



FIA FORMULA 1 WORLD CHAMPIONSHIP



# 2025 AUSTRALIAN GRAND PRIX

14 - 16 March 2025

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<b>From</b>	The FIA Formula One Media Delegate	<b>Document</b>	7
<b>To</b>	All Teams, All Officials	<b>Date</b>	14 March 2025
		<b>Time</b>	09:55

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**Title** Car Presentation Submissions

**Description** Car Presentation Submissions

**Enclosed** 2025 Australian Grand Prix - Car Presentation Submissions.pdf

**Roman De Lauw**

**The FIA Formula One Media Delegate**



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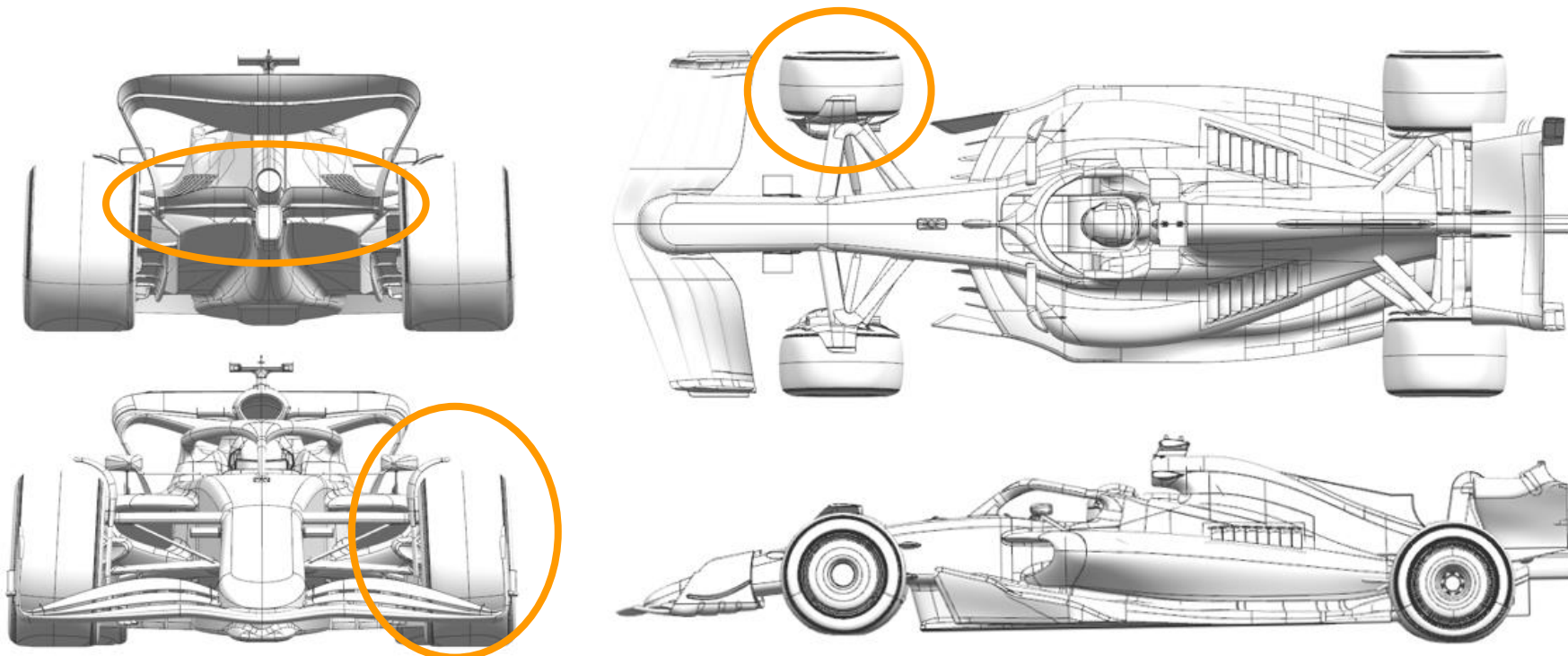


## Car Presentation – Australian Grand Prix McLaren Formula 1 Team

	Updated component	Primary reason for update	Geometric differences compared to previous version	Brief description on how the update works (min 20, max 100 words)
1	Front Corner	Performance - Flow Conditioning	Revised Front Brake Duct Winglet	Revised Front Brake Duct Winglet geometry resulting in improved flow conditioning, resulting in an improvement of overall aerodynamic performance downstream.
2	Front Corner	Circuit specific - Cooling Range	Lower Cooling Front Corner Scoop	Low cooling Front Brake Duct option converting reduced brake cooling demand into increased aerodynamic performance achieved via improved flow conditioning.
3	Beam Wing	Circuit specific - Drag Range	More loaded single element Beamwing	In order to improve both aerodynamic efficiency as well as overall load on the Rear Wing assembly, a more loaded single element Beamwing has been designed.
4	Beam Wing	Circuit specific - Drag Range	More loaded double element Beamwing	In order to improve both aerodynamic efficiency as well as overall load on the Rear Wing assembly, a more loaded double element Beamwing has been designed.



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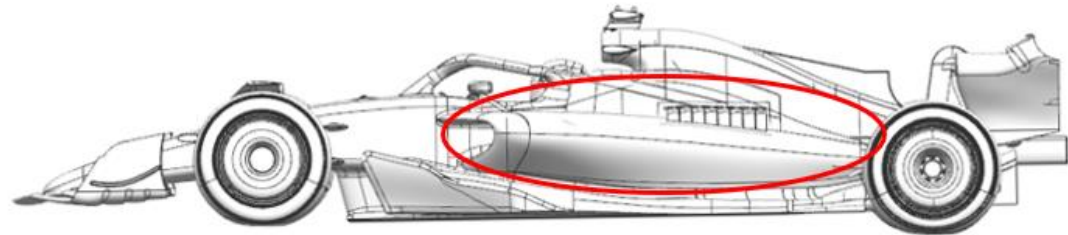
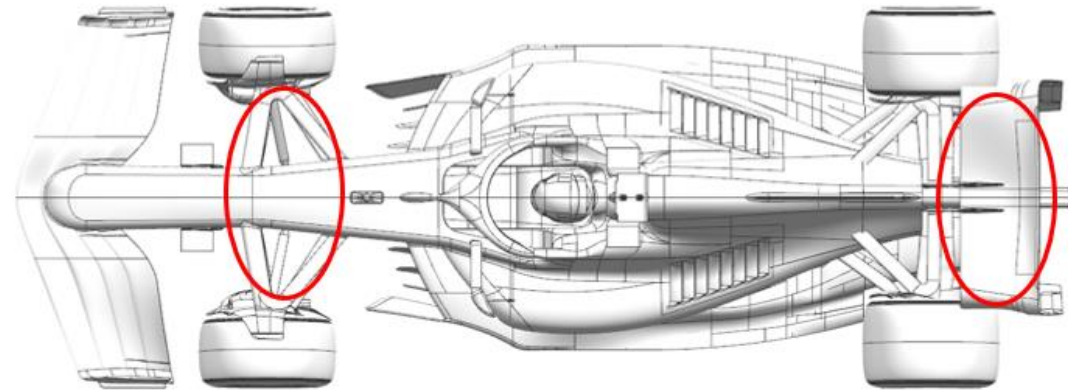
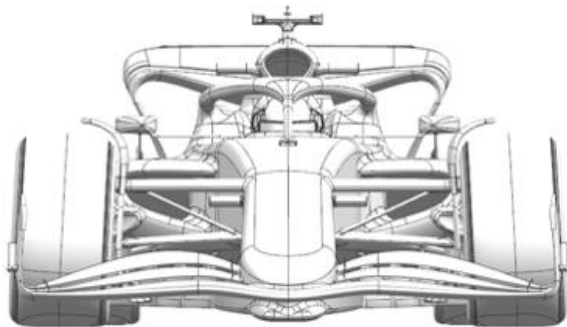
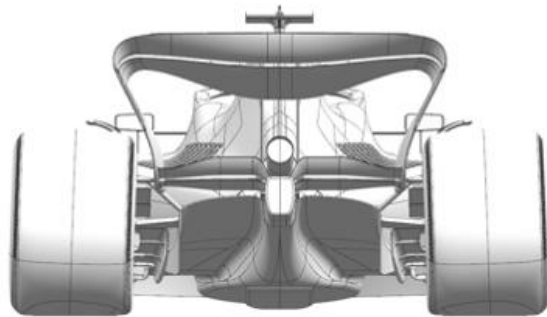
## Car Presentation – 2025 Australian Grand Prix

### \*SCUDERIA FERRARI HP\*

	Updated component	Primary reason for update	Geometric differences compared to previous version	Brief description on how the update works (min 20, max 100 words)
1	Front Suspension	Performance - Flow Conditioning	Switch from pushrod to pullrod, upper and lower wishbones geometry rearrangement to suite and new front brake duct scoop topology	This new front suspension layout has unlocked several development paths, focused on enhancing interactions with the front wing and maximizing downstream flow quality
2	Sidepod Inlet / Engine cover	Performance - Flow Conditioning	More compact sidepod in both side and plan views. Reoptimized cooling exits, including engine cover centre line louvres	Benefiting from an improved onset flow quality, the sidepod design has been optimized and made more compact for both improved interactions with the floor / floor edge as well as the rear end of the car
3	Rear Wing / Beam Wing	Performance - Local Load	New top rear wing profiles and revised lower wing design	Capitalizing on improved upstream flow energy and new cooling exit topology, the rear wing has been deeply redesigned, offering a net gain on car aerodynamic efficiency



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## Car Presentation – Australian Grand Prix Red Bull Racing

	Updated component	Primary reason for update	Geometric differences compared to previous version	Brief description on how the update works (min 20, max 100 words)
1	Front Wing	Performance - Local Load	First element and curls to the endplate revised, other changes consequential to observe regulations	Redistributed loadings across the elements seeking improved load whilst maintain flow stability
2	Nose	Performance - Local Load	Revised fairings at the element junctions	A consequences of revising the element junctions, the regulations require areas at specific sections, hence the profile was revised.
3	Front Suspension	Performance - Local Load	Suspension fairings revised on the trackrod and wishbones	More local load has been extracted from the revised fairings via increased camber whilst maintaining flow stability
6	Floor Body	Performance - Local Load	Re-profiled surfaces to supplement the changes to the fences and edge wing	Revised shape improves pressure distribution given other changes to the floor to extract more load and maintain flow stability
7	Floor Fences	Performance - Local Load	Repositioned laterally at the leading edges	Changing the lateral positions allows more overall load to be attained from pressure distributions in the channels
8	Floor Edge	Performance - Local Load	New surfaces with increased camber locally	Given changes upstream, more camber has been applied to the edge wing for more local load.
9	Coke/Engine Cover	Reliability	Mild revision to the sidepod shape to clear components.	Subtle changes to components shrouded by the sidepod have resulted in a new shape giving improved cooling flow with less downstream detriment
10	Cooling Louvres	Cooling	Reduced span for the medium levels of cooling	Given the sidepod improvements cooling louvres at most circuits will be smaller than last year with less downstream loss



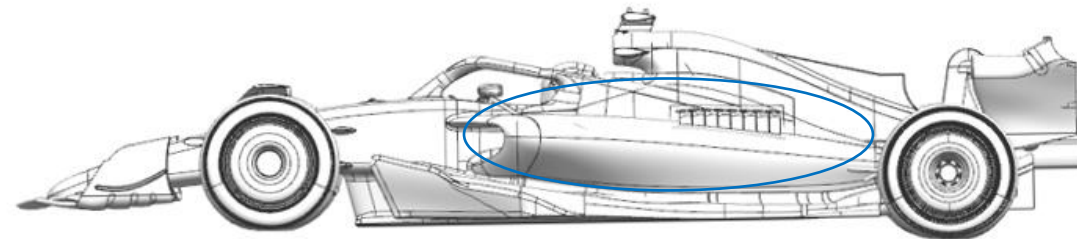
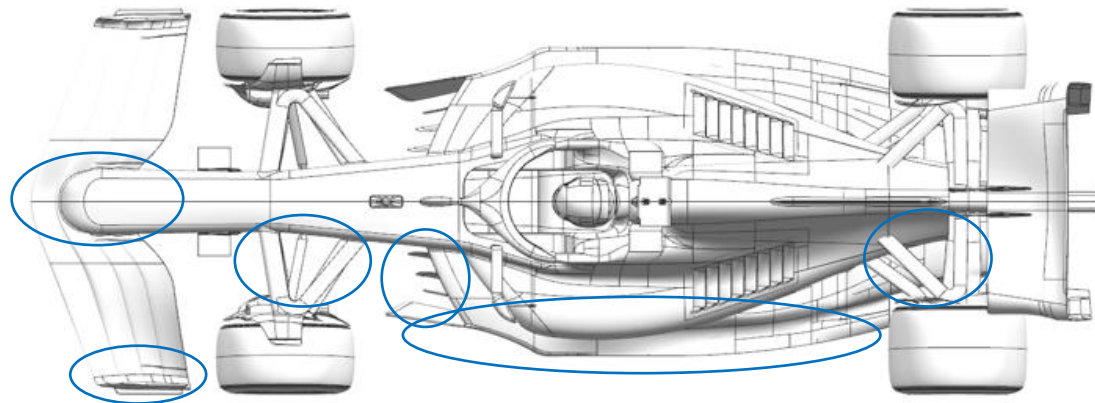
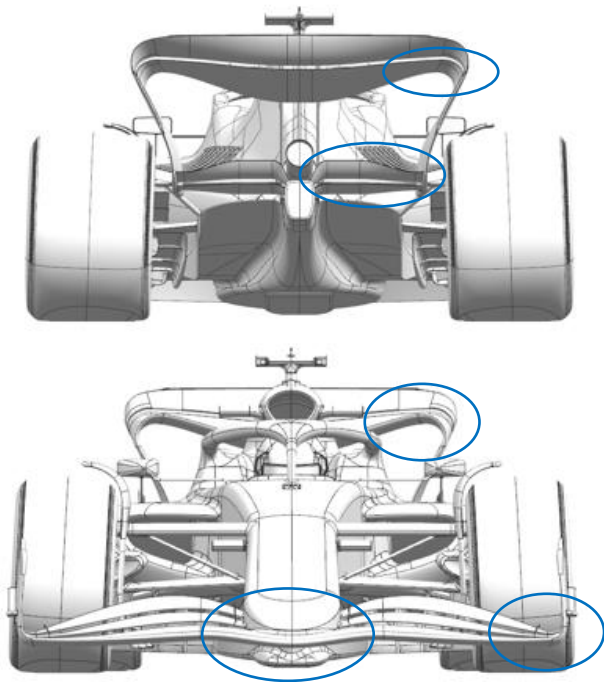
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13	Rear Suspension	Performance - Local Load	Revised fairings	Given bodywork changes upstream, the fairings have been re-optimised gaining locally more load whilst maintaining flow stability
15	Beam Wing	Performance - Local Load	Revised camber distribution across the span	Less blockage behind the central topbody cooling exit to reduce the louvre count and improve slightly the load extracted across the span
16	Rear Wing	Performance - Local Load	Revised curl geometry for the mainplane	A revised mainplane tip geometry has extracted more local load by revising the pressure distribution across the span.
17	Rear Wing Endplate	Performance - Local Load	Tip geometry as a result of changes to the mainplane	Consequential change from the tip geometry of the mainplane.



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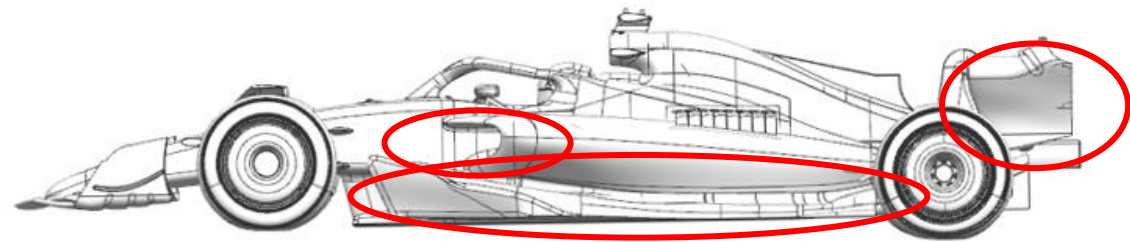
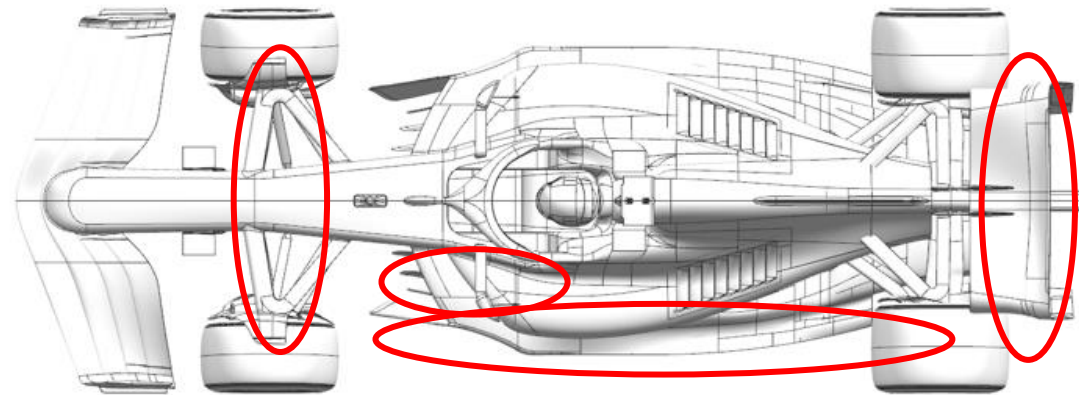
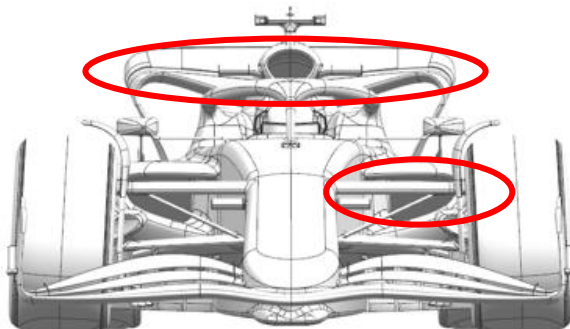
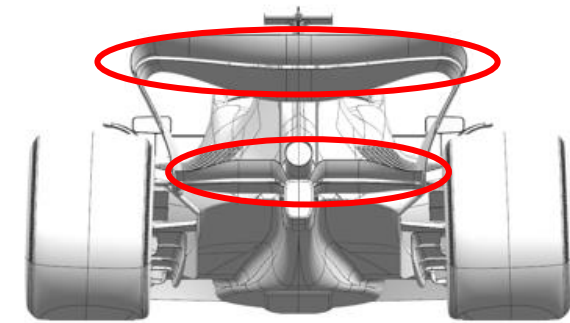
## Car Presentation – 2025 Australian Grand Prix

### \*Mercedes-AMG PETRONAS F1 Team\*

	Updated component	Primary reason for update	Geometric differences compared to previous version	Brief description on how the update works (min 20, max 100 words)
1	Sidepod Inlet	Performance - Flow Conditioning	Vertical and horizontal inlet.	Improved flow quality to the radiator and rear of the floor, thus increasing floor load.
2	Floor Body	Performance - Local Load	Change in the fence camber and floor tunnel profile.	Increased local load which in turn increases mass flow under the floor; flow quality to the diffuser improved which increases rear floor load.
3	Coke/Engine Cover	Performance - Flow Conditioning	Increased undercut sidepod.	Improved flow quality to the rear of the car and floor edge – which in turns improves rear floor load.
4	Beam Wing	Performance - Local Load	Improved section profiling.	Improved profiling of both beam wing elements resulting in better wing efficiency.
5	Front Suspension	Performance - Flow Conditioning	Low rear track rod	Increased suspension loading and front tyre wake control, improving flow to the floor.
6	Rear Wing	Performance - Local Load	Improved section profiling.	Reprofiling has cleaned up the tip flow structures, thus improving tip and wing efficiency without losing wing load.



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## Car Presentation – Australian Grand Prix

### Aston Martin Aramco F1 Team

	Updated component	Primary reason for update	Geometric differences compared to previous version	Brief description on how the update works (min 20, max 100 words)
1	Nose	Performance - Local Load	Longer nose compared to 2024 connecting to the forward front wing element.	The new longer nose improves the loading distribution of the front wing and interaction with surrounding parts for better performance.
2	Front Wing	Performance - Local Load	Evolution of the profiles and outboard details.	The modifications to the wing surfaces change the loading distribution and improve the performance of the wing across the different on track conditions.
3	Front Corner	Performance - Local Load	Scoop inlet and exit topology refined, lower deflector incidence modified.	The changes to the scoop geometry improve the cooling efficiency of the brake ducts. The deflector planview incidence is changed to suit the current car characteristics.
4	Sidepod Inlet	Performance - Flow Conditioning	The sidepod inlet is now retracted below the upper lip.	The sidepod inlet has been revised to manage the flow to the rear of the car whilst maintaining sufficient flow into the inlet to cool the car.
5	Coke/Engine Cover	Performance - Local Load	Undercut depth has increased and the engine cover is narrower.	The undercut works in conjunction with the new inlet. The exit of the bodywork is shaped to manage the position of the internal cooling flow downstream.
6	Cooling Louvres	Performance - Flow Conditioning	Louvres cover a larger area compared to 2024.	The cooling louvres are designed to position the underbody cooling massflow in the most favourable position going rearwards over the car.
7	Floor Body	Performance - Local Load	Numerous subtle changes in the shape of the floor.	Combined changes to the floor improve the flowfield under the floor increasing the local load generated on the lower surface and hence performance.



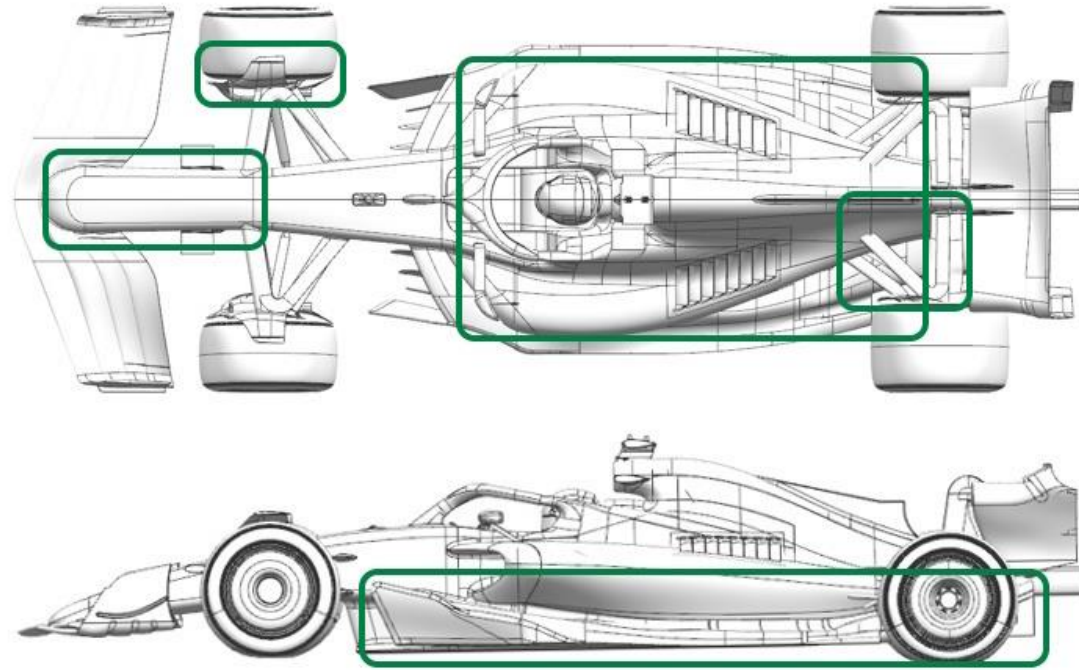
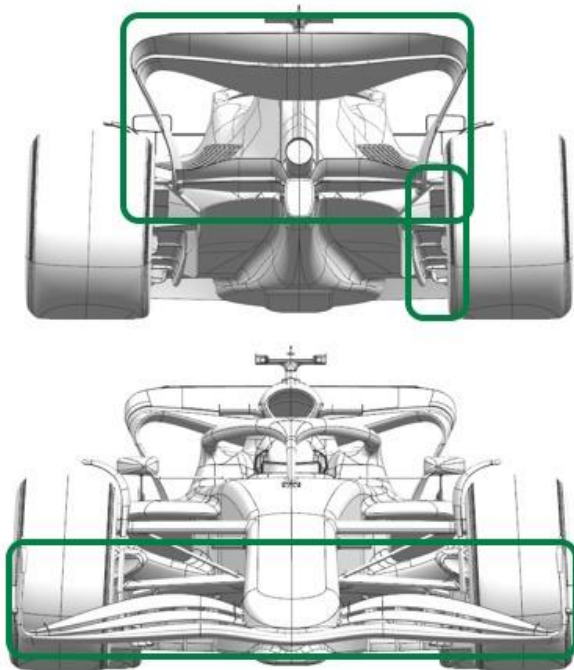
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8	Floor Fences	Performance - Local Load	Realignment and repositioning of the four floor fences.	Combined changes to the floor improve the flowfield under the floor increasing the local load generated on the lower surface and hence performance.
9	Rear Suspension	Performance - Local Load	Fairings have been refined with changes in section and twist.	The revised rear suspension fairings have been evolved to work in conjunction with the changes to the flow at the back of the car.
10	Rear Corner	Performance - Local Load	Revised exit duct shape and vanes.	The exit duct and vanes have been developed to increase the load generated by the rear corner through the operating envelope.
11	Beam Wing	Performance - Local Load	Raised OB tips.	In combination with the rear wing the assembly now generates more efficient load, as usual there will be a sweep of wings to cover different circuits.
12	Rear Wing	Performance - Local Load	Flap tips are swept further forwards.	In combination with the beam wing the assembly now generates more efficient load, as usual there will be a sweep of wings to cover different circuits.



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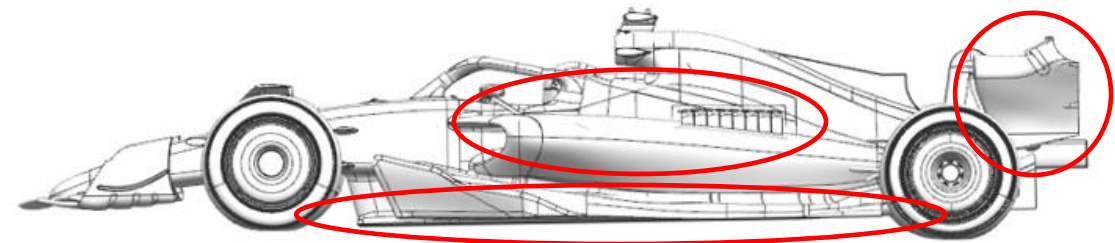
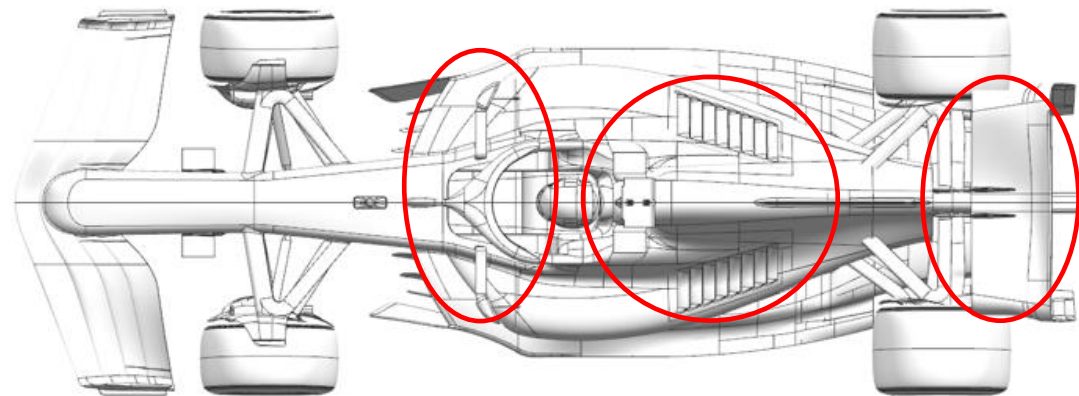
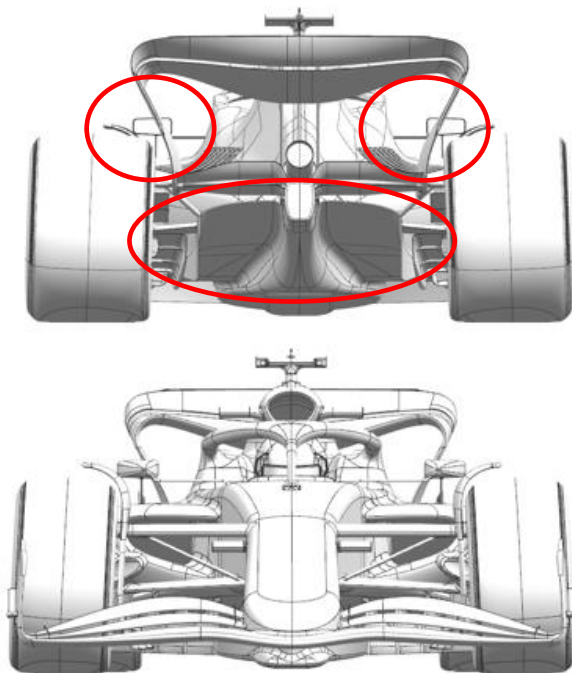
## Car Presentation – Bahrain Grand Prix

### BWT Alpine F1 Team

	Updated component	Primary reason for update	Geometric differences compared to previous version	Brief description on how the update works (min 20, max 100 words)
1	Sidepod Inlet	Performance - Flow Conditioning	Raised and reprofiled inlet	The sidepod inlet has been reshaped for a local flow optimisation whilst ensuring sufficient airflow is fed to the cooling system.
2	Coke/Engine Cover	Performance - Flow Conditioning	Re-designed bodywork and cooling options	This new bodywork has been designed to improve the flow delivery at the rear of the car while also offering sufficient cooling options to cover the range of conditions seen throughout the season.
3	Floor Body	Performance - Local Load	Complete floor optimisation, including fences, floor edges and diffuser	The floor has been optimised to improve efficient and balanced load generation. This has been achieved by delivering a cleaner loading of the floor and better management of the underfloor structures.
4	Rear Corner	Performance - Local Load	Revised design of the rear corner	Redesign of the rear drum and its winglets to optimise the flowfield interaction with the floor and generate some efficient local load.
5	Rear Wing	Performance - Flow Conditioning	Rear wing endplate reprofiled	The rear wing endplates have been reprofiled to improve the flowfield management, offering efficient downforce performance gains in the surrounding elements
6	Rear Suspension	Performance - Flow Conditioning	Update to rear suspension fairings	The rear suspension legs/fairings have been optimised to the surrounding flowfield, improving the local flow quality, while gaining efficient performance.



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## Car Presentation – 2025 Australian Grand Prix

### MONEYGRAM HAAS F1 TEAM

	Updated component	Primary reason for update	Geometric differences compared to previous version	Brief description on how the update works (min 20, max 100 words)
1	Front Wing Endplate	Performance - Flow Conditioning	Revised Front Wing Endplate	The revised Endplate design allows an improved flow conditioning, enabling better control of the front wheel wake and its impact on the rest of the car.
2	Front Wing	Performance - Flow Conditioning	New span-wise loading of the profiles	The new design loads the FW in specific areas, where the wake is less detrimental in terms of overall car performance.
3	Sidepod Inlet	Performance - Drag reduction	More forward sidepod inlet	The Sidepod Inlet is more forward compared to last year, this allows a more efficient cooling performance: the required cooling levels are achieved at a lower drag level.
4	Floor Body	Performance - Local Load	Increased floor expansion	The new floor increases the overall floor performance, thanks to a higher diffuser expansion and an optimized evolution of the floor geometry.
5	Floor Fences	Performance - Local Load	The new floor body required a complete re-design of the floor fences.	The fences are optimized for the new floor design, prioritizing higher mass-flow over local load increase.
6	Floor Edge	Performance - Local Load	Revised floor edge	Due to the increased mass-flow passing through the floor inlet a higher side extraction was possible and required a revision of the geometry.
7	Coke/Engine Cover	Performance - Flow Conditioning	Increased coke undercut and narrow engine cover	The new design increases the undercut below the sidepod inlet, extending all the way to the rear end of the side body. This allows for a clean flow to feed the rear end of the car. Furthermore, the engine cover was shrunk, favouring undisturbed flow impacting the rear wing.





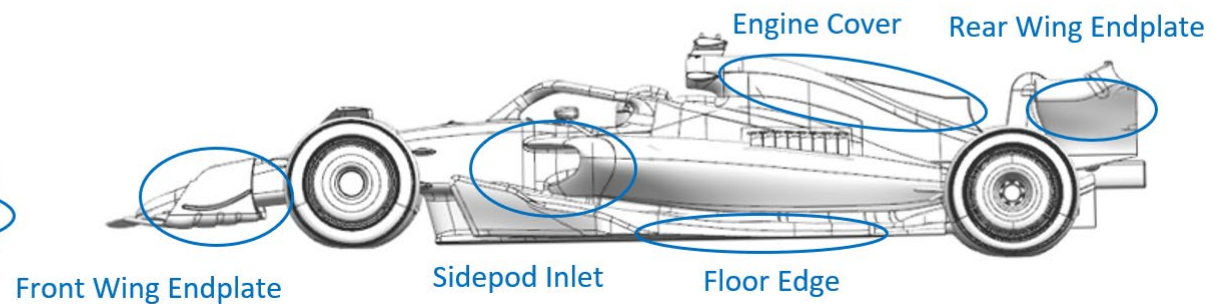
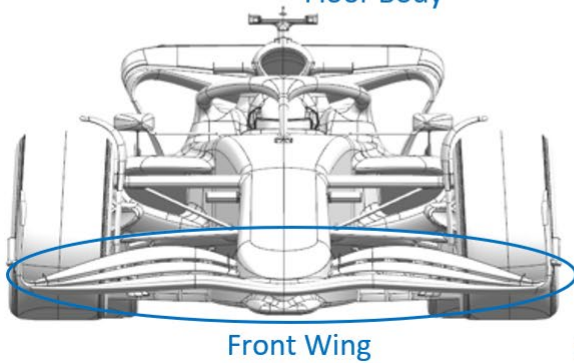
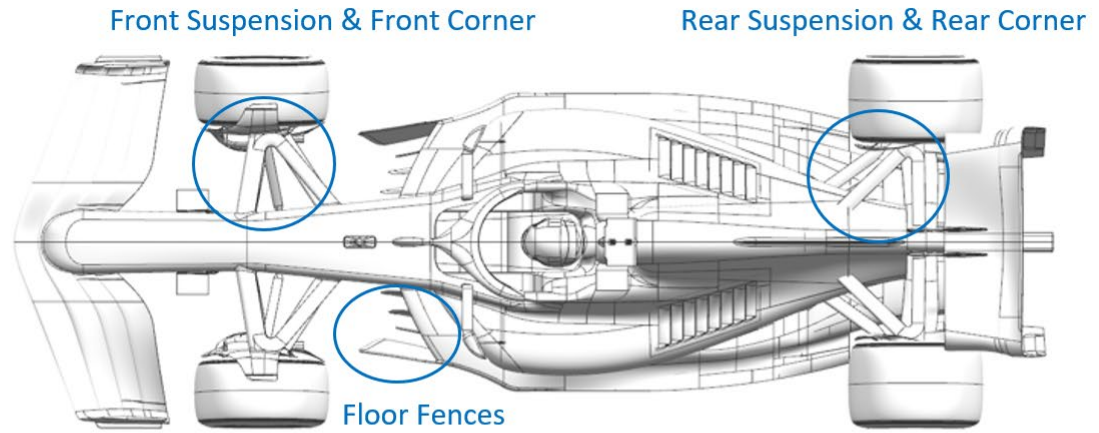
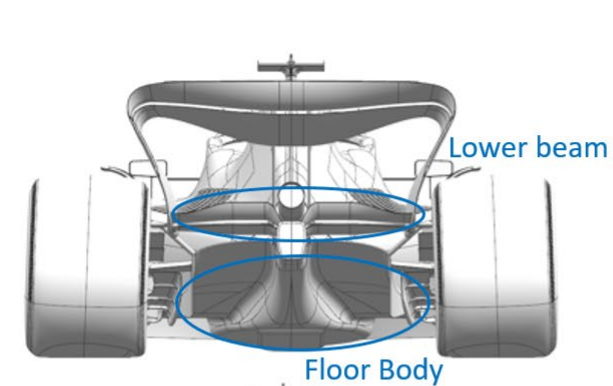
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	Updated component	Primary reason for update	Geometric differences compared to previous version	Brief description on how the update works (min 20, max 100 words)
8	Rear Wing Endplate	Performance - Drag reduction	Increased cut-out	The increased cut-out on the RWEPE enhances load efficiency by allowing the expanding flow underneath the rear wing profiles to move freely without the obstruction of the endplate.
9	Beam Wing	Performance - Local Load	Increased OB expansion	The new car layout allows to efficiently increase the loading of the lower beam, increasing its support to the OB region of the upper RW.
10	Front Suspension	Performance - Flow Conditioning	Suspension fairing optimization	The new span-wise loading of the FW required an optimization of the suspension fairing.
11	Front Corner	Performance - Flow Conditioning	Updated scoop design	The scoop geometry was narrowed, reducing the frontal impact area and improving the flow impacting on the rest of the car.
12	Rear Suspension	Performance - Flow Conditioning	Updated rear suspension with revised fairing design	The new floor and bodywork design imply different flow impacting on the rear suspensions: the new fairings are designed to enhance efficiency and condition the corner flow.
13	Rear Corner	Performance - Local Load	Revised internal and external design	The revised design improves the cooling performance of the rear corner and increases the generated local load, through a complete revision of the ancillaries.



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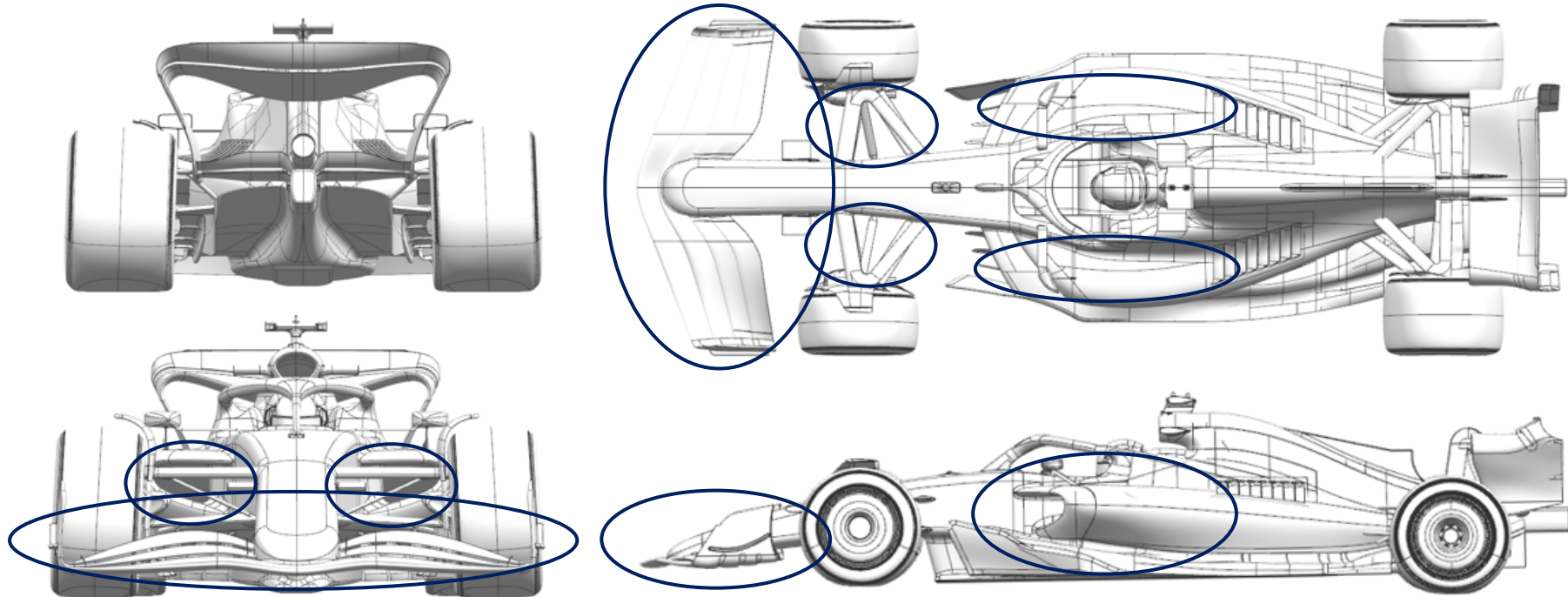
## Car Presentation – Australian Grand Prix

### Visa Cash App RB

	<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 (min 20, max 100 words)</b>
1	Sidepods	Performance - Flow Conditioning	Revised radiator inlet and sidepod curvature.	Revised inlet geometry to optimise cooling and make it more efficient, and at the same time improving the downforce provided.
2	Front Wing	Performance - Flow Conditioning	New mainplane elements, flap & endplates.	The loading distribution across the front wing is modified to promote better quality flow to the rest of the car.
3	Front Suspension	Other - Local flow alignment	Suspension leg orientations have been modified.	Suspension profiles optimised for the new aero package, the aim being to make them more aero friendly while maximizing the aero load



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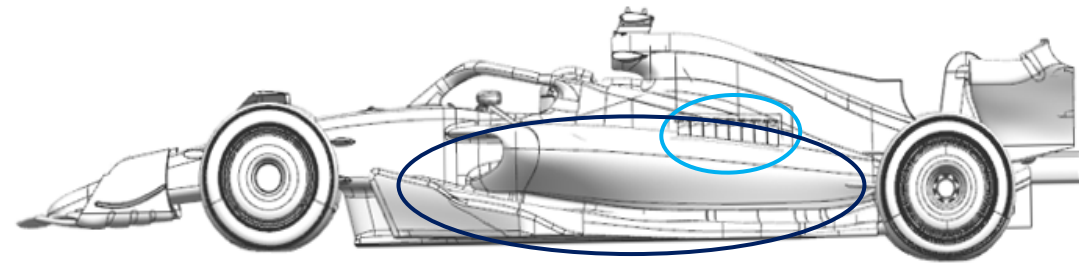
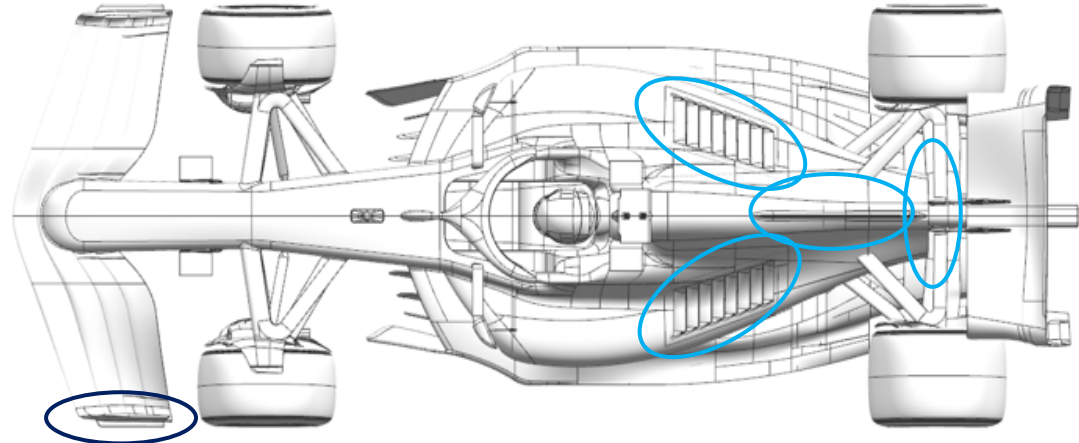
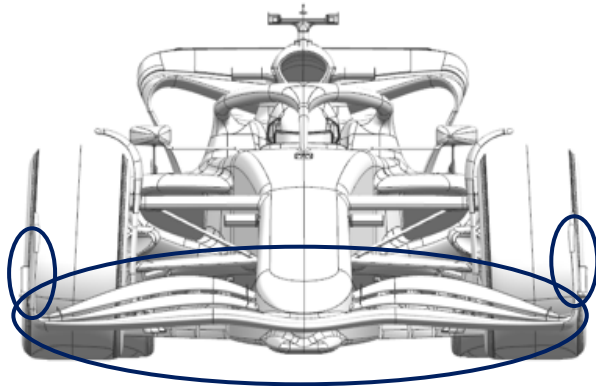
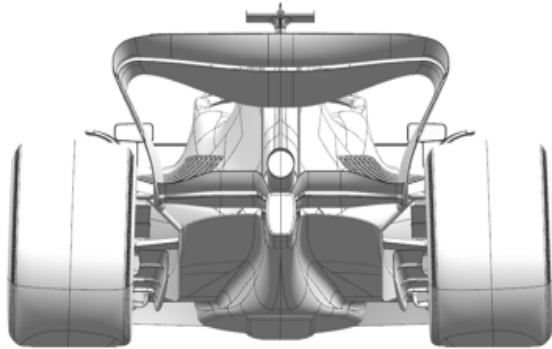
## Car Presentation – AUSTRALIAN Grand Prix

### \*ATLASSIAN WILLIAMS RACING\*

	Updated component	Primary reason for update	Geometric differences compared to previous version	Brief description on how the update works (min 20, max 100 words)
1	Cooling Louvres	Circuit specific - Cooling Range	Compared to the launch car, there are new cooling louvre panels available if required. Compared to the cooling specification used in Bahrain, we have new panels that have more louvres and larger louvres.	The higher cooling louvre panels simply allow more air mass to flow through the cooling system, which keep the PU, Gbox and hydraulic fluids in the correct temperature window to suit the conditions and nature of the Melbourne circuit.
2	Coke/Engine Cover	Circuit specific - Cooling Range	If a further step of cooling is required, then an optional GF can be fitted to the trailing edge of the central cooling exit.	Like the higher cooling louvre panels, this addition works by drawing more cooling air through the cooling system. It will only be used in the event of very high ambient temperatures.
3	Front Wing Endplate	Performance - Flow Conditioning	Compared to the car that we raced at the end of the 2024 season, the detail around the tips of the rearmost FWing elements and their connection to the endplate has been updated. The profile of the endplate itself is also updated and now has a straighter profile.	These detailed geometric updates work with the overall profiles of the new front wing elements to offer both direct load from the front wing as well as generating flow structures that help deliver efficient load from the floor.
4	Front Wing	Performance - Local Load	All four elements of the front wing are updated compared to the assembly that raced in Abu Dhabi at the end of the 2024 season. The relative size of the elements is updated, and the central section of the main element is lowered.	These revised profiles work with the detailed changes to the intersection between the wing elements and the endplate to offer both direct load from the front wing as well as generating flow structures that help deliver efficient load from the floor.
5	Coke/Engine Cover	Performance - Flow Conditioning	Compared to the end-of-season FW46, the new FW47 features a reprofiled sidepod undercut. The overall width of the sidepod is also increased. The central cooling exit is lower and wider with the remainder of the engine cover more tightly packaged around the internal components.	The geometric changes to the main bodywork components improve local load performance but also supports the flow field around the rear wing elements and floor edge, which supports the generation of load in these components.



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## Car Presentation – Australian Grand Prix

### KICK Sauber F1 Team

	Updated component	Primary reason for update	Geometric differences compared to previous version	Brief description on how the update works (min 20, max 100 words)
1	Coke/Engine Cover	Performance - Flow Conditioning	A full Aerodynamic program for the 2025 car has resulted in all areas being revised and developed. Much of this work has centered around new directions in upper bodywork design.	The redesign better compliments downstream flow and improved management of losses in the upstream flow.
2	Floor Body	Performance - Flow Conditioning	Floor redesign.	The floor has been changed significantly over the winter to enable more consistent downforce delivery.
3	Front Wing	Performance - Flow Conditioning	A new front wing and developments on the rear wing are also introduced at Race 01 to complement the above changes.	The changes work with the upper bodywork and floor updates to optimise aerodynamic flow overall the package.
4	Rear Wing	Performance - Flow Conditioning	A new front wing and developments on the rear wing are also introduced at Race 01 to complement the above changes.	The changes work with the upper bodywork and floor updates to optimise aerodynamic flow overall the package.
5	Front Corner	Performance - Mechanical Setup	A full new front suspension design has been implemented on the C45, both external geometry and associated kinematics and the front suspension internals layout and components are new for 2025.	This work has been done primarily for improved handling and mechanical grip in the second year of our front pull-rod design.
6	Rear Corner	Performance - Mechanical Setup	The cooling system layout has been revised to improve both weight and efficiency of the cooling systems, together with revisions to the gearbox case design and rear suspension outboard components.	The cooling system layout has been revised to improve both weight and efficiency of the cooling systems, when combined with the 2025 cars new bodywork this provides a far more optimal solution than that seen on the 2024 car. In line with this, revisions to the gearbox case design and rear suspension outboard components have allowed both an efficient weight reduction as well as improved rear axle mechanical grip - particularly in



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				high-speed conditions. Similar weight reduction measures for little compromise have been successfully initiated in other areas of the C45 chassis.
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