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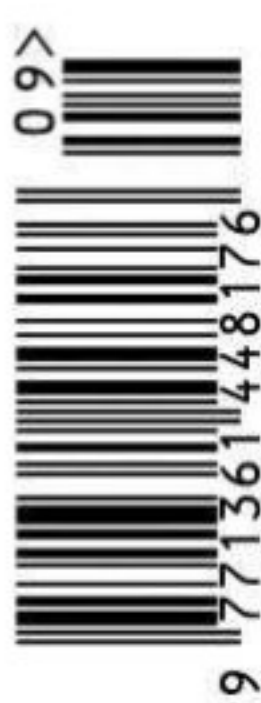
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Damien Smith

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Saints and sinners in a changing F1 world

Wednesday 12 July, Trafalgar Square and Whitehall, London. F1 brings a corner of the British capital to a standstill with a well-received street demo (see [page 80](#)). All the current drivers are there – except the one who really matters. As own goals go, Lewis Hamilton lobs his keeper from the halfway line. He should have dropped his holiday to be there and saved himself some aggro.

Three days later, Saturday 15 July, Silverstone. Before qualifying I take the bus from The Wing to Luffield to watch among the throng and gauge the London hangover. From Hamilton's first pass it's clear there isn't one. Rapture welcomes the Merc each time Lewis arcs into the long right-hander, practising what he preached in our exclusive cover story last month. He seeks grip from the wider wet line, even when conditions improve, accelerating harder and earlier than anyone else. This is his domain – and they love him unconditionally here.

Later, he'll claim his sensational Silverstone result – pole, fastest lap, dominant win (see [p102](#)) – validated his decision to miss London. It's hard to argue when his form is this good, but would the demo *really* have harmed his pre-British GP prep? Still, from sinner to saint in less than a week. That's what it is to be Lewis Hamilton.

A few days later came more rumination on good versus evil: and this time it's serious. The FIA's

news-bomb that the 'halo' cockpit safety device will offer drivers new levels of head protection from 2018, blows a thong-shaped hole through F1's firmament. This one was always going to be ugly, both figuratively and literally (see [F1 Insider, p20](#)).

"I've made myself clear since the beginning: we don't need anything," said Romain Grosjean at Silverstone, when Seb Vettel's test of the alternative shield solution ended in dizziness after one lap. "The test was not very conclusive today. I'm against every halo or shield or whatever. It's not F1."

Grosjean has been consistently brave on this one. In the wake of Jules Bianchi, Justin Wilson, Henry Surtees and more, it's tough to speak out. But, for many, the halo breaches a metaphysical line. As much as we all want racing drivers to avoid injury, is F1 about to lose something of its essence? Can motor racing really become too safe?

In my head I'm screaming an emphatic 'yes'. This is the sport I've grown up with and, like so many others, I quake a little at change. But were I to answer those questions out loud in front of the mother, father, husband, wife or child of a dead racing driver... I'd surely be more equivocal. We all have to search deep for our true answer to this one.

Damien Smith
European editor-in-chief

Contributors



ANTHONY ROWLINSON
'Prof' was the only journalist who attended Robert Kubica's comeback test and spoke at length to him about his F1 dream ([p36](#))



MALCOLM GRIFFITHS
The last time Malcy went to Zandvoort was for an F3 race in the mid-'90s. This month he's back there with Max Verstappen ([p48](#))



ANDREW BENSON
BBC Sport's chief F1 writer was in Canada to watch Lewis Hamilton match Senna's 65 poles. On [p66](#) he compares the two drivers.



GLENN DUNBAR
North of Montréal is the karting track where Lance Stroll first started racing. Dunbar joined Stroll for a trip down memory lane on [p84](#)

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The fine art of teamwork


During the Austrian Grand Prix, I spent some time photographing guests in the Paddock Club, the VIP hospitality area that is located directly above the pitlane.

Kimi Räikkönen came in for his one and only pitstop, so I took this shot of him having his tyres changed. I deliberately went with a wider angle, which means the Ferrari is framed by the two red lines that denote the two edges of the pitlane.

What is unusual about this image is that I took it with a mirrorless Sony A9 rather than my usual bulky Canon. It has a little screen that flicks up, which makes positioning the camera a lot easier, particularly when leaning over a balcony.



Photographer

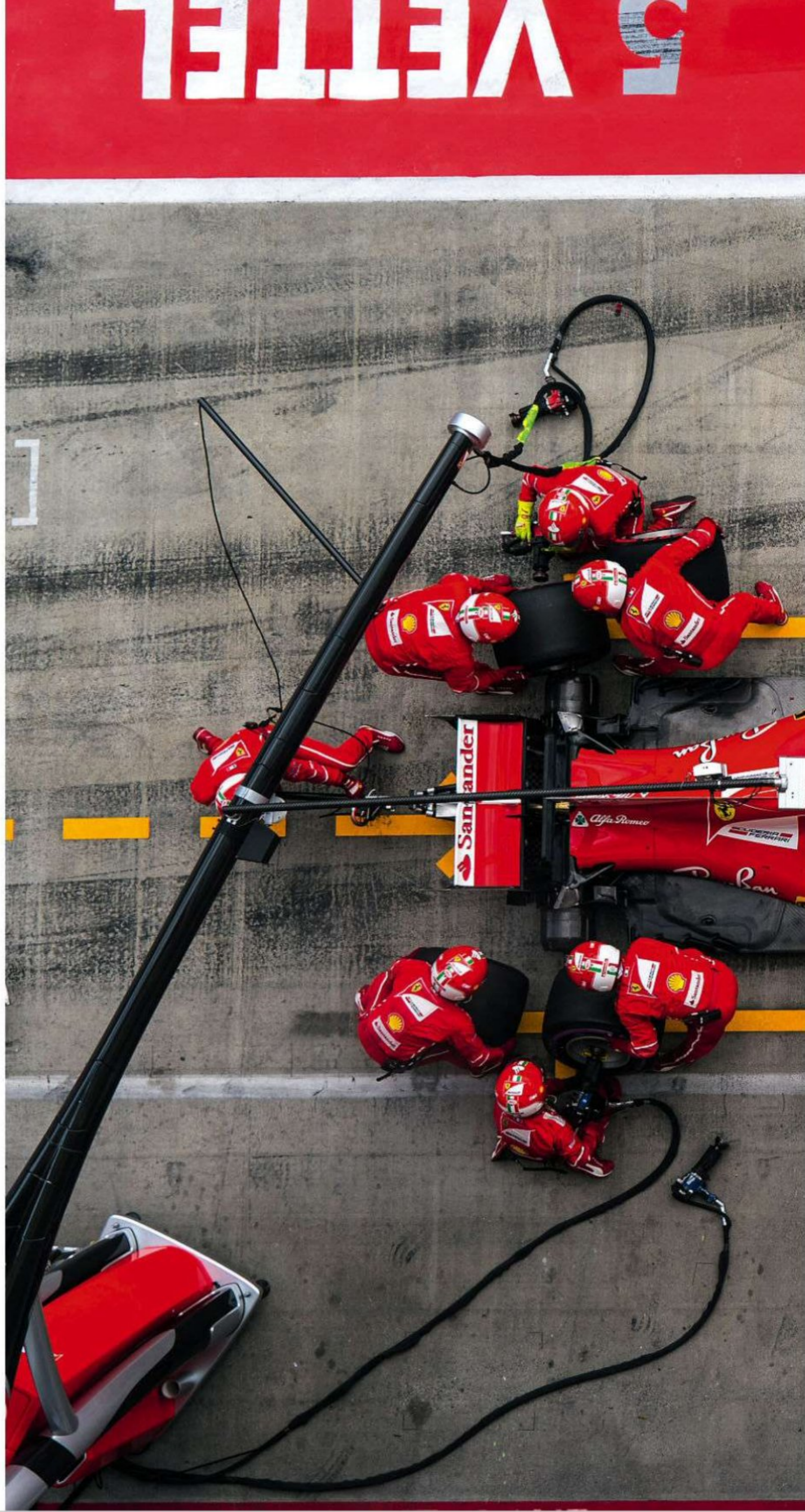
 LAT IMAGES: Glenn Dunbar

Where Spielberg, Austria

When 2.54pm, Sunday

9 July 2017

Details Sony A9 (ILCE 9),
70mm lens, 1/1000sec @ F4.5





Hülk lights up the gloomiest day


One of the best places to shoot photos at Silverstone is backwards towards Becketts as the cars sweep into the right-hander at around 180mph.

Normally it's quite overcast at the British Grand Prix, so the light is poor, but here you get a great contrast with the very bright effect of the titanium skid-plates sending up sparks as they hit the kerb.

Pictured here is Nico Hülkenberg, who made it into Q3 in qualifying this year. The track was still a little damp, but you can see his commitment.

It's a very short movement to pan with him because he's travelling so fast, but the slow shutter speed enhances the shower of sparks.



 **LAT IMAGES:** Lorenzo Bellanca

Where Silverstone, UK

When 2.04pm, Saturday
15 July 2017

Details Canon EOS-1DX MkII,
600mm lens, 1/8th @ F32





Lewis feels the support of his fans

After Lewis Hamilton won the British GP, he announced to the crowd from the podium that he'd be down in a minute to start surfing with them. Last year he did it without warning and I photographed it from a distance with a long lens.

Knowing he would definitely be doing it again, I had a little more time to prepare and decided to get a different perspective by choosing a close-up shot with a wide-angle lens.

I was up on the pitwall opposite parc fermé as Lewis jumped backwards onto his adoring fans. There were a lot of other photographers trying to get a similar shot, but you just have to get your elbows out to get the picture you need.



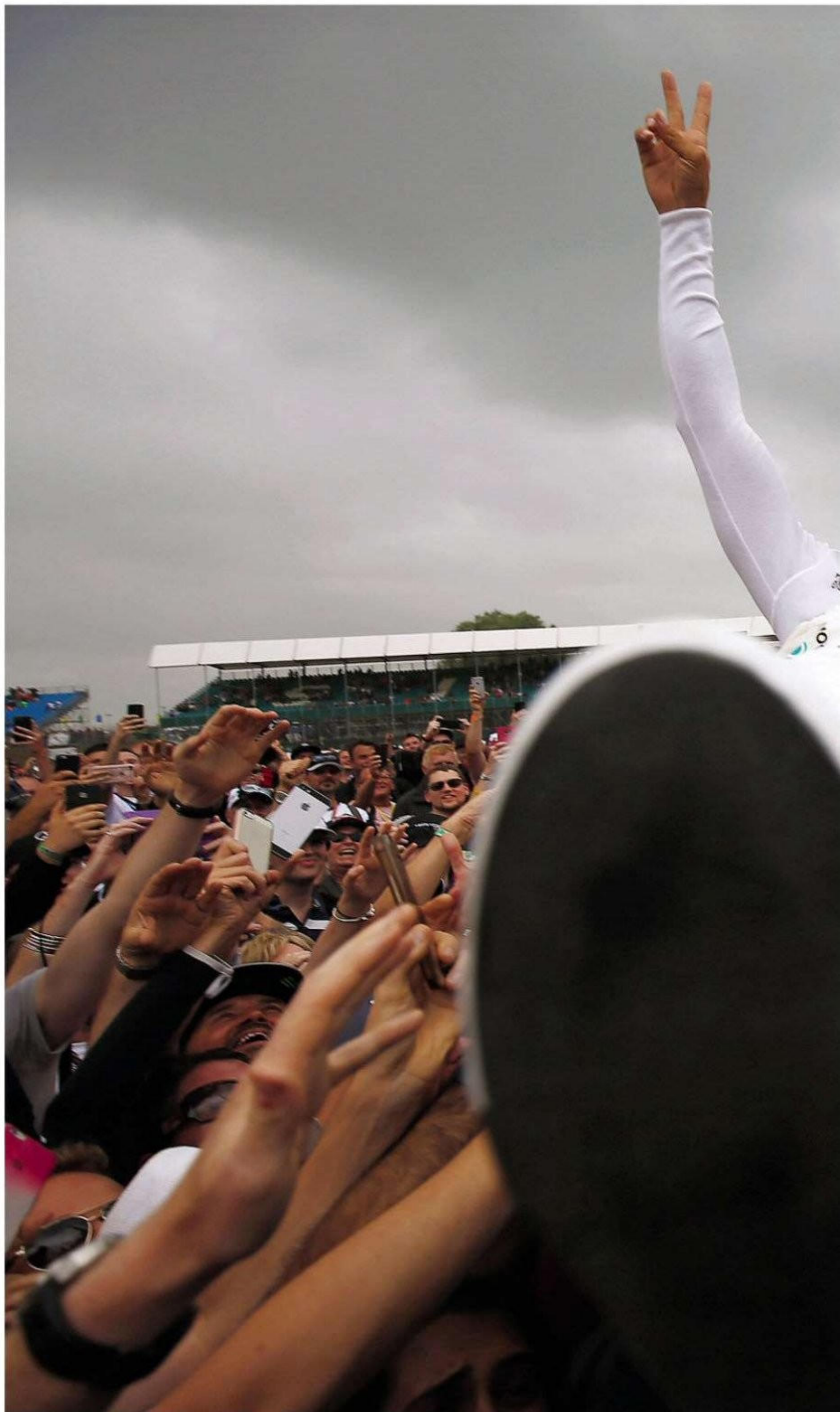
Photographer

 LAT IMAGES: Andy Hone

Where Silverstone, UK

When 3.52pm, Sunday
16 July 2017

Details Canon EOS-1DX,
35mm lens, 1/500th @ F4.5









The view we all missed out on

I was on pitlane duty for the F1 Live London event that took place on the Wednesday evening before the British GP.

I found a route that took me from Old Scotland Yard up to Trafalgar Square but, just as I'd feared, the event was so popular that the crowd was 40-deep.

I was about to head back when the wind caught a sign... and there was an image of the driver that everyone in front of me was searching for. It was the closest anyone would get to Lewis Hamilton that day.

I like the fact you can see people clinging to lamp posts and traffic lights – as Londoners have been doing for decades on occasions such as a royal wedding or state funeral.



Photographer

 **LAT IMAGES:** Steven Tee

Where London, UK

When 6.52pm, Wednesday
12 July 2017

Details Canon EOS-1DX MkII,
200mm lens, 1/1000th @ F5





A truly capital success

For the first event of its kind, F1 Live London was brilliantly well organised. It was amazing how many people had crammed into and around Trafalgar Square to watch the parade of F1 cars.

I was standing on the exit of the road they were using as a makeshift pitlane, and next to me were Ferrari racer Sebastian Vettel and team principal Maurizio Arrivabene.

At that moment, with the sun setting on Horse Guards, Kimi Räikkönen lit up his rear tyres with a burnout and blasted towards Nelson's Column.

This was an event that was fully embraced by all those who attended it and it was a great spectacle to see F1 cars on the streets of London once again.



Photographer

 **LAT IMAGES:** Steven Tee

Where London, UK

When 7.07pm, Wednesday
12 July 2017

Details Canon EOS-1DX MkII,
35mm lens, 1/500th @ F8

THE GREATEST SHOW ON EARTH



ANTHONY ROWLINSON

@Rowlinson_F1

01 **If you build it they will come.** And if you stage a Formula 1 street display amid some of London's most recognisable landmarks, then they will *certainly* turn up – in their tens of thousands.

The F1 Live London event, held around Trafalgar Square and Whitehall just before the British GP, proved a truth that's easy to take for granted: Formula 1 remains a hugely popular sport, still very capable of capturing hearts, minds and wallets. The London street demo was free, of course, which helped suck 100,000 rev-heads into central London to press noses against barriers, but still, a fan-draw on that scale, for an event unpublicised on account of security concerns, was impressive.

By way of context, the British Grand Prix that followed drew 345,000 spectators: 24,500 (Thursday); 80,000 (Friday); 103,000 (Saturday) and 137,500 (Sunday).

F1 Live London drew 100,000 fans to the UK capital to see their heroes in action – and the social media response was huge



Never mind the critics, the much-maligned halo will save lives and that's what *really* matters

"It was an unqualified success," says Sean Bratches, F1's commercial chief, speaking exclusively to *F1 Racing*. "The reaction from fans on the day and subsequently through social media has been hugely positive."

Of greater significance is what the event heralds for Formula 1 and its devoted followers. F1 Live London, Bratches reveals, was merely a taste of what's to come as Liberty Media seek to make the most of a sport that has suffered for decades from a lack of active promotion:

"We're going to polish F1 every day so that it shines as brightly as it can possibly shine," he tells *F1R*. "London Live was demonstrative of our vision as to where this sport should be and how it should be represented and promoted. I started in Formula 1 five weeks before the beginning of the season, and one of the things that struck me was that the Australian GP just kind of 'appeared'. There was no excitement or anticipation of the start of the season so, going forward, I see an F1 Live London-type event happening prior to the start of the year."

A key aspiration for Bratches is that F1 will have a 12-month media profile, rather than the 20 or so 'spikes' from each race. "We need to keep the news cycle alive," he says, "and there's an opportunity to create events that some or all of the teams can participate in, to do that. We want to create content that lives outside a GP weekend and celebrates F1."

Liberty's stated ambition for F1 is bold: "To create the greatest racing spectacle on the planet," and this, via a five-point plan that's resulted from a freshly commissioned brand study, is how they plan to do it:

REVEL IN THE RACING

F1's sporting MD Ross Brawn and team are charged with improving the on-track offering by considering thorny issues such as how to let F1 cars overtake each other more easily and what aspects of track design promote exciting racing. New hires ex-Williams sporting director Steve Nielsen, Jason Somerville (head of aero) and Craig Wilson (head of vehicle performance), will work with the FIA's own staff and team engineers to devise regulations that guarantee close, exciting racing.

"We need a much more competitive grid," says Bratches. "We have a team of 25 spotters around the tracks looking at where racing and overtaking is happening at individual circuits."

MAKE THE SPECTACLE SPECTACULAR

'Fan engagement' is a buzz-phrase for F1's new owners: it means making the fun-and-games around a race weekend far more attractive to those fans who are considering spending their hard-earned cash on a costly race ticket.

Kubica prepares for his crucial F1 test

“WE’RE GOING TO POLISH F1 EVERY DAY SO IT SHINES AS BRIGHTLY AS IT CAN POSSIBLY SHINE. F1 LIVE LONDON WAS DEMONSTRATIVE OF OUR VISION AS TO WHERE THIS SPORT SHOULD BE AND HOW IT SHOULD BE REPRESENTED”



Sean Bratches plans to open up F1 to the fans and add value, giving them the confidence that their investment in the sport is worthwhile

London Live has so far been the banner event for this philosophy, but at the Spanish GP earlier this year, the 'F1 Fan Zone' boasted a behind-the-grandstands zipwire, Heineken bars, T-shirt guns firing into grandstands, interactive 'robots' mingling with fans, and a broadband cloud to allow real-time sharing of social media moments.

"We have to make our fans believe that their investment in the sport is worthwhile," says Bratches.

BREAKING BORDERS

Part of Formula 1's allure over the decades has been its exclusivity. From the tinsel of Monaco, to the studied inscrutability of Kimi Räikkönen, through to the cloistered impenetrability of the F1 paddock: Formula 1 has never been a place for everyman – and less so in the latter years of Bernie Ecclestone's reign than ever.

Liberty want to open up the sport in degrees and let the public look backstage. "We want seams in that exclusivity where people can touch the sport in different ways," says Bratches. "We want them to have their viscera moved by the sounds and smells of this amazing sport."

Evidence of that ambition can be seen with the re-imagined F1 two-seater programme running at most grands prix this year. And there are plans to open up F1 garage tours, while offering lunches with senior F1 personnel for 'golden ticket' winners.

Taking races closer to fans is also key to the Liberty vision. The location for F1 Live London was no accident: evocative city-centre locations are firmly on the agenda for future calendar expansion – though not at the expense of traditional venues. Bratches says: "For 2018, we've lost Malaysia, but gained France and Germany. Going forward we want to appeal to cosmopolitan audiences, by promoting the tech-first essence of the sport."

"TASTE THE OIL"

This pungent phrase is how Bratches describes F1's need to tell its own technical story far better. "We are the most sophisticated sport on the planet and what engineers achieve is absolutely amazing, extraordinary," he says.

But the story of those achievements, such as the stunning thermal efficiency figures achieved by hybrid V6 power units is undersold, or veiled in complexity. "We need to be doing a much better job of explaining and broadcasting our technical excellence," says Bratches.

LET THE BLOOD BOIL

"Gladiators and pilots – what are their back-stories?" The human aspects of F1, the epic contests between the Hamiltons, Vettels, Alonsos and Ricciardos are recognised as the vital life-blood of the sport by its new owners. And it will come as no surprise to readers of *F1R* that the human interest stories offered by the gifted individuals who work in F1 are what make it such an endlessly compelling discipline. But it's refreshing to hear those sentiments articulated from on high: "Let's unleash those human stories. Fans are clamouring for all of this." ▶

Make no mistake, Liberty need to make money from their \$8bn investment – and plenty of it. The difference is that they are set on doing so by boosting the sport's global appeal, rather than by squeezing huge race-hosting sums out of states keen to improve their public image.

“There are so many untapped opportunities that we need to exploit,” says Bratches, “like our popularity with women and fans under 35. We’re being transparent, we’re communicating, and we have a vision the F1 community can sense and believe in, too.”

SAY HALO, WAVE GOODBYE?

02 So far, so positive, but another aspect of F1's future is proving altogether more controversial: the halo head-protection system. Since it was first trialled in public, by Kimi Räikkönen at a March 2016 Barcelona test, its aesthetics have been panned, with some commentators claiming its introduction will herald the demise of F1.

The trouble is, for those in the ‘anti-’ camp, the halo (and future variants thereof) is here to stay.

During a technical briefing at the Hungarian GP weekend, Laurent Mekies, FIA deputy race director and safety director, said that the 8kg titanium component, compulsory for 2018, has been in development since 2011 and is the only device yet devised that is capable of meeting prescribed protection targets. These are that a wheel/tyre assembly weighing 20kg, impacting the halo at 140mph, should be deflected with no driver contact.

Alternative shields and screens have been tested but found wanting, so the halo it will be, built by a single supplier to be appointed through a tender process.

Three types of accident were assessed in halo testing: car-to-car; car-to-environment; and small-object impacts.

“THE HALO IS THE ONLY DEVICE YET DEvised THAT IS CAPABLE OF MEETING THE PRESCRIBED PROTECTION TARGET THAT A WHEEL/TYRE ASSEMBLY WEIGHING 20KG, IMPACTING THE HALO AT 140MPH, SHOULD BE DEFLECTED WITH NO DRIVER CONTACT”



LAT IMAGES: GLENN DUNBAR; CHARLES COATES; ANDY HONE

Aesthetic criticisms of the halo device continue to come thick and fast, but if it saves lives does it matter what it looks like?

Car-to-car accidents such as the Alex Wurz-David Coulthard collision at Melbourne 2007 and the Romain Grosjean-Fernando Alonso tangle at the Belgian GP in 2012 were analysed to establish what effect the halo would have had. Similar studies were made of Luciano Burti's high-speed barrier impact at the 2001 Belgian GP, Heikki Kovalainen's Barcelona 2008 accident and Carlos Sainz's 46G practice shunt at Sochi 2015.

In all cases, said Mekies, a halo would have had an “overwhelmingly positive” effect on driver safety.

Nonetheless, and despite universal approval by the F1 Strategy Group for the halo to be introduced, it remains a divisive topic among drivers. Leading lights including Sebastian Vettel, Lewis Hamilton and Fernando Alonso ▶

F1 DIGEST THE MONTH'S BIG STORIES AT A GLANCE

11.07.17 Silverstone triggers break clause in their British Grand Prix contract



12.07.17 Frédéric Vasseur announced as new Sauber team principal

16.07.17 Romain Grosjean switches to Carbone Industrie brakes for British Grand Prix

18.07.17 In-season test dates at Barcelona and Hungaroring set for May and July/August 2018

19.07.17 Halo cockpit safety device confirmed for 2018 onwards



27.07.17 FIA imposes new ‘fuel burn’ restrictions

27.07.17 Sauber announce cancellation of their engine-supply deal with Honda



02.08.17 McLaren Autosport BRDC Award winner Lando Norris tests a McLaren MCL32 at the Hungaroring



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“ I UNDERSTAND THAT THE HALO IS NOT GOOD-LOOKING, BUT IT WILL BE DEVELOPED. AND AT THE END OF THE DAY IT’S THERE TO SAVE DRIVERS’ LIVES.” PADDY LOWE



Studies proved the halo would have had a positive effect in Sainz’s 46G shunt at Sochi in 2015

have all backed the halo, although the likes of Romain Grosjean, Jolyon Palmer and Max Verstappen have all questioned its necessity.

Their opposition – and that of any commentator or fan – is moot, for the halo has now been blessed by both the FIA and the Formula 1 Group, so

whatever the aesthetic reservations, they’ll simply have to be put aside or overcome.

Williams chief technical officer Paddy Lowe offers this view: “It became clear that there had been a number of near-misses around the drivers’ heads occurring at the rate of around one per year and that this was a hazard we needed to close off. I understand that it’s not good-looking, but it will be developed. And at the end of the day it’s there to save drivers’ lives.”

The only pertinent question, then, is surely this: is any driver’s life worth sacrificing for the sake of a prettier car?

COMEBACK KING

03

As *F1 Racing* went to press, Robert Kubica was due to take a further, significant step towards what seems increasingly likely to be a full-time F1 comeback. If he does so, whether this season or 2018, it would rank as one of the greatest sporting – make that human – recoveries ever.

You’ll read on [p36](#) of this issue about the struggles he’s endured over the six years since his near-fatal rally accident. Perhaps you’ll be struck, as others have been, by his reserves of courage, and his new perspectives on life and racing as he fought to fix his broken body. Or maybe you’ll be sceptical that he will ever be able to tame a beefy 2017 F1 car sufficiently well to extract its maximum performance. Whatever your view, Kubica and the admirable Renault Sport team understand that the only relevant judgement is the impartial authority of the timing screen.

Cynics be damned. He’s back. It’s real. 🍷

Kubica impresses in Hungary during a Renault test set up to give him his first taste of a 2017 F1 car



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- Q1 Which current driver was the last to claim pole when not driving for Mercedes, Ferrari or Red Bull?
- Q2 In 2007, their only year in F1, Spyker claimed just one single point. Who scored it and where?
- Q3 This year’s Malaysian race will be the last, but when was the first F1 GP at Sepang?
- Q4 Which Dutch driver returned to F1 for two races in 1992, ten years after his previous race?
- Q5 For which of these teams did Rubens Barrichello make more starts: Stewart or Williams?
- Q6 Antonio Giovinazzi used the number 36 when racing for Sauber this year, but what was his number as a Haas Friday driver at Silverstone?
- Q7 Hollywood actors Owen Wilson and Woody Harrelson were at the British GP to publicise which computer-animated racing film?
- Q8 True or false: only three drivers ever led the Korean GP in the race’s four-year history?
- Q9 The 24 finishers in the 2011 European GP at Valencia set which Formula 1 record?
- Q10 Which two races in 2017, up to and including the British GP, have not had full Safety Car periods?



1 Felipe Massa, Williams (Austria 2014) 2 Adrian Sutil, Japan 3 1999 4 Jan Lammers 5 Stewart GP (48) 6 50 7 Cars 3 8 False, it was two, Vettel and Alonso 9 It was the highest number of finishers in a GP 10 The Australian and Austrian GPs

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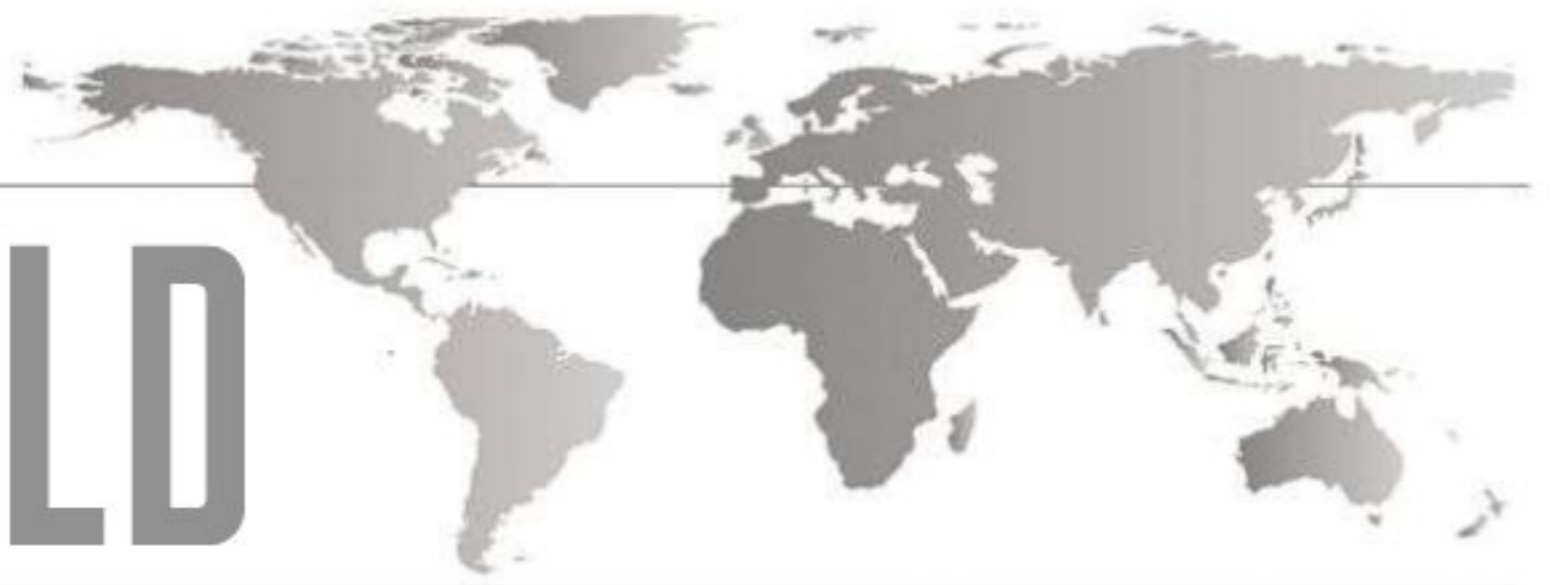


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Your guide to modern and classic F1 happenings across the globe



11-13 August
Oldtimer Grand Prix,
Nürburgring

AUGUST

11-13 August

> Oldtimer Grand Prix,
Nürburgring

Both the HGPCA (Pre-1966 machinery) and the FIA Masters Historic Formula 1 championship (post-1966 3-litre cars) will be doing their stuff out on the Nürburgring's grand prix circuit.

27 August

> F1 Belgian Grand Prix,
Spa-Francorchamps

SEPTEMBER

1-3 September

> Historic Grand Prix,
Zandvoort, Netherlands

3 September

> F1 Italian Grand Prix,
Monza



16 September

> Nigel Mansell
– Meet the Legend,
St Helier, Jersey

A special event at The Mansell Collection, home of the 1992 world champion's eclectic and comprehensive range of memorabilia, racing trophies and cars. The man himself will be making a personal appearance. Tickets from www.eventbrite.co.uk

17 September

> F1 Singapore Grand Prix,
Marina Bay circuit

15-18 September

> Spa Six Hours,
Spa-Francorchamps
This full weekend of retro racing includes a multi-class fixture for the Historic Grand Prix Association. Pre-war GP cars such as ERAs and Talbot T26s mix it up with world championship F1 cars up to the mid-1960s, including Maserati 250Fs, Coopers, Brabhams and Lotus, along with curios such as the Scarab-Offenhauser. The FIA Historic F1 series for post-'66 cars is also on the schedule.

OCTOBER

1 October

> F1 Malaysian Grand Prix,
Sepang International
Circuit



8 October

> F1 Japanese Grand Prix,
Suzuka

21-22 October

> Estoril Classic Festival
Estoril, Portugal

22 October

> F1 US Grand Prix,
Circuit of The Americas
(See travel guide, [p110](#))

16 September
Nigel Mansell – Meet the Legend,
St Helier, Jersey

15-18 September
Spa Six Hours,
Spa-Francorchamps

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THE RACER'S EDGE

PETER WINDSOR

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they required by an F1 world that liked them – and wanted them. If Toyota had competed in Formula 1 in the 1970s, in other words, they would probably still be here now.

Looking back, it's a bit of a jolt to realise that Renault entered only four other F1 races in 1977 and that the team also missed the opening two rounds of the 1978 championship, when, in theory, they'd had all winter to get it right. It wasn't until 1979, when they ran a second car for René Arnoux, that they finally won a race.

South America was tough, but at Kyalami, at high altitude, Renault and Jabouille took their first pole, then outraced Jody Scheckter on the opening lap, around the outside, right on the limit.

Then came the rain; then came another engine failure. The transmission seized on Jean-Pierre's car at Long Beach during practice and threw him into the concrete barriers at 160mph; he escaped with just a broken wrist – something I guess would be a big deal today, but at the time seemed completely innocuous.

Renault's development continued. The turbo V6 was almost perfect for a narrow, ground-effect car like the Renault RS11/12 (unlike the wide Ferrari flat-12 that clogged the airflow around the T4 chassis); it gained still more power and almost-normal throttle response with the advent of KKK twin turbos and water-air intercoolers; and the ups and downs of side skirts were commensurate with the ups and downs of Michelin tyre grip. Inconsistent, in other words, but good while they were working.

In the build-up to the crucial French GP, Renault were buoyed by the cancellation of the Swedish GP. Suddenly they could set up their own Fiorano on the smooth surface of Dijon. The twin-turbo layout was tried and proven; Renault unearthed a chassis-flex issue easily fixed with reinforcement; and the car covered two grand prix distances. It was the birth of a new era of testing in F1, although Jabouille, still recovering from Long Beach, was exhausted by the end of it, barely able to breathe.

It wasn't hot at Dijon; we wore our Goodyear jackets. Which is to say it was Michelin weather – and Renault turbo weather. Jabouille was quick in the cool of Friday morning, when times counted for

THE GOLDEN BOY OF A GOLDEN AGE

There's a passionate Saturday-afternoon feel to Renault that I can't explain but have always loved. Maybe it goes back to 1974, when I'd fly Air France to Orly in the days when croissants were served fresh from a basket rather than soggy in a plastic bag. I'd rent a Renault 5 from Hertz because it would have been crass to have done otherwise. At Viry-Châtillon, home of Renault Gordini, I'd tour the factory with François Castaing, the urbane and multilingual technical director who later joined American Motors. As much as the talk was of the future – of winning Le Mans and building an F1 car – it was also about Amédée Gordini, Alpine, the French GP and Montlhéry. It was about the simple seductions of motor racing, sans politics, ego and middle-management.

I was swept along with it, helped by the fabulous Marie-Claude Beaumont, who is still the best press/PR lady ever to have raced a Corvette at Le Mans. I was mates, too, with Patrick Depailler and all the Jean-Pierres – Jabouille, Jarier and Jaussaud, which made those Le Mans years all the sweeter. Gauloises was the scent; crisp, barking



A victorious Jean-Pierre Jabouille, flanked by runners-up Villeneuve and Arnoux at Dijon in 1979

V6s were the audio. Those were the days of the classy, artistic Jabouille and *Breakfast in America*, of Stand 21, sunny days at Dijon and an amazing, poster-sized French magazine called *Scratch*. They didn't represent a new chapter in the history of motorsport: they were a complete new volume.

I was thinking about all this because of the 40th anniversary of Renault in F1. I was at Silverstone in 1977, covering the race for *Autocar* and, of course, I was impressed that the 1.5-litre V6 turbo had finally started a race. Back then, 'pressure' was not part of the vernacular. You could run one car if you wanted to – and you could enter only a handful of races. You could join and depart the F1 grid as your development programme dictated.

Which was kind of nice, of course. It gave ground-breaking teams like Renault-Elf all the time they needed, and made their infrequent appearances the subject of healthy curiosity rather than political derision. They were given the space

The 1979 French GP was a classic race, featuring some nail-biting duels and the first F1 win for a turbo-charged car



the grid. He then saved the rest of his Michelin 200 qualifiers for Saturday, when he set pole with a jaw-dropping 1min 7.19s. René was slightly slower, the victim of yet another broken valve spring.

Jabouille's race was defined by the brilliance of Ferrari's Gilles Villeneuve. With Gilles seizing an early lead, Jabouille resolved in his wake to look after his tyres and engine, rarely stepping out of line, always leaving plenty of space around the back-markers. Then the track picked up oil and rubber; Villeneuve, who had far less chassis-generated downforce with which to play, quickly lost grip.

Jean-Pierre thus won for Renault and for France – and his success was underlined by Arnoux, who dropped to ninth at the start and would have been

a wheel-banging second but for a misfire in the closing laps. He finished, instead, third behind his friend, Gilles Villeneuve.

So here's to Jean-Pierre Jabouille and to Renault and the 40th anniversary of the day when it all started. Pre-Dijon, they used to question Jabouille's speed as a driver. Was it the car, they whispered – or was it Jean-Pierre? Post-Dijon, they said that it had been easy for him: too easy.

From where I stood, up at Leeukop, at Kyalami, or behind the pits at Dijon, by the esses, the softly-spoken Jabouille *made* the Renault look as good as it went. He was an engineer-driver of the highest level; he was at the heart of that golden, French era.

“ BACK THEN, ‘PRESSURE’ WAS NOT PART OF THE VERNACULAR. RENAULT WERE GIVEN THE SPACE THEY REQUIRED BY AN F1 WORLD THAT WANTED THEM ”

This was a first victory for Renault, made all the more special for taking place on home turf. Here, Renault's sporting director Jean Sage (yellow jacket) celebrates the result with the rest of the team





THIS F1 LIFE

PAT SYMONDS

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The cost of the power unit has since risen to around €750,000. However, this is offset by the fact that in 2017 a driver may only use four power units, and, in 2018, this will drop to three. At that point, the hardware cost of power units for the racing season is very similar to the cost of a supply of the V8 engine. Yet even with the cooperation of the power-unit suppliers, who, at the behest of the FIA, have pared back their originally contracted receipts by several million, the cost of supply is still above that of the old V8s.

In order to understand why, we need to accept that the business model has changed and manufacturers are no longer prepared to absorb all development costs within their own teams while supplying

customers at an incremental cost. The new way of doing things sees the manufacturers passing on some of the cost of development of the current engines. The amount passed on appears to vary between the different manufacturers and true figures are hard to come by, but for 2018 the regulations dictate a price of €12 million, a figure that once again approaches incremental cost.

That may seem a huge sum, but F1 is not a cheap sport and for a mid-sized team this represents perhaps ten to 12 per cent of its budget. The power unit embodies a significant part of the overall package and personally I don't feel that this cost is totally unreasonable. In the late 1990s at Benetton, our engine bill was around £17million and at the end of the season we got an additional bill because we had exceeded the agreed testing mileage. Of course in those days we might well use one engine on Friday, two

WHAT NEXT FOR THE FORCES THAT POWER F1?

Once again we have come to that point in the regulatory cycle when thoughts turn to the next power unit. The previous naturally aspirated V8 had a lifespan that ran from 2006 until the end of 2013. Eight years seems a reasonable life for an engine design, so now it is time to consider what will replace today's highly sophisticated hybrids.

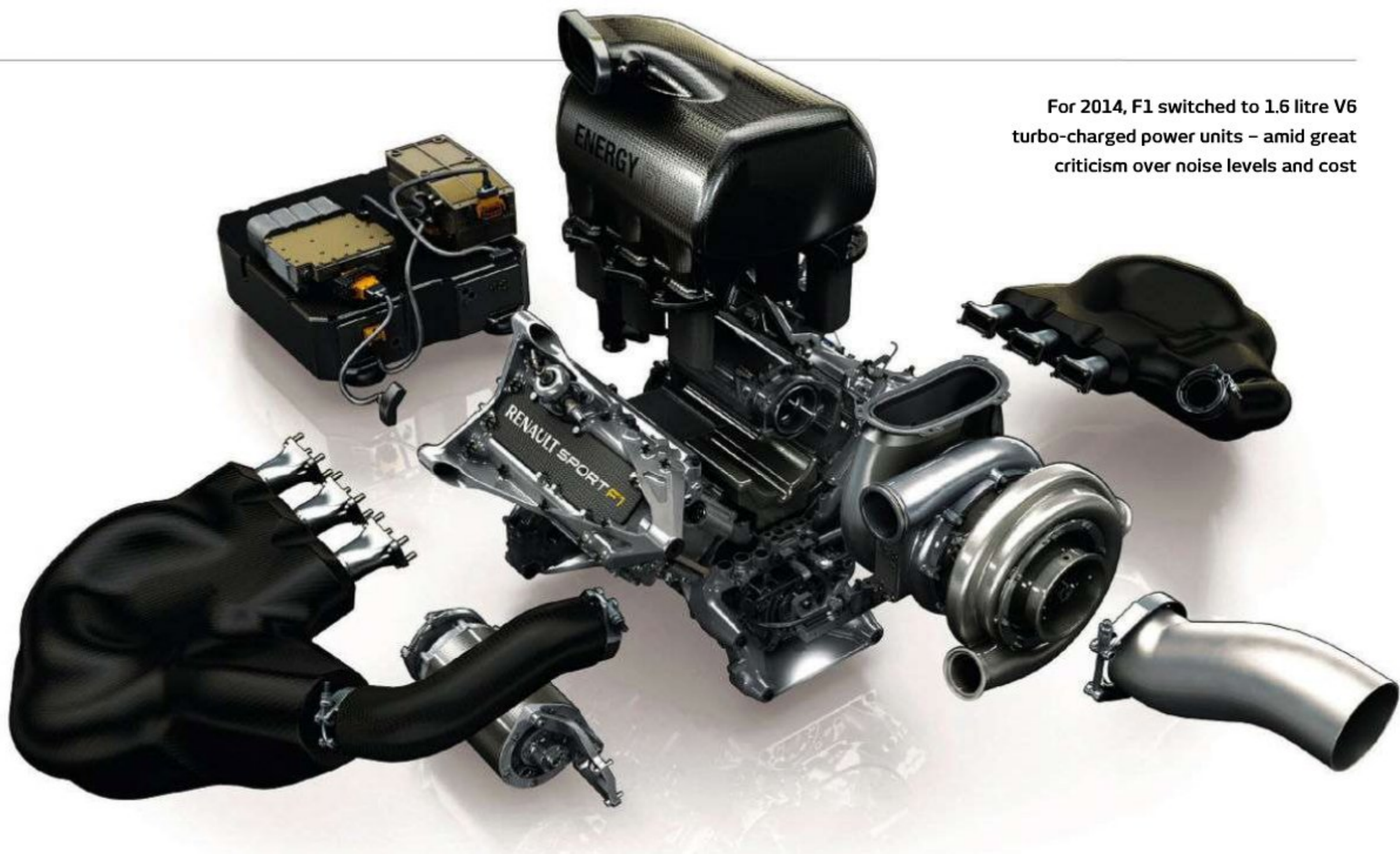
Various factors, not least the expiry of current commercial agreements at the end of 2020, have determined that the next power unit should appear for the 2021 season. Current engines have attracted more negativity than they deserve. Yes, they are complicated, but their sophistication and efficiency would not have been possible without complexity. The decisions to downsize the engines and bring back the power of the internal combustion engine through turbocharging, while adding significant hybrid electrical capacity, has mirrored much of what is going on in the auto industry. While the incredible efficiency that has been achieved has perhaps not attracted the publicity it should have done, I think most fans are aware that the race-fuel consumption is

around two-thirds of what it was in 2013, while maintaining similar levels of performance.

There have been further criticisms. Much was made of the lack of sound, which wasn't surprising given that this is a low-revving, downsized turbocharged engine. Next, the expense of the engines became a focus. Some of this latter criticism is unjustified: total engine bills *have* risen, but not for the obvious reasons. In 2006, the V8 engine had a unit cost of just over €300,000 and, over a season, each car used eight of them. Add in the inevitable cost of support including trackside engineers and freight, and it's clear that a typical engine bill of €8-€10 million for a two-car team merely covered the incremental cost of supply and support.



The high-downforce 2017 cars seem underpowered despite the engines producing in excess of 900bhp



For 2014, F1 switched to 1.6 litre V6 turbo-charged power units – amid great criticism over noise levels and cost

“ I THINK IT IS IMPORTANT THAT WE RETAIN HYBRIDISATION. NOT ONLY IS IT ROAD RELEVANT, IT ALSO GIVES US A TOEHOLD IN THE DESIGN OF ELECTRICAL MACHINES, ENERGY STORES AND HIGH-POWER CONTROL ELECTRONICS ”

on Saturday and a further one on Sunday – a situation no one would wish to go back to, but nevertheless it puts things in perspective.

What should 2021 power units look like? I think it is important that we retain hybridisation. Not only is it road relevant, it also gives us a toehold in the design of electrical machines, energy stores and high-power control electronics as well as the strategies involved in energy management. I was recently gratified when talking to a Jaguar engineer working on the new I-PACE, that he admitted how much their Formula E programme has taught them about the simulation of energy management.

And there is no doubt that instant electrical torque at all engine speeds, coupled with the very impressive power-to-weight ratio of modern internal combustion engines, provides the best solution for high-performance cars. While the motor generator unit attached to the turbocharger

is tricky to master, it contributes enormously to the power and efficiency of the F1 engine. Unfortunately, it is not as road relevant as the rest of the system, since it is designed to recover some of the energy that is wasted as heat in an engine that is running a full load. Very few engines outside of racing operate for significant periods at full throttle and so the MGU-H, as it is known, may not survive the next generation of F1 engines.

While the 900-plus bhp that the current 1.6-litre engines can produce in qualifying is impressive, the sophistication of the modern F1 car, and particularly the high downforce aerodynamics



Manufacturers such as Jaguar are learning lessons about electric power and energy management from their involvement in Formula E

introduced in 2017, have made the cars appear underpowered. I believe we should be targeting higher power even if this comes at the expense of increased fuel flow or maybe even energy recovery from the front axle. It would be nice to think we could reduce the weight of the engines but it's an inescapable fact that the hybrid power unit will always be heavier than a conventional engine.

Whatever solution is arrived at, I am confident that we will not dumb down the technology that is at the heart of F1 and that the new emphasis on entertainment will ensure this technology is spectacular in every sense.



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POWER PLAY

DIETER RENCKEN

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Then, on the Thursday before the Hungarian Grand Prix, it was announced that the deal was off, with Honda's general manager Masashi Yamamoto citing "differences in the future directions" between supplier and team. Vasseur added that "this decision has been made for strategic reasons, and with the best intent for the future of the Sauber F1 team in mind".

McLaren also want out of their Honda deal, and are said to have written to the FIA to ask about the ramifications of switching suppliers. Mercedes are believed to be top of their list and Ferrari seem the most unlikely, given their rivalry in the sportscar market. Thus, within two months of the nomination date, two teams have requested exemptions from Article 8.3 and Appendix 9. If both are granted, the concessions could leave the FIA open to litigation from teams who stand to lose out to a Mercedes-powered McLaren.

It's not unreasonable to assume that a McLaren-Mercedes piloted by double world champion Fernando Alonso might beat a Merc-

powered Force India or Williams-Mercedes – regardless of driver – particularly since McLaren enjoy substantial budgetary advantages as a direct result of the sport's inequitable revenue structures.

Any team displaced by an empowered McLaren-Mercedes could face a loss of up to £20m in their earnings from the constructors' championship, so they could hardly be blamed for seeking to block any concessions. Nor could the FIA be faulted for being concerned about the repercussions of legal action during a presidential election year. It seems as though present incumbent Jean Todt will sail through unopposed, but he likes to keep matters tidy.

It's no coincidence that the FIA took the unusual step of making a last-minute change to its Austrian GP Friday press conference line-up, to include McLaren, Honda and Sauber. As expected, all three publicly pledged their respective allegiances; that said, F1 contracts are known to be about as elastic as bungee rubber – and this time the cord would snap with inevitable consequences...

And the engine rumour mill continues to grind on: Scuderia Toro Rosso are said to be in negotiations with Honda, a suggestion that makes little apparent sense given the advantages STR enjoy by sharing engine supply with sister team Red Bull.

During these wranglings one significant factor has been overlooked: every power unit requires a compatible gearbox, and there are no regulations covering transmission supply. Appendix 10, anyone?

ENGINE DEALS THAT GO OVER THE RED LINE

Formula 1: it's all about power, not least when it comes to the power units themselves. Teams' access to them, regulations governing their development and their cost and specification have been the source of some of the sport's most bitter fights. The FIA, aware of these struggles and their potential to rip F1 apart, last year introduced revised procedures to regulate engine supply and costs and unfreeze development. This last provision was intended to help Honda accelerate their laggardly performance development curve.

Article 8.3 of the Sporting Regulations stops subsidiaries of major motor manufacturers from supplying more than three customer teams (in-house operations, as separate legal entities, are deemed 'customers'). A revision, known as Appendix 9, goes a step further: teams are required to nominate their power-unit partners by 1 May for the following season.

Should any teams be without a willing supplier by 1 June, the FIA can direct the manufacturer supplying the fewest teams to supply power units to any other teams at the stipulated price,



Sauber have withdrawn from their Honda engine deal for 2018; McLaren might like to do the same

and under the terms of Appendix 9. An elegant solution to a potentially thorny issue? Apparently so, until all teams nominated their 2018 power-unit suppliers and major cracks started to appear.

The first of these showed up at Sauber, who, having nominated Honda by the due date, after dropping long-standing engine partner Ferrari, split with team principal Monisha Kaltenborn. She had arranged the 2018 Honda deal, along with a concurrent supply of McLaren gearboxes, but Sauber's owners – the Swiss Longbow Finance consortium, funded predominantly by Swedish money – immediately began to express doubts about a Sauber-Honda partnership.

Longbow chairman Pascal Picci's reservations were echoed by new team principal Frédéric Vasseur. The word was that Sauber preferred any power unit other than Honda, with Ferrari topping their wish list, followed by Mercedes and Renault – all of whom currently supply three teams.

Renault's racing history spans four decades... and beyond. From the 1977 RS01 to today's F1 car and a vision for the future

PAST PRESENT & FUTURE

40 YEARS OF RENAULT IN F1

Forty years ago Renault made their debut at the 1977 British Grand Prix and transformed the sport forever. The French marque arrived with a 1.5-litre turbocharged engine, and by 1979 Jean-Pierre Jabouille had scored the company's first win of the modern era. Within ten years, all the major front-runners in Formula 1 had followed Renault's lead by switching to turbocharged power units.

In the four decades that have elapsed since the RS01 first appeared at Silverstone, Renault have continued their pioneering approach to innovation in the field of aerodynamics, chassis and engines.

By competing at the pinnacle of the sport, Renault are advancing their engineering prowess by developing hybrid turbocharged power units that lie at the heart of the current technical regulations. This allows them to connect the advanced technologies they use in F1 with their road cars – particularly in the development of electric and hybrid vehicles.

Combined with a long-term commitment to Formula 1, Renault recently unveiled their concept of how a racing car of the future could look ten years from now: their stunning R.S. 2027 Vision. Aided by 40 years of experience in grand prix racing, this futuristic machine puts greater emphasis on the drivers and envisages a more spectacular, more electric, safer sport.

Ultra-high-performance for the R.S. 2027 Vision comes about as a result of Renault's expertise in four-wheel drive, four-wheel steering and high-energy-density batteries.

From their humble debut in 1977 to multiple titles over the following four decades, Renault have enjoyed a long and illustrious history in Formula 1. And as they enjoy this special celebratory year, the focus of the company is still to return the team to where they rightly belong: the top step of the podium.



Renault Sport Formula 1 Team racer Nico Hülkenberg stands alongside the all-new Mégane R. S. in its striking black and white camouflage livery

Since 1977, they have taken part in more than 600 grands prix, claiming 168 race wins, 12 constructors' titles and 11 drivers' crowns with legendary champions including Alain Prost, Nigel Mansell and Fernando Alonso.

In 2016 Renault emphasised their commitment to Formula 1 by returning as a full-time works entry once more, a decision that underpins the manufacturer's vision for motorsport as an essential showcase for technical excellence.

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MÉGANE R.S. TIMELINE

- ▶ **2004** The first Mégane R.S. goes on sale
- ▶ **2007** Launch of the F1 Team R26 and first availability of a limited-slip differential
- ▶ **2008** The Mégane R26.R breaks the Nürburgring Nordschleife lap record for a front-wheel-drive production car
- ▶ **2009** Launch of the third-generation Mégane R.S.
- ▶ **2015** Introduction of the Mégane R.S. 275 Trophy-R
- ▶ **2017** New Mégane R.S. debuts at Frankfurt Motor Show in September
- ▶ **2018** Fourth generation Mégane R.S. goes on sale



All-new Mégane R.S. official CO2 and MPG figures not yet available. These will be published once obtained

THE LONG INTERVIEW

A glittering F1 career was brought to a brutal halt by a near-fatal rally crash in 2011. There followed some of the darkest days of Robert Kubica's life, yet he never gave up hope. In Valencia, in June, *F1 Racing* was privileged enough to attend his first F1 test in six years, and it was instantly clear that his talent remains undimmed. Here he tells us the story of his fall, and rise...

THIS IS ROBERT
KUBICA

INTERVIEW ANTHONY ROWLINSON
PORTRAITS MALCOLM GRIFFITHS





HERE else to interview Robert Kubica than in the back of a garage? Not for this guy the glitz and tinsel of the F1 circus. Kubica was always and only about the racing. Today we'll sit on a chassis packing case to talk. Of course we will.

"Give me a fast car, a bed and a roof over my head – that's all I need," he once said to me, a lifetime ago.

A decade later, after an accident that nearly killed him and having charted an emotional odyssey none would choose to undertake, he's back driving a Lotus (now Renault) E20 F1 car around Valencia's Ricardo Tormo circuit the only way he knows how: as fast as humanly possible.

His return to the cockpit with the team for whom he was driving back in 2011, just three days before the rally accident that briefly left him clinically dead, has been a soul-stirring mix of high emotion and shop-floor practicalities. Yes, there was a 115-lap test-day programme to be worked through, but – pinch yourself – this was *Robert Kubica back in an F1 car*, hammering in laps like he'd never been away.

If it seemed scarcely imaginable that he could be back at the wheel, powers apparently undimmed and performing in a commanding, yet business-as-usual-manner, the magnitude of what he'd achieved and the pain endured to prepare for this day were not lost on him. After thanking the Renault race-support team for their labours and then changing out of his overalls, Kubica took himself away to a quiet corner of a nearby garage for ten still minutes of solitary reflection. His performance had surpassed all expectations. Now, we all knew, the only pertinent question was: "What's next?"

F1 Racing: You look as if you want to get straight back in the car and do it all again...

Robert Kubica: Well, for sure, my goal was not to do one test and go home. This test was very important for me and probably also for Renault to see what I could do and if I could drive the car. I don't know what the future will bring, but I have been working hard for this and now I know that in some

way – in a good way – I am able to do it. So now I have to keep working to be ready for wherever the opportunity might be.

If you asked me today [we're speaking on 6 June 2017] to do a grand prix, I would say no. But not 'no' because I think I cannot do it. It would be 'no' because I need more time to understand better the tyres and stuff like this. The big thing in F1 now – and I've been able to tell this even watching from the outside, on television – is tyre management. And that's something you learn only by testing. Today, here, we had extremely high temperatures; the track temperature was more than 60°C and that definitely makes it even more difficult.

That's probably a good thing because I've always said to the Renault guys that I'm not here to hide my difficulties and I'm not here to prove anything. The test was only to see if I was able to do it. I think I'm intelligent enough to know where my limit is and probably I was putting my limits much lower than they really are. So the test gave me a good boost and confidence, and probably even more energy and more motivation to go forward and work for something.

F1R: You look very happy...

RK: [He gives an 'aw, shucks' look, with a half-downturned smile, almost embarrassed that he has betrayed his feelings.] Well, yeah. I'm not an emotional guy, but today *was* an emotional day. Not while I was driving, but when I stopped. To be honest, there were mixed emotions. It's not that I felt one hundred per cent happy, but I do have to be happy. But on the other hand, you know, there are memories.

People will say to me 'you have to think about the future, not the past', which is true. But we are human beings and it's normal that sometimes when you love something and you lose something, it still comes to your brain, into your head. So when I jumped out of the car I was very happy about the day. But at the same time I know that the accident took a really big part out of my life. Today was a confirmation that I lost a big part of, let's say, *what I was living for*. And it is not easy to find new goals or new targets and a new way of living.

Probably I was searching too far away from where my life was and today showed that maybe there is something closer to what I was doing, where I can still have good satisfaction, good fun, and I can set some new goals.

Kubica is wearing a T-shirt and shorts and makes no attempt to hide the extensive scarring that runs almost the length of his right arm – legacy of his accident and the multiple operations required to restore the arm's function. Suspension of disbelief is necessary to reconcile the extent of the injuries with the speed he's displayed today. In one early run he set times faster than those posted a day earlier by Renault reserve driver Sergey Sirotkin.

F1R: Is your arm still painful?

RK: No, I don't feel pain. I know people who've had metal plates inserted for fractures who feel pain when they go to

high ground or whatever. But I don't. Okay, I have limited movement and I cannot train the arm a lot, but this is a consequence of the accident and there are some things that I just cannot change.

To come here after six years away from F1 and do long runs, this shows not everything is done by muscles and power. It makes me wonder if limits are placed by my brain and my real limits are beyond what I think – but I am yet to discover them. In my situation, the most important thing is to discover my limits and to get to know myself better in this condition. Honestly, I think tomorrow I could do a race distance.

F1R: A huge amount has changed for you, hasn't it, since we last spoke to you a few years ago when you were doing a few rallies with Citroën?

RK: It has, yes. But the rally thing... maybe people don't understand why I was doing that. The reason was actually very simple: I realised that anything I did that reminded me about F1 and what I was doing before the accident, was hurting me. So I decided to change the environment. It was maybe a harsh way of doing things, but I really felt it was necessary. It wasn't that I went crazy after the accident – I had many injuries, but the brain is still fine!

Doing Formula 1 again, for sure this is more what I'm used to, but if I had done this two or three years ago, it would have been too early and I didn't want to hurt myself even more. I could have done it and I knew I would enjoy it but I also knew, then, that I wasn't ready to do anything more. So that's why I kept it very quiet – stopping rallying and doing just

single races, here and there. These were all kind of check-ups and tests for myself because my secret goal was always to jump back into an F1 car. All the small tests were to raise the difficulty and physical stress for my limitations step by step.

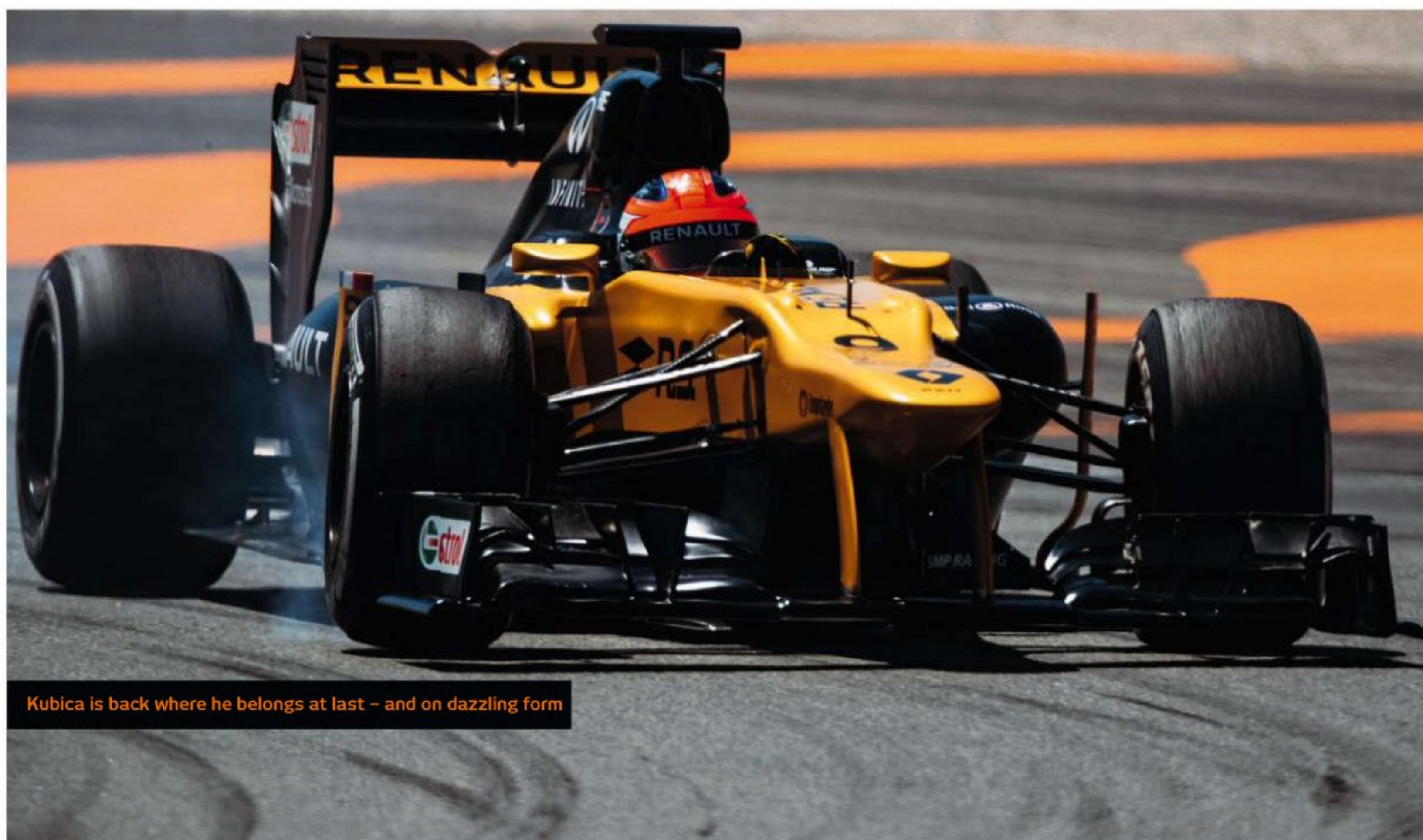
And I prepared very well for today, so I think it has been the right approach for me. Maybe it was not the most common approach, but my situation was very unusual. For someone else, maybe something completely different would have been right, but the only person who really knows how I feel and what I can do is me. I've always been very cautious by nature, doing things step by step and quietly. If it works, there's satisfaction; if it doesn't work, well, at least I've tried. So this was the kind of approach I took here.

I felt for a couple of months or more that I was ready; it was just a question of preparing for it and, fortunately, the opportunity came – thanks to Renault. Somehow they have always been there for me: my first F1 test was with Renault in 2005, so there's quite a strong link between us. I really ▶

“

TO COME HERE AFTER SIX YEARS AWAY AND DO LONG RUNS, THIS SHOWS NOT EVERYTHING IS DONE BY MUSCLES AND POWER. IT MAKES ME WONDER IF LIMITS ARE PLACED BY MY BRAIN AND MY REAL LIMITS ARE BEYOND WHAT I THINK

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Kubica is back where he belongs at last – and on dazzling form

THE LONG INTERVIEW



appreciate that the opportunity came. I'm not the kind of person to knock on doors for a drive, but I guess some people had good memories from when we raced together in 2010.

F1R: Formula 1 is a kind of a drug, isn't it?

RK: For me, it's very simple: Formula 1 is the most professional and highest-level category, not only the car, but the whole environment and the people who work in it.

My biggest difficulty was that I missed the people I worked with and the experience of always trying to maximise the potential of the car, working on every single detail with all our focus. Okay, I missed racing, I missed driving, but I missed as well the highest professional level of motorsport.

F1R: Is your mental readjustment the biggest breakthrough you've made, realising that you're ready to drive F1 again?

RK: Yes, for sure. On the physical side there are some things that I cannot change, but there are other things that I can work on to improve my physical level. I know I've never been as fit as I am building up for this test! And there are other ways I have to compensate for my limitations: I cannot compensate for a lack of 'force', or a lack of movement of the right arm [the rotational ability of Kubica's right wrist is limited], so my brain has had to readjust and find tweaks.

I know this will sound strange, but in some ways I feel I'm a better driver now than I was in the past. That may be partly the rallying giving me a different sensitivity, but I also think that the head and the brain have had to discover new ways of doing things. In some areas I've become more sensitive, which is positive. Of course I would prefer to have two arms working at 100 per cent, but this is not the case, which is why I have to work harder than before. I have to make sure that whatever I try to do I'm able to do it, and that's why I am very cautious.

I've had many requests to race in different categories, and I've always asked to have a day of driving before going to the race. Sometimes that wasn't possible and I got the feeling people thought it was an excuse for me not to go. The truth is that it was just for myself – to see if I'd be able to get a good result. I don't race to make up numbers, you know?

Kubica's driving rehabilitation programme has included Formula E, sportscars, F3, WRC, simulator sessions and one-make saloons. Each category has allowed him to evaluate different aspects of his physical capabilities.

RK: This may sound strange but an F1 car is probably the easiest one for me to drive, because of the power steering. On the one hand you have less reaction time in an F1 car because things are going quick and a special level of concentration is required. But, as I confirmed to myself today, I've not lost everything – even though when I wake up every morning and I look in the mirror I see my hand, and even after six years it still reminds me of what has happened.

This was another reason why I chose to do some rallying, because I've driven at the highest level in circuit racing when I was 100 per cent fit. But I'd never done a lot of rallying in the past, so I didn't know how much I was losing; it didn't remind me that I might have difficulties, because I wasn't making a comparison. That helped me.

Whatever targets you have, you try to achieve them. And that's the best thing, you know? The worst times for me are waking up in the morning and having nothing to do. Then you start thinking... maybe you watch a grand prix and then maybe you think about the races you miss more than others...

F1R: Which are the ones you really missed?

RK: The week before the season starts has always been the worst. Then, for sure, Melbourne, Monaco, Monza... Those three I would say. And Canada is very special.

Now, fortunately, that feeling is over: it's true that sometimes the best medicine is time. I think it shows that sometimes being patient and taking your time is not the worst thing and actually it can work. Okay, I know I've lost a few more hairs and that the years I've lost won't come back – I won't be credited – but it's also part of my life. After what happened to me I had to set up a few targets, and definitely this was my big goal. I'm very positive about today.

F1R: So what made you feel ready for F1? How could you tell that you were ready?

RK: I'd say 80 per cent is the brain. Once you start believing you can achieve it, it's half of the success. Then, for sure, I had to work hard, I had to prepare hard. This goal was in my head for a long time, but I didn't talk with anyone about it.

I started slowly, losing weight – I weighed 14kg more than now! – so step by step I started improving my physical side. Then I started working also on my brain, again in small steps, and when I could see an improvement I started to believe that it might be possible. In my situation there was a high

Friends reunited: the Renault mechanics talk Kubica through the steering wheel controls. They're every bit as keen for him to succeed at this test session as he is

risk of burning myself, especially mentally, and this was the last thing I wanted – to mentally destroy myself.

Then, of course, you have to be given an opportunity. Before I came here, I already knew that this would be a very emotional day for me, but I also knew that the only way that it could work would ▶



F1 Racing has kept a close eye on Kubica's career ups and downs, putting him on the front cover in 2007, 2008, 2010 and 2013





“

I KNOW THIS WILL SOUND STRANGE, BUT IN SOME WAYS I FEEL I'M A BETTER DRIVER NOW THAN I WAS IN THE PAST

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RENAULT

RENAULT

THE
LONG
INTERVIEW



THIS GOAL WAS IN MY HEAD FOR A



LONG TIME, BUT I DIDN'T TALK WITH ANYONE ABOUT IT.
I STARTED SLOWLY, STEP BY STEP...



...AND WHEN I COULD SEE AN IMPROVEMENT,
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be for me to arrive relaxed and confident so that I would be able to do the job. That's why I worked so hard. I could have done this a couple of months earlier, maybe even last year, but I wasn't sure. Like this, I was coming here with confidence today – not 100 per cent, but I was nearly sure. My only question was whether it would take ten laps or 100 laps for the feeling to come back.

It took only one...

F1R: What was it like this morning when you were putting on your race suit?

RK: Actually I didn't have a lot of sleep last night. I woke up at 4.30am and then I was in the gym at six o'clock, doing nearly one hour of biking just to warm up a bit and to try not to think too much – to chill out.

Things change, you know? In the past I would always sleep until the last minute – ten hours a night! But today was even bigger than my first test in Formula 1: there were more emotions, more unknowns. That's a very strange feeling when you already have experience and you already know that you can drive the car. I knew what to expect and probably how it would feel, but there were a lot of emotions there for me because of the past six years.

But I was able to relax. When I saw the time of the first lap, I knew I would be okay. I felt comfortable in the car. Actually, I kept in my mind that it would be more difficult than in reality. So that I could have a positive surprise. Like this: I am well surprised, you know? Surprised in a positive way. I made sure I didn't come here thinking that I could definitely do it, no problem. I came here with respect for what I had to do; with respect for the car; respect for the challenge and respect for myself – but still confident and relaxed. Always telling myself that if I stayed calm and quiet and just waited for the right moment, the feeling would come back: *I can do it*. It happened surprisingly fast.

F1R: How much set-up work did you have to do with the car before the test?



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RK: Well, there is a funny story from when I was doing the seat fit. I jumped into the car and they started doing the seat moulding, and while we were doing it the guys asked me how was the steering wheel, what do we have to change? I said: "Nothing." They looked at me and asked: "Why nothing?"

It was because it already felt like home to me. This car [a 2012 chassis] was exactly what I wanted for 2010 or 2011. It's still exactly how I like the cockpit. The pedal angle is exactly what I had asked for, the steering wheel is in just the right place – it's what I was used to, practically made for me. This gave me a lot of confidence because I knew that I didn't even have to think about the angle of the brake pedal or the stiffness – or the length of throttle travel. I already knew exactly how it was going to feel. And that took away some of the things that I'd normally have to think about or adapt to. It put me more quickly into a 'comfort zone' with the car.

F1R: The gearshift paddles allow you to change up and down with your left hand, don't they?

RK: Yes, I use the pull and push paddle for upshift and downshift, and I do everything with the left hand. That's the only difference.

F1R: You looked comfortable immediately out on track.

RK: Yeah, I was surprised with that. When you're driving, you think about a target lap time and you know that you'll be happy when you hit it. I was happy when I saw the time of the first lap. In a way it doesn't mean anything, because I know that taking a car to 90 per cent is quite easy, and the last ten per cent, the last couple of tenths, is where it gets tricky.

The biggest difference I found was with the tyres and tyre management. Practically every run was like something new for me – a different compound or used tyres – and that can make life difficult. But it's very productive and you learn a lot. For sure, if I have the opportunity to do this again I now have much more knowledge about how the car is changing – balance, performance, grip level and so on – with different tyres and different fuel loads over different lengths of stint. The most important thing is that I felt very comfortable.

F1R: When you were doing qualifying runs, how hard were you pushing? Ten tenths? Nine tenths?

RK: When you are driving something that you haven't experienced before, it's like driving blind. I didn't know what to expect from the tyres, or the fuel load.

But I think I can be happy with the lap times and with my driving. I know I can improve because I didn't have all the knowledge I need. Apart from one set of tyres I would say I was happy whatever fuel loads we were running, and on the long runs the pace and tyre management were consistent. That's the stuff you need to get 'the feeling' and it was there. That's the most important thing.



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DEBRIEF ENCOUNTER

F1 Racing is granted rare access to a paddock meeting of Mercedes engineers, as Lewis Hamilton and Valtteri Bottas are briefed ahead of Friday practice at the Austrian GP

WORDS JAMES ROBERTS

PICTURE STEVE ETHERINGTON



1 Ron Meadows has been a member of the Brackley-based Formula 1 team since their first incarnation as BAR-Honda in 1999. He was team manager through their years under the ownership of Honda, and is now Mercedes F1 sporting director.

2 Lewis Hamilton's private room is located directly behind his chair at the briefing desk. Here he is flanked by his two senior race engineers, Riccardo Musconi on his left and Peter 'Bono' Bonnington, who is sitting on his right.

3 This is one of two screens the engineers are looking at (the other is behind our photographer), which display a series of objectives for the two 90-minute Friday practice sessions. These objectives include set-up parameters, tyre evaluation and engine-control work.

4 Technical director James Allison sits next to chief trackside engineer Simon Cole. Opposite each other at that end of the table are Evan Short, team leader trackside electronic systems (left) and Marcelo Martinelli, trackside control systems engineer (right).



5 The team communicate via headsets, enabling everyone in the debrief room to hear, while extending the dialogue to factory staff back at base in Brackley. This particular meeting (in the trucks behind the pits) starts at 9am, exactly one hour before FP1.

6 Valtteri Bottas's room is behind the second grey door on the left-hand side. In the meeting he sits opposite his team-mate and is flanked by senior race engineers, Marcus Dudley (on his right) and Tony Ross (left) who engineered Rosberg to the world title last year.

7 This is chief strategist James Vowles. The team will spend part of Friday evaluating aero updates, tyre wear and degradation. The latter will inform their strategic decision for qualifying and the race, which Vowles will have calculated from the data provided.

8 The meeting is being chaired by trackside engineering director Andrew Shovlin. He has prepared the agenda on his laptop and that information is then projected onto the overhead screens inside the debrief room.





THE PRINCE OF ZANDVOORT



In his home country **Max Verstappen** is idolised to a degree that's hard to explain... but we'll give it our best shot! *F1R* spent a weekend with him at the former venue of the Dutch GP and watched him smash the lap record in a Red Bull RB8

As the sun rises, the lifeguards move into position. Flags are hoisted and ice-cream vendors stack their wafer cones for business. It's going to be another scorcher. The busy double-decker trains pull into the final stop on the line and holidaymakers swarm ant-like out of Zandvoort aan Zee station. But today, they are not flocking to the sandy beaches. They are turning their backs to the waves and heading inland to the dunes to watch their hero perform. The former home of the Dutch Grand Prix will today resonate to the sound of Formula 1 machinery, 32 years after the last world championship race was held here.

In a garage at the top of the pitlane sits a Red Bull RB8. There's no need for slick presentation; this is F1 in the raw. As the countdown to a show run ticks down, more fans clamber up the sandy dunes for a better view. Around the track, children press their faces up against

WORDS
JAMES ROBERTS
PHOTOS
MALCOLM GRIFFITHS

the chain-link fences to catch a glimpse of the car and, most importantly, the driver.

Greeted by whoops from the crowd, Max Verstappen, 19, finally appears, flanked by his entourage as he coolly strolls down the pitlane.

He smiles and waves to his fans as he enters the garage. Marshals clear the pitlane as the V8 burbles into life. Local photographers are literally shaking as they try to line up the Dutch national hero in their viewfinders as he lowers himself into the cockpit of the 2012 machine.

Once he's strapped in, he blips the throttle and the roar thrills those who can hear but not yet see him. The tension builds around the track. Then standard Formula 1 procedures take over. His engineer walks backwards out into the pitlane, signals for the four tyre warmers to be removed, and commands Max to take to the track. The car clunks forward into first gear and he ▶



finally emerges from the gloom of the garage into the bright sunshine.

Then – no speed limit rules here – Max nails the throttle and his hard, orange-rimmed rear Pirellis emit a plume of blue smoke as he guns the Red Bull down the pitlane. Instantly he's into Tarzanbocht, the famous long right-handed hairpin, commencing his first lap.

A minute or so later, the car picks up pace rounding the last corner. As Max blasts past the pits, that old 2.4-litre V8 screams at the top of its voice, setting stomachs trembling, while fans in the grandstands, smartphones held aloft, swing their arms in unison as they record their hero shooting past them. Once again he brakes for Tarzanbocht and begins another lap. Up, down, through the dunes, flat-

The grandstands of Zandvoort are packed to the rafters and crowds follow Max's every move. If F1 were to make a return here, there'd be no doubting the levels of local support

out through Hunserug, Slotemakerbocht and then into the right-hander, Scheivlak. For everyone who's watching today this is a spine-tingling thrill, since Verstappen is clearly pushing on this narrow track where run-off is limited and gravel traps will curtail any fun, instantly.

After ten minutes of lappery, Max slows his Red Bull at the entrance to Tarzanbocht and nails the throttle to perform a series of spectacular donuts, engulfing the crowd with wreaths of white tyre smoke. He then comes

around to the start/finish line, stops the car, climbs out and waves as he receives a standing ovation from his loyal supporters. It's a feat he'll repeat half a dozen more times over the next two days. The crowd love it. It's clear that they're all here for this one man. ▶





THE PRINCE OF ZANDVOORT

The Netherlands has a rich motor racing history: Zandvoort began hosting GPs after WWII and 16 Dutch drivers have entered world championship F1 races. But one family has dominated the stats. Jos Verstappen galvanised the country during the 1990s, and now his son, Max, is arguably the most recognisable sportsman in Holland – and the only Dutch racer to win a grand prix.

“I never used to watch Formula 1, ever,” says Liesbeth van Mourik, a local resident. “Now, because of Max Verstappen, I never miss a race.”

The younger Verstappen is demonstrating his Red Bull in between sessions for a domestic race meeting at Zandvoort. Also on the event card is a BOSS race (mainly former GP2 cars, although one Benetton B197 is also

on the grid) and a couple of rounds of the touring car TCR Benelux series. There is also a sportscar race that includes among its number a yellow ‘Jumbo’-sponsored LMP2 prototype. It will go on to race at Le Mans this year, with Rubens Barrichello at its wheel, as he makes his debut at the 24 Hours. Alongside him at the wheel will be former Dutch F1 driver Jan Lammers and Frits van Eerd. The latter owns the Jumbo supermarket chain, which is financing this weekend’s ‘Jumbo Familie Racedagen’ and is also a private sponsor of Verstappen.

On the big screens dotted around the track are TV adverts featuring Max dashing around a Jumbo supermarket with a trolley – and fans were able to get tickets for this event from Jumbo shops. In total, more than 100,000

A few crowd-pleasing donuts from the home hero





people have crammed into the small facility at Zandvoort this weekend.

The enthusiasm for young Verstappen has given motorsport in the country a lift, and Zandvoort itself is undergoing a bit of a renaissance. Two years ago, it was bought by Prince Bernhard of Orange-Nassau van Vollenhoven – or Bernhard van Oranje, as he is also known. As a motorsport fan, entrepreneur and long-time amateur GT racer, he has been working hard to revitalise Zandvoort. And today he takes *F1 Racing* on a tour of the pit building and hospitality suites, showing off a restaurant overlooking Tarzanbocht that wouldn't look out of place in the West End of London.

"We aim to provide the best dining experience of any circuit in Europe," says van Oranje. "We have partnerships with Heineken and Red Bull and are opening the track for more than 300 days a year to make Zandvoort a viable financial operation."

The new restaurant (appropriately called 'Bernie's') opened last night. In attendance were former Dutch F1 drivers Robert Doornbos, Christijan Albers, Lammers, Max (obviously) and two-time Indy 500 winner Arie "The Flying Dutchman" Luyendyk. Bernie pauses to look up at a big screen and there is Verstappen waving to the crowd as he's interviewed on an open-top bus driving around the 2.6-mile track.

"We're very grateful to Max for helping to promote this event," continues van Oranje. "He's one of the most popular sportsmen in the Netherlands at the moment, and because of his age and the way that he deals with people, he's very cool, very relaxed and very accessible. Youngsters need to have an idol and he fits that well. Also it's very good for motorsport in Holland, which had suffered a bit of a downturn until Max arrived on the scene. He has helped revitalise that market."

With Formula 1 now under new ownership, the sport is heading back to its European heartland. Races in France

Crowds line the sand dunes, all desperate for a glimpse of their national sporting hero, doing what he does best

and Germany are set to return to the calendar in 2018. So, perhaps now the time is right for Zandvoort to pitch for the return of the Dutch GP? One thing is guaranteed: there will be a huge demand from a spectator point of view.

"Clearly we have an ambition for F1 and there is new management now, so hopefully they will change the sanction fees for a race," says van Oranje. "A fan survey supported the return of Zandvoort. We have an enormous history and we cherish our heritage, but if we were to host a race we'd need to find a business case or government help."

As a narrow, old-school track with limited run-off, it's clear that this circuit would need a big upgrade to accommodate modern F1 cars – and its owners are rightly wary, since any alterations would change the unique nature of the layout. And because the circuit pincers back to the pits after Turn 1, it reduces the paddock space so there's simply not enough room to fit all of the paraphernalia required for a 2017-spec grand prix.

"In essence, we'd like to look at what needs to be done," says van Oranje. "For the pits and paddock, we might need to put them on the other side of the track, as we'd like to keep changes to the track as small as possible so we don't alter its classic configuration. We haven't spoken with F1's new owners yet, but we're researching a business case for the government and the area."

The nearest Verstappen currently has to a home race is the Belgian GP at Spa, just 20 miles south of the Dutch border. Each year, a growing legion of orange-clad fans cross that border in great numbers to support him.

The affection with which Verstappen is regarded is obvious, and this weekend in Zandvoort he's surrounded by followers whenever he leaves the sanctuary of his car. Six burly Red Bull security guards help bundle him through the clamouring crowds: it is Verstappen who is the prince among men at Zandvoort, not van Oranje.

"It's pretty exhausting," says Max when we catch up

with him, "but it's beautiful to see so many fans, over 100,000! That's really cool. And it's crazy to see little kids, older people, mums, dads, all just as fanatical. For sure it can be a bit hectic sometimes, but that's part of it and you try to manage it as well as you can."

It feels more F3 than F1 when we interview Verstappen in the back of the Red Bull truck and he's happy to be ▶

"IT'S BEAUTIFUL TO SEE SO MANY FANS - OVER 100,000! THAT'S REALLY COOL. AND IT'S CRAZY TO SEE LITTLE KIDS, OLDER PEOPLE, MUMS AND DADS, ALL JUST AS FANATICAL" MAX VERSTAPPEN



THE PRINCE OF ZANDVOORT



reminded of his Masters of Formula 3 victory here, back in 2014. But does he ever think he'll get the chance to win on home turf, here, in F1, in the future?

"If they want to do an F1 race here again, they've done something right because they've laid new asphalt. But they also need to look into run-off areas and paddock space because at the moment there's not enough. I think the average speed of the track is too fast to encourage overtaking, so they might need to change the layout a little bit. Maybe before the last corner, build in a hairpin to encourage overtaking and then lead that out onto the straight. Otherwise, you'd qualify and then just follow each other around.

"But the track at the moment is still great. Maybe it could be a little bit wider, but it's special because it's very old-school – a bit like Suzuka, but then it's designed by the same guy [John Hugenholtz]. The second part of the lap is flat and there are some nice

"WE BROKE THE LAP RECORD – WITH HARD TYRES AND A LOT OF FUEL, TOO. IT WAS A GREAT EXPERIENCE. I DIDN'T HAVE A LAP TIME ON MY DASH, BUT I WAS PUSHING AS HARD AS I COULD" MAX VERSTAPPEN



corners, but once you go off here the car is destroyed: going all the way to the limit is hard."

But Max knows only one way to drive. So when the RB8 is fitted with a new set of hard tyres, he immediately (but unofficially) breaks the lap record. The previous mark here was set by Luca Badoer, when he demonstrated a Ferrari F2001 16 years ago. Badoer set a lap time of 1min 19.880s, bettered today by Verstappen who stops the clocks on the newly resurfaced track at 1m 19.511s.

"Yeah, we broke the lap record – with hard tyres and a lot of fuel, too," says Max. "It was a great experience. I didn't have a lap time on my dash, but I was pushing as hard as I could with the tyres and fuel load I had. Then they said I broke the lap record and that was great."

Verstappen finished his last demo run about an hour before we talk and the track is still active with various

The first ever motor race took place on the streets of Zandvoort in June 1939 and the event proved so popular that the local mayor decided a permanent circuit should be built in the dunes to the north of the town.

The new track hosted its first race, won by Prince Bira of Siam, after the war in 1948. But it wasn't until 1952 that the 'de Grote prijs van Nederland' became part of the F1 world championship.

A potted history of Zandvoort



The 1967 Dutch Grand Prix was significant because Jim Clark triumphed in the Lotus 49, recording the first win – on its debut – for the Ford-Cosworth DFV engine.



Tragedy struck at Zandvoort when Piers Courage lost his life in the 1970 event and then Roger Williamson suffered a fatal accident three years later. Williamson's car overturned, caught fire and despite the brave rescue efforts of his friend David Purley, he succumbed to his injuries.



James Hunt stunned the F1 establishment when he overcame the might of Niki Lauda's Ferrari to win the 1975 Dutch Grand Prix in the privately run Hesketh – the little team's only world championship victory.



In total, 30 F1 races were held at the track and winners included champions Mario Andretti, Nelson Piquet and Alain Prost. McLaren's Niki Lauda triumphed at the final grand prix to be held at Zandvoort in 1985. Soon after, the layout of the circuit was shortened.

touring cars circulating. But as soon as the F1 engine falls silent, the crowds immediately disperse and start to file back towards the train station, the coastal town train line once more filling up to take folk back to Amsterdam and beyond.

Zandvoort is like many other F1 towns across the globe, which once thrived as a result of having a grand prix, but now have only the memories of those glory days. Like many others *F1 Racing* has visited over the years, such as Kyalami, Watkins Glen, Adelaide and Imola, all have bars and cafés adorned with motor racing memorabilia on their walls from the times they were awash with F1 stars. There's still an active circuit nearby and, on weekends like this when F1's back in town, the passion is re-ignited. But, in reality, their race-hosting days are behind them. We doubt that even Max Verstappen has the power to reverse that trend. **1**

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WORDS STEWART WILLIAMS
PICTURES JAMES MANN

THE LOTUS 78

This revolutionary Lotus was the first competitive ground-effect F1 car



Castrol

Lotus had dominated great swathes of the 1960s and early '70s with some impressive machinery: the Type 25, the 33, the beautiful 49 and finally the 72. But by 1976 the performance of their 77 was causing Lotus founder Colin Chapman concern. A new car was required and Chapman was adamant that the Lotus 78 would be a completely different machine.

Chapman had studied the radiators on the wings of a Mosquito fighter plane and found that the hot-air outlets produced lift. He deduced that if this was inverted on an F1 car, it would boost downforce. He handed the project over to head of engineering Tony Rudd, who put together a team that included chief designer Ralph Bellamy, vehicle engineer Martin Ogilvie and aerodynamicist Peter Wright.

An inverted wing profile wasn't a completely new idea in F1; Rudd had tested the concept at BRM. But the eureka moment came when Wright was trying various car body shapes in a windtunnel. He noticed that as the speed of the rolling road increased, the car (and specifically its sculpted underside) was drawn closer to the road. When he added cardboard sides, downforce levels soared – and so 'skirts' were born.

NOW THAT WAS A CAR

No. 61

THE LOTUS 78

Chapman gave the project the green light and after further design and engineering work, plus more time in Imperial College's windtunnel, the 78 was put into production – taking design cues from the ageing 72. With a similar wedge shape and internal layout, the 78 had a stronger, narrower monocoque. The bodywork was made from fibreglass panels, with aluminium used to strengthen the chassis.

A longer wheelbase, better weight distribution and detailed aerodynamics helped, but it was all about the car's underbody. In addition, the positioning of the radiators meant the hot air they expelled passed over the upper bodywork, creating even more downforce. This boosted grip, which increased corner speeds. Initially brushes were attached to the sidepods to keep the low-pressure area beneath the car, but these were later replaced with movable rubber skirts.

Five examples were built, known as the John Player Special MkIIIIs. The car was ready to race by mid-1976, and the team immediately knew they'd come up with something special. Lead driver Mario Andretti spent a lot of time with the car at the team's Hethel test track, describing the experience of driving the 78 as if it were "painted to the road".



Andretti pushed Chapman to run the car in 1976, but Chapman wanted to keep his powder dry since the title was already out of reach and he was wary of alerting the rest of the grid to what he had up his sleeve. The 78 therefore made its debut in the first race of 1977, the Argentine GP. Andretti qualified eighth and Gunnar Nilsson P10, but only one car started the race after a fire extinguisher exploded in Andretti's car during Sunday warm-up. Andretti took over his teammate's 78 for the race but retired with two laps to go when a rear wheel bearing failed, although he was still classified P5.

Further retirements for Andretti in Brazil and South Africa, with Nilsson managing P5 in the former, were the precursor to the car's first win at Long Beach. Andretti had qualified second but his win was a little fortuitous since he had followed Jody Scheckter's Wolf for most of the race, until a slow puncture got the better of Scheckter letting Andretti through with two laps to go. That popular home win was followed by another triumph, this time from pole, in Spain.

Despite these two wins the 78 suffered various teething problems. The low-pressure area under the car was too far forward, which meant a larger rear wing was needed, which, in turn, caused drag at high-speed circuits, although a small wing was later designed that enabled Andretti to claim victory later on in the season at Monza. Nilsson's sole win came in the Belgian GP at a wet Zolder, and Andretti was victorious in France.

The brakes weren't great and the trusty Ford Cosworth DFV was no match for the flat-12 engine in the back of Niki Lauda's Ferrari, which, in turn, forced Ford to search for extra speed at the cost of reliability. This was what lost Andretti the title in 1977, even though he won more races than eventual champion Lauda. That said, Andretti still loved it: "If I was going to choose the car that gave me the most satisfaction winning races, then I would say the Lotus 78 rather than the 79."

Other teams tried to copy it, but were hindered both by the skirts (which hid the underside of the car effectively) and the team's secrecy. Lotus started the 1978 season with the same car and it was still competitive enough to enable Andretti and Ronnie Peterson to win two of the first three races. Peterson's P2 in Belgium was the last podium for the 78 and a final



"THE CAR THAT GAVE ME THE MOST SATISFACTION WINNING RACES WAS THE LOTUS 78"
MARIO ANDRETTI

RACE RECORD

Starts	53
Retirements	23
Wins	7
Poles	9
Fastest laps	7
Other podiums	4
Points	106



SPECIFICATION

Chassis	Aluminium monocoque
Front suspension	Double wishbones, inboard spring/damper
Rear suspension	Parallel top links, twin-radius arms, lower wishbones, outboard spring/damper
Wheelbase	2,741mm
Engine	Ford-Cosworth DFV V8
Engine capacity	2,933cc
Output	475-495bhp
Gearbox	Hewland FG400 5-speed manual
Tyres	Goodyear
Weight	588kg
Notable drivers	Mario Andretti, Gunnar Nilsson, Ronnie Peterson

scheduled appearance for the car with the works team. Héctor Rebaque privately campaigned the original 78 prototype throughout 1979 and, tragically, Lotus brought a 78 out of retirement for Peterson in Italy, the race that cost him his life, after his 79 was damaged in practice.

Andretti would win the title that year and while the new 79 took an extra five wins from the remaining 11 races, 18 of his 64 points came from the 78. It was in a class of its own. 🏆

{ YOU ASK THE QUESTIONS }

DANIIL KVYAT

The Toro Rosso racer is in good spirits and happy to discuss his new love of backgammon, his romance with a triple world champion's daughter and heavy metal. But then there's the matter of being dropped by Red Bull...

WORDS JAMES ROBERTS

PHOTOS  LAT IMAGES: LORENZO BELLANCA

While Daniil Kvyat is being ushered from the back of the Toro Rosso garage, he reflects on the last time he sat down to answer our readers' questions. It was at the end of the 2014 season, in the dusk of the Abu Dhabi paddock, when he'd just finished his first year with Toro Rosso. Back then he was a burgeoning young racer with a bright future. Ahead of him lay the promised land of a drive with the senior Red Bull team – justification for a man of his obvious talents. That promotion duly came in 2015, but was followed a year and a bit later with the very public demotion to Toro Rosso when he was replaced by Max Verstappen.

Mark Webber once remarked that the order of these question cards is deliberately arranged. Start with the easy ones and then make them increasingly harder. Well, the truth is that they appear in random order. To prove this to Daniil, we shuffle them in front of his eyes. We're definitely not hiding the tricky ones until the end...

Happy with that, he's ready to pounce on the first one. Then our shuffling spectacularly backfires and Daniil's cheery demeanour fades: the dreaded demotion comes straight to the top of the pile.

"Oof!" he says, gutted. "First question, straight away..."

How did you manage to get your mind in the right place after your move back to Toro Rosso?

Samarth Shah, India

Nothing in the mind so much. Not when you're in that situation: you just have to go with the flow and adjust to basically move ahead, do your job and drive the car. That's all I could do.

FIR: [We attempt to help Daniil out a bit, given the awkwardness of the first question.]
Positive thoughts?

DK: It wasn't easy to have positive thoughts at the time, but now I'm full of positive thoughts, so it's all okay to me now. It seems like something that happened a long time ago and it doesn't really bother me any more.
[Let's swiftly move on...]

How did you and Kelly Piquet meet? And have you had any tips from her dad, Nelson?

Anna Hunt, UK

We met in Monaco during our vacation in August last year. We both had a very positive vibe with each other straight away, so I knew that I wanted to share something more than just ▶





Kvyat has bounced back from the bad times and is fully committed to F1. Although he does have an eye on the future...

knowing her. That was mutual, luckily. I haven't had the chance to chat with her dad, even though I would love to as he's a legendary driver. Kelly knows a lot about racing, obviously, the history and what's going on today.

You recently got a backgammon set for your birthday, but what is your favourite gift you've ever received?

Fern Lock, UK

The backgammon set is one of the best gifts I've had. The board I got was from my father and I learned how to play it. My first teacher was Bernie [Ecclestone, a player of some repute since the 1970s]: he explained to me the basics at

the Russian GP one year. But now I play a lot with Kelly. We travel a lot, so the one my father gave to me is very nice but at home. We take a travel backgammon board that lives in the hotel room.

F1R: What is the secret to winning?

DK: You know, there is a luck factor, but what's good about it is that you also create your own luck. There is a lot of strategy involved in terms of how much risk you will take, where you're going to move and place your pieces – it's actually a really interesting game.

F1R: Who normally wins out of you and Kelly?

DK: We are quite evenly matched, even though she has ten years more experience playing it than me and I've only played it for a couple of months. Actually, last night, I had an incredible win over her and she was very upset. I had to sleep on the sofa... only joking!

“ YOU SHOULD NEVER SAY ‘NO’ OR ‘NEVER’ IN LIFE



OPEN YOUR EYES AND SEE WHERE YOU CAN GO NEXT ”

Does taking part in the Indy 500 or Le Mans appeal to you?

Craig Curtis, UK

At the moment I'm 23 and I'm fully focused on Formula 1. These events are a long way from my mind. Obviously since Fernando Alonso has recently done it, there

is a lot of talk about these races now. I think it was a great call for him; it's something different. It's like when I was racing Formula 3 and GP3 at the same time; it's great to have so much confidence when you do so well on both. Formula 1 is a serious thing, it's 21 races a year and in my case, I can't take my focus away from it.

I'm more interested in the WRC. It's a completely different kind of racing and something fresh. I've actually tried it: I did some rally testing, a Group B car – it was fantastic, a real adrenaline rush. I also did a proper rally stage in Finland in 2012 on snow with a co-driver and I spoke to Kimi Räikkönen about it. He said that it's quite a different thing when you have to trust 50 per cent your co-driver and 50 per cent yourself. So maybe one day...

Could you see yourself returning to Red Bull in the future?

Sally Davies, UK

You should never say 'no' or 'never' in life. You still need to drive the car, do your job, and then after you're done a good job, you stand still for a second,

you open your eyes and you see where you can go. If it's something attractive, then who knows? [Daniil then fills a water bottle cap full of water and flicks it at his trainer, ▶



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YOU ASK THE QUESTIONS

Pyry Salmela, who is within earshot, but not listening, and who returns the gesture with a bemused glare...]

DK: I don't know this guy. Actually, I just do things like this to random people.

Ufa, your home city in Russia, is home for many ice speedway drivers. Have you ever tried ice speedway?

Sebastian Hohne, Germany

[Calls over to his trainer Pyry] Ice speedway is what your father did? [“No”, replies Pyry, adding that speedway is for motorcycles, with spikes on the tyres.]

DK: Ahhhh! No, I've never tried this. But why not? I'm open minded to these sorts of things.

Nico Hülkenberg said a few years ago that you play tennis together. Who is the better player?

Luca Romagnoli, Italy

I play often with Nico in Monaco and it's always quite a close fight between us because our level is quite similar. Recently I've been a bit ahead of him, so he needs to train a bit more. He hasn't called

me for a while, actually not since our last game, because I was quite good. So I think he's secretly training with some professional [indeed he is... find out who on [page 74!](#)] and then I'm sure he'll call me and try to beat me.

F1R: Is tennis your favourite sport?

DK: I like tennis, I like football, squash, ping-pong... there are a few I can do, to be honest. If you work hard at one, you'll be good at the others. And skiing.

F1R: Do you play against any other drivers?

DK: No, but I did once play padel with Daniel Ricciardo in Spain when we stayed at the same hotel, and I've played it in Rome before with my friends.

What's your favourite thing about racing for an Italian team?

Chloe Hewitt, UK

My favourite thing is that it makes me Italian, even though I don't have Italian blood. The mentality and the growing-up process has influenced me so

much. I lived in Rome for eight years and raced for many Italian kart teams. I'm 23, so that was a big part of my life. I feel at home here and you can see there is a lot of heart at this team; the Italian passion is good.

How long does it take for the relationship between the engineer and the driver to develop?

Charles Pervo, USA

It depends. with some people the relationship flows straight away and you don't particularly need any time for it to develop. You sometimes find that it's all quite strong and settled after only one or two races. But then with other people you might need to work a

bit more, find out the areas where your opinions differ, and then make compromises so that you're working towards the same goal. If it isn't working then you can tell the engineer to eff off – no, I'm joking!



“
BEING AT TORO
ROSSO MAKES
ME ITALIAN
EVEN THOUGH
I DON'T
HAVE ITALIAN
BLOOD...
THE ITALIAN
PASSION IS
GOOD
”

Speaking about the relationship between me and my race engineer, Pierre Hamlin, we were both thrown into a deep ocean because he'd suddenly been promoted to the role of race engineer and I'd just started at Toro Rosso, so we helped each other to adapt and at the same time find a mutually agreeable approach: I think we've done well. By the end of last season, we hadn't had any real difficulties or misunderstandings. We have a good work ethic together, we like it, and we don't plan to change anything because it's all good.

I heard you're a Metallica fan. What do you think about their new album?

Andrzej Chrystyniak, Poland

I like their old tunes, but I haven't listened to their new album yet. I'm also a fan of indie/rock – this type of music. Heavy metal I really like, too. My favourite album is '...And Justice for All'.

F1R: We're not a fan! 🙄



YOU ASK THE QUESTIONS

Next month, Pascal Wehrlein is in the hotseat. For your chance to ask him a question, sign up at: f1racing.com/global-fan-community



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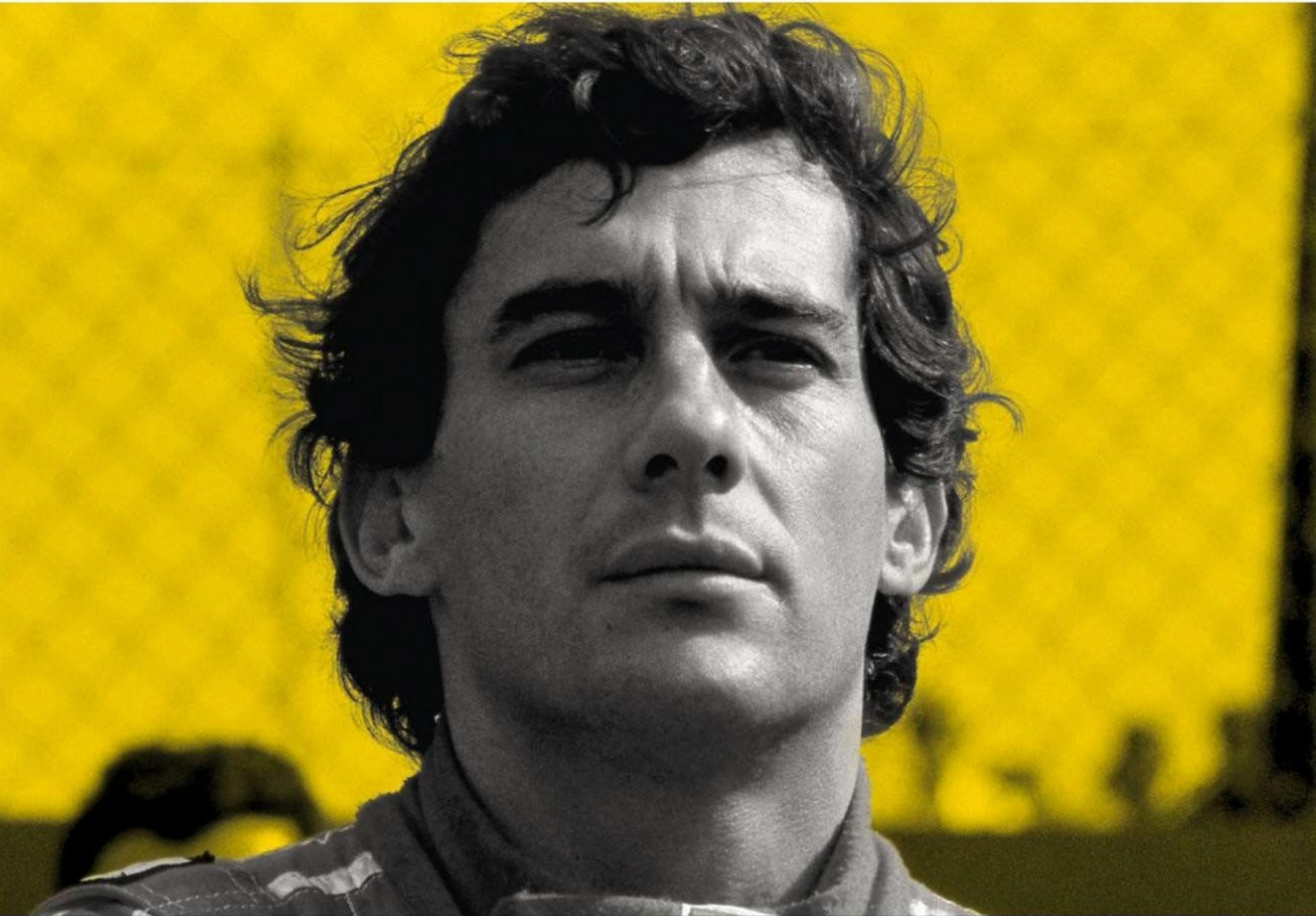
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AYRTON SENNA VS



MASTER & COMMANDER

LEWIS HAMILTON



At the Azerbaijan GP, Lewis Hamilton set his 66th pole and surpassed his hero Ayrton Senna's record. To mark his achievement, we consider how the two compare. And there's more to this game than pure speed alone...

WORDS ANDREW BENSON PICTURES  LAT IMAGES & SUTTON IMAGES



Lewis with his most precious possession: his hero Ayrton Senna's F1 racing helmet

LEWIS HAMILTON

stared at the yellow helmet like a child who had just opened his dream present on Christmas morning. It was a gift from the family of Ayrton Senna, to mark the Mercedes driver equalling his childhood idol's record of 65 poles.

Holding it in his hands, Lewis said he was "shaking, speechless". He was driven back to the paddock from Turn 2 at the Circuit Gilles Villeneuve, where the presentation had been made, and sat on the open window of a car, cradling it. Now, in the official news conference, he could barely take his eyes off it. "For the Senna family to send me this," he said, "this is the most special thing I have, above and beyond all my trophies and everything."

Earlier that week, a set of Canadian stamps was unveiled to mark the 50th anniversary of the country's grand prix. Lewis was among the drivers pictured on them, along with Senna, Gilles Villeneuve, Michael Schumacher and Jackie Stewart. Lewis regularly talks about the "honour" he feels in being considered among "those great drivers, those previous legends". It's not a humblebrag. He means it. But he is going to have to get used to it.

At the next race in Baku, Lewis surpassed Senna's record by setting his 66th pole position, just two shy of Michael Schumacher's record of 68. With 56 race victories under his belt, Hamilton has already overtaken Alain Prost to claim second place in the list of winning drivers – although he still has some way to go to match Schumacher's record of 91 grand prix wins.

Like Senna, Lewis is a three-time world champion and may well make it four by the end of this season, so by any measure he has to be considered an all-time great. His onward statistical march has added currency to the questions any observer of F1 asks of all the best drivers – how do they compare with the titans of other eras? And in Hamilton's case, Senna, the driver he admires above all others, is the most pertinent benchmark. So how, over the course of their ten-year careers, do they compare?

1 SPEED

Senna's pole record is the foundation of his legend. Some of his laps have passed into history as the very definition of raw speed and talent in an F1 car, none more so than in Monaco 1988.

That one resonates because of the way Senna spoke about it in a famous interview, detailing a kind of out-of-body experience, as if he were looking down on himself driving, and saying that he eventually chose to stop because he realised he was putting himself at risk. That day, he ended up 1.4s quicker than team-mate Alain Prost. But there were other times when his superiority was even greater – such as in Japan in 1989, when he took pole from Prost by 1.73s – an almost inconceivable margin for one great driver over another in the same machinery.

There were countless other examples, too. Like Jerez in 1990, when Senna ventured out after the crash that left Martin Donnelly with horrific injuries – and went even faster. He didn't need to: pole was already in the bag. But he wanted to prove to himself that he could.

And few of his pole laps can have been better than his final three – when he put a difficult Williams at the front through what seemed like sheer force of will alone.

Hamilton's achievements have not generally been afforded the same reverence, but perhaps they need to be reconsidered. Think of his first pole, when he was 0.456s quicker than team-mate Fernando Alonso in Canada 2007, or the 0.668s margin he held in China the same year, prompting Alonso to chuck his helmet at a door

in anger, suspecting conspiracy in the wake of his fall-out with McLaren, and claiming that no one was that much faster than him *anywhere*.

Or what about Korea 2011? A few days after being in the depths of despair following his break-up with Nicole Scherzinger, Lewis beat Sebastian Vettel's dominant Red Bull by 0.222s, the only time Vettel was outqualified in the final nine races of that year. Or China 2014, when Lewis beat team-mate Nico Rosberg by 1.283s in the wet. Or Monza 2014, when he was 9.3mph quicker than Rosberg through the first Lesmo.

Very few people in modern F1 have worked with both Senna and Hamilton, but someone who has is Williams technical chief Paddy Lowe. And he says Hamilton "undoubtedly" has Senna's speed. "Those great drivers are able to pull out an extraordinary lap," Lowe says. "They can't do it every Saturday, but every now and again they just go out there and something really extraordinary is required and they produce a lap where you go: 'Wow. Where on earth did that come from?' Lewis is certainly one to do that, and so was Ayrton."

SCORES | SENNA 5 | HAMILTON 5



Senna vs Hamilton: hard racers, almost level-pegging on poles, wins and titles. And in terms of racecraft, there's very little in it

2 CONSISTENCY

Senna was driven to prove that he was the best every single day of his life. It was what led him to some of the darker actions of his career, but also what made him so difficult to beat.

It was Senna's relentless speed in qualifying that eventually led Prost to stop bothering trying to beat him to pole – at least while they were at McLaren together. Instead, Prost switched his focus to preparing his car for the race. Back then, these were two very different things.

Likewise, when in an inferior car, Senna's consistency kept him in the game. Take, for example, 1991, when after winning the season's first four races, Senna found himself fighting a rear-guard action against the much faster Williams of Nigel Mansell. It was his metronomic delivery of his best that won him the title over the remainder of that year. ▶

Likewise, in 1993, when Senna was lacking both performance and power compared with the Williams-Renaults of Prost and Damon Hill, his results in the first six races were three wins, two second-place finishes and a retirement.

Hamilton, just as Senna did, also believes himself to be the best, and he achieves his peak more often than most of his rivals. But equally, he dips below it more often than someone of his talent perhaps ought to. Prime examples of the latter would be Russia or Monaco this year, or Baku or Singapore last year: weekends when for whatever reason – and often the reasons are different – Hamilton flunks out.

SCORES | SENNA 5 | HAMILTON 4

3 TECHNICAL PROWESS

Back in the 1980s, drivers did not have the luxury of thousands of pages of data to go through, overlays of laps to compare or real-time advice from engineers. They had to go out and figure it out for themselves. And the ability of Senna and Prost in particular to do that is the stuff of legend.

One story from Senna's career sticks in the mind. There was a race where he insisted he could feel a problem with the engine. None of the data tools at McLaren showed anything up, and the team were convinced nothing was wrong. But they changed the engine anyway, because they knew better than to ignore his request. When

the old engine was later taken apart, a minute imperfection was found on the crankshaft that would have led to it failing had it been left in the car. Senna had felt it.

We have to assume that the reason we don't hear stories like that about Hamilton is that they don't exist. Whether that matters at all is a different question. "People often talk about drivers and their technical input," Lowe says. "I have actually never got that. For me, a driver is a guy who can go out and wring the car's neck and has the experience to get the best from it. You don't want the driver to be an engineer. He isn't an engineer. He's a driver. I just want him to tell me stuff every now and again – if something's better or not; where he can go quicker. And then to go and deliver. Lewis does a perfect job of that, and so did Ayrton."

Although these remarks come from someone who started working in F1 in the late 1980s, they are set against the backdrop of the incredible advance in simulation and data-analysis in 21st century F1. And there are clearly occasional races where Hamilton gets lost on setup – or cannot tune himself to the setup he needs to be quick at a given track. Singapore 2016 and Russia 2017 are two examples.

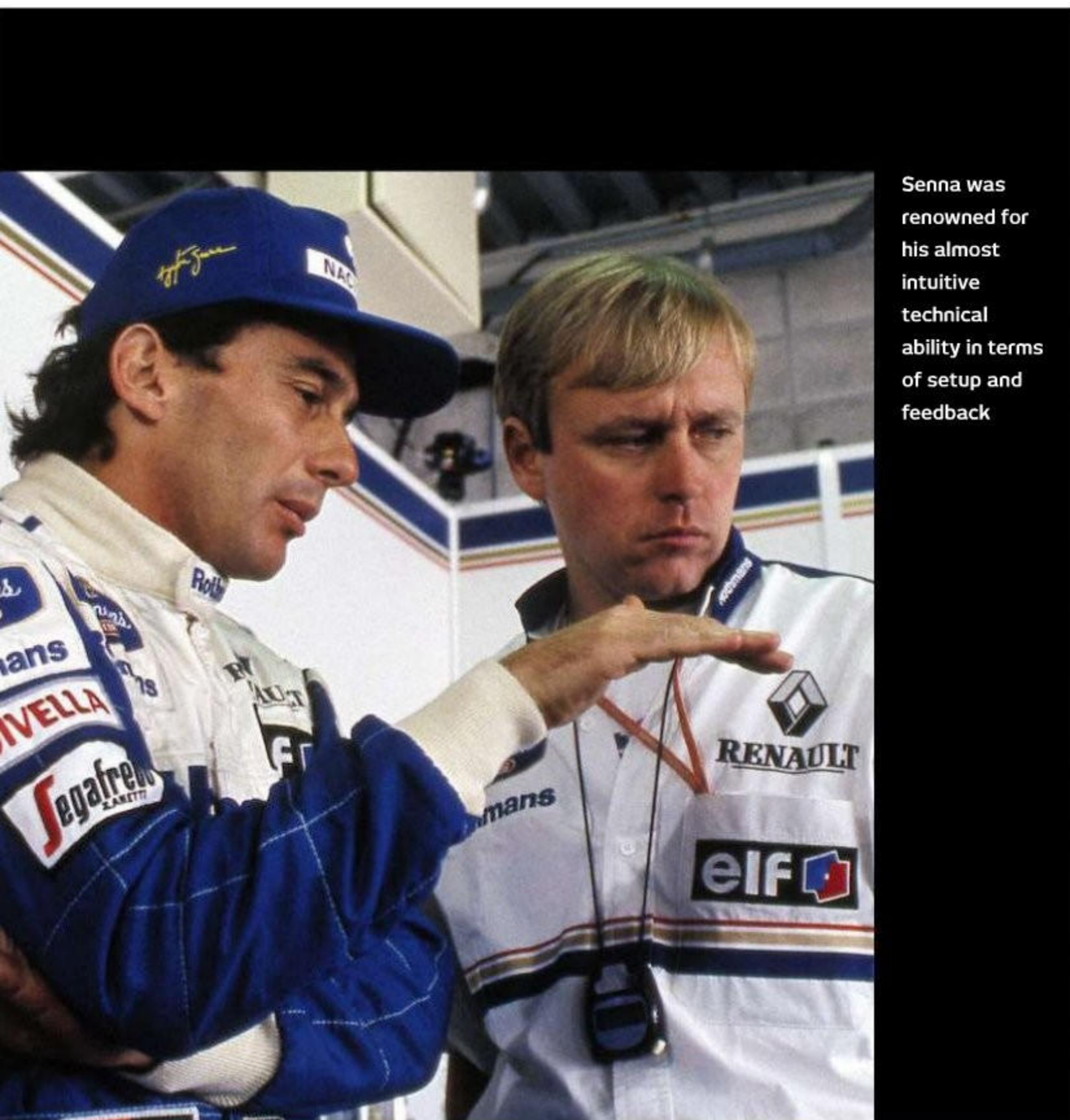
But Lewis is also perfectly capable of giving the engineers everything that they need to prepare the car in the right way.

SCORES | SENNA 5 | HAMILTON 3

4 RACECRAFT

Beyond their blistering speed, Senna and Hamilton also have exceptional skills when it comes to racing other cars. Think of Senna's fightback after dropping to 14th at the start of the 1988 Japanese Grand Prix, or Hamilton's charge from last to third in Hungary in 2014.

Then there are the races in which they have had to overtake en route to a win: think Lewis on Vettel in Spain in 2017; Senna on Mansell into Eau Rouge on slicks in the wet in Belgium in '85. And, of course, the races that demonstrate their ability to defend with skill and fairness: think ▶



Senna was renowned for his almost intuitive technical ability in terms of setup and feedback

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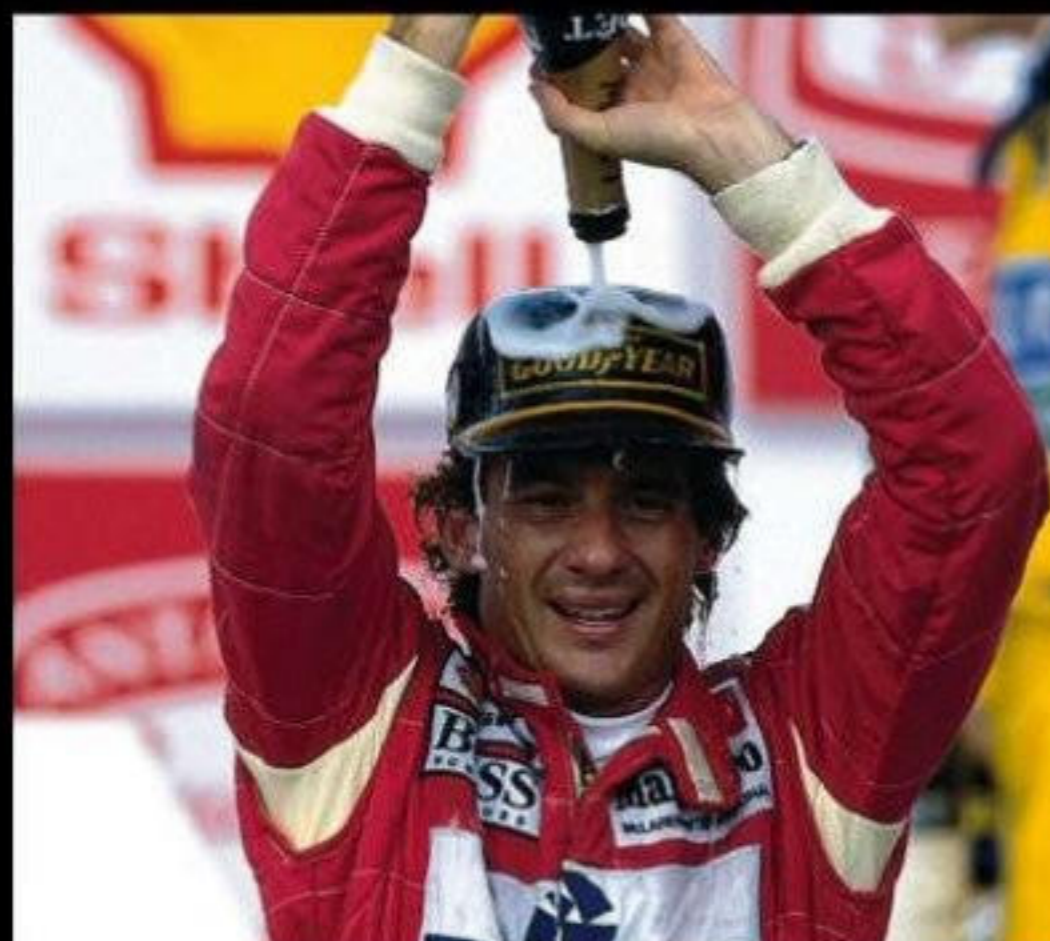


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41 (25.5%)	WINS	57 (28.8%)
3	TITLES	3
65 (40.4%)	POLES	67 (33.8%)
80	PODIUMS	110
19	FASTEST LAPS	37
614**	POINTS	2,423***



* All statistics correct up to and including 2017 British GP.
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Senna from Mansell in the closing laps of Spain in 1986 or Hamilton against Rosberg in their thrilling duel in the desert in Bahrain in 2014.

And finally, consider their skill and sheer speed in the rain. Senna has Estoril '85 and Donington '93 as historic demonstrations of his peerless wet-weather ability. But Hamilton's wins in Silverstone in 2008, Japan in 2007 and Brazil in 2016, among others, were just as good.

SCORES | SENNA 5 | HAMILTON 5

5 ETHICS

Senna's death has lent a soft-focus sheen to his legacy: people remember the good and tend to shut out the bad. For, in truth, he was intensely controversial throughout his career. From the beginning, he incurred the wrath of more experienced drivers because of his tendency to cruise around on the racing line on slow laps in qualifying, ignoring faster cars behind him.

He was aggressive in the extreme, often pushing beyond the limits of acceptability, and he could veer into outrageousness. The most infamous example was his decision to smash into the back of Alain Prost's Ferrari at the first corner in Japan in 1990 because his request to have pole position moved to the other side of the track had been rejected.

Lowe says: "Character-wise, they are quite different. People criticise Lewis, but he is actually a real gentleman and a very fair racer – hard but fair. Mostly I was playing against Ayrton.

That's why I struggle with perspective. I was at Williams in those days and Ayrton was the guy we were struggling to beat and eventually did in 1992, but it seemed impossible in the years building up to it. He was ruthless. He had various tactics to intimidate his opposition. But that was the name of the game. It was a different world and Ayrton played it as he had to."

Perhaps, but not everyone played it the same way, and while Senna undoubtedly opened the door to some dubious tactics, and Michael Schumacher for one then positively ran through it, many drivers still eschew the sort of driving practised by those two.

Hamilton is as tough as they come: just look at the number of times he ran Rosberg out of room on the exit of a corner. And he hates losing. But the evidence so far is that he would rather fight fair and lose than win by cheating. And ramming someone off track to make a point? It's hard to imagine the thought even entering his head.

SCORES | SENNA 2 | HAMILTON 5

6 CHARISMA

Senna's personal magnetism was legendary. He could quieten a room by walking into it. His press conferences, in which he would speak of death, vulnerability, the human spirit, the meaning of racing and life, were compelling. He would hold a roomful of journalists rapt, the silence so deep you could hear a pin drop. The way he expressed his spirituality was eloquent and compelling.

Andrew Benson is chief F1 writer at BBC Sport

Lewis, too, makes it clear that faith is an important element of his life, but in a far less overt way than Senna did. Senna leant heavily on his faith, sometimes to the point of using it to justify some of his more extreme on-track actions. The flip side was his charitable work and his efforts to use his wealth to assist poverty-stricken children in his home country of Brazil.

Hamilton, too, quietly engages in a lot of charity work away from the cameras. He's also the most famous driver on the planet, living a peripatetic life, jetting to the States to relax or party with film stars and musicians. But his charisma and presence fall short of those of his hero. Nor does he share Senna's eloquence or intellectualism. But that's not to say Hamilton is not smart. For a start, his upbringing and education were nowhere near as privileged as Senna's. One grew up in a council house; the other had a life of wealth and advantage.

Hamilton's pursuit of fame and celebrity is not to everyone's taste, and differs from Senna's more simple lifestyle. Hamilton shares Senna's propensity to be difficult if the mood takes him, but does not share his sense of entitlement.

They are very different men. But as sportsmen they share one key fundamental: each is about as fast as any racing driver has ever been. 1

SCORES | SENNA 5 | HAMILTON 3

TOTALS





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SERVING UP AN AGE



Renault's **Nico Hülkenberg** is no one-hit wonder when it comes to sport. Away from Formula 1, tennis is his favourite game. New balls, please!

WORDS STUART COOLING

PICTURES LORENZO BELLANCA



This is almost the perfect day for a knockabout, marred only by the wind swirling around the five clay courts of the Mairie tennis club, just off Cap Marquet beach and a short stroll from the busy port of Cap d'Ail and the moneyed milieu of Monaco beyond. Every footstep kicks up a brief puff of dust, not least those sent skyward by the purposeful stride of Nico Hülkenberg as he lets himself in through the gate and moves towards the net, twirling his racquet throughout.

On court, Nico seems at ease and very much in his natural environment, dressed modishly tennis-casual, shorts obeying the 'Goldilocks principle' (neither too long nor too short), socks

less so (we'll forgive him that; it's very 'now' in the sports world) and baseball cap pointing resolutely forwards. He's actually a member of the Monte Carlo Country Club – the one up on the hill, home of the annual Rolex Masters tournament, of which the current champion is one Rafael Nadal – but he assures us he's not *that* good, and insists the Country Club isn't *that* exclusive. "Well, maybe a little bit," he concedes, "but I don't really think so."

Not that *F1 Racing* will be thwacking any balls around the court today – we're leaving that to



CNN's Amanda Davies, who has arrived in a pro-looking garb redolent of national treasure Sue Barker in her prime. "Can you really play for fun?" she calls to Nico across the court.

"That's what we're doing," he says with a grin, prowling the baseline, jiggling on his feet and spinning his racquet once more.

"Does he keep score, honestly?" we whisper to Martin Poole, Nico's performance coach, who stifles a laugh.

"No..." ▶



DEKRA

INFINITI

RENAULT

Castrol



Given Nico's chosen domicile of Monaco, his choice of sporting pastime is unusual compared with that of his peers. Most of them prefer to cycle – the group ringleaders are Alex Wurz and Jenson Button, and regular readers might recall that three years ago we infiltrated this secretive group, which includes professional cyclists as well as racing drivers from all disciplines.

"I'm not into cycling at all," says Nico. "I've tried and the Monaco cycling community tried to get me in. I went a few times and I'll go out with them again – but it's not my 'thing' somehow."

Nico's height and build would certainly put him at the Marcel Kittel end of the two-wheeled

spectrum, a sprinter not a distance machine, but maybe it's other elements of the culture that put him off. The fixation of the keenest cyclists with form and style, perhaps, as detailed in the infamous Velominati package of 'Rules', wherein the colour and length of elements such as shorts and socks are tightly prescribed. A swift look at the other users of the courts this morning reveals considerable deviation from standard tennis attire; no snobbery here, it seems.

"Not at all," agrees Nico. "I don't care about that sort of thing. I don't take it *that* seriously."

"I've been playing for a good ten years, but really as a hobby, for pleasure. I get fun out of

it: it's just you, your form, your racquet. There aren't any other elements involved in it, which makes it good fun as well as good exercise."

An antidote to the minutiae-dependent, marginal-gains universe of Formula 1, then? That might be it. And, for sure, the new generation of heavier, wide-track car is tougher than ever before to finesse into the set-up 'sweet spot', and faster to drop out of it when conditions change even slightly. Drivers up and down the grid have spent the months since the season-opening Australian GP expressing frustration at how they can lose – or even gain – performance between sessions, even without altering any settings.



“IN THE MIDFIELD, ANYTHING CAN HAPPEN DURING A RACE. THERE CAN BE A CRASH, OR A SAFETY CAR, AND THAT CAN BRING YOU BACK INTO IT. YOU NEED TO BE IN THE RIGHT PLACE TO TAKE ADVANTAGE OF THAT, WHICH IS WHY YOU HAVE TO GIVE IT YOUR BEST SHOT EVERY TIME”



Hülkenberg's got the clobber, he's got the skills and he's certainly got the requisite competitive streak



“Yeah, we've found that sometimes with our car,” says Nico. “It can be easy to change some things and you don't really understand why, or you can have the wind change between sessions and all of a sudden you lose a lot of performance. Maybe the more compact or better cars at the front are better protected against these scenarios, but it's a matter of developing the car; you have to understand how it works in

different conditions and build on what you've got.

“It is different for me, being part of a manufacturer team now, although at the end of the day you've still got the same job to do. But you see and feel everywhere that you're working for a much bigger operation. You feel the *weight*, in terms of resources, of a major car manufacturer behind it – and also the sense of expectation too. But I think we're on a good road, and recently we've taken some good steps forward in the right direction. In F1, though, like you see with all the big teams, it takes time: nobody comes out of the ashes and destroys their rivals. You saw this team had a very troubled season last year and, before that, well, you know the history – they've come from a difficult spot and just need to take a bit of time to rebuild.

“Ultimately it's tight in the midfield, although I think maybe Williams and Force India have the upper hand for now. But anything can happen during a race in that part of the field – there can be a crash, or a Safety Car, and that can bring you back into it. You need to be in the right place to take advantage of that, which is why you have to give it your best shot every time.”

What a fantastically appropriate turn of phrase for a racing driver standing on a tennis court. Even during a simple knockabout Nico visibly unwinds – a little bit – from the racing driver's naturally defensive and cagey paddock persona. Although ‘best of three’ soon becomes ‘best three out of five’ and then ‘first to ten’, a sequence of developments that amuses performance coach Poole no end. Hand a racing driver something

to be competitive about, it seems, and they just aren't able to resist.

“Are you even sweating yet?” Davies calls across the court.

“Yeah,” answers Nico. “A little bit...”

His next return-of-serve is a fierce forehand sweep that directs the ball with hitherto-unparalleled velocity... quite some distance out of bounds. It's followed into the boondocks by a ragged exclamation from Nico's own throat: “Arrrgghhh!!!”

Perhaps it's time, with the score declared at ten-four – by some rubric *F1 Racing* has been unable to fathom – for a break in play. We know he faces off against Daniil Kvyat occasionally (see p60), but who else takes to the court with the Hulk? Surely there must be a few pro players based hereabouts for tax purposes, who might be up for an all-star knockabout?

“That's an interesting question,” he muses, “because tennis doesn't have an off-season like F1. I can't play against any [Monaco-based] professionals because they're hardly ever around, even if they live here! They travel so much more than we do, following the seasons but also playing indoors. Tennis happens everywhere.

“Recently I've been playing Daniil Kvyat a lot. He's based just here and we have a good laugh.”

Now, when we spoke to him, Daniil insisted that matches between the two are “quite a close match”. But here, in the very theatre of



conflict, we might be able shake Nico down for intelligence on who actually *wins*. He takes a deep breath and exhales with just the hint of a sigh as he mulls over the question.

“He does,” answers Nico finally, “because I make too many mistakes...”

“When we play for real I have no patience and I go for the big shots – they usually end up in the net or far out. I've won a few times, too, but I think, on balance, if I'm honest, he wins.”

The frank confession hangs in the air for a moment before the breeze carries it away. Has ever a racing driver admitted to such a thing? We should get them playing tennis more often... 🎾



Mark
Arnall

MY DREAM JOB

No.4



WORDS ANTHONY ROWLINSON

PORTRAIT  LAT IMAGES: LORENZO BELLANCA

Personal trainer
to Kimi Räikkönen

CV

Mark Arnall
Age: 44

2007

Employed by Kimi Räikkönen as personal trainer

1997

Driver performance coach, McLaren

Pre-1997

University of Surrey sports department

The moment Ron Dennis calls to demand: “*What the hell have you done with my driver?*” is the moment you come to realise that yours is no ordinary job. And such was the case for Mark Arnall, long-time physio, trainer, confidante and all-round life manager for Kimi Räikkönen.

This incident occurred on 30 November 2004, when Kimi and friends visited a beach resort in Gran Canaria... with predictable consequences. Pictures of a somewhat worse-for-wear Räikkönen cuddling an inflatable dolphin were soon delighting tabloid readers everywhere, and underscored what Kimi’s fans have always known: behind the Iceman facade he’s just like you and me. But none of this was doing Arnall any favours with their mutual boss, Mr Dennis. “The worst bit,” Mark recalls, “was that I wasn’t even there!”

Such are the trials of working with a high-profile F1 driver and, in Arnall’s case, keeping him in race-ready condition since 2002 – their first year together at McLaren. Arnall had previously worked as Mika Häkkinen’s trainer and when Mika quit at the end of 2001, he was presented with another Flying Finn to maintain. Since then he has accompanied Kimi through McLaren, his first spell at Maranello, his adventures in rallying and US racing and then his F1 second coming with Lotus and Ferrari. And since the first seasons at Ferrari, Arnall has worked directly for Räikkönen, rather than for a team, and his services to the Iceman extend beyond physical preparation.

“There are no set day-to-day hours,” says Mark. “We do all the GPs together, but we also do all the tests and we train together. There has to be flexibility: sometimes Kimi’s got to be at the factory, sometimes he’s got other stuff to do.”


Arnall also attends to any number of tasks designed to keep Räikkönen’s mind focused on racing and his body in tune. “I make sure he’s where he needs to be when he needs to be there, with the right gear,” he says. “It means looking after his race kit. Then I work with the helmet guys, to make sure the visors are correct. I book all Kimi’s flights, and hotels, too.”

Details such as these, he reckons, promote marginal gains in driver performance: newer planes with higher cabin pressures reduce jet lag, for example. And their double-act obviously works: Kimi is on schedule to finish 2017 with 271 grand prix starts from a career stretching back to 2001.

In 1997 a McLaren staffer took a climbing lesson with Mark at the University of Surrey’s sports department. “Afterwards he came to my sports injuries clinic,” Arnall recalls. “He asked me about what I did and explained that McLaren wanted someone to look after the physical therapy for their drivers [David Coulthard and Mika Häkkinen]. F1 didn’t interest me in the slightest. It was a sport where I remember seeing Mika’s name on the screen and wondering ‘How do you pronounce Häkkinen?’ A year later I’m working with him. Bizarre. It was almost by accident, but it was lucky because one part of the job that I actually really enjoy is the travelling. And that’s something a lot of people get fed up with.”

And it’s here that Arnall sounds a note of caution for any sports science undergrads wishing to pursue a similar path. “There are several things to consider,” he notes. “It’s super-intensive in terms of time away from home, so if you’re married with kids it’s something you should think twice about. Then you must consider what you want to specialise in. Is it training? Or osteopathy? Or a combination of the two?”

After that comes the challenge of breaking into F1 – more often by dogged persistence than happy accident – and even then, should you be skilled and fortunate enough to end up working with an F1 superstar, what happens when they quit?

The suggestion prompts a wry smile: “What happens if he retires? Well, if he says ‘I’m going to spend the next five years on my sofa,’ there is no point me staying in his employment. But if he starts talking about a ten-race NASCAR programme and Le Mans, then I’d be likely to take up a new challenge.” 

A CAPITAL



IDEA

F1 Live London brought Formula 1 to the streets of Britain's capital city for a party no one wanted to miss – with one notable exception...

WORDS: STUART COOLING

PICTURES  LAT IMAGES: STEVEN TEE; LORENZO BELLANCA;

ZAK MAUGER; ANDREW HONE



Mayor of London Sadiq Khan is shown around the Trafalgar Square expo (right), while F1 fans line the surrounding streets to see their heroes in action

For 13 years London has been deaf to the sound of Formula 1, save for occasional (and fanciful) rumblings about hosting a grand prix on its streets. But on the eve of the British Grand Prix at Silverstone, the nation's capital paused to enjoy the sight, sound and smell of F1 cars for the first time since Nigel Mansell led an eight-car demo run up Regent Street in July 2004.

F1 Live London ran on a much larger scale, and was an encouraging sign of intent from the sport's new owners. Sets by musical acts Bastille, Little Mix and the Kaiser Chiefs within a larger F1 expo in Trafalgar Square added a festival vibe to the on-street action that was of such scope it was all planned in total secrecy and announced only 48 hours beforehand. Mindful of the potential for mischief by the kind of people Donald Trump would call "the bad guys", the London authorities made it clear that if advance word leaked out, they would pull the plug.

So while some fans were irked by the lack of notice and consequently unable to attend, in Trafalgar Square and Whitehall the numbers built all afternoon, peaking at 100,000 (according to Formula One Group) as veteran racer René Arnoux kicked off the street demo with two laps in the 40-year-old Renault RS01, F1's first turbo machine. *F1 Racing* wouldn't dispute that crowd figure, having had to stake out a vantage point two hours in advance.

All but one of the current F1 drivers came and performed for the crowd. Daniel Ricciardo thrilled by performing donuts – despite strict instructions to the contrary in the drivers' briefing – and Sebastian Vettel drew cheers for his spirited attempt to 'drift' his Ferrari around the Charles I Statue. And if Lewis Hamilton's absence was felt and commented upon by the opinionati, he more than made up for it at Silverstone four days later... 🏁





STROLL DOWN MEMORY LANE

We take Williams rookie Lance Stroll back to his roots on a visit to the Canadian circuit where he raced karts for the first time

WORDS JAMES ROBERTS
PORTRAITS  LAT IMAGES GLENN DUNBAR

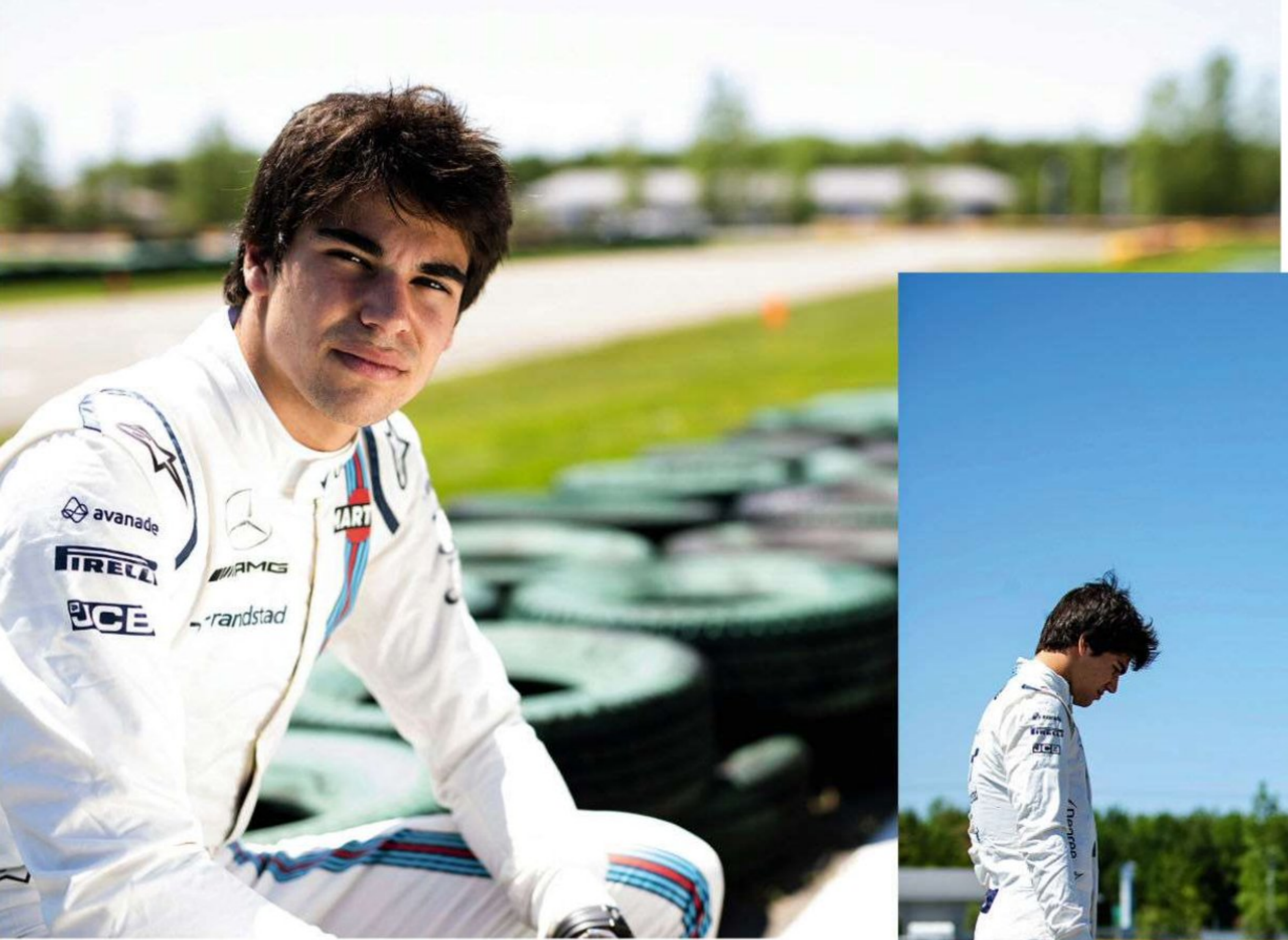




IN JUST TEN YEARS,

Lance Stroll has gone from competing in his first kart race in front of a handful of parents to racing a Formula 1 car in front of nearly 100,000 fans at his home grand prix. Yes, his career has been fast-tracked by his family's wealth, but he has still had to perform in every category in which he's competed. He won a trio of consecutive titles in his three years prior to F1: FIA European F3, the Toyota Racing Series in New Zealand and Italian Formula 4.

Now, on the eve of his home F1 grand prix debut in Canada, we accompany him to the place where it all began. North of Montréal, along Autoroute 25, is the SRA kart circuit, which is named after the nearby Quebecois village of Saint-Roch-de-l'Achigan. This morning the 0.75-mile track is bathed in warm sunshine ▶



and a 125cc Rotax two-gear shifter kart awaits Lance. He's ready to reacquaint himself with the place that ignited his passion for racing.

Leading up to today, Stroll, 18, has been coming under fire for the apparent poor start he's made to his rookie season in F1, pockmarked by three DNFs in his first three races, plus outings where he struggled even to escape the clutches of Q1 in a car that – in the hands of his team-mate Felipe Massa – regularly made it into Q3. But both he and the team have been asking for patience, in the belief that eventually the good results will materialise. Which, as we would soon discover, they do.

So, for the moment, Stroll is putting his F1 travails to one side as he reflects on the short journey he has made from grassroots karting to the top tier of the sport. We're about 30 miles north-east of



Montréal, and a further 80 miles north is the ski resort of Mont-Tremblant. This is where the Stroll family are based (although they now live mostly in Geneva). And it's there, alongside the Rivière du Diable, that the picturesque former grand prix circuit that hosted the Canadian GP twice in 1968 and 1970 is located. It's now owned by Lance's billionaire father, Lawrence.

In the car park of the circuit, Stroll Sr, a gentleman GT racer and a collector of classic Ferraris, would lay out a few cones and his son would drive around them for hours on end in a little kart. When he reached the age of eight, it was time to make the first serious step in the world of karting and they came to SRA.

The track, which is owned by Michel Boisclair, was built in 1996 and in 2001 hosted the first round of the CIK World Karting Championship. Drivers who competed here then included Lewis



Hamilton, Nico Rosberg, Vitantonio Liuzzi and Giedo van der Garde. Today, Boisclair is standing above the pits reminiscing about the old days as he watches Stroll gun a little 125cc kart around his track – and is impressed when he launches over the kerbs on his first out-lap. After a little anecdote about Keke Rosberg ploughing

Back where it all began: Stroll eyes a 125cc Rotax kart, his drive for the day at the place where he launched his racing career



his rental car into a ditch on the weekend of the world championship race, Boisclair recalls the years when Stroll used to race here.

“Right from the beginning you saw a clear path in terms of what the Strolls wanted to achieve,” he explains. “It’s easy to say that the path has been made for you, but you need to take

advantage of it and be motivated for it. And the motivation to race was always there in Lance. That’s an aspect that people don’t always see. To be in Formula 1 you need to be a good driver, but you also need to love what you are doing. The passion has to be at the maximum. And I saw this right away; his motivation is there. He wanted to learn; he was at the track more than anybody else. And he never complained that it was too hard, too this, too that – doing club karting was the best thing for him as a person and it made him a better driver, too.”

After a few laps, Stroll returns to the pits, removes his helmet and his eyes tell the story. It’s been a few years since he was last here, and he’s instantly back in the groove – although he admits his fingers are aching.

“It’s in the shifting: the paddles are stiff, plus there’s the weight of the car on the wheel in the corners,” he says grinning. “But wow, that was *so much fun*. The bumps really shift out the rear of the kart, and it’s great sliding around here.” He turns to Boisclair: “I’ve been saying since I was eight that there should be grass at the chicane. You shouldn’t be able to cut it. Racing is all about gravel and walls.”

“Ah, we keep the Tarmac there for the rental drivers...” Boisclair replies.

Once Lance has caught his breath, he perches on the tyre wall by the start/finish straight and gazes across the now quiet kart track, with just the twittering of birds overhead and the distant rumble of traffic on the autoroute in the distance. Did this track bring a lot of success?

“A bit, yeah,” he says smiling. “I won the Quebec championship here and a couple of races when I was younger, too. I’ve had bad days here though, you know, it starts to rain, you spin... But there are so many memories here; I haven’t been back since my last race here in 2010 and it’s so special to come back. Everything is the same.”

Four days after our chat, Stroll overcomes his poor start to 2017 by securing his first points with a ninth-place finish at his home race. Then, a fortnight later on the streets of Baku, he keeps his head when all about him are losing theirs and claims a surprise podium finish. Yet as we talk, success still seems a distant prospect, and he speaks openly about where he needs to improve as the second half of the season looms.

“There are a few things I need to work on, but it’s just taking time adapting to F1. It’s all about gaining more experience, weekend by weekend, getting the car to my liking, finding consistency, getting on top of tyre management and having a bit of luck with regard to technical issues,” he says.

“I think it’s still early days and we just need to keep working to understand the weaknesses. For example, the braking is different to what I’ve been used to in Formula 3 and the tyres don’t accept the same driving style to what I have been doing in the past, so I need to adapt a little bit more. ▶



Schumacher: hero to a new generation

Lewis Hamilton was touched to receive a replica Ayrton Senna helmet in Canada, a gift from the Senna family to celebrate his achievement in matching Ayrton’s 65 poles. But the new generation of drivers, like Esteban Ocon and Lance Stroll, weren’t even born when Senna was racing. They grew up in the 2000s when there was one man dominating the sport: Michael Schumacher.

Ocon recently posted a picture on Twitter of him wearing a replica Schumacher helmet. When Stroll started racing, he looked up to the seven-time champion, and remembers meeting him at the Canadian GP. And recently, Lance has become friendly with Michael’s son, Mick, racing against him in karts.

“I have so many memories of watching Michael race in F1 when I was growing up,” says Stroll. “He is a great guy, a true champion on and off the track. He was so committed, he trained so hard, he put in so many hours and he was so precise about what he wanted.

“He always maximised the performance of the car and lived for the sport. I just hope that he’ll recover from what happened, as it’s terrible to see and I think it’s impacted the motorsport community. We need to remember all the greatness he has brought to the sport, because he was one of a kind.”



Sometimes it takes time for things to fall into place, we just need to stay cool and calm – and always be positive.”

Tweaks have been made to his Williams FW40, notably with the power steering, to assist with what technical chief Paddy Lowe has described as an “active” driving style. Guidance has also come from his senior team-mate. Felipe Massa spoke recently about how much advice he was given when he was young by Michael Schumacher – and now he is able to impart some of that wisdom to Stroll.

“Yeah, it’s great to have Felipe around,” concurs Stroll. “He’s a good benchmark for me, he’s still quick. Some tracks are new to me, so after FP1 it’s good to look at his data and learn that actually I can brake later at certain corners. Felipe’s doing a great job this year and he’s motivated to help the team move forward. He knows what we need to be more competitive and he’s pushing the team in the right direction.”

“IT’S GREAT TO HAVE FELIPE AROUND. HE’S A GOOD BENCHMARK FOR ME, HE’S STILL QUICK. SOME TRACKS ARE NEW TO ME, SO IT’S GOOD TO LOOK AT HIS DATA”



Since Montréal is Stroll’s first home race, much is being made of his attendance, so he has to depart promptly for another PR appearance and another ‘meet and greet’ with sponsors. First though, he heads to the boot of his car to look for something. When he returns, he hands Boisclair a trophy. It’s the title-winning cup from August 2008, awarded for Stroll’s first place in the *Cadet Championnat du Quebec de Karting*. He explains that it belongs in the club house of the SRA facility. It’s a thoughtful gesture and one that Boisclair accepts with some pride. Whatever Stroll goes on to achieve in the future, he can thank this little track in rural Quebec for igniting his passion for racing. **❶**

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IN FOUR DAYS, McLAREN'S 140-TONNE HOSPITALITY CENTRE MUST BE OPEN FOR BUSINESS AT THE BRITISH GP

PROBLEM: IT'S CURRENTLY IN AUSTRIA AND IT TAKES FOUR DAYS TO BUILD IT...

WORDS JAMES ROBERTS

PHOTOS  LAT IMAGES: SAM BLOXHAM

NO

PRESSURE, THEN...



At every European grand prix there is a corner of the F1 paddock that is a home-from-home to all on-site McLaren personnel. The impressive, glass-fronted, three-storey silver edifice known as the Brand Centre is a mini version of the team's Woking HQ: the McLaren Technology Centre. With its spiral staircases and central atrium, the Brand Centre offers hospitality for guests and staff, including offices for management, and driver rooms (and showers) for both Fernando Alonso and Stoffel Vandoorne.

At a normal GP weekend, the building takes four days to construct, but with back-to-back races in Austria and Silverstone this year, it's a race against time to dismantle it in Austria on Sunday night and transport all 140 tonnes of it 1,000 miles so that it's all ready to serve lunch in Northamptonshire on Thursday afternoon. Each year it's completed just in time.

"It's a well-drilled operation and we begin a light pack-up on the top floor about an hour after the race has finished, when the VIPs begin ▶





“

**EVERYTHING
CONNECTS TO
THE KITCHEN
UNIT, SO
UNFORTUNATELY
THE LAST THING
TO LEAVE IS THE
FIRST THING
WE NEED AT
SILVERSTONE**

”

to disappear,” explains Jonathan Ostrowski, the Brand Centre manager. “Then the first major step is removing the ‘pop-ups’, which are on either side of the building. These contain offices as well as the spiral staircases that lead to the first and second floors. Once they have gone and have been attached to a cab to be driven away, then we can take out all the furniture. Everything you see inside the building is unclipped, unbolted and removed.”

A crew of 19 people are involved in the dismantling process and will work non-stop throughout Sunday evening, taking apart the Brand Centre one step at a time. Once the pop-ups have gone, the next stage is the delicate task of removing the glass panelling at the front. For this, the team use a hydraulic crane that they take with them to every race.

“Once all the furniture is out, plus the 30 panes of glass at the front, the atrium collapses and we remove the air conditioning unit from the top,” continues Ostrowski. “Then we take out the pods above the kitchen, the drivers’ rooms and the management offices. Then the roof gets lowered, the atrium comes out and finally the kitchen gets lowered down onto its axle. Everything connects to the kitchen unit, so unfortunately the last thing to leave is the first thing we need at Silverstone.”

Ostrowski and his team, led by crew chief Mike Hughes, watch each truck load up and depart the Red Bull Ring to make the long trip through northern Europe, across the channel and around the M25 to Silverstone. The final articulated vehicle leaves the now-empty Austrian paddock at noon on the Monday after the grand prix. ▶



A RACE AGAINST TIME



At-a-glance guide to the McLaren Brand Centre

Structure: A fully air-conditioned and enclosed three-storey building

Front facade: Thirty panes of glass

Average build time: Four days

Austria de-rig: 18hrs (Silverstone rig: 38hrs)

Trucks needed to transport structure: 7

Trucks needed to transport furniture, generator and other equipment: 8

Size of build crew: 19 people

Main material: Carbon fibre

Kitchen: Fully equipped, serves three meals a day

Facilities: Two driver rooms, each with toilet and shower facilities, and corporate hospitality

Seven trucks transport the actual building and another eight trucks carry the plant machinery and furniture. The total weight transported is more than 500 tonnes. Last year, to avoid disruption at Calais, some of the vehicles took the Zbrugge-Tilbury route and every eventuality is considered to get the lorries to Silverstone on time. "We even thought about having a tyre vehicle follow the trucks, just in case one of them was delayed with a puncture," adds Ostrowski.

While the lorries are motoring north, the rest of the crew return to their hotel to rest after the all-nighter. Early on Tuesday morning they head to Vienna and fly to Heathrow. They check into their hotel in Towcester and are at Silverstone for 9pm on Tuesday when the first of the trucks start to arrive, ready to get to work. Just 33 hours after it was taken down, the construction process commences with another all-night shift. The deadline for completion is Thursday lunchtime, when the mechanics, engineers and drivers will all need to be fed.

"The focus is always, rightly, about what is going on across the paddock with the cars in the



garage. But in terms of impressive engineering feats, this is right up there," says Ostrowski. "You leave the paddock in Austria and four days later walk into this building in Silverstone and it's easy to forget the effort that's gone into achieving

that. And compared to a lot of other motorhomes in the paddock, ours is quite a complex structure with its hydraulic arms and floors that lift up and cantilever out – it isn't modular, it doesn't just have containers plonked on top of each other."

The Brand Centre is a self-contained entity that can be placed anywhere; all it needs is a water supply and a drain. It has its own generator for electricity and is built from carbon fibre to reduce weight. From October-April it is erected in a warehouse in Maidenhead to be put through a maintenance programme. The 11-year-old edifice is checked by certified engineers who look at the hydraulics, electrical and water systems and make the necessary changes. Last year the pipework underneath the building was refitted.

"It's a bit like the Forth Bridge," says Ostrowski. "There's always something that needs to be worked on. But the brief for the original design is the same. The building makes you feel as if you're in McLaren's HQ wherever you are in the world."

And that's the case whether you're in the Styrian mountains of Austria or a former RAF airfield at Silverstone – just four days later. 📍

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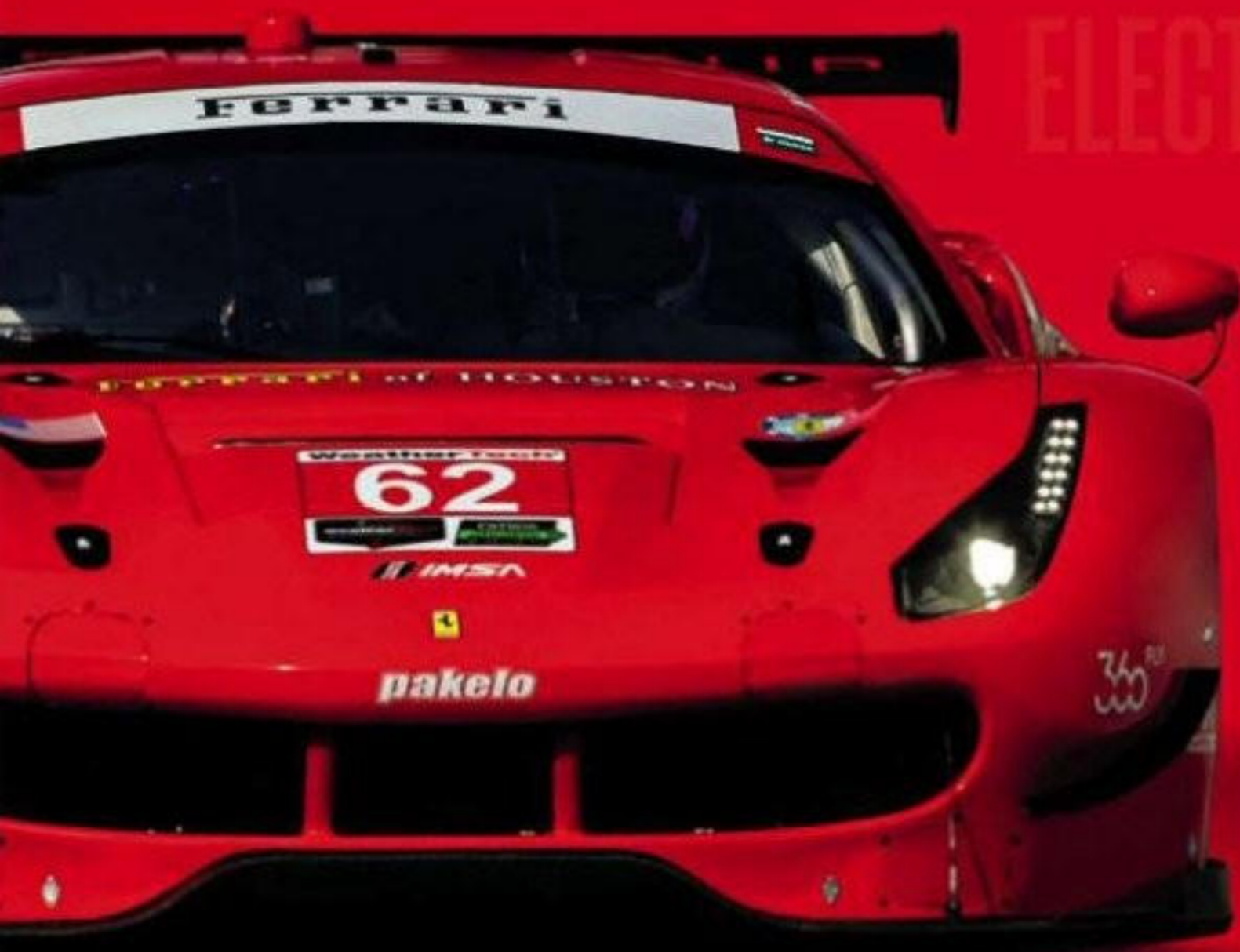
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FINISHING STRAIGHT

LAT IMAGES: GLENN DUNBAR; CHARLES COATES; JAKOB EBREY; STEVE ETHERINGTON



Luck may have paid a part, but Lance Stroll went some way to proving the naysayers wrong with P3 in Azerbaijan

First strike of the Lance

Nobody could predict the roller coaster ride that was the Azerbaijan GP. There was Bottas's fightback to P2, unsportsmanlike driving that cost Vettel the win and even an unforeseen victory for Red Bull. But no one could have predicted a podium for 18-year-old rookie Lance Stroll in the Williams FW40.

This was a driver who'd had his driving ability questioned after three DNFs in the first three races of the season, in a car that has been a prominent midfield runner. So has he finally answered his critics?

Alas, he has taken just a small step in a long journey of proving he is good enough for F1. But at least that step has been taken in the right direction. Yes, I know luck played its part, but Stroll put his head

down and drove the rest of the race at a consistent pace with few errors.

Jonny Clinker
Oxfordshire, UK

A disgrace to the sport

In 83 years of watching motorsport (my first race was Brooklands, 1934), both on screen and live, I can't ever remember seeing such a disgusting display of bad temper as Sebastian Vettel showed in Baku.

To be fair, it could be said that you'd expect little more from a man who from the early days of him winning insulted us all with his rude and arrogant one-finger gesture. But such loutish driving should be severely punished as road-rage incidents usually are.

Why did it take the stewards so long to announce their findings?

And did they honestly think that giving Vettel a slap on the wrist was sufficient punishment for dragging our sport down to the level of fairground dodgems?

Robert Goodchild
By email

Separate scores required

Once again, in Austria, a competitor (Lewis Hamilton) has been punished, and lost valuable championship points through no fault of his own before a race starts. This time, it was due to a design/factory/supplier problem that resulted in a questionable bearing inside his gearbox.

There is no excuse for these heavy-handed grid penalties being given to the drivers. It means that both drivers and fans are cheated

out of some potentially good competition because the FIA is incapable of recognising the fact that there are two championship races going on simultaneously.

Really, two different scoring systems are needed. If a driver is found guilty of a violation related to his driving prior to the start of the race, then he deserves a grid-drop penalty. But not when a mechanical component fails through no fault of his own.

If a penalty is called for due to replacement of a mechanical part, a driver should be permitted to start the race in the qualifying position he earned. At the end of the race, as constructors' points are calculated, the grid drop that the part's change calls for should then be added to the car's finishing position to determine the constructors' points. A driver who qualified on pole after a five-place grid drop and went on to win the race would still earn his rightful 25 points. But the team would get points as if the car had ended up in sixth place.

Now logic finally seems to be allowed in F1, let's start applying it!

John Tulebitz
By email

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NEXT MONTH



LEWIS VS SEB
The big battle for supremacy in 2017



ON COURSE
Bottas on duathlons and life at Mercedes



RÉNE ARNOUX
One of Renault's old boys reminisces

ON SALE

SEP 14

- > Felipe Massa talks penalties and comebacks at Chelsea
- > Shooting Formula 1 with a 104-year-old camera
- > Sauber's Pascal Wehrlein answers YOUR questions
- > Now that was a car: Merc's 2012 race winner, the F1 W03



RACE DEBRIEF AUSTRIAN GP

FINISHING STRAIGHT

THE RISE OF THE VALTTERI

Proving that first win was no fluke, his victory at Spielberg marks Bottas as a true title contender



"I believe... the team believes," said Valtteri Bottas as he stood proud following the second grand prix victory of his career. We'd got so used to considering the battle for the 2017 Formula 1 World Championship to be a two-horse race between Sebastian Vettel and Lewis Hamilton that the Finn in the other silver car had tended to be overlooked. This will no longer be the case after what happened in Austria.

A perfectly controlled victory drive from pole position pinged Bottas slap-bang onto the championship radar – and, as he himself was quick to point out, there was still more than half of this season to go. At this stage, Bottas was now 35 points down on leader Vettel and just 15 behind Mercedes team-mate Hamilton.

QUALIFYING

Hamilton had known since the previous Tuesday that a gearbox change (nothing to do with the Vettel rear contact in Azerbaijan) would result in a five-place grid drop in Austria. Mercedes broke the news on Friday evening after Lewis had topped both free practice sessions with his new 'box.

A brake failure had hampered him in final free practice on Saturday, but he was fastest in Q1 as he worked to minimise the impact of his penalty. In Q2 he opted to run on the supersoft Pirellis, ensuring he would start the race on this slower tyre, at odds with the rest on their ultrasofts. Second to Bottas in the session, he reverted to ultras for Q3 but still lost out to his team-mate in the first runs that would define the starting order.

As the second runs got under way, Romain Grosjean's Haas trickled to a standstill on the exit of Turn 3, while an oversteering Max Verstappen threw his Red Bull into a high-speed spin out of Turn 7. The yellow flags ensured no one would go faster today. That left Bottas with his second career F1 pole ahead of Vettel's Ferrari, which had been just 0.04s down on the Mercedes on those first runs. Hamilton was third, meaning an eighth-place starting slot on row four.

RACE

Bottas described it as "the start of my life" as he shot into the lead when the five red lights went out. Vettel was adamant Valtteri had jumped them, even when it was pointed out that his rival's reaction time had officially been measured

“BOTTAS LOOKED TO BE STROKING TOWARDS VICTORY IN THE EARLY STAGES, OPENING A 7.9S GAP TO THE FERRARI BEFORE VETTEL STOPPED FOR SUPERSOFTS”

at +0.201s. "Don't believe it..." Seb replied with a rueful smile. Daniel Ricciardo had a good view from his fourth place on the grid and couldn't resist adding his "two cents" in the press conference. "The lights were held for a long time, more than normal," he said. "For sure, he went, but the lights went out. I guess he got lucky."

As the field threaded its way uphill into Turn 1, Verstappen's race was already unravelling thanks to a clutch problem – to the dismay of the orange army that dominated the grandstands and grass banks at Red Bull's home venue.

Fernando Alonso had made his usual flier, only to find himself bumped into Verstappen on entry to the first turn. The villain was Daniil Kvyat, who received a drive-through penalty for starting the concertina shunt. At the front, Bottas led from Vettel, as Ricciardo moved up to third. Fast-starting Romain Grosjean made it up to fourth from sixth, while Kimi Räikkönen was down two places in a messy opener during which his Ferrari ran wide out of Turn 3 as Ricciardo got the better of him.

Hamilton demoted Sergio Pérez and Grosjean to chase Kimi's Ferrari. Out of kilter on tyre strategy, Lewis was the first of the frontrunners to make their single stop, ditching the slower supersofts for ultras on lap 31. Räikkönen would be forced to wait longer than most before his stop, substituting his ultras for supersofts on lap 44 as he (briefly)

RESULTS ROUND 9

RED BULL RING / 09.07.17 / 71 LAPS



Verstappen's orange army were disappointed when their man was knocked out on the very first lap, as Daniil Kvyat shoved the McLaren of Fernando Alonso into him in a concertina shunt



Bottas held on from a fast-closing Vettel to score his second win and ignite his title challenge

became a factor in the battle for the lead. The strategy didn't work out too well, with Hamilton comfortably taking P4 from him as he rejoined.

Bottas looked to be stroking towards victory in the early stages, opening a 7.9s gap to the Ferrari before Vettel stopped for supersofts on lap 31. The Merc managed ten more laps on ultras before making its stop, but the strategy resulted in a net loss. On lap 42, Vettel was just 4.4s down with 29 laps still to run – and long-running Räikkönen, still on his set of ultras, was ahead of them both, which was just what Mercedes had been trying to avoid.

Would Kimi balk the Merc and help Vettel close in? No. Bottas swept past his fellow Finn on lap 44, with Räikkönen finally pitting to take on supersofts at the end of the lap.

Still, it wasn't over: Vettel was gaining. On lap 69 of 71 the Ferrari was just 0.8s behind – and finally within DRS range. But Bottas, nursing a blister on his left-rear Pirelli, kept his cool. Vettel was 0.65s shy at the flag.

Behind them, Hamilton did at least manage an attempt on Ricciardo for third. The Mercedes got a run on the Red Bull down to Turn 4 on the penultimate lap, but the outside line was always a tall order. Ricciardo clung on to third.

Afterwards, in the press conference, Vettel's doubts over Bottas' lightning getaway were beginning to sound like sour grapes. Beside him, Bottas clearly couldn't care less. His belief, in himself and his quick-silver Mercedes W08, was only growing stronger.



1st	Valtteri Bottas Mercedes	1h 21m 48.523s
2nd	Sebastian Vettel Ferrari	+0.658s
3rd	Daniel Ricciardo Red Bull	+6.012s
4th	Lewis Hamilton Mercedes	+7.430s
5th	Kimi Räikkönen Ferrari	+20.370s
6th	Romain Grosjean Haas	+73.160s
7th	Sergio Pérez Force India	+1 lap
8th	Esteban Ocon Force India	+1 lap
9th	Felipe Massa Williams	+1 lap
10th	Lance Stroll Williams	+1 lap
11th	Jolyon Palmer Renault	+1 lap
12th	Stoffel Vandoorne McLaren	+1 lap
13th	Nico Hülkenberg Renault	+1 lap
14th	Pascal Wehrlein Sauber	+1 lap
15th	Marcus Ericsson Sauber	+2 laps
16th	Daniil Kvyat Toro Rosso	+3 laps

Retirements

Carlos Sainz Toro Rosso	44 laps – engine
Kevin Magnussen Haas	29 laps – hydraulics
Fernando Alonso McLaren	1 lap – collision
Max Verstappen Red Bull	0 laps – collision

FASTEST LAP



Lewis Hamilton
1min 07.411s on lap 69

FASTEST PITSTOP



Lewis Hamilton
20.761s (entry to exit)

TYRE COMPOUNDS USED



Ultrasoft Supersoft Soft Inter Wet

CLIMATE

Sunny

AIR TEMP

30°C

TRACK TEMP

51°C

DRIVERS' STANDINGS

1 Vettel	171pts	11 Stroll	18pts
2 Hamilton	151pts	12 Hülkenberg	18pts
3 Bottas	133pts	13 Grosjean	18pts
4 Ricciardo	107pts	14 Magnussen	11pts
5 Räikkönen	83pts	15 Wehrlein	5pts
6 Pérez	50pts	16 Kvyat	4pts
7 Verstappen	45pts	17 Alonso	2pts
8 Ocon	39pts	Palmer, Ericsson,	
9 Sainz	29pts	Vandoorne, Giovinazzi,	
10 Massa	22pts	Button	0pts

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LAT IMAGES: STEVE ETHERINGTON; ANDY HONE; ZAK MAUGER



RACE DEBRIEF BRITISH GP

FINISHING STRAIGHT

HOME TOWN HAMMERTIME

When Lewis Hamilton took a record-equalling fifth British Grand Prix victory, no one else got a look-in



Ahead of the British Grand Prix Lewis Hamilton had courted controversy by being the only 2017 race driver not to attend the 'F1 Live London' street parade around Trafalgar Square. But when the chips were down – when it *really* mattered – Hamilton delivered for 'his fans' in a manner that few other drivers have ever been able to.

QUALIFYING

This was predictable Silverstone weather: overcast, blowy and drizzly, with a threat of even heavier rain. Equally predictable was a Q3 slugfest between Mercedes and Ferrari, with the silver cars seeming stronger. Ahead of the weekend, team boss Toto Wolff had noted that the W08 remained a tricky car to balance. But in the hands of a fired-

up superstar, it can be devastatingly effective – as Lewis Hamilton would demonstrate.

Silverstone is Hamilton's stamping ground: home turf where he is habitually brilliant. His first marker was a 1m27.231s lap, but there was better to come. He turned the timing screens purple with three best sectors on his final flying lap, laying down a 1m26.6s lap, over half a second faster than Kimi Räikkönen's P2 time of 1m27.147s. This stunning lap allowed him to match Jim Clark's record of five British GP poles and put him one shy of Michael Schumacher's outright pole record of 68.

"The high-speed section here is incredible," he enthused afterwards. "I could feel the energy from the crowd, and when it dried out I was really able to use the grip. The final lap felt fantastic."

Kimi's P2 was a fine effort, while Seb Vettel's P3 came with a gripe about imperfect tyre preparation. Valtteri Bottas's P4 became P9 after a gearbox penalty, elevating Max Verstappen to the second row. Hülkenberg, Pérez, Ocon, Vandoorne and Grosjean closed out the top ten, but all, surely, were competing to be best of the rest...

RACE

Don't doubt for one second that we're witnessing something very special during this era of Lewis Hamilton-British GP domination. This was his fifth British GP victory here – a tally equalled only by Jim Clark and Alain Prost. It was also his fourth consecutive victory at Silverstone.

“ HAMILTON STRETCHED OUT A FURTHER GAP, CHARGING AWAY ON SUPERSOFTS. HE PAUSED ONLY ON LAP 25, FOR A SET OF SOFTS THAT WOULD SEE HIM TO THE FLAG ”

Untouchable on Saturday, only misfortune or mechanical misadventure could stop Hamilton's ascent to the podium's top step. An abandoned start, caused by the formation-lap failure of Jolyon Palmer's brake-by-wire system, was no impediment. They simply went round one more time before Lewis blasted into a lead he would never relinquish. It was his rivals' turn to suffer: Vettel's brakes caught fire; Bottas started from ninth due to a gearbox penalty; and Dan Ricciardo started 19th after pre-race technical woes.

Only Räikkönen was able to keep Hamilton in sight. After lap 1, Lewis's lead over Kimi was 1.6s, although it was wiped out by a three-lap Safety Car resulting from a clash between Carlos Sainz and Daniil Kvyat that pushed Sainz into retirement.

When the race resumed Hamilton was able to stretch out a further gap, charging away on supersofts. He paused only on lap 25, for a set of softs that would see him to the flag, with a fastest lap (1min 30.621s) thrown in three laps from home. "I was managing a 12-14s gap to Kimi," he said afterwards, "but then I saw there'd been a couple of blow-outs right at the end, so I backed off."

The two blow-outs occurred within a lap of each other, and each one killed the front-left tyre of a Ferrari. Räikkönen's came two laps from home and cost him P2. The Pirelli didn't explode, but lost its tread without deflating, letting Kimi cruise to the pits for fresh boots and a sprint to the last podium position. Vettel's, one lap later, was more dramatic:

RESULTS ROUND 10

SILVERSTONE / 16.07.17 / 51 LAPS

Jolyon Palmer's race was over before it began, following a warm-up lap brake-by-wire failure



Bottas finished P2 behind Mercedes team-mate Hamilton, after starting from P9



Vettel's late-race tyre failure helped whittle his title lead down to just one point ahead of Lewis

his front-left (six laps younger than Räikkönen's) flattened without warning and while Ferrari would offer no reason for the failure, Vettel *had* locked up the left front heavily a few laps earlier, during a furious fight with Bottas.

Bottas, charging from P9, had passed Vettel for third, pre-blowout, prompting partisan cheers – Vettel's positional loss being Hamilton's title-fight gain. Bottas then rose to P2 following Räikkönen's troubles, with Vettel slumping to seventh.

Verstappen wound up fourth after a late stop, having engaged in battle with Vettel for P3. Each ran the other off the track, but Vettel could find no way past. Ferrari eventually opted for the undercut on lap 18 and when Max pitted two laps later, he knew a place had been lost even before he left the

pits. Meantime, Ricciardo's charge to fifth, from P19, was one of the many highlights of this brilliant grand prix. He's a driver who, like his team, doesn't know when he's beaten.

Next up was Nico Hülkenberg. A new floor had blessed the R.S.17 with greater grip and balance and Hülk's delivery of the team's joint-best 2017 finish to date was a happy footnote to the 40th anniversary of Renault's F1 debut.

Esteban Ocon and Sergio Pérez stayed out of each other's way to record another double points finish for Force India, while Felipe Massa salvaged Williams' lacklustre weekend with tenth.

Lewis left his beloved Silverstone just one point off the championship lead. Ten down, ten to go... These are heady times indeed.



1st	Lewis Hamilton	Mercedes	1h 21m 27.430s
1st	Valtteri Bottas	Mercedes	+14.063s
3rd	Kimi Räikkönen	Ferrari	+36.570s
4th	Max Verstappen	Red Bull	+52.125s
5th	Daniel Ricciardo	Red Bull	+65.955s
6th	Nico Hülkenberg	Renault	+68.109s
7th	Sebastian Vettel	Ferrari	+93.989s
8th	Esteban Ocon	Force India	+1 lap
9th	Sergio Pérez	Force India	+1 lap
10th	Felipe Massa	Williams	+1 lap
11th	Stoffel Vandoorne	McLaren	+1 lap
12th	Kevin Magnussen	Haas	+1 lap
13th	Romain Grosjean	Haas	+1 lap
14th	Marcus Ericsson	Sauber	+1 lap
15th	Daniil Kvyat	Toro Rosso	+1 lap
16th	Lance Stroll	Williams	+1 lap
17th	Pascal Wehrlein	Sauber	+1 lap

Retirements

Fernando Alonso	McLaren	32 laps – fuel pump
Carlos Sainz	Toro Rosso	0 laps – accident
Jolyon Palmer	Renault	DNS – hydraulics

FASTEST LAP



Lewis Hamilton
1min 30.621s on lap 48

FASTEST PITSTOP



Felipe Massa
27.583s (entry to exit)

TYRE COMPOUNDS USED



CLIMATE	AIR TEMP	TRACK TEMP
Cloudy	21°C	31°C

DRIVERS' STANDINGS

1	Vettel	177pts	11	Massa	23pts
2	Hamilton	176pts	12	Stroll	18pts
3	Bottas	154pts	13	Grosjean	18pts
4	Ricciardo	117pts	14	Magnussen	11pts
5	Räikkönen	98pts	15	Wehrlein	5pts
6	Verstappen	57pts	16	Kvyat	4pts
7	Pérez	52pts	17	Alonso	2pts
8	Ocon	43pts	Palmer, Ericsson,		
9	Sainz	29pts	Vandoorne, Giovinazzi,		
10	Hülkenberg	26pts	Button		

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RACE DEBRIEF HUNGARIAN GP

FINISHING STRAIGHT

MERCEDES' MORAL DILEMMA

They played the team game perfectly in Hungary, but what price will Merc pay for doing the right thing?



Kimi Räikkönen could have won the Hungarian Grand Prix, but Ferrari ultimately didn't allow that to happen, leaving him to act as a frustrated human shield for a car-troubled Sebastian Vettel.

Similarly, Mercedes *could* have allowed Lewis Hamilton to hold onto his third place, having prevailed upon his team-mate Valtteri Bottas to give that position up to allow Hamilton an opportunity to attack the vulnerable Ferraris. That they didn't was perhaps laudable from a moral point of view, but it made for an incredibly tense final few laps of the race as Mercedes team principal Toto Wolff weighed up the pros and cons of 'doing the right thing' and swapping them back again – while Red Bull's Max Verstappen closed in rapidly on them from behind.

QUALIFYING

Hungary's combination of high-ish ambient temperatures and a compact, smooth-surfaced track layout with a preponderance of slow and medium-speed corners was never expected to favour the long-wheelbase Mercedes W08s.

Third and fourth in qualifying for Bottas and Hamilton, behind Vettel and Räikkönen, was probably the best Mercedes could have expected after Daniel Ricciardo was fastest for Red Bull in both Friday practice sessions and Vettel led a Ferrari one-two on Saturday morning. Still, Merc team boss Toto Wolff insisted Hamilton would have been "in the fight for pole position" if he hadn't run wide at Turn 4 and been forced to abort his first run in Q3.

Qualifying also proved disappointing for the Red Bulls on one of the most engine-neutral circuits on the calendar. Despite another batch of chassis upgrades, and that sizzling practice pace, Ricciardo could do no better than sixth, with Verstappen P5.

RACE

The tight nature of the Hungaroring means overtaking is almost impossible here and a good start is vital – so incidents are virtually guaranteed at Turn 1. Vettel and Räikkönen got away cleanly but then a brawl erupted behind: Hamilton tucked in behind Bottas and got boxed in as Verstappen plotted a successful course around the outside, and Ricciardo found a gap on the inside.

TEMPTED THOUGH MERCEDES WERE TO LEAVE HAMILTON IN THIRD AND BANK MORE POINTS, THEY SWAPPED HIM WITH BOTTAS AT THE FINAL CORNER

Hamilton lost two places, but gained one back when Verstappen took out Ricciardo at Turn 2, a clumsy shunt that would earn Max a 10s penalty. After four laps behind the Safety Car, Hamilton had a look at the inside at Turn 1 on the restart but declared it "wasn't worth the risk".

The first suggestions of Ferrari's vulnerability came when Vettel reported that his steering had become offset to the left, and that the problem was getting worse. A message from the pitwall advised him to avoid heavy kerb impacts – not the fastest way around this circuit. Immediately behind, Räikkönen began to protest that he was being held up. Ferrari were in a quandary: should they let Vettel retain the lead, and leave both their cars open to an assault by Mercedes, or should they order them to swap places and allow Räikkönen to go clear, preserving a Ferrari victory but putting Vettel at greater risk? As the laps ticked by, no word came despite Räikkönen's palpable agitation.

Mercedes might have been better placed to take advantage of Ferrari's vulnerability had they not been stymied by technical issues of their own. A cracked fibre-optic cable was disrupting their communications, including the team radio, so Hamilton and Bottas had but intermittent contact with the pitwall in the opening phase of the race.

Bottas was the first of the leading group to pit, on lap 30, followed by Hamilton, Vettel and Räikkönen on subsequent laps. Räikkönen flew when Vettel pitted out of the way, and had he been



Ricciardo is knocked out on the first lap after a clumsy move by team-mate Verstappen at Turn 2



Seb Vettel is affected by various handling issues, and team-mate Räikkönen holds station astern



On the final corner, Hamilton sportingly hands back the position Bottas had relinquished to him

left out longer he might have undercut his team-mate and emerged in the lead, but it was not to be, and he departed on Vettel's tail. "I had the speed to stay out," he fumed over the radio.

Serving his ten-second penalty would put Verstappen out behind Hamilton, so Red Bull kept him out until lap 42 to give him fresher tyres in the final phase. With the radio restored, Hamilton indicated he was faster than his team-mate and could challenge the Ferraris if Bottas gave way: "If I can't catch and pass them I'll let him back past."

On lap 45 the Mercedes swapped places at Turn 1 and Hamilton made inroads into the Ferraris' leading margin, helped by permission from the pitwall to engage a more potent engine mode for a five-lap push. Räikkönen began to feel the

pressure as Hamilton got within DRS distance, forcing him to run closer to Vettel.

But Vettel lifted his pace, and when Hamilton ran wide at Turn 5 on lap 58 and fell out of DRS range, the battle was over. Now it was the Mercedes crew's turn to sweat, since Verstappen was closing in on Bottas. Tempted though they were to leave Hamilton in third and bank more points, they swapped at the final corner.

The result leaves Vettel on 202 points and Hamilton on 188. Had Mercedes let Lewis finish third, the standings would have been 202-191. A small difference, but one that may take on greater import come Abu Dhabi.

If it does, Wolff admitted: "I'll be the first person to shoot myself in the knee..."



1st	Sebastian Vettel	Ferrari	1h 39m 46.713s
2nd	Kimi Räikkönen	Ferrari	+0.908s
3rd	Valtteri Bottas	Mercedes	+12.462s
4th	Lewis Hamilton	Mercedes	+12.885s
5th	Max Verstappen	Red Bull	+13.276s
6th	Fernando Alonso	McLaren	+71.223s
7th	Carlos Sainz	Toro Rosso	+1 lap
8th	Sergio Pérez	Force India	+1 lap
9th	Esteban Ocon	Force India	+1 lap
10th	Stoffel Vandoorne	McLaren	+1 lap
11th	Daniil Kvyat	Toro Rosso	+1 lap
12th	Jolyon Palmer	Renault	+1 lap
13th	Kevin Magnussen	Haas	+1 lap*
14th	Lance Stroll	Williams	+1 lap
15th	Pascal Wehrlein	Sauber	+2 laps
16th	Marcus Ericsson	Sauber	+2 laps
17th	Nico Hülkenberg	Renault	+3 laps/gearbox

Retirements

Paul Di Resta	Williams	60 laps – oil leak
Romain Grosjean	Haas	20 laps – wheel
Daniel Ricciardo	Red Bull	0 laps – collision

*Includes 5-second penalty for forcing another driver off the track

FASTEST LAP



Fernando Alonso, 1min 20.182s on lap 69

FASTEST PITSTOP



Lewis Hamilton, 21.338s (entry to exit)

TYRE COMPOUNDS USED



Supersoft Soft Medium Inter Wet

CLIMATE	AIR TEMP	TRACK TEMP
Sunny	32°C	56°C

DRIVERS' STANDINGS

1 Vettel	202pts	11 Massa	23pts
2 Hamilton	188pts	12 Stroll	18pts
3 Bottas	169pts	13 Grosjean	18pts
4 Ricciardo	117pts	14 Magnussen	11pts
5 Räikkönen	116pts	15 Alonso	10pts
6 Verstappen	67pts	16 Wehrlein	5pts
7 Pérez	56pts	17 Kvyat	4pts
8 Ocon	45pts	18 Vandoorne	1pts
9 Sainz	35pts	Palmer, Ericsson, Giovinazzi,	
10 Hülkenberg	26pts	Di Resta, Button	0pts

FORIX For F1 statistics visit www.forix.com

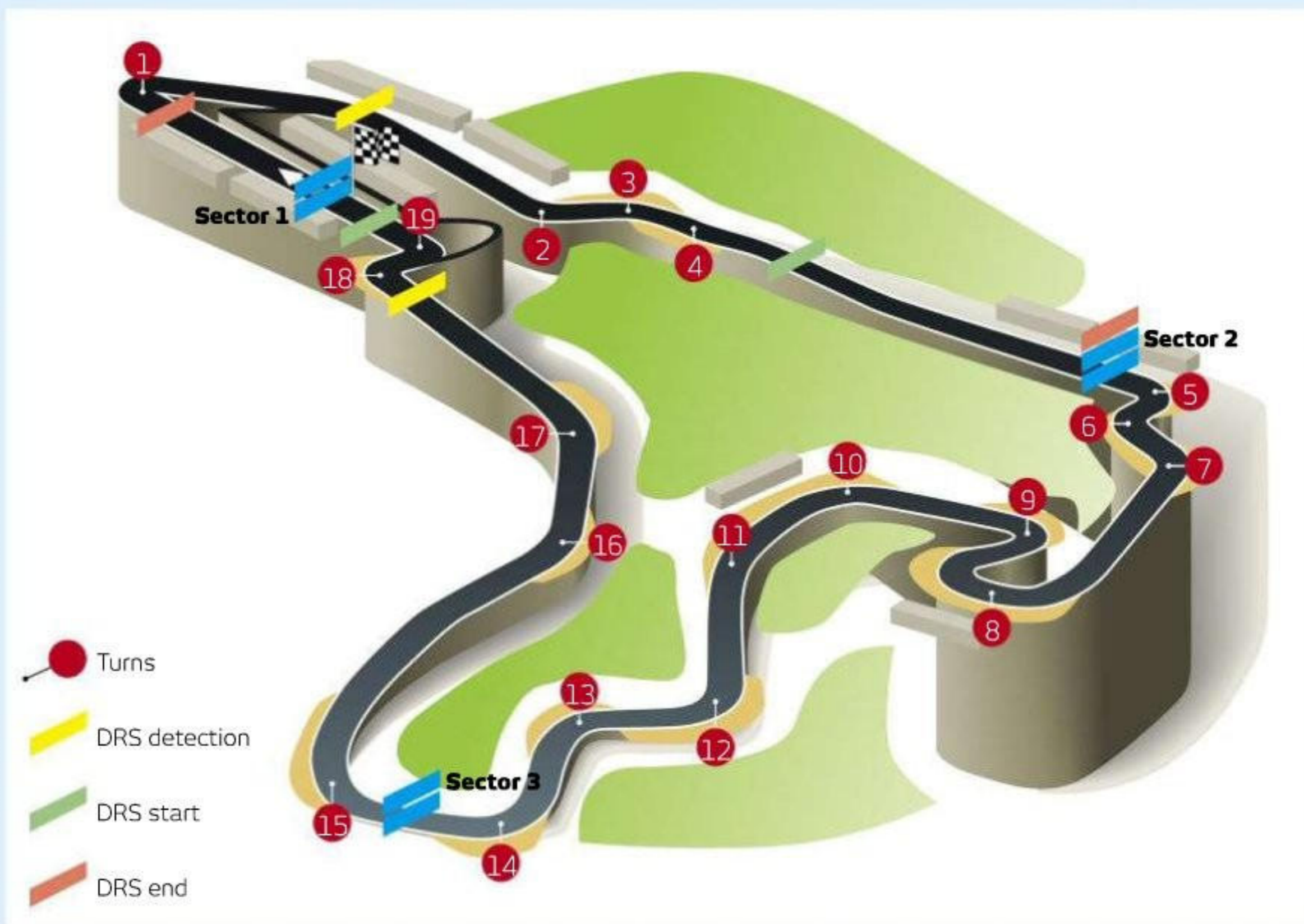
LAT IMAGES; ZAK MAUGER; GLENN DUNBAR; CHARLES COATES; OTHER PHOTOS: SUTTON IMAGES.



FINISHING STRAIGHT

THE BELGIAN GP

LAT IMAGES: ANDY HONE; GLENN DUNBAR; ZAK MAUGER; STEVE ETHERINGTON; STEVEN TEE; CHARLES COATES; ILLUSTRATIONS: ALAN ELDRIDGE



RACE DATA

- Circuit name** Circuit de Spa-Francorchamps
- First GP** 1950
- Number of laps** 44
- Circuit length** 4.352 miles
- Race distance** 191.415 miles
- Lap record** 1m 47.263s
Sebastian Vettel (2009)
- F1 races held** 49
- Winners from pole** 17
- Tyres** Ultrasoft, supersoft, soft

TV TIMETABLE (UK TIME)

- Friday 25 August**
- Practice 1** 09:00-10:30
- Practice 2** 13:00-14:30
- Saturday 26 August**
- Practice 3** 10:00-11:00
- Qualifying** 13:00-14:00
- Sunday 27 August**
- Race** 13:00
- Live coverage** Sky Sports F1 & Channel 4

THE MAIN EVENT



Motor racing has been taking place along the roads of Belgium's high fens for 95 years. And whether you stay in one of the villages of Malmedy, Stavelot, Francorchamps or Spa itself, you cannot escape the sense of history.

The biggest draw is the racetrack itself. Take a drive around the old circuit, which extends from Les Combes to Blanchimont, and you begin to appreciate the bravery of the drivers who used to drive flat-out in fragile machinery around these daunting public roads. Today's modernised GP track, with corners such as Eau Rouge and Pouhon, still thrills drivers and spectators alike.

Then there's the fickle weather, which can usually be relied on to mix things up. The nature of the climate in the Haute Fagnes region can throw up sweltering sunshine one day, then fog and pouring rain the next.

Finally, there's the recent influx of Max Verstappen fans, with his Dutch army flocking across the border to give the venue a party atmosphere. All in all, it's a heady concoction.

CLASSIC RACE: 1995

Unpredictable weather dominated this race. Qualifying produced a mixed-up grid with the Ferraris of Gerhard Berger and Jean Alesi in P1 and P2, while title rivals Damon Hill and Michael Schumacher were P8 and P16. When rain struck in the race, Schumacher stayed on slicks and kept wet-shod Hill behind with some very robust driving. Schumacher won, and Hill went to find him post-race to express his displeasure. The stewards agreed and gave Schumi a one-race ban, suspended for four races.



THE LAST FIVE WINNERS HERE...

2016	2015	2014	2013	2012
Nico Rosberg	Lewis Hamilton	Daniel Ricciardo	Sebastian Vettel	Jenson Button
Mercedes	Mercedes	Red Bull	Red Bull	McLaren

THE ITALIAN GP



RACE DATA

Circuit name Autodromo Nazionale Monza
First GP 1950
Number of laps 53
Circuit length 3.6 miles
Race distance 190.587 miles
Lap record 1m 21.046s
 Rubens Barrichello (2004)
F1 races held 66
Winners from pole 23
Tyres Supersoft, soft, medium

TV TIMETABLE (UK TIME)

Friday 1 September
Practice 1 09:00-10:30
Practice 2 13:00-14:30
Saturday 2 September
Practice 3 10:00-11:00
Qualifying 13:00-14:00
Sunday 3 September
Race 13:00
Live coverage Sky Sports F1
Highlights Channel 4

THE MAIN EVENT

Just like Spa, Monza is steeped in history and the basic layout of this classic circuit has remained unchanged for many decades – despite the addition of three chicanes to reduce speeds. Situated in a royal park on the outskirts of Milan, Monza is characterised by trees lining the track from the Variante della Roggia, beyond the Lesmo bends, all the way down to Ascari.

The narrow ribbon of Tarmac and flat-out racing brings a sense of drama, and on race-day morning you can feel the tension build. The patriotic tifosi flock here to cheer on the red cars – and you can expect them to ratchet up their enthusiasm into a frenzy if either Sebastian Vettel or Kimi Räikkönen seem likely to make the podium this year.

Rather like Le Mans, drivers walk across a gangway to the rostrum and stand on a circular structure positioned above the pitlane that overlooks the start/finish straight, which fans are allowed to enter after the race.



CLASSIC RACE: 2008

Minardi were regarded as F1's perennial underdogs, fighting for just the odd point here and there. Then Red Bull boss Dietrich Mateschitz took ownership of the team in 2006, rebranding them Toro Rosso. A lot of the old Minardi staff stayed, so when a young Sebastian Vettel dominated a rain-soaked 2008 Italian GP, they couldn't believe their eyes. Toro Rosso's one and only win is still the stuff of legend and, at the time, Vettel was F1's youngest ever race winner, aged 21 years and 73 days.



THE LAST FIVE WINNERS HERE...



2016
Nico Rosberg
Mercedes



2015
Lewis Hamilton
Mercedes



2014
Lewis Hamilton
Mercedes



2013
Sebastian Vettel
Red Bull



2012
Lewis Hamilton
McLaren



60

FIGURE

Still going strong, it's time for magical Monza's numbers

LAT IMAGES: STEVEN TEE

110

The number of days it took to build the original Monza track in 1922

0.61s

The amount of time that covered the top five finishers in the 1971 Italian GP – the closest ever F1 finish



148 MILES

The distance between Monza and Imola

FOUR

The number of Italian GPs held at Monza that have been won by Italians: Nino Farina (1950), Alberto Ascari (1951/52) and Ludovico Scarfiotti (1966)

217

The record number of laps led at Monza – by Alberto Ascari

76%

of the track is driven at full throttle

66

grands prix have been held at Monza – more than at any other circuit in F1 history

19

The number of times a Ferrari has been on pole at Monza, eight times more than nearest rivals McLaren



320 METRES



The radius of the two banked corners that were used in Italian GPs in 1955, 1956, 1960 and 1961

2 HOURS 0 MINUTES 25 SECONDS

The time it took Kenyan athlete Eliud Kipchoge to run a marathon on the Monza circuit on 6 May 2017 – setting an unofficial world record

MANSELL 'RED 5' COLLECTION



TAXI FOR SENNA, BRITISH GRAND PRIX, 1991



MONACO 'CHASE'



FERRARI 'SPARKS'



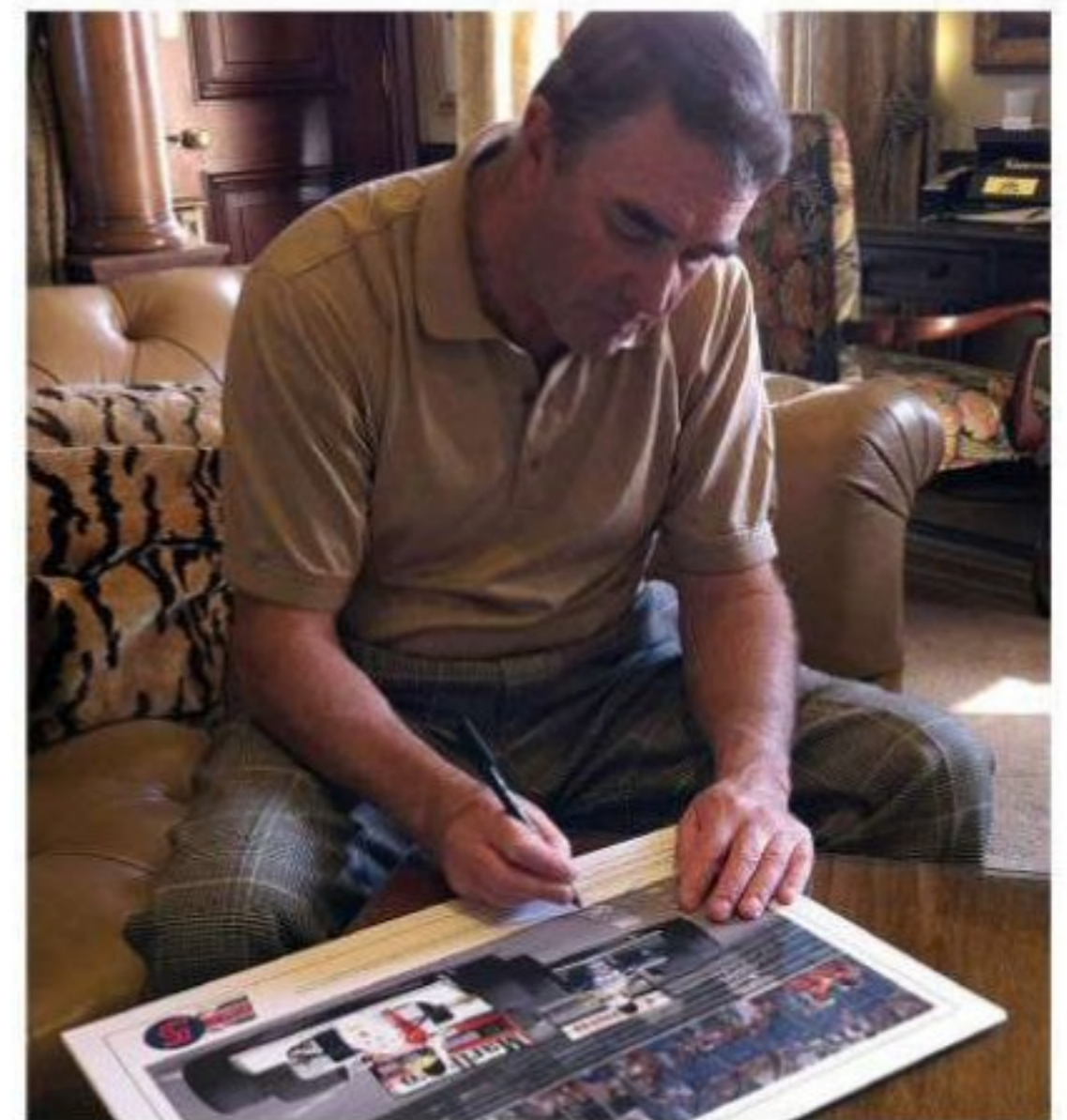
MANSELL VS SENNA 'RIVALS'

The 'Red 5' signed print collection has been put together, with Nigel Mansell, to capture the greatest racing moments from a 15 year career in F1 and Indy Car.

NIGEL MANSELL

Nigel Mansell, CBE won both the Formula One World Championship (1992) and the CART Indy Car World Series (1993). Nigel was the reigning F1 champion when he moved over to CART, becoming the only person to hold both titles simultaneously.

Nigel first raced with the number 5 when he joined Williams in 1985, and it was Murray Walker who popularised describing Nigel as 'Red 5', a number he was able to take with him to IndyCar.



Available from The Signature Store, every print is available rolled for worldwide delivery, with framed prints available in the UK. Every print comes with a Certificate of Authenticity, and some as 'collectors editions' with the full 'Red 5' signature.



WWW.THESIGNATURESTORE.CO.UK



THE CIRCUIT OF THE AMERICAS

Austin, Texas; 20-22 October 2017



WHY VISIT?

Over the course of five years, the US GP in Austin has established itself as one of the most popular races on the F1 calendar. One of the reasons for this is that, despite being a modern circuit, the purpose-built Circuit of The Americas presents drivers with quite a challenge – from the steep 30-metre incline of Turn 1 to the high-speed switchback from Turns 3 to 10.

The other reason is that Austin is such a bustling and vibrant city, which is rightly famed for its abundance of live music and revelry. Combine that with beautiful parks and scenic greenbelts and it's no surprise that Austin has

been named the best place to live in America in 2017 by *US News & World Report*.

The Circuit of The Americas has also invested in the live music scene by hosting two concerts for race-going fans at the track each night of the grand prix weekend. This year Justin Timberlake will perform following Saturday's track action, while Stevie Wonder will entertain the fans at the circuit on Sunday night after the race.

The F1 personnel who travel to every race often cite Austin as being one of their top three grands prix of the year, so now's the time to discover the race *and* the city for yourself.

WHAT TO SEE

Texas State Capitol

Bigger even than the US Capitol in Washington DC, this impressive state building was erected during the 1880s and designed in an Italian Renaissance Revival style. Free tours run daily, which explore the history of the building and of Texas. Bring your binoculars to get a good view of the Goddess of Liberty statue, which is perched on the top of the building.

Bullock Texas State History Museum

Texas is the USA's second largest state and has been at the heart of the US story for the past 250



Smart, vibrant Austin has become one of the most popular host cities on the Formula 1 calendar



FAST FACTS

- Currency** £1 = \$1.31 US dollar
- Time zone** GMT -6
- Plug type** Type A
- Weather** 21°C / sunny
- Flight time** London Heathrow to Austin-Bergstrom 10hrs 20mins

Barton Creek

A tributary of the Colorado River, Barton Creek runs through scenic countryside outside Austin. Join the locals as they head out to canoe and swim in the creek – it's a great way to get a feel for life in the Texan city. The creek is also home to the endangered Barton Springs salamander.

Lady Bird Lake

Created in 1960 as a cooling pond for a power plant, this reservoir has overcome its industrial beginnings to emerge as a hub of recreational activities with hiking and biking trails around the shoreline and paddleboats and kayaks to hire.

Brewery tours

Austin is home to some of America's favourite craft beer breweries and most welcome visitors, so why not take a tour and enjoy a tipples? Hops & Grain, Blue Owl and Zilker are favourites.

years. At the Bullock Museum, you can take a trip back in time and view the reconstructed hull of the 17th Century Le Belle shipwreck, discover the history of the American Civil War, and see military aircraft and world-class sculptures.

City bike tours

Austin enjoys an impressive 230 days of sunshine a year, which makes it the perfect place to get on your bike and see the sights. Various companies run bicycle tours around the city, offering different themes and giving a whistle-stop tour of the city's most fascinating places.

THOMAS COOK SPORT BREAK DETAILS

GP ticket and four-night hotel-only breaks from £949pp*

YOUR BOOKING INCLUDES

- A great choice of hotel accommodation with breakfast included daily
- Weekend general admission to the US GP
- Access to the Justin Timberlake and Stevie Wonder concerts
- A merchandise pack including a bag, sun cream, poncho, pen, earplugs, ticket wallet and lanyard
- Service charges and taxes

WHERE TO STAY?

Embassy Suites by Hilton Austin – Downtown / Town Lake

300 South Congress Avenue, Austin, Texas 78704



Located in the very heart of Austin, this smart and comfortable hotel offers convenient access to many attractions including the scenic Lady Bird Lake and its surrounding hiking and bike trails.

Sheraton Austin

701 East 11th Street, Austin, Texas 78701

Centrally positioned in downtown Austin, this hotel is within walking distance of the Red River Music District. Facilities include indoor and outdoor pools and a gym, while the modern rooms are equipped with 32-inch flat-screen TVs and coffee makers.



*Pricing correct at time of press

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F1 UPGRADES

Enhance the F1 experience with the latest must-have products

STEPHEN SOUTH: THE WAY IT WAS

Author Darren Banks

Price £28.50

performancepublishing.co.uk

British racer Stephen South seemed destined for a career in F1, only for a crash to curtail his ambitions. He'd impressed in junior formulae and made a sole F1 outing for McLaren at the 1980 Long Beach Grand Prix. But at a Can-Am race that year, he suffered a crash that led to the amputation of his lower left leg.

For the first time, South discusses the events that forced him to race in North

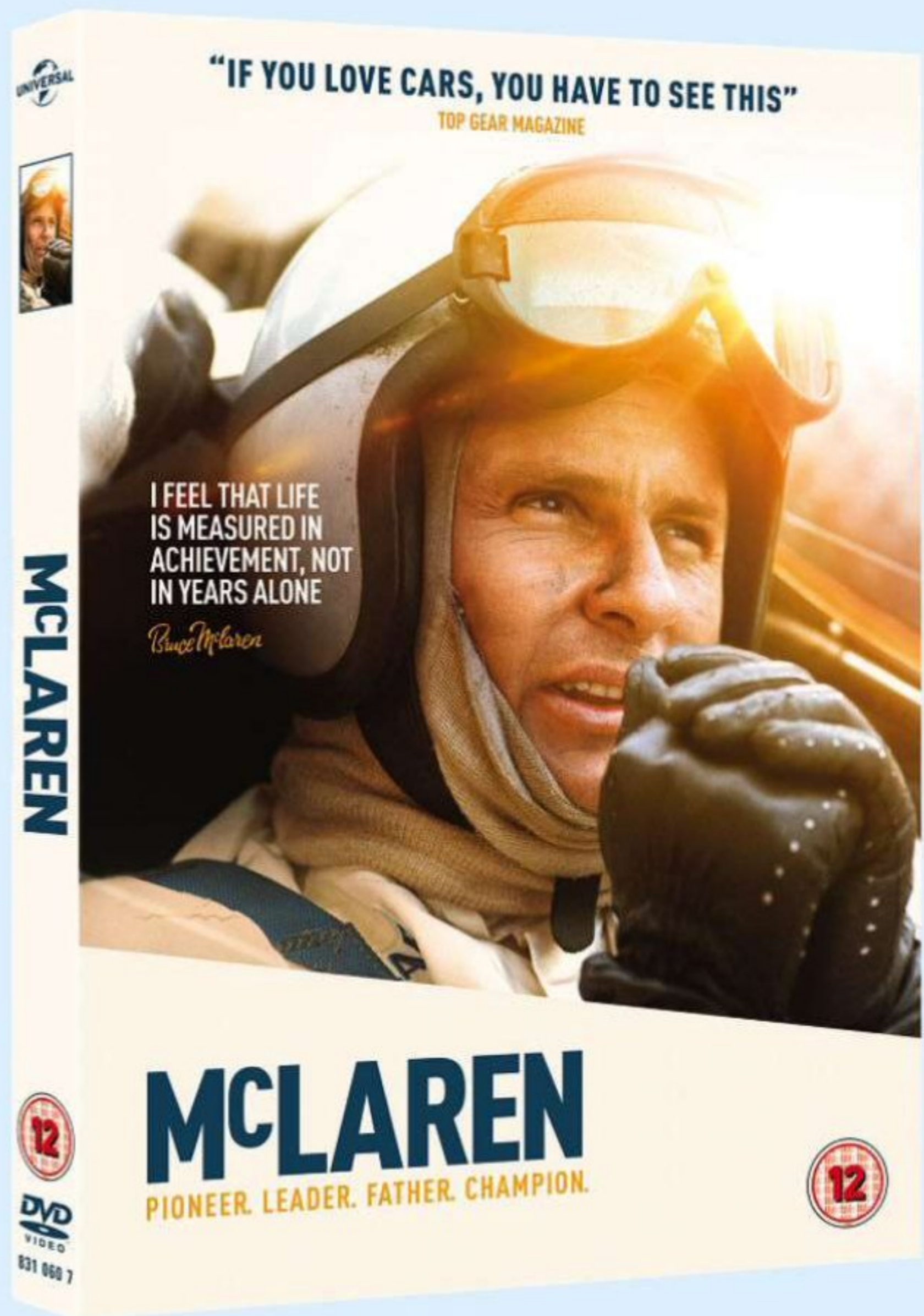
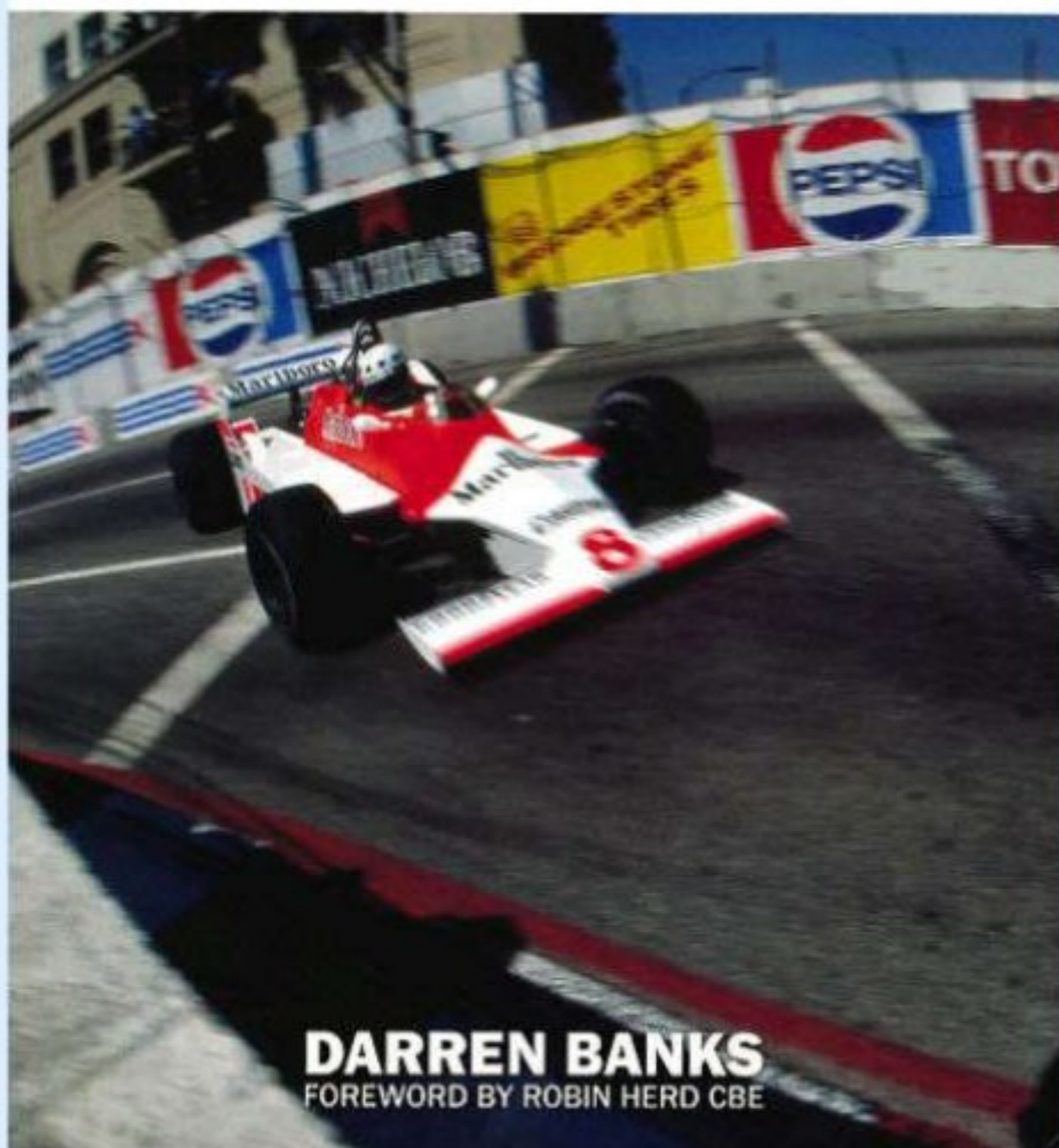
America, his horrific accident and his long and emotionally painful recovery.

Author Darren Banks speaks to many of the people involved in South's career, including respected F1 journalist David Tremayne, who helped edit the book and who also went to school with South in Harrow. "I can still picture him arriving in the mornings at the wheel of his father's green S-Type Jaguar, looking super-cool," says Tremayne.

This is a powerful look back at a perilous era of racing, away from the top flight, in the 1970s.

STEPHEN SOUTH: THE WAY IT WAS

The story of a British racer who was too fast to be forgotten



MCLAREN

Director Roger Donaldson

Format DVD/Blu-ray/online

Price From £10/£13/£3.49

universalpictures.co.uk

Some Formula 1 stories seem so familiar as to need no retelling. The legend of Bruce McLaren is surely one of them: the ambitious Kiwi who became the then youngest ever grand prix winner in 1959, aged 22, then went on to found a motorsport empire that bears his name to this day, before his untimely death in a testing accident at Goodwood in 1970.

But all great tales are worthy of a reboot, and in the case of *McLaren*, that equates to the full biopic treatment. This documentary film is now available to view online at YouTube or Amazon Prime, or you can buy a copy of the DVD or Blu-ray.

McLaren shares a similar narrative arc to that of the documentary film *Senna*, but the burdensome knowledge of impending tragedy and the mortality of the protagonist is suspended by the joyful recollections of friends, peers, colleagues and

family of an exceptionally well-loved man.

Racers including Chris Amon, Jackie Stewart, Dan Gurney, Emerson Fittipaldi and Mario Andretti all speak of the respected racer and fierce rival against whom they competed, building a picture of a man blessed with huge energy and focused intent to succeed.

It is here that *McLaren* truly shines, as it fills out previously incomplete impressions of a great name from a previous era, whose simple humanity has been hidden by the subsequent growth of his legend.



**TAG HEUER FORMULA 1
AYRTON SENNA LIMITED
EDITION WATCH**

Price From £1,150
tagheuer.com

To celebrate the 30th anniversary of the first of Ayrton Senna's six Monaco Grand Prix wins, TAG Heuer have unveiled three limited-edition watches.

The first is the Carrera Heuer-01 timepiece, in a 45mm case that houses a skeleton dial with flashes of red and black. The other two pieces in the series are 43mm in diameter, featuring red lines within the dial to symbolise speed (pictured). All three limited-edition models proudly display the red lacquer Senna 'S'.



**FERRARI FRAGRANCE
IPHONE CASE**

Perfume Holding
Price £30
fragrancecase.com

This is something different: a case for your iPhone 6 or 6S that contains eau de toilette. One squirt from the back of the phone releases a cloud of one of Ferrari's signature colognes – Ferrari Black or Ferrari Red, which are described as "modern, elegant and intensely masculine scents."

Any concerns that the liquid might damage the phone itself have been alleviated due to extensive tests and an airtight seal guarantee. The case is available in red or black and comes with 25ml of scent, plus an extra 25ml refill.



WILLIAMS

Director Morgan Matthews
Worldwide release 14 August
williamsfilm.com

You wait years for an F1 biopic to come along, then two arrive at once. Like *McLaren*, this feature-length documentary charts the rise of the Williams F1 team by focusing on its founder. But perhaps the movie should have been called 'Frank', since it offers a brutally honest insight into family life away from the track, too. The film charts Frank Williams'

obsession with motor racing above all else and deals with the near-fatal car accident that left him paralysed.

Racing enthusiasts will be used to documentaries regurgitating the same old footage again and again, but *Williams* is different in that the production team have spent three years uncovering unseen archive film of Frank from his early days and across his time in F1.

There is great access to the Williams team today and at his daughter Claire's family home where she uncovers

clippings and photos charting her parents' life. The main thrust of the story is archived interviews with Frank's late wife Ginny, which became the basis of her 1991 book: *A Different Kind of Life*.

Interviews with the team's key players are interwoven with reconstructed scenes, which combine to make an absorbing, fascinating and moving film. The movie will be released at cinemas and Curzon Home Cinema from 4 August, and will be available on Blu-ray and DVD from 14 August.



**AUTOSPORT INTERNATIONAL
THE RACING CAR SHOW 2018**

11-14 January 2018
Ticket price From £33
autosportinternational.com

This annual pre-season event covers every aspect of motorsport, from grassroots to F1, with exhibitors catering for both industry and fans

alike. The first two days are trade-only, while the weekend offers entertainment at the Live Action arena.

Tickets for next year's motorsport extravaganza, which has been running at Birmingham's NEC since 1991, have just gone on sale, and the centrepiece of the 2018 show will be a feature of

Ferrari cars run in conjunction with Corse Clienti, the Scuderia's exclusive client-racing programme.

A new website has been launched to help fans keep track of the latest news and exhibitors (including *F1 Racing*) scheduled to attend. Visit autosportinternational.com for more details.



Michael Schumacher in his yellow Benetton, on his way to victory at a rain-soaked Belgian Grand Prix

LAT IMAGES

THE FIRST OF MICHAEL'S MANY

It was 25 years ago, just a year after his Formula 1 debut at the same venue in Spa, that Michael scored the first of his record 91 grand prix wins, as **Peter Windsor** recalls...

It was anniversary time. In 1991 Michael Schumacher had replaced Bertrand Gachot to make his F1 debut with Jordan at Spa, and now, one year and 16 races later, he was back in the Ardennes forest, driving this time for Benetton-Ford: Ross Brawn. Rory Byrne. Tom Walkinshaw. Flavio Briatore.

The 1992 season, however, was all about Nigel Mansell and the Williams-Renault FW14B with its active-ride/traction control/launch-strategy brilliance. Mansell exploited it to the maximum, while his team-mate Riccardo Patrese rued the loss of the passively suspended 1991 FW14.

At Spa, as at all the circuits that year, Nigel was again seemingly unbeatable. He was quickest in most sessions, including in the wet and in the warm-up on Sunday – and on Friday he took time to scrub in extra sets of race slicks because rain was expected to disrupt Saturday's running.

Michael nonetheless felt confident and calm. The B192 was beautifully balanced through Eau Rouge, Pouhon and Blanchimont; it braked well and had the power – even if it wasn't a Williams. With grey, leaden clouds overhead, Michael was second in the Sunday morning warm-up.

THE HEAVENS OPEN

Drizzle at the start would soon give way to a genuine Spa downpour. With all the main contenders on slicks, Ayrton Senna took the lead into La Source for McLaren-Honda, with Nigel braking early and holding the middle ground. Within a few laps, however, Nigel flicked to the outside into Blanchimont and seized the lead as they dived into the high-speed corner. Michael, who had started from P3, had a ringside view of the audacious move, running just behind the leaders as the rain began to fall with greater intensity.

Then all but Ayrton stopped for wets. Senna plugged on in the lead, gambling that the rain would abate, but by lap 14 he was obliged to stop. The two Williams were by then leading the two Benettons: Mansell-Patrese, Schumacher-Martin Brundle. Soon the rain ceased and it became a race of tyre management and strategy. Ayrton kicked himself; up front, Nigel was building up a margin. All seemed in order.

On lap 29, with 15 to go, Michael, his left-front tyre feeling the heat, missed the apex at Stavelot and ran wide onto the grass. Rejoining behind his team-mate, Michael saw that Brundle's rear

tyres were showing early signs of blistering. He took an immediate decision to stop for slicks.

In front, Nigel Mansell had also decided it was time to switch tyres. He radioed his intentions but Patrick Head's voice boomed in response: "STAY OUT. STAY OUT. RICCARDO IS COMING IN!"

It was lap 33 before Nigel was allowed to stop. When he rejoined the race, Michael was leading by five seconds. It would have been close, since Nigel's newer, nicely scrubbed slicks would surely have told over the last ten laps, but then Nigel's Renault engine suddenly lost power. His became a race of survival. Michael surged away to become the first German to win an F1 race since Jochen Mass's half-points day in Spain, 1975.

A new era was under way.

1992 THAT WAS THEN...

SPORT

Chris Boardman wins Britain's first cycling gold medal in 72 years, riding the revolutionary Lotus 108 bike at the summer Olympics, held in Barcelona

POLITICS

Bill Clinton is elected the 42nd president of the USA

TECHNOLOGY

The first ever text message is sent on 3 December

FORMULA 1

Seven engine manufacturers race in F1: Renault, Ferrari, Ford, Judd, Ilmor, Lamborghini, Yamaha

FILM

Quentin Tarantino's film *Reservoir Dogs* is released

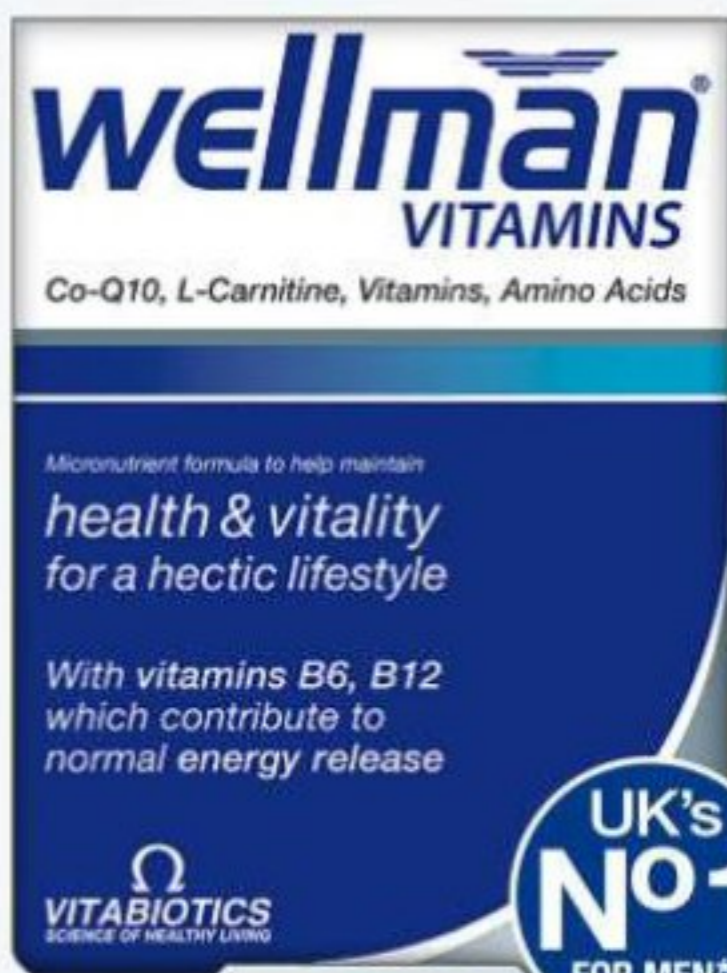
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TIM ROBEY, THE TELEGRAPH

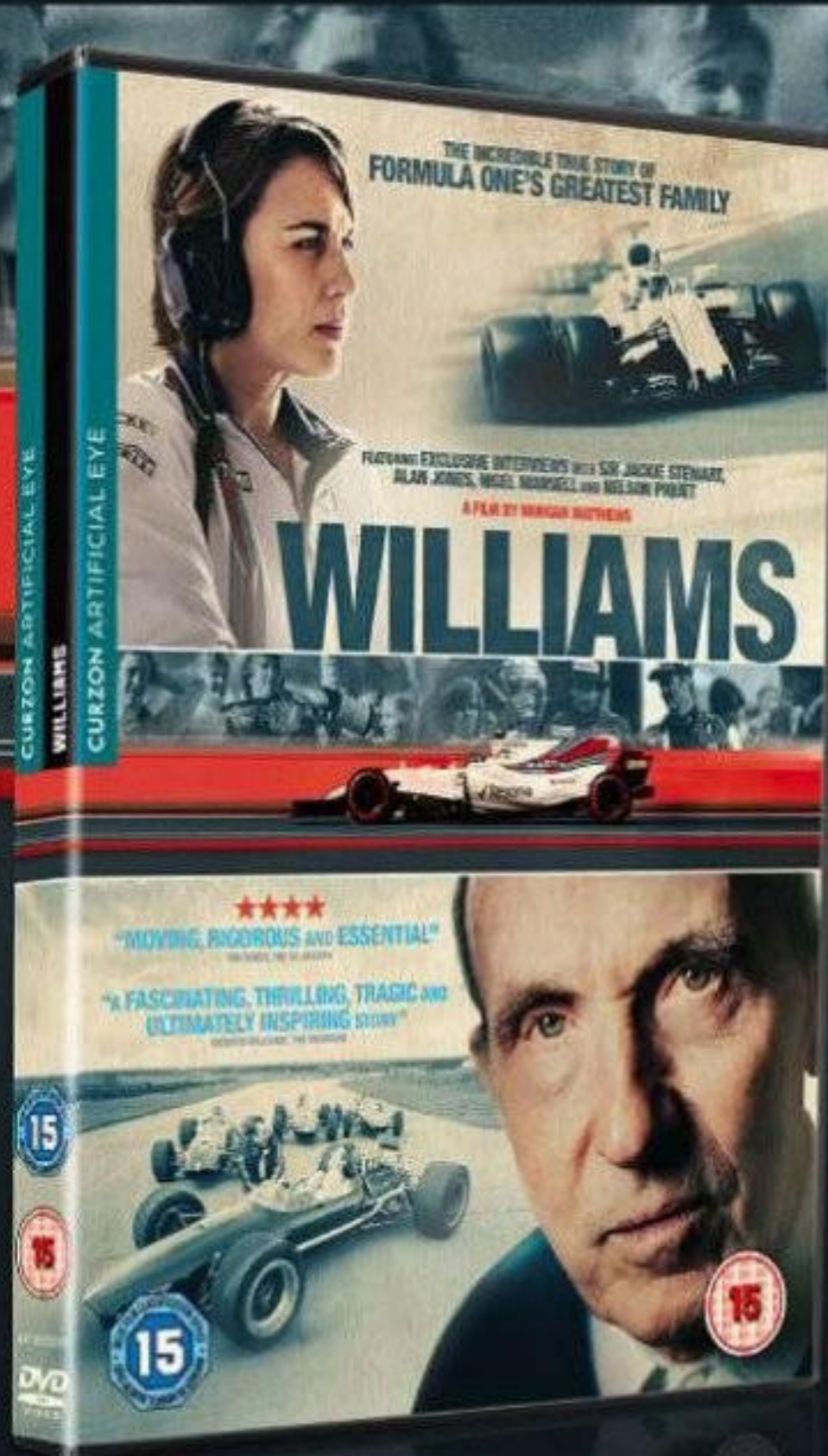
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RICHARD WILLIAMS, THE GUARDIAN

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NIGEL MANSELL AND
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A FILM BY MORGAN MATTHEWS

WILLIAMS



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