F1 REVIEW All the races, cars, drivers... and domination

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The records, stories and battles of Formula 1 in 2023

Let's be honest, it wasn't a classic Formula 1 season. The domination by Max Verstappen and Red Bull means 2023 is unlikely to make anyone's list of greatest F1 years. But there was plenty of incredible record-breaking, unpredictable battles behind Red Bull and off-track intrigue that is worth looking back on before we head into 2024.

In this 116-page F1 review special (starting on page 19), we talk to many of the key players and look at how the various fights were won up and down the grid. We also have our traditional tech focus on the main battlegrounds (p34), pick out our top 10 drivers (p28) and bring you the important stats (p76), as well as an expanded article on the best race drives of the season (p40). Now that we've got 22 grands prix (and rising), it only seemed fair to increase our list from five to 10, with drivers limited to one entry each.

Remarkably, the F1 driver line-ups will remain unchanged in 2024, but that doesn't mean there weren't some fine performances in the F2 and F3 support series. Megan White ranks the 10 best in our review of the feeder categories on p80.

Next week, some of those up-and-comers will also be part of our Top 50 drivers of the year list, which leads our 140-page Christmas special. The double issue will also include the best pictures of 2023, a review of many other series including MotoGP, the return of Autosport's Christmas quiz, and the year's top club-racing rivalries. Be sure to look out for all that and more from 21 December.



Cover images Mark Sutton/Glenn Dunbar/Andy Hone/ Steve Etherington/Simon Galloway/ **Motorsport Images**

PIT & PADDOCK

- 4 F1 teams unite in fury against FIA
- 7 Ilott bags Jota Porsche WEC deal
- 8 Lamborghini tops IMSA Daytona test
- 10 Le Mans bans tyre warmers after all!
- 13 Dennis commits to Andretti future
- 15 Opinion: Alex Kalinauckas
- 17 Feedback: your letters

23 SEASON REVIEW

- **19** How Verstappen made it a one-Bull race
- 28 Our top 10 drivers of the year
- 34 Tech analysis and key battlegrounds
- 40 Best race drives of 2023
- **44** The end of a Mercedes dynasty?
- **48** Ferrari gets another reality check
- 52 Aston's surprise and McLaren's recovery
- 58 The driver who saved F1 in 2023?
- 62 AlphaTauri's tumultuous year of change
- **68** The key off-track battles of F1 politics
- 74 Top 10 autosport.com stories
- **76** The season in numbers
- 80 Support cast: best drivers of F2 and F3

FEATURES

86 Peugeot's Le Mans rookie sensations

CLUB AUTOSPORT

- 99 Obituary: John Turner
- **100** Pulling returns to F4 with Rodin Carlin
- **102** Hill among the stars at Dubai historic
- **Opinion: Stephen Lickorish** 105
- 106 The rise of Freddie Slater

FINISHING STRAIGHT

- 110 What's on this week
- **112** From the archive: 1983 Monte Carlo Rally
- 114 My favourite team-mate: Gabriele Tarquini





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PIT + PADDO



F1 teams unite amid legal row over FIA

FORMULA 1

Toto and Susie Wolff want the FIA to pay for dragging their reputations through the mud. The former says his Mercedes Formula 1 team is in "legal exchanges" with the governing body. The latter wants to know who "misled the media" after the pair were threatened with an investigation into a supposed conflict of interest. This remarkable turn of events follows the FIA announcement last week that its Compliance Department was looking into allegations that confidential information had been passed to an F1 team principal by a member of staff for commercial rights holder Formula One Management.

Although the Wolffs were not mentioned by name, they were in the crosshairs. Supposedly, in a meeting between team bosses, Toto Wolff made comments based around intelligence that could only have come from FOM. Wife Susie is the F1 Academy managing director, so theoretically might have been privy to the information.

While Susie Wolff says publicly that they are searching for who is responsible, behind closed doors they have a pretty good idea. The allegations first appeared in an unnamed publication, and these dubious reports made it to the attention of FIA president Mohammed Ben Sulayem, who ostensibly pushed for the probe. In doing so, he inadvertently highlighted how united F1 and its 10 teams are, and ensured that the season ended with relations between the FIA and championship as fractious as at any point in recent history. That's no mean feat considering the fallout from the 2021 Abu Dhabi title decider, repeated track limits farces, Ben Sulayem questioning a potentially overinflated value of the series, his push to expand the grid to 11 teams, plus a fixation with drivers wearing jewellery and making political or religious statements.

In response to the initial FIA statement, FOM not only vehemently denied the accusations but tellingly revealed that nothing had been shared by the governing body in advance. Likewise, Mercedes commented: "It was highly surprising to learn of the investigation through a media statement." Susie Wolff firing back was far more impactful. She wrote that the inquest appeared to be "rooted in intimidatory and misogynistic behaviour and focused on my marital status rather than my abilities".

In no small part thanks to F1's current popularity bringing immense prosperity, the series and its teams are particularly closely aligned. As such, all nine of Mercedes' rivals coordinated the release of near-identical statements. The teams made two points. One was in a clear display of support behind Susie Wolff: "We are pleased and proud to support F1 Academy and its managing director through our commitment to sponsor an entrant in our liveries from next season." Two: "We can confirm that we have not made any complaint to the FIA regarding the allegation of information of a confidential nature being passed between an F1 team principal and a member of FOM staff." By





BAN ON AERO TESTING AHEAD OF 2026 RULES

FORMULA 1

The FIA has codified an aerodynamics testing ban to prevent Formula 1 teams from turning their attention to the landmark 2026 rule changes too early.

While the final chassis specification is yet to be locked in, a major reduction in drag and a 40-50kg weight saving are targeted. These will be facilitated by both front and rear wings becoming active, the wheel rims dropping from 18 to 16 inches, and a shrinking of the cars' wheelbase and width.

To prevent any teams baking in an early



advantage, and following agreement from the F1 Commission, the governing body has written into the sporting regulations that wind tunnel and CFD work cannot begin on the new-spec machinery until 1 January 2025. A similar arrangement was made ahead of the shift to ground effect that came into effect for the start of last year. The rulebook now reads: "In order to prevent testing which aims to develop for the 2026 season, from 1 December 2023 until 1 January 2025, [restricted wind tunnel testing] may only be carried out using a scale model that substantially complies with the 2023, 2024 or 2025 F1 technical regulations." ADAM COOPER



Madrid talk played down

FORMULA 1

The FIA has rebuffed rumours that a deal to move the Spanish Grand Prix to Madrid for 2026 is imminent There was plenty of speculation last week that Formula 1 was poised to ditch Barcelona for the capital city, since commercial talks are progressing well. But the governing body says any agreement remains some way off since it has not yet been tasked with homologating the proposed IFEMA convention centre parkland-based circuit in the north-east of the city. Carmelo Sanz de Barros, president of both the Spanish automobile

federation and FIA senate, said: "Have the Spanish federation received, as of today, this project to be analysed, studied and focused? No. Then, when the Spanish federation consider that this project is a valid project and that they are interested, they channel it to where? The FIA, because they have to homologate it. "If they are talking about a semi-urban circuit, the first thing you have to do is to homologate it and certify. If the Spanish federation have not received anything, then they have not sent anything to the FIA." JONATHAN NOBLE

crying Wolff

denying any approach to the FIA over the matter, immense pressure was put on the governing body to disclose what prompted it to formalise the allegations by getting its Compliance Department involved.

The FIA duly backed down from the investigation. There was no apology, but it was "satisfied" that FOM measures were robust enough to protect against information being leaked. Perhaps this was an attempt to neatly close the matter before the FIA Prize-Giving Ceremony took place in Baku last Friday. But it didn't suffice. Lewis Hamilton used the event to blast the "unacceptable" saga. "It seems that there are certain individuals in the leadership within the FIA that every time we try and make a step forward, they're trying to pull us back," he said. "That has to change."

There remains the external fallout. F1 is furious. Mercedes is engaging in "active legal exchanges with the FIA... We await full transparency about what took place and why and have expressly reserved all legal rights." Susie Wolff wants answers for why she may have been "collateral damage in an unsuccessful attack on somebody else, or the target of a failed attempt to discredit me personally". And inside the FIA, there are many who are deeply upset by having their work tarnished by these latest controversial actions from the top.

MATT KEW



Hydrogen group set up for future of sport

FORMULA 1

Formula 1, the FIA and Extreme H – the spin-off from the Extreme E allelectric off-road series have announced the creation of a Hydrogen Working Group that will start in 2025. They will evaluate how hydrogen fuel cells and battery technology can be rolled out across motorsport and, rather than concentrate on powering race cars, the focus will be on increasing the sustainability of freight and infrastructure plus the charging networks for electric categories.

F1 will be represented by chief technical officer Pat Symonds, the FIA by single-seater director Nikolas Tombazis and Extreme H by XE technical director Mark Grain. Symonds said: "Our sport has a tradition of bringing new technologies to the forefront of public perception in incredibly short timescales. We do this by being open-minded to all solutions and embracing cross-functional engineering.

"With climate change mitigation at the forefront of everyone's mind we are committed to promoting sustainability and therefore need to explore all areas of decarbonisation of the mobility sector. This must include sustainable liquid hydrocarbon fuels, electrification and hydrogen. This Working Group enables a collaboration which will allow us to gain first-hand experience and contribute to the understanding and development of the many aspects of hydrogen propulsion that Extreme H will embrace."

Extreme H plans a first full-speed shakedown of its hydrogen off-roader by the end of this year ahead of a more comprehensive testing





programme in early 2024. The series is set to begin in 2025. Meanwhile, Le Mans and World Endurance Championship organiser the Automobile Club de l'Ouest will delay its introduction of a hydrogen-powered prototype class for another year until 2027.

Tombazis added: "The FIA Technical Department has experience and knowhow in the area of hydrogen technology, which we will bring to the Working Group along with sporting, safety and regulatory expertise. As is currently the case across the entire FIA motorsport portfolio, we will take learnings [lessons] from this collaboration for the benefit of our sport and mobility." MATT KEW

IndyCar delays hybrid until after next May's 500...

INDYCAR

The IndyCar Series has elected to postpone the debut of its hybrid unit until after late May's Indianapolis 500.

This is the third delay for the hybrid technology, which is being paired with the current 2.2-litre twin-turbocharged V6, and which has undergone extensive testing over the past three months. Four teams – Andretti Global, Arrow McLaren, Chip Ganassi Racing and Team Penske – and 13 drivers have combined for over 15,000 miles of running.

Team Penske's two-time champion Josef Newgarden, who is among those to have



tested the hybrid, said: "It's really just a timing thing and what's going to be the best opportunity for it to succeed at the highest level. I think they're right that the delay is probably the best thing to do, but they've done over 10,000 miles of testing on this thing. I've driven it pretty extensively and it works.

"It's absolutely coming. They just have to think of the interest of the entire championship, not just one team or the other. This has got to be fair and robust and completely correct for everybody. So, it definitely makes a lot of sense." The biggest factor was the lack of opportunities for smaller teams such as Dale Coyne Racing, Ed Carpenter Racing and Rahal Letterman Lanigan Racing, which are yet to get acquainted with the hybrid. "We can still go hybrid in 2024 and we can pick the opportunity that's going to be best for the entire field," Newgarden said, "and that makes a lot of sense to do it in that way." **JOEY BARNES**

Ilott secures Jota Porsche Hypercar seat

WEC

Callum Ilott will switch from IndyCar to the World Endurance Championship in 2024 with a plum drive with the Jota Porsche squad. The Brit will share the #12 entry with Will Stevens and Norman Nato in the team's expanded two-car line-up of 963 LMDhs in the Hypercar class.

Ilott (right) has returned to sportscar racing after splitting with the Juncos Hollinger IndyCar squad at the conclusion of this year's campaign and then a successful try-out in the Jota Porsche in Qatar this month. His previous sportscar campaign came in 2021 during his year as Ferrari Formula 1 test driver and Alfa Romeo reserve when he raced a Ferrari 488 GT3 in the GT World Challenge Europe Endurance Cup with Iron Lynx and the GTE version at the Le Mans 24 Hours.

"We've very excited to have Callum," said Jota team principal Sam Hignett. "He tested with us in Qatar and he did the excellent job we were expecting." Ilott described the



Porsche as "fun to drive", adding that he had been "ultra-impressed with the team".

Ilott was announced on Monday along with Nato and Phil Hanson, who will race the #38 entry with Oliver Rasmussen. Like Stevens, Hanson was confirmed on the publication of the WEC entry list last month.

Formula E regular Nato, a two-time LMP1 race winner in WEC with Rebellion Racing in 2019-20, comes into the line-up after a try-out in the Porsche at last month's Bahrain WEC rookie test. Hanson moves up from LMP2 and over from the United Autosports team with which he won the class title in the 2019-20 'superseason'.

That leaves one seat in the two Hertzsponsored Jota 963s vacant. Yifei Ye, who drove in 2023, will not be part of the line-up. It has been confirmed that he is leaving Porsche, and looks certain to race the customer AF Corse Ferrari 499P as part of a wider deal with the marque.

The Chinese will be renewing his partnership with Robert Kubica, one of three star names along with Sebastian Vettel and Jenson Button Jota had been talking to. Only Button remains in the frame. GARY WATKINS



...as WRX re-admits ICE power

WORLD RALLYCROSS

The World Rallycross Championship will re-admit internal combustion engine Supercars next year after it was agreed that they could compete against the current electric-powered RX1e machines when powered by sustainable fuels.

The series, which went all-electric in 2022, will admit a maximum of 16 cars for what it has billed as a Battle of Technologies. "We have all seen and enjoyed the electrifying power and potential of RX1e over the past two years, and we have also witnessed a lot in Euro RX," said Rallycross Promoter GmbH managing director Arne Dirks. "There has been tremendous interest from drivers and teams across the board, and we believe this sustainable new format offers competitors and fans alike the best of both worlds."

RX1e cars have not been seen in action since July, when a fire at Lydden Hill destroyed two cars. The season resumed in October using ZEROID X1 cars from the secondary RX2e class.

The reintroduction of ICE cars was announced following the latest meeting of the FIA World Motor Sport Council.



of passion for combustion-engined cars JAMES NEWBOLD

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Lamborghini makes a splash by topping Daytona test

IMSA

Lamborghini's Iron Lynx team boss Andrea Piccini has admitted "it's a bit of a pity" that his squad won't contest next month's Daytona 24 Hours after outpacing all its GTP rivals on its US testing debut last week.

Lambo's new SC63 LMDh prototype (above) – a 3.8-litre, twin-turbo V8-powered Ligier-spined chassis that will race in the World Endurance Championship and the longer-distance races in the IMSA SportsCar Championship – lapped Daytona's road course in 1m35.027s in the hands of Andrea Caldarelli last Wednesday. That is about a second off last year's pole position time, but it eclipsed Acura, BMW, Cadillac and Porsche across the two-day test and logged over 1000km of running.

Iron Lynx will miss the season-opening Daytona race because this same chassis, which was already homologated by IMSA, must now go through the WEC's similar process in Europe.

When asked about prospects for the car's American race debut in March at Sebring, Piccini replied: "At least from the pace the car has shown from this first test, I think we can be competitive. Sebring is a very bumpy track, very hard for the cars, so let's see if we're reliable enough there. We're at least optimistic about running quite well. It's a tough race, but it's in March, so we have three months longer to prepare. "Of course, when you see the performance of [Wednesday], you say "maybe we should have done it' [race at Daytona], but the answer is no."

IMSA racers Romain Grosjean and Daniil Kvyat drove the car on Thursday, along with already-nominated WEC driver Mirko Bortolotti. Iron Lynx moved on to Circuit of The Americas this week for its final LMDh pre-season test in the US, where it shared the track with Penske Porsche Motorsport.

Penske's Jonathan Diuguid said of the Lambo: "I think they've done a good job. Their lap count was low, which is indicative of where we were at the same time last year, but they're on the pace." CHARLES BRADLEY

Macau king Browning stays with Hitech for F3 attack

FORMULA 3

the year ended in fine style

their support going into

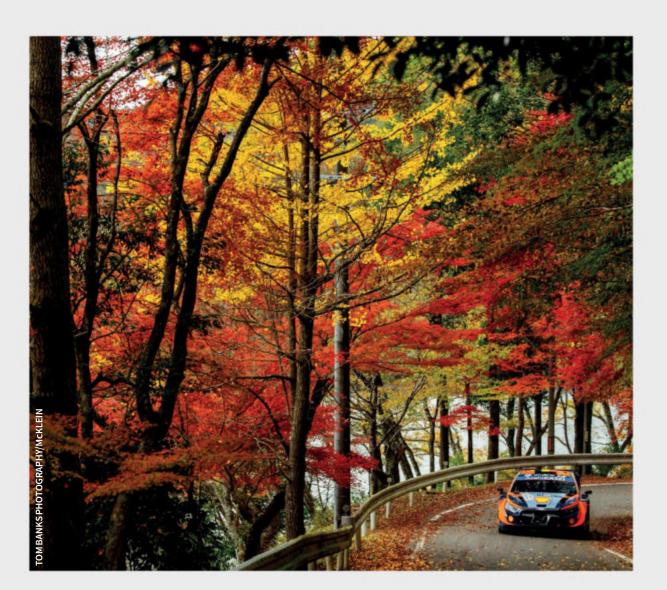


Macau Grand Prix winner Luke Browning is to remain at Hitech GP for his second season in the FIA Formula 3 Championship in 2024. The 21-year-old Williams F1 protege (left) had a tough season in 2023. As the reigning GB3 champion with Hitech, his last-minute deal was the final slot to be taken on the F3 grid and he took 15th in the points. But

with his Macau victory and an Aston Martin F1 test, his prize for winning the 2022 Aston Martin Autosport BRDC Young Driver of the Year Award.

"Having visited all of the tracks we're going to next year once before, I believe puts us in a great position to score points in every race weekend," said Browning. "I'm super-grateful to Williams and Hitech for the new season."

Elsewhere on the F3 grid, new Red Bull Junior Oliver Goethe moves from Trident to Campos Racing for his second full season in the series. Goethe, who won the Silverstone feature race, is joined there by Mari Boya, who was with MP Motorsport in 2023. Leonardo Fornaroli, who took three podiums this year, remains at Trident.



Dull Sundays prompt points tweak

WRC

The World Rally Championship is to introduce a new points system for 2024 aimed at spicing up the action throughout events. It is understood that the new structure will mean extra points being awarded on Sundays in a bid to add an extra dimension to the final day of rallies.

This change – the exact structure of which has not yet been announced – has been ratified by the FIA at the latest meeting of the World Motor Sport Council, which followed an announcement of a new working group to address the direction of rallying.

Under current regulations a maximum of 30 points can be scored by a driver at a WRC round should they win the rally (25 points) and set the fastest time on the rally-ending Power Stage (five points). system comes at the end of a season where the WRC has come under fire from drivers, teams and fans for a perceived lack of appeal and direction. Competitors have cruised through Sunday stages, preserving their tyres for the Power Stage, so addressing the Sunday format of rallies has emerged as a key target for both the FIA and the WRC Promoter.

"The principles of a new format for the attribution of championship points have been approved with the aim to enhance excitement and competitiveness, especially on Sunday," read a statement from the FIA. "The details and balance of the points per day will be confirmed by the WMSC Task Force at a later stage."

In addition, the FIA announced that South Korean company Hankook will take over as the WRC's control tyre supplier from 2025, succeeding Pirelli.

POURCHAIRE TO JAPAN AFTER Strong debut run

SUPER FORMULA

Newly crowned Formula 2 champion Theo Pourchaire's move to Japan for 2024 has been ratified, with the Frenchman one of 11 drivers confirmed by Toyota for next season's Super Formula series.

Sauber protege Pourchaire will line up with the Team Impul squad of Japanese racing legend Kazuyoshi Hoshino, and joined Impul for two days of last week's official SF test at Suzuka. On his first taste of the circuit and the Dallara SF chassis, he lapped sixth quickest, 0.290 seconds adrift of pacesetter Kamui Kobayashi, who will again dovetail his Toyota World Endurance Championship drive with an SF programme for KCMG.

Another ex-F2 racer, Nirei Fukuzumi, was second at the test with KCMG, and joins Kobayashi at the team after switching from Honda. Third fastest was Sho Tsuboi, who replaces F2-bound 2023 champion Ritomo Miyata at TOM'S after finishing fourth with Cerumo-Inging this year.

IMSA GTD Pro champion Ben Barnicoat was quickest on the rookie-only final day (from which Pourchaire was absent). With TOM'S, the Briton lapped 1.1s adrift of Tsuboi's time from the previous day.



The introduction of the new points

TOM HOWARD

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Gounon champ, other Merc wins

GULF 12 HOURS

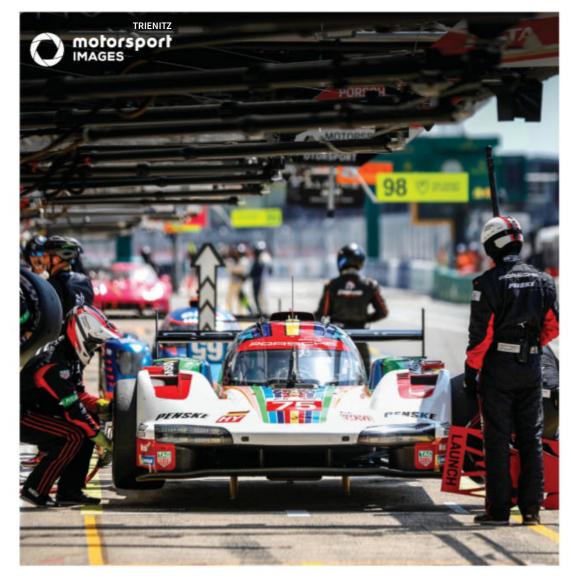
Mercedes was on top at last Sunday's Gulf 12 Hours. While Jules Gounon drove a 2 Seas AMG GT3 to third place to give himself and the marque the Intercontinental GT Challenge drivers' and manufacturers' titles, it was the GruppeM version (below) of Maro Engel, Luca Stolz and Mikael Grenier that took victory at the Yas Marina circuit.

Gounon led the points into the weekend, and the first sign that things were going his way came in the early hours when closest title rival Philipp Eng, sharing a WRT BMW M4 GT3 with Sheldon van der Linde and Charles Weerts, lost several laps while the team fixed an exhaust problem. They finished six tours down in 14th position.

As the race moved into its second half, the sister WRT BMW of title contender Dries Vanthoor, together with Nick Yelloly and Valentino Rossi, was leading from the GruppeM Mercedes. But a sticking pedal box just into the final third of the race cost around 15 seconds as Rossi handed over to Yelloly. This promoted the big yellow AMG machine, which itself had lost time early in the race with a wheel issue, into the lead, and meant Vanthoor had to take the final stints because the pedal position was uncomfortable for the taller Rossi and Yelloly.

Try as he might, the Belgian could not erode the gap, and a five-second track-limits penalty further hampered him. Vanthoor finished 12.8s adrift of Engel, and Stolz leapfrogged him for the runner-up spot in the points.

The 2 Seas Merc had lost time with a brake change under a full-course yellow, and it was all Gounon, Maxi Gotz and Fabian Schiller to do to stay on the lead lap. They fell off it late on, but finished in front of team-mates Lucas Auer, Frank Bird and Lorenzo Ferrari. Optimum McLaren trio Rob Bell, Ollie Millroy and



Tyre warmers banned from Le Mans after all for 2024

LE MANS 24 HOURS

The prohibition on tyre warmers in the World Endurance Championship *will* cover the Le Mans 24 Hours after all next year. The prospect of the ban being lifted for a second consecutive season had been raised by series bosses, but it has now been confirmed with the publication of the supplementary regulations for the WEC double-points round.

The text of the Le Mans regulations released last week reads the same as the WEC sporting rules. They state: "Any process that involves a direct or indirect attempt at modifying the temperature of a tyre (compared to the ambient temperature) is forbidden."



accidents in cool ambient conditions. The ACO statement in late May announcing the U-turn for Le Mans said that the lifting of the ban on a one-off basis would give "tyre manufacturers, teams and drivers valuable time to develop better understanding of how to bring cold tyres up to temperature ahead of the remainder of the 2023 WEC season". The new safety car procedure introduced at Le Mans in 2023 has also been tweaked. The cars will no longer be formed up in class groups at the end of the process in what was known as the 'drop-back'. **GARY WATKINS**

Mark Radcliffe took pro-am honours.



WEC boss Frederic Lequien (right) had revealed as recently as the end of last month that the situation at Le Mans remained under review. He explained that further discussions were still required. The rule to prohibit the pre-heating of tyres before they are put on the car proved contentious from its introduction at the start of 2023. It was then brought into focus at the pre-Le Mans WEC round at Spa when its absence was deemed to be a contributing factor in a series of



Hyundai gives Mikkelsen a return

WRC

Hyundai has completed its World Rally Championship line-up for 2024 by restoring Andreas Mikkelsen to the top flight and retaining veteran Dani Sordo.

Mikkelsen, who recently claimed his second WRC2 crown, and Sordo will share Hyundai's third i20 N WRC entry with Esapekka Lappi. Five-time WRC title runner-up Thierry Neuville and 2019 world champion Ott Tanak, who drove an M-Sport Ford this season, will campaign the team's full-time entries.

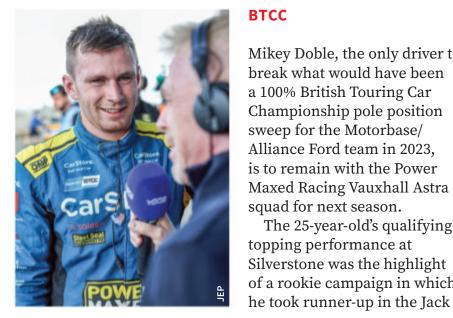
Mikkelsen (above) is no stranger to Hyundai. He drove for the team from 2017-19 following a stint at Volkswagen, where he scored three WRC wins before the German marque withdrew from the championship. The 34-year-old Norwegian has been striving to return to the top level and was considered by Hyundai for a 2023 drive before Lappi's arrival.

"We have a big opportunity in front of us, and we will grab it with both hands and make the most out of it," said Mikkelsen, who has driven a Toksport Skoda for the past three years.

Next season will be Sordo's 11th with the team. "The rallies we will compete in suit how I drive, which gives me confidence," said the Spaniard.

It is expected that Mikkelsen will contest asphalt rounds, beginning with next month's season opener in Monte Carlo. **TOM HOWARD**

Doble doubles up for more in Astra



BTCC

Sears Trophy sub-division and a best overall finish of fifth. Doble was unsure at the end of the season as to whether he could raise the budget for next year, but has pledged to reveal "new partners for the season over the coming months". He again joins Aron Taylor-Smith in the PMR line-up. "I'm confident that we can take the team to a whole new level next year," said PMR boss Adam Weaver, "with Mikey playing a vital role in that." MARCUS SIMMONS

TOP NAMES FOR DACIA

Dacia is taking no chances on the driver front for its 2025 debut assault on the Dakar Rally: it's hired five-time event winner Nasser Al-Attiyah to join nine-time World Rally champion Sebastien Loeb! The Qatari, a long-time Toyota man, will be in a Prodrive-built Hunter for next month's 2024 running. Dacia will undergo a 'test phase' next year of selected World Rally-Raid rounds.

BRIDGESTONE'S FE DEAL

Japanese tyre giant Bridgestone has been appointed as the control tyre supplier for Formula E when the electric series moves to its Gen4 machinery for the 2026-27 season. It will replace Hankook, and has been tasked with producing a 'baseline' grooved all-weather tyre that "must guarantee sufficient grip to ensure safe racing in light rain" and 'typhoon' rubber that will be "mandatory in heavy rain".

SORENSEN STAYS AT ASTON

Three-time World Endurance class champion Marco Sorensen has signed a new multi-year contract to remain with Aston Martin Racing. The Dane, who joined the British marque in 2015, will race for D'Station in the new LMGT3 class in the WEC and is expecting a programme "of more than 20 races in 2024".

FITTIPALDI'S VAR DECISION

Red Bull Junior Enzo Fittipaldi has become the first driver confirmed on board at Van Amersfoort Racing for the 2024 Formula 2 season. The grandson of two-time world champion Emerson Fittipaldi moves across from Rodin Carlin, where he netted his maiden F2 victory this year.

PROTON'S NEW COLOURS

The German Proton Competition team's Porsche 963 LMDh will run in the colours of long-time IMSA SportsCar Championship sponsor Mustang Sampling in next year's series. The natural gas company backed the JDC-Miller Porsche in 2023 and was previously aligned with Action Express Racing. Neel Jani and Gianmaria Bruni have been confirmed for next month's season-opening Daytona 24 Hours.

Mikey Doble, the only driver to break what would have been a 100% British Touring Car Championship pole position sweep for the Motorbase/ Alliance Ford team in 2023, is to remain with the Power Maxed Racing Vauxhall Astra squad for next season. The 25-year-old's qualifyingtopping performance at Silverstone was the highlight of a rookie campaign in which



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WEC/WRC Toyota has unveiled new matching matte black liveries for its GR010 HYBRID Le Mans Hypercar and GR Yaris Rally1 that will compete respectively in the World Endurance Championship and World Rally Championship in 2024. The latest corporate colour scheme replaces the red and white that represented the Japanese flag because, said company chairman Akio Toyoda, there "are many cars with similar colours". The look, according to Toyota, represents 'speed', 'hate to lose' and 'prototype'. **Images by Toyota**

Dennis stakes future at Andretti



FORMULA E

Reigning Formula E champion Jake Dennis has re-signed with Andretti Global on a multi-year deal that will keep him with the American squad beyond 2025.

The 28-year-old Briton, who clinched his maiden FE title on home soil in July, was on a contract that was to third place in the F3 European Championship. He has combined his sportscar and FE campaigns in recent seasons with a role as simulator driver for the Red Bull F1 team since 2018, and this month took part in FP1 for the squad at the Abu Dhabi GP.

While Dennis's lofty height could compromise his prospects, as it did in his F3 days, he is known to be keen on an F1 shot and team boss Michael Andretti rates him extremely highly. "I began my Formula E journey with Andretti, and I'm excited to continue with the team that has supported my career in this series," said Dennis. "The Gen3 era is an exciting time for us with the relationship with Porsche supplying the powertrain, which I won the title with last season. I'm super-motivated for next year." **STEFAN MACKLEY**

ROSEMARY SMITH 1937-2023

OBITUARY

Pioneering Irish rally driver Rosemary Smith has died at the age of 86.

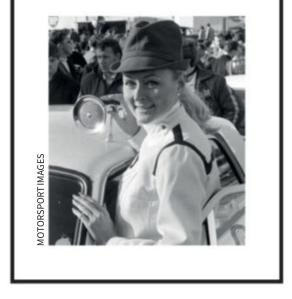
She will be remembered as a trailblazer for women in motorsport thanks to a successful career in which she represented Ford, British Leyland, Porsche, Opel, Lancia and Chrysler Talbot.

Dubliner Smith learned to drive at the age of 11 under her father's guidance and obtained a licence aged 16, defying societal norms. In rallying, she caught the attention of the Rootes Group's Competition Department, which offered her a coveted works drive.

After clinching the ladies' prize at the Circuit of Ireland in 1964, Smith and co-driver Valerie Domleo guided a Hillman Imp to overall victory the following year in the four-day Dutch Tulip Rally.

Smith took on the world's toughest rallies, and was on course for sixth overall on the Monte Carlo Rally in 1971 in a Lancia Fulvia when a co-driver miscommunication resulted in an off-road excursion.

She opened a driving school in the 1990s, and remained active in the sport, entering the Guinness Book of Records in 2017 when, aged 79, she became the oldest person to drive a Formula 1 car with a run in a Renault at Paul Ricard. **TOM HOWARD**



set to expire at the end of 2024. His new deal overlaps with the intended entry of Andretti to Formula 1. The team's application has been approved by the FIA and is now in the hands of FOM, and any acceptance could put Dennis in line for F1 opportunities. Dennis's last full-time, regular single-seater season came in 2016 in GP3, but in 2015 he beat current F1 stars Charles Leclerc, Lance Stroll, George Russell and Alexander Albon

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An apology to Lando Norris

A recent interview with the McLaren driver prompted a need to reflect on previous sentiments, which in turn helped highlight one of his key strengths

ALEX KALINAUCKAS

ando, I'm sorry. In our 26 October issue, this column ended with the line: "Norris must put glory above friendship if he's to have the best chance of ever prevailing." It insinuated that the reason why you didn't fight Max Verstappen

harder in 2023 – particularly at the United States Grand Prix you led early on, but also in the British GP where you did likewise – was down to your off-track friendship.

As the end of a long season approached, there was talk in the paddock about the friendly, jovial relationships between the current crop of racers, and how this contrasts with the pure loathing in generations of old. Shades of that remain, sure, but there are those who feel the tone of modern driver relationships has changed to something very different.

I recalled my post-Austin column while listening to your press pen comments after the Abu Dhabi GP, your response to a question asking: "How will you be able to stop your BFF, Max?" You didn't hold back. "He's not my BFF, don't ever say that again" was the immediate reply. You went on to state that high levels of mutual respect are "as close as it gets" in terms of your relationship.

But the thrust of the hook for this column came after we spoke last week for a season review interview organised by McLaren. I asked you about racing Verstappen in 2023 and offered you a right of reply to my previous column. The rebuke was so deft:

"Not battling people often has gained me a lot more than trying to battle those people"

"Loved that one!" Delivered with all the raised eyebrowness and smile you could cram into a tongue-filled cheek, or perhaps that exclamation mark. at the right time. And actually, not battling people often has gained me a lot more than trying to battle those people. That doesn't matter if it gives the wrong perception out. Because I know I did it for a better reason.

"But I did read the article! Something I would say that you do is kind of question it at the same time. Like you've done now, you kind of question, 'Why would he do that or why would he not?' But people on the outside are too quick to judge again why I wouldn't. [They say], 'Ah it's because he's friends with Max' and all of that stuff. Which couldn't have anything less to do with it. If anything, that makes me want to beat someone more, if I'm friends with them than if I'm not!

"The worst excuse ever is to use that line. It's just I pick my battles when I need too. But we'll race against them next year, so I'm not worried."

But I was left to reflect on a few things. One was on the role of the media in modern F1 and the context in which it operates. In my four seasons in the F1 press corps, I've been struck by the utter entrenchment of certain positions. And for many journalists there's no bringing them out, no matter how calm or reasoned the argument – or indeed those that are not. The ego development, let alone other unpleasantness, is staggering. But I firmly believe that the media must learn and grow – change positions and explain why if so. Hence this column.

Lando, I appreciate that you understand the nuance of what we try to do in our Autosport opinion columns, something this publication has done throughout its 73-year history. But my conclusion on why you didn't race Verstappen harder was wrong. What wasn't wrong was the desire to see you racing him harder in any context.

There's a desire for F1 to return to the close battling of 2021 and early 2022, because such racing inspires joy. You know it, clearly; Verstappen knows too. Your explanations for why you didn't defend harder at Austin or attack again in Brazil are completely understandable. You clearly aren't forgetting the near-1000 people in McLaren's racing division relying on you and Oscar Piastri to deliver the points that can boost the fortunes of your team and therefore its employees' livelihoods. Also clear is your self-reflection, which you said leads to "a lot of my best performances", when others see it as "you shouldn't beat yourself up". It's a vital part of your armoury. But now comes the true challenge for those people who rely upon you. It's up to McLaren and the rest to close the gap to Red Bull. Recapture the magic F1 fleetingly had. Norris vs Verstappen

And then we were both away. You delivered a detailed explanation of your actions, merrily blowing past our allotted timeframe. Thanks to paper's constraints, here are the key takeaways. "There's a reason for things," you began, the grin remaining. "And I think one of those areas where I've done a good job this year is by reading the situations that I'm in, knowing who I'm racing against and who I'm not. Would I have loved to be more forceful and put on a better defence? Absolutely. Like, why would I not? I love racing and that is what I want to do. I don't want to ever give a position up to anyone! Especially not Max! "More often than not, it's just about making the right decision

in F1 2024. Anyone vs Verstappen in F1 2024. Please. 🗱

P28 OUR TOP 10 F1 DRIVERS OF 2023



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Wheel-banging, provided it is not deemed to be inherently dangerous, injects excitement and unpredictability that the genuine motorsport fan wants to see

HUGH WROTH

Nothing wrong with a bit of wheel-banging

It was disappointing that the stewards saw fit to impose a penalty on Sergio Perez following his wheel-banging episode with Lando Norris in the Abu Dhabi Grand Prix, which resulted in little damage to either car.

Formula 1 needs to improve the 'wow', which it has been striving to do for so many years, and these decisions serve only to instigate yet further clinical and negative constraints to ruin the show.

Wheel-banging, provided it is not deemed to be inherently dangerous such as deliberately causing a driver to crash and sustain injury, injects excitement and unpredictability that the genuine motorsport fan wants to see.

The last few laps of the French GP at Dijon in 1979 (right) is a case in point, providing one of the most thrilling finishes to a GP. I don't remember Rene Arnoux or Gilles Villeneuve being handed draconian sentences. This was raw racing, and that is why the 1970s/1980s are held with such affection. FIA take note.

Hugh Wroth

Marlborough, Wiltshire

We have sympathy with the sentiment, but not the example. Perez simply missed the apex and gave Norris nowhere to go – ed

Give F1 rookies more track time

The line in the Pit + Paddock story (7 December, page 4) which read: "[James] Vowles was also appreciative of limited testing and punishing sprint race formats making F1 even less forgiving for newcomers" shows some team managers know that F1 rookies have it hard, given the lack of opportunities outside of F1 weekends to drive the cars. Yes, they have simulators, but there is nothing like being in the car.

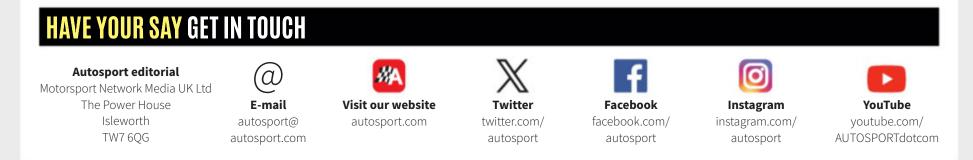
It got me thinking, why not give full-time rookies (and teams' reserve drivers, subject to their level of experience) an extra one-hour practice session before the official first practice session begins. This would be especially beneficial on F1 sprint weekends for new drivers. It would make it a little fairer for



these drivers to have this additional track time. Given that a team may have a rookie full-time driver and a reserve driver, it would mean two cars out in that session as well, so that team will get a double dose of running – an advantage for employing a rookie driver.

Also, the reserve drivers would have an opportunity to drive the car at every event, so if anything happened to one of the main drivers, they have already driven the car, rather than jumping in cold. It would also make it even more worthwhile for the reserve driver to be at the races, rather than just standing around watching. The fans, both trackside and on TV, will also have more opportunity to see cars out on track at race weekends, making it a better experience for them as well.

Yes, there would have to be amendments to the budget cap, tyre allocations and engine allocations etc, but with the multi millions of pounds swilling around F1, this would be a drop in the ocean to enable this to be happen. It might even make teams more likely to gamble on employing a rookie driver, as they know they will get additional running at race weekends. It all boils down to the fact that anything that can help rookies succeed surely has to be implemented. **Michael Skeet** Lordswood, Southampton



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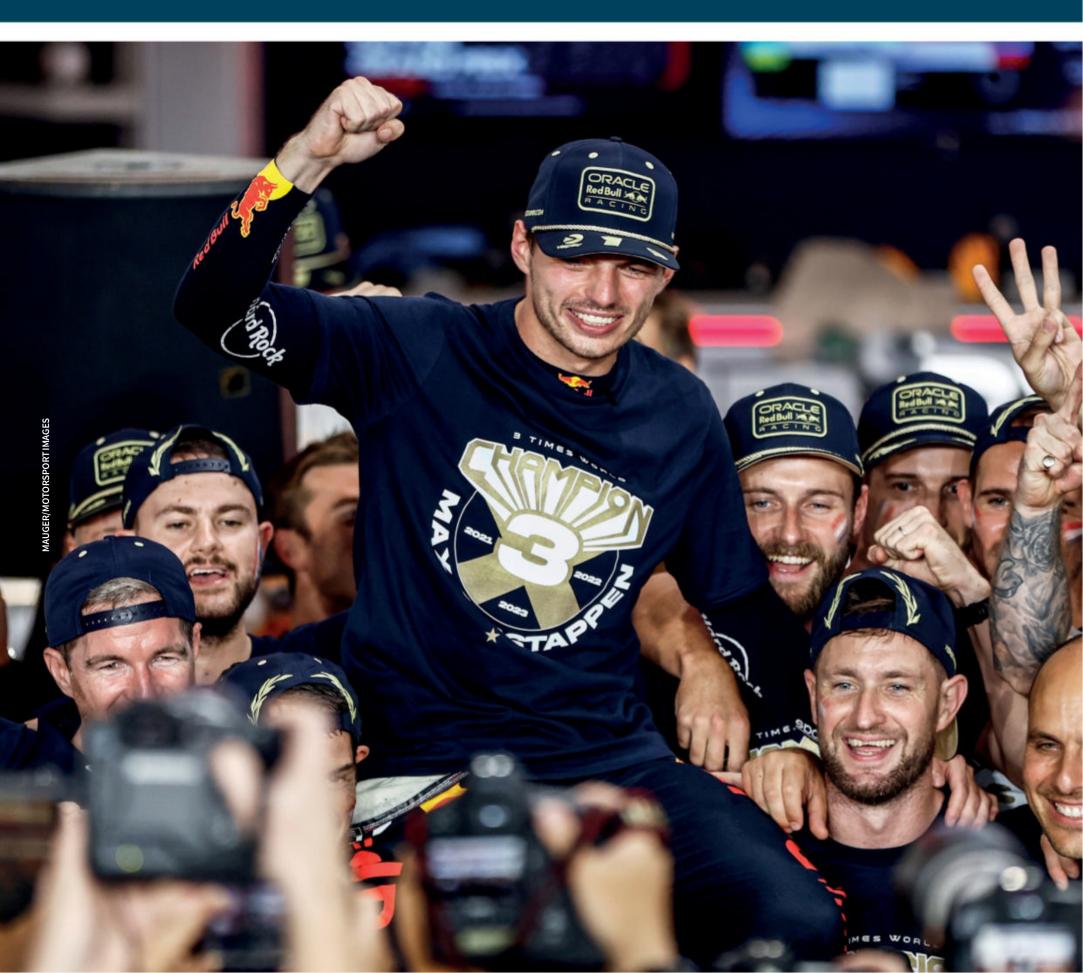
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Max Verstappen, three-time world champion? That was a slam-dunk. But everything else in 2023 was up in the air

F1 season review



lui

Verstappen makes it a one-Bull race

Win records fell as Max Verstappen picked up momentum, in one of the most comprehensive F1 campaigns delivered by anyone – ever Alex Kalinauckas





Bahrain GP

DRAG

1 Verstappen 2 Perez 3 Alonso

The Red Bull RB19 is shown to be so gentle on tyres that it uses the soft compound over the first two stints of this two-stop affair, while the rest go to hards as early as possible. Leclerc jumps Perez at the start, which allows Verstappen to escape. But an engine electrics failure after his second pitstop forces Leclerc out after Perez has battled back past. Alonso rises to inherit third.

verything went perfect." That was how Ferrari driver Carlos Sainz summed up the team's season launch back in mid-February. On that sunny day at Fiorano, Ferrari seemed so confident, so smooth. But barely three weeks later, Charles Leclerc, with Sainz well adrift, had not only been comprehensively defeated

at the very Bahrain venue where in 2022 Ferrari had started off with a win, but his new car had let him down too.

As the Formula 1 teams left Bahrain in the wake of Max Verstappen's first win of an eventual 19, and with a jumbled competitive order behind, the story of the season instead became the question as to whether Red Bull could really win every single race, as Mercedes driver George Russell was soon suggesting.

Testing's only surprises are behind Red Bull

In what now must be viewed as foreshadowing the year to come, the only problem Red Bull faced in pre-season testing at the Bahrain track, which again hosted the season opener, came via Sergio Perez. The Mexican seemed all at sea during a long run on the second morning, regularly locking up and running off track. But, really, that was it for the reigning constructors' champion squad. On the final evening of the three-day event, Perez topped the test with a series of one-lap performance runs.

Behind, Aston Martin emerged as the dark horse. An eyecatching late long run even had some forecasting the green team to be bothering Mercedes in the pecking order behind the two leading squads from 2022. That actually turned out to an underestimate. It was soon to be revealed that the 2023 grid was shaped very differently, and this had much to do with Ferrari and Mercedes persevering with the design paths they'd employed to less success than that of Red Bull the year before.

Testing, Leclerc said, had shown that Ferrari was "struggling a little bit more in the corners", after it had headed Red Bull on the cornering-speed front in 2022. Ominous.

Ferrari falters as Aston surges

The engine electrics issue that had knocked out Leclerc from a certain third place in the Bahrain opener then had a knock-on impact for round two in Jeddah. The Monegasque needed his control electronics unit replacing for the second time in a week ahead of the Saudi Arabian race. This meant Leclerc was penalised from qualifying second – appearing yet again very fast, but fragile - to start 12th. He'd actually been beaten to pole by Perez, fastest

in Jeddah qualifying for the second year running. But this was no dominant performance, as Verstappen was absent from the pole fight thanks to a driveshaft issue in Q2.

In the race, Perez got off to a second poor start in a row (he'd lost in Bahrain largely thanks to falling behind Leclerc off the line), while Alonso shot forward and led the early laps. The Aston Martin was soon overcome by Perez's straightline advantage, and was also at the forefront in an early-season rules saga.

In Bahrain, Alpine's Esteban Ocon had been penalised for lining up too far over in his grid box. In Jeddah, Alonso was guilty of the same thing. So, in Australia, the FIA trialled a central 'guide line' paint marking, but critically widened the grid boxes by 20cm, and this issue did not crop up again.

Alonso kept his third place from Jeddah after Aston successfully argued its case over its pitstop penalty actions, while Verstappen had roared up through the field with relative ease to come home second to Perez. There had been tetchy radio exchanges across the two cars and the Red Bull pitwall over late race pace and fastest lap attempts. But the end result of Perez's win meant he left Jeddah just one point off the drivers' standings lead thanks to Verstappen's bonus point.

"At the moment," said a contented Perez, "I am feeling very comfortable with the car."

Verstappen dashes Perez hopes of a title fight

"Certainly, coming out of Bahrain, we felt, 'We've got a really good package here'," Red Bull team boss Christian Horner would later tell us of the early stages of 2023. "But it's only when you've had a sample of two or three and you've gone to a couple of circuits that have been more troublesome, certainly for us the previous year, like Melbourne for example, that suddenly you're thinking, 'OK, no, this is really together."

That was exactly how Verstappen's squad felt once he'd triumphed in round three in Australia, where his car's straightline speed edge helped him power back past the Mercedes pair that had muscled ahead on the first lap (the first red flag actually got Verstappen back ahead of unlucky early leader Russell).

That race ended in chaos following two more red flag periods. Perez, who had slid out on his first Q1 lap thanks to his brake balance moving unexpectedly, avoided being caught up in the late third standing start crashfest, his rise to fifth place from a pitlane start coming thanks to the Red Bull's potent DRS advantage.

Red Bull's two drivers exchanged scruffy weekend performances next time out in Baku, where Leclerc bagged a pair of poles for the season's first sprint weekend but wasn't a victory contender in »





Saudi Arabian GP 1 Perez 2 Verstappen 3 Alonso

A driveshaft failure leaves stomach bug-addled Verstappen starting 15th. Polesitter Perez gifts the early lead to Alonso, who is penalised for lining up too far left. Perez powers back past before a safety car period boosts Verstappen's recovery. He then passes Russell and Alonso, and chases Perez. A post-race Alonso penalty for a jack touching his car during his first stop later gets rescinded.

Australian GP

1 Verstappen 2 Hamilton 3 Alonso

Russell and Hamilton jump Verstappen on the first lap before he starts a recovery, boosted by Albon's crash as Mercedes pits Russell before a red flag. Verstappen easily overcomes Hamilton with DRS at the restart before dominating. Debris from Magnussen's wallstrike causes a second stoppage, with chaos at the next restart leading to more reds and a final order from start three minus the fallers.

Azerbaijan GP 1 Perez 2 Verstappen 3 Leclerc

Perez wins the year's first sprint race ahead of double polesitter Leclerc, while Verstappen and Russell tangle then argue. The Red Bull pair, with Verstappen starting ahead, jump Leclerc early in the GP before a de Vries crash is covered by a safety car just after Verstappen pits. He then has to repass Leclerc and can't catch his team-mate, despite a late Perez wallstrike.

F1 season review



either race. In the first, Verstappen tangled with Russell, partly thanks to the Mercedes driver's resolve at Turn 2, and was furious about the sidepod damage that ensued, leading to an unedifying exchange in parc ferme.

Then in the GP, Verstappen led Perez past Leclerc before unfortunate pitstop timing around the safety car meant their positions were effectively reversed. And try as he might, Verstappen couldn't find a way by, a late Perez wallstrike actually making his car "somehow pick up a bit of front end".

Behind, Verstappen was making deliberate alterations to his steering wheel brake bias, differential and engine braking settings to try to improve his car's balance. He would later credit this with putting him in "a good rhythm", since it meant he knew what starting set-up positions to select on these 'tools' to recapture that feeling for the opening laps of subsequent weekends.

Verstappen then immediately brought what he felt was a clear set-up gain to bear in the following Miami round. There, Perez started on pole, after Verstappen's mistake on his first Q3 run was compounded by Leclerc crashing, meaning no one else could improve. But by lap 15 of that contest, it was clear that Verstappen was in victory contention as he had another serene run from a lowly starting spot, this time ninth.

"I was also quite careful in my way moving back forwards, because it was a lot about just collecting points," Verstappen would say of his various 2023 comeback drives.

Horner reckoned that Perez's Miami defeat was "a big psychological blow for him", and that the confidence from



those Saudi and Baku wins had "started to disintegrate" by the time F1 headed back to Europe.

This run of races should have started with the Emilia Romagna GP at Imola, but horrendous flooding killing 15 people and displacing over 50,000 others meant the race was cancelled. F1, which had dithered in uncannily similar circumstances over the 2020 Melbourne race at the start of the COVID-19 pandemic, was praised for its swift decision-making in calling off what would have been the sixth of 23 planned rounds.

The championship headed onto Monaco, where McLaren ran a livery tweak homage to the team's 'Triple Crown' successes. But the real intrigue in the Principality came via Perez and Alonso.

First Perez crashed, "caught by surprise, just getting that rear out of shape" at Ste Devote in Q1, which meant Red Bull's rivals got a nifty look at the RB19's complex underside as the wreckage was craned away. He therefore started last and eventually finished a twice-lapped 16th after various clashes in the pack.

Verstappen won yet again, but needed what Horner called a "final sector that was something that you don't witness very often" to pip Alonso to the critical pole position, effectively sealing

Race by Race





Monaco GP

1 Verstappen 2 Alonso 3 Ocon

Aston's gamble to start Alonso on hard tyres

backfires when polesitter Verstappen's mediums

When it finally arrives, Aston misreads the weather

last better as rain threatens from mid-distance.

and puts Alonso on mediums, before he's forced

later. Ocon survives the attentions of Sainz, then

Hamilton to convert third on grid to the podium.

to stop for inters well behind Verstappen a lap



Miami GP

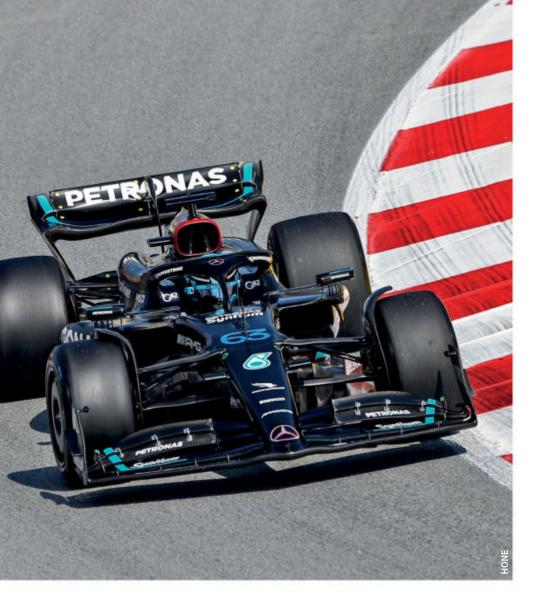
1 Verstappen 2 Perez 3 Alonso

Leclerc's Q3 crash and Verstappen's error on the first runs leave the Dutchman starting ninth and Perez on pole, but by lap 15 they run 1-2. Verstappen's gamble of starting on hard tyres pays off as Perez takes it too easy on first-stint mediums. Verstappen cycles to lead when Perez stops, then passes him quickly when finally on the mediums. Alonso easily seals a lonely third.

Spanish GP 1 Verstappen 2 Hamilton 3 Russell

Verstappen forcefully sees off Sainz at Turn 1, then dominates on medium tyres, hards and softs although hates his second-stint balance and ends up in danger of a track limits penalty. Far behind, Hamilton takes second after surviving a first-lap Norris clash, then fighting past Stroll and later Sainz. Russell puts in a pass-fest to rise from 12th to third and hold off the similarly rising Perez.

The story of 2023



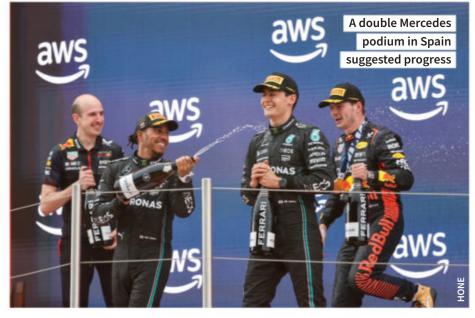
victory a day earlier than normal. But that sixth Red Bull win of 2023 might have gone begging anyway had Aston not erred in putting Alonso onto medium tyres just as rain was intensifying late on in the race.

"It's better than I could have ever imagined, for sure," Verstappen said after beating Sebastian Vettel's record 38 wins for Red Bull.

Ferrari and Mercedes redesigns steal focus

Mercedes, said team boss Toto Wolff, had realised back in Bahrain that the W14 wasn't "going to be competitive eventually". Lewis Hamilton had felt "immediately that it wasn't a championshipwinning car" when he first sampled it at Mercedes' pre-testing shakedown. But, unlike Ferrari, Mercedes publicly confirmed that it would make big design changes to adopt Red Bull's downwash sidepod concept after the Bahrain race.

This was slated to arrive at Imola, but obviously had to be pushed back to Monaco. Wolff declared the update package to be merely "not good" rather than the "awful" experienced there in 2022, but in Spain Mercedes' form was transformed.



It was not Red Bull-toppling – Verstappen comfortably won again – but it was better. Hamilton ended up second, while Russell made an even more impressive rise than Perez from their 11th and 12th-place starting spots to take third ahead of the second Red Bull driver, who was by this stage 53 points back in the standings.

Perez was rueing another poor qualifying showing – as was Leclerc. The Ferrari driver had been knocked out in Q1 and blamed his aggressive driving style working against him on the sensitive tyres, mixed with drying conditions. This was a factor that he said would also hamper him in Canada, before he got on top of it to be able to inherit pole at Spa with Verstappen's penalty. Russell's Barcelona starting spot was down to a Mercedes miscommunication regarding the run plans he and Hamilton were executing, leading them to clash on the long Barcelona pitstraight.

At this race, Ferrari revealed that it too had been working to adopt the downwash sidepod principle. This was something of a surprise after team boss Fred Vasseur had said after the Australian GP that his squad had ruled out "a B-car". But even with the changes, Sainz struggled badly after challenging Verstappen at the first corner, thanks to Ferrari's ongoing woe with in-race tyre wear – another factor from 2022 that carried over into the new season.

Perez's slump drags on...

Verstappen gave Red Bull it's 100th GP triumph in Canada. But Perez could only rise to sixth after he again underwhelmed in the tricky, changing conditions in qualifying. There followed two more Q2 exits in Austria and Britain, and then Perez could only »



Canadian GP

1 Verstappen 2 Alonso 3 Hamilton

Verstappen takes Red Bull's 100th GP win. He leads Hamilton after Alonso's poor start before all three stop for hard tyres under the safety car triggered by Russell's solo crash out of fourth. Verstappen finds these hard to warm, but still pulls away as Alonso repasses Hamilton. Verstappen is happier back on mediums, while Alonso nurses a fuel system worry to the end ahead of Hamilton.

Austrian GP

1 Verstappen 2 Leclerc 3 Perez

Verstappen wins the sprint after seeing off some feisty Perez attacks on the wet first lap. In the GP, he does likewise against Leclerc, albeit in the dry, before an early safety car for debris. Ferrari then stops its cars under a VSC, which means Verstappen has to repass them in the second stint. He then insists on a third stop to snatch the fastest lap from the recovering Perez.

British GP

1 Verstappen 2 Norris 3 Hamilton

Norris sensationally jumps Verstappen at the start before the Red Bull inevitably repasses and pulls clear, as clouds gathering pre-race put the leading teams off starting on soft tyres. Verstappen gets these by pitting just past halfway under a safety car that wrecks Piastri's challenge for third and makes Hamilton's. He pressures the hard-shod Norris after the restart but can't find a way by.

F1 season review



manage to qualify ninth in Hungary after messing up sector one on his last Q3 effort.

He blamed this poor streak on "how I was setting up the car", and not understanding "which direction I need to go when I get issues". But it all left him needing to recover up the order time and again, and meant he arrived in Belgium on the eve of the summer break with a 110-point deficit to his team-mate and his title hopes all but over.

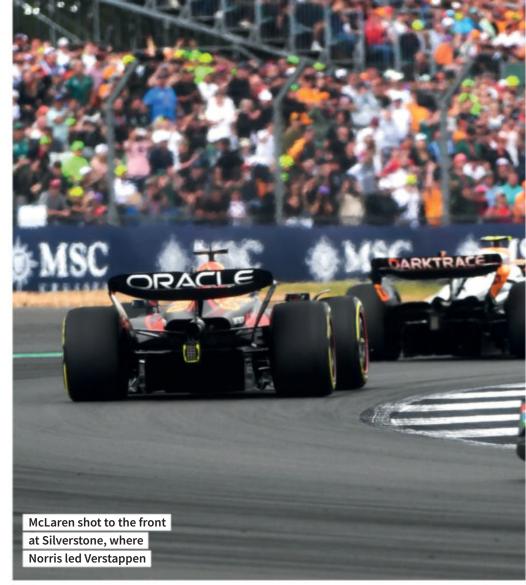
Perez had at least shown good fight in attacking Verstappen early in the wet Austrian sprint race, their battle so fierce that Verstappen swore over the team radio before they smoothed things out ahead of facing the media.

Perez did finish second at Spa, but this was again another crushing blow. Verstappen had started sixth after a gearbox change penalty but, by the end, and around an almighty save at Eau Rouge during a mid-race sprinkling of rain, he had put 22 seconds over Perez on what is still one of F1's most challenging tracks. The points gap was up to 125.

...as Aston's starts and McLaren's ends

Mercedes' Spanish GP form had not lasted, and it had become another theme of 2023 that no one other than Red Bull was able to maintain a consistent challenge for the podium positions.

Aston and Alonso were second again in June's Canadian GP, where Russell's crash while chasing the podium places early on ended his very strong early season run. Indeed, it really took until his third place in the Abu Dhabi finale before Russell looked so



composed again, albeit his Qatar race had been undone by Hamilton's mistake at the start.

Montreal proved to be a key moment in Aston's season. The team had introduced floor and sidepod changes that it later felt were "not the right choice", according to team principal Mike Krack. And it was around this time that Aston insiders admitted it had made changes in response to the FIA's early flexi-wing probing, although it wasn't accused of doing anything illegal.

Next time out in Austria, Ferrari scored only its second podium of the season (following Leclerc's third place in Baku). Leclerc was second at the Red Bull Ring, boosted by a pitstop under the virtual safety car, but looking confident with Ferrari's front wing and front floor upgrade, and therefore tyre wear too. This also led to strong race pace from Leclerc at Spa, but by now McLaren had suddenly surged into position to bother Red Bull.

The reasons behind this were twofold. First, the orange team's comprehensive Austrian GP update in July transformed its pace potential and season. Plus, Silverstone and the Hungaroring featured little of the slow-speed stuff the MCL60 detested. Lando Norris even briefly led his home race before Verstappen powered

Race by Race



Hungarian GP 1 Verstappen 2 Norris 3 Perez

Expectations of a 2021-style fight are lost instantly when Verstappen easily passes shock polesitter Hamilton at Turn 1, where the Mercedes falls behind Piastri and Norris. Verstappen romps clear, while McLaren's protection of Norris from a Hamilton undercut and his out-lap speed get him past Piastri. Perez's speed on a contra hard-medium strategy aids his rise past Hamilton and Piastri.

Belgian GP 1 Verstappen 2 Perez 3 Leclerc

Verstappen wins the rain-shortened sprint, with Hamilton dubiously penalised for Perez contact. Leclerc inherits GP pole due to Verstappen's gearbox-change penalty. He rises from sixth to chase Perez in front of Leclerc before the first stops. Verstappen nails his team-mate and dominates, while Leclerc's race pace on the two-stopper allows him to drop Hamilton.

Dutch GP 1 Verstappen 2 Alonso 3 Gasly

In the first of two rainstorms, Perez pits on lap one. Polesitter Verstappen emerges behind his team-mate and others following a lap-two stop for inters, catches Perez, undercuts him going back to slicks, then heads clear. A late stoppage for a deluge ensues, with Perez among the spinners. Alonso threatens Verstappen at the restart; Gasly sticks with pitlane speeder Perez to inherit third.



past to win the sixth of a record-breaking 10-race run.

Mercedes was also inconsistent and surprisingly fragile in one key area. Hamilton scored an impressive pole in Hungary but, at the same race, Russell said he and Mercedes "made a big cock-up" by putting him out in Q1 traffic. Then, next time out at Spa, the pair got in each other's way in sprint qualifying thanks to Mercedes misjudging its cars' on-track positions.

But, more than these odd operational issues, Mercedes was lacking against McLaren on the high-downforce tracks. History suggested that Perez would also struggle at such venues compared to Verstappen, making life easier for the Dutchman.

Sainz's purple patch ends Red Bull's run

On the return from the summer break at Zandvoort, Verstappen won a dry-wet-dry-wet thriller at Zandvoort, where Alonso's adaptability was key to Aston getting back on the podium for the first time in five GPs. Perez, meanwhile, spun, hit the pitlane wall and got caught speeding in the pits.

But there was another eye-catching performance in the pack behind. This was Sainz's battling run to fifth, which at the time

The story of 2023



he rated as "one of my best drives of the season". The Spaniard followed this up with a sensational Monza pole ahead of Verstappen and Leclerc with something Ferrari had been working on, and explained its poor cornering speed in Bahrain.

This centred around a bid to cut overall drag with differing wing approaches. In Italy this was combined with an even slenderer rear wing that Ferrari senior performance engineer Jock Clear described as "bespoke" for Monza's straights. Sainz led the early stages of Ferrari's home race, but Red Bull's slightly bigger rear wing (still its smallest) meant Verstappen could enjoy strong speed in Monza's few high-speed corners, to stay in DRS range and also keep his medium tyres alive.

He eventually squeaked ahead and went on take that 10th straight win, with Perez following him up to second from a fifth-place starting spot. Leclerc threw everything at beating his team-mate to the final podium spot but was rebuffed.

Vasseur said that Sainz's focus on rapid pace "from lap one in FP1" had boosted him at Zandvoort and Monza, and it would do so again when he took pole in Singapore. Here, Red Bull's streak was finally cracked, that winning-all-the-races question answered.

The bumpy surface and the benefits from riding kerbs on the slow-speed Marina Bay turns was a combination that thwarted the RB19. Red Bull compounded its struggles with mistakes on floor and ride height, and Verstappen and Perez could qualify only 11th and 13th, and race to fifth and eighth.

Up front, Leclerc sacrificed his strategy to aid Sainz. Once Leclerc had been sent tumbling during the pitstops under the »



Italian GP 1 Verstappen 2 Perez 3 Sainz

Polesitter Sainz leads the early stages with Ferrari's bespoke low-downforce package, and rebuffs Verstappen repeatedly before his higher rear-tyre wear allows the Red Bull to finally muscle in front. After his pitstop, Perez fights his way past both Ferraris as they overtake cars on the contra tyre strategy. The red cars then engage in a thrilling and savage fight in which Sainz edges Leclerc.

Singapore GP 1 Sainz 2 Norris 3 Hamilton

The race of 2023, with Red Bull missing the RB19's ideal set-up on the bumpy street track. Leclerc soft tyres gets him past Russell and up behind Sainz, who controls the pace. Sargeant's barrier biff brings out the safety car and stuffs Leclerc. Sainz then backs up Russell, but a VSC means Mercedes pits both cars. They chase, but Sainz's gift of DRS to Norris pays off before Russell crashes.

Japanese GP 1 Verstappen 2 Norris 3 Piastri

The McLaren drivers swamp slower-starting Verstappen at Turns 1/2, but he prevails then checks out around a safety car and VSC period – the first caused by start chaos in the pack, the other by a poor Perez move on Magnussen. Piastri undercuts Norris with a first stop under the VSC but loses due to his inferior tyre management. Leclerc threatens in fourth but fades late on. safety car, Sainz controlled the pace ahead of Russell. When Norris got up to second, Sainz cannily gave the McLaren DRS to protect himself against the Mercedes pair, now charging on medium tyres.

"I want to thank everyone in Ferrari for making this huge effort to turn around and manage to win this season," Sainz said before receiving his second F1 winner's trophy.

Rule sagas don't hurt Red Bull this time

Ahead of Singapore, the FIA revealed that the 2022 cost cap had been met by all 10 teams. So there was no repeat of the saga that left Red Bull facing a \$7million fine plus a 10% year-long reduction in aerodynamic testing for breaching the 2021 cost cap.

Verstappen reckoned Red Bull was therefore "a bit more limited" on car development through 2023. But the other intrigue through this period came from the two technical directives that finally came into force for Singapore, clamping down on flexi wings and floors. Was this the real reason for Red Bull's sudden slump?

Horner bombastically declared that "it's not changed a single component on our car", then the Suzuka round revealed that the RB19's gap to the rest – at some points during the year, such as in Canada, this was reduced when Red Bull struggled to hit the best tyre operating windows – was back to its general huge margin.

Verstappen was so good he beat off a brief threat from Norris by 19s. Perez retired twice, so he could serve a penalty for biffing Kevin Magnussen a week on from doing likewise to Alex Albon.

Verstappen crowned early again

F1 next made its return to the newly resurfaced and upgraded Qatar circuit. After the opening day of running, however, it was discovered that the Pirelli tyres couldn't stand repeated blows from the track's new pyramid-shaped kerbs, thanks to the cars hitting such high speeds at the long-standing MotoGP venue.

Verstappen sealed the 2023 title in the sprint race that weekend after Perez was eliminated in a three-way crash with Esteban Ocon and Nico Hulkenberg, while Oscar Piastri won an entertaining contest from pole. Red Bull, wary of soaking its pitbox surface the evening before the GP, had to take its energy-drink-soaked celebratory pictures away from its garage.

With stint lengths mandated in the GP thanks to the tyre concerns, a predictable three-stop affair played out. Verstappen won again, after the two Mercedes collided at Turn 1 and McLaren asked Norris to hold back from attacking Piastri. The Woking team completed the podium at a track where Norris believed it had its best chance to win all year.

That left five dead rubbers, all of which Verstappen nevertheless



scooped up. But he was tested in all of them bar Mexico, where he had to pass the Ferraris at Turn 1 before Perez crashed out, and in the Abu Dhabi finale, where Leclerc had to be resisted three times during the opening lap.

At Austin, Hamilton (later excluded) surged thanks to a Mercedes floor upgrade on a day when Verstappen grappled with a brake problem, but was pleased that Red Bull had finally made progress on its year-long start inconsistencies, while in Brazil Norris mounted a surprise attack at the restart after a red flag.

But it was F1's Las Vegas return that had Verstappen tested the most. Leclerc lost a likely win when Russell's clash with the world champion, who was penalised and running down in the pack for having the polesitting Ferrari off at Turn 1, meant a race-changing safety car. Verstappen battled back and thrillingly got ahead of Leclerc and Perez, who lost second on the final lap to a driver who was leading Ferrari again in the wake of its Suzuka floor update, which gave Leclerc the oversteer balance he loves.

Ahead of a brutally long trip to Abu Dhabi a week later, where the seeds of early off-season political tension were sown, F1 reflected on how the entertaining Vegas race had saved the championship's blushes at an event where the track breaking up eventually led to spectators being kicked out on the first day and a lawsuit launched. "Today was fun – that's the only thing I want to say about it," Verstappen concluded.

His tirades against the off-track elements of the penultimate race were Verstappen's most vocal statements across a year where he also raged against the sprint race idea and how that might one day impact his participation at the pinnacle of motor racing. *#*





Qatar GP 1 Verstappen 2 Piastri 3 Norris

Verstappen's third crown is sealed in a lively sprint won by polesitter Piastri after Perez crashes out. The GP is a unique affair due to the tyres being unable to run for too long over the track's new kerbs. Mandated stint lengths of 18 laps on the remaining rubber are installed, with Verstappen leading Piastri once the Mercedes drivers collide at Turn 1. Norris battles his way to third from 10th.

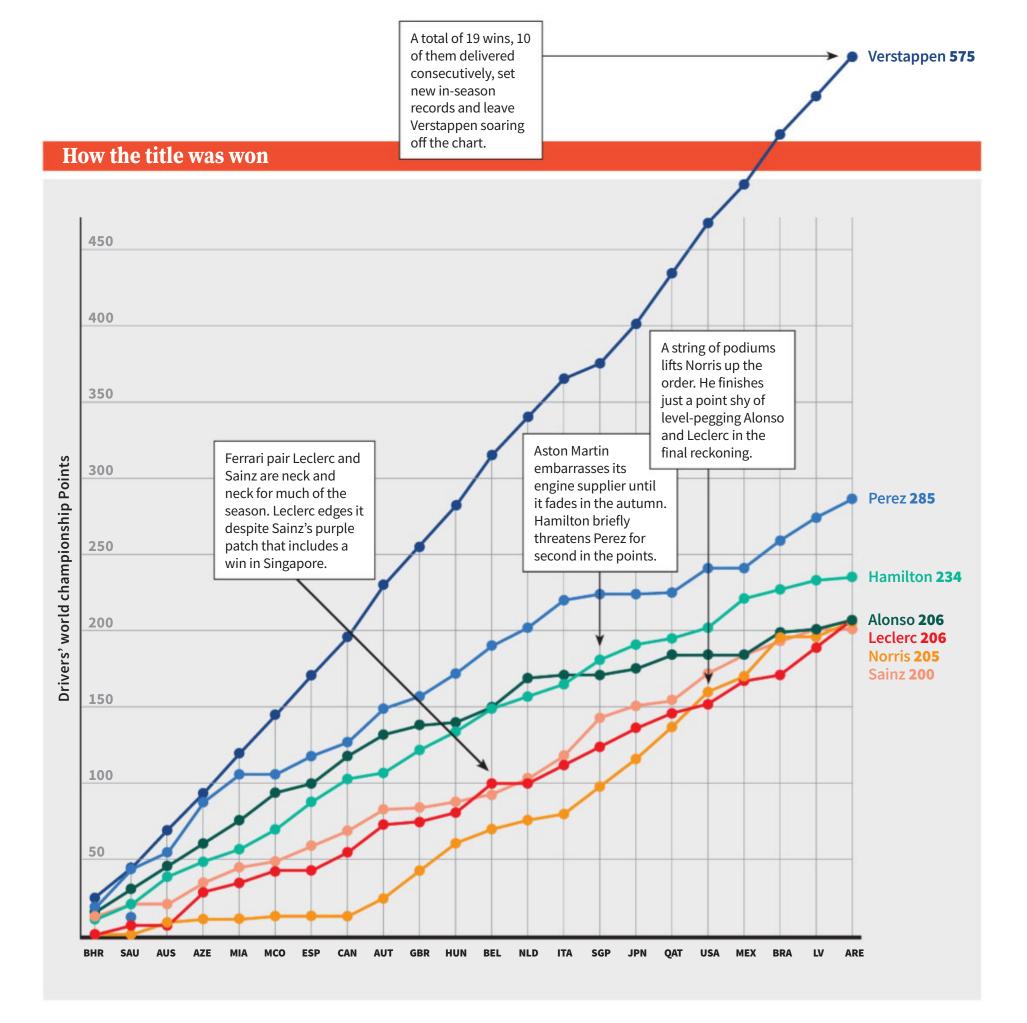
United States GP 1 Verstappen 2 Norris 3 Sainz

Verstappen dominates a lifeless sprint race after an aggressive chop on Leclerc at the start. In the GP he starts sixth after a Friday qualifying track-limits transgression, but still wins thanks to his car's superior tyre degradation – despite a brake problem. Norris leads early on but fades, with Hamilton charging and nearly mounting a late lead attack. He and Leclerc are disqualified post-race.

Mexican GP

1 Verstappen **2** Hamilton **3** Leclerc

Verstappen passes both Ferraris on the run to Turn 1, where Perez is eliminated by turning in on Leclerc with Verstappen inside. Leclerc rallies in a damaged car, but Verstappen's two-stop strategy works either side of Magnussen's race-stopping crash. In the second half, Hamilton boldly passes the hard-shod Leclerc on the better mediums and chases Verstappen before opting to cruise home.









Brazilian GP

1 Verstappen 2 Norris 3 Alonso

Verstappen wins the season's final sprint after jumping polesitter Norris. In the GP, Leclerc's car fails on the warm-up lap, Albon and Magnussen then crash. Norris's mega first start moves him up to second, and he has one passing attempt on Verstappen after the restart. Mercedes has a shocker, while Alonso's brilliant final-stint defence then attack on Perez steal the headlines.

Las Vegas GP 1 Verstappen 2 Leclerc 3 Perez

Verstappen pushes polesitter Leclerc off at Turn 1 and is penalised, but the Ferrari gets back in front with better first-stint tyre degradation. Leclerc's tyre advantage for second stint is undone when Russell hits Verstappen and the safety car appears. Perez and Leclerc exchange the lead before Verstappen powers past both, then a Leclerc error gifts Perez second. He retakes it with a great last-lap pass.

Abu Dhabi GP

1 Verstappen 2 Leclerc 3 Russell

Leclerc attacks polesitter Verstappen three times on the opening lap but is easily rebuffed. Verstappen takes it easy in the first stint on medium tyres, then dominates once on hards for stints two and three. Leclerc hands second on the road to Perez, who has a penalty for hitting Norris. Because Russell sticks close to Perez, he moves up to inherit third behind Leclerc.



The jostle behind the champion

The can only be one choice for the top spot after such a season. But the rest of our top 10 proved much harder to decide Jake Boxall-Legge and Alex Kalinauckas



A surprise? Perhaps, but the German has earned his place, despite having to struggle with a severely flawed car, thanks to a series of strong qualifying efforts and pouncing on opportunities across the races in which

long-awaited podium. And, without a red-flag infringement in qualifying in Montreal, he'd have started on the front row alongside Max Verstappen. Austria was the highlight, with two



Haas was not so severely hampered. There was rust to shake off after three years out, save for a handful of COVID-enforced cameos for Racing Point/Aston Martin, but Hulkenberg immediately broke into Q3 in his first race back in the saddle in Bahrain.

A shame, then, that Haas's 2023 car was completely incompatible with the Pirelli tyre range, ensuring that the VF-23s would regress in race trim. His defensive efforts in Australia were excellent while warding off Lando Norris to claim a season-best seventh; had the last-gasp madness shaken out differently, he was within a sniff of a stunning qualifying efforts to secure eighth for the grand prix and fourth for the sprint. In the latter, he climbed to second before stabilising in sixth to show what Haas could be capable of, were it not so rubber-hungry. Overall, the stats don't lie: Hulkenberg outqualified team-mate Kevin Magnussen by 15-7 and outraced him by 13-9. Having chosen to roll back to the initial car design instead of persisting with the Austin upgrades, Hulkenberg put his car eighth on the grid for the Abu Dhabi finale, outqualifying Sergio Perez and Pierre Gasly. JBL

Top 10 drivers

9 Oscar Piastri + NEW ENTRY

Remember how Piastri arrived in F1 under substantial pressure following the court case over his 2023 services last year? Well, not that and little else seemed to faze the 22-year-old, who demonstrated wisdom beyond his years across his first campaign.

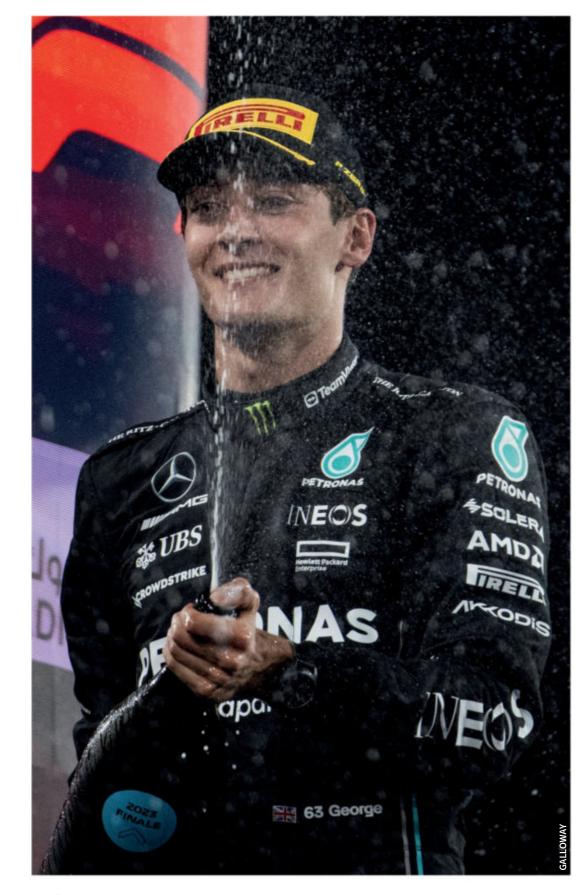
During McLaren's struggles early in the season he showed enough pace to have Lando Norris declaring that "he's keeping me on my toes" after just three races, and Piastri scored his first points with a fine drive on home turf in Melbourne. This was followed by him successfully battling a severe stomach bug in Baku, but just missing out on more there.

Down moments included a lack of pace in the Monaco rain, a late off under pressure from Alex Albon in Canada, a corner-cutting pass on Liam Lawson late on in Italy, and his overly optimistic part in the Turn 1 crash with Carlos Sainz at Spa.

What impressed McLaren was his coolness to avoid "unnecessary stress", as team boss Andrea Stella put it, his technical feedback, and how quickly he learned and adapted on the tracks he had never raced at before. The orange team was particularly pleased by his stunning performance to qualify second on the unforgiving Suzuka layout.

Piastri's highest points ended up being sprint races – his early lead in the changing conditions at Spa, then winning the entertaining contest in Qatar, where he was intelligent enough to clean his off-line GP grid position while taking victory. He couldn't replicate Norris's highlights in grands prix, thanks largely to his overall inferior tyre management, but you sense he's so smart that this weakness won't remain for long. **AK**







This was hardly Russell's best year in F1. His second season at Mercedes yielded multiple mistakes amid his self-imposed pressure to perform. Russell and team-mate Lewis

Hamilton. There was a smidgen of ill fortune among that run; at Zandvoort, his impressive third on the grid was undone by the decision to stay out on slicks. Singapore

Hamilton were level in qualifying across the season, but the elder Briton was overall stronger in race trim. While Russell had been in the better qualifying form at the start of the year, outperforming Hamilton four times at the opening five rounds, he often fell behind in the races. His recovery from 12th on the grid to take third in Spain was an early-season highlight. This was followed by an unforced error in

Montreal, where Russell slid into the wall on the exit of Turn 9, causing ultimately terminal damage. He then had a run of results where he was largely outclassed by was the biggest blot on Russell's copybook, when his efforts to claim the sole non-Red Bull win of 2023 ended in the barrier on the final lap of the race.

Late-season highlights included his recovery to fourth after being struck by Hamilton in Qatar, and his season-ending podium in Abu Dhabi to help Mercedes clinch the championship runner-up spot. Regardless, Russell was too often his own worst enemy, and arguably tried too hard to get a tune out of an often-recalcitrant W14. He'll have to chalk this up as a character-building year. JBL

F1 season review



Carlos Sainz NO CHANGE

For so long he was ahead of his team-mate in our ranking, mainly thanks to his impressive consistency with the peaky Ferrari SF-23 in the first half of the season and then that glorious purple patch after the summer break. But 2023 ended on rather a down note, just as Charles Leclerc really was taking the fight to Red Bull.

Let's start with the good stuff, because it really was top-drawer. Sainz led the line for Ferrari with his calm and methodical approach when Leclerc was erratic in the early rounds, the Spaniard unfortunate to be so harshly penalised at the end in Australia given the small mistake he made in tagging Fernando Alonso was obliterated by the race's third red flag. But what was really impressive was how, post-summer break and Ferrari's much changed design coming on-song over longer stints, Sainz added searing qualifying speed to his armoury. He made massive efforts to be on top form over one lap early in weekends, and this was key to his pole at Monza, and battling



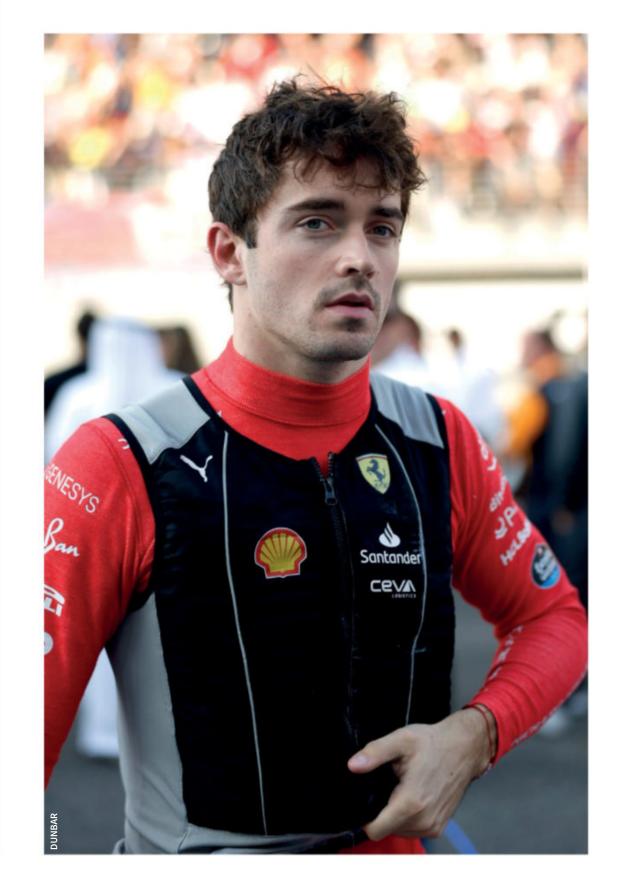
The first part of 2023 was, by all accounts, pretty dismal for Leclerc. A strong run to third in Bahrain was derailed by powertrain troubles, and Ferrari's electronics issues persisted in Saudi Arabia to force an early 10-place grid penalty to knock him out of his front-row start. The first-lap Turn 3 clash with Lance Stroll in Australia, however, was of Leclerc's own making.

A resurgence in Baku looked to have kickstarted his year, with pole in both the sprint and grand prix, and he grabbed podium finishes in both. But he crashed in qualifying at the Miami round, and his hometown hoodoo continued at Monaco with a three-place grid penalty, which denied a potential podium.

Finishing second in Austria was impressive, while his Spa pole arrived by

default thanks to Max Verstappen's grid penalty on a weekend when Leclerc moved above Sainz in the points.

Summer changes to the SF-23 worked in Sainz's favour more, and Leclerc was outclassed in Monza and Singapore by his team-mate, but the Monegasque's season started to come together in the final quarter. He took three poles in the last five races and could have realistically won in Las Vegas, although this strong run of form was interrupted by his failure to start in Brazil and his plank-enforced disqualification in the US GP. Regardless, Leclerc had been the better of the two Ferrari drivers since Sainz's Singapore win, and showed his growing tactical awareness in Abu Dhabi in Ferrari's attempt to wrest second in the constructors' championship. JBL



drives there and at Zandvoort.

Come the end of the year, he slipped behind Leclerc again on both qualifying and race fronts, for example being unable to match his pace despite the other Ferrari having front-wing damage in Mexico, and his Abu Dhabi practice crash knocking his weekend off course. It was a tiny margin, yet he just ended up behind in our thinking. But what shouldn't be forgotten, of course, was how brilliant he was to win in Singapore. Rapid in qualifying to claim another pole, then flawless in a complex race, particularly in thinking to give Lando Norris DRS as the pair of Mercedes bore down on them. **AK**

Top 10 drivers





Get ready for some stats. Across the 28 sprint shootout and GP qualifying sessions in 2023, Albon defeated his Williams team-mate Logan Sargeant a perfect 28-0. Then in races they both completed without retirements altering the picture, Albon's Both team and driver are pleased with the deep connection they've formed in the past two years, with Albon's polite but determined nature – backed up with fierceness when required – a key part. His 27-point haul was ultimately the difference

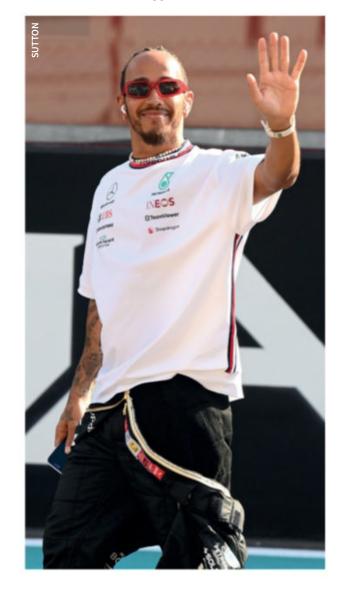
Lewis Hamilton

A second winless season looked to have got to Hamilton by the end of the year, but there were very clear highlights over 2023 as he exerted control over George Russell in their intra-team battle at Mercedes. His efforts to reach the podium in both Spain and Canada suggested that the squad had turned over a new leaf with its high-profile aerodynamic changes, although track-limits violations in Austria interrupted a purple patch that later went on to include a Silverstone podium and pole in Hungary.

His drive in Mexico was impeccable too, converting sixth on the grid into a brilliant second place with an astute performance. He'd also offered Verstappen a genuine challenge at the US Grand Prix and finished just 2.2 seconds behind the winner at the chequered flag, before his second-place finish was chalked off for excessive skid-block wear.

That's not to say that there weren't mistakes. His gung-ho approach into the first corner in Qatar resulted in a first-lap retirement after clashing with Russell, and an unnecessary swipe on Oscar Piastri at Monza yielded a time penalty. His year petered out after failing to perform at Interlagos, a circuit that he loves, and frustrations with his W14 machinery seemed to cloud his Las Vegas and Abu Dhabi races.

Although recency bias might suggest that Hamilton had a disappointing year, and it would be considered such by his own standards, there were moments of sheer class from the seven-time champion, but also moments of uncharacteristic ruggedness. JBL



record was also unblemished. It should be noted that Sargeant was a rookie and Albon is now four years deep into his F1 career, yet that's still a rare sweep.

What really boosts Albon's ranking here is his qualifying speed, something for which we rewarded his Williams predecessor George Russell but has not been included in our race-only GP driver ratings this term. Again, the stats are impressive for Albon, who was only knocked out in GP Q1s on five occasions, while he made Q3 seven times for a team that still has inconsistent form in F1's pseudo-science of qualifying tyre prep. in Williams defeating AlphaTauri for seventh in the constructors' championship. The highlights were his stern defence on the way to a point in Bahrain, doing similar but on a very tough one-stopper against much faster cars in Canada, undercutting rivals in Hungary, great tyre preservation at Zandvoort, and defying Lando Norris at Monza. The lowlights came from binning it solo in Australia, and damaging his nose with a needless look inside two cars in the early Baku exchanges. Inconsistent starts and track-limits penalties need addressing in 2024. **AK**

F1 season review



A brilliant new start to life at Aston Martin, all with regular splashes of his greatest team radio and media message hits. Alonso can surely even be said to have saved the season from being even more boring.

Alonso was Red Bull's biggest threat through the first phase of the campaign and before in-season development knocked Aston back. He took a podium in Bahrain after recovering from contact with team-mate Lance Stroll on the opening lap, during which Alonso had to use his considerable nous to make passes in places where the AMR23's year-long drag deficit to its rivals could be overcome. He also had to contend with early unfamiliarity with Aston's power-steering system, meaning he was dealing with regular snaps of oversteer, but this got better with a change the team made for May's Miami GP.

There were negative moments – his Q1 gravel trip at Barcelona, solo Spa sprint crash, Singapore pitlane gaffe and late off, plus lining up too far left for the Saudi start back before the FIA widened grid boxes from Australia onwards. But ultimately these were well and truly eclipsed by Alonso's many high points.

In Canada, he battled past and beat Lewis Hamilton despite a late fuel system worry, in the changing Zandvoort conditions he showed his brilliant adaptability, and he should have won in Monaco, where he qualified second but was undone by Aston's late-race strategy mistake.

His top moment must be his race to an eighth and final 2023 podium in Brazil, defying Sergio Perez for lap after lap with his differing, tractiongaining lines through the final turns, then nailing the Red Bull back on the last lap.

Thrilling, relentless. Usual Alonso adjectives. AK







Lando Norris

Even before McLaren had started to install its season-changing upgrades, Norris made the most of a car short on downforce. Sixth at Albert Park had opened McLaren's second. He repeated that position next time out in Hungary, where he was within a tenth of Lewis Hamilton's pole time.

The trio of races either side of the

account for the season, and breaking into Q3 for the first time in 2023 in Baku foreshadowed the performance gains made with its new upgrade approach. Once the next package of new aero parts was tacked on in Austria in July, Norris was dynamite. Boosted by the upgraded MCL60, Norris was immediately able to fight with the Ferraris and Mercedes at the Red Bull Ring to claim fourth. He then challenged for pole at Silverstone, and sensationally took the lead at the start of the race from Max Verstappen and held it for four laps en route to the team's first podium of the year with a summer break had been less auspicious, with McLaren struggling on the high-speed layouts of Spa and Monza, while a front row at Zandvoort went begging in mixed conditions. But Singapore and Japan worked to McLaren's favour; Norris was helped to second by Carlos Sainz's tactical wizardry in the former, and a supreme grasp of tyre management helped Norris capture the runner-up spot in Japan after being outqualified by Oscar Piastri. He was equally impressive in Brazil after capturing the sprint pole, despite having less confidence in his car over a single lap. JBL



Max Verstappen NO CHANGE

So many elements created Verstappen's most complete F1 world title yet. Plenty was down to his utter lack of opposition, but there was little he could do about that. What he could control, he did so commandingly.

Take his recovery drives from the O2 driveshaft issue in Jeddah, his and Charles Leclerc's mistakes in Miami qualifying, or the gearboxchange penalty at Spa. Red Bull reckons he used his accrued championship experience to take it easy early in those events, and rely on his car's race pace potential and slippery nature to get him out of trouble. Less is more and all that. But Verstappen also showed more is more in his devastating performance - tyre management and all - to beat polesitter and brief title rival Sergio Perez in Miami. Or deliver against the odds with a majestic Monaco Q3 final sector when his team-mate had crashed in Q1. And in how he insisted on taking the fastest lap bonus point from Perez with a needless third pitstop in Austria.

Off-track he was notably more vocal in 2023, with his intense dislike of sprint races and the Las Vegas razzmatazz, but that counts for nothing in these rankings, although it's interesting that he undermined speculation on improved emotional maturity in some quarters with his "dickhead" comment to George Russell and fury leading up to it after their Baku sprint clash...

After that event - his own pick for

about sprints overall considering what happened in Baku, Verstappen needing to recover from behind Oscar Piastri at Spa after not making the call to pit first in the wet, and his Qatar defeat to the Australian. In the penultimate sprint, he showed that his typical ruthlessness isn't really buried with his chop on Charles Leclerc at Austin, before he was rightly penalised for his Vegas start tactics against the Ferrari driver.

Forgotten highlights were his Jeddah performance while sick with a debilitating stomach bug, how good his tyre management and late race pace was around Red Bull's struggles in Singapore, and that he could cope much better than Perez with the RB19's tricky tyre warm-up requirements.

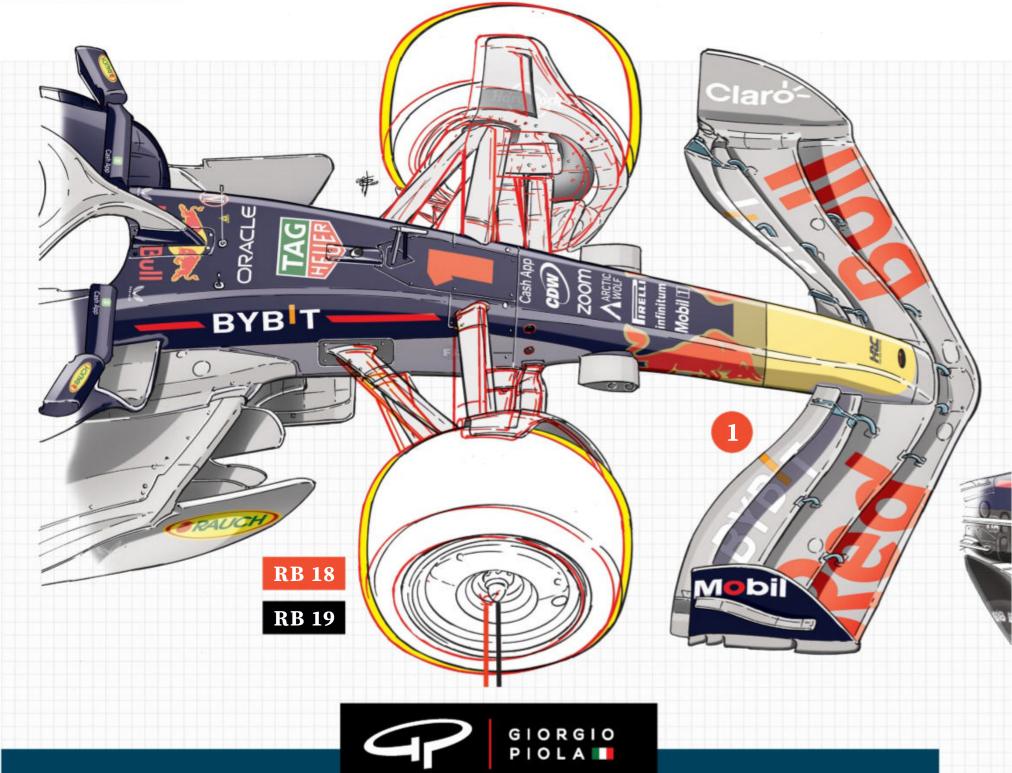
Red Bull team boss Christian Horner puts the massive, critical difference between the pair in qualifying (Verstappen scored 12 poles and Perez had his two handed to him) down to Verstappen having "the ability, confidence and skill to extract that moment of grip out of a tyre".

There were odd track-limits issues, such as in Spain, and inconsistent starts, but Verstappen laid the blame for those at Red Bull's systems. But his adaptability was seriously impressive - doing whatever his team required on car balance to prioritise race tyre degradation and adjusting his brake bias, differential and engine braking steering wheel 'tools', all while chasing Perez in Baku, to boost his subsequent early weekend work with a substitute performance engineer was all excellent. He said he appreciated "a bit of fire" from Gianpiero Lambiase on the radio, which enhanced a year when his dominance strangled F1. And the sheer class of so many drives -Suzuka just about the top highlight - cannot be denied. AK

10 Esteban Ocon

his lowlight weekend of the year, where luck went against him in the timing of the GP safety car - he admitted to not liking street tracks. That exposed a rare weakness in his overall game, and he had close shaves with walls on several occasions in his late Baku GP pursuit and the Monaco rain. That, though, is an exceedingly relative point. But perhaps there's something

NEXT WEEK AUTOSPORT TOP 50 SEE WHERE THE F1 DRIVERS SLOT IN...

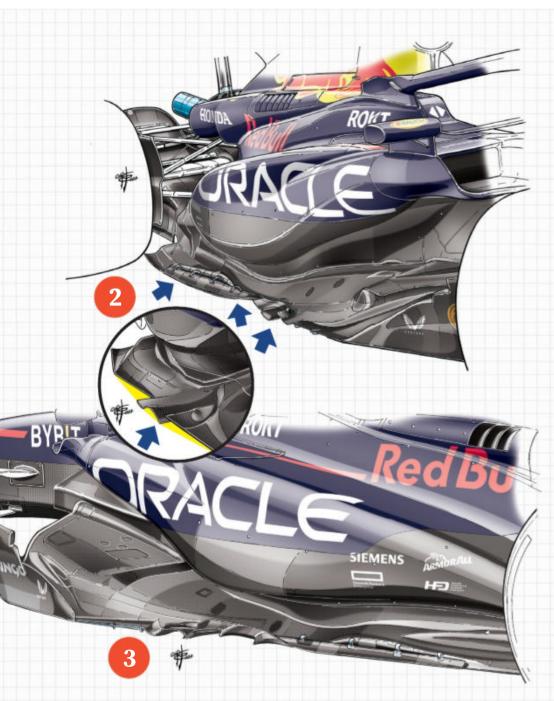


The technical battlegrounds of F1 2023

Red Bull built upon its mastery of F1's most recent rules reset, while in its wake cost-cap-conscious upgrades aided the jockeying for position throughout the field **Giorgio Piola and Jake Boxall-Legge**

mbued with a year's experience of Formula 1's ground-effect revival, most teams would be forgiven for expecting greater convergence throughout the field in 2023. And, largely, that maxim was true. Four teams ultimately battled to be the second-best on the grid, with Ferrari and Mercedes joined in the melee for podium finishes by a much-improved Aston Martin and a resurgent McLaren. There was also a four-team battle for seventh in the constructors' championship as Williams found form, AlphaTauri turned around a dismal start, and both Alfa Romeo and Haas found points-scoring opportunities harder to come by.

Red Bull, however, bucked that trend. The fine lines between the teams behind in the performance stakes ensured that Max Verstappen could breeze to the 2023 title uncontested, and Red Bull claimed 21 of 22 victories. With the RB19 proving the most potent weapon in this year's arsenal, its successes will undoubtedly inspire next year's designs to a fuller extent and many of its visual hallmarks made their way



onto the majority of the 2023 field over the season. A varied approach to sidepod design, which has been inextricably linked to the performance of the floor, had converged by mid-2023 towards the downwashing arrangement used to great effect by Red Bull. Much like in 2003, when most of the F1 field arrived at the Melbourne opener with cars heavily inspired by the all-conquering Ferrari F2002, you can expect a field of Red Bull facsimiles – all with their own twists as the other teams seek to improve their fortunes next year.

Beyond floor and sidepod 'concepts', suspension design was also a fruitful vein to tap into because the ground-effect rules have made the floor the most significant aerodynamic device on the car. Developing a suspension package that can allow the floor to perform at its optimum is therefore hugely important, and this was another area where Red Bull found great strides over the competition. Last year's early mantra had been to run the car as low as possible, but Red Bull found a way to generate huge amounts of downforce without having to scrape the floor through the high-speed corners. F1's cost-cap regulations have continued to enforce a more strategic approach to bringing upgrades over the season. Although many teams have found that huge strides can be made despite the need for financial prudence, others have had to pass on bringing developments if the gains found in their simulations were not enough to justify the cost. Most of the teams elected to wrap their upgrades into one big bundle, rather than take a piecemeal approach over the year. Here's a look at the key technical battlegrounds over the season, and how teams approached their development paths over 2023 - carefully illustrated by F1's master of penmanship Giorgio Piola.

How Red Bull improved upon excellence

The English language is running out of superlatives to describe the RB19, such was its success over 2023. Perhaps most damning of all was that Red Bull paused its development early owing to its aerodynamic testing penalty for transgressing the 2021 cost-cap rules, and instead pinned its focus upon next year's RB20.

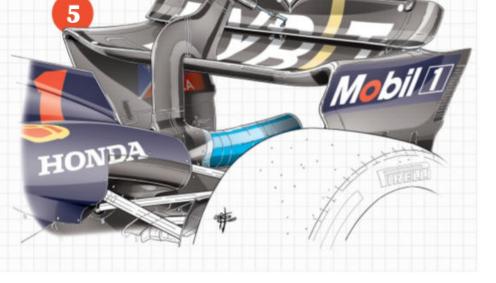
Red Bull already had a strong base to work from with the 2022 title-winning RB18, and a series of known weaknesses that it could improve upon. A drop in weight proved to be low-hanging fruit that it could easily deal with, and it opted for a slightly longer wheelbase [1] to improve stability.

Despite the early focus on 2024, Red Bull did not stop perfecting an already near-perfect design. It had already begun the year with a much more complex floor than in

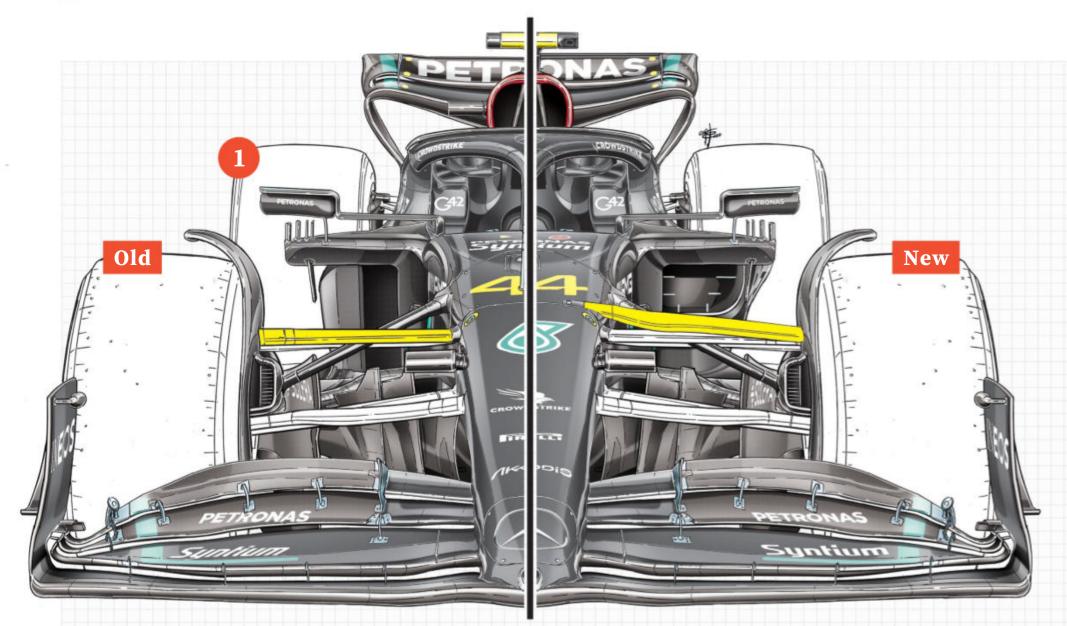
2022, with a visual difference in the edge that included a series of cascading winglets and a slot braced by four brackets to help seal the floor [2], which received further updates for the Asian leg of the calendar [3]. Continuing with a similar sidepod concept to last year, Red Bull honed this with a more distinctive undercut [4a] for the launch-spec car, and updated its solution for April's Baku round [4b] with a wider, shorter inlet to expand on it.

One of Red Bull's strengths in 2023 was in its straightline performance, particularly when it came to DRS use. By employing a single beam-wing element at certain circuits, the activation of the DRS flap could dump more drag, which encouraged Max Verstappen's drives through the order at Jeddah and Spa. But it also borrowed a few design cues from others, becoming one team to opt for the detached-tip rear wing [5] on the high-downforce circuits. Long-radius and

[5] on the high-downforce circuits. Long-radius and high-downforce corners were a distinct RB19 strength, as it compromised on the shorter, slower corners, so Singapore was the only venue it did not win at in 2023. >>



F1 season review



The battle for second: Mercedes vs Ferrari

Mercedes prevailed in the battle for second in the constructors' championship after its duel with Ferrari went down to the wire in Abu Dhabi, although the bounce that it had enjoyed after scrapping its 'zero-pod' sidepod solution had long since subsided. Instead, Ferrari had been the stronger of the two teams in the second half of the year after ditching its own unique sidepod solution.

At launch, the Mercedes W14 featured a revised version of its predecessor's distinctively slim sidepods with a squarer inlet, but hopes of building on its sole 2022 race win did not emerge in the early rounds. Perhaps sensing this, the Brackley squad dropped its unique design and shifted to a more conventional downwashing solution [1] for Monaco. This was accompanied by a revised front wishbone design, where the front leg's attachment point to the chassis was moved upwards as it aimed to instil further anti-dive qualities into the car.

The floor was updated to link up with the

followed the lead of many other teams with a partial detachment of the upper wing plane. The aerodynamicists could thus ensure it produced a vortex to strengthen the lower suction surface of the wing [4]. Despite the improving fortunes of the car, Mercedes is set to opt



for an entirely new concept for 2024 as it seeks to return to race-winning form.

As Mercedes' upgrades slowed down, Ferrari was able to start putting pressure on the team over the second half of the year. Early efforts to snuff out drag in a bid to challenge Red Bull on the straights were fulfilled with a single-mount rear wing [5] grafted into the DRS housing,

change in pressure field around the sidepods, a front wing update emerging [2] for Silverstone with a new, curved endplate to assist with outwash production. A new, curved mainplane was merged into this to assist with that direction and enhance the effect of the two downturned fins affixed to the rear portion of the endplate.

Mercedes improved the sidepod solution with a new inlet with greater curvature, which also led to changes to the upper fairing that encloses the side impact structure [3]. This was augmented prior to the summer break with a new rear wing, which



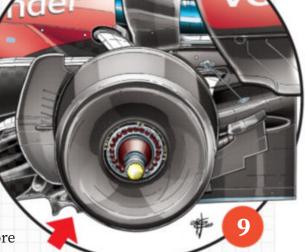
Technical analysis

-bomet 5 Old New although the team returned to the dual-pillar design to to defend on the help Charles Leclerc bag pole in Baku in April. While straights. Following strong in qualifying, Ferrari struggled to replicate that the Spaniard's win in

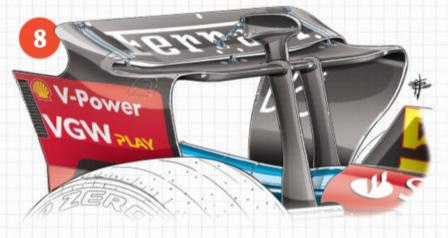
help Charles Leclerc bag pole in Baku in April. While strong in qualifying, Ferrari struggled to replicate that form in the races, where it proved to be hard on the tyres, and a Miami floor change [6] sought to address that. But the bigger-ticket item arrived for Barcelona, where Ferrari dropped its bathtub sidepods for a downwashing design. This featured a smaller groove in the upper surface, since the internal infrastructure could not be so easily changed, so the design was something of a compromise [7].

The start of Ferrari's post-summer turnaround emerged at Monza when Carlos Sainz gave his utmost in defending the to defend on the straights. Following the Spaniard's win in Singapore, Ferrari upped the ante with a new floor [9] for Suzuka, helping it beat Mercedes to draw closer in the championship stakes. Much of Ferrari's

Much of Ferrari's second-half success



lead from the Red Bull pair, helped by a shallow rear wing [8]



emerged as it unlocked more potential from set-up choices, which initially swung the pendulum in Sainz's favour before further tweaks gave Leclerc more confidence towards the end of the season. This inspired the Monegasque's impressive form in Las Vegas and Abu Dhabi. Although Ferrari has work to do to catch Red Bull, Sainz noted that there were traits that he'd like the team to keep, suggesting that it should retain "the straightline speed, the braking performance and the performance in 90-degree, short duration corners. The kerb riding I think is a very strong point." »

McLaren's zero-to-hero rise

McLaren had not been particularly pleased with its launch version of the MCL60, although team boss Andrea Stella was keen to point out that the arrival of mid-season upgrades would help turn the tide. A small upgrade to the floor in Baku in April was the first among the bunch; this was not going to offer a huge surge in performance itself, but rather to inform the next series of updates planned for the season. This tweaked floor [1] had visible changes to the edge, deleting the slotted element and replacing it with an exposed winglet to assist with sealing the underbody.

McLaren had garnered a handful of points in the opening rounds, but its season improved drastically with its large update package for the Austrian GP in July. A redesigned engine cover [2] featured a repositioning of the cooling fins and a tighter 'Coke-bottle' section, along with new sidepods with a shorter intake to increase the size of the undercut and include a waterslide-like groove in the upper surface [3] and another new floor.



These were added to Lando Norris's car for the Red Bull Ring, increasing the performance

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significantly, and Norris finished fourth. This extended to the detail areas of the car, with fins added to the trailing edge of the halo to improve the flow emerging from the safety device.

Both cars received the updates for Silverstone, although Norris had a new front

Aston Martin rises and falls, Alpine flatlines

A surprise contender for second in the championship early in the season, Aston Martin fell back over time as Mercedes, Ferrari and McLaren all improved more over the course of 2023. There were notable influences from Red Bull in the AMR23, although with the team's own twist on them to create a package that was strong in high-downforce conditions. The sidepods had a distinctive ramp at launch [5] that could channel air to the rear of the car more cleanly, a design that was refined among a series of upgrades for Montreal in June along with detail changes to the floor.



cognizan

One of the Silverstone squad's more interesting design features included a small tail-like

element to the rear crash structure [6], which it hoped could help augment the flow emerging from the diffuser. Although Aston built a special rear jack to ensure this fin did not break, it proved problematic and was later discarded. High levels of experimentation with the car emerged in the latter end of the season, and a new floor [7] was introduced for the Mexican GP as the team sought to test ideas for 2024. In the meantime, Alpine had a lonely run to sixth in the championship standings. The Renault-owned team had undergone a management overhaul amid stagnation in terms of results, although there was a clutch of updates over the year as the team looked to consolidate its position. A focus around its rear wing came with an adoption

MEXICO CI

Technical analysis

wing added to his car to magnify its outwashing capabilities. The new package allowed both McLarens to fight at the front for the first time in 2023 and had dialled in much in the way of missing downforce, although Norris felt that the car still required a very specific approach to drive it successfully. The team continued to ring the changes throughout the year, opting for an exposed-tip rear wing for Zandvoort [4] to boost the performance of the car in lower-speed environments.

At the same time, the beam wing was reduced to a single-element design to help DRS activations become more powerful.

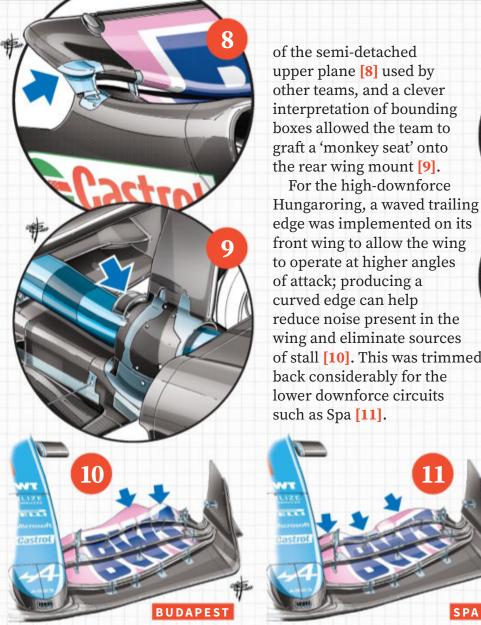
The edge wing

removed for the Baku

round was introduced back into the floor for the Singapore race and

beyond, because the engineers had found a way to extract more performance from it with the new upgrades.

There were still inherent issues in the car; it was already down on straightline performance in Baku, and the updates did not tangibly reduce any aerodynamic inefficiencies - November's Las Vegas event proved to be a difficult round. Stella explained that the team's data had hinted that the updates could have also introduced handling difficulties, but was keen to point out that this was a hypothesis among the team. Nonetheless, McLaren had significantly improved its fortunes throughout the year, and produced a baseline for 2024 that it hopes will allow for a championship challenge.



Hungaroring, a waved trailing edge was implemented on its front wing to allow the wing of stall [10]. This was trimmed

...and the rest

Of the teams battling over seventh in the championship, Williams eventually won out with a car that was not only quick in a straight line, but also handy around the slower circuits such as Zandvoort when weather conditions aligned. By the end of the season AlphaTauri had become the British squad's sternest challenger in the championship stakes, after introducing an ambitious upgrade schedule (see page 62).

This started to bear fruit towards the end of the year, especially with changes to the sidepods to incorporate a waterslide-type element [12] introduced for Singapore, and a new floor in Abu Dhabi featuring a revised front fence and slot along the edge [13]. The car was initially difficult to handle on corner entry, but these changes ensured that the AT04 had become one of the stronger packages in low-speed conditions.

Alfa Romeo did not enjoy the levels of success it had achieved in 2022, with an inefficient car proving to be a persistent problem as it was lumbered with excess levels of drag. The team experimented with different nose options to set up the airflow passing rearwards, opting for the extruded tip version early in the year [14], while also reworking its rear wing throughout the season to shift some of the drag.

Haas was hampered by a car that was poor on its tyres, and efforts to remedy the issue ultimately came to nothing despite pouring its resources into a comprehensive update for Austin in October. This featured a new engine





cover and sidepods [15], but it proved to matter little and the car remained unsuccessful in race trim, despite some impressive qualifying showings.



For more on all F1 technical developments go to autosport.com



The best race drives of 2023

Jake Boxall-Legge and Alex Kalinauckas





Max Verstappen Miami GP (1st)

This was the race that crushed Sergio Perez's fleeting hopes of challenging for the title, when Verstappen atoned for a messy qualifying to scorch to victory from ninth on the grid. With nothing to lose, Red Bull put the reigning champion on the alternative strategy to start with hard tyres, while the top seven all opened on the mediums.

Once Verstappen got into his rhythm, he reeled off passes on Valtteri Bottas, Esteban Ocon, Kevin Magnussen, Charles Leclerc, George Russell and Pierre Gasly in the opening nine laps, then homed in on polesitter Perez and Fernando Alonso. Once Alonso and Carlos Sainz were dispatched,



What a difference a day made for Russell and Mercedes in Spain. After

investigated, but Russell was cleared. Also, Lando Norris dropped back due

Verstappen went long on his tyres as Perez began to worry about his mediums graining. Verstappen maintained a consistently strong pace to ensure that, by the time both drivers had stopped, they were separated by 1.6 seconds.

On the softer tyre, the Dutchman was on the charge and pushed Perez into defending into the end-of-back-straight Turn 17, which gave him the ammunition to make the final move into the first corner of lap 48. There was another hammerblow to come; Verstappen surged to the fastest lap of the race as he scampered away, 0.85s faster than anything Perez managed, to demonstrate the start of his 2023 dominance. JBL his Q2 exit following his slightly shambolic crash with team-mate Lewis Hamilton, caused by a miscommunication on their respective run plans, he ended up finishing third in the race behind Hamilton, despite starting from eight places further back.

Russell's brilliant race from 12th at Barcelona started by gaining five positions on the opening lap. First he blasted past Sergio Perez and Pierre Gasly away from the startline, then he had to bail out of a three-wide Turn 1 move with Oscar Piastri and Nico Hulkenberg. This was to a clash with Hamilton.

Russell then produced a bold pass on Esteban Ocon before stopping to exchange soft tyres for mediums, after which he mistakenly thought it was raining due to sweat from a trapped strand of hair hitting the inside of his visor as he braked. In the final stint, he pulled off a tougher pass on home hero Carlos Sainz, then showed strong enough pace on his ageing soft tyres to knock Perez off a briefly possible one-stopper and then held off the Red Bull's rise back towards the podium places late on. **AK**

Best race drives

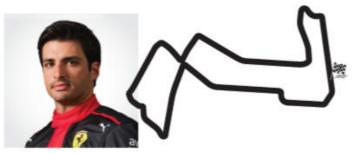




Alex Albon Canadian GP (7th)

Even the Maginot Line had been less impervious to attack than some of Alex Albon's defensive efforts since the Anglo-Thai joined Williams. The Montreal race was no exception, as the lengthy back straight offered Albon plenty of opportunity to flex his FW45's top-speed attributes. After topping Q2, Albon could not log a representative lap in Q3 when Oscar Piastri crashed, so he started ninth. He lost a position to Charles Leclerc on the opening lap, remaining between the Ferraris until a lap 12 safety car (produced by debris from a wall-bothering George Russell) offered an opportunity to pit.

The clincher here was opting for a one-stop race, since many of the cars in the top 10 elected to conduct a second stop later on. Albon therefore moved up the order amid the second pit cycle and got as high as sixth, before Sergio Perez moved past to shuffle the Williams down to seventh. From here, Albon stabilised. Although the chasing pack of a wounded Russell, Esteban Ocon, Valtteri Bottas and Lando Norris could all pick up DRS, Albon had them all covered and focused on nailing his hairpin exit to keep them all behind. And he managed this with a set of ageing hard tyres. Not bad. JBL



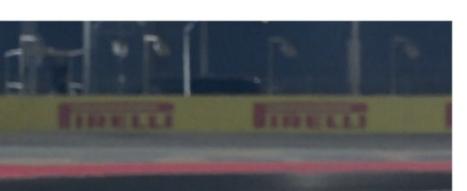
Carlos Sainz Singapore GP (1st)

A tactical masterclass by a driver who is carving out a reputation as someone who knows how to read a race. Securing pole position helped -Ferrari set-up breakthroughs had suited Sainz perfectly - but preserving the lead off the line laid the foundations for the Spaniard's victory.

George Russell had been the main challenger as Red Bull suffered a mysterious lack of form, but his iffy start ensured Charles Leclerc could play as Sainz's tail-gunner in the opening half. When Russell pitted for a second time under a virtual safety car, his Mercedes now had fresh tyres and he started to pick his way through the order, taking third off Leclerc before homing in on Lando Norris.

Instead of dropping the hammer on aged tyres, Sainz held back and started to pull Norris along with DRS, ensuring that Russell would struggle to pass the McLaren in the few passing zones. This meant Sainz was completely protected for the last six laps of the race. An excellent win was cemented on the final lap when Russell put his car into the wall at Turn 10. JBL







There's nothing quite like a rookie

Qatar GP (2nd)



in the parc ferme interviews, handed Piastri



announcing themselves in their first year of Formula 1 with a win, and Piastri managed that feat at the Losail circuit. It wasn't a grand prix win, granted, because the success came in an exciting sprint, but it was a nonetheless impressive weekend from McLaren's young Australian. Although he'd lost the sprint lead to the soft-Pirellishod George Russell after starting from pole, the Mercedes driver started to run out of tyre life, giving Piastri the opportunity to pounce back ahead.

A sixth-place start for the full GP, after being informed of a track-limits deletion a greater workload for a gruelling encounter in the Qatari heat. Tyre issues added another hurdle, but his path to second was greased by the first-corner contretemps between the two Mercedes drivers.

With everyone locked into a threestopper, Piastri likened the race to "57 qualifying laps" and hoped to provide an unlikely challenge to Max Verstappen in front. He just fell short, but managed to beat team-mate Lando Norris when McLaren asked the more senior driver to sit behind with a radio call – after all, the Melburnian had earned it. JBL



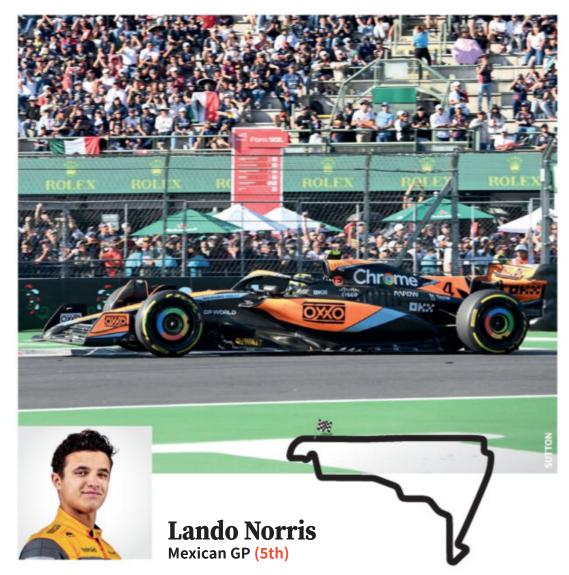
Lewis Hamilton United States GP (DSQ)

Not a perfect race drive, given he went long in his pitbox at his first service and had an off-track moment. But, given how much better Red Bull's RB19 was than Mercedes' W14 in 2023, for Hamilton to come so close to finally standing on the top step of an F1 podium deserves credit.

At the getaway, Carlos Sainz squeaked past at Turn 1, with third-starting Hamilton ending up defending Max Verstappen's surge on the downhill exit from the left-hand hairpin. The Briton then repassed the Spaniard and polesitter Charles Leclerc early in the first stint to run second.

Hamilton then erased Lando Norris's lead before being left out for an elongated stint compared to Verstappen's two-stopper behind. Mercedes ended up regretting this – Hamilton's pace when back on the mediums for his third stint prompted a much stouter defence from Norris than against Verstappen. Once past the McLaren, he closed on Verstappen by 0.6s per lap as the Dutchman battled a braking problem. Hamilton reckoned he might have been able to mount a pass with one more lap, but it later became academic when he was disqualified for overly worn planks. **AK**





After showing Max Verstappen-shading long-run pace in second practice in Mexico City, it all went wrong for Norris in qualifying. He ended up 17th after a late Q1 error that followed McLaren having to pit him to check his fuel system while on a medium-tyre banker lap.

Then in the first half of a race cut rather in two by Kevin Magnussen's crash, he lost three places by stopping just before the red flag, and shipped four more to a wheelspinheavy second standing start. But that was the only real error on a day when Norris ultimately wouldn't be denied. His pace on the medium tyres from the second start to the flag compared favourably even to dominant winner Verstappen, and Norris was having to pass nine rivals as he produced those lap times. It all left observers wondering whether he might have been a victory threat without the Q1 exit.

Norris's passes on Daniel Ricciardo and George Russell late in the race were very impressive, all done as he fought to keep the mediums in best shape and temperature on the tricky track surface. And as with all the rest in the thin, high-altitude air, he had to take care not to overheat his brakes. **AK**



Fernando Alonso Brazilian GP (3rd)

The second half of 2023 had been short of Alonso magic after a bright start to the year, but the Asturian found a sprinkling of gold dust in his path to third in Brazil. Alonso had a challenge from a ninth-starting Sergio Perez, whose heavily undercut first pitstop had brought him into play. Although Perez closed in during the middle stint, Alonso had been able to stabilise and maintain a solid three-second gap before their final pitstops. With both on soft tyres for the last stretch, the Spaniard initially covered off Perez but soon fell into DRS range, prompting some improvisation by opting for a series of different lines through sector two to shake Perez off his scent. He eventually succumbed to a first-corner move on the penultimate lap and the Mexican took third position. But Alonso was still in the fight. He placed his car perfectly over the lap to ensure Perez was exactly where he wanted him to be, putting the Red Bull off-line slightly at the start of the final lap. This gave Alonso the momentum to return the favour into Turn 4 on the last lap, and he held the place, with the two separated by just half a tenth at the line. JBL



Best race drives





Leclerc really should have doubled Ferrari's 2023 victory tally with his brilliant performance on F1's return to Las Vegas, but was undone by race circumstances behind him on a day when the team's year-long struggles with tyre overheating didn't matter thanks to the cool, night-race temperatures. At the start, polesitter Leclerc was pushed off at Turn 1 by Max Verstappen's lunge on the slippery track surface, Leclerc wary to avoid contact given Ferrari's close fight with Mercedes for second in the constructors' championship. But he rallied and repassed Verstappen just before the world champion pitted and served a penalty for his first-lap move, the Ferrari performing much better on the fragile medium tyres.

faced a deficit to Sergio Perez thanks to the Mexican's first-lap stop for a new front wing being negated by the race's first safety car. But just as Leclerc was coming back towards the lead, having carefully brought his hards up to temperature when the risk of rear graining with aggressive corner exits was



Esteban Ocon Las Vegas GP (4th)

Fourth in Las Vegas was Ocon's best result since his third-place finish in Monaco, on a day when he went dramatically forwards for Alpine while his team-mate Pierre Gasly tumbled back from a strong qualifying result.

Ocon started 16th, but his efforts to avoid the first-lap chaos on the cool, low-grip track surface meant he'd risen to eighth by the time he started the second tour. Kevin Magnussen did come past following the early safety car period caused by Lando Norris's huge crash, but Ocon soon battled back through for a second time after the restart. He then set about catching and passing Logan Sargeant, which he did with

Leclerc was left out to build a considerable tyre offset as Verstappen set about climbing back up the order following his long stop. When Leclerc did pit for hard rubber, he high, a second safety car ruined his hard-built advantage.

Ferrari left him out while the Red Bulls pitted, which meant losing critical tyre temperature on the hards. He repassed Perez after the restart, then Verstappen came past both, before Leclerc's only mistake – a lock-up leading onto the Strip straight – let Perez through again with seven laps to go. But he used his 'Monza special' lowdownforce rear wing to catch back up, then stole second on the last lap after spotting Perez taking it easy into the left-hander at the end of the Strip six tours earlier. **AK** a fine move at the Turns 6/7 complex by the Sphere – unfancied for overtaking.

Ocon then passed Alex Albon in the other Williams, and after the race-altering VSC was with Gasly. He then appeared to ignore an instruction to hold station, but explained that he actually just misheard the call as he was making the move. After this, Ocon was able to stick close to the leaders on a similar one-stop strategy to Charles Leclerc ahead (Ocon stopped one lap before the Ferrari mid-event), while Gasly fell backwards with tyre graining and a battery issue. George Russell got Ocon on the last lap, but the Mercedes' penalty meant that didn't matter. **AK**

An extended blip or end of a dynasty?

A second year in the doldrums for the team that once dominated F1 will have really smarted. It knows this cannot be allowed to become a trend Matt Kew



id Toto Wolff pack a travel-size tombola drum in his suitcase this season? For when it came to appraising the W14, it seemed as though the Mercedes motorsport boss had cranked the handle, picked a random Mercedes pioneered a slender architecture for the 2022 return of ground effect because, with so much of the prepotent floor exposed, class-leading downforce was simulated. But this was only achieved in the wind tunnel with its smooth rolling road. At real-world circuits, with all their lumps and bumps, the ride height had to be raised to navigate a bouncing and porpoising double whammy. The car was moved outside of its narrow operating window to leave it lurching between understeer and snap oversteer. However, there were glimmers last year. Race pace was stellar in Spain, and Russell bagged pole in Hungary before Lewis Hamilton chased after Max Verstappen in Texas and Mexico. Russell then won the Brazil sprint and main race. These all suggested that, on its day, the platform had the innate pace to threaten Red Bull. As such, the designers stuck to their guns for 2023. The difference for this second attempt was that, rather than run the W14 slammed into the ground, Mercedes sought to generate downforce when the platform was raised. But when rubber hit >>

ticket, then relayed the corresponding epithet. The car was a "surprise box", "Diva 2.0", "miserable thing" and a "nasty piece of work", to list but a few unflattering testimonials. The first winless creation to emerge from the Brackley factory since 2011 needed until the dying laps of the Abu Dhabi finale to secure second position in the constructors' championship over Ferrari as George Russell bagged the last of only eight podium finishes for the squad. At least its Italian rival could toast a grand prix victory and is now entitled to more aerodynamic testing time to chase after Red Bull.

When the W14 broke cover, it clearly borrowed heavily from its predecessor as the unmistakable 'size-zero' sidepods remained.

Mercedes



the road, engineers soon discovered an aerodynamic performance ceiling had been hit. The set-up was duly lowered but, rather than finally settling in a 'Goldilocks' sweet spot, the car was now in a state of compromise whereby nothing was configured to run as originally intended. Hamilton, who eventually wound up third in the points, recalls: "When I first drove the car in February, I knew immediately that it wasn't a championship-winning car. It felt identical to the previous year's car so that was definitely a concern."

Wolff adds: "The most clever people don't understand where they got it wrong. Great infrastructure, all the resource that you need, the right mindset... Maybe because we wanted to be compliant with all the financial regulations, [chief designer] John Owen was more involved in making sure that the accounting side was working than in designing a car. But put simply, we got the physics wrong. Our tools didn't work as good as they did for all the other previous technical regulations. Physics. Nothing mystical."

Hamilton had further complaints. To exploit the unique sidepod concept, Mercedes left the crash structure exposed so it could act as an aerodynamic device. But to do so meant shifting the cockpit further forwards. The seven-time champion, renowned for his mastery of a lively rear, felt it was just too skittish: "When you're driving, you feel like you're sitting on the front wheels, which is one of the worst feelings. It makes it harder to predict."

Hamilton finished fifth in the Bahrain opener while Russell clocked seventh. Meanwhile, Fernando Alonso humbled both in wheel-to-wheel combat as Aston Martin emerged as the closest challenger to Verstappen and Sergio Perez. Wolff reckoned that the Bahrain GP was "one of the worst days in racing" for his team. This would come to accompany a Belgian qualifying he labelled as "the worst... I had in 10 years", and a visit to Brazil regarded as the "worst weekend in 13 years".

Given the anonymous start, which added to the misery of 2022, the top brass concluded that only a change of car concept would do. In previous eras, that would have meant the mid-season introduction of a 'B-spec' machine. But Mercedes had its hands tied. Ground effect requires a holistic approach. Alpine's floor won't necessarily work with McLaren's rear wing. Accordingly, to bring about wholesale change would have meant an all-new chassis that needed to pass crash-testing. The 2021 introduction of a cost cap, partly conceived to bring the field closer together, made that fanciful. Mercedes was then essentially stuck in a holding pattern as Red Bull tallied up the victories.

Despite the restrictions, the W14 still looked dramatically different when it rolled out of the garage for round six in Monaco. A more conventional downwash sidepod, complete with 'waterslide' ramp towards the rear, had been adopted.



The front suspension was overhauled, too. It is said that Hamilton and Wolff had plenty of sway when it came to the design office ultimately changing tack and chasing something slightly more akin to the yardstick Red Bull RB19.

"I had asked for certain changes and they clearly weren't done," says Hamilton. "There were definitely frustrating moments... The [engineering] debrief, it gets boring because every weekend you are hopeful that it's going to be good. But pretty much each time, it's under your expectations and your hopes."

While the aerodynamicists had been busy, so too were their bosses. In April, technical director Mike Elliott – effectively the overlord of Ws 13 and 14 – swapped jobs with chief technical officer James Allison, who returned to a more hands-on role. That switcheroo has always been billed as a mutual decision between the pair. But would a team so proud of its 'no blame' culture say anything else? In October, after 11 years of service, Elliott announced that he was leaving Mercedes altogether.

Hamilton clarifies: "There unfortunately may be people in the outside world who think it's one individual's fault. It never is. James has got that leader mentality more than any other engineer I've come across. He does instil massive confidence in people. He's so eloquent in how he speaks."

Elliott's last race in the paddock was the United States GP, where a new floor made an instant impact. Had Russell not fluffed his launch to wave sixth-starting Verstappen by into Turn 1, Hamilton might have plausibly beaten the champion to the flag – only to be disqualified hours later for finishing with an overly worn plank. While the sprint race format and a rough Austin track caught out







"I've never had a season like this. I'm scratching my head a bit how so many results have slipped through my fingers"

Ferrari that weekend as well, Mercedes' season was notable for a spate of operational shortcomings.

Correlation does not equal causation. But in a year where pitwall powerhouse James Vowles left to head up Williams, Mercedes faltered too often. Russell and Hamilton collided in Q2 in Spain, "catastrophic" strategy undermined the visit to the Netherlands, the pair delayed one another in the Belgian sprint shootout, then shunted dramatically at the first corner in Qatar. Wolff also cited Mercedes falling behind with its pitstops – another factor that denied Hamilton the chance to pip Verstappen in Texas.

The Austrian admits: "Our mindset in the last 12 years: we don't need to be world champions in pitstops. We need to avoid very slow pitstops. It's coming to a situation now where we realise that it's got so competitive and we just need to ramp up our game there.

"We have fallen short of key components and performance. It's not only the car's behaviour, but the pitstops have been very oscillating. It's nothing to do with the mechanics, our equipment just wasn't up to the levels that are necessary. Our DRS is not



working as it should [due to conventional sidepods on a package never conceived to run them]. We had the odd strategic mishap. The days that we lose are the days we learn the most."

The intra-team Qatar shunt was a carbon copy of Hamilton's ill-fated dice with old pal Alonso at Spa in 2022. He tried to pass around the outside but turned in when the car to his right had nowhere to go. That was two races on from Russell's biggest blunder. On the final lap in Singapore, the top four ran nose to tail. Victory hopes might have been fading, but second place was up for grabs if Russell could dive past compatriot Lando Norris. Instead, following in the wheeltracks of a McLaren that kissed the wall, the Mercedes whacked it to crash out in a shower of sparks. As Wolff made clear, better to make those mistakes now rather than when the team is back fighting for titles. That's something it intends to do with an unchanged driver line-up, having re-signed Hamilton and Russell until the end of 2025.

Russell had already reset himself over the summer break, addressing his hitherto patchy qualifying record to end the year tied 11 all with Hamilton in the one-lap head-to-head. But he ultimately ranked only eighth in the standings, partly the legacy of a poorly timed pitstop preceding an engine fire after leading early on in Australia, plus mismanaging the arrival of rain at Zandvoort.

"I've never had a season like this – when I see so many opportunities that have gone past," reflects Russell. "That's definitely very frustrating. Right now, I'm scratching my head a little bit how so many results have slipped through my fingers.

"No doubt, it's been probably the toughest season I've ever had psychologically. Bouncing back from missed opportunities, missed results, mistakes. I could comfortably lift my foot off the gas pedal and drive a percent below the limit and I could sit here right now and tell you that I wouldn't make a single mistake. Probably when I sit through my [junior] championship years, I wasn't being pushed as much as I'm pushing myself now. I'm purposely trying to push myself further and beyond. I'm not satisfied with just being on par with my team-mate in qualifying or whatever it may be. I want to be ahead. I'm thankful it's not a season where we're fighting for a championship victory." Courtesy of the cost cap, Mercedes was forced to persevere with an architecture it had long since decided to ditch. A clean sheet of paper for 2024 should allow the Three-Pointed Star to finally close the gap to Red Bull – although its Milton Keynes foe is already two years down the road understanding its own optimal take, around which everyone else has converged. As Hamilton says, within a few laps of testing it becomes relatively clear whether colleagues can start to mentally spend their bonuses for winning that year's crowns. Mercedes must therefore come out immediately fighting next term following a campaign that didn't right too many of 2022's wrongs. Failing that, it will be entirely appropriate to ask whether this is no longer merely a ground-effect stumble for the eight-time constructors' champion but, instead, the fall of an F1 dynasty. 🗱

Ferrari faces reality check as revamp shows promise

Expectations were high following Fred Vasseur's takeover as Maranello chief, but in 2023 Ferrari soon woke up to the reality of facing a transitional year **Filip Cleeren**





hen Ferrari bravely launched its SF-23 challenger with a live installation run at Fiorano, the team declared its optimism over being able to fight for both world championships this year. That further fuelled the expectations of the everdemanding tifosi.

Much like the Real Madrids and FC Barcelonas of this world, failure is not an option for the Italian giant. But Ferrari's passionate fans were in for a rude awakening at the opening round in Bahrain when that optimism proved misplaced. Rather than fighting for titles, Ferrari ended up narrowly losing out to Mercedes for second place after a rollercoaster 2023 season for both squads.

Like everyone else, Ferrari turned up with a car that was no match for the all-conquering Red Bull RB19. Charles Leclerc and Carlos Sainz qualified on the second row for the Bahrain opener, a respectable three to four tenths behind Max Verstappen and Sergio Perez. But while Ferrari's one-lap pace seemed promising enough, it was the race performance that set off the alarm bells. Sainz finished fourth, *48 seconds* behind winner Verstappen, after being passed and left for dead by Fernando Alonso's Aston Martin as the hot and twisty Sakhir circuit exposed Ferrari's weakness. The drivers found themselves churning through the tyres in a bid to keep up with the Red Bulls.

To make matters worse, Leclerc retired from the race with power unit issues that prompted an engine penalty as early as the second race. The 22-round season was barely under way, yet the prancing horses had already stumbled over the first hurdle with a bruising Bahrain foreshadowing more blows to come.

"For sure I think the level of expectation was a bit too high at the beginning of the season," says team boss Fred Vasseur. "We understood quickly the situation after a couple of laps in Bahrain, and even a couple of laps into the simulator before going to Bahrain."

Ferrari's fortunes improved on less demanding circuits. Leclerc took pole and claimed Ferrari's first podium in Baku, albeit 21s behind Perez. But it received more hidings in Miami and **>>**



Leclerc heads Sainz at Silverstone. Later Ferrari became the only team beyond Red Bull to win





Spain, while further questions over its race strategy were raised in Monaco, where neither driver finished within a minute of Verstappen. Seven races into the season, Ferrari sat fourth in the table on 100 points, well behind both Mercedes and 2023's early surprise package Aston Martin.

Going for a full B-spec was not an option under F1's cost-cap rules, but an aggressive upgrade path was identified to not only make the SF-23 quicker, but also kinder on its tyres. Better handling was targeted too, with both drivers frustrated by its unpredictable behaviour and wildly fluctuating form race to race and – alarmingly – even stint to stint. From June's Spanish Grand Prix onwards, Ferrari leaned further into the prevailing downwash sidepod solution that moved it closer to Red Bull's winning philosophy, but that tyre-churning race further exposed its weaknesses. "We keep talking a lot about tyres and degradation, but I think there's also a bit more of a fundamental problem with the race pace," Sainz opined after finishing 46s behind Verstappen in his home race at Barcelona. "We just lack race pace and we need to make a car that is kinder on tyres but also more consistent with the aero."

The low-degradation Montreal circuit allowed Ferrari to show its true pace better, and Leclerc finished second in a morale-boosting Austrian GP, just five seconds adrift of winner Verstappen, but more struggles at Silverstone and the Hungaroring dampened any hopes of a lasting breakthrough.

The team took further courage from its home race in Italy, for which it had developed a Monza special low-downforce package. That patriotic approach yielded an emotional pole for Sainz, and both drivers battled tooth and nail for third, regaling the tifosi

"We just lack race pace and we need to make a car that is kinder on tyres but also more consistent with the aero"

has also shown its first promising signs. Amid Red Bull's unprecedented dominance, Ferrari was the only team to keep the Milton Keynes-based team from a clean sweep of 2023 race wins, with Sainz's speed and cunning allowing him to take the only non-Red Bull victory in a thrilling Singapore showdown. It was the sort of high-pressure race that could have featured a previous iteration of Ferrari crumbling under the pressure, but neither driver nor team put a foot wrong, and capitalised on the rare opportunity to benefit from an off-kilter weekend from Red Bull.

Ferrari's drivers experienced their team's many ups and downs of 2023 through different ways. A final score of Leclerc on 206 points and Sainz on 200 – which placed them fifth and seventh respectively, split by McLaren's Lando Norris – suggests they were



with a spirited display that shows that sentiment still has a place in the calculated world of modern F1. But what had become obvious by the summer was that, while some progress had been made, Ferrari soon ran into the limitations of how much it could address the baked-in peakiness of the SF-23 without changing the chassis, meaning a lot of items on its drivers' performance wishlist had to be deferred to 2024.

As Aston Martin's challenge faded, Ferrari became embroiled in a straight fight for second with Mercedes, a squad that faced similar form fluctuations with this generation's capricious ground-effect cars. The fight went down to the wire in Abu Dhabi, with Mercedes just holding out by three points.

But while new team boss Vasseur's first year in charge was compromised by shadows of the past, his Maranello restructure

Ferrari



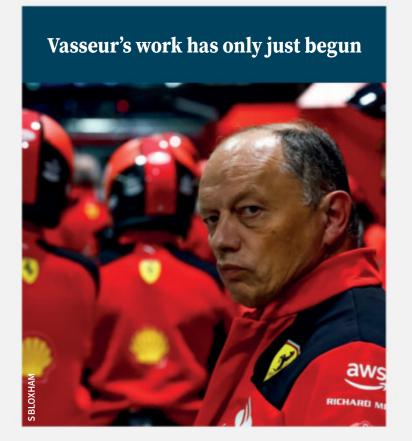
evenly matched, but the way they amassed those points tallies could not be more different. Leclerc suffered what he called a "disaster" of a start by scoring just six points in the first three races, and went through more misfortune despite appearing slightly more comfortable with the SF-23.

After the summer break it was Sainz who became the dominant driver, capped by his Monza pole and subsequent Singapore pole-to-flag triumph. But another floor upgrade in Japan allowed Leclerc to lean on the car harder again and hit a late purple patch of form. His increased confidence led to three poles and four podiums across the last five races, despite not making the start in Brazil due to an electronics issue that caused him to crash out on the formation lap.

Ferrari's season was clearly not without mistakes, bookended by Leclerc's DNF in Bahrain and DNS in Brazil, but also including his disqualification for floor-plank wear in the United States GP and penalties for impeding in qualifying.

Vasseur admits to keeping a list in his head of all the missed opportunities, but refuses to divulge them in public because he doesn't want his troops to look for excuses. "We gave up more points than our competitors and that is another topic that we need to work on for next year, to be more opportunistic and more efficient," he explains. "But I hate to race with 'if', because everybody can race with 'if' and do a better job. It means that this [word] is completely forbidden at the factory. It is not to find an excuse at all because it is our fault. It is where we have to improve. It is clearly a huge potential in terms of points."

Vasseur's humane but no-nonsense approach appears to inspire confidence in Maranello, where the drastically different



Inertia is an inescapable phenomenon in Formula 1. Teams can often fix technical issues overnight, but a change of personnel or culture takes much longer to reap the rewards from.

Ferrari's 2023 season is a good example of that lag. It came off the back of a challenging 2022, where it had an initially competitive car, but led to team principal Mattia Binotto resigning.

Binotto's replacement, Fred Vasseur, faced the task of cutting through the byzantine squad to improve its organisation from top to bottom, but it's a mission that will take time.

Ouestions about its execution and reliability linger, but under Vasseur's leadership Ferrari appeared a more harmonious organisation that tried to make the most of the hand it was dealt. It has also attempted to be more open towards the media and the outside world at large. "The most important thing is that the one thousand people we have are convinced that they are all contributing and they are all trying to push the limit," is how Vasseur sums up his people management approach at Maranello.

"The reality is that when you want to steer the boat a little bit, then we are not agile anymore"

Another example is his capture of Mercedes' performance director Loic Serra to replace the McLaren-bound David Sanchez as part of a larger recruitment drive. Serra will be a key asset but, due to his Mercedes terms, he won't join before 2025.

"The issue in F1 is inertia," Vasseur explains. "The reality of our business is that when you want to steer the boat a little bit, then we are not agile anymore. If we want to recruit, we are speaking not in days, we are speaking in years. But if you don't do it, it will be even worse in

2024 car project is led by chassis technical director Enrico Cardile and engine chief Enrico Gualtieri. But while the tifosi may not like to hear about muted ambitions, Ferrari won't fall into the same trap of setting sky-high expectations.

"What I would keep in mind this season is the reaction of the team," adds Vasseur. "We had tough moments but we collectively made a huge step forward and this is good for the future.

"I don't know if it will be better next year, nobody knows. You can make up one second and if the others are doing 1.5s, then you look stupid. But if they do five tenths then you look like a hero. At the end of the day it is a comparison. I don't want to be too optimistic because it was probably one of the issues we had last season. We just have to be focused on what we are doing and not to think about the prize-giving ceremony before Bahrain." *#* six months."

It appears that Carlos Sainz and Charles Leclerc, who knows Vasseur well from Sauber and his junior career, are on board too, with Leclerc heading towards a long-term contract renewal. But as 2024 will feature the first Ferrari F1 car designed under his regime, Vasseur's work is only just beginning.

The opposing fortunes of McLaren and Aston Martin

It was definitely a season of two halves for two great motorsport names, with slow-starters McLaren eventually defeating early surprise package Aston Martin Jake Boxall-Legge and Alex Kalinauckas





McLaren unveils the MCL60 at its sprawling Woking headquarters on 13 February, with much to look forward to based on discussions over the team's upcoming celebrations of the 60th anniversary of its founding – hence the car name. But new team principal Andrea Stella and McLaren Racing CEO Zak Brown are pointedly downcast in their predictions for the year ahead. The Italian says that McLaren is "not entirely happy for what is the launch car", its specification featuring only minor sidepod, engine cover and nose updates. But they promise major upgrades starting in Baku (in April) and still

Aston's simultaneous start

Hours after McLaren's embargoed unveiling, Aston Martin launches its AMR23. The new car is the first produced by a technical team bolstered by the signings of ex-Red Bull designer Dan Fallows and former Mercedes man Eric Blandin, and the launch features big-ticket new signing Fernando Alonso. Featuring design cues pioneered by Red Bull in 2022, the new car is described as an "aggressive approach" by Fallows. It emerges with a distinct 'waterslide' sidepod treatment. Alonso admits to expecting "difficult races" at the start of the year, but a quiet confidence

target a top-four finish in the constructors' points.



seems to emanate from the Silverstone squad.



Martin ended up battling for fourth place in the 2023 Formula 1 constructors' championship. That was a position it looked like McLaren could never reach early on, and one not good enough for Aston at the same time. But their fortunes waxed and waned in wildly contrasting campaigns.

cLaren and Aston

This then, is the timeline to explain it all.





Aston a dark horse after testing

Aston Martin's testing programme in Bahrain is challenged by Lance Stroll's pre-season bike crash, putting the workload on Alonso and reserve Felipe Drugovich. An early electrical glitch for Drugovich nine minutes into the first test day causes a minor scare, but an otherwise problem-free three days in Bahrain end with Aston and Alonso frequently among the frontrunners. This is noted by those close to Aston in 2022, although the team seeks to play down expectations. "I think we are in a decent place," Alonso observes after a final-day race run suggests that the team has produced



a podium-worthy machine for 2023.

Alonso's immediate impact

The pace demonstrated by Aston Martin in testing carries over. On pure one-lap pace, the green cars seem to be shy of the Red Bull, Ferrari and Mercedes packages, but race pace proves to be quite a different story. Alonso is fifth on the grid for the Bahrain opener as Stroll recovers from his pre-season hand and toe breaks to qualify eighth, and both improve on those starting berths. Helpfully, neither Aston driver sustains damage when they briefly touch on the first lap. Alonso's pass on Carlos Sainz offers fourth, and this becomes third when Charles Leclerc retires to secure a famous first Aston podium finish. Stroll is also impressive, moving past George Russell's Mercedes to grab sixth despite his injuries.

DUNB

Disaster strikes McLaren again in Bahrain

A year on from McLaren's Bahrain pre-season testing being disrupted by Daniel Ricciardo's positive COVID-19 test and front brake cooling issues, this time the team loses major time having to repeat work reinforcing its front top/inside wheel covers and again completes the fewest laps. But come the race, the results are worse than many outsiders had feared. Neither Lando Norris nor Oscar Piastri make Q3, then reliability issues strike both cars in the race. An electrics problem puts Piastri out after 13 laps, while Norris needs six pitstops to top up his engine's pneumatic pressure and finishes a twice-lapped 17th.

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Stevenson saves Alonso's Saudi success

Alonso leads the first three laps in Jeddah but lacks the straightline performance to keep Sergio Perez's Red Bull at bay. He can also do little about Max Verstappen's recovery from a Q2 exit, but nonetheless hangs on to claim another third place. Or so he thinks. After the podium celebrations, Alonso is slapped with a 10-second penalty for allegedly failing to properly serve an earlier 5s addition in the pitlane, with a rear jack installed before the five seconds had elapsed. Aston Martin sporting director Andy Stevenson successfully demonstrates that there was no explicit rule against this, rescuing the top-three result.



McLaren's next calamity presages staff changes

McLaren's driver line-up lets it down in Jeddah. First Norris needlessly clips a wall in Q1 and qualifies 19th. Then in the race, Piastri tangles with Pierre Gasly and his front wing flies off and is struck by Norris – both their races wrecked in a stroke. Before round three in Melbourne, technical director James Key departs, with former Ferrari head of vehicle concept David Sanchez rehired for 2024 as one of three technical directors reporting to Stella – including Peter Prodromou as aerodynamics supremo. Former Red Bull chief engineering officer Rob Marshall is announced in late May as joining as technical director, engineering and design from 1 January 2024 with Sanchez.

McLaren's points and new floor finally arrive

McLaren finally gets off the board with a solid double points finish in Melbourne – but it needs the late restart chaos to get there, since Norris and Piastri are still struggling with more drag than many of their rivals. Norris earns credit for his defence against Perez's Red Bull, as does Piastri for dealing with his home race pressure. Norris then scores again in Baku, while running McLaren's new floor plus lower-drag rear wing, but Piastri is very ill. The updates are eagerly anticipated yet bring a modest gain since they're not aimed at fixing McLaren's other weakness: slow-speed corners.



Aston's near miss in Monaco

Alonso finishes third again in Australia, then fourth in Azerbaijan before returning to the podium in Miami. But the AMR23's strength in slower corners suggests Alonso can fight for victory in Monaco, and he attempts a contra-strategy from starting second on hard tyres to get past polesitter Verstappen. Rain falls late on and Alonso pits – but for medium tyres, rather than intermediates. The track then dampens significantly, forcing Alonso to follow Verstappen in again the next time around. Alonso refuses to criticise the pit call at the time, but later concedes that an initial switch to inters might have

clinched a shock win. In the meantime, McLaren is on poor form in Miami, but manages three points in Monaco, where it unveils its 'Triple Crown' celebration livery.



Aston's Canada updates miss the mark

In May, Aston Martin settles into its plush new F1 facility adjacent to Silverstone, while preparing an update for Canada following lost momentum in Spain. A new bodywork package and floor are flown to Montreal as the team hopes to regain its form – and Alonso's second-place finish suggests that these have worked. But the low-downforce environment in Canada has apparently masked some less-desirable attributes, which emerge in a mid-season downturn in form. There are rumours that Aston Martin has had to redesign its nose and front wing amid a fresh flexi-wing clampdown, but this is denied by the team.



July updates transform McLaren's 2023

After resetting the MCL60's development baseline in Baku, McLaren's first major upgrades arrive with a fully redesigned floor, plus sidepod and engine cover alterations (including a revision to internal cooling) in Austria. An outwash front wing is then added at Silverstone. At its home race, McLaren is now so quick in the high-downforce corners that Lewis Hamilton says it's "murdering" Mercedes, and Norris even leads Verstappen early on. He eventually follows his Austrian fourth place with seconds at Silverstone and the Hungaroring. Piastri is in the wars in Austria with his non-updated car, but should take a Silverstone podium but for unfortunate pre-safety car pitstop

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timing, and he's undone by Norris's undercut in Hungary.



Aston back on form at Zandvoort

Unable to keep hold of its early form, Aston Martin drops behind Mercedes in the constructors' standings by the summer break. Zandvoort briefly suggests that it has returned to form, and Alonso proves determined en route to second in a rain-affected race. Kicking off with a two-for-one move into Hugenholtzbocht to claim third, he then dispatches Norris for second when the rain intensifies on lap two. A slow pitstop sends him down to sixth, but he rallies and works his way back up the order before the worsening rain results in a red flag. Although he puts pressure on Verstappen on the restart, he can't find enough to deny the home hero.



Spa, Monza and Singapore mixed for McLaren

Between McLaren's further upgrade pushes in Belgium (with its revised beam wing that aims to improve straightline speed) and Singapore (where it brings another new floor as part of another major car upgrade, this one aimed at addressing the slow-corner weakness), the team has a more difficult run on the aerodynamic efficiency tests at Spa and Monza, plus the changing conditions at Zandvoort. At Monza, Piastri tags Norris after their stops and the pair are admonished by Stella. Then in Singapore Norris is second again – a race where Aston struggles, lacking rear grip, Alonso makes poor errors at the pitlane entry and heads down an escape road, while Stroll misses out on racing due to his huge Q1 crash.

McLaren misses its best GP victory chance

As F1 heads to two high-speed tracks at Suzuka and in Qatar, the McLaren drivers move to downplay expectations, but these are raised by their strong qualifying performances. Piastri stuns with second on the grid for his first Suzuka race, before Norris jumps him and nearly passes Verstappen at Turn 2. McLaren ends up with a first double podium since winning the 2021 Italian GP, with Piastri finally enjoying the 'Singapore upgrade'. In Qatar, Norris rues repeated track-limits issues in the two qualifying sessions, with Piastri topping the sprint shootout and winning the shorter event. He leads home Norris in the tyre-dominated GP, having let him by at Suzuka.



Mexico, but to little avail. Dismal performances in qualifying and the sprint in the United States force the team to break parc ferme and take pitlane starts – which Stroll turns into a commendable recovery effort to nab seventh. Both drivers retire with damage in Mexico, where the team opts to end its "painful" experimentation. "We did a bit too much R&D work in front of you all," performance director Tom McCullough reflects.

Norris brings Brazil brilliance...

McLaren gets a final visit to the podium thanks to Norris's superb performance in the Brazilian GP, a day after Verstappen had jumped him off the line from sprint race pole. The Briton makes up for McLaren leaving its GP Q3 runs too late by jumping three cars at the start from sixth and moving to second with Charles Leclerc absent from the front row. He chases Verstappen after the restart and even attacks for the lead, before deciding it isn't worth risking damaging his tyres. Piastri is a victim of the first start crash but gets to restart with repairs, one lap down all race.



...as does Alonso at Interlagos

Experimentation over, Aston Martin looks back to normal in Brazil. Stroll and Alonso lock out the second row for the GP. They fall behind Hamilton and Norris at the start of the main race, although Alonso finds his way past his ex-team-mate to claim third. But Perez is reeling him in. Once they make their second stops, he puts Alonso under the microscope. Alonso's canny defence – one that lasts 15 laps of brilliant duelling – looks to have run out of steam on the penultimate tour, when Perez passes. But a second wind and poor Perez defence allow Alonso to sensationally return the favour on the final lap.

McLaren ends 2023 downbeat again

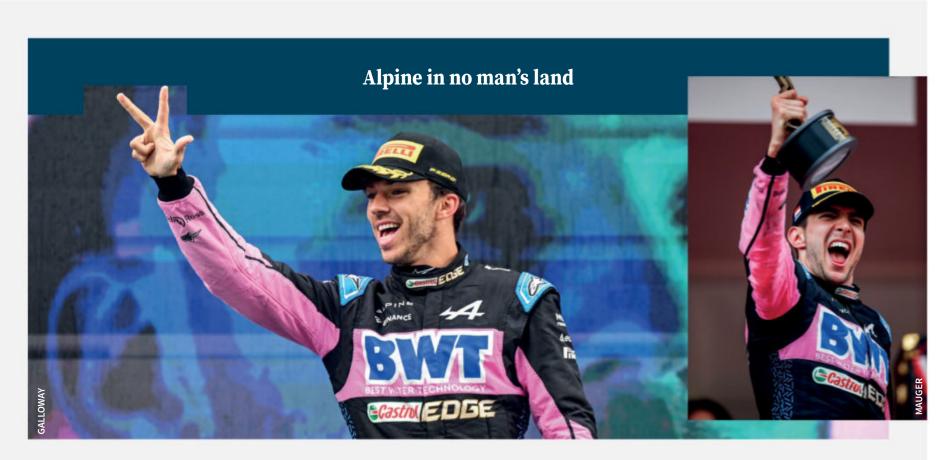
The Las Vegas race is always going to be harder for McLaren with its remaining drag issues and Ferrari's rise back to the fore, but it ends badly for Norris, who crashes hard. Piastri then shines, rising up the order in the chaotic proceedings, but eventually fades due to his two-stop strategy. At the Abu Dhabi finale, Norris blows a pole shot with a late Q3 mistake, but McLaren is anyway off the race pace compared to Ferrari and Mercedes. Stella concludes the year wondering, "have we embedded in this development [path], which

Aston endures experimental Americas double

Zandvoort appears long since a flash in the pan, the succeeding races less fortuitous for Aston Martin. So the team decides to get a jump on 2024 and experiment with new parts and set-ups at Austin and in certainly gave good grip, some elements of possibly the car just losing too much grip too rapidly in some conditions?" **#**



Alpine



Perhaps the kindest way to describe Alpine's 2023 season is 'neither here nor there'. Too slow to fight the quicker teams and too fast for the slower ones, the team was an outcast and ploughed a lonely furrow in the middle of the championship stakes.

Great individual results from Esteban Ocon and Pierre Gasly lightly peppered the season, with Ocon's third in Monaco and fourth at Las Vegas joined by Gasly's third at Zandvoort and Spa sprint-race podium. Behind closed doors, however, the team faced a series of power struggles – not only in the boardroom, but often between the two drivers.

Much was made of Ocon's and Gasly's history when they were paired up for 2023. Both drivers downplayed their adversarial past and vowed to work together, but the unspoken undercurrent sometimes had a way of seeping out. Remember their restart clash in Melbourne? The Suzuka swap that forced Gasly to cede position to Ocon? The Abu Dhabi undercut that left Gasly behind? As then-team principal Otmar Szafnauer said at the start of the season, Alpine was "cautiously optimistic" after bagging fourth in 2022. The team had targeted third, but that proved to be overambitious once the season got under way. Ocon managed to earn the ire of the stewards three times over the Bahrain opener, while Gasly could only collect ninth with a compromised set-up.

Both drivers scored in Saudi Arabia, prior to their Melbourne clash that erased a potentially large payday, while Azerbaijan was dismal; both Alpines had to start from the pitlane after the sole practice session laid bare further set-up problems, while Gasly faced the brunt of iffy reliability. This led to CEO Laurent Rossi's explosive Canal+

"The parting shot from Pat Fry that the team lacked ambition appeared to be on the money" interview, in which he labelled the team "amateurish".

While Alpine responded with another double-points finish in Miami, paired with Ocon's run to third in Monaco, the team was still way off the leading quartet of teams, and was pushed further back in the pecking order when McLaren began to build momentum with its upgrade path. A lack of consistency reflected Alpine's inability to progress to the same extent with its mid-season upgrades.

Gasly managed just one more podium for the team, when he was promoted to third after Sergio Perez was caught speeding in the pitlane at Zandvoort, and Alpine only broke into the GP top five three times over the season.

Reliability, although improved from 2022, was another bugbear. Ocon went on a run between Silverstone and Austin where he retired from more races than he finished; three of those retirements from mechanical issues, one with floor damage, and Hungary yielding a

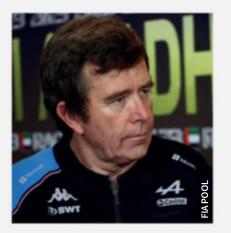
The power struggle

After Rossi's outburst on French TV, it appeared that his days at the helm were numbered. Indeed, he was moved to work on "special projects" at the Renault Group, a term usually reserved for desk clearing. Ex-Ferrari executive Philippe Krief was brought in as his replacement, while Alpine engine chief Bruno Famin (below) was installed as vice-president in a bid to revive team fortunes.

But the axe continued to swing. During the Belgian Grand Prix weekend, Alpine dispensed with the services of team principal Szafnauer after just 18 months in charge, and long-serving sporting director Alan Permane was also given his marching orders. Famin was put in direct charge of Alpine's F1 operation on an interim basis, although may remain in place for 2024 with no known progress on a new permanent team chief. His goal has been to unite the fractured Enstone and Viry-Chatillon camps, with 2026's engine formula looming. JBL



double-DNF for the team when the Alpine pair were victims of Zhou Guanyu's firstcorner pinball game. Ending the year 160 points shy of Aston Martin in the championship underlines the no man's land that Alpine occupied in 2023, and the parting shot from departing technical chief Pat Fry that the team lacked ambition appeared to be on the money.



The driver who saved F1 2023?

The evergreen Fernando Alonso helped ensure there was often a 'show' for fans to relish while Red Bull went about its business of domination **Alex Kalinauckas**

Fernando Alonso. After all, consider how even duller the campaign that's just concluded might have been without his many battling drives behind the dominant Red Bulls. Or indeed, those times when he eclipsed

Max Verstappen and Sergio Perez... Alonso began the year as one of the stories to watch, as he joined a fifth different F1 team of his storied career and made yet another new start, this time at Aston Martin. The team was the dark horse of winter testing thanks to the refinements to a car that had been dubbed a 'green Red Bull' following its many in-season changes early in 2022. The updates left Alonso delighted with the car's predictable handling balance.

ormula 1 fans really ought to thank

Aston led the fight for second in the constructors' championship throughout the opening phase, as Mercedes, Ferrari and McLaren floundered. But Alonso did that largely single-handedly, bringing home 75.5% of the team's points to the halfway point.

Lance Stroll did well to contribute eight points with sixth in the Bahrain season opener following wrists and toe injuries from his pre-season cycling accident. But even when those were fully healed by Monaco, Alonso continued to lead the line for Aston.

Alonso's result in Bahrain had been a "surprise" third place behind the Red Bulls, this performance a comeback drive after unfortunate intra-Aston contact had shuffled him down the order early on. Then he led in Jeddah, jumping Perez off the line before his grid box and pitstop penalties (the latter later rescinded) stole the headlines.

The podium results kept coming. He chased Lewis Hamilton



closely to end up third in Australia before the concluding madness kicked off there, then might have maintained a podium streak that lasted until his home race in June but for Charles Leclerc hanging on behind Perez and Verstappen in Baku.

"I was hoping to be in the top 10 regularly," Alonso says of his pre-2023 expectations. "I was hoping to score points in at least 80% of the races – something like that. I was hoping to be in Q3 50-60% of the time. And I was dreaming to be on the podium one time.

"I was thinking, 'OK, the podium is going to be nearly mission impossible - there are two Red Bulls, two Ferraris, two Mercedes and we have to beat Alpine eventually', because they were P4 last year. The podium seemed like a big target."

Having achieved that - repeatedly with the AMR23 and its braking strength he loved - Alonso should have been a winner in Monaco but for Aston's error in fitting medium tyres at what should have been a single pitstop as the rain arrived late on. Alonso refused to criticise his team afterwards, saying "we were brave on the strategy".

Further glittering results were then harder to come by, despite Alonso ending 2023 feeling "we deserved it more than anyone else this year" when it came to sealing what little victory success Red Bull let fall from its grasp. Nevertheless, he had an unlikely shot at a win thanks to the late restart circumstances in the tricky drywet-dry-wet race at Zandvoort. And then there was Brazil.

By this stage, with three events to run, McLaren had well and truly usurped Aston (and the fleeting threats of Ferrari and Mercedes) to be Red Bull's most regular challenger. At Interlagos, Alonso had battled past Hamilton at the early restart, and it seemed that an eighth podium of 2023 (the highest total for a non-Red Bull driver) was on for the Spaniard.

Then Perez arrived on his tail. But Alonso, as ever, was undaunted. He produced a 43-lap defence and short late attack that secured his final podium visit of the year and handed Aston valuable momentum heading into 2024.

"I'm happy with the personal performance," reflects Alonso. "I think together with 2012 [when he came so close to that year's title with Ferraril, it's the best season for me. Personally, I rate it the best season in my driving and I was happy with everything. Motivated, I was fit, I was performing in difficult conditions sometimes." Although Alonso echoes his team's upper management in "seeing only positives" from 2023, there were low moments. Aston made errors in its floor and sidepod changes just before his run to second place in Canada – that track's low-downforce nature masking the reality – and a mid-year fallow run followed. This included a rare Alonso gaffe in his Spa sprint race crash and retirement, while another was his earlier Barcelona Q1 off. He felt the challenging period was made worse by Aston not making ideal set-up choices. Plus, team insiders have admitted >>

Fernando Alonso













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Fernando Alonso



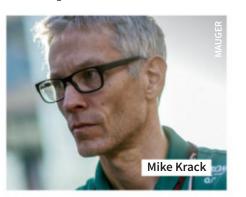
that it made tweaks to its front wing around the time of April's Azerbaijan GP after the FIA had been probing the flex-wing saga. There is, however, no suggestion that Aston had been doing anything against the rules.

Given Alonso's reputation for challenging his teams when things haven't been flowing like a "honeymoon", in the words of Aston team boss Mike Krack, how was he to work with when things got harder in 2023? "Super-constructive," Krack adds. "Both drivers, they agreed with each other what were the main problems and it was always constructive. It showed real qualities of the team, of Fernando, of Lance that we stuck together. It was really difficult times, maybe a couple of races [through Austin and Mexico], and I think the relationship became now even stronger through that."

Alonso is clear where Aston needs to improve for 2024 – a sense

he crystallised on after the team experimented with parts it claimed were designated for the AMR24 during the tough events at Austin and in Mexico City.

"We need to find some consistency," he explains, also pointing out that the AMR23's main strength came from being kind on its tyres, like the similarly shaped Red Bull RB19.



"One of the weak points was the car has to operate in a very narrow window. It's the same for everybody, but it seems that we're struggling a little bit and it will be nice if we can always perform at a stable level next year. And also if we can improve the straightline speed."

Expectations now turn to an even more impressive jump for Aston and Alonso from 2023 to 2024, a year when the two-time world champion will be settled with the squad and will not have to adjust, for example, to the team's power steering design as he did this year. Aston will also be extracting additional resources from its still-expanding, massively reworked Silverstone factory. "Now the real difficulty starts," concludes Alonso, who is clear that he can still reach that third world title with his new, growing team. "Let's say that that first step to become a top 10 contender is the easiest part. Now comes the tricky period for Aston Martin. I think the next two or three years – to find that extra bit to create something that no one has in that moment, to be creative, to be innovative [is the plan].



What does Fernando Alonso reckon was his best race performance in 2023?

His Bahrain debut with Aston Martin must be in with a shout. A swashbuckling, wild charge back to an unexpected podium – add in the very Alonso aggrandising team radio and it stands out even further. Then there was leading the next race in Jeddah, being in the victory hunt in Monaco, and beating arch-rival Lewis Hamilton to second in Canada even while battling a fuel system problem.

Surely, though, it's his sterling defence against Sergio Perez through the long final stint in Brazil, which featured Alonso adjusting his lines to gain traction on corner exits against the slippery Red Bull, and had the Spaniard nick third back with a brilliant final-lap pass to secure a final podium of the season (see page 40).

Not so. It was the race to ninth at Monza, one week on from Alonso threatening Verstappen's victory at the disrupted Dutch Grand Prix. He made the selection all by himself in a media scrum ahead of the Abu Dhabi finale. Then he doubled down on that choice during a subsequent session with select publications, including Autosport. "Really?" came "Monza honestly was just a surviving exercise, because the car was nearly undriveable"

our reply. "Monza was better than Brazil?"

"They were very different," Alonso replies effortlessly. "Brazil was a very well executed defensive and strategically complex [race] with all the tyre management, pitstops, lines, decisions. Yes, Brazil had a level of complexity that was high. But Monza honestly was just a surviving exercise, because the car was not on the ground, the car was nearly undriveable.

"And we had to keep up in the DRS with the McLarens and some cars in front. To finish in the points that race, it was like not matching [anything else]. Something strange. One of those weekends where it seems that the performance from the car and myself – they were in a different dimension, that you struck something that should not be there. "So, when I crossed the line P9 in Monza, I was happy with the points. And I felt, 'OK, this was not a normal race, this we should never [have been] P9."

"I think that's maybe the biggest question mark that we need to face and I think no one has the answer..." *

"I realised last year, in March or April, that from the aero side we were not going in the right direction. We had a wrong philosophy"

AlphaTauri faced playing catch-up early in Franz Tost's final season at the helm, as an improving Yuki Tsunoda found himself teamed with and against three drivers in the other car Jake Boxall-Legge



AlphaTauri



n his final press conference as AlphaTauri team principal, Franz Tost made no bones about his disappointment with the team's most recent pair of Formula 1 cars, and that he had set the wheels in motion for change. The Italian squad had enjoyed its best season at the end of the previous regulation set, claiming

sixth in the 2021 constructors' title with 142 points, but its first car under the new-for-2022 ruleset was comparatively unimpressive. Despite its deal with the parent Red Bull Racing squad to take as many transferable components as allowed under the regulations, AlphaTauri slipped to ninth in the championship as it fell towards the back of the field.

Tost, in one of his final acts as team principal, sought to bolster the aerodynamic department. So he tasked AlphaTauri's HR department with finding "three, four or five senior aerodynamicists" to help turn the ship into more prosperous waters. With long gardening leave periods a hurdle in the Austrian's desire for a more immediate turnaround, many of those aerodynamicists could not join the Faenza squad until 2023 had already started. The AT04 had already been born, and so the incoming reign of the new aero pharaohs was largely focused upon improving the current car to ensure that Tost's final year at the helm was not spent at the back.

"Last year's car didn't work and I was totally shocked," he explains. "Then this year at the beginning the car did not work. And I just said to the aero department and the engineers they have to bring to every race an upgrade; just bring new parts and improve the performance of the car. I just want to see a good lap time and the rest I'm not interested in. And I must say it worked out well."

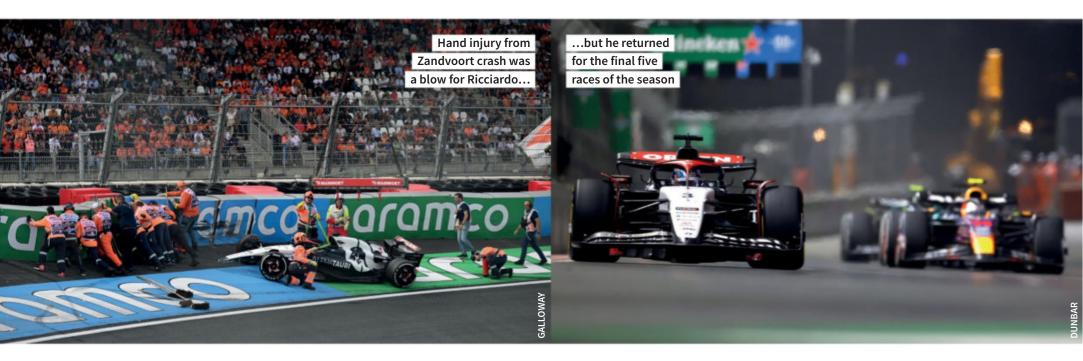
With the departure of Pierre Gasly to Alpine over the off-season, the team needed to gravitate around a new focal point on the driving front. Nyck de Vries was expected to become that. As a champion in both Formula 2 and Formula E, the Dutchman also had plenty of experience in his reserve role at Mercedes to draw upon. Outwardly, it suggested that the Frieslander would come straight in as team leader, fresh from having his CV gilded by ninth at the 2022 Italian Grand Prix in place of an unwell Alex Albon at »

"Last year's car didn't work and I was totally shocked. Then this year at the start the car did not work"



ALPHATAURI

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Williams. Instead, it was Yuki Tsunoda who stepped up.

Perhaps too willing to play the role as Gasly's little brother in their two years as team-mates, Tsunoda's development under Tost started to bear fruit. A diamond in the rough during his first two years, the Japanese cut a more polished figure over 2023, toning down his oft-combative radio messages (slightly) with a willingness to help provide the feedback that the team needed to improve.

One key bugbear was that the car suffered from instability when being run at higher ride heights, resulting in a drop in downforce when contending with low-speed corner entry. This was something that Tsunoda could cope with better than de Vries; comparing their GPS traces through both of their Q1 laps at the Bahrain opener, Tsunoda carried far more speed into the plethora of slow corners, which yielded a Q2 appearance at the expense of his team-mate. A new floor taken to the Australian GP helped both cars get into Q2, which Tsunoda converted into the team's first point of the year. He then got his car into Q3 at Baku, snaring eighth on the grid and finishing 10th once more in the Azerbaijani capital.

De Vries, in the meantime, continued to struggle. His confidence was further sapped in Baku by hitting the wall at Turn 3 in qualifying, and he then binned it at Turn 5 during the race after clipping the inside barrier to snap his front-left suspension.

The first half of the season had been contrary to early predictions: de Vries was being soundly beaten by Tsunoda.



"That Ricciardo plonked his car 13th on the grid suggested that the AlphaTauri driver shuffling had been vindicated"

Even if the two were occasionally evenly matched in qualifying, Tsunoda was far stronger in the races and had contributed both points scored in the season's opening half. The pressure had been on de Vries early on, and this escalated after a tepid British GP.

At this point, Daniel Ricciardo entered from stage left. After stepping away from F1 in the wake of a bruising two years at McLaren, his time spent rediscovering his groove in Red Bull's simulator as 'third driver' had been productive. Wishing to see whether his progress could translate into the real world, he'd been given driving duties for the post-British GP Pirelli tyre test at Silverstone, where he got his hands on the all-conquering RB19.

This is perhaps mythologised as the moment when Red Bull advisor Helmut Marko decided to give de Vries his marching orders, as the Australian set some not-insignificant lap times at the wheel of the Red Bull. Regardless, de Vries's lacklustre performances had been the last straw for Marko, and Ricciardo was drafted into the line-up for the Hungarian GP.

That Ricciardo had plonked his car 13th on the grid with minimal preparation, outqualifying Tsunoda, suggested that AlphaTauri's driver shuffling had been vindicated. The car was slowly becoming stronger too, with a handful of updates being taken to most races, and Ricciardo's impressive run at the Hungaroring to finish where he'd started, with no experience of the car, suggested that its low-speed performance was becoming more manageable.

Tsunoda stepped up his game in response. An excellent drive at Spa yielded a third 10th-place finish to take into the summer break, and AlphaTauri plotted its way off the bottom of the standings. Ricciardo had a rougher ride at the famed Belgian venue and only managed 16th, and then his otherwise solid return to F1 hit something of a brick wall. Oscar Piastri's trip to the barrier at Zandvoort's banked Hugenholtzbocht caught Ricciardo unaware during the Dutch GP's second practice session. He avoided the stranded McLaren, but hit the wall with enough force to end up with a fractured hand, derailing his comeback significantly. AlphaTauri would need to make another driver change, this time against its own will. Liam Lawson had made the trip directly from the Japanese Super Formula race at Motegi to join AlphaTauri as its reserve driver, and was rewarded for his lengthy journey with the seat for the remainder of the weekend.

AlphaTauri



But conditions were difficult. Rain proved persistent throughout the rest of the weekend, handing Lawson an extra challenge to contend with in addition to his understanding of the car. It wasn't a great surprise that he qualified last, but he pounced on the early rain with a pitstop that eventually contributed to a 13th-place finish – two positions higher than Tsunoda.

Two races later, AlphaTauri's performances in the low-speed conditions were further vindicated when Lawson finished a superb ninth in September's Singapore GP. The team had introduced a hefty upgrade package for the Asian double-header, adding another new floor and reprofiling the bodywork to add more downforce; with the early issues fixed, Ricciardo had cited previously that the car simply lacked outright downforce on his first experience with it.

A switch in rear suspension also helped; AlphaTauri had been using the suspension package from last year's Red Bull, but swapped to the current specification to assist with curing rear-end instability at higher ride heights. After Lawson proved that these changes had worked handily in Singapore, the team was on the cusp of points again next time out at Suzuka.

Ricciardo was back for Austin after Lawson had one last race in Qatar, but the eight-time grand prix winner endured a difficult return as Tsunoda shone once again, claiming eighth to carry AlphaTauri to two points off Haas in the championship. The team was not about to abort its development for the year, and had found some lucrative gains in the wind tunnel in this period. "We obviously started the season a long way off on the back foot, so there was plenty to find," relates head of trackside engineering Jonathan Eddolls. "But I think it's fair to say that we've done a really good job at identifying the weaknesses of that car, and then working hard to try to address those. All the updates you have seen since Austin onward – we've been updating the car all year, but to get points with so many cars in front, it's taken quite a while to get to this stage where we can consistently score points with the car."

A back-on-form Ricciardo delivered the team's best result of the season in Mexico City, where he qualified a brilliant fourth and eventually landed in seventh position at the chequered flag to leapfrog both Haas and Alfa Romeo in the championship standings in one fell swoop.

Not to be outdone, Tsunoda was brilliant in Brazil at the end of the Americas triple-header. He followed up his sprint race sixth with ninth in the GP, helping the team draw clear of the two teams behind and affixing Williams securely in its sights. Although now strong in the low-speed stakes, straightline pace was still lacking. Las Vegas was therefore not a fruitful encounter, but finding seven points to move ahead of Williams in the constructors' standings in the Abu Dhabi finale was achievable.

Here, Tsunoda underlined his own growth as a driver. Hoping to give his mentor Tost a fine send-off, he grabbed sixth on the grid in qualifying and hoped to convert that – doing so would be enough to get AlphaTauri above Williams in the championship. Williams had strategised around keeping Ricciardo out of the points, pinning AlphaTauri's hopes solely on the 23-year-old. He executed the one-stop strategy to near-perfection, but it wasn't enough to stave off the two-stoppers as his hard tyres began to age. Pouncing on Hamilton's attempted last-lap overtaking move to retain eighth was the maximum he could achieve.

Regardless, AlphaTauri made great strides throughout 2023. Seemingly down and out while mired in last place after the first half of the season, Tost's gauntlet-throwing at the start of the year appeared to spur the team on into making heady progress with a poor car. He could be forgiven for taking some satisfaction out of the turnaround, as he begins a new chapter of his life after 18 years in charge at the team.

The seeds have been sown for the team's new journey. Peter Bayer and Laurent Mekies will assume control of an operation that will be rebranded in 2024 and, with Tost's hires bringing their influence to next year's car, the team formerly known as Toro Rosso looks to be on the rise once again.





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Williams

Williams reaches seventh heaven



James Vowles could be forgiven for having to mop the sweat from his brow as the Abu Dhabi Grand Prix drew to its final stages. Williams could do little to defend its seventh place in the constructors' standings from AlphaTauri on pace alone – the FW45 proved ill-suited to the Yas Marina Circuit – but strategy helped its cause come race day.

With Yuki Tsunoda in impressive form, Williams had to focus on stalling Daniel Ricciardo's efforts to join the top 10 to ensure that the Italian squad's late play for seventh could be halted. Ultimately, it worked out, securing the best constructors' championship position for Williams since 2017.

It was an impressive first year as team principal for Vowles. Owner Dorilton Capital had been unhappy with the team's progress under previous boss Jost Capito, as it slipped to the back of the order across 2022. This prompted Vowles to take control at the team, although the FW45 was already designed and built by the time he came into the fold. The ex-Mercedes strategist has been conscientiously building up the team from within, while noting key weaknesses with its ageing infrastructure. At races, his focus was on helping the team get the best out of its 2023 car.

Like its predecessor, the FW45 was stunningly fast in a straight line, but was not as much of a one-trick pony as the 2022 car. This gave Alex Albon the platform to impress throughout 2023. The Anglo-Thai made the most of a somewhat peaky design when the stars aligned, and could be relied upon to convert impressive qualifying efforts into defensive masterclasses in races.

The Canadian GP was the

Albon took any chance

"Vowles has been building up the team, noting key weaknesses with its ageing infrastructure"

standout example, in which he roared to seventh place after keeping George Russell and Esteban Ocon firmly in his rear-view mirrors throughout the entire second half of the race. His defence against Fernando Alonso and Charles Leclerc in the British GP was also exemplary, as was his Italian GP run to seventh – a year after his appendicitis-enforced absence at Monza.

Albon scored 27 of Williams's 28 points, while rookie Logan Sargeant managed to trouble the scorers just once – he was promoted to 10th at Austin after Lewis Hamilton and Leclerc were



disqualified. A bright start in Bahrain quickly nose-dived with a qualifying crash in Jeddah, and a series of accidents continued to chisel away at Sargeant's confidence. The car's delicate front end, which was prone to locking, hurt the American's progress – the Williams needed a surplus of downforce to stave off the understeer. Albon had managed to get his head around it, owing to his greater experience.

Sargeant managed to get the crashes out of his system after adding to an already hefty repair bill at Zandvoort and Suzuka, and qualifying sixth at Las Vegas showed that he's got the underlying pace. Williams felt the same, and extended Sargeant's deal into 2024.

This was a year for Williams to build from, with Vowles putting the foundations in place to help the team move forward after years of underinvestment. A change to the capital expenditure regulations has given the team a chance to modernise its facilities, something that Vowles cites as a key factor behind its 20-year fall from race wins to battling in the lower reaches of the points. That ambition has enticed Pat Fry to join as chief technical officer and, with the extra cash in its lap for finishing seventh, Williams finally seems to be heading on an upward trajectory.



Future stirrings under calm waters?

A relative lack of political turmoil doesn't exactly mean peace in our time. Matters on multiple fronts might soon bubble to the surface Matt Kew

addock politics largely imitated on-track proceedings this year: the drama was turned right down. Formula 1 wasn't still reeling from an intensely controversial title decider, no teams were found guilty of breaching the cost cap, dolphins could reclaim ownership of 'porpoising', and Oscar Piastri didn't find himself at

the centre of a custody battle. But F1 and the FIA certainly weren't playing happy families. That marriage of convenience remained just as loveless.

For many, that it didn't all boil over was a welcome change, given the exhausting vitriol that has hung around the series since the 2021 Abu Dhabi Grand Prix finale. For others, it underlined why 2023 was very far from a season for the ages amid the Max Verstappen monopoly.

But perhaps the past 12 months have at least laid the foundations for some juicier disputes that have yet to fully unfold. Are AlphaTauri and Red Bull that bit too close for comfort? Why did the FIA investigate whether the same could be said of the Wolffs? And will championship top brass ultimately tell Michael Andretti and General Motors where to go to inspire a bitter legal battle?

President elects to step back

A more muted tone for the season was set in February when divisive FIA president Mohammed Ben Sulayem, at least publicly, stepped away from the day-to-day running of F1. While seeking election, his manifesto outlined a plan to install a "revised governance framework", so handing over control to FIA single-seater director Nikolas Tombazis after 14 months in office wasn't totally unforeseen.

But the timing of this couldn't go unnoticed. His move out of the limelight arrived weeks after F1's lawyers wrote a "cease and desist" letter over the president's suggestion that the championship's mooted \$20billion valuation was "inflated". This was deemed to be interference in commercial matters, which fall solely under the remit of series owner Liberty Media. Ben Sulayem also caused chagrin by beating F1 to revealing its own 2023 calendar, upset the drivers by overseeing an updated International Sporting Code that banned "political, religious or personal" statements. Plus, comments published on his website in 2001 resurfaced. In these, Ben Sulayem said he did not like "women who think they are smarter than men, for they are not in truth".

Ben Sulayem remained highly visible and, despite seeming to loosen his grip, kept pulling the strings. The president is said to have had plenty of sway in Lewis Hamilton, singled out for his "role model status", being reinvestigated for crossing a live track at the Qatar GP. Ditto when an inquest was sensationally launched into Toto and Susie Wolff only last week. And Ben Sulayem would remain vocal whenever it came to the merits of the F1 grid growing to 11 teams...

Any room at the inn for Andretti?

The highest-profile political thread of the year was the flirtation surrounding an 11th F1 team. Championship chiefs are quite content with 10, so were caught unawares when Ben Sulayem said that the FIA was willing to receive applications. A formal reason for wanting to expand the grid was never properly communicated. But the unconvincing inspiration is thought to come from wanting to see exactly how many potential entries really were as interested in joining as they made out.

Bids from Rodin Cars, which would have reserved a race seat for triple W Series champion Jamie Chadwick, FIA F2 squad Hitech GP and start-up Asian effort LKYSUNZ were rejected. Only one interested party was allowed to proceed. That was Andretti Global, which proved it had the technical and financial resources to be competitive and commit to the top flight for a long time.

The Andretti paperwork then landed on the desk of F1 CEO Stefano Domenicali. While incumbent teams have no direct say in the matter, the Italian knows full well they don't want to divide their slice of the commercial pie. Plus, they fear any destabilising effect a new entry might have, and they want a bit of recognition for sticking by F1 during its 2014-16 hybrid era lull. Objections raised in public by team principals have been weak. The one offered for a while was that any new addition must bring "value". Then in November, it was revealed that American automotive giant General Motors had registered with the FIA to build a Cadillac-branded engine that would be reserved only for an Andretti chassis. This prompted teams who don't bring the "value" of a works powertrain programme to revise their counterargument, then making out that they didn't have enough data to know whether Andretti-Cadillac

"Perhaps the past 12 months have laid the foundations for some juicier disputes that have yet to fully unfold"

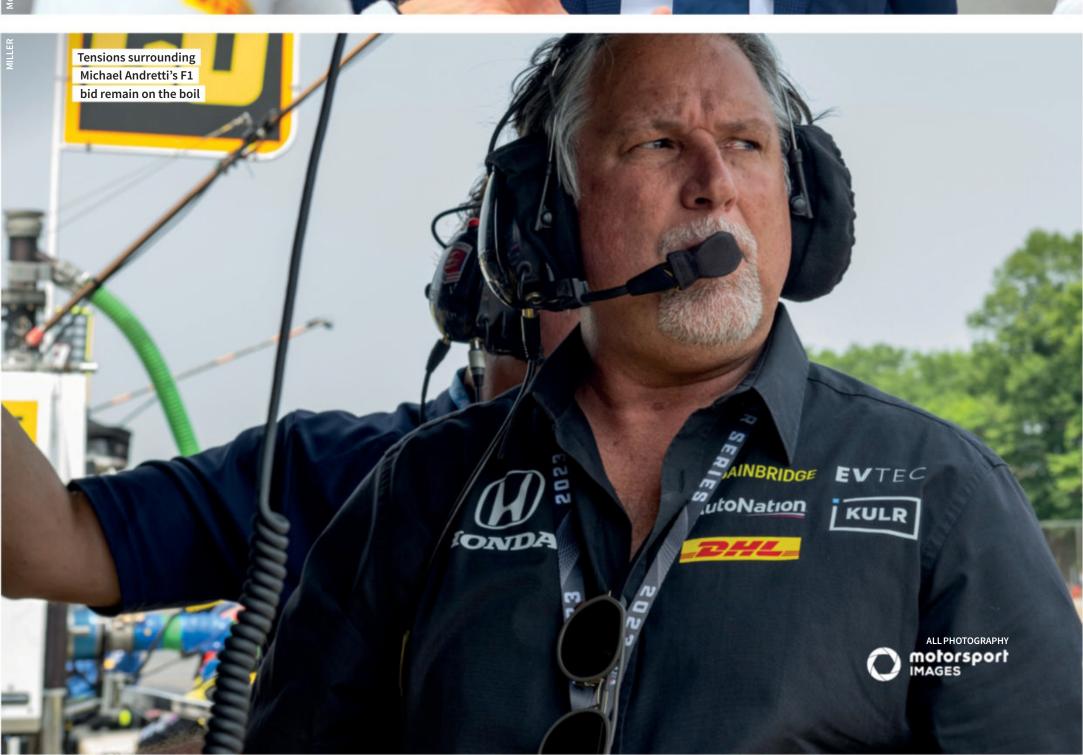
could be a good thing or not.

Already, the drawn-out new team saga has underlined the lack of communication between the FIA and F1, and made the paddock »

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FIA president on duty in the WRC. Did he really step back from F1?

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F1 season review

appear unwelcoming to new faces. The public perception seems to be that Andretti brings everything that can be reasonably asked of a new team, so should be allowed in. If it isn't, expect a damning response from the team and General Motors, which will brand F1 as a closed European shop. In that scenario, given the loss of time, money and, worst of all, face for Andretti, a legal battle will ensue because investors will want to know exactly why they have met every specified criterion and yet still been turned away.

Massa's legal claim to the throne

F1's legal department has also been kept busy thanks to Felipe Massa. After a spring interview with Bernie Ecclestone, the 2008 runner-up reckoned the powers-that-be knew in good time that Nelson Piquet Jr had crashed deliberately in that season's Singapore GP. But they chose not to act to protect the championship's reputation. As such, 15 years down the line, Massa wants the race result to be deleted so the Brazilian would beat Hamilton to the crown. Aside from the trophy, Massa's representation believes that he has missed out on "tens of millions of euros".

Explaining his legal challenge, the ex-Ferrari racer said: "I always was really aggressive about what's happened in that race, which is not sport. Especially after 15 years, we hear that people knew in 2008 and didn't do anything. So, then it was what changed my mind to fight for justice."

It's unlikely that Massa will get what he believes to be his. Once the post-season FIA Prize-Giving Gala is complete, the year's result is set in stone. The governing body's judicial system also makes plain that there is no higher authority than the independent International Court of Appeal. No alternative has jurisdiction over the FIA. Nevertheless, Massa's legal team pressed on and sent a letter to the FIA and FOM to set a deadline for when their internal investigations needed to be completed. But this was ultimately pushed back by the summer break, since too many personnel

> Massa remains livid over 'Crashgate' 15 years on

were on holiday to compile a proper response in time.

Mercedes motorsport boss Toto Wolff warns that "disarray" could follow if the case is somehow successful. Still, the Austrian is watching "from the sidelines with curiosity" on the off chance that it enables his team to revisit the 2021 Abu Dhabi GP, for which the FIA has openly admitted that it incorrectly handled the late safety car period and procedure for drivers unlapping themselves. The tin opener remains poised over the can of worms.







F1 rallies around the power couple

But the Wolff household was somewhat distracted by a different investigation over the winter. In a remarkable early-December development – and ostensibly following complaints from team bosses – the FIA Compliance Department started looking into a possible conflict of interest between spouses Toto and Susie Wolff, the F1 Academy managing director.

This was apparently exposed when Toto made a comment in a meeting between team principals based on material that could only have come from FOM, to which Susie could theoretically have greater access. This was relayed to Ben Sulayem, who asked his staffers to do some digging.

Plainly, this - plus the support the governing body keeps throwing behind Andretti - is causing further harm to the relationship between F1 and the FIA. See the strong riposte from the championship: "We note the public statement made by the FIA that was not shared with us in advance. We have complete confidence that the allegations are wrong, and we have robust processes and procedures that ensure the segregation of information and responsibilities in the event of any potential conflict of interest. We are confident that no member of our team has made any unauthorised disclosure to a team principal and would caution anyone against making imprudent and serious allegations without substance." Mercedes' reply was similarly punchy: "The team has received no communication from the FIA Compliance Department on this topic and it was highly surprising to learn of the investigation through a media statement. We wholly reject the allegation in the statement and associated media coverage, which wrongly impinges on the integrity and compliance of our team principal." But arguably the most damaging was posted by Susie Wolff on social media, who suggested alternative motives were at play.

She wrote: "I am deeply insulted but sadly unsurprised by the public allegations that have been made. It is disheartening that my integrity is being called into question in such a manner, especially when it seems to be rooted in intimidatory and misogynistic behaviour and focused on my marital status rather than my abilities."

A day later, in an almost unprecedented display of unity, particularly behind Susie Wolff, the nine other squads issued near-identical statements: "We can confirm that we have not made any complaint to the FIA regarding the allegation of information of a confidential nature being passed between an F1 team principal and a member of FOM staff. We are pleased and proud to support F1 Academy and its managing director through our commitment to sponsor an entrant in our liveries from next season."

Since the team bosses denied all knowledge of lodging a complaint, it placed immense pressure on the FIA to disclose precisely what prompted it to shine a spotlight on the Wolffs. That transparency didn't come but, 24 hours on, the governing body said it was satisfied that FOM's protective measures were robust enough and that the investigation had been dropped.

Red Bull gives you wings – what about floors and suspension?

After the late-2022 death of company co-founder Dietrich Mateschitz, whose love of motorsport was clear to see, the Red Bull F1 teams fell under the leadership of new CEO Oliver Mintzlaff. His business mind wanted to know why AlphaTauri was sinking to the bottom of the standings while the exposure of racing in the top flight was doing little to boost sales for the fashion brand. AlphaTauri team boss Franz Tost wrung the changes through an aerodynamic department he thought was responsible for the torrid adaption to the ground-effect rules. But that wasn't » Newey and Horner know Red Bull teams remain under scrutiny

enough to save his job. After 18 years in charge at Faenza, his last race in charge came at the 2023 Abu Dhabi GP before making way for ex-Ferrari sporting director Laurent Mekies.

As Tost counted down his remaining weekends, Helmut Marko was next in the crosshairs. The FIA issued the Red Bull motorsport advisor with a written warning for suggesting that Sergio Perez's protracted dip in form was down to his ethnicity. "He is South American [sic] and he is just not as completely focused in his head as Max [Verstappen] is or as Sebastian [Vettel]." Autosport understands that Red Bull's new engine technical partner Ford was furious and that sales of the energy drink took a major hit in related regions.

Amid the corporate restructure, rumours were rife that Marko had been sidelined. But the rest of the pitlane was more concerned by the dynamic between Red Bull and AlphaTauri, the latter enjoying an aggressive run of upgrades during the closing rounds to jump from last to eighth in the points. McLaren team principal Andrea Stella seemed more barbed than complimentary when appraising the turnaround: "I would like to say very well done



to the AlphaTauri engineers for having made the best car in low speed. It's quite impressive!"

It points to a storyline that will run into 2024, with the paddock concerned that ties between Red Bull and AlphaTauri are especially tight. The worry stretches beyond how far the junior squad could climb. Put simply, with the AlphaTauri operation – which uses the main team's wind tunnel – consolidating in Bicester, how much information and how many personnel could theoretically be shared? And might some of those shiny new parts that ended up on the AT04 find themselves bolted onto the RB20 in time for next season? Sharing the love could help mitigate some of the aerodynamic testing restrictions imposed upon Red Bull for winning the constructors' crown.

Team boss Christian Horner is emphatic: Red Bull is "totally

within the regulations" and this is no "pink Mercedes" repeat – a la Racing Point in 2020. The FIA investigated the pairing and found no evidence to indicate foul play. Tombazis said: "We haven't seen anything in AlphaTauri that is concerning us." Besides, ground effect requires a holistic approach. Red Bull's floor might interact horribly with an AlphaTauri chassis that was homologated at the start of the term.

Sources suggest that at the last F1 Commission meeting in Abu Dhabi there was a proposal to consider refining the ways in which teams might collaborate under future rulesets. This was met by resistance from two teams, and they weren't Ferrari and Haas, who also enjoy a close working relationship... Red Bull's rivals might therefore wish to revisit the matter when the Christmas cheer runs dry early in the new year.

Alpine drought results in Famin

Alpine set crystal clear and entirely attainable pre-season targets. The team that snared fourth in 2022 would repeat that feat while closing the gap to Red Bull, Mercedes and Ferrari by again ensuring that every upgrade bolted on its car would be an instant hit. But come round five in Miami, the Enstone squad sat sixth and had watched midfield rivals Aston Martin and McLaren surge past. Meanwhile, the Viry engine factory needed to answer why its power unit - finally reliable after replacing a fragile water pump – was 30bhp down on everyone else's.

Laurent Rossi, the Alpine CEO whose remit covered both the diminutive road car programme and F1 concern, wanted to tell the world that this simply wasn't good enough. He organised an interview with French broadcaster Canal+ to brand his employees "amateurish" and lacking the right mindset. Shockingly, this didn't curry favour. Chief technical officer Pat Fry was suitably irked and signed for Williams. Two months later, Rossi was given the flick and told to focus on nondescript "special projects" - chiefly, writing a new CV. Four-time F1 champion Alain Prost, formerly a team advisor, would declare Rossi to be akin to "an inept manager who thinks he can overcome his incompetence with his arrogance and his lack of humanity towards his people".

Ex-FIA operations director Bruno Famin was tasked with looking after the grand prix team in addition to his role at the top of the engine programme. Renault Group boss Luca de Meo then called team principal Otmar Szafnauer, who he'd hired ahead of the 2022 campaign, plus long-serving Enstone sporting director Alan Permane, to demand success in double-quick time. The experienced duo reckoned it took longer than that to change the fortunes of an F1 team, so both were shown the door.

Szafnauer would reveal: "They wanted to do it faster than is possible and I couldn't agree to an unrealistic timeline. If you do that, it's only a matter of time before everyone gets frustrated,



so I laid out a very realistic and possible plan and I think they wanted to shortcut that plan with somebody else."

When the revolving door finally stopped spinning, Famin could also count himself as interim team principal. By Autosport's count, Alpine (nee Renault) has ousted 13 senior figures in the past five years. The season ended with the team still sixth in the standings and challenging nobody. It was 92 points ahead of Williams but 160 adrift of fifth-placed Aston.

Teams fear 'Frankenstein' horror story

Audi and Porsche were both at the negotiating table when it came to devising the 2026 engine regulations. With F1 enjoying its Drive to Survive popularity boom, they wanted in.

But the emissions scandal still loomed large for their parent Volkswagen Group, so the new rules had to promote greater sustainability and road relevancy. As such, the FIA outlined a much larger reliance on the electrified part of the hybrid unit. Theoretically, a 50:50 power split between batteries and internal combustion engine can still change. But this would inspire outrage from manufacturers, whose dyno testing is well under way.

Early analysis from squads prompted fears that the cars would not be able to regenerate enough energy from the Motor Generator Unit-Kinetic. This, they reckoned, could lead to sudden losses of speed on straights, with drivers forced to even downshift should the electrically generated 470bhp go AWOL. One team boss said: "We have to make sure we don't end up creating some Frankenstein cars that are not what was originally intended with the regulations."

F1 chiefs hit back. They reckoned that these concerns were due to teams using outdated data, possibly based around simulating how the 2026 engines would cope when fitted in the middle of the current breed of high-drag machinery. For the next generation, both front and rear wings will become active to improve the way cars slice through the air. The new model will also be 10



ACCURATE AS OF 6 DECEMBER 2023

Top 10 Formula 1 stories of 2023 on Autosport.com

A rundown of the biggest news stories of the year from F1* Haydn Cobb



F1 car floors flashed in public in Monaco

Every team's biggest secret since the return to ground effect had been car floors, with any exposure quickly covered up. But for Red Bull and Mercedes at Monaco, that went out of the window when Lewis Hamilton's W14 was hoisted into the air by recovery cranes after he crashed in FP3, and Sergio Perez's RB19 was presented to the world in qualifying.



Ford to return to F1 in 2026

In 2022, the incoming hype was all for Audi signing up to join F1, and in 2023 it was Ford's turn after it confirmed its return to grand prix racing as engine partner to Red Bull. This came about after the squad saw its coupling with Porsche fall apart, and created a full-circle moment given Red Bull bought the Ford-owned Jaguar team in 2004.



FIA clamps down on grid access

F1 had many track personnel problems this year, starting with fans being allowed onto the circuit during the Australian GP. But it came to a head in Spain when special guests, including footballer Neymar Jr (above), were standing on the edge of the track during the formation lap. Further fan incidents occurred in Brazil, which led to a crackdown on track access.







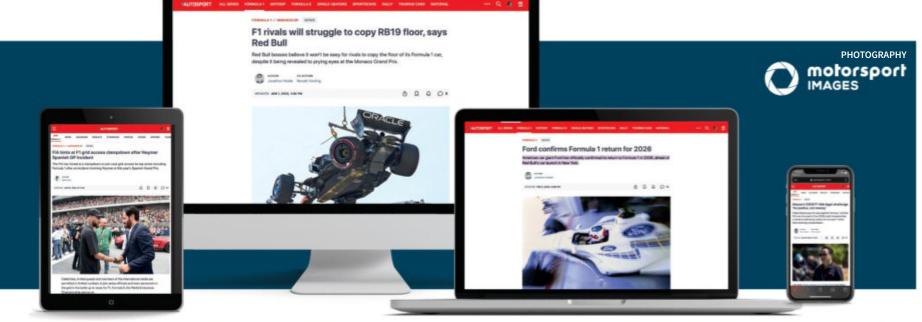
Snowbiz and safety concerns at Las Vegas

F1's most-talked-about race in 2023 endured a mixed reception, with the Las Vegas GP's opening practice night suspended and delayed by track covers being dislodged, which wrecked Carlos Sainz's Ferrari. After running without spectators in FP2, which ended at 4am, the Vegas extravaganza picked up its pace and delivered a thrilling race, but left F1 with lots to learn.

Andretti's entry plans turn into a showdown

Another never-ending story was Michael Andretti's bid to join the grid from 2025-26. A Cadillac partnership, a promise of a new engine from General Motors, and the green light from the FIA has thrown the decision into F1's hands about its feasibility. The other 10 teams remain wary of a loss of earnings from Andretti taking a slice of the pie.

Top online stories





Massa's 2008 F1 title challenge saga

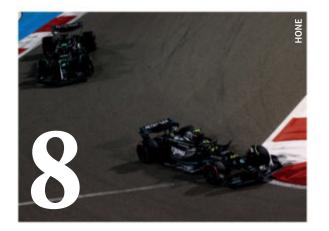
Felipe Massa's legal bid over the 2008 Formula 1 world championship was a running saga, as the Brazilian claimed a loss of earnings and reputational damage over the title defeat. It kicked off after it came to light that Bernie Ecclestone indicated that the crash scandal of Singapore 2008 was known by F1 and the FIA before the end of that season.



Hamilton and Leclerc disqualified at US GP

Hours after Lewis Hamilton challenged Max Verstappen in the United States GP, the Briton and Charles Leclerc, who finished sixth, were disqualified for excessively worn car planks. It left a controversial finish to F1's Austin weekend when the sprint format was placed under the spotlight because teams were unable to make set-up changes after Friday's GP qualifying.









Mercedes scraps car concept before first race

Mercedes knew its hopes were dashed after the first qualifying of the year in Bahrain. There, with George Russell and Lewis Hamilton sixth and seventh with the W14, boss Toto Wolff declared it must change its car concept to fight for world titles again. A new-look car arrived in Monaco, the 'zero-pod' concept gone, and it switched focus to next year's overhaul.

Austrian GP track limits chaos

The FIA recorded a potential 1200+ track-limit breaches in the Austrian GP and effectively gave up counting midway through the race. The governing body handed out an additional 12 track-limit penalties hours after the chequered flag, and the farce pushed the governing body into a track-limits policing rethink for both the stewards and the Red Bull Ring.

Ongoing FIA penalty confusion

F1 and rules uncertainty wasn't limited to the Austrian GP. From the FIA admitting it gave the wrong penalty to Max Verstappen in Singapore qualifying, to Lewis Hamilton being penalised for a clash with Sergio Perez in the Belgian GP sprint race that the majority saw as a racing incident, there were repeated pleas for consistency from the FIA over its own rules.

AUTOSPORT ALL SERIES FORMULA 1 MOTOGP FORMULA E SINGLE-SEATERS SPORTSCARS RALLY

··· Q & m

The year in numbers

Compiled by Forix.Autosport.com and Kevin Turner

| D | rivers' standir | ngs | | | | | | | | | | | | | | | | | | | | | | |
|-----|------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-----|
| POS | 5 DRIVER | BHR | SAU | AUS | AZE | ΜΙΑ | мсо | ESP | CAN | AUT | GBR | HUN | BEL | NLD | ITA | SGP | JPN | QAT | USA | MEX | BRA | LV | ARE | PTS |
| 1 | Max Verstappen | 1st | 2nd | 1st | 2nd | 1st | 5th | 1st | 575 |
| 2 | Sergio Perez | 2nd | 1st | 5th | 1st | 2nd | 16th | 4th | 6th | 3rd | 6th | 3rd | 2nd | 4th | 2nd | 8th | R | 10th | 4th | R | 4th | 3rd | 4th | 285 |
| 3 | Lewis Hamilton | 5th | 5th | 2nd | 6th | 6th | 4th | 2nd | 3rd | 8th | 3rd | 4th | 4th | 6th | 6th | 3rd | 5th | R | DSQ | 2nd | 8th | 7th | 9th | 234 |
| 4 | Fernando Alonso | 3rd | 3rd | 3rd | 4th | 3rd | 2nd | 7th | 2nd | 5th | 7th | 9th | 5th | 2nd | 9th | 15th | 8th | 6th | R | R | 3rd | 9th | 7th | 206 |
| 5 | Charles Leclerc | R | 7th | R | 3rd | 7th | 6th | 11th | 4th | 2nd | 9th | 7th | 3rd | R | 4th | 4th | 4th | 5th | DSQ | 3rd | DNS | 2nd | 2nd | 206 |
| 6 | Lando Norris | 17th | 17th | 6th | 9th | 17th | 9th | 17th | 13th | 4th | 2nd | 2nd | 7th | 7th | 8th | 2nd | 2nd | 3rd | 2nd | 5th | 2nd | R | 5th | 205 |
| 7 | Carlos Sainz | 4th | 6th | 12th | 5th | 5th | 8th | 5th | 5th | 6th | 10th | 8th | R | 5th | 3rd | 1st | 6th | DNS | 3rd | 4th | 6th | 6th | 18th | 200 |
| 8 | George Russell | 7th | 4th | R | 8th | 4th | 5th | 3rd | R | 7th | 5th | 6th | 6th | 17th | 5th | 16th | 7th | 4th | 5th | 6th | R | 8th | 3rd | 175 |
| 9 | Oscar Piastri | R | 15th | 8th | 11th | 19th | 10th | 13th | 11th | 16th | 4th | 5th | R | 9th | 12th | 7th | 3rd | 2nd | R | 8th | 14th | 10th | 6th | 97 |
| 10 | Lance Stroll | 6th | R | 4th | 7th | 12th | R | 6th | 9th | 9th | 14th | 10th | 9th | 11th | 16th | DNS | R | 11th | 7th | 17th | 5th | 5th | 10th | 74 |
| 11 | Pierre Gasly | 9th | 9th | 13th | 14th | 8th | 7th | 10th | 12th | 10th | 18th | R | 11th | 3rd | 15th | 6th | 10th | 12th | 6th | 11th | 7th | 11th | 13th | 62 |
| 12 | Esteban Ocon | R | 8th | 14th | 15th | 9th | 3rd | 8th | 8th | 14th | R | R | 8th | 10th | R | R | 9th | 7th | R | 10th | 10th | 4th | 12th | 58 |
| 13 | Alexander Albon | 10th | R | R | 12th | 14th | 14th | 16th | 7th | 11th | 8th | 11th | 14th | 8th | 7th | 11th | R | 13th | 9th | 9th | R | 12th | 14th | 27 |
| 14 | Yuki Tsunoda | 11th | 11th | 10th | 10th | 11th | 15th | 12th | 14th | 19th | 16th | 15th | 10th | 15th | DNS | R | 12th | 15th | 8th | 12th | 9th | 18th | 8th | 17 |
| 15 | Valtteri Bottas | 8th | 18th | 11th | 18th | 13th | 11th | 19th | 10th | 15th | 12th | 12th | 12th | 14th | 10th | R | R | 8th | 12th | 15th | R | 17th | 19th | 10 |
| 16 | Nico Hulkenberg | 15th | 12th | 7th | 17th | 15th | 17th | 15th | 15th | R | 13th | 14th | 18th | 12th | 17th | 13th | 14th | 16th | 11th | 13th | 12th | 19th | 15th | 9 |
| 17 | Daniel Ricciardo | - | - | - | - | - | - | - | - | - | - | 13th | 16th | DNS | - | - | - | - | 15th | 7th | 13th | 14th | 11th | 6 |
| 18 | Zhou Guanyu | 16th | 13th | 9th | R | 16th | 13th | 9th | 16th | 12th | 15th | 16th | 13th | R | 14th | 12th | 13th | 9th | 13th | 14th | R | 15th | 17th | 6 |
| 19 | Kevin Magnussen | 13th | 10th | 17th | 13th | 10th | 19th | 18th | 17th | 18th | R | 17th | 15th | 16th | 18th | 10th | 15th | 14th | 14th | R | R | 13th | 20th | 3 |
| 20 | Liam Lawson | - | - | - | - | - | - | - | - | - | - | - | - | 13th | 11th | 9th | 11th | 17th | - | - | - | - | - | 2 |
| 21 | Logan Sargeant | 12th | 16th | 16th | 16th | 20th | 18th | 20th | R | 13th | 11th | 18th | 17th | R | 13th | 14th | R | R | 10th | 16th | 11th | 16th | 16th | 1 |
| 22 | Nyck de Vries | 14th | 14th | 15th | R | 18th | 12th | 14th | 18th | 17th | 17th | - | | - | - | - | - | - | - | - | - | - | - | 0 |
| | | | | | | | | | | | | | | | | | | | | | | | | |

CALENDAR 1 Bahrain GP (Sakhir), 2 Saudi Arabian GP (Jeddah), 3 Australian GP (Melbourne), 4 Azerbaijan GP (Baku), 5 Miami GP (Miami), 6 Monaco GP (Monte Carlo), 7 Spanish GP (Barcelona), 8 Canadian GP (Montreal), 9 Austrian GP (Red Bull Ring), 10 British GP (Silverstone), 11 Hungarian GP (Hungaroring), 12 Belgian GP (Spa), 13 Dutch GP (Zandvoort), 14 Italian GP (Monza), 15 Singapore GP (Marina Bay), 16 Japanese GP (Suzuka), 17 Qatar GP (Losail), 18 United States GP (Austin), 19 Mexican GP (Mexico City), 20 Brazilian GP (Interlagos), 21 Las Vegas GP (Las Vegas), 22 Abu Dhabi GP (Yas Marina). SPRINT RACES took place in Azerbaijan, Austria, Belgium, Qatar, USA and Brazil.

| Constructors' | | | | | | | | | | | | | | | | | | | | | | | |
|-----------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|-----|-----|
| POS CONSTRUCTOR | BHR | SAU | AUS | AZE | MIA | МСО | ESP | CAN | AUT | GBR | HUN | BEL | NLD | ITA | SGP | JPN | QAT | USA | MEX | BRA | LV | ARE | PTS |
| 1 Red Bull | 43 | 44 | 36 | 57 | 44 | 25 | 38 | 34 | 56 | 34 | 41 | 51 | 37 | 43 | 14 | 26 | 34 | 49 | 25 | 51 | 40 | 38 | 860 |
| 2 Mercedes | 16 | 22 | 18 | 20 | 20 | 23 | 33 | 15 | 11 | 25 | 20 | 24 | 8 | 18 | 16 | 16 | 21 | 18 | 27 | 11 | 10 | 17 | 409 |
| 3 Ferrari | 12 | 14 | 0 | 36 | 16 | 12 | 10 | 22 | 32 | 3 | 10 | 24 | 10 | 27 | 37 | 20 | 13 | 24 | 27 | 13 | 26 | 18 | 406 |
| 4 McLaren | 0 | 0 | 12 | 2 | 0 | 3 | 0 | 0 | 12 | 30 | 28 | 16 | 8 | 4 | 24 | 33 | 47 | 23 | 14 | 26 | 2 | 18 | 302 |
| 5 Aston Martin | 23 | 15 | 27 | 22 | 15 | 18 | 14 | 20 | 21 | 6 | 3 | 12 | 19 | 2 | 0 | 4 | 9 | 6 | 0 | 25 | 12 | 7 | 280 |
| 6 Alpine | 2 | 6 | 0 | 0 | 6 | 21 | 5 | 4 | 3 | 0 | 0 | 10 | 16 | 0 | 8 | 3 | 6 | 10 | 1 | 7 | 12 | 0 | 120 |
| 7 Williºams | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 4 | 0 | 0 | 4 | 6 | 0 | 0 | 2 | 3 | 2 | 0 | 0 | 0 | 28 |
| 8 AlphaTauri | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 2 | 0 | 0 | 5 | 6 | 5 | 0 | 4 | 25 |
| 9 Alfa Romeo | 4 | 0 | 2 | 0 | 0 | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 16 |
| 10 Haas | 0 | 1 | 6 | 0 | 1 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12 |

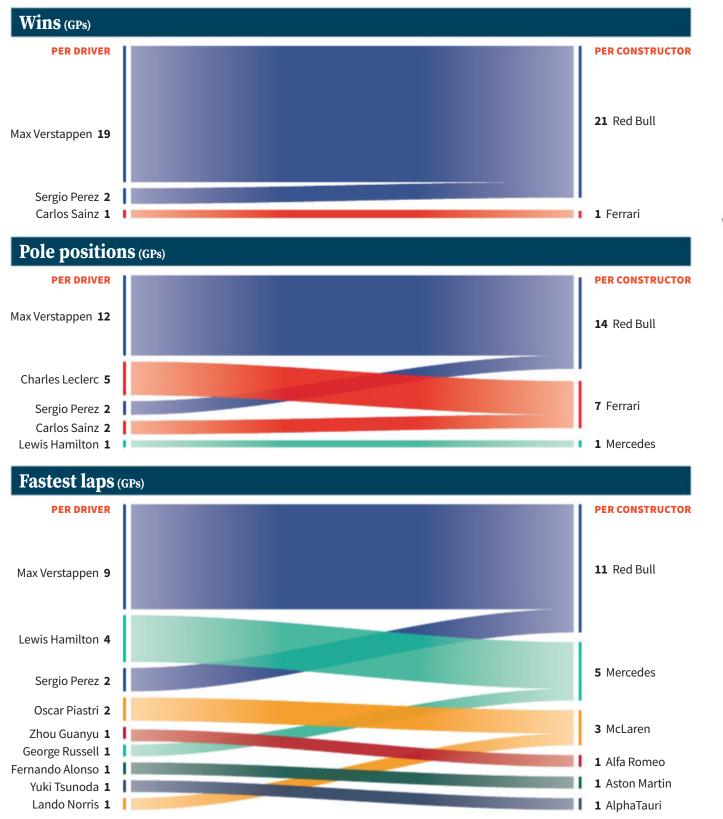
Average qualifying positions (prior to grid penalties being applied, excludes sprints)



Statistics



Motorsport Stats is the pre-eminent provider of motorsport data to media owners, rights-holders, bookmakers and sponsors. Its data services are founded on the world's largest repository of racing results dating back to 1897. For more information contact sales@motorsportstats.com



Big number





| Driver supert | imes |
|------------------|----------------|
| DRIVER | SUPERTIMES (%) |
| Max Verstappen | 100.140 |
| Charles Leclerc | 100.487 |
| Carlos Sainz | 100.652 |
| Lewis Hamilton | 100.702 |
| George Russell | 100.830 |
| Sergio Perez | 100.901 |
| Fernando Alonso | 100.928 |
| Lando Norris | 100.976 |
| Oscar Piastri | 101.203 |
| Pierre Gasly | 101.496 |
| Alex Albon | 101.551 |
| Esteban Ocon | 101.582 |
| Lance Stroll | 101.681 |
| Nico Hulkenberg | 101.790 |
| Valtteri Bottas | 101.805 |
| Yuki Tsunoda | 101.832 |
| Daniel Ricciardo | 101.959 |
| Zhou Guanyu | 102.104 |
| Kevin Magnussen | 102.120 |
| Nyck de Vries | 102.152 |

Sprint races

| Wins | | Pole positions | | Fastest laps | |
|----------------|---|------------------------|---|-----------------|---|
| Max Verstappen | 4 | Max Verstappen | 3 | Max Verstappen | 3 |
| Sergio Perez | 1 | Charles Leclerc | 1 | Sergio Perez | 1 |
| Oscar Piastri | 1 | Oscar Piastri | 1 | Nico Hulkenberg | 1 |
| | | Lando Norris | 1 | George Russell | 1 |

| Top scorers | |
|-----------------|----|
| Max Verstappen | 45 |
| Sergio Perez | 25 |
| Carlos Sainz | 22 |
| Lando Norris | 21 |
| Charles Leclerc | 21 |

Nyck de vries102.132Logan Sargeant102.340Liam Lawson102.757Based on taking each driver's fastest

Based on taking each driver's fastest lap of each weekend, expressed as a percentage of the overall fastest time, averaged over the season.



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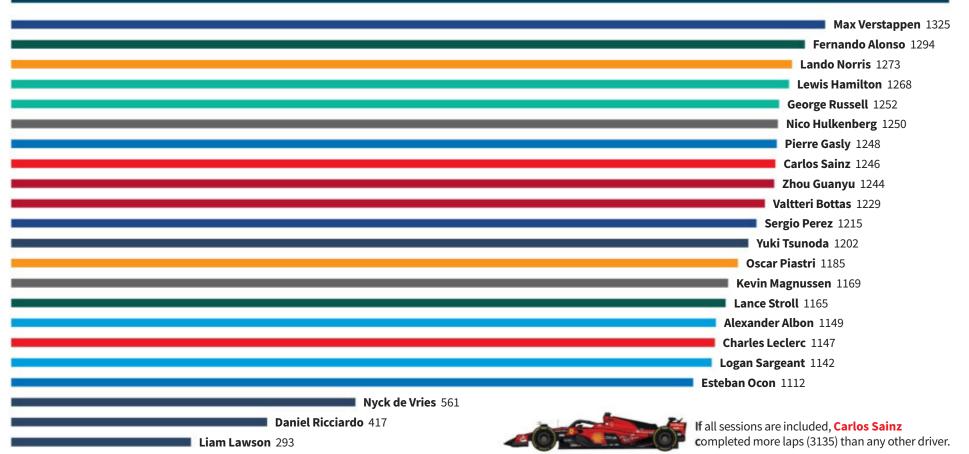
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Statistics

Raced laps per driver (GPs)



Podium finishes (GPs) PER DRIVER PER CONSTRUCTOR Max Verstappen 21 30 Red Bull Sergio Perez 9 Fernando Alonso 8 9 Ferrari Lando Norris 7 9 McLaren Lewis Hamilton 6 8 Aston Martin Charles Leclerc 6 Carlos Sainz 3 George Russell 2 8 Mercedes Oscar Piastri 2 Esteban Ocon 1 2 Alpine Pierre Gasly 1

Q3 appearances (GPs)

| DRIVER | | | | | |
|------------------------|----|-----------------|----|------------------|---|
| Fernando Alonso | 20 | Oscar Piastri | 15 | Valtteri Bottas | 5 |
| Charles Leclerc | 20 | Sergio Perez | 13 | Yuki Tsunoda | 4 |
| Max Verstappen | 20 | Pierre Gasly | 11 | Kevin Magnussen | 3 |
| Carlos Sainz | 19 | Esteban Ocon | 9 | Logan Sargeant | 2 |
| Lewis Hamilton | 18 | Nico Hulkenberg | 8 | Zhou Guanyu | 2 |
| George Russell | 18 | Lance Stroll | 8 | Liam Lawson | 1 |
| Lando Norris | 16 | Alexander Albon | 7 | Daniel Ricciardo | 1 |
| | | | | | |

Big number



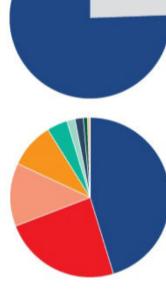
Qualifying head-to-head (GPs)

| 1 Perez | |
|---------|--|
| | |

PER DRIVER

PER CONSTRUCTOR





Laps led (GPs)

THE OTHERS Sergio Perez 146 Carlos Sainz 77 Charles Leclerc 41 Lando Norris 30 Lewis Hamilton 13 George Russell 6 Yuki Tsunoda 5 Fernando Alonso 3 Oscar Piastri 1



1149 Red Bull



Best F2 and F3 drivers

While the firm title favourite had his work cut out to meet expectations in F2, on the rung below a rookie belied his inexperience to win in dominant style Megan White





The Argentinian started the year by following in the footsteps of his nation's legendary Carlos Reutemann in being signed up to the Williams F1 team, and with a short hop from one Dutch F3 team to another - Van Amersfoort Racing to MP Motorsport. He put in a solid sophomore season to finish just nine points shy of runner-up Zak O'Sullivan, and vastly outperformed his teammates. While Colapinto never qualified on the front row, it was consistency that proved key to his strong championship position, with 14 finishes in the top 10 from the 18 races. Both his victories came in sprint races: the first at Silverstone a dominant display in mixed conditions from fourth on the grid; the second at Monza after fending off challenges. He was first on the road in another sprint – in Melbourne – only for all three MP cars to be excluded for a bodywork infringement. He stepped up to F2 for the Abu Dhabi finale as a taster to his full-time graduation in 2024.





For the fourth time in his five years of single-seater racing, the Estonian finished third in a championship with Prema Racing. It was a strong rookie F3 season on his step up from the Formula Regional European Championship with Alpine. Some had expected team-mate and reigning FRECA champion Dino Beganovic to be the stronger of the two, but Aron beat him by three positions, scoring one race win along the way in the Red Bull Ring sprint. That was a dramatic and hard-earned success. He'd lost pole for the feature race thanks to exceeding track limits, and his final qualifying position of fourth converted to eighth on the reversed grid for the sprint, from where he battled to victory before triumphantly exclaiming: "They took away my pole, they cannot take away my win." Aron, who finished in the top five in 10 of the 18 races, went on a steady climb up the standings to lie second before the series finale at Monza. He was ultimately pipped to runner-up by team-mate Zak O'Sullivan, and has parted ways with the Mercedes F1 junior programme, but moves up to F2 next year with Hitech GP.





It was another strong campaign from the Japanese Red Bull and Honda protege, who continues to impress despite his relative inexperience. This was just his fourth full season in single-seaters and his second in F2, and this time Iwasa went one better than his 2022 final position of fifth. His finest moments came on street courses, three wins going his way, in the Melbourne feature race, where he beat eventual champion Theo Pourchaire, and in the sprints in Jeddah and Monaco. After that Melbourne victory, Iwasa even led the points before Pourchaire and Frederik Vesti kicked their title charges into action. Even so, he held third in the rankings for much of the rest of the season before late-season form man Jack Doohan demoted him. Now he will make what's becoming something of a trademark Red Bull move to Super Formula in his native Japan for 2024 with Team Mugen.

Supporting cast



Nobody in F3 matched the British Williams F1 protege's tally of four race wins; the problem was he added just one further podium to that, hence the distance to eventual champion and two-time race winner Gabriel Bortoleto. Former GB3 champion O'Sullivan had impressed during his rookie F3 season with Carlin despite the team's struggles, and a move to Prema for 2023 removed any question marks over the environment to perform. After a tough opening weekend in Bahrain, the 2021 Aston Martin Autosport BRDC Young Driver of the Year took his maiden series victory in the Melbourne sprint next time out. To this he added two successes in feature races, firstly at the Red Bull Ring, then a dominant display at the Hungaroring, where he cruised to a lights-toflag victory ahead of team-mate Dino Beganovic. He could have been in with a shot at the title were it not for a few tough weekends, including Silverstone and Spa. Since the F3 season finished, he has taken part in a Formula 1 FP1 session at Abu Dhabi with Williams before also completing the rookie test, and joined reigning champion team ART Grand Prix for a step up to F2 in 2024.







The Frenchman entered the season as the reigning F3 champion and remained with ART Grand Prix, with which he also claimed the 2020 Formula Renault Eurocup crown, for his step up. Given the closeness of last year's F3 title battle, and with all six of the main contenders graduating to F2, the battle for top rookie this year was keenly anticipated, and it was Alpine junior Martins who earned it by 20 points over Ollie Bearman. He showed searing speed too, with three pole positions to the two of champion team-mate Theo Pourchaire, and a chart-topping seven feature-race front-row starts to Pourchaire's three. Unfortunately for him, that translated into just one race win, but what a victory it was... In the feature race at Silverstone, he had to overcome three safety car periods to eke out enough of a margin to overcome a five-second penalty. Martins knows he's good, and insisted that his season was "average", but were it not for four retirements and an exclusion from fourth place in Baku he may well have challenged the top three in the standings. Surely he'll be a championship favourite in 2024, for which he is expected to continue at ART.

F1 season review



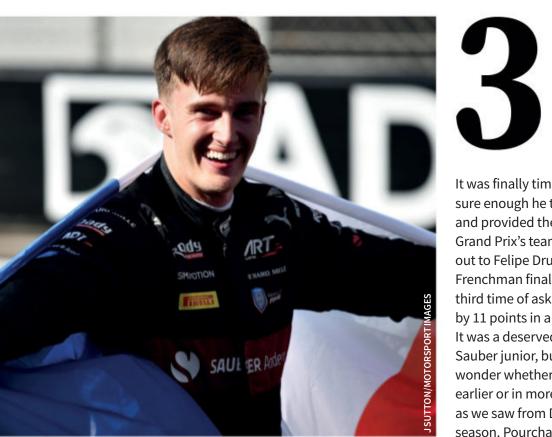


It was a season of two halves for the Australian Alpine Academy member, who stayed on with Virtuosi Racing for his second F2 campaign. From the first 14 races he scored just one podium – a second place in the Jeddah feature race. After the opening six of the 13 events, he languished in 12th place in the points. But if the championship had started in July, we'd now be feting Doohan as the king of F2 by 23 points over Victor Martins! Such was the miraculous turnaround over the final seven weekends... That poor start was not down to him, but was due to a "fundamental issue" Virtuosi was experiencing with his car. Once that was fixed at Barcelona, the fightback began, and he leapfrogged Ayumu Iwasa for third in the final standings thanks to his third win of the season in the Abu Dhabi finale. His first victory of 2023 at the Hungaroring had been flawless, and he repeated the feat seven days later at Spa from 11th on the grid. His Abu Dhabi success came despite juggling Alpine F1 FP1 duties that weekend. Doohan is not staying in F2 for a third season, and is weighing up his options as he continues to pursue his F1 dream.

Ollie Bearman 6th in F2

The exciting 18-year-old Essex talent shouldn't even have been racing in F2 this season. But such was his startling progress in his rookie F3 campaign in 2022 that his Ferrari F1 mentors felt he had to step up. So he remained on board at Prema Racing and did it all over again. Up until the final weekend in Abu Dhabi, Bearman had the highest number of feature race wins - three - only for it to be equalled by Jack Doohan. And his total tally of victories - four - was exceeded only by team-mate Frederik Vesti's six. As well as that, he and fellow rookie Victor Martins led the pole positions table with three apiece. The first of those came in Baku, where he took an astonishing clean sweep on the fearsome streets of the Azerbaijani capital: he also topped free practice and won both races, and scooped the fastest lap in the sprint race. Given that, it was a surprise that only two more wins came his way: a comfortable drive from pole at Barcelona, and a success at Monza via the turbulence of five safety cars. He is expected to remain at Prema for another go at F2 in 2024; what price on it being him against Martins for the crown?





Theo Pourchaire

It was finally time for glory in 2023, and sure enough he took the F2 drivers' title and provided the foundations for ART Grand Prix's teams' crown. After missing out to Felipe Drugovich last season, the Frenchman finally became champion at the third time of asking, pipping Frederik Vesti by 11 points in a final-round showdown. It was a deserved championship for the Sauber junior, but you can't help but wonder whether it should have come a year earlier or in more dominant fashion, such as we saw from Drugovich in his own third season. Pourchaire came away from the opening weekend in Bahrain with a feature race victory, and never stood on the top step of the podium again. Instead, it was his consistency that paid off, with 10 podiums, seven of them in feature races, hence his finishing 16 points ahead of Jack Doohan and 23 clear of Vesti if you discard the sprints. Two second-place finishes at Spa, where Vesti faltered, proved pivotal in the title fight, while he narrowly missed out on a second victory in Melbourne's third round. Like Ayumu Iwasa, he looks set to head off to Japan for a campaign in Super Formula in 2024, likely with Team Impul.

Supporting cast





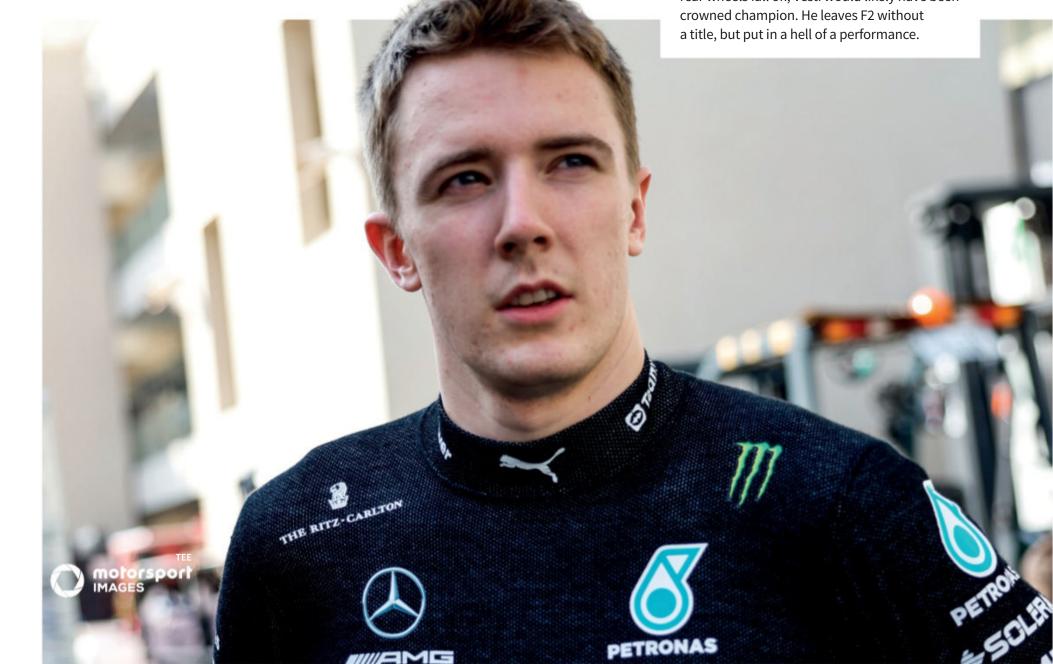
Gabriel Bortoleto 1st in F3

It's funny to think that this Brazilian was only the fourth-highest-ranked driver from the 2022 Formula Regional European Championship by Alpine to be transferring up to F3. But he'd looked the business in testing with Trident, and that translated once the season got under way. Bortoleto blew those who'd beaten him in FRECA (Dino Beganovic, Gabriele Mini and Paul Aron) out of the water, laying the foundations with wins in the first two feature races of the season. In Bahrain, victory came after on-the-road winner Mini was penalised, and in Melbourne he withstood race-long pressure from Gregoire Saucy. He was now established in the championship lead and, although no more wins went his way, he claimed four second places, and finished all but three races in the top 10. It all meant that when qualifying was done and dusted at the Monza finale, Bortoleto was champion because neither of his two title rivals had earned the bonus points for pole. As did compatriot and good friend Felipe Drugovich in F2 the previous season, Bortoleto entered the year as the underdog and ended it a dominant champion. No wonder he was picked up as a McLaren F1 junior and will graduate to F2 with Virtuosi Racing.



Frederik Vesti 2nd in F2

The Dane arguably put in a season-long performance that deserved a crowning as the 2023 Formula 2 champion. A consummate victory from pole at the wheel of his Prema Racing car in the Monaco feature race in late May elevated him to the championship lead, and he held his advantage for five event weekends until Spa. There, Vesti made a rookie error by crashing on the formation lap for the feature race, but that was not representative of the Mercedes F1 junior's class for the remaining 25 races of his sophomore F2 season. Following a tricky opening weekend in Bahrain, he went on to take a season-high of six wins, among 10 podiums, and never finished a race outside the top 10. Apart from Monaco, he won the feature race in Jeddah, and sprint successes came at Barcelona, Silverstone, Monza and Yas Marina, the last of those keeping him in the title hunt until the last day of the season. Were it not for the freak incident at Zandvoort where both his rear wheels fall off, Vesti would likely have been





How the F2 title was won



Theo Pourchaire had entered the season as the firm title favourite, but his championship charge was less straightforward than expected, with Frederik Vesti taking the fight to the ART Grand Prix driver.

After Sauber junior Pourchaire took his only win of the season in the opening feature race in Bahrain, Vesti fought back in Jeddah to draw equal on wins,

but neither led the title race. Instead it was Campos Racing's popular Swiss F2 veteran Ralph d Boschung, who had added a second in the Bahrain feature race to his victory in the sprint, and scored just enough points in Jeddah to sneak ahead of Pourchaire in the table.

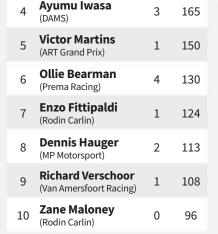
> Victory in Melbourne then propelled Ayumu Iwasa of DAMS into the series lead before the

championship headed to Europe, and Pourchaire (above) and Vesti got into their stride. Prema Racing's Danish talent took over the points advantage with his

"Vesti took over the points advantage with his Monaco win, but his Spa gaffe allowed Pourchaire in front" Monaco win, but his gaffe at Spa allowed Pourchaire in front. The Frenchman could really have pulled out a gap next time out at Zandvoort, but had crashed out moments before Vesti's elimination. Despite a valiant effort from Vesti at the Abu Dhabi finale to win the sprint and fight from ninth to third in the feature race, Pourchaire clinched the title by 11 points.

Jack Doohan (Virtuosi Racing) snatched third in the table from Iwasa at the last gasp, while the battle of the star rookies was, appropriately, between the respective team-mates of Pourchaire and Vesti, with Victor Martins getting the nod over Ollie Bearman for fifth overall. Other feature race winners

| F2 DRIVERS' CHAMPIONSHIP TOP 10 | | | | | | | |
|---------------------------------|--|------|-----|--|--|--|--|
| POS | DRIVER (TEAM) | WINS | PTS | | | | |
| 1 | Theo Pourchaire (ART Grand Prix) | 1 | 203 | | | | |
| 2 | Frederik Vesti (right) (Prema Racing) | 6 | 192 | | | | |
| 3 | Jack Doohan (Virtuosi Racing) | 3 | 168 | | | | |
| | | | | | | | |





were Van Amersfoort Racing's Richard Verschoor at the Red Bull Ring and Trident's Clement Novalak in that bizarre Zandvoort event. Sprint successes were collected by Dennis Hauger for MP Motorsport at Melbourne and the Hungaroring, Jak Crawford with Hitech GP at the Red Bull Ring, and Rodin Carlin racer Enzo Fittipaldi at Spa.

Supporting cast

How the F3 title was won

Gabriel Bortoleto may have been an F3 rookie, but his dominant title charge showed maturity beyond his years. Few predicted that the 18-year-old Brazilian would be a contender for the crown after his sixth place in the 2022 Formula Regional European Championship by Alpine, but he clinched the title before a racing lap was run at the Monza finale.

As part of Fernando Alonso's A14 Management stable, Bortoleto (below) joined Trident in time for post-season testing in 2022 and was strong from the off. His victories at the opening two rounds placed him 20 points clear at the top of the table. From then on his margin never dipped below 17, and he finally won it by a clear 45.

The battle behind him was pretty hectic. Going into the final round, it was Paul Aron (Prema Racing) and Pepe Marti (Campos Racing) who stood outside mathematical chances of the crown, but the failure of either of them to take pole ensured it would go to Bortoleto. Then, after the races, they had both been gazumped by Prema's Zak O'Sullivan, while Franco Colapinto (MP Motorsport)



snuck in between Aron and Marti for fourth.

Dino Beganovic and Gabriele Mini were the top two in FRECA in 2022 but, in light of Bortoleto's progress, had disappointing seasons. Ferrari junior Beganovic was sixth with Prema although failed to win, finishing one spot ahead of Hitech GP driver and Alpine protege Mini, who took a beautiful victory in the Monaco feature race. Others to win feature races were Bortoleto's team-mate Oliver Goethe at Silverstone, Taylor Barnard (Jenzer Motorsport) at Spa in a wet-dry race where tyre choice was king, and Jonny Edgar (MP) at Monza,

"Few predicted that the 18-year-old Brazilian would be a contender for the crown"

| F3 DRIVERS' CHAMPIONSHIP TOP 10 | | | | | | |
|---------------------------------|---|------|-----|--|--|--|
| POS | DRIVER (TEAM) | WINS | PTS | | | |
| 1 | Gabriel Bortoleto (Trident) | 2 | 164 | | | |
| 2 | Zak O'Sullivan (left) (Prema Racing) | 4 | 119 | | | |
| 3 | Paul Aron (Prema Racing) | 1 | 112 | | | |
| 4 | Franco Colapinto (MP Motorsport) | 2 | 110 | | | |
| 5 | Pepe Marti (Campos Racing) | 3 | 105 | | | |
| 6 | Dino Beganovic (Prema Racing) | 0 | 96 | | | |
| 7 | Gabriele Mini (Hitech GP) | 2 | 92 | | | |
| 8 | Oliver Goethe (Trident) | 1 | 75 | | | |
| 9 | Caio Collet (Van Amersfoort Racing) | 1 | 73 | | | |
| 10 | Taylor Barnard | 1 | 72 | | | |

while Caio Collet's disappointing year with Van Amersfoort Racing included a sprint win at Spa.

Reigning GB3 champion Luke Browning had a tough F3 baptism with Hitech, but put in a blistering performance to win the non-championship Macau Grand Prix in November from Dennis Hauger (stepping down from F3 with MP) and Mini, who switched to Prema as a prelude to his 2024 campaign with the team.



LE MANS 24 HOURS

PEUGEOT'S LE MANS ROOKIE SENSATIONS

Thirty years ago, victory at Le Mans turned race newcomers Christophe Bouchut and Eric Helary into stars. But it wasn't quite enough for them to reach Formula 1





piece of Le Mans history was made when the #3 Peugeot claimed victory at the 24 Hours in 1993. Two thirds of its driver line-up were event debutants, each with only a single race in the car under their belts. That rookie pairs had won just twice in the

event's 70-year history suggested that they weren't the favourites to conquer the world's biggest endurance race, a point underlined by the fact that their car's third driver, while a veteran of two Le Mans starts, had never before raced the 905 Evo 1 Bis.

But on the final hurrah for Group C cars at the Circuit de la Sarthe, Christophe Bouchut and Eric Helary were joined atop the podium come Sunday afternoon by Geoff Brabham, and a pair of first-timers netted Le Mans glory for the first time in more than 40 years. The era-concluding 24 Hours had spawned two new French stars, who between them would rack up a further 19 (Bouchut) and 10 (Helary) appearances at the great race and come within touching distance of the grand prix grid.

"It's even a bit unbelievable, you need time to realise what happened," reflects Bouchut, who like Helary was 26 years old at the time. "Especially when you come for the first time to Le Mans and you're still a young driver in terms of endurance racing, because at that time the drivers were older than they are now. It was also something special."

Yet Bouchut, a podium finisher on his Macau Grand Prix debut in 1989, is clear that Le Mans wasn't the end goal. "My target was a little bit different because I was looking for Formula 1, not especially endurance," he recalls. "But Le Mans was on my list, clearly. It was one of my dreams, so it's why I say it's a dream come true, but it's not something I had been looking for."

It's a view echoed by Helary, the French Formula 3 champion in 1990, one year before Bouchut: "That was our only target, going to Formula 1. For sure we were still dreaming."

The common 3.5-litre engine rules used in F1 and in sportscar racing's top tier meant it was a fair assumption that Peugeot would have an eye on grand prix racing. Indeed, Enrique Scalabroni was tasked with designing an F1 chassis that never got beyond the

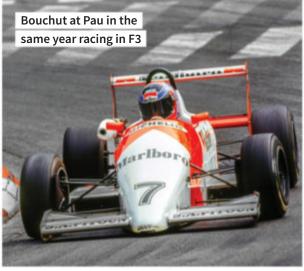
"Le Mans was a dream, so it's why I say it's a dream come true. But it's not something I was looking for"

drawing board, although Peugeot did supply engines to McLaren in 1994 and subsequently Jordan.

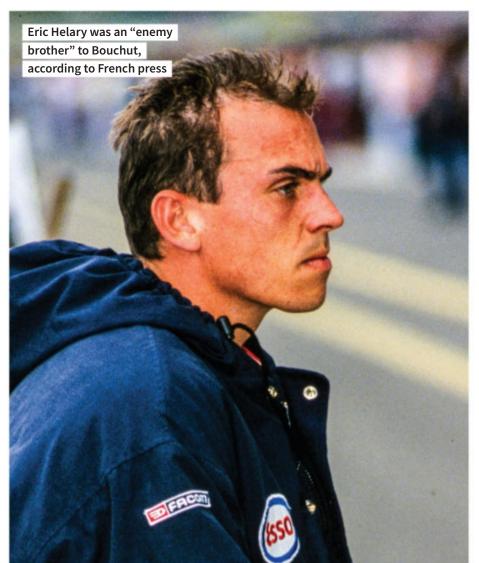
"We knew then their plan was to do their [own] team in the next few years following, so it was not a secret," states Bouchut. A reduced budget from Marlboro for Formula 3000 in 1992, following France's ban on tobacco advertising, meant he'd have to find some more money himself, and so Bouchut elected to throw his lot in with sportscars rather than pursue F3000 as Helary had – in fairly disastrous fashion – in 1991. After paying his money up front to First Racing, he'd finished third at Pau but, when the courts seized the team's assets prior to the Enna round, he was left high and dry.

> The pair had arrived at Peugeot via a stint in the one-make 905 Spider Cup in 1992, when they were rivals at the French Danielson team. Helary won the European title, Bouchut the French. They didn't have much of a relationship, with Helary even suggesting they "didn't like each other". "When you are fighting with somebody, how can you be friends?" asks Bouchut, who relates that this wasn't helped by the French media. "The press made us out as 'enemy brothers', you know? And then maybe hearing those words, we started to think it's the reality." In character too, they were different >>>





PEUGEOT AT LE MANS, 1993



sides of the coin. "He's just my opposite," offers Helary. Bouchut agrees: "We are totally different." But they agreed to put these feelings aside after being summoned to a meeting by Peugeot Sport director Jean Todt, who asked the pair to shake hands before posing them a question.

"Todt said, 'Could you work together for 24 hours?' because he knew that we were not very good friends," remembers Helary. "We said 'yes' and that's what we did. We spent 24 hours in the same car and we had a good feeling. But then it stopped just after the race!"

The car was well developed by the time Bouchut and Helary drove it for the first time in the final round of the 1992 Sportscar World Championship at Magny-Cours, an unsatisfactory curtaincloser for the moribund series contested by just eight cars. They finished second after electrical issues delayed title-winning team-mates Yannick Dalmas and Derek Warwick. "[Peugeot] had done all of the work before," reckons Helary. "They all had done a fantastic job so the car I drove was the final touch. I can tell you, this car was unbelievable."

Bouchut uses the same word to describe the car in its most



high-downforce trim. His comment that it was "close to a Formula 1 car" is borne out by Philippe Alliot's 1m16.415s pole position time, which would have put him eighth on the French GP grid, a shade quicker than Ivan Capelli's Ferrari.

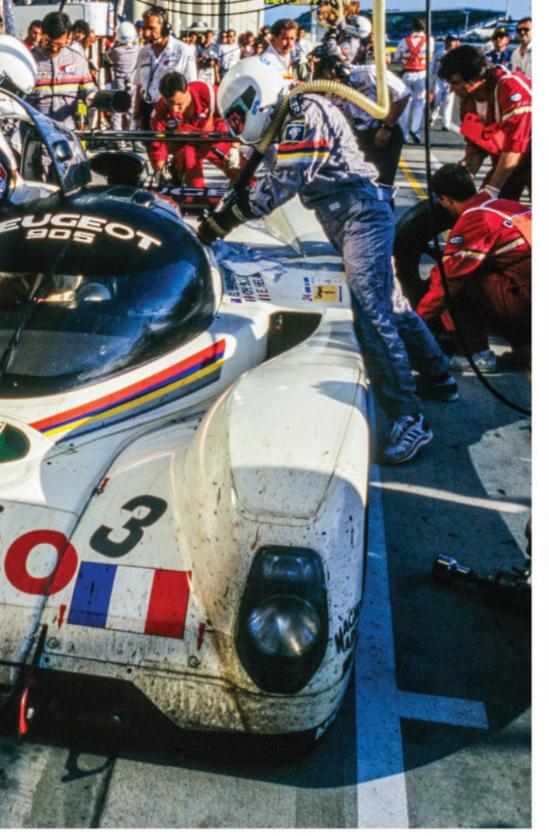
Even so, Bouchut points out that the 905 wasn't an easy car to handle, and "was very easy to make a mistake" in. "Even the windscreen was very difficult to see through well," he adds. "No, I don't say the car was bad. But for me personally, it's not the best car I drove at Le Mans."

Their prospects for Le Mans, in low-downforce spec, were helped by the fact that Peugeot's only manufacturer opposition came from the Tony Southgate-penned Toyota TS010 that had

PEUGEOT'S FORGOTTEN PROVING GROUND FOR HEROES

The Martini MK64 doesn't immediately leap out as a significant car in sportscar history, but in the 1992 Peugeot 905 Spider Cup it was the machine in which Eric Helary and Christophe Bouchut made their case for inclusion in the Group C programme.

Teamed up at Danielson, they were unstoppable. Engineer Remi Decorzent says: "We won everything: the French championship, the European championship, and seeing that we won so much Jean Todt said, 'Maybe these guys Bouchut and Helary are not bad.' So he decided to put them in the 905 and they won Le Mans the year after." Bouchut won each of the first four races in the French championship ahead of Helary, including the 1992 Le Mans support race. On a damp track, Bouchut recovered from a sluggish start that dropped him to fifth to tiger back to the lead after passing Alain Ferte, with Helary second. Decorzent, who again saw Bouchut at close quarters in the Danielson Formula 3000 team in 1995, recalls that Bouchut had an extra hindrance that day. "Fourth was in the place of the third [gear]," recalls Decorzent. "It was a Hewland H-pattern gearbox. He had instructions on the steering wheel that when he selected third, it was actually fourth." It's a race that Bouchut remembers too: "This year was special because that was the first year of this project of a new championship for Peugeot. The car was brand-new, we had several small technical problems and we had to swim between them. I was able to adapt myself really quickly, even if the car was not sometimes perfect." Decorzent went on to work in Formula 1 with Sauber and Toyota and has no doubt that Danielson's "very strong" 1992 line-up had the necessary skills to make it. "Bouchut for me is one of the guys that should have been in Formula 1, also Helary," he asserts.

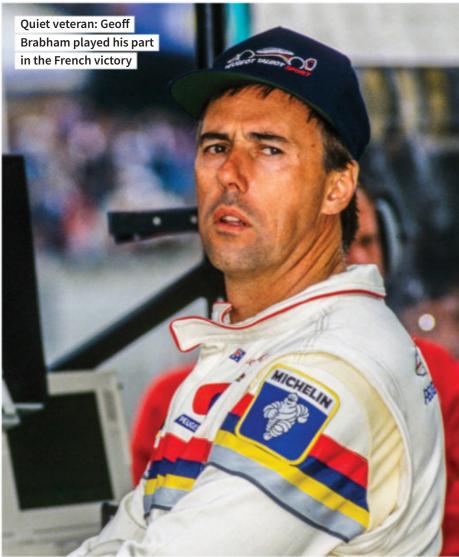


toppled Peugeot just once in their six bouts the year before. And after winning the event in 1992 with Dalmas, Warwick and Mark Blundell, Peugeot arrived well-prepared.

Helary reckons the team completed seven 24-hour simulations at Paul Ricard, and the enormous test programme gave the drivers an insight regarding what to expect in the race. The need to take things steady to guard against problems was soon apparent. "You had to be nice with your gearbox, you had to be nice with your engine, you had to save everything so you needed a lot of experience," Helary explains. "Because we did so many tests, we had a lot of experience."

A tactic of keeping away from the kerbs was devised, which

PEUGEOT AT LE MANS, 1993



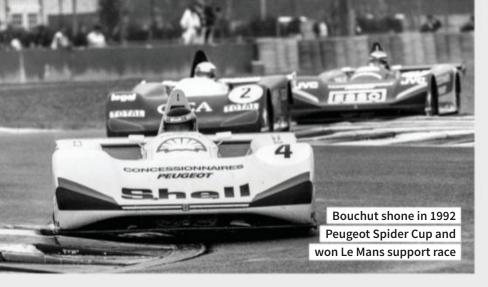
"We had a conversation about kerbs, to drive more easily for the car and to let the race come to us"

Bouchut reckons was the initiative of the #3 crew rather than dictated by Todt and designer Andre de Cortanze. "We had a conversation, between me and the two other drivers Geoff and Eric, about kerbs, to drive more easily for the car and to let the race come because we had the experience of several 24 hours simulations where we always had problems," Bouchut recalls. "So we said, 'OK, we have to be quiet.""

Helary adds: "The other drivers, they were used to Le Mans, they were stars, and they just wanted to show they were quick."

The third member of the line-up engineered by Paolo Catone was by comparison a sportscar veteran. But Brabham – the 41-year-old eldest son of Jack and a four-time IMSA GTP champion – hadn't raced at Le Mans since 1990 and, according to Helary, produced mixed displays in testing that made him apprehensive. But come the race, Helary says the Aussie "was incredible, he did his job perfectly".

"Geoff was a little bit slower," says Bouchut, "but he was doing a good job, he never had a problem with the car. He was the third driver of the crew, he clearly did less than me and Eric during all the tests and during the race."



Bouchut adds that Brabham's quiet demeanour meant they had more in common than he did with Helary. "I was passing more time with him," he remembers. "Geoff was not talking a lot." "He didn't say anything, he was just there," confirms Helary. "Sometimes nobody knew if he was here or not. Incredible." The crew enjoyed a largely trouble-free run in the race, but the same couldn't be said for the rest of Peugeot's entourage. Early leader Alliot, who crashed his pole-sitting #2 car in qualifying, trailed in with an oil leak attributed to his liberal use of kerbs, and the car's comeback was delayed further by exhaust woes identical to those that dashed victory hopes for car #1. Dalmas, Teo Fabi »

and Thierry Boutsen had already been hampered by smokeproducing electrical dramas on the dash, which elevated car #3 to the lead for the first time.

"They had to fix the exhausts which were broken because they were driving on the kerbs," points out Helary. "We didn't have this problem because we didn't use the kerbs."

Damage inflicted by backmarker contact and a combination of alternator and gearbox problems had respectively hit two of Toyota's three challengers and left it with a single bullet in the gun. But repeated battery changes for a car that set fastest lap in Eddie Irvine's hands meant its prospects had dwindled, even before clutch problems that required a rear-end change condemned it to fourth.

Toyota's latest drama prompted Todt to call for team orders, which were duly upheld, and Brabham crossed the line a lap ahead of the #1 crew, while Alliot, Mauro Baldi and Jean-Pierre Jabouille finished eight laps back to complete the top-three lockout in #2. It was the last hurrah for Todt with Peugeot before he joined Ferrari, tasked with turning around its fortunes in F1. Likewise, the winners couldn't bask in their glory for long.

"Then suddenly reality came," Bouchut laments. "You know you won the biggest race in the world and then we didn't continue with that car, with that team. It was the end of the story. It's difficult because you would love to continue for years and years like this."

But Bouchut's Peugeot story didn't end there. "I was the only one who had a contract to race cars other than the 905," he explains. "I was doing Super Touring also with Peugeot." He ended 1993 as its best-ranked driver in the French championship, placing fourth overall. Having outperformed veteran Jabouille, Bouchut believes

"Suddenly reality came. We won the biggest race in the world and then we didn't continue with that car"

that he should have been in the fray for an involvement in Peugeot's partnership with McLaren. But Todt's replacement – Jabouille himself – thought otherwise.

When Mika Hakkinen was banned for the Hungarian GP, Alliot drove in his place, while Laurent Aiello, who had been poached from BMW, was given a test. Bouchut believes that his omission "was a personal and emotional decision" by the late Jabouille. "Peugeot had no reason to be looking for somebody else than me," he maintains. "That was a wrong decision and that broke completely why I joined Peugeot. Because OK, it was Le Mans, but in my head I already had a plan about F1."

Meanwhile, Helary had claimed a second 905 Spider championship in 1993 and raced a Bugatti EB110S at Le Mans in 1994, while Bouchut campaigned a Honda NSX for Kremer – the team for which he won the Daytona 24 Hours the following year – alongside his first of three French Carrera Cup title-winning





campaigns. But neither was willing to give up the F1 dream.

Bouchut says he was invited to race for Larrousse at Spa in 1994, but turned it down because he lacked the requisite preparation: "I believed I had a future in Formula 1 and I wanted to do it with everything well, at the right moment, with the right experience."

Then followed talks with several teams, including Arrows, before Bouchut elected to sign with Larrousse for 1995, where he was due to join the team's 1991 driver Eric Bernard. Both had their names on an official entry list, but it ultimately came to nothing amid a buyout of Gerard Larrousse's equipe by Junior Team's Jean Messaoudi and Laurent Barlesi.

"That was a big mess for me," rues Bouchut, who points out that he didn't have a manager to represent him or any personal backing. "I knew the team had some problems about money, but at that time many teams were in that situation, we heard many stories about several teams. So I said, 'I have an opportunity to go there, so I go





THE OTHER LE MANS ROOKIE WINNING PAIRS



there.' And then at the last minute, they called me to say, 'We will not race in Formula 1, you have a contract but this is the end of the story.' It was really a shame."

Helary too hoped to have an involvement in Larrousse for 1995. He says he also signed a contract to race before the team collapsed. But rather than disappointment, his overriding emotion is relief he hadn't paid the full amount. Instead, he drove a works Courage at Le Mans and finished second as McLaren's F1 GTR – which Helary raced to third in long-tail form in 1997 – took a famous win. "When I didn't do [F1], I was not completely lost," he admits. "I was quite happy not to have lost 10 years of my life trying to give the money back to the bank. Already I had lost so much money in Formula 3000. I was a bit afraid of losing more in F1." With his options now limited, Bouchut landed in F3000 with Danielson, but he took no money to the team and was often blighted by unreliability, which limited him to a single podium. He was linked with a plum ride at Super Nova for 1996 and impressed in testing, but a lack of budget proved a limiting factor. "I tried many ways to get into Formula 1, but it didn't happen," he sums up. "The only thing I can say, it wasn't a question of speed. I was just missing some money."

the Ardennes coinciding with a hat-trick of FIA GT titles in Larbre-run Vipers, following a stint at Mercedes. But Bouchut is conflicted on not reaching F1. "It is more easy to say, 'No, I don't care', but this is not true," he says, before acknowledging that "my life will be not like it is right now if I'd made it to F1" – because he met his wife through endurance racing.

"OK it didn't happen, but it could be worse," he reflects. "It can be better, yes, but you never know what you are missing. It's impossible for me to say I am disappointed or my life is bad, because I have a lot in my life. And that didn't come from F1." For his part, Helary is convinced that racing in F1 "would have been worse than at Peugeot" because few teams could match its level of preparation. "We had more trucks, we had more mechanics, we had more engines, gearboxes, and maybe [only] McLaren and one or two other F1 teams were better than Peugeot in '93," states Helary, who finished runner-up at Le Mans for a second time in 2006 with Pescarolo. "It was the whole package which was perfect. "We had Michelin tyres which were made for the car. Special tyres for us, and we had special fuel from Esso too. Everything was on the top level. It was a bit difficult afterwards because everything else I had to drive was, in a sense, not so good. I started with the very best." #

Bouchut is the only driver to claim outright wins in the 24-hour races at Le Mans, Daytona and Spa (2001 and 2002), his successes in

Christmas

6

PROMOTIONAL FEATURE



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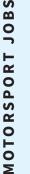
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- Attend and manage simulator (DIL) session as required
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- Working closely and reporting to Chief Engineer

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- To work as an effective team member in relation to the Trackside Engineering team
- To take initiative and solve problems through statistical analysis and regular liaison and discussion with colleagues, line managers and race team representatives.
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Pulling to make British F4 return Remembering Skoda racer John Turner 500cc F3 part of 500th Combe event





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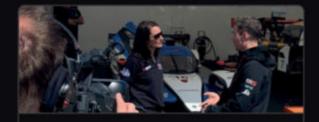
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John Turner 1942-2023

OBITUARY

John Turner, who died on 4 December, was a 1970s Special Saloon star, synonymous with the Skoda-Chevrolet S110R he and friends created and campaigned across a 23-event 1974 season.

The timber merchant's quiet, understated character was diametrically opposed to his fierce determination on track, and having built a stream of winners in the woodyard's workshop, Turner's results speak volumes.

In 1970, he won the British Automobile Racing Club's Osram-GEC and Brands Hatch's Atlantic Petroleum championships in a 1000cc Hillman Imp and, the following year, he contested the British Saloon Car Championship with a Group 2 Sunbeam version. Bill McGovern dominated again in George Bevan's remarkable Imp, but Turner snatched a round win when the Irishman tripped up at Silverstone.

Having notched more Special Saloon victories at Thruxton and Castle Combe, Turner switched horses to the ex-John MacDonald Ford Anglia with its 1000cc BRM Formula 2 engine. His team subsequently built an Escort around a two-litre Tasman BRM V8 for 1973 and it won before crashing at Silverstone.

The new Super Saloon initiative demanded a bigger, faster, 'hybrid' and, having identified the only rear-engined production car with a workable wheelbase, Turner and his crew married a steel Skoda coupe shell with F5000 Leda underpinnings. The first of a kind, the 'Yellow Peril' was an instant crowd favourite after it debuted at Snetterton (where it non-started) and at Mallory Park over an April weekend where it took some sorting.

A breakthrough win at Castle Combe presaged more at Oulton Park, Kirkistown, Knutstorp (Sweden), Brands





Hatch, Thruxton and Mallory. Nine outright victories, wet and dry, and a string of lap records – Oulton's at 98.61mph and Combe's at 102.22mph – delighted Skoda GB. Newly retired Formula 1 and Can-Am champion Denny Hulme even drove the monster at Brands and was impressed.

But running costs did not stack up against prize money and Turner bought the F5000 Lola T330 Lella Lombardi had raced throughout 1974 for what proved his last season with fifth, in the category's European finale at Brands, the best result. In May, Turner had achieved an ambition, racing on the terrifyingly fast old Francorchamps circuit. Sharing Pete Smith's Chevron B23, they finished a class-winning 10th in the Spa 1000km World Sportscar Championship round – a magnificent achievement for privateers. Turner is survived by son Richard and daughter Penny - younger son Peter died in 2008 – and second wife Sue, to whom Autosport extends sincere condolences. MARCUS PYE

Pulling to race in British F4 as well as F1 Academy

BRITISH F4

F1 Academy podium finisher Abbi Pulling will return to British Formula 4 next year alongside another campaign in the all-female F1 support category.

Pulling was previously a frontrunner across two seasons in British F4, finishing sixth in the 2020 standings and then taking another three podiums in a partial 2021 assault with JHR Developments.

The 20-year-old has subsequently starred in W Series and the inaugural season of F1 Academy, in which she drove for Rodin Carlin. The Alpine Academy member will continue with the squad this year but will also make a British F4 return in "selected" events. There is only one clash at present, with the Singapore





rounds of F1 Academy ruling her out of the Silverstone National British F4 fixture.

"I'm ecstatic to be coming back with Rodin Carlin in 2024," said Pulling. "We had some highs and lows in 2023, but it was the best group of people to work with and learn with; it really feels like a second family. We're pushing hard for 2024, and I think we have an exciting year lined up.

"It's also going to be really great to head back to the British F4 Championship, there's certainly some unfinished business there and I'm pleased to be able to race in such a brilliant championship with Rodin Carlin where they have such a great history – I think we're in for a great year together!" Rodin Carlin boss Steph Carlin added: "Abbi was a star to watch last year and I have no doubt she will be a championship contender in 2024. I'm also pleased that she will be taking part in selected British F4 rounds which will give her even more valuable time behind the wheel in another competitive championship."

Rodin Carlin has also announced that its Spanish F4 racer Alex Ninovic will switch to the British series for next year. The Australian finished 10th in the Spanish table after scoring one podium, and these latest announcements mean seven drivers have already been officially confirmed for the 2024 British F4 season.

Entries already open for 2025 Mini scholarship

MINI CHALLENGE

Mini Challenge organisers have already opened entries to the category's 2025 scholarship after receiving significant interest in the inaugural edition. A multi-stage contest is already under way to determine who wins a funded drive in the new JCW Sport sub-class of the Mini Challenge for 2024, with the chosen racer due to be revealed early next year. Over 100 people signed up to take part in the competition, which began with a karting

event in October. Now organisers have revealed details and opened entries for the 2025 scholarship, which will encompass two stages next August, beginning with a karting, quiz and media skills event before participants then drive a Mini. The funded JCW Sport prize drive, worth around £50,000, will again be up for grabs. "Given the interest we had in the 2024 Scholarship, we were keen to push ahead with plans to bring it back and are delighted to now be



launching entries for 2025,"Ssaid series coordinator RheatBeauchamp. "As we did thisttime around, we are packingIin plenty of activities as wetlook to uncover new talentfand help them make it ontop

"Seeing the way people competing in the 2024

the race track.

Scholarship embraced the opening stage of the ongoing competition, we look forward to making things even bigger and better for 2025 and providing people with the opportunity to battle for a place on the grid as part of the Mini Challenge family."



Fastest Mini in the World race's sustainable fuel gives power boost

FASTEST MINI IN THE WORLD

Dyno testing of the sustainable fuel used in this year's Fastest Mini in the World race has shown it offers a slight increase in performance compared to petrol.

All of the cars in the annual Brands Hatch contest used Coryton's Sustain Classic Racing 50 fuel this summer, which reduces carbon emissions by 35%.

But to prove how the alternative fuel is still competitive on track, a Mini A-Series engine was tested by Swiftune on its dyno using the Coryton product and it yielded impressive results.

"The test shows the Sustain Classic Racing 50 fuel versus the unleaded are virtually the same but the Sustain fuel gives very slightly more power from 7000rpm to 8300rpm over the unleaded race fuel – showing a 0.4bhp to 1.8bhp increase," said Swiftune boss Nick Swift. "The Lambda indicates the ecofuel does run a very slightly leaner mixture, approx 0.01 Lambda."

The Fastest Mini in the World race is set to again use the sustainable fuel in 2024 and coordinator Nigel Death believes these test results strengthen the case for making the switch.

"Every driver is always looking for marginal gains and this helps push the agenda of tackling environmental issues and powers you on track," he said. "It makes me immensely proud of the innovation we're doing for a club race – the numbers back it up." **STEPHEN LICKORISH**

HARRISON STAYS AT ELITE

Finn Harrison will continue with Elite Motorsport in GB4 next year, after making his single-seater debut with the squad in October's season finale. The Ginetta Junior podium finisher took a best result of fourth at Donington Park and is now planning a full attack. "We've worked with him since the latter half of 2023 and his commitment and determination has been impressive," said Elite team boss Eddie Ives. "From what we've seen during testing, we're hopeful that he will be able to battle at the front of the GB4 grid."

MORE GINETTA FOR MIALL

Ginetta Junior racer Holly Miall will continue with Fox Motorsport for a second season in the category after taking a best result of 10th this year. "My rookie season was a real eye-opener and it was obvious from the first round just how high a level you have to be at on every lap if you want to be competitive," she said. "The speed improved towards the end of the season and, with the experience of a year behind me, I know we'll be stronger. I've had great support from the team and can already feel the gains we've made."

MICHELIN TYRES FOR CLIOS

Michelin has been announced as the tyre supplier for the new-for-2024 Clio Cup GB series, the MotorSport Vision Trackdays category being for the latest specification of the French hatchback. "It's hugely important to us that competitors feel like they're racing on an even playing field, with an opportunity to showcase their abilities," said championship manager Stuart Garland. "And it was a no-brainer, not just to appoint a control tyre supplier, but to make the most of Michelin's expertise and experience in providing race tyres for Renault Clios."

Junior Saloons bosses insist series will run after 2024

Organisers of the Junior Saloon Car Championship insist the category will continue to run beyond 2024 despite the introduction of the new TOCA Junior series. Dave Beecroft and his team have been appointed to administer the new British Touring Car-supporting category, which is due to be introduced in 2025, pending approval from governing body Motorsport UK. It is set to feature a rear-wheeldrive tin-top, and more details are planned to be released next year. But Beecroft has stressed that the Citroen Saxo-based JSCC – which is celebrating its 10th anniversary season in 2024 and attracted record grids this year– will continue to run in addition to the TOCA Junior category and that each caters for different types of driver. "Second-hand cars are still coming onto the market and selling to new drivers, and new models are in build," added Beecroft of the Saxos. He said the cars remain "engaging to drive" and described the series as an "affordable" option for junior racers. STEPHEN LICKORISH



Brits star in Gulf Historic Dubai GP Revival

HISTORICS

Britons Stuart Hall and Mike Cantillon won the Formula 1 features at last weekend's Gulf Historic Dubai GP Revival, where British Touring Car star Jake Hill left a big impression on his single-seater race debut.

The varied F1 grid was joined in the showcase by sports-racers from the Group C and Le Mans Prototype eras, while Saturday evening's floodlit threehour 1960s GT contest gave spectators a taste of endurance racing as ambient temperatures dropped from 30C.

Four-time F1 world champion Alain Prost – who demonstrated his 1991 Ferrari 643 – and son Nicolas were among the star guests at the Dubai Autodrome, where Thierry Boutsen, Andre Lotterer and Jean-Eric Vergne competed. Boutsen saddled a Warsteiner Arrows A3, 40 years on from the birth of his F1 career in an A6.

Hall qualified ROFGO Racing's March 821 on pole and won Saturday's F1 race from Cantillon (Williams FW07C) and Jamie



Constable (Tyrrell 011). Cantillon beat Hall in Sunday's sequel, with Martin Stretton (Tyrrell 012) third as Hill was a fighting fourth in the ex-Rikky von Opel Ensign N173, shadowed by Constable.

Rob Huff snared pole as Ford GT40s topped the Le Mans 60s qualifying before Kyle Tilley/Nic Minassian won the enduro from Shaun and Max Lynn, with Lee Mowle/ Phil Keen (Jaguar E-type) third. Top small capacity GT was the Lotus Elan of Andrew Haddon/Mark Drain, chased by the similar car of Colin Sowter/Hill.

Steve Brooks (Peugeot 90X) won both

LM2000 races from Canadian Keith Frieser (Zytek 09S) as Xavier Micheron (Riley & Scott) and Steve and Patrick Zacchia (ORECA 01) shared thirds.

In Le Mans 80s+, Manuel Lopez (Porsche 962C) beat Marc Devis (Spice SE90C) and Arthur Mathieu/Bernhard van Oranje (Cougar C28LM) on Saturday. Mathieu/van Oranje won for John Danby Racing on Sunday, from Dakar rally star Mathieu Baumel/Valentin Simonet (Argo-Mazda JM16) and Jack Leconte/David Terrien (Rondeau M382).

GP Extreme to take over Masters Historic Racing



HISTORICS

Masters Historic Racing, one of the leading historic racing organisers, has merged with GP Extreme, enabling founder Ron Maydon to step back from the day-to-day running of the business after 20 years. The 2024 schedule will remain unchanged and continue to be operated by Masters Historic Racing's regular organisational team before transitioning across to GP Extreme, which is headed by Fred Fatien and organises the Historic Dubai Grand Prix Revival.

"It felt like the right

time to find someone to take Masters onto its next phase," said Maydon, who founded Masters in 2004.

"I will truly enjoy watching Fred, and his team at GP Extreme, embrace the ethos of Masters and implement the great enthusiasm and ideas he has for the future."





Castle Combe welcomes back 5000A to mark 500th meeting

HISTORICS

The 500 Owners' Association will begin its 2024 season with a very special doubleheader at Castle Combe's 500th race meeting on Easter Monday.

The 500s competed at Combe's inaugural event in 1950 and it is thus fitting that the motorcycle-engined category should grace the season-opener – sub-titled Howard's Day on 1 April in memory of Howard Strawford, whose passion saved the venue.

The 500OA has kept the flag flying for decades, since a band of owners decided to branch out from using their charismatic cars in hillclimbs and sprints and return to the tracks, with next year's programme the most ambitious yet.

The opportunity to be part of the third Red Bull Classic on Austria's F1 circuit from 7-9 June has already attracted 19 intentions to compete. The Oulton Park invite on 26-28 July not only celebrates the 70th anniversary of the first Gold Cup meeting – at which F1 feature winner Stirling Moss also won the 75-mile 500cc F3 final – but also the life of the late Cheshire veteran Roy Hunt.

Goodwood's opportunity comes every four years, so September's eagerly anticipated Earl of March Trophy race will doubtless attract a capacity grid. Rounds at Silverstone (21 April) and Mallory Park (19 May) are joined, unusually, in the championship by the 500OA hillclimb at Wiscombe Park on 11 May, "to encourage a crossover between the speed eventers and racers," according to Staride stalwart Xavier Kingsland. MARCUS PYE

British Rallycross calendar unveiled

MEMBERS' MEETING House captains Named For 2024

GOODWOOD

Four new house captains in the form of Tom Kristensen, Dario Franchitti, Andy Priaulx and Gordon Shedden have been selected ahead of next year's 81st Goodwood Members' Meeting.

Each driver will lead one of the four houses, Darnley, Torbolton, Aubigny and Methuen respectively, with events on and off the track dictating which one will come away with the coveted house shield.

The quartet will replace the outgoing incumbents, Jochen Mass, Emanuele Pirro, Nicolas Minassian and Anthony Reid – who had been in place since the event was first revived in 2014 – for the 13-14 April meeting.

"Of course, I hope Aubigny can win the house shield but first and foremost it's an honour to be chosen as a house captain at the Members' Meeting," said three-time World Touring Car champion Priaulx. "We are all racing drivers, so we want to win, but we're there for the club members and we want to have some fun."

Four-time IndyCar champion Franchitti added: "I'm really enjoying my historic racing, especially at the Revival and Members' Meeting. Winning the shield would be good, but just getting involved as a house captain is an honour in itself."

"Methuen has won the shield more times than any other house so that's a big act to follow," said three-time British Touring Car title winner Shedden (below). "But it's also fun because the Members' Meeting is such a great event and it's good to get involved as a captain alongside the racing."

BRITISH RALLYCROSS

The calendar for the 2024 Motorsport UK British Rallycross Championship 5 Nations Trophy has been revealed, with the headline Supercar category set to be held over 10 rounds.

All 5 Nations BRX classes will compete at the Lydden Hill Easter Bank Holiday weekend opener (30 March-1 April) for a double-header, before all classes then head to Mondello Park in Ireland (25-26 May). The Supercar and Junior categories will then hold rounds as part of the brandnew Lydden Legend weekend (including a double-header for Supercar) on 20-21 July. The rest of the 5 Nations BRX roster will attend Lydden Hill for another new event, the 2WD Superprix, on 17 August, where 5 Nations BRX will align with the BTRDA Clubmans Rallycross Championship for a joint meeting. All classes will visit the Pembrey Circuit at the start of autumn (date TBC), before returning to Lydden Hill for the now traditional Fireworks Rallycross weekend on 2-3 November. Unlike previous years, the series will not visit mainland Europe in 2024 after feedback from competitors, but has

plans to return in the future.



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The other important numbers

Last week Autosport looked at grid sizes – but without sufficient volunteers to enable the safe and fair operation of events, strong entries risk becoming meaningless

STEPHEN LICKORISH

he National section of last week's Autosport (7 December) contained plenty of numbers. These were all related to grid sizes, but they are not the only figures that are important when it comes to assessing the health of club motorsport.Volunteer numbers are also incredibly significant, too. After all, your series could have the largest entries of any but, unless there are sufficient numbers of marshals, scrutineers, clerks of the course and those filling a multitude of other vital unpaid roles giving their time to assist at your events, then those massive grids are irrelevant as racing cannot take place safely and fairly.

And this has certainly been a factor over the past year. Autosport is aware of at least one Donington Park fixture that had to swap from the Grand Prix circuit to the shorter National layout amid concern over marshal numbers. While that's a fairly minor change, more concerning was an event that had a slightly delayed start due to officials deciding if the relatively small number of marshals that had signed on was actually enough to allow the meeting to proceed. Having fewer volunteers than is desirable obviously has very serious safety implications, but the impact stretches beyond this. Take track limits as one example – some events have run with minimal policing due to a lack of people to act as judges of fact and determine who strayed beyond the circuit's boundaries.

"It can make a massive difference if you think you're not going to be treated so well"

Yet these cases are certainly not reflected across the board. Yes, it may have been held in November when there are fewer events to restrict the pool, but huge numbers of men and women in orange signed on as marshals for the Walter Hayes Trophy at Silverstone, with the organising Historic Sports Car Club reporting there were impressively around 200 each day. Not bad for a cold, and often wet, winter weekend. The British Motorsports Marshals Club also says it has enjoyed another increase in membership this year. "The BMMC as a club hit 2500 members at the back end of last year, which was a milestone for us because it had dropped quite significantly over the years," says chair Nadine Lewis. "We're at 2600 for this year so we've gained another 100 marshals over the course of 12 months and that's before you include any we lost." So why is there a shortage in some quarters? Well, it comes down to many of the same issues that were detailed last week in having affected grid numbers: choice and cost. "It's the number of events on at the same time or on consecutive weekends – that seems to have been a bit of an issue this year," explains Lewis. "Also, marshals are being more selective. The cost of living means people are less prepared to travel and more likely to do local events."

The organising club's attitude towards marshals is another important factor. "It can make a massive difference if you think you're not going to be treated so well – if you've been to one of those events before and the lunchbreak didn't happen or you didn't get bottles of water on a really hot day," continues Lewis. "That can then filter through to other people. At the Anglesey 750MC event, Sports 1000 put on a barbecue for marshals on the Saturday night and for all the championship. It was a brilliant evening. Some clubs do raffles, and it all makes a difference."

But there are other wider issues rumbling in the background that can also have an impact. Some of the 'orange army' were left "disgruntled" at the way light panels were hurriedly introduced at the start of last season in place of traditional flag signals, and the tricky implementation of new track-limits rules by governing body Motorsport UK has not helped either. "The dialogue [about planned changes] is really important to have up front," acknowledges Lewis. Inconsistent implementation and working practices surrounding the light panels has caused frustration in some quarters.

However, for all the fears over volunteer numbers, it is important to remember we have been here before. "I think it's been a challenge for over 30 years!" says British Automobile Racing Club group chief executive Ben Taylor. "When you look back at the minutes from meetings in the 1970s/1980s in the archives, you find that people are worried about the number of marshals coming. If we can do things to make them look more favourably at a BARC meeting then we will do that - whether it's buying them breakfast or giving them some high-quality racing. It's our job to put on events with full grids and good racing." And we have pretty much gone full circle there and are back to the topic of grid numbers and whether there is too much racing. When producing last week's analysis, many of the club chiefs Autosport spoke to referenced concerns about the dilution of grids amid too many events and categories. It is important to also consider the volunteer community when these issues are discussed. The British Racing & Sports Car Club is carrying out some great work to try to encourage new marshals and officials to join the ranks, but there are actions the sport as a whole can take that could help, too. ***

THE MOST EXCITING BRITISH PROSPECT SINCE NORRIS?

Freddie Slater turned heads with his domination of Ginetta Junior. Now he's aiming for more glory in single-seaters

STEPHEN LICKORISH



Motorsport IMAGES

es, the headline to this feature may sound like a bold claim. And, yes, we are talking about a driver with only one full season of car racing under their belt. But there's undoubtedly something special about Freddie Slater's glittering career to date. It's rare for a driver to combine remarkable talent behind the wheel – a plethora of top karting titles and his domination of the Ginetta Junior field this year demonstrate that – with the right backing and people around them to make it all the way to the very top of the sport. Slater ticks all of those boxes, and that's what makes him such an exciting prospect.

It's certainly no surprise that the 15-year-old has entered the world of motorsport. His father Adrian managing director of luxury bath and beauty brand Baylis & Harding and a huge supporter of UK racing, who donated tens of thousands of bottles of hand sanitiser to Motorsport UK during the pandemic – is a long-time Porsche competitor, and Slater's godfather is another leading figure in the Porsche world, Mark Sumpter. Slater Jr therefore grew up around motorsport and soon began karting. "I got my first go-kart when I just turned five and I loved it so much and I started racing," he recalls. "It's mad to think where I started and the level where I'm at now - I never expect things too much. I started getting good results in Cadets and it started to rocketship from there. It's been a hell of a journey." That journey has taken him around the globe, and Slater has enjoyed karting success on the American, European and World stage. One of his most notable achievements was becoming DUNBAR the 2020 Junior World Karting champion, defeating Formula 1 team juniors Arvid Lindblad and Ugo Ugochukwu. His karting glory has even continued into this year - alongside his Ginetta Junior competition, he secured the European KZ2 crown this summer.

debut with the leading R Racing squad at Snetterton last year, the sixth round of the season. But, considering his rivals had at least half a year of car racing experience - some far more - a best result of seventh hinted at Slater's potential. He does admit, though, that the switch from karts to cars was tricky to begin with. "The Ginetta Junior car is so sensitive, also it's not got a lot of power and it's on road tyres so it's really hard to drive," states Slater. "The transition to cars is a completely different ballgame because everything is so different. When I moved out of karting, I thought I could take a few things - and you can take the general feeling of what the car's doing and a bit of racecraft - but, otherwise, you

cond

Given all that success, there was, unsurprisingly, already a lot of hype surrounding Slater when he made his Ginetta



have to learn from scratch again. I did the last three rounds and we were OK but I wasn't mega in qualifying."

R Racing team boss Jamie Ross acknowledges Slater did struggle a little to begin with, but says this was just "about needing more

"The standout for me was qualifying at Silverstone, when he put it on pole by 2.4 seconds – it was ridiculous!"

seat time in the car" and adapting to the differences from karting. And it all clicked for the Winter Series at Brands Hatch, where he won three of the four races to become the youngest-ever Ginetta Junior victor and seal the title. "I was in the zone and the team was doing well," reckons Slater. "I stepped up to another level and started to get into a rhythm without making those little mistakes." For his rivals, it provided a worrying hint of what was to come.

Ginetta Junior has never featured domination on quite the scale Slater has produced this year. He won 16 of the 21 races he started - and could have topped another two but for track-limits penalties - to wrap up the championship with effectively two events to spare. He picks out his Cadwell Park triumphs as among his favourites, describing the Lincolnshire venue as "an insane track for a Ginetta Junior". It may not have been the strongest of seasons

as the series moved away from its home on the British Touring Car bill to join the British GT package, but Slater's consistency for a driver still aged 14 was remarkable.

"We've had so many standout drivers through the years, like Zak O'Sullivan, who was driving in F1 the other weekend, but Freddie is just exceptional," says Ross. "The pole margins he's had this year are just unbelievable. Normally, if you see this dominance in a single-make series, there's questions about 'is the team cheating?' but everyone knows how good Freddie is.

"I think the standout for me was qualifying at Silverstone, when he put it on pole by 2.4 seconds – it was absolutely ridiculous! >>>



From memory, he was on pole by about a second and me and Craig [Boyd, Slater's performance coach] were watching and were like, 'that's good' and he then went purple again. There's never a sense of 'that will do now', it's always 'I can do better'!"

Further evidence of that impressive attitude comes when Slater discusses his season and admits to being disappointed to not contest the final two events – so he could instead progress to single-seaters – as he missed out on the chance of adding further wins and making his new records even tougher to beat! But, despite his domination, Slater says he "still learned so much" that he is already putting to good use as he moves further up the ranks.

That next step came in August when he made his Formula 4 debut in the British series with the returning Double R squad at Donington Park. Although Slater had already completed numerous test sessions, it was another sign of his ability that he jumped straight into the series and twice qualified third. He was battling for the win in the finale when slight contact damaged his wing, but he had looked completely at home in the slicks-and-wings



"People from inside my team think I've done a good job in my F4 races but that wasn't enough for me"

machinery. "If I didn't do Ginetta, I don't think I would've been as good as I've been in F4 at the start," Slater reckons.

He has also been among the frontrunners in Euro 4 and Italian F4 races he has contested in Europe, with Prema and Van Amersfoort Racing respectively, although there have been a few little scrapes as well. "I've been speaking to quite a few people about my F4 races and people from inside my team think I've done a good job but that wasn't enough for me," shrugs Slater, showing a level of self-reflection that belies his age. "I don't want to finish third if I can go for a win – it's better taking my front wing off and learning from it than finishing third. But when you're fighting for a championship, then it's better picking up the points."

But Slater's most impressive F4 performance to date has to have been at Macau. He was second in the qualification race and was hounding leader and Prema team-mate Lindblad in the main contest when what Slater describes as a "tiny" failure cost him vital performance. "It was an incredible experience – I will never forget that," he enthuses. "It's the most insane weekend, at 0730 they had all filled the stands! I put in a good lap in qualifying and the qualification race was wet, and I was watching in front and Arvid was definitely pushing quite a lot because, by the time we got to Turn 9, we had nearly a three-second gap to the car behind. You can't crash at Macau so my aim was to build it up to the GP. We went into another level – we had so much pace and so I was gutted to go out like that. But that's motorsport, things break." Slater's most recent F4 outing came in support of the Abu Dhabi Grand Prix – he took a podium – and the event has only made him more determined to be one day racing on the main stage. "It's



driven me even more to be in F1 because I saw it and that's absolutely where I want to be," he states. "Before that, I didn't know how good it was because I hadn't been to a grand prix. I didn't get involved in the F1 paddock but just watching the cars go round I was in love at that point. F1 is my goal – that's where I want to be. That's my dream and I'm going to do my best to make my dream into reality."

And Slater has some people around him who know exactly what it takes to do just that. He is guided by ADD Management, headed by Mark Berryman and Fraser Sheader, and they have already completed the same journey with Lando Norris. "I wouldn't be where I am today without them," acknowledges Slater. "I hope to pay everything back to them." Alongside his parents, he also highlights Boyd – who he has worked with since the age of seven – as being a key element to his success. "Everyone speaks of Freddie as an individual but I think Freddie Slater is a team of people," adds Ross. "It's the effort that everyone has put in, his management, his performance coach Craig Boyd – everything has no stone unturned. There's no other goal but to make an F1 driver out of him. There's no arrogance about it, but just so much confidence."

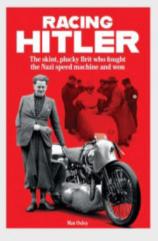
Yet, before Slater can think about F1, there are several more steps on the single-seater ladder to climb first. The likely next stage is the UAE F4 championship early next year, and Slater wants to adopt the same approach as he did with Ginetta Junior, where he used his 2022 outings to learn and make some mistakes ready to attack from the start of the new season.

And he will go into that with another confidence boost, after

defeating strong opposition to be voted by Autosport readers as the National Driver of the Year award winner. His rivals included Ash Sutton who, like Slater, enjoyed a remarkable 2023 campaign. Sutton has completed some driver coaching with R Racing and the duo's paths have crossed. "I've tested with Ash in Ginetta Junior and he's an incredible and amazing guy," says Slater, who also has ambitions to tackle the endurance racing scene in the future. "I turned up to my table at the Awards and I'm sitting next to Ash the whole night! We were winding each other up about who wins!" Historically, Ginetta Junior champions are not even nominated for the Award, let alone win it, and this again shows he is one to watch. And speaking of possible future stars, Ross reveals that Slater's younger brother Alfie has now begun Ginetta Junior testing as he seeks to follow in his successful sibling's footsteps... *W*

FINISHINGSTRAIGHT

Plucky Brit's need for speed



BOOK REVIEW RACING HITLER Mat Oxley RRP: £24

As the world becomes more progressive, it seems that the voices who decry sport for involving itself in social matters only get

louder. Formula 1's various initiatives over the past few years have been met with just as many – if not more – opponents than supporters of such things, complaining that politics should stay out of sport. Of course, they often fail to understand the difference between a political issue and a social one.

What will chill these individuals to the

To get around this, the Nazis turned to the automotive industry – and to motorsport in particular – and pumped millions of reichsmarks into the technological advancement of the motor car and motorcycle. All of this would be technology that would ultimately power the war machine. But it was the propaganda that Germany could spin from its engineering intelligence and the daring of its competitors that demonstrated to the world the true might of its violent ideology.

A key battleground for this was the motorcycle land speed record, brilliantly brought to life by Mat Oxley in his latest book, *Racing Hitler*. A former racer, and journalist and author for over 40 years, Oxley has written more about motorcycle racing – and in particular MotoGP – than he's had hot dinners. *Racing Hitler* serves as the follow-up to 2009's brilliant *Stealing Speed* – arguably the best motorsport book ever written. *Stealing Speed* told the real-life story of the evolution of East German motorcycle manufacturer MZ, the grand prix success it had with Ernst Degner (after whom two corners are named at Suzuka), and his defection to the West during the Cold War, taking with him MZ's secrets to Suzuki. Joan Mir's 2020 MotoGP title probably would have never happened without that moment in history.

Racing Hitler focuses on the motorcycle land speed record attempts of three nations: Germany, with Ernst Henne and BMW; Italy, with Piero Taruffi and Gilera; and Britain, whose honour was upheld by a plucky, penniless, eccentric by the delightful name



bone will be this: much of modern-day motorsport as we know it is built on the foundations of the fascism that would lead to the outbreak of the Second World War. At the signing of the Treaty of Versailles following the end of the First World War, Germany – regarded as the chief aggressor in the conflict, so punished severely – was forbidden from undertaking any kind of military development. This became a bit of a problem for Adolf Hitler and his band of thugs, whose national socialism soon swept Germany through the late 1920s and 1930s before the Nazis' invasion of Poland in 1939.

FINISHING STRAIGHT

Fernihough greets Canadianborn racer Kay Petre (well worth a Google – ed) at Brooklands in 1938



of Eric Crudgington Fernihough.

With Henne backed by Hitler and Taruffi's efforts supported by Mussolini, Fernihough put his life on the line for British honour by scrimping and saving where he could, accepting goodwill gestures, and tirelessly fettling his Brough Superior at Brooklands without so much as a 'thank you for your service' from the UK government. What's changed, eh?

Oxley brilliantly details the efforts of all three speed demons and their contrasting surroundings, which helps strengthen the magnitude of Fernihough's achievements before the tragic end to his story.

Racing Hitler offers a fascinating insight into the pioneering early days of motorcycle and aerodynamic development without being overbearingly complex. There is a lot of technical detail in this book, but Oxley has simplified it to be palatable to those



youtube.com/AUTOSPORTdotcom



Autosport's 2023 F1 season review: part 1

In this first instalment, Martyn Lee is joined by Blake Hinsey /@ brrrake and Jonathan Noble to look back at the 2023 F1 season from a team-by-team perspective – who gained on the dominant Red Bull RB19, and what it means for next season.





Autosport Podcast: MotoGP season review

Oriol Puigdemont and Lewis Duncan look back at the 2023 MotoGP season, focusing on the title battle between Francesco Bagnaia and Jorge

Martin. Ducati's dominance and the struggles of Honda and Yamaha were a key storyline this year. They also discuss the decision of Marc Marquez to leave Honda for Gresini, and whether the sprint race format worked for the fans and the championship.



without such understandings (like this writer), without patronising those with a greater knowledge.

At 128 pages, *Racing Hitler* is a relatively short read, but that is very much to its credit. Historical motorsport books often get bogged down by endless facts. Oxley keeps things tight and concise without compromising the surprisingly in-depth nature of the book.

Oxley's books are always a must-read for motorsport fans, and *Racing Hitler* is up there with his very best.

LEWIS DUNCAN

WHAT'S ON INTERPORT INTERO

INTERNATIONAL MOTORSPORT Brazilian Stock Car Championship Round 12/12 Interlagos, Brazil 17 December Divestream on Motorsport.tv, Sunday 1606



FROM THE ARCHIVE

French rally legend, motorsport polymath and sometime movie stunt driver Jean Ragnotti demonstrates why fans dubbed him 'the acrobat', taking the line of least resistance and maximum airtime on his and co-driver Jean-Marc Andrie's way to seventh place in the unexpectedly unsnowy 1983 Monte Carlo Rally. Things had moved on somewhat from when Ragnotti won this event two years previously, his Renault 5 Turbo finishing 19 minutes behind winner Walter Rohrl's Lancia 037 Rally, which pulled off a giant-killing coup on the season-opener against the more-fancied Audi Quattros.



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GABRIELE TARQUINI MY FAVOURITE... TEAM-MATE



Tiago Monteiro

I n a professional racing career that spanned more than 30 years, Gabriele Tarquini worked with more teammates than he would care to mention. But after they raced together in all but one of nine consecutive World Touring Car Championship seasons between 2007 and 2015, Tarquini's choice of Tiago Monteiro as his favourite team-mate should come as little surprise. Across stints at SEAT and Honda, the pair developed a strong bond.

"I enjoyed very much to stay on track and outside the track with him," affirms Tarquini. "We spent holidays together with the family, we spent a lot of time especially in between races to share the same hotel."

The Portuguese arrived in Tarquini's orbit fresh from two mixed seasons in Formula 1 upon joining SEAT's five-car superteam in 2007. He made a strong first impression on Tarquini, who felt the partnership "started very well because he introduced himself not like an F1 star".

"Especially because I was as well in F1 before jumping in touring cars, so we had more or less a similar experience, I can understand the problem he had jumping in touring cars," the Italian remembers. "But he was growing a lot after a few races and seasons. He became a very good touring car driver."



After SEAT withdrew factory support at the end of 2009, the duo continued with privateer Sunred Leons for two seasons before being announced as Honda drivers midway through 2012. Monteiro was hired at Tarquini's suggestion, he recalls, as their mutual understanding deepened.

"It's true our relationship improved year by year," Tarquini explains. "We went to a private team with not a lot of money. We had these bad seasons but always very strong in our relationship, it was very friendly."

Although Honda couldn't match Citroen following its arrival in 2014, Tarquini and Monteiro kept a unified front and "always pushed together to solve our problems".

Fittingly, Tarquini was invited back almost two years after leaving Honda to replace Monteiro after his serious testing crash in 2017, a duty that he took seriously, and they remain in semiregular contact several years after their long spell as team-mates concluded. JAMES NEWBOLD



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| 20/21 Jan | Portimão /P - Race days |
| 29/1 Mar | Aragón /E – Test days |
| 2/3 Mar | Aragón /E - Race days |
| | Lang /E - Test days (INC) |
| 9/10 Mar | Barcelona /E – Race days (tbc) |

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| 9/10/11 Cb | Valencia /E – Test days |
| 15 Feb | Valencia / - Dare daus |



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