

PRESS PACK

ALPINE A424_β



ALPINE



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FOREWORD



« We hope to offer all motorsport fans some splendid and epic battles, and we have just one thing to say to them: see you on the track! »

Endurance racing is entering a new golden age, and we look forward to making our contribution. After ten years of collaboration with our long-standing partner Signatech, we are embarking on a new chapter in our adventure in the fascinating discipline.

Since its founding by Jean Rédélé, Alpine has strived to reach the pinnacle. And we are doing everything in our power to get there. As a result of our ambitious strategy, we are one of the few brands to have competed simultaneously in several FIA-labelled World Championships over the past three years, thanks to the introduction of innovative regulations enabling us to establish synergies between our programmes.

Born from competition, Alpine's ambitions are alive and growing. Motorsport is not just a hobby. It runs through the veins and the DNA of our «band of racers». Forty-five years after our historic victory in the 24 Hours of Le Mans, our presence here is no coincidence. This is demonstrated once again today by unveiling the Alpine A424_β, the forerunner of our Hypercar, designed to challenge the finest competitors as of next year.

In keeping with our values, this new prototype projects the A-arrow brand into the future whilst following in the footsteps of our creations, starting with Alpenglow and the A290_β. It is racy, elegant and distinctive with its symbolic and iconic design. It embodies both our present and our future, thanks to the involvement and investment of our designers in its development.

This project has been a tremendous human adventure for nearly two years, promoting our ambitions beyond the racetrack. Our staff and partners are working tirelessly to ensure that the car is a resounding success. It is already one visually, and we are working hard to ensure it will also be a sporting success from next year.

We do not underestimate the task awaiting us in this exciting challenge. We stay humble but determined to make our mark on both sides of the Atlantic. We hope to offer all motorsport fans some splendid and epic battles, and we have just one thing to say to them: see you on the track!

Laurent Rossi
Alpine CEO

THE A424_β



Sixty years after its first entry in the 24 Hours of Le Mans, Alpine has unveiled the A424_β, foreshadowing its challenger in the premier class of the FIA Endurance World Championship.

With its design, the A424_β reaffirms the brand's DNA while heralding its future.

Its name, A424_β, is a symbol of this: the A nomenclature followed by three digits beginning with 4; respects the tradition of our victorious endurance cars,

24 echoes the 24 Hours of Le Mans and 2024, and β designates its final stage before its launch.

The A424_β is the quintessence of Alpine's automotive and racing artistry, both aesthetically and technically.

Rich in creativity, it presages Alpine's future lighting signature on an incredibly racy and assertive front end, while the rear reveals two exceptionally impactful A-arrows.

The triangular motif, echoing the Alpine snowflakes, also appears in the treatment of the daggerboards and rear wing.

In the cockpit, the drivers will take their place at the heart of a body that has been refined, purified and polished, like a road-going supercar.

The flanks are inspired by Alpenglow, the concept car setting out Alpine's ambitions by embodying the fascinating future of the brand's production

and competition models.



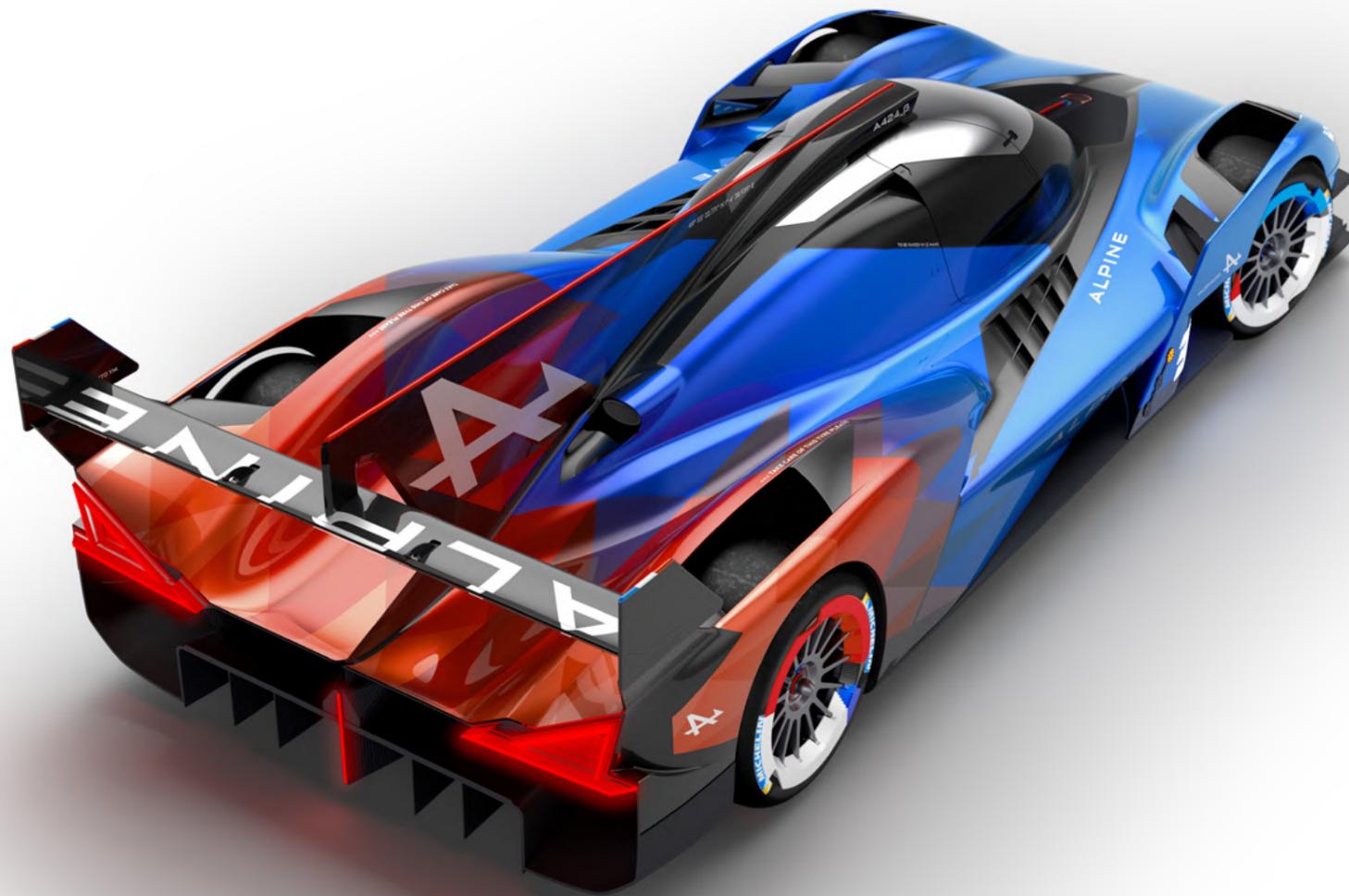
« Today we unveil the Alpine A424_β, the forerunner of our Hypercar designed to challenge the best competitors starting next year.

True to our values, this new prototype takes the A-arrow brand into the future; while following in the footsteps of our creations, beginning with Alpenglow and the A290_β. The Alpine A424_β is racy, elegant and distinctive with its iconic and emblematic design.

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Alpine CEO

TECHNICAL SPECIFICATIONS



CHÂSSIS

Type	Carbon fibre & honeycomb body shell
Bodywork	Carbon fibre
Suspension	Double wishbone with pushrods
Steering	Electric power-assisted
Length	5,000 mm
Width	1,998 mm
Height	1,058 mm
Wheelbase	3,148 mm
Weight	Approximately 1,030 kg (according to BOP)

ENGINE

Configuration	V6 single turbo at 90°
Displacement	3,400 cc
Power	500 kW / 675 horsepower
Rev band maximum	9,000 rpm
Hybrid system	Bosch standard / 50 kW
Lubrication	Dry sump/multi-stage oil pump
ECU	Marelli

GEARBOX

Brand	Xtrac
Type	Transversally-mounted
Gearshift	Steering wheel-mounted paddles and pneumatic control
Gear	7 + reverse gear

WHEELS

Front tyres	Michelin 29-71/R18
Rear tyres	Michelin 34-71/R18
Front rims	12,5"x18"
Rear rims	14"x18"

BRAKES

Discs	Ventilated carbon
Calipers	Six-piston one-piece

SAFETY

Harness	Six-point, adapted for the Hans® system
Fuel cell	Safety rubber tank with built-in reserve system

ALPINE

In Endurance



Alpine has always relied on competition to support its development, particularly in Endurance racing, where the brand has written some of the finest chapters in its motorsport history.

1962-1969

In 1962, Jean Rédélé begins the development of the Alpine M63, the first model of a prototype powered by a 996cc Gordini engine.

The following year, Alpine debuts in the 24 Hours of Le Mans, relying on lightness, aerodynamic finesse and reduced engine capacity to quickly win the «Energy Efficiency Index» and «Performance Index». The Alpine M65 with Lucien and Mauro Bianchi wins the 1965 Nürburgring 500 kilometres. The Alpine A210 and its variants are next on the scene, with numerous successes in Europe and Le Mans until 1969.

1973-1978

In 1973, Alpine presents the A440 with a clear goal: to win the 2-litre European Sports Prototype Championship before designing a car to win Le Mans.

The following year, the European title goes to Alain Serpaggi's A441, and the brand launches the development of a new turbocharged 1,996 cm³ engine developing 490 bhp with the Alpine A441 Turbo chassis, then with the A442 to compete in the World Championship for Makes from 1976. This car claims pole position in its first 24 Hours of Le Mans. Alpine then focuses exclusively on this event, and its crowning glory comes in 1978 with the Alpine A442B, driven by Jean-Pierre Jaussaud and Didier Pironi.

1979-1994

Having met its objectives, the team switched all its focus to Formula 1, where it proved again its mastery of the turbo.

Meanwhile, privateer teams continued to compete with Alpine in the Le Mans 24 Hours until 1994.

2013-2020

Alpine officially returns to competition to accompany its renaissance. The Alpine A450 immediately makes its mark with back-to-back European Le Mans Series titles in 2013 and 2014. After an LMP2 podium finish at Le Mans, the Signatech-Alpine team enters the FIA World Endurance Championship.

In 2016, the Alpine A460 wins in the Sarthe and takes both world titles in its category with Nicolas Lapierre, Gustavo Menezes and Stéphane Richelmi. From 2017, the Alpine A470 also enjoys success in the hands of Pierre Thiriet, Nicolas Lapierre and André Negrão with a victory to celebrate the 40th anniversary of the 1978 win.

The trio repeats the feat 12 months later, giving Alpine its second world drivers and team titles during the 2018-2019 Super-Season.

2021-2024

Alpine takes on the premier class of the FIA WEC and the 24 Hours of Le Mans in 2021. In just two seasons, the Alpine A480 shakes up the elite with an overall podium finish in the twice-around-the-clock classic, followed by historic victories at Sebring and Monza in 2022.

Alpine finishes runner-up in the World Endurance Championship. For 2023, it steps back a class to better prepares its Hypercar debut with the A424, developed by Alpine and run in partnership with the talented Signatech team.

THE GENESIS OF THE PROJECT

5 october 2021

Alpine announces its entry into the Hypercar/ LMDh category with two cars from 2024.

January 2022

Viry-Châtillon begins its initial studies with Oreca and Mecachrome.

December 2022

First engine dyno runs.

9 june 2023

Alpine presents the A424_β, 60 years after its first entry in the 24 Hours of Le Mans.

15 september 2020

Alpine announces its return to the premier class of Endurance racing for 2021 and 2022.

November 2021

The Design Office drafts the first sketches of the Alpine A424.

July 2022

Alpine and Oreca begin the first aerodynamic testing.

May 2023

First engine/gearbox tests on the Viry-Châtillon test benches/

Q&A

with Bruno Famin

Alpine Racing SAS Executive Director since 2022, Bruno Famin brings his wealth of motorsport experience, including Endurance racing with a victory in the 24 Hours of Le Mans in 2009, to the A-arrow brand. The Frenchman shares with us the early secrets of the A424_β.

// The A424_β is the first prototype of its kind developed by Alpine at Viry-Châtillon since 1978. How did the project team come together?

Viry-Châtillon is an entity bringing together many activities beyond F1. At Viry, our Vehicle Division brings together customer racing, Formula E and other projects, including the A424_β and Alpenglow. We have built on our existing strengths while adding quantity and quality to our workforce.

In addition to the dedicated team, all the Viry-Châtillon departments contributed to the A424 project whenever and wherever needed.

Lastly, our official Signatech team is also preparing for our future challenges, where their operational experience will be an asset.

// Why did you choose LMDh for the new era of Endurance racing?

In 2021, we decided to enter the Hypercar category and have been fully committed to it since January 2022. The pace gradually quickened, and given Alpine's ambitions to penetrate the American market the LMDh option was obvious as it requires a more limited investment in engineering than the LMHs.

The LMH/LMDh idea is to put the cars in the same aerodynamic and engine performance windows through thoroughly well-designed regulations. With the LMDh, we have a shared spine surrounded by a chassis from one of the four approved manufacturers.

Manufacturers can also design a body with the stylistic codes of their brands, hence the divergences we are already seeing with prototypes whose style is not dictated solely by aerodynamics.

With this, Alpine is reaffirming its strong identity and its technical talents within an agreed budget, allowing us to market our LMDh in the future.



// What are Alpine Racing's ambitions in Endurance racing?

Thanks to the many talents involved in this project, it's fantastic to return to the premier class of Endurance racing. The Alpine team at Viry-Châtillon has a wealth of expertise, particularly in power unit development, energy management and the impact of the hybrid system on the car's dynamics.

Together with our partners Oreca and Signatech, we have worked very hard to prepare this new generation of prototypes. We are now approaching the first runs after making significant progress on the various project milestones.

We all look forward to seeing the A424_β on track after so much deve-

lopment and hours on the test benches. Now more than ever, Alpine is on its way to the top!

Q&A

with Philippe Sinault

At the helm of the Signatech structure representing Alpine since its return to Endurance racing in 2013, Philippe Sinault also prepares the premier Hypercar category comeback for the A-arrow brand.

Prior to this new era from next year, his teams will have an intense programme between their current LMP2 commitments and A424 development programme.

// Ten years after Alpine's return to competition, is this the start of a new era?

In 2013, we convinced Alpine to return to racing, and we knew that such a brand only belongs in the premier class. Alpine never denies itself the dreams it aspires to, and neither do we at Signatech. We couldn't imagine what would happen next, but we had high hopes for it, and that ambition is about to become very real.

Our ten-year adventure has resulted in European and world titles in several disciplines. More than ever, we are genuinely proud and pleased to represent Alpine at the pinnacle of Endurance ra-

cing and other collaborations with the A110 Cup, A110 GT4, A110 Rally and soon the A110 Pikes Peak. It has created a positive momentum around our projects and it offers fantastic prospects for the future.

// How is Signatech preparing for its important role in the A424 development?

Before entering this new chapter, our mission was to get to grips with our transition season in LMP2 while planning our future in Hypercar.

This year, we have changed dimensions because of the tremendously busy programme that awaits us between our racing commitments and the development of the A424 with the Alpine Racing teams beginning this summer.

We have recruited many talented people from different backgrounds, and we are fortunate to have the support of Viry-Châtillon with the wealth of experience of Bruno Famin, Christophe Chapelain and François Champod, to name just a few.



// Is combining competition and development going to be a serious challenge?

We are racers first and foremost, and it was unthinkable for us to imagine the 24 Hours of Le Mans centenary edition without Alpine.

We absolutely wanted to be competing as racing is in our genes and also the best way to prepare ourselves. Our teams will therefore be on both fronts, but we will be smart to work on the development car.

A massive amount of groundwork, anticipation and commitment from everyone has already been done for nearly a year. The support of Alpine Racing and Oreca will be invaluable in ensuring

that we are in the best possible position and make this magnificent prototype further cement Alpine's place to the French and international motorsport zenith.

Q&A

with Christophe Chapelain



Working at Viry-Châtillon since 2013, Christophe Chapelain is Alpine Hypercar-LMDh project's chief engineer. With his wealth of experience in the world of motorsport across a wide variety of disciplines, the Frenchman also returns to Endurance racing after working for OAK Racing from 2010 to 2013. Today he offers us a glimpse of the Alpine A424_B's genesis.

// What can you tell us about the chassis?

In LMDh, each brand must work with one of the four homologated partners. In Endurance, we have collaborated with Oreca since 2013. We consulted the three other constructors. They all have their strengths, but Oreca's experience prevailed, even more so in the context of a 100% French project.

We worked with Oreca on the chassis, engine integration and the input of our stylists to include the character traits of future Alpines in collaboration with their aerodynamicists.

// How is this collaboration going? What compromises have you had to make to adopt Alpine's styling cues?

We work incredibly well with Oreca. From the outset, they have been tremendously reactive to our demands whilst providing us with a wealth of information for the en-

gine integration. As for the chassis, it's the first time they've dealt with so much input from car designers. Compromises had to be made, between the desire for design and certain regulatory aspects for example.

However, the aerodynamic window leaves enough room to incorporate many ideas whilst converging towards the required windows. We had to reunite two different worlds and the result is magnificent. It shows that everyone has worked in the same direction to make this project successful, not only in terms of style today, but also on track tomorrow.

// What can you tell us about the engine?

We have teamed up with Mecachrome for the powertrain. Mecachrome has experience in Endurance racing and we conducted several studies and tests starting in June 2022. It enabled us to analyse its advantages and disadvantages so that our teams of Formula 1 engineers could draw up specifications, define the architecture and calibrate it for the desired performance range.

The engineers at Viry were very much involved, sharing their capabilities, resources and methods with us to improve power, reliability and materials. In simple terms, it's a 3.4-litre single-turbo V6. We'll be the only ones with this configuration.

As required by the regulations, all the LMDh competitors have an engine coupled to an Xtrac gearbox, a standard Bosch hybrid box and a Williams battery. Lastly, it must be noted that the synergies with F1 are such that our LMDh software is strongly inspired by F1. The F1 cost cap also works in our favour, as it frees up dyno hours in addition to those available at Mecachrome.

// What were the main challenges of this project?

Although Signatech has a great deal of experience in endurance racing, key subjects such as the balance of performance are new to us. The aim is to make the best LMDh while anticipating future BoP changes.

// What's next for the A424_B?

As an engineer, I'm always keen to get on the track as soon as possible. All of us can't wait for our first laps. In the meantime, our engine continues to run on the dyno before a first start scheduled for 28 June. Then we will conduct a shakedown by the end of July before starting a series of test sessions from August.

// What is the homologation timetable?

This is an incredibly important aspect. By August, we should have built a second car and fitted it with an engine to send it to the United States for wind tunnel testing in mid-November. With two preparation sessions, we'll need to get as close as possible to the final configuration of the Alpine A424 as it will be used for homologation purposes.

It's not a difficult exercise, but we have to avoid any delays. After that, we'll head off to the FIA for the homologation and further measurements. All this requires an extremely specific organisation.

« A project I am proud of »

Q&A

with Raphaël Linari



« Unprecedented proportions for an Alpine »

Alpine's exterior and racing chief designer, Raphaël Linari has worked for the Renault Group for over ten years. As part of the A-arrow brand's team, he joined Alpine Cars just in time to work on one of the most exciting cross-disciplinary programmes in contemporary motorsport: a genuine racing prototype with the hallmarks of future production Alpines. Mission accomplished with the A424_β.

// What role has design played in the A424_β's development?

We have been progressively integrated into this project. We started working on the first sketches in 2021 before being in touch with Oreca.

We got one of their chassis at the end of the year to have a base on which to design an Alpine. We spent a whole year there as we needed a learning phase to understand all the constraints involved with regard to proportions and attitude as the driving position dictates the configuration of many associated volumes. We then produced a synthesis, which was refined as the aerodynamic tests progressed.

They paced the stylistic development to sculpt the A424_β shape, both literally and figuratively, as we had to enter a mandatory performance window. It was a long-term project, but tremendously rewarding.



// What were your guidelines for this spectacular design?

Our vision was to have a pure body, like a road-going supercar. We tried to be efficient, so we simplified, smoothed and purified the surfaces as much as possible to avoid adding volumes and heterogeneous elements.

It is particularly true at the rear. It is the end of the aerodynamic line, where drag should be as fluid as possible. We've kept it as streamlined as possible to emancipate from the cube-like appearance typical of Le Mans prototypes.

// What can you tell us about this remarkable light signature?

These light signatures are perhaps the most striking elements. At the front, we were rather unrestricted despite the regulatory requirements on visibility, as it is, in fact, a module of headlamps that must be integrated into a given volume.

Meanwhile, the rear was much more restricted. We created a lighting signature specific to our LMDh by reinterpreting the A-arrow and adjusting it to its surroundings in the lower section.

When a competitor is following us, the onboard camera won't be able to miss this A-arrow. It sends a strong message at the front and an impacting one at the rear.

// What are the links with Alpenglow?

Both projects have fed off each other in a way. Alpenglow has the same codes as the LMDh for a road-going concept-car free of any technical or homologation constraints, for instance. We drew our inspiration from the sides of Alpenglow while carrying over some of the work done on the Alpine A110 for the A424_β.

Q&A

with Raphaël Linari

// Does the challenge really differ from your daily routine?

More than different, it was unprecedented. Engineering firms usually design these prototypes. On our side, we don't necessarily have the same approach as a racing car constructor.

For series production, all the surfaces come from the design by synthesising all the technical constraints of our suppliers and factories. Contrary to our usual approach, race engineering takes over the manufacturing of moulds and parts. We had to design a car that isn't usually designed.

The constraints linked to performance are always easy to accept as we are an integral part of the 'band of racers' who want to see Alpine reach the pinnacle. On the other hand, the LMDh economic model requires budgetary rationality in terms of servicing and operation by a privateer team.

Therein lies all the complexity, but we succeeded in creating a modern object of unprecedented proportions for an Alpine.

// What has this adventure been like for you?

It's an incredible honour and an immense privilege to design the Alpine that will compete in the 24 Hours of Le Mans.

We enjoyed ourselves, despite the 'traditional' clash of cultures between designers and engineers. When faced with emerging constraints, designers will try to smooth out surfaces to absorb them, whereas an engineer might be happy with a last-minute bump. It is just one example, but there is an approach to harmonising and synthesising volumes.

We all managed to work in the same direction. It would have been irrelevant to propose concepts contrary to performance, but we wanted this car to be as Alpine as possible despite the mandatory technical base. We managed to strike the right balance with this iconic Alpine, which I am immensely proud of.



THE LMDh CATEGORY



Unveiled on 20 January 2020 before the 24 Hours of Daytona, the LMDh category reunites racing cars designed to compete in the FIA World Endurance Championship and the IMSA WeatherTech SportsCar Championship in the United States.

Together with the LMHs, the LMDhs form the Hypercar elite category in the FIA WEC and the GTP class in IMSA. These prototypes enable drivers, teams and constructors to compete with the same cars on the world's best circuits and in Endurance racing

LMDhs must be based on one of the four chassis accepted in LMP2. Competitors fit them with an engine of their choice and a common 50 kW hybrid system. To guarantee the competitiveness of all the cars, the ACO, the FIA and IMSA have defined several principles, including an aerodynamic performance window, a minimum weight of 1,030 kg and a power output of 500 kW.

The bodywork, however, can adopt the styling cues of the standard production vehicles of the brand whose interests they are defending, hence the unrivalled style of the Alpine A424_β.

All in all, a challenge full of opportunities that Alpine couldn't pass up to fulfil its ambitions!

AMBITIONS



Although the Alpine A424 will make its racing debut next year, 2023 is a crucial year in the development of this prototype before it challenges the many prestigious constructors entered in the premier class of Endurance racing.

By revealing Alpenglow and A290_β, Alpine revealed its vision of the future. That future is now clearly reflected in the A424_β, designed to reaffirm the brand's ambitions in a discipline in which it has enjoyed tremendous suc-

cess. With this new project, the Alpine teams have two goals: to keep extending their track record and to attract new customers.

The centenary edition of the 24 Hours of Le Mans - the most famous Endurance race in the world - will be one of the must-see events for all motorsport fans. Alpine has therefore chosen this ideal moment to position itself against the other brands already competing in the Hypercar category by unveiling its ambitions.

Designed at Viry-Châtillon, this prototype benefits from the expertise of the best elements in areas crucial to performance: energy management, engine integration, dynamic operation, and other essential success factors.

The A424_β will be firstly run by Signatech, a long-standing partner of the A-arrow brand since 2013.

A partnership with a prolific track record, thanks to the excellent operational capabilities of Philippe Sinault's

men. Alpine will also be looking to attract other teams alongside its factory Hypercar team so that it can compete on several fronts, including across the Atlantic in IMSA.

COMING UP

28 june

First start-up of the Alpine A424_β.

End of July

Alpine A424 shakedown at Lurcy-Lévis.

Mid-august

First test session at Circuit Paul Ricard.

September

Second test session at Motorland Aragón.

October

Third test session at Jerez.

Mid-november

Wind tunnel test for LMDh homologation.

November

First 24-hour Endurance test at Motorland Aragón.

December

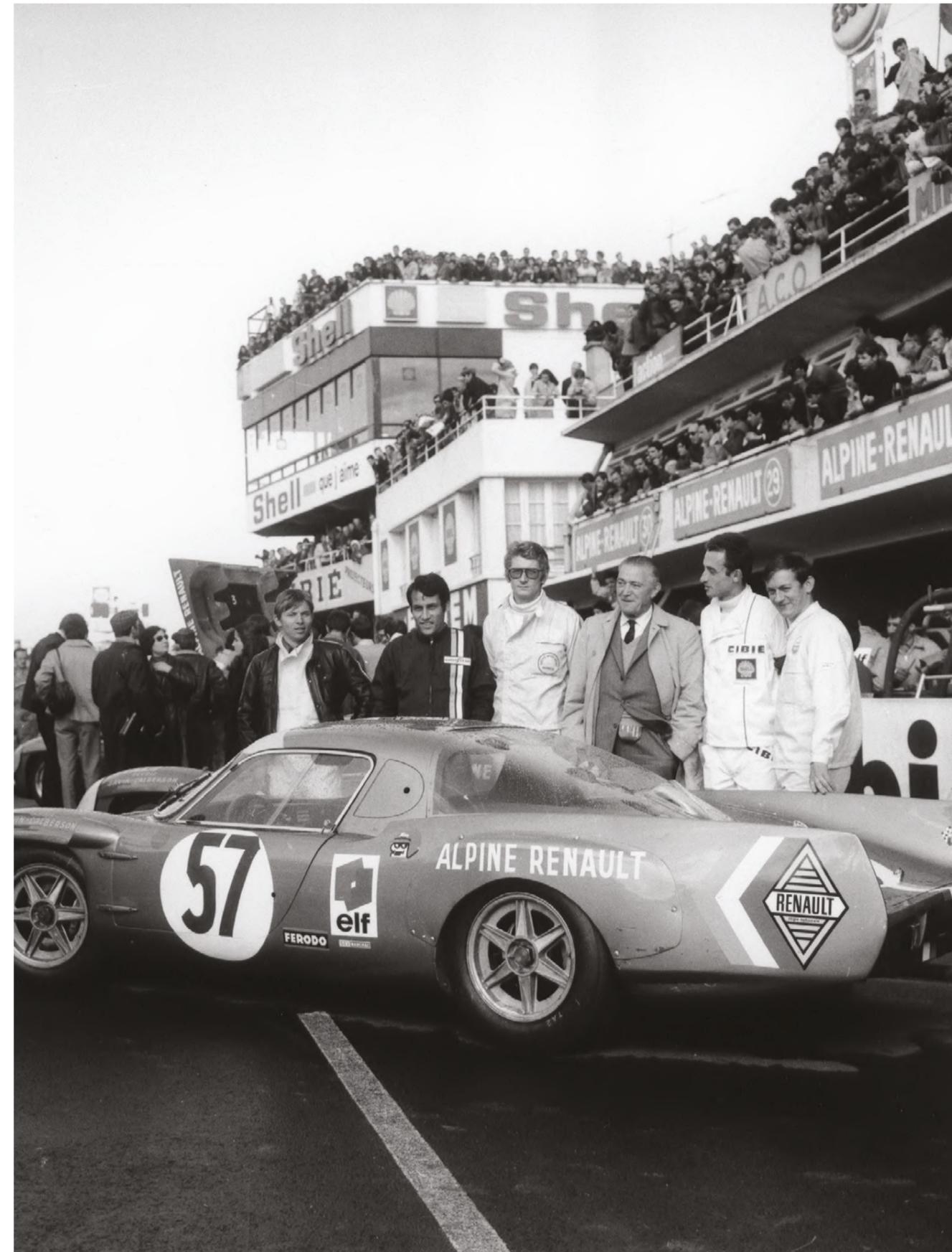
Test session at Portimão.

End of december

FIA homologation procedure.

March 2024

First FIA WEC race, the 6 Hours of Qatar.





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