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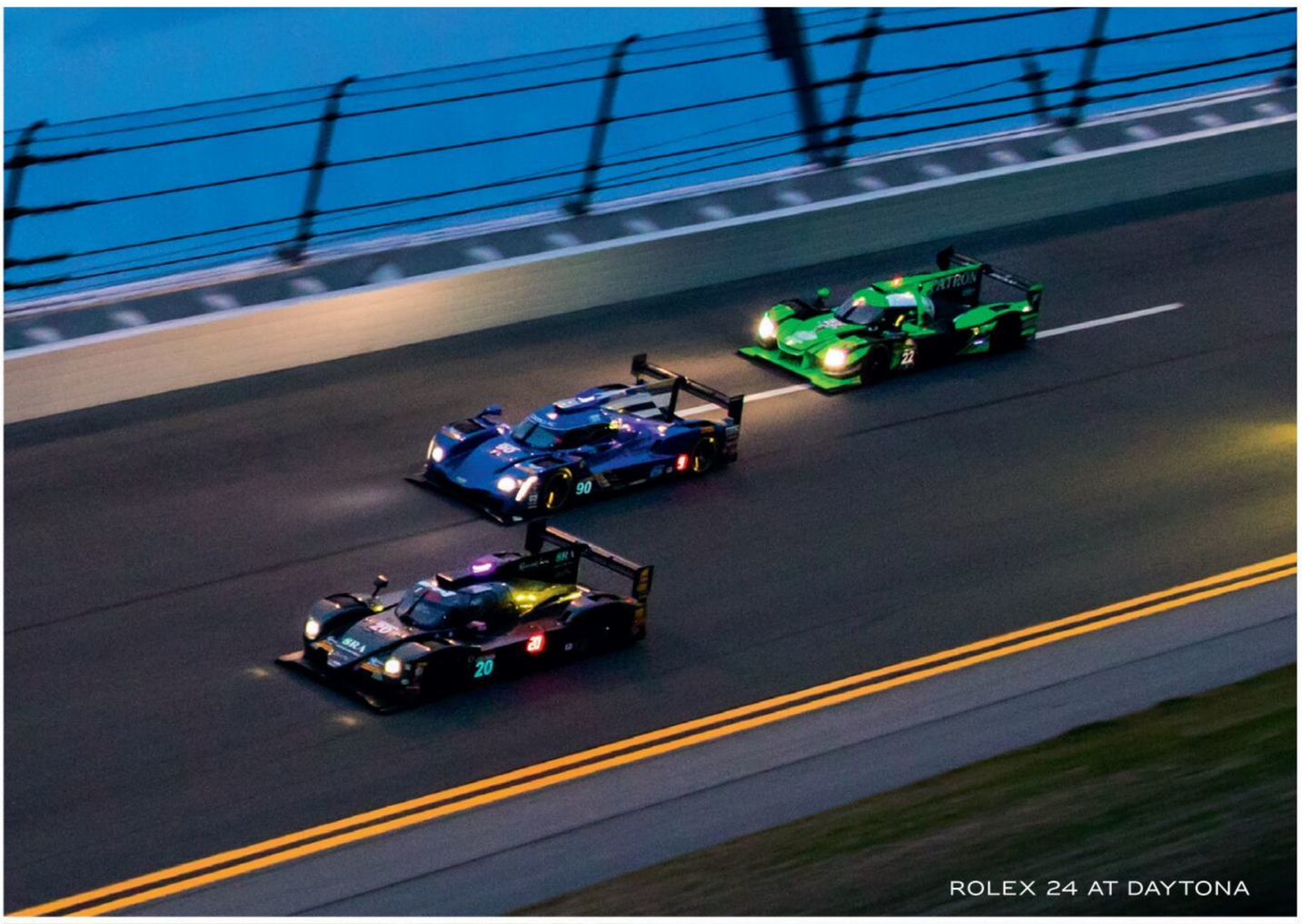




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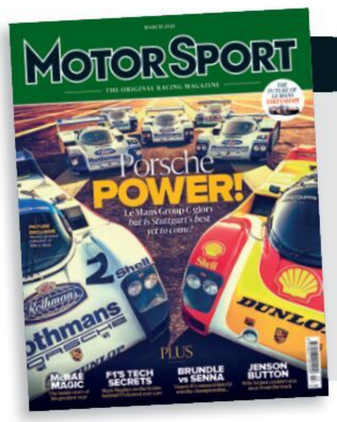
ROLEX

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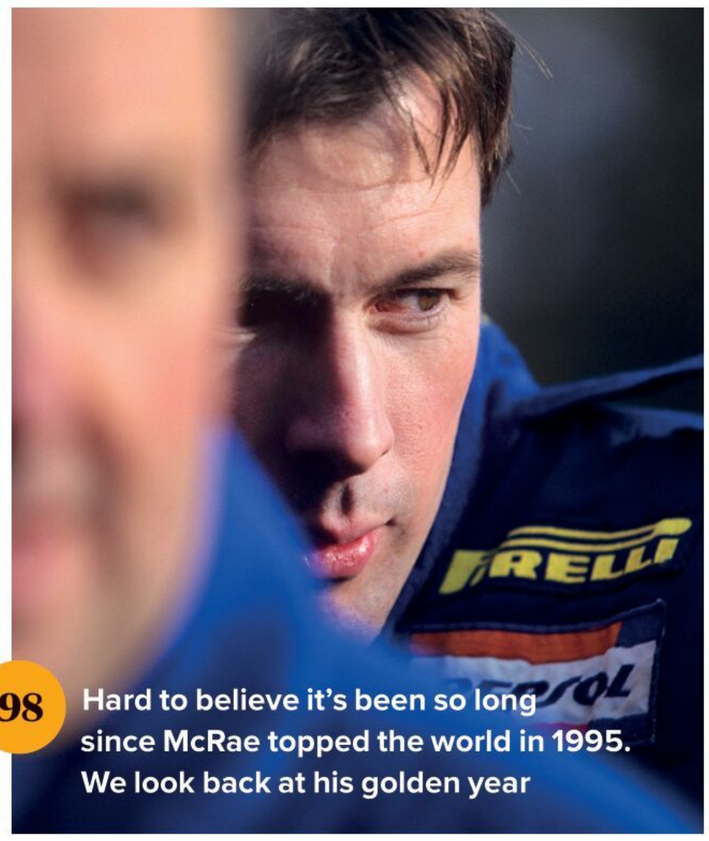
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MOTOR SPORT

THE EDITOR



"Ironically, historic race teams may prefer to go to Brands than Spa"

IT IS AROUND THIS TIME OF THE YEAR THAT I usually start to look back at photographs and footage of the previous summer's races and recall the smell of cut grass mixed with race fuel, the sound of birdsong and the bark of engines firing. For obvious reasons this year it has not been Silverstone's vast crowds basking in the sun and the frisson of excitement that comes with a big race weekend that have lingered in the memory, but the gentler thoughts of historic race car meetings. E-types and pre-war Bentleys belting around Donington or Ferraris sweeping through Madgwick, the clatter of pre-digital tools and bonhomie of the paddock.

But it is not just nostalgic memories that make the historic scene so important. Like many things to do with cars and racing, it is an area that Britain both excels at and undervalues. Which is why I was pleased to see a recent report which aimed to place historic and classic motoring on the map.

'The Economic and Environmental Impact of the Historic and Classic Motor Industry in the UK', produced by the consultancy Centre for Economics and Business Research (CEBR), found that the historic and classic motor industry contributes £8.7bn to the UK economy in terms of Gross Value Added (GVA – a similar measure to GDP). It's about twice the size of the Scotch whisky industry and comparable to the performing arts and ports industries.

In particular the report highlights the success of the classic car restoration and repair industry, which contributes £1.33bn in GVA, and accounts for 25,000 of the 113,000 jobs that rely on the historic and classic car sector.

The CEBR was commissioned to establish the industry's economic credentials by HERO-ERA, the classic rally and event organisation. It came against a backdrop of government commitment to end the sale of petrol and diesel cars by 2030 and a fear that owners of classic and historic cars may be hit with punitive taxes as internal combustion engines fall further out of fashion. So aside from the economic contribution of the industry, the report highlighted the low carbon footprint of classic cars, which are only driven for an average of 1200 miles a year. The 563kg of CO_2 per car is said to be a sixth of the emissions from a conventional car. Not to mention the fact that in terms of manufacture emissions, classic cars are greener than any electric-powered vehicles – which, as the owner of a 20-year-old Honda, is an argument I have long been making to anyone who will listen.

The report was commissioned pre-Brexit and raised several questions about how the industry would continue in 2021. In an update released last month, the authors combed the small print of the Brexit agreement. They discovered that despite some fears being allayed, there remained questions unanswered.

"Problems were broadly in two categories:

The status of historic or classic vehicles that might be brought into the UK for repair and renovation. Would these be subject to tariffs either when brought into the UK or when returned to their country of origin? Would there be difficulties in bringing parts for historic vehicles into or out of the UK?

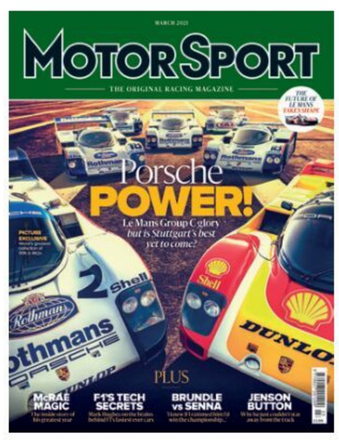
Touring with historic and classic vehicles either organised individually or formally, in for example a rally. Would there be difficulties in taking such vehicles across borders? Would driving licences be recognised? Would rally organisers have legal status?"

I have heard similar concerns. According to Paul Lawrence, who has spent decades covering the historic scene, it won't be the larger operations that will be affected but the hobbyists: "The bigger team owners like Martin O'Connell and Martin Stretton, for example, will find a way to cover the costs and absorb the additional paperwork," he says, "but if you're the guy with an MGB who likes to go to Spa Six Hours, you will look at the requirement to create an inventory of every spanner and spare tyre plus the £250 carnet cost, and may think twice."

Ironically, Lawrence predicts that this may help the domestic scene, with UK-based teams and owners preferring to go to Donington or Brands rather than Pau and Spa.

Tomas de Vargas Machuca, chairman of HERO-ERA, puts it fairly succinctly when he says: "It is important that when the details are tied up, this sector is not impeded by the Brexit arrangements. It will be crucial for the relevant departments to contact the leaders of the relevant bodies to ensure that this happens."

For the sake of a vital area of our sport that brings much pleasure to fans and competitors alike, let's hope the powers that be do just that.



THIS MONTH'S COVER IMAGE:
A special gathering of legendary Group C Porsches
Photography by Jayson Fong
Retouching by Midas

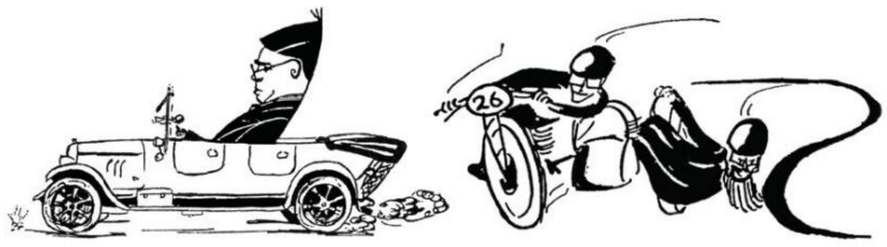
Joe Dunn

Joe Dunn, editor
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NEXT ISSUE: OUR APRIL ISSUE IS ON SALE FROM 3 MARCH

MOTOR SPORT

IN THE SPIRIT OF BOD AND JENKS



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Details matter.



Our retrospective of Colin McRae's WRC winning year features one of the most famous liveries in motor sport: the blue and yellow British American Tobacco of Colin's Subaru Impreza. The 555 on the numberplate and livery promoted the brand's State Express 555 cigarettes, which came in blue and yellow packets. At rallies where tobacco advertising laws were tighter the cars kept the colour scheme but ran with yellow crescents.

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Alongside the modern field, the Dakar Classic boasted some fine machinery, such as this Porsche 911 of Amy Lerner and Sara Carmen Bossaert



Dakar 2021: delights, dunes and dromedaries

The latest escapade provided another spectacular set of images, as drivers and riders battled the arid, dusty conditions

HELD IN SAUDI ARABIA FOR THE SECOND time, the 2021 Dakar gave us its customary thrills, off-road heartbreak and extreme tests of human endeavour, not to mention an even greater amount of navigational controversy than usual.

Stéphane Peterhansel took the overall car win in the X-Raid John Cooper Works Mini buggy - his 14th victory, 30 years after his first, achieved while competing in the bike category. A disgruntled Carlos Sainz finished third overall in another John Cooper Works Mini, the four-time Dakar winner complaining this year's event was too reliant on navigation, likening it to a "gymkhana".

Competitors this year were given their navigational roadbooks 15 minutes before the start of each stage, as opposed to the day before, meaning they had no time to add their own notes

Sébastien Loeb - competing in the new Prodrive-run BRX-Hunter Raid Xtreme after a one-year Dakar hiatus - endured a torrid rally. Things started to go wrong for the 2017 runner-up on stage five, after he suffered two punctures and got lost in the desert.

He then broke the suspension arm on his BRX-Hunter on the next stage, and was left waiting for eight hours in the desert only for the recovery truck to bring the wrong parts to fix it - two right suspension arms instead of one right and one left.

Loeb next found himself embroiled in a row with the event's officials, labelling the stewards "incompetent" after they handed him a five-minute time penalty for

ASO/DAKAR/DPPI



Dakar legend Stéphane Peterhansel celebrated his 14th career victory on the event, this time in a Mini buggy. Right, Loeb endured a truly miserable rally in his BRX



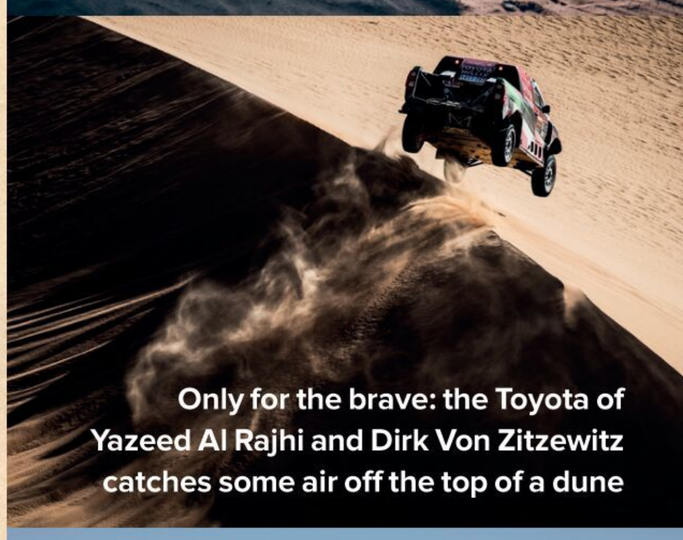
Dune-busting Tobias Juan Carrizo in full flow on his quad



The Saudi Arabian route produced a stunning backdrop



Lightweight competitor Sebastian Guayasamin takes a break to enjoy the view on stage four



Only for the brave: the Toyota of Yazeed Al Rajhi and Dirk Von Zitzewitz catches some air off the top of a dune



exceeding the speed limit in stage four. Loeb's misery was compounded when two punctures within the first 50 miles of stage eight, when he only had one spare tyre, forced him to retire.

The Frenchman also backed up Sainz on the navigational front, saying this year's event was a "race of co-drivers".

Kris Meeke made his Dakar debut, and despite more than a few setbacks managed to make the finish. After setting fastest time for the T3 class in the Prologue aboard his PH Sport-run Zephyr buggy, Meeke suffered a freak fire caused when his spare wheel ignited after his electronics overheated on stage one.

Meeke's buggy then broke two drive shafts during the marathon stage, meaning he had to cover a considerable length of the event with only two-wheel drive.

Despite commenting that Dakar was "trying to crush my soul", the indefatigable Ulsterman somehow made the finish. Francisco López Contardo won Meeke's Lightweight Vehicle category, while Argentinian rider Kevin Benavides became only the third non-European to take overall victory in the Bike class.

In the Quads, Manuel Andújar took the win with a 33min advantage, as Dmitry Sotnikov scored an assured victory in the Trucks category, finishing 40min ahead of Kamaz team-mate Anton Shibalov.

Sadly, French rider Pierre Cherpin, 52, lost his life following a crash on the seventh stage of the event.

Ladies first as IndyCar welcomes all-female team

THE FIRST ALL-FEMALE TEAM IN IndyCar history will tackle this year's Indianapolis 500 after Paretta Autosport lodged its entry.

It will run a Chevrolet-powered Dallara, driven by Simona de Silvestro (*right*) and crewed by an all-female engineering team. Team Penske will offer technical support.

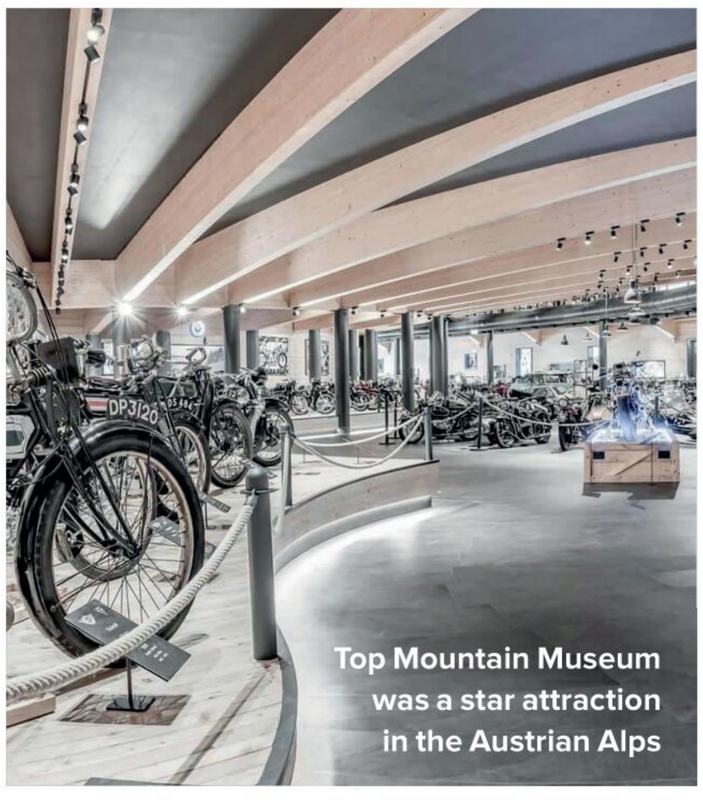
Paretta Autosport has developed from the Grace Autosport concern, which was founded in 2015 by former Dodge SRT director Beth Paretta as an educational programme. The initiative will now head to the Brickyard as a fully fledged team.

Peretta said: "This marks the beginning of a commitment to gender equality in sport, to encourage women to work hard so they can earn their seat at the table or spot on the grid. We have a commitment with IndyCar's Race for Equality & Change to ensure opportunities continue in the future. One day we hope to see a woman's face on the Borg-Warner Trophy."

Grace Autosport attempted to tackle the race in 2016 with Katherine Legge as its driver. However, a shortage of cars led to the plan being abandoned.



All-female Paretta Autosport team will have back-up tech from Penske



Top Mountain Museum was a star attraction in the Austrian Alps

Blaze wrecks world-class collection

OVER 230 CLASSIC MOTORCYCLES AND at least a dozen classic cars have been destroyed after a fire ripped through the Top Mountain Crosspoint Motorcycle Museum in the Austrian Alps in January.

The museum – noted internationally for being built at an altitude of 7135ft, making it the highest-altitude museum in Europe – caught light in the early hours of January 18, with the blaze consuming virtually the entirety of the largely wood-clad building. There were no reported injuries.

The cause of the blaze is as yet unknown, and the museum had been closed to the public since November due to Covid restrictions.

Opened in 2016, Top Mountain housed almost 300 bikes from 10 different constructors, with highlights being a 1920 Anzani racing bike, a 1923 Harley-Davidson and a 1970 Münch Mammut. Among the cars were an Aston Martin DB5, a 1964 Lotus 23B, a Porsche 959 and a 1932 Alfa Romeo 8C 2300 Monza.

The museum was founded by twin brothers Alban and Attila Scheiber and inaugurated by Giacomo Agostini. There has yet to be any word on whether it will be rebuilt.

The ‘new’ Ecurie Ecosse Jaguar C-types will be made using traditional techniques mixed with new technology

Seven sisters for the Scottish C-types





The 4.2-litre 300bhp XK engine features fuel injection

Ecurie Ecosse is working to create a run of seven continuation Jaguar C-types, one for each of the now near-priceless originals run by the team in period.

Between 1951-55, Ecurie Ecosse notched up 59 podium finishes in major international motor races using a total of seven C-type chassis, before switching to the D-type and going on to win Le Mans in 1956 and ’57.

While each of the seven original Ecurie Ecosse C-types still survives, they are unlikely ever to be raced again given their value – the last one to be sold fetched £8.4m at auction back in 2015.

To pay homage to the originals, Ecurie Ecosse will create a sister car for each, which will be made to traditional style but with some modern upgrades. Each will be based around a stiffened version of the original steel spaceframe chassis design and will be built in Coventry – as the originals were – and each will run thin-gauge aluminium bodies.

An uprated 300bhp version of Jaguar’s 4.2-litre straight-six XK engine will power them through a modern five-speed manual transmission. Each car will also boast modern disc brakes and suspension.

Inside, alloy-framed seats will be trimmed in blue leather, with TAG Heuer Master Time stopwatches fitted into the dash. Cars will come in the distinctive blue and white Ecurie Ecosse livery with hand-airbrushed decals.

Ecurie Ecosse patron Alasdair McCaig said: “How better to celebrate the success of the original Ecurie Ecosse C-types than to manufacture a batch of cars in their honour? The seven chassis that raced in period are priceless today, coveted by their lucky owners and only occasionally being seen at concours events. We’re paying homage to them by created each a sister car.”

The first car can be viewed and driven via Hofmann’s at Henley-on-Thames. Each is priced at £516,000.

Toyota unveils its next Le Mans challenger

DESCRIBED BY ITS DRIVERS AS A RETURN to "pure racing", Toyota's much-anticipated 2021 Le Mans hypercar has finally broken cover. Christened the GR010 Hybrid, it will race at this year's Le Mans 24 Hours and in the World Endurance Championship.

In what the ACO is hoping will be the first signal of a new golden era in elite sports car competition, the Japanese marque became the first entrant to fully reveal its new Le Mans hypercar (LMH), ahead of rival teams Glickenhaus, ByKolles and Peugeot – which has only shown concept drawings ahead of its planned entry in 2022.

Development of the GR010 began as soon as the new LMH rules were confirmed 18 months ago. The hybrid racer has four-wheel drive, with a 3.5-litre twin-turbo V6 powering the rear axle with up to 680bhp. A motor-generator unit provides 270bhp to the front axle and recovers energy to charge the lithium-ion battery.

The three-time Le Mans-winning team is aiming to carry on its WEC winning streak started by the TS050 LMP1. Some of the powertrain technology has been carried over but significant change imposed by the new rules include a single motor-generator unit, rather than the pair used by the 2020 car.

The car complies with new cost-cutting measures introduced by the ACO. The GR010 is 162kg heftier than its predecessor, thus bringing it up to the minimum required weight of 1030kg. It's also 250mm longer, 100mm wider and 100mm higher.

Toyota says the hybrid racer will be 10sec slower at Le Mans than last year's, which set a pole time of 3min 15.267sec in the hands of Kamui Kobayashi.

With the total power output capped at 680bhp, the Toyota's electronics will kick in to reduce the engine's performance whenever the hybrid system is deployed. Being the only major factory-backed



New hypercar prototypes should give drivers more input





Toyota is the first to reveal a complete Le Mans hypercar





The race car shares design similarities with the road-going GR Super Sport concept

hypercar programme, Toyota already looks to be the 2021 WEC and Le Mans favourites. It's likely to face a tougher challenge from Peugeot's hypercar next year, followed by another wave of competition in 2023, when Audi and Porsche return with cars built to new LMDh regulations. The ACO is pinning its hopes for close racing on a new Balance of Performance process that allows both classes of cars a fighting chance of victories.

Developed in conjunction with Toyota's road-going GR Super Sport, the design similarity with the GR010 is partly down to a new aerodynamic philosophy introduced this year, which limits overall downforce.

Toyota drivers Sébastien Buemi and Brendon Hartley enthused about driving the GR010, which puts more emphasis on those behind the wheel.

"The fact that we don't have to save fuel per lap like we used to with the TS050 is nice," said Buemi. "You can stay flat until the end of the straight and brake as late as you want. That gives a feeling of pure racing."

Hartley agreed: "The fuel-saving aspect is very different from what we had before, so we're attacking the braking phases more. We're now going to be diving in under the brakes. It's going to come down to the driver and getting the race together."



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#Get The Edge



A new track has been proposed at the Musselburgh Lagoons nature reserve

Fewer race tracks, more cannibal gulls, please

PROPOSALS TO BUILD A RACING CIRCUIT on a site set aside for a wildlife haven have met with strong opposition in Scotland.

Retired businessman Bob Jamieson earmarked Musselburgh Lagoons – nine miles east of Edinburgh – as a suitable location for a new venue, one he felt would bring useful economy to the local area. He told the *Edinburgh Evening News*: "It is scandalous that this valuable site will not generate any local income from birdwatchers, butterflies and seagulls. The opportunity to generate income from millions of visitors to support local businesses will be lost."

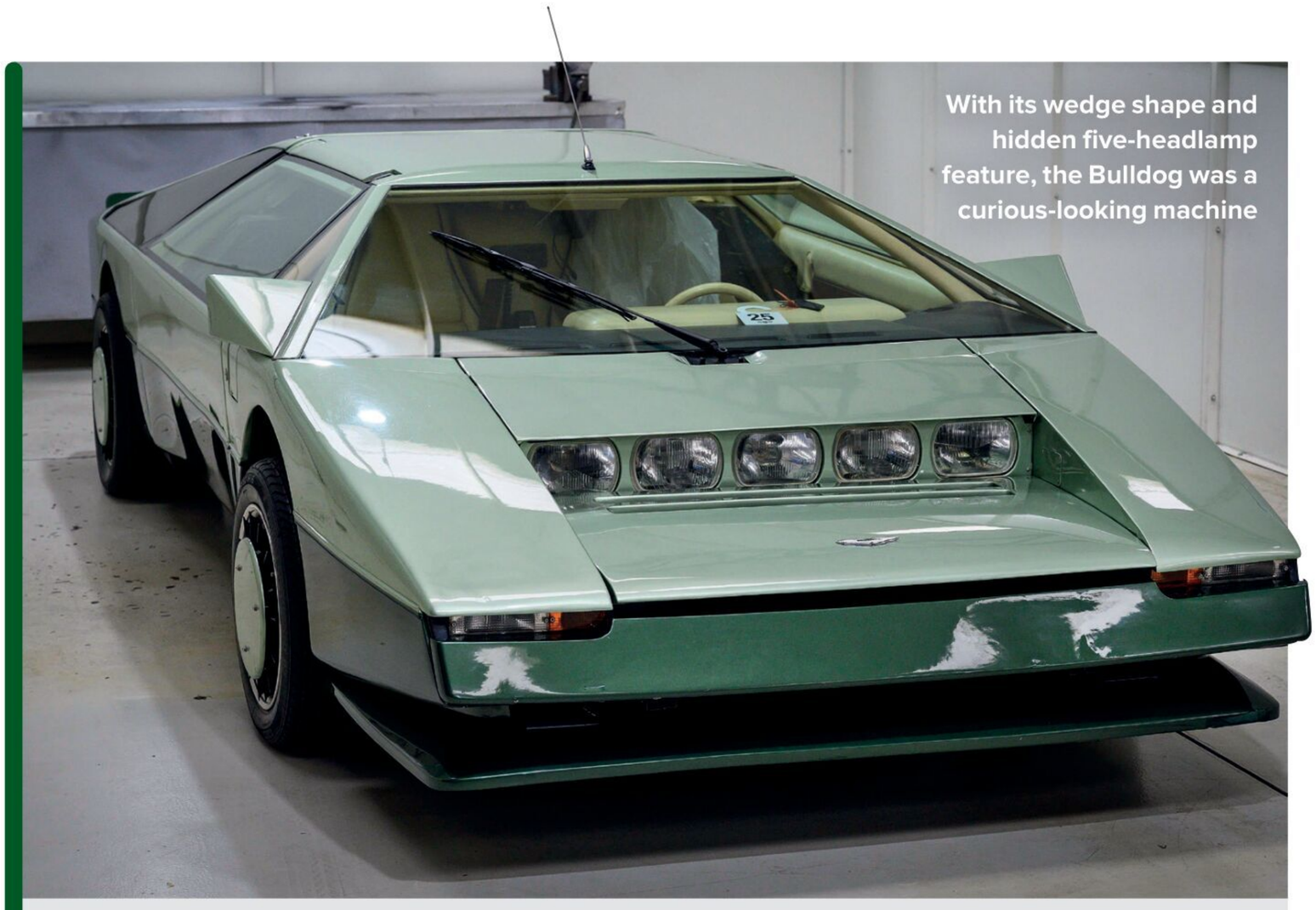
A sketch of his vision indicates that the track layout would replicate Albert Park, Melbourne, which runs around a sumptuous lake containing a wide diversity of wildlife, including pelicans and black swans.

Jamieson's plan features no such natural concessions, although he hopes the site would incorporate other sports facilities such as an ice rink, a gymnasium and a speedway track.

Locals launched a petition demanding that the site be preserved for wildlife and as a recreation area for the local community; local papers reported several thousand signatures within 24 hours, but it was showing as 'unavailable' as *Motor Sport* closed for press.

According to the *East Lothian Courier*, Jamieson responded to objectors by saying: "If East Lothian wants cannibal seagulls rather than new jobs, tourism and local economic benefits... that is your choice."

NEWSPRESS


With its wedge shape and hidden five-headlamp feature, the Bulldog was a curious-looking machine

Revived Bulldog aiming for 200mph run

MORE THAN 40 YEARS AFTER IT rolled off the production line, Aston Martin's Bulldog supercar will finally get its chance to crack the 200mph barrier, with marque veteran Darren Turner at the wheel.

Aston first unveiled the Bulldog back in 1979, with the first test chassis being completed for 1980. The wedge-shaped Bulldog was designed by William Towns and intended to be a technical showcase for the brand as the fastest production car ever made at that point, with a top speed of just over 200mph predicted.

Aston had planned to build as many as 25 of the 5.3-litre V8 machines, but the project was curtailed when Victor Gauntlett took over as Aston chairman and deemed the project too costly.

Only one car was built, and it did achieve 192mph during a test at MIRA before being sold to a Middle Eastern collector for £130,000 in 1984, and then spending time in American hands. The Bulldog is now back in the UK, where its new owner has commissioned a full 18-month nut-and-bolt rebuild through Classic Motor Cars in Bridgnorth – with the restoration being overseen by Victor Gauntlett's son, Richard.

Once it's completed, Turner will attempt to set the speed record that never was, and take the sole Bulldog to 200mph.

Gauntlett said: "The car is well on its way to being restored and CMC will have it running by the end of the year. A critical part of this was finding the right driver, somebody who could get involved with the final elements of the project such as set-up and testing."

Turner added: "I had heard of the Bulldog from within Aston Martin, and when I got asked to join this project I didn't have to think twice. I'm looking forward to being part of the story of bringing the Bulldog back to life and finally achieving what it set out to do all those years ago."



Darren Turner has signed up to take the Bulldog to its limit



British GT's final round at Silverstone was deemed an elite sport, so it could run but without spectators.

Mainstream national racing on hold until May

TOP-FLIGHT BRITISH RACING WON'T begin until early summer this year after both the British Touring Car and British GT championships announced they would delay the start of their campaigns until May, at the earliest.

The BTCC was due to start at Brands Hatch on April 3-4 but has now made Thruxton its first round on May 8-9. The Hampshire venue was due to be the third round, but both Brands and Donington will now shift to June and October respectively.

British GT had pencilled in its traditional Easter round at Oulton Park on April 3-5, but will also shuffle its first two rounds back, with Snetterton now becoming the fifth round with an August date, and Oulton moving to September.

The move means British GT will now begin at Brands Hatch on May 22-23.

Both championships have made the changes in an attempt to safeguard their seasons in the face of Covid restrictions.

The BTCC was forced to cancel its second event at Silverstone National due to the mass rescheduling of the racing calendar after the initial virus outbreak. British GT likewise had to drop its Spa-Francorchamps round and run six events. Spa returns to the calendar this year, pending any lingering travel restrictions.

The plans also boost hopes that fans will be able to attend events this year. The BTCC was classified an elite sport, meaning it could race during the virus measures, but behind closed doors.

British GT did host a limited number of spectators for most of its events, but was re-classified an elite sport for its live-TV finale at Silverstone last November.

Bloodhound needs an electric trail

FUTURE LAND SPEED RECORD ATTEMPTS should utilise electric power in order to remain more relevant, according to outgoing Bloodhound LSR CEO Ian Warhurst, who says alternative technologies are needed to maintain interest in such projects.

It comes after he put the Bloodhound LSR project including the car up for sale in a final bid to save it from closing down last month.

Bloodhound would have started with more renewable technologies if conceived from scratch today, he said. "When we started back in 2008-2009, the original design was based on existing technology and tried to keep up with the times to stay on the cutting edge," Warhurst says. "The next project with Bloodhound was to basically use the best battery and hydrogen technology. It will be interesting to see where that goes."

In January the Bloodhound project announced it was looking for a new owner. Warhurst bought the operation in 2018 after the previous owners failed to raise enough funding to keep it going.



In 2019 Bloodhound hit 628mph testing in South Africa



Button back in time at Williams

JUST OVER TWO DECADES AFTER HE MADE his Formula 1 debut with Williams, Jenson Button has re-signed for the team as its new senior adviser.

After quitting F1 at the end of 2017 Button has stayed in touch with the paddock via punditry roles for Sky. He will now mix that with a new management role within Williams that will feature him providing advice and support to both the engineering team and working with both Williams' race and young drivers. "I am so delighted to once again be able to say that I've signed for Williams," said Button. "Back when I was 19 it was a moment that changed my life and, despite the fact it was over 20 years ago, I feel like I never really left. Sir Frank Williams showed faith in me, which I will be eternally grateful for and I am incredibly excited to have the chance to come back and help the team."

Since Dorilton Capital took the team over there have been mass management changes, with Simon Roberts the new team principal and ex-VW man Jost Capito the new CEO.

Exclusive: Why Button became a team boss, and what his racing future holds, page 116.

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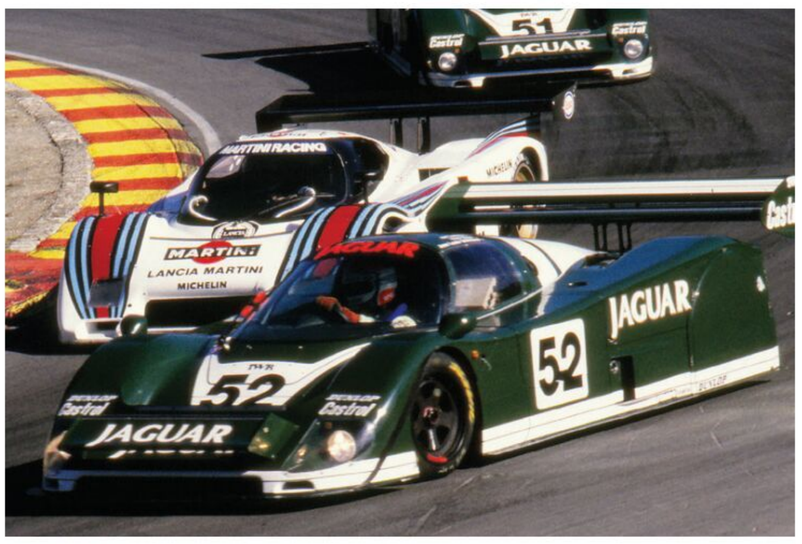
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MARK HUGHES

"Alpine needs to put its management upheaval to bed as soon as possible"

AN F1 TEAM OWNED BY AN automotive company is always liable to spring a nasty surprise on that team – as Toyota, Honda and BMW showed a few years ago. The last couple of years have been a worrying time for the Renault-badged Enstone team, which has recently been re-labelled as Alpine.

Carlos Ghosn, boss of the automotive giant Renault-Nissan-Mitsubishi, was arrested in November 2018 in Japan on financial charges. He escaped Japan while awaiting trial in December 2019, secreted in a cargo box in a plane headed for Lebanon.

With Ghosn incapacitated by his arrest, he was replaced at Renault in June 2019 by Jean-Dominique Senard as Renault's chairman and interim CEO Clotilde Delbos, who would assume that position until a permanent replacement was found. That replacement was announced in January as Luca de Meo, former SEAT president.

Meanwhile, boss of Renault Sport (the competition arm of Renault), Jérôme Stoll, had been set to retire at the end of 2018 and be replaced by Ghosn's favoured Thierry Koskas. Koskas was a part of the executive committee who had reported to Ghosn but who also previously had a close working relationship with Ghosn's former number two at Renault, Carlos Tavares. Tavares had left Renault in 2013 after a power struggle with Ghosn. He subsequently took the role of CEO at the rival Peugeot PSA group where he has been ever since.

Koskas, as an appointee of a man who was no longer there, instead took up the offer – in early 2019 – of his old friend Tavares to be Peugeot's senior VP of sales and marketing before he had even begun his role as boss of Renault Sport. This meant Stoll deferred his retirement from that role until the end of 2020.

"Carlos Ghosn escaped Japan while awaiting trial, secreted in a cargo box on a plane"

Before his retirement, Stoll had overseen a De Meo-planned restructure of Renault Sport as the F1 team was rebranded as Alpine. De Meo wanted Renault team principal Cyril Abiteboul – who had worked closely with both Ghosn and Tavares – to move into the former Stoll role. For the F1 team position, De Meo wanted Davide Brivio, a man he had previously formed a close working relationship with at the Yamaha MotoGP team, which was run by Brivio and sponsored by Fiat, for whom De Meo was the marketing boss. That was over 10 years ago but De Meo had been impressed by Brivio's ability to get a team to gel, an ability underlined last year when he guided the Suzuki team to its first MotoGP championship.

De Meo clearly felt more comfortable making his own appointment for the job of guiding the Alpine team's F1 programme than retaining the appointee of the previous regime, especially given the unsatisfactory progress of the team in the previous few years. All seemed set for Brivio to be announced as the new team boss, with Abiteboul moving up to that corporate role De Meo had envisaged for him. But at the 11th hour Abiteboul announced he would not be taking up the job – and that he was leaving the company. It is said he wished to still be in charge of the F1 team within the corporate role but that this was not accepted by De Meo. It would be no surprise to see Abiteboul recruited by Tavares and turning up within the expanded Peugeot group – which has competition programmes with Peugeot (Le Mans from 2022), Citroën (a rumoured return to the WRC) and Alfa Romeo (title sponsor of Sauber in F1).

A couple of weeks after Abiteboul dropped his bombshell, the former Stoll role was announced as being filled by Laurent Rossi, a Renault automotive internal appointment. But closer to the coalface of the F1 team, the differing visions of Abiteboul and De Meo also brought a problem: Abiteboul had planned around making the team's executive director Marcin Budkowski team principal as Abiteboul moved to the senior Alpine role. But now there appeared to be two competing candidates for that team principal job – Budkowski and Brivio, and the latter had already departed Suzuki. A way needed to be found to accommodate both in positions which respected their ambitions and commitments made to them.

Brivio was subsequently announced as racing director – reporting direct to Rossi (i.e. not to Budkowski). But the ambiguousness of the situation created by Abiteboul's departure was reflected within the statement by the sentence, "[Brivio's] specific role and responsibilities will be announced in the coming weeks." If, as expected, Budkowski becomes team principal, there has effectively been another layer of management created.

The challenge for the team will be in preventing the volatile corporate environment from impacting upon its operation and to keep everyone motivated despite the uncertainty at the corporate level. Getting the right group of people in place, then providing a stable working environment has been proven to be the key to F1 success. If Alpine is to flourish, it needs to put this management upheaval to bed as soon as possible – especially with the arrival of Fernando Alonso, who will likely be blunt in his assessment of any shortcomings.

Brivio's reputation from MotoGP is having great personal skills. That is going to be put to the test now and in a team with about 10 times the number of employees as those of a MotoGP outfit. He's going to need the support and co-operation of those who are already there if the whole thing is to fly.

Since he began covering grand prix racing in 2000, Mark Hughes has forged a reputation as the finest Formula 1 analyst of his generation
Follow Mark on Twitter @SportmphMark



MAT OXLEY

"Suzuki works so well because it fuses strong work from Japan and Italy"

DAVID AND GOLIATH STORIES always brighten up the racing world, and the story of Suzuki's 2020 world championship MotoGP success – its first since 2002 – is one such tale. The Hamamatsu manufacturer has a much smaller race department that Honda, Ducati and Yamaha and punches above its weight thanks to people who know how to make the most of what they've got – financially, mechanically and philosophically.

Suzuki suffered in the early years of four-stroke MotoGP, when its GSV-R was left behind by Honda's RC211V, Ducati's Desmosedici and Yamaha's YZR-M1. Factory engineers had badly underestimated what was needed, so that they lost one of their brightest, Australian Warren Willing, long before the inaugural race in 2002.

"I asked Suzuki about their four-stroke development, 'Are you doing this or that?'," remembered Willing, architect of the factory's final success in the two-stroke 500cc era. "They said, 'No, it's not necessary'. So I said, 'Well, Honda are doing this and that'. 'No, no,' they said, 'Our technology is more advanced than Honda's'. I said, 'Really, how come?' And they said, 'Because our GSX-R1000 streetbike outsells Honda's CBR1000'. So I turned to Garry [Taylor, Suzuki's team manager at the time] and said, 'Sorry, I'm out of here'."

Suzuki's humiliation continued for a decade, with just one race win from 170 races, and that in torrential rain at Le Mans. Perhaps the nadir of the factory's messy struggle was a blue-on-blue incident during the 2003 Italian GP when team-mates John Hopkins and Kenny Roberts Junior took each other out due to a ride-by-wire throttle that refused to close.

"There's a lot of electronics on these bikes, not all of them working like they should be," a Suzuki engineer told me at the time. "We've had a nightmare with software and hardware problems, and maybe the throttle might not close when you want it to..."

Finally at the end of 2011 Suzuki quit, citing the global financial crisis, although many assumed the company had simply had all the humiliation it could handle.

Suzuki did return, four years later, with a completely new bike, the inline-four GSX-RR, to replace the GSV-R V4. Engine configuration is key to MotoGP performance as a V4 MotoGP bike makes more horsepower while an inline-four handles better. It's up to the engineers to decide which road to take, then work at maximising the positives and minimising the negatives of their chosen configuration.

MotoGP is all about compromise. Suzuki's chief engineers Shinichi Sahara and Ken Kawauchi take this to heart more than anyone. Balance is their mantra.

"The most important thing is the balance of the bike," says Kawauchi. "If we just increase horsepower it's not ideal and if we only improve turning it's not ideal. So we always work to extend the bike's ability in all areas."

Last year Suzuki won two grands prix on its way to winning the title with 23-year-old Spaniard Joan Mir. It's significant that at both those races – at Valencia and Aragon – the GSX-RR was among the slowest through the speed trap, while the fastest bike – the Ducati – didn't even get close to the podium.

"Suzuki showed what you can do if you stick to the basics"

The GSX-RR and Desmosedici are polar opposites. While Suzuki focuses on all-round performance, Ducati is obsessed with straight-line speed. During recent years the Bolognese have introduced downforce aerodynamics, ride-height adjusters and holeshot devices to MotoGP, all designed to improve acceleration, so the Desmosedici is anything but balanced.

Andrea Dovizioso, who quit Ducati last season, summed it up: "Suzuki have shown what you can do if you concentrate on the basics," he said, aiming his criticism straight at Ducati Corse general manager Gigi Dall'Igna.

Over the years Suzuki has taken great care to keep the GSX-RR evolving step by step, maintaining its equilibrium. It may not be the fastest motorcycle on the grid but it does everything well, except absolute top speed.

Crucially, the GSX-RR is rider- and tyre-friendly. Its inline-four engine, with its longer crankshaft, makes the bike easier to ride in corners. And Suzuki engineers understand that the critical aspect of engine and electronics performance is how they gel with MotoGP's notoriously tricky spec Michelin tyres.

"If you use the tyres better than everyone else, even marginally, you gain a big advantage," says Suzuki test rider Sylvain Guintoli.

Like the other Japanese factories Suzuki's MotoGP department is split between bases in Japan and Europe, with a mix of Japanese and European staff. Seven-times MotoGP champion Valentino Rossi believes it's not only the engineering that took Suzuki to the 2020 title but also creating a balanced working relationship between the team departments.

"Suzuki works so very well because I think Davide [Brivio, Suzuki team manager who joins the Alpine Renault F1 team this year] has made a fantastic job, fusing the work from Japan with some very strong work at the team in Italy," says Rossi. "He's able to convince the Japanese to work with the Europeans and Italians, so they make a very strong team. I think they've improved with this strong work."

Suzuki is the only Japanese manufacturer in MotoGP with just two bikes on the grid, while Honda and Yamaha each have four. That may change next year when Rossi's VR46 team is expected to move into MotoGP.

Mat Oxley has covered motorcycle racing for many years – and also has the distinction of being an Isle of Man TT winner

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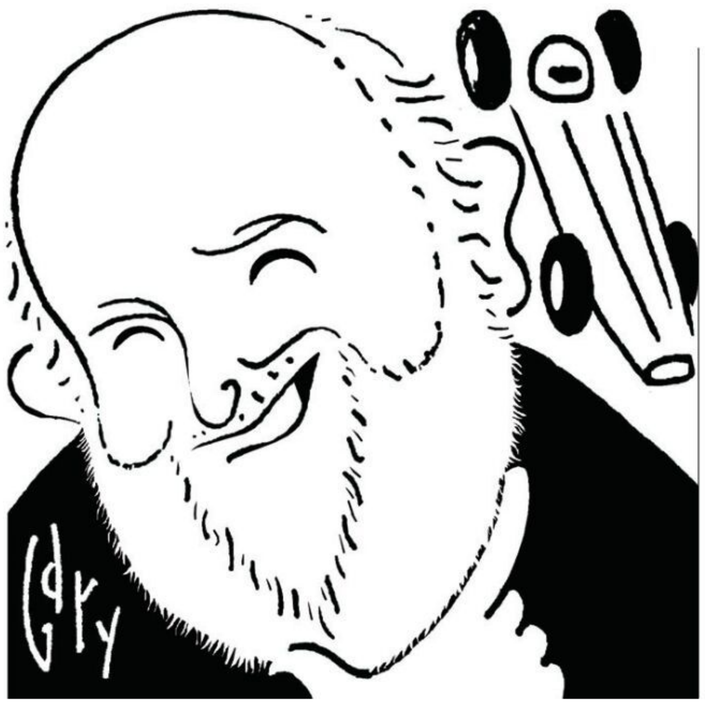


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DOUG NYE

"Today, the descant song of a racing V12 certainly survives as a rosy memory"

I SUPPOSE IT'S TRUE THAT OVER TIME the tint of one's glasses becomes increasingly rosy. Naturally, it's always important to keep this in mind when looking back at racing seasons fondly remembered. The important thing is not to allow memory to become too fond.

That's quite difficult thinking back, say, 30 years to the season of 1991. For starters it's hard today to visualise no fewer than 18 teams registering to compete in the Formula 1 World Championship series. But in 1991 they did.

In addition to Ferrari, McLaren and Williams, there were AGS, Benetton, Brabham, Coloni, Dallara, Fondmetal, Footwork (née Arrows), Jordan, Lamborghini, Larrousse, Leyton House (aka March), Ligier, Lotus, Minardi and Tyrrell. Of course, not all of these teams or marques were healthy, vibrant, competitive entities. Several were lame ducks, no-hopers barely surviving on optimistic life-support systems of variable adequacy – but much the same could also be said of today's hopeful F1 entry list.

Back in '91 of course the year featured that knock-down, drag-out, season-long struggle for supremacy between McLaren-Honda and Williams-Renault, Ayrton Senna versus Nigel Mansell. Alain Prost battled manfully to insert himself between them in the developing, but then still immature Ferrari 642/643 cars, but while Ayrton Senna went on to win seven of the 16 title-qualifying races, and Mansell five, the French 'Professor' dibbed out and left the Italian team for diverse reasons – not altogether involving on-track matters – before season's end. That year also, of course, brought the F1 debut of Michael Schumacher – such a promising breath of fresh air at that time – plus diverting GP wins for Nigel Mansell's team-mate Riccardo Patrese (twice; Mexico and Portugal), for veteran Nelson Piquet of Benetton, and for Gerhard Berger, notably gifted by McLaren team-mate and the year's World Champion Driver, Senna, in Japan.

That year also witnessed the last F1 World Championship title win for a V12-engined car, the McLaren-Honda MP4/6 with its 3.5-litre RA121 power unit. That success represented the final Grand Prix-racing triumph for the classical V12 configuration as had been pioneered in racing power boats (the Putney Motor Works Craig-Dörwald 18-litre of 1904), refined for aircraft (Renault, 12.2 litre, 1909) and eventually for competition cars in Louis Coatalen's Brooklands Sunbeam *Toodles V* (9 litre, 1913). Between the two world wars such smooth-running, refined production V12s as the Packard Twin-Six, Daimler Double-Six, Auburn, Franklin and Lincoln, the Hispano-Suiza, Maybach Zeppelin and the Rolls-Royce Phantom III provided magic-carpet transport for the moneyed and (en)titled.

Meanwhile racing V12s built most notably by Delage, Alfa Romeo, Mercedes-Benz, Auto Union and Delahaye made their marks – followed, postwar, of course, by Ferrari. Had the instigators of the British BRM project in 1945-46 only listened to newly recruited staff engineer – and celebratedly eccentric boffin – Eric Richter, they too might have embarked upon perfecting a V12 engine instead of their theatrical V16, which might well have seen that entire saga rewarded with the early success its creators craved.

"The BMW-V12 made the McLaren F1 jaw-droppingly capable"

So Senna's 1991 world title was accompanied by McLaren-Honda winning that year's Formula 1 Constructors' Championship. Back at that time I was involved with McLaren Cars Ltd, more or less as a retained observer following progress of their three-seat, centre-drive McLaren F1 project. We ended up producing a half-reasonable book covering it all. Rose-tinted glasses or not, that was a fascinating time. Gordon Murray had first asked me to become involved when the company had only recently formed, and the F1 existed only as a developing design concept apart from a rough mock-up buck in MDF board, with a roof-frame in place and taut strings indicating the windscreen surface. Pete Stevens was styling the piece and that little team in its secure building at Genesis Business Park, remote from the F1 works at Woking, was a frenzied hive of creative energy.

Up on the top floor was the associated TAG electronics office staffed largely, it seemed, by Germans. One Christmas Peter and his McLaren Cars mates challenged them to an England-Germany football game in the car park. Ron Dennis was not amused...

On February 1, 1991, the engine spec for the forthcoming McLaren F1 was agreed with BMW and on the 15th the new collaboration was announced, together with the choice of the F1 name for what would eventually be revealed as the forthcoming new centre-drive coupé. Thirty years ago. Coo!

The McLaren S70/2 engine custom-built for them by BMW would emerge as the 6.1-litre V12 which really made the F1 the jaw-droppingly capable projectile it proved to be. The first running prototype V12 was delivered to Genesis on March 4, 1992 – and a little over three years later the McLaren F1s made their Le Mans debut, won outright – and filled third, fourth, fifth and 13th places. For McLaren Cars, Le Mans '95 marked the greatest Le Mans race debut in depth ever achieved. And that was with a detuned V12 road car.

Today the descant song of an internal-combustion naturally aspirated V12 at flat-strap, howling around a race circuit, certainly survives as a rosy memory. So with this in mind, who needs glasses?

Doug Nye is the UK's leading motor racing historian and has been writing authoritatively about the sport since the 1960s



ANDREW FRANKEL

"We are meant to be the puppeteers, cars our puppets, but it no longer feels the case"

ELSEWHERE IN THIS ISSUE YOU WILL find my review of the Ferrari Roma, so I won't let it delay us here except to say that when I drove it, it did strike me that if a car of such performance were produced not that long ago, it would have been all but undrivable for quite a lot of the time.

Indeed the single biggest reason the entire envelope of automotive performance has been able to expand at what at times has seemed an exponential rate over the last couple of decades is not car manufacturers finding more power, but developing with companies like Bosch the electronic intervention systems to go with it.

I happened to drive over to the Roma's Goodwood launch in a McLaren GT, but because Ferrari makes you sign a piece of paper promising not to do any kind of comparison testing as a condition of being allowed to get in its cars at launch, I can't tell you much about their relative strengths and weaknesses. What I can say – I think – is that on wet roads or cold roads, or both, both cars and plenty of others are so traction-limited as to make their power outputs a matter of only academic interest.

The system in the McLaren is so good you are aware of its operation only because the car appears to lose power. There is no sense of traction control 'cutting in'; indeed if not for a small flashing light, you might feel inclined to take the car to the dealer to discover what's gone wrong. Discard the safety nets, however, and you'll soon find out the motor is absolutely fine; whether you scare yourself rigid in the process of that discovery is another matter.

Much depends on the environment, and around Goodwood in the Roma I must confess I left a last line of electronic defence in place because not to do so would have put me clearly on the wrong side of the risk to reward ratio.

Some cars don't even need nasty conditions. At the other end of the McLaren and Ferrari ranges, you'll find a Senna is comprehensively held by back its electronics even on a dry road, while a 986bhp SF90 is so clever you can come smoking out of a bend with maximum opposite lock, right foot buried and be in not much greater danger of losing control than were you driving at 20mph along your local high street.

So what's wrong with this? I'm not going to re-open my argument about us having reached 'peak car', though I believe that in performance terms we have. But I will say that we're meant to be the puppeteers, the cars our puppets, and with a growing number of cars, that no longer feels the case. And while the result may be quicker and safer travel, it is less involving and, inevitably therefore, less fun.

THERE'S A NEW DOCUMENTARY ABOUT SIR Stirling Moss out on Sky, and I'd recommend all save the bits when you have to put up with my ugly mug pontificating about this and that. There's lots of footage I'd not seen before and interviews with both of Stirling's children, Allison and Elliot. As well as the usual suspects (Mille Miglia '55, Monaco '61) it provides insight into the more personal side of the Moss story, from how he was bullied at Haileybury to the breakdown of his first marriage.

But the most moving moment is when Annie and Jim Strudwick, a former nurse and pathologist respectively who were among the very first on the scene of the Goodwood accident, go back to the outside of the entry to St Mary's where it happened. Annie is the one in all the photographs holding Stirling's hand and she reveals he was drifting in and out of consciousness, whereas I always thought he was out for the count. And it was Annie who also saw him turning blue, and because she was both intelligent and a motor sport fan, knew that many drivers used to chew gum and managed to dislodge what was at the time the single greatest threat to him. She saved his life, a life that would go on for another 58 years.

"If I were Fiat I'd be thinking of a genuine successor to the 500"

IF I WERE AN ENTREPRENEUR, AND I AM emphatically not, I would start buying up old and scruffy Fiat 500s from the 1950s and 1960s, ripping out their engines and installing electric motors instead. Because the cars are inherently light and would only ever be used in the trendier parts of town, they wouldn't need much range. And with a few off the shelf creature comforts, like navigation, a digital radio and so on, you could sell them to rich city types as environmentally friendly fashion accessories all day long. And do so for vulgar amounts of money.

Actually I'd look at converting all manner of small, old, compact city cars from Minis to Messerschmitts, but I expect it's the 500 that would do best. There is something about Dante Giacosa's shape that makes its rivals seem amateur by comparison, and the fact that Fiat still mines the design language to this day – as you will see in my test in this issue of the new Fiat 500 Electric – speaks for itself. But perhaps as owner of an old and scruffy 500, I would say that.

Even so, I think the idea worth considering. Indeed if I were Fiat, I would be thinking hard about creating a genuine successor to the 500, not one that just apes its shape at twice the size. There will always be a demand for cars in cities because some people just don't like public transport, and once cars can no longer be taxed on their emissions and congestion zones have been lifted, a really cute, fun and effective city car could become very popular indeed. And if, as has been widely predicted, Covid is brought under control but never entirely eliminated, such a car could become a goldmine.

A former editor of *Motor Sport*, Andrew splits his time between testing the latest road cars and racing (mostly) historic machinery
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The a-Roma of success

Andrew Frankel takes a spin in a 'new-old' Ferrari that takes the marque back to the very best of its basics



THE ROMA IS NOT JUST A NEW Ferrari, but a new kind of Ferrari. Or, at the very least, one we've not seen for a long time. For over 50 years Maranello's ranges have been divvied up between the big and the small – the full-size cars (almost) always with V12 engines, the smaller with V8s and, once, even a V6. And the last of these 'compact' Ferrari coupés also to offer occasional rear seating was the Mondial, a car launched over 40 years ago. Ferrari won't thank me for calling the Roma a rather late replacement for one of its least-loved models but that, in effect, is what it is.

It's not entirely new, because it splits its duties and much of its structure with the Portofino convertible, but it's over 70 per cent different, says Ferrari. And interestingly in a world where closed cars always cost less than their glamorous drop-top siblings, the Roma does not. In price, power and even the number of gears in its transmission, the Roma is positioned clearly ahead of the Portofino.

And doesn't it look the part? It looks like one of Pininfarina's finest Ferraris since the 1970s. But it's not: it's all the work of Ferrari's own Centro Stile design centre.

In terms of its specification, it's all very conventional: no driven front axle, no hybrid drive and there may come a time when we crave such simplicity from these cars. It's just got Ferrari's well-known 3.9-litre engine under the nose, programmed to produce 612bhp, driving the rear wheels alone through a new eight-speed double-clutch gearbox first seen on the SF90 hypercar, and notable for its absence from the Portofino. At least for now.

The cabin is by far Ferrari's best effort to date for this kind of car, marrying elegant shapes and sumptuous upholstery with a level of technological sophistication to make the traditionalists splutter into their espresso. Its instrument pack was also first seen in the SF90 and makes all previous efforts by Ferrari seem antediluvian by comparison. It's complex in presentation but surprisingly uncomplicated in operation. And while those rear seats are very limited for human habitation, you can say the same of those of a Porsche 911 Turbo S or a Bentley Continental GT.



Roma's interior is a perfect blend of class, comfort and technology

We meet in conditions which, short of snow, are about as unsuited to driving a new Ferrari as you might never wish to imagine. It is cold, it is wet, the roads of the south east of England are rather more crowded than the hills above Maranello, and time is short.

Even so, I'm not going to turn my nose up at a couple of laps of Goodwood, but discover little more than a car that will spin its wheels in fifth gear, circulate cleanly and slowly if you select a sensible level of electronic assistance, and flick, kick and slip if you do not. I learn far more about the track conditions than I do about the car, so I give it up as a bad job and head out onto the public road instead.

It would be interesting to bring someone from the Testarossa or Boxer era to the present day and sit him or her in the passenger seat of the Roma while you put it through its paces. If you kept it in the higher gears, they would doubt your sanity. If you dropped a cog or three and really let rip, they would doubt their own. Where Ferrari is so clever is to provide peak power not at a certain point, but from all the way from 5750-7500rpm. This, combined with closely stacked gear ratios



Traditional engineering clothed in a stunning body. But it's not by Pininfarina; instead it's Ferrari's own design

"The Roma is a wide and heavy car, but it's so accurate, so easy to place, that it never feels so"

means peak power is available from gear to gear to gear. Which would have been great except for the fact that even had the roads been dry, full throttle activity in this part of the world would have been restricted to a few breathless squirts, punctuated by nervous glances in the mirror. On streaming wet roads it's not much fun particularly, as with all flat-plane crank, turbocharged V8 motors, its voice is more purposeful than tuneful.

But that is not to say there is no enjoyment to be had here. On the contrary: despite the weather, I would have happily kept on powering the Roma across the Sussex countryside until the tank ran dry. The Roma still manages to offer a rare and special driving experience even when you can't use some or more of its performance.

It rides beautifully, particularly when you've remembered to press the 'bumpy road' button and softened off its dampers (or just left the little manettino controller in its 'comfort' setting). More than that, it feels compact in a way that it really isn't. The Roma is a wide and quite heavy car, but it's so accurate, so easy to place, it never feels so.

Part of the reason for this lies in the excellent visibility, the rigidity of its structure and the tuning of its suspension, but it's also down to a quite simple choice to fit a steering rack that doesn't provide sudden reactions when your hands move away from the straight-ahead position. Ferraris did this in the past because it made them feel superficially sporting, but it also made them more difficult and less fun to drive, particularly in conditions like this. And it bodes well that a car can give a good account of itself in such conditions, and important too as the Roma is the Ferrari most likely to be used every day, at least until its SUV goes on sale in 2023.

It has the look, the name, the power and the driving experience. In short there is very little not to like here.

FERRARI ROMA



- **Price** £170,984
- **Engine** 3.8 litres, 8 cylinders, turbocharged
- **Power** 612bhp
- **Weight** 1570kg
- **Torque** 516lb ft
- **Power to weight** 390bhp per tonne
- **Transmission** Eight-speed double-clutch, rear-wheel drive
- **0-62mph** 3.4sec
- **Top speed** 199mph
- **Economy** 25.2mpg
- **CO_2** 255g/km
- **Verdict** The weather was rubbish. The car certainly isn't.

500 little sparks

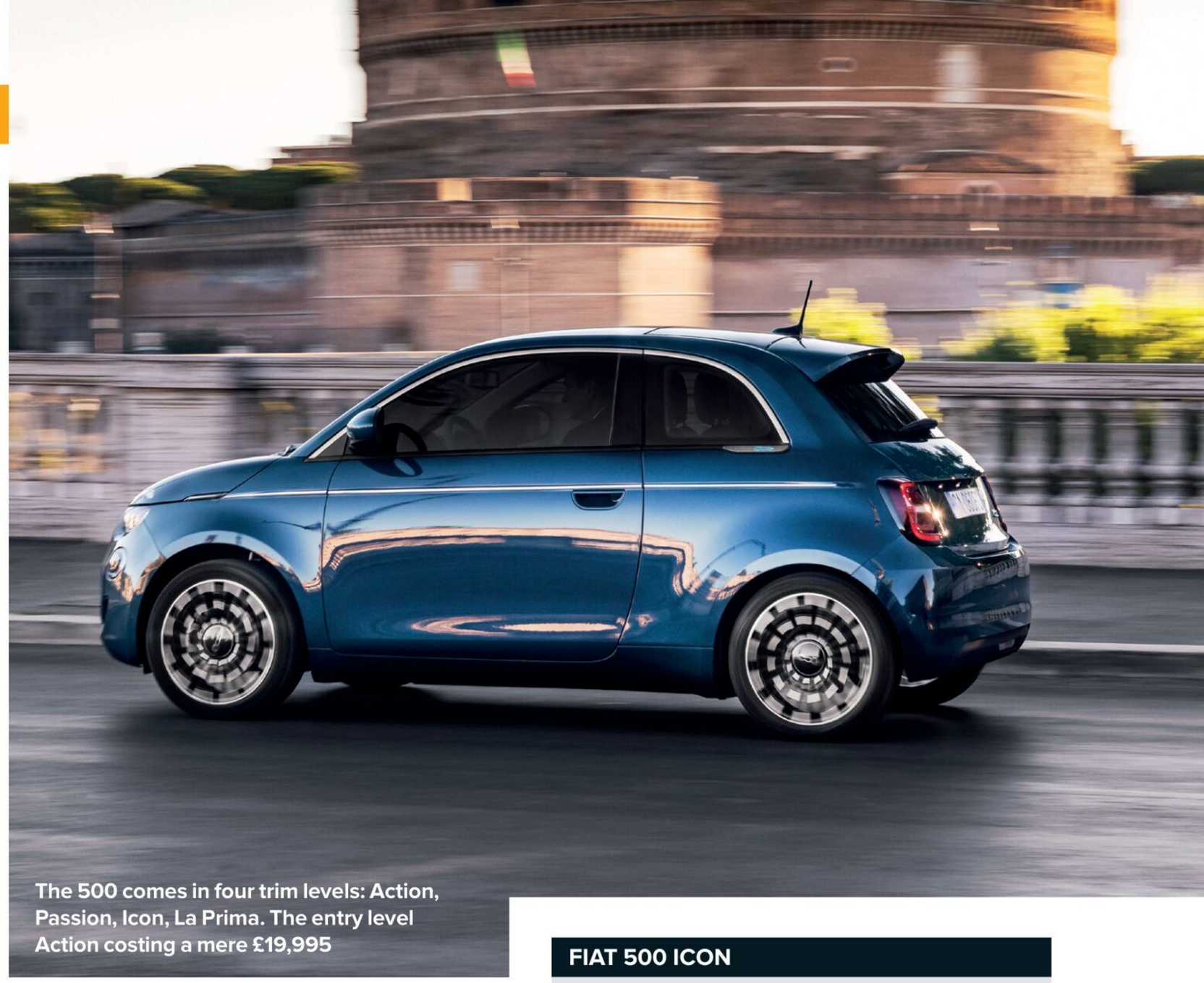
Fiat has taken its supermini all-electric, and it's shocking

THERE ARE FEW CARS I'VE FOUND more frustrating than the Fiat 500 during the last dozen years or so it's been on sale. I just didn't understand how so many people could be so entirely seduced by such a flimsy veneer of derivative styling, to the extent they ignored the utterly mediocre car beneath.

But then again, and as my daughters remind me, fashion and I will be forever strangers. Even so, what hope then for this entirely new Fiat 500? It doesn't even have a combustion engine to which to cling. All will be electric only, with a base model powered by a tiny 24kWh battery and all others a more meaty 42kWh battery. For those who want an actual engine, the old car remains on sale.

You'd be surprised by the new version. I know I was. It's a brand-new design and far more spacious, not just because it's bigger in every direction but also because of the space-efficiency of electric car architecture. More notably, it's built to higher standard than not just the old 500 but any Fiat I've driven. Inside and out it feels like a premium product.

It still has nothing of appeal to the driver, but it's quiet, comfortable, adequately quick and, crucially, not annoying in any way I could discern. It even has a decent range (just under 200 miles) for this kind of car. I remain somewhat electro-sceptic, but of those hatchbacks I've driven, this is the best by far.



The 500 comes in four trim levels: Action, Passion, Icon, La Prima. The entry level Action costing a mere £19,995

FIAT 500 ICON

- **Price** £24,995 (after government electric car grant)
- **Engine** Single electric motor, 42kWh lithium ion battery pack
- **Power** 118bhp **Weight** 1365kg
- **Power to weight** 86bhp per tonne
- **Transmission** Direct drive, front-wheel drive **0-60mph** 9.0sec
- **Top speed** 93mph **Range** 199 miles
- **Verdict** Hugely better than expected

Bigger is not always better

Yes, there's a W12 on the table, but eight cylinders still trumps it



EIGHT CYLINDERS OR 12? DOESN'T seem like much of an argument to be had. Eights are great but 12s are, well, something else. Certainly that's true of Aston Martins and Ferraris, but with a Bentley whose 12 comes in a compact but hardly tuneful 'W' layout rather than 'V' configuration? In the Continental GT the eight wins every time: it's lighter, handles better but crucially it sounds wonderful.

Can the same argument be made for this new Flying Spur V8, especially that for the first time in three generations, it's Bentley's de facto flagship now the wonderful Mulsanne is gone?

Well yes. Absolutely in fact. I guess there must be a certain plutocratic satisfaction in having W12 badges on your flanks and I expect that Bentley has cutting-edge scientific instrumentation that proves the 12 is quieter at cruising speed and, yes, it has even more torque. But will some owners notice it, even some of the time? I doubt it.

They're far more likely to notice that the V8 sounds a whole lot better, is 100kg lighter, £21,400 cheaper, goes further on a tank and has a better relationship with its double-clutch gearbox. Both handle implausibly well for such large and weighty cars, but I once drove a W12 Spur to the Alps and back, and not once during the V8's time with me did I miss any aspect of it. Both are outstanding cars, but the V8 is the one to have.

BENTLEY FLYING SPUR V8

- **Price** £153,900
- **Engine** 4 litres, V8, twin turbo
- **Power** 562bhp at 6000rpm
- **Weight** 2330kg
- **Power to weight** 241bhp per tonne
- **Transmission** Eight-speed double-clutch, four-wheel drive
- **0-60mph** 4.1sec **Top speed** 198mph
- **Economy** 22.2mpg **CO_2** 288g/km
- **Verdict** Eight is better than 12

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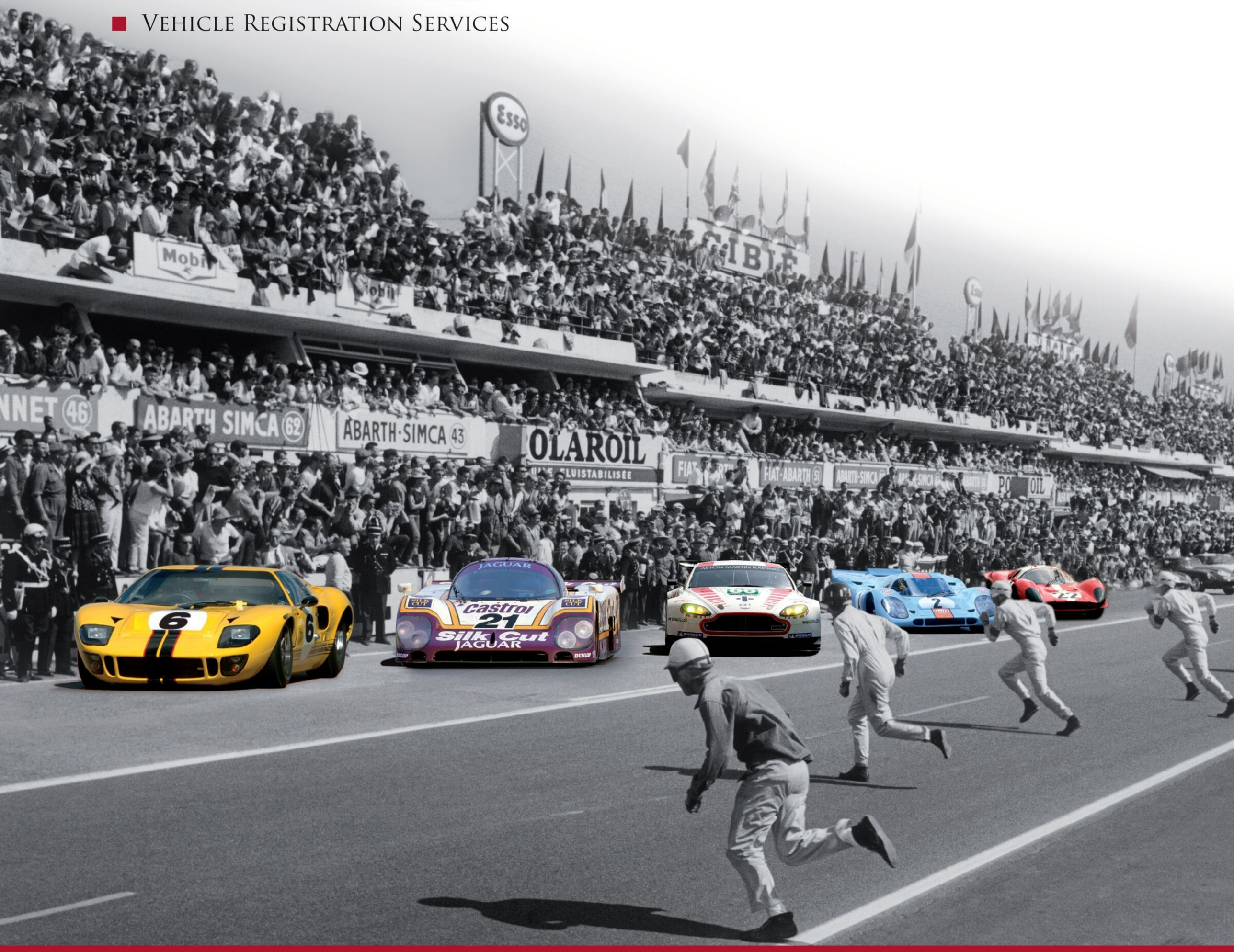
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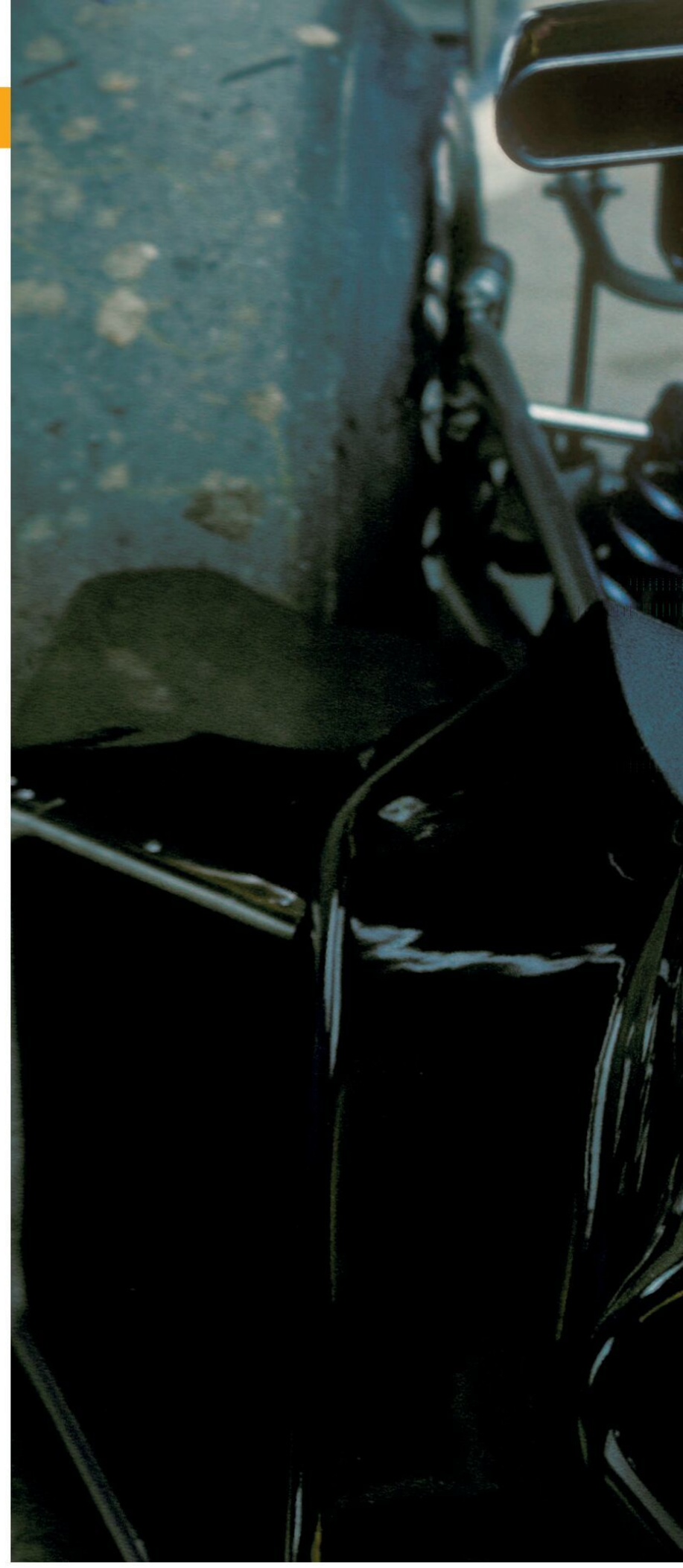
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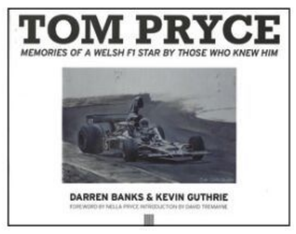
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HORTONS BOOKS

An ode well worth the Pryce

Tribute works to lost grand prix talent are on the rise, and this one looks at the story of a Welsh wonder. **Simon Arron** delves into it





Tom Pryce: Memories of a Welsh F1 star by those who knew him
Darren Banks & Kevin Guthrie
Performance Publishing
ISBN 9780957645073
£35.00

IN RECENT YEARS THERE HAS BEEN A pleasing trend for authors to pay tribute to bygone stars whose names meant a great deal within the motor sport firmament, and yet whose accomplishments remain largely unknown to the wider world.

Cases in point include Richard Jenkins' excellent homage to Richie Ginther and works by each of the co-authors here: Darren Banks' profile of Stephen South, his first literary endeavour, received widespread acclaim; Kevin Guthrie's Jim Crawford biography is perhaps less well known, but the subject is every bit as worthy.

Appetites whetted, the two pooled resources for a first joint venture, and the result is eminently readable.

Pryce's story has been covered before, in David Tremayne's elegant chronology *The Lost Generation* published in 2006 – a book that also analysed the careers of Tony Brise and Roger Williamson, a gifted trio whose potential was never fulfilled thanks to a cocktail of fate, peculiar circumstance and the inherent dangers of the period in which they were ascending the racing ladder. All three left an indelible impression on enthusiasts of a certain age – and they flourished just as my interest in the sport did likewise.

Pryce first caught my attention during a round of the Shell British F3 Championship at Oulton Park on Good Friday, 1972. He led impressively in his Royale RP11 until spinning with a couple of laps to go, at which point Williamson took control; both would be on my radar from that moment on, likewise the dominant winner of the afternoon's main F2 feature – Niki Lauda. (Brise was eighth in the F3 race that day, ability perhaps slightly masked by a Brabham chassis, but his turn would soon come.)

Tremayne was involved in this book, too, in an editorial role, but it is very different to his earlier work, a complementary volume rather than a potential rival. It is not a simple retelling of the Welshman's life and times, but a series of recollections provided by those who knew him from school days and beyond – family friends, rivals, flat-mates, engineers, team-mates and so on.

Notionally it is a book into which one can dip as and when the mood demands, without fear of losing the thread, but in reality it's quite hard to stop once you've poured a glass of Malbec or brandy (other accompaniments are available…) and settled down in a comfy chair.

Although Pryce moved away from his beloved North Wales in successful pursuit of a racing career, sharing digs close to Brands Hatch with a bunch of fellow drivers, he never really left it behind – and many anecdotes herein reflect as much.



Pryce at the wheel of his Shadow DN5, leading Jochen Mass in the 1975 Dutch Grand Prix

John Watson: "We were at a Formula 2 race in '74, at Enna. There was no food at the track, so a group of us including Tom and [wife] Nella went off to a restaurant. I'm a bit of a foodie, love Italian cooking and am immediately reading the menu. 'Tom, what are you going to have?' 'Chicken and chips,' he said. 'Tom, for f**k's sake, you're in Sicily. You've got some of the finest food in the world…' That's where he was maybe still the boy from Wales."

Trevor Foster (then a Shadow mechanic, later team manager at Jordan GP): "I remember Tom coming to the factory for a seat fitting and he seemed just a very, very normal guy. He was a hit with the team right from the first day he arrived. Very quiet, almost embarrassed to the point of, 'Why am I here?', but deep down he had an



Humble, unassuming and naturally gifted, Tom Pryce was a rising F1 star before his tragic death in 1977. Here he awaits action at Jarama in 1976

GRAND PRIX PHOTO

"Tom was very quiet. Almost embarrassed to the point of 'Why am I here?' but he had huge confidence"

inner confidence that he just knew he could drive an F1 car."

There is lots of poignancy here, naturally, and also a fair bit of swearing - mostly, but not exclusively, from Ian Flux, who was floor sweeper-cum-van driver for the tiny Token team with whom Pryce made his F1 debut: "Tom was very gifted. He never saw himself as the racer and me as just the van driver. He spoke to me as an equal, and that's probably why I liked him so much." NB that this is one of the few sentences in which he doesn't use expletives...

The tone of the delivery might fluctuate from witness to witness, but the message remains consistent from start to finish.

Pryce's big break, of course, came when officials refused to sanction Token's entry for the 1974 Monaco GP. He was offered a seat in the supporting F3 race instead, taking over the entry originally slated for Australian Buzz Buzaglo. The latter was devastated, but accepted the consolation of a luxury weekend with his then-girlfriend in Monte Carlo; he would never race again. Pryce dominated the event and a few days later rejoined Token for a test at Goodwood, where senior team members from Hesketh and Shadow turned up in a bid to procure his services.

Pryce joined the latter, won the 1975 Race of Champions at Brands Hatch, led the British GP from pole until caught out by a rain shower and took podium finishes in Austria 1975 and Brazil 1976. He died at Kyalami during the 1977 South African GP, the consequence of a freak accident that should have been wholly avoidable.

This is an engaging epitaph to a spectacular talent, one which was taken before he'd had a fair chance to exploit it.

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Purpose-built from clamshell nose to perky tail, the RS200 ended up jobless

Gone before its time

It was shaping up to take centre stage – until the axe fell. **Gordon Cruickshank** learns all about Ford's promising RS200

Lucky Graham Robson – he had an RS200 as his daily driver during the years he was involved in the project. In fact he saw all stages of the chunky machine going through development, so he couldn't be a better guide to how Ford did what it did, so quickly, and the struggles it went through before this promising machine was knocked on the head by the abrupt cancellation of Group B just as it hit its stride.

Robson was close to Stuart Turner when he became Ford's motor sport director in 1983 and immediately canned the floundering RS1700T project, instead assembling a small team to create a Quattro beater. It seems to have been one of those magic moments when the right people came together; in less than a year from proposals a prototype was ready. Robson vividly describes the excitement that surrounded the task, not that it was easy: arguments raged about the aluminium honeycomb structure, the styling, who should build what, and where to assemble it. But the result was what Turner wanted – a rally winner which looked like a distinct car, not a converted saloon, was decently built and which could also be type-approved and sold for the road. Ghia did a fine job of blending a cut-down Sierra cabin into a cute profile, while the team's collective motor sport experience meant that the car would be both capable and easy to work on, with its flip-top body panels and easily switched components. It also had to be reasonably comfortable for occupants, and use as many off-the-shelf components as possible – space was even left for a radio-cassette.

After a hearty technical analysis Robson moves on to the complexities of having the thing built: that involved a large number of outside agencies and the sheer frenzy of getting the car ready for homologation is clear. Yet they had 200 cars ready for the FIA inspectors by January '86, and thereafter the stubby little vehicle began to show that it was a potential champion – until the axe fell.

There's thorough coverage of the rallies the car did do, plus its later rallycross career, but also the unexpected pressure of refettling the now-redundant cars for the road. Lots of first-hand content, Robson's own memories adding a personal slant, plus generous pictures and a full chassis listing make this a great overview of a sadly truncated story.



RS200 – Ford's Group B rally legend
Graham Robson
Herridge, £47.50
ISBN 9781906133955

THE MICHAEL TURNER COLLECTION

Chas Parker with Michael Turner

Many readers will have bought the Christmas cards which for 50 years renowned motor sport artist Michael Turner produced annually. Author Parker was one such, but now goes further by collaborating with Turner on collecting all of them into a lavish book, well reproduced on good paper. Each of Michael's images is accompanied by the story of its subject, and also by Michael's own memories of the painting, and often of the driver, because Turner was there. Foreword by Sir JYS. **GC**

Porter press, £70
ISBN 9781907085994

AUTOCOURSE 2020-2021

Edited by Tony Dodgins

Lewis Hamilton, Pierre Gasly and Sergio Pérez were responsible for some of the most eye-catching achievements of the last F1 season – and here's another. Traditionally *Autocourse* has been a Christmas treat for grand prix fans, but the delayed 2020 campaign made it impossible to produce by then. Even so, the first copies landed on January 10 – speed on a Mercedes W11 scale. Written by Tony Dodgins, Maurice Hamilton, *Motor Sport* regular Mark Hughes and more, it is comprehensive, authoritative and well worth the (short) wait. **SA**

Icon Publishing, £55.00
ISBN 9781910584422

FERRARI 250 GTE– THE FAMILY CAR THAT FUNDED THE RACING

David Wheeler

If not for its glamorous brothers we'd see the 250 GTE as a highpoint of grand tourer style. Instead, 180 of these elegant 2+2s, whose profits kept the racing going, have been chopped about to make another SWB or mock GTO. Long-time enthusiast Wheeler devotes this hefty tome to polishing the car's profile, from prototypes through production and on to those replicas, backed by vast detail, a ton of photos plus histories. Really one for owners or dedicated fans, though. **GC**

Porter, £75. ISBN 9781913089207

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PRODUCT OF THE MONTH

Renntransporter, 1955 British Grand Prix, winner Stirling Moss



1:18 replica of the famous Rennwagen Transporter 'the blue wonder', famously created by the Mercedes-Benz Racing Department to rapidly transport cars to and from the factory and race track, combined with a Stirling Moss 1955 British Grand Prix winning W196 Monoposto, presented cased and hand signed, this must be the ultimate tribute to the team that dominated the 1955 season.







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Product of the month

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GARMIN CATALYST DRIVER TRAINER

Remember the days when sat navs were best suited to guiding lorry drivers into lakes or family estates down near-imrpassable country lanes? Well, things have moved on a fair bit since then, and now a sat nav can even – reportedly – make you a better racing driver.

Garmin is one of the biggest names in the navigation industry, but has now turned its expertise to motor sport tech with this nifty Catalyst driver-training system.

Designed to fit into any track car like a removable sat nav, the system acts as far more than just your regular old GPS lap timer. The Catalyst comes pre-loaded with data from 450 circuits around the world, and if your chosen circuit isn't included, it can learn your car's movements and position to trace the layout for you.

The Catalyst goes a lot further than the usual lap timing and speed-tracking functions, incorporating live car positioning and racing line data and thanks to its many sensors and built-in accelerometers it can even offer real-time audio cues to drivers for when they should ideally be braking and turning into corners. Those prompts can then be transmitted either to a compatible headset or through the car's Bluetooth stereo system.

Also, instead of using traditional split times to work out best sectors, it can calculate your own personal optimal lap time by taking all of your data into account. On top of all that, it also comes with a HD camera to record your footage and can display all of your session data immediately on its 7in screen, removing the need for any separate computer and showing you exactly how and where you could improve.

Due to it mounting with a suction cup, it's not race legal, but could be a game-changer for the track day warriors out there.

£899.99, garmin.com

AC CARS SCOOTER

Now in its 120th year, AC Cars (founded 1901) is a brand not afraid to tinker with its own established ways. Late last year it unveiled a new all-electric 600bhp-plus version of its famous Cobra sports car, and has now opted to branch its electrification skills out into two-wheeled transport, too.

This new scooter reunites AC with Autokraft, the company that saved the brand by buying the naming rights in the 1980s. Now a technology firm based in Norfolk, Autokraft has led the way with development of AC's first scooter. The TR-560 features a 30kg frame fitted with a lithium-ion battery and charger, giving 15mph and a 31-mile range. It can be charged in four and a half hours but there will soon be an option for a more powerful battery pack to up speed and range.

£1692, autokraft.technology





MORGAN x PISTON GIN

Just when Aston Martin thought it had the car-themed spirits market to itself, along comes another iconic British brand for a tie-up. Morgan has collaborated with Piston Distillery to create a world-first gin infusion.

Ever since Henry Frederick Stanley Morgan quit his job in the drawing office at Great Western Railway to found Morgan Motors in 1910, the firm has been famous for using ash wood as part of its chassis construction, so there's few prizes for guessing the key ingredient in this.

Believed to be the world's first ash wood-infused gin, it's then hit with a slight tang of apple as well as Piston's usual award-winning combo of 14 botanicals.

Each bottle comes with a stainless steel piston cap; a limited batch will be made.

From £45, morgan-motor.com

PHOTOWALL LE MANS MURALS

Fancy pepping up your freshly spring-cleaned rooms with something that's a bit more dramatic than you'll find in your local B&Q?

Head to Photowall and check out its stylish range of motor racing-themed wall murals. Each is scalable to fit almost any surface and comes supplied as a ready-to-paste wallpaper. Our pick would be the Mercedes 300 SLRs in full flow at Le Mans by Swedish designer Sune Envall.

From £29m², photowall.co.uk





FOCAL FOR BENTLEY HEADPHONES

Can't bear the thought of being seen with a pair of Sony or Philips headphones around your lugholes when stepping out of your Continental? Bose and Bang & Olufsen just that bit over-used? French company Focal has exactly what you need with this rather opulent set of personal acoustics.

Designed in conjunction with Bentley, the Radiance headphones draw on many styling cues from the car range – such as the copper accents that mimic those used on the EXP 100 GT concept, or the diamond latticework that's also found on Bentley seats.

Aside from the showy bits, they have a 40mm full-range speaker driver, leather on the headband, earcups made from super-soft Pittards leather and come complete with a luxury carry case and are packaged in a soft-touch box. And being Bentley endorsed, they're also reassuringly expensive.

£1199, shop.bentleymotors.com

RETRO COMICS

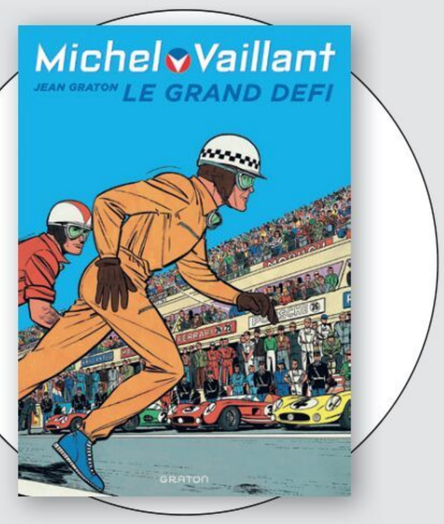
Let's re-live our youth with these classic cartoons



TIGER

Skid Solo was perhaps the defining hand-drawn racer of his era. This *Tiger* issue from April 1973 covers his exploits racing in North Africa.

£6, tilleysvintagemagazinesshеffield.com



MICHEL VAILLANT COLLECTION

Covering the first 70 issues of France's greatest cartoon sports car driver, this is unmissable. The only catch is that you need to speak French to enjoy it.

£14, amazon.co.uk



NASCAR HEROES

Back in 2007 NASCAR sanctioned its first comic book series, which ran to six issues and followed Jimmy Dash, a janitor who gained super-human racing powers.

From £3, mycomicshop.com (US)



Bahrain will open the Formula 1 world championship for the first time since 2006

The shifting sands

With the Australian GP postponed and the Chinese event cancelled, it's back to the Middle East for the return of F1

Formula 1 Bahrain Grand Prix, Sakhir, March 26-28

AUSTRALIA WON'T BE HOSTING the first Formula 1 race this year after it was postponed until November, leaving Bahrain to raise the curtain on the 2021 season.

The teams will already be set up and ready to go after a switch of pre-season testing venue from Barcelona to Sakhir, but there will only be three days of track time ahead of the race.

Memories of the thrilling Sakhir GP in December are still fresh and hopefully there will be similar fireworks on the race's return to the full circuit layout.

George Russell's nearly moment and Sergio Pérez's maiden win made for one of the best races of 2020 on the track's outer loop, and Pérez is the one who stands the best chance of more success on the main track.

A lifeline with Red Bull alongside Max Verstappen was a worthy reward for the finest year of his career so far, but can the Mexican really challenge his team-mate?

Further down the pitlane, it will be unfamiliar territory for Ferrari as the Maranello squad hopes to bounce back from its worst season in 40 years with the exciting pairing of Carlos Sainz and Charles Leclerc.

Sebastian Vettel has traded in his red overalls for British racing green and Aston Martin. The team celebrated a win decked in the pink of Racing Point when last in Bahrain. Can four-time champion Vettel hit the ground running in 2021?

Then there's the return of Fernando Alonso with Alpine. Rebranded from the yellow of Renault to the tricolour for the performance brand, the Spaniard returns to F1 with title aspirations, but his reputation for outperforming whatever car he's in means that he can't be counted out for a surprise or two this year.

Importantly, will anyone be able to stop Mercedes' Lewis Hamilton from taking a record-breaking eighth championship?



George Russell was the star of Sakhir last season, but won't have a Merc this time

1000 MILES OF SEBRING

March 19

The Hypercar era begins with a return to the United States for the 1000 Miles of Sebring after its cancellation last season. It will be the first taste of the new World Endurance Championship and life after LMP1.

SUPERCARS CHAMPIONSHIP – SANDOWN

March 19-21

Sandown replaces Albert Park for the second round of the Aussie Supercars 2021 season following the postponement of the F1 race. Reigning champion Scott McLaughlin will not be on the grid to defend his title after switching to IndyCar.

DONINGTON PARK STAGE RALLY

March 21

Donington's 2021 season gets started with the Stage Rally on the 21st. There will be plenty of rally action to take in as well as access to the paddock. Tickets are available to the event and will be refundable if spectators are prevented from attending.

MOTOGP QATAR GRAND PRIX

March 28

MotoGP is back in the Middle East after 2020's Qatar round was cancelled. Defending champion Suzuki is without Davide Brivio after his departure to F1, Marc Márquez is racing to be fit in time for the opener while Ducati and Yamaha hope to close the gap to the top.

NASCAR FOOD CITY DIRT RACE

March 28

NASCAR has shaken up its calendar and one of the major dates comes at the end of March at Bristol Motor Speedway, Tennessee. 'The Last Great Colosseum' will look a little different though as the premier series returns to dirt for the first time in over 50 years.

MORE MARCH EVENTS

March 7	NASCAR – ISM Raceway, Phoenix
March 12-14	F1 testing – Bahrain
March 20	IMSA – Sebring
March 21	NASCAR – Atlanta Motor Speedway

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From humble beginnings as the son of a garage owner, via a brief career in banking, the Danish ace battled the odds and rose to become ‘Mr Le Mans’, setting records that may never be broken along the way

Tom Kristensen

THE MOTOR SPORT INTERVIEW

INTERVIEW BY ROB WIDDOWS

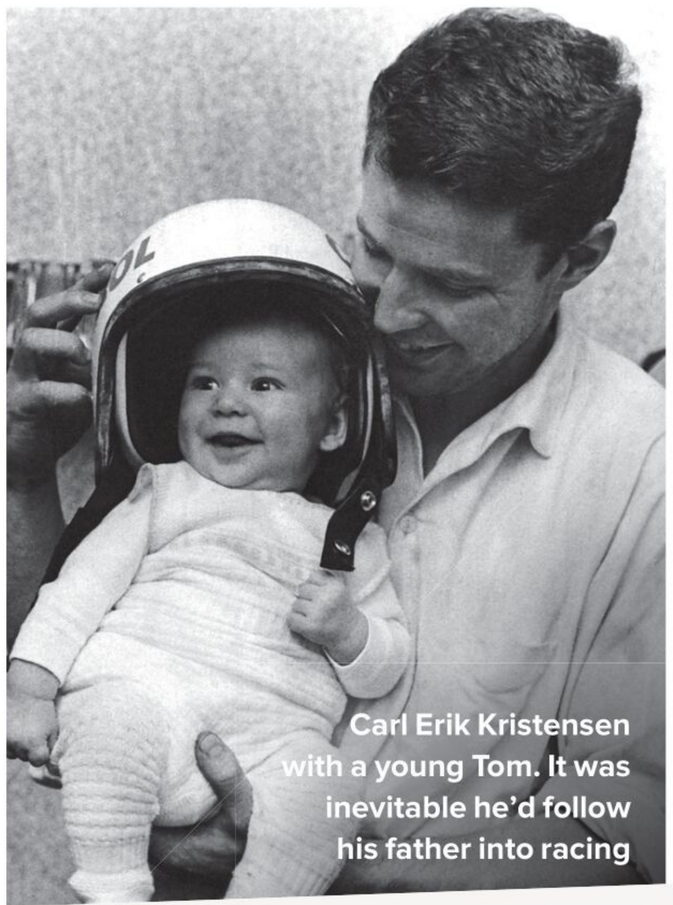
Tom Kristensen won the Le Mans 24 Hours at his first attempt, having never seen the circuit until his practice laps in 1997, and went on to win the race another eight times, a record that still stands today. 'The Great Dane', as he is affectionately known, has also won the Sebring 12 Hours six times, another record. In 2014 the Queen of Denmark appointed Tom 'Knight of the Order of the Dannebrog' in recognition of his international success. Having won the German F3 championship in 1991, and the Japanese title in '93, he narrowly missed out on the Japanese F3000 title in 1995. He seemed destined for grand prix stardom but, despite a testing contract with Tyrrell, he opted for endurance racing and was world champion in 2013. From his home in Hobro on the Jutland Peninsula he reflects on a record-breaking career.

Motor Sport: ***When you first started racing, Denmark was not what you'd call a motor racing country, so how did you take your first steps up what Jackie Stewart called 'the staircase of talent'?***

TK: Yes, you're right, it was very humble beginnings, growing up at the family's gas station but my dad was racing touring cars, on both gravel and asphalt circuits, so I grew up in a racing environment. I got an old, rather unreliable and not very fast kart when I was eight years old. We used to run it round the gas station before we took it to the local track at Mou [a kart track near Aalborg in Denmark] to make sure it worked.

The first year we raced at Mou and here I was very happy, racing with my dad. It was where I wanted to be. My mum, she was not so happy. As a teenager I got some support from a local kart dealer, won some Danish championships and beat Mika Häkkinen to the Scandinavian championship in 1985. So now I was up against the top drivers, racing in Italy, going to America, and runner-up in the 1987 world championship.

Then, for three years - from 1987 to early 1991 - I did not have a drive, just a test here, a race there. At this point I did my training to be a clerk at a Danish bank, and my mum was happy again, but for what I call my '1000 days', I had no chance to be a racing driver. Despite this, I kept my belief in myself because I'd done well in karts previously, my rivals were maturing as champions in cars, so I knew that if I got the chance, I had the talent and determination to succeed.



Carl Erik Kristensen with a young Tom. It was inevitable he'd follow his father into racing



"With no racing, I did my training to become a bank clerk"

You most certainly did because you won the German F3 championship in 1991. How did that big break come along?

TK: I'd met a lot of people. They knew how fast I was in karts. It was Bertram Schäfer who signed me up for his F3 team in Germany just before the season started and I put the car on pole for my first race at Zolder. It was a big championship; the year before it was Schumacher, Rensing and Kaufmann fighting for the title. So this was a huge breakthrough for me and I won that first race, led the championship from beginning to end. So now I was a professional driver and I'd moved to Bitburg to work with the team on a daily basis. It was the foundation of everything. At Christmas my mum tried to convince me to stop. She said I'd had my dream, proved myself as a winner and now it was time to go back to the bank. You know, it's crazy, but I was actually on leave from the bank the year I won the F3 title.

Did you already have your sights set on Formula 1? Was this the ultimate goal as German F3 champion?

TK: Of course, it was a realistic target, but you have to understand that everyone in Denmark said that was impossible. There was no money, no backers, and they said Formula 1 would not be the right place for any commercial sponsorship, it was just too far away. There was very little private money in Denmark at that time. There is more today, but there was not going to be any support to take me to F1. There were no patrons like maybe there were in other countries at the time. I think possibly I had come too far too soon, it was going too well with too little experience and I had nobody behind me to help manage this.

In the end it was Alessandro Zanardi, a team-mate from karting, who got me a test drive with Giuseppe Cipriani's Il Barone Rampante F3000 team. He was racing for them in '91, fighting for the championship with Christian Fittipaldi. So I did the test at Mugello, it went well, but I didn't have enough sponsorship, so it was at Macau for the F3 race that I got my next huge breakthrough. TOM's Toyota came to see me and offered a contract for F3 in Japan. It didn't take me long to say yes to that, and the next journey began.

This was a very big step for you - a new culture, first time away from Europe and a fiercely competitive series that had attracted many other top European drivers. Was that at all daunting?

TK: No, I loved my five years in Japan, there was great camaraderie, I made many friends, raced so many different cars, learnt a lot of challenging tracks and matured very much as a driver. We had a lot of fun as well as a lot of good racing. It was another important turning point in my career. It wasn't just all the *gaijins* [Japanese for foreigners] staying together. The group changed all the time, and we had Japanese team-mates. We all socialised together. A great community.

One of my best races was my victory in the international Macau/Fuji F3 International ahead of the world's leading F3 drivers. Then in '93 I won the F3 title ahead of Rickard Rydell and Anthony Reid and just missed out on the Formula Nippon title in '95 behind Toshio Suzuki. I also got experience in a lot of other cars like the Nissan Skyline in GT, a heavy 4WD car, Super Touring, lightweight, front-wheel drive, some testing for Toyota in Group C. I made my sports car debut with Eddie Irvine and Jacques Villeneuve in the Toyota TS010. They joined TOM's at the same time as me and we are all still friends. Then there were the circuits, we used 12 in all, very varied layouts, which is yet more great



Formative steps in Formula Ford 2000, but Kristensen never got a full campaign until Bertram Schäfer gave him a shot in F3 for 1991, right



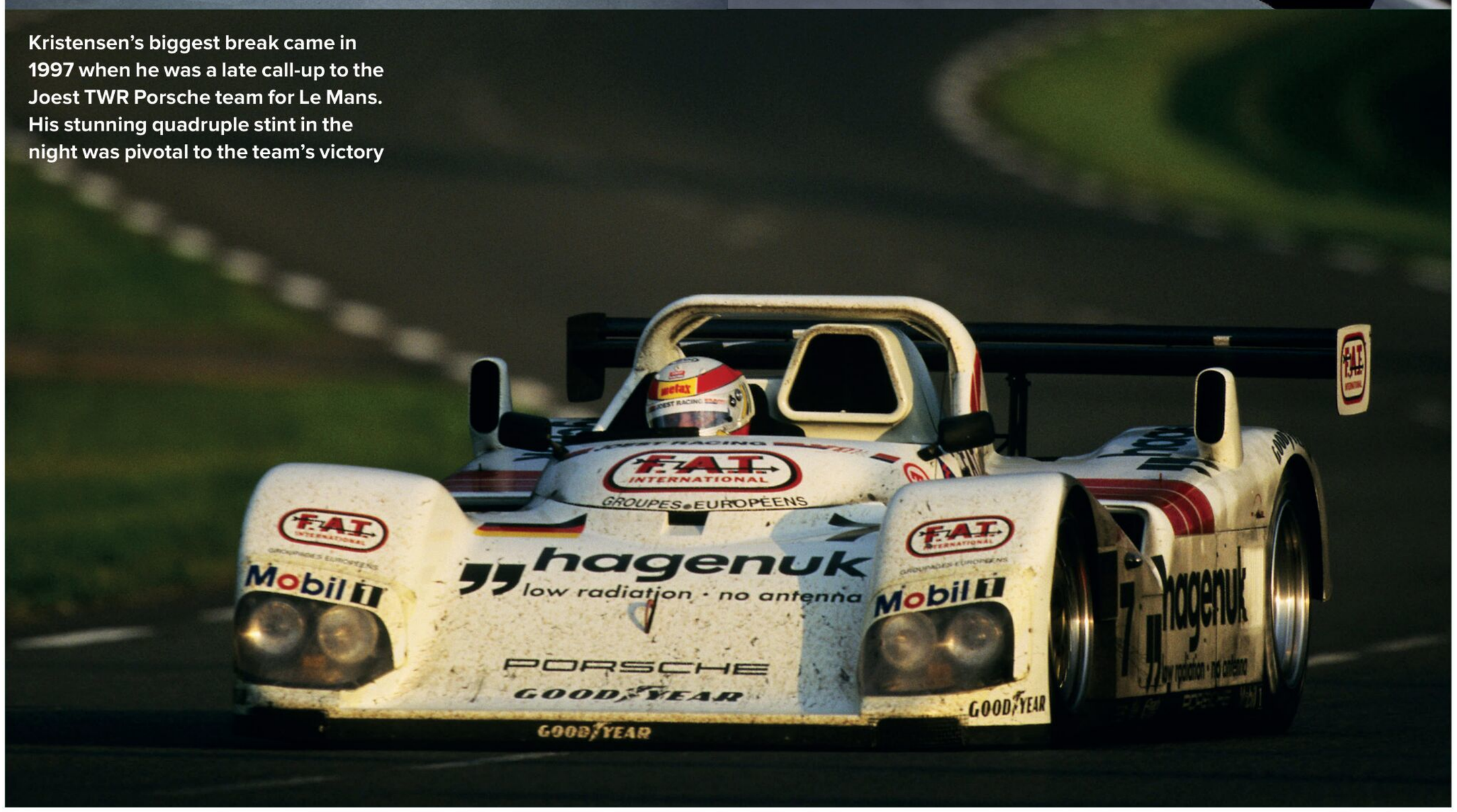
During his time in Japan, TK also excelled in tin-tops, winning the 1993 Fuji Inter-Tec 500 in a Nissan Skyline alongside Hisashi Yokoshima (both in yellow overalls)





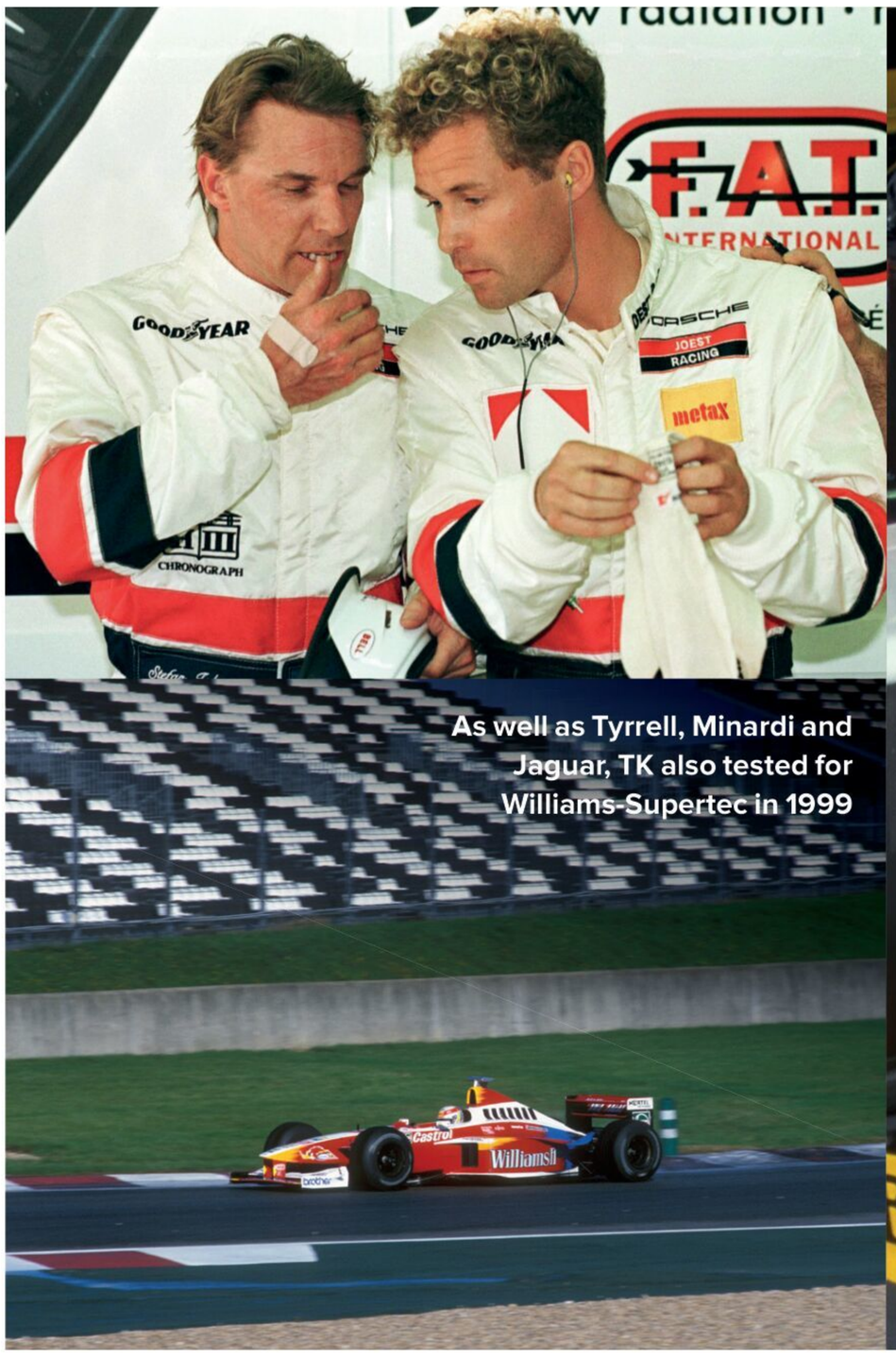
In F3000 action for Auto Sport Racing at Pau in 1997. He'd be second in this race, and sixth in the championship with a single win

Kristensen's biggest break came in 1997 when he was a late call-up to the Joest TWR Porsche team for Le Mans. His stunning quadruple stint in the night was pivotal to the team's victory

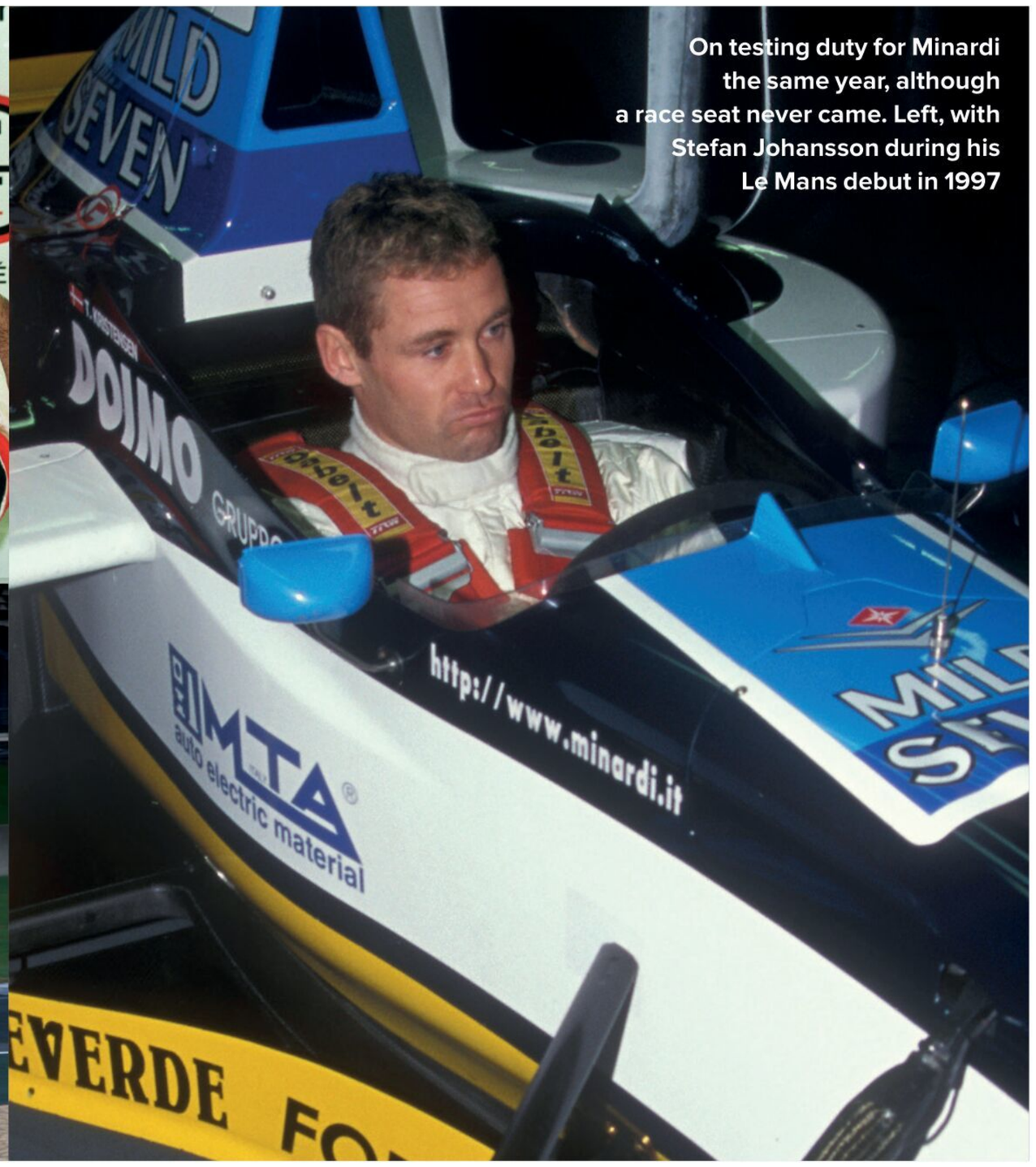


DPPI, MORTEN ALSTRUP, TOM KRISTENSEN ARCHIVE

Kristensen's performances in Formula 3000 marked him out to Joest when it needed a Le Mans stand-in. He was leading the championship when the call came



As well as Tyrrell, Minardi and Jaguar, TK also tested for Williams-Supertec in 1999



On testing duty for Minardi the same year, although a race seat never came. Left, with Stefan Johansson during his Le Mans debut in 1997

experience. So, you know, such a great variety of cars and tracks, and that is what made racing in Japan like a university education for so many drivers who hoped one day to make it to Formula 1.

Back in Europe you were winning in F3000 and then came your first victory at Le Mans in the summer of '97 after a surprise call from Joest. We know you treasure that maiden victory.

TK: I do, yes, it was the very foundation of my whole Le Mans career. I never expected to be anywhere near Le Mans in the summer of '97. I'd won the opening round of the F3000 series at Silverstone, come second in Pau, and was leading the championship when I got a call from the Joest team. They were running the TWR Porsche WSC-95, the same chassis that had won the year before, and I was to share with Michele Alboreto and Stefan Johansson. So this call was a big surprise. I mean I signed with Joest just four days before the race. I was playing tennis when the team called me and four days later I was in the car. I'd never seen the track before, and did just 17 laps in qualifying before the race actually started. I was full of butterflies, preparing to impress the little Joest team, which was just 12 people back then.

Michele put the car on pole, he was so fast, but we knew we had to be faster than the works Porsches because we carried less fuel and had to make more fuel stops than them. Anyway, the car was reliable and I got a new lap record along the way to beating the works McLarens, Porsches and Nissans by a lap. I remember my engineer Ralf Jüttner coming on the radio saying, '*Schnellste runde, schnellste runde,*' and then he came on again, 'Lap record, lap record... now keep it steady.' And I realised, hey, if a German starts speaking English to me, then I'm doing a good job. Great memories. I drove the car again for the first time since at Goodwood SpeedWeek [lastyear] and it was just the same, big fat tyres, old-school gearbox, open cockpit, head in the wind - and I still fitted the car perfectly. A wonderful reunion.

"If a German was speaking English to me I must be doing a good job"

So now you've won Le Mans, impressed in F3000, and in '98 you're offered an F1 test by Tyrrell. Did you believe you were now on your way to grand prix racing?

TK: Yes, but at that time Tyrrell was in a bit of a mess, in the midst of a takeover by BAR and not the great team it had always been. They asked me to do a test - but I'd already driven for Tyrrell when I drove Ken and Harvey Postlethwaite to the railway station after a race at Suzuka... so, you can say that was the only time I'd driven for Ken before the test. Anyway, I did the tests, at Monza and Magny-Cours, with the takeover going on in the background, and I realised all this was to put pressure on the existing drivers to bring more sponsorship... so I never got to race. It was the same with Williams-BMW. I did a lot of Michelin tyre testing for them in 2000 but the opportunity for a race seat never came along.

I will say, however, that the F1 tyre testing proved to be very useful because later we used Michelins on the sports cars.

Do you have any regrets about not showing your talent in F1? At the time many people said you had a great future in grand prix racing.

TK: No, no, I don't, even though it had been my dream. I was a Le Mans winner,

GETTY IMAGES, GRAND PRIX PHOTO



Kristensen, McNish and Capello were Audi's LMP1 dream team, racing together for seven seasons. Here they celebrate victory in the 2009 12 Hours of Sebring



On stage at the *Motor Sport* Hall of Fame in 2016

working for BMW, and on my way to Audi the following year in '99, so I was in a good place. Wolfgang Ullrich [Audi's head of motor sport] had contacted me and signing with Audi was a great decision, the best I ever made as it turned out.

I did drive Formula 1 cars as we have said, and I have no doubt I would have gone well in grand prix racing, but I have always been very satisfied with the challenges, the cars, the teams I raced for, in my sports car career. Long-distance racing is very challenging, the circuits we go to, driving hard and fast for many hours, heading into the dark, sharing all of this with my team-mates. I had 16 team-mates in 18 years of Le Mans and the years with Dindo (Capello) and Allan (McNish) were special. We were a very strong team. In '97, I was very much the new boy alongside Michele and Stefan, then at the end, with Loïc Duval and Lucas di Grassi. I was now the 'old boy' in the team.

So, no regrets. I would not have wanted to miss the career I've had, and I never had the backing for a proper F1 chance. Also, I was always fighting to go forward in my career and the setbacks only make you mentally stronger.

Did your victory first time out at Le Mans in '97 have a big impact in Denmark? Was there now more support in your homeland?

TK: Yes, it was a breakthrough for me. The win in '97 for a Danish driver generated more interest even though football and handball were still by far the biggest sports at home. As for motor sport, it was speedway that everyone was watching and following. Remember, John Nielsen had already won at Le Mans in the Jaguar in 1990 and Jan Magnussen was in Formula 1 with Stewart Grand Prix, but neither Le Mans nor F1 were broadcast live on Danish TV so it wasn't like you might expect. Later, when the fans started going to the races, there was a huge following with Magnussen coming to race in LMP1 and I was on a roll with Audi.

In April 2007, when you'd won Le Mans seven times, you had a very nasty accident at Hockenheim in the DTM, putting your whole career in jeopardy. You've rarely talked much about that...

TK: Yeah... it was a huge setback, I was out for two months, and there were questions about whether I should come back to racing after that. It was a big impact, a long recovery from the after-effects, and it was mentally incredibly tough to come back in time for Le Mans in June. A lot of kind people were saying it was time for me to stop but I'm very glad I didn't because the next seven years brought so much success.

I have no regrets about returning to what I absolutely loved doing, competing at the highest level. It was rare for me to crash but on the first lap of a DTM race there are a lot of wild, hungry drivers all fighting for the lead. At turn three, I got a tap from my team-mate – I'd gone over the kerb trying to avoid that – and my first reaction was to try and keep the car out of the barrier. But... I was now in a wild spin, sort of hidden in a tyre smokescreen, so I was in danger from the cars coming from behind. I was hit by Alexandre Prémat. He was doing nearly 200kph [125mph] and went straight into the 'A' pillar of my car. Then I got a second hit,



An enduring friendship: Audi Sport head Dr Wolfgang Ullrich and Kristensen were a team

on the other side, and at this point I passed out. My life was saved by the monocoque construction and the support of the HANS neck device, but I was out cold for nearly 30 minutes. Of course the other drivers had no chance to avoid me so you can't complain about that.

The recovery was very tough and it wasn't until the Monday morning of the week before Le Mans that I decided I would race. The team was supportive, the doctors cleared me to race, and it was the right thing for me to do. I'm glad I did that.

Are you able to explain what makes a great endurance racing driver, what you need for this discipline?

TK: Aaaah, this is not an easy one to answer. First, obviously, you need to be fast and consistent and always be thinking of the big picture, the whole race, not only the next corner. It's important to manage your determination, to keep your focus, your concentration, you need to find an inner strength which helps you to keep the focus, the concentration over a long distance. It's about the mental strength, the discipline. Always be fast, yes, but sometimes you need to wait before you overtake someone, maybe some minutes, choose the moment, and all the time keep your rhythm.

You must race hard, for sure, but you must have the capacity to see that it's not about your position, it's about lap times, and looking after the tyres, the fuel and the brakes. This means you must give yourself some freedom within the rhythm of the whole race. It's something you learn, you feel, and not so simple to explain.

"I was in a wild spin, hidden by tyre smoke when I was hit at 125mph"

In November 2014 you and Audi chief Wolfgang Ullrich held a press conference in Copenhagen to announce your retirement.



No regrets: never making it to F1 doesn't weigh on Kristensen's mind, thanks to his fairytale sports car career

Why did you decide to stop when you were still at the top your game?

TK: Well, the trigger for this came two years before when Dindo decided to stop, guys like Emanuele Pirro and Frank Biela had already stepped aside, and then Allan stopped at the end of 2013. Also, my dad died in 2013 and so he was not there to ask me why wasn't I faster, why hadn't I won this race or the other, and why did I overtake where I did, things like that. I missed his input, that intimacy with him. These kind of conversations you can't always have with the team.

Then in 2014 we had the new regulations, and that was a challenge I enjoyed, the lift and coast and all of that, but it required a very different style of driving. So, you know, I was now the oldest in the team, I was 'Uncle Tom' and all in all I thought it was time to stop. The week before the last race in Brazil I decided I would call it a day as a driver. I did the final stint and it was just great to be on the podium at Interlagos with Loïc and Lucas for the last time. I have stayed with Audi, a team I like very much, as an ambassador and I am still working with the drivers there, which is fantastic. It was very important for me to finish strongly. It was the perfect time to stop.

We had lived in Monaco which was, apart from the financial side, good geographically for travelling to testing and racing, but we moved to Denmark. That was important for my wife, my two sons and my daughter, and it's nice for the family to make our home here in Hobro, where I was born. ○



Tom Kristensen's autobiography Mr Le Mans is published in March by Evro and is available via the Motor Sport shop .

ALAMY, GRAND PRIX PHOTO, DPPI

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Flashback...

For two decades **Maurice Hamilton** reported from the F1 paddock with pen, notebook and Canon Sure Shot camera. This month's pic captures the BBC TV commentary team at the 1986 German GP

THERE WERE FEW COMMENTARY positions better than this one at Hockenheim. Having gained access to the lofty perch thanks to keeping a lap chart for BBC Radio, I had the opportunity to catch the BBC TV team preparing for the 1986 German Grand Prix.

James Hunt takes in the panoramic view of the stadium while Murray Walker refers to his copious notes and sets the scene. Murray may have always had a preference for a lip mike, but it was essential here.

As can be seen, the mezzanine floor for broadcasters was slung beneath the roof of the massive grandstand. Commentators found themselves at the top of a cacophonous echo chamber filled with the roar of the crowd beneath and cars blasting past the pits. It brought new meaning to the term 'atmospheric', particularly when spectators could react to either the sight of a new leader emerging into the stadium or as often happened, a piece of demon out-braking into the Sachs Kurve that followed. When Michael Schumacher appeared six years later, school was out. On every lap, it seemed.

Walker would have been hitting the rev-limiter while describing even the most routine scene; a style of commentary that raised criticism more often than not. It was a subject that Hunt was keen to address a few days later when I spent an afternoon at his home in Wimbledon.

The purpose was to discuss the 10 years since he had won the championship. You only had to look around to see the change. Emerging from an aviary in the back garden, James was cheerfully waving a spatula used to attack the droppings from 120 noisy budgies being bred for show. In the front drive, his Mercedes was raised on bricks. Parked alongside the disabled 450 SEL, an Austin A35 van. "Paid £900 for it," he enthused. "Nineteen fifty-seven; 29,000 miles; immaculate; original tyres. It doesn't half slide around! Unfortunately, it's stuck in first gear at the moment. I have to sort that out as soon as we finish this."

As always, our chat was forthright and illuminating. Once onto the subject of broadcasting, James came straight to the point. "Let me say this about Murray," he said. "People criticise him for getting things wrong. It's bloody difficult to get it right. I get confused from time to time. If they know the driver is Prost and not Piquet, then why write in about it if they know in the first place? So what? All he ever hears is criticism. He's a tremendous enthusiast and does a hell of a lot for the image of the sport."

This was in the days before the instant and sometimes spiteful self-gratification of social media. But the essential point remains. As Walker, now 97 and living in happy retirement, is rightly viewed as a national treasure, it's perhaps useful for the best of today's maligned broadcasters to remember that wasn't always the case.





MY Greatest RIVAL

MARTIN BRUNDLE on AYRTON SENNA

In 1983 two drivers dominated British Formula 3. **Martin Brundle** remembers his firecracker season with a shrewd competitor



"I COULD HAVE CHOSEN MYSELF AS MY greatest rival. So much of sport is all in the head, every driver has his demons, the pressures, the insecurities, and I had those with Ayrton Senna when we battled for the British Formula 3 Championship in 1983.

There's always a genius driver who comes along to spoil your day, and Senna's reputation preceded him. He won the first nine races, and that started to do my head in. Then, when I won at Silverstone in June, and he crashed trying to keep up with me, I realised I could beat him in the same car on the same day. That race was a turning point and I won the next two rounds. We both had Toyota-powered Ralts, his run by Dick Bennetts with a good budget, mine by Eddie Jordan with virtually no money. I was still selling cars for a living.

I knew Senna was beatable but it became incredibly intense when I started winning. He was rattled, he started complaining about the stewards, convinced they had it in for him and were trying to nail him for his aggressive tactics. Things came to a head at Snetterton. He'd got alongside me coming out of Sear, drove half on the grass, and connected with my rear tyre. He went up in the air, landed, but kept his foot in, and T-boned me at the next corner which, ironically, is now called Brundle. He'd tried to have me off the road. There was a ruthless streak in him, but strangely, as we saw later, there was also compassion in him.

At Oulton in August, he crashed again trying to pass me, and landed on top of me, took us both out. That was the only race all year that one of us didn't win. That month was triumph and tragedy. We'd won the F3 support race at the Österreichring, and then the Jordan transporter crashed on the way home. My mechanic Rob Bowden was killed. It was devastating. Senna won at Silverstone at the end of August, but then I won three in a row, and was ahead on points going into the last round at Thruxton.

I wish now I'd robbed a bank to buy a new engine. Ours were knackered by this time, and Thruxton is a power circuit. Meanwhile Ayrton had been to Italy, seen his new engine on the dyno, and brought it back himself for this last race. It was no contest, he won quite easily from pole. I've often thought I could have rammed him on the first lap and won the championship but that wasn't my style. Clerk of the course Sid Offord, a man of considerable size, had come up to me on the grid, pointed at me, and said, 'No monkey business.' I'm sure it must have been on my mind. There's no doubt, Ayrton was my toughest rival. I could beat him on my day but that's the key phrase, on my day, because the great drivers have many more of their days, and he did have that natural talent, that sixth sense they all have.

I probably have to thank Ayrton for my F1 career and that epic season is still talked about years later. Ayrton got his drive at Toleman, Ken Tyrrell gave me my chance in F1, and now I often think that the whole experience of being a racing driver was a fact-finding mission for my TV career!" ●



Head-to-head

Brundle	vs	Senna
7	WINS	12
3	POLES	15
5	FASTEST LAPS	12
19	PODIUMS	14
123	POINTS	132

Figures from the 1983 British Formula 3 Championship

BOB THOMAS SPORTS PHOTOGRAPHY VIA GETTY IMAGES, DPPI

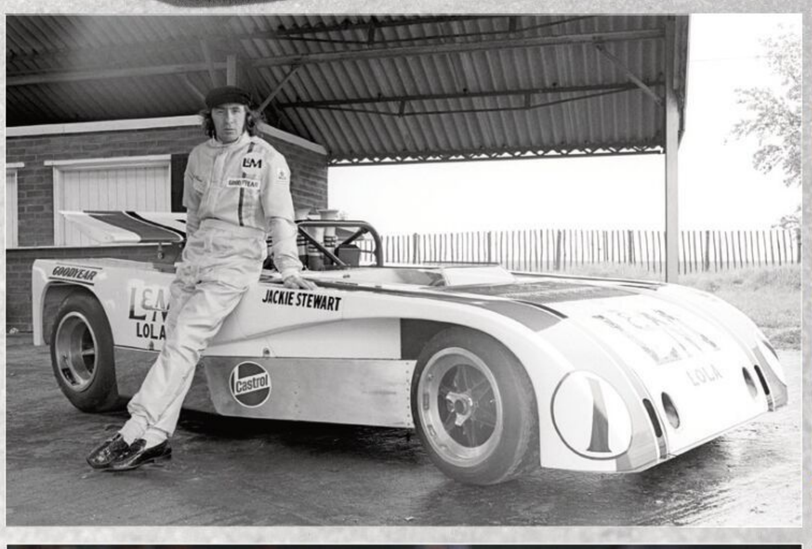
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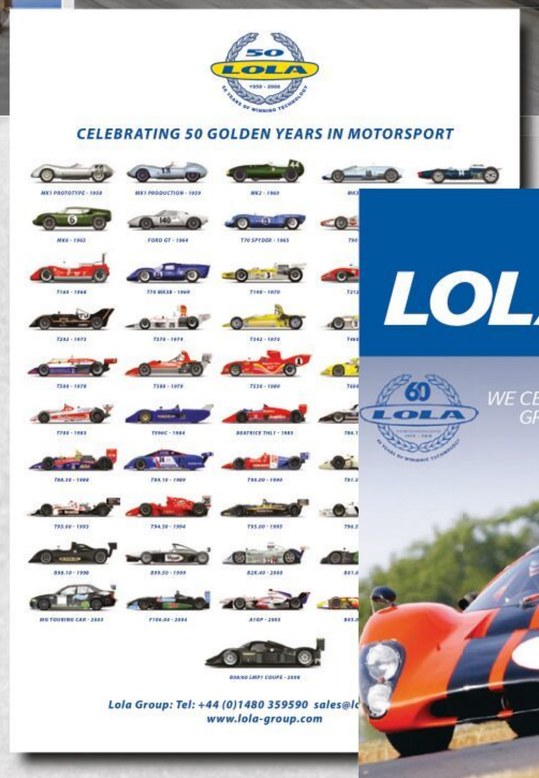


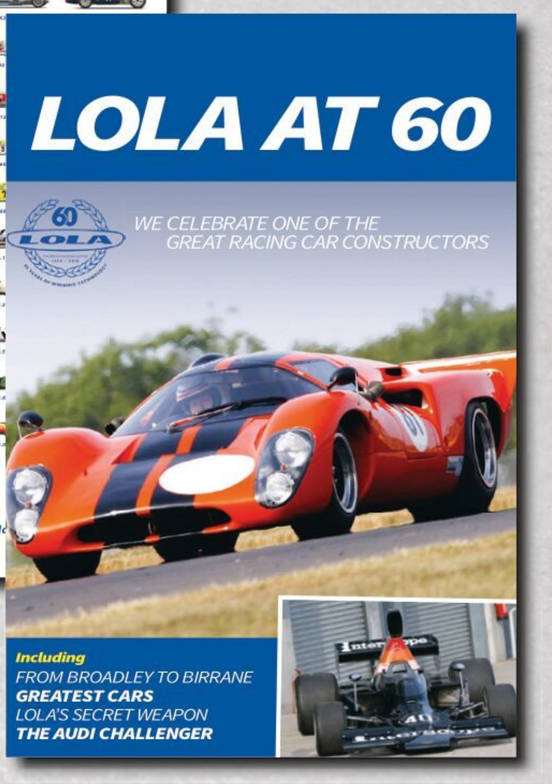












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*NB: Lola's state-of-the-art wind tunnel has remained in continual operation since 2012, helping to develop both race and road cars. Its modular construction allows for re-location anywhere in the world.

For further information please contact David McRobert at lola@flyfive.co.uk



Right on the button

Mention vintage motor sport watches and talk turns to Heuer, but Hanhart has an equally impressive automotive history

JOHAN HANHART STARTED OUT AS A watch retailer in 1882, but 20 years later his son Wilhelm joined the business and set about turning Hanhart into a manufacturer by opening a factory in Schwenningen, Germany. 'Willy' was a keen athlete and didn't take too kindly to the fact that all the stopwatches used for timing his track-and-field events were Swiss-made and expensive.

He remedied the situation in 1924 by producing the first Hanhart stopwatches, which soon became popular thanks to being both accurate and affordable. By 1935, Hanhart was producing split-second stopwatches and by 1938 it had reduced the size of its mechanisms to enable the creation of the first Hanhart wrist chronograph.

Production ramped up at the start of World War II when Hanhart was flooded with orders for military chronographs that, primarily, were issued to pilots and naval officers. By 1940, the firm's original single-button design had been augmented by a model with two chronograph buttons, the lower of which was red to help prevent accidental use of the re-set mechanism – a distinctive feature still used today.

In the 1960s, however, when dial names such as Heuer, Yema and Universal were attracting motor racing stars and fans with their driver-orientated wrist chronographs, Hanhart ceased production of such watches altogether and concentrated on stopwatches. Its Amigo made the firm the worldwide leader in stopwatch sales.

Hanhart timing systems were widely adopted by race teams large and small. At Phillips in 2018, for example, a '50s rally timer set made for Ferrari crossed the block for more than £10,000. The chronograph clock and separate matching stopwatch were still contained in their original control case that was designed to be screwed to the navigator's side of the car dashboard.

By the 1970s, Hanhart was as widely recognised around the world's race circuits as Heuer, despite the fact that the brand no longer made wristwatches. That changed in the early 1990s when it introduced a replica of its 1939 pilot's wrist chronograph, but it wasn't until 2013 that the Pioneer Racemaster driving watches were introduced to mark Hanhart's history in motor sport.

The 45mm Racemaster range comprises three models, all of which have perforated leather straps. The GT and GTF feature two-pusher chronograph mechanisms, while the GTM uses a single-pusher. If you appreciate genuine motor sport heritage and a watch that isn't an obvious choice, look no further.
Hanhart Racemaster, from £2850, hanhart.com



EVERY YEAR SINCE 1988, CHOPARD has produced a fresh Race Edition chronograph in celebration of its role as sponsor of the Mille Miglia. In 2020 as usual, each team was given a uniquely numbered version of the latest MM watch, which is also on sale as a non-numbered edition of 1000 pieces. The stainless steel case makes for a superb 'tool watch' look; there is also a 250-piece edition with a rose gold bezel at £7330. In either format, one of the best Mille Miglias to date.
Chopard Mille Miglia 2020 Race Edition, £5850, chopard.com



PEOPLE WHO WEAR A TIMEX OFTEN seem to have a sense of inferiority, probably because they don't realise that the US brand is one of the most innovative in the history of watch production. It met the Japanese quartz invasion head-on in the 1970s with its own range of quartz-powered Q Timex models. Now is the time to 'Q' a reissue of the superb Marmont from 1975. Combining a stainless steel case with a bit of plated gold-tone detailing, it looks like the watch a kindly uncle wore 45 years ago, yet it looks rather cool today.
Q Timex Marmont 1975, £155, timex.co.uk

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MOTOR SPORT

LETTERS

IN DECEMBER'S ISSUE MARK HUGHES TALKS ABOUT THE ENGINE USED BY NELSON PIQUET in qualifying and, as it turned out, the race at the 1980 Canadian Grand Prix. Over the years I have read speculation about this engine and am writing to clarify the issue.

In 1980 I was an engine builder with a first-rate company specialising in rebuilding DFVs, and was entrusted with building this particular engine. The engine was DFV 318 and was standard in every way apart from the pistons. Usually we used Cosworth pistons but on this occasion we fitted semi-slip ones made by another manufacturer, which improved the performance on the dyno by around 5bhp. However, as the article correctly states, they were known to be fragile and incapable of lasting a race distance but as it was a qualifying engine they were not required to.

The engine did not have a higher compression ratio as has been speculated. I built the engine to the specification laid down by my supervisor so all credit must go to him or whoever advised him for using different pistons, as they did indeed improve performance which, in turn, helped Nelson Piquet secure pole position for the race.

LES BADHAM, BY EMAIL



Making a splash – Derek Warwick celebrates with Brian Henton and Andrea de Cesaris

I ENJOYED CHRIS WITTY'S ARTICLE about the 1980 Toleman Formula 2 team [*Band of brothers, February*]. I was at the opening round of that year's European F2 Championship at Thruxton, where there was eager expectation as Derek Warwick was our local driver on our local track. We had cheered him on when he was in the 1978 BP Super Visco F3 Championship, particularly as he had won the first two rounds for his Warwick Trailers Team at Thruxton. That is not to say that we didn't support Brian Henton too, as he had been notably successful at Thruxton.

The pristine TG280s were the centre of attention in the paddock. As mentioned, Toleman's Pirellis suited the abrasive Tarmac and Henton cruised to a relatively easy win.

My photo (*above*) shows Derek exploding the champagne watched by Brian Henton and Andrea de Cesaris. For all us locals it was a great spring day to celebrate... and we did!

BRUCE GRANT-BRAHAM, WIMBORNE, DORSET

THANK YOU FOR THE EXCELLENT article on the Toleman F2 team. I was pleased to read that Brian and Derek's competitive spirit still thrives. Like several British drivers of the period I'm sure Brian could have made it to the top in F1 with the right opportunity but being in the right team at the right time is always crucial.

I was always a fan of Brian Hart both as a driver and engine builder and I would like to suggest a small correction regarding the 420R. F2 rules up to the end of December 1975 required stock blocks so Hart engines up to then were based on the BDA dimensions and referred to as 420S. From January 1 '76 the 420R, based on a stretched 420S, with jackshaft-driven oil pump and distributor, was introduced. For 1977 Hart produced an updated engine with a belt-driven DFV-type oil pump and crankshaft-triggered ignition which continued with various external differences until the end of the formula.

JIM EVANS, RICHMOND, NORTH YORKSHIRE

I WRITE IN RESPONSE TO NIGEL ROEBUCK'S inspired piece in December [*1967: The Summer of Love*]. I found myself drawn time and again to the iconic shot of the German GP starting grid, and it dawned on me just what a totemic picture it is. On that grid are the reigning world drivers' champion, three former champions and three future champions. Collectively, over a period of 15 years, they won 13 drivers' titles.

Of the 16 F1 drivers on the grid, no fewer than 10 had already won at least one championship GP. Two more went on to do so, as did one of the F2 drivers. Three of the F1 drivers were also F1 constructors. Three more went on to become F1 constructors. All seven of the F1 constructors represented on the grid had won GPs; one of the F2 constructors went on to do so the following year. The seven constructors used seven different engines, four of 12 cylinders, two of eight and one of 16.

Tragically, of the 27 drivers on the combined F1 and F2 grids, no fewer than nine subsequently lost their lives in motor racing accidents, and the promising career of a tenth was ended by a serious accident. Nineteen sixty-seven truly was a different country.

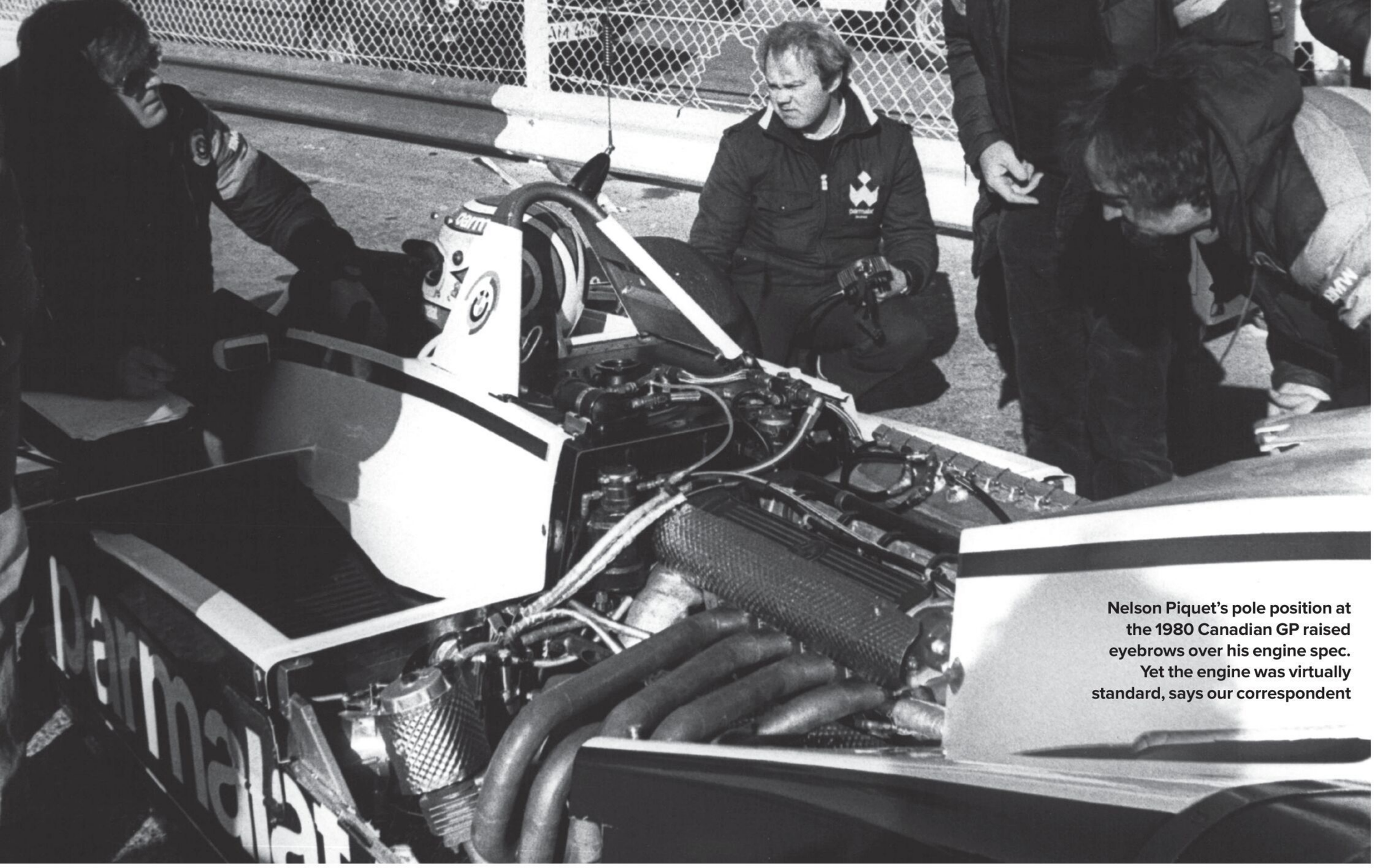
DAVID COKER, GREAT EASTON, LEICS

I GET FRUSTRATED AT SEEING THE same mistake made by even the best F1 writers, this time in your December issue by Nigel Roebuck [*1967: The Summer of Love*]. When emphasising how much heavier current F1 cars are than those of the past, they quote the current minimum weight as if it could be directly compared to the earlier ones. But the minimum weights before 2004 did not include the driver; since then they have. And now that weight for driver and equipment has to be 80kg. So when a writer compares a 1967 car to a current one, he should subtract that 80kg, making it 500kg then compared to 666kg (not 746kg) now. Yes, the current cars are heavier, but not that much heavier. I would really like to see this accurate comparison become the norm, because I think the current F1 cars, although heavy, are quite magnificent, and hate to see them repeatedly caricatured.

STEVE BIELER, RICHMOND, VIRGINIA, USA

REGARDING STEVE MCQUEEN AND *Day of the Champion* [*McQueen's Lost Movie, February*], the images you describe as the Alan Mann workshops were, in fact, the Brabham production shop. I had been working there since 1963 but the staff at Brabham were rarely informed about anything that might take place, and such was the case when McQueen and Moss appeared. As you can see from the state of the workshop we were unprepared for the visit.

I recall the occasion but very little detail except being told to down tools and keep quiet. We were well used to celebrities visiting



Nelson Piquet's pole position at the 1980 Canadian GP raised eyebrows over his engine spec. Yet the engine was virtually standard, says our correspondent

the workshops but they rarely spoke to the staff and this occasion was no different. After a few hours they all left and it was barely referred to ever again. I regret not getting McQueen's autograph!

NICK GOOZEE, DORSET

HAVING READ THE STEVE MCQUEEN article, I recall being a marshal at the Oulton Park Tourist Trophy meeting in April 1966. I was at the first corner, Old Hall, when Steve McQueen wandered down from the pits and told us about his plans for the forthcoming film *Day of the Champion* and how he hoped to do some filming at Oulton.

I remember we marshals were somewhat awestruck having not so long ago seen two of his recent films – *The Great Escape* and *The Cincinnati Kid*.

MICHAEL COOKSON, AUDLEM, CHESHIRE

HAVE JUST READ THE LOCAL HEROES feature [*January*] and disappointed that Johnny Herbert's victory at the 1995 British Grand Prix was missing. I know he was lucky, but didn't that victory make him a local hero, even if only for just one day?

ANDREW ANDERSZ, ASTON CLINTON, BUCKS

IT WAS A PLEASURE TO READ ABOUT DEREK Ongaro [*Flashback, January*], an understated man who made a significant contribution to safety in motor sport back in the '70s and '80s. One of his notable achievements was that he was pivotal in setting up the licensed rescue unit system. It would have been rare for Derek not to be at a motor sport event at weekends. The man who had travelled the world as Formula 1 circuit inspector and starter was equally happy at any grass roots race meeting. Derek's style was to quietly discuss ideas, but he was no pushover; he also had a steely determination. And who knew he was also a very accomplished artist and fisherman? Or that he had competed in motorcycle circuit racing as a sidecar passenger, something he certainly kept quiet about!

The February issue mentioned Martin Birrane [*For sale: Lola, two careful owners*], a self-made man, fiercely competitive, and a true enthusiast who achieved a huge amount in racing but also quietly helped people. When Martin purchased Mondello Park, I asked him why. His answer was simple: "It's a race circuit, it's in Ireland and if I don't it will die."

He financially supported the Pacific Formula 1 initiative simply because he liked to support those having a go in motor racing. A number of promising young drivers received help from Martin, not with overt sponsorship but behind the scenes financial help and sage advice.

Two guys I was lucky enough to enjoy long-term friendships with. Motor sport is all the better for their contribution.

JOHN SYMES, ORPINGTON, KENT

THANK YOU FOR RUNNING THE ARTICLE about Brian Joscelyne's photograph archives [*Racing through Europe, January*]. A couple of errors crept into your brief biography though. Brian almost always used his Pentax camera for his colour photographs, and as far as I'm aware never owned a Leica. Although Palawan Press concentrates on his photographs from the 1950s-70s, he continued to take amazing photos until the late 1980s when he switched to moving images, like his father Hilton had before him who took colour cine film at Brooklands, before World War II.

Brian also continued to attend race and car meetings all over England and Europe until just a few years ago. Returning home in 2008 after yet another memorable Le Mans trip, the ever enthusiastic and youthful Joscelyne captured some remarkable images of the Aston Martin factory DBS demonstrator, probably the last still images ever taken by him, as he was then exclusively using video.

He passed away peacefully at home just days after seeing a copy of the book, but will never be forgotten thanks to the amazing legacy of his colour images.

DR BRIAN KENT, LONDON W1

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Porsche

These 962s and a 956 from a private Group C collection are steeped together before. **Andrew Frankel** gets up close to the liveried leviathans

Even the Porsche Museum can't match Henry Pearman's menagerie. The 956/962 is the most successful sports car in history

heaven

in motor-racing history, yet they have never been photographed that lit up Le Mans, IMSA and global endurance racing in the 1980s

PHOTOGRAPHY: JAYSON FONG

This was a little like digging priceless historical artefacts out of a field. First one emerged, a dream all by itself, more than I could have hoped for, beautiful, important and captivating. But then I caught a glimpse of another, and another...



The monocoque chassis was made from aluminium, plus a lot of info from the aviation industry





The 956 finished 1-2-3-4-5 at the 200-mile Norisring race in 1983, with Stefan Bellof (9) winning

MCKLEIN

This 962 made its debut at Le Mans in 1985 and was used by Porsche as an IMSA testbed

PORSCHE 956/962

More and more until no fewer than seven masterpieces emerged, all from the same creator, all similar in size and shape, yet no two truly alike. I simply didn't know where to look next.

My slightly embarrassing reflex reaction to seeing Henry Pearman's Historic Porsche Group C Collection is simply to start laughing, as the brain tries to process exactly what we have here. Which is more Group C Porsches in one place than anywhere else in the world and, yes, that includes the Porsche Museum. There are actually a double-digit number of 956s and 962s here which gives us the luxury of choice, so today we'll just be sticking to cars either raced by the works, or in just one case, by the official works-supported team.

Together they span almost the entire history of Porsche's factory involvement in perhaps the most fabled category of sports car racing. We start with the eighth 956, built to contest Le Mans in 1983, and end with the 962 that was the last car to win a Group C world championship race for Porsche in 1989. Between these lies the history of the world's most successful sports racing car.

MOST ENTHUSIASTS KNOW the story of the creation of the Porsche 917, how Porsche defied rules specifically drafted to ensure such a car never got built by making all 25 units required and insouciantly lining them up for inspection. The story of how the Porsche 956 came to be is less well known, yet even more remarkable.

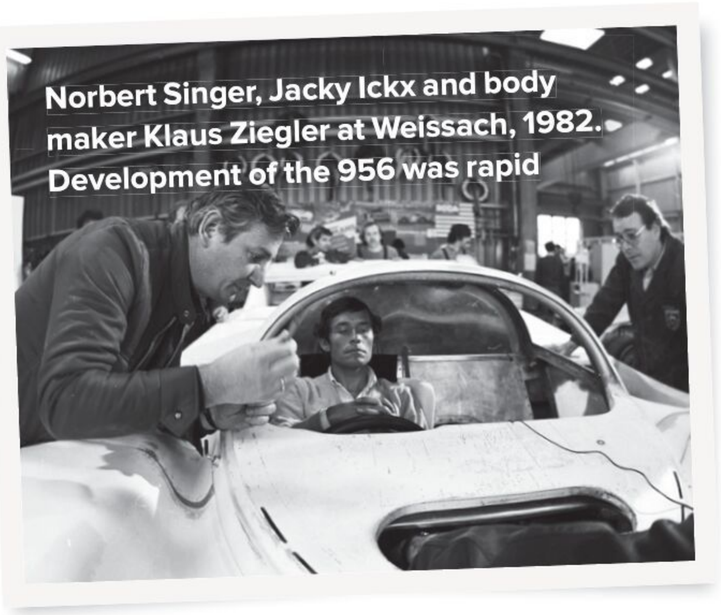
When Porsche announced its return to Le Mans last month it gave itself three years to plan its campaign (the marque will line up in the LMDh class in 2023). Its previous foray into prototype sports car racing was announced in 2011, also allowing itself fully three years to design and develop the 919 Hybrid, which then took a further year to win Le Mans. By contrast, just one year before the 956's Le Mans debut in 1982, the project had not even been given the green light privately, let alone announced publicly.

And while the 917 was a car like no other seen before, there was nothing technically new about it. Indeed it wouldn't be that inaccurate to call it an evolution of the 908 with an extra cylinder attached to each corner of its engine. The 956 was not only a clean-sheet design, but incorporated two crucial technologies that were brand new to Porsche, one of which provided an enormous headache.

The attraction of Group C, at least to a company like Porsche, was that it was a

simplified formula with a deliberately slim rulebook. You could, for instance, have an engine of almost any size, and cars with 1.4-litre four-cylinder motors to 7-litre V12s raced in the Group C era. The most significant rule was a finite amount of fuel allowed per race, which was seen as a profound limitation by some but a fascinating technical challenge to Porsche.

But in the time since Porsche had last developed a new prototype racer in the mid-1970s, the ground-effect era had begun in Formula 1 and it was quite clear the new sports car would have to incorporate the technology, too. This, combined with mooted new crash-test regulations, meant Porsche's traditional spaceframe method of chassis construction was out of the question. Monocoque sports cars had been around



Norbert Singer, Jacky Ickx and body maker Klaus Ziegler at Weissach, 1982. Development of the 956 was rapid

since the Jaguar D-type in the mid-1950s but Porsche had remained faithful to its ultra-light, but not terribly strong or stiff spaceframes - until now.

"There was a philosophy in Porsche that said a tube frame was the lightest chassis but that didn't take stiffness into account," says Norbert Singer, Porsche racing legend and head of the car's engineering team. "And with high downforce you need very stiff springs and also a very stiff car, which meant we needed a monocoque. On the safety side too, it was clear we had to leave the tube frame.

"We knew nothing about monocoques. We had to go and ask the aircraft industry what rivets to use, which aluminium to use, even which tools to use. We gave ourselves four weeks to figure it out, decided what was the best solution for us and it worked."

Singer was faced with developing the car from the drawing board to the race track incorporating untested technology and with a massive problem: he had the wrong engine. A flat-six motor may have many qualities,

PORSCHE ARCHIVE



This 956 was built for Le Mans 1983 and led for the first four hours, with Mass and Bellof on driving duties. It retired with just two hours to go

but few more prejudicial to your lap time than its ability to get in the way of the underbody venturi essential for the generation of ground effect. A new 'V' formation engine would be ideal but there was neither the time, money nor latitude in the rule book for it to be a feasible proposition. They would have to make do with the flat six from the predecessor 936.

But Singer, veteran of Porsche's motor sport campaigns from the 917 programme onwards, plays down the disadvantage. "The location of the flat-six engine did cause us some problems but only when we were trying to develop the car later on," he says. "We ended up making the tyres narrower so the [underfloor] tunnels could be wider because we realised you'd gain more in aerodynamic grip than you lost in mechanical grip."

To say time was tight is the understatement to end them all: as 1982 dawned, barely six months before Le Mans, not a single 956 had been built. Three months before not one had turned a wheel under its own power. And yet not only did it make Le Mans, the very first car made it to Silverstone, a month ahead of the French classic, with over 4000 miles of testing under its Dunlop tyres.

> "With high downforce you need stiff springs and a very stiff car"

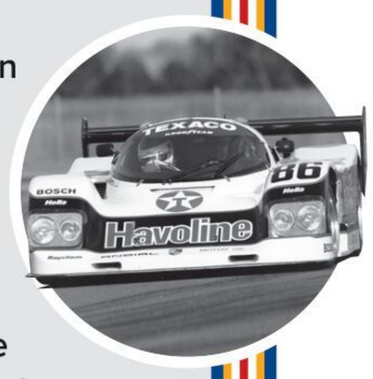
The race itself was a bad joke, because the new Group C regs were still ironing themselves out and failed to distinguish in the fuel allocation between a standard 1000km race and the six-hour race at Silverstone where the winning car actually covered 1132km. Jacky Ickx claimed pole with ease but then he and team-mate Derek Bell had to crawl around to eke out their fuel allowance while the Lancia LC1 of Michele Alboreto and Riccardo Patrese – entered under the previous Group 6 regs which had been allowed to carry over in this ▶



How the 956 transformed into the 962

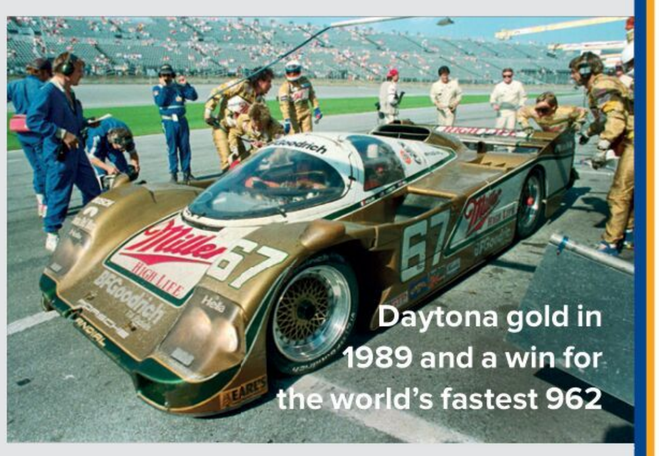
IMSA regulatons called for a few design tweaks

The Porsche 962 was not initially designed as a Group C car. It was a response to IMSA refusing to allow the 956 to race, thanks to rules mandating that the driver's feet be behind the front axle centre line. IMSA didn't like the look of the 956's multi-valve, twin-turbo, water-cooled motor either. For years IMSA had been dominated by private Porsches, or Porsche-powered prototypes and they all had good ole-fashioned air-cooled, single-turbo, single-cam flat sixes.



But Porsche rarely lets details like regulations get in its way. "We knew they wouldn't let the 956 race in IMSA, but that was fine because we designed it for Group C," says Norbert Singer. "It was easy to make the changes needed. We had some aero issues with the shorter nose but we overcame those and the longer wheelbase actually helped."

Porsche had an entirely eligible single-cam, single-turbo 12-valve air-cooled version of the flat-six engine already dominating IMSA in the 935. The driver's feet issue was solved by extending the wheelbase by 121mm and lopping a commensurate amount off the nose to keep the car within permitted length, which is why, to many, the 956 is a far better looking car than the 962. The new car made its IMSA debut in 1984 and dominated the category for the next four years.



Daytona gold in 1989 and a win for the world's fastest 962



A 956 pit stop at Le Mans, 1983. The striped helmet is Derek Bell, with Jacky Ickx to his right. Below, Bruce Leven Bayside 962, IMSA, late 1980s

"We could tell that the 956 was going to change the rules"

transitional year – was able to romp away to victory. So Porsche treated it as an economy run and left Northamptonshire armed with very encouraging fuel consumption data and happy in the knowledge that the car had run trouble-free. And despite its drivers short shifting on minimal boost, it had still come second...

Then, at Le Mans, the three 956s came first, second and third, the winner a frankly ridiculous 30 laps ahead of the next car home behind the factory steam-roller. Unsurprisingly, Singer describes it as the "biggest moment, because with a new car you expect a lot of detail problems. We thought we might get one car into the top five. To win after that is nice, but there's nothing like that first win."

Derek Bell shared the winning car with Jacky Ickx following their victory together a year earlier in a 936. He says his memories are patchy, but for good reason. "You'd think I'd have great memories of 1982," he says. "But apart from a problem with fuel mixture early in the race, it was a re-run of the year before. I think we got back into the lead shortly after midnight and that was that: a straight run to the flag followed home by the other two works cars.

"We could tell even then that the 956 was going to change the rules of sports car racing. It had full ground effect and was electrifyingly quick on the track."

The following year was the one that got away for Bell, and the performance he rates as his best at Le Mans. "We so wanted the hat-trick in 1983 and it went wrong on the second lap," he says. "Jacky was dicing for the lead with Jan Lammers, they touched going into Mulsanne and Jacky had to take to the escape road. By the time he had regained the circuit, almost the entire field had gone through. It took us 14 hours of slog to make up the time we'd lost but on Sunday morning I slipstreamed past the leading 956 of Vern Schuppan and into the lead.

PORSCHE ARCHIVE, GETTY IMAGES

The mysterious 962-087 with Sprint tail – and spares. Left, a scene that would have been familiar to the likes of Vern Schuppan, Bob Wollek and Sarel van der Merwe

The works 962 007 carries the names of Mass, Wollek and Schuppan from Le Mans 1987. Right, this FATurbo 962 is in its 1993 configuration. Engine size for the 956/962 ranged from 2.65-3.2-litres

"It lasted just seconds before the engine stopped dead. I'm not mechanically minded but we'd been told that if this happened it would be one of three things. I managed to get the cover off, usually a three-man job, and change all three components. I then hit the button and heard the engine whoosh back into life. I got the engine cover back on – God knows how – and rejoined the race. We then got back onto the pace until Jacky brought the car in for the final stint and announced that the brakes were finished. It would take 10 minutes to change them so I just jumped in regardless and headed off." Bell would finish second, 17 seconds behind Al Holbert in another 956.

It's not the purpose of this article to detail all its subsequent successes, but it is worth mentioning that between them the 956 and 962C won five successive World Sportscar Championships and six back-to-back Le Mans (which would have been almost certainly seven had Klaus Ludwig not run 962-10 out of fuel in 1988). Outside Group C it won five championships in Japan and three IMSA titles in North America, despite not being eligible to enter for the first two years of its working life. In total it chalked up some 232 victories in internationally recognised motor races.

But the question that needs answering is how it stayed good for so long, even after rivals had clearly got ahead technologically.

The answer appears to come in two parts. First it was even better from the outset than many of the those closest to the project actually realised. Ickx once told me a revealing story about testing the early 956 at Paul Ricard: "There was a kink that was nowhere near flat in the 936, and I didn't think it would be flat in the 956. But as I tested the car my confidence grew enough to try taking it flat just once. And it was easy. I never lifted again."

Singer readily recalls the Ricard test Ickx refers to and recounts how quickly the team made progress with its new masterpiece. "To start I did some lap simulations, and when we started testing my simulations were faster than what Jacky or Derek were doing," he says. "Six months later they were going two or three seconds faster in exactly the same car! It shows the drivers had to really find a way with the downforce. At the fast chicane at Paul Ricard the simulations said it was flat but I could see the brake lights. So I told Jacky, 'This should be flat,' and he replied, 'If Jochen [Mass] goes flat through there, I will on the very next lap. But I will not be the first...'"


So much racing history in one place, with Rothmans, Shell Dunlop and FATurbo colours

Driving the ultimate factory Porsche 962C

The superlatives flow from **Andrew Frankel** as he recalls his trackday at a chilly Silverstone in the racer that finished second in the 1988 Le Mans 24 Hours. And what a car it is...



I have been lucky enough to track test a couple of Porsche 962s. The one you see pictured was Porsche's own, a Le Mans winner and was driven at Weissach, the home of Porsche motor sport, under grey skies. That's about as good as it gets. But despite this, the one I recall most vividly was Henry Pearman's 962-010 that I drove at Silverstone a few years ago.

This was the factory's last laugh, a one-off car built to win Le Mans in 1988 –and it almost did. Even without qualifying boost, so probably with 'only' around 750bhp under my right foot, it was a revealing experience.

The interior still looked primitive, far closer to that of a 1960s racer than a modern sports racing car. And for all the progress made under the engine cover, there was still significant turbo lag. It needed more than 3000rpm on the clock before it would show any interest at all, and then you had to watch out because when the power did turn up, it wasn't shy about announcing its arrival.

On a dry but cold track and probably old slicks there was no point in putting your foot down

JAMES LIPMAN

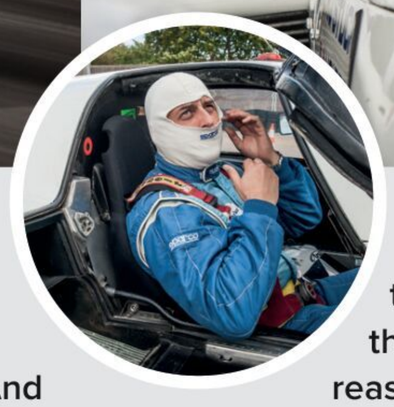
The best book

The definitive history of the factory Porsche 956, *Works Porsche 956* by Serge Vanbockryck, was published in 2019. Across two volumes and 800 pages, it includes every car, every development, every race and every driver in extraordinary detail, and is available from Porter Press for £450. Vanbockryck's book about factory 962s follows this year.





Our writer sits where Hans Stuck, Derek Bell and Al Holbert have gone before



in second. But in third the thrust was extraordinary.

It felt a little cumbersome in slow corners, thanks no doubt to its locked differential and the kind of spring rate required to support a body capable of generating so much downforce, and as we were using the National circuit it was only through Copse that I felt it starting to work. And it was incredible: fast, but also inspiring complete confidence. All I didn't much like about it was the slow, ponderous gearchange.

Having driven it, the thought occurred to me there was one more reason the 956 and 962C did so well and survived for so long: these were easy cars to drive, pretty straightforward in operation, forgiving by nature with reliability built into their DNA. In long-distance racing such qualities are as important as pure power. There was no single reason for the success of the 956 and 962, but all these factors combined.

As for racing longevity that's simple: as has been said before, nothing succeeds like success.

1 1989 Porsche 962-011
Porsche did not race as a factory team in 1989 but chose to be the support team for Joest Racing. Driven by Bob Wollek and Frank Jelinski it won at the Nürburgring, Silverstone and Dijon, the last of these being the final Group C race to be won by a Porsche. It was used by Joest as a privateer car from 1991-93 mostly in FATurbo Express livery when Porsche helped develop high-downforce bodywork. It is the ultimate factory developed 962.

2 1987 Porsche '962-087'
Perhaps the most intriguing car here; while believed to be an ex-works, lightweight development car, it is yet to be confirmed as such. It is referred to as '087' because all works cars had '0' numbers and it is a period correct tub. The problem is that no 962 tubs had chassis numbers, so identification is hard. It does, however, have the qualifying engine from the 1987 Le Mans winner, an ex-works gearbox and the Sprint tail from 962-008.

3 1985 Porsche 962-004
One of the first three factory 962Cs, and the first 962 used for IMSA testing. Made its debut at Le Mans in 1985 but retired after 21 hours. Used by Jochen Mass and Jacky Ickx for the rest of the season until damaged by Ickx at Spa in the accident that took Stefan Bellof's life. Raced by Mass and Bob Wollek in 1986, including pole at Le Mans before retiring. Sold to Reinhold Joest and used in Rothmans colours. Finally finished Le Mans in 1988 in fifth place as a Blaupunkt entry.



"If Jochen goes flat through there, I will on the very next lap"

These days drivers of even GT3 are very familiar with cars that seem to gain grip as speed increases thanks to downforce, but to sports car drivers in the early 1980s, it was a new development. "It was only when you really started to push it that the ground effect began to work properly," says Bell. "Only then did we start to get an idea of just what an extraordinary car this was."

The other explanation for why it took so long for the opposition to beat the Porsche Group C effort was that while the fundamental design never changed (apart from the wheelbase extension required for IMSA that turned the 956 into the 'American version' 962), the detail development never stopped. So while Henry Pearman's earliest 956 and latest 962 both have aluminium tubs, flat-six twin-turbo engines and five-speed synchromesh gearboxes, I doubt that there is a component that was carried over unchanged from first to last.

"When you look at the pictures you might think that not a lot of development took place between 1982 and '87 but under the skin a lot of work was done," asserts Singer. "It's all in the details. We never had the budget to make a completely new car after 1982 and the car was successful enough not to require it. But we still had to increase the downforce but reduce the drag, increase the power but reduce the fuel consumption... That was a lot of work."

At the beginning and because time was so short, the motor used in the 1982 956 was essentially the same as that used in 1981 in the 936, which meant a 2.65-litre capacity, an air-cooled block and a maximum output of around 620bhp. Compare that to the 3-litre motor built for the 1988 Le Mans effort, which was fully water cooled and in qualifying trim produced 880bhp.

6 1988 Porsche 962-010
The ultimate works 962C, built to win Le Mans in 1988 in the hands of Derek Bell, Hans-Joachim Stuck and Klaus Ludwig. Took pole, but came second after it ran out of fuel with Ludwig driving and had to return to the pits on the starter motor. Equipped with high-boost qualifying engine offering 880bhp, the most power ever generated by a factory Group C Porsche. It's one of the least raced, most original 962s in the world.

4 1987 Porsche 962-008

Derek Bell and Hans Stuck's car for the early part of the 1987 season, achieving three consecutive poles and finishing on the podium in every race until Le Mans where it secured pole and led the race before retiring with a holed piston. The following year, it was the car in which Mario, Michael and Jeff Andretti tried to become the first family to win Le Mans but only came sixth. This is also one of few 962s to run with a pioneering PDK gearbox.

5 1987 Porsche 962-007

One of the two lightweight 962s intended for Le Mans in 1987, raced that season until Le Mans, when it was damaged during a shakedown at Weissach by Stuck who would go on to win the race in the spare car (962-006, still owned by Porsche). Qualified in second for Le Mans in 1988 and led the race for many hours before retiring. Sold to 'works supported' Joest team and raced during '88 and '89. Now restored with Sprint bodywork and its Rothmans livery.

7 1983 Porsche 956-008

Built for Le Mans 1983 to be raced by the all-German squad of seasoned campaigner Jochen Mass and young hotshot Stefan Bellof. Retired after 22 hours having been timed on the Mulsanne at 218mph. Used by Bellof to win the 'Money Race' at Norisring a week later. Loaned to Richard Lloyd Racing for Le Mans in 1984 and raced by, among others, Nick Mason before retiring. It was then used as the works camera car, with a podium finish in its final race, in 1985.

A high boost engine made 010 the most powerful 962 (880bhp) – and was also the last works car built



Porsche 962-087 is fitted with the qualifying engine from the 1987 Le Mans winner

But probably the most significant engine modification was the most subtle. It was the adoption of Bosch Motronic MP1.2 engine management for the 1983 works cars (made available to customers in 1984 in a car designated 956/84 but more commonly if unofficially referred to as the 956B), in place of the original Kugelfischer mechanical fuel injection. By using a computer to control both injection and ignition, the system provided a dramatic improvement in fuel consumption which meant the cars could run higher boost for longer durations for the same fuel amount of fuel burned. As the regulations evolved reducing both the amount of fuel available and its maximum permissible octane, the system was replaced in 1988 with the more efficient Motronic 1.7 system, utilising electronic wastegates.

Aerodynamically the cars changed all the time, with not just sprint and low-downforce bodywork being available depending on where the cars were racing, but also in every detail over the years as Porsche sought to optimise the car's drag to downforce ratio, with a team that was learning the rules of ground-effect aerodynamics on the job.

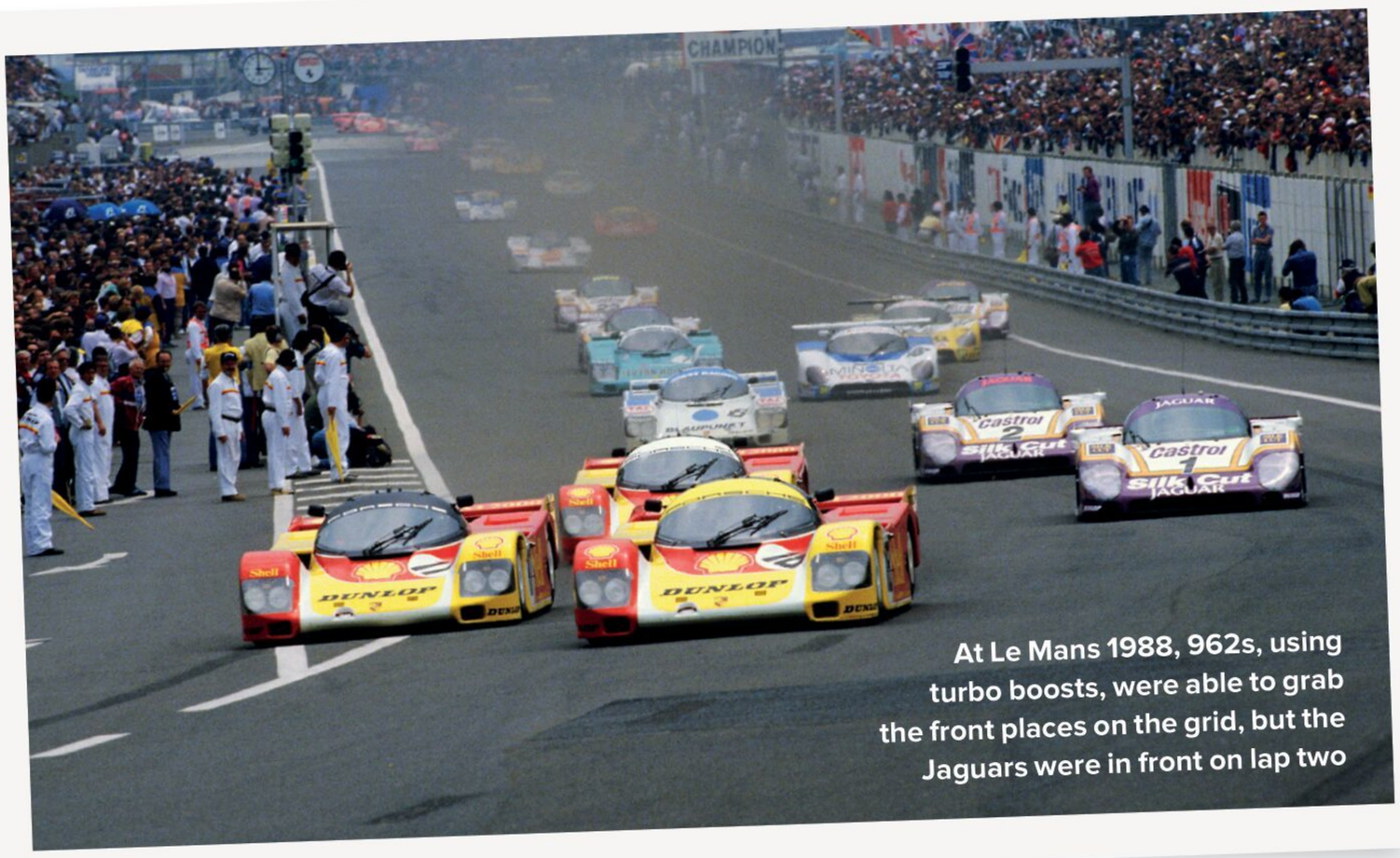
"In the wind tunnel we tried copying F1 and discovered that didn't work, so we had to find our own way," says Singer. "We did it all ourselves because if you hired people, in a couple of years they might leave and take their knowledge elsewhere. So we kept it in-house. It didn't always work, but more often than not it did."

"When you race for Porsche, you're not just driving a car, you're buying into the whole Porsche package - the history, the attention to detail, the Porsche way of doing things," concurs John Watson, who raced Rothmans Porsches in 1984 and at Le Mans in 1985, then later joined the rival Tom Walkinshaw Racing Jaguar squad. "Those cars had serious ground effect and with the level of downforce we were getting by the late '80s, you needed the most rigid construction there was, which meant the Jaguar was always going to have an advantage over the Porsche, particularly in high-downforce sprint configuration."

"Few of the changes were giant leaps, but with a car that good from the outset they didn't need to be," says Bell. "It progressed, step by step through its career, its chassis, aero and engines always evolving, never sitting still. At the end it was still the same concept of car as it had been at the start, just better in every measurable way."

With thanks to Henry Pearman and the staff of the Historic Porsche Group C Collection for all their help making this feature possible.

"When you race for Porsche you're buying into the whole package"



At Le Mans 1988, 962s, using turbo boosts, were able to grab the front places on the grid, but the Jaguars were in front on lap two

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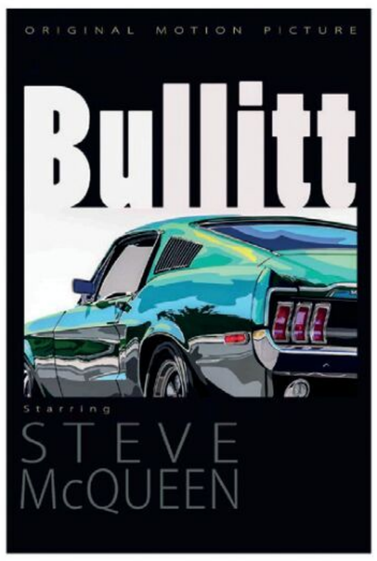
Jim Clark, Formula 1 1:2 scale helmet. £149.95



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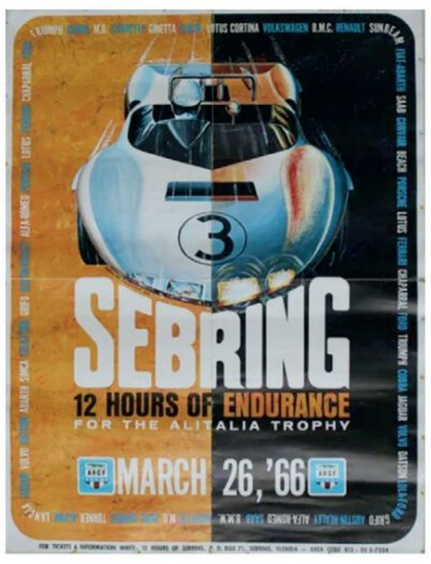
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THE SAVIOUR OF SPORTS CARS



Porsche will return to Le Mans in 2023 with a new LMDh project, but might the new rules ultimately kick-start a revolution that could rival Group C? **Damien Smith** finds out

THE PORSCHE FACTORY TEAM set the gold standard in the heart of the 1980s Group C era, but it's also true that it could have throttled the life out of the formula, particularly in its dominant early days. What saved Group C was Porsche's canny decision to sell customer cars to privateers, some of whom had the backing and technical nous to develop their own 956s and 962s, and on occasion beat the factory, or at least represent the manufacturer when the works team missed races. Imagine how thin grids would have been without that policy, how much less colourful (so many great privateer liveries...) - and how short the wonderful Group C era might have become.

Happily, Porsche appears set to embrace a similar approach on its return to the premier division of sports car racing in 2023. In December, the manufacturer gave us something to smile about in these depressing times by confirming its intention to bid for overall victory at Le Mans, in the World Endurance Championship and in the US

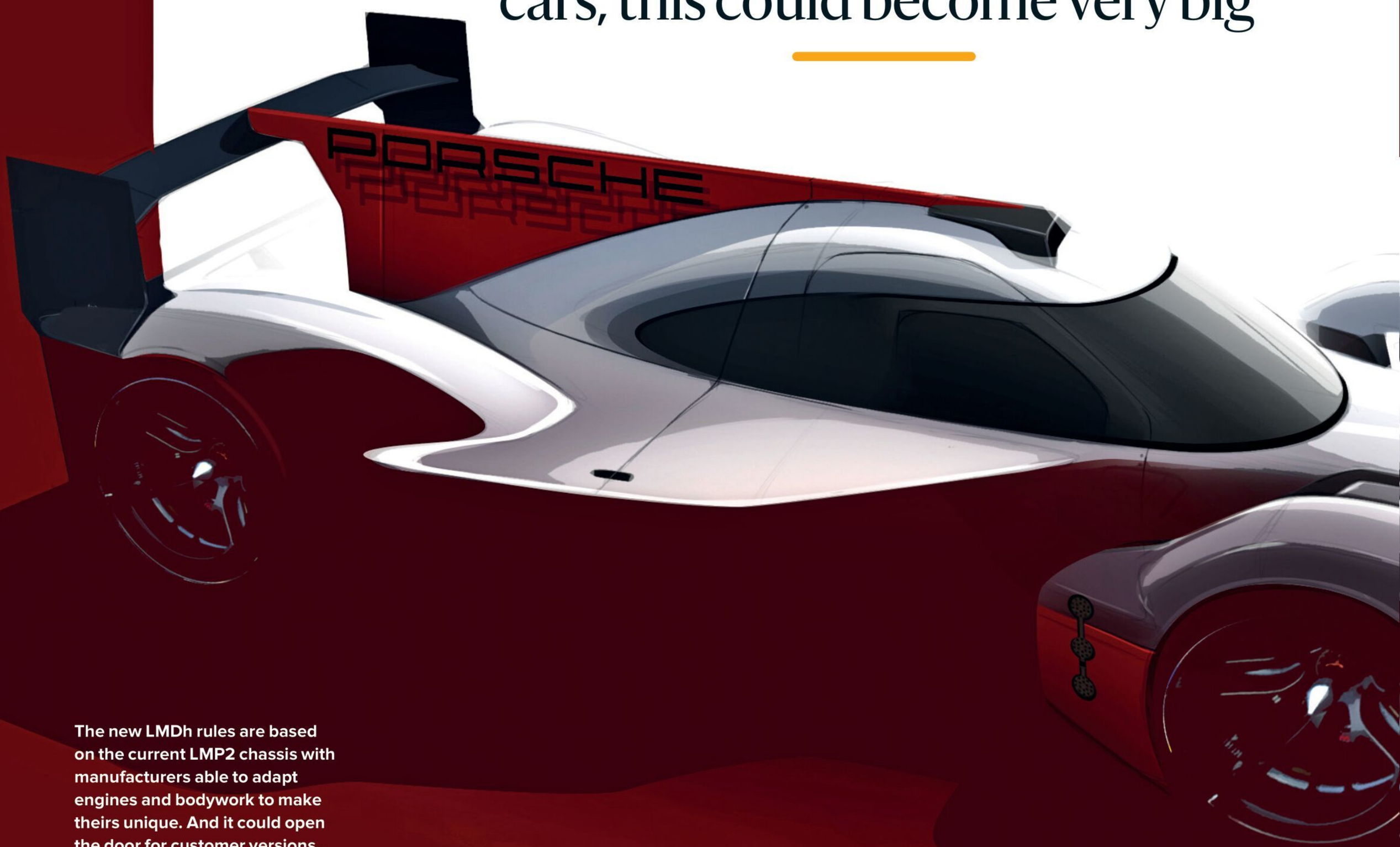
IMSA series with a new contender built to the unifying LMDh rules due to come on stream – the first since the 1990s that will allow one model of prototype to compete on both sides of the Atlantic.

He didn't confirm it, but motor sport boss Pascal Zurlinden spoke openly about the possibilities of offering customer cars in LMDh, the category which will also lure Volkswagen stablemate Audi back to Le Mans. The two most successful manufacturers at the 24 Hours, with 19 and 13 wins respectively at the race, will face Toyota and Peugeot in the parallel Hypercar class, with potentially more car makers, including possibly McLaren, Honda (Acura) and even Ferrari, weighing up the chances of joining them. Now imagine if all of them take a leaf from Porsche's Group C policy. The variety and number of entries bidding for a spot on the Le Mans grid could explode in a manner not seen since the race's 1960s heyday.

"We could go back to the 1980s and '90s with lots of cars and lots of manufacturers," said Zurlinden, "and if everyone does some customer cars, this could become really big for all of us. If a customer would win, even if we have a works team, in the end it is still a Porsche, so we would be really happy."

LMDh, devised by IMSA and adopted with enthusiasm by Le Mans organiser Automobile Club de l'Ouest and the FIA, is the vaccine sports car racing has been calling out for in the wake of the LMP1 category's hybrid era, when costs soared and hopes for overall victory stretched far out of the reach of privately funded teams. Now a formula has been created based around chassis rules from LMP2 – the increasingly popular secondary prototype division originally created solely for customer teams – along with a spec hybrid system from Williams Advanced Engineering, plus standard Bosch electronics and an Xtrac gearbox. The

"If everyone does some customer cars, this could become very big"



The new LMDh rules are based on the current LMP2 chassis with manufacturers able to adapt engines and bodywork to make theirs unique. And it could open the door for customer versions...

choice of internal combustion engine is free, as is body styling. As Zurlinden said, it's tailor-made for the big car makers as they can race for victory at a "reasonable cost".

"It's amazing, isn't it?" says Richard Dean, boss of United Autosports, the team that in 2020 claimed an LMP2 triple by winning Le Mans, the class WEC title and the European Le Mans Series - and is now one of many eyeing the forthcoming LMDh era. "For the past decade and more there's been a hole at the top of the sports car tree where ambitious teams like ours have had no opportunity to compete at that top level.

"LMP2 has been very much the level you can compete at and in my mind that has become the race. OK, that's because we're in it, but with 26 cars at Le Mans it's easy to take your eye off Toyota racing against [privateer] Rebellion. In my mind I'm picturing the 26 cars in LMP2 replicated in the top class, with privateers and factory teams competing with the same equipment."

From his career as a driver at Le Mans - he won the GT2 class with Panoz in 2006 - through to his transition as a team owner, Dean is well versed in the "cycles of boom and bust" in sports car racing. "You see manufacturers pulling out of other series, such as Formula E," he says, referring to Audi and BMW's decisions to withdraw from the all-electric series after 2021. "Budgets haven't been under control and have been allowed to accelerate to a point where it's more than they want and are able to spend. That's been the same in the regulations of any top class, whether it's Formula 1 or sports cars. You can sell anything if the price is right, throughout life. It doesn't have to be more complicated than that."

It should also be added that teams such as United are keeping an open mind on which strain of sports car rules to enter. Hypercar is absolutely an option, says Dean, even if he acknowledges his outfit is "probably better versed" in LMDh because of its growth out of LMP2. "We'd like an opportunity in a top class irrespective of which one, and we'd like to work with a manufacturer," he says. "That's the dream, whether that's in Hypercar or LMDh, as long as you've got a set of regulations with the same opportunity and equipment."

Inevitably, Balance of Performance will be required to ensure a level playing field within LMDh and between the class and the Hypercars. But as Zurlinden pointed out, it's in everyone's interests, from regulators to manufacturers, to ensure this artificial system, accepted by most today as a 'necessary evil' for modern sports car racing is fair and equitable for all. It could lead to the start of something that might even outstrip Group C in terms of competitiveness and the number of entries. As Dean says: "Instead of it being an unrealistic target, an overall victory at Le Mans finally feels like it is within reach."



Porsche will join sister brand Audi in a Le Mans return with LMDh machinery, while Toyota and Peugeot have committed to Hypercar programmes

FAREWELL LMP1

END OF

Porsche, Toyota and Audi created the finest of the breed with their hybrid LMP1 chargers, all of which triumphed at Le Mans. But now a new era beckons

AN ERA

After more than a quarter of a century as the premier class of Le Mans and endurance racing, LMP1 has taken its final bow. **Gary Watkins** looks back at the defining moments in the history of the division



The battle for diesel supremacy in 2008. Audi lagged behind Peugeot on outright pace, but stole the win via great strategy

GETTY IMAGES, AUDI

The greatest Le Mans heist

Audi driver Tom Kristensen reckoned Peugeot had "given us a bit of a smacking" at the 2008 Sebring 12 Hours. Another victory a couple of months later at Spa confirmed the French manufacturer as the clear favourite for the Le Mans 24 Hours in the battle of the turbodiesels.

The Peugeot 908 HDi had again proved its supremacy over the ageing Audi R10 TDI at the Le Mans Test Day two weeks ahead of the race. The best of them, with Stéphane Sarrazin at the wheel, was more than four seconds up on the fastest of the German machines over the two sessions held in mixed conditions.

The rain gave Audi hope, however. On a wet track, the R10 was up there with the 908s. For Allan McNish that was the key to the against-the-odds victory that he, Kristensen and Dindo Capello pulled off at Le Mans that year.

"When it rained we were suddenly competitive, a little bit quicker than them," recalls McNish. "That's when we knew we had a chance. We saw a chink in their armour and we logged it in the back of our minds."

That chance, of course, relied on it raining during the race. Audi's forecast ahead of the start suggested it was going to do just that, but not until the small hours of Sunday morning.

"We knew with the rain coming we had to be there to be within striking distance to take advantage of a very driveable car in the wet," explains McNish. "We built everything up to be as perfect as possible so that we could stay in the game: our job was to remain on the lead lap until it rained.



Despite being over five seconds off Peugeot in qualifying, Audi triumphed in 2008

"We drove every lap like a qualifying lap. We were going to a safety car map from the end of the Porsche Curves to try to stretch the fuel and make sure we went a lap longer than we should have done. It was the only way if we were going to hang on in there."

> "We drove every lap like a qualifying lap, but had to go a lap longer"

Hang on in there they did. The only one of the three Audis in contention that weekend was just half a lap back when it started raining shortly after the halfway mark. Ninety minutes later, Kristensen swept past race leader Jacques Villeneuve aboard the 908 he shared with Nicolas Minassian and Marc Gené.

There were a couple of twists and turns to come, but McNish, Kristensen and Capello went on to pull off arguably the greatest heist in Le Mans history.

Panoz blows the roof off

"Whoever heard of the horse pushing the cart?" So declared Don Panoz when he took the wraps off the front-engined GT1 racer he was going to take to Le Mans in 1997. The cynicism was muted because he wouldn't be the first to race a car with the engine ahead of the driver in the class created four years earlier. But when the pharmaceuticals magnate announced a couple of years later that he was going to cut the roof off the car to create an LMP prototype, everyone thought he was joking.

The smirks disappeared when a car initially called the Panoz LMP Spyder notched up a first American Le Mans Series victory at Mosport in June 1999. By the end of the car's frontline career in 2002 the doubters were laughing on the other side



The pace in 2008 was so high that the lead cars had completed 200 laps by the 12-hour mark, and then the rain arrived...

of their faces. What was quickly renamed the LMP Roadster S, and was then updated into the LMP-01 Evo for its final season, ended up with a tally of eight American Le Mans Series wins. Five of those came against the might of Audi.

The preposterous idea to create an open car out of the Panoz Esperante GTS-R, designed and built by British racing car constructor Reynard, originated in the fertile mind of Tony Dowe. One of Tom Walkinshaw's long-time subalterns, Dowe had been recruited from Arrows to run the Panoz racing operation at the end of '97, but he quickly got fed up of complaints from the boss that the car wasn't receiving due recognition for its successes in the GT1 arena in North America.

"Don kept going on about the car not getting the credit it deserved," recalls Dowe. "I said, 'Well you've got to be winning outright with an LMP1 to get that.' He told me he wasn't going to pay for a new car, so I decided to have a look if we could somehow use the existing car. I thought, 'Why not cut the roof off?', because I'd done that before."

That's a reference to the double Le Mans-winning Porsche WSC-95 that was created out of the Jaguar XJR-14 3.5-litre Group C car in the dying days of TWR's North American operation. Told he needed to come up with a project to save the company, he persuaded Porsche that he had an IMSA World Sports Car awaiting an engine in what he describes as a "real smoke and mirrors job".

"It looked like some kind of Mexican lowrider when we'd finished"



David Brabham and Jan Magnussen celebrate their 2002 Washington DC win with Don Panoz

"The problem with the GT1 was that it wasn't allowed the same width tyres as the LMP1 cars," says Dowe. "We cut the wheel-arches and put the big wheels and tyres on the car. It looked like some kind of Mexican lowrider when we'd finished."

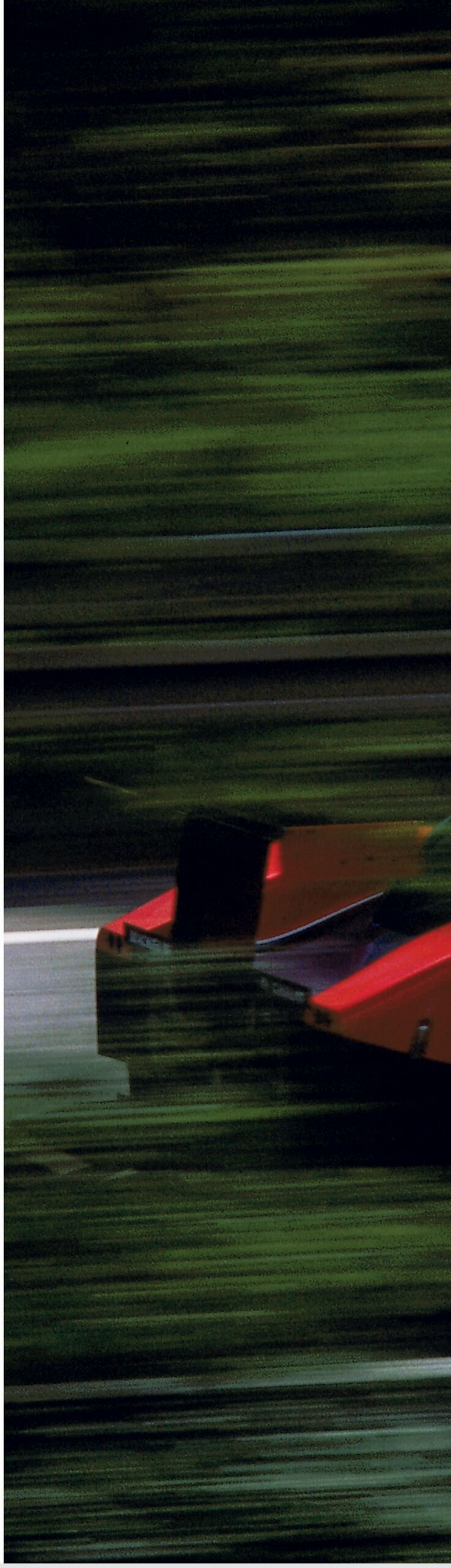
Jan Magnussen, out of work after being flicked by the Stewart Formula 1 team during 1998, drove the car at its first test at Road Atlanta at the end of that year.

"Jan had called me because he was looking for a drive, so I suggested he come over for a test," explains Dowe. "Watching Jan get on the brakes into the chicane at the end of the back straight made the hairs on the back of your neck stand up. He was way quicker than all the prototypes racing in America at that time, so it wasn't that much of a jump to cut the roof off this thing we'd built."

Dowe had fallen foul of Panoz's whims and departed the organisation by the time the LMP1 car made its debut at Road Atlanta in round two of the ALMS in '99. It was a winner next time out at Mosport with Magnussen and Johnny O'Connell and, more significantly, triumphed at the Petit Le Mans 1000-mile enduro at Road Atlanta in September, David Brabham, Eric Bernard and Andy Wallace doing the driving.

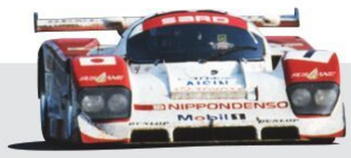
The arrival of the Audi steamroller in 2000 didn't stop its winning ways. There were some crazy races, most famously the one-off 2002 Washington DC city event on a circuit laid out in a car park. Brabham ▶

GETTY IMAGES, DPPI



The making of the top class

The story of LMP1, from the beginning



1994
Le Mans 24 Hours organiser the Automobile Club de l'Ouest introduces a new class dubbed LM-P1/C90 — note the hypen — that lumps the new breed of open-top World Sports Cars from IMSA and old-style Group C together. No WSC cars make the trip

1995
Group C cars are excluded and the class temporarily becomes known as LM-WSC before the LMP1 name makes a return

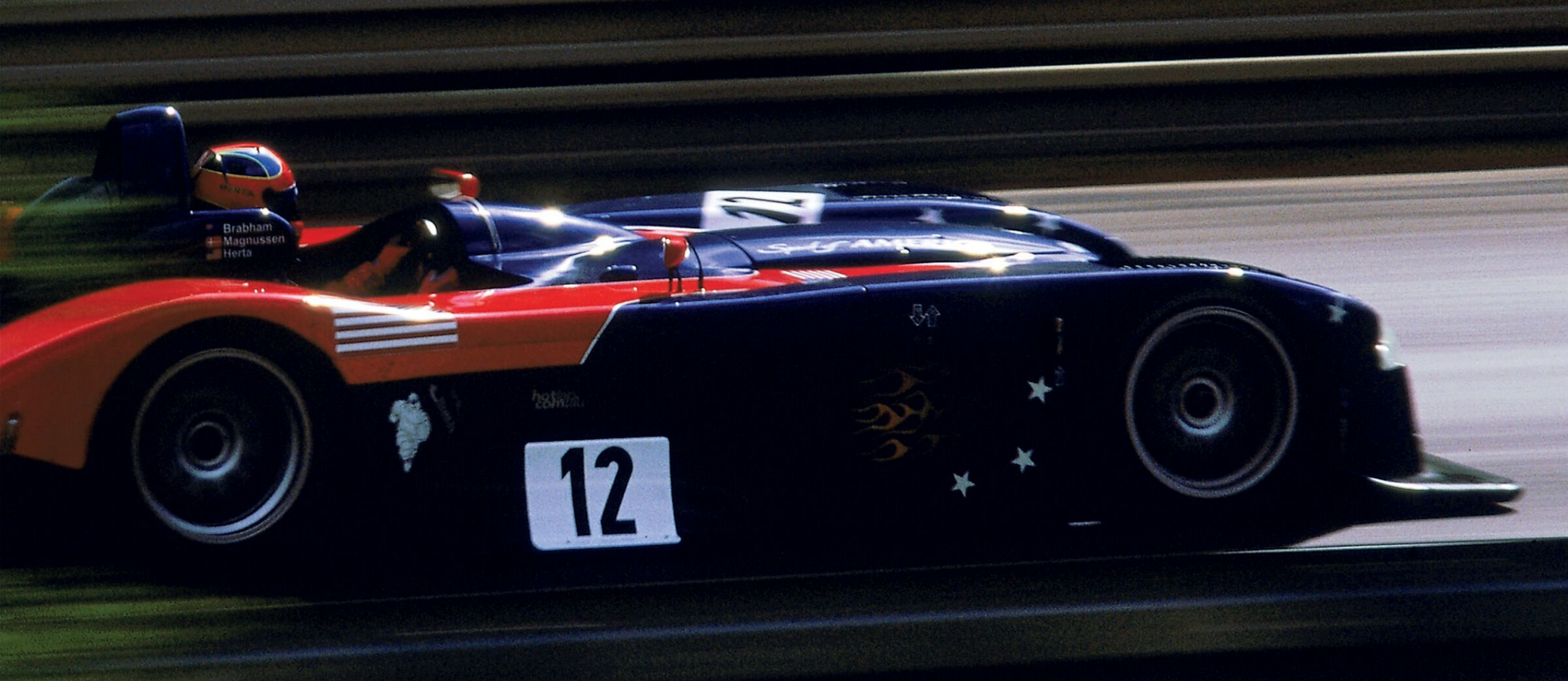
1996
First Le Mans win for an LMP1 courtesy of a Joest-run Porsche WSC-95 (*below*)



2000
Class renamed LMP900 in first year of the Audi R8 to reflect the minimum weight (it had briefly been known as LMP875 in 1997)

FAREWELL LMP1

Take a GT1 monster, cut the roof off, fit bigger wheels and *voila*, you have yourself an LMP1 car. Well, you do if your name is Don Panoz. Yet the crazy plan worked





2005/06

Staggered introduction of new aerodynamic rules that also allow coupés for the first time

2011

A rule change mandating only two mechanics can change tyres results in Audi abandoning open-top in favour of a coupé. Dorsal fins mandated in further attempt to stop cars flying

2014

New energy-based formula introduced which limits the fuel flow to each car's internal combustion engine



2016

Audi announces the end of its LMP1 programme

2017

New rules revealed for 2019 that include hybrids having to run on electric power only after each fuel stop. Porsche cans its programme. The ACO and the FIA begin working on a new top class



2020

Toyota claims the final overall Le Mans win for an LMP1 car, and commits to new Hypercar category

and Magnussen triumphed over Tom Kristensen and Dindo Capello in a thriller of a dogfight.

Toyota's late heartbreak

Toyota was no stranger to heartbreak at Le Mans. The Japanese manufacturer had lost victory in the closing stages in 1994, '97 and '98, but it had the win ripped from its grasp with just six minutes left on the clock when Sébastien Buemi, Anthony Davidson and Kazuki Nakajima looked to be home and dry in 2016.

Nakajima was in control even before Neel Jani brought the chasing Porsche into the pits with a slow puncture with just 10 minutes remaining. That gave the leading Toyota TS050 Hybrid an advantage of 80 or so seconds as the cars began their penultimate laps.

Less than a third of the way around that lap, a connection on the high-pressure airline between the turbo and the wastegate fractured on one bank of cylinders. Nakajima lost power and crawled around onto the start-finish straight and then stopped right in front of his pit. The Porsche 919 Hybrid Jani shared with Romain Dumas and Marc Lieb sped past the stationary car to take the lead. Toyota's dreams were over for another year. Nakajima got going after running through a series of resets, but his last lap was too slow for the car to be classified.



Toyota had dominated the 2016 Le Mans over Porsche, but only managed second

> "Our engine worked when all was fine, but there was no back-up mode"

It was doubly galling for Toyota. Had the marque been a month or two more advanced with development of its new twin-turbo V6, it might have been able to hang on to win despite the technical glitch.

"The development time of the engine had been very short," says Toyota Gazoo Racing Europe technical director Pascal Vasselon. "We had an engine that worked when everything was fine, but there was no back-up mode. You need software that can handle that kind of situation and at that time we did not have it. A couple of months later we did."

Davidson perhaps summed it up best. "No one would believe a movie if it ended like this," he said.



Kristensen's late arrival

Le Mans was a race on Tom Kristensen's target list (see this month's *Motor Sport* interview) but a week before the 1997 event he had no plans for it. That changed with a phone call from Joest Racing. Not only would he be making his maiden start, but he'd be doing so aboard the very Porsche WSC-95 that had won the race the previous year.

Joest's decision to give Kristensen the break that set him on course to become the most successful driver of the LMP1 era followed a protracted period of indecision within the team. It was receiving no support from the factory and wasn't flush with cash, which resulted in a back-and-forth debate between team owner Reinhold Joest and his technical director, Ralf Jüttner, as they considered who to put in the car alongside ex-Ferrari Formula 1 drivers Michele Alboreto and Stefan Johansson.

"One day, I would say, 'you know we really must go for someone with some budget' and Reinhold would reply, 'but we might be giving up the chance to win'," recalls Jüttner. "The next day I'd tell him that he was right and he'd go, 'but you know we really need the money'. We were switching our positions around all the time."

Kristensen, who was back in Europe after a four-year sojourn in Japan to try and re-establish himself in the motor sport mainstream, was already on the team's list. But what Jüttner calls "the final kick" to sign him came from former Joest team manager Domingos Piedade, who'd also looked after Emerson Fittipaldi in the 1970s.

"Domingos said I should take Tom and that I didn't need an experienced driver because Le Mans had become a 24-hour sprint," says Jüttner. "He said the young kids could see like eagles in the night because they were used to be being in the disco..."

The late Piedade's comments turned out to be spot on. It was during the night that Kristensen offered more than a hint of what was to follow over his illustrious career. He set a succession of lap records over the course of a third stint on a set of tyres. So quick was he, that Jüttner kept him in the car for what at the time was an unprecedented fourth stint.

Jüttner believes that the young gun's pace motivated Alboreto and Johansson to up their respective games. They were able to match the pace of the leading Porsche 911 GT1 Evo and put it under pressure. The closed-top car failed late on and Kristensen joined the select band of drivers to win Le Mans at the first time of asking. Just eight years later, the Dane had equalled Jacky Ickx's Le Mans record of six wins and went on to extend that mark to nine before hanging up his helmet.



A dream debut for Tom Kristsensen alongside Johansson and Alboreto in 1997

GETTY IMAGES, DPPI

A distraught Kazuki Nakajima is helped away from his stricken Toyota at the end of the 2016 Le Mans. His final lap was beyond the maximum six minutes, so the car couldn't be classified

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By 2002, Audi's R8 was already established as the LMP1 benchmark. That year the team locked out the podium, beating the fourth-placed Bentley Speed 8 by 13 laps

DPPI, AUDI

Birth of the greatest LMP1

Audi might have finished third and fourth on its Le Mans debut in 1999, but the hard truth was it was nowhere. Its first stab at an open-top LMP prototype, the R8R, wasn't a match for the machinery from BMW and Toyota that slugged it out at the front. A second design, the R8C coupé, was neither fast nor reliable.

A new car was clearly required, and the decision to build one had already been made. It was taken in the weeks after an even more unconvincing race debut from the R8R at the Sebring 12 Hours three months earlier. The result was a machine known simply as the R8, and it would turn out to be one of the greatest sports cars ever, and certainly the most successful of the LMP1 era. Five victories at Le Mans followed, not to mention 50 in the ALMS.

"It was clear before we even went to Le Mans that we would be doing a new car for the following year," recalls Wolfgang Ullrich, the long-serving head of Audi Sport and architect of its prototype programmes. "I can't tell you exactly when it was, but I would say three or four weeks after Sebring.

"We had a programme inked for the following year and we decided that a new

> "I was 80 or 90 per cent sure I was going to lose the race in the final laps"

open-top car was the right way to go. First we concentrated on Le Mans and then we incorporated everything we had learnt into a new car."

That gave an incredibly short schedule to get the car up and running in time to be fully tested before the start of the 2000 season the following March. But Audi Sport technical director Wolfgang Appel always joked that he didn't start work on the new car straight after Le Mans – he waited until the Tuesday...



The wet-shod R8 of Capello just holds off the rival BMW in a red hot, but non-smoking finish

Dindo smokes 'em – just

Dindo Capello made himself a promise as the clock ticked down on the Mosport round of the ALMS Series in August 2000. He was going to quit smoking if he won the race. It was, however, an empty threat. He might have been leading, but the Joest Audi R8 he shared with Allan McNish was very much the second favourite.

The Audi was still on wet tryes, while Jörg Müller in the chasing BMW V12 LMR was on slicks. The German Schnitzer team had rolled the dice with 20 minutes to go as the track began to dry up after a mid-race shower, bringing in the Bimmer co-driven by JJ Lehto for a change of tyres. The tactic looked like it was going to pay dividends.

Müller inexorably closed down a car that had dominated the race. On the penultimate lap he carved a massive seven seconds out of Capello's advantage as the Italian struggled with wets on the drying surface. That left the BMW driver four seconds to



gain over the final 2.46 miles around the former home of the Canadian Grand Prix.

"I was 80 or 90 percent sure that I was going to lose the race over those final laps," recalls Capello. "The car was moving around a lot in the fast corners and it was difficult to stop it for the slow corners.

"I think Jörg got a little bit of traffic on that final lap and when I got to the end of the back straight still in front, I said to myself that there was no way I was going to lose the race now. I drove those final three corners as though I was on slicks."

Capello's struggling Audi crossed the line a scant 0.148sec ahead of the chasing BMW. The result was generally reckoned to be the closest competitive finish in history for an international sports car race up until that point in time.

The winning driver remained true to a promise he didn't think he'd have to keep, "little by little" giving up the cigarettes over the course of the following six months. By the beginning of the following season he was most definitely an ex-smoker.

Three men go into a bar...

Three men sitting in a bar in Ingolstadt in January 2001 shaped the future of the LMP1 division. They didn't know it at the time, but they set in motion a course of events that once again made the top category of sports car racing a technological proving ground for the automotive industry. Their discussions – drunken, perhaps – centred on the idea of putting turbodiesels on the grid at Le Mans.

> "As our wives say, bars are full of drunk men talking cars and football"

The scene of their debate was in the local NH Hotel, the favoured destination of Audi Sport engine boss Dr Ulrich Baretzky when he made the trip from his Neckarsulm facility to visit motor sport headquarters. The other participants late that evening were the two Daniels, Poissenot and Perdrix, respectively the sporting and technical directors at Le Mans 24 Hours organiser the Automobile Club de l'Ouest. Diesel powerplants somehow came up in their postprandial discussions.

"I can't remember who brought it up, but we ended talking about how 50 per cent of the cars Audi sold around the world were diesels, but there was no motor sport category where you could race one," recalls Baretzky. "That was the starting point. As our wives always say, bars are full of drunk men talking about cars and football."

Little more than two years later after "a lot of toing and froing", according to Baretzky, the ACO duly announced that turbodiesels would be able to race in LMP1 from the following year. It would be wrong to say, however, that Audi's engine guru was the driving force behind the move. He admits that he was initially against the idea for one simple reason: "I didn't know anything about diesels."

By the time the inclusion of diesels in the 2004 LMP1 rulebook was announced the previous March, Baretzky had undergone a change of heart.

"I realised that I had to do it, because for the rest of my life I'd regret it if I didn't, if someone else did it first," he says.

Baretzky's ideas for a diesel-powered P1 car were met with initial scepticism at

LMP1 hits and misses

It wasn't just the big four brands that proved memorable in the top class

HITS



Pescarolo 01

The Pescarolo 01 was arguably the first accessible P1. Henri Pescarolo became a constructor for 2007, creating a car designed to be sold to customers for either LMP1 or LMP2. It looked great, had great liveries, finished on the podium during its Le Mans debut in 2007, and raced until 2015, by then badged as a Morgan.



Lola Aston Martin B09/60

A rule tweak to allow the use of production engines in LMP1 led to the marriage of Lola's B08/60 chassis with Aston's six-litre V12 from the DBR9. Being petrol-powered it would never realistically challenge the diesels, but the best did finish fourth at Le Mans in 2009. Regardless, name a better looking, or sounding, P1 car...



Bentley Speed 8

Crewe and Norfolk's answer to Audi's juggernaut, and it was far more than just a modified R8C. Racing Technology Norfolk may have started out with an Audi platform, but what it rolled out was far more Flying B than four rings. The Speed 8 was unstoppable at Le Mans in 2003, taking pole and a one-two finish.

MISSES



Nissan GT-R LM Nismo

The front-engined GT-R LM Nismo was first shown off in a TV advert during Superbowl XLIX. However, the self-styled 'LMP1 Bad Boy' turned out to be just bad. The car was beset by issues, had no working hybrid, wayward handling and boiled its brakes. Two cars retired and the third wasn't classified at Le Mans in 2015.



Aston Martin AMR-One

Perhaps the worst manufacturer sports car programme ever? Aston tried an in-house design for 2011. It made three carbon tubs and its own 2-litre turbo straight six. The engine lacked power and rattled itself to bits. They qualified behind the LMP2s in 2011 and did a combined six laps before both were retired and scrapped.



Dome S102

Supposed to be Japan's glorious return to Le Mans, but turned out to be rather underwhelming. The 2008 S102 had some trick bits and was expected to get among the diesels in qualifying, but was over eight seconds off. During the race it endured multiple accidents and glitches, but still somehow managed to finish.

GETTY IMAGES, NEWSPRESS



Audi, but he found a champion at the very top of parent company, the Volkswagen Group. It was that great innovator with a love of motor sport, Ferdinand Piëch. Baretzky was granted an audience with the architect of the Porsche 917 and the Audi Quattro, then chairman of VW's supervisory board, in the dead of night at Le Mans 2004.

"My boss at Audi Dr [Martin] Winterkorn said, 'Come, I want you to explain to someone what you want to do,'" he recalls. "He took me to see Piëch and after five minutes of questions and answers, he told me, 'You should do it.' That was enough for me, because Piëch was god."

Two years later the Audi R10 TDI powered by a bespoke 5.5-litre turbodiesel engine was on the grid at Le Mans. It won the race in 2006 and would remain unbeaten in the 24 Hours over its three-year lifespan with the factory Joest squad.

Shake, rattle and gold

It was meant to be an historic moment. Porsche's first contender for outright honours at Le Mans this century was about to turn a wheel for the first time. But Alex Hitzinger, the technical director on the 919 Hybrid LMP1 project, knew there was a problem. As good as the new car seemed, the whole thing appeared to be shaking itself to pieces.

> "I was standing next to the car and felt the vibration from the engine"

A massive vibration from the 919's two-litre V4 engine could have, he says today, "potentially killed the programme". What it did do was cause a torrid first six months or so of testing with the car. "Painful" is how he describes the in-house Porsche factory team's attempts to get on top of the handling and reliability of the rattling machine.

But a fix was already in the works through the second half of 2013 as Porsche geared up for its return to the top flight of sports car racing in the World Endurance Championship the following year. Hitzinger decided that wholesale changes were needed at the rollout on the marque's Weissach proving ground in June 2013.

"I remember it as if it was yesterday," remembers Hitzinger, who now sits on the board of VW. "I was standing next to the car and felt the vibration, so I asked the guys responsible for the engine whether we could cope with it."

The response was in the affirmative, but Hitzinger begged to differ.

"I'd inherited the engine concept when I joined the project [in November 2011] and the designers had been very aggressive on the firing order," Hitzinger explains. "I made the decision right there and then that we had to turn the thing around as quickly as possible. Changing the firing order meant we needed a new crankshaft and

Porsche's long-awaited return to Le Mans came with its new 919 Hybrid in 2014. While it didn't win first time out, it laid the foundations for dominance in the years to follow

camshaft, both of which were going to be long lead time components."

The revised engine arrived in time for a test at the Algarve circuit in December and the corner was quickly turned. "From that point on we made massive progress in terms of handling, reliability and performance," says Hitzinger.

He describes the change of direction on the engine as the "golden decision" of what turned out to be a golden programme. By the end of its first season, the 919 was a race winner in the WEC. Over the next three years, the second iteration of the 919 swept to a hat-trick of hat-tricks, Le Mans victory and drivers' and manufacturers' WEC titles in 2015, '16 and '17.

Scandal drives Audi away

No one knew it at the time, but it was the beginning of the end for LMP1.

Audi dropped the bombshell in October 2016. The German manufacturer announced that it would be walking away from sports car racing altogether at the conclusion of that year's WEC, taking it away from a category in which it had been an ever-present factor since 1999.

The announcement, described at the time as a realignment of its motor sport future, was tagged with the line 'Formula E instead of WEC'. But that wasn't quite true: Audi had already announced that it was stepping up its involvement in the Abt Schaeffler Formula E squad ahead of a full-factory entry for the 2017/18 season. Formula E was, Audi Sport boss Wolgang Ullrich had explained when that news broke, "an additional programme" alongside racing in the WEC with the brand's turbodiesel LMP1 machinery.



The architect of all of Audi's prototype masterpieces, Dr Wolfgang Ullrich

But Audi parent company Volkswagen was reeling from the dieselgate scandal that had hit the group just over 12 months previously. The financial liabilities were mounting and money needed to be saved at a time that VW could no longer be seen to be promoting diesel technology.

"It was not an easy period for the group financially or politically," says Ullrich. "Suddenly, almost from one day to the next, everyone was talking bad about diesel engines. How could we have continued to race a diesel engine? No way."

It was a swift turnaround for Audi. A new car, building on the all-new 2016-spec R18, was in the final stages of design and some parts had already gone to procurement.

The demise of LMP1 was equally swift. Porsche, also part of the VW Group, announced it would be walking away from P1 at the end of 2017 just eight months later. By September, WEC promoter the Automobile Club de l'Ouest had announced that it was beginning to work on rules for a new breed of car to contest its top division. P1 was in its death throes.

GETTY IMAGES, DPPI



PURE ALFA

The Italian constructor enjoyed a grand prix renaissance in the early 1980s. Now one chassis is back in action, revived by driver Bruno Giacomelli. **Paul Fearnley** tells the story

FOR 27 YEARS IT SAT – UP ON blocks, under a cover – in his mother's suburban garage: last in line of an evocative motor-sporting bloodstock… a works grand prix Alfa Romeo, designed, built and run.

The car was a (parting) gift to Bruno Giacomelli after a fourth season spent in Formula 1 with *Ingegnere* Carlo Chiti's Autodelta SpA. That was 1982. Their agreement, however, had been struck in October 1980, a few days before the GP of the United States.

"I was in a strong position after Watkins Glen [Giacomelli had led convincingly from pole until halted by an electrical gremlin] and I signed a two-year contract," says this ex-British Formula 3 and European Formula 2 champion. "And I insisted that they gave me a car at the end of each season. Chiti didn't want to, to begin with, but he was a good guy and made sure that I got cars in perfect working order."

Giacomelli took delivery of both – a 179B, chassis 03, and a 182 – on the same day: 20 December 1985. "I had to insist a lot."

The latter was the work of ex-Ligier designer Gérard Ducarouge and featured the first all-carbon F1 tub – made by Roger Sloman's Advanced Composites of Heanor, Derbyshire – to emerge from female moulds. Powered by Chiti's 60-degree V12, it showed well initially, particularly on street circuits – Andrea de Cesaris was on pole and led at Long Beach and would have won in Monaco given a splash more fuel – but its performances tailed away thereafter.

"I had done all the development work," says Giacomelli. "It was a clean car, with good power – we had 530bhp – and on the weight limit. I set a lap record for non-turbos testing on the short circuit at Paul Ricard.

"I got on very well with Andrea. He was fast, but I was more meticulous, more precise. When the team started falling in love with him, it was not really listening to me any more. And I don't like to shout and bang my hands on the table."

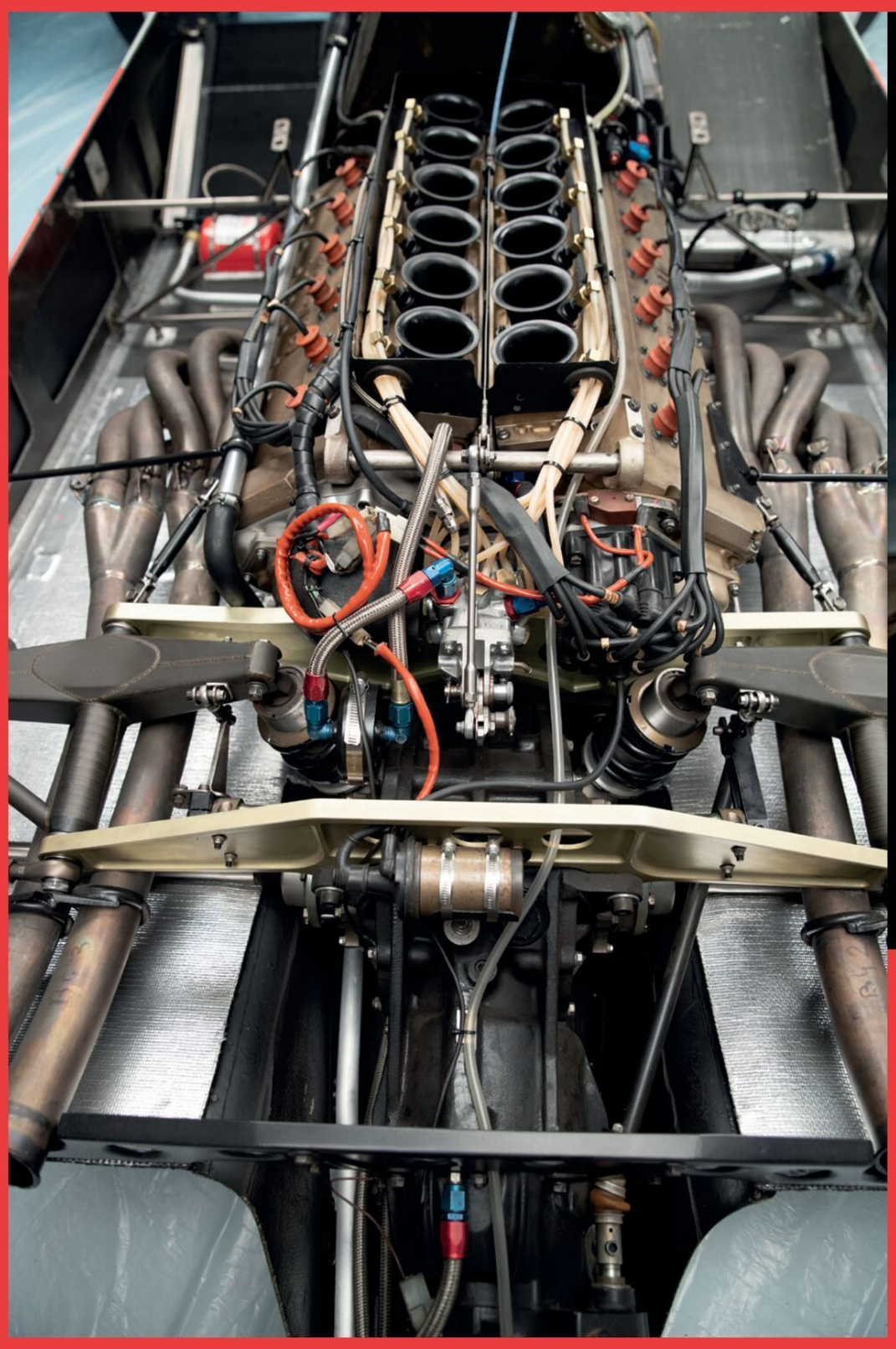
Giacomelli, let go late, would sign with Toleman for 1983, while de Cesaris remained at a restructured 'Alfa Romeo': the beleaguered state-owned manufacturer would farm out the design and running of its F1 cars to Paolo Pavanelli's Euroracing for the next three seasons.

"I was busy getting on with my career and the rest of my life and I almost forgot that I owned this 182," says Giacomelli. "My mother – she was one of my biggest fans – was its guardian. But eventually I knew it was the right time to put my hands on it again."

The car was wheeled back into the daylight in May 2012 and transferred to long-time Autodelta engineer Renato Melchioretto, his twin sons Andrea and Daniele and daughter Manuela, the A, D and M of ADM Motorsport. Better known for its involvement in junior formulae, running the likes of future two-time Le Mans 24 Hours winner Earl Bamber, this was to be the Milanese team's first historic restoration.

MASSIMO REGGIA, LORENZO MARCINNÒ

After 27 years locked in his mother's garage, the Alfa required a seven-year restoration to get back on track





Left, the Carlo Chiti 60-degree V12 engine developed 530bhp in period, but had to have extensive restoration work to correct a bagful of issues, such as seized pistons and a pesky corroded water pump. Above, the Alfa is full of date-correct details, with Giacomelli insisting on originality.

Below, Giacomelli in the 182 at Long Beach in 1982. The car fared well on street circuits, with team-mate Andrea de Cesaris starting this race on pole – then becoming F1's youngest pole-sitter in the process at 22 years 308 days – before brake troubles hit. Right, Giacomelli saddles up for his first runs at Varano

"Renato had started as an engine man at Autodelta but, when Ducarouge arrived [in 1981], he became a chassis expert, too," says Giacomelli. "So he knew everything about this car. That was very lucky because there are no drawings, nothing; everything from Autodelta is lost.

"But we did it without pressure. There was no hurry. They never worked full-time on it. And I was the supervisor. I trained as an engineering draughtsman for three years before I became a racing driver and the technical side of the sport has always fascinated me, so I enjoyed this project a lot."

All seven years of it.

Its most onerous task was the water pump, its original magnesium casing having been ruined because someone - ahem - had forgotten to drain the coolant.

Mario Tollentino, another Autodelta man, an early advocate of CAD and the designer/reworker of the subsequent 184T and 185T, helped greatly with this part of the project.



Giacomelli: "He didn't have anything from those days - can you believe it? - but he had kept working in motor sport [in F1, sports cars and rallying, for AGS, BMW, Dallara, Hyundai, Lamborghini, Volkswagen] and he had a great enthusiasm for our project.

"If you have the drawing, it's not a problem. But we had nothing. So we had to look at the piece itself and, even after a 3D scan, we double-checked the interactions of the shafts, built a dummy and changed some measurements before establishing the

GETTY IMAGES, LORENZO MARCINNÒ



definitive part to be cast and machined.

"We could have made it in aluminium but I wanted to stay with magnesium. But I didn't want people to think that it was an original part, so I had it painted a strange colour rather than be chemically treated, which used to turn parts golden."

Elsewhere, three pistons had seized in the bores of their wet liners. The gearbox – an Autodelta casing – was split to reveal perfect Hewland internals, complete with a brand-new crown wheel and pinion. Koni shocks were disassembled and rebuilt; this company's former representative in Giacomelli's hometown Brescia had not only attended the tests at Balocco back in the day but also kept his detailed notes. The Magneti Marelli distributor and the metering unit for the Lucas fuel injection underwent the same processes – the latter being the only part sent to the UK for renewal.

New gaskets, new bearings in the uprights, new pipework, new stickers, new skirts, refurbished wheels – and the car was ready for a 15-mile shakedown at a chilly Varano, near Parma, in December 2019.

Giacomelli: "People were asking if I was excited to drive it again, and I kept saying, 'No.' I am *razionale*. For me, this is normal. Remember, I was a part of the development of this car: the seating position; its steering wheel; the dash and its instruments. I had decided all these things. Yes, very many years ago, but still I knew exactly what to expect. I knew all the good work that we had done. I jumped in, started the engine, spun the wheels, went sideways a bit, and drove onto a wet track. On slicks. Normal. It ran perfectly and really I felt a sense of achievement from that.

"I'd sold my 179B many years ago, but I kept the 182 because I felt it was an important car, even though it had never won any races. It's pure Alfa. That doesn't exist now. It's just a badge and a brand today."

But which 182 is it?

A bewildered Denis Jenkinson wrote in *Motor Sport* in 1982: "When you see an Alfa Romeo engineer making notes on a technical sheet about a specific car and there is no engine or chassis number on the sheet you begin to wonder if the Autodelta racing department works to any sort of system."

Its previous aluminium chassis at least had plates glued to them – these could and would be swapped about, warns Giacomelli – but 182's carbon item carries no identifying marks. (That's how it left Derbyshire and ▶

"If you have the drawing, it's not a problem. But we had nothing"

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Left, Giacomelli poses alongside the ADM Motorsports team. This car was ADM's first historic race car restoration. It is more accustomed to running modern Formula 3 cars and most recently Italian F4 entries. Above, new stickers in place for the test. Below, cue oversteer on fresh slicks

how it is now.) Thus the scuffed piece of paper bearing Autodelta's letterhead and Chiti's signature that is in Giacomelli's possession is priceless: it confirms his car as chassis 01. Except that even Bruno is not entirely sure if that's right.

The car's rebuild revealed professionally repaired damage to the tub's right-front corner. Might this be the car - 02, reportedly - which De Cesaris stuck in the wall while chasing Niki Lauda's leading McLaren at Long Beach? Sloman recalls one of the batch of five (or six) chassis - Chiti initially ordered a dozen - being returned for repair, but is unable to remember the precise date and circumstances.

Or is it the chassis which Giacomelli drove that crisp March day in the South of France, when all was new and promised so much; in which he qualified third at Monaco and briefly held second before a badly heat-treated driveshaft broke; and which pitched him into the Brands Hatch catch-fencing when its rear wing failed on the 175mph downhill approach to Hawthorns?

"It's very difficult to see a Formula 1 car from this period that doesn't have pieces missing or that are wrong," he says. "That's normal in historic racing today. My car is complete, after being stored for almost 30 years in a garage, where nobody touched it. It still has its complicated underbody wing. It has the later style of engine cover from 1982 - but it's exactly how it left Autodelta and came to me."

> "It's difficult to see an F1 car of this age that doesn't have bits missing"

The pandemic stymied plans to demonstrate the car in 2020, but again *razionale* Giacomelli is prepared to wait. The car is stored safely - minus its coolant! - in readiness for the next right time. He might sell in the future, when provenance will be all-important - and likely quibbled over - but for now he knows exactly what he has: a genuine and moving - in both meanings - tribute to his Alfa Romeo *fratelli*.

"I wanted Gérard - I phoned to tell him that the car's restoration was progressing - and Mario - he was ill, but we didn't know - and also Andrea to see the car run again," he says. "Sadly they have all gone now. So, too have my Autodelta mechanics."

And Bruno's mother Rachele, who rode Moto Guzzi in the 1950s, passed away three years ago, aged 101. Hers was a strong life that spanned the works Alfa Romeo grand prix cars of Tazio Nuvolari, Juan Fangio and her beloved son.

LORENZO MARCINNÒ

COLIN McRAE



10 CHAMPAGNE

In the year that Damon Hill and Michael Schumacher had been slugging Colin McRae and Carlos Sainz were in a titanic tussle for top spot.



SUPERNOVA

it out in F1, over in the World Rally Championship, Subaru team-mates **Anthony Peacock** looks back at the season that went right to the wire

McKLEIN/REINHARD KLEIN

THE SINGLE MOST STRIKING THING about Colin McRae's 1995 World Rally Championship title, according to nearly everyone who was lucky enough to be there at the time, is that it was more than 25 years ago. For many people, half a lifetime away. And because of that, it's understandable that memories are patchy and some recollections gone, while others remain as vivid as if they happened a few minutes ago.

A bit like flicking through an album where an assortment of the photos are missing, the souvenirs of that season are a patchwork kaleidoscope of moments, not necessarily in chronological order, which combine to give a nostalgic flavour of what actually happened.

But most people already know the basics of the story. The wave of expectation that preceded the start of that 1995 season, a cut-throat year-long battle with Spain's Carlos Sainz, and a finale which was the rallying equivalent of 1976 in Formula 1. A showdown between two maverick geniuses that turned into a resounding British triumph.

What's perhaps even more interesting is how the passage of time has altered the perceptions of McRae's achievements. For the people who were there, perspectives have subtly changed, from being caught up in the moment to looking back on an enduring feat that defined so many lives and careers.

> "It was a showdown between two maverick geniuses"

Back then, like all good times, there was a feeling that everything was going to last forever. It was the height of the Group A era, with manufacturers – notably Subaru – coming into the sport and Colin's star shining as bright as the Pleiades star cluster that inspires the famous Japanese manufacturer's logo.

McRae had enjoyed an excellent 1994 season – his first proper full year in the world championship, which resulted in two wins: New Zealand and Rally GB (or the RAC as it was known back then). The Impreza was new, and only expected to get better the following year, with Prodrive working flat out to create a world-beater in 1995.

"There was a feeling that it was more a question of when rather than if," recalls father Jimmy McRae, who accompanied Colin on most rounds, more as a friendly face than in any official role. "There wasn't a lot of advice that I could really give Colin: the car that he was driving then was a bit different from anything I drove, and he was a lot faster than me! But I could be a sounding board and share ideas about tyre choice and things like that."

Nowhere is tyre choice more important than Rallye Monte Carlo, and that actually got off to the worst possible start for McRae. Not only did he go off on the famous Sisteron stage, but his team-mate and other key protagonist of the 1995 season – Sainz – won.

July 1995 brought the WRC to New Zealand, but with Carlos Sainz absent, McRae was free to dominate. Left, pressure at Rally Catalunya

"Our ice-note crew had warned us that there might be a bit of ice on the corner, but when we got there it was absolutely pure sheet ice and off we went," remembers Derek Ringer, McRae's co-driver. "We told Carlos what happened and he said, 'Yes, of course, there's always sheet ice there.' So thanks for that, Carlos..."

A lot has been said about the rivalry between McRae and Sainz over the years, but - at the beginning of 1995, at least - it was mostly good-natured, if indubitably tense. Probably this is the single aspect of the story that has changed most over the years. From a relationship that had seemingly deteriorated beyond repair by the end of 1995, the two gradually grew closer once more, in spite of everything that had happened. They had a towering respect for each other as team-mates once more after several years at Ford and later Citroën, and, as Sainz recounts, they became better friends than ever in the years before Colin died. It was McRae who first suggested

"By the end of our 1995 season it was tense. Especially after Spain"

to Sainz that he might like to consider doing the Dakar Rally, during one of their many chats.

"In the end, Colin was my best friend in rallying," says Sainz. "Not a day goes by without me thinking of him for some reason or other. But back then, it was a bit different. We were both younger and we both wanted to win. I was actually happy with our 1995 season, but by the end it was a bit tense. Especially after Spain..."

Sweden, the second round of the 1995 season, was a disaster for the entire Subaru team, with all three cars retiring due to engine-related issues. By Portugal in March things were back on track, but it was Sainz who was on the top step of the podium while McRae was third (which was, in reality, only his sixth career podium).

On to the insidious Tour de Corse, and there was not much to choose between them: 25 seconds to be exact, as Sainz finished fourth ahead of McRae in fifth.



McKLEIN/REINHARD KLEIN

The penultimate round of the WRC 1995 was in Spain. To McRae's disbelief, Subaru team orders favoured Sainz

And then it was the longest trip of the year, to New Zealand – and that was the first big turning point of this epic season.

Sainz, who was leading the championship, didn't make the 24-hour journey to the other side of the world as days earlier he had fallen off a mountain bike and broken his shoulder. Maybe it was a little bit more than a mountain bike, if the truth be told, but it couldn't have come at a worse moment. His loss was the gain of the team's junior driver, Richard Burns, drafted in to take Sainz's place after finishing seventh in the Rallye de Portugal. Ultimately it would lead to disappointment, as Burns – another late, lamented champion – retired with a broken engine.

"Ourselves and Colin were at different stages in our careers," remembers Robert Reid, co-driver for Richard Burns. "Out of myself and Richard, I was definitely the one who knew Colin better; at least in the beginning – I'd actually co-driven for Colin in the past, and we were both part of the Scottish 'mafia', which Richard was never sure about. It was interesting to watch the relationship between Colin and Richard evolve though, from Richard being the understudy to a genuine rival. Back in 1995, we were definitely the understudies. We weren't even doing the full world championship, just a handful of events like New Zealand."

There was no real doubt as to who would win Rally New Zealand in 1995. Having taken his very first career WRC win in the land of the long white cloud with the Subaru Legacy two years earlier, then dominating again with the Impreza in 1994, McRae was on an absolute mission to make it a hat-trick.

He duly won 10 of the 33 stages to score maximum points, and it was then that he – along with most of Britain – realised that the championship was a genuine prospect that year. Some people have said that Sainz falling off his bike was the turning point of the season, that things might have perhaps worked out differently had the Spaniard been able to recover slides on two wheels as effectively as he did on four. But that is just not true. New Zealand was a foregone conclusion before Colin's plane had even touched down in Auckland.

> "Few could have predicted how toxic the championship was to become"

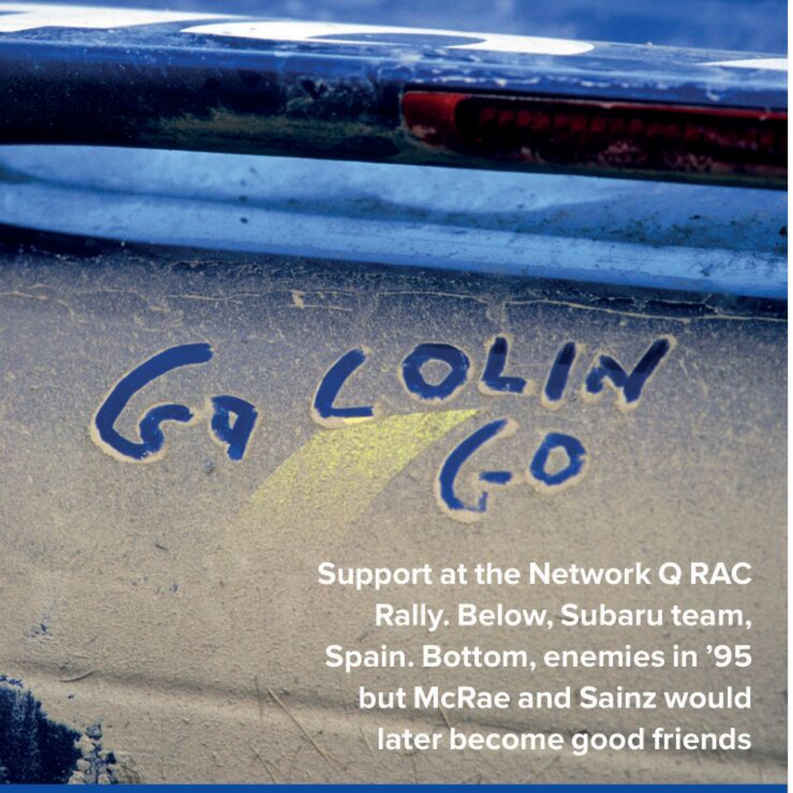
"The real pivotal moment was probably in Australia instead," says Derek Ringer. "New Zealand didn't make much difference as Colin would have won anyway. But in Perth we were involved in a close fight for the win with Kenneth Eriksson in the Mitsubishi, and in the end – although most people think it's not really like him – Colin quite wisely decided to settle for second place and bank the points. I can't claim credit for that or say that I talked him into it: it was Colin's own decision to do that, and I think that was where the tide really began to turn."

It meant he left Australia with a five-point lead over a fully recovered Sainz, with just two rounds of the championship left to go: Spain and Britain. A film director couldn't have staged it better. The scene was set for something epic. But few people could have predicted just how toxic or controversial it was to become.

Sainz, the Matador, swaggered into home territory, an intense, wired man with flashing



And then came the Network Q RAC Rally, with Sainz, pictured here at Tatton Park, and McRae both on 90 points



Support at the Network Q RAC Rally. Below, Subaru team, Spain. Bottom, enemies in '95 but McRae and Sainz would later become good friends





eyes, the worship of an entire nation behind him, and the most ferocious work ethic that has ever been seen in rallying. He would test and prepare until his fingers bled. Above all, he had to win at home, in order to ensure a comfortable margin over McRae before taking on the Scot again at Rally GB, where McRae had won the previous year.

A lot has been said and written about what happened in Spain in 1995. It was a complicated event, made that much more controversial by Toyota's subsequent disqualification for trickery involving a turbo restrictor, and Subaru had decided that its best hope for victory and maximum points lay with Sainz. Team orders were issued to make it happen, but McRae – who was pushing hard for the win – didn't see it that way.

Team members were even dispatched to the stages to slow Colin down, but it was only the threat of an instant sacking that convinced him to settle for second place behind Sainz at the very last gasp. He'd go into the final round of the championship equal on points with his team-mate. But the fallout had been sufficient to terminally damage the relationship between Prodrive and Sainz, who would head off to Ford in 1996.

EVEN THOUGH IT WAS THE Spaniard who had ultimately benefited from this messy situation at home, he was the one who seemed more rattled going into the title decider. And there was no doubt where the loyalty at Prodrive lay.

"In the end, Carlos actually did Colin a favour with everything that happened in Spain," concludes Jimmy McRae. "He wasn't really that upset by it all, but he was extremely determined to go one better on the RAC. It was from that moment on that we all knew he was going to do it. He was just unstoppable. Of course, that's really the part of the season that everybody always remembers now."

One of the best-known journalists currently on the World Rally Championship is David Evans, who has covered the series for nearly 20 years. Back in 1995 he was at university in Staffordshire, and with his dad Derek they chased around the countryside in Derek's Vauxhall Calibra – which had been tuned by none other than Vauxhall ace Dave Metcalfe's company – to witness McRae's moment of glory.

Their adventure had started several weeks earlier with the arrival of the official 'rally ▶



Winter wonderland at the Swedish Rally. This was round two of the 1995 WRC but neither McRae nor Sainz finished

McKLEIN, GETTY IMAGES



Hill vs Schumacher made gripping viewing in '95. Below, Johnny Herbert, home-win hero at Silverstone

That was the year that was...

Colin McRae's landmark WRC success wasn't the only significant talking point in 1995

CULTURALLY AND POLITICALLY, this was a time of a change in a world that was about to have its horizons broadened by something called 'the internet', whatever that might be...

In Britain, the Labour Party was starting to rebuild momentum under the stewardship of Tony Blair, *right*, seeking to wrest governance from the Tories for the first time since 1979. And the UK became a focal point for the music industry as Britpop approached its zenith, Blur and Oasis making their way from the arts section to the front of newspapers. Despite having been formed in Sheffield towards the end of the 1970s, Pulp managed to tag along with this new movement, and charismatic frontman Jarvis Cocker, *below*, became a star in his thirties.

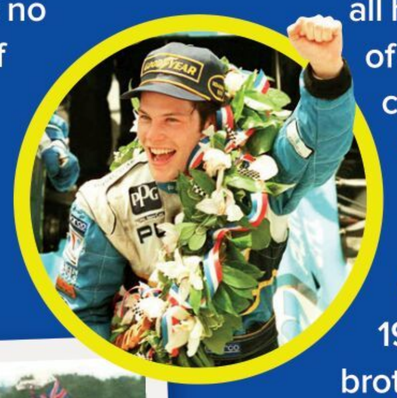


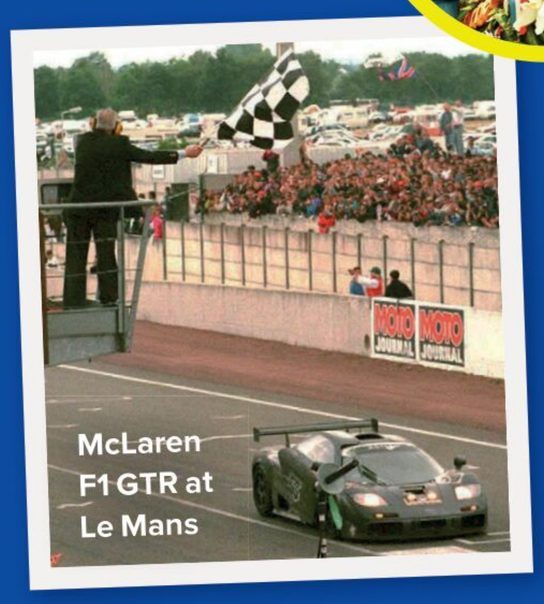
A couple of years his senior, Damon Hill was likewise liable to be headline news as he and Michael Schumacher – both now armed with Renault's potent V10 – renewed Formula 1 hostilities in the slipstream of their oft-fractious title battle the previous season.

Adrian Newey's Williams FW17 was perhaps a more efficient proposition than Benetton's B195, but Schumacher was able to compensate effectively with his customary blend of force and guile. When the pair collided at Silverstone and Monza, however, the finger of blame pointed at Hill. On both occasions, Schumacher's team-mate Johnny Herbert was on hand to pick up the pieces and record his first two grand prix victories. David Coulthard (Williams) also became a maiden grand prix winner, in Portugal, while Jean Alesi (Ferrari) scored what was to be his sole F1 triumph after transmission trouble hobbled leader Schumacher in Montreal.

Four years earlier Herbert had shared an unexpected victory in the Le Mans 24 Hours, he, Bertrand Gachot and Volker Weidler guiding their Mazda to victory. The 1995 race also produced a turn-up – not least because Gordon Murray's McLaren was never designed with racing in mind. There were seven F1 GTRs on the grid when the car made its Le Mans debut. The sports prototypes were significantly faster, but also more fragile – and the McLaren of JJ Lehto, Yannick Dalmas and Masanori Sekiya worked its way to the front, the Finn lapping up to half a minute faster than rivals. Mazda's victory had been the first in the event for a Japanese manufacturer; Sekiya's was the first for a Japanese driver.

In America, this was the final campaign before the CART/Indy Racing League split that diluted open-wheeler combat for a number of years. Jacques Villeneuve's victory, *below*, in the Indianapolis 500 was no surprise. It was one of four wins that made him that season's champion, his final act before decamping to F1 – but the manner of its execution was remarkable.





McLaren F1 GTR at Le Mans

The Canadian had been handed a two-lap penalty for passing the pace car during a full-course caution, but clawed his way back into contention thanks to a combination of astute strategy and good fortune. He finished second on the road to Scott Goodyear, but the latter was demoted for the same offence that had previously compromised Villeneuve...

While Colin McRae's WRC exploits had made him a household name – and transformed Subaru into a cult brand – his younger brother Alister was carving a reputation all his own. At the wheel of a Nissan Sunny GTi, co-driven by David Senior, the younger McRae emulated father Jimmy (five times a winner in the 1980s) and his older brother (crowned in 1991 and 1992) by taking the British Rally Championship title.

At the campaign's end he switched to a Ford Escort Cosworth for the RAC Rally and, with Chris Wood alongside, finished fourth, behind the Subarus of Colin, Sainz and Burns. A fine performance, but the eyes of the world were focused firmly elsewhere.

GRAND PRIX PHOTO, GETTY IMAGES

pack': a folder that contained a comprehensive set of maps and instructions to help spectators plan their odyssey. Because that's what it was back then: a high-speed tour that criss-crossed the country, whether you were competing or just watching. Of course this was before internet, rally radio, satnavs or smartphones, which made planning the whole trip and possession of a decent map indispensable.

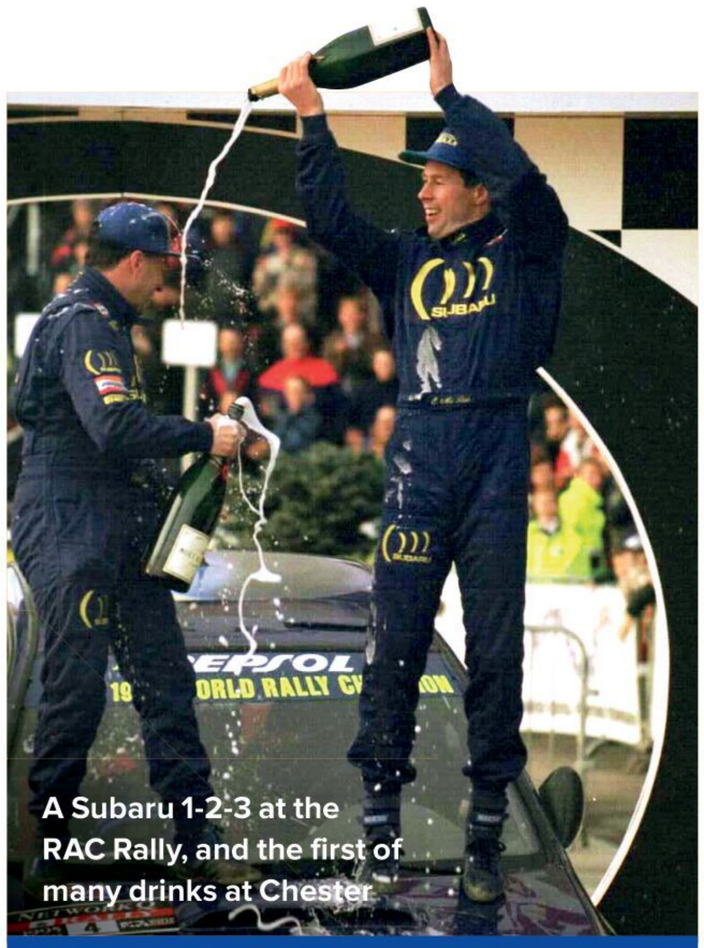
Those without were stuck, and that's why when a bunch of scruffy Scottish lads in a battered Peugeot asked if they could follow the Evans father and son duo, they were only too happy to help. The same arrangement persisted for the following day, and in conversation it turned out they were friends of Colin. Of course, everyone was a friend of Colin's that year, so David and Derek didn't take it too seriously - right up to the point where their new acquaintances trooped into Colin's motorhome at service, stuck their heads out of the door, and indicated to David and Derek: "Are yous coming or what?"

For David, who at that point was writing rally reports covering gentleman drivers for his local newspaper, it was something of an overwhelming experience. But it crowned a magical weekend, when in spite of a puncture and a myriad other little problems, Colin triumphed. "We all just knew it was going to happen; it could never be otherwise," David remembers. "It was total self-belief."

Sainz knew it too. "I realised quite soon that we didn't have much of a chance. We were pushing, but no chance of a win," says the Spaniard. "I don't remember how I felt at the time, but now, I'm very happy that Colin won. It was good for him, for his family, and the whole sport."

PERHAPS THREE PEOPLE WHO HAD the best grandstand views of that historic day were Richard Burns and Robert Reid - who finished third in another factory Subaru, albeit more than six minutes behind, and Colin's brother Alister, who was fourth in a Ford Escort Cosworth hired from Malcolm Wilson.

"At the time, we didn't really take it in," says Reid. "We were there with a job to do, which was to represent the team and score as many points as possible. So we probably didn't appreciate the full scale of Colin's achievement at the time. It's only when you look back at it that you see how important it was. And you definitely have a different perspective when you look at it now as a piece of rally history, compared to seeing it as a competitor. But I remember that we all went out that evening in Chester and we were pleased for him - we really were - and not just because we were team-mates."



A Subaru 1-2-3 at the RAC Rally, and the first of many drinks at Chester



"It was the culmination of everything we had worked towards"



McKLEIN, SHUTTERSTOCK

Details of what went on that evening are hazy: and it's probably best for it to remain that way. Literally, nobody can remember what happened then - nor for much of the following day.

But plenty is recorded for posterity: Alister McRae's fourth place, for instance. "You could say that Alister was the forgotten man on that rally!" jokes Jimmy McRae. "That was an absolutely fantastic drive from him and he actually won the British championship that year, but obviously all eyes were on Colin. And that's understandable because it was an incredible thing; the youngest-ever world champion. It took a few days for it to sink in, also because there was so much media and stuff going on for a long time afterwards."

One of the journalists helping to create that buzz was Jerry Williams, writing for the *Daily Mail*. The day after McRae won the title - November 23 (a Thursday, rallies didn't always happen at weekends back then) - the Scot occupied a good chunk of column inches in every Fleet Street paper. "It was massive news," remembers Williams. "At the time, rallying was a sport that made proper headlines: everyone knew who Colin McRae was by the time the RAC came round. So when you look back at it, you could say that Colin's success meant even more back then than it does now, because there's never been anything like the same amount of attention paid to the sport since."

But as the years go on, more photographs fall out of that mental album and the captions fade. For many people, what happened in 1995 was another era. What we see now is a completely different sport.

These days, Derek Ringer is taking life easy, in his own words, in a small village in northern Spain, having completely stayed out of the World Rally Championship since completing McRae's last full season in 2003 (with Citroën) and returning for a couple of outings with American daredevil Travis Pastrana in 2008.

"I enjoyed the moment," he says simply. "I think we enjoyed the moment enormously. It was a very special achievement and the culmination of everything we had been working towards. There's no reason why Colin couldn't have gone on and won several more championships after then, but it turned out to be just that one, which I feel privileged to have been a part of. If it had been many more championships, would it have felt more special? I really don't think so. In the end, it's only your body that tells you it was so long ago. The rest feels like yesterday."

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LAST FRACTION HEROES

Grand prix cars became faster than ever last season, but who really excelled in finding this ultimate performance? **Mark Hughes** crunches the numbers to find out

GETTY IMAGES

ALTHOUGH F1'S COMPETITIVE order has been rather more static than ideal over the last few seasons of Mercedes domination, there have been significant changes within the pack. Here, we look specifically at the losses and gains made by each team last season compared to 2019 – and the technical reasons driving those changes.

In the accompanying data the comparisons are taken from the seven tracks which overlap between the two seasons and at which the same tyre compounds were used in both years. On this basis, seven of the 10 teams were faster in 2020 than in '19. The three which were slower were all Ferrari-powered, thereby highlighting perhaps the biggest story of last season: the swingeing performance penalty imposed upon the Ferrari power unit by the FIA's technical directives.

Ferrari lost 0.65sec-worth of lap time and this was a very significant part of why Mercedes increased its advantage over the next-fastest from 0.15 to 0.7sec. But not the only one. Even referencing only itself, Mercedes made big gains with the W11. On the seven tracks at which comparison is possible, it was 0.44sec faster than its predecessor – and that gap is understated because, for the Merc at least, the Barcelona track was slower in the searing summer heat of the 2020 event than in the early spring of the 2019 race. Mercedes was even less able than usual to keep the softest tyre from overheating before the end of the qualifying laps.

So Merc continued to advance even as Ferrari was brought up short – and the effect was further amplified by the struggles of Red Bull in adopting a different aerodynamic philosophy, one which proved littered with booby traps. Ferrari's sudden descent ensured Red Bull was the second-fastest, but it was



Mercedes' advantage over its main rivals increased, largely due to restrictions for Ferrari, which knocked the Scuderia for six during 2020

significantly further adrift of Mercedes than in ’19 and its advantage over its own junior team (AlphaTauri, formerly known as Toro Rosso) shrank from 1.2 to 0.7sec in 2020.

Racing Point, in abandoning the technical philosophy it had followed for the previous three years and instead simply copying the 2019 Mercedes W10, vaulted from the seventh-fastest car in 2019 to the third-fastest in 2020, with an average gain on these tracks of 1.3sec, by far the biggest jump in the field and leapfrogging it (on raw performance at least) past Renault and McLaren despite their improvements. McLaren’s stronger driver pairing – rather than raw pace – is what ultimately allowed it to pip Racing Point to third in the constructors’ championship.

Williams, with the same basic architecture as its disastrous 2019 car, achieved much more respectable performance in 2020 and was faster at all seven tracks and by an average of 1.1sec. This putting it marginally ahead of the two Ferrari-powered customer teams Haas and Alfa Romeo, albeit with the help of a power advantage over them in the order of 65bhp.

Here we take a closer look at the technical points driving these performances.

Mercedes rear suspension – the Hamilton-driven tweak

For the three seasons after the introduction of the wide-body 2017 regulations Lewis Hamilton was insisting that the long-wheelbase, low-rake Mercedes, while delivering great downforce, did not give him the slow-corner alacrity he sought. If they could just give him a car which, in addition to that downforce in fast corners, could be aggressively pointed into slow corners without upsetting the rear, a car which could rotate early into the corner – then he’d find even more lap time from himself. Not only in raw qualifying speed, but in tyre usage in the race.

“I’ve always preferred a more positive front end in the car,” he explains. “But there’s a limitation with these tyres. The front has a limitation, the rear has a limitation, grip wise. There’s saturation, there’s thermal deg and there’s only a certain amount you can do with the mechanical balance before it affects the other end. It’s like a see-saw. [In 2019] our car was definitely very, very strong at the rear and the car was generally driven by the rear end and the front was a lot more understeery. So you struggled a lot more when you went over the tyre and no matter how much we put the mechanical rearwards it wouldn’t really fix it.

“You can develop a set-up, but the tyres have a huge amount of time in them and how do you get all the potential out of them on a single lap but also in a long run? There are things the car does... both in set-up but also in the aero package [which determines] how you can look after the tyres.

“I applied a lot of pressure on the team in terms of where I want the aero balance. I have had them shift that since 2014. We have been shifting it bit by bit. The team will have a simulation that will tell you what the best car is, but it can’t do what I can do, and it doesn’t have that feeling.”

Having reached an apparent limit in generating rear downforce to support Hamilton’s preferred late and aggressive turn in, Mercedes thought out of the box in trying to accommodate what its lead driver was pushing for. The solution was radical – and a big engineering challenge. The rear lower wishbone would be fed not into the gearbox casing, as normal, but into the crash structure behind it. This would allow the whole rear suspension to be swept much further back, creating a big volume of airflow-enhancing space which could be used to increase the draw upon the diffuser, thereby increasing downforce, particularly at the rear end at low car speeds. It wasn’t an easy change – nor was it without risk.

> “I won’t say how much time it was worth... enough to have us testing last-minute”

“I’m not going to reveal how much lap time it was worth,” says technical director James Allison, “but enough for us still to be trying crash tests right at the 11th hour. Putting the wishbone where we put it meant the aft-most element is on the crash structure and that means [in the crash test] you need to have done all the stopping on the crash structure before you hit the hard point of that suspension link because that would definitely trigger you above the peak *g*. That means you have less space to stop it, so the crash has to be pretty much perfect. The crash has to jump instantly to the peak *g* the test permits and then it has to skirt along just below the peak *g* for the full length of the travel – so it’s like an almost perfect deceleration in order to fit in the space.

“But the crash test was only part of the structural difficulty. The [forward] wishbone legs go into the gearbox in places where the gearbox is not naturally strong so the ’box structure needed to be beefed up quite a lot to cope with the sub-optimal pickup point locations to make sure we got at the far side of it a nice driving characteristic that matched up with the behaviours we’ve had in the past.”

“Yeah, with the aero balance more rearwards the car was shifting different and also at different steering angles and different yaw – so it is definitely working a lot better,” smiles Hamilton.

Tech directives and their effect on Ferrari

Technical directives regarding fuel flow were introduced at Austin 2019, which specifically prohibited an interpretation rivals feared Ferrari may have been making to get around the power-defining maximum permitted flow. Ferrari’s under-declaring of its fuel level in Abu Dhabi 2019 could in theory have been a way of getting around the restrictions. The FIA



A daring rear suspension change for Mercedes helped Hamilton unlock even more pace. Mercedes rear wishbone link now mounts to crash structure

GETTY IMAGES, DPPI

investigated Ferrari's 2019 power unit after the season ended and in addition to the second FIA fuel-flow sensor that had already been regulated, issued further technical directives. These concerned ways of measuring adherence to the fuel flow, oil burn and electrical power distribution. The combined effect of all this lost Ferrari in the region of 65bhp, taking it from the most powerful engine in 2019 to the least powerful in 2020. Concurrently Mercedes found around 25bhp. So Ferrari went from around 25bhp ahead of Mercedes in 2019 to 65bhp behind in 2020.

The power reduction wasn't the sole cause of Ferrari being around 0.65sec slower than the year before, but it was the root one. The SF1000 differed from the 2019 car mainly in its sidepod design, with a total repackaging of components beneath the rear bodywork to enhance the car's downforce, even at the usual expense of extra induced drag. Which would have been fine for the 2019 power levels, but was considerably too far biased towards downforce for the lower power of the 2020 power unit. So it had an inappropriate aero concept for the power it was actually obliged to run with.

Each track has a different lap time sensitivity to power and the teams calculate these. The straight loss of 65bhp on the seven tracks considered here would be expected to slow the car by an average of around 1.3sec. But the Ferrari was slower by only half that amount of time - confirming the team's claims that it did have significantly higher downforce levels than the 2019 car.

Ferrari-powered Alfa Romeo did not significantly change the concept of its car into 2020 - and had almost certainly not been running the 2019 engine in a way that Ferrari was suspected of doing. Hence there is less performance loss between the two seasons (0.25 rather than 0.65sec). The Ferrari-powered 2020 Haas was starved of any development parts and hence its loss of performance from '19 was considerable (at 0.62sec).

Aero booby traps at Red Bull

Red Bull switched from its traditional wide nose to the narrow-nose concept, which Mercedes has been using for years. It went to a lot of trouble to completely re-engineer the front of the car to minimise the nose width to an extreme degree, moving the steering gear and reservoirs behind the suspension. Since the 2019 restrictions on the permitted number of under-wing guide vanes, the narrow nose has probably been better in allowing the fashionable under-nose cape to turn the airflow to the barge boards. It enables the turning process to begin earlier and therefore with less risk of detachment. This will then allow the barge boards to do a better job in creating the vortices which are then used to accelerate the speed of the underfloor airflow (and thereby increase the downforce). But there are some perils attached, as Red Bull's engineering chief Paul Monaghan explains. "The cape will produce a vortex, which, if you can work with it and keep it away from other vortices nearby, you can utilise to your advantage... If you can't keep the vortices apart, or they become blended together, or worse, burst, then it is to your detriment."

> "If you can't keep your vortices apart and they blend, or burst, then it's trouble"

The implication is that the nose was so narrow that there was difficulty in keeping the vortices of each side from interfering with one another, thereby reducing the effectiveness and consistency of the barge boards' contribution to the underfloor performance. This was particularly the case at low speeds - and frequently the car would ▶

DPPI, GETTY IMAGES



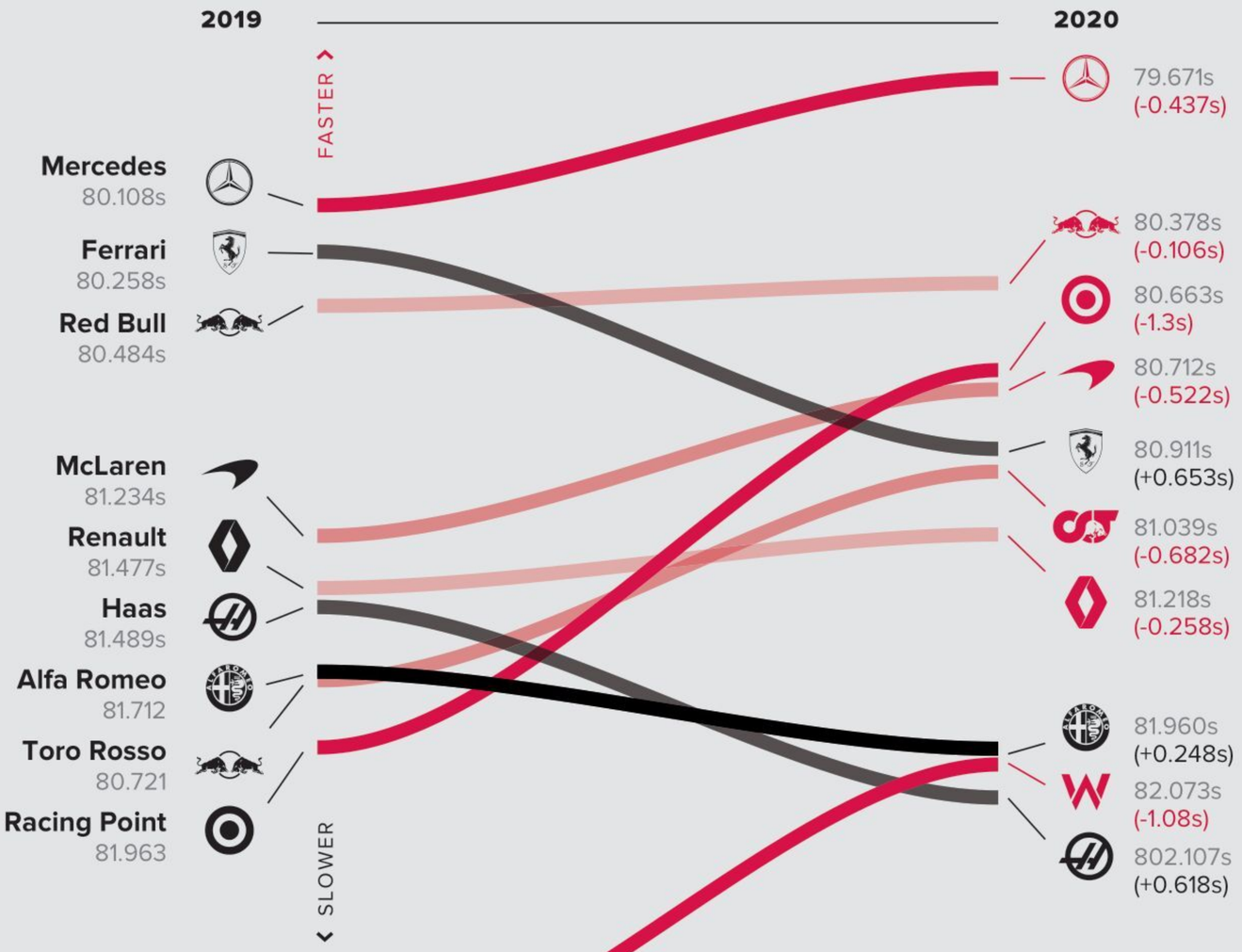
Red Bull switched tack to a narrow-nose, but had some challenges

New FIA tech directives for 2020 cost Ferrari a total of 65bhp, plunging it down the order

Tracking Formula 1's pace setters

Seven out of the 10 grand prix teams made steps forward in pace during 2020. Here, using data recorded from the seven circuits that offered direct comparisons between 2019 and 2020, we reveal exactly how much change each team experienced. While Mercedes was well clear in the pecking order, its rate of advancement was comparatively small up against some of the midfield teams, which found big strides.

AVERAGE LAPTIME DIFFERENCE



LAPTIME DIFFERENCE PER TRACK
2019 TO 2020

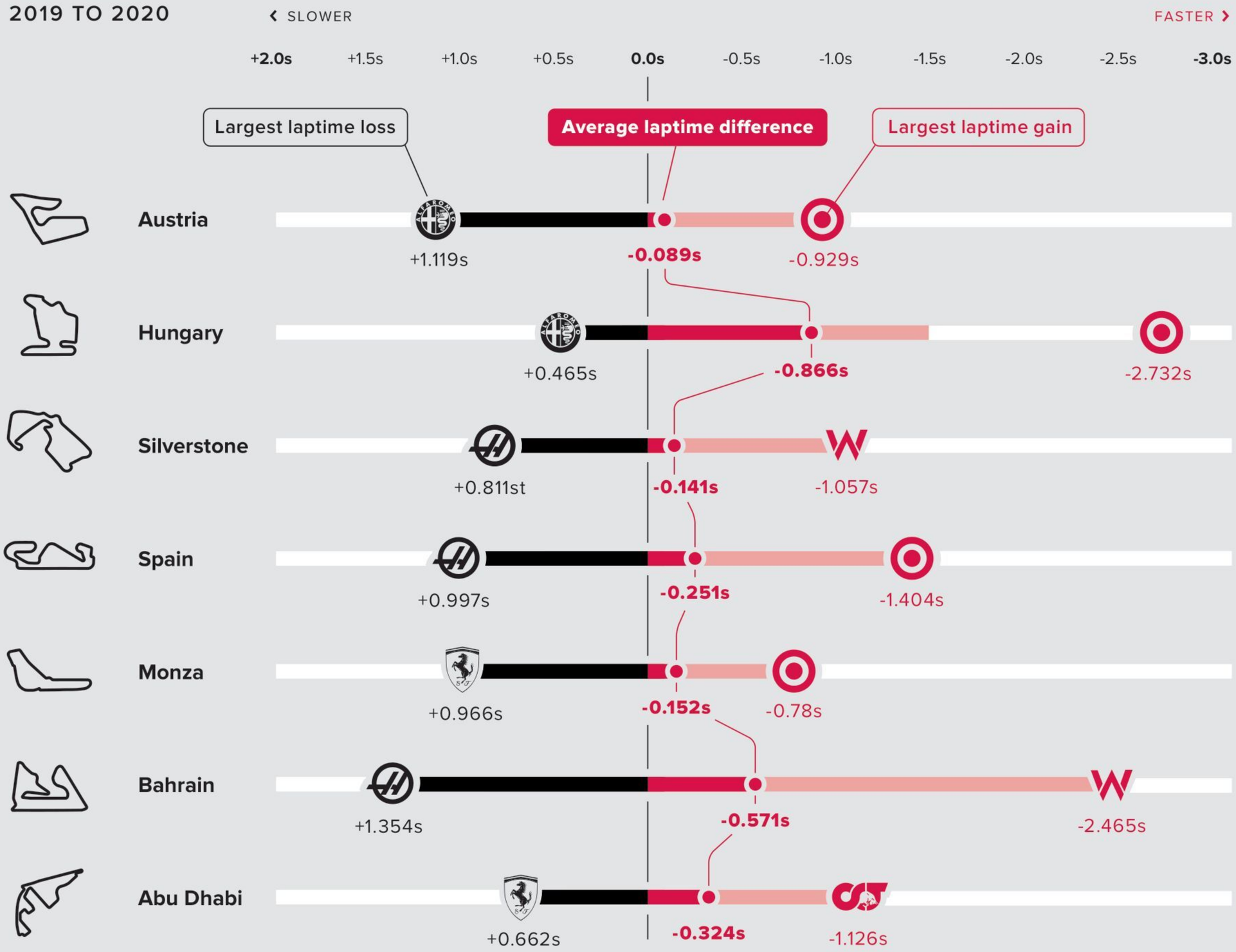


ILLUSTRATION: MADE FROM DATA



The 'Pink Mercedes' proved a revelation for Racing Point

spin in such corners, even when the setup gave an understeering trait in fast corners. The car was developed more than any other through the season and by the last two races was extremely competitive. But it had taken all season to get it there and Mercedes had switched off its development in September.

By contrast, the Red Bull junior team AlphaTauri stuck with the old wide-nose concept - together with a more inboard-loaded front wing - and reaped the benefits. The car showed great improvement over its quite similar predecessor and the gap between Red Bull and the junior team was halved. Technical director Jody Eggington explains: "The front wing just kept delivering development gains for us all down the car. We just kept taking the gains and re-optimising. So we'd do a new endplate, a new flap, new mainplane etc, just kept chipping away at it. The gradients in the tunnel were nice but nothing that got us fantastically excited, just little and often. That seems to work quite well for us."

Evolution vs copying

"The planning stage for the 2020 car was the first time since the new regs in 2017 where we could actually afford to do a different car rather than just tweak what we already had," says Racing Point's tech director Andy Green. In what was set to be the final year of these regulations before the all-new aero regs came into force, Green - tired of hearing the same driver complaints of the car for three straight seasons - decided to take the gamble of abandoning the old concept and going full-on Mercedes copy, given that the team was already taking the whole rear end from Mercedes. The 2020 Racing Point RP20 was visually almost identical to the 2019 Mercedes W10.

But just taking on another team's design creates all sorts of missing understanding, as Mercedes' James Allison explains: "One of the things that perhaps Racing Point deserves more credit for is a) the courage that they showed in doing it and b) the competence with which they've done it, because they've done a good job in making that leap."

Green talked pre-season about the process of understanding the low-rake Mercedes. "We started looking at different attitude in CFD to understand where you're losing compared to a high-rake car, and where you can gain, because it's a trade in the two. And from that, let's try to understand what they've been doing with it... the first thing you understand is: 'crikey, we've got no front load on the car. We've taken a pinch out of the car, and suddenly we've lost 40 points of front load that needs recovering'. You start to move in that direction. You start developing your front wing and start looking at how has Mercedes got round this big reduction in front load. We looked at their front wing, at the way their flow structures pass over and around the front wing. And it was very different from the way that we had done it in the past, with the strake arrangement now in front of the front tyres." The process of understanding gradually moved down the car from there.

> "We made big, bold decisions early and gave the design team strict constraints"

The gains were spectacular, in that the team found 1.3sec over its 2019 car at these seven tracks. But comparing the 2020 Racing Point average with that of the ostensibly very similar 2019 Mercedes, it can be seen that the pink car trails the silver one by an average of 0.55sec. How much of that is down to driver differences, how much to team knowledge and how much to random factors is an unknown. But some combination of the three.

How Williams progressed

Emphasising the point made by AlphaTauri, Williams found a lot of performance (1.1sec) between 2019 and '20, despite an ostensibly very similar-looking car.

Chief engineer Adam Carter explains what was behind this: "Fundamentally the core architecture of the car was not the problem. So we held on to that so we could maximise the resource investment into the areas that we thought were our performance opportunities, our true hotspots.

"Having the architecture locked down earlier allowed us to do a lot more design iterations, and then we had a healthy development rate in the tunnel. So more design loops, more structural efficiency loops, packaging detail, etc. If you look at the FW43's packaging underbody, the car is exceptionally clean; all the underbody aerodynamics, the packaging detail on it, the wishbone structural efficiency, the detailing around the front uprights, etc. The guys and girls in the design team have done an absolutely exceptional job there and that also comes from making big, bold decisions early and giving them known constraints to work in and then let them go at it and get it into that. Also, if you get the detail right at design level, you get the detail then delivered at manufacturing as well."



Same basic architecture, far better execution. Williams made huge gains over its disappointing 2019 car

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A new chapter begins

While their British GT debut didn't go to plan, Jenson Button and Chris Buncombe are only just starting to write their own story of team ownership. **Robert Ladbrook** caught up with them













Clockwise from left, Jenson Button's dad John raced the 'Colorado Beetle' in rallycross; Jonathan Buncombe's Equipe Esso Ford Capri leads a line of saloon cars, Silverstone, 1979; Chris Buncombe in the 4 Hours of Sepang, 2019; Jenson in karts, 1996. Inset, with dad, Montreal, 2005

A DECADE IS A LONG TIME TO wait for a 14th place at Silverstone. Especially if you're a Formula 1 world champion and have a Le Mans 24 Hours class winner alongside you.

In truth, Jenson Button and Chris Buncombe's British GT Championship debut back in November was a letdown in terms of result - the pair largely held back by a tired McLaren and a lack of any serious testing before the three-hour Silverstone 500 event.

But what it lacked in terms of silverware it more than made up for in terms of personal enjoyment for the firm friends.

"We've waited a long time for this," says Button before sliding into the McLaren 720S GT3 for the race. "We know we're off the pace, and we don't like to be because as a racing driver you want to be competitive and fighting at the front in everything you do, but it's a special weekend regardless."

Buncombe - part of the 2007 Le Mans LMP2-winning Binnie Motorsport team - smiles: "How many years have we been talking about doing this? I've lost count!"

It's been a while since Button has enjoyed a race in the same way he enjoyed the Silverstone 500. This one wasn't purely about pace, performance and perfection. This was about pride, friendship and family heritage. This was the first time Button had raced a car under his own banner, and the first time he's entered a circuit race alongside best buddy Buncombe, and the first time he's raced anything with 'Rocket' on it since his karting days alongside his father, John.

The story of the formation of Jenson Team Rocket RJN is threefold, bringing together a trio of competitors who all went their own ways, but who the racing gods have seen fit to converge again.

Let's start with that Rocket part, which goes back beyond both Jenson and Chris, to their fathers, John Button and Jonathan Buncombe, who both worked together at John's VW-Audi dealership in Trowbridge, Wiltshire. And they both raced, too, with John proving himself a star in rallycross - runner-up in the 1976 British Rallycross Championship - while Jonathan headed to tin-tops, winning the 1971 Special Saloons title. That success raises a bone of contention between the two these days.

Buncombe: "Originally our dads knew each other as late teenagers when they both worked in the same car dealership, then they lost contact. My dad went off to race touring cars, and John went off to take part in rallycross; Jenson did karts, and I went to ride motorbikes."

Button: "See, my dad never won the British championship, and yours did. Mine *only* finished second, and yours won. I was always jealous of that..."

And then along came these two. When Jenson was old enough, John gave up his racing career and instead supported his son through karting. So much so that he founded his own team, Rocket Motorsport. Jenson

"The saying was you had a Rocket engine, or got beaten by one"

DPPI, JAKOB EBREY, MIKE DIXON, GETTY IMAGES, THE MIKE HAYWARD COLLECTION



Done for in the dunes?

How Button and Buncombe's Baja adventure ended early, and in the worst possible place



It seemed like such a thoughtful birthday present, but when Button and Buncombe finally did set off for their 1000km all-terrain adventure on the Baja back in November 2019, not all went to plan.

Button and Buncombe were joined by navigator Terry Madden – an ex-military man and well known in the off-roading world – and it was a good thing too, when their truck's differential failed.

"The Baja was tough, but we got a great story out of it at least," says Button. "We ended up spending 17 hours stuck in the desert. We got 260 miles in and broke the diff, so it was game over. But it left us stuck in the mountains in Baja, where normal cars couldn't get to us, so the teams couldn't get to us and we were there for 17 hours. Stuck. Going nowhere.

"Fortunately we'd packed a lot of energy bars and water. Terry made a fire and we all just sat around it during the night as the temperature dropped to near zero. When it eventually got too cold we'd jump in the truck, start it up and be warming our hands on the engine and exhaust.

"We'd also lost communication as we'd broken the aerial so we couldn't get in touch with anybody and the satellite radio wasn't really working that well, but eventually we got through to somebody and they arranged for a helicopter to come and pick us up. It's not an event we'll forget very soon. It was mad, and quite an experience."

won the 1991 British Cadet Championship with a Rocket-tuned engine and then went off to Europe, leaving Rocket to win a total of 11 British junior championships before John called time on it after deciding to travel the world with Jenson after his graduation to Formula 1.

"Karting is where all this actually started," says Jenson. "A lot of drivers of a certain vintage will know Rocket Motorsport from the karting days, because the old saying was that most either had one of the Rocket engines or got beaten by one!

"It's really nice to be able to bring the Rocket name back – it feels like keeping a bit of family tradition going. When I got into F1, Dad wanted to travel around with me so he couldn't carry on the business. From 2000 until last year really Rocket Motorsport didn't exist. A lot of drivers like seeing it back and some have commented to me that it reminds them of their karting days and stirs up old memories, so it's a nice thing to do."

The second element is Button and Buncombe. We all know about Jenson. Formula Ford Festival winner, did some other stuff, won an F1 title for the ultimate underdog team, etc, etc. But the foundations


Chris grew up with Jenson, and raced for his father's kart team

for this particular project were actually laid during that magical 2009 world championship season. More on that later...

With Jenson in the Formula 1 bubble, Buncombe forged his career in both touring cars and sports cars, after some formative steps in single-seaters.

Buncombe: "I started off in motocross, but that got pretty dangerous pretty quickly, so I went and raced for Rocket in karting."

Button: "In that old octagonal awning... I remember it leaked everywhere."

Buncombe: "That's the one! You were already well established in karting when I started, but we reconnected through that and took it from there. I did some Formula Vauxhall and Renault, and then joined the Nissan Motorsport Europe team to race its Primera touring car in 1999. That's where I first met Bob."

And so we come to perhaps the most important strand in the Jenson Team Rocket RJN union – Bob Neville. "Everything goes through Bob," says Button. "We'd be nowhere without Bob." Bob – or Robert James Neville – is 'Mr Nissan' in European racing circles, and has been for over two decades. He looked after the touring car programme that ran Chris, the factory GT programme that ran Chris's brother Alex Buncombe, and when Nissan stopped factory racing he founded RJN Motorsport in 2000 to carry on racing Nissans, and has been the brand's go-to guy ever since.

However, when Nissan eventually did decide to pull the plug on all its factory programmes with the successful GT-R GT3 in order to redirect its attention on Formula E at the end of 2018, RJN needed a new direction.

Cue Button and Buncombe, and that 2009 world championship.

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With Jenson firmly in the title hunt with Brawn GP, Chris decided to mix his Aston Martin sports car programme with trips to support his friend. He attended 15 grands prix with Button that year, and began a hospitality business off the back of it.

"We always used to say, 'Wouldn't it be great to get something and do something between us,'" says Buncombe. "We spoke about it all the time, and quite seriously, but back then we were all so busy we'd never have the chance to share something and have a bit of fun. Well, a decade later and that's exactly what we're doing!"

When Jenson called time on his F1 career in 2017, he could take his pick of opportunities, and was determined to try as many different disciplines as possible in order to rekindle his love of racing outside of the restrictive world of F1.

He did a Japanese Super GT season with Honda – and won the 2017 championship alongside Naoki Yamamoto in an NSX-GT – and did his first Le Mans with Russian LMP1 squad SMP Racing.

And then he turned his attentions off-road, buying a Brenthel Industries 6100 Trophy Truck and entering it into the gruelling Baja 1000 for Chris's 40th birthday present (*see sidebar, previous page*).



But for 2020, there wasn't much on the table. So all three factions decided to gather round and serve something up.

"I was chatting to Bob, who was looking at new directions and needing a new manufacturer relationship," says Buncombe. "At that time Jenson was racing in Japan with Honda, but that was winding down, so we all got round a table and put our heads together and this was the result. We all wanted to figure out our own new chapters, and RJN has a great, diverse history of racing in GTs, touring cars, Dakar... so it just all fits well with everything we want to do."

Jenson Team Rocket RJN was born. A hat-tip to John Button's karting team that helped both Jenson and Chris get a career foothold, and a new direction for RJN.

Button adds: "Originally we were going to run a Honda. But we wanted to try the McLaren and we wanted to work with them, so I called and we did a deal. It wasn't like we were just handed the car or anything. It kind of works with my McLaren past, but it certainly wasn't fully built on that."

First thing for the team was to add a fourth strand to the union in the form of a partnership with the World's Fastest Gamer, the digital talent search run by Darren Cox – the man who also founded Nissan's GT Academy programme aiming to give gamers a taste of real-life racing with... you guessed it... RJN-run race programmes.

The winner of WFG, James Baldwin, was the team's first confirmed driver for its new McLaren, alongside Michael O'Brien. They were due to run in the GT World Challenge Europe, but the pandemic led to a change of plans and a move into British GT for 2020. And that's what brings us here.

"Why should those two have all the fun?" jokes Jenson. "We had the team here already, why shouldn't we race ourselves, like we always wanted to?"

Button borrowed the second McLaren for Silverstone. But the only one left in the workshop was the development mule, which has conducted tens of thousands of miles of ▸

"Why shouldn't we race a car ourselves, like we always wanted?"

JAKOB EBREY

Jenson Team Rocket RJN competed with McLaren 720S GT3s in 2020. Above, Button and Buncombe struggled at Silverstone last November

testing during its lifetime and also lacked some of the more modern upgrade parts found on the sister car.

A suspension problem led to wayward handling at high speed and limited Button and Buncombe to 17th on the grid after qualifying. The team identified the issue and changed the dampers in time for Sunday, and the pair fared better – rising to 14th at the flag – but even then still had their issues.

"The car was definitely better after the suspension changes, but what we got back through high speed we lost in low speed," says Button. "I think we also had a clutch issue as we had problems downshifting from third to second, and the car was also trying to crawl in the pitstops, even with the clutch pedal fully depressed. The result could have been better for us, but that doesn't mean we didn't enjoy it.

"I definitely want to race GT3 again, but we'd just need to have more testing beforehand next time, and it's been great to be back in a British championship again. My last British championship round was Formula 3 back in 1999! I couldn't believe how professional everything has become. In Super GT it's like going karting. The paddock is tatty, the trucks are 20 years old and there's no hospitality. Here there's beautiful trucks, big teams, great cars and everything just feels right.

"From the moment I walked into the paddock, I've felt at home. I've seen so many faces from the old days, people like Rob Bell and Charlie Hollings, both of whom I raced against in karting. And Richard Williams, who is a great friend to both Chris and myself. We've talked about one day all three of us sharing a car in the Spa 24 Hours. It hasn't happened yet, but it certainly could."

"My last British championship round was Formula 3 back in 1999"

So, after the slightly underwhelming opening chapter for Button and Buncombe's GT3 career, what more adventures does the story hold?

Well, this year there will be a DTM entry (drivers unconfirmed at the time of going to press) and the likelihood of that planned GT World Challenge Europe programme, virus permitting, and perhaps even more British GT racing as the team chases its ultimate goal of heading to Le Mans.

Then, building on his off-roading experience, Button has also taken up a spot in the Extreme E field. He will handle one of the all-electric buggies for his own JBXE team, becoming the third F1 world champion to lend his name to a team, following Lewis Hamilton and Nico Rosberg.

Plus Button will be back on the F1 trail as a pundit for Sky and in his new role as a senior advisor to the Williams team.

"It's always hard to head into a new championship and be competitive against the regulars, regardless of who you are or what you've done before, and British GT is very tough," adds Button. "But we're definitely keen to give it another go."



Debriefing the champ

It's been quite a debut season for James Baldwin, and it even ended with him giving Button tips



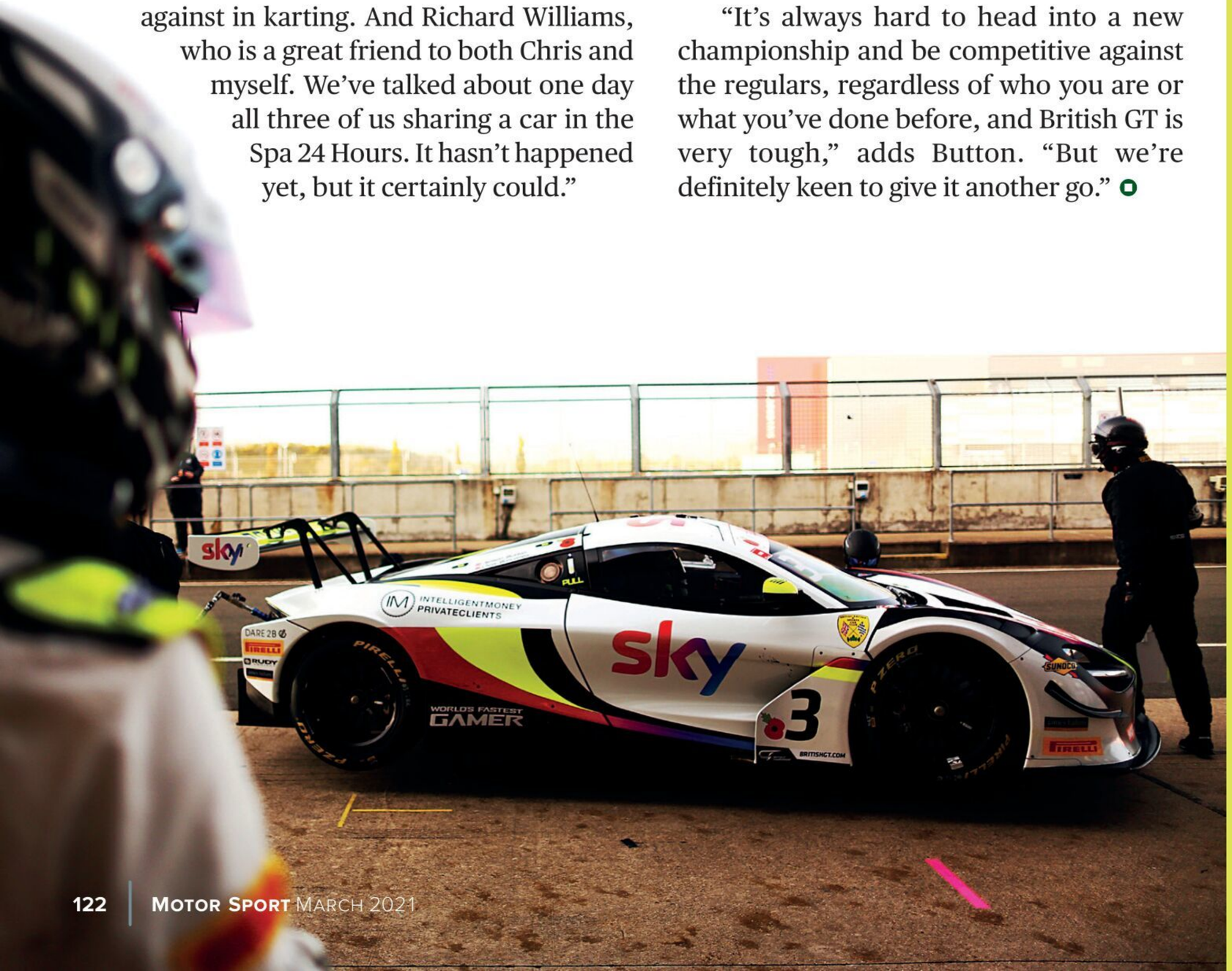
The look on James Baldwin's face said it all as he exited the Jenson Team Rocket RJN truck after qualifying. He had that cloudiness to his expression that suggested something surreal had just happened. And it had. For, at the final race of his maiden GT3 season, he'd just debriefed a Formula 1 world champion.

"Silverstone was just surreal," he says. "We shared all the data between the cars and debriefed together. So on one side there's Michael and I, and across the table is Jenson Button, and he's asking me questions – like, 'Where are you braking for that turn? And how hard are you braking?' I'm just sat there thinking, 'But you're Jenson Button... what in the world can I possibly tell you?' It was one of those pinch-yourself moments. When he first walked into the garage I was pretty starstruck, but by the end of the weekend we were getting on well and chatting like mates. It's been brilliant to have him here."

In contrast to Button and Buncombe, Baldwin and O'Brien scored a podium at Silverstone, which was enough to secure them fourth in the British GT points.

"It's been an amazing year," Baldwin adds, "but it's also bittersweet as we had the potential to do a bit better in the championship. But for my first year, I'll take it and see what 2021 will bring."

JAKOB EBREY



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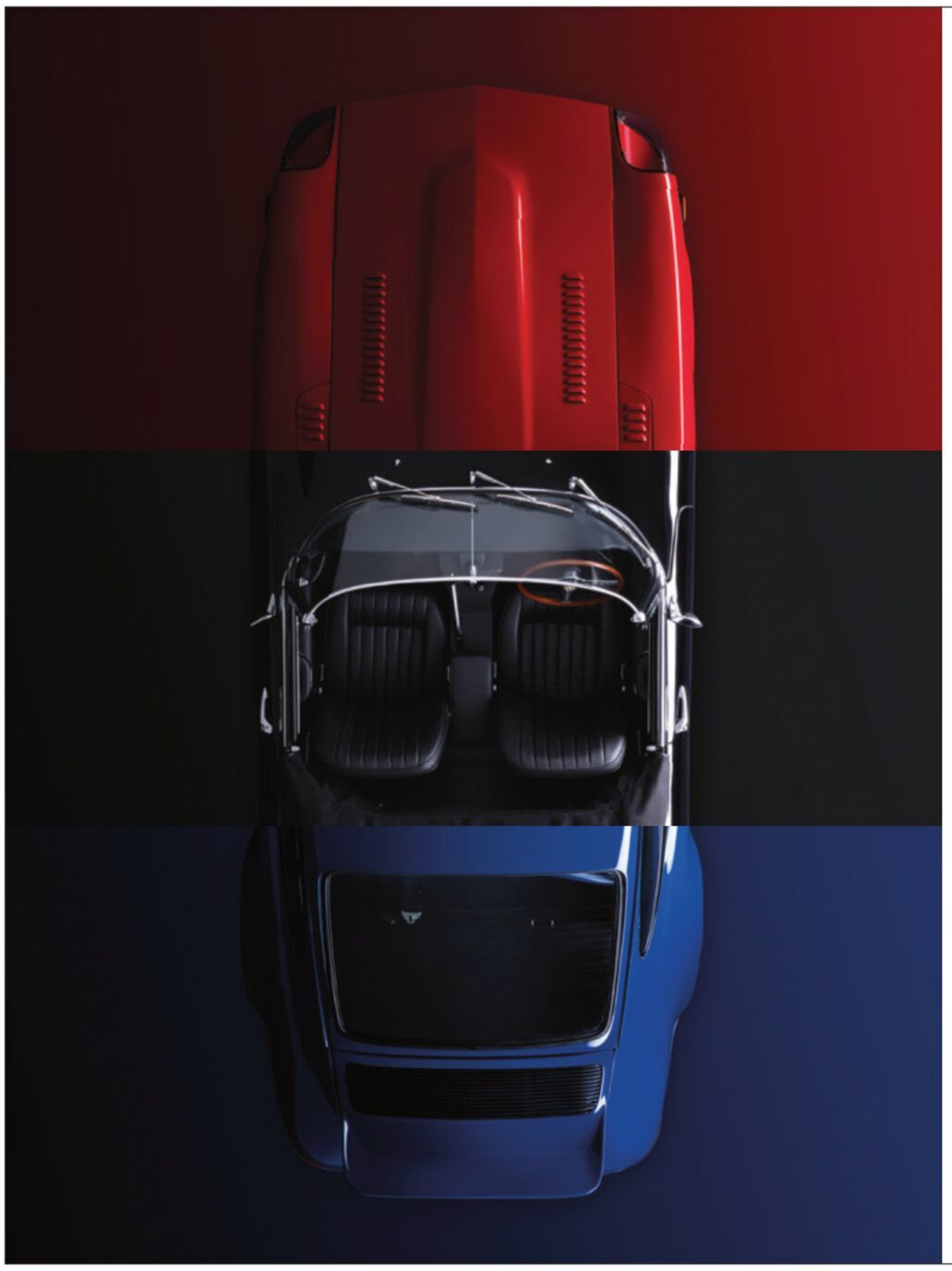


Porsche GT3 RS
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Just eight Bugatti T57S chassis were bodied by Cricklewood-based coachbuilder Corsica

BONHAMS

The special one

Not seen in public since 1969, this Bugatti 57S can thank London for its lines. **Simon de Burton** inspects a huge upcoming sale

ASK ANY PRE-WAR CAR FAN WHAT marque he or she would most like to discover tucked away in a barn, and there's a good chance that Bugatti will be at (or at least near) the top of the list. And considering that fewer than 8000 were built and that all were expensive and rare in their day, a surprising number seem to re-emerge after decades in obscurity.

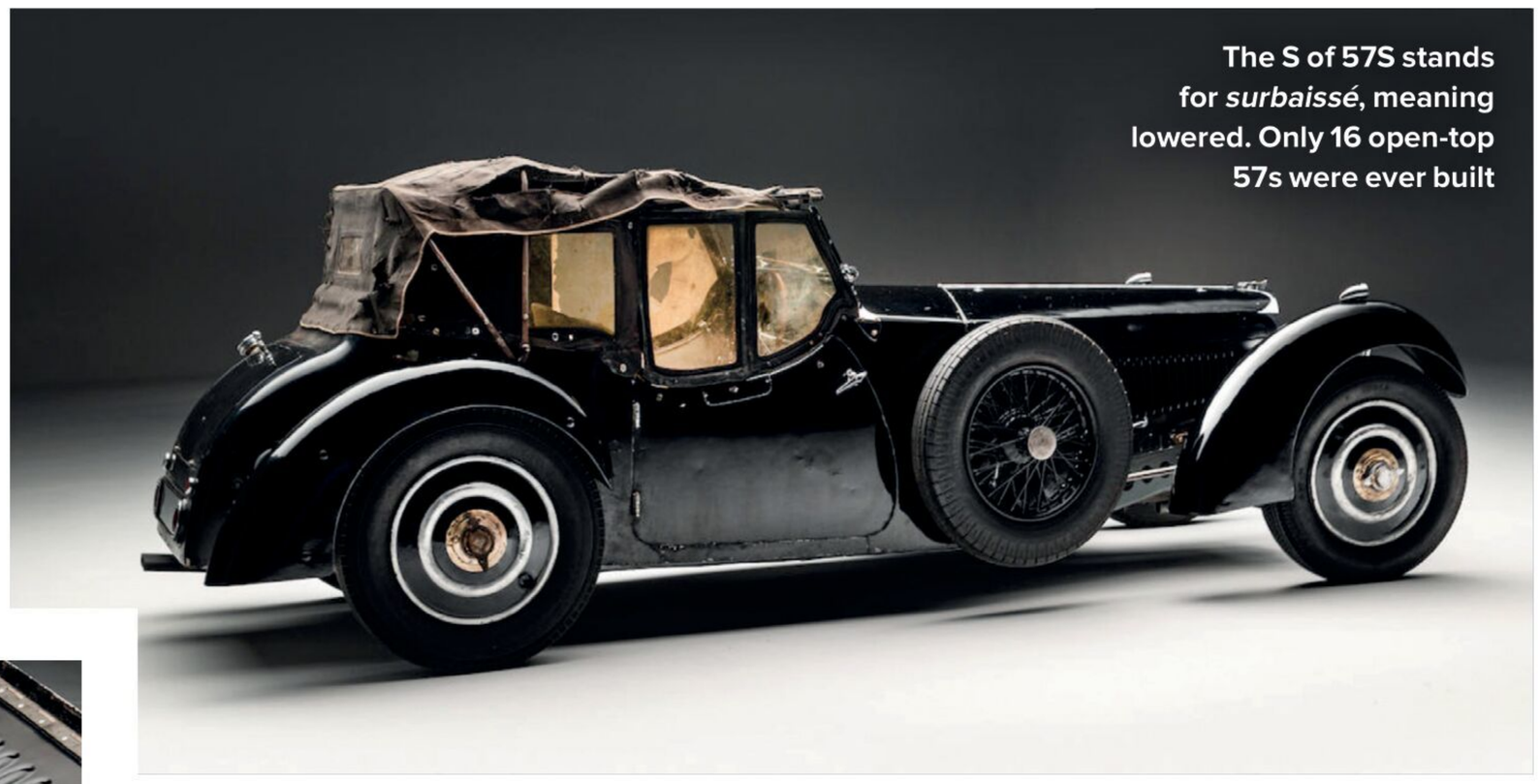
Among the most celebrated of those rediscovered in recent times is the 1937 Type 57S Atalante originally owned by aristocrat British racing driver Earl Howe (sold by Gooding and Co last September for £7.8m); a 'regular' Type 57 that was among the 59-strong collection of neglected barn finds in the Baillon collection auctioned in 2015; and, famously, the 1925 Type 22 that was hauled out of Lake Maggiore in 2008 - after 75 years under the surface of the water.

The lost Bugattis just keep on coming, as evinced by the Type 57S pictured here that's due to cross the block as the star of the Legends of the Road sale being held by Bonhams at its New Bond Street HQ on February 19.

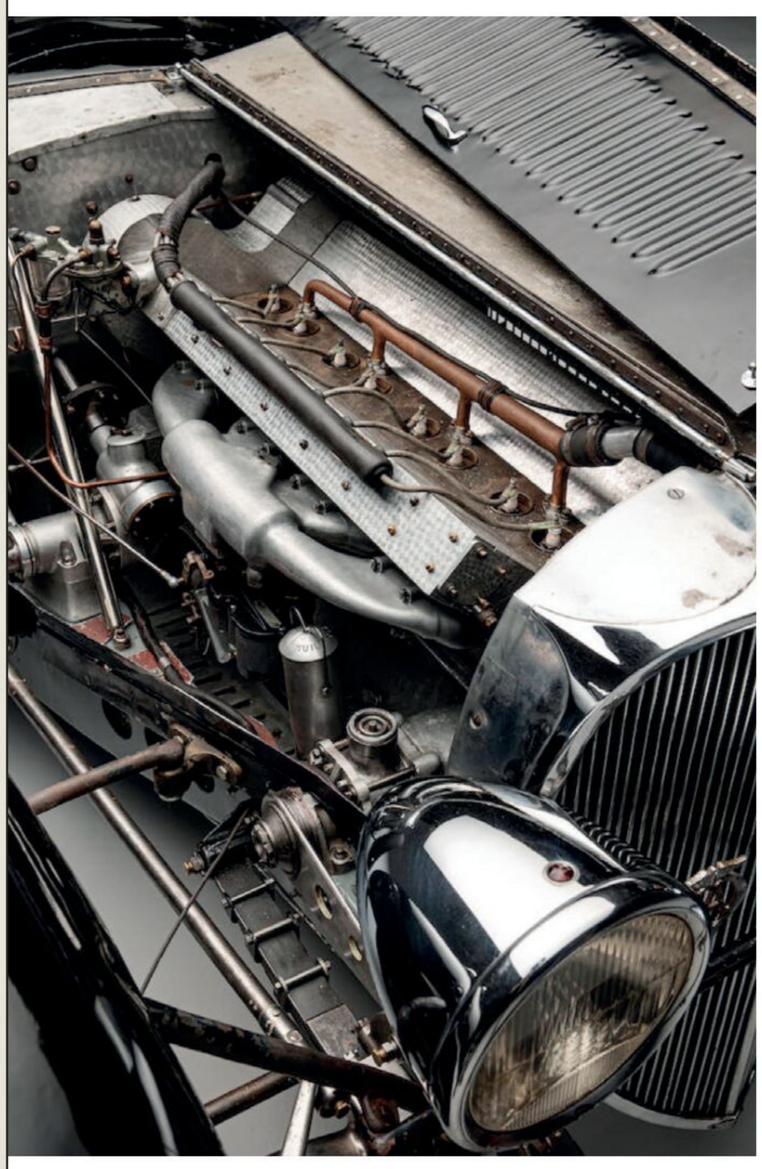
Unused for the past half century, the 1937 car - one of 42 S models built - was originally owned by Robert Ropner of the Teesside-based Ropner shipping family. He ordered it through Mayfair dealer Jack Barclay, specifying four-seater bodywork by London coachbuilder Corsica (which also bodied seven other examples of the Type 57S).

In its day, the 3.3-litre 57S was about the quickest road car available - a fact that must





The S of 57S stands for *surbaissé*, meaning lowered. Only 16 open-top 57s were ever built



have appealed to its second owner Rodney Clarke, who went on to found the Connaught grand prix team in 1950.

Clarke bought the car in 1945 but crashed it, selling it to HH Coglan the following year. Coglan rebuilt it, ran it until 1953 and then passed it on to a buyer in Essex, the memorably named Dr KGA Cock who, after suffering major gearbox problems, sold the Bugatti to the respected Staffordshire-based engineer and 'Bugattiste' Bill Turnbull in 1969 – and it is from his estate that the car is now being offered.

Shortly after buying it, Turnbull set about piecing together its history by gathering information from previous owners, and it was subsequently discovered that his Type 57S was more special than any of the others, since it was built onto one of the three lightweight chassis produced for the grand prix-winning, Le Mans-winning and record-breaking Type 57G 'Tank' streamliners of 1936.

As is often the case, however, the rebuild dragged on and, although Turnbull came close to completing it, he failed to do so before his death. He had, however, enlisted the assistance of a gearbox specialist from the Mercedes Formula 1 team to help him solve the problem he had discovered during the drive home after buying the car in 1969.

Hopefully the next owner will have the resources to complete the finishing touches quickly and get this incredibly special and remarkably original Bugatti back on the road. Because, as Sholto Gilbertson of Bonhams suggests, "This could well be the last 'hidden' pre-war Bugatti of note."

Although we bet there are a few more squirrelled away, just waiting to be found.

1937 BUGATTI TYPE 57S
On sale with Bonhams, London, February 19. Estimate £5m-£7m. bonhams.com

In the market for a pre-war sporty number?

Perhaps the idea of a seven-figure car might not go down well at home. Try these...



1935 RAILTON STRAIGHT EIGHT SPECIAL, £39,950 With the same owner for the past 40 years, this midnight blue 2+2 has seen much restoration. With its 4.2-litre Hudson engine, it is ideal for hillclimbs and sprints. *robinlawton.com*



1934 LAGONDA RAPIER, £34,000 One of the finest small sports cars of its era, its 1100cc engine was built for Lagonda by Coventry Climax. This model is in good working condition. *classicandsportscar.ltd.uk*



1930 ASTON MARTIN TEAM CAR LM4, £995,000 An ex-works team car, LM4 raced in the early 1930s. It was rebuilt in the '90s and recently fitted with a new engine. The original racing engine is part of the sale. *ecuriebertelli.com*



1939 MERCEDES-BENZ 320 CABRIOLET A, £410,000 The E-Class of its day, this open top has seen a recent nut-and-bolt restoration, having been found 30 years ago in the Czech Republic. Swift and luxurious. *vandp.net*

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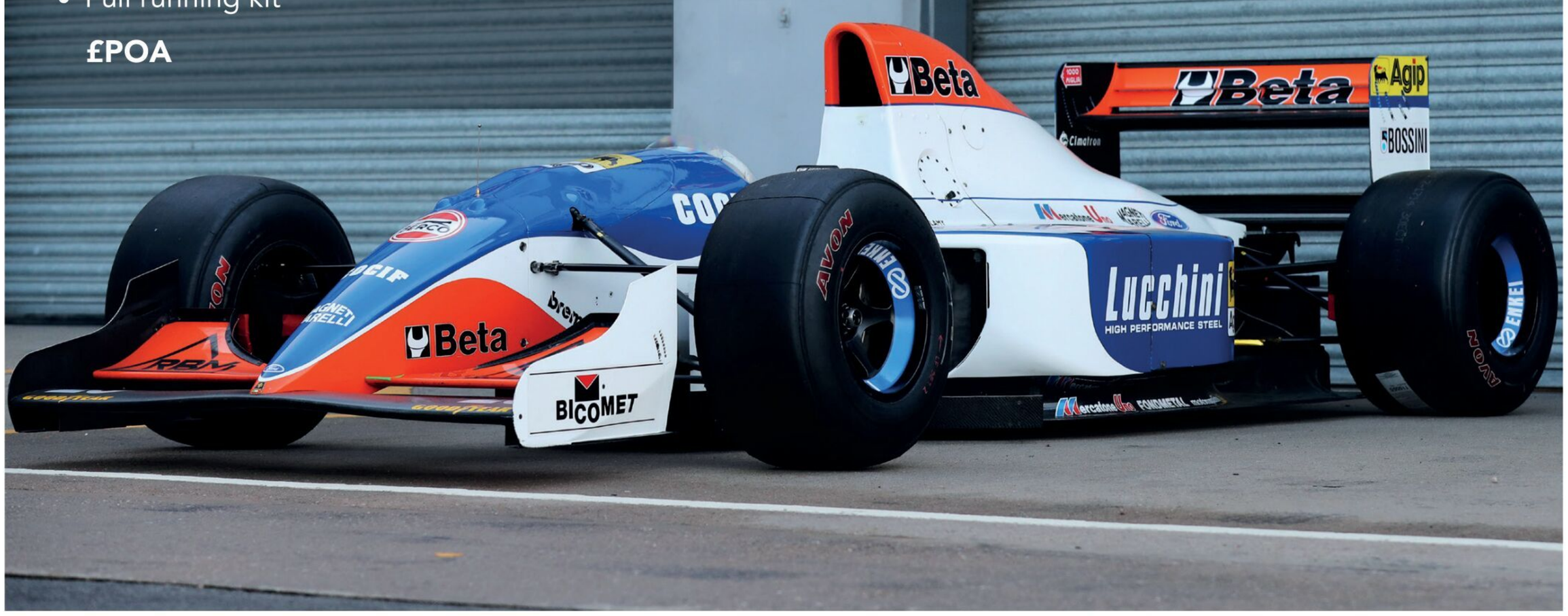
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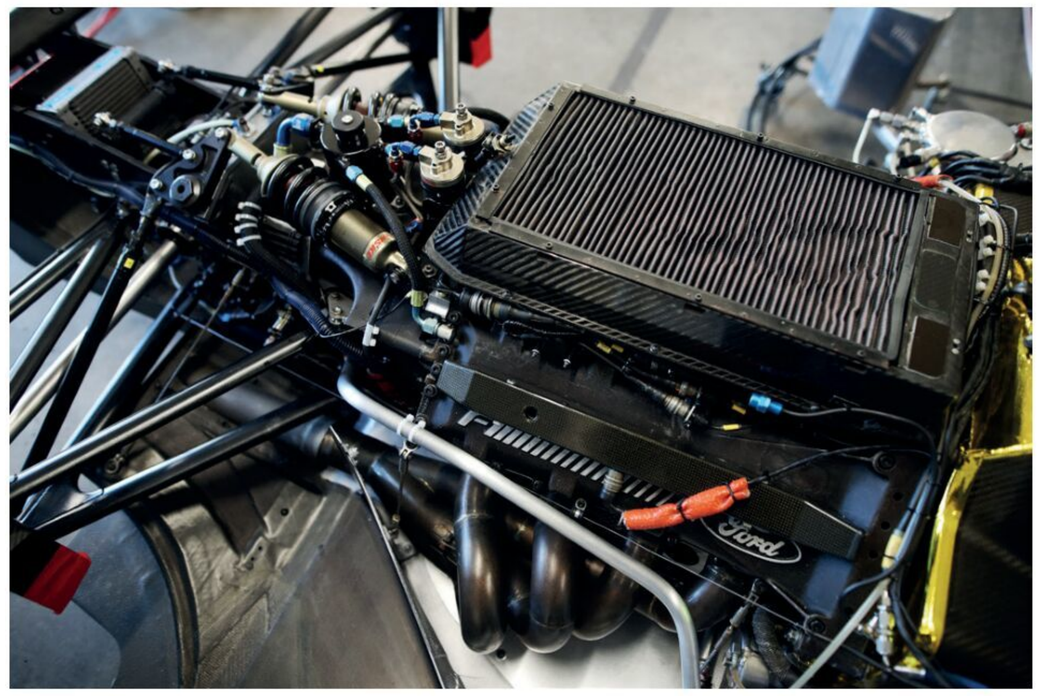
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Highly sought-after, this overhauled MV Agusta Magni 861 with just 13,000 miles has **Simon de Burton** hot under the collar

THROUGHOUT THE 1950S, '60S AND '70s, MV Agusta enjoyed one of the most remarkable runs of racing success of any motorcycle marque in history: 250 grand prix wins, 37 manufacturers' world championships and 38 riders' world championships.

And the man who helped to make those victories happen was legendary engineer Arturo Magni, poached from Gilera in 1950 at the age of just 25 by MV's owner, Count Domenico Agusta, as a key weapon in his plan to dominate racing at the highest level.

Having started as chief mechanic, Magni was soon promoted to race director, a role he held until MV withdrew from competition more than 25 years later – at which point, after a brief but respectful hiatus, he and his two sons established an eponymous business manufacturing special parts for the then-current four-cylinder 750S model.

Magni developed the enterprise into a full-scale production facility that would go on to create a range of handmade, fine-handling specials designed to house engines by Honda, BMW, Suzuki and Moto Guzzi.

But it is the MV Agusta Magni that most enthusiasts want and few come much better than this exceptional example at the Classic Motor Hub. Offered for sale complete with its original toolkit, handbooks, sales literature and full race fairing in MV's famous red and silver livery, the bike remained in the hands of its original owner for 39 years, having started life as a regular 750 model in 1976.



In 2019, UK-based MV Meccanica Verghera rebuilt the bike

It was despatched from the MV factory to the Magni workshops where it received the full treatment: a shaft drive to chain drive conversion; an aluminium fuel tank; a frame weighing 11kg; 30mm Dellorto carburettors; a curvaceous four-pipe exhaust system and, most significantly, the fitting of high-compression pistons and 70mm bore, nine-fin cylinders to bring capacity up to 861cc.

The result was a bike that weighed 200kg and produced 95bhp, compared with the stock machine's 240kg and 75bhp.

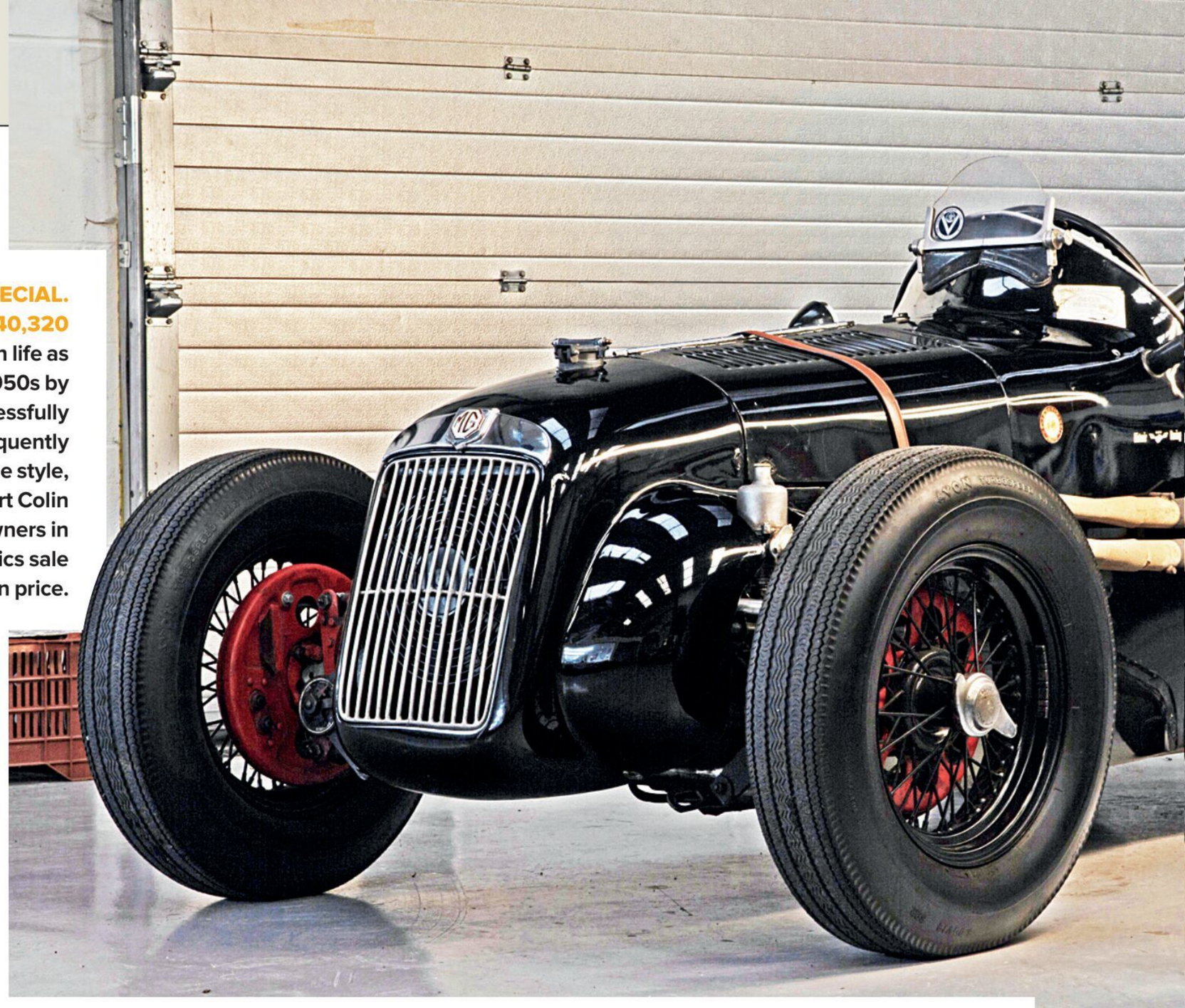
Once completed, the Magni-fied MV was shipped to the UK in 1977. It was the first Magni in the country and has had only one owner since (who acquired it in 2017) and, although it has just 13,000 miles, benefits from a recent overhaul, which included a new crankshaft with upgraded bearings.

The classic car market is levelling up, but demand for exotic motorcycles in original condition and with cast-iron provenance is rising. While the best part of £100,000 for two wheels might have seemed strong only 10 years ago, there are pundits who believe 'the best of the best' still has a long way to go.

And, when it comes to MV Agustas, they don't come better than the ones modified and built with the magical touch of Arturo Magni.

1978 MV Agusta Magni 861. On sale at The Classic Motor Hub, Bibury, Gloucestershire. classicmotorhub.com. Asking: £95,000.

SPEEDSHOP *Auctions*



1934 MG P-TYPE SPECIAL. SOLD BY HISTORICS. £40,320

This beautifully presented P-Type Special began life as a standard PA, but was modified for racing in the 1950s by Geoff Monk and Ray Masters. Campaigned successfully during the following two decades, it was subsequently acquired and re-bodied into its current R-Type style, single-seat configuration by historic racing stalwart Colin Warrington in 1983. It has since belonged to owners in Denmark, Germany and Italy. Prior to the Historics sale the car had not run for 20 years, hence the bargain price.



1969 MERCURY COUGAR XR7. SOLD BY BONHAMS. £356,500

Bond fans will recognise this Cougar from *On Her Majesty's Secret Service*. The vendor acquired the car as a wreck in 1990 for £2500 because he wanted the rare Cobra Jet engine for his Mustang. After discovering its history, he gave it a thorough restoration. It set a record price for the model.



BRONZE PHIL HILL SCULPTURE. SOLD BY GOODING & CO. £5750

This bronze by sculptor J Paul Nesse depicts Phil Hill roaring to his 1961 F1 World Championship victory. This was the top seller among more than 240 lots of Hill memorabilia, which sold online for a combined £300,000.



1965 JAGUAR E-TYPE SEMI-LIGHTWEIGHT. SOLD BY HISTORICS. £134,400

One of the 10 competition E-type replicas built by Zealia Engineering, this superb build represented the next best thing to a genuine lightweight. Featuring all-aluminium panels and Le Mans-spec wheel-arch extensions, this is great value.

Lockdown warriors

While business has been curtailed by Covid, some are using the pandemic to their advantage, says **Simon de Burton**

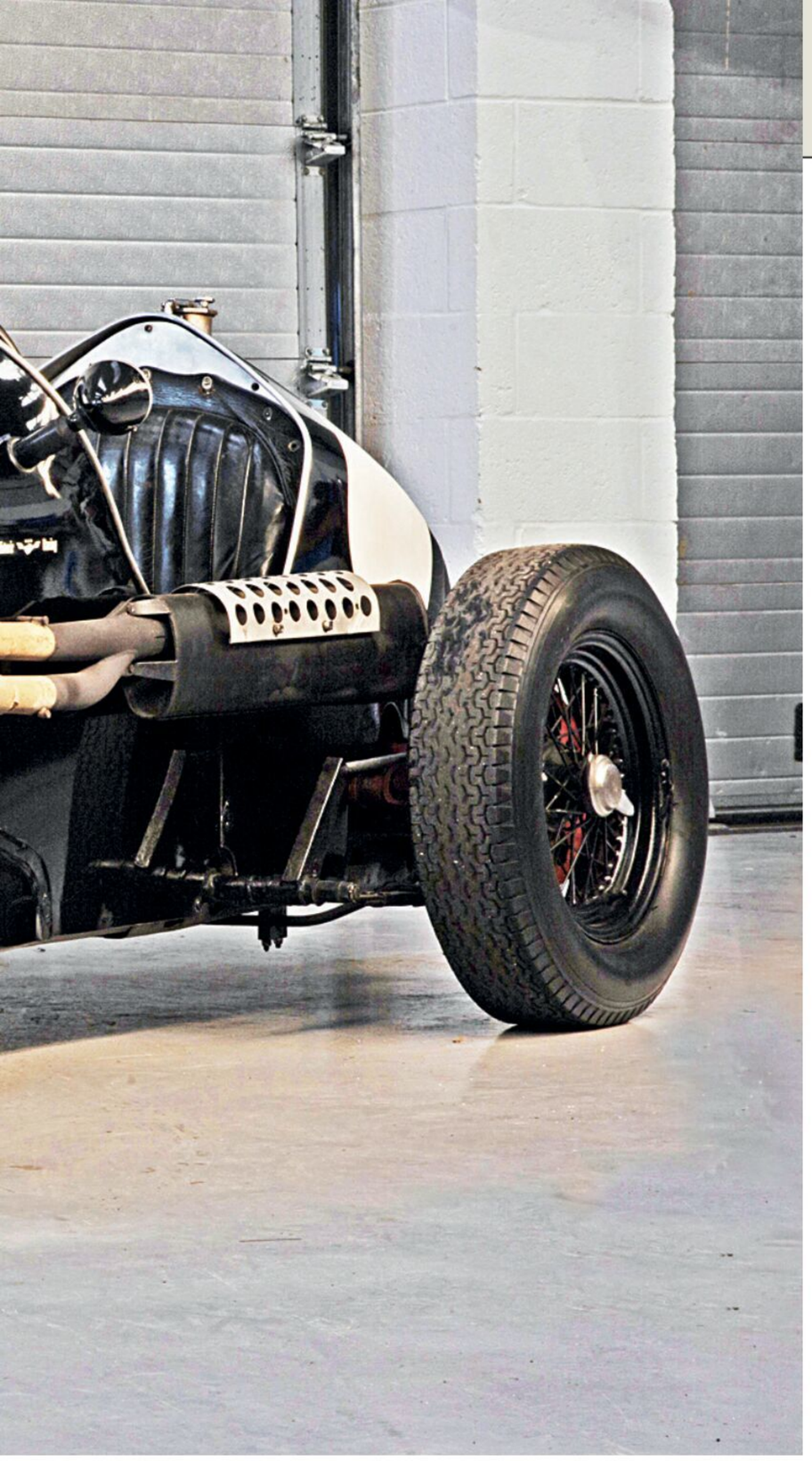
EDWARD LOVETT CERTAINLY GOT his timing right when he founded the Collecting Cars online auction site in summer 2019. After coronavirus hit six months later, buying and selling through internet auction sites quickly became the norm, and Lovett's tempting combination of zero seller's commission and a minuscule five per cent plus VAT buyer's premium - capped at £6000 - must have seemed irresistible to even the most die-hard of traditional auction-goers.

The firm has now sold more than 1800 lots since launch for a combined value of £55m, has opened offices in mainland Europe and Australia to enhance its service to more clients and is currently preparing to roll out a version of the platform in Australia. In March, Lovett is also set to introduce a similar operation for wrist watches called Watch Collecting.

The Market is the most obvious competitor to Collecting Cars and operates a similar model. It too reports impressive figures for 2020: turnover of £10.5m, an 88 per cent sales rate and 561 cars sold in total.

With frequent UK lockdowns and little understanding of whether Covid could re-infect, one not only wonders whether traditional auctions will make a full return, but if it really matters if they do or not. *collectingcars.com; watchcollecting.com*

MIKE MAEZ, BONHAMS





1976 GABRIEL CHRONOGRAPH WATCH. SOLD BY BONHAMS. £7650

Ordinarily the £300-£500 estimate applied to this obscure Gabriel chronograph would have been reasonable, but this was among items owned by Barry Sheene. He was awarded the watch after the 1976 Prince de Chimay trophy race.



1994 BROOKE 190 ME. SOLD BY COLLECTING CARS. £16,250

Combining 1950s looks with 1990s engineering, its 230bhp rear-mounted Vauxhall engine is required to propel a mere 560kg. Originally the personal car of Brooke founder Toby Sutton, it featured in much company promotional literature.



THE INSIDE LINE

"Despite upheaval, 2020 was a good year for the classic car world"

In the eye of the storm it's difficult to focus on anything other than the surrounding chaos and yet, as a certain Mr Dury (aided by The Blockheads) once sang, there still remain 'Reasons to be Cheerful'.

Part 1. The gift of hindsight shows the doom-mongers and naysayers were wrong. Despite hiccups, monumental upheaval and life as we know it changing beyond all recognition, 2020 was a relatively good year for the classic car world.

In fact it can now be viewed as one of opportunities, whether you re-ordered priorities, took the plunge on a purchase or even finally embarked on a long-awaited project. And from a professional perspective, sales and auctions were in fact stronger than they had been for a few years. It's a buyers' market; anyone silly with their pricing was laughed at, but decent presentation and prices were rewarded. In fact, with lockdowns and tiers, the one thing 2020 wasn't good for, was driving.

Part 2. It's ironic then, that it's now enthusiasts driving (no pun intended) the market, and our prediction is that will continue to be the case in 2021. Let me show you examples...

One such hotspot is Alfa Romeo's delectable Giulia 105 Series Coupé. They're lovely to look at, joyous to drive and offer a range of gutsy twin-cam engines; add in simple to fix, excellent parts availability and a whiff of Italian exotica, and aficionados can't get enough of them.

We recently sold a South African 2000GTV for £21,500 - strong money for a car with no paperwork and still requiring a degree of titivation. While an example of the less sought-after GT Junior, which although concours, was modified and had the 'wrong' engine, sold online for a model record £50,000. Someone wanted that Alfa.

Compare that to Italian junior supercars of the same era, such as the De Tomaso Pantera or Maserati Khamsin. Fifteen years ago, you could famously buy one for used Ford Mondeo prices. They then shot up to £100k in the investors' market, but they're dropping back and recent sales approaching £70k are now much lauded in the press. Enthusiasts know the allure of big exotic cars is often different to the reality of running one (costs, fun, reliability, ease-of-use), even if they do have pop-up headlights (that sometimes work).

The net result of the demand on these two examples is that they now almost overlap in desirability and therefore price.

Part 3. Shifting demographics are a given in our industry, yet still they take some by surprise. It happened with the pre-war market and this generational move continues, with the march of the wealthy 40-somethings ensuring cars of the '90s are now hot stuff.

Despite being a JDM car (not even one of the fabled 16 UK cars) and modified, our recent Subaru Impreza 22B achieved a whopping £106,000 - for a Scooby!

"A semi-defeat for Covid will get our bums firmly back in our driver's seats"

So to complete my 2021 prediction: I see a reduced demand for '50s and '60s cars, maintaining a recent trend. Not a collapse, more a continued gentle drop. Good news if you're a fan of metal from those decades.

Chancellor Rishi Sunak also reminded us that we've not yet felt the economic impact of the pandemic and, with the effects of a snatched last-minute Brexit deal on our industry still uncertain, there could be choppy waters ahead.

However, with multiple vaccines on stream, a semi-defeat for Covid is hopefully likely. That will get our bums firmly back in our driver's seats and that's surely the best of my 'Reasons To Be Cheerful'.

When that happens, we'll call it Part 4.

Tristan Judge is director and co-founder of The Market, the online auction platform for classic and collectible cars

Buying guide

Lister Storm GT

While many consider it a salesroom flop, Lister's flagship sports car went on to be a GT hero of the late 1990s



IF YOU'RE MAKING A LIST OF THE fastest, most outrageous cars of the 1990s, this is the one you're most likely to forget. Up against the might of the Ferrari F40, Lamborghini Diablo, Bugatti EB110, McLaren F1 and such, what chance did little old Lister have?

After all, Lister only built four, priced them well out of their league, and the Storm faded from showrooms as fast as it had blown in.

But here are some headline figures worth remembering. A hulking 7-litre V12 adapted from a Le Mans 24Hrs winner; a top speed of 208mph that made it the fastest four-seater car in the universe in its time; and after its road career came to a premature end it actually made a mighty fine race car.

Despite being a low-volume manufacturer, Lister already commanded respect in the racing world thanks to its work first with MG and Bristol power since its formation in 1954, and then its founder Brian Lister's link with Jaguar that gave us the eternal Knobbly.

But following the financial trouble which led to the original company's closure in the mid-1960s, all fell silent in the Lister camp, until engineer Laurence Pearce resurrected the company in 1986, primarily to tune special edition Jaguar XJS road cars. Pearce began by expanding the 5.4-litre V12 in each of them to a full 7 litres, endowing them with a 200mph top speed, adding new body panels and charging just over £100,000 for each of the 90 this new version of Lister produced.

But to truly get back to its former glories, Pearce knew Lister needed a flagship model of its own rather than a tuned version of somebody else's car. The Storm was brewing.

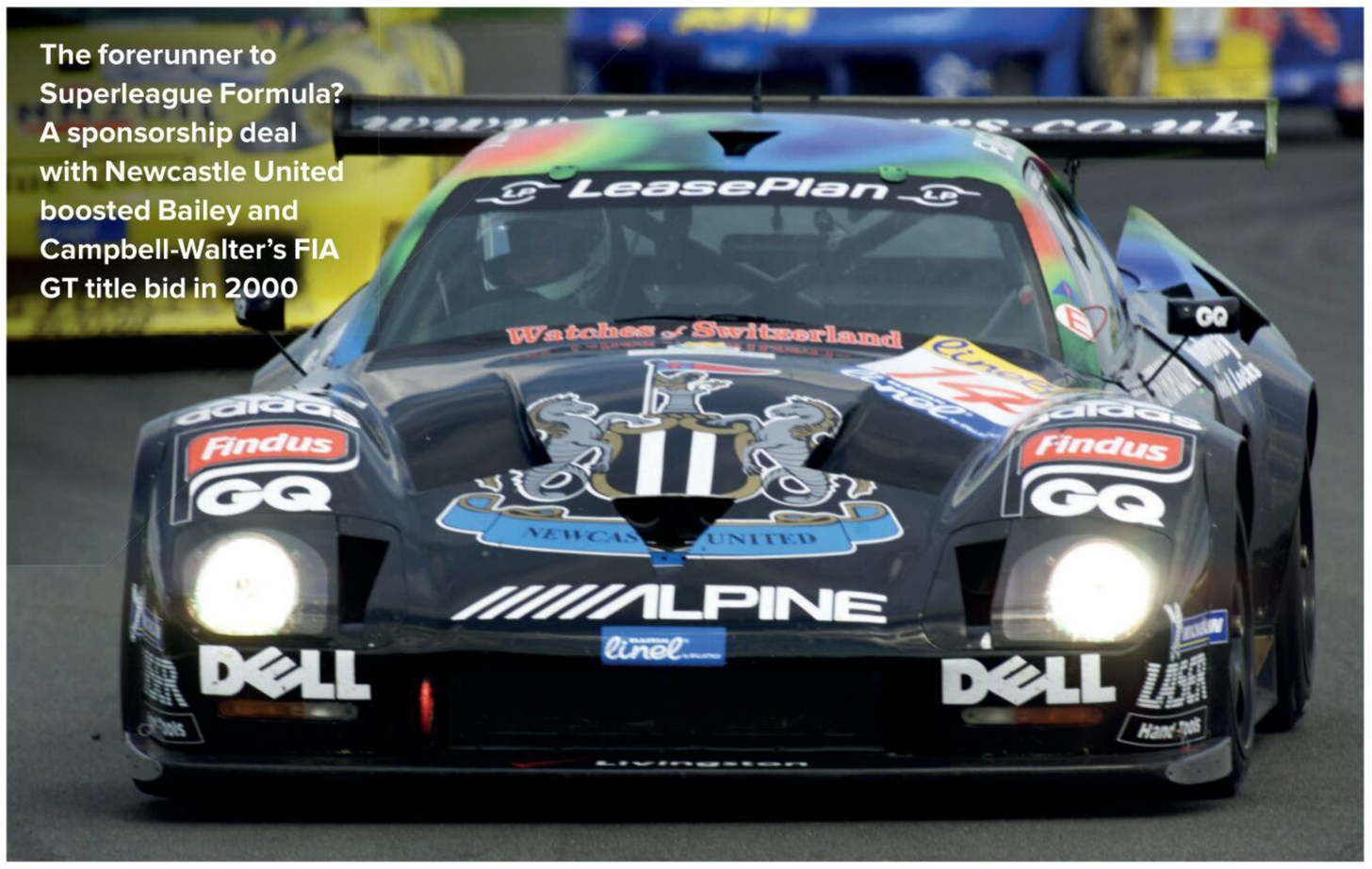
To start, Pearce used his Jaguar connection to secure a stock of engine parts from Tom Walkinshaw's Le Mans-winning XJR-12 Group C operation, basing the Storm's heart around the same huge 24-valve V12 that powered Britain back to glory at La Sarthe in 1990 - and in doing so gave the Storm the largest engine fitted to a production car since World War II.

Then came a lightweight aluminium monocoque chassis, with the engine slotted

LISTER STORM GT

- **Price new** N/A
- **Price now** £400,000-£500,000
- **Engine** 7-litre Jaguar SOHC 24-valve V12
- **Rivals** Porsche 911 GT2, Dodge Viper GTS-R, Ferrari 550 Maranello
- **Verdict** Ultra-rare on the road, but highly successful on track... eventually





The forerunner to Superleague Formula? A sponsorship deal with Newcastle United boosted Bailey and Campbell-Walter's FIA GT title bid in 2000



Complete with its Audi 80 rear lights, the Storm boasted the largest engine fitted to a production car since WWII

up front, but deep down and as far back as it could go to centralise the weight without needing the driver to sit on top of it.

Only then came the coachwork, with its distinctive sloping bonnet smoothly fitted over that lump of an engine. Lister used carbon fibre for many of the panels, and also raided the parts bin of other brands to complete the design – the rear lights are from an Audi 80.

When it was launched in 1993, the Storm was priced at a staggering £220,000. Few were prepared to pay that, so only four cars exited the factory doors before the project was canned and Lister did what it historically did best. Went racing. With a high-powered production model on its books, Lister homologated the Storm for GT racing… at exactly the wrong time. The first version – the GTS – debuted at Le Mans in 1995, right into the path of McLaren's dominant F1 GTR.

"Lister homologated the Storm for GT racing… at exactly the wrong time"

Then, just a year later, Porsche changed the game with its 911 GT1 – essentially a prototype race car for the road – and that spelled the end for production GT racing before the Storm even got a fair chance at it.

A second version, the GTL, was released for 1997, using a carbon chassis and bodywork and more streamlined aero in the hope of upsetting the GT1 establishment, but it stood little chance against the might of both Porsche and Mercedes' CLK GTR. However, the company's persistence did eventually pay off.

With costs rising, GT1 was finally canned in 1999, opening the way for Lister to shine. A GTL shared by Julian Bailey and Jamie Campbell-Walter won that year's British GT Championship before the pair did the same in the 2000 FIA GT Championship, winning five of the 10 rounds in a works-run GTM (a GT2-spec car with less aero and a longer nose). Mike Jordan and David Warnock secured a second British GT title for the Storm in 2001, but its star was starting to wane.

Newer rivals from Porsche, Saleen, Ferrari and Chrysler's Viper gradually pushed the Storm down the pecking order, and Lister lost focus when it began work on the ill-fated and expensive Storm LMP a few years later.

The Storm's racing exploits eventually ended in 2005, but it had made far more of a mark in Lister's traditional arena than its attempts at taking the road by, err, storm.

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Harking back to a classic style but with a modern twist, the Abington combines the elegance and poise of a bygone era with state-of-the-art engineering. Crafted from custom-drawn Reynolds Technology steel tubing, which combines high-tensile strength and low-weight, ARCC Bikes have utilised a double top tube design to create a **super-lightweight** frame (starting from 10.5kg). Complete with flowing lines and a smooth finish, the bike is **hand brazed** and comes in several sizes: small to medium, medium to large and extra-large.

Designed with low maintenance and modularity in mind, the Abington has machined stainless steel dropouts which allow for a variety of drivetrains, including **Shimano** Alfine 8 Speed, **Shimano** Alfine 11 Speed and **Rohloff** 14 Speed hub gears, as well as the revolutionary **Gates Carbon Belt Drive**, which requires little cleaning or care. Available also with a wide variety of other options and configurations, like saddles, pedals and luggage racks, the Abington can be customised to suit any rider.

Fitted as standard with Shimano flat mounted **disc brakes,** which offer a superior smooth braking motion, and large, puncture-resistant **Schwalbe Marathon Plus 650b x 38 tyres**, which give the rider confidence on even the most weather-beaten roads.

The Abington is available in standard configuration or as an **electric bike** when fitted with the **e²-pod Intelligent Drive System**. The e²-pod equips the already superb bike with several innovative features. This includes a highly sensitive torque pedal sensor and an inclinometer/accelerometer which detects gradient changes and adjusts motor output accordingly. It also comes with a **launch control function**, which provides three seconds of maximum acceleration when moving away from lights and crossings in heavy traffic. Featuring unique **Bluetooth connectivity**, the system's power levels can be altered wirelessly via the handlebar-mounted controller.

Both the Abington and e²-pod system come with a **five-year warranty** from ARCC and are constantly regulated by a committed team of technicians.

Experience the e²-pod yourself on a **test ride** at our facility or **build your own bespoke ARCC Abington** today on our website: **www.arccbikes.com**

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Buying guide

Jensen Interceptor

Britain's answer to the muscle car may have had its faults, but it has an enduring cool

THE CAR INDUSTRY WAS AN exciting place in the 1960s. Engineering and production techniques were improving rapidly and many brands opted to switch focus towards beautiful, svelte, sporty offerings such as the Jaguar E-type, Ferrari 250 and Porsche 911.

But the '60s also gave rise to another automotive trend, the muscle car. The Ford Mustang, Dodge Charger and Pontiac GTO all arrived Stateside, boasting big-capacity thundering engines, striking looks and - importantly - affordable price tags.

The issue was, pure-bred muscle cars were largely confined to the US back then, with very few finding their way across the Atlantic. There was a niche in the British market for something similar: a big, brash, V8-engined GT. The Jensen Interceptor filled that gap brilliantly, and in doing so created perhaps the only model Jensen is remembered for.

At the time, Jensen was a small-volume manufacturer, producing mainly variants of its fibreglass-bodied, Austin-powered 541. But things began to change when customers of the 541S - the prettiest of the line - began to demand more power than its straight-six Austin could produce. Donald Healey was the most vocal, requesting the factory install a 327ci (5.3-litre) Chevrolet V8 into his personal 541S, and with that came a spark of inspiration.

In its formative days, Jensen had largely used Ford V8s and, with American muscle being relatively cheap, it opted to do so again.

In 1962, Jensen ditched British motors altogether and made a new car, the C-V8, which all used big-block Chrysler Golden Commando V8s. The C-V8 made headlines by becoming one of the fastest production four-seaters available, but there were issues. The Eric Neale-designed body was very much an acquired taste, and it was still largely plastic. Jensen built 500, but a change was needed to take the brand truly mass-market, and it came from Italy.

Jensen went to design house Carrozzeria Touring, which penned a new, sleeker steel body to fit over the C-V8's chassis. The skins

JENSEN INTERCEPTOR

- **Price new** £5200
- **Price now** £40,000-£100,000
- **Engine** 5.9-7.2-litre Chevrolet V8s
- **Rivals** Ford Mustang, Sunbeam Tiger, Jaguar XJS
- **Verdict** Flawed, but since when has a muscle car ever been perfect?

The presence of a US muscle car, clothed in Italy, but with British flair. The Interceptor was a successful amalgamation of three worlds





The Interceptor came with all the trimmings, with later models even boasting air conditioning and anti-lock brakes



Perhaps the Interceptor's defining design feature is the stunning rear glass screen/tailgate, styled by Carrozzeria Touring in Italy

were hand-constructed by coachbuilder Vignale and shipped back to Jensen's West Bromwich factory for assembly. To complete the package, Jensen added a 6.3-litre Chevy V8, disc brakes all round and perhaps the coolest title ever given to a car. The original Interceptor had been a lukewarm Austin-based tin-top from 1950, and only 88 had ever been made, but this time the Interceptor name would be put to far better use.

When launched in 1966, the Interceptor was a game-changer for Jensen. Buyers loved the purposeful looks, capped by that stunning single-piece rear aero windscreen/tailgate.

There were issues – such as inconsistent steering racks (some even came from the Triumph Stag, which were prone to disintegrate over time) and body corrosion – but that didn't prevent huge sales.

"In creating the FF, Jensen made the world's first all-wheel-drive road car"

The MkII arrived in 1969 with restyled headlights and interior changes designed to push the Interceptor to the American market, too. Then followed a convertible version, and finally the polished MkIII for 1971, which was the pick of the bunch with that distinctive flat and wide grille, GKN alloy wheels, air conditioning and a 385bhp 7.2-litre V8.

In total, Jensen produced over 6400 Interceptors before the company ran into financial trouble and eventually folded in 1976.

But just before Jensen shut its doors it had another trick for the Interceptor. Using a donor chassis extended by five inches, Jensen worked with Ferguson Research to install a four-wheel-drive system and Dunlop anti-lock brakes into a new version to be called the FF. In doing so, Jensen and Ferguson created the first road-focused car to feature all-wheel drive, pre-dating the AMC Eagle and Audi Quattro by 13 and 14 years respectively.

Only 320 FFs were made, with sales largely held back by customers having to fork out almost twice the price of the regular Interceptor and it having no provision for left-hand drive, which ruled out any expansion to the American or European market.

The Interceptor quickly gained a cult following, thanks to serial TV appearances in popular shows such as *The Saint*, and today there's an entire industry dedicated to restoring or even replicating the model, proving its enduring appeal.

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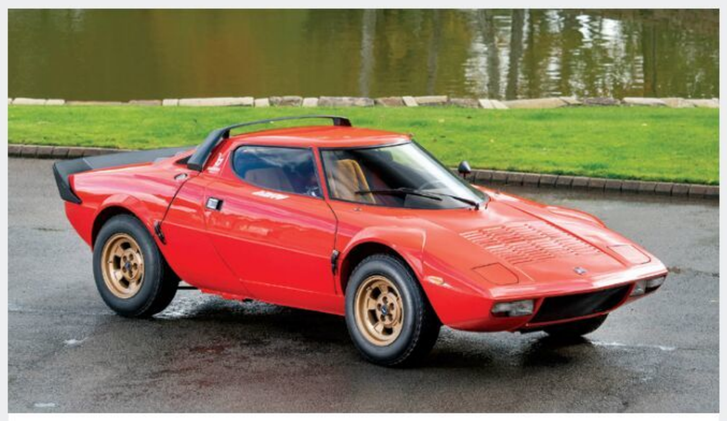
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1973 EX-WORKS FORD ESCORT RS1600 'XPU 216L' – EX-ROGER CLARK, SAFARI, RAC, WORLD CUP

XPU 216L was completed by the Ford Boreham Competition Department in April 1973 in preparation for that year's International Safari Rally, with works driver, British Rally Champion and future World Champion, Roger Clark. Clark would lead the gruelling rally overall for some time until a cracked exhaust manifold and failing alternator led to his retirement. Next up for 1973, was the International Scottish Rally for Tony Pond, coming home a strong 7th behind greats including Roger Clark and Hannu Mikkola. The final rally of '73 was the Daily Mirror International RAC Rally, where future double British Rally Champion Russell Brooks would DNF. XPU's final International Rally was the 1974 London–Sahara–Munich World Cup Rally. Andrew Cowan would come home in 15th place, resplendent in the 'White Horse Whisky' livery. An extremely rare and original Competition Dept Works car, and a fabulous addition to any Ford or Rally collection.

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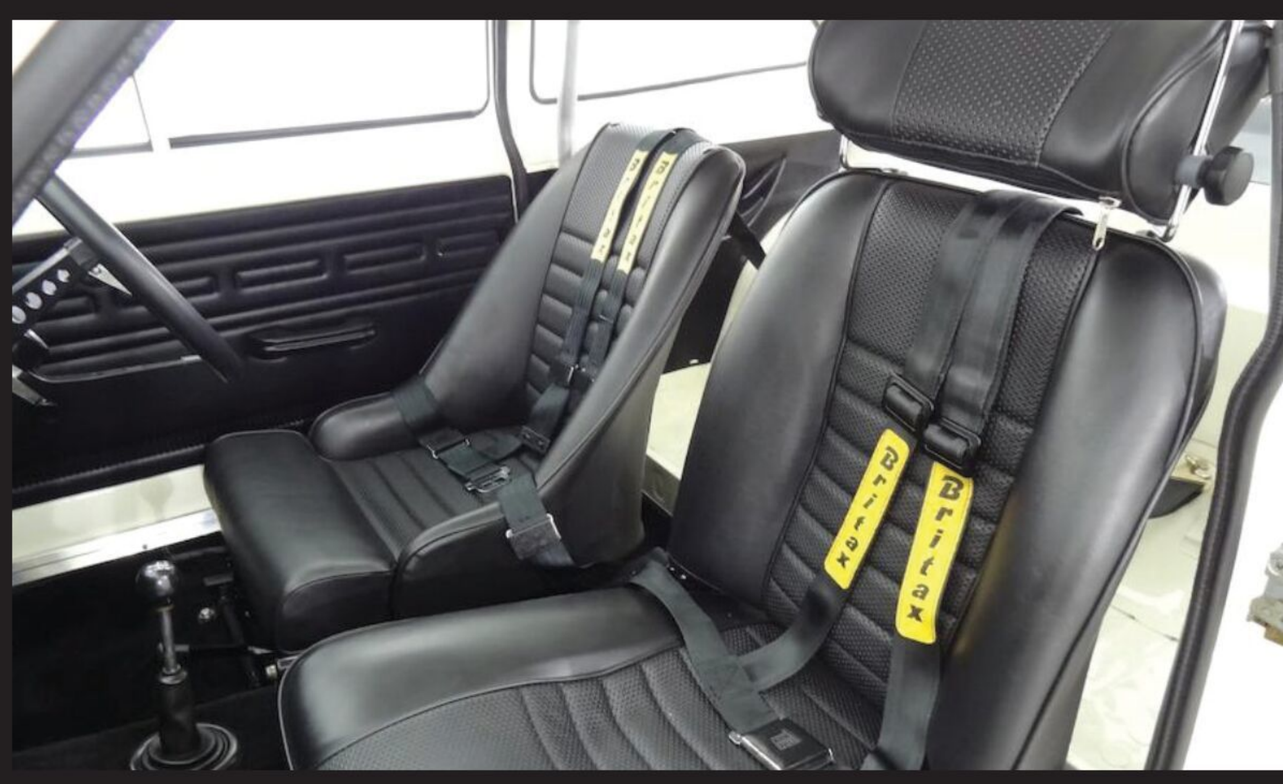
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1968 EX-WORKS FORD ESCORT TWIN CAM 'BEV 812G' – EX-ROGER CLARK, HANNU MIKKOLA, JEAN TODT

BEV 782G was prepared at the Boreham Ford Works Department in 1968 for the 1969 Monte Carlo Rally, in which factory team driver Jean-Francois Piot had Jean Todt reading the notes. The French crew finished 4th overall, the car being the top finishing Ford that year. The Ford Team's next event was in nearby San Remo, where BEV 782G was driven by Hannu Mikkola, while for the Circuit of Ireland, the car was entrusted to Roger Clark, who, with his trusty navigator Jim Porter, won the classic tarmac rally overall. Swedish pairing Ove Anderson and Gunnar Palm were equally successful in the car, winning the Welsh International. Later that season, BEV 782G was issued to works team drivers Clark for the Scottish and to Mikkola for the RAC, the car's 6th international, after which, in 1970, it was sold by Ford to the private sector.

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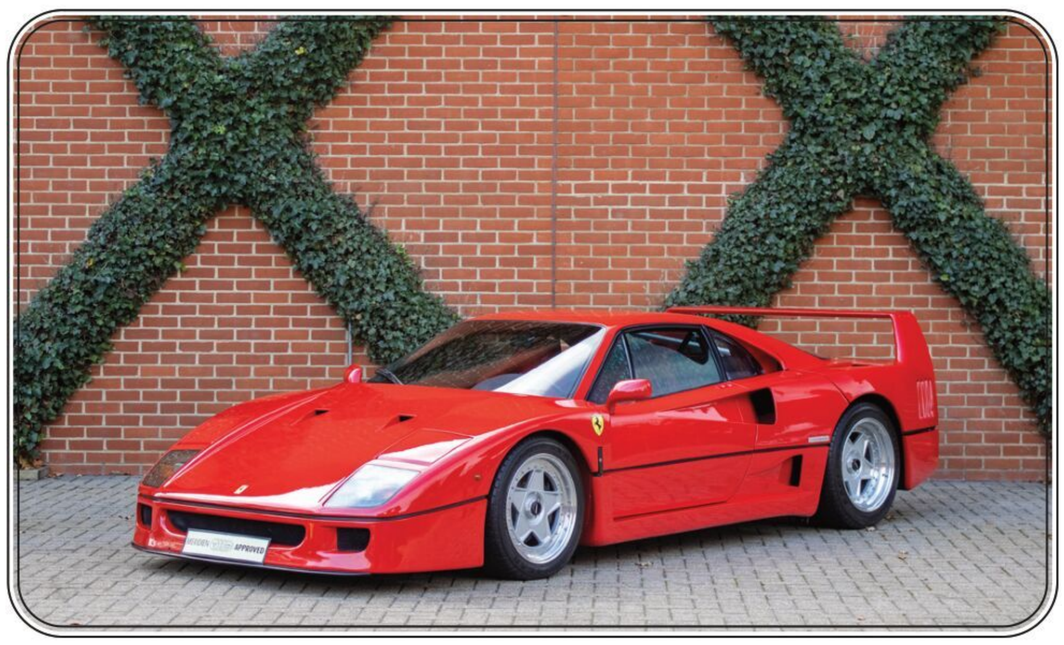
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Ferrari F40 – 1990 £1,200,000



Rosso Corsa Exterior with Rosso Cloth Interior, 17" Speed Line Alloy Wheels with Nero Brake Callipers, Air Conditioning and Stereo System. UK Supplied. Maintained by Meridien Modena for the last 15 years. 17,200 klm

Ferrari F12berlinetta – 2017 £649,995



Grigio Ferro Metallic with Nero Alcantara Interior, Nero Alcantara Dashboard, Nero Carpets, Grigio Special Stitching, Nero Headlining, 20" Matt Painted Rims with Giallo Brake Callipers, Climate Controlled Air Conditioning, Electronic Suspension, ASR, Cruise Control, Large Carbon Fibre Racing Seats. 2,700 miles

Ferrari Dino 246 – 1974 £329,995



Rosso Corsa Exterior with Nero Leather Interior, 16" Alloy Wheels, Ferrari Classiche Certified, Complete Recent Restoration. The truly beautiful Pininfarina design of the Dino, executed by the Scaglietti factory in Modena, can be considered one of the most desirable car designs of all time. 17,600 miles

Ferrari 488 Pista – 2019 £309,995



Rosso F1 2007 4 Layer Paint with Nero Alcantara Interior, Nero Alcantara Dashboard, ORO Metallic Stitching, 20" Forged Gold Rims with Nero Brake Callipers, Climate Controlled Air Conditioning, Large Daytona Racing Seats with Racing Seat Lifter, Front and Rear Parking Distance Control with Parking Camera. 2,200 miles

Ferrari 458 Speciale – 2015 £269,995



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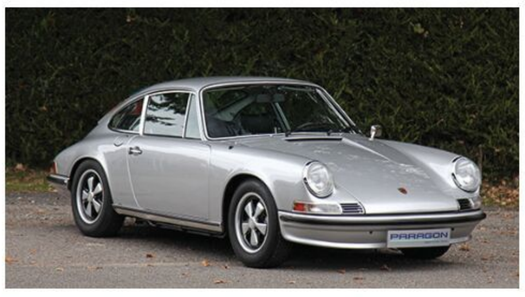
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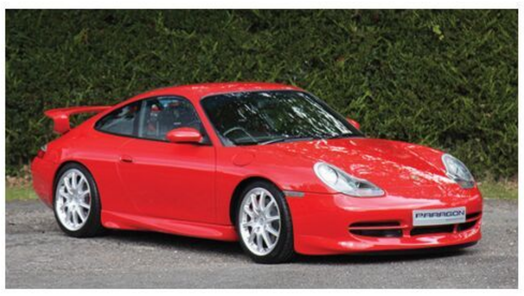
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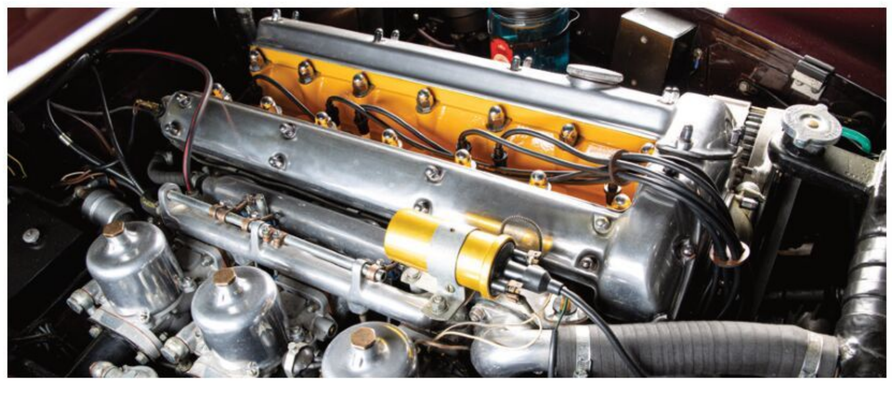
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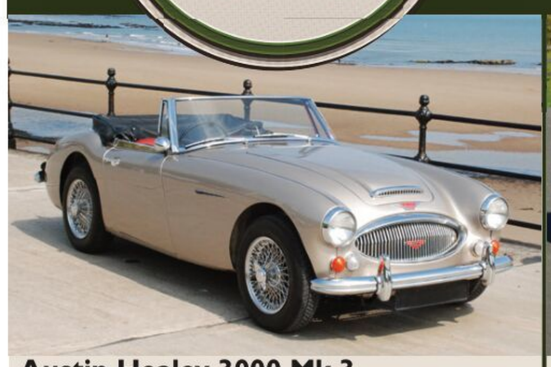


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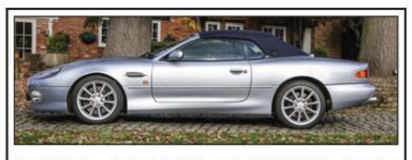
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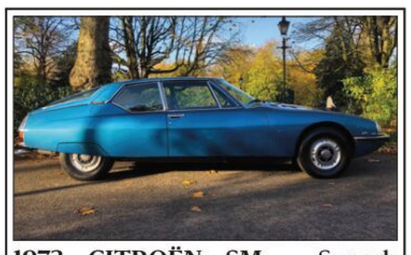


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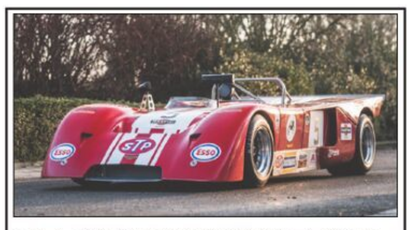


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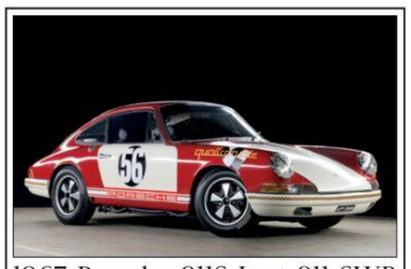
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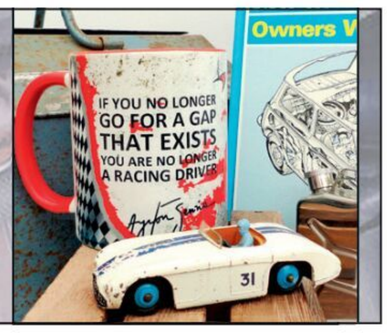
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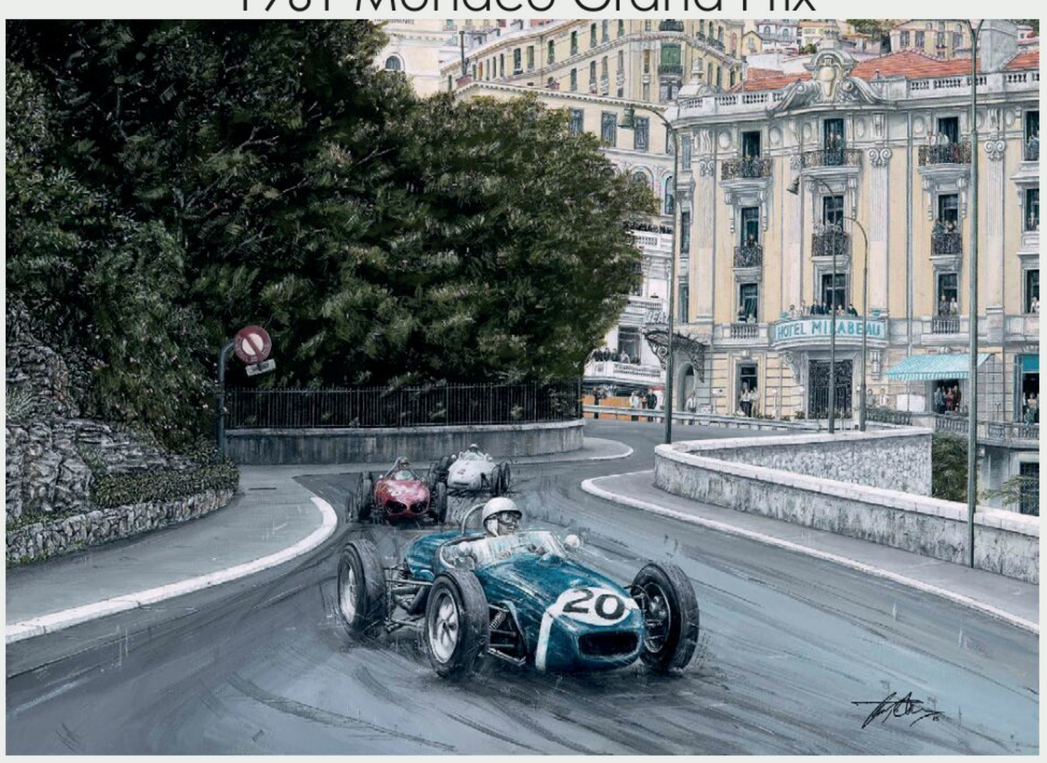
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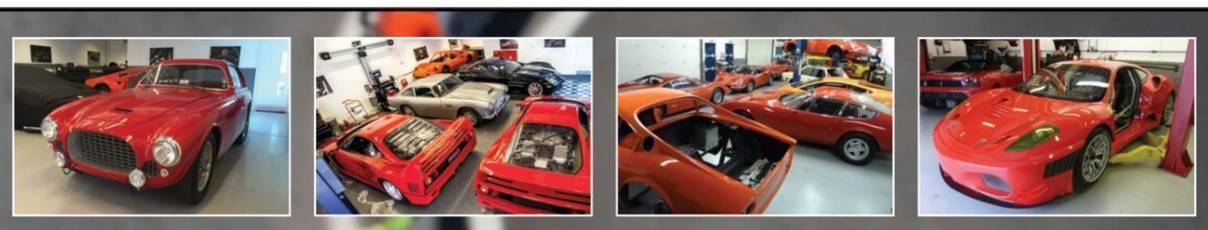
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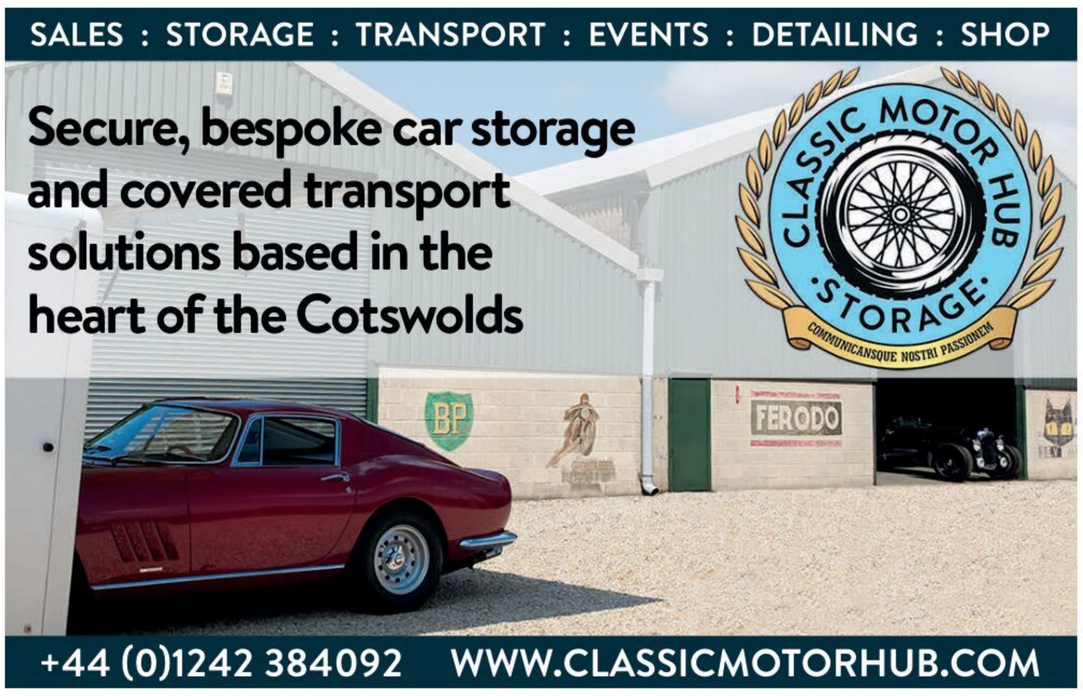
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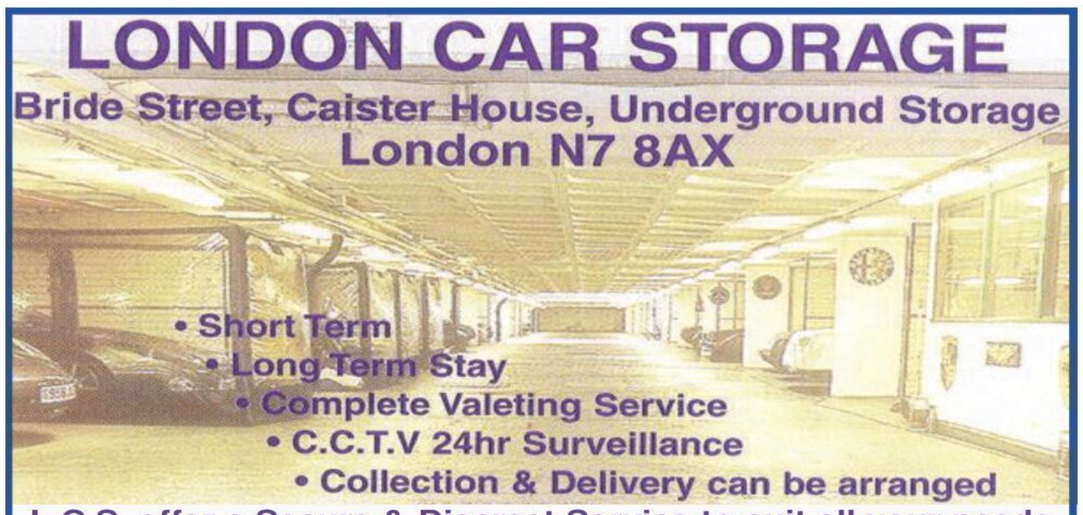
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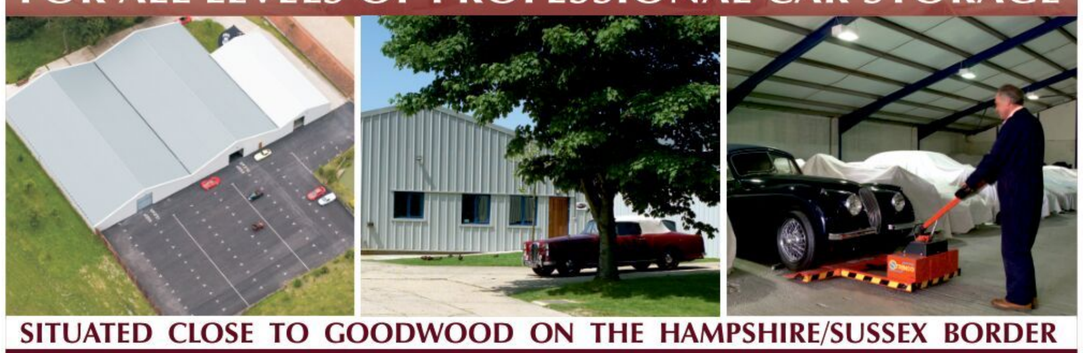


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The summer we loved

Our recent feature on 1967 prompted **Julian Nowell** to recall his trips that wonderful season – two UK F1 meets plus one of the great sports car races. And all reached by bus and shanks' pony

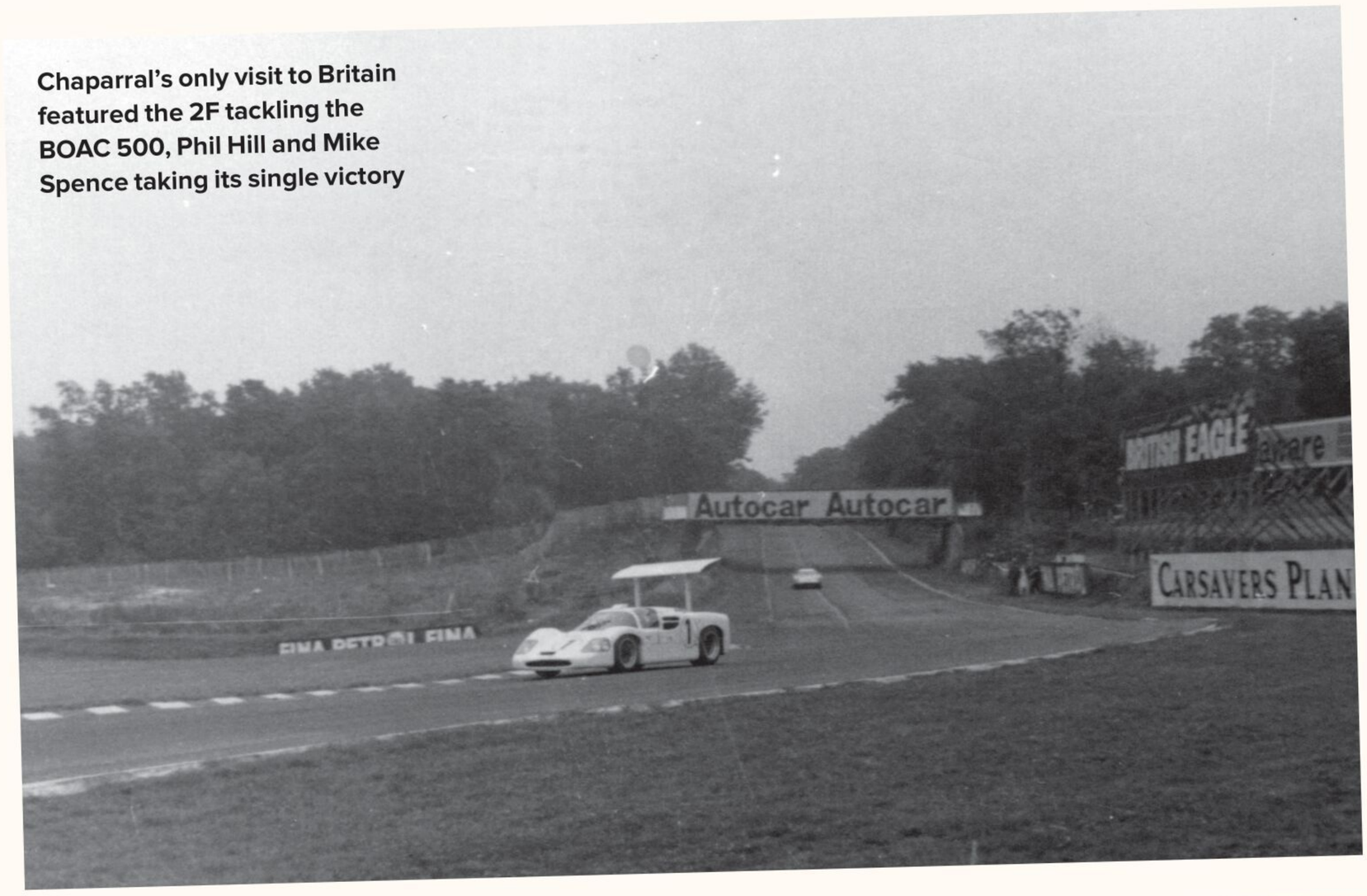




Ludovico Scarfiotti guns his Ferrari out of the Brands paddock tunnel after the Race of Champions. And those are pedestrians behind. Different times...



Chaparral's only visit to Britain featured the 2F tackling the BOAC 500, Phil Hill and Mike Spence taking its single victory

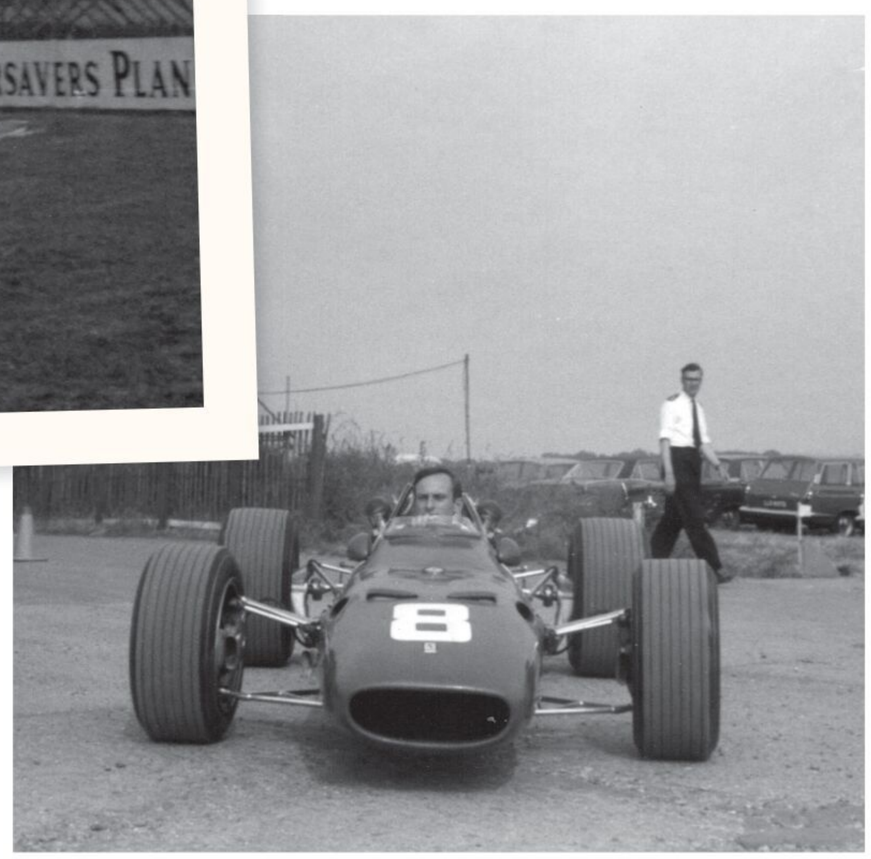


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This meeting is organised by the B.R.S.C.C.
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For a youthful Nowell, '67 brought two chances to see the works Ferraris: this is Chris Amon, below, at Silverstone, back in the UK for the GP



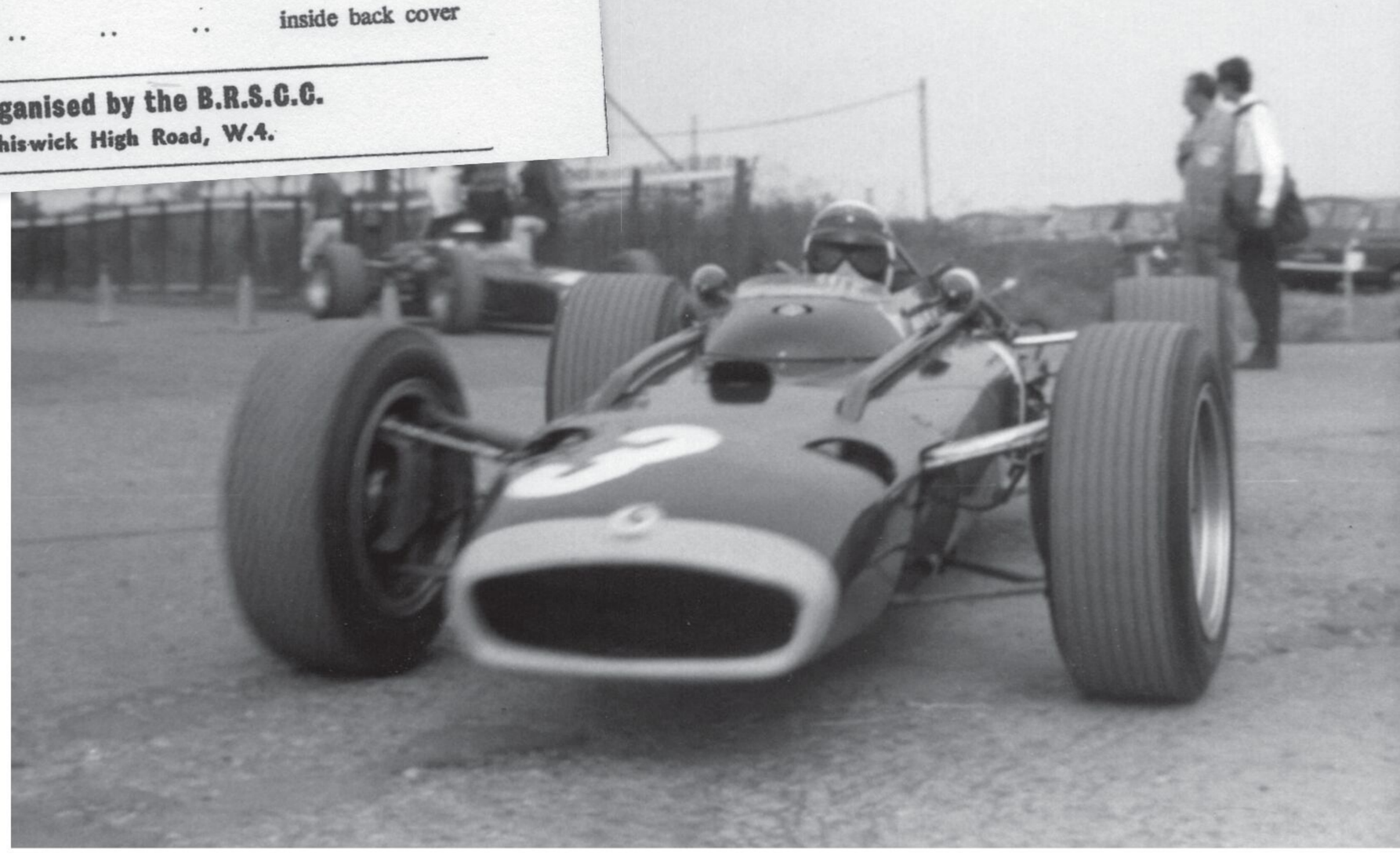
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Above, triple-headers aren't new. In '67 you got two F1 heats plus a final *and* two saloon events. Scarfiotti and Bandini signed Julian's card at the Shell pumps

Left, Graham Hill strides out to his F1 Lotus at the GP, having only had a works Cortina to race at Brands Hatch

Right, four BRMs appeared for the British GP with the unwieldy H16 – and two finished! Sadly for Stewart, his wasn't one of them



JUNE 11, 1988
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Sparks fly as Derek Warwick gets airborne aboard his Arrows-Megatron during practice for the Canadian Grand Prix. Caused after sliding on dirt into the chicane, Warwick's car hit the Wall of Champions hard and he was briefly knocked unconscious. He recovered to race on Sunday, finishing a fine seventh.

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