidence of the Floor Edge & wing has been modified.	In combination with the above changes, the Floor Edge Wing has been modified to increase loading of the underfloor.



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Floor - multiple elements including Floor Body, Fences, & Floor Edge



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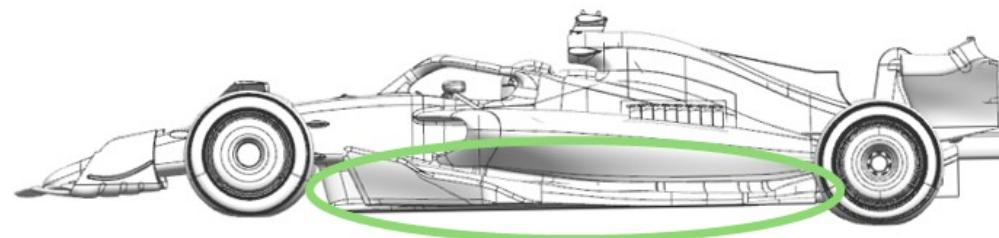
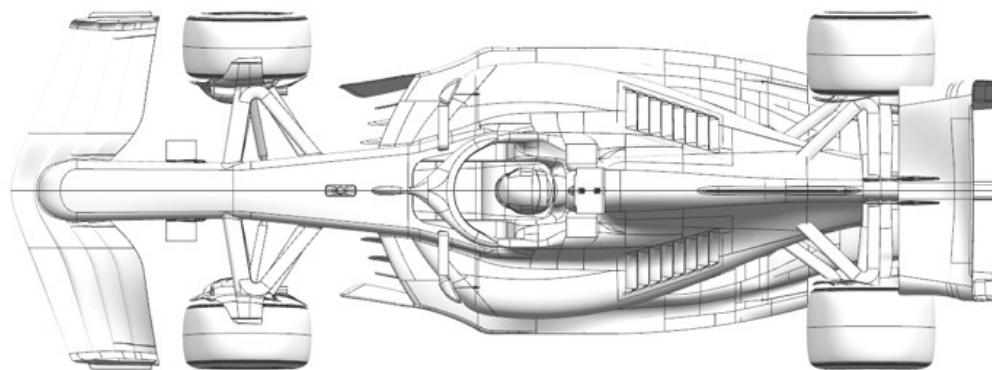
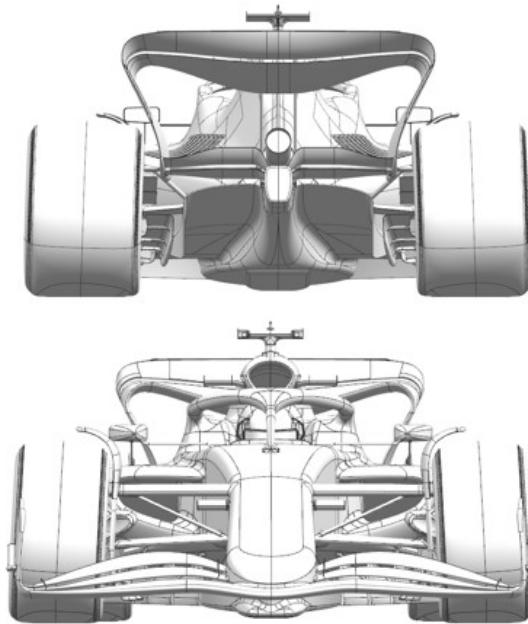


### STAKE F1 TEAM KICK SAUBER

	<b>Updated component</b>	<b>Primary reason for update</b>	<b>Geometric differences compared to previous version</b>	<b>Brief description on how the update works</b>
1	Floor Body	Performance - Flow Conditioning	New design of the floor body and edges, mostly in the front and middle sections	The new floor, with extended fences and redesigned front and middle parts, improves the airflow and the stability of the car, improving aerodynamic efficiency of the whole package.



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MONEYGRAM HAAS F1 TEAM

No updates submitted for this event.