



PRESS PACK

2023





BWT ALPINE F1 TEAM



# A523

**BWT Alpine F1 Team enters its third season in Formula 1 after finishing in fourth place in the 2022 FIA Formula 1 World Championship, marking a clear, upwards trajectory of the team since it entered the sport in 2021.**



For 2023, the team reveals its new driver line-up where Esteban Ocon is joined by compatriot Pierre Gasly to form an all French pairing forged in the rustic lands of Normandy. The story of how Alpine's two drivers have come together at this stage of their careers is compelling, venturing a long way from their days as aspiring karters at the age of ten.

Esteban and Pierre, as well as Reserve Driver Jack Doohan, will represent the iconic colour of Alpine blue on the global stage as they embark on the 23-race campaign, which spans five continents including the highly anticipated new-for-2023 Las Vegas Grand Prix in November.

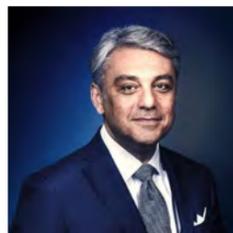
The team is supported by the dedication to Formula 1 by Renault Group CEO Luca De Meo and is led by Alpine Cars CEO Laurent Rossi and Formula 1 Team Principal Otmar Szafnauer on its ambitious road map to compete for Formula 1 World Championship titles within 100-races. After last season's 22-race campaign where the team progressed from fifth place in 2021 to fourth place in 2022, 78-races remain on the team's objective to step towards the front of the grid.





For 2023, the team unveils its 2023 challenger, the A523 Formula 1 car, powered by the Renault E-Tech RE23 power unit. Chief Technical Officer Pat Fry and Technical Director Matt Harman have led the Enstone programme for chassis development seeking to make improvements over the winter to the package, while Executive Director, Bruno Famin, at Viry-Châtillon has worked hand in hand with Enstone to integrate the power unit.

Formula 1 remains seminal to Renault Group's 'Renaulution' ambitions where each of its brands has been best positioned to allow its development. Alpine is synonymous with racing, and it remains true to its identity by remaining competitive in Formula 1 and other racing categories.



**LUCA DE MEO, CEO RENAULT GROUP**

I'm very much looking forward to the 2023 Formula 1 season and seeing BWT Alpine F1 Team continue on its impressive journey towards the front of the grid. Since the Alpine name joined Formula 1, I have seen clear and tangible progress, which is the end result of the passion, determination and dedication of each and every staff member who contributes to the success of the team. It often reminds me why I decided to place Alpine in Formula 1 because, ultimately, it belongs there; it feels right. 2023 marks one more chapter in the story of Alpine and this year we make history with two French drivers representing our brand. We shall see what the season brings, of course, and myself and all at Renault Group are excited to follow the progress closely.

# A523



▽  
Alpine's history dates back to 1955 when Jean Rédélé, a young man passionate about competition, formed the automotive brand. Fast forward nearly 70 years, and Alpine is now at the forefront of motor racing, competing alongside the elite in the FIA Formula 1 World Championship and the World Endurance Championship as well as other motorsport disciplines.

# 1955

▷ The original A110 road car was introduced in 1962 and, by the early 1970s, Alpine was a major force in top-flight rally competition. In 1971, Alpine took the three steps on the podium of the world-famous Rallye Monte Carlo for the first time and later again in 1973. The company went on to win the World Rally Championship Manufacturers' title later that year.

Alpine achieved one of its most famous motorsport triumphs in 1978; overall victory at the 24 Hours of Le Mans. The factory continued to release new and innovative road cars throughout the 70s and 80s, including the A310 V6 and the GTA.

A period of non-racing activity followed, but as soon as Alpine's relaunch in 2012 was announced, a competition programme was born to develop the brand's awareness. This commitment was underlined in endurance racing, through a partnership with the Signature team, which has enjoyed numerous successes on international circuits.

Fast forward to 2021 and Alpine took its very first steps into the elite realms of Formula 1, after Luca de Meo announced the company's decision to enter the series as the rebranded Alpine F1 Team.

The same year also marked an important milestone in the history of the brand, with a commitment for the first time in its history to Formula 1, a return to the premier class of the World Endurance Championship, and the involvement in the FIA R-GT with Alpine Rally from customers competition program.

The team finished the season fifth in the FIA Formula 1 Constructors' Championship in 2021, logging the best debut campaign of a Formula 1 team since Brawn GP took the title in 2009. In 2022, after adapting strongly to a significant overhaul of the regulations, the team went one better to finish in fourth place.



## THE ALPINE A110 R

Extreme, light, more streamlined, and more inspired by motor sports than ever – ‘radical’ is the only way of describing the car that now sits as the crowning jewel of the A110 line-up.

The ultimate expression of lightness and performance, the Alpine A110 R was designed to be sensational on the racetrack yet still certified for the open road.

The first main difference with the A110 R is seen through the extensive work put in to reducing its overall weight down to as little as 1,082kg – 34kg less than the A110 S. A weight gain made possible by the use of carbon parts. Its aerodynamic performance has been enhanced, with the contribution of the BWT Alpine F1 Team for greater downforce and reduced drag. For the first time ever on the A110 range, some parts (e.g., the bonnet, rear window, and diffuser) have been redesigned specifically for the new model. The exclusive improvements made to the chassis, along with the 1.8L 300HP motor, and race-car interior, feed into the heightened radical feel that make the driving experience more intense than ever before.

Taking just 3.9 seconds to go from 0-100km/h, the All-new Alpine A110 R pushes the boundaries of sports cars. Building off the brand's commitment to motor sports, the design phase involved direct input from top-level experts and is more than ready to beat the clock when it takes to the racetrack. Made in France at the Manufacture Alpine Dieppe Jean Rédélé, this latest car marks the beginning of a new chapter for the brand's expertise in motor sports.



### ALPINE A110R TECHNICAL SPECIFICATION

Engine type	4 cylinders in-line, 16 valves
Engine capacity (cm <sup>3</sup> )	1798
Bore & stroke (mm)	79,7 X 90,1
Injection type	Turbo direct injection
Gearbox type	7-speed dual-clutch gearbox
CdA (Cd.A, A(m <sup>2</sup> )/Cd)	0,637
Top speed (km/h)	285 km / h
0-100 km/h (s)	3,9
Wheel	215 / 40 R18 245 / 40 R18 Michelin Pilot Sport CUP 2
Min empty weight (MVODM)	1082

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**Laurent is the Chief Executive Officer (CEO) of Alpine, leading the development of the car brand as well as overseeing its ambitions in Formula 1 and motorsports.**

Born in 1975, in Corsica, Laurent took a keen interest in engineering, motorsport and Formula 1 from a young age. An engineer by trade, Laurent holds a Master of Science in Fluid Mechanics from ENSEEIHT (Toulouse) and a Master of Science in Mechanical Engineering / Automotive Engines & Petroleum Products from IFP School (Paris). He began his career at Groupe Renault in 2000 as Project Leader in the Powertrain Division. Laurent then moved to the USA to obtain an MBA from Harvard Business School, which he achieved in 2009, and was then recruited to work for the Boston Consulting Group in New York as Project Leader, specialising in automobiles.

Laurent remained in America, joining Google in 2012 as Global Accounts Business Manager, leading business relations with key accounts in the automotive industry. By 2018, Laurent returned to Europe and to Paris, to again work for Groupe Renault in Strategy and Business Development, becoming Chief Strategy Officer in April 2018.

With the Alpine name joining the Formula 1 grid ahead of the 2021 FIA Formula 1 World Championship season, Laurent was appointed CEO of Alpine in January of that year, tasked with developing the car brand's exclusive and innovative line-up, making it profitable by 2026, as well as leveraging its involvement in motorsport.

Away from leading Alpine, Laurent is an avid sports fan with particular interest in Rugby Union and Football as well as being a competitive Squash player.

Q&A



**What are the goals for the team for the 2023 FIA Formula 1 World Championship?**

What I really want to see in 2023 is continued progress from the team. We ended last season on a high by finishing in a deserved fourth place in the Constructors' Championship, an improvement from fifth, which we achieved the season before. Clearly, our trajectory and momentum are on the up and it's important now that we carry on with that trend. Finishing fourth again is the minimum target but this time we have to do that with a much firmer grip and by that, I mean with more finishes, less retirements and more points. We're hitting our development targets on our 100-race plan, and we have a greater understanding on the new regulations as we enter this year. The respective teams led by Otmar, Pat, Matt and Bruno across Enstone and Viry have done an immense job in their preparation, and I cannot wait to see the A523 on track.

**How exciting is the 2023 driver line-up with Esteban being joined by Pierre?**

Our driver line-up is certainly a hot topic, not just amongst Formula 1 fans but general sports fans both in and away from France. For me, it's an exciting pairing, one of the strongest on the

grid, which mixes natural talent with experience and ambition. Esteban has been with the team for a number of years and has always been consistent and dependable. Pierre, meanwhile, embarks on a new chapter in his career and it will be a fantastic opportunity for them both to work together to drive the team forwards. Teamwork is going to be key to our success and I expect a great level of commitment, maturity and togetherness from everyone at the team in contribution to attaining our goals.

**How is Alpine's road car programme benefitting from its Formula 1 involvement?**

We've seen the brand exposure of Alpine increase astronomically since we entered Formula 1 in 2021. We're always exploring ways to work hand in hand and transition technology and ideas from the pinnacle of motorsport into our everyday road cars and the A110 R, the most radical Alpine ever, is a very good example of the bridges we build between F1 and road cars. What is exciting for 2023 is the Formula 1 calendar and being able to explore new markets. Of course, there are three races across the United States this year and that's very exciting for us to delve into that market.



Q&A

**Firstly, what are your reflections of the 2022 FIA Formula 1 season?**

It was a privilege to be entrusted by Laurent Rossi and Luca de Meo to lead BWT Alpine F1 Team in 2022 to fourth place in the Constructors' Championship. The team met its goals, another milestone ticked on its journey, and now I look forward to seeing what we can achieve in 2023. I would say last season was a great year of learning and understanding, especially the complexities of the new regulations where we were able to adapt fast to bring consistent upgrades to our package. It's been an intense off-season for the team and we now look ahead to unveiling our 2023 challenger; the culmination of over 1,200 people coming together and working exceptionally hard.

**What are your early impressions of the A523 Formula 1 car?**

We've worked hard on developing the A523, combining all of our learnings from last season together with pure innovation to come up with what we believe is an exciting package. This year, we have a more competitive car and the teams at both factories in Viry and Enstone

have worked well to improve the overall reliability; something which did let us down at times last season. We continue to grow our workforce and I see a real spark of team spirit here and a high level of motivation from everyone to push this team forwards. Time will tell on where we stand in the championship order.

**How much are you looking forward to working with Esteban and Pierre this year?**

This is my fourth season working with Esteban and it's been great to see him develop and mature into a fantastic Formula 1 driver. Esteban was the reason this team finished fourth in 2022 with sixteen points finishes courtesy of some very measured and consistent race drives. I'd like to see Esteban keep making big steps forwards, which will help this team on its journey. This will be the first time I've worked with Pierre and, as I've said before, we signed him for this team based on his natural talent, raw speed and experience in Formula 1. It's a great line-up and one which motivates this team to produce a fast and reliable race car, which will allow them both to flourish and showcase their ability.



**Otmar begins his second season as Team Principal of BWT Alpine F1 Team having joined in March 2022.**

He reports to Alpine CEO Laurent Rossi and is tasked with the day-to-day management of the Formula 1 team with the sole aim of making progress towards the front of the grid and to compete for championship titles within 100 races.

The Romanian-born American started his motorsport career in 1989 when he became Racing Programmes Manager for Ford. Whilst working for Ford he attended the Jim Russell Racing Driver School, where he had a stint as a driver in Formula Ford and Formula 2000.

Otmar began his Formula 1 journey in 1998 as British American Racing's (BAR) first Operations Director. He then became Honda's Vice President of Racing Developments and a member of the Management Board for the Honda F1 Team.

When Honda departed F1 in 2008, Otmar remained in Formula 1 and joined Force India in 2009, overseeing the team's rise from finishing ninth in the Championship in 2009 to regular top five efforts from 2015: finishing fourth in 2016 and 2017. Most recently, the 58-year-old led the team through its rebrands to Racing Point in 2019 and 2020 and Aston Martin in 2021, overseeing their only race win, before signing for Alpine prior to the 2022 FIA Formula 1 World Championship. The team finished in fourth place in the Constructors' Championship in his first season as Team Principal.





**Bruno enters his second year at the helm of the team's engine division in Viry-Châtillon after joining the team prior to its 2022 campaign. Bruno remains responsible for the development of the Power Unit, working closely with Enstone to optimise its performance within the chassis package.**

The Frenchman began his time in motorsport with Peugeot in 1989, working with Peugeot Talbot Sport on engines and gearboxes. He personally worked on several vehicle projects such as the 905 Spider and the 106 GrA.

In 2005, Bruno was made Technical Director of Peugeot Sport and by 2012, he took over as Director of the company. He played a seminal role in the Le Mans winning 908 project and the record-breaking Pikes Peak victory in 2013 at the hands of Sebastien Loeb. Bruno was also at the helm of three Dakar Rally victories between 2016 and 2018 as well the 2015 World Rallycross Championship win.

By 2019, Bruno became Director of Operations and then Deputy Secretary General for the Fédération Internationale de l'Automobile (FIA). His main role was to manage the integration of all of the Federation's sporting, technical, safety and support functions, and to deal with FIA championships promoters.

Q&A



**It's your second season as Executive Director, what were your main reflections on 2022?**

Clearly, finishing in fourth place in the Constructors' Championship can be defined as a successful season, so that was satisfying for the team, especially in an era for Formula 1 with such revolutionary changes both on chassis and power unit. We were aggressive on our engine design in light of the development freeze and that brought some high moments throughout the year and some bitter ones. It was a privilege to see up close the collective hard work of the teams from Enstone and Viry who did a very good job in collaborating for a smooth and effective power unit integration to the chassis and, in general, maximising the package through the year.

**What changes and improvements have been made at Viry over the course of last year?**

I would say that 2022 was a part transitional year at Viry given I joined the team prior to the start of the 2022 season. We are now just over 300 people working on site at the site for F1 and we've grown in size geographically with some new facilities. We are continuing our engine dyno modernisation plan

and building two new dynos for electric motors. The organisation has evolved and our work together with the Enstone teams is increasingly effective. All these investments and improvements allow us to be more efficient and above all to step up the development of the 2026 power unit and car generation.

**What can you say about the Renault e-Tech RE23 power unit?**

We've been working closely with the teams at Enstone on bettering the packaging and integration for our powertrain system. This demonstration of good teamwork was highlighted in January when we joined together in using our new test facility in Viry to validate the powertrain system, which was a success and an important milestone in the inception of the A523-RE23 package. We have a newly designed water pump to combat our reliability issues from 2022 on this part. It is new, designed in a new location, and we have confidence that this problem is now fixed. It's been a busy period at Viry with endurance testing on the dyno and we look forward to seeing the results on track to see if this hard work has truly paid off.





**As Technical Director, Matt takes responsibility for delivering performance and experiments to the track, structuring the technical organisation and processes, plus growing talents and teams.**

He oversees chassis technical direction, bringing to the team his unique experience in chassis-power unit technical integration to extract maximum overall car performance.

Matt joined the team in September 2018 as Deputy Chief Designer before moving to Engineering Director. He signed with over 18 years of experience in powertrain and overall race vehicle engineering. Matt's first taste for engineering began at Ricardo, an automotive business specialising in a range of market sectors including passenger car, commercial vehicles, rail and clean energy.

He then moved to Mercedes AMG High Performance Powertrains as Engineering Team Leader - remaining in that position for 11 years - before becoming Head of Powertrain Integration and Transmission Design for Mercedes-AMG Petronas Formula One Team between 2011 and 2018.

Q&A



**How has the A523 evolved since last year's car?**

The A523 has certainly evolved in many aspects since its predecessor, the A522. We've made changes to both the front and rear suspension and we've unlocked some performance from the front wing and front flow structures that has allowed us to produce further performance into the diffuser, which has brought a slightly different rear suspension concept. We've adapted the heat rejection system in size and position to complement an enhanced bodywork concept building on last year's great performance. At the rear of the car, we are improving efficiency from the rear wing and in particular the beam wing element, which is yielding high levels of efficiency gain.

**When did the A523 design project start?**

We began this project quite a long time ago in November 2021, so even before the inception of last year's A522. We accumulate a vast quantity of data through the design and validation allowing us to improve performance on the various sub-systems. The objective is to build a wide picture so we can then identify concepts and areas to improve. As I mentioned, the A523 is a

significant evolution from the A522 as a result from a high level of learning and understanding that we've faced over the last year and a half during the big change in regulations.

**The team stood out in the development race last year, what is the plan for the 2023 season?**

We were very pleased with our development programme in 2022 and we created a clear, well-structured plan to bring upgrades on a regular basis, along with bigger and more effective updates at certain points during the year. In 2023, we aim to be even more aggressive. We want to continue in the same vein, and we already have a clear plan in place and things in the pipeline, both aerodynamic and mechanical. We're definitely excited by what we have lined up in terms of development.

**What milestones have we reached for the A523 car so far?**

The A523 was fully homologated before Christmas, which was a fantastic step forwards for the team. We've been well invested in our validation programme. In the third week of the year, we made use of our full car power unit test facility in Viry to validate the powertrain in the context of the rest of the car. We were very pleased with what we achieved there and the mileage we were able to complete. That particular project, hand in hand with Viry, went extremely well and it means we go into the season with increased confidence on certain aspects of our package.

**How has the Enstone-Viry collaboration worked in preparation for this season?**

I'd say the work between Enstone and Viry is the closest it's ever been, especially at this stage of the year in our preparation for the season. We've been identifying root causes together and it was no secret that we faced some tough moments in 2022 in best executing our powertrain system - the gearbox in conjunction with the power unit. We're very happy with our work together and we're working in a clear and positive direction, which bodes well for the future especially with the 2026 programme in mind. In terms of the power unit, even though it's homologated, we've put an emphasis on the integration into the car, reliability and vehicle application performance, where we will see some improvements this season.





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**MATTHIEU DUBOIS**  
**Head of Race Strategy**

Matthieu is the team's Head of Race Strategy and has worked for the team in Formula 1 for 25 years with February 2023, officially marking 25 years of service. Matthieu finalised his studies in 1997 in Mechanical Engineering from Ecole Centrale, Nantes, and worked as an Engineer with Srena Offshore Limited for his first job. In 1998, Matthieu joined Renault in Formula 1 as a Dyno Engineer and then as a trackside Test Engineer. Between 2003 and 2006, Matthieu worked as Chief Test Engineer for the engine and continued in a trackside testing role until 2007. In between obtaining a Masters in Motorsport from Cranfield in 2007, Matthieu then switched focus to strategy working as a Strategy Engineer between 2008 and 2012. He then returned into a power unit specific role from 2013, working as Trackside Operations Manager for all power units between 2015 and 2017. In 2018, Matthieu took on his current role heading the team's race strategy.

**ALAN PERMANE**  
**Sporting Director**

Alan has worked at Enstone in a number of roles over a 34-year career. Currently Sporting Director, he first worked as an Electronics Engineer for Benetton, contributing to Michael Schumacher's first world championship victory in 1994. Alan then worked with Jean Alesi in 1996 and 1997 as Race Engineer and later in the same role to Giancarlo Fisichella. By 2002, Alan engineered Jarno Trulli and again Fisichella in 2005 and 2006 across the two-world championship winning years. Alan then became Chief Race Engineer for Renault F1 Team and Lotus Renault GP between 2007 and 2011. In 2012, he became Trackside Operations Director for Lotus F1 Team until Renault's return in 2016. As Sporting Director, Alan is responsible for a range of matters concerning the trackside team, including overseeing the race team and the primary spokesperson to the FIA.

**CIARON PILBEAM**  
**Head of Trackside Engineering**

Ciaron is Head of Trackside Engineering for BWT Alpine F1 Team and has worked in Formula 1 since 1998. He first started at British American Racing working in Vehicle Dynamics. A year later, Ciaron worked closely with Jock Clear as Assistant Race Engineer to 1997 Formula 1 world champion Jacques Villeneuve. Ciaron continued working with BAR as Race Engineer to Takuma Sato before moving to Red Bull Racing in 2006 with Christian Klien. In 2007, Ciaron took on the role as Mark Webber's Race Engineer, keeping that position for six years. He assisted nine race wins for the Australian and contributed to three constructors' world championship titles. Ciaron then joined Lotus F1 Team as Chief Race Engineer in 2013 and then McLaren in the same role. In 2017, Ciaron returned to Enstone as Chief Race Engineer, working closely with Alan Permane and the engineering team, and he now occupies the role of Head of Trackside Engineering.

**JOSH PECKETT**  
**Race Engineer, Car #31**

Josh has been Race Engineer to Esteban Ocon since 2021. Josh and Esteban first crossed paths in 2016 at Manor, when Josh worked with the team as Pascal Wehrlein's Race Engineer, having previously engineered Will Stevens at the former Banbury-based outfit the previous year. Josh graduated from the University of Sheffield in 2011 with a degree in Mechanical Engineering. With an interest in motorsport, he began his working career as a Performance Engineer at GP2 squad iSport International with Sam Bird, Marcus Ericsson and Jolyon Palmer. He then transitioned to Formula 1 in 2013 with Marussia F1 Team, joining Manor in 2015 and Renault in 2017 on the Race Support Team. In 2019, Josh became Performance Engineer for Nico Hülkenberg, continuing in the same role with Esteban in 2020, before taking on full Race Engineer duties in 2021.

**KAREL LOOS**  
**Race Engineer, Car #10**

Karel works as Race Engineer to Pierre Gasly having previously engineered Fernando Alonso, Daniel Ricciardo, Carlos Sainz and Jolyon Palmer between 2017 and 2022. Alongside a semi-professional football role as an aspiring goalkeeper, Karel studied for five years in various engineering colleges in his native Belgium, completing his education with a Masters in Motorsport Engineering and Management from Cranfield University. Karel first worked in motorsport in 2009 as a Data Engineer with PK Carsport in FIA GT - alongside his studies at Cranfield - and then in the same championship as a Race Engineer with SRT. A move to Formula 1 followed in 2011 as a Vehicle Performance Engineer with Lotus F1 Team. Karel remained at Enstone in a number of trackside roles before becoming Race Engineer to Palmer in 2017, Sainz in 2018, Ricciardo across 2019 to 2020, Alonso during his two-year stint and now with Pierre ahead of the 2023 season.

**PAT FRY**  
**Chief Technical Officer**

Pat joined BWT Alpine F1 Team in February 2020 as Chassis Technical Director before moving to Chief Technical Officer in February 2022, overseeing all technical activities in Enstone. Pat is responsible for setting the performance target of the car, defining the technical capabilities and competencies needed and identifying future technologies and disruptors. He will ultimately arbitrate on major performance trade-offs and risks and set the long-term development strategy to maximise performance within the constraints of the cost cap. Pat has worked in Formula 1 since 1987, including stints at Benetton, McLaren, Ferrari and Manor.



**CHASSIS**

Moulded carbon fibre and aluminium honeycomb composite monocoque, manufactured by BWT Alpine F1 Team and designed for maximum strength with minimum weight. Renault E-Tech 2023 power unit installed as a fully stressed member.

**FRONT SUSPENSION**

Carbon fibre top and bottom wishbones operate an inboard rocker via a pushrod system. This is connected to torsion bar and damper units which are mounted inside the front of the monocoque. Aluminium uprights are complimented by BBS standard machined magnesium wheel rims and standard wheel covers.

**REAR SUSPENSION**

Carbon fibre top and bottom wishbones with push rod operated torsion bars and transverse-mounted damper units mounted inside the carbon suspension carrier. Aluminium uprights are complimented by BBS standard machined magnesium wheel rims and FIA standard wheel covers.

**TRANSMISSION & HYDRAULIC**

Eight-speed semi-automatic cassette gearbox with reverse gear. Hydraulically operated "Quickshift" system maximising speed and consistency of gearshifts with a hydraulically controlled differential. Hydraulic supply for power unit actuation, power steering, DRS and clutch.



**FUEL SYSTEM**

Kevlar-reinforced and homologated rubber fuel cell incorporating a scavenge to primer pump fuel supply system.

**ELECTRICAL**

MES-Microsoft Standard Electronic Control Unit.

**BRAKING SYSTEM**

Carbon discs and pads. Calipers and Master cylinders Brembo S.p.A with fully integrated brake by wire system.

**COCKPIT**

Removable driver's seat made of anatomically formed carbon composite, with six-point harness seat belt and entire assembly ballasted up to 80kg. Steering wheel integrates gear change paddles, clutch paddles, DRS and driver display unit.

**OVERALL WEIGHT**

796kg, with driver, cameras and ballast

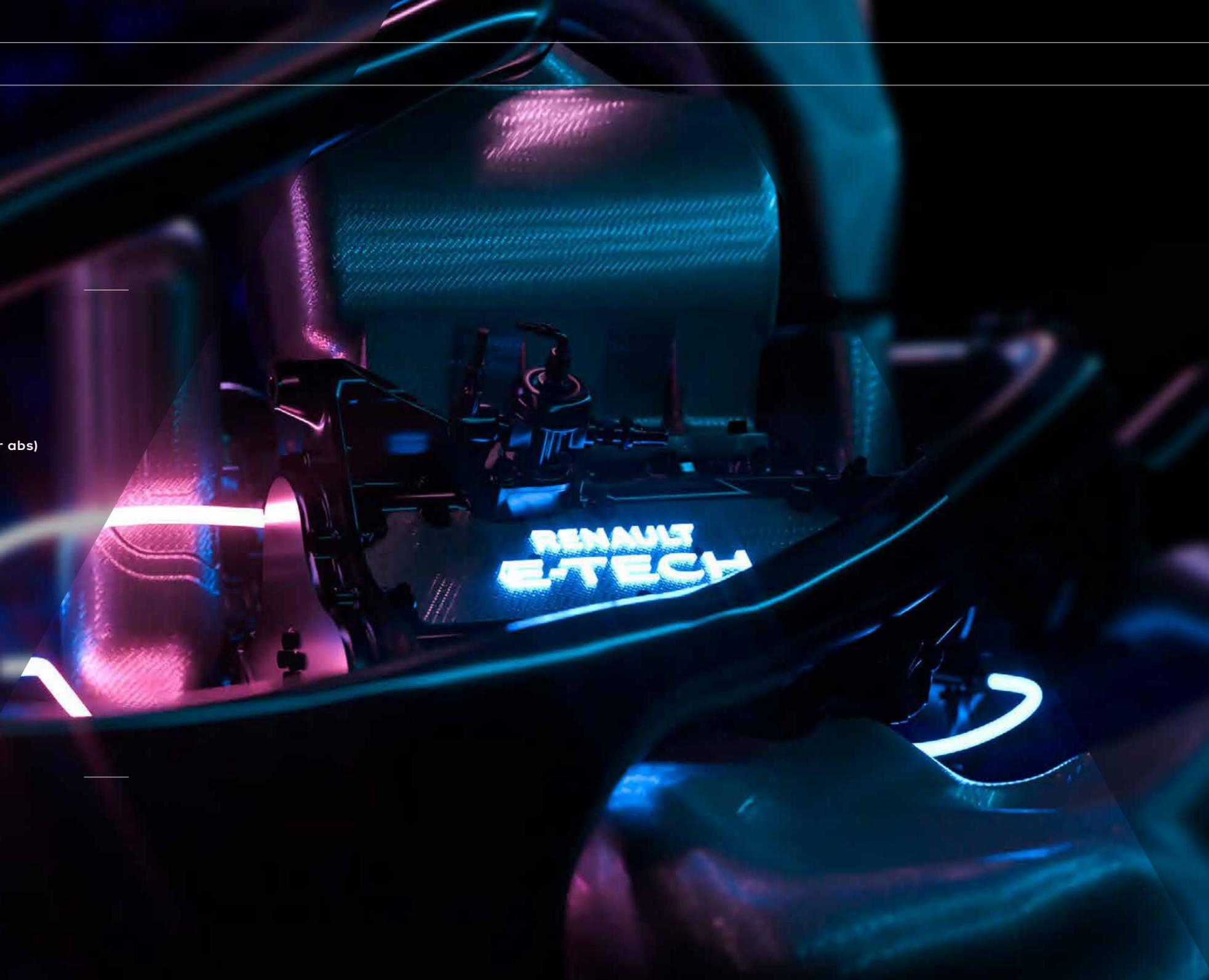






**ENGINE**

Displacement	1.6L V6
Number of cylinders	6
Rev limit	15,000rpm
Pressure charging	Single turbocharger, unlimited boost pressure (typical 5 bar abs)
Fuel flow limit	100kg/h
Permitted fuel quantity per race	Max 110kg
Configuration	90° V6
Bore	80mm
Stroke	53mm
Crank height	90mm
Number of valves	4 per cylinder, 24
Fuel	Direct fuel injection





ENGINE

MGU-K rpm	Max 50,000rpm
MGU-K power	Max 120kW
Energy recovered by MGU-K	Max 2 MJ/lap
Energy released by MGU-K	Max 4 MJ/lap
MGU-H rpm	>100,000rpm
Energy recovered by MGU-H	Unlimited

GENERAL

Weight	Min 150kg
Number of Power Units permitted per driver in 2020	3 ICE/Turbo/MGUH/MGU-K and 2 ES/CU 8 sets of engine exhausts
Total horsepower	More than 950hp

RENAULT  
E-TECH





OUR DRIVERS

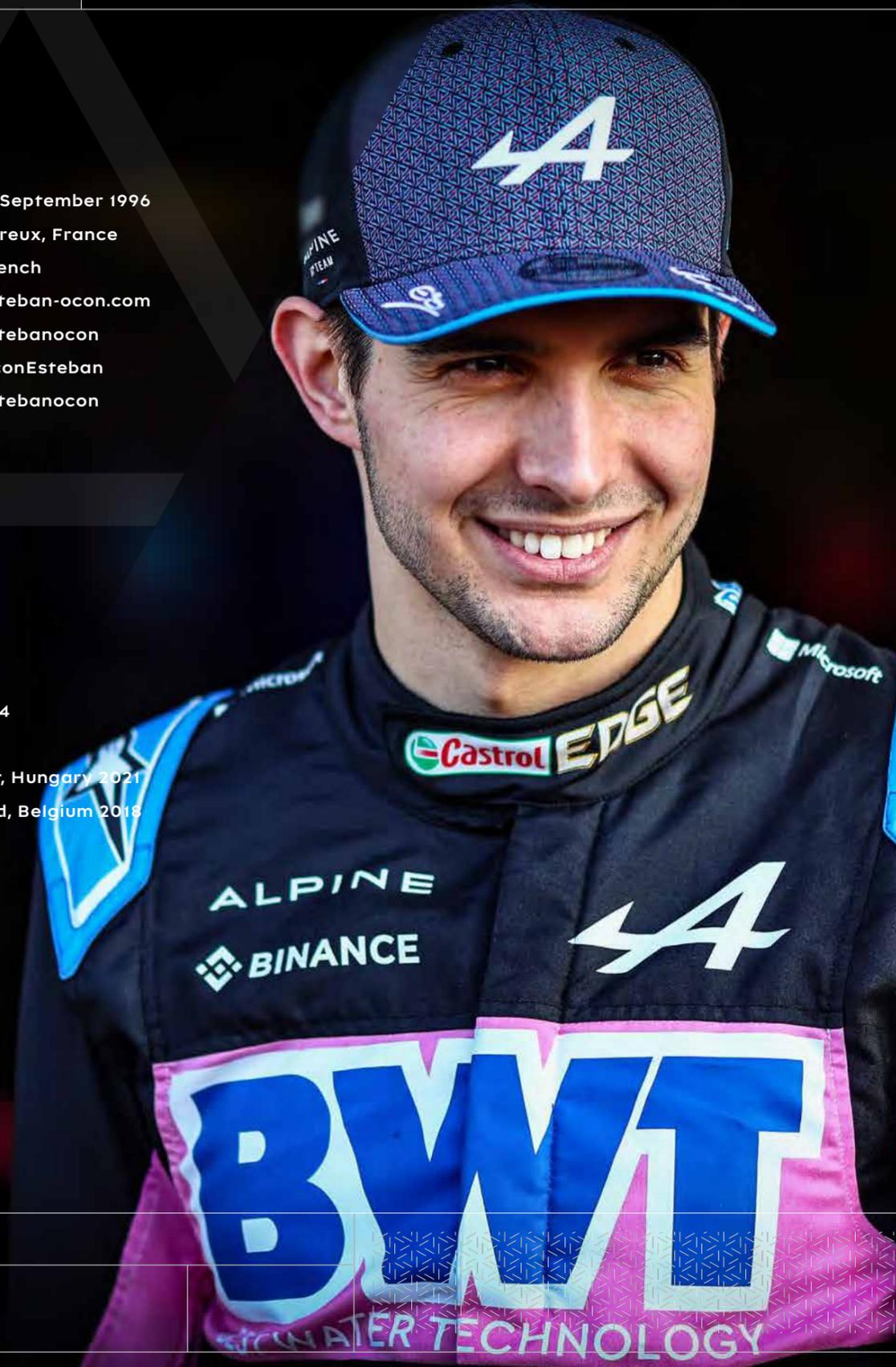


KEY DETAILS

Date of Birth **17 September 1996**  
 Place of Birth **Évreux, France**  
 Nationality **French**  
 Website **esteban-ocon.com**  
 Instagram **estebanocon**  
 Twitter **OconEsteban**  
 TikTok **estebanocon**

F1 STATS

Grands Prix Started **111**  
 Wins **1**  
 Podiums **2**  
 Pole Positions **0**  
 Fastest Laps **0**  
 Points **364**  
 Best Finish **1st, Hungary 2021**  
 Best Grid **3rd, Belgium 2018**



**Esteban Ocon begins his fourth season with the team ahead of the 2023 FIA Formula 1 World Championship season, his sixth full-time campaign in Formula 1, which he enters on the back of his best overall year in the sport and a career-high points-tally.**

Esteban is well known to the Enstone-Viry family having spent the 2016 season as the team's Reserve Driver, and, prior to that, was part of the Lotus junior programme during which he won the FIA European Formula 3 title in 2014.

A year later Esteban won the GP3 Series crown. The 26-year-old has started 111 Grands Prix and accumulated 364 points during that time since making his Formula 1 debut as a teenager at the Belgian Grand Prix in 2016.

His best qualifying performance to date remains his superb third place in Belgium in 2018, while his best race result is his stunning debut victory at the Hungaroring in 2021. This year he will partner Pierre Gasly in an exciting all-French driver pairing, mixing talent, youth, and experience.

Q&A

**How has your physical and mental preparation been going during this longer than usual winter period?**

I really enjoy my pre-season preparation and I would say it's been going well. It's been a longer off-season than usual since the 2022 season ended in November, which has allowed for some more time to switch off and recharge and, more importantly, to prepare for what will be another long and intense season. I was able to try new things and activities during this off season while balancing the training and I feel ready to go. I'm really looking forward to the season starting, bring it on!

**You have a new teammate this year and it's someone you know well so what do you expect of Pierre heading into this new season?**

Having Pierre join the team is an incredible story for us and for the Alpine brand. Pierre and I have known each other since we were little kids growing up in Normandy, so for both of us to reach our dreams of racing in Formula 1 and now on the same team is extremely special. We took different paths during our junior categories but I am excited to have Pierre join the Alpine family and I have no doubt he will settle in well and it's great to have him as my team-mate. I know we both can't wait to get started and help the Team reach its targets.

**You've had a taste of the A523 on the simulator and have discussed it at length with your engineers during the last couple of weeks. What are your early impressions?**

The start of the year is always exciting as there is so much anticipation and intrigue from everyone at the team. A new car brings new opportunities and as I driver all you want to do is go out there and push to the limit and fight for good results alongside your team. That will be the plan with the A523. Obviously, there's not much I can reveal at this stage - that will have to wait until Bahrain - but I must say I'm excited by what I've seen so far. Like every year, we do not know where our competitors will be so we need to keep our heads down and focus on ourselves and what we can control. We do hope to make all the men and women of Viry and Enstone proud as they've worked so hard over the winter to deliver this incredible machine, so a big thanks to everyone involved for their commitment and dedication.

PIERRE GASLY

Race Driver #10



**Pierre Gasly joins BWT Alpine F1 Team ahead of the 2023 FIA Formula 1 World Championship ready to take on his sixth full season in the sport.**

Pierre started his Formula 1 career at Scuderia Toro Rosso having impressively progressed through the junior formulae with driver titles in 2013 in Formula Renault Eurocup and in 2017 in the GP2 Series.

His talents caught the eye of Red Bull Racing who nurtured his career until the end of the 2022 campaign. Since his Formula 1 debut in Malaysia midway through 2017, Pierre has amassed 108 race starts, scored 332 points, claimed three podium finishes as well as a famous Grand Prix win, which he emotionally achieved at the 2020 Italian Grand Prix in Monza.

The Frenchman is well known to the Renault family having competed in Formula Renault categories during his teenage years as well as racing for the Renault e.dams Formula E team for two races in 2017. Pierre is well prepared for his Alpine debut in 2023 having sampled the A522 in last season's Abu Dhabi Test.

**Q&A**

**How excited are you to join Alpine for the 2023 season?**

As the season approaches, the excitement for me is definitely ramping up. It's an honour to officially be a BWT Alpine F1 Team Driver and I cannot wait to become fully integrated into the team. I've already spent a lot of time with some of the team getting ready for the year ahead and beginning this new chapter of my career. I'm especially thankful to Red Bull Racing for their support to this date and getting me to where I am, but right now, I feel this is a clean slate, a fresh start, and my future is in my own hands. The focus from me right now is working closely with the team and delivering strong results on a consistent basis to help Alpine meet its targets.

**What qualities do you bring to the team?**

Above all, I value hard work and commitment to anything I do. I really thrive on teamwork and working closely with people around me to reach whatever I set out to achieve. As a driver, I want to be up to speed as quickly as I can, but I'll remain realistic as I know it won't be easy to be immediately at 100% straight away. I'll keep working hard in my preparation, deliver consistent feedback to the engineers in order to improve the package and I aim to have strong results to benefit the team in the championship."

**What stands out for you on the 2023 calendar?**

It's another busy season in Formula 1. Last year it was fantastic to go to Miami for the first time and experience a very unique race weekend. I must say, Las Vegas is going to be very exciting for everyone in Formula 1 and so is our return to Qatar. Unfortunately, there is no home

race for us in France but I'm sure we will thrive in places like Monaco and Belgium and Silverstone for the Enstone team. I always look forward to Monza since I live in Milan and it's the venue where I won my first Grand Prix so that will always be special. Japan too is always a pleasure!

**Are you looking forward to working closely with a familiar face in Esteban this year?**

Esteban and I have known each other for a long time, and we've grown up racing together. It's a really special story that the two of us are now, not only in Formula 1, but we are both race winners in Formula 1 and now teammates at the French team on the grid. It's a true honour to represent France in this sport and that is made even more special now I've joined Alpine alongside Esteban. We must motivate each other and galvanize the team so we all reach our aims. It's an exciting year ahead!



**KEY DETAILS**

Date of Birth	<b>7 February 1996</b>
Place of Birth	<b>Rouen, France</b>
Nationality	<b>French</b>
Website	<b>pierregasly.com</b>
Instagram	<b>@PierreGASLY</b>
Twitter	<b>pierregasly</b>

**F1 STATS**

Grands Prix Started	<b>108</b>
Wins	<b>1</b>
Podiums	<b>3</b>
Pole Positions	<b>0</b>
Fastest Laps	<b>3</b>
Points	<b>332</b>

Best Finish	<b>1st, Italy 2020</b>
Best Grid	<b>2nd, Qatar 2021</b>

**PRESS PACK**

2023



KEY DETAILS

Date of Birth **20 January 2003**  
 Place of Birth **Gold Coast, Australia**  
 Nationality **Australian**  
 Instagram **jackdoohan**  
 Twitter **jackdoohan33**

JUNIOR FORMULAE STATS

Races **170**  
 Wins **20**  
 Poles **10**  
 Fastest laps **23**  
 Podiums **54**



Jack Doohan steps up to become BWT Alpine F1 Team's Reserve Driver in 2023 after joining the team's Academy programme last year.

Jack impressed in 2022 in his rookie FIA Formula 2 season claiming three wins on his way to sixth in the Drivers' Championship.

The Gold Coast born 20-year-old made his Grand Prix weekend debut in Mexico City in November where he drove Esteban Ocon's A522 in Free Practice 1. He then had his second F1 outing in Abu Dhabi before driving for the team in the post-Abu Dhabi Test.

Jack will have an increased test programme in 2023 alongside his racing duties in Formula 2 where he remains with Virtuosi Racing for his second season in the Formula 1 support category.

Q&A

How excited are you to be working closely with Esteban and Pierre over the season?

I'm really excited to be working alongside both Esteban and Pierre this year. It's a very strong line-up for the team. Both of them will provide solid data and help develop a fast race car together with the team. For me, I want to gain as much experience as I can from both of them throughout the year. I started to work more closely with Esteban last season especially in preparation for my two F1 outings. I don't know Pierre, so it will be good to welcome him to the team and learn things from him.

What does your Reserve Driver programme entail?

The role has many different avenues. I have to be ready in any circumstances in case one of the race drivers is unable to race for whatever reason. In that sense, I have to make sure I am prepared and ready for anything that might happen. More generally, it's about shadowing the team and the drivers to help maximise the race weekend. I will do a lot of simulator sessions at Enstone and some test days in an old car to stay sharp in Formula 1 machinery.

What attributes do you think makes a good Reserve Driver?

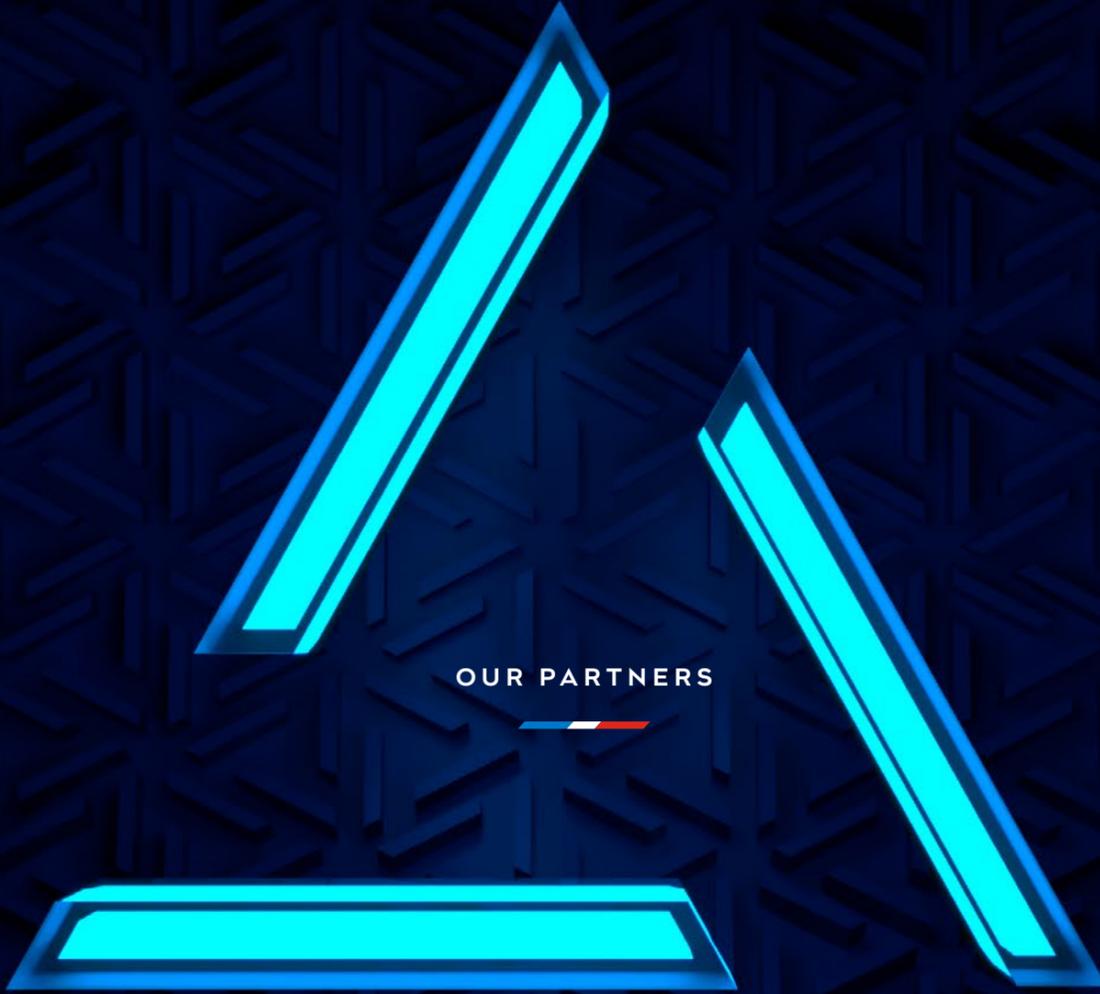
I'm very new to this role so I'll be finding out a lot about the criteria throughout the season. It's going to be about being dependable and consistent as well as having the ability to adapt quickly. I will be staying race sharp as I'm racing in Formula 2 this season so that is a benefit. I will be doing my best to help the F1 team out by providing feedback from my sessions. It might be small details but hopefully I can pass on some good knowledge and be an extra pair of eyes and ears to assist the team's progress.

How did you find the experiences in the A522 last season?

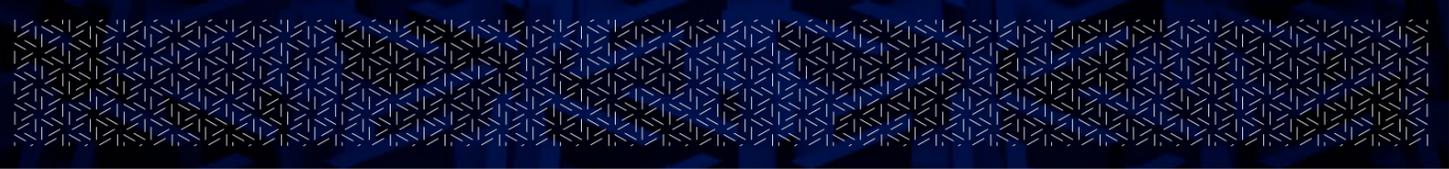
It was an awesome opportunity to drive the A522 in official Formula 1 sessions last year. My first one was in Mexico City for F1 and then in Abu Dhabi for another F1 as well as the young driver test. I took it step by step and focused on learning as much as I could on those days. I aimed to run to the programme and better my knowledge on what it takes to drive a modern Formula 1 car. By the post-race Abu Dhabi test, I was able to push a little more to see the potential of the car.

Are you looking forward to seeing and sampling the A523?

It's always exciting to be given an opportunity to drive a Formula 1 car. I think everything is looking good for 2023 and the team looks to be in good shape after a successful season in 2022. It will be a beneficial experience to drive the 2023 car and feel the differences from the A522 and see what has evolved. I'm really thankful to the team for these opportunities and it's really good at this stage of my career to keep adding this experience to my driving skillset.



OUR PARTNERS





The BWT - Best Water Technology - Group is a leading water technology company in Europe with a staff of more than 5,500, working on innovative, economic and ecologically friendly water treatment technologies to provide private households, industry, commerce, hotels and municipalities with the safest, healthiest and most hygienic water possible for their day-to-day needs.



BWT Alpine Climate Bottle  
Now available in the  
BWT Onlineshop!

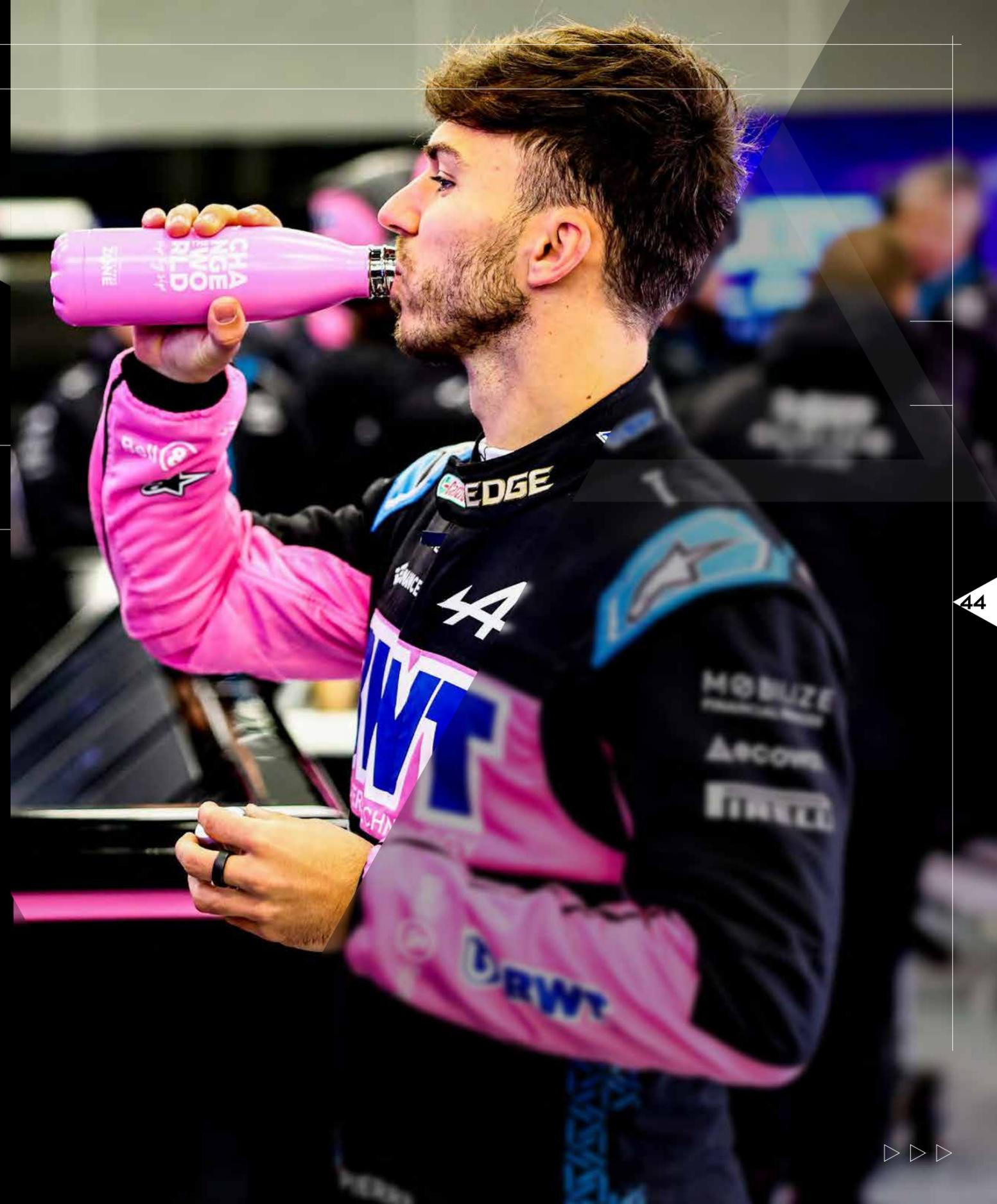
BWT provides modern water treatment systems and services for drinking water, process water, pool water and, especially, WFI - water for injection for the pharmaceutical and biotech industry. The company's research and development staff works on new techniques and materials using cutting-edge methods to develop economical and ecologically friendly products. Employees work particularly hard to create products which use fewer resources and less energy, thereby reducing CO<sub>2</sub> emissions.

Sustainability is in BWT's DNA, and every BWT product contributes to the conservation of our most valuable resource, water. BWT's Claim - For You and Planet Blue - is today more relevant than ever before, given the challenges our society faces worldwide

today. With its unique and patented water treatment technologies, BWT contributes every day to "Change the World - sip by sip" - not only through the creation of "Plastic Bottle Free Zones" but also with its worldwide leading know how in the development and production of high-performance membranes for the fuel cell - the energy converter of the 21st century.

BWT's declared goal is to provide water of perfect drinking water quality everywhere in the world. With innovative, patented BWT technologies, it is possible to make out of any locally available water healthy, tasty, mineralized drinking water - without the need to produce and transport bottled water. A win-win solution for people and the environment.

More information about BWT Group and their products and services is available at [www.bwt.com](http://www.bwt.com)





### BP

Bp's purpose is to reimagine energy for people and our planet. It has set out an ambition to be a net zero company by 2050, or sooner, and help the world get to net zero, and recently announced its strategy for delivering on that ambition.

### CASTROL

Castrol, one of the world's leading lubricant brands, has a proud heritage of innovation and fuelling the dreams of pioneers.

Our passion for performance, combined with a philosophy of working in partnership, has enabled Castrol to develop lubricants and greases that have been at the heart of numerous technological feats on land, air, sea and space for over 100 years.

Today, we are driving sustainability and the transition to lower carbon to shape the next 100 years.

Castrol is part of the BP group and serves customers and consumers in the automotive, marine, industrial and energy sectors. Our branded products are recognized globally for innovation and high performance through our commitment to premium quality and cutting-edge technology.



### MOBILIZE FINANCIAL SERVICES

As a partner caring for all its customers, Mobilize Financial Services builds innovative financial services to create sustainable mobility for all. A subsidiary of the Renault Group whose activity started almost 100 years ago, Mobilize Financial Services is the commercial brand of RCI Banque SA, a French Bank specializing in automotive financing and services for Alliance customers and dealers.

With operations in 36 countries and nearly 4,000 employees, the group financed over 1.4 million contracts (new and used vehicles) in 2021 and sold 4.7 million services. At end 2021, average performing assets stood at €44.8 billion in financing and pre-tax income at 1,194 million. Since 2012, the group has rolled out a deposits collection business in several countries.

At the end of December 2021, net deposits collected totaled €21 billion or 47% of the company's net assets. [www.mobilize-fs.com](http://www.mobilize-fs.com)

Follow us on Twitter: [@Mobilize\\_FS](https://twitter.com/Mobilize_FS)

### RENAULT E-TECH

Hybrid technology designed for everyone

As pioneers of the electric vehicle, Renault has developed the innovative and exclusive E-TECH technology. Protected by 150 patents, it has allowed to develop two types of hybrid engine :  
- E-TECH : cordless hybrid  
- E-TECH Plug-in : mains rechargeable hybrid

The E-TECH technology brings :  
- Maximum electric driving;  
- Maximum driving enjoyment;  
- All of the adaptability of the flagship models starting with All-New Renault CLIO.





## BELL&ROSS

For 30 years, Bell & Ross has equipped exceptional pilots whose mission and life depend on their instruments and their machines. Bell&Ross is, in essence, the supplier of extreme professionals for whom each watch is designed to meet four basic principles: readability, functionality, accuracy and reliability.

This is why, in 2016, the House launched an assault on the circuits by joining forces with the Renault F1 Team, the avant-garde watchmaker joining the very closed and high-tech Formula 1 industry.

In 2021, the team renamed to Alpine F1 Team. There was no change, however, as Bell&Ross remains the official watchmaking partner of the team. The two entities are united around the same passion for precision and high-performance mechanics. Through this prestigious partnership, Bell&Ross is pursuing its quest for excellence and innovation.

## BINANCE

Binance is the world's leading blockchain ecosystem and cryptocurrency infrastructure provider with a financial product suite that includes the largest digital asset exchange by volume. Trusted by millions worldwide, the Binance platform is dedicated to increasing the freedom of money for users and features an unmatched portfolio of crypto products and offerings, including trading and finance, education, data and research, social good, investment and incubation, decentralization, and infrastructure solutions, and more. For more information, visit [Binance.com](https://binance.com).

### About Binance Fan Tokens

Binance Fan Token is a type of utility token that powers the fan experience and connects teams and brands with their fans worldwide. Partnering teams can launch tokens to fans via Binance Fan Token Launchpads, while fans can show their support and unlock unique "fan moments" through exclusive rewards such as: once-in-a-lifetime experiences, limited edition NFTs, exclusive voting rights on certain club decisions reserved for fans and collectible fan badges. Binance Fan Tokens are also available for all Binance users via fiat and crypto purchases. For more details, available team tokens and new listings, visit the Binance Fan Token platform.

## BOEING

As the advanced central research and development organization of The Boeing Company, Boeing Research & Technology (BR&T) provides innovative technologies that enable the development of future aerospace solutions while improving the cycle time, cost, quality and performance of existing Boeing products and services.

Boeing Research & Technology employees typically work in small teams across Boeing with its global technology partners, including more than 20 international R&D consortia, to provide a broad array of innovative solutions. These include sustainability technologies, more intelligent and autonomous systems; advanced structures and materials technologies; flight sciences technologies; unmanned aerial systems; advanced manufacturing processes; and more.

During nearly 10 years successful collaboration, BR&T and Enstone have shared and developed technologies in such areas as Computational Fluid Dynamics, additive manufacturing and advanced materials.

Formed in 2006, BR&T is comprised of more than 3,500 technicians, technologists, engineers and scientists who create and collaborate with research and development partners around the world to solve the aerospace industry's toughest challenges. The company's research and technology development is largely conducted at 13 Boeing research centers in Australia, Brazil, China, Europe, India, Japan, Korea and the United States, including Alabama, California, Missouri, South Carolina and Washington.





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**BORGWARNER**

Delphi Technologies, a brand of BorgWarner, is a global Aftermarket leader championing next-generation talent, first-to-market innovations, market leading products and smart service solutions, for a better and more connected today and tomorrow.

Our mission is to bring the best of both worlds to our OES and Independent Aftermarket customers, ensuring that resources exist for the real-time Aftermarket, while charging forward for what is next. We are committed to developing solutions that prepare technicians all over the world, to help vehicles go cleaner, better, further, right through their lives.

**ECOWATT**

Ecowatt is a green investment platform that accelerates climate action by building renewable energy stations and funding social impact projects. Ecowatt has two distinct investment portfolios, the first is a Green Asset portfolio, and this is where Ecowatt either builds new renewable power stations or acquires operating ones. The pipeline of energy solutions includes a variety of options across solar, wind and geothermal, collectively amounting over 1,800 MW.

Ecowatt's second is the Social Impact portfolio, made up of land-based projects that produce carbon credits, such as reforestation. Currently, 25% of net revenue from the Green Asset portfolio is used to fund this portfolio. The expansion objective is to add ocean and water-based projects such as coral reef rejuvenation and clean-ups.

Funding the renewable power stations is made possible through the issuance of green bonds, large-scale investment vehicles aimed at institutions. They are intended to provide investors with a way to support the transition to a more sustainable economy while earning a financial return on their investment.

**KAPPA**

Kappa® is one of the world's leading sportswear and lifestyle brands: technical, non-conformist, colourful, flexible, competent, global and Italian. Founded in 1967, the brand is recognised as one of the leading and most innovative sports equipment manufacturers in the team sports market, providing high performance technical equipment. The brand is historically linked to the sponsorship of professional clubs. Today, the brand equips more than a hundred professional clubs around the world. Present in football as well as in rugby, basketball, handball and skiing, Kappa® claims elegance and style at the service of performance. Since 2022, Kappa has opened a new chapter in the world of Formula 1® by partnering with Alpine F1 Team and thus enabling the Franco-British team to benefit from innovative products adapted to the motorsport demands.  
[www.kappastore.eu](http://www.kappastore.eu)





K-WAY

K-Way is a brand of BasicNet SpA, the Company also owner of Kappa, Robe di Kappa, Jesus Jeans, Superga, Sebago, Briko, and Sabelt. Basic-Net's leader brands are present in the sports and leisure apparel, footwear and accessories market. It operates worldwide through an international network of entrepreneurs, licensees of the brands, which produce or distribute the products.

BasicNet offers to its network services of research, development, industrialization of the products and global marketing. All the company processes occur only through the Web, making BasicNet a "fully web integrated company". BasicNet, with headquarters in Turin, Italy, is listed at the Italian Stock Exchange since 1999.

MICROSOFT

Microsoft (Nasdaq "MSFT" @microsoft) enables digital transformation for the era of strategic innovation. Its mission is to empower every person and every organization on the planet to achieve more.

Microsoft believes in leveraging its technology and its people to help sports teams and organizations solve their toughest challenges. With Microsoft's analytics tools and productivity solutions, sports organizations worldwide are connecting with fans, optimizing team performance, and managing their operations in new, cutting-edge ways.

PLUG

Plug is building an end-to-end green hydrogen ecosystem, from green hydrogen production, storage and delivery to energy generation through mobile or stationary applications, to help its customers meet their business goals and decarbonize the environment. In creating the first commercially viable market for hydrogen fuel cell technology, the Company has deployed more than 60,000 fuel cell systems for forklifts and more than 180 fueling stations that our customers use daily to fill their forklift trucks. Plug intends to deliver its green hydrogen solutions directly to its customers, and through joint venture partners into multiple markets, including material handling, e-mobility, power generation, and industrial applications.

SPRINKLR

Sprinklr is a leading enterprise software company for all customer-facing functions. With advanced AI, Sprinklr's unified customer experience management (Unified-CXM) platform helps companies deliver human experiences to every customer, every time, across any modern channel. Headquartered in New York City with employees around the world, Sprinklr works with more than 1,000 of the world's most valuable enterprises — global brands like Microsoft, P&G, Samsung and more than 50% of the Fortune 100.





### EURODATACAR

Eurodatacar is the leader in the field of anti-theft marking, approved by insurance companies for theft protection since 1978.

Eurodatacar is distributed by the biggest car brands and car dealers and manage more than 3 million of vehicles. Their customers receive technical and financial assistance if their vehicle is stolen. Eurodatacar also offers its customers financial and technical assistance in the event of an accident.

### PERKINELMER

PerkinElmer is a trusted global solutions provider with an 80+ year track record of bringing thought leadership, innovation and technology to our customers to enable and accelerate scientific outcomes. Our end-to-end solutions and services provide our customers the innovative technologies needed to reshape the world for the better. When choosing PerkinElmer, you have an experienced partner in laboratory management, analytical testing and access to our global service network. Utilizing our scientific knowledge, we strive to provide you with the products, services and expertise that matter most to your laboratory.

For over 20 years the FI Team at Enstone have used PerkinElmer technologies to ensure component safety, quality and integrity. Through our technical partnership with Alpine FI Team, a dedicated PerkinElmer scientific laboratory operates within the Enstone facility; the latest PerkinElmer thermal analysis, infrared spectroscopy and imaging technologies are used to support proactive monitoring, issue prevention, reliable quality and enhanced performance of Alpine FI Team race car components.

### SHAMIR

Established in 1972 as a manufacturer of bifocal lenses, Shamir Optical Industry is today a leading producer of advanced single vision and progressive lenses. For more than five decades, the company has successfully solidified its global market position as a cutting-edge innovator, compliant with highest quality assurance standards.

Shamir's reputation is built on its keen awareness of the challenges of human vision, and on its creativity, successfully pioneering powerful vision technologies to meet any challenge. Proud of its panoramic product offering that harnesses innovative technologies to address an unparalleled range of human vision needs, Shamir is a product of the Israeli "startup nation", prioritizing and heavily investing in R&D, and employing the industry's top minds.

Shamir has achieved numerous scientific breakthroughs, placing it at the forefront of optical technology. Efforts focus not only on development of technologies for enhancing visual acuity, but also on supporting ECPs (Eye Care Professionals) with the products, knowhow, and tools they need for promoting their brand and growing their business.

### YAHOO

Yahoo reaches nearly 900 million people around the world, bringing them closer to finance, sports, shopping, gaming and news—with the trusted products, content and tech that fuel their day. For partners, we provide a full-stack platform for businesses to amplify growth and drive more meaningful connections across advertising, search and media. To learn more, please visit [yahooinc.com](https://www.yahoo.com).





### 3D SYSTEMS

More than 35 years ago, 3D Systems brought the innovation of 3D printing to the manufacturing industry. Today, as the leading Additive Manufacturing solutions partner, we bring innovation, performance, and reliability to every interaction - empowering our customers to create products and business models never before possible. Thanks to our unique offering of hardware, software, materials, and services, each application-specific solution is powered by the expertise of our application engineers who collaborate with customers to transform how they deliver their products and services.

3D Systems' solutions address a variety of advanced applications in Healthcare and Industrial markets such as Medical and Dental, Aerospace & Defense, Automotive, and Durable Goods. 3D Systems and BWT Alpine F1 Team entered a Technical Partnership in 1998, when the first SLA 5000 was deployed in Enstone for rapid prototyping applications. Since then, the companies are constantly pushing the boundaries of additive manufacturing by extending productivity, quality and its use in performance applications. High productivity wind tunnel model parts, casting patterns, actual car components both in thermoplastic and metal alloys are helping to fulfil the Team's aspiration to accelerate development, testing and production. [www.3dsystems.com/motorsports](http://www.3dsystems.com/motorsports)

### ALPINESTARS

Alpinestars, the world's premier motorsports performance protection manufacturer, has been racing at the highest levels of motorsports for more than 60 years. Partnering with the world's best drivers and teams in championships from Formula 1, Formula E, WEC and NASCAR to WRC, and in events like the Dakar, provides Alpinestars' technical staff unrivalled access to a testing programme that pushes technology to the absolute limit both on and off the track. By pursuing innovation through technology research, design and development, the company's state-of-the-art facilities in the US and Europe fuel a worldwide racing development programme that ensures Alpinestars remains in pole position as a global force in every major motorsport series. The company is forever committed to delivering the highest level

of technically advanced driver and team products which offer improved breathability, optimal comfort, and the ultimate in performance and protection for the racing world's top athletes and to ALPINE F1 Team's drivers Pierre Gasly and Esteban Ocon. **ALPINESTARS. ONE GOAL. ONE VISION.**

### ALPINE EYEWEAR

Alpine Eyewear launches new collections of Alpine Cars and BWT Alpine F1 Team glasses each year, the distribution of which is entrusted to distributors in France and abroad. This is how the frames are then made available at approved opticians. Designed for providing visual comfort on a daily basis, the collections are available in many versions: sporty models with an assertive design, top-of-the-range models made from exceptional materials, as well as models inspired by the brand's vehicles with a strong personality and a timeless look that are available in optics, sunglasses and prescription glasses.

Some frames are inspired by the Alpine A110, from which they take up certain stylistic codes such as the handles evoking the headlights and the arrowed A found on the hinges of the frames. Building on this success, we have developed ranges of optical and sunglasses frames inspired by Formula 1, focused on innovation and performance.

Therefore, brand enthusiasts will be able to choose from many colour combinations and styles, with the use of materials such as titanium, aluminum and carbon. In total, partner opticians will be able to offer dozens of variants in order to best meet consumer expectations.





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**ELYSIUM**

Elysium provides 3D Geometry solutions that enable Model Based Enterprise via 3DxSUITE and other powerful packages for high performance multi-CAD Translation, Migration, Simplification and Validation, Product Data Quality Management, Engineering Change Management, and a number of other tools to achieve the highest quality 3D data consumption at enterprise level. Elysium has remained a global leader in the interoperability industry for 38 years, and pushes the envelope of what's possible in the world of CAD data collaboration and quality. At BWT Alpine F1 Team, the pressure to have high quality data and the fastest turnaround on engineering changes while collaborating with multiple divisions and suppliers using CAD, CAM and CAE is enormous, with improvement deadlines every race. This is precisely where Elysium excels, and Elysium has been a constant reliable partner helping BWT Alpine F1 Team meet this challenge for 20 years.

**GCAPS**

The Global Center for Automotive Performance Simulation (GCAPS) provides accurate and affordable models to support virtual development for the transportation industry. Our simulation group, which has significant experience ranging from mathematical model development to graphic design to tire mechanics, is an important aspect of our successful model creation. These models—including tire models, vehicle models, and environments—are created from both customer data sources and physical testing performed in our own advanced testing facilities, which feature the world's most capable indoor flat-trac machine. Our physical testing expertise has led to research and new modeling methods for improved products delivered to our customers, including leading global vehicle manufacturers, tire manufacturers, and championship motorsports teams. These clients have used our model and testing services to elevate their performance in vehicle handling, autonomous vehicle technology, and many other aspects of transportation simulation. Collectively, our vast experience in controls development, vehicle simulation, model creation, and physical data interpretation will help any company in the transportation industry excel.

**HEXIS**

French manufacturer of adhesives since 1989, the HEXIS group is recognized worldwide for the quality of its adhesive films intended for professionals in visual communication and surface protection.

HEXIS brings all its know-how and makes it a point of honor to innovatively develop ranges of adhesive products that meet the requirements of the most technical markets such as the automotive, rail, aeronautical, nautical, public transport, urban display, interior design and textiles.

The agile collaboration between HEXIS and Alpine F1 Team reveals the perfect synergy between industrial engineering and the need for technological excellence and performance required by motorsport. [www.hexis-graphics.com](http://www.hexis-graphics.com)

HEXIS is present on the social networks LinkedIn, Twitter, Instagram, Facebook & Youtube.

**KX**

KX is the creator of kdb+, independently benchmarked as the world's fastest time series database and real-time analytics engine. Built for the most demanding data environments, KX technology is trusted by the world's leading companies for their mission-critical data applications. Our industry-leading software processes and analyzes time series and relational data at unmatched speed and scale, enabling richer actionable insights to drive decisions. We empower developers and data engineers to build high-performance data-driven applications and turbo-charge their favorite analytics tools in the cloud, on-premise, or at the edge. Part of FD Technologies plc, KX operates from more than 15 offices across Europe, North America, and Asia Pacific. [www.kx.com](http://www.kx.com)





### JOHNSON HEALTH TECH (MATRIX)

Matrix Fitness - A total solutions partner - is the commercial division of Johnson Health Tech. Matrix is comprised of a complete range of premium, commercial-grade cardiovascular and strength-training equipment for health clubs and other fitness facilities.

Renault Sport was the first commercial partner for Matrix - joining together around 14 years ago. This relationship has been retained throughout the years and continues to grow with Matrix providing fitness equipment to the team's Technical Centre; a purpose-built sports training and sports science facility known as the Human Performance Centre (HPC).

### PIRELLI

Pirelli was founded in Milan in 1872 and today stands as a global brand known for its cutting-edge technology, high-end production excellence and passion for innovation. It is among the world's major producers of tyres and associated services and the only one focused solely on the Consumer tyre market, which includes tyres for cars, motorcycles and bicycles.

Technological innovation is an essential element of the Pirelli strategy: the investment in Research & Development is around 6% of its revenues from High Value products and boasts a portfolio of more than 5,800 patents. These activities also improve environmental efficiency along the entire tyre life cycle. Pirelli's activity in motorsports started in 1907, and it is now involved in some 350 car and motorcycle sporting competitions. Pirelli has been the sole Global Tyre Partner in Formula 1 World Championship since 2011.

### ROLAND

Japanese manufacturer, Roland DG, have pioneered development of digital printing and CNC technology over the past 35+ years. Today, they are the leading name in the field of print and cut devices, providing reliable and versatile equipment to thousands of businesses worldwide in industries as diverse as commercial print, graphic design and motorsport, to name a few.

Aside from digital print and cut, Roland also produce several 3D milling solutions renowned for their reliability, not to mention UV printers, laser cutters and garment printing devices. All these devices are supported by an unrivalled warranty service, giving users one more reason to invest in equipment from Roland DG.

### TRAK RACER

Since 2008 Trak Racer have been designing high-end gaming accessories. Trak Racer products are made from high-quality material and durable construction that gives Trak Racer the confidence to offer lengthy warranties on Trak Racer products. As we have done in the past, we will continue to develop and launch ground-breaking products that set new benchmarks.

# 2023



5 March	<b>Sakhir</b>	<b>Bahrain</b>
19 March	<b>Jeddah</b>	<b>Saudi Arabia</b>
2 April	<b>Melbourne</b>	<b>Australia</b>
30 April	<b>Baku</b>	<b>Azerbaijan</b>
7 May	<b>Miami</b>	<b>United States</b>
21 May	<b>Imola</b>	<b>Emilia Romagna</b>
28 May	<b>Monte Carlo</b>	<b>Monaco</b>
4 June	<b>Barcelona</b>	<b>Spain</b>
18 June	<b>Montreal</b>	<b>Canada</b>
2 July	<b>Silverstone</b>	<b>Great Britain</b>
9 July	<b>Spielberg</b>	<b>Austria</b>
23 July	<b>Hungaroring</b>	<b>Hungary</b>
30 July	<b>Spa-Francorchamps</b>	<b>Belgium</b>
27 August	<b>Zandvoort</b>	<b>Netherlands</b>
3 September	<b>Monza</b>	<b>Italy</b>
17 September	<b>Marina Bay</b>	<b>Singapore</b>
24 September	<b>Suzuka</b>	<b>Japan</b>
8 October	<b>Qatar</b>	<b>Qatar</b>
22 October	<b>Austin</b>	<b>United States</b>
29 October	<b>Mexico City</b>	<b>Mexico</b>
5 November	<b>São Paulo</b>	<b>Brazil</b>
18 November	<b>Las Vegas</b>	<b>United States</b>
26 November	<b>Abu Dhabi</b>	<b>United Arab Emirates</b>





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# THE 2023 ALPINE CALENDAR



**MARCH**  
17th 1000 miles of Sebring (WEC)

**APRIL**  
8th-10th Nogaro (Alpine Europa Cup)  
16th 6 Hours of Portimao (WEC)  
21st-23rd Imola (Formula Regional European Championship by Alpine), Charbonnières (Alpine Rally Trophy)  
29th 6 Hours of Spa (WEC)

**MAY**  
4th-6th Magny Cours (Alpine Europa Cup)  
19th-23rd Spain (Formula Regional European Championship by Alpine), Antibes (Alpine Rally Trophy)

**JUNE**  
1st-4th Spa (Alpine Europa Cup)  
10th-11th 24Hours of Le Mans (WEC)  
16th-18th Hungary (Formula Regional European Championship by Alpine), Dijon Prenois (Alpine Europa Cup)  
29th-1st (July) Spa (Formula Regional European Championship by Alpine)

**JULY**  
1st **Spa** (Formula Regional European Championship by Alpine)  
7th-9th Mugello (Formula Regional European Championship by Alpine), 6 Hours of Monza (WEC), Rouergue (Alpine Rally Trophy)  
21st-23rd Paul Ricard ((Formula Regional European Championship by Alpine)

**SEPTEMBER**  
8th-10th Austria (Formula Regional European Championship by Alpine), Mont Blanc (Alpine Rally Trophy), 6 Hours of Fuji (WEC)  
14th-16th Barcelona (Alpine Europa Cup)  
15th-17th Monza (Formula Regional European Championship by Alpine)  
30th Cover de France (Alpine Rally Trophy)

**OCTOBER**  
1st Cover de France (Alpine Rally Trophy)  
6th-8th Paul Ricard (Alpine Europa Cup)  
13th-15th Zandvoort (Formula Regional European Championship by Alpine)  
20th-22nd Germany (Formula Regional European Championship by Alpine)

**NOVEMBER**  
4th 8 Hours of Bahrain (WEC)  
11th-13th Barcelona (Alpine Europa Cup)  
24th-26th VAR (Alpine Rally Trophy)



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