TONY BROOKS 1932-2022

AUTOSPORT

12 MAY 2022

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One of the sport's quiet greats who should not be forgotten

Tony Brooks was one of the finest racing drivers of the 1950s. The news of his passing, at the age of 90, came through shortly after our last issue went to press and marks the end of an era, so our tribute to an understated legend begins on page 4 this week.

Only Juan Manuel Fangio, Alberto Ascari and Stirling Moss won more world championship grands prix during the 1950s, and Brooks could consider himself unfortunate not to have taken the title. He led the line at Ferrari in 1959 and, but for a combination of calendar changes, unreliability and farcical scenes at Sebring, he could have been world champion. As it was, he only lost to Jack Brabham by four points.

Ferrari's latest trip to the US underlined what many had already been thinking: Max Verstappen and Red Bull must now be regarded as championship favourites in 2022 after another victory, even though the Dutchman is still 19 points behind Charles Leclerc.

There are question marks over how Red Bull will be able to keep up its development pace in the face of the cost cap (p12), but the bigger one concerns Ferrari's ability to strike back. The new Miami GP was generally regarded as a success, but Ferrari's lack of straightline speed needs to be addressed to give Leclerc a fighting chance this year.

• There's still time for you to give your feedback about Autosport. Please turn to p44 and take our reader survey.

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NEXT WEEK 19 MAY

Porsche and Audi to F1?
We take a look at how and why two big names could enter F1

Have your say, get in touch

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PIT & PADDOCK

4 Obituary: Tony Brooks
12 Red Bull running up to budget cap?
14 Penske wants WEC round at Indy
16 Walkinshaw team jumps camp to Ford
19 Opinion: Alex Kalinauckas
20 Opinion: Matt Kew
21 Feedback: your letters

RACE CENTRE

22 Miami GP report and analysis
38 WEC: surviving Toyota wins at Spa
46 World of Sport: WTCR; ETCR; W Series; Formula Regional European; Euroformula Open; Super GT

AUTOSPORT READER SURVEY

44 Tell us what *you* think – and want

INSIGHT

50 Porsche's latest Le Mans contender

CLUB AUTOSPORT

63 More uncertainty hits British GT
64 Festival of Speed to celebrate BMW
66 Driver breaks leg in Wiscombe crash
68 Opinion: James Newbold
69 National reports: Bishopscourt; Silverstone; Cadwell Park; Knockhill; Harewood; Pembrey; Oulton Park
80 Lotus's motorsport return

FINISHING STRAIGHT

84 What's on this week
87 Introducing: Ricardo Feller
88 From the archive: 1981 US GP West
90 My favourite team-mate: Paul O'Neill

SUBSCRIPTION OFFER

32 Special deals for Autosport

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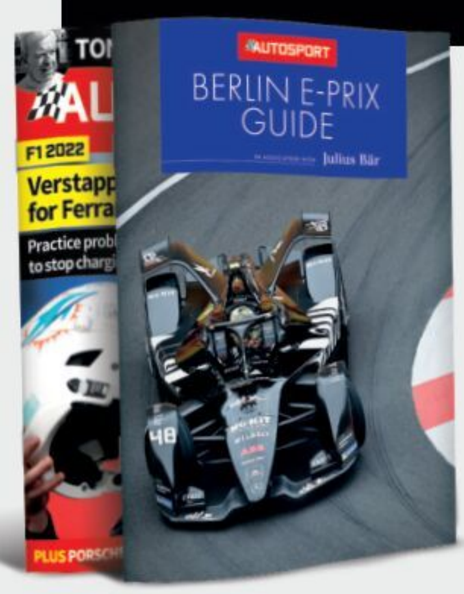


BERLIN E-PRIX GUIDE

We look ahead to this weekend's Berlin Formula E encounter, consider how the all-electric series has changed motorsport, and delve into Gen3.

DUNLOP

TONY BROOKS

1932-2022

PAUL FEARNLEY

PHOTOGRAPHY motorsport IMAGES

Two young Britons etched their names into motor racing lore in 1955: Stirling Moss and Tony Brooks. Moss was already an established works driver at 25 when he won the Mille Miglia for Mercedes-Benz. His pounding of Italy's roads would have been a standout performance even had journalist Denis Jenkinson, his pace-noting navigator, not captured the occasion so vividly in the greatest motorsport article.

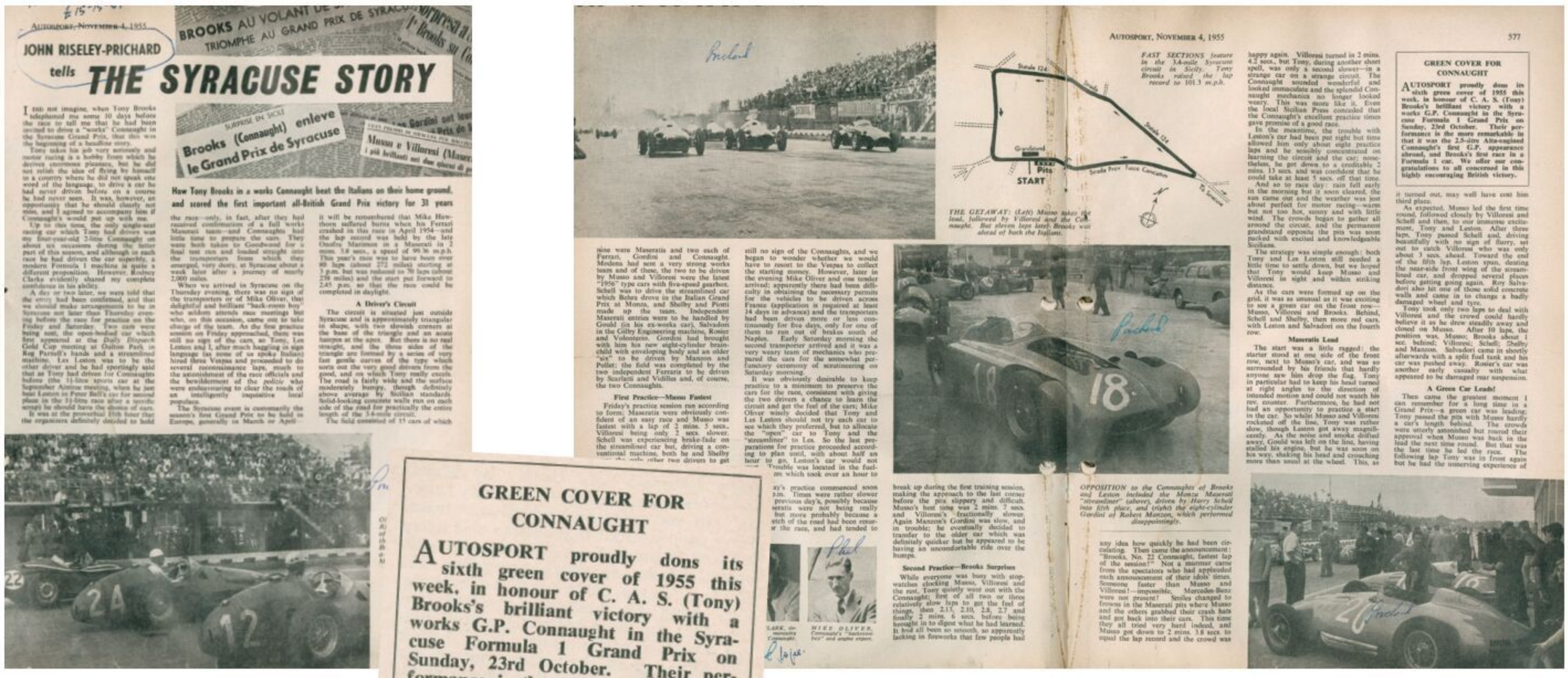
Brooks's drive in the non-championship Syracuse Grand Prix was more low-key — as was the man — but 'Jenks', observing trackside, was just as effusive. And rightly so, for a rookie's apparently effortless defeat of a phalanx of works Maserati 250Fs driven by established stars in front of a fervent home support was *Boy's Own* stuff.

Charles Antony Standish Brooks, 23, was planning to follow his father into dentistry — Moss's father was a dentist, too — and thus spent the tedious outward flight to Sicily revising for the impending finals of a six-year course at Manchester University. The upcoming race was of secondary importance: insouciance bred by naivete out of brimming natural talent. Brooks had yet to drive a Formula 1 car, and modestly put Connaught's selection of him down to there being nobody else available.

He was underselling himself. The man from mill town Dukinfield — hardly a hotbed of motorsport — had caught the eye with silky, speedy performances in a variety of cars since his debut at a Goodwood British Automobile Racing Club Members' Meeting on 22 March 1952. On that occasion — in the Healey Silverstone that he had part-exchanged his mother's MG for — he was unplaced in a scratch race and sixth in a five-lap handicap. He returned in May to win a handicap, a feat he repeated in July.

The Healey was no match for a nimbler Frazer Nash Le Mans Replica, however, and so friend and rival Dudley Hely loaned Brooks his for much of 1953. He won another Goodwood handicap in May and, back aboard the Healey, added a Snetterton victory in August. By the season's end he was mixing it with homegrown stars Roy Salvadori, Ken Wharton and Duncan Hamilton. There was no Mike Hawthorn-type headline upstaging of Juan Manuel Fangio but, in his no-nonsense — measured rather than bluff — »

BUMSTEAD



AUTOSPORT, NOVEMBER 4, 1955

JOHN RISELEY-PRICHARD tells THE SYRACUSE STORY

BROOKS AU VOLANT DE... TRIOMPHE AU GRAND PRIX DE SYRACUSE

Brooks (Connaught) enleve le Grand Prix de Syracuse

How Tony Brooks in a works Connaught beat the Italians on their home ground, and scored the first important all-British Grand Prix victory for 31 years

FAST SECTIONS feature in the 3A-mile Syracuse circuit in Sicily. Tony Brooks raised the lap record to 101.3 m.p.h.

THE GETAWAY: (Left) Musso takes the lead, followed by Villoresi and the Connaught. But eleven laps lately Brooks was ahead of both the Italians.

Maserati Lead

Second Practice—Brooks Surprises

OPPOSITION to the Connaughts of Brooks and Leston included the Monza Maserati "streamliner" (above), driven by Harry Schell into fifth place, and (right) the eight-cylinder Gordini of Robert Manzon, which performed disappointingly.

A Green Car Leads!

GREEN COVER FOR CONNAUGHT

AUTOSPORT proudly dons its sixth green cover of 1955 this week, in honour of C. A. S. (Tony) Brooks's brilliant victory with a works G.P. Connaught in the Syracuse Formula 1 Grand Prix on Sunday, 23rd October. Their performance is the more remarkable in that it was the 2.5-litre Alta-engined Connaught's first G.P. appearance abroad, and Brooks's first race in a Formula 1 car. We offer our congratulations to all concerned in this highly encouraging British victory.

Syracuse GP win in 1955 attracted attention, including a special report in Autosport, after Brooks beat the Maseratis

Northern way, Brooks was making impressive strides.

He stumbled in 1954 because a 'Nash, even the lightweight works version handed him by AFN boss Bill Aldington, was beginning to show its age. But ex-racer 'Aldy', who had a nose for driving talent, also entrusted his DKW saloon and Porsche to Brooks, who scored class wins with them at Silverstone and Aintree, international meetings both. Brooks could drive anything quickly with the minimum of fuss.

Having made his overseas and world championship debut in a privateer Frazer Nash Sebring at Dundrod's 1954 RAC Tourist Trophy, Brooks was invited by John Wyer, another excellent judge, to a winter test with Aston Martin. He impressed and was placed in the works squad for 1955: he would retire at Le Mans and Dundrod with electrical woes and a broken conrod bolt, but finish third in August's Goodwood Nine Hours in a DB3S shared with Peter Collins, another member of this British Golden Generation.

Game-changing 1955 would also feature Brooks's single-seater bow. As would often prove the case, the more demanding the question, the more impressive his response. He qualified John Riseley-Prichard's Formula 2 Connaught third behind a brace of 250Fs for his heat of Crystal Palace's London Trophy in July, and finished fifth; he finished fourth in the final behind three F1 cars. He would finish fourth at Aintree, too, and fifth at Castle Combe.

And that was the sum of his experience – not much more than 60 races, the majority at club level – as he crammed while thrumming above the Alps towards his true vocation.

It's undeniable that Brooks's Syracuse selection alongside F3 hotshoe Les Leston included a financial element: Connaught, overstretched and underrated, needed every lira of the start money. To have employed expensive star-name drivers might have cost it 1956; it was that tight. As it was, both sides of an almost by-the-by phone call deal got much more than they were bargaining for.

The flustered team was running a day late, so Brooks reconnoitered the 3.4-mile triangular road course on a hired Vespa scooter, blistering his hands on a bumpy course that included a level crossing. Consisting mainly of fast bends hemmed by natural hazards, it was right up his street.

When the fine-handling B-types – Brooks drove an open-wheeler, Leston's was an all-enveloping streamliner – arrived finally, both men were issued with a strict rev limit to save their Alta engines for the race: no go, no dough. Even so, Brooks

Brooks made appearances in historic events, as here at Goodwood in a Connaught

BUMSTEAD

Brooks, Tony Vandervell and Moss celebrate famous 1957 British GP Vanwall win

qualified on the front row next to the 1956-specification 250Fs of Luigi Musso and Luigi Villoresi, the future and past of Italian racing. The Englishman's methodical whittling of his lap times in an unfamiliar car generated mostly consternation but also some respect among a partisan 50,000 crowd. It was the opposite for his team, especially when Brooks pitted to apologise for a heart-stopping — theirs, not his — spin during practice.

He sustained this commendable calm during the race. Having almost stalled at its chaotic start, astonishingly mature progress saw him hit the front on lap 15 (of 70), whereupon he coolly played

"At last a British driver in a British single-seater had won an international race"

BOLAND

Different styles but Brooks and Moss were both British stars

cat-and-mouse with Musso while still keeping 800rpm in reserve. He would allow the Maserati man to dive by under braking for the hairpin in the knowledge that not only he could outaccelerate it thereafter, but also that his disc brakes would likely outlast his rival's drums. He consistently trimmed his best lap time, too, despite a holed exhaust manifold and a deteriorating surface, and eventually took control, adding to his advantage on each and every lap. He set a new lap record — more than five seconds quicker than he had been in practice — on lap 55, and was able to back right off with 10 to go.

At last a British driver in a British single-seater had won an international race. Moss had strived in vain for years for just such a result; Brooks had managed it at his first attempt. His life, if not his outlook — all he wanted to do was escape the madding crowd (he changed directly into civvies) and rest before resuming his studies — had changed forever; Brooks would never practise as a dentist.

The first season for Tony Brooks the racing driver would test his resolve, for neither his works BRM nor Aston Martin — Wyer had him on a three-year contract — proved up to the task in 1956; indeed, the former almost killed him. Poor Connaught never received the support it hoped would stem from the Syracuse sensation, but BRM, thanks to the industrial might of boss Sir Alfred Owen, was able to lure Hawthorn from Ferrari to lead its attack and employ promising Brooks in a supporting role. Its car had astounding acceleration but underwhelming reliability, while its unforgiving handling, propensity for cataclysmic mechanical failure and marginal brakes spooked both drivers. They ran 1-2 at Silverstone's British GP in July, Brooks bursting from the third row to do so, but both soon hit trouble. Brooks stopped to have a broken throttle fixed. The repair was hasty and the throttle stuck open at the ultra-fast Abbey Curve. The car thudded into an earth bank »

and flipped before having "the good grace" to burn to a crisp. Brooks, flung out, broke his jaw.

His year might have been a complete write-off had he not met his future wife – the lovely Pina from Italy – while competing for Aston Martin at Rouen, and had not Rob Walker volunteered his privateer F2 Cooper-Climax. Brooks found this beetle-backed car from Surbiton easy to drive compared to a front-engined GP machine and qualified on pole for both his end-of-season races with it, at Oulton Park and Brands Hatch, and finished second and first.

Oddly, such apparent 'pluses' sowed seeds of doubt in Brooks. The responsibilities of marriage and family, plus a deep-seated belief – a churchgoing Catholic, he had studied the classics before switching to science – in the sanctity of life would gnaw at his continued participation in this most gladiatorial of sports. That he was also underwhelmed by the new rear-engined cars' uncommon lowering of the driving denominator meant that his career would be cut short by choice, not fate. Albeit not before Britain had finally got all its GP pieces aligned in Tony Vandervell's 1957 Vanwall team: Moss and Brooks again.

Moss was Vanwall's clear number one, with first choice of car and a disruptive habit of swapping engines and chassis to ensure that he had the best of everything. Brooks, handily, was sufficiently flexible to cope with compromised cars and abridged practice sessions, and fast enough to step into the breach. At Monaco, Moss and the Ferraris of Hawthorn and Collins crashed early. Thereafter Brooks, in only his second world championship GP start, and despite an inoperative clutch that rendered his gear-shifting hand "a plate of raw meat" by the end, chased Fangio's victorious Maserati for 100 laps; the great Argentinian was adamant that he had been shadowed by a future champion.

The following weekend Brooks scored Aston Martin's biggest success to date, a wonderfully fluid performance in the svelte DBR1 at the Nurburgring 1000Km, capably supported by inexperienced co-driver Noel Cunningham-Reid. This burgeoning season was to be punctuated, however, by an Aston Martin crash at Le Mans in June. Running second but distracted by a gearbox jammed in fourth, Brooks misjudged Tertre Rouge, landed upside down in a sandbank and was promptly sideswiped by a Porsche. Badly bruised and abraded, there was an ugly, fist-sized hole in his thigh.

Still far from fit upon his return at Aintree's British GP in July, Brooks could string together a handful of quick laps – he qualified a gutsy third – but no more, and so planned to keep his car "on the boil" should Moss require it. That's precisely what happened.

Brooks brilliantly chased Fangio in 1957 Monaco GP, his second world championship start

Moss, his Vanwall falling sick when holding a healthy lead, took over Brooks's fifth-placed machine on lap 26 and charged from ninth to a historic British victory. Though indubitably the day belonged to Moss and Vandervell, it was fitting that Brooks had played an important role.

Bolstered by the precocious Stuart Lewis-Evans, Vanwall then laid a swathe through the phalanx of red cars, Ferraris as well as Maseratis: Moss won twice more in 1957 – at Pescara and Monza – and added another three GP victories in 1958: Holland, Portugal and Morocco. Brooks equalled Moss for quantity (excluding Moss's Argentinian GP win in a Rob Walker Cooper) in the latter season while edging him on quality: wins at Spa, Nurburgring and Monza – the classics. He set pole at Monaco too.

Brooks was not a fan of the increasingly prevalent airfield-type tracks. He preferred – and prospered on – circuits that rewarded his accuracy and sensitivity for balance and grip. That German GP win,

The 1956 British GP did not end well for Brooks and he lost confidence in BRM

Taking the flag to win at Spa, where he always shone, for Aston Martin

"That Moss called Brooks 'the greatest unknown racing driver' is a truth, not a slight"

for example, mirrored Fangio's epic of 1957. Again restrained by the team during practice while Moss circulated – to send Brooks out would have spurred 'Mr Perpetual Motion' to even greater effort, risking cars and vital parts – the early stages of his race were spent wallowing in a car unsorted on full tanks and suffering a mid-range misfire. Moss, meanwhile, rushed away, only to be halted by magneto failure. Ferrari's Hawthorn and Collins had been all smiles after their 1957 defeat by Fangio – no shame in that – but now, with Brooks's car coming back to him as it burned off fuel, they were being reeled in by a skinny fellow from urban Cheshire. Collins tried too hard in response and crashed fatally. Thus Brooks's greatest drive was forever coloured by tragedy.

Though a master of the Nurburgring's swoops, the faster sweeps of Spa-Francorchamps brought the absolute best from Brooks's fingertip finesse: he had won there twice for Aston Martin in 1957. Perhaps mindful of the potential threat from his team-mate, Moss missed a gear while leading the opening lap of the 1958 Belgian GP and wrecked his engine. This had opened the door for Brooks to score his first (solo) world championship win, commanding the race despite a tightening gearbox in the closing laps.

Moss loved nothing better than a scrap and one can count his off-days on one (clenched) hand. Brooks was more of a boxer who picked his shots. The gentler on cars, he was able to use Vanwall's stiffer 'wobbly web' one-piece wheels whereas Moss stuck with wires at the front because of their greater compliance and to prevent his brakes from overheating. Brooks was the first to dial out this car's built-in negative rear camber. Doing so made its handling more progressive, less understeery, and Moss, though unconvinced initially, followed suit.

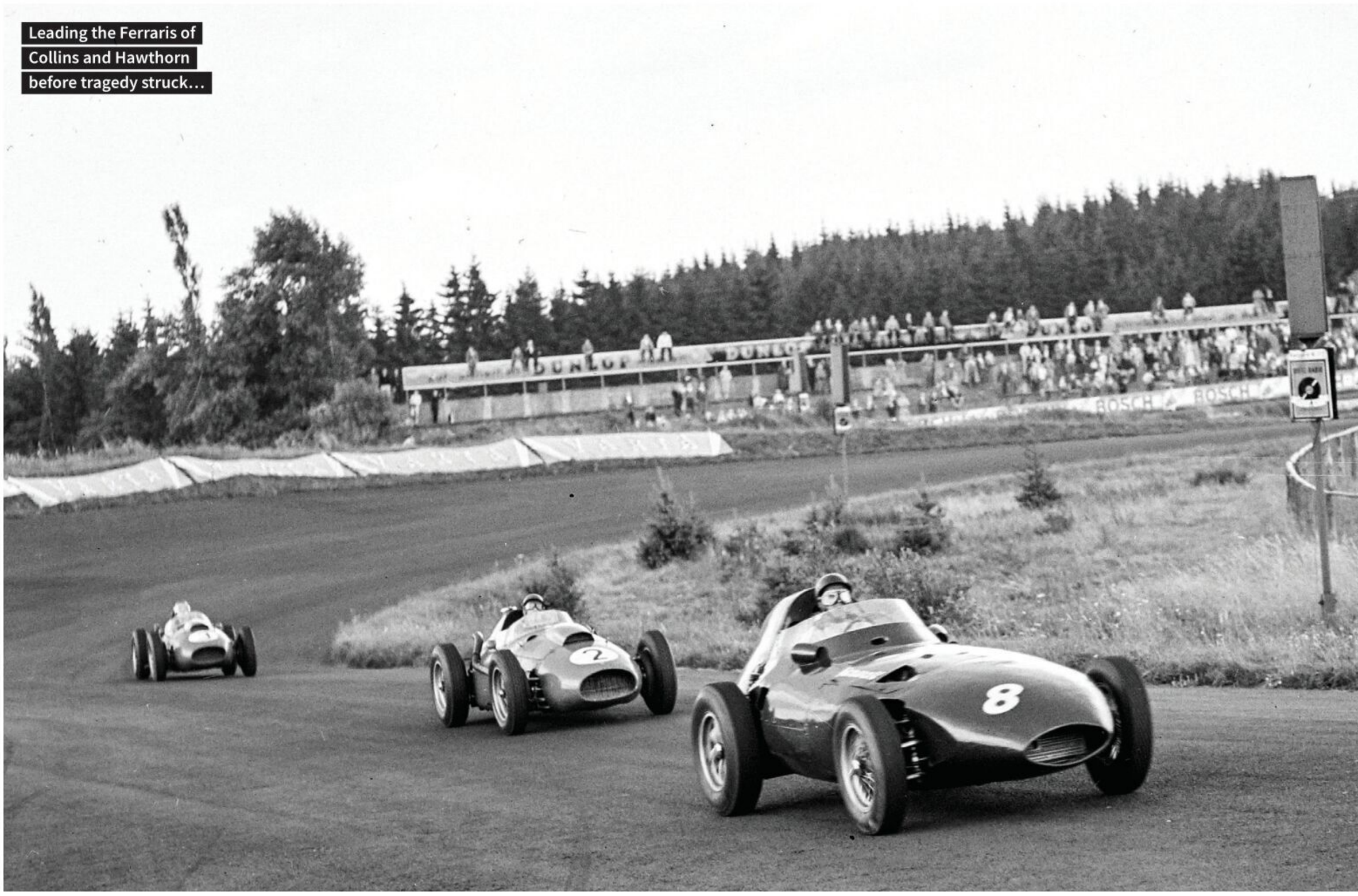
These were friends who gelled – and shared a TT victory in an Aston Martin at Goodwood in 1958 – but Brooks, without doffing the cap, knew his place. What gave Moss his edge was a relentlessness. Brooks spoke of biorhythms, of driving blindly into a low sun, of uneasy feelings with cars that were outwardly sound. If Moss harboured such doubts, they never prevented him gunning for victory.

That Moss called Brooks "the greatest unknown racing driver" is a truth, not a slight – and was accepted as such by the man himself. But the fundamentally private and unfailingly polite Brooks was not made of stone and there were occasions when the 'accolade' prickled. He never pushed himself forward (teams came to him), nor did he want to make a living from being Tony Brooks, but there were times perhaps when he felt that more approbation – not too much, mind – ought to have been forthcoming. His waters ran deeply and ebbed on occasion; Moss's flowed, roaringly.

The dream team split in 1959 when Vanwall withdrew, and Moss shook hands with Walker while Brooks signed for Ferrari. No contest, you might think. In truth, the loyal Brooks had waited too long for the ailing Vandervell to make his decision, by which time the Prancing Horse's was the only worthwhile option on the table. At least now he would have mechanical parity with his team-mates, and though hardly Enzo's ideal of a hot-blooded racer – italophone Brooks met *Il Commendatore* on few occasions – he quietly and quickly established himself as team leader.

The new front-engined Dino was much improved from its predecessor yet remained a dying breed, around which those Coopers buzzed. But on the arrow-straights of Reims and Avus, »

First of three classic GP victories in 1958 came in Belgium after Moss error



Leading the Ferraris of Collins and Hawthorn before tragedy struck…

the latter being scene of that year's two-heat German GP, it was the thing to beat — and Brooks was unbeatable. His whippet frame sometimes caused onlookers to question his stamina, but this middle-class boy from the big house at the top of the hill was nugget tough. As Reims melted under a fizzing Champagne sun, asphalt 'shrapnel'breaking screens, goggles and spirits, Brooks,'fortified' only by a scalding swig from an onboard flask of squash, sailed serenely to victory. Team-mate Jean Behra, infuriated by his inability to keep up, struck team manager Romolo Tavoni and was sacked; a dehydrated Brooks merely hit the tea, hard.

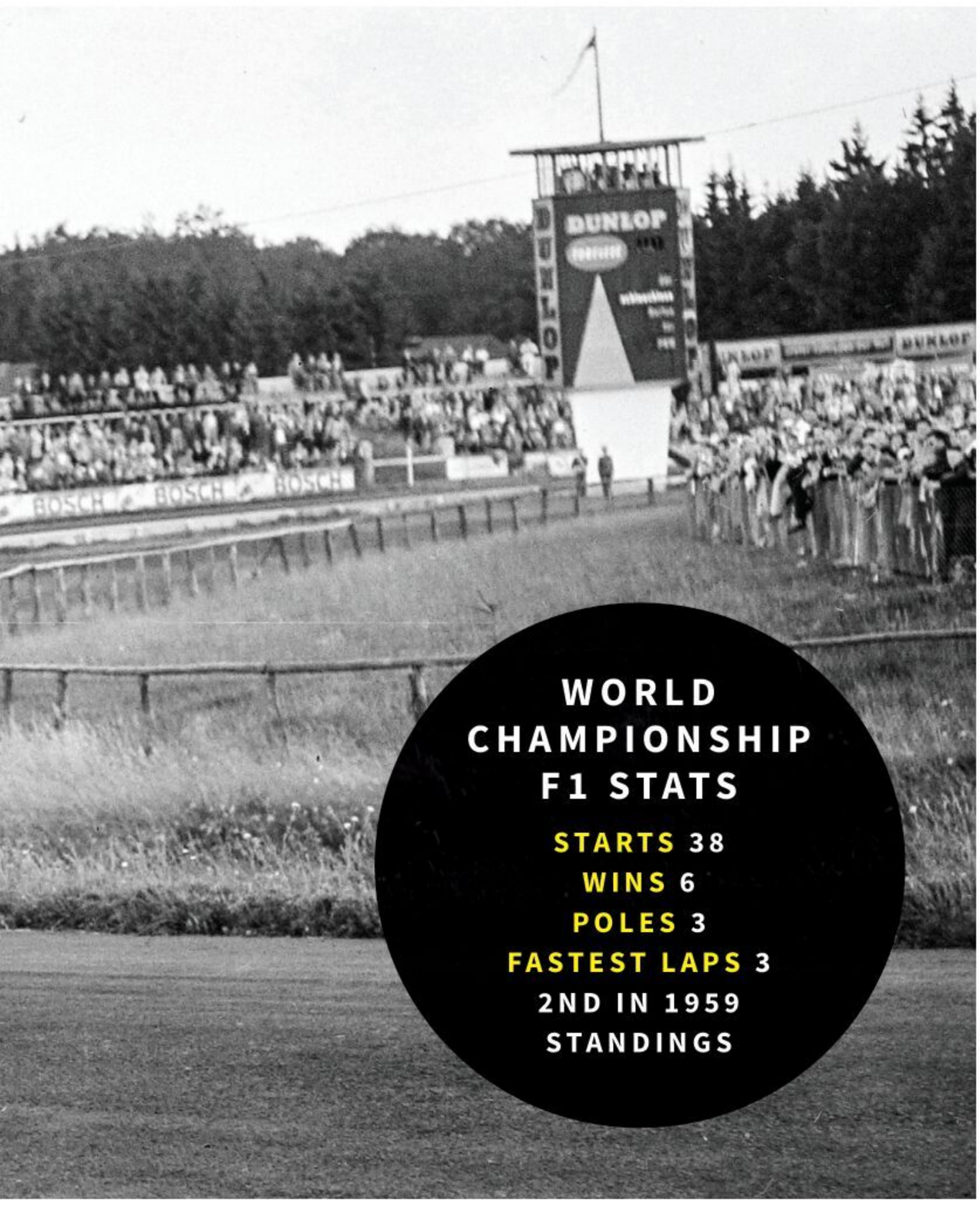
Had there been a Belgian GP that year — it was cancelled — and had not the American GP at Sebring replaced the on-off-on-off Moroccan round at the fast Ain Diab road circuit, Brooks likely would have been assured of the title. He only just missed out even so.

Having qualified in the middle of the front row at Monza, he alerted his team to a whiff of Ferodo. Brakes? Perhaps. Just to be sure, mechanics changed the clutch, too — but didn't bed it in. Brooks, planning to nurse a single set of tyres, as he had in victory in 1958, lurched a few hundred yards: the low point of his career. He was not out of championship contention, but now only victory at Sebring — plus the extra point for fastest lap — would suffice.

The Dinos, fitted with independent rear suspension for the finale, proved wayward and Brooks worked wonders to squeak onto the front row alongside the Coopers of fellow title aspirants Moss and Jack Brabham. But loquacious Harry Schell, a Franco-American, persuaded the organisers that they had missed his fastest time; in fact, his 2.2-litre Cooper had missed a section of the circuit. Brooks was not only unjustly relegated to the second row at the last minute, but also rammed in the tail during the first-lap melee by overexuberant team-mate Wolfgang von Trips.

A dilemma. Ferraris were sturdy but, since his injurious crashes in mechanically hampered cars, Brooks had vowed never again to chance it; he pitted to have his car checked, losing almost a lap.

Brooks led the line for Ferrari in 1959 but missed title in Sebring finale



WORLD CHAMPIONSHIP F1 STATS

STARTS 38
WINS 6
POLES 3
FASTEST LAPS 3
2ND IN 1959 STANDINGS

…but 1958 German GP remained perhaps his greatest performance

"His whippet frame sometimes caused onlookers to question his stamina, but he was nugget tough"

No doubt Moss would have pressed on regardless, but Brooks's was arguably the braver course. Recovering from the self-imposed delay, he passed Brabham for third place on the last lap, but by then the nut-brown Aussie was pushing his out-of-fuel car to the title.

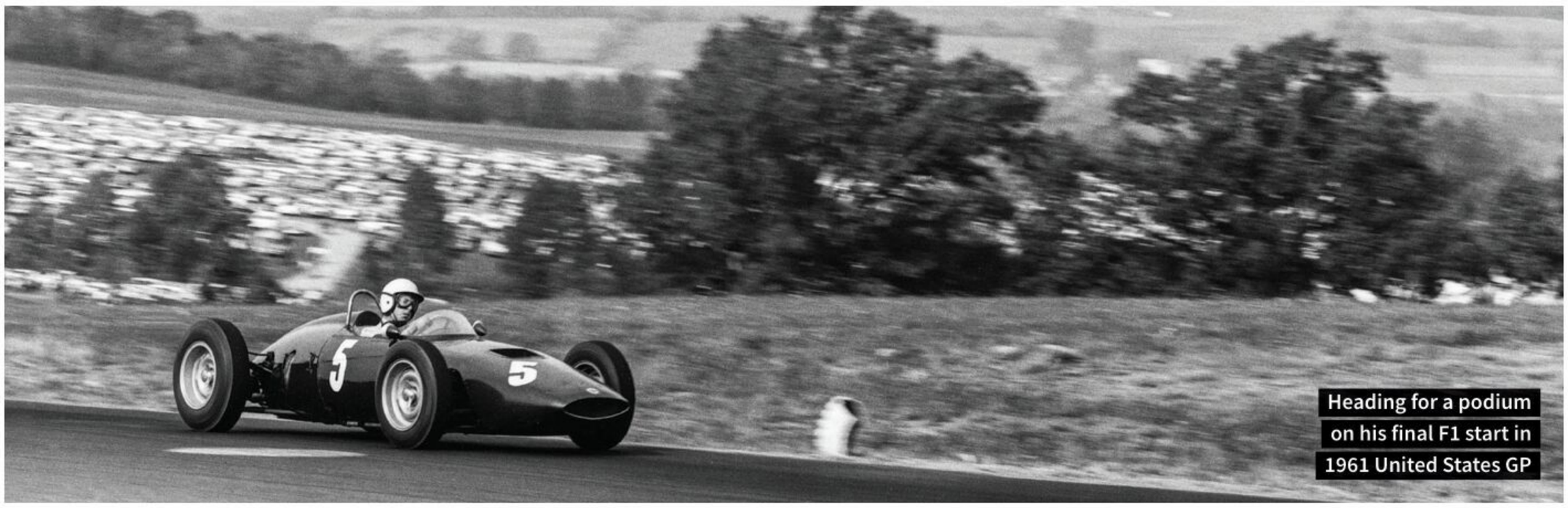
The crown probably would have come Brooks's way in 1961 too, had he stayed with Ferrari; he could see that the forthcoming 1.5-litre formula would play into its foundry's hands. But being world champion didn't have the cachet it does today, plus there was no pot of gold at the end of the Maranello rainbow. Running a garage in Weybridge, a recent acquisition, was the more viable option and Brooks came home to his wife and recently born daughter.

Plans to drive for a reinvigorated Vanwall in 1960 crumbled; its new front-engined car arrived late and was off the pace; its rear-engined replacement — a Vanwall engine in a Lotus chassis — failed to start on its only appearance. So Brooks instead raced an outdated privateer Cooper for the Yeoman Credit team. He starred in qualifying at Monaco and Spa, but the car was no match for a works 'Lowline' Cooper or boxy Lotus.

The sportscar drives had dried up too, Brooks having gone somewhat cold on them after his Aston had been forced off the road during the 1958 Nurburgring 1000Km by a humdrum Peugeot 403; massive speed disparities did not lie comfortably with his self-preservation instinct. Time was becoming more of an issue too, as an expanding garage business demanded ever more of it. Though serious about racing, Brooks had always viewed it as a hobby.

Somewhat surprisingly, he rejoined BRM for 1961. The team was in abeyance, its V8 being still in development, and the stopgap four-cylinder Coventry Climax-powered car was a disappointment. Team-mate Graham Hill comfortably won their in-house qualifying battle, but Brooks outpointed him in the races while showing flashes of the old style: fastest lap in the wet at Aintree and a third place at Watkins Glen, his last GP start.

Brooks still had it in him. But he no longer wanted it. The 'racing dentist' had had his fill.



Heading for a podium on his final F1 start in 1961 United States GP

Red Bull running up to budget cap, Ferrari claims

FORMULA 1

Ferrari believes that Red Bull will not be able to maintain the current levels of spending on an aggressive upgrade push that has contributed to Max Verstappen's back-to-back victories in the Emilia Romagna and Miami Grands Prix.

The Dutchman's wins at Imola and in Miami have indicated that recent car developments have given Red Bull the edge in the close fight at the front of the pack. While Ferrari's early-season advantage has been wiped away by its decision not to introduce any major updates so far, and Charles Leclerc's points lead is being eroded, the Italian squad still believes that the long game is important.

With all teams limited by Formula 1's $140million budget cap this year, Ferrari thinks that Red Bull's early expenditure on developments mean it will have to pay the price later on when its budget runs out.

Speaking after the Miami GP, Ferrari team principal Mattia Binotto said that the change in form between his squad and Red Bull could be explained by the extensive upgrades taken by its rival to Imola. But he reckoned there was no way that Red Bull could keep up its rate of changes without exceeding the cost-cap limit.

"It's true that Red Bull have improved their car since the very start of the season, and they introduced upgrades," explained Binotto. "If I look at the last two races, maybe they have got a couple of tenths per lap faster to us. Now, I have no doubt that in order to keep the pace, we need to develop ourselves and introduce upgrades. I hope so because there is as well a budget cap, that at some stage Red Bull will stop development, otherwise I will not understand how they can do that."

Ferrari is planning its first major upgrade package to the F1-75 for next week's Spanish GP, and Binotto is under no illusion that the developments for Barcelona are critical if Ferrari wants to inject some fresh form into its campaign. But he explained how the financial constraints imposed under the budget cap mean Ferrari has to be sparing with its upgrades.

"We do not have the money to spend for upgrades at each single race," he said. "I think it's as simple as that. Not because of an inability, but because of the budget cap. So we need somehow to try to focus development on when we believe it's the right moment and the right spending."

One story that emerged in Miami was concerns raised by Ferrari's rivals over the specification of floors it used during the Pirelli tyre test at Imola after the Emilia Romagna GP. Leclerc and Carlos Sainz were spotted running different specifications during the test, appearing to contravene

says Ferrari

the regulations surrounding tyre tests.

The rules state that "no test parts, component changes or set-up changes will be permitted which give any sort of information to the competitor that is unrelated to the tyre test".

It prompted the FIA to probe the matter and seek clarity from Ferrari after at least two teams got in touch with F1's governing body to check the legality of the test running, with others taking a close look at the matter. But the governing body was satisfied with Ferrari's explanation that the floor change was due to damage sustained to the initial specification, and the alternative was one that had been run earlier in the year, thus complying with the rules.

The decision has still not satisfied some teams, who are clear that the rule demands that parts need to have been raced or used during pre-season testing.

McLaren boss Zak Brown felt that the FIA needed to give teams a detailed explanation of the situation and proof of when the floor ran. "I think what's important is that we do have total trust in the FIA to police the sport, whether it's at a test or a race weekend," said Brown. "But then we also need total transparency. I think in today's day and age, total transparency will help the sport understand what happened, why it happened and what's been done about it."

JONATHAN NOBLE

P22 MIAMI GP REPORT

McLaren: 'no interest' in team sale amid Audi talks

FORMULA 1

McLaren CEO Zak Brown has ruled out a sale of the team to Audi amid interest from the German manufacturer in a potential takeover.

Audi parent company the Volkswagen Group is in an advanced state of preparations with its efforts to get Audi and sister marque Porsche to enter F1 from 2026. Audi held talks with McLaren, and one option that was being evaluated was for a full takeover of the squad that would have resulted in it becoming the official Audi F1 team, potentially leading to the McLaren name disappearing from F1.

But speaking ahead of the Miami Grand Prix, Brown (above right) made it clear that the McLaren name is here to stay and there will be no sale to Audi.

"Our shareholders are very committed to McLaren," said Brown. "We did have conversations with Audi, and we're not for sale. We're very committed to our future and we're doing really well on the track.

"Shareholders are making substantial investments to give our team the resources we need to get back to the front, and commercially we're doing really well. Morale is really good. We don't have any interest in selling the racing team. We're McLaren F1. That's what we're going to remain, and we're going to remain owning the racing team."

Brown's confidence about the future of McLaren is based on the improved financial situation at the team, which has turned things around since a cash crisis at the start of the COVID-19 pandemic in 2020.

But while a sale to Audi has been dismissed, Brown said that a decision about which engine McLaren uses from 2026 remained a totally separate topic. "We won't consider a buyout of McLaren, but it's up to Andreas [Seidl, team principal] to decide what power unit he wants in the back of the racing car," he said.

ANDRETTI BIDS FOR SUPPORT

In other news relating to possible new F1 entries, former Indycar champion Michael Andretti was in Miami for meetings to try to gain more support for his plans to join the grid.

Andretti told Autosport that he held a "positive" meeting with FIA president Mohammed Ben Sulayem, and was also seen going from team to team trying to gain backing for his plan to enter a new squad from 2024.

Scepticism remains from some about the financial dilution it may cause the rest of the grid, but Andretti is going ahead with plans to start construction on an F1 facility in Indianapolis this summer.

JONATHAN NOBLE & LUKE SMITH

Michael Andretti had an enjoyable time at the Miami GP

DOLE/MOTORSPORT IMAGES

Indianapolis 'roval' hosted an IMSA round back in 2014

Penske wants to bring WEC classic to Indy road course

WEC

The Indianapolis Motor Speedway could host a round of the World Endurance Championship in the future. Roger Penske wants to establish a major long-distance sportscar race at the venue he bought along with the IndyCar Series at the end of 2019 and is ready to welcome the WEC with open arms.

Penske described creating a new fixture on the Indianapolis road course as "at the top of my list". He floated the idea last year in the context of the IMSA SportsCar Championship and has now revealed that initial discussions have started with the WEC and series boss Frederic Lequien.

"We are having discussions about it right now: nothing to announce, but it would be terrific," explained Penske. "I've talked to Frederic and said we might have an interest. As far as Indianapolis is concerned our arms are wide open: come and run, we will have the place ready to go."

Penske admitted that he was "further down the line" in his negotiations with IMSA and said he'd be happy hosting a round of either series. Team Penske will, of course, be represented in both championships next year as Porsche's factory representative with its new LMDh prototype.

Lequien admitted an interest in bringing the WEC to North America for a second race in addition to the Sebring 1000 Miles, but ruled it out in the short term. "The USA is a very important market for us: it would be stupid to exclude opportunities like this," he explained. "If we extend the championship, why not have a second race in the USA? But in the close future this is not something that can happen."

Lequien has vowed to take a cautious approach as the WEC expands after its reduction to six rounds in 2021 as a result of the COVID pandemic. He suggested that a return to the championship's traditional eight-race calendar in 2023 is unlikely. "If we add one it would be good and two maybe in 2024," he said. "We will certainly go back to eight, but maybe not next year."

Lequien dismissed speculation that the Fuji 6 Hours this September was about to be replaced on the calendar. He explained that he was working with series freight partner DHL to secure guarantees on getting the cars to Japan and then on to Bahrain for the series finale in November.

● New FIA deputy president for sport Robert Reid believes that the Le Mans 24 Hours double-points round of the WEC should not clash with Formula 1. He said that avoiding a date conflict will be particularly pertinent in the centenary year of the French enduro in 2023. "Next season is a good opportunity for us to say we should not have a clash and that should become the norm," said Reid.

The French enduro is on the same weekend this year as the Azerbaijan Grand Prix, the first clash since 2016, although the eventually-cancelled Canadian Grand Prix and Le Mans were initially scheduled against each other in 2020 and 2021.

GARY WATKINS

Jewellery, pants stance draws ire

FORMULA 1

Lewis Hamilton has shown no signs of backing down in the ongoing stand-off with the FIA over wearing jewellery while competing in Formula 1.

The FIA informed drivers at March's Australian Grand Prix that it would be strictly enforcing the article of the International Sporting Code that bans the wearing of piercing jewellery or neck chains, and made checks part of the pre-race scrutineering declaration by each team for last weekend's Miami GP.

Hamilton turned up to the press conference on Friday wearing eight rings, three watches (all on different timezones), bracelets and neck chains. "It's almost like a step backwards, if you think about the steps we're taking as a sport and the more important issues and causes we need to be focusing on," he said. "I think we've made such great strides as a sport. This is such a small thing."

This led to talks between Hamilton and FIA medical staff, who explained their safety concerns about wearing jewellery in the car. Hamilton agreed to remove what he could, and was given a two-race exemption for his nose stud, which he cannot easily remove. Asked if he would be taking the nose stud out in Monaco following his two-race exemption, he gave a clear "no" in response.

"I got an exemption here, I'll get an exemption the rest of the year," he said. "Wedding rings are allowed." He also said he would "wear four watches next time".

Another area of the regulations being enforced more strictly is drivers' underwear. Sebastian Vettel, who appears on BBC 1's *Question Time* broadcast today (Thursday), made light of this by wearing a pair of trunks over his race suit ahead of Friday's practice running as a "piss take".

LUKE SMITH & ADAM COOPER

MAUGER/MOTORSPORTIMAGES

Abt to return to Formula E field

FORMULA E

Long-time Audi squad Abt will make its return to the Formula E grid for next season's start of the Gen3 era after departing at the end of the last year.

Abt won the inaugural E-Prix, the 2014 Beijing race, with Lucas di Grassi, and evolved into the works Audi team during its initial stay in FE. It went on to win the 2016-17 drivers' championship with di Grassi, following that up with the teams' title in 2017-18. Its return to the series all but guarantees 12 teams on the grid, with an announcement about the departing Mercedes squad expected soon.

"Formula E has always had a big place in our hearts and we have never made a secret of the fact that we want to be back," said team boss Hans-Jurgen Abt.

Abt will operate as a customer team for 2022-23, with its powertrain supplier yet to be named, while the team has also stated its intention to sign "quick and clever" drivers to make the most of its return. It continues to run former Abt FE driver Rene Rast as part of its Audi DTM squad.

Abt CEO Thomas Biermaier said: "We will probably [run] as underdogs, unlike last time as a factory team. The first talks are exciting and very positive, so I'm sure we'll have our team together soon."

Di Grassi scored last Abt FE win in Berlin in 2021

SAO PAULO SIGNS FE AGREEMENT

The City of Sao Paulo has signed a five-year agreement with Formula E to host the championship's first race in Brazil, which could be as early as next year.

Sao Paulo Turismo later added that the race would take place at the Anhembi Sambadrome, which hosted the IndyCar Series from 2010-13.

The Brazilian city has appeared on provisional FE calendars before, and was set to host an E-Prix in the 2017-18 season before being dropped for Punta del Este in Uruguay. Rio de Janeiro was also due to host a race in FE's opening season in 2014-15, but this was also never realised.

JAKE BOXALL-LEGGE

BMW juniors on top in 24-hour warm-ups

NURBURGRING 24 HOURS

Irish budding Nurburgring Nordschleife hero Dan Harper was part of the winning BMW Junior Team line-up in last weekend's Nurburgring 24 Hours qualifying races.

Harper co-drove fellow youngsters Max Hesse and Neil Verhagen to victory in Saturday's three-hour race in their RMG-run M4 GT3, beating the Rowe Racing BMW of 'seniors' Philipp Eng, Nick Yelloly, polewinner Augusto Farfus and Connor De Phillippi.

It was the BMW juniors (right) who crossed the finish line first again on Sunday. They upheld Munich honour following dramas for the Rowe and Walkenhorst (for which Jesse Krohn had qualified on pole) cars, but a late 40-second time penalty for a Code 60 offence denied them the victory. Honours therefore went to the GetSpeed Mercedes of Adam Christodoulou, Maximilian Gotz and Fabian Schiller.

That was some consolation for GetSpeed, whose other Merc trio of Maro Engel, Jules Gounon and Daniel Juncadella finished third on Saturday, before Gounon shunted out of a likely second late on Sunday.

Hesse put in a charge in the closing stages to move up to second on corrected times ahead of the two Car Collection Audis, with Christopher Mies beating Christopher Haase. Fifth were Nick Tandy and Earl Bamber in their KCMG Porsche.

BMW

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Walkinshaw squad in shock Ford switch

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KLYNSMITH/MOTORSPORT IMAGES

Mostert pushes on in Holden of Walkinshaw (inset), but not for long

AUSTRALIAN SUPERCARS

The Australian Supercars team founded by the late Tom Walkinshaw has made a sensational defection to Ford for 2023. Walkinshaw Andretti United, the category's most famous Holden team, will field a pair of Mustangs as part of a factory deal with Ford Performance.

Walkinshaw's operation ran as the works Holden Racing Team from the 1990s until the backing was transferred to Triple Eight for the 2017 season. Since then, the team has continued to field Holden hardware but without any noteworthy backing from parent company General Motors.

"Today marks a new era for Walkinshaw Andretti United, one we are extremely excited about," said team co-owner Ryan Walkinshaw, son of Tom. "For over three decades, we have gone head to head in competition with Ford, but joining forces with them for Gen3 was the clear direction forward. Walkinshaw Andretti United is a business with three international branches, and all three share history with Ford. My mum even met my dad while he was racing a Ford Capri in the British Touring Car Championship."

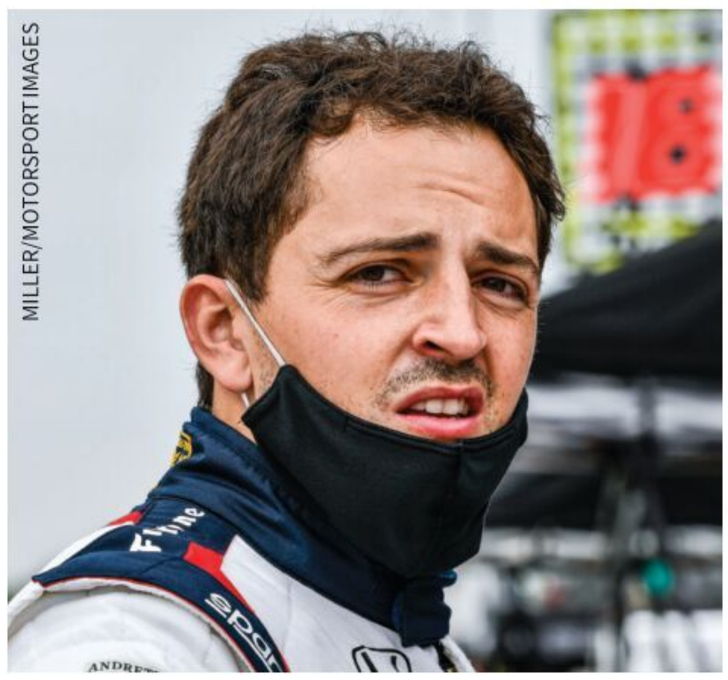
Walkinshaw Jr's fellow co-owners Michael Andretti and United chief Zak Brown both have links to Ford. Andretti raced Indycars with Ford power for eight seasons and his father Mario won the 1978 Formula 1 crown with Ford-badged engines, while Brown has multiple classic Capris in his extensive racing car collection.

As for the WAU drivers, Chaz Mostert is well known to the Ford faithful thanks to his six-year stint at Ford Performance/Tickford Racing. Nick Percat, however, is a career-long Holden driver and, as a South Australian, has a family connection to the marque.

WAU's Ford switch will help square up the balance between Chevrolet Camaros and Mustangs on the grid for the start of the Gen3 era. Between WAU, Tickford Racing, Dick Johnson Racing, Grove Racing and the Blanchard Racing Team, there will be 11 Mustangs on the grid to take on 14 Camaros. Ford has confirmed that only these five teams will be supported in the 2023 season.

ANDREW VAN LEEUWEN

Wilson is 33rd 500 entry with DragonSpeed



MILLER/MOTORSPORT IMAGES

INDY 500

US-based Briton Stefan Wilson will compete in the Indianapolis 500 this month for a fourth time – and his entry brings the field at last to the traditional 'magic' 33-car mark.

Wilson has joined forces with DragonSpeed and Cusick Motorsports, the team of entrepreneur Don Cusick who backs Wilson in the four Michelin Endurance Cup rounds of the IMSA SportsCar Championship, where he is racing a Porsche. The Chevrolet-powered equipment is being supplied by AJ Foyt Racing.

DragonSpeed competed at the Indy 500 in 2019 and 2020, and got Wilson's fellow Yorkshireman Ben Hanley into the show on race day on both occasions.

DragonSpeed boss Elton Julian said: "This means so much to us. Putting this programme together with Don Cusick, Stefan Wilson and the Cusick Motorsports partner group brings us back to Indy even earlier than we hoped, and a step closer to becoming a full-time IndyCar team."

Wilson, a former McLaren Autosport BRDC Award winner and younger brother of the late Justin, has a best Indy 500 finish of 15th to his credit from 2018.

DAVID MALSHER-LOPEZ

ERA When we talk about ERAs at Pau, it's not a voiturette race from the 1930s. It's the planned first electric junior single-seater series, which demoed its Formula 4-based car at last weekend's Pau Grand Prix. Ellis Spiezia, one of few drivers signed to the series, successfully completed several laps on Friday evening, but a programming error led to the car's regenerative functioning turning off on his Sunday run after two corners. Stephane Richelmi briefly demoed the hydrogen-powered Mission H24 prototype sportscar, while supercars ran laps with synthetic fuel. The Pau GP seeks to bar conventional fuels from competing at some point in the future. **Image by ERA**

Schnitzer BMW name returns

DTM CLASSIC

The famed Schnitzer name and former racer Kris Nissen will return to the DTM package in harness this season.

Bavarian Stefen Trautwein and his son Yannik have acquired the machinery, spare parts, archive and naming rights of talismanic long-time BMW factory team Schnitzer Motorsport, which closed its doors in 2020 not long after the passing of long-time boss Charly Lamm. Under the name Schnitzer Classic, the team will run a Super Touring BMW 320i E36 in DTM Classic as well as a Class 1 M3 E30 for Nissen, whose car is a replica of the test machine he drove in the winter of 1990-91.

"There is hardly any other name so closely connected with the golden days of DTM than Schnitzer," said Trautwein Sr. "Therefore, running the historic race cars in DTM Classic is the logical step." Nissen added: "We had very nice conversations, the chemistry was right, everything was perfect."

The series kicks off with next week's DTM Lausitzring support round.

DTM

IN THE HEADLINES

LOGANO SHOVES AND WINS

Team Penske Ford star Joey Logano ended a 40-race winless streak in the NASCAR Cup Series last Sunday at Darlington. William Byron had moved his Hendrick Motorsports Chevrolet into the lead for the first time on lap 268 of 293 but, as the final laps ticked down, Logano was quickly gaining on the leader. With one to go, Logano pulled up right behind Byron entering Turn 3 and gave him a shot in the rear bumper, which sent Byron up the track and into the wall. Logano held off Tyler Reddick to win. "He's just a moron," said Byron. Justin Haley was third from Kevin Harvick and series leader Chase Elliott.

HE'S DUNNE IT AGAIN

Irish talent Alex Dunne has taken an early lead in the Italian Formula 4 Championship to add to his table-topping exploits in Britain. Dunne, driving for German team US Racing, took a win in race two at the Imola opener from sixth on the grid ahead of team-mate Kacper Sztuka. Pole Sztuka won the finale (with Dunne third), while Dunne was second to Prema's Brazilian Ferrari junior Rafael Camara in the opener.

THE KING OF BELGIUM

Harry King kicked off his Benelux Carrera Cup campaign with Parker Revs Motorsport in perfect style last weekend at Spa. The 2020 Carrera Cup GB champion is dovetailing the Benelux series with his Supercup exploits with Lechner Racing this season, and claimed a double pole and two wins on the World Endurance Championship undercard.

GOTZ IS GOT, GOUNON GONE

Leading GT World Challenge Europe Sprint Cup contender Jules Gounon will miss his home round this weekend at Magny-Cours due to the clashing Bathurst 12 Hour. His place in the ASP Mercedes line-up alongside Jim Pla is taken by 2014 champion Maximilian Gotz.

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Ferrari's Miami GP silver lining

Despite defeat at the hands of Red Bull at F1's newest venue, there's a sign of hope for the Italian squad that could play a decisive role in the championship battle

ALEX KALINAUCKAS

So, what did you make of Formula 1's first Miami Grand Prix? Was it an unrivalled triumph of mass-market, glitzy, celebrity entertainment manifesting itself through sport? Or was it a soulless, over-hyped, very expensive and actually not that interesting race in the car parks around a stadium built to host another sport entirely? The truth, inevitably, is in between the totally polarising positions F1 fans currently seem determined to adopt and then vitriolically defend on just about any subject.

The race definitely did need something to make it interesting once Max Verstappen had passed Charles Leclerc for the lead fairly early in the opening stint. The safety car that followed Pierre Gasly's unfortunate clash with Lando Norris led to the gripping final chase at the front and the heap of action behind (which included a lot of shoddy driving).

The accusations that F1 has sold out with events such as Miami are surely nothing new considering where it has been prepared to race in decades past. It's just the world, and therefore the places left to go, has changed — not to mention the championship now has an owner that wants success in its home market (and is finding it).

Few, if any, countries are stumping up the capital required to build grand, purpose-built, and permanent tracks such as Spa or Silverstone. There's an argument that it would be better for the planet that they do not. Therefore, city-based races are here to stay and anyway have always been part of motorsport's DNA. Perhaps the problem is that, for each new high-profile and usually lucrative location F1 wants to flock to next, it inevitably threatens the future of long-established and long-loved events.

"Maybe some Sainz success will be the tonic F1 needs after the Miami madness/magic"

There is a saturation effect of too many races and, currently, a contractual limit of 24. Plus, F1 itself has declared that existing events must raise the bar on their infrastructure, public offerings and overall event management or risk losing their spots. It's little wonder many promoters from other races were in attendance in Miami Gardens. They may well have been amused by the stories of hospitality areas running out of comestibles for guests that paid considerably to attend, but likely alarmed that the event's costs ended up being so great it means no profit will be drawn this year.

Whatever, the online reaction to the Miami race all got a bit too much. But maybe there's a deeper reason behind it. Is F1's hive brain detecting serious danger to the idea that the 2022 championship battle between Red Bull and Ferrari is going to go the distance?

In Melbourne, Leclerc was on course to dominate even before Verstappen retired. Since then, Red Bull has had the upper hand. If the Scuderia is defeated again in Spain and Monaco — technical tracks that should suit the F1-75's strengths more than the RB18 — then its title challenge is in serious trouble. Much hope is pinned on the upgrade "package" — per team boss Mattia Binotto — Ferrari is set to introduce at Barcelona. But it is Red Bull's top-speed superiority that poses the real danger. If Ferrari cannot counter that, Verstappen will continue to stay close enough to pounce on occasions he is defeated in qualifying, or indeed lead from the off as he likely would have done without his practice problems in Miami.

Ever optimistic, let's assume the finely poised victory battles that played out in Bahrain and Jeddah return. Ferrari curing its current softer compound weakness will be critical to this hoped-for scenario. But if the two squads can be as closely matched on all tyres as they were on the hards late on in Miami, then there is a glimmer of hope on display there that may prove to be crucial in settling this season's story.

Carlos Sainz extended his run of self-inflicted ill-fortune to a third race with his FP2 crash. This left him with neck pain that meant he couldn't "push 100%" to the end last Sunday — a situation compounded by the last time he completed a GP distance, in Jeddah, being six weeks previously. His muscle memory was lacking.

Yet he still repulsed Sergio Perez's Red Bull to finish third. The day before, a small slide at Turn 17 created the gap to the pole-winning Leclerc. Now, Perez was hobbled by his engine sensor issue. But there are plenty of examples of drivers who should snatch success in advantageous situations instead somehow finding defeat. Sainz saw Perez off — successfully defending at Turn 1 in a way Leclerc did not against Verstappen.

If Sainz can keep this up and take the final step to securing an F1 pole or victory that seems rather inevitable, then he will become a critical factor in how a close title fight may be decided. After all, it was Perez's gap to Verstappen in 2021 that cost Red Bull in that constructors' tussle against Mercedes...

So, F1 now heads to Sainz's home race in Spain. Perhaps the home field advantage will make the difference and he can finally clinch tangible, glittering success. He's a popular paddock figure and that would be a very welcome result. And with a return to such a 'traditional' track, and a problematic one at that on the overtaking front, maybe some Sainz success will be the tonic F1 needs to calm down after the Miami madness/magic. Pick your side once again!

P22 MIAMI GP REPORT

F1 in Miami: more pros than cons?

Florida's new grand prix track had a lot to live up to, so maybe the reality was destined to fall short of the hype, but there were still a whole heap of upsides to savour

MATT KEW

For the next 800 words or so, it is immaterial to me that the Miami Grand Prix was a blockbuster event set in a glamorous location that attracted a host of famous faces and was designed to be photogenic. The 3.36-mile configuration could just as well have been plonked in an anonymous Lincolnshire field, Formula 1 having struggled to sell a single ticket, and I would still be about to defend the circuit's credentials.

The cars looked superb lapping by themselves during practice and then in qualifying. They were yawing through the high-speed sweeps and jolting over the kerbs in the difficult stop and extremely tight direction change of the Turn 14-15 chicane. As a brand-new venue where drivers had to quickly correlate their reference points from the simulator with real-world conditions, we saw a pleasing divergence in lines.

The green asphalt plus deceptive off-camber nature, which was lost via the TV cameras, led to a flurry of drivers needing to hurriedly catch slides and make corrections. While that ultimately diminished the peak of the battle for pole when Max Verstappen bailed out of his final flying lap in Q3 after his twitch in Turn 5, it was a true spectacle to watch the cars nervous and on their tiptoes.

An agreeable blend of slow-, medium- and high-speed corners plus the proximity of the wall out of Turn 16 was a happy coming together of the stronger elements of Singapore and the Jeddah Corniche Circuit. There were complaints over an inadequate number of Tecpro barriers and Esteban Ocon entered the race feeling only "50% physically" after his enormous 51G smash in FP3. But these weren't the apparently needless dangerous blind bends of Saudi Arabia.

"The track surface kept to US F1 tradition by having all the heat resilience of a chocolate teapot"

Miami was also more three-dimensional than Jeddah, which is totally flat and smooth apart from the banked Turn 13. In Florida, as well as the camber, there were bumps and, while no huge climbs and plunging dives like Spa or the Red Bull Ring, enough elevation changes to see the cars going light on their feet.

It was much more refined than what might be expected from a street circuit but still entertaining to watch. Certainly, a far better effort than most of F1's past dalliances with American street tracks — in the Caesars Palace car park, Dallas, Detroit and Phoenix. Given free practice is hardly the peak of an F1 weekend, there was still plenty of compelling action. So much so, the brilliant Ben Edwards (on lead commentary duty for F1TV last weekend) never seemed to feel the need to engage when the director tediously cut to shots of people sipping champagne by the pools. He was just focused on the events on-track because there was plenty to observe as drivers wrestled their cars around.

The street track nature, without much runoff on the outside, also helped those of us watching from home (those in attendance, unsurprisingly, have been hastier to defend the GP). It meant the cameras were positioned closer to the track so enhanced the sensation of speed as the cars looked energetic and fast. The violence of direction changes wasn't lost to wide angles.

These observations arrive after my first visit to Imola for the Emilia Romagna GP last month. A venue steeped in history that satisfies many of the more conventional criteria of an old-school exciting track. In this sense, Miami had a tough act to follow rather than coming as something of a tonic after a series of anonymous runs at dull 'Tilkedromes'.

The Miami circuit can be remembered for being lined by palm trees, the fake marina and sitting in the shadow of the Hard Rock Stadium. But I felt there was plenty else from the 19 corners that it needn't be defined by those elements.

Of course, the track surface kept to F1 tradition in America by having all the heat resilience of a chocolate teapot and copping plenty of flak as a result. And, while the race also came under heavy fire (the brimmed cars at the start looking particularly cumbersome through the direction changes and over the kerbs), it was an average affair but no stinker.

With 45 overtakes, it has only been surpassed by the 58 of Bahrain from the five rounds this season. And Miami at least broke the trend of 2022 — so far most of the passing has been derived from DRS. Last weekend, lock-ups and driver error were the main factors.

Perhaps the critical reception was so low because the Miami GP came so hotly anticipated that it was only ever going to fall short. But unfavourable comparisons to Sochi seem particularly harsh. For me, it felt like Miami was closer to a decent Champ Car or IndyCar venue. Despite the glitz off track, it was ugly in places and all the better for its imperfections.

OK, the grand prix last Sunday proved that Miami was by no means a flawless circuit for racing. But, from what we saw throughout practice and qualifying, I reckon it was still an exhilarating racing track.

P28 TRACKSIDE VIEW

YOUR SAY

Surely as has been shown by COTA in Texas, a better track can be used, as most of the public will travel to events if need be

STEVE MUNDY

Underwhelmed by Miami

Well, another new track that looks almost like the other new concrete-lined tracks. Might be good/challenging to drive at and everybody there said the atmosphere was great. But from the TV viewers' standpoint, it was pretty boring (again), as per Saudi and to a lesser extent Australia.

I know the reason behind it all is 'to bring the event' to the public in the middle of a city. But surely as has been shown by COTA in Texas, a better track can be used, as most of the public will travel to events if need be. Also, they do have some good tracks in the US that aren't connected to a burger shop.

Now we have this track and the soon-to-come Vegas one to complement (replace) proper tracks, all to 'further the reach of the sport'. Still, I hope they all got a good suntan, and the next few weeks will at least start with some events at a proper track.

Steve Mundy
Gosport

Switching channels for some old-school star quality

I've been to loads of sport in America and I'd be surprised if they'd enjoyed their day out on Sunday. As a TV experience it was cringe-worthy, especially the pre-race where most of the grid guests were comic strip characters! I missed the post-race to move on to Darlington NASCAR where the grid was full of The King and Awesome Bill from Dawsonville, which is more my thing.

Thank God motorsport is such a rich tapestry... we have Le Mans, Indy and other delights coming soon.

Tim Richardson
Great Bedwyn, Marlborough

More F1 rules suggestions...

May I throw in some new F1 rules for consideration:

1 To reduce the first qualifying session shenanigans, provide a Q1 free pass to the top three teams in the constructors' championship at the start of the race weekend. This would reduce Q1 traffic, and add more value to the often forgotten constructors' championship. It would also add some excitement to Q2.

2 If a driver or team is ruled to have caused an accident which resulted in damage to a competitor, the perpetrator should be fined (deducted from their budget) and the fine should be awarded to the aggrieved team (added to their budget) to aid in the repair expense.

Mervyn Rudgley
By email

Remembering Tony Brooks

Some years ago having just read Tony Brooks's excellent biography *Poetry in Motion*, in which there is a photograph captioned 'The photographer caught a rare smile in the one and a half litre BRM', I sent him this photograph (above) taken by myself at the 1961 Aintree British Grand Prix.

I received a charming letter back from him which included the following paragraph: 'I believed that the photo on page 258 of *Poetry in Motion* was the only one that showed me smiling in a BRM but yours of me with the same countenance and in the wet is nothing less than astonishing – it must have been my fastest lap of the race and the thought that I had been given the wrong engine!'

His time at BRM was not a particularly happy one but being a true racer he persevered.

Michael Cookson
Audlem, Cheshire

Have your say, get in touch

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RACE CENTRE

STAT

19

Leclerc's gap over Verstappen is now 19 points, the smallest so far this season

DUNBAR

FORMULA 1

VERSTAPPEN HOLDS HIS NERVE AS RED BULL CHARGE CONTINUES

Ferrari qualified on the front row, but Red Bull's straightline speed proved too much, despite a late chance for Charles Leclerc

ALEX KALINAUCKAS

PHOTOGRAPHY motorsport IMAGES

It really couldn't have ended any other way. The top three finishers in Formula 1's first Miami Grand Prix wore Pirelli-branded NFL helmets atop the gigantic podium, the Miami Dolphins' aqua-coloured-structure dwarfed by the vastness of the Hard Rock Stadium behind it.

Max Verstappen and Charles Leclerc had gone wheel to wheel yet again. The Red Bull driver emerged victorious in a race that was re-enlivened only by a late-race safety car following a dramatic crash in the pack, while Ferrari's challenge was lost for the second event in a row with struggles on softer Pirelli tyres.

In qualifying, however, Ferrari had got the softs up to temperature nicely on the slippery track surface, and Leclerc had been able to keep them in the performance window best to aid his run to a third pole of the season so far (see panel, p27). When the lights went out in the race, he made the perfect launch to steam towards Turn 1 in the lead. And that's pretty much as good as it got for Ferrari last Sunday.

From alongside Leclerc on the front row, Carlos Sainz reacted at the same moment as his team-mate, but lost a few car lengths because he was forced to start away from the gripped-up racing line. But Sainz still accelerated well enough, it's just that Verstappen, who had gained off the line but not enough to be properly alongside as they braked for the first corner, was about to take a gamble that paid off big time.

Heading into the race, the drivers had been concerned about having to take a variety of lines into the first corner, following their complaints about the state of the track off-line across the weekend. The issue centred on the new granite-and-lime-rock surface shedding some of the small stones imbued within it, leaving the tyres skating and

sliding when taken off the racing line, and consigning the drivers to unpredictable handling. But the pre-race track sweeping had been thorough enough to remove this loose surface from the fast right-hander — Fernando Alonso spotted this when he was stopped there for a long time on the drivers' parade, and decided that an around-the-outside move would be viable.

But Verstappen, who "didn't even do a start" in the three practice outings such were his reliability dramas in the two Friday sessions, didn't know what to expect. Still, he realised he'd have momentum to try to attack Sainz, and "saw the opportunity to go around the

"VERSTAPPEN FLEXED HIS RB18'S FIGURATIVE MUSCLES, LEAVING SAINZ WITH NO OPTION BUT TO CEDE"

outside in Turn 1. So, I tried and luckily it worked."

The move was bold. It got Verstappen fully alongside Sainz, but critically on the racing line for the soon-following Turn 2 left-hand kink. Here, Verstappen flexed his RB18's figurative muscles, leaving Sainz with no option but to cede the place. And so the world champion, armed with superior top speed to the Ferraris', set off in pursuit of his title rival, a potential rolling roadblock removed.

At the end of lap one of 57, Leclerc's advantage was 0.85s. He pushed on to escape Verstappen's DRS threat during the opening two tours, successfully managing to establish a lead over the critical one-second mark. The race quickly boiled down to a two-horse contest. Sainz and the chasing Sergio Perez, while still within touching distance of the lead throughout the first stint, never factored into the battle up front.

Leclerc knew he was vulnerable to attack through any of the Miami International Autodrome's three DRS zones, such was the remaining potency of Red Bull's low-drag package, even with the reprofiled rear wing that Ferrari had brought to this event in a bid to make the F1-75 more competitive on the straights. So, he charged through the first sector each time in the opening phase, regularly pulling up to 0.4s clear of Verstappen and lighting up the timing screens with a series of purple first sectors.

But in the other two thirds of the lap, Verstappen brought his top-speed advantage to bear. That meant Leclerc's lead only ever reached a maximum of 1.4s – at the end of lap five after the Ferrari had set a fastest lap to date of 1m33.963s.

But that came at a cost. From there, Verstappen began to eat into Leclerc's lead, and by lap eight a band of dark rubber had appeared on the leader's front-right tyre – the stressed corner around an anti-clockwise course such as this. Verstappen had barely been informed that his rival was struggling through a graining phase on the mediums (all the frontrunners had started on this compound) when he was suddenly within the critical DRS detection gap.

At the end of lap eight, Leclerc slid exiting the Turn 17 hairpin, which the drivers considered to be the last real corner on the 3.36-mile track. Verstappen, his mediums showing little sign of trouble – Red Bull was impressed by how he kept his right-front rubber in good shape in the first stint – closed right up to the Ferrari's rear. He was perfectly positioned to strike, which he inevitably did at the first opportunity: the pitstraight run towards Turn 1.

Leclerc jostled, but made the early call to stay on the racing line down the short run along the grid hatchings, parallel to the stadium's longest sides. That gifted Verstappen the inside line for the overtaking point, but it was a calculated decision by the Ferrari driver.

"The experience I had from FP1, FP2, FP3... inside there it was a disaster, the grip on Friday and Saturday," Leclerc explained. "I did not expect Max to have that much grip. But, actually, I think it was much better for the race. Looking back, you can always do »

Leclerc tried hard to fight back after allowing Verstappen to overtake down the inside (inset)

something better, but I thought that, at that moment, it was the right thing to stay on the racing line and try to optimise the braking point. Which I did, but it didn't work out."

Despite his worn mediums, which improved once he had got through the graining phase (so much so that he and the rest of the leaders extended their opening stints to make it a one-stopper rather than the expected two), Leclerc gave everything he had to try to stay with Verstappen. He continued to charge through the opening sector, where Ferrari's high and medium-speed corner advantage with an overall higher-downforce package counted significantly. But he couldn't stay within DRS range and fell to 2.6s behind by the end of lap 12, after he'd lost a full second locking his right-front and sliding deep at Turn 17.

With Leclerc complaining that his car had become "so difficult to drive" after 11 further laps, during which Verstappen had edged clear by an average of 0.174s per tour, Ferrari brought him in to take the hards. Here, Leclerc lost another 0.8s with a sluggish right-rear change, and such was Verstappen's lead by this stage that Red Bull opted not to respond for another two laps. When the Dutchman did arrive for his service, he too was put onto the white-walled rubber and the gap between the pair, once Verstappen had completed his out-lap, was 7.6s.

In this middle phase, a deja vu experience played out. Again, Leclerc would post regular purple first sectors and gain several tenths on Verstappen, before the Red Bull hit back around the rest of the lap, just as it had in the opening stages. They exchanged fastest laps five times through the next 15 laps, taking that benchmark down into the 1m32s bracket. And the result was that Verstappen's lead did not really grow.

"Once we did the pitstop and put the hard tyre on we were actually very closely matched in pace," said Verstappen. "It was very crucial to get that gap [on the mediums at the end of the first stint]."

It appeared that the stalemate would play out to the finish, Red Bull only concerned by a build-up of cloud that threatened rain that never arrived. But that all changed, very quickly.

On lap 39, Alonso, who had gained four places thanks to his wry Turn 1 calculations and a fortunate whack against Lewis Hamilton, wrecked his race. He hit Pierre Gasly in a move that Alonso called "very optimistic" and "my mistake", having "braked too late" at the first corner.

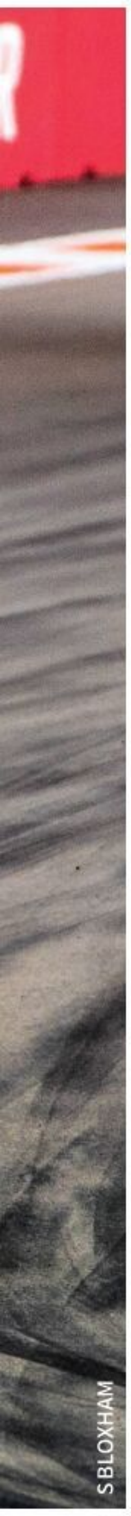
This had a big knock-on effect, thanks to AlphaTauri leaving Gasly out to assess how badly his car was damaged. But although its aerodynamic load readings were acceptable, Gasly was touring slowly, hobbled with a steering issue that left him unable to turn sufficiently. He had to use the runoff in Turns 6 and 8 on lap 40, then, after rejoining the track opposite the much mocked 'fake marina', disaster struck. The McLaren of Lando Norris, then running 14th, struck Gasly's right-front corner – the incident was one of sheer bad luck.

"ONCE WE DID THE PITSTOP AND PUT THE HARD TYRE ON WE WERE ACTUALLY VERY CLOSELY MATCHED"

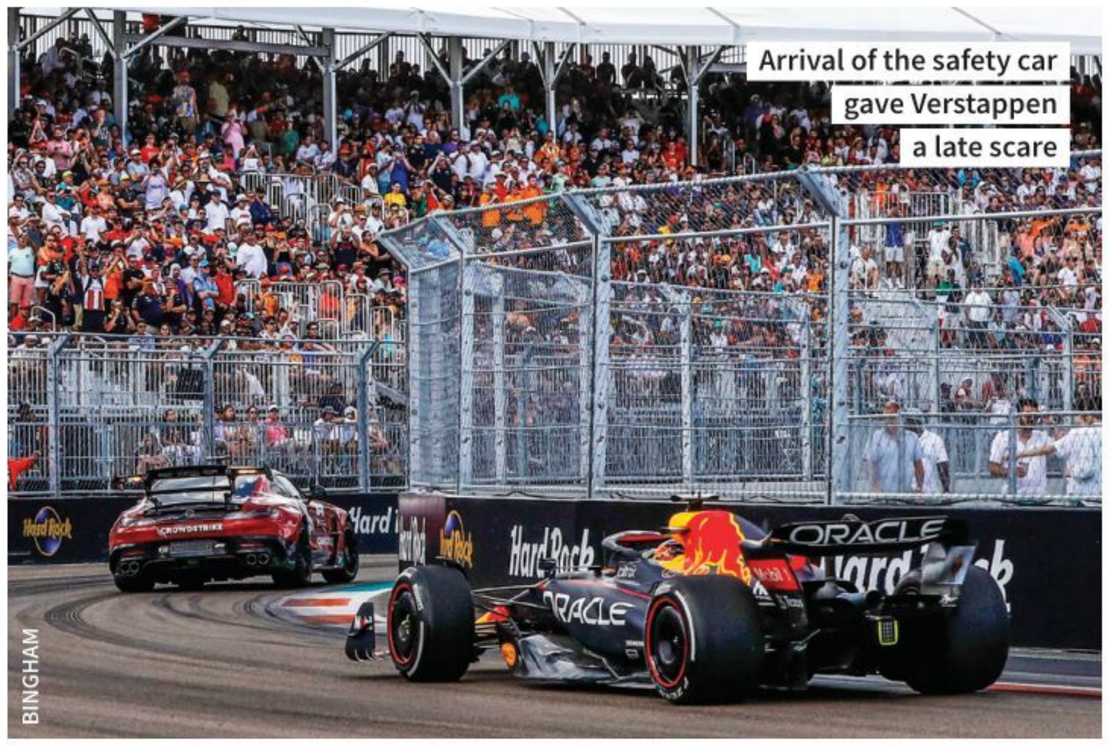
Gasly was clearly attempting to steer right through the shallow right-hand kink at the start of the meandering fast run to the 90-degree left-hander at Turn 11. But the AlphaTauri was not responding as it normally would. Norris, overtaking to Gasly's left but unaware of the Frenchman's issue, said he was "just unlucky" as he came by. The contact ripped off the Briton's right-rear wheel and put him out of the race after a wild spin between the walls.

The virtual safety car was activated, but this eventually became a full safety car. That upgrade from race control happened when Verstappen, his lead about to be wiped out, had already passed the pit entry. Red Bull team boss Christian Horner later suggested that Ferrari "left us off the hook" by not taking "a free stop" here. But that wasn't possible for Leclerc, as he too had just passed the pitlane entry point when the safety car was called and so had no chance of taking on fresh rubber.

Sainz did have such an opportunity, but Ferrari opted not to take it.


BLOXHAM

Former team-mates Bottas and Hamilton ran as best of the rest for much of the distance
HONE


Arrival of the safety car gave Verstappen a late scare
BINGHAM

The Spaniard had lost three seconds with a slow right-front change at his stop for hard tyres, and after that had been running comfortably in front of Perez. The gap between them had ballooned in the first stint, artificially inflated thanks to the Mexican encountering a dramatic loss of power on lap 19. The problem was a faulty sensor, which Red Bull issued instructions to reset, but at the cost of "10km/h down on the straights", said Perez, for the rest of the race. Hence Sainz pulling away early in his second stint.

When the safety car appeared, Red Bull chose to bring in Perez for a second stop, to switch back to the medium tyre. This, Sainz later explained, was not an option for Ferrari. "I knew Checo was going to pit because he had a new medium," Sainz said. The Ferrari drivers had come into the GP with just one set each of new mediums and two of new hards, which were poor for the tyre warm-up needed at restarts. "Our alternative was a used soft or a new hard, and both of them were not good enough for me for 10/12 laps. So, we were better off staying out on our used hard."

The race was neutralised for five laps while Norris's wrecked car was removed from the track, with Verstappen leading the Ferrari duo and wondering how his team-mate's sudden advantage would impact the remaining proceedings.

These began with the restart at the beginning of lap 47 (11 to go), which Verstappen aced to run clear of Leclerc once again. But, just as had been the case before the safety car period, the pair were very evenly matched. Actually, the Ferrari driver was back in the ascendancy as the pair began a showdown to the finish.

Leclerc once more was gaining in the opening sector, but Verstappen's lead was in serious danger at another point of the track – the much-disparaged, very tight and blind chicane at the end of the second sector. Here, Verstappen was "struggling a lot with cold tyres hitting the kerbs" and was losing fractions to Leclerc each time. This reversed a general trend from the race, which surprised Ferrari: that Verstappen had been faster through the track's slow-speed corners.

These are the type of turns that have suited the red cars more at »

QUALIFYING

SUTTON

After all the complaints, all the fears that the first qualifying action for the Miami Grand Prix would be blighted by red-flag stoppages and big crashes following heavily disrupted practice, the session ran interrupted throughout. There wasn't even a single yellow flag. Ferrari roared to its first front-row lockout of 2022 and Max Verstappen "f***** it".

The world champion had led after the first runs in Q3, his 1m28.991s giving him a 0.080s advantage that covered both the following Charles Leclerc and Carlos Sainz in third. Verstappen started the final fliers towards the rear of the pack, while Leclerc led his team-mate for the last-gasp effort.

It didn't start off brilliantly. "Turns 1, 2, 3 weren't great", said Leclerc of the fast, sweeping sequence that starts a lap of the Miami International Autodrome, where he grappled his F1-75 throughout after missing the apex of the opening corner. But Leclerc "caught back a little bit in Turns 4, 5, 6, 7, 8" and then aced the technical run at the end of the final sector. This includes what AlphaTauri driver Pierre Gasly (seventh in Q3 behind Sergio Perez, Valtteri Bottas and Lewis Hamilton) disparagingly called a "Formula E chicane".

"The last corner was as good even though it was very tricky with the change of asphalt [resurfaced twice after breaking up ahead of Friday practice]," Leclerc concluded. And this proved to be critical to taking pole ahead of Sainz, who had started his last lap with a stunning first sector that had him 0.2s up.

He lost ground thanks to Leclerc's fine run from Turns 11-16, but was still up as the end of the lap approached. But at Turn 17 – the last real corner – Sainz slid luridly on the slippery exit. He'd done the same at the end of his final warm-up lap crossing the different coloured surfaces, which added tyre temperature. This aided his sector one charge, but sapped life by the time he next came through. "I tried a different line in the last corner," he said. "But it didn't make it any better by doing what I did in the last lap."

"THE FINAL SECTOR INCLUDES WHAT PIERRE GASLY DISPARAGINGLY CALLED A 'FORMULA E CHICANE'"

Finishing 0.190s behind Leclerc's pole-winning 1m28.796s was nevertheless an impressive recovery from another practice crash for Sainz, albeit aided by Verstappen disappearing from the pole fight. His practice reliability dramas had restricted him to "four or five" push laps, which meant he was "still learning the track" even at the end of Q3.

A typically aggressive turn-in to the Turn 5 long right ended up with a "weird moment" as the RB18 snapped left and put Verstappen into the runoff. From there he abandoned the lap and swearily accepted defeat.

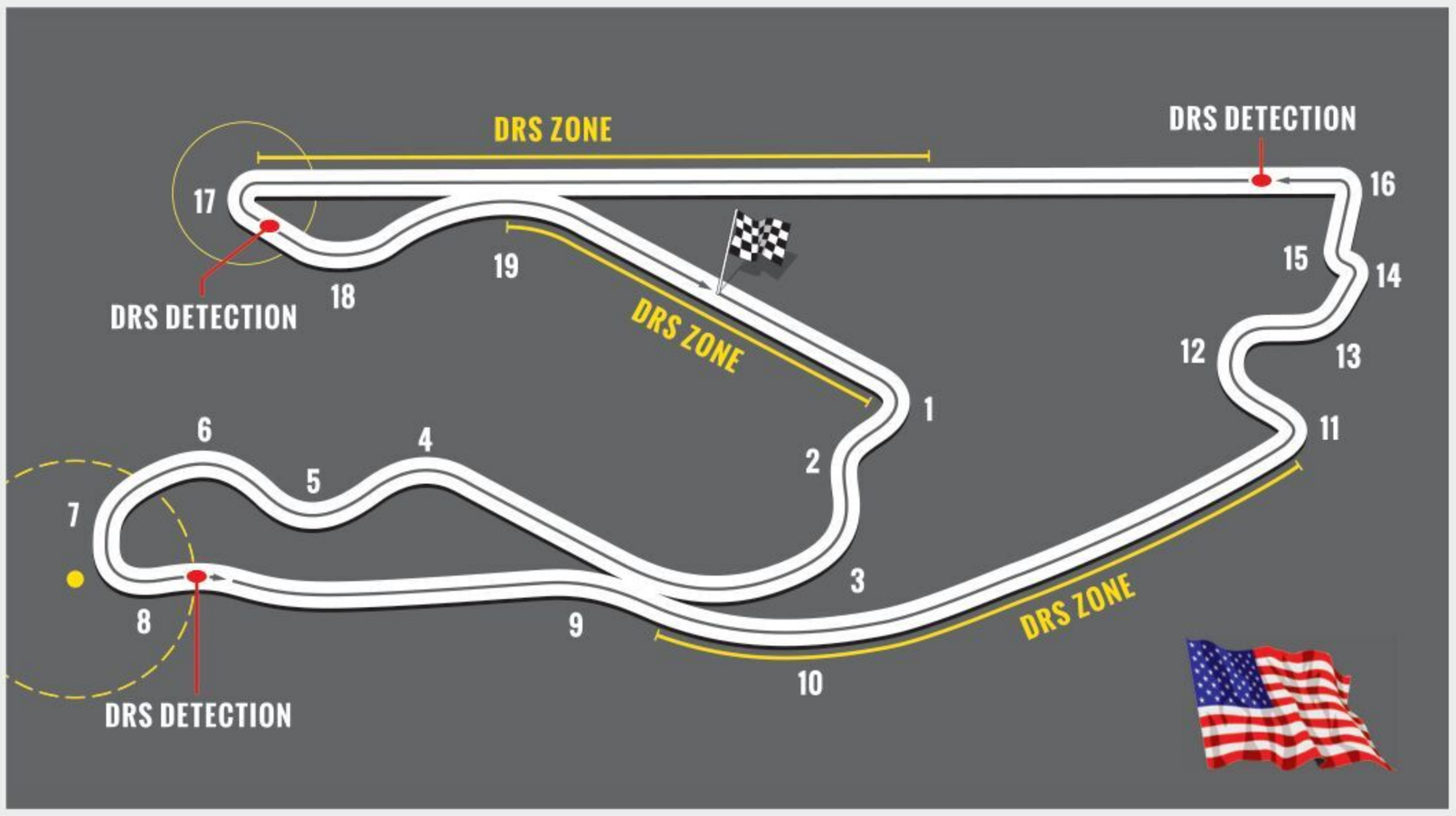
TRACKSIDE VIEW

The grandstand is packed, the fans expectant. Every driver is cheered as they pass by, touring slowly on the first laps out of the pits in the blazing sunshine. The Miami International Autodrome is alive with Formula 1 machinery at last.

Autosport is up high, perched in a photography tower overlooking the tricky Turns 7/8 double left-hand complex at the bottom left end of the sprawling Hard Rock Stadium complex. We've come here because ahead of the event the drivers have picked it out as a place where significant lap time can be found or lost. We've been informed ahead of the event that these corners are inspired by Signes at the end of the Mistral straight at Paul Ricard, but they're preceded by the series of sweeps that begin the lap and are taken at a massively lower speed, so we can't really see the connection ourselves (*plus Signes is a right-hander – Ed*).

The drivers are soon coming through quicker and quicker. There are a variety of lines on display – Fernando Alonso is one taking the first left closer to the middle of the track, while from the off the Ferrari pair are glued to the white line at the edge. Come qualifying, however, they've migrated inwards.

Across the opening 30 minutes, Alonso begins to edge wider each time he comes through and the double world champion provides a handy reference for how the drivers are learning the line. The key is to arrive with tyres that are sufficiently up to temperature that they can cope with the first bite of left, then stay cool so as not to send the two axles out of balance and find wild oversteer on the exit. Yuki Tsunoda discovers the final challenge is a big one after 10 minutes, as he loops around and just manages to stay out of the wall. From our position it appears that he clunked the inside kerb, but replays later reveal that the rears couldn't take his request and the car swung around.



"EVERYTHING IS ON A REAL KNIFE EDGE AND THOSE CORNERS HIGHLIGHT IT WELL"

Back to Alonso. He's regularly grappling oversteer much earlier – on the edge of the track that forms the approach to the Turn 8 turn-in. This challenge isn't helped by crossing a different type of asphalt – slippery and freshly laid after the track began to break up here and at the Turn 17 hairpin on the final preparation day, under the weight of construction, support and hospitality trucks.

But things can go wrong even earlier than this point, as Valtteri Bottas discovers. At the halfway point of the session, the Finn loses the rear of his Alfa Romeo before reaching the new asphalt midway around Turn 8 and spins off backwards into the barriers, destroying the rear end.

"Everything is on a real knife edge [around the track]," says Williams head of vehicle performance Dave Robson. "And those corners highlight it well."

ALEX KALINAUCKAS

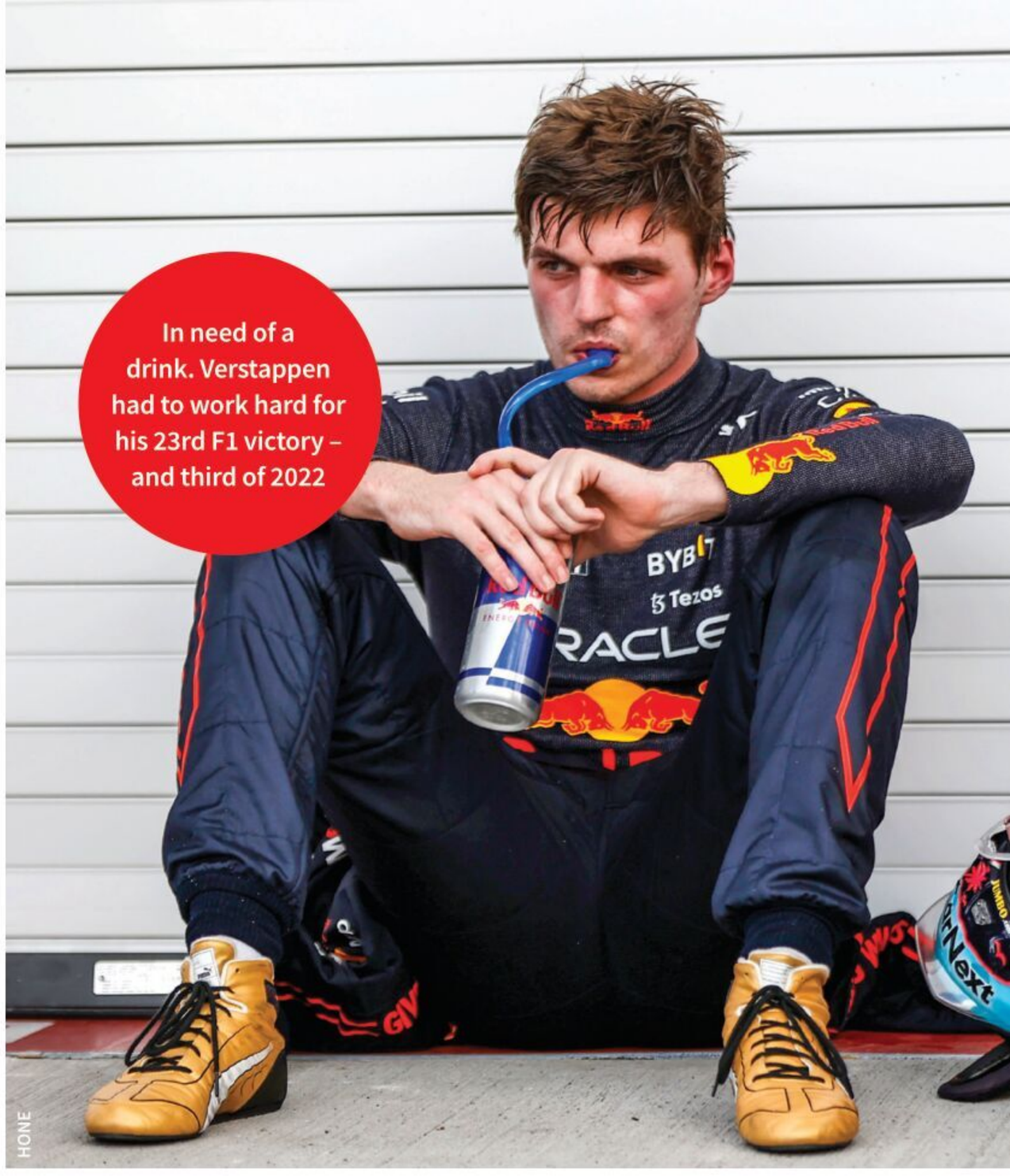
Alonso's efforts grabbed Autosport's attention at Turns 7/8

2022's opening races, but Leclerc revealed that he was "struggling quite a bit more than them in the slow-speed corners" throughout last Sunday. The lowest temperatures since FP1, caused by a rain shower one hour before the start, were a likely factor. These also impacted Verstappen's ability to switch his hard tyres back on following the restart. And the problem was so acute that Leclerc felt there was "one very good opportunity on the second lap after the safety car" to mount an attack.

That was the race's 48th lap but, with DRS still not available in accordance with F1's regular restart rules, he had no chance to get alongside Verstappen – the Red Bull driver still had his immense top speed to come to his rescue – despite being very close out of Turn 8 at the end of the first sector.

In the six laps that followed the restart, Verstappen's lead never rose above 0.9s. He felt he made "a few mistakes" through the chicane as he struggled with his cold rubber, but slowly the temperatures rose and he "had a little bit more pace".

In rather similar circumstances to Imola last time out, Leclerc



In need of a drink. Verstappen had to work hard for his 23rd F1 victory – and third of 2022

HONE

"AS SOON AS I HAD A LITTLE OPPORTUNITY, I WENT FOR IT. BUT IT WAS TOO DIRTY OFF-LINE"

had a chicane kerbs moment on lap 52, clattering over the Turn 14 apex violently, just as he'd been even closer behind Verstappen, looking to the inside of Turn 11 (as he'd also done two tours earlier). Unlike in Italy, however, he remained pointing in the right direction after his kerbstrike. Leclerc later acknowledged that it was "a big hit" but insisted "I managed it quite well, so it didn't have any consequence on the opportunity for overtaking". "On that particular lap I overdid it," he added. "But I actually didn't lose that much compared to my previous lap. The lap before it was Max who took it quite hard and helped me to get close."

Leclerc never got another chance thereafter. By lap 54, with three tours remaining, Verstappen had recovered enough pace to pull out a 1.3s gap and to seal the race's fastest lap bonus point with a 1m31.361s. He sailed on serenely to the finish, 3.8s in front; Leclerc abandoned his ferocious chase, content with his fourth podium from five races so far in 2022.

"It's a very good comeback," Verstappen said of his 23rd F1 career victory arriving after he'd missed a chunk of FP1 with his car overheating, basically all of FP2 with a precautionary gearbox change and then a subsequent hydraulic issue.

"We'll have to analyse the end of the run on the mediums, which was the weak point of this race," concluded Leclerc, who also lost the Imola sprint in similar circumstances on the same C3 compound.

Sainz completed the podium, but to do so he had had to see off Perez's late advances. The first of these came at the restart, where Perez got a better run through the final corners. Sainz, though, showed him to the outside line for Turn 1 and maintained the position. That move did, however, immediately remove any chance of Sainz picking up a tow and later DRS from Leclerc's car ahead.

Perez chased him for four laps, then made his second attempt to secure a third straight podium, which would have matched his longest F1 streak. The critical point again came into the first corner on lap 52, but this time Perez lunged from much further back. He steamed down the inside of Sainz, who made a late move to defend, swinging across right towards Perez, and the pair so nearly made contact. The Red Bull's left-front locked and Perez slid deep and wide. "My tyres were overheating," he explained. "So, as soon as I had a little opportunity, I went for it. But it was too dirty off-line."

The botched move meant Sainz could re-establish a 1.4s advantage and he stayed ahead unruffled to the finish. There, he scored a result he felt he "needed" – mainly to "complete a race distance, to get the body back to shape" after going over a month without running a full grand prix. As a result of that absence, and neck pain he sustained in his FP2 crash at the chicane, Sainz "wasn't feeling 100%". "It's a combination of those two things," he explained. "I was paying the price a bit and at some stages of the race I couldn't push 100%."

The podium celebration scenes rather exceeded a 100% level of... decorum. But the scenes were rather apt in summing up what was a massive party in Miami. It was one Verstappen was keen to join. "I need a drink!" he said on the cooldown lap. He may equally have been referring to his urgent desire to rehydrate after a race that matched the much-missed event in Malaysia for heat and sweat-loss. But this is America's party city, and Verstappen had very much earned his liquid reward.

Under-par Sainz narrowly held off a hobbled Perez for final podium spot

SBLOXHAM

NEXT F1 REPORT

SPANISH GRAND PRIX
26 MAY ISSUE

NORRIS THE VICTIM OF GASLY-ALONSO CLASH

Pierre Gasly tried to leave Lando Norris room before their safety car-triggering crash on lap 40, but he struggled to steer due to damage inflicted from contact with Fernando Alonso.

Gasly and Norris, who was running 14th, made contact while exiting Turn 8, which caused the McLaren to hit the wall on the left-hand side of the circuit. That came after Gasly had run wide at Turn 7, which permitted Mick Schumacher and Kevin Magnussen to pass before Norris also tried to get ahead. The stewards noted the incident but took no action.

The AlphaTauri racer retired soon after and explained that his car was already ailing from a tag from Alonso on the previous lap when the Alpine tried to dive up the inside at Turn 1.

"We tried to do one more lap to see if we could continue, and the car was too damaged," said Gasly. "I could not even stay on track or turn left anymore. Then on our last lap, I was going slow after Turn 7... I was trying to turn right to give room, and Norris came and clipped my front-left tyre."

Alonso took full responsibility for his role, copping a five-second penalty before offering an apology.

Daniel Ricciardo, meanwhile, brought home the remaining McLaren in 11th, but was classified 13th after the imposition of a 5s penalty for leaving the track and gaining an advantage.

SUTTON

S BLOXHAM

Russell helped to fifth by upgrades and safety car

George Russell maintained his unrivalled streak of top-five finishes so far this campaign by leading team-mate Lewis Hamilton to complete a Mercedes 5-6 aboard the updated W13.

The duo thought the arrival of more efficient front-wing endplates plus upgraded rear and beam wings (see page 33) would not wholly fix the troublesome car, but should aid the team's medium-term troubleshooting. When both machines were porpoising far less in FP1 and Russell topped FP2, it took the young Brit by surprise.

But late set-up tweaks meant the oscillations returned violently for qualifying, tethering Russell to 12th as Hamilton progressed to sixth, with a 0.376s advantage in Q2.

Russell turned in a 40-lap opening stint on hard tyres and used the virtual safety car to pit for mediums. That permitted him to chase after his stablemate, who was running the inverse strategy.

Hamilton had endured a frustrating Turn 1 when he clipped the inside kerb and allowed Pierre Gasly to pass before being bumped by Fernando Alonso. Down to eighth, he did regain his starting position by the end of the stint and was closing on Valtteri Bottas. After some debate over team radio, Hamilton was not pitted during the safety car to leave him prey to Russell, who emerged directly behind.

Russell needed two bites of the cherry to pass, having run off road at Turn 11 initially and then handed the position back. But he eventually got the job done after the pair had gained a place when Bottas glanced the wall. He wound up nearly 20s behind winner Max Verstappen.

"George did a great job in that first stint on the hard tyre – in hindsight the hard tyre was probably the better race tyre for today," said Hamilton.

"But George did well to recover from his position and we got fifth and sixth, which is good points for the team. I was a bit of a sitting duck in our move, but George did great, was very fair, and on old tyres there wasn't much I could do. Even running in our positions, it's still racing, it just changes your perspective."

BIG NUMBER

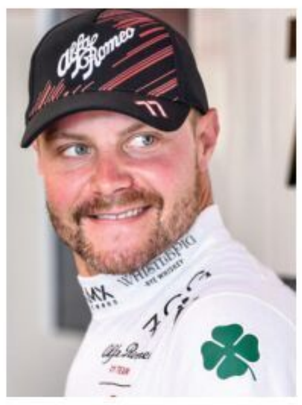
3

Alex Albon's points tally so far. Tenth at the line for the Williams driver became ninth after Fernando Alonso received two 5s penalties – one for hitting Pierre Gasly, the other for exceeding track limits. Albon climbs above the double champion in the standings.

DUNBAR

Q&A

VALTTERI BOTTAS
ALFA ROMEO DRIVER



Just before the safety car, Lewis Hamilton was within DRS range. Could you have held him off?
I don't see why not. I was managing the gap over [Hamilton] and P5 would have been possible. But once the race was neutralised, the gap was gone and [George Russell] was on fresh medium tyres behind us, so keeping this place would have been difficult. Everything was going pretty smoothly until then – I was hoping for that kind of race.

What happened to allow both Mercedes to pass late on?
When [Russell] had the possibility to stop, he was really closing in quickly. As he was overtaking [Hamilton], I was kind of following them in the mirrors. They were getting pretty close. I was thinking I might have to close the door. I just braked a fraction too late. I missed the apex a tiny bit, and then I got onto the dirty surface and, even though I was going slowly, understeered into the wall. Luckily it didn't break anything or give me a puncture.

Overall, have you been encouraged by the car's race pace?
It was a good recovery from Friday, and the race pace was very close to Mercedes so it is good to see that we can really fight with them. It's a shame we didn't get P5 but still, P7 is good. It was a race where there were no DNFs in front of me. It was fighting for fifth position with this car. We'll see in Barcelona – we'll try to bring some new bits.

What are your final thoughts on the Miami venue?
I didn't have many battles. I think the layout is good, but the issue is that there's only one racing line. When you go off line, you pay for it in the next three corners. I would've also liked to have seen the [Turn 13 Tecpro barrier] change that the drivers requested, because it's unnecessary. For sure there's enough Tecpro out there somewhere. I would've liked to see more reaction.

S BLOXHAM

NO ONE PUNISHED AFTER SCHUMACHER-VETTEL COLLISION

Sebastian Vettel labelled his collision with Mick Schumacher five laps from home as "stupid for both of us". It appeared the stewards agreed, judging neither to be predominantly to blame.

Schumacher was nearing his first F1 points finish. But, while fighting for ninth, the two Germans collided at Turn 1 as Schumacher tried to regain position after running wide through the final corners defending against Esteban Ocon.

"I'm sorry we're both out [of the points]," said Vettel. "I thought I had the corner and was in front. I didn't expect him. Then when I saw him, it was too late. It's bitter for both of us."

Schumacher would soften from his initial frustration over team radio, later saying it was difficult to see in the mirrors. He pitted to finish 15th in his Haas, while Vettel's Aston Martin was eliminated on the spot but was classified 17th.

Ocon hails 'victory' drive to eighth after crash

Esteban Ocon missed qualifying in Miami owing to a cracked Alpine chassis following his 51g shunt into a concrete wall during FP3. Little wonder he described a recovery to eighth as "a victory for us".

The Frenchman's major spill at Turn 14 left him feeling only "50% physically", like Carlos Sainz who entered the race with an aching neck following his crash at the same spot in FP2. Despite the pain in his knees and lower back, plus bruised heels, Ocon executed a long first stint on the hard tyre before pitting for softs under the safety car.

After overcoming his early struggles to switch on the hard Pirellis, and also keeping his nose clean when Mick Schumacher eliminated Sebastian Vettel, Ocon eventually returned ninth on the road. That became eighth after team-mate Alonso was dealt his two penalties.

"There was clearly a mountain to climb," said Ocon. "But from the strategy to the radio calls, the tyre management, everything was perfect today. To end up in the points being 50% physically as well, it's like a win.

"I have to say a big thank you to the boys, because everything was broken in the car. [This morning] the seat is in pieces. The pedal box is broken, the throttle, the brakes, it's broken, and the chassis... but we've made it."

SUTTON

AUTOSPORT

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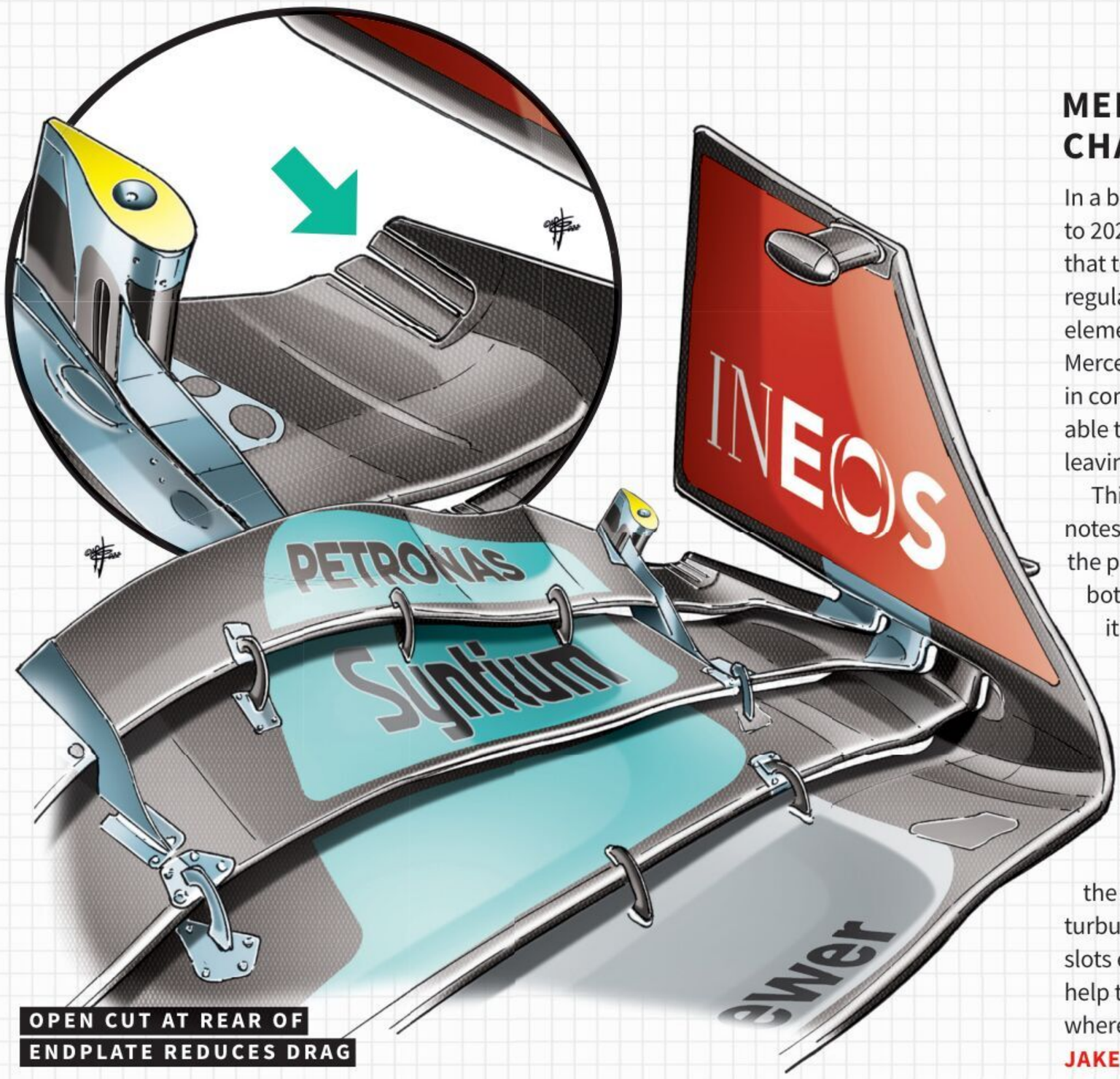
DRAWING BOARD

GIORGIO PIOLA



OPEN CUT AT REAR OF ENDPLATE REDUCES DRAG

MERCEDES MAKES CHANGES TO THE FRONT...

In a bid to reignite its fortunes after a rough start to 2022, Mercedes introduced a new front wing that took a different approach to the new endplate regulations. As the new rules state that the wing elements must merge directly into the endplate, Mercedes has ensured that its new wing remains in conformity with the regulations, but has been able to sweep the attachment points forward, leaving an open cut at the rear of the endplate.

This, Mercedes said in its pre-event technical notes, "improves front-wing efficiency by reducing the pressure difference between the top and bottom surfaces at the wing tip", suggesting that it has been able to reduce the induced drag of the front wing. In having the cut-out in the endplate, it also potentially allows airflow to be pushed outwards, developing the outwash effect in the front wing that had become popular in the previous ruleset. This will in turn boost the performance of the other aerodynamic devices further down the car as it helps to tune down the amount of turbulence produced by the front tyres. Two little slots on the outer edge of the rear-wing flap will help to direct and guide that airflow outwards to where Mercedes needs it to be.

JAKE BOXALL-LEGGE

...AND THE BACK OF THE TROUBLESOME W13

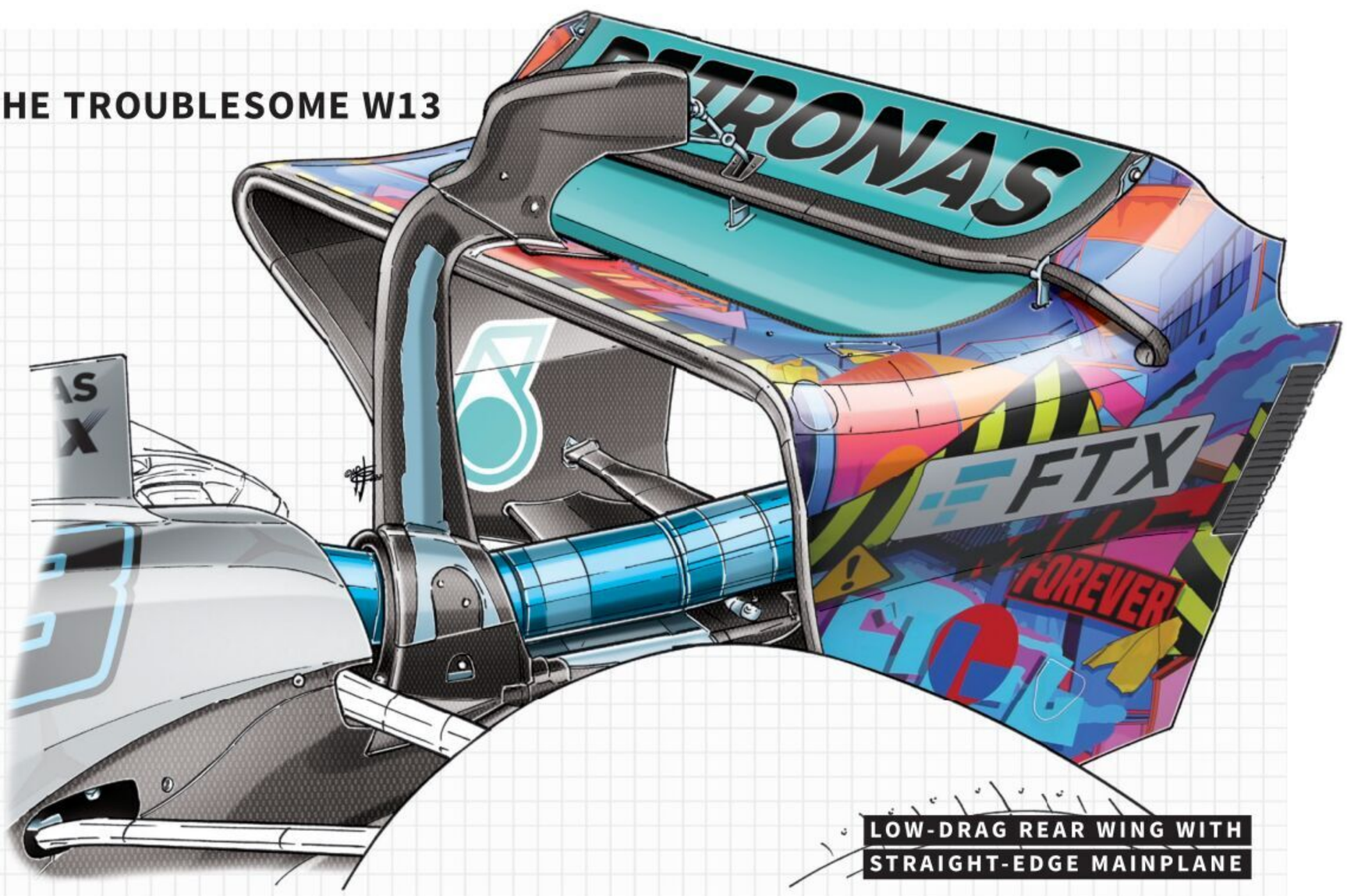
Mercedes also introduced a new lower-drag rear wing and beam wing, aiming to further improve its performance on the straights, after apparently being set back by a draggy W13 in the opening rounds. This was decked out in a particularly colourful scheme as teams leaned into the bright blue-and-pink hues associated with Miami.

The wing featured a more straight-edge mainplane to cut back on any superfluous downforce, while the upper wing element could lean at a lower angle of attack compared to the higher-downforce variant.

The beam wing featured shorter-chord wing elements to further facilitate the cutback in drag and downforce, as Mercedes' circuit simulations showed that the team could afford to lose some on the high-speed layout. The team kept the lower-downforce parts on beyond practice, having hinted at good pace early on in the weekend when George Russell headed FP2. The Brit dropped out in Q2 but Lewis Hamilton made it onto sixth on the grid.

Although the updates cemented Mercedes' current place as best of the rest – Russell recovered to fifth ahead of Hamilton – the team still has a way to go to get on terms with Red Bull and Ferrari.

JAKE BOXALL-LEGGE



LOW-DRAG REAR WING WITH STRAIGHT-EDGE MAINPLANE

FREE PRACTICE 1

POS	DRIVER	TIME
1	Leclerc	1m31.098s
2	Russell	1m31.169s
3	Verstappen	1m31.277s
4	Perez	1m31.301s
5	Gasly	1m31.498s
6	Sainz	1m31.528s
7	Albon	1m31.854s
8	Hamilton	1m31.956s
9	Magnussen	1m32.559s
10	Ricciardo	1m32.592s
11	Norris	1m32.615s
12	Alonso	1m32.884s
13	Zhou	1m33.020s
14	Vettel	1m33.024s
15	Ocon	1m33.417s
16	Stroll	1m33.576s
17	Bottas	1m33.773s
18	Tsunoda	1m34.043s
19	Schumacher	1m34.945s
20	Latifi	1m35.637s

WEATHER Sunny, air 22-23C track 38-44C

FREE PRACTICE 2

POS	DRIVER	TIME
1	Russell	1m29.938s
2	Leclerc	1m30.044s
3	Perez	1m30.150s
4	Hamilton	1m30.179s
5	Alonso	1m30.372s
6	Norris	1m30.535s
7	Gasly	1m30.547s
8	Zhou	1m30.860s
9	Ocon	1m30.861s
10	Magnussen	1m30.921s
11	Sainz	1m30.964s
12	Ricciardo	1m31.208s
13	Tsunoda	1m31.260s
14	Vettel	1m31.393s
15	Schumacher	1m31.587s
16	Stroll	1m31.631s
17	Albon	1m31.710s
18	Latifi	1m32.913s
19	Verstappen	no time
20	Bottas	no time

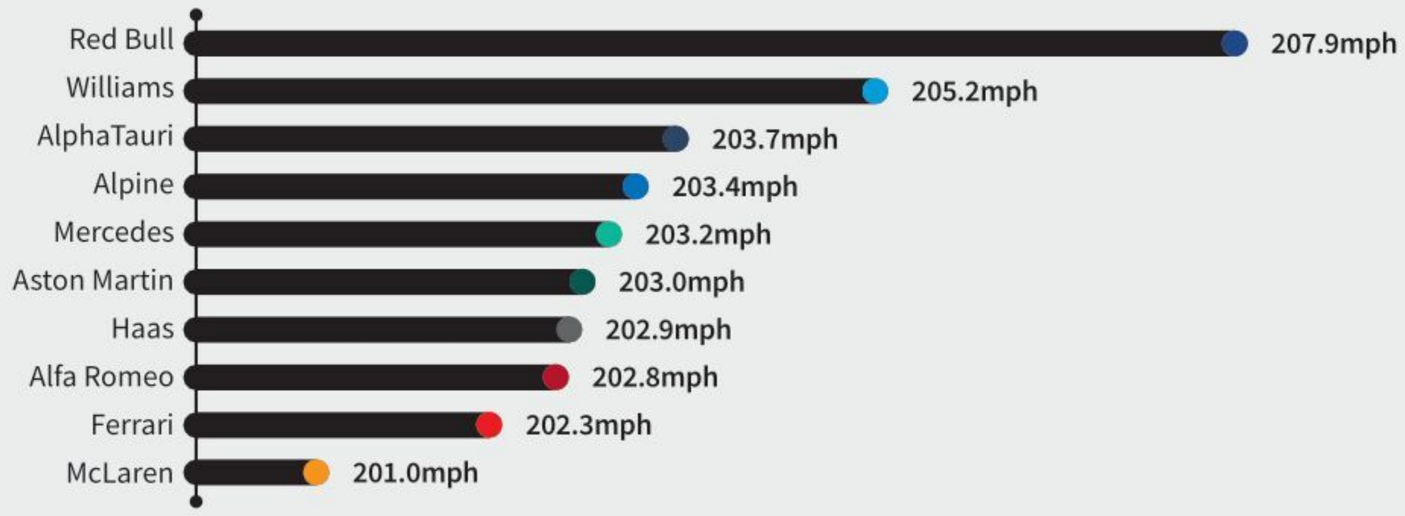
WEATHER Sunny, air 33-34C track 44-54C

FREE PRACTICE 3

POS	DRIVER	TIME
1	Perez	1m30.304s
2	Leclerc	1m30.498s
3	Verstappen	1m30.649s
4	Alonso	1m31.036s
5	Vettel	1m31.049s
6	Schumacher	1m31.050s
7	Sainz	1m31.172s
8	Magnussen	1m31.227s
9	Albon	1m31.501s
10	Norris	1m31.594s
11	Tsunoda	1m31.659s
12	Stroll	1m31.665s
13	Ricciardo	1m31.728s
14	Bottas	1m31.885s
15	Hamilton	1m31.890s
16	Gasly	1m31.901s
17	Russell	1m31.924s
18	Zhou	1m32.051s
19	Latifi	1m32.376s
20	Ocon	no time

WEATHER Sunny, air 33C track 48-49C

SPEED TRAP (QUALIFYING)



QUALIFYING 1

POS	DRIVER	TIME
1	Leclerc	1m29.474s
2	Verstappen	1m29.836s
3	Perez	1m30.055s
4	Sainz	1m30.079s
5	Hamilton	1m30.388s
6	Alonso	1m30.407s
7	Stroll	1m30.441s
8	Tsunoda	1m30.485s
9	Russell	1m30.490s
10	Ricciardo	1m30.583s
11	Schumacher	1m30.645s
12	Vettel	1m30.677s
13	Norris	1m30.761s
14	Gasly	1m30.779s
15	Bottas	1m30.845s
16	Magnussen	1m30.975s
17	Zhou	1m31.020s
18	Albon	1m31.266s
19	Latifi	1m31.325s
20	Ocon	no time

QUALIFYING 2

POS	DRIVER	TIME
1	Leclerc	1m29.130s
2	Verstappen	1m29.202s
3	Norris	1m29.634s
4	Perez	1m29.673s
5	Sainz	1m29.729s
6	Bottas	1m29.751s
7	Hamilton	1m29.797s
8	Stroll	1m29.996s
9	Tsunoda	1m30.031s
10	Gasly	1m30.128s
11	Alonso	1m30.160s
12	Russell	1m30.173s
13	Vettel	1m30.214s
14	Ricciardo	1m30.310s
15	Schumacher	1m30.423s

QUALIFYING 3

POS	DRIVER	TIME
1	Leclerc	1m28.796s
2	Sainz	1m28.986s
3	Verstappen	1m28.991s
4	Perez	1m29.036s
5	Bottas	1m29.475s
6	Hamilton	1m29.625s
7	Gasly	1m29.690s
8	Norris	1m29.750s
9	Tsunoda	1m29.932s
10	Stroll	1m30.676s

WEATHER Sunny, air 33-34C track 49-53C

SEASON STATS

	DRIVERS' CHAMPIONSHIP	PTS	BEST FINISH	BEST QUAL
1	Leclerc	104	1	1
2	Verstappen	85	1	1
3	Perez	66	2	1
4	Russell	59	3	6
5	Sainz	53	2	2
6	Hamilton	36	3	5
7	Norris	35	3	3
8	Bottas	30	5	5
9	Ocon	24	6	5
10	Magnussen	15	5	4
11	Ricciardo	11	6	6
12	Tsunoda	10	7	9
13	Gasly	6	8	7
14	Vettel	4	8	9
15	Albon	3	9	14
16	Alonso	2	9	5
17	Stroll	2	10	10
18	Zhou	1	10	13
19	Schumacher	0	11	12
20	Hulkenberg	0	12	17
21	Latifi	0	14	18

CONSTRUCTORS' CHAMPIONSHIP

1	Ferrari	157
2	Red Bull	151
3	Mercedes	95
4	McLaren	46
5	Alfa Romeo	31
6	Alpine	26
7	AlphaTauri	16
8	Haas	15
9	Aston Martin	6
10	Williams	3

QUALIFYING BATTLE

Hamilton	**3**	2	Russell
Verstappen	**4**	1	Perez
Leclerc	**5**	0	Sainz
Ricciardo	0	**5**	**Norris**
Alonso	**3**	2	Ocon
Gasly	**4**	1	Tsunoda
Vettel	**2**	1	Stroll
Stroll	**1**	1	**Hulkenberg**
Latifi	1	**3**	**Albon**
Zhou	0	**5**	**Bottas**
Magnussen	**3**	2	Schumacher

Based on Q1/Q2/Q3 sessions, not sprint races.
Events removed when one driver in a team could not record a representative time for reasons outside their control

WINS

Verstappen	3
Leclerc	2

POLE POSITIONS

Leclerc	3
Perez	1
Verstappen	1

FASTEST LAPS

Leclerc	3
Verstappen	2

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STARTING GRID

RACE RESULTS ROUND 5/23 (57 LAPS – 191.58 MILES)

POS	DRIVER	TEAM	FINISH TIME	LED	TYRES
1	**Max Verstappen** (NLD)	Red Bull	1h34m24.258s	48	**M**n, **H**n
2	**Charles Leclerc** (MCO)	Ferrari	+3.786s	8	**M**n, **H**n
3	**Carlos Sainz** (ESP)	Ferrari	+8.229s	1	**M**n, **H**n
4	**Sergio Perez** (MEX)	Red Bull	+10.638s		**M**n, **H**n, **M**n
5	**George Russell** (GBR)	Mercedes	+18.582s		**H**n, **M**n
6	**Lewis Hamilton** (GBR)	Mercedes	+21.368s		**M**n, **H**n
7	**Valtteri Bottas** (FIN)	Alfa Romeo-Ferrari	+25.073s		**M**n, **H**n
8	**Esteban Ocon** (FRA)	Alpine-Renault	+28.386s		**H**n, **S**n
9	**Alexander Albon** (THA)	Williams-Mercedes	+32.365s		**M**n, **H**n
10	**Lance Stroll** (CAN)	Aston Martin-Mercedes	+37.026s		**H**u, **M**u
11	**Fernando Alonso** (ESP)	Alpine-Renault	+37.128s		**M**n, **H**u
12	**Yuki Tsunoda** (JPN)	AlphaTauri-Red Bull	+40.146s		**M**n, **H**n, **S**u
13	**Daniel Ricciardo** (AUS)	McLaren-Mercedes	+40.902s		**M**n, **H**n, **S**n
14	**Nicholas Latifi** (CAN)	Williams-Mercedes	+49.936s		**H**n, **M**n
15	**Mick Schumacher** (DEU)	Haas-Ferrari	+1m13.305s		**M**n, **H**n, **M**n
16	**Kevin Magnussen** (DNK)	Haas-Ferrari	56 laps-accident damage		**M**n, **H**n, **M**n
17	**Sebastian Vettel** (DEU)	Aston Martin-Mercedes	54 laps-accident damage		**H**u, **M**u
R	**Pierre Gasly** (FRA)	AlphaTauri-Red Bull	45 laps-accident damage		**M**n, **H**n, **S**u
R	**Lando Norris** (GBR)	McLaren-Mercedes	39 laps-accident		**M**n, **H**n
R	**Zhou Guanyu** (CHN)	Alfa Romeo-Ferrari	6 laps-water pump		**M**n

WEATHER Sunny, then overcast, air 28-30C track 38-48C

WINNER'S AVERAGE SPEED 121.764mph **FASTEST LAP AVERAGE SPEED** 132.511mph

FASTEST LAPS

POS	DRIVER	TIME	GAP	LAP
1	**Verstappen**	1m31.361s	-	54
2	**Leclerc**	1m31.488s	+0.127s	53
3	**Sainz**	1m31.790s	+0.429s	56
4	**Perez**	1m31.819s	+0.458s	54
5	**Russell**	1m32.195s	+0.834s	56
6	**Schumacher**	1m32.528s	+1.167s	57
7	**Hamilton**	1m32.941s	+1.580s	55
8	**Tsunoda**	1m33.035s	+1.674s	55
9	**Ocon**	1m33.163s	+1.802s	56
10	**Bottas**	1m33.184s	+1.823s	56
11	**Ricciardo**	1m33.265s	+1.904s	56
12	**Stroll**	1m33.312s	+1.951s	52
13	**Alonso**	1m33.331s	+1.970s	53
14	**Norris**	1m33.411s	+2.050s	37
15	**Albon**	1m33.447s	+2.086s	57
16	**Vettel**	1m33.479s	+2.118s	50
17	**Magnussen**	1m33.511s	+2.150s	52
18	**Latifi**	1m34.169s	+2.808s	53
19	**Gasly**	1m34.487s	+3.126s	38
20	**Zhou**	1m35.731s	+4.370s	4

TYRES

KEY: H - Hard M - Medium S - Soft I - Intermediate W - Wet n - New set u - Used set

RACE BRIEFING

GRID PENALTIES

STROLL and **VETTEL** voluntarily started from the pitlane due to fuel-temperature issues

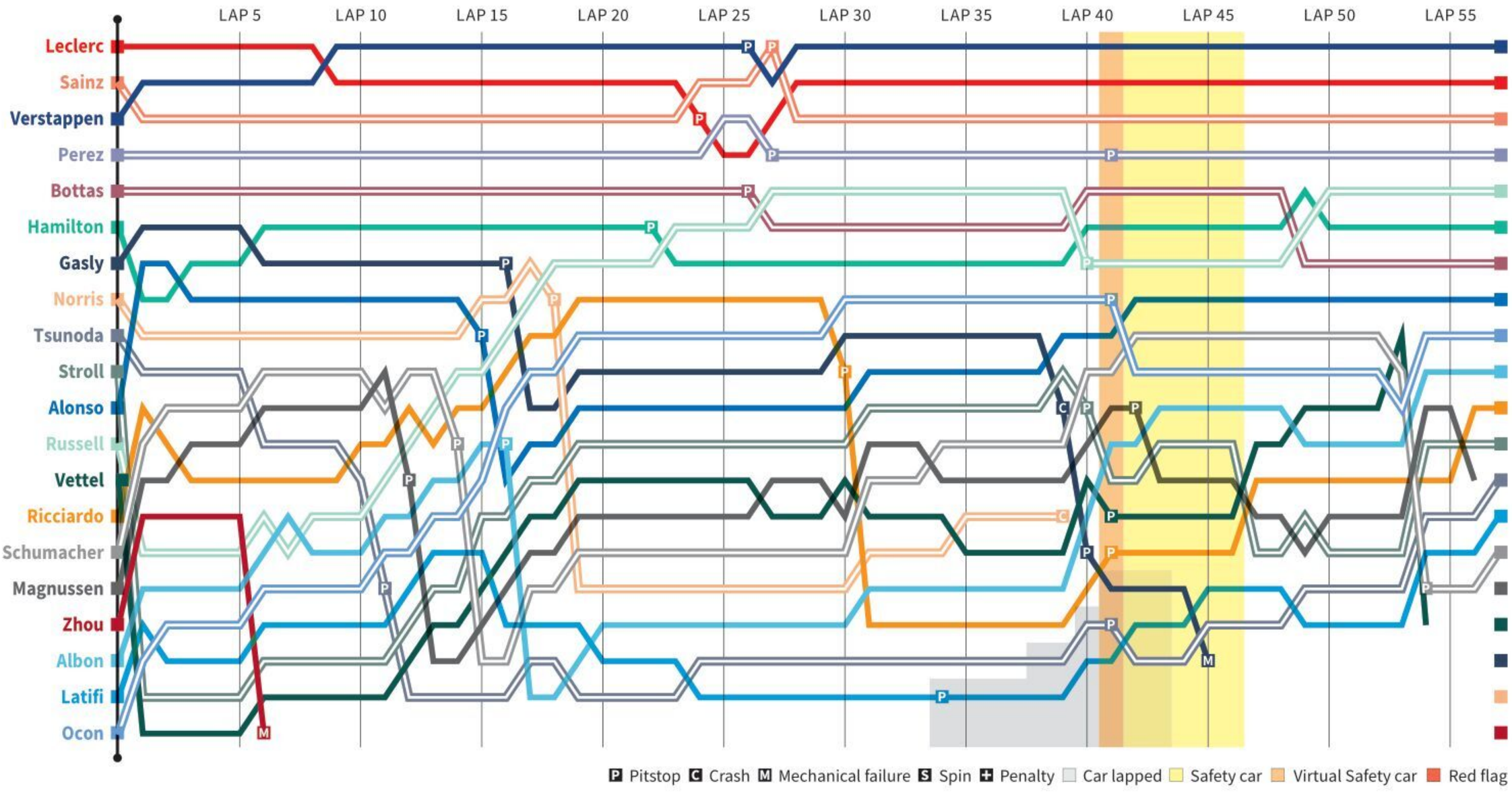
RACE PENALTIES

ALONSO Five-second penalty and two licence points for causing a collision with Gasly, and another five-second penalty and one licence point for leaving the track and gaining an advantage

MAGNUSSEN Five-second penalty and two licence points for causing a collision with Stroll

RICCIARDO Five-second penalty and one licence point for leaving the track and gaining an advantage

LAP CHART What happened, when



NOBODY'S PERFECT IN SWELTERING MIAMI

...but title rivals Verstappen and Leclerc were close after showing the rest the way once more, while Albon shone again for Williams

ALEX KALINAUCKAS

MERCEDES

LEWIS HAMILTON

Started **6th** — Result **6th**

8 Can't score higher for two reasons. He was beaten in qualifying by Bottas's slower Alfa Romeo, and in race locked up and climbed the kerbs at Turn 1, as Gasly slipped past and Alonso hit him. Needed a Bottas gaffe to pass, after which he had no chance of holding back Russell.

GEORGE RUSSELL

Started **11th** — Result **5th**

8 Q2 exit caused by Mercedes' porpoising problem. Lost ground at the start on hard tyres, then had great pace on a 40-lap opening stint. Had luck with virtual safety car timing and battled Hamilton well with a big tyre delta, even if he had to pass twice after running off at Turn 11 the first time.

RED BULL

MAX VERSTAPPEN

Started **3rd** — Result **1st**

9 An impressive turnaround after his blighted Friday. His slip off the road in Q3 likely cost him pole, but he did what he had to do in the race. Nailed Sainz at the start, pressured and passed Leclerc, then romped clear while managing tyre wear. Survived a big scare on cold tyres after the safety car.

SERGIO PEREZ

Started **4th** — Result **4th**

7 Car capable of pole, but wound up fourth after a messy second sector late in Q3. Was closing in on Sainz before his power problem struck, then did very well to keep his pace so high despite losing 10km/h on straights. Botched attempted pass on Sainz on fresh tyres after the safety car.

FERRARI

CHARLES LECLERC

Started **1st** — Result **2nd**

9 Managed his softs better than Sainz in Q3 to clinch pole. Aced the start and tried to drop Verstappen in the corners, where Ferrari excelled. But couldn't keep his medium tyres in good shape and lost out when Verstappen attacked. Late chase was impressive, but faced a critical top-speed disadvantage.

CARLOS SAINZ

Started **2nd** — Result **3rd**

8 Great response after his recent disastrous run, but did crash in FP3. This brings down his score, as his chicane approach spin led to neck pain from his shunt beyond Turn 14, which contributed to him being unable to stay at "100%" in the race. Battled well, but also had a costly Turn 17 slide in Q3.

McLAREN

DANIEL RICCIARDO

Started **12th** – Result **13th**

5 A fire-up issue delayed his last Q2 run. From start, gained with a bold Turn 1 outside move, then battled while on the longest medium-tyres stint. Couldn't find pace with the hards. Fought Magnussen and Stroll on softs post-safety car, but penalised for going off and gaining an advantage.

LANDO NORRIS

Started **8th** — Result **R**

6 Made Q3, but got a poor exit from the chicane on his final Q3 run. In the race, ran adrift of Alonso and then after his stop he couldn't pass the Haases even with fresher rubber. Not a lot he could have done differently in the Gasly shunt given his rival's car was damaged and coming across.

ALPINE

FERNANDO ALONSO

Started **10th** – Result **11th**

3 He blamed Sainz being ahead for missing the Q3 cut, but it didn't merit investigation. In the race he got away with tagging Hamilton, then clattered Gasly and was penalised. Picked up more time for cutting the chicane and abused track limits so much he got a black/white flag warning.

ESTEBAN OCON

Started **18th** — Result **8th**

7 FP3 chicane approach crash was a major error, resulting in a cracked chassis and missing qualifying. But in the race he was superb, putting in the joint-longest first stint in the hope of gaining with a late incident. Got that, then battled Schumacher and Vettel and benefited when they crashed.

ALPHATAURI

PIERRE GASLY

Started **7th** — Result **R**

7 Felt this was his best qualifying of 2022 so far to run Hamilton close for sixth. Set for points until misjudged Turn 1 Alonso pass left him with damage. Team felt he was OK to stay out, but the steering problem got more severe and left him with no chance of avoiding Norris in a heavy clash.

YUKI TSUNODA

Started **9th** — Result **12th**

6 Did well to reach Q3. Wheelspin off the line, but dropped a spot because Alonso braved the Turn 1 outside line. Struggled for pace and tyre life during the shortest medium-tyre stint, and car balance no better on the hards. Had a final stint on the softs post-safety car but couldn't make inroads.

George Russell's strategy gamble in Miami paid off

ASTON MARTIN

SEBASTIAN VETTEL

Started **Pit** — Result **17th**

6 Eliminated in Q2. Stroll then had him covered from their pitlane starts. Also takes *some* blame for Schumacher crash. The damage meant he stopped three laps early with no points. Had a shot at scoring with double pass following Schuey's defence against Ocon before they clashed.

LANCE STROLL

Started **Pit** — Result **10th**

8 Mighty Q2 lap, but rued a poor final sector on last Q3 run. Fuel temperature problem meant a pitlane start. Led Vettel on a long hard-shod first stint. After the restart hit twice by Magnussen, the second on the penultimate lap letting Ricciardo past. Did cop a black/white flag for weaving late on.

WILLIAMS

NICHOLAS LATIFI

Started **17th** – Result **14th**

5 Albon showed where Williams could reach, but then he did have lighter, quicker new parts. Latifi therefore did well to get as close as he did in Q1, but had a difficult race. Couldn't get the hard tyres to work and ran at the back, but did have to cope with unexpectedly high fuel consumption.

ALEX ALBON

Started **16th** — Result **9th**

9 Misses the maximum for his Q1 exit, down to not getting his tyres sufficiently hot at the start of lap, then overheating them. In the race he got stuck in, was unlucky that the VSC/safety car timing hurt his strategy of starting on mediums, but benefited when others crashed or were penalised.

ALFA ROMEO

ZHOU GUANYU

Started **15th** — Result **R**

5 Blamed last-corner traffic for his Q1 exit, but might not have escaped in any case after a scruffy chicane exit. That results in an average score, brought up one because even though his race was over after just six laps due to a water leak, he passed the gripless Russell nicely into Turn 11 on lap one.

VALTTERI BOTTAS

Started **5th** — Result **7th**

5 It had all been looking *so* good. He produced a brilliant Q3 effort to beat Hamilton to fifth, then held his position off the line. Unruffled pre-safety car, but his mistake in sliding deep at Turn 17 and striking the wall, distracted by Russell attacking Hamilton in his mirrors, was so poor it ruins his score.

HAAS

KEVIN MAGNUSSEN

Started **14th** – Result **16th**

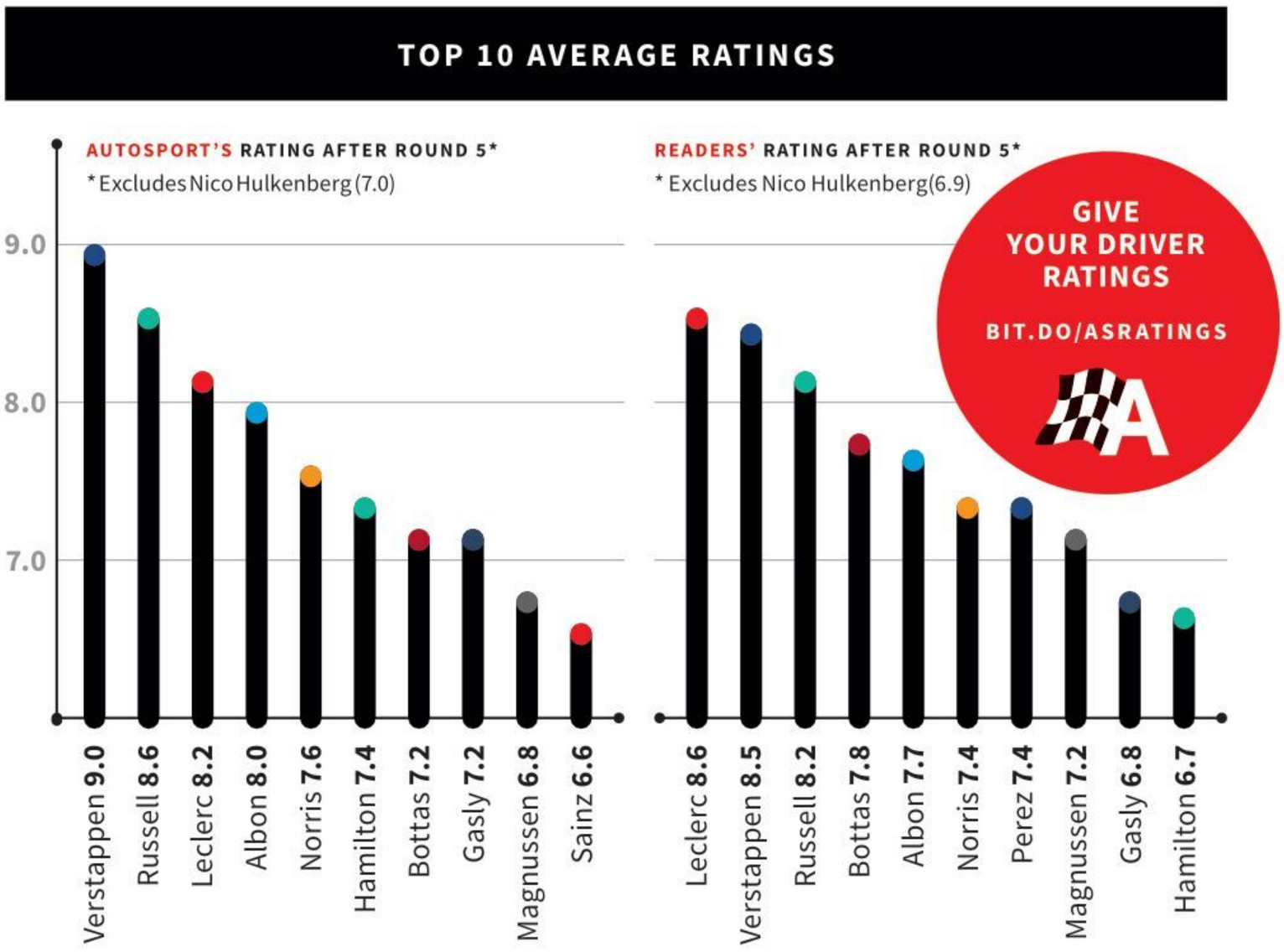
4 Outqualified by Schumacher, but had no radio. Got repassed by his team-mate after being waved by early on, then a black/white flag warning for weaving and hit Stroll twice. Penalised for awful clattering into the Aston at Turn 11, but did have front-wing damage from their first clash.

MICK SCHUMACHER

Started **13th** – Result **15th**

4 An excellent weekend ruined. Only Haas to reach Q2. In the race he started strongly before letting Magnussen past, then repassed his team-mate in the middle phase. Was in the hunt for points when he clumsily hit Vettel at Turn 1 – in our opinion more to blame as he was so far back.

TOP 10 AVERAGE RATINGS



WEC SPA

Toyota's sole survivor succeeds at Spa

After its sister car fell by the wayside, the Conway/Lopez/Kobayashi GR010 HYBRID held on through treacherous conditions to win

GARY WATKINS

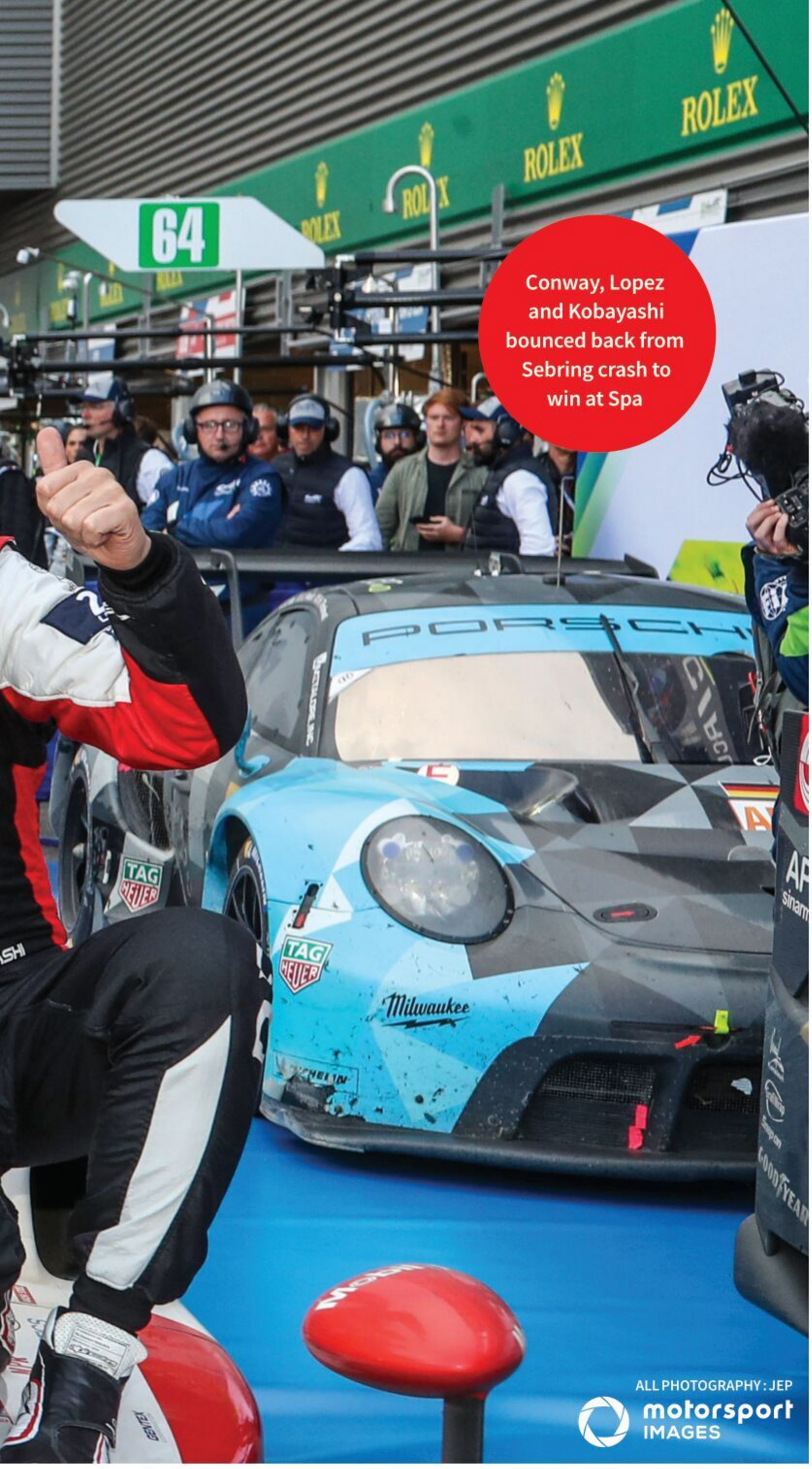
Relive this race at motorsport.tv

To lose one victory in the World Endurance Championship when you are the only major manufacturer in class might be regarded as misfortune. To lose two in a row would probably be deemed careless. Toyota avoided that fate at Spa last weekend, despite a first mechanical retirement for one of its prototypes since 2017 and everything the Ardennes weather gods could throw at the field.

Toyota led the majority of the way through a race interrupted by three red flags, six safety cars and five full-course yellows, and wasn't headed in the Hypercar class beyond early in the second hour on a day when neither Alpine nor Glickenhaus put together a consistent challenge. But to suggest that race winners Mike Conway, Kamui Kobayashi and Jose Maria Lopez somehow had it easy aboard the winning Toyota GR010 HYBRID would be both unfair and downright disrespectful.

The conditions for much of the middle hours of the Spa 6 Hours were treacherous in the extreme. And that first retirement since Le Mans 2017 meant that all the Toyota eggs were in one basket.

Lopez conceded that he had it easy: the Argentinian didn't have



to run in full wet conditions – he only ran on intermediates and slicks. Yet he reckoned that from the sanctuary of the team's pit garage the race made for difficult viewing. "Watching the inboards and hearing the radio from the garage was really tough," said Lopez, who completed a 27-second victory over the Alpine-Gibson A480 after taking over for the final 80 minutes. "There were points in the race where Mike and Kamui looked like passengers in the car; there was so much aquaplaning, it was extreme at times. To watch from outside, it was like a horror movie."

Conway, who started the race in the winning Toyota, didn't disagree: "Some of the wet running was really treacherous, a lot of standing water, just hard to keep it on the road. It was really tough, but we hung in there, didn't make any mistakes, and that was key to victory."

Toyota Gazoo Racing Europe technical director Pascal Vasselon described the victory at Spa – the marque's sixth in a row at the Belgian venue – as an "important one for the team". "Losing once is OK, but losing twice is too much."

The hybrid system failed on the sister GR010 shared by Sebastien Buemi, Brendon Hartley and Ryo Hirakawa, the exact problem remaining unexplained in the immediate aftermath of the race. The car led in Buemi's hands to the first round of pitstops and into the first sequence of stoppages just after the one-hour mark.

The safety car had been sent and then the reds shown when »

PRIAULX, TINCKNELL AND RIED TOP GTE AM

The Proton Dempsey team made a pair of tactical calls in the final stages of the Spa 6 Hours that yielded GTE Am victory for the Porsche 911 RSR (below) shared by Harry Tincknell, Sebastien Priaulx and Christian Ried. One without the other probably wouldn't have been enough for the car to beat the TF Sport Aston Martin that took the chequered flag a scant second and a half behind in the hands of Marco Sorensen.

With an hour and 20 minutes of the race to run, Tincknell took over the car from Priaulx and was given the soft-compound Michelin. Just over half an hour later, the team opted not to bring him into the pits during the penultimate full-course yellow. That leapfrogged the car into the lead, the team opting for what Tincknell described as the "fuel marathon", and then the soft tyres proved crucial after the final, last-gasp FCY.

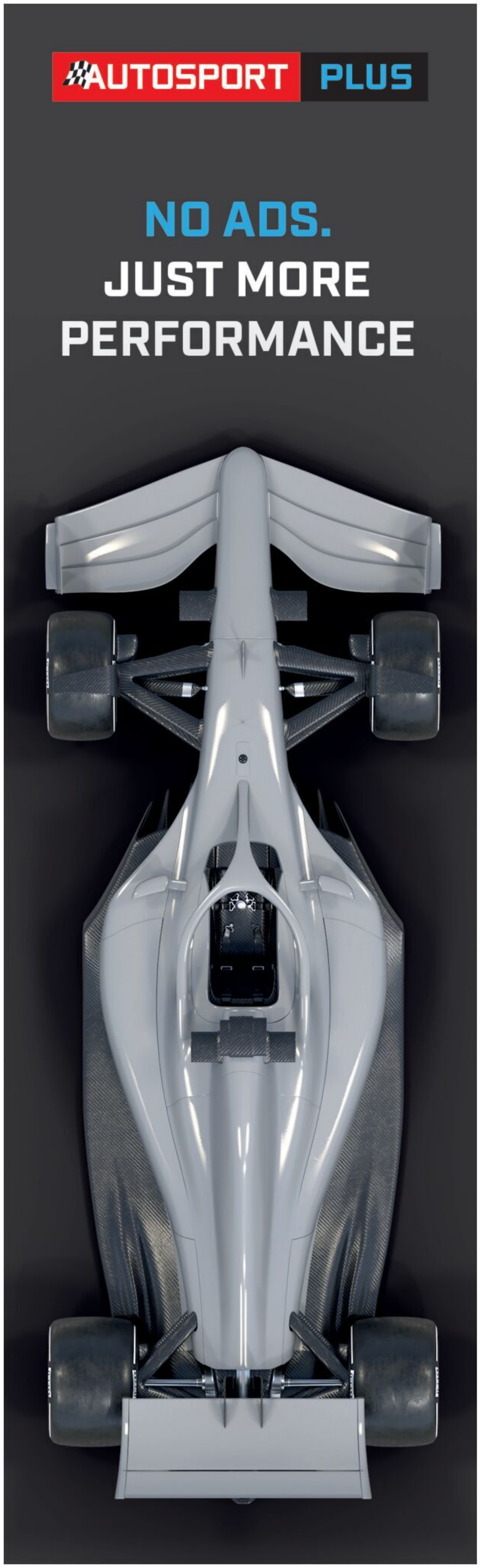
Tincknell used the softs after taking over the car from Priaulx to scythe through up to third place behind the NorthWest AMR Aston Martin Vantage GTE driven by Nicki Thiim, David Pittard and Paul Dalla Lana and the TF car that Sorensen shared with Ben Keating and Henrique Chaves.

Sorensen leapfrogged his former factory team-mate Thiim in the pits and was right with the Porsche when the yellows flew for one last time. Tincknell was struggling as his softs went away against an Aston that was on the harder of the two Michelin compounds. The last FCY was crucial because it allowed the Brit's rubber to cool down.

"The pace was really strong until it really started to dry out and the soft tyre started to degrade," explained Tincknell. "I went from thinking this is a 40-minute victory drive, to we are in trouble now. Not only did the last FCY help with the fuel, but it also cooled the tyres down. It was win or fence. I tried to pull away when the tyres were cool and managed to get four or five seconds."

Sorensen reckoned the win was on for TF but for the late VSC. "We would definitely have had a better go at it but for that," he said. "He could really switch his tyres on when it went green."

Thiim was two seconds behind the TF Aston in third position at the end of the race.



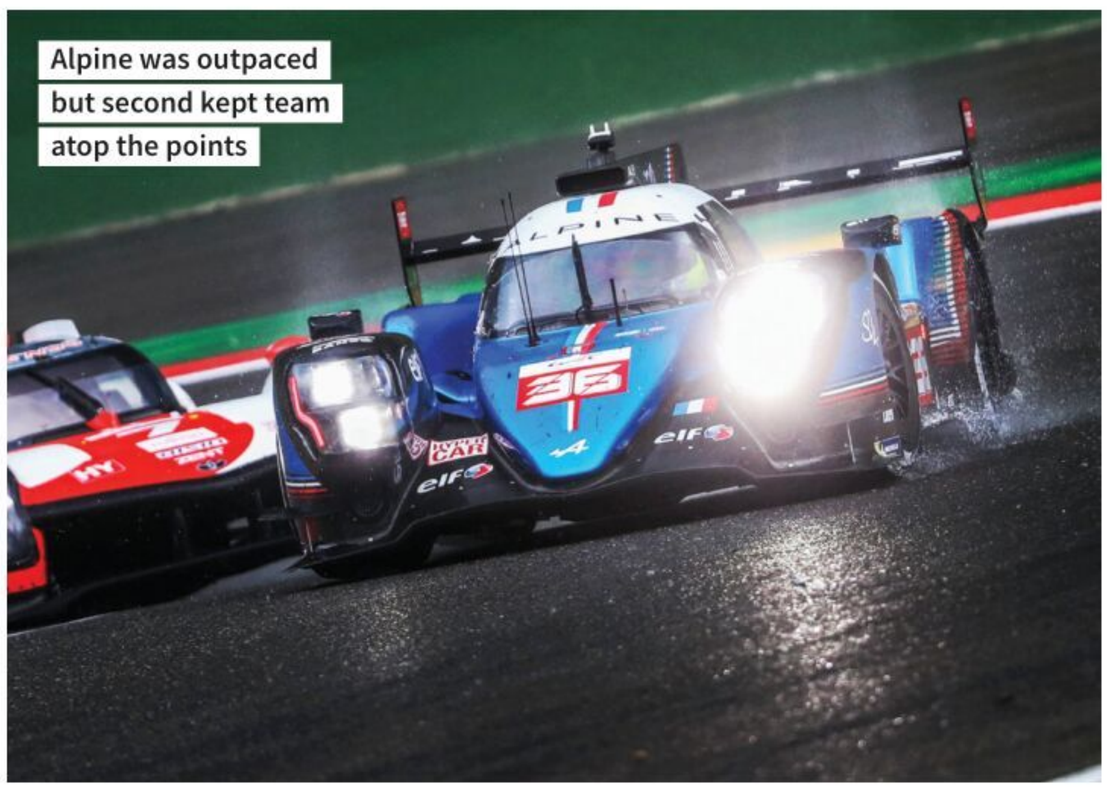
Glickenhaus (left) took pole but wasn't quick in all conditions

Miroslav Konopka clashed the ARC Bratislava ORECA LMP2. When the race restarted just over 20 minutes later, the #8 Toyota struggled to get away from the queue on the start/finish straight. There was a problem with the hybrid system and, after one recycle of the car's system before he got away and another on the Kemmel Straight, he was asked to pull over and retire the car before the completion of one lap. "We knew there was a severe problem," explained Vasselon. "We tried to mitigate it, but it was not possible. In the end it was a terminal problem."

Buemi had led Conway by five seconds after the first stops. The Swiss had made it past the pole-winning Glickenhaus with Olivier Pla at the wheel after 15 laps, Conway following him through a lap later. The Toyotas and the Glickenhaus appeared evenly matched at the beginning of the race; Pla in the American car was only briefly more than a second clear of Buemi. But as the only fully dry stint of the Spa 6 Hours wore on, it was Toyota that had the more consistent car. Pla, who shared the 007 with Pipo Derani and Romain Dumas, fell away from the Japanese machines to the tune of 10s before the pitstops.

Thereafter, the Glickenhaus was quick in the wet, but a real handful in mixed conditions. That much was evident on the first lap after the restart. Pla, along with Andre Negrao, went off at the Bus Stop on a damp track – the rain had arrived during the red and the surface was quite wet in places.

The pace of the Glickenhaus in the wet meant it was still in the mix in the middle of the penultimate hour. Derani was less than 10s down on the remaining Toyota, and just ahead of the Alpine, when an FCY brought the cars into the pits on a drying track. The Toyota and the Alpine went to intermediates, but the Glickenhaus was sent out on slicks. Two laps later, it was back in for inters. The botched



Alpine was outpaced but second kept team atop the points

“We knew there was a severe problem. We tried to mitigate it, but it was not possible”

call and the car’s struggles on the drying track resulted in the 007 completing the race down in ninth place, behind six LMP2s.

Luca Ciancetti, technical director at Glickenhaus, described the mix-up as “complicated”. The radio on the car wasn’t functioning correctly and Derani couldn’t hear properly when he was asked if he wanted slicks or cut slicks, meaning inters. The intermediate Michelin only came on stream at the Le Mans 24 Hours last year and Derani wasn’t aware of its availability. He thought he was being given the choice between slicks and wets.

It wasn’t a bad weekend for Glickenhaus overall, though. Pla had claimed the marque’s first WEC pole, though Toyota had compromised its pace in qualifying by opting for the harder of the two Michelin compounds: it wanted a full allocation of the more durable tyre for the race because it reckoned consistency would be its strongest weapon. That at least partially explained why the GR010s ended up third and fourth, Kobayashi just ahead of Hartley, behind Matthieu Vaxiviere in the Alpine.

“In the dry not too good, not too bad; in the wet good, and in intermediate conditions very bad,” was how Ciancetti summed up the team’s day. “This is what we had today at Spa. It was not a perfect performance.”

The 007 did race the brake-by-wire system that it tried in practice at Sebring in March. But Ciancetti reckoned the improvement it should yield has yet to be fully unlocked, though he is not predicting that it will result in a giant step forward.

The Alpine couldn’t match the Toyotas or the Glickenhaus in the dry after its Balance of Performance hit in the wake of its Sebring 1000 Miles victory. The car was running with 20kW (26bhp) less power at Spa. But second place was a decent result, reckoned Negrao, given the conditions. “We got the job done today,” said the Brazilian. “This car has always struggled in the wet; the traction control we have is not the best. We’ve made a step forward in the rain, but against Toyota and Glickenhaus we had no chance.”

Had it stayed dry, Toyota would probably have won this race anyway. The Glickenhaus wasn’t good enough on its tyres and the Alpine, with the latest BoP, not quite quick enough. If it wasn’t already, Toyota is now very much favourite for the Le Mans 24 Hours in June. »

P50 PORSCHE’S NEW LMDH CHALLENGER

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OUR JOURNALISTS COVER ALL MAJOR SERIES

FERRARI HOLDS ON FOR GTE PRO VICTORY

Ferrari wouldn't have got a look-in at Spa had it remained dry. But the great leveller that arrived in bucketloads from the sky and streaming rivers from the hillsides allowed it to claim a victory that was both a shock and highly dramatic. James Calado had to hang on at the end around a track with a clear dry line in the face of a stern challenge from Porsche and Michael Christensen.

Alessandro Pier Guidi had qualified the winning AF Corse-run factory Ferrari 488 GTE Evo eight tenths from Porsche driver Gianmaria Bruni's pole. That was admittedly much closer than the two-second deficit first time out this season at Sebring in March. Ferrari reckoned it still had no chance in the dry after the off-season Balance of Performance reset that followed the introduction of a new biofuel from TotalEnergies.

After 20 laps, Pier Guidi was the better part of 10s in arrears of Kevin Estre in the Porsche 911 RSR with which Calado would be duking it out five and bit hours later. The rain changed everything, though not before Pier Guidi lost the better part of a lap at the first red flag. He got it back courtesy of the wavearound at the second red and, when conditions were pretty much at their wettest, was able to move past Christensen for second early in hour four.

Calado "gave more than 100%" to hold off Porsche

The leader at this stage was the second AF Ferrari of Miguel Molina and Antonio Fuoco, which owed its position at the front of the field to gambling for wets on the grid during the first red.

Pier Guidi pulled one of the mammoth shifts for which he has become renowned: he only handed over to Calado with 80 minutes left. The Brit moved into the lead when Fuoco stopped for a splash along with Christensen under FCY conditions with an hour to go.

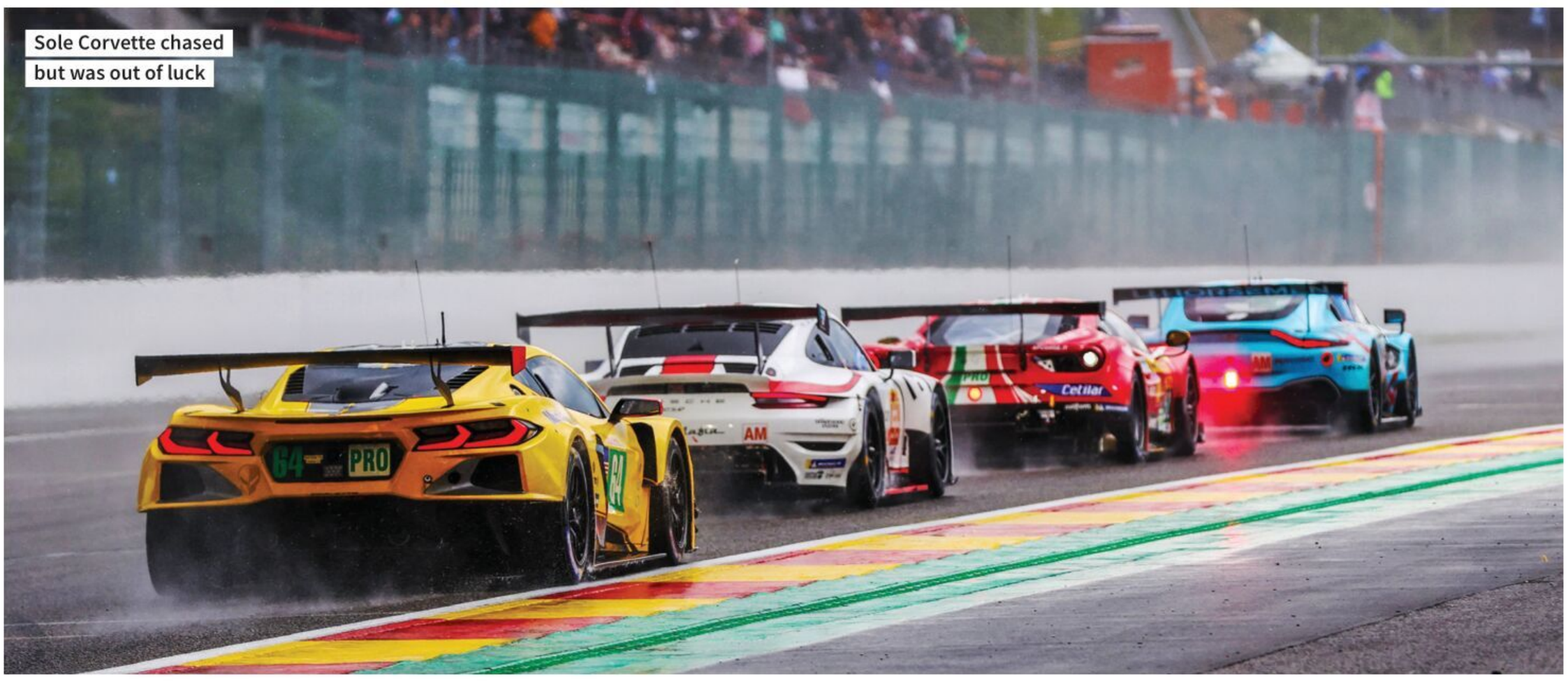
Christensen made it past the second Ferrari with 25 minutes left and charged up onto the back of the Calado car. The Porsche was showing its superiority on slicks around a track with a clear dry line. But over the 10-minute sprint to the flag, Calado somehow hung on.

"I gave it more than 100%, too much actually, but I didn't want to give up," said Calado. "I nearly crashed the car three times on the last two laps."

Calado reckoned the last FCY was crucial. He suggested the car would have needed a splash without it. Christensen conceded that the Ferrari was quicker in the wet over the full duration of a stint. His efforts to overtake at the end were stymied, he said, because he was unable to stay flat in the Ferrari's slipstream through Eau Rouge, robbing him of the traditional passing opportunity at Les Combes.

The Chevrolet Corvette C8.R was again in the mix, but lost a full lap at the first red flag. Nick Tandy's pitstop had been delayed after the safety car came out, which meant he had to come in under the red that quickly followed. That came with a full one-lap penalty. The car shared by Tandy and Tommy Milner did get back on the lead lap, but an extra driver change to put Milner back in the car at the end because he hadn't completed the minimum drive-time put them back again.

Bruni sustained a puncture at the exit of La Source on lap one in a side-by-side contact with Estre, after the Frenchman overtook him with locked-up brakes. Bruni and Richard Lietz lost a lap and never got it back on the way to fifth.



Sole Corvette chased but was out of luck

Frijns, Gelael and Rast celebrate fine WRT win

WRT BACK TO ITS BEST IN LMP2

WRT may have claimed second and third positions first time out this year at Sebring, but it wasn't quite the force around the Florida airfield that it had been at the back end of 2021. But at Spa last Saturday the Belgian team was back to its imperious best on home turf.

It wasn't so much that the team notched up a 1-2 at the end of the six hours that was so impressive. Rather it was the performance of the winning ORECA-Gibson 07 shared by Sean Gelael, Robin Frijns and Rene Rast. They led the class for 67 of the 103 laps on the way to a 34-second victory ahead of the sister car driven by Rui Andrade, Norman Nato and Ferdinand Habsburg. More to the point, Frijns led the race for 26 laps from the end of the second hour into the fourth.

Gelael put in probably his best WEC performance yet; he appeared to benefit from tests at Spa and Monza since Sebring after WRT airfreighted the #31 ORECA back from Sebring rather than waiting for the boat. The Indonesian ran second to the first stops (behind Antonio Felix da Costa in the #38 Jota ORECA), and again to the initial stoppage (behind Lorenzo Colombo in the Prema car).

The WRT machine moved into the lead when the safety car that followed shortly after the resumption brought the field into the pits in ever-heavier rain. The car was on wet-weather Goodyears already, and the seconds gained by not changing tyres when the others did allowed Frijns to take over the lead. After a second red, he was able to pull away, extending his lead to as much as 15s.

The only hiccup for the winning crew came in the closing stages when the Ultimate ORECA spun right in front of Rast on the exit of the Bruxelles hairpin. The German T-boned the spinning car and damaged the nose of the WRT ORECA, but it was too late in the day to have any effect on the outcome.

As dominant as WRT was, it did enjoy some good fortune. It would have won anyway, but what happened on the front straight during the initial red helped Frijns get into the overall lead. Gelael had picked up a left-front puncture just before the stoppage. The rules allow teams to switch to wets, but not to change a single slick for another. It forced WRT's hand into going to wets earlier than everyone else.

There was any number of cars that might have deprived the second WRT ORECA of the runner-up spot but for hard-luck stories. The United Autosports ORECA shared by Josh Pierson, Alex Lynn and Oliver Jarvis flew in the wet in Lynn's hands, but its race unravelled with a broken door catch. When Jarvis took over at the second attempt, he had to do so via the passenger side.

Two moments for Phil Hanson at the Bus Stop – one when he got bottled up behind the Toyota as it struggled on inters on an increasingly dry track – almost certainly cost the car he shared with Filipe Albuquerque and Will Owen the runner-up spot. The #38 Jota car recovered to third in the hands of Will Stevens after Roberto Gonzalez had struggled in the wet.

Lynn flew for United in the wet conditions

AUTOSPORT

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RESULTS WORLD ENDURANCE CHAMPIONSHIP ROUND 2/6, SPA (BEL), 7 MAY (103 LAPS – 448.258 MILES)

POS	DRIVERS	TEAM	CAR	CLASS	TIME
1	Mike **Conway** (GBR) Kamui **Kobayashi** (JPN) Jose Maria **Lopez** (ARG)	Toyota Gazoo Racing	Toyota GR010 HYBRID	Hypercar	6h00m31.052s
2	Andre **Negrao** (BRA) Nicolas **Lapierre** (FRA) Matthieu **Vaxiviere** (FRA)	Alpine Elf Endurance Team (Signatech)	Alpine-Gibson A480	Hypercar	+27.473s
3	Seal **Gelael** (IDN) Robin **Frijns** (NLD) Rene **Rast** (DEU)	WRT	ORECA-Gibson 07	LMP2	+1m06.185s
4	Rui **Andrade** (PRT) Ferdinand **Habsburg** (AUT) Norman **Nato** (FRA)	Realteam by WRT	ORECA-Gibson 07	LMP2	+1m40.676s
5	Antonio **Felix da Costa** (PRT) Roberto **Gonzalez** (MEX) Will **Stevens** (GBR)	Jota	ORECA-Gibson 07	LMP2	+1m48.571s
6	Emmanuel **Collard** (FRA) Dane **Cameron** (USA) Felipe **Nasr** (BRA)	Team Penske	ORECA-Gibson 07	LMP2	+1m57.610s
7	Will **Owen** (USA) Phil **Hanson** (GBR) Filipe **Albuquerque** (PRT)	United Autosports	ORECA-Gibson 07	LMP2	+1m57.901s
8	Josh **Pierson** (USA) Alex **Lynn** (GBR) Oliver **Jarvis** (GBR)	United Autosports	ORECA-Gibson 07	LMP2	-1 lap
9	Olivier **Pla** (FRA) Romain **Dumas** (FRA) Pipo **Derani** (BRA)	Glickenhaus Racing	Glickenhaus-Pipo 007 LMH	Hypercar	-1 lap
10	Lorenzo **Colombo** (ITA) Robert **Kubica** (POL) Louis **Deletraz** (CHE)	Prema ORLEN Team	ORECA-Gibson 07	LMP2	-1 lap
11	Alessandro **Pier Guidi** (ITA) James **Calado** (GBR)	AF Corse	Ferrari 488 GTE Evo	GTE Pro	-1 lap
12	Kevin **Estre** (FRA) Michael **Christensen** (DNK)	Porsche GT Team (Manthey)	Porsche 911 RSR	GTE Pro	-1 lap
13	Miguel **Molina** (ESP) Antonio **Fuoco** (ITA)	AF Corse	Ferrari 488 GTE Evo	GTE Pro	-1 lap
14	Charles **Milesi** (FRA) Lilou **Wadoux** (FRA) Sebastien **Ogier** (FRA)	Richard Mille Racing Team (Signatech)	ORECA-Gibson 07	LMP2	-2 laps
15	Alessio **Rovera** (ITA) Francois **Perrodo** (FRA) Nicklas **Nielsen** (DNK)	AF Corse	ORECA-Gibson 07	LMP2	-2 laps
16	Ryan **Cullen** (IRL) Nico **Muller** (CHE) Sebastien **Bourdais** (FRA)	Vector Sport	ORECA-Gibson 07	LMP2	-2 laps
17	Steven **Thomas** (USA) James **Allen** (AUS) Rene **Binder** (AUT)	Algarve Pro Racing	ORECA-Gibson 07	LMP2	-2 laps
18	Nick **Tandy** (GBR) Tommy **Milner** (USA)	Corvette Racing (Pratt & Miller)	Chevrolet Corvette C8.R	GTE Pro	-2 laps
19	Francois **Heriau** (FRA) Jean-Baptiste **Lahaye** (FRA) Matthieu **Lahaye** (FRA)	Ultimate	ORECA-Gibson 07	LMP2	-3 laps
20	Gianmaria **Bruni** (ITA) Richard **Lietz** (AUT)	Porsche GT Team (Manthey)	Porsche 911 RSR	GTE Pro	-3 laps
21	Christian **Ried** (DEU) Seb **Priaulx** (GBR) Harry **Tincknell** (GBR)	Dempsey-Proton Racing	Porsche 911 RSR	GTE Am	-4 laps
22	Ben **Keating** (USA) Henrique **Chaves** (PRT) Marco **Sorensen** (DNK)	TF Sport	Aston Martin Vantage GTE	GTE Am	-4 laps
23	Paul **Dalla Lana** (CAN) David **Pittard** (GBR) Nicki **Thiim** (DNK)	Northwest AMR (Prodrive)	Aston Martin Vantage GTE	GTE Am	-4 laps
24	Thomas **Flohr** (CHE) Francesco **Castellacci** (ITA) Nick **Cassidy** (NZL)	AF Corse	Ferrari 488 GTE Evo	GTE Am	-4 laps
25	Niki **Leutwiler** (CHE) Matteo **Cairoli** (ITA) Mikkel **Overgaard Pedersen** (DNK)	Team Project 1	Porsche 911 RSR	GTE Am	-4 laps
26	Michael **Wainwright** (GBR) Riccardo **Pera** (ITA) Ben **Barker** (GBR)	GR Racing	Porsche 911 RSR	GTE Am	-5 laps
27	Tomonobu **Fujii** (JPN) Satoshi **Hoshino** (JPN) Charlie **Fagg** (GBR)	D'Station Racing (TF)	Aston Martin Vantage GTE	GTE Am	-6 laps
28	Claudio **Schiavoni** (ITA) Matteo **Cressoni** (ITA) Giancarlo **Fisichella** (ITA)	Iron Lynx	Ferrari 488 GTE Evo	GTE Am	-6 laps
29	Fred **Poordad** (USA) Patrick **Lindsey** (USA) Jan **Heylen** (BEL)	Dempsey-Proton Racing	Porsche 911 RSR	GTE Am	-7 laps
30	Christina **Nielsen** (DNK) Rahel **Frey** (CHE) Doriane **Pin** (FRA)	Iron Dames (Iron Lynx)	Ferrari 488 GTE Evo	GTE Am	-7 laps
31	Toni **Vilander** (FIN) Simon **Mann** (USA) Christoph **Ulrich** (CHE)	AF Corse	Ferrari 488 GTE Evo	GTE Am	-9 laps
32	Gabriel **Aubry** (FRA) Franck **Dezoteux** (FRA) Pierre **Ragues** (FRA)	Spirit of Race (AF)	Ferrari 488 GTE Evo	GTE Am	-12 laps
R	Brendan **Iribe** (USA) Ollie **Millroy** (GBR) Ben **Barnicoat** (GBR)	Team Project 1	Porsche 911 RSR	GTE Am	93 laps-acc damage
R	Ed **Jones** (ARE) Oliver **Rasmussen** (DNK) Jonathan **Aberdein** (ZAF)	Jota	ORECA-Gibson 07	LMP2	82 laps-accident
R	Jakub **Smiechowski** (POL) Alex **Brundle** (GBR) Esteban **Gutierrez** (MEX)	Inter Europol Competition	ORECA-Gibson 07	LMP2	52 laps-accident
R	Sebastien **Buemi** (CHE) Brendon **Hartley** (NZL) Ryo **Hirakawa** (JPN)	Toyota Gazoo Racing	Toyota GR010 HYBRID	Hypercar	29 laps-hybrid
R	Miro **Konopka** (SVK) Tijmen **van der Helm** (NLD) Bent **Viscaal** (NLD)	ARC Bratislava	ORECA-Gibson 07	LMP2	25 laps-accident

In each car, first-named driver started race. **Winners' average speed** 74.602mph **Fastest lap** **Buemi** 2m05.298s, 125.040mph

LMP2 da Costa 2m06.955s, 123.408mph.
GTE Pro Bruni 2m15.147s, 115.927mph.
GTE Am Barker 2m17.160s, 114.226mph.

QUALIFYING 1 Pla 2m02.771s; 2 **Vaxiviere** 2m02.999s; 3 **Kobayashi** 2m03.087s; 4 **Hartley** 2m03.137s; 5 **Rovera** 2m04.246s; 6 **Frijns** 2m04.290s; 7 **Albuquerque** 2m04.451s; 8 **Deletraz** 2m04.548s; 9 **Nato** 2m04.640s; 10 **Stevens** 2m04.692s; 11 **Aberdein** 2m04.717s; 12 **Nasr** 2m04.887s; 13 **Muller** 2m04.985s; 14 **Milesi** 2m05.148s; 15 **Binder** 2m05.370s; 16 **Gutierrez** 2m05.383s; 17 **M Lahaye** 2m05.843s; 18 **Jarvis** 2m05.849s; 19 **van der Helm** 2m06.667s; 20 **Bruni** 2m14.301s; 21 **Christensen** 2m14.481s; 22 **Tandy** 2m14.606s; 23 **Pier Guidi** 2m15.102s; 24 **Molina** 2m15.443s; 25 **Keating** 2m17.408s; 26 **Dalla Lana** 2m18.912s; 27 **Iribe** 2m19.700s; 28 **C Nielsen** 2m20.789s; 29 **Leutwiler** 2m20.937s; 30 **Ried** 2m21.027s; 31 **Hoshino** 2m21.168s; 32 **Flohr** 2m21.787s; 33 **Poordad** 2m22.622s; 34 **Schiavoni** 2m23.856s; 35 **Dezoteux** 2m23.963s; 36 **Wainwright** 2m24.384s; 37 **Ulrich** no time.

CHAMPIONSHIP
Hypercar drivers 1 Negrao/Vaxiviere/Lapierre 57; 2 **Pla/Dumas** 39; 3 **Hartley/Hirakawa/Buemi** 27; 4 **Lopez/Kobayashi/Conway** 25; 5 **Ryan Briscoe** 23; 6 **Derani** 16.
Hypercar manufacturers 1 Alpine 57; 2 **Toyota** 52; 3 **Glickenhaus** 39.
LMP2 drivers 1 Rast/Frijns/Gelael 52; 2 **Pierson/Jarvis** 46; 3 **Habsburg/Nato/Andrade** 41; 4 **Paul di Resta** 38; 5 **da Costa/Gonzalez/Stevens** 27; 6 **Colombo/Deletraz/Kubica** 24.
LMP2 pro-am drivers 1 Rovera/Nielsen/Perrodo 63; 2 **Lahaye/Lahaye/Heriau** 42; 3 **Allen/Binder/Thomas** 41.
GTE drivers 1 Estre/Christensen 57; 2 **Pier Guidi/Calado** 43; 3 **Tandy/Milner** 39; 4 **Bruni/Lietz** 34; 5 **Fuoco/Molina** 27; 6 **Pittard/Thiim/Dalla Lana** 19.
GTE manufacturers 1 Porsche 91; 2 **Ferrari** 73; 3 **Chevrolet** 39.
GTE Am drivers 1 Pittard/Thiim/Dalla Lana 53; 2 **Keating/Sorensen** 47; 3 **Ried/Tincknell/Priaulx** 43; 4 **Florian Latorre** 28.

NEXT REPORT
LE MANS 24 HOURS
16 JUNE ISSUE

Girolami heads compatriot and team-mate Guerrieri

VINCENT/DPPI

First it's the Argentinians, then it's argy-bargy

WORLD TOURING CAR CUP
PAU (FRA)
8 MAY
ROUND 1/10

Munnich Motorsport's Honda Civics may be the oldest TCR cars on the grid, but the German team remains the biggest threat to Cyan Racing Lynk & Co in the World Touring Car Cup, judging by the opening round of 2022. Argentinian duo Nestor Girolami and Esteban Guerrieri claimed a convincing 1-2 from the front row of race one to beat a trio of the blue Lynk & Cos as the series made its first appearance at the famous Pau street track.

The team-mates and friends blitzed the qualifying shootout on Saturday, Guerrieri proving faster in Q2 only for Girolami to pip him to pole position in Q3. Locking out the front row was more than half the job, with third qualifier Yvan Muller admitting it was "too risky" on the tight city streets to challenge for the win at his home race.

Reigning double champion Yann Ehrlacher began his defence with fourth place behind his uncle Muller. Starting sixth, he demoted impressive new team-mate Ma Qing Hua from the start, then pounced on Nathanael Berthon late in the race after the Comtoyou Audi incurred bodywork damage and a puncture by clipping a barrier.

Ma, who did well to outqualify a rattled Ehrlacher on Saturday, lost another place at the start to Attila Tassi's Honda, but then pulled it back with an opportunistic move. He then followed Ehrlacher past Berthon to take fifth on his debut for Cyan Performance Lynk & Co, his first WTCR appearance since 2019. As for Berthon, his misery was complete when he was nerfed into a barrier by Mikel Azcona's Hyundai, and then found himself reprimanded for holding up the field while running on a puncture.

The partially reversed-grid race two proved more eventful (which was entirely the point of switching it from race one, as it was previously) – but only at the start, thanks to an uncharacteristically poor piece of judgement from pole position winner Norbert Michelisz. Fellow Hungarian Tassi, in an Engstler-run Honda this year, made a better getaway beside him, whereupon Michelisz edged him hard into the pitwall. The impact left Michelisz's Hyundai stranded sideways in the middle of the track, triggering chaos further back as Gilles Magnus rammed Muller, and Mehdi Bennani picked up suspension damage from a clash with Thed Bjork. The Swede was having a tough weekend, having punched a hole through a steel barrier in qualifying after clipping the wall.

"My start was average," explained a sheepish Michelisz. "I started to turn for Turn 1 and we touched. It was unfortunate. Sorry. Not the way to start the season."

Azcona inherited the lead and, while Santi Urrutia piled on pressure when racing resumed after a safety car interlude, he soon built a gap to win on his maiden weekend for BRC and Hyundai. Ehrlacher looked set for third until a damaged tyre forced him to pit – "I feel like crying," said the champion to his team over the radio – gifting a delighted Ma third place to go with his earlier fifth.

Race one winner Girolami was seventh, two places behind Guerrieri, and leads his team-mate in the standings by seven points, with Azcona one further back. The Nurburgring Nordschleife awaits them next, at the end of this month.

DAMIEN SMITH

Azcona chased by Urrutia in reversed-grid race

VINCENT/DPPI

New name, same story as Ekstrom wins

eTOURING CAR WORLD CUP
PAU (FRA)
7-8 MAY
ROUND 1/7

Electric king Ekstrom steers his Cupra into Parc Beaumont
FIA ETCR

The start-up Pure ETCR series has transitioned into the FIA eTouring Car World Cup this year, with a continuation of its innovative and experimental format and its form man, 2021 champion Mattias Ekstrom.

It retains its two parallel racing routes for the six cars shared by two drivers apiece, but the does-what-it-says-on-the-tin Pool A and Pool B have received a lexicon update to 'Fast' and 'Furious'. Ekstrom took the 'Furious' route to be crowned 'King of the weekend' in Pau, while Adrien Tambay and Tom Blomqvist were 1-2 in the 'Fast' pool to secure an overall top three lockout of the event for Ekstrom's own EKS Cupra team.

It wasn't all smiles for EKS, which has replaced Zengo Motorsport as Cupra's ETCR team – Jordi Gene crashed heavily at the Croisement chicane in one-shot qualifying and caused a big Saturday morning repair job.

The first races, dubbed quarter-finals despite the lack of a knockout system, occurred later that day. Each three-lap bout featured three cars, with results determining semi-final grids. Drivers had qualified using 500kW (approximately 670bhp), but the cars' full performance was only available for 40 seconds now as a boost to the regular race 300kW.

Ekstrom took 'Furious' pole by half a second, but pushed his team into making tweaks so "I can use the peak of the tyres better because I didn't feel I could nail it", and the reward was a car even better optimised for the three-lap sprints.

He was the only driver to complete his quarter-final, as Mikel Azcona (Hyundai) and Giovanni Venturini (Romeo Ferraris Alfa Romeo) rubbed wheels and immediately broke the Giulia's steering, while Azcona pitted and finished a lap down. Hyundai's Jean-Karl Vernay dominated against Ekstrom's team-mates in the 'Fast' pool, but was then disqualified for running at 400kW.

That sent Vernay to 'Fast' semi-final two and promoted Romeo Ferraris's Maxime Martin to semi-final one, which was a Tambay-led EKS 1-2. The strategic use of boost did increase tension, as Blomqvist just held off Martin.

Venturini's car had to be reset and repaired for Luca Filippi to drive it in semi-final two, an even closer-fought race. Filippi barged past Vernay for second on lap two, but Vernay then used his boost to get back alongside up the hill and initially kept with winning team-mate Norbert Michelisz. Filippi, meanwhile, dropped way back in third with car concerns.

Ekstrom's set-up changes resulted in 'Furious' semi-final one victory, while Venturini just won semi-final two, but couldn't do his super-final because Filippi had clashed again with Vernay in the eight-lap 'Fast' super-final on the climb to Pont Oscar hairpin. Filippi was launched twice into the barriers, the impacts destroyed the car's front and rear-left corners, and could force a withdrawal from next week's round at Istanbul Park.

The 'Furious' super-final was a thrilling duel between Ekstrom and Azcona. Victory for the Swede ensured that he got more points from his weekend than 'Fast' winner Tambay to be crowned king. It was a near-perfect way to fly ahead of schedule on EKS's targets, and end a stressful fortnight both professionally and personally for Ekstrom with TCR, rallycross and the death of his father.

IDA WOOD

Filippi (rear of shot) damaged his Alfa
FIA ETCR

WEEKEND WINNERS

WTCR
PAU (FRA)
Race 1 Nestor Girolami
Munnich (Honda Civic Type R TCR)
Race 2 Mikel Azcona
BRC (Hyundai Elantra N TCR)

ETCR
PAU (FRA)
Mattias Ekstrom
Cupra EKS (Cupra e-Racer)

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Chadwick shrugs them off for opening double

Chadwick fends off Kimilainen during busy W Series opener

W SERIES
MIAMI (USA)
7-8 MAY
ROUND 1/8

There was huge pressure for Jamie Chadwick, but the reigning double champion shrugged it aside to kick off the W Series season with a double victory in Miami.

She didn't have it all her own way though. Nerea Marti was fastest in qualifying, but Chadwick took the lead at the start of the opening race, with Marti slow away. Meanwhile, 2021 series runner-up Alice Powell stalled from third on the grid, then hit the wall at the exit of Turn 7, which she blamed on dirt off the racing line, prompting a red flag.

The race resumed with Chadwick defending from Emma Kimilainen, and the Finn had just taken the lead when the safety car emerged again following a tangle between Abbie Eaton and Fabienne Wohlwend. There was time for one lap of racing when the green flag flew; Kimilainen ran wide while defending at Turn 1, allowing Chadwick and Marta Garcia in front. Kimilainen certainly wasn't settling for third, but her bid to pass Garcia around the outside at Turn 17 resulted in contact, dropping her to last. Garcia finished second, before a 10s post-race penalty for contact, handing second to Jessica Hawkins from Beitske Visser.

Chadwick dominated Sunday's race to cross the line almost three seconds ahead of second-placed Marti. The Spaniard emerged from an early battle with Kimilainen, who was at the centre of the action again.

Kimilainen was battling with Powell for third on the penultimate lap when she lost the rear at Turn 17. Powell was unable to avoid her and broke her front wing, but continued to the line in third place, with Kimilainen dropping to fifth behind Belen Garcia. Powell was then promoted to second by a one-position penalty applied to Marti for impeding another driver.

MEGAN WHITE

Mini gets a maximum at last

FORMULA REGIONAL EUROPEAN
IMOLA (ITA)
7-8 MAY
ROUND 2/10

Gabriele Mini won both races on the road at Imola, but only one of them counted.

The Sicilian was hit with a 10-second penalty in Saturday's encounter for inching forward from pole, due to a clutch glitch, before lights-out. Not too bad a sanction, you might think. Except this farcical race featured two red flags and two further safety car periods. ART Grand Prix starlet Mini was therefore dumped to 28th place on corrected times.

Mini's team-mate Mari Boya could have won and ran second early on, but somehow Prema-run Ferrari protege Dino Beganovic found time during a fleeting moment of green-flag racing to demote the Spaniard into Tamburello. The Swede therefore won from Boya and two more Prema drivers, Paul Aron and Sebastian Montoya.

There was more drama on Sunday, but 2020 Italian F4 champion Mini survived it all to finally notch up his first FRECA win in 24 starts. On a damp-but-drying track, he was leading Beganovic and Michael Belov when a thunderstorm caused a red flag and a switch to grooved Pirelli tyres.

Mini headed the restart from Beganovic,

Mini took a win after just 10 laps of green-flag racing in two days

while Kas Haverkort (Van Amersfoort Racing) bravely survived wheelbanging with Belov to take third, and Gabriel Bortoleto and Hadrien David also took advantage to slip past the Russian.

Goethe fluffs his start to deny GP gold

EUROFORMULA OPEN
PAU (FRA)
7-8 MAY
ROUND 2/9

FOTOSPEEDY

Goethe passes beneath the palms at Gare

The Pau Grand Prix weekend belonged to Oliver Goethe, in almost its entirety. The Motopark driver was unbeaten in free practice, qualifying and Saturday's race on the street circuit's return after two years out, but when it came to the start of Sunday's race — the GP itself — he was slower off the line than those behind, and within four seconds had passed up the opportunity to win.

Formula 4 graduate Vlad Lomko, driving for the CryptoTower team run with Motopark's engineering expertise, had been pipped to pole by Goethe and took the lead at the start. From there on he was never challenged, and the French-licensed Russian claimed a historic maiden Euroformula Open win ahead of team-mate and Saturday race runner-up Christian Mansell.

Goethe dropped behind Mansell, Josh Mason and Filip Ugran on the traction-sapping dust at Gare, the first proper corner, but did still make the podium to keep a 19-point series lead. First Mason crashed out at the Foch chicane, while Van Amersfoort Racing's Ugran did all he could to resist Goethe, but succumbed to a brilliant diving move at the Buisson hairpin.

Chilean ex-British F4 racer Nico Pino qualified and finished fifth, after crashing out of race one in a collision with Motopark's Frederick Lubin at Gare. Pino was Drivex's only competitor — Alex Peroni's sponsors chose to focus on his sportscar commitments following his EFO appearance at the Estoril opener.

IDA WOOD

ISHIHARA/MOTORSPORT IMAGES

Nojiri and Fukuzumi were the ones left standing when results were worked out

Hollow Honda win amid chaos

SUPER GT
FUJI (JPN)
4 MAY
ROUND 2/8

ARTA Honda pairing Tomoki Nojiri and Nirei Fukuzumi won a bizarre Fuji 450Km overshadowed by a huge crash for Nissan driver Mitsunori Takaboshi.

Takaboshi was battling the SARD Toyota of Yuhi Sekiguchi for the lead on lap 59 of 100 when he swerved to avoid a slow-moving GT300 car along the start/finish straight, losing control of his Nissan Z and slamming into the barriers at high speed. Luckily, he was able to exit the wreckage unaided and was cleared of any serious injury.

The incident caused the second of two red flags and, after a 90-minute delay for makeshift barrier repairs, the race resumed but finished behind the safety car. The SARD Toyota of Sekiguchi and Yuichi Nakayama took the chequered flag first, but lost the win to a penalty, awarded because Sekiguchi had touched the front-left corner of his car during the stoppage.

Incredibly, the second-placed car on the road, the TOM'S Toyota of Sacha Fenestraz and Ritomo Miyata, was also penalised due to Miyata making contact with the sister car of Giuliano Alesi while battling for the lead at Turn 1. That gifted Nojiri and Fukuzumi victory ahead of TOM'S pair Alesi and Sho Tsuboi, with Impul Nissan duo Bertrand Baguette and Kazuki Hiramine third.

JAMIE KLEIN

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WEEKEND WINNERS

W SERIES
MIAMI (USA)
Races 1 & 2 Jamie Chadwick

FORMULA REGIONAL EUROPEAN
IMOLA (ITA)
Race 1 Dino Beganovic
Prema Powerteam
Race 2 Gabriele Mini
ART Grand Prix

EUROFORMULA OPEN
PAU (FRA)
Race 1 Oliver Goethe
Motopark (Dallara-Spiess)
Race 2 Vlad Lomko
CryptoTower Racing Team
(Dallara-Spiess)

SUPER GT
FUJI (JPN)
Tomoki Nojiri/Nirei Fukuzumi
ARTA (Honda NSX-GT)

NASCAR CUP SERIES
DARLINGTON (USA)
Joey Logano
Team Penske (Ford Mustang)

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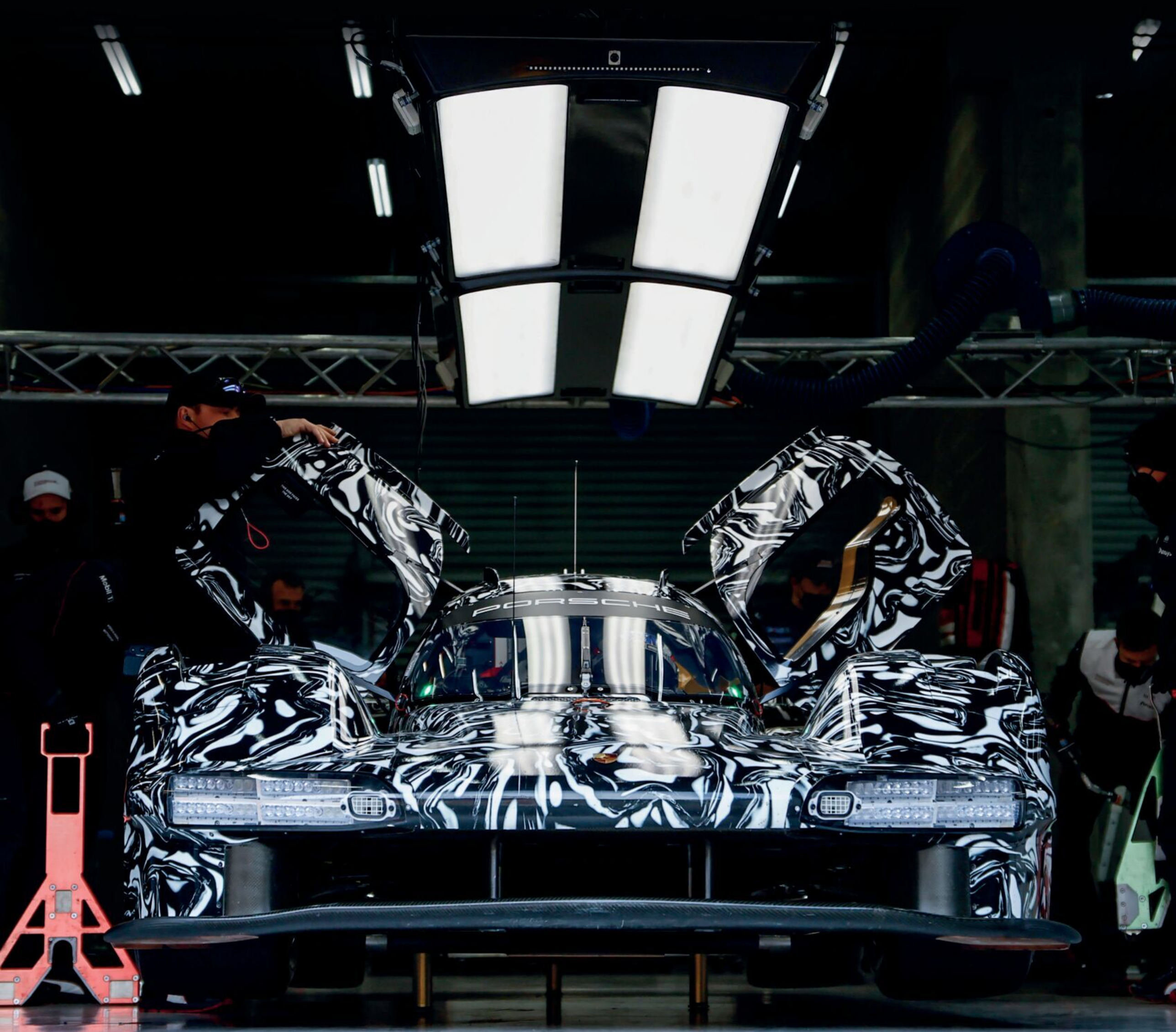
PORSCHE LMDH UPDATE

THE KING RETURNS FOR ITS CROWNS

Porsche has been gearing up nicely for its return to the top level of sportscar racing in LMDh. Victories at Le Mans and Daytona are its target

GARY WATKINS

PHOTOGRAPHY **JUERGEN TAP/HOCH ZWEI/PORSCHE**



Porsche's last absence from the top flight of sportscar racing spanned 15 seasons between 1998 and 2014. Now, it's returning to the top of the tree once again with an LMDh prototype, just five years after the end of the 919 Hybrid LMP1 World Endurance Championship programme that recrowned the marque as the king of endurance with a Le Mans 24 Hours hat-trick. The reason is simple: a set of regulations that allows it to challenge for outright glory on both the world and North American stages from next season.

Porsche doesn't want to just add to its record 19 overall victories at Le Mans; just as significantly, it's looking to increase its tally of 18 wins in its North American equivalent, the Daytona 24 Hours. That's important for a marque that hasn't won since 2003 at what next January, as the opening round of the IMSA SportsCar Championship, will be the scheduled debut of the as-yet-unnamed LMDh.

"North America always has been and still is an important market for us," says new Porsche Motorsport boss Thomas Laudenbach, who last year rejoined a company at which he had previously been its head of powertrains. The naturally aspirated 3.4-litre V8 that powered the RS Spyder LMP2 prototype of the late 2000s was among his babies. "With the same car you can race in the WEC, an FIA championship that includes Le Mans, and in North America, where you have the big races like Daytona and the Sebring 12 Hours. An IMSA entry was one of the core points for us."

That reasoning explains why Porsche never appeared likely to develop a Le Mans Hypercar, the other route into the WEC and the IMSA series. Laudenbach says it was considered – and Porsche was a participant as an observer in the initial rules discussions – but he points out that there was no firm commitment from IMSA that LMHs could compete until a full six months after Porsche's announcement in December 2020 that it would be coming back with an LMDh.

"I wouldn't say LMH was never of interest; it was considered," he explains of a category that allows more scope for technology: a manufacturer can develop its own hybrid system rather than having to use the spec system mandated in LMDh. "Of course some more technological space would have been nice from an engineering perspective. But it was important that if we returned, we needed to be able to race in the USA, which at that time wasn't clear."

There is now what Laudenbach calls "an entirely different set of boundary conditions" to 2017, when Porsche decided to call time on the WEC-only 919 project in favour of a move into Formula E. Not only can Porsche produce one car for both arenas, but it can do so at a reasonable cost, not the hundreds of millions required in the previous era. And with less expenditure than in LMH: the LMDh rules require the cars to be developed out of one of the next-generation LMP2 chassis from four licensed constructors. "What you have to spend and what you can achieve is in a reasonable ratio," he says. "It all came together to make LMDh very interesting, because endurance racing is our living room."

New as-yet unnamed Porsche LMDh is already pounding the test tracks

THE PARTNERS

Porsche, perhaps strangely, announced the team that will mastermind its factory assaults on the WEC and IMSA before the chassis partner was revealed for a programme on which Audi was initially piggybacking. (The Audi side of the programme has been axed, though officially is only on hold.) Team Penske was confirmed a couple of weeks prior to Multimatic Motorsport.

Laudenbach insists that it is coincidence that it has partnered with two North American-based organisations. That's even with the importance of the IMSA campaign. "The nationality or the base of the company wasn't a factor," says Laudenbach. "We looked at all aspects of the companies: who has got the technological skills, what can they do for us, do they have the same philosophy?" It should be pointed out that Multimatic already had a working relationship with Porsche: the 919 ran on its dampers, as does the latest-generation GT3 Cup car.

Left: Privateers shone for Porsche with Group C 956 in the 1980s. Middle: new car shares V8 engine choice with LMP2 RS Spyder. Right: Porsche 919 scored a Le Mans hat-trick in previous LMP1 era

MOTORSPORT IMAGES

The idea of a full-house factory team based at Weissach running the cars in either series was quickly discounted. Part of the reason was that the standalone structure established for the LMP1 programme was integrated into the wider Porsche Motorsport organisation after 2017. It simply no longer exists.

Penske looked a shoo-in for the Porsche deal, at least on the IMSA side, almost from the beginning. Its deal with Acura in IMSA, which yielded two overall titles, came to an end at the conclusion of a three-year contract in 2020, so it was free to forge a relationship with a marque with which it has history. Not only did it run the RS Spyder programme in the American Le Mans Series from the end of 2005 until 2008, but it won the Can-Am title with the 917/10 and 917/30 Group 7 sportscars in 1972 and 1973.

It is known that other teams were in talks about the WEC deal and were visited by the Porsche Motorsport hierarchy, but Laudenbach insists a decision to work with one team across the two series was reached early on. "It was discussed in the early meetings if we should have a global partner," he says. "If you do one programme with team A and one with team B, straight away they are in competition, especially if they see each other at Le Mans [though four works cars at the 24 Hours in year one of the programme appears unlikely]. We saw that it was best for all interfaces to have one partner. If there was one team that could do a professional job in two championships it was Team Penske."

The decision to go with Penske for both the WEC and IMSA has resulted in a new entity known as Porsche Penske Motorsport. It will operate out of Penske HQ in Mooresville, North Carolina and a new base established in Mannheim, Germany on the site of a Porsche dealership long since part of the Penske group. PPM managing director Jonathan Diuguid, an engineer in the Acura DPi days, has promised "a one programme approach" from the new organisation.

A SECRET V8 ENGINE

Porsche announced at the back end of last year the configuration of the engine that powers its LMDh, and which was already installed in the back of the Audi before the axe fell. It's a twin-turbo V8, which it says has its roots in a production engine. That doesn't necessary contradict the rumours that it is based on the RS Spyder powerplant. That engine was also the base of the 4.6-litre normally aspirated unit that powered the 918 Spyder hybrid sportscar produced in 2013-15.

Asked if there is any similarity between the P2 engine and the LMDh unit, Laudenbach says: "Yes, they are both V8s." Porsche is keeping its cards close to its chest; more details of the engine won't be divulged until the summer launch of the car.

PROGRAMME ON COURSE

Porsche is happy with testing so far, despite a faltering start. Before Christmas a shakedown was scheduled, then abandoned, as was an initial plan to begin circuit testing in North America with a January test at Sebring. The rollout also took place on Porsche's Weissach test track in mid-January without the hybrid system working.

"It wasn't the complete system, it wasn't fully operational – that's not a secret," says LMDh programme manager Urs Kuratle, without going into detail of which component or components from the system developed by Williams Advanced Engineering (battery), »

Bosch (motor generator unit) and Xtrac (gearbox) weren't ready. "We wanted to get the car rolling: the car is more than just a hybrid system. We wanted to find as many bugs as possible."

The 40kW (54bhp) rear-axle hybrid system was in the car for a Weissach run only a few days later, after which the test programme moved to a proper circuit, at Barcelona in February. The total distance covered by the car in subsequent tests at Motorland Aragon in March and Spa in April now stands at over 6000km. "The reliability has been one of the surprising things," says Kuratle. "That is a compliment to all the partners. It has definitely been running reliably because otherwise we wouldn't have been able to do the mileage that we have."

A second car is in build at the moment, and then one of the two chassis will be flown to the US to begin testing on American tracks. That will include official sanctioned tests run by IMSA at the back end of the year prior to the car's homologation ahead of Daytona.

Kuratle says there will be two "parallel programmes with a test once a month", probably with alternate tests in Europe and North America over the second half of the year.

DRIVING THE LMDh

"It does feel like a prototype," says Dane Cameron of a car that tips the scales at 1030kg – more than 100kg up on the Daytona Prototype internationals he formerly raced in IMSA. "I was impressed with it from the get-go; it didn't feel strange, but once you get into the nuances of the car it is more complex.

"Weight is never your friend: there may be a little less peak performance compared with a DPi car," continues the two-time overall IMSA champion, who was confirmed along with Felipe Nasr in the first Porsche LMDh driver announcement in December. "You feel how it affects the reaction of the car, how it changes direction. Everything takes a moment longer because you're carrying 100 kilos extra."

Cameron and Nasr have shouldered the bulk of the development work so far, but a number of other drivers from Porsche's bulging factory roster of GT drivers have had the chance to sample the LMDh. Frederic Makowiecki was the first when he got to shake down the car at Weissach in January. The Porsche bigwigs have mentioned some other names: it is known that Andre Lotterer, Kevin Estre, Michael Christensen, Laurens Vanthoor and Mathieu Jaminet have all climbed behind the wheel so far.

There will be a core driving squad of 10 for the twin programmes come the start of 2023 – that's six permanent drivers for WEC and four in IMSA. The likelihood is that WEC drivers will be brought in for the longer races that make up the Michelin-sponsored Endurance Cup leg of the IMSA series. Diuguid points out that the Daytona, Sebring and Petit Le Mans enduros will be "fantastic opportunities for the WEC drivers to get more experience" of the car.

The likelihood is that when the full line-up is confirmed it will include some more incomers. "Porsche is a good address for drivers who are not with us right now," says Laudenbach. He insists that the team is "relaxed" on the topic. "There's no rush," he reckons. That suggests that the full complement won't be announced at the summer launch of the car, which could happen as early as the end of June.

Dane Cameron was "impressed with the car from the get-go"

Thomas Laudenbach (left) and Urs Kuratle. Right: testing at Spa

CUSTOMER CARS FROM DAY ONE

Porsche's announcement of its LMDh programme included a commitment to have cars in the hands of privateers in addition to the works entries from the start. It's remaining true to its word, making a total of four cars available, with a maximum of two in each arena.

"It's a brave approach to have customer cars from the first year; if you remember we didn't do that with the RS Spyder," says Laudenbach of a programme that didn't expand until Dyson Racing switched to the car in the ALMS in the second full season for the design in 2007. "It could be up to two in each series. We are saying that is the maximum and we can't do more than that.

"One thing is clear: it is not about selling as many cars as we can. With such a high-level prototype, if we sell a car to a race team, first of all it's important that the team is at a certain level to handle it and then that we can support them. We want to make sure they have everything to be competitive."

Discussions are already under way with potential customers, says Kuratle. "We have had some good talks with customers, but nothing is signed yet," says the Swiss, who began his motorsport career with Sauber in Group C back in the late 1980s. "Yes we are in contact with potential customers, but there are not 10 teams in line for a car like this. We fully hope that we have two cars, which maybe could also be two teams – a car in each team – in 2023, in both the series. That is the aim and the capacity we have."

EARLY DEBUT POSSIBLE

Porsche's LMDh could feasibly race before next season. An FIA World Motor Sport Council decision in March opened the way for the new breed of prototype to compete in this year's WEC on an invitational basis. It was a clear invite to Porsche, given that none of the LMDh manufacturers for next year are at such an advanced stage with their cars. The rulemakers – the Automobile Club de l'Ouest and the FIA – are looking to get as much data as possible to help with the Balance of Performance that is one of the cornerstones of the new era.

The move has been welcomed by Porsche, but it has stressed that no decision is imminent whether it might be ready and willing to race the LMDh this season. Laudenbach says that Porsche is "interested" in the opportunity, while stressing that the season finale in Bahrain in November is the only race it could feasibly attend. "We are happy that this opportunity exists," he says. "But it only makes sense if we consider ourselves in a shape that is mature enough to go racing. We won't race just to be there."

GUINEA-PIG CAR

Porsche has a head start on the rival LMDhs from Cadillac and Acura it will face at Daytona next January – they aren't due to run until the summer. The early test debut for the Porsche is a double-edged sword, reckons Kuratle. "We are the guinea pig for the hybrid system," he explains. "But I would call it an even situation." He says that because Porsche is effectively readying the hybrid system for its competitors.

Porsche is aiming to be ready to win in both IMSA and the WEC from next season and, reckons Kuratle, "there can be no excuses because we have all the resources to develop a winning car".

The marque believes it will be well placed to notch up wins 19 and 20 respectively at Daytona and Le Mans in 2023.

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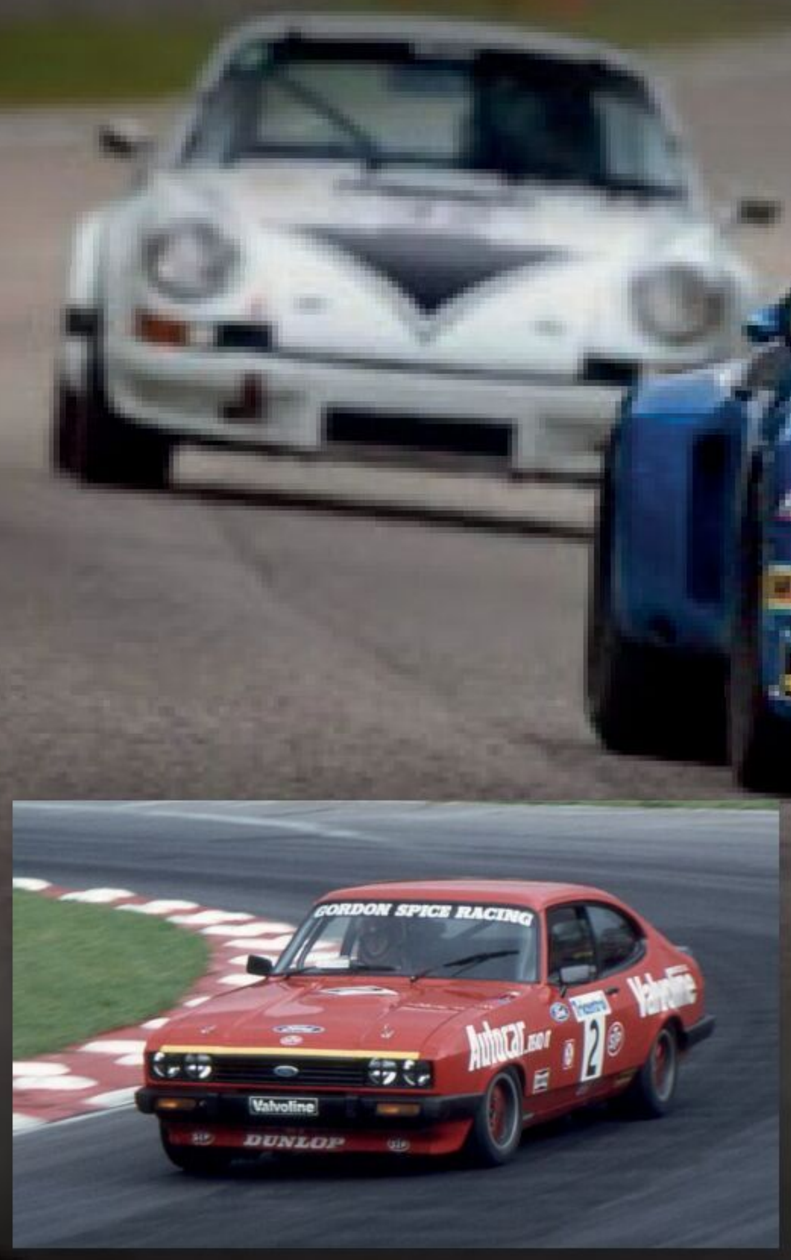

Equipe 70s will bring together GT, GTS and Touring cars of the period in two pilot races this year. Equipe 70s will run in 5 groups, each group will run to separate engine capacity classes. The first race will be on the full GP Circuit at Silverstone on June 11th/12th then at Snetterton on August 6th.

Running to FiA period specification for Group 1 and Group 2 Touring cars and Group 3 and Group 4 GT and GTS cars of the period. Group R will be for period road going cars running to the spirt of the period.

FiA papers are welcome but not mandatory. The core clubman racing values of Equipe Classic Racing will continue in this series with a high level of driving standards and car preparation demanded.

The Silverstone event has 60 minutes of track time, hospitality and a fully catered party for £595.

Equipe 70s will replicate an era where a fantastic mix of cars raced wheel to wheel. Our ambition is to run a full 8 race program for 2023 – come and join us

Full details, entry and regulations can be found at: **equipeclassicracing.com**, contact us at: **info@equipeclassicracing** or call **07825 345 999**

EQUIPE CLASSIC RACING

equipeclassicracing.com

British GT **Barwell wins but points yet to be given**

AUTOSPORT NATIONAL

CLUB RACING • HISTORICS • FEATURES

Lotus back to its racing roots

Historic brand ends long absence from motorsport with launch of new Emira GT4

GRANFORS GRASPS GB3 ADVANTAGE

FESTIVAL OF SPEED TO CELEBRATE BMW M

CAR RACING RETURNS TO BISHOPSCOURT

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Result of second Oulton race is still to be decided

No success penalties at Silverstone

BRITISH GT

British GT's Silverstone round was staged without success penalties last weekend, and no points have been awarded yet, as RAM Racing's appeal into the Oulton Park race-two result was not heard in time.

RAM pairing Ian Loggie and Jules Gounon won the Oulton contest on the road, but a mid-race red flag during the pitstop period meant their success penalty for finishing second in race one was added to their race time and demoted them to fifth. RAM's protest into the result, lodged on the basis that the rulebook did not have a provision to determine what the correct procedure should be for such an eventuality, was rejected but swiftly followed by an appeal to the National Court.

With the result still provisional, the series decided not to impose any in-race time penalties during the three-hour Silverstone event and will instead add post-race penalties retrospectively once the Oulton result is confirmed.

A championship statement provided to Autosport said its decision "was taken following extensive consultation with Motorsport UK's legal department", as it was deemed "the fairest and simplest way of determining provisional GT3 and GT4 winners at Silverstone, and also ensures that results and championship points are ultimately correct".

"RAM Racing is entitled to appeal Oulton's race-two result and we fully respect their right to do so," the statement said. "The National Court is not due to sit again until 17 May but there is, currently, no guarantee that RAM's appeal will be heard on that date.

"We will be very disappointed and frustrated if Oulton's race two and Silverstone results cannot be finalised before Donington [on 29 May] as that would leave us no choice but to also suspend success penalties there. But that matter is now beyond SRO's [British GT organiser] control."

The result from Silverstone is unlikely to change considerably regardless of the appeal outcome, as none of the top eight finishers have any success penalties looming over them from Oulton Park. Moreover, provisional Oulton race-two winners Martin Plowman/Andrew Howard (subbing for Kelvin Fletcher) and third-place finishers Chris Froggatt/Kevin Tse in ninth and 10th were the last cars one lap down so wouldn't lose any positions if time penalties were imposed against them. Loggie and stand-in co-driver Callum Macleod were 10 laps down in 15th after lap-one contact, but sixth of the GT3 Pro-Am entrants.

British GT added that it has "no intention" of removing success penalties in the future. "Success penalties have been an integral element of British GT for the best part of a decade," the statement continued. "Indeed, they are key to maintaining an open championship and something that teams fully accept when joining the series. Also, and unlike success ballast, they allow teams to qualify on merit and drivers to race an uncompromised car — something that's especially important for our amateur contingent."

Autosport approached governing body Motorsport UK for comment about the time taken for the Oulton Park appeal to be resolved but had not heard back before going to press on Tuesday afternoon.

JAMES NEWBOLD

Mitchell and Balon won at Silverstone but are yet to receive points for it

P68 OPINION

JOSEPH HARDING

BMW M to be celebrated at Goodwood Festival of Speed

GOODWOOD

Fifty years of BMW's motorsport division will be celebrated at this year's Goodwood Festival of Speed.

The German manufacturer has been announced as the central feature at this year's event – which is due to take place on 23-26 June at the famous hillclimb course – where a sculpture paying tribute to the past five decades will be on display along with some of the marque's famous cars.

BMW M was first created in 1972 with just 35 employees, but went on to achieve incredible success over the following years in motorsport.

The Duke of Richmond said: "We are delighted to be celebrating 50 years of BMW's hugely successful motorsport division at this year's Festival of Speed, and it is especially fitting as we prepare to honour 'The Innovators – Masterminds of Motorsport'.

"BMW M's success can of course be attributed to half a century of innovation and we look forward to honouring the marque's past, present and future achievements at Goodwood in June."

Further details of BMW M's presence at the Festival of Speed will be revealed in the coming weeks.

Also announced as attending this year's FoS will be four of the current 10 Formula 1 teams. Ferrari, McLaren, Mercedes and Williams will all be in attendance in some capacity.

"The incredible spectacle of Formula 1 has long been a central part of what makes the Festival of Speed so unmissable, and it has been a privilege to see so many different cars and drivers at the event since teams first attended in 1994," added the Duke of Richmond.

"We're proud that, in a year where we will be spotlighting innovation in motorsport, we can create a place for fans to examine the developments throughout the different eras of F1 that brought us to this point.

"We can't wait to welcome the teams to Goodwood this summer and are looking forward to the incredible sights and sounds of legendary F1 machines and drivers taking to the hillclimb once again."

Haigh and Adam 'did what we came here for'

BRITISH GT

Flick Haigh and Jonny Adam say the objectives of their British GT return were achieved as they finished fifth at Silverstone last weekend on their first outing in a 2 Seas Motorsport Mercedes.

The 2018 title-winning pair qualified ninth, with Adam the second-fastest in the Pro session, and enjoyed a trouble-free race to finish sixth on the road before the Abba Mercedes was disqualified from fifth.

In her first race since 2019, Haigh dropped to 10th on the opening lap but set consistent times in a 31-lap opening stint that four-time British GT champion Adam explained was designed to increase Haigh's confidence ahead of her next appearance of a planned three-race campaign at Snetterton in June.

"We did what we came here for," said the Aston Martin factory ace, who admitted to still looking for the wrong buttons on the Mercedes steering wheel. "We were here to finish top-six, it was more just experience for her today.

"We've learned a bit today, so hopefully at Snetterton there will be a big step forward for both of us."

Haigh conceded it had been "a bit of a shock to the system" after only two days of pre-event testing but said she feels "in a much more confident space" as a result.

"I'm happier with the car, and we've got some testing ahead of Snetterton as well, so hopefully we're building the blocks," she said.

"It was great to have that hour-and-a-bit stint to dial into the car and feel what it was doing. I'm really pleased with the result."

JAMES NEWBOLD

JEP/MOTORSPORTIMAGES

GT return for Jordan Collard with Speedworks

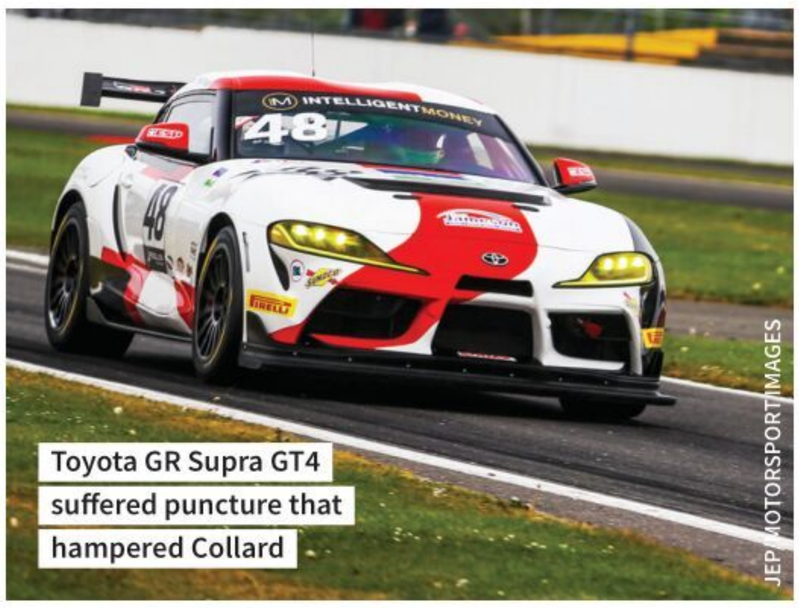
BRITISH GT

British GT4 race winner Jordan Collard will complete the season with Speedworks Motorsport after a last-minute deal to replace Jack Mitchell at Silverstone last weekend.

Collard, who finished third in 2021 with Team Rocket RJN's McLaren and took a win at Snetterton, sat out the opening round of this season as 2018 GT4 champion Mitchell joined Ginetta Junior graduate Tom Edgar.

But following in the footsteps of his elder brother Ricky, who races a Speedworks-run Toyota Corolla in the British Touring Car Championship, a deal was agreed for Collard to race the team's GR Supra GT4 and he got his first mileage in testing on Friday.

After starting ninth, 21-year-old Collard was running fourth when a puncture forced an extended spell in the garage with a brake line and a diff cooler also damaged.



Toyota GR Supra GT4 suffered puncture that hampered Collard

JEP/MOTORSPORTIMAGES

Although the team only finished 13th, six laps down, team boss Christian Dick said Collard had made a strong impression. "He gave lots of good feedback on the direction of the car and what he wants from it," he said. "He's going to be a real good asset."

Porsche Carrera Cup GB race winner Matthew Graham also returned to British GT last weekend for the first time since 2017, replacing Valluga Racing team boss Benji Hetherington aboard the team's Porsche Cayman. Together with Ross Wylie, Graham finished third.

JAMES NEWBOLD

Romanek and Oldfield claim maiden series win at Silverstone

GB4

Lucas Romanek is aiming to enter more rounds of the GB4 Championship this season after ending his first weekend in the series with victory at Silverstone.

Driving for Oldfield Motorsport on the team's series bow, Romanek capped off an impressive debut by passing fellow Formula Ford 1600 graduate Logan Hannah to win the full reversed-grid race.

"Ecstatic," said Romanek. "I'm glad we did a little set-up change [before the race] – it all paid off. It's a massive difference between Formula Ford and GB4, so it's been hard getting used to that."

Despite his success, Romanek said his main priority this year will remain on the National FF1600 Championship, where he also won last time out at Knockhill.

"Our main focus is National FF1600, but it will be nice to come back and do maybe a few more rounds that don't clash," he said.

STEVE WHITFIELD

Romanek got the better of Hannah at Silverstone in the reversed-grid race

JEP/MOTORSPORT IMAGES

IN THE HEADLINES

BAPTIE'S NEW RIDE

Double Scottish Classic Sports and Saloons champion Alastair Baptie claimed a pair of top five finishes in his new MGB GT V8 at Knockhill last weekend. Baptie missed the opening round of the Scottish Motor Racing Club season through illness but made it out for the second weekend of the year. He claimed fourth after starting from the pits in race one, and came home second in race two.

CMMC RECRUITMENT

Classic and Modern Motorsport Club founder Richard Culverhouse has recruited former Vintage Sports-Car Club competition secretary Richard Winchester to assist him in running the organisation. "We would like to expand the club and become our own masters," said Culverhouse. "We're trying to bring out cars in garages that aren't being used." The club is running its own events at Mallory Park and Silverstone this year and is looking at others in the future.

WRIGLEY MONACO BOUND

Prolific historic racer Matt Wrigley is due to race two grand prix cars at the Monaco Historique this weekend when he competes in a recently acquired Penske PC3 and a March 721G. "I've only done eight laps of Monaco in my previous visit there," said Wrigley, who is set to race at Pau in a Historic Formula Ford 1600 Merlyn Mk20 the following week.

WAINE RECOVERING

Frazer Nash racer Paul Waine is now recovering at home following his horrific crash last month at Goodwood's 79th Members' Meeting. Waine underwent chest surgery after being transported to Southampton hospital, having suffered a broken sternum and several ribs when his 1935 chain-ganger (below) rolled during the AFP Fane Trophy marque race, subsequently throwing him from the car. Autosport wishes him a speedy recovery.

STYLES

ERA crash delays VSCC Wiscombe

VSCC

A serious incident towards the end of morning practice, in which Terry Crabb's ERA left the course on acceleration out of Sawbench hairpin, tested officials and delayed the Vintage Sports-Car Club's Wiscombe Park hillclimb in South Devon last Sunday.

Crabb, who has owned and campaigned R12C since 2007, sustained a double break to one leg when he was ejected from the car, which was launched onto its side and hit a tree scuttle first. The old warhorse did not roll, but landed on its wheels around seven metres off the track in a forested area out of bounds to spectators.

The rescue crew, stationed in the cutting at Sawbench, arrived within seconds and – with the doctor quickly in attendance – stabilised the driver. The air ambulance was called as a standby, but Crabb was taken by road to Plymouth Hospital, where he underwent surgery on Monday.

Despite Crabb remaining conscious, police declared the zone a crime scene and impounded the damaged car. But, with the involvement of Motorsport UK, the event resumed after a four-hour hiatus. Following the completion of practice, the competition runs were concluded successfully.

Crabb suffered broken leg after crash in ERA R12C, while Frank (inset) won new award

Ian Baxter (Alta 61 IS) was fastest on 46.91s, with Jon Giles (Morgan GN Salome) the quickest Vintage competitor on 48.47s. A new contest for drivers under 30, celebrating the memory of Dorset club stalwart Richard Bonham Christie, attracted nine entrants, one tenth of the entry. It was won by David Frank (AC/GN Beetle) in 52.93s.

Officials described the police intervention as unprecedented in the history of VSCC events, staged on the private estate for 40 years. The venue – driveway to Wiscombe House, built in 1826 – was first used for speed hillclimbing in 1958 and has hosted National Championship rounds on the current 1000-yard course since May 1962.

MARCUS PYE

Tonetti takes narrow Lurani Formula Junior wins

HISTORICS

Two half-second victories for reigning Lurani Trophy Historic Formula Junior title winner Roberto Tonetti (Brabham BT6) over Manfredo Rossi di Montelera (Lotus 22) at Hockenheim last weekend marked the return of the competition to 'post-Brexit, post-COVID normality' in Europe.

Audi's three-time Le Mans 24 Hours winner Marco Werner (Lotus 22) was among 26 drivers representing 12 nations. The German qualified on the front row but suffered clutch failure on the grid for Saturday's opener. Tonetti and Rossi swapped the lead throughout, finishing ahead of Philipp Buhofer (ex-Midland Racing Partnership Lola Mk5A).

Sunday's sequel was an action replay, with Tonetti's pale blue Brabham again just ahead of Rossi at the chequer. Stephane Rey (Lola Mk5A) resisted a tough challenge from Werner for the final podium step.

Briton Adrian Russell (ex-Henri Grandsire Lotus 22) was overjoyed with fifth overall on his Lurani debut. Aggregate class winners included Scot Malcolm Wishart (front-engined Faranda), Australian Marty Bullock (Australian-built Wren) and veteran Colonel Bob Birrell (Lotus 20).

Next stop for the Lurani circus is Austria's Red Bull Ring in June.

MARCUS PYE

Reade to race G55 for new Wolf Motorsport team

GINETTA GT4 SUPERCUP

Ginetta GT4 Supercup podium finisher Luke Reade will remain in the series this year after putting together a late deal to compete with a new team he has set up with fellow Ginetta racer Carlito Miracco and his family.

Reade finished 13th in the standings last year with Rob Boston Racing and will continue to drive a G55 (right) this season for Wolf Motorsport, rather than step up to the new G56.

"I am very grateful to be returning for my second season — it has been very touch and go over the winter months trying to connect all the dots, so I am super happy we've got it done," said Reade. "It's great to have formed a brand-new team with Carlito and his family, and together I really feel we can have a super-successful year."

Another driver to have secured a place on the grid for the series' opening round at Brands Hatch this weekend is Conner Garlick. The former Ginetta GT5 Challenge racer will drive a G55 run by Xentek Motorsport in the same G55 Pro class as Reade.

First Pickups champion Simpson returns to the series at Pembrey

PICKUPS

The inaugural Pickup Truck Racing champion Jeff Simpson returned to the formula for the first time in 23 years when he raced at Pembrey last weekend.

The championship is celebrating its 25th anniversary this year and Simpson claimed the title in that first season. After a previous lay-off, he returned to competition to become the 2012 Silhouette champion, which he almost repeated the following year, but crashed at the final round and had not raced since.

"The truck was just sat in the garage after my son Matt [former British Touring Car driver, who was a race winner in Pickups last year] raced it, so I decided to bring it out," he explained.

Simpson finished all three races at Pembrey, taking a brace of 14th-place finishes before improving to 12th in the finale.

PETER SCHERER

Simpson took a best result of 12th on his comeback

STEVE JONES

KNOCKHILL SUPER TOURING EVENT REDUCED

SMRC

Only one of the planned Super Touring Trophy races took place at the second Scottish Motor Racing Club meeting of the season at Knockhill last weekend due to a series of mechanical issues.

Returning for the first time since 2019, a total of nine cars entered the David Leslie Trophy race, some of which compete in the new Classic Touring Car Racing Club Super Tourers series south of the border.

However, three cars were lost from the entry following the opening CTCRC round of the year at Silverstone, while another one suffered mechanical dramas during the test day prior to the Knockhill meeting.

Five cars, John Cleland (in his original Vauxhall Vectra from the 1997 British Touring Car campaign, below), Allister McMillan (Nissan Primera), Conrad Murray (in an ex-Tom Chilton Ford Focus), German driver Steffan Irmler (Astra) and Tony Absolom (Cavalier) took part in the opening race.

McMillan and Murray unfortunately hit trouble before the end of race one, leaving organisers no option but to turn the planned second race into a 15-minute Super Touring demonstration instead.

"It's unfortunate but that's the way things go in racing sometimes," said Knockhill director of events Stuart Gray. "These cars are a lot older now and they're very fragile. We had a strong entry at the start of the week, but some pulled out. We'll still put on these events for as long as we can, though. They are great cars and very popular with the fans, too."

STEPHEN BRUNSDON

JIM MOIR

Provisional problems

The ongoing appeal into how British GT applied its success seconds at Oulton Park had significant knock-on effects at Silverstone

JAMES NEWBOLD

British GT was stuck between a rock and a hard place at Silverstone last weekend. With the National Court hearing into RAM Racing's appeal of Oulton Park race two (see p63) not set to be held until later this month at the earliest, and the classification of that race still to be finalised, it did the only thing it could and opted not to have in-race success penalties at Silverstone. They will be retrospectively added once the Oulton result is determined and only then will championship points for Silverstone be distributed.

"It's not a true penalty," reasoned Enduro Motorsport's Marcus Clutton, who cited the benefit to be had from not losing track position and dropping into traffic as a result. "But," he added, "I also believe it's the best they can do." His was a widely held view.

It cast a shadow of uncertainty over proceedings in the build-up at Silverstone. Even before a wheel was turned in practice, it was clear the result would be provisional. "It's a big mess," was Barwell Motorsport commercial director Chris Needell's apt summary. "We won't have a penalty anyway, but the people that could do or might do, then won't actually know where they finish today. Everyone is a loser, and this is going to be ongoing for all the races until the result of Oulton is determined."

In the end, the three-hour race came down to a tense battle between Barwell's Sandy Mitchell and Garage 59 McLaren racer Marvin Kirchhofer, both unaffected by the fallout from the second Oulton race. It was a bullet dodged for British GT, but it so easily could have been a different story — a point that wasn't lost on teams.

"It's unfortunate that it can't be concluded quickly then everybody knows where we are"

Martin Plowman finished third on the road at Oulton but was promoted to victory with Paddock Motorsport co-driver Kelvin Fletcher by the application of post-race penalties for RAM's Ian Loggie and to Shaun Balfe's Audi. Going into the race unsure if he and stand-in team-mate Andrew Howard would have a penalty added to their race time, Plowman acknowledged the series had its hands tied, but felt the ongoing situation was "making a mockery of the championship". "It's not a good look when you've got people watching at home and nobody really knows what's going on," he said.

Balfe, who also went into the meeting unsure whether he and Adam Carroll would have a success penalty added retrospectively, agreed: "It's just a bit of a dampener isn't it? It's unfortunate that it can't be concluded quickly then everybody knows where we are. It undoubtedly is spoiling things a bit."

The uncertainty also impacted how teams approached the race. Several pointed out that, with no telling who would ultimately be given the penalties, waiting for the final pitstops to let the natural order shake itself out would not be an option. The hard work would have to be done on the track.

"Now, all of a sudden, it's not about keeping someone behind you," said Richard Neary, who finished second to Plowman and Fletcher at Oulton and was therefore in the same boat. "It's trying to get 11 seconds in front of them, which might be impossible."

The Silverstone race ran without interruption following the usual lap-one chaos, and was overall a good advert for pro-am GT racing on a national level. With so many quality line-ups up and down the field making the prospect of one crew emerging as a dominant force unlikely, has British GT reached a point, Autosport pondered, where success penalties are no longer required? "It's almost better that they just said, 'We're going to scrap success penalties for the season now', you just forget about them," was Needell's response.

Balfe reckons "success penalties could be something we could manage without and the racing would be good", but recognises that may not always be the case. "If it's a grid of 12-15 cars and you've only got two cars that are predominantly at the front, then we're going to be saying, 'Well, why haven't they got success penalties?'" he said.

It's certainly not a black-and-white issue. While many relish the purity of racing in GT World Challenge Europe, another SRO-run series where success penalties play no part, Plowman welcomes the way they "can give different teams a chance to have their moment in the sun". And the inclusion of success penalties in the sporting regulations has inarguably helped to facilitate many championship battles going to the season's business end.

For its part, British GT is adamant that success penalties will remain part of the show — the loophole behind the problem having now been closed. "Oulton's red flag created a scenario that we hadn't foreseen," said a series statement provided to Autosport. "But now the regulation has been tightened there is no need to, and we have no intention of, removing success penalties in the future."

Whatever happens next, everybody is hopeful for a swift resolution before Donington Park on 29 May, although British GT acknowledges the matter is out of its hands.

"I just wish the system would allow it to be resolved in advance of the next round," said Balfe. "Let's have a timeline that it needs to be sorted [by] that is representative to what's going on in the championship. If you look at what they're saying, it's June, July. Well, British GT is front-loaded..."

P70 BRITISH GT REPORT

Barrable (r) and Richardson had some close battles in Legends races

Quadruple delight for Barrable as car racing returns to Bishopscourt

BISHOPSCOURT
BARC
7-8 MAY

Car race meetings at Bishopscourt don't come along very often, once a year as a rule, but last weekend's large gathering was the first since COVID-19 struck. The organising team, overseen by Dale Wells, had a pretty large task on their hands with a total of 23 car races to fit into just two days. But the sun shone and red flags were comparatively rare, once everybody had got used to what was, for many, a first visit.

Legends got it all off to a flying start, with two Saturday races, the first won by Geoff Richardson by a gnat's whisker from Peter Barrable, with the order then reversed with Barrable ahead by a 'massive' 0.4 seconds. Barrable was victorious in three further Sunday races, despite having to start from the back of the grid in the second contest. In all cases, it was Richardson who provided the often very close competition.

Jack Byrne emerged triumphant from the first of two Formula Vee encounters, with Anthony Cross and Gavin Buckley keeping him close company across the line. Jordan Kelly emerged ahead of multiple champion Cross in race two from Buckley and Byrne.

Kelly took the spoils in Formula Vee race two

ALL PHOTOGRAPHY: MICHAEL CHESTER

BOSS Ireland provided plenty of pacey action, eventually. Eamon Matheson's Dallara-Honda was still on its green flag lap when the rest took off for the first time but, while Jonathan Fildes powered his Lola-Renault V6 ahead from the second row to lead into Turn 1, misadventure struck a lap later and he came to a halt. Red flags followed and, at the restart, a squabbling bunch of Formula 3 Dallaras led, with Aaron Gaughran heading Tony Greenan and Noel Robinson over the line.

Fildes was back in action for race two and there were no mistakes this time as the Lola boomed away into an unassailable lead. Gaughran led the F3 brigade again, from Michael Roche, with Greenan next in line.

Fiestas abounded, and bounced off each other and the scenery on occasions. The Mondello-based ST versions provided wins for Daragh Denning and Eddie Peterson, but not before there was a touch of first-lap chaos in the opener, which brought out the red flags. Derek Graham took the Northern Ireland Zetec class on both occasions, fending off the Stewart brothers. And there was more Fiesta fun when the Irish Zetecs went into action, with William Kellett and Keith Rabbitt scoring a win apiece.

There were back-to-back victories for Steven Larkham's Radical in Roadsports and Jonathan Taylor in the concurrent Stryker class, while Richard Kearney was another double winner over a small field of Formula Sheanes. The FF1600 contingent, which ran concurrently, featured just two starters, the faster of which was Crossle boss Paul McMorran's Crossle (no surprise here) 20F.

The Historics twice featured David Kelly's beautiful Crossle 9S BMW strolling away from the MGBs of Gareth Thompson and Bernard Foley, while Future Classics spoils went to the Honda Civic of Mark Geraghty.

Shane Murphy took the honours in the first SEAT Supercup race but could do no better than fourth in the second, which went to Ross Barnes. Elsewhere, Irish Touring Cars was dominated by Stephen Traub in his immaculate Honda Integra, although Peter Baxter's SEAT stayed close in race one, before Alan O'Neill's Mazda RX-7 provided the race-two opposition.

RICHARD YOUNG

WEEKEND WINNERS

LEGENDS
Race 1 Geoff Richardson
Races 2, 3, 4 & 5 Peter Barrable

FORMULA VEE
Race 1 Jack Byrne (Leastone)
Race 2 Jordan Kelly (Sheane)

BOSS IRELAND
Race 1 Aaron Gaughran (Dallara F3)
Race 2 Jonathan Fildes (Lola-Renault)

FIESTA ST
Race 1 Daragh Denning
Race 2 Eddie Peterson

FIESTA ZETEC
Race 1 William Kellett
Race 2 Keith Rabbitt

ROADSPORTS/STRYKERS
Races 1 & 2 Steven Larkham (Radical PR06)

FORMULA SHEANE/FF1600
Races 1 & 2 Richard Kearney

HRCA HISTORICS/FUTURE CLASSICS
Races 1 & 2 David Kelly (Crossle-BMW)

SEAT SUPERCUP/IRISH SUPERCARS
Race 1 Shane Murphy
Race 2 Ross Barnes

IRISH TOURING CARS/NI SALOONS
Races 1 & 2 Stephen Traub (Honda Integra)

For full results visit: speedhive.mylaps.com

Mitchell/Balon take the spoils after race-long GT3 battle

SILVERSTONE
BRITISH GT
7-8 MAY

Half a second was all that split the winning Barwell Lamborghini from the pursuing Garage 59 McLaren after three hours of flat-out racing at Silverstone that ran uninterrupted for the duration.

As Sandy Mitchell and Adam Balon banished the memories of a tricky British GT season opener at Oulton Park, the pair needed an inch-perfect drive to beat a guesting Marvin Kirchhofer and Alexander West in a race determined by fine margins.

"If we'd lost one or two seconds throughout the whole race then [the win] probably wouldn't have happened," said Mitchell, who breathed a sigh of relief when Kirchhofer resumed the race after his third and final stop on lap 68 narrowly behind. Mitchell admitted that he likely wouldn't have passed Kirchhofer, on four-lap fresher rubber, had he rejoined ahead for the final 35-minute dash. The pair proved so evenly matched that they set identical times on the penultimate tour.

"The McLaren's straightline speed is pretty strong compared to us as well, so I think it would have been extremely difficult to overtake," explained the 2020 champion. "I had to defend two or three times, but thankfully he never got side-by-side."

Mitchell's stunning qualifying effort, 0.693 seconds faster than anybody in the Pro session, allied with a strong fourth place for Balon, had secured them pole. But Balon soon had fastest Am qualifier Alex Malykhin (Redline Lamborghini) looming large in his mirrors, and the lunge came as they went into Club on lap three. Contact was made and Malykhin was issued a drivethrough penalty, limiting him and James Dorlin to an eventual fourth.

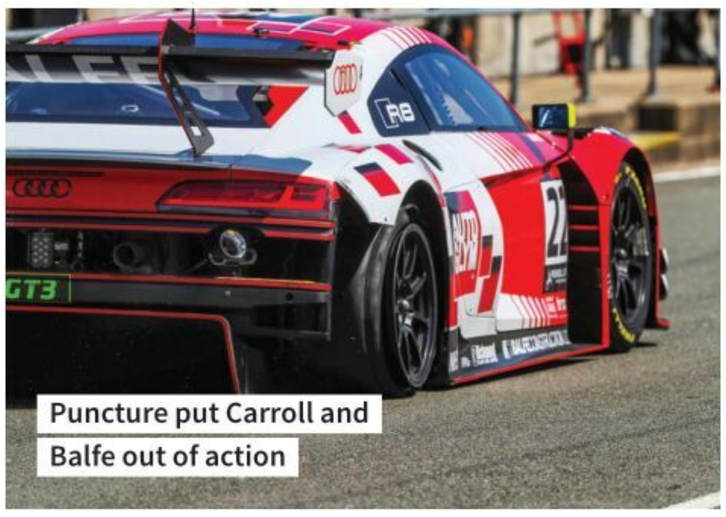
West had started 10th, but ended the first lap third after "one of the luckier starts I've seen". After being rebuffed by Malykhin for second into Becketts, James Cottingham was challenged into Stowe by Richard Neary. The pair ran side-by-side into Club, where the Abba Mercedes went deep into the left-hander, allowing Cottingham to get back alongside entering the right. Neary then clouted Cottingham into a spin, causing race-ending damage to the right-rear corner on the 2 Seas Mercedes, which was then clipped by Ian Loggie's RAM Racing example.

Barwell duo led from the start of the three-hour race at Silverstone

"The wishbone was so bent they couldn't get to some of the fixings properly," explained team boss Dan Shufflebottom of the lengthy repair that left Loggie and Callum Macleod to finish a distant 15th in GT3 with steering still askew.

Neary continued, fighting back from the tail end of the pack to finish fifth on the road, before being excluded when a door was removed under parc ferme conditions. Kevin Tse (Sky Tempesta) had inherited third, then spun at the Loop, completing a terrible opening lap for Mercedes.

Once Malykhin had served his penalty, Balon returned to the lead but soon had his mirrors full of a flying Morgan Tillbrook, who had started 13th in the Enduro McLaren he shared with Marcus Clutton. Up to seventh on lap one, he'd passed Mark Sansom (Assetto Bentley), Shaun Balfe's Audi, Nick Moss (Optimum McLaren) and West, then ran longest of anybody


Puncture put Carroll and Balfe out of action

West and Kirchhofer chased hard for the win

SILVERSTONE GT4 SUCCESS AGAIN FOR TOPHAM/TURNER

Newbridge Motorsport Aston Martin crew Darren Turner and Matt Topham repeated their 2021 Silverstone victory in GT4 with a long-running strategy that took advantage of the Pro-Am pair's shorter pitstops.

Their second consecutive win was founded on keeping clean, as fancied Silver rivals hit strife, and spending 14 seconds less in the pits for each of their three mandatory driver changes. They romped to victory by over half a minute from Richard Williams and Sennan Fielding's pole-winning Steller Audi.

Turner admitted to being disappointed with qualifying only sixth as the Audi checked in 1.4s quicker on aggregate times than nearest challengers Marco Signoretti/Matt Cowley (Academy Ford Mustang). But, in the chaotic early laps, survival was the name of the game.

Will Burns (Century BMW) punted Signoretti wide at Stowe on lap one, before Josh Miller (R Racing Aston) turned Williams around at Village on lap two. Burns thus led Miller – who would be penalised for that contact, and a refuelling infringement – and returnee Jordan Collard until a right-rear puncture for the Speedworks Toyota dropped him and Tom Edgar from contention. Meanwhile, an undamaged Williams began his fightback, rising to third behind Burns and his team-mate Tom Rawlings before making his first stop on lap 10.

As Burns pulled away, Rawlings held back Ross Wylie's Valluga Porsche and the recovering Signoretti, Topham keeping a watching brief behind. Content to set his own pace and not get involved in scraps, Topham ran longer than anybody in the opening stint, pitting 18 tours after Williams on lap 28.

Newbridge and Steller's strategies diverged again thereafter, the Audi squad completing its driver changes five laps before the end of Turner's long second stint. The three-time Le Mans class winner picked off Chris Salkeld (in for Rawlings)

with a 66-minute opening stint that took him to lap 32, 11 further than Balon.

After a right-rear puncture for Adam Carroll (in for Balfe) had ended his pursuit of Mitchell and put the Oulton winner out, Clutton rejoined fifth as Mitchell led Kirchhofer, Sam Neary and Jamie Caroline (RAM). Another long stint from Clutton appeared to set the crew up for a podium, only for a fire extinguisher to go off in the cockpit as Tillbrook climbed aboard, which robbed the car of power.

Mitchell again pitted before Kirchhofer, and the German overturned a 5.7s deficit in his laps against Balon to give West an 11s lead. But Mitchell returned the favour against West, who was left to lament traffic "in the wrong place at the wrong time". "But, after qualifying, if somebody had asked if I'd take second place, I would have done, no doubt," he added.

Moss and Joe Osborne made it two guesting McLarens on the podium. After Moss had matched Tillbrook's marathon opening stint, Osborne rejoined 11th but brought the car back into contention over the next hour. A short second stint from Moss consolidated third spot.

Behind Dorlin, Jonny Adam chased Neary to the line and took fifth with Flick Haigh – another to run long early – on their first weekend in the 2 Seas Mercedes as a stop/go penalty for a short pitstop and a subsequent vibration dropped Caroline and John Ferguson out of contention, promoting Sansom and Will Tregurtha to sixth.

No success penalties were served, pending the appeal into the Oulton Park race-two result (see News). The Silverstone order therefore remains provisional and points have yet to be appointed. But, whatever happens in the courts, Barwell's win will be unaffected, and its championship challenge is back on track.

"A lot of the guys that did well at round one haven't had such a good weekend," said Mitchell. "Now the door's wide open again."

JAMES NEWBOLD

RACE RESULTS

GT3

(86 laps) 1 Adam Balon/Sandy Mitchell (Lamborghini Huracan EVO, above); 2 Alexander West/Marvin Kirchhofer (McLaren 720S) +0.529s; 3 Nick Moss/Joe Osborne (McLaren); 4 Alex Malykhin/James Dorlin (Lamborghini); 5 Flick Haigh/Jonny Adam (Mercedes-AMG GT3); 6 Mark Sansom/Will Tregurtha (Bentley Continental). **Fastest lap** Kirchhofer 1m58.304s (111.38mph). **Pole** Balon/Mitchell. **Starters** 20.

GT4

(78 laps) 1 Matt Topham/Darren Turner (Aston Martin Vantage, below); 2 Richard Williams/Sennan Fielding (Audi R8 LMS) +34.427s; 3 Ross Wylie/Matthew Graham (Porsche 718 Cayman RS CS); 4 Marco Signoretti/Matt Cowley (Ford Mustang); 5 Will Burns/Jack Brown (BMW M4); 6 Tom Rawlings/Chris Salkeld (BMW). **FL** Fielding 2m09.861s (101.47mph). **P** Williams/Fielding. **S** 14.

For full results visit: tsl-timing.com

and Cowley, then closed on Wylie's impressive co-driver Matthew Graham before pitting.

Following a seven-lap burst from Topham, Turner took over again, rejoining 20s clear of Jack Brown (in for Burns). Losing half a minute in his final stop to a refuelling problem put Fielding back behind Graham in fourth, but he eventually worked an opening to claim third on the road – which became second when a post-race 40s penalty for Burns/Brown dropped them to fifth.

"It was just a clean, non-dramatic race in terms of strategy," said Turner. "We just need to learn how to get these tyres to work in qualifying."

JAMES NEWBOLD

Pro-Am pair were helped by shorter pitstop times

Granfors grabs the initiative in GB3 title race

SILVERSTONE
BRSCC
7-8 MAY

A win and second helped put Granfors to the top of the points

Fortec Motorsports's Joel Granfors moved to the top of the GB3 Championship standings at Silverstone, as three different drivers scored maiden series triumphs.

Granfors continued his strong pace from last month's Oulton Park season-opener by taking a double pole on the Grand Prix circuit. He converted the first of those into the lead, pulling out an early two-second cushion over Hitech GP's Luke Browning, who had passed Elite Motorsport's Tom Lebbon on the opening lap. Browning picked up the pace late on to close the deficit, but came home 0.721s behind.

Lebbon finished third, ahead of Douglas Motorsport's Max Esterson, who gained two places at the start to score his best result so far. Lebbon's team-mates James Hedley and John Bennett completed the top six.

Elite's strong weekend continued in race two as, starting from the inside of the front row, Lebbon took advantage of a low downforce set-up to out-drag Granfors on the run to Maggotts and snatch the lead. The Briton then controlled the remainder of the 10-lap contest to take his and the team's first GB3 victory.

"I just managed to get a run on Joel coming out of Copse," said Lebbon on his race-winning overtake. "He was carrying a lot more wing than us, so I knew we would have the straightline speed advantage. I managed to get alongside and it was done from there really."

Granfors came home a close second to further reduce the points deficit to Browning, who was third, while Esterson started and finished fourth to repeat his race-one result. Single-seater rookie Callum Voisin overtook his Carlin stablemate Roberto Faria late on to finish fifth.

It was another rookie who starred in the fully reversed-grid race as Hitech's Cian Shields, who moved straight into GB3 this year from karts, triumphed having passed polesitter David Morales at the start.

Morales, who missed most of testing due to illness, also lost out to Hillspeed's Nick Gilkes before Copse. Gilkes then applied pressure on Shields throughout, but it was the latter that held on to win by 0.434s.

"It was quite nerve-wracking having Nick [Gilkes] on my tail the whole race, but over the moon to come out on top," said Shields. "Coming straight from karts it was obviously a big jump. We didn't expect to win in only the second weekend in the car."

His team-mate Bryce Aron completed a double-overtake on Morales and Douglas Motorsport's Tommy Smith into Brooklands early on to score his first podium in third.

Early contact hampered Browning from 18th on the grid, with the resulting damage leaving him down in 17th at the flag. Granfors, meanwhile, passed half the field from the back to finish ninth, giving the Swede a three-point advantage.

"In F4 I had to be sliding the car a bit, and that's not really my driving style," said Granfors on his impressive start to the season after moving up from British Formula 4. "I think this car just suits me more and feels better to drive as well with more grip."

Race victories were also shared in the

Jenkins edged away from scrapping pack to win race two in GT5 Challenge

ALL PHOTOGRAPHY: JEP
motorsport IMAGES

WEEKEND WINNERS

GB3
Race 1 (all 10 laps) 1 Joel Granfors; 2 Luke Browning +0.721s; 3 Tom Lebbon; 4 Max Esterson; 5 James Hedley; 6 John Bennett.
Fastest lap Browning 1m53.441s (116.16mph).
Pole Granfors. **Starters** 20.
Race 2 1 Lebbon; 2 Granfors +1.013s; 3 Browning; 4 Esterson; 5 Callum Voisin; 6 Roberto Faria.
FL Browning 1m52.783s (116.84mph).
P Granfors. **S** 20.
Race 3 1 Cian Shields; 2 Nick Gilkes +0.434s; 3 Bryce Aron; 4 David Morales; 5 Javier Sagrera; 6 McKenzy Cresswell. **FL** Voisin 1m54.290s (115.30mph). **P** Morales. **S** 20.
Points 1 Granfors 127; 2 Browning 124; 3 Faria 95; 4 Lebbon 92; 5 Bennett 83; 6 Esterson 74.

GINETTA GT5 CHALLENGE
Race 1 Will Orton
Race 2 Will Jenkins

PORSCHE SPRINT CHALLENGE GB
Race 1 Matthew Armstrong
Races 2 & 3 Charles Clark

GB4
Races 1 & 2 Nikolas Taylor
Race 3 Lucas Romanek

GINETTA GT ACADEMY
Races 1 & 2 Marc Warren

For full results visit: tsl-timing.com

Ginetta GT5 Challenge, which provided some of the most dramatic action of the weekend. Elite's Harley Haughton and points leader Nat Hodgkiss contested first place in the early stages of race one, but the latter eventually retired after a collision with Haughton's team-mate Will Jenkins.

Will Orton climbed to second, and then set a series of fastest laps to close in on Haughton for the lead. The pair went side-by-side into Abbey, with a trip through the gravel dropping Haughton to fourth. Orton held on to take his second win of the season ahead of Mikey Doble and Jenkins, the top four separated by less than a second.

Jenkins passed Haughton to lead race two, and then took advantage of a frenetic scrap for second to pull away and win by nearly 3s. Haughton and Hodgkiss continued their battle from race one before the latter then lost out to Connor Grady and Orton. In the closing stages, Hodgkiss tried to pass Orton around the outside at Club, but his momentum carried him into Haughton, putting both briefly off the circuit. That allowed Orton to clinch second ahead of Grady and Ruben Hage.

Charles Clark cruised to a brace in the Porsche Sprint Challenge GB series, but had to play second fiddle to Matthew Armstrong in the opening race by less than 0.5s.

STEVE WHITFIELD

GB4 RIVALS COLLIDE IN THRILLING CONTESTS

The GB4 Championship provided its most exciting weekend to date at Silverstone, with drama in the title battle and two teams on the podium for the first time.

Hampered by poor starts at the opening two rounds, Fortec Motorsports's Nikolas Taylor (leading above) made amends with a brace of wins. Points leader Alex Walker took pole for race one ahead of his Elite team-mate Jack Sherwood, but the latter made a poor getaway, allowing Taylor to claim second into Copse.

On the second lap, Walker tried to defend from Taylor on the Hamilton Straight but the latter squeezed into a small gap to the inside before completing the move into Abbey and then held his rival off until the end. Hillspeed's Max Marzorati kept Fortec's Elias Edestam at bay to record his fourth podium.

Marzorati grabbed the lead at the start of race two from Taylor, who then fought back on the Hangar Straight but they were both beaten into Stowe by Walker. Having reclaimed second, Taylor tried to retake the lead later in the lap around the outside at the Loop, but contact dropped him to fourth while Walker retired on the spot with suspension damage.

"I tried it around the outside," said Taylor on his incident with Walker. "He tried to push me wide and I couldn't go anywhere."

Hannah took maiden GB4 podium

Taylor passed Tom Mills and Megan Gilkes following a brief safety car period and drew alongside Marzorati into Becketts, before Mills capitalised to sneak past the pair of them. But, hampered by straightline speed issues all weekend, Mills was unable to prevent Taylor from getting the lead back into Copse.

Mills's team-mate Jarrod Waberski climbed from fifth to finish in second behind Taylor, while Marzorati scored another third place as Mills eventually limped home in ninth. "I'd say we can put it down as a character-building weekend," he said. "We can't find the problem, and we've been working so hard for it."

Another driver suffering similar issues earlier in the weekend was Logan Hannah. An intercooler problem left her down on power in qualifying, but she bounced back to deliver Graham Brunton Racing's best performance of the season in the full reversed-grid race.

Hannah grabbed the lead on lap one by sweeping past team-mate Chloe Grant into Becketts as series debutant Lucas Romanek was soon into second for Oldfield Motorsport. Grant was then involved in a three-car collision and dropped to the back having tried to defend against Waberski into Club, as an over-ambitious move up the inside from Taylor resulted in him being launched over Grant's car, putting himself and Waberski out.

Hannah resisted pressure from Romanek until half-distance, but a small mistake exiting Chapel allowed the latter to sweep by at the end of the Hangar Straight and eventually win by two seconds. A first podium finish left Hannah delighted after a difficult start to the season, while Sherwood finished third.

STEVE WHITFIELD

Wright came through from the back of the grid in first Cockshoot Cup race

Mark made of the Wright stuff after victory charge

CADWELL PARK
MGCC
8 MAY

Neither the day's biggest entry nor a circuit on which overtaking is notoriously challenging could prevent Mark Wright claiming his first Cockshoot Cup victory from the back of the grid at a sunny Cadwell Park.

Alternator failure on his ex-Vince Martin MGF Cup car forced Wright to qualify out of session and start each race at the rear of the 29-car grid — the northern-based championship's largest for several years.

Wright's rapid progress to 12th on the opening tour counted for nothing when Peter Bramble's MGB smote the barrier at The Mountain, but the East Midlander went even better in the rerun. Fourth by the end of lap three of 10, he then picked off the Midgets of Keith Egar and David Morrison before homing in on Paul Wignall's MG ZS 180. Wignall had scored a maiden pole position on his first appearance in the ex-Morgan Short car but his valiant defence was breeched by Wright exiting Barn with two laps to go.

Wright's bid for a repeat in the sequel ended with an engine blow-up having risen to third. Two-time class champion Wignall claimed his own maiden outright win, passing Egar mid-race after both benefited from an early clash between the fast-starting Midgets of Morrison and Ian Whitt. Karl Green's ZS completed the podium after pipping Phil Standish (ZR) on the line.

On his return to the championship, Jason Burgess had little trouble cruising to two victories over an MG Trophy field depleted by withdrawals. Patrick Booth kept him honest in the opener until flat-spotting his tyres in a failed lunge at Park late on, as set-up tweaks helped Burgess to a more dominant later win.

The action came behind them as the Class B frontrunners scrapped in their less powerful ZR 170s. Struggling with a long brake pedal, James Dennison lost out to Josh Bromley through The Mountain on race one's final lap.

As Bromley attempted to repeat the move early in the rematch, the pair made contact. Bromley's car was pitched across the nose of Dennison's, causing chaos behind. Tylor Ballard was slammed into the barriers as he tried to squeeze past but Astin Wigley avoided the trouble to run third overall. He lost out to the recovering Dennison after the resulting safety car but held off the challenges of Joe Dalgarno and Jack Chapman, who came to blows at the final corner.

Reigning MG Trophy Class B champion Fergus Campbell won on his first MG Cup outing. Front-row men Campbell and Ian Boulton (both in ZRs) had lonely races as a queue formed behind Dave Nixon's Rover 220 Tomcat in third. Nixon's stout defence through Gooseneck in particular held firm until the penultimate lap when he bounced over the kerb at Mansfield, letting Richard Buckley's similar car and Dennis Robinson's ZR past.

From third on the grid, Buckley jumped Campbell and Boulton in race two as Nixon also powered past within a lap. Roles reversed, Buckley was forced into defending while Nixon's attacks left him briefly losing out to Campbell before the Tomcat's grunt eventually told.

In a repeat of the season-opener, Mark Eales and Mike Williams shared Metro Cup honours. Polesitter Williams dropped to fourth before clearing Tim Shooter and Dick Trevett then shadowing Eales home

Eales took opening win in Metro Cup race at Cadwell

ALL PHOTOGRAPHY: MICK WALKER

WEEKEND WINNERS

COCKSHOOT CUP
Race 1 Mark Wright (MGF Cup)
Race 2 Paul Wignall (MG ZS 180)

MG TROPHY
Races 1 & 2 Jason Burgess (ZR 190, below)

MG CUP
Race 1 Fergus Campbell (MG ZR 170)
Race 2 Richard Buckley (Rover 220 Tomcat Turbo)

MG METRO CUP
Race 1 Mark Eales
Race 2 Mike Williams

MIDGET & SPRITE CHALLENGE
Races 1 & 2 Paul Sibley (MG Midget)

MORGAN CHALLENGE
Russell Paterson (+8)

For full results visit: tsl-timing.com

in race one. Williams fought off Jon Moore's challenge at the start of race two and got a run exiting Charlie's to overhaul Eales, managing the gap thereafter.

Paul Sibley was in commanding form in the Midget & Sprite Challenge, opening his 2022 account with two comprehensive wins after narrowly missing out at Brands Hatch in March. Sibley's likely biggest threat, Richard Bridge, was sidelined by an engine failure in qualifying while the third Modsports-spec machine of Mike Chalk ended its day in the wall. Pippa Cow's two second places were as comfortable as Sibley's wins.

The Rover V8-powered Morgan +8s of Russell Paterson and Roger Whiteside entertained with a race-long Morgan Challenge duel settled in Paterson's favour. The Perth-based Morgan dealer lost out to Whiteside exiting Barn on lap two, but pounced when Whiteside got sideways through The Mountain around two-thirds of the way through the 30-minute race. Paterson held on to win by just 0.5s, with Andrew Thompson's more modern ARV6 nearly 30s adrift.

MARK PAULSON

AT THE TOP OF THE MIDGET & SPRITE HERD

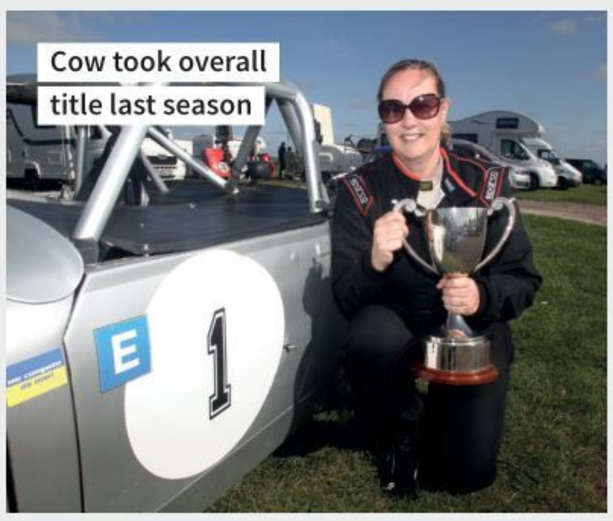
For reigning Midget & Sprite Challenge champion Pippa Cow, adding last year's overall crown to her two previous class titles was the culmination of a lifetime spent in and around the series.

Cow claimed Class E honours (for race-modified cars) by topping the section in her Austin-Healey Sebring Sprite on all but two occasions. It was enough to pip Class D (road-modified) champion Mark Witherspoon to the overall title.

Like a number of her competitors, Cow followed her father, Gil Duffy, into the series after growing up immersed in the paddock. Richard Bridge and Barney Collinson – frontrunners in Classes A (fully modified) and D respectively – did similarly, as well as Hugh Simpson and last year's Class A champion Edd Weston.

Taming a single horsepower had initially been enough for Pippa, until her dad, who now campaigns a Formula 3 Brabham BT21B in Historic Sports Car Club events as well as tending to Pippa's Sprite, made her aware of the Formula Woman initiative in 2004.

"I was competing on horses but my dad had the cars," said Cow. "I'd been living in Australia and I came back, and my dad said to me, 'There's an advert in Autosport about Formula Woman, it's for novice women racing drivers'. So I applied."



Cow took overall title last season

Following an assessment day and final 'boot camp' at Cadwell Park, Cow took her place on the grid for the quick-fire summer season of races alongside 15 other women in Mazda RX-8s. She finished seventh overall but the four-wheeled racing bug had bitten even before the assessment.

"I did a trackday before I did the Formula Woman test day and I really enjoyed it," she said. "So I saved some of my wedding fund and spent it on a rolling chassis of a Locost! When I got through to Formula Woman, we had to pause with that, so I did Formula Woman and then the following year I raced the Locost."

Cow then progressed to the Midget & Sprite Challenge, racing a Mk1 Frogeye Sprite. She also shared the car with her father in Classic Sports Car Club Swinging Sixties events before it was written off – an incident that demonstrated the camaraderie within the paddock.

"It was two weeks between races, and [two-time champion] Richard Perry very kindly said I could have the silver shell," said Cow. "My dad built it up using all the bits from the red Frogeye and got me going again in a fortnight."

Under the series' race-modified regulations, the car's original 1275cc engine has been bored out to 1380cc, moved back in the chassis by four inches and mated to a Ford five-speed gearbox, while road-holding is controlled by a five-link suspension.

It may not be on a par with the series' fully modified Modsports-spec cars, but Cow is often able to get among them, particularly before their slicks reach full operating temperature. She claimed five overall podium finishes last year, and added two more at Cadwell last weekend as her title defence gathered momentum.

MARK PAULSON

CLUB AUTOSPORT

Gray continues to ride the crest of Fiesta wave

KNOCKHILL
SMRC
8 MAY

JIM MOIR

As true as the saying 'calm seas never make a good sailor' may be, reigning Scottish Fiesta ST Cup champion Steven Gray has been riding the crest of a wave since July last year.

Of the past 10 points-scoring races at Knockhill, he's won every single one of them. Another double victory last weekend took Gray's 2022 tally to four from four, despite fierce competition from his long-term rival Dave Colville.

Gray may have a 100% record in the championship so far this year, but he's had it far from easy. Proof of that came in qualifying, with the top four cars split by a mere 0.077 seconds. Gray led off the line from pole position in the opening race, with Colville recovering from a poor initial getaway from third to sneak past impressive youngster Broddy Orr at McIntyres.

From then, Gray and Colville broke clear at the front as the leading quartet split into two squabbling groups. Colville briefly got alongside Gray over the line on the 10th lap of 12, which brought Mark Dickson into a three-way battle for the win. But Gray held on to claim a narrow victory from Colville, with just six tenths covering the podium finishers. "I tried everything I could to get past him, but he defended really, really well," admitted Colville.

Gray again led the way in race two, but Colville remained glued to the back of the leader's Fiesta. A missed gear exiting the Hairpin from Gray allowed Colville to pull alongside into Duffus Dip before he snuck through into the lead when Gray dipped a wheel onto the grass at Leslies. Keen to make a break, Colville pushed too hard on the following lap, running deep at the Hairpin and allowing Gray to reclaim the lead, which he maintained to keep his unbeaten run alive.

While the Fiestas flew the flag for the Blue Oval in the Scottish championship, the visiting Modified Ford Series proved equally entertaining around the Fife circuit, with Dave Cockell taking his Escort Cosworth to both victories.

Cockell, driving at Knockhill for the first time, had taken pole position by 1.7s from closest rival Jack Gadd, but didn't have such an easy time come the race. He'd opened up a two-second advantage but was caught by the chasing Mk1 Escort in the closing stages. Just half a second split the pair at the line, with Piers Grange's Mk2 Escort third.

Race two was red-flagged following a spectacular incident for Paul Daly when he lost a wheel approaching the Hairpin. Cockell led from start to finish, but it wasn't a straightforward run as he was pushed by Gadd throughout. "My dash stopped working and I couldn't see the rev counter or any of the real-time warnings, so it was a bit nerveracking near the end," explained Cockell.

First-lap contact between Grange and Malcolm Harding's Mk2 Zakspeed Escort ended Grange's race in the Clarks barrier, while Harding went on to take third.

The Scottish C1 Cup produced two excellent 10-lap races, with Thomas Comber and Sam Corson taking the wins as reigning champion Ross Dunn completed a damage-limitation weekend. Dunn qualified on pole but started race one from the back after his front-left tyre was deemed too worn by officials. His recovery from 19th to seventh was one of the drives of the weekend. Comber fended off 2019 champion Finlay Brunton in the opener. Brunton collected another second place in race two, behind Corson, while a frenetic seven-car battle for third was settled in favour of Paul Winfield.

Michael Weddell extended his Mini Cooper Cup points lead with two wins and a third. Former champion Oly Mortimer made a one-off appearance in the turbocharged R53 class and took both overall wins, while Jack Irvine won the reversed-grid finale.

John Kinmond took his Rover 3500 to both Classic victories, beating Andrew Graham's Triumph TR8 in the opener before fending off double champion Alastair Baptie's new MGB GTV8 in the second.

The depleted Super Touring Trophy field was topped by double British Touring Car champion John Cleland's Vauxhall Vectra.

STEPHEN BRUNSDON

Gadd (right) had no answer to pace of Cockell in Modified Fords

JIM MOIR

Reigning champion Gray remains unbeaten but faced intense pressure from Colville

WEEKEND WINNERS

KNOCKHILL
SCOTTISH FIESTA ST CUP
Races 1 & 2 Steven Gray

MODIFIED FORD SERIES
Races 1 & 2 Dave Cockell (Escort Cosworth)

SCOTTISH C1 CUP
Race 1 Thomas Comber
Race 2 Sam Corson

SCOTTISH MINI COOPER CUP
Races 1 & 2 Oly Mortimer (Mini Cooper R53)
Race 3 Jack Irvine (Mini Cooper)

SCOTTISH CLASSIC SPORTS AND SALOONS
Races 1 & 2 John Kinmond (Rover 3500)

SUPER TOURING TROPHY
John Cleland (Vauxhall Vectra)

For full results visit: smart-timing.co.uk

HAREWOOD
ROUND 5
1 Wallace Menzies (3.3 Gould-Cosworth GR59M) 47.00s; 2 Scott Moran (4.0 Gould-Judd GR59J) 47.05s; 3 Matthew Ryder (4.0 Gould-Judd GR59JB) 47.39s; 4 Alex Summers (2.7 DJ-Cosworth Firestorm) 47.62s; 5 Trevor Willis (3.2 OMS 28-RTE) 48.63s; 6 Will Hall (4.0 Gould-Judd GR59JB) 48.94s; 7 Richard Spedding (1.6 GWR-Hayabusa Raptor 2) 49.01s; 8 David Uren (3.5 Gould-NME GR55B) 49.20s; 9 David Warburton (1.6 Gould-Suzuki GR59) 49.48s; 10 Eynon Price (1.7 Force-Hayabusa TA) 51.12s.

ROUND 6
1 Menzies 46.86s; 2 Summers 47.15s; 3 Ryder 47.19s; 4 Moran 47.46s; 5 Willis 48.02s; 6 Uren 48.78s; 7 Spedding 48.98s; 8 Warburton 50.48s; 9 Jack Cottrill (2.7 DJ-Cosworth Dallara) 50.63s; 10 Lee Griffiths (1.7 OMS 25-Suzuki) 50.71s.

POINTS
1 Menzies 56; 2= Moran & Summers 54; 4 Ryder 42; 5 Willis 40; 6 Uren 31.

For full results visit: britishhillclimb.co.uk

Reigning champion Menzies shaved nearly a second off his 2019 best

PAUL LAWRENCE

Menzies in record-breaking form again at Harewood

HAREWOOD
BRITISH HILLCLIMB
7-8 MAY

Two more wins at Harewood for Wallace Menzies put the current champion ahead in the British Hillclimb Championship on a day when the outright hill record took a battering.

As ever, Menzies's wins were incredibly hard fought as Scott Moran, Alex Summers and rising star Matthew Ryder all pushed the Scotsman to give his very best. Menzies's 2019 hill record of 47.81s was always going to come under attack as the current generation of cars competed at a dry and warm Harewood for the first time in nearly three years. By the end of the afternoon, Menzies had the record back at 46.86s.

In the opening run-off it was Ryder, drawing widespread praise from his rivals, who threw the gauntlet down by going under the record at 47.39s in the Gould GR59 he is sharing with Will Hall. Summers dipped to 47.62s but knew it could have been a little better, and then Moran stormed in with a 47.05s, believing that a sub-47s climb was possible.

That left Menzies as the final driver to run and he went to the line knowing that he had to lower his old record by three quarters of a second to take the day's first win. Once again, the current champion delivered when the pressure was on and his climb was a perfect balance of controlled aggression as he stopped the clocks on 47.00s. Within four minutes, four drivers had bettered the old hill record.

From the smaller-engined pack, Richard Spedding, David Warburton and Eynon Price – first time out with a 1720cc Hayabusa engine – all took richly deserved championship points.

Later on, during an event when the cars were on the hill up to six times in quick succession, the second top 12 run-off closed another perfect day of top-flight hillclimbing.

Summers put it all together to shoot a superb 47.15s, which was just 0.04s better than Ryder's final shot. Menzies went last and it all came together for him to stop the clock at 46.86s and bag his fourth run-off win on the trot. "I knew what I had to do both times and I knew that a 46s was possible," said Menzies, adding: "I'm so impressed at how quickly Matthew has got up to speed" of his newest rival.

Local ace Spedding again edged Warburton to top the under two-litre pack behind Moran, Trevor Willis and David Uren.

PAUL LAWRENCE

Ryder impressed and was one of four drivers inside old record

PAUL LAWRENCE

King can't be toppled from Pembrey Mini throne

PEMBREY
BARC
7-8 MAY

There was no stopping Nelson King as he opened the Mini Challenge Trophy season with a winning treble at Pembrey.

King led from the start of the opener, but he was under intense pressure from Matt Hammond for its entirety. Nicky Taylor joined them in an early break, but he lost ground and Lee Pearce got past him at Hatchets after 12 of the 18 laps. That left Taylor to hold off Alex Solley and Tom Ovenden to the finish.

With Hammond running wide at Hatchets on the first lap of race two, King was in the clear from Taylor, while it became a four-car battle for third. Louie Capozzoli and Ovenden fell over each other on lap 10, leaving Solley and Pearce to battle, with Solley almost catching Taylor by the flag.

King was again in charge of the finale when early leader Pearce ran onto the grass at Honda on the first lap. Taylor remained clear in second, with Capozzoli keeping the recovering Pearce at bay for third.

British Truck Racing champion Ryan Smith once again showed his dominance, taking four wins out five in his Daimler and leading Stuart Oliver's Volvo and John Newell (MAN TGS) throughout Saturday's opening two races.

Mark Taylor headed Sunday's opener, initially from the MANs of Tom O'Rourke and Steven Powell. But from a partially reversed grid, Smith worked his way into second by lap nine of 13, and snatched victory from Taylor on the last tour.

With O'Rourke and Newell colliding at Brooklands and Smith off in avoidance, race four was restarted after red flags.

Khera a double Ferrari winner

OULTON PARK
MSVR FERRARI
6-7 MAY

The 2020 champion began season with two victories

Ferrari Challenge UK opened its 2022 account at Oulton Park last weekend with another masterclass in supercardom as Lucky Khera grabbed a double win.

On the 30th anniversary of the Ferrari Challenge's inception, track time was split between racing and the Passione Ferrari, an opportunity for customers to take their own car around the circuit, guided by the stunning Roma pace car.

In the paddock, despite the display of rare Ferraris, it's the impressive hospitality unit, crewed by Italian chefs and baristas, that stands proud as a statement piece. There are no half measures here; simply the very best that Italy has to offer.

Most Ferrari Challenge championships are run regionally but, here in the UK – along with Italy – we have our own, specifically tailored to allow Ferrari customers the opportunity to take their first steps into racing. There are no teams allowed, every car being maintained by Ferrari technicians (flown from Italy), supported by professional driver coaches and crew from Pirelli. All the drivers need do is buy their 488 Challenge car from a UK dealer and start racing.

The car itself houses the torquey 3.9-litre, 670bhp V8 turbo engine that delivers everything an aspiring GT driver could wish for. And to maintain an absolutely level playing field, the only two options available are your choice of colour scheme and the size of the driver's seat.

Out on track, Khera harnessed all his recent experiences of the new Pirelli slicks to deliver the pace and consistency that seldom saw his advantage threatened. The

ALL PHOTOGRAPHY: STEVE JONES

Legends champions Rudman (left) and Mickel were in the thick of the action

Simon Reid (Iveco Stralis) led away from Taylor, but Smith was into second by lap three and closing. Reid held on for the win, while Oliver snatched third from Taylor.

It was Newell's turn to set the pace in the finale, but under tremendous pressure from both Smith and Oliver. And, sure enough, it was Smith who bagged another win, Oliver also demoting Newell late on.

John Mickel came out on top of a terrific three-way battle with Miles Rudman and Jack Parker to win Saturday's opening Legends heat. But Rudman was in charge for the second half of heat two, as Daniel Clark and Parker duelled behind. Will Gibson was clear for most of the final, with Mickel just holding off Chris Brockhurst in an entertaining tussle for second.

Mickel won again in Sunday's opener, which he led from lap seven of 10 after squeezing past Rudman. Gibson then joined in to make it nose to tail for the podium onto the very last lap. Marcus Pett and Steve Whitelegg duelled in heat two, with Pett emerging triumphant and Gibson close enough to threaten both to the flag. Rudman took the final spoils after a restart and race-long pressure from Mickel. Nick Bridgeman completed the podium following a fight to the flag with Brockhurst.

The first of the Pickup races had to be restarted, before George Turiccki had an off on the opening lap and dropped down the order, leaving Michael Smith and Mark Willis clear. Smith took the win from the recovering Turiccki and Reece Jones, while Willis and Dale Gent won the later races.

Less than 0.5 seconds covered the top three in both 2CV thrashes. David O'Keeffe did the double, with Peter Sparrow and Nick Crispin second and third in race one, before Nick Roads joined O'Keeffe and Crispin on the race-two podium.

PETER SCHERER

WEEKEND WINNERS

PEMBREY

MINI CHALLENGE TROPHY
Races 1, 2 & 3 Nelson King

BRITISH TRUCKS
Races 1, 2, 3 & 5 Ryan Smith (Daimler)
Race 4 Simon Reid (Iveco Stralis)

LEGENDS
Races 1 & 4 John Mickel
Races 2 & 6 Miles Rudman
Race 3 Will Gibson
Race 5 Marcus Pett

PICKUPS
Race 1 Michael Smith
Race 2 Mark Willis
Race 3 Dale Gent

2CVs
Races 1 & 2 David O'Keeffe

WELSH SPORTS AND SALOONS
Race 1 Rhys Lloyd (Opel Astra)
Race 2 Damian Longotano (Westfield SE)

OULTON PARK

FERRARI CHALLENGE UK
Races 1 & 2 Lucky Khera

PIRELLI FERRARI FORMULA CLASSIC
Races 1 & 2 Wayne Marrs (F355 Challenge)
Race 3 Vance Kearney (F355 Challenge)

For full results visit: tsl-timing.com

Marrs's F355 Challenge won first two Formula Classic races

2020 champion was always in control of his destiny, unlike fellow front-row starter Graham de Zille, who failed to find momentum off the line, inviting Paul Hogarth to seize the opportunity to head into second place. That was how it stayed, despite pressure from de Zille to regain the place, and from Faisal Al-Faisal in fourth, eager to make the podium.

In Coppa Shell, for gentleman drivers, newcomer John Seale looked set to take the win but a scuffle with Paul Simmerson sent the ex-British GT racer into retirement. Simmerson was time-penalised after the race, leaving Paul Rogers to collect class honours. There were also notable debuts for novices Andrew Morrow and Jason Ambrose, both having graduated from a road car experience last year.

Khera was again on pole for race two but, this time, he was joined by Han Sikkens, who immediately grabbed the lead as they headed into Old Hall, only to see the places reversed moments later. Hogarth held firm in third but, further back, Seale and Simmerson were at it again, although this time it was Seale who was frustrated.

Seale launched his attack into Lodge, Simmerson left room, but Seale carried too much speed, hitting his rival twice as they clattered up Deer Leap, before spearing across the track, mounting the barrier near the pit entry and landing over it. Simmerson was able to take the restart, won again by Khera, while Seale (his car heavily damaged) was disqualified and given penalty points for the contact.

There were also three Pirelli Ferrari Formula Classic races to enjoy, Wayne Marrs (F355) kicking off 2022 with another dominant display in the opening two contests, despite giving himself much to do in the second encounter. Vance Kearney and Tim Walker's F355s battled nose-to-tail in race three after a wayward start, Kearney getting ahead early on and then soaking up the pressure to take the win.

STEVE HINDLE

EMIRA GT4

Lotus gets back on track

It's been over a decade since the famous brand last launched a car for the motorsport world but, with the new Emira GT4, it's finally returning to where it "should be"

STEPHEN LICKORISH

PHOTOGRAPHY **LOTUS**

Lotus. It is one of the most iconic names in the world of motorsport. And yet, despite its illustrious history, it has been over a decade since the brand released a new car dedicated to racing. But that long wait is finally over as, last week, the next chapter of Lotus's story began with the launch of the Emira GT4.

"Lotus should be racing, that's what Lotus is about," states managing director Matt Windle, who rejoined Lotus in 2017 having previously worked in its Engineering division. "For me, when I came here, it's one of the things I really wanted to achieve. I'm a big fan of motorsport and I think it's where Lotus should be.

"This now brings us into this decade, so we've raced every decade, and I think that's really important. And we will continue to race every decade going forward, as far as I'm concerned."

Getting Lotus back to where it belongs on the race track is a central plinth of the manufacturer's Vision80 strategy to transform the business ahead of its 80th anniversary in 2028. And it is certainly a company that is very different to when its last motorsport offering, the Evora GT4, first took to the circuits in 2010.

Most notably, it has a new owner since then, Lotus now falling under the wing of the Chinese Geely Group – which is also responsible for the successful Lynk & Co machines in the World Touring Car Cup.

JEP/MOTORSPORT IMAGES

Previous Lotus racer, the Evora, achieved GT4 success in British GT from 2011-15

With the fresh ownership has also come a fresh model range, the popular and long-standing Elise, Exige and Evora triumvirate being phased out at the end of last year. In their place comes the Emira – Lotus's final hurrah in terms of a mass-produced internal combustion-engined machine – along with a switch to the electric arena with the Evija sportscar and a move into the SUV segment with the high-performance Eletre.

But the changes run deeper than just the cars themselves. There has been major investment in the Hethel headquarters, and in Lotus's other sites, both in terms of facilities and personnel. An example of this comes in the form of the Lotus Learning Academy, which is training the next generation of engineers and technicians in Norfolk ready for the manufacturer's expansion. "We've built from the foundations up so this [return to motorsport] is not just a pet project that we've put some stickers on a car, we've been developing all of the systems, all of the people and the team," continues Windle.

Another clear sign of this commitment to racing is the formation of the Lotus Advanced Performance division earlier this year, which caters for everything outside of Lotus's core road cars – which now includes its motorsport activity. But work on the Emira GT4 dates back far further than the creation of the new department. »

Windle says new GT4 Emira is just the first step in Lotus's racing comeback

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Development has been headed up by long-time iSport engineer Richard Selwin, who helped guide Timo Glock to the 2007 GP2 crown, with work on the Emira GT4 first beginning two years ago. "When we were engineering and designing the Emira, we always had this [motorsport] in mind," explains Windle, with Selwin estimating that 40% of the parts are carried over from the road car. "We were always thinking about 'right, that suspension needs to do GT4', 'that system needs to do GT4'. It's not as if it's just a plug-on that we've done at the end, it's always been there as part of the strategy."

It is an approach that has paid dividends for several of the leading GT4 cars and one that Lotus hopes will build upon the success of the Evora. That model took eight GT4 wins in a four-year period between 2011 and 2015 in British GT, along with countless other triumphs around the world, before it became too long in the tooth to keep up with the latest GT4 models.

Portimao is among the venues Emira has visited during testing

"We've got an incredible history, we need to start generating some here and now as well"

Some elements of the Evora have been retained, such as the transversely mounted 3.5-litre supercharged V6 Toyota engine but, in many ways, the Emira represents a clean slate. And it is a slate that has been crafted by not one but two successful motorsport brands, with renowned tin-top engineering company RML also playing a "very important" part. While Lotus has designed and engineered the different elements, it is RML bringing it all together.

"It's very much been a partnership — RML build the cars using all the bits that we supplied," says Lotus Advanced Performance executive director Simon Lane, who previously held a similar position at Aston Martin. "They've supported us with testing as well. The car's been out to Portimao, it's been to Paul Ricard, and they've supported with that.

"The other area they're really going to help us with is with aftersales support. Right now, we're not structured to do that and RML are. They have a call centre, they have a really excellent parts support, so they'll be on hand and present at some of the races as well — at British GT, for example, they'll be there on hand so we can give proper back-up to people that buy these cars when they race them."

And in terms of those prospective buyers, there has been plenty of interest from all around the world. "From across the globe, from as far away as New Zealand, Australia, Middle East, all over the USA, we've got a huge amount of demand," says Lane. "Our importer in Australia is bringing a number of them in to compete in the Targa series so they won't just be used in GT4, they'll be doing other things as well.

"Our initial plan was to build 90 cars. It's starting to feel like that's not going to be enough, so maybe we'll build a few more. We'll see."

But that significant amount of interest can pose a few problems as well as being positive, particularly with the ongoing global supply chain disruption. The first cars are set to be delivered to customers in the final three months of this year, ahead of a major push in 2023, but Lane cannot be certain of how many Emiras will actually be ready for Q4.

"The challenge we've got now is obviously to build them," admits Lane. "It's a challenge just because there's so much uncertainty in the global supply chain and some of our suppliers for this car have been struggling to get parts. For example, there's a challenge around Xtrac gearboxes at the moment . But we're very focused on that now and getting the car into build and getting the car into customer's hands in quarter four."

Having reached this point, with a race debut potentially just months away, Lotus is on the verge of once again ticking the box that says 'motorsport'. But this is just the start of the journey.

"What's cool for us is we're now talking about, 'OK, so GT4 is basically done and we're going to start building and delivering them, now what are we going to do next?'" says Lane. "We really want to continue that story with motorsport, continue that Vision80 strategy of getting Lotus back into motorsport. I love talking about what we did in the past, we've got an incredible motorsport history, we need to start generating some here and now as well."

Windle adds: "It's about doing it the right way, so we've come back in with GT4, we have plans to develop the motorsport strategy going forward but what we'll do is get this running first. We wanted to get a product that's competitive out there, see how we go, build the team back up around the motorsport offering and then move forward from there."

And, despite the road car range veering towards the world of electric power, that does not necessarily mean Lotus's motorsport focus will also be heading in that direction. "We've said we won't do any new high-volume ICE cars but that doesn't mean we won't do something else that's in the motorsport arena so, through Lotus Advanced Performance, there's some ideas that we've already got, at different levels, of where the product will be," concludes Windle. "There's a lot to come."

For Lotus enthusiasts, that sounds just as good as the throaty new Emira. The road-going version has already been seen leading the British GT pack as its new safety car. Now Lotus race cars could soon be back where they belong and also be fighting at the front of grids.

Emira has already appeared as new British GT safety car

JEP motorsport IMAGES

F1 heroes through the lens

BOOK REVIEW

F1 HEROES: CHAMPIONS AND LEGENDS IN THE PHOTOS OF MOTORSPORT IMAGES

RRP £30

The adage that 'a picture is worth a thousand words' rings true particularly in sport, where the raw emotion from a competitor can be captured through the eye of a lens. Whether that be euphoria and joy or the depths of despair, there's always a story to tell and a camera to capture the moment.

This is particularly true with motorsport, which is perhaps ironic given that a driver's face when in the car is covered by a helmet, and even their eyes are blocked from view by a tinted visor once that has been dropped. Their bodies have become further submerged, and protected, within the confines of the cars over the decades to the extent where watching their hands in motion from outside the cockpit is almost impossible.

But despite that, it's the drivers and not the cars that are the centre of attention for fans around the globe. It's their stories and their lives which fascinate, especially those from the past when the perils of racing in a bygone era created an aura bordering mysticism around the drivers.

F1 Heroes: Champions and Legends in the Photos of Motorsport Images offers the chance to relive the past and remember those who pushed to the limit, and sometimes beyond. Released last month, the 192-page book contains hundreds of pictures from Motorsport Images, which is the world's largest motorsport image library and chief supplier of pictures to Autosport. It contains more than 28 million pictures, including the world's only unbroken visual history of Formula 1 racing, with images of every grand prix.

Contributors to the book include collections from the archives of LAT, Rainer Schlegelmilch, Studio Colombo, Sutton Images, Giorgio Piola and Maggi & Maggi.

The book was released last month, but had previously been showcased in Italy last year, with guests such as Formula 1 CEO Stefano Domenicali plus grand prix winners Jacky Ickx and Jean Alesi.

"The great Juan Manuel Fangio once observed that there are two types of people: those who like a quiet life and the adventurers," said James Allen, president of Motorsport Images owner Motorsport Network.

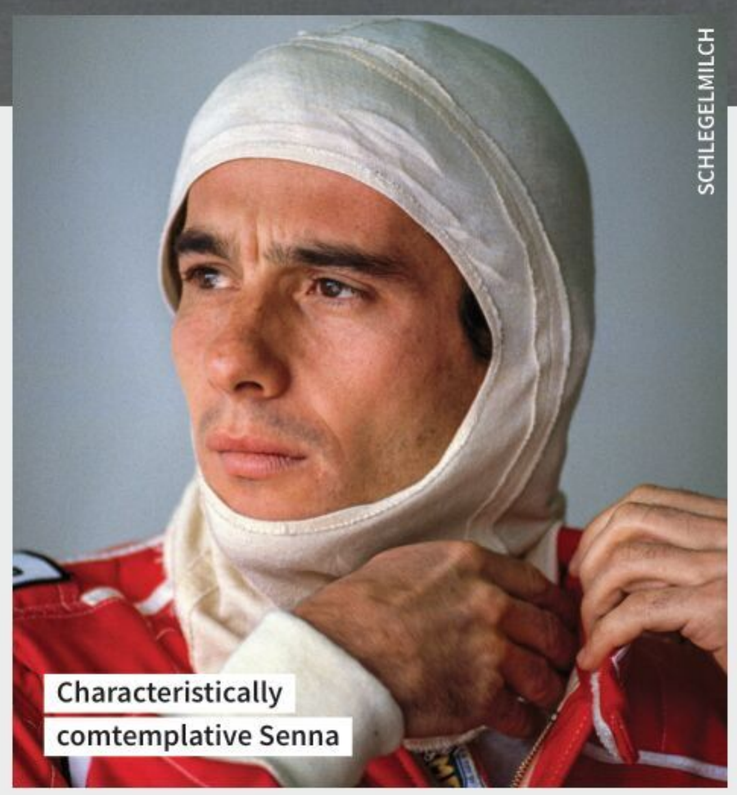
"Racing drivers, he said, and especially the champions, are the ultimate adventurers because the harder something is the greater the satisfaction they derive from taking that challenge. Drivers are the focal point of Formula 1 and this fascination with their adventure is the core appeal of the sport. It has always been this way.

"In the days from Fangio, through Gilles Villeneuve, to Ayrton Senna, the risks meant that it could be a beautiful, but also brief, life. More recently with the welcome

Images from the book showcased last year

Il Commendatore's famous embrace of Villeneuve

COLOMBO



SCHLEGELMILCH

Characteristically comtemplative Senna

advances in safety, the driver remains the hero and his or her skill in dominating a machine of unimaginable power can be appreciated as an entertainment and a sport. Photography has always been the most powerful medium for carrying this adventurer narrative."

Each decade has its own chapter, from 1950 and the inaugural season of the world championship, through to the end of the 2020 season. Famous images include Villeneuve in typical sideways action, as well as the iconic embrace between him and Enzo Ferrari after his heavy crash at Imola in 1980. There are pictures of three-time champion Senna deep in thought, and flinging his McLaren through a shower of sparks at Silverstone.

Romain Grosjean's fiery crash at the 2020 Bahrain Grand Prix, which adorns the book's cover, is perhaps one of the more significant pictures from recent years. Although the sport has become safer, this image demonstrate that drivers today still face some of the dangers and challenges of their predecessors. It's little wonder that they're still revered as heroes by so many.

To find out more about Motorsport Images, visit motorsportimages.com

Miami Grand Prix review

Max Verstappen turned up the heat in the Formula 1 title battle by claiming his second win on the bounce as he defeated Ferrari's Charles Leclerc in the inaugural Miami Grand Prix. Join Autosport's F1 reporter Luke Smith, GP Racing's Stuart Codling and Motorsport Network's Jess McFadyen, who all made the trip Stateside, as they discuss the Miami GP with host Martyn Lee.

autosport.com/podcast

WHAT'S ON

INTERNATIONAL MOTORSPORT

Bathurst 12 Hour
Intercontinental GT Challenge
Mount Panorama, Australia
15 May
Livestream on Motorsport.tv

Formula E
Round 5/9
Berlin Tempelhof, Germany
14-15 May
TV Live Channel 4, Sat 1330, Eurosport 2, Sat 1330, Channel 4 Sport YouTube, Sun 1330, Eurosport 2, Sun 1330

IndyCar Series
Round 5/16
Indianapolis, USA
14 May
TV Live Sky Sports F1, Sat 2000

Indy Lights
Round 3/11
Indianapolis, USA
13-14 May

European Le Mans Series
Round 2/6
Imola, Italy
15 May
Livestream on Motorsport.tv, Sat 1130, Sun 1010

GT World Challenge Europe Sprint Cup
Round 2/5
Magny-Cours, France
14-15 May

IMSA Sportscar
Round 5/12
Mid Ohio, USA
15 May

NASCAR Cup Series
Round 13/36
Kansas Speedway, USA
15 May
TV Live Premier Sports 1, Sun 1930

24H Series
Round 5/8
Hockenheim 12 Hours, Germany
14-15 May

MotoGP
Round 7/21
Le Mans, France
15 May
TV Live BT Sport 2, Sun 1230
TV Highlights ITV4, Mon 2000

UK MOTORSPORT

Brands Hatch BARC
14-15 May
BTCC, British F4, Ginetta GT4 Supercup, Ginetta Junior, Mini Challenge, Porsche Carrera Cup
TV Live ITV4, Sun 1100, ITV1, Sun 1400, ITV4, Sun 1655

Oulton Park 750MC
14 May
116 Trophy, Bikesports, BMW Car Club, Historic 750 Formula, Sports 1000, Type R Trophy

Silverstone HSCC
14-15 May
70s Road Sports/80s Sports & GT, Aurora & Geoff Lees Trophy, Classic FF1600/ Historic F3, Griffiths Haig Trophy, Guards Trophy, Historic FF1600, Historic FF2000, Historic Roadsports/ Historic Touring Cars/Ecurie Classic, Thundersports

Croft BRSCC
14-15 May
Fiestas, Fiesta Junior, Fun Cup, National FF1600, Northern FF1600/Super Classic

Snetterton BARC
14-15 May
British Endurance, Britcar Trophy, Hyundai Coupe Cup, JSCC, Kumho BMWs, Praga Cup, Snetterton Saloons
Livestream Search 'British Automobile Racing Club' on YouTube

Anglesey CSCC
14-15 May
Future Classics, Magnificent Sevens, Modern Classics, New Millennium, Open Series, Swinging Sixties, Tin Tops, Turbo Tin Tops
Livestream Search 'Alpha Live' on YouTube

Mallory Park BRSCC
15 May
Classic Alfa Challenge, Dunlop Allstars, Jack Sears Trophy, Swiftune Trophy

Pembrey
14-15 May
British Rallycross Championship

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INTRODUCING

Ricardo Feller

The 21-year-old Swiss is on the up in the DTM

JAMES NEWBOLD

When Rene Rast and Kelvin van der Linde teamed up to win the 2014 ADAC GT Masters title, Ricardo Feller was still racing karts. Fast-forward to 2022, and the 21-year-old is part of Abt's DTM roster alongside Rast and van der Linde, after winning Germany's 'other' GT3 title last year.

Like van der Linde before him, Feller was bestowed with Audi factory driver status for his GT Masters success with Land Motorsport team-mate Christopher Mies. It was a standout 2021 that also included a race-winning GT World Challenge Europe Sprint Cup campaign with Lamborghini squad Emil Frey Racing.

So don't presume that the Swiss, who made a winning start to his GT Masters title defence with Jusuf Owega and Land at Oschersleben last month, will automatically occupy the role of junior partner at Abt this year. With two top-10 finishes at the Algarve Circuit's DTM season-opener, Feller is level on points with reigning champion Maxi Gotz and 10 clear of Rast, who drew a blank in Portugal. No surprise then that Feller is "super-happy" with how things are going.

"I think I did quite a big step last year," says Feller, whose adaptation to Abt has been eased by the addition of previous Emil Frey engineer Fabio Waser. "The main difference for DTM is you're the only driver on the car and everyone can go with the set-up as aggressive as he wants, so everything is quite maximised. I wanted to know if I can do another step in my personal performance and I think this happened."

Feller's arrival in the GT3 arena for the 2017 GT Masters, aged 16 as part of the Audi Sport racing academy, was somewhat unexpected. After an unsuccessful 2016 in German F4, Feller recognised that he had "no future in formula racing" and had set his sights on touring cars. But Audi TT Cup coach Sepp Haider was so impressed by Feller in his first test that he put him into a GT3 car, setting the ball rolling on his path to the DTM.

Ominously, Feller expects he'll only get better as he understands more about fine-tuning the set-up. "We're working on it to get the car exactly where I like it and I think then it should be possible to do another step," he says. "Definitely I think it will be better the more we race this year."

DTM success then may not be far away, particularly given that the next round is at Lausitzring, the scene of a GT Masters win from pole in 2021...

"For DTM everyone can go with the set-up as aggressive as he wants"

CV

Age	21
2021	1st in ADAC GT Masters, 1st in GT World Challenge Europe Endurance Cup Silver, 4th in GTWCE Sprint Cup
2019	5th in ADAC GT
2018	13th in ADAC GT; 5th in Dubai 24 Hours

FROM THE ARCHIVE

Gilles Villeneuve's Ferrari 126CK is captured in legendary motorsport photographer Rainer Schlegelmilch's characteristic 'zoom' style during the 1981 United States Grand Prix West at Long Beach. True to his own form, at the start of the race Villeneuve spectacularly hurled his machine from fifth on the grid into a blink-of-an-eye lead, before running wide at the hairpin and gathering it up to resume in fourth place. A broken driveshaft ended his afternoon after 17 laps.

● To mark 40 years since Villeneuve's fatal crash during qualifying for the Belgian GP, see Autosport.com for our pick of his greatest drives.

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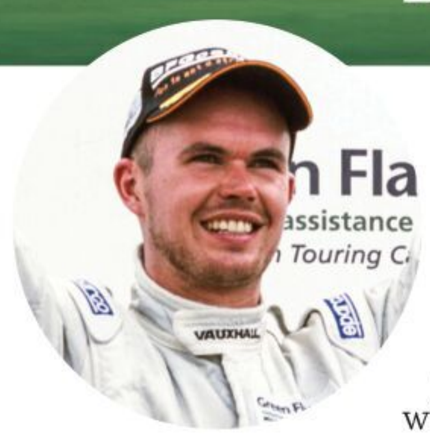
PAUL O'NEILL

MY FAVOURITE... TEAM-MATE

James Thompson

MAIN AND INSET: GRIFFITHS/MOTORSPORT IMAGE



Vauxhall was spoiled for talent in the 2002 British Touring Car Championship. Following 2001 champion Jason Plato's departure, James Thompson had switched from Egg Sport to join Yvan Muller in the works Triple Eight Astra Coupes, with Super Touring independent king Matt Neal and Production class graduate Paul O'Neill forming an all-new line-up at T8-run Egg.

O'Neill couldn't have hoped for better drivers to learn from as he settled into the top class – between them, Thompson, Muller and Neal won each of the next five BTCC titles. But the Lancastrian doesn't hesitate in choosing 2002 and 2004 champion Thompson as the favourite team-mate of his racing career.

"He was stunning to me," says BTCC pundit O'Neill, who also worked closely with the Yorkshireman in 2003 when he joined Thompson and Muller under the T8 banner. "He did everything he could, even though he was battling for a title and being paid big wages."

Thompson "was quite instrumental" in O'Neill's career-making move and followed through by being generous in giving the 22-year-old advice. O'Neill cites the five laps he spent following Thompson's lines on the Brands Hatch Grand Prix circuit as an example of his willingness to "put his plans on the backburner to help me out".

O'Neill still uses many of Thompson's tips in his coaching work, and believes his strong technical understanding is an attribute for which Thompson doesn't receive enough credit. "He was very switched on with weight transfer," says O'Neill. "He could use the brake and throttle together to change the rotation of the car and then be on 100% throttle quicker than most other people."

That allowed Thompson to still be competitive with success ballast, a point that O'Neill recalls would leave Muller rattled. "He was a massive thinker," adds O'Neill. "A lot of people saw James as a party animal, but he was a cut-throat race winner and title winner. Going up against Yvan, he'd cause Yvan to question himself.

"He was an all-rounder and one of the best drivers I've ever seen in touring cars. I've got to give him high praise. No one comes close to what James did for me."

JAMES NEWBOLD

IN NEXT WEEK'S ISSUE

Porsche and Audi in F1?

HOW AND WHY THE VW GIANTS COULD MAKE THE LEAP

CAMILLE DEBASTIANI

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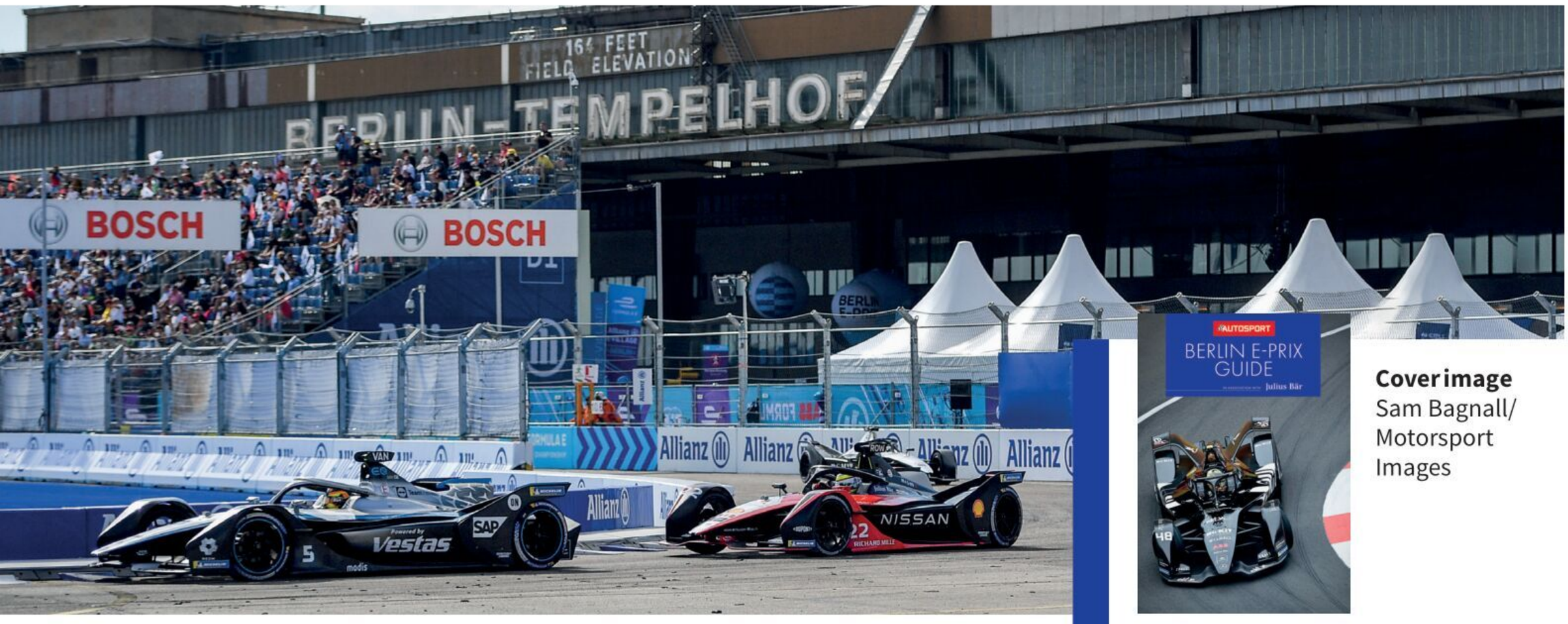

GALLOWAY/MOTORSPORT IMAGES

Cover image
Sam Bagnall/ Motorsport Images

GET READY FOR GREEN IN BERLIN

With five different winners from the first six races, Formula E's final season of the Gen2 era has certainly lived up to expectations so far. Four drivers from as many different teams have come to the fore as the early championship challengers, but all is still to play for ahead of this weekend's Berlin double-header, which marks the halfway point in the 2021-22 campaign.

Such is the unpredictable nature of Formula E that predicting a favourite at the Tempelhof Airport track, a fixture on the calendar with the exception of 2016's one-off visit to Karl-Marx-Allee, is an exercise in folly. But if last year's dramatic title decider is anything to go by, then those making the trip will be in for a treat.

Inside this guide to the FIA's world championship for electric single-seaters, you'll find everything you need to be armed with knowledge for Berlin. From the basics of Formula E's unique format (page 18) to an in-depth look at how it has led the push for other categories to electrify (page 24), there's something within these pages for both newcomers and seasoned FE observers alike.

Venturi's Edoardo Mortara explains the complexities of racing on a circuit that can be run in both directions in our track guide (page 20), while his team-mate Lucas di Grassi shares his experiences of switching from a manufacturer to a customer team after seven years as part of the Abt Audi set-up (page 11).

Jake Boxall-Legge outlines how the championship has evolved from its humble origins powered by a 200kW motor to the imminent arrival of its 600kW Gen3 machine in his technical overview (page 30), and also gets the lowdown from champions on the traits needed to succeed (page 22). Will the drivers take their own advice? Let's wait and see...

JAMES NEWBOLD
EDITOR

6 INTERVIEW
Marco Parroni
Why Julius Baer continues to see value in supporting Formula E

11 SEASON OF CHANGE
Lucas di Grassi
The 2016-17 title winner reflects on his season so far and previews Berlin

12 TEAM BY TEAM
Formula E's runners and riders
Your guide to the teams and drivers that will be on the grid in Berlin

18 FORMAT EXPLAINED
How Formula E works
Formula E's qualifying format, like attack mode and fanboost, is unique

20 TRACK GUIDE
Berlin Tempelhof
Edoardo Mortara explains the corners to look out for on the airfield circuit

22 WHAT IT TAKES TO WIN
The secrets for success
Champions share their tips for conquering Formula E

24 ELECTRIFYING MOTORSPORT
Leading the push for change
How Formula E transformed the motorsport industry's agenda

30 TECH FOCUS
What to expect from Gen3
Under the skin of the radical racer that will take FE into its new era

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The lights go green at the start of the 2021 Formula E championship finale at Berlin Tempelhof. Stoffel Vandoorne (Mercedes) and Oliver Rowland (Nissan e.dams) prepare to launch away from the front row, with championship challenger Mitch Evans's Jaguar behind them in third. But the Kiwi failed to get off the line and was clobbered by unsighted 11th-place starter and fellow title contender Edoardo Mortara (Venturi), putting both out on the spot. That helped points leader Nyck de Vries, who had qualified 13th, to come through and secure the crown by finishing eighth. Norman Nato won on his final start for Venturi from sixth on the grid, beating Rowland and Vandoorne.

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An advocate from the very beginning

The partnership between Formula E and Julius Baer has been a long and fruitful one, as Marco Parroni explains to Autosport

JAMES NEWBOLD

IN ASSOCIATION WITH **Julius Bär**

As one of Formula E's founding partners, it should come as no surprise that Julius Baer remains enthusiastic about the success of its engagement with the all-electric single-seater series. The Swiss-based banking institution has for more than 130 years provided wealth management services and investment advice to clients, and its partnership with Formula E has proven mutually beneficial on the series' journey to becoming a fully fledged world championship for the 2020-21 campaign.

Formula E's origin story is well known. But once series founder Alejandro Agag and then-FIA president Jean Todt had drawn up the blueprints on a restaurant napkin in March 2011, there was a problem of how this vision would be funded. It sought a forward-thinking partner who was prepared to buy into its pioneering mantra and give it the credibility to approach OEMs. On both counts, Julius Baer fitted the bill.

Its 2012 takeover of Merrill Lynchs's international wealth management business was a major step for Julius Baer. Head of global brand programmes, partnerships and sponsoring Marco Parroni says it "completely changed the size of the bank, as it also became much more international". When Swiss-Italian automotive industry veteran Parroni joined Julius Baer in 2013 from Ferrari, he was tasked with finding a first-rate global platform to increase brand awareness that also shared the bank's values. After receiving a PowerPoint presentation from Agag, he felt that Formula E was the "perfect match because it was new, with a lot of risk, but a lot of benefits too".

"Julius Baer is well known as a bank with values such as innovation, sustainability and forward-looking pioneering spirit," he says. "Formula E came in the right moment, because it was exactly what was extremely important to us – a global platform to promote electric mobility for a better, more sustainable future. These were the elements that convinced us to invest and to support Formula E in an early stage."

This was not without risk, given that there was no data to support this hunch. But for Julius Baer, its show of faith demonstrated "not only a vision but created a proof point" of its mantra, according to Parroni.

"It's not [enough] only to say we see the trends, we also invest in the trends," he says. "Formula E is for us an excellent story we can have when advising clients, showing that Julius Baer can anticipate trends that are worth investing in. Formula E creates our credibility."

"Formula E is for us an excellent story we can have when advising clients. Formula E creates our credibility"

That confidence was vindicated by a successful first event at Beijing in 2014, which proved the concept viability and hinted at a bright future. Parroni reflects fondly on seeing the Julius Baer brand front and centre at Monaco in 2015 – "We walked on the track and we were thinking, 'This is a milestone for Julius Baer to be here'" – and on the "dream come true" achievement in 2018 of staging an international motor race in Zurich, in Julius Baer's home market of Switzerland, 63 years after the 1955 Le Mans tragedy that led to a ban on motorsport in the country.

"The race was in the heart of the city, this was the biggest highlight in Julius Baer's Formula E story," Parroni recalls. "We were proud that for the first time the big sponsoring project from Julius Baer was brought to Switzerland. In the beginning it was so risky to support, but the race was sold out. All the elements were there."

Formula E has come a long way since those early days of ▶

Alejandro Agag with Marco Parroni (right) – working together since the start of Formula E

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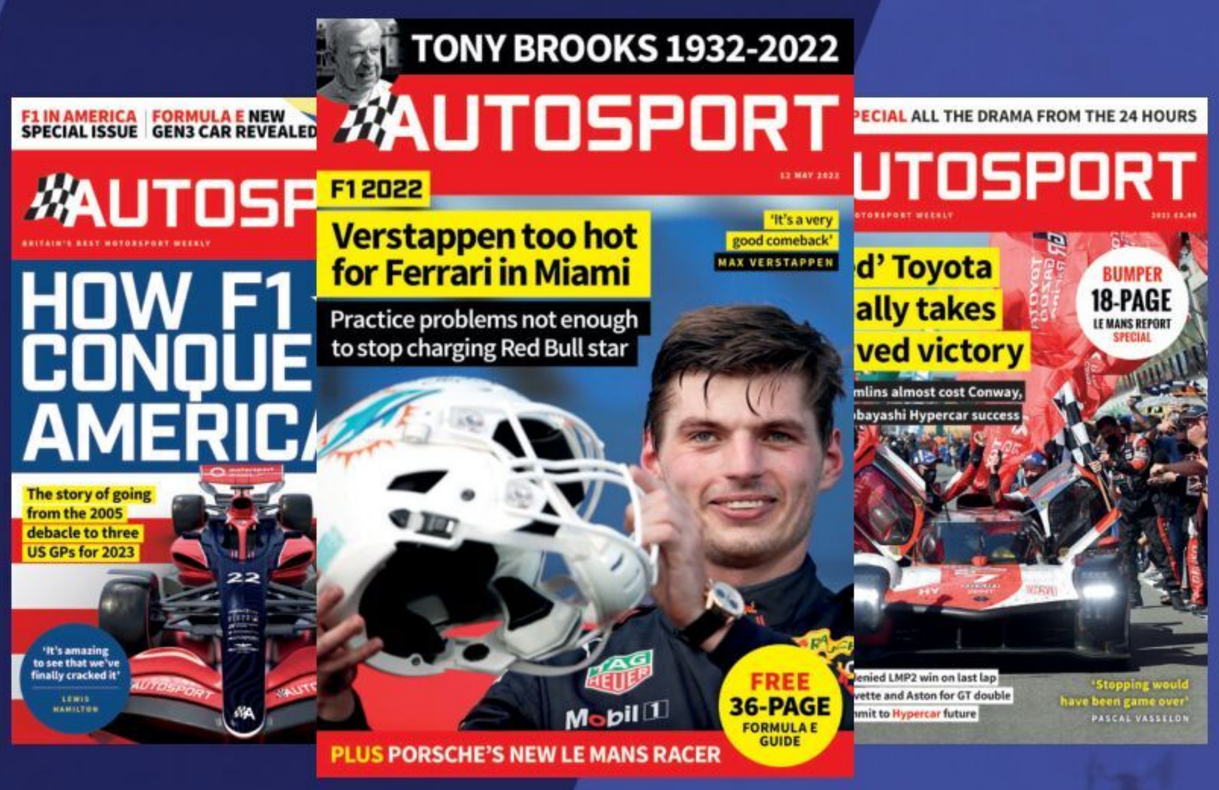

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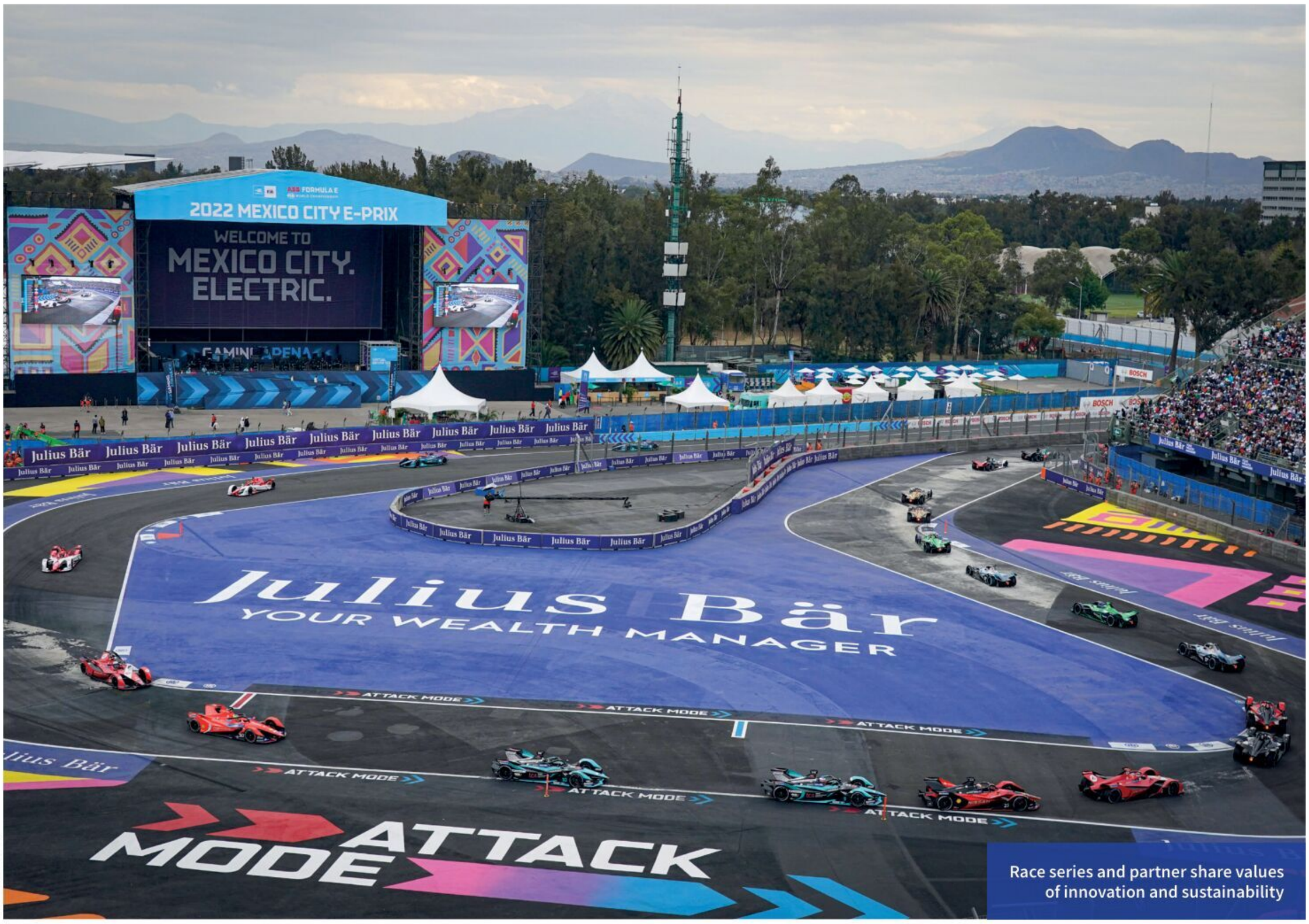

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Race series and partner share values of innovation and sustainability

mid-race car swaps, with the eagerly anticipated Gen3 era of faster, lighter and increasingly sustainable cars on the horizon. And Julius Baer's input has been important too.

In 2017, Parroni was formally brought into the inner circle on the championship's global advisory board. There, he discusses the technology and sporting roadmap with other key stakeholders "to help Formula E to develop and grow in the right direction". It's something that he is very proud of, but a responsibility he holds deeply.

Parroni is clear that Formula E faces challenges, following the withdrawal of big hitters Audi, BMW and Mercedes. But, with the Stellantis Group bringing Maserati to the Gen3 party, he is optimistic that Formula E's future will live up to the championship's story of success in a world that is increasingly accepting of a message once considered radically disruptive.

"Gen3 goes to the next level and Formula E wants to show how technology can be evolved and then transferred to road cars"

"It's important Formula E remains a reference in electric motorsport for OEMs," says Parroni. "Gen3 goes to the next level and Formula E wants to show how technology can be evolved and then transferred to road cars. In the past Formula 1 was exactly this, which is why it attracted so many OEMs. Formula E must do the same.

"It was regrettable to see BMW, Audi and Mercedes announce they will leave Formula E. Formula E is still a young motorsport series and when you see the strategy from the OEMs, it's 100% electric. The Formula E technology is exactly the technology you will find on the road car.

"Now with Gen3, Formula E must demonstrate that it is going the right way and that it's important to be part of this evolution. The Stellantis Group will be electric by 2027, so it absolutely makes sense for OEMs to be in Formula E."

Whatever the future of Formula E, Parroni does not dismiss the prospect of an F1 merger given that the electric series' exclusive FIA licence extends to 2039. And with the bank in its corner for at least this and next season, the world championship, which further wants to increase its influence and relevance, has an advocate from the very beginning at its side. ■

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Gen3 car was unveiled at Monaco Formula E round

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LUCAS DI GRASSI

REFLECTIONS ON A YEAR OF CHANGE

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This season in Formula E has brought lots of new challenges for me. I've been learning a new team in Venturi, and a new powertrain package in Mercedes, but also an entirely different philosophy as a customer team rather than a manufacturer, which means the impact I can have on development is decreased.

I raced with Audi for seven years since the start of Formula E, and the software that Envision is running now was basically built year by year by me and the Abt team. Whenever I wanted to make a change to suit my driving style, we could easily do it. Now, although we can do small updates and change the set-up, most of the critical components are developed by Mercedes and we just have to optimise them. It's a different way of working, which has taken some getting used to.

That said, our car is good. And because in Formula E manufacturer teams are obliged to supply the same hardware and software to their customers, with the rest of the car basically the same, it's possible for us to beat the works Mercedes team. It was the same with Audi and Envison. We developed everything and gave everything to Envision, so we were very close together in the years that we ran the same package.

Of course, at Venturi we have limited resources compared to Mercedes as a private team. But the engineers and all the personnel are very good. Of the core people, the level is no worse and maybe even better than it was at Audi.

In general, I'm very pleased with the pace we've shown this year and happy with the team. We are very competitive and got a podium in the first weekend in Diriyah, but since then a lot of things have gone against us, which has been unfortunate. Considering the pace we've had, we should be a lot closer to the points lead, but this is how it goes in Formula E sometimes.

Formula E has made changes this year too. The qualifying format we have now is definitely better than the random, crazy qualifying we had in the last few years. I'm glad that the FIA realised that it was something to be improved and it changed the format to the duels, which is much more fair and has been very exciting. The recently announced five-year agreement to stage a Brazilian race in Sao Paulo from 2023 is also something I am very excited about.

Our next race is in Berlin, which is a track all the teams know very well from racing there so many times in 2020. I've had some good results there in the past, winning in 2019 and 2021, and also some bad luck like losing the win in 2015. But I don't think I have any advantage there compared to any of the other guys. The data gives us a good baseline to study, to understand what we did wrong or right, and try to improve from there. But everybody else has the same opportunities too.

It's a wide track that allows for overtaking, and there is a specific driving technique with the concrete and the amount of energy you put in the tyres. I just wish that the main straight would be slightly longer.

Because we have space at Tempelhof Airport, I think Berlin is the ideal place to try a different track configuration each year. Why do we always have to do the same track? It would be fun to change it, so everyone starts from scratch on an aggressive layout that's a variation of the existing track or even completely different every year.

This is the final time that we go to Berlin with the current Gen2 cars before we enter the Gen3 era later this year. The Gen3 specs are amazing, it's a big jump to the fastest-ever cars in Formula E. The amount of extra power and also the measurements of the car, with it being smaller and lighter and more compact, is definitely a good thing.

Although I would have liked the new car's design to be more futuristic, just being a faster machine is motivating me to drive it and making me excited for the future of Formula E. ■

BAGNALL/MOTORSPORT IMAGES

Di Grassi's been finding his feet with new team Venturi

TEAM BY TEAM

GALLOWAY/BLOXHAM/MOTORSPORT IMAGES

MERCEDES

Formula E's reigning champion team, Mercedes joined the series in 2019 and immediately replicated its winning ways from Formula 1, taking both titles in the 2020-21 season. Nyck de Vries is the reigning drivers' champion, having secured the title at last year's Berlin finale. The Dutchman, who was Formula 2 champion in 2019, collected two wins on the way to winning a close contest for the Formula E spoils by seven points.

Former McLaren F1 driver Stoffel Vandoorne has been a consistent frontrunner since joining the series, and has taken pole twice this season in the opening six races. One of those was at the Diriyah season opener, where de Vries immediately picked up from last year's success, taking victory as Vandoorne's error arming attack mode meant he had to complete the Mercedes 1-2.

Following his victory in Monaco, Vandoorne now leads the standings. The Belgian started from fourth in Monte Carlo, cleared polesitter Mitch Evans, and benefited from the varying misfortunes of Pascal Wehrlein and Jean-Eric Vergne to take a lead he did not relinquish. De Vries, meanwhile, endured a more difficult weekend but was able to take a point for 10th place, helping Mercedes to retain first in the teams' standings in its final season before it departs Formula E at the end of the year.

TEAM STATS

Powertrain
Mercedes-EQ Silver Arrow 02

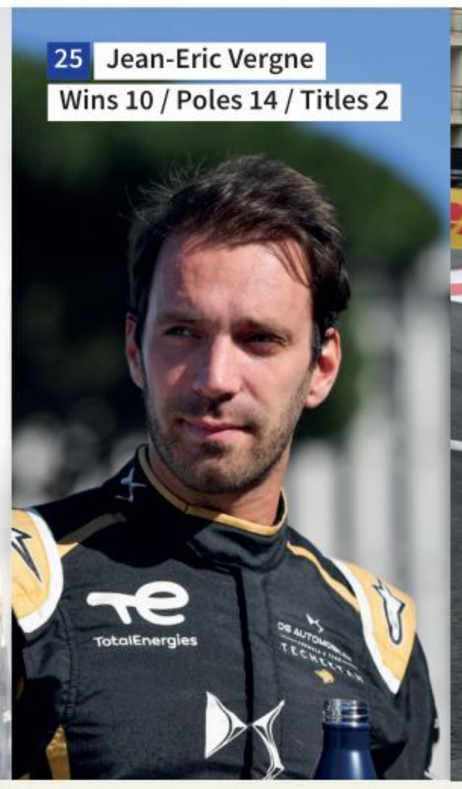
Base
Brackley and Brixworth, UK

Wins 6

Poles 8

Teams' championships 1

Drivers' championships 1



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DS TECHEETAH

The early dominant force in Formula E's Gen2 era, DS Techeetah has faced much greater competition in recent years, although still has one of the most complete driving line-ups on the grid. Jean-Eric Vergne is Formula E's only two-time title winner, claiming the spoils at the climax of the Gen1 era and at the start of Gen2. Antonio Felix da Costa drives the sister car; he joined for the interrupted 2019-20 season and took the title amid a six-race end-of-year run in Berlin.

DS Techeetah is yet to win a race in 2021-22, although Vergne led the standings after Rome owing to his consistency and remains the sole driver to have scored points in every race. The Frenchman had pole for the second Rome race, but lost out to the greater speed of Mitch Evans, who dominated the weekend. He then held the lead in Monaco before a mistimed attack mode activation meant he gave up position to Stoffel Vandoorne, then a full-course yellow meant that the extra power elapsed without a chance to use it.

Da Costa has shown good pace but has endured difficult luck in the opening six races. He left Diriyah scoreless before following Vergne home in fourth at the Mexico E-Prix. He rescued a fifth in Monaco after being eliminated in the group stage of qualifying, in which he has been inconsistent so far this year. Yet he remains one of the quickest drivers on the grid.

TEAM STATS

Powertrain DS E-Tense FE21

Base Versailles, France

Wins 14

Poles 16

Teams' championships 2

Drivers' championships 3

GALLOWAY/MOTORSPORT IMAGES

JAGUAR RACING

Jaguar's 2021-22 season didn't really kick off until Rome, where Mitch Evans dominated both races in the Eternal City to move himself into championship contention in one fell swoop. The team hadn't wanted for speed, but execution had been Jaguar's main bugbear until the first European round of the season.

Evans has been a perennial factor in the title fight throughout the Gen2 era, and has been just slightly shy of taking the spoils. He will hope his back-to-back Rome success and second place in Monaco can provide a springboard for a more concerted title challenge. The New Zealander heads into Berlin as the form driver, having scored 71 of his 72 points this season in the past three races, including a runner-up spot in Monaco despite early energy management concerns.

Sam Bird is one of Formula E's stalwarts, and has the unenviable record of holding the most race wins without a title to his name. The Brit started well with fourth in Diriyah, before going two races without points. He returned to the scoreboard with fifth in Rome, a weekend in which he largely played tailgunner to Evans, before a crash with Nick Cassidy in race two. Bird then endured a difficult weekend in Monaco – he qualified well down the order before retiring from the race with a broken trackrod. It's a difficult start to overcome, but Bird isn't a driver to shy away from a challenge.

TEAM STATS

Powertrain Jaguar I-Type 5
Base Coventry, UK
Wins 6
Poles 4
Teams' championships 0
Drivers' championships 0

GALLOWAY/BAGNALL/MOTORSPORT IMAGES

ENVISION RACING

Throughout the Gen2 era, Envision has benefited from an Audi customer powertrain deal, keeping it at the sharp end of the grid. Formerly the Virgin Racing team before Envision Energy took full control, the squad has never finished below fifth in the teams' championship throughout its time in Formula E.

Robin Frijns is a frequent fixture at the front, and the no-nonsense Dutchman has been a frequent thorn in the side of the manufacturer squads, blending aggression with consistency to keep his foot in the door of this year's title fight. Although yet to score a win this season, Frijns has three podiums from the opening six races and has appeared in the qualifying duels in every race this year – he and Andre Lotterer are the only drivers so far to manage that feat.

Team-mate Nick Cassidy has shown fantastic speed and has the capability to swashbuckle his way through the order, but has invariably been drawn into more than his fair share of incidents. His carve through the field in Mexico was undone by energy strategy, while a similar ascent through the order in the second Rome race came to an end in the wall after contact with Sam Bird. As a result, the Kiwi took a more circumspect approach in Monaco, which rewarded him with seventh place.

Next year, the squad will have Jaguar power, as the Big Cat embarks upon its first customer supply deal.

TEAM STATS

Powertrain Audi e-tron FE07
Base Silverstone, UK
Wins 11
Poles 10
Teams' championships 0
Drivers' championships 0

GALLOWAY/S BLOXHAM/MOTORSPORT IMAGES

VENTURI RACING

Venturi is in its final season as a Mercedes customer team, and will tie up with Maserati for the start of the Gen3 era as the Italian manufacturer makes its return to single-seater racing after a six-decade absence. In the meantime, Venturi continues to fly high in Formula E after spending most of its history in the midfield. Edoardo Mortara was last year's runner-up in the championship, and led this year's standings before encountering a tricky weekend in Rome.

Lucas di Grassi, Formula E's first employed driver and the 2016-17 champion, occupies the second seat. In the form of Macau specialist Mortara, Formula E has one of the world's best street racers, while di Grassi has a typically aggressive approach. The Brazilian has the capacity to calculate and exploit the rules in the heat of a race, witness his use of the pitlane to try to jump the field under the safety car in last year's London E-Prix. He's also one of the most invested drivers in the championship with his own interests in e-mobility.

After failing to finish in the past two races, Mortara has slid down to fifth in the drivers' championship, 22 points off the top four. The Swiss-Italian won the second Diriyah race as the Mercedes powertrain ran riot, but has struggled to replicate that form. Di Grassi, meanwhile, has a sole podium to his name this season but has an impressive record in Berlin.

TEAM STATS

Powertrain Mercedes-EQ Silver Arrow 02
Base Monaco
Wins 4
Poles 1
Teams' championships 0
Drivers' championships 0

GALLOWAY/MOTORSPORT IMAGES

PORSCHE

The Stuttgart powerhouse took its first Formula E victory earlier this year in style, when Pascal Wehrlein bagged a dominant win in Mexico ahead of team-mate Andre Lotterer as Porsche controlled the race. Inconsistent in its first two Formula E seasons, Porsche has shown marked improvement so far in 2021-22, and Lotterer has appeared in every duels stage of qualifying so far.

Although the oldest driver on the grid at 40, Lotterer remains every bit as competitive as ever as he continues his search for a first win in Formula E after numerous near-misses. He's been a consistent presence in the top half of the points this year – he settled for second in Mexico and briefly led the second race in Rome, but ultimately lacked the opportunity to win in either event. Regardless, Lotterer retains the reputation of being combative, sometimes to the frustration of others, in his tough defensive drives.

Wehrlein is in his second season with Porsche after starting in Formula E with Mahindra, and the German-Mauritian was in touching distance of a second victory of the season in Monaco before an electrical failure caused his car to shut down. The ex-F1 driver has great speed, narrowly missing out on pole in Monaco and becoming a mainstay in the qualifying duels after missing out on the top-eight knockout series in both Diriyah races.

TEAM STATS

Powertrain Porsche 99X Electric
Base Stuttgart, Germany
Wins 1
Poles 3
Teams' championships 0
Drivers' championships 0

GALLOWAY/S BLOXHAM/MOTORSPORT IMAGES

ANDRETTI

After BMW withdrew its works support, Andretti entered 2021-22 with an all-new red livery and a significantly changed team to cover the loss of the Bavarian manufacturer. Andretti still has BMW powertrains, and has retained the services of Jake Dennis after the Brit mounted a surprise assault on the championship in his maiden season.

After a circuitous route since his single-seater days, Dennis is very much Andretti's driver-line-up spearhead. The Warwickshire native continued from where he left off in 2020-21 with third in the Diriyah opener, following that up with fifth in race two, but braking issues in Mexico left him lucky to rescue a point. He was stellar in qualifying in Rome, but energy management issues and strategy precipitated a steady descent through the field in both races. But his recovery to ninth in Monaco showed that he's back on the up.

Oliver Askew has joined Dennis at the team. He struggled to find a full-time IndyCar seat after spending 2021 making bit-part appearances in the US category. The American impressed on his Formula E debut to take ninth in Diriyah, but since then has just missed out on adding to his tally as he continues to adapt to the series. Like the other rookies, he's had to understand a new car and new cast of circuits, but in Dennis has a team-mate who went through those growing pains last year.

TEAM STATS

Powertrain BMW iFE.21
Base Indianapolis, US / Banbury, UK
Wins 7
Poles 8
Teams' championships 0
Drivers' championships 0

GALLOWAY/MOTORSPORT IMAGES

NISSAN E.DAMS

Formula E's original teams' championship winner, e.dams has now been bought out by Nissan as the Japanese marque seeks to stamp its authority on the championship after falling down the order in recent years.

Sebastien Buemi, Formula E's 2015-16 title winner, remains at the team with which he's spent the entire eight seasons of the series, and yearns for a return to the early glory days. Points have been scarce for the team in the opening six races, and Buemi looked set for further struggle after qualifying last in Monaco, but he had considerably stronger race pace to rise through the field and finish in a well-deserved eighth place.

The Swiss is partnered by three-time FE race winner Maximilian Guenther, who spent two years at the works BMW Andretti squad and earned a reputation as a fast and diligent driver, with an occasional penchant for in-race contact. Guenther has managed just two points so far this season, and looked set for a good haul from Monaco before energy overconsumption meant that he simply dropped down the order at the close of the race.

The team's flawed powertrain package means it currently struggles to score consistently, and team boss Tommaso Volpe has admitted that e.dams is struggling to find the right qualifying strategy as it still awaits a first appearance in the duels.

TEAM STATS

Powertrain Nissan IM03
Base Ruaudin, France
Wins 17
Poles 20
Teams' championships 3
Drivers' championships 1

GALLOWAY/STALEY/MOTORSPORT IMAGES

NIO 333

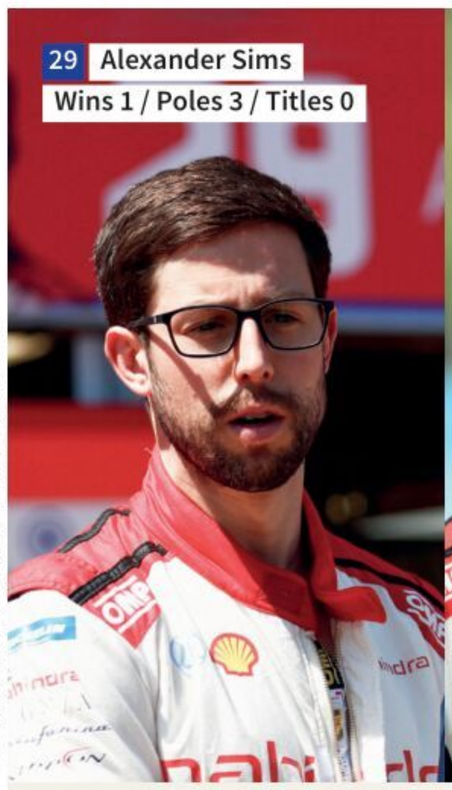
Formerly known as Team China Racing (which took Nelson Piquet Jr to the first Formula E title) and NextEV, NIO 333 has undergone a change of ownership in recent years that the team hopes will enact a rise back up the order after seasons of struggle. A new Silverstone base has brought the formerly fragmented team under one roof, and a well-executed second Rome race got NIO 333 onto the scoreboard for this year – Oliver Turvey secured seventh, with Dan Ticktum grabbing his first Formula E point with 10th.

In Turvey, NIO 333 has a reliable, consistent and technically attuned driver who will guarantee results in difficult races, and remains one of the most underrated competitors in the field. He has been with the team since the first season of the championship, dovetailing his duties with a role at McLaren's F1 team as a test and development driver. Yet to win a race in Formula E, Turvey was close to his maiden victory in the 2017 Mexico E-Prix before battery woes ended in heartbreak.

Ticktum is a naturally gifted firebrand who, for his own sake and the team's, will want to concentrate on delivering strong results rather than courting the wrong kind of attention. So far, he has been doing the business, with Turvey there to offer a solid benchmark for him to measure up to. NIO 333 remains the only team in 2021-22 to have finished every race with both cars.

TEAM STATS

Powertrain NIO 333 001
Base Silverstone, UK
Wins 2 (as Team China Racing)
Poles 2
Teams' championships 0
Drivers' championships 0



S BLOXHAM/GALLOWAY/MOTORSPORT IMAGES

MAHINDRA RACING

The Indian manufacturer is another of Formula E's mainstay squads. It has been a staple in the cut and thrust of the midfield, and is capable of challenging for victories on its day. But since Alex Lynn bagged a victory for the team last year in London, Mahindra hasn't been able to get close to that in a difficult start to 2021-22.

Alexander Sims has begun his second season with the team, but has struggled for pace and points so far this season. Unlike new team-mate Oliver Rowland, Sims is yet to break into the qualifying duels so far and has therefore been stranded in the midfield. After a series of retirements and middling results, Sims was on the brink of points in Monaco, but still has not troubled the scoreboard this year, the only driver aside from the Dragon duo yet to do so.

Rowland joined the team from Nissan and has shown that the Mahindra machinery is capable of results. But following his initial success in reaching the duels phase of qualifying in Riyadh, he has struggled to match that performance. Changes in braking software and mechanical tweaks were introduced for Monaco to aid qualifying performance, helping Rowland to ninth on the grid, but he undid his weekend with an ambitious lunge that took him and Andre Lotterer out of the race while in the points.

TEAM STATS

Powertrain Mahindra M7Electro
Base Banbury, UK
Wins 5
Poles 8
Teams' championships 0
Drivers' championships 0

GALLOWAY/BAGNALL/MOTORSPORT IMAGES

DRAGON PENSKE AUTOSPORT

Another of Formula E's original teams, Jay Penske's Dragon operation has trickled towards the back of the field in recent seasons – albeit sometimes pitching in with the occasional surprise result. With the tweaks in qualifying format, those results have been harder to come by, and it has yet to score a point in 2021-22.

Sergio Sette Camara is in his second full season with the US squad and has shown great pace and eagerness to punch well above his weight in limited machinery. He was on course for an impressive appearance in the duels in Rome, before a crash on his final group qualifying lap. A former McLaren reserve driver, Sette Camara matched up well against Lando Norris when they were team-mates in Formula 2, and also managed pole in his one and only Super Formula drive.

He partners Antonio Giovinazzi at the team, the former Alfa Romeo Formula 1 driver trading the white-and-red of the Swiss-Italian squad for… the white-and-red of Dragon. Giovinazzi's maiden Formula E season has been a struggle, however, as his adaptation to the demands of the Gen2 car has been ponderous at best. Braking has been a struggle, although he doesn't necessarily have the easiest car with which to learn the nuances of Formula E. The Italian credited his Monaco weekend as his "best so far" – he already knew the track and hence could focus on understanding the car.

TEAM STATS

Powertrain Penske EV-5

Base Los Angeles, US / Silverstone, UK

Wins 2

Poles 3

Teams' championships 0

Drivers' championships 0

DRIVER STANDINGS

POS	DRIVER	POINTS
1	Stoffel Vandoorne	81
2	Jean-Eric Vergne	75
3	Mitch Evans	72
4	Robin Frijns	71
5	Edoardo Mortara	49
6	Andre Lotterer	43
7	Pascal Wehrlein	42
8	Nyck de Vries	39
9	Lucas di Grassi	37
10	Antonio Felix da Costa	30
11	Jake Dennis	28
12	Sam Bird	22
13	Nick Cassidy	16
14	Sebastien Buemi	10
15	Oliver Turvey	6
16	Oliver Rowland	4
17	Maximilian Guenther	2
18	Oliver Askew	2
19	Dan Ticktum	1
20	Alexander Sims	0
21	Sergio Sette Camara	0
22	Antonio Giovinazzi	0

TEAM STANDINGS

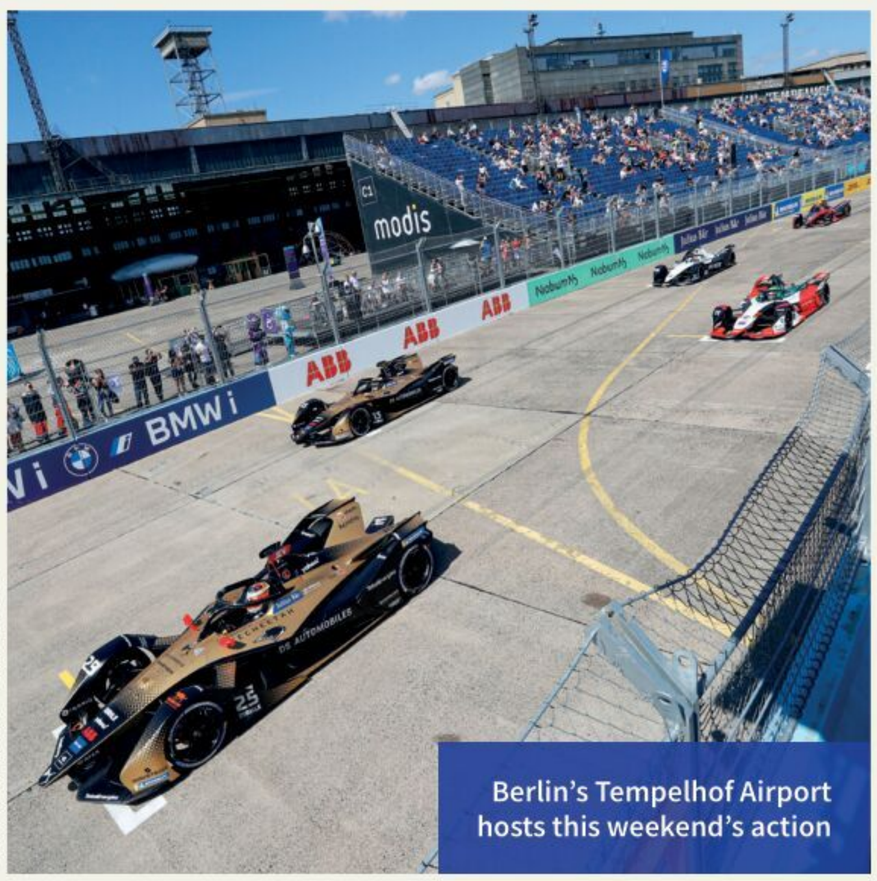
POS	TEAM	POINTS
1	Mercedes	120
2	DS Techeetah	105
3	Jaguar	94
4	Envision	87
5	Venturi	86
6	Porsche	85
7	Andretti	30
8	Nissan	12
9	NIO 333	7
10	Mahindra	4
11	Dragon/Penske	0

CALENDAR

DATE	VENUE
28-29 January	Diriyah
12 February	Mexico City
9-10 April	Rome
30 April	Monte Carlo
14-15 May	Berlin
4 June	Jakarta
16-17 July	New York
30-31 July	London
13-14 August	Seoul

WINNERS SO FAR IN 2022

VENUE	DRIVER	TEAM
Diriyah 1	Nyck de Vries	Mercedes
Diriyah 2	Edoardo Mortara	Venturi
Mexico City	Pascal Wehrlein	Porsche
Rome 1	Mitch Evans	Jaguar
Rome 2	Mitch Evans	Jaguar
Monte Carlo	Stoffel Vandoorne	Mercedes



STALEY/MOTORSPORT IMAGES

Berlin's Tempelhof Airport hosts this weekend's action

How a Formula E weekend works

The all-electric series set out to stand apart, forging its own identity while maintaining motorsport's fundamental appeal. Here's our guide to the essentials of an E-Prix

JAKE BOXALL-LEGGE

Since its inception, Formula E has been keen to underline its credentials as a disruptive force in motorsport. Completely unbeholden to history and tradition, the championship's management has often favoured previously unexplored formats and methods of going racing to make Formula E stand out. In other words, to the uninitiated, Formula E has a lot of key differences over 'traditional' racing categories that require some degree of explanation.

The key parts of a race weekend remain the same: drivers try to qualify for the best grid slot, and then fight for victory in the race, but the tools to get them there are a little different. Let's run through how a race weekend works.

PRACTICE SESSIONS

On a single-race weekend, there are traditionally two half-hour free practice sessions preceding qualifying and the race, with a third session on the following day if the weekend has a second race. In practice, teams can explore set-up options in their preparations for the following sessions, and the times logged by the end of the session have no bearing on the rest of the weekend.

QUALIFYING

Formula E introduced an all-new qualifying format for the 2021-22 season, following criticism levelled at its old superpole format, where track evolution often favoured the final group and created an artificially jumbled grid. Now, drivers are split into two groups based on championship position, with the odd-positioned drivers placed into Group A and the even-positioned drivers put into Group B.

Each group has a 12-minute session allocated to it, allowing drivers the latitude to set multiple laps across the session. Once each session is complete, the top four drivers from each group progress into the duels. Group A's fastest driver faces off against Group B's fourth-fastest

Cars start a race without enough charge to complete the distance, so drivers must regenerate energy

GALLOWAY/MOTORSORT IMAGES

Drivers' response to Formula E's new qualifying format has been positive

GALLOWAY/MOTORSORT IMAGES

Attack mode activation is well off the racing line

BAGNALL/MOTORSORT IMAGES

driver, the second-fastest driver from Group A battles against third place from Group B, and so on. The two drivers are offset slightly on track, attempting to set the fastest time in each duel.

The fastest driver in each of the quarter-final duels progresses to the semi-finals, where they do battle once more in a bid to get to the final. Once there, the drivers duke it out for pole position; the fastest time in the final yields pole, with the losing finalist being rewarded with second on the grid. Third and fourth on the grid are ordered by the losing semi-finalists' times, with fifth to eighth in the order of times set by the losing quarter-finalists.

After this, the rest of the grid is staggered by the drivers' positions in the groups. If the polesitter is from Group A, ninth place on the grid is occupied by the fifth-fastest driver from that group, with 10th occupied by their Group B counterpart — or vice versa, if the polesitter began in the second qualifying group.

RACE FORMAT

Formula E runs to a timed race format, with each race set at 45 minutes plus one lap. This means that the drivers must go as fast as possible while conserving enough energy within the battery, which has a capacity of 54kWh, to get to the end of the race. As the battery does not begin with enough charge to last the race, drivers must regenerate energy at the rear of the car, employing tactics such as lifting and coasting to ensure that the motor puts energy back into the battery and slows the car down at the same time.

To add a tactical element into the race, Formula E has an attack mode function, in which drivers have the option to take to a loop off the racing line to enter a higher power mode, moving up from the standard 220kW power level allowed in the race to 250kW.

The quantity of attack mode activations mandated within each race is open to variation, the most common involving two activations lasting four minutes each, but at double-header races this can change. For example, the second Rome E-Prix last month enforced just one activation lasting eight minutes. Drivers must use the whole activation before the end of the race.

Formula E also introduced the concept of Fanboost, where fans vote for a driver to receive a one-time, five-second burst of 250kW power mode. The top five drivers voted for by the fans receive Fanboost in time for the second half of the race. Although it has rarely had an influence on the outcome of a race, Fanboost has nonetheless remained controversial.

To cover the reduced energy used under a safety car, Formula E has also introduced added time to races, where every minute of the race run under safety car conditions will result in 45s being added on to the end.

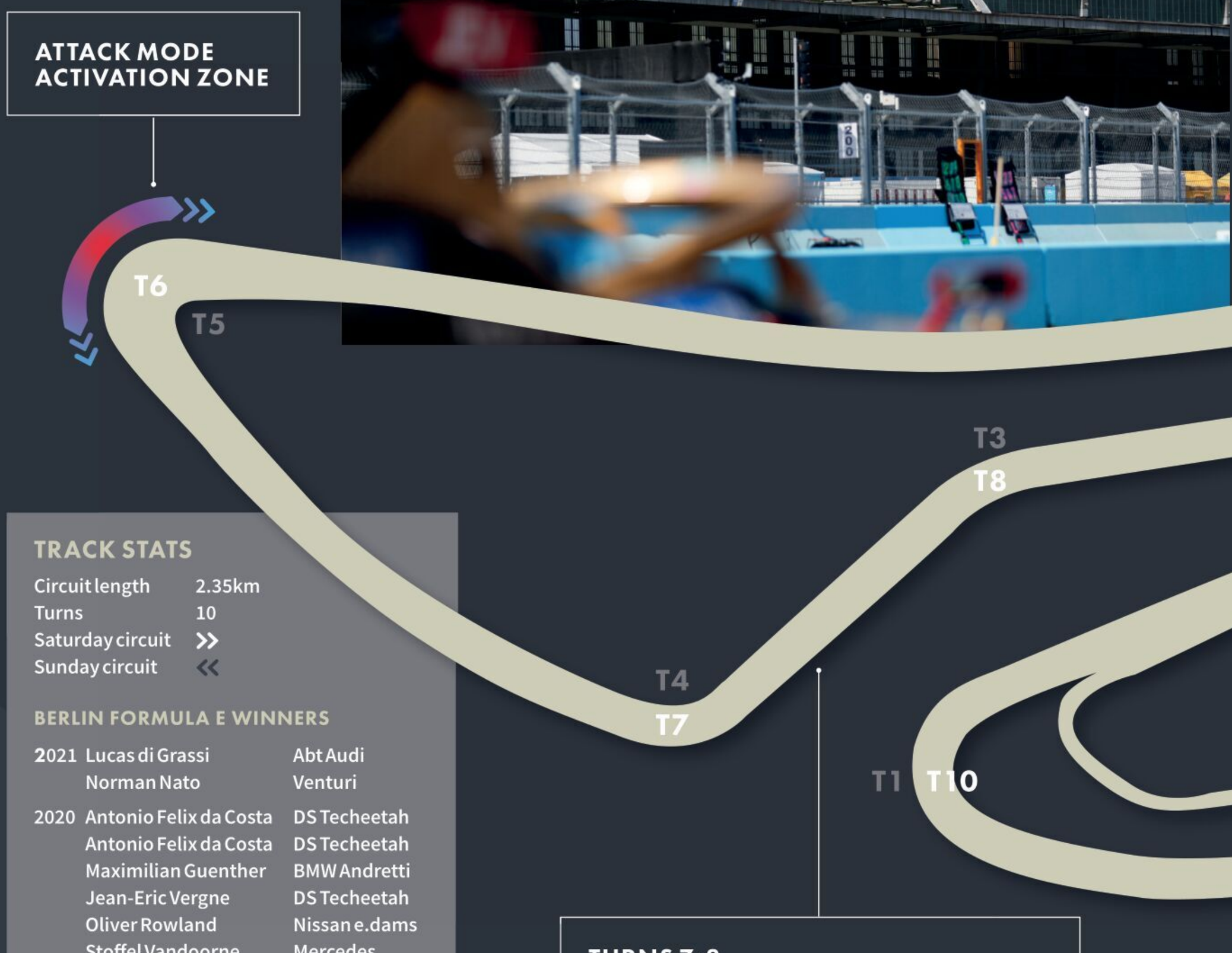
From there, it's like any other racing category: be the first one to cross the line to win. And that's the most difficult part... ■

A DRIVER'S GUIDE TO THE BERLIN E-PRIX

Edoardo Mortara explains how to tackle the Tempelhof circuit

Tempelhof is run anti-clockwise in race one, and clockwise in race two, presenting two very different challenges for drivers to deal with. Berlin is a very specific race track; we have a very abrasive asphalt there, and this causes us to have quite a few issues with the tyres during the race. Because you have a lot of stop-and-go corners, it's easy to have quite a lot of rear tyre degradation.

S BLOXHAM/MOTORSPORT IMAGES



TRACK STATS

Circuit length	2.35km
Turns	10
Saturday circuit	»
Sunday circuit	«

BERLIN FORMULA E WINNERS

2021	Lucas di Grassi	Abt Audi
	Norman Nato	Venturi
2020	Antonio Felix da Costa	DS Techeetah
	Antonio Felix da Costa	DS Techeetah
	Maximilian Guenther	BMW Andretti
	Jean-Eric Vergne	DS Techeetah
	Oliver Rowland	Nissan e.dams
	Stoffel Vandoorne	Mercedes
2019	Lucas di Grassi	Abt Audi
2018	Daniel Abt	Abt Audi
2017	Felix Rosenqvist	Mahindra
	Sebastien Buemi	Renault e.dams
2016	Sebastien Buemi	Renault e.dams
2015	Jerome d'Ambrosio	Dragon

TURNS 7-8

Coming into Turns 7 and 8, we're onto the fast part of the track, and you can make quite a lot of difference in there as a driver. The next day, these are Turns 3 and 4; Turn 3 normally is flat, or almost flat on 250kW power. Turn 4 is a very tricky corner; the car is normally moving a lot and you have to carry a lot of speed into the corner, and it's the same for both days.

TURN 5-6

Coming out of Turn 5, you have a long straight before you get to T6. It's very important, especially the braking as it's very, very bumpy – so it's quite easy to miss the braking point.

Turn 6 is Sunday's Turn 5 and is very important because you have a long, long straight after. So, the exit of 5 is very important. It's very easy to lose quite a bit of lap time if your exit is not good.

TURNS 3-4

Still early in the lap, Turns 3 and 4 lead into a number of twisty parts! This is where it's important to have some good minimum speed in there. The exit of Turn 4 is very important because you have a long straight after that.

On Sunday this is coming into the last part of the racetrack, and it again gets quite twisty with Turns 6 and 7. The braking for Turn 6 is very challenging, because it's very difficult to see the apex of the corners and braking is not straight, so it's very easy to lock the front wheels.

TURNS 1-2

This is the first turn of the Saturday version, but the last on Sunday, which makes it completely different. It's the kind of normal, classic Berlin version! Braking into Turn 1 is extremely difficult because you have a car that is loaded, and you have to brake quite late, so it's very easy to lock the wheels.

On Sunday, this is the final part of the circuit. And like the twisty corners, it's important to let the car have good minimum speed into the corners. They're very slow corners so you have to look out, and it's very easy to lose lap time in that part, which can really make the difference.

TURNS 9 AND 10

Turn 10 is the final corner and is a very tricky corner to do; it can really make the difference between a good lap and an average lap. On entry, you have to try and brake late. But the main important thing is to have a good exit out of it before you get onto the start/finish straight.

This is the first sector on Sunday and is a question of being able to brake late and carry some good speed in Turn 1 and Turn 2, two hairpins that are difficult to navigate. Turn 1 is almost blind and you never entirely know when to turn in, so this is one of the trickiest parts of the lap.

What it takes to win in the all-electric world championship

It helps to be smart and strategic, but the closeness of the field in Formula E means that consistency is the key word cited by those who've lifted the crown

JAKE BOXALL-LEGGE

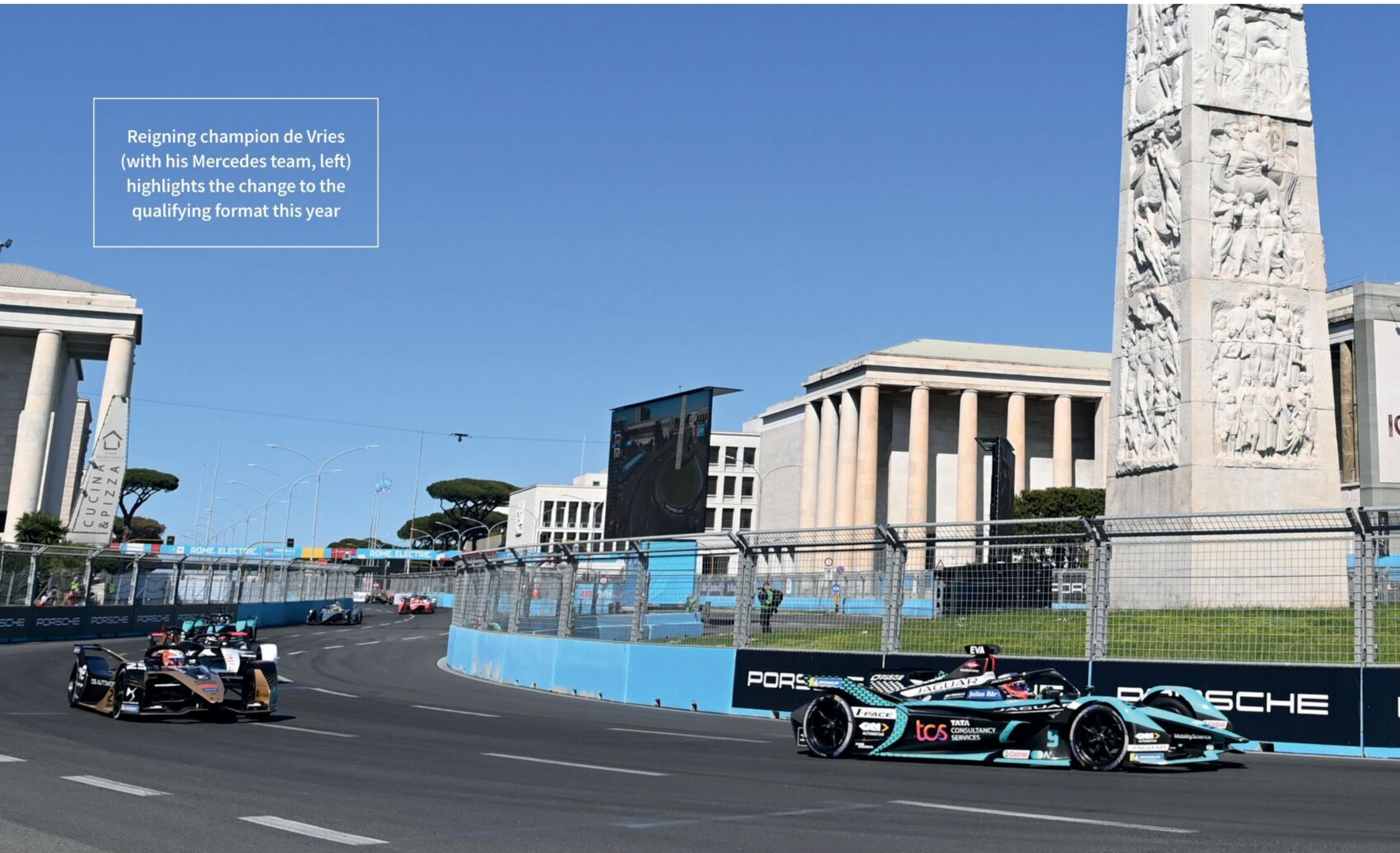
Within the realms of conventional motorsport, the fastest car will usually win races, so long as it has the requisite reliability to finish. There are still various parameters, such as mechanical set-up, worth considering to flex that advantage further, but having the overall pace in the car is most of the battle won.

In Formula E, that's not necessarily the case, since the gaps between teams in raw performance is so small. That makes it much more difficult to find a clear advantage over your competition, and even harder to do so on a consistent basis. Therefore, winning a championship in Formula E requires a considerable amount of work to set in motion — and, to a certain degree, a good helping of luck.

"I think every season required a slightly different execution to become champions," explains reigning Formula E champion Nyck de Vries. "Last year, what we'd seen was that the qualifying format was spicing things up a lot. It was very important to take the big points when you had the opportunity, because there was no real way to be consistently scoring. This year, that has changed with the new format. It's very important to be consistent and scoring good points."

De Vries believes that the closeness of the field has also changed the dynamic, opening the door to more teams to pose a threat in the fight for victory. "A couple of seasons back, there were a few teams that had a little bit of an edge over the years; I think it was not as compressed as it is now," reckons the Mercedes driver. "As we do more and more seasons with Gen2, the whole field is just compressed. According to our statistics, the whole field is within 0.3%, and that is extremely, extremely tight. So, consistency is key.

"But obviously, you need to manage the race. It's not only in your hands, because you're also a little bit dependent on the people around



Reigning champion de Vries (with his Mercedes team, left) highlights the change to the qualifying format this year

you and when you take certain calls, but the consistency is key in anything, minimising the mistakes, being there all the time."

Antonio Felix da Costa agrees that, with the closeness of the field, the margin between each driver is coming down to the "last detail". Owing to the relative parity of cars, the DS Techeetah driver explains that on-track technique can be a particularly heavy factor in deciding a race, and how a driver uses the other cars on track to save energy. Keeping a slight energy advantage in hand at the end of the race can pay off, especially when other cars struggle with consumption. Managing your energy across an E-Prix is key.

"A lot of the races that I've won, I've used the other cars to help me achieve the speed that I needed to achieve," points out da Costa. "There are a lot of games and strategies that you can do with other cars, a little bit like NASCAR almost! There's a big strategy in doing that, and maybe sometimes leading the whole race is not the way to win the race. So I have to be smart about it.

"When you have the pace, like for example Mitch [Evans] had in Rome, you can just lead the whole way through. But to be honest, we haven't had that advantage since 2019-20. So the races I've won since, it's been more on trying to be smart and strategic."

Nissan e.dams' Sebastien Buemi won the second Formula E championship season, and was one of the clear frontrunners in the early days of the championship. He echoes de Vries's assessment that consistency is the key behind a title run, and says that, in Formula E, any eventual race winner or champion is the one who has made the fewest errors on the path to victory.

"It's a very tight and close championship, so it's important to score many points all the time," says Buemi. "Not necessarily to win, but to score as many points as possible. We often say that in Formula E, the one that wins is not the one that did everything perfect, but is the one that makes the least mistakes, because it's extremely difficult to have a clean weekend. It's difficult to have a clean championship. It's totally different to Formula 1 where you have to optimise all the time; here it's more difficult to optimise."

Buemi says it's all about minimising mistakes

WARNER/MOTORSPORT IMAGES; TOP LEFT: GALLOWAY/MOTORSPORT IMAGES; TOP RIGHT: BAGNALL/MOTORSPORT IMAGES

And after winning one title, it's a lot more difficult to win two in Formula E. Only one driver has managed that feat. Jean-Eric Vergne ended Gen1 and kicked off the current Gen2 era with back-to-back title wins, and he's got a very simple mantra of how to get there: "Just score more points than the other guys." So, that's settled then. ■

Audi used electric power for Dakar Rally in 2022

ETCR was new-for-2021 tin-top version of FE

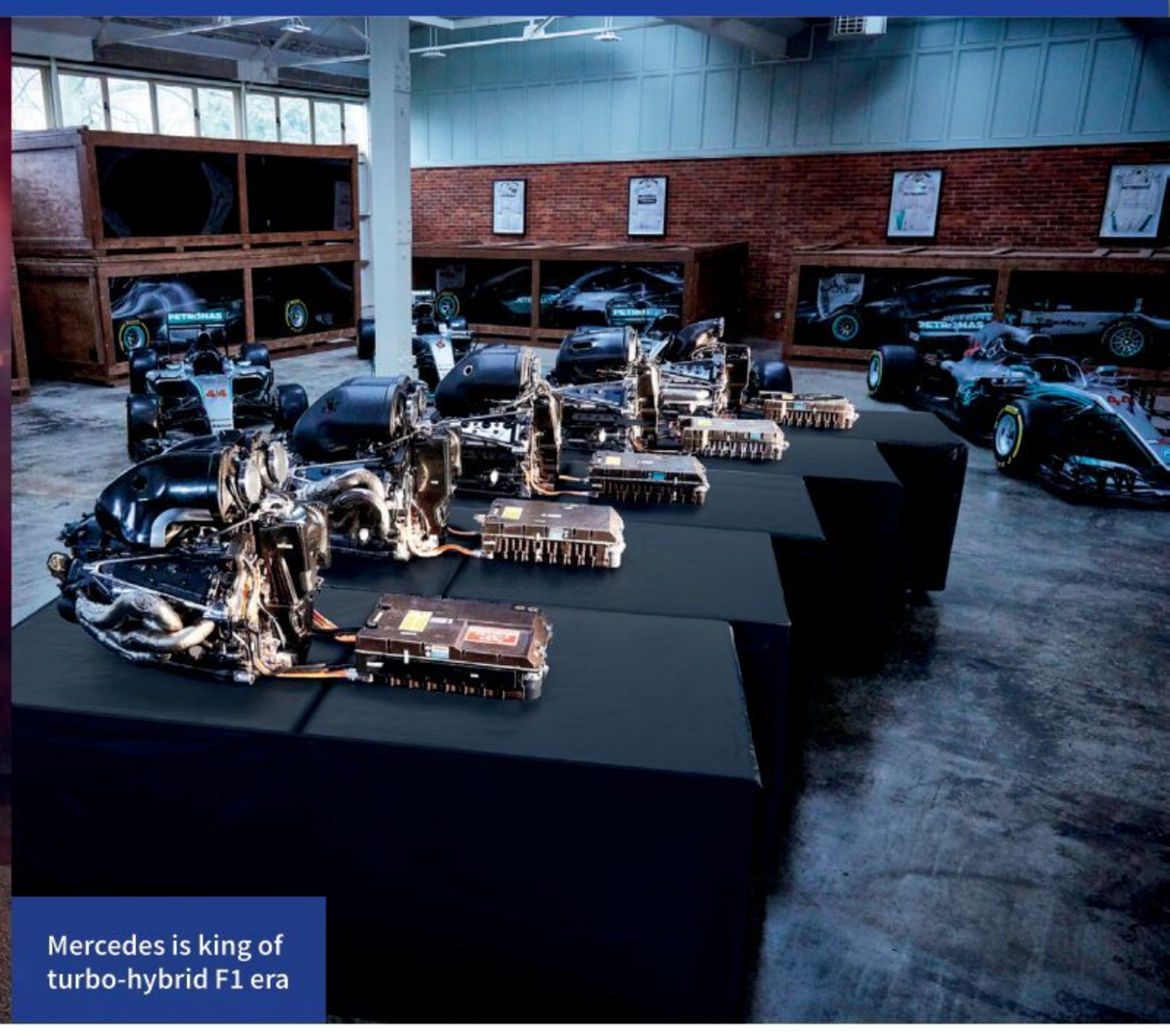
AUDI COMMUNICATIONS MOTORSPORT/VARGIOLU/DPPI; PURE ETCR; TOYOTA GAZOO RACING

How Formula E helped change motorsport

The all-electric single-seater series has been a remarkable pioneer, its message extending across race track and special stage to industry, transport and beyond

JAKE BOXALL-LEGGE

Hybrids are foundation of new WRC formula in 2022



Mercedes is king of turbo-hybrid F1 era

McKLEIN; MERCEDES-BENZ GROUP AG; JORDI RIEROLA

Le Mans Hypercars use hybrid power...

...and so now does the popular BTCC

JEP

This is the new Nitro Rallycross contender

Motorsport has undergone considerable change within the past decade. Cars powered purely by petrol-guzzling internal combustion engines are becoming more of a rarity as hybrids and electric power become more commonplace. The world is becoming more aware of the damage that civilised society is doing to the environment, and racing championships are more eager to become part of the solution, rather than the problem.

When Formula E kicked off its first championship season in 2014, it coincided with a growing mainstream appreciation of electric mobility. In the meantime, Formula 1 was coming to the end of its first season with hybrid powertrains, but Formula E offered automakers the scope to be involved in the world's first all-electric racing championship. Now, as teams are not only involved in the development of their racing hardware but also squeeze more efficiency and performance out of it via the software it runs on, the series has not only become more relevant to manufacturers, but it has also spawned several electric racing championships.

Furthermore, through the involvement of sponsors and partners, Formula E isn't simply changing attitudes within motorsport. The reach of its message of sustainability and alternative propulsion systems is transcending the motorsport and automotive sectors and finding use in other industries too.

At the start of Formula E's life, it's probably fair to say that many of the drivers populating motorsport weren't as open-minded as they are now; the growth of the championship has begun to change attitudes to electric mobility, both inside and outside the series. Now, many of the drivers are huge advocates for not only increased EV use, but also have interests in sustainability and innovation.

Nico Rosberg, the 2016 F1 world champion, is one such driver. Although he's never raced in Formula E, he showcased the Gen2 car at the 2018 Berlin E-Prix and has a number of key investments in sustainable mobility, technology and business. He's also started his own racing team, RXR, which competes in electric rally-raid series Extreme E — another of Formula E founder Alejandro Agag's e-mobility racing projects.

"I have always been interested in the technological developments and progress within mobility and the automotive sector," says Rosberg. "After all, this is my home turf and motorsport plays a massive part in advancing technologies for road cars. After my active career as a driver ▶

STALEY/MOTORSPORT IMAGES

Rosberg's passion for sustainability has won over petrolhead dad Keke

"This is my home turf. Motorsport plays a massive part in advancing technologies for road cars"

City centres have been the focus for Formula E

S BLOXHAM/MOTORSPORT IMAGES

Hydrogen fuel-cell chargers provide power for Extreme E's Odyssey 21 machines

S BLOXHAM/MOTORSPORT IMAGES

"Formula E is going to contribute more and more towards marketing awareness of electrification"

ended, I began investing in sustainable mobility start-ups and founded the Greentech Festival, which is a global platform for sustainable products, technologies and ideas. I think we have made a lot of progress in mobility and there is definitely more to come over the next years."

Rosberg explains that the image of Formula E, and the manner in which it has been able to aid the transformation of an electric car's image from an unfashionable and range-shy mode of transportation to something considerably more desirable, has converted the more 'traditional' motorsports fans.

Of course, there will be a portion of the motorsport fanbase that will never be truly sold on the lack of noise or smell associated with Formula E's racing product, but Rosberg says some of the more old-school fans and drivers are developing a keen interest — including his father, 1982 F1 champion Keke Rosberg — while the newer fans fit into a more modern and forward-looking demographic.

"It led the way into a new future," Rosberg says. "In the beginning, many people felt electric racing was odd, especially those that had been following F1 and considered themselves more 'traditional' petrolheads, such as my dad. But even he quickly came to the conclusion that electric racing is super-cool — and now he's the biggest fan of Formula E!

"Formula E helped make sustainability 'cool' by bringing the racing action directly to the city centres and reaching a young, urban and modern target group. It also introduced new ways of interaction, with virtual reality or with Fanboost. I think FE fans are more likely to buy an electric car. These people are also more environmentally conscious and hopefully make more sustainable lifestyle choices outside of mobility."

Sustainability is becoming a greater area of focus across motorsport, and it's largely been down to the electric disciplines to portray that message. To expand and encourage greater attention to sustainability, the FIA — motorsport's governing body — has introduced its Environmental Accreditation Programme to encourage stakeholders, championships and teams to improve their working practices and manage their impact on the environment. This is an achievement that multiple Formula E squads have attained, and teams such as Envision Racing, for example, have gone further, becoming officially recognised as a carbon-neutral and net-zero entity. The British operation has also partnered with COP26 to promote cleaner mobility, a field becoming particularly prominent as multiple worldwide governments make pledges to decarbonise transport options and attempt to slowly phase out vehicles powered by fossil fuels.

THE FUTURE OF MOBILITY

Many of the world's governments, biggest cities and global businesses recently signed the COP26 declaration stating "as governments, we will work towards all sales of new cars and vans being zero emission by 2040 or earlier, or by no later than 2035 in leading markets".

This is slightly complicated by the emergence of e-fuels in the market, as the world tries to end its reliance upon burning fossil fuels for energy. Rosberg says that the two can co-exist, especially in emerging markets where the infrastructure may not be in place for a wholly electric approach.

"Many regions in the world still rely on internal combustion engines and they will continue to do so due to the lack of EV infrastructure there," Rosberg explains. "We therefore need a double approach with our technologies. There is a need to go electric in regions where it is possible, such as western Europe, and develop e-fuel solutions for the existing ICE cars elsewhere.

"I think [sustainability] is becoming an expected standard. We already see that customers and partners are expecting a sustainable approach from businesses, and there are certain shared values across the market that are no longer up for discussion. This is a good thing. The market will no longer excuse environmental damage as it did in the past. What we have to aim for is creating shared standards across different markets so that there is no way for companies to find loopholes elsewhere."

For the next decade and beyond, the proportion of hybrid and battery-electric vehicles will continue to rise. Nearly every automotive manufacturer has at least one electric vehicle in its range, and many have ambitious targets to expand their product ranges even further. Nissan, for example, has stated its ambition to ensure that half of its full range of cars will be EVs by 2030, making a pledge of full carbon-neutrality by 2050, and aiming to use its racing team to underpin its efforts in electric mobility.

"Formula E also gives us an opportunity to create more awareness of our electrification," says Nissan COO Ashwani Gupta. "Some of the technologies which we have in Ariya [Nissan's battery-electric crossover SUV] reflect from what we learned in Formula E. So it's definitely moving forwards, and Formula E is going to contribute more and more towards marketing awareness of electrification."

As Formula E helps to further electric technology, F1 has plans to introduce sustainable and synthetic fuels for use in its hybrid powertrains from 2026 as part of plans to become a carbon-neutral category. For a championship frequently derided as an excuse to pollute the environment by burning fuel, F1 has dramatically elected to change course. After all, it cannot ignore the prevailing trends of the market and, to tempt more manufacturers to join, it needed the allure of a ruleset that promises to hold lots of opportunity for automotive concerns to develop their products to trickle down into their consumer products.

Beyond that, there's also the continued interest in hydrogen-electric power, which is slowly gaining a foothold in endurance racing. The H24 prototype car has completed demonstration runs at Le Mans, ▶

Formula E was greeted with scepticism in many motorsport quarters, but attitudes have changed

WARNER/MOTORSPORT IMAGES

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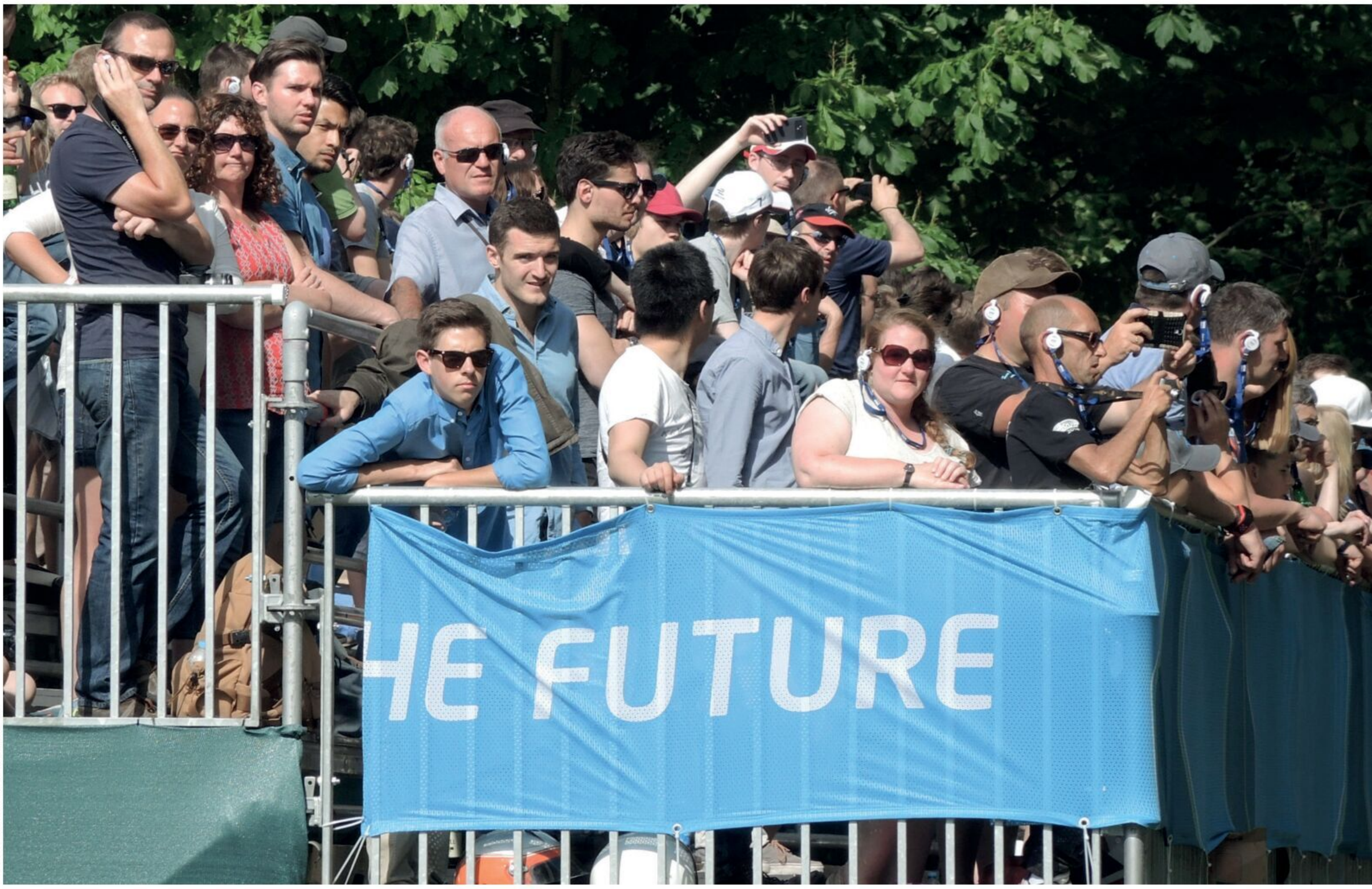
Rosberg's RXR racing team competes in electric rally-raid series Extreme E



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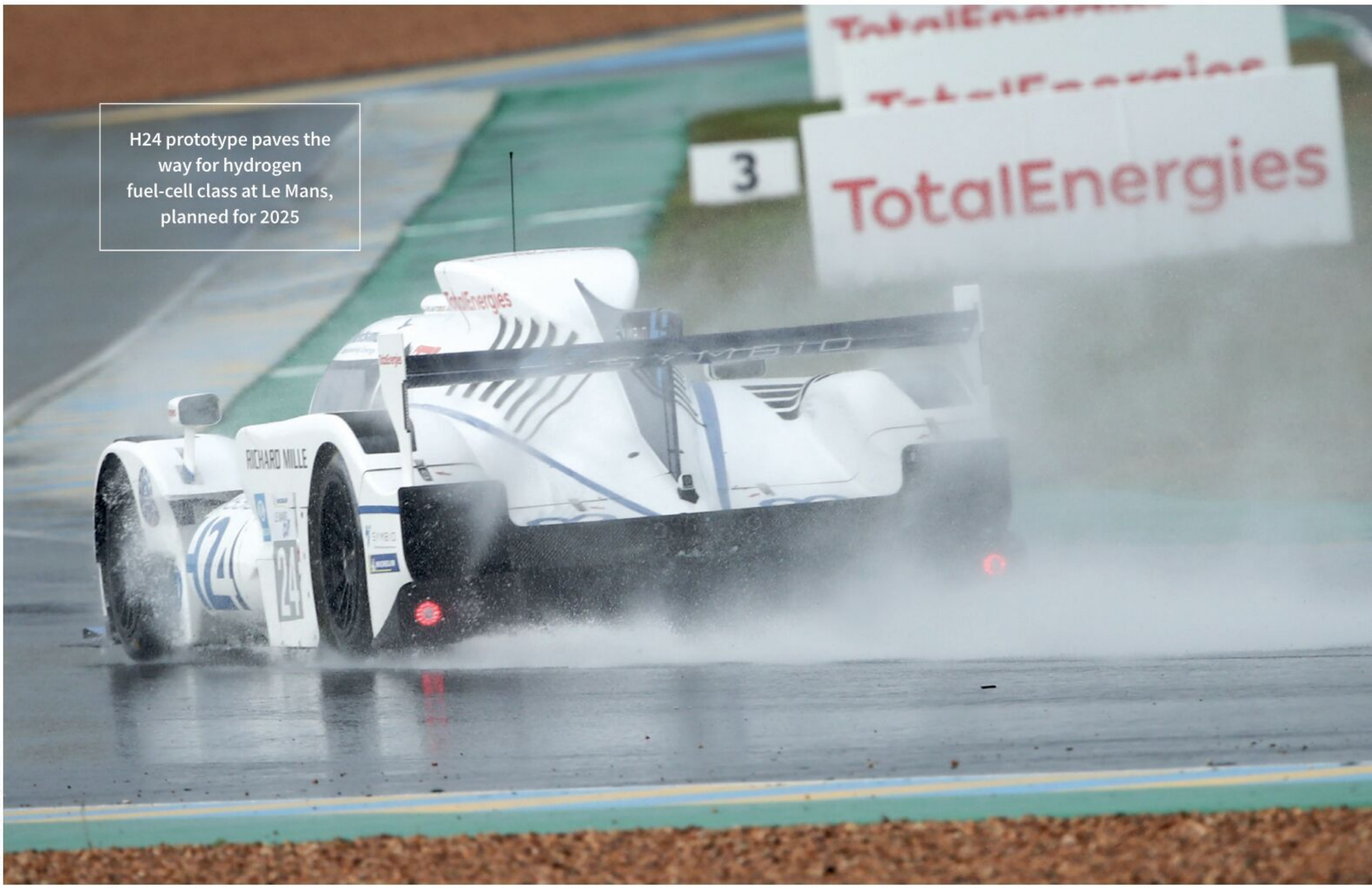


H24 prototype paves the way for hydrogen fuel-cell class at Le Mans, planned for 2025

JEP/MOTORSPORT IMAGES

and there are plans to introduce a hydrogen fuel-cell class at the 2025 edition of the race, with the chassis due to be a collaboration between Red Bull Technologies and ORECA.

The biggest draw for a hydrogen-powered car is that it produces no emissions other than water. A hydrogen fuel cell takes hydrogen molecules and breaks them down into hydrogen ions and electrons. The electrons then generate the current required to develop an electrical charge, which can be stored by the car's onboard batteries. The hydrogen ions then recombine with the electrons and with oxygen to create water as its sole byproduct.

This is already being used in a motorsport setting. AFC Energy produces external hydrogen fuel-cell chargers to power the Odyssey 21 cars used in Extreme E. AFC creates the hydrogen gas from solar-powered electrolysers, stores it in low-pressure cylinders, and then ensures it is ready to use for the teams to charge their cars. It's not quite as direct as simply pumping hydrogen into the tank of a car, but it does live up to the promise of supplying the XE cars with zero-emission energy. But that's on a small-scale application.

Breaking hydrogen out of compounds and storing it as a gas is an expensive and energy-intensive pursuit — and on larger-scale applications, the energy expended in breaking hydrogen out of water via electrolysis simply kicks the emissions can further down the road. It remains a desirable fuel, but progress on making hydrogen fuel cells a viable solution worldwide has been considerably more glacial compared to the battery-electric car.

HOW WILL MOTORSPORT CONTINUE TO PURSUE SUSTAINABILITY?

To carry Formula E's hopes over the next few years, the championship has worked with the FIA to ensure that its fleet of new cars can withstand the test of time by pursuing ambitious sustainability targets for the Gen3 machines. Many of the advances wrapped up within the new car are technologies that have been in the offing for a while, but have not had the exposure of being involved in an international racing category — at least, until now. The bodywork features natural fibres such as linen in the composite lay-up process, and also features recycled carbonfibre to reduce the quantity of new materials used (see page 30).

Using natural weaves such as linen, flax and hemp ensures that less energy is consumed in the processing of carbonfibres, and their use is becoming more widespread through manufacturers such as Bcomp, whose natural composite structures have applications in the automotive, motorsport and marine sectors. Formula E's new tyres from Hankook also feature 26% natural fibres and rubbers in their construction, improving the quantity of sustainably sourced materials within the car.

Beyond that, the electric revolution in motorsport is beginning to find a path offshore too; Agag and ex-Ferrari and Red Bull engineer Rodi Basso linked up to create the E1 powerboat series, with Basso's experience of the engineering and motorsport industries coming into play to festoon the RaceBird powerboats with various smart materials and technology. Like Formula E, the E1 Series also has a battery with recyclable components, and Basso explains that the technology involved in producing the batteries will continue to change the landscape in all forms of mobility.

"We have a 100% recyclable battery — compare that to 10 years ago, where you couldn't recycle anything about the battery," says Basso. "This tells a lot how much old investments focused and funnelled towards the education process are delivering a huge step forward in the technology. And I believe in the next 10 years, there will be another incredible evolution that we'll be able to put on our vehicles and vessels."

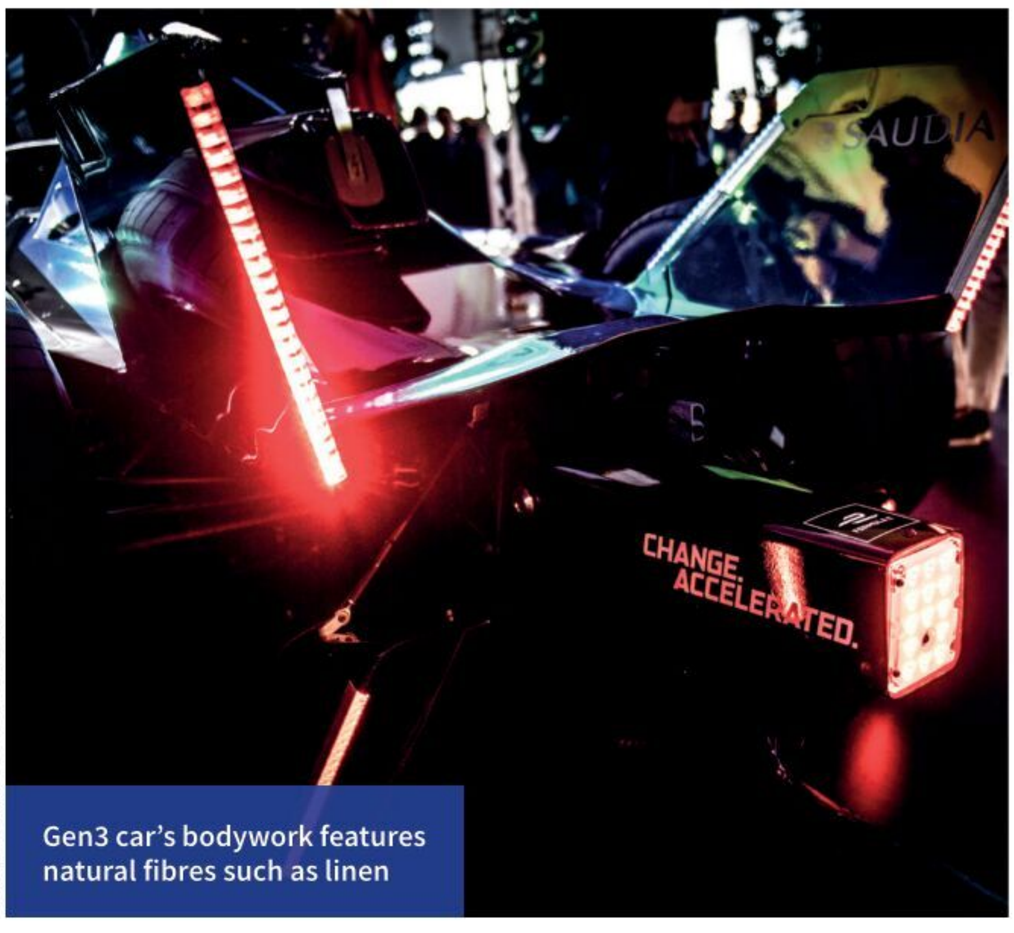
With Formula E already looking at a Gen4 package, there are many more directions for the world of e-mobility to take, although it remains to be seen whether that involves alternate drive systems or battery development, since talks are at an early stage. Regardless, as the motorsport collective drives towards a more sustainable future, Formula E will want to remain as one of the key forces behind it. ■

Basso (below) is creative force behind E1 powerboat series

2022 LLOYD IMAGES

2022 LLOYD IMAGES

"We have a 100% recyclable battery – 10 years ago you couldn't recycle anything about the battery"



GALLOWAY/MOTORSPORT IMAGES

Gen3 car's bodywork features natural fibres such as linen

The path to Gen3 and beyond

The next incarnation of Formula E car moves the game on considerably: it's smaller, lighter, faster, more powerful and more sustainable. And it'll be racing in a few months

JAKE BOXALL-LEGGE

With the halfway point of the 2021-22 Formula E season fast approaching, it won't be long until the championship's eighth season concludes in Seoul, after which the current Gen2 car will be granted its place in a museum following four years of service. In its place, the Gen3 racer unveiled at the Monaco Yacht Club will take to the grid for the 2022-23 season. It's smaller, lighter, faster, more powerful and more sustainable; the bodywork was inspired by a fighter jet, and the car could theoretically hit 200mph on the right stretch of road. In Formula E's short history, a lot of progress has been made.

It feels deceptively long ago that the first generation of Formula E cars took to the grid around the Beijing Olympic stadium to kick off the championship's first ever race in September 2014. Back then, everything was completely new; nobody in the paddock, or watching on TV, knew what was about to unfold. The teams couldn't be sure if they would get to the end of the race, after testing at Donington Park ahead of the 2014-15 season opener had thrown up reliability concerns.

The original cars feel primitive today, especially compared to the metrics thrown up by the Gen3. Electric mobility has made great strides in the past few years as more manufacturers have dedicated space in their product lines for EVs, and Formula E continues its desire to be a driving force behind that.

The Gen1 machines started off with a common motor and five-speed gearbox assembly, developed by McLaren and Hewland respectively. The motor could produce 200kW in qualifying trim, but race modes were capped at 150kW and thus circuits were rather small to largely mask the relatively glacial pace, also featuring multiple chicanes to introduce areas for energy regeneration.

Williams Advanced Engineering was responsible for the 26kWh lithium-ion battery, a weighty but small-capacity energy store that necessitated in-race car-swaps in the early years. Although it added a strategic element to the race, whereby it gave drivers pitstops to contend with and a focus on how they drove their first car – going long, after all, would reward you with more energy to burn in the second – it was a little bit of a joke among motorsport purists. The sight of drivers hopping out of their cars and legging it across the garage to leap into the next one seemed a touch ridiculous in retrospect, but it was a necessary evil given the battery range. ►

"Everything was completely new; nobody in the paddock, or watching on TV, knew what was about to unfold"

Gen1 machine broke cover in Las Vegas in January 2014

MILLER/MOTORSPORT IMAGES

Gen3 car embodies the progress made by Formula E and electric mobility in general

S BLOXHAM/MOTORSPORT IMAGES

GEN3 TECHNICAL FOCUS

BATTERY

Because the capacity to regenerate power is greater in the Gen3 car, the battery can come down in size since the extra cells would be unnecessary. This, in addition to the smaller car and absent rear brake assembly, yields an overall reduction of 60kg from the Gen2 car. The batteries are, like in the Gen1 days, produced by Williams Advanced Engineering, and have had their materials selected from more sustainable sources to reduce the global impact of the battery production.

FRONT MOTOR

The Gen3 car makes use of a front-mounted motor for the first time, used purely for energy regeneration. This is a single-supply part and can regenerate up to 250kW of power from the front wheels and, with no differential, will offer a challenge to the teams in synching the front and rear motors.

REAR MOTOR

The drive motor will run at up to 350kW – that's around 470bhp – to ensure the fastest Formula E cars yet. In tandem with the front motor, that adds up to 600kW of regen, which will ensure that around 40% of the energy used in the race will come from that recuperated from the brakes and wheels. The cars also feature no rear brakes, so the motor will have to do all of the slowing of the rear wheels. It will run at around 95% efficiency – compare that to an F1 powertrain running at just over 50%.

TYRES

Michelin supplied rubber for the Gen1 and Gen2 cars, and now Hankook takes over the tyre supply tender and has introduced a series of construction innovations to boost its sustainability credentials. Around 25% of the tyre is made from natural rubber and fibres, and can be recycled after use. Hankook has also retained the all-weather tread, meaning that the tyres can continue to work come rain or shine.

Regardless, the Gen1 car kept the series in business. It looked like a mish-mash of every junior-formula car out there, but it regardless gathered attention and helped draw in a flurry of big-name drivers and manufacturers who could lend Formula E credibility, especially when powertrain development was declared open for the series' second season.

After four years of helping to build Formula E's fanbase and image, the Gen1 car passed the baton to the Gen2 machinery, which aesthetically proved to be a very different concept. The introduction of front wheel covers, Batmobile-like bodywork and tailfins replacing a conventional rear-wing arrangement looked dramatically different from anything seen in single-seater racing before. Formula E, it seemed, intended to be disruptive and develop a radical design concept to visually mark its territory.

For those not yet convinced by Formula E, the departure of car swaps was a key factor in getting rid of some of the championship's apparent clunkiness. With McLaren Applied Technologies responsible for the distribution of the new 54kWh battery, there was now enough capacity inside to complete the whole race. Furthermore, motors had become increasingly more efficient, could regenerate more energy, and had been developed to operate at 250kW in qualifying trim – up 50kW from the old motors.

By this stage, the motor and gearbox formula had largely converged; in the early years of Gen1, teams were experimenting with multiple motors and multiple gears to try to find more efficiency. But by the start of Gen2, almost all the teams had opted for a single motor with a solitary drive gear to minimise any losses.

Although car swaps had been removed, it took with it a vital strategic battleground. Without an adequate replacement, the worry was that races could end up being quite one-dimensional. In its place, attack mode was born to inject some degree of strategy into the races. By placing the attack mode activation loop off-line, it handed a distinct penalty to those taking a higher power mode – and, with its use mandatory, it meant that the teams and drivers had to consider when best to take it.

Halfway through the Gen2 car's life, the power modes on offer changed to increase the pace of the cars; the race mode power allowance rose from 200kW to 220kW, while attack mode – initially at 225kW before receiving a 10kW boost – was moved up to 250kW for parity with the qualifying and Fanboost. ►

"By placing the attack mode activation loop off-line, it handed a distinct penalty to those taking a higher power mode"

Nico Rosberg stretches the Gen2 car's legs on the streets of Berlin in 2018

STALEY/MOTORSPORT IMAGES

BODYWORK
Within the new, angular design of the bodywork lies a number of innovations to further boost the sustainability associated with the car. The composite lay-ups now feature alternative fibres such as linen, and repurposed bits of old Gen2 'waste' bodywork, cutting the overall emissions involved in producing car parts. And, in the considerably likely event that more debris is shed, that can be recycled too.

NOSE AND FRONT WING
After opting for a low-nose design on the Gen2 car, the Gen3 plays into the desired fighter-jet aesthetics with a pointed, higher nose in addition to a more complex front wing. The wheelarches from the previous car are gone, replaced by slanted endplates that attach to a lower and upper front-wing geometry. The front wheels are left exposed as a result.

FORMULA E

FORMULA E

FORMULA E

Recycled and recyclable materials abound in Gen3 car

"The removal of the rear brakes means drivers will rely solely on the stopping power from the motor regeneration"

For 2022-23, Formula E will undertake its changing of the guard – and the Gen3 car's statistics are impressive. For the first time, a Formula E car features electric motors at both axles. At the back, the car is powered by a 350kW motor, which Formula E estimates can yield speeds of up to 200mph, although the small size of the circuits will make that a rare event.

At the front, Formula E has introduced a standard 250kW motor that only features for regenerative purposes. That's 600kW of regen potential that drivers can employ and, even with the additional motor, the Gen3 car is 60kg lighter than its predecessor. Part of that has been down to reducing battery size, since the regeneration is so much more powerful that carrying around extra cells becomes superfluous.

It's estimated that 40% of the energy used in the races will come from regenerated energy, up from around 25-30% for the Gen2 car. The car's weight is also helped by the complete removal of the rear brakes, meaning drivers will solely rely on the stopping power from the motor regeneration at the back. That should eliminate the need for the drivers to have to pull a paddle before a corner to do that, since it should be covered in the software maps automatically.

Formula E has also put a bigger focus on sustainability, using recycled and recyclable materials in the build of the Gen3 car. The new battery pack supplied by Williams Advanced Engineering uses materials possessing some degree of post-life reuseability, with Formula E planning to recycle and repurpose the cells after the batteries can no longer be used. The bodywork now features linen fibres in its lay-up along with recycled carbonfibre, while Hankook's new tyres include natural rubber and recycled fibres within the construction.

Trying to mesh sustainability aspirations with performance targets is difficult, but that's something that Formula E and the FIA have tried to work on in tandem. Chief engineer Alessandra Ciliberti explained how both boxes were able to be ticked with the new car.

"We've been trying to do our best in meeting [Formula E's] requests, while still keeping in mind the technical target," she said. "So what you don't want is to make this car too heavy, you don't want the car to lose any of the technical and performance criteria that you have set in the technical brief. But by working closely throughout the process, you can find ways of achieving our technical targets while also enabling them to express the best in terms of sustainability.

"The main challenges were around making this car lighter while adding parts. Because we have the front powertrain kit, which currently is not in the Gen2 car, we added parts, we've increased the power. But despite that, we could reduce the weight of each and every component. The monocoque is much safer than today but smaller; the battery is outputting and retaining a lot more power, but is smaller and lighter. And thanks to that the wheelbase is shorter, and the car is more agile overall, and that's really the best we could expect."

There'll also be a host of potential new venues next season for the new car to race on: Cape Town is ready to host South Africa's first race at its Green Point district, while the Vancouver event was postponed to 2023. The cities of Sao Paulo and Hyderabad have both stated their intent to host an E-Prix next year too, ensuring that Formula E looks set to have a healthy calendar for the start of its new era.

Formula E has come a long way with its cars; if the Gen1 machine was largely a means to get the series off the ground, then the current Gen2 car moved the series on by hiking up the power and creating an entirely new face for the championship with its own unique visage. Gen3, over to you... ■

THE FUTURE OF MOBILITY:

WHAT WILL MOVE US TOMORROW?

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