100-PAGE F1 2024 PREVIEW SPECIAL

MAUTOSPORT

ESSENTIAL GUIDE

29 FEBRUARY 2024

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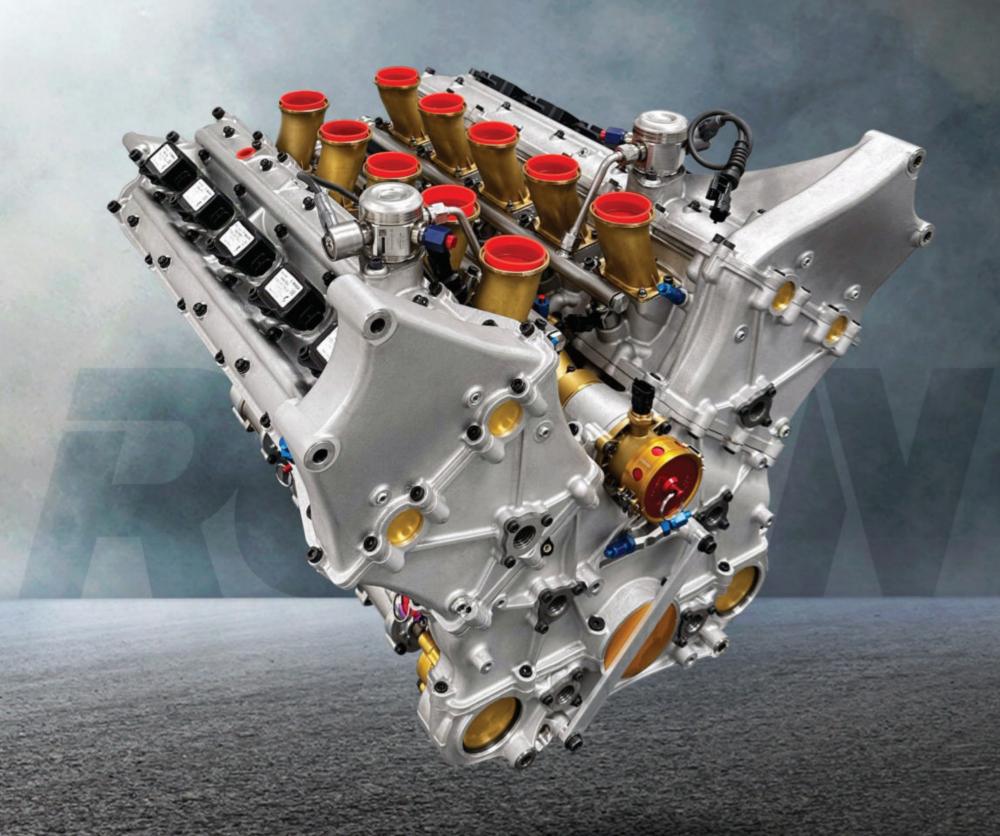
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The chase of Verstappen is about to begin again

The new Formula 1 season is upon us, with all the usual questions and excitement that come at the start of a fresh campaign. The big one is, of course, can anyone challenge Red Bull and Max Verstappen? But there are many others that we attempt to answer in this week's F1 2024 season preview special.

As Alex Kalinauckas points out in our analysis of last week's Bahrain pre-season test (page 18), Red Bull's radical racer looks ominously impressive, but the pace and consistency of Ferrari has given some hope that things won't be *quite* so one-sided in 2024.

As well as all the key data from testing, we take a look at the tech battlegrounds in the third year of this ground-effect era (p24), look at the challenges facing Charles Leclerc (p32), Lewis Hamilton (p36), Fernando Alonso and Lando Norris (p40). We also have our traditional team-by-team guide (p44) and essential calendar info (p55).

The increasingly competitive World Endurance Championship also kicks off this weekend, in Qatar. Gary Watkins brings you the latest from the Prologue test (p6), speaks to the key players about the chances of toppling Toyota (p56), and runs through the Hypercar manufacturers (p62). James Newbold is your guide to the new LMGT3 class and the main contenders on p72.

 Thanks to the extra pages in this week's bumper issue, we've had to increase the cover price. We'll return to our normal price next week.







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COVER IMAGES

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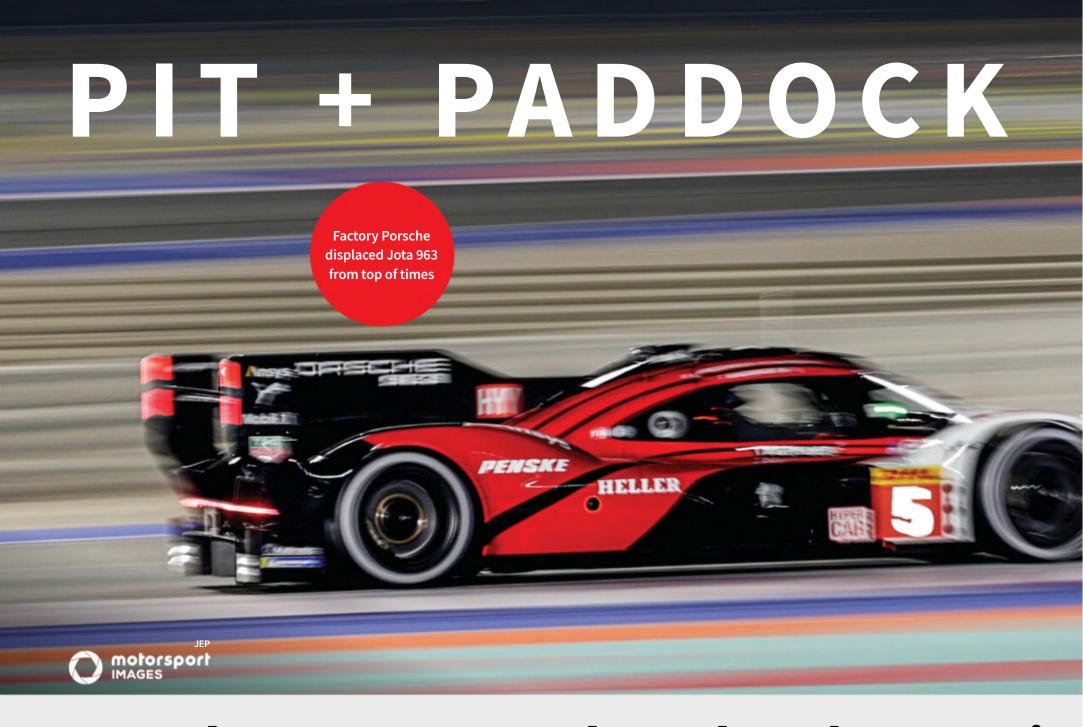
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Porsche tops test as dawn breaks on epic

WEC

Porsche took first blood in the pre-season World Endurance Championship Prologue ahead of this weekend's Qatar 1812Km. Its 963 LMDh ended up fastest overall as well as topping the times in each of the four sessions of the delayed two-day test on the Losail International Circuit.

Frederic Makowiecki was quickest overall in the #5 Porsche Penske Motorsport car in the final session on Tuesday afternoon. The Frenchman posted 1m40.404s early in the three hours, which was initially 0.8s clear of the field. But it stood until the chequered flag despite a flurry of quick times as conditions cooled towards the 1700 finish.

Alex Lynn jumped to second aboard the solo Chip Ganassi Racing-run Cadillac V-Series.R with a 1m40.621s, and then improved to a 1m40.458s to finish 0.054s off Makowiecki. Team-mate Earl Bamber had been second for the majority of the session until the late improvements.

Yifei Ye moved up to third in session in the customer AF Corse Ferrari 499P Le Mans Hypercar courtesy of a 1m40.749s with 15 minutes left on the clock. The time promoted him ahead of the AF-run factory #51 Ferrari in which Antonio Giovinazzi posted a 1m40.926s late on after losing a slightly faster time to a track-limits deletion.

Makowiecki had also led the way in the morning session on Tuesday, while the

Jota Porsche squad topped the times in the opening two periods on Monday. Because the Prologue had been pushed back from Saturday and Sunday as a result of shipping delays caused by the geopolitical situation in the Red Sea, teams were required to participate in three of the four sessions including the middle two. Jota's 963s were two of only three Hypercar entries to take part in session one, Norman Nato and Jenson Button ending up 1-2.

The team then hit the ground running in the Monday evening session. Callum Ilott posted a 1m40.541s early on and this stood as fastest time of the Prologue until its hectic climax. The British prototype debutant still ended up third in overall times behind Makowiecki and Lynn.

Antonio Fuoco was fourth quickest overall with his Monday evening time for Ferrari of 1m40.673s, while Ye and Giovinazzi took fifth and sixth with their best laps from Tuesday afternoon.

PPM boss Jonathan Diuguid described the test as "pretty productive". "We were struggling a little bit yesterday so I thought it was quite a good recovery by the team overnight," he said after the conclusion. "It was quite a late night for everybody; some people were here until 0300 on our team."

Cadillac came out of the test looking good as it starts its second WEC campaign. The V-Series.R was the only car to end up in the top six in all three of the sessions in which it participated, Bamber taking fifth





WEC season

in session two and Sebastien Bourdais the same position on Tuesday morning.

Porsche and Ferrari were losers under the new Balance of Performance published last week ahead of Qatar, as was Toyota with its all-conquering GR010 HYBRID LMH. Nyck de Vries set the fastest time for the Japanese manufacturer, but his 1m41.789s was only good enough for 13th in the combined times.

GARY WATKINS

POS	DRIVER (TEAM)	TIME				
1	Frederic Makowiecki (Porsche)	1m40.404s				
2	Alex Lynn (Cadillac)	1m40.458s				
3	Callum Ilott (Jota Porsche)	1m40.541s				
4	Antonio Fuoco (Ferrari)	1m40.673s				
5	Yifei Ye (AF Ferrari)	1m40.749s				
6	Antonio Giovinazzi (Ferrari)	1m40.926s				
TOP LMGT3 TIMES						
TOP	LMGT3 TIMES					
TOP POS	DRIVER (TEAM)	TIME				
		TIME 1m54.480s				
POS	DRIVER(TEAM)					
POS 1	DRIVER (TEAM) Gregoire Saucy (UA McLaren)	1m54.480s				
POS 1 2	DRIVER (TEAM) Gregoire Saucy (UA McLaren) Davide Rigon (AF Ferrari)	1m54.480s 1m54.542s				
Pos 1 2 3	DRIVER (TEAM) Gregoire Saucy (UA McLaren) Davide Rigon (AF Ferrari) Esteban Masson (ASP Lexus)	1m54.480s 1m54.542s 1m54.565s				

Ford adds itself to clamour calling for Red Bull resolution

FORMULA 1

The CEO of the Ford Motor Company has written to Red Bull to make plain the manufacturer's dissatisfaction over the time taken to conduct an investigation into allegations made against Formula 1 team principal Christian Horner by a female employee. A decision on Horner's future was due imminently as Autosport closed for press on Tuesday.

Ford will help Red Bull develop the new-specification powertrain that will debut for the 2026 season, although its marketing strategy around competing in the championship has already whirred into life. According to reports by the Associated Press, boss Jim Farley has written to Red Bull GmbH to urge the energy drinks company to come to a resolution. He writes that Ford is "increasingly frustrated by the lack of resolution or clear indication from you about when you anticipate a fair and just resolution of this matter. We are likewise frustrated by the lack of full transparency surrounding this matter with us, your corporate partners, and look forward to receiving a complete account of all findings." Farley demanded that Red Bull give "prompt and serious attention" to the matter.

Farley said that Ford, as a familyowned company, was not happy with how it felt things were proceeding, and expressed displeasure that previous requests for greater transparency over the matter had been ignored. In the letter he added: "As we have indicated previously, without satisfactory response, Ford's values are nonnegotiable. It is imperative that our racing partners share and demonstrate a genuine commitment to those same values. My team and I are available at any time to discuss this matter. We remain insistent on, and hopeful for, a resolution we can all stand behind."

Ford is not alone in calling for Red Bull to get its house in order. Partly prompted by fears that the Horner saga could hang over the season-opening Bahrain Grand Prix this weekend, Formula One Management recently issued a statement making it clear it too did not want the matter to drag: "We have noted that Red Bull has instigated an independent investigation into internal allegations at Red Bull Racing," read the release. "We hope that the matter will be clarified at the earliest opportunity, after a fair and thorough process and we will not comment further at this time."

While the investigation has continued, Horner has remained in his role. He has maintained a high-profile while attending the launch of the new RB20 in Milton Keynes as well as last week's F1 pre-season test in Bahrain. He has strongly denied any wrongdoing.

JONATHAN NOBLE



Sauber denies doubts amid more Audi change

FORMULA 1

Sauber Formula 1 figurehead Alessandro Alunni Bravi has yet again had to deny that Audi is getting cold feet about entering the championship in 2026. The Italian lawyer defended the manufacturer after CEO Markus Duesmann, a key advocate for the F1 project, left the company last year to make way for the sceptical Gernot Dollner.

Duesmann was joined by chief development officer Oliver Hoffmann for Audi's announcement of its top-flight return at the 2022 Belgian Grand Prix, and now German newspaper Bild reports that he is also set to be moved aside. Rather than being forced out altogether, it is believed that Hoffmann will be offered a role within the F1 operation, although that is likely to add another hoop through which highly rated Sauber CEO Andreas

Seidl must jump before getting the resources required to build up the Swiss chassis concern.

Alunni Bravi has sought to assuage the unease, telling Autosport: "There is a strong commitment from the Audi Group at all levels. We always said that the decision to enter into F1 was not based on a decision of single individuals but was on the decision of the management board of Audi. And it's then been confirmed by the advisory board of Audi and the supervisory board of VW Group. So, the commitment is there.

"The project is proceeding according to the timeline, and the agreed governance between shareholders. The dynamic within the board is not for us to comment on. But what we know is that we have a strong support. Andreas Seidl is working closely with the Audi people to develop our



team towards 2026. This is what I think is important."

Hoffmann's long-term contract as CDO had been extended only last year. The reason for his departure is said to be a difference of views with Dollner over the future of the company. Hoffmann is also blamed for sluggish Audi sales figures, and that the models planned under his direction have been repeatedly postponed.

CHRISTIAN NIMMERVOLL & ADAM COOPER

Key F1 figure Nielsen returns after FIA departure

FORMULA 1

Ex-FIA sporting director Steve Nielsen has taken on a consultancy role for the Formula 1 organisation. He quit the governing body at the end of 2023, after a year in the job, due to growing concerns about how the organisation was being run and its direction. But Nielsen was back in the paddock last week for pre-season

testing in Bahrain, albeit so far without an official title. When he's not on official championship business, he will work with other clients, such as circuits.

After starting as a truck driver with the MSL catering firm, Nielsen worked for Team Lotus, Tyrrell, Benetton/Renault, Honda, Arrows, Caterham, Toro Rosso and Williams, mostly in team manager or sporting director roles. He left

Nielsen became truckie
for Lotus team in 1987

Williams to join F1 as sporting director in August 2017 and was one of the first key hirings made by Ross Brawn under Liberty Media's ownership.

Nielsen held a wide brief, getting involved in the development of the sporting regulations as well as having an operational role on race weekends. These are aspects he is expected to pick up again. He worked closely with race venues and was a key player in the effort to get F1 back on track during the pandemic by helping to fill a cancellation-hit calendar with new or longabsent venues such as Imola, Nurburgring, Mugello, Qatar and Istanbul Park.

Nielsen joined the FIA with F1's blessing last January with a similar job title and worked closely with race director Niels Wittich. He was, according to the FIA, "responsible for overseeing all sporting matters including the ongoing development of race control and the remote operations centre, as well as future updates to the sporting regulations".

ADAM COOPER



ELECTRIC VANS Remember last week, when we showed you a photo of Jules Gounon going well under the Mount Panorama lap record at the wheel of a modified GT3 Mercedes in a demo run at the Bathurst 12 Hour? Well, last weekend Gounon's compatriot Romain Dumas sliced 0.3 seconds off that at the Supercars meeting – in an electric van. Ford's SuperVan 4.2 was whisked around the Aussie track in 1m56.3247s, and exceeded 300km/h on Mountain Straight and Conrod Straight. "We left nothing on the table as we pushed for the fastest lap possible," said Dumas. "No one has ever driven a vehicle like SuperVan 4.2 around Mount Panorama, and certainly not this quickly!" **Photograph by Ford**

IMSA penalties for Ferrari, BMW

DAYTONA 24 HOURS

Ferrari and BMW have lost their IMSA SportsCar Championship GTD Pro and GTD manufacturers' points from the Daytona 24 Hours last month. The two marques, which finished first and third in the former class, were also fined as a result of their respective GT3 machines violating declared performance levels.

Manufacturers in the twin GTD categories have to declare their performance under a new system of Balance of Performance introduced to the North American IMSA series for this year. Statements from IMSA said that it had been decided that the Ferrari 296 GT3 and the BMW M4 GT3 had "demonstrated performance in the Daytona 24 Hours that exceeded IMSA's expectations as shared in the GT manufacturers' technical working groups". It added that the goal of the new system



is "to ensure the demonstrated performance of the best example of each manufacturer's car model would be within a targeted performance window – allowing for competitive equivalency".

The results are unaffected, which means that Risi Competizione Ferrari (above) line-up James Calado, Alessandro Pier Guidi, Davide Rigon and Daniel Serra keep the GTD Pro victory and drivers' points. IMSA does not change the classification once the results have been declared official. No appeal by Ferrari or BMW is possible. GARY WATKINS

TOYOTA GIVES HYDROGEN ROLE TO VASSELON

LE MANS 24 HOURS

Pascal Vasselon will remain at Toyota Gazoo Racing Europe and take the reins of the Japanese manufacturer's programme to put a prototype powered by a hydrogen combustion engine on the grid of the Le Mans 24 Hours in 2027.

The 60-year-old Frenchman had been expected to move into the role after he was abruptly removed at the start of this year from the technical directorship he had held since 2006. It has now been confirmed, along with David Floury's promotion to Vasselon's former job, which he had filled in an acting capacity since January.

Vasselon has been announced as the new vice-president of TGR strategic motorsport development in which he will "contribute to the planning and development of future global motorsport activities with a focus on carbon neutrality and hydrogen technology", according to a statement. Within his role he will "will lead Toyota Gazoo Racing's representation to the relevant governing bodies around the world".

Toyota firmed up its intent to build a prototype for the forthcoming hydrogen class at Le Mans last year when it unveiled the GR H2 Concept (below) on the eve of the race.

GARY WATKINS



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LE MANS 24 HOURS

Plans for Porsche to introduce a revised engine for its 963 LMDh in time for the Le Mans 24 Hours round of the World Endurance Championship have been pushed back. But the revisions, centred on a new crank for the 4.6-litre twin-turbo V8, are still scheduled for a 2024 introduction.

Porsche has been forced to delay bringing the engine on stream in time for the double-points round in June because the rulemakers – the FIA and the Automobile Club de l'Ouest – wanted it to be introduced at the Imola round in April. Two races, the Italian event and then Spa the following month, were required to assess its performance before the big one at Le Mans.

That would have compromised the programme of endurance testing with the revised powerplant necessary before heading into a 24-hour race. It was compounded by the fact that Imola clashes with the Long Beach round of the IMSA SportsCar Championship and only one homologation is allowed in LMDh. That would have meant producing a supply of engines for all nine 963s racing in the WEC and IMSA for the same weekend.

"The governing bodies set a clear goal, clear targets how we had to implement the crankshaft, and it won't allow us to do it before Le Mans," said Urs Kuratle, project chief on the 963. "The risk was too big. We had to decide to concentrate all our endurance runs before Le Mans on the

old crankshaft; we would not get enough mileage on the new one."

Kuratle revealed that the introduction of the latest-spec LMDh hybrid system jointly developed by Bosch, WAE Technologies and Xtrac at the Daytona 24 Hours IMSA round won by Porsche in January had eased Porsche's concerns over reliability of the current-spec engine.

The key motivations for the engine revision, which does away with a 180-degree or flat-plane crank in favour of one of 90-degree configuration, was to reduce vibration in the name of hybrid system reliability.

A revised timeline for the introduction of the engine has yet to be finalised.

GARY WATKINS

One Motorsport takes BTCC 'pause'

BTCC

Long-time British Touring Car Championship independent One Motorsport is taking what it has termed a 'planned pause' from racing for 2024.

The Brackley squad has won 19 races with Honda Civic Type R machinery dating back to its days as BTC Norlin Racing in 2018, 16 of them scored by Josh Cook. But doubts had begun to

swirl amid the departures over recent months of Cook, Aiden Moffat and team principal Danny Buxton to Speedworks Motorsport. Although Cook won the independents crown, the team went winless for the first time in six years in 2023, when it had no on-track test programme to speak of beyond the pre-season launch day.

"We won't be downing tools as we have a clear

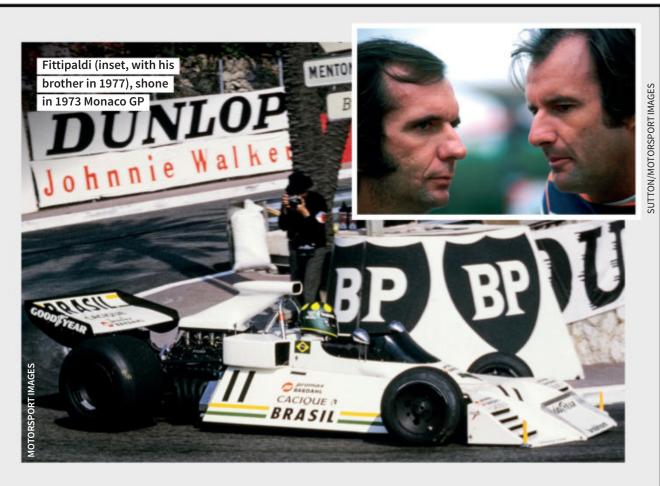


programme of work that we want to carry out," said One owner Steve Dudman. "With what we hope will be a year on the sidelines, we can come back next season in a strong position and hit the ground running."

Under BTCC regulations, One would need to reapply for TBL entrants' licences from series organiser TOCA in order to re-enter the championship.

While this potentially trims the grid to 21, sources hint that an existing team could put out an extra car for a 'satellite' squad, and two more of the ex-Team Hard Cupras could appear.

MARCUS SIMMONS



Wilson Fittipaldi 1943-2024

OBITUARY

Wilson Fittipaldi, who died last Friday aged 80, was a Formula 1 points scorer and constructor in his own right – not just the older brother of double world champion Emerson and father of Indycar race winner Christian. Fittipaldi had been hospitalised since Christmas Day, also his birthday, after he choked on a piece of meat. His family was unable to clear his airway, which triggered a cardiac arrest.

Born in Sao Paulo, he drove a wide variety of cars in his youth, encouraged by father and key Brazilian racing figure Wilson Fittipaldi Sr. In 1966 he had a brief initial stint in Europe in Formula 3, but it was only after Emerson's impact that he made the full-time move in 1970, becoming an F3 race winner.

At the start of 1971, Fittipaldi made his F1 debut in a works Lotus entry alongside his brother in the non-championship Argentinian GP, and scored points on six occasions that year in Formula 2 with a Team Bardahl Lotus. That propelled him into a seat with the Brabham F1 team for 1972 and 1973. In the latter year, he put

in a storming drive in Monaco, reaching third place before a late retirement. He scored points twice, the best result a fifth in the German GP at the Nurburgring.

Fittipaldi then focused on putting together his own team in Brazil. In his own hands, the first car in 1975 was uncompetitive. But despite the team's lack of form, he convinced Emerson to join him in 1976, and he retired from driving.

The highlight was second place in the brothers' home race in 1978. The team also ran Keke Rosberg and gave a first F1 job to university graduate Adrian Newey, before folding at the end of 1982.

Fittipaldi returned to the cockpit in 1982 to compete in Brazil's Stock Car series, and triumphed with son Christian in the 1994 Mil Milhas Brasileiras, an event created by Wilson Fittipaldi Sr. In 2008 he shared a Porsche with Emerson in Brazilian GT events.

He had been in poor health since 2020, when he underwent surgery for a cerebral haemorrhage, but remained active at motorsport events, and was in the paddock at last year's Brazilian GP.

GUILHERME LONGO & ADAM COOPER

PITTARD AND GUNN TEAM UP

Walkenhorst Motorsport has named the three Aston Martin factory drivers who will race its Pro class Vantage GT3 in the GT World Challenge Europe Endurance Cup. They are new signings David Pittard, who made his name with the German team, fellow Brit Ross Gunn and Henrique Chaves.

PROJECT 1 CLOSES DOORS

The German Project 1 team, formerly Tolimit Motorsport, has closed its doors after 30 years. The team based near Bremen claimed GTE Am honours at the 2019 Le Mans 24 Hours at the end of a winning class campaign in the WEC. Last year the team competed in the DTM with a pair of BMW M4 GT3s, one raced by factory driver Marco Wittmann.

GUVEN IN MANTHEY LINE-UP

Bathurst 12 Hour winner Ayhancan Guven has secured the Manthey EMA Porsche seat alongside reigning champion Thomas Preining in the DTM for this season. The Turk replaces Dennis Olsen, who has joined Ford. Meanwhile, Maximilian Paul, who took a shock win at the Nurburgring DTM round as a substitute driver with the Grasser Lamborghini team, has joined the series full-time. He sticks to Lambo and will race with the family Paul Motorsport squad.

HARVEY CLOSE TO COYNE

British IndyCar racer Jack Harvey is getting closer to retaining a presence in the series. Harvey, 24th in the 2023 standings, was out again with Dale Coyne Racing in this week's pre-season Sebring test alongside IMSA star Colin Braun, and is tipped in some quarters to race for the squad in next week's St Petersburg opener.

EDGAR STAYS AT RODIN

Jessica Edgar has completed Rodin Motorsport's line-up for F1 Academy, the 2023 Austin winner joining fellow Brit Abbi Pulling and Lola Lovinfosse. Fellow F1A race victor Nerea Marti, meanwhile, has taken the series' final seat, at Campos Racing.

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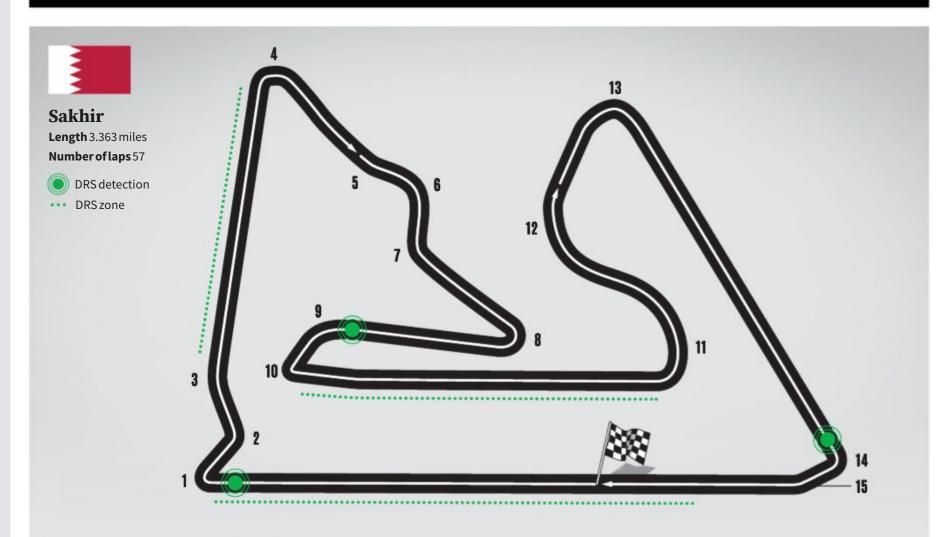
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ROUND 1/24

F1 BAHRAIN GRAND PRIX PREVIEW





UK START TIMES

Thursday 29 February **FP1** 1130 **FP2** 1500

Friday 1 March **FP3** 1230 **QUALIFYING** 1600

Saturday 2 March **RACE** 1500

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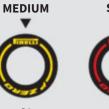
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2023 FINAL CHAMPIONSHIP POSITIONS

Drivers

1	Verstappen	575
2	Perez	285
3	Hamilton	234
4	Alonso	206
5	Leclerc	206

Constructors

1	Red Bull	860
2	Mercedes	409
3	Ferrari	406
4	McLaren	302
5	Aston Martin	280



SAKHIR STATS

Previous winners

'I U U I	ous willigts	
2023	Max Verstappen	Red Bull
2022	Charles Leclerc	Ferrari
2021	Lewis Hamilton	Mercedes
2020	Sergio Perez	Racing Point
2020	Lewis Hamilton	Mercedes
2019	Lewis Hamilton	Mercedes
2018	Sebastian Vettel	Ferrari
2017	Sebastian Vettel	Ferrari
2016	Nico Rosberg	Mercedes
2015	Lewis Hamilton	Mercedes
	2023 2022 2021 2020 2020 2019 2018 2017 2016	2023 Max Verstappen 2022 Charles Leclerc 2021 Lewis Hamilton 2020 Sergio Perez 2020 Lewis Hamilton 2019 Lewis Hamilton 2018 Sebastian Vettel 2017 Sebastian Vettel 2016 Nico Rosberg 2015 Lewis Hamilton

2023 POLE POSITION **Max Verstappen** 1m29.708s

POLE LAP RECORD Lewis Hamilton 1m27.264s (2020)

RACE LAP RECORD Pedro de la Rosa 1m31.447s (2005)



Lewis Hamilton 11 Kimi Raikkonen 8 5 **Sebastian Vettel** Valtteri Bottas 4 Fernando Alonso 4 **Max Verstappen** 3 **Nico Rosberg** 3

3

Sergio Perez



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Admitting when we're wrong

Following last year's switch to a revised method of rating F1 driver performances, we're reverting to the previous process – and there's a specific catalyst for that change

ALEX KALINAUCKAS

Formula 1 season. The alternative headline for this column was: 'An apology to Nico Hulkenberg'.

The sentiment here is that the Haas racer was the one to suffer most in our driver ratings for 2023, when it was race performances only that were assessed for a mark out of 10.

That's a rather hyperbolic way of describing the situation, of course. But ultimately, when it came to our regular rankings following each F1 weekend last year, Hulkenberg's consistent qualifying heroics were ignored.

et's start off with both a little secret and also

But a change we're making at Autosport means that, even if Haas's VF-24 turns out to be no better in race trim than the tyre-chomping VF-23, when Hulkenberg inevitably wrestles it to a high qualifying position then he'll find the reward that was missing in our assessment criteria.

In short, we're going back to our old, tried-and-tested method of creating a rating from every session of each F1 weekend.

In most cases, this means a driver will be scored on how they perform in a combination of the sessions that matter most – qualifying and the race. But, should a driver pick up a penalty or eliminate themselves from the later sessions in a crash (think Lance Stroll's accident in qualifying for the 2023 Singapore Grand Prix), this will once again be factored into their overall score.

"We're always talking about different shades of gold when it comes to F1 drivers"

Of late, I'm no stranger to publicly apologising for calling something wrong about a particular F1 driver, but it was our 2023 system that did for Hulkenberg's average rating last year. Yet it'a another driver who was actually the catalyst for our switch back to the previous method. This is Red Bull racer, and 2023 drivers' championship runner-up, Sergio Perez.

On so many occasions last year, Perez wasted golden chances to succeed with what will go down as one of F1's best cars. Think here that five-race sequence of missing Q3 during the early summer run.

Perez's average Autosport race-only rating from last year was 6. That put him 12th in the overall order – behind Alpine's Pierre Gasly. But, had we been using the ratings method we're returning too, Perez's scores likely would have ended up lower.

Those good examples of battling back from, say, qualifying disappointments in Austria and Las Vegas would not have entirely saved his scores. In those examples from 2023, Perez ended up with 9 and 8 ratings respectively.

It might appear that we're piling onto Perez on the eve of a new championship, when the slate is wiped clean. That's a fine opinion to hold. But, based on what we saw in testing last week, Red Bull is set to start the season again unopposed up front. And so that in turn increases pressure on Perez to provide an intra-team test to Verstappen for everyone's entertainment. Given what we know about the punchy, inyour-face attitude of the Red Bull squad, it would surely relish such a fight between Verstappen and Perez in the RB20s too.

Now, applying our revised ratings logic to the wider field and moving past our Perez pedantry, overall in 2024 Autosport readers (who, for what it's worth, rated Perez an average of 5.8 over 2023) can expect to see scores actually go up by returning to our previous method.

By adding qualifying and the rest back in, there is simply more opportunity for these superb drivers to shine. For all of the viciousness of the current hot-take culture that social media has brought us to, here at Autosport we're always talking about different shades of gold when it comes to F1 drivers.

I can predict, however, that the discerning reader will be able to pluck out specific differences in the highest ratings produced by myself and my colleague, Autosport F1 writer Jake Boxall-Legge. Just based on our ongoing ribbing about this task, I can suggest that I will hand out higher scores on average, while JBL will bring a certain charming curmudgeonliness to proceedings. We disagree, for example, on how often the 10 mark should be awarded. JBL believes what I consider to be implausible – that such a rank should only be handed out for performances along the lines of Juan Manuel Fangio winning the 1957 German GP. I think there's no point having such a mark if it's really never going to be awarded in what, please let's remember, is a subjective and for the most part fun exercise.

But before I've got to start penning yet another apology, what I'm getting at is that on average, those scores will even out as our differing styles of awarding driver ratings comes in. Last year, the thrust of our race-only ratings tweak was about reflecting the changing way Autosport's content is viewed and for simplicity's sake to boot. But it arguably led to misleading scores that didn't reflect the overall picture.

By last summer we already felt a change back was required. So, here it is, now go ahead and disagree with all of it.

• The 2024 scoring criteria will appear next week.



Not since the class of 2018, with George Russell and Lando Norris, have I looked forward so much to watching the second-tier category

MICHAEL SKEET

Second tier promises top-notch entertainment

What an exciting season of racing we have coming up, starting with Bahrain this weekend. So many quality drivers, who should, and no doubt will, be duking it out for the championship. No, I am not talking about F1, unless Red Bull has slackened and the RB20 turns out to be merely competitive and not dominant.

I am, though, talking about the F2 championship. Not since the class of 2018, with George Russell and Lando Norris, have I looked forward so much to watching the second-tier category. Although Andrea Kimi Antonelli has been dominating the media coverage, he will not have an easy ride. Victor Martins, Ollie Bearman, Zak O'Sullivan, Zane Maloney, Ritomo Miyata, Kush Maini and Gabriel Bortoleto, I'm certain, will have a large say in the matter. With the likes of Richard Verschoor, and Enzo Fittipaldi more than capable of taking occasional race wins as well, that's 10 drivers who could be capable of being championship challengers.

If F1 does turn out to be a bore-fest (and I really hope it doesn't), do tune into the F2 races, as this could turn out to be a blockbuster season.

Michael Skeet Lordswood, Southampton

Time to loosen restrictions on testing?

The current, restrictive, F1 testing regime was introduced to curb the vast amount of cash being spent on endless testing before, during and after the season. Now there is a budget cap that rationale no longer applies, so why not allow teams complete freedom to test whenever they wish if they can do it within budget?

It would throw an interesting variable into the mix - someone might discover a demon tweak and leap up the grid plus, perhaps, only novice drivers could be allowed, giving the next generation a chance to shine.

The teams could use the sessions to develop the next cohort of race engineers, etc. The injection of more unpredictability into the on-track action has got to be worth considering.

Colin Charman By email



Race programmes offered in charity sale

As a spectator for 50 years, I have hundreds of programmes – especially from the 1970s to the 1990s. These include many grands prix, F2, F5000, etc. But I have come to realise that when I am gone these are all heading for the skip!

I wondered if I might be able to sell some of the more interesting ones, and give the proceeds to charity -Jackie Stewart's Race Against Dementia.

If you would be interested in buying one or more of the programmes, please email me on multitex10@gmail.com and I will forward the list to you. I have not indicated any prices, it is purely whatever you think appropriate. I will also cover the cost of sending the programmes out (if it is UK standard mail), so everything you donate goes to the charity.

Please help me to make some space for a good cause!

By email

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The three test days are over. Here's our guide to the season that kicks off in Bahrain this weekend

F1 season preview











Testing analysis

How the teams stacked up in testing

While there wasn't the usual performance-run final flourish, there's lots to glean – and a top 10 to assess – from performances and progress over three days in Bahrain

ALEX KALINAUCKAS

F

ormula 1 testing for 2024 did not end in the way we have come to expect. There was to be little of the final-hour action that had become something worth watching in previous years, as teams finally switched to performance running – with those typical caveats on fuel loads and engine modes. Think Lewis Hamilton

spinning while preparing for a flier on soft C5 Pirelli tyres in 2021. Or Max Verstappen doing likewise a year later but still taking the top spot on that set of rubber.

Last week's top time came via Ferrari's Carlos Sainz – a 1m29.921s on the C4s – but that came with three hours to go on the second day. Given his team-mate Charles Leclerc was running slightly later and into falling temperatures when he set the quickest lap of the final day, it seems that the track was at something of a peak when Sainz registered the best time. He then switched to long running. The following day, Leclerc did another race simulation effort in the closing laps of the test – as did Red Bull, McLaren and Aston Martin.

As we head into the third year of the current design rules, it's

logical to conclude that the teams have enough data to eschew performance runs and instead concentrate on doing as much work as possible on what ultimately brings home the points.

Some squads clearly wanted a better idea of where to improve against the clock – including Williams with Alex Albon, Mercedes with George Russell, and Sauber. In the neon-green-splashed machine, Zhou Guanyu leapt up to fourth in the overall order just seconds before a final timing and start systems check brought the event to a muted close. But a race-focused philosophy has been central to Red Bull's domination since midway through 2022.

F1 is back in action as the first event of the 2024 season gets under way today (Thursday). The true pecking order will soon be revealed. But, with all this in mind, here's how we think the pack stacked up in testing – where key narratives of the coming campaign were established.

Those caveats we've mentioned of course deliberately disguise the picture. But, based on what all the teams did or didn't do last week, plus digging deeper into the times and understanding the various key targets and messages across the pitlane, this is how all 10 contenders got on...



Red Bull

With Max Verstappen at the wheel, the reigning champion squad simply blew the opposition away on day one. Verstappen's 1.14-second margin over McLaren's Lando Norris produced the biggest first-day-of-testing gap since Red Bull driver Mark Webber trailed the McLaren of Jenson Button by 0.848s at Jerez in 2013. That was hitherto the biggest gap of the modern era, going back to 2009, when testing really started to become restricted.

But it must be acknowledged that Red Bull's rivals closed the gap over the final two days, while it rather trod water. In terms of the headline pace, it was actually eclipsed and shuffled down to fourth overall, Russell and Zhou making the final moves. But the feeling in the paddock as testing finished last Friday was not that Red Bull's commanding position had disappeared. Instead, the belief was that the Milton Keynes operation was hiding exactly how good the RB20 is.

The team totally avoided showing anything close to resembling a hand regarding performance runs on the softer tyres. And GPS data clocked from the test suggests that Red Bull was running in a very conservative engine mode, shipping over 10km/h (6mph) to Ferrari, which led the way on top speed.

There were, however, small problems. On day one, there were several occasions when Verstappen would have been off the road had he not backed out, the Dutchman seemingly struggling with the understeer he detests.

Set-up tweaks addressed things on his balance ahead of logging his day-one-leading 1m31.344s and that stunning gap, but that this was needed at all suggests that Red Bull will have to fettle its new challenger into an ideal window at every race. That's always the game, but it has got this wrong in the past – think the 2021 Turkish Grand Prix, or Singapore last year.

On the second day, Sergio Perez lost time with a left-front brake fire. Then, as night fell shortly past the test's halfway point, the Mexican had to interrupt an on-off-on-off push run, crawling back to the pits for a settings reset.

But, clearly, Red Bull is very satisfied overall from its first three days of official F1 track work in 2024. "The team believes that with how the car is at the moment, there is more potential to find," said

"The team believes there is more potential to find. So that's now up to us to unlock..."

Verstappen. "So that's now up to us to unlock..."

Part of this effort will centre on getting the RB20's seemingly Mercedes 2022/23-inspired upper aerodynamic surface parts to work best. Sources suggest that Red Bull considers it a risk making such notable changes to a package that utterly crushed the opposition last year, but that it's one worth taking, mainly because its rivals now have cars that so closely resemble last year's RB19.

As the end of the test approached, it was suggested that the true picture could have Red Bull with as much as a 0.3s advantage on pure pace over the rest. But the team itself felt that one particular rival was closer than it appeared in testing...

Ferrari

Ferrari heads into the new season widely considered as Red Bull's closest challenger – but not just because it topped the testing times.

Most intriguingly, the SF-24, with Sainz at the wheel, logged a race simulation on the second day that tracked nearly exactly with Red Bull's own – via Sergio Perez. They both started on the C3 medium tyres, then moved gradually harder, compound-wise, in two pitstops up to the C1s.

Their stint lengths were comparable at 16 and 14 respectively on the C3s, 19 each on the C2s, and 20 for Ferrari on the C1s with Red Bull on 22. Those totals add up to 55 each, just short of the 57 laps scheduled for this Saturday's race, contributing to the intrigue.

Sainz's pace beat Perez's over all three stints. But the margin was what shocked the most – he led by an average of 0.5s per lap on the C3s, 1.2s on the C2s and 1.7s on the C1s. There is simply no way Red Bull has swung to be that far off, which implies Perez had



considerably more fuel aboard overall. Whether Red Bull was running a detuned engine mode becomes pertinent here, too.

"If they run with 20 kilos we are in a good shape," explained Ferrari team boss Fred Vasseur. "But if they run with 80kg we are nowhere. Nobody knows except them."

On the final day, Ferrari also showed well in the long runs that rather replaced those much-anticipated performance efforts of previous years. These was less of a direct comparison, however, with Red Bull regularly wheeling Verstappen back into the pits before sending him out again – likely with more fuel and a tweaked set-up.

Another eye-catching element was the consistency of Leclerc on a first stint with the less durable C3 tyres, and over the second of the three runs he logged on the final evening.

This emulated Sainz's race simulation of the second day, when he was able to hit the same low-1m37s and mid-1m35s brackets, even after a long stint on the two harder compounds that have undone Ferrari in previous years. His pace did slip from a 1m36.725s to a 1m39.126s over the course of his C3 stint, but this is Bahrain with its abrasive track surface.

Ferrari was chuffed over the course of the Bahrain running with its tyre management, something it had targeted specifically when designing the SF-24, aiming to have a more predictable and stable car overall. "We definitely did a step forward in terms of tyre management," said Leclerc.

Viewed trackside (see page 28), the SF-24 certainly seemed less edgy and regularly wayward than its predecessor. Last year, particularly at the fast, twisty Turns 5-7 complex, the Ferrari was really struggling in terms of wind sensitivity. Indeed, Leclerc reckons that on this front his squad is now "quite a lot better".

"The team has worked hard to iron out the handling flaws that were integral to the W14"

Ferrari also rather eschewed performance running, no doubt confident in its drivers' ability come qualifying sessions, with a perceived testing focus on making the SF-24 better overall in race trim.

But with the GPS data showing that the Ferrari was the quickest in a straight line, that possibly means that it might not have much more engine grunt to come when the serious business of qualifying arrives this Friday.

Mercedes

3

When George Russell was putting in that 1m30.368s to net the third quickest time of the test, behind only the Ferrari drivers, the W15 looked to have come alive. But, given Mercedes appeared to deliberately

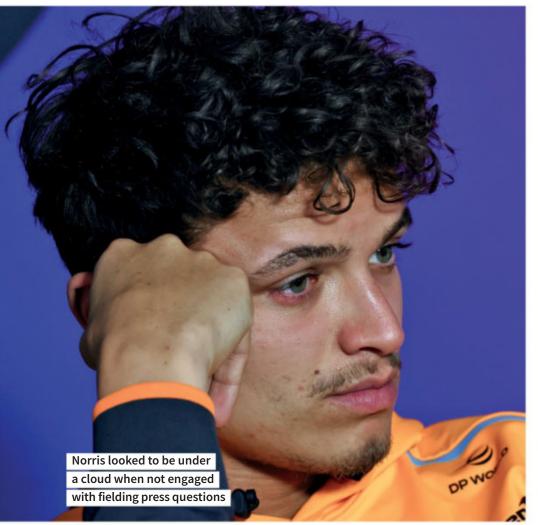
avoid the kind of race sims logged by Red Bull and Ferrari – it conducted its high-fuel running over shorter stints of around 10 laps on days two and three – it's tricky to place its potential.

What can't be denied is what the team itself is saying. Lewis Hamilton's "we know we've got work to do and we're not yet where we want to be" was the key takeaway. And, for all of Russell's late third-day poise, even with the W15 running low (seemingly in more of a qualifying trim), Hamilton had appeared to be regularly wrestling for rear grip earlier in the test at Turn 13. He was doing this far more than drivers from the other frontrunning teams.

This inconsistency in how its balance looks might, however, actually be considered something of a boost for Mercedes. It has developed an adaptable front suspension arrangement, which should mean it can optimise its set-ups more comprehensively. This is a clear sign that Mercedes is able to make its latest design better, rather than just understanding why it doesn't work. This was its challenge in both 2022 and 2023.

"The team has worked hard to iron out the handling flaws that were integral to the W14, and it's great that we seem to have put a number of those problems behind us," said Mercedes' director of trackside engineering Andrew Shovlin.

But, as with Red Bull, there is a sense that Mercedes was also rather holding something back. It was the only team slower in that GPS analysis of straightline speed. Again, the logical conclusion is that its engine wasn't running at full power.







McLaren

4

"We've definitely taken some steps in the right direction, but I think it's still quite a long way behind Red Bull," Lando Norris said after climbing out of the MCL38 for the final time in testing,

midway through day three. "So, a very long way behind Red Bull and a long way behind Ferrari still."

The Briton's press conference answers were perky and polite as usual. But when not holding the mic, his demeanour was downright dark – Norris obviously was not best pleased. We could suggest that this was disappointment over his new car possibly slipping behind Ferrari and Mercedes. But it's more likely that he was displeased about having a race simulation effort thwarted for a second day in a row. On the second, this was due to detritus in the McLaren's fuel system, and on day three there was another problem that McLaren wouldn't specify. "Not exactly what I wanted," Norris mused.

What Norris called "a few setbacks here and there" in terms of the MCL38's reliability meant McLaren ended up with the second lowest mileage of any team (328 laps). On the long run logged by Oscar Piastri on the test's final evening, McLaren also seemed to be struggling with tyre degradation given his times were rather inconsistent. But it's worth remembering that this was a weakness Piastri displayed against Norris last year, and Bahrain has long been something of a bogey track for McLaren.

On the plus side, the MCL38 looked very compliant viewed trackside. And team boss Andrea Stella said, "we are happier with the grip at the rear axle, which was one of the aspects that we wanted to work on", before adding, "overall, there is more grip in the car" (see p24). This indicates that McLaren has made clear progress on its key winter target of making its 2024 car more predictable at the limit. And, although there were niggles, this was not the Bahrain testing bother of 2022 and 2023.

Aston Martin

5

Aston could, frankly, have the number four spot in this ranking. But it doesn't simply because it kept its hand so closely guarded.

Then there was Fernando Alonso's admission

when Autosport asked about the braking instability we'd spotted trackside, when he said that the AMR24 in this area "feels tricky". This is important because good braking feel was a key part of Alonso's fine form early in 2023.

Inside Aston, the view is nevertheless that it has made a step forwards on the car, especially when it comes to the 2023 weaknesses Alonso wanted addressing – in straightline speed and overall handling consistency. "It was a very, very good test for us," said team principal Mike Krack. "The car was in a really good state when it arrived here, very reliable, high-quality parts."

Stacked against this is Alonso's mood – he is not bouncing as he was in 2023, and continued to talk about being in "a good position to negotiate" in the 2025 driver market.

Lance Stroll, meanwhile, completed his running and so goes into the season without the handicap Aston felt he had all through 2023 in terms of understanding the car after missing pre-season testing with injury.

Stroll also completed a similar race simulation on day two alongside Sainz and Perez. He diverged in terms of tyres and stint lengths, but on the C3s to begin with he came in 0.3s slower on average than the Ferrari. A real gap of this nature on Saturday wouldn't result in an Aston Bahrain podium repeat.

RB



In the midfield, the rankings can be considered even more fluid. But RB takes the sixth spot for two important reasons. One was the impressive stability of the VCARB 01 when viewed trackside

– in the gusty conditions of the second afternoon, only the Red Bull appeared to be as unwavering.

The other is that the former AlphaTauri team appears to have retained its edge in the low-speed corners – GPS data had Daniel Ricciardo beating Sainz in these turns during their respective best runs on day two.

RB also got on smoothly with its test running amid the focus on the various broadsides launched at it by rivals regarding its closer ties to Red Bull. But, more importantly, like its relations to the senior team, that GPS tracking suggests it too will receive a boost from the Honda engine come Friday qualifying.









Sauber

Sauber can be considered both fortunate and hard done by with this ranking. The Swissbased team got a considerable boost for its late performance running with Zhou Guanyu on the learners are without any major dramas

C4 tyres. It also racked up the mileage without any major dramas, logging the most laps of any midfield team other than Haas, which, as we'll come to, is a special case in 2024 testing. Only the third-day drain-induced red flag and some ensuing "precautionary checks" in the garage resulted in "a few missed test items and laps", according to Valtteri Bottas. "I feel that we made good steps in many different areas," the Finn added. "So, there's nothing that is worse than last year. Aero-wise, mechanically – steps forward."

Haas

Given it ended up last in 2023, and based on new team principal Ayao Komatsu saying the team expected to stay there for the start of 2024, Haas must be considered the most likely backmarker

for the season opener. But there's no denying it had rather a good test, with other teams unable to say likewise.

Haas was at the foot of the times after day two, but it leapfrogged Alpine with a performance run put in by Kevin Magnussen, where the Dane was without "any sort of optimising of the set-up" compared to what he'd had for a dedicated final race sim.

Haas also did so much long running as it concentrated on fully understanding its 2023 in-race tyre weakness that it ended up topping the mileage chart, with 441 laps. That can only be considered a positive sign, which came with an additional boost. Magnussen concluded "in high fuel I feel like it's more consistent", while Komatsu reckoned "we've got lots more work to do, but at the same time we've got a base car that we can actually race".

Williams

9

The only time a car was returned to the Bahrain paddock on a flatbed in testing last week occurred with 20 minutes remaining of the first session on day one. It was the Williams FW46 that Alexander

Albon had pulled over at the exit of Turn 2 – near enough to the barrier to avoid a red flag stoppage – after losing drive with a fuel pump failure. Williams then lost more time that day with a driveshaft issue when Logan Sargeant took over.

All told, Williams's reliability issues went a long way to explaining why it finished with the lowest mileage (299 laps). The FW46 was unremarkable in trackside viewings, and never looked particularly quick or agile.

But, after losing time at the end of both sessions on day two with further reliability issues, the Williams ran without fault on day three. Team boss James Vowles insisted that the FW46 "looks directionally correct" in terms of being more adaptable on a wider range of track types, as Williams wanted. And that's a big boost for a team that was able to ride its restricted favourable circumstances brilliantly in 2023. Having a more adaptable package in a crowded midfield must therefore be considered promising, despite the FW46 having a tough infancy.

Alpine

10

Alpine could actually be leading the midfield in the true Bahrain GP pecking order, but there can surely be no denying that its test form was poor. It propped up the times overall – admittedly

without any headline performance running, it should be noted – and had a Williams-like pace propensity when viewed trackside.

Then there were the odd handling moments for its drivers, such as Esteban Ocon skating over the Turn 4 exit gravel after having to catch a snap of oversteer in the test's opening session, plus his Turn 1 lock-up in the second session on day two. Then, late on the final day, Pierre Gasly had a right-front wheel cover top fall off as he ran down the main straight.

Alpine barely led the relatively hobbled McLaren and Williams in the mileage charts, despite reporting no reliability dramas. It just had a lot of work to do in the garage. And rumours flew come the test's end that the reason for its lack of livery is that the A524 is overweight. It is, however, a massively overhauled design, which will take time to understand. And Alpine did signpost at its season launch that it didn't expect to be showing promising times in the early season. "I don't think we look great," Gasly summarised.



Testing data, Bahrain, 21-23 February

Sakhir test times						
POS	DRIVER	CAR	DAY ONE	DAYTWO	DAYTHREE	TYRES FOR FASTEST LAP
1	Carlos Sainz	Ferrari SF-24	1m32.584s	1m29.921s	1m31.247s	C4
2	Charles Leclerc	Ferrari SF-24	1m33.247s	1m31.750s	1m30.322s	C4
3	George Russell	Mercedes W15	1m34.109s	-	1m30.368s	C4
4	Zhou Guanyu	Sauber-Ferrari C44	1m33.871s	1m33.715s	1m30.647s	C4
5	Sergio Perez	Red Bull-Honda RBPT RB20	-	1m30.679s	1m31.483s	C3
6	Max Verstappen	Red Bull-Honda RBPT RB20	1m31.344s	-	1m30.755s	C3
7	Yuki Tsunoda	RB-Honda RBPT VCARB 01	1m34.136s	1m38.074s	1m30.775s	C4
8	Alexander Albon	Williams-Mercedes FW46	1m34.587s	-	1m30.984s	C4
9	Oscar Piastri	McLaren-Mercedes MCL38	1m33.658s	1m32.328s	1m31.030s	C3
10	Lewis Hamilton	Mercedes W15	-	1m31.066s	1m31.999s	C3
11	Fernando Alonso	Aston Martin-Mercedes AMR24	1m33.385s	1m33.053s	1m31.159s	C3
12	Lando Norris	McLaren-Mercedes MCL38	1m32.484s	1m31.256s	1m32.108s	C3
13	Daniel Ricciardo	RB-Honda RBPT VCARB 01	1m32.599s	1m31.361s	1m37.015s	C4
14	Nico Hulkenberg	Haas-Ferrari VF-24	1m35.906s	1m37.509s	1m31.686s	C3
15	Lance Stroll	Aston Martin-Mercedes AMR24	1m33.007s	1m32.029s	1m32.038s	C3
16	Esteban Ocon	Alpine-Renault A524	1m34.677s	1m32.061s	1m33.079s	C3
17	Pierre Gasly	Alpine-Renault A524	1m32.805s	1m33.804s	1m32.149s	C3
18	Valtteri Bottas	Sauber-Ferrari C44	1m34.431s	1m32.227s	1m33.528s	C3
19	Logan Sargeant	Williams-Mercedes FW46	1m33.882s	1m32.578s	-	C4
20	Kevin Magnussen	Haas-Ferrari VF-24	1m35.692s	1m36.611s	1m33.053s	C3

The fastest time for each driver is marked in **bold**, with fastest time of the day in red.

Laps	completed				
POS	TEAM	LAPS COMPLETED	POS	DRIVER	LAPS COMPLETED
1	Haas	441	1	Magnussen	239
2	Ferrari	416	2	Sainz	224
3	Red Bull	391	3	Ricciardo	210
4	Aston Martin	379	4	Verstappen	209
5	Sauber	379	5	Hulkenberg	202
6	RB	367	6	Stroll	196
7	Mercedes	361	7	Bottas	193
8	Alpine	334	8	Ocon	193
9	McLaren	328	9	Leclerc	192
10	Williams	299	10	Russell	189
POS	ENGINE	LAPS COMPLETED	11	Zhou	186
1	Mercedes	1367	12	Piastri	183
2	Ferrari	1236	13	Alonso	183
3	Honda RBPT	758	14	Perez	182
4	Renault	334	15	Hamilton	172
			16	Albon	161
	TAL LAPS	RED FLAGS	17	Tsunoda	157
	MPLETED ALL CARS		18	Norris	145
3	695	7 *	19	Gasly	141
			20	Sargeant	138

 $^{{}^*\}text{Not counting those activated for F1/FIA system checks (three)}. Both were for lifting drain covers, none for car stoppages.$

P28 Trackside verdict MAUGER MAUGER



The key tech contests of F1 2024

With testing revealing intricacies hidden at launch, we see cooling innovations, front wing diversification, adjustable suspension and returning design solutions

JAKE BOXALL-LEGGE

T

here's always an element of secrecy and gamesmanship in Formula 1's launch season. Teams are keen to only show the car in a state that doesn't give up their development secrets, although it's inevitable that these will be revealed when pre-season testing begins. But, if nothing else, the mystery at least delays

the point at which other teams can analyse a solution and implement it into their own simulations.

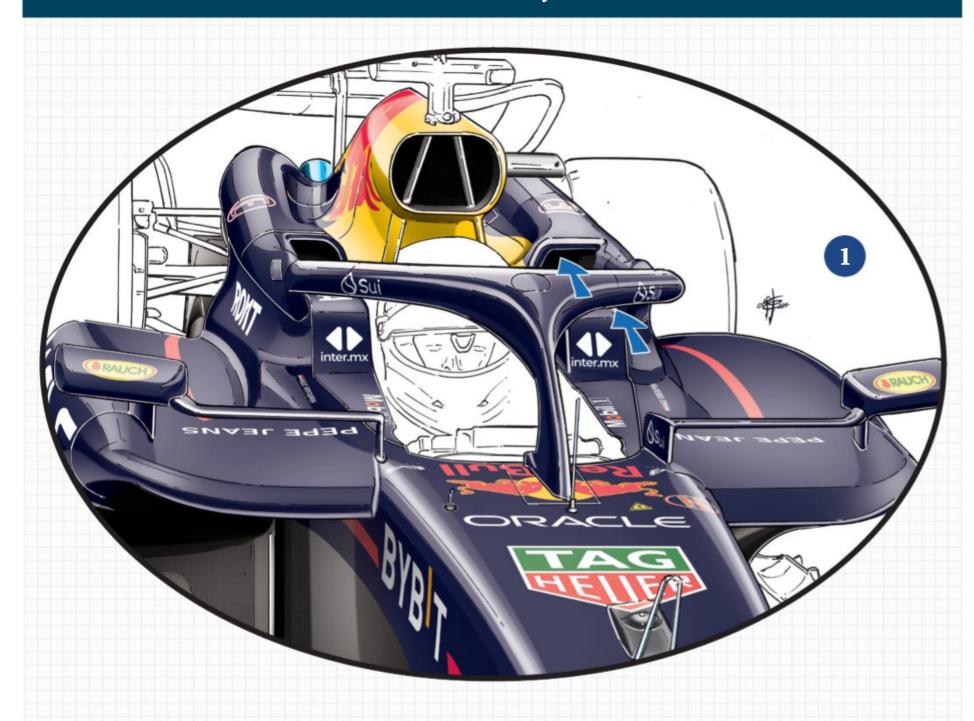
As the covers were taken off, the 'proper' 2024 cars finally burst onto the scene last week in Bahrain. A handful of teams had already revealed key features in their shakedown runs but, thanks to that earlier secrecy amid the launches, there were lots of new technological advancements to dissect. Now that F1 reaches

its third season with the 2022-defined ruleset, the wealth of talented designers across the field are starting to get a handle on how to exploit the letter of the law but perhaps sidestep the intent of the regulations.

With pre-season testing as short as ever, teams don't entirely have the liberty to trial completely different specifications, so it's likely that 99% of what was seen in testing will translate into their respective Bahrain Grand Prix configurations. Ensuring that the car remained reliable over the three days of testing was hence of paramount importance, allowing the engineers to collect reams of data throughout and start decoding it in preparation for the following week.

What was new in terms of technological tweaks ahead of the new season? Let's assess the most interesting points of development over the winter.

Red Bull's inlets finally revealed





t the launch of its RB20, Red Bull avoided its recent tactic of pushing out an old car in a new livery and instead chose to demonstrate a representative model. The caveat was that the team had taken great pains to keep its sidepod inlets hidden from view, either

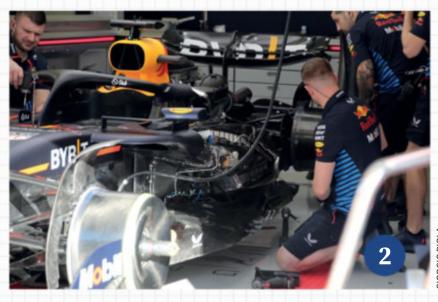
through lighting at its launch or liberal use of the burn tool in Photoshop. But there's no hiding once testing begins, and the RB20's full form had to emerge from the shadows at some point.

After pioneering the underbite inlet arrangement, Red Bull switched to an overbitten leading edge to the sidepods with a short, wide inlet recessed into the undercut like a letterbox. Underneath, two vertical slots are fed by the flanks of the chassis, not dissimilar to the positioning of the inlets on Mercedes' initial-spec W14.

There's a further set of inlets either side of the central airbox (1), using the bulkier engine cover and its blend into the halo to house two openings. This is used to cool further elements of the powertrain, although the main radiators remain in their usual inclined position within the sidepods.

Within these cannon-like shoulders, Red Bull has positioned outlets to release heat on the outside, but has also trialled further cooling panels within the channel between the shoulders and the airbox. This has been shaped at the trailing edge to influence the airflow towards the rear wing.

The packaging of the RB20 (2) has benefited from moving cooling components further up to enhance the undercut. The radiator is positioned almost horizontally, but with a slight incline to fit in with the downwash characteristic of the aerodynamics. With this tight



packaging, rumours of a potential revision to the sidepods would require a change in the overall infrastructure to be realised.

Red Bull had also kept its floor hidden at the launch, but it retains a similar form to that seen on the RB19; a series of flick-ups appear along the edge ahead of a slot. This should all ensure that the underbody airflow is not allowed to bleed out, while keeping any ambient, unaccelerated air from leaking into the venturi tunnels.

The team also made a small change to its front wing on the final day of testing, swapping the panel at the nose tip for one with a small inlet, after earlier shifting the wing flap adjusters inboard to assist with producing an outwashing effect.

Mercedes' adjustable suspension

ecause the development
of a suspension layout is so
entrenched within the chassis
design, it's very difficult to
implement geometry changes

without either hacking away at the monocoque or building an entirely new one. Hence it comes as some surprise that Mercedes has been able to produce two differing suspension layouts for its W15, where it could move the rear leg of its upper wishbone between two positions along the chassis. This leg either sat just below the AMG logo on the flanks, or was moved down towards the lower wishbone (1).

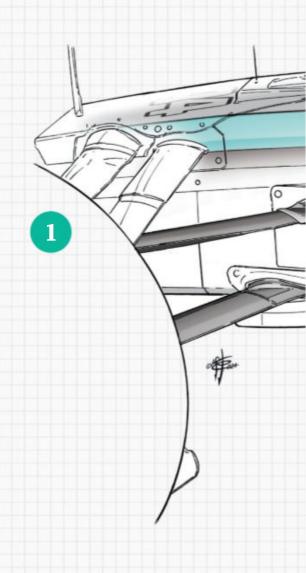
In doing this, Mercedes can explore two things: firstly, the aerodynamic flow around this area assisted by the suspension elements' shrouding; and secondly, any improvement in anti-dive properties that can enhance the effectiveness of the floor. The latter has been an important development with the current generation of cars, since maintaining a stable platform for the venturi tunnels to work is imperative to produce the right amount of downforce in the corners. Motion like pitch and roll can create an imbalance in the underbody flow, so mitigating that is a crucial component

of drawing performance from the floor.

Whether Mercedes chooses to retain the adjustability remains to be seen, and it could be merely a back-to-back test to determine which direction to stick with permanently. Regardless, having that level of modularity with the suspension design is somewhat rare, but it's not the only area where Mercedes has innovated for 2024.

The team has developed a new front wing that makes use of a tiny piece of carbon fibre to satisfy the four-element rule between the endplate and nose. This fits between the nose and the adjustable flap bracket and will have a negligible effect on downforce overall, but it allows the 'real' upper flap to be very slightly detached from it and make use of an exposed tip to generate greater vorticity. Here's the clever bit: the tip lines up with the flap bracket to ensure it operates at the maximum allowed gap between the split in the top two elements.

While it's a smart bit of design, it clashes with the philosophy of shaping the rules to improve the on-track action. F1's chief technical officer Pat Symonds questioned on F1 TV: "It's within the regulations, there's absolutely no doubt about it. But is it the sort of thing we want? I think we need to know how strong is the effect."



Teams make strides with front wing design



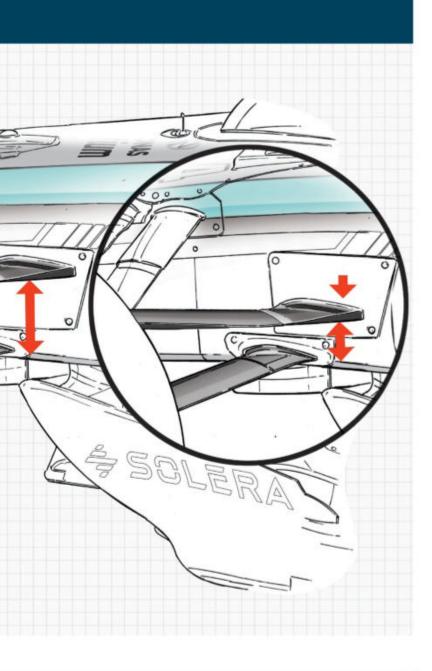
M

ercedes has not been the only team to experiment with its front wing geometry for 2024, with teams taking more liberties within the letter of

the regulations to produce more favourable flow patterns at the front end. The Haas front wing has been surprisingly eye-catching, taking the effort to play with the attachment points between the wing elements and the endplate. The wing elements have exposed trailing edges, all firing airflow outwards, while the rearmost flap has a tiny winglet attached to it.

This was something that a number of teams explored last year, but Haas has put a little endplate on it to build vorticity and strengthen the airflow's path outwards around the front tyre. The RB wing has two small winglets situated at the trailing edge of its front wing endplate, both with the hope of capturing a similar effect. Sauber has not directly used an additional winglet on the endplate to manage flow like this, but has turned the bottom corner inwards to produce a similar vortex in this area.

Red Bull's front wing opts for something slightly different, where its upper element's



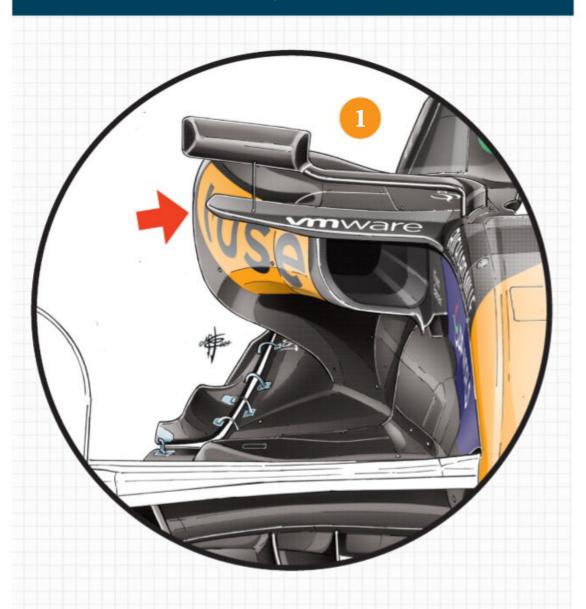
trailing edge passes beyond the endplate, attaching to it with a sweep forward into a right angle. This leaves an exposed corner on the wing, which appears to be its own method of generating some kind of vorticity. This is not entirely dissimilar to Mercedes' solution back in 2019 where it also featured an upper wing element that protruded from the endplate, although it was forced by the FIA to scale this back when it was ruled to be outside a rule where 95% of the front wing had to

be obscured by the endplate when viewed side-on.

The different approaches on the outboard diveplane are also intriguing, and Haas again has opted for an interesting approach with two concave sweeps upward. These are used to generate a little bit of downforce to help balance the front end, and produce some degree of direction away from the front wheels. Ferrari, in the meantime, has opted for a conventional upward sweep but has angled the outer edge downwards to perhaps control the vortex generated here, much like teams used to produce with a footplate under the old regulations.

Despite the restrictive nature of the current ruleset, teams are finding ways to skirt this while maintaining legality to improve their aerodynamic packages.

McLaren's key details unveiled



L

ike Red Bull, McLaren has strayed away from the underbite sidepod inlet structure for 2024,

and has introduced a wing section ahead of the apertures to which the mirrors are mounted (1). This is not dissimilar to the sidepod inlet treatments that many opted for prior to the introduction of the current rules in 2022, so it's another situation where old design solutions are beginning to creep back into the modern formula. With this, McLaren can have more control over the airflow that reaches the sidepods, and offers a chance to help condition any wake from the tyres that may migrate towards this area of the car.

During its launch, McLaren had also kept its floor concealed, but images from testing detail the first iteration of its edge on the MCL38. This features a slot along the rear two-thirds, with a raised lip towards

the front. This houses two fins, which can produce vortices to help keep the underbody sealed.

In its aggressive upgrade strategy last year, McLaren had worried that some of its updates had exacerbated an issue with waywardness at the rear end. With the new car, team principal Andrea Stella reckons that most of these issues have been cured, but says that there is room for further development across the season. "We are I would say happier with the grip at the rear axle, which was one of the aspects that we wanted to work on," the Italian explained. "Overall there is more grip in the car. There are some aspects that we still have some work to improve, save the fact that the major performance opportunity remains overall grip.

"It's not like you need to correct features, you just have to put more grip on the car, which mainly comes from aerodynamic performance. But we have some more margin to improve."



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T

here's no doubt when the new Red Bull RB20 is heading your way. That's clear from any wander trackside during last week's pre-season testing in Bahrain.

The world champion squad's latest challenger is notable precisely because the other machines have been shaped to look like its stunningly successful predecessor.

The RB20 stands out largely thanks to its high waistline – those long cooling gulley cannons – although the intricacy and beauty of those parts feeding back from the halo can be lost when it's running. And when viewed head on, it's actually quite an ugly look. Instead, it's speed that's the main takeaway when the car is shooting and twisting past you.

Other cars stand out visibly too. The Sauber and McLaren liveries are not pleasant in the carbon-fibre flesh – mainly because there's so much of it. What colour there is on these

two looks splashed, basically, across the top aerodynamic surface designs. The tweaked Mercedes colour scheme also looks rather plain, all things considered.

The Haas colours are essentially the same as last year, while RB is probably the most visually stunning livery of the new crop, especially when its metallic finish glints under the floodlights, which also boost the dark green Aston Martin hue.But the RB does lose points for unoriginality. It's a 2019 Toro Rosso with added white.

Williams and Alpine naturally don't project given their dark looks. The latter team has even added a nose strip of its lovely corporate light blue, just so it can better identify its car running at speed. And then there's Ferrari. A classic look, which loses something in the night running as the matte finish dulls colour under the lights. But how a car performs is much more important for Formula 1 fans, given it highlights key trends. So, here's what we took away from watching trackside last week.

Impressive poise from Red Bull and RB

W

here else to begin but Red Bull? The reigning world champion squad did have something of a tricky start to testing when Max Verstappen

was regularly having to back out of corners on the opening morning as the team chased an initial set-up. But it's all relative, and in any case the RB20 looked utterly planted by mid-morning on day one.

A day later, with Sergio Perez at the wheel, it was a similar story. Each time he made his way through the high-speed left of Turn 7 at the start of the second sector in the opening session, he was able to whip his car's nose through the continuous rotations quicker than his rivals. It's a visibly faster change of direction – and not just here.

At Turn 11 at the end of the back straight, the Red Bull sweeps in with commanding agility, whereas the others are more sluggish. The car just looks planted at all the key spots – other than Perez misjudging his braking on the odd occasion into the Turn 8 hairpin and varying his line a lot coming out of the tricky, near-double-apex Turn 13, which is effectively the track's penultimate corner, in the second session of day two.

This is a key spot, which we'll return to, for several reasons. For a start, it illustrates car balance well, as drivers need to start rotating fast after they brake or else wash out wide and lose momentum and time. It's also very gusty here throughout our wanderings on day two, and the cross/tailwind change will show up the cars that are particularly sensitive to wind. Finally, Bahrain's abrasive track surface and demanding cornering energy load means Turn 13 shows when the rubber has given up, and therefore the machines that can keep it alive longest.

Throughout our time on the outside of the corner, nothing ruffled Perez once he'd found a consistent line. Not even the wind picking up considerably 90 minutes into the second



session could seemingly knock him off-course as he pounded around on the C3 tyres.

And, intriguingly, the same can be said for Daniel Ricciardo at the wheel of the RB. Lowgrip conditions and situations have favoured the package since its 2023 Abu Dhabi Grand Prix floor upgrade, so this spot shows the car well when it's still lacking compared to others in the high-speed stuff. At the Turns 9/10 complex on other days, it's planted, reflecting its continued key strength in low-speed turns.

But, of course, much has been made of the former AlphaTauri squad forging even closer ties with its senior team since rumours that the wider Red Bull company was considering selling its junior operation emerged here a year ago. And while Perez and Ricciardo end up apart in the day's times (second and fifth, separated by 0.7 seconds), their shared poise through the corners is clear and therefore notable.

On the tyre front, the Red Bull showed little in the way of overheating wiggle, time after time, on corner exit. This suggests it has retained its edge in this critical area for race success. Overall, such is the car's harmony that Perez was able to get on the power earlier on exit than any other machine while feeding his way through the complex and down the hill towards another smooth lap.



An unwanted diversion from the action



ando Norris was an important reference as we watched from Turn 13 on the second day. This was during a spell late in the first half of the second session on Thursday, when the wind had really started blowing hard from the Arabian Gulf to the east of the small island of Bahrain.

The McLaren was the first of three cars to have huge snaps of oversteer as they traversed the gusts, the rear end stepping out violently. These moments were either side of the Red Bull and RB serenely sailing through unruffled.

Norris's former team-mate Carlos
Sainz was the second driver to catch
a potential big moment. But Ferrari's
wind-sensitivity weakness from Bahrain
testing a year ago – particularly at the
twisting, staccato Turns 5-7 complex –
seems to be less of an issue overall for
the team this time, with Williams driver
Alex Albon suggesting "the Red Bulls
and Ferraris are seemingly not affected
by the wind, they just turn where
they want to turn".

The third save came slightly later -

once Norris and Sainz had come through several times more on the on-off-on-off-on-off run plan the teams employ regularly during early testing, before the need to complete race simulations takes over. It was completed by Aston Martin driver Lance Stroll.

The Canadian's moment was no bigger than those that had come before, but a wander up the incline behind the course to look down onto the area where the Turn 12 exit becomes the Turn 13 approach revealed that he still struggled, even when the wind calmed. Stroll often needed an extra steering bite when he came through on a push lap, the green machine's nose toing and froing over the road as he did so.

To give a taste of some others, here Kevin Magnussen's Haas was squirming plenty whenever he put the power down on the Turn 13 exit. This suggests that the rear tyres are still being tortured by the American squad's cars. Logan Sargeant and Esteban Ocon, meanwhile, were more ponderous at the wheel and therefore slower on the power coming out of Turn 13 for Williams and Alpine respectively.





hortly before the drain issue on the second day, we'd been watching the cars descend to the tight Turn 8 right-hand hairpin, checking to see how

each package stacked up on braking stability. This is key to providing confidence for the drivers when pushing.

The standout outliers were Mercedes and Aston Martin – Lewis Hamilton consistent at the wheel of the W15, Fernando Alonso at this stage on board the AMR24.

The two cars, with their shared pushrod rear suspension layout, were visibly oscillating as they slowed each time through. Alonso, who locked up heavily twice during our view of this stage in proceedings, later said the situation "feels tricky", when Autosport asked what had been going on with the AMR24's braking. "But I think the conditions the [first] two days, especially with the wind, has been tricky for everybody," Alonso continued. "And we saw a few moments even for Max in the first couple of laps [of day one]. It didn't last long but it was difficult for a few laps at least on the Red Bull..."

Back to Thursday's late afternoon running outside Turn 13, and we'll end on Hamilton, given his driving was by far the most interesting here. The clear takeaway was that the Mercedes

'Wind' provides an extra challenge



hat we got to watch Sergio Perez
driving at all on our trackside
walk was thanks to an
unfortunate event with just over
90 minutes remaining in the first

session of the second day. With echoes of the 2023 Las Vegas GP FP1 shambles, a drain cover had worked loose on the approach to Turn 11.

It's been clear how the drivers' lines here have evolved to take them very far to the right-hand side of the track, with two thirds of each car on the kerbs before they flick left on turn-in as they aim to open up the long, sweeping, uphill left-hander to reduce strain on the tyres, all while maintaining speed.

This naturally takes more of the powerful underfloor ground-effect suction onto the drains lining the circuit, and it was this that caused the metal to come loose. Charles Leclerc's Ferrari struck the cover, which necessitated a floor change on the SF-24 due to the damage, as did Lewis Hamilton in the following Mercedes. The red flags duly flew and Thursday's opening session was not restarted.

Hurried repairs followed once FIA race director Niels Wittach had arrived aboard a borrowed Mercedes safety car – the drain cover was fully removed and its surround ground down with an angle grinder. A replacement cover was then welded into place and eventually declared safe for the action to continue.

As hurried updates were made to the lunchbreak media schedule – Lando Norris and Kevin Magnussen were no doubt *devastated* to miss their press conference appearances after being switched in for Oscar Piastri and Nico Hulkenberg respectively – Red Bull also swapped Max Verstappen's planned takeover of the RB20 to the final afternoon of the test.

But the problem occurred again on the final day, after just 27 minutes of the first session. This time it was Perez who sucked the drain cover loose at the same spot, and a 75-minute delay for repeat repairs followed. This meant the final day lacked a lunchbreak at all. The Bahrain circuit contractors are expected to fill in the drains with concrete to avoid such issues at this weekend's GP, with no rain forecast.

Hamilton handling a Mercedes weakness?

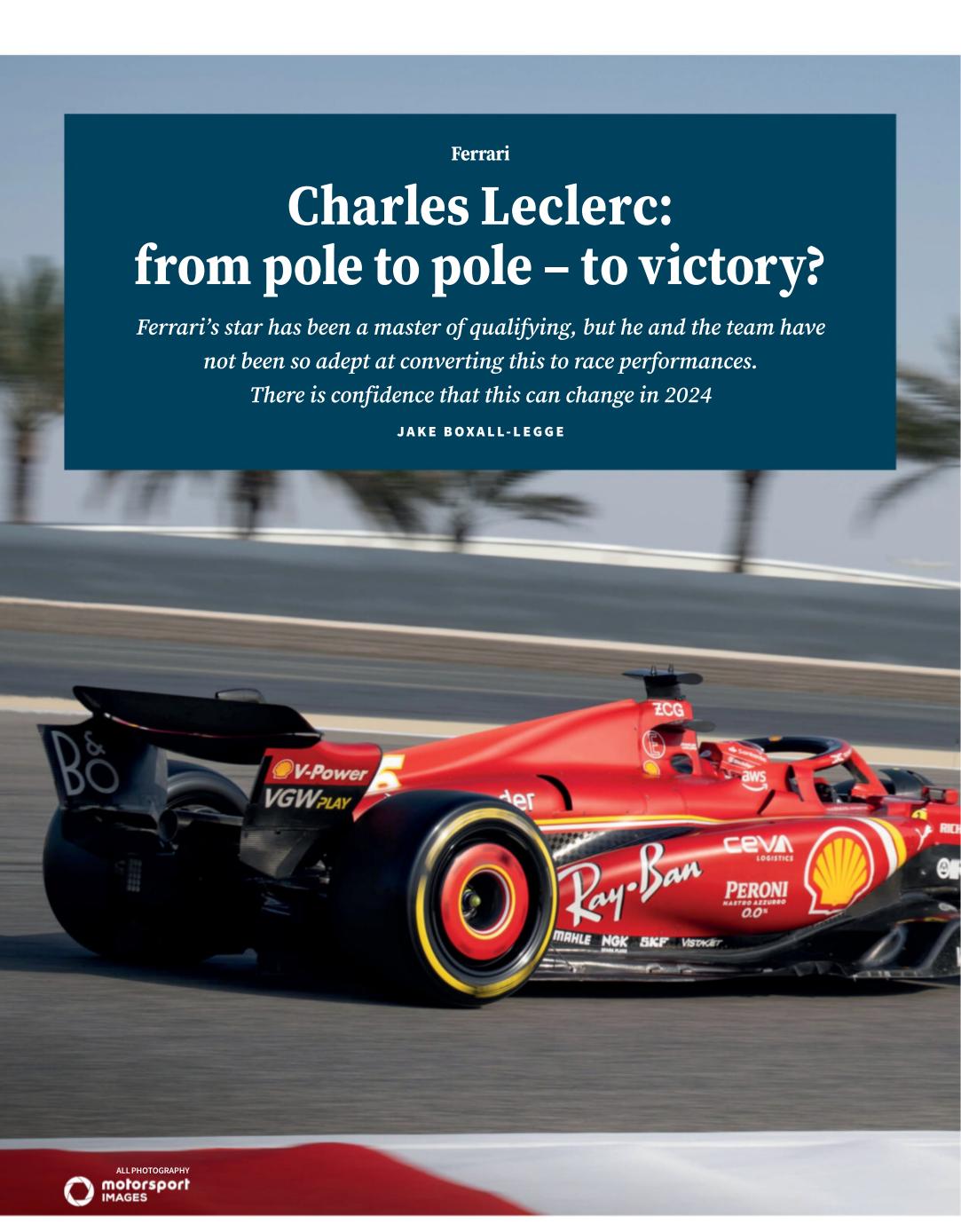


was sliding at this point much more than its rivals. Hamilton was regularly taking a wider line to lessen the strain on the tortured tyres by this point in the lap, but it was clear that his main struggles were happening on the way in.

Time after time, Hamilton was almost backing the Mercedes into the right-hander –

then having to tame rear sliding (as Lance Stroll often did too) when it came to putting the power down on the exit. The problems arose seemingly every time the seven-time world champion was trying to push on to the end of a quick lap. It was a beautiful, almost drifting, style, but it notably lacked the poise of the Red Bull and the RB.

The conditions might well have been key here too, however, as once we'd returned to the media centre to watch the running conclude on F1's TV coverage as darkness had fallen – and, despite it being Bahrain, we were chilly – the Mercedes did finally appear to be handling more stably across the course.





F

ive wins in five years is hardly the return Charles Leclerc hoped for when he embarked upon his journey with Ferrari in Formula 1. His collection of 23 pole positions has translated into victories only four times, perfectly symbolic of his tenure at the Prancing Horse.

Although he bears the responsibility for a few of those failures to convert, most have not been Leclerc's fault. Ferrari has been plagued by a handful of false dawns, the team's sloppy strategy calls and untimely unreliability issues serving to restrict Leclerc's appearances on the top step of the podium.

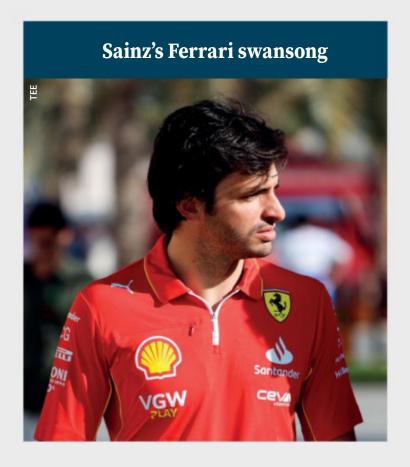
In a 2019 season where Ferrari had flattered in testing only to deceive in the opening rounds, Leclerc had a first win denied in Bahrain by a control system glitch in the final 10 laps. His defeat to Max Verstappen in Austria that year perhaps demonstrated naivety in wheel-to-wheel combat, and it took until Belgium where he was able to take victory. His 2020 was immediately nixed when Ferrari's powertrains were seemingly neutered by an FIA technical directive on oil burning and, although 2021 wasn't much more competitive, he had a chance to win in Monaco after securing pole. At least, until he binned the car on his following flyer and ended up not starting the race due to gearbox damage.

Ferrari was not winless in 2023, thanks to Carlos Sainz's tactical mastery and Red Bull's subdued performance in Singapore. Leclerc may feel that it should have been he who prevailed in the south-east Asian city state, but dutifully played rear gunner in the opening stages to ward off a threat from Mercedes' George Russell. So Leclerc's most recent win remains the 2022 Austrian Grand Prix, during a phase of the season when he appeared to be a legitimate title contender, but his fortunes waned as Red Bull's star rose. It was another false dawn, and Leclerc had to endure it.

Crashes and hubristic strategy calls may have cost victories, but the main problem to constrain Leclerc during grands prix has >>>

"Leclerc's fortunes waned as Red Bull's star rose. It was another false dawn, and he had to endure it"





When Lewis Hamilton threw a depth charge into F1's 'silly season' and blew everyone out of the water with his Ferrari move for 2025, it came at Carlos Sainz's expense. Without any history as a Ferrari junior or the pull of multiple world titles, the Spaniard was always going to be the more dispensable driver, even though he's often matched Leclerc over their three-year tenure as team-mates so far.

Thanks to his two race wins and strong form at Ferrari, Sainz is likely to be an in-demand option for many of the teams with vacant seats for next season, and there's still ample opportunity to put himself in the shop window for one of the better drives available.

His efforts in 2023 have helpfully showcased his best attributes, and his Singapore surprise last year was a magnificent display of anticipation and awareness of the cars around him. Knowing that the Mercedes duo was a significant threat on fresher tyres in the latter stages of the race, Sainz figured that he had a better chance of staying out in front if Lando Norris could act as a breakwater. So he dragged his former McLaren

"Sainz was always going to be the more dispensable, even though he's often matched Leclerc"

team-mate with him in the DRS tow and claimed the spoils thereafter.

Sainz's efforts in Monza to retain the lead, despite the looming inevitability of the Red Bulls behind him, also showcased his strengths. A post-summer upgrade to the floor suited Sainz more than it did Leclerc, allowing him to lead the charge in the early stages of the season's second half. It didn't last when the balance shifted towards Leclerc's tastes, but it showed what Sainz has in his locker if a car is built to his preferences.

He'll expect to push
Leclerc again in 2024, even
if he falls a tenth or two shy
in outright pace, but should
remain a good foil versus his
more mercurial team-mate.
Off track, he's got some big
decisions to make about his
future, and progress with
the ongoing 2026 engine
regulations will undoubtedly
play a big role in his
post-Ferrari career.



lain in Ferrari's inferior tyre management capabilities. The 2017 F2 champion chalked up five poles over the course of 2023, but none lasted long into the races; Ferrari simply could not match Red Bull on race pace given the RB19's deft touch on Pirelli rubber. But change is in the air at Maranello.

Since Fred Vasseur took the reins at the team, his desire to transform Ferrari into a championship winner has been matched by his rigorous approach to understanding where its weaknesses lie. Like his compatriot Jean Todt, who transformed a sleeping giant into F1's premier team for half a decade, Vasseur is laying the foundations for a future title challenge. Leclerc, thanks to his new long-term contract, is part of those foundations – as is Lewis Hamilton, who will replace Sainz at the team in 2025.

Ferrari and Leclerc, however, cannot simply wait for a more prosperous tomorrow. Short-term progress will lead into future success, and the team has been able to identify the traits that have held it back in recent years. Those tyre management deficiencies had to be worked on, as did the unpredictability on the approach





"From the first laps on the simulator, it felt like an easier car to drive. We managed to be consistent straight away"

to corners, but holding on to its latent pace in qualifying was an important target. From Leclerc's initial assessment of the new SF-24, Ferrari has made palpable gains where it needs to.

"I think the first good thing is that there are no surprises," Leclerc reported after his initial runs in testing in Bahrain with the SF-24. "Everything that we expected from this car, we got it on the real track. So that is a good thing because that helps us to develop the car in the simulator and everything seems to make sense.

"Honestly, from the first laps on the simulator, it felt like an easier car to drive. We drove with some wind, and it was similar on the track from the very first laps here and the feeling was good. We managed to be consistent straight away, and this will help the race runs. But driveability and competitiveness are two very different things. Last year we were struggling to be consistent because the car was just a little bit all over the place whenever there was some wind. That doesn't mean, especially in qualifying, that we will win a lot, and that doesn't mean anything compared to Red Bull. We still have to work a lot, and then we'll see how competitive we are."

The initial testing performance of Ferrari has shown that the SF-24 is far more amenable than its predecessor, with less motion needed at the wheel to coax the car around the corners. If Ferrari has married that with outright pace, this benefits Leclerc hugely. One of the best qualifiers in F1, Leclerc was able to keep it together on a single lap more often than not over 2023, with Miami the main example of his occasional tendency to overdrive and suffer the consequences when he hurled his car into the Turn 7 wall. A more stable platform should ensure that errors like this are far rarer.

In that event, if Ferrari can keep Red Bull on its toes in qualifying, then the developments made over the winter should allow it to stay better in touch over a full race distance. Leclerc cited "a step forward in terms of tyre management", adding that the performance of the old car on fresh, soft tyres on Saturdays

masked some of the more inherent issues of its previous challenger. Where Red Bull – particularly Max Verstappen – could maintain its pace over the course of a race stint, Ferrari tended to drop more dramatically as tyre wear affected the balance over the course of a race.

Development of the new car remains paramount to not only fully curing those issues, but advancing Ferrari's overtures towards more consistent race victories. According to Leclerc, the SF-24 offers very clear clues towards its project development path and in mitigating its weaknesses. "I remember last year I finished the test and it was very, very difficult to understand in which direction to develop because the car was just so inconsistent," he reflected. "It was very difficult to understand what were the main weaknesses. This year it's a very different story. We know exactly where we need to improve, where are the weaknesses, the main weaknesses of this car. And this gives us a bit more hope for the development of the car."

Under Vasseur, Ferrari appears to be in the ascendancy. Indeed, Leclerc has been instilled with enough belief to extend his contract with the Italian squad on a multi-year basis. He's grown at the team from an impressive sophomore F1 driver with a penchant for the occasional hefty crash into a formidable racer with an irrepressible turn of speed. Ferrari had enough faith in him at the start of his F1 career to dispose of its proclivity to sign more experienced drivers, and Leclerc is returning the favour in backing its ambition to fight for titles.

It's very unlikely that 2024 will be the year in which Leclerc can have the platform to deliver on his wealth of talent and force his way into a title fight, since Red Bull has moved the game on with its RB20 – much to the dismay of those hoping for a closer battle at the front. What he should have this year is a far more consistent car at his disposal, one that can grant opportunities to capitalise should Ferrari's rivals falter.

In that, he has the chance to ensure that he continues to improve and take a step towards his driving peak. A significant challenge awaits in 2025, with Hamilton alongside him, and the Briton's star power will draw Ferrari's attention towards him. Leclerc must ensure that he uses 2024 to keep the team's gaze fixed firmly upon him and prove that, when measured against a seven-time world champion, he firmly remains the top dog at the team.

If he can fix his waning pole-to-win conversion rate in the process, then his season can be deemed a qualified success. **





Mercedes

Last wish upon a Three-Pointed Star

Lewis Hamilton has one more season at Mercedes before he saddles up for the Prancing Horse, but how will his impending departure to Ferrari impact 2024?

FILIP CLEEREN

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he dust from Lewis Hamilton's shock move from Mercedes to Ferrari for 2025 had barely had time to settle by the time Formula 1 testing got under way in Bahrain. The seven-time world champion and the two teams all appeared keen to get this winter's headline story out of the way before the start of the season,

to avoid speculation spilling out into the coming weeks and months and becoming an ever-larger distraction.

But while there is now clarity over the 2025 Ferrari line-up and Hamilton's future – which we thought we already had, given he signed a two-year Mercedes deal last summer – the subject of speculation will inevitably shift to the identity of Hamilton's successor and to how the intra-team dynamic within Mercedes will change in 2024.

It is very rare for F1 to be experiencing a situation where two high-profile stars such as Hamilton and Carlos Sainz know they will be leaving their current teams before a wheel even turned in the Bahraini desert. Hamilton's stint with Mercedes is the longest one driver has ever had with a single team in F1: over an 11-year stint, he has notched up 222 starts, claimed 82 wins and won six drivers' championships. With the pride and the relationships he has built in Brackley, there seems little doubt that he will not change one iota of his laser-focused approach heading into 2024.

"I feel the most motivated and focused I've ever been," the 39-year-old Hamilton said at the launch of the W15. "Every year you come back, you're like 'I'm fitter than ever', and all these other things. I genuinely feel I put more work and more time and more focus into preparation this year. I never thought that at this point in my life I would have hunger like I do right now. And to finish on a high with the team, it will be a dream. We've gone through a whole heap together, so [it would] be the greatest honour to be able to help them get back to the top."

Getting Mercedes back to the top of the pyramid in the short term is perhaps fanciful given Red Bull's crushing domination in the current rules cycle, with team principal Toto Wolff admitting that the team has a "mountain to climb" in an industry where silver bullets don't exist. Following two difficult years, which may have helped prompt Hamilton's Ferrari move, Mercedes has finally embarked on a drastic concept change that will address its outstanding weaknesses and is intended to cure some of the handling ailments that Hamilton and team-mate George Russell have lamented for many months.

There seems little hope for Mercedes, or any other team for that matter, to catch and overhaul Red Bull this year or even in 2025. But if it can provide a faster and more predicable car to make Hamilton more comfortable, then he proved in 2023 that he will be



"We've gone through a whole heap together, so it would be the greatest honour to help them get back to the top"

right there to reap the rewards from any opportunity that presents itself. Flashes of brilliance and dogged determination allowed him to him win the battle for third behind the untouchable Red Bulls, finishing over 25 points clear of a gaggle that included Charles Leclerc and Fernando Alonso, and 59 clear of Russell, who went through a much more inconsistent season.

The decision to leave Mercedes for Ferrari may be the last roll of the dice for Hamilton, but it appears to be a move prompted more by hunger than desperation. So, if he will continue to give 100% to Mercedes until his contract runs out, how much will Mercedes still give to him? The team appears to have treated Hamilton and Russell fairly and equally over the past two seasons, and there is no reason to suggest any of that will change on a race-by-race



basis. As long as Mercedes isn't fighting for the world championship, it would seem odd for it to favour Russell while squabbling over the odd podium.

Logic does suggest that, as far as development at the factory is concerned, a driver known to be leaving tends to be gradually frozen out. The less Hamilton knows about next year's W16, the better for Mercedes, so he won't be privy to sensitive information and will be left out of meetings concerning long-term plans. With F1 changing to different regulations for 2026, and teams banned from starting aero work on those all-new cars until 1 January 2025, there seems little risk of delicate inside knowledge ending up at Ferrari, any more than when Mercedes' former performance director Loic Serra takes up his new job at Maranello next year.

But with the rules remaining stable for 2025, next year's car project is a different matter. "In terms of the development going forward, I think this is something which we need to look at," Wolff acknowledged in his first media call after Hamilton's departure was announced. "The regulations stay pretty much the same.



"We have engineers that leave us and go to other teams. The notice periods are sometimes as short as six months"

And when it comes to 2025, we will evaluate later in the season what it means in terms of technical information, but that's not something that bothers me at all.

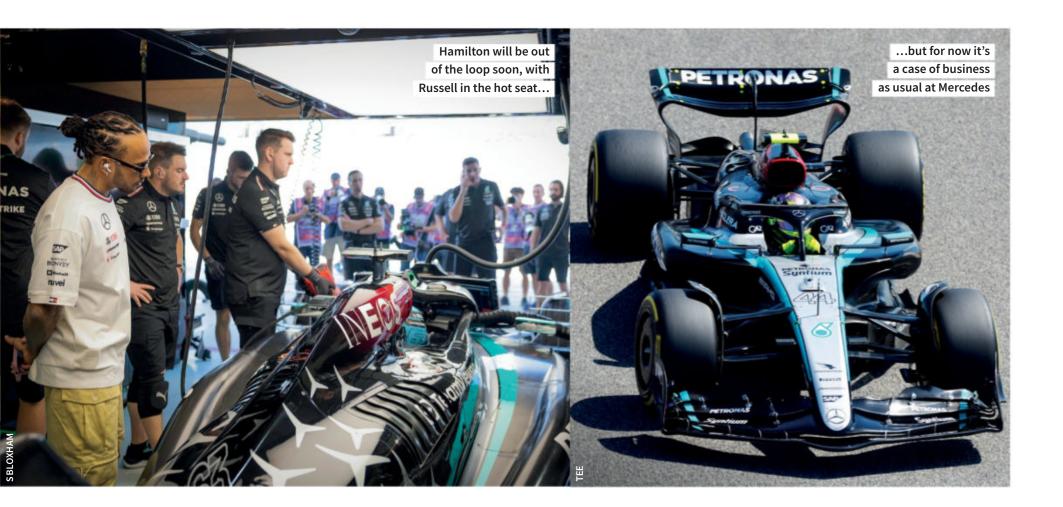
"We have engineers that leave us and go to other teams and the notice periods are sometimes as short as six months. So I don't have any doubt in Lewis's integrity, in terms of sharing information. And in that respect, we want to make sure that this is a successful season for both drivers, and a successful season for Mercedes, and all of us will give our utmost to achieve that.

"I'm always interested in new and challenging situations, and balancing 2024 Mercedes interests versus 2025 driver interests is something that we will openly discuss at the beginning, how to manage that, and for sure come to a good outcome between us."

Red Bull's Sergio Perez summed it up best when asked about the Hamilton-Mercedes relationship for 2024. "I think the dynamics are going to be interesting to watch from the outside," predicted the Mexican. "Having a driver that is moving teams, we all know how jealous the teams are on sharing information, because Lewis has been there for many years, and he will be taking a lot of knowledge to another team."

Max Verstappen added that it will be "a little bit more difficult for the entire team to work together throughout the entire year", but he didn't expect major issues given all the credit Hamilton has built up. "Everyone's professional, so I'm sure they'll be able to deal with it, also because they've had so much success together. But of course, you won't be allowed to attend certain meetings."

Perhaps the best person to ask is Hamilton's old rival Alonso, who went through a similar situation 18 years ago. Alonso caused his own shock by signing for McLaren for the 2007 season, only weeks after claiming his first world championship with Renault in 2005. "For me, it didn't change much," he recalled of the 2006 championship, which he went on to win anyway. "I started the season with a very good atmosphere. It did change maybe for



the team a little bit, because halfway through the season they were testing things for the following year, and I was not involved in those things because they kept some secrets from me, which was understandable."

Time will tell how Hamilton's impending departure will impact Brackley, and whether Russell will grab a unique chance to become Mercedes' undisputed leader for the long term. With options limited for Mercedes to make a marquee signing to replace its star driver, that role is there for the taking. And getting the upper hand on Hamilton in 2024 will give Mercedes final confirmation that Russell can be its man for years to come, regardless of the identity of his future team-mate.

In any case, Hamilton's move has taken any eventual decision for Mercedes to replace its stalwart out of its hands, avoiding a potentially much more painful split down the road. With neither party keen on committing to a longer-term deal last summer amid a wide-open driver market for 2025 and beyond, it appears that scenario had already played on Wolff's mind. And it also avoids souring their joint legacy if Mercedes cannot get it right and Hamilton's frustration had kept building for two more years.

"At the end of the day, he is the most successful driver," Wolff reflected. "We've had a sensational spell and journey together. That's something that will go down in the history books, and also the Mercedes history books. But then, we're the Mercedes Formula 1 team, the best car brand in the world, a team with legacy, and we want to finish this on a high in terms of his career. I can promise you we will build another phase of success. More victories, more world championships in the years to come. And we'll be looking back at this very, very good time with Lewis in a Mercedes."

Ending that symbiotic relationship on a high will be a tough ask, but it would be a fitting end to Mercedes' Hamilton era. Twelve years ago, Hamilton shocked the entire paddock when he announced his move from McLaren to Mercedes, which was still building up its title challenge credentials after taking over a stripped Brawn GP team in 2010. But to the surprise of the naysayers, the Briton took a win in Hungary in his first season as well as five pole positions, which foreshadowed the dynastic dominance that would soon follow.

Over a decade later, Hamilton has been winless for two full seasons, his last triumph coming in the 2021 Saudi Arabian GP. Mirroring 2013 by breaking that winless streak in his final Mercedes season would be a perfect swansong. And it would also echo the iconic Mercedes logo – a silver star coming full circle.





Aston Martin and McLaren

Alonso and Norris: the patient pair chasing Red Bull

But exactly how patient? One is hedging his bets on a future with Aston Martin, while the other needs his faith in McLaren to be justified – and now

MATT KEW

A

ston Martin and McLaren helped prop up a deeply unspectacular Formula 1 campaign for large parts of last year.

Aston's flying start made it the surprise early package, and Fernando Alonso chased the Red Bulls as it became clear that Mercedes and Ferrari had dropped the ball. When a development path, which

attempted to reverse-engineer parts for the 2024 car to fit the AMR23, knocked Aston well off course, McLaren picked up the mantle. Following its Austrian GP update, Lando Norris became the second-highest-scoring driver behind only Max Verstappen.

Their seasons showed two different ways to skin a cat: fast out of the gates versus finishing with a flourish. The choice of lead driver is similarly contrasting. Outside of the top three teams, Alonso and Norris are the two most complete contenders on the grid. But they sit at opposing ends of their careers. The two-time world champion is angling for a return to a frontrunning gig, while Norris is still yet to top a Formula 1 podium, despite many seeing him as a future title winner. He's watched key junior single-seater near-contemporaries George Russell, Charles Leclerc, Verstappen and Carlos Sainz– and even rookie team-mate Oscar Piastri – all get there first, although Piastri's win was only a sprint race.



Given his relative youth and an urge to top up the trophy count, 24-year-old Norris might have held the keys to this summer's driver market merry-go-round. His McLaren deal was due to expire at the end of 2025, so he was plausibly available for a fair price. Red Bull has continually flirted with his signing and the Brit would have been on Mercedes' shortlist of Lewis Hamilton successors. But he's recommitted to working in Woking on a new "multi-year" deal.

With Norris out of the way and Leclerc renewing his Ferrari vows, Alonso will now believe that he can save 'silly season'. Forget that he's going to turn 43 in July, the Spaniard has been talking up his best-ever fitness test scores and his marketability to prospective employers. Ever the protagonist, this is Alonso putting himself in the shop window to land a Mercedes drive should Toto Wolff decide to delay the promotion of protege Andrea Kimi Antonelli, who will contest F2 with Prema Racing in 2024. He could have so easily shut down speculation by pledging his allegiance to Aston.

"Everything that I do in life and everything that I did in the last few months was just to prepare myself better than ever for a very long season," says Alonso. "To prepare myself also in case I want to keep driving, being better than ever. If I commit to a project in the future for the next year or next few years, I need to first ready myself to commit to that... If I want to keep driving it's because I know, starting from myself, I can give 200% to the team on and off-track, simulator work, marketing work, delivering the results."

It's quite a change in tone from when he spoke at the unveiling of the 2023 car. Back then, he acknowledged that Aston is "probably my last team... unfortunately I'm not 20". Just one year on, he's pumped up and talking about conditioning his body to possibly continue until he's 50!

Of course, Alonso is no stranger to deploying a soundbite to retain maximum media coverage. In 2024, he needs to make sure that he keeps being heard. Especially if Aston doesn't excel in the early races this time and Alonso ends up plying his trade in the congested midfield, where his undeniable brilliance will yield points rather than headline-grabbing, underdog podiums.

It's not as though Alonso merely beating his team-mate is enough to bolster his reputation, as it might be for much of the rest of the grid. Dominating Lance Stroll is seen as the minimum expectation, even if the Canadian should fare better in 2024 after missing missed testing last year due to broken wrists, which then meant he was still recovering while the AMR23 was at the peak of its powers last term.

Norris is in a much tougher position in that regard. Many peddled the notion that Piastri was an even match for his stablemate in the second half of 2023. That can be debunked to some degree by Norris winning the qualifying head-to-head 9-6 with an average delta of 0.15 seconds when measured from the British GP – by which time the Australian had largely found his >>>

CONOR MCDONNELL/ASTON MARTI









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feet in F1. Still, Piastri fared better than papaya predecessor Daniel Ricciardo, so provides a far sterner benchmark than Stroll does to Alonso. Norris will need to ensure that he keeps the young pretender in his rear-view mirror to double underline his status as McLaren's experienced number one.

To help improve his one-lap record versus Piastri further still, Norris has focused over the winter on dialling out the occasional mistakes that creep in when the pressure peaks. His Qatari and Mexican qualifying sessions were undermined by errors. A plausible pole in the Abu Dhabi season finale was denied by a snap of oversteer through the final corners. Some of these were due to the spikey on-the-limit handling of the upgraded MCL60, but a stuttering start that allowed front-row rival Verstappen to waltz into the lead of the Brazil sprint race wasn't.

"There's been various things already, both in terms of how I drive, how I work in extracting the performance during laps, understanding these traits, and also then putting them already to the test on the simulator, and trying to improve them," offers Norris. "Sometimes it's hard to improve various things until you're actually in the car and performing, but to the extent of what I can, even if it's mental things, I'm trying to work on any area I can to improve."

As ever with pre-season testing, it's tough to precisely gauge where both squads sit. But there are clues. Alonso is no longer in his honeymoon phase at Aston where everything is rosy. He's dispensed with talk about how much potential there is left to unlock. This time, while he acknowledges a "step forward" with the car, he's also busy bigging up Red Bull, telling us his car is "tricky" under braking in a windy Bahrain, and that there's not enough testing time. It's a less cautiously optimistic note.

For McLaren, the Sakhir circuit has rarely been kind. The layout hasn't suited its recent creations at the best of times, but the squad also suffered brake overheating during 2022 testing before bodywork began fouling the year after. No such dramas this time, apart from a small piece of detritus that needed retrieving from the fuel tank.

Perhaps McLaren briefly hoped that as Red Bull revealed such a bold RB20, the dominant team was about to endure an 'Icarus moment'. Last week's stellar running for the reigning champions has made that look rather fanciful. So, Norris and his colleagues will have to already accept that the best the well-developed MCL38 can fight for is probably second. Alonso would be happy enough with that from Aston, but the runner-up spot is not why either of these drivers get out of bed in the morning. #

Will we see more of the real Piastri?

OK, so it wasn't a proper grand prix, but the record still shows that Oscar Piastri is a Formula 1 race winner thanks to his Qatar sprint success. That's a feat Lando Norris can't boast. It also earned the Australian's rookie campaign comparison with Lewis Hamilton's sublime start 16 years earlier. Piastri's reward: a hasty contract extension that runs until the end of 2026 to allow McLaren to keep laying claim to one of the finest pairings on the grid.

The MCL60's terrible form during the early races of 2023 afforded Piastri a chance to acclimatise to on-track life in the top flight away from the spotlight. For his second season, it's the approach outside of the cockpit that may develop most.

Piastri could be spotted at various Heathrow terminals with bleary eyes during the very small hours. Given the sheer amount of travel involved, he wanted to be on the first flight back to the UK. He now appreciates it's

"There's been occasions where Mark has come up with questions that haven't even entered my mind"

better to fly at sensible times so he's not quite as exhausted on the other side. That'll help reduce the recovery between races. Sound advice from manager Mark Webber. "His hindsight is my foresight," says Piastri. "There's been plenty of occasions, especially in the beginning of the year, where he's come up with questions that haven't even entered my mind."

It'll be interesting to see how Piastri's public persona evolves, too. Having arrived in F1 at the centre of a contract storm between Alpine and McLaren, he wanted to deliberately keep a low profile last season. But in the final weekends, and during the launch of the MCL38, he's gradually shown himself to be more tongue-in-cheek, quicker to crack a wry smile. He poked fun at Red Bull for teasing its RB20 with a filming day before properly whipping off the covers, for example.

Piastri's been painted as boring but that seems unfair. There's a difference between being downright dull and, much like his driving style, calm and smooth. As he finds his place in F1 and turns up to races with more zing, perhaps his true personality will start to shine through.



Red Bull

CAR RED BULL RB20 ENGINE HONDA RBPTH002



STARTS 369 | FIRST GP AUSTRALIA 2005 | WINS 113 | POLES 95 | FASTEST LAPS 95 | 2023 1ST

ed Bull heads into the season as the red-hot favourite once again.

There's no reason why a team that won all but one race in 2023 – for a 95.5% victory rate – should not be eyeing perfection this time around.

Historically, its package has been a rocketship in a straight line thanks to a very efficient aerodynamic layout allied to excellent Honda engine grunt, and packed-on downforce via its intricate floor arrangement to dominate in the corners. What undid the team in its 2023 Singapore Grand Prix defeat was an aversion to kerbs and bumpy courses. Fixing this has been a key target for the new campaign.

When its RB20 was unveiled, it was clear that Red Bull had not been content to produce another evolution of what had proved so successful since Formula 1's new ground-effect era began in 2022. The car features

two major redesigned elements on its upper aerodynamic surfaces – its cannon-like cooling gulleys high up, plus vertical sidepod inlets under a very slim horizontal one. The first two aspects suggest that Red Bull is considering a switch to something similar to Mercedes' 'zeropod' approach, which would be staggering given its rival could not get that concept to work in 2022 and 2023.

Red Bull's new elements didn't appear to impact the team in testing, although it concealed its hand even more than usual in performance runs as well as race simulations. But it has been suggested that an even bigger sidepod overhaul is coming for the Japanese GP in April, a risk Red Bull apparently feels it needs to take. A further question overhanging the team as the season starts is the future of team principal Christian Horner and the investigation into his conduct towards a female employee.

ALEX KALINAUCKAS



#1 MAX VERSTAPPEN



#11 SERGIO PEREZ

1ST	2023 POSITION	2ND
26	AGE	34
185	STARTS	257
AUSTRALIA 2015	FIRST GP	AUSTRALIA 2011
54 WINS	BEST FINISH	6 WINS
32 POLES	BEST GRID POS	3 POLES
30	FASTEST LAPS	11



Max Verstappen

F1's undisputed current dominator, partly because he's had no real opposition since mid-2022. Verstappen is rapid over a single lap, but it's his ability to extract consistent pace over a race stint, as well as learn from any tyre management missteps, that makes him so relentlessly brilliant. Questions over his battle tactics remain, with his Brazil 2022 crash with Lewis Hamilton and penalty for forcing Charles Leclerc off at the 2023 Las Vegas start pertinent.

Sergio Perez

Goes into 2024 seemingly with a massive fight to save his Red Bull drive. He started 2023 well, but went rapidly off the boil away from the street tracks he excels on, with the pressure of a potential title battle against his team-mate his undoing. He can't replicate Verstappen's feel for car control on corner entry, particularly in the medium/slow-speed corners. With Daniel Ricciardo looming, Red Bull simply needs Perez to be an effective number two.

Mercedes

CAR MERCEDES W15 ENGINE MERCEDES M15



STARTS 293 | FIRST GP FRANCE 1954 | WINS 125 | POLES 137 | FASTEST LAPS 105 | 2023 2ND

fter last year's botched start to the season, Mercedes finally relented and gave up on its zeropod

concept. The Brackley squad implemented a partial concept shift from May's Monaco Grand Prix onwards, but what it really needed was an all-new chassis to truly realise the behavioural changes often requested by Lewis Hamilton and George Russell.

Fortunately for Hamilton and Russell, the long-awaited W15 seems much more poised and compliant than its devious predecessors. The two Britons no longer have a diva car, and it looked reasonably quick over long runs.

The 2024 car is probably the last roll of the dice for team boss Toto Wolff and Mercedes to regain racewinning competitiveness before the drastic 2026 rule changes. But it remains to be seen whether or not

motorsport

the W15 can realise those ambitions. Wolff rightly said Mercedes has a mountain to climb to catch Red Bull over the next two seasons, and that was before the Milton Keynes team stunned the paddock with a surprisingly different RB20 that seemed even more impressive than the car that won all but one of the 22 grands prix last year.

So, for a squad that finished second in the constructors' table last year and looks unable to make that final step, what can success really look like in 2024? For starters, it will want to end the departing Hamilton's 12-year tenure on a high with at least one more race victory after two unprecedented winless seasons. But perhaps more fundamental than that, Mercedes will also want to prove to itself that it hasn't lost the knowhow and ingenuity that led to its dominant era. After two bruising and humbling years, it must find its mojo again.

FILIP CLEEREN



LEWIS

3RD



2023 POSITION 8TH

GEORGE

39	AGE	26
332	STARTS	104
AUSTRALIA 2007	FIRST GP	AUSTRALIA 2019
103 WINS	BEST FINISH	1 WIN
104 POLES	BEST GRID POS	1 POLE
65	FASTEST LAPS	6

Lewis Hamilton

Will Hamilton win again before he departs? Both the seven-time world champion and his team seem determined - if not desperate – to give their partnership the conclusion it deserves. His legacy has already been cemented but, if the W15 has truly fixed Hamilton's biggest gripes, then we should expect to see the best of the 39-year-old. Not only to challenge for wins, but perhaps also to draw a line in the sand for future Ferrari team-mate Charles Leclerc.

George Russell

With Hamilton leaving next year, Russell will have the chance to truly become Mercedes' main man for the foreseeable future. The best way to do so is to bounce back from a rollercoaster 2023 and finish on a par with, or even ahead of, Hamilton after being 59 points adrift in a year featuring unusual errors and a mid-season blip of form. Armed with a better W15, this season will be a big one for Russell to make his mark on the team with a stronger showing.

Ferrari

CAR FERRARI SF-24 ENGINE FERRARI 066/12



STARTS 1074 | **FIRST GP** MONACO 1950 | **WINS** 243 | **POLES** 249 | **FASTEST LAPS** 259 | **2023** 3RD

he team that pushed
Red Bull so close in
the first half-season
of F1's latest groundeffect era in 2022 goes
into the new campaign buoyed by a
very positive test in Bahrain, after
slipping behind Mercedes last year.

Ferrari topped the times, but that really doesn't matter. Instead, the team showed that it had made significant progress on what has been its key weakness of recent years: ability to keep its tyres alive over a race stint. To get there, Ferrari put all its efforts into making a major breakthrough on set-up understanding for its 2023 package at last season's Dutch GP, which resulted in big progress back towards being best of the rest by year's end.

Ferrari took its new knowledge and produced a fresh floor concept that made its 2023 car more stable, boosting star driver Charles Leclerc in particular. It has continued this process in the SF-24, making it much less wind-sensitive and edgy overall. Based on the long runs from Bahrain testing, it seems that Ferrari may have finally cracked its tyre management weakness; its drivers could produce consistent times over long stints, on a very abrasive and high-energy surface.

Heading into 2024, Ferrari still hasn't shaken off its image of strategy shambles and mechanical misfortune, but team boss Fred Vasseur has been in post well over a year now and made his mark by signing Lewis Hamilton for 2025 earlier this year. If Ferrari is again adrift of Red Bull by a major margin, however, expect questions over its potential to continue. Furthermore, it must now deal with Carlos Sainz already knowing his future is elsewhere, and Leclerc hoping to prove his late-2023 resurgence was just the start of a rebuilding path.

ALEX KALINAUCKAS



#16 CHARLES LECLERC



#55 CARLOS SAINZ

5TH	2023 POSITION	7TH
26	AGE	29
123	STARTS	183
AUSTRALIA 2018	FIRST GP	AUSTRALIA 2015
5 WINS	BEST FINISH	2 WINS
23 POLES	BEST GRID POS	5 POLES
7	FASTEST LAPS	3



Charles Leclerc

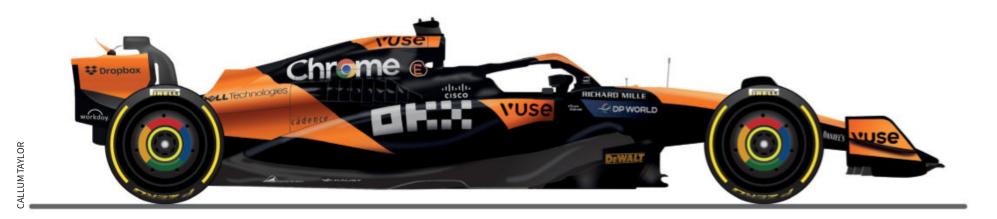
Can be viewed as Ferrari's darling given it has signed him to a new multi-year contract and will jettison his team-mate in favour of Lewis Hamilton next year. He goes into 2024 seeking to avoid the errors that blighted his early 2023 campaign and instead maintain the overall excellence he was showing by last season's climax. Leclerc is still F1's fastest qualifier, but must start delivering better result consistency; he's 102 races into his Ferrari career.

Carlos Sainz

That Zandvoort-Monza-Singapore 2023 purple patch will live long in F1's collective memory, but it wasn't enough to stop Ferrari going after Lewis Hamilton and dropping a driver who has been close to being a match for Leclerc in their three-year stint as team-mates so far. Sainz shows brilliant technical and strategical nous, which has rewarded him in key moments during his Ferrari tenure, such as in the 2022 Monaco GP rainstorm.

McLaren

CAR MCLAREN MCL38 ENGINE MERCEDES M15



STARTS 946 | FIRST GP MONACO 1966 | WINS 183 | POLES 156 | FASTEST LAPS 164 | 2023 4TH

efore Ferrari came
back strong at the end
of 2023, McLaren had
worked its way to
being Red Bull's most
consistent challenger thanks to a
series of impressive upgrades to a
package that resembled the RB19.

But it heads into the 2024 season having seemingly been usurped by Ferrari based on their testing showings, with others in the best-of-the-rest gaggle also in close contention. McLaren had a more difficult test overall than the rest of the frontrunning pack - a problem with detritus in its fuel system restricted its long running on day two, and further small issues prevented Lando Norris from completing any race simulation running. When Oscar Piastri did get a long run in on the final afternoon, he seemed to struggle with tyre degradation. Laid against all this is the knowledge that Bahrain is

SBLOXHAM

something of a bogey track for the Woking team.

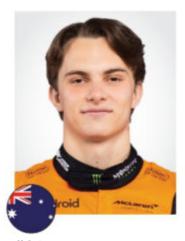
In the MCL38, McLaren has worked on improving rear-end grip levels – something that will be key to its drivers avoiding mistakes when taking things to the limit in qualifying. This became an issue late in 2023 due to the team's development choices. On this, much is expected given how good McLaren got last year and, despite highly rated team boss Andrea Stella sagely warning that there may be a development ceiling on its car concept approaching, the team has also signposted that it's got important new parts coming soon.

Overall, McLaren goes into the new season once again as rather a work in progress. But, critically, it's starting from a much stronger spot after avoiding a third straight year of testing disasters, led by a team principal and two star drivers who have all proved that they can deliver.

ALEX KALINAUCKAS



#4 LANDO NORRIS



#81 OSCAR PIASTR

6TH	2023 POSITION	9TH
24	AGE	22
104	STARTS	22
AUSTRALIA 2019	FIRST GP	BAHRAIN 2023
2ND	BEST FINISH	2ND
1 POLE	BEST GRID POS	2ND
6	FASTEST LAPS	2

MAGES IMAGES

Lando Norris

Has "no regrets" over committing his future to McLaren beyond 2026 - despite doing his new deal just days before Lewis Hamilton's Ferrari move blew the driver market open. Norris has been McLaren's consistent star since his career really took off in 2020 and he's got 13 podiums and one pole. But he's still lacking a race win. Brilliantly fast, great on tyre management, but does still make mistakes when the pressure is on.

Oscar Piastri

Surely the 'difficult second album' cliche can't apply to Piastri, because nothing seems to faze him. And now he's got through the rookie learning year, with handy extra knowledge gleaned on how to prepare for each race through tweaked fitness and travel insight, it all points to massive progress from the Australian. He's got to fix an in-race tyre management weakness, but his speed is obvious and he's got a delightfully deadpan character.

Aston Martin

CAR ASTON MARTIN AMR24 ENGINE MERCEDES M15



STARTS 71 | FIRST GP NETHERLANDS 1959 | WINS 0 | POLES 0 | FASTEST LAPS 1 | 2023 5TH

A

dazzling start to 2023 catapulted Aston Martin from the midfield to genuine podium contenders

through the evergreen Fernando Alonso, who captured four third places in the opening five races. Its in-season developments did not entirely offer the opportunity to retain that form, however, and the team had to be content with only two visits to the podium after the summer break.

After looking sideways at the growth McLaren enjoyed over last season, technical director Dan Fallows tasked the Silverstone squad with producing a car with a stronger potential development curve. The AMR24 is an evolution of its predecessor and, says Fallows, features "no surprises", but has been augmented with a series of aerodynamic improvements aimed at reducing the overall drag levels.

The team has also taken Mercedes' pushrod rear suspension, which has allowed it to pursue the avenues it wanted to around the rear end.

In testing, the car seemed to have picked up from where Aston left off last season, with good reliability and long runs that place it within the group of teams hunting down Red Bull in the top half of the field. Yet it remained conspicuously low key, and largely eschewed short runs or glory laps to explore its race performance over the three-day stint in Bahrain.

The Aston Martin appeared to handle well and did not seem to suffer too much with tyre degradation. Out-and-out pace remains unknown, and Alonso has also sown the seeds of doubt that the car could beat Red Bull to victories, but the team should retain its position in angling for podiums and top-five results.

JAKE BOXALL-LEGGE



#14 FERNANDO ALONSO



#18 LANCE STROLL

42 AGE 25 377 STARTS 143 AUSTRALIA 2001 FIRST GP AUSTRALIA 2017 32 WINS BEST FINISH 3RD 22 POLES BEST GRID POS 1 POLE 24 FASTEST LAPS 0
AUSTRALIA 2001 FIRST GP AUSTRALIA 2017 32 WINS BEST FINISH 3RD 22 POLES BEST GRID POS 1 POLE
32 WINS BEST FINISH 3RD 22 POLES BEST GRID POS 1 POLE
22 POLES BEST GRID POS 1 POLE
24 FASTEST LAPS 0

Fernando Alonso

Revitalised last season after two middling years with Alpine, Alonso was back to his magical best. His streak of podiums, near-miss in Monaco, and sensational Brazil battle with Sergio Perez packed out the highlight reel, but a first F1 win in a decade still remained out of his grasp. If he can't get that victory in 2024 either, the Asturian's patience with the Aston project might start to fray. He might need to work his magic once again to clinch a 33rd victory.

Lance Stroll

The Canadian's 2023 was rocked by a pre-season cycling crash that forced him out of testing. His performance in the Bahrain opener was remarkable given the pain he had to contend with. Amid the heights that Alonso managed to reach, Stroll was comprehensively outclassed. Unencumbered by injury, he must make a step forward; his points tally from last season stopped Aston from beating McLaren in the constructors' standings.



Alpine

CAR ALPINE A524 ENGINE RENAULT E-TECH RE24



STARTS 466 | FIRST GP BRITAIN 1977 (AS RENAULT) | WINS 36 | POLES 51 | FASTEST LAPS 33 | 2023 6TH

shuffles rather set
the tone for Alpine
last season, arguably
rooted in departing
CEO Laurent Rossi's accusations of
"dilettantism" levelled at the team.
Rossi was removed from his duties
and, later, team principal Otmar
Szafnauer and sporting director
Alan Permane were also ousted. Now
ex-Peugeot Sport director Bruno
Famin has installed, erm, himself
as team principal after carrying out
the role on an interim basis for
the second half of last year.

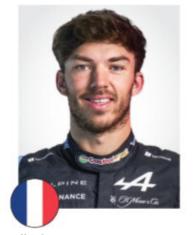
onstant management

This overshadowed the team's middling performance over 2023, in which it occupied F1's no man's land between the top five teams and those towards the back. With an all-new car, Alpine is hoping to close the gap to the likes of McLaren and Aston, but indications from testing suggest that the Anglo-French squad has a job on its hands to prevent regression.

The team has taken great pains to remind everyone that its Renault power unit remains around 30hp short of the other powertrains on the grid, with a plea made to the FIA that was abandoned following a lack of the required support from rivals. Pierre Gasly, now in his second year with the team, reckons that the A524 also needs significant upgrades amid expectations to struggle early on.

Alpine started the 2023 campaign in disappointing fashion and managed to make ground, and the Enstone team must operate on a steeper trajectory over this year to achieve the progress it desires, given it has spent almost a decade treading water in the midfield. One significant change from testing featured a minor tweak to its livery, featuring a smidgen more blue; it had previously ditched its usual metallic azure scheme for a disappointingly carbon-heavy aesthetic to save weight.

JAKE BOXALL-LEGGE



#10 PIERRE GASLY



#31 ESTEBAN OCON

11TH	2023 POSITION	12TH
28	AGE	27
130	STARTS	133
MALAYSIA 2017	FIRST GP	BELGIUM 2016
1 WIN	BEST FINISH	1 WIN
2ND	BEST GRID POS	3RD
3	FASTEST LAPS	0

Pierre Gasly

Signed from AlphaTauri after Alpine spectacularly fumbled its contracts with Fernando Alonso and Oscar Piastri, Gasly held a slender edge over Esteban Ocon in the 2023 qualifying stakes and outscored him by four points, peaking with a podium at the Dutch GP. It'll be tough to repeat that feat, but Gasly has the ability to make things happen. He's shaken off the Red Bull cast-off tag, but how he progresses depends on the package Alpine presents him with.

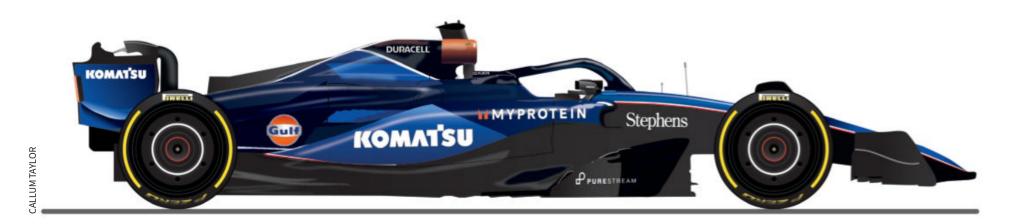
Esteban Ocon

The lanky Frenchman ideally wanted to spend 2023 showing long-time adversary Gasly a clean pair of heels and, although he was a stronger contender in the races, won't take kindly to being outscored. Converting third on the grid in Monaco into a podium was his high-water mark last season after starting the year well, but was ultimately level with his team-mate by the season's end. He'll aim to claim the upper hand over 2024.



Williams

CAR WILLIAMS FW46 ENGINE MERCEDES M15



STARTS 810 | FIRST GP SPAIN 1977 | WINS 114 | POLES 128 | FASTEST LAPS 133 | 2023 7TH

f 2023 was a tentative first step in Williams's recovery from underfunded also-ran to a competitive force, then this season team boss James Vowles will look to make bigger strides in his quest to return to the front in his second year in charge. Last year's low-drag FW45 was a one-trick pony that could only shine on low-downforce circuits such as Monza and Montreal in the hands of lead driver Alex Albon, while still facing too many limitations to keep up with the rest of the midfield on more technical layouts.

With the FW46, Williams has attempted to produce an all-rounder that can score anywhere, which will be crucial if it wants to improve on seventh and hold off a promising looking RB team. But Vowles has already declared that results continue to be of secondary importance compared to the

bigger picture of bringing Williams's workflow, mindset and infrastructure up to par with the rest of the field, with incoming CTO Pat Fry a key asset to help oversee a comprehensive overhaul of the squad and its Grove facilities. F1 has changed a lot since the team's last win in 2012.

While the pair is putting building blocks in place in the background, it is up to Albon and second-year driver Logan Sargeant to confirm the team's on-track progress. Despite some reliability gremlins during winter testing, Williams does seem to be in a better place than last year, but it remains to be seen whether the team already has enough aerodynamic firepower at its disposal to keep up in a frantic midfield battle. The gap to sixthplace Alpine was still massive in 2023 but, with the Enstone squad bracing for a low-key start to 2024, perhaps that spot is there for the taking. **FILIP CLEEREN**



#2 LOGAN SARGEANT



#23 ALEXANDER ALBON

21ST	2023 POSITION	13TH
23	AGE	27
22	STARTS	81
BAHRAIN 2023	FIRST GP	AUSTRALIA 2019
10TH	BEST FINISH	3RD
6ТН	BEST GRID POS	4TH
0	FASTEST LAPS	0



Logan Sargeant

Some eyebrows were raised when Williams decided to retain Sargeant for 2024 following a tough debut season. The American showed flashes of speed, but they were punctuated by too many mistakes due to his penchant to overdrive and being overly desperate to prove his worth. This year the 23-year-old cuts a much more confident figure after rethinking his approach, and needs to deliver more consistently over 24 race weekends.

Alexander Albon

Albon's career trajectory has taken more than one unexpected turn. After being dropped by Red Bull and receiving a lifeline from Williams, his commanding 2023 performances that single-handedly delivered Williams seventh have transformed him into one of the hottest properties on the driver market. While technically under contract for 2025, another strong season could see interest from top teams intensify as the 27-year-old approaches the peak of his powers.

RB

CAR VCARB 01 ENGINE HONDA RBPTH002



STARTS 351 | FIRST GP BAHRAIN 2006 (AS TORO ROSSO) | WINS 2 | POLES 1 | FASTEST LAPS 3 | 2023 8TH (AS ALPHATAURI)

he 2024 season is one of sweeping change for the former Toro Rosso and AlphaTauri operation, which is now known as the unwieldy 'Visa Cash App RB'. In the wake of Dietrich Mateschitz's death in 2022, Red Bull's new leadership decided something had to give after its second F1 team continued struggling for performance on and off the track.

Former FIA bod Peter Bayer and Ferrari's Laurent Mekies have arrived to replace long-time team boss Franz Tost, who was given a send-off at the 2023 Abu Dhabi finale after nearly two decades of service. They established a new, vanilla identity to boost the team's commercial output, and the changes to the former Minardi team don't stop there.

While its original headquarters remains in Faenza in Italy, RB is set to move from its cramped Bicester facility to a brand-new second HQ

in Milton Keynes, just down the road from the Red Bull campus and its wind tunnel. It is just one example of RB's closer ties with its parent team after years of diverging more than usual, and it has now also reverted to taking Red Bull's front and rear suspension.

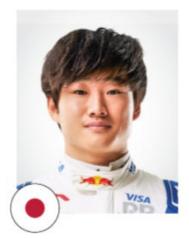
Last year's impressive floor developments turned the AlphaTauri into one of the best cars in low-speed corners and it allowed Daniel Ricciardo and Yuki Tsunoda to make a late but unsuccessful lunge for Williams's seventh place in the constructors' standings, falling just short with the Japanese's eighth-place finish in Abu Dhabi.

If the team can start 2024 where it left off, which Bahrain winter testing has provided some evidence of, then Ricciardo and Tsunoda should be able to continue challenging for points on most race weekends in the unattractively named VCARB 01.

FILIP CLEEREN







#22 YUKI TSUNODA

17TH	2023 POSITION	14TH
34	AGE	23
239	STARTS	63
BRITAIN 2011	FIRST GP	BAHRAIN 2021
8 WINS	BEST FINISH	4TH
3 POLES	BEST GRID POS	6TH
16	FASTEST LAPS	1

Daniel Ricciardo

Ricciardo's F1 comeback wasn't quite the fairytale the affable Australian was hoping for. A hand fracture at Zandvoort took the wind out of his sails just as it was starting to pick up and, to add insult to injury, his replacement Liam Lawson staked his own claim on a future seat. He's now had a full off-season to prepare, so 2024 should be considered the real start of his second F1 stint. It's now or never for Ricciardo to try to dislodge Sergio Perez at Red Bull.

Yuki Tsunoda

After an inconsistent start to life in F1, Tsunoda has quietly developed into a more well-rounded racer. His temper can still get the better of him - see the Mexican GP clash with Oscar Piastri – but ahead of his fourth season the 23-year-old should be well equipped to get the most out of the car. But drivers can't linger at Red Bull's second team forever and, with Lawson waiting in the wings, Tsunoda might come under more pressure to stand out.



Sauber

CAR SAUBER C44 ENGINE FERRARI 066/12



STARTS 442 | FIRST GP SOUTH AFRICA 1993 | WINS 1 | POLES 5 | FASTEST LAPS 5 | 2023 9TH (AS ALFA ROMEO)

this, but 2024 represents the first of two placeholder seasons. Title sponsorship from Alfa Romeo has come to an end and the Swiss squad won't formally be recognised as Audi until 2026. That's if the manufacturer ever arrives, amid the latest round of rumours that a new-look boardroom is having second thoughts. In the meantime, this much-loved team has been clumsily rebranded to Stake F1 Team Kick Sauber. That new identity comes with an equally uninspiring paintjob, which looks as though someone has spilled a tin of flo-vis (some seem to quite like it - ed).

auber won't thank

anyone for saying

As Sauber prepares for life as a works team, the focus is on improving the chassis department. The team gradually lost its early-2022 weight advantage to frequently fade into backmarker anonymity. That's why highly rated CEO Andreas Seidl has hired former McLaren colleague James Key as technical director. He is rebuilding his reputation after being blamed for the Woking team's slow adaptation to the ground-effect rules. Given his late arrival, the new C44 is not all Key's own work, but the sentiment from pre-season testing is that the car is better placed to precede a climb of one or two places to beat 2023's ninth-place finish.

The Bahrain testing plan was deliberately conservative, with the priority on investigating long-run performance and mechanical set-up. Still, Key says a lot of boxes have been ticked, and no surprises have been thrown as the car concept has transitioned from wind-tunnel model to real-world racer. The drivers reckon a switch to pullrod front suspension has already yielded greater aerodynamic efficiency and cornering balance.

MATT KEW



#24 ZHOU GUANYU



#77 VALTTERI BOTTAS

18TH	2023 POSITION	15TH
24	AGE	34
44	STARTS	222
BAHRAIN 2022	FIRST GP	AUSTRALIA 2013
8ТН	BEST FINISH	10 WINS
5TH	BEST GRID POS	20 POLES
2	FASTEST LAPS	19



Zhou Guanyu

Tickets for the Zhou grandstand at the returning Chinese GP sold out in four minutes. The website crashed! But, having struggled to match an underwhelming Bottas last year, Zhou needs to step up in 2024 if he's to race on home soil more than once in F1. Along with half the grid, he is out of contract in the winter and needs to develop beyond being just a 'safe pair of hands' if he's to put himself towards the top of anyone's list.

Valtteri Bottas

The 2023 car didn't enjoy a weight advantage like its predecessor had. Even still, Bottas's displays were humdrum beyond an eighth in the Bahrain opener. He didn't seem to drag the team forward. The Finn will provisionally be a free agent at the end of this year, but reckons a contract extension will effectively mean he has landed an Audi gig. But last year's efforts would mark him out as a conservative choice for the inbound Germans rather than their lynchpin.

Haas

CAR HAAS VF-24 ENGINE FERRARI 066/12



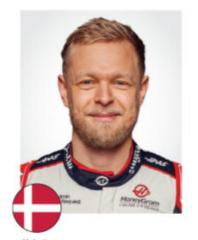
STARTS 166 | FIRST GP AUSTRALIA 2016 | WINS 0 | POLES 1 | FASTEST LAPS 2 | 2023 10TH

evelopment of the 2024 car was paused for two long months last season while Haas focused on a critical upgrade for October's United States Grand Prix. But the new parts did little to remedy soaring tyre temperatures that ruined races. Kevin Magnussen and Nico Hulkenberg were thereafter forced to run different car specifications as investigations continued. All told, the revised VF-24 will wade into battle with damp powder. Initially, it'll be underbaked and missing key wind-tunnel findings.

Despite those concerns, pre-season testing hasn't painted an entirely bleak picture. The focus was on finally putting those Pirelli problems to bed. Haas is happy with how the troubleshooting has gone. So, some more qualifying heroics from Hulkenberg might just precede a few rare points finishes. Haas reckons,

even if it's started on the back foot, that plenty of progress has been made in a short window so the team isn't nailed on to finish in last place.

There's been a fair bit of turnover behind the scenes. Founding team principal Guenther Steiner wasn't offered a new contract so left over the winter amid a falling out with owner Gene Haas, who wants better results without writing a bigger cheque. Whether Steiner was the perfect leader or not, Haas has lost its most recognisable asset. In his place is long-standing trackside engineering director Ayao Komatsu. Thanks to his background, he's very tuned into debriefs and has instated a revised structure that's sent on-loan technical director Simone Resta back to Ferrari while Andrea de Zordo has been promoted. Given the limited funds, it's about making every area as efficient as possible as Haas sets its sights on longer-term improvements. **MATT KEW**



KEVIN **MAGNUSSEN**



HULKENBERG

19TH	2023 POSITION	16TH
31	AGE	36
163	STARTS	203
AUSTRALIA 2014	FIRST GP	BAHRAIN 2010
2ND	BEST FINISH	4TH
1 POLE	BEST GRID POS	1 POLE
2	FASTEST LAPS	2



recalled on the eve of the 2022 season to replace ousted Russian Nikita Mazepin, he quickly made Mick Schumacher look bang average. He led Haas with aplomb and provided a morale lift. But last year, especially in qualifying, Nico Hulkenberg humbled the Dane to cause his stock to fall. Out of contract at the end of the year, Magnussen must improve to stay. F2 driver Ollie Bearman is breathing down his neck.

Kevin Magnussen

When Magnussen was

Nico Hulkenberg

Settled back into life in F1 last year in double-quick fashion after three seasons spent mostly as a reserve. Hulkenberg excelled on Saturdays, featuring in a GP Q3 no fewer than eight times. But he only bagged points in the Australian GP and Austrian sprint as tyre troubles plagued the VF-23. If this is sorted for 2024, hopefully he shouldn't go backwards in every race – even if Haas has lost ground overall to make those giant-killing one-lap displays harder to come by.

M O ER

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WE'RE DEDICATED TO PRESERVING THE CLASSIC FERRARI SPIRIT



1 BAHRAIN GP Sakhir 2 March

UK start time: 1500

2 SAUDI ARABIAN GP

Jeddah 9 March

UK start time: 1700

3 AUSTRALIAN GP

Melbourne 24 March

UK start time: 0400

JAPANESE GP

Suzuka 7 April

UK start time: 0600

5 CHINESE GP*

Shanghai

21 April UK start time: 0800 MIAMI GP*

Miami

5 May

UK start time: 2100

7 EMILIA ROMAGNA GP

Imola

19 May

UK start time: 1400

8 MONACO GP

Monte Carlo

26 May

UK start time: 1400

CANADIAN GP

Montreal

9 June

UK start time: 1900

10 SPANISH GP

Barcelona

23 June

UK start time: 1400

11 AUSTRIAN GP*

Red Bull Ring

30 June

UK start time: 1400

12 BRITISH GP

Silverstone (above)

7 July UK start time: 1500

13 HUNGARIAN GP

Hungaroring

21 July

UK start time: 1400

14 BELGIAN GP

Spa

28 July

UK start time: 1400

15 DUTCH GP

Zandvoort

25 August

UK start time: 1400

16 ITALIAN GP

Monza

1 September

UK start time: 1400

17 AZERBAIJAN GP

Baku

15 September

UK start time: 1200

18 SINGAPORE GP

Marina Bay

22 September

UK start time: 1300

19 UNITED STATES GP*

Austin

20 October

UK start time: 2000

20 MEXICAN GP

Mexico City

27 October

UK start time: 2000

21 BRAZILIAN GP*

Interlagos

3 November

UK start time: 1700

22 LAS VEGAS GP

Las Vegas

23 November

UK start time: 0600 (Sun)

23 QATAR GP*

Losail

1 December

UK start time: 1700

24 ABU DHABI GP

Yas Marina

8 December UK start time: 1300

*sprintweekend



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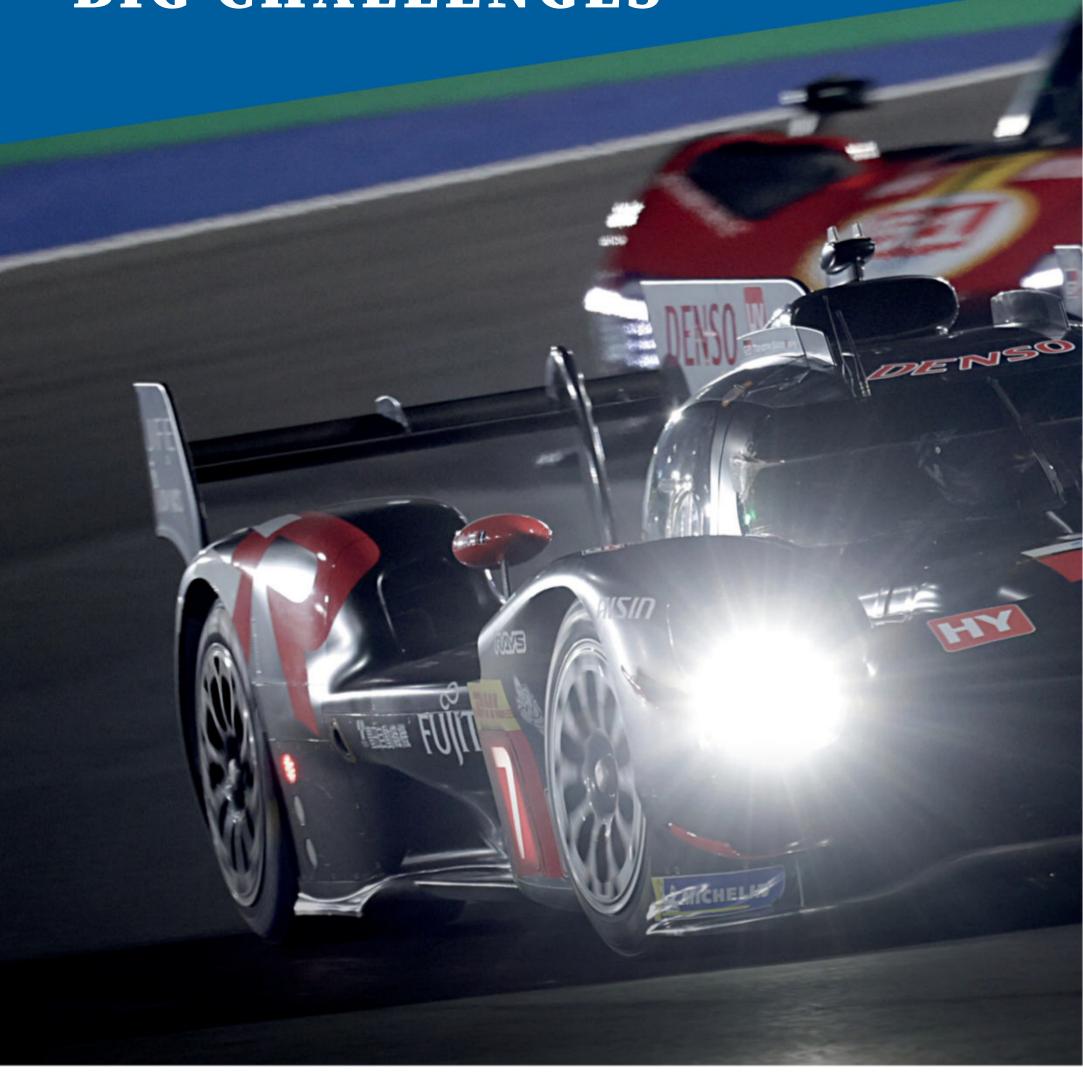


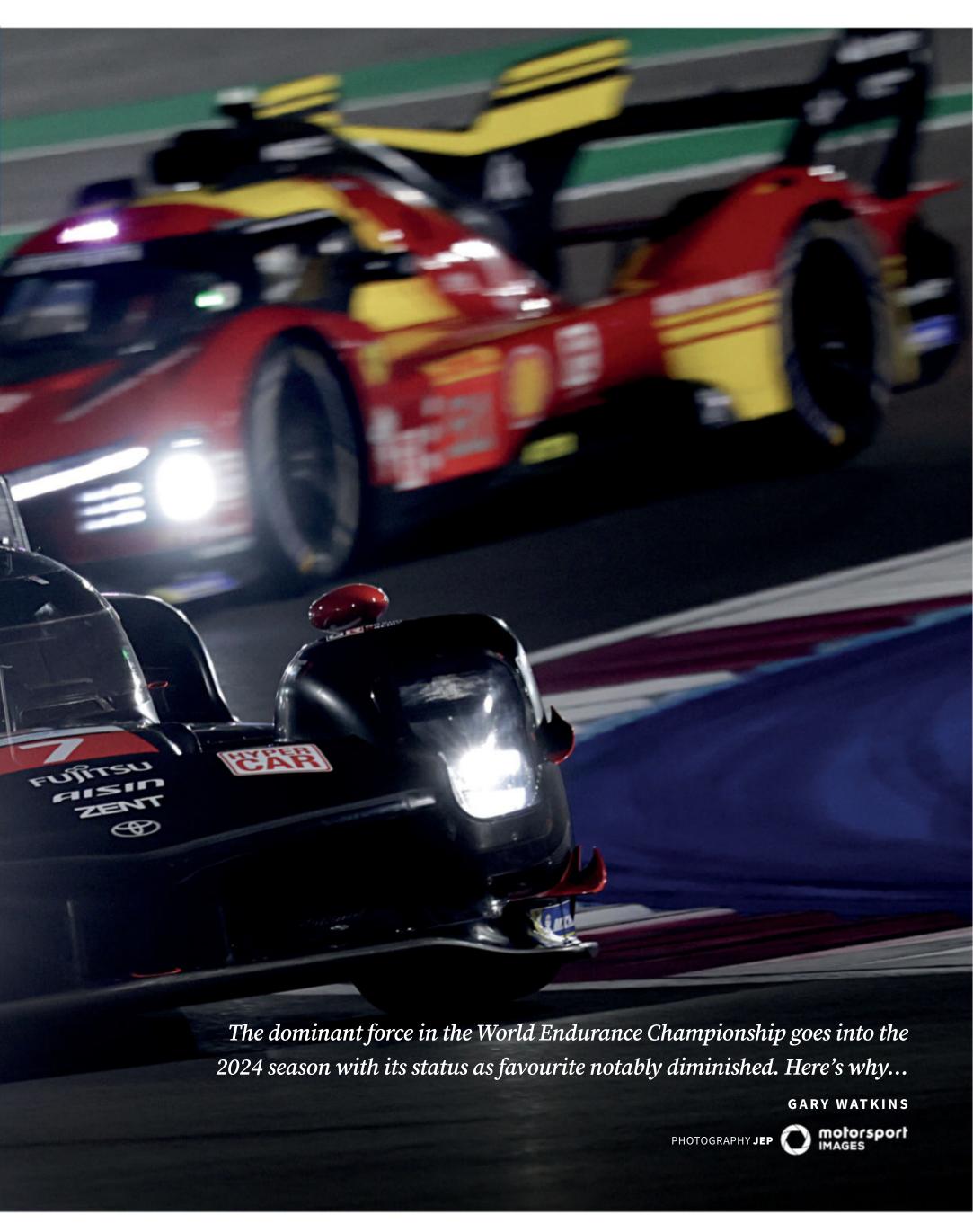
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TOYOTA FACES NEW RULES, FRESH RIVALS AND BIG CHALLENGES









ou'll find the odd person at Toyota who'll stand in front of you and tell you with a straight face that the Japanese manufacturer isn't favourite going into this year's World Endurance Championship. Most, however, will happily concede that a marque that swept to a fifth straight drivers' and manufacturers' title double last year has,

in reigning champion Brendon Hartley's words, "a target on its back". But on the other hand, insists his team-mate Sebastien Buemi, "that doesn't mean we are going to be at the front again".

"It's hard to deny that if you have won six out of seven races one year, you have to be the favourite the next," admits Buemi, who together with Hartley and Ryo Hirakawa repeated the title they won in 2022 in the second season of the Hypercar era. "OK we didn't win the biggest race, the Le Mans 24 Hours, but we have to acknowledge that we are the team to beat. But everything changes for the new season."

That includes the level of the competition faced by Toyota's GR010 HYBRID Le Mans Hypercar, and not just because three new major manufacturers have arrived in the forms of BMW, Alpine and Lamborghini in the second season of the WEC since the introduction of LMDh machinery. The other newcomer is garagiste Isotta Fraschini with its LMH. Just as significant, probably more so, is that the new manufacturers from 2023, Ferrari, Porsche and Cadillac, now have a year's experience – with their machinery and as teams – under their belts. And then there's Peugeot, which is returning for its second full WEC campaign with a major overhaul of its out-there 9X8 that will come on stream for round two at Imola in April.

That's not to forget some subtle changes to the WEC when it kicks off in Qatar this weekend, one of two new venues on the calendar together with Imola, and one of four along with Interlagos and Austin being visited for the first time since the introduction of the Hypercar class. The LMP2 division has been banished to WEC co-organiser the Automobile Club de l'Ouest's feeder series with the exception of Le Mans, and now there are 18 GT cars out on track in the new LMGT3 class. The significance of that is that all of them have a true amateur, the mandatory bronze-rated driver, as part of the line-up. The qualifying format has changed, too. It now mimics the Hyperpole system introduced at Le Mans in 2022, a two-round affair with 10 cars from a first 12-minute session going through to 10 minutes of final qualifying.

Something else that is new is the Balance of Performance, one of the building blocks of the Hypercar class as we know it. A new season, of course, means a new BoP table, but there is also a new system in place.

"So much has changed since last year," continues Buemi. "No P2s and more GTs is going to change the on-track dynamic, and, of course, a new BoP."





THE GAP IS CLOSING

That much was clear at the end of 2023. Toyota may have won the opening three races at a relative canter, but things were closer as the campaign drew to a conclusion when it picked up its winning streak after the defeat at the hands of Ferrari at Le Mans. Porsche led for four of the six hours at Fuji in September, and the best of the Penske factory 963 LMDhs might well have split the Toyotas but for an error in the pits before the race had even begun. Then, in Bahrain, the privateer Jota entry was the fastest car in terms of an average over a double stint on a set of Michelin tyres. Put simply, the pack was catching up.

The expectation should be that this process has continued over the winter and will continue to do so through the eight races on the expanded 2024 calendar. LMH and LMDh allow limited scope for development, so the gains that can be made are incremental. Toyota's advantage last year owed much to the fact that it had a well-proven car in its third season of racing that had undergone two off-season updates. The steps it can now make are probably of the pigeon variety, whereas Ferrari, Porsche, Cadillac and, of course, Peugeot, have the ability to

"So much has changed since last year. No P2s and more GTs is going to change the on-track dynamic"

make more significant strides. That goes for their machinery and as teams organisationally. Toyota has been racing in WEC since 2012, whereas its rivals last year were largely new: the European arms of Penske Porsche Motorsport and Cadillac Racing both came together in the weeks running up to the Sebring season-opener last March.

"We had new competitors joining at the start of 2023, who were on a steep learning curve and catching up all the time," says David Floury, who has succeeded Pascal Vasselon at the Toyota Gazoo Racing Europe organisation in Cologne that runs the WEC programme. "Our progression margin is smaller than for our competitors. Our car has been running in WEC in 2021 and we have been in the championship even longer, since 2012. We have to expect the others to progress quicker than we can, and with a bigger margin."

The Toyota GR010 is racing in the same form as last year. TGRE didn't make a request to take up one of the five evo jokers – developments made in the name of performance – available to a manufacturer over the lifespan of an LMH or LMDh. "We couldn't claim a performance joker with the position we were in last year," says Floury. The rulemakers – the ACO and the FIA – have to approve jokers and were hardly likely to allow the fastest car to get even faster.

Of its rivals, only Peugeot has opted to invoke a joker or jokers – we



WEC season preview

don't know how many because the process is not in the public domain. Manufacturers aren't even told what their rivals have been allowed to do. Ferrari, Porsche and Cadillac have opted to make the best of what they have, before invoking jokers. Porsche has an engine revision in the works for Le Mans, but it is not known whether it has been able to argue that the changes are being made in the name of reliability and therefore don't mean playing one of its jokers. The position of each of these three marques is that they need to make the most of what they have before opting for performance updates.

"We want to exploit the potential of the base car: before we apply for any jokers we want to understand the ultimate performance of our car," says Ferrari sportscar racing technical director Ferdinando Cannizzo of the Italian manufacturer's 499P LMH. "The more we run the more we understand the car, the aero, the tyres, and definitely the electronics and the controls."

Ferrari hasn't ruled out opting for a joker during the course of the season – mid-season homologation updates are allowed for the moment, but are unlikely to be possible in subsequent seasons – but insists that it's not in the plan for the moment.

Stephen Mitas, team manager of the Ganassi-run Cadillac Racing squad, says the same thing in a different way about its V-Series.R: "There is still a lot to be learned with the package as it stands. If we do take the opportunity to use a joker and rehomologate the vehicle, we want to do it in the best possible fashion."

Porsche points out that its priority since last year has been improving the reliability of its 963 LMDh and then, says PPM boss Jonathan Diuguid, "we can focus on performance and look at evo jokers to get us to where we need to be in the future".

The natural order should see a concertinaing of the field, at least of those manufacturers involved last year. How those that are new to the WEC fit in is a big unknown, though they have the biggest gains to make through the season. BMW, of course, has a proven car, not in the WEC but over in North America, where the Rahal team has been racing the M Hybrid V8 LMDh in IMSA for a year now.

WHAT EFFECT WILL THE BOP HAVE?

The BoP, or rather a BoP, was published last week. How long it remains in force isn't known for sure. An explanation of the system in force for 2024 has yet to be given – a media briefing to that effect is scheduled for today (Thursday). But it can be said with some certainty that the FIA and the ACO have backed away from an intent to introduce what they were billing at the end of last year as a simplified system and, in the most extreme manifestation, could have resulted in one BoP for the entire season. Richard Mille, president of the FIA Endurance Commission, insisted at last year's Bahrain finale in November



"I believe that politics will not play a big role in the BoP and that the rules will be enforced as they should be"

that the BoP shouldn't be "a pillow of laziness".

It can be said with some certainty that a U-turn has been made, that the BoP will now be more reactive, with possible scope for race-by-race changes unlike last year. There is believed to be no timeline as in 2023: the outgoing system allowed for just one set of wholesale changes after Le Mans and two so-called platform changes – an adjustment to the balance between LMH and LMDh machinery – after the first two races and again after a further two races post-Le Mans. That plan, of course, was overridden by the powers that be pre-Le Mans.

There can be no confirmation other than through the official channels because manufacturers, teams and drivers are forbidden from talking publicly about the BoP on pain of sanction from the stewards. That is written in black and white in the sporting regulations.

A possible further tweak is also in the pipeline. The organisers are looking to level up the performance profiles of the cars in terms of acceleration and straightline speed. There is provision for what is dubbed a power gain after the cars reach 210km/h (130mph) – a percentage increase or decrease to the maximum power listed for each car in the BoP. The idea was scheduled to be trialled during this week's official pre-season Prologue test in Qatar with a view to a possible introduction at Imola.

The BoP as it stands – and there is no news on whether it could change between the Prologue and the race in Qatar – has hit Toyota, but also Ferrari and, the biggest loser, Porsche. The GR010 is both heavier and less powerful than during the final leg of the 2023 season. Its minimum weight has been set at 1089kg, an increase of 9kg, which has resulted in one hard fact we do know about the BoP. The maximum weight allowed has been increased from 1080 to 1100kg, which isn't an issue. The class minimum for LMH when the Toyota was being designed was 1100kg before its reduction to 1040kg for four-wheel-drive cars as part of the convergence process with LMDh.

LMDh is now the dominant ruleset in Hypercar with the arrival of BMW, Alpine and BMW. The political landscape has shifted: last year there were three OEMs with LMHs and two with LMDhs. Now there are five LMDh manufacturers to rattle the rulemakers' cage.

Rob Leupen, Toyota's race director, insists this is an irrelevance. "I saw enough politics last year and I am confident that we have all learned from the past," he says. "I believe that politics will not play a big role in the BoP and that the rules will be enforced as they should be."

WHAT WILL QATAR TELL US?

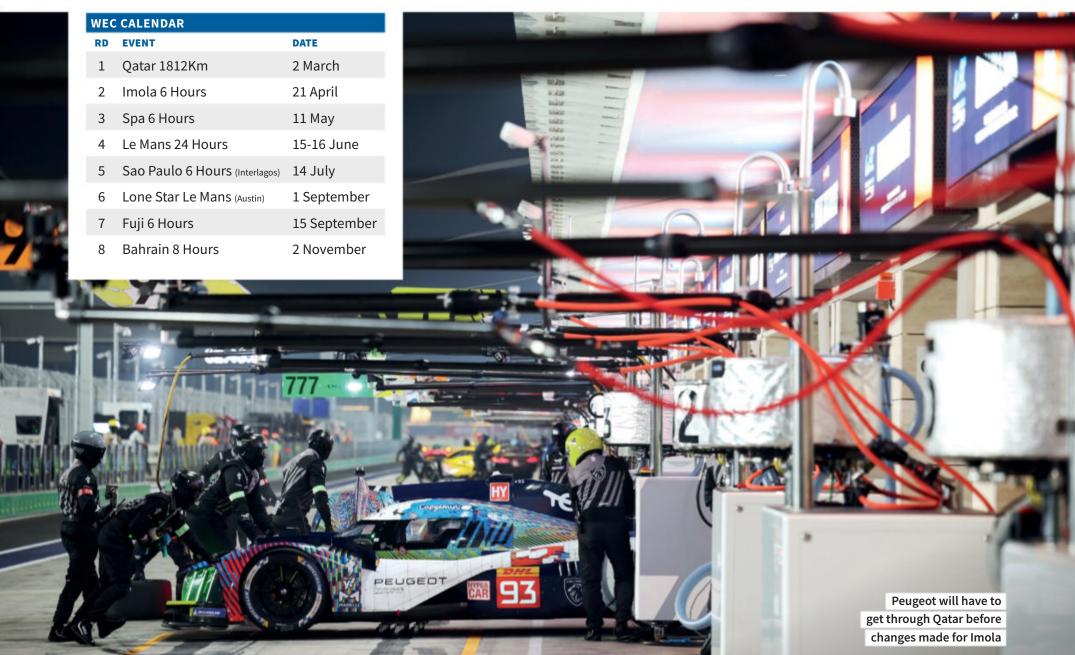
Possibly not a lot. The rebuilt Losail International Circuit could be a bit of an outlier. The new surface that Toyota, Ferrari and the Penske and Jota teams experienced during a test in late November doesn't put a lot of energy through the tyres, resulting in relatively low degradation.

The tyre allocation for the Qatar 1812Km – a race that can run for a maximum 10 hours if that figure, a nod to the year of inauguration of the Qatari state, is not reached – is eight sets. That compares with four and a half sets for a regular six-hour WEC event, so it is slightly more generous. That means if Toyota still has the defining advantage it enjoyed in 2023, pace over a double stint, it is likely to be less of a factor this weekend than in subsequent races. That was one of a number of unknowns at press time resulting from the delay of the pre-season Prologue test from Saturday and Sunday to Monday and Tuesday. The late arrival of freight was caused shipping delays in the Red Sea – the freight was unloaded in Jeddah and driven across Saudi Arabia to Qatar.

But what can be said is that the GR010's advantage will be diminished. Toyota certainly believes so. "I don't think we are as much a favourite as we were last year," says Hartley. "Last year we turned up at Sebring and Ferrari gave us a bit of a wiggly tooth when it took pole. Now there are other manufacturers who are more established and everyone is going to be fighting us harder. The championship is anyone's to take."

Turning up the heat on Toyota





TOYOTA



IEP/MOT

t looks like business as usual at Toyota, the acknowledged king of the WEC.
There's been just one change in the line-up of drivers, with the belated arrival of Nyck de Vries in the #7 GR010 HYBRID Le Mans Hypercar. But what might be described as a tickle to the driving roster isn't the only shuffle of the pack.

What impact a management change at the top of the Cologne-based Toyota Gazoo Racing Europe organisation that masterminds the WEC programme will have can't be determined until the season gets under way. But Pascal Vasselon's surprise and unheralded departure

"There's always something to improve, always some fine-tuning in terms of the running of the team" can't be underestimated. Not only was the long-serving technical director one of the key architects of Toyota's WEC involvement since the beginning, but he was a key political player. Toyota will miss him in its interaction with the rulemakers. He was a master of the smoke-filled room.

On the other hand, new technical director David Floury had long since been lined up to take over from the veteran, who hit 60 last year. He had been Vasselon's deputy since 2021 and before that had been an uber-engineer for the WEC team, as part of the posse from ORECA that helped run the Toyota squad from its WEC entry in 2012 until the end of the 2019-20 campaign. Only the timing of the succession was unexpected.

De Vries should be a bolt-in replacement for Jose Maria Lopez alongside Kamui Kobayashi and Mike Conway. He's not so much

Toyota GR010 HYBRID



Mike Conway Kamui Kobayashi Nyck de Vries

#8

Sebastien Buemi Brendon Hartley Ryo Hirakawa

a newcomer as a returnee. The Dutchman was previously part of the Toyota WEC set-up as test and reserve driver, and had a contract for 2023 to fill the seat he has taken for this year. That deal had a get-out clause if a Formula 1 team came calling, and de Vries went on to have what turned out to be a short-lived career as a grand prix driver with AlphaTauri. Expect an even more seamless transition than when Ryo Hirakawa joined Sebastien Buemi and Brendon Hartley in place of Kazuki Nakajima in 2022.

The six Toyota drivers will have a 3.5-litre twin-turbo V6 contender at their disposal that is largely unchanged from 2023 – there are no performance upgrades. Any revisions have been focused on reliability, serviceability and, particularly, useability. There are new headlights and a new system to adjust the front anti-roll bar, for example.

"There is always something to improve, always some fine-tuning in terms of the running of the team," says Hartley. "We are always working to keep the level as high as possible. But in terms of the car, maybe there's another couple of tenths we can get out of it."

There's one more change at
Toyota this year: a new livery that's
quite distinct from anything of its
previous 11 campaigns. The largely
black corporate colour scheme that
straddles WEC and the World Rally
Championship represents, among
other things, a hate-to-lose attitude.
Nowhere more so than at Le Mans:
making up for its defeat last year
will be near the top of its priorities.



FERRARI



he decision to bedeck the pair of factory 499Ps in a shade of Ferrari racing red inspired by that of the F2007 in which Kimi Raikkonen took the Italian manufacturer's last Formula 1 world drivers' title must say something about its aspirations going into the 2024 season.

Ferrari triumphed at Le Mans in year one of the programme, so now the next target has to be to win the world championship. That stands to reason.

Ferrari was clearly buoyed by its maiden season with its new LMH developed in-house at the Attivita Sportive GT sportscar racing

"We've done Le Mans in 2023, but I want to be a world champion in the top class" department. It was number two behind Toyota in 2023 on average across the season on its way to third and fourth places in the drivers' classification behind the Japanese marque's two crews and the runner-up spot in the manufacturer points. It had slipped to third behind Porsche in the manufacturer hierarchy by its end, podiums at Monza and Bahrain notwithstanding, something that had a lot to do with the BoP swinging against Ferrari after a tickle in its favour pre-Le Mans.

The strengths and weaknesses of the 499P were evident from Ferrari's first event back at the pinnacle of sportscar racing as a factory after an absence of 50 years. Antonio Fuoco put the car on pole position at Sebring, but it wasn't on the pace of the Toyota over a double-stint on a set of Michelin tyres. The Circuit de la

Ferrari 499P

AF Corse

#50

Antonio Fuoco Miguel Molina Nicklas Nielsen

#51

James Calado Antonio Giovinazzi Alessandro Pier Guidi

#83

Robert Kubica Robert Shwartzman Yifei Ye Sarthe at Le Mans is a low-energy track where tyre degradation is less of a factor. That was probably just as important in its victory as the BoP change.

The focus at Ferrari over the off-season has been on developing the package, its three-litre twin-turbo V6 included, rather than pushing through hardware upgrades. Getting on the pace of the Toyota over a double-stint will have been the priority.

The driver line-up is unchanged, which means Le Mans winners James Calado, Alessandro Pier Guidi and Antonio Giovinazzi line up in #51, with Fuoco, Nicklas Nielsen and Miguel Molina in #50.

A big plus for 2024 is the arrival of a third 499P to the attack. Officially it's a customer car even though it is run, like the factory entries, by AF Corse, albeit by a different set-up. It is also driven by two factory drivers, Robert Shwartzman and Yifei Ye joining Robert Kubica in the car. Ferrari has clearly opted to play the numbers game with what would be better described as a satellite entry in a striking yellow livery rather than a customer car.

It is another signal of Ferrari's intent, along with the new look. "The goal is to win; my ambition is to win the world title," claims Calado. "We've done Le Mans in 2023, but I want to be a world champion in the top class. For me this is the most important thing, more than Le Mans. More manufacturers coming into the championship will make it more difficult, but I don't really fear anyone."



PORSCHE



orsche arrives in
year two of its LMDh
programme with
real momentum.
In development, the
963 turned a corner last summer

and became a much more raceable – and competitive – machine. It led for more than half the race at Fuji, the privateer Jota team might have made the podium in Bahrain and, over in IMSA, the Penske factory squad won two of the final three races. And then came the Daytona 24 Hours victory last month.

For much of its maiden season, the 963, developed in conjunction with Multimatic Motorsports, didn't look like a car you'd expect from a manufacturer with 19 outright

"The Daytona win might just be what Diuguid calls 'a springboard' to even greater things" Le Mans wins under its belt. It initially proved unstable in the braking phase, which had implications all the way through the corner. The introduction of a revised diff and hybrid software appears to have overcome that to create a more lithe racing car that rotates better mid-corner.

The developments arrived in time for the Road America IMSA round in August and then in the WEC for Fuji in September. They didn't turn the 963 into a match for the Toyota: the race-leading performance of the #6 car owed much to Laurens Vanthoor's first-corner opportunism. But it was close, witness Kevin Estre hanging onto the lead under intense pressure for the best part of an hour.

The factory Porsche Penske Motorsport squad was clearly number two in the Hypercar pecking order in Japan. It lost that position at the Bahrain finale – to

Porsche 963

Penske



Matt Campbell Michael Christensen Frederic Makowiecki

#6

Kevin Estre Andre Lotterer Laurens Vanthoor

Jota

#12

Callum Ilott Norman Nato Will Stevens

#38

Jenson Button Phil Hanson Oliver Rasmussen

Proton



Julien Andlauer Neel Jani Harry Tincknell Jota. The British team's solo entry might have split the Toyotas but for a penalty, and Yifei Ye produced the fastest double-stint of anyone.

There has also been an important step forward in terms of reliability after a stuttering start with the car powered by a 4.6-litre twin-turbo V8. As PPM boss Jonathan Diuguid points out: "It's fair to say the endurance races weren't our best performances in 2023." That changed with the Daytona victory.

There's another plus in terms of WEC. Matt Campbell, the ace in its pack in IMSA last year, has swapped places with Dane Cameron, who clearly struggled in WEC, to join Michael Christensen and Frederic Makowiecki in #5. The move may or may not make it the equal of the sister car shared by Vanthoor, Estre and Andre Lotterer that generally had the advantage in 2023.

Porsche doesn't just have two cars from PPM (and three at Le Mans). There are five 963s on the grid, courtesy of Jota and Proton. The customers don't score manufacturers' points - they compete in their own teams' classification - but increase its chances of collecting silverware. Both have assembled impressive line-ups, Jota bringing in Jenson Button and Callum Ilott to join a squad that has expanded to two cars. The aspirations are clearly high at Jota, as they are at Proton, which has Neel Jani and Harry Tincknell among its drivers.

Porsche has numbers on its side and a much improved car. The Daytona win might just be what Diuguid calls "a springboard" to even greater things.



CADILLAC



adillac returns for its second World Endurance Championship campaign with the factory Chip Ganassi Racing-run squad, again with only a single car. There had been talk of upgrading to two cars, but finances didn't allow for that, though there will be three V-Series.R LMDhs at the Le Mans 24 Hours, where the second Cadillac Racing entry and the Action Express Racing car from the IMSA SportsCar Championship join the grid. It's a strategy that probably shows where the priorities lie for the General Motors marque.

The Caddy LMDh, for which

"A Le Mans rookie will be driving a car in which he has so far only one race appearance"

General Motors partnered with Dallara Automobili in Italy, hit the ground running at the start of its maiden campaign. It could have made the podium in front of Ferrari on its debut at Sebring in March, and was third quickest car behind Toyota and the Italian machine over the first half of the season. The high point was the podium at Le Mans for the WEC entry, while Ganassi's IMSA car ended up fourth and had the pace, if not the clean run required, to challenge the top two marques. Momentum was undoubtedly lost as it slipped down the order in the wake of the 24 Hours.

Cadillac has taken what Stephen Mitas, boss of its European operation, calls "a holistic approach" to development. "Every day the car is running, we are learning something," he explains. A machine powered by a 5.5-litre normally aspirated V8 is still doing

Cadillac **V-Series.R**



Earl Bamber Alex Lynn Sebastien Bourdais*

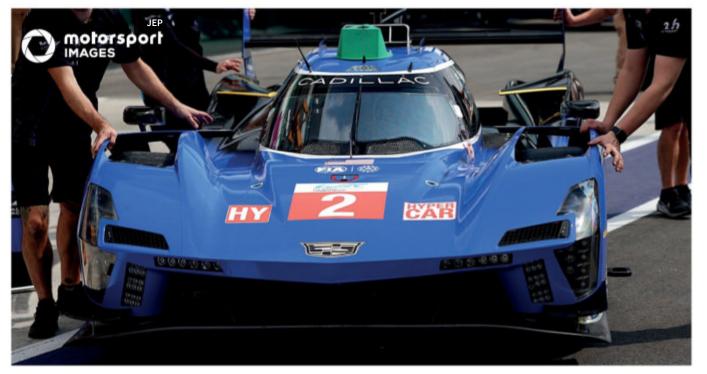
*only confirmed for first round in this car

a lot of running courtesy of its twin programmes across the WEC and IMSA, even if there was only limited winter mileage for the European team. It tested at Motorland Aragon before Christmas, and after that it moved onto car preparation before the boat left for Oatar. Cadillac was the only Hypercar team that seafreighted its car to the Middle East.

A different approach has also been taken on the driver front. Earl Bamber and Alex Lynn continue in the WEC squad in 2024 - with Richard Westbrook released - and will race as a duo in the six-hour events, so five of the eight rounds. It may be an unusual move in the top class of the WEC, but it is not without logic. Just two drivers means more track time for each driver through a race weekend. Sebastien Bourdais joins the line-up for Qatar, and either he or his regular IMSA team-mate, Renger van der Zande, will be in the car for the Bahrain finale in November.

Neither will be available for Le Mans, which is why Ganassi has drafted in IndyCar star Alex Palou. The downside is that a Le Mans rookie will be driving a car in which he has so far only one race appearance, at the Daytona 24 Hours in January, and will miss the Test Day courtesy of an IndyCar clash.

The team appears positive that it can rekindle its early-season form of 2023. "There were some real shining performances," says Lynn. "I think we can use all the positives in an interesting way this year."



PEUGEOT



A

manufacturer with three Le Mans wins to its name has endured a difficult return to the top

of the sportscar tree with its avant-garde 9X8 LMH since it pitched up in the WEC at Monza in the summer of 2022. A single piece of silverware, won at the Italian track 12 months later, is all it has to show for its efforts so far. It is against this backdrop that Peugeot is undertaking a massive overhaul of its concept, a revision that will only come on stream for round two at Imola in April.

The original 9X8, which bows out in pure 2023 spec in Qatar, is a traction-limited machine that has

"We know that the level of competition was very high last year and will be even higher this year" only been anything approaching competitive on the fastest of circuits: think the podium at Monza and a starring performance into the night at Le Mans. The problem elsewhere is that it's been hamstrung by the narrower rear tyres it has run in comparison to everyone else in Hypercar.

Equal-size front and rears were an essential part of the wingless 9X8 concept. It enabled the in-house Peugeot Sport design team to push the weight distribution of a machine powered by a 2.6-litre twin-turbo V6 rearward to facilitate the unconventional aerodynamics. To say it was the wrong choice would be incorrect, because Peugeot didn't have a choice.

The original LMH rules called for the 31/31 tyre option for front-axle hybrid machinery. But when Toyota was allowed to swap to the 29/34 for season two of its

Peugeot 9X8

#93

Mikkel Jensen Nico Muller Jean-Eric Vergne

#94

Paul di Resta Loic Duval Stoffel Vandoorne GR010 HYBRID in 2022, when it argued that its design had been compromised by late rule changes that were a consequence of the convergence process with LMDh, it queered the pitch for Peugeot. When the 9X8 was in conception, the French manufacturer believed that 29/34 would have been the quicker option. The evolutions to the 9X8 are about much more than bolting on a rear wing, what appears to be a low-slung affair from the spy shots (there have been no official photos so far).

"Everything is driven by the tyre choice we are making now: first we needed to move the weight distribution of the car," says Peugeot Sport technical director Olivier Jansonnie. "We needed some lighter parts on the car and to move some ballast, and then retune the aero balance.

"We know that the level of competition was very high last year and will be even higher this year, so it is very important for us to bring something that is making a clear step forward in terms of performance."

Peugeot is looking for the silver bullet in the revised car, but it is also focusing on the detail in looking for the incremental gains. It first promoted Stoffel Vandoorne from a reserve role to take the place of Gustavo Menezes, and then shuffled the pack in the name of set-up preference. Paul di Resta has swapped from #93 to #94 to share with Vandoorne and Loic Duval, while Nico Muller has gone the other way to line up with Mikkel Jensen and Jean-Eric Vergne.



ALPINE



he rhetoric from Alpine is all too familiar for a top-class newcomer, or in this case returnee (its 'grandfathered' ORECA LMP1 was a race winner in 2022). The Renault marque will "remain humble" as it goes into a "learning year" with its new A424 LMDh run by Signatech, says motorsport boss Bruno Famin. But then it was hardly likely to stand up and proclaim that it was going to be winning races from the get-go. Yet there seems to be real optimism in the camp.

Famin insists that Alpine's humility doesn't signal a lack of ambition for its maiden season for

"Famin insists that Alpine's humility doesn't signal a lack of ambition for its maiden season" the A424, developed in conjunction with ORECA. Those ambitions, it seems, appear to be focused on Le Mans in June and then the remainder of the season.

"We need to improve every race and see where we are," declares Charles Milesi, who has stepped up from the LMP2 squad run by Signatech last year to the two-car Alpine Endurance Team line-up. "We are trying to get the car running properly, to get some mileage in the first races to be ready for Le Mans."

Milesi and his team-mates in the two-car squad realise there are many unknowns heading into Qatar. It can't predict how it will stack up against opposition. But development of the A424 – the 'Beta' suffix of last year's show car has been dropped as planned – appears to have been smooth.

The car has racked up 14,000km since its roll-out at Lurcy-Levis in

Alpine A424

#35

Paul-Loup Chatin Ferdinand Habsburg Charles Milesi

#36

Nicolas Lapierre Mick Schumacher Matthieu Vaxiviere August. A first endurance test, undertaken at Motorland Aragon in November, has also been billed a success. The A424's single-turbo 3.4-litre V6, developed at Alpine's engine headquarters in conjunction with Mecachrome from the base of its spec Formula 2 unit, did hit a problem right at the end of a 30-hour simulation. But Signatech chief Philippe Sinault has been quick to point out that it was after the car had racked up in excess of 5000km, more than a Le Mans distance.

Alpine believes it can employ the experience from its F1 hybrid powertrain and Formula E – the Nissan powertrain is developed at Viry – to short-cut development and get on the pace. The hybrid system in LMDh is made up of spec parts, but software is free. That's where it believes it can gain a crucial edge.

The driving squad is made up of familiar faces from previous Signatech escapades, with a couple of exceptions – one notable. Nicolas Lapierre and Matthieu Vaxiviere resume the relationship that took a pair of WEC wins in 2022 and are joined by star signing Mick Schumacher. Putting the sportscar rookie with veteran Lapierre was a no-brainer, reckons Sinault.

Ferdinand Habsburg gets his big break after three seasons in LMP2, which included WEC title success with WRT in 2021. The Austrian is paired with Milesi, one of his team-mates from that campaign, and Paul-Loup Chatin, who has come back into the Alpine fold after racing its P2s in 2014-15.



BMW



he 2023 season was our learning year." So says Maurizio Leschiutta, project manager on the BMW M Hybrid V8 LMDh.

That suggests the expectation at the Munich marque is that it has to hit the ground running in the WEC after a debut season for the car in IMSA in 2023. He does add a perhaps inevitable caveat: that a manufacturer making its first factory bid for outright Le Mans honours since its 1999 victory is new to the Hypercar class, if not the championship after its GTE Pro campaign in 2018-19.

Key to the hopes of BMW, which was fourth in the GTP order – on

"We have taken a lot of steps from where we were last year to where we are now"

pace and points won – in IMSA last year, is that it is now developing a car powered by a four-litre twin-turbo V8 on two fronts. The Belgian WRT squad masterminds the new-for-2024 WEC programme, while Rahal continues as the factory BMW operation in North America.

WRT has been testing with the M Hybrid since last June as it steps up to the very pinnacle of endurance racing after winning just about everything it has ever done in the ranks below. That includes the Spa and Nurburgring 24-hour races in the GT3 arena, not to mention more than 50 championship titles since its formation for 2010, and then two world crowns in LMP2 together with a class victory at Le Mans. "All the tests with WRT ran very smoothly," says Leschiutta. "We did everything we wanted to and generated a lot of data."

BMW M Hybrid V8

#15

Raffaele Marciello **Dries Vanthoor Marco Wittmann**

#20

Robin Frijns Rene Rast Sheldon van der Linde

'Data' is the key world there, because BMW has opted against taking up the chance to make any hardware evolutions under the evo joker rules. But it still reckons it has taken a significant jump forward, even if its showing in the 2024 IMSA curtain-raiser at Daytona didn't yield a result. Both cars hit problems – relatively minor ones, but with major repercussions – but, as BMW M Motorsport boss Andreas Roos points out, things wouldn't have looked so bad had it been a 12-hour race. "We have taken a lot of steps from where we were last year to where we are now, but we are still working on performance and driveability," he says. "But we can still take another step."

If the M Hybrid is on the pace, WRT will exploit it to its fullest. The team has proved it can hit the ground running in a new discipline. Think back to its maiden season in LMP2 back in 2021: it won the WEC title and the class at Le Mans, and took European Le Mans Series honours to boot.

The driver line-up at WRT should be regarded as at least the equal of any in the Hypercar field. It is made up of team regulars recruited into the BMW fold since its deal with the Munich manufacturer was announced in the summer of 2022 (Robin Frijns, Rene Rast and Dries Vanthoor), some marque long-termers (Marco Wittmann and Sheldon van der Linde), and a highprofile winter recruitment from the Mercedes GT3 roster (Raffaele Marciello).



LAMBORGHINI



Lamborghini SC63

#63

Mirko Bortolotti Daniil Kvyat Edoardo Mortara

amborghini makes
a low-key entry into
the top flight of
sportscar racing for
the first time. The

Italian manufacturer's factory Iron Lynx squad is mounting one-car campaigns in the WEC and the IMSA enduros with the new SC63 LMDh developed in conjunction with Ligier Automotive.

Opting to go for single-car campaigns was a needs-must decision for a marque that counts North America as one of its biggest markets. And the young but highly ambitious Iron Lynx organisation has essentially split the team run by Prema, which came under its umbrella in 2021 and fielded a

"We are quite optimistic, confident I would say, that we have a reliable car" pair of LMP2 cars in the WEC last year, although they will re-converge for Le Mans in June. "We have to build our operation," says team principal Andrea Piccini. "One car in each championship was the safest and smartest thing to do." Though that's "not ideal", concedes the former Aston Martin factory driver and race winner in both the FIA GT and FIA GT1 series, "having two cars allows you to shorten your learning curve when you are at the races".

Piccini reckons Lambo and Iron Lynx/Prema are well prepared for the SC63's race debut: the car was never scheduled to contest the first of the IMSA enduros at Daytona in January, so it is racing for the first time in Qatar. "As ready as we can be," is how he puts it.

That's despite a shunt in testing at the end of August that resulted in a one-month testing hiatus for a car that had only hit the track just a couple of weeks previously. It also meant that the second chassis wasn't up and running until the start of this year. Piccini insists that the impact of the shunt was quickly overcome. The programme over 10 separate tests following the Imola roll-out for a car powered by a bespoke 3.8-litre twin-turbo V8 has been pretty straightforward.

"It had little impact on our timeframe – it was not a drama, though better if it hadn't happened," says Piccini. "We were quite surprised from the first time we put the car on track that we did not experience any major issues. So we are quite optimistic, confident I would say, that we have a reliable car."

The spiel from Lamborghini on its aims for year one of the SC63 pretty much mirrors that of Alpine, the other manufacturer with a new LMDh: "The aim is to build performance on the way to Le Mans and be ready to do something good at the 24 Hours, and then to close the gap as much as possible and be 100% ready for 2025. It would be arrogant to come one year late and say we are going to beat everyone this year."

Lamborghini's WEC line-up is made up of long-time Lambo factory driver Mirko Bortolotti, Daniil Kvyat (who joined Prema's P2 squad last year after signing with the marque) and prototype newcomer Edoardo Mortara. This trio will be joined at Le Mans by the IMSA squad of Andrea Caldarelli, Matteo Cairoli and Romain Grosjean.



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ISOTTA FRASCHINI



his once-renowned manufacturer undergoing a relaunch appears to have done everything right on the technical front ahead of its WEC entry with an all-new Le Mans Hypercar. Michelotto Engineering, the architect of the Isotta Fraschini project, has assembled an impressive list of partners in the development of a car known as the Tipo 6 Competizione LMH, WAE Technologies (formerly Williams Advanced Engineering) and HWA among them. What were clearly high aspirations for the project must have been tempered in

"We want to compete, not to be at the back. We think we can be somewhere in the middle"

the run-up to its WEC debut.

First, Isotta made a late switch of team from the British Vector Sport squad to the French Duqueine operation, and made no secret of the fact that it had been motivated by finance. Now the team has announced a driver line-up that on the face of it must be the result of the same considerations. The official line is that the sponsor that came in with Duqueine to support the programme was then involved in the driver choice.

Jean-Karl Vernay, briefly Peugeot's reserve driver back in its LMP1 days, leads the crew after playing a key role in the Tipo 6 development programme that kicked off nearly 12 months ago. Former Audi P1 driver Marco Bonanomi was his partner for much of the programme, but Vernay's team-mates don't have quite the same level of experience. Two young drivers, each a year

Isotta Fraschini 7 oqiT Competizione LMH

#11 Carl Wattana Bennett **Antonio Serravalle** Jean-Karl Vernay

either side of 20, have but a handful of sportscar starts between them.

The new signings are Antonio Serravalle, 21, and 19-year-old Carl Wattana Bennett, the former a veteran of a couple of Indy Lights campaigns, the latter a member of Fernando Alonso's A14 Management roster who is heading into only his third season of car racing. The best way of putting it without damning their credentials is to say that Isotta is pitching up in the rarefied heights of the Hypercar division with two thirds of its line-up made up of silver-rated drivers.

The new drivers and team are on a steep learning curve: Duqueine, a race winner in the European Le Mans Series, only got hold of the Tipo 6 at the back end of last year, testing for the first time at Estoril in December. "It will be a challenging season," says team CEO Max Favard. "We want to be professional and do our best and grow through the seasons."

But there appears to be a decent base to work from. The Tipo 6 hybrid, which is powered by an HWA-developed three-litre single-turbo V8, has so far completed 10,000km in testing. There have been no major problems; a fire at Monza in the summer was caused by a fuel leak.

For Isotta, the aspiration is to be mid-grid, says its motorsport boss Claudio Berro, with the eventual target of podiums. "We want to compete, not to be at the back," he states. "We think we can be somewhere in the middle. we believe that is possible."



GT3 JOINS THE PARTY

The new class replacing GTE Am has brought a cast of nine manufacturers

JAMES NEWBOLD

PHOTOGRAPHY **JEP**



Aston Martin

Vantage GT3

Daniel Mancinelli

Marco Sorensen

Erwan Bastard

Clement Mateu

Alex Riberas

Ian James

#777

#27

in the World Endurance Championship's GT class. While there was nothing wrong with GTE Am's sea of Porsches and Ferraris, with the odd Aston Martin and Corvette mixed in, the new era has plenty of upsides - chiefly, that nine manufacturers will be

represented, each with two cars.

ariety is back in vogue

At least 18 GTs will be on the grid at each round, four more than last season's highest non-Le Mans tally. It would surely be more had the full season overall entry not been capped at 37, since LMGT3 cars have ABS, which make them more accessible to the non-professional bronze drivers who are GT racing's lifeblood. "It makes it easier to make that last step quicker," explains WEC newcomer James Cottingham, "because you get so much more seat time in a GT3 car quickly, and just transfer that to WEC where it's not about relearning the car, so to speak."

Pro drivers with allegiances to manufacturers that previously lacked an eligible car now have a pathway to the top. Sure enough, the 2024 grid features a wealth of experienced GT3 racers new to the WEC.

Many drivers predict that ABS will make the racing closer too. Much will

"The 2024 grid features a wealth of experienced GT3 racers new to the world championship"

also depend on how teams acclimatise to the new-for-2024 Goodyear tyre, designed to start from cold without heaters. ASP Lexus boss Jerome Policand has been impressed by their performance so far in testing, finding warm-up is "not a problem at all. It's not a tricky situation when you exit the pits, they work well. Now the key will be if we can do two stints with the same set."

As in Hypercar, cars will be subject to limitations on energy consumption per stint. This is measured by driveshaft torque sensors and covered by the Balance of Performance.



The Aston Martin Vantage GT3's latest evolution will arrive in the WEC with two squads that partnered the marque's Prodriverun Aston Martin Racing operation last year. Heart of Racing's line-up, which made its series

debut at Spa under the NorthWest AMR banner, is unchanged after taking a best finish of third in Bahrain from its four GTE Am outings. Pro racer Riberas enters his third full season with a squad he first represented in 2020 alongside veteran James, an LMP2 podium finisher at Le Mans in 2005, and silver Mancinelli.

D'Station Racing has an all-new line-up led by Aston works driver Sorensen, whose most recent of his three WEC titles came in GTE Am in 2022. His French team-mates are both WEC rookies, but experienced Porsche racer Mateu's links with Aston date back to the FIA GT1 era when his family team Hexis claimed the 2011 teams' title. Promising silver Bastard, a French and European GT4 champion, has a year of GT3 racing under his belt in Sainteloc-run Audis.

Sorensen says the 2024-spec Vantage is "basically a brand-new car" such is the extent of its upgrades to bodywork and suspension, which he feels makes it "definitely easier to drive". "It should be more in the window when you get to the new tracks we're going to this year," he adds.





WEC with BMW has naturally dominated discussions over WRT's entry into LMGT3. The MotoGP legend's silver driver grading allows him to continue

a partnership with fellow factory driver Martin that yielded a

first GT World Challenge Europe Sprint victory at Misano last year. They are joined by capable bronze Al Harthy, who won two Blancpain Endurance Pro-Am titles in a successful GT3 spell prior to his WEC debut with TF Sport last year.

Gelael remains with WRT after two seasons with the Vincent Vosse-run squad in LMP2. It's the Indonesian's first full season in GTs, though he has raced the M4 in the Dubai 24 Hours. He's joined by reigning British GT champion Leung, who claimed the title aboard an M4, and veteran factory BMW ace Farfus, back in the WEC for the first time since he raced an Aston Martin in 2021.

WRT's LMGT3 crew may be WEC newcomers - its LMP2 team has transitioned to Hypercar and in just its second year with the new-for-2022 M4, but has GTWCE laurels by the bucketload and boasts impeccable credentials. Sporting director Kurt Mollekens, the 1996 Zandvoort Formula 3 Masters winner, previously ran his own KTR single-seater squad, while team manager Elliot Hoffet this year celebrates his 10th anniversary with WRT after spells in Fun Cup and TCR.

Rossi's arrival to the

BMW M4 GT3 #31

Augusto Farfus Sean Gelael **Darren Leung**

#46 **Maxime Martin** Valentino Rossi **Ahmad Al Harthy**











Since its ORECA-built 296 GT3 entered the stage last year, the 488's successor has already proven its worth to Ferrari with wins in the 24-hour races at the Nurburgring and Daytona. Now the AF Corse-run cars, overseen as in the

Ferrari

Davide Rigon Francesco Castellacci **Thomas Flohr**

#55 Alessio Rovera Simon Mann

2023 WEC by the acclaimed Ron Reichert, who led the Red Bull-backed Ferrari DTM project in 2021-22, will seek further glory on the biggest stage of them all.

Factory drivers Rigon (part of AF's GTE Pro line-up from 2014-20) and rising star Rovera lead the respective crews, the older Italian fresh from conquering Daytona with Risi. Ominously, Rigon suggests "this year for LMGT3 we are much more prepared" to extract the car's full potential.

As in 2023, Rigon partners Flohr and Castellacci, the duo entering their seventh WEC season together in AF-run equipment. They will naturally look forward to Fuji, where last year Flohr scored his second win at the track where he broke his duck in 2017.

Rovera, the 2021 GTE Am champion, was part of the line-up that gave the 296 its first GTWCE win in the 2023 Endurance Cup finale at Barcelona. He joins experienced prototype racer Heriau, who has been gaining 296 mileage in the Asian Le Mans Series with Mann and Rigon, the trio peaking with third in Dubai.



Francois Heriau

Its 2024 line-up has a grand total of

In the absence

Dean and Zak

Brown's United

of a tie-up with

there! - ed).

of LMP2 (apart from

at Le Mans), Richard

Autosports remains

on the grid courtesy

McLaren (no surprise

one WEC start courtesy of 19-year-old Chilean Pino, who took third in P2 at Le Mans last year around a race-winning European Le Mans Series campaign with Duqueine. But what they lack in experience, United's crews compensate for in promise. Ex-Formula 2 racer Sato claimed three ELMS wins with United's P2 operation last year, while former bike racer Caygill is known to the team from ELMS LMP3 outings. Pino will be shuffled out of the McLaren line-up into United's LMP2 squad for Le Mans, where Caygill is replaced by Hiroshi Hamaguchi.

Saucy switches to sportscars after three podiums in two seasons of F3, and is joined by reigning Brazilian Carrera Cup champion Costa – who as the silver could prove United's secret weapon. Accomplished historics racer Cottingham completes the line-up after finishing second in British GT last season before gaining experience with the 720S, which received an Evo upgrade in 2023, in the Asian LMS. "The McLaren seemed like the strongest package, especially with United running it," he says.

McLaren **720S GT3 Evo**

Gregoire Saucy Nicolas Costa James Cottingham

Marino Sato Nico Pino Josh Caygill

Lamborghini After running **Huracan GT3 EVO2** Porsches with Proton during last #60 year's WEC, Iron

Lynx switches to

Lamborghini for

its LMGT3 attack

to align with its

But the Andrea

Piccini-led team

Hypercar assault.

Franck Perera Matteo Cressoni Claudio Schiavoni

#85

Michelle Gatting Doriane Pin Sarah Bovy

hasn't completely ditched its Weissach links. The Italian squad is running 911s in the ELMS "because we like to make it a bit more complicated for us," Bovy jests.

The Belgian reprises her partnership with Gatting that netted a first WEC GTE Am victory for the all-female Iron Dames in the 2023 Bahrain finale. Mercedes junior Pin joins them in place of Dames project manager Rahel Frey after Gatting was reclassified as a gold. Bovy, the highestplaced returning bronze from 2023, accepts that the deeper field means "we have no idea what we're going to be faced with". But all three Dames have raced the Huracan - which gained its second Evo update in 2022 – in GTWCE Endurance and IMSA SportsCar rounds over the past 12 months, with former LMP2 racer Pin qualifying third of the GT entrants at Petit Le Mans in October.

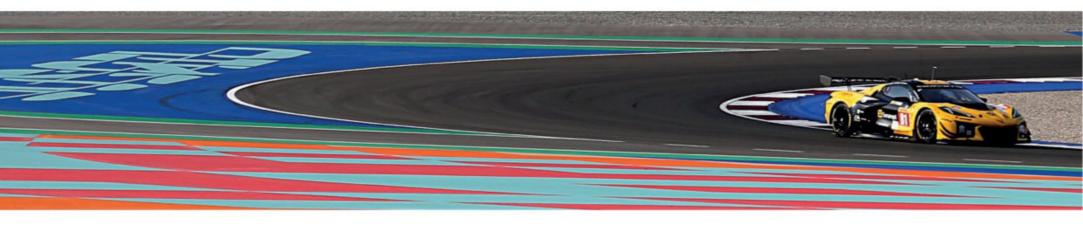
DTM race winner Perera gets a long-awaited WEC debut in the lurid yellow Lambo, after the ex-Toyota Formula 1 tester's sporadic entries with Iron Lynx in IMSA. He joins the Schiavoni-Cressoni pairing that peaked with second at Monza alongside Alessio Picariello last year.







WEC season preview









The Blue Oval returns to the WEC for the first time since its four-year campaign with the Ford GT ended in 2019, with the new Mustang GT3, reprising its technical cooperation with Multimatic. The decision of Proton Competition boss

Ford Mustang GT3

#77

Ben Barker Zacharie Robichon Ryan Hardwick

#88

Dennis Olsen Mikkel Pedersen Giorgio Roda

Christian Ried to switch camps from Porsche to Ford wasn't only down to pragmatism, since he sought to secure the future of a team that has been a GTE Am mainstay since 2012. It continues a relationship with Multimatic that dates back to 2021. The team has already raced the car at Daytona, where its GTD pro-am entry featuring Hardwick and Ford works driver Olsen retired with accident damage.

Roda, 29, was part of Proton's roster that finished second this month in the Asian LMS LMP2 standings. He joins Pedersen, part of Proton's GTE Am winning line-up at Monza last year, and DTM race winner Olsen, the Norwegian branching out after racing Porsches since 2016.

The Robichon-Hardwick axis that stormed to the ELMS LMGTE title last year is partnered by Barker, now a factory Ford driver after eight years in GTE Am partnering Michael Wainwright. The Brit concedes that "there's going to be a lot of learning on the race weekends" as the programme gathers momentum, but is anxious to get going in Qatar. "We're chomping at the bit to get started," he adds.

The French ASP squad will return to Le Mans for the first time since 2014 after swapping Mercedes machinery for Lexus. Jerome Policand's operation, which won the Spa 24 Hours in 2022 and the past two GTWCE Endurance titles, has had links with Lexus

parent marque Toyota for the past 12 months, running its GR Supra GT4 Evo in France last year. That project's lead engineer, Adrien Cera, now heads up the Lexus programme, which has benefited from the input of IMSA GTD Pro champ Jack Hawksworth and TRD USA during testing.

"We had roughly two and a half months to make everything happen since Zandvoort, the last race in [GTWCE] Sprint with Mercedes, until we had to load the container to Qatar," sighs Policand. "We needed support from everyone."

Two-time WEC champion Lopez joins after six years in the top class with Toyota, and his Le Mans-winning experience will be invaluable as ASP adapts to the WEC. Kimura, a series regular with Kessel-run Ferraris, and 2021 French F4 champion Masson complete the roster.

Two-time Nurburgring 24 Hours winner van der Linde gets his shot at the world stage in the sister car alongside ASP regular Boguslavskiy, who conquered GTWCE Endurance last year with two Mercedes works drivers. Robin won last year's Le Mans Cup GT3 title with an Aston Martin.

Lexus RC F GT3

#78

Kelvin van der Linde Timur Boguslavskiy Arnold Robin

#87

Jose Maria Lopez Esteban Masson Takeshi Kimura The 2022 GTE Am title-winning TF Sport squad of Tom Ferrier will run a GT car other than an Aston Martin for the first time since its foundation when it fields the brand-new Z06 GT3.R in Qatar. "For everybody it's a completely new

challenge – how the

Chevrolet Corvette Z06 GT3.R

#81

Charlie Eastwood Rui Andrade Tom van Rompuy

#82

Daniel Juncadella Sebastien Baud Hiroshi Koizumi

car works from the pitstops and everything else," points out Eastwood, a team regular since 2018 who claimed Le Mans GTE Am spoils with TF in 2020.

Now a GM factory driver, the Northern Irishman got a first taste of the V8-powered 'Vette for customer squad AWA at Daytona, but TF's pre-Qatar test wasn't quite so productive thanks to flooding in Dubai. Eastwood is joined aboard the yellow-nosed #81 by experienced prototype racer van Rompuy and Angolan racing hero Andrade, who retains his silver driver grading after scooping last year's LMP2 crown with WRT.

In the reverse colour scheme on car #82 with the black nose, Juncadella joins Corvette's works roster after many successful years with ASP-run Mercedes. For his WEC debut, the 2022 Spa 24 Hours winner and GTWCE Endurance champion teams up with fellow series rookie Baud, the Frenchman also an AMG GT3 regular in recent years. Bronze-rated Koizumi was the Le Mans Cup GT3 runner-up last year in a Ferrari, and raced at Fuji in a first WEC appearance since the same event in 2013.











The Manthey team's credentials need little introduction given its years of running Porsche's GTE Pro operation in the WEC from 2013-22, adding three Le Mans class wins to its brace of GT drivers' and manufacturers' titles. The team run by

Porsche 911 GT3-R

#91

Richard Lietz Morris Schuring Yasser Shahin

#92

Klaus Bachler Joel Sturm Alex Malykhin

brothers Nicolas and Martin Raeder has good form in GT3 racing too, and this month added Bathurst 12 Hour glory to the DTM title it earned last season in the first year for Porsche's new 4.2-litre 992 model.

Lietz, a 2015 WEC GT champion with Manthey, returns after being absent from the full season in 2023 for the first time since the series' inception. Shahin, owner of The Bend circuit in Australia, and 19-year-old Porsche Supercup standout Schuring – the Dutch youngster was aged two when Lietz took the first of his four Le Mans class victories in 2007! – join him in a 911 entered under the Manthey EMA banner.

Belarusian Malykhin, the British GT Silver/Am champion in 2022, graduates under the Manthey Pure Rxcing banner with the drivers he partnered in GTWCE Endurance last season. His alliance with 22-year-old Sturm, who enters his third full season in a GT3-spec 911, and works driver Bachler has already snared the Asian LMS GT title this season. It will be Bachler's first WEC appearance since Le Mans 2017; the Austrian has since largely focused on GT3 rather than GTE.





GT RACING GETS MORE EYEBALLS

Several elements combine to make sportscar racing difficult for newcomers to follow. But in streamlining the World Endurance Championship's class structure for 2024, not only should it be more straightforward to grasp for those lured in by the current golden era, but it will also ensure that the GT battles get a larger share of the television coverage.

It's the nature of the beast with multi-class racing that the fight for outright honours will get top billing. But for the first decade of the WEC's modern existence, the rest of the pie had to be split three ways between LMP2, GTE Pro and GTE Am. Now the structure is somewhat simplified thanks to the vast growth of the Hypercar class, which prompted the call to drop the LMP2 category and devote the rest of the grid to LMGT3.

Based on his experience in the IMSA SportsCar Championship, BMW driver Augusto Farfus believes enthusiasts are set for a treat. "I've seen in America that many times the GT class gives better racing because the cars to a certain extent allow for more contact, more close racing," explains the Brazilian, who raced the M Hybrid V8 GTP car Stateside

in 2023. "In IMSA especially there is as much attention on the GTD class as there is on LMDh, so I think it's a matter of time that people understand.

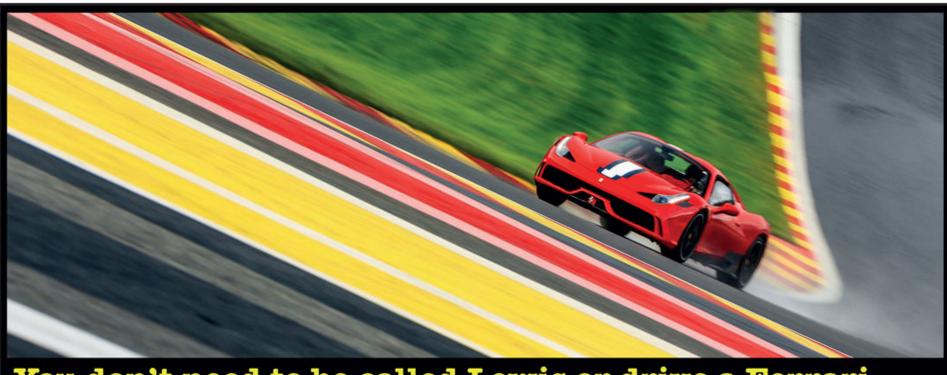
"Of course, the WEC having these three classes in the past, it was not so easy also to broadcast the races because there was always something going on in the classes, and now we're going to have pretty much two distinct classes running together. I have no doubt that the show will be nice and the fans will learn to appreciate the GT class as well."

The absence of LMP2 cars is also a win-win for drivers, reckons Aston Martin ace Marco Sorensen. The reduction in performance forced on the de facto single-make ORECA class since 2021, to ensure that they didn't usurp the new breed of Hypercars, meant they had a smaller advantage relative to the GT pack and therefore a greater impact on their race when overtaking. "[The organisers] had to slow down the LMP2s so much in the past for the Hypercars," states the Dane. "It was a whole mess where the slower the LMP2s actually got, the more annoying it became for the GT cars."



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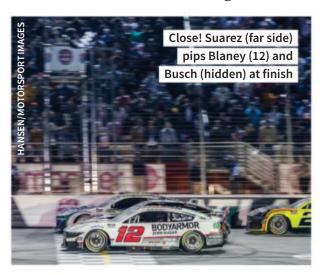
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Suarez nabs it from Blaney, Busch

NASCAR CUP ATLANTA (USA) **25 FEBRUARY ROUND 2/36**

Daniel Suarez experienced a full circle of emotions in last Sunday's NASCAR Cup race at Atlanta Motor Speedway.

The race began with the Mexican's Trackhouse Racing Chevrolet collected in a multi-car wreck on lap two, but by the last of 260 tours he was back in position to contend for the win. Entering Turns 3



and 4, Suarez went to the outside lane as he joined Kyle Busch and Ryan Blaney to make it a three-wide battle for the lead.

The trio drag-raced to the finish line where, after a brief review, NASCAR declared Suarez the winner by 0.003 seconds over the Team Penske Ford of 2023 champion Blaney. Officially, it was the third closest finish in series history and snapped a 57-race winless streak for Suarez.

Suarez, who hasn't had much luck at the superspeedways of Daytona or Talladega, has performed well at the reconfigured 1.54-mile Atlanta oval, where he has four top-six finishes in five starts. The win all but ensures that he will be one of the 16 drivers to compete in the 2024 Playoffs.

"We have done a lot of work on this race team to make it better and to keep moving forward," Suarez said. "This is just the beginning of something amazing that we are going to go through together."

Kyle Busch was credited with a thirdplace finish in his Richard Childress Racing Chevrolet, ahead of Austin Cindric and Bubba Wallace.

JIM UTTER

WEEKEND WINNERS NASCAR CUP ATLANTA (USA) **Daniel Suarez** Trackhouse Racing (Chevrolet Camaro) **AUSTRALIAN SUPERCARS MOUNT PANORAMA (AUS)** Race 1 Broc Feeney

Triple Eight (Chevrolet Camaro) Race 2 Will Brown (above) Triple Eight (Chevrolet Camaro)



For full results visit motorsportstats.com

Broc wins at Bathurst! Then Brown scores

AUSTRALIAN SUPERCARS MOUNT PANORAMA (AUS) 24-25 FEBRUARY **ROUND 1/12**

Any thoughts that Triple Eight's Chevrolet team would take a while to settle in the youngest driving line-up in the Supercars pitlane were swept aside by two convincing victories at Bathurst.

Second-year driver Broc Feeney and new recruit Will Brown traded pole positions and then victories in Saturday's and Sunday's 250-kilometre races, and left Mount Panorama already looking like the drivers to beat in 2024. Brown's 2-1 results give him the edge in the championship points after Feeney finished third on Sunday, largely because of a five-second pitlane penalty after a clash with a fast-starting James Golding (PremiAir Chevrolet).

That penalty dropped Feeney behind the other form driver of the weekend. Chaz Mostert sacrificed a little straightline speed from his Walkinshaw Andretti United Ford Mustang and took third in the opening race. He led 23 of



the first 30 laps in Sunday's race after winning the start from the outside of the front row, but Brown's pit strategy put him ahead after the second round of stops, and Mostert had to settle for second.

While the good news was less good for the other Ford drivers, what did appear as a positive was that the Chevrolets did not dominate as they did in 2023. Richie Stanaway was particularly fast on Saturday, when he was fourth in his Grove Racing Ford, while Thomas Randle (Tickford, fourth on Sunday) and Matt Payne (Grove) also showed speed in their Mustangs.

One of Ford's favourites for the title, Cam Waters, had a difficult weekend.

He missed the two Top 10 Shootouts by just 0.4s and 0.2s respectively, but so close is the field that he started the races from 20th and 18th and from there did not gain much ground. On Saturday he lost a front wheel and was classified 22nd and, on Sunday, 16th was all the Tickford Mustang could manage.

Triple Eight apart, best of the Chevy drivers was David Reynolds, eighth and sixth in his first event with Team 18. Erebus Motorsport's new line-up had an up-and-down time, Jack Le Brocq taking a best of eighth and Todd Hazelwood 11th.

PHIL BRANAGAN

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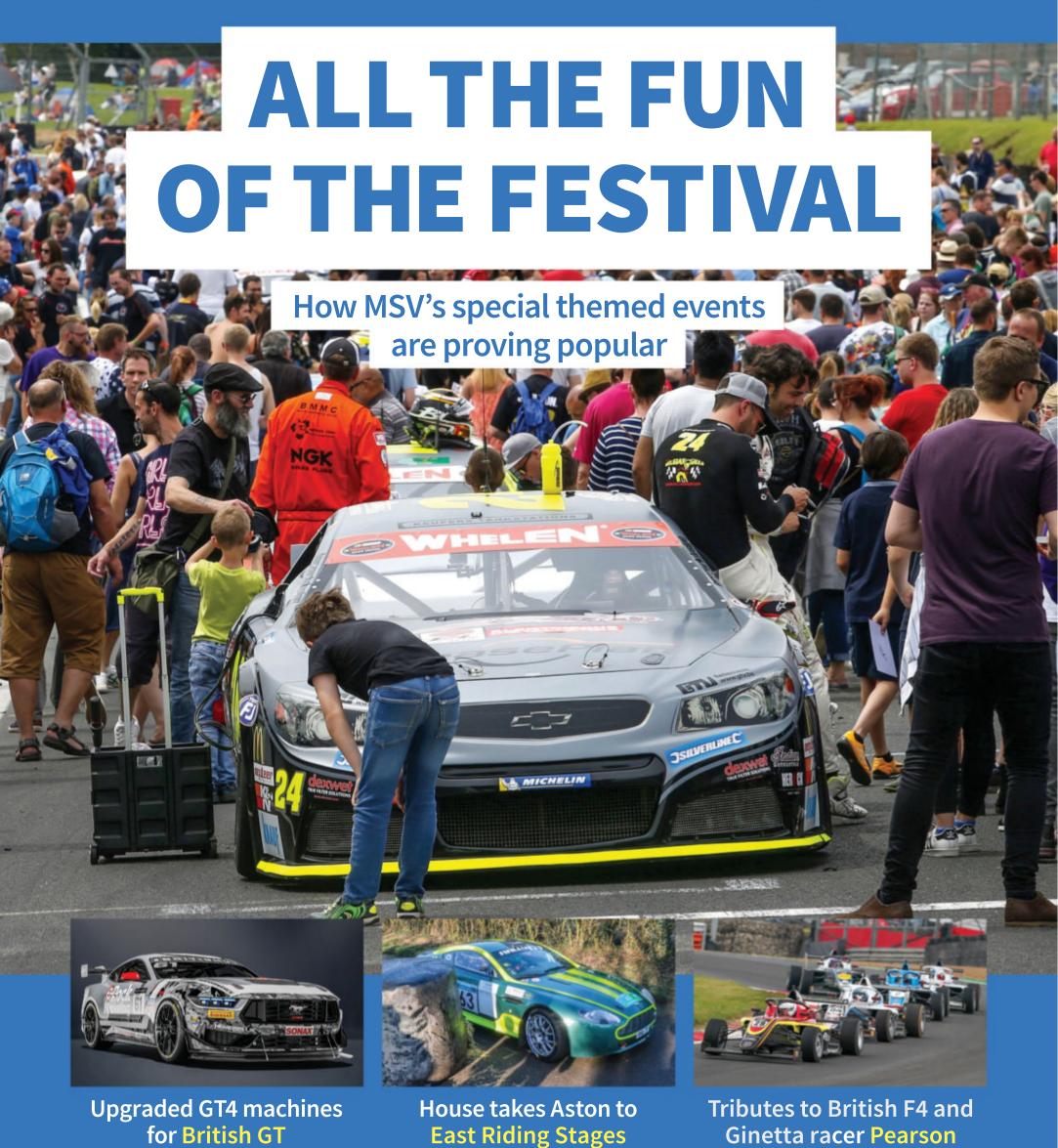


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OBITUARY

Tributes have been paid to former British Formula 4 and Ginetta Junior racer Joel Pearson, who died last week after a courageous three-year battle with cancer. He was just 19 years old.

Pearson first made the switch from karts to cars partway through 2018 before contesting two full Ginetta Junior campaigns, finishing eighth in 2020 after taking two podiums. He was then due to graduate to British F4 the following year with Argenti Motorsport prior to his cancer diagnosis.

The Yorkshire teenager resolved not to let his illness put a stop to his racing dreams and continued to drive on simulators during his treatment, while Mercedes F1 boss Toto Wolff and stars George Russell and Max Verstappen were among those to film messages of support. But the particularly rare form of cancer in his pelvic area required specialist help and he travelled to

Germany and the US, determined not to let the cancer defeat him.

Pearson's resilience was rewarded with an inspirational return to competition for 2022. "It's the thing that was keeping me going – I was trying to stay positive and wanted to get back to racing," he said at the time. "It's a case of going out there and having fun."

Sure enough, he was able to enjoy his racing passion once again, contesting the opening half of the British F4 campaign with Chris Dittmann Racing and taking a best result of fourth, before he broke his thumb in a Croft crash. Sadly, the cancer was subsequently found to have returned, but still Pearson fought bravely and tested several sportscars last year.

"Joel lived and breathed motorsport
- racing cars was all he cared about,"
recalled his manager, ex-British Touring
Car driver Phil Glew, who said he
"instantly developed a bond" with
Pearson and his family after first working
with then-15-year-old when he joined

R Racing in 2019. "It was an absolute pleasure just to coach him, be his friend, mentor him and be around him. He was a warrior – he had a picture of a bull on his helmet – and it's just so hard to take. Our hearts go out to his family."

R Racing boss Jamie Ross added that he would remember Pearson for his personality off track, rather than just his prowess on it: "He never had a smile off his face. My dad described him as a gentle soul and he was too nice for motorsport really! Everyone he met just liked Joel."

Dittmann also has fond memories of working with Pearson, believing he had the talent to fight at the front of F4. "He started with us on the back foot with no testing and he wasn't at full fitness, so to have the results he did, you could see the potential in him," added Dittmann. "I never saw him moan or whinge, he was really grateful for what we had."

BTCC ace Josh Cook was among those to coach Pearson as he climbed the ranks and recalled a particular day at Thruxton: "Ash Sutton was in car with Aston Millar, and I was in car with Joel on a private hire day. It ended up Ash and I being driven by these youngsters in a bit of a race! It was a real standout for me of his abilities behind the wheel. Very few people had his love and dedication for driving. He was a really genuine, kind person – no ego at all and really willing to learn."

Pearson's funeral is due to take place on 12 March in Leeds, and Autosport sends sincere condolences to his family and friends.

STEPHEN LICKORISH





BRITISH GT

Reigning Porsche Carrera Cup GB champion Adam Smalley will make his British GT Championship debut this season at the wheel of a Garage 59-run McLaren 720S Evo GT3.

The 23-year-old, who is also a former Ginetta Junior and GT4 Supercup champion, will partner Shaun Balfe after the Am driver moved across from Barwell Motorsport.

"I've always wanted to do GT racing and I think this is a fantastic step to becoming a factory driver," said Smalley. "I looked at all the options – being the Porsche Junior has been an incredible experience and winning the championship was great. This just seemed like the best next step for my career. The way the world is now with GT racing, it's all on the up and there's a lot of opportunities."

Despite being new to the championship, Smalley is aiming for outright success alongside Balfe, who is one of the most experienced Ams in a series he first contested in 1999.

"It should be an exciting season," added Smalley. "The goal is to win the title – the approach doesn't change to last year. But I'm also realistic and I know it's going to be very difficult – there are some of the world's best drivers on the grid this year and it's an incredibly tough challenge."

The second Garage 59 McLaren will be driven by Marcus Clutton and Morgan Tillbrook, who remain together for a fourth season. The pair, who have taken three outright British GT wins, ran their own Enduro Motorsport team over the past three years, but disbanded the squad at the end of 2023 in order to focus on their racing.

"We did a two-day test last week, which was positive, the first time with the team," said Clutton. "For me personally, the stress levels have come down massively and I think it's potentially the final ingredient for that big push now. I think, if there's ever a time where we're ready, it's now."

STEFAN MACKLEY & STEPHEN LICKORISH

New Mustang and Vantage ready to go

BRITISH GT

Erik Evans will defend his British GT4 title this year using one of Academy Motorsport's new Ford Mustangs, partnering returnee Marco Signoretti.

American Evans clinched the 2023 GT4 title alongside Matt Cowley, while Signoretti raced for Academy in 2022.

"Last year, seeing the passion

and excitement the British racing fans had for the car and our team was remarkable and inspiring," said Evans (right). "With the support of our partners and having Marco as my team-mate, I am superexcited to see what we can accomplish unleashing this new beast on our competition."

The second Mustang will be driven by Will Moore and

Matt Nicoll-Jones once again.

Another upgraded car to hit the track in British GT4 this season will be the Aston Martin Vantage, two of which will be fielded by Forsetti Motorsport. Mikey Porter and Jamie Day will form an all-silver pairing, while the second will be driven by Mini ace Will Orton and Porsche Sprint Challenge victor Marc Warren in Pro-Am.



Avon tyres still set to be produced after Nova deal

AVON

The historic Avon brand is set to continue and some of its tyre ranges will still be manufactured, despite the closure of its factory at the end of last year, following an agreement between parent firm Goodyear and the new Nova Motorsport tyre company.

Goodyear has confirmed that Nova has bought "certain assets used in the manufacturing and sale" of Avon Motorsport tyre ranges, including the brand licence. These tyres are set to be constructed at a new facility, independent of the Goodyear group, and Vintage Tyres will continue to act as a UK dealer for the rubber.

"We were fully cognizant of the potential repercussions that the closure of our Melksham facility in the UK could have on some niche motorsport championships, hence we are pleased to have signed an agreement regarding



these assets," said a Goodyear spokesperson. "We are fully supportive as they industrialise production in the coming period.

"We would like to take this opportunity to highlight that Nova will license the Avon Motorsport and Avon Racing brand names for use in connection with the production of certain Avon Motorsport product ranges, which will be announced later. Goodyear remains the owner of the Avon brand and this agreement does not change the brand's position in Goodyear's portfolio."

Nova (which is Avon spelled backwards) is a new division of the SPC Rubber group and contains former Avon employees.



Championship winner Steller to return to British GT with Audi

BRITISH GT

Steller Motorsport will return to British GT this season, fielding an Audi R8 LMS GT4 for Pro-Am pairing Jordan Albert and Tim Docker.

The team spent last year racing in the Le Mans Cup after taking the 2022 British GT4 title with Sennan Fielding and Richard Williams. Albert has competed in British GT over several seasons, including being a GT4 title contender with Beechdean in 2016 and winning at Brands Hatch in 2020 aboard Academy Motorsport's Ford Mustang.

"Steller Motorsport are an impressive team with great infrastructure and they were championship winners in 2022, so I trust they are going to provide a great package," said Albert, who was also on McLaren's young driver roster.

Docker will make his British GT debut following a strong GT Cup campaign with Albert in a McLaren last term that yielded class wins.

Also racing in British GT4 this season will be 2020 champion Dan Vaughan, who will form a Pro-Am partnership with Kavi Jundu aboard an upgraded Toyota GR Supra GT4 Evo run by Speedworks. Charlie Robertson, meanwhile, will move away from Ginetta and drive a Century-run BMW M4 GT4 with Ginetta GT Academy runner-up Ravi Ramyead.

LLOYD MOVES TO BRITISH F4

Ginetta GT5 runner-up Ella Lloyd will switch to single-seaters this season with JHR Developments in British Formula 4. "I started testing with the team in the middle of last year and that has been going well," said Lloyd, who has also enjoyed success in the worlds of show jumping and skiing.

THREE DRIVERS FOR GB3

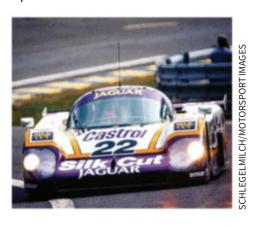
Chris Dittmann Racing will run Formula 4 graduate Sebastian Murray and karting champion Flynn Jackes in the GB3 Championship this season. Scottish-born 16-year-old Murray, who is based in the United Arab Emirates, raced in two rounds of GB4 last season and took a best result of fifth in this year's F4 UAE series. "The GB3 Championship is filled with amazing tracks and talent, and I am very excited for the challenge ahead," he said. Jackes, meanwhile, returns to GB3 after contesting three races with Hillspeed in 2021. Also racing in GB3 this season is American Nikita Johnson, who joins VRD Racing by Arden after finishing runner-up in USF2000 with VRD, despite being just 14 when the season started.

FOX SIGNS BRUCE FOR GB4

Megan Bruce will race for Fox
Motorsport in the GB4 Championship
this season. The 19-year-old made
her racing debut in the Caterham
Academy in 2023, securing a single
podium finish in the one-make
series. "Adapting to the change from
a Caterham on treaded tyres to a GB4
single-seater with slicks and wings
has been interesting so far, but the
Fox Motorsport team have made
me feel at home," she said.

XJR-9 SET FOR DEMO LAPS

The Jaguar XJR-9 that finished fourth in the 1988 Le Mans 24 Hours (below) is set to complete demonstration laps at the Brands Britannia event on 26 August. Meanwhile, an XJR-11 that enjoyed success in 1990 is also due to be among the static displays at the event that celebrates the British motor industry, while featuring race action from the Classic Sports Car Club.



House's Aston stars as Kelly is East Riding victor

RALLYING

Former VW Racing Cup champion Phil House turned heads on last weekend's East Riding Stages when he teamed up with JWB Motorsport boss Nick Beaumont to tackle the closed-roads event in his ex-works Aston Martin Vantage GT Rally.

Only four rally versions of the Vantage were ever made as a partnership between Prodrive and David Appleby Engineering, with House's car rallied in Europe by Stephane Sarrazin and by Appleby himself. Prior to this year's East Riding Stages, House had used the car at the Goodwood Festival of Speed and Yorkshire Motorsport Festival, as well as for various other demonstrations.

"Last year doing my first closed-road rally I was scared, but doing this year in the Aston I was petrified," said House, who finished 44th overall and sixth in class. "A brilliant



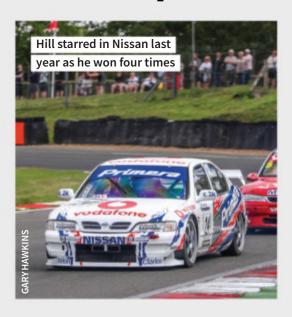
day, it was a real handful on the wet and slippery opening stages. The afternoon was amazing, though, and I really got the feel for it as well as entertaining the spectators."

Among the top crews, the Skoda Fabia of Mark Kelly and Will Atkins was never headed and was fastest on six of the 10 stages. Kelly won by five seconds, after James Williams/ Ross Whittock (Hyundai i20 R5) halved the gap on the last stage. Reigning UK Asphalt champions Callum Black/Jack Morton consolidated third in their Ford Fiesta Rally2, after a change to harder tyres paid dividends.

Winners for the past two years, David Henderson/Chris Lees, retired after a turbo pipe came off their Fiesta early on, while multiple Scottish and 2011 British Rally champion David Bogie also had a swift exit after wiping out a wall on the first stage.

PETER SCHERER

More Super Touring Power racing for Hill and Reid



SUPER TOURING

British Touring Car stars
Jake Hill and Anthony Reid
are due to race Nissan
Primeras again at this
year's second edition of
Super Touring Power
at Brands Hatch.

Hill won all four Super Tourers races at the inaugural event last season in a 1999 John Danby Racing-prepared Primera, while Reid took a best result of third in the machine he drove in the BTCC in 1998. The races, using the Brands Indy and Grand Prix circuit layouts, will be held across 29-30 June.

"A huge thank you to Richard Wheeler, the owner of the Primeras," said Hill. "I love the idea that we get to race on the two layouts during the weekend, and honestly the car is absolutely awesome. Somehow the car held together for all four races last year, and that's partly down to the preparation of John Danby Racing – they're a great bunch."

Wheeler is set to race a third Primera, while his newer ex-Dan Eaves Honda Integra is also slated to be in action.

MARCUS SIMMONS & STEPHEN LICKORISH

P90 NATIONAL FOCUS





New halo car for South African junior single-seater series

MSA F4

Motorsport South Africa's junior singleseater racing future has been secured with this week's launch of a bespoke Formula 4-type car at an accessible price for its next phase, starting in 2025.

The initiative of UK-born Ian
Schofield, chairman of Investchem –
sponsor/promoter of the Formula 1600
championship it will supersede – the
MSA4 answers varying competitors' needs.

"We came up with the idea a couple of years ago and have worked to perfect it," said Schofield. "Bertrand Decoster wanted to sell me all the [obsolete] Mygale F4 cars, patterns and jigs. But that wasn't a way forward and the carbon-fibre tubs concerned me. So we have stuck with a tubular steel chassis, incorporating a halo

and side impact structures. It's what parents want. They look to F1, F2, F3 and F4 and see halos. Without them it's a deal-breaker."

Designer Achim Bergmann is partner with top fabricator/engineer Stuart Thompson in WCT Engineering at Kyalami, renowned for creating Dakar raid vehicles. "If spaceframes are strong enough for the Dakar – the world's toughest race – they are good enough for us," added Schofield.

The MSA4 takes the Hewland sequential gearbox, suspension, brakes and wings from current F1600 cars – Mygales of 2001-10 Duratec vintage – meaning owners can update cost-effectively with a chassis kit, bodywork and slightly wider centre-lock wheels. Volkswagen Motorsport is backing the initiative, supplying one-litre, three-cylinder engines from the SA-built VW Polo. MARCUS PYE

Cooper ace Hammond eyes JCW switch

MINI CHALLENGE

Former Mini Cooper champion Matt Hammond plans to move to the top JCW class this year and has bought a car to race.

Hammond won the 2017 Cooper title before spending a spell on the sidelines working for Excelr8's Mini squad. He returned to racing in 2021 and was in championship contention again both that season and the following campaign, before taking a year out in 2023 in preparation for the JCW move.

"I've done my time in the Coopers and the dream has always been to one day move into JCWs," he said. "I've worked with the cars during my time behind the scenes with Excelr8, and have pretty much done everything apart from actually race one!

"The obvious challenge is that the budget needed to

compete in the JCWs is much larger, but I'm working hard to try and make it happen."

Meanwhile, another past Cooper champion – 2021 title winner Dominic Wheatley – will remain on the JCW grid for a third year, and is moving to Excelr8 after finishing ninth in the 2023 standings with Graves. Mannpower Motorsport has also announced that fatherand-son Trevor and Jamie Keates will race for the squad.

FURTHER TCR UK RECRUITS

Multiple podium finisher Callum Newsham (JH Racing Hyundai i30 N) and former British Touring Car and GT driver Mark Smith (privateer Cupra TCR) will both continue in TCR UK this season. Newsham has finished in the lower reaches of the top 10 in the standings for each of the past two years while hampered by unreliability. The son of BTCC race winner Dave qualified on the front row and finished second at Brands Hatch last October.

TAAFFE'S SCHOLARSHIP WIN

TJ Taaffe has been named the latest winner of the Irish Junior Mini Scholarship with his prize including the use of a car and tyres, entry and testing fees. Runner-up Leo Richardson will receive free entries, while third-placed Jayden McBrearty will be given free testing at Mondello Park. The previous two scholars, Bobby Joe McFall and David Travers, have both gone on to win the Irish Junior Mini title.

CRONIN BACK TO BRC

Four-time British Rally champion Keith Cronin has confirmed that he will return to the revamped series this year for another attempt at sealing a record-equalling fifth title at the wheel of a Ford Fiesta Rally2. His younger brother Robert, meanwhile, will spend a second season in the Porsche Sprint Challenge GB with Team Parker Racing, driving one of the new RS versions of the Cayman.

ROVER WINS RALLY

A Rover P6 crewed by Peter and Louise Morton (below) was a surprise classic class winner of Rally the Globe's Road to Hanoi Marathon, a month-long endurance test across Vietnam, Cambodia, Thailand and Laos. "Everyone said we were mad to have a Rover as they break down, but my dad had one and I wanted to persist," said Peter Morton. "The car was incredible as was the organisation and the camaraderie among the competitors." The pre-war class was headed by the Chevrolet Fangio of Daniel Sauter and Martin Ruebel.





Since the first Mini Festival over a decade ago, MSV has added lots of other special events to its calendar to showcase UK motorsport to the masses

STEPHEN LICKORISH

PHOTOGRAPHY GARY HAWKINS

very weekend during the thick of the national racing season there are scores of events taking place that feature a stunning array of cars and some brilliant battling. Yet it's no secret that, at many of these race meetings, very few people are spectating trackside and get to witness this action – it might just be the marshals and a small number of family and friends of the participating drivers. But leading circuit operator MotorSport Vision has been trying to change that for the past decade, by organising an increasing number of special, themed events that have attracted thousands of people through the gates and showcased the wonders of club racing to a whole new audience.

"We're fortunate we have so much national racing compared to a lot of other countries, and the racing at some events is really superb, and the hardest thing as a circuit operator is to attract spectators to race meetings," admits MSV group motorsport event manager David Willey. "The way these festivals and car shows work is we're attracting people who have an interest in a certain theme or car or manufacturer, bringing them to our event and they see some relevant racing – we're attracting people that wouldn't usually come to a race circuit."

While MSV does not publicise attendance numbers for such events, the sizeable crowds are hugely important for the whole motorsport industry. "Your first experience of a race track hooks



you for life and that's the aim," explains Willey. "It might get people wanting to start racing themselves – whether you become involved in the industry as your career or as a volunteer or marshal or spectator, it's a great way to develop people's interest."

With circuits offering huge open spaces to fill with car clubs, family entertainment, trade stands and caterers, it's no wonder Willey says venues such as Brands Hatch lend themselves perfectly to such festival-style events. "We've got a fantastic creative team at MSV," he adds. "We are the circuit owners and operators so we have the control to do what we want, so it's a very blank canvas."

That blank canvas was first filled by a special themed event back in 2012, with the inaugural running of the Mini Festival at >>

2024 MSV SPECIAL EVENTS CALENDAR



American SpeedFest, Brands Hatch

This event embraces all things Americana, and a special Ford vs Chevy muscle car race is joining the regular EuroNASCAR, Legends and Pickups contests and NASCAR demos.





Supercar Pageant, Oulton Park

There are some impressive cars on and off the track at this Cheshire meeting. The supercars of the GT Cup top the racing bill, while plenty more gather around the venue.



Super Touring Power 2, Brands Hatch

The ever-popular Super Tourers headline this tin-top extravaganza, but the Classic Touring Car Racing Club's categories cater for a huge range of eras, with a Group A focus this year.



Historic Gold Cup, Oulton Park

A multitude of different historic racing organisers feature at this Historic Sports Car Club-administered fixture, which spans pre-war beasts to unique Special Saloons.



Mini Festival, Brands Hatch

The original MSV themed event attracts thousands of Mini enthusiasts. The Mini 7 Racing Club provides great battling, while the Fastest Mini in the World race adds modified variety.



Festival Italia, Brands Hatch

There is a distinct Italian flavour to Brands in August with Ferraris and Alfa Romeos on track, while several Formula 1 cars take part in popular demo runs, alongside Italian-themed food.



Cult Classics, Cadwell Park

This event draws its inspiration from several of the British Racing & Sports Car Club categories, including Mazda MX-5s and BMW Compacts, and celebrates such 'cult classics'.



US AutoShow, Oulton Park

Following the success of American SpeedFest, Cheshire now gets a taste of the American theme later in the year with the eclectic Bernie's V8s grid among the star attractions.

CLUB AUTOSPORT NATIONAL FOCUS

Brands Hatch. "At the time, I was working a lot with the MSVR side of the business and we just took on the Mini Challenge back then," recalls Willey. "It's a great race series and we thought if we got Mini Challenge, the Mini Se7ens and Miglias, Super and Mighty Minis plus a one-off pre-'66 race, that makes one hell of a race meeting. There's lots of Mini shows but the unique element of our event is it's giving racing and a car show."

The event has evolved from there and continues to be enormously popular. Off track, hundreds of Minis are assembled and thousands of brand enthusiasts attend. On track, a diverse range of Minis compete, including the modified beasts of

the Fastest Mini in the World race. The Mini 7 Racing Club is another that provides plenty of race action and it views the Mini Festival as an important event in its season. "It's the focal point for Mini racing and it's a real treat to go to," says the club's commercial manager Colin Peacock. "It's tremendous racing in front of the crowds and it's great for our sponsors – Mini Spares love it. For us, it's become a mainstay event and we base our calendar around it."

Encouraged by the potential shown by that very first Mini Festival, MSV decided it was "a good template" that could be used to create other special meetings. Next to join the roster was American SpeedFest in 2013. "At the time, we had EuroNASCAR that was supporting DTM in 2011-12," recalls Willey. "This race series, while it's great to support

DTM, we thought it can probably hold its own and thought an American event would be incredible. We took the template of the Mini Festival, having American racing and American car owners off track." Now, in June each year, the Kent circuit is transformed to completely embrace the Stars and Stripes theme. Legends, Pickups and some of the American muscle cars found in the Bernie's V8s series support EuroNASCAR on the race timetable, while special off-track displays have expanded to even include a country music festival for the 2024 edition.

In the decade since SpeedFest debuted, the number of specially promoted MSV events has risen to 14, but few have enjoyed quite the instant popularity that Super Touring Power achieved last July. The big-spending era when star names did battle on UK shores is widely regarded as a halcyon period of the British Touring Car Championship, and it was little surprise that fans flocked to Kent in their masses when a special event was put on to celebrate these machines and their drivers.

"With Super Touring Power, we worked very closely with Stuart Caie from the Classic Touring Car Racing Club," explains Willey. "I met with Stuart a year or so before the event last year and said, 'Your club has got some amazing cars, it would be fantastic to develop some sort of classic touring car festival.' There seems to be a real following for these cars, and the team at MSV and CTCRC worked really hard to get as many display and demo cars."

To have the likes of Antipodean aces Greg Murphy, Steve

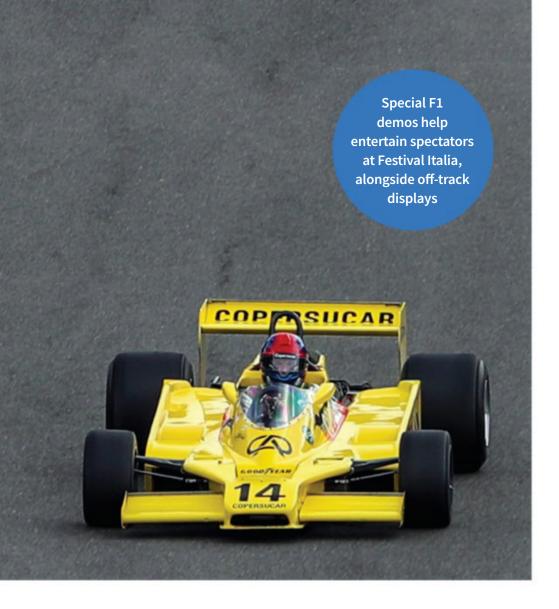


Richards and Paul Radisich competing at the inaugural edition was a major coup, while plenty of tin-top legends could be found away from the track, too. "It was a major highlight," enthuses Willey. "I've never been to an event that was so full of enthusiasts and everyone had a smile on their face. It was like going back to the '90s – people were seeing their idols and it was just magical."

Events such as Super Touring Power show that it's not just MSVR's own categories that benefit from the increased exposure and promotion of the special festivals. Another example is Brands Britannia. This was also launched last year and runs alongside a Classic Sports Car Club race meeting while embracing the heritage of the British motor industry. CSCC director Hugo Holder describes it as one of the highlights of the club's 2023 campaign and the event is set to further develop for this year. "We had gridwalks and Morris dancers on the grid and that went down really well, and it's going to come back bigger and better," he says. "We're tailoring the racing to get a whole load of British cars racing on the same day."

But whether it's the Italian exotica of Festival Italia or the American might of Oulton Park's US AutoShow, all of these special events require a huge amount of preparation in order to attract the crowds. "We've got a great team, led by Alex Robinson, who organise and put together all the content we have at these events," says Willey. "They look after the entertainment and display cars, the car clubs and owners. They're dealing with hundreds of cars





"Super Touring Power was like going back to the '90s – people were seeing their idols and it was magical"

and owners' clubs, live music, themed catering and trade stands."

Months of planning is undertaken, and each member of the team is allocated specific responsibilities on the day of the event, whether it be looking after the music stage, coordinating the artists and engineers, or overseeing the successful creation of a craft tent. Once everything is set up, the whole team then comes

together to ensure the large car parades are organised to precision. Inevitably, the popularity of these events does create its own challenges. "We have to balance the venue space available for clubs and owners against other entertainment content that adds value, and most of our events are at capacity now," says Robinson. "We help to manage this by being very strict on the entry criteria, particularly for historic festivals like the Gold Cup at Oulton Park. Ford Power Live at Brands Hatch is our busiest event, and the one that fills fastest, with well over a thousand Fords."

Despite all of this success, Willey and the rest of the MSV team are certainly not taking anything for granted. "Hosting this type of event does take a huge amount of work and investment in terms of marketing and promotion," he acknowledges. "We've been pretty successful in doing that, but it only takes bad weather and you can get unstuck."

So far, MSV has been able to avoid such pitfalls and these festivals' popularity has demonstrated that there is still a clear appetite for motorsport and motoring in the UK, even when there are so many other competing demands for people's time. And, with each event targeted at a subtly different audience, there is always one eye on the future and what other themes could be introduced. For example, a third American-focused fixture is being added for 2024 – this time at Snetterton, where MSV is hoping to capitalise on the numerous US Air Force bases in the area to help generate interest.

But all of this has come a long way from the uncertainties prior to the first Mini Festival back in 2012. "We marked out the spectator areas for all the clubs we contacted," recalls Willey. "I will never forget thinking, 'I hope all these Minis turn up for the displays.' Fortunately, they did." And Willey and the rest of the MSV team have not looked back since.

26 AUG

Brands Britannia, Brands Hatch

Another new event for 2023, this one pays homage to the glory years of British carbuilding. The Classic Sports Car Club entry provides plenty of MGs, Jaguars, Morgans, Minis and more.



USA Snetterton 300, Snetterton

The latest addition to MSV's themed roster is a third American celebration, this time tapping into the US air bases that surround Snetterton. Legends and Bernie's V8s are on the race bill.



Vaux Valves, Donington Park

There may not be any one-make Vauxhall race series currently, but this event has plenty of off-track displays commemorating the famous Griffin, along with some on-track demos.





Ford Power Live, Brands Hatch

This weekend is perfect for fans of the Blue Oval and is among the best attended of MSV's festival fixtures. Modified Fords, EnduroKa and FF1600 are among the Ford-based series set to be racing.



Autos de France, Oulton Park

Also new for 2023 was this French celebration. The British Automobile Racing Club's Citroen 2CVs and Junior Saloon Saxos race, while the likes of a Peugeot LMP1 have been gathered.



Trucks and Fireworks, Brands Hatch

The BARC's end-of-season Trucks meeting always draws a good crowd, and the addition of one of the best-regarded fireworks displays in the south east only helps pull in the punters.



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FINISHING STRAIGHT



Bahrain Grand Prix

F1 World Championship **Round 1/24**

Sakhir, Bahrain

2 March **TV** Live

Sky Sports F1,

Fri 1510, Sat 1455

W Highlights

Channel 4, 1950

Sky Sports F1, Sat 1830,

Formula 2

Round 1/14

Sakhir, Bahrain

1-2 March

Live Sky Sports F1,

Fri 1410, Sat 1025

Formula 3

Round 1/10

Sakhir, Bahrain

1--2 March

Live Sky Sports F1,

Fri 1010, Sat 0855

Qatar 1812Km

World Endurance Championship

Round 1/8

Losail, Qatar

2 March

Live Eurosport 2,

Sat 0730, 1615

NASCAR Cup Series

Round 3/36

Las Vegas, USA

3 March

Live Viaplay 2, Sun 2000

NASCAR Xfinity Series

Round 3/33

Las Vegas, USA

2 March

NASCAR Truck Series

Round 3/23

Las Vegas, USA

1 March

Brazilian Stock Cars

Round 1/12

Goiania, Brazil 3 March

D Livestream

on Motorsport.tv, Sat 1700, Sun 1500



F1 testing takeaways, plus Bahrain GP preview

In the latest Autosport podcast, Sam Hall is joined by Alex Kalinaukas, Filip Cleeren and Jake Boxall-Legge to reflect on Formula 1 pre-season testing and look ahead to this weekend's Bahrain Grand Prix. While revealing their top



three rankings for this year's drivers' and constructors' battles, the trio make some bold predictions and answer a selection of your questions.



FROM THE ARCHIVE

The four-wide front row of Juan Manuel Fangio (#1 Maserati 250F), Mike Hawthorn (#8 Ferrari D50), Jean Behra (#2 Maserati) and Peter Collins (#7 Ferrari) heads the field at the start of the 1957 German Grand Prix at the Nurburgring. What's about to unfold is one of motor racing's most thrilling dramas, Fangio's fightback to victory after a pitlane delay later chosen by the five-time world champion as his greatest race. He described the experience – "I've never been a spectacular racer, but I did things I had never done in my life" – to Autosport back in 1989, which can be read here: bit.ly/Fangio57



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hat Kelvin Burt never finished lower than second aboard the Dallara F393 on his way to the 1993 British Formula 3 title makes its selection as his favourite car somewhat self-explanatory. Its vast superiority over the Reynard 933 in which he'd started the season prompted Burt's Paul Stewart Racing team to jump ship for the 10th round of the championship at Donington Park, and he never looked back.

Burt won first time out in a car that he says felt "tighter" than the Reynard, and collected a further four over the remainder of the year. He was only beaten at Pembrey, where he struggled with tyre wear, and denied a 100% qualifying record when beaten to pole at the Thruxton finale. Third on aggregate at the Macau Grand Prix ensured his 100% podium record with the car.

"It became obvious by the summer that we weren't going to be able to compete with what we'd got," remembers Burt, who had seen Edenbridge's Oliver Gavin surge into contention with four wins on the trot after ditching his Ralt. "Torsionally, the car was much better in terms of the gearbox [the Reynard had suffered from flexing]. The car felt like it was on top of the road, instead of *in* the road, that's how I described it.

"The Reynard felt more planted because it was basically softer and it was gripping the road more. The Dallara was



more on top of the road because it was tighter. It felt like a car on its toes, more nimble. But it won twice because Neil Brown could turn the [Mugen] engines up more without them detonating because they didn't 'bog' the engine so much. So not only was it actually quicker through the air, it had more power as well with like-for-like the same engine."

Later an underutilised Formula 1 tester for Jordan and Arrows, as well as a British Touring Car Championship race winner with Ford and Volvo, Burt regards the fact that he could get on the pace so quickly as a credit to the F393.

"That's how good they were," he says of the car that boosted Dallara's conquest of F3. "I didn't look at it as a big deal. I just thought, 'OK, another car, let's see what we can do with this.' I was much more basic in my approach in those days."

JAMES NEWBOLD



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Autosport, ISSN number 0269946X, is published weekly by Motorsport Network Media UK Ltd, The Power House, Isleworth, TW7 6QG, United Kingdom. Air freight and mailing in the USA by World Container Inc., 150-15, 183rd Street, Jamaica, NY 11413, USA. Periodicals postage paid at Brooklyn, NY 11256. Subscription records maintained at Motorsport Network Media UK Ltd, The Power House, Isleworth, TW7 6QG. Air Business Ltd is acting as our mailing agent.
Postmaster: Send address changes to Autosport, Air Business Ltd, C/o World Container Inc., 150-15, 183rd St, Jamaica. NY 11413. USA.

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Seymour Distribution Ltd, 2 East Poultry Avenue, London, EC1A 9PT. Tel: +44 (0) 20 7429 4000. Printed by William Gibbons & Sons Ltd, 28 Planetary Road, Willenhall, Wolverhampton WV13 3XT. ISSN 0269-946X. Autosport is published weekly by Motorsport Network Media UK Ltd, The Power House, Isleworth, London, TW7 60G

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