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68-PAGE SPECIAL

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Starts on p77







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MATTERS OF MOMENT

www.motorsportmagazine.com/author/dsmith

YOU'VE SPENT YOUR LIFE working towards one goal: Formula 1. If you make it, you cling on for as long as it will allow. Sometimes it's all too brief. But if you're lucky – and good enough – it could be years.

Then there are those who don't make it, who barely touch the hem. They know they are in the majority, but that's of little solace. There comes a time of realisation, perhaps even a kind of mourning, and then, hopefully, acceptance that it's time to move on. But to what? Are you hungry to continue racing and find fulfilment in something else? Or do you step away from the cockpit completely and discover a new purpose?

It's an inevitable crossroads for a racing driver, one that is familiar to sportsmen and women in any discipline at any level: when to stop and what to do next.

Susie Wolff reached that point relatively early, at just 33. For her, the F1 goal had been tantalisingly within reach. She never quite made it over the line and on to the starting grid, but she got closer than most. Her years as a test driver at Williams at least allow her to look in the mirror and recognise her capabilities. There's much to be said for that.

But what now? Media work was an obvious route and she's a comfortable fit within Channel 4's F1 coverage – but that's clearly not enough to satisfy her. She has much more to give.

"I knew I wanted to do something after I'd hung up my helmet to help the next generation," she says. The result is a new campaign, launched in partnership with British motor racing's governing body, the MSA. It's called 'Dare to be Different' and it aims to encourage more women to consider motor sport as a career choice.

"The background? I was asked to feature in *Harper's Bazaar* in an article titled 'Dare to be Different'," she explains. "I said although I was flattered, I hadn't dared to be different – I'd just followed a path." That was true. Susie Stoddart, as she was before she married Mercedes F1 team principal Toto Wolff, never thought of herself as different to any other ambitious young racer. If anything, she dared to be the same as the male rivals she came up against. Equality was all she expected.



DAMIEN SMITH
EDITOR

But as the magazine team pointed out, to the wider world a woman in motor racing is different. That's the perception, despite the increasing number of women employed in high-profile roles. Few of them would consider themselves so, but the tagline stuck in Susie's mind.

"So I rang up [MSA chief executive] Rob Jones and the stars aligned," she says. "He'd just returned from a European karting event where there'd been 200 participants and out of that number, just four girls were huddled together. So we decided to join forces and find out what we could do."

The mission statement is 'driving female talent' – and not just behind the wheel. Wolff is at pains to stress this isn't about finding a female world champion, although inevitably the old questions about the capability of women racers continue to linger. "There's no reason why women can't perform, but there are not enough trying for that many to break through," says Wolff on cue (she's discussed this more than a few times over the years). "If you have 100 boys and only a couple of girls it's always going to be a struggle for the few to rise to the top." The stats back her up. Of the 30,000 racing licence holders in the UK, about 1500 are women – only five per cent.

Wolff waves away Bernie Ecclestone's typically enlightened comments on the subject, which ruffled headline writers recently following his 'car-crash' interview with Sir Martin Sorrell. "What Bernie said was taken out of context," she says. "When I was driving I made a point of not getting involved in politics, but now I felt able to call him up and speak to him about it. Very quickly I realised we're actually aligned in our thinking." The 85-year-old is now signed up as a 'Dare to be Different' ambassador.

In other sectors of society, stories are rife that sexism remains malignant, whether it be the quality of jobs female graduates can secure to the salaries they can expect to earn. In the weird world of Hollywood, the divide is infamously wide and outdated. So how does a supposedly testosterone-fuelled business such as motor sport compare?

"The opportunities are out there," says Wolff. "Unlike a creative environment motor sport is performance based." She highlights another of her ambassadors Ruth Buscombe, who is chief race strategist at Haas. The Cambridge graduate, who has a First Class Honours degree in aerospace and aerothermal engineering, has played a key role in the new team's flying start in F1. Buscombe says: "It's so important that we fight the archaic stereotype that women and motor sport 'don't go together' to prevent misinformation and dogma prescribing a subset of career choices for girls."

That's at the heart of 'Dare to be



Susie Wolff wants to help women in all spheres of motor sport. Her supporters include Williams F1 deputy team principal Claire Williams, inset

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Different'. "Being a woman is secondary," says Wolff, "and there's a new generation that accepts that, without preconceived ideas of it being otherwise: people like Claire Williams and my husband. It's happening organically."

The semantics of the tagline can be argued (and has been among women who work in racing). But the ambition is bang on. Post-retirement, Wolff has found her new purpose and is daring to make a difference.

❖

SHOULD WE BE IN OR SHOULD WE be out? The 'Brexit' referendum facing the UK on its future in Europe offers a thorny challenge, its complexity matched only by the last time we were called to the polls on this subject in 1975.

Whether we choose to believe the scaremongering coming from both sides is purely personal, of course. But what's the view in the thriving business of UK motor sport, I wondered? Chris Aylett, chief executive of trade body the Motorsport Industry Association, has an answer after conducting a survey of his members.

"Seventy-five per cent want to stay in, which is on a par with other business surveys," he reports. "The commercial world sees the value in staying in a 'reformed' EU." That highlighted word is key, he says. "The view is that it's better to stay and reform from within rather than standing outside complaining.

"That is the considered opinion of the head, if not the heart."

How much effect being in or out would have on trade is entirely debatable, like everything surrounding the EU. Predicting a Le Mans winner is easier… But Aylett says: "Europe and America are the two largest groups of economic activity in world motor sport, and the UK is the dominant force in Europe. In terms of sales value, Germany, France and Italy are only collectively at the same level as the UK. Our relationship with this mass market is vital to our industry and we are closely engaged in trade, in both directions, with that market.

"Being outside would make this relationship more complicated."

❖

WE WELCOME NIGEL ROEBUCK back this month following his recent illness. As you'll see on page 17, our editor-in-chief is in typically fine form as he reflects on F1 past and present.

We also rub our hands in expectation this month ahead of another Le Mans 24 Hours. Our 'bumper' issue looks ahead to what we consider the biggest race of the year, and naturally casts a glance back at some key races from the past. To mark how special Le Mans is to us, we've produced three covers for this edition, all of which are available, featuring overall race favourites Porsche and Audi, plus the comeback story of the year – Ford and its new GT. Which one did you get? Ⓜ

SEE PAGE 74
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IN NEXT MONTH'S ISSUE

Brands Hatch memories – the riotous 1976 British GP

ON SALE JUNE 2

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18-20 Rosemont Road,
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EDITORIAL
Telephone 020 7349 8484 **Fax** 020 7349 8494
E-mail editorial@motorsportmagazine.co.uk
Editor-in-Chief Nigel Roebuck
Editor Damien Smith
Deputy Editor Gordon Cruickshank
Features Editor Simon Arron
Grand Prix Editor Mark Hughes
Art Editor Damon Cogman
Online Editor Ed Foster
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ADVERTISING
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E-mail sales@motorsportmagazine.co.uk
Commercial Director Sean Costa
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PUBLISHING
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SUBSCRIPTIONS
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THE MOTOR SPORT MONTH

IN PICTURES

APRIL 23, 2016

Rally Argentina

CORDOBA

New Zealanders Hayden Paddon and John Kennard (Hyundai i20) got the better of world champions Sébastien Ogier and Julien Ingrassia (VW Polo) to win the fourth round of this year's World Rally Championship. Paddon's first WRC victory moved him up to second in the standings, albeit 39 points behind the ultra-consistent Ogier. Andreas Mikkelsen and Dani Sordo were third and fourth, for VW and Hyundai respectively.

RED BULL



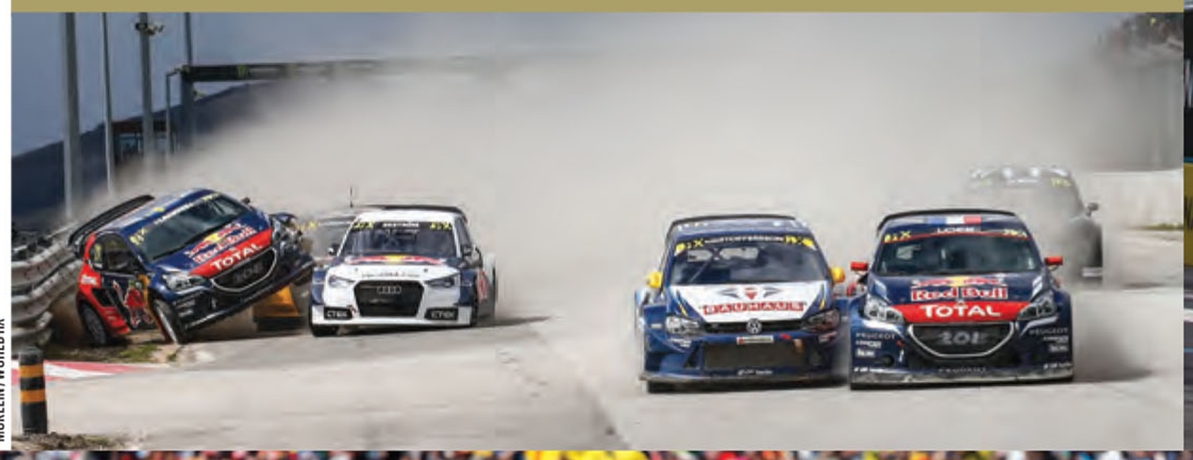
LAT

INDYCAR, BIRMINGHAM, ALABAMA, USA, APRIL 24

Frenchman Simon Pagenaud (Penske) celebrates his second consecutive Indycar victory after a frantic duel with Graham Rahal (RHL). Josef Newgarden and Will Power completed the top four, while Juan Pablo Montoya charged through from last on the grid to take fifth. This was the fourth race of the campaign. Next stop? The Indy 500.

WORLD RX, MONTALEGRE, PORTUGAL, APRIL 17

Sébastien Loeb and Johan Kristoffersson get close at the start of the first semi-final, while Mattias Ekström is launched in the background. Kristoffersson won this race, from Loeb, but they placed sixth and fifth respectively in the first final of the World RX season. Former world rally champion Petter Solberg triumphed in his Citroën DS3.



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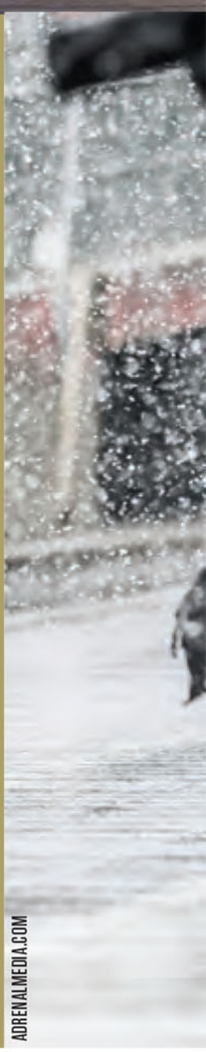
YAMAHA

MOTOGP, JEREZ, SPAIN, APRIL 24

Cheered to the rafters after beating his Spanish rivals in Spain, Valentino Rossi acknowledges the crowd after scoring his first win of the year for Yamaha. In March the 37-year-old signed a contract extension that will keep him with the Japanese manufacturer until 2018. Jorge Lorenzo (Yamaha) and Marc Márquez (Honda) joined him on the podium.

WEC, SILVERSTONE, UK, APRIL 16

Which month is it again? Heavy snow led to a practice session being abandoned during the double-header that opened the European Le Mans Series and World Endurance Championship seasons at Silverstone. It remained bitterly cold after the blizzard stopped, but there was plenty of close racing to warm the spirits of a weekend crowd estimated at 52,000.



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THE MOTOR SPORT MONTH

IN PICTURES

PARIS E-PRIX, FRANCE, APRIL 23
Paris has often been touted as a potential venue for a Grand Prix but, as with London, Formula E got there first. Winner Lucas di Grassi leads the pack on a circuit laid out around the museums and monuments of Les Invalides. Local landmarks included Napoleon's tomb.

LAT

BRITISH GT, BRANDS HATCH, APRIL 17
The British GT Championship began in dramatic fashion, with a long full-course yellow after Aston Martin racer Phil Dryburgh crashed heavily. Once the dust had settled, TF Sport Aston drivers Derek Johnston/Jonny Adam (leading here) won from Rick Parfitt Jr/Seb Morris (Bentley).



SIMON ARRON



FISKENS

FISKENS, KENSINGTON, LONDON, APRIL 25
How the modern world works... Classic car specialist Fiskens rolled a Ferrari 512M into a Kensington mews, to take photographs prior to the car's sale, and a parking warden pounced swiftly to issue a £120 ticket (presumably reduced to £60 if paid within 14 days). The car is expected to fetch about £10 million.

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REFLECTIONS *with*



Nigel Roebuck

>>RINDT'S ARTISTRY REMEMBERED >>THE PROBLEM WITH CVC...

THE FINAL CHAPTER

Pit photos from 1970s F1 are always blessed with a certain ambience, but this one is particularly poignant. Jochen Rindt waits for Team Lotus to fettle his 72 at Monza, where he would suffer fatal injuries in a Saturday afternoon practice accident.

ALL IMAGES LAT

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REFLECTIONS *with* Nigel Roebuck

SATURDAY, SEPTEMBER 5 1970. LUNCHING with friends at a favourite Soho bistro, I was in a state of high excitement, for the following day – by means of a Page & Moy one-day trip – I was going to Monza for the first time, and could speak of little else.

Back in the day there was hardly any TV coverage of Grand Prix racing, and qualifying – or practice, as it was then universally known – was never so much as mentioned. Heading home in the late afternoon, I wondered how it had gone, but as I came out of Baker Street tube station an *Evening Standard* hoarding stopped me in my tracks: 'World's leading race ace dies in crash'. I bought the paper, and there it was: Jochen Rindt, touching the very hem of the world championship, was dead. Back to the flat I stumbled, inconsolable.

Even by the standards of the time, it had been a bad year. In early June Bruce McLaren had been killed in a Can-Am testing accident at Goodwood, and three weeks later Piers Courage died at Zandvoort. Courage had been a close friend of Rindt, and his death strengthened Jochen's resolve to call it a day at the end of the season. First, though, there was a championship to be won.

Next morning I duly flew off to Milan, everyone on the aeroplane speaking of nothing but Jochen. It was a blazing day, and as our coach inched its way to Monza, I saw something I have never forgotten: a red Fiat 500, crammed with an unlikely number of people, and – across its rear window, stuck there with respectful black tape – a simple message: *Jochen non ti dimenticare*. Jochen, you will not be forgotten.

At the circuit, though, no mention of the tragedy was made over the PA, and from my seat in the old stone grandstand opposite the pits the only sign of anything untoward was the sight of Jackie Stewart, dressed entirely in black. Later, after an epic race on what was still a flat-out slipstreamer of a circuit, he finished second to Clay Regazzoni's Ferrari. Formula 1 was strong meat in those days.

I never knew Jochen Rindt, and the more I have talked about him with folk who did, the more I have come to realise what I missed. For me he was the personification of a racing driver, and to watch him through a corner like the old Woodcote was to be reminded of why you had fallen in love with this in the first place: the cars were anything but bolted to the track, and if ever you needed proof that a thousand horsepower – Rindt had perhaps half that – means nothing in itself, that what matters is the right balance between power and grip, you had only to watch Jochen.

When it came to racing cars, he was a purist – why, he didn't even care for wings! For one thing, he considered them dangerous (which, in their infancy, indubitably they were); for another, they made the cars easier to drive, and that went against the grain for one consummately more skilled than most of his fellows. Through his last season, 1970, Jochen was acutely aware of his Lotus 72's fragility, but nevertheless appreciated its superiority. "A monkey," he said, after beating Ickx's Ferrari at Hockenheim, "could have won in my car…"

Although Rindt never had a manager *per se*, he took advice on commercial matters from Bernie Ecclestone, to whom he became increasingly close in the latter part of his life, and Herbie Blash – a Lotus mechanic at the time of Jochen's death – once told me he reckoned there was a strong chance that, were he alive today, he would be running Formula 1 with Ecclestone.

"Yes," Bernie said when I put that to him, "I think that might well be right. We were close enough – we trusted each other enough, respected each other – so probably that's right, yes. I thought the world of Jochen – just a lovely guy, and a *really* bright one, too…"

Over the years, whenever something of real significance or controversy has occurred in Formula 1, quite often I have found myself thinking, 'What would people like Ayrton or Ronnie – or, for that matter, Jenks – have made of this?'

There are, for example, many who find fascinating the endless radio conversations between drivers and engineers, and while I agree it can be diverting to hear a Vettel or Alonso give vent to a particular frustration of the moment, can anything sound more out of place, in the heat of a Grand Prix, than a flat, unemotional, voice requesting that his driver 'Go to setting 497B, please…'?

When Hamilton complained in Melbourne that he couldn't get past Verstappen, he followed up with, "We need a new strategy, guys…" Not exactly gladiatorial, but not uncommon these days, either. We laughed when years ago Max Mosley said he thought of a Grand Prix in terms of a chess match. Perhaps he was simply ahead of his time.

Steps have been taken this year to reduce the 'driving by numbers' aspect of contemporary Formula 1, and that's good – save that it adds another layer to an already ludicrously over-complicated sport, for now the radio conversations need to be monitored, so as to ensure that the driver isn't getting too much stage direction. Just as I think we may be fairly sure of Gilles's response to a Formula 1 in which he was given radio instruction on how to drive his car, so it seems a fair bet that Jochen would have felt the same way. How might things have been in this business now, had he been involved in the running of it?

"WHEN IT CAME TO RACING CARS, RINDT WAS A PURIST"

Different, for sure. Rindt was always commercially minded, highly entrepreneurial in spirit, and he would certainly have savoured the wealth that, in partnership with Ecclestone, would have come his way. That said, from everything I know of the man he was, I somewhat doubt that he would have approved of the thinking which these days pollutes our sport. By this, of course, I mean the suggestion – at a time when spectator attendances and TV viewing figures are plummeting – that F1's fall from grace may be ascribed to domination by one team – oh, and the fact that the cars aren't as noisy as they were.

In their facile attempts to 'sex up' the sport, the powers-that-be bring to mind every cliché in the book, from fiddling while Rome burns to rearranging the deckchairs on the Titanic. And while we're about it, let's throw in not seeing the wood for the trees. As they panic themselves into wholesale changes for 2017, discuss everything from reverse grids to success ballast, they fail to get it that real racing enthusiasts *loathe* anything contrived, that what they crave is a return to simpler times, with fewer silly little rules, with the emphasis on *pure* racing. As Gerhard Berger puts it, "Take Formula 1 back to where it used to be – when people loved it…"

Instead, in their mistaken belief that making the cars way quicker will solve all the sport's problems, the powers-that-be intend greatly to increase downforce – the very last thing, as Lewis Hamilton says, they

Jochen Rindt, pictured en route to victory at Clermont-Ferrand in 1970, was close to Bernie Ecclestone, right



should be doing. This blight has long assailed the sport across the world: the hideously ugly 'aero kits' in IndyCar, for example, have of course increased cornering speeds, but – surprise! – have made overtaking way more difficult than before. At Long Beach the drivers were vociferous in their criticism, but that side of the water, as in Europe, it seems that their opinion is of little account.

Understanding what's going on in F1 these days is like gripping a glass doorknob with soapy hands. Grounded I may have been for the last two or three months, but I have kept in touch with the anarchic goings-on, been aware of all the dissension, yet somehow been curiously unmoved by it – angered, yes, that's a given – but not much moved. Maybe, because it has all gone on for so long, like others I have simply become war-weary.

For a start, who – if anyone – is in charge these days? Bernie? Emphatically not as he used to be. Jean Todt? Give me a break. The F1 Strategy Group? Let's be serious. Dieter Zetsche and Sergio Marchionne? You might be on to something. CVC? Don't get me started…

For countless years this was a question one had no need to ask. Once Ecclestone had bought Brabham in 1972, swiftly taken on board that he and his fellow team owners were being shafted by race organisers, and proposed that in future he do the deals on everyone's behalf, it was inevitable that over time the business would fall into his absolute control – if he acquired inordinate wealth along the way, so also he made others rich beyond their imagining, and dogs don't howl when beaten with a bone. For a very long time Ecclestone was essentially unopposed, his cause in no way hurt when, after a few little difficulties with the FIA, Jean-Marie Balestre was succeeded as president by Max Mosley, Bernie's long-time ally.

Let us say it one more time: as far as the fundamental health of Formula 1 is concerned, the most disastrous event in its history was the sale of its commercial rights by Mosley's FIA to Ecclestone. Not only was this done on what may be called terms advantageous to Bernie, it was also an agreement for 100 years! "Have you ever," murmured Jackie Stewart at the time, "heard of *any* commercial deal for 100 years…?"

This was 2001, and JYS's long-time team owner Ken Tyrrell, nearing the end of his life, was outraged by the turn of events. "You wait," he said in the course of our last 'phone conversation, "in time Bernie'll move the rights on to a bunch of bloody asset-strippers…"

Ultimately, of course, that came to be, but for a while the rights were handed around like a tray of cakes, involving sundry banks, a German TV company and God knows what else, until finally, in late 2005, they passed into the hands of CVC Capital Partners.

If this has put Ecclestone's wealth into the stratosphere, so it has also come at a price, in the sense that while he may still do the deals, his one-time autonomy is gone, for these days he is essentially an employee, and if frequently he laments the advent of what he calls 'democracy' in Formula 1, really he has no one but himself to blame.

In the days when Bernie was a one-man band, he could use his power – and money – as he wished. On occasion, for example, he would take over as promoter of a given race, often to the relief of the organisers, and he would risk his own cash in so doing. "I'd ask the Rons and Kens and Franks to come in with me," he told me long ago, "but they never wanted to take the chance…"

REFLECTIONS *with* Nigel Roebuck

When he reported to no one, once in a while, too, Ecclestone was able to cut an organiser some financial slack, so as to allow his race to stay on the calendar. He made that point during an interview we did at Spa back in 2005: "If this wasn't Spa, there'd probably be complaints about it, because they're always short of money here. But it *is* Spa – a *race* circuit, rather than a Scalextric track…" Ah, but that was then. Within a month or two of our conversation came the announcement that, as Tyrrell had forecast, 'a bunch of bloody asset-strippers' had indeed acquired a controlling share of the sport's commercial rights, that CVC Capital Partners now effectively 'owned' Formula 1.

Even before that happened, though, Bernie was lamenting that times had changed, that he no longer had absolute control. That day at Spa we discussed the debacle at Indianapolis a few months earlier, when – for once – Michelin got it wrong, and turned up with tyres incapable of coping for long with the Speedway's newly 'diamond cut' track surface. Thus the grid for the 2005 US Grand Prix comprised two Ferraris, two Jordans and two Minardis, and although Michelin behaved very honourably, reimbursing angry fans, still there were many who vowed they would never be back.

That weekend, certainly for the first time in my hearing, Ecclestone admitted that he no longer had the power that had once been taken for granted. "In the good old days I'd have sorted it out – most people used to rely on me, but now everybody wants to be in charge…"



CVC might 'own' F1, but Donald Mackenzie is only rarely seen at Grands Prix

At Spa I reminded him of what he said. "Yeah, that's right. The Michelin teams believed the FIA would back down, and put a chicane in before the corner causing the trouble, but that was never going to happen. And not," he added, in a Freudian afterthought, "just because Ferrari was on Bridgestones…

"For one thing, from an insurance point of view the FIA wasn't going to agree to a chicane – what if there was an accident there, and someone got killed? And anyway, if one company turned up with suitable tyres and the other didn't, why should you change things for people who've basically cocked it up?"

This was a very reasonable argument – and it occurs to me that it surely still resonates in 2016, as the powers-that-be – not least Bernie – flounder around with imbecilic attempts to 'fix' the rules, in the hope of compromising Mercedes, which has done a better job than its rivals.

That, since the beginning of time, has been the object of Grand Prix racing. As Jacques Villeneuve recently said, throughout the sport's history there have been exciting races, and dull ones, and to expect anything else is unrealistic. Did anyone contemplate some artificial means of trying to peg back the Mercs in the mid-fifties, when the W196 ruled? Were ever there moves afoot to compromise the supremacy of Clark and Lotus 10 years later, or Schumacher and Ferrari in the early years of this century? Not as I recall – so why now does the spectre of Barnum & Bailey suddenly come into play?

Fifteen years ago you set off to a Grand Prix in the virtual certainty you were going to see a Ferrari victory – and you knew, too, which one it was going to be, for under the iron control of J Todt, Michael's various team-mates were on hand only to pick up any crumbs that fell from his table. Speak to Rubens Barrichello.

At least Mercedes allows its drivers to race each other, as McLaren has always done – but there again Ferrari is a special case: in how many other sports, after all, does one competitor have the right of veto over any rules it doesn't like? Always potentially risky, that ill-advised agreement, and all the more so now with a bruiser like Marchionne in control.

Back to Indy. "In the old days," Ecclestone went on, "I would simply have said, 'Michelin hasn't done a very good job, and because of that we're in trouble – we've got 150,000 people out there, who are going to be super-upset. Why don't we ask Bridgestone if they'll supply everyone with tyres? In the days of Colin Chapman, Teddy Mayer, guys like that, I'd have been able to do it – they'd just have said, 'Bernie, get it sorted…' But with this lot, we've got 'democracy'…"

At the time it amazed me to hear Bernie conceding that his vice-like grip had been loosened, but particularly since F1 passed into the hands of CVC that has been ever more apparent. Consider the matter of TV coverage in the UK: recently it was announced that – with the exception of the British Grand Prix – from 2019 on the races will be broadcast only by Sky.

At a time when teams are struggling to attract major sponsors, when the sport is haemorrhaging fans across the world, this – for all save the money men – is an appalling development. If you doubt me, look at the example of MotoGP, and compare the viewing figures in the 'free' era of the BBC and Eurosport with those of today, when – following the handing over of a huge cheque to Dorna – it is available live only on BT Sport. In terms of F1, many will be unable to afford the monthly Sky subscription, and of course there are many, too, with such a distaste for Rupert Murdoch and all his works that they won't touch it on principle.

Just as at one time he swore blind to me that he would never, *ever*, put on more than 16 races a year, so Ecclestone once assured me that this would never happen: "I'm not stupid – whatever happens in the future, Formula 1 will always be available 'free to air'…"

Ah, but that was before the asset-strippers arrived on the scene, and the sport is now in the hands of folk with no investment – let alone interest – in its long-term future: having very successfully reamed Formula 1 for more than a decade, CVC is looking to get out, and in September Bernie will be 86 years old.

Donald Mackenzie, the CVC chairman, has always been a shadowy figure in this business his company controls, rarely showing up at the races, and keeping a low profile when he does. I have grown weary of folk trying to assure me of his enthusiasm for Formula 1: "Over time Donald's really got to love it, you know," someone said not long ago. "I mean, he's bought one of Jimmy's Lotuses…" That made me feel a little sick. If he loves it so much, why does he allow his rapacious company to run it into the ground?

Still, doubtless the Sky cheque will be eye-watering, and I'm sure Mr Mackenzie's investors are rubbing their hands.

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IF, OVER THE YEARS, ECCLESTONE HAS COME UP WITH SOME quaint ideas for Formula 1 – remember the plan to introduce 'Olympic-style medals' instead of points? – by no means have all been laughable, and one of his best was the qualifying system used in recent years, whereby the hour is split into three mini-sessions, with cars being eliminated along the way, leaving just 10 to fight for the pole on a relatively uncluttered circuit.



"F1 IS A MERITOCRACY – ALWAYS HAS BEEN. IF YOU DON'T AGREE, DO SOMETHING ELSE"

The system was neat, easily understood, and provided plenty of action. Prior to that, if you recall, we had Indy-style one-at-a-time qualifying, and if that works well at an oval, where lap times are short, and spectators have a clear view of much of the track, on a road circuit it sent people to sleep. "I was always against that," Bernie said. "It was brought in to give the small teams' sponsors some TV exposure – in the races they were never on screen, but that was their problem, not mine…"

If, from the fans' point of view, Ecclestone's revised system worked a treat for 10 years, in today's Brave New World it had one serious shortcoming, in that the fastest car tended to start at the front, the slowest at the rear. Thus, great minds went to work, coming up with a new system so asinine and convoluted that not even the TV commentators could understand it. If, with their assistance, we found it near impossible to fathom what was going on, what chance was there for folk actually at the circuit, particularly those out of sight of the pits? In Melbourne Q3, invariably a highlight of any Grand Prix weekend, finished with Sebastian Vettel already changed into civvies and a chequered flag waved over an empty, silent track.

It was literally farcical, and immediately after the session team principals and drivers were unanimous in their condemnation. "We tried it," said Christian Horner, "and it didn't work – we need to go back to the old system immediately…"

That day I watched qualifying on TV, then drove to Goodwood for the wonderful Members' Meeting, highlighted – for me – by the sight of a couple of W196s, driven with some enthusiasm by Mika Häkkinen and Jochen Mass. As I wandered around the paddock, a number of people came up to chat about Melbourne: they, too, had watched the early morning qualifying session. "I've loved Formula 1 all my life," one said, "but this was so ridiculous that in the end all I could do was laugh. The sport's got a death wish, hasn't it?"

Initially, it was decided to revert immediately to the old qualifying system, but then Ecclestone and Todt – for once curiously united – said no, the revised procedure should be given another chance. "This," Todt insisted, "is what the fans want…"

Thus we had more of the same in Bahrain, and it was just as in Melbourne: a joke. Why, in the face of overwhelming criticism from all sides, did the powers-that-be dig in their heels? Well, because they had decided that what F1 needed was a mixed-up grid, and this was potentially a way to achieve it. What it was actually doing was attempting to turn the whole ethos of Grand Prix racing upside down, to penalise excellence, rather than reward it. "F1," Frank Williams said to me long ago, "is a meritocracy – always has been, always should be. If you don't agree with that, go and do something else…"

The great irony of the 2016 season to date is that, amid all the off-track acrimony, it seems to me that the races themselves – Shanghai in particular – have actually been pretty good.

Fernando Alonso recently said that Formula 1 should not be about 'saving' anything, be it fuel, tyres, battery, whatever, that it wasn't terribly satisfying to be driving cars several seconds a lap slower than they used to be. One can well understand his point of view: if the power from the best hybrid engines is now at least a match for the 3-litre V10s so beloved by all who experienced them, today's power units are extremely heavy, so that the all-up weight of a contemporary chassis is, as Martin Brundle has said, "More sports car than Formula 1…"

All that said, if we can set aside for a moment all the paddock bickering, the vested interests, the unsavoury deals, the greed of CVC, the machinations of the wretched F1 Strategy Group, I continue to believe that – once the cars get out on the circuit – there remains much that is good about Formula 1 in 2016. For example, although I was one of many to regret that Pirelli, rather than Michelin, got the nod to continue as Formula 1's solus tyre supplier, and I well understand the drivers' frustration with the near 'road car' tyre pressures imposed on them these days, still there is no doubt that the choice of three compounds, rather than two, and the freedom to decide in advance which to use – and how many sets of each – at a given race, has done much to liven up proceedings.

And there have been some surprises this year. I'll confess that, after Nico Rosberg's three consecutive victories at the end of last season, when Hamilton was off the boil after clinching his world championship, I rather expected Lewis to be back in charge from the first race on, but such has not been the case, and even more surprisingly – given that Nico, driving beautifully, has racked up another hat-trick – his disposition has been outwardly sunnier than we have seen for some time.

Ferrari, as expected, has narrowed the gap to Mercedes, but not completely closed it, and clearly this is on Sergio Marchionne's mind: "I think the team knows the clock is on," he said in Shanghai. "We

need to fix this – now…" It came across like a line from *The Sopranos*.

Compared with the Luca di Montezemolo era, these are indeed very different days at Maranello – there is nothing of the dilettante about Marchionne – and, however much he may protest to the contrary, Alonso must surely regret he is not there to benefit from them. Ultimate reliability apart, there is not much awry with this year's car, as evidenced by the rekindling of Räikkönen's long-dormant enthusiasm. One trusts that Marchionne will not demand a rebate on Kimi's salary cheques from 2014 and '15.

An immutable rule of F1 is that the longer the fundamental rules remain unchanged, the more the pack closes up. In the 'hybrid' era Mercedes may have had things all its own way for a couple of years, but if the team retains an advantage in this third season, Ferrari is increasingly a threat, Red Bull is coming up on the rails and the midfield positively seethes. The season looks intriguing.

That said, there remains this blind determination to change everything for 2017, to bring in cars with far greater downforce, to the sure detriment of *racing*. Madness, if it happens. If you want to make the cars quicker in a constructive way, to sidestep any question of 'cruising', increase – or scrap – the fuel allowance for a race.

Let me finish with a quote or two. "You sit 10 competitive people down, from different teams, and you ask them to find a way to solve a problem, and they all think, 'What's good for me, and bad for the others?'

"You need a dictator, really. Colin Chapman used to say, 'Do what you want with the regulations, but I need two years' notice of what they're going to be, and then you can't change them for a few years, OK? Then I'll decide if I want to be in the championship or not'.

"As soon as you write a regulation, it costs a fortune to get round it. If you kept the same regulations for five years, whatever anyone came up with, the rest would soon know about it, so it'd be difficult to get an advantage. It's only when you change the regulations that people get an advantage – because the rich teams can react quickly – so that's why it's best to keep them stable…"

This was Bernie on my tape in 2005, and what he said then was right on the money. I suspect that Jochen, the racer pure, would have agreed.

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ANOTHER DATE FROM THE DISTANT PAST: NOVEMBER 11 1997. We were in Colnbrook for a press conference with FIA president Max Mosley, following the World Motor Sport Council's deliberations into Michael Schumacher's collision with Jacques Villeneuve in the European Grand Prix at Jerez. "The World Motor Sport Council," Mosley began, "has come to the conclusion that, although the act was apparently deliberate, it was instinctive and not premeditated."

No one said a word, but many an eye rolled: already we could see how this was going to go. As Damon Hill – who knew whereof he spoke when it came to incidents with Michael – pointed out, surely what you do instinctively is *avoid* an accident, not cause one.

"The WMSC," Max went on, "has given careful consideration to banning Schumacher for 1998, but has concluded that to do so would be futile, because there is no driver who would not be ready to accept a ban in 1999 – if he could win the championship in 1998. It would not be a deterrent in any sense. The WMSC has therefore decided to exclude Schumacher from the results of the 1997 world championship. That is to say, his race results remain, but he will not feature in the 1997 championship."



Schumacher's Ferrari carries the scars of battle after his '97 Jerez brush with Villeneuve

SUTTON

"EVEN BY MOSLEY'S STANDARDS, THIS WAS PUSHING IT A BIT..."

Even by Mosley's standards, this was pushing it a bit, but surely there was more to come: what was Schumacher's *punishment* to be? Plainly he had tried to take Villeneuve out, and many had thought that only some sort of ban was appropriate, but the WMSC had decided that would be 'futile'. Plus, of course, bad for business...

"In addition," Max continued, "the WMSC considered imposing a fine. It discussed, however, with Schumacher the possibility of his participating in a road safety campaign the FIA is mounting in 1998, with the European Commission. He immediately agreed to take part. Accordingly, there will be no fine, there will be exclusion from the 1997 world championship and Schumacher has agreed to participate in our road safety campaign..." The momentary stunned silence was broken by a trenchant voice to my immediate left: "Excuse me," Alan Henry said. "Is this April 1?"

At that the room erupted into laughter, and even Mosley struggled to keep a smile from his face. It was a typically irreverent 'AH' moment from one who made me laugh as much as anyone I have ever known.

My dear old friend died on March 3, and if this were not wholly a surprise – he had been ill for some years – still it was a shock to all who knew and loved him. For countless years a small band of us – Denis Jenkinson, Eoin Young, Maurice Hamilton, Alan, me – travelled to the races together, and rejoiced in each other's company. They were good times, and as I have long missed Jenks and ESY, so I shall AH.

The timing of his death struck a particular resonance with me, for it came within a few days of my returning home from hospital, following a brush with The Reaper early in February. After a few weeks of convalescence, I'm happy to say that I'm feeling well, pleased to be working again, and looking forward to going to Barcelona, then to Indianapolis and Montréal.

In the meantime, I have been overwhelmed by the cards and messages and gifts I have received not only from the racing community but also from well-wishers outside it, most of whom I have never met. Inadequate as it feels, to every one of you I offer my grateful thanks. M

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F1 FRONTLINE *with*



Mark Hughes

>> THE RULES FOR 2017... AND BEYOND >> WHY RED BULL MIGHT WIN THIS YEAR

SIX OF THE BEST

Nico Rosberg's victory in China maintained his unbeaten start to the F1 season and extended his winning streak to six. With Mercedes team-mate Lewis Hamilton delayed by a first-corner clash, after starting last, the German opened up a 36-point championship lead.

LAT

F1 FRONTLINE

with

Mark Hughes

ALTHOUGH THE FIRST few Grands Prix painted a picture of continuing Mercedes domination, things are afoot that will probably make this a far less one-sided season than those of 2014 or '15. An inopportunely timed safety car might well have cost Ferrari victory in Melbourne, a Kimi Räikkönen startline error maybe lost it another in Bahrain. Then there's Red Bull. Here's an observation made by Williams' Pat Symonds: "We can see from GPS just how staggeringly quick the Red Bull is in slow corners – definitely faster than the Mercedes."

While it's true that the Merc's aero excels in the higher speed sections and has a superb spread throughout the speed range, it's probably also true that its power unit superiority is playing the largest part in keeping it ahead of Red Bull. That has also been so for each of the past couple of seasons, but the difference this time is that there is genuine excitement about what Renault Sport is set to deliver in time for Canada. An extra 30bhp on top of a similar gain made over the winter should put the TAG-labelled motor within 20bhp of the Merc (assuming the latter is not about to make another big jump), and with perhaps more to come. That should get Red Bull somewhere very close to performance parity – and the prospect of three teams fighting over race wins in the season's second half seems realistic.

As the hybrid formula matures, so the performance is beginning to converge, as would be expected. But the process has needed some help, such was the enormous lead Mercedes HPP established at the first time of asking.

'Convergence' is one of the four objectives set by the FIA to the engine manufacturers (along with price reduction, guaranteed supply and an increase in noise). They have to agree a way between themselves of limiting the difference between them to no more than two per cent by 2018. Based upon the current Mercedes – believed to be topping out at about 960bhp – that would mean the least powerful having a deficit of no more than 19bhp. In other words, about where Renault is set to arrive at in Canada. As things stand, from Canada onwards only Honda will not be within the convergence limit set for '18, but it might well have arrived there by later this season.

It raises the question why an artificial limit is needed at all. Is turning the engines back to the status of plug-in components that don't have the potential to make a difference – as was the case in the engine-frozen V8 era – really what we want to see? Is the idea of a bunch of manufacturers getting around a table to make sure they all have engines as good as each other really what a sporting competition should be? Even before we arrive at the convergence requirement, there will be a freeze on a key part of the hybrid technology. Neither batteries nor ERS components will be allowed to be any smaller than the best of the current units – thereby ending a key area of technology gain.



If Renault delivers on its engine promise, Red Bull could challenge for wins this year

REDBULL

STRAIGHT talk

Why Merc's winning start didn't necessarily tell the full story...



Read more from Mark about Formula 1

@ THE MOTOR SPORT WEBSITE

In getting to within sniffing distance of Mercedes power, one of the key breakthroughs made by Ferrari last year – and believed to be what's behind the big improvement in the upcoming Renault – was the adoption of trick new combustion technology. In the case of Ferrari at least, this has come from 'turbulent jet ignition', a new technology separating combustion into a pre-chamber and main chamber that allows huge efficiency gains. When applied to road cars it promises to deliver diesel economy in a petrol engine. When applied to F1 it makes a much bigger bang. It's clear there has been some cross-pollination of ideas – with Mercedes said to have provided help to its rivals.

But rather than require everyone to be equal by regulation– and thus taking a fascinating dimension out of a multi-dimensional competition – what about requiring every engine manufacturer to make its engine available for inspection to an engineering body at the end of each season, with the results made public in a paper? That way, the technology would spread and we would be able to explain to the world at large just how these fantastic leaps are being made – rather than desperately trying to eke out secrets from competitive engineers.

We presently have a closed shop sharing secrets with each other but keeping out everybody else, which is surely the worst of both worlds. Ⓜ

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F1 FRONTLINE
with
Mark Hughes

What will F1 do next?

Harmony has long been an alien concept in Grand Prix racing – and its current absence makes the short-term future ever more uncertain. Here are the hurdles that must urgently be negotiated

AS A MICROCOSM OF WHAT IS HAPPENING in the bigger world, Formula 1 is being hollowed out as the monetary gap between the factory teams and the traditional independents grows. This in turn is neutering the racing even though those factory teams are making some amazing technology breakthroughs in the hybrid turbo engine era. As we pointed out in the F1 Revolution feature two years ago, that basic dysfunction is what has created the various problems F1 is facing – and the artificial band-aid solutions that have been applied.

There are three power factions within F1 – the leading teams that sit on the F1 Commission, the commercial rights holder and the governing body. For the purposes of analysis, they can be embodied as Sergio Marchionne, Bernie Ecclestone and Jean Todt respectively. They each have conflicting interests and thus widely varying visions of the sport's direction as it closes in on 2020, when the current commercial agreement between the teams and F1 expires. As such, they are acting in their own interests rather than as a group and any action that is attempted by one is invariably neutered by the other two forming an alliance against

them. This alliance varies according to the issue in question – sometimes Ecclestone and Todt against the teams, sometimes the teams and Todt against Ecclestone, occasionally even Ecclestone and the teams against Todt. Within the team grouping there is rarely accord, either, and this is regularly exploited by Ecclestone in furthering his own agenda. But the outcome is the same regardless: a dysfunctional state of suspended animation. The recent farcical situation regarding the qualifying format of the first two races – when F1 went into a second race using an ill-considered new system that had proven disastrous in the opening event – was just an outward manifestation of this, a symptom. It is in part what led the Grand Prix Drivers Association (GPDA) to issue a statement between the Australian and Bahrain Grands Prix saying, among other things, "The decision-making process in the sport is obsolete and ill-structured and prevents progress being made. Indeed, it can sometimes lead to just the opposite, a gridlock."

HOW DID WE GET HERE?

The virus was planted in the early part of this millennium, when Max Mosley extended F1's commercial rights to Bernie Ecclestone for an extra 100 years. With Bernie licensed to sell those rights to the highest bidder, the 100-year deal hugely increased their value. Bernie eventually leased them out to CVC, the private equity company that has held a controlling share of the sport for 11 years – and slowly strangled it, taking huge profits out if it, exploiting rather than investing. Which is in the nature of private equity companies and why they are a wholly inappropriate type of owner for a complex sport that is constantly evolving and requiring careful management and investment.

Max and Bernie used to act as one and the teams were not empowered in the decision-making process. That led to a revolt by the teams in 2009 and, indirectly, the standing down of Mosley from office. Now the commercial rights holder and the FIA no longer operated as one and, to dilute the power of a governing body that no longer had his ally presiding, Ecclestone exploited the FIA's financial stress (caused partly through Mosley having set up the FIA Foundation) by cutting a deal with new president Jean Todt. This divested some of the FIA's power between Bernie and the teams in exchange for the FIA receiving a bigger income from F1. Todt correctly points out that the formal system of governance has not changed since he came to power – in that the various groups propose things to the F1 Commission, which then votes and the result is then rubber-stamped by the FIA World Council – but the composition of the F1 Commission and the sway the leading teams hold has changed. This is what has seized the sport solid. Ecclestone essentially brought the leading teams further into the voting process precisely so he had a group with which he could align against the FIA when necessary. But of course those alignments can also work against him – and have.

Bernie has progressively lost power over the years. First, in selling to CVC; flawed financial deals are no longer solely within his remit to correct. Second, in the loss of his ally Mosley from the governing body. Thirdly, in his attempt at countering that, the potential for the teams to ally with the FIA to thwart him. Fourthly, the rise in political power of the manufacturers brought by the complex hybrid engines.

Concurrently, the outside world had imposed its own stresses on the sport. Mosley's initiative of aligning automotive research and development on hybrid engines with F1 brought about the current turbo hybrid formula – at considerable expense. The timing of this was unfortunate in that long-running repercussions of the global economic crash of 2008 had imposed big financial pressures upon the teams. But the big teams, by their very size, were committed to big spends. So they forced F1's owners to relinquish more of F1's income (from TV revenue and race-hosting fees) to feed their vast facilities. They did this through deals cut with Ecclestone that vastly increased their F1-sourced income. Which left less for the small, independent teams. The independents essentially subsidise the big teams, while allowing CVC to continue taking vast revenues from the sport. Meanwhile, Caterham has gone and Sauber, Force India and others are in a seemingly permanent state of financial crisis.



LAT

The hybrid formula had another unintended consequence. Because of their complexity and the huge R&D necessary to devise them, they cannot feasibly be made by independent engine suppliers. Hence the increased political power of the representatives of those manufacturers making them – Ferrari, Mercedes, Renault and Honda – over Ecclestone. He cannot reduce their political power by reducing their competitiveness because a) unlike in Mosley's day, the FIA will no longer sanction rule revisions that Bernie would seek to achieve that and b) he cannot offer the non-factory teams a competitive engine that would loosen the manufacturers' hold.

Ecclestone has thus formed a close alliance with the only non-manufacturer major player – Red Bull. Their mutual interest in neutering the power of the manufacturers is obvious. This has only increased the belligerence of the manufacturer group – or rather that of its de facto head, a new Ferrari boss, Marchionne, determined to play hardball. As well as invoking Ferrari's regulatory veto, he's made it clear he'd be prepared to go legal should Ecclestone and Todt, for example, try to push through the 'independent client engine' and the associated balance of power equivalency for which Bernie has been pushing.

That's two sides of the power triangle. The third – Todt – has adopted a passive attitude, as he feels he has no choice, and so favours neither one nor the other of the two sides, thereby prolonging the gridlock. "I am not a dictator," he says. "The day of the dictator has passed. I have been entrusted by 250 FIA members to be president.

I cannot allow myself to have the FIA sued and lose. We see in much more important matters than sport what is happening to dictators today. It always fails. We have a governance and as long as I am president I will follow it. Is the governance good? That's a different question. No, it is not good. But it is what we have until 2020."

All the above is necessary background information in understanding the crossroads at which F1 stands and where it might be heading.

THE CONFLICTING VISIONS

1) FACTORY F1 TEAM

Marchionne's vision would be for a sport owned by the competing manufacturers, probably with Ferrari as the central stakeholder. Anything which prises away control from CVC and Ecclestone would almost certainly find favour with him. Already it's being rumoured that in the next three-four years he will retire from his role at Fiat-Chrysler to concentrate on establishing a new F1 commercial entity.

This F1 would likely continue with hybrid engines, would lead to small independent teams being replaced with associated satellite operations, not necessarily factory-owned but using hardware produced by the factories – very much along the lines of the current Haas team.

It would be an F1 run via a conventional corporate structure, with experts heading the relevant key roles of racing, finance and marketing. It would likely be technologically rich as manufacturers could justify participation as part of their research and development budgets. As such, regulations might be expected to be framed around power efficiency and drag reduction. There could be manufacturer-supplied budgets for full research into subjects such as aero regulations that would produce raceable cars. The fastest would not constantly be reined in, in the interests of artificially close competition. If someone found an advantage, it would require the others to catch up.

It would be professional and well run, but the long-term sustainability of such a structure must be questionable. The history of factory-controlled championships is a dire one of boom and bust, right from the mass manufacturer pull-outs of grand prix racing in 1908 and 1928, through to sports cars, rallying and touring cars in more modern times. Once a manufacturer is finishing last repeatedly, spending huge budgets on so doing, it tends to pull out, leaving someone else in the depleted field to finish last – and the process is repeated until the category implodes from its own top-heaviness. Different manufacturers would assign different budgets to being competitive and that's a crucial fault line that always ends in withdrawals. A category is much less secure if it is not largely populated by teams whose only reason for existing is racing.

2) RED BULL-ECCLESTONE INDEPENDENT F1

Ecclestone has reportedly suggested to Red Bull's Dietrich Mateschitz that they should form the Red Bull Grand Prix World Championship for loud, normally aspirated cars with an independent engine supplier.

It would be immune from the automotive world's R&D direction, and would be self-financing through TV deals and race-hosting fees.

Either Red Bull and/or Bernie would purchase CVC's controlling shares – or it would separate from the official FIA F1 world championship. The rules would regularly be tweaked to make it as competitive as possible, but it would primarily be an aerodynamics-dominated category with engines equalised in an attempt at a modern recreation of the DFV era. Any automotive manufacturer supplying engines would have to be prepared to supply as many as required to the independents at a set price. In theory it would be a more sustainable championship than the manufacturer vision. But it implies all the charges of manipulation levelled at the current era of F1 and would be technically sterile outside of aerodynamic innovation.



PIRELLI

THE CURRENT ISSUES

TYRES: THE PIRELLI EFFECT

Ecclestone's favoured tyre supplier Pirelli is so because it has been open to providing a tyre to produce whatever he has requested. So since 2011 it has been providing heat-degrading tyres that do two critical things. 1) They reduce how much extra performance can be found from downforce. Because the tyre is easily 'saturated' by the demands put upon it, it limits the lap time advantage of an aerodynamically superior car. 2) They encourage diversity in race strategies.

But what they have also done is turn the racing on Sunday afternoons into endurance-style contests where drivers have to run as much as 3sec off the pace in order to make the stint lengths required to minimise total race time. Run any harder than that and the heat-degrading composites within the rubber fry, permanently hardening, drastically reducing rubber flexibility and tyre performance.

This has become deeply frustrating for the drivers and is – together with aerodynamics unfriendly to wheel-to-wheel racing – behind the GPDA's voicing of its concerns about F1's direction.

For 2017 the FIA has tasked Pirelli to come up with a bigger tyre – to increase mechanical grip – that does not feature this heat-degrading mechanism, that is not permanently destroyed when pushed hard and simply degrades with wear in the conventional manner. It has also been asked that the tyre can be safely operated at pressures close to those of the performance optimum unlike at the moment, when Pirelli imposes super-high minimum pressures in order to keep excessive loads off the outer shoulder. However, time is running out to test such a tyre adequately and it would be accurate to say not all the teams are confident that

Pirelli will be able to deliver. The challenging set of demands placed upon Pirelli and the lack of progress in getting what it needed had it threatening – between the Bahrain and Chinese Grands Prix – to leave F1 altogether at the end of this year. Or possibly even sooner…

Looking back to our F1 Revolution feature, it has at least been acknowledged that the idea of having drivers deliberately driving off the pace is fundamentally wrong. That's progress of sorts.

2017 CHASSIS REGULATIONS

On Ecclestone's initiative, the F1 strategy group was last year tasked with devising aero regulations that would make the cars faster and more demanding to drive, to eclipse the qualifying records of the old V10 cars of more than a decade ago. It was a typically F1 piece of unconnected policy. Much of the previous few years had been spent finding ways to make their aerodynamics more overtaking-friendly, which is why they'd become slower.

The strategy group proposed wider cars (2 metres, up from 1.8, taking it back to where it had been pre-1998) and bigger tyres. After discussion between the teams about bodywork regs, three different proposals were considered. In ascending order of downforce, they were the proposals of Williams, McLaren and Red Bull. As things stand, the strategy group is set to recommend the McLaren proposal. Mercedes believes even this will be excessive, that it will generate too much downforce, that the wider cars will force the teams to build them longer too (in order to keep the current aero balance), making them even heavier and more truck-like, placing even more demands upon tyres that they do not have faith in and making overtaking even more difficult.

"I think we should leave the regulations alone," said Toto Wolff in China. But, the way F1 is structured, doing nothing is not on the table. Just as with the change to qualifying procedure, once the strategy group has been charged to come up with a proposal, the mandate is followed – and the proposal must be made. An unofficial show of hands was recently taken between the teams – and eight out of 11 favoured leaving the chassis regs as they are. But it's happening anyway. Because that's the governance…

Red Bull is happy for the change to come – as it believes it will give it greater scope to beat Mercedes. "Mercedes doesn't want to change because it has an advantage with these regulations," says Christian Horner.

In the proposed '17 regulations, the relationship between the wheels, bodywork and front wing will force teams to prioritise airflow outboard of the front wheels. The Williams proposal would have made it advantageous to send more of the flow inboard and through the underbody. This would have given a much cleaner wake, and thereby less turbulence for the car behind. Red Bull's objection to this was that it would make drag from the wheels a much higher proportion of the total – and therefore would more heavily favour cars with more power over those with less…

Mercedes' estimate of the drag is only one-third of what Red Bull expects. It's fair to say, this has not been at all well researched, that most do not want it, but it's happening anyway. Agendas are at play.

As we said in the Revolution piece, the ideal aero configuration requires a huge and lengthy research programme. What we are set to get in 2017 – still with stupidly intricate front wings very prone to losing a lot of performance in turbulent air, a wake that is more turbulent and shorter braking distances – will probably make the racing worse. Most teams know this and don't want it.

ENGINES: THE SOUND OF SILENCE

Here's the most divisive topic of all. Fans don't like the noise, and Bernie has inflamed this view because it meets with his agenda of reducing the clout of the manufacturers. Plus they are too expensive for the independent teams, given how little of the prize money they receive even if they do well. Rather than increase the money paid out to the small teams (which would cost CVC), Ecclestone had allied with Todt on this issue to attempt to force the manufacturers to sell the engines at a pegged price of €12 million (currently between €18-24 million) from 2018, to make proposals that will reduce performance disparity between the four engines and to guarantee a supply for any team that needs it (the apparent Red Bull engine crisis of last year underlining this very conveniently) and to increase the noise.

Ecclestone's client engine proposal (a simpler, bigger, cheaper engine with a balance of power equivalency factor that would make it competitive with the best of the hybrids) enlisted Todt's provisional support. But as soon as the manufacturers agreed in principle to come up with an answer to the four tasks listed above, Todt dropped his support of the independent engine, much to Ecclestone's dismay.

The four-part assurances had to be incorporated into regulation by the end of April (after the time of writing). If no agreement is forthcoming – and, Horner maintains, "They are nowhere close" – then the independent engine comes back onto the horizon. And possible legal action from Ferrari.

> "THE DEMANDS PLACED UPON PIRELLI HAD IT THREATENING TO LEAVE F1 AT THE END OF THIS YEAR"

WHERE IS IT ALL GOING?

Impossible to call. Maybe as Ecclestone suggested in Bahrain: "In times like this you need a coup." But against who, and by whom? It feels as though there is too much discord to stumble on for another four years, when the current commercial agreement ends, feels like something will break – and send F1 into emergency mode, breaking the stalemate. As Todt said, "If there is accord between the three parties we could rip up the agreement tomorrow."

Perhaps a Pirelli pull-out might trigger it. Or the planning of an alternative championship. Or the sale of CVC's shares to someone with a more holistic vision of what's required. But although Ecclestone's past actions are in large part responsible for the current mess, in many ways his proposed vision looks more realistic and achievable than the alternative, even if it's from the moral low ground. The manufacturers' vision looks likely to lead only where manufacturer championships always end up – dead. Out of the ashes, an F1 more akin to what we outlined in the Revolution feature might rise. Ⓜ









top left: 1955 AC Aceca. *top right: 1956* Jensen 541L. *lower left:* 1962 Jaguar E-Type S1 3.8 L Coupé, *lower right:* 1979 Ferrari 308 GTS

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F1 FRONTLINE
with
Mark Hughes

GRAND PRIX NOTEBOOK

BAHRAIN & CHINA

FERNANDO ALONSO HAD INITIALLY SHRUGGED OFF THE small discomfort he felt after his heavy Melbourne crash. But when he got home the following Monday, the pain had increased. With the Bahrain Grand Prix just a few days away, a scan in Spain showed two cracked ribs and a small pneumothorax (an uncoupling of the lung from the chest wall). It was nothing serious, the doctor insisted. It would all knit back together soon enough and if he could manage the pain, there was no imminent danger, no reason why he couldn't fly to Bahrain or race when he got there.

He would, however, require clearance from the FIA doctor at the meeting, Jean-Charles Piette. So on Thursday morning in Bahrain Fernando presented himself. Piette looked at the scans Alonso had brought with him from Spain. He disagreed about there being no risk. It was slight, perhaps, but there – that if he suffered another impact, the cracked ribs and the uncoupled lung might collide, with potentially very serious implications. He refused to sign him off as fit to race.

Which suddenly presented McLaren with a problem, of course. In the days between the races it had no reason to believe Alonso's fitness might be in doubt. Its reserve driver, the hugely promising reigning GP2 champion Stoffel Vandoorne – who had been present in Melbourne – was in Japan testing his Super Formula car in preparation for his season there. Now he had to be recalled suddenly to make his Grand Prix debut. He landed in Bahrain early Friday morning after a 13-hour flight. First practice for this evening race was 2pm. Although he had not tested the actual MP4-31 before, he knew it intimately, had spent hours driving a representation of it on the simulator – though not at this track. His GP2 record here is pretty good though – three wins from four races.

The Belgian is six years older than Max Verstappen, but his potential is similarly vast. The longer years reflect a relatively late start in the sport and a family unconnected with racing, not in a position to assist financially with his career. The Royal Belgian Automobile Club picked him out as a young kartist to give him his break – and he's dominated pretty much every junior category he's contested. He won on his race debuts in the World Series by Renault and GP2 and, although he lost out to fellow McLaren junior driver Kevin Magnussen in the former series, he was effectively one year behind in experience. One driver coach with decades of experience describes his car control as, "The best I have ever seen – from anyone." Ironically, there was a time when he shared management with Jenson Button, via Richard Goddard, but as Vandoorne came up through the McLaren ranks a conflict of interests was some day clearly going to develop. Which is when Button split from long-time manager Goddard to look after himself, while the latter concentrated on Vandoorne.



It was Button who last year conducted his own negotiations with Ron Dennis about whether McLaren would exercise its option on the second phase of his two-year contract. Contractually, McLaren could have chosen not to – in which case (the much cheaper) Vandoorne would have slotted in as Button's replacement. But if it chose to take up the option, contractually McLaren had to pay Button the pre-agreed sum – believed to be double the $6 million he was paid in 2015. It's fairly typical to 'back-load' multi-year contracts in this way. From the team's perspective, if the driver underperforms it won't have cost them as much. Dennis used brinkmanship in the negotiations, threatening to exercise the break point that annulled the contract by a set date last year – and then to renegotiate. Button played hardball, said that if he wished to use the break point to end the contract, that was Dennis's prerogative…



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"VANDOORNE IS SIX YEARS OLDER THAN MAX VERSTAPPEN, BUT **HIS POTENTIAL IS SIMILARLY VAST**"

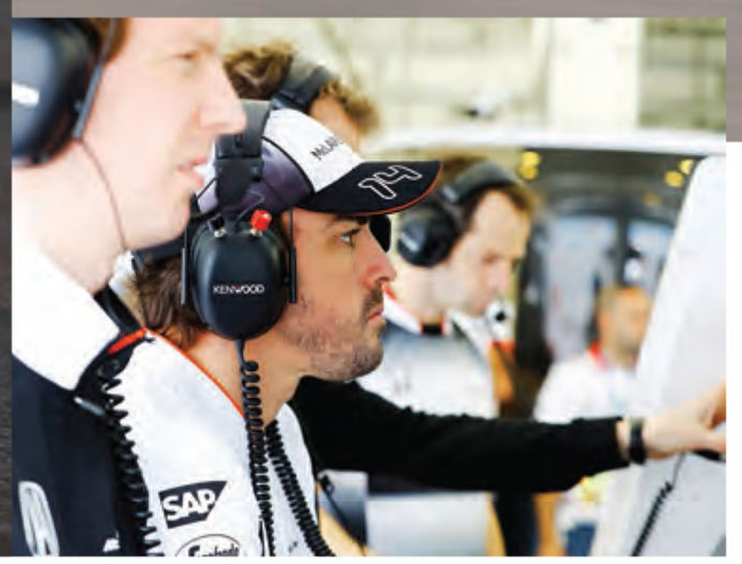
ALL IMAGES LAT & MCLAREN

F1 FRONTLINE

with

Mark Hughes





Vandoorne built up his speed in Bahrain, as Alonso (right) watched. Above, the Spaniard raced again in China

but that if he drove for McLaren in 2016 it would be for the already contracted sum. Button got his way and Vandoorne remained on the sidelines. But for 2017, Button has no contract. Alonso's has another year to run. Essentially, Button and his former protégé Vandoorne might potentially be fighting over the 2017 McLaren seat – and now here was Stoffel on his F1 debut, going head to head with Button. It wouldn't just be the outside world that would be keenly monitoring the comparison.

Magnussen, now racing at Renault, had no doubts when asked if he thought his former rival could run at Button's pace on his debut: "I think he can," he said. "Maybe with the radio ban there might be more he has to remember, but in terms of driving the car, doing the race and being fast I'm sure it'll be no problem."

McLaren put him on aero data-gathering duty for the first few laps, just playing him in. His subsequent practice laps were contained, just filling in his data banks. Button, on a different programme, was revelling in the balance of the MP4-31, especially on the super-soft tyres he tried in second practice that evening. The Honda's all-out power shortfall to Mercedes is still in the region of 100bhp – but not for the whole lap. It can now harvest and deploy its electrical energy in a way that could only have been dreamed about last year. On the low-fuel runs in practice two, Button's name suddenly popped up in third place. Yes, it was probably on a lower fuel than most others, but the prospect of the McLaren-Honda getting through to Q3 for the first time seemed real.

Whether coincidence or not, it was at this point that Alonso expressed an interest in trying to overturn the FIA doctor's decision. That evening he and Dennis took a walk down to Piette's office… Alonso performed a series of press-ups in front of the doctor, insisted he had no physical symptoms. It would be fair to say that Ron finds it difficult to communicate in a benign way with anyone opposing his



viewpoints. The discussion with Piette didn't go well and Alonso remained sidelined.

"We have call on the leading world experts," said Dennis later, "and based on the scans two sets of doctors cleared Fernando to drive. Fernando felt aggrieved and we thought it right to ask the FIA if it would consider clearing him if he had new scans made. They said no. Racing is data-driven and we felt there was no data supporting that decision. I didn't think it was appropriate that they would not re-evaluate if presented with new data, felt that it was a bit unreasonable. Though we have to live by it, I don't think the FIA has the ability to field every single expert in this domain."

Vandoorne's seat was thus safe for the weekend and Ron wouldn't be making a career switch to the diplomatic corps any time soon.

Into Saturday Vandoorne began to push harder. Through the middle sector – the fast downhill sweeps and hard downhill braking into the hairpin, he was acing Button, but losing out by slightly more in the first sector. They were almost identical in the third. The car was hovering just outside the top 10. This was the pattern in practice three. Into qualifying Vandoorne locked up into Turn One and almost dropped out in Q1 in the second running of the controversial elimination-style qualifying. But escaping that, he made an inch-perfect yet aggressive lap in Q2. Button, feeling some understeer in Q1, had some front wing added before his Q2 lap and could feel as soon as he got out there it was too much – the car was now oversteering and by the beginning of the flying lap its rear tyres were already too hot. The resultant lap was 0.15sec slower than Vandoorne's, the McLarens lining up 12th and 14th. Adding their best sectors together, Button would have been a few hundredths faster, but it was Vandoorne who'd succeeded in hooking up those sectors when it mattered. The battle might have continued, except there were no more fresh super-softs – reflecting the fact that the original allocation had been made when McLaren wasn't expecting to be contending for Q3. To a CV showing multiple championships in junior categories, he could now add outqualifying a world champion team-mate at the first attempt in F1.

In the opening seconds of the race, the McLarens came perilously close to hitting each other amid the confusion sown by a Turn One collision between Lewis Hamilton's pole-sitting but slow-starting Mercedes and Valtteri Bottas' Williams – an incident that paved the way for a comfortable Nico Rosberg Mercedes victory – and it was Button who came out three places ahead, running 10th. Six laps later Button felt a sudden loss of power. The ers had failed, the engine cut out altogether and Button pulled off beneath the floodlights. Button seemed keen afterwards to highlight the race he'd lost out on – and by inference the comparison with a tidy but unspectacular drive into 10th place for Vandoorne. "I was running comfortably," said JB, "saving a lot of fuel, my tyres were in good condition, and I was just cruising behind the cars in front. We were going to try something a little bit different with the strategy; the cars we were sat behind finished fifth and sixth, and I felt like we could have had a good fight with them."

Stoffel said all the right things, thanked the team for the opportunity,

thanked Alonso for his help through the weekend. There was a moment after qualifying when Dennis's eyes met with Stoffel's – and an unmistakable smile of pride and satisfaction was writ upon Ron's face. Vandoorne has a big future at this team. The generations turn…

Two weeks later in the smog of the industrial hinterlands of Shanghai, it was difficult not to speculate whether Dennis' performance in the good doctor's room in Bahrain had any bearing on the delay of the FIA in confirming that Alonso was now fit to race. Eventually, he was allowed 'provisionally' to take part in first practice, but must 'stop immediately' if he felt any discomfort. Yeah, right… He was subsequently cleared for the rest of the weekend.

Even Shanghai's 1.1km-long back straight wasn't a swingeing penalty to the 2016-spec Honda, the McLarens in a similar state of competitiveness to Bahrain. Alonso and Button were each reckoning on challenging for a place in the top 10. Out there on their fresh super-softs in the last moments of Q1, trying to catch the track at its quickest, the task was to edge out the Toro Rossos or Force Indias – possible


Three into two won't go: Button is out of contract at the end of this season, but Alonso isn't..

WORD *on the* BEAT

It's a rumour that comes around every so often but here it is again: **Bernie Ecclestone** is considering buying out CVC's controlling interest in F1. Quite how that would move it past its governance stalemate is not clear, however.

Although **Christian Horner** suggested in China that the engine manufacturers were as far away as ever on meeting the criteria stipulated by the FIA in February re 2018 engines – namely a price reduction to 12 million euros (from 18-24), a guaranteed supply, power convergence and an increase in noise – Mercedes boss **Toto Wolff,** the man tasked with getting this agreement in place, was adamant they had an agreement ready to present to the FIA and that it met all criteria.



Ecclestone is said to have suggested to **Dietrich Mateschitz** that together they could form **'The Red Bull Grand Prix World Championship'** for loud, normally aspirated cars and break away from the official F1 series. The Austrian drinks magnate is said to be less than enthused. The dreaded prospect of two parallel world championships – last mooted for 2010 and, before that, 1981 – would return should Mateschitz be convinced to change his mind.

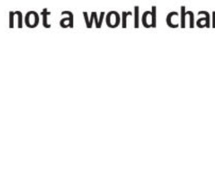
On the matter of the qualifying format, the teams faced down **Bernie Ecclestone** and **Jean Todt**, insisting pre-China that the 2015-style procedure be re-instated, with an agreement to trial alternative systems in the late season. Very much taking a lead role in the team unity stance was **Ron Dennis**, who visited the Mercedes unit on at least three occasions over the Bahrain Grand Prix weekend.

In the increasingly desperate quest to get F1 fans to buy into the current **turbo hybrid engines**, increasing the fuel flow has been suggested – making it advantageous to run them beyond the current typical change-up speed of **10,500-12,000rpm**, thus increasing the noise. Interestingly, Mercedes HPP has advertised for a 'noise engineer' to work on improving acoustics without compromising engine performance. At the same time, the engine manufacturers are suggesting going to a three-engine limit per car (down from five) per season.

So far this year, drivers are very much on-message about not criticising **Pirelli** specifically as, with no contract yet signed with the FIA, there is a fear the tyre company could simply withdraw at the end of this season. Off the record, they are as critical as ever. Between the Bahrain and Chinese Grands Prix, with assurances from the teams and the FIA about getting the necessary test days to test the new 2017 tyres, Pirelli boss **Tronchetti Provera** threatened to pull the company out of F1, potentially leaving the category without a tyre supply. An emergency meeting was hastened in which the test days were agreed.



Though **Haas** impressed hugely by scoring 18 points in the first two races, it came at the cost of near-exhaustion to several members of the 120-strong team. A recruitment drive is underway.



One of the drivers of the proposed Pirelli Formula 1 test car could yet be **Robert Kubica**.

Fernando Alonso and **Johnny Herbert** publicly made up in China after their spat in Bahrain, hugging each other and laughing on the driver parade truck on which Herbert was conducting the interviews. Alonso's live TV rebuke – Herbert had said in a column that he believed Alonso was past his best and should retire – involved him suggesting to the Englishman that he'd been forced to become a commentator because he was not a world champion.

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but not easy. A red flag forced them to abandon these laps – leaving Alonso and Button relying on their scrubbed-tyre times and starting 12th and 13th respectively.

Big problems for Hamilton – he'd failed to record a time in qualifying and suffered heavy damage at the first corner in an incident triggered by the Ferraris making contact – gifted Rosberg a sixth consecutive Grand Prix victory. Alonso and Button did what they have done so many times before – took each other on using transposed tyre strategies, Button ahead on the super-softs initially, Alonso staying sufficiently in touch to be ahead after the stops. JB tried for a late third stop to super-softs, but Alonso had him covered – 12th and 13th.

A long way still to go, but the McLaren-Hondas are no longer a joke. A big power upgrade is promised and for the second half of this season there is genuine hope. If that should progress into a properly competitive 2017 McLaren, the question of who will be driving it takes on an even more interesting dimension. Ⓜ



The McLaren-Hondas now have solid midfield performance – and a further upgrade awaits

Rd 2 BAHRAIN, APRIL 3 2016

				RACE DISTANCE
1	NICO ROSBERG	Mercedes W07	1hr 33min 34.696sec	57 laps
2	KIMI RÄIKKÖNEN	Ferrari SF16-H	1hr 33min 44.978sec	191.530 miles
3	LEWIS HAMILTON	Mercedes W07	1hr 34min 04.844sec	

FASTEST LAP NICO ROSBERG Mercedes W07 1min 34.482sec

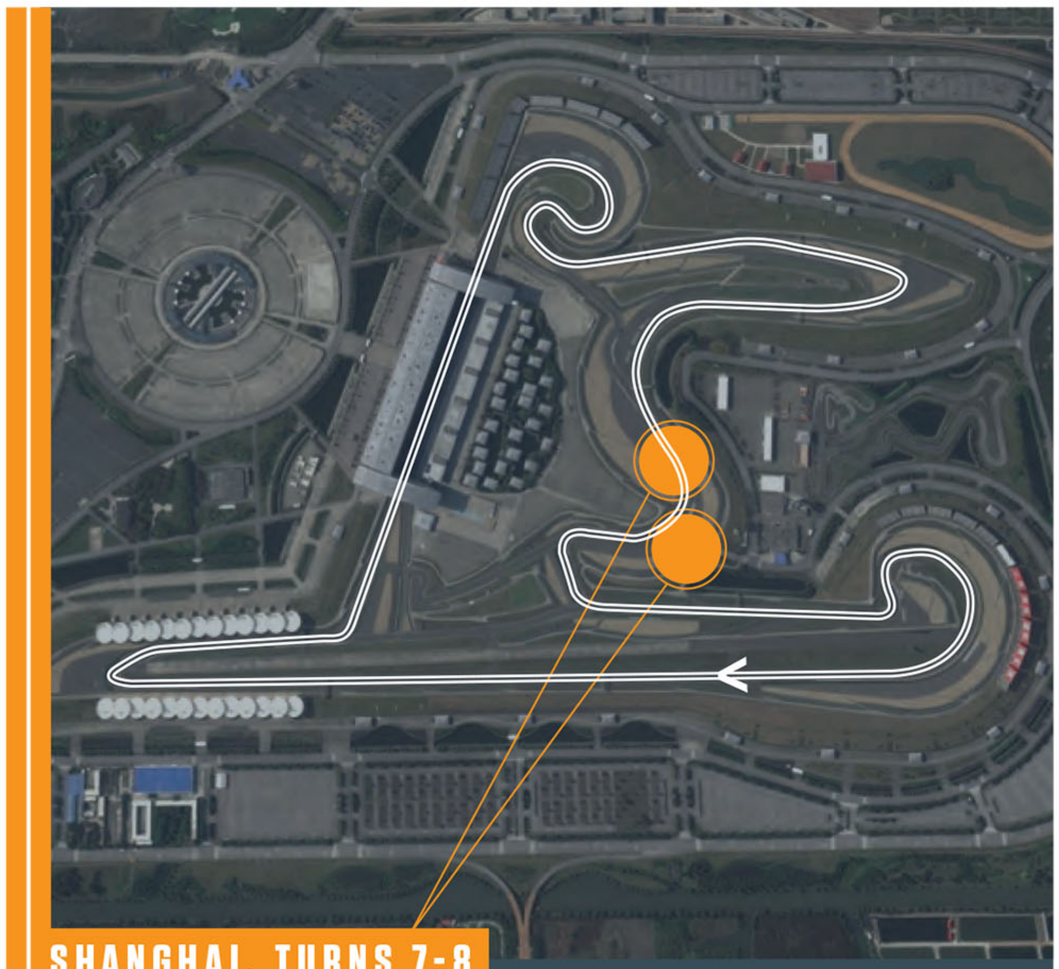
POLE POSITION LEWIS HAMILTON Mercedes W07 1min 29.493sec

Rd 3 SHANGHAI, MARCH 20 2016

				RACE DISTANCE
1	NICO ROSBERG	Mercedes W07	1hr 38min 53.891sec	56 laps
2	SEBASTIAN VETTEL	Ferrari SF16-H	1hr 39min 31.667sec	189.559 miles
3	DANIIL KVYAT	Red Bull RB12	1hr 39min 39.827sec	

FASTEST LAP NICO HÜLKENBERG Force India VJM09 1min 39.824sec

POLE POSITION NICO ROSBERG Mercedes W07 1min 35.402sec



SHANGHAI, TURNS 7-8

Trackside view

"A late Shanghai Friday morning, sun trying to burst through the smog, stiff breeze stealing up through the corridor formed by the paddock buildings and earth banks to present the cars with a headwind as they exit the fast but decreasing-speed S-section formed by Turns Seven-Eight.

They exit Seven still carrying massive speed that is grudgingly bled off through the approach to Eight. The transition of the 'S' between the two turns makes for a spectacular sight – especially when Nico Rosberg attacks it on new tyres, the suddenness of the Merc's direction change without any accompanying upset deeply impressive.

Max Verstappen flies through in a shower of underbody sparks, ride height too low, a raise needed, which will inevitably cost downforce. A brief stop and he's back out, floor now clear of the track, and he soon has an aggressive flow going through the whole sequence.

Rio Haryanto is out there in the Manor learning his F1 craft, progress visible, hesitant and step-like at first, quick and neat so you can't see the joins within a few laps.

As they pass by, then accelerate briefly prior to the short, hard brake for the tight Turn Nine, the exhaust notes of the four engine types are quite distinct: the crisp, hard-edged blare of a Mercedes, the deeper, throatier bark of a Ferrari, the bland soft whoosh of a Renault, the aggressive but messy Honda with its hard part-throttle transition between compression and spark ignition."

MAP DATA: GOOGLE, DIGITALGLOBE

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A better way forward

AND THE NOMINEES ARE...

Voting has closed for the 2016 *Motor Sport* Hall of Fame and we're delighted to reveal the top three nominees you have chosen for each of the five categories.

The new members will take their place in our exclusive club for motor racing heroes at a star-studded awards night at the Royal Automobile Club's Woodcote Park estate in Surrey on Tuesday May 31. More than 25,000 votes have been cast to decide which great figures from the worlds of Formula 1, sports car racing, motorcycling, rallying and US motor sport will enter our Hall of Fame.

To find out how you can be there on the night to see who topped the polls, turn to page 56. For now, here are the 2016 *Motor Sport* Hall of Fame nominees, listed in alphabetical order for each category.

MOTOR SPORT
SINCE 1924
HALL OF FAME
2016



FORMULA 1

MIKE COSTIN & KEITH DUCKWORTH
The clue is in their surnames. Together, they changed Grand Prix racing forever with the glorious DFV V8 engine that would win more than 150 races.

GILLES VILLENEUVE
'Crazy diamond' French-Canadian who lit up the Grand Prix scene and Ferrari all too briefly. The only real surprise is he's not yet a member…

PROFESSOR SID WATKINS
F1's late, much-loved doctor who contributed so much to driver safety from the late 1970s. His influence has stretched beyond his lifetime.

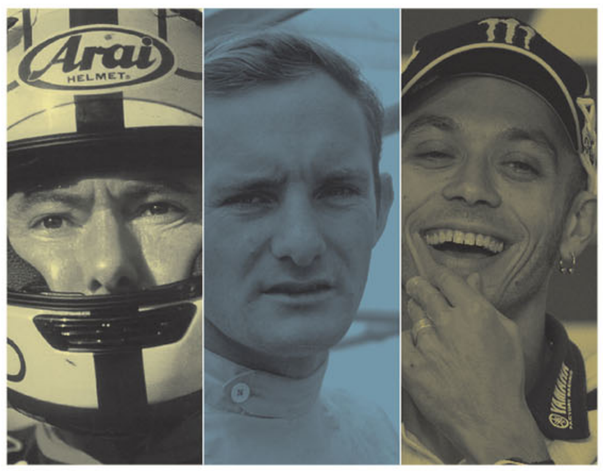


SPORTS CARS

DEREK BELL
Debonair five-time Le Mans winner and world champion who graced endurance racing through three decades. Remains a huge fan favourite.

BRIAN REDMAN
He'd argue (rightly) that he was much more than 'just' a sports car driver… But images of Lancashire's finest in Gulf GT40s and 917s tend to linger.

PEDRO RODRIGUEZ
Drenched Brands Hatch BOAC 1000 in 1970 cemented the legend. Fierce, fast and brave – with a penchant for sporting a natty (and not very Mexican) deerstalker…



MOTORCYCLING

JOEY DUNLOP
The stat – a record 26 Isle of Man TT wins – is only the tip of why he matters so much to the two-wheeled world, but also to his whole country. A genuine national hero.

MIKE HAILWOOD
To many who saw him race, 'Mike the Bike' will always be the greatest. The comeback at the IoM after a decade away only embellished the legend.

VALENTINO ROSSI
The record books have been at his mercy, but like all racing heroes it's the style and manner of his approach that means the most. He's transcended his sport.





RALLYING

RICHARD BURNS

England's only world rally champion was the ice to Colin McRae's fire. His loss through tragic illness at the age of just 34 remains keenly felt in rallying more than 10 years on.

SÉBASTIEN LOEB

Man or machine? The spirit that has taken him beyond nine WRC titles to Le Mans, Pikes Peak, the Dakar and now world rallycross suggests the former.

HANNU MIKKOLA

Stamped his mark in the ubiquitous Ford Escort, then led the four-wheel-drive revolution with a WRC title in the era-defining Audi Quattro.



US RACING

DAN GURNEY

At home in F1, sports cars, Can-Am, Indycars… Through five decades he's been a benchmark in the cockpit and a charismatic leader for his sport out of it.

AJ FOYT

He won everything. The tough Texan isn't to everyone's taste, but the bullish personality belied silky skills to match anyone in just about any car.

ROGER PENSKE

'The Captain' is approaching 80, but his energy and acumen for a deal – and the next race – remain undimmed. The single most important figure in American racing.

AWARDS TIME

THE LATEST UPDATES ON MOTOR RACING'S SOCIAL HIGHLIGHT OF THE SEASON

■ Luxury watchmaker Christopher Ward is the official timing partner of the *Motor Sport* Hall of Fame, which will feature a selection of great cars and star drivers at the Royal Automobile Club's Woodcote Park on May 31.

■ The afternoon Hall of Fame 'Live' event (details on page 56) will include a panel discussion with racing personalities. *Motor Sport* columnist Darren Turner is the latest to be added to a line-up that also includes Tom Kristensen and Derek Bell.

■ The Donington Grand Prix Collection has offered a wonderful pair of racing cars to display in the grounds. The first is the Vanwall VW5 Tony Brooks shared with Stirling Moss to score a historic British Grand Prix win in 1957 at Aintree, marking the first world championship GP victory for a British-built car – and the last time F1 race spoils were shared by two drivers. Donington will also bring its 1969 BRM P139 in which John Surtees finished third in the United States Grand Prix at Watkins Glen.

■ Other confirmed displays include a pair of wonderful 1950s sports racers: the famous Jaguar C-type XKC005 in which Moss made history at Reims in 1952 by winning for the first time in a car fitted with disc brakes, and a glorious Ferrari 750 Monza.

■ Straight Eight Logistics, the specialist in classic car transportation by land, sea and air, is the official transport partner for the 2016 Hall of Fame.

■ We're also delighted to confirm a new charity partner for the Hall of Fame. The Sean Edwards Foundation, created in memory of the late GT racer, campaigns for improved safety in motor sport and is supported by ambassadors such as former F1 test driver Susie Wolff and world endurance champion Brendon Hartley. Sean's father, Guy Edwards, has kindly added to our line-up of racing cars with the famous Penthouse-liveried Hesketh 308 in which he made four Grand Prix starts during 1976.

Christopher Ward
TIMING PARTNER

AUCTION PARTNER · EVENT PARTNER · CHARITY PARTNER · TRANSPORT PARTNER



LAT

Doubt clouds Silverstone sale

BRDC ponders next move as JLR deal hits stumbling block | BY GARY WATKINS

THE PROPOSED SALE OF Silverstone to Jaguar Land Rover hangs in the balance after the board of circuit owner the British Racing Drivers' Club won only a narrow majority in its favour after polling its members.

At an extraordinary general meeting in April, just under 54 per cent of the club membership voted for negotiations with the Indian-owned car maker to continue. It remains unclear whether the board will view such a slim majority as the mandate it requires to push ahead with the JLR deal.

BRDC chairman John Grant said that the small majority in favour still technically gave the board the authority to bring the negotiations with JLR to a conclusion. But he stressed that a decision on how to proceed would take some weeks.

"We don't want divisions in the club," he said. "We mentioned at the meeting that we would take any concerns away and address them. It will take a few weeks to work out how to move forward."

THE ARGUMENTS

The EGM was preceded by a letter to the membership from a group of concerned members, led by Ginetta Cars boss and former BRDC director Lawrence Tomlinson, expressing fears over the JLR deal. Tomlinson was then allowed to put forward what was in effect a counter-offer for Silverstone at the EGM, to show that there was an alternative, although the vote was solely a 'yes/no' on the JLR deal.

Tomlinson said the deal with JLR, which involves selling a 249-year lease on the circuit for £33 million in staged payments, would result in the BRDC having to "protect rather than promote British motor racing". He argued that it would leave the club financially vulnerable, because under the terms of the proposed sale it would still bear the burden of the contract with Formula 1 Management (FOM) to host the British Grand Prix, as well as other financial liabilities.

The JLR proposal would result in the BRDC, through its wholly-owned Silverstone Circuits Limited company, continuing to run motor sport at the track. In a written reply Grant told Tomlinson that he believed a majority of members "want to retain an involvement in motor racing at Silverstone".

Grant argued that the JLR sale would allow the BRDC and SCL to put its finances on a sound footing, at the same time as allowing it to continue to operate the circuit.

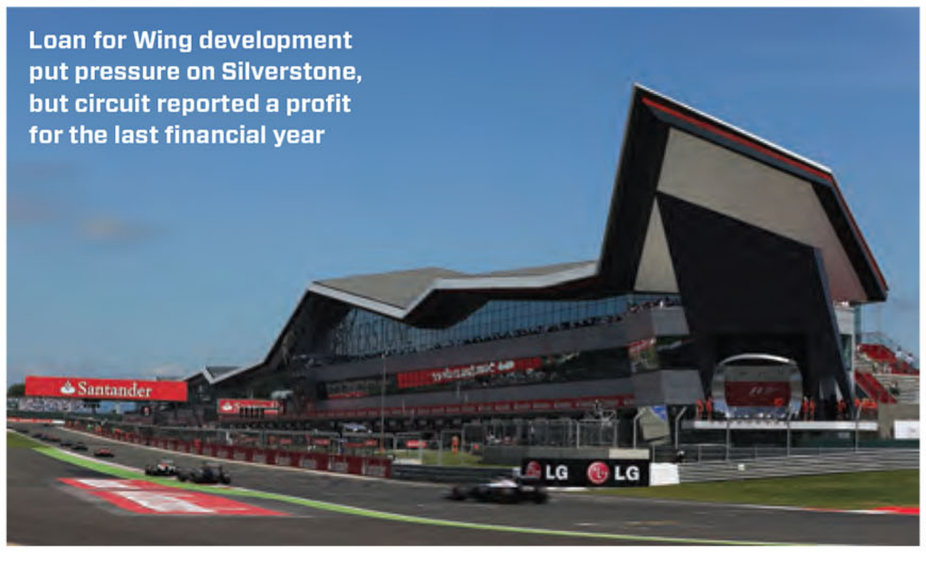
Tomlinson claimed that JLR's stated expansion plans would put the infrastructure of the circuit at risk and that SCL would be unable to diversify its business because it would only be in control of the land within the national circuit.

Grant countered that Tomlinson's fears were unfounded, because there would be "legally binding agreements that they [JLR] will do nothing that would cause destruction of major events" in the terms of the sale.

"Silverstone will only be used for customer-facing and heritage-type activities," he said. "JLR demonstrated to the board that its ambitious growth plans will be accommodated at other sites in the Midlands and elsewhere... and bought into the masterplan that governs and limits planning approval on the Silverstone estate."

He added that JLR had plans "to undertake a range of improvements to enhance the circuit".

Tomlinson's counter-proposal is believed to involve him matching JLR's initial payment, underwriting any financial liabilities of the BRDC and then paying an annual lease of £1 million for the circuit, which his companies would then operate.



Loan for Wing development put pressure on Silverstone, but circuit reported a profit for the last financial year

LAT

BIG NAMES AGAINST A SALE

There appears to remain a significant group of members who believe that the club should not sell the circuit. These include Prodrive boss David Richards and McLaren's Ron Dennis, who both aired their views against a sale – Dennis via letter – at the EGM.

"There are many of us who believe that the circuit is not ours to sell: we are custodians for future generations," said Richards. "We should look at all opportunities in raising funds that do not involve selling the family silver.

"This deal would change the BRDC forever and the membership should not allow it to happen. JLR could be a good partner for Silverstone, but not in the terms of the deal being proposed."

He pointed out that the current SCL management team put in place at the end of 2014 under new boss Patrick Allen had turned the company around. Silverstone reported an annual profit for the last financial year and revealed that the GP was out of the red for the first time in a number of years.

"What is being proposed is selling the assets and putting the money into the operating company," added Richards. "If the operating company is so good, why not let that company trade ourselves out of any difficulties?"

Richards claimed the narrow 'yes' vote did not give the board a mandate to sell. "If the board tried to plough on, there would be an EGM called overnight [50 members could trigger one with a vote of no confidence]," he said.

The latest proposed sale of the fabric of Silverstone circuit follows a sale of land to commercial property management company MEPC in September 2013. Development land around the circuit, including the track's industrial areas, was sold for £32 million on a 999-year-lease.

That followed a run of annual losses for SLC and a £26 million loan taken out in 2010 while the new Wing pit and paddock complex was being completed.

The BRDC board revealed at the same time that it was negotiating to sell the track to an undisclosed bidder. The board had received a mandate from the members to seek a buyer, but the so-called 'Members' Charter' enabling them to do this had a finite lifespan that came to an end in 2014, after those negotiations collapsed.

— OBITUARIES —

Freddy Rousselle

Belgian racer Freddy Rousselle, who has died aged 89, made an impact on the tough Liège-Rome-Liège rally, finishing sixth in 1955 and earning a works Triumph drive as a result. His most notable results were successive fourth places at Le Mans in the Écurie Nationale Belge D-type Jaguar, with team principal Jacques Swaters in 1956 and journalist Paul Frère the following year.

Picko Troberg

Per-Olov 'Picko' Troberg, who has died at the age of 78, was one of the mainstays of Swedish motor sport for half a century. The winner of multiple titles in his homeland, he won the prestigious Monza Lotteria F3 race in 1965 and also raced sports cars at world championship level. His team then played a major role in helping young Swedish drivers, including Rickard Rydell and Mattias Ekstrom.

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LAT

GORDON KIRBY

INDYCAR'S AERO DILEMMA

AFTER THE OPENING TWO RACES OF THIS year's IndyCar series it was Penske vs Ganassi once again. Juan Pablo Montoya and Simon Pagenaud finished one-two for Penske in the streets of St Petersburg in late March while defending champion Scott Dixon won two weeks later when the championship returned to the Phoenix oval in Arizona.

Team Penske was in top form at St Petersburg. Its Dallara-Chevrolets swept the first four places in qualifying and finished one-two-four in the race, with Montoya scoring a clear victory. The Colombian attacked and passed Pagenaud on a mid-race restart and was in control thereafter.

Montoya turned 40 last September but remains as sharp and motivated as ever and is a favourite to win this year's Indy 500 and IndyCar title with Penske. He believes having three fast and experienced team-mates in Pagenaud, Will Power and Helio Castroneves is the key to Penske's strength. "I've been with some of the top teams in motor racing, but this is the only one in which we actually help each other," Montoya said. "It comes from Roger and goes all the way through the organisation. We're team players."

Dixon beat Montoya to last year's IndyCar championship at the final round. The Kiwi won at Phoenix this year after Montoya cut a tyre while leading, but Dixon dominated the last two-thirds of the race.

"Our car was super-fast," Dixon said. "I think it was the best out there. It was extremely quick all night. We had some bad luck at St Pete with overheating issues, but we're a strong team. We're always competitive and if we can figure out the first part of the season it will make the end a little easier for us. This is a tough series. You've got to get points, whatever the circumstances."

Thanks to this and last year's aero kits, downforce numbers keep going up in IndyCar. This makes for more speed and more loading on the cars and drivers. Like most of the drivers, Montoya would prefer to see downforce reduced. "I'm not a big fan of where we are with downforce on the short ovals," he said. "I'm a big pusher for taking off downforce there. I think it would be better, but I don't make those decisions. I drive the car and I'll give my opinions, but at the end of the day IndyCar decides where we're going to be, and that's where we are."

NASCAR's experiment this year with a new low-downforce package has worked well, with good racing, different grooves and the cars sliding around. The drivers like the new package and it's produced some entertaining races. "But it's different from an Indycar," Montoya said. "In a NASCAR you're taking away maybe a few hundred pounds of downforce, but with an Indycar we have more than 6000 pounds. It's much harder to figure out how you're going to take it off.

"It's a lot easier in NASCAR to add or take downforce off. You've got the spoiler and the splitter. But our cars are different. We have different rear wings, different front wings, different side pod shapes. So how do you control it? It's a much more complicated thing to make happen and to manage. And every time you change something, it costs the manufacturers money and makes it more expensive for them.

"You have to decide what you're looking for. That's the million-dollar question. Yes, we all believe we need less downforce, but we must make sure we don't ruin the show by taking too much away. It's a hard compromise, but it's a work in progress. The question is, what do the manufacturers want to do?"



After a poor qualifying run, the Turner/Sorensen/Thiim Aston took third in the GTE Pro class

DARREN TURNER

TWO RACES, ONE CLASS WIN ON HOME SOIL

CONSIDERING THE HORRENDOUS WEATHER we had at Silverstone, it was great to hear that more than 50,000 people attended the first round of the FIA World Endurance Championship. Saturday was freezing cold and our last free practice session was cancelled because of a rather surprising snowstorm. Raceday was equally freezing – but gloriously so as the sky was a beautiful blue and Silverstone itself looked amazing, just like a well-maintained golf course, which is exactly how it should be.

One of the nicest things about the World Endurance Championship, or WEC as we call it, is walking into the paddock as it's a friendly place. You will often see people having a coffee in the 'wrong' hospitality area as they have popped in to see their friends at a rival team. I think that's great and probably a rarity for a world championship. The fact that supporters can mingle in the paddock also adds to the atmosphere.

I had a particularly busy weekend at Silverstone as I also did the European Le Mans Series race in the Beechdean Aston Martin – taking a class victory – so I was bouncing around between the old pits and The Wing, changing my race suit along the way as the schedule was so tight. The team had to manage my schedule meticulously so I could cram it all in, but things worked out really well.



"We were all surprised at how aggressive the LMP1s were. We were all passed by an LMP1 without knowing it was coming!"

Qualifying for the WEC race was a bit of a disaster. We hadn't experienced conditions where the track is pretty wet but also freezing, and we were outside the window for wet tyres but not quite ready for intermediates. We ended up pretty close to the back of the grid, behind even the GTE Am cars.

I awoke on Sunday to sunny skies and felt confident that we had the right tyres for the race. I was sure we would have reasonable performance and we knew the Aston Martin Racing guys would nail the pit stops. They have been working hard on this over the winter, practising every day.

I took the start and the plan was for all three of us to double-stint during the six hours. We need to make as few driver changes as possible to reduce the risk of any mistakes. The other two are big fellas so we didn't want to be dragging my booster seat in and out too often!

When you're that far back for a rolling start it gets really strung out, but by the time I got to Turn One it was very congested. I was glad to complete the opening lap unscathed and set about overtaking the 'Am' cars. I had a bit of hassle with those as they always try to race the 'Pro' cars, forgetting they are in a different class. If they just let us go they could get on with their own race!

I was happy to get past them and had worked my way up to third in GTE Pro when the Porsche in front of me had a problem, so I was able to hand the car over to Marco in second place.

Both my team-mates had trouble-free runs. The Ferrari with a three-minute penalty was blasting through the field once Nicki Thiim was in our car and, with their pace, there's no way he could have held him off for long, so we dropped to third before the end. We were delighted to finish on the podium in our first race with Dunlop, though. It was a good reward for all the effort through the winter and gives us confidence for Spa.

There were a few moments with LMP1 cars during the race. I chatted to a few drivers afterwards and we were all surprised at how aggressive the LMP1s were. We were all passed by an LMP1 without knowing it was coming!

The P1 Porsche vs GT Porsche crash was waiting to happen at that part of the circuit. If I know there's an LMP1 car coming I'll lift off the throttle a bit into Turn Two so I can have a tighter line and give them a bit of space. That gets them out of my hair so I can have a good Turn Three, but as your tyres go off you end up going wider and wider there anyway. It's inevitable that there will be contact with such variables in car speeds and driver experience, but it'll be easier at Le Mans – we get more warning because we can see them coming from farther back.

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Riding as an art form: Casey Stoner in 2006, his first season in MotoGP

GOLD AND GOOSE

MAT OXLEY

THE END OF FINESSE?

"TECHNOLOGY IS A BIG DESTROYER OF emotion and truth. It's the disease you have to fight in any creative field: ease of use." So said Jack White, the American musician who has fronted bands such as The White Stripes and The Raconteurs. There is no doubt that White's statement is hugely relevant in music, but surely it can't be in motor sport; or can it?

Just as music-making software such as Auto-Tune and Chord Generator create so much depressingly bad music, some argue that rider aids such as traction control and wheelie control produce humdrum motorcycle racing.

Most MotoGP riders don't like electronics overkill: they are riders, so they love riding motorcycles; they don't want computers doing it for them. Valentino Rossi still remembers the first time he used traction control, during 2002 post-season testing with Honda. "When I tried the first time I went back into the pits and I say, 'F**k, nooo!' I mean with this system everybody could ride the bike. And that was with one per cent of what we have now."

MotoGP rights holder Dorna has been trying to get on top of this problem for years, but it is mostly fighting an unequal struggle, because during the 1990s the FIM (Fédération Internationale Motocycliste) abrogated control of technical regulations to the manufacturers. Inevitably factory engineers are keen on electronics development.

Recently Dorna did win a small battle in this long-running war by forcing MotoGP constructors to accept the introduction of a lower-spec control ECU. All riders now use identical Magneti Marelli hardware and software, which are less intelligent than the factories' tailor-made kit. That didn't stop the first race of 2016 being a record-breaker.

It is no surprise that many riders prefer the new lower-tech electronics, because they feel more control in their throttle hand. But others believe the spec ECU is still too clever, most notably Ducati's star test rider Casey Stoner.

"The electronics are still too good, in my opinion," says the twice MotoGP world champion, who quit racing at the end of 2012, partly because he didn't like the direction MotoGP was taking. "For me, the 990s [the 990cc bikes he rode during his 2006 rookie season] were probably MotoGP's best era. The electronics were just about perfect. They were there, so they'd save you to a certain degree, but they wouldn't increase your performance. The only way they really helped was with engine braking: you'd still be loose, you'd still be backing it into corners, but the electronics stopped you completely locking up and sliding."

Stoner grew up in Australia riding dirt track, learning the art of throttle control on loose ovals, with the back tyre kicked sideways into corners and out of them too. It's a skill in which he takes great pride.

"I still believe there's more to be made out of the human hand than out of electronics," he adds. "But electronics help massively for those riders who can't control the rear.

"Back in 2006 or 2007, if you had more finesse you would pick up the bike out of the corner and almost pass the other guy halfway down the straight, because you had worked hard at getting a better drive. Or maybe the other guy would slip and slide and mess up the exit, so you'd get a run on them and you'd pretty much have the pass done before you got to the next corner."

Although Stoner hasn't raced a MotoGP bike in four years, he is still fully competitive. During pre-season testing at Sepang he was as fast as Ducati's current factory riders Andrea Iannone and Andrea Dovizioso, even though he hadn't ridden in anger for six months.

"I'm enjoying my testing role, but with modern electronics I miss that element of trying different things to find some kind of grip when the rear tyre is greasy as hell, like really picking up the bike out of a turn or short-shifting."

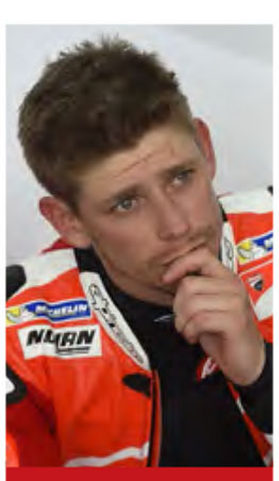
The 30-year-old, who also won Grand Prix victories in the 125 and 250cc categories, believes that while modern traction control may save many crashes on corner exits, it contributes to others further along the racetrack. "No one can make the difference on the exit – you can hear all the riders hitting the throttle at the same part of the turn and driving out – so they just make a big stab on the brakes.

"It's all about who brakes the latest and who is willing to take the biggest risk. Electronics have taken a lot of finesse out of it, so the aggressors can perform well now.

"I don't want to see riders losing the rear and getting high-sided, because it hurts, but having a bit more respect for the bike would give riders a little more respect for their competitors and for the Tarmac."

Stoner's dislike of rider aids doesn't end with traction control. "I used to enjoy trying different things with my riding, like stopping the bike from doing wheelies, so wheelie control is another thing I don't like. I like being able to float the front wheel and get that perfect amount of drive out of the corner. That's the kind of thing that makes riding a bike into an art, rather than just opening it up and having the electronics do it all for you. All those elements that have disappeared now."

It isn't impossible that Stoner's dream of reduced electronics will come to pass. Dorna is playing the long game with the factories, so one day it may be able to turn down the rider aids. In the meantime, we will just have to be happy with the fact that runaway electronics technology has at least been halted. Ⓜ



"I still believe there's more to be made out of the human hand than out of electronics. But electronics help massively for those riders who can't control the rear."

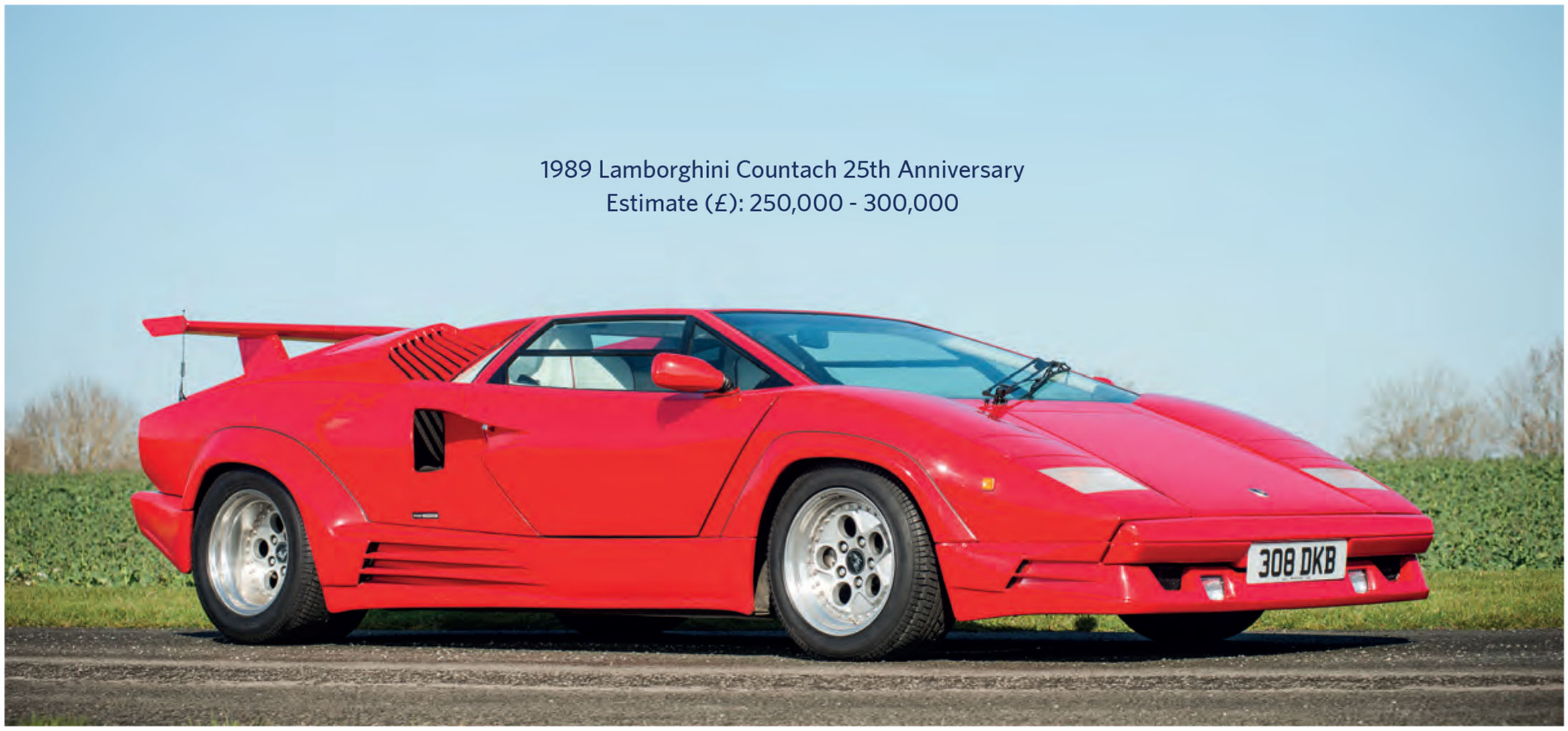
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LAT

Hunt's title celebrated

Classic F1 season revisited, 40 years on | BY PAUL LAWRENCE

THE 40TH ANNIVERSARY OF James Hunt's world championship title will be celebrated during major events at Goodwood, Silverstone and Brands Hatch this summer.

The career of Hunt, who died in 1993, will be a major theme at the Goodwood Festival of Speed in June. To mark his defeat of Niki Lauda by a single point to win the 1976 title, examples of every significant car from the Englishman's career will be at Goodwood. Surtees, Hesketh, McLaren and Wolf Grand Prix machinery will be on show as well as other race cars from his career. His sons Tom and Freddie, along with family, friends, drivers, team members and mechanics, will be present.



CHARLIE WOODING

A month later, Hunt will be remembered at the Silverstone Classic with a display of cars, trophies, suits and helmets. Hunt scored his first F1 win at Silverstone, in the 1974 International Trophy, with Hesketh. His sons will also be at Silverstone and Freddie will contest one of the touring car races, sharing a Mini Cooper S (below left) with Jonathan Lewis.

A demonstration of ex-Hunt cars will be staged at the Masters Festival at Brands Hatch on May 28/29 and the winner of Sunday's Historic F1 race will receive the James Hunt Trophy. Hunt had his first race and his last win at Brands Hatch. "I'm really thrilled that Masters is remembering my father and his world championship success," said Freddie. "Brands was a special place to him."

BMW theme at the FoS

BMW WILL BE THE HONOURED marque at this year's Goodwood Festival of Speed, which celebrates the marque's 100th anniversary with a feature display.

Cars on show will include the 1940 Mille Miglia-winning 328, an M1 Procar and the 1983 Brabham-BMW BT52 with which Nelson Piquet scored the first Formula 1 world championship title for a turbocharged car.

Other star exhibits will be the 1999 Le Mans-winning V12 LMR as well as 635CSI and M3 touring cars. Bringing the story up to date will be a 2010 M3 GT car and Michael Dunlop's 2014 TT-winning 1000RR motorcycle.


JEFF BLOXHAM

The ex-Mo Harness Ensign LNF3 has returned to racing after a gap of 40 years and will contest the Classic Formula 3 Championship with new owner Glenn Eagling. Eagling tested the 1600cc Ensign as an 18-year-old at the end of 1973, but never got to race it. He finally bought it last year and has spent six months restoring it to immaculate condition.

Ex-Pryce Shadow returns

AN EX-TOM PRYCE SHADOW DN3 will return to racing this season after a gap of more than 30 years, and will compete at the Grand Prix de Monaco Historique in the hands of British racer Phil Keen.

Pryce used chassis DN3/5 in the second half of the 1974 season and scored his first world championship points in the German Grand Prix. The Shadow has been acquired by Jon



SUTTON

Minshaw,who has entrusted it to his British GT co-driver Keen.

"It's an incredible car and has been untouched since 1975. It's been in a private collection," said Minshaw.

Packed Monaco F1 entry

A TOTAL OF 70 3-LITRE GRAND Prix cars will line up at Monaco for the 10th Grand Prix Historique over the weekend of May 13-15. Alongside the regular drivers from the FIA Masters Historic Formula One Championship will be Adrian Newey (Lotus 49), Emanuele Pirro (Ferrari 312B3), Eje Elgh (March 711) and Anthony Beltoise, son of 1972 Monaco winner Jean-Pierre, in a Matra MS120B.

To accommodate entries, the 3-litre F1 field will be split across two races, one spanning 1966-72 and one for cars from 1973-76. Earlier GP cars will contest pre-61 and pre-66 races, with Andy Middlehurst heading the latter entry in his ex-Jim Clark Lotus 25.

Brabham back in action

THE EX-DAVE MORGAN BRABHAM BT35, winner of the opening round of the 1972 European Formula 2 Championship at Mallory Park, will return to competition this season.

After the shock Mallory result, when Morgan's taller Formula Atlantic tyres proved ideal for the bitterly cold day, BT35 chassis 8 went to Australia and



MIKE HAYWARD

remained there until acquired recently by John Hughes, the former FIA Historic Commission chairman. He plans to use it in some classic European hillclimbs.

Stokes' memory honoured

THE LATE DAVID STOKES WILL BE commemorated with an end-of-season award in the Mintex MSA British Historic Rally Championship.

This will honour the rallying career and character of the four-time BHRC champion, who was challenging for a fifth crown in his Ford Escort MkI when taken ill with cancer last summer. He died in February.

The award will be presented to the individual who displays 'spirit and enthusiasm for the BHRC in the style of David'. This could be a driver, co-driver, mechanic, official or marshal.

Smits to rebuild Lola

MICHIEL SMITS IS RECOVERING well from back injuries sustained during the Goodwood Members' Meeting and says he plans to return to the event in his rebuilt Lola T70 Spyder.

"It could have turned out much worse," said the Dutchman. "The car will be repaired as soon as possible and I'm already looking forward to next year's Goodwood event."

The car flew off the road at Woodcote corner after it was thought to have been hit by bodywork from another car.

The 50th anniversary of the Historic Sports Car Club will be marked at the Silverstone Classic with a parade of 50 cars from the club's portfolio of race championships and series. On the Sunday of the event (July 31), the parade will show the breadth of the club's race programme with at least three cars from each of the its 16 categories.

Gareth Burnett and Martyn Taylor won the eighth edition of the Flying Scotsman when the challenging three-day trial for pre-war cars ended in Scotland. Sometime historic racer Burnett also won the 2013 event in his 1931 Talbot 105, ending two years of Bentley victories.

The VSCC has announced a new Sprint and Hillclimb Championship, building on the success of a pilot series run in 2015. The championship will have 10 rounds including all of the club's hillclimbs as well as sprints at Curborough, Brooklands, Pembrey and Goodwood. The season starts at Curborough on May 1.



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David Hayhoe

Very few people will know precisely that, having annexed his maiden Formula 1 pole, Mario Andretti waited eight years and 19 days for his second. Lewis Hamilton? His first two were but seven days apart, during his rookie summer of 2007. Both are records, for different reasons.

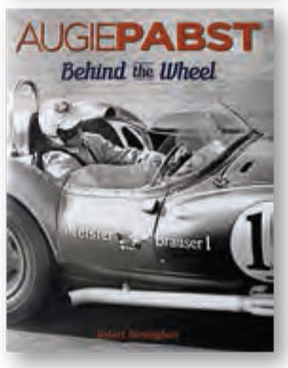
And that is the essence of David Hayhoe's latest work. He has in the past produced excellent reference books combining world championship Grand Prix results and trivia, but they were conceived before the internet became a natural resource for statisticians.

His latest offering differs significantly, in that the detailed results section has been ditched (although there's an abbreviated version at the back, covering 1950–2015 inclusive) to make way for more than 1000 topics (and sub-topics), covering everything from consecutive fastest laps at the same venue to French F3 champions and the lowest race number never to have been used in a Grand Prix (said to be 47, although that piece of information is already out of date thanks to Stoffel Vandoorne in Bahrain).

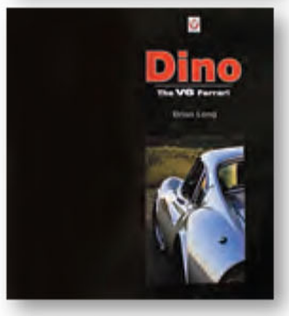
It's not the kind of thing you'd read in one sitting, but it's engaging to browse and mind-bogglingly thorough. ***SA***

Published by DH
ISBN: 978-0-9935329-0-0, £35

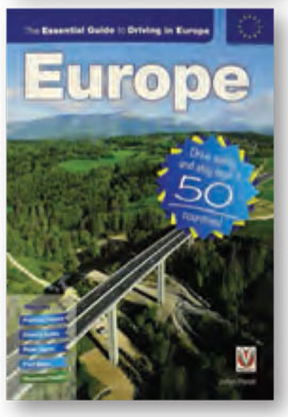












Augie Pabst

Behind the Wheel

Robert Birmingham

This might seem a heavy tome for a racing career of just 10 years, but Augie's story is interesting and worth telling.

Combining his activities with garage ownership, before working for the family Pabst Brewing Company, Augie began racing sports cars in 1956, in Wisconsin. He later competed nationally with success, winning the USAC championship and driving for Briggs Cunningham as well as racing a Scarab – a marque with which he would become linked.

There are interesting tales, such as a trip to Botswana with team owner John Mecom and a meeting with Enzo Ferrari in Modena, where Augie and Walt Hansgen guaranteed their 275 LM would win at Road America... as it did.

The appendices contain detailed race results, a nice piece on a trip with Pabst to the 1984 Mille Miglia and clippings from his career.

While the price might seem steep and the target audience small, it is a lovingly compiled tome with great photographs. ***JH***

Published by Dalton Watson
ISBN: 978-1-85443-277-3, $79

The Jowett Jupiter

The Car That Leaped to Fame

Edmund Nankivell

It is more than 60 years since Jowett – an oft-forgotten outpost of the UK car industry, in Bradford – produced its last Jupiter, and 35 since author Nankivell wrote the original version of his comprehensive model history.

The text has been extensively revised for this new edition, which celebrates a car whose diverse sporting achievements include class wins in both the 1950 Le Mans 24 Hours and 1951 Monte Carlo Rally. There are some lovely photos of competing Jupiters and some interesting graphic asides – not least a map of the Silverstone layout for the Third National Six-Hour Handicap Relay in 1953, when the triangular club circuit featured a runway extension leading to a hairpin by Club Corner.

Motor Sport has a connection of sorts with Jowett, in that the magazine's former owner Wesley J Tee – famed for crashing rather than cherishing his cars – was something of a Jupiter aficionado and owned a couple of them during the 1950s. One marque website even lists him as a notable former owner, alongside such as John Surtees, rugby player Budge Rogers, speedway star Peter Craven and Peter Ustinov...

It's an interesting tale – which ended in 1954, when problems sourcing car bodies triggered the company's demise – and it is here diligently relayed. ***SA***

Published by Veloce
ISBN: 978-1-845849-12-2, £50

Dino

The V6 Ferrari

Brian Long

There's no question that the 246 Dino remains one of the prettiest cars ever to have poked its nose beyond the exit gate at Maranello. Would it be sacrilegious to suggest that its close relation, the Fiat Dino, was actually more elegant, even if it did have a cheaper badge on its snout?

Both feature in a paean that covers almost every rivet of the Dino's six-year production cycle, though the accent is very much on the more celebrated of the two. The text is beyond thorough and well supported by technical illustrations and images, the only pity being that many of the latter look like period press shots and are thus lacking a little dynamism – but then car photography had still to morph into an art form at that stage.

The presentation isn't quite as stylish as the subject, but then very few things are... ***SA***

Published by Veloce
ISBN: 978-1-904788-39-3, £40

Let Them Stare!

Michael Hipperson

A self-published book about nice cars that have passed through the author's tenure? If that sounds like an ego trip too far, think again.

Former racer Hipperson's recollections cover the cars he owned during a more parsimonious era, when buying a barn-find E-type didn't require a seven-figure bank balance. At various times he paid £1100 for a fully functioning E-type, a lofty £4600 for a Ford GT40, £3000 for a McLaren M10 Formula 5000 chassis, £2800 for a Ferrari 365 GTB/4 Daytona and £4000 for a Lamborghini Miura P400S – a different world that existed only 30–40 years ago. These are his reflections on the joys – or otherwise – of owning these and many others.

As well as its alternative slant from books that celebrate such cars' present exclusivity, this is printed in a good cause. Hipperson has long worked to raise funds for Little Havens Hospice, which provides free care for terminally ill children and their families. This charity receives a percentage of all proceeds. ***SA***

Published by iStudio21
ISBN: 978-0-9575016-4-5, £15
(from letthemstare.co.uk)

The Essential Guide to Driving in Europe

Julian Parish

"Worried about driving abroad?" That's the big question on the back cover, but there's an argument that anyone who feels that way should perhaps not be on the road at all...

This is not so much preoccupied with the simple task of switching from left to right, or vice versa, but covers often overlooked details. Most countries list mandatory equipment drivers must carry – warning triangles, hi-viz jackets, breathalysers and so on – but the rules vary from border to border. Such information is widely available on the web, but this wraps it up neatly in something that will fit in the door pocket of anybody planning a tour of European racing circuits or similar this summer. Pau (May 21–23), the Le Mans Classic (July 8–10), the Nürburgring (August 12–14), Zandvoort (Sept 2–4) and Spa (Sept 16–18) are sensible targets.

One question remains, though. Why do some nations insist on the carriage of spare bulbs, when many modern cars seem designed to prevent motorists making such changes? ***SA***

Published by Veloce
ISBN: 978-1-845847-86-3, £9.99

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STAR LOT @ RM SOTHEBY'S

PEUGEOT 908 HDI FAP
{Monaco, May 14}

Rare to see a recent Le Mans prototype up for auction. Built for 2008, this chassis not only finished second at Le Mans with Nicolas Minassian, Marc Gené and Jacques Villeneuve, but went on to win the 2009 Petit Le Mans and 2010 Algarve 1000Kms. As the V12 diesel needs specialised support to run, Peugeot will supply this for two years. Not that there are many options for running it… Est: €1.2-1.6m

UNDER THE HAMMER

Key highlights at classic and racing auctions from around the world

RM Sotheby's

@ MONACO MAY 14

1968 Ferrari 275GTB4 NART Spider
See full feature on this car on p146
Estimate: €19-23m



1982 Gp4 Renault 5 Turbo
Driven by Jean Ragnotti and Jean-Luc Therier; French rally championship winner in 1982 and five victories '82-84; fourth on 1984 Monte Carlo
Estimate: €250-350,000

1948 Tucker 48
Advanced flat-six rear-engined saloon. One of 50 built before project collapsed. Only Tucker in Europe
Estimate: €1.35-1.85m

1952 Bentley R-type
Mike Couper's 1953 Monte Carlo Rally entry, won Concours de Confort and Coupe d'Or, star of his rallying book
Estimate: €80-100,000



1969 MGC GTS Sebring
Original lightweight works shell, alloy block, completed and much raced by John Chatham
Estimate: €150-250,000

@ QUATTRORUOTE SALE, MONACO MAY 14

1922 Lancia Lambda 1st Series Torpedo
Estimate: 160-220,000 euros



AUTOMOBILIA

BONHAMS



1/8-scale model Bugatti Type 35 by Fontenelle
Estimate: £3100-4700



A signed letter from Enzo Ferrari
Estimate: £2400-4000

Bonhams

@ GRANDES MARQUES, MONACO MAY 13



1959 Moretti-Branca Formula Junior
Very early mid-engined FJ design; Fiat 1100 motor
Estimate: £67-98,000

1953 Jaguar C-type
Ex-Écurie Francorchamps, driven by Jacques Swaters and Olivier Gendebien. Ninth place at Le Mans in 1953. Later raced by Mike Salmon. Extremely original, one family ownership since purchased for £635 in 1963
Estimate: £3.1-3.9m



1929 Alfa Romeo 6C 1750 Super Sport Supercharged Spider
First owned by Achille Varzi, original Zagato body
Estimate: £1.4–1.9m

1964 Ferrari 250GT Lusso Berlinetta
One of only 350 made
Estimate: £1.3-1.5 million



1925 Bugatti Type 35 Grand Prix two-seater
Competed at Brooklands, Shelsley Walsh, Southport Sands
Estimate: £790,000-1.2 million



2011 Aston Martin One-77
Cosworth-tuned 7.3-litre V12 of 750bhp; capable of 220mph – one of just 77 built
Estimate: £1.3-1.8m



@ ASTON MARTIN WORKS SALE MAY 21

1953 Aston Martin DB3S/5
David Brown's road car, then a works racer driven by Moss, Collins, Salvadori etc – and actor Terry-Thomas, in *School for Scoundrels* under the name 'Bellini'
Estimate: £6-7m

@GOODWOOD FESTIVAL OF SPEED JUNE 24



2016 Peter Blake Pop Art Bentley Continental GT V8 S

To be sold without reserve

1965 MGB EX234 Prototype Roadster

Coachwork by Pininfarina. Unique MG prototype. Single family ownership ex-factory. Only 374 miles from new

Estimate: £35-45,000

Coys

@ASCOT APRIL 16



1964 Gordon-Keeble

1 of 99 made. Rare manual version, fully restored

Sold for £73,480



1987 BMW E30 M3

Sold for £39,880

H&H

@DUXFORD APRIL 20



1978 Ford Capri 3-litre

Driven by Bodie in TV series *The Professionals*

Sold for £55,000

1954 Lagonda 3-litre drophead coupé

Sold for Lagonda record of £350,000



1961 Jaguar E-type 3.8 competition roadster

Built for John Coombs; recently raced by Pirro, Attwood, Gené. 1 of 7 Project cars that were the first competition E-Types

Sold for £840,000

Auctions America

@FT LAUDERDALE APRIL 2

1965 Shelby Mustang GT350

Sold for $314,600

1952 Mercedes-Benz 300S

With original factory luggage

Sold for $506,000

AUCTION CALENDAR

MAY

***5** AUCTIONS AMERICA*
Auburn, US

***11** BRIGHTWELLS*
Leominster, Herefs

***13** COYS*
Monaco

***13** BONHAMS*
Monaco

***14** RM SOTHEBYS*
Monaco

***18** H&H*
Donington Park, UK

***20** SILVERSTONE AUCTIONS*
Silverstone, UK

***21** BONHAMS*
Aston Martin Works, Newport Pagnell, UK

***28** SILVERSTONE AUCTIONS*
Aarhus, Denmark

JUNE

***4** BARONS*
Sandown Park, UK

***5** BONHAMS*
Greenwich, CT

***11** HISTORICS AT BROOKLANDS*
Brooklands, UK

***18** CLASSIC CAR AUCTIONS*
Warwickshire, UK

***23** BARRETT JACKSON*
Connecticut, USA

***24** BONHAMS*
Goodwood, UK

***25** BARONS*
Stamford, UK

***25** AUCTIONS AMERICA*
Santa Monica, US

JULY

***2** COYS*
Blenheim Palace, UK

***9** H&H*
Chateau Impney, UK

***12** BARONS*
Newmarket, UK

***28** H&H*
Donington Park, UK

***30** SILVERSTONE AUCTIONS*
Silverstone, UK



FOR SALE @ MOTOR CLASSIC & COMPETITION CORP Bedford Hills, New York, USA

DREAM GARAGE

FIAT ABARTH 850 BERLINA

A 50 per cent power hike from a bolt-on tuning kit sounds deeply impressive. And it is – even if the extra horses only amount to a couple of dozen. That was the baseline Carlo Abarth started from: the modest 27bhp of Fiat's 600 baby car, the minuscule four-seater that got cash-strapped 1950s Italy back on its wheels. It was meant to be family transport, but with his growing experience of extracting improbable power from mundane components Abarth seized on it as an affordable route to sporting fun – and turnover for his young firm. Cleverly, once he had developed a spec for his enlarged engine, he marketed a kit to convert any 600 into an 850 Abarth, enabling him by 1962 to claim the 1000 build figure needed to qualify for the Touring Competition class.

Arriving in a wooden crate, the kit comprised everything from crankshaft and carburettor to gaskets, even down to full instructions and an official 'Abarth Derivata' chassis plate. "We don't know if ours was converted at the workshop or by a customer," says Nick Soprano of Motor Classic & Competition Corp, where this example is on offer, "but it has all the right parts and the registration document says the same thing. A good friend of mine brought it over to the States after he fell in love with it in Italy, where it spent most of its life. It has light patina – not too shiny or overdone. Really, it looks like it would have done in its first few years."

This one boasts Campagnolo wheels, propped engine cover and the front disc brakes which may indicate a factory conversion, but in any case they're a plus on a curvy road.

"It's a fabulous little guy, really nimble," says Nick. "That little 850 is so effervescent, willing to rev. It doesn't know it's just 850 – it wants to believe it's 1600!"

Once homologated, 850 Abarths hoovered up class wins, touring car and manufacturer titles and even a category victory at Le Mans. Including the parallel 500-based variants, the marque is said to have garnered 900 wins in 1965 alone, making the scorpion badge a symbol to be respected across Europe. And in America it still turns heads. "People love it," says Nick. "I've driven it plenty. It would be great for classic rallies or sprints."

This mighty mini might be tiny, but when it grows up it wants to be a Ferrari...

FACTFILE

YEAR 1963

ENGINE 847cc, 57bhp

TRANSMISSION four-speed transaxle

SUSPENSION front: transverse leaf and A-arms, rear: semi-trailing arms

TOP SPEED 88mph

PRICE $47,000

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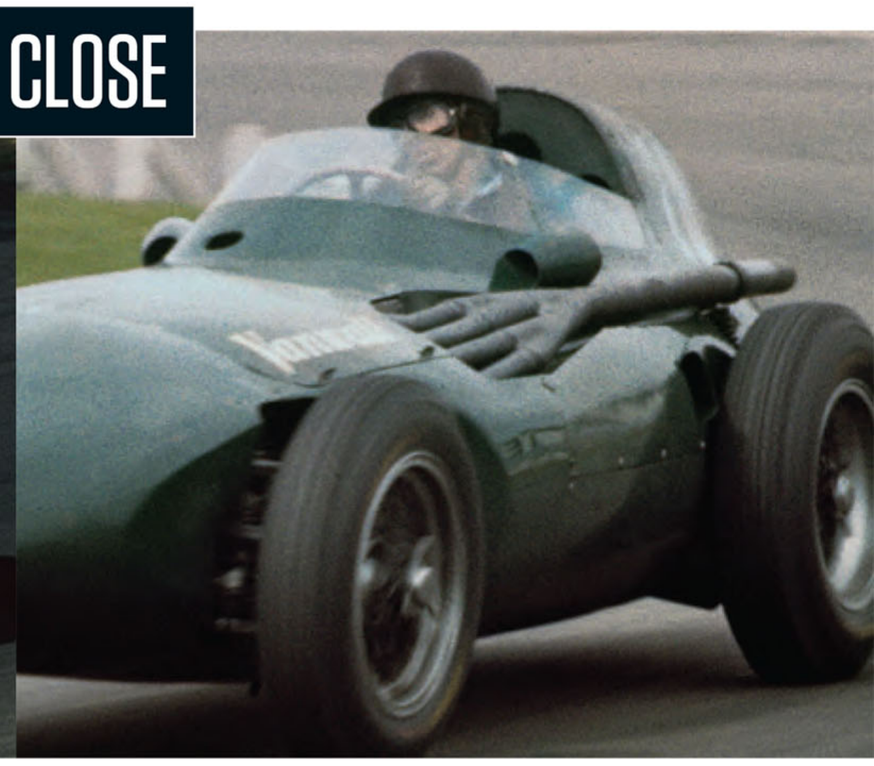
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Jaguar promises that new XKSS models will be faithful in every respect to their progenitor

The XKSS returns...

...but Jag will build only nine continuation cars | BY ANDREW FRANKEL

JAGUAR HAS ANNOUNCED IT IS to build nine brand-new XKSS sports cars to 'replace' those lost in the 1957 Browns Lane fire.

In a widely anticipated move, Jaguar says the new cars will be identical in every way to the originals and will each be priced at more than £1 million.

Jaguar insists the cars are not being built as a way of cashing in on its heritage and scoring an easy profit. Jaguar Land Rover Classic director Tim Hannig says, "You would not believe how little money we'll make on these cars." Instead, and like the series of six lightweight E-type continuation cars made last year, the XKSSs are intended to showcase Jaguar's ability to repair and restore its classic models. Jaguar already sells such cars and plans to expand its parts and restoration business in the hope that customers will find attractive the prospect of Jaguar certified components and workmanship.

The XKSS was created to dispose of unsold D-type chassis and, as such, was almost identical to the racing car upon which it is based. Main differences include the fitment of a proper windscreen with wipers, a passenger door, bumpers and the deletion of both the divider between passenger and driver and optional rear stability fin. Powered by a 3.4-litre D-type engine with 250bhp and weighing just 914kg, the XKSS was quoted as being able to reach 60mph from rest in 4.7sec, a figure unknown for any road-going car of that time. Sixteen were built before the fire (all bar two going to America) and two were later converted from D-types. Original XKSSs have two designated chassis numbers, one denoting which XKSS it is, the other identifying the D-type from which it was derived.

Jaguar has confirmed that it is unable to register its new XKSSs for road use in the UK. Jaguar Land Rover is too large to be entitled to use the single-vehicle type approval system, which allows ultra-low volume manufacturers like Ariel and Caterham to avoid much of the prohibitive expense of full homologation. However, it says the problem does not exist in other regions of the world and believes even UK clients would be able to submit theirs for approval once they had taken ownership.





"You would not believe how little money we'll make on these cars."
Tim Hannig

Merc plans tilt at Ferrari

MERCEDES-BENZ IS AT AN advanced stage in assessing an all-new supercar to sit above the AMG GT Coupé as a serious alternative to a Ferrari, Lamborghini or McLaren. The car would be AMG-branded and, like the GT Coupé, not based on any pre-existing architecture. Unlike the AMG GT, however, the car will not be front-engined or rear-wheel drive. AMG boss Tobias Moers says, "We are now at a level where we could support another dedicated AMG model, but the car would need to be totally different from the GT."

Insiders suggest Mercedes is looking at the very reverse of the traditionally configured GT. It would place its engine behind rather than ahead of the driver, and would feature a small capacity internal combustion engine, boosted by a hybrid drive system in much the same way as already provided by the BMW i8, but with an altogether more thrilling level of power and performance.

The configuration is being considered



because more than anything Mercedes is keen to cash in on its current success in Formula 1. "We have the most energy-dense hybrid pack in existence," said one insider. "It would make a great deal of sense to find a way to harness that technology for use on the road."

The car is likely to use a carbon-fibre core, to provide strength, light weight and a further link to Mercedes' F1 operations, and be priced at about the same £200,000 as more exotic rivals.

It seems the new supercar has not been in the plan for long and a green light for production has yet to be secured. Until recently it was thought that Mercedes might shy away from producing such a car, as it was feared the brand might not be strong enough to compete against such blue-chip opposition. AMG has been going through a period of phenomenal growth, however, with record sales of 32,000 units in 2013 more than doubling in just two years to more than 68,000 cars by 2015.

Mercedes will further augment its credentials as a serious supercar manufacturer with the unveiling this summer of an extreme version of the AMG GT, tipped to be called the GT R. Believed to boast upwards of 570bhp and with a considerable cut in kerb weight married to extra downforce from a dramatic wing pack, the GT R is unapologetically heading for exactly the same turf occupied by Porsche's less powerful but lighter 911 GT3 RS.

AMG will also reveal a roadster version of the GT later this year as well as its take on the new E-class saloon and estate. Moers says the new E63 AMG will be the biggest step in the evolution of the fast E-class in almost 20 years and that its V8 engine will produce at least 600bhp.

Aston confirms GT8

FOLLOWING IN THE FOOTSTEPS of last year's limited-edition Aston Martin Vantage GT12, the company has announced a little sister called GT8. Also based on the Vantage, the GT8 (top) features the 4.7-litre V8 used by most Vantages, rather than the 6-litre V12 found in the GT12. Just 150 cars will be made, each priced at £165,000. By contrast 100 GT12s were produced and sold for £250,000.

The primary focus for the GT8 is weight reduction and to that end the car features a lithium-ion battery plus carbon-fibre sills, bumpers and rear diffuser. If you're prepared to spend the extra you can also have carbon door panels, a carbon roof, a Perspex rear screen and a titanium exhaust. Tick every one of those boxes and your GT8 will weigh fully 100kg less than a standard Vantage S. Also helping the car's speed is a 10bhp power hike (taking it to 440bhp) and an optional aero package featuring a large carbon rear wing balanced by a front splitter.

In the meantime Aston Martin has announced that a seven-speed manual gearbox will become a no-cost option on the Vantage V12 S. This is not the only three-pedal seven-speed transmission in production – manual Porsche 911s have seven speeds – but it is alone in offering the classical race configuration that places first on a dog-leg. The car will be reviewed in the next issue of *Motor Sport*.

These are likely to be among the last modifications to the Vantage, which has already been in production for 11 years. Its replacement will be shown next year with styling rumoured to be close to that of the avant-garde DB10 seen in the recent James Bond romp *Spectre*. However it looks, it will be the first to come equipped with the Mercedes-AMG 4-litre twin-turbo V8. Mercedes is known to be preparing versions of this engine with more than 600bhp for its own products, so the potential for the next Vantage is clear to see.



Mazda has revealed an MX-5 with a retractable hard top. Called the MX-5 RF (roof fastback), it features a top that folds behind the driver, leaving the flying buttresses in place to create a targa shape. The car is crucial, especially in the UK where it is expected to account for the vast majority of MX-5 sales. The roof system adds 40kg of weight and, undoubtedly, a four-figure sum to its list price. It is expected to go on sale in the UK early next year.

Tesla enjoys sales growth

TESLA IS EXPERIENCING MASSIVE demand for its latest model, the BMW 3-series rivalling Model 3. At the time of going to press the firm had received almost 400,000 orders for the four-door car, sales of which aren't due to start until next summer.

Like all other Teslas, the Model 3 is powered by electricity alone but, unlike its stable-mates, it will be a touch more affordable. UK prices are likely to start south of £35,000, compared with the £63,235 required to buy even the cheapest of the extant Model S line-up. Tesla claims the entry-level Model 3 will cover up to 250 miles on a single charge and reach 60mph from rest in better than six seconds. It also says it will lead the class for interior space and offer unprecedented levels of safety. Ⓜ



A year before sales commence, the new Tesla has attracted almost 400,000 orders



JAGUAR F-PACE

An SUV with driver appeal? British talisman makes a flying start with its first step into a fresh sector | BY ANDREW FRANKEL

UNLIKE ITS NAME, THE reason behind the Jaguar F-Pace's existence is not hard to fathom. You may like, loathe or feel thoroughly indifferent about premium SUVs, but in the car world they are flavour of the month, year and decade. By the end of this one, sales are projected to double the sky-high level they enjoy today. But to a car manufacturer, these cars are better news even than that. In the past companies were forced to choose between or balance their ranges across low-cost, high-volume and low-volume, high-margin models. But cars like the Porsche Macan have shown that if you get the formula right, automotive utopia – a car with both huge sales and margins – can be achieved.

Jaguar has made the F-Pace a certain way – and that requires a little further explanation. While you and I may have been made aware of Jaguar by an XK, E-type or a MkII, in the wider world in general and vital emerging markets in particular, this is the first Jaguar that people will recognise. If it is not the best selling car in the company's history something will have gone badly wrong, so it must serve not only as a car in its own right, but as a shop window for all the others. So it has to have a face that makes people realise that XEs, XFs, XJs and F-types are Jaguars too.

Nevertheless, at least while speaking to hacks assembled in Montenegro for its launch, Jaguar's pitch is that the F-Pace is most definitely 'a Jaguar that looks like an SUV' rather than the other way around. The roads around the tiny Balkan state would soon reveal the truth or otherwise of that assertion.

You will read elsewhere that the F-Pace is based on the same platform as the XE and XF. It's not. It doesn't share a single significant dimension with Jaguar's saloons and more than 80 per cent of its components are unique.

Jaguar F-Pace 3.0D S

FACTFILE

£51,450

ENGINE
3.0 litres, 6 cylinders, twin-turbocharged

POWER
296bhp@4000rpm

TORQUE
515lb ft@2000rpm

TRANSMISSION
eight-speed automatic, four-wheel drive

WEIGHT
1884kg

POWER TO WEIGHT
157bhp per tonne

0-62MPH 6.2sec
TOP SPEED 150mph
ECONOMY 47.1mpg
CO_2 157g/km

Carry-over parts relate mainly to powertrains and electronic architecture. What it does share is the same design template, which is not the same thing: you can put two entirely different dishes into the same oven for the same time and they'll never turn into the same meal. But it does mean an XE and an F-Pace can go down the same production line and be built by the same tools and robots, which is where the economies really lie.

The big seller, at least in Europe, will inevitably be the 2-litre diesel, mainly with automatic gears and four-wheel drive, though a manual rear-drive version is available to squeeze the car under the vital 130g/km CO_2 barrier vital for fleet sales. All other F-Paces have 3-litre V6 engines, all-wheel drive and automatic transmissions, with either turbochargers, diesel fuel and 296bhp, or supercharger, petrol power and 375bhp. Prices begin at £34,170 for the base model, rising up to £51,450 for either of the V6s. The most

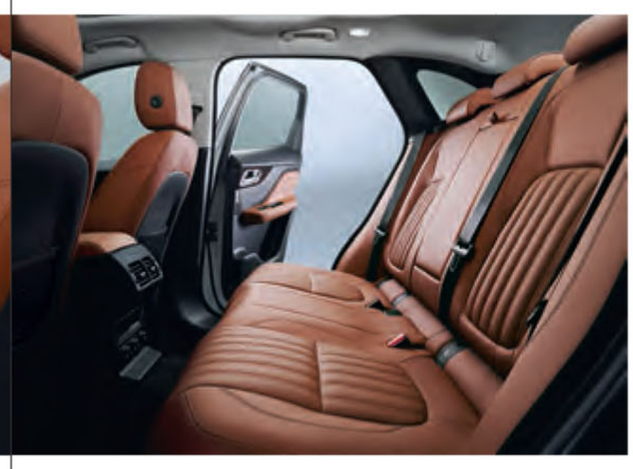


popular in the UK will be 2-litre diesel, four-wheel-drive, mid-spec 'R-Sport' models retailing for £40,360.

Physically it's a large car, bigger than rivals such as the Audi Q5, BMW X3 and Macan in most dimensions. It will seat four adults in comfort, five at a squeeze. The interior is more smart than special and lacks the visual flair that has distinguished Jaguar cabins of the recent past. But you cannot complain about the bewildering array of what marketing types describe as connectivity solutions on offer. Jaguar design boss Ian Callum showed me an app on his smartphone that gave every detail of every journey his car had done, exactly where it was parked and the virtual button that could start the engine remotely as easily as if you were sitting in the car with the key in your hand. Given that at the time it was in Hampshire and we were quite near Albania, I was suitably impressed.

I enjoyed driving it too. The 2-litre diesel offers only adequate performance but compensates by being notably light on its toes, exceptionally for a car of its size and height. Its ride was not great, but good enough to make you feel the correct balance between comfort and agility had been struck for an SUV. In the class, only a Macan has a better chassis. I was at least as interested to discover how quiet the car was, having been disappointed by the noise the same engine makes in the XE and XF. And





While F-Pace interior may lack previous Jaguar flair, crisp exterior carries family genes into expanding markets

whether for reasons of installation, on-going development or both, I can report that – at least in the F-Pace – the problem is solved.

I tried the petrol powered V6 next and emerged slightly disappointed. It only felt as fast as its figures suggest (0-62mph in 5.5sec) if you caned it, at which point it made a rasping noise that to me sounded rather contrived, though I am assured there are no sound 'symposers' or other black magic apparatus fitted. And I'd not much fancy the fuel consumption either: Jaguar claims 31.7mpg, which probably means 25-26mpg in normal use.

It's hard to see how it can be worth it when the 3-litre diesel actually feels quicker in normal driving (thanks to a monster 516lb ft of torque at just 2000rpm compared to 332lb ft at 4500rpm for the V6 petrol), and does 47.1mpg on paper, so probably 40mpg in practice. It sounds more natural, is quieter, delivers its power in a way that is more appropriate to this kind of car and will probably go half as far again on a tank of fuel. The extra 100kg of mass in its nose means it doesn't feel quite as nimble as cars fitted with the little diesel but, crucially, this is still an engaging and rewarding car to drive: a Jaguar that just happens to be an SUV indeed.

So the company should feel proud of its newest recruit, not least because it is its first SUV. Of course there is the know-how within the group derived from Land Rover living under the same roof, but this is no reconstituted Discovery; it's a brand-new car designed to define how a Jaguar SUV should appear and feel, not a badge-engineered Land Rover. It doesn't feel like a tall, imperious Land Rover at all; it feels like a tight, taut Jaguar.

I am told that the fate of the faster versions you might naturally assume would follow is still to be decided. Jaguar is evaluating right now whether an F-Pace R, or RS would be a viable proposition in the marketplace. Certainly the car has been engineered to take the big, blown 5-litre V8 – already existing with outputs of up to 562bhp in other Jags – but Jaguar fears the sales volumes might not be sufficient to justify it. My inner cynic suggests very strongly the car will come and Jaguar is just speaking this way because for now it wants the focus to stay on F-Paces customers can actually buy, and I don't blame them for that.

In the meantime Jaguar can relax in the knowledge that, as of now, it has managed what BMW, Audi and Mercedes have not, and produced a premium SUV which does all the things such cars must while retaining real driver appeal. Porsche's Macan is the only other car in the class that can say as much. As company to keep, in this category at least, it gets no better than that.



PORSCHE 718 BOXSTER

Switching to four cylinders is not wholly bad news

PORSCHE'S DECISION TO place its future in the hands of turbocharged engines for all its products, save the GT-badged output of its Motorsport department, is easy enough to understand. It has very little to do with power generation and almost everything to do with generating the kind of CO_2 numbers (on paper) that will help assure legislators that Porsche in general – and its beleaguered VW parent in particular – is living up to its obligations as an environmentally good citizen. The decision to rob the Cayman and Boxster of a pair of cylinders is perhaps a little harder to fathom... and the choice to name both after what for most will be, at best, an obscure 1950s sports-racer is barely comprehensible.

Many owners will find that exchanging their six-cylinder, naturally aspirated Boxster for one with four cylinders and a turbocharger does not exactly leap off the page as a great idea. They may find a fuel saving of between 4-5 per cent and a commensurate drop in CO_2 emissions (and company car tax) a move they could probably afford not to make. And that's before they've heard the dull off-beat thrum that Porsche now offers in place of the once haunting wail of the old and now defunct flat six. In a car bought for predominantly recreational purposes and with rivals still toting a greater number of cylinders, it remains to be seen how Porsche's usually fiercely loyal clientele reacts to the news.

Even so, what those in the market for a Boxster now should do is either buy a nearly new version of the old car, or grit their teeth and buy the new four-cylinder model instead. Simply put, the Boxster is so far ahead of its Mercedes, BMW and Audi opposition that they could probably install an industrial generator under the engine cover and still emerge as the best car in its class.

Besides, this new motor is by no means all bad. Regardless of what you will read elsewhere the noise is a disappointment, but the mid-range torque it provides is a real bonus for two reasons specific to the Boxster's slightly curious configuration. Firstly, all Boxsters up to and including the GTS have felt underpowered relative to the abilities of their chassis. In fact the power has often been there, but you'd need to use gearchanges and revs to find it; now it is but a twitch of the toe away. And it brings the car's chassis alive. Secondly, Boxsters have also always felt overgeared as Porsche has fitted final drives suited not to the provision of maximum performance, but emissions that look less terrible on paper. So while the gaps between the gears are as wide as ever, the torque of the new engine now covers them perfectly.

So the new Boxster is more capable, more effortless, better looking and even now comes with state-of-the-art navigation and entertainment. Is a rather dull noise such a price to pay? For me it is, because it has robbed the car of a chunk of its character. But I must accept also that there's still no civilised roadster I'd rather drive. Ultimately Porsche must have figured you can afford to take a step back when you're so many miles ahead. And while I might not much like that analysis, I must concede it is correct.

FACTFILE

£50,695

ENGINE
2.5 litres, 4 cylinders, turbocharged

POWER
345bhp@6500rpm

TORQUE
310lb ft@1900rpm

TRANSMISSION
six-speed manual, rear-wheel drive

WEIGHT
1460kg

POWER TO WEIGHT
236bhp per tonne

0-62MPH 4.5sec
TOP SPEED 177mph
ECONOMY 34.9mpg
CO_2 177g/km



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BMW X1

Rear-drive traditionalist reverses its approach

LENDING ME A CROSSOVER IS a gutsy thing to do. My dislike of the genre is well known and founded on what I regard as the undeniable truth that, as a whole, they represent the most underachieving class on sale. Because they are high and heavy they are uniformly worse than conventional cars in their performance, handling, fuel consumption, CO_2 emissions and so on. But because they are 'crossovers' they lack the truly commanding driving positions of true SUVs and, by and large, their off-road ability too. They are fashion accessories bought by people happy to spend more money on a car less suited to their needs so long as they think it makes them look good, or at least better than otherwise they might.

But such is their popularity, manufacturers simply can't afford to avoid them – even BMW, which has held out longer than most. But this new X1 is a crossover pure and simple, rather than a jacked-up small estate like its ugly but wildly successful predecessor.

It's based on a new front-wheel-drive platform, the first so configured for BMW, that will also come to underpin the entire Mini range. Most X1s will indeed be front-wheel drive, though four-wheel drive is an option and standard on the most powerful 25d model driven here.

Of its type if no other, it is highly convincing. Its single best attribute is to look like a crossover but not behave like one, which for BMW must have been the primary dynamic goal. With a good slug of power and a wall of torque provided by one BMW's typically gutsy 2-litre diesels, there is all the performance you could want from such a car, and probably substantially more than you might expect. It handles well too, refusing to wallow around when hustled like so many of its ilk. In short, it feels as a BMW should.

Inside, those progressing from the old X1 may scarcely believe the improvement in quality, but those who go shopping with an Audi Q3 or Mercedes-Benz GLA also on their lists will be less easily swayed. All the scratchy plastics may now be gone, but for sheer style Audi remains ahead as does the Benz for a sense of luxury.

FACTFILE

£36,370

ENGINE
2.0 litres, 4 cylinders, twin turbocharged

POWER
228bhp@4000rpm

TORQUE
332lb ft@1500rpm

TRANSMISSION
eight-speed automatic, four-wheel drive

WEIGHT
1660kg

POWER TO WEIGHT
143bhp per tonne

0-62MPH 6.6sec
TOP SPEED 148mph
ECONOMY 56.5mpg
CO_2 133g/km

I found the ride a little challenging, too.

But the X1 is still inherently likeable, which gives it a massive head start over most of the opposition. And if it's a compact crossover you feel you must have, I'd probably recommend it over any other on the market right now.

Not that this should be mistaken for any kind of ringing endorsement. Instead it is worth considering that for less that £3500 more, you could drive away a 330d Touring in M Sport trim. Its engine has three litres not two, six cylinders not four. Its handling and performance are so far beyond the X1 and to render further comparison pointless, it rides much better and, officially at least, covers just three fewer miles for each gallon of diesel. By any objective assessment, it is a wildly better car. But that's not what sells crossovers and, as the best of its bunch, I expect the X1 to fly out of the showroom.



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MERCEDES-AMG SL63

An opulent cruiser that packs one hell of a punch

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THERE REALLY IS NOTHING else out there quite like a Mercedes SL and, given the small numbers in which it sells, you might rightly conclude there is a good reason for that. It is a car of contradictions: it has just two seats, which shouts sports car, but a complex and heavy folding metal roof that smacks far more of all-purpose cruiser. There are four engines available, two of them snarling V8s and one a 6-litre twin turbo V12 that, combined with its aggressive styling, should certainly speak to monied young guns. Yet when you look at those who drive them in the US – far and away its biggest market – you'll find the hair belonging to its driver grey, white, largely absent or hiding beneath some kind of hat.

Featuring styling intended to recall the W194 prototype 300SL that won Le Mans and the Carrera Panamericana in 1952, this facelifted model perpetuates the conundrum. More sharply shaped than ever, its appearance belies its character.

Normally this would annoy me. I don't like cars that promise one thing then deliver another, especially when the former is more exciting than the latter. But the SL has always been the exception: I know exactly what it's going to be like and know also what it offers cannot be replicated by anything else.



FACTFILE

£114,100

ENGINE
6.2 litres, 8 cylinders, turbocharged

POWER
577bhp@5500rpm

TORQUE
663lb ft@2250rpm

TRANSMISSION
seven-speed paddle shift, rear-wheel drive

WEIGHT
1860kg

POWER TO WEIGHT
129bhp per tonne

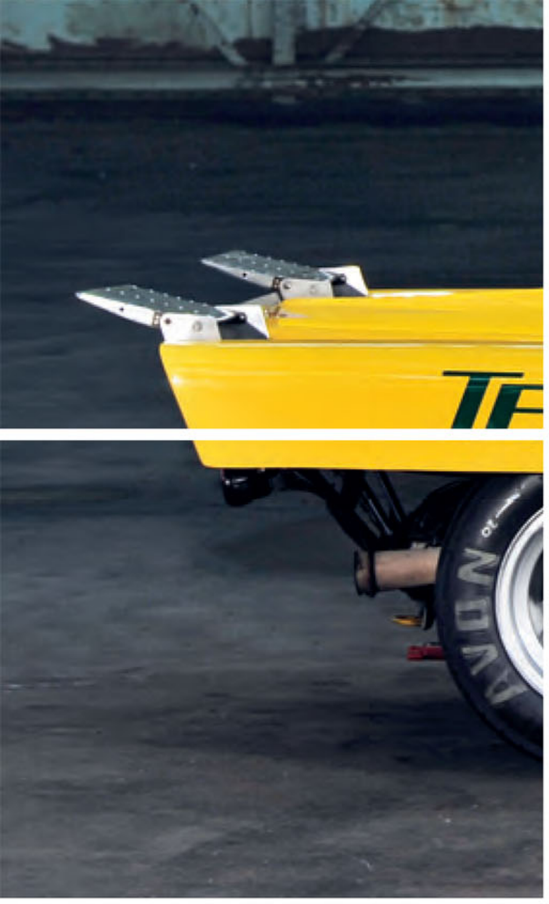
0-62MPH 4.1sec
TOP SPEED 155mph
ECONOMY 28mpg
CO_2 235g/km

The entry level SL400 has been much improved by being given a slug more power but really, and ever since the Bobby Ewing days, an SL has needed a V8, and I don't mean 'or a V12' because that monster is massively expensive and its weight fundamentally unbalances the car. But the SL500 and SL63 are perfect examples of the SL art, the smaller-engined 500 giving away remarkably little in terms of character to its AMG-powered stablemate despite costing more than £30,000 less. Really it is the one you should have.

And yet it was to the SL63 I was drawn again and again, and not just because of its 577bhp output. More persuasive to me was that this is one of the very last AMGs to use its ageing 5.5-litre twin-turbo motor, which has survived into this generation of SL merely because this a mid-life tweak. When the entirely new SL comes along in about three years it will have the brand new 4-litre V8, and very good I am sure it will be. But that deep bass thunder of the old engine provides one of the all-time great automotive soundtracks. Its ability to surge forward on just the twitch of a toe, or else explode out of the blocks if you tread a little bit harder, is not just enticing but irresistible.

Best, it plays exactly to what I love most about the SL, that sense of a horizontally laid back boulevardier possessing, coiled up deep within, the potency to blast anything this side of a bona fide supercar clean off the road. It's a strength you may go your whole life never feeling the need to use, but you will enjoy the knowledge of its presence every time you climb aboard.

Mercedes-Benz will already have decided what kind of car the next SL will be, and it's a fair guess than it will be both lighter and faster than this. But it needs also that sense of heft, luxury and quality that instils in its driver a will not to rush anywhere for anyone other than him or herself. Without that, however good it might otherwise be, it's not an SL.

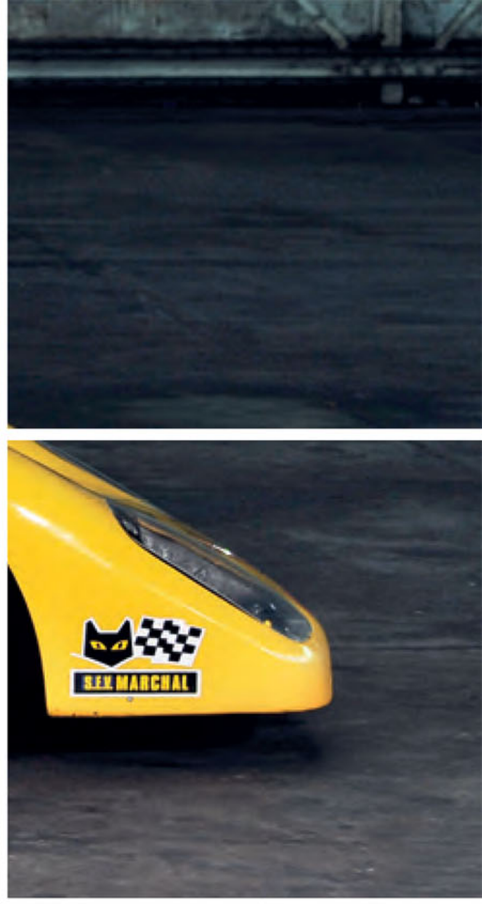




1970 FERRARI 512M
Ex-Escuderia Montjuich
Entered 1970 & 1971 Le Mans











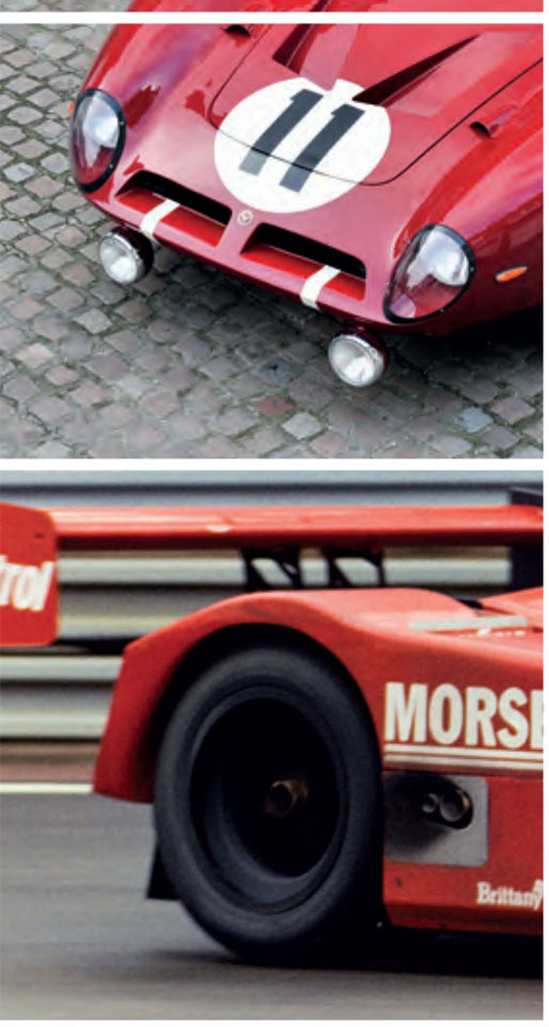
1966 BIZZARRINI
COMPETITION LE MANS COUPE
Entered 1966 & 1967 Le Mans



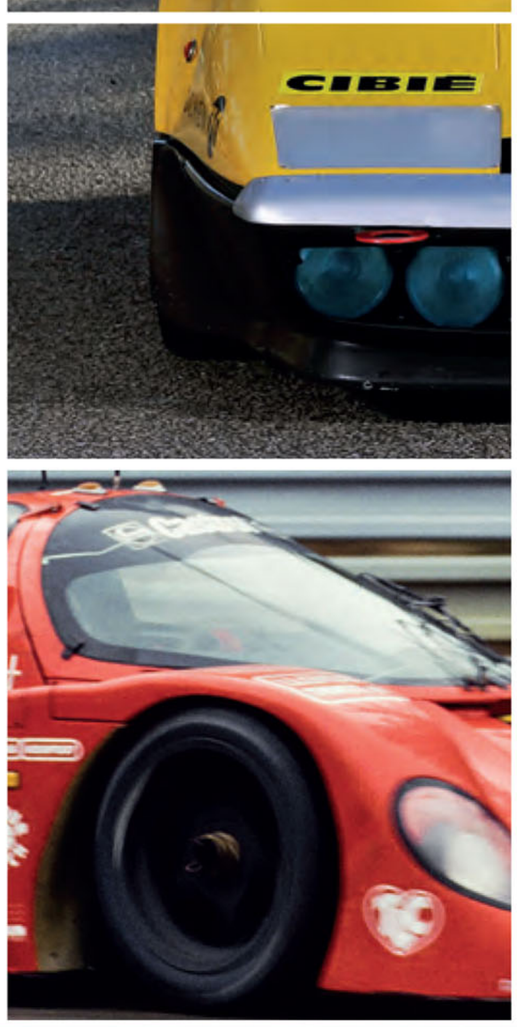
1978 FERRARI 512 BB
Ex-Ecurie Francorchamps
Entered 1978 Le Mans



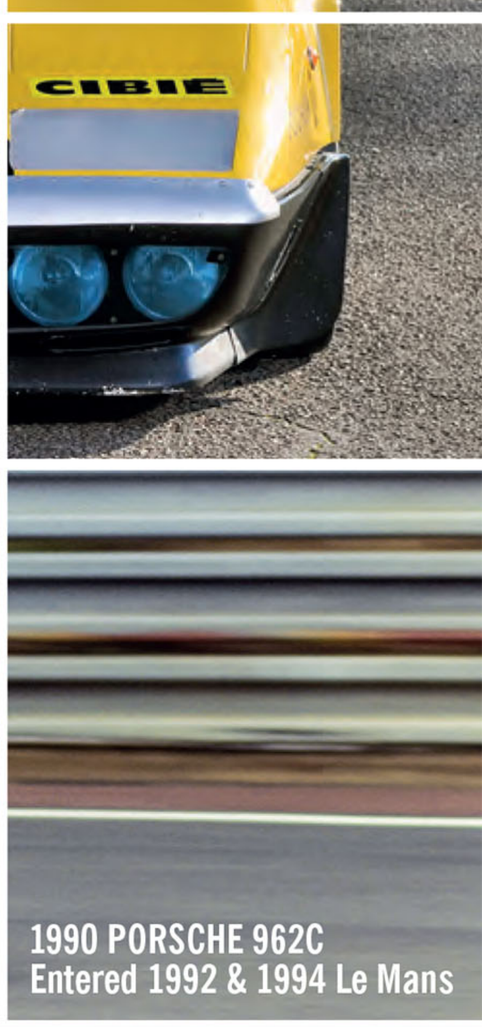












1990 PORSCHE 962C
Entered 1992 & 1994 Le Mans

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The price of success

With reference to the lucky escapes at this year's 74th Members' Meeting, Goodwood is an amazing event but it has become a victim of its own success. The range and quality of cars now competing are the result of this success, but the downside is that it has become too important to win.

Just taking part is no longer enough, hence the numbers of professional drivers now being employed to get the best from the cars.

On the Sunday the only race not to be either red-flagged or to involve the safety car was that for Edwardians. I am sure it is no coincidence that these cars are owned and driven by people who are passionate about them; some have been in the family for years, while others were built by the owner who thus has a vested interest in the car. The possible consequences of an accident are also obvious.

On the flipside, a professional driver has no particular affection for the vehicle he is racing; it is just a piece of equipment with which to achieve his winning goal.

I took part in the first Revival meeting and, as I was driving my Austin A40, winning was not an option. But none of that mattered because it was 'an event' and we had the most wonderful weekend. I resprayed a matching A40 to use as a tow and support vehicle and entered into the whole spirit of the event.

Sadly, I think that often it is now seen as a way of increasing the value of a car rather than as a spectacular event in which to take part.

Derek Harris, Ruckinge, Ashford, Kent

Room for review

Having been 'weaned' on historic racing as a junior member of the VSCC, when Neil Corner, Hon Patrick Lindsay, Simon Phillips, Michael Bowler and Willie Green were among the front-runners, my views about the 74th Members' Meeting are these.

What Lord March has achieved with the Goodwood brand deserves high praise; three world-class, industry-leading events from nothing. However, the marketing department at Goodwood does itself no favours by presenting edited 'thrills and spills', most recently Stephen Bond's miraculous escape and Karsten Le Blanc's extensive damage to his Cobra.

Mixing amateur race drivers with multiple Le Mans, touring car and F1 race winners is in my opinion dangerous for all concerned. I accept the RAC TT at the Revival does this in part, but the amateur competitors in this race are usually highly experienced. More concerning is the 'Goodwood effect', where amateur drivers are undoubtedly racing beyond their capabilities in an effort to show favourably. I believe the MM and Revival selection committee need to address the alarming disparity in competitor ability and speed.

The Goodwood circuit has more than ridden its luck with the entry angle and location of the chicane (just ask Jochen Mass, Paul Knapfield and Tony Wood, among others). The circuit management definitely made a mistake when it negated the opportunity to reprofile the width of the pitlane, during the recent control tower restoration. Tradition is very important, but not at any price.

Surely, all this damaging publicity plays into the hands of local council do-gooders who seek to restrict our sport and encourage further residential development adjacent to the circuit.

I've attended all but two Festivals of Speed, every Revival bar one and all Members' Meetings. I'm neither an owner, racer nor preparer, rather a passionate enthusiast and spectator with a genuine concern that things at Goodwood need fundamental review.

Edward Brown, Northwich, Cheshire

Calculating risk

When I travel to London I am aware that I could be the victim of a terrorist attack. When I go motor racing at Goodwood I know that, even as a spectator, I could be the victim of a freak accident. However, I know that the odds on my side in both instances are at least a million to one and I am prepared to take the risk. I do hope the circuit and protection measures remain unchanged and that there is not a knee-jerk reaction.

I was hugely disappointed by the 74th Members' Meeting. I fully supported the use of a safety car to deal with the Bond and Smit incidents, but local waved yellows would surely have been sufficient for some of the other mishaps.

With regard to driving standards at club/national level, there has always been a huge gulf between professional/talented amateur drivers and the also-rans. With the more powerful cars, perhaps the answer is for Lord March to ensure that his valued invitations are sent only to those who have demonstrated at least a modicum of talent.

John Hindle, Penshurst, Kent

This is the modern world

I enjoyed your very rational report of the 74th Members' Meeting, especially the question you asked as to what should happen in future as far as safety is concerned.

I do not know what modifications Goodwood will have to make, if any, but it's difficult to imagine some debris fencing not being introduced. If that is brought in, I believe the number of visitors would still remain high – similar to the Silverstone Classic, which is surrounded by fencing.

If the worst happens, then we owe Lord March and his team a huge debt of gratitude for letting us enjoy 16 years of superb spectating as it used to be. If motor racing is to continue, however, there may be no choice but to modernise.

Julian Nowell, Walton on Thames, Surrey

Print on demand

So the dust settles and we have swapped a long-term BBC monopoly for a long-term Sky monopoly, and will still have to pay for both. How is that good for fans, team sponsors, teams or indeed the current Channel 4 investment?

Many years ago, when F1 had virtually no TV coverage, I followed it via *Motor Sport* and went to the odd race to get the best blend of reporting and the visceral live experience.

Back to the future for me, and perhaps many others.

Steve Singleton, Ilkley, West Yorks

Hawaiian topic

I've just read Doug Nye's January column – stuff takes a while to get to Hawaii! Thanks for remembering me all these years later – those were fun days, from tin-tops to GTs and GPs. As you will recall, many drivers drove all three on Grand Prix days and I think the sport was the better for it. Aloha.

John Sprinzel, Molokai, Hawaii

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Gentleman Brian

It was fabulous to read your review of Brian Redman's memoirs.

I spent many of my younger days at Oulton Park – just a couple of hours by bicycle from south Manchester, where I lived. I first saw Brian helping his colleagues push one of the Red Rose sports cars up to the scrutineering bay, although my first actual meeting was in about 1969/70 when I was a young technician in the physics department at the Christie Hospital.

I went to visit him when he was, I believe, having some repairs to burns acquired at various stages during his career. I took along a motor sport scrapbook and left it with him as I thought he might need something to read. His wife was with him at the time, so I did not hang about long, but they were very friendly and polite.

When I collected my scrapbook some days later I found that all photos of Brian had been autographed; he had obviously also had a visit from Dickie Attwood, as he'd signed a photo of his BRM in Monaco. I was over the moon.

Our paths did not cross again until September 1979, when I was a competitor in Longton & DMC's Isle of Man sprint. He was in a 5.7-litre Chevron B32 while I was in my home-built 3-litre V6 turbocharged Ford Anglia, so I introduced myself again and thanked him for the autographs. He was again very friendly and polite.

He's a fine man, and it's good that he was one of the lucky ones to survive the 1960s and '70s.

Pete Nelson, Thurnham, Lancaster

He wasn't there

Re *You Were There* in the May 2016 edition: photo two is not Eugenio Dragoni, but Mauro Forghieri. With his back to the camera is almost certainly Franco Gozzi, Enzo Ferrari's press officer and right-hand man. Lorenzo Bandini is at the right of the photo.

Please let us have a *Lunch with* Mauro Forghieri; his memories are unique.

Roy Pagliacci, London SW19

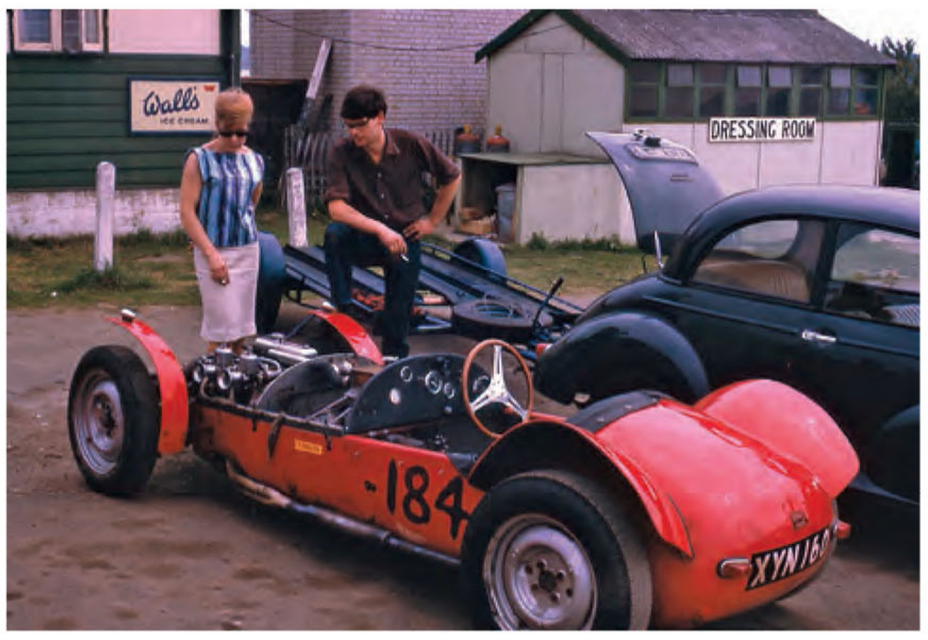
Florida cocktail

I really enjoy Mark Hughes's analyses. As a long-time F1 fan and press photographer I lament the terrible state of affairs in F1 today. I just put together an exhibit of some of my 1970s F1 photos and it got me thinking about those great times. I was reminded that from 1979-1982, over a period of 60 GPs, there were 19 different winners. Over the past four years we had 150 races and seven different winners. Is it any wonder F1 is failing?

Mike Gotwalt, Vero Beach, FL

Formula Junior mystery

Perhaps your readers can help. This time last year I bought the chassis of a Yimkin Formula Junior on the strength of a note from someone who raced these cars in period. They vouched for its provenance and had seen it at the Yimkin works in Cadogan Lane, Chelsea, between 1961 and 1963.



Do you recall this car? Then you may also have seen Alastair Cox's Yimkin FJ chassis at the works at the same time in 1963. Info please...

Unfortunately the Yimkin founder and engineer Don Sim has no recollection of this car, which suggests it may either be one of the original six that was later modified, or a seventh built after Don sold his interest in the company. More recently I have seen photos clearly showing both the ex-John Parkinson Yimkin and my own chassis outside the Yimkin works in 1963.

Don Sim, John Parkinson, the Formula Junior club and several other members of the community have responded, but somewhere the connection has been lost and there is no recollection of why this Yimkin was modified in 1961 or indeed mothballed for more than 50 years. Does anyone know the history of this Yimkin? My father owned this car in the early 1970s and I'd like to rebuild it with him while his knees still bend!

Alastair Cox, Cottenham, Cambs

Indycar better than F1?

I have just read Mark Hughes' piece on the long-overdue open letter posted by the GPDA regarding the state of Formula 1. Having read *Motor Sport* and closely followed F1 for close to 50 years, I'm actually starting to believe spec racing (heaven forbid) might need to be jammed down F1's throat to regain some of the lost excitement.

Watching Juan Pablo Montoya in Indycar is now more exciting than following F1, something I never thought I'd say.

While I praise Mercedes's engineering dominance within the current technical regulations, I blame those who stitched together today's patchwork of 'fixes' that have, in fact, made watching F1 painful. DRS, degrading tyres, proprietary diffusers, energy recovery systems and excessive aero packages are fast killing fan enjoyment.

Yes, Hamilton and Rosberg might be good drivers, but what would it look like if all 22 racers were in technically similar cars?

If F1 exists simply to satisfy a small number of manufacturers (or even teams) so they can display the latest technology, we are lost. We will likely soon be watching cars circulate either without humans aboard or drivers acting simply as passengers. F1 fans want to see cars move around a bit and see the best drivers battle in at least 'near equal' equipment, not a technical road map that favours only the wealthiest of entrants.

Let's hope those in power simplify the technical by truncating the artificial aspects. This cannot be that difficult.

Colin McArthur, Franklin, Tennessee, USA

Radical qualifying idea

Formula 1 qualifying and the subsequent race could be made more exciting if the first 11 places on the grid were taken by the car from each team with the quickest time, and places 12 to 22 by the second-fastest driver in each team.

This would make qualifying more competitive, as top cars/drivers who fail to beat their team-mates would find themselves towards the back of the grid. Racing would also be better as those drivers tried to recover lost ground.

Stephen Pole, Dolton, Devon



1

DR JOSEF MAIER

An Austrian now resident in Knittlingen, southern Germany, Dr Josef Maier attended the German Grand Prix at the Nürburgring on August 6 1961. He used a Leica M3, a 135mm lens and some rolls of Kodachrome to capture the adjacent splendour 1 Mid-race tussle for sixth between Mairesse (Ferrari), Gurney (Porsche) and McLaren (Cooper) **2** Runner-up von Trips pictured during sunny practice **3** Phil Hill leads Moss, who eventually overcame the Ferrari armada **4** Maier, then 15, climbed a tree to take this shot of John Surtees' Cooper. A policeman told him he'd be arrested if he did it again... **5** Gerry Ashmore's Lotus 18 pictured driving away from the Karussell section



2



3



4

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5

KEEPING AN EYE ON THE TIME: NEW RELEASES IN THE WATCH WORLD

by Richard Holt



PATEK PHILIPPE World Time Chronograph in white gold £48,480

PATEK PHILIPPE

For people that don't really see the point in mechanical watches, particularly ones that cost a lot, there is no sense trying to persuade them. They are very likely to be the same people that would look at a Lamborghini and think just how much more shopping you could fit into a Mitsubishi Mirage.

In the accuracy battle, of course, spring-powered watches lost out to quartz decades ago. And now smartphones are midway through the evolutionary process of spawning straps, so that they can inhabit our wrists. Despite these twin assaults, more and more people are discovering the joy of wearing a watch based on technology that has been around twice as long as the steam train.

It is an appreciation of design for its own sake. There will always be accusations that the watch serves the purpose of reflecting glory onto its owner, but nice things always attract cheap shots.

Certain luxury brands are of course guilty of the occasional bit of over-blinging. But that could never be said about Patek Philippe, which has not only produced some of the most beautiful watches ever made but is also a master of complicated movements.

Patek was a front-runner in developing the world timer, invented by Louis Cottier in the 1930s. It involved two concentric circles that could be used at a glance to tell the time anywhere in the world. The latest model to feature an evolution of this is the Patek World Time Chronograph. It has a seconds hand on the main dial and minutes on the subdial. Adding this on top of the 24-hour and world city rings could be a recipe for clutter, but the fact it works so well is testament to Patek's design mastery.

The two pushers on the right operate the chronograph, and the one on the left changes the local time. Clicking through the different timezones gives the same feeling of perfectly harmonised engineering as slotting through the cogs of a good-old manual gearbox. Yes, there are easier ways of doing things – your smartphone updates its own time zone automatically as soon as your plane lands. But where's the fun in that?

www.patek.com



OMEGA Speedmaster Moonphase £7140

OMEGA

Both Neil Armstrong and Buzz Aldrin were wearing Omega Speedmasters when they landed on the moon. As the first official Nasa space watch, Omega has understandably made much of the Speedmaster's reputation. But it wasn't conceived to go into space, being designed as a stopwatch for motor races and other earthbound sporting events. This latest version comes complete with moonphase display – so the moon watch now comes complete with its very own moon.

www.omegawatches.com



TUDOR Black Bay 36, £1940 on bracelet and £1730 on leather.

TUDOR

There are few watch brands causing as much of a stir as Tudor. It was launched in the 1940s as a cheaper alternative to sister brand Rolex, and for that reason spent many years in its sibling's shadow. This all changed in 2012 with the launch of the Black Bay Heritage, a design that won legions of admirers. Latest in the collection is the Black Bay 36, with a smaller (36mm) stainless steel case that lacks the diving bezel of previous Black Bay models. It was one of the most talked-about watches at the recent Baselworld watch extravaganza, showing how Tudor's ascendance as a brand in its own right shows no signs of slowing.

www.tudorwatch.com

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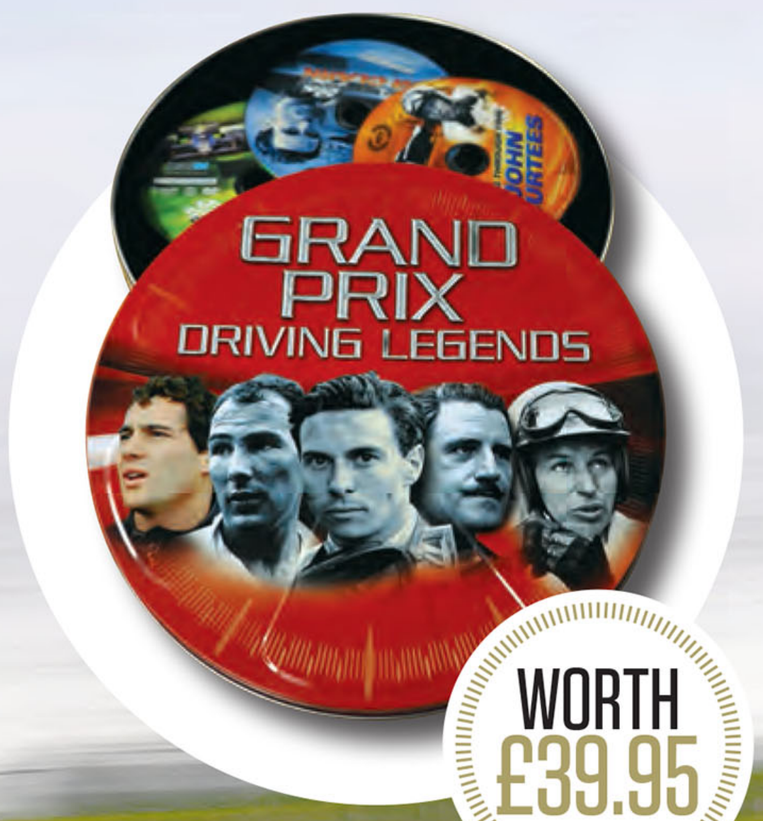
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LAP63

by Ludovic A. Parayre



Mike Hailwood and Niki Lauda at Brands Hatch, 1973
photo: Ian Dawson

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Ford's GT attack
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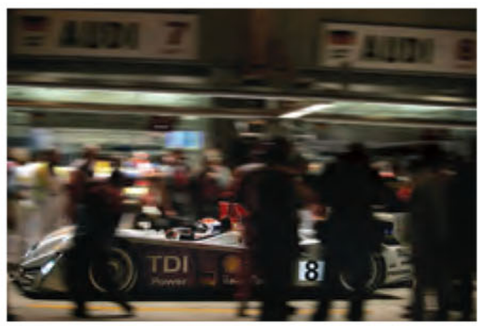
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Back & blue

It is 50 years since Ford celebrated its maiden Le Mans victory. As the factory prepares to return to the race for the first time since 1969, we spoke to three key players in one of the biggest endurance racing stories of modern times

writer SIMON ARRON | **photographer** DREW GIBSON

TO THE RIGHT STAND TWO Ford GTs, one resplendent in full racing livery and the other an unmistakably fresh shade of raw carbon. They are surrounded by a team of almost 30, many of them poring over screens wired rather messily to the car's brain. To the left is a 1964 GT40, overseen by a couple of blokes from Ford Heritage – probably twice as many as you actually need to operate the thing. The family heritage might be obvious from the adjacent coupés' profiles, but beneath the skin the contrast could scarcely be greater.

We're at Turweston Airfield, a handful of miles from Silverstone and a popular choice with racing teams for low-key shakedowns. For the European arm of Ford Ganassi Racing, it's a first day of action ahead of a hectic pre-season test schedule. Marino Franchitti is on hand to conduct systems checks on an L-shaped circuit incorporating two-way sprints along bisecting runways. It sounds simple enough, but this is a live aerodrome and the team has to time its runs to accommodate incoming and departing Cessnas, of which there seem to be rather a lot.

The GT40? That's present partly as a photographic prop to bridge generations, partly to allow Franchitti to get a feel for the thing prior to a proposed car share in the Alan Mann Trophy at the Goodwood Members' Meeting. Works teams in the World Endurance Championship aren't too precious to permit such arrangements – could you imagine Maurizio Arrivabene sanctioning Sebastian Vettel's participation in a similar event, perhaps at the wheel of a Ferrari 246? – but the Scot's deal had just fallen through due to the GT40 in question being sold. That, though, would not temper his enthusiasm for a quick stint at the helm (see sidebar).

Firstly, though, we need to analyse the day job. "We're using testing to build the team," Franchitti says. "We're all working together for the first time, developing relationships, learning WEC procedures. We're just starting to put the pieces together – and we have to do it quickly.

"Because of the hours the guys spent putting the cars together, there was soon an amazing amount of camaraderie. I was going to the workshop about once a week to see how everybody was doing… and taking them a lot of sugary treats – cookies, doughnuts and so on – to help them keep going. That builds a team very quickly. It's not like we received a car from a manufacturer, read a book about how to make it and then went racing. These guys have been doing it from scratch, and we're just a small part of an absolutely massive programme."

★★★

THE TRUTH OF FRANCHITTI'S WORDS becomes fully apparent a couple of weeks later, when *Motor Sport* heads to the global arm of



Ford Chip Ganassi Racing in Greatworth – also very close to Silverstone – to talk to team principal George Howard-Chappell, aka motor sports business director at Ford partner Multimatic, which is building both road and racing versions of the GT (and running the latter under the Ganassi banner).

Such is the intensity of the immediate pre-season schedule that Howard-Chappell has little spare time during the day. He suggests meeting up at close of play – a soft enough target in theory, but the M25's unsuitability for purpose makes me almost an hour late. No matter. The factory car park remains rammed, the lights are on and there's still a hive of activity within a modest industrial unit just off the B4525. "We could have had a flash 'look-at-me' building," Howard-Chappell says, "but Ford wanted something low-key, with character, away from that kind of environment."

The accent is on engineering rather than image – and that's always a good sign.

Howard-Chappell has a strong track record. After working in Formula 1 with Team Lotus from 1992-1994, he set up the factory Lotus GT team and oversaw Le Mans class wins for Ferrari and Aston Martin during a long stint (1998-2012) at Prodrive. He then joined Multimatic and commenced work on another racing project that didn't reach fruition, after which the Ford programme began to take shape. "I have worked on nothing else since," he says. "There are parallels with my previous work, because it's GT racing with a manufacturer and that's what Aston Martin was all about. In terms of the scale and the way it's being handled, though, it's not the same at all. At Prodrive the whole racing programme was very much handed over by Aston and we were told to get on with it. Here, there's a lot more Ford involvement and the very big difference is that, on the Multimatic side, we're building road and racing cars at the same time. Aston Martin is a high-profile brand but a smallish company owned by a finance group. Ford? When you go to Dearborn and see the scale, it's not like the Aston HQ at Gaydon! And the support we get from the parent company, when needed, is just amazing. So it's the same – but different."

The relationship between the Blue Oval and Multimatic vice-president Larry Holt stretches back many years – and not just in terms of competition. "There's a very, very close link on the OE (original equipment) side, too," Howard-Chappell says. "Multimatic makes a whole bunch of mainstream Ford product components – all sorts, from lower wishbones upwards. It's huge.

"The first thing I said to Larry when I joined was that I'd never realised the extent of what his company did or what its skills were. I asked why he didn't publicise it more, because it had such an amazing range of expertise, and he

"WHEN YOU SEE THE SCALE OF DEARBORN IT'S NOT LIKE THE ASTON HQ AT GAYDON!"





"LE MANS WITH A FACTORY FORD GT – WHERE ELSE DO YOU GET AN OPPORTUNITY LIKE THAT?"



replied 'Why would I do that? I don't need any more work and can already pick and choose what I do, plus a number of clients like the fact it isn't all high-profile. You can go to Multimatic and get a job done without everyone knowing about it.' It is an under-the-radar company, although that's perhaps changing a little with the Ford GT programme."

★★★

MULTIMATIC PICKED UP THE KEYS TO Greatworth – formerly home to British Touring Car Championship team Triple Eight – on November 1 last year and had precisely two months and four days to tailor the building to its own needs and have a complete car ready for the media launch. "It's definitely one of the most intense programmes with which I've been involved," Howard-Chappell says. "It was similar when I set up the Lotus GT team back in 1995, ditto when we built the first Prodrive Ferrari – we had a factory and the right infrastructure to support us, but turned a road car into a racer in just 16 weeks and the effort nearly killed some of us. This has been challenging, but great fun. The chance to go to Le Mans with a factory Ford GT – where else do you get opportunities like that?"

This, of course, is the European side of an operation that is also running a brace of GTs in the US-based IMSA series, which began 10 weeks before the World Endurance Championship kicked off at Silverstone. The GT showed clear potential from the off, although myriad problems affected both cars on their debut at Daytona. One was delayed by an accident at Sebring, although the other finished fifth in class and on the lead lap.

"We started by looking at the donor car while holding a set of regulations in one hand and asking ourselves what we could do to turn it into a racer," Howard-Chappell says. "The Ford GT is an ideal platform – mid-engined, low frontal area, nice double wishbone suspension geometry all round, quite low. Having read the regulations, there was nothing to make us think, 'Oh dear, this will be a bit difficult.' It has a very stiff carbon chassis and the EcoBoost is a very nice race engine [previously proven in Daytona Prototypes]. It ticks all the boxes and was much less of a struggle to turn into a racing car than other things I've worked on in the past."

Franchitti adds: "From the word go I've felt very relaxed about this programme because I really believe in the people involved. Look at George – he's a bit like a modern John Wyer, someone who has won at Le Mans with different manufacturers. I've watched his work from afar for years and to see him build



Muscle versus sinew: GT40 and MkII employed tough steel tub; today's GT is a carbon-fibre athlete



this team from the ground up has been very impressive.

"When driving the GT, you have to leave the pits with the torque turned down, because full torque would blow the gearbox if you didn't let it warm up fully. Then you'll be doing about 180 on the straight and get a message – 'torque time'. It's like accelerating from zero again. It's bonkers, but a beautifully built car.

"There were a few teething troubles at Daytona, but they were easily traceable. The main thing was that the car's performance was good. We could see it was where it needed to be and, having tested it so much, that came as no surprise. And the old adage about learning more in defeat than you do in victory is absolutely true. Victories are forgotten really quickly, but defeats eat away at you until you get a chance to go out and fix things."

At Le Mans Ford's IMSA and WEC divisions will operate as one team – its GTs numbered 66, 67, 68 and 69, which Ford requested to honour its four straight victory years with the MkII, MkIV and GT40. "The crews aren't going to intermingle," Howard-Chappell says, "because that would be a mess, but there will be a great deal of information sharing. It's a four-car team, but with some logical divisions because of the way things have come together.

"Our initial focus was very much on Le Mans and you can see that from the way we decided to approach our first two races, at Silverstone and Spa. We could very easily have run two drivers per car in those events, but opted to go with three because that will help us prepare better for Le Mans. We're taking things one stage at a time, but expect to be competitive from the start."

After so many years in the sport, does he approach new projects with clinical



THE RIVALS

'Ford vs Ferrari' makes a great headline, but they're not alone



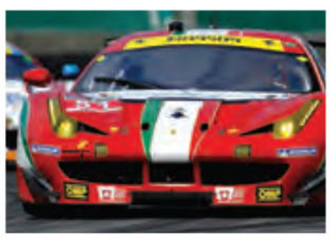
CORVETTE

The Chevrolet Corvette made its competition debut 60 years ago, in the 1956 Sebring 12 Hours, and first raced at Le Mans four years later. The current story began with the creation of Corvette Racing in 1999. Its cars sound even better than they look and have this far notched eight class victories at Le Mans – including a GTE Pro success last season for Oliver Gavin, Tommy Milner and Jordan Taylor.



PORSCHE

Synonymous with Le Mans since scoring its first win in 1970 – and has more outright successes (17) than any other manufacturer. Also prolific in the GT classes – most recently in 2013, when 911s triumphed in both GTE Pro and GTE Am divisions.



FERRARI

Hasn't won the race outright since 1965, after which Ford became the dominant force, and has made no attempt so to do since the early 1970s. Very active in the GT classes for many a season: won GTE Am last year and took GTE Pro honours in 2014, with Gianmaria Bruno, Giancarlo Fisichella and Toni Vilander.



ASTON MARTIN

In recent times, some of the Corvette vs Aston GT battles have been the best thing about Le Mans – in terms of both competitive ferocity and sonic output. Formed in 2005, the current team took back-to-back GT1 wins in 2007 & 2008 and scored a dominant GTE Am victory in 2014.

professionalism or does his inner schoolboy sometimes escape?

"Mostly clinical professionalism," he says, "but with a bit of schoolboy thrown in. When we got to our first Aragon test and stood there in the garage with our two cars, then watched them go out on track… there was a bit of excitement in that."

Howard-Chappell's Le Mans victories came in 2003 (Ferrari), 2007 and 2008 (both Aston), while he was also responsible for the sonically sumptuous Lola-Aston V12 that finished fourth overall in 2009. Which was his tensest Le Mans?

"Probably 2005, my first year with Aston," he says. "We'd been to Sebring and won on our debut, then did a one-off FIA event at Silverstone and took first and second in class. After about 20 hours at Le Mans we were leading and thought, 'Wow, what a story – we're going to win everything'… and then it all fell apart. It was a similar story in 2006. Whenever you get into a strong position, by midday on Sunday you begin to sweat."

Is it a race somebody in his position can enjoy in real time, or purely with the benefit of hindsight?

"I enjoy it until about 4am on Sunday," he says, "by which stage you're pretty knackered. You run until midnight on Wednesday and Thursday, so don't get away from the track until about 1.30am. It's gruelling, but it's the thing we always talk about. Whenever people ask about the highlights from my time in racing, I never mention F1. The answer always seems to be 'Le Mans'."

Time, perhaps, to lob in a bit of mischief. In the current climate, does he believe the World Endurance Championship is a better product than F1? He grins and says, "It depends on your perspective, I guess, but it is for me. It's so open and a huge amount of innovation is possible. OK, the Nissan thing failed badly last season but look how different it was from everything else. Thinking outside the box is so possible with the LMP1 cars – there's no way you could do that with the current F1 regs – and there's a lot of excitement in our races, too, with constant overtaking. It's very competitive and you can never be sure what might happen, whereas in F1 at present it's almost a foregone conclusion. There is no way we do any nursing in the WEC, either – the way we prepare for and race at Le Mans is absolutely flat out. Drivers go as quickly as they can all of the time and we test to make sure they are able to do that."

★★★

FAST-FORWARD ANOTHER FEW DAYS and Ford conversation resumes in the Goodwood paddock, during the 74th Members' Meeting. Seasoned professional Franchitti is present, but has no drive and is restricted to watching the Alan Mann Trophy for Ford GT40s. Ironically, though, Ford's European chairman and CEO Jim Farley – a keen amateur who races a Lola T298 in Peter Auto's Classic Endurance Racing series – *is* taking part, in a GT40 owned by Portuguese driver Diogo Ferrão. Farley is hugely excited about that (the pair would go on to finish ninth), but perhaps even more so by the GT programme.

"Racing to me is a counterpoint to the intense nature of my day job," he says. "It's a deeper way to enjoy cars than the stuff I usually do. You are so focused on going as quickly as you can that there's no time to think about anything else, which I find very relaxing."

Farley joined Ford from Toyota in 2007, and a return to competition was already on the Blue Oval's radar. "When I first met Edsel Ford," he says, "one of his opening questions was to determine what I thought about Ford coming back to racing. We then started to think about the kind of road car we'd need as a starting point.

"If you look back at the 1960s, there wasn't a big supercar market when the GT40 was developed – they were designed only as racing cars. There is now a big demand for supercars and we saw that as an opportunity. It's breath-taking to see the reaction we've had to the GT. Some projects are just the right things to do – they don't have to fit into a customer clinic or be a perfect business equation – and that's the case here.

"RACING IS A COUNTERPOINT TO MY DAY JOB. IT'S A DEEPER WAY TO ENJOY CARS"



"I think the company now looks at its performance business in a way that it hasn't since perhaps the 1960s. We didn't previously have RS or ST badging on such a wide range of products – and people who buy these cars feel just as strongly about them as those who buy an M-class BMW or an AMG Mercedes. It's not a hobby for a few enthusiasts. We're selling tens and tens of thousands of these vehicles globally and I think our new programme will help connect the brand with those customers.

"GT racing has its roots in prestige, luxury brands. I think it's quite poetic that Ford is trying to disrupt the status quo – just as it did all those years ago."







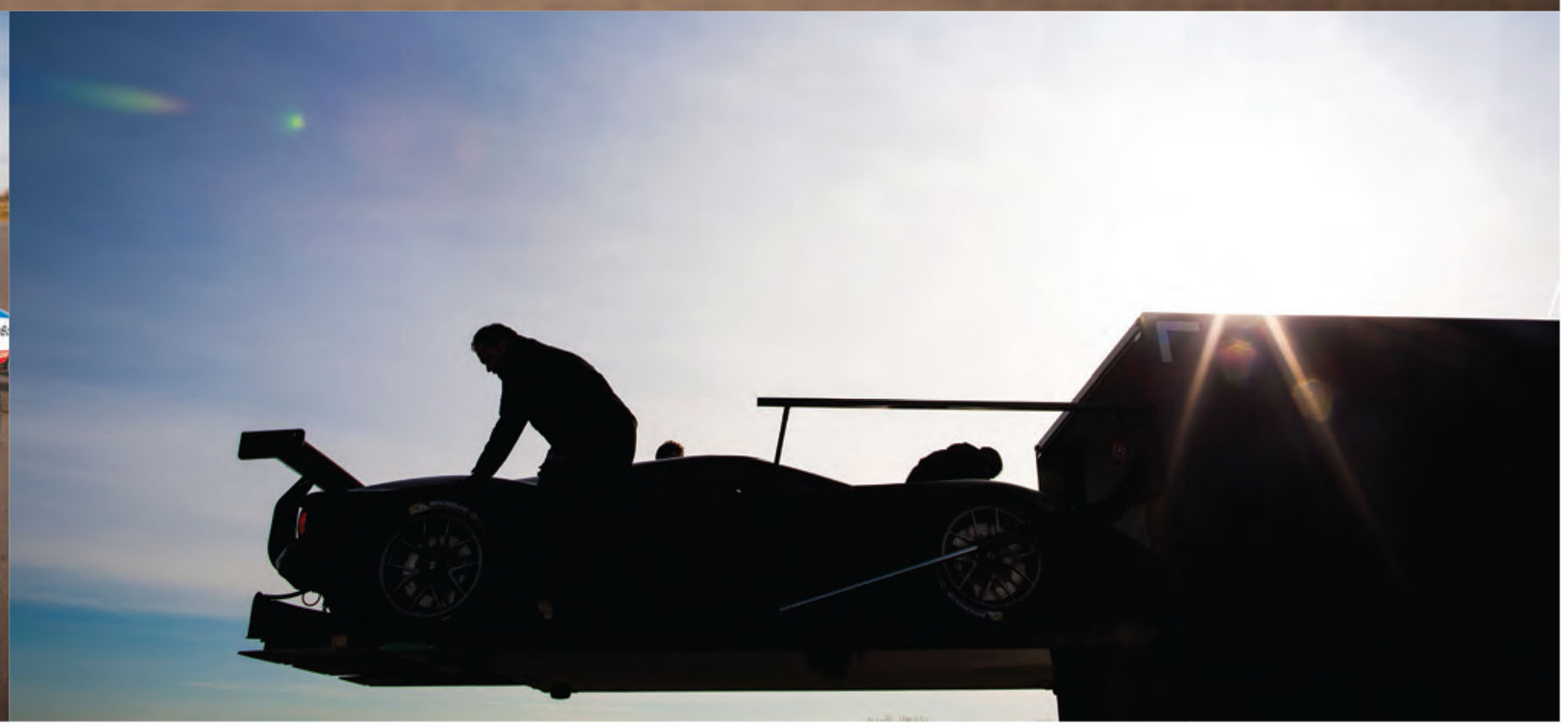







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SWING LOW, SWEET CHARIOT

Marino Franchitti tries a GT40 for the first time. The second can't come soon enough

SOME QUESTIONS SIMPLY DON'T HAVE TO BE asked: the look on Marino Franchitti's face tells all. He has driven many classics in the past – history is as much a part of the family's racing DNA as hitting apices – but this is his first run in a Ford GT40. Having left Ganassi Racing's temporary Turweston base, the Scot drives along a short straight, turns right, completes a bidirectional run on a modest slice of airstrip and then peels left to hand the car back. The whole thing takes little more than a minute, yet still he's in raptures.

"I've driven a Ferrari 250 GTO," he says, "and the step between that and a GT40 seems huge, even though they are not too many years apart – that's what I love about that era, the accelerated development.

"Talk about instant gratification... It's incredible. I knew I had only one run so I had to get every experience I could. Legendary cars can be intimidating – you're apprehensive as you approach them, although they're legendary because they were successful – but the GT40 just works. Gearbox, clutch, throttle, the connection between the throttle and your ear... it sounds amazing from the inside.

"Just think about it: two drivers in one of those for 24 hours. We're talking huge cornering speeds and lots of four-wheel drifting, keeping an eye on all the dials, trying to remain sufficiently quick without overdoing it. That's something I really enjoy about racing old cars – getting the middle of the corner correct so that you are *just* right at the exit, balancing the thing the whole way through so that you don't get to the exit and find there's a whole car width left. But it's just a different cassette, a bit like putting a different operating system in a computer. You have to affect the car's attitude before mid-corner and get it set – turn in hard and early, flow it through there and pick your exit point."

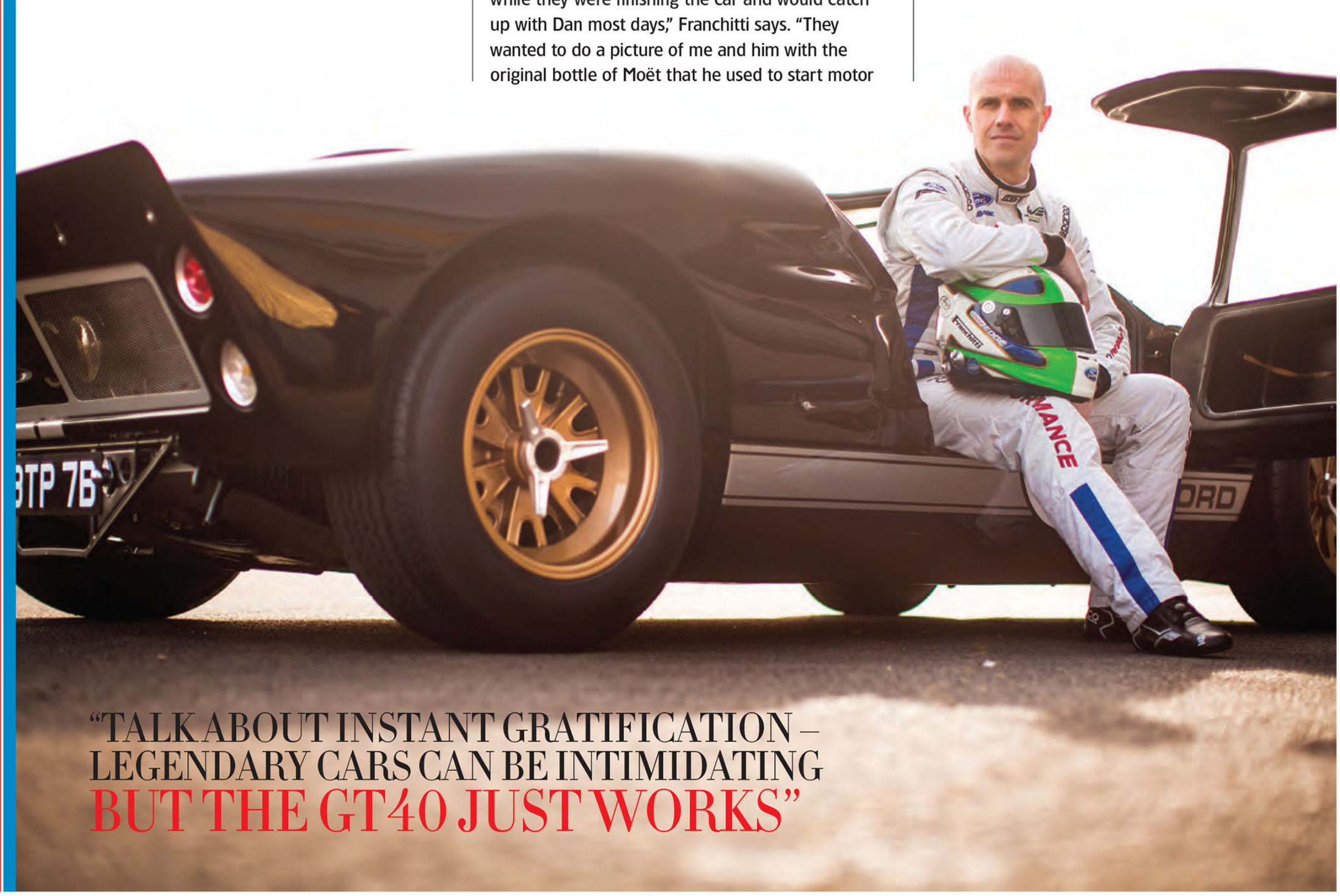
Franchitti has consumed at least a library of GT40 literature and knows many of the anecdotes, but he also has a direct connection with Dan Gurney, who co-drove the winning Ford with AJ Foyt at Le Mans in 1967. The Scot raced the original DeltaWing sports-prototype, which was built at Gurney's All American Racers factory in Santa Ana, California.

"I was at the workshop for about three weeks while they were finishing the car and would catch up with Dan most days," Franchitti says. "They wanted to do a picture of me and him with the original bottle of Moët that he used to start motor racing's champagne-spraying tradition at Le Mans in '67. He gave me a champagne-shaking lesson and it would be very nice to use that at Le Mans.

"Engineer Phil Remington [who died in 2013, aged 92] was still working there at the time. He was a big part of reworking the GT40's aero before the race – and also created the roof bubble for Dan, who needed a bit more headroom. 'Remy' found a street sign, dug out some sand and hand-beat it to the correct shape there and then. That was OK for the test, although obviously they had a proper one made afterwards. The opportunity to be with him and Dan, and to see their interaction, gave me a little insight – peeking through the curtains to see what they did when they were younger."

But back to the present...

"Older cars always feel more open," Franchitti says, "because there's a lot more window glass, roll cages are much skinnier – if they're there at all – and you feel rather exposed. I'd like to spend a lot more time in a GT40 – a quick run has whetted my appetite. It's a bit like being given a new toy for Christmas and then have someone take it off you almost straight away. I need to get back in one – and soon." Ⓜ



"TALK ABOUT INSTANT GRATIFICATION – LEGENDARY CARS CAN BE INTIMIDATING BUT THE GT40 JUST WORKS"

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"McLaren was quicker so his car was sabotaged..."

Ford was desperate to win Le Mans in 1966, but had to overcome political in-fighting as well as Ferrari. This is how the Blue Oval scored a famous first victory

writer PAUL FEARNLEY



FORD

"This is a victory meeting." It wasn't – far from it – and querying glances were exchanged. But Leo Beebe didn't blink: "Next year, we're going to come back and win, and we might as well start right now."

FoMoCo to the core, this former sports coach – baseball, basketball, football, track – and US Navy Phys Ed instructor didn't mind dirty jobs. He'd locked the doors behind him on Ford's Edsel embarrassment, for example. Yet motor sport had turned his stomach. Charged in April 1964 with winning the Daytona 500, Indianapolis 500 and Le Mans 24 Hours – no pressure! – his witnessing the grisly accidents of NASCAR ace Glenn 'Fireball' Roberts at Charlotte and Dave MacDonald and Eddie Sachs at Indy on consecutive May weekends caused him to question his role. He hadn't anticipated its human cost and perhaps should have stayed in Brussels, selling cars and trucks.

Nobody had died at Le Mans 1965 – but Ford was mourning six retirements from six and having to suck up a sixth consecutive Ferrari victory. Relocating the programme's powerbase from UK to US had led to a hurried introduction of a fast but unreliable car. Having created this 7-litre monster – almost 3000lb (ready to rumble) – Beebe was wondering if he should have let experienced John Wyer's Ford Advanced Vehicles, created in Slough in autumn 1963, just get on with it.

But Beebe had worked wonders elsewhere.

In 1964 Hemi-powered Plymouths finished 1-2-3 at Daytona; Team Lotus Powered by Ford collapsed at Indy; and the Ford GT, designed, built and based in England – but lumbered with a fragile Italian gearbox – instilled little optimism. So he cleared his desk of PR flimflam and created programme heads – Ray Geddes, a law graduate colleague of Carroll Shelby's, got sports cars – and locked horns with the sport's biggest names, with immediate effect: a Daytona 500 shortened by rain was won by Fred Lorenzen's Holman & Moody-run Galaxie and a refocused Lotus scored a dominant victory at Indy.

So Beebe slept on it.



SUTTON

Formation finish: the GT40 MkIIs of McLaren/Amon, Miles/Hulme and Bucknum/Hutcherson take the chequered flag at Le Mans in 1966

He went all in for Le Mans 1966. H&M and Alan Mann Racing of Byfleet were drafted to support incumbent Shelby American and between them they would prep, test and run no fewer than eight of those 'monsters'.

"We were included to give the car longevity," says Lee Holman, son of co-founder John. "We had 450 employees – far bigger than Shelby's – and one customer: Ford Motor Company. We could produce an entire car in our building and we applied that to what the [Le Mans] car needed."

This was racing gone corporate. Le Mans had never seen its like: 20 tons of spares and equipment, individual transporters, a 40ft mobile machine shop shipped from New York to Le Havre, and considerably more than 100 crew. Ford was ready at last to kick Enzo Ferrari where it would hurt most: due Sarthe.

Revenge was its trigger. When chief negotiator Donald Frey returned from Maranello in May 1963 with a flea in his ear and a signed autobiography in his suitcase, the combustible Henry Ford II lit up. Enzo had initiated takeover talks yet filibustered for days – interminable nights, actually – before walking. Jilted, Ford outlined its Plan B one week later: a Special Vehicles Department to conceptualise a high-performance sports-racer and liaise with outside agencies to oversee its build.

Having watched Ferraris fill the top six places at Le Mans, Ford representatives crossed to England to meet Colin Chapman, John Cooper and a shy former quantity surveyor. Lola's Eric Broadley got the gig. Ford approved of his lack of ego and Mk6 GT: a low-line mid-engine coupé, powered by a Ford V8, that showed promise at Le Mans until its Colotti gearbox caused David Hobbs to crash after 13 hours. A one-year deal was signed on August 1 and Bruce McLaren was testing an updated 'Ford' by the month's end.

❖

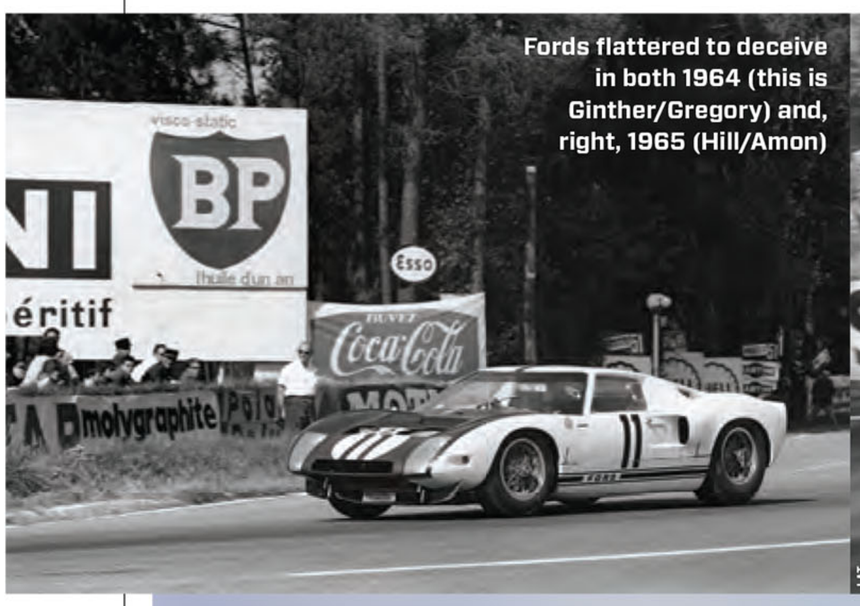
TEN MONTHS LATER RICHIE GINTHER took his courage in both hands and blew by three Ferraris along the Mulsanne Straight on the second lap. This fairy tale beginning had a sad end: two GTs retired because of gearbox problems and a third caught fire. Three more retirements followed a fortnight later at the Reims 12 Hours – Ford was too impatient to beat Ferrari – and another questionable scheduling decision, to contest November's Nassau Speed Week against more agile rivals on a bumpy, stop-go circuit, led to a clutch of DNFs. Whereupon Beebe handed the cars to Shelby American in LA, having empowered Special Vehicles to build its second iteration at Kar Kraft's 'skunk works' in Dearborn.

Shelby nursed a deep dislike of Enzo. Though looking and sounding diametrically different, they were uncomfortably similar beneath that Stetson and behind those shades: ambitious, imbued with a whiff of snake oil, and capable of gathering, motivating and orchestrating talented colleagues to create mythic brands greater than the sum of their parts.

Ford 'folding' allowed the Texan chicken farmer to move from his cramped Venice speedshop to a pair of vast hangars adjoining LAX. His roster included legendary designer/draughtsman/engineer/fabricator Phil Remington and English expat Ken Miles, 46, an astute and fetishistically fit tester/racer whose big chance this was. But the team was reliant on relegated Wyer for spares and (less so) advice. These long lines of communication, divided by a common language, did not promote Beebe's common purpose.

Time was running short as the American arm mused how best to flex its muscle. The earliest GTs used the aluminium 4.2-litre Fairlane V8 developed for Lotus's 1963 Indy campaign. With a plan to switch to its quad-cam update scuppered by delays and resultant shortage, Cobra's cast-iron 4.7-litre was fitted instead. A tailor-made V12 was considered next, but once again Ford had to cut its cloth, albeit much wider this time: a 650lb 7-litre pushrod suited to NASCAR, but which, to European eyes, was at odds with a cutting-edge competition car.

Ray Lunn, another expat, formerly of AC, Aston Martin, Jowett and Ford of Britain, oversaw this MkII conversion as tech boss of Special Vehicles. Integral from the off, he'd fallen out with Broadley, who jumped ship, and exchanged barbs with Wyer before returning to America in November 1964. A skilled ▶





Fords flattered to deceive in both 1964 (this is Ginther/Gregory) and, right, 1965 (Hill/Amon)

LAT

"BEEBE WENT ALL IN FOR LE MANS IN '66. THEY WOULD PREP & RUN NO FEWER THAN EIGHT OF THOSE 'MONSTERS' "



FORD

Project head Leo Beebe with Ford staff in 1965 and, right, awaiting the start one year later


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FORD

engineer and wily politician, he was a crucial FoMoCo cog.

The prototype wasn't completed until mid-May and yet Miles – though he and Lloyd Ruby had won February's 2000km Daytona Continental in Shelby's revised MkI – insisted on it for Le Mans. Though buzzing after lapping the Romeo test oval at 201mph, he didn't take such decisions lightly. He knew MkI better than any racing driver had known any racing car because of his pioneering onboard data-logging work with Ford's aerospace outfit, Aeronutronic: pressures and temps measured inside ducts and rpm recorded by an oscillograph. He and Remington had busted guts on its aerodynamics, brakes, suspension, tyres and wheels, too. His endorsement, therefore, carried weight.

Two of the unsorted 460bhp four-speed machines were sent to France for Shelby American, and Phil Hill's grabbed a dramatic pole position, five seconds faster than John Surtees' works Ferrari. Ford's race, however, was a disorganised disaster. Though MkII ran one-two initially, and set fastest lap, all six cars retired before the seventh hour.

Lunn reckoned the mistaken refitting of a scrapped gear in the rush to be ready had cost it victory, while an official report blamed a misaligned oil hole and incorrectly adjusted clutch. But the devil lay in the big picture: the admin hell of five teams running two models in two types – five coupés and a roadster – fitted with three sizes of V8. Stretched head bolts, a recurrent problem that might have been cured had not Ford become sidetracked, sidelined three MkIs.

The pace told on Ferrari, too – all its works cars were retired by 2am – but privateers in reliable machinery gave Enzo a 1-2-3.

Beebe had plenty to chew on over breakfast.

With Indy won, he could concentrate on the French enduro that had made Ferrari's name in America. In a bid to reduce red tape and instil a tight-knit atmosphere atop a giant industrial pyramid, his Le Mans Committee allowed departmental heads – John Cowley from NASCAR had replaced Geddes – to join hands, or step on each others' toes, every fortnight. Spurred by defeat, this distant race was suddenly up close and personal even to the guys on the assembly line.

❖

TESTING RECOMMENCED IN AUGUST and Miles and Hill managed just nine hours of running in four days at Daytona. A 24-hour test in December was interrupted by engine and brake failures. And only 18 hours could be completed at Sebring in mid-January before the gearbox quit. So the inaugural Daytona 24 Hours would be a plunge into the February dark, physically and metaphorically.

Ferrari stayed away and MkIIs finished 1-2-3-5. Yet not everyone was convinced by this sledgehammer. Wyer and Mann favoured the small-block route: better mpg and easier on tyres and brakes. Thus Sebring in March was billed as a showdown between Ford strategies, as well as against Ferrari. Mann built the lightest GT40s yet (2025lb) and put Graham Hill and Jackie Stewart in one; it qualified third and led the opening lap. But Ford of America won the (half) day. Though its victor – the lightweight X-1 roadster, one of two aluminium chassis built by Abbey Panels – was unsuitable for Le Mans because of draggy aerodynamics, bigger was now officially better.

"Engines let down our cars," says Alan Mann Racing fabricator Jim Rose. "They were bloody awful. We only found out after the Le Mans test [in April] that we'd be running 7-litres. The next thing, six of us – plus my wife, who had friends up in the Valley – were on a plane to LA. All the teams worked together at Shelby's for about six-seven weeks. You had the right tool in your hand and so you went down the line doing the same job, getting faster each time. We didn't know which car was going where, so there was no favouritism. Of course, when we got ours home we rebuilt them the way we wanted to."

And that ought to have been that. But Lunn, craving self-sufficiency, pushed hard for his



FORD



LAT

J-Car to be considered. X-1 had been gathering data for this radical aluminium-honeycomb design, the programme's first all-American, so that it might tackle the Test. Thus Ford arrived with two GT40s and two MkIIs, plus its latest interloper, and endured a terrible weekend. Pushing unadvisedly hard in the rain, 46-year-old Walt Hansgen crashed his MkII at 150mph. The following day, J-Car, crammed with recording instrumentation, lapped a second slower than Hill's 1965 pole but two seconds faster than

"FERRARI STAYED AWAY AND MKIIs FINISHED 1-2-3-5 AT DAYTONA. YET NOT EVERYBODY WAS CONVINCED BY THIS"

Miles, who slid his MkII into a sandbank.

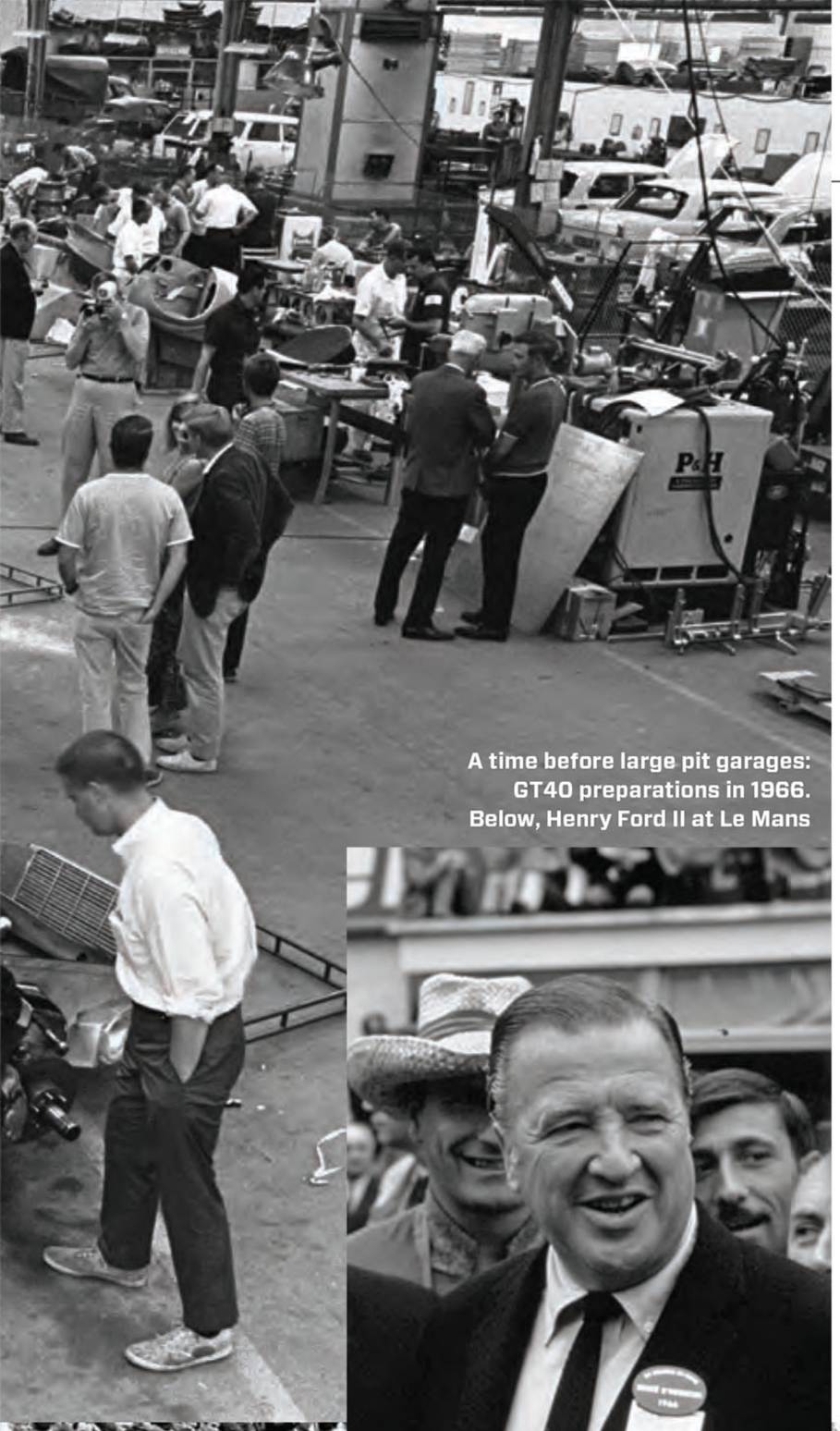
Was it all turning Blue Oval-shaped again?

Tests at the Kingman oval and Riverside – 24 hours in three blocks of eight – proved MkII marginally faster in terms of top speed and considerably more prepared than J-Car. It had been an unnecessary distraction. Meanwhile, an engine-with-gearbox was completing simulated laps of Le Mans in a Dearborn test cell. It hit its 48-hour target in the last week of May and 12 of them – lighter by 40lb due to magnesium oil pan and aluminium heads and front cover – were assembled, tested and crated to LA.

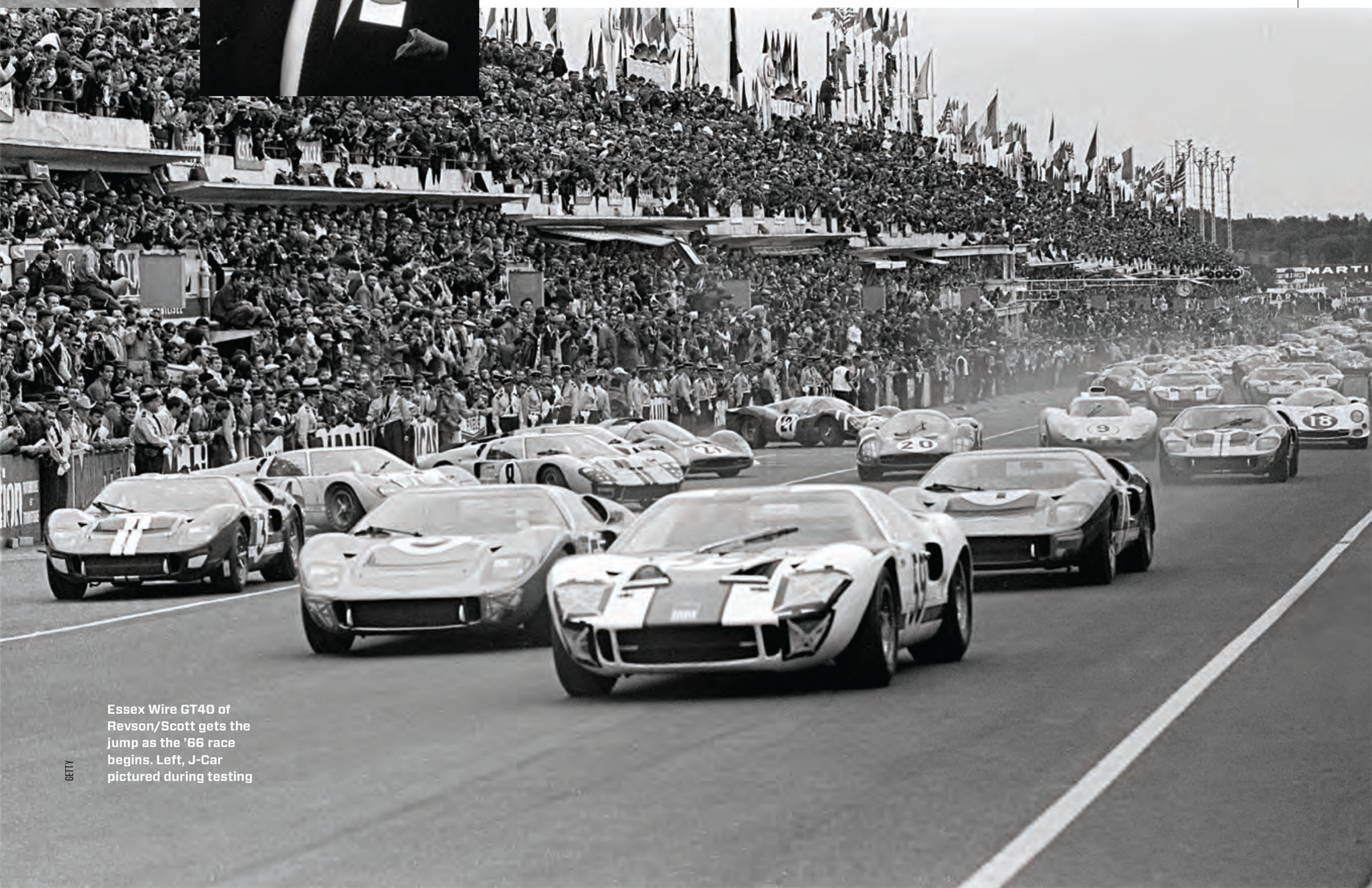
"We weren't allowed to touch them," says Rose. "We couldn't even take the rocker covers off. They'd detuned them, too. The NASCAR version had 515bhp, but they ran 480 at Le Mans. They tried twin carbs but it just used more fuel."

Holman: "The compression ratio was dropped and they were only turning about 6400rpm; at Daytona we were turning 7500-8000rpm."

European observers noted how more organised and cogent this attack was. For instance, Remington and H&M had developed respectively a quick-change caliper and rotor to enable crucial brake swaps in just 2-3 minutes. But that's not to say there weren't internal rivalries – drivers, managers, teams and tyres – in need of massaging. They weren't nasty but they were potentially divisive.



A time before large pit garages: GT40 preparations in 1966. Below, Henry Ford II at Le Mans



Essex Wire GT40 of Revson/Scott gets the jump as the '66 race begins. Left, J-Car pictured during testing

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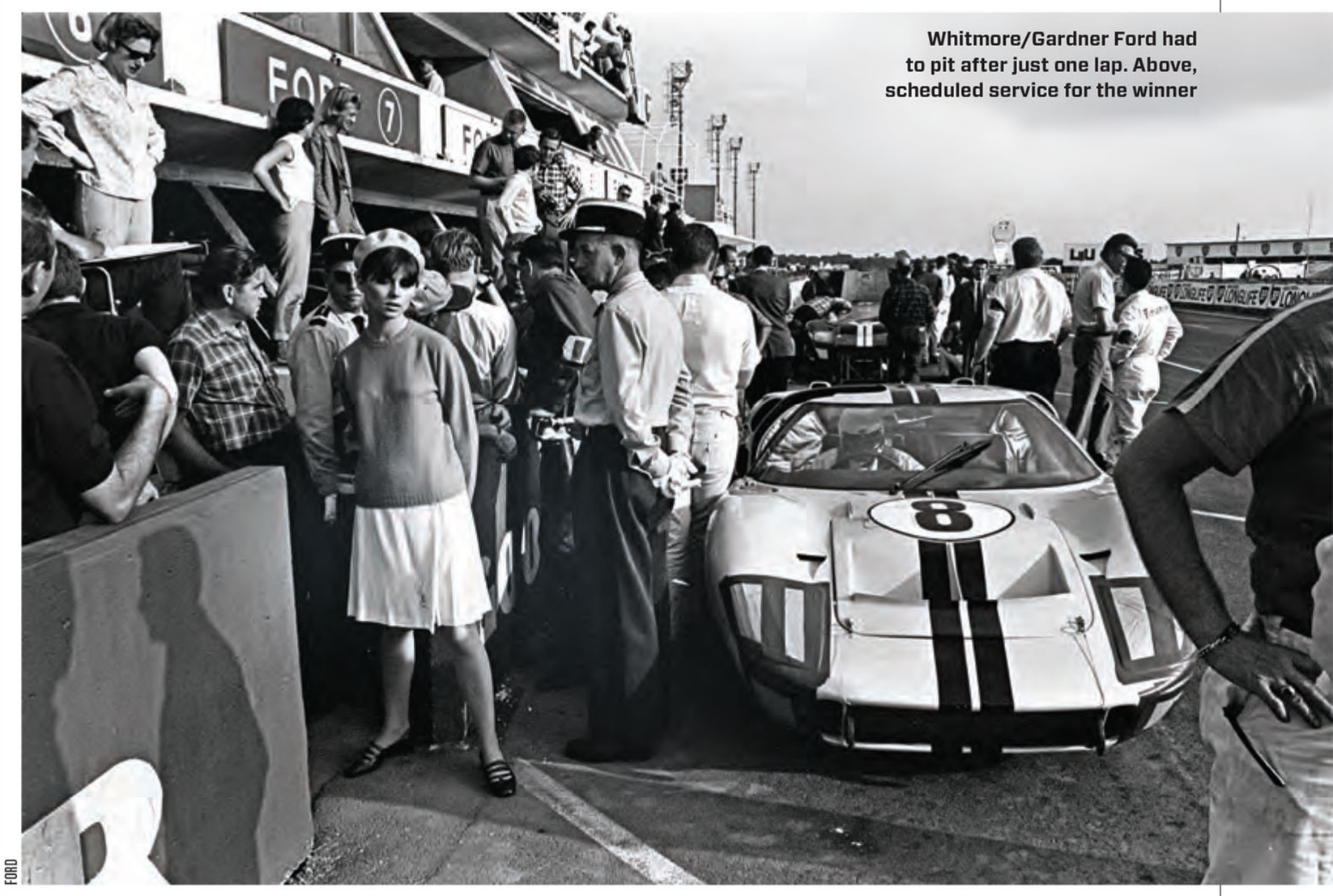
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Whitmore/Gardner Ford had to pit after just one lap. Above, scheduled service for the winner

FORD

"I thought the atmosphere was good," says Rose. "We got on well with Shelby's, which had remarkably few American mechanics: Charlie Agapiou and Bill Eaton were English, plus there were Canadians, New Zealanders and Japanese. Both American teams worked very hard and wondered why we never stopped messing about (yet won everything). We put a Mercedes sticker on the silver car and that caused no end of aggravation.

"Maybe there was more animosity between Shelby and Holman & Moody. The only real problem we had was with the parts guy. He wouldn't give the Brits anything and pretended not to understand us."

Holman: "It was tense, in that Ford expected to win and there were three teams each trying to do the best they could. Shelby had got so far in debt to Ford over the Mustang and Cobra projects that he'd become a division of Ford, albeit a fairly independent one. So his was the factory team. Both Alan Mann's and our drivers were told not to pass a Shelby American car unless a Ferrari was passing it, too.

"My father's attitude was, 'We're here at Ford's pleasure. If they want us to do something, we'll do it. It owns the cars and can do whatever the hell it wants with them.' He was a team player.

"But there was rivalry within Ford: Shelby was backed by Lee Iacocca, who was trying to sell Mustangs and Cobras; Bill Innes of Engine and Foundry and Henry Ford II backed us. There was more infighting over who controlled the budget than there was between us and Shelby American."

Some others didn't see eye-to-eye either.

Holman: "When my father realised that we were going to race in Europe in 1966, he sent me to work with Alan in 1965. I was 20, had a Ford credit card in my pocket and travelled around Europe helping run Cobra Coupés. That's when I found out how mad Alan was with Shelby. With Alan's help, we had developed racing Mustangs that basically were a '64 Falcon rally package on a Mustang body. These won the Tour de France and Shelby asked for one. Ford sent him the winning car and he copied it to make the GT350. Alan was so pissed about it that his 1965 contract with Ford of America included a clause stating that he had the right to withdraw from an event if Shelby ever showed up."

Ford's driver line-up was unsettled, too. Sadly, Hansgen had succumbed five days after his crash. Thankfully Ruby, AJ Foyt and Stewart survived theirs – at Indianapolis (airport!), Milwaukee and Spa – but they were ruled out by injury. The excellent Denny Hulme replaced Ruby. Though he was as laid back as Lloyd, who often dozed between stints, insomniac Miles worried that the New Zealander did not have enough invested.

Another unsettling rejig was required when Dick Thompson, in for Stewart at Alan Mann Racing, was disqualified for unsportsmanlike conduct after colliding with a slower Ford during practice. The car was threatened with disqualification initially and Beebe put his neck on the block by bluffing a total withdrawal. The eventual compromise involved only Thompson falling on his sword.

❖

THE BIG FORDS DOMINATED PRACTICE in the absence of Ferrari's fastest – Surtees had dashed to Maranello for a me-or-him meeting with Enzo about manipulative team manager Eugenio Dragoni – and Dan Gurney took pole, ahead of Miles, John Whitmore and McLaren; Hill was sixth and Ronnie Bucknum ninth in the fastest H&M car. Rain 30 minutes before the start caused flutters but Honorary Race President Henry Ford II had more than eight reasons to feel confident as he waved the flag.

Whereupon Miles clipped a hesitant Whitmore and both pitted at the end of the first lap, as did Paul Hawkins' MkII: the latter had a broken driveshaft; a clutch adjustment cost Whitmore's Alan Mann car 10 minutes; but Miles was stationary for mere seconds as a door ajar was slammed shut.

The pace was fierce and three MkIIs retired before midnight: diff, clutch, head gasket. Then Hill's suffered front suspension failure. But Ferrari's trio of works 330 P3s, outnumbered and outgunned, despite a fuel-injected DOHC 4-litre V12, also faltered and Fords held the first six places as dawn broke. Team-mates Gurney and Miles were reprising their Sebring battle – and were again admonished for it. McLaren, now on Goodyear inters – Bruce to co-driver Chris Amon: "Go like hell!" – were recovering from delays caused by chunking Firestone wets in the changeable conditions. Shelby American had the race in its pocket but Ford worried that its drivers might burn a hole.

Gurney was asleep when Grant burst into

the trailer at 9am to tell him that the lead car's water temperature was off the clock; its engine cooked in less than an hour. The 'EZ' sign was hung and Miles took the 'opportunity' to close on McLaren. The potential for calamity loomed still and Ford's top brass had a big decision to make. It plumped for a dead heat. There'd never been one before and the organisers, excited at the prospect, were amenable. McLaren and Miles were informed prior to their final stints and neither was excited at the prospect. The latter was on the cusp of a historic Triple Crown – Daytona, Sebring and Le Mans – and felt that his extensive, exhaustive input deserved reward; a tie would be a defeat in his view. McLaren, normally swan-like compared to the hawkish Englishman, was fizzing, too.

Holman: "There was rivalry within Shelby American, because it wanted Miles to win, but McLaren was quicker so his car was sabotaged. The other two Shelby cars listed heavier springs – 1100-1200lb instead of 900lb – and shock settings in their reports so that the McLaren car would copy them; I don't know if its crew realised it was bad information, but I do know that Bruce did not like the way the car handled.

"FORD'S TOP BRASS PLUMPED FOR A DEAD HEAT. THERE'D NEVER BEEN ONE BEFORE"

He complained to my father, and to Alan Mann and Henry Ford II, and a group of mechanics – some of Alan's crew and two of our workers – stayed over the night before the race to change the suspension. To my knowledge, [Carroll] Shelby wasn't aware. That's one of the reasons why Bruce wasn't receptive to trying to make a correct photo finish."

Another was the unnecessary tyre change – in McLaren's view, ordered by Goodyear to banjax Firestone-contracted drivers – that cost him the lead at the last scheduled fuel stop.

Holman: "Shelby always wanted to run Goodyears because of his tyre store in California."

The crowd was unaware of the undercurrents as the stage-managed MkIIs drew level in streaming rain, the third-placed car of Ronnie Bucknum/Dick Hutcherson riding shotgun, 12 laps in arrears. Nor did the main protagonists know that their dead heat was a dead duck. The organisers had backtracked: McLaren had started 20 metres behind Miles and that figure could not be ignored in the final calculation.

"The most important thing was for Ford to win," says Rose. "When our cars retired we stayed on in case our help was needed. I don't remember worrying about any controversy. I was just glad we'd beaten Ferrari."

Miles appeared to back off in protest approaching the chequer. Holman, on pit road at the time, insists McLaren accelerated. According to Amon, Hulme, as his co-driver feared, wasn't overly bothered by events but Miles was teary and bitter. Ford's sweet revenge ended on a sour note, and because the 'injured party' was killed testing the J-car at Riverside that August, the echo of its human cost can still be heard, 50 years later. Ⓜ



A fresh angle on the controversial 1-2-3 finish, which left favoured son Miles 'teary and bitter' according to Chris Amon

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ANDY PRIAULX

A world champion though you wouldn't know it, Guernsey's BMW touring car ace has switched tracks for Ford's GT team. Main target? Le Mans

writer SIMON TAYLOR | **photographer** HOWARD SIMMONS

IN THESE DAYS OF WALL-TO-WALL Formula 1 television coverage, more people are aware of motor racing than ever before. Our fine world champion Lewis Hamilton is subjected to a degree of fan worship and tabloid exposure normally reserved for teen pop idols and misbehaving reality starlets, and earns hundreds of thousands of pounds every single week. Yet F1's very success as commercial TV entertainment for the masses means that most of the other rewarding and exciting disciplines in motor sport – like rallying, sports car racing, GP2, historics, national racing at all levels – have been thrust into the shadows, and rarely get the coverage they deserve.

So the general public, unlike your fully informed *Motor Sport* reader, has no idea that we have another recent British world champion to be proud of: one who, remarkably, won his title three years running, against the strongest works opposition that his chosen formula could offer.

But Andy Priaulx is sanguine about that. "I know I could win a dozen touring car world championships, and get less recognition than if I just finished ninth in one F1 Grand Prix. But that's the way it is." He is happy to have achieved, after a long fight and much sacrifice, his goal of making it as a professional racing driver. Now, after 13 seasons with BMW, he has joined Ford to be part of the Blue Oval's return to Le Mans, 50 years after its first victory in the 24 Hours. He's excited to be part of what is clearly a very serious programme, and he loves the whole philosophy of the new Ford GT. "Today the original GT40 still looks wonderful. I hope that in 50 years people will look at this one and feel the same."

Andy is a Guernseyman. His homeland is just nine miles long and five miles wide, and he loves it dearly. He meets me at the tiny airport and insists on giving me a guided tour of the island's charms, including a storming drive up the Val de Terres hillclimb in his factory-issue Ford Mondeo, before we repair to Le Petit Bistro in St Peter Port for lunch. Guernsey may be 100 miles from mainland England but it's barely a dozen miles from France, whose coast is clearly visible in good weather. So Mickaël and Delphine Pesrin's menu is properly

French: real onion soup with brandy and a hefty crust of melted gruyère, and locally caught sea bass dressed with razor clams, parsley risotto and a citrus tartar. Like any serious athlete, Andy drinks only water and decaf coffee.





ANDY PRIAULX
CAREER IN BRIEF

Born: 8/8/74, Guernsey
1982 karting, then motocross **1992** hillclimbing **1995** British Hillclimb champion in Pilbeam **1996-7** FRenault and British F3 **1998-9** Renault Spider series, title in '99 **2001** BTCC with Honda **2002-4** ETCC with BMW, champion in '04 **2005/6/7** WTC champion **2008** awarded MBE **2009-10** WTC, ALMS, V8 supercars, Le Mans **2011** ILMS **2012-14** DTM, USCC **2015** BTCC **2016** Ford works GT driver

THE PRIAULX FAMILY ROOTS IN Guernsey go back to the 11th century, and Andy is the third generation to be a racing driver. His grandfather, whose first language was Guernsey French, lived through the rigours of the German occupation in World War II: evidence of this still remains in fortifications and gun emplacements on the island. Once the war was over he built a rear-engined single-seater that was a consistent winner at Val de Terres and in Guernsey's other form of motor sport, sand racing on its long, flat beaches.

Andy's father Graham campaigned a Fiat-Abarth initially, and later a Tiga 2-litre sports-racer. Meanwhile young Andy was passionately pursuing any form of motorised sport that he could. He was karting at eight years old, and at 10 he took up motocross with a tiny bike. As he grew bigger the bikes got bigger too.

Then there was offshore power-boat racing. "A motocross friend was my crew. We raced around the Isle of Wight, down to Torquay, and a lot around the island. It was really challenging. You have to read the sea and get the trim of the boat right, like feeling a car through your backside. Too much and the boat starts to flail around, not enough and the boat is down in the water and you're slow. When it's rough you have to judge it wave for wave.

"By the time I was 18 I was working as an apprentice in the family garage. I was doing motocross at quite a high level, and starting to hurt myself. My father said he wanted me to carry on walking with my legs, and suggested I should try four wheels. Circuit racing was out of the question for us financially, so we opted for hillclimbing and bought a secondhand Mallock U2. We had some success in Channel Islands events and ventured to the mainland too, and we both caught the hillclimbing bug, big time.

"In 1994 we got our first single-seater, a Pilbeam-Hart. In hillclimbing you can share a car, of course, so we did a full British Championship season together. We were running against the top guys, the Roy Lanes, the David Graces, who all had the big F1-engined V8s, but I scored an outright win at Wiscombe Park. Gradually I started to beat my dad. He was quick, and we were always close, but to be honest I think he was driving more for me: he was always concerned about bringing the car back in one piece for my turn.

"That first year I was fourth in the championship, only beaten by three V8s, so for 1995 we pushed the boat out and bought a secondhand Pilbeam-Cosworth DFL. I was still only 20, and it was a serious piece of kit. It had massive grunt, and the first time I drove it I couldn't believe how all that 500bhp came in so relentlessly. Big wings and skirts, so good downforce when you got the speeds up. You'd often be crossing the finish line nudging 150mph or more – and all those tracks are very narrow.

"We kept the car on the mainland at a friend's house, and Dad and I would fly in on Thursday, prepare the car on Friday, and tow it to the event for Saturday and Sunday. We'd work on it Monday, cleaning it up, swapping the gear ratios for the next event, and fly home Tuesday. I won first time out, breaking the Prescott hill record, and as the season went on I scored maximum points in the series – you count your 10 best scores and I scored 100 – so I'd won the British hillclimb title. It was still a family effort, and Dad was equal third in the championship. In the final round, up in Scotland at Doune, Dad got the record, then I took it, then he took it again, then I got it back on my last run. We both knew that was probably my last-ever hillclimb. Doune is a very fast, narrow hill, and I had to risk everything to beat him.

"My closest rival that year was Mark Colton. We were head-to-head and became good friends. Dad and I decided to miss the Irish round, Craigantlet, because we didn't really have the budget to get there, although Mark tried to get us to change our minds because he wanted to have us there to race against. That was where he was killed: his front wing failed, and he hit a telegraph pole.

"I did realise that racing this big, very fast car on such narrow, twisty, bumpy little lanes was dangerous. The cars go on getting faster and faster, but the tracks are the same as they've always been. You can't move the trees back. But the special character of hillclimbing is precisely because the tracks haven't changed. It's the same for the TT bikers on the Isle of Man: you can't move the houses back. It is what it is.

"People don't realise how competitive championship hillclimbing is. A hundredth of a second makes the difference between winning and losing. In a three-hour race, if you waste a hundredth, you can usually get that back. But hillclimbing is like permanent qualifying – and on cold front tyres. If you're the quickest before the final Top Ten runs you're the last to go at the end of the day, sometimes into a low sun. As you sit on the line the big digital clock tells you what the man before has done, so you know what you have to beat. Or you're sitting there and spots of drizzle start to appear on your visor. Or you're told to switch off and wait until your friend's bent car comes down the hill on the back of a truck.

"And your rivals really are your friends. Once when I was fighting David Grace for BTD, as I did my tyre-warming going up to the line, a driveshaft let go. Before I knew what was happening I felt the car being pulled back and jacked up. David had run to get his spare driveshaft and his spanners, and there were a dozen people clustered around my dad helping him fit David's shaft. They had it done inside three minutes, and I was able to take my climb. I can't see Vettel's mechanics rushing to help Lewis like that...

LAT & STEVE WILKINSON



1



2



3

1 In '95 Priaulx took UK hillclimb title in Pilbeam-DFL **2** Mind training brought perfect 1999 in Renault Spiders **3** New sponsors funded 2001 F3 seat **4** Honda's 2002 BTCC entry was Priaulx's first paid drive – but lasted just a year



4



5 & **6** Top of his game – in 2005 Priaulx topped the new WTCC, becoming world champion **7** 2005 Williams F1 trial led to some testing **8** Priaulx with wife Jo, karter Seb and Daniella **9** Receiving WTCC award at FIA gala, Monaco 2005 **10** Back in touring cars for 2015, in WSR M125i **11** Fresh challenge for 2016: Ford's major GT assault



6



7



8



9



10



11



"The top hillclimbers do it very seriously, but in the end it's really all for fun. Dad and I just wanted to be as good as we could be, and I didn't have ambitions beyond that. But because I was going well there was some media hype, and at the September Prescott who should turn up but Paul Stewart. Jackie had sent him to summon me to Snetterton for a test.

"Well, I'd never driven on a racing circuit in my life. I had no idea about racing lines, because it was the first time I'd been on a track more than about 12 feet wide. The car seemed so slow, the track seemed so huge, and I made some mistakes because I was very raw. But after that test I was offered a Vauxhall-Lotus season with Paul Stewart Racing. They would cover some of the cost, but I still had to bring £60,000, which was out of the question for us. Our entire championship-winning hillclimb season, running both of us in the car, had cost us £20,000.

"But then I thought, I've done all right in hillclimbing, maybe I've got some talent, maybe I should try to find a way to do circuits. I managed to scrape together various little bits of sponsorship, and I ended up signing a deal with Andy Chisholm at Martello Racing to do Formula Renault. It was not a success. My first race was at Thruxton, and I qualified last. I scrapped over a few of the bottom positions as if my life depended on it. I went on to do half the season, but circuit racing still felt totally awkward. Then the money ran out.

"At the end of the year I said to my wife Jo, 'We're going to have to do this properly, or not at all.' So we moved to the mainland, towed a caravan to Silverstone and lived in that. Jo got a job in the ticket office at £4 an hour, and I started working at the racing school. That may seem strange when I had so much to learn myself, but being an instructor, thinking it through, taught me how to race. And I made some good friends. John Pratt, one of the best Formula Ford racers at that time, was a great influence on me. These days he runs iZone Driver Performance for me: that's the driving school I have at Silverstone.

"I was now trying to do B-class Formula 3, and it was just awful. I paid for the ride at Falcon Racing, and I wasn't doing very well. Then I had a one-off race with SpeedSport, Mike O'Brien's team, and it rained. I went from last on the grid to 10th by the end, overtaking some good people. That restored my confidence a bit, and I also did a couple of A-class races with TOM's Toyota. But at the end of that season I realised that I should try to learn my trade lower down the ladder.

"Renault Spider was a one-make formula that seemed affordable, so I bought a car and prepared it myself. Alan Docking lent me a corner of his workshop, and I instructed at Silverstone all day and worked on the car most of the night. I finished the season with some podiums and a few fastest laps, but money was still desperately short, and I'd had so much failure and disappointment, I was mentally ruined. I knew I had to do something pretty sensational, or accept that I'd always be struggling.

"Then over that winter John suggested I took a course in what's called the Silva Method of mind training. It involves meditating to visualise your goals, whether it's visualising a perfect lap or visualising a sponsor's cheque coming through the letterbox, always focusing on the end result. Well, it worked. Up to then I'd never won a race in my life. I went to the first round of the 1999 Spider championship at Donington, and before I got there, in my mind I had already won. And I went out and drove away from everyone." It was the same for the rest of the season. There were 13 rounds of the championship: Andy took 13 pole positions, won 13 races, set 13 fastest laps, and was voted British Club Driver of the Year.

"I was now using a little outfit at Silverstone called Mardi Gras Motorsport to prepare the car, so I could concentrate on preparing myself. I got into a routine of physical and mental training, chasing sponsors, and meditating: visualising my goals, feeling the trophy in my hands, smelling the champagne. I've gone on doing this ever since, and there have been several times in my career when it's really worked for me.

"HAVING WON THE RENAULT SPIDER championship I asked Serge Saulnier, who ran the Renault-engined Promatecme F3 team, to run me in a test he was having at Paul Ricard to choose his No2 driver for 1990 alongside Matt Davies. He wasn't keen: 'You are 26 years old, so why are you trying to get into F3?' But I persisted, and eventually he agreed. It was wet and slippery, and on about the sixth lap I went off. Came back in embarrassed and apologetic, gravel everywhere. Serge said, 'OK, go out and do another 20 laps.' Out I go, and I skid off again. Serge said, 'Andy, I have seen everything that I don't want to see. You can go home now.'

"I begged, I pleaded, I told him I had let him down, but please would he let me finish the day. Reluctantly he agreed. Now I knew it just had to happen. And I was faster than all the other drivers, and I got the ride.

"As it turned out the Renault engine didn't have the legs of the Toyota that season, but I had a pole position and three podiums, and in the championship I finished ahead of Matt, my more experienced team-mate. Things were getting better now. We'd moved from the caravan to a little house in Towcester – although we still towed the caravan to races behind our Ford Escort, to save on hotels – and I'd stopped instructing to concentrate on my racing.

"But when I shook hands on a deal with Alan Docking Racing for my 2001 F3 drive, which was going to cost me £200,000, I had no idea how I was going to pay for it. I'd worked very hard to find all sorts of small sponsors, a sticker here, a name there. They'd come to the races and I'd have to welcome them, make sure they were happy, then I'd get in the car and Jo would look after them all day. Now I found two really good sponsors, Psion Computers and a Danish investment banker, Lars-Christian Brask. Both of them stayed with me for a long time. It was a tough year because our budget was still much less than the big teams, but I won two rounds, had three seconds and a third." *Autosport* said that in the wet Andy was the only driver able to threaten series winner Takuma Sato.

"Jo was now expecting our first baby, and during a check-up the X-rays showed that the foetus was very small, and the umbilical cord was wrapped around its neck. Right away they gave her an emergency Caesarean, and Seb was born, very premature. He was tiny, less than four pounds, and was in an incubator for the first month. But he did well, and soon we could take him with us to the races.

"The other important thing that happened that year was that in the British Touring Car Championship Phil Bennett, who drove for Vauxhall, got a one-race ban, and Derek Warwick heard about it. He's a near neighbour in Jersey, a respected friend who has always





Watch a documentary about Andy Priaulx winning the 2005 WTCC to begin his hat trick of world titles

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Heading for victory at Oschersleben in 2003, the first of many years with BMW

given me good advice. I was at the F3 round at Knockhill, I'd just put it on pole, and Derek called me: 'Be at Oulton Park next weekend.'

"I turned up, I'd never sat in a touring car before, but I took the Vauxhall out and against all the BTCC regulars I put it on pole for both races. I finished second in the first race, and was battling for the lead in race two when I ran wide, damaged the sump, and that blew the engine.

"Suddenly lots of people wanted to speak to me. Andy, this is Eddie Jordan, we'd love to run you in F1, how many millions can you bring? In the real world Honda offered me a two-year contract, and they actually wanted to pay me: £50,000 a season. For six long years I'd dragged Jo through so much pain, no social life because we never had any money, stupid things like we never had a TV. And now I was going to be paid to race.

"Honda was pretty green in its first attempt at the BTCC with the Civic Type-R, and to start with we were a long way off. Gradually we developed the car, and by mid-season we began to get podiums. At Knockhill in August I took pole, won and set fastest lap, and we ended the season fifth in the championship. But at the end of the year Honda decided to pull out of racing. I was back to square one.

"THAT WAS WHEN BMW CALLED, AND I found myself racing a 320i in the European Touring Car Championship. Well, it was the European in 2003 and 2004, and after that it became the World Touring Car Championship with rounds in places like Curitiba, Amozoc in Mexico and Istanbul. The car was officially entered by BMW UK and my contract was with them, but the British bosses weren't big motor sport fans, and to be honest they didn't really want to do it: it was only because Germany had told them they had to. At first they couldn't even pronounce my name: who is this Andy Proolex?

"My car was prepared and run out of Belgium by Bart Mampaey's RBM team, and they did a brilliant job. We were a one-car team, up against the Schnitzer cars that were effectively the works effort. They had all the data and the latest updates, and between their two cars they could run to a strategy. But the Germans, they're wonderful engineers, but they don't understand the human side. If you treat a driver like a machine, you're not going to get the best out of him. RBM understood that if you can put your arm around a driver's shoulders, that's worth three tenths.

"So that first year I won at Brno, Spa and Oschersleben, and ended up third in the series behind Gabriele Tarquini's Alfa GTA and

Jörg Müller's Schnitzer BMW. I had just finished the Macau touring car race when I got an urgent phone call: Jo, who was pregnant with our second child but not due for some time, had been rushed to hospital. She'd developed a condition that was gradually shutting down her key organs. Daniella was delivered at once, five weeks premature, and after being on oxygen for a couple of days she was fine. But Jo was critically ill.

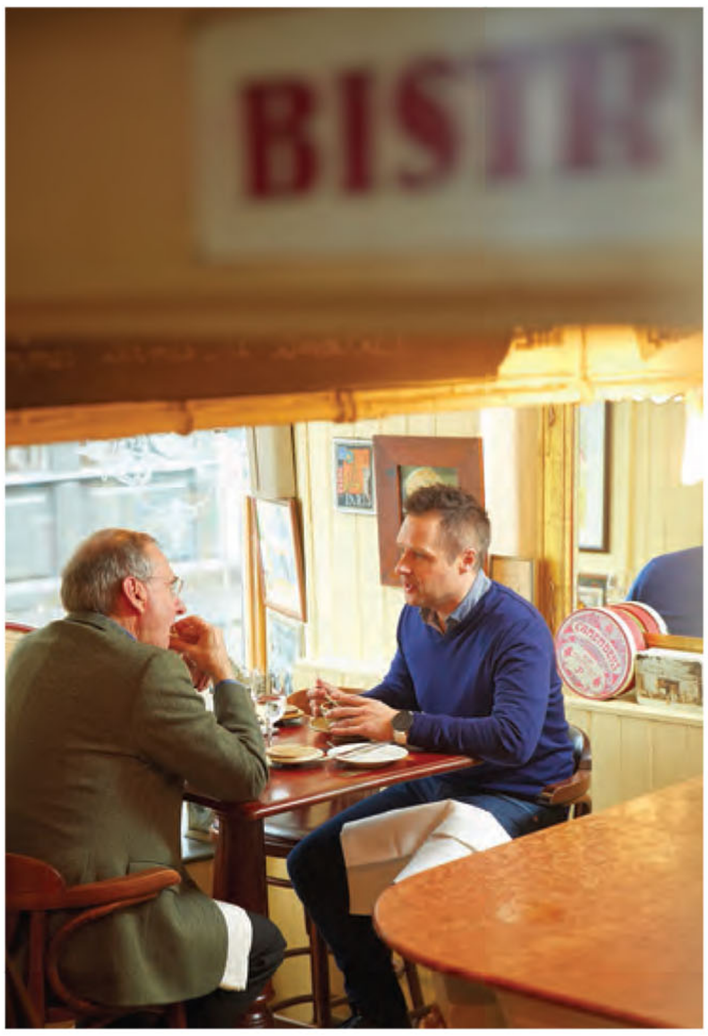
"After we'd been through all this and Jo was recovering, I was sitting on the end of her bed and she said, 'We've had two premature babies. It's something a lot of people go through. We need to find a way to help other parents who have to deal with it.' That's how the Priaulx Premature Baby Foundation got started. Seb and Daniella are 15 and 13 now, very fit and well, and Jo has worked tirelessly running the Foundation ever since.

"BY 2004 I WAS IN MY STRIDE WITH European touring cars. I had a season-long battle with Dirk Müller's Schnitzer BMW, but going into the final round in Dubai I was 12 points behind and everybody thought it was all over. In fact, BMW had brought along a pile of T-shirts with 'Dirk European Champion' on them. I thought, right, we'll see about that. I'd never seen the track before: I found out later that BMW had organised a secret test there for Dirk and Jörg, but I wasn't invited. But hillclimbing taught me how to learn new tracks quickly, and I took pole. I got second in both races, Dirk got a fifth and a retirement, and that put us level on points. I had five wins to his three, so I was European champion. We got hold of one of the T-shirts, crossed out Dirk and wrote on it Andy."

From the next season the series became a world championship. Andy only had one win in 2005, at Oschersleben, but by consistently running at the front he piled up 10 podiums, which gave him the title by a healthy margin from Dirk Müller, with Fabrizio Giovanardi's Alfa Romeo third.

"Now that I could call myself world champion, I thought everything would be different. But when I woke up on Monday I found that life was still the same. Win on Sunday, forgotten on Monday. The only thing to do was focus on winning it again." And the next season, after a really tense battle, he did just that. Jörg Müller was the favourite for Schnitzer, but Andy scored five victories and pipped him by one point for his second world title on the trot. Now he was determined to make it a hat-trick.

"In 2007 it was just as close. I'd been racing three Müllers, Dirk, Jörg and Yvan, none of them related [and no umlaut for Yvan, who is



"BATHURST MAKES THE HAIRS STAND UP, LIKE THE FIRST TIME YOU SEE EAU ROUGE"

French]. This time my fight was with Yvan. He was in one of the Seat Leons, which were turbodiesels and had a lot of power. Going into the final round at Macau we were level on points." In the first of the two Macau races Andy could only finish eighth. The WTCC rules dictated that previous winners had to carry 'success ballast', which in Andy's case was now



70 kilos. But the rules also made the first eight in race one take the grid for race two in reverse order, which gave Andy pole, a start-to-finish win and world championship number three. In the 2008 New Year's Honours he was made an MBE, which recognised the work of the Premature Foundation as well as his three world titles.

Meanwhile there had been other races: like Bathurst, which Andy first did in a big Opel Commodore with Yvan Muller in 2002. "It's a wonderfully challenging track, makes the hairs stand up on the back of your neck. The first time you race there, it's like the first time you see Eau Rouge." Then there was the Nürburgring 24 Hours on the Nordschleife. "I did that in 2005 for Schnitzer. I was a Nordschleife virgin, and Hans Stuck was very kind to me: he drove me around for a couple of laps, and then sat me down and we talked it through, corner by corner. Then I went round and round in my road car to fix it all in my mind. And I won it. I was in the No2 Schnitzer entry, with Boris Said and Patrick Huisman. I remember doing the early morning stint with the sun coming up and I could smell the campers frying breakfast all around the track. There were guys who stood at the same bit of fence for the whole race, you could spot them each lap. There was one who waved a Guernsey flag every time I came past.

"That was a good week: won the Nürburgring 24 Hours, did a two-day F1 test for Williams, led the Silverstone round of the World Touring Car Championship until I got a puncture on my last lap. The Williams test was a BMW reward for winning the world championship and I took it very seriously, trained like a maniac, hanging weights off my neck all day long. They liked me enough to use me for some more testing that their regular boys couldn't do, like the pre-Monaco test at Vallelunga. Of course I loved it. The FW27 felt to me like the perfect racing car: it did so much for you, downshifting, traction control. It left me with huge respect for the F1 drivers."

After Andy's third world title BMW continued in the series for three more seasons, but the Seat turbodiesels were favoured by the regulations and were appreciably quicker. He had nine wins and 13 podiums over that time, but could only finish fourth in the championship in all three years. "One of those wins was around the streets of Pau. It was wet, and I had to work for it: puddles, white lines, kerbs, a safety car, a restart, and I was under pressure for the whole race. I just love that place.

"Actually I reckon 2010 was just about my best year in touring cars. I won six races – on the Marrakesh street circuit, Monza, Zolder, Brands Hatch, Masaryk in the Czech Republic and Oschersleben. Seat had been running a six-speed sequential gearbox, so for the last two rounds BMW applied to the FIA to run a

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sequential box. In Japan I stick it on pole and I finish second, which moves me into second place on points with one round to go. Then we get disqualified." After a protest from Chevrolet, which went on to win the series, the FIA conceded that the sequential box had been homologated just for Alex Zanardi, who could only race with hand controls.

BMW then withdrew from the WTCC and put Andy in the works 4-litre V8 M3s in America and Europe in the ALMS and ILMS, plus he travelled to Australia in the off-season to race the big V8 Supercars for Holden. "Big heavy monsters, 800bhp, not a lot of grip. I was second at Surfers' Paradise sharing with Craig Lowndes.

"In 2010 I did my first Le Mans with the big-engined M3: we were out embarrassingly early with a fuel sensor problem. The next year the cars were more competitive with the Ferraris and the Corvettes, but Dirk and Joey Hand and I had a misfire, then a puncture. That dropped us way down, but in the end we climbed back up to third in class."

For two seasons, 2012/13, Andy did the German touring car series, the DTM. "That was a horrible part of my career. There's something weird about DTM: I don't think David Coulthard or Jean Alesi enjoyed it much either. You can go from one weekend being right at the front to the next weekend running 20th. I spent the first year blaming myself, but then I realised it wasn't me, and there were so many things in the politics and hierarchy of DTM that I couldn't influence. In my first DTM race I was first BMW home, sixth behind the Mercedes and the Audis, so I was BMW's first points-scorer that season; and in my last I qualified third and finished sixth. But between those two there was nothing better."

So for 2015 it was a complete change: a season back in the British Touring Car Championship. "I loved it. I put it on pole for the first round at Brands, and missed winning by 0.04sec. I ran with Dick Bennetts, and sometimes the tight budget compromised things a bit, and I didn't do every round because I was doing IMSA in the USA as well. But I had a couple of wins, finished eighth in the series out of 40. It was great fun.

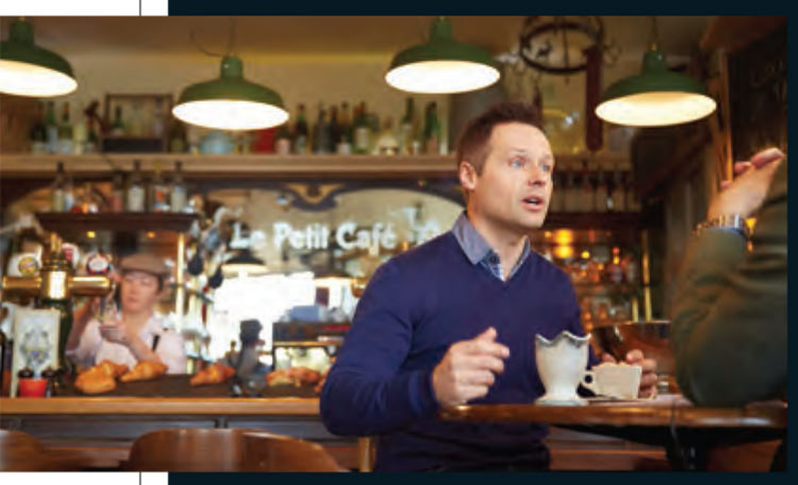
"Something else I've done for several years now is the Race of Champions. It's special because you can't practise, it's raw, you're driving by instinct. The one last winter, at Wembley, the British team was me and Jason Plato, and we won the Nations Cup, beating Vettel and Hülkenberg.

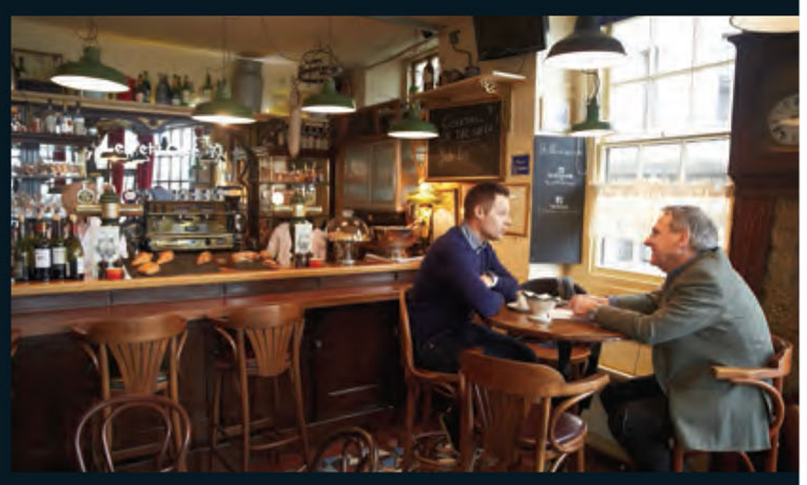
"In 2015 I did BTCC, ALMS and ELMS. In all I did 40 events during the season. The GT car was the Z4, the big V8 front-engined two-seater. It was a good car, not the fastest in its class, and very physical, you had to wrestle with it. But we had some great results and we fought for the championship right down to the last race. And in the European series, the GTE category of the ELMS, with Henry Hassid and Jesse Krohn, we were runners-up in the series and we won the final round, the Estoril Four Hours.

"By then I'd made the decision to leave BMW. I knew Estoril would be my last race for the marque I'd been faithful to for 13 seasons, and I really wanted to go out on a high. Mid-way through the race it rained. That helped me because we were all on slicks, people were sliding off everywhere, and I always like it when conditions are difficult. That goes back 20 years to my hillclimbing days. So my final BMW race was my 51st win.

"BMW did offer to extend my contract, but I knew it was time for a new script. When I first heard about the Ford GT programme I called George Howard-Chappell, just to put my name in his head. After that the phone didn't ring for six months. Then one day in November George called: 'Are you still available?'"

This is also a big year for the fourth racing Priaulx. "Seb has been karting since he was eight, and this year he'll be in cars, in the Ginetta Junior Championship. He very nearly won the Ginetta Scholarship , got through to the final three out of 60, so we've bought a car and got some sponsorship for him. I have a simulator at home that I used for pre-race prep when I was racing on all those circuits in America. Seb's on it every afternoon as soon as he's home from school, soaking up every inch of every track he'll be racing on this year. He can't wait to get stuck in."





"THE RACE OF CHAMPIONS IS SPECIAL BECAUSE YOU CAN'T PRACTISE, IT'S RAW, YOU'RE DRIVING BY INSTINCT"

AS YOU READ THIS THE SILVERSTONE round of the World Endurance Championship will have already happened, but when we lunched Andy hadn't even tested the new Ford. He saw the US team cars run in the Daytona 24 Hours, because he was sharing a Chip Ganassi-entered Riley prototype with the same compact turbo V6 engine that the Ford will use. "I was driving with Alex Wurz. He's retired, but Chip persuaded him to come and do one last race. It was my first proper sports car drive, and we were in the leading pack until we lost a lot of laps with an electronic problem, but we climbed back to fifth place. And that engine is very smooth, very nice.

"Le Mans is a very intense experience. From when you first get there early in the week you feel you're part of a massive event. There's 90 years of history there, it's in the atmosphere. The track is challenging: long straights, heavy braking, changeable weather. And it's quite narrow in the traffic, with the hugely fast LMP1 cars coming through, faster than F1 cars, while you're in a competitive dogfight in your own category which can lock you into a flat-out train for hours. With BMW I remember one stint when the sun was setting and the screen was covered in oil, and braking hard into Indianapolis for a moment I just couldn't see. There's not much run-off, just a big tyre wall: it's not somewhere you want to make a mistake.

"There's no doubt that the GT class is getting more and more profile. At Le Mans it's being promoted as Ford vs Ferrari again, 50 years on, but in fact there are five serious marques all going to head to head, with Corvette, Aston and Porsche too. You could say that Le Mans, which was originally for production cars, is going back to its roots. The 2016 race is going to be great, and I for one can't wait."

DK Engineering
Est. 1977

Ferrari 250 GT Lusso

This LHD example was supplied in July 1964 to an Italian Lady and was finished in stunning "Grigio Fumo" the same colour in which the car is today presented. Between 2005 and 2006 the car was totally restored by the very well-respected "Sportgarage Bruno Wyss" in Switzerland. Since restoration the car has seen limited use and has recently been "red book" Classiche certified at which time the car was confirmed as matching numbers throughout. UK registered and available to view immediately. **£POA**

Additional Motorcars Available for Acquisition



Ferrari 275 GTB *"Short Nose"*

This Left Hand Drive Early 275 GTB "Short Nose" was delivered new to Spain in 1965, remarkably the car had just two owners until 2012 when the car was brought to the UK. In recent years the car has been well maintained by DK Engineering. The car is presented in its stunning original colour of Verde Pino. The car is UK registered & Classiche Certified (confirmed as a matching numbers example throughout). **£POA**



Jaguar XK 120 *Aluminium*

This rare RHD Aluminium bodied XK120 Roadster was the 25th of only 58 examples produced. The car is renowned for its racing success in the 1950s in South East Asia. This was famed as the fastest sprint car in the Far East at the time and achieved numerous successes before being completely restored by DK Engineering in the 1990s. Finished in the traditional colour of British Racing Green, the car is accompanied with its original buff log book. **£POA**



ISO Bizzarrini A3C Corsa *(Aluminium)*

An early Bizzarrini from 1965, completed in Livorno, Italy. The car benefits from a lightweight aluminium body, disc brakes all round, independent front suspension and a De-Dion rear axle. Restored to the same specification as the first ISO A3C Corsa, which raced in early 1964 and is now ready to race at the highest level. The car has valid FIA/HTP papers and is therefore eligible for numerous events during the racing calendar, including the Goodwood TT (where it started on the front row in 2014), the Spa Six Hours and the Masters historic racing series. **£POA**

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AUDI

OF

Formula 1 might monopolise the mainstream motor racing headlines, but few Grands Prix attract even half as many spectators as the Le Mans 24 Hours. More than 260,000 made the pilgrimage to north-west France in 2015 and the turnout is likely to be similar this time. The main draw? A fierce tripartite contest between manufacturers with proven track records but contrasting approaches. Triumphant 12 months ago, Porsche is using a revised version of its 919 Hybrid in a bid to repeat that success. To counter this threat, World Endurance Championship rivals Audi and Toyota have produced all-new cars, potentially similar in performance yet very different in conception. Here, we peer beneath the skin of all three main contenders and analyse their prospects. Porsche will be chasing a record-extending 18th outright victory at Le Mans this year, while Audi seeks its 14th and Toyota – world champion as recently as 2014 – its first.

writer GARY WATKINS

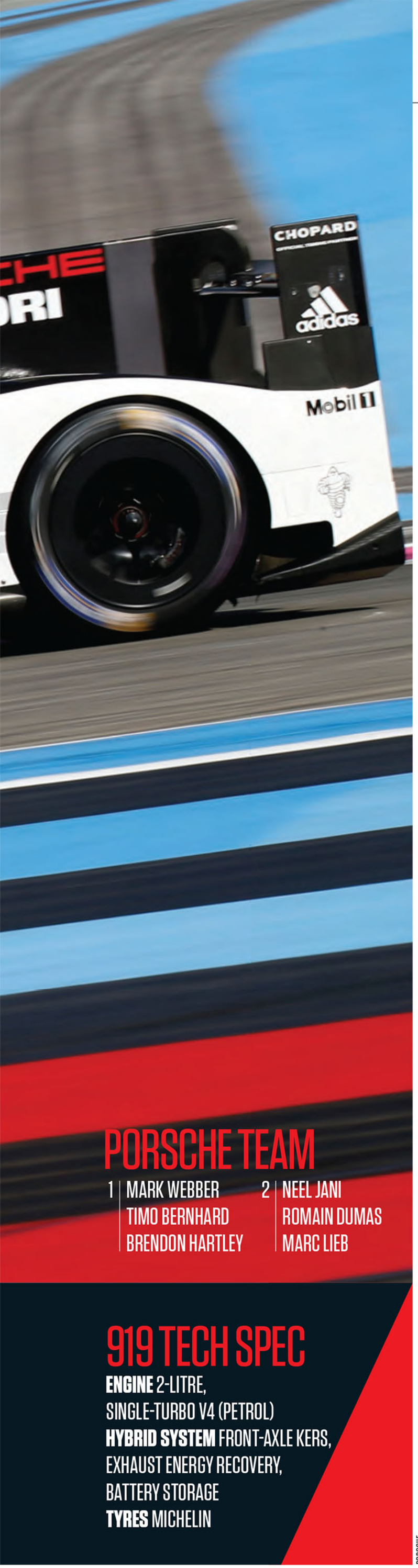


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We say

Porsche's updated P1 contender isn't going to be leapfrogged in 2016 in the same way that Toyota was ahead of its defence of its 2014 WEC titles. Much of Porsche's advantage last year came from the regulations. The fuel-flow rules introduced for 2014 were framed to give an advantage based on hybrid class: the bigger the system, the more energy allowed per lap. Porsche moved up to the 8MJ class and Toyota remained in 6MJ. Now that Toyota has moved up and Audi has gone to 6MJ – the optimum for a turbodiesel, it claims – they are starting out equal. Porsche also has two years of knowledge about how to get the best from a battery storage system, whereas its rivals are just starting out with this technology. That could be crucial. As could reliability. Key elements of the updated 919 – including this year's powertrain – have been testing since before Christmas. Silverstone proved that the Porsche is still the pace-setter, at least in high-downforce trim. Webber and then Hartley controlled the race before an ill-judged overtaking manoeuvre from the latter put the car out.



PORSCHE TEAM

1	MARK WEBBER	2	NEEL JANI
	TIMO BERNHARD		ROMAIN DUMAS
	BRENDON HARTLEY		MARC LIEB

919 TECH SPEC

ENGINE 2-LITRE, SINGLE-TURBO V4 (PETROL)
HYBRID SYSTEM FRONT-AXLE KERS, EXHAUST ENERGY RECOVERY, BATTERY STORAGE
TYRES MICHELIN

PORSCHE

"We are convinced that we can be competitive with an updated car, otherwise we would have made a different decision."

PORSCHE 919 HYBRID

THAT IS HOW LMP1 team principal Andreas Seidl explains Porsche's decision to defend both its Le Mans 24 Hours crown and its World Endurance Championship titles with an updated version of last year's 919 Hybrid.

Porsche believes there is enough room for improvement in the second-generation 919, a complete redesign of the 2014 original, for it to remain on top in the WEC battle. Rather than producing an all-new car like its rivals, the Stuttgart manufacturer has opted for a major overhaul of its championship winner that has left little unchanged apart from the monocoque.

"There have been updates on the aerodynamics, the suspension, the weight and the hybrid system," says Seidl, who has for the moment taken over the duties of departed technical director Alex Hitzinger. "We have improved the engine in terms of combustion, gas exchange and frictional losses. We believe we have made a good – or let's say reasonable – step from last year."

Hitzinger offered a similar assessment before leaving Porsche for new pastures outside motor sport at the end of March. "We know there were big gains to be made with our package and we know what they are," he said.

The step of which Seidl talks added up to a car that proved to have the legs of the opposition in the opening WEC round at Silverstone in April, or at least the no1 entry of reigning champions Mark Webber, Brendon Hartley and Timo Bernhard did before it crashed out. "We have proved that the car is fast, that is the most important thing," said Porsche LMP1 vice-president Fritz Enzinger after a race in which the sister car inherited victory on the exclusion of the winning Audi for a technical infringement (see page 163).

The Porsche drivers appear happy with the gains that have been made at a time when conventional engine power is down courtesy of a reduction in fuel flow.

"We have definitely lost a lot of power, but we have recovered a fair chunk of performance in terms of aero and the hybrid system," says Neel Jani. "Understeer was always our problem. We improved for 2015 and I think we've made another good step in that direction for this year."

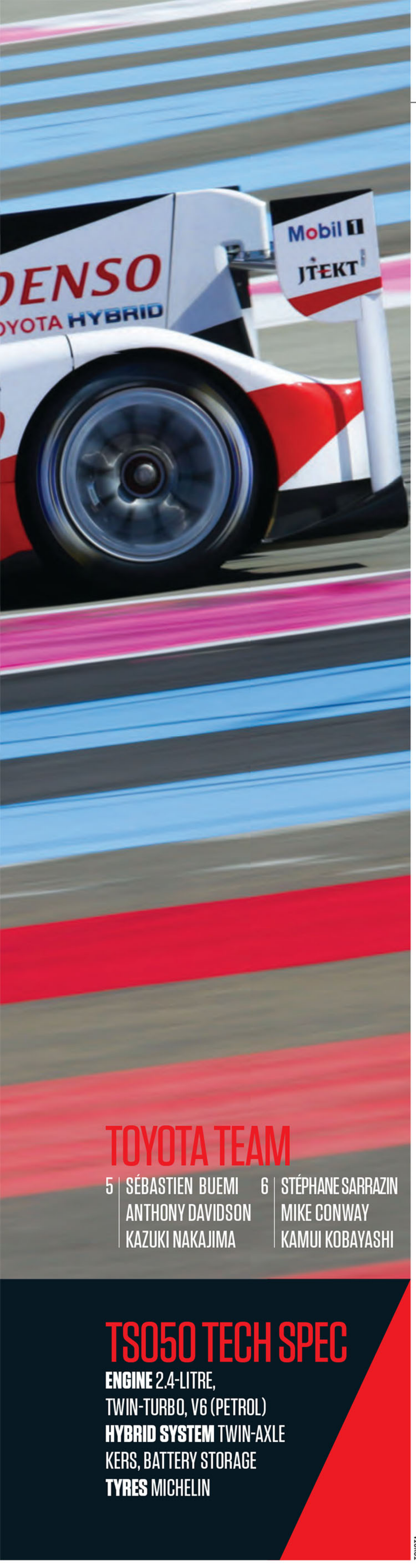
Porsche runs two cars rather than three at Le Mans this year, which means that 2015 winners Nick Tandy and Earl Bamber return to the manufacturer's GTE Pro line-up for Le Mans (and Nico Hülkenberg will be busy on the streets of Baku at the Azerbaijan Grand Prix). That's the result of an agreement with sister marque Audi to reduce their respective assaults on the 24 Hours, made in the name of cost reduction in the wake of the 'dieselgate' emissions scandal late last year. As a consequence Porsche's hopes rest on its two regular WEC cars, which now have unchanged line-ups for a third consecutive season.

All three cars finished Le Mans last year without major problems, though the fifth-placed car was stymied by a braking issue that sent it off the track on two occasions. This time Porsche believes it will be better prepared than ever for the 24 Hours. The revised 919 completed a pair of endurance simulations ahead of the start of the season, the first before Christmas at the Motorland Aragon circuit, and a further two were planned, one after Silverstone and one after Spa, at the same track. The definitive Le Mans aero was due to come on stream at the first of those and was scheduled to be on the cars for the second round of the WEC.

"We are going into year three, so we feel better prepared than in the past two seasons," says Seidl. "We still have points to cover, but nothing that gives us any concern."

We say

Toyota's belief that it didn't extract the maximum from the TS050 Hybrid at Silverstone seems plausible. There were times when the new twin-turbo LMP1 was quick, but it wasn't consistently so. Toyota wasn't sure it was optimising its hybrid system and had concerns that it wasn't getting the most out of its Michelin tyres after going off-line in traffic. It was still early in the development curve for a car that undertook the first of its two tests at the beginning of the year with the previous normally aspirated V8 in the back. That learning process was most evident in qualifying at Silverstone. Its two cars were dramatically off the pace in a session held on a drying track, conditions it had not encountered before. What we can say with some certainty is that Toyota has made some giant gains – it was more than a second and a half faster at Silverstone than 12 months before – and will be closer to the front of the field than in 2015.



TOYOTA

"We understood after Spa last year that we should have changed engine concepts for 2015."

TOYOTA TS050 HYBRID

TOYOTA MOTORSPORT technical director Pascal Vasselon offers a candid appraisal of the Japanese firm's unsuccessful defence of its 2014 WEC crowns. His words also explain why this year's new Toyota TS050 Hybrid has a twin-turbo V6.

A turbocharged engine to replace the normally aspirated V8 that powered the TS030 and TS040 had been scheduled for 2017. Toyota's technological road map called for a switch from its super capacitor energy-storage system to a battery in 2016, to be followed one year later by the arrival of a new petrol powerplant. The poor performance at last May's Spa WEC round resulted in a rethink.

"We kicked off a global feasibility study to see how far the changes could go," says Vasselon. "We understood at Spa that the development potential of turbos was a bit higher [than a normally aspirated engine]. A turbo gives you peak efficiency in a much wider range of revs, atmospheric pressure and temperature. Overall you operate at a higher average fuel efficiency over a season."

An additional consideration was the reduction in fuel available to the factory LMP1s for 2016. The final call by the rule makers to go for the maximum reduction of 10MJ of energy measured over the long Le Mans lap, roughly equivalent to 7.5 per cent, was made after Toyota's decision, but it was on the table. Vasselon describes this as a "consideration" but not "the driving factor".

The green light was given to the turbo programme immediately after Le Mans last June. Little existed at that stage at Toyota's Higashi-Fuji technical centre in Japan, but by mid-September the first 90-degree 2.4-litre engine was running on the bench. A V6 was chosen because, says Hisatake Murata, general manager of Toyota's motor sport development unit, it "achieves the best balance of power and efficiency" with the latest regulations.

Toyota might have opted for a turbo engine and the switch to a battery, enabling it to move up into the 8MJ hybrid class, but its concept remains distinct from that of Porsche. The reigning world champions retrieve from the front axle and a turbine driven by exhaust gases. Toyota has retained the twin-axle kinetic energy recovery system of the TS040.

Murata points out that recovering kinetic energy "is for free", but using exhaust gases to drive a turbine comes with a penalty on engine performance. Vasselon concedes that a twin-KERS is heavier than Porsche's set-up, but "you get more performance out of it".

Toyota admits it is still learning about its 2016 Le Mans challenger and can improve on a Silverstone weekend during which it was outpaced by rivals. "We still have the possibility to make big steps, which Porsche doesn't," says Vasselon, "but they have room to improve."

Toyota again runs two cars at Le Mans. Former champions Davidson and Buemi continue with Nakajima, who joined them in 2015 (with the exception of Spa, where he sustained back injuries in practice), while ex-F1 driver Kobayashi has graduated from a test and reserve role to take the retired Alex Wurz's seat alongside Mike Conway and Stéphane Sarrazin.

Toyota claims it has had no major problems during its endurance tests for Le Mans.

"We have had no issues affecting long-lead parts, so no gearbox or engine problems, things we would struggle to fix before Le Mans," says Vasselon. One more 30-hour simulation was planned between the Silverstone and Spa WEC rounds, at Motorland Aragon in Spain.

"We absolutely need this session, but it should be enough to validate all the solutions to the problems we have had," adds Vasselon. "We should be able to close our winter test season."

We say

Audi's pace at Silverstone might just be very bad news for Porsche and Toyota ahead of the Le Mans 24 Hours. The latest R18's hybrid system didn't make it well suited to a circuit with relatively few heavy braking zones. Because the Audi has to do all its energy retrieval through one axle, the likelihood was that its drivers weren't able to deploy the full amount of energy allowed under the regulations. That won't be a problem around the Circuit de la Sarthe – think of the heavy braking involved for the four chicanes and the Mulsanne and Indianapolis corners. The 2016 R18 proved its speed on its debut, but not its reliability. The no7 car that won on the road didn't have any problems, but its sister did. Audi didn't have the kind of bulletproof car that we have come to expect right from the start of the season. The question is whether it can achieve that 'unburstability' when it goes up against Porsche's proven contender around the Circuit de la Sarthe on June 18/19.



AUDI TEAM

7 | ANDRÉ LOTTERER
BENOÎT TRÉLUYER
MARCEL FÄSSLER

8 | LOÏC DUVAL
LUCAS DI GRASSI
OLIVER JARVIS

R18 TECH SPEC

ENGINE 3.7-LITRE, SINGLE-TURBO V6 (DIESEL)
HYBRID SYSTEM SINGLE FRONT-AXLE KERS, BATTERY STORAGE
TYRES MICHELIN

AUDI

"We wanted to maintain downforce at the levels we had last year and reduce the aerodynamic drag."

AUDI R18 E-TRON QUATTRO

THAT TARGET, SAYS Audi Sport head of engineering Jörg Zander, drove the radical aero concept of the latest turbodiesel LMP1 contender to bear the R18 e-tron quattro name.

Audi Sport's designers have picked up the nose of the new car and moved the driver cell backwards to create clean airflow under the chassis. The new concept is a reaction to rules that have cut the per-lap fuel allocation for the factory P1 hybrids by 7.5 per cent, placing an ever-greater emphasis on efficiency.

"We want to make sure we have a smooth flow to attack the underfloor and the rear diffuser," adds former Sauber F1 technical director Zander. "We are trying to generate more downforce in the lower parts of the car."

This aero thinking has coincided with the introduction of a new hybrid concept. Audi has replaced the flywheel energy-storage system of the new R18's predecessors with a high-voltage lithium-ion battery, technology that Zander says is "similar but not the same" as Porsche's.

That has allowed Audi to move to the 6MJ hybrid sub-class. That's one step up from the 4MJ division in which it ran last year and one down from petrol-powered rivals Porsche and Toyota, but Zander explains that 6MJ is the optimum for a turbodiesel courtesy of the higher weight of the engine concept.

This explains why the move up in class has not been accompanied by the addition of a second means of energy retrieval. The new R18 – like its hybrid predecessors and unlike the rival contenders from Porsche and Audi – recovers solely via front-axle braking. An additional system could not be incorporated within the 878kg minimum weight limit and would also compromise the weight distribution.

The Audi drivers have to recuperate 6MJ at Le Mans – and a percentage of that at other tracks – with one system. That and the switch to a battery explains the massive step up in power of the motor generator unit. The mgu on last season's R18 was rated at 200kW and this year's at 350kW, or 268bhp compared with 496bhp. A 300kW limit will, however, be imposed (at Le Mans only) on safety grounds.

"With a single mgu you are closer to the limit of recuperating the energy that is required," says Zander, "but considering the whole season, and in particular Le Mans, we think it is the most non-compromised solution."

The conventional turbodiesel of the new R18 is a further refinement of the 120-degree, single-turbo V6 used in all previous cars to bear that type number. Audi, like its rivals, says it has been able to claw back a fair proportion of the power lost to the reduction in fuel flow.

Audi returns to Le Mans seeking a 14th victory with two cars driven by the same combinations as its regular WEC line-ups from last season. There is no additional or third entry (or a fourth as in 2012), courtesy of its agreement with Porsche.

Zander describes the new R18 – the sixth car to carry that type number and the third distinct design – as "complex". That goes a long way to explaining a difficult programme of winter testing for Audi Sport. It was happy to admit that it was behind the game when it arrived at the official WEC test, known as the 'prologue', but stressed that it was catching up fast.

Its on-the-road victory at Silverstone suggests that process has been completed, at least in terms of performance. Question marks remain over the new car's reliability, however.

"Here and Spa will be the most difficult for us, so we're looking forward to Le Mans," said André Lotterer, who 'won' at Silverstone with Benoît Tréluyer and Marcel Fässler until the car was disqualified for excessive wear to its front skid block. "Hopefully we can keep the reliability we had with our car today."


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By reputation Audi is a paragon of efficiency in sports car racing, but its engineers admit to being naïve when they conceived the R10 TDI. Ten years on, here's how the firm's history-making diesel evolved to win Le Mans at its first attempt

writer GARY WATKINS

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From town-centre scrutineering to Saturday afternoon, the start of a bold new era

LIKE MANY OFF-THE-wall ideas, this one was hatched in a bar. The notion that a diesel-powered sports-prototype might one day challenge for victory in the Le Mans 24 Hours would have sounded so preposterous at the turn of the century that it could only have been conceived under the influence of alcohol. And so began the story of the Audi R10 TDI.

The participants in the boozy evening were Audi Sport engine boss Ulrich Baretzky and two of the Automobile Club de l'Ouest's most important officials of the time, Daniel Poissenot and Daniel Perdrix. The subject of diesels appears to have come up in light of a previous conversation Audi Sport boss Wolfgang Ullrich had conducted with the powers-that-be at Le Mans about the need to incorporate new technologies into the LMP rulebook.

The remarkable thing was that Audi was still a newbie at Le Mans when these first tentative diesel discussions were taking place. Baretzky remembers that his "night in the bar with the two Daniels" was as early as January 2001. That means the German manufacturer had only claimed one of its 13 victories in the 24 Hours at that point, and it would be another five and a half years before it would take win number six with the R10 turbodiesel.

The alcohol-fuelled idea of racing a diesel engine in a sports-prototype took a long time to take hold in Baretzky's mind. So outlandish was the thought that he tried to suppress any hopes he might have had of trying to convince Audi to take a turbodiesel to Le Mans. Then,



AUDI

perhaps as much as two years later, came the eureka moment.

"I realised that if someone else other than Audi, as the pioneer of direct-injection diesels for the road, should bring this technology to Le Mans and win, I would regret it for the rest of my life," he says. "It was like a bolt of lightning."

Baretzky might have convinced himself about a turbodiesel Le Mans programme, but he knew that winning over the Audi board would be an altogether more difficult process.

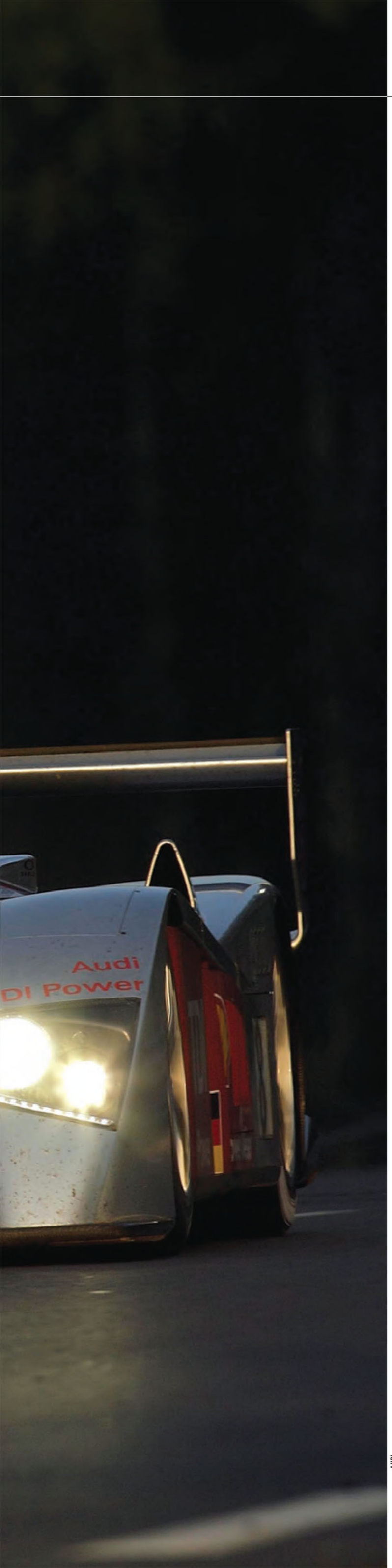
"They must have thought I was a little bit crazy," he says. "Whenever I suggested it to anyone, they looked at me as though to say, 'You are an honourable man and have been successful, but isn't that a little bit too much, a little bit too strange?'"

One of Baretzky's key allies was an engineer who would subsequently become an adversary at Porsche, Wolfgang Hatz. The then head of engine development at Audi, who would later take Porsche back to Le Mans with the 919 Hybrid programme as research and development director, was in favour of the idea. He was in the throes of taking the FSI direct-injection technology pioneered on the petrol-powered R8 LMP900 in 2001 into Audi's production range.

"He really supported the diesel idea because it was road-relevant," says Baretzky. "He was about to prove that there was a direct link between road and race technology with the introduction of direct-injection for our street cars."

This technological cross-over that would become the calling card of Audi's sports-prototype programmes gave it an ace to play when it came to getting the necessary

"WE DIDN'T KNOW ANYTHING ABOUT TURBODIESELS. WE HAD TO LEARN EVERYTHING"



AUDI

go-ahead at board level. The American Le Mans Series had been part of its LMP programme since 2000 and there was a long-term plan to introduce its diesel range into the USA. The R10 could be a means to change perceptions about cars disparagingly still known as 'oil-burners' in the States.

"We wanted to push the sportiness of the diesel," says Ullrich, "and the best way to do that was through motor sport."

The ACO, meanwhile, was working on its plans to allow diesels to race in the top prototype class and would announce that the technology would be admitted from 2004 in the March of the previous year. It was late in 2003 that Audi Sport started working on diesel technology.

❖

A TURNING POINT FOR THE PROGRAMME came at Le Mans in 2004, and not because there was a privateer on the grid with a turbodiesel – of all things a Volkwagen engine taken from a Touareg SUV by British team Taurus Sport. It was deep in the night of the 24 Hours that Baretzky got the go-ahead he and Audi Sport needed to pursue their concept in earnest.

Baretsky was in Audi's VIP area, high in the old tribune across from the pits, when company chairman Martin Winterkorn suggested a meeting with someone he described as 'the boss'.

"I didn't know who he was talking about," Baretzky says, "because I believed Martin was my boss."

The man in question was Ferdinand Piëch, chairman of the supervisory board of Audi parent company Volkswagen and, of course, the father of the Porsche 917. Baretzky explained Audi Sport's ideas to the committed endurance racing fan, and the reply he got was, "You should do it".

"Winterkorn pulled me away and I said, 'What does this mean?' His reply was that now we could do it, now we could accelerate," adds Baretzky. "Without that, no one in the group would have dared."

There had been scepticism within Audi about a programme that would take it back to Le Mans for the first time as a factory since 2002, not least from one of its diesel pioneers, Richard Bauder.

"He said we had to build the engine in cast iron," says Baretsky. "I told him that I would never voluntarily build a racing engine in cast iron and that it had to be aluminium. He said it would never last, but I replied that we'd make it last – and we did."

Ullrich describes developing the world's first purpose-designed diesel racing engine – as distinct from previous production-based racing powerplants – as a "real adventure".

"No one had done it before and there was no experience to fall back on," he says. "Most of our suppliers from the R8 thought we were completely crazy when we told them what we wanted to do. There was quite a lot of discussion before we could convince them, and only then could we go full throttle."

Building an all-aluminium racing powerplant was a step in the dark for Audi Sport's engine division at Neckarsulm.

"We didn't know anything about turbodiesel engines except that you put diesel in them and the pistons go up and down," adds Baretzky. "Bosch didn't have a powerful enough engine control unit, so they had to develop it from scratch. We had to understand that the pistons needed an enormous amount of cooling. We had to learn about the injector pressures. We had to learn everything.

"The worst thing is that in the beginning there was nothing and we knew that it would take 13 or 14 months before we could get everything together to have an engine running on the test bench."

That resulted in Audi Sport taking a production V8 with a similar bore and stroke to its forthcoming race engine to begin testing on the bench. It wouldn't be until May 2005 that the race engine would fire up for the first time.

"We learnt a lot about turbocharging and the injectors, and we found a lot of problems very early," says Baretzky.

Not least of Audi's problems was building an aluminium engine strong enough within the weight constraints. The rules allowed for a maximum of 12 cylinders and a capacity of up to 5.5 litres, and that was the configuration for which Audi opted.

"We chose that because we didn't know anything about diesels and the loads they could withstand," explains Baretzky. "We had no idea if that was too big or too small, no clue at all. But we thought the bigger the capacity the better and that it would be better to distribute the loads to a maximum number of cylinders."



LAT

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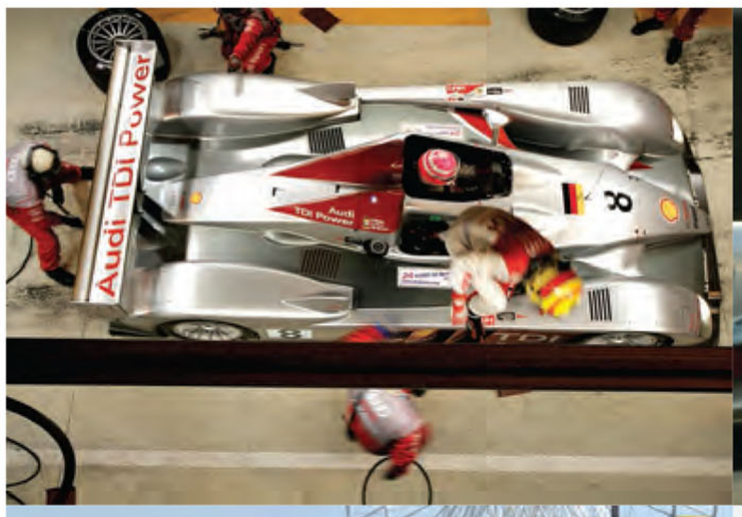
THE RECORD BOOKS SHOW THAT THE R10 TDI won on its race debut at the Sebring 12 Hours in March 2006 and scored a victory first time out at Le Mans three months later. Audi ultimately dominated those races against limited opposition, but so new was the technology that the results might easily have gone the other way.

The R10s encountered a run of engine

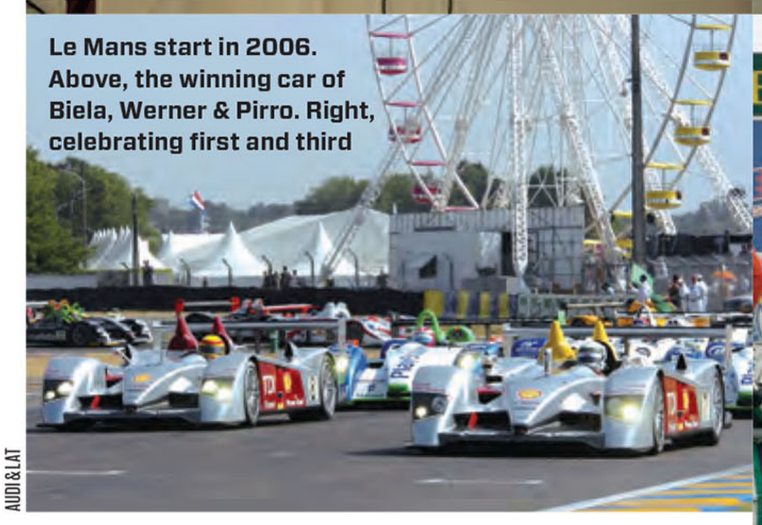
problems in the week leading up to both events. What's more, one of the two cars entered each time encountered problems early on, leaving Audi's victory hopes resting on one car.

Sebring, back then a round of the ALMS, already had an enshrined place in Audi's Le Mans preparations. In the first few months of 2006, the car-breaker of a circuit became a home from home for its test team.

Testing wasn't straightforward – Baretzky knew the airline menu card by heart, so frequent were his trips to Florida early in 2006 – and things only got worse when the team returned to the Sebring International Raceway for the ALMS opener. Audi Sport Team Joest turned up with a truckload of engines, and come race day had pressed each and every one of them into service.







Le Mans start in 2006. Above, the winning car of Biela, Werner & Pirro. Right, celebrating first and third

AUDI & LAT



"Everything was fine on the first day, except that the oil pressure slowly went down on both cars," says Baretzky. "We'd never seen this before, but thought, 'OK, we'll change the engines.' Then it was the same story the following day.

"We had new engines for qualifying on Friday, and it was only in the evening that we found the problem. The oil tank had a sensor that was meant to be glued in place. For whatever reason, and we never found out why, it had been taped in on this batch. The oil, the heat and the turbulence meant the tape came off, and it was this tape blocking the filter that caused the oil pressure to drop."

The problem might have been solved and another pair of engines – the final two – installed for the race, but Audi's problems weren't over. Oil temperatures on pole winner Allan McNish's car soared during the short raceday warm-up ahead of the scheduled start.

The pressure was fine, so Baretzky concluded that there must be an issue with the oil cooler within the engine vee. And Audi happened to have a supply of those attached to the line of abandoned engines.

"I asked the chief mechanic how long would it take," remembers Baretzky. "He told me it would take three hours. I replied, 'I'm sorry, but the race starts in one and half hours.' Without any further discussion eight mechanics started work, four on the race engine and four on the engine from the day before."

The job was completed just in time for McNish to start the race on time, albeit from the pits. The car was pushed onto pitroad literally as the cars were leaving the grid to begin the warm-up lap. It was a good job, too. McNish and team-mates Tom Kristensen and Rinaldo Capello dominated the race on the way to a four-lap victory, but the sister car shared by Emanuele Pirro, Frank Biela and Marco Werner was out inside three hours.

Telemetry contact had been lost with the car when Werner started to complain about a loss of power. Exactly at that moment the data connection was restored, revealing 140deg C water temperatures. The driver was ordered to the pits and the car retired to avoid an engine failure.

"For whatever reason, the radiators were clogged with tyre debris," explains Baretzky. "The funny thing was that one car had this problem and the other not. We were left with only one for the rest of the race, and you could imagine that I aged about 20 years over the remaining hours."

Audi didn't race the R10 again until Le Mans in June, relying on the old R8 instead for its ALMS campaign until after the 24 Hours. It was a similar strategy to that which Audi had employed in 2000 when it had given the new R8 a winning debut at Sebring before going back to an updated version of the previous season's R8R.

"It was clear with such a young project that we couldn't continue in the other ALMS races with the car at the same time as doing the maximum for Le Mans," says Ullrich. "We used Sebring as a testing ground, but until Le Mans was done we used the existing R8 in the US."

❖

LE MANS WEEK DIDN'T BEGIN WELL FOR Audi. It was hit by a series of injector problems from first qualifying.

"We had carried a problem through testing and we were changing everything on the engine, even the loom," recalls Baretzky. "Every morning out in the car park we were having a conference call to Bosch in Stuttgart. We knew what the problem was, but we didn't know how to fix it."

It is a complicated story that involves the ISA (injector voltage adjustment) values embedded in the ECU. Baretzky explains that the development of the engine through the first half of 2006 changed the way the injectors behaved, but no one understood that the values needed to be altered to compensate.

So unsure of the reliability was Audi that it took the unprecedented step – at least according to its own practices at the time – of running one engine per car through the two qualifying days and into the race. It was a case of better the devil you know.

"We kept mileage on Wednesday and Thursday to an absolute minimum, knowing that those were going to be our race engines," explains Audi Sport Team Joest boss Ralf Juttner.

Audi was running just two cars at Le Mans that year, a decision taken with regard to the cost and complexity of the R10 programme. One suffered a serious delay as early as the fourth hour, when a set of injectors needed replacing on the pole-winning car shared by Capello, Kristensen and McNish.

Twenty minutes and six laps were lost because, says Juttner, "At that time the electronics couldn't identify which injector

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had failed, just which bank of cylinders it was." The need for repairs to a front corner, following a clash with a GT, and then the replacement of a turbo left no way back for this car.

❖

THAT LEFT AUDI'S VICTORY HOPES once again on the shoulders of one driving crew, this time Pirro, Biela and Werner. They took over the lead from the sister car and were never headed. There was a delay to change the gearbox internals after a differential failure, but no recurrence of the injector problem that had hit the pole car. To this day, Audi doesn't fully understand why.

"WE OPENED THE DOOR TO NEW TECHNOLOGIES WITH THE R10 TDI"

"Maybe the winning car ran two or three degrees cooler, and that's why the problem didn't occur," suggests Baretzky. "The moment the injector got too hot under load and it went outside of its operating window, a security system shut it off. I remember it taking us two or three months after Le Mans to find out the real reason."

Pirro and his team-mates finished four laps up on the second-placed Pescarolo-Judd, while the Kristensen Audi made it home third, a further nine laps in arrears. History had been made and the top prototype class at Le Mans was set on a course that has made it the technological laboratory that it is today.

Had there been no Audi R10 TDI, would we be witnessing the super-powerful and super-efficient hybrids that race under the latest LMP1 rulebook? Probably not, thinks Ullrich.

"We opened the door to new technologies with the R10 TDI and, before that, the R8 FSI," he says. "Maybe we changed the mindset by showing what could be done with future-orientated technology." Ⓜ

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SUCCESS BREEDS SUCCESS

The R10's landmark Le Mans win was just the start...

THE AUDI R10 TDI CLAIMED A PLACE IN THE history books when it notched up the first Le Mans 24 Hours victory for a diesel-powered car in 2006. It then cemented that place throughout the remainder of its career with Audi Sport Team Joest.

The R10 turbodiesel was unbeaten in its three starts with the factory team at Le Mans. Emanuele Pirro, Frank Biela and Marco Werner scored their second victory with the car in 2007, though only after the sister Audi shared by Tom Kristensen, Allan McNish and Rinaldo Capello retired from a four-lap lead.

Kristensen and his team-mates put the record straight 12 months later when they did win after a phenomenal battle with Peugeot. Audi wasn't given a chance ahead of the event, but the drivers of its lead car stayed in the hunt until rain arrived in the small hours. A game of guile and strategy then played out in mixed conditions before Audi sealed a narrow victory.

The R10 also racked up a run of victories and titles in the American Le Mans Series in a halcyon period for the championship, during which the Audi turbodiesel went head to head with Porsche's lightweight RS Spyder LMP2. A tally of 18 wins in the US-based series included two at Sebring and three in the Petit Le Mans enduro at Road Atlanta. There was also a championship victory in the Le Mans Series in Europe against Peugeot in 2008.

The first in a line of Audi turbodiesels enjoyed a phenomenal record of reliability. Only once did an R10 retire from a race for mechanical reasons, at Sebring on its debut. And Audi Sport engine boss Ulrich Baretzky would dispute that one.

The R10 was also the car that gave the world of international sports car racing André Lotterer. The German was happily plying his trade in Japan when he was offered a ride – and had to bring a budget, against his better judgment – in one of two Audis run by the privateer Kolles team. A starring performance brought him to the factory's attention and landed him a drive for the following season.



Audi admits today that it knew nothing about racing diesels when it embarked upon its R10 TDI project

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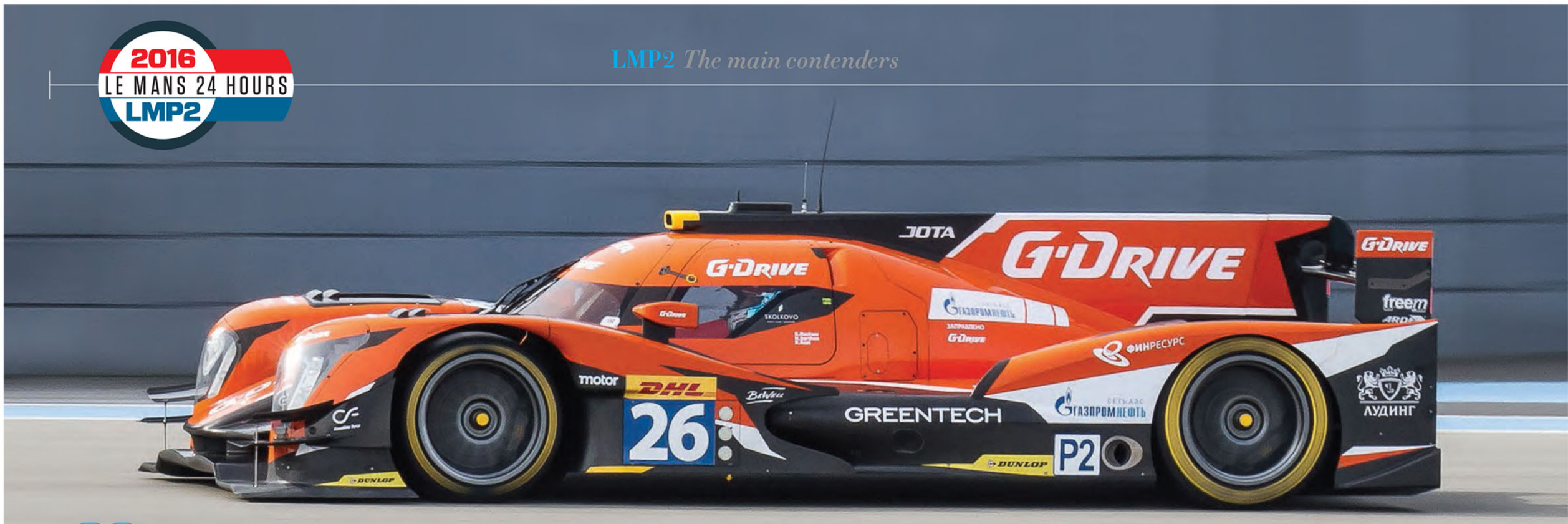
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26 G-Drive Racing

Car *ORECA-Nissan 05* ***Drivers*** *René Rast/Nathanaël Berthon/Roman Rusinov*

It's all change for G-Drive after its successful championship assault last season. It has swapped from OAK Racing to the Jota Sport team and from the Ligier JSP2 to the ORECA 05. Jota is undertaking its first full WEC campaign after four seasons as a front-runner in the European Le Mans Series, and its drivers showed at Silverstone that they are going to be a force. They ended up third, despite losing time with two separate problems. This line-up, with Rusinov as its mandatory silver-rated or 'amateur' driver, is arguably the best in the field.

41 Greaves Motorsport

Car *Ligier-Nissan JSP2*

Drivers *Memo Rojas/Kuba Giermaziak/Julien Canal*

LMP2 stalwart Greaves Motorsport is back at Le Mans with a solo entry for the new Ligier coupé, with which it is defending its ELMS crown (it had to withdraw its open-top Gibson after failing to find drivers for what now appears to be an unfashionable car). It has put together a strong line-up with three-time Daytona 24 Hours winner Rojas, former Porsche Supercup star Giermaziak and Canal, the silver in last year's WEC-winning crew at G-Drive.



PICK A WINNER...

LMP2, the second prototype division, pitches seasoned pros against ambitious young talent and amateur 'gentlemen'. It's also the most unpredictable and open class at Le Mans.

writer GARY WATKINS



48 Murphy Prototypes

Car *ORECA-Nissan 03R*

Drivers *Jeroen Bleekemolen/Marc Goossens/Ben Keating*

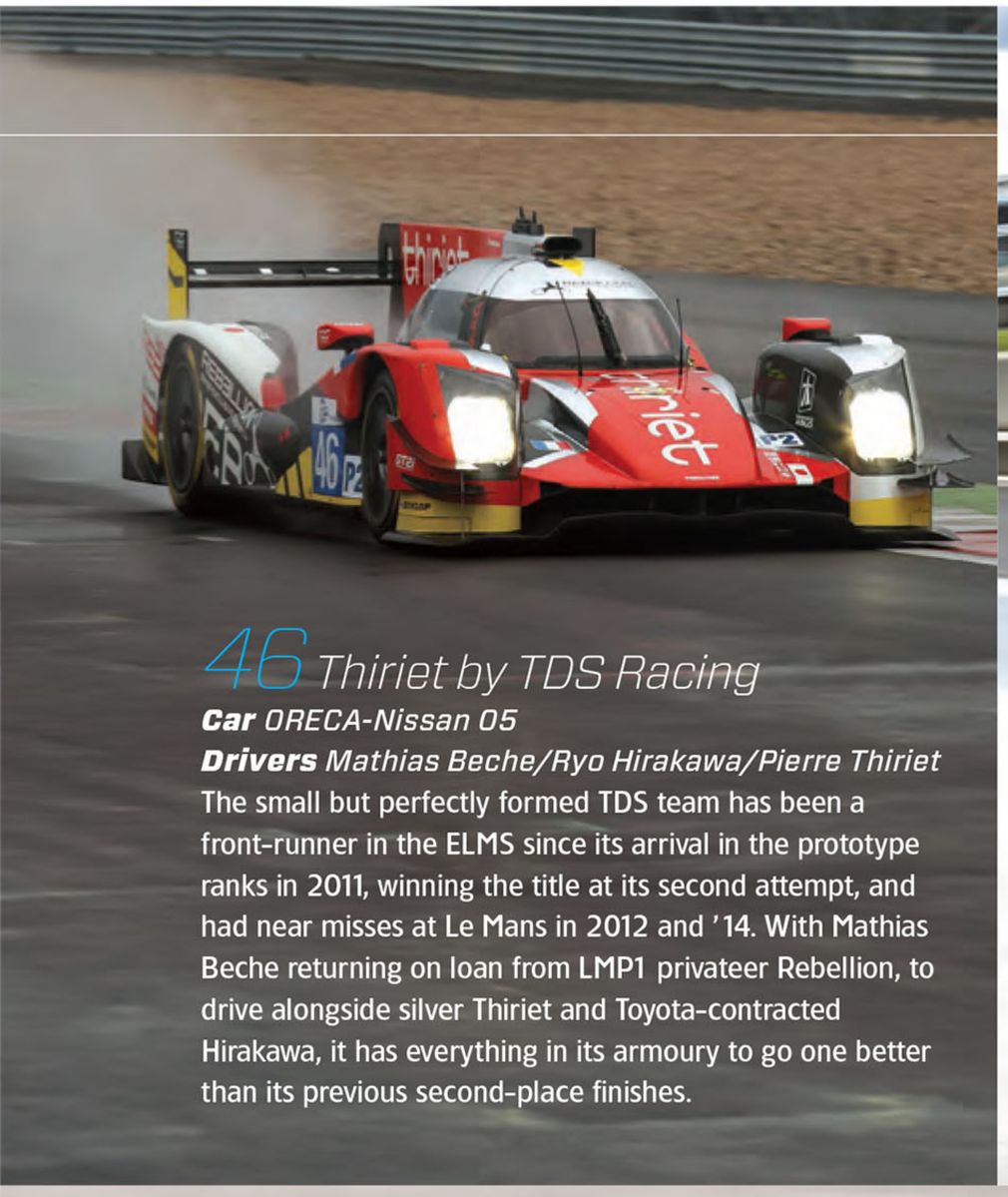
The Anglo-Irish Murphy squad, back for its fifth Le Mans campaign, has retained its open-top ORECA and put together a strong line-up in GT star Bleekemolen, the experienced Goossens (who will be making his 13th start at the 24 Hours) and handy silver Keating.



49 Michael Shank Racing

Car *Ligier-Honda JSP2* ***Drivers*** *Oswaldo Negri Jr/Laurens Vanthoor/John Pew*

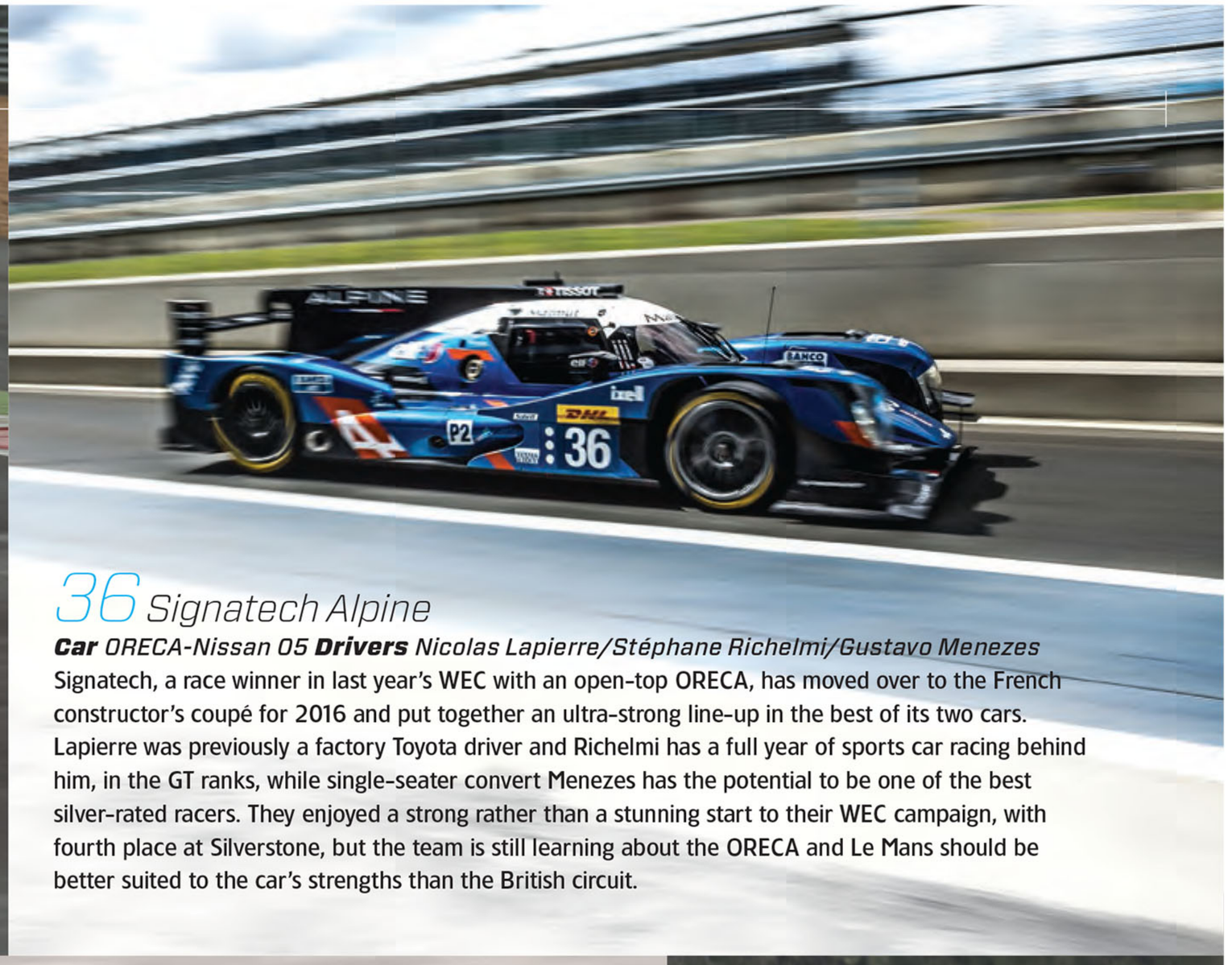
Shank needs no introduction to aficionados of US sports car racing. It has lately been a consistent front-runner in Grand-Am and then IMSA and won the Daytona 24 Hours in 2012. This will be its first Le Mans, but any shortfall in experience should be overcome by running under the umbrella of OAK Racing, part of the organisation that includes Ligier constructor Onroak Automotive. It will run the same chassis with which ESM won at Daytona and Sebring, but with the 2.8 (rather than 3.5) version of the Honda twin-turbo V6. The bigger engine isn't homologated for the WEC.



46 Thiriet by TDS Racing

Car *ORECA-Nissan 05*
Drivers *Mathias Beche/Ryo Hirakawa/Pierre Thiriet*

The small but perfectly formed TDS team has been a front-runner in the ELMS since its arrival in the prototype ranks in 2011, winning the title at its second attempt, and had near misses at Le Mans in 2012 and '14. With Mathias Beche returning on loan from LMP1 privateer Rebellion, to drive alongside silver Thiriet and Toyota-contracted Hirakawa, it has everything in its armoury to go one better than its previous second-place finishes.



36 Signatech Alpine

Car *ORECA-Nissan 05* ***Drivers*** *Nicolas Lapierre/Stéphane Richelmi/Gustavo Menezes*

Signatech, a race winner in last year's WEC with an open-top ORECA, has moved over to the French constructor's coupé for 2016 and put together an ultra-strong line-up in the best of its two cars. Lapierre was previously a factory Toyota driver and Richelmi has a full year of sports car racing behind him, in the GT ranks, while single-seater convert Menezes has the potential to be one of the best silver-rated racers. They enjoyed a strong rather than a stunning start to their WEC campaign, with fourth place at Silverstone, but the team is still learning about the ORECA and Le Mans should be better suited to the car's strengths than the British circuit.

31 Extreme Speed Motorsports

Car *Ligier-Nissan JSP2* ***Drivers*** *Luis Felipe Derani/Ryan Dalziel/Chris Cumming*

US entrant ESM has transformed its fortunes after linking up with OAK Racing, last year's P2 champion with G-Drive, for the 2016 season. It has already scored back-to-back outright victories at the Daytona and Sebring enduros, the opening two rounds of the IMSA SportsCar Championship in North America, with a Honda-powered Ligier. It followed that up with a second place in the WEC opener. 'Pipo' Derani is emerging as a driver with a big future in the prototype ranks. The experienced Dalziel and decent silver driver Cumming complete a strong line-up.





38 G-Drive Racing

Car *Gibson-Nissan 015S*
Drivers *Giedo van der Garde/Simon Dolan/Jake Dennis*

Jota has consistently proved that there is life left in the open-top Gibson, a design that dates back many seasons (see page 138). It showed that at Le Mans last year with second in class and, most recently, in the opening round of this year's ELMS. Harry Tincknell, who will be on duty with Ford in GTE Pro in the 24 Hours, anchored another victory for the team in its first race running under the G-Drive banner. Tincknell's absence for Le Mans means two rookies – van der Garde and Dennis – line up alongside amateur Dolan.

43 RGR Sport by Morand

Car *Ligier-Nissan JSP2* ***Drivers*** *Bruno Senna/Filipe Albuquerque/Ricardo Gonzalez*

Former WEC P2 champ Gonzalez has put together his own operation, bringing the Swiss Morand team under the umbrella of OAK Racing. The new set-up and strong driver line-up fulfilled its potential with a first-time-out victory in the WEC at Silverstone. The trio remained in the hunt all the way, even though their win owed a lot to others' problems.



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A MIDSUMMER KNIGHT'S DREAM

Olympian Sir Chris Hoy conquered the cycling world. Now he's relishing life as a humble rookie, racing at Le Mans and notching up another sporting ambition

writer DAMIEN SMITH

HE LOOKS THE PART IN HIS shiny Nissan overalls, and he certainly says all the right things. But does Sir Chris Hoy, the most successful Olympic athlete in history, a god of the cycling velodrome and the bearer of multiple gold medals and world titles, actually feel like a racing driver?

"Once I get my helmet on, yes," he says with a glint of his trademark optimism. "On my Twitter profile I now have 'races cars' at the end of my description of who I am…"

It's just as well he means it. 'Our' sport can never define him in the eyes of the wider world like his old one will, but this new chapter can no longer be dismissed as merely a hobby, a means of distraction following his retirement from the toe clips. And it can bite, too. There's nothing half-hearted about Le Mans.

We're in Nissan's 'Innovation Centre' within the bowels of London's O2 Arena to hear all about Hoy's new adventure. Happily, his reputation as a friendly, down-to-earth bloke is precisely as we find him. Naturally we're the last to get to him (after the man from the *Daily Mail*), but his excitement hasn't tarnished as he welcomes us to fire away for a "proper" interview about what is clearly a genuine passion.

After just two full years racing within Nissan's renowned driver development programme, Hoy will take his bow at the world's biggest race. He'll be driving a Ligier JSP2 in the prototype class's second division, sharing the car run by Algarve Pro Racing with Frenchman Andrea Pizzitola and fellow Brit Michael Munemann. Naturally, power will be delivered courtesy of the Japanese manufacturer that has steered his second sporting career since he tackled the British GT Championship in 2014.

"I never thought I'd get the chance to race properly," says the lifelong motor racing fan. "It was really after I retired from cycling that the opportunity arose, when I had more time on my hands to pursue it. I never thought it would be possible to get to Le Mans, or to have the support I've had. It wouldn't have been possible without Nissan."

Anyone who caught the BBC documentary Hoy made about his childhood hero Colin McRae will have noted how genuine the cyclist is about motor racing. Pedal power might have dominated his life, but cars were always there.

❖

EDINBURGH-BORN HOY LEARNT HOW to win on BMXs (just like Alex Wurz), which he raced successfully until he was 14. The switch to track sprint cycling in 1992 would lead to his first world championship medal, a silver, seven years later. From there, the roll of honour is just astounding: 11 world titles, two Commonwealth crowns and those amazing six golds and a silver at three Olympics, culminating in the glorious London Games of 2012. In between, he brought velodrome cycling to the mainstream and claimed the BBC Sports Personality of the Year Award in 2008, the knighthood and MBE further embellishing this modest man's status as a national hero.

His presence at Le Mans will deliver Nissan more headlines (and certainly more positive ones) than any over-ambitious and outlandish LMP1 project. It's a coup for the race, too.

But any notion of dismissing him as a celebrity racer is unfair. He heads to Le Mans on merit, having won his entry fair and square by winning the LMP3 class of the 2015

European Le Mans Series with Charlie Robertson in a Ginetta. The baby prototype class offered Hoy his first taste of real downforce – and he liked it.

"When I got that extra grip through the faster corners, it felt like the first time I'd driven a proper racing car," he says, while duly doffing his cap to the GTR "beast" in which he'd cut his teeth. "It took a bit of time to get the confidence, knowing that when you get to a fourth, fifth or sixth gear corner you can take it flat when your brain is telling you to slow down. But I'm quite a scientific person, so having all the data laid out and to see that someone in the same car has gone through a corner flat on the throttle does help me."

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LMP2 IS A STEP ON AGAIN, AND although it was always the plan for him to graduate this year the deal has come relatively late – confirmed only 10 days before the London announcement in early April. Previous tests with the Greaves Motorsport Gibson and, subsequently, a run in his Algarve Ligier at the ELMS Prologue will at least give him something to go on before the Le Mans test weekend at the beginning of June. And lest we forget, he did get a taste of the great circuit during the test day last year in the LMP3 Ginetta.

"I find the prototypes much more intuitive to drive," he says. "The GT cars with traction control and ABS are quite hard to read. You smash the brake and hold it. With the prototype it's real fingertip stuff. It's still very physical, but it communicates a lot more feel from the track through to the seat of your pants. To me if feels like a pure driving experience and one that I enjoy more, and I feel like I've got into the swing of that type of driving more easily than I did with the GT. The P2 is the most fun I've had in a car so far."

Last year a fact-finding mission to the 24 Hours allowed him to taste an event of borderline Olympic scale. Seasoned sports car racer and Nissan driver coach Stuart Moseley points out a man of Hoy's experience won't be overawed: "Inevitably, for anyone going there for the first time there's the massive distraction of the event itself. Having been there, Chris can get over the 'wow factor'. But if anyone can turn off the distractions surrounding an Olympics to win gold medals, they are going to cope pretty well with Le Mans."

Hoy admits this is where his previous life will help him. "It was the same thing with the Olympic Games," he says. "It was still a velodrome and a normal track, but all this stuff around it could distract. It's important to focus on what you can control."

The cycling knight won't be the first Olympian to race at Le Mans. Back in 1962 French skier Henri Oreiller started the race, 14 years after winning the Men's Downhill and







Top and above, Hoy shared LMP3 title success with Charlie Robertson in 2015. Above right, racing Nissan GT-R in the 2014 British GT Championship. Right and below, Algarve Ligier LMP2 of Hoy, Parth Ghorpade and Michael Munemann took 10th in this year's ELMS opener at Silverstone



Men's Combined Gold at the Winter Games of 1948. New skills come easier to those who've competed at the highest levels, whatever the sport, it seems. Hoy's old cycling team-mate Victoria Pendleton is another example, following her recent exploits in horse racing.

Pendleton's adventure was far from welcome among many in the racing stables, seasoned insiders decrying her efforts as dangerous in the wake of her relative inexperience (she sat on a horse for the first time only a year before her race debut). But was envy mixed in there too? She dominated the recent Cheltenham Festival headlines ahead of the leading riders, horses and trainers – but that was predictable. It was a great story, particularly when she proved the doubters wrong.

Will the same be true for Hoy at Le Mans? Professional racers who scrape away looking for drives each year could be forgiven for resenting a man who has walked in with manufacturer support at a higher level than he surely would have done without those gold medals. But if there is jealousy, it's unlikely to be voiced publicly in motor sport. Hoy will be given an easier ride than Pendleton, but then he's male… and it helps that he's so humble.

"I'm acutely aware how lucky I am to get these chances and it's not something I take lightly," he says. "The general media might be sceptical that I won't actually do it and that there will be excuses, but in my mind there has never been any doubt.

"It's amazing to be here now talking about sitting on the startline of the greatest race in the world against some of the best drivers. They make it look so easy from the outside, the professionals, although it's anything but. When you are absolutely on the limit and you feel you've extracted every ounce of performance from the car, you come in and look at a pro driver's time and they are 2sec quicker… It's amazing, they really are exceptional athletes who are so cool under pressure."

He insists the only pressure he feels is from his own natural competitiveness. "It comes from me, not from outside. It's the pressure to do a good job. I don't want to be gifted a seat or a chance and just waste it, or for it to be that I got this job because I used to be a cyclist and won a few medals. I want to treat it with the respect it deserves, give it 100 per cent commitment the same way any driver would if they were given the chance I have. It's the same pressure I put on myself when I did my first races in Radicals.

"It's exactly the same feeling, whether you're on a bike or in a car. From when I was younger racing BMXs, there was that excitement, nervousness, the adrenaline. I never thought I'd feel that again after retiring from cycling, I thought that was the end of that part of my life. I didn't do this to replace my cycling, but in many ways I get to carry some of the enjoyable parts of my cycling career into motor sport."



Hoy retired from competitive cycling on a pinnacle after winning six Olympic golds

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WHILE HE'S COMMITTED, HOY IS UNDER no illusions that this is the beginning of a new professional career. After all, he's just turned 40. "It's definitely not like cycling because I can't do it seven days a week. Cycling was the only thing I did. This is part of my life, but it's not everything. When I'm in the car it's everything, but I've got umpteen different things I'm trying to shoe-horn into my life. That's the biggest difference."

Still, those natural competitive juices are addictive. He relishes the fact he's a rookie, after years setting the benchmark on a bike. "Yeah, I love that," he says. "It's cool because you see massive steps in improvement. You've been at the top for so long looking for the tiniest gains. If you could improve by half a tenth over four years at the Olympics, that was seen as significant. We were dealing with such small margins. Here, you see an improvement and you feel like you're getting somewhere every time you get out on track. That's exciting."

He's way beyond the point of feeling like "a fish out of water" in a racing car and describes his progress as a series of steps rather than a steady curve. "Last year I did the Red Bull Ring ELMS and the weekend before I was racing Radicals, and I had a lot of seat time, about five or six hours over the space of two days," he says. "It was like a penny dropped, I suddenly gained this confidence. Also, in the test at Aragon this year, I did a time only a few tenths off the pro drivers. I couldn't have dreamt of that back in British GT when I was three and a half, four seconds off Al Buncombe. I definitely feel it's not this continual improvement. All of a sudden something clicks and you step up, then there's another one. And there's more to come between now and Le Mans, particularly in the high-speed corners. I was getting there at Aragon but at Paul Ricard [for the ELMS Prologue] we had some problem with porpoising on the straight just before turn-in. It didn't give you the confidence to go flat. But it'll come."

Moseley mentions traffic as the biggest challenge Hoy will face, but that's not news to him. He's well versed in the "basic principles" of sticking to your line, about "not being indecisive" when LMP1s are upon you seemingly out of nowhere.

Again, he'll draw on lessons from his previous life. "On the surface it's a very different challenge, but there are so many simple things – not just in sport, but in life – that you learn from competing at a high level. You can deal with situations when you are under stress. Focusing on what you can control, on what you can influence rather than on what could go wrong or is happening around you. That's crucial in traffic, or coming into a fast corner in the dark looking for your reference points.

"When it's half past two on Saturday afternoon and we're just about to get ready, there will be moments of doubt. But I used to have those on track at the Olympics. It's normal. But you don't dwell on them, it's not the time to engage with these thoughts. It's the time to say, 'I've dealt with these six weeks ago, thought them through, so now I'll put them away and focus on what's at hand'."

Hoy has been blessed by Nissan with more time in a racing car than any 'normal' newcomer. He's had all the training and support anyone could want. He also has the competitive gene and winning mentality of history's most decorated Olympian. He'll be ready. Ⓜ

To the Manor reborn

The name has been a familiar part of motor sport's landscape across three decades, but has never previously been associated with the World Endurance Championship. It is now...

writer SIMON ARRON | **photographer** DREW GIBSON

THE INSTALLATION IS so fresh that there is no visible signage outside. The door is ajar, though, so I walk in and find myself on a workshop floor with two LMP2 ORECA-Nissans. There is a delightfully old-school motor racing ambience – no battery of receptionists, just a functional, no-frills unit close to Silverstone's perimeter and a small, dedicated workforce fettling a couple of cars. It is from here that Manor is running its inaugural World Endurance Championship programme, set up by John Booth and Graeme Lowdon after their departure from the Formula 1 team of the same name.

Before we chat, there is one important matter that requires resolution: would I like a cuppa?

The Manor name has been prominent in motor sport since 1990, when former FF1600 star Booth launched the team in Formula Renault. It went on to be highly successful in junior single-seater racing, at home and abroad, guiding Marc Hynes and Antonio Pizzonia to British F3 titles and running numerous drivers who would later grace F1, including Robert Kubica, Lewis Hamilton, Kimi Räikkönen and Paul di Resta. When the FIA invited tenders for new F1 teams in 2010, Manor Grand Prix was one of the three applicants selected, although assorted business partnerships would lead it to run as Virgin Racing, Marussia Virgin and plain old Marussia before it morphed, in 2015, into Manor Marussia. From 2010-2014 it also ran a GP3 operation, scoring 11 race wins. Lowdon has been involved for the past 16 years.

Team principal and Manor founder John Booth, left, and sporting director Graeme Lowdon


MANOR
MANOR
MANOR



Manor will run two ORECA-Nissans at most WEC events, but a single car at Le Mans

The temptation to take a tilt at F1 was based on a promised budget cap that never materialised. "I think we can be proud of what we achieved," Lowdon says. "There were many challenges we didn't expect when we committed to step up, but business is all about dealing with things as they come along – you see that in every industry. Our goalposts moved enormously and it was incredibly hard to predict where they might end up. It's difficult to plan when there's a lack of stable governance."

Booth: "The loss of a budget cap was the biggest shift of all shifts – going from $40 million per season, paid for by TV revenue, to £60 million per year and receiving a third of what we initially thought…"

Reality bit late in 2014, when the F1 team missed the final three Grands Prix and its GP3 sibling folded. "The financial challenges mounted during the season," Lowdon says, "and then the worst possible thing happened when Jules Bianchi had his accident at Suzuka [the Frenchman died from his injuries nine months later]. Soon afterwards the team went into administration, so John and I worked closely with the regulators and did the best we could to make sure the team carried on. It was a really difficult period, but we managed to create an environment where a new investor [Ovo Energy boss Stephen Fitzpatrick] could come in. Our roles then changed significantly, though, because we were no longer shareholders. Fundamentally we'd been trying to make sure the team survived for somebody else, by which stage we were just employees – and in that capacity you have the opportunity to go and do something else. I felt that was the right course."

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BOTH PLEDGED TO SEE OUT THE 2015 season. En route to the Abu Dhabi finale, however, Lowdon stopped off in Bahrain on a WEC fact-finding mission. "I'd sat next to Allan McNish on a few aeroplanes," he says, "and we'd talked about sports car racing. He very kindly arranged for me to go to Bahrain as an Audi guest and that gave me a chance to take a look at what had been happening while we were immersed in everything else. Walking into that paddock, it just felt great."

Unaware of his friend's train of thought, Booth had his mind elsewhere. "On the Monday after Abu Dhabi," he says, "I flew to Australia, for a holiday, and had no intention of going to a race ever again. That was it for me, but I came back with batteries recharged – and that continued as this project evolved. I felt pretty excited heading down to Paul Ricard for our first test." [He has since also accepted an F1 consultancy role with Toro Rosso.]

Lowdon: "After Abu Dhabi I went out for dinner, had a drink and by lunchtime the following day I was thinking, 'Right, what's next?' John was probably on his plane by then…" 'Next' turns out to be our current location, within the motor sport-rich industrial complex known as Silverstone Park. As the smallest F1 entrant Manor had 200 personnel, but team principal Booth and sporting director Lowdon now oversee seven full-time employees and will have a crew of 27 during race weekends. They put in a single entry for Le Mans – that having been the original plan for the whole season – but will run two cars for the balance of the WEC campaign, for defending Le Mans LMP2 winner Richard Bradley, F1 refugees Roberto Merhi and Will Stevens, long-time Manor driver Tor Graves, Yorkshireman James Jakes and former F3 racer Matt Rao.

Although endurance racing is new to both men in terms of hands-on participation, it has played a significant part in their lives. "One of my greatest moments was watching a Group C start at Donington Park," Lowdon says. "I'd really never seen anything like that before and in June 1990 I went to Le Mans for the first time. That left a big impression and I went back every year until 2009. That's where I was when I received the phone call telling me we'd been granted an F1 entry. If I were to draw up a list of things that make me passionate about motor sport, there would be a lot of F1 on it – but also a great deal of sports car stuff."

Booth: "The first race meeting I ever attended was the Kosset Six Hours at Silverstone in 1977 – Porsche was trialling the new whale-tail ahead of Le Mans and was expected to reach 200mph on the Hangar Straight, so I wanted to see it. On the way out, I watched the Formula Ford race from Woodcote and thought, 'I've got to have some of that'." He did, too, remaining a competitive force well into the mid-1980s.

❖

CAPTAINS APART, THE NEW TEAM features a blend of past Manor employees – some of whom were on the F1 roster – and a number of people with solid WEC experience. "It's a different challenge when you're not manufacturing a car," Lowdon says, "but you still need people of the highest calibre because we're competing against strong rivals who operate from the same rulebook. One of the things that swayed our choice was a meeting with WEC CEO Gérard Neveu and his team. They told us that the WEC was not really their championship, but that it belonged to the competitors and that we should talk to them. I thought that was a powerful sales pitch, because the people running the show had such a level of confidence in the product. That told me it was a really good championship."

Booth admits to being bowled over by what he saw when teams arrived for the pre-season prologue at Paul Ricard. "The paddock was absolutely full of spectators," he says, "which was great – much better than having tumbleweed blowing through, as happens in F1. The drivers smile, too.

"It's quite interesting that the LMP1 teams have their spendathon, with absolutely massive operations, while LMP2 is much more tightly controlled and nobody is allowed to steal a march in technical terms. It's almost like they've written one set of rules for the manufacturers and another for the spectators. I watched most of Le Mans last year and every time I switched on the TV the top three LMP2 teams were less than a minute apart. It's outstanding for the fans to see that kind of racing. It's a clever idea – two separate categories that complement each other."

Lowdon: "They've managed to achieve it without being contrived in any way, too. I don't want to make direct comparisons, but look at the mess surrounding F1 qualifying at the start of this season. I fear that F1 could become a victim of some people wanting a random number generator, but if the end result is just to shake up the grid you might as well get the drivers to dress in fancy costumes and pick a ball from a hat. Fans are not interested in contrived randomness. They want to see drivers taking their car around as quickly as possible, a level of purity, not for the chairs to be whipped away one at a time like a children's party game…

"Spectators understand endurance racing – look how many Brits go to Le Mans. It takes a while to get there, but they are passionate about what they're watching and understand it. There's a straightforward leaderboard and you don't need 17 stopwatches to work out what's going on. The best games are the simplest."



"OUR PRIMARY OBJECTIVE IS TO GAIN THE RESPECT OF OUR PEERS IN A FORMULA THAT'S NEW TO US"

While the short-term focus is LMP2 in the WEC, Manor is keeping an eye on other opportunities in sports car racing and elsewhere. "It was never an option to go back to F3 or GP3," Booth says. "We're done with that particular part of our lives, but Indycar was a thought because we haven't yet tried it. The new LMP1 Light regulations could also be quite interesting – if ever they get released. We might consider becoming a manufacturer again. I never say never, but firstly we need to concentrate on LMP2 while being prepared for anything else that might arise. We could in future expand the current programme by running in America or Asia, but the priority is to earn our spurs here. We want to be competitive and I'll be disappointed if we don't score a victory this season."

And is F1 to be put on the same 'been there, done that' shelf as junior single-seater racing?

"It changes all the time," Lowdon says, "so who knows? Whatever we do has to be a challenge, has to be competitive and has to be something around which you can develop. F1's biggest asset is its fanbase, which is massive, passionate and global. It should be the most attractive series around which to build a business, but at present quite clearly it isn't. People ask whether we're serious about sports cars in the long term, but we are very committed to our business and believe we can create something solid in the WEC.

"Our primary objective is to gain the respect of our peers in a formula that's new to us – that's always the first target. Everyone else is trying to build the best sports car team in the world and we're no different, but you have to go step by step."

By their own estimation, neither party has previously been directly involved in a race lasting more than four hours – and that was the 2011 Canadian GP, which dragged on due to a lengthy rainstorm interruption. The 2016 campaign is likely to throw up rather steeper hurdles, but you get the sense that they relish the prospect. "What is nice," Booth says, "is that we're in control of our own destinies once again." Ⓜ

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2016
LE MANS 24 HOURS
LMP2

The long and winding road

New teams and entries flood into the LMP2 class, but they face tough opposition from one venerable warrior

writer ED FOSTER

THE CAR THAT SITS before us is the 2016 Gibson 015S LMP2 racer. Carbon-fibre monocoque, carbon discs, carbon fibre and Kevlar bodywork and a 4.5-litre V8 NISMO VK45DE that produces 450bhp. Cutting-edge stuff – isn't it? Well…

The car is four years old but its design is technically 16 years old – yet it's still active in the front line of sports car racing. Even the Porsche 956/962 was only at the top of its game for seven seasons. In Formula 1 the Lotus 72 competed between 1970 and '75, and the McLaren M23 arrived in 1973 and won the championship in 1976. But there's nothing that comes close to 16 years. Sixteen years!

We must go all the way back to 2000 to trace the seeds of the car you see here. It's an extraordinary length of time, especially when you consider how competitive the design has been since 2003: it has won races throughout, from a round of the old FIA Sportscar Championship to, most recently, the opening round of the 2016 European Le Mans Series.

Beforehand we'd asked whether the team thought it would be competitive despite having had no updates over the winter. The reply? "We'll be disappointed if it's not..."

We're at Silverstone prior to that first race and Jota, the team running the car, is readying it for Friday practice. To our left is a small indoor heater drying some 9323 epoxy adhesive on a front splitter vane, to our right is an immaculate pit set-up – and in the air there's that racing staple: the smell of frying bacon.

The name above the garage now is Russian oil brand G-Drive, but this LMP2 car has only recently changed moniker. Dubbed 'Trigger's broom' by Jota driver, team owner and businessman Simon Dolan, little remains of the original car bar the gearbox casting.

The engineer behind the operation is Tim Holloway, who emerged from the Rocket Propulsion Establishment at Westcott and went to March Engineering before helping set up the Leyton House F1 team. "I spent a lot of time with Adrian [Newey], and the magic on the Leyton House cars was the aero," he says. "It was easy to drive, benign. That was Adrian's philosophy and, despite joining March as a young lad, his emphasis was already on aerodynamics. I understood the power of aero from then on and have held onto that."

It was a lesson that would have a bearing on this LMP2 car so many years later. After running a company that built F1 cars for customers, Holloway went to Jordan and then Zytek.



BACK TO THE MATTER AT HAND – THE origins of this LMP2 car. "It was designed to be dual-purpose," says Holloway, who created the original chassis at Zytek. It was intended to be both an LMP1 and an LMP2 car and ran as a P1 for the first few years of its life. The basis for the chassis came from the Reynard 02S – designs to which Zytek bought the rights when it started its chassis division. Holloway says, "We changed nearly everything on the Reynard and when it hit the track it was competitive. Interestingly Jota was our first customer [in 2003], that's how we got to know [then driver, now Jota partner] Sam Hignett.

"It was a great baseline car and very easy to drive. We worked hard to make sure we didn't lose that ability from it. Especially in those days, when there were lots of gentlemen drivers and the key was to give them an easy car.

"We did develop it, but we never had the budget at Zytek to do a new car. The first big upgrade was an aero kit, but we fitted that to the old chassis. The following year we did a new chassis and fitted that to the aero kit. It was always compromise, compromise, compromise. That meant the basic shape and fittings didn't change. In some ways it instilled more discipline and made sure we didn't go off on a new tangent as you might with a new car. That's what made it so sustainable over a period. At the time we thought it was a negative, but actually it was a positive."

"WE MUST GO ALL THE WAY BACK TO 2000 TO TRACE THE SEEDS OF THE CAR HERE"

Fast-forward to 2012 and Jota was running the Zytek Z11SN. "It's odd how we ended up there," Dolan tells me. "We did a deal with Aston Martin Racing in 2010 and the deal was that we'd buy a GT4 car and race that for a year [2010], then race a GT2 [2011] before buying an AMR-One to do LMP1." For those that don't remember, the Aston Martin AMR-One was a rare blot on Aston's copybook. Designed as an open-top P1 car with a 2-litre straight six, it proved uncompetitive and was abandoned after one year in January 2012.

"We were back to the drawing board," adds Dolan, "and looked at various different options. Sam [Hignett] had a long relationship with Zytek because of racing with them a few years beforehand, so we decided to go and have a look and it all kicked off from there. I much prefer slicks and wings, prototype stuff and that's why we were keen on LMP2. We looked in a very casual way at doing the BTCC, but





The G-Drive as it looks today... but there's a 2000 Reynard in there somewhere. Above, Turvey, Tincknell and Dolan celebrate 2014 Le Mans LMP2 success

almost everyone I spoke to said, 'Oh no, you're not going to like that…'"

After only a season of Radical SR3s and two seasons in the European VdeV series aboard a Ligier, LMP2 was a sizeable step up for Dolan. "It was a big change, but I took to it straight away, I don't know why. Probably because I was used to driving smaller cars and when I saw something bigger with wider tyres it just seemed that it would be more capable, which it is. Visually I had a lot of confidence that the car would stick to the road. It had loads of grip and loads of power. Perfect."

❖

JOTA FIRST CAMPAIGNED THE CHASSIS in 2012, with Dolan and Sam Hancock as drivers, and managed a class win at the Spa Six Hours. The following year Oliver Turvey replaced Hancock and then, for 2014, it recruited Harry Tincknell. That year Dolan, ably abetted by Tincknell and last-minute stand-in Turvey, achieved a life ambition – a class win at the Le Mans 24 Hours. "It's interesting how Simon has grown with the car," says Holloway. "In order to make this car easy to drive we got the basics right. The centre of gravity is low and, because of the position of the fuel tank, it doesn't change if you have full or empty tanks.

"It's on the weight limit and the aerodynamics were good from the start – the centre of pressure moves in the right direction when you're braking or accelerating. Other cars might be a tenth of a second quicker, but I am sure Simon would be half a second slower in some other LMP2 cars. Maybe not over one lap, but over 20 laps and that's what counts."

"As soon as I drove the car with Simon," says Tincknell, "I saw he was quick. It's so important to have a fast silver-rated driver in the car in LMP2." Tincknell, having never been to Le Mans before, won it at the first time of asking. "I got on really well with the car because it felt similar to the F3 cars I had been driving.

"Our advantage came from a number of areas at Le Mans. All the drivers were strong: it's Simon's strongest track, Oliver is quick everywhere and I got up to speed pretty quickly. We also had a good strategy of staying off the kerbs and looking after everything. The car had the pace for us to do that and Tim [Holloway] knows it inside out. It's a car that gives you a lot of feedback, so it's easy to come into the pits and be very specific about what it's doing. It doesn't do anything like trick you into thinking that it has oversteer when actually that's triggered by understeer on turn in."

By now we're walking around the car in the Silverstone pits and Holloway is explaining all the developments over the years. "At the time you think you're not changing too much, but when you look back it's very different from before," he admits. The car used to run with a Zytek engine, the chassis had only one exposed roll hoop, the oil tank bell housing has been changed to accommodate different engines and the gearbox internals have all been modified. And while the suspension layout is the same as it was 15 years ago (because of the same gearbox casting), the pick-up points have shifted along with the geometry. "It's had an amazing life," Holloway says as he watches the mechanics take the engine off the back of the chassis.

"We've saved an enormous amount of money running this car. When someone buys a new car they say 'It costs £500,000.' That's not the end of it, though, because you have to buy all the spares and suddenly it's £1m. There are all these people complaining about the price of cars, but they change manufacturers so that costs them a fortune.

"Given that this car has been so competitive over such a long period, it's amazing that more weren't sold. It's always a dangerous statement to make, but if ORECA had built this car they would have sold a lot more because people didn't see Zytek as a chassis builder."

❖

AT THE END OF THE SEASON THE CAR IS finally being retired because of a change in the regulations. As of 2017 it will be compulsory in LMP2 to buy a closed-cockpit chassis from ORECA, Ligier or Dallara and you'll need to run the Gibson (née Zytek) engine. Holloway: "Would we run this car in 2017 if the regulations allowed it? Of course."

"The worst thing as a driver is not knowing what a car is going to do," says Dolan. "You don't understand it and then you can't push because you never know when it is going to bite. With this car you get in, you feel confident and you can push straight away. It's just fundamentally a good design – it's a shame that Gibson didn't pitch to be one of the 2017 chassis manufacturers because I think they could have done something really good."

"This car is special," says Holloway. "To have a car that's been competitive for so long is amazing. I'm not sure what it says about the competition, though." Four days after talking to Holloway the car won the first race of the ELMS season by more than 90 seconds...

Towards the end of my conversation with Dolan I asked how many cars he has kept from Jota's history. "None, they've all gone. I don't have fond memories of any of them!" But will he keep this one?

"Absolutely."

FEATS OF ENDURANCE

What the faithful LMP2 has achieved over the past five seasons



2012 (Jota)

EUROPEAN LE MANS SERIES

Drivers: Sam Hancock, Simon Dolan. *6 Hours of Castellet:* 13th overall, 9th in LMP2 class. *6 Hours of Donington:* DNF

LE MANS 24 HOURS

Drivers: Sam Hancock, Simon Dolan and Haruki Kurosawa (DNF)

WORLD ENDURANCE CHAMPIONSHIP

Drivers: Sam Hancock, Simon Dolan and Nicolas Minassian. *6 Hours of Spa-Francorchamps:* 8th overall, 1st in LMP2 class. *6 Hours of Silverstone:* 14th overall, 7th in LMP2 class



2013 (Jota)

EUROPEAN LE MANS SERIES

Drivers: Oliver Turvey and Simon Dolan. *3 Hours of Silverstone:* 1st overall (pole position). *3 Hours of Imola:* DNF (pole position). *3 Hours of Red Bull Ring:* 4th overall (pole position). *3 Hours of Hungaroring:* 3rd overall. *3 Hours of Le Castellet:* 3rd overall (pole position)

LE MANS 24 HOURS

Drivers: Oliver Turvey, Simon Dolan and Lucas Luhr (13th overall, 7th in LMP2 class)

WORLD ENDURANCE CHAMPIONSHIP

Drivers: Oliver Turvey, Simon Dolan and Lucas Luhr. *6 Hours of Spa-Francorchamps:* 10th overall, 3rd in LMP2 class



2014 (Jota)

EUROPEAN LE MANS SERIES

(2nd overall) ***Drivers: Harry Tincknell, Simon Dolan and Filipe Albuquerque.*** *4 Hours of Imola:* 1st overall (pole position). *4 Hours of Red Bull Ring:* 2nd overall (pole position). *4 Hours of Castellet:* 4th overall. *4 Hours of Estoril:* 3rd overall (pole position)

LE MANS 24 HOURS

Drivers: Simon Dolan, Harry Tincknell and Oliver Turvey (5th overall, 1st in LMP2 class)

WORLD ENDURANCE CHAMPIONSHIP

Drivers: Simon Dolan, Harry Tincknell and Marc Gené. *6 Hours of Spa-Francorchamps:* 9th overall, 2nd in LMP2 class



2015 (Jota)

EUROPEAN LE MANS SERIES

Drivers: Simon Dolan, Filipe Albuquerque and Harry Tincknell. *4 Hours of Silverstone:* 2nd overall. *4 Hours of Imola:* 3rd overall (pole position). *4 Hours of Red Bull Ring:* 1st overall (pole position). *4 Hours of Castellet:* 3rd overall (pole position). *4 Hours of Estoril:* 4th overall (pole position)

LE MANS 24 HOURS

Drivers: Simon Dolan, Oliver Turvey, Mitch Evans (10th overall, 2nd in LMP2 class)

WORLD ENDURANCE CHAMPIONSHIP

Drivers: Simon Dolan, Harry Tincknell and Mitch Evans. *6 Hours of Spa-Francorchamps:* 9th overall, 1st in LMP2 class



2016 (G-Drive Racing)

EUROPEAN LE MANS SERIES

Drivers: Simon Dolan, Harry Tincknell and Giedo van der Garde

4 Hours of Silverstone: 1st overall Ⓜ

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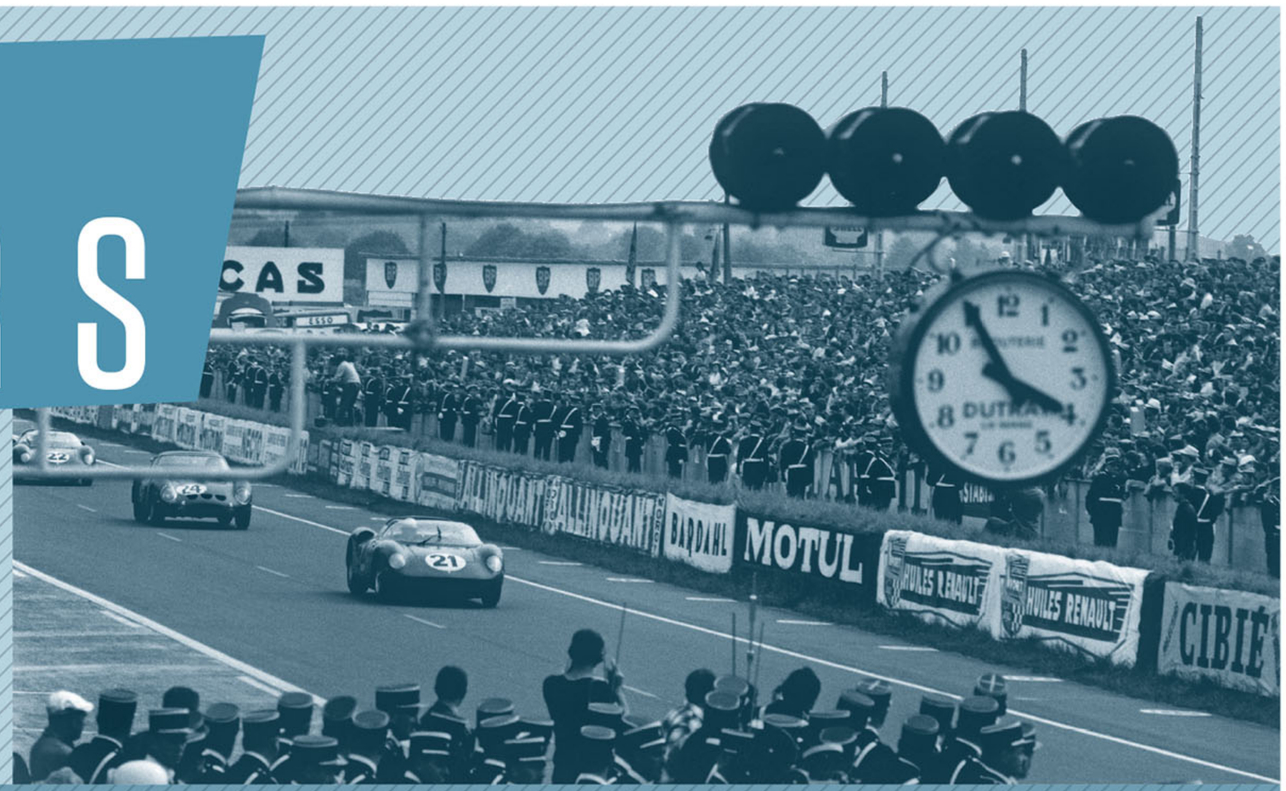
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LE MANS 24 HOURS



It's a French institution with international appeal and the 84th running is nigh...

writer PETER HIGHAM

LE MANS HOLDS A UNIQUE place in motor racing history. Scene of the first Grand Prix de l'Automobile Club de France in 1906, the Route Nationale that is now the Mulsanne straight formed part of the circuit that was used for the rival Grand Prix de France from 1911 to 1913. The basis of the current circuit was then used for the 1921 GP de l'ACF, which Jimmy Murphy won for Duesenberg and America.

The Le Mans 24 Hours was introduced two years later, originally as the triennial Rudge-Whitworth Cup for 1923, '24 and '25. It was a biennial competition from 1924, and an outright winner of each race was officially declared only from 1928.

Bentley held sway by that time and the event has always attracted teams and spectators from across the English Channel. Last year's victory was Porsche's 17th success – including the 1994 victory for a Jochen Dauer-built 962 replica – although Audi has won 13 of the 16 races since the turn of the century. With five victories, the Audi R8 is now the most successful car type in the history of the race – one more than the Porsche 956.

Tom Kristensen has won on nine occasions – five of which were in succession, another record. Phil Hill is the only driver to win both the world championship and 24 Hours in the same season. Father and son Louis and Jean-Louis Rosier won in 1950 with the latter only behind the wheel for two laps – the shortest distance for a winning driver.

MOST WINS DRIVERS

9

TOM KRISTENSEN

JACKY ICKX	6
FRANK BIELA	5
EMANUELE PIRRO	5
DEREK BELL	5
YANNICK DALMAS	4
HENRI PESCAROLO	4
OLIVIER GENDEBIEN	4

MOST WINS CONSTRUCTORS

17

PORSCHE

AUDI	13
FERRARI	9
JAGUAR	7
BENTLEY	6
ALFA ROMEO	4
FORD	4

OLDEST WINNING DRIVER

47 YEARS, 11 MONTHS, 9 DAYS
LUIGI CHINETTI

YOUNGEST WINNING DRIVER

22 YEARS, 4 MONTHS, 1 DAY
ALEX WURZ

MOST STARTS DRIVERS

HENRI PESCAROLO	33
BOB WOLLEK	30
YOJIRO TERADA	29
DEREK BELL	26
FRANÇOIS MIGAULT	24
CLAUDE BALLOT-LÉNA	23
CLAUDE HALDI	22
PIERRE YVER	22
JAN LAMMERS	22
ANDY WALLACE	21
EMMANUEL COLLARD	21

MOST STARTS CONSTRUCTORS

PORSCHE	65
FERRARI	54
ASTON MARTIN	39
LOLA	36
CHEVROLET	32
JAGUAR	25
ALFA ROMEO	21
BMW	21
MG	19

FIRSTS

1923 Cars lined up in pairs in descending number of cylinders for inaugural race **1925** 'Le Mans' start first used **1950** Dunlop Bridge built **1953** Winning car averaged more than 100mph **1963** Qualifying times used to decide starting order **1971** Rolling start used for first time **1990** Chicanes built on the Mulsanne Straight

'Data Trace' was born from *Motor Sport*'s online Database, which includes results from around the world, from the mainstream to the obscure. There are full results for the sport's main championships, while the history of others is detailed with race winners and champions – a feature that will expand in time. Add to those 7000 driver profiles (and counting), 750 circuit histories and a compare/contrast function for all F1 drivers...

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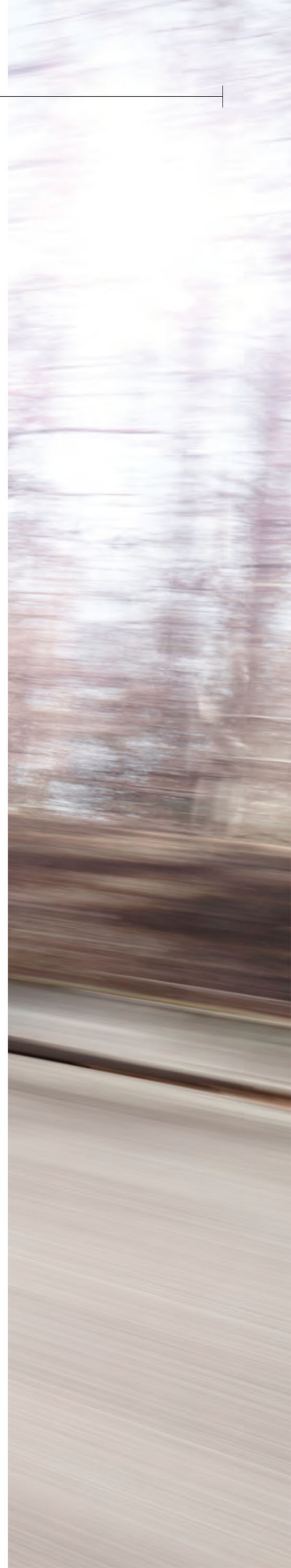




At first you think you recognise the badge.

It would be hard not to, with its black cavallino rampante at its centre against a familiar yellow background. But something is different here: above said stallion is a truncated flag, a representation of the American standard, featuring the stars of 48 of its states. Below the horse are four red letters on a blue background. Together they read: N.A.R.T. The name of the North American Racing Team. This then might be a Ferrari 275GTS/4, but so too is it more properly the NART Spider. And it is one of the rarest and most valuable Ferraris ever created.

writer ANDREW FRANKEL | **photographer** MATTHEW HOWELL





"CHINETTI PLANNED TO BUILD 25 SPIDERS... THEY WERE SO EXPENSIVE THERE WAS DEMAND FOR JUST NINE"

LUIGI CHINETTI AND Enzo Ferrari went way back. They met when Chinetti went to work at Alfa Romeo as a teenager in 1918 and remained acquaintances, business partners and sometimes bitter enemies until time called the Old Man aloft some 70 years later. Chinetti and Ferrari were both tough old Italians, men who suffered fools not at all and each other only some of the time. They had tempers and could trade insults as easily as do deals, but their histories were intertwined. If ever Ferrari had a friend it was probably Chinetti, though the latter was once heard to remark, "I don't think he liked anyone."

Like Ferrari, Chinetti was a racer, better behind the wheel than the man he would come to depend upon, but not quite top drawer. As Brock Yates says in his masterly Ferrari polemic, "He [Chinetti] had never been a sprinter, never particularly fast in the twitchy, pitiless single-seat Grand Prix machines. But give him a full-fendered Alfa Romeo or Ferrari sports car and he could run like a marathoner... crushing the opposition with his sheer grit." Chinetti won Le Mans in 1932, though illness meant his superb co-driver Raymond Sommer did most of the work. The following year he was beaten by mere seconds by Sommer and none other than Tazio Nuvolari. But in 1934, sharing his Alfa with Phi-phi Étancelin, they dusted the field, putting 13 clear laps between themselves and the second-placed Riley.

But Chinetti would have to wait until 1949 for his finest hour: driving Lord Selsdon's 166MM for more than 22 of the 24 hours, he won Le Mans all but single-handedly at the age of almost 48. Although Ferrari had nothing to do with the entry, it meant Maranello was the first company to win the world's greatest race at its first attempt – if you exclude Chenard et Walcker's win in the inaugural event in 1923. It is a feat that has been repeated just once since then, by a works McLaren in 1995. Two weeks later Chinetti won the Spa 24 Hours. He went on, aged 50, to win the 1951 Carrera Panamericana with Piero Taruffi.

❖

BY THEN CHINETTI WAS A NATURALISED American citizen who had arranged with Ferrari to be the first to import his cars into the US, deliveries beginning in 1949 from premises in New York.

The story that leads to the NART Spider began in 1957, when Chinetti set up the North American Racing Team that in time would join Britain's Maranello Concessionaires, Écurie Nationale Belge and Scuderia Filipinetti as the private teams most favoured by Ferrari.

Chinetti still had to fight (and pay) to ensure he wasn't fobbed off with tired, clapped-out factory hand-me-downs. But while the cars supplied by Maranello were never as good as those the Scuderia kept for itself, by and large they were the next best thing.

NART scored its first big victory at Daytona with Pedro Rodriguez winning the 3 Hours in 1963 and also the 2000km event it became in 1964, driving a 250GTO on both occasions. But its finest hour came at Le Mans the following year, when the young Jochen Rindt and 'Kansas Flash' Masten Gregory spared Maranello's blushes. Once the factory Ferrari and Ford efforts had failed, they drove a 250LM to what remains to this day Ferrari's most recent outright victory at Le Mans.

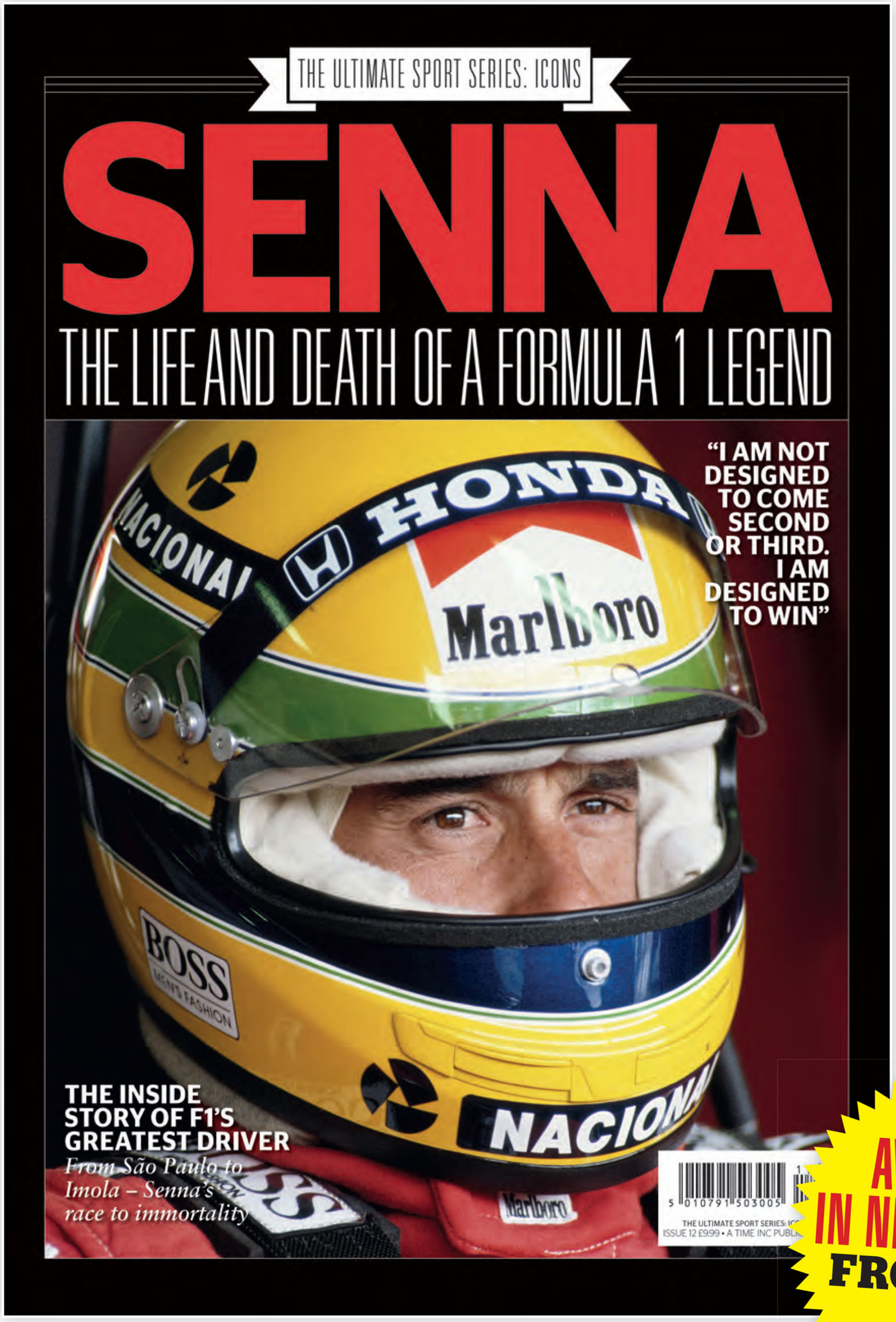
By 1967 Chinetti's currency at Ferrari could scarcely have been higher. America was Ferrari's most important export market by far and it was Chinetti that had put the prancing horse on the US map and kept it there. At the same time, Ferrari had just put on sale its new 275GTB/4 Berlinetta. This was essentially the same as the 275GTB that had first been shown in 1964, but with a more refined driveline and, crucially, a four overhead camshaft engine based on the unit seen in the 275 P2 prototype racer in 1965.

What the new model lacked was a convertible option. Originally Ferrari had made an open 275GTS, but it had completely different bodywork from the 275GTB, was much less sporting in outlook and regarded as softer, flabbier and less of a driver's car. When the 275GTB/4 came out, the GTS was replaced by the 4-litre 330GTS that continued in a similarly unexciting vein.

Over in the US, Chinetti spotted what he saw as a gap in the market. What if Ferrari were to make a series of convertible 275GTB/4s to be sold only to Chinetti's most valued customers? Using as much of the GTB/4's existing bodywork as possible, the car could hardly fail to be beautiful, and with the new powertrain and the Berlinetta's lightweight construction and sporting suspension settings, it would not be dull to drive. Perhaps surprisingly, Enzo agreed.

Although Ferrari has made special one-off cars throughout its history, and indeed supplied such machines to Chinetti's customers before the NART Spider, so far as I am aware this is the first and to date only time a foreign importer had been able to persuade the factory to put into production a series of uniquely styled vehicles, exclusively for that market.

Originally Chinetti planned to produce 25 Spiders and the popular belief is that they were so expensive there was demand for just nine cars, although a 10th – this car as it happens – was sold in Europe. One owner claims the reason so few were built had nothing to do with demand and everything to do with the fact they took so long to arrive. By the time new



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Spider's sheen masks the fact it has been used as its creator intended. Below, original ID



Federal standards came into force in 1968, outlawing the car on engine emissions grounds, only 10 had been constructed, forcing Chinetti to cancel orders for the remaining 15.

Either way, what no one disputes is that just 10 NART Spiders were built, which makes them almost four times more scarce than a 250GTO and more than five times rarer than the much-vaunted 250 GT Spider California. Even by the standards of Ferrari's most exotic production models, the 275GTS/4 (as the NART Spider is described on its chassis plate) is as rare as powdered unicorn horn.

Which is why on the extremely rare occasion one comes up for sale, records tend to get shattered. The most recent I know about was auctioned by RM in the US in 2013, selling for $27.5 million. It remains the largest sum of money ever paid at auction for a car intended for road use.

❖

THAT COMES UNDER THE CATEGORY of things best not thought about when contemplating driving a NART Spider around a tree-lined test track with no barriers, gravel traps or other ways of mitigating any mistake you might make.

I'll confess now quite a large part of me didn't want to drive it at all. Usually the way a car looks is of almost no importance to me relative to the way it drives, but when a car is so utterly, almost unbearably gorgeous I fear it makes a promise to which the engineering beneath can never aspire. I also know that when Ferrari instructed Sergio Scaglietti to start decapitating 275GTB/4s to satisfy Chinetti's demands, he felt no need to tell him to embark on an exhaustive test programme to ensure as little of the car's rigidity was compromised as a result of having such a large hole cut in its structure. I feared it would wobble uncontrollably.

Besides, it's such a lovely place just to sit. The interior architecture is classically Italian, with those eight Veglia dials, the chromed five-speed gate, the alloy-spoked wheel and vertical handbrake. All the details from the door handles to the tiny shield on the transmission tunnel are just perfect.

The driving position is predictably Italianate too, but doesn't require the almost freakishly long arms and abbreviated legs of some of its countrymen. And I love the fact that through the windscreen I can see the gentle power bulge in the bonnet, signifying that thereunder lies the full-house, four-camshaft engine.

Incredibly this engine can trace its roots back to Ferrari's earliest post-war history, indeed to

"THE MOST RECENT WAS AUCTIONED BY RM IN 2013, SELLING FOR $27.5 MILLION"

the very 166MM in which Chinetti won Le Mans back in 1949. Made with a variety of bore widths but the same 58.8mm stroke throughout the 1950s and early to mid '60s, it was only when the 275GTB was introduced in 1964 that, with nowhere to go horizontally, the engine became enlarged vertically with a 71mm stroke. With the four-cam heads added in 1967, the 3286cc V12 produced fully 300bhp at 8000rpm, rather better than double its output as a 2-litre racer in the late 1940s. The 275 was Ferrari's first pure road car to feature a five-speed gearbox and its first to locate that gearbox between the rear wheels. It was the first to use fully independent double wishbone suspension at each corner too.

I had expected the NART Spider to be a museum piece, an ornament cajoled into action for long enough to take these pictures. I knew it would function, I knew I'd be able to tell you truthfully that I'd driven a NART Spider, but beyond that I didn't hope for too much, because so often that way lies disappointment.

But then I looked a little closer. The Spider seems perfect from 10 paces, but move just a little nearer and you discover it's not: there are tiny stone chips on the bonnet, and minute fragments of paint have been shed along the trailing edge of the driver's door.

I didn't need a deerstalker to tell that, oh the horror of it, this is a car that's not been a glass box these last few decades, but used and enjoyed as Chinetti intended.

❖

USE YOUR FOOT TO ALLOW JUST A little air into the six twin-choke downdraft Weber carburettors platooned between the valve chests angled at 60 degrees, turn the key to send electrical pulses shooting from twin distributors to a dozen spark plugs and, as the V12 eases into life, listen to the kind of noise road cars don't make any more. It's not loud, but nor is it muffled. In fact each component of the sound is incredibly crisp but, layered among all the others, difficult to discern at first. It's a hackneyed word to use in this context, but it is the right one too: this engine has an ▶



Spider appeared briefly in 1968 movie *The Thomas Crown Affair*. Expectations are high as it heads to RM Sotheby's Monaco auction

exquisitely orchestral texture to it.

Watch the dials. Water temperature is reasonable and there's no oil temperature, but only because the gauge is the only thing on the Spider that does not work. Nor do you need it: if the oil pressure drops as you reduce the revs to idle, that's a sure sign there's thin, hot oil circulating the engine.

The clutch engages sooner than expected and the engine revs fall away to nothing. But so smooth and balanced is this motor that instead of stalling it just pulls away gently. For an engine designed more than half a century ago and reputed to rev to 8000rpm, it is staggeringly forgiving.

We start to lap the track together, the NART Spider and I. There's not much springing in the gearbox so you have to aim with accuracy, but the quality of the change is well oiled, rifle-bolt perfection. I can feel the anticipation building within me for that moment when I shift down to second and throw open the taps. And when it comes, the Spider does not disappoint. In that instant, the engine ditches its cloak of effortless urbanity and reveals the competition motor beneath. A yowling, howling crescendo of symphonic sound is spat out via the effective medium of four ANSA exhausts. A GTO is louder than this, but its tone is no better.

You are moved in time and space. You are no longer a hack negotiating his way around a concrete test track in Surrey, you are Pedro, blasting across Wisconsin en route to a rendezvous with the P4 prototype NART has taken to Elkhart Lake for you. Needles race around their dials, the gearlever flashes, the wind rushes and the engine sings that haunting



song. With a little imagination the Spider will take you anywhere you want to go.

Back in the real world, I am impressed by how little the Ferrari has suffered in the conversion from closed coupé to open roadster. There's one combination of bumps that sends ripples right through the car but otherwise there's just a little steering shake, and the occasional shiver from the suspension. I've driven ordinary convertibles designed within the last 20 years that are no better.

And when I summon the nerve to test the chassis just a little, I find a car with fine inherent balance, surprising traction given its modest 14in, 205-section Michelin XWX shoes (at least until I remember the gearbox integral with the rear axle) and superb steering. Only the brakes disappoint, or would had I not experienced that dead pedal feel on other road Ferraris of the 1960s and early '70s.

In the end I drove the NART Spider quite quickly and now, a few days later, that seems an outrageous thing to have done with a car of such unimaginable value. But at the time it seemed nothing other than right, the way the car wanted – insisted, even – to be driven. The only way to drive it properly. It occurred to me also that no one other than those who'd driven NART Spiders have ever heard that four-cam motor in its full outdoors, unadorned glory. And that's a pretty special club to which to gain such undeserved access.

To me what makes the NART Spider so much more desirable than all those other 1960s drop-top Ferraris is neither its looks nor its scarcity, though to the market both are likely to prove compelling. Instead I loved it because it's the real deal, first, second and third a Ferrari for driving, fourth, fifth and sixth one to be seen in. Among open Ferraris of that era, that makes it unique. I just hope that when the hammer falls in Monaco later this month, its new owner realises as much. For if all he or she ever does is look at it, they will see only a beautiful design and never the unique, extraordinary machine beneath. Ⓜ

Our thanks to RM Sotheby's and its owner for making the NART Spider available. It will be the star lot in RM's Monaco sale on May 14

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PORSCHE

ON OCTOBER 15, 2013 Sean Edwards was killed in a horrifying accident at Queensland Raceway, Australia. He wasn't competing, but was in the passenger seat of a Porsche 911 GT3, teaching a rookie how to handle this powerful Supercup car during a private test session. He was just 26 years old.

This tragedy has led to the formation of the Sean Edwards Foundation, a charity devoted to campaigning for better safety and procedures on track days.

The son of former Grand Prix driver Guy Edwards, Sean had won the Nürburgring 24 Hours, his first major endurance victory, just six months before his death and was closing in on the 2013 Porsche Supercup championship.

❖

AT THIS YEAR'S *MOTOR SPORT* HALL OF Fame the Sean Edwards Foundation will be the event's chosen charity, highlighting the work that has been done, and is still to be done, to prevent the kind of accident that took Sean's life that day in Queensland.

His mother Daphne McKinley Edwards established the Foundation and remains the driving force behind its continuing campaign for the creation of safety education programmes and standardisation of safety assessment tools. In short, it aims to minimise the risks that are outside the racing driver's control.

"It's what Sean would have wanted," she says. "I'm doing it for him, and to prevent such a tragedy happening to another family. I don't want his death to be in vain and he would have wanted to see some changes made to the way these track days are organised. He's gone, but he has given me the strength and the motivation to campaign for better safety."

So how can these improvements to protocols and disciplines be achieved?

"We need to change the organisational culture, to find out why he died, what could have prevented it. Safety has been transformed in Formula 1 and I want to change attitudes to safety outside F1, to learn some lessons from

THE DRIVE FOR SAFETY

Sean Edwards' mother is on a crusade to prevent the kind of accident that claimed her son's life in 2013

writer ROB WIDDOWS



Edwards finished fifth in his final Supercup race, at Monza, and led the title chase at the time of his death. Below, his mother Daphne

what happened. Track day and test day protocols and procedures need to be reviewed; I believe Sean would be with us today if certain safety procedures had been in place. There needs to be better marshalling, more disciplined management of the days and stricter checks on the cars that are being used. There will always be risks, but we need to understand what they are and how to reduce them."

More specifically, what could have been done that was not done?

"Medical facilities and assistance could have been improved dramatically. These were not properly in place when Sean died. In GT racing there is a huge divide between the amateur drivers and the professionals so we need to look more closely at the drivers' backgrounds and qualifications. Sean was teaching an amateur, with an amateur team, so there's a collective responsibility – the driver, the team, the mechanics and the circuit. In this case the track was up to FIA standard on race days, but not on private track days, and Sean was not aware of this."

Daphne has now created the Sean Edwards Test, a detailed questionnaire that has been adopted by Stéphane Ratel's SRO organisation for its GT championship events around the world.



LAT

"We have worked closely with SRO and they have made this test mandatory," she says. "In the Blancpain GT series, for example, drivers must now prove they have the experience, knowledge and information to race at this level. Many of them are amateurs, racing with professionals, so there are huge differences in experience. A Russian driver, for instance, is able to buy a licence, so he may not be up to the required standard, may not be aware of all the regulations for the series in which he's racing. The test has changed attitudes, the drivers have supported it, and as a result the risks of professionals racing alongside amateurs may be reduced. It's all about awareness, building a better culture of safety, and that takes time."

Another of Daphne's incentives, championed by the Foundation, is a 'point-of-crash' device that monitors the driver's vital signs before medical help arrives. Tried and tested in a Miami hospital, the device has prevented fatal heart attacks before they happen.

"Immediate trackside medical treatment gives a driver the best possible opportunity for survival," says Daphne. "At present the device involves the driver wearing a belt but we're working on developing something smaller for single-seater drivers. It can also be used as a teaching tool to monitor what a driver is doing during the race, how he is breathing, his core body temperature and accordingly how his performance could be improved. I am hoping that SRO will adopt this new system for the Blancpain series, especially as I think it could be linked to the TV coverage and provide an interesting insight for the fans into what's happening inside the cars."

These are still early days for the Sean Edwards Foundation but Daphne is on a mission drastically to reduce the chances of a similar accident to that in which her son was killed.

"I wake up every day knowing that I will never see Sean again," says Daphne of her quest to do something positive in his memory, "and if I can save one family from such a tragedy, save one life, then I will have achieved our goal. So much more, I believe, could have been done to prevent the accident in Australia." Ⓜ

You can learn more about the Foundation, and support its aims, at the Motor Sport *Hall of Fame at the Royal Automobile Club in Woodcote Park on May 31. Sean's parents will be there, along with the F1 Hesketh Guy raced in 1976. For more about our adopted charity, and the Hall of Fame evening, visit www.motorsportmagazine.com or www.seanedwardsfoundation.com*



Pascal Wehrlein

This son of a German boxer is punching above his weight with Manor in F1. Adam Cooper spoke to him

GERMANY'S F1 SUPERSTARS HAVE A habit of making spectacular debuts, and while Pascal Wehrlein didn't quite match the past achievements of Michael Schumacher and Sebastian Vettel, the Manor driver certainly got himself noticed in Melbourne.

At the wheel of what is still in theory the least competitive car in the field, he jumped from 21st to 13th on the first lap and kept several quicker cars behind until his tyres went off. Second time out in Bahrain he raised eyebrows by qualifying 16th before putting in another charging performance in the race. It's already apparent that if the three-pointed stars align, he will be a works Mercedes driver at some stage in the future.

The impetus for Pascal's involvement in racing came from his father, although Wehrlein Sr's roots are in a very different sport.

"When he was a teenager he was a boxer," Pascal says. "He was not too bad, I think he won the south German championship and he was third overall in Germany. Now he has an engineering company, he produces gearbox pieces and he has about 30-40 people.

"He was always a car fan, and we watched F1 together. I was a McLaren-Mercedes fan, so we always supported Mika Häkkinen. We went to Hockenheim when I was about five, in 1999 or 2000. I told my father that one day I wanted to drive there, so in 2003 we started in karting."

He soon made an impact, but family backing could only get him so far. German governing body the ADAC came to his aid: "They support young drivers not only with money, but with fitness and media workshops. Then after that I had the Deutsche Post Speed Academy. These two programmes helped a lot to get me into single-seaters."

Aged 15 Pascal moved into the ADAC Formula Masters series in 2010, winning the title in his second year with Mücke Motorsport. That led to interest from HWA and Mercedes, who supported him in Euro F3 in 2012. He finished second and he was then moved into DTM for 2013, initially with the subsidiary Mücke team.

It's not easy to plot a course from DTM to F1, and while Paul di Resta managed it, many other youngsters have soon found themselves typecast. Despite his youth Pascal took an eminently sensible approach.

"I definitely thought that this wouldn't be the easiest way, because I didn't have experience in touring cars. I was 18, and I'd had only one year in F3. I knew it was going to be hard. I had to beat my team-mates and win the title as quickly as possible. If I won it after six years, no one would care. I also knew it had to be quick to not lose all the feeling you had in a single-seater. But it was the only way I could do it."



LAT

CAREER IN BRIEF

Born: 18/10/94, Sigmaringen, Germany
2003-09 Karting **2010-11** ADAC Formula Masters (champion in second year) **2012-13** Euro F3 **2013-2015** DTM (champion in '15) **2016** Formula 1, Manor Racing

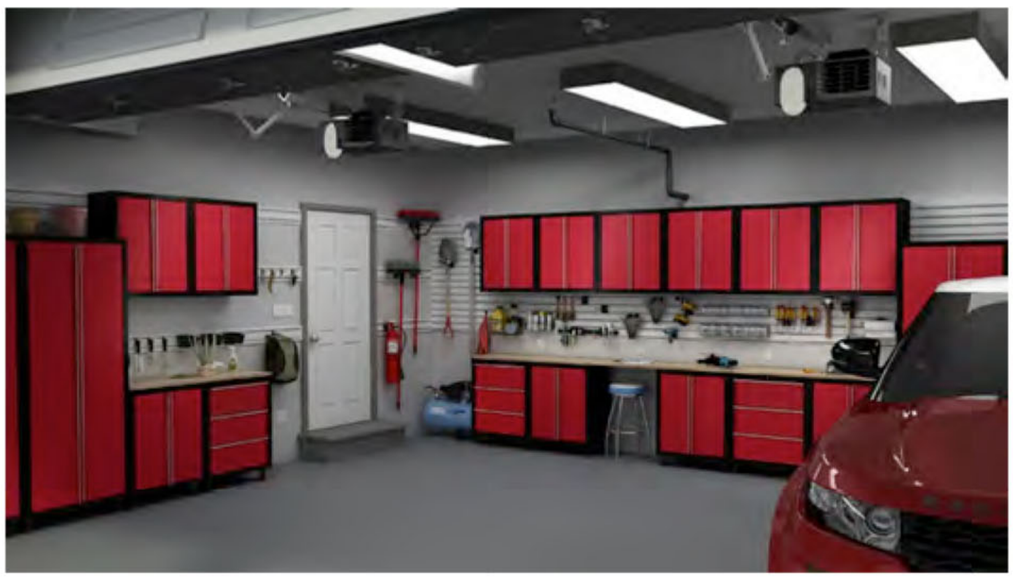
He was at the bottom of the Mercedes totem pole in 2013, and it was a difficult learning year. Promoted to HWA in 2014 he won a race, and was second-best Mercedes driver.

"In 2013 and '14 Mercedes' DTM performance wasn't great. The important thing was always to be one of the quickest Mercedes guys, and improve my standing in the team. Last year we had a car which was good for the championship."

Indeed in 2015 everything came together. As Mercedes F1 reserve he impressed in the sim and in testing, and he won the DTM title. When Mercedes joined forces with Manor, an obvious opportunity presented itself for Toto Wolff to place his protégé. The rest is in Pascal's hands.

"We will have some races this year which will be hard, but then there will be some tracks that are easier for us, and conditions that help. For sure we can show some highlights. The key is to be ready when the opportunities are there." M

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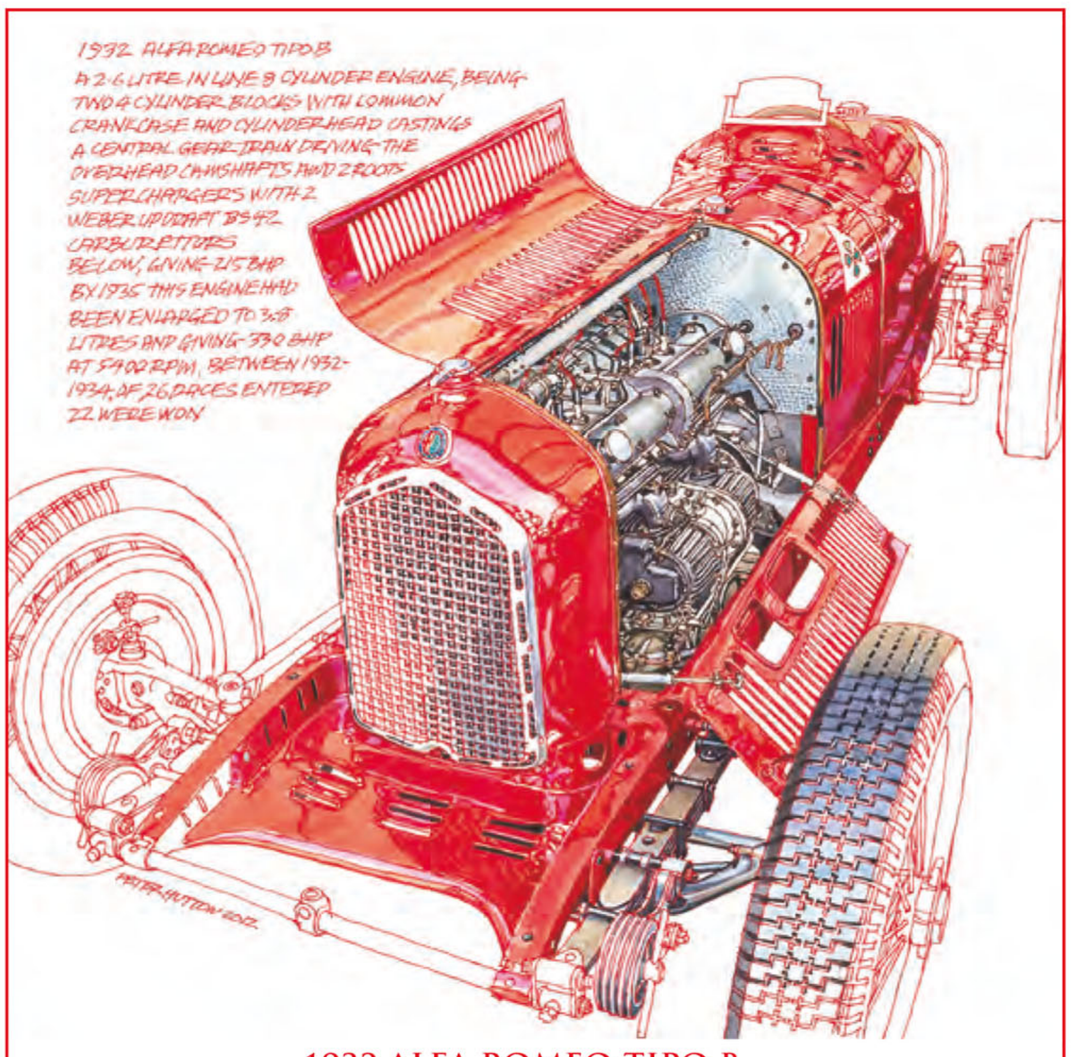


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"All arms and

Of the many fascinating cars that grace the track during Goodwood race meetings, few are quite as distinctive as the Cunningham C4R. Here's how it feels from behind the wheel

writer SAM HANCOCK

AS IS SO OFTEN THE case, the call comes late. With barely a week to go before the 74th Members' Meeting at Goodwood, my old pal Ben Shuckburgh (or 'Le Patron' as he becomes known during the weekend) rings asking if I'd pedal his mighty Cunningham C4R in the Peter Collins Trophy.

In the past I'd have thought carefully about a last-minute invitation, questioning testing time, likely competitiveness, availability of fresh tyres and generally taking it all far too seriously.

This time I have no such concerns. "Yes!" I reply, not giving Ben the time to finish asking. It's not just that Ben is a friend, nor that I had a hoot racing this very same car to a near-win in the 2014 Revival and saw a chance to go one better. It's just that this car's story is so special.

In the early 1950s, US industrialist Briggs Swift Cunningham II was determined to take on the likes of Jaguar and Ferrari at Le Mans with an all-American effort, backed entirely by his own money. Although failing in his mission to win the greatest of all endurance races, the Cunningham cars commanded tremendous respect, with Briggs taking a fine fourth overall in 1952, before the team went on to finish third in both '53 and '54.

Only three C4R sports roadsters were built as racing cars, but 27 road-going C3s were required by the rules to homologate the racer.

Ben's example is based on a totally original C3 chassis mated to its original engine and correct four-speed gearbox. Having first spotted it in 2009, when it sported a home-made body, Ben set about turning the car into a C4R so uncompromisingly faithful to the original specifications that one suspects Cunningham himself would struggle to tell it apart from one of the factory cars.

Shunning the opportunity to enjoy performance enhancements from modern componentry, Ben and the team at Jim Stokes Engineering scoured the globe for original

CHRISTOPHERSCHOLEY & ANDREW YOUNG

Yankee muscle: Chrysler V8 Hemi ready to power Hancock, below, to front of field

elbows”



parts, only recreating new ones when absolutely necessary – and ensuring that they did so in the most exacting of ways. The aluminium body, for example, is the result of a perfectionist digital scanning process of a surviving C4R housed within the Collier Collection at the Revs Institute in Florida. From these a 3D buck was created around which this perfect replica body was made. The crew's exhaustive searches for original parts led to aircraft breakers' yards for items such as the oil cooler, and vintage American truck spares stockists for the Gemmer steering box.

As he was recovering from a life-threatening illness just as this story began, one imagines Ben's obsessive Cunningham build adopted a special importance all of its own. A herculean effort to have the car ready for the 2011 Goodwood Revival involved a 24-hour shift and a 'shakedown' en route to the circuit. After an understandably glitchy debut, the following Revival a year later better illustrated the car's potential as it raced comfortably within the top six.

My own first taste came in bitter-sweet form, Ben calling me from the medical centre after an accident while qualifying another car. Pole position and runner-up spot in the race came as a surprise to us all, except perhaps those well-informed historians who remembered the coupé version, the C4RK, leading the first lap at Le Mans in 1952.

Aircraft oil cooler breaks up lines of brawny Cunningham C4R as it waits to be called for the race

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NOW TO 2016 AND THE 74TH MEMBERS' Meeting. I arrive at Goodwood on the Friday in style, 'Le Patron' chauffeuring me to the circuit in his British Racing Green V12 Ferrari 456GT. Let us pretend he also sported unnervingly dark sunglasses while reminding me of his expectations, "Win the race. Do not crash." Actually Ben is too charming and articulate to be so blunt, but the gentle directives he did proffer essentially translated the same way.

Once in the paddock, I rush to sign on before the office closes. There is no sumptuous Drivers' Club at the Members' Meeting, administration and changing areas being in a gaggle of cosy Portakabins, and I sense that all enjoy this more straightforward environment. Jostling for position, I find myself reacquainted with British Touring Car Championship winners Matt Neal and Gordon Shedden, whom I'd seen only a few weeks earlier in Sweden at Richard Tuthill's ice-driving school. With the stars arriving in droves, the locker room bristles with excitement as the long off-season comes to a welcome end.

Among its competition, the Cunningham commands attention with its sheer presence. Bold and imposing, the functional styling looks better than ever. A traditional 'seat fit' ensues, but with historic cars this involves little more than wiggling your bum around a little and giving the mechanics a thumbs-up to confirm what they already know – namely "It is what it is, pal, take it or leave it." I ask to remove the seat cushion, hoping to sink deeper into the short but voluminous cockpit in search of more knee room around the vast wood-rimmed steering wheel. Mission accomplished, I wiggle a bit more and give the lads from CKL, who now prepare the car, a nod of approval.

On to the evening drivers' briefing, in a Hogwarts-style assembly hall. Sitting at the long candelabra-dressed dining tables, we are introduced to our house captains by Lord March in unapologetically British boarding-school style. "House points will be accumulated both on and off the track with a medley of games and challenges," he says. "There will, however, also be penalties." Cue an introduction to the race director, who adopts a serious tone to instil in us the importance of best behaviour at this old-school circuit. After a video spotlighting those responsible for misdemeanours of previous years, his message is received loud and clear.

After the briefing, and keen for an early night, Ben and I head for a quick pub supper with expert historic racer Ludovic Lindsay. Ludovic has co-driven this car with Ben and, over a pint, helpfully distinguishes between he and I. "You see Sam, I am a tart," he says, referring to the fact that he'll drive anything for free. He is quick to point out that I am thus a very different kind of 'pro' and by definition we concur that Ben must be our pimp! Cheque please…

❖

SATURDAY IS QUALIFYING DAY, AND with our session not scheduled until five o'clock I arrive just in time for lunch. There's a warm familiarity as I find myself transported back to my school days, waiting in line, tray in hand for bangers and mash, crumble and custard. Spotting Lord March and Howard from Take



That also queuing, I marvel at the egalitarian atmosphere unique to this event.

Food-coma settling in nicely, I retire to the changing rooms in time to hear Derek Bell telling Dickie Attwood about how a demonstration of McLaren F1s at Le Mans so nearly went wrong. "Strict instructions to crawl around at 50mph predictably lasted about five seconds," he says. "Coming flat out through the kink at the end of Mulsanne, a few of us got well out of shape. Chatting afterwards none of us could understand why until we realised the owners of these things often forget the need to fit new tyres. We were all on old blocks of concrete!"

Things take a turn for the surreal when I gently voice my envy for the lunch vouchers they have been given. Cue disproportionate concern and the most generous fuss as two giants of our sport, clad only in their Nomex undies, rush to share theirs with me. Gentleman racers indeed.

Into qualifying and my mechanic, Dave Lampard, earns himself a beer by getting the car

lined up at the front in the assembly area. Leading the field out onto the circuit, this proves crucial as it gives me one clear flying lap to post a time before catching the tail end of the traffic. That lap is enough to secure provisional pole, but working the traffic a little later in the session gives me just one more, this time a touch faster. Our time of 1min 32.751sec puts us 2.8sec ahead of the pack. Things are looking good.

It might be bitterly cold, but I for one am grateful that it is at least dry. You see, the Cunningham has what I might carefully describe as great 'character'. Stand trackside as it thunders by at 150mph, the Chrysler Hemi V8 rattling the fillings from your teeth, and you'll understand well enough. But at the wheel it's another story altogether.

The chassis is poised and elegant, belying its 1145kg weight. The drum brakes inspire an unexpected confidence for the task they face, but the steering has a somewhat disconnected feel. When Chrysler designed the Plymouth truck from which Cunningham pinched the steering box all those years ago, I don't expect they anticipated it being used to race at Goodwood more than 60 years later. I learn quickly that the



trick is to take up the not inconsiderable slack well before the corner so that the car is then taut and poised, ready to turn on demand. Through the apex it's a dream to balance the car on the throttle thanks to the mountainous 418lb ft of torque. Problems arise, however, if you over-cook it and get out of shape through the exit. Unwinding the steering fast enough to get through the slack and into opposite lock on the other side takes quick handiwork. By the end of qualifying my arms feel like they've gone a few rounds with Joe Calzaghe.

"Stop being a girl," says Ben, "You're on pole by three seconds so it seems OK to me."

❖

SUNDAY BEGINS WITH A COACHING session. My team-mate this weekend is Charlie Settrington, son of Lord March, making his Goodwood debut in Ben's impressively prepared Mini. Stowing ourselves away from the cold in dad's office above the pit straight, we delve into what makes for a quick lap at Goodwood and how best to wring the Mini's neck without breaking it. His onboard footage reveals all the bravery of youth and a most natural feel for car control. A little rough around the edges just now, Charlie will be one to watch, mark my words.

Furnished with the vouchers of Messrs Bell and Attwood, I thoroughly overdo it again at lunch, this time walking it off with a stroll around the magical paddock before settling in to watch a fantastic touring car race on the chicane banking. Sadly, a later accident delays the afternoon's proceedings and by 5pm I wonder if our race – last of the day – will happen.

Still dry, but with light fading fast, we are finally ushered onto the circuit for a shortened 10-minute contest. Eyes glued to the drop of the flag, I slip the clutch off the line a little more than feels comfortable in an effort to contain the massive torque. It works beautifully and I have a clear lead into the first corner. With 385bhp, the Cunningham enjoys a power advantage on the straights but lacks the nimble handling of the Aston Martin DB3S and Jaguar C-type that provide its stiffest competition. Sensing my chance to escape, I give the opening lap everything and build an unexpected seven-second lead. The comforting sight of blazing headlights being reduced to a distant glow in my mirror is offset by the reappearance of a subtle misfire that first showed up in qualifying. Using a few less revs seems to contain the problem and I concentrate instead on maximising the corners as best I can. Usually the team at Goodwood might discourage drivers from romping away on the rare occasion that such a luxury is afforded, but I am nervous of the misfire reappearing and, frankly, I'm having too much fun. Attacking a fast circuit like Goodwood in the Cunningham is an all-consuming affair, visibly all arms and elbows at the wheel, contrasting with a delicate teasing of that most potent throttle pedal. Never quite brave enough to take the Fordwater kink absolutely flat, I nonetheless enjoyed trying as the sky grew a deeper, more theatrical red with each passing lap. With just eight laps completed the chequered flag falls, the mighty Cunningham winning by 26sec and setting the fastest lap of the race.

A lovely quirk of the Members' Meeting is that winners are presented with medals, akin to those that might adorn the breast of a decorated soldier. Passing mine to Ben as I recall how this car's great story began, I can't think of a more fitting reward for his efforts. Ⓜ

With thanks to Ben Shuckburgh, CKL Developments and Goodwood. Sam Hancock is a professional racing driver and historic car consultant. A former Le Mans Series champion (LMP2) and Aston Martin works driver (LMP1 & GTE), Sam has raced at Le Mans seven times and competes regularly in major historic events. Visit www.samhancock.com





That +13 grows to +26 as Hancock surges to victory in Goodwood's gathering dusk



CHRISTOPHERSCHOLEY & ANDREW YOUNG

CKL Developments would like to congratulate Sam Hancock on his win,
pole position and fastest lap with the CKL prepared
Cunningham C4-R at the Goodwood 74th Members' Meeting

Photo: Christopher Scholey

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OF THE MONTH

WEC SILVERSTONE 6 HOURS ❖ HSCC CASTLE COMBE ❖ EMIRATES CLASSIC CAR FESTIVAL



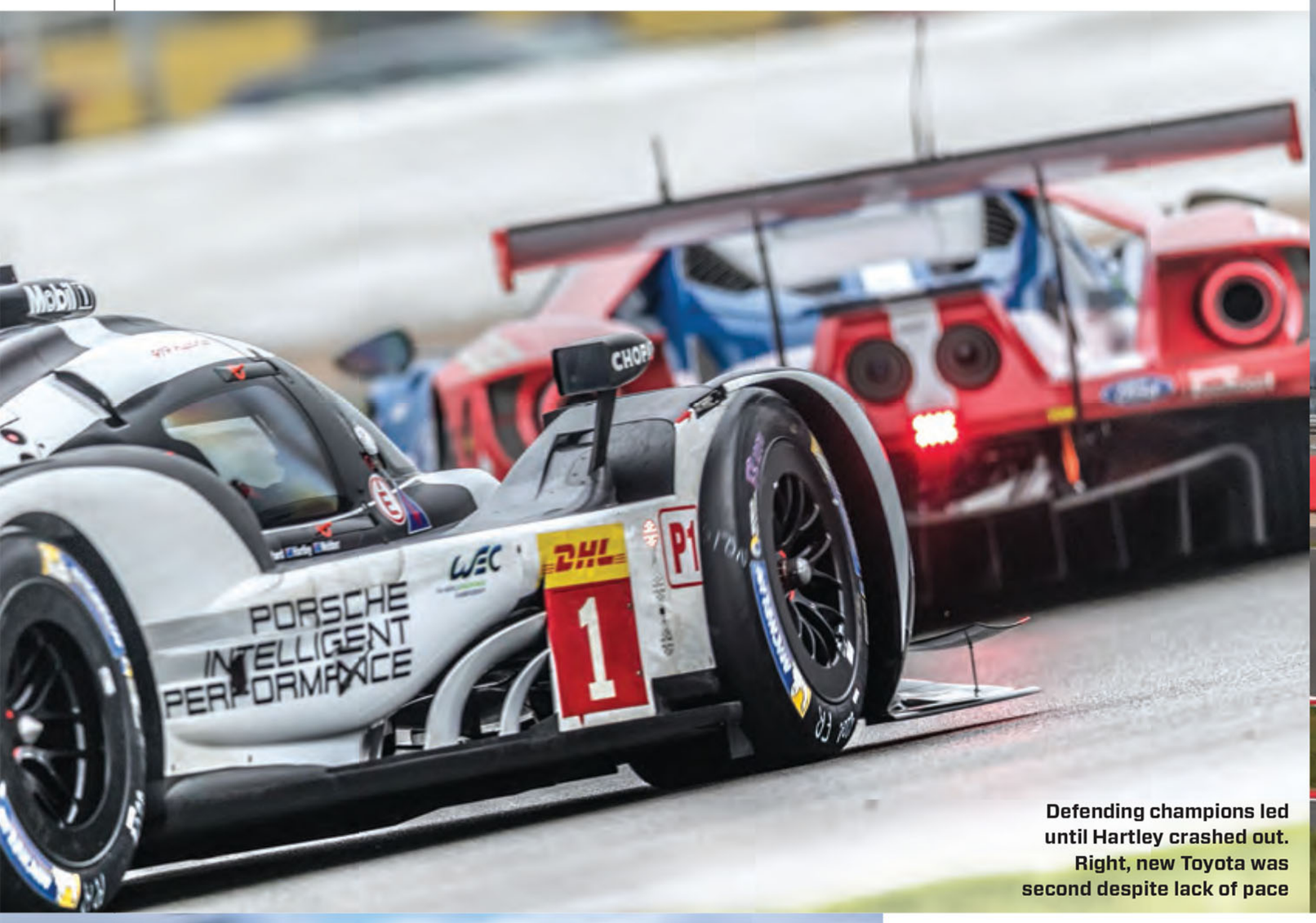
Audi's new R18 locked out the front row at Silverstone as the 2016 World Endurance Championship burst into life

AUDI

WEC Silverstone 6 Hours

IN PREVIOUS DECADES, SILVERSTONE IN THE SPRING meant it was International Trophy time, the non-championship Formula 1 race that invariably offered Grand Prix glitterati a cold (and often damp) start to thrust them shivering into the dawn of a new European season. 'Pointless' events are long extinct from the F1 scene (well, there are still Baku, Sochi, etc…), but that doesn't stop racers from around the globe gravitating to the place in April. The opening round of the FIA World Endurance Championship, twinned with its European Le Mans Series counterpart, is fast becoming a popular new tradition.

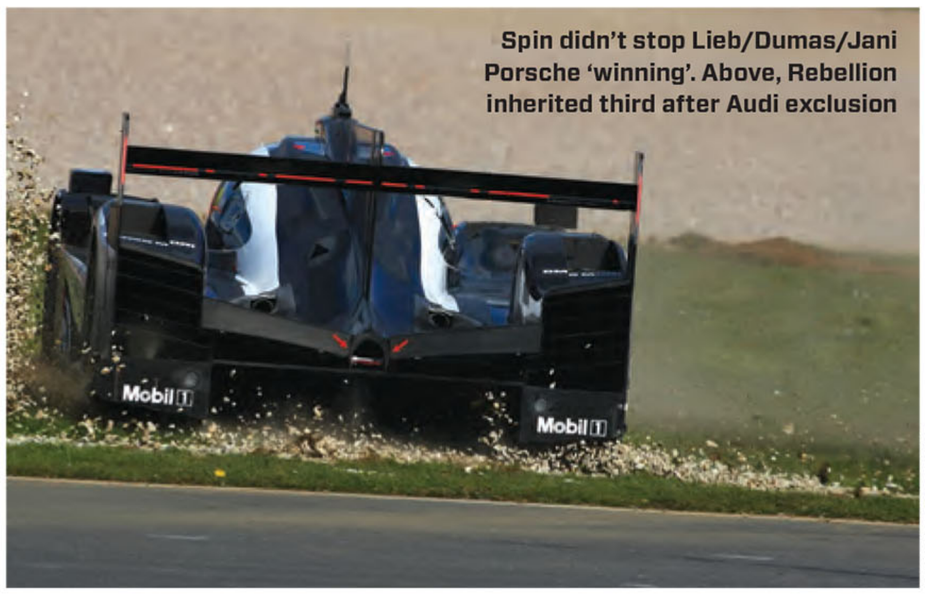
Britain isn't short of hardy sports car racing enthusiasts, which is just as well. A snow flurry tested the commitment of the bravest on Saturday morning (shades of Ronnie Peterson and his blizzard-ravaged Lotus 72, said those old enough to recall), but still Silverstone could claim a total crowd of 52,000





Defending champions led until Hartley crashed out. Right, new Toyota was second despite lack of pace





Spin didn't stop Lieb/Dumas/Jani Porsche 'winning'. Above, Rebellion inherited third after Audi exclusion

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for the weekend. Those present on the Sunday were rewarded with a mesmeric six-hour race, run in the dry.

You couldn't take your eyes off this one for a minute – even after the flag fell, as it turned out. Porsche looked on course for a comfortable victory, lost it in a moment of misjudgment, then had it gifted back by the stewards after the winning Audi's front skid block was found to be worn to excess.

Audi's radically all-new R18 had impressively locked out the front row in qualifying, only for reigning world champion Mark Webber to slice past both Oliver Jarvis and André Lotterer in near-identical moves early on to establish a strong lead. Team-mate Brendon Hartley continued to stretch the gap beyond 40 seconds, until he came across Mike Wainwright's Gulf Porsche GT at Farm. The Kiwi was banking on the finest of margins as he swept around the 911 – and got it resoundingly wrong. The contact kicked the 919 on to its side before it ploughed right way up into the gravel – but in no fit state to resume.

In the wake of this, a complete hybrid systems failure did for the no8 R18, Lucas di Grassi having taken over from Oliver Jarvis. That left the Audi of Lotterer, Benoît Tréluyer and Marcel Fässler in a straight duel for victory with the 919 of Romain Dumas, Neel Jani and Marc Lieb. The fight was fantastic – and bodes well for the rest of the season.

Just six seconds separated leader Fässler from Jani after their final full pitstops, only for a puncture to thwart the Porsche. A splash-and-dash for the Audi renewed hopes of a thrilling climax, only for Jani to require his own top-up before the end. Audi had not won for 11 months, since the Spa 6 Hours last year, but its jubilant celebrations were cruelly premature. Audi appealed initially, but then changed its mind.

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The stewards' decision not only handed victory to Dumas and co, it also bumped the new Toyota TS050 Hybrid of Stéphane Sarrazin, Mike Conway and Kamui Kobayashi up to second. The sister car was delayed by catastrophic damage from a puncture caused by contact with a GT car while Kazuki Nakajima was at the wheel, on a day that suggested Toyota still has much work to do if it is to return to its winning ways of 2014.

Rebellion also gained, the team's non-hybrid R-One driven by Mathéo Tuscher, Dominik Kraihamer and Alexandre Imperatori taking an





FERRARI

inherited place on the (virtual) podium.

The RGR Sport by Morand Ligier, with Bruno Senna on the driving strength, claimed fifth overall and LMP2 honours, 32sec ahead of Extreme Speed Motorsport's version driven by Scot Ryan Dalziel, Christopher Cumming and last month's *In the Spotlight* feature subject Pipo Derani.

Ferrari dominated GTE Pro, Davide Rigon and Sam Bird leading all the way. The sister car of Gianmaria Bruni and James Calado started with a three-minute penalty for an overnight engine change, charging impressively up to complete a Prancing Horse one-two at the expense of *Motor Sport* columnist Darren Turner, Nicki Thiim and Marco Sørensen in the Aston Martin Vantage. Still, the podium capped a successful home sortie for Turner, who'd led the Beechdean Aston team to GT victory the previous day in the four-hour ELMS round.

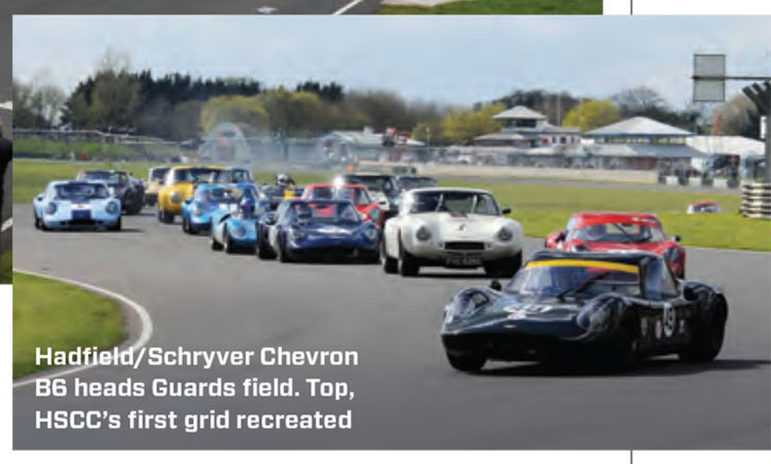
That race was won overall by a certain Gibson-Nissan you can read more about on page 138. G-Drive's venerable LMP2, run for so long under the Jota Sport banner and in its previous guise as a Zytek, claimed the first race of its final season in the hands of Giedo van der Garde, Simon Dolan and Harry Tincknell. In the 'baby' prototype class, Zak Brown's United Autosports claimed a one-two on its debut in LMP3.

Spa is next on May 7, and then it's the 'big one' at Le Mans.

Senna, Albuquerque and Gonzalez took fifth and LMP2 class win, top. Ferrari of Rigon and Bird led all the way in GTE Pro, above

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Hadfield/Schryver Chevron B6 heads Guards field. Top, HSCC's first grid recreated

HSCC Castle Combe

A MID-MORNING SNOWSTORM FOLLOWED the early drizzle, yet by early afternoon there was sufficient balmy sunshine to generate custom for the ice-cream vendors. The Historic Sports Car Club's 50th anniversary meeting commenced with four seasons in almost as many hours...

In 1966 a small group of enthusiasts created the HSCC to provide a competitive outlet for older sports cars – and the movement's first race, won by Neil Corner's Jaguar D-type, took place at Castle Combe. By way of commemoration, a representative grid – featuring a number of cars that took place in that inaugural event – lined up for public inspection at lunchtime on both days.

There were 17 races over the weekend, a blend of HSCC staples plus a sprinkling of the circuit's own well-supported championships, and highlights included a 37-car field in the 40-minute Guards Trophy, a Chevron benefit in which the B6 of Simon Hadfield/Michael Schryver beat the B8s driven single-handedly by James Schryver and Charles Allison.

Ray Mallock (U2 Mk2) won the front-engined Formula Junior race, after a close initial tussle with Stuart Roach's spectacularly driven Stanguellini. Andrew Tart's front-drive Bond eventually separated the pair and closed to within almost a second of the leader by the end.

Given the foul conditions of Saturday morning, small cars dominated Historic Touring Car Championship qualifying and it was something of a reverse giant-killing that Warren Briggs (Ford Mustang) and Chris Clarkson (Falcon) were as high as fourth and seventh among the Minis and Imps. On a dry track, however, Briggs was able to pull a clear lead before the rest of the field reached Quarry for the first time. The Kiwi went on to win from Chris Sanders (Lotus Cortina), Greg Thornton (Mustang) and Clarkson, as pole-sitter Roger Godfrey (Mini) slipped to a class-winning eighth.

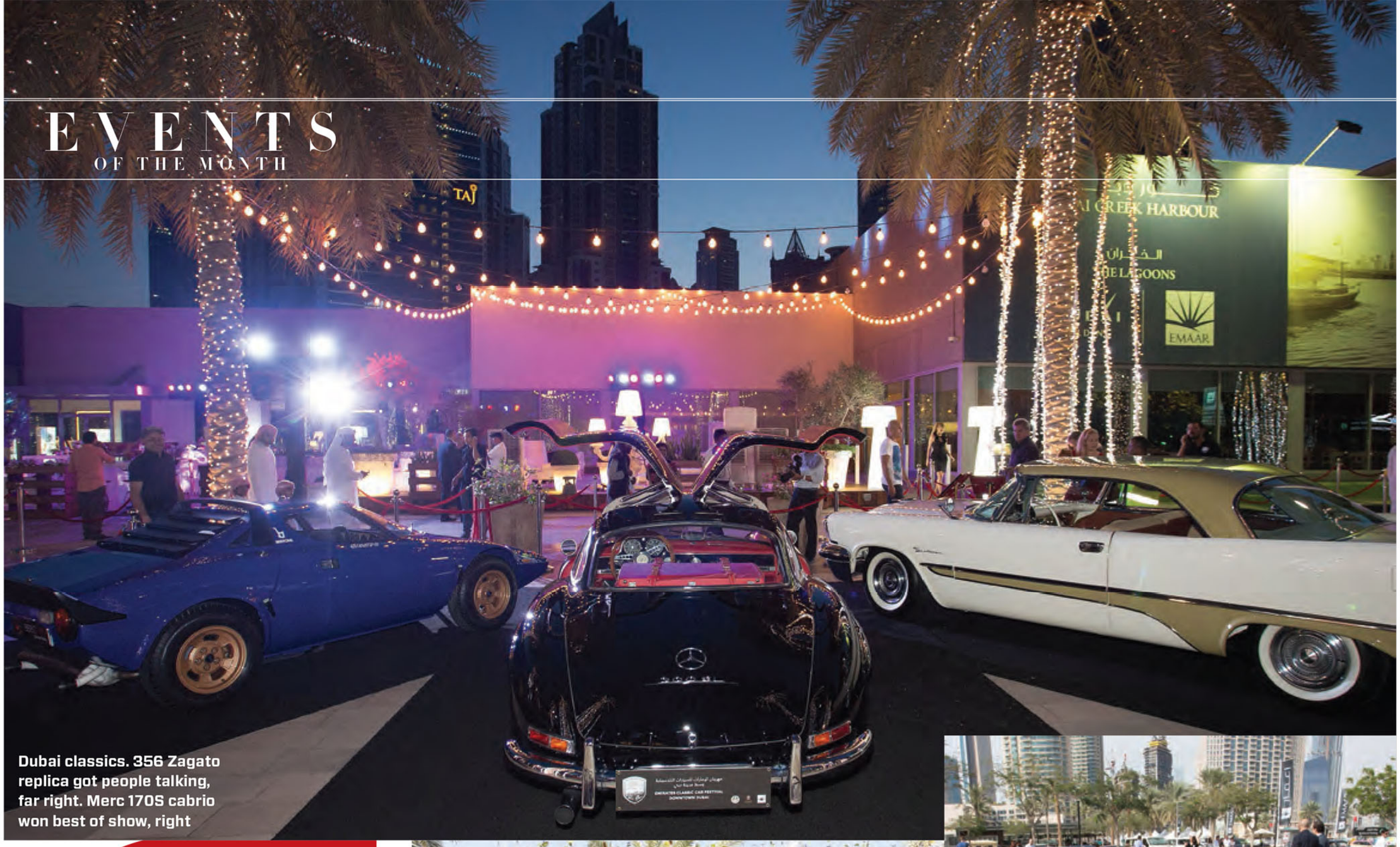
The Historic Formula Ford field attracted sufficient entries for two separate races, won by Merlyn drivers Mark Shaw and Callum Grant, although the competitive vim was diluted by the fact that the quickest couple of drivers were kept apart. Scope, surely, for the reintroduction of two heats and a final..?

Simon Arron



Ray Mallock leads front-engined FJunior race from the press-on Stuart Roach

JEFF BLOXHAM & SIMON ARRON



Dubai classics. 356 Zagato replica got people talking, far right. Merc 170S cabrio won best of show, right





Emirates Classic Car Festival Dubai

"THE BOMBSHELL WAS THE RECREATION OF a 1958 Porsche 356 Zagato," said Patrick Rollet, president of the Fédération Internationale des Véhicules Anciens (FIVA). Rollet was one of the judges at the eighth edition of the Emirates Classic Car Festival on March 25–27 in Dubai. "For me it's a good thing that someone is spending time and money to revitalise something that would otherwise have disappeared forever," he said. "This festival is one of the good events on the world stage, because there are cars I haven't seen anywhere else."

While best of show went to the more sedate 1950 Mercedes 170S Cabriolet, it was the elusive 356 Zagato Speedster that got people talking. The original car had a tragic history. French gentleman racer Claude Storez commissioned a new 356 Speedster from Porsche and the chassis was sent to Milan, where Zagato designed a lighter, more aerodynamic aluminium body that was delivered in August 1958. Storez enjoyed considerable success until he crashed fatally at Reims in February 1959, while contesting the Rallye des Routes du Nord. The wrecked car subsequently disappeared.

American collector Herb Wetanson recently asked Zagato Classic to recreate the legendary 356. Using original drawings and 3D imaging of vintage photographs, nine cars were produced and the fourth of these was unveiled at the Dubai festival.

The Emirates Classic Car Festival was organised by development company Emaar Properties in association with the Automobile Touring Club of the United Arab Emirates (ATCUAE), a member of FIVA. The streets of downtown Dubai were decorated with 100 years of motoring history. More than 400 vehicles lined the palm-fringed Sheikh Mohammed Bin Rashid Boulevard at the foot of the Burj Khalifa, the world's tallest building.

The 14-time FIA Middle East rally champion Mohammed Ben Sulayem, ATCUAE president, opened the show and presented the awards. "Each year this event grows in terms of numbers and car quality," he said. "Now it's easier to import cars that you find on the internet and the festival encourages people to aim for the standard of the best cars on display."

A concours d'élégance was staged within the festival and highlights included a 1976 Lancia Stratos, purchased from Austria in 2013 by Imtiaz Shaikh of Tomini Classics Dubai with just 43,000 kilometres on the clock. "This car was purpose-built to win rallies," the new owner said. "I love its no-compromise shape and timeless design." It won the best design award, while Shaikh's 1974 Ferrari 246 GTS Dino drove off with the Emaar award.

New this year was an on-site build-off, during which a 1923 Ford Model T was delivered to the boulevard in pieces and assembled during the festival.

"Dubai is a motor city with a real passion for cars," said judge Florian Zimmermann, one-time head of the Mercedes-Benz Classic Centre in Stuttgart and now head of the Vintage Car Company. "Within the last few years this show has been a major catalyst in the rise of interest in classics. People can buy with confidence because access to spare parts in the UAE is becoming easier and a support network is expanding." *Dave Saunders*

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Lando Norris leaves rivals in the spray during the opening race of the new BRDC Formula 3 era

LAT

TRACK OF MY TIERS

Snetterton, March 27: it's British Formula 3, but not as we know it. A popular old name returns to the domestic calendar

THERE IS, I SUPPOSE, A symmetry of sorts. When Formula 3 switched to 2-litre engines in 1974, I was present at the opening race – Oulton Park, March 9 – to watch Brian Henton spin and then recover to win after 15 laps, although the achievement wasn't quite as impressive as that might sound. Only 12 drivers entered (quite a contrast with the circuit's final F3 race of the 1.6 era, when Alan Jones beat a full field containing Tony Brise, Jacques Laffite and others of similar calibre), seven arrived, five started, three finished and the grid was bolstered by a motley patchwork of Formula Fords.

That same 2-litre principle continues to underpin the FIA European F3 Championship, though the UK's domestic series petered out at the end of 2014 due to rising costs and decreasing interest. The name has this year returned, though, after Jonathan Palmer repositioned what was his entry-level BRDC F4 Championship in a bid to create clear separation from the far-too-similar MSA Formula. It has a new look, more performance, lots of racing heritage (Tatuus chassis,

SIMON ARRON



230bhp 2-litre Cosworth engine) and the F3 label has been adopted in a bid to restore some form of structure to a national single-seater ladder that has become a pale shadow of its once-congested self.

F3 will mostly be the main support feature at British GT Championship meetings this year, but it kicked off as the headline at a busy MSVR-run club meeting alongside a cast including Radicals, the beguilingly diverse MSVT Trackday Championship (five classes, separated in terms of bhp/tonne), the glorious evergreen that is FF1600 (which suffered a few withdrawals due to appalling conditions during the meeting's second day) and stuff that could exist only in the UK, such as the JustMotorsportAds.com Nippon Challenge/Deutsche Marque/Tricolore Trophy, for Japanese, German and French cars that need a racing home…

There was also a decent turnout of wildlife: pied wagtails are a constant at most UK tracks, but Snetterton seems to have more than anywhere else and is also blessed with some of the most sociable rooks.

The F3 cars were a couple of seconds shy of lap times the last time a representative field turned up in Norfolk, in August 2012, but they look and sound the part and there was some close racing – albeit not at the front during the opening race. In unusual conditions (bright sunshine, sodden track following a pre-race storm), Carlin driver Lando Norris romped away to win by 19sec. Circuit boss Palmer, who scored a victory here during his own British F3 title season in 1981, was on hand to present trophies. During the recent past he has often expressed a desire to create a healthy, F3-style national championship at a realistic price point (such things always being relative in motor racing) and the initial evidence suggests he might succeed. "We expect to do the season for about £200,000 per car," said Richard Dutton, boss of Fortec Motorsports, "and in the previous F3 era budgets had crept up to £650,000-plus. Costs are spiralling in Europe, too, where the F3 championship is turning into a playground for millionaires. Some people are throwing absolutely silly money at it. Last year we entered four cars, but we're no longer running any." He's not alone: Euro F3 entries had slipped from almost 40 in 2015 to 21 by this season's opening race at Paul Ricard. There were 21 F3 cars at Snetterton, too, but that's fine at the start of a fresh chapter.

Most F3 teams used privacy screens to conceal their garages from the public gaze – an odd stance, given that the sport should be doing everything it can to engage with its audience at national level – but a few key essentials are in place. The fact the first three races produced as many different winners (Matheus Leist and Enaam Ahmed triumphed on day two, by which stage I'd done a flit to Cheshire) suggests that the campaign will be suitably competitive, while Toby Sowery was also a constant factor, finishing fourth, third and second respectively. One or two have a little work to do, mind: American Quinlan Lall missed the assembly area entry prior to the first race and could be seen apparently heading towards the A11 (a pointless exercise, as the local Little Chef was demolished years ago), although he did return in time to take his place on the grid.

A few purists might complain that a one-make series has no business calling itself 'F3', given the category's open heritage, but to my mind it represents a rare outbreak of common sense and is thus welcome.

Somehow it seemed appropriate that I should turn out to watch my second consecutive new-generation F3 race, 42 years after the last…



QUEUE BRANCH

Oulton Park, March 28: nature vanquished in a triumph for astute marketing

STORM KATIE'S WRATH HAD BEEN forecast as I continued an Easter trail that embraced Kent, Norfolk, Kent, Cheshire and Kent again (plus Marwell Wildlife in Hampshire, although that bit need not detain us), but nobody anticipated heavy snow in Birmingham, nor the flooding that would close two northbound lanes of the M6 while the blizzard was at its fiercest. Possibly not the best day to introduce a new event, then (even if the sun later appeared).

Such holiday weekends used to be a time of plenty in Cheshire, with perhaps Formula 5000 on the Thursday/Friday and then some of the world's leading motorcyclists pitching up for the final leg of the Transatlantic Trophy on Monday. But no more. This year's schedule accommodated a Friday/Saturday bike clubbie





Clockwise: Ingram heads for victory; packed pit walkabout; Turkington's rallycross Subaru; Jamie Caroline in difficulty; Cammish leads 911 rivals





SHORT BUT SWEET

Brands Hatch, April 3: oodles of youthful promise... and a first encounter with the Subaru Levorg

IT'S NOT JUST THE 7.45AM TAILBACK that underlines the modern British Touring Car Championship's allure. It's the audible buzz that builds as the first of three races approaches, the fact a high percentage of the audience is dressed from tip to toe in team apparel and the complete invisibility of the pit asphalt when the public invasion is in full swing during the morning walkabout.

A manufactured show as well as a showpiece for manufacturers? The accusation has been made many times but, whatever your feelings about the purity of using ballast to tweak the balance of power, the wider public seems not to mind. Cramming 32 modern racing saloons (and estates, thanks to Subaru) onto the Brands Indy circuit creates an undeniable spectacle – and there is an encouragingly gifted infusion of young drivers among the established stars at the front and the well-heeled amateurs towards the rear. Tom Ingram (22) wins the opening race of the campaign in his Speedworks Honda Civic, while MG team-mates Ashley Sutton (22) and Josh Cook (24) are bang on the pace throughout. Old-stagers Matt Neal and Gordon Shedden accumulate more points than anyone else during the day, in their works/Team Dynamics Hondas, but the opposition appears deeper and stronger than it has for some time.

A shame the rest of the programme isn't quite as diverse as the main course, which has a side salad of one-make everything, but the Porsche Carrera Cup underlines that defending champion Dan Cammish is more than ready for a bigger stage and the Ginetta Juniors are dependably entertaining.

Outside karting, where else could you find an eight-strong lead train with a cumulative age of about 118?

and, 48 hours on, the first Easter Funday, a family-themed event (fairground attractions, egg hunts, entertainers in a big-top tent) that happened to have a bit of motor racing attached – monoposto, northern sports/saloons, VAG Trophy, the BRSCC XR Challenge for 30-year-old Fiestas and Escorts and a couple of Grand Prix demos featuring Benetton B190, Jordan EJ12 and a Formula Nippon Lola painted to look like a Renault R27, even though it was nothing of the sort. The F1 cars weren't spectacularly quick, but made enough noise to magnetise small children. Job done.

The decision was also taken to use the Fosters circuit, so during a 15-minute race cars passed by rather more frequently than they would have done on the longer version – again, a move to engage families (many possibly visiting a circuit for the first time, following an extensive marketing campaign locally).

Customarily a meeting such as this would attract a sprinkling of people with an Arron-level appetite for motor racing's grass roots, plus participants' friends and families. By early morning, however, drivers were queuing for 20 minutes or more to get in. Not like the early 1970s, certainly, but attracting several thousand people to a modern clubbie represents a miracle of Leicester City proportions.

Nobody had seen that coming – rather like the crepuscular snowstorm. Ⓜ







VW frenzy, above. Caterham vs Suzuki vs Seat, above right; John Reaks (Benetton) leads Kevin Mason's Renault clone, right

ALL IMAGES SIMON ARRON

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Whizzo Williams and his rally Mini fire up the Bromyard Festival in the town's High St

SEEDS OF EXPANSION

Barrie Williams has a long motor sport history – including a little-known connection to the NMM

THERE WAS A PLEASING circularity about the inaugural Bromyard Festival of Motoring in April, thanks to that irrepressible local hero Barrie 'Whizzo' Williams, saloon, sports, historic and just-about-everything-else racer. Snipping the ribbon to launch the event, the perpetually cheerful Whizzo let loose 130 diverse machines around his normally quiet home patch, from vintage bikes to race and rally cars to classic sports cars and his own Welsh Rally-winning Mini, plus a parade of Morgans – the first three-wheeler was built here in the town. Loudest vehicle was the rumbling 18-litre V12 350hp Sunbeam 'Bluebird' brought over by the National Motor Museum – which in a way Barrie's family helped get off the ground.

How so? Because in the 1950s Barrie's father provided a lot of cars for Lord Montagu's fledgling new museum, cars that had come to rest at the family garage and engineering works in the Herefordshire town.

"People would bring them in for repair," Barrie tells me, "but money was short and if they couldn't pay, they'd just leave them there." It wasn't



always due to cash flow. "A fighter pilot brought in a 3-litre twin-cam Sunbeam with a cracked block, and my dad spent ages stitch-welding it together. Then he contacted the family and found the owner had been shot down…"

Needing space for his new karting venture, Fasta Karts, Williams Sr wanted rid of these old vehicles and Lord Montagu heard about it. "I remember him turning up with his agent in plus-fours and tweeds," says Barrie. "He took my parents to lunch to negotiate buying the lot – about 15 or 16 cars plus a charabanc. He paid what looks like pennies today. But getting them out meant knocking a wall down and Dad made him agree to that first!"

The visit caused a bit of a stir in the quiet town as Montagu had just come out of prison and the scandal was still front-page news, but before long the wall was down and the cars were being loaded onto lorries. "There was a Trojan, twin-cylinder Rover, Clyno, a couple of Bullnose Morrises, a little Wolseley, an A7 Swallow… I think the Sunbeam went to Beaulieu too," Barrie recalls. "And the Maxwell charabanc and lots of motorbikes."

Barrie's dad was a Sunbeam works rider until he crashed on the Isle of Man, and he and his brother then raced Austin 7 Ulsters. Barrie remembers going with them to Longbridge to see Austin chairman Leonard Lord. "We were taken into the factory and shown the engines and bodies of the 750cc single-seaters. To me they looked just like those tinplate Schuco toy racers, so I said 'Look, Dad, baby Mercedes!' Leonard Lord wasn't too pleased."

Among the photos Barrie showed me was a wonderful early motor caravan built by his grandfather. It might have been the perfect support vehicle for the bike-riding Williamses, years before paddocks got crowded with its glassfibre descendants, but it was long gone by then. "It was built on a Model T Ford chassis," Barrie explains, "which my granddad extended using a slave axle and sprockets and chains. He used it for fishing trips all round the country. Eventually he gave it to the lad who helped him build it, who said he would restore it but he took the chassis off and sold it."

With two gears and 20bhp this wooden-hulled land-yacht would have been no cross-country sprinter, but it was a stately pioneer of today's air-conditioned high-speed hotels. Even if they don't have tasselled curtains.

Some of the Williams cars remain at the National Motor Museum, as the Montagu collection became, including the charabanc, restored to people-carrying duty. "On the 50th anniversary of the museum I drove it around the grounds with Montagu's family aboard," says Whizzo.

He wasn't allowed to drive the Sunbeam at the Bromyard do, but he did pilot one of his father's Fasta Karts (which proved a highly successful venture once the old cars were out of the way) down the High Street. "Hee hee, I'd no idea is was so bumpy," he giggles. Can't have been half so rough as one of his early experiences: "Dad used to tow me along the street on a sledge behind his Austin 10!"

Isn't that a custodial crime nowadays?

Stately mobile home: Ford T-based camper built by Barrie's grandfather (r) around 1910. Below, forlorn Chevrolets ready for removal









Maxwell charabanc remains at NMM providing visitor transport, in very different shape to when it was carted off in the mid-1950s



TT Bentley and, below, GN Thunderbug both sport RH changes – but where are the LH equivalents?

SIMON ARRON

RIGHT-HAND JIVE

Before paddles proliferated, drivers had to reach for it – but why is right right and left left out?

RE-READING DEREK WARWICK'S comments recently about driving the Jaguar XJR-14 Le Mans car triggered a historical query I've not been able to answer. Warwick said he never got used to the Jaguar's left-hand gearchange – rare in a sports-prototype. In those far-off days when you had a lever to yank, not a paddle to pull, the mechanical linkage on a mid-engined car had to be routed around the engine, and in a (normally RHD) sports car the straightest run was to the driver's right hand. Even on symmetrical single-seaters, while there are plenty of examples of left-hand changes, over time the right side became the convention.

But my query is about production cars. In a narrow early vehicle there might not be room for four knees and a lever, so many vintage cars had an outside change and as most inter-war European cars were RHD that put the lever by your right hand – witness the classic Type 35 Bugatti. As bodywork expanded a few makers brought the change indoors but still by the right knee; anyone who has climbed into a Derby or early Crewe Bentley will recognise the 'gearstick up the trouser leg' scenario that can ruin your *sang froid*.

In the US and post-war Europe, of course, the driver got a left-hand seat and a central gearbox, or a column shift. But my question is, were there any left-hand-drive cars with left-hand changes, inside or out? I'm not counting column changes, pre-selectors or Cotal shifts, just 'four on the floor' – or 'four out the door'. I once asked WB this and he couldn't think of one. Can readers?

JEFF BLOXHAM



SECOND HELPINGS FOR MS TROPHY

Grimwade repeats a strong season to lift *Motor Sport*'s Brooklands Memorial

CONGRATULATIONS ONCE AGAIN TO Julian Grimwade, winner of the *Motor Sport* Brooklands Memorial Trophy for the second year. His 2015 season in his rorty single-seater Frazer Nash Norris Special brought a healthy harvest of silverware including the VSCC Historic Racing Trophy, but he claims he just had a few lucky events. "I've peaked early!" he says. Yet again he tied on points with regular rival – and mate – Nick Topliss in ERA R4A, but the results countback sent the cup his way, with another 'Nash pilot, Charlie Gillett, third.

"It was tight all the way with Topliss," Julian says, "but I'm expecting him to win it this year. He's planning a serious go this time. And there's Tom Walker in his Amilcar-Hispano – more torque than me and he's a bloody good driver. Had a lot of trouble with him last year." Walker took the 2015 VSCC Metallurgique Trophy for 10-litre-plus cars.

Meanwhile Julian plans more hills and fewer races this season. "I'll do all the VSCC hillclimbs and sprints, and Château Impney which was more like a social weekend with some racing thrown in. And probably Etretat again – a bit of French madness. You don't get start money, you get start cider, and prize wine!"

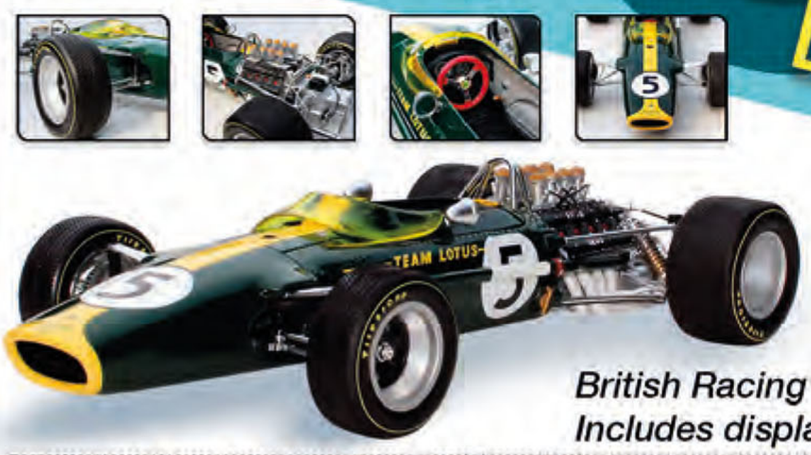
Over the winter he stripped the Norris's 3.5-litre Alvis engine, "but it needed remarkably little work. Just the big ends and main bearings." Given all the events he did, including an outright win at Loton Park, that's not bad for two seasons of hard racing.

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FROM THE ARCHIVES WITH

DOUG NYE



Our eminent historian dips into the past to uncover the fascinating, quirky and curious



The Monaco chicane expanded into the harbour in 1986, to make it slower. Here, Ayrton Senna tackles the corner in 1988

LAT

CHICANERY IN MONTE CARLO

Rearranging the deckchairs hasn't much altered the unforgiving Monaco circuit

BACK IN 1986 – 30 YEARS ago – the Monaco Grand Prix exemplified the changing standards within Formula 1. While the race itself was described at the time as "the usual procession" – headed again by Alain Prost's McLaren-TAG Turbo, the stage upon which he and his rivals performed had undergone subtle change. One report declared that "Prost did not dominate simply by preventing others from overtaking, [after] taking an impressive pole position and then disappearing into a world of his own where the only worry would be maintaining concentration for almost two hours. The closest anyone got to the world champion was when they were being lapped…".

The Monte Carlo street circuit itself had evolved over the long years since the race was first run, in 1929. Perhaps its biggest change had been made in 1973, when today's swimming-pool section was introduced behind the modern pits, entered – as was remarked at the time – by a "45-degree left-right of surprising speed, while the next is a 90-degree right-left of surprising slowness…". The Rascasse complex

replaced the traditional old Gasworks Hairpin, while the course was longer and provided hugely enhanced spectator viewing. Jacky Ickx observed: "Monaco has always been frustrating. The job there is to keep away from the trackside dangers and avoid colliding with other cars while you have to wait your chance to move up a place. So why complain about changes which make a better show and add to the character?" One presumes he meant the character of the course rather than that of the competing driver…

In 1976 another change was made with a peculiar chicane fiddled in at Ste Dévote, the right-handed first turn. And the course had been tinkered with at frequent intervals, ever since. For 1986 the basic parameter of performance was altered yet again. A concrete extension had been grafted onto the quayside at the site of the traditional harbourside chicane, the objective being to tighten up the turn itself, and so slow the cars more between tunnel and Tabac corner.

In 1985 drivers had complained that the original flick-left/flick-right chicane had become "nothing more than a blur at 160mph". On the right stood the sheer rock face made famous – to a certain audience – in John Frankenheimer's film *Grand Prix*. So the only option to provide more space there in which a more severe chicane could be created was to construct a new platform projecting into the harbour.

This latest modification apparently added 16 metres to the length of the circuit, and the new chicane – taken in second gear – attracted some driver criticism for being too slow, but the Formula 1 drivers as a group were of course a uniquely demanding community. It seemed that the change to the course – slowed by the new chicane but speeded up by levelling of bumps – especially on the pit straight – seemed to have extended lap times by about four seconds. However, the work had also been intended to provide another overtaking point on the traditionally 'after-you-Alphonse' street circuit.

In seeking that objective, the work – neither for the first time, nor certainly the last – would prove a failure. This was because the adverse camber on the inside of the chicane entry made overtaking there alarmingly unpredictable. It proved very difficult for a charging driver to achieve a clean turn-in and maintain it rather than merely understeering straight on into a rival forced onto the wider line.

So the queue of cars that had become a Monaco Grand Prix hallmark persisted – despite the Automobile Club de Monaco's (and the supportive Principality's) expenditure, which even 30 years ago was confessed to have been "just under £1 million". Historically, very few people who matter have ever truly challenged Formula 1 and Grand Prix racing's cost/benefit performance, but in the matter of tinkering around the edges to preserve a legendarily charismatic Grand Prix venue which in general terms would surely have been condemned as obsolescent decades ago, Monaco just about takes *le biscuit*.

Patrick Depailler tackles the reprofiled Ste Dévote in 1976. Below, Cevert leads Peterson through Rascasse, which replaced Gasworks hairpin for 1973



GETTY



LAT

TROUBLED OIL ON WATER

Even the Grand Prix legends can't defeat the laws of physics, as a leaking pipe proved at Monaco eight decades ago

WHILE SUCH CHICANERY WAS A talking point of the 1986 Monaco GP, 50 years earlier – in 1936 – the harbourside chicane again featured large in the race's story.

That year's Grand Prix was run on Easter Monday in nothing like Riviera weather. Rain fell steadily from a leaden sky, and the 18 starters faced the prospect of a 100-lap race around the hilly – and now streaming – streets. The *Motor Sport* report described how Mercedes-Benz fitted "short mud flaps behind the front wheels to keep some of the spray from the face of the driver" while the opposing Scuderia Ferrari mechanics had "clapped neat rain excluders over the air scoops on their (Alfa Romeos') brake drums".

Shortly after 1pm the winner of the previous day's dry-weather Prince Rainier Cup race for voiturettes, ERA driver Prince 'Bira', opened the circuit in his personal 'Bira blue' 3-litre Bentley, accompanied by François Dureste, president of the organising club.

While they splashed around their ceremonial lap, back on the soggy starting grid the Grand Prix cars were sheltered beneath tarpaulins. The three-strong front row comprised two Mercedes-Benz W25s for Rudi Caracciola and local star Louis Chiron, making his debut for the German team, with Nuvolari's Alfa on the outside.

It was then the Italian who led the snake of cars pluming off into the opening lap, while the tail of the snake was taken up – at some distance – by Mario Tadini, whose Alfa Romeo was gushing oil from a broken pipe. The car had been prepared for Antonio Brivio, but when the Scuderia mechanics on the grid found it leaking oil from a broken pipe, Brivio scrambled instead into Tadini's sister car. The unfortunate Tadini was bundled into Brivio's stricken machine with orders merely to "get the start money". As he limped around that opening lap, laying down a narrow rainbow trail of lubricant on the wet road, Caracciola nosed ahead of Nuvolari with Rosemeyer's Auto Union V16 third.

On their second lap, Caracciola and Nuvolari both lapped Tadini's crawling, incontinent Alfa before it finally dumped most of its remaining oil on the change-down into the harbourside chicane. Chiron locked up and slid straight into the sandbag barrier, Rosemeyer and Varzi



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Monaco 1936: recriminations at the harbourside after von Brauchitsch shortens Farina's Alfa. Below, even Homer nods... Bernd Rosemeyer spins into retirement

dodged by in their Auto Unions, as did Fagioli for Mercedes and Stuck's Auto Union. But Farina's Alfa took a wild header into the barrier and Brivio in Tadini's original Alfa also slid off there. Brauchitsch then buried his Mercedes into the tail of Farina's Alfa and Count Carlo Felice Trossi stopped his Maserati after missing the only way through the mess...

Motor Sport described how, "Excited officials [were] trying to slow the approaching cars, blue flags waving everywhere and workmen endeavouring to extricate the cars that were too badly damaged to continue. It presented an amazing sight to which more fuel was added as



GP LIBRARY

Rosemeyer's Auto Union arrived on its next lap and spun helplessly like a slowing [sic] top, but escaped disaster by inches and went on."

Marshal reactions to such an incident have come a long way since 1936 as "Efforts were made to erect the remains of the chicane and quantities of petrol were poured onto the course in an attempt to clear away the oil. The rain continued in torrents and the cars that were left treated the spot with extreme respect. Instead of the 40-50mph at which this point was negotiated in practice, the drivers crawled through at a bare 12mph. Even so the oil made them slide perilously near the far-side wall and drivers twisted the steering wheel this way and that with little response in the form of front adhesion... At the end of the fourth out of the 100 laps, only 13 cars remained of the 18 proud vehicles that started a few minutes before...".

Luigi Fagioli – driving the fourth Mercedes-Benz, then rammed the chicane exit barrier after a worker, as he arrived, inadvertently tossed a shovelful of sand – intended to soak up the oil and petrol – into his face...

This left Caracciola as the Stuttgart team's sole survivor. And on the left-hand uphill curve past the Hotel de Paris, even the hyper-talented Bernd Rosemeyer lost control, his Auto Union spiralling into a spin which ended with its tail smashed halfway through a retaining wall over the edge of a yawning drop. Rosemeyer clambered out, studied the damage, shrugged his shoulders and trudged back to the pits with a piece of stonework in his hand as a souvenir. *Motor Sport* again: "Significant, perhaps, that it was his 13th lap, and the date, April 13th..."

By half-distance it was clear that the acknowledged *Regenmeister*, Caracciola, was living up to his reputation for wet-weather mastery, leading comfortably from Nuvolari with Hans Stuck's Auto Union a distant third. As the long race progressed and the rain became even more intense, "The only scrap of colour visible was a series of iridescent circles on the murky waters of the harbour where the oil from the course had seeped through the paving stones into the sea itself."

Modern-style team strategy came into play at Auto Union: "Varzi, knowing that Stuck must soon stop for fuel and expecting that he would have to do likewise, closed in on his team-mate, and, after a lap or so in close company, he moved into second place on the 83rd lap. Stuck pulled in but was away again in 18 seconds with enough fuel for the remainder of the distance. Varzi delayed his own stop until later and lost about an equal time but still retained his position..."

Caracciola brought home the Mercedes-Benz to win from the two Auto Unions after a non-stop master-class drive that took him 3hr 49min 20.4sec flag to flag – time enough for a couple of modern-era Monaco GPs. Mark Webber and Nico Rosberg's combined 2012 and 2013 winning drives occupied 13 minutes *less* wheel time – with a different chicane, a lengthened circuit and very different cars. But matchless charisma – and minimal overtaking – are perhaps the only things unchanged at Monaco since 1929...


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Simpler times... The Chevrolet Corvette of Jean-Claude Aubriet and Jean-Claude Depince – who raced as 'Depnic' – chases a Porsche 911 through Tertre Rouge en route to 18th overall and second in the over-5-litre GT class. It finished 33 laps behind category winners Henri Greder and Marie-Claude Beaumont, also in a Corvette.

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