

F1 HAMILTON REDEEMS HIMSELF AFTER CRASH

AUTOSPORT

BRAZILIAN GP BATTLE

BOTTAS BLEW IT!

How Vettel pounced on Merc man's key flaw

**HE WAS "EMBARRASSING"
JACQUES VILLENEUVE**



ALONSO MOVES CLOSER TO LE MANS ATTACK

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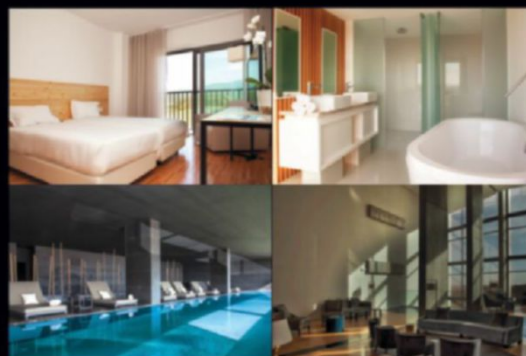
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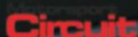


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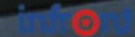
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Bottas needs to find that extra something

JACQUES VILLENEUVE'S VIEW THAT VALTTERI BOTTAS was "embarrassing" at last weekend's Brazilian Grand Prix is rather harsh, but it does touch upon a key concern for the Finn.

Bottas's graduation to Mercedes this season was well-earned after some strong performances for Williams. He started the year pretty well too, with wins in Russia and Austria, but fell away in the wake of the Lewis Hamilton-Sebastian Vettel championship fight.

Having taken a fine pole at Interlagos, Bottas had a great opportunity to show he had turned a corner and could be considered a real title contender next year. That's surely what he'll need to be if he is to keep himself in a top Formula 1 car in 2019. But he couldn't get the job done in Brazil and finished only 2.7 seconds ahead of Hamilton, despite the #44 Mercedes starting from the pitlane.

Second to Vettel is hardly a disastrous result, but Bottas looked unhappy after the race and with good reason. He knows he has to make the most of his opportunities if he is to be considered one of F1's very best drivers, but his start and (to a lesser degree) his out-lap gave Vettel enough of a sniff for the Ferrari star to snatch another win.

Bottas is a self-reflective character, which should allow him to continue improving, just as his Mercedes predecessor Nico Rosberg did. Next year will be crucial. If he is to turn that approach and potential into a world title —as Rosberg did— Bottas will need to show he has a place alongside Vettel, Hamilton, Max Verstappen and Daniel Ricciardo at F1's top table when the going gets tough in 2018.



KEVIN TURNER EDITOR

kevin.turner@autosport.com

@KRT917



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Sutton Images; Tee/LAT

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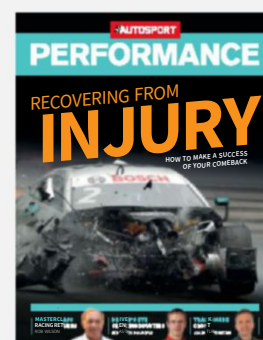
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PERFORMANCE SUPPLEMENT



How best to return after injury is the main focus of this issue of Performance, with advice from some of motorsport's leading drivers.

NIGEL ROEBUCK

Massa's last goodbye

A Ferrari won and a Mercedes stormed through the field, but it was the #19 Williams that inspired the adulation of the Interlagos crowd

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AT INTERLAGOS THE RESULT, AS SO OFTEN – TOO often – these days, was settled in the opening seconds, when the pole position man got too much wheelspin, and Sebastian Vettel asserted himself into the first turn, going on to a superbly measured victory. Throughout the afternoon, he was never very far in front of Valtteri Bottas, but so evenly matched were the Ferrari and Mercedes that it would have taken a mistake by Vettel for the order to change.

Had it been Hamilton's Mercedes on pole, who knows what kind of scrap we might have had, but when the lights went out Lewis was not so much as on the grid, instead starting from the pitlane, after crashing on his first run in Q1. "It just shows we're all human," he modestly observed, but the goof guaranteed a memorable drive on race day.

New engine, new turbo, no concerns about points... all the ingredients were there for the kind of no-holds-barred afternoon all great drivers savour, and it didn't hurt Hamilton's cause that several cars accounted for themselves in shunts on the opening lap, or – better yet – that the incidents brought out the safety car.

If the race allowed Lewis a free hand in showcasing his talent and pace, so also it allowed a glimpse of Mercedes performance when the gloves are off. Up the endless climb

at the end of the lap, Hamilton wafted by other cars – even some with Mercedes power units – with contemptuous ease, and what was especially impressive was the way he combined blazing speed with care for his (soft) tyres: not until lap 43 did he stop. We expected a mesmeric drive, and we got it.

Sentimentally, though, Interlagos was all about Felipe Massa, bidding farewell to his people, a role for which he was well rehearsed, having already done it in 2016.

On that occasion Felipe, swathed in a Brazilian flag,

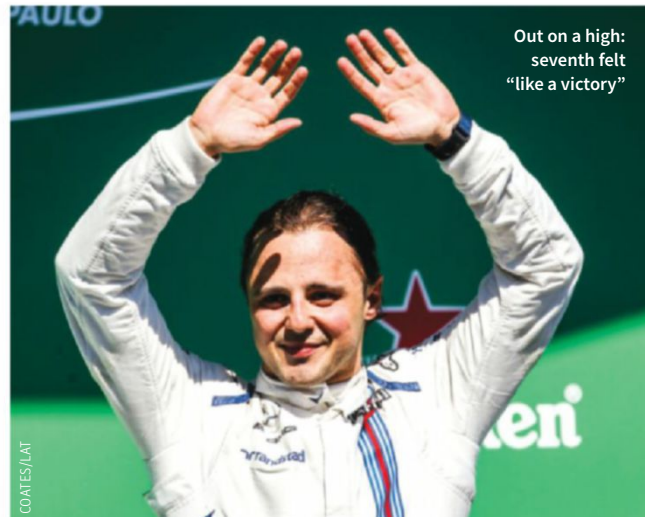
trudged down the pitlane as the rain beat down, having parked his Williams against a guardrail. Emotional as he was, responding to the cheers of the *Paulistas*, this was not the finale for which he had hoped,

but fortunately Nico Rosberg came to the rescue, by retiring immediately after winning the championship.

This obliged Mercedes to sign Bottas as his replacement, and Williams, who had shown Massa the door in order to accommodate Lance Stroll, suddenly realised they'd quite like him to stay, after all. Felipe, who loves racing as fellow-countryman Rubens Barrichello always did, was only too happy to agree.

Twelve months on, though, it really is the end of the line, and at Interlagos everyone hoped that Massa would go out

"Interlagos was all about Felipe Massa, bidding farewell to his people"





ETHERINGTON/LAT

Hamilton starred on his way through the field at Interlagos

on a high. For one thing, he is that rare Formula 1 driver who doesn't have an enemy in the paddock; for another, memories of him will always be wedded to this fabled *autodromo*, ramshackle by comparison with most other venues on the world championship trail, but a track marinated, like Monza or Spa or Suzuka, in racing legend.

Massa has always been a team player. Just as he obeyed a coded Ferrari instruction – at a time when team orders, ludicrously, were banned by the FIA – to let team-mate Fernando Alonso through at Hockenheim in 2010, so he had done the same for Kimi Raikkonen at Interlagos three years earlier. In both cases, they were in contention for the championship, and Felipe was not.

In 2008, though, he was – emphatically. Indeed, when he won at Interlagos, as he had done two years before, momentarily he believed he was world champion. As it was, though, 40 seconds later Hamilton passed Timo Glock at the last corner of the last lap, and four points for fifth place – rather than three for sixth – gave Lewis the title by a point. Luca di Montezemolo, watching at home, smashed his TV set to pieces.

On the podium Massa was rather more controlled, but it would have been a stony heart left unmoved by the conflict in his face, the mix of anguish and pride. He handled this cruellest of scenarios with consummate grace, and I was not alone in believing him the more worthy champion that year, not least because he won more races.

At the time I talked to Jackie Stewart, who was of the

same opinion. “Hamilton and Massa both had great races this season, as well as good luck and bad, but overall I think Felipe deserved the championship more, partly because of his drive at Interlagos. He went there behind Lewis in the points, so it was a race he absolutely had to win, and his drive in the treacherous conditions was completely masterful – the manner in which he conducted his whole race was perfect.

“Even more than that, though, when he lost the championship at the very end, I thought the behaviour of both himself and his family had a dignity and style beyond anything I've ever seen in motor racing.”

Bittersweet as it was, that was Massa's day of days, and the last grand prix he ever won. The following year, in Hungary, he was seriously injured in a freak accident, and we must take his word for it that this in no way affected him for the balance of his career. In '08, particularly, there were days when Felipe's driving – smooth, undramatic, flawless – had reminded one of Alain Prost, but when he returned to Ferrari after the accident, now partnered by Alonso rather than Raikkonen, he suffered increasingly from a loss of confidence, which took a long time to get over.

On Sunday, perhaps fittingly, Massa had a race-long duel with Alonso, and when he drove into pitlane at the end among those clapping him was Fernando. As Felipe said, “It may have been only seventh place, but it feels like a victory...”

They cheered him to the rafters, and quite right, too. A very fine driver, an even better man. 🍷



WORLD ENDURANCE CHAMPIONSHIP

Fernando: the real story

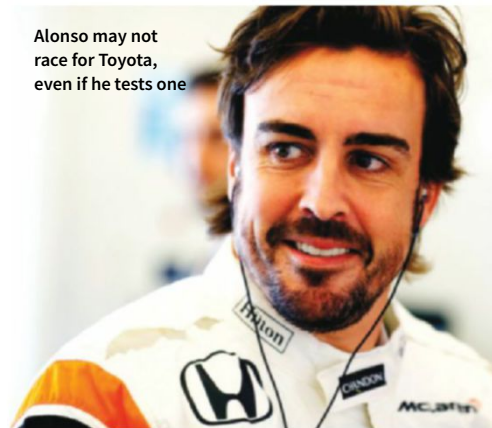
THE SMART MONEY IS ON FERNANDO Alonso getting behind the wheel of an LMP1 car for the first time in Sunday's official World Endurance Championship test in Bahrain, at least it was at the start of this week. But should the two-time Formula 1 world champion drive a Toyota TS050 HYBRID in the so-called rookie test this weekend, it is not a given that he will race one of the Japanese manufacturer's cars come the Le Mans 24 Hours next June.

The push for Alonso to test the kind of car he will one day race – perhaps sooner, perhaps later – when he bids for the Le Mans segment of the motorsport triple crown has come from within the WEC. It has driven the idea, no doubt spurred on by memories of the publicity generated by Juan Pablo Montoya's run in a Porsche 919 Hybrid at the same test back in 2015. The WEC needs all the good news days it can get right now in the wake of Porsche's withdrawal from LMP1.

It seemed highly likely as Autosport closed for press that Alonso would do the test, with an announcement coming in the second half of the week. He's already had a seat fitting at Toyota Motorsport GmbH headquarters in Cologne and he doesn't have to travel far. The McLaren F1 driver has a home in Dubai, little more than an hour's flight away from Bahrain.

Why his participation in the test on Sunday, the day after the WEC finale, hasn't been

Alonso may not race for Toyota, even if he tests one



confirmed isn't clear. Perhaps it was decided that it would be distracting if it was announced ahead of last weekend's Brazilian Grand Prix. Or maybe there were contractual hoops to jump through. After all, Alonso's salary at McLaren is effectively paid by another Japanese manufacturer in Honda.

Toyota has stayed tight-lipped on the subject. That's partly because Alonso doing the test probably isn't its news to announce given the role of the WEC in the process, and partly because it doesn't want to do anything to fuel rumours that the Spaniard is being lined up for a Le Mans drive next year. That would be



FORMULA1

Kubica set for test in 2017 Williams

ROBERT KUBICA IS SET TO DRIVE FOR Williams in the post-Abu Dhabi Pirelli Formula 1 tyre test later this month as the team edges closer to finalising its 2018 driver line-up.

The 32-year-old Pole, whose F1 career was interrupted by life-threatening injuries from a rally crash in 2011, is the frontrunner to partner Lance Stroll next season.

Kubica is expected to complete one day of running in this year's FW40 at Yas Marina, though the team has yet to officially announce its plans.

He has already completed two one-day tests for Williams this year, running a 2014-spec car at Silverstone and the Hungaroring. Williams is believed to have been impressed with him but wants to do another test, this time in 2017 machinery, in a bid to help answer its remaining questions over his ability to return to F1.

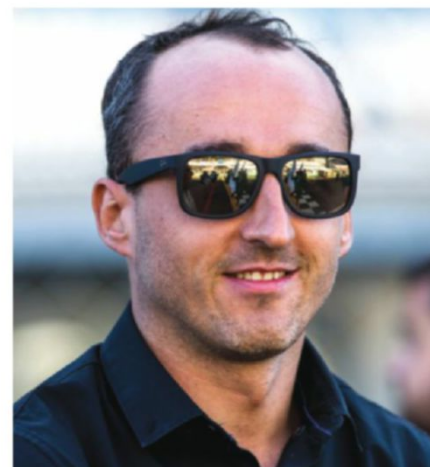
Running Kubica in the Pirelli test will allow it to compare his data with that gathered by the race drivers from the grand prix weekend before the test while benchmarking him against other teams that will be running at the same time. It remains unclear who will drive for Williams on the other day of action.

The team is in no rush to decide on a team-mate for Stroll, who has a deal that is believed to run up until the end of 2019. An announcement is not expected until next month at the earliest.

Autosport understands Kubica's management, which includes 2016 F1 world champion Nico Rosberg, is working on putting together a financial package to aid his bid for the seat.

The alternatives to Kubica are Williams reserve driver Paul di Resta, former Toro Rosso driver Daniil Kvyat and Sauber's Pascal Wehrlein. Felipe Massa dropped out of contention when he decided to retire for the second time, ending a 15-year F1 career.

LAWRENCE BARRETT



MAUGER/LAT

behind the Le Mans bid

unsettling for the TMG-run squad as it continues its bid to secure some kind of consolation prize at the end of a season of disappointments by outscoring Porsche in terms of race victories.

The rumour mill has already been working overtime after the news that Alonso was set to test the Toyota. Most speculatively, one suggestion was that he could actually race for Toyota in Bahrain. That was wide of the mark, as surely were reports that he might contest a full programme with Toyota next year, barring the clash between the Fuji WEC round and the United States Grand Prix.

McLaren might possibly have given Alonso the freedom to do the 24 Hours in his new contract, as he bids to add Le Mans and Indianapolis 500 victories to his brace at the Monaco Grand Prix, and complete the unofficial motorsport triple crown. But allowing him to do a second full programme would be another matter entirely. McLaren racing director Eric Boullier has already said as much.

How far the talks about next year have gone between Toyota and Alonso cannot be known. What shouldn't be forgotten is that the Japanese brand has yet to confirm its continuation in the

WEC, though it is edging in that direction. Nor should it be taken as read that if the grand prix star wants to do Le Mans, then Toyota will roll out the red carpet and provide him with a seat.

Having Alonso on its driver roster at the 24 Hours next year would be a double-edged sword for Toyota. Yes, it would bring a level of media

interest that sportscar racing – even Le Mans – can only dream of, but that would heap its own pressures on a brand that has no excuses as it bids to finally win the 24 Hours for the first time.

And how would the headlines read next June should Alonso complete a

second leg of the triple crown? 'Toyota wins Le Mans' or 'Alonso wins Le Mans'? That's an easy question to answer.

What if there's a situation in the final hours when the Toyota Alonso is driving is lying second behind the sister car. Most teams in that situation would enforce a 'hold-station' policy. Imagine the headlines then.

No-one doubts that having Alonso racing at Le Mans would be good for the event and, more pertinently, good for the WEC in its hour of need. But one of the key questions is whether it would be good for Toyota.

GARY WATKINS

“No-one doubts that Alonso would be good for the event”

Q&A

GEORGE RUSSELL
MERCEDES JUNIOR



Recently crowned GP3 champion George Russell made his debut grand prix weekend appearance as he replaced Sergio Perez at Force India for FP1 in Brazil.

How was the test sorted?

It's been on the cards for a while. After winning the GP3 title I was pushing Mercedes quite hard – I wanted to be given the opportunity. It was meant to be [confirmed in Austin and] Mexico and it wasn't, so I got a little bit worried. Then I got a phone call the Tuesday night after Mexico saying: "Right, we're doing Brazil and Abu Dhabi."

How did you react when you got the news?

With a massive sigh of relief, but then I had a few hours to enjoy it and then I was in Force India the next day for a seat fit and simulator work.

How much of a step up was it?

It was a huge step up but I've been prepared really well. I've done a lot of days in the simulator with Mercedes and with Force India, plus four days of F1 testing this year. After my two days in Budapest this was the next step, and I think I've been as prepared as can be for knowing that it was only arranged eight days before. It was a big step up but I think it went well.

What programme did you do?

Since the team have sealed fourth in the championship, they're looking forward to next year. We did a lot of aero running at the beginning, which hurt us getting some proper running to find set-up changes to put it to my liking. But generally, it was very good – I got up to speed fairly quickly and I was happy with the car.

ADAM COOPER

FORMULA 1

Renault-Toro Rosso tensions boil over

TORO ROSSO AND RENAULT'S partnership reached breaking point during the Brazilian Grand Prix weekend, as the Italian team took offence to comments from the French manufacturer's F1 chief Cyril Abiteboul.

In the wake of a series of engine failures suffered by Toro Rosso, Abiteboul said: "We do have a little bit of a concern about the way that our engine is operated in the Toro Rosso car." He then added that there are "never coincidences in this sport".

Toro Rosso then hit back at suggestions it was to blame with a statement that referenced the fact that the Italian team is a few points ahead of Renault in the constructors' standings. It said "the situation may not be a coincidence, but it is certainly not due to STR's car".

Red Bull motorsport advisor Helmut Marko and Abiteboul were seen having a heated conversation in the paddock shortly after the statement was released. Marko then moved to defuse the situation with his own statement.

"Over the last 10 years, many successful, we have been through every emotion with our current engine supplier," he said. "As usual at the end of another long season, emotions are running high but it is a valued relationship and will remain so. There has never been any question that we have not been treated fairly and equitably by our engine suppliers. And that is still true today."

Toro Rosso team principal Franz Tost, who is understood to have been hurt by

Renault's public accusation, declined to backtrack. "[Why] should I apologise? For all the damages we have? We're both upset," he told Sky Sports F1. "Who started with all this nonsense? Cyril yesterday, with his stupid interview. Should I say 'Oh fine, good interview from him, we accept it'? No, we don't accept it. Therefore, we came out with our statement."

Renault special advisor Alain Prost defended the French manufacturer, refuting suggestions it would play "dirty games" in the championship. "The Renault company [has been] involved in F1 for a long time, and we prove that by giving exactly the same engine to everybody, which is not the case of the other manufacturers," he added.

Abiteboul admitted that Renault's Viry factory was struggling to keep up with the unexpected demand for extra components. "With the logistics and the timing issues there's a limit to what we can do and the number of new parts that we can bring," he said.

When Tost was asked if he was worried Renault might withhold engines from his team for the Abu Dhabi GP, he said: "We have a contract. I don't see that we have broken [any clause]." Prost was adamant that Toro Rosso "will have an engine in Abu Dhabi, there's no question about that".

The two companies have one more race weekend together before going their separate ways, with Toro Rosso switching to Honda power and Renault moving its supply to McLaren for 2018.

LAWRENCE BARRETT



Abiteboul (left) and Marko (centre) met several times across the weekend



COATES/LAT

PHONE/LAT



GT Bentley has unveiled a new Continental GT3. The car has been developed by M-Sport, which was responsible for the original Continental GT3 first raced at the end of 2013, in conjunction with Bentley Motorsport at its company headquarters in Crewe. A mostly aluminium structure will allow the Bentley to weigh in at significantly under 1300kg, compared with the 1315kg at which the car raced in the Blancpain GT Series for the majority of the 2017 season. The second-generation Bentley Continental GT3 is scheduled to make its race debut at the opening round of the Blancpain Endurance Cup at Monza in April. **Photograph by Bentley Motors**

WORLD ENDURANCE CHAMPIONSHIP

Next-gen LMP1 could be modelled on road cars

THE NEXT BREED OF FACTORY LMP1 cars could be styled in the image of manufacturers' high-end road cars.

The proposal has emerged from meetings set up by the FIA and the Automobile Club de l'Ouest to come up with new regulations for the start of the 2020/21 World Endurance Championship to revive manufacturer interest in LMP1.

The ACO is not commenting on the plan right now, but Toyota Motorsport GmbH technical director Pascal Vasselon has shed some light on the proposals.

"One of the ideas is to make sure the bodywork supports the manufacturer's products better," he said. "At the moment, LMP1 is a kind of generic prototype and you have to paint it to put your mark on it. One idea could be to go towards bodywork that is closer to real cars."

Vasselon suggested that the styling rules would be more extensive than in IMSA's Daytona Prototype international class in North America. The DPi rules allow for changes to the front and rear

bodywork of the LMP2 base car for a manufacturer to introduce styling cues.

The idea borrows a key element from the latest GTE regulations introduced for 2016. Competing manufacturers would be given an aerodynamic performance window in which their car must sit to ensure a level playing field.

What is not being proposed is the LMP1 division moving towards the introduction of hypercars such as the Aston Martin Valkyrie or the LaFerrari.

There appears to be a consensus that racing homologated road cars would not facilitate the reduction in costs that is a key target of the rule-making process. The new rules would allow OEMs to use their energy-retrieval technology, and Vasselon insisted there is still a desire to "keep the technology challenging".

The rulemakers are attempting to have framework for the 2020/21 regulations in place before the December meeting of the FIA World Motor Sport Council.

GARY WATKINS



New LMP1 machines could adopt aero balance used in GTE

FORMULA 2

RISING STAR NORRIS GETS END-OF-YEAR F2 OUTING

LANDO NORRIS WILL MAKE his Formula 2 debut at the season-ending Abu Dhabi round for the Spanish Campos Racing squad.

Norris, the 2017 Formula 3 European champion and McLaren's reserve Formula 1 driver for next year, will use the event to gain experience of the grand prix support series ahead of a likely F2 campaign in 2018.

"Having won the FIA Formula 3 European Championship at my first attempt this year, I will either step up to Formula 2 or Super Formula in 2018 towards my goal of one day racing in Formula 1," said Norris, who turned 18 on Monday.

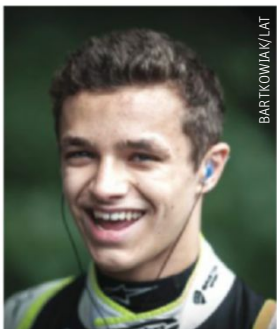
"To get the opportunity to contest the last two races of this year's F2 season is therefore a bonus whichever category I ultimately chose. It'll be the first time I've ever competed in a race that includes a compulsory pitstop and so this will also be a new experience for me."

Norris is aiming to win the Macau Grand Prix at the second attempt with the Carlin squad this weekend, in an effort to cap a championship-winning rookie year in Euro F3 that featured nine wins and eight poles.

"It would be great to go back to Macau and win," added Norris. "It would be an awesome end to what's already been an amazing year."

Japanese F3 and Formula V8 3.5 race winner Alex Palou will drive the other Campos car at the Yas Marina circuit.

ALEX KALINAUCKAS



MOTOGP

Silverstone secures new three-year MotoGP deal

SILVERSTONE WILL RETAIN ITS PLACE ON THE MotoGP calendar for the 2018 season after signing a fresh three-year deal to remain the home of the British motorcycle grand prix.

The move ends any hopes of former grand prix venue Donington Park — which last hosted a MotoGP race in 2009 — replacing the Northamptonshire track on next year's schedule.

Silverstone's history as a fixture on the MotoGP calendar began in 2010. Since '15 it has acted as a stand-in for the never-completed Circuit of Wales project that had signed a now-void five-year deal with series promoter Dorna. This meant Silverstone required a fresh contract of its own to continue hosting the MotoGP race, and an agreement between the track's bosses and Dorna

was finally struck last weekend at Valencia during the 2017 season finale.

"A lot of time and money has been invested in recent years to ensure MotoGP fans, teams and riders enjoy what Silverstone has to offer and we are delighted to have secured the contract to 2020," said Silverstone managing director Stuart Pringle. "Two-wheel racing is as much a part of Silverstone's heritage as four-wheel racing and we are looking forward to welcoming the championship and its fans back to Silverstone next August."

Dorna boss Carmelo Ezpeleta added: "We look forward to giving fans more action over the British Grand Prix weekend and I'm sure fans will be as happy as we are that Silverstone remains on the calendar."

JAMIE KLEIN



IMSA

Tandy/Bamber set for IMSA return

PORSCHE WORLD ENDURANCE Championship LMP1 drivers Nick Tandy and Earl Bamber look certain to return to the IMSA SportsCar Championship next season.

Porsche GT racing boss Frank-Steffen Walliser admitted that the duo's presence in the CORE-run GT Le Mans class squad — where Tandy drove full-time in the United Sportscar championship between 2014 and '16, while Bamber joined

the team for the final two races of '14 — at last month's IMSA finale at Road Atlanta was a firm indication they would be back full-time in the team next season.

"It sounds logical; most things we are doing are by intent," he said.

But he insisted that final decisions about Porsche's driver line-ups across the IMSA and WEC squads running its new-for-2017 rear-engined 911 RSR are yet to be

made. "This is the direction we are going, but our driver calendar is really complex," he explained.

Porsche has promised to keep all six of its LMP1 drivers on its books after it leaves the top WEC class.

Its full 2018 roster is set to be announced at the annual motorsport prize-giving ceremony at Porsche's Weissach development centre on December 9.

GARY WATKINS



DTM-SUPERGT

DTM-Super GT link grows

THE POSSIBLE TIE-UP BETWEEN THE DTM and Super GT Championship came another step closer with a demonstration at Motegi last Saturday.

Bosses from the two series called the demo at the Super GT season finale “a big step” towards a combined ‘inter-series’ race.

Plans were announced two years ago for a pair of events that would allow DTM machinery to take on their GT500 Super GT counterparts, as part of a push towards combined ‘Class 1’ rules as early as 2017. However, the push to merge the two championships’ regulations stalled until Mercedes announced it would withdraw from the DTM after ‘18. That seems to have renewed interest in an alliance with Super GT.

A demo run for Lexus and Nissan GT500 cars was held at the DTM Hockenheim season finale last month as the first step towards the two series strengthening ties.

Last Saturday three DTM cars joined a trio of Super GT machines in a second demo. Loic Duval, Maro Engel and Augusto Farfus represented Audi, Mercedes and BMW respectively, and were joined on track by ex-Formula 1 racer and 2015 Super GT champion Heikki Kovalainen (Lexus), four-time Super GT title-winner Ronnie Quintarelli (Nissan) and Tomoki Nojiri (Honda). As Honda did not make the trip to Hockenheim, the Motegi demo marked the first time that all six manufacturers shared the track at the same time.

Super GT chairman Masaaki Bandoh said: “It was a heartfelt moment to see the Nissan GT-R and Lexus LC 500 lined up with three DTM cars on the track at Hockenheim. Today, six cars got together and I got emotional again.

“I also felt that the distance between Europe, DTM, Super GT and Japan got closer. Bringing these race cars together in front of the fans is a big step towards the inter-series race.”

ITR chairman Gerhard Berger, who was also at the event, added: “What I and [Super GT] chairman Bandoh are trying now is not simply to deepen our friendship, but to create a common set of regulations.

“If manufacturers from Japan and Germany built racing cars based on unified regulations, then they can compete in either series, which would enhance the brand of the cars as well as reduce costs.

“We are hoping to realise an inter-series race as our final goal, so that we can provide a great satisfaction to both sets of fans.”

The GT500 crown was secured by New Zealander Nick Cassidy and Ryo Hirakawa on Sunday, after they took second place in their Lexus (see report, page 46). Nobuteru Taniguchi and Tatsuya Kataoka became champions in the secondary GT300 class by finishing third, despite victory falling to rivals and fellow AMG-Mercedes GT3 drivers Naoya Gamou and Haruki Kurosawa.

JAMIE KLEIN

IN THE HEADLINES

INTERLAGOS F1 TYRE TEST CALLED OFF

Formula 1 tyre supplier Pirelli and McLaren cancelled their planned Interlagos test due to safety concerns at the Brazilian Grand Prix venue. The two-day test, aimed at completing Pirelli's evaluation work on its 2018 tyres, was scheduled to take place on Tuesday and Wednesday with McLaren drivers Stoffel Vandoorne and Lando Norris, but following a robbery attempt last Sunday targeting Pirelli staff, the tyre manufacturer announced the test had been called off.

‘WE WILL IMPROVE’ – SAO PAULO MAYOR

Sao Paulo mayor Joao Doria says the Brazilian Grand Prix venue's sale will improve security after a spate of robberies. Pirelli, Mercedes, Williams and Sauber personnel were all subjected to attacks last weekend and Doria believes the privatisation of the Interlagos circuit should provide the funding to increase security.

NORRIS AND DI RESTA IN LMP2 RUNS

McLaren Formula 1 junior Lando Norris and Williams 2018 seat contender Paul di Resta completed their first LMP2 test last week. European Formula 3 champion Norris, di Resta and two-time F1 world champion Fernando Alonso will join the United Autosports Ligier JSP217 team for an assault on the Daytona 24 Hours in January.

CALDERON TO TAKE ON FV8 3.5

Sauber Formula 1 development driver Tatiana Calderon will make her Formula V8 3.5 debut in this weekend's Bahrain season finale. The 24-year-old Colombian joins RP Motorsport in a third entry alongside team regulars Roy Nissany and Yu Kanamaru, having previously raced for RP last year in Euroformula Open.

RALLY DRIVERS TO TEAM UP AT MONZA

World Rally Championship drivers Thierry Neuville and Andreas Mikkelsen will share driving and co-driving duties in a Hyundai i20 WRC at the Monza Rally next month. Neuville and Mikkelsen will swap seats in a 2016-spec New Generation i20 between stages on the December 1-3 event – it will be the first time either has co-driven competitively.

MURRAY COULD RETURN WITH NEW CAR

F1 design legend Gordon Murray could return to motorsport with a new sportscar. The title-winning ex-Brabham and McLaren designer, who also penned the Le Mans-winning McLaren F1 (below), revealed plans for the car at an exhibition at Dunsfold Park marking his 50 years of vehicle design. The as-yet-unnamed project will be the first produced by Gordon Murray Automotive under the IGM brand, and Murray said, “I'd like to go racing again” if the car fits any relevant regulations when it is finished.





Force is strong for Russell

George Russell has won the GP3 championship, and now a test gig with Force India could boost his Formula 1 career trajectory

By Alex Kalinauckas, Assistant Editor

[@nauckas](#)

MERCEDES IS NOT SHORT OF FORMULA 1 DRIVERS.

On the Silver Arrows' current books are four-time F1 world champion Lewis Hamilton, Valtteri Bottas (still in with a chance of taking place second in the 2017 points standings), Esteban Ocon (getting better with each race at Force India), and Pascal Wehrlein (still Sauber's sole scorer this year).

Now another Mercedes star is rising through the ranks: up-and-coming British racer George Russell. He has just won the 2017 GP3 title and made his debut F1 weekend appearance, driving for Force India, during practice for the Brazilian Grand Prix. That added another session in a 2017-spec F1 car to his two-day turn-out in the Mercedes Wo8 at the Hungaroring in August.

The 19-year-old took over Sergio Perez's VJM10 for FP1 at Interlagos and he finished 12th fastest, 0.593s behind Ocon's best time for the session. That margin over such a short lap is on the large side, but considering Russell had not driven the circuit on the simulator or sampled the Force India in real life before last Friday, it's fair to give him the benefit of the doubt.

Russell also explained that having to focus on aerodynamic development in the early part of the session reduced the time he had to set the car up to his ideal liking. But with his eye now in, he will have another chance to impress when F1 heads to Abu Dhabi for the 2017 season finale, where Russell will take over Ocon's car for another FP1 outing.

Russell has previously stated that he's likely to make the next, and most logical, step up the single-seater ladder to race in Formula 2 in 2018, and if he keeps up his success in the second-tier category next season, Mercedes will face a problem. At the very top of its driver chain, the German marque has no reason, right now at least, to change the line-up of its works squad, with Hamilton winning titles and Bottas picking up race wins along the way too.

Sauber is looking increasingly likely to become the team where Ferrari provides its junior drivers with their F1 breaks in the coming years, the first of whom will be reigning F2 champion Charles Leclerc, which presents Wehrlein with a problem of his own. Williams would appear to be the perfect team for Mercedes to place a highly rated young British racer, but the minimum driver-age agreement between Williams and its title sponsor Martini is repeatedly cited as a potential stumbling block for such a deal.

The current Mercedes junior pathway is therefore with Force India, and Ocon is a successful test case for this method. The French driver followed up his 2014 Formula 3 European title with the GP3 championship in 2015 and then made his F1 debut with Manor midway through last season. The demise of F1's perennial backmarker squad made the path narrower for the Mercedes juniors.

Since Ocon was promoted to Force India for the start of the 2017 campaign he has made excellent progress — albeit with a few high-profile clashes with Perez along the way — and he is just 11 points behind his more experienced team-mate in the drivers' standings. Before his lap-one clash with Romain Grosjean at Interlagos, Ocon was on a three-race streak of outscoring Perez.

Ocon presumably has his own ambitions to step up the Mercedes pecking order as soon as possible, but unless a Nico Rosberg-esque retirement scenario plays out again at the works squad over the coming off-season, he will remain at Force India for 2018 (also assuming that in such a situation

Mercedes wouldn't swoop for an established driver over its juniors as it did with Bottas last winter).

Russell said after his Interlagos FP1 outing that driving the VJM10 was a target he had "really wanted to do" following

his GP3 title success, just in case an unexpected slot opens up at Force India for next season, and he has made it clear that he feels ready to race in F1 right now. But since a year in F2 is the more likely option for Russell, he can at least be satisfied that a deal to make him Force India reserve driver for 2018 is looking likely. This is a situation the Silverstone-based squad's deputy team principal Bob Fernley described in Brazil as a "win-win for Mercedes and ourselves". Even more encouragingly for Russell, Fernley confirmed that his limited simulator work for the team translated into his performance on track at Interlagos, which stands him in good stead ahead of his Abu Dhabi appearance.

In his post-FP1 media session at Interlagos, one of the more enlightening questions Russell had barked at him was whether he now sees himself as roughly following Ocon's F1 career path. The similarities are clear to see and Force India is proving to be an excellent test-bed for Mercedes junior drivers. "This is a good place for me to learn, as Esteban is doing now," Russell said. "Hopefully one day we can progress into the main Mercedes team." Now what a line-up that would be. 🌟

"If Russell keeps up his success, then Mercedes will face a problem"

FEEDBACK

Ferrari rhetoric does it no favours

And so it begins. The inevitable struggle between the post-Bernie Ecclestone modernisers, Liberty, and those with a vested interest in the status quo, led by Ferrari.

Of course F1 will be worse off if Ferrari quits. But Sergio Marchionne does himself no favours with the language he employs, such as refusing to 'play' if F1 is run like a 'global NASCAR'. To my knowledge no-one has suggested using NASCAR as the model for F1's future (although in NASCAR, despite its artificialities, the cream still rises to the top).

The point is that it is becoming increasingly tiresome that drivers from only two teams, or occasionally three, can possibly win an F1 race. How many times are we supposed to be excited that Force India or Williams or whoever will be 'best of the rest'? And how are we to know if the likes of Carlos Sainz and Stoffel Vandoorne could win a grand prix unless they get their bum

into a Mercedes or Ferrari? We simply need more unpredictability, more winners.

Ferrari, if they stay, will almost certainly remain in the vanguard. So may I suggest Marchionne adds one more word to his colourful lexicon: compromise.

Chris Hockley
Walton on Thames

Who gave Ferrari so much clout?

We understood that the manufacturers were involved in drawing up proposals for the next F1 engine regulations, but they are now saying it will need totally new engines with subsequent large amounts of investment necessary.

Ferrari, predictably, have threatened to withdraw from F1 if they don't like the new regulations, which means they want their ball back and won't play unless they have their own way. I still find it amazing that Ferrari can have so much influence on

Ferrari threatening to flounce is this week's chief talking point

drawing up legislation, which is the responsibility of the FIA.

Is Marchionne turning into Enzo via metamorphosis, do you think?

Neil Davey
Newport, South Wales

Threats to quit: an F1 tradition

It would hardly be an F1 season without Ferrari and/or Red Bull threatening to quit, would it?

Much as I respect the memory of the late *Commendatore*, teams who purchased engines (Tyrrell, Lotus, Williams, Red Bull, etc) consistently beat his cars for many years.

S Baker
By email

How to spice up a grand prix

My ideas to spice up a GP: make it a two-day event; Saturday FP1 and FP2 followed by 15-minute qualifying (loads of track action for the punter); top five in qualifying get 5-1 points and 5-1 grid-slot gains; grid drawn from a hat then grid slot gains added (random grid for good action); Sunday warm-up due to reduced running over the event (more advantages for spectators); race point awarded for fastest lap and leading a lap; no grid penalty for engine change – dock constructor points, thus not affecting the race and the driver.

Over to you, FIA and Liberty.

James Quatermass
Leicestershire



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Autosport editorial
Autosport Media UK Ltd
1 Eton Street
Richmond
TW9 1AG

@
E-mail
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facebook.com/
autosport

Mercedes weaknesses give Vettel his chance

By Ben Anderson, Grand Prix Editor [@BenAndersonAuto](#)





A MERCEDES DRIVER SHOULD HAVE WON THE BRAZILIAN GRAND PRIX. BOTH were quick enough. The faster of the two almost managed it despite starting from the pits! The other should have got the job done having started from pole position. But both ultimately failed, to the delight of Ferrari and Sebastian Vettel.

A chronic weakness of the Mercedes Formula 1 car played a part in scuppering star man Lewis Hamilton's chances, despite a stunning recovery drive from that pitlane start, while team-mate Valtteri Bottas paid the price for a long-standing flaw in his competitive make-up, which undid his hopes of a better result once again at the crucial moment.

Bottas is a very talented driver and a hard worker to boot, someone who reviews the details of every race methodically and always tries to learn and improve. That diligent approach has helped him out of a competitive slump since the August break, which dropped him out of title contention and made him look a shadow of the driver that won two of the first nine races.

After qualifying fractionally behind Hamilton at Mexico City, Bottas was fast in every session at Interlagos, and beat Vettel's Ferrari to pole after Hamilton's uncharacteristic crash took one Mercedes out of the fight on the first flying lap of qualifying.

But when Bottas sits down to review the Brazilian GP, he will surely regret that he did not do more to fend off Vettel's successful challenge at the start of the race. Firstly, he could have done with making a better getaway. Bottas lost traction as the cars accelerated through the gears on the short run to the Senna S, which made him vulnerable to attack.

"The issue was the initial wheelspin," explained Bottas. "As soon as I started to release the clutch I broke the traction. I had wheelspin and a poor getaway. I was trying to cover the inside, but looking in the mirror I couldn't see Seb anywhere. I was guessing he would come inside, and he did."

Vettel used his superior traction to edge alongside as they approached the first left-hander, but his own start wasn't perfect and he only had his Ferrari partly alongside as they braked for the turn.

"Initially I had a very good launch and I thought, 'I got this'; then I was maybe a bit too greedy spinning up the wheels a little bit, losing some momentum on Valtteri," Vettel said. "I looked over and saw he was still struggling and gained a bit on the second

phase to get momentum into the first corner. I knew I had to go for it — there was a little bit of a gap and I went for it. It was important."

Bottas elected not to brave it with Vettel and hold on around the outside through Turn 1, which would have given the Mercedes the inside line for the second part of the S and a chance to fight back. Instead, Bottas conceded position and slotted into second place, a decision that effectively settled the race in Vettel's favour.

"With a good start it would have been possible to keep the lead because our pace was pretty similar," Bottas added. "Being first out of Turn 1/2 would have been quite a different race. But if and if..."

During his fine formative seasons with Williams, a tendency to be overly tentative on the first laps of races was the chief weakness that stood out for Bottas. He even admitted at the end of last year that it was an area in which he could "definitely still improve", in terms of finding the right balance between attack and defence at that most crucial phase of races.

This season has been a mixed bag again in this regard. He nailed it — with help from a tow and long run to the first corner — to beat both Ferraris to victory in Russia, and did well again (a little too well many rivals felt) off the startline to win in Austria. But in Spain he was caught in two minds under pressure at Turn 1 and ended up in a three-way collision with Kimi Raikkonen and Max Verstappen, and was fortunate to get away with more contact with Raikkonen at Turn 2 in Azerbaijan, having left his nose in trying to defend position.

The aggressive decisiveness displayed so regularly by Red Bull drivers Verstappen and Daniel Ricciardo in such circumstances further highlights the shortcomings Bottas still has in this regard. He can still be considered a slightly soft touch in wheel-to-wheel battle. You can bet both Verstappen and Ricciardo would have toughed it out with Vettel through Turns 1 and 2 had they been in Bottas's shoes.

Mercedes team boss Toto Wolff admitted Bottas still lacks a bit of what he describes as a "killer" instinct compared with his "rock and roll" team-mate Hamilton. >>



Vettel seized the initiative into the first corner



Hamilton charged up the field, but lost just a bit too much time in traffic

COATES/LAT



“Valtteri had a solid race,” was Wolff’s diplomatically expressed verdict. “He lost it at the start. The initial getaway was good, but there was too much wheelspin through the gears. He’s not very happy about the performance. He’s not satisfied, because it was difficult for him to shine. He needs to recover in Abu Dhabi and start fresh next season.”

The race at the front descended into stalemate after the initial battle between Bottas and Vettel. Bottas was only three hundredths per lap slower on average than Vettel over the 20 laps of proper racing they did through the first stint on the super-soft tyre, and only four hundredths per lap slower on average over the 42 comparable laps they each managed on the soft compound in the second half of the race.

The pitstop phase at the end of the first stint presented Bottas with his only other realistic chance of denying Vettel victory. Mercedes attempted to jump the Ferrari by calling Bottas in before Ferrari had a chance to service Vettel first, at the end of lap 27 of 71.

Bottas got close as the Ferrari emerged from its reactive pitstop at the end of the following lap, but Vettel made it into Descida do Lago still ahead as they finished the first sector of lap 29.

“Our undercut was a little move of desperation,” said Wolff. “We knew we lacked half a second, but nevertheless we gave it a go and the result was as expected.”

“Bottas paid for the Mercedes pitstop being slower than Ferrari’s”

It’s possible Bottas might have challenged Vettel into Descida do Lago, had the first sector of Bottas’s out-lap not been half a second slower than Vettel’s. Bottas went fastest of all through the middle sector of his out-lap – four tenths quicker than Vettel managed – and did a personal best in the third, but he paid for Mercedes’ stop being 0.6s slower than Ferrari’s.

“Pace-wise it was very, very close,” reckoned Bottas. “We were trying to put a lot of pressure on Seb, especially in the pitstop, but it was not quite enough. I got close after he came out of the pits, just not quite enough to try to overtake.”

“I’m definitely disappointed after a good day yesterday, and it’s obviously not so good for me in the battle for second place in the championship. We need some miracles in Abu Dhabi.”

Third-placed Raikkonen wasn’t fast enough on a

“tricky” set of super-soft tyres through the first half of the race to pose any real threat to the top two, slipping more than four seconds behind Bottas and out of contention before the pitstops, while Verstappen burned his tyres up in vain pursuit of the second Ferrari, unable to perform miracles in the face of a half-second engine deficit, exacerbated by the need to run the Renault turbo at reduced speed to protect reliability.

So, it fell to last-starter Hamilton to attempt a miracle of his own in hope of somehow denying Vettel victory.

QUALIFYING



AFTER AN INCREDIBLY CLOSE FINAL PRACTICE SESSION ON Saturday morning, where the Mercedes and Ferrari drivers were blanketed by less than six hundredths of a second, Formula 1 braced itself for a nail-biting four-way shootout for pole position in qualifying for the Brazilian Grand Prix.

Then something highly unusual happened. Newly minted four-time world champion Lewis Hamilton crashed – on his first flying lap of the session. Hamilton turned in to the high-speed right-hander at Ferradura and everything seemed under control, until the rear of his Mercedes broke away suddenly mid-corner and pitched him hard into the barriers.

Hamilton sat still in his broken car for some time, seemingly struggling to compute that a driver of his extraordinary powers had suddenly been recalled to the mortal realm. He eventually emerged unscathed, save for a bruising to his ego. Hamilton admitted he'd been “taken by surprise” at the W08's floor bottoming out over the bumps on cold tyres and losing downforce.

“These sort of things happen,” he said. “I hadn't gone in there any quicker than before, but it's my fault and I should take full responsibility. It's less painful as the championship is done, but

I still feel it just as much. I take a lot of pride in my commitment and how I drive.

“I haven't made any mistakes all year and it's been a long time since I've put the car in the wall. But it happens. I'm human still. Shit happens. Once it happens, there's no point dwelling on

“It's been a long time since I've put a car in the wall”

Lewis Hamilton

it. All I can do is keep my head high and move forwards.”

Hamilton's Q1 exit cleared the way for team-mate Valtteri Bottas to battle the Ferraris single-handedly for pole, and Hamilton was delighted to see Bottas was more than up to the task.

Bottas has endured a slump in form since the summer break, but he qualified strongly in Mexico last time out and shadowed Hamilton closely again during Friday practice in Brazil, before narrowly (by 0.003s) topping final practice. He was less than half a tenth away from being fastest in Q1, beaten by Kimi Raikkonen, then narrowly trailed Sebastian Vettel in Q2 and after the first runs in Q3. But Vettel failed to improve on his final run in Q3, after he “chickened out” on the brakes at the Senna S.

Bottas found 0.120s to beat Vettel to top spot by just 0.038s, with a best lap of 1m08.322s. Bottas whooped with delight over the radio, this result a panacea for his recent struggles and a boost for his Mercedes team after some of them were robbed at gunpoint outside the circuit on Friday night.

The second Ferrari of Raikkonen fell away in Q3, ending up third quickest, just under two tenths slower than Vettel, while Max Verstappen's fourth-placed Red Bull was the only other car to lap below 1m09s. The Mexican GP winner revealed that the Renault engine cost him “half a second” on the straights in Brazil, accounting for most of the 0.603s deficit to pole.



Vettel and Bottas soon pulled away from the chasing pack, but the Mercedes man could not find a chink in the Ferrari's armour

After crashing out of qualifying spectacularly on Saturday, Hamilton said he headed into Sunday's race focused only on “redeeming myself”. He certainly managed that, making full use (for the first time this year, he claimed) of the fresh engine Mercedes fitted to his car overnight to recover to fourth, finishing less than 5.5s shy of victory.

“For me it was the best fourth place I've ever seen!” enthused Wolff. “If you consider starting from the pitlane and ending up 5.5s behind the leader, it's quite an astonishing drive.”

First-lap incidents that eliminated Stoffel Vandoorne, Kevin Magnussen and Esteban Ocon, as well as severely delaying >>

“THE FERRARIS ARE BADLY DISCOMBOBULATED”



Turns 6-7



WATCHING FROM THE OUTSIDE OF THE SWEEPING TURNS 6 AND 7 during opening practice, I'm impressed by just how much speed the two Red Bulls carry through that sequence by taking a tighter line. Max Verstappen and Daniel Ricciardo are clearly not as wide as the Ferraris or Lewis Hamilton. Valtteri Bottas is the only other driver to prefer taking a tighter line through there.

An even closer look at the Ferraris suggests that the team is running a lower rideheight than many rivals, evidenced by the sheer quantity of sparks shooting out of the underfloor area. The cars are badly discombobulated by kerbs, too, particularly at the rear, which doesn't settle once it has that little kerb strike in the way the Red Bulls quickly get their body movements in check.

Still, there's no question that when it comes to these high-speed corners, there's a gulf between the top three cars – Mercedes, Ferrari and Red Bull – and everybody else.

That said, the McLaren in the fast stuff looks just as spectacular. Watching from Turn 6, looking head on as the cars approach you and turn into the corner, you can appreciate how aggressive certain drivers are on turn-in. Although Fernando Alonso's style is calmer than it was during the Michelin days, he is still more elbows and shoulders than anybody else into these kind of corners. A lot of other drivers are gentler with the wheel, but he just muscled the car – and it responds. That's the impressive thing.

One of the beauties of watching the first session of a grand prix weekend trackside is that it makes you appreciate how the rookies cope with a track that's new to them. Stoffel Vandoorne was a case in point at Interlagos this weekend.

Within a handful of laps, he looked completely comfortable with the circuit. That's a sign of the confidence he has built in the second half of the season. He is gentler with the wheel compared with Fernando, and doesn't try to force the car in the way his team-mate does. It's a style thing, though, and it doesn't necessarily reflect in terms of lap time.

KARUN CHANDHOK



Turn 6 was a great place to watch during FP1



Ricciardo, Pascal Wehrlein and Romain Grosjean, helped Hamilton quickly up to 14th by the end of the second lap. When racing got under way properly at the end of lap five, after a safety car period to clean up the mess, Hamilton made short work of passing Brendon Hartley, Lance Stroll, Marcus Ericsson, Pierre Gasly and Carlos Sainz Jr.

It took a bit longer to clear Nico Hulkenberg's Renault, Sergio Perez's Force India (which put up a spirited if futile defence) and the race-long Felipe Massa/Fernando Alonso duel, but by the time Hamilton reached Descida do Lago on lap 21, he was up to fifth, trailing Vettel by a little over 17s, with 50 laps to run.

Having started on the soft tyre and run a longer first stint than the leaders, Hamilton made his own stop at the end of lap 43 and fitted the faster super-soft tyre. Hamilton now had 28 laps in which to charge for victory.

At times, he was lapping a second faster than the leaders. He cleared Verstappen's hobbled Red Bull without too much difficulty to move up to fourth with fewer than 12 laps to go, but Hamilton came unstuck when he reached the back of Raikkonen's Ferrari in the closing stages.

Hamilton felt he was quickest by a "long way" in this race, and probably would have won easily had he started on pole. His pace on the soft tyre was prodigious all weekend, but his hopes of a podium, or even a sensational victory, were thwarted in part by the Mercedes W08's weakness in traffic.

Hamilton lost crucial time stuck behind slower cars, such as Stroll's Williams, during lappery – regularly understeering wide through corners as he made his way through. Hamilton then struggled to follow Raikkonen's Ferrari at the end as the

Vettel celebrated his win in fine style, and is now close to securing second in the standings



Mercedes' super-soft tyres gave up the ghost.

If the W08 had the SF70H's capacity for following other cars without damaging the tyres so badly, perhaps Hamilton could have achieved more. Had Bottas got as close to Vettel as Hamilton got to Raikkonen, perhaps he could have achieved more too.

Driver-turned-pundit Jacques Villeneuve called Bottas's performance "embarrassing" when judged against Hamilton's remarkable charge. That's perhaps a bit harsh, but certainly Hamilton's star show put Bottas very much in the shade.

"When we discussed it in the morning, what we deemed a realistic target [for Lewis] without the safety car was P4," reckoned

Bottas knows a good opportunity has slipped away, as Vettel celebrates his fifth victory of 2017

Wolff. "We had the safety car, so that helped us a little bit, but the [pace] gap to the Ferraris was too close to have really achieved more.

"I think a win would have been possible; Lewis was the quickest guy out there, but you must also consider that Sebastian was managing the pace at every time of the race but the last laps, so we haven't probably seen a real race."

Vettel claimed he'd been pushing "flat out all the way" on the podium, and later suggested Hamilton was no real threat, instead benefiting from that alternative tyre strategy being better suited to Sunday's super-hot track conditions. Vettel also argued Bottas had help from a race-long tow, while Vettel's Ferrari suffered for a lack of straightline speed.

"If you are fair, we are losing on the straights and that was enhanced with the tow — we were half a second quicker in the middle sector but losing it on the straights," Vettel said. "It was very close. It's not the first time this year that a mirrored strategy has some advantages. It is not attractive starting in front, but can be attractive starting from where he [Hamilton] has. The track ramped up at the end, so the super-soft was the faster tyre."

Ultimately, it would have been a real shock had Hamilton — who thought he'd finish "somewhere around fifth or sixth" before the start — somehow stormed through from the pitlane to win this race, and we'll never know how much, if any, pace Vettel held in reserve in case Hamilton somehow made it up to second.

The Mercedes driver who lost the most realistic chance of winning the Brazilian GP was Bottas, who has clearly improved markedly of late, but still has plenty of work to do to overcome his residual weaknesses and become a true match for the very best drivers on the current grid. ❄



Villeneuve hits out at 'embarrassing' Bottas pace

VALTTERI BOTTAS'S PERFORMANCE in the Brazilian Grand Prix was "embarrassing" and the level of a "number two" driver, according to 1997 Formula 1 world champion Jacques Villeneuve.

Bottas has had a tough time since the August summer break, but built on an encouraging qualifying performance last time out in Mexico to grab pole in Brazil, after Mercedes team-mate Lewis Hamilton crashed out in Q1.

But the race was underwhelming for Bottas, who lost out to Ferrari's Sebastian Vettel on the first lap in Brazil and couldn't recover.

Bottas crossed the line 2.8 seconds adrift of Vettel, but only 2.7s ahead of Hamilton, who started from the pits.

"When you see what the Mercedes was capable of, you just have to look at Lewis and Bottas wasn't up to pace," Villeneuve told Autosport. "Lewis finished around three seconds behind him when he started from the pits.

"It's embarrassing for Bottas. He simply is not on the pace of Hamilton. It's been like that all year. That's his level. Which is a good number two."



Renault struggles hold back Red Bull

AFTER DOMINATING THE Mexican Grand Prix so impressively, Max Verstappen was never able to properly challenge Ferrari and Mercedes for victory in Brazil.

He felt he was faster than Kimi Raikkonen through the first stint, but trying to make up for what he estimated to be a half-second deficit from the Renault engine took too much from the tyres.

Verstappen ended up making an extra pitstop late-on and finished a distant fifth, while team-mate Daniel Ricciardo recovered from a grid penalty and getting spun around on lap one to salvage sixth.

Red Bull boss Christian Horner reckoned the engine-dependent nature of much of the Interlagos circuit, coupled with being forced to run the Renault engine in conservative modes to protect fragile reliability, held the team back.

Although annoyed that the lack of engine performance hampered Red

Bull's bid for another podium finish, Horner admitted recent reliability problems, and a shortage of parts, meant it made little sense to push things to the limit.

"We've run pretty conservatively engine-wise," said Horner. "I think after all the problems it was perhaps the more prudent approach to the race. It's very power sensitive here — more so than Mexico. There's a lot more full-throttle here than there is in Mexico."

Renault boss Cyril Abiteboul said it was "bitter" to have to sacrifice performance in Brazil.

"It's not a nice situation to be in — everything was settled after the first lap," he said. "Actually it's a bit bitter because we know there is much more potential.

"We just need to make sure it doesn't happen again and that we don't have to choose between performance and reliability. If we want to race in F1, we need both."



Honda deficit is 'worrying for Toro Rosso'

FERNANDO ALONSO BELIEVES Honda's new 2018 partner team Toro Rosso should be concerned by the lack of power displayed by the Japanese power unit in Brazil.

McLaren driver Alonso spent a big part of the race behind the Mercedes-powered Williams of Felipe Massa (below). Despite getting within DRS range, Alonso was unable to pass.

Alonso said his rivals "must be 40 or 50 km/h" up when running behind him with DRS, and labelled Honda's lack of power "alarming" and a warning for Toro Rosso.

"The lack of power was amazing; the lack of speed was alarming," said Alonso, who described it as "the same" as in Mexico.

"I was very, very close to Felipe a couple of times on the exit of the last corner, but even with the DRS he was pulling away. The lack of power is quite worrying for Toro Rosso next year."

Honda F1 boss Yusuke Hasegawa was encouraged by running the current engine at full power with no reliability problems in Brazil.

"We could maximise the current engine performance in Brazil, which

is encouraging," he told Autosport. "From a power point of view, we're a little bit behind the other engines. We are closing the gap, but we're not there yet."

McLaren will switch to Renault engines for next year but, despite Renault's reliability issues and the fact that the French manufacturer had to turn down its engines in Brazil, Alonso said he has no concerns.

"Renault is the best engine company in the last 15 or 20 years," he added. "So I think we should not be worried."





DUNBAR/LAT



SUTTON

Gasly's car breaks down across the finish line

TORO ROSSO DRIVER PIERRE Gasly revealed he "completely lost power" from his Renault engine 200 metres before the finish of the Brazilian Grand Prix.

While team-mate Brendon Hartley retired just beyond half-distance, his car "drinking oil" as it did in Mexico, Gasly crossed the line 12th, but also hit trouble within sight of the flag.

"I knew there was something wrong because every lap they were like 'oil transfer, oil transfer' – and I knew we had the old-spec MGU-K so I was hoping it was going to last until the end," Gasly said. "Two hundred metres before the finish line I was full throttle and I lost

completely the power. I was like 'bup, bup, bup, bup'. I crossed the line I think at 60km/h, and they just told me to park the car."

Toro Rosso became involved in a heated spat with Renault over mounting reliability problems during the Brazilian GP weekend.

After both cars suffered multiple failures in Mexico, they were fitted with replacement MGU-Hs for Brazil, but Hartley's turbo failed in first practice and Gasly's required a double change.

Renault suggested this was something particular to the STR installation, but Toro Rosso hit back, saying it has to reuse old parts thanks to a Renault supply shortage.

Massa stars in Brazil on second send-off

FELIPE MASSA COMPLETED WHAT HE INTENDS TO be his final Brazilian GP with a starring drive to seventh, finishing best of the rest behind the big three teams.

The Brazilian, who announced his intention to retire from F1 for a second time the weekend before his home race, started ninth, but overtook both Renaults and Sergio Perez's Force India on the first lap.

Although overtaken by the recovering Lewis Hamilton and Daniel Ricciardo, Massa jumped Fernando Alonso's McLaren-Honda at the safety car restart, before fending it off for the remainder of the race.

Q&A

PADDY LOWE
WILLIAMS CHIEF
TECHNICAL OFFICER



Felipe wanted to sign off with a good result here. To end it best of the rest seemed a great race from him.

Perfect. We all remember Felipe's first retirement here last year, which was actually very dramatic – you couldn't have scripted a better farewell – but this was actually far better because it was on the basis of a terrific drive.

As you say, best of the rest, and under extreme pressure. He probably didn't have the quicker car overall, but he managed to claim that position by fantastic skill – particularly managing the life of the tyres.

Does it confirm the improvements you've made over the last few races have got you back on track?

I think there are some things we've been doing that have turned a few corners. It was very pleasing to see our pace advantage to Renault, because they really outdeveloped us through the mid-season. We were stronger than Renault today and I think that's come from a number of developments we've done in the last month or so.

What happened with Lance?

The story of Lance's weekend is not great. He had a reasonably good Friday, but FP3 it all went wrong on the first lap. We had a gearbox failure, due to a corruption of the electronic calibration. It selected very low gears at high speed and revved the engine to over 18,000rpm, so the engine is finished! We put in engine number three, but it's down on performance. We're a customer team and it would be our decision to buy another engine. And engines aren't cheap. We looked at it, but the benefit was extremely marginal, if not non-existent.



COTES/LAT

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Grosjean 'struggling to understand' penalty

ROMAIN GROSJEAN SAYS HE IS "struggling to understand" why he was handed a penalty for his clash with Esteban Ocon on the first lap of the Brazilian Grand Prix.

Grosjean lost control of his Haas at Ferradura and hit the Force India, which crashed into the barriers and out of the race. It was Ocon's first retirement in Formula 1, and stewards deemed Grosjean was at fault and handed him a 10-second time penalty and two points on his licence.

Although Grosjean apologised, he believed it was a simple racing incident and reckoned he spun because he had a puncture.

Speaking in a video message shared after the race, Grosjean said: "I'm sorry for the contact with Esteban. I was touched strongly from behind – I believe I had a puncture so I lost the car and he was on the outside.

"It's to me a racing incident. I'm really struggling to understand the penalty. It is what it is and we have to move on."

Ocon, who appeared to lose control on his own trying to pass the Haas around its outside, called the penalty a "small recognition" that he was the innocent party.

"I was ahead at the braking point and he just lost it in the rear and crashed into me," he said. "I blame him, it was his fault."



First-lap collision takes out Vandoorne and Magnussen

FORMULA 1 STEWARDS deemed the three-way opening-lap collision that took Kevin Magnussen and Stoffel Vandoorne out of the Brazilian Grand Prix to be a racing incident.

The crash occurred when Vandoorne's McLaren became sandwiched between the Haas of Magnussen (on the inside) and Red Bull's Daniel Ricciardo (outside) through the second part of the Senna S on lap one.

Contact between

Magnussen's left-front and Vandoorne's right-front corners broke suspension arms on each car. Ricciardo was spun across the bows of both but escaped with a cut tyre, pitted under the safety car and then charged through to sixth.

The crash was investigated after the race and it was ruled that no action was necessary.

"If I'd realised earlier that Ricciardo was on the outside of Vandoorne, then perhaps I'd have given more room," said Magnussen. "But by

the time I saw Ricciardo it was too late."

Vandoorne said his early exit was particularly painful given that he had made an excellent start.

"I had a very good launch," he said. "It was very tight with Esteban [Ocon] and with Romain [Grosjean]. We had a good first corner and then it bunched up.

"Unfortunately, I got squeezed in Turn 2. We were in the middle of a sandwich and there was nowhere to go. I was just a passenger."



GP3 champion Russell 'ready for F1'

MERCEDES PROTEGE GEORGE RUSSELL BELIEVES he is ready to race in Formula 1 in 2018 and is expected to become Force India's reserve driver next season, after making his grand prix weekend debut with the team in Brazil.

The GP3 champion drove Sergio Perez's car in first practice at Interlagos, posting the 11th quickest time, six tenths slower than team-mate Esteban Ocon, who he will drive in place of in FP1 in Abu Dhabi.

The 2014 McLaren Autosport BRDC Award winner also tested for Mercedes in Hungary earlier this year.

"I feel ready for an F1 seat next season," said Russell. "I feel I've been prepared well. The only options [for a race seat] are Williams or Sauber, but we'll see."

Russell wants to use the Force India running to be ready in case another Nico Rosberg-style shock departure frees a seat. "I want to be prepared," he added. "In January, if something happens, I can say I'm the guy ready to make the step."





DRAWING BOARD

BY GIORGIO PIOLA

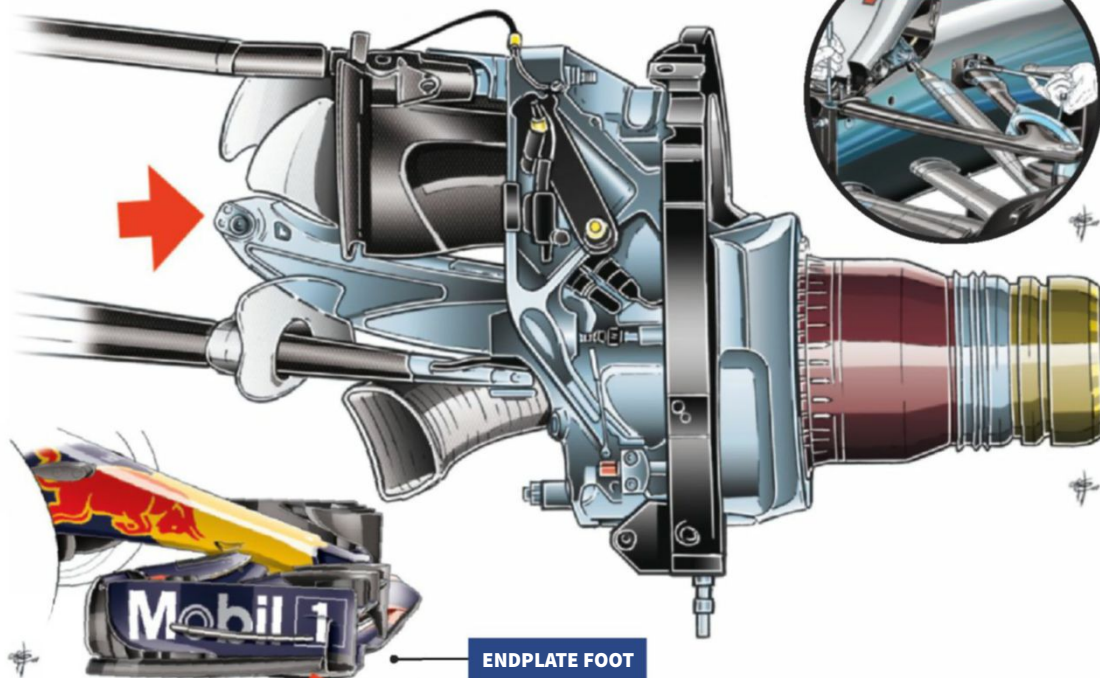
RED BULL AND MERCEDES PLAY WITH THEIR SUSPENSION

In days of old, the front pushrod was mounted fairly simply on the lower front wishbone outboard end, then it moved to the upright and now, as can be seen, it is still upright-mounted but a long way inboard.

This mounting position allows the engineers lots of scope to alter the weight jacking and front rideheight with varying steering lock.

The actual road wheel angle in a high-speed corner is around three degrees; medium-speed six degrees; slow-speed nine degrees; and in a hairpin 12 degrees. So, with this inboard pushrod pickup point effectively altering the front pushrod lengths, the varying steering angle between low-speed and high-speed corners will mean the car will lower itself with increased steering angle, giving more front grip at low speeds.

Red Bull set the trend among the current cars for running high rake (low front rideheight, high rear rideheight) and has revised its outboard front wing endplate



foot to fit with this philosophy. Under braking and mid-corner, when the car is at maximum roll, this area is very close to if not touching the ground, so can generate inconsistent performance.

Red Bull has raised the leading edge of this outer

foot to improve the consistency of the airflow that goes underneath it, which should improve the overall performance of the front wing.

Mercedes has also experimented with its front suspension set-up. Moving the

top wishbone rear pickup point downwards will increase anti-dive support under braking, but too much of this can reduce feedback, resulting in the driver locking the front brakes more easily; too little and the front of the car will move too much under

braking, resulting in having to run higher front rideheights.

Everything on a car is a compromise, and Mercedes was probably experimenting for next year as part of an evaluation of a Red Bull-style high-rake set-up.

GARY ANDERSON

ALONSO'S PADDLES

McLaren has followed the steering wheel clutch paddle design route first seen on the Mercedes, with pockets for the driver's fingers to fit into. These allow that little bit more positional feel during the start phase. Last year, the driver could use both clutch paddles – holding one at the clutch bite point while fully disengaging the clutch with the other. Then they would just release

the fully disengaged paddle, which meant the one that was sitting at the bite point would allow the clutch the correct engagement to get the car off the startline.

This year, the clutch control has to be a single paddle movement controlled by the driver. The longer the stroke and the more feeling the driver has, the easier it will be to find the initial bite point and control the rest of the engagement more delicately, depending on the available traction.

GARY ANDERSON



RENAULT FINESSES ITS BARGEBOARD CONCEPT

In Mexico, Renault introduced the multi-slotted foot on the inner bargeboard, and it has since focused on integrating and optimising that. This has led to another outer component

being added, with small turning vanes between the two. Both will increase the bargeboard's workload, improving its overall effect on the front wing and underfloor.

GARY ANDERSON

**GIORGIO
PIOLA** 



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G5

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-Carbon Fiber accents -Titanium Bezel

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F1/BRAZILIAN GRAND PRIX RESULTS

STARTING GRID

1 Bottas #77
1m08.322s

2 Vettel #5
1m08.360s

3 Raikkonen #7
1m08.538s

4 Verstappen #33
1m08.925s

5 Perez #11
1m09.598s

6 Alonso #14
1m09.617s

7 Hulkenberg #27
1m09.703s

8 Sainz #55
1m09.805s

9 Massa #19
1m09.841s

10 Ocon #31
1m09.830s

11 Grosjean #8
1m09.879s

Race results / 71 laps – 190.092 miles

POS	DRIVER	TEAM	FINISH TIME	LED	TYRES	TIME IN PITS
1	Sebastian Vettel (D)	Ferrari	1h31m26.262s	57	<div><div></div><div></div><div></div></div>	1m17.492s
2	Valtteri Bottas (FIN)	Mercedes	+2.762s		<div><div></div><div></div><div></div></div>	1m17.392s
3	Kimi Raikkonen (FIN)	Ferrari	+4.600s	1	<div><div></div><div></div><div></div></div>	1m18.920s
4	Lewis Hamilton (GB)	Mercedes	+5.468s	13	<div><div></div><div></div><div></div></div>	1m20.460s
5	Max Verstappen (NL)	Red Bull-Renault	+32.940s		<div><div></div><div></div><div></div></div>	1m40.581s
6	Daniel Ricciardo (AUS)	Red Bull-Renault	+48.691s		<div><div></div><div></div><div></div></div>	1m25.488s
7	Felipe Massa (BR)	Williams-Mercedes	+1m08.882s		<div><div></div><div></div><div></div></div>	1m16.994s
8	Fernando Alonso (E)	McLaren-Honda	+1m09.363s		<div><div></div><div></div><div></div></div>	1m17.315s
9	Sergio Perez (MEX)	Force India-Mercedes	+1m09.500s		<div><div></div><div></div><div></div></div>	1m17.473s
10	Nico Hulkenberg (D)	Renault	-1 lap		<div><div></div><div></div><div></div></div>	1m19.582s
11	Carlos Sainz (E)	Renault	-1 lap		<div><div></div><div></div><div></div></div>	1m19.709s
12	Pierre Gasly (F)	Toro Rosso-Renault	-1 lap		<div><div></div><div></div><div></div></div>	1m20.240s
13	Marcus Ericsson (S)	Sauber-Ferrari	-1 lap		<div><div></div><div></div><div></div></div>	1m20.819s
14	Pascal Wehrlein (D)	Sauber-Ferrari	-1 lap		<div><div></div><div></div><div></div></div>	
15	Romain Grosjean (F)	Haas-Ferrari	-2 laps		<div><div></div><div></div><div></div></div>	1m37.599s
16	Lance Stroll (CDN)	Williams-Mercedes	-2 laps		<div><div></div><div></div><div></div></div>	1m44.583s
R	Brendon Hartley (NZ)	Toro Rosso-Renault	40 laps-engine		<div><div></div><div></div><div></div></div>	1m20.943s
R	Esteban Ocon (F)	Force India-Mercedes	0 laps-collision		<div><div></div><div></div><div></div></div>	
R	Stoffel Vandoorne (B)	McLaren-Honda	0 laps-collision		<div><div></div><div></div><div></div></div>	
R	Kevin Magnussen (DK)	Haas-Ferrari	0 laps-collision		<div><div></div><div></div><div></div></div>	

Fastest laps

POS	DRIVER	TIME	GAP	LAP
1	Verstappen	1m11.044s	-	64
2	Hamilton	1m11.845s	+0.801s	63
3	Stroll	1m11.862s	+0.818s	69
4	Ricciardo	1m12.029s	+0.985s	71
5	Bottas	1m12.466s	+1.422s	58
6	Raikkonen	1m12.492s	+1.448s	61
7	Vettel	1m12.539s	+1.495s	63
8	Perez	1m13.052s	+2.008s	61
9	Gasly	1m13.323s	+2.279s	61
10	Alonso	1m13.451s	+2.407s	57
11	Massa	1m13.452s	+2.408s	60
12	Grosjean	1m13.532s	+2.488s	66
13	Sainz	1m13.625s	+2.581s	67
14	Ericsson	1m13.666s	+2.622s	70
15	Hulkenberg	1m13.758s	+2.714s	57
16	Hartley	1m14.658s	+3.614s	29
17	Wehrlein	1m14.812s	+3.768s	60

WEATHER Dry, sunny; air 28C, track 60C WINNER'S AVERAGE SPEED 124.729mph FASTEST LAP AVERAGE SPEED 135.675mph. ● New ○ Used ● Ultra-soft ● Super-soft ● Soft ● Medium ● Hard ● Wet ● Intermediate

3

Raikkonen has claimed a hat-trick of podium finishes for the first time in his second Ferrari stint

4

For the first time, two drivers who have won four or more world titles started a grand prix together

6

This was Alonso's highest grid position in his second stint with McLaren

27

Ocon's record run of consecutive race finishes since his debut came to an end at Interlagos

98

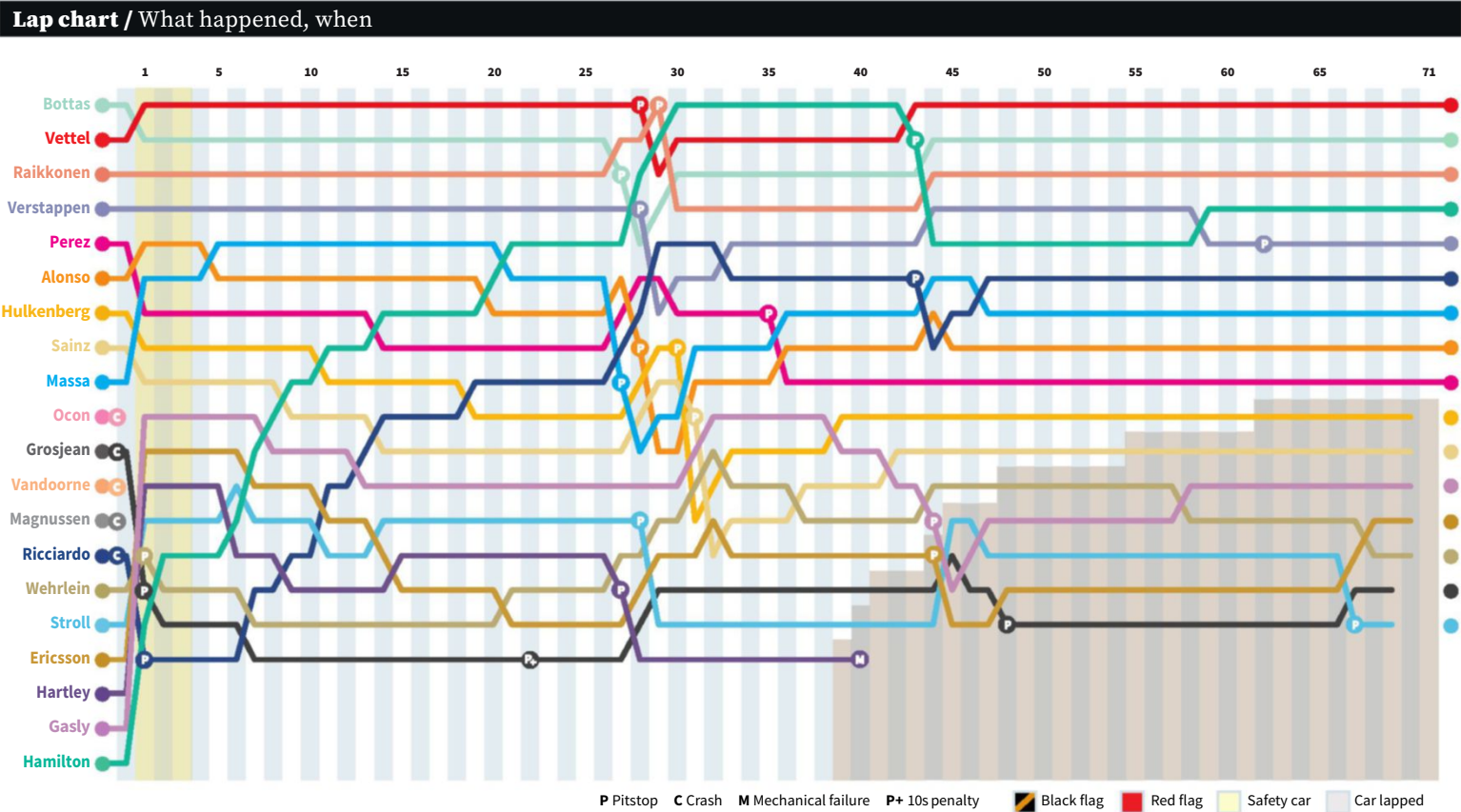
Vettel's 98th F1 podium moves him to fourth in the all-time list, behind only Alain Prost, Hamilton and Michael Schumacher

150

This was the 150th F1 event Hulkenberg has appeared in – 14 of them he drove only during practice

2410

Vettel has broken the 2400-point barrier in F1 – the second after Hamilton to achieve this



12 Vandoorne #2 1m10.116s	14 Ricciardo #3 1m09.330s	16 Stroll #18 1m10.776s	18 Hartley #28 no time	20 Hamilton #44 no time
13 Magnussen #20 1m10.154s	15 Wehrlein #94 1m10.678s	17 Ericsson #9 1m10.875s	19 Gasly #10 1m10.686s	

Qualifying 1			Qualifying 2			Qualifying 3		
POS	DRIVER	TIME	POS	DRIVER	TIME	POS	DRIVER	TIME
1	Raikkonen	1m09.405s	1	Vettel	1m08.494s	1	Bottas	1m08.322s
2	Bottas	1m09.452s	2	Bottas	1m08.638s	2	Vettel	1m08.360s
3	Vettel	1m09.643s	3	Verstappen	1m09.050s	3	Raikkonen	1m08.538s
4	Massa	1m09.789s	4	Raikkonen	1m09.116s	4	Verstappen	1m08.925s
5	Verstappen	1m09.820s	5	Ricciardo	1m09.533s	5	Ricciardo	1m09.330s
6	Ricciardo	1m09.828s	6	Alonso	1m09.593s	6	Perez	1m09.598s
7	Hulkenberg	1m10.078s	7	Massa	1m09.612s	7	Alonso	1m09.617s
8	Perez	1m10.145s	8	Hulkenberg	1m09.726s	8	Hulkenberg	1m09.703s
9	Grosjean	1m10.148s	9	Perez	1m09.760s	9	Sainz	1m09.805s
10	Ocon	1m10.168s	10	Sainz	1m09.768s	10	Massa	1m09.841s
11	Alonso	1m10.172s	11	Ocon	1m09.830s			
12	Sainz	1m10.227s	12	Grosjean	1m09.879s			
13	Vandoorne	1m10.286s	13	Vandoorne	1m10.116s			
14	Magnussen	1m10.521s	14	Magnussen	1m10.154s			
15	Hartley	1m10.625s	15	Hartley	no time			
16	Wehrlein	1m10.678s						
17	Gasly	1m10.686s						
18	Stroll	1m10.776s						
19	Ericsson	1m10.875s						
-	Hamilton	no time						

WEATHER Dry, overcast; air 18C, track 27C



Race briefing

FRIDAY PRACTICE

RUSSELL replaced Perez at Force India
LECLERC replaced Wehrlein at Sauber

GRID PENALTIES

RICCIARDO 10-place penalty for additional power unit element used
HARTLEY 10-place penalty for additional power unit element used
GASLY 25-place penalty for additional power unit elements used
STROLL Five-place penalty for replacement gearbox
ERICSSON Five-place penalty for replacement gearbox
HAMILTON Started from pitlane as car modified while under parc ferme conditions

RACE PENALTIES

GROSJEAN 10-second penalty and two points on licence for causing a collision

SEASON STATS

Drivers' championship

1	Hamilton	345
2	Vettel	302
3	Bottas	280
4	Ricciardo	200
5	Raikkonen	193
6	Verstappen	158
7	Perez	94
8	Ocon	83
9	Sainz	54
10	Massa	42
11	Stroll	40
12	Hulkenberg	35
13	Grosjean	28
14	Magnussen	19
15	Alonso	15
16	Vandoorne	13
17	Palmer	8
18	Wehrlein	5
19	Kvyat	5

Constructors' championship

1	Mercedes	625
2	Ferrari	495
3	Red Bull	358
4	Force India	177
5	Williams	82
6	Toro Rosso	53
7	Renault	49
8	Haas	47
9	McLaren	28
10	Sauber	5

Wins

Hamilton	9
Vettel	5
Bottas	2
Verstappen	2
Ricciardo	1

Fastest laps

Hamilton	7
Vettel	5
Raikkonen	2
Alonso	1
Bottas	1
Perez	1
Ricciardo	1
Verstappen	1

Pole positions

Hamilton	11
Vettel	4
Bottas	3
Raikkonen	1

Qualifying battle

HAM	13	6	BOT
RIC	6	13	VER
VET	14	5	RAI
PER	12	7	OCO
STR	2	16	MAS
STR	1	0	DIR
VAN	3	15	ALO
VAN	0	1	BUT
GAS	0	2	HAR
KVY	1	0	HAR
GAS	0	2	SAI
KVY	6	8	SAI
GRO	12	7	MAG
HUL	2	1	SAI
HUL	16	0	PAL
ERI	7	10	WEH
ERI	2	0	GIO

Free practice 1			Free practice 2			Free practice 3		
POS	DRIVER	TIME	POS	DRIVER	TIME	POS	DRIVER	TIME
1	Hamilton	1m09.202s	1	Hamilton	1m09.515s	1	Bottas	1m09.281s
2	Bottas	1m09.329s	2	Bottas	1m09.563s	2	Hamilton	1m09.284s
3	Raikkonen	1m09.744s	3	Ricciardo	1m09.743s	3	Raikkonen	1m09.326s
4	Verstappen	1m09.750s	4	Vettel	1m09.875s	4	Vettel	1m09.339s
5	Ricciardo	1m09.828s	5	Verstappen	1m09.886s	5	Ricciardo	1m10.244s
6	Vettel	1m09.984s	6	Raikkonen	1m10.117s	6	Alonso	1m10.288s
7	Massa	1m10.102s	7	Ocon	1m10.306s	7	Perez	1m10.322s
8	Vandoorne	1m10.402s	8	Massa	1m10.373s	8	Ocon	1m10.357s
9	Ocon	1m10.454s	9	Hulkenberg	1m10.396s	9	Verstappen	1m10.495s
10	Alonso	1m10.476s	10	Alonso	1m10.655s	10	Sainz	1m10.599s
11	Stroll	1m10.632s	11	Sainz	1m10.685s	11	Vandoorne	1m10.637s
12	Russell	1m11.047s	12	Perez	1m10.695s	12	Massa	1m10.671s
13	Grosjean	1m11.188s	13	Vandoorne	1m10.902s	13	Magnussen	1m10.721s
14	Magnussen	1m11.463s	14	Stroll	1m11.064s	14	Hulkenberg	1m10.743s
15	Sainz	1m11.467s	15	Grosjean	1m11.300s	15	Grosjean	1m10.762s
16	Hulkenberg	1m11.608s	16	Gasly	1m11.422s	16	Gasly	1m10.981s
17	Leclerc	1m11.802s	17	Hartley	1m11.821s	17	Hartley	1m11.085s
18	Ericsson	1m11.898s	18	Wehrlein	1m11.857s	18	Wehrlein	1m11.126s
19	Gasly	1m14.034s	19	Ericsson	1m11.989s	19	Ericsson	1m11.480s
20	Hartley	no time	20	Giovinazzi	1m12.417s	20	Stroll	no time

WEATHER Dry, sunny; air 24C, track 39C

WEATHER Dry, cloudy; air 29C, track 50C

WEATHER Damp/drying, overcast; air 19C, track 25C

In search of perfection

So-so qualifying performances cost three drivers perfect scores this week

By Ben Anderson, Grand Prix Editor

[@BenAndersonAuto](#)

MERCEDES



9 LEWIS HAMILTON
Hamilton's race was a 10 out of 10 effort. He had a new engine, and no need to conserve it, but to finish fourth from a pitlane start, within 5.5 seconds of the winner, was the maximum Mercedes expected. He's marked down for that crash in Q1, which prevented him from dominating this race from the front.

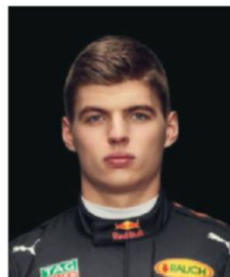


8 VALTTERI BOTTAS
Bottas should have won, but paid for a poor start and being too tentative into Turn 1. Underwhelming Mercedes pitstop also stymied a later effort to counterattack. Hard to know if there was more in the car with Hamilton sidelined in qualifying, but Bottas did beat Vettel to pole, even if Sunday was disappointing.

RED BULL



8 DANIEL RICCIARDO
Seems baffled as to why he suddenly can't get the tyres working properly for one lap in Q3, despite being rapid on Fridays. This is usually a forte of his. Ricciardo was superb in the race, though, showcasing his renowned blend of controlled aggression to recover to sixth after contact on lap one.



9 MAX VERSTAPPEN
Verstappen was wild in practice, but pulled it together when it mattered most in qualifying. Wasn't in the fight for pole, but was well ahead of Ricciardo again. Cut a frustrated figure in the race, where he burned through tyres trying vainly to keep up with the leaders. Lack of power was just too much to overcome this time.

FERRARI



9 SEBASTIAN VETTEL
Vettel executed his race faultlessly, passing Bottas off the line and controlling the pace from the front. The only slight fault is his qualifying effort. Both of Vettel's Q3 laps were scruffy, so he loses a mark for giving away the four hundredths that would have put him on pole and made for a perfect weekend.



8 KIMI RAIKKONEN
Was faster than Vettel in FP3 and quickest of all in Q1, but fell away in Q2 and couldn't quite get it back in Q3, finishing two tenths off pole. That's one mark lost. Struggled in the first stint of the race, which accounts for the other mark, but did better in the second. One of his better displays overall.

FORCE INDIA

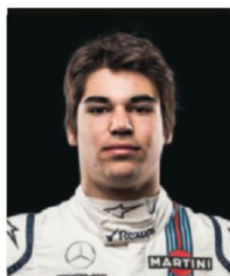


8 SERGIO PEREZ
Reckoned this was his best qualifying effort for a while, having struggled to maximise the car since the major Singapore update. It's difficult to disagree given Perez topped a tight midfield battle. Got bullied by Alonso on lap one and couldn't find a way to recover, though he almost repassed Alonso at the end.



5 ESTEBAN OCON
A disappointing weekend for Ocon, who was within a tenth of Perez in Q2 and less than seven hundredths away from making Q3, but just couldn't get hooked up through sector two as he needed. Blamed Grosjean for his retirement, but it looked as though over-ambition had already got the better of him.

WILLIAMS



4 LANCE STROLL
Stroll is not yet able to deliver his full pace immediately in qualifying, so losing FP3 to a broken gearbox hurt. Had to revert to an older engine too, but still shouldn't have been a second off Massa in Q1. Race was disappointing as well – stalled at the start and got stuck behind Grosjean, before flatspotting a tyre.



9 FELIPE MASSA
Massa's race was a flawless 10 out of 10. Aced the start, gained three places on lap one, and resisted enormous Alonso pressure after jumping the McLaren at the restart. This was Massa at his best. Loses a mark for being tardy in Q3, after becoming distracted by a needless blocking spat with Sainz and almost crashing.

McLAREN



6 STOFFEL VANDOORNE
Vandoorne's car was finally matched to Alonso's aero spec, but he couldn't live with Alonso in qualifying, saying he couldn't get the tyres to work, particularly in Q2, which costs him marks given he should have made Q3. Almost survived the melee at Turns 1 and 2, before an accidental hit ended his race.



9 FERNANDO ALONSO
Alonso qualified very strongly again, perhaps a bit better than expected given Honda's power deficit, but there's an argument to say he should have beaten Perez having been sixth fastest in Q2. Alonso was at his relentless best in the race. It's hard to see how he could have done much more.



TORO ROSSO



7 PIERRE GASLY
For Gasly to be behind a Sauber and out in Q1 looked bad, but he took wing off in readiness for Sunday, knowing he faced a hefty grid penalty, so it's not a fair comparison. Reckoned this grand prix was his best yet. The start and first lap was excellent, but he struggled to hang on to the tyres in the first stint.

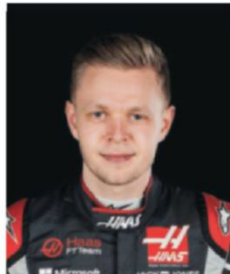


7 BRENDON HARTLEY
Hartley was the Toro Rosso driver to squeak into Q2, but his focus was on the race so he didn't bother to set a time having made it through, so judging his performance is difficult. Stroll stalling and an unplugged radio made the early running tough, but was recovering well when engine problems stopped him yet again.

HAAS

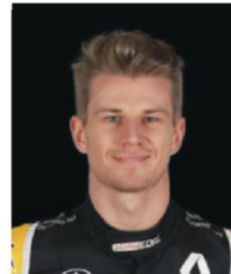


6 ROMAIN GROSJEAN
Qualifying was the main highlight for Grosjean, who was only 0.112s away from Q3 despite Haas struggling for pace in practice. The first-lap spin and bump with Ocon was clumsy, but probably not worth a penalty given Ocon already seemed out of control. Floor damage then made it difficult to achieve further progress.



5 KEVIN MAGNUSSEN
Magnussen was close to Grosjean until the final runs in Q2 – only a tenth behind until Grosjean pulled out a special lap. Magnussen admitted he struggled to cope with the car's rear instability in the same way. After a 'perfect' race in Mexico, this one was over almost immediately, thanks to clumsy contact with Vandoorne.

RENAULT



8 NICO HULKENBERG
A pretty solid weekend from Hulkenberg. Admitted to leaving a bit of time on the table in Q3, so should have beaten Alonso, and didn't make a great start in the race. But was quicker than Sainz throughout and it's hard to see what more he could have done, given the need to detune the engine for reliability.



7 CARLOS SAINZ JR
Sainz was pleased to make Q3 for the third time out of three with Renault, but is still leaving some margin while he learns his new car. Lacked a small but crucial bit of pace compared with his team-mate in qualifying and the race, partly due to lap-one floor damage, but was at least closer than in Mexico.

SAUBER



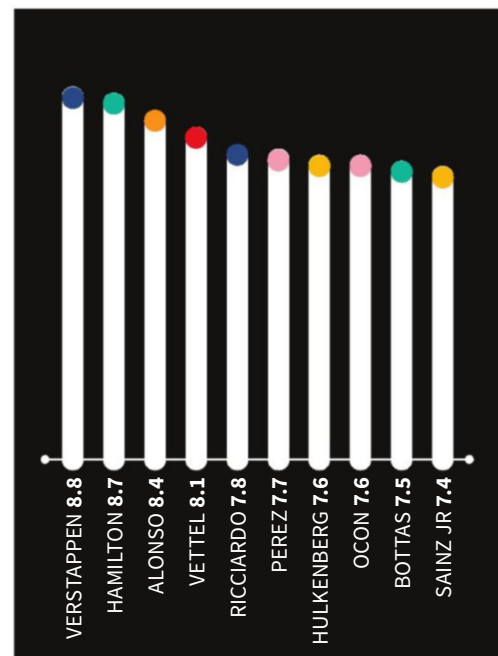
7 MARCUS ERICSSON
Has been the more impressive Sauber driver of late, but was behind Wehrlein in FP2 and FP3, and two tenths off in qualifying, even though Wehrlein missed FP1. Struggled with the balance on the soft tyre and had to let his team-mate past, but came alive on the super-soft late-on. A solid effort.



7 PASCAL WEHRLEIN
With new aero and suspension parts fitted in lieu of a chassis change, Wehrlein looked more like the driver Mercedes rates – only 0.053s from Q2 and ahead of a Toro Rosso and a Williams. His race was spoiled by a big moment avoiding the Turn 2 mess, and an attempt to do 70 laps on one set of tyres.



TOP 10 AVERAGE RATING





Marquez marks place in history

Marc Marquez joined an elite club of premier class champions with his fourth MotoGP crown

By Jamie Klein, MotoGP Correspondent

[@JamieKlein_](#)

A title on the line, controversy, late drama and a last-lap pass for the win. With this, the Valencia Grand Prix was a fitting finale to an incredible MotoGP season.

But in the end, there was no stopping Marc Marquez being crowned champion for a fourth time in five seasons, and becoming the youngest rider to reach such a milestone.

At just 24 years old, Marquez joins a highly exclusive club of four-time

premier class champions, which also includes Geoff Duke, John Surtees, Mike Hailwood and Eddie Lawson. Only Giacomo Agostini, Mick Doohan and of course Valentino Rossi have won more, and right now you'd be brave to bet against the Spaniard eventually going on to surpass them all.

In many ways, Valencia was a typical Marquez weekend. He crashed twice — once in Friday practice and then again in qualifying, which was his 27th fall of the season. And he very nearly made it a hat-trick late on in the race just as he seemed to have the title secured.

But even if Marquez hadn't managed to perform an outrageous save and keep

Marquez set pole and led the early laps, then survived a near-crash on lap 24

his works RC213V bike upright, his sole challenger Andrea Dovizioso didn't have the required pace to snatch the title away.

Dovizioso put up a brave fight, but had to recover well from a sub-par qualifying that left him starting down in ninth for a race he had to win to have any chance at all of beating Marquez. In the event that the Italian did pull off an unlikely victory at Valencia — a track ill-suited to the Ducati — his pre-weekend 21-point deficit meant he needed Marquez to finish no higher than 12th, which was always going to be unlikely barring a crash or a mechanical failure. Dovizioso was also going to require assistance from team-mate Jorge Lorenzo —



LAT IMAGES

something of a Valencia specialist and by some distance Ducati's most competitive qualifier in fourth place – to deny Marquez.

The early stages of the race looked more promising for Dovizioso, as he quickly moved up to fifth behind the leading quartet of polesitter Marquez, Tech3 Yamaha's Johann Zarco, the second works Honda being ridden by Dani Pedrosa and Lorenzo, settling into a rhythm behind the three-time champion.

But as the race progressed, it became clear that Lorenzo's presence was becoming less of a benefit than a hindrance, as Dovizioso climbed all over his rear wheel and looked for a way past.

As a result, and for the second race in a row, Ducati felt the need to intervene with the coded message – 'Suggested Mapping 8' – wired to Lorenzo's dashboard. When this attempt went unheeded, a pitboard with the rather more blunt instruction of '-1' was shown to him a few laps later. Still, to the astonishment of many observers who were quick to denounce his apparent indifference to his team-mate's quest,

Lorenzo refused to budge.

But for all the controversy, it wasn't until the two-thirds point of the 30-lap race that it really came alive.

Marquez had let Zarco go through into the lead on lap four, but after 15 laps of sitting patiently behind the French rookie, he succumbed to temptation and began to attack, eventually finding his way past at the final corner at the end of the 23rd lap. But in his desperation to get away and build a cushion, Marquez outbraked himself into Turn 1 at the start of the next tour, lost his front but saved what would have been crash number 28 with his left knee and forearm.

For a fleeting moment, it looked for all the world like he might just have blown it. But this wasn't quite the lifeline Dovizioso needed to keep his rapidly fading challenge alive, so far ahead of the rest of the pack were the leading five by this stage in proceedings. Instead, Marquez rejoined fifth, and that became third when, on lap 25, Lorenzo crashed at Turn 4 and then Dovizioso did likewise moments later at Turn 8.

Amid all that drama, it was easy »



GOLD AND GOOSE/LAT

MARQUEZ'S MOMENT

MARC MARQUEZ'S TITLE-WINNING SEASON had a rather unusual trajectory. Despite being the reigning champion, he didn't start as favourite (that tag went to Yamaha's new recruit Maverick Vinales) and after crashing twice in the opening five rounds, the Honda rider's chances seemed remote.

It wasn't until the second half of the season got underway at Brno, after a productive in-season test at the Czech track, that he turned the tide.

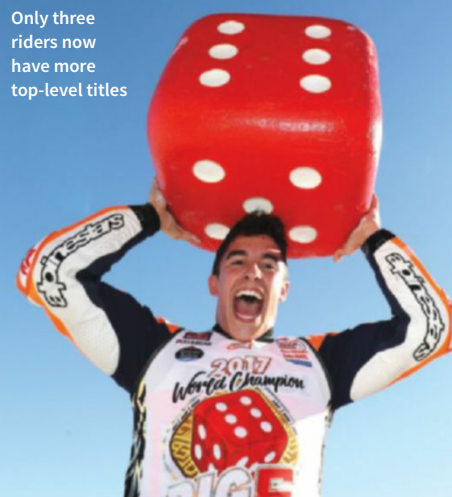
From there, Marquez was always a factor, scoring another four wins (to end the year with a total of six), and only missing out on podiums due to engine failure at Silverstone, and at Sepang, where his need to protect his title advantage led him to fewer risks than he may have taken otherwise en route to fourth.

Despite such a strong end to the campaign, Marquez revealed just what a toll his difficult start to the year had taken on him physically, and paid tribute to his faithful crew – led by long-time chief mechanic Santi Hernandez – for helping him turn things around.

"It has been a really tough season," he said. "Many ups and downs, many difficult moments, many good moments. The first part of the season was especially very hard. After [Barcelona in June], I was with my hairdresser and she said, 'What is going on, what happened? You are losing hair', and it was true. I went directly to [MotoGP medical director] Dr Charle and he said, 'You need to change your approach to racing because you have too much stress inside your body'.

"When you have such a good team around you, it helps a lot. You are in a hole, but you can go out and be better and better. This second half of the season has been perfect."

Only three riders now have more top-level titles



MICHELIN

to overlook a thrilling dice going on for victory that had developed between Zarco, still chasing his maiden MotoGP win, and wily veteran Pedrosa, whose unorthodox choice of medium rear tyre brought him right into contention after Marquez's scare. Zarco — on his conventional strategy of two softs — did well to hold on until the final lap, but couldn't prevent Pedrosa from slipping up the inside at Turn 1 and going on to claim a well-judged second victory of the year by just over three tenths of a second.

A further 10s back, Marquez crossed the finish line in third, giving him the 2017 championship by a final margin of 37 points over the non-scoring Dovizioso. Speaking after his triumph, Marquez admitted he had been unable to control his natural urge to fight for every position, even with a title on the line — and explained that once he had cleared Zarco, he felt nervous about a possible counter-attack, leading directly to the moment that so nearly ended in disaster.

"The easiest strategy was just finishing the race, but it was so difficult to control myself from the beginning," he said. "I [didn't] start so bad, then I saw that Zarco was behind. I let him pass because I knew that he would try to push.

"When I was behind him I was much faster and even when I was losing concentration, I was doing stupid mistakes because I was not riding 'my way'. Then he did a mistake and I overtook, but I saw he was aggressive. For that reason I made the mistake in the first corner, because when I passed him in the last corner I was scared — I felt like his bike was close [and I] braked later to try to avoid a critical moment."

Despite missing out on the title, Dovizioso can still reflect on a job well done this season. He surpassed all expectations with six victories in what was Ducati's best season since the halcyon days of Casey Stoner (who scored 10 in 2007 and six in 2008). The 31-year old was humble in defeat, and was quick to point out that Lorenzo's refusal to heed Ducati's instructions in no way harmed his chances.



"I didn't know about the messages," Dovizioso said. "At the beginning I was a little bit faster in some parts of the track, but on the last part of the track I was so slow. During the weekend I lost a minimum of three tenths every lap from Jorge. In the race it was much better, but still I was slower than him. In the middle of the track I was able to overtake him, but I couldn't find a way, and after a few laps he started to ride in a better way and I had the same pace as him.

"I was completely on the limit, like him. We pushed 100% from the beginning together. We had the same pace, we were pushing over the limit for all of the race. That's why I think Jorge crashed and I crashed."

While Honda celebrated the title, and Ducati's title bid crumbled in dramatic style, Yamaha's season ended in subdued fashion, even if Ducati's double DNF served to hand it the runner-up spot in the constructors' standings.

After another lacklustre qualifying in which Rossi placed seventh and Maverick Vinales a miserable 13th, Yamaha took the gamble of putting both its works riders back on the 2016-spec machine

Lorenzo appeared to defy Ducati's call to let Dovizioso go by

that Zarco — and before his illness, Jonas Folger — has put to such good use on a number of occasions this year for Tech3.

It didn't pay off, though, as Rossi was beaten by Suzuki rider Alex Rins in the battle for fourth and Vinales, whose last victory at Le Mans in May now seems an awfully long time ago, trailed home 12th.

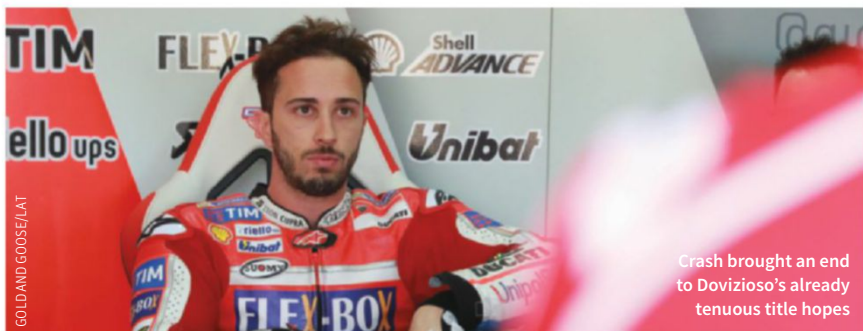
While Rossi reckoned he'd probably have finished fifth regardless of what chassis he used, such was the limited time he had to set up the older-spec bike in morning warm-up, Vinales was more enthusiastic about the last-minute switch, but hindered himself with a crash minutes into the warm-up. It remains to be seen whether the 2016 bike, instead of the 2017 variant that has given Rossi and Vinales many headaches this year, will provide the basis for next year's M1, and also what Tech3 will be provided with for the 2018 campaign. Convention would dictate that the satellite squad gets given the up-to-date bike at the end of each year, but Zarco's recent strong run of form means matters aren't quite as straightforward this time.

While Yamaha faces a long winter of working out where exactly it went wrong, its arch-rival Honda can celebrate another season of success thanks to the sheer virtuosity of leading light Marquez. It's almost impossible to overstate how much of its recent success has been down to the newly minted four-time champ, who has once again stood out, well above his fellow Honda stablemates.

As for Dovizioso, it must be hoped that — unlike Nicky Hayden after his 2006 title win — he gets another shot at title glory in the future. A tremendous campaign built not just on consistency but also an exceptional win tally suggests he will. After all, Dovizioso has proven this year that he can be a match for the very best MotoGP can offer, Marquez included, even if he and Ducati fell heartbreakingly short of the ultimate prize. ❦



Yamaha made a late call to use its older bike



Crash brought an end to Dovizioso's already tenuous title hopes

RESULTS ROUND 18/18, VALENCIA, NOVEMBER 12 (30 LAPS – 74.658 MILES)

POS	RIDER	TEAM	TIME
1	Dani Pedrosa (E)	Honda	46m08.125s
2	Johann Zarco (F)	Tech3 Yamaha	+0.337s
3	Marc Marquez (E)	Honda	+13.567s
4	Alex Rins (E)	Suzuki	+17.601s
5	Valentino Rossi (I)	Yamaha	+13.817s
6	Andrea Iannone (I)	Suzuki	+14.516s
7	Jack Miller (AUS)	Marc VDS Honda	+17.087s
8	Cal Crutchlow (GB)	LCR Honda	+17.230s
9	Michele Pirro (I)	Ducati	+25.942s
10	Tito Rabat (E)	Marc VDS Honda	+27.020s
11	Bradley Smith (GB)	KTM	+30.835s
12	Maverick Vinales (E)	Yamaha	+35.012s
13	Danilo Petrucci (I)	Pramac Ducati	+38.076s
14	Karel Abraham (CZ)	Aspar Ducati	+41.988s
15	Hector Barbera (E)	Avintia Ducati	+47.703s
16	Loris Baz (F)	Avintia Ducati	+47.709s
17	Michael van der Mark (NL)	Tech3 Yamaha	+52.134s
R	Pol Espargaro (E)	KTM	25 laps-accident
R	Andrea Dovizioso (I)	Ducati	25 laps-accident
R	Jorge Lorenzo (E)	Ducati	24 laps-accident
R	Sam Lowes (GB)	Aprilia	22 laps-accident
R	Alvaro Bautista (E)	Aspar Ducati	14 laps-accident
R	Scott Redding (GB)	Pramac Ducati	4 laps-accident
R	Aleix Espargaro (E)	Aprilia	3 laps-accident
R	Mika Kallio (FIN)	KTM	2 laps-accident

Winner's average speed 97.093mph. **Fastest lap** Zarco 1m31.576s, 97.830mph.

QUALIFYING 2

1 Marquez 1m29.897s; **2** Zarco 1m30.246s; **3** Iannone 1m30.399s; **4** Lorenzo 1m30.460s; **5** Pedrosa 1m30.589s; **6** Pirro 1m30.764s; **7** Rossi 1m30.848s; **8** A Espargaro 1m30.857s; **9** Dovizioso 1m30.961s; **10** Rins 1m30.972s; **11** P Espargaro 1m31.044s; **12** Miller 1m31.190s.

QUALIFYING 1

1 P Espargaro 1m30.893s; **2** A Espargaro 1m30.913s; **3** Vinales 1m31.030s; **4** Rabat 1m31.197s; **5** Petrucci 1m31.216s; **6** Crutchlow 1m31.297s; **7** Smith 1m31.300s; **8** Abraham 1m31.325s; **9** Kallio 1m31.361s; **10** Barbera 1m31.487s; **11** Bautista 1m31.578s; **12** Redding 1m31.625s; **13** Baz 1m31.775s; **14** Lowes 1m31.816s; **15** van der Mark 1m32.504s.

RIDERS' CHAMPIONSHIP

1 Marquez 298; **2** Dovizioso 261; **3** Vinales 230; **4** Pedrosa 210; **5** Rossi 208; **6** Zarco 174; **7** Lorenzo 137; **8** Petrucci 124; **9** Crutchlow 112; **10** Jonas Folger 84; **11** Miller 82; **12** Bautista 75; **13** Iannone 70; **14** Redding 64; **15** A Espargaro 62; **16** Rins 59; **17** P Espargaro 55; **18** Baz 45; **19** Rabat 35; **20** Abraham 32; **21** Smith 29; **22** Barbera 28; **23** Pirro 25; **24** Kallio 11; **25** Lowes 5; **26** Katsuyuki Nakasuga 4; **27** Sylvain Guintoli 1; **28** van der Mark 0; **29** Takuya Tsuda 0; **30** Hiroshi Aoyama 0; **31** Broc Parkes 0.

MANUFACTURERS' CHAMPIONSHIP

1 Honda 357; **2** Yamaha 321; **3** Ducati 310; **4** Suzuki 100; **5** KTM 69; **6** Aprilia 64.



Pol Espargaro crashed out late on



Miller took seventh

IN THE HEADLINES



FOLGER'S ILLNESS DIAGNOSED

The illness that has left Tech3 Yamaha rider Jonas Folger on the sidelines since the start of the end of season flyaway races has been diagnosed as 'Gilbert's syndrome'. Folger had been rendered "bedridden" by the condition ahead of last month's Motegi race, but Tech3 hopes the 24-year old will be ready to return to test action at Sepang later this month.

HONDA TEAM BOSS DEPARTS

Repsol Honda team boss Livio Suppo has announced he is to leave the MotoGP paddock with immediate effect. The 53-year-old Italian, who moved over to the Japanese marque from Ducati in 2010, was promoted to team principal in 2013, overseeing all four of Marc Marquez's titles. Honda has yet to confirm a replacement for Suppo, and will spend the winter months considering how to restructure its hierarchy.

TRIO BOW OUT FOR NOW

Sam Lowes' tenure as a MotoGP rider ended last Sunday, after he suffered gearbox issues and crashed out. The 27-year old begins preparations for his 2018 Moto2 title bid this week with a two-day test at Jerez. Avintia Ducati duo Hector Barbera and Loris Baz are also waving goodbye to MotoGP for now. They will race in Moto2 with Pons and World Superbike with Althea BMW respectively next year.

SUZUKI REGAINS CONCESSIONS

Suzuki will again be granted the technical concessions that allow newer manufacturers to catch up to the established frontrunning teams for 2018 after it completed the season without scoring a single podium finish. Suzuki, which lost those concessions following the 2016 season, will be able to perform unlimited in-season testing next year, and develop its engine freely. This development follows a campaign that was badly compromised by Suzuki's erroneous choice of engine specification during pre-season testing.



BLOXHAM/LAT



LAT IMAGES

Forever on the Frijns of success

Once seemingly destined to become a grand prix star, Robin Frijns found a home in Formula E where he could showcase his talents. But being extremely quick hasn't been enough to keep him there

By Scott Mitchell, Autosport Plus Editor

 @ScottAutosport

Consider two things. First, that one of the finest single-seater talents of this generation – Robin Frijns – has lost his Formula E seat for the crime of being in the right place at the wrong time. Second, that a Formula 1 driver who has almost exclusively underperformed for eight seasons – Felipe Massa – might be able to waltz into Formula E now grand prix racing has finally stopped giving him chances. The two are not connected, but you can spot the injustice.

Frijns is contracted to the Audi WRT operation in GTs, and his customer racing affiliation there meant BMW – Andretti's increasingly-influential technical partner in FE – did not want the Dutchman driving cars with its badges in the electric single-seater series.

"We all really enjoyed working with Robin, he was a lot of fun and in terms of raw talent he is extremely quick – one of the quickest guys out there," explains Andretti co-team principal Roger Griffiths.

"There were some other complexities in the relationship that Robin has with Audi, and BMW is a big competitor. It was a very tough thing to do."

To recap, Frijns won the Blancpain Sprint Series title in September. It was his fifth championship success in eight years, his fifth from six full-time campaigns – and the outlying year, 2016, he was a race winner in Blancpain and claimed victory in the Sepang 12 Hours. His meteoric rise up the F1 ladder before that included back-to-back-to-back titles in Formula BMW Europe, Formula Renault Eurocup and Formula Renault 3.5 from 2010-12. In securing a dominant two-litre Renault success, Frijns defeated Carlos Sainz Jr, Daniil Kvyat and Stoffel Vandoorne. His final crown, the feather in his junior single-seater cap, came against Jules Bianchi, Sam Bird, Antonio Felix da Costa and current Haas F1 driver Kevin Magnussen.

Let's bring Massa back into the picture here: he's scored 13 podiums in eight seasons since his horrific Hungarian Grand Prix qualifying accident in 2009. His team-mates have taken 52 in that time. OK, that tally is bolstered by the phenomenon that is Fernando Alonso, but the stats don't lie – Massa's not been doing the business. The fact Williams dropped him last season, forcing him into retirement, and then had to do an embarrassing about-face when it had no other options, tells you that much.

As does the fact Williams, for 2018, was evaluating the unknown quantity of Robert Kubica, the hasn't-raced-in-F1-properly-since-2013 Paul di Resta and Toro Rosso reject Kvyat before Massa finally decided to call it a day anyway...

Would you rather have Frijns or Massa in your team? The answer should be obvious, but somebody is missing the message. Frijns is on the FE sidelines and Massa's in the picture for the same reason: politics.

In Frijns's place, Andretti fielded BMW's GT star Alexander Sims and DTM race winner Tom Blomqvist in official pre-season testing. Also present at Valencia were Porsche drivers Neel Jani and Andre Lotterer, and Mercedes DTM ace Edoardo Mortara, who have landed drives at independent teams Dragon, Techeetah and Venturi ahead of their respective employers' FE entries in 2019/20.

"I don't need to explain how it works," says Frijns. "It's part of a game that's played in FE, everybody gets a seat for a reason. I'm not saying they are bad drivers, the FE grid in terms of drivers is really high, and they deserve to be in the car. But it's unlucky."

It's understood FE tried to get teams to hire a Japanese driver for the coming season, because the TV deal out there is so valuable. Indonesian ex-F1 driver Rio Haryanto has also been promised

support by FE to find him a reserve-driver role.

FE could obviously push harder for Frijns to remain involved in the series, but the Netherlands is not a major selling point for the championship and he's not got a huge profile. So where's the obvious commercial benefit? This is where Massa comes in – he'd be the biggest-profile ex-F1 driver to join the category, and that's why FE wants him to get on board.

FE retains an enduring preference for ex-F1 drivers that made sense in the beginning. Much like the design of the series' inaugural electric single-seater, borrowing F1 hand-me-downs was a good way to get people to pay attention.

It doesn't need to be relying on past reputations anymore. Sebastien Buemi and Lucas di Grassi have established themselves as the faces of the series, and the talent pool has much more depth heading towards the 2017/18 season. It's a much, much stronger field than the inaugural campaign – Sakon Yamamoto and Michela Cerruti aren't going to get a look-in now.

FE doesn't have a massive audience. That's despite 20 grand prix drivers (of varying ability and success) turning out in an electric single-seater at some point since the championship's ➤➤



TEE/LAT

DOLE/LAT

LAT IMAGES

inception. So, ex-F1 drivers haven't exactly been a golden bullet in terms of attracting mass appeal. Is one more really going to be the tipping point, the catalyst for explosive growth?

FE has to find other ways to grow — and if it's doing that organically, it's time to turn its 'homegrown' talent into electric superstars. Frijns fits perfectly into that category. Give quality young drivers a chance and the best among them will take it. Felix Rosenqvist has become a race winner with the Mahindra team, something that took him just seven races to manage. Conversely, ex-F1 driver Jean-Eric Vergne qualified on pole for his FE debut but didn't win in his first 30 attempts. Having grand prix experience on your CV guarantees nothing.

FE is filled with a number of quality drivers with different careers and backgrounds. That's what it needs. Focus on depth and let the strength of the series draw in wider appeal. Massa would not necessarily be a bad FE driver. He is experienced, dedicated and still capable of driving very quickly. If he could be plugged in and run right at the front, of course he would be a big addition to the series. But there's no guarantee he'd be successful.

And if his pace is lacking, would his experience translate into the same nous for development as, say, Nick Heidfeld, who has been immensely valuable to Mahindra? That is definitely up for debate — witness Williams's general spiral in form in 2017.

Massa's career is ebbing towards a conclusion. If FE really values itself, it should not willingly become a retirement option for a driver no longer good enough to covet a leading F1 seat. Instead it should focus its attentions elsewhere.

Motorsport is littered with hard-luck tales of wasted talent, and Frijns's story is right up there in the 'wrong place, wrong time' stakes. FE looked to have finally afforded him with the opportunity F1 never provided. It shouldn't miss the chance to hold on to him now.

Frijns was mesmerising at times in his debut FE season, battling gamely as Andretti stuck to the season-one specification Spark SRT_01E for a second campaign after its attempt at a powertrain (motor, gearbox and inverter) hit the skids in pre-season testing. He was only 12th in the points, but secured #1 in Autosport's list of top 10 drivers for the season.

His reward for a stellar campaign as a battling underdog

was to spend another season as a battling underdog. It took a Herculean effort from Frijns to steal the team seventh in the championship in 2016/17.

"When I was driving the junior series, heading to F1, I never got the opportunity," says Frijns. "Now I've had the opportunity in Formula E and I've done quite well with the car I had, I drove the season-one car in season two, and my second season we didn't have a car to finish in high positions.

"It didn't go my way in F1. Now Formula E doesn't go my way as well. I know the feeling too well..."

Da Costa says Frijns's "personality is probably what puts him on the back foot — he's quite a laidback person. He's like, 'Everything will sort itself out.'" And there are stories of people encountering Frijns and perceiving him to be switched off. But before you think the 26-year-old should take responsibility for his plight, consider this. He is not an extrovert, but he is not sullen. He's a quiet joker with a confidence that could easily be mistaken for arrogance and a relaxed persona that some could perceive to be lethargy.

Griffiths reckons that for all Frijns's "natural talent", he "struggled a bit more perhaps with the discipline of the race team sometimes". But when Andretti "found what buttons we had to press", Frijns turned it on. Yet he remains a driver for whom external factors are handicapping what could be a spectacular career.

FE needs to buck its ideas up and make sure it is the place where Frijns finally makes a lasting impact, instead of wasting its time trying to force Massa — or anyone else — on a team for commercial reasons. Now that would be real value for money. *W*

Clockwise from top left: Frijns claimed Formula Renault 3.5 crown in 2012; his efforts in FE have been heroic; Audi link stymied chances of staying on at Andretti

FRIJNS'S RACING TITLES

YEAR	SERIES	TEAM
2017	Blancpain GT Series Sprint Cup	WRT Audi R8 LMS
2015	Blancpain GT Series	WRT Audi R8 LMS ultra
2012	Formula Renault 3.5	Fortec
2011	Formula Renault Eurocup	Josef Kaufmann Racing
2010	Formula BMW Europe	Josef Kaufmann Racing

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The team planning to stop Norris in Macau

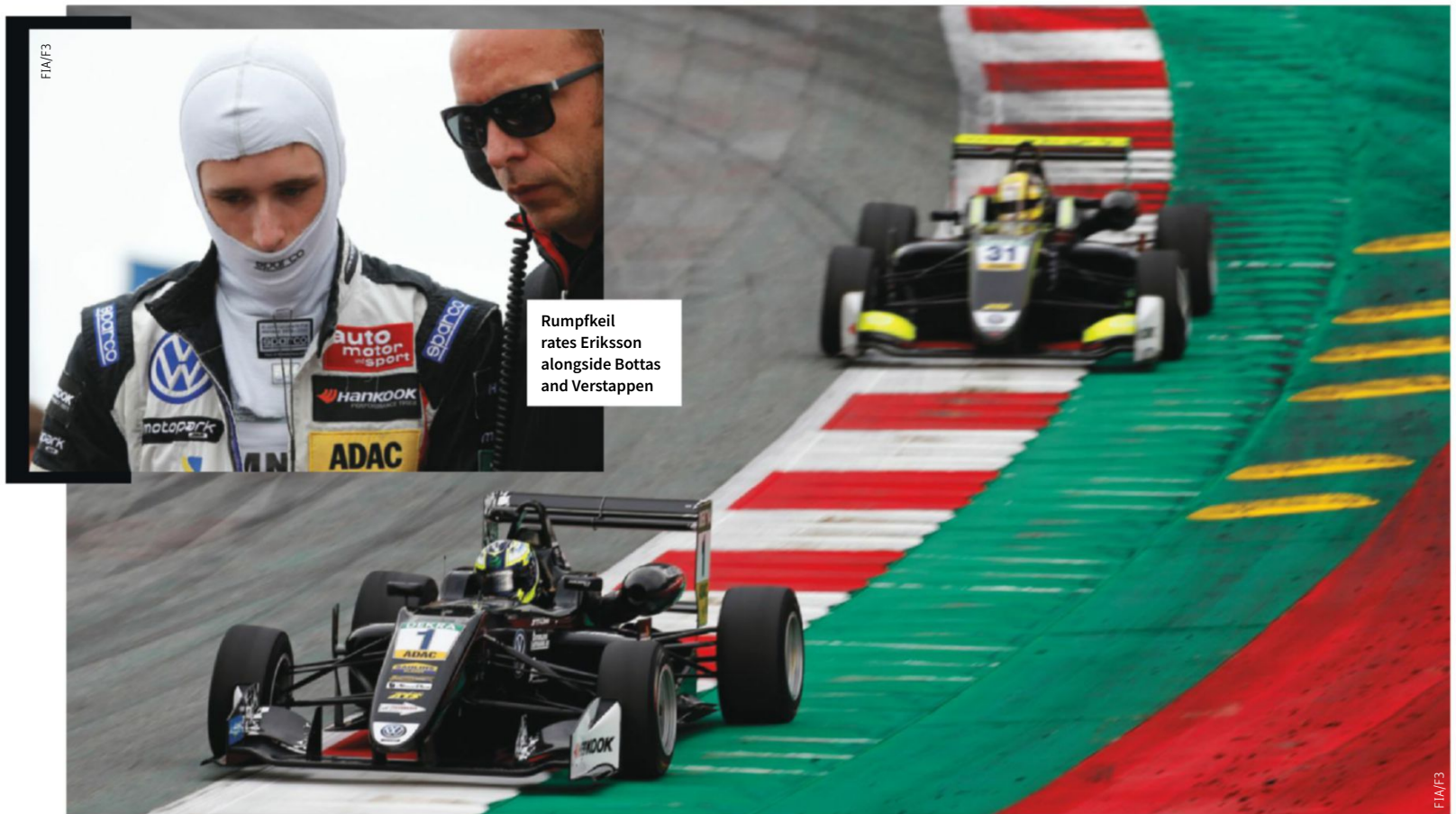
Don't just assume Lando Norris is going to win Macau.
This is how Motopark – especially lead driver Joel Eriksson
– could stop the Brit completing a 2017 F3 double

Marcus Simmons, Deputy Editor

🐦 @MarcusSimmons54







Motopark boss Timo Rumpfkeil makes a very good point when he describes the best state of mind for Macau Grand Prix preparation. Effectively, there's no sense in going there expecting to fight for the win because, well, Macau is just so random. "I think the best anybody can bet for is a shot at the podium," he says. "Everybody is aiming for the win, but if you are in with a shot of the podium, then you are in with a shot of the win as well."

"And," he adds, "I think we have four of our guys who are in with a good shot for the podium, and hopefully one of them will win it!"

He's not wrong there. Motopark, the frontrunning Formula 3 European Championship team based at the German circuit of Oschersleben, has arguably the most intriguing line-up for this week's Macau GP — practice and qualifying for which will have already have kicked off by the time you read this. Joel Eriksson, runner-up to Lando Norris in Euro F3 this season, and a very highly rated member of the BMW Junior team, is undoubtedly one of the favourites for race victory. Alongside him is Sergio Sette Camara, a podium finisher with Carlin here in 2016, a race winner (albeit reversed-grid) in Formula 2 this year, and the only driver stepping down from a more senior category in Europe for Macau. Then there's Red Bull Junior Dan Ticktum, the exciting *enfant terrible* of British motorsport, a race winner in Formula Renault Eurocup this season, and a 2017 McLaren Autosport BRDC Award finalist; and Honda protege Tadasuke Makino, who switches across from the Macau-avoiding Hitech GP squad after a strong final third of the season.

It's undoubtedly Motopark's best chance for a major title since it returned to the FIA F3 ranks, coincidentally in Macau in 2014. But it has a long history of success in junior motorsport, including names such as Scott Speed, Valtteri Bottas, Kevin Magnussen and Max Verstappen.

After the Berlin Wall came down, the Rumpfkeil family moved from the west to the east of Germany in the 1990s.

Timo's father Peter was an ex-army man and former racer who had been heavily involved with the club that organised the DTM races on the Diepholz airfield, with the revenues ploughed back into helping young talents. Rumpfkeil Jr began racing, becoming a frontrunner in Formula Renault in the '90s and graduating into Formula 3, while his father was asked to become CEO of the new Oschersleben circuit being built in the former Democratic Republic.

Even as a driver in his twenties, Rumpfkeil established his



team out of a facility at Oschersleben. “The initial idea was to have the French system of a racing school, and we had some good support from Volkswagen,” he recalls. “We received 10 Formula König cars for the school [the same category Michael Schumacher had started in, in 1988] – we only needed seven for the actual racing school so we took three and raced them!”

After competing in the German Carrera Cup and the short-lived V8-STAR series over 2000 and ’01, Rumpfkeil hung up his helmet: “When I was racing I was always very hands-on, spending a lot of time helping on the cars, because I really liked that part. It’s not like I got forced into it.”

The team really took off in 2004, when it secured the European and German FRenault titles with American Speed, a Red Bull Junior. Since then Motopark has fielded many of Helmut Marko’s proteges, continuing a relationship that dates back almost three decades. “I’ve known Helmut since I was 14 or 15, because my dad knew him for many years,” says Rumpfkeil. “They had a connection from the motorsport club in Diepholz supporting talent. My dad placed Arnd Meier [future Indycar driver] with Helmut’s team [RSM Marko]. When I was racing in FRenault they had a scholarship thing where the top drivers

“Four of our guys are in with a good shot for the podium, and hopefully one of them will win it!”

went to a race weekend with an F3 team and got involved. Everybody was interested not to go to RSM Marko, because they all knew he was very strict! But I was happy to go, and spent the weekend at Norisring with them in 1995 helping out.

“Without Red Bull and the faith they’ve given us, definitely we would not be where we are today, that’s for sure.”

Bottas was Euro FRenault champion with Motopark in 2008, and Magnussen starred with the team in ’09. But it was Rumpfkeil’s decision to put Verstappen into his German >>



The leading contenders

FORMULA 3

European champion and McLaren Formula 1 reserve Lando Norris (below in 2016) doesn’t start as favourite for Macau, simply because the nature of the race means no-one can ever be counted as favourite. What’s more, the Carlin team leader may miss the opening free-practice session, and may only arrive just in time for Thursday qualifying, because he’ll be travelling from the now-cancelled Brazil F1 tyre test.

But there’s little doubt that Norris will have the most limelight upon him, and that’s the closest to a ‘favourite’ tag you can have.

Even with a free-practice setback, Norris should lead the Carlin charge. Jehan Daruvala and Ferdinand Habsburg have both won races this year, but Daruvala is a Macau newcomer and Habsburg had a torrid debut in the race in 2016. Formula

Renault Eurocup champion Sacha Fenestraz also joins the team, which is completed by Devlin DeFrancesco – Fenestraz is an ace on street circuits, so could spring a surprise.

Aside from Motopark, the biggest opposition will come from Prema

“Norris may have to miss the first practice session”

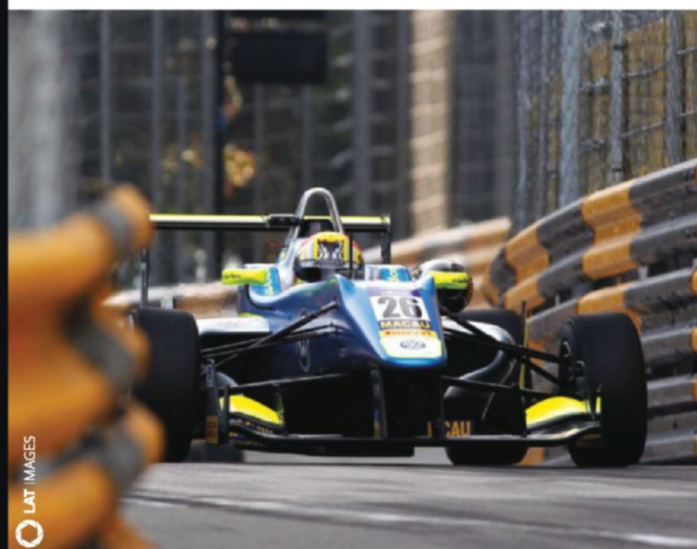
Powerteam. Backed once again by the Theodore Racing initiative of Teddy Yip Jr, son of Macau GP godfather Teddy Sr, Prema should be led by new Ferrari junior Callum Ilott, a leading contender here last year. Maximilian Gunther finished ahead of Ilott in Euro F3 this season, third in the points, and should be also in the mix. Ilott’s fellow Ferrari Driver

Academy recruit Guan Yu Zhou returns for a second crack at the race, while Mick Schumacher gets to sample the circuit conquered by his father Michael in 1990 and uncle Ralf in ’95.

Van Amersfoort Racing runs two cars, with Pedro Piquet – a strong top-10 finisher in 2016 – joined by Macau debutant Ralf Aron, who slides over from Hitech. Either could be an outside podium shot.

Of the Japanese F3 challenge, B-Max boasts the strongest line-up on paper. Both Kenta Yamashita and Yuhi Sekiguchi step back from Super Formula, and each has finished fourth on these streets in the past. But don’t rule out a very strong run from Drago Corse – the Tomei engine carried Yamashita to his strong 2016 result, and driver Alex Palou has raced in Macau before, back in ’14.

TOM’S has talent too, with Japanese F3 runner-up Sho Tsuboi and quick rookie Ritomo Miyata.



HISTORY OF MOTOPARK



Motopark's only year in GP2, with Russian Time, was 2013. This is now-Motopark driver coach Tom Dillmann coming a cropper at Monaco



Motopark took Bottas to 2008 Formula Renault Eurocup title...



...helped spur on '14 Masters of Formula 3 winner Verstappen...



...and ran Speed (here chased by Grosjean) to Euro FRenault crown in '04

F3 car for the December '13 Valencia test that changed the course of modern motorsport history.

"It was me who diverted them from Formula Renault to make the step from karts to F3," he says. "If he had gone to Formula Renault, he would still have arrived where he is now, but probably in a different way."

At this time, Rumpfkeil's squad had just carried Russian Time to the GP2 teams' title – Motopark's only season in the series: "I was pretty convinced I would be doing GP2 again, but they didn't go with us, and therefore we were busy sorting all the mess of the Russian Time leftovers. We were going to re-enter FIA F3 in 2014, but since it took us a bit of time and energy to sort out that stuff we decided to postpone it. If we had done so, I'm pretty sure Max would have been in the car."

Now Rumpfkeil has Eriksson, a driver he has this year placed on the same plateau as Bottas and Verstappen in terms of talent. A heavy shunt in first qualifying set the Swede back in Macau last year, but can he bounce back to ruin Norris's F3 swansong? "Of course, otherwise we probably wouldn't go," says Rumpfkeil. "Lando had a great season in F3, he won the championship, so that's to be respected, but our ambition is to beat him, to beat everybody."

"Last year Joel crashed too early, and that's a classic rookie error. You saw it from Lando [in the qualification race] and you saw it from Joel – they were too quick too soon. It was a heavy one for Joel and that took him a while to shake off. By race two he was fine, but you are struggling to come back from there."

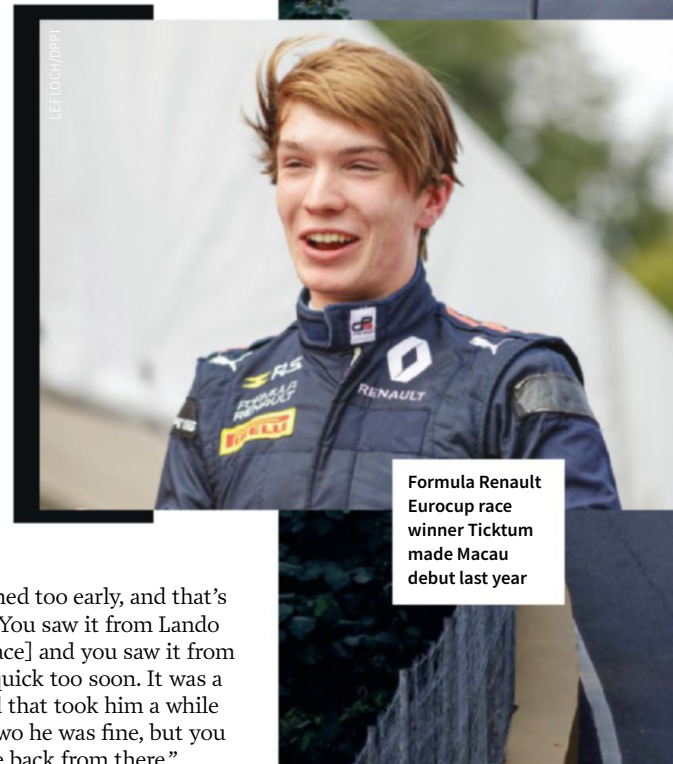
Sette Camara, meanwhile, competed with Motopark in 2015 and '16 (the latter year his solitary season as a Red Bull Junior). He set a race lap record for the Guia circuit in '15 that remained unbroken last year, when he switched across to Carlin for Macau and finished third.

"We lacked experience with our drivers in 2016, so we decided we wanted a strong line-up for Macau this time, and that's why we found an agreement with Sergio very early," says Rumpfkeil.

For Ticktum, it's only his third event in F3, two of which will have been in Macau, having made his debut on the streets last year with Double R Racing. "Dan was bloody quick there," asserts Rumpfkeil, "and because Double R hadn't competed in European F3 that season it must have been difficult. He's tested at Nurburgring and Spa with us, and that's his preparation. Not extensive, I think probably the least of anybody. But we believe he'll be a very strong contender there."

Ticktum is also very hotly tipped for a full Euro F3 season with Motopark in 2018, with Red Bull Junior chief Marko seemingly ending his one-season hate-affair with the category following the spate of engine failures suffered by his proteges Sette Camara and Niko Kari last year.

"Dan has had to overcome a very individual set of difficulties, I would say," says Rumpfkeil, referencing his one-year ban



Formula Renault Eurocup race winner Ticktum made Macau debut last year



LAT IMAGES

from racing. "Today when you speak to him he's so much more mature and he knows that he's been given a chance, and he knows what he's done, what he can improve from the past. I'm quite sure he'll be a very big surprise in Macau."

Makino finished top of the drivers from the Japanese F3 Championship in Macau in 2016, and has looked ever-stronger in Europe in '17. Rumpfkeil is also predicting a good run from him, while the least-fancied of the team's quintet – Makino's countryman Marino Sato – has run towards the back in Euro F3, so the target is "to stay away from the walls and do as many laps as possible", says Rumpfkeil.

Whoever wins, the beauty of Macau is that effectively the usual F3 form is reset. The cars are on Macau-specific tyres (Yokohama has got the contract back after one year with Pirelli), and the downforce is taken off for the straights. "It's a unique track," says Rumpfkeil, "and whatever you gain in experience during the season gets put into perspective a bit when you go there, because it's so different. But it's also easier to put a good line-up together for Macau rather than for a season, because the season involves a lot more economics. Everybody is always very eager to prove a point there..." ❁



LAT IMAGES

Macau master Huff tipped to steal limelight

WHILE INTERLOPERS HAVE COME AND GONE IN THE 2017 WORLD Touring Car Championship title race, the battle looks set to boil down to a head-to-head between Thed Bjork and Norbert Michelisz, with Tiago Monteiro absent for a third straight event through injury.

But it's one man who's notable for his absence from the lead group who's expected to steal centre stage in Macau this weekend. Rob Huff – well fancied before the season's start after switching to race Munnich Motorsport's Citroen C-Elysee – currently sits a lowly eighth in the points, and his failure to visit the top step of the podium so far in 2017 means it's now more than 18 months since he won a WTCC race.

Huff's season may have flattered to deceive, but his record in Macau still makes him favourite for Guia-race spoils. Eight wins – including the most recent WTCC race held here in 2014 – four poles and the lap record (set in a Lada Granta no less) dwarf the feats achieved by the remaining 18 drivers on the entry and mark him out as the man to beat.

"I've always been quick and confident there but I don't know the answer why," says Huff. "I went there for the first time with no apprehension, no idea really. I hadn't really heard of the place if I'm honest. The first year [fellow WTCC racer] Tom Coronel helped me out; we spent two hours from 2am on the Monday and Tuesday before the race going around in a taxi.

"You can make a few mistakes at the Nordschleife and get away with it. At Macau you don't get away with any mistakes. There are circuits that are as challenging, but there aren't any as unforgiving as Macau. There's no room for error."

The other event bearing the FIA moniker in Macau boasts no fewer than eight previous winners of key races in the Special Administrative Region. Seven manufacturers make up the 20-car GT World Cup field for the standalone event, with defending winner Laurens Vanthoor (Porsche 911 GT3 R), five-time Macau winner Edoardo Mortara, Maro Engel and Daniel Juncadella (all Mercedes), as well as the likes of Felix Rosenqvist, Lucas di Grassi and Augusto Farfus, all part of a star GT cast.

JACK COZENS



LAT IMAGES



Lexus duo Cassidy and Hirakawa clinch crown

SUPER GT
MOTEGI (J)
NOVEMBER 12
ROUND 8/8

NICK CASSIDY AND RYO HIRAKAWA clinched the 2017 Super GT title with second place at Motegi behind race winners Ronnie Quintarelli and Tsugio Matsuda.

Cassidy and Hirakawa – aboard the #37 TOM'S Lexus – started the 53-lap race from third on the grid, knowing they needed to finish in either of the top two positions to claim the title ahead of rivals Kazuya Oshima and Andrea Caldarelli, Quintarelli and Matsuda, and outside contender James Rossiter.

There was drama even before the start when polesitter Quintarelli and Team LeMans' Caldarelli touched on the formation lap, resulting in minor damage, as Quintarelli tried to control the speed of the pack. But he was nevertheless able to pull a gap at the start and the #23 GT-R crew led throughout the race to score Nissan's first victory of the season.

Behind Quintarelli, Cassidy passed Caldarelli on lap four, as Rossiter made great progress up from his starting spot of seventh on the grid in the other TOM'S-run Lexus LC 500 to run behind his team-mate in third by lap five. But the Brit suffered bad luck two laps later when his car came into contact with a GT300 class machine, which bent its right-rear suspension and meant his slim title chance disappeared.

Up front, Quintarelli pitted the leading GT-R

on lap 24 to hand over to Matsuda, three laps after Hirakawa had replaced Cassidy in the #37 LC 500. Hirakawa pushed hard in the second half of the race, but could not close on Matsuda and finished 6.263 seconds adrift at the flag. Even so, that result was enough for Hirakawa and Cassidy – both 23 years old – to land the title by two points over Matsuda and Quintarelli, and makes the duo Super GT's youngest champions.

Third place went to Yuji Tachikawa and Hiroaki Ishiura aboard the Cerumo-run LC500, while the top Honda NSX machine of Kodai Tsukakoshi and Takashi Kogure was fourth. Naoki Yamamoto and Takuya Izawa (Honda) came home fifth, and Satoshi Motoyama and Katsumasa Chiyo (Nissan) completed the top six.

It was hard race for Team LeMans, as Caldarelli and Oshima dropped out of the fight for the win and the championship, eventually coming home a lap down in 13th.

With Oshima, Caldarelli and Rossiter not scoring in the final race, fourth place in the standings went to Tachikawa and Ishiura.

JIRO TAKAHASHI

RESULTS

1 Tsugio Matsuda/Ronnie Quintarelli (Nissan GT-R) 53 laps in 1h31m44.581s; 2 Ryo Hirakawa/Nick Cassidy (Lexus LC 500) +6.263s; 3 Yuji Tachikawa/Hiroaki Ishiura (Lexus); 4 Koudai Tsukakoshi/Takashi Kogure (Honda NSX-GT); 5 Naoki Yamamoto/Takuya Izawa (Honda); 6 Satoshi Motoyama/Katsumasa Chiyo (Nissan).

Points 1 Hirakawa/Cassidy 84; 2 Quintarelli/Matsuda 82; 3 Kazuya Oshima/Andrea Caldarelli 63; 4 Ishiura/Tachikawa 62; 5 James Rossiter 53; 6 Kazuki Nakajima 47.



Kristoffersson finishes up on top

WORLD RALLYCROSS
KILLARNEY (ZA)
NOVEMBER 11-12
ROUND 12/12

WORLD RX CHAMPION JOHAN Kristoffersson ended his first title-winning season in style by entering the record books as the first winner of a World RX event in South Africa.

Kristoffersson qualified on pole for the final and headed the field throughout the race, taking his joker on lap six and rejoining ahead of Timmy Hansen, who finished on the podium for the second round in a row.

Behind the top two, the finale boiled down to a battle between double champion Petter Solberg and 2016 winner Mattias Ekström for second. Ekström took the advantage in the intermediate classification, and then beat Solberg in the final to finish third and secure overall runner-up to Kristoffersson.

Former DTM driver Timo Scheider concluded the list of finishers, as 2016 European Rallycross champion Kevin Hansen — who joined elder brother Timmy in the final for the second event in a row — retired with transmission problems.

Ken Block initially qualified for the final but was disqualified from the second semi-final after his car was found to be underweight.

Sebastien Loeb's season concluded with a puncture in the semi-finals, but he still ended up with fourth place in the points.

RESULTS

1 Johan Kristoffersson (Volkswagen Polo GTI) 6 laps in 4m23.751s; 2 Timmy Hansen (Peugeot 208) +0.918s; 3 Mattias Ekström (Audi S1); 4 Petter Solberg (Volkswagen); 5 Timo Scheider (Ford Fiesta); 6 Kevin Hansen (Peugeot). **Points 1 Kristoffersson 316;** 2 Ekström 256; 3 Solberg 251; 4 Sebastien Loeb 214; 5 T Hansen 201; 6 Andreas Bakkerud 194.

Kenseth denies Elliott, chaos reigns

NASCAR CUP
PHOENIX (USA)
NOVEMBER 12
ROUND 35/36

JUST ABOUT EVERYTHING happened at Phoenix.

Matt Kenseth took his first NASCAR Cup victory of 2017, Brad Keselowski sneaked into the last spot of the championship final four, Chase Elliott was denied a playoff berth (and clashed with Denny Hamlin again), and a wall caught fire.

Kenseth threw himself into

contention for the win in the pits, as he emerged from the stops first following a caution for Trevor Bayne's accident in the middle of the final stage. He then fought Elliott — desperate to win to secure a playoff place — in the closing stages, with Kenseth prevailing to take his 39th Cup win.

Elliott had to settle for second, missing out on the fight for the title despite a battling drive, which included a brush with Hamlin two weeks on from their collision at Martinsville. This time, Elliott nudged Hamlin against the wall

to grab third, and Hamlin — who dominated much of the first half of the race — crashed out a lap later with a cut tyre.

As a result of Hamlin's retirement, Keselowski made the cut for the final four on points despite a quiet race to 16th place. He will join Martin Truex Jr, Kevin Harvick and Kyle Busch (third, fifth and seventh) in fighting for the title in the finale.

Jimmie Johnson's hopes of retaining the title ended after his tyre blew out at the end of the second stage, which put him into the wall. The race was briefly red-flagged with 58 laps to go when Chris Buescher hit the wall because of a brake failure, and it subsequently caught fire.

RESULTS

1 Matt Kenseth (Toyota Camry) 312 laps in 2h57m23s; 2 Chase Elliott (Chevrolet SS) +1.207s; 3 Martin Truex Jr (Toyota); 4 Erik Jones (Toyota); 5 Kevin Harvick (Ford Fusion); 6 Jamie McMurray (Chevy); 7 Kyle Busch (Toyota); 8 Ricky Stenhouse Jr (Ford); 9 Aric Almirola (Ford); 10 Dale Earnhardt Jr (Chevy). **Championship 4 1 Harvick 5000;** 2 Busch 5000; 3 Truex 5000; 4 Brad Keselowski 5000.



Kenseth took his 39th Cup win

IN BRIEF

MOTO2

KTM rider Miguel Oliveira cemented his status as 2018 Moto2 title favourite by reeling off a third successive win in the Valencia season finale. MotoGP-bound champion Franco Morbidelli led much of the race aboard his Marc VDS-run Kalex, but was powerless to resist Oliveira when the Portuguese rider caught him with six laps left. Brad Binder again made it two KTM riders on the podium in third, while poleman Alex Marquez slumped to fifth.

MOTO3

Jorge Martin scored a dominant maiden Moto3 victory at Valencia, finally succeeding in converting pole position into a win after eight failed attempts this year. Champion Joan Mir was second after a spectacular comeback, but was denied a shot at taking 11 wins in a season when he dropped to 18th in avoidance of the crashing Gabriel Rodrigo on lap two. Marcos Ramirez beat Romano Fenati to the final podium spot.

COTA 24H

Herberth Motorsport's Porsche 991 GT3 R driven by Daniel Allemann, Ralf Bohn, Robert Renauer and Alfred Renauer took a comfortable win in Austin. Renauer crossed the finish line two laps clear of the second placed Mercedes-AMG GT3 of Ben Keating, Jeroen Bleekemolen, Abdulaziz Al Faisal and Luca Stolz. The third-placed Manthey Racing-run Porsche was a further five laps behind.

SPANISH FORMULA 4

Christian Lundgaard sealed the 2017 Spanish Formula 4 title by winning the final race of the season. Lundgaard, who is also the 2017 SMP F4 champion, finished second in race one at Estoril, which was won by Bent Viscaal, and took the second event win.

NASCAR XFINITY

William Byron held off Ryan Blaney for the win at Phoenix, as Erik Jones finished third ahead of Christopher Bell. The Xfinity playoff four for the season finale at Homestead this week will be Byron, Elliott Sadler, Justin Allgaier and Daniel Hemric.

NASCAR TRUCKS

Johnny Sauter scored his first Truck Series win at Phoenix, beating John Hunter Nemechek by 0.668 seconds in a final two-lap shootout. Sauter, Christopher Bell, Austin Cindric and Matt Crafton are the 2017 Trucks playoff finalists.

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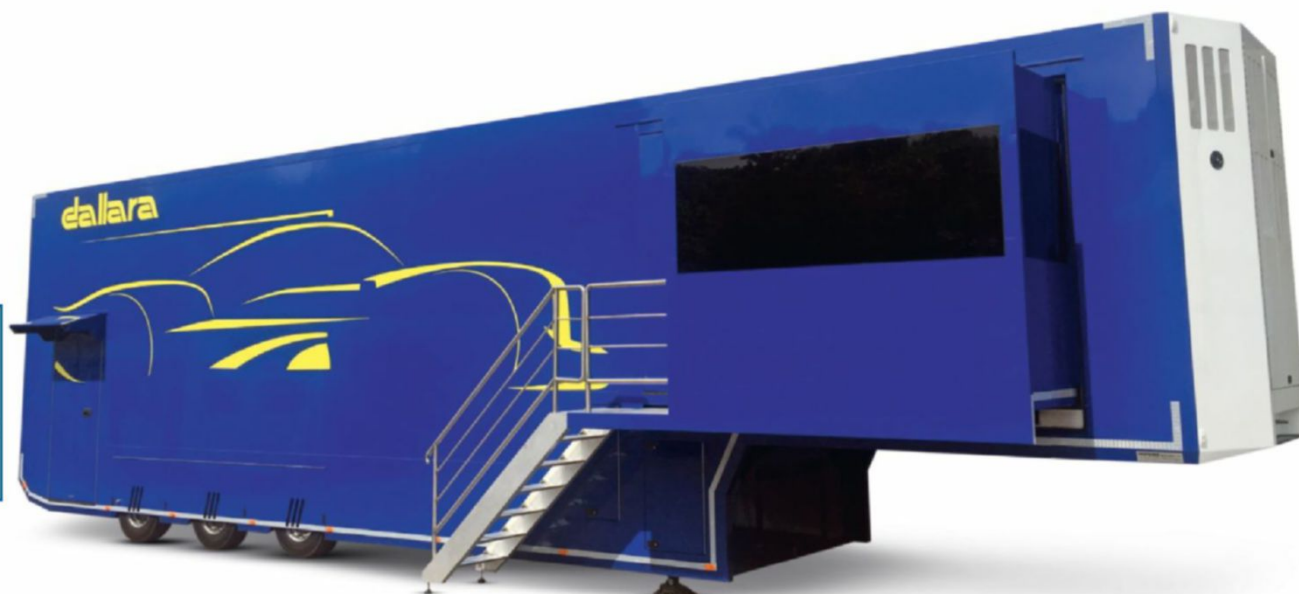
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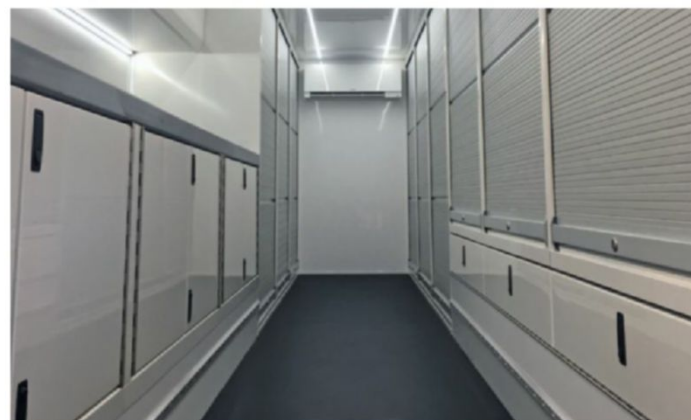
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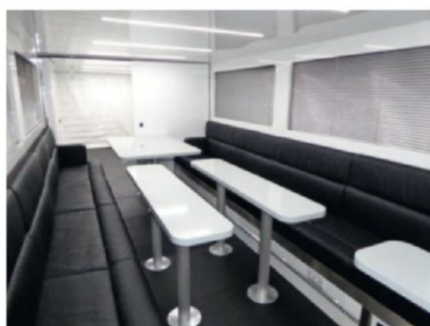
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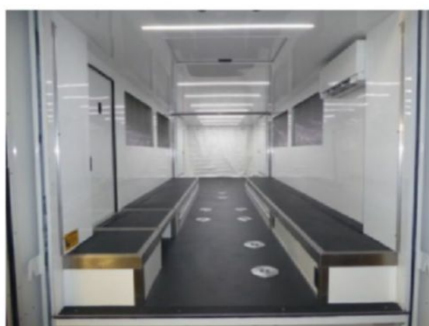
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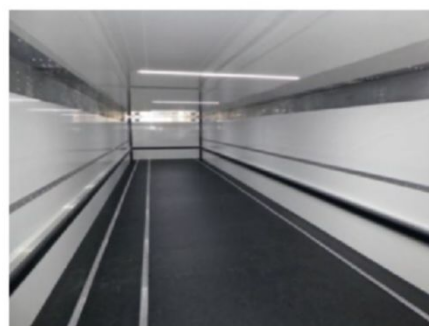
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RACE TEAM BODYWORK TECHNICIAN

We are seeking a talented Bodywork Technician to prepare, repair and present all bodywork finishes and stickers on our Formula One cars. As a member of our Race Team, you will travel to circuits around the world, ensuring that our cars are immaculately presented. Experience of working with composite materials in the motorsport environment is essential, as well as a sharp eye for detail.

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For the above roles the successful candidates will be self-starters with the ability to work calmly and efficiently under pressure, possess strong attention to detail and have a proactive and positive approach to their work. In addition, the ability to work collaboratively within this close knit team is essential, with effective communication and work to high standards and tight deadlines. For all of the above roles it will be a necessity to take part in the pit stop training programme. This is an exciting opportunity to further your career at an exciting time in our team's history.

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PORSCHE CARRERA CUP GB

Ginetta racer Harper becomes Porsche Carrera Cup GB Junior

GINETTA JUNIOR RACE WINNER DAN HARPER has been chosen as the next Porsche Carrera Cup GB Junior driver.

The 16-year old, who finished third in the Ginetta standings this year, was revealed as the new Porsche Junior at the series' Night of Motorsport event in Ascot last weekend. He has secured £85,000 towards his budget for each of the next two Carrera Cup seasons, as well as a variety of support from Porsche.

Harper was chosen after an assessment day at Silverstone earlier this month, during which he impressed both on track and off it in a number of driving, media and fitness tests.

He beat GT4 Supercup race winner George Gamble, British Formula 4 champion Jamie Caroline, British GT4 driver Dean Macdonald and GT Cup racer Esmee Hawkey to the prize, after Porsche received a record number of entries from drivers wanting to become the next Junior.

"I couldn't believe it when I was announced as the Junior," said Harper. "I definitely wasn't expecting to win.

The competition was an exceptionally high standard.

"It's a massive achievement to win it, but to win it at such a young age as well is even harder. If I can get close to what Charlie [Eastwood] and Josh [Webster, previous scholars who both won the title] achieved I wouldn't be doing too bad!

"It's going to be exceptionally tough to replicate what they've done but I will just have to do what I can. I can't wait for next year so the hard work starts now.

"I know it's going to be challenging next year – the Junior isn't eligible for the rookie championship so I can't aim for that now.

"But I think I will try and get as much experience as I can and get as many podiums and victories as possible, and then use that experience to challenge for the title the following year."

• Harper was the standout performer in the Junior assessment day earlier this month. A future edition of Autosport will carry an in-depth story on how he won.



STEPHEN LICKORISH
SPECIAL
CORRESPONDENT

[@sdlickorish](https://twitter.com/sdlickorish)

FOR MOST 16-YEAR-OLDS graduating out of Ginetta Junior, the Porsche Carrera Cup GB might seem a pretty large jump. But then again, Porsche GB's new Junior driver Dan Harper clearly is not your average teenager.

Anyone who has followed the TOCA package for the past couple of years might recognise the name. He arrived on the scene as a Ginetta scholar in 2016 and made an impression quickly by winning his fifth car race.

Harper was clearly very mature for his age and he put in a string of powerful performances to end the year as top rookie. He impressed again this season. Yes, he may have 'only' finished third in the standings, but it was incredibly competitive at the front of the field. That didn't stop him taking seven wins.

He deserves this chance with Porsche – beating four other incredibly talented finalists to win the prize. Harper has adapted very quickly to new challenges, so don't be at all surprised to see him running at the front next year.

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Ginetta Juniors will run new engine



GINETTA JUNIOR

Major changes for Ginetta series in 2018

GINETTA HAS ANNOUNCED A NUMBER OF changes to its roster of championships for 2018, including a tightening of the engine regulations in the Junior series.

Three drivers from the leading JHR Developments team were initially excluded from the Thruxton round this year over alleged engine irregularities, before the team was later suspended from competing in Ginetta categories while its conduct was investigated.

Now, as part of a plan to ensure equality across the grid, all Junior drivers for 2018 will have to run a new engine from Ginetta. The fresh motors will be distributed at the media day. The cost of the unit will be included in the series entry fees for next year.

"At Ginetta, we are constantly looking for ways

to ensure complete parity between the cars competing in our championships," said Ginetta motorsport manager Ash Gallagher.

"The Junior Championship is arguably one of the most closely fought junior series in the UK, with 14 of this year's races decided with a winning margin of under a second. We feel this next step in our scrutineering process will continue to uphold the level playing field and integrity our series is built upon."

Other changes include the Ginetta Racing Drivers Club series switching to a one-day format for next year, with a concierge service available for drivers that will assist them in a number of ways, including suggestions for hotels and restaurants.

The GRDC+ series will also be renamed the G40 Cup, with a 'Chairman's Cup' added to both

it and the GT5 Challenge for drivers aged over 45.

Testing rules in the GT4 Supercup will be tightened for next year too. None of the drivers in the series will be permitted to test at a circuit during the four weekends before a race there.

Meanwhile, Ginetta Junior rookie champion Kiern Jewiss will head the entry for the Winter Series at Brands Hatch this weekend, but top team HHC Motorsport will be absent after deciding to skip the meeting.

With HHC absent, Elite Motorsport has a massive eight-car entry headed up by former JHR Developments and HHC driver Adam Smalley.

Total Control Racing also returns to Ginetta Junior after a season out, running ex-Douglas driver Tom Canning and series rookies Conner David and Sam Neary.

MAZDA ROAD TO INDY SHOOTOUT

Thorburn and White win Shootout spots

FORMULA FORD 1600 drivers Jamie Thorburn and Oliver White have both won 'tickets' to the Mazda Road to Indy Shootout (MRTI) and a chance of securing the £150,000 scholarship.

Thorburn – who raced in the British Racing and Sports Car Club FF1600 National Championship for the first time this season – earned his spot by winning James Beckett's SuperSeries Shootout at Silverstone.

The 19-year old and other finalists underwent

a fitness test, media session and finally a run in an iZone simulator at the event last week.

"It's still not really sunk in yet but the opportunity is amazing," said Thorburn.

White, who competed in the MRTI Shootout last year, was due to take part in the SuperSeries shootout but was given a ticket directly by Mazda, which has the right to select a driver it deems to show "exceptional talent". "I really didn't expect it," he said.



Beckett (left) with winner Thorburn

LEGENDS

Power will test Austin's BTCC car

LEGENDS RUNNER-UP BEN POWER HAS secured a prize test in a British Touring Car with HMS Racing (formerly Handy Motorsport).

Power came out on top of a separate points table to the main Legends championship to win the prize. The points rubric was based on performance, presentation and sportsmanship.

Power, who took 14 Legends wins this year, will now get to test the HMS Racing Toyota Avensis at Silverstone on Monday.

The car has been raced by Rob Austin this year before he switches to the team's new Alfa Romeo Giulietta next season.

Power said of the prize: "I'm absolutely elated – it's an honour to have been chosen. This is the silver lining for me after just missing out on the championship."



MODIFIED SALOONS

Birley's Escort could be a write-off

ROD BIRLEY IS UNSURE WHETHER HE will be able to race his Ford Escort WRC again after a 130mph crash at Brands Hatch.

The car suffered extensive damage in the crash at the end of the first Modified Saloons race earlier this month.

The incident happened as Birley was fighting Graham Crowhurst along the pit straight on the final lap of the race. Birley's car spun into the pitwall at 130mph, and the 2016 Modified Saloons champion said the impact force was about 6G.

"It's quite a mess and extensive damage,"

said Birley. "We're not sure if it's repairable at this stage and we won't know until later.

"It's going to be very expensive. [Probably] £25-£30k for on-the-market repairs as an estimate. The wheels are £600-700 each and when you look at it, the force that went through them... and it's sourcing them too, they're bespoke."

Birley is still expecting to compete in 2018 since he also owns a Honda Integra.

Andy Banham (Subaru Impreza) won the second race at Brands, while Tin Top honours were shared between Daniel Fisher and Birley.

IN BRIEF



NUTTER TO RACE LOLA IN ENDURANCE

Vic Nutter has added a two-litre Lola sports-racer to his growing stable and plans to race the 1977 car in the Pre-'80 Endurance Series next season. The BMW-engined T296 was converted to T297 specification in period. Nutter had his first run in the car in the HSCC Allcomers race at the Walter Hayes Trophy earlier in the month.

SEXTON TROPHY FINALISTS ANNOUNCED

Motorsport Ireland has announced Charlie Eastwood, James Roe Jr and Jordan Dempsey as the three finalists for the prestigious Sexton Trophy award. Porsche Carrera Cup GB champion Eastwood and successful Formula Ford 1600 racers Roe and Dempsey are in contention to win €50,000 (£44,000) towards their racing budget for next year. The winner will be announced next month.

SEVEN CARS ON OFFER AT TCR UK TASTER

The new-for-2018 TCR UK series will offer a taster day later this month with seven cars for drivers and teams to sample. The event, which takes place at Brands Hatch on November 29, will feature an Alfa Romeo Giulietta, an Audi RS3 LMS TCR, a Hyundai i30, a Honda Civic Type R, an Opel Astra, a SEAT Leon and a Volkswagen Golf GTI. The championship will officially launch at Silverstone on March 6 with a media day.

CIVIC CUP WILL JOIN BRSCC ROSTER

The Civic Cup will become part of the British Racing and Sports Car Club next season and will join the TCR UK support bill for two events. The category has previously run with the 750 Motor Club but will now join the BRSCC as the series enters its eighth year in 2018. The 2016 Civic champion, Carl Swift, is planning to switch to TCR UK next year.

LYONS AND SMITH-HILLIARD WIN CROWNS

Michael Lyons and Max Smith-Hilliard have secured the two main awards in the FIA Masters Historic Formula 1 Championship. Lyons (below) won the Post-'78 title in his RAM-Williams FW07, while the less experienced Smith-Hilliard sealed the Pre-'78 crown after dividing his season between his Shadow DN5 and Fittipaldi F5A.



BRITISH FORMULA 4

Sharp Motorsport plans expansion

THE SHARP MOTORSPORT British Formula 4 team is planning to expand for next year after joining forces with race instructor Stuart Jones' Pure Pace Performance Management.

The team ran a sole car for Jamie Sharp in its maiden season this year.

Team boss Joe Sharp believes that by adding the performance management element, drivers will develop

a lot more. The team plans to buy a training car to help youngsters out of karting.

"We are trying to build the team and find new drivers," said Sharp. "I want it to be about the kids, and Stuart is coming on board so kids that choose to race with us get to learn every aspect about the cars. It's more of a structured approach. We're also going to use a junior race car, like a Citroen Saxo or a Ford Fiesta, for training.

"Jamie's going to be racing with us again and we've got interest from other drivers."



Sharp was new to F4 for the 2017 season

RACE OF REMEMBRANCE

Mission accepted by Eastwood

HOLLYWOOD STUNTMAN AND F3 CUP race winner Wade Eastwood, along with two colleagues, took part in this year's Race of Remembrance — after flying from the set of the latest *Mission Impossible* film.

Eastwood was joined by Scott Armstrong and Chris Gordon as the trio travelled from Norway to take part in the race at Anglesey.

"We were filming on the top of a mountain in freezing conditions and only had a short

window to get a helicopter in, fly us down a fjord and catch our plane," said Eastwood.

While Gordon and Armstrong shared the Rob Boston Racing Lotus Elise to victory with Peter Mansfield in the Heroes Trophy, Eastwood's car was retired early after team-mate Charles Graham crashed out.

All three stuntmen returned to filming in London studios on Monday morning.



WALKER

GOLD CUP

CHEVRON B8
RACE TO
CELEBRATE
50 YEARS

THE 50TH ANNIVERSARY of the Chevron B8 will be marked with a unique one-make race at the Oulton Park Gold Cup meeting over the 2018 August Bank Holiday weekend.

The Historic Sports Car Club is aiming for more than 20 cars in what will be the first dedicated race held for B8s, as well as the earlier B6s.

In 1967 Chevron produced around half a dozen examples of the model initially called the GT, which was renamed the B6. Its successor, the B8, remains one of the most enduringly popular sports-racing car designs and was one of the most successful projects from designer, engineer and Chevron founder Derek Bennett, who died in a hang gliding accident in 1978.

Grahame White of the HSCC said: "The Chevron B8 is one of the most desirable and sought-after sports-racing cars of a generation and we thought it was very appropriate to mark the car's 50th anniversary with a race at Oulton Park.

"Derek Bennett was a truly gifted race car designer and constructor. I think he would be amazed that we are going to celebrate 50 years of one of his most successful designs."

PICKUP TRUCKS

Pickups go night racing in 2018

THE PICKUP TRUCK RACING CHAMPIONSHIP IS introducing new features for next year, including night racing, pitstops and a 'dash for cash' event.

The champion of the series will come from the road course events, while a separate Rockingham champion will be crowned for the three oval meetings.

Qualifying for the night races will take place on Saturday afternoon at the regular British Automobile Racing Club meetings, with racing due to finish at around 9.30pm.

The last event of the Rockingham Championship will offer a £3000 prize pot. The additional dash for cash race – which will be worth around £1000 – will run with a mandatory pitstop and prizes for drivers across the field.

Rockingham has been given greater flexibility by the local authority for 2018, allowing it to run a 24-hour race, as well as the Pickup night races.

"It's something I've been wanting to do for some time, but we've never been able to overcome Corby Council,"

said Pickup Truck Championship organiser Sonny Howard. "They've relented. Peter [Hardman], the boss at Rockingham, wanted to do something different as well."

During pitstops only three crew members will be allowed to work on the car, and the championship will deduct a lap for any loose or missing wheelnuts.

Former British Touring Car racer and Pickup frontrunner Lea Wood said: "I think [the night racing] is a good idea. What Sonny has put together for the championship next year, of all the championships I've been involved in, I've never seen anyone put as much effort in as him. He's so passionate about it and there are more exciting things like the pitstops. I think it's set to be a really good year."

Newly crowned 2017 Pickup champion Scott Bourne added: "I think it's going to be one of the best things they've done."

→ P66 THE UK'S FASTEST CLUB RACING CHAMPIONSHIP

GOODWOOD MEMBERS' MEETING

F5000 and Group 5 cars at Goodwood

MIGHTY FORMULA 5000s and rare Group 5 sportscars will be among the headline attractions at the Goodwood Members' meeting next March.

F5000 single-seaters from the early 1970s will shake the ground in demonstration sessions at the Sussex track, along with Group 5 cars from the same decade's world sportscar

championship.

F5000 cars from Begg, Chevron, Eagle, Lola, March, McLaren, McRae, Surtees, Talon and Trojan are promised, as these cars feature at Goodwood for the first time.

Meanwhile, the 76th Members' Meeting's homage to Group 5 will include as many

as four examples of the dominant car of the period, the Porsche 935, which was used by the factory team from 1976.

Also on track at Goodwood will be BMW's ferocious 320i Turbo, the Lancia Beta Monte Carlo, Ferrari 512BB/LM and the spectacular Zakspeed Ford Capri.



F5000 cars will demo at Goodwood

LAT IMAGES



Goodwood celebrates great days of thunder

By Marcus Pye, the voice of club racing

[@autosport](#)

GOODWOOD'S ANNOUNCEMENT THAT MARCH'S 76TH Members' Meeting – its 50th modern era event – will include high-speed demonstrations for flame-belching Group 5 'Special Production' cars and Formula 5000 single-seaters on the motor circuit fills me with joy.

Both spectacular sets were instrumental in shaping my love of motor racing, providing unforgettable snapshots and sensational soundtracks through my late teens. The prospect of commentating on some of history's wildest cars will sustain me through the winter months.

F5000 came first, spawned from the nucleus of the SCCA's Formula A in the USA, to which five-litre pushrod V8s injected new lifeblood in 1968. The 50th anniversary of the big-banger class will be widely celebrated there next year, not least at Monterey in August. Championed by John Webb of MCD, the concept made its debut here in '69.

Very different to everything else on offer, it provided a platform not only for the versatile Peter Gethin to showcase his talents, but also for Trojan to build a beautiful series of McLaren M10s, for two seasons the class of the field.

Like Formula Junior and F3 before it, F5000 was built around stock-block engines that were readily available and, by F1 standards, inexpensive.

While the ubiquitous and immensely tuneable 302 cubic inch Chevrolet iron ruled the Stateside roost, Ford, Oldsmobile, Plymouth, Pontiac, American Motor Corporation and Dodge powerplants played supporting roles, as did the Australian Holden V8 engineered by the Repco concern, which motivated Jack Brabham to his third F1 drivers' title in '66.

I first witnessed an F5000 race at Brands Hatch in '71 and the memories still make my spine tingle. Four years later, as

a British Automobile and Racing Club startline marshal, I ushered Teddy Pilette's Team VDS Lola T400 onto the grid there, pushing on its huge rear tyres. The class had run its course in Europe by the end of '75 – although some cars returned in the subsequent ShellSport International Group 8 series. More than 40 years on it still excites.

I'm so privileged to have driven a bunch and raced a few in historic events, including the wonderful Lola T332 co-owned with Simon Hadfield in 2007.

My memories of Group 5 cars, outrageously powerful and lavishly bewinged caricatures of roadburners, include seeing Ronnie Peterson and Gunnar Nilsson taming the brand new chassis-twisting BMW CSL Turbo in practice for the 1976 Silverstone Six Hours (a World Championship for Manufacturers' round). The Swedes qualified second behind Jacky Ickx/Jochen Mass's Martini Porsche 935, but neither car finished the following day's race of attrition, won by the BMW CSL of John Fitzpatrick/Tom Walkinshaw by a second from the fast-closing Bob Wollek/Hans Heyer Kremer Porsche 935.

Then there was the '77 DRM finale, the Nurburgring Super Sprint, run in torrential rain. The conditions in Germany were atrocious, not conducive to operating a hydroplane, let alone a ferocious 670bhp turbocharged race car.

Some stars kept them on the island, however. Division 1 champion Rolf Stommelen, Wollek and poleman Manfred Schurti (935s) went the distance, as did Harald Ertl (Toyota Celica Turbo). In Division 2, Klaus Ludwig triumphed in the wacky 1.4-litre Rodenstock BMW 2002 Turbo from Heyer (Zakspeed Ford Escort RS) and points winner Manfred Winkelhock in the surviving BMW Junior Team 320i, both chasers powered by screaming two-litre F2 engines. 🏆



MAIDEN F5000 VICTORY FOR COLLINS IN NEW ZEALAND

Class rookie Michael Collins scooped his first Formula 5000 victory in last Saturday's opening leg of the New Zealand MSC Tasman Cup Revival Series encounter at the Circuit Chris Amon (formerly Manfeild). Driving Alistair Hey's ex-Evan Noyes McRae GM1, the 21-year-old multiple South Island FF1600 champion eagerly took advantage when Andy Higgins (Lola T332) – who had pipped him to pole by 0.04s – was slowed by gear selection issues. Higgins returned to the fore in Stuart Lush's Interscope-liveried car on Sunday; the 2013-'14 champ shaded Collins in both races. Grant Martin (Talon MR1A) and defending champion Brett Willis (Lola T330) shared the weekend's thirds. David Arrowsmith was the Class A standout, taking a best of fifth in his Ford-powered Lotus 70. The spectacular series resumes at Bruce McLaren Motorsport Park's Taupo Historic GP event on January 19-21, with Hampton Downs and Ruapuna's Skope Classic on successive weekends.

BRANDS HATCH
CSCC NOVEMBER 11-12

Lithe BMW defeats monster Corvette in Sixties contest

IAN EVERETT OVERCAME A 30-second penalty for previous winners to claim a thrilling Swinging Sixties race at Brands Hatch. In very tricky conditions, he squeaked home despite losing 8s to Dan Williamson's monstrous Chevrolet Corvette on the final lap when a fluffed gearchange locked his diminutive BMW's wheels.

Donington Park winner Williamson earlier handicapped himself by taking his penalty twice, the first – incorrectly – in his own pitbox. Wil Arif handed Dean Halsey the lead in their penalty-free Datsun 240Z, but the car slipped to sixth at the flag, with Richard Wilson's MG completing the podium.

Swinging Sixties polesitter Richard Wheeler crashed his Lotus Elan on oil on the opening lap but made amends in the Tin Tops. Wheeler dropped to third at the start, then made up ground to pit his Ford Fiesta in the lead. Co-driver Jake Hill emerged in second after serving

a 30s winner's penalty, but the British Touring Car racer clawed back over 20s to pass Danny Cassar – who was struggling with wet tyres on a drying track – in just six laps. The Reece Jones/Wayne Crabtree Honda Civic overhauled David and Tom Hutchins' similar car for third.

Surviving scares when Wheeler skated across the gravel and then Hill drove part of a lap with no lights, the duo won Saturday's second Night Race by more than a lap from Tom Mensley's Renault Clio. Early leaders Cassar and Garry Barlow lost time when held in the pits under a safety car, dropping to sixth.

On-the-road victor Bill Hardy was slapped with a one-minute penalty for passing the safety car in the first race in darkness, relegating his Vauxhall Corsa to sixth. That handed the win to Mark Lucock's Ford Escort Mk1, which – together with Alistair Lindsay – passed Everett's BMW on the final



Williamson (69) would eventually finish second to Everett (1) in Swinging Sixties race

lap when it was baulked at Surtees.

Nicholas Grindrod prevented Tim Davis scoring a double in Sunday's Catherham-dominated night races by prevailing in a terrific scrap in the second, longer stanza. The pair had onlookers holding their breath as they traded the lead while ducking in and out of backmarkers, until a spin for Graham Charman's Ginetta G55 – the leading non-Catherham – brought out the safety car and then red flags. Davis comfortably won the shorter race from Hugh Coulter.

A race-long tussle in the Magnificent Sevens also involved Davis, who eventually had to settle for second to Simon Smith. Third-placed Gary Bate's challenge faded in the closing laps.

"The best weekend's racing I think I've ever had," declared Davis, who claimed more silverware with second place in the Open Series race. Up front, Darren Burke helped Paul Lewis to a maiden victory aboard their Caterham Supersport. Behind Davis's C400,



L-r: Frost, Ramm and Philpott battle

RESULTS

SWINGING SIXTIES (24 LAPS)

1 Ian Everett (BMW 1502); 2 Dan Williamson (Chevrolet Corvette) +0.401s; 3 Richard Wilson (MGB Roadster); 4 Matthew Howell/Julian Howell (Austin Mini); 5 Raymond Barrow (Chevrolet Camaro); 6 Wil Arif/Dean Halsey (Datsun 240Z).

Fastest lap Williamson 1m07.223s (64.68mph). **Pole** Richard Wheeler/Jake Hill (Lotus Elan). **Starters** 34.

TIN TOPS (29 LAPS) 1 Richard

Wheeler/Jake Hill (Ford Fiesta ST); 2 Garry Barlow/Danny Cassar (Honda Integra Type R) +15.329s; 3 Reece Jones/Wayne Crabtree (Honda Civic Type R); 4 David Hutchins/Tom Hutchins (Civic Type R); 5 Bill Hardy (Vauxhall Corsa SRI); 6 Colin Simpson/Steven Simpson (Peugeot 206 RC). **FL** Hill 55.134s (78.87mph).

P Wheeler/Hill. **S** 30.

NIGHT RACE (13 LAPS) 1 Mark

Lucock (Ford Escort Mk1 RS2000); 2 Alistair Lindsay (Volkswagen Golf GTI Mk2) +1.060s; 3 Ian Everett (BMW 1502); 4 Ryan Mone (Porsche 944 S2); 5 Steven Simpson (Peugeot 206 RC); 6 Bill Hardy (Vauxhall Corsa SRI). **FL** Simpson 56.265s (77.28mph).

P Simpson. **S** 11. **RACE 2 (33 LAPS)**

1 Richard Wheeler/Jake Hill (Ford Fiesta ST); 2 Tom Mensley (Renault Clio 172) -1 lap; 3 Kevin Glover/Henry Wright (Fiesta ST); 4 Tony Maryon (Porsche 944); 5 Steven Grove (Lotus Elise S1); 6 Danny Cassar/Garry Barlow (Honda Integra Type R). **FL** Hill 55.070s (78.96mph). **P** Wheeler/Hill. **S** 30. **RACE 3 (11 LAPS) 1 Tim**

Davis (Caterham C400); 2 Hugh

Coulter (C400) +16.732s; 3 Michael

Russell (BMW M3 Evo E36); 4 Lucky

Khera (M3 E46); 5 Dave Griffin (M3

E46); 6 Oliver Clarke (Fiesta ST).

FL Davis 51.811s (83.93mph). **P** Davis.

S 9. RACE 4 (21 LAPS) 1 Nicholas

Grindrod (Caterham R300); 2 Davis +3.711s; 3 Darren Burke/Paul Lewis (Caterham Supersport); 4 Colin Watson (C400); 5 Khera; 6 David Rowe/Christian Szaruta (Supersport). **FL** Davis 50.725s (85.72mph). **P** Watson. **S** 26. **MAGNIFICENT SEVENS (40 LAPS)**

1 Simon Smith (Caterham CSR); 2 Tim Davis (Caterham C400) +5.179s; 3 David Rowe/Christian Szaruta (Supersport);

4 Mathew Evans (BMW M3 E46);

5 Colin Watson (C400); 6 Alan

Cooper/Kevin Cooper (Caterham Super Seven). **FL** Davis 1m04.487s (67.43mph). **P** Davis. **S** 28.

JAGUAR SALOON AND GT (13 LAPS)

1 James Ramm (XJS); 2 Colin Philpott (XJS) +7.212s; 3 Rodney Frost (XJS); 4 Derek Pearce (XK8); 5 Tom Robinson (XJR); 6 Guy Connex (XJ6 S2). **FL** Ramm 57.442s (75.70mph). **P** Ramm. **S** 21.

RACE 2 (11 LAPS) 1 Ramm;

2 Connew +15.826s; 3 Frost; 4 Robinson; 5 Tom Butterfield (XJS); 6 Patrick Doyle (XJS). **FL** Ramm 54.917s (79.18mph). **P** Ramm. **S** 21.

FUTURE CLASSICS (27 LAPS)

1 Andy Woods-Dean/Martin Johnston (Audi V8 Quattro Saloon); 2 Dan Rogers (Mazda MX-5 Mk1) +43.535s; 3 Aston Blake/Joshua Waddington (Porsche 944 S2);

4 Tony Maryon (944 S2); 5 Tim Bates

(Porsche 911 SC); 6 Sam Smith (MX-5

Mk1). **FL** Woods-Dean 1m02.100s (70.02mph). **P** Brian Lilley/Aaron Tucker (Ford Sierra Cosworth). **S** 31.

NEW MILLENNIUM (36 LAPS)

1 Samuel de Haan (Audi RS3 TCR); 2 Mark Smith/David Cuff (BMW M3 Evo E36) +7.903s; 3 Dominic Malone (M3 Evo E36); 4 Graham Charman (Ginetta G55); 5 Mathew Evans (M3 E46); 6 Oliver Clarke (Ford Fiesta ST). **FL** Malone 52.421s (82.95mph). **P** Evans. **S** 19.

MODERN CLASSICS (14 LAPS)

1 Nicholas Olson (Lotus Esprit S3); 2 Rob Hardy (Porsche Boxster S) +11.417s; 3 Laurence Squires (BMW 323i E36); 4 Michael Russell (BMW M3 Evo); 5 Dave Griffin (BMW M3 E36); 6 Gavin Dunn (BMW 328i E36). **FL** Griffin 53.566s (81.18mph). **P** Griffin. **S** 28.



Christian Szaruta survived a spin at Paddock to finish third in the David Rowe-started Supersport.

James Ramm charged to a dominant Jaguar Saloon and GT Championship double. Pole and a pair of fastest laps completed a near-perfect weekend for the Essex driver that left him tied on points – and awaiting countback confirmation – with Rodney Frost in the standings. The South African won his class in each race with a pair of third places. The title challenge of Colin Philpott, second in race one, evaporated when he spun and bent his steering at the start of race two. Guy Connew took advantage to record his best finish of the year in second.

The ex-DTM Audi V8 Quattro of Andy Woods-Dean and Martin Johnston took Future Classics victory after Brian Lilley's Ford Sierra Cosworth – shared with Aaron Tucker – was black-flagged due to tyre irregularities. Dan Rogers' Mazda MX-5 inherited second as Neil Fowler crashed his MGB within sight of the flag, just holding off the Aston Blake/Joshua Waddington Porsche 944.

At the wheel of an Audi RS3 TCR, Sam de Haan took a maiden win in the New Millennium contest on only his second race weekend. After a slow pitstop, Charman's Ginetta was chasing down de Haan until he spun at Clearways. Charman slipped to fourth as a result, behind the Amspeed BMWs of Mark Smith/David Cuff and Dominic Malone, both taking winner penalties.

Pitting just before a mid-race red flag – for the inverted Ford Puma of Luke Johnson – was key to Nicholas Olson claiming Modern Classics laurels. He coaxed home his Lotus Esprit amid worrying rattles from its differential. Rob Hardy and Laurence Squires benefited similarly, with Michael Russell's BMW M3 best of those who had to pit after the restart, in fourth. Jon Attard won the Ford Puma division.

MARK PAULSON

ANGLESEY RACE OF REMEMBRANCE NOVEMBER 11-12

Comfortable memorial win for Sofa King

THE SOFA KING FAST TEAM OF Caroline Everett, Jay McCormack and James Beardwell led home a quartet of Caterham squads as they dominated this year's Race of Remembrance at Anglesey.

The first six-hour part of the race ran in dry conditions until 9pm on Saturday, and early on the British Sports Car Services Lotus Exige of Alan Henderson, Xavier Brooke, Nicolas Maduz and Tim Gray set the pace before McCormack gave Sofa King a spell of leadership.

Later into the evening Gray pitted with severe vibration and handling problems, but they fared better than the Datum Motorsport 1 Exige, which Wade Eastwood had got into second place before Charles Graham crashed out at Turn 1 in the third hour.

The Caterhams were also a relay class, and after four hours Mad Cat Racing's Douglas Thain/Matthew Welch had a lap on Sofa King Fast and CTS Motorsport 2 (Peter Reynolds/Peter Walters/Geoff Price).

The safety car saw plenty of action into the night, as did the stop/go penalty box, but when the flag came out to end part one at six hours, it was McCormack to the fore for Sofa King, with Mad Cats' Welch one lap down, from Team Tivarney's Tom John.

The Datum Motorsport 2 Lotus Elise of John Lamaster and Craig Denman was the first non-Caterham in fourth place, before more Caterhams – CTS Motorsport 1's Ross Olivant and APB Racing's Andrew Burd – completed the top six.

Sunday started wet and continued in similar showery conditions, but the Sofa King trio continued to dominate and only lost the lead during the exchanges in the pits, although none of the top four could be completely discounted.

Beardwell was given the privilege of taking it to the flag for Sofa King, with only the CTS Motorsport 1 car in Rob Watts's



hands on the same lap after sterling drives from team-mates Alex Jordan and Olivant.

CTS Motorsport 2 completed the podium, from Mad Cat and the Datum Motorsport 2 Elise, with the Caterhams of SPD Racing, Toby Clowes Racing and APB Racing next home. Heroes Trophy winner for first non-relay car was Rob Boston Racing in ninth, despite Peter Mansfield spinning off at Church in the closing minutes, after sharing with race debutants Chris Gordon and Scott Armstrong.

The Tivarney Caterham squad had looked set for a decent finish, but a stop/go penalty put them out of the top 10. Dan Welch had the Roddison Motorsport 1 Mazda MX-5 into the top 10 after a strong drive on Saturday evening, but after Paul Roddison/Jon Halliwell had kept it in contention, exhaust maladies dropped them to 15th.

Tom Onslow-Cole/Josh Caygill's Milltek Sport Toyota GT86 was an early casualty after contact, but, along with the Datum Motorsport 1 Exige, they were the only unclassified finishers from the 41 starters.

There was a five-car class for Citroen C1s, which spent much of the time in close formation, before the spoils went to BS Motorsport's Ben Short, Matt Short and Ben Hancy. Meyrick Cox's team of Andrew McKay, Matt Maxted and Gary Dunning had built a good lead, but had to have an engine change, which left them fourth behind PT Sportscar (Charlie Martin/Andrew Faulkner/Justin Beadle/Thomas Clynes) and Advantec (Sean Whatley/Matt O'Hare/Chris Williams/Alistair Weaver).

In the Heroes Trophy the Datum Motorsport 3 Elise of Ben Brooks/Lee Brooks/Phil Grayson followed home the similar Rob Boston car, with the RKC TGM Honda Civic of Ricky Coomber, Tom Gannon and Mark Simmons third.

PETER SCHERER

RESULTS

RACE OF REMEMBRANCE (358 LAPS) 1 Sofa King Fast (Caroline

Everett/Jay McCormack/James Beardwell) (Caterham Tracksport); 2 CTR Motorsport 1 (Alex Jordan/Russ Olivant/Rob Watts) (Caterham 270R) +2m14.091s; 3 CTS Motorsport 2 (Peter Reynolds/Peter Walters/Geoff Price) (Caterham 270R); 4 Mad Cat Racing (Douglas Thain/Matthew Welch) (Caterham 270R); 5 Datum

Motorsport 2 (Craig Denman/John Lamaster) (Lotus Elise); 6 SPD Racing (Steven McCulley/Donald Henshall/Paul Aram) (Caterham 310R). **Class winners** Merlu Motorsport (Marco Aghem/Davide Bernacchi/David Galliano/Dario Gambino) (Mazda MX-5); BS Motorsport (Ben Short/Matt Short/Ben Hancy) (Citroen C1 Challenge); Denman/Lamaster; RKC TGM (Rick Coomber/Tom Gannon/Mark Simmons) (Honda Civic); Paul Sheard Racing (Carl Garnett/Pete

Edwards/Steve Dolman/Adam Bessell) (Mazda MX-5); DDCR Racing (David Drinkwater/Robin Welsh/Clive Brookson/Dan Collett) (BMW Compact); Rob Boston Racing (Peter Mansfield/Scott Armstrong/Chris Gordon) (Lotus Elise). **Fastest lap** British Sports Car Services (Alan Henderson/Xavier Brooke/Nicolas Maduz/Tim Gray) (Lotus Exige) 1m38.293s (76.91mph). **Pole** British Sports Car Services. **Starters** 43.

The fastest club championship in the UK

This might come as a surprise, but the Pickup Truck Championship is the fastest in the UK and boasts unique quirks. Autosport investigates on the series' 20th birthday

By Jack Benyon, Group National Editor

🐦 @jackbenyon



Unlike NASCAR, UK Pickups race on the oval even if it's wet

It might not have been the first championship you thought of when you read that headline, but the Pickup Truck Championship is the UK's fastest club series. When it runs on the Rockingham oval, speeds go north of 130mph.

Unlike its American NASCAR counterparts its cars use V6s, cost an affordable £10-15,000, and races go ahead in the wet – even on the oval.

A focus on keeping costs down and driving standards up has helped the championship endure since its inauguration in 1997. It's the only club series to race on ovals in the UK and Ireland. Former British Touring Car driver Lea Wood, who has taken a voluntary refuge in the championship, enjoys the challenge of something that's totally different to racing on a circuit.

"To be honest, it's the most exciting thing I've ever done," says Wood. "It's so exhilarating. The big thing for me coming from circuit racing, at Rockingham the race doesn't start until the last two laps and it's all about trying to get yourself into position for those last couple of laps."

"That's the big factor, understanding when to do that, where to position yourself. If you make the move to overtake and you don't make it work, the train will drive past you because they [the individual cars] aren't the most aerodynamic of things."

It's a tactic that's accepted by all the drivers. Work yourself into position and try not to be leading heading into the last lap. It helps to create some exciting finishes, when many other club championships have been wrapped up in the first handful of laps and there's a half-minute gap for the winner to sit on at the end.

In NASCAR it's a given that if the heavens open, the racing is off. But in this championship the event goes ahead, even if the venue is Rockingham's oval. That provides another dimension, another style to that of normal oval and circuit racing.

"The oval in the wet is definitely a lot more demanding on the car and driver," explains 2017 champion Scott Bourne. "You have a lot more to think about and you can't really put a foot wrong."

"You have to run a different line, which throws you a little bit. You're right up against the wall and you're doing the same sort of speeds as in the dry when you're lower on the race track. That's hard! The only way to overtake is to come down off the line. Sometimes you can lose a lot [by coming down the race track] and sometimes you can gain a lot. It's interesting."

"To be honest, it's the most exciting thing I've ever done. It's so exhilarating"

Generally accepted as the quickest driver on the ovals and the man who scored the most points from the oval rounds this year, Mark Willis races for one of the only remaining single-car teams in the championship. Pickups has become popular enough to support multiple-car squads in recent years.

Willis says that, contrary to popular belief, it's possible to change the car from circuit to oval specification quickly: "It takes three nights to change everything over from circuit set-up to oval set-up. It's the spring rates, caster, camber adjustments, diff settings, preload and cross weight."

"Once you find something you like, you've got to record it and measure it to make sure you can get back to the set-up. It's hard to find it and easy to lose it."

The championship isn't just about the ovals. This year it visited Brands Hatch, Pembrey, Donington Park and Snetterton as well as holding four rounds at Rockingham.

At the Brands Hatch finale earlier in November, BTCC frontrunner Andrew Jordan had the opportunity to sample a truck and grabbed it gleefully. He was surprised by the result.

"I'd never driven one before," says Jordan, who took a second ➤



Close racing is a given in the series, as Andrew Jordan (leading) found out

HAWKINS

“There’s a bit of door banging, but I’m used to that from touring cars”

and a first. “They handle and drive so much better than I expected. You look at them and they appear quite agricultural, but they’re actually really nice to drive.”

Something Wood and Jordan have in common is their experience of the robust racing in the BTCC. Both credit the pickups for being hard but fair. It’s a difficult blend to strike in club racing. Too rough and the damage can really hurt those racing on a relative shoestring. No close racing and contact at all and it can all feel a bit tame. Jordan and Wood reckon the Pickups are finely poised.

“The truck has a few rubs on it... but no more than I’d expect,” says Jordan. “We had some hard racing but it was fair and sensible.”

“It’s a good standard, there are some good drivers involved with a mix of experience,” adds Wood. “It’s hard — everybody is hard when you’re out there and there’s a bit of door banging — but I’m used to that from touring cars.”

It’s clear the organisers of the championship are highly rated. Sonny Howard is the man behind the series and with a team described as “professional” by Willis.

“We’d done the V6 Eurocars and then the V8s came along, but they were a bit of a struggle,” says Howard when asked to explain his inspiration for the series. “They were implemented by the British Racing and Sports Car Club and it was really ahead of its time. I wanted to do the Pickups first. I thought that would help the structure of the championships. They insisted on having the V8s.

“There was interest from the short-oval people in going into something else and I ended up using the same specification engine as the National Hot Rods. When it started they could bring things over because the engine was the same.”

What he created is a championship that offers variety, and does everything it can to keep costs down. The 2.3-litre Division 1



Using the draft is important on ovals, and Willis (65) is a star

HOLBON



Wood has found a home in Pickups after his BTCC career

READ



Jordan will race in the series again after successful Brands debut

HOLBON

models can be picked up for around £12,000 and can be run for £1000 per round. The Division 1 trucks get 30kg of ballast for race wins and, unlike other championships, you can only shed ballast if you finish outside the top three. If you 'tank' to lose ballast, your championship bid is significantly struck. Only allowing one new tyre per meeting also helps keeps things equal.

The two-litre Division 2 trucks don't accumulate ballast. They have a chance to cause an upset in the second half of the season – indeed, Bourne scored an overall win in a Division 2 machine at Brands Hatch in 2016. Howard's engineering company built the trucks and carries the necessary spares inventory at every round.

"Sonny stocks everything, every nut and bolt from front to back," says Willis. "He has everything down to spare chassis. He has a van full of spares so there's no problem there. On the rare occasion he hasn't got something, one of the other teams will lend it to you."

Willis is one of the longest serving drivers in the championship, and feels that Howard and his team are key to its success. Although he admits he's biased towards 'his' series...

"I think it's the best-kept secret in motorsport," he says.

"The way it's run and the dedication they put in; we have our own scrutineers, it's such a professionally run series I can't understand why more people don't get on the bandwagon."

More people are getting on the bandwagon. Mike Jordan, former British GT champion and father of Andrew, started in the series in 1997 and had the first truck Howard built. Now he could compete alongside Andrew in the championship in 2018. Andrew's generous assessment of the championship can be taken at face value given he wants to compete in the series again next year.

The championship has some radical ideas for 2018, including night oval races for the first time in its history, and a 'dash for cash' race with a pitstop (see news, p62). It's got its drivers pumped up, and after 20 years of continuous racing, Howard and his team are dedicated to another 20.

If the championship continues to offer its unique challenges to drivers, keep the costs down and the enjoyment high, there's no reason it can't continue to bloom. 🍀



Pickup Truck specifications

ENGINE

2.3-LITRE FORD, 2.0-LITRE GM

WEIGHT

980KG

CHASSIS

TUBULAR SPACEFRAME

BALLAST

FIRST PLACE 30KG
SECOND 20KG
THIRD 10KG
MAXIMUM BALLAST 50KG

GEARBOX

FOUR-SPEED SEQUENTIAL,
FOUR SPEED H-PATTERN
DOG BOX/SYNCHROMESH

TYRES

AVON; CIRCUIT SLICK
AND WET, OVAL SLICK

BODYWORK

FORD RANGER WILDTRAK,
ISUZU RODEO, VAUXHALL

COST TO BUILD

£12,000-£15,000

POWER

230BHP

COST TO RUN

£1000 PER ROUND

HAWKINS

WHAT'S ON



GT Sport – online focus over classic

GT SPORT IS NOT GRAN TURISMO 7, and should not be treated as such. It marks something of a departure from PlayStation 3-era GT games – which, for many, is no bad thing.

At the launch of GT Sport in London's Olympic Park last year, it was clear that the new game's focus was to be online, with a pair of FIA-certified online tournaments as the centrepiece, and everything else in the game is geared up around that. Much has been made of the lack of a lengthy single-player campaign mode, and anyone expecting a full-fat Gran Turismo title akin to 2013's GT6 – complete with the Goodwood Hill and Lunar Rover missions – is likely to be disappointed.

But for just about everybody else, GT Sport offers something that is leaner, more compact and more focused – and, critically, more enjoyable than its immediate predecessors.

In an offline race, players will be greeted by the beautiful graphics they've come to take for granted over 20 years and four console generations of GT games. Setting the difficulty to

'professional' will provide a challenge for the hardest players, while the AI is more aggressive and assertive.

With only 162 cars available at launch, GT Sport marks a major reduction compared to the 1000-plus machines available in GT6. There are 40 track layouts across 17 locations available, with the focus largely on a roster of new fictional venues at the expense of some real-life circuits.

To think of the modest Campaign Mode as the heart of the game is the wrong approach, as it's little more than

GT Sport offers players the chance to earn an FIA Gran Turismo digital licence; Brands Hatch (below) is one of 17 playable locations

an in-depth tutorial to prepare players for the rigours of online gameplay. The FIA-sanctioned Nations Cup and Manufacturer Fan Cup tournaments launched this month with a seven-round 'test season' ahead of an expected fuller campaign next year.

Players can choose from one of five time slots to race each round of either tournament, and are matched against rivals according to experience levels. Points are then awarded depending on performance, with the best three scores out of seven counting towards the total. Outside of those races, there's also a choice of three Daily Races, which take place at regular intervals on a rotation of three different tracks – a way of sampling GT's online offering without the pressure of the FIA tournaments to build experience.

GT Sport also places heavy emphasis on good driving (even forcing you to watch a pair of Racing Etiquette videos before diving into the online action), awarding players a 'sportsmanship rating' that gets a knock whenever they are involved in an on-track clash.



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FELIPE'S FAREWELL TO HOME FANS

Search for Felipe Massa's Emotional Final Race in Brazil | 2017 Brazil Grand Prix

Yes, we've been here before, but who could possibly remain unmoved by Felipe Massa's Brazilian Grand Prix swansong? And it was a stonking drive to seventh, too, Paddy Lowe describing it as "perfect" and delivered with "fantastic skill".

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November 19

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BRANDS HATCH

JONES



LAT IMAGES



MACAU GRAND PRIX

Live on Autosport.com and Motorsport.com
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The Macau Grand Prix is one of the most prestigious races in single-seater competition. Antonio Felix da Costa enjoyed racing around the hallowed streets so much when he won in 2012 that he returned in 2013 and '16, winning again last year. Follow the action live on Autosport.com and Motorsport.com

The ultimate goal of GT Sport, as series developer Kazunori Yamauchi alluded to last year, is to make as many gamers into real-life race drivers as possible, via the FIA Gran Turismo digital licence. As of last year, 22 national motorsport bodies (including the UK, India, Australia and New Zealand) had signed up to the scheme, although there has been little word since on exactly how the licence will be made attainable.

In certain respects, GT Sport is a throwback to an earlier time in the franchise's history, before it arguably became too bloated for its own good with the addition of countless features that added little real value.

By contrast, GT Sport does away with all the pointless peripheral clutter and perfectly captures the essence of what made the franchise so great back in its early-2000s heyday. Such an online-focused product may not be to everybody's taste, but Gran Turismo deserves credit for taking a step back, deciding exactly what it wishes to accomplish — and then nailing it.

JAMIE KLEIN

FROM THE ARCHIVE

A huge Brands Hatch turnout, dressed for a British summer as only a home crowd can be, watches Mauro Baldi (Sauber C9/88-Mercedes) lead the field around Paddock Hill Bend at the start of the fourth round of the 1989 World Sports-Prototype Championship.





TOP FIVE

WORST TEMPORARY CHICANES

During its recent official test session at Valencia, Formula E installed a temporary concrete-blocks-and-tyre chicane to make the circuit more similar to the city-centre tracks it normally uses. It did not go down well with the drivers, and one team boss called it “pretty average”. With that in mind, here our top five worst temporary chicanes.



1 BELGIAN GRAND PRIX 1994

This short-lived chicane for the 1994 Belgian Grand Prix at Spa tops the list purely because it was installed at Eau Rouge, removing much of the speed from the fearsome corner. The modifications were made as part of the safety drive that followed Ayrton Senna's and Roland Ratzenberger's deaths at Imola earlier in the season, but were gone for the '95 event – although added safety features including tyre walls and runoff areas were installed for that race.



2 FORMULA E VALENCIA TESTING 2017

This chicane, built three-quarters of the way down Valencia's 'National' main straight and consisting of two staggered concrete blocks, with tyres placed in front of them, was called “dangerous” by Sebastien Buemi. DS Virgin driver Sam Bird crashed into the barriers on the first day of the test, which led to a second set of identical barriers being installed, effectively splitting the straight into thirds.

3 SPANISH GRAND PRIX 1994

Following the deaths of Senna and Ratzenberger, the Grand Prix Drivers' Association was reformed at the next race at Monaco. At the following round at Barcelona, the drivers' group insisted that a tyre-barrier chicane was built at what was then the Nissan corner – the preceding Campsa turn now feeds onto a straight and leaves it out – to lower speeds approaching the La Caixa hairpin.



4 GRAND PRIX OF BALTIMORE INDYCAR 2012

When IndyCar arrived in Baltimore, the drivers understood they would be facing just 12 corners following complaints about a chicane on the circuit's main Pratt Street straight in 2011. But without it cars were hitting the rail tracks crossing that road section and “launching like quail” (as Autosport described it). Grinding the road did not work, so the tyre barrier chicane was reintroduced.



5 SLOVAKIA RING FIA GT1 2012

Ahead of the Slovakia Ring round of the 2012 FIA GT1 world championship, a tyre-barrier chicane was installed on the exit of Turn 2. The reason for this feature (pictured in 2013) was that in previous events cars had begun to lift dramatically as they went over a crest on the adjoining straight. Along with having to navigate the chicane, drivers were banned from overtaking by yellow flags.



AUTOSPORT

Autosport Media UK Ltd, 1 Eton Street, Richmond, TW9 1AG
Tel +44 (0) 20 3405 8100 Email autosport@autosport.com
Individual email firstname.surname@motorsport.com
Website www.autosport.com Twitter [@autosport](https://twitter.com/autosport)

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LAT IMAGES

Photography

Steven Tee
Glenn Dunbar
Sam Bloxham
Zack Mauger

Special Contributors

Gary Anderson
Alan Eldridge
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Tel +44 (0) 20 3405 8131 Email abbey.gunner@motorsport.com

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Laura Paterson +44 (0) 20 3405 8129

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THERE'S A STORY TOLD BY INDYCAR

legend Rick Mears that causes me to smile and shake my head with disbelief in equal measure.

Following a crash at Sanair the previous September that almost cost him his right foot, Mears returned to the cockpit in 1985, but was still far from fully fit. The Penske driver had to be lifted into the car such was the pain, but when asked how his preliminary run went by his crewmen, his feet were a secondary concern.

"It cracked them up when I just replied, without thinking, 'It's pushing a little bit in Turns 3 and 4, but it's neutral in 1 and 2.'"

It would be easy to assume that racers are wired differently to your average person – look no further than Valentino Rossi's brave run to fifth in the Aragon GP (above), just three weeks after a leg-breaking motocross accident.

But while it's true that adrenaline and competitive instincts can be a powerful combination when it comes to climbing back into the saddle, don't make the mistake of thinking it's a seamless process. The effort that goes on behind the scenes to get an athlete **back to the top of their game after a serious injury** should never be underestimated.

As Niki Lauda, Felipe Massa and more make clear, the act of **getting injured** is only the beginning; **it's the recovery** where the real work starts.

JAMES NEWBOLD
PERFORMANCE EDITOR

james.newbold@autosport.com

@james_newbold



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LAT

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CHIEF SUB-EDITOR Peter Hodges SUB-EDITORS Stuart Codling, Robert Yarham CONTRIBUTORS Stefan Mackley, Matt James, Caroline Stammers SENIOR DESIGNER Michael Cavalli COVER IMAGE Jürgen Tap/HOCH ZWEI
ADVERTISING ENQUIRIES Don Rupal email don.rupal@motorsport.com



MASTERCLASS

WITH ROB WILSON

THE ESTEEMED DRIVER COACH EXPLAINS WHY RECAPTURING PAST GLORIES IS MUCH HARDER THAN YOU THINK



Schumacher frequently found himself in Rosberg's shadow

LAT IMAGES

The challenge when you return to racing after some time away is you forget just how many things had to go in your favour to be successful. You convince yourself that, somehow, it was all down to you outdriving people, but there are a lot of things that have to be right for you to be in a winning position.

Very few people have ever won the world championship in anything but the best car. From 2000 to '04, Michael Schumacher had the best car on the Bridgestone tyres, he dominated the team and he won. Of course, he was a great driver, but when he came back in '10, even his brother Ralf wasn't convinced about the wisdom of the move.

For a while I think it took the shine off his legacy. When he came back he was kept honest the whole time by Nico Rosberg. Rosberg got better, and Schumacher lost a certain amount of momentum.

I personally think it's a pity how it turned out, but people have an amazing knack of forgetting the bad part and just looking back to his glory days at Ferrari.

People completely forget about Alan Jones's comeback. He had that wonderful 1980 season, and even '81 up to a point in the Williams, but when he turned up again in a Beatrice-Lola at the end of '85, it didn't work out for him. He also did a race at Long Beach in an Arrows in '83 after a couple of years away,

but when he drove the Beatrice with Patrick Tambay, that mojo had gone. He wasn't in the best car, but people erase that from their memories.

In every success story, there's a point where both car and driver come together at their absolute peak and are able to take advantage when the opposition is that little bit weaker. Sometimes we sugar-coat our memory and think that's what we always were.

Recreating the glory days in a slightly different environment, and at a different time, is much easier said than done, because when one part of that formula breaks, the whole chain falls apart. Take Jacques Villeneuve. The Ferrari wasn't fully developed in '97

– Schumacher was still three years away from winning world titles – but anything from there on for Villeneuve simply didn't work. That's not to say that Villeneuve wasn't a talented driver, but thinking that win defines you is forgetting the other times you didn't win.

To make the comeback work takes something extraordinary, and Niki Lauda was that. He's probably the only one who made a true success of it.

Yes, Mika Hakkinen came back from being seriously injured in the final race of 1995 and went on to win two championships, but he only missed one race. Lauda recovered from horrific injury at the Nurburgring in 1976 to win the title the following year, and came back



Lauda came back from retirement to win his third title in 1984

LAT

Question marks remain over Kubica despite Renault tests



1980 champion Jones's comeback with Beatrice is best forgotten



Hakkinen opted to stay in retirement after a brief testing return in 2006

“Of the champion drivers that really stopped driving, the only truly successful comeback was Lauda’s”

from retirement to become champion in '84 as well. He was out of F1 for two full years, returned into a different environment and delivered.

Kimi Raikkonen managed to come back and win after his stint in the WRC, but that's different from Lauda because Kimi was driving all the time. The same goes for Juan Pablo Montoya winning the Indy 500 after 15 years away, as he was doing Formula 1, NASCAR and sportscars in between. Both will have developed from staying active; it wasn't like they were retired.

Of the champion drivers who really stopped driving – Jones, Lauda and Schumacher – the only truly successful comeback was Lauda's, but even he was arguably never as quick as Alain Prost when they were team-mates at McLaren. Has a driver ever come back from a retirement, enforced or otherwise, and gone faster than they did before? It's doubtful.

Stirling Moss absolutely rebounded from a massive accident in 1960 at the Belgian Grand Prix, but after his Goodwood accident in '62 he went testing and it had

gone. Hakkinen came back from his sabbatical to test for McLaren in 2006, but decided he would be better off staying retired from F1 after all.

A lot will depend on where the driver was in their career when they had the interruption. Graham Hill had already done 12 years in F1 when he had his big accident at the end of '69 at Watkins Glen.

Hill won the Monaco Grand Prix in 1969 and he was still a great driver – it is often forgotten that he was born in the same year as Mike Hawthorn, who retired at the end of '58 – but when he emerged five months later at the first round of the '70 world championship in South Africa, I think the accident changed him.

Instead of challenging at the front, or finishing second as he had done the year before, Hill eventually came home in sixth at Kyalami, albeit in a Rob Walker Lotus 49 rather than the factory car. That was fine, but he was in a different place from that point on.

Robert Kubica is younger than Hill was, but his return would be both from injury and from a big gap at once.

While you don't necessarily need two hands to drive a car, there might be certain situations on-track where you need to know you've got the ability to use both to make a split-second decision. Not having that certainty could make you second-guess yourself.

That could be doing Robert a disservice, but even if he was perfect, and had just gone off to do rally driving for seven years, there would still be a tuning-in process to get back to being a racing driver again. Could he ever get back to the time he won the Canadian Grand Prix in 2008? That's hard to say.

There was an awful lot going for him back then – he had a very good chassis, a good engine and he was at Montreal, which normally favours a strong engine. That said, I don't think Formula 1 moves on in the sense that there are people with more talent winning nowadays. For example, you wouldn't say Lewis Hamilton is more talented in his pomp than Schumacher was in his pomp, so Kubica should be somewhere in the pack if he returns.

Is it going to be different to Paul di Resta, Daniil Kvyat or Pascal Wehrlein if Kubica does come back? Will he get back to the point where Fernando Alonso rated him so highly? Let's hope that's the case, but there's still a question mark there, as there is when all drivers attempt to make a comeback after a serious layoff.

Sometimes, you just forget how fortunate you really were.



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INSIDE LINE

SEBASTIEN BOURDAIS

THE US-BASED FRENCHMAN EXPLAINS WHY IT WAS IMPORTANT TO PUT INJURY TALK BEHIND HIM AS QUICKLY AS POSSIBLE

CAREER Highlights

- 2017** IndyCar (Dale Coyne), 1 win; Daytona 24H GTLM winner (Ford)
- 2016** IndyCar (KVSH Racing), 1 win; Le Mans 24H GTE Pro winner (Ford)
- 2015** IndyCar (KVRT), 2 wins; Sebring 12H winner (Action Express)
- 2014** IndyCar (KVRT), 1 win; Daytona 24H winner (Action Express)
- 2013** IndyCar (Dragon Racing)
- 2012** IndyCar (Dragon Racing); V8 Supercars (Triple Eight), 1 win
- 2011** IndyCar (Dale Coyne); V8 Supercars (Triple Eight), 1 win
- 2009-10** Superleague Formula, 3 wins
- 2008-09** Formula 1 (Toro Rosso)
- 2004-07** 4x Champ Car champion (Newman/Haas), 28 wins
- 2003** Champ Car, 3 wins
- 2002** F3000 champion (Super Nova), 3 wins
- 1999** French F3 champion

I have had some pretty sizeable shunts in my career, but none where I ended up in hospital with an inactivity period, so it was all very new to me [Bourdais suffered a massive crash in qualifying for the 2017 Indy 500]. There's always a scary period post-crash when everybody is assessing the damage and trying to work out how bad it is, but once I knew that nothing was really bad and couldn't be fixed within a reasonable amount of time, I wasn't too worried.

Doctors are always very cautious with their prognosis, so to take the pressure off they said, 'He's probably out for the season'. I had some nerve damage and they had to cut a piece of bone to get to the femur, so you're never quite sure how fast that's going to recover.

I didn't have much point of comparison because I haven't broken anything before, but the bone healed pretty well and, as they saw how it was coming together, things changed a little bit. We started talking with the doctor about the timeframe; around six weeks for weight bearing, eight weeks for walking and

Mid-Ohio was the first time I got back in the car and it went really well. I didn't feel much of anything as far as the hip was concerned. Mostly the biggest limitation was the neck, but other than that, it was just a matter of doing laps and regaining confidence. When I got the all-clear to get back to racing two weeks later, I didn't have to think twice about it.

I am hoping that when we come back next year in St Pete, all we talk about is the season ahead and not how I managed to come back or where I'm at physically. For me it's important that next year, that chapter is closed and we're focusing on the job ahead instead of focusing on all the not particularly pleasant memories. I've seen it before with James Hinchcliffe. Obviously that was a bit different because he almost died, but I'm not particularly excited about the fact that this is going to be a matter of discussion all winter long.

It's perfectly fine that I deal with it, but ideally for the least amount possible and for the shortest duration possible as well. That's only going to happen when people see me as they used to see me and not as a guy

“Sooner or later you're going to have to deal with it, so you might as well deal with it as early as possible”

then three months to get back in the car.

I'm not a stubborn guy, I tried to follow instructions as best I could. The last thing I wanted to do was rush things and make it worse, so I tried to be on the cautious side. Your ego takes a big hit when you're naked in a hospital surgery room. You end up feeling like a piece of meat. But once I got the green light and everything was strong enough to take another hit, there was no reason to hold back. At that point, the objective was to come back for the last race and if I was going to be ready for Sonoma then I wanted to be ready for Watkins Glen two weeks before. The July 31 test in

who has survived something and is just coming back.

To get back for Gateway in August was a big ask. It was not really intended that way and there were a lot of questions about whether it was the right thing to do or not. But when it's your job and you plan on continuing regardless of what's happened in May, I guess sooner or later you're going to have to deal with it, so you might as well deal with it as early as possible and get a head start for next year.

We have a comfortable and confident relationship with Dale [Coyne, team owner], so there wasn't any reason to be forced to come back early. I knew I would be back next year and I wanted to give myself every opportunity to maximise my chances of success.

For me it was about making sure that all the mental gremlins were taken care of for next year, when hopefully we can fight for something significant. Now I'm that much more comfortable for when I'm going to be back on an oval next year and I'm feeling good. I'd say I'm about 95% outside the car and running is starting to be an option again. It's not super comfortable, but it's good enough considering where I'm coming from!



ROAD TO RECOVERY

FINDING A WAY BACK TO RACING AFTER INJURY IS LITTERED WITH PITFALLS.
OUR EXPERT PANEL SHARE THEIR EXPERIENCES
BY JAMES NEWBOLD



Brack's return at Indy in 2005 was stunning

“It was a kind of divided feeling, I think. Some people thought it was the best thing since sliced bread and some people thought it was absolutely crazy. But a lot of people felt pretty pumped about it. That was a good day.”

Unless you are a racing driver who has also been forced to sit on the sidelines through injury, the sense of triumph Kenny Brack felt in May 2005 will likely be lost on you. Even for seasoned IMS veterans, the 1999 Indianapolis 500 winner's return to the Brickyard in place of injured defending winner Buddy Rice, 588 days after his near-fatal 214G impact at Texas Motor Speedway in 2003, seemingly defied all logic.

With pins in his back, wires in his ankles and a smile

missing the first four months of the season with a broken right leg and left ankle.

Or, given the many factors that need to be in place to get back in a winning car – a dilemma Robert Kubica is especially familiar with – should a higher value be placed on a driver proving that they can compete on a par with the level they were operating at before their injury?

Brack's astonishing qualifying run – which put him only 23rd on the grid, as the top 22 had already been locked into the field on Pole day – ultimately came to nothing due to a loose steering arm, but the Swede has no doubts that he could have fought for victory had his car not let him down after 92 laps.

“It was the first time in my career when I felt I had

“To come back and set the fastest lap of the field was the most successful you can ever be after what I'd been through”

plastered on his face, the fact that Brack was even alive, let alone strapped into an Indycar, was a remarkable feat. When he then set the fastest time of the entire week, qualifying at 227.598mph, one of the feel-good stories of the year was complete.

For as long as people have gone motor racing, drivers have had accidents and had to recover from injuries, with varying success. But precisely what constitutes a successful recovery is a matter for debate.

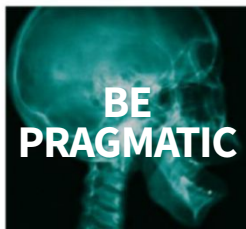
On the basis of results, it's hard to look beyond Michael Schumacher's run of five successive drivers' world championships following his leg-breaking shunt at Silverstone in 1999, or Kyle Busch's 2015 NASCAR Cup title success, which came despite

won the race before it had even started,” says Brack, now a development driver for McLaren Automotive.

“Short of winning the race, to come back and set the fastest lap of the field was the most successful you can ever be after what I'd been through.”

Even the timeframe is disputed – some argue that it's vital to get back as soon as possible to ensure doubts don't have a chance to fester, while others recommend taking the time to allow everything to heal and thereby minimise the risk of causing further damage.

Since so much is contingent on the nature of the injury itself, there is no single answer that will satisfy every case, but there are some common elements that all successful recoveries share. ►



There's never a good time for a racing driver to be injured, and remaining positive during the recovery phase is much easier said than done, particularly in cases of serious injury where

drivers have to rely on others for help with basic tasks.

But while it's not always necessary to go to the same lengths as Johnny Herbert – who adopted his famously chirpy persona to internalise the Brands Hatch F3000 crash that shattered his ankles in 1988 – recovery is ultimately what a driver makes of it and having the right frame of mind is an important starting point.

Chaz Mostert was the defending Bathurst 1000 winner and enjoying his best season in Supercars when he crashed heavily in practice for the 2015 race, fracturing his left leg and wrist. The accident threatened to derail his inexorable rise, but Mostert's self-belief never wavered.

He knuckled down over the off-season and picked up where he left off in 2016, scoring five pole positions – more than any other Ford driver, reigning champion Mark Winterbottom included.

"After the first surgery, the only thought in my head was just getting back into a race car and being back to doing exactly what I love doing," he says.

"I didn't actually realise how big the time off would be – two months sitting on your bum doing nothing and then the rehab after that to try and get the flexibility back, the strength and all of that – it was a lot bigger than I thought. But you rely on your friends and family and you just keep pushing through it."

Buoyed by the support of the TOCA fraternity, British Touring Car Championship rookie Luke Davenport is recovering well after his Motorbase Ford was involved in a multi-car pileup at Croft in June, leaving him in an induced coma with multiple chest injuries, lung damage, a broken right leg, a broken pelvis, broken right arm and a broken collarbone.

"I've had a number of people from TOCA come to



Massa has come to terms with his Hungary accident

"Many people think I was unlucky, but I was lucky for what it could have been"

go through the accident with me and make sure my head is in the best place possible," says Davenport.

"I have a very clear understanding of why it happened and also of how rare the accident was."

Inspired by TT racer Ian Hutchinson, with whom he shared a ward at Addenbroke's after his accident, Davenport is working towards a BTCC comeback in 2018 and recently tested a TCR VW Golf at Snetterton.

"It's all about keeping positive and that's what I've been working on with my physio – she's given me a fake race pedal to get flex back in both ankles and work on being even better at heel-and-toe techniques," he says.

"I'm a lighter frame now I've lost a lot of the muscle

I had in my legs for GT3, because I don't need it for touring cars. It's all positive communication that I'm working on about being lighter, more wirey and better suited for a touring car."

Understanding what caused an accident is one thing, but when injury results from a freak occurrence the challenges can be different.

Felipe Massa's collision with a spring from Rubens Barrichello's Brawn during qualifying for the 2009 Hungarian Grand Prix forced the Brazilian to miss the remainder of the season while he recovered from emergency surgery on his fractured skull but, eight years later, he bears no bitterness about the incident.

"I was very lucky. Many people think I was really unlucky for what happened, but I was really lucky for what it could have been," says Massa.

"My brain was not affected, it was just the bone. I could become blind from one eye, I could die, so it was very lucky in so many details."

The same is true for his compatriot Cristiano da Matta. The 2002 CART champion, who started 28 grands prix for Toyota, was testing at Elkhart Lake in August '06 when his car struck a deer and left him clinging to life with swelling to the brain. When he left hospital in Wisconsin two months later to continue his recovery in Brazil, da Matta had lost almost 10% of his body weight.

Like Massa, he's come to terms with his lot, although his top-flight career was effectively ended.

"After everything they have told me that I went through, I'm more interested that I'm here, I'm alive and moving everywhere I want," da Matta says.

"I could do anything. I could play guitar, I could speak English and Portuguese, so for the level of the injury it was, I was lucky that everything is fine and it didn't get to the point with the brain that would affect everything."



Mostert showed mental strength after Bathurst shunt



Busch won the 2015 NASCAR title months after breaking his foot

"I wasn't mad or frustrated that it wasn't my fault. Like you guys say in England, 'Shit happens', right?"



Encouraged by his testing, Davenport is hoping to be back at full-strength by February. As the New Year looms larger, having an end goal to work towards is

helping to keep the fire burning.

"They have said that as an older man I'll probably need a hip replacement and I'll struggle with my legs, but that's something to try and prove wrong," he says.

"Instead of the need to go racing, it's the need to win the battle with the physio every week and, even if it doesn't happen, it's still good to push yourself."

Following his 90mph impact with a concrete wall at Daytona in February 2015, Busch identified the non-championship All-Star race at Charlotte in May as the date for his comeback, but of more pressing concern was the imminent arrival of his son, Brexton.

"I think everybody knows I'm not the most patient person, but I also knew I wasn't going to make it back overnight," says Busch.

"I wanted to be able to walk into the delivery room

and be a part of his birth, and I was able to do that. I knew eventually I would get back to racing, but that was the goal, first and foremost – that was more motivating than anything, to be honest."

But if they are to be more than a motivational tool, goals have to be grounded in reality.

"It's important in those situations to set yourself goals that are reachable," agrees Brack.

"If I had said when I woke up, 'I'm going to race Indy again', that wasn't a feasible goal at the time – in the beginning it's back to the basics of how to eat, shit and pee. My mindset was do the best I can today to start tomorrow as good as possible."



Drivers should also be mentally prepared for the stringent dedication to monotonous routines that is required to meet their goals.

"It wasn't even that I could stand on one foot and just try to put weight through my other one," Busch recalls of his early attempts to get vertical.

"I had to stand on my broken leg and not put any weight on my left foot because the foot was worse. I started to see stars and was about ready to black out. We did that three or four times and that was it for the day. Two days later he came over and we did it again."

Following his release from hospital in January 2004, Brack would drive himself to the outpatient rehabilitation centre using crutches to operate the pedals and worked for seven hours a day, five days a week, only stopping for a two-hour break in the doctor's office at lunch.

Niki Lauda's recovery from his fiery Nurburgring accident in 1976 was perhaps the most gruelling of all. In order to breathe independently, the Austrian spent a week having his charred lungs pumped, a process that had to be done while conscious.

"It was very hard on me," he says. "They put the tube in your lung and then your lung collapses. I said, 'Do it as much as you can', but they slowed me down because they thought some other problems might come up." ►

WAIT UNTIL YOU'RE READY

In the beginning it goes quite fast," says Brack. "You take maybe one step and the next day you can take two steps, that's a 100% improvement." As progress comes thick and fast in those

early stages, drivers should manage their expectations and be wary of thinking the recovery is at a more advanced stage than is actually the case.

DTM racer Mike Rockenfeller was fortunate to escape with only a concussion to show for his frightening 185mph accident at Le Mans in 2011. It wasn't the first time the 2010 24 Hours winner had experienced a blow to the head – he was knocked unconscious as a teenager in karting and returned to race later the same day – but Rockenfeller was still optimistic of being passed fit to race at Lausitz the following weekend until the Audi doctors had their say.

"In a way, you always try to feel better than you really are," he agrees.

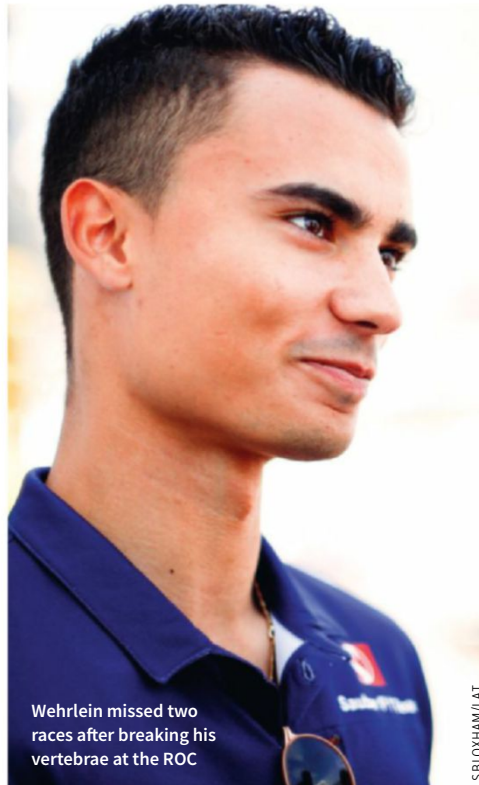
"I think it depends also on your age – the older you get, the more you know if you feel well or not. That's sometimes the good part about being young – you're not that experienced and you sometimes believe you can do more than you actually can in that moment!"

It's not an uncommon feeling. After a year of speech therapy and physiotherapy concluded in 2007, da Matta was given the green light to return to racing the following year, but admits it wasn't until much later that he stopped noticing improvements in his condition.

"In the beginning, I would be like, 'Wow, last week I thought I was 100% the same person I was before, but now I am truly the same guy,'" he says.

"That would go on for about four or five weeks, then eventually you start noticing that every month until it gets a lot more spread out. The accident was in 2006, but up until '12 or '13, I still had that feeling."

The dangers of making a premature return are considerable, particularly where head injuries are concerned. Suffering a second major impact without allowing the first to heal properly can result



Wehrlein missed two races after breaking his vertebrae at the ROC

SBLOXHAM/LAT

in irreversible damage – a phenomenon that is no less real in motorsport than it is in full-contact sports such as NFL or boxing.

Although Massa felt ready to make his return for the final two races of 2009 in Brazil and Abu Dhabi, doctors were concerned about the risk of another accident after an operation to install a titanium plate into his skull, and advised him to wait until the following year.

In the end, it was arguably a blessing in disguise, as Ferrari had already turned its attentions to 2010, allowing other teams to overhaul them in the development race. Neither Kimi Raikkonen nor Massa's replacement Giancarlo Fisichella were able to haul the recalcitrant F60 into podium contention and languished down in 12th and 16th places respectively



Lehto rushed back too soon in 1994, which ended his F1 career

after a dismal showing in Abu Dhabi.

Motorsport is a fickle business and, while it is understandable that drivers want to get back as soon as possible to ensure they aren't forgotten, returning under the wrong circumstances – whether due to an uncompetitive car or the driver not being ready – can put them under the spotlight for all the wrong reasons.

Pascal Wehrlein faced a similar situation earlier this year after breaking his vertebrae in a crash at the Race Of Champions. With his pre-season training regime compromised, Wehrlein was off the pace in practice for the Australian Grand Prix and withdrew, citing his lack of fitness. The stern criticism he received from a short-sighted minority was at least tempered by the knowledge that he had avoided the fate that befell another rising star – JJ Lehto, in 1994.

Although commendably brave, the Finn's quick return from breaking his neck in testing was a disaster – vanquished by his Benetton team-mate Michael Schumacher, it spelt the end of his F1 career. However, Lehto did famously go on to win Le Mans the following year.

"In a way, you always try to feel better than you really are"



Rockenfeller escaped from his 185mph impact at Le Mans with concussion in 2011

GIBSON/LAT



a fundamental misunderstanding about the nature of injuries in motorsport and how drivers recover from them.

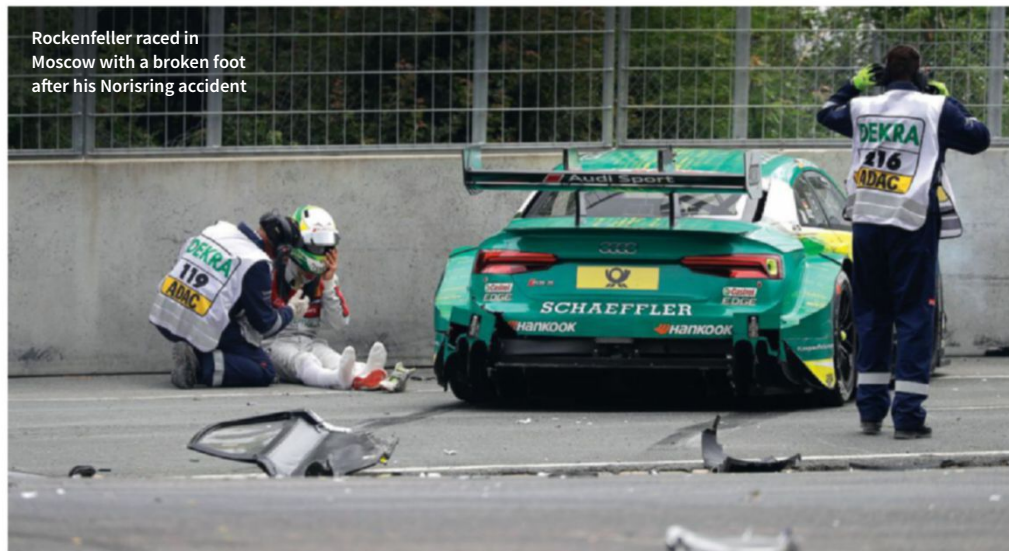
Recovery is never a precise science and varies from case to case, rendering comparisons largely pointless. While it's only natural for drivers to be competitive, the last thing they should be doing when facing a long spell out is base their timeframe for recovery on past examples, especially without knowing all the details.

In the context of concussions – a form of traumatic brain injury – a return date should be determined solely by data generated from the IMPACT test, where cognitive performance is measured against a pre-season baseline to identify any changes in reaction times, processing speed and memory.

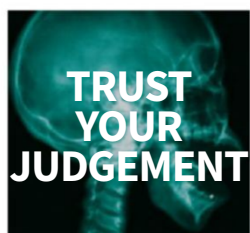
"You need some kind of a control," says Rockenfeller. "It's one thing to say, 'I feel good' and another to basically see it on paper."

Rockenfeller was cleared and back in the car at the Norisring just three weeks after his Le Mans accident, but it was a full two months before Audi team-mate Tom Kristensen was fit to return after he was involved in a multi-car pileup at Hockenheim in 2007.

"You cannot say that every concussion is the same," he agrees. "I missed Lausitz, but one week later I felt good again, it took [Kristensen] a lot longer because he was dizzy when he was training or doing quick movements."



Rockenfeller raced in Moscow with a broken foot after his Norisring accident



Regardless of external pressure from the team, media, fans and doctors, the driver has to be comfortable with the timing of any return.

Being fit enough to withstand another impact is vitally important, but is not a pre-requisite for success on the track. Balancing the desire and ability to come back is a fine art.

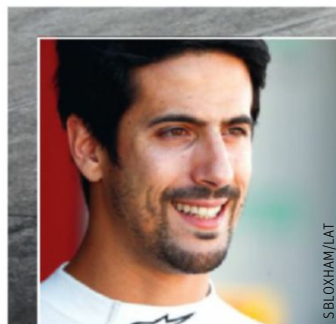
Days after breaking his ankle playing football, Lucas di Grassi kept his Formula E title prospects alive by earning pole and twice finishing on the podium in Berlin this year. But with much less to gain – and plenty to lose – from racing at Le Mans the following weekend in a GTE Ferrari, the Brazilian elected to withdraw and have surgery instead.

Rockenfeller, too, pushed the boundaries, finishing second in the DTM at Moscow nursing a broken foot sustained in a crash registering 38-40G at the Norisring.

"If you have something on your body which is risk-free, more or less – if it's a foot or an arm or a finger, not like a concussion – then you have to decide, 'Do I have a chance to be successful?' Is it worth the effort and the risk and the pain?" he says.

"For me as a sportsman, you always have the will and the motivation to try."

Clearly, that's not a universally shared opinion.



Di Grassi's podiums in Berlin with a broken ankle were crucial in Formula E title push



Rockenfeller's former team-mate Alex Premat was fired by Audi after the Frenchman ignored doctors' orders not to run the New York Marathon and rest up after his massive DTM shunt at Adria in 2010.

But Lauda, Mercedes' non-executive chairman, says he would not condemn one of his drivers for getting back as early as they could, despite his admission that he put too much pressure on his own comeback at Monza in 1976.

"I sat down with myself and said, 'I always knew it was dangerous – why am I worried now? I was lucky to stay alive anyway, let's try a comeback,'" he says.

"Whatever is the first possible time, do it. Just look at [Valentino] Rossi..."

Rossi's run to fifth at Aragon with his leg in a cast after fracturing his tibia and fibula three weeks before is an extreme example, but he does have past form, taking fourth at the Sachsenring on his return from a broken leg in 2010.

Ultimately, it is a matter of personal choice – motorsport is dangerous and no amount of preparation will change that fact.

"You need to feel well with your decision and be confident," says Rockenfeller.

"At the end of the day, it's just a sport – which I probably would not have said 10 years ago. We are there to entertain people. I only live once and I have kids and a wife – when you are young and you don't have that, you don't think that far ahead sometimes." ▶

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WHEN THE RETURN DOESN'T GO TO PLAN

AFTER RECOVERING FROM INJURY, DRIVERS DON'T ALWAYS MANAGE TO GET BACK TO THE SAME LEVEL THEY WERE RACING AT BEFORE. BUT SOMETIMES THEY AREN'T GIVEN MUCH OF A CHANCE, AS CRISTIANO DA MATTA FOUND OUT

Eleven years on from the altercation with a deer at Elkhart Lake that left him with a subdural hematoma, there have only been fleeting sights of ex-F1 Toyota racer Cristiano da Matta in competitive action.

After being cleared to drive in 2008, 'Shorty' made his return in Grand-Am with Bob Stallings Racing at Laguna Seca alongside Jimmy Vasser – who had visited da Matta in hospital and brought him a guitar to play – but after sponsorship dried up, he managed only one more outing that year at Miller Motorsports Park before returning to his native Brazil to race trucks in 2010.

Three races in 2011 followed with the disastrous RSR Jaguar GT2 in the American Le Mans Series and that was it – hardly an end befitting of a driver who had the measure of Michael Andretti, Scott Dixon, Dario Franchitti, Paul Tracy and the rest on his way to the CART title in 2002.

Now 44, da Matta is pragmatic about the difficulties

he encountered in relaunching his career, particularly given the impending economic crisis that made team owners risk-averse in their driver selection.

"It wasn't a very easy time to get back into a race car," he says.

"Even for my friends who were racing, it was difficult to find cars to drive with proper teams and sponsors. Imagine for someone who was coming back from an accident – many people had doubts if I was going to be able to drive or not."

Those reservations weren't helped when da Matta threw up and retired the car on his comeback race – later, it was discovered that this had been caused by cockpit fumes. Despite that knocking his confidence, he was still optimistic of securing a ride for 2009.

However, when nothing materialised, he decided not to hang around any longer. Whether it would have made any difference had he banged the drum a little



Da Matta's career was halted by testing shunt

KENT/LAT

longer is moot, but two years after his accident, da Matta was tired of living in limbo.

"It's funny to see the way I was looking at things at the time because to me, one year took a lot longer. It felt forever trying to get back in a car," he says.

"When I look back today, it was only a year – I should have tried longer. But for me, at the point, time was a lot slower."

Although his career may not have lasted as long as he expected and he never graced the Indianapolis 500, da Matta does not regret how things turned out. He now has a family and has grown to enjoy working for his brother's bike accessory company in Brazil.

In restless moments, he admits that he still misses the rush, but is content with all that he achieved.

"Just the other day I woke up and I had this dream that I was a race car driver and I was there in the engineering room discussing the set-up with the engineers," he says.

"Racing is something in my brain, or in my body, so of course I may be happier if I was racing cars. If I can do it properly I would love to do it, but I'm not going to look for it.

"I'm happy about what I've accomplished. I won the championship in the US, I've been to F1 and I've competed against a bunch of good drivers on every single level, but it's a different part of life. I'm on a different chapter now."

JAMES NEWBOLD



Comeback race at Laguna Seca ended in disappointment

LEVITT/LAT

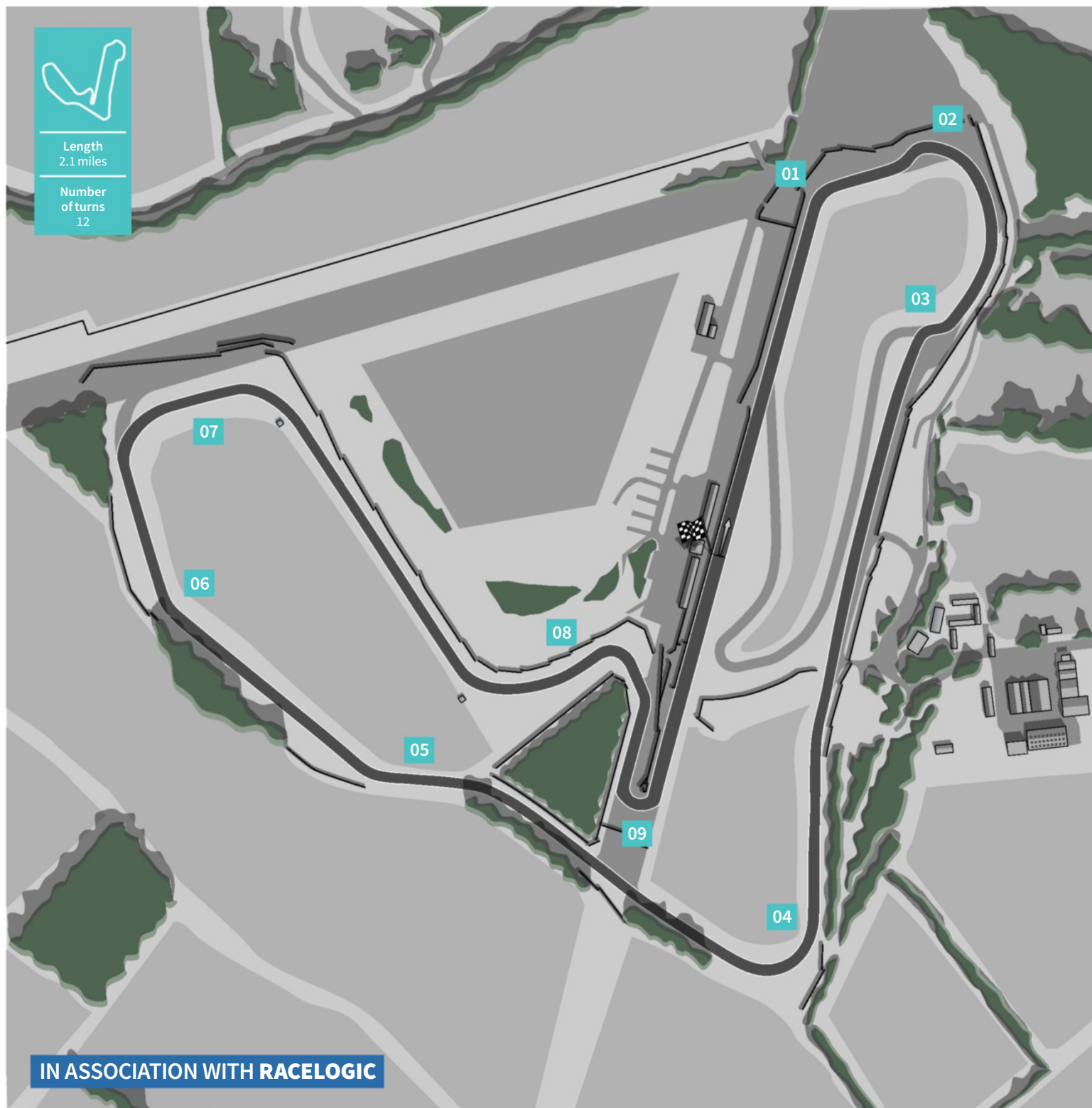
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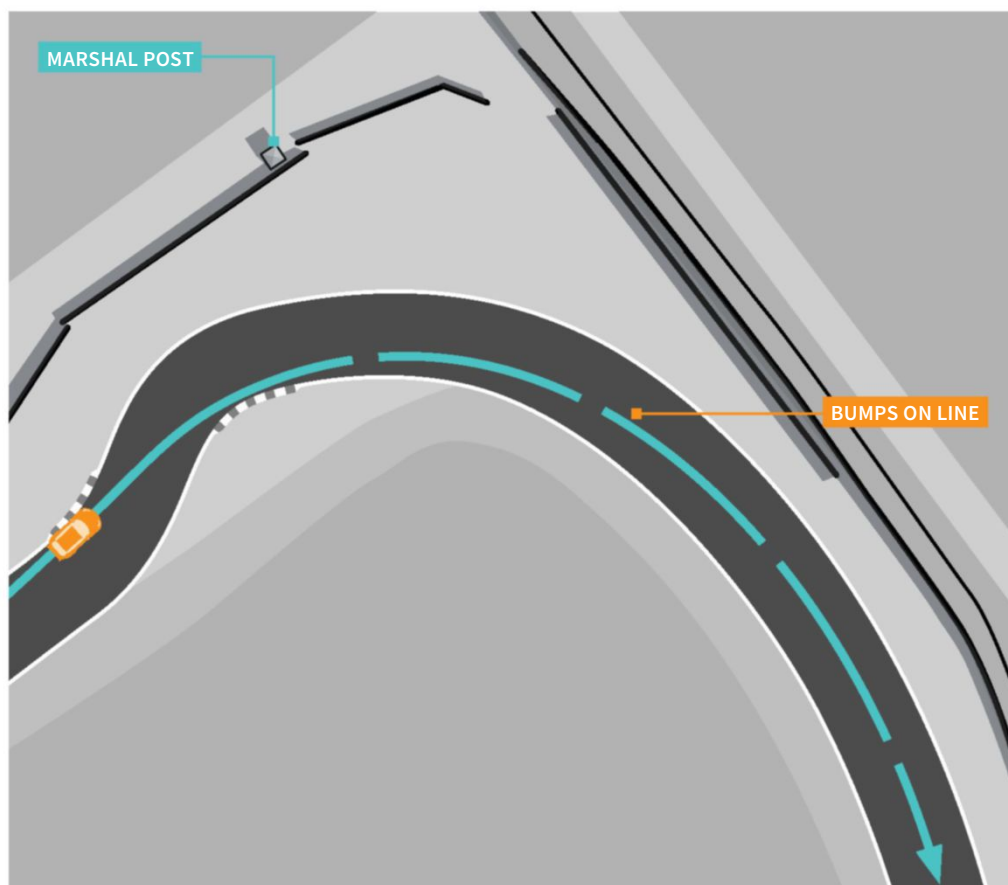
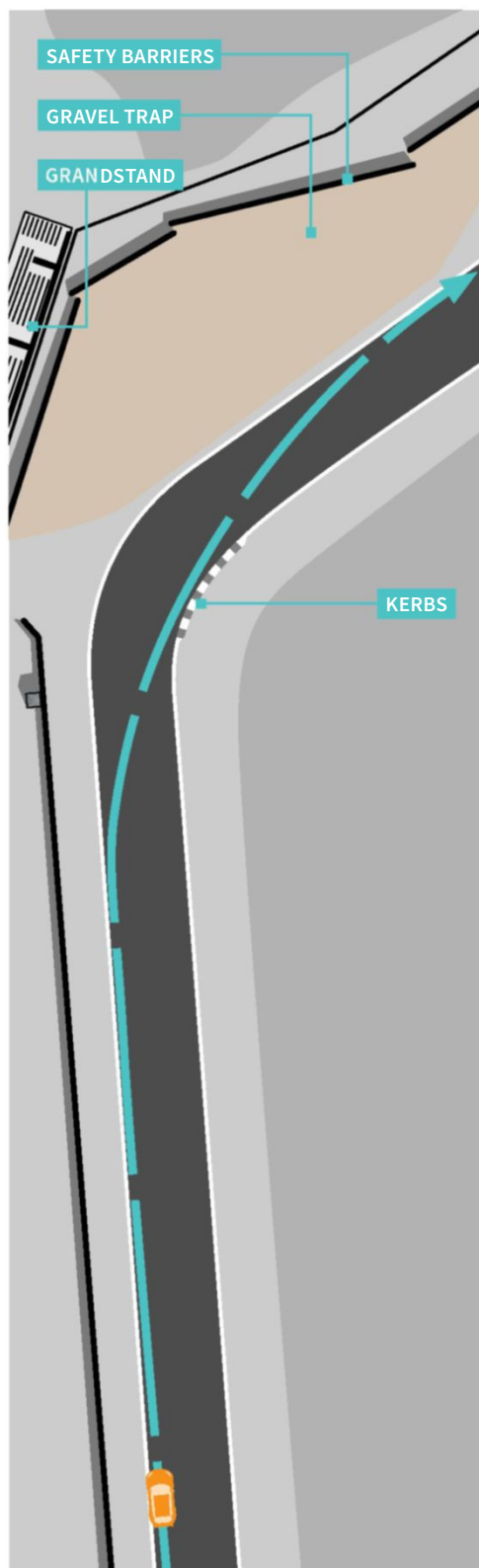
COLIN TURKINGTON

WITH 12 CAREER WINS AT CROFT, THE TWO-TIME BTCC CHAMPION IS THE PERFECT GUIDE TO THE NORTH YORKSHIRE CIRCUIT



01 CLERVAUX Turn 1

Clervaux is one of those corners that is a bit quicker than it looks to the eye. In the touring car, it's down two gears to fourth and just a short, sharp brake. Because there is no straight afterwards, it's all about trying to carry as much speed as you can. There's no real opportunity under normal circumstances to pass there – nine times out of 10 it's going to end with one or both cars in the gravel. There is only one line through the corner, so it's easy to defend if you're the lead car.



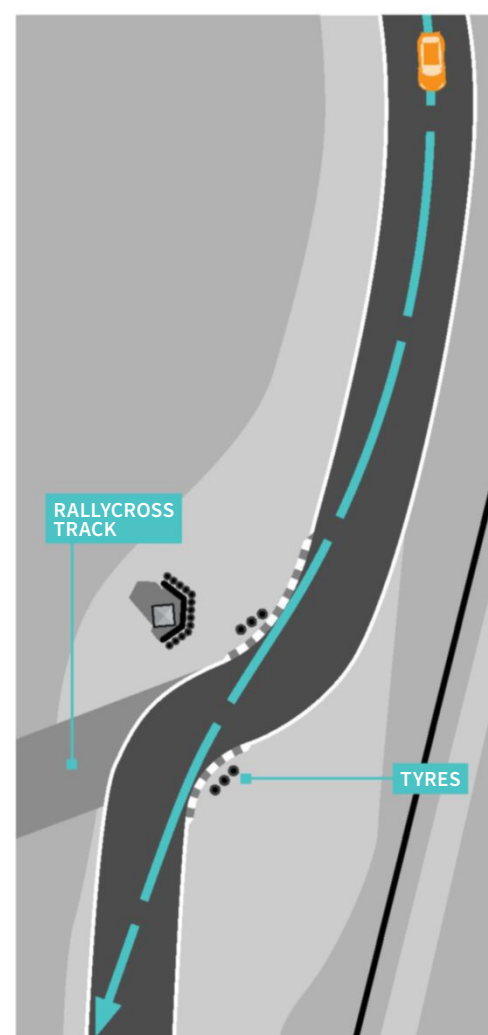
02 HAWTHORN Turn 2

Hawthorn is one of the most crucial corners on the circuit as you line up the best entry to the Chicane. It's all about exit speed, so it's different to turn one, which is all about the entry. There's a small kerb on the inside that most people run and tends not to upset the car very much, but after that the track itself is bumpy. No matter whether you're in a front-wheel-drive or rear-wheel-drive car, you're always fighting for traction because you're trying to put the power down, plus add steering lock to get around the corner.

The key is to be very sensitive on the throttle and find the threshold of grip, just letting the car find its feet. You don't run right out to the white line on the exit because that makes it more difficult to get back across the track for the Chicane, so you're only running half or three-quarters of the way across the track there.

03 CHICANE Turn 3

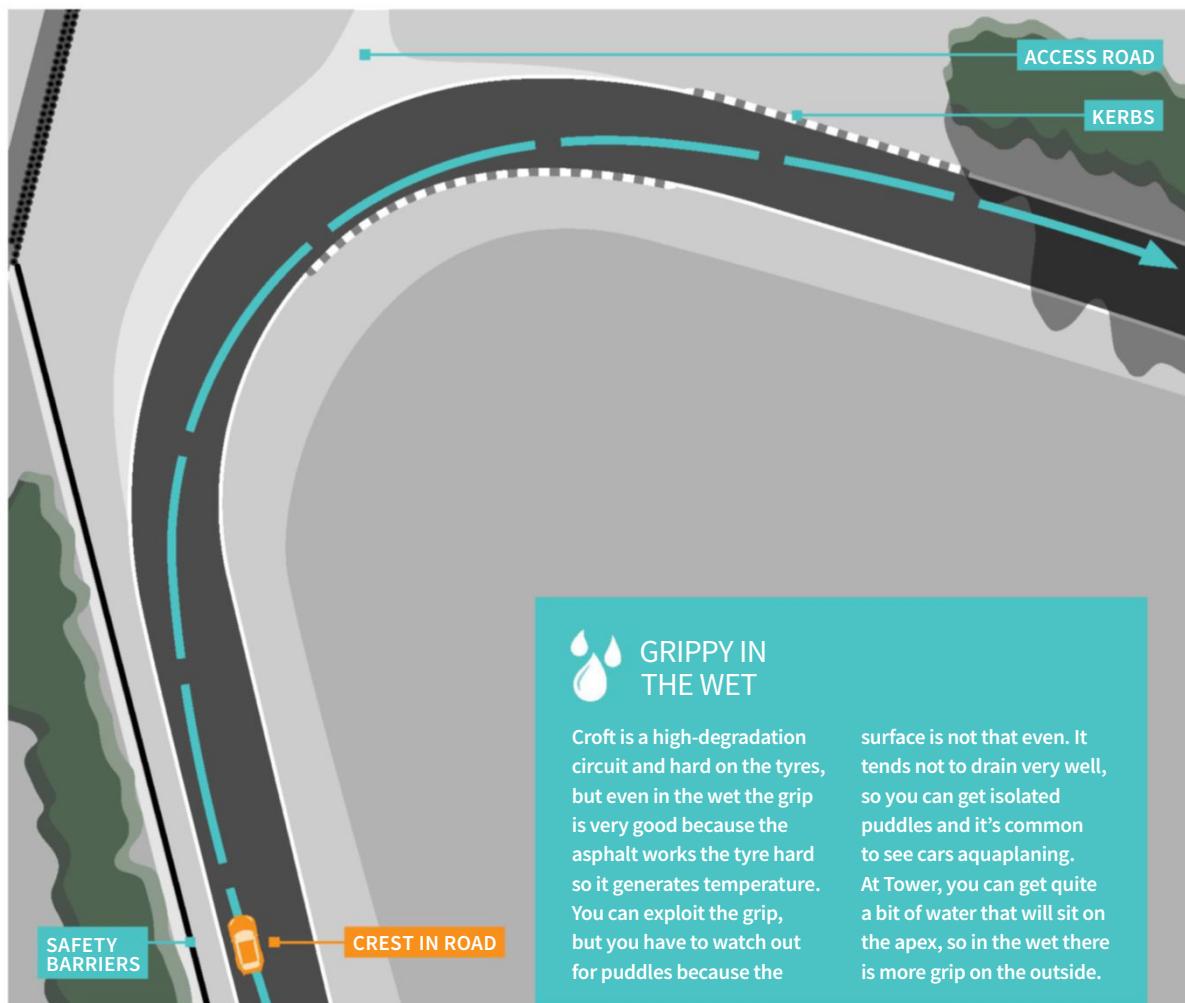
Touch wood, I've never had a problem there, but I may have nudged the tyres a few times! You have to be very precise, the work is really done on the entry because you have to approach with no steering lock. If you're still trying to sort out the exit of turn two and bring the car back to the right, then your change of direction through the Chicane is very difficult. You have to arrive with the steering straight and really try to pick your exit, as there's more speed to be gained down the straight. It's a very fine line and you're threading the needle between the tyre stack on the right and the tyre stack on the left. Try not to look at those tyres – there's a greater chance of hitting them if you do!



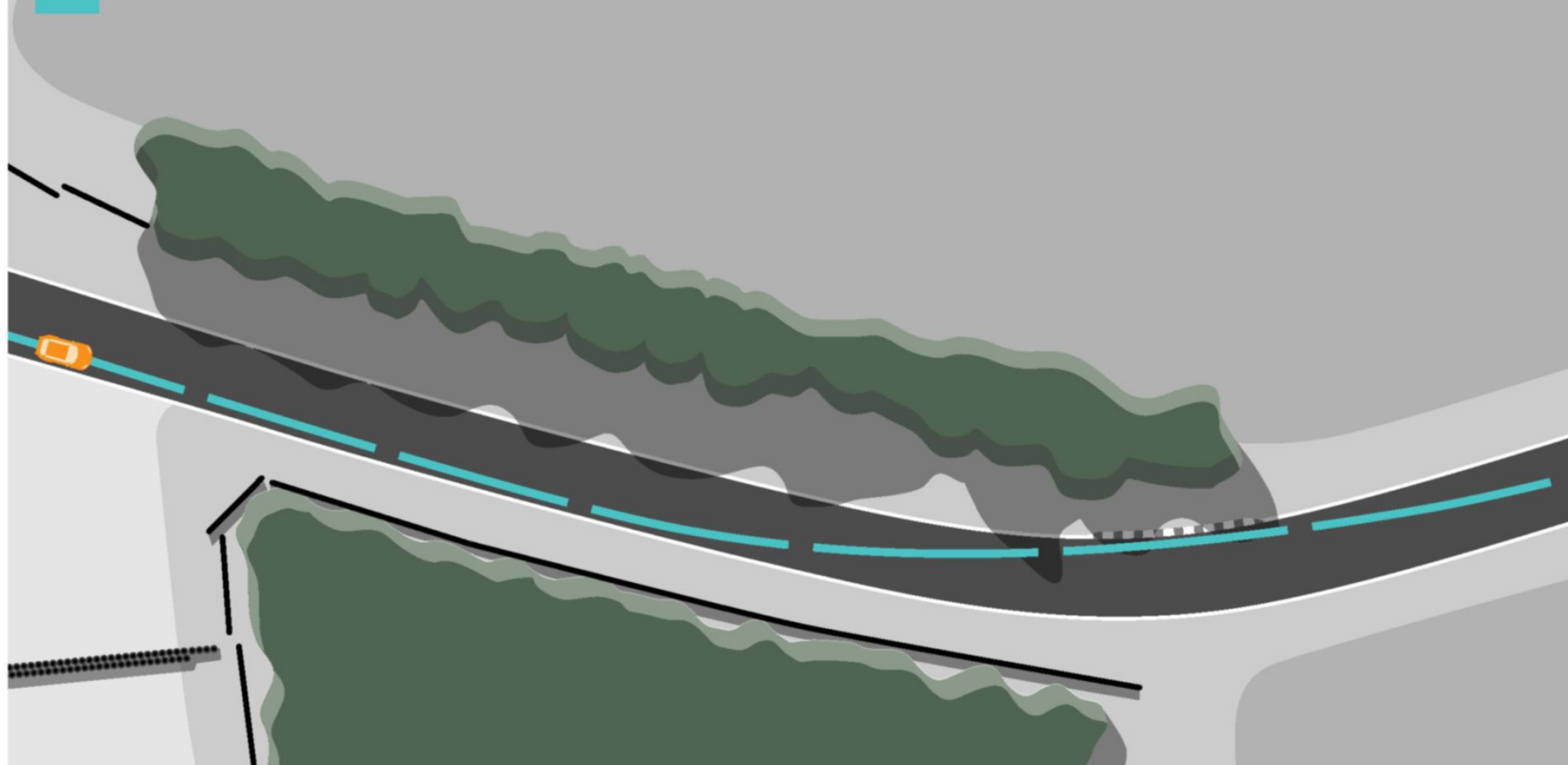
04 TOWER BEND Turn 4

The approach to Tower is probably the widest bit of the track, so that presents the best overtaking opportunity. The dog-leg on approach isn't a problem in any car – you're full throttle through there – but what you've got to watch for is a crest in the road exactly where you want to hit the brakes. If you brake on it, then you're at risk of locking the front tyres, so you've got to brake just before the crest. That means your first initial hit of brake has to be quite light, then once you go over the crest you can attack the pedal a bit more. It's one of those corners where it's worth sacrificing a little bit of speed on the way in to improve your exit, because you've got the longest straight basically on the track to come.

If you feel like you're under attack then you can bring the car to the inside or middle of the road. You've got to really close off the inside line because it is wide there, and even though you think you've got it covered, there's probably still a bit of room for someone to slip one down the inside.



05



KEY CORNER

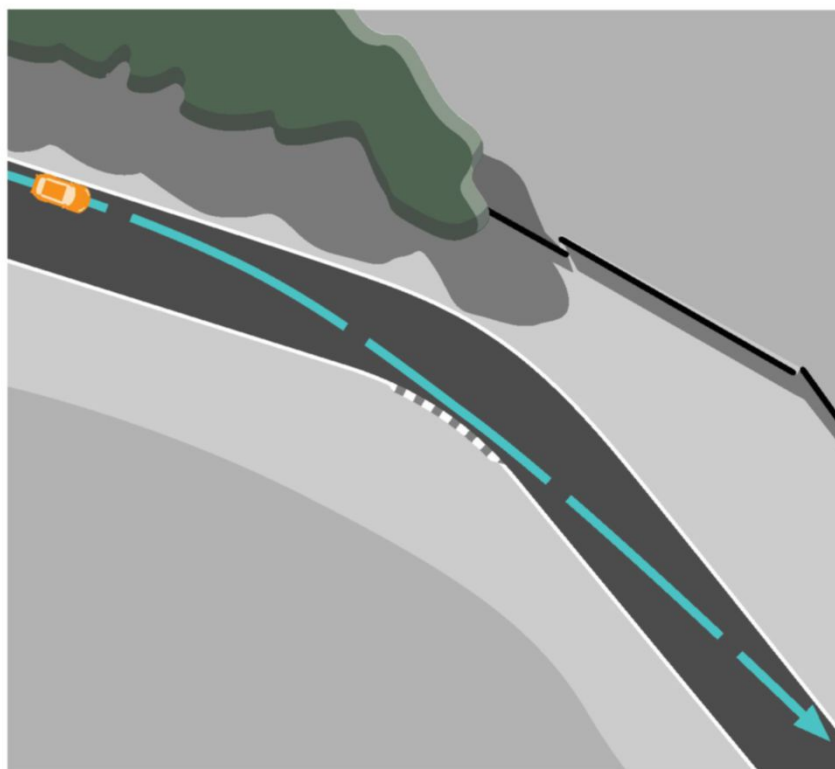
05 JIM CLARK ESSES
Turn 5, 6

It's certainly my favourite part of the track. It's high speed and, in a touring car, it's almost flat-out. In qualifying, if you're brave then you might be able to get through the left and the right of the Esses flat-out, but you'll never do it in the race. Because the corners follow into each other very quickly, you've got to turn in to the left-hander a little early and get the car as far over to the left as you can to get the best line through the right-hander. If you're lazy bringing the car back across, then you make the second part too difficult – you have to go through it with too much lock and run out of road on the exit. It used to be that when you went through the right, you could run way out onto rough asphalt there, but now what makes it tricky is you've got to keep the car within the track limits on the exit of the right-hander.

! WATCH THE
TRACK LIMITS

It is a tricky section in the wet because of that high-speed change of direction, but the car is always on the limit of adhesion there, whether it is dry or wet. You have that bit of ground as a safety net, but, even with that, it's not one of those corners where you feel you can over-speed and there'll be no penalty.

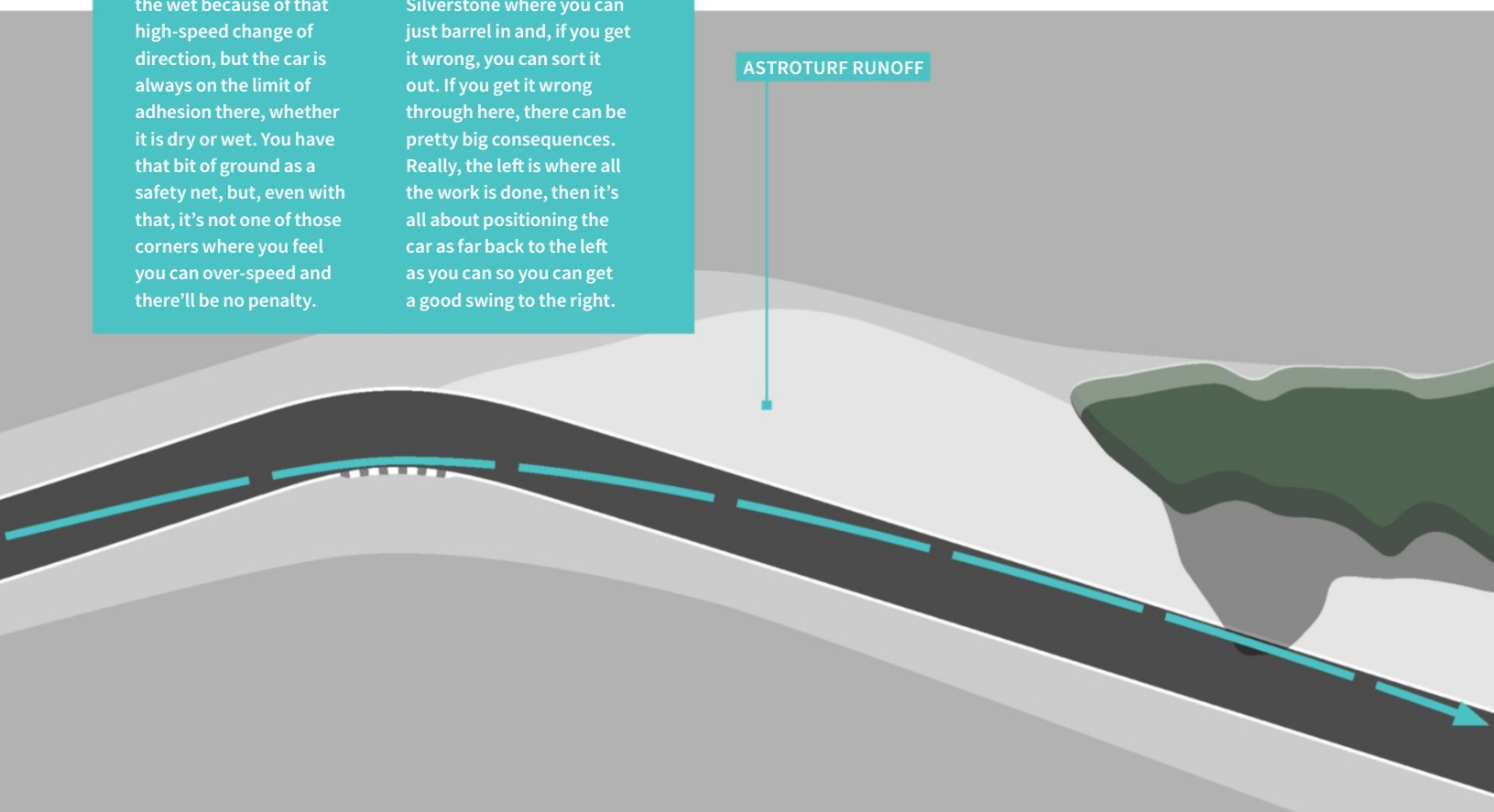
It's not like Copse at Silverstone where you can just barrel in and, if you get it wrong, you can sort it out. If you get it wrong through here, there can be pretty big consequences. Really, the left is where all the work is done, then it's all about positioning the car as far back to the left as you can so you can get a good swing to the right.

06 BARCROFT
Turn 7

Through Barcroft is where you start preparing for Sunny In. You stay in top gear for it because you're trying to maintain the speed you've carried through the Esses as much as you can. It's normally just a very

light brake, just to steady the car. Maybe for cars not as powerful as ours it's just a lift, it's either a bleed off the throttle or a light brake to maintain the speed and you're thinking about settling the car for Sunny In.

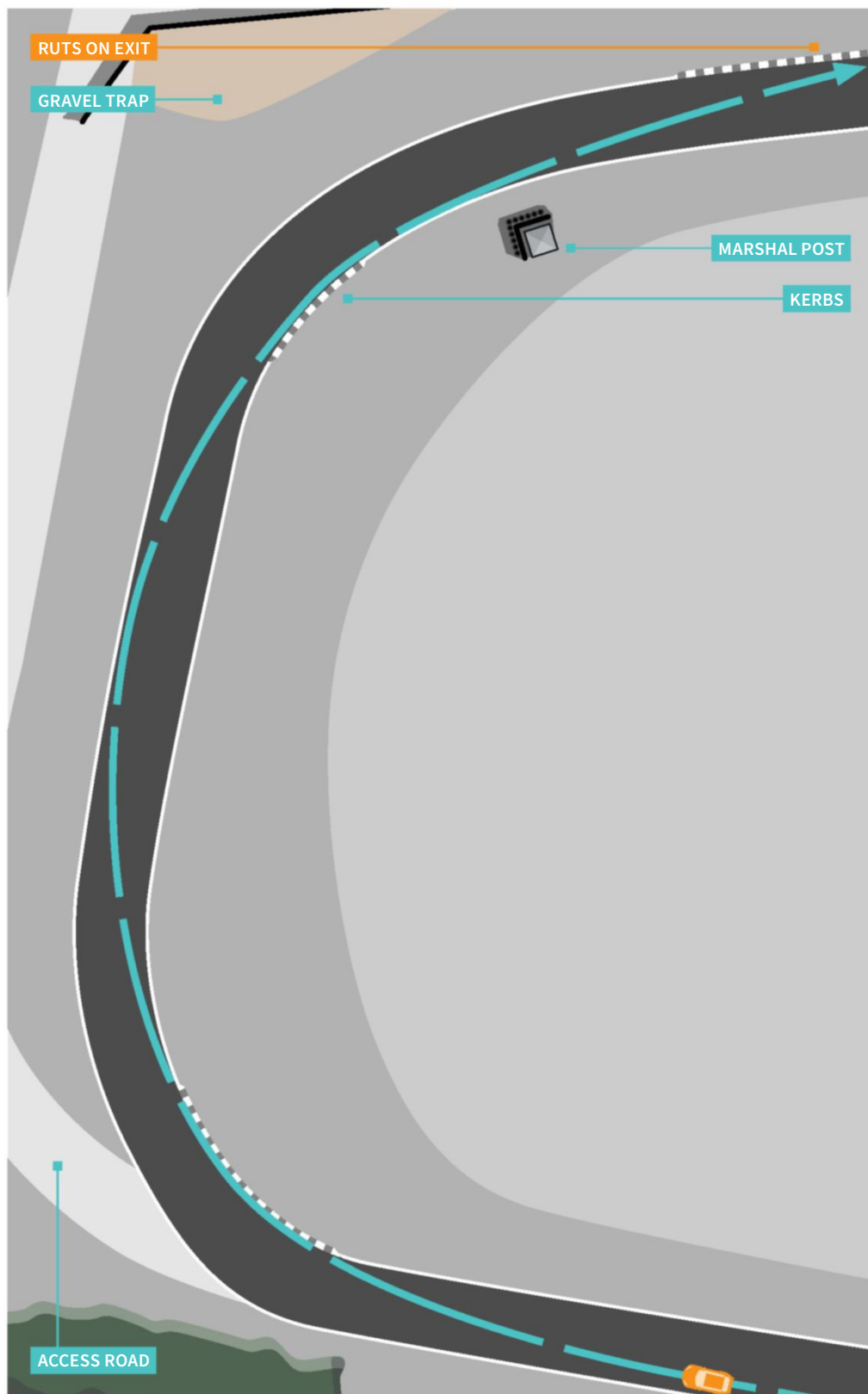
ASTROTURF RUNOFF



07 SUNNY IN & SUNNY OUT Turn 8, 9

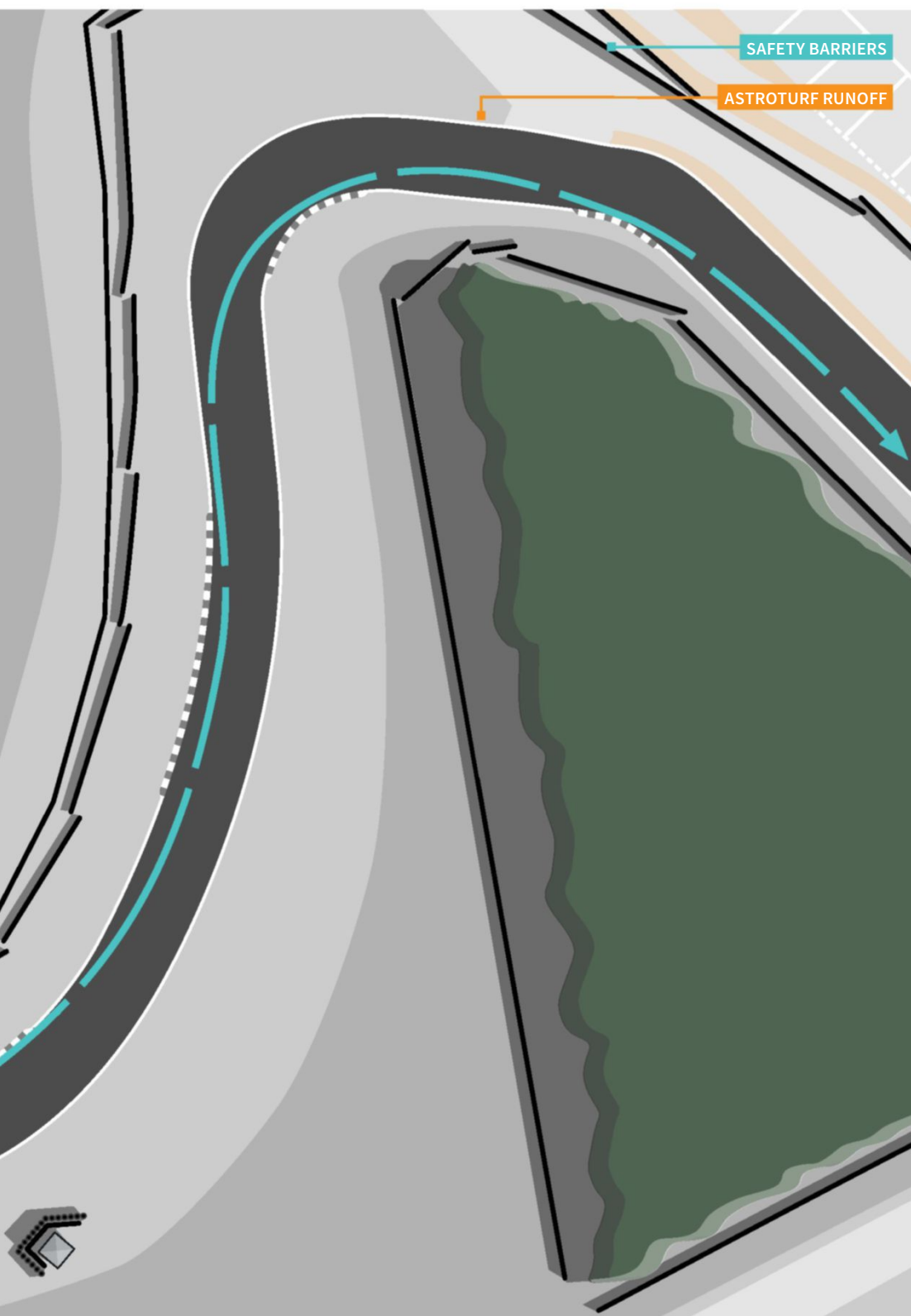
The car can be a bit unstable under braking for Sunny In. You're not braking entirely in a straight line and the track is bumpy, too, so the rear can hop a little bit. There's new asphalt on the inside so the grip is quite good, but you've got to get the nose in early – if you turn in slightly too late then you'll understeer through the corner. Under normal circumstances, it's difficult to pass between the two corners, unless somebody

makes a mistake into Sunny In. You change up from third to fourth for Sunny Out and there's a small kerb on the inside that is normally okay to run. There's also a bit of camber on the inside so the grip is quite good, but you have to be careful not to run wide because there's quite a drop off the exit kerb. There's normally a rut that forms there, so if you drop a wheel in, you're either going to damage a rim or it can spit the car off.



08 THE COMPLEX Turn 10, 11

The Complex is the most technical part of the circuit, so there's a lot of time to be made or lost there. We approach it in fifth gear and change down two gears for the first left-hander. It's a bit like turn one because you can carry a bit more speed through there than you originally think. There are no significant issues to worry about, you're just managing the car on the exit of the corner. You've got to be a little careful not to consume too much road and keep the car to the left on the exit,



otherwise you compromise the rest of the Complex. Speed in is important, but you can't be too greedy.

The right-hander is a second-gear corner, it's basically a stop-and-go-type corner. You've got to get the speed scrubbed off, get the car rotated and try to get the best exit you can. Again, you're trying not to consume too much road on the exit, it's all about trying to generate the best traction that you can and bring the car back to the right-hand side to line up for the Hairpin.

VBOX
MOTORSPORT

RACELOGIC

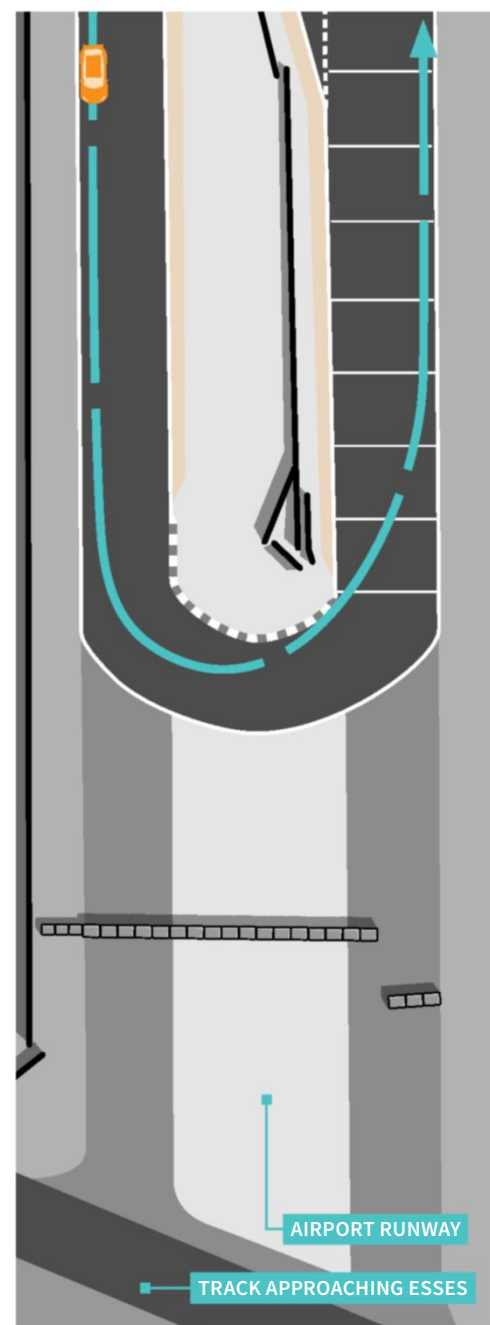
The right lines and references are a great starting point, but driver improvement can yield the biggest performance gains. Combine these tips with Racelogic's variety of motorsport equipment to help maximise your development.

www.vboxmotorsport.co.uk

09 HAIRPIN Turn 12

The Hairpin is the critical corner on the circuit whether you're in a front-wheel-drive or rear-wheel-drive car. It also presents another overtaking opportunity as well, because everybody is conscious that you need to get the best exit possible and will take a swing at the Hairpin. Drivers will get right over to the white line on the right-hand side, turn in a bit deep to get a cutback and leave a gaping hole up the inside for you to stick your nose in – you've just got to think to yourself 'Has this guy seen me?'

You're trying to do all the steering in the early part of the corner so that you can release the lock and get as hard into the throttle as soon as possible. As you're accelerating in first gear, you're wanting to maximise your traction by getting the lock off and feeding in the power as smoothly as you can. Again, it's a bit like Tower where it's better to sacrifice a bit of entry speed to improve your exit onto the start-finish straight.



CASE STUDY

Sean Walkinshaw

AGE 24 FROM CHIPPING NORTON 2017 SUPER GT (GT300)

As the son of the late, great Tom Walkinshaw, a motorsport titan who enjoyed successes both as a driver and a team owner, there is inevitable pressure on Sean Walkinshaw to live up to his legacy. Walkinshaw the younger has followed the mould of running his own team – staffed by long-time veterans of his father's TWR operation – but his foray into Super GT is the mark of a man seeking to forge his own path.

A late starter in motorsport – he didn't step into a kart until he was 16 – Belgian-born Walkinshaw sought to build a career in sportscars and made the switch from single-seaters to the Blancpain GT Series in 2015. His first podium arrived at Brands Hatch, but a difficult 2016 season and an increasingly competitive driver market

“It's properly full-on, but it's added to my skill set massively”

left him at a crossroads until a chance opportunity arose to stay in GT3 in Japan.

Aguri Suzuki's team had promoted Takashi Kobayashi to its GT500 roster and needed a team-mate for Shinichi Takagi in its GT300 BMW. His family's long-standing relationship with Bridgestone and Suzuki himself – who finished third at Le Mans in a TWR Nissan in 1998 – smoothed the introductions, but Walkinshaw still had much to prove in a stacked class featuring 12 manufacturers and competition from Dunlop and Yokohama.

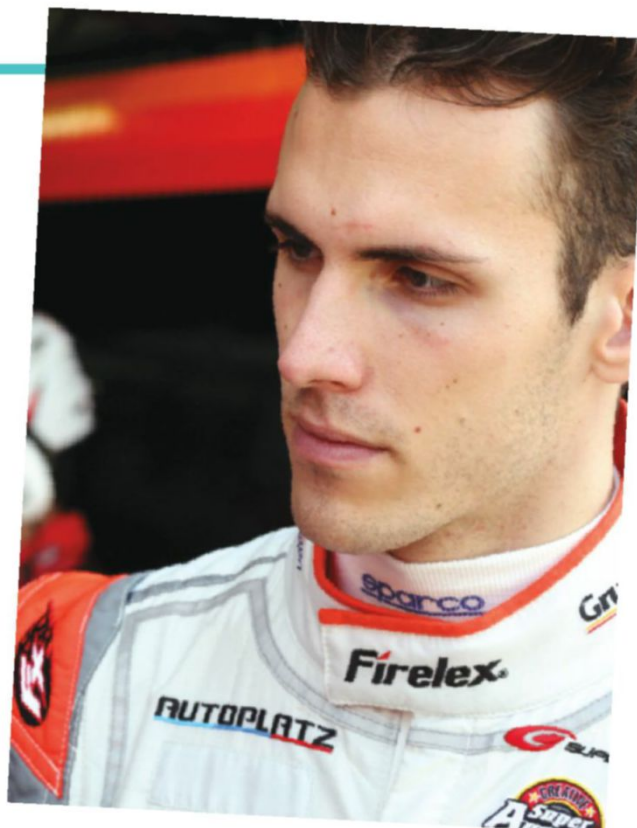
Victory at Fuji and ending the year fourth, as top BMW in the standings, was a more than respectable outcome considering his lack of circuit knowledge and a language barrier to overcome.

“It's been the best thing for me, I've learned a lot,” says Walkinshaw. “It's like Supercars, where all the good drivers from Australia tend to stay there – most of the Japanese drivers want to be in Super GT or Super Formula because that's their dream. Augusto Farfus [BMW factory ace] came over for the Suzuka 1000Km and he was no quicker than any of the Japanese guys – they were just as quick or quicker.”

Learning from Suzuki and 2002 GT300



Walkinshaw has been a winner in debut Super GT campaign



CV

2017

Super GT (GT300), 1 win; Blancpain Asia, 2 races

2016

Blancpain GT Series

2015

Blancpain GT Series, 1 podium

2014

Euroformula Open; Gulf 12 Hours

2013

Euroformula Open; British F3 (National), 3 races; FR 2.0 NEC, 2 races

2012

FR 2.0 BARC; InterSteps; MRF Challenge; JK Asia

2011

FR 2.0 BARC; FR 2.0 NEC, 2 races

champion Takagi – “the best driver I've ever been with” – was a useful eye-opener, but Walkinshaw credits the relentless tyre development work as being the greatest factor in his development so far.

“So much detail goes into tyre testing – you're using 10 sets of tyres with the smallest of differences,” he says.

“Each car has their own tyre engineer and every time you get out of the car you have a massive debrief. It's properly full-on but it's added to my skill set massively. It's so much better than just having to run on a spec tyre and it makes the racing better because there's more strategy involved.”

Although Walkinshaw says the jet lag is no longer a problem, he would like to build on his first year and plant roots in Japan if a deal to combine Super GT with a return to Blancpain does not materialise next year.

“The ultimate goal is to spend another couple of years in GT300 in Japan and then move to GT500 if I can find a drive,” he says.

“The really nice thing in comparison to Europe is, because they're more isolated out there, the drivers hang out a lot more. A lot of the guys I know are in GT500, like [James] Rossiter, Andrea Caldarelli and [Bertrand] Baguette, and have been very welcoming and helpful with integrating into the Japanese teams as well.

“One thing I would do if I had to do it again is maybe move to Japan and get more involved with the team. It's an amazing place to live, everyone is friendly, the drivers out there are well respected, and you could have a very nice life there.”

Cian Shields



Shields has been racing in the very competitive IAME Cadet class

INSIDE THE WORLD OF JUNIOR KARTING

Years before many racers even sit in a 'proper' racing car, chances are they will have honed their craft at one of the many karting circuits found around the UK in one of more than a dozen series.

One of the most popular championships for junior drivers looking to gain experience is IAME Cadets. Powered by a 60cc IAME engine, the series for eight to 13-year-olds is a proving ground for up-and-coming talent.

At the Three Sisters circuit, just a couple of miles outside the centre of Wigan, more than 40 youngsters competed in the season finale of the Northern Karting Federation's IAME Cadet championship.

One of those was 12-year-old Cian Shields. Shields has been karting for 18 months and is coming to the end of his first full season in IAME Cadets. He has taken part in championships stretching from his local Larkhall circuit to PF International – the host of this year's CIK-FIA World Karting Championship.

Racing as a privateer, his career has seen him go from his first taste of karting on his 10th birthday

to winning races against some of the fiercest competitors in the category. Competing at Three Sisters for just the second time, he worked closely with driver coach – and karting ace – Dean Macdonald to fine-tune his knowledge of the high-speed circuit.

Macdonald, who competed in British GT this year with McLaren GT, is full of praise for Cian's development: "Since I started working with Cian his racecraft has really improved. He always had the raw speed, it was just developing his technique, but now he's able to put it all together. On an average weekend, the work I do with him is to go through all the data and help him fine-tune his performance."

Like the vast majority of youngster, drivers dream of following their racing heroes into car racing. However, Shields is not looking to rush matters: "I'm happy to continue my karting career for the next few years, I'll be competing in Mini X30 in 2018 and I'll see how that goes before I think of anything else." ▶

"He always had the raw speed, now he can put it all together"



A WEEKEND IN CADET KARTING



Shields was second in the last race of his season at Three Sisters

The most striking thing when a casual fan walks into a karting event is the sheer size of the paddock. Teams taking part in the final NKF round of the season have awning set-ups that make Renault UK Clio Cup outfits green with envy, a far cry from the 'dad-and-lad' past most people picture.

However, some teams aren't as large as the bigger outfits such as Strawberry Racing and Fusion. The likes of Shields are taking on – and frequently beating – the big names with smaller operations, while the championship still welcomes 'dad and lad' privateers to enjoy karting.

Shields is joined for the season finale by Iain Brown, who introduced Cian to the sport and has followed his progress from complete beginner to race winner. Along with Brown is his son Finlay, also racing in IAME

Cadets, and the small privateer team all work together with Cian's trusted mechanic Jim, driver coach Dean Macdonald and his father Jonny, who owns successful engine builder Shox Performance.

Friday and Saturday testing is when Jonny is generally the busiest, with different drivers in the paddock testing engines to maximise performance and increase the chance of victory in the highly competitive class.

At the same time as engines are run in, drivers learn how to dial in the set-up, with everything from tracking to wheel caster and choosing the right sprocket to aid with gearing under the microscope.

For Shields, who is only visiting Three Sisters for the second time, it is also an opportunity to become more familiar with the quirks of the circuit. A successful dry test on Friday is followed by torrential downpours, which lead to a day of wet practice on Saturday.

Macdonald isn't concerned though. "Cian is a natural in the rain," he says. "I think it helps that a lot of his experience when he was a new karter was in Scotland, which is pretty wet! He is brimming with confidence at the best of times, and that really shows when he is racing in some pretty horrible conditions."

Confidence is one of the most important elements for a karter. With more than 40 evenly matched racers more often than not competing in one large pack, knowing you'll be able to squeeze through a seemingly impossible gap requires great commitment.

That certainly pays off on race day, when scoring as many points as possible in the three heats is the main order of business. Karting works much the same as rallycross, where the accumulated points from all three heats decide the finishing position for the final.

Starting eighth in heat one, a great double-overtake going round the circuit's first of two hairpins helps Shields start Sunday with a victory.

After the heat, there is little time to relax as Macdonald pulls Shields aside to pore through the data from the eight-lap race. To the untrained eye, the series of peaks and troughs mean nothing but to



Macdonald helps Shields to study the data from his opening race

“He’s been improving every time he’s been on a track”

Macdonald this is the story of Cian's race and he is quick to suggest tweaks for the next heat, the most important of which is not braking so hard for the 90-degree right-handed turn one.

Macdonald explains that, with these karts having so little power and the tyres being so durable in Cadets that they don't need to be managed, it is important to carry speed through the corner as the karts won't accelerate quickly.

"That becomes less important when you move up into things like X30 where there is a bit more power to accelerate out the corner with, but having that smooth style of carrying momentum through the corner and not stabbing at the brake is always beneficial," he adds.

After a brief discussion about increasing tyre pressures with Jim, Shields is out again for his second and third heats. It is clear Dean's advice has paid off as he claims a pair of sixth place finishes having started 11th and 21st respectively.

With drivers competing in three out of four heats, it is a tense time for many of the earlier runners as they wait to see if they've been demoted into the 'B' final rather than the 'A' final because of the sheer number of competitors. For Shields, though, victory in heat one and a brace of sixth-place finishes has secured him a second-row start in the 'A' final.

As the afternoon builds to its climax, the nerves around the paddock similarly start to rise. For many, this is their final race of the season and for some – like Shields – this is their last event before moving into another category and they want to cap it with victory.

The final delivers intense battling, with Shields slugging it out with drivers who have raced Cadets for a lot longer. No-one is able to pull a decent advantage and the top eight are inseparable, with the order changing at the blink of an eye.

Coming into the final lap, Shields is lying in third and looking to claim second. Sticking close to the kart in front he gets a better exit off the final corner – a right-hand kink where Jim and Dean kept reminding Shields that quick steering inputs were key – and takes second place by 0.02 seconds.

"I'm absolutely delighted for him," says Macdonald after the final. "He's been working hard all year so to claim second place is a well-deserved result and it is a great way to finish off a season where he's been improving every time he's on the track."

1	3	Maxwell Dodds	49.07	47.37	(5) Lap 10
2	22	Cian Shields	48.91	47.39	(8) 0.26
3	60	Freddie Spindlow	49.19	47.53	(3) 0.28
4	45	Jake Weston	49.08	47.60	(6) 0.77
5	39	Charlie Walsh	49.13	47.58	(7) 0.94
6	94	Eddison Purcell	50.14	47.70	(9) 1.00
7	20	Harley Haughton	48.83	47.77	(7) 2.23
8	96	Sam Gornall	49.48	47.44	(5) 3.02
9	12	Luis Gardner	49.64	47.53	(7) 3.10
10	15	Max Barrow	48.55	47.93	(8) 4.37
11	38	Olivier Algieri	48.91	47.49	(7) 4.80

Getting into karting

LOOKING AT HOW TO GET STARTED IN the world of karting can be a daunting prospect. With a variety of junior classes and a wide-range of championships to compete in, it can be confusing for someone not familiar with the scene. Thankfully Dean Macdonald has shared some tips with Autosport for anyone looking to get started.

Before even looking at championships you need to buy a kart and an engine. For eight to 13-year-olds there are two main options – IAME Cadet and Honda Cadet, both of which are great categories for youngsters to get the hang of racing a kart. These then progress into junior and then senior categories for karters looking to move up the ladder.

Macdonald explains that

championships range from events that take place solely at one track, to contests that take in all corners of the UK. "The best way to start is get along to your local track, somewhere like Larkhall, which runs a club championship all year-round that is great for beginners," he says. "After that, you can move up into regional championships like Little Green Man and then you've got the best of the best racing in Super One – the British Karting Championships."

Most importantly, Macdonald believes there isn't a 'set' way for young racers to progress up the ladder, with drivers racing in championships like the Clio Cup and British F4 all taking different paths on their way to a car racing career.

Useful websites

You can easily join as a privateer but many teams are available. Visiting your local kart track and meeting the teams is the most practical way. They can talk you through the process and what the next steps are to be involved.

Karting schools

Association of Kart Racing Schools arks.co.uk

This lists MSA approved Karting Schools throughout the UK where beginners can get advice on how to start karting and obtain their MSA Competition Licence.

Kart circuits

Find your local kart circuit	karting.co.uk/tracks/
Trent Valley Kart Club/PF International	tvkc.co.uk/beta
Whilton Mill	whiltonmill.co.uk
Three Sisters	threesisterscircuit.co.uk

Championships

Super One	superoneseries.com
Little Green Man	lgmseries.com
Northern Karting	northernkartingfederation.co.uk

Clubs

British Schools Karting	bskc.co.uk
West of Scotland Kart Club	wskc.co.uk
For a full list, please visit	abkc.org.uk/clubs

For more online information on karting and how to be involved, contact your local kart circuit, or visit abkc.org.uk

PREPARATION



How preparation is important outside the kart

Taking podium finishes – like Cian Shield's at Three Sisters – isn't just because of the work done setting up the kart during testing, it's the result of weeks of preparation, training and, increasingly, simulator work.

With video games like Project Cars including karts and kart tracks, it has never been easier to practice and test at home. For Shields, that is key for his preparation: "I use iRacing a lot before a weekend, especially if it's a track I'm not that familiar with because people have designed versions of most of the kart circuits in Britain so it's great to be able to practice.

"Some of the tracks aren't quite accurate though, they don't get all the bumps! But it's good to be able to practice different ways round the track and then use that knowledge when I actually get there."

Simulators are something Dean Macdonald is very familiar with, having used McLaren's simulator all season to prepare himself for each round of the British GT Championship. However, it's not just simulator work that helps, it's also YouTube.

"YouTube is absolutely great for racers looking to learn more about a circuit," he says. "People upload their laps all the time and Cian is obsessive at watching them! He will spend hours looking at laps and then ask me how they pulled off some of their moves, it really helps him improve his race technique.

"It is something I would recommend to other people, even videos with not-so-good racing in them are useful because you can learn from other people's mistakes."

Drivers also need to have a good exercise programme because of the physical nature of driving a kart flat-out all weekend.

Shields' technique for staying fit between kart meetings is boxing, with the demanding nature of training to be a boxer having a direct benefit on his performance in a kart. Other drivers in the paddock do everything from rugby to track runs on an evening. The strength training that comes with boxing helps Shields fight the kart around the narrow and twisty circuits that are a well-known feature of UK karting. ■

"I use iRacing a lot, it's great to be able to practice circuits"



THE HIDDEN THREAT TO MOTORSPORT SAFETY

COUNTERFEIT PRODUCTS ARE A MAJOR PROBLEM, BUT THE INDUSTRY IS FIGHTING BACK TO KEEP COMPETITORS SAFE

The old saying 'if something sounds too good to be true, then it usually is' applies particularly well to motorsport. With perhaps the rare exception – Paul Stoddart tells a story that Brazilian journeyman Tarso Marques got his drive at Minardi in 2001 for just \$15,000 – motorsport has a high barrier to entry, and for good reason. As a rule of thumb, you only get what you pay for, and those who attempt to cut corners are often caught out.

In 1999, Team Penske passed up the chance to replace the injured Al Unser Jr with Le Mans winner JJ Lehto – dropped on the eve of the season by Hogan Racing – and settled upon rookie Marques instead, who unsurprisingly failed to turn around the team's flagging fortunes. Penske duly learned its lesson and hired Gil de Ferran, who promptly won back-to-back CART titles.

The same concept applies to safety products. Buying a helmet, race suit or harness system from a private internet seller is considerably cheaper than buying direct from the manufacturer or an approved retailer, but it comes with none of the guarantees of



'You get what you pay for' applies to safety as well as drivers

quality that distinguishes a fully licensed original, developed at length to meet and surpass the FIA's exacting standards. Worse, discounted items of questionable heritage can sometimes turn out to be counterfeits, masquerading under the name of a recognised brand.

Counterfeit products are a widespread and damaging issue for the motorsport industry, taking business away from the manufacturers and retailers of original merchandise, while also impacting consumer confidence in the brands concerned.

Considering the scale of the problem, it is surprising that many remain ill-informed on the subject, although the reluctance of manufacturers and the FIA alike to do more to spell out how a fake can be distinguished from the genuine article – thereby equipping the counterfeiters with the tools to pass their designs off as original products – is entirely understandable.

The conviction in May this year of a rogue trader in Wales, given a suspended 18-month jail sentence for selling counterfeit seatbelt harnesses on eBay and Facebook, served as a timely reminder that counterfeiters won't go away overnight and just how

grave the consequences could be for a consumer. When tested in controlled conditions by Carmarthenshire Trading Standards officers, the fake belts failed at just 50mph.

It wasn't the first such case and nor will it be the last, but there are plenty of options open to manufacturers to fight back. Firstly, they can approach the FIA to see if there are loopholes in the regulations that can be closed.

Bell Racing Helmets spent several years developing a series of mirrored visors that reduce light intensity in low sun while still providing the correct contrasts.

But company chairman Stephane Cohen was compelled to launch an investigation when drivers using customised Bell Racing visors found that their colour perception had been altered, causing yellow lights to appear green.

"Some dealers were buying regular clear shields and would have them cut with some sort of mirror treatment, without any knowledge of what they were doing," explains Cohen.

"That can be extremely dangerous because if a driver sees a yellow flag as a green flag, the driver will think they have passed the dangerous area on the track when they are still in the area."

Bell Racing consulted the FIA, which conducted its own inquiry before arriving at the same conclusion. It responded by introducing a measure that manufacturers must certify its visors as well as its helmets, placing an official FIA label on the visor to make it easier for scrutineers to identify counterfeits (see sidebar).

Cohen believes things "are moving in the right direction" and similar measures to prove authenticity are proving popular among other manufacturers.

Brembo Racing has experienced problems with counterfeit brake calipers and contacted Autosport to warn that any calipers sold separately from the disc, adapter pads and clamp are likely to be fakes, or made using inferior parts that have been manipulated and repainted to look like the original.

Officially licensed Brembo Racing products are therefore sold with a scratch card that can be used to verify the product online.

But to get to the root of the problem and respond

Takata Racing employs a proactive approach to fighting counterfeiters



LAT IMAGES

ISHIHARA/LAT

effectively, manufacturers first must understand the conditions that cause counterfeit products to permeate the market in the first place. This can be traced back to three main factors – supply, demand and, inevitably, price.

Having been endorsed by OEMs such as Honda and Toyota in their factory racing programmes, demand for Takata Racing belts skyrocketed, but a lack of availability outside Japan created a chasm that was filled by the black market.

"Successful brands are more likely to be copied and, where there's a market void or an extremely expensive entry level, that opens the window of opportunity for counterfeit products," says Takata Racing head of motorsport programmes Tom Myers.

In response to the problem, Takata Racing has

worked to heighten its appeal by widening its distribution network, expanding its product range and lowering the price to entry. But to contain the problem, the Japanese marque has also attempted to stop the flow of counterfeit products onto the market by pursuing the counterfeiters themselves.

After its cooperation with Chinese authorities to carry out warehouse raids had limited success, Takata changed tack and shifted focus to cutting off supply chains. It hired a third-party company to identify and remove internet listings from unauthorised vendors at lower-than-normal rates, thereby denying the counterfeiters access to their main selling channels and leaving them with stock they can't move.

"They can do it the old-fashioned way and try to sell products via word of mouth, but as soon as they show up online, then these third-party companies should find them and take them down," says Myers.

"It's certainly not indiscriminate, the algorithm behind the policing is actually quite complex. We've given our third-party supplier the full list of all of our known customers and retailers, so there's a 'good guy' list and then there's the rest."

This proactive approach, Myers believes, is the most effective way to combat the counterfeiters.

"If a company believes they may have a counterfeiting problem or could have one in the future, the recommendation from us would be to get these third parties involved to scan the internet for your brand and products that may be counterfeit," he says.

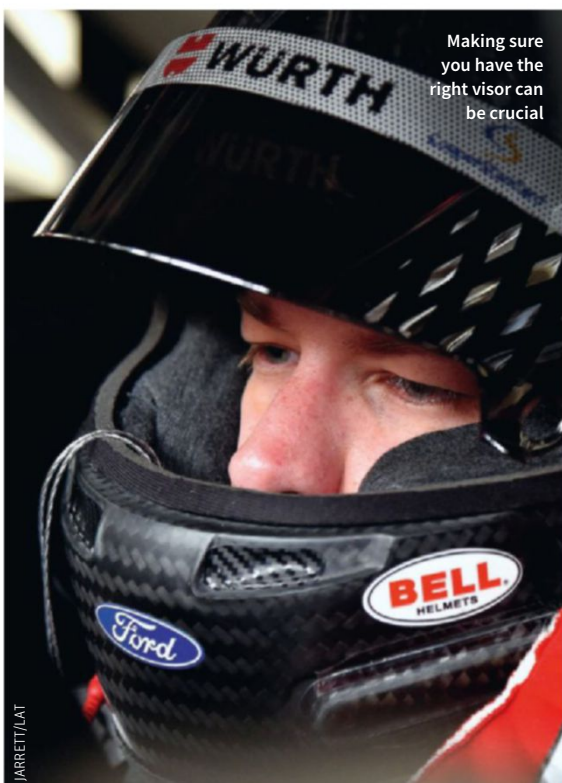
"It doesn't cost a lot of money, but typically companies don't react until they get a problem. Once you as a manufacturer receive information that there are fake products on the market, you're then in a reaction mode and you can't be proactive.

"It might not be the right answer for everyone, but from a Takata Racing standpoint, that's the

Sourcing brake calipers is an area where care is needed



MAUGER/LAT



Making sure you have the right visor can be crucial

“To have the best chance of escaping an incident, it pays to be responsible”

only efficient, proactive way to do it.”

Lastly, manufacturers can encourage consumers to use common sense in their buying habits. Basic measures like supporting recognised retailers, checking for the correct packaging and making sure that the manufacturer actually produces the item listed can go a long way to ensuring that the products are original. And while price isn't always the best reference, if it looks too good to be true then it probably is.

“There will always be people who say, ‘It’s a rip-off because Bell Racing is charging €140 and I can buy the same visor for €90’, but although it may look the same, it’s not the same,” says Cohen.

“We put value into the product because we put a tremendous amount of research and development into the product.”

As it says on the entry ticket, motorsport is dangerous and accidents can happen to anyone, at any time. To have the best chance of escaping an incident uninjured, it pays to be responsible and invest in the best protection available.

“When you buy a restraint system for under £100 with a name brand, you know that it’s not real,” says Myers. “In that sense, it’s not any different to buying a ‘Rolex’ from the street corner.” ■

JAMES NEWBOLD



WHAT THE FIA IS DOING ABOUT COUNTERFEITING

Over the last five years, the FIA has ramped up its drive to eliminate counterfeit products from motorsport and is working closely with safety equipment manufacturers and National Sporting Authorities (ASNs) to find solutions.

Its most significant measure has been to introduce a standardised labelling system, which comprises a hologram and a universal label template. According to the FIA's Head of Safety Equipment Homologation Nuno Costa, this represents “a big step forward in terms of helping scrutineers and drivers to identify original products.”

All holograms have their own unique serial number, linked to a serial number on the manufacturer's own label containing the FIA standard, model name, date of manufacture or validity date and homologation number, making it very difficult to fake.

“We teach scrutineers that every time they have a doubt in the product, if someone did a copy of the label or a copy of the hologram, they should send us that information through the ASN and then we can match the information to see if the product is original or not,” says Costa.

The FIA Safety Department provides regular

training and safety seminars for scrutineers, but is also looking to target drivers and co-drivers, with “several projects in place” to warn them of the dangers of using counterfeit products.

“The target is to pass the information that using FIA-approved equipment gives you the right protection to race, but at the same time it is important that drivers use original products,” says Costa.

“If we manage to pass that message to the competitors, and the drivers and co-drivers are confident about the type of protection that FIA-approved equipment gives them, then the issue with fake products will be reduced.”

The FIA also has an Equipment Approval Group, made up of manufacturer representatives from around the world, where holograms and the type of information available to people are among the topics discussed.

“We will continue to work with manufacturers and consumers to combat this issue,” adds Costa. “We also do what we call the Safety News through FIA.com, where we communicate on the latest approved products or if we identify specific fake products. If any ASNs want our support, we are always available.”

FIA-APPROVED PRODUCTS

FIA STANDARD	DESIGNATION OF THE PRODUCTS	TECHNICAL LIST WITH APPROVED PRODUCTS
8856-2000	Overalls	TL27 – Part 1
8856-2000	Underwear (shirt and pants), balaclava, socks and shoes	TL27 – Part 2
8856-2000	Gloves	TL27 – Part 3
8858-2002 8858-2010	Frontal Head Restraint (FHR) System	TL29
8858-2002 8858-2010	Helmet compatible with FHR Systems	TL41
8859-2015	Premium Helmet	TL49
8860-2004 8860-2010	Advanced Helmet	TL33



HOW A CUSTOM-FIT RACE SUIT IS CREATED

BESPOKE RACE SUITS ARE BECOMING INCREASINGLY POPULAR AMONG CLUB-LEVEL RACING DRIVERS. STEFAN MACKLEY WENT ALONG TO GRAND PRIX RACEWEAR TO SEE WHY

EBREY

The constant evolution of motorsport leaves no stone unturned and is visible in every part of a racing driver's armoury down to the suit on their back.

Over the past decade, off-the-peg race suits have come a long way in terms of lightness and breathability, all without compromising safety. But for those willing to pay a little bit extra, the refinements mean that there is even more value to wearing a bespoke suit, not just for professional drivers, but club racers too.

For Grand Prix Racewear owner and managing director Barbara Camm, having a race suit designed and custom-made is an essential service for drivers who are serious about getting results.

GPR is a long-term supplier of custom racing suits for the McLaren Autosport BRDC Award finalists and has clients ranging from Formula 1 teams to historic.

"Once someone has had a custom suit, they never want to buy it off-the-peg again," says Camm.

"Psychologically, they feel better because their suit fits like a glove. It's one less thing to worry about – you've already got enough with the car and what's happening on the track.

"Your suit is seamless, it's an extension of you."

Having a suit designed and tailored at GPR is

straightforward and doesn't require a visit to its Silverstone store, as measurements can be given over the phone or by email.

In all, 11 measurements are taken, including neck circumference, shoulder, chest, waist, hip, sleeve length, thigh circumference, the length from neck to waist, outside and inside leg, as well as body length.

It's not just the fit that is bespoke, but also the colours and design of the suit, right down to whether logos are printed or stitched on.

"In terms of the design, they can send a picture of their car if they want us to make something similar to that, or if they have a design in mind they can tell us the colours, send us the logos and we'll get an image drawn up on the computer," says GPR sales executive and suit fitter Luke Howes.

"Generally, we do two or three designs, if they have sort of a broad spectrum of what they wanted. But some people know specifically what they want, so it's just one design and they tweak it from there."

Once a design has been agreed, the suit will be created and dispatched within three to four weeks, although it can be delivered sooner if needed.

"With racing drivers, they need it yesterday, so at a push we can sometimes have them done in two or three days if it's really urgent," adds Howes.

For those trying on a suit in-store, GPR has had a kart

built and installed on the premises so the wearer can get a feel for how the suit fits in the right environment.

Suit brands available for customisation include OMP, Sparco and HRX, with prices varying, depending on the brand, whether the suit is two- or three-layer and the level of detail that's needed to bring the customer's vision to life.

"Custom-wise you're starting at £400-£450, then you can go up to £2000 for a custom, high-end suit and anything in-between," says Howes.

"The materials have come a long way. You can get an entry-level suit that will be a two-layer suit, but you'll tend to get quite hot in there – it's not very breathable. Then you go to a high-end suit that is very light, very breathable, but it's also much more comfortable and won't get as hot in the car.

"An entry-level suit is aimed more at club drivers with a lower budget."

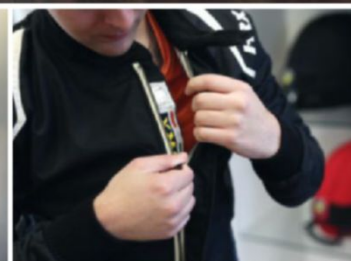
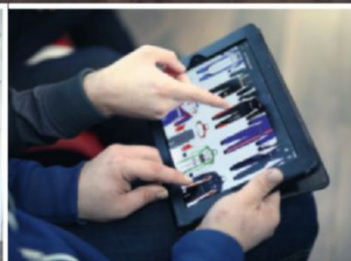
Although it could be viewed as a luxury by some, for Camm, bespoke racewear is an expense that is not only justifiable in terms of comfort, but absolutely necessary for a driver to have peace of mind.

"It is a mind thing as well as a body thing because they know they have done all they can to make the suit not be an issue," she says.

"If you want to win, you do everything you can, don't you?"



GRAND PRIX RACEWEAR'S SUIT-FITTING PROCESS



A PROFESSIONAL DRIVER'S VIEW

Since winning the McLaren Autosport BRDC Award in 2005, Oliver Jarvis has grown accustomed to the process that comes with making a custom suit, but made a costly slip-up ahead of his debut for Bentley at the Bathurst 12 Hours that was the source of much amusement for his new team-mates.

"I'm going to blame my wife for this one!" he laughs.

"I got an email asking if I could provide measurements, because we were on a very short timescale. Although I'd checked the number, I hadn't checked to make sure we

were using the right measurement and I think we just got the waist measurement in inches rather than centimetres.

"We were missing something like 10cm, so when the suit arrived, I really did have to try to squeeze myself into it. It was incredible actually that the suit survived the whole weekend – you could feel it almost splitting at the seams."

Afterwards, Jarvis sent the suits back to Sparco to be adjusted and was amazed with the results.

"They did such a good job that I couldn't say what they did," he says. "You'd never know it had been

cut or bits had been added, but it came back and it fitted perfectly."

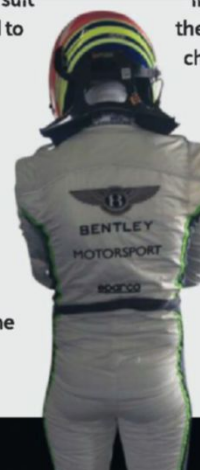
The Briton believes the main advantage of a bespoke suit is that it can be tweaked to meet a driver's specific requirements. In endurance racing, the need for quick driver changes demands more from the suit than in single-seaters,

"Over the years we added stretchier parts under the arm-pits, in the elbows or in the knees. Just having that extra

flexibility makes a big difference when you're getting in and out of a car," Jarvis says.

"In sportscar racing, where they're developing and changing the cars, you might also need a part of the suit reinforced on a particular side. Even with the boots, sometimes you have to change them slightly, depending on the cockpit design and it's similar with the suit as well."

JAMES NEWBOLD



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SUSIE WOLFF

NOW RETIRED FROM RACING,
THE FORMER WILLIAMS TESTER
EXPLAINS HOW SHE USED
DIFFERENT SPORTS TO PREPARE



I enjoyed playing a number of different sports in school and doing that meant I could use various different sports as part of my training regime. It was important to keep the fun aspect, because when I got to Formula 1 I was on a really hard training schedule. It was easy to stay motivated, because I knew I couldn't drive the car if I wasn't fit enough, but at some stage you need to be able to combine it with other sports that are fun to do where you don't actually realise you're in a training session. Not all the others sports I did I was actually very good at, but that made it an even better workout!

HIKING

Hiking is something we did a lot of during the Mercedes-Benz fitness weeks. They sent us off to mountain resorts and we would be going up continually asking, 'Where the hell is the top?'

Everyone in DTM had very good fitness levels –

in my time, Paul di Resta, Jamie Green, Gary Paffett and Bruno Spengler were all very fit and then when David [Coulthard] and Ralf [Schumacher] joined, they were also pretty fit from their time in F1. It was more of a team-building exercise, so we wouldn't just pool on the starting line and say, 'First to the top wins'. We did it together as a group. Our fitness trainer Tony Mathis would always have done the route beforehand, so he knew exactly how hard it was and on which days we would be doing which mountain.

By the end of it I could barely walk because I was so exhausted from seven days of really hard training, but the beauty of that is stamina – your heart rate will be averaging between 160 and 170bpm, so it's a tough workout.

TENNIS

Tennis was really good for reaction and coordination. And because I didn't play tennis with much skill, it meant I had to move around the court a lot more. Most of the way through my career from the DTM

to Formula 1, I did quite a lot of coordination work, but particularly when I was a test driver because I felt I wasn't in the car enough to keep those reactions up like I was when I was racing in DTM.

I didn't see a great benefit on the strength side, but for me it was easy to lose an hour playing tennis because I'm so competitive and I kept losing! Of course it was quite tough to take the fact that I didn't win very often, but it was good because it combined the sports and competitive element, as opposed to just doing a workout in the gym.

MOUNTAIN-BIKING

I never did road cycling like we all see from drivers on social media. I was more into mountain biking, but not really fast downhill because it was too risky for injury – more like very long tours. Now it's become quite common, but with the electric mountain bike we would do big four-hour climbs up a mountain and then one hour along the top. Actually I would go down on a gondola!



Reaction times
are important
in an F1 car...

DUNBAR/LAT



LOTHIAN



LOTHIAN



...and can
be honed by
playing tennis

LOTHIAN

“We did a lot of hiking. They sent us off to mountain resorts and we’d be going up asking, ‘Where the hell is the top?’”

The great thing for me about the electric bike is you can pick which heart rate you wanted. If it was recovery training after a race weekend, or after travel, then you would put the battery high – say between 130 and 140bpm – and if you really wanted to go for it then you could put it at a different level. Even now, sometimes my husband [Mercedes F1 team boss Toto Wolff] and I will go biking with Sebastien Ogier and he’s on one battery pack of power, Toto is on full and I’m somewhere in the middle. It’s a great way to exercise because everyone can pick what level they go on to determine how tough the training session is.

SWIMMING

I never just jump in the pool and pound away, I will always have a regime to follow. I swam competitively as a child until I was about 12, when needless to say my racing took priority, so I know lots of the training drills from that. For example, we’d do a 400-metre warm-up, which would be 16 lengths of a 25m pool, then 10 lots of four 100m lengths in two minutes. The quicker you go, the more rest you get and the slower you go, the less stressed you get, but you’re not taking as much out of yourself by doing that. Normally you try to go as fast as you can in each one and then you can do a cool-down at the end.

GYM WORKOUT

TRAINING LIKE SCHUEY

The biggest challenge for me was the g-force that your body is subjected to under braking and through the high-speed stuff, then building up the neck muscles to cope with that. It was heightened by the fact that I wasn’t driving the car much – the best way to build fitness is by doing lots of testing days, but because I was a test driver I only had specific times in the car. That meant I had to do everything I could in training to be ready, particularly because there was always that question mark about whether a female was physically strong enough to race in F1.

I was lucky enough to have the use of a machine that Michael Schumacher developed at the Mercedes-AMG base at Brackley, which made a huge difference because it was very tailored and specific. When I see people just putting their head off the end of a bench with weights on, that’s not what it’s like in an F1 car. You don’t lift a weight with your neck – you’re trying to keep your head straight as a huge load is coming against you from behind under braking or from the side, like Turn 3 at Barcelona. What you need, and this machine had, is for your head to be strapped in, then you’ve got to try to keep your head straight as the machine puts differing loads from different angles onto your head.



Wolff was the
Williams test
driver in 2015

DUNBAR/LAT

GETTING A TASTER FOR THE BTCC

DUNLOP AWARDED THREE STANDOUT NATIONAL RACERS A FIRST BRITISH TOURING CAR CHAMPIONSHIP TEST AT SNETTERTON LAST WEEK. MATT JAMES WENT ALONG TO FIND OUT MORE



R

arely have there been so many smiles as a driver steps from the cockpit of a thoroughbred British Touring Car Championship car. Normally, a race winner is beaming

while everyone else across the line has an excuse for losing, so last week's Dunlop Prize Drive Day at Snetterton made for a refreshing change.

Three BTCC newcomers were strapped into one of the two-litre, turbocharged Motorbase Performance Ford Focus machines and got to enjoy themselves. The Dunlop-backed reward for the three drivers – Mini Challenge runner-up Reece Barr, Mini Cooper

Pro Class champion Matt Hammond and BRSCC Ford Fiesta Championship winner Jamie White – was the icing on the cake of a successful season for the trio.

The premise is simple: as a way of strengthening its links with different levels of motorsport, the Dunlop test shows that there is a strong connection between what the tyre firm does in the paddocks of club racing series in the UK with its ongoing support of the BTCC.

As Motorbase Performance team manager Oly Collins explains, there are several objectives for the day and they aren't all about pure pace.

"We have done this test day for five years now,

and we have had all kinds of drivers come through the programme," he says. "There are those who are on a career trajectory, and those who are top-level club racers. Our aim is to make sure that each person behind the wheel learns something.

"It isn't about lap times for me. It's about giving each driver an insight into how the team works, to give them nuggets of information to build on what they already know. It's not about outright speed: no-one is going to get a drive on the strength of how quickly they go when they get the chance to drive the Focus. Some of the previous drivers haven't quite understood that message... but I'll mention no names."



JCW runner-up Barr was unfazed by the step up

“It’s not an alien environment from a Mini, but it is a big step up”

before another five-lap outing. That’s the initial impression for each of the drivers, and the reactions are all positive.

White is the first on track, under pressure as all his peers are looking on to see how he progresses. After a hesitant getaway, he’s soon into his stride. “That was the experience of a lifetime,” he smiles. “It’s just such a different thing to drive from what I’m used to.”

“Just amazing,” says the grinning Hammond as he steps from the cockpit. “I looked down at the dash on the back straight – I was north of 200km/h [130mph]... I was dead chuffed about that! The grip levels and the precision of the car are something else.”

Barr reports that he’s impressed with the grip the car demonstrates coming out of the sharper corners on the technical three-mile layout.

“I think I was getting the hang of it by the end...” says the Donegal driver. “It is not an alien environment from a Mini [Barr had also tested a TCR car before his Snetterton run], but it is clearly a big step up in everything it does.”

The learning part of the day begins in earnest after the initial runs. Straight from the car, each racer is taken into the inner sanctum of the Motorbase Performance truck and sat down with data engineer Daniel Blackledge. He takes them through a data trace and compares them with a benchmark time logged by Butcher earlier in the morning.

Each is taken through their fastest lap, given pointers as to where they can potentially improve, ►

The day begins with the drivers bundled into Motorbase Performance’s luxury minibus for a lap of the circuit. With speeds restricted to 50mph, the arduous driving duties are handed over to Collins. In the passenger seat is team regular Rory Butcher, who is giving handy hints and tips on the secrets of the Snetterton 300 layout.

There is only a single lap to take in all the information, and Butcher is on full download. There’s a lot to take in for Barr, Hammond and White.

After that, the engine is fired up. Following a rapid lesson in how the car operates, the drivers are sent out for a brief run, with two flying laps



Hammond enjoyed the grip of the Motorbase Focus

ALL PICS: MITCHELL/FEBREY



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Hammond downloads with regular Focus incumbent Butcher

and confirming the sections where they are performing well. The consensus is that the braking capacity of the BTCC car is on a completely different level to anything that the three drivers have been used to up until this point.

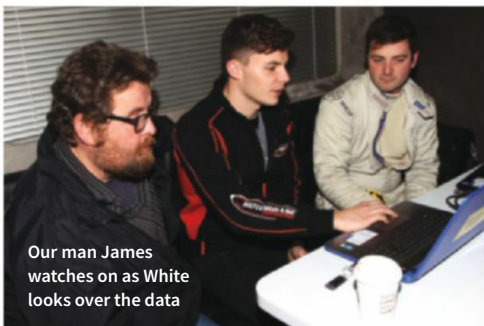
With that information to digest, the drivers are given a break to digest lunch too. But then it's back to action, and the threat of rain has everyone on their toes. The test won't stop, but it'll add a whole new dimension...

The afternoon is where the serious work begins. Each driver is given a 10-lap race run, preceded by a two-lap stint to warm up the tyres before pitting for the rubber to be swapped diagonally. This is where another new element is introduced: the Dunlop Sport Maxx Soft tyre.

In the BTCC, there are prime and option tyres, and the option rubber has to be used in at least one of the races across the weekend.

"The softer tyres are a different proposition," Collins tells the drivers. "Drivers find that there's plenty of grip to start with, and then they drop off. If a driver sets their best lap on lap two, it will take the life out of the tyres and they struggle at the end. But then, leave it too late and there is grip to spare."

That is a tricky conundrum. The participants are all newcomers to this situation and this is where feel for the grip available will come into play.



Our man James watches on as White looks over the data

"I built my speed and confidence, but there was more still to work on"

"It is interesting to see how the drivers cope with it," adds Collins. "The balance of the car changes throughout the session, and the drivers have to adapt the way they handle the car."

Each of the drivers handles the session with aplomb, and sticks to their instructions. The outings are all followed by another debrief with Blackledge where he points out the various improvements. All make strides throughout the sessions, and are given the chance to take away some of the onboard footage as a memento of the day.

Hammond says that, brakes aside, he was happy with his performance. "Going through the data afterwards with Daniel was great, and I was pretty pleased with my performance."

"I've gone from something that is basically a road car with a rollcage fitted in it in my Mini Challenge car to a proper race-bred machine: that is quite a step. The way the day was structured really built confidence with us and I was thrilled with the chance."

"I certainly built my speed and confidence across the day, but I could see from the debrief at the end that there was more still to work on. I am just itching for another go now."

Barr is equally pleased with his chance to sample the BTCC car but, for him, it is working with the team that opened his eyes.

"The set-up at Motorbase Performance is just so professional," says the teenager. "The cars, the trucks, everything – it really is on a different level ▶"

THE DRIVERS

REECE BARR

From Donegal, Ireland
Age 17



After a successful karting career, Barr took a year out to study and to assess his options. He joined the Mini Challenge in the JCW class in 2017 and was among the pacesetters. He won the Rookie title and was second overall in the standings. Champion Brett Smith had already graduated to the BTCC in his father Jeff's Eurotech Honda and stepped aside from the test to allow Barr to take his chance.

MATT HAMMOND

From Salisbury, Wiltshire
Age 39



Former Mini Challenge Rookie champion Hammond stepped into the series in 2014, although he was forced to sit out most of the '15 season and all of '16 due to budget issues. The technical engineer retuned with Excelr8 Motorsport this season and claimed the crown in a tense final-round shootout with Jessica Hawkins.

JAMIE WHITE

From Baintree, Essex
Age 28



Winner of the BRSCC Fiesta Championship, White (son of former FF2000 driver Roger) was a successful racer in the Mighty Mini Championship before making the switch to Daniels Motorsport to contest the highly popular BRSCC Ford Fiesta Championship in 2016. This season he claimed the Class D honours, as well as the overall spoils.

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White enjoyed finding the limit of the brakes

“There’s enormous satisfaction when you see guys enjoy their experience”

and it was awesome to work with them all.

“The car was very technical and I was trying to adjust things to see what the changes were like. I played with the brake bias and the bias pressure just to get a feel for how the adjustments altered the handling. The car was awesome.”

White has probably the biggest jump from the Fiesta to the Focus, but he’s nevertheless comfortable in the cockpit by the end of the day. He slashes his lap times from his initial run and is happy with his performance.

“The day has been fantastic, and the way it has been set up gave me time to learn and to understand what was going on,” says White.

“The brakes are the hardest thing: it’s difficult to comprehend just how much pressure you can apply to them, but that’s something that would come with time I am sure. The feedback from the car was amazing.”

Team manager Collins is also smiling at the end of the day, with his prized touring car in one piece and three drivers bubbling with enthusiasm having had a glimpse into how a professional team operates.

“It really couldn’t have gone much better,” he says. “They all listened, learned and progressed throughout the day. That was the objective, and that was achieved.”

“There is an enormous sense of satisfaction when you can see guys enjoy their experience and take a lot from it. It’s our job to help them get the most from it, and to help them get the most from themselves too. It’s what this programme is all about.” ■

INSIGHT

WHY DUNLOP RUNS THE PRIZE DRIVE

Dunlop has offered a range of national racing champions the opportunity to get their first taste of a fully fledged British Touring Car through its link-up with Motorbase Performance for the past five seasons.

Reigning champion Ash Sutton got his first run in a BTCC car through this test, and others to have enjoyed the experience include BTCC graduates Mike Bushell and Ant Whorton-Eales.

But the test isn’t just about the career-focused drivers. It’s a chance to reward competitors who use Dunlop’s products from different levels of UK motorsport with an insight and an opportunity that, for some of them, will be a once-in-a-lifetime chance.

Dunlop’s motorsport communications director James Bailey explains: “We have been involved in schemes to promote drivers through the sport for a long time – you can go back to the Dunlop Race Academy, which gave access to the Dunlop Sport Maxx Cup, through to running a guest car in the Ginetta G20 Championship.

“This test with Motorbase has been a huge success, because not only does it provide a reward to some of the most successful drivers in club racing – who are also our customers – it also shows a direct link between what they do and the highest-profile racing championship in the UK, which is the BTCC.”

As well as a reward, Bailey and Motorbase carefully construct the day to provide an education for all the participants. It’s not just about being belted in and sent out on track.

“It is great to see the reaction of the drivers after they have driven the BTCC car,” says Bailey. “The idea is to get the winners to work with engineers, the regular driver and the entire team and take a fresh insight away from their time with the team. The programme allows each driver to learn and gain something valuable as well as the opportunity to handle the Focus. The progress they make across the course of the day is just as important as lap times.”

Given the positive impression that all three 2017 drivers made on Motorbase Performance, it seems Reece Barr, Matt Hammond and Jamie White left Snetterton with more in their back pockets to help them improve on the UK tracks next season.



ALL PICS: MITCHELL/JEBREY

HOW TO

RACE ON THE NURBURGRING

DRIVER TRAINING EXPERTS RSRNURBURG TAKE AMATEUR RACERS AND TURN THEM INTO *RINGMEISTERS*



B

ernd Schneider once said that the Nurburgring Nordschleife should only ever be driven at 98%. "If you need 100%," the five-time DTM champion remarked, "it's getting dangerous."

Danger has always been an intrinsic part of the Nurburgring's attraction. First opened in 1927, the 12.93-mile circuit is long and narrow, and packed with vertiginous sweeps, blind crests and relentless corners – 73 in total.

Bearing remarkably few changes since the time of Sir Jackie Stewart's pomp, the 'Green Hell' is rightfully regarded as being the ultimate driving challenge and every year attracts people of all nationalities and levels of racing experience hoping to conquer it – from young professionals hoping to impress a manufacturer, to enthusiastic amateurs living out their dreams.

As proof of the 'Ring's international appeal, among their number is IMSA Porsche GT3 Cup Challenge regular Facundo Chahwan, heralding from over 7000 miles away in Buenos Aires. An engineering student from ITBA, Argentina's leading technical university, the 22-year-old aims to follow in the footsteps of his father Alejandro by contesting the Nurburgring 24 Hours, but it's not as easy as bringing a well-stocked wallet.

For would-be Ringmeisters without an intricate knowledge of either the circuit or its complex licensing rules (see right), getting to race on the Nordschleife can be a frustrating process – but approaching driver training experts RSRNurburg can simplify the steps and make a sizable impact on the learning curve.

RSRNurburg offers a linear pathway from trackday rentals all the way through to racing, with a dedicated in-house Driving Academy to learn techniques and teach newcomers the various pitfalls to avoid.

After booking onto an RSRNurburg trackday to learn the circuit and attending a seminar with instructor Luis Ramirez, Chahwan was entered in an RCN event the very next day, with the same race-spec BMW 235i he had rented for the trackday.

A mix of regularity rally and time trial, RCN is the ideal bridge between trackdays and competitive motorsport for hobby racers with limited circuit experience – and free from the enormous closing speeds of GT3 cars in the more professional VLN Series. After setting an opening benchmark on their first lap, drivers must alternate between pushing as hard as possible and matching their original time, encouraging consistent driving and building gradually up to the limit. Crucially, instructors are permitted to sit alongside and provide another set of eyes to minimise the chance of an incident.

Ramirez, himself a regular in VLN races, believes there's no better method for improving confidence and circuit knowledge.

"RCN is a perfect introduction to racing on the Nordschleife – it's always safer because you are competing more against yourself, not so much all the other people around you," he says.

"Also, there are fast cars and slow cars, so it's good preparation for the VLN. For an amateur, I always recommend to do at least 45 RCN laps so they can understand how the traffic works."

Chahwan's first RCN race was dogged by heavy

SIDIRAS/RSRNURBURG

DMSB LICENCES NO SHORTCUTS TO SUCCESS

Following a spate of accidents involving factory GT3 cars and amateur drivers in slower vehicles, Germany's motorsport governing body – the DMSB – introduced a licence system for 2016 to ensure a base standard of competency for all drivers racing on the Nordschleife.

The prized DMSB Permit Nordschleife grade A is required for drivers to enter the 24 Hours or race in the fastest class – SP9 – in VLN, but can only be achieved by finishing two VLN races within the top 75% of each respective class (with a minimum of three race starters) and completing a minimum of 18 laps in doing so.

Regardless of reputation or experience

elsewhere, Nordschleife rookies must start in the lower classes – DTM ace Jamie Green steered a Porsche Cayman to 72nd overall in VLN 8, but failed to finish VLN 9 – in which Mercedes GT gun Raffaele Marciello claimed 83rd overall in a Toyota GT86.

To enter a VLN race, drivers first require a grade B Permit. International C licence holders can pay to take a training course and receive this immediately, but International D/National A licence holders have to contest three RCN races, again finishing within the top 75% of their class.

An e-learning course provided by the DMSB Academy is mandatory for all.



All rookies must finish two VLN races in top 75%

STIDRAS/RSRNURBURG

rain and fog, making Ramirez's presence in the passenger seat all the more valuable.

"I had very few laps before, so it was actually the only way I could do it!" Chahwan says.

"Luis knew it was my first time there and every corner, every brake, every full gas, it was constant communication, so now I have it printed in my mind.

"It's really helpful because you can have those laps where you go slower and every other car is also slower – you don't have that pressure from the VLN of cars passing you at 300 km/h. It's a very good starting point and it's safer when you don't have to sprint every lap."

Chahwan has since gone on to race in VLN alongside his father, driving for an RSRNurburg-affiliated team. The RCN experience is not only a useful educational tool for the driver, but for the instructors, too, informing decisions on whether they can handle racing solo.

"Trust has a lot to do with racing, especially when you are with a person going 215 km/h on the Dottinger Hohe straight – because if they lift at the wrong moment, it could end very badly," says Ramirez.

"Facundo already had racing experience, so for him it was a little bit easier, just teaching him the track properly. When the student trusts the coach, the coach can trust them in return and can help them reach their goals. But if there is no trust between the driver and the coach, then there is no point.

"Sometimes we have a responsibility to protect the customer from themselves. When a coach doesn't feel

"RCN is safer because you are competing more against yourself"

comfortable with a driver, you can't rush and put them directly in a racing situation – even if it damages their ego a little bit. This is where an intensive RSRNurburg Driving Academy course can really make the difference."

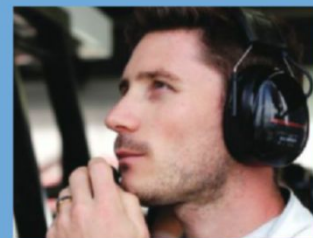
Argentina may not be adding another name to the roster of German Grand Prix winners alongside the great Juan Manuel Fangio and Carlos Reutemann, but Chahwan is now well on his way to the 24 Hours and agrees that guided coaching is the way to go.

"If you want to go and race on the Nurburgring then that's the process you need to do," he says.

"You can't get in there only with a simulator because it's not like any other circuit in the world.

"I advanced four years of experience in one weekend – it really helps you get done those steps you need to do much faster."

JAMES NEWBOLD



TRIENTZ/LAT

PRO TIP TAKE YOUR TIME

It's not just amateurs that can benefit from driver coaching on the Nordschleife.

With so little margin for error, it pays to learn the circuit prior to a race meeting as any accident can heavily compromise the weekend, so RSRNurburg offers its services to professional drivers too. World Touring Car Championship racers Nestor Girolami (Volvo) and Daniel Nagy (Zengo Motorsport) were among those to receive training before the Nurburgring round earlier this year.

Twice a winner in VLN this year, Porsche factory ace Kevin Estre has rented cars on several occasions from RSRNurburg to show personal sponsors around the 'Ring. The Frenchman holds the lap record for the combined Nordschleife and GP circuit and agrees that taking the time to learn it at a reduced pace is key.

"Before you start to think about the traffic, knowing the track is important," he says.

"For an amateur trying to learn, it's definitely important to start with a small car there."

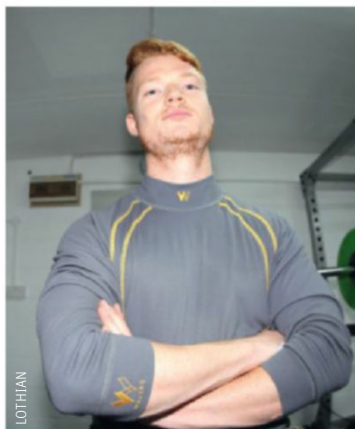


WTCC race winner Girolami learned the 'Ring with RSRNurburg

GOODEN/DPPI

PARTNERS' NOTICEBOARD

WALERO TOM CAVE RACING DIARY



Finishing on the WRC2 podium on Rally GB was the climax to a significant season for Walero ambassador Tom Cave.

The 26-year-old assisted in the development of Hyundai's new i20 R5 on select rounds of the British Rally Championship and also took third on the fast forest stages of Rally Finland after a productive two-day test.

"[Finland's] an event I always enjoy and we were full of confidence, which I think was reflected in the result," says Cave. "The car was still unproven in WRC2 so there was a bit of pressure to produce a result, but we showed excellent pace

and to get a podium was fantastic."

Back in a Ford Fiesta R5 for the first time since the Border Counties in March, Cave was soon on the pace on GB. He exchanged quick times with WRC2 champion Pontus Tiedemand and series runner-up Eric Camilli, eventually finishing 13th overall.

As the best-placed Welsh crew, Cave was also awarded the Gareth Roberts Croeso Trophy. "That was a real honour for me, I knew Gareth very well," he says. "I was very humbled to win that, it just topped off a really good weekend for us."

Cave has been a Walero ambassador

since 2016 and found the product's ground-breaking Outlast® technology to be an invaluable tool in his armoury.

"I've done two or three hot events now and the Walero gear just makes it that bit more comfortable; you really do notice the difference," he says.

"My co-driver couldn't understand it until I gave him a set of clothing to try and he found it a surprising improvement for him to wear as well.

"It's certainly one of a kind and I will even wear it when I'm out on the golf course because it acts as a thermal under-layer as well."

Cave helped develop new Hyundai R5



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VALETPRO

VALETPRO TO EXPAND LOTUS CUP EUROPE PARTNERSHIP

ValetPRO will expand its partnership with the Lotus Cup Europe in the 2018 season, with logos for the car-care product manufacturer prominently displayed on the number panel.

Managing director Greg Spink is a long-time Lotus enthusiast and hopes ValetPRO's growing association with the championship – which visited classic circuits including Hockenheim, Brands Hatch, Spa, Zolder, the Nurburgring and Le Mans this year – will present opportunities to enter new markets and expand the pH neutral specialist's product range.

"We're starting to ask questions of the teams to better understand the challenges they have in the cleaning and the protection of their vehicles, to see if we can develop things specifically for them and the motorsport market as a whole," said Spink.

ValetPRO also plans to create videos to promote the championship. "We want to make content not just about our products and what we do, but about things that interest people who like cars," Spink said. "We want to use our relationship with the Lotus Cup Europe to make content that people want to watch."

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SCHROTH

FIA STANDARD 8863-2013

For all the good work the HANS Device has done to protect drivers, as a frontal head restraint system (FHR), it simply was not designed with lateral or angled-side impacts in mind.

This is not an immediate problem in single-seaters with high cockpit sides, but it's a different story in touring car and GT racing where even the most advanced seats cannot offer the same protection.

"In an angled-side impact, the body can still come forward and out of the seat," explains Andy Mellor, a consultant for the Global Institute for Motor Sport Safety, which acts as the FIA's safety research partner.

"With the pelvis and torso restrained, the head and neck can be injured because the FHR doesn't work specifically in that forward-lateral direction."

Research into containing the driver's head during a lateral or side-angled impact was already underway when Allan Simonsen was killed at Le Mans in 2013. Mellor studied the Dane's accident closely during the development of Racing Nets, which are governed by FIA Standard 8863-2013.

Not to be confused with window nets seen in the World Touring Car Championship – which keep drivers' limbs inside the cockpit and prevent debris from coming in – Racing Nets consist of a mesh of horizontal and vertical straps that are attached to the rollcage behind the seat, wrap around the back of the seat to provide support for the driver's head and shoulders and connect to mounting points on the dashboard.

The Global Institute conducted dynamic-sled testing at the ACTS laboratory in Germany, where the effects of a 70G angled-forward crash with and without a net were made clear.

"If you conduct a test without a racing net, the measurements from the dummy, particularly the neck loads, are extremely high and likely unsurvivable – in one specific baseline test without Racing Nets, we caused more than €20,000 worth of damage to the dummy," says Mellor.

"When you repeat the tests with the nets correctly fitted, the measurements from the dummy are significantly below the thresholds for serious or fatal injury and the trauma outcome may be limited



Racing Nets helped Goethe survive Le Mans shunt

to a few bruises. The difference is day and night."

Racing Net pioneer Schroth played an integral part in the R&D process and was the first manufacturer to homologate a product under the new standard in February 2015. Since then, Racing Nets have been incorporated in the WTCC and by Simonsen's Aston Martin Racing outfit in the World Endurance Championship, helping Roald Goethe emerge from a heavy crash at Le Mans in '15 with only two broken vertebrae.

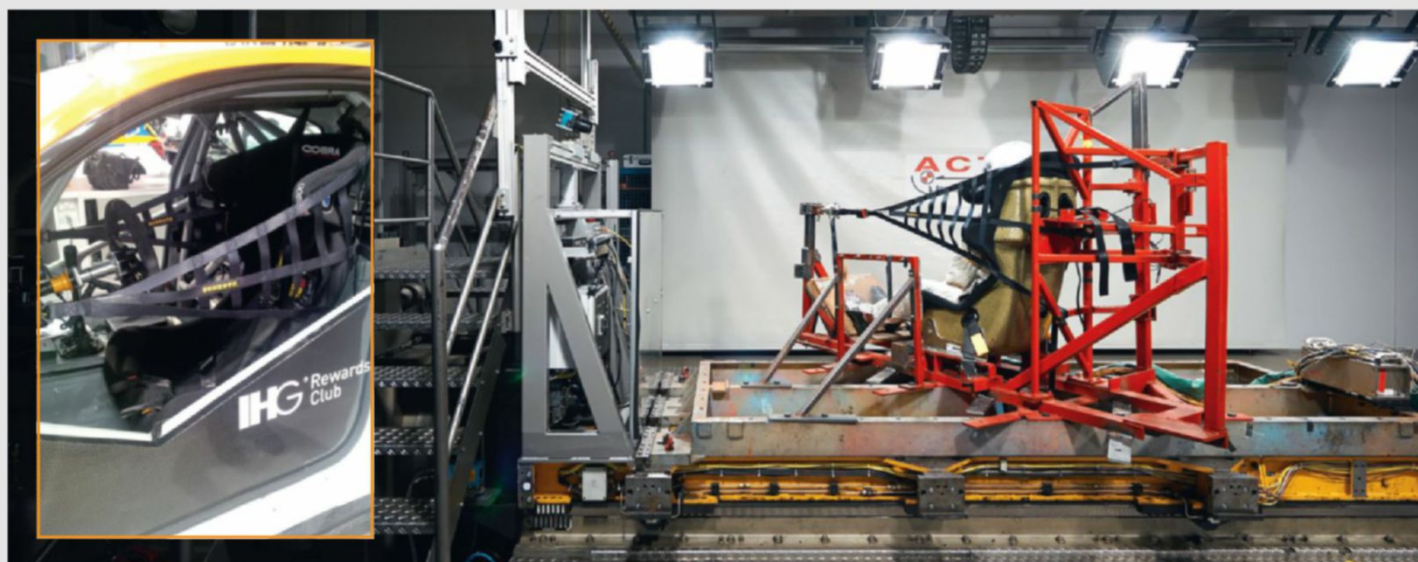
Progress to date has been encouraging, but Mellor acknowledges there may be further work required to ensure best-practice integration with all types of closed cars and seat installations. While they must be closely fitted to the seat to give optimum protection, nets must

not obstruct the line of vision or access to the controls such as the gear-shift. They must also have a quick-release mechanism to assist with extraction after a crash.

"The R&D successfully led to the FIA8863-2013 specification for Racing Nets and we need to support the cascade to as many championships as possible," he says.

Mellor identifies the British Touring Car Championship as one series with which the Global Institute aims to resolve any outstanding cockpit integration issues, and a dialogue with the BTCC is already underway.

"Racing Nets are lightweight, low cost and extremely effective," he says. "They do need care to be fitted correctly, but they are able to provide a critical level of protection during a severe accident."



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MACAU PREPARATION

THE NEXT LEVEL OF SIMULATION

THE MACAU GRAND PRIX IS THE EVENT THAT ALL JUNIOR SINGLE-SEATER RACERS WANT TO WIN. AT PRO-SIM, DRIVERS CAN USE SIMULATION FOR MORE THAN JUST LEARNING THE TRACK, AS JAMES NEWBOLD EXPLAINS



Drivers can practise using the slipstream effect

Cast an eye over the recent winners of the Macau Grand Prix and you'll quickly form the impression that Formula 3's annual end-of-year jamboree is an event that favours experience. Antonio Felix da Costa took his second victory last year at his fifth attempt, defeating the winner of the previous two contests, Felix Rosenqvist, himself a veteran of seven starts between 2010 and 2016.

Not since Keisuke Kunimoto in 2008 has a rookie ascended the top step of the podium, but with significantly fewer old hands on this year's entry list, there is guaranteed to be a new winner for the first time since 2014. However, if a new face is to make their mark, they can't rely on talent alone.

As with any street circuit, the track walk is hardly the most conventional – often taking place amid regular rush-hour traffic as barriers are still being installed – and the constantly evolving road surface renders the first practice session of little use, beyond basic course familiarisation.

Simulation isn't a new premise for junior single-seater drivers, but its true potential is frequently under-utilised. Beyond simply teaching drivers when to brake or turn, simulators can be harnessed to practise safety car restarts, using the slipstream effect and extracting the maximum from the tyres in qualifying – in short, to refine the skills that are needed to thrive in real life.

This is the guiding principle for Pro-Sim founder



LAT IMAGES



MAU GER/LAT

Far left: European champion Norris has previous Macau experience

Left: Team-mate Daruvala has been using his home sim to compare data

Adrian Quaife-Hobbs, a race winner in GP2 and GP3 before turning his attentions to the virtual world. With the stated aim of building the most effective driver-training tool possible, Quaife-Hobbs painstakingly developed a range of simulators for home use, equipped with accurate force-feedback steering systems, hydraulic brakes and an adjustable gas spring throttle to improve the correlation to real life.

To see the worth of his labour, one need look no further than Quaife-Hobbs' top pupil, FIA European F3 champion Lando Norris, who is seeking to join Edoardo Mortara (2010) and Rosenqvist (2015) in the exclusive club of drivers to claim the European crown and Macau victory in the same year.

In addition to owning a Pro-Sim unit at home to learn the circuits, Norris has reaped the rewards from working on the finer details at Quaife-Hobbs' Surrey base with Carlin team-mates Jehan Daruvala and Ferdinand Habsburg prior to every European F3 round this season. On the high-speed streets of Macau, where the margins between success and failure are minuscule, the collaborative approach will be especially valuable (see page 46).

Although Norris has previous circuit experience, his rookie outing last year came under less than ideal circumstances, with only one race outing in an F3 car at Hockenheim to fall back on. An opening lap crash in the qualifying race compromised his weekend, but the then 17-year-old recovered well to finish on the fringes of the top 10 from the back of the grid in the finale.

Now with a title-winning F3 campaign under his

belt, Norris is comfortable with the favourite label and ready to hit the ground running.

"I'm definitely more prepared than I was last year," he says.

"It was my second ever time in F3 and I was up against drivers that had done it all season, so it was tough – not just going to Macau as a rookie, but in a car I wasn't confident with. Now I know the track, I can go in and push because I know the limitations,

"It's easy to find half a second, eight tenths without knowing how"

so that's definitely an advantage compared to the rookies that are doing it.

"You need to know the areas where you can push and ones that are going to improve throughout the weekend – it's little things like that can build up to something big."

As one of three Macau newcomers in Carlin's expanded line-up for Macau – joined by Devlin DeFrancesco and Sacha Fenestraz – Daruvala

knows he has a lot to learn.

The Guia Circuit requires a measured approach, as the combination of a low-grip surface and unforgiving walls require little invitation to punish drivers who overstep the mark.

This isn't helped by the circuit's Jekyll-and-Hyde character, as teams are forced to compromise downforce for straightline speed on the flat-out run to the circuit's main overtaking point at Lisboa, which can make the car a handful in the twisty section that follows. It can be particularly unsettling on the brakes, not least on the bumpy approach to Lisboa.

"It's easy to find half a second, eight tenths without really knowing how," says Daruvala.

"It's all about taking it as it comes for me and doing as much prep on my simulator as possible to feel like I've been there before, even though I haven't."

The best way to build confidence is to become familiar with how the car responds to different grip settings and get used to finding chunks of time as the grip improves. Times in Free Practice 1 are typically around four seconds off the ultimate qualifying pace, as drivers adjust their lines to get as close to the walls as possible.

"We start with a lower grip setting and we'll have a reference time for what's possible on each level so we can see how close they get," says Quaife-Hobbs.

"They spend a bit more time at the lower grip and then when you take the jump to Free Practice 2 and qualifying, they've got to find two or three seconds in a safe way. ►



Quaife-Hobbs shares his tips with Fenestraz

“Every lap you’re finding a tenth here and there from being more comfortable with the track and getting a bit closer to the walls. Then you’re not having to push as hard and the lap times just come.

“We’re taking it on to the next level of what you can do on a sim. It’s not just about lap times, it’s also about all the other elements too.”

Daruvala has found the process invaluable in his rookie preparations.

“We treated it like a real session,” he says. “I went out and built up to it like I would in real life, not taking any risks and staying out of the walls.”

For Daruvala in particular, it’s easy to spend a session churning out laps and building into a rhythm, whereas traffic and the perpetual risk of red flags mean that invariably never happens at Macau.

On Yokohama tyres, which are expected to have a more pronounced peak than the Hankooks used in the FIA European championship, it will be vital to be able

to hit the sweet spot straight away in qualifying, so the Carlin drivers have practised being released into traffic together and finding a clear lap.

“You can do 10 or 15 laps and lead yourself into a good time, but it’s being able to go out and do it on that first lap that will be critical on the Yokohamas,” explains Quaife-Hobbs.

“Obviously, that adds a bit of pressure because you haven’t got this buffer, so that’s what they can practise here. We’re trying to break the rhythm, doing qualifying runs where they’re getting in each other’s way and then going off to do a lap. It’s about trying to keep calm, so that you can get the space and do the lap without being distracted.”

But it’s not just in qualifying where a calm head can pay dividends. Safety cars are part and parcel of racing at Macau, and learning to handle the pressure that comes with the restarts – as the leader can be a sitting duck on the run to Lisboa – will be crucial

to secure a good result.

Marco Wittmann found that out the hard way in 2011. The German was dominant all weekend, but found himself shuffled down to fifth at a late restart before a huge accident for Kevin Magnussen neutralised the race prematurely, handing a shock win to Daniel Juncadella.

Staying ahead of the pack is much easier

“We’re taking it on to the next level of what you can do on a sim”

said than done, but there is a precedent for it – da Costa led every lap of the qualifying race and the main event in 2012, a feat repeated by Alex Lynn one year later.

Norris has made excellent restarts a key part of his armoury this year, yet knows Macau will be a different story and has been practising them with his team-mates in readiness for the race that all junior single-seater drivers want to win.

“That’s been one of the things I think we did very well this year, we’ve been practising them quite a bit to see when to go, what speed to be doing and so on,” he says.

“Macau is definitely much tougher than other tracks with such a long straight before the first proper braking zone, but da Costa did it last year, so it is possible.”

And so, too, is a fourth FIA F3 World Cup for Carlin. The drivers have done their homework, now the rest is up to them. ■

HOW TEAM ETHIC IN THE SIM YIELDS RESULTS

When the green flag drops for Free Practice 1 in Macau, spare a thought for Formula Renault Eurocup champion Sacha Fenestraz, as the biggest fish in the pond is thrust into the shark’s pen for only his second F3 outing. The Franco-Argentinian (right) impressed by qualifying fourth for his debut at a soaking wet Nurburgring, but with little experience of F3 and none whatsoever of the circuit, he will be decidedly up against it.

However, Fenestraz does have a lifeline in Carlin’s open approach to sim work. The 18-year-old joined the team’s three regular drivers at Pro-Sim for a session prior to the Nurburgring and

flourished, not that company founder Adrian Quaife-Hobbs was the slightest bit surprised.

“They’re more open because they’re not at the track, so everyone is a bit less stressed and less secretive,” he says.

“It tends to run well because it’s an open environment and they’re bouncing ideas off each other, trying different gears and different lines. They’re all helping each other, so it’s a lot more fun and as a consequence they can get the best out of it.”

Lando Norris has found the group approach to simulator training helpful in his title campaign and shares data from his home simulator with

team-mate Jehan Daruvala to compare against on his own sim.

“We all have a different driving style so there’s always a place where someone else is quicker, whether it’s braking, high speed, low speed or whatever,” he says.

“It was always good to learn from them and the techniques [in the sim] were very similar to what we had in the car, so it corresponded very well with real life. It’s much better than driving on your own and just doing laps – learning off others helps progression much faster.”



DRIVING **FUN** IN THE WINTER SUN



*Escape winter with trackdays at
Ascari Race Resort in Spain
and Circuit Portimao in Portugal
in March 2018*

Picking up your bags, you head out into the cold, wintry weather. They're light - it's because you're leaving behind the heavy winter jackets, insulated clothing and heavy boots - replacing it instead with some beach shorts, light t-shirts and flip-flops.

But amongst the warm weather items, you also have your driving shoes, and race helmet - because this is a trip with a dual purpose. Not only do you get away from the cold March weather, you also are heading down to the start off your 2018 driving and trackday season in style - on the Iberian coast. More specifically, Ascari Race Resort in southern Spain or the Autodromo Internacional do Algarve (AIA - more commonly known as Circuit Portimao).

ASCARI RACE RESORT - MARCH 2017



The event? An RSR Iberia Premium Trackday. RSR Iberia is the sister company to the already well established RSR Nurburg (based at the Nürburgring in Germany) and RSR Spa (at Circuit de Spa-Francorchamps in Belgium).

If you've decided to drive your own car, then it was loaded up onto the transporter a week or two ago - already making its way down to the circuit. If you've decided to hire a track car from RSR's impressive sportscar fleet, then all you need to do is get yourself there!

Start off your 2018 trackday and driving season in style

There are two events to choose from. **Event one** is a special Nissan GT-R only event based at the ultra exclusive Ascari Race Resort in Spain. Day one is a guided road tour through the Andalusian countryside, with a visit to the UNESCO world heritage site at Alhambra followed by a group welcome dinner in the Hotel in Ronda.

Days two and three are where the action starts. Complete with safety briefing, guided laps, track walk and cost-optional full-time personal instruction, you experience the 3.4 mile circuit, with all its 26

corners that incorporate many aspects from other circuits around the world - the Karussell, Eau Rouge and the Corkscrew included.



Event two is open for all car types and comprises of two days and one evening on the spectacular Circuit Portimao in Portugal. This flowing rollercoaster of tarmac is a must drive with its blind crests and tricky cambers to keep challenging you each and every lap. Perhaps of course, the hardest part of all is getting back on the plane to head back to what you know will be cold, wintry weather. Maybe just one more week on the beach first? ■

Ascari Race Resort Track Event

16th - 18th March 2018 (Nissan GT-R only)

Circuit Portimao Track Event

16th - 18th March 2018 (All cars welcome)

Trackday entry only pricing starting from 1795€ (Ascari) and 750€ (Portimao). Car transport, hotel and track car packages available upon request. Advanced booking is essential.



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