



FERRARI'S NEW DIRECTION

**WHY THE TEAM'S LEADERSHIP HAD TO CHANGE...
...AND WHY IT'S CRUNCH TIME FOR LECLERC**

TOUGH TIMES AT WILLIAMS

The plan to rescue
F1's struggling titan

FORD AND FORMULA 1

WHAT THE BLUE OVAL MUST
GET RIGHT AS IT PLOTS
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THE NAKED TRUTH

VALTTERI BOTTAS

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F1's in rude health if you measure the plethora of team sponsors



Stuart
Codling



Freedom suits 'cheeky' new Bottas

A man with a mullet and a moustache on the cover of *GP Racing*? You may be wondering, dear reader, if the editorial team has taken leave of its collective senses. Perhaps it has. But as Polonius said, albeit slightly less equivocally – though this may be madness, yet there is method in it.

For several Formula 1 seasons it became a trope in the sporting media to seize upon some aspect of Valtteri Bottas's appearance – be it a beard or merely some 'designer stubble' – as evidence of a winter transformation. This, reported the paddock sages, was a new Bottas, one who was now ready to get his elbows out at Mercedes and compete hard with his team-mate rather than merely being a dutiful number two. Lewis Hamilton himself referred to "Bottas 2.0" giving him a harder time in 2019.

Truth is, Valtteri never particularly bought into that myth or tried to perpetuate it. And, as you'll read in our exclusive and somewhat unusual interview on page 30, now he's got the freedom to do and speak as he pleases, he's enjoying life – and his driving – as never before. This is the Valtteri who has always been waiting to get out, and he's all the more fun for it. He's even found a 'cheeky' way to raise money for charity...

The stately pace of the printed page being what it is, the Saudi Arabian Grand Prix will have occurred while this edition of *GP Racing* is in the post to subscribers and on its way to the news stand. But already the fur is beginning to

fly with the season barely under way. Famously, when asked about the greatest challenges faced by a statesman, Harold Macmillan is said to have replied, "Events, dear boy, events."

As Roberto Chinchero writes in his analysis of the challenges facing Ferrari's new team principal (p42), every tenant of that position comes into it knowing their occupancy of it is finite. Few other team leaders in F1 are so prey to the dreaded *events*, for in Ferrari's form rests the hopes of a sporting nation (not to mention a good many shareholders). Already there is word of a rift between Frédéric Vasseur and CEO Benedetto Vigna over questions of authority.

The ravens are already leaving the tower, it seems, as Ferrari is gripped by unexpected on-track *events*. Engineer David Sanchez has cleared his desk, as have long-time staffers Gino Rosato and Jonathan Giacobazzi. Rosato's principal task of ferrying Jean Todt's slippers up to the first-class cabin is long in the rear-view mirror but the departure of Giacobazzi, the partner-wrangler whose parents sponsored Gilles Villeneuve, is indicative of a wider cultural malaise between time-served individuals on the factory floor and the upper echelons of the c-suite.

GP Racing has a podcast!
Search for 'Flat Chat with Codders' in
your podcasting platform of choice

Contributors



OLEG KARPOV

Oleg journeyed to Piteå in Sweden, 60 miles south of the Arctic Circle to catch up with Valtteri Bottas. The results are... revealing (p30)



ANDREW BENSON

BBC Sport's chief F1 writer takes a look at what Ferrari drivers Charles Leclerc and Carlos Sainz are facing in 2023 (p50)



MAURICE HAMILTON

After the announcement it is to return in 2026 with Red Bull, Maurice runs the rule over Ford's previous efforts in F1, good and bad (p68)



MARK GALLAGHER

Mark asks what James Vowles, the new man in the hot seat at Williams, needs to do to lift the team out of its lengthening slump (p60)

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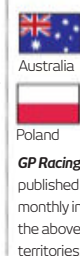
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A Racing Machine On The Wrist

A faceful of hot sparks

Half an hour into the Bahrain Grand Prix and, while the field was stretched out up front, the battle for 14th between Nyck de Vries and Zhou Guanyu was shaping up nicely. This spot at the end of the track's main straight is a favourite among photographers because the cars' titanium skid plates throw up so many sparks.

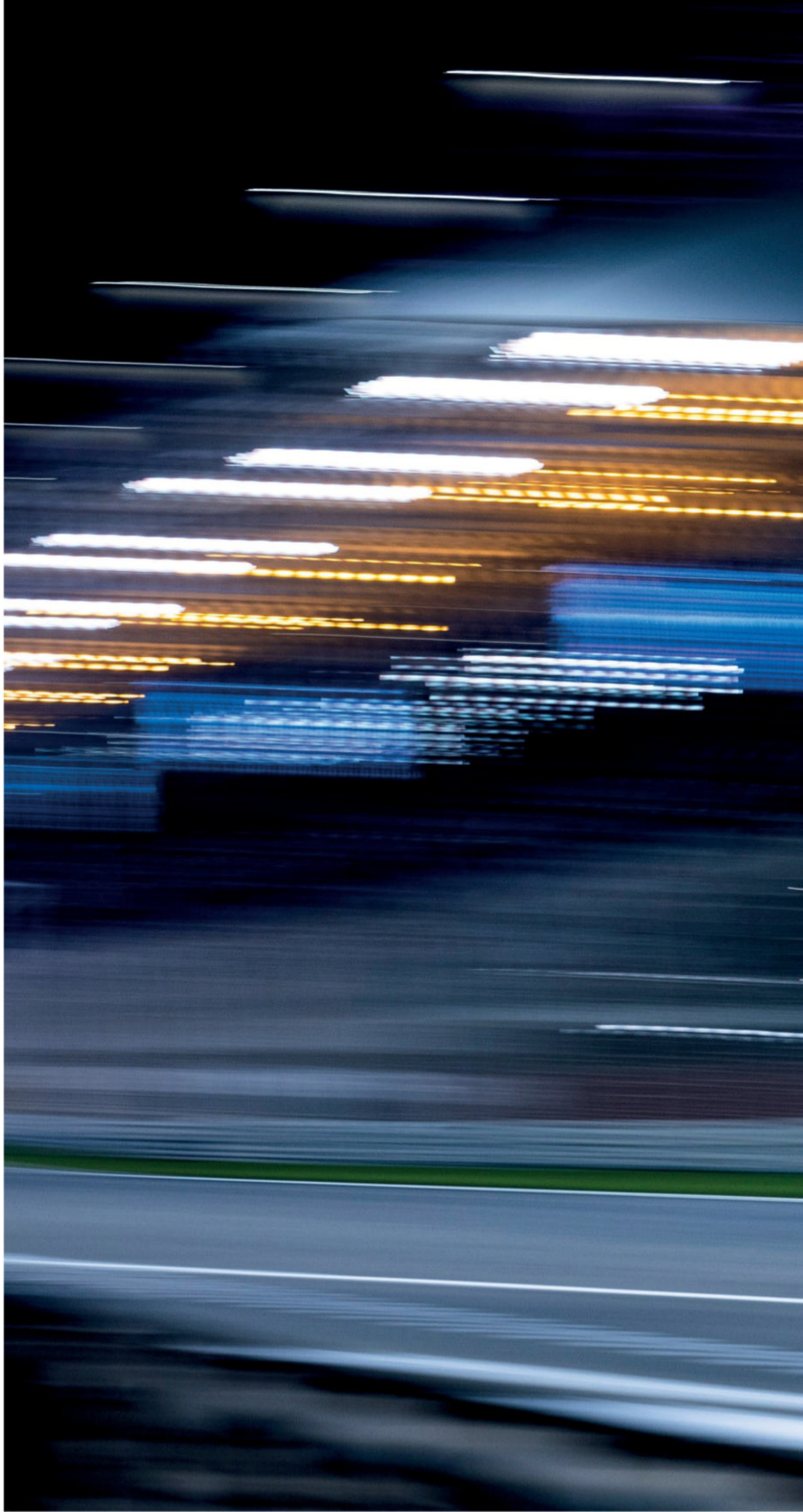
The effect was more pronounced this year because the track surface has been damaged a bit by cars repeatedly bottoming out. There's a small bump, more like an indentation, which sets them bouncing. Word in the paddock is that the circuit's owner is going to do some resurfacing soon...



Photographer
Sam Bloxham

Where Sakhir, Bahrain
When 6:31pm, Sunday
5 March 2023

Details Canon EOS-R3
70-200mm lens, 1/8th @ F16





Fernando: still rorty at forty (plus)

As Aston Martin's team photographer I've become very aware of how excited everyone is about the arrival of Fernando Alonso at the team. When he got into third place in the closing stages of the Bahrain GP I knew the mechanics would be ecstatic, so I left my spot out on track early to get back to the pits.

Expecting them to hang out of whatever openings they could find on the pitwall and cheer him across the finishing line, I found a window of my own a bit further down so I could lean through and capture the moment. This was Fernando's 99th time on a Formula 1 podium, 32 of which have been for wins. Quite a ratio!



Photographer
Zak Mauger

Where Sakhir, Bahrain

When 7:38pm, Sunday
5 March 2023

Details Canon EOS-R3
24-70mm lens, 1/1000th @ F2.8





Like a wheel within a wheel

A large Ferris wheel has been one of the Bahrain International Circuit's visitor attractions since 2019 and, as with pretty much every aspect of this track's operations, it's been cleverly thought through to provide a spectacle at night as well as by day. After dark it lights up and the glow makes for a great opportunity in panning shots.

For this image I positioned myself in one of the many wadis dotted around the circuit. There was a mound of earth which just allowed me to see the cars on track. By using a very slow shutter speed I blurred both the foreground and the background, and the circuit's array of illuminations did the rest, with the wheel in the background.



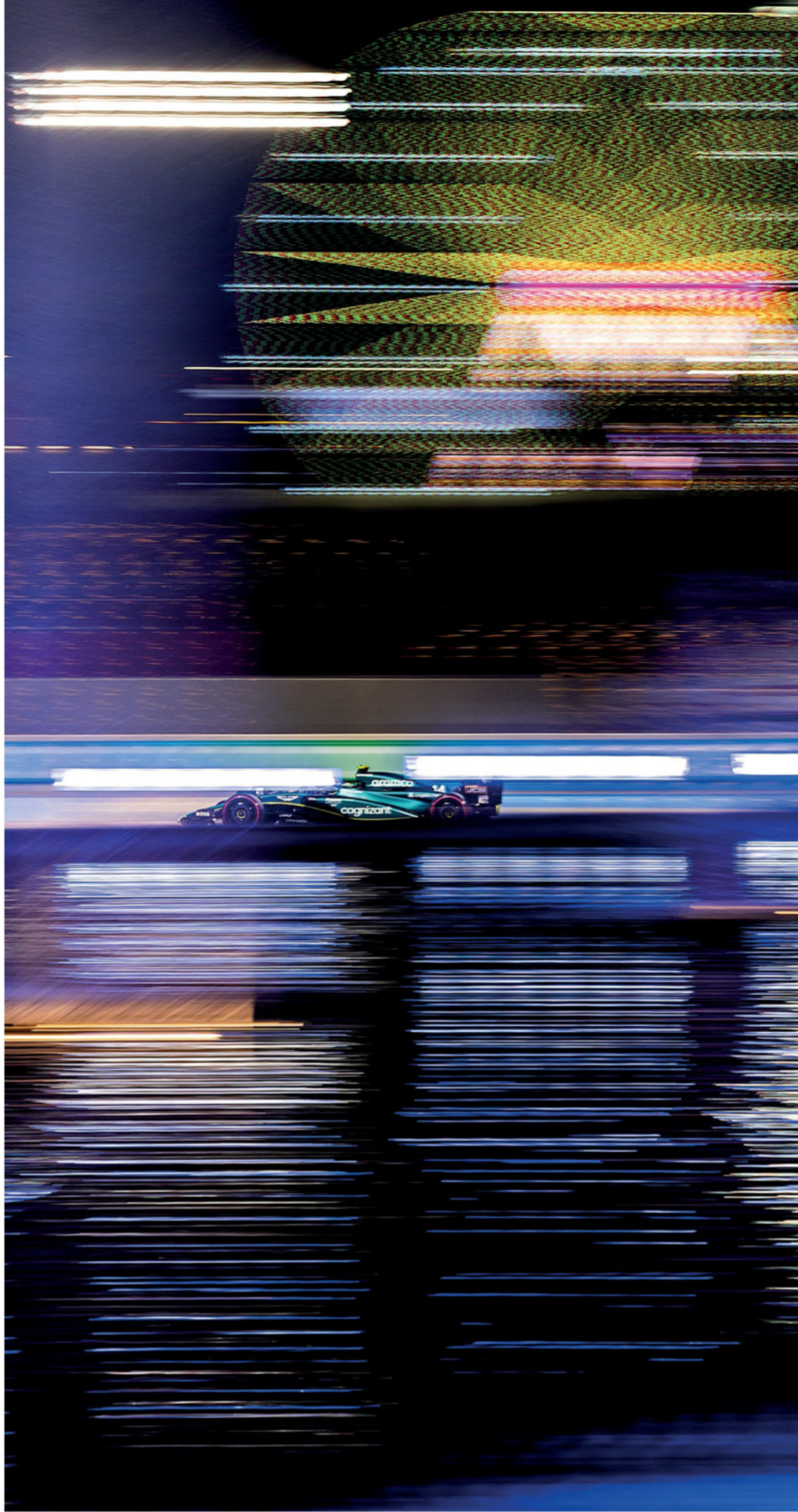
Photographer

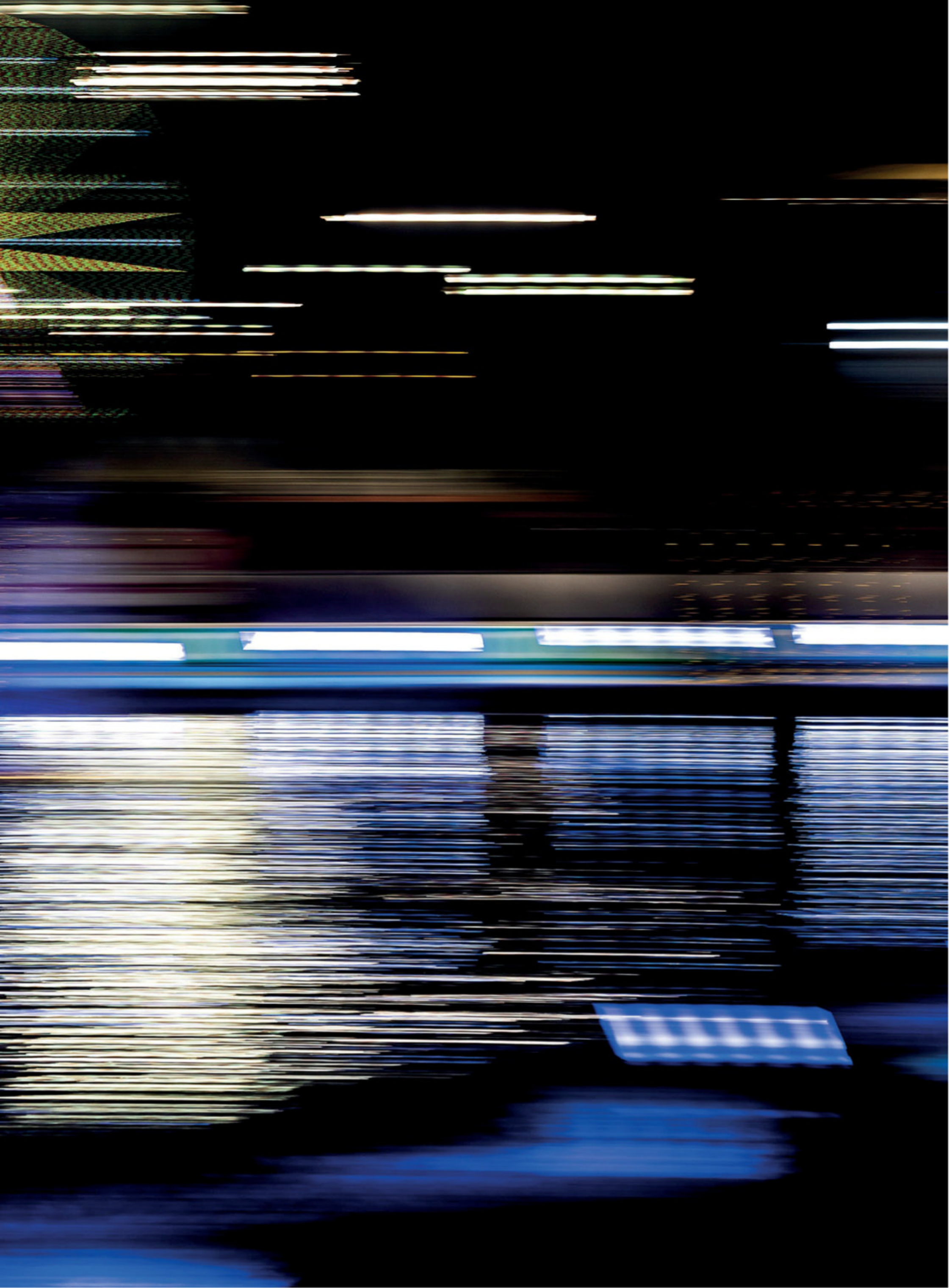
Zak Maugher

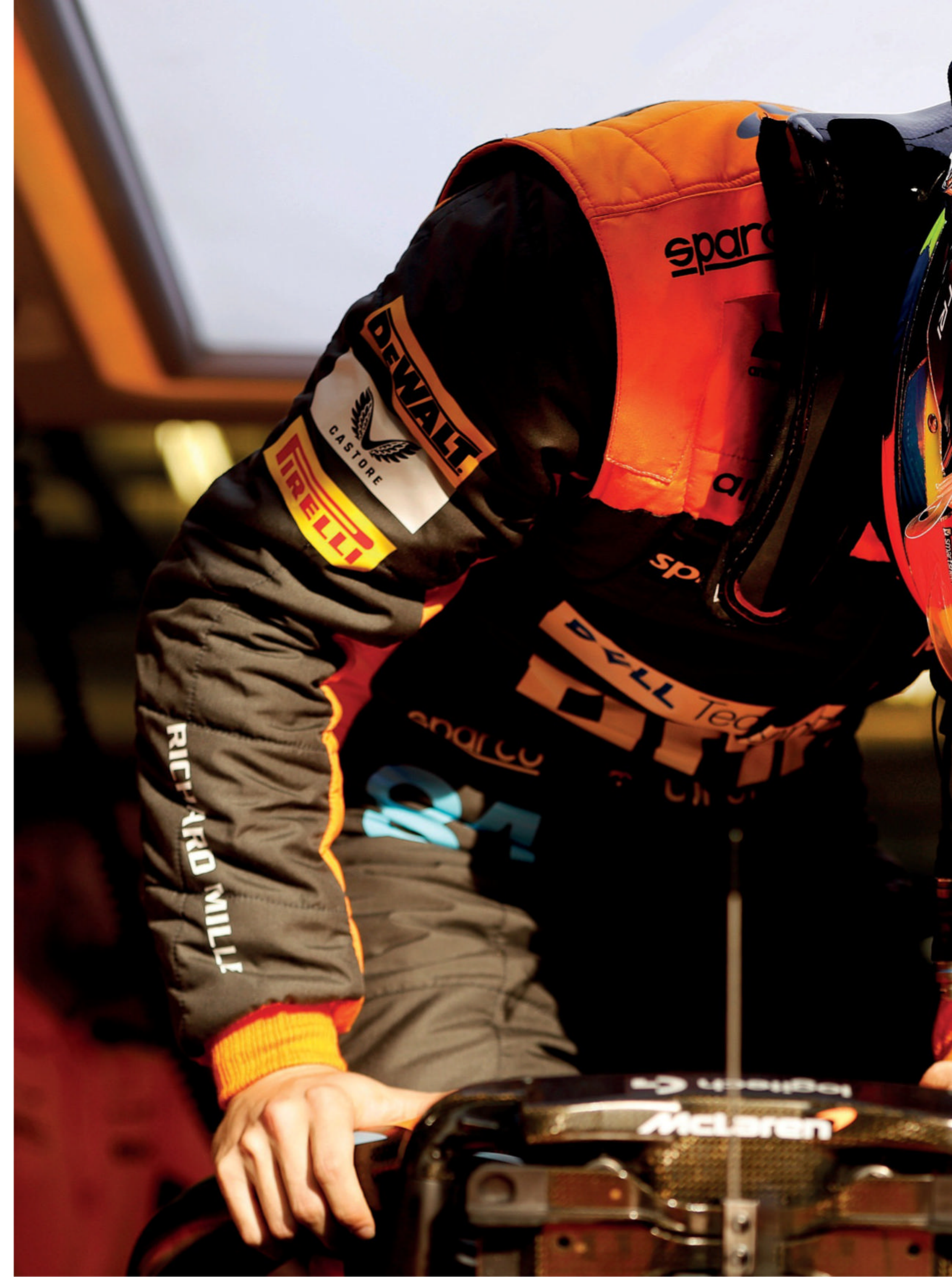
Where Sakhir, Bahrain

When 6:47pm, Friday
3 March 2023

Details Canon EOS-R3
70-200mm lens, 1/15th @ F7.1









Oscar polishes his performance

I've been working with McLaren for many years now and it's always interesting when new people join to see how they integrate themselves. On the face of it, Oscar Piastri hasn't had the best start to the season with an early DNF in race one. But actually it's no bad thing to go about your business out of the spotlight in these circumstances. I was impressed with how he just quietly got on with the job of learning to be a Formula 1 driver.

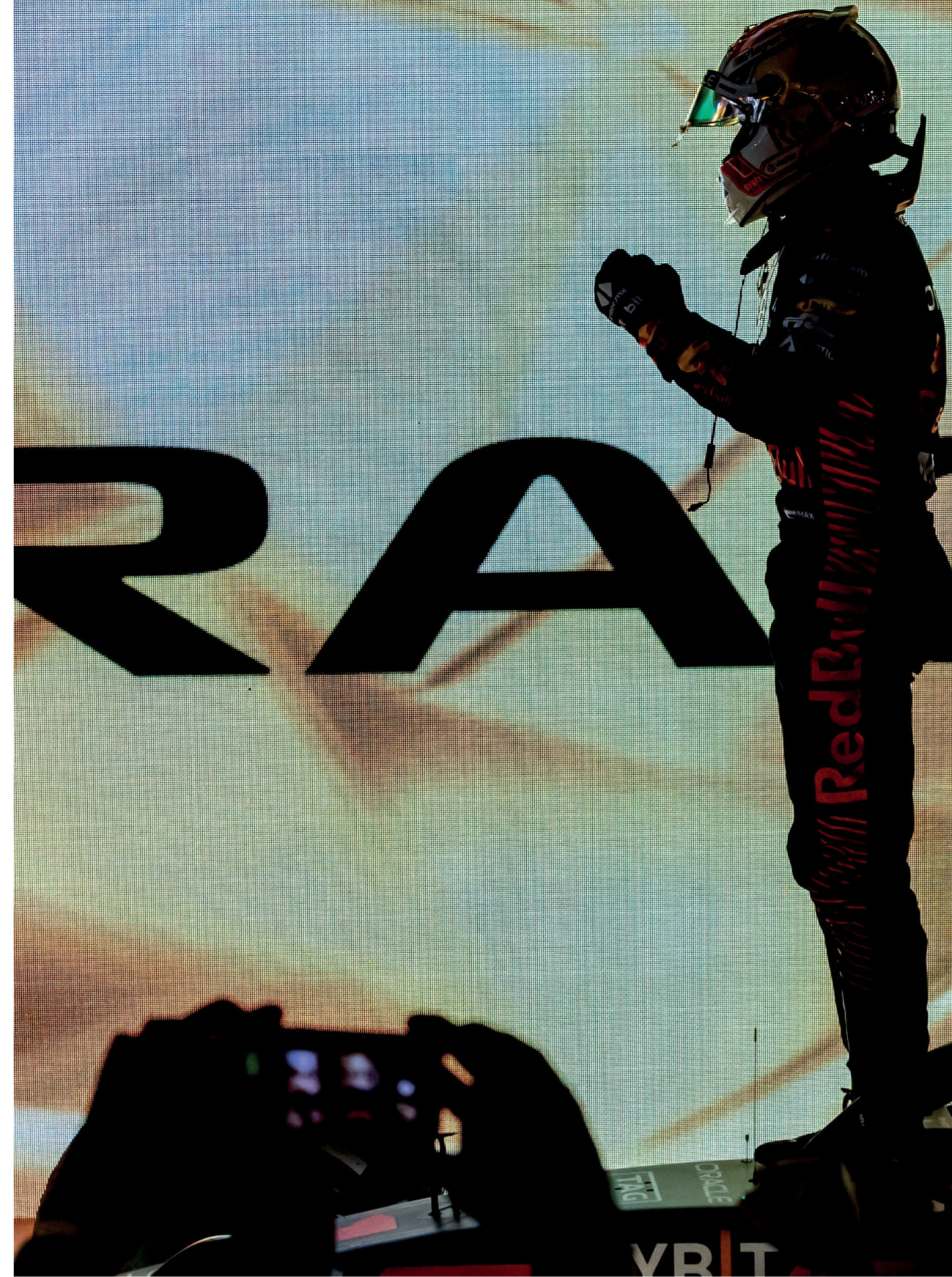
I quite liked the way the early afternoon sunlight works in this shot, as Oscar gets in the car ahead of FP3. Most shots from this race are with artificial light so it's nice to make use of the sun in these earlier sessions.



Photographer
Steven Tee

Where Sakhir, Bahrain
When 2.25pm, Saturday
4 March 2023

Details Canon EOS-R3
70-200mm lens, 1/640th @ F3.5



RA

VR/IT



Max, the prince of darkness

There was something of a kerfuffle immediately after the first race of the season as parc fermé was plunged into darkness. I'm sure it made for great TV with this giant screen in the background, but stills photographers who paint with light were left cursing whoever had come up with the idea.

In these circumstances you improvise and, when Max climbed on his car, it made for quite a nice semi-silhouetted image with just a little bit of the light from the screen playing across him so you can tell who it is. Unfortunately, when third-placed Fernando Alonso pulled up, the lights were still off but that's another story...



Photographer
Glenn Dunbar

Where Sakhir, Bahrain

When 7:41pm, Sunday
5 March 2023

Details Canon EOS-R3
100-500mm lens, 1/500th @ F7.1

ALPHATAURI: GO HARD OR GO HOME

01

The AlphaTauri Formula 1 team has responded to speculation that it may be sold. These claims appeared in the German press ahead of the start of the new season, but have now been formally debunked – albeit in a way which revealed disquiet behind the scenes.

The original report in the respected *Auto Motor und Sport* asserted that Red Bull's management was considering selling the team or moving it to England in order to improve synergies between Red Bull Racing and its sister team, given AlphaTauri's poor results. Red Bull's new sporting chief Oliver Mintzlaff, according to Michael Schmidt, a journalist with over 40 years of F1 experience, is unhappy with the financial performance of the Faenza-based team, which has been "under scrutiny" since the death of Dietrich Mateschitz.

A few days later, AlphaTauri released a statement from team principal Franz Tost denying the rumours.

"I had some very good meetings with Oliver Mintzlaff,"

he was quoted as saying, "who confirmed that the shareholders will not sell Scuderia AlphaTauri, and that Red Bull will continue supporting the team in the future. All these rumours have no foundation, and the team has to remain focused for the start of the

ONE POTENTIAL BUYER COULD BE ANDRETTI, WHO HAS BEEN POUNDING ON F1'S DOORS FOR OVER A YEAR NOW

season to perform better than last year."

This statement was laden with vagueness, and it's hard to deny that Mintzlaff has reason to be concerned about the future of Red Bull's second team in F1. The suggestion that AlphaTauri finds itself needing a bigger financial injection than the senior team doesn't seem misleading at all – quite the opposite. Given Tost's team finished ninth last season, its share of the FOM pie was many times smaller than Red Bull's. Understandably, it's also less attractive to sponsors.

Speaking to *GP Racing's* sister publication *Formel1.de*, Red Bull motorsport advisor Helmut Marko rebuffed talk that AlphaTauri was up for sale – yet also admitted there was cause for discontent among the company's bosses.

"True, AlphaTauri's ninth place in the constructors' championship is not up to expectations," he said in response to the *Auto Motor und Sport* claims. "That means



In a statement team principal Franz Tost (above) denied that AlphaTauri is for sale. But he knows the team needs to perform better than it did last season

there must be an improvement. It is also true that the financial commitment at AlphaTauri is too high, i.e. the losses. This means that we also have to do something on the sponsor side, on the revenue side. In the course of this process, of course, we also discussed the possibilities. But it was always very clear that AlphaTauri would remain in-house. That is an important part of our junior programme. The author of this article has again put apples, pears and what the hell else he knows together and used a lot of imagination to interpret something into it."

He added, though: "Neither [AlphaTauri's] sporting performance nor financial performance meet Red Bull's standards. So we have to do something to change that. We're playing through various options, including [moving some staff to] England. AlphaTauri already has over 100 employees in England. But the idea that the entire team will immediately move over there is also an overinterpretation."

02 | QUALIFIED SUCCESS

Mixed response to format change



Red Bull motorsport advisor Helmut Marko (right) has admitted that moving some more staff from the team's Faenza base (below) to England is an option



Michael Andretti (left) would be an obvious buyer if AlphaTauri is put up for sale, but the American is still planning on setting up his all-new F1 team with Cadillac

Naturally one potential buyer could be Michael Andretti, who has been pounding on F1's doors for over a year now. But he revealed to US media that he had talks with Red Bull bosses about AlphaTauri, but confirmed they're "not interested" in selling – for now, at least. Andretti's main plan is still to set up an all-new F1 team in conjunction with Cadillac, but the current teams are reluctant to let a new player in. Speaking to

the *Daily Mail*, Red Bull Racing boss Christian Horner made it clear he would prefer to see Andretti buy a current F1 team.

"Red Bull Racing was Jaguar, which was Stewart," he said. "You look at Mercedes, that goes all the way back through Honda to BAR to Tyrrell. Aston Martin go back to being a Jordan team. That has been the procedure for many years.

"Andretti is a great team, [Michael's father] Mario Andretti is a name synonymous with Formula 1... Cadillac, GM, is one of the biggest car manufacturers in the world. So it would be great to see them in the sport, but it's just got to be done properly."

How to square this with the claim AlphaTauri isn't for sale? It's understood the established teams are pushing for the price of entry into F1 to triple, from \$200 million to \$600 million. If this was approved, the value of F1's current teams would increase. And then, perhaps, Red Bull's bosses may change position from "not interested" to something less categorical? ►

NEW QUALI FORMAT TO GO ON TRIAL

02 At the start of 2016, Formula 1 attempted to revolutionise its qualifying format by introducing an extra elimination rule, whereby drivers were knocked out one-by-one mid-session rather than at the end of each segment. The experiment proved to be an unmitigated disaster: F1 chiefs not only had to revert to the previous version after two failed attempts, they were lambasted for trying to fix something which wasn't broken. Since then, the format has undergone only cosmetic changes – but it looks as though there will be another experiment in the course of the current championship.

F1 is preparing to try out a new format at the Emilia Romagna GP in May. The crux of the change is to force teams to use different tyre compounds in different segments of qualifying. Drivers will be required to use only hard tyres in Q1, mediums in Q2 and softs in Q3.

The main objective is to reduce the number of sets F1's official tyre supplier, Pirelli, brings to every GP. Each driver currently receives 13 sets of tyres for the whole weekend; as part of the experiment this number will be reduced to 11. The distribution will be three sets of the hard, four of the medium and four of the soft.

This will have a major impact on the way teams operate throughout the weekend. Early predictions are that drivers will be forced to use only one set of softs in FP2 and another in FP3 – to ensure there are two sets of softs for the decisive Q3 runs. Drivers who drop out after Q2 will theoretically have two fresh sets of softs for the race, which could provide an advantage on some tracks.



To reduce the sets of tyres Pirelli brings to every race, the trial format will force teams to use only certain compounds in Q1, Q2 and Q3

In the event of rain during qualifying, drivers will be allowed to use any tyre – from full wets and intermediates to slicks of any compound on the drying track.

It's expected the experimental format will also be used at another event later in the season, and only then will F1 decide whether it needs to be made the norm. If it proves successful, it could come in full-time from 2024.

Not everyone is impressed, though. Reigning world champion Max Verstappen has already said the prospect of using hard tyres in qualifying doesn't appeal to him.

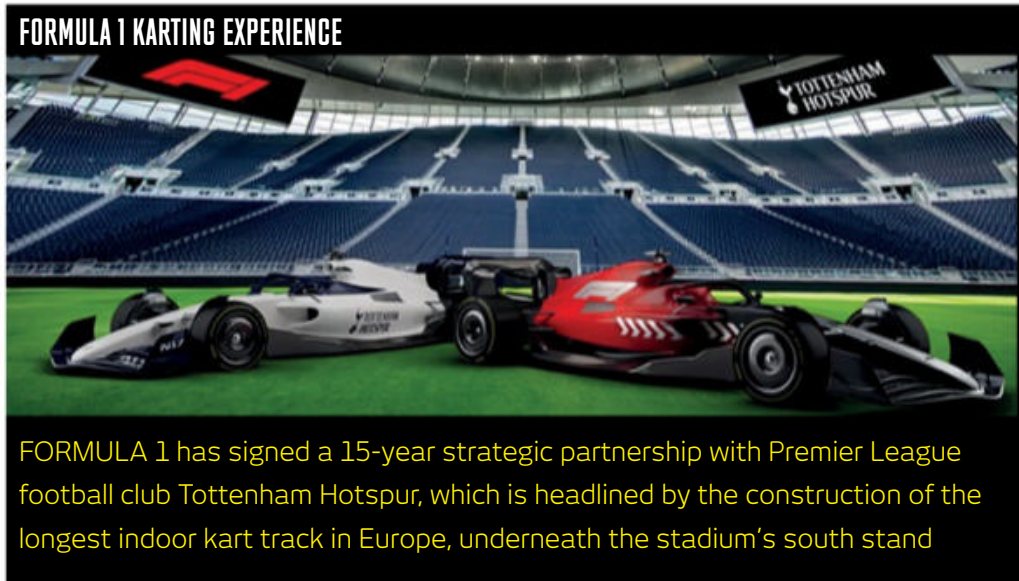
"I hope it's not going to be cold in Imola, otherwise it's going to be quite tricky," he said. "It's the same for everyone but I don't think we need to do these kinds of things in qualifying. I don't really see the benefit of it."

He added: "It's better if we make sure all the cars are close to each other and more competitive instead of spicing things up in that way."

Coming from a driver whose team undoubtedly has the best car at the moment, these words sound particularly convincing. But if the new format doesn't harm the show and helps F1 move a little closer to its stated sustainability goals, that would surely be no bad thing. ▶

NEWS IN BRIEF... NEWS IN BRIEF...NEWS IN BRIEF...

FORMULA 1 KARTING EXPERIENCE



FORMULA 1 has signed a 15-year strategic partnership with Premier League football club Tottenham Hotspur, which is headlined by the construction of the longest indoor kart track in Europe, underneath the stadium's south stand

WOMEN

Susie Wolff has been announced as managing director of F1's new all-female Academy series

CIRCUITS

This year's Spanish GP will not use the final sector chicane at the Catalunya circuit for the first time since 2007

FACTORIES

McLaren hopes to have its new windtunnel, which is finished and is now being calibrated, ready to use by June

TEAMS

Ferrari's head of vehicle concept David Sanchez is leaving the team after 10 years at Maranello

DRIVERS

The 2009 world champ Jenson Button will make his NASCAR Cup debut in Austin later this month

RIP

Slim Borgudd, the Swedish musician who made 10 starts for ATS and Tyrrell in 1981 and 1982, has died aged 76



Two Partners, One Mission: Einhell Launches Partnership with Mercedes-AMG PETRONAS F1 Team

Landmarks in London, Barcelona, Montreal and Melbourne glowed red at the start of the F1 season.

The reason? A new partnership between Mercedes-AMG PETRONAS F1 Team and Einhell Germany.

Before the Formula 1 season launched in Bahrain, the innovative DIY and garden tool manufacturer from Germany made a worldwide mark as the “Official Tool Expert” of the Mercedes Team, lighting up buildings in 3 continents and 4 cities, leaving fans eagerly anticipating what promises to be an exciting season.

CORDLESS EXCELLENCE IN THE FORMULA 1 PIT LANE

The Power X-Change battery platform from Einhell now covers over 250 tools for the home and garden. As the Formula 1 season launches in Bahrain, Einhell tools will be found in the racing team’s pit lane, and under the most extreme conditions for the first time. *“The team is delighted by the range of our cordless tools and more than happy with the power and endurance of our products,”* Andreas Kroiss reports.

Toto Wolff, too, believes it to be a convincing partnership: *“We are delighted to partner with Einhell. They are consistently setting new standards in their industry with the constant development of their technology. By using Einhell’s battery-powered tools and equipment, we benefit from the latest technology for maximum performance.”* As a visible symbol of the partnership, the Einhell logo will feature on the racing car and the clothing of the drivers and Mercedes team from the start of the Formula 1 season in Bahrain.

Toto Wolff will also play a role as brand ambassador in the future communications of Einhell, including the TV campaign that will be broadcast internationally from May 2023.

BATTERIES ON THE MARCH

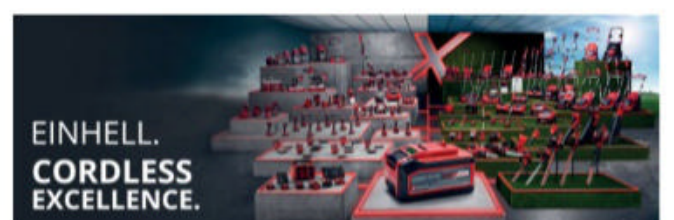
The cordless specialist is wowing DIY customers all over the world with its innovative Power X-Change battery platform. Boasting more than 40 subsidiaries, Einhell Germany AG has become a global player with an active presence in over 90 countries. The Power X-Change platform is symbolic of Einhell’s success, and positions the company as the category leader in the cordless tool sector.

“The partnership brings together two brands that stand for technology expertise. Our success comes especially from our team spirit, our dynamism and a clear, bold goal in mind. This is why the partnership with the Mercedes-AMG PETRONAS F1 Team is the strategic next step for us towards our goal of becoming an international market and technology leader in battery-powered tools for the home and garden,” explains Andreas Kroiss, CEO of Einhell Germany AG.

ABOUT EINHELL

Einhell is a leading manufacturer of state-of-the-art tools and equipment for the house and garden. From its headquarters in Landau/Isar (Bavaria), the internationally successful company has continuously expanded its innovative rechargeable battery platform Power X-Change and is now the market leader in the area of cordless tools and garden equipment. For many years Einhell has set new standards in terms of endurance, performance, and safety. Einhell customers appreciate the freedom of cordless operation for all their DIY projects, as well as the excellent value for money that Einhell products represent and the first-class customer service offered by the company.

For more information please visit our website: www.einhell.co.uk



McLAREN WEIGHS UP RED BULL-FORD ENGINE FOR 2026

03 Having already secured the backing of one of the world's biggest car manufacturers – Ford – Red Bull's new powertrain division is in talks with potential customers in Formula 1. Among these is McLaren. Its CEO Zak Brown has already paid a visit to the newly built engine factory in Milton Keynes.

The fact of the visit was confirmed by Red Bull team principal Christian Horner, who admitted the parties are discussing a possible engine deal to begin in 2026, when the next set of regulations comes into force. For the time being, however, the talks are only preliminary.

"As a powertrain manufacturer for 2026, it's inevitable that discussions are going to be had regarding potential powertrain supply," Horner said. "It's only natural we would speak with potential customers."

In addition to Red Bull Racing itself, Red Bull Powertrains is also planning to supply AlphaTauri in 2026. But it's already clear there is interest from other teams in an engine supply deal.

McLaren is back with Mercedes after a disastrous spell with Honda and three years with Renault, but the Brixworth-built engines are no longer considered the best in F1 – and it's rumoured McLaren has even considered a return to Honda. The Japanese manufacturer plans to remain in F1 after the new regulations come into force in 2026, but has yet to agree a deal with any team beyond 2025. Honda's options for then are limited, since there are five manufacturers planning to build engines, including Red Bull-Ford and Mercedes, as well as Ferrari, Alpine and Audi.

It's not beyond the realm of possibility that the Red Bull-Ford could be the most popular engine in F1 in 2026. However, according to Horner, having customers wouldn't bring any financial benefits to his engine division. "Obviously, we're under budget caps," he said. "Supply costs are dictated. From what we see, there is no money supplying customer teams. It's not a profitable business."

Having additional partner teams can, however, be useful for engine development, especially at the start of a new rules cycle.



McLaren is also rumoured to be considering a return to Honda engines, despite its disastrous spell with the manufacturer from 2015 to 2017

IT'S NOT BEYOND THE REALM OF POSSIBILITY THAT THE RED BULL-FORD COULD BE THE MOST POPULAR ENGINE IN F1 IN 2026

F1 MASTERMIND

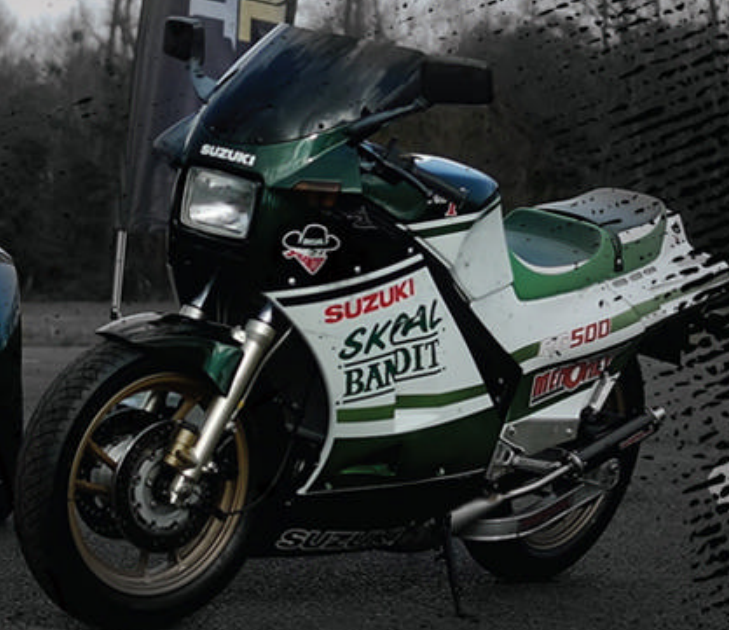
Your chosen specialised subject: the world's greatest motorsport

- Q1** Which two drivers recorded a fastest race lap in 2022 but didn't score the point for it?
- Q2** What is Nico Hülkenberg's best ever finish in the world championship and in what year?
- Q3** When did Fernando Alonso last start the season with a podium in the opening race?
- Q4** Before Max Verstappen and Nyck de Vries in 2022 and 2023, who were the previous two Dutch drivers who raced in F1 at the same time?
- Q5** How many starts did it take Jenson Button to achieve his first F1 podium: 58, 63 or 68?
- Q6** Who am I? I started 180 GPs from 1997 to 2007 for Jordan, Williams and Toyota, claiming six wins and six pole positions.
- Q7** Which engine manufacturer is fourth in the all-time list of wins after Ferrari, Mercedes and Ford?
- Q8** True or false: Kimi Raikkonen led more laps in 2005 than world champion Fernando Alonso?
- Q9** The fourth Emilia Romagna GP will be held at Imola this season, but in what year did the circuit last hold the San Marino GP and who won the race?
- Q10** Carlos Sainz qualified as high as fifth just once in 56 starts for Toro Rosso. Where and when?



1 Zhou Guanyu and George Russell **2** Seventh in 2018
3 2013 **4** Christijan Albers and Robert Doornbos (11 races in 2005/2006) **5** 68 **6** Ralf Schumacher **7** Renault (375 to 336) **8** 2006, Michael Schumacher **9** Spanish GP, 2015

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THE F1 ANALYST

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second was annulled; new technology with hybrid engines and strict fuel-flow rates had caught out Red Bull.

So the Melbourne crowd has still been unable to wake up the day after the show and celebrate watching an official top-three finish for a home racer. It's a shame, but it's not affecting the numbers wanting to turn up. Last year a record 419,000 fans were listed as attending over the four days and this year's event sold out during 2022. While grandstands, the F1 paddock and hospitality areas are beyond availability for general admission tickets, any spectators can enjoy access to 99% of the 176 hectares (435 acres) of parkland. Many of them will arrive as early as possible to find a unique position on the Melbourne Walk: a path between an internal car park and F1 paddock where they can celebrate the arrival of so many stars of the sport. You barely ever see F1 people hustle along so quickly...

There will also be new viewing opportunities. The FIA Formula 3 and Formula 2 championships, both of which Piastri has won, will support the Australian Grand Prix for the first time and, unusually, those paddock areas will have access for general admission. Finding a place to watch track action without a seat is also possible, although

I wonder if some fans who have enjoyed the grassy slope on the outside of the back part of the track where they used to be able to see the cars brake hard and change direction rapidly at the Turns 9 and 10 chicane are finding it a little less enthralling. From last year that was converted into a flat-out curve to encourage overtaking further along. Unfortunately the plan to allow the drag reduction system in that area was dismissed but the FIA recently confirmed it would be reinstated this year.

There may be some fans present who have been attending since Melbourne's first F1 race in 1996 and others who continue enjoying the current contract all the way to 2035. Taking place in early autumn in a city known for changeable weather, there's always an air of unpredictability. 10 years ago Red Bull dominated qualifying yet the race was won by Kimi Räikkönen in a Lotus from seventh on the grid due to smart tyre strategy. Last year we saw another clever angle on tyres from Williams which allowed Alex Albon to score the team's first points at the track in five years.

While McLaren is not the most likely team to earn multiple podiums this year, it has the most wins in Australia, a useful statistic for Piastri to lock away in his mind. As the only Aussie on the grid, while staying just 10 minutes away and enjoying his mum's food, he will be racing at a fully packed track where close friends and family have seats opposite the McLaren pit. Oscar is about to take on an unforgettable weekend.

MELBOURNE IS WHERE OSCAR'S HEART IS

A kid who grows up with a Formula 1 event happening once a year just down the road falls in love with motor racing and begins karting at a young age. Within a few years the climb up the ladder has begun and the talented youngster soars to the top at every level. Suddenly he wakes up in his local community in his early twenties ready to take on one of the biggest races of his life.

All of this happened to Charles Leclerc, who was born in Monaco and raced F1 there for the first time in 2018. It is a pattern about to be repeated by Melbourne's Oscar Piastri and the level of support he is going to receive from one of the biggest crowds of the year will be truly inspiring.

Mind you, success at your home event is not always something that happens; Leclerc crashed out of that first Monaco race due to a brake disc failure and, despite taking pole position at the last two, he has failed to step onto the podium so far.

Top-three finishes for Australians in Melbourne are similarly difficult. Mark Webber managed to enjoy a celebration standing on the rostrum in



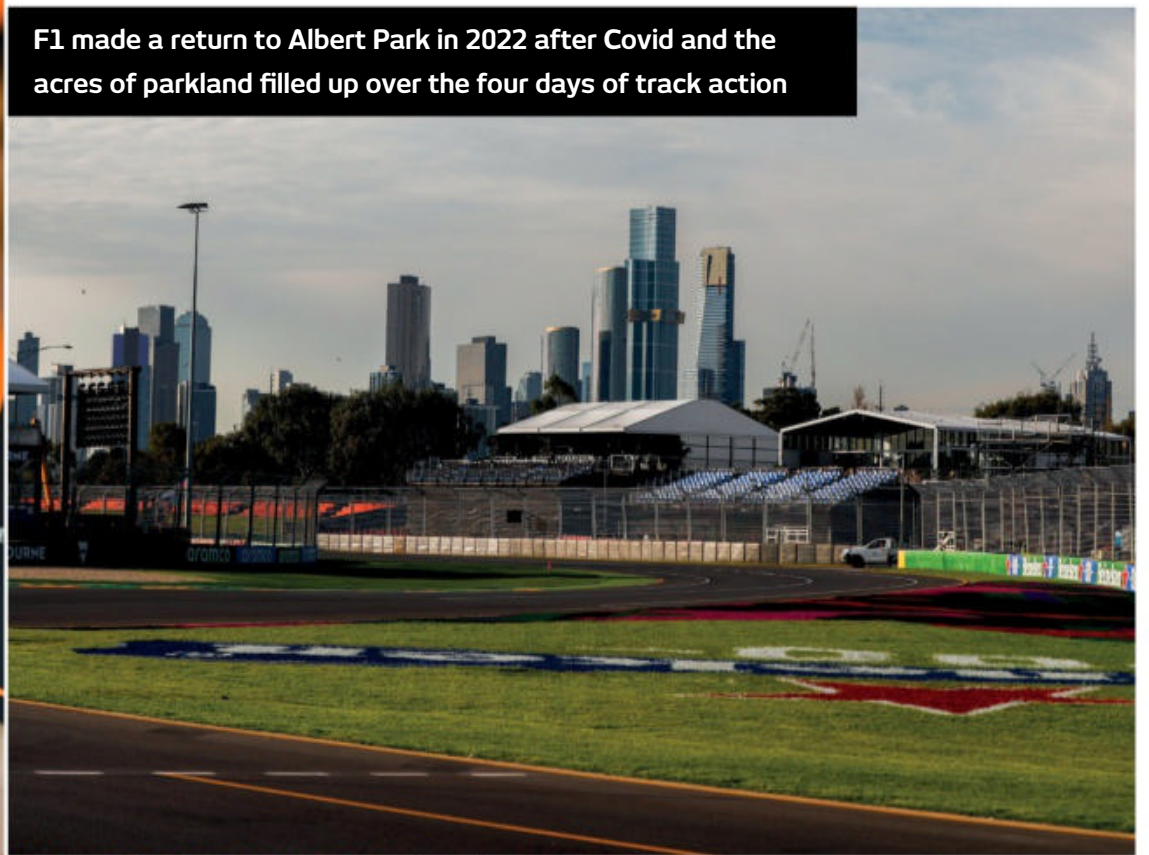
Monaco-born Leclerc raced at his home circuit for the first time in 2018 but retired with brake failure

2002 but it wasn't official. He was the first Aussie to race at Albert Park, he was competing with the humble yet inspired Minardi team, and he achieved a fifth-place finish to earn points on his debut in the sport, as well as the most points earned by that team in over seven years. No wonder Mark and his fellow Australian team boss Paul Stoddart were invited to celebrate once the top-three finishers had enjoyed their own champagne sprays.

A decade later Perth's Daniel Ricciardo had his first F1 race on the same Albert Park circuit. Driving for the team that had evolved from Minardi into Toro Rosso he also scored points straight away by finishing ninth. Two years later he was promoted to sister team Red Bull and home fans were able to celebrate his appearance alongside race winner Nico Rosberg and Kevin Magnussen on the podium. Yet within a couple of hours, Daniel's



Piastri's third F1 race will be in front of his home town crowd, with the team that has the most wins in Australia



F1 made a return to Albert Park in 2022 after Covid and the acres of parkland filled up over the four days of track action



As a Red Bull driver Ricciardo was second in 2014 but lost it due to a technical infringement



Mark Webber's F1 debut for the lowly Minardi team in 2022 went superbly when the Aussie scored points on home soil



Melbourne became the home for the GP in 1996. Piastri will be the third Aussie to race there



Ricciardo also scored points on his Australian GP debut, finishing ninth for Toro Rosso in 2012



UNDER THE HOOD

PAT SYMONDS

PICTURES  **motorsport** IMAGES

limit at the end of last year and, while weight reduction is expensive, it gives a guaranteed payback. Shave 5kg off the car and it will go 0.15 seconds quicker around an average circuit. It's pure physics and, barring a few nuances of tyre temperature and centre of gravity height, a reduction in weight will give the result that's expected. Unfortunately, for the fans and even the seasoned observer, it's virtually impossible to see the areas where the weight saving has taken place. They will consist of a bit of rationalisation here, a bit of stress optimisation there. A couple of the teams have shown me examples and, believe me, they're subtle.

The second area of focus is, as always, aerodynamics. The FIA

introduced new regulations for the floor geometry for this year as part of its attempt to limit porpoising. This change lifted the edges of the floor by 15mm and the lowest part of the floor by 10mm. In reality, many teams were already on top of the porpoising by the last part of the 2022 campaign but, nevertheless, the rule has been introduced. This will have reduced the downforce on the car by around 5% and, as has been the case so many times in the past, when a rule reduces downforce, the aerodynamicists' first thought is to wrest it back.

Talking to the engineers at the test and looking at the lap times, I would say they've been very successful. While one can never be sure of the exactitude, it's safe to generalise and say that most cars are looking significantly quicker than in last year's test. Of course this can be down to track conditions, but track temperatures during the quickest part of the evening were within one degree of last year and the wind was similar. Equally, Pirelli's new front tyre may have helped a bit but the engineers I asked about this felt it wasn't a discernible difference.

So, assuming teams were running similar test conditions to last year in terms of fuel load and engine settings we see most teams around a second and a half quicker than last year. With that established we see the biggest gains year-on-year for single-lap pace are Mercedes, Williams, Alfa Romeo and Aston Martin. Arguably the first two needed to improve the most and, indeed, Mercedes made good headway during the ►

UNPICKING THE NEW PECKING ORDER

Writing this during the last stages of 2023 pre-season testing, one might hope to make a clear prediction for the coming season – but, as happens every year, the picture only really becomes apparent a few races into the season. That doesn't prevent us, as competitive people, from analysing every bit of data, scrutinising every comment, and applying judgement to visual clues to try and establish the pecking order.

Restricting the pre-season test to just three days means there's a lot of work for the teams to get through. The new-car sign-off lists have to be worked through laboriously and yet precisely. The sheer volume of work requires perfect reliability in order to get everything covered and yet that very testing is there to try and establish the reliability. A virtuous circle it is not. However, an increase of 28% in total laps covered compared with last year shows reliability isn't holding the teams back.

The 2022 cars were, of course, extremely different to their predecessors. Finding out how best to exploit the characteristics that were



The Mercedes cars will once again be black but this time it is because the team is weight saving by using less paint on the W14

effectively baked in to the regulations took an enormous amount of simulation – and a not inconsiderable amount of testing. The 2022 pre-season tests in Barcelona and Bahrain were extremely difficult to interpret. While the 2023 cars are much more evolutionary than revolutionary it's proving as difficult as ever to really establish who has made progress and who hasn't.

There have been two main areas teams have focused on over the winter. The first is to get weight out of the cars. Many, even the frontrunners, were still running over the weight



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Alfa Romeo, Mercedes (top), Aston Martin (above) and Williams (below) seem to have made the biggest gains on single-lap pace



course of 2022. Alfa Romeo and Aston Martin, though, do look like genuine improvements – probably by half a second over the average. Those that didn't show so well were Alpine, McLaren and Haas. While Haas was probably abnormally fast last year due to running after the other cars, Alpine and McLaren definitely have work to do.

All teams are busy on upgrades now and some will have already been seen at the first race by the time this issue of *GP Racing* reaches the shelves. They may alter the pecking order slightly but I suspect, even though I always advise against making predictions based on a sample of one, that we're likely to see further Red Bull domination this year. The excitement may well be in the battle behind the leaders, though. The midfield was close last season and the early indications are that it will be even closer this year.

A final word should go to porpoising.

Twelve months ago it was the talk of the paddock. This year it was barely mentioned. Looking at some data I could see Mercedes had made huge improvements. Vertical acceleration was around one third of last year's levels while Ferrari, at times, showed similar levels to last year. The compromise that teams seek is still there – how much aero efficiency gain can they find by running the car low and stiff while keeping the bouncing

THE EXCITEMENT MAY WELL BE IN THE BATTLE BEHIND THE LEADERS. THE MIDFIELD WAS CLOSE LAST SEASON AND THE EARLY INDICATIONS ARE THAT IT WILL BE EVEN CLOSER THIS YEAR

at an acceptable level. I suspect Ferrari was simply trying to find that answer when its car was bouncing heavily.

It may also show that one of the secrets of the Red Bull performance is that the car has benign aerodynamics and compliant suspension. Red Bull appears to be able to run its car softer while maintaining downforce. I think this is still the secret others are trying to unlock.



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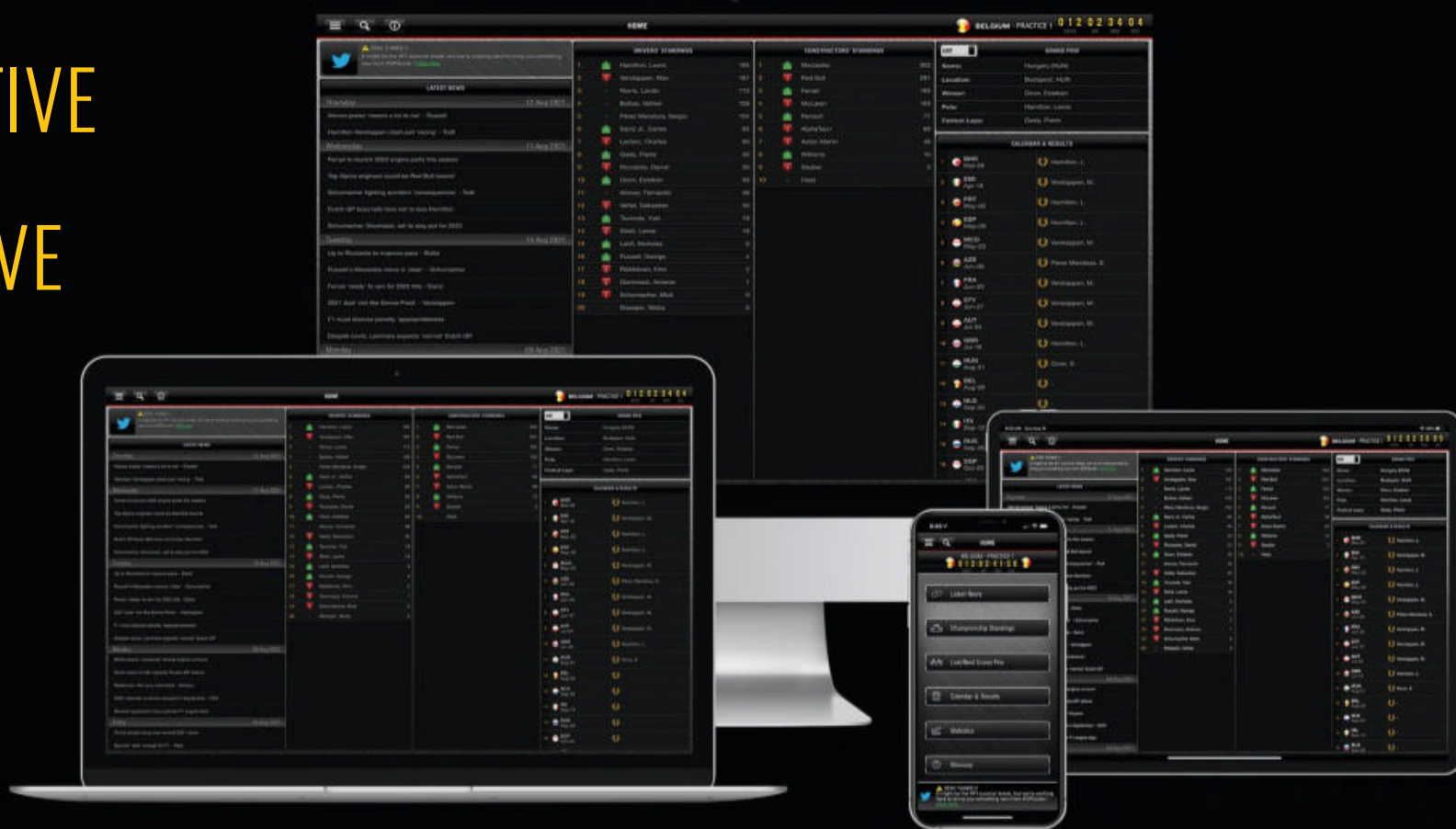


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STRAIGHT TALK

MARK GALLAGHER

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SPONSORS? PARTNERS? CALL THEM WHAT YOU WANT...

It was McLaren's Ron Dennis and Ekrem Sami who decided, back in the 1980s, that sponsors were no longer sponsors. Instead they were partners. Commercial partners, technical partners or, bottom of the rung, official suppliers.

Being a sponsor suggested something altogether different. A charitable donation or a cash contribution towards a worthy cause, such as winning the world championship.

Going into this season, Formula 1's ten teams sported no fewer than 301 'partners', although the nomenclature differs from team to team.

Scuderia Ferrari has 36 equitably named 'official partners'. Whether you're Shell, Santander or Virtual Gaming Worlds, you have the same billing as Brembo brakes, Garrett turbochargers or Technogym sports equipment.

Oracle Red Bull Racing has that much-sought after beast, a title sponsor. Yet Oracle is listed as a 'technical partner'. This neat positioning

Ineos to 19 'team partners' and half a dozen 'team suppliers'. Aston Martin likes the 'title partner' approach, applying that to Cognizant, while Saudi energy giant Aramco is referred to, rather cryptically, as 'strategic partner'.

While Mercedes and Aston Martin sport 27 partners each, McLaren is simply bursting at the seams with 50, three of which are 'primary' – OKX, Android and Google – while 41 are 'Formula 1 partners' and six 'McLaren licensees'.

It comes as no surprise that a team headed by Zak Brown should be good at wooing partners. Anyone who can list Unilever, Coca Cola, Dell and VM Ware among its partner list has, quite literally, done the business.

A surprising second in the numbers game is Alfa Romeo Racing.

In a nod to tradition the team lists both Alfa Romeo and the Stake gambling business as 'title sponsors'. It's refreshing to see the folk at Hinwil recognise sponsors for what they are. Throw in its 'main partner', the Kick streaming platform, along with the 41 'official partners' and two 'team suppliers', and the Swiss

team quietly impresses.

Alpine's support from the modestly named Best Water Technology Company is that of a 'title partner', while the Enstone team refers to both Castrol and BP Ultimate as 'premium partners' even though BP owns both. They are joined by Renault. The team has a further 26 official, technical and supplier partners.

Haas's deal with Moneygram is significant, fully integrated into the team's brand identity and something it is rightly proud of. The arrival of the Chipotle Mexican Grill company, with 3200 restaurants across North America, the UK, France and Germany, shows Haas may have turned the sponsorship corner. It sports 14 partners in total.

Williams has 21, including owners Dorilton, and the neat way in which it has applied Duracell branding to the FW45 illustrates nice creativity. AlphaTauri has landed Polish energy company Orlen, formerly with Alfa, but its modest line-up of 16 partners belies the support of Red Bull.

All of this reflects the rude health in which the industry finds itself. So far there is no sign of sponsors worrying about being lost in the clutter, each carving out their own storyline. They keep countless advertising, sponsorship, PR and hospitality agencies in work, cascading the benefit of F1's growth far beyond the paddock gates.

If you've ever wondered what a heyday looks like, this is it.



The Sauber-run Alfa Romeo operation has a huge number of sponsors or official partners, but it is Alfa itself and the gambling company Stake that are the team's two title sponsors

reflects its role in helping Hannah Schmitz and her colleagues in the strategy department to run millions of simulations in order to give Max Verstappen an optimal race.

Mercedes has four categories of partner, from 'title partner' Petronas and 'principal partner'



BADASS

Released from the corporate leash, Valtteri Bottas has rediscovered the fun factor in his racing. But that doesn't mean he's afraid of breaking a sweat these days...

WORDS OLEG KARPOV
PICTURES JERRY ANDRE


BOTTAS

ACCORDING TO THE WORLD HAPPINESS REPORT, compiled under the auspices of the United Nations, Finland is the happiest country in the world. The land of reindeer and lakes has topped the rankings since 2018. And although Valtteri Bottas hasn't lived in his homeland for quite some time, he's perfectly suited to the role of its ambassador. Because he is one happy Finn.

A trip to the North is one of his wintertime traditions. A couple of years ago Valtteri finished building a small house not far off the Arctic Circle, in one of those places where the sun remains below the horizon throughout December.

"It's a place called Kilpisjärvi," he tells *GP Racing*. "It's [a village] at the border of Finland, Sweden and Norway. So basically, as north as you can escape. Maybe you need to check, but I believe it's fewer than 200 people."

He isn't wrong, as far as we can tell. In 2000, which appears to be the last time someone visited with a clipboard, the population of Kilpisjärvi was recorded as being 114. These days, Bottas's abode there is one of his favourite places for rest.

"It's almost like a treehouse type of thing," he says, calling to mind TV's *Grand Designs*. "There's like two cabins connected. One is just one bedroom upstairs. So that means no [place for] guests! And downstairs, a kitchen and a living room. And the other building is just purely a sauna and a relaxation area on top. And I have a big garage for toys, ski-doo's and stuff like that."

Our appointment with Valtteri is in somewhere similar but not quite so geographically remote – Sweden's Pite Havsbad, 600km south of Kilpisjärvi. The Race of Champions is here for the second time in a row – a sporting meet for drivers from various motorsport categories, including the ▶



Photobombing to the extreme. Mika Häkkinen decides to get in on the action during our photoshoot at the hotel for the Race of Champions

likes of F1 veterans Mika Häkkinen, David Coulthard and Sebastian Vettel.

For Bottas, racing on an ice track on the frozen Baltic Sea, with a sauna twenty steps away from the service park, is a great way of transitioning from holidaying to working. For *GP Racing* it's an ideal venue to catch him in conditions resembling his natural habitat.

"When I'm in Finland, I'm in the sauna every day," says Valtteri. "It's almost like a spiritual thing in a way because normally, you don't talk that much in the sauna. You're just trying to reset your thoughts."

Is this the secret ingredient of Finnish happiness?

"The pace of the life of a Finn is quite slow. I mean, we're always on time, but nothing needs to happen like this," Valtteri snaps his fingers to illustrate the point. "We're really fortunate to have very pure air, pure water. We have lots of space. Obviously, yes, in the city you have a lot of people. But as soon as you get out, you have beautiful forests, lakes, and space. And silence."

"I think, with all this combined, you start to appreciate small things in life. The feeling you get when you go to the sauna, for example. It's like a big treat. You enjoy it. Yeah, simple things make us happy."

LEARNING TO LOVE F1 AGAIN

THE TIME FINLAND HAS SPENT at the top of the happiness ranking leaderboard has more or less overlapped with the most successful period of Bottas's career. Brought in to replace the retired Nico Rosberg at Mercedes, Valtteri won 10 races, became world vice-champion twice and, as he puts it, even lost count of his podiums.

Yet the five years within the German car giant's team were also full of stress. Patchy job security due to serial one-year contracts, consistent comparisons with a driver who is now the most successful ever in the history of F1, along with unpleasant episodes like Sochi 2018, when Valtteri had to give up a win – all that almost made him retire from F1. So, in terms of enjoying life, it's only recently that he's caught up to his table-topping fellow countrymen.

And, of course, the Alfa Romeo move isn't the only source of that. As Valtteri disrobes for some 'authentic' sauna shots, the stark contrast between his bronzed arms and shins and the expanse of pale flesh elsewhere clearly displays the fact that he is an avid cyclist ("Tan lines should be cultivated and kept razor sharp" is the seventh dictum of the Velominati's famous Rules).

The bicycle is now a huge part of Bottas's life. Not only is it a way of spending time with his girlfriend, professional cyclist Tiffany Cromwell –

though that's obviously a big factor – it's also something which has helped him reach his peak physical form without subjecting himself to an excruciating training regime. And that's very important to Valtteri, who admits that in the early years of his career – especially when his Williams team-mate was the diminutive Felipe Massa – he'd trained himself "to pain, physically and mentally" while trying to shed weight.

"I also had a much more strict diet because, naturally, I'm not light," says Valtteri. "You know, I'm really strongly built, so I almost had to starve myself. And then, yeah, the training programme... Actually, if I look at just hours, I'm probably training more now than I'd done in those years, but it was much more strict and specific at that time. I always, for every week, had a certain plan on paper done with the coach, and I would just execute that plan every day."

Naturally, Valtteri was one of those drivers benefitting from when F1 changed its rules and finally stopped setting a minimum weight limit that was driver and car combined rather than just the car. That change meant he no longer had to lose weight at all costs. But it wasn't just that which changed his training routine – first and foremost, it was experience.

"I think I've learned a lot about myself over the years," he says. "And one thing I've learned is that it's

"WHEN I'M IN FINLAND, I'M IN THE SAUNA EVERY DAY," SAYS VALTTERI. "IT'S ALMOST LIKE A SPIRITUAL THING IN A WAY BECAUSE NORMALLY, YOU DON'T TALK THAT MUCH IN THE SAUNA. YOU'RE JUST TRYING TO RESET YOUR THOUGHTS"

good to listen to your body and sometimes just do things that you want to do, instead of something planned and specific. Today, if I need to go for a gym session, but I feel like I actually want to ride my bike to the mountain, then I'll choose that and move the gym session to another day.

"In the long term, it's really, really important, especially if you want to have a long career. It's very easy to burn the candle from both ends and go to a bad place through that. That's why it's important to know yourself and your

body. Unfortunately, quite often with athletes, that comes from learning from your own mistakes.

"I definitely overtrained myself [in the past]. But you learn. You know your limits better as well. Now I know exactly what my body says. Okay, if you need to have a rest day, or three days of rest, that's what you've got to do."

THE CHEEK OF IT

"THERE'S PROBABLY THREE THINGS I ENJOY ABOUT IT,"

Valtteri says of cycling. "One, yeah, the physical feeling. Another one is you see so much, especially with a gravel bike.

"And then the last thing is, I feel it's pretty good for my head. Because on the bike... I don't know, I always find that I mostly think about positive things. It's somehow natural. Maybe the endorphins or whatever you produce when you do sports... I don't know!"

It seems logical that riding a bike with your girlfriend is a lot more fun ►



than lifting weights in a room with sweaty dudes. And while he's not shy to admit he's still not at the level of Tiffany, Bottas's numbers are pretty impressive.

"Last year I did 7777.7 kilometers," he smiles. "After the F1 season was done, I saw that I'd done like five-thousand-something. And I said to myself, 'OK, by the end of this year, I want to be at 7777' – and I made it on New Year's Eve. I finished the last kilometres with [former F1 driver] Brendon Hartley in New Zealand on the mountain bike. And then, once I completed the target, we had a shot of tequila!"

It was during one of these trips with Tiffany that Bottas became the source of a new meme. Having stayed in the US after the Miami Grand Prix, and in the company of renowned sports photographer Paul Ripke, they made a stop in Aspen, Colorado. A picture of Bottas bathing in one of the mountain streams – with his posterior on full display – quickly became the most-liked post on his Instagram.

"I posted it in the evening in Aspen," Valtteri laughs, "and then I didn't look at it until the next morning. But when I checked it... it had quite a lot of likes and interactions. Actually, it was Paul who came up with the idea that we should do something good with this because it was booming. So almost immediately, we decided to do prints, sell them, and give the money to charity."



PICTURE: TIFFANY CROWWELL

The famous picture from Aspen that became Bottas's most-liked Instagram post and also made over 50,000 euros for charity

Over 5000 people in 24 hours paid €10.77 each for a print.

"I had 50,000 euros in like this," Valtteri snaps his fingers again. "And because the picture was of my butt, [the money went to a charity] where they support people who have stomach cancer, you know, problems in the stomach and, well, the exhaust pipe.

"So yeah, glad I could do some good for charity with my butt!"

The meme shows no sign of dying down. No rain-interrupted track session goes by without someone superimposing a bare-assed Bottas onto a screen grab of wet asphalt from the official broadcast, then sharing it on social media.

He's happy to play along. One of the photo prints





Valtteri relaxes ahead of the new season (above). Crucial points in Mexico (left) and Brazil ensured his new team finished sixth in the constructors' race



he presented personally to Lewis Hamilton in the Monaco Grand Prix paddock. He'll happily pose for photos in front of t-shirts with that very same image captioned 'Finest Ass in Finland'. And he's made his rear available for a photoshoot to go into an F1 magazine – even though that required emerging from a cold sauna into -8°C wearing just a beanie.

ALFA BRAVO

LAST YEAR WAS ALSO A QUALIFIED SUCCESS in terms of on-track results. It was the first time since his rookie F1 season in 2013 that he didn't score a podium, but that was to be expected after moving from a team which had won every constructors' title since 2014 to one which had finished 2021 ninth in the standings.

The 2022 constructors' roster, taken alongside the drivers' championship table, suggests Bottas achieved what he wanted in his first season with his new team.

"I think it's a good reflection," he agrees. "I'm happy we hit the targets as a team, even though it was a bit too close at the end for seventh place. But we made it to top six and me to the top 10, which I thought would be a good starting point for this project."

It's fair to say Alfa could have been much lower on the table without Bottas. His 49 points were almost 90% of the team's tally. Valtteri delivered when it mattered the most, at the start of the season when Alfa Romeo was at its most competitive. And then he picked up crucial points in Mexico and Brazil which allowed the team to *just* hold off Aston Martin. It may be that his team-mate Zhou Guanyu had the greater share of the bad luck but, either way, simple maths is enough to conclude that, had it fielded a pair of rookies, the Hinwil team could have ended up eighth or even ninth rather than sixth.

Bottas was hired to make the most of the car and show its true potential. And that is exactly what he did.

"Of course, it makes me proud," he says. "But it's also understandable that as a rookie, the first few races are the most difficult ones, and that's when the car was kind of the most competitive the whole year. Yeah, it just shows that experience can help a lot." ▶

He also admits he needed a break from the spotlight – from having his performance compared directly with Hamilton’s every weekend. “It’s definitely easier,” he says. “There’s probably less judgment, and I can just really focus on the work. I think I really needed that kind of change, also [at this stage] in my career. So I only see positive things about that.

“I’m sure it does reflect on performance. Some of the races I drove last year I definitely felt I was at my peak. For sure, it helps when you’re in a good headspace, and also the stress level is lower, which gives you more energy. And then that reflects for the whole team as well. Like, if I would be really tense, that could transfer to the people I work with.”

“SOME OF THE RACES I DROVE LAST YEAR I DEFINITELY FELT I WAS AT MY PEAK. FOR SURE, IT HELPS WHEN YOU’RE IN A GOOD HEADSPACE, AND ALSO THE STRESS LEVEL IS LOWER, WHICH GIVES YOU MORE ENERGY”

The tension is indeed probably less, when finishing anywhere but first isn’t automatically cause for criticism, when your teammate isn’t a multiple-time world champion, and when most of the memes about you concern your posterior rather than the now-infamous “Valtteri, it’s James.”

At Alfa nobody asks him to be anyone else, too. When he was at Mercedes Bottas was often

told – by media members and even the aforementioned Rosberg – that he must become less of a ‘nice guy’, ‘get under Lewis’s skin’ and start indulging in some ‘mind games’.

“I’ve had all kinds of questions in press conferences, but that one was, yeah, [put to me] many times,” he laughs. “People kind of expected that’s what I need to do.

“But you can’t change your personality. You know, I like to do things my way. And also, you know, I knew that if I became, let’s say, an asshole, then... Yeah, the team spirit gets more tricky, the success of the team might struggle with that. And also, I could probably lose my job! Because I never had a contract for next year. So if become an asshole and I don’t win, that’s just game over.”

HAPPINESS IS THE TRUTH

NOW HE DOESN’T HAVE TO CREATE and publicise a new version of himself every year, to be ‘Bottas 2.0’, ‘3.0’, or any other evolution. He is just Valtteri Bottas, one of the top 10 drivers in the world’s most prestigious racing series. He’s one of the main assets of his team, has established a leadership role, knows what he’s capable of on the racetrack – and mostly does what he likes off it as well. He is as fit as ever and comfortable in his own skin. ▶



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"IN MY MIND, I HAVEN'T GIVEN UP ON WINNING. I KNOW THAT IN THE FUTURE, IF THINGS GO WELL, IT IS POSSIBLE. SO THAT'S ALWAYS THERE, THAT SAME MOTIVATION"



"I am the happiest I've ever been in my life," he confirms, "on track and outside of the track, too."

There's only one downside, really. He's no longer fighting for poles, wins and podiums weekend-to-weekend – and he readily admits that the emotions of simply getting a quality result with Alfa Romeo can't replace the feeling of seeing his name in first place in the classification.



Arriving in style: Bottas is the easy rider on the Harley Davidson with professional cyclist partner Tiffany Cromwell, at the US GP in Austin last year


"As a racer, for sure, when you do an amazing quali lap," says Bottas, "and then you see somebody still more than one second faster... yeah."

"But I'm completely fine with that. I had enough time to make sure that mentally I reset the goals. And then, when these are the goals, you focus on those. I know the name of the game; it's how it goes in this sport. If you want to win, you need to be in the top two teams. The satisfaction comes from different things now. You know, seeing progress and hitting targets, and just keep working that way."

For a guy who admitted his main motivation to get out of bed was to be world champion, it must be difficult to let it go. But Bottas can't tell us *how* difficult – because he doesn't feel he's let anything go yet.

"No, it's still there," he says. "In my mind, I haven't given up on winning. I know that in the future, if things go well, it is possible. So that's always there, that same motivation."

"Because F1 is a funny sport, you just never know what happens. And I still feel like I have many years in me. Still, I know it's very challenging for us as a team to win a race. But you also know that something can happen. It can be a crazy race and stuff. So, never say never."

Call him an optimist or even naive. Could that lingering motivation come in handy down the line? In 2026, when his current team becomes the works outfit for a German automotive giant, he'll only be 36. Still in peak physical form, hopefully in the right frame of mind and quite possibly still the team's lead driver. And if that German manufacturer's project hits the sweet spot right away we know at least one driver who'd be happy for that to happen. 



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OSCAR PIASTRI



McLaren's new Australian star spent a year on the sidelines as Alpine's reserve driver after winning the 2021 Formula 2 championship. No wonder he's so keen to go racing again...

CV

Born

Melbourne,
6 April 2001

2015

Australian Kart
Championship KF3, 3rd

2016

CIK-FIA World
Championship OK
Junior (Ricky Flynn), 6th
F4 UAE Championship
(Dragon), 4th

2017

F4 British
Championship
(Arden), 2nd

2018

FRenault Eurocup 2.0
(Arden), 8th

2019

FRenault Eurocup 2.0
(R-ace GP), 1st

2020

FIA F3 (Prema), 1st

2021

FIA F2 (Prema), 1st

2022

Alpine F1 reserve driver

Who was your sporting hero when you were growing up?

Good question. I actually don't have a specific one. I try to draw inspiration from different areas. So people like [Ayrton] Senna obviously, [Alain] Prost... I've had the privilege of meeting Alain, throughout my time [in Renault/Alpine's young driver programme] in the last few years. Getting to know him in person has been really cool. People like Lewis [Hamilton] in the past few years, he's been impressive, plus Max [Verstappen] recently. Outside of motorsport Michael Jordan is a good one.

Do you have any superstitions or perhaps a specific routine before you get into the car?

I don't have one. I'm pretty low on my superstitions, although I generally like to get in the car from the same side just because I find it more comfortable.

Obviously, getting to Formula 1 has been your dream and now you're here – what's it like?

Yeah, I feel good. I feel pretty calm and relaxed. It's obviously been quite a while waiting for me. I'm trying to get the most out of myself and the car so from that aspect, not much is different. But,

yeah, knowing that I'm in the pinnacle of motorsport now is a very special feeling.

You had to spend a season not actually racing. Do you feel it would have been better to have gone straight to F1 from F2, or has that season of working in the background been beneficial?

Working as a reserve driver definitely taught me a few things. So it wasn't a wasted year by any means. Naturally, as a racing driver, I just want to be racing as much as I can.

And ideally going straight from F2 to F1 probably would have been better. But there's no point complaining about it – it's in the past now. It's what happened. I'm here now on the grid. There's definitely some areas, mostly off-track, where I learned a lot last year and I think that's helped with my wider introduction to the world of F1. Not necessarily the driving but

everything else. So I feel like that's an area I'm quite comfortable with.

How much have you been looking forward to getting back to racing?

Yeah, it's super exciting for me. It's been a massive motivation boost, I would say, giving me something to focus on. It's been going really well with everyone at McLaren so far. I'm feeling very comfortable in the team.

The pre-season test was your first chance to drive the MCL60 so you were obviously very preoccupied with engineering matters. Then straight into the first race weekend. How long before you can start to just enjoy the driving?

I've been pretty busy trying to learn how this car works and how to extract the most from it. I think it's always a nice mindset to be in, sort of not really thinking about the emotion of it and stuff like that. I feel like throughout the last year, being a reserve driver, it's been a bit of a soft entry into F1. So this year, it feels like it's maybe a bit less of a step than if I had come straight from F2. I feel like I'm fully in business mode. Of course, it's pretty cool to be out there.

It's been widely reported the MCL60 was 'frozen' around launch time and a

THIS YEAR IT FEELS LIKE
IT'S MAYBE A BIT LESS
OF A STEP THAN IF I HAD
COME STRAIGHT FROM F2



new direction taken in terms of where the developmental path will go. What has been the expectation in terms of the package you have right now? What have the debriefs been like, in terms of what can be used and where you can take the car?

It's a bit difficult to say still, because we don't 100% know where we are relative to others. We're about where we expected to be. We've got some things in the pipeline that will hopefully be coming soon. So that's a good step for us. But, yeah, I think our targets from the launch are about where we've ended up.

So, finally, what is a realistic target for you for this season?

I think putting numbers on our expectations is difficult. And, like we've said, we've got a few more things coming in development. So hopefully we can become a bit quicker, early in the season. So where we're starting might not necessarily be where we are in the middle of the year or at the end of the year. So, for me, I'll try and gain more experience, and feel like I'm getting close to the limit. I'll just try and do the best job that I can, obviously there's going to be an element of rust. So I think just limiting the mistakes, trying to do the best that I can is the aim at the moment.



RIGHT SAID FRED

Ferrari seemed to be on an upward trajectory last season but still team principal Mattia Binotto lost his job. New boss **Frédéric Vasseur** has wasted little time in making major changes to the operation. What was going so wrong under Binotto – and just how long has Vasseur got to fix it?

WORDS
ROBERTO CHICHERO
PICTURES  **motorsport**
MAGAZINE
AND FERRARI

WHEN IT COMES TO FERRARI THERE ARE NO HALF MEASURES. When the Scuderia wins we speak of triumphs, when it loses we're faced with a Greek tragedy: even if only figuratively, the final act concludes with blood on the floor. In Maranello everything is extreme, the spotlights are on the team 24/7, throwing every action into stark relief – everything makes the news when there are millions of fans in red eager to comment on the smallest of happenings.

Changes of team principals aren't a rarity in Maranello. Those who covet the seat of management – or merely agree to sit on it awhile – know well what they are getting into, and shouldn't be too surprised if their head is called to the chopping block in the event of a defeat. In the four years he occupied the helm of Ferrari, Mattia Binotto won very little: three grands prix in 2019, four in 2022. And in between, two very difficult seasons for the Scuderia, during which the team principal managed to survive by promising a great comeback when the technical regulations would change.

Ferrari actually returned to winning last year, but not as much as hoped, and above all it only did so in the first half of the season. Even so, Frédéric Vasseur's arrival in Maranello has divided opinions – between those who would have liked to see Mattia Binotto's cycle continue, and those who deemed a change in the direction of the team was both necessary and urgent. But Binotto's fate was already written last autumn, owing to a complex chain of circumstances which can only be understood by taking a step back. ►



NO SUCCESSION PLAN

When at the end of 2018 Binotto won the internal battle in Maranello against the polarising figure of Maurizio Arrivabene, he was aware he was facing the biggest challenge of his professional life. Few people knew the reality of Ferrari like Binotto, who entered it immediately after graduating in engineering, in 1995, as his first place of work. Binotto's has been a remarkable climb: year after year he has risen in rank to the highest position in the *Gestione Sportiva*, the headquarters of Ferrari's Formula 1 programme.

The final step was possible thanks to excellent work done in the role of technical director, as he oversaw a return to competitiveness in 2017-2018, but the transition to the role of team principal meant having to face a very different job from the previous one. Moving from technical problems to managerial ones requires other qualities and, even if in the past there have been technicians able to play the role of team principal very well (Ross Brawn, one of Ferrari's most successful technical directors of the past few decades, is the best example), running an entire organisation rather than single portion of it throws up unexpected challenges.

The first anomaly with the Scuderia Ferrari managed by Binotto was the decision not to name a successor to him. For four seasons in Maranello, the role of technical director and team principal merged in the same person: Binotto. Mattia was very skilled in managing difficult situations, such as the thorny matter

Binotto survived Ferrari's fallow years of 2020/21 but after the great start to 2022 he needed to win titles to stay in the job



of the 2019 power unit which led to a secret agreement with the FIA. But even this apparent success came at a price: catastrophic results in 2020 with a car whose aerodynamics had been conceived in the expectation of a more powerful engine. The circumstances of the pandemic gave little headroom to turn this around but there was still a very slight improvement in 2021.

Binotto managed to survive this very difficult period by promising the great redemption in 2022, an appointment for which Ferrari would not be found unprepared. The message sent by Binotto was clear: the Scuderia technical staff pivoted to a complete focus on the 2022 car as early as possible. As Ferrari laboured through two challenging seasons its leadership was at pains to argue that this state of affairs was only

temporary, and normal competitive service would be resumed in the new ground-effect era. This allowed Binotto and his work group to publicly write off 2021, but it greatly increased the expectations for 2022.

WHY BINOTTO HAD TO GO

The excellent start to last season was in line with the promised targets, but two problems swiftly arose which were at the root of the end of the relationship between Binotto and Ferrari. Expectations began to streak beyond the team's capacity to fulfil them. Ferrari was at its best in the first three races of the season,



where everything seemed to go according to plan. After Leclerc's victory in Melbourne there was much talk, especially in Italy, that the world championship – not claimed by a Ferrari driver since Kimi Räikkönen in 2007 – was a realistic possibility. Fans accustomed to serial disappointments dared to dream once again.

Then everything changed quickly. The chorus in this latest Greek tragedy began to strike up its dire foreshadowings of great doom and distress at the Spanish GP, where a power unit failure forced Leclerc to retire. Further manifestations in subsequent races led to the decision not to use the engine in its highest power modes during the second half of the season.

Seven days later, in Monaco, a sensational strategy error deprived Ferrari of a potential

Vasseur with sporting director Laurent Mekies at testing. Mekies's role has been altered to focus just on team management

one-two finish. What made this situation even more difficult was the damage caused to Leclerc, the driver who up until that moment was clearly the team's best performer. Ferrari utterly mismanaged the transition from wet to dry conditions, dithering when Red Bull brought Sergio Pérez in for intermediates and only calling Leclerc in (from the lead) two laps later. Carlos Sainz, seeing the track was almost dry, refused the order – with the result that Leclerc had to sit behind Sainz in the pits when they both stopped for slicks. This incident shook Leclerc's faith in the team in two ways: he lost confidence in its

strategic competence and began to feel Sainz had the ear of management rather than him.

This impression was magnified at Silverstone, when Ferrari differentiated its strategies but failed to let Leclerc maximise his. Running faster in the early stages, Leclerc had to beg the team to order Sainz to let him past; and then circumstances around a late Safety Car period led the team to pit Sainz to cover Lewis Hamilton's Mercedes and leave Leclerc out. Sainz then rejected the team's request to protect his team-mate at the start. While this was the right call to ensure a Ferrari driver actually won the race (as drivers on fresher tyres swamped Leclerc), it made the pitwall look weak. And it magnified tensions between Binotto and his star driver.

It's believed that Leclerc and his manager, the supremely well-connected Nicolas Todt, privately began to lobby Ferrari's most senior management for change, a process which gathered momentum as the team began to lose ground in another crucial area: development. Leclerc's victory in Austria, in mid-July, would be the team's last of the season. Concerns began to grow within the team that it had taken the wrong way in development, or at best been out-developed by Red Bull. During the Italian Grand Prix weekend it ran back-to-back tests on track between the F1-75's original floor and a new spec introduced in France, months earlier. Only the evidence of this evaluation persuaded the team that the new floor had been an improvement after all.

Criticism began to rain publicly from above. There had been a regime change at Ferrari during Binotto's tenure: In December 2020 CEO Louis Camilleri left his position for health reasons, ultimately replaced by Benedetto Vigna – who, after spending his first year focused on the road car side of the business, began to develop a close and increasingly vocal interest in the Scuderia. Having lost the confidence of the ▶

**AFTER
LECLERC'S
VICTORY IN
MELBOURNE
THERE WAS
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ESPECIALLY
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– NOT CLAIMED
BY A FERRARI
DRIVER SINCE
KIMI RÄIKKÖNEN
IN 2007 – WAS
A REALISTIC
POSSIBILITY**



Weeks into the job and Vasseur has already instigated a restructuring of Ferrari's operations across race weekends

new CEO as well as the president, John Elkann, Binotto's fate was sealed.

Although Frédéric Vasseur has a strong relationship with Todt through their partnership in the winning ART Grand Prix team, he's also good friends with Carlos Tavares, the powerful CEO of Stellantis who, with Elkann, engineered the landmark merger between Fiat-Chrysler and Peugeot Citroën. Vasseur's recruitment was approved by both Vigna and Elkann, who want a new era at Ferrari to bear their signatures.

VASSEUR RINGS IN THE CHANGES

Vasseur is understood to have been in the frame for the team principal role at Ferrari in 2018, when rumours circulated he was the preferred choice of then-president Sergio Marchionne. But this prospect faded in the flurry of events which surrounded Marchionne's untimely death that year. Even if in F1 Vasseur hasn't yet obtained results of tremendous significance, he boasts a vast experience in motorsport. In Maranello a man of the track, an organiser with a profound knowledge of the work carried out in a racing

team and with great experience of driver management, was seen as necessary – someone with both the knowledge to identify weaknesses and the clout to rectify them.

"I need a period of learning," Vasseur insisted in his first press conference, held in Maranello in January – but within weeks he had clearly learned enough to begin reshaping the Scuderia's operations. The first topic on Vasseur's agenda was the strategy team, whose head – Inaki Rueda – was banished to a factory role while Ravin Jain was appointed in his place. The team's pitwall complement was reduced from eight people to six, and head of track operations Claudio Albertini (a senior engineering figure for many years) was transferred to the Ferrari Driver Academy. Sporting director Laurent Mekies also lost some of his previous responsibilities. Activities concerning relations with sponsors and media, as well as driver management, will now fall within Vasseur's remit, while Mekies focuses solely on team management.

It's not a massive revolution, but it represents change after a long period of stability in the team guaranteed by Binotto. One of the hallmarks of the Binotto era was the refusal to acknowledge or

"IF YOU STAY AT THE SAME LEVEL TWO WEEKS IN A ROW YOU ARE DEAD BECAUSE EVERYBODY ELSE IS IMPROVING"

FRÉDÉRIC VASSEUR

admit to failures, which the team principal would defend to the hilt or try to explain away even in the face of evidence of critical mistakes. Vasseur has made it clear that everything is up for reassessment during his reign: he wants Ferrari to be more like Red Bull or Mercedes, targeting continuous improvement in all areas. He emphasised that the changes to the strategy setup were "not about the person", but part of a wider reassessment of process, communication and technology.

"If you stay at the same level two weeks in a row you are dead," he said during the Bahrain test. "Because everybody else is improving."

The path that awaits Vasseur certainly isn't as steep as the one taken by Jean Todt in 1993. Ferrari finished 2022 as runner-up, has sound technical know-how and a reasonable organisational structure. The first problem Vasseur will have to familiarise himself with will be the pressure, destined to increase if the results don't live up to expectations, or if Ferrari doesn't confirm itself as a title contender by the end of the season. Early in the Todt era, president Luca di Montezemolo intervened in the difficult moments to publicly confirm his faith in the working group, ►

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taking pressure off the team. Elkan and Vigna are unlikely to do this; so far, their only public interventions have been to heap pressure on the team leaders rather than deflect it.

Another significant challenge for Vasseur will be to manage the relationship between Sainz and Leclerc, a couple who already had critical moments last year. Any further friction here will feed into another situation looming on Vasseur's radar: Leclerc's contract renewal.

Although Leclerc's deal runs until the end of 2024, in reality the decision on whether to extend it or not will be shaped by events this year. If the SF-23 can be made reliable and race-winningly competitive, if Ferrari can develop it effectively through the season, and if the team can operate at a consistently high level, Leclerc will have few reasons to transfer his allegiance



Vasseur will be judged on team operations (above) and if the SF-23 can be developed into a reliable and successful machine




The relationship between Leclerc and Sainz (above, left and right) also needs Vasseur's attention, as does Leclerc's contract

elsewhere. That amounts to a lot of 'ifs'.

Over the past four years, both on the track and in his human and professional relationships with the whole team, Leclerc has added tremendous value to Ferrari. Also, pressingly, there is nobody within Ferrari's young-driver ladder ready to operate at his

level should he choose to depart. For all these reasons he would be massive loss to the Scuderia, and one which would invite the wrath of fans, media, sponsors and senior management.

For Vasseur, then, the race to keep Leclerc in red has already begun. 



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NO ROOM FOR SECOND BEST

The message from Ferrari's top brass over the winter has been clear:

runner-up spot isn't enough. The Scuderia had the second-best car and what is considered to be the second-best driver line-up on the grid... what will it take to go one better?

WORDS
ANDREW BENSON
PICTURES  AND FERRARI

CHARLES LECLERC SUMMED UP FERRARI'S SITUATION heading into the new world championship campaign in a couple of sentences in one answer at the launch of its new car this year.

"2022 was a good step forward compared with the two difficult years of 2020 and 2021," Leclerc said, "but we finished second in both championships.

"I think we've done a great job on the new car trying to address the weaknesses of last year's car. The goal is to win, clearly. It's what motivates me and all the team. I'm really looking forward to getting back in the car and trying to win that championship."

In one way, Leclerc's remarks reflect his character, which has always been open and straightforward. In another, perhaps they are also indicative of a new start for Ferrari this year.

The same two drivers, yes, but there is a new team boss in Frédéric Vasseur, and one who has employed a similar directness in the few short weeks he has been in position. Ferrari's weaknesses last year were obvious, it was pointed out to Vasseur in his first meeting with the media. Reliability and car development were not good enough, and there were too many strategy errors.

Vasseur met the question head-on, with a smile.

"Thank you for doing my analysis for me," he said, before going on to explain that the engine department seemed to have done a good job and he hoped reliability ►

was under control, and that development was complex under a cost cap when weighing progress one year against design for the next.

“I wasn’t there and don’t want to make any judgements on what has happened in the past,” he said. “But we will see during the season.”

As for strategy, he said: “You see only the visible part of the iceberg, and strategy isn’t just a matter of the guy at the top of the iceberg.

“Very often it’s matter of communication, organisation, the flow of communication on the pitwall, and we’re in the process of reviewing everything. It’s a bit short notice for me but we will have to do some improvement.”

The contrast with his predecessor Mattia Binotto’s consistent public denials last year that anything was wrong on strategy did not go unnoticed.

The message – and, more importantly, the direction – was clear. And that message was underlined at the start of pre-season testing, a week before the opening race, when it emerged that head of strategy Inaki Rueda had been switched to a new factory-based sporting role, and replaced by one of his previous lieutenants, Ravin Jain.

“Fréd arrived with very clear ideas and understands a team that’s very big,” Leclerc says. “Within a few days he understood what had to be done and he did it. It’s positive. His job is to put people in the right positions, and he’s excellent at it. Amazing.”

■ IS LECLERC AT MAX’S LEVEL?

Of the many question marks hanging over Ferrari heading into 2023, the smallest one is over the drivers. In Leclerc, the Scuderia has a man of extravagant talent, who is increasingly regarded as perhaps the out-and-out fastest over one lap in the entire field.

Nine pole positions last year tell their own story and, while some have pointed out the disparity between the 18 poles he has scored in his career and his five victories, an analysis of why that has happened quickly makes it clear that the failings are overwhelmingly on the side of the team, not the driver.

Such was the case last year, too. Leclerc’s nine poles begat just three victories. But three further potential wins were lost to strategy errors (Monaco, Silverstone and Hungary) and two more to engine failures (Spain and Azerbaijan). Without those, the championship battle would have run a lot longer than it did, even if the result would not have changed.

Leclerc himself made two significant errors

– at Imola, where a spin in the closing stages dropped him from chasing Sergio Pérez for second to sixth, and in France, where he crashed out of the lead while trying to build a gap to Max Verstappen on an off-set strategy. He is nothing if not self-critical, and he recognises this is an area in which he still has room for improvement.

“The goal as every year is to try and improve,” he says. “In the first years in F1, you always have one particular thing that you need to improve on as a driver. Now it’s been a few years I’m trying to put the pieces together.

“I know how to be quick. Obviously, there were some mistakes. I’ll try and do fewer and fewer mistakes year after year.

“But overall it’s just try and become a better driver, learn from the past experiences. When I was saying at the end of the year we’ve looked at the bad races, I also looked at my bad races and what I could have done better in those weekends and learn from it.

“There are different points of focus, it’s not just one area. It’s to become a better driver overall and, if as a team we do the best job we can, I’m sure we can be successful.”

While Leclerc never seeks to hide from his errors, though, it’s not entirely fair to say this is an area of weakness compared with Verstappen. The Red Bull driver also made two significant in-race errors; it’s just that his didn’t hurt him.

In Spain, Verstappen spun off in the early stages when chasing Leclerc, but came back to win after Leclerc’s engine failure and Red Bull imposed team orders on Sergio Pérez. In Hungary, Verstappen spun at the penultimate corner having just taken the lead, but managed to continue without losing more than a few seconds.

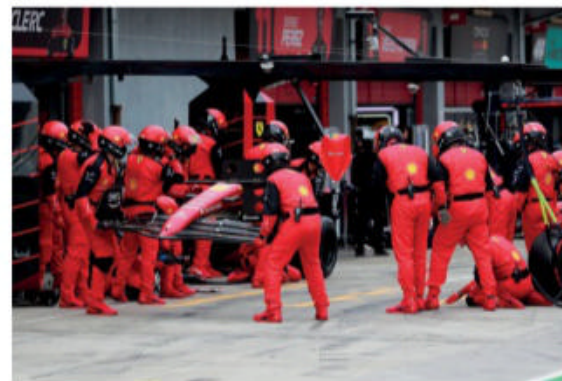
Towards the end of last year, Carlos Sainz said he believed his team-mate was “driving at a level that is very close to Max or any other driver. And for me he’s in a way done a perfect season, apart from the two or three typical mistakes everyone does in a year, or the luck [which] maybe he has been lacking the same as me.”

If Ferrari has no doubts Leclerc is capable of delivering a title, the confidence doesn’t necessarily work the other way around.

The constant knock-backs Leclerc received through last year as he tried to deliver Ferrari’s first drivers’ title since 2007 clearly wore him down, and his radio messages after the numerous strategy errors suggested he was beginning to question his team.

There are parallels here with Fernando Alonso. He, too, was utterly dedicated to winning a title with Ferrari. But four years of falling just short, of Alonso performing heroics in cars that lacked the performance to properly challenge Red Bull, ultimately led to him losing faith in the

Leclerc’s two major errors last year were in Imola (bottom) where he needed a new wing, and that agonising spin in France (below)



ability of the team ever to get him there, and he negotiated an exit from his contract two years before it was up.

The five-year deal Ferrari signed with Leclerc after his starring debut season with the team in 2019 lasts until 2024.

That might seem a long way away, but Leclerc will already be thinking of what to do when it comes around. And one of the tasks Ferrari faces this year is convincing its lead driver that it really can deliver him the title he craves. In Ferrari’s favour is that his obvious alternative destination – Mercedes – is facing questions of its own.

■ SAINZ GOES MARCHING IN

If Lewis Hamilton and George Russell is widely regarded as the strongest driver line-up, Leclerc and Sainz at Ferrari must be next in line.

Sainz established himself as one of the sport’s leading drivers with his two seasons alongside Lando Norris at McLaren. Since his move to Ferrari, that position has been consolidated – directly, by his results compared with Leclerc, and indirectly, by Norris’s destruction of Daniel Ricciardo.

Brought to Ferrari as support for Leclerc, ►



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CHARLES LECLERC



Sainz has proved himself much more than a number two.

He works hard, tends to improve as the season progresses as he becomes more familiar with the demands of the car, and has a tactical intelligence that over last season suggested the best strategist in the Ferrari team was the man driving the number 55 car.

But Sainz doesn't quite have Leclerc's pace and raw natural ability, as evidenced by the qualifying comparison between the two. Leclerc was the quicker on average by 0.13s over the 2022 season and 0.123s in 2021.

Last year, though, those statistics are influenced by the struggles Sainz had with the car's tail-happy handling – the average deficit was 0.265s after Leclerc outqualified his team-mate eight times in a row at the start of the season. But from Silverstone onwards, the average margin was only 0.03s, reflective of Sainz's improvement.

"Last year I felt very close to the limit of the car," Sainz says, "and was performing at a very high level so I'm hopeful I can start where I left off and do a step in the right direction.

"I hope the car can adapt a bit more to my driving and I can adapt a bit better to it, and it will be a strong start to the season.

"I've been working hard over winter to arrive to this season prepared and convinced that I can do it and become an even better driver.



Sainz struggled in 2022 with the Ferrari's handling, but did at least claim his maiden F1 win, at the British GP (above and below)



"Last year I had my bit of success. It's true it wasn't an easy season, but in a not-easy season, I won a race, three poles, a lot of podiums with a car that maybe I wasn't at my best with. I know as soon as this year I find my groove, a good window of comfort in the car, I know I'm able to do very good things."

Sainz did out-score Leclerc in the championship in their first season together, but that was more reflective of circumstances twisting in his favour than any performance advantage. But if he has yet to prove he can beat Leclerc on merit over a season, he remains determined to prove that's the case, while being more than smart enough to try within the bounds of the way the team is run.

There is no number one or two at Ferrari, and Leclerc says: "I completely agree with this philosophy. It's important for Carlos and me to be fully motivated, do the best job possible in the first part of the season, to push each other to perform the best.

"Then, if at one point in the championship, a driver is clearly in the fight for winning that championship, then I'm sure the team will do everything possible for the driver that's fighting for the championship, for him to be in the best possible conditions.

"This we'll talk about at a later date of course. At the beginning of the season this is the right thing to do." ▶





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■ CAN THE CAR DO THE JOB?

However good the driver line-up, though, it means nothing without a competitive car, and the biggest questions over the team hang over performance and race-management. You can read in Roberto Chinchero's analysis (p42) how Vasseur has set about resolving the weaknesses in the team, and the drivers are optimistic he will be successful.

"We need to give Fr d time," Leclerc says, "but already you start seeing different things and I respect a lot everything Fr d has done in his past. I'm sure he'll give us things to improve and change that are going to go in the right direction."

But what about performance?

The word from inside Ferrari is that it has a 0.2s lap-time gain compared with the second half of last season, attributed to the reliability fixes on the engine, which can now run in higher performance modes again.

The engineers have worked on reducing drag, to counter the straight-line speed advantage of the Red Bull last year, but Leclerc has already raised questions as to whether this has affected cornering performance.


The early signs are that, for all Ferrari's work over the winter, it is Red Bull which starts

the season with the fastest car.

But there is confidence at Maranello that Ferrari can make a fight of it. This is partly informed by the hope that Red Bull will be affected by its 10% reduction in permitted aerodynamic research, the punishment for breaching the budget cap in 2021, combined with its already limited allowance on F1's new inverse sliding scale based on championship positions.

Leclerc says: "One thing for sure is that, especially after a year like last year, whether we are first in the first race, doesn't mean it's finished, and that goes both ways. "If we're winning the first race, it doesn't mean it will be just the same until the end of the season, and vice versa. If we have a bad first race we shouldn't give up and give in. Keep pushing because everything is possible."

"When you're at Ferrari coming from 2022," Vasseur says, "you can't have another objective than to win."

"I don't want to say it will be easy because Red Bull and Mercedes will have the same target, and only one team and driver will win. But we need to have this kind of target. We need to have the mindset to do a better job tomorrow than today and to be always trying to improve the system." 

Andrew Benson is BBC Sport's chief F1 writer

The crux of the matter for Ferrari, is can the SF-23 take the fight to Red Bull. The signs aren't promising at the moment



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MATT HARMAN

Alpine is one of the few teams not to have copied Red Bull's car design in its push to get ahead of the midfield pack. The team's technical director explains why it's happy to pursue its own design direction – including a new weight-saving rear suspension concept

CV

We've seen a lot of convergence in designs a year into the new rules package. Are you still seeing other teams bringing developments that surprise you?

2022

Technical director,
Alpine F1

2019

Engineering director,
Renault F1/Alpine F1

2018

Chief designer,
Renault F1

2011

Head of powertrain
integration and
transmission design,
Mercedes F1

2000

Engineering team
leader, Mercedes
AMG HPP

1995

Project engineer,
Ricardo Engineering

I wouldn't say 'surprising' as such. But you can see people's different evolutions, what they're targeting and why. It's been very good to see some of those solutions. It's also been quite confidence-building for us, because some directions we've been taking we've seen on other cars, and it gives you a good feeling – that you're taking good directions which may unlock performance for later. I would say interesting rather than surprising.

Last year you were conservative with ground effect. In trying to squeeze more out of it, has this made things more critical in this area?

We've pushed forward on our race car instrumentation, our high-speed logging, which allows us to understand it [the porpoising/bouncing caused by ground effect] more carefully. We feel more confident because we're more informed. In terms of what we've done, we've been more aggressive. We did have some concerns but only because it isn't a fully understood phenomenon. What we've seen so far is we've got quite good control of it, we can understand when it's going to occur and how to manage it.

How happy are you with the new rear suspension design, performance-wise but also in terms of ease of setup?

Very happy. It's performed as we expected. We've had to learn how to very

quickly optimise and change it during sessions. That's given us a few headaches but we've fixed all those. The mass and aerodynamics have come in as expected. In the future we just need to do a bit more pre-preparation to make sure we can make those changes during the sessions as quickly as we'd like. But to be honest, if I had to pick something to be a little bit behind the curve on, that would be the right one, because we've fixed it already.

Last year you had small upgrades almost every race. What about this season?

It may not be every race, because as the cars are evolving they're more integrated, and therefore the packages need to be a little bit more widespread. But there will be an attempt to develop something at every race that will give us lap time, even if it's not bodywork or things you can see. We were proud of that last year, and we've got the same resources, we've got the same finances, if not slightly better. So it's just down to us to get through that work.

We've seen Ferrari add small elements to its front wings and Mercedes reinterpret slot-gap separators. Is there much

performance to be found in these parts?

I think it's very concept specific. We've had a look a few times at those. And you may see them on our car, you may not. The clarification on the regulations is quite clear that you can do them.

Last year's car was all new, this season you could carry elements over. Does that affect your budget for development?

There's little that's the same, actually. With the exception of one major component, most of the car is completely new. I think that's important to say – we've pushed the margins in every area. We needed to find a considerable amount of mass to take off the car, which we did. You do that by not only focusing on some good areas, but also by trying to make sure you shave it off everywhere that you can. So, fundamentally we've got a good development budget, but we didn't screw up on the launch car budget, as we call it.

Hopefully the pink car weighs the same as the blue car [Alpine will revert to its blue livery after Australia]...

[Laughs] Yeah, of course, of course.

You were a team that seemed to have a good grasp of the new rules. Has that given you an advantage for 2023?

We've benefited from choosing some concepts very early on in the A522 programme which we've stuck with [on the A523], and they've proven to be correct. Who knows what that will be, moving forward. We may have to evolve a little bit more in a different direction.

**WITH THE EXCEPTION OF
ONE MAJOR COMPONENT,
MOST OF THE CAR IS
COMPLETELY NEW**

IT'S NOT ABOUT THE CAR

For Williams, welded to the bottom of the constructors' championship for the past five seasons, designing a fast car is only part of a bigger challenge. New team principal James Vowles has lots of problems to solve, from years of under-investment to unstable leadership – and a working culture set in its ways. As **Mark Gallagher** explains, these issues have already foxed much more experienced team bosses...

PICTURES  **motorsport** IMAGES AND WILLIAMS



The 'Vowles era' started well with Alex Albon claiming a point for Williams in the first race of the season in Bahrain



When Alex Albon claimed a point for Williams in the opening race of the season in Bahrain it raised many a smile, whether among its hard-pressed staff, patient fans, or those of us who have followed the great British team's trials and tribulations. For new team boss James Vowles, less than two weeks into the job, it showed the potential which lies within the FW45, which in testing lapped 2.4s quicker than its predecessor almost straight out of the box.

Meanwhile former team boss Jost Capito posted a congratulatory note on LinkedIn, somewhat pointedly thanking former technical director FX Demaison and the departing aerodynamics director David Wheeler for all their hard work on the new car during 2022.

It is 20 years since Williams last mounted a championship challenge worthy of the name, 26 years since the team last won a world championship title.

The decline has been painful to watch. With 16 world championship titles under its belt, the team founded and led by Frank Williams and Patrick Head has struggled to recapture past glories.

One symptom of the fall was the team opting to change engine suppliers no fewer than six times in 10 years. After the relationship with BMW soured in 2005, Williams moved to Cosworth, Toyota, back to Cosworth in 2010, thereafter to Renault and Mercedes.

There were false dawns, dashed hopes and a two-year change of fortune when Mercedes hybrid power helped Williams achieve third in the constructors' championship in 2014 and 2015. Under Claire Williams and Pat Symonds things appeared to have recovered during those seasons; Felipe Massa and Valtteri Bottas even managed a front-row lock-out in Austria, 2014.

Just as with Pastor Maldonado's outlier win for Williams at the 2012 Spanish Grand Prix, however, those results flattered to deceive. Soon overtaken by Red Bull Racing and Force India, Williams fell to 5th in the championship for two years. Since then it's fallen off a cliff, finishing 10th in four of the last five seasons, scoring no points at all in 2020.

The reasons for the decline are varied. A lack of succession planning in technical or commercial leadership, a dearth of sponsorship, results leading to a smaller share in F1's prize fund, a lack of investment in talent and technology, perhaps a touch of corporate hubris.

A QUESTION OF CULTURE

The culture within Williams has been questioned from time to time. A tendency to point fingers internally, an underlying resistance to change.

Back in 2014, head of performance engineering Rob Smedley told *Autosport*, "Perhaps Williams was guilty in the past... of having a bit of a blame culture on the technical side. When you have a blame culture, people spend 60-90% of their effort covering what they have done rather than doing anything positive and understanding the problem, making the car go quicker or making operations slicker."

It was a topic to which Jost Capito returned when speaking to this magazine in 2021, admitting that there was a tendency

Some short-term respite was achieved by Symonds (below) and Williams (second from bottom) in 2014/15 but Lowe (second from top) was not a success. Capito (bottom) only lasted two years



towards blame and a reluctance to change.

"What I have found is that a lot would say, 'Oh, this is the Williams way, this is how we always did it,' and that had to be overcome."

Williams has lacked neither talent nor intellect in technical leadership. Sam Michael led the charge during the noughties, departing in 2011. At the time there were suggestions that his approach was too 'old school' in that all key decisions came across his desk and often resulted in a bottleneck.

Michael was replaced by Mike Coughlan who, in turn, handed the technical reins over to Pat Symonds in 2013. It was he who oversaw the stronger showings in 2014/15. Pat left at the end of 2016, later replaced by the highly regarded Paddy Lowe. One of F1's most experienced and successful technical directors, Lowe had started his career at Williams before spending 20 years at McLaren, then four years at a dominant Mercedes as executive director.

Lowe endured two very unhappy years and both the FW41 and FW42 proved to be uncompetitive, relegating the team to dead last. "The less said about it the better," is his summary.

REGIME CHANGE

In terms of executive leadership, Adam Parr was CEO from 2006 onwards, later becoming chairman during the period when Toto Wolff became an investor, board member and ultimately executive director. Alex Burns became CEO under Parr, but both they and Wolff were gone within a year, leaving Claire Williams to battle on, now with former Jaguar Land Rover executive Mike O'Driscoll in the CEO role.

In June 2020 McLaren's former chief operating officer Simon Roberts was appointed as managing director, then promoted to team principal in September following the Williams family's decision to sell the team to Dorilton Capital.

After Dorilton appointed Jost Capito as CEO, a restructuring of the team led to Roberts being replaced in the role of team leader by Capito himself. That restructuring also led to Capito's former VW Motorsport colleagues FX Demaison and Sven Smeets being appointed technical director and sporting director respectively.

Dorilton's decision to part company with both Capito and Demaison last December surprised and shocked. Once again the leadership reset button had been struck.

Capable, stable leadership is beneficial, so regular upheavals tend to be symptomatic of wider issues. This is something Vowles is aware of, having worked for two decades in Brackley as his employer transitioned from BAR to Honda, then Brawn to Mercedes.

"Any organisation, irrespective of whether it's an F1 team or otherwise, cannot be a high-performing outfit if you (a) take money away from it and (b) basically have such disruption across a number of years that you end up in a poor situation," says Vowles. "That's where Williams is. It's not for lack of good people, it's just simply lack of stability."

Vowles' first order of business will be to understand what precisely Dorilton expects him to achieve, including the timescales, targets and financial resources available. Seeing eye to eye with Dorilton's Matthew Savage, one of Williams' ►

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ACROSS A NUMBER
OF YEARS THAT YOU
END UP IN A POOR
SITUATION”**

JAMES VOWLES



AMG

Dorilton.
Ventures



WILLIAMS
RACING

three directors alongside former racer turned hedge fund entrepreneur James Matthews and Mark Biddle, the team's legal counsel, is critical.

"Every time we spoke, both of us bounced the same ideas off each other," says Vowles of his job interview with Savage. "I believe in future generations, and graduates, in bringing the brightest and best of them to the organisation. I believe in empowerment, I believe in leading with intent. All of these things were mirrored during the course of the interview and what became abundantly clear was we have the same beliefs in things.

"I highlighted the approximate investment required for us to move forward, and it wasn't a concern. Those are the things that really put me in a situation where I understand what my direction would be."

NO QUICK FIX

Only with Dorilton's support on strategy, funding and timescales can Vowles be expected to tackle the complex issues facing Williams as it tries to return to competitiveness. Realistically, the new technical era commencing in 2026 offers a deadline and goal for the team to work towards, leaving 2024 and 2025 to put in place the technologies, people, systems and processes needed to make a significant step.

"The team has, over the past 15 years, been through a tremendous amount of difficulty, financially and otherwise, and it's survived through all of that," says Vowles. "It's just survival compared with other organisations which have finance. That's



Vowles was a crucial cog in the Mercedes machine that took Lewis Hamilton to his many titles



Alex Albon (centre) and Logan Sargeant (right) with Vowles at the team's launch back in February

the luxury I had prior to joining [from Mercedes]. As a result of that, you have these stark differences between where we are today and where we need to be in the future."

"The pathway is, to a certain extent, a number of years required to get some of the core facilities to the level required to compete at the front. That's not the work of six or 12 months. We're in a position where we're lacking key technical personnel and the team is definitely under strain at the moment to ensure we're filling those voids as best we can."

Concerns about the team's culture have, quite naturally, reached Vowles. Formula 1 is a close-knit community and news, whether good or bad, travels fast in motorsport valley. When people change teams they carry with them insights into current and previous employers.

Of the team's reputation for being resistant to change, Vowles says, "I think the belief on that has changed as a result of everyone seeing the results that have been achieved over the past few years. I'm not sure it's so much in the way described as much as there's people that haven't had their eyes opened to what excellence is." Excellence is something Vowles understands from his time at Mercedes.

"To break into the top three is incredibly difficult. They have resources beyond your dreams. They have the best people on the grid, and as you become better and better at what you do you become more cost-cap efficient."

In 2021 Williams employed 755 staff. Some weren't born when the team was winning world championships. Not that the systems and processes which assured success in the 1980s and 1990s have much relevance today.



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2 April	Cadwell Park	The Alan Healy Memorial Cadwell Stages	14/15/16 July	Brands Hatch	HSCC Legends of Brands Hatch
7/8 April	Donington Park	Masters Historic Race Weekend	15 July	Oulton Park	Ford Power Live
8/9 April	Brands Hatch	British Truck Racing Championship	21/22/23 July	Brands Hatch	Bennetts British Superbike Championship
8 & 10 April	Oulton Park	British GT and GB3 Championships	22 July	Oulton Park	Tunerfest North
22/23 April	Donington Park	Kwik Fit British Touring Car Championship	28/29/30 July	Oulton Park	Historic Gold Cup
29/30 April	Donington Park	Donington Historic Festival	29/30 July	Donington Park	CRMC Classic Motorcycle Festival
29/30 April/1 May	Oulton Park	Bennetts British Superbike Championship	6 August	Brands Hatch	Mini Festival
1 May	Cadwell Park	Modified Live	12/13 August	Donington Park	Convoy in the Park – British Truck Racing
6/7 May	Brands Hatch	Kwik Fit British Touring Car Championship	13 August	Brands Hatch	Festival Italia
6/7 May	Cadwell Park	Historic Wolds Trophy	13 August	Cadwell Park	Cult Classics
13/14 May	Cadwell Park	Vintage Motorcycle Club Championships	19 August	Oulton Park	U.S. AutoShow
19/20/21 May	Donington Park	Bennetts British Superbike Championship	20 August	Donington Park	Tunerfest Midlands
20/21 May	Snetterton	Kwik Fit British Touring Car Championship	26/27 August	Donington Park	Kwik Fit British Touring Car Championship
27/28 May	Brands Hatch	Masters Historic Festival	26/27/28 August	Cadwell Park	Bennetts British Superbike Championship
27/28 May	Donington Park	British GT and GB4 Championships	3 September	Brands Hatch	Festival of Porsche
3 June	Oulton Park	BMW Sommerfest	9/10 September	Brands Hatch	British GT and GB3 Championships
4 June	Brands Hatch	Brands Britannia	15/16/17 September	Oulton Park	Bennetts British Superbike Championship
11 June	Brands Hatch	Tunerfest South	16/17 September	Snetterton	British Truck Racing Championship
17/18 June	Brands Hatch	American SpeedFest 10	17 September	Brands Hatch	Ford Power Live
17/18 June	Oulton Park	Kwik Fit British Touring Car Championship	24 September	Brands Hatch	Go Japan!
17/18 June	Snetterton	British GT and GB3 Championships	23/24 September	Cadwell Park	Vintage Motorcycle Club Championships
18 June	Cadwell Park	Vintage Motorsport Festival	29/30 Sep/1 Oct	Donington Park	Bennetts British Superbike Championship
30 June/1/2 July	Donington Park	Motul FIM Superbike World Championship	7/8 October	Brands Hatch	Kwik Fit British Touring Car Championship
1 July	Oulton Park	Supercar Pageant – Featuring GT Cup	13/14/15 October	Brands Hatch	Bennetts British Superbike Championship
1/2 July	Brands Hatch	Super Touring Power Festival	21/22 October	Donington Park	British GT and GB3 Championships
7/8/9 July	Snetterton	Bennetts British Superbike Championship	22 October	Snetterton	Modified Live
8 July	Brands Hatch	Bernie's V8s And Historic Outlaws	4 November	Oulton Park	Neil Howard Stage Rally and Fireworks
8 July	Oulton Park	Autos de France	4/5 November	Brands Hatch	British Truck Racing and Fireworks
9 July	Donington Park	Vintage Motorsport Festival	19 November	Cadwell Park	Stage Rally and Fireworks



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Austria 2014:
smiles for
Williams (above)
when Bottas
finished third
and the Merc
man on the
podium (below)
was Vowles...

IMPORTANT GAPS TO FILL

Vowles appears keen to appoint a technical director who is fully in tune with contemporary F1 and not, as with FX Demaison, someone from outside the category.

“I’m a firm believer in fundamentally ensuring that we have growth within our sport. There are some incredible individuals who are ready to be technical directors,” he says. “First and foremost, it’s someone with F1 experience, it’s not going to be someone from outside.”

Having personally experienced coming up against the barrier of career development at Mercedes, a point Toto Wolff acknowledged, Vowles is conscious that there are others desperate to have the opportunity to have a crack at the top job of technical director.

“It could be someone who has been in the role or perhaps wants a change in scenery, or someone who has really been up against the glass

ceiling, ready and waiting and has all the ability to do so, but hasn’t had the opportunity.”

While the recruitment of key technical staff is a priority, Vowles will also need to address the requirements of the team’s commercial department. Given his technical background, it will be essential for him to understand what commercial director James Bower needs to build a sponsorship portfolio

**“I HAVE VERY GOOD
RELATIONSHIPS
UP AND DOWN
THE PADDOCK
WITH MOST TEAM
PRINCIPALS
AND, THUS FAR,
EVERYONE HAS
BEEN SUPPORTIVE”**



which, when added to the prize monies, enables the team to become profitable.

Williams has a formidable history and heritage, evidenced by the museum and conference centre located on its leafy Oxfordshire campus. It ought to be possible to create a compelling offering with which to lure potential sponsors, particularly at the current time. This is another reason the team must drag itself off the bottom of the rankings. Potential sponsors respond well to a little on-track success.

In 2020 Williams’ losses were a significant £58m and, while these reduced to £12m in 2021, the company borrowed £45m from its owners. The company’s auditors noted that Williams has cumulative losses of £184m to set against future profits, an indication of the extent of the financial difficulties which have undermined previous attempts to stem the team’s decline.

If Vowles’ to-do list isn’t long enough, he also has to come to grips with dealing with a wider range of demands on his time. From

shareholders and staff through to tier one suppliers, Mercedes among them, F1, the FIA, sponsors, media and, yes, even fans.

As with other recent team principal appointees from a technical background, it will be fascinating to see how he responds to the challenge of becoming a business leader.

Enjoying a strong relationship with Toto Wolff, Vowles also knows many of the other team bosses. But, while there has been plenty of initial support, he isn’t naive about joining F1’s infamous Piranha Club.

“I have very good relationships up and down the paddock with most team principals and, thus far, everyone has been supportive,” he says.

“That may change in time...” 

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WHEN FORD GETS F1 RIGHT... AND WRONG

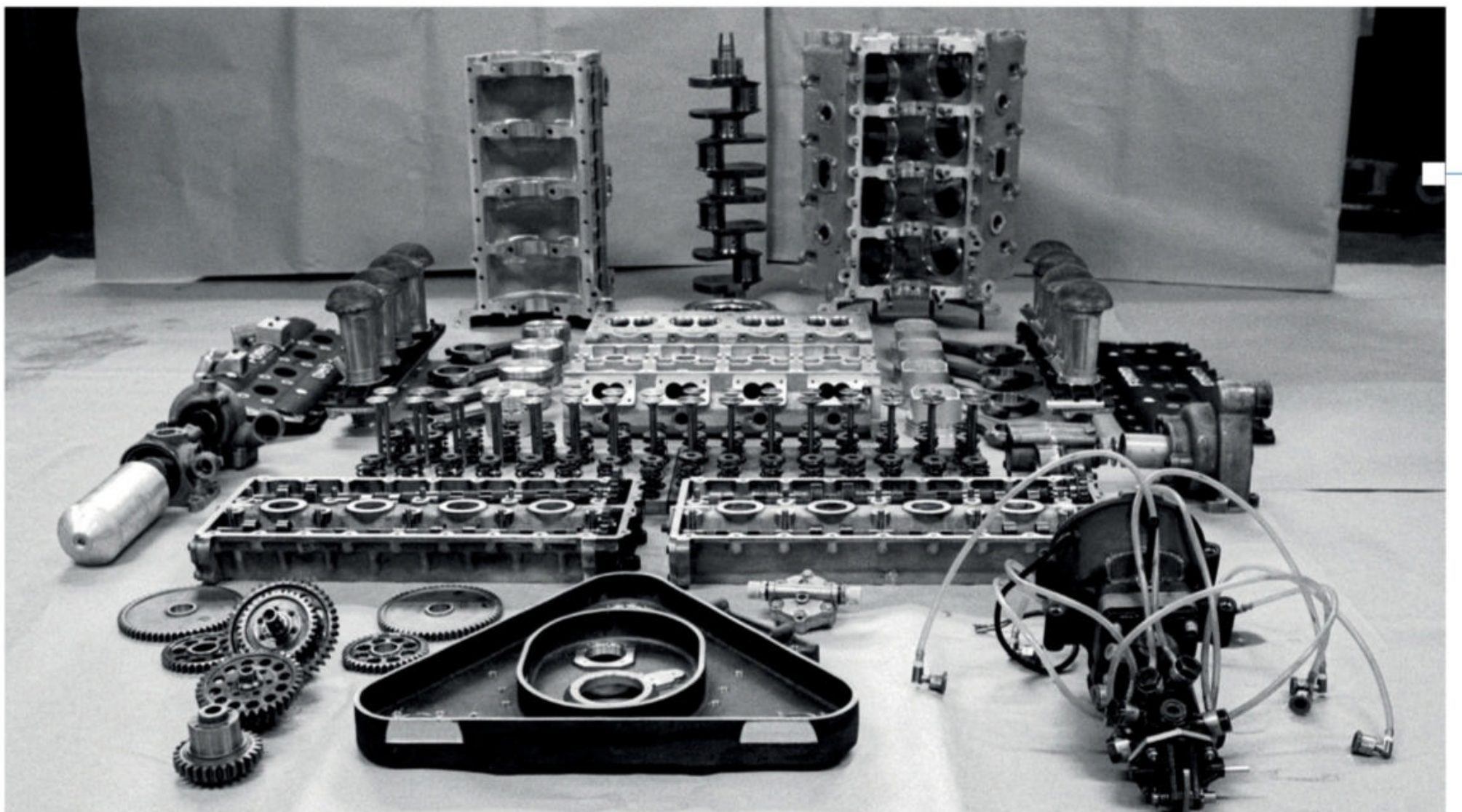
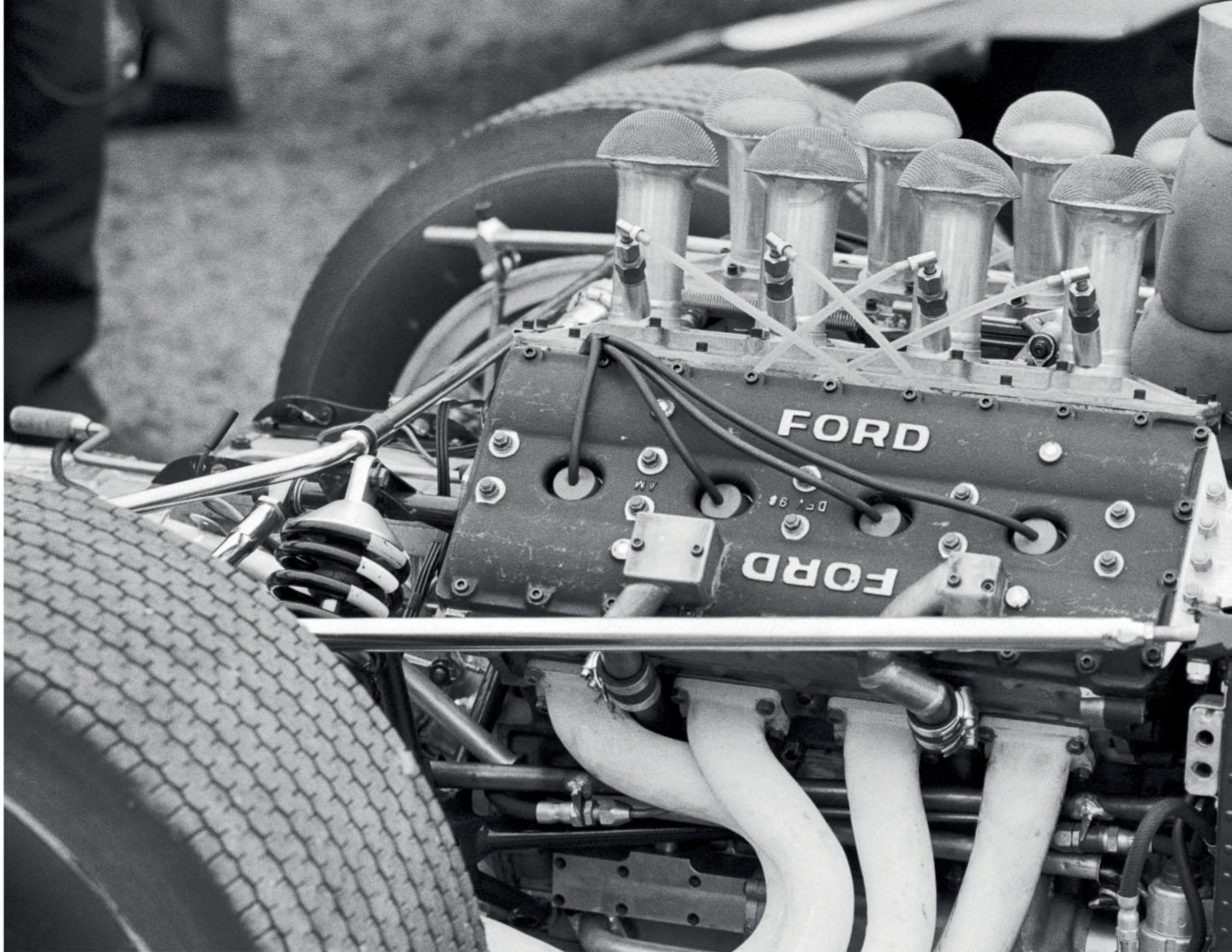
As Ford announces its Formula 1 comeback with Red Bull for 2026, we look at the lessons the blue oval can learn from its own up-and-down history in F1. From democratising the formula with a reliable, affordable engine to lending tacit support to struggling teams and ensuring key drivers got in the right seats, Ford's influence was far-reaching for decades – until it tried to run its own team...

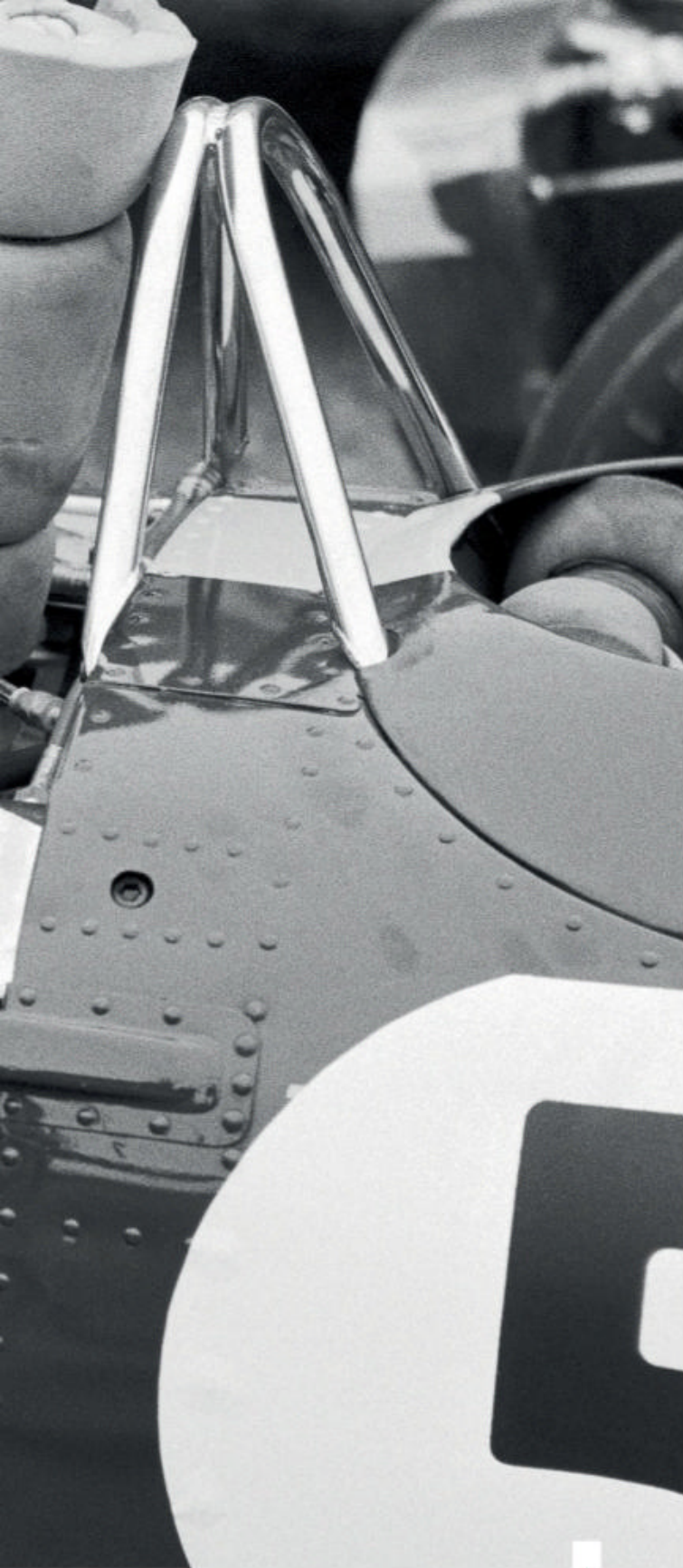
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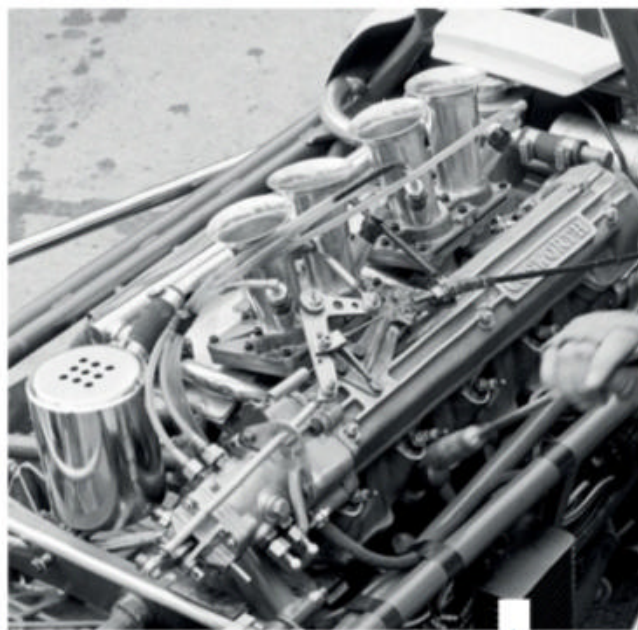


The blue oval's relationship with F1 was consummated when Jim Clark won the Dutch GP using the Ford Cosworth DFV. Walter Hayes (sitting) was right to smile...





A Double Four Valve stripped down (left). The V8 engine was light and powerful and won on its F1 debut, in Jim Clark's Lotus 49 at the 1967 Dutch GP (above). And so it began...



Cosworth had developed Ford engines prior to the DFV, for use in many categories including this example for Formula 2 in 1966

'ANY OTHER BUSINESS'

This item at the bottom of an agenda usually signals important matters have been discussed and the meeting is drawing to a close. It's almost an afterthought. Such a moment of potential minutiae at a Ford committee meeting in the spring of 1966 would actually herald one of the most far-reaching decisions ever made by a major motor manufacturer.

The chairman of the policy committee within Ford of Britain was initially taken aback when he turned to Any Other Business and heard Walter Hayes, the director of public affairs, say he would like Ford to "do a Grand Prix engine". It may have been delivered as if a casual aside, like suggesting a staff discount for Ford Cortina wing mirrors, but the proposal was born of relevant and knowledgeable discussion among key players alert to a major motor racing opportunity. The subsequent boardroom discussion – surprisingly short given the subject's significance – would lead to the creation of the Ford Cosworth DFV, the most successful grand prix engine ever made.

This should have been no surprise to anyone familiar with the erudite Hayes and his mastery of public relations. An ability to think outside the box and understand human foibles had been honed during time spent by Hayes in his early thirties as the editor of a British national newspaper. In search of an informed view on motoring, Hayes had signed Colin Chapman as a freelance columnist, the founder of Lotus providing words and thoughts as distinctive as his cars.

The relationship had moved beyond print in 1962 when Sir Patrick Hennessey, the Chairman of Ford of Britain, persuaded Hayes to come on board. This coincided with the launch of the Cortina, destined to become Ford's most successful European car over the next two decades. The rather mundane image of the saloon car would be enhanced dramatically when Hayes and Chapman came up with the Ford Lotus Cortina and Jim Clark, Chapman's world champion, flung the white car with its distinctive green flash around racetracks with consummate brilliance.

Chapman, meanwhile, had been increasingly preoccupied with sourcing a power unit to meet a significant change in the F1 regulations. Having dominated the 1.5-litre era with Coventry Climax engines, a withdrawal by the British firm left Lotus high and dry as the engine formula jumped

to three litres at the start of the 1966 season. Chapman's only reasonable option would be to run his existing cars with engines enlarged to two litres on tight circuits and, in the absence of anything else, buy 3-litre BRM H16s for use on the faster tracks. Being a thoroughly pragmatic engineer, however, Chapman realised neither option would be satisfactory, particularly as the heavy and complex BRM threatened to be slow in both performance and delivery. Far better, he reasoned, to find someone capable of manufacturing a compact and purpose-built 3-litre V8. An approach to the British motor industry (and, indirectly, the British Government) brought little but a sympathetic ear.

SEIZING THE 3-LITRE OPPORTUNITY

At around the same time, Hayes had been invited to shoot the breeze over dinner at Chapman's home in Hertfordshire. Hayes not only came away impressed by his host's thoughts about an ideal engine, but he was also in accord with Chapman's passionate concern over the

impending loss of British engineering prestige and national pride on the racetracks of the world. The astute Hayes immediately sensed an opening for the Ford Motor Company.

The benefit of Ford's association with competition had already become evident through success in many categories with production-based engines. But that would be a stroll in a national park compared with the effort needed to scale the pinnacle of global motor sport. As luck would have it, an

experienced motoring mountaineer was about to walk through the front door of Ford's British headquarters at Brentwood in Essex.

Harley F. Copp had made his name by leading

THE CHAIRMAN OF THE POLICY COMMITTEE WITHIN FORD OF BRITAIN WAS INITIALLY TAKEN ABACK WHEN HE TURNED TO ANY OTHER BUSINESS AND HEARD WALTER HAYES, THE DIRECTOR OF PUBLIC AFFAIRS, SAY HE WOULD LIKE FORD TO "DO A GRAND PRIX ENGINE"

the engineering behind various successful Ford road cars in the United States and backing the blue oval's entry into NASCAR in the 1950s. As the newly appointed head of a special vehicles engineering department in Europe, Copp had chosen to set up his base in Brentwood.

As soon as Hayes became aware of Copp's enthusiasm and understanding of motor sport, he arranged to have the American hear Chapman's ideas at first hand. Chapman had recently since discussed the prospects for a F1 engine with Keith Duckworth, the 'worth' in Cosworth Engineering, a company formed in 1958 and now comfortably established in the production of Ford-based Formula Junior, F3 and F2 engines.

Not that Copp needed much persuasion, the clincher was Duckworth's plan to start with a 4-cylinder F2 engine based on the Ford Cortina cylinder block and then double this up to a 3-litre V8. By doing so, the all-important cylinder head could be tested on the 4-cylinder block before making the commitment to build a V8. Not only would the V8 be uncomplicated, light and powerful – meeting Chapman's needs – it could also be used by Ford's PR team to make the link between their passenger cars and grand prix racing. Now Hayes, with the support of Copp, needed to gain the policy committee's approval for this crucial piece of Any Other Business.

When asked by Chapman how much the V8 might cost, Duckworth had thought for a moment before replying: "Oh.... about £100,000." Worth £2.4 million today, this was a considerable sum for the board to consider even though, in the wider scheme of things in 1966, £100,000 would have been a drop in Ford's vast ocean of road car development costs. Having listened to Hayes' reasoning, backed by Copp and Chapman's engineering credentials, the board passed the motion without demur. The engine would be known as the Ford Cosworth DFV (Double Four Valve). A momentous piece of motor sport history was under way.

FROM EXCLUSIVE TO UBIQUITOUS

It had been agreed Lotus would initially have exclusive use of the DFV once it was ready to run in 1967. Duckworth was happy to meet Chapman's wish to make the engine a stressed structural member of his new car. Unlike many of Chapman's pioneering creations, the Lotus 49 would be relatively simple to allow the team

ALL THE GEAR, NO IDEA: THE JAGUAR FIASCO



If Ford's involvement in F1 with the DFV engine was a master class in timing, strategy and understanding, the blue oval's next major association with grand prix racing would be a disaster class in maladministration, false entitlement and naked hubris.

Competing under the 'Jaguar Racing' banner between 2000 and 2004 would do little to hide the blue oval's humiliation. A failure by Ford's hierarchy in the USA to grasp the extent of the challenge and fully understand what was going on in F1 had caused the problem in the first place.

On paper, the deal for Ford to buy Stewart Grand Prix had seemed logical enough thanks to the persuasive and heartfelt words of a man held in the highest regard by those who mattered at Ford's HQ in Michigan. Jackie Stewart's three world championships with Tyrrell and Ford had been matched by the Scotsman's eloquence as a global ambassador for the motor manufacturer. When Jackie and his son Paul entered F1 with their own

team in 1997, Ford helped bankroll an operation that managed to avoid making a loss; an achievement as worthy as winning the 1999 European GP. It seemed to Ford that the hard yards had been covered and Stewart Grand Prix was ripe for purchase as a ready-made entry to F1. The rest, it figured, would be comparatively easy.

That was the prevailing attitude at the London launch of Jaguar Racing. The loudest of many warning bells was unintentionally sounded by Wolfgang Reitzle when the new team principal said in all seriousness that Jaguar would win a couple of races in the coming season and the championship 12 months later.

Jaguar scored four points in 2000 and established a regular place near the bottom of the table. Managers came and went, Reitzle replaced by Indy winner Bobby Rahal, who lasted less than a year after being embarrassed by his friend, Adrian Newey, agreeing to become technical director and

then changing his mind.

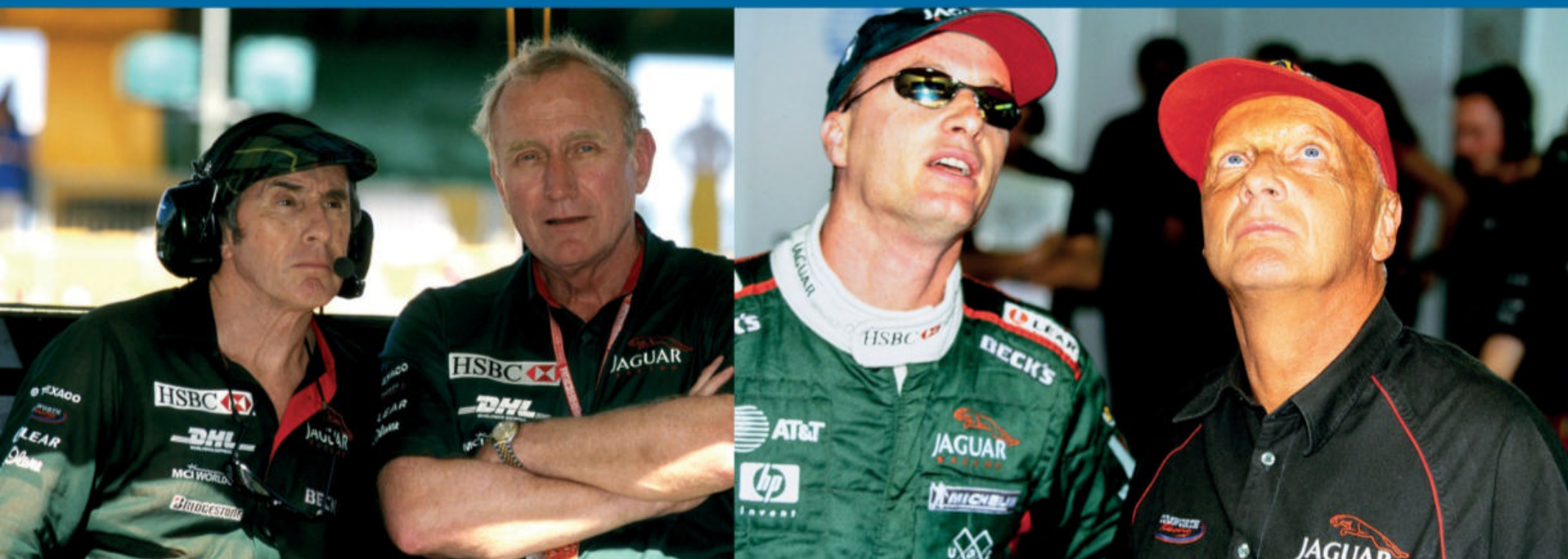
Niki Lauda's appointment as team principal had seemed logical enough but not even the Austrian's knowledge and searing rationality could cut through the web of red tape emanating from Michigan. Forgetting, for a moment, the hopeless expectation of a competitive car emerging from a succession of technical directors, Lauda's experiences would sum up the institutionalised methods being brought to bear on a team in need of free and fast thinking.

On Lauda's first day at Jaguar, he had been presented with a copy of Ford's 'Compliance Rules'. "When I asked what this meant," recalled Lauda, "the finance guy said whatever I did, it had to comply with these rules. When I asked for an example, he said: 'Say you are in a hotel and you take a water with soda from the mini bar, you have to pay for it. But if you take one without soda, you don't have to pay for it.' I told him to keep the book. I would pay for everything with my own money. There would be



The team's first car, the R1, was a tricky beast to drive and only managed two points finishes in 2000

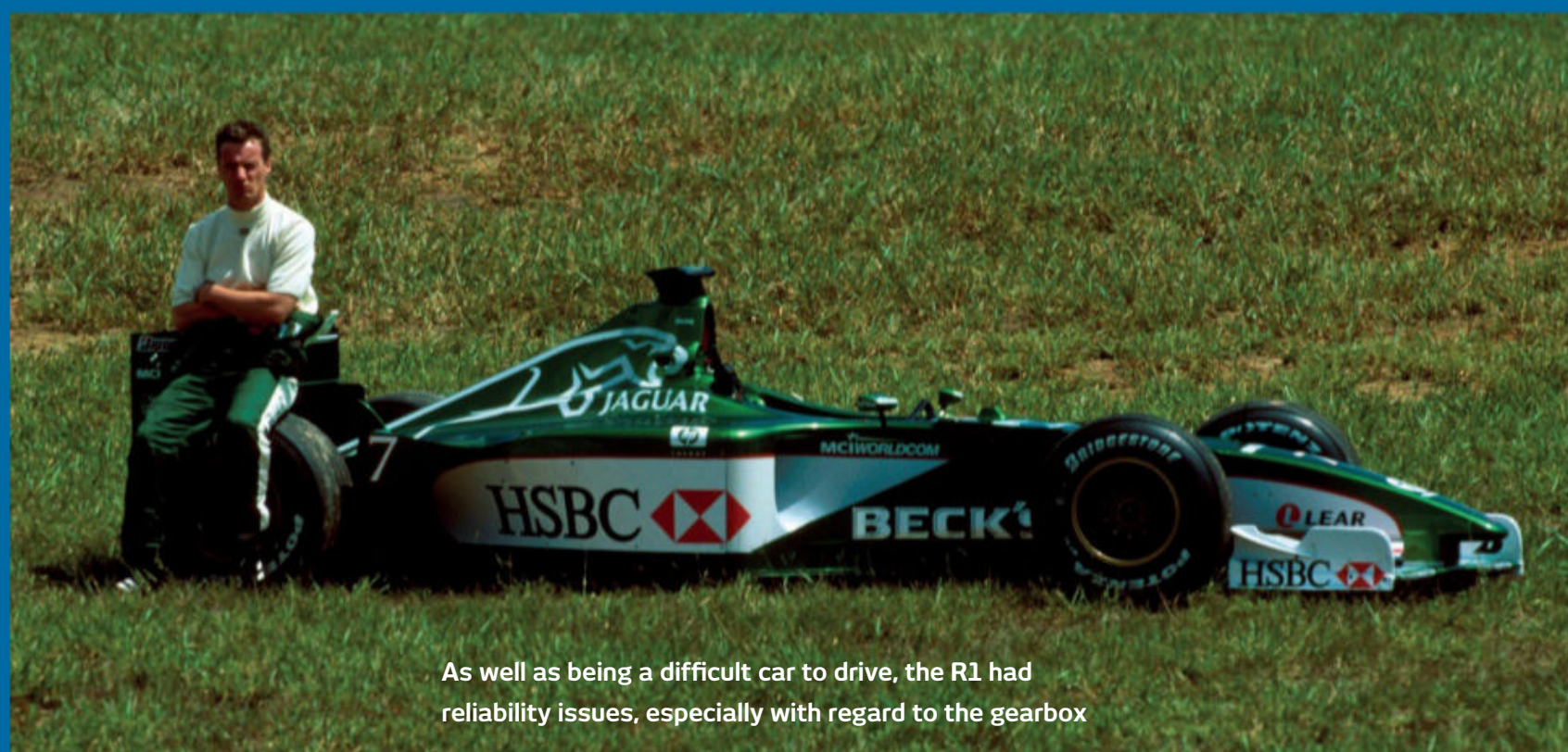
The launch (left) in 2000. Neil Ressler (below, right, with Jackie Stewart) was the team's first chairman



Niki Lauda (right) with Eddie Irvine. Lauda took over from Bobby Rahal as boss in 2002 but only lasted 16 months

no expenses from me.

"When everything ended between me and Ford [December 2002], people came all the way over from America and asked to see my account. When the guys at Jaguar said there was no account for Niki Lauda, they said: 'What do you mean? He must have expenses!' Can you imagine: they came all that way to look for this bloody mineral water with soda! We had a very good race team in the end, but the people in charge, put there by Ford, had no idea."



As well as being a difficult car to drive, the R1 had reliability issues, especially with regard to the gearbox

and Cosworth to focus on the new engine. Hayes also took a low-key approach by avoiding fanfare leading up to the combination's first public appearance in Holland, three races into the 1967 GP season. There would be no official launch. The shakedown was completed by Graham Hill at the Lotus test track in Norfolk and the debut was so understated that Clark had not seen the car, never mind sat in it, when the Lotus transporter arrived in the Zandvoort paddock.

The reaction of rivals can be imagined when Hill smashed the lap record as he took pole. Clark, getting a feel for the green car with its yellow stripe, started from sixth and was perfectly poised to take an unassailable lead when Hill's engine failed after 11 laps. Reliability problems may have dogged the team for the rest of the season but nine consecutive pole positions (and three more wins for Clark) made it clear that the Lotus-Ford package was in a different league.

Certainly, Ken Tyrrell had seen enough to return home from Holland and immediately place an order for three DFVs at £7,500 each despite having only the nucleus of an F1 team and very little money to pay for it. Even worse, Tyrrell needed £20,000 if he was to tempt Jackie Stewart to become his driver. It says much about the standing and influence of Hayes that Tyrrell should not delay in paying a visit to Brentwood. Ken was aware that Hayes had singled out Stewart three years before as a young British driver worth supporting.

"Ken said he had heard Jackie Stewart was going to Ferrari," recalled Hayes. "Well, that was like bringing the British Empire – or the Scottish empire, or whatever – to an end if Stewart went to Ferrari. We couldn't possibly have that!"

"I had tremendous assistance from Walter," said Tyrrell. "I said I thought I could get the money, but I wanted someone to stand beside me. Walter said he would see that the money was made available. He provided the £20,000 on the understanding that, when I got sponsorship, I could give it back. It meant I could go ahead, say I had Stewart as my driver, do the deals and pay Walter and Ford back."

Hayes could see the potential in a French Matra chassis, powered by a DFV, driven by Stewart and entered by Tyrrell. He also chose wisely when selecting Bruce McLaren's fledgling Formula 1 team to become the third recipient of the Ford engine.

In 1968, there were 12 grands prix: Lotus won five (Hill took the title), while Tyrrell and McLaren claimed three apiece. And so began

Win number 100 was at Monaco in 1977 with the Wolf WR1 driven by Jody Scheckter. Wolf was one of five DFV-powered teams to win that year



Walter Hayes (above and with Colin Chapman below) played a huge part in Ford's DFV success



Ford's 50th win with the Cosworth DFV engine came in Canada in 1972 with Jackie Stewart, whom Hayes had helped Ken Tyrrell secure as a driver



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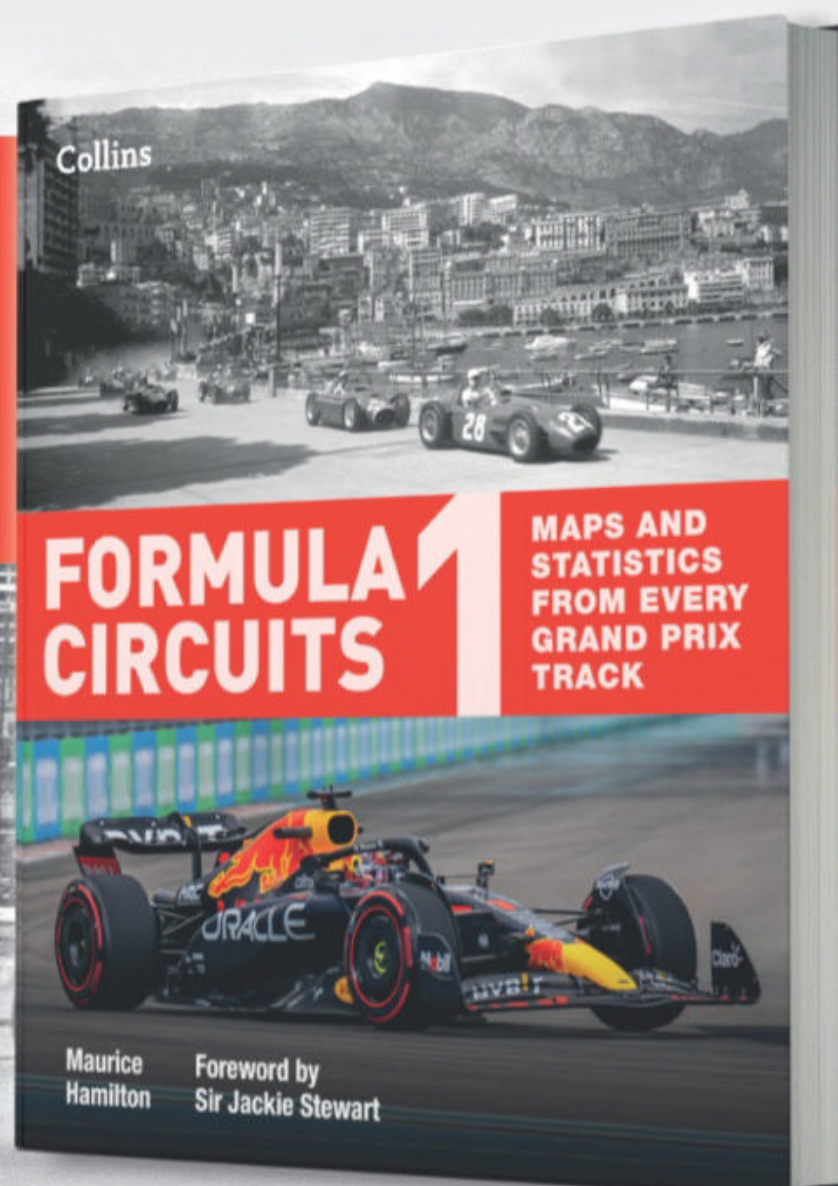
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The Cosworth DFV's 150th win in Austria in 1982 also contributed to Ford's 12th and last drivers' title

Ford's F1 hegemony as the DFV's presence eventually ranged from one end of the paddock to the other. Jackie Stewart's Tyrrell would score the DFV's 50th grand prix victory in Canada in 1972; five years later the Wolf of Jody Scheckter made it 100 for Ford at Monaco. The 150th landmark win was one of the closest ever as Elio de Angelis (appropriately in a Lotus) edged Keke Rosberg's Williams by 0.05s at the end of the 1982 Austrian Grand Prix.

SUPPORT FOR THE UNDERDOGS

Rosberg would go on to give Ford its 12th and final drivers' championship that year, the association with Frank Williams highlighting the breadth of Ford's influence across the F1 spectrum. Frank had relied on off-the-shelf and relatively inexpensive refurbished Ford-Cosworth DFVs when struggling 10 years before. The avuncular figure of Hayes, with his ever-present pipe, had also been a discreet saviour for Williams and others straining to make ends meet.

"I used to lend [Ford] Anglia vans to Frank from time to time, and he would sell them," reflected Hayes in 1997. "That was how people like Williams raised money to survive. It was the sport's currency at the time. 'We need money to go motor racing,' they would say, 'and we get it any way we can'. If you had brought in someone



Hayes with Clark and Stewart. Hayes ensured Ford never forgot Clark, and the company and JYS were linked for 40 years


from outside and they had seen what was happening, they would have said: 'But you can't let him do that to your property! It's illegal.' But we didn't see it that way."

Such unofficial largesse typified the ability of Hayes to appreciate the benefit of mixing industry and sport for the benefit of both sides. Ford's relationship with Stewart would last for 40 years, Jackie advising on performance development and playing an up-front role in the promotion of models such as the Sierra 4x4,

many of which could be seen in F1 paddock and media car parks due to the deft hand of a Ford public relations team following guidelines established by Hayes.

Some of his work would be less obvious. In 1997, hearing that the community in Jim Clark's birthplace was struggling to raise finance for an unpretentious statue to commemorate Fife's most famous sporting son, Hayes arranged for Ford to foot the bill. As he stood to one side, quietly puffing his pipe at the simple unveiling in the village of Kilmany, Hayes said it was only right and proper to pay tribute to the man who had won the 1965 Indianapolis 500 for Ford and who would have claimed countless grands prix had he not been lost to motor sport less than a year after the debut of DFV. It was part of a return Hayes had ensured Ford fully understood.

In truth, however, Hayes had never envisaged a payback extending to 154 grands prix wins (155 if you count the DFV's solitary victory). Having secured the backing of Ford of Britain's policy committee in the Spring of 1966, Hayes had travelled to Detroit to win the approval of the main board. When Henry Ford II asked what the proposed engine might achieve, Hayes had replied: "I think it will win several grands prix. And I also think it's fairly likely to win a world championship."

'Fairly likely'. A deceptively modest prediction, worthy of Any Other Business at any level. 



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WILLIAMS FW15C

The most high-tech
Formula 1 car of
all time?





Racing folk are impatient as a breed. The protracted development of the 1993 Formula 1 championship-winning car began in the summer of 1991, its racing debut was delayed nine months, and there were those within the Williams team who quietly feared it might be found wanting as rivals finally got their acts together. And yet delayed gratification, a concept seldom entertained in F1, would ultimately prevail in the form of 15 consecutive pole positions, 10 fastest laps and 10 race wins.

As Adrian Newey sketched the first outlines of what would become the FW15 on his drawing board, its predecessor was belatedly beginning to pay out on its potential. The FW14 had been quick in the hands of Nigel Mansell and Riccardo Patrese since the beginning of the '91 season – surprisingly, perhaps, the Italian veteran often enjoyed the upper hand over his team-mate – but reliability was poor. Failures of the new semi-automatic gearbox handed McLaren's Ayrton Senna what would prove to be a title-winning advantage as he won the first four races of the season, followed by a self-inflicted wound in Montréal as Mansell missed a downshift while



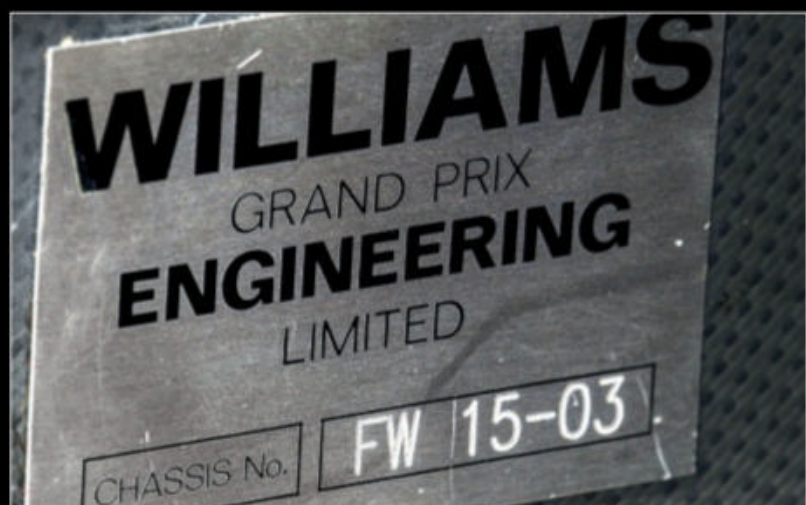
waving to the crowd on the final lap.

It wasn't until mid-June that the FW14 was able to bring home the winning silverware it warranted as Patrese passed Mansell to lead a Williams 1-2 in Mexico. Three weeks later, as Formula 1 visited the unloved Magny-Cours for the first time, 'Our Nige' embarked on a winning streak that reignited his championship hopes.

By then, though, the Williams leadership team were plotting the future – specifically the introduction of semi-active suspension, an improvement on a system the team had tried and shelved in 1988. Although resolving the gearbox issues hogged many resources, test drivers Damon Hill and Mark Blundell were racking up the laps on a mule car with the new suspension. Tentatively Williams planned to run it in a B-spec FW14 at the beginning of the 1992 season and then introduce the FW15, which was designed around more optimal packaging of the reactive system's components, at the Spanish Grand Prix in early May.

It was a nervous winter for Williams. The team felt McLaren had won the development race over the second half of the year (Mansell even ran without an instrument panel during qualifying at some rounds in a bid to save weight)

WILLIAMS FW15C



despite the team's new windtunnel coming on stream in summer. Mansell, poorly disposed to reactive suspension after previous experience at Lotus and Williams, wanted no part of the new system, especially when Blundell and Hill reported it gave little feel for grip levels on corner entry. Fearing they would have to junk both the FW14B *and* the new FW15, and race the passively suspended FW14 for the majority of 1992, Newey and technical director Patrick Head emphasised to Mansell that the reactive cars would be his only means of winning the world championship. The FW15 couldn't run without the system because its aerodynamics depended on it.

Mansell therefore capitulated – and the reactive suspension proved more instantly transformative than expected. The FW14B had so much in hand over cars from rival teams that the sole worry became reliability. At the season opener in South Africa Mansell qualified on pole, 0.74s ahead of Senna, and romped to victory over 34s to the good. Only the top five cars finished on the lead lap. As this pattern repeated in successive GPs Williams decided to set aside the introduction of the FW15 and focus on the FW14B's reliability, and Mansell claimed the drivers' title in Belgium, round 12 of 16.

When the FW15 made its debut nine months later than

WHEN THE FW15 MADE ITS DEBUT NINE MONTHS LATER THAN PLANNED, MUCH HAD CHANGED – HENCE ITS ARRIVAL IN C SPEC

planned, much had changed – hence its arrival in C spec. Most significantly, perhaps, it had a new lead driver. Frank Williams had been quietly courting Alain Prost through 1991 and reached a secret deal for '93; no wonder Prost had been so unfazed about heading into a 'sabbatical' after parting ways with Ferrari two races before the end of the '91 season. There was

now no room for Mansell, since Prost had stipulated they could not work together under the same roof. Patrese, too, was on his way after struggling to accommodate his style to the reactive suspension's peculiarities. Hill got the nod as his replacement after much debate among senior management.

Though clearly related to its predecessor the FW15C had been designed from the ground up to maximise the possibilities offered by reactive suspension. It now had power-assisted steering, removing another obstruction to anyone other than Mansell driving it. Besides the better packaging of the mechanical systems, its aerodynamics were optimised within the finely controlled window of ride height permitted by the electronics.

By reducing pitch, dive and roll, Williams could keep the car's aerodynamic centre of pressure constant in the way a passive car simply couldn't. As on the previous system developed with AP, the Williams reactive suspension replaced conventional springs and dampers with hydraulically actuated ▶

NOW THAT WAS A CAR
No116



pic to come

rams. The difference was more sophisticated – computerised rather than mechanical – management of the hydraulics via Moog servo valves at each corner which offered faster, more finessed responses. Steve Wise, the team's head of electronics, had evolved a new control module built in-house and Paddy Lowe had joined him to work on the control software.

As on the FW14B, the FW15C featured a button on the steering wheel which could lower the rear ride height, stalling the diffuser and reducing drag for a straightline speed boost. But it no longer had dials enabling the drivers to tune the car's ride height for low-speed and high-speed corners: telemetry technology had progressed to the point that the car's electronics knew where it was on the circuit and could set these parameters to their optimal levels without driver input. All in all it was a faster car. Although the FIA had introduced some measures to slow cars down, including narrower wheels and track and a ban on front-wing endplate 'skirts', the FW15 sliced through the air more efficiently than its predecessor.

THE CAR'S ELECTRONICS KNEW WHERE IT WAS ON THE CIRCUIT AND COULD SET THESE PARAMETERS TO THEIR OPTIMAL LEVELS WITHOUT DRIVER INPUT

Superior aerodynamics aside, the FW15C also gained power-assisted brakes with a four-channel anti-lock system (introduced at the French GP). New conrods and a revised combustion chamber design in the Renault RS5 engine yielded even greater power from what was already Formula 1's most powerful V10.

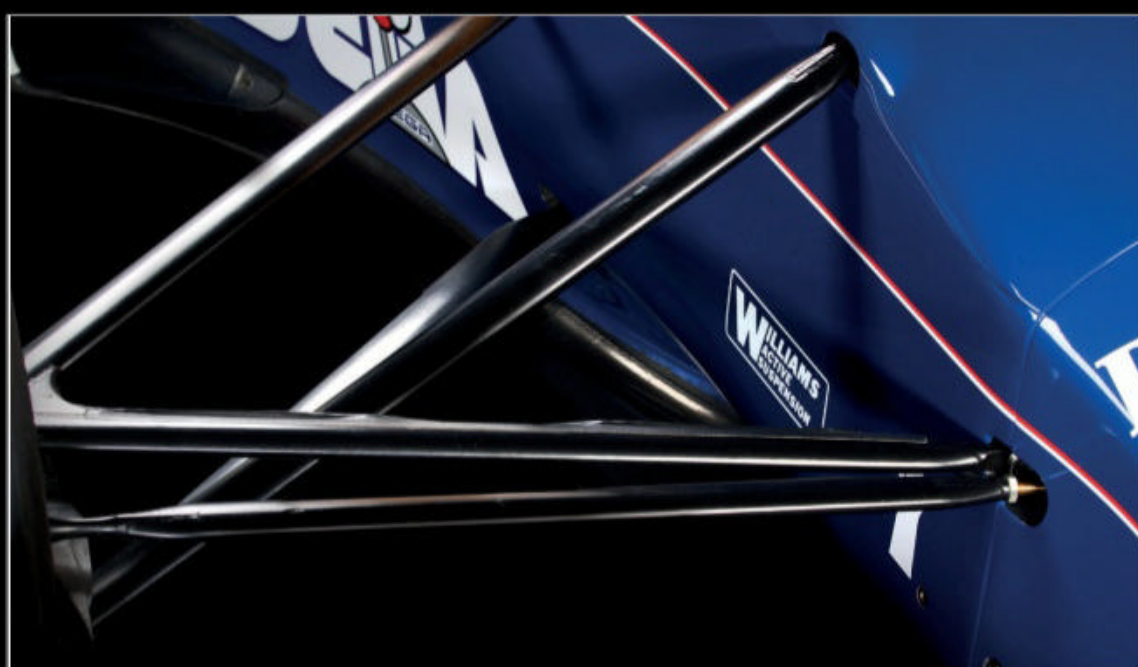
Even before pre-season testing, Williams had reason for confidence. Although key rivals had been working on their own reactive suspension systems, they were behind the development curve and had less useful engines. Following Honda's withdrawal, McLaren was engaged in a bunfight



with Benetton over which spec of Ford engine it could obtain; in any case the V8 had less grunt than Renault's V10. Ferrari's reactive suspension, meanwhile, appeared to come with a built-in poltergeist.

Williams continued to push development of electronic driver-assistance technology, testing a system which would eliminate gearchanges entirely. Continuously variable transmission (CVT) wasn't a new idea but it had never really caught on in the automotive industry.

Pioneered and patented by the Dutch engineer Hub van Doorne of the truck and bus manufacturer DAF, the CVT gearbox provided a USP for the company's new range of small four-seater cars, beginning with the DAF 600 in 1958. Known as the Variomatic, the 'box drove via a belt and two variable-diameter pulleys, enabling stepless changes of effective gear ratio: altering the diameter of the pulleys in sync, one narrowing while the other widened, enabled the one driven by the engine to maintain a constant speed while



WILLIAMS FW15C NOW THAT WAS A CAR

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the other's rotational velocity changed. This made for a slightly disconcerting driving experience since the engine revs remained constant at peak torque while the car accelerated.

While CVT was widely adopted on mopeds there was little interest among mainstream car manufacturers, perhaps because of its association with DAF's quirky little economy cars. When Volvo bought DAF's car division in the 1970s it wasn't interested in CVT and the patents were transferred to another company, Van Doorne Transmissie. As Williams readied its own system for use – in partnership with the Dutch company – the only mainstream car on sale in the UK with CVT was the Fiat Punto Selecta.

Test driver David Coulthard completed a number of runs in a CVT-equipped FW15C, one of which – at Pembrey – was filmed by a Discovery Channel camera crew. The footage is all that remains of the project since the FIA moved to ban such systems before work on it was complete. Whether it would have made the car faster is open to conjecture. Coulthard thinks it would, since there was no break in power delivery (seamless-shift 'boxes were 14 years away) but, since the team hadn't yet reached the point of making back-to-back comparisons in the same running conditions, it's impossible to say for sure.

Despite the horsepower deficit, and a supposedly wavering commitment to McLaren – he would only countenance a race-by-race deal – Senna took the battle to Prost in a remarkable fashion during the 1993 season. For all the FW15C's superiority, emphasised by Prost and Hill claiming 15 poles in 16 races, whenever Alain fluffed his lines the vivid yellow crash helmet of his old adversary was always ▶



FOR ALL THAT THE FW15C WAS GARLANDED WITH ASSISTANCE TECHNOLOGIES, PROST OFTEN STRUGGLED TO GET AWAY FROM THE LINE CLEANLY



in close attendance. And there were several slips twist cup and lip – not least at the European Grand Prix at Donington where, in typical British spring weather, Senna was in a class of his own while the usually canny Prost read the conditions poorly. For all that the FW15C was garlanded with assistance technologies, Prost often struggled to get away from the line cleanly, particularly at Monaco where he jumped the start and then stalled when leaving the pits after serving his penalty.

Nevertheless Prost seemed to have the championship well in hand until a mid-season run of misfortune – a rear-wing problem in Hungary, a slow pitstop in Belgium, and an engine failure in Italy – sapped his momentum slightly. At round 14 of 16, the Portuguese Grand Prix, he finished second to Michael Schumacher's Benetton and that was enough to put the title beyond anyone else's reach.

By then, though, Prost had already announced his retirement, half way through his two-year contract. It was said his enthusiasm for F1 was beginning to pall in the face of supposed victimisation by the FIA and its president, Max Mosley. That March he had been summoned before a tribunal for making vocal criticisms of the governing body, and on more than one occasion he had been penalised for seemingly arbitrary reasons while blatant examples of poor driving by others were ignored.

Equally significant was the arrival of Senna at Williams for




WILLIAMS FW15C

1994, at that point only a strong rumour but one which was confirmed a fortnight after Portugal. After their rancorous relationship at McLaren, they could not work with one another again – although Senna was among the most disappointed to see Prost depart. He was the driver Senna had always measured himself against, the one he felt driven to defeat. The photograph of the podium at the season-ending Australian GP communicates this poignantly: second-placed Prost is all smiles, victorious Senna is downcast and lost to introspection.

It was the end of an era. Mosley made it his personal mission to put an end to what he called “driver aids”, believing them to be corrosive to sporting purity as well as elevating car performance to dangerous levels. In June he had announced plans to outlaw such technologies from 1994, enshrining in the rulebook a phrase which endures to this day: “the driver must drive the car alone and unaided”. Engineers and some drivers threw up their hands in horror but even the famously ballsy Gerhard Berger must have given thanks for the forthcoming ban when, as he accelerated out of the Estoril pits in his Ferrari, its rear suspension dumped the car on the ground and he spun across the path of others travelling at racing speed.

Williams didn’t race the CVT but Benetton ran its Pat Symonds-designed four-wheel steering system in the last four rounds of the season. 1994 would supposedly represent a competitive clean sheet while the FW15C, still perhaps the

most technologically sophisticated F1 car of all time, would take its place in the Williams museum.

Events of the following season would demonstrate that, while the rulemakers could eliminate technologies at the stroke of a pen, they could not do the same for the risks inherent in high-speed competition. 

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No116

RACE RECORD

Starts 32
Wins 10
Poles 15
Fastest laps 10
Podiums 12
Championship points 168

SPECIFICATION

Chassis Carbonfibre monocoque
Suspension Double wishbones with pushrod-actuated, computer-controlled hydropneumatic rams
Engine Naturally aspirated Renault RS5
Engine capacity 3493cc
Power 780bhp @ 13800 rpm
Gearbox Six-speed semi-automatic
Brakes Carbon discs front and rear
Tyres Goodyear
Weight 505kg
Notable drivers Alain Prost, Damon Hill

MAURICE HAMILTON'S ALTERNATIVE VIEW

Following the news Ferrari has filed patents in the US to augment the noise of high-performance electric motors, we bring a special report from the Scuderia's HQ



"FERRARI PLOTS TO REPLACE ITS engines' roar with speakers... Green engineers have found a way to replicate its distinctive growl... through an external speaker positioned above the rear axle."

The Times, 25 January 2023

From GP Racing's Arts and Reproductive Organs Correspondent Maranello, 3 February 2023

The unusual sound of Ferrari's 2023 car, the SF-23, was heard for the first time this morning in the Braying Horse Studio, a new structure attached to the team's Racing Assembly Area. A carbon sound system, fitted to the SF-23, was turned up in the presence of team principal Frédéric Vasseur and Seb Belius, the FIA's newly appointed delegate for transparency, democracy and decent digital interface.

Previously known as 'The Initial Fire-up', Ferrari say this so-called 'Racing Album Release' is a very special moment for any F1 team. "This is the first time the recording is brought to life when fitted to the chassis after months of development by our recently created SAD (Scuderia Audio Department)," said Vasseur, before taking a red seat in the soundproof auditorium.

Vice president Piero Ferrari was asked to choose which channel he would prefer for this special occasion. Moving to the mixing desk, Mr Ferrari scrolled through the menu and settled on '1968 Overture for 12 Cylinders, Opus 10, Monza'.

On a reverential nod from Mr Ferrari, Beat Hoven, the head of harmony, reached into the cockpit and pushed a yellow steering wheel button marked with a treble clef shaped to cleverly resemble a black prancing horse. The room was suddenly and dramatically filled with

the sound of Chris Amon's 312 F1-68 accelerating hard from the pits at Monza. Senior members of the team were seen dreamily closing their eyes and immersing themselves in the classic sound. One, as if conducting, was shifting an imaginary gear lever with his right hand. (By visiting LighterAndLouder.com, younger fans will be able to download a diagram showing the quaint arrangement of three pedals in the footwell, plus a full description of the double-declutch technique.)

Hoven, dressed in tails with a white bow tie and matching lapel rose, was seen moving majestically to the SAD control room and gently tweaking voltage regulators while checking his wristwatch. This was in accordance with the amended FIA 2023 F1 Technical Regulations – specifically Article 93.8 (Recording Studio Diversity and Diligence): "Sound engineers are limited to a maximum of one hour per day listening to any F1 engine pre-Hybrid 2014 for fear of causing undue longing for a proper racing engine. This follows the FIA's desire to tick all boxes and not upset anyone unduly by extensive playing of what might be termed as 'sweet and proper music' by belligerent F1 fans of a certain age."

The track lasted for 1 minute and 10 seconds. It should have been much longer but, true to his abysmal luck, Amon's engine had broken before the lap was completed. As the revs died, Hoven skilfully applied the fader moments before the clatter and jangle of stressed metal could be heard. With earnest aplomb, Hoven asked his studio technicians to remove their headsets and take a bow. A long round of applause was followed by calls of "Encore".

Scrolling through the playlist once more, Piero

Ferrari settled on 'The Boxer' by Scheckter and Villeneuve. Hoven duly called for quiet by tapping on the side of the cockpit with his replica camshaft and pressing the yellow button once more. Sounds of a flat-12 engulfed the room. Aficionados nodded with approval and understanding as engine revs momentarily shot to 13,000 rpm. "That's Jody. Missed gear. Silverstone '79," said one. "No, no," whispered another. "That was Gilles, flat out over the bad bump at Zandvoort." The glorious beat of 12 cylinders on full harmony continued for another minute before Hoven's white-gloved hands slowly reduced the melody to a distant echo. More enthusiastic applause followed. Many in the room were moved to tears.

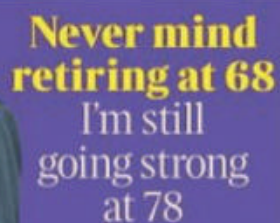
Gaspere Fregatura, Ferrari's head of bilancio raduzione, explained how the team's cost cap had not been compromised. "This reproduction system has nothing to do with the car's performance and comes under 'Employee Benefits and Mental Wellbeing,'" he said. "We've noticed when the sounds are played, people are 'appy and smiling much more. This applies across the whole workforce and such diversity is in accordance with the wants of our very good friends at the FIA. For that reason, we are 'appy to include this sound system, even though it means extra weight in the car."

Meanwhile, Red Bull has protested Ferrari's sound system. It is claimed the positioning of the twin speakers has been carefully calculated and the additional weight is compensated by a performance advantage. "I mean, it's just not fair," said a Red Bull spokesperson. "We estimate that the pressure waves created by the sound system give extra downforce around the rear wing. It also has the potential to upset Ma... er, both our drivers. The sound of a V12 at peak revs is very distracting and creates the impression of, y'know, being really, really fast. There's absolutely no truth in the rumour that we're protesting because the only sound available to us through our new connection with Ford is that of a Transit van in Epping High Street."

Haas says it will not consider an external sound system. "No way! It's total bullshit!" said team principal Guenther Steiner. "I've said to our drivers, 'If you like the sound of noisy engines, you can go "Brrmm...Brrmm...Brrmm" in the cockpit all day long for all we care – but just make sure it's not being filmed on Netflix.' I mean, we don't want to look completely bloody stupid."

IT SHOULD HAVE BEEN MUCH LONGER BUT, TRUE TO HIS ABYSMAL LUCK, AMON'S ENGINE HAD BROKEN BEFORE THE LAP WAS COMPLETED

(based on 7 Day Print Pack)



which runs with book-uring the receive a anies will oliday as cover ski action will mass stop-

Pascal de Thiersant, director of the Société des 3 Vallées lift company, was scathing of the unions' action. "After
Continued on page 2

Laurence Sleator

Now, as the Italian manufacturer goes green, engineers have found a way to replicate its distinctive growl for a quieter electric model: pipe the sound through speakers.

By using this rather than a recording of a normal combustion engine, Ferrari believes drivers will hear something approaching the authentic sound of their car, only louder.

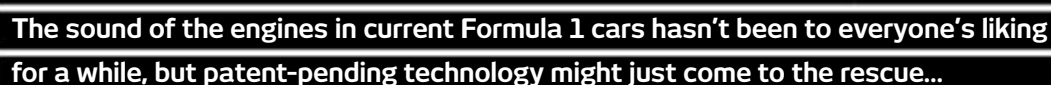
The volume would correlate to how quickly the wheels are rotating and how hard the driver is pushing on the throttle, with the sound getting louder as the vehicle speeds up.

Ferrari is set to release its first fully electric car in 2025 and wants 40 per cent of its sales by the end of the decade to be from its battery-powered range.

It hopes that the speakers can replicate the sensory experience of driving a Ferrari that was so important to the company's founder. Enzo, a former motor racing driver who set up the company as a racing team in 1939, once said: "I don't drive just to get from A to B. I enjoy feeling the car's reactions, becoming part of it."

The patent also notes that engine sound is a significant part of the "driving pleasure" of a high-performance sports car.

Ferrari has yet to comment but Ernesto Lasalandra, the company's research and development director, said last year that his team had been working on a "sound signature" for its electric vehicles that would "stir up both feelings and emotions".







 **motorsport**
IMAGES
SHOWCASE

THE WORST F1 CARS

▲ *Pacific's PR01 was delayed by a lack of money, plus the sale of Reynard's original designs for the car, so it appeared in 1994 and not 1993 as planned. It qualified only seven times out of 32 possible starts and never finished a race*

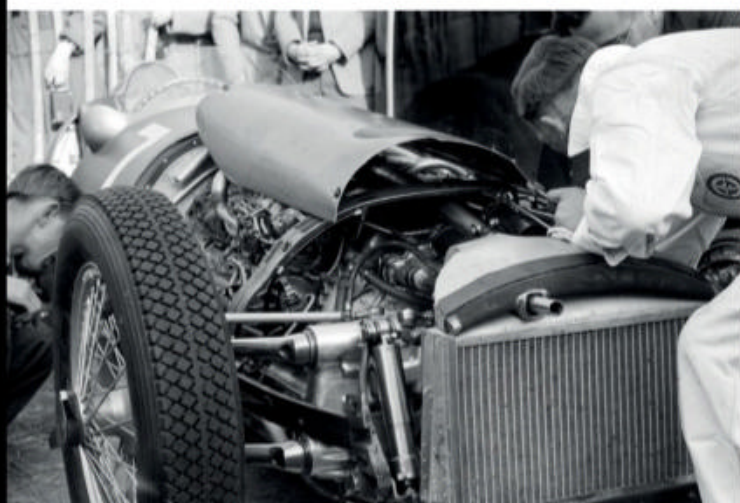
For every McLaren MP4/4 or Ferrari F2004, there's an Andrea Moda or Life. These are some of F1's flops...



▼
BRM's Type 15 wasn't ready for the first ever world championship F1 GP in 1950 and never really recovered from that. However, the car did manage fifth and seventh in its only championship appearance at Silverstone in 1951

▲
The Andrea Moda S291 of 1992 was actually a car Simtek designed for BMW in 1990. Perry McCarthy and Roberto Moreno tried to qualify the cars – when they ran – a number of times, with Moreno only managing it once in Monaco

▼
If 1988 was Coloni's high point in F1 when it qualified for 50% of the races, 1991 was easily the low point. The C4 was a C3 which had seen some detail work by university students and it failed to pre-qualify for all 15 races it entered



▼
McLaren engine builder and British Formula Atlantic champion John Nicholson commissioned Lyncar to build him an F1 car in 1974. It wasn't a success as Nicholson failed to qualify the 006 at the 1974 British GP and finished 17th a year later



▶ When the Owen family withdrew support from 1962 title double winner BRM at the end of 1974, long-time team boss Louis Stanley continued to enter cars under the Stanley-BRM banner. The team's decline continued and in 1977 the P207, a final stab at recapturing former glories, failed miserably and qualified only once, on debut



▶ Forti was a successful Italian team in F3 and F3000 which stepped up to F1 in 1995. The FGO1 wasn't a bad effort for a new team with a best of seventh in Australia. But the FGO1B for 1996 was a disaster and the replacement FGO3 even worse. Luca Badoer and Andrea Montermini (pictured) last tried to qualify the FGO3 at the British GP



▼ Minardi first entered F1 in 1985. The team's first car, the 185, was powered by a turbocharged V6 Motori Moderni engine but was horrendously unreliable. The uprated 185B was even worse. Andrea de Cesaris and Alessandro Nannini qualified for all bar one race in 1986, but only managed to finish the Mexican GP





If you think this Eifelland E21 driven by Rolf Stommelen in the 1972 French GP has a familiar look to it, you'd be right. The E21 was a redesigned version of the March 721 but the alterations didn't improve on the original. It was quick enough to qualify for all eight races it was entered into, but 10th in Monaco was the best result for Stommelen and the E21



HRT (formerly Campos and Hispania) designed the F112 for the 2012 season. After problems passing the crash tests, the cars made it to the first race in Australia but both drivers were outside the 107% mark necessary to start. In Monaco Pedro de la Rosa dramatically lost his rear wing but team-mate Narain Karthikeyan scored the car's best result of 15th



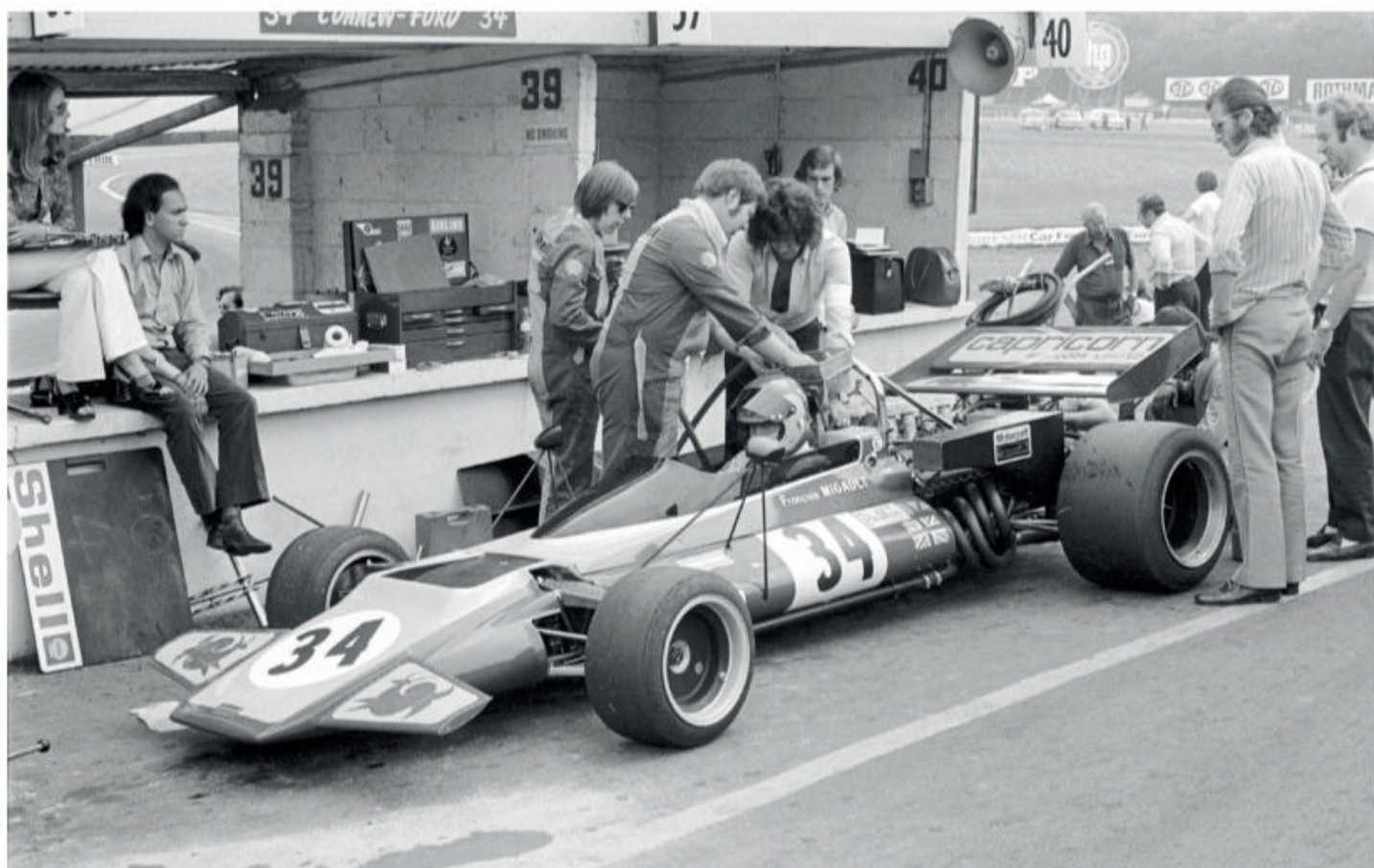
Where to start with the L190, Life's F1 effort in 1990? The W12 engine was awful and the car was too heavy. Add to that an inability to get the car running most of the time meant main driver Bruno Giacomelli spent a lot of pre-qualifying sessions doing nothing. Even putting a Judd V8 into the car couldn't save the project and the team withdrew with two races left in the season





▲ Fondmetal, an Italian manufacturer of alloy wheels, was Osella's main backer in 1990, taking over the operation for 1991. The team's first car, the GR01, appeared for the first part of the 1992 season but wasn't a success. Andrea Chiesa qualified twice in eight attempts, while Gabriele Tarquini managed six starts but no finishes

▶ Surtees draughtsman Peter Connew decided he wanted to design his own F1 car and the result was the Connew PC1. Put together on a shoestring, the car practiced for the 1972 British GP but a cracked suspension forced its withdrawal. It was refused entry to the German GP but did start one race, the Austrian GP, retiring after 22 laps





▲ Maki's attempt to become Japan's next F1 constructor after Honda's withdrawal in 1968 was pitiful. Two DNQs in 1974 and then four more for this car, the Maki F101C, in 1975, plus a failure to start. One more DNQ followed in 1976

▶ It's strange to see a McLaren here, but the MP4/18 was disaster. A basic issue with the shape of the chassis meant that, despite extensive testing, the car was never reliable enough or quick enough to supplant the interim MP4/17D in 2003. The MP4/18 never raced, but was the basis for the MP4/19



◀ Olivier Grouillard paddles the Osella FA1M down the pitlane during practice for the 1990 US GP in Phoenix. The car had shown some promise the year before, in the hands of Nicola Larini and Piercarlo Ghinzani, but was very unreliable. Minor upgrades for 1990 added nothing and Grouillard failed to qualify seven times, retired on five occasions, and managed a best finish of 13th



EuroBrun made its F1 debut in 1988 and to begin with qualified both of its cars most of the time. But the team's sole entry in 1989 didn't start a single race and this car, the ER189B, managed only two starts in 1990 by Roberto Moreno. Team-mate Claudio Langes (pictured) never even got past pre-qualifying



It could be argued that the gas turbine-powered Lotus 56B was just ahead of its time in demonstrating the importance of aerodynamics. The car itself, though, was a dog but Emerson Fittipaldi did manage eighth at the 1971 Italian GP in the car's third and final appearance in F1



Kauhsen was another Formula 2 team – although not a particularly successful one – which thought it wise to have a crack at F1. The WK (owner Willi Kauhsen's initials obviously) attempted to qualify twice in 1979 in the hands of Gianfranco Brancatelli, missed by miles, and never tried again



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FINISHING STRAIGHT

RACE DEBRIEF

F1 WORLD CHAMPIONSHIP ROUND 1

THE BAHRAIN GP IN 5 KEY MOMENTS

1 Red Bull dominant as reliability sidelines Ferrari

For those hoping Red Bull's dominance might slip as a consequence of cost-cap penalties and other teams making competitive leaps over the winter, the Bahrain GP served as an abrupt reality check.

"Red Bull has got this championship sewn up," lamented Mercedes' George Russell. "I don't think anyone is going to be fighting with them this year. I expect they should win every single race this season. That is my bet."

Is this an unduly pessimistic verdict? Certainly Max Verstappen had nobody to trouble him for vast swathes of the race and was able to focus on hitting his target lap times to maintain optimal tyre

performance, finishing just under 12s clear of teammate Sergio Pérez. It would only have been closer if Checo hadn't flunked his start from second on the grid, falling behind Charles Leclerc's Ferrari during the opening stint... as Max romped away from pole, pulling out a gap by around half a second per lap.

Leclerc had only done one flying lap in Q3 to reserve a new set of soft tyres for the opening stint and this helped his assault on Pérez, but what happened after the first set of pitstops would prove to be the most chilling aspect of this race for the other competitors. Leclerc was nearly 10s behind Verstappen at the end of lap 13 when he

pitted for hard-compound Pirellis, believed to be essential on this highly abrasive track surface. The Red Bulls carried on – Verstappen for one more tour while Pérez waited until lap 17 – and then took on another set of softs.

While Pérez emerged four seconds in arrears, he was able to close up and DRS past Leclerc on the main straight within six laps. Thereafter Leclerc drifted backwards into a lonely third place before his engine shut down on lap 40. He had already taken on a new battery pack pre-race.

"We never expected to have something like this," said team principal Frédéric Vasseur. "It's the



It really was a walk in the park for Verstappen (left). After pulling away easily at the start he had nobody to challenge him thereafter



Smiles all round for Red Bull (above) as the team started the 2023 season in dominant fashion despite those cost-cap penalties



Leclerc (above) got ahead of Pérez when the Mexican fluffed the start but was unable to hold the Red Bull back after the first pitstops

PICTURES: STEVEN TEE; GLENN DUNBAR; ANDY HONE; MARK SUTTON



Alonso outpaced both Mercedes drivers and claimed his first podium since Qatar in 2021, swiftly moving Aston up the pecking order

first time we had it and we didn't face the same issue at all during the 6000, 7000km we did with the engine in the last week [testing] with the three teams [Ferrari plus its two customers] and we didn't develop the same issue on the dyno. But we need to do a full investigation to have an answer."

Besides these unexpected engine problems, tyre management clearly continues to be an issue for Ferrari while Red Bull – and possibly Aston Martin too – have made gains. Fernando Alonso mugged Leclerc's team-mate Carlos Sainz for third place while the second Ferrari struggled on its tyres during the final stint.

"The other two cars [Red Bull and Aston Martin] for some reason found something that means they degrade half," said Sainz. "You could see how much Fernando and Max could push on the tyres and how much we needed to save. As soon as we push, we go backwards. That doesn't leave you a lot of margin."

It will be worrying, too, that Red Bull now has sufficient one-lap pace to not have to worry about Ferrari during qualifying – enabling it to prioritise race performance.

"We focused on the race more than quali and that paid its dividends," said Red Bull team principal Christian Horner. "We were able to run on the softer compound, particularly in the middle part of the race, and still have the durability."

2 Aston Martin leapfrogs Mercedes

Much intrigue surrounded Aston Martin during pre-season testing, concerning both its performance and the mysterious nature of the injury which caused Lance Stroll to be absent. During 2022 the team turned round what had regularly been the ninth-fastest car into one which could compete for sixth in the constructors' championship. Early form suggested the new, sleek-looking AMR23 had what it took to run at the head of the midfield.

Its performance in Bahrain suggested that not only had Aston passed that benchmark, it had joined what had previously been the 'top three' – and surpassed Mercedes, the team from which it buys its powertrain and rear suspension. Fernando Alonso qualified fifth, ahead of both Mercedes, and then battled through to third after a scruffy opening lap in which he dropped behind both Mercedes and clonked Stroll at the apex of Turn 4. He passed George Russell after the first stops and then hunted down Lewis Hamilton, finally getting the better of his old nemesis after the most entertaining battle of the race. Next he reeled in Carlos Sainz to nail his first podium since Qatar in 2021.

Stroll's performance was also highly noteworthy. The son of the team owner has often appeared to not particularly enjoy F1 and yet his comeback from injury was remarkable – as was his performance in the opening round after missing testing and suffering pain in both wrists throughout the race.

Stroll had fractured both wrists and broken a toe in a cycling accident ahead of the pre-season test. Dr Xavier Mir, the specialist who has reassembled MotoGP's Marc Márquez, inserted two screws in Stroll's right wrist while placing the left in a cast. A return to the cockpit as early as the season opener seemed unlikely, and doctors suggested he wouldn't be fit until round three. Only in the days before the GP did Stroll feel that he had recovered enough movement to attempt a simulator session.

Difficulty steering in the opening complex of corners meant Stroll was off Alonso's pace but he qualified eighth and raced to sixth, despite more discomfort in the closing laps. "I was in pain," Stroll said. "Just trusting my wrists, like catching [oversteer] snaps... it doesn't give me confidence to fully push because that is still difficult." ▶



FINISHING STRAIGHT

RACE DEBRIEF

F1 WORLD CHAMPIONSHIP ROUND 1

3

Merc calls time on car concept

Mercedes began the season at a dispiriting disadvantage and with no sign of clawing back its performance deficit in the near future. An upgrade package is promised for the European season, but team boss Toto Wolff admitted this will be a sticking plaster not an outright fix. The problem is the underlying car concept and this is likely to have to change; last season Mercedes persisted, believing there was performance to access once the porpoising and bouncing were dialled out. It has achieved this but the W14 is still behind rivals.

Lack of downforce is the main issue: the W14 can be quick over a single lap but, in this trim, it slides around a lot at the rear and destroys its tyres. When Mercedes fits its alternative higher-downforce rear wing, the car isn't fast enough.

George Russell qualified sixth and Lewis Hamilton seventh, over half a second adrift of Max Verstappen's pace in Q3 (and slower than Fernando Alonso's Aston Martin). Afterwards Wolff confirmed that nothing was off the table in Merc's quest for

improvements – even an all-new car philosophy.

"I don't think this package is going to be competitive eventually," he said. "We gave it our best shot, and now we just need to all regroup and sit down with the engineers, who are totally not dogmatic about anything. There are no holy cows."

Hamilton got by Russell at the start, and both passed Alonso, but Russell's slow first stop enabled Alonso to get by him again. At the second stops Lance Stroll used the undercut to catch and pass Russell shortly after the Mercedes left the pits.

Hamilton also fell victim to Alonso after a protracted tussle. Reeling in the Ferrari of Carlos Sainz, also labouring with rear-tyre degradation, was of little consolation to Lewis as he crossed the line fifth. Afterwards he was critical of the team, saying his views on last year's car weren't heeded.

"I think it's really about accountability," he said. "It's about owning up and saying: 'Yeah, you know what? We didn't listen to you. It's not where it used to be and we've got to work.'"

4

Ocon's triple penalty sums up Alpine's weekend

Alpine had been quietly optimistic ahead of the Bahrain GP, having avoided low-fuel glory runs on soft tyres during testing in favour of more extensive setup evaluations. But the race weekend was a veritable catalogue of disasters and mishaps.

Pierre Gasly was seventh quickest during Friday's second free practice session but in qualifying on Saturday he encountered crippling understeer, lining up last on the grid after being slowest of all in Q1.

"I don't know why, it was just way too extreme for the conditions, and was a bit all over the place on all the exits," he said. "The references or expectations I built up through the weekend just disappeared."

Esteban Ocon made it through to Q3 and started ninth but his race began to unravel before the lights went out, when he lined up on the grid with his right-front tyre outside the permitted 'box'. This triggered a five-second penalty which he served at his first stop, but the pit crew didn't wait the full five seconds before starting work on the car, incurring a further penalty of 10 seconds. Team boss Otmar

It was a desperate start to the season for Mercedes as the team realised that the concept behind the W14 is too limited





Ocon's race started badly when he lined up incorrectly on the grid. Errors from team and driver at his initial pitstop, when serving his first penalty, caused further woe and resulted in more penalties

Szafrauer later explained this was caused by the automatic countdown in the mechanics' headsets activating 0.4s before the car came to a halt.

Ocon then brought a further five-second penalty upon himself by releasing the pitlane speed limiter too early and straying 0.1km/h over the 80km/h limit. The accumulation of time lost put Ocon at the back of the field and, with no prospect of him making much ground, the team called him in to retire. Gasly recovered to ninth at the finish.

"It's very rare for this team to make those types of operations mistakes," said Szafrauer. "I've never seen it happen here before. And we have good systems in place for that not to happen, so I'm confident it won't happen again."

5 Sargeant's quietly impressive debut

He got eliminated in Q1 and raced to 12th while more experienced team-mate Alex Albon claimed a point for Williams in the opening grand prix of

the year, but Logan Sargeant delivered a more assured F1 debut than the results might suggest.

Although Albon felt the FW45 – in his hands at least – had the pace to make Q3, he suffered a front-wing failure in Q2, likely as a result of kerb strike, and ended up one place ahead of Sargeant on the grid, in 15th. Sargeant only missed Q2 by a whisker, setting an identical Q1 time to McLaren's Lando Norris, which meant Norris went through on account of logging his time earlier.

After losing ground with too much wheelspin at the start, Sargeant made two decisive overtakes on the first lap to latch back on to Albon's tail. He even lapped slightly faster than his team-mate at times during the race, on the hards after his first stop and on softs in the final stint, although his softs were new while Albon's were used – plus Albon was pushing harder on his out-laps in his pursuit of points and therefore taking more life out of the rubber.

Williams head of vehicle performance Dave Robson was unequivocal, saying Sargeant "didn't make a single mistake, was measured in attack and good with his tyres".



Sargeant's first GP went well, the American recovering from going out in Q1 to finish 12th

RESULTS ROUND 1

SAKHIR / 05.03.23 / 57 LAPS



1st	Max Verstappen	Red Bull	1h33m56.736s
2nd	Sergio Pérez	Red Bull	+11.987s
3rd	Fernando Alonso	Aston Martin	+38.637s
4th	Carlos Sainz	Ferrari	+48.052s
5th	Lewis Hamilton	Mercedes	+50.977s
6th	Lance Stroll	Aston Martin	+54.502s
7th	George Russell	Mercedes	+55.873s
8th	Valtteri Bottas	Alfa Romeo	+72.647s
9th	Pierre Gasly	Alpine	+73.753s
10th	Alex Albon	Williams	+89.774s
11th	Yuki Tsunoda	AlphaTauri	+90.870s
12th	Logan Sargeant	Williams	+1 lap
13th	Kevin Magnussen	Haas	+1 lap
14th	Nyck De Vries	AlphaTauri	+1 lap
15th	Nico Hülkenberg	Haas	+1 lap*
16th	Zhou Guanyu	Alfa Romeo	+1 lap
17th	Lando Norris	McLaren	+2 laps

*includes 5s penalty and 10s penalty for multiple track limits infringements

Retirements

Charles Leclerc	Ferrari	41 laps/power unit
Esteban Ocon	Alpine	39 laps/withdrawn
Oscar Piastri	McLaren	13 laps/electrics

Fastest lap

Zhou Guanyu 1m33.996s on lap 56

TYRE COMPOUNDS USED



CLIMATE

Dry/
night



AIR TEMP

28°C

TRACK TEMP

31°C

DRIVERS' STANDINGS

1 Verstappen	25pts	11 Tsunoda	0pts
2 Pérez	18pts	12 Sargeant	0pts
3 Alonso	15pts	13 Magnussen	0pts
4 Sainz	12pts	14 De Vries	0pts
5 Hamilton	10pts	15 Hülkenberg	0pts
6 Stroll	8pts	16 Guanyu	0pts
7 Russell	6pts	17 Norris	0pts
8 Bottas	4pts	18 Ocon	0pts
9 Gasly	2pts	19 Leclerc	0pts
10 Albon	1pts	20 Piastri	0pts





FINISHING STRAIGHT

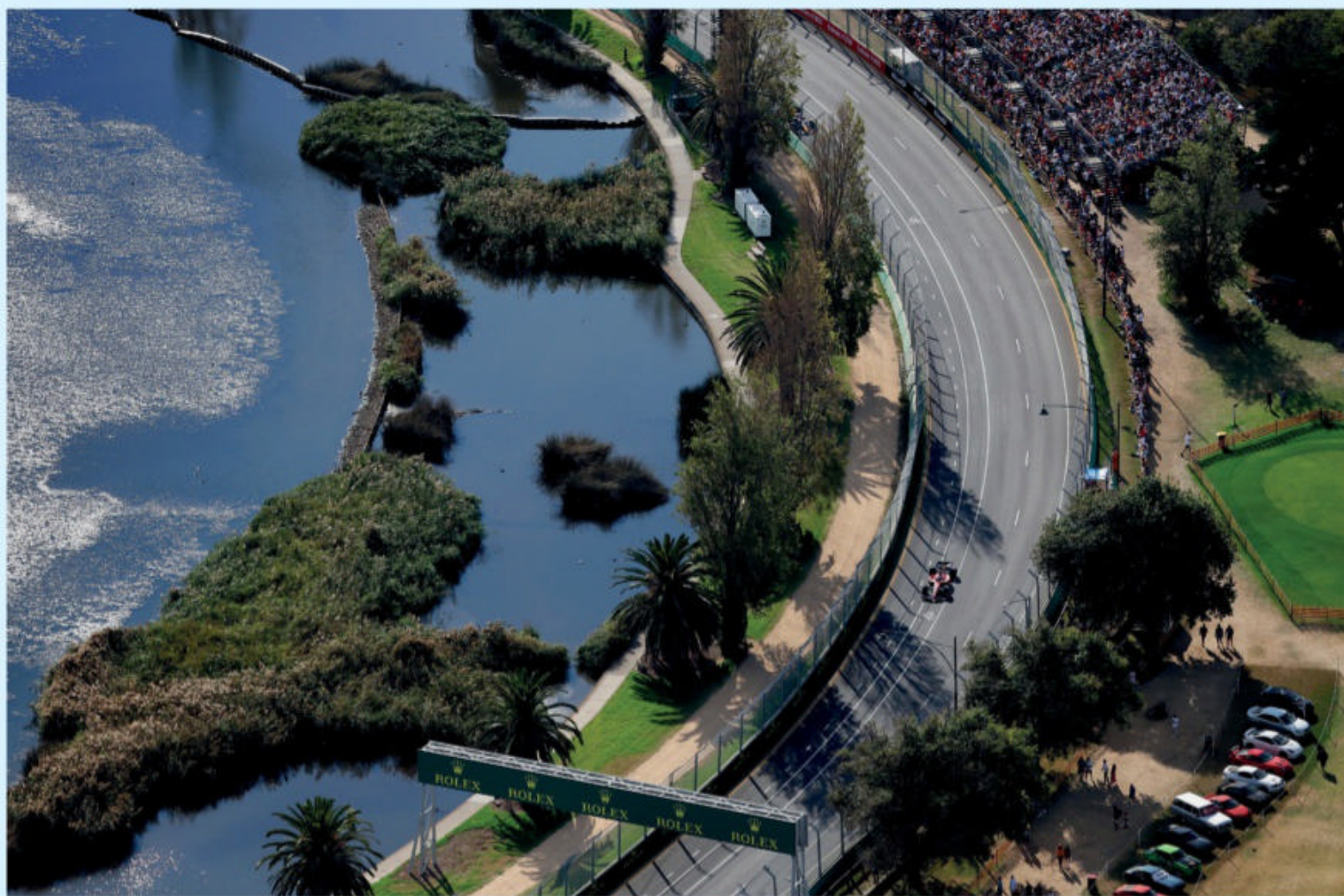
RACE PREVIEW

F1 WORLD CHAMPIONSHIP ROUND 3

AUSTRALIAN GP

31 March-2 April 2023
Albert Park

PICTURE: ANDY HONE. ILLUSTRATION: ALAN ELDREDGE



RACE DATA

Circuit name Albert Park
First grand prix 1996
Number of laps 58
Circuit length 3.279 miles
Race distance 190.217 miles
Lap record 1m20.260s
Charles Leclerc (2022)
F1 races held 25
Winners from pole 9
Pirelli tyre compounds
C2, C3, C4

CAR PERFORMANCE

Downforce level High
Cooling requirement Medium
Full throttle 61%
Top speed 203mph
Average speed 128mph

TIMETABLE (UK TIME)

Friday 31 March
Practice 1 02:30-03:30
Practice 2 06:00-07:00
Saturday 1 April
Practice 3 02:30-03:30
Qualifying 06:00-07:00
Sunday 2 April
Race 06.00
Live coverage Sky Sports F1
Highlights Channel 4

THE MAIN EVENT

Home of the Australian Grand Prix since 1996, Melbourne was formerly the preferred choice as season opener, and not just because (now former) F1 commercial chief Bernie Ecclestone and the late Australian GP Corporation boss Ron Walker were best buddies. The state capital of Victoria has a pleasingly laid-back and cosmopolitan vibe and plenty of ardent F1 fans, making for a great atmosphere.

Logistics have dictated a shimmy down the order but the GP remains hotly anticipated thanks to the F1 debut of local boy Oscar Piastri. He'll be hoping for better luck at Albert Park than F1's last Australian, Daniel Ricciardo...

2022 RACE RECAP

After two pre-race furores – one a pointless intervention from the race director regarding drivers' jewellery, the other a controversial deletion of a DRS zone for safety reasons – the first Australian GP since 2019 got under way with Charles Leclerc leading from pole. Ferrari seemed to have a pace advantage over Red Bull at Albert Park, hence the brouhaha over removing the DRS zone in the redeveloped section between Turns 8 and 9; Red Bull was one of the teams seemingly disadvantaged by this late change.

In the event, Max Verstappen only made a serious challenge during Safety Car restarts before a fuel leak caused his car to catch fire on lap 39. Anti-stall issues at the start set the other Ferrari of Carlos Sainz back and he spun while charging back into contention. Sergio Pérez brought the second Red Bull home 20.5s adrift of Leclerc, with George Russell third for Mercedes.

KEY CORNER: TURN 3 One of the few obvious overtaking opportunities on the lap, this sharp right-hander now offers even greater encouragement to late brakiers thanks to last year's reprofiling.



THE PAST FIVE WINNERS HERE...



2022

Charles
Leclerc
Ferrari



2019

Valtteri
Bottas
Mercedes



2018

Sebastian
Vettel
Ferrari



2017

Sebastian
Vettel
Ferrari



2016

Nico
Rosberg
Mercedes



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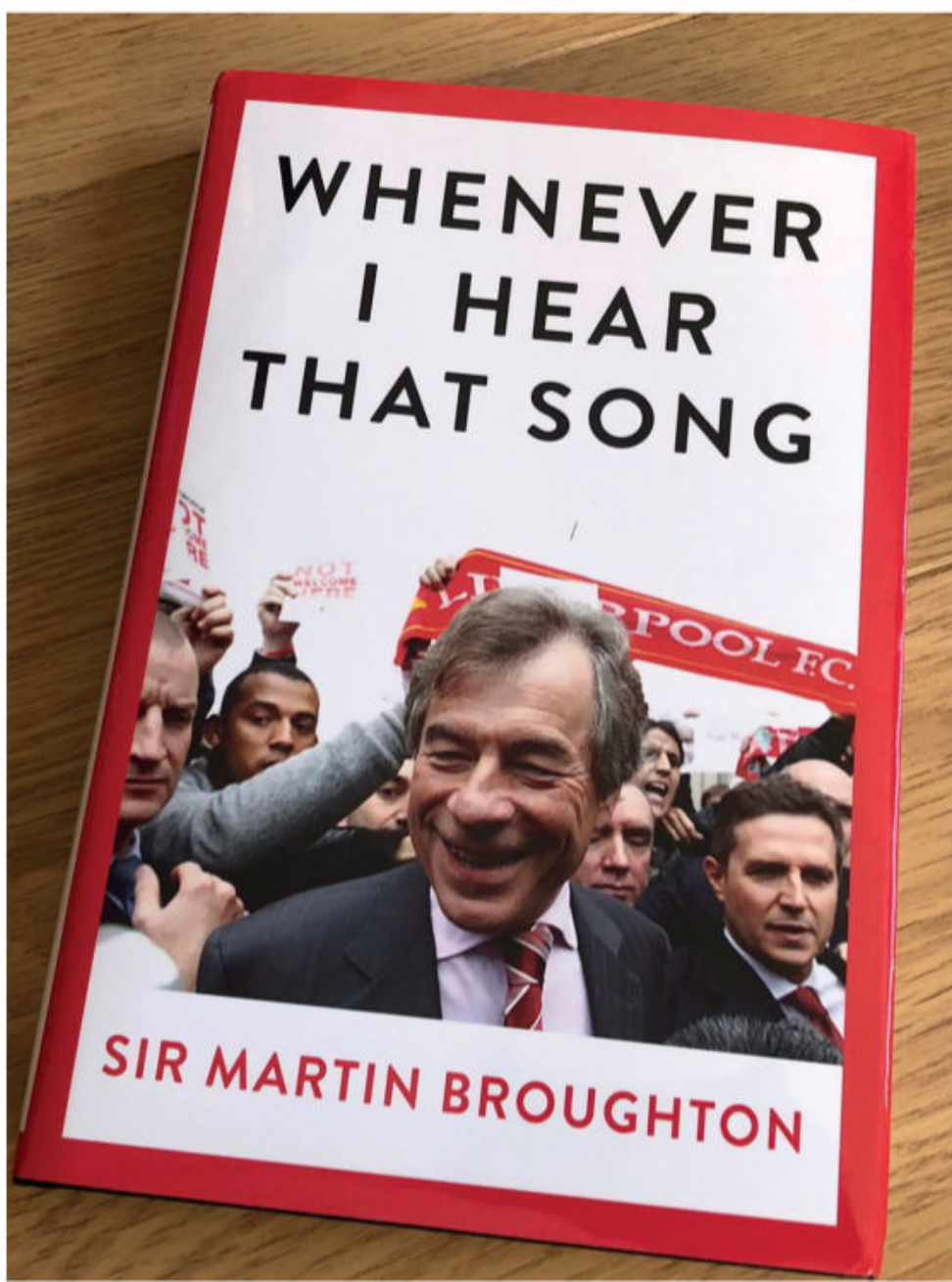
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nineelmsbooks.co.uk

Sir Martin Broughton is a relatively tangential figure in Formula 1 history; younger fans may chiefly associate him with Lewis Hamilton and Serena Williams as part of a consortium bidding to buy Chelsea FC last year. But this captain of industry did play a significant behind-the-scenes role in a transformative event: as CEO of British American Tobacco he oversaw the company's transition from sponsor to team owner, acquiring Tyrrell and relaunching it as British

American Racing. This entity remains on the grid in the form of Mercedes.

This is but one chapter in Broughton's memoir, through which run intertwining threads of music, business and sport. Broughton is also venerated by fans of Liverpool FC as the man who helped liberate the team from owners who had burdened it with debt in the late 2000s. He also led an attempt to buy the Tote in 2009. Proceeds are being donated to the Retraining of Racehorses charity.



TIMEX NORTH TITANIUM AUTOMATIC

Price £330

timex.co.uk

Timex is on a roll with its vintage-inspired timepieces including the Expedition series, which feature rugged and utilitarian styling with build quality and materials to match. Though some may cavil at the choice of a 41mm case size for an 'outdoors' watch, the choice of titanium makes it relatively light weight. It's water-resistant to 200m and has a screw-down crown, unusual for a timepiece at this price point. The face is enclosed by scratch-

resistant anti-glare sapphire crystal.

The hands have a black-finished centre which makes for a floating effect, while the hour and minute hands, as well as the numerals, hour markers and minute lines feature a luminous coating so the watch can be read in the dark. A two-piece strap with a titanium pin buckle is made from Timex's Ecco DriTan leather, which is claimed to be produced via a proprietary process which uses less water than similar items.





BUILT FOR ATHLETES RED BULL COLLECTION

Price £5.99-£550
builtforathletes.com

In February the British-based premium fitness brand Built For Athletes joined Red Bull Racing as official luggage partner. Now the company has released a 14-piece collection of high-quality luggage, bags and accessories in RBR colours. Should you find yourself on the same aeroplane as the Red Bull crew you'll have no difficulty spotting these on the luggage carousel, though it is of course slightly more challenging if you're part of the team to identify whose bag belongs to whom.

While the range kicks off with humbler items such as patches, bum bags and shoulder bags, there are three 'hero products' including a limited-edition backpack featuring the RBR logo. There are also holdalls in 35-litre carry-on size and a more substantial 90 litres. The latter is "specifically curated to accommodate the team's requirements to be prepared for any trip".



FORMULA 1 TECHNOLOGY

Author Steve Rendle

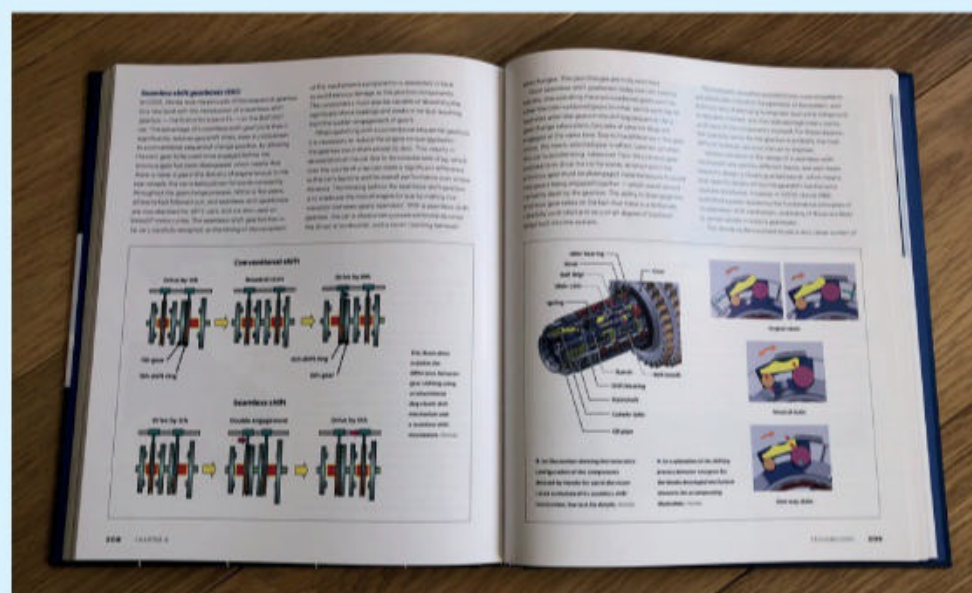
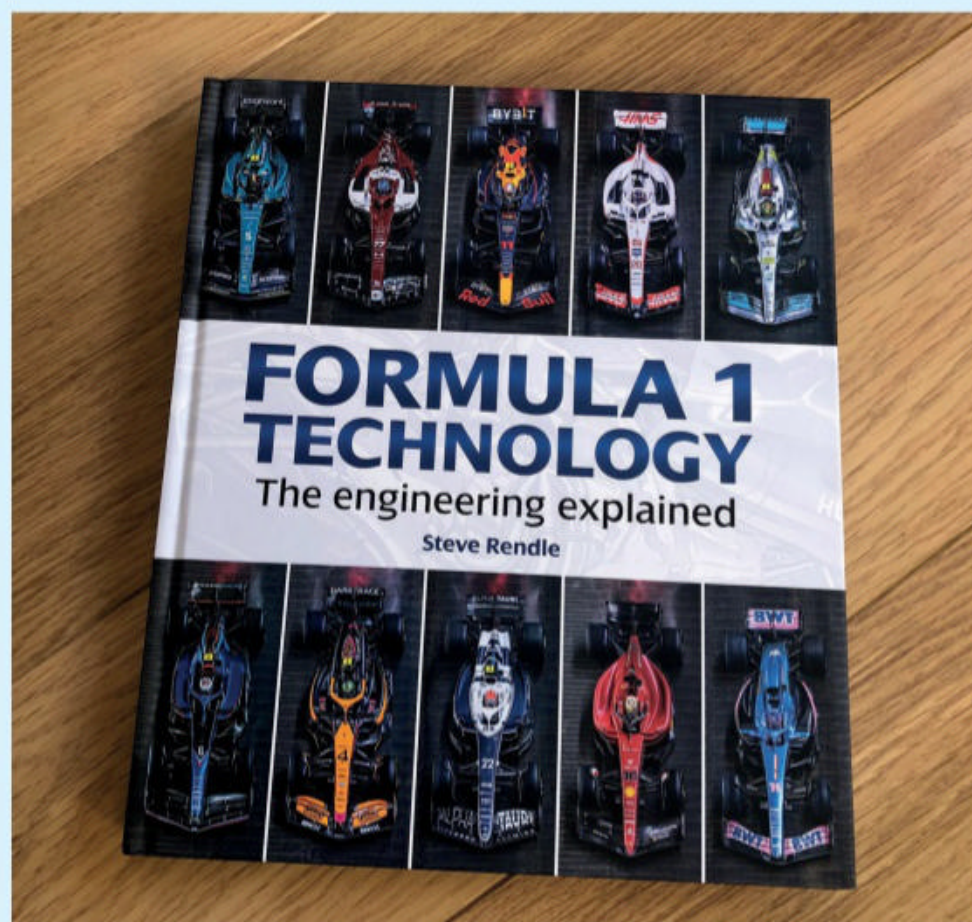
Price £55

evropublishing.com

While the 1993 FW15C (see p78) remains a high-water mark for the sheer volume of technology packed into an F1 car, contemporary machines exist at the cutting edge of the engineering permitted within them. Steve Rendle's book delivers with utmost thoroughness on the promise of its title: it explains the detail behind the function, design, construction and operation of pretty much every aspect of an F1 car, from the brake callipers to the workings of the internal combustion engine

and its associated energy recovery systems. If, for instance, you struggle to comprehend how a seamless-shift gearbox does its thing by briefly having two ratios engaged at once, you will find the (well-illustrated) explanation here.

The author is a Haynes alumnus and has written several of that company's iconic manuals devoted to F1 cars from years past. As usual with Evro books production values are high, with lavish illustrations as well as high-quality photography.





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FLAT CHAT

{ FULL THROTTLE MUSINGS WITH MATT KEW }

PICTURES



THERE'S NO STOPPING THE BULL RUN

It's now plain to see there are only two ways to be successful in this ground-effect era of Formula 1. The first option is to build a Red Bull. Failing that, build a car that looks like a Red Bull.

There have been plenty of jibes about Aston Martin having merely reached for a piece of tracing paper when designing the AMR23. But this shouldn't be treated as a taboo subject because the technical team has publicly admitted, in effect, to doing this. It accepted the need to swallow its pride last year and has taken heavy inspiration from the RB18 of 2022. Why wouldn't it replicate a car which won 17 grands prix and both titles? Frankly, to attempt to catch Adrian Newey – who is continually refining a standard-setting creation anyway – by chasing diminishing returns and developing a fundamentally inferior car concept is to waste time and restricted money.

Red Bull motorsport advisor Helmut Marko

says Aston should be investigated for what he thinks is outright plagiarism of the downwash sidepod setup. But, as part of a bigger picture for F1, the green team shouldn't be painted as the bad guy. It has been downright pragmatic by copying the homework of the best in class. Besides, without such an approach, as large chunks of the Bahrain Grand Prix proved, an inescapably dull period of Max Verstappen-led



The AMR23 does, as Aston's tech team has admitted, take inspiration from the RB18. Alonso put it to good use in Bahrain

domination would be inevitable. It was Fernando Alonso's overtaking to secure a podium that made the first GP of the season entertaining late on. And it's thanks to his result that eight other teams have been given a rude awakening. If the outcome of 2022 wasn't enough, Alonso's turn of pace was all the evidence required for them to bin their current philosophies and converge around the Red Bull design if they are serious about being competitive.

Mercedes has cottoned on to this already. Toto Wolff concedes he has now lost faith in the W14 and those distinctive size-zero sidepods. Since the Aston shares the Merc's powertrain, gearbox and rear suspension and was even shaped in the same windtunnel, there's no prizes for guessing it's the aero which needs radically revising. Ferrari, however, appears much more stubborn. New team principal Fréd Vasseur insists it's merely setup tweaks preventing the SF-23 from becoming a regular race-winning force.

He believes the Scuderia can end its title drought by ploughing its own furrow. Even with lingering unreliability and strategy errors set to one side, the data suggests he shouldn't be so sure...

If all the teams are to do the sensible thing and consolidate around a Red Bull layout, the casualty will be the pleasing design differentiation the new regulations permitted. Liveries notwithstanding, no longer will the Mercedes be instantly recognisable for resembling a cuttlefish. Nor will the Ferrari stand out for looking as though two Victoria Plum baths have made their way into the scarlet sidepods. But if the cars don't all look the same, more Red Bull thrashings feel like an inevitability.

There are, of course, other factors in Aston being on course to launch from seventh in the standings (per 2022) to a possible third, or even higher. It has been on an expensive shopping spree, building a new state-of-the-art factory and poaching top talent from further up the constructors' championship. But its rate of progress over just one winter nevertheless goes to show that waiting a decade or more for the cost cap to cancel out the advantage of the leading teams is a nonsense. Convergence is the way to create a more competitive F1, and that was half the reason the new regulations were conceived in the first place.

PICTURES: STEVEN TEE. ILLUSTRATION: BENJAMIN WACHENIE

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