

F1 2018 BATTLE TO BE F1'S NEXT NEW CHAMP

 **AUTOSPORT**

CAN RICCIARDO BEAT VERSTAPPEN?



**"He's the
strongest
team-mate
I've had"**

VERSTAPPEN

**"He's the
first driver
who can
challenge me"**

RICCIARDO



PLUS ALONSO'S 'SCARY' DAYTONA DEBUT

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Don't discount Ricciardo just yet

IT'S OBVIOUS THAT MAX VERSTAPPEN WILL, GIVEN half a chance, battle for many Formula 1 world championships. Even Lewis Hamilton has said he'll need to "raise his game" to stay ahead of the Dutch star. But it's far too early to write off Daniel Ricciardo.

Red Bull's 'other' driver is still only 28 and, as he tells Lawrence Barretto in this week's cover piece, the Australian believes he knows how to beat Verstappen. Ricciardo has been one of F1's best performers over the past four seasons and did outscore his team-mate in 2017.

He'll be hard-pushed to do so again this season, but the (so-far-friendly) rivalry at Red Bull will be one of the most fascinating stories of 2018, particularly if the car is good enough to allow them to fight to become F1's next new world champion.

Another Red Bull-backed driver has already made a stunning start to the year. As our report on p36 shows, there were opportunities for other drivers to shine on the Monte Carlo Rally, but Sebastien Ogier was again imperious for M-Sport. The strength of the Toyota challenge was impressive, but it remains to be seen who – if anyone – can put together the sort of consistent campaign Ogier is likely to manage.

And talking of Toyota challenges, Fernando Alonso is pretty much a nailed-on certainty for wins as he takes on the World Endurance Championship this season. He began the next stage of his triple-crown quest at Daytona last weekend and it's probably fair to say things didn't entirely go to plan (p4), but it was still a valuable experience for Alonso as he gears himself up for a Le Mans 24 Hours assault.



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Charles Coates/
LAT Images

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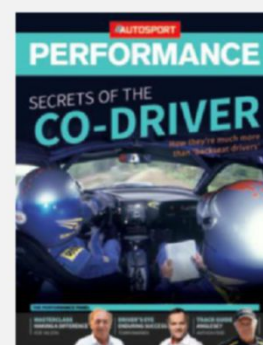
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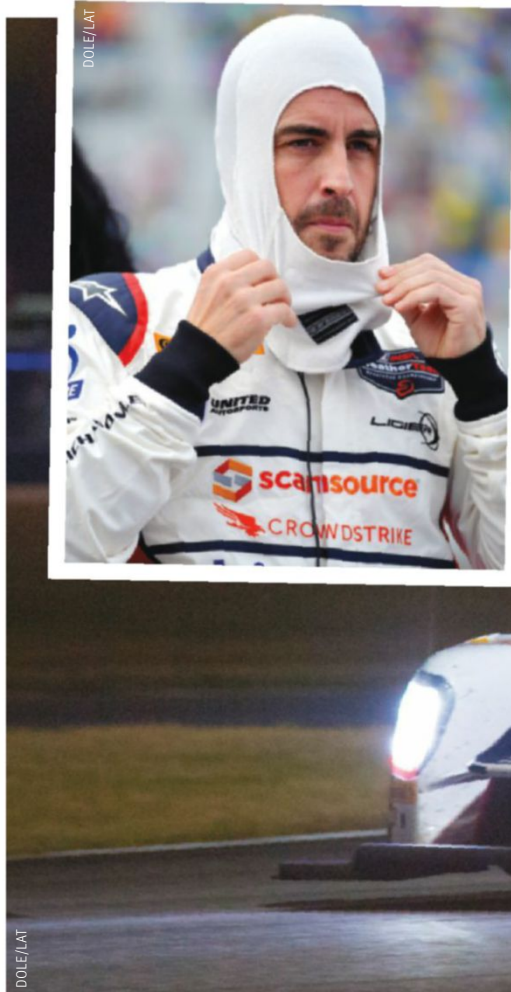
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FREE INSIDE

PERFORMANCE SUPPLEMENT



The secrets of co-driving and how to build a team around you are just two of the subjects in the latest edition, which includes Anthony Reid's Anglesey guide.



DAYTONA 24 HOURS/LEMANS

Alonso commits to Toyota

FERNANDO ALONSO TALKED ABOUT HIS outing in last weekend's Daytona 24 Hours as preparation for "if and when" he went to Le Mans. Given that his assault on the French enduro with Toyota was confirmed within 48 hours of the chequered flag falling at the end of the Florida enduro, his first race in a sportscar also clearly convinced him that he was ready to press on with his quest to win the unofficial triple crown of motorsport.

The McLaren Formula 1 driver's performance in the opening round of the IMSA SportsCar Championship showed the world what he will be capable of when he goes to the Le Mans 24 Hours in June and, perhaps more pertinently, how highly motivated he is for the challenge that lies ahead.

Alonso took to sportscar racing straight away in a United Autosports Ligier-Gibson JSP217 shared with teenagers Lando Norris and Phil Hanson. The Spaniard excelled in the car, as you would expect of a two-time Formula 1 world champion, but he also impressed with his attitude out of it over the course of a sometimes difficult weekend for United and the Ligier-Gibson package.

An impressive qualifying performance on day one of the quickfire Daytona event might well have been the least significant moment of his weekend. He probably overachieved with a time less than a second off the pole, albeit one that left him 13th, because the Ligier-Gibson LMP2 package wasn't anywhere near a match for either the Daytona Prototype Internationals or the ORECA 07 P2 over one lap.

But at the end of the day a racing car is a racing car, even if it has a roof and is running on control tyres with which the driver is still largely unfamiliar. Prior to qualifying, Alonso was only able to add three more laps to the 60 odd he'd managed in the JSP217 on IMSA-spec rubber at the official pre-event test at Daytona.

Where Alonso really shone was in traffic during the race. Getting past slower cars in what is a multi-class discipline without losing time distinguishes the great from the good in the modern era of sportscar racing. It is what put the likes of Allan McNish and Tom Kristensen firmly in the former category in their pomp. There were times during the race when Alonso looked like he'd been ducking and diving around slower cars throughout his career.

United's Richard Dean, co-owner of the team with McLaren boss Zak Brown and the man who runs it on a day-to-day basis, couldn't hide his admiration for Alonso's prowess in and around slower cars. "Going through traffic, he was in full-attack mode — he wasn't taking any prisoners," said Dean. "We had the inboard-camera feed in the pits, and you could see that he was thinking two or three corners ahead. And he didn't hit anyone. That's the mark of a top sportscar driver."

Another is the ability — or rather the desire — to work closely with your driving partners. Sportscar racing is a team sport, and Alonso clearly grasped this. "Fernando couldn't have been more accommodating and enthusiastic,



LAT IMAGES

after Daytona debut

especially when it came to working with his young team-mates,” continued Dean. “I was fully expecting a ‘what-the-hell moment’ when things were going badly, but it never came.”

Alonso never let his head fall. That’s another requirement of success in sportscars. He appeared as motivated in the car late in the race while he and his team-mates nibbled their way back into the top 40 as he did early on when they were consistently running in the top five or six. That’s a good sign for when he has to head back out onto a dark and perhaps slightly damp Circuit de la Sarthe for a fourth stint on a set of tyres.

The Alonso/Norris/Hanson car lost time with bodywork damage from a tyre blowout, two different braking problems and a throttle issue. Yet Alonso was still pushing hard even though his Ligier fell more than 90 laps down on the leaders.

Alonso talked about various aspects of the endurance discipline that he experienced for the first time last weekend. He mentioned driver changes, communication and compromise with team-mates, as well such simple things as how much time to spend in the pits between stints.

There’s still a lot of learning for Alonso to do ahead of his bid to add a Le Mans victory to his pair of Monaco Grand Prix wins as he seeks to emulate Graham Hill’s triple crown. Remember that he’s so far only done one day of testing in the Toyota. But the announcement that he will contest all the World Endurance Championship events that don’t clash with his Formula 1 commitments means he will be on the grid for

the opening round of the 2018-19 WEC at Spa at the beginning of May. That’s significant. It proves how committed he is to securing his motorsport legacy with a triple-crown victory.

Alonso’s full-time place on the Toyota roster for the superseason, with the exception of this year’s Fuji race on the same day as the US Grand Prix, means there’s a casualty in the Japanese manufacturer’s ranks. Anthony Davidson has been downgraded to a test-and-reserve role after losing his seat in a car he’s shared with Sebastien Buemi and Kazuki Nakajima since 2015.

Nine-time Le Mans winner Tom Kristensen said he admires Alonso’s passion for all forms of racing. “He’s done Indianapolis and Daytona and now he’s preparing for Le Mans,” he said. “This kind of versatility was what I saw as I grew up, watching the greats from Mario Andretti to Jacky Ickx and others who took part in many different kinds of racing. That’s what I find so brilliant.”

Alonso likes driving racing cars as fast as they will go. That joy was evident on multiple occasions in uncompetitive McLaren-Hondas over the past three years and again over the weekend after a run of problems dropped his Ligier out of contention.

That love may take him back to Daytona in 12 months’ time. “It’s an iconic, prestigious race and it’s in a part of the year when we are quite relaxed, normally preparing ourselves for our season,” he said. “Instead of being on a bicycle or in the gym, you are driving. So it’s much better.”

GARY WATKINS

US MOTORSPORT

Chip Ganassi notches up 200 victories

CHIP GANASSI RACING CLAIMED ITS 200TH victory by winning the GTLM class of the Daytona 24 Hours last weekend with its Ford GT, driven by Richard Westbrook, Ryan Briscoe and Scott Dixon. Formed in 1990, Ganassi’s first victory was taken by Michael Andretti at Surfers Paradise Indycar race in 1994. Over half of Ganassi’s wins – 103 – have been taken in top-class open-wheel racing.

TOP CHIP GANASSI RACING WINNERS

1 Scott Pruett 44 wins

Pruett and Ganassi were a dominant combination in Grand-Am, winning five Daytona 24 Hours and five championships together – and a lot of races.

2 Scott Dixon 43 wins

The New Zealander is Ganassi’s longest-serving driver, triumphing in 40 CART/IndyCar races as well as being part of the 2015 Daytona 24 Hours-winning crew.

3 Memo Rojas 30 wins

The Mexican driver is the lowest-profile on this list, but was Pruett’s partner in Grand-Am for a run of four titles in five seasons from 2008-12.

4 Juan Pablo Montoya 17 wins

Ganassi’s Mr Versatile, Colombian folk hero Montoya has won for the team in CART, IndyCar and NASCAR – as well as scoring a trio of Daytona 24 Hours wins.

5 Alex Zanardi 15 wins

The first in a lineage of the Ganassi team’s legendary drivers, Zanardi is synonymous with the team through his swashbuckling CART performances from 1996-98.

6 Dario Franchitti 14 wins

Two Indianapolis 500 wins and one in the Daytona 24 Hours are among Franchitti’s achievements – but rising NASCAR star Kyle Larson is only one victory behind.

EDD STRAW



DOLE/LAT



FORMULA1

ASSEN MOVING AHEAD WITH NEW DUTCH GP PLANS

THE ASSEN CIRCUIT has moved a step closer to being able to hold a Dutch Grand Prix after Formula 1 race director Charlie Whiting visited the track – which is located in the far north of the Netherlands – for an inspection.

Whiting's trip for a track inspection came last week as Assen chases the Grade 1 licence it would need to stage a grand prix.

A statement issued last Friday from Assen chiefs said that following the 'thorough inspection', Whiting's verdict was that only a few minor changes were required for the FIA to be happy that it could hold an F1 race.

The necessary alterations would mainly involve adding extra kerbstones, guardrails and Tecpro barriers at certain points around the track.

The circuit itself would not require any major changes so the layout could remain unchanged – something that is important because track chiefs had said they would not be interested in holding an F1 race if it had a negative impact on its hosting of the famous Dutch TT MotoGP event.

Whiting's track inspection followed a preliminary assessment by the FIA. In December, a computer simulation already indicated that the TT Circuit Assen met the Grade 1 safety

requirements set by the FIA in terms of track layout and width.

Circuit chairman Arjan Bos said: "It's extremely pleasant to hear that Charlie Whiting is also very happy with the track, the modern facilities and the level of maintenance. His positive judgement is an important step in the right direction to get Formula 1 back to the Netherlands, but we are not there yet. Far from it. The next step would be for the FOM to pay a visit to the TT Circuit Assen. This will likely happen in the near future."

The Champ Car World Series and Superleague Formula (above) have both raced at Assen.

Formula 1 commercial chief Sean Bratches told Autosport last year that he would be interested in bringing the Dutch Grand Prix back on the calendar, but was understood to favour a street-circuit venue in one of the country's major cities.

Zandvoort is the only host of the Dutch GP so far, the first running taking place in 1948 and the last in '85, when Niki Lauda took the final victory of his career for McLaren. The track's co-owner Bernhard van Oranje – the cousin of King Willem-Alexander – said as recently as last November that his circuit could host F1 following an "unofficial" summer visit by Whiting.

ERWIN JAEGGI

FORMULA1

Low T-wings: the next battle

Those unsightly high wings on the ghastly shark fins may be gone, but a lower version looks set to sprout

Formula 1 teams are set to engage in a new design battleground over low T-wings in 2018, as part of a push to regain downforce lost at the rear of cars. A loophole in last year's technical regulations opened the door for teams to run high T-wings on the shark-fin engine covers in a bid to improve performance. But their addition caused an outcry among fans and teams because of their appearance, and an outright ban was introduced for the 2018 season.

With F1 teams aware of the benefits that the small wings delivered in terms of managing airflow and increasing downforce, it is almost certain that this concept will not have been ignored when teams come to finalising their 2018 challengers.

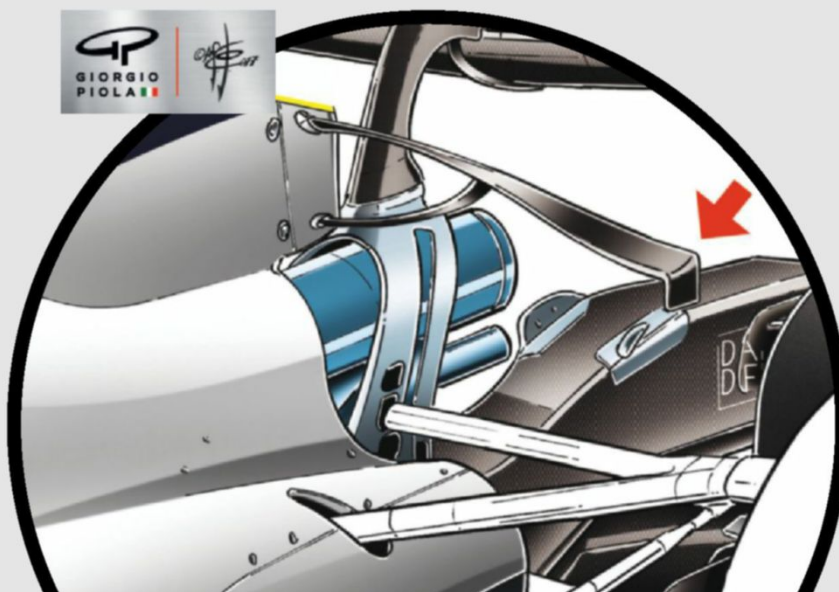
As teams claw to recover the loss of downforce caused by the ban on high T-wings, plus the outlawing of monkey seats, it appears likely that T-wing development will open up in a new area of the car instead. That is because the wording of the 2018 regulations that outlawed shark fins and high T-wings still leaves room for another area to be exploited.

Article 3.5.1 of F1's technical regulations banned high T-wings by making it clear that no bodywork could appear in a specified triangular area above the defined engine cover. It states: "When viewed from the side, no bodywork forward of the rear wheel centre line may lie above a line parallel to the diagonal boundary defined in [the rule that defines the dimension of the engine cover] and intersecting the rear wheel centre line 650mm above the reference plane."

But there remains a small area below this triangle that is still available for teams to exploit, and this is an area in which Williams ran elaborate T-wing concepts last year. As well as developing a high T-wing like other teams, Williams's FW40 featured a second element lower down to help manage airflow in this area. Along with channelling air to the lower element of the rear wing, this airflow can also prove important in helping maximise the efficiency of the diffuser.

F1 teams are expecting big gains in downforce this year thanks to a much better understanding of the performance aspects of the new aero rules that were introduced last year. McLaren technical director Tim Goss told Autosport: "You would expect there to be a step, and given the cars are relatively immature, you would expect it to be a bigger step than in previous seasons."

JONATHAN NOBLE AND GIORGIO PIOLA





P14 OPINION
MORE ON FORMULA E'S NEW CAR

FORMULA E Here it is: the second-generation Formula E racer that will battle it out silently around the city centres of the world from the end of this year. The electric racer, which will bring an end to the mid-race car swaps, features a ring of lighting around the FIA-mandated halo cockpit-protection device, a huge rear diffuser and LMP1-inspired covering of the front wheels. The front and rear wings are angled more aggressively. The car was revealed digitally on Tuesday ahead of a physical launch planned for the Geneva Motor Show in March. Spark Racing Technologies won the tender to produce the car, which will be powered by a new McLaren Applied Technologies battery.

WORLDENDURANCE/IMSA

Le Mans wants alignment with IMSA for LMP1

THE LE MANS 24 HOURS ORGANISER wants the North American IMSA SportsCar Championship to adopt the new breed of LMP1 prototype planned for the 2020-21 season.

The Automobile Club de l'Ouest, which runs the French enduro and promotes the World Endurance Championship, believes that the new P1 category should provide the basis of a common set of rules straddling the Atlantic. This would allow IMSA teams to race at Le Mans and WEC teams to compete in the major US enduros.

ACO president Pierre Fillon explained that the target for 2020-21 was to come up with a set of regulations that would allow manufacturers to style the cars after their roadgoing machinery while maintaining P1 performance at current levels. At the same time, he wants costs to be reduced to bring them in line with IMSA's LMP2-based Daytona Prototype International category (right). "We are working on common prototype rules," said Fillon. "The idea to give the cars a brand identity began with DPi, but we want to go further. We want to reduce the costs

of the next breed of prototype so they're not that much different to DPi."

The ACO's vision for the next generation of P1 cars includes hybrid technology, but Fillon conceded that it may be difficult to persuade American manufacturers that energy-retrieval systems should be part of the formula.

IMSA boss Scott Atherton expressed support for the idea of a common platform. "We have a shared vision of having a set of prototype regulations that would enable the cars competing for the overall win at Le Mans and the overall win at the Daytona 24 Hours and elsewhere in the IMSA series to be one and the same," he said.

The idea of moving away from cars based on LMP2 machinery for IMSA's top category appears to have limited support among the manufacturers. Mazda North America boss John Doonan said: "We need to be consistent and take the momentum that we have to grow the sport rather than changing things around. If we would have to do our own car the value would disappear."

GARY WATKINS



 LAT IMAGES

GALSTAD/LAT

RACE OF CHAMPIONS

GLUT OF CHAMPIONS SET TO 'ROC' AND ROLL

WORLD ENDURANCE AND DTM champions Timo Bernhard and Rene Rast are among the last batch of drivers to have signed up for the Race Of Champions in Saudi Arabia.

Porsche star Bernhard (below) will make his RoC debut in the event, which takes place this Friday and Saturday at the King Fahd International Stadium in Riyadh, with drivers competing in sportscars, tin-tops and even trucks.

"Believe it or not I visited the Race Of Champions way back in 1989 when it came to the Nurburgring," said Bernhard. "That day I was just watching with my dad but ever since I've been waiting for my chance to compete, and now that day has arrived!"

World Rallycross champion Johan Kristoffersson will also make his debut in the event, and will be joined by fellow Swede and new BMW DTM driver Joel Eriksson, who was runner-up in the Formula 3 Championship last year behind McLaren Formula 1 junior Lando Norris, who is also competing in Riyadh.

Memo Rojas, the 2017 European Le Mans Series LMP2 champion, and NASCAR Mexico title winner Abraham Calderon will also join the field. Among the drivers previously announced are ex-Formula 1 race winners Juan Pablo Montoya and David Coulthard, IndyCar champions Josef Newgarden and Ryan Hunter-Reay, IndyCar never-quite-champion Helio Castroneves, and nine-time Le Mans 24 Hours winner Tom Kristensen.

JACK COZENS



WORLD RALLY CHAMPIONSHIP

Solberg aims for WRC return after testing Polo

A DAY TESTING A RALLY CAR AND PETTER SOLBERG is back to his old ways: the 2003 World Rally champion is to compete in the Historic class of Rally Sweden in a Ford Escort RS1800, while pushing for a WRC2 drive in a Volkswagen Polo GTI R5 later this season.

Solberg tested VW's all-new rally machine for a day in northern Sweden last week (above), and the Norwegian emerged ready to rally again. "Honestly, the car was fantastic," said Solberg after almost 200 flat-out miles in perfect winter conditions. "It was really nice to drive, really predictable and easy — this is so important for the R5 car. Now I have done the test in that car, I really want to drive one in competition. I don't know when it might be possible and we didn't talk about it yet, but I would love to do that."

Solberg's son Oliver is tipped to make his world

championship debut at Rally GB and his dad is tempted to join him. "Maybe doing Rally GB would be good," he said. "If Oliver does the event, it would be a really nice story to be competing there as well."

Solberg will be focused this year on the World Rallycross Championship, in which he is a two-time champion and where he drives a Polo RX Supercar for his PSRX VW Sweden team, but the day of testing fired his imagination and enthusiasm for this month's Rally Sweden Historic.

"Pernilla [his wife] and I won this event for three years," said Solberg, "so it's really nice to be doing it again. Rally Sweden is based so close to our workshop in Torsby, we just had to do it." Solberg's brother Henning will drive Mads Ostberg's Ford Fiesta WRC on the main rally.

DAVID EVANS



TOYOTA RACING SERIES

Verschoor claims double victories

DROPPED RED BULL JUNIOR Richard Verschoor continued to impress in the Toyota Racing Series by winning last weekend's New Zealand Motor Cup headline final race at Hampton Downs.

The 17-year-old Dutchman, who will continue in the Formula Renault Eurocup this season, dominated the weekend on pace — he grabbed both pole positions and took two wins.

Verschoor led all the way in the

first race on Saturday. Marcus Armstrong got the jump on front-row starter Juan Manuel Correa, but worrying water temperatures forced the Kiwi to play it safe in second. Correa fended off Robert Shwartzman to secure a top-four lockout for M2 Competition.

In the NZ Motor Cup climax, Verschoor (left of pic) again led from lights to flag, although series leader Armstrong (right) kept the pressure

on, especially when Verschoor made an error. This time, Shwartzman got the better of Correa for third.

The reversed-grid middle race provided a win for karting graduate Clement Novalak, who took advantage of a poor start from poleman Reid Harker. Novalak led home Shwartzman and Armstrong. Briton James Pull scored a fifth and two sevenths across the three races.

JURGEN STIFTSCHRAUBE





DTM

Ekström calls time on DTM

THE DECISION OF MATTIAS Ekström to stand down from the Audi DTM team brings to an end the top-line circuit-racing career of a driver who became a talisman of the series.

Just take a look at the statistics to the right, which are based upon the modern era of the DTM since it was revived in 2000. The 39-year-old Swede, who confirmed on Monday that he was going to concentrate on his World Rallycross programme with his own EKS Audi team – he also won that title in 2016 – comes out on top in every department.

Admittedly, much of his achievement is based on his longevity. Ekström joined the DTM in 2001, and enjoyed an uninterrupted run of 17 seasons. He had only taken one pole in the last five years and scored a solitary victory in '17 – and that was handed to him at the Red Bull Ring by Jamie Green. But Ekström stayed competitive to the end, finishing as series runner-up in his final season. By this time

he wasn't the quickest driver around, but his uncanny ability to look after his tyres on long race runs and his canny racecraft meant he just kept accumulating the points.

Ekström, who described the decision as “probably the most difficult of my professional life”, leaves the DTM with two championship titles (2004 and '07), and 17 consecutive years with the Audi-spearheading Abt Sportsline team in which he never finished outside the top seven in the points, other than in his rookie season.

His replacement is reigning Blancpain Sprint Cup champion Robin Frijns, the super-talented Dutchman who won titles at every level on the single-seater ladder but never got the Formula 1 race deal his abilities deserved.

Frijns slots into an otherwise-unchanged Audi line-up alongside Green, reigning champion Rene Rast, former title winner Mike Rockenfeller, Nico Müller and Loïc Duval.

MARCUS SIMMONS

EKSTRÖM IN NUMBERS

MOST DTM STARTS

Mattias Ekström	194
Timo Scheider	180
Martin Tomczyk	176

MOST DTM WINS

Mattias Ekström	23
Gary Paffett	19
Bernd Schneider	19

MOST DTM POLES

Mattias Ekström	21
Bruno Spengler	18
Bernd Schneider	17

MOST DTM PODIUMS

Mattias Ekström	76
Bernd Schneider	54
Bruno Spengler	48

MOST DTM RACES LED

Mattias Ekström	47
Jamie Green	40
Bruno Spengler	33

IN THE HEADLINES

WILLIAMS TO MAKE FIRST F1 LAUNCH

Williams looks as though it is in pole position to take victory in the Formula 1 launch season, after announcing that its FW41 will be the first 2018 challenger to break cover, in London on February 15. Renault and Sauber have also set dates in the past week, with the Regie taking off the wraps online on February 20, and Sauber also going for an internet job on the same day.

SAUBER, FORCE INDIA DROP EU PLEA

Sauber and Force India have dropped the complaint they made to the European Union Competitions Commission regarding F1's governance and payment structure. The two teams lodged an official complaint with the Commission in September 2015, citing the division of revenues and drawing up of rules as “unfair and unlawful”. But in a joint statement they said: “We have been greatly encouraged by the dialogue that has been introduced following the appointment of Chase Carey as executive chairman and CEO of the Formula 1 commercial rights holder and his new management team.”

GHIOTTO INSTALLED AT CAMPOS F2

Campos Racing has snapped up Formula 2 race winner Luca Ghiotto as it bids to bounce back from a poor 2017 season in the category. The Italian, who tested for the Williams F1 team last year, has been a force during his two seasons in GP2/F2 after finishing a close runner-up to Esteban Ocon in the 2015 GP3 Series.

RENAULT ACE AUBRY WITH ARDEN IN GP3

Formula Renault Eurocup ace Gabriel Aubry is to step up to the GP3 Series this season with Arden International. The spectacularly sideburned Frenchman, three times a winner last year in Eurocup, has become Arden's first driver confirmed for GP3 this year after post-season Abu Dhabi test outing with ART Grand Prix and MP Motorsport.

ABERDEIN JOINS MOTOPARK F3 SQUAD

South African Jonathan Aberdein has become the latest driver announced by Formula 3 European Championship squad Motopark for 2018. Aberdein has spent two seasons in German Formula 4 with the team, and dominated the 2016-17 UAE F4 series.

ASIA GETS REGIONAL F3 SERIES

The FIA's new Regional Formula 3 concept has spawned an Asian series for 2018, which will kick off at Sepang in July. Asian F3 will be run by Shanghai-based Top Speed, and will link in with the successful Blancpain GT Asia as well as the Chinese F4 Championship. The haloed machine is set to be powered by a 270bhp engine. Italian reports suggest that the chassis will be provided by Tatuus and the engine by Abarth F4 tuner Autotecnica.



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WORLD RALLY CHAMPIONSHIP

Citroen wants more from less

CITROËN DOESN'T NEED SEBASTIEN Ogier, an increased budget or more testing. What it needs is the people in the team to back themselves to be more efficient and more productive. And it needs serenity. That was the view of PSA Group CEO Carlos Tavares at last week's Monte Carlo Rally.

Tavares waved away talk of budget cuts and missed opportunities to sign Ogier and Andreas Mikkelsen for the World Rally Championship, and said he would stick to the sort of policies that helped him turn Citroën around as a company.

"If you give a team the biggest pot of money and the biggest drivers, everything is high, high, high, but what's the merit?" said Tavares, a former amateur touring car racer. "The merit is in the fact you create a team of people who have strengths and weaknesses, and you assemble those strengths and weaknesses of a group of people for them to feel excited as a team to demonstrate to all the other guys that they are better. If you give them more money, more people, more drivers and more engineers, at the end of the day it's not a team that's winning – it's a banker and this is not my philosophy of sport."

Citroën is rethinking its approach to the WRC, with Tavares trumpeting a more fiscally aware attitude.

"Managing the team," said Tavares, "is all about breaking parodies and making things impossible possible. People tell me we need

more money because we need more tests. The question is how we can make more tests with less money – that's how to break the parody."

Asked directly why he didn't sanction the signing of Ogier, Tavares said: "We believe we have a great driver called Kris Meeke. He has demonstrated through the two wins last year he is a very fast driver. But we need to help him have a car in which he is completely comfortable and make sure the overall context in the team is calm and serene and confident."

Citroën's failings last year were likened to sister company Peugeot's miserable Dakar Rally return in 2015, with Tavares pointing to the Paris firm's recent success in South America as the sort of positive outcome he wanted from the C3 WRC.

"We were beaten [in WRC] in 2017," said Tavares. "We were number four from four teams; we failed. But we are sportsmen and sportswomen, so when we have a bump on the road we raise our head again and we fight back. That's the spirit of Citroën Racing. It is normal that, at one point in time, we might fail."

"Peugeot Sport, on the first-year comeback in Dakar, failed, but for the next three years we won. I understand the fact that my teams can fail one year as long as they behave like top sportsmen and sportswomen, look at what happened and, in an honest and clear way, try to understand why it didn't work and then try to fix it."

DAVID EVANS

IN THE HEADLINES

INDY CUTS 500 QUALIFYING POINTS

The IndyCar Series has slashed the number of points on offer for Indy 500 qualifying. Previously, the polewinner earned 42 points, with all 33 qualifiers rewarded. Now it will be exclusive to those in the top-nine shootout, with nine points for pole down to one for ninth. Running for the 500 kicks off on Tuesday May 15 with rookie orientation, with the race taking place on May 27.

PININFARINA HELPS MAHINDRA

Famed Italian car-styling house Pininfarina is to work with the Mahindra Formula E team on developing its 2018-19 challenger. Mahindra bought the Pininfarina group in 2015. Team principal Dilbagh Gill said: "It's huge. Even now, you understand it's a new car coming and we're not developing aerodynamics. [But] we need to understand the existing aero of the car and it's going to be really huge and important because as you know we do not have the infrastructure of other teams."

INDY SUPERSTARS GO ICE RALLYCROSS

Reigning IndyCar champion Josef Newgarden and three-time Indy 500 winner Helio Castroneves will contest two ice rallycross events in Norway! The duo will compete at the AI (February 24) and Gol (March 3) rounds of the Scandinavian RallyX on Ice series in Supercar Lites machinery. World Rallycross winners Robin Larsson and Kevin Eriksson are also on the entry.

SCHUMACHER TAKES FIRST WIN IN CARS

David Schumacher, son of Ralf, took the first win of his car-racing career in last weekend's round of the United Arab Emirates Formula 4 Championship in Dubai. Schumacher, who topped qualifying, won the reversed-grid race. His team-mate at Rasgaira Motorsports, karting star Leon Kohler, won the other two on his car debut.

BIRD HATCHES NEW RENAULT CAMPAIGN

Briton Frank Bird is remaining in the Formula Renault Eurocup this season. Bird has switched from Fortec Motorsport to Tech 1 Racing. Also in FR Eurocup, Italian F4 star Lorenzo Colombo has joined JD Motorsport.

BARWELL GETS MITCHELL FOR ENDUROS

Barwell Motorsport has recruited highly rated Scottish ex-McLaren starlet Sandy Mitchell for the Blancpain Endurance Cup this season. The 17-year-old will share a Lamborghini Huracan in the Silver Cup 'junior pro' class with Croatian Barwell regular Martin Kodric and reigning Italian GT champion Michele Beretta.

FITTIPALDI TESTS INDYCAR AT SEBRING

Formula V8 3.5 champion Pietro Fittipaldi could be in line for competing in the IndyCar Series this year after testing for Dale Coyne Racing (below) at Sebring last week. Fittipaldi, whose grandad Emerson and uncle Christian starred in Indycars, also tested in Indy Lights.



NIGEL ROEBUCK

Reborn in the USA

Fernando Alonso found racing at Daytona greatly preferable to what a Formula 1 driver would usually be doing in January

[@autosport](#)

IT WAS IN 1972, THE SECOND YEAR OF MY LIFE AS A racing journalist, that I first went to Daytona, there to see AJ Foyt win the fabled 500, and ever since I've savoured my visits there, even though I tired of the 500 once it had become a 'restrictor plate' race. Richard Petty, one of my heroes, told me some years ago that he felt the same way. "On restarts it's painful, isn't it?" he said. "I mean, the cars don't accelerate – they just kinda pick up momentum..."

If my interest in the 500 therefore declined over time, the Daytona 24 Hours – or rather, the Rolex 24 at Daytona – is a different matter. I saw it for the first time in 2009, and it became an instant favourite, not least because, as Chip Ganassi says, "It's like a harbinger of spring". After a long off-season, racing people are glad to see each other again, and, as well as that, of course, a dose of Florida sun in January never goes amiss, although sadly this year it was in short supply.

This was my first visit to 'the 24' since 2013, and in five years much has changed in American sportscar racing. Gone are the dumpy Grand-Am cars that dominated Daytona

for so long, and now the contenders for overall victory are state-of-the-art sportscars, most from the Daytona Prototype International category, such as Cadillac and Acura, the rest from LMP2, including ORECA and Ligier. Attempts have been made, I'm told, to achieve a performance balance between the two, but clearly more work is needed to help the LMP2 brigade, as Fernando Alonso realised in qualifying: on pure pace the Cadillacs looked unassailable.

As at Indianapolis last year, Alonso's presence in the race of course gave the Daytona weekend a lift. If there is always a strong field of drivers on hand for this race, the presence of a Formula 1 star is rare indeed, and

of course there was intense interest in how Fernando would cope with his first competitive touch of a sportscar.

First off, there is something about America that suits him, and even though his United Autosports Ligier was not truly on the pace, he was in fine spirits throughout the weekend. "I used to come to the USA for holidays, because no-one knew me, but that's changed a bit since I did Indy. It's true that I like racing here, because they have a different

"Instead of being in the gym, you're driving, and that's much better"



Alonso's second
US adventure
resulted in 38th
place overall



approach – there's the same passion for motorsport that we have in Europe, but here everyone is much more open. They actually share information with you!

"In the same way, we all eat in the same tent, for example – everything is for everybody, and I think we lost that ambience in Europe, where there's much more stress with everything, even in FP1! You have a new rear wing... maybe this is the last race for this engine... because of the penalties, where do you start on the grid *this* week... Everything seems to be a tense moment. At press conferences here there are positive questions, whereas in Formula 1 there are only 'polemic' questions: even if you're not in trouble yourself, you get asked about Hamilton and Rosberg, or whatever, and you say, 'I don't know, I'm not in that team'. It's just a different atmosphere here."

Racing at Daytona was very much an exploratory exercise for Alonso, allowing him to experience endurance sportscar racing before making a decision about venturing to Le Mans.

"Certainly I'm enthusiastic about sportscars, yes – I love the aesthetics, for one thing. It took a bit of getting used to the very small cockpit area – it's like being in a single-seater with a canopy over you. And something else that I needed to acclimatise to was that, depending on which side of the car you're sitting [left in the Toyota he tested last year, right in the Ligier], the corner of the car stops you from getting a clear view of the kerb – sometimes you look through the windscreen, sometimes through the side window! To start with, placing the car was just a guess, honestly."

Compared with what he was used to, did the Ligier feel slow? "Not really. The thing is, when you're in the car, the sound is quite nice – for sure a lot better than a Formula 1 engine! – and there's a lot of vibration, so you feel the speed, and it doesn't feel slow at all."

As expected, the Ligier indeed struggled to keep pace with the Cadillacs and Acuras, although when the car's problems began it was running fifth, still on the lead lap, and Alonso and his team-mates found it more competitive than practice had suggested.

"First, we had a puncture, which did quite a lot of damage to the car, and cost us four laps, but during the night it rained, and we were one of the three fastest cars, and made up two laps, partly thanks to the safety car. Lando [Norris] did a fantastic job."

"Then we had a brake problem. I was a little bit scared, I admit, because it happened at the first corner, which you approach at 300-310km/h, and when I hit the brakes, there was nothing there. Luckily I didn't hit anything, and got the car back to the pits, but we lost 40 minutes, and effectively that was the end of our race."

"Still, it was an experience I really enjoyed, particularly my stint when night was turning to day, and I think I'll come back to Daytona. It's an iconic race, and it's in January, when the racing calendar is quite empty. Instead of being in the gym, you're driving, and that's much better!"

And Le Mans? "I'd like to do it, but it's not just up to me. When I got here, I said it was 50:50; now I'd say 60-40..." 🍀



New model army

Formula E's dramatic new look signals the championship's move into increasingly unfamiliar territory. Can it flourish there?

By Scott Mitchell, Autosport Plus Editor

[@ScottAutosport](#)

FORMULA E NEEDS A NEW NAME. IT REVEALED ITS second-generation car this week (see page 7) and the new machine is many things: dramatic, striking, aggressive, bulky... but it's not an open-wheeled single-seater any more!

This might seem like an odd, pedantic point with which to start, but there's a reason for it. Formula E has just moved onto completely new ground. For years now, its founders have been foretelling an electric revolution. It had a unique selling point – the world's only electric single-seater category – and a nice quirk in that it raced in city centres. Now, though, it's taken that differentiation to a whole new level.

What sets it apart from the rest is no longer a message, or a powertrain, or a noise (or, indeed, the relative absence thereof). It's now something tangible. You can see it. This is not a traditional category. This is not a traditional single-seater.

Its striking new look includes a huge rear diffuser and LMP1-inspired coverage of the front wheels. The front and rear wings are angled more aggressively, and the remaining bodywork has very different styling treatment from before.

A ring of lighting runs around the FIA-mandated halo cockpit-protection device, and even that doesn't look terrible.

One big bonus that's worked in FE's favour is that the low-speed nature of the series means it

doesn't rely heavily on aerodynamics. Crucially, that has given those who worked on this second-generation car more freedom – and they've certainly embraced that, hence the more ambitious visual treatment. But there is another consequence that gives it substance as well as style, and this bodes well for another crucial FE characteristic.

There is a lot of pressure on this car to be a good racer. The current chassis has been the basis for an incredibly tight trio of championship fights, with a variety of winners and plenty of on-track action. It's important that while the new car is a very creative design, it still doesn't have wing-based aero at its core.

Out has gone the extremely plain rear wing, replaced by something more akin to an aircraft's tailplane. The wings attach either side of the spine of the car to form a dihedral angle, with simple wing elements on the outside and endplates that connect to more bodywork. This swoops down and connects to the sidepod, covering the rear wheels, and runs all the way up the car and does the same to the front wheels before connecting to an angled front wing. Again, this contains two simple wing elements, and is connected to a wide, very smooth nosecone.

Obviously, there are questions about how the aerodynamic devices on the car – such as the remodelled front end, the dihedral wing and the diffuser – will perform. But there needs to be an improvement in grip, because FE will get a chunky power boost for the new season: an extra 50kW (67bhp) at full whack, and 40kW (53bhp) more in race mode. So the car – which is at least 10kg heavier than the current model – will need to be able to handle that.

Perhaps the crucial factor will be whether the diffuser can add enough grip to ensure the performance of the car increases in line with the power boosts, without sacrificing the ease with which the cars can follow each other. One of FE's greatest assets is its close racing, so if the new package created Formula 1-like scenarios in which cars lost aero grip while following each other closely, militating against overtaking opportunities, that would be a very negative change.

The other question mark is over the resilience of the new car. A whack up the rear or to the side isn't usually terminal in FE – that doesn't promote bumper-car racing, but it does mean

wheel-to-wheel aggression has generally been a hallmark of the series, which has been a big, unexpected win for a category that uses street circuits.

The new car marks a very good first step

towards a crucial phase for the series, which will use this new car to move away from mid-race car swaps next season. Therein lies a key warning, though: all of the above is utterly meaningless if the single-car races go wrong.

Moving from car swaps to a full race distance is a big challenge. It would be a disaster for the series if one, let alone several, cars don't make it to the finish of the first race of the new season because the battery can't handle it.

McLaren Applied Technologies, the Formula 1 team's sister company, beat current battery supplier Williams Advanced Engineering to the deal. The teams were concerned a year ago, but now seem quietly confident. It's a mark of MAT's progress that one senior team figure suggested that the product is now far ahead of what they thought was realistic to expect.

That would suggest MAT has got it right and, now that the chassis and batteries are making their way to the teams, there will be more answers as testing of the new cars begins.

The coming season will be a litmus test for FE's long-term credentials. There are still points to prove, but it's scored an impressive early win. *W*

“What sets the Formula E car apart is no longer a message or a powertrain”

FEEDBACK

Looking forward to a battle outside F1

Hamilton v Vettel v Verstappen. A great prospect for the coming season.

But the battle I am really looking forward to is Russell v Norris.

Ah, but they are not in F1, I hear you say. And you would be correct.

The confirmation of George Russell joining ART (Autosport, Jan 25) in the upcoming F2 season, and Lando Norris already confirmed at Carlin, cements a mouth-watering (and hopefully friendly) rivalry between two of the most talented (and hyped) young British drivers we have had for a very long time.

It's going to be really fascinating to witness this battle, and its development over the course of the season, and seeing which one in their rookie season manages to finish above the other, because personally I think that means they will be champion.

That won't be a bad thing for British motorsport. Can't wait.

Michael Skeet
Byemail

Don't forget Jack Aitken's at ART, too — ed

Focus on the TV viewer

Liberty Media wants to increase entertainment for F1 fans at the track. Yet when I visited the Hungarian Grand Prix in July, it was so busy we couldn't get near any of the attractions anyway, especially on race day!

Why focus on improving things for the people lucky enough to get to the front of the queue, when it is the many millions watching on television that keep the sport in business?

I'd rather have more free-to-air coverage, less pay-per-view, better on-screen graphics and a deeper insight into the overall race. That's the way to engage the fans again.

Ian Howlett
Ely, Cambridgeshire

Remembering Dan Gurney

I much appreciated the Autosport obituary for Dan Gurney and Nigel Roebuck's tribute (January 18), and the review of his 10 best drives (January 25).

Dan was my childhood hero. I became aware of him in 1961 and '62, driving the unusual-looking Porsche F1 cars, particularly in the French GPs of those years.

The first time I saw Dan drive was the 1963 Silverstone British GP where he ran second in the Brabham (to Jim Clark) until engine failure at three-quarter distance just where I was spectating.

I saw him drive at British GPs from 1963-68 and in '70. I also saw him drive the Shelby Cobra Coupe to third place (first GT) at the Goodwood TT in '64.

The highlight for me came at the



Reader Starling will remember this well: Gurney in full flight at Silverstone in 1963

1965 Brands Hatch Guards Trophy meeting where Dan was driving his newly acquired McLaren M1B. I found him in the paddock; he kindly autographed my programme and then encouraged his fellow drivers, with whom he was talking, to do the same. I came away with autographs of Graham Hill, Jim Clark, John Surtees, Bruce McLaren, Jackie Stewart and Denny Hulme — a day I will never forget!

Dan could drive anything, had a passion for the sport and safety and for being the first to do something different. He was a great racer, race engineer and car developer — his memory lives on — and I still have the 'Dan Gurney for President' bumper sticker!

Graham Starling
Crewe, Cheshire

Three easy steps...

F1's declared three areas to focus on is at best fatuous! Despite all the bull and bluster, it is possible to improve F1 in three simple changes:
1 adopt single-plane front wings;
2 adopt MotoGP engine rules;
3 do the two things above. This would result in penalty-free, and better, racing at almost no cost!

David Fidgeon
Byemail

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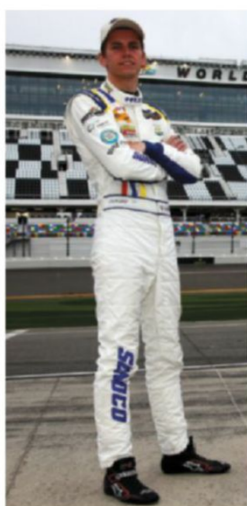
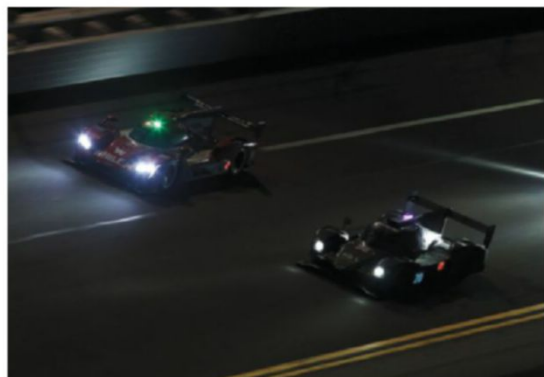
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Stuart Rolex 24



Sunoco Challenge Whelen winner Stuart Middleton set new Rolex 24 records

18-year old Stuart set new records becoming the youngest overall podium finisher of the 21st century, but he is also the highest placed Sunoco Whelen Challenge winner in the Rolex 24 At Daytona, breaking 2012 Sunoco Challenge winner Felipe Nasr's record! After some stunning drives, by the whole #31 Whelen team, Stuart shone and took the chequered flag in second place. It was an amazing effort from the Action Express team, who also took overall victory in front of a record-breaking crowd in the Rolex 24 for an emotional 1-2 finish. A massive thank you and congratulations to everyone in the team for all their support for making this possible.

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Sunoco 240 Challenge winner Rick Parfitt Jnr impressed at Daytona in the Audi R8 GT4

2018 Sunoco 240 Challenge winner Rick Parfitt Jnr shocked the BMW Endurance Challenge field with a stunning 4th place in qualifying, taking on and beating factory pro drivers. A superb drive in the race saw Rick battling at the front of a 50 plus grid throughout his stint and was running a solid 5th when a fuel miscalculation halted his progress. Never-the-less Rick impressed on his Daytona debut in the 4-hour Friday endurance race and performed flawlessly.



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THE FIGHT TO LEAD RED BULL'S TITLE CHARGE

**Max Verstappen may be the golden boy
at Red Bull, but Daniel Ricciardo still
believes he can beat the Dutch sensation**

**By Lawrence Barretto
F1 Correspondent**

🐦 @lawrobarretto





A season in which you finish fifth in the Formula 1 World Championship, behind four drivers in the two class-leading cars and ahead of your highly rated team-mate, is nothing to be sniffed at. But Daniel Ricciardo was left feeling disappointed, and a look beyond that statistic tells you why.

Consistency was the foundation of his 2016 season, when he finished third. That campaign was, in his words, his “best-ever” in F1, and he ended the year at number one in Autosport’s Top 50 Drivers list. But consistency deserted him last year in the face of the oncoming force that is Max Verstappen. Power in the team appeared to shift towards the Dutchman, particularly when Verstappen signed a new deal to stay at Red Bull.

There were high points for Ricciardo, such as his opportunistic victory in the Azerbaijan Grand Prix that came during a run of five podiums. He was delivering results that the Red Bull RB13 shouldn’t have been capable of on raw pace. But there were worrying lows, such as the qualifying session in Mexico where he had no idea why he was so slow. Throughout the year he struggled to master the new generation of F1 cars and the bigger, wider tyres.

It is true Ricciardo was not helped by some woeful engine reliability towards the end of the year, failing to finish three of the last four races, but team-mate Verstappen was worse off on balance after a string of failures earlier in the season.

“Last year it was a bit trickier to find the right formula,” Ricciardo tells Autosport during an interview in a temporary hospitality unit in Baku, overlooking the track on which he claimed his sole 2017 victory, as part of a visit to promote this year’s Azerbaijan Grand Prix. “I wouldn’t say I struggled with the car, but I found it tougher to maximise. I crashed twice in qualifying, which is very uncharacteristic. For whatever reason, Max didn’t find it as complicated to start the year.

“I’m quite sensitive to things and therefore in the past it’s been good for tyre management. I feel how the car behaved last year, I would probably be better off driving through something as opposed to being, ‘Oh, we need to change that or change that’.

“Maybe sometimes I’ll try to set up the car and try to fix it when it’s never really going to be fixed. Maybe sticking with one set-up for longer in the weekend and learning how to drive that set-up the best is the way forward. There were a few times we’ve got a little bit lost and changed too many things.

“It was a pretty big learning process last year. We didn’t catch into it as quickly as we could have. But I feel I’ve learned a bit as well. Sometimes just throw the book out the window and drive it. There are still some positives, looking ahead to this year. I don’t look ahead with any less confidence than I would have at the beginning of last year. I’m confident this year will be better. My Sundays last year were as good as »





Ricciardo took maiden Formula 1 pole position at Monaco in 2016; Malaysia 2016: Ricciardo held off hard-charging Verstappen; Verstappen and Ricciardo (here with Red Bull team manager Jonathan Wheatley) get equal treatment as part of squad's ethos



The pair clashed in Hungary last year, but the air was swiftly cleared by Verstappen's contrition and offer of a beer; unreliability pendulum swung in Ricciardo's disfavour at end of 2017 – this is Abu Dhabi

they've ever been for the most part. The racer in me is very confident and determined."

That confidence and determination will be crucial if Ricciardo is to find a way to stop Verstappen from wresting control at Red Bull and becoming F1's next new champion. Ricciardo may have scored more points than Verstappen in 2017 – 200 to 168 – but he will know that final points tallies don't always tell the full story. In '15, for example, he was beaten by team-mate Daniil Kvyat despite being the stronger driver over the year.

When both cars finished in 2017, Verstappen came out on top five times to two. In qualifying, Verstappen excelled and led the way 13-7 in the head-to-head. And in terms of race wins, Verstappen secured two to Ricciardo's one. Crucially, Verstappen also signed a long-term deal with Red Bull and appears to have the momentum within the team.

Ricciardo knows Verstappen is a formidable opponent. "Max is able to go out there and set a time straight away," says Ricciardo of his team-mate's one-lap pace. "He could set a pretty good benchmark off the cuff. That's down to natural ability more than any real understanding of the car; it's going out guns blazing."

Before teaming up with Verstappen at Red Bull early in 2016, Ricciardo had raced alongside four-time world champion Sebastian Vettel (whom he beat in the '14 drivers' standings, scoring three wins to Vettel's zero), Kvyat, Jean-Eric Vergne, Narain Karthikeyan and Vitantonio Liuzzi. Is Verstappen the toughest he has raced alongside? "Yes, I think so," he says. "I'm not saying I've had it easy in the past, but I think he's the first driver who can challenge me. In the past, if I've taken a high-speed corner flat-out for example, I've never had someone who can get there the same way. He would at least go out there and try it. He's been able to match stuff easier than some other guys have."

Ricciardo has full faith in his ability and knows that if he gets everything right, he can be unbeatable. But he is also conscious that even the slightest drop in performance will allow Verstappen to get ahead.

"In the final part of qualifying in Abu Dhabi last year, as soon as I crossed the line I knew that lap [for fourth on the grid, two places and nearly four tenths quicker than Verstappen] would not be beaten by Max," he says. "I knew I'd done all I could with that car on that day, so I had the confidence that I couldn't be beaten. So I know if I still

put it all together, I still believe I've got it.

"But I didn't put it together as many times as I would have liked last year. I know if I make a little mistake in the past... this is where I would say he's the better team-mate because maybe I could have ended up still ahead in qualifying. Now, if I make a mistake, he's in front. It's the same if he doesn't quite put a perfect lap together, I'm in front. We've both raised our game. We can't afford to put a wheel wrong because we're going to get beat."

Verstappen's end-of-season form was explosive. Free from the reliability problems that had plagued most of his season, he scored 100 points in the final six grands prix. That total, which included two race wins, was equalled by world champion Lewis Hamilton but matched by no other. In that same period, Ricciardo – who was stung by unreliability – scored just 38. Having comfortably outscored his team-mate in the first half of the year, Ricciardo found himself on the wrong side of a momentum shift come the end of it.

But he doesn't feel his younger team-mate now has the edge. "We both had an even amount of good races," he says. "The difference was his bad ones weren't as bad as my ones. I would say we both had 10 good races each comparative to each other, but his good ones probably had more weight over mine."

There is no doubt that Verstappen and Ricciardo are top-line drivers, among the best in F1 right now. Red Bull boss Christian Horner consistently said last season that they represented the best driver pairing in F1. While some may

feel threatened by having a strong driver on the other side of the garage, Ricciardo insists that having someone who can consistently keep you on your toes can work in your favour.

"I would say it's pushed me more than anything," he says of having a strong team-mate. "Sometimes, like in Budapest, there were a couple of races where I overdrove. I felt it was there and I tried to get too much out of it. But that's on me. I should know what the limit is and what I need to do to put the lap together. I really feel like having a strong team-mate for both of us, we can explore our limits more than if you have a guy you're beating easily every weekend."

"I don't want to direct this at [Jolyon] Palmer, but it's interesting in Nico Hulkenberg's situation at Renault with Carlos [Sainz] and to see how he adapts. I'm sure Carlos will push him more than he was pushed before. Nico might have felt he was driving at his top level, but I >>

"I'd done all I could, so I had the confidence I couldn't be beaten"



宇田川

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渋谷二丁目

山本周

久太郎

Red Bull Racing

ダニエル

think now he'll find a bit more."

Two team-mates operating at a high level can create a tricky situation for those running the team. Lewis Hamilton's and Nico Rosberg's fractious relationship at Mercedes is evidence of that. Sergio Perez and Esteban Ocon at Force India last season is another example. In both instances, the team-mates collided on track, on more than one occasion, creating unnecessary tension in the team and compromising strategy.

The Red Bull drivers collided only once last season, at the Hungaroring, when Verstappen locked up and ran into the side of Ricciardo's car into the tight Turn 2 left-hander on the opening lap. The damage led to Ricciardo spinning and retiring, while Verstappen was given a 10-second penalty and finished fifth. Ricciardo was furious. After the race, Verstappen apologised and offered a beer as a peace offering. Ricciardo respected Verstappen's reaction and admits that, while there may be more incidents like that and their relationship could change if they both fight for the title, he doesn't think it will break down to the extent that Mercedes witnessed with Hamilton and Rosberg.

"The hot water in Budapest, that was a bit of a test," he says. "Fortunately he handled it well and apologised and did what he had to. So I feel like there is that respect for each other. I feel like Max matured a lot, on and off the track. On track, he was more sensible. He was under a lot less scrutiny than he was in 2016. I feel like he also respects the competitors a bit more."

"I don't think it would ever get to a point like Lewis and Nico. I think that was a pretty special situation. It would

only get to that point if we lost respect for each other. The races he won last year, I acknowledged it, said he was a better driver on the weekend or the day, and that was that. If you're honest, acknowledge he did better and then find a way not to let it happen again. If things happened, we'd find a way to deal with it. But I'd still say it's a good problem to have. If there is a bit of friction, I'd rather that than be fighting for sixth and have no friction."

Red Bull operates a fair policy with its drivers. It doesn't subscribe to favouritism. But that was questioned by some when Horner said Verstappen could build the team around him as it tried to persuade him to stay. Verstappen's signature on a new long-term deal that commits him to Red Bull until the end of 2020 added weight to that argument.

But Ricciardo doesn't think that way. Does he feel he will have the support to win the title in 2018 if he has the car to do so? "I do," he says. "That's 100% honest. I didn't see it in the press but afterwards I found out about Christian's comment. It was because he came up to me and cleared it up. He said, 'Look, if you've seen the

comments, it's not out of context but I didn't want it to come across that way. I don't want you to think anything like that. We're fighting for both of you.' Max got the updated engine for the last few races, that was the only thing that has ever been different. But I don't have any concern with it. If I did, I would have spoken up about it already."

Ricciardo says he was not bothered by Red Bull's decision to prioritise extending Verstappen's contract, but he was

"Max will have got a pay rise, but he's too young to think just about money"

RICCIARDO v VERSTAPPEN AT RED BULL

RACES 37

DRIVER	WINS	PODIUMS	FINISHES AHEAD*	FASTEST LAPS	POLES	QUALIFYING HEAD-HEAD	POINTS
RICCIARDO	2	17	10	4	1	18	420
VERSTAPPEN	3	11	12	2	0	19	359

* Only counting races in which both finished





Malaysia 2016: celebrating the team's first one-two finish since the Brazilian GP three years earlier; Ricciardo is in no rush to decide his next move

surprised by the timing of the deal. "The timing was early," he says. "I thought, 'It's cool. He thinks the team is going to keep progressing.' I'm sure he'll have got a bit of a pay rise, but he's still too young to think just about the money. It's not just that. There are some performance things he believes in and he feels he's got the right team around him."

Whether Ricciardo and Verstappen will be in the hunt for the drivers' title will, of course, hinge on the car Red Bull gives them. The change in the aerodynamic regulations for 2017 had been expected to favour a team of Red Bull's prowess. It had

been tipped to provide a genuine threat to Mercedes and Ferrari, but a championship challenge failed to materialise.

Problems with its correlation tools left Red Bull well off the pace at the start of the season. The team found a solution, and its relentless rate of development meant it had a car capable of winning races on merit by the end of the year. But by then its championship hopes were over. Throughout the year, an unpredictable Renault power unit remained its Achilles' heel.

From a chassis point of view, Ricciardo is hopeful that Red Bull has done its part by learning from its mistakes so that >>



若い挑戦者→若き



THE MAN BLOCKING RICCIARDO'S PATH

RED BULL BOSS CHRISTIAN HORNER says one of the reasons he believes Max Verstappen and Daniel Ricciardo form the best line-up in Formula 1 is that they both have a high level of respect for each other. Both appear to recognise the other's ability and, so far, have been willing to admit when they have made a mistake or the other has done a better job.

Ricciardo says Verstappen is the strongest team-mate he has had in his career, better than four-time

world champion Sebastian Vettel, and Verstappen reciprocates. "Yes, I think [he is the strongest team-mate I've had in my career]," says Verstappen. "He has a lot of experience in F1 and he has already settled down a bit.

"He also has a lot of experience in racing in general, because of all the things he did before he came into F1. So in the beginning it was a bit difficult for me. But in terms of speed we've always been close to each other, especially in the

races. And actually things have only become better compared to him."

Verstappen has upped his game across the board. His racecraft was strong last year, the way he dealt with the relentless unreliability problems was remarkable and he made a breakthrough with his qualifying form.

Having been outshone by Ricciardo on one-lap pace in 2016, that last feat was perhaps the most impressive. Ricciardo has been renowned for his speed, so to reverse the trend and beat

his team-mate 13-7 in qualifying in '17 is a real statement. Verstappen puts his gains down to experience.

"I have always been able to beat my team-mate," he says. "It may not show in the points standings, but in general I've always been ahead. In qualifying we obviously did very well last year. I personally think that it's because I gained more experience compared to [the previous] year, that it was just a bit more difficult for him to get close to me."

挑戰者

YOUNG CHALLENGER



it can start this campaign strong from the off. “Last year the direction they thought was going to be the right way wasn’t,” he says. “All the development was going towards this kind of aero configuration and that wasn’t the way to go.

“We saw in testing our car looked very basic. Looks aren’t everything, but it shows that the performance wasn’t there. We started in the wrong direction and that spiralled for the first few races and then we brought it back. We just started off on the wrong foot. But the rate of development has been amazing, so I’m hoping if we can start on the right foot in 2018, you would argue we would be the favourites – if we started with Mercedes and Ferrari, our development is pretty strong.”

A lot will depend on the engine gains made by Renault this year, something Red Bull can do very little about. The French manufacturer said midway through last year that further power-unit developments would be limited as the focus was on 2018. Now it must deliver. And so must Red Bull.

Ricciardo’s contract expires at the end of the season, making him one of the most sought-after drivers for 2019, and he knows Verstappen’s early commitment to Red Bull could play in his favour: “It gives me some confidence and it also takes one guy off the market. I’ll be real. I’m sure the both of us... maybe there are a couple of others... both of us are up there in terms of desire, who wants who. By him committing to Red Bull, it gives me one less competitor.”

The Australian says he is in no rush to decide his next move and is sensibly waiting to see how Red Bull performs this season before committing. In 2019 there will be opportunities at all teams on the grid barring Williams and, at 28, he knows that his next move will be crucial. “I’ve still got years in this sport, but I’m not 23/24 anymore,” he says. “I’m still learning. I don’t feel I’m past my peak.

“The next contract I sign or next extension I do, they are potentially the peak years of my career. That next bit of paper I sign could make or break my desire in terms of whether I can fight for a title or not. That’s why I’m taking my time, I want to see where everyone is at. Maybe I’ll have more options, maybe I won’t. I doubt I’ll sign a one-year deal somewhere, it’s probably going to be a multiple-year deal, so I need to make sure it’s the right place, competitively.”

For now the focus is on 2018 and making a good start at the opening round in Australia. Red Bull traditionally leaves the launch of its car as late as possible to maximise development time, but Horner said late last year that bringing forward the introduction of this year’s car by just five days will be enough to help it attack from the first race.

If that proves to be the case and the team avoids the sluggish start that has characterised its recent seasons, Ricciardo and Verstappen could find themselves thrust into the title battle.

Ricciardo believes in his ability to lead that charge at Red Bull and beat Verstappen. Does Verstappen have any weaknesses he can exploit to help that bid? “I think there is one, but I’ll keep it to myself!” ❄

Verstappen speaks with a confidence in his ability that is backed up by statistics. His rate of progression is remarkable. So impressive were his performances at Toro Rosso as a rookie that he was promoted by Red Bull after just 23 races, having raced only one season in single-seaters prior to F1.

Four-time world champion Lewis Hamilton has already marked him out alongside Vettel and double world title winner Fernando Alonso as the three rivals he felt were operating at a

similar level to him.

“It’s all good for Max,” says Verstappen’s father Jos. “Max’s name has grown so much. They all know he will be there all the time and that’s good. And he will get better and better. It’s all about experience.

“He definitely doesn’t know everything yet, so that’s why he will get better. His time will come, I’m 100% sure.” If Verstappen’s father is right, Ricciardo, Hamilton and co will need to be at their very best to stop him.

Verstappen is rated highly by Hamilton



Cadillac claims old-school Daytona triumph

In a race of high attrition, Action Express's two cars limped home to claim a one-two in an event that was unusually light on safety cars

By Gary Watkins, Special Contributor

🐦 @gazzasportscars







The best-ever entry for the Daytona 24 Hours, said some. A race that 15 of the 20 cars in the top class could win, reckoned others. Such statements held validity, but last weekend's 2018 IMSA SportsCar Championship opener turned into an old-school enduro, quite untypical of the kind of race the Florida classic has thrown up year after year for the past decade.

There was no sprint to the chequered flag from a late-race safety car. Rather, the winning Action Express Racing Cadillac DPi-V.R shared by Filipe Albuquerque, Joao Barbosa and Christian Fittipaldi limped across the line with an ailing engine that the team feared might go pop at any moment.

But the race did provide a close finish. Albuquerque crossed the line with just over a minute in hand over the second of the Action Express cars, which was a regular leader in the hands of Felipe Nasr, Eric Curran, Mike Conway and

Stuart Middleton. It was only another 20 seconds up on the third-placed CORE Autosport ORECA-Gibson 07 driven by Colin Braun, Jon Bennett, Loic Duval and Romain Dumas.

It was close because the handy three-lap lead the Portuguese-speaking trio enjoyed as late as the 22nd hour was slowly eroded as they nursed home their overheating V8. Had they maintained that advantage it would have been the first edition of the race since 2008 to have been decided by a margin greater than one lap.

The absence of a safety-car-induced dash to the finish and a clear lead for the winner at lunchtime on Sunday might have suggested that this wasn't a classic Daytona, but that would be wrong. It was the relentless pace of a race interrupted by just four safety cars that made it look decidedly old-fashioned at the end. The intensity of the battle took its toll on the Daytona Prototype International and LMP2 machinery battling it out at the front of a race in which the Daytona distance record, dating back to 1982 and the days before the Bus Stop chicane on the back straight, was finally broken.



Second Action Express Cadillac had problems, like its sister car, on way to runner-up spot

The 56th running of the race was a thriller for the better part of two thirds of its duration. It turned into a Cadillac-versus-Acura — or Action Express-versus-Penske — battle that grew in intensity through the night until the challenge of the sportscar returnees faded on Sunday morning.

There wasn't a lot to choose between Action Express's Dallara-based Cadillacs and Penske's new Acura ARX-05s, based on the ORECA LMP2 chassis. The



Pole-winning WTR car led at the start, but retired after spate of punctures

Cadillac, however, was probably the most consistent package despite a Balance of Performance change in the run-up to the race that robbed the DPi-V.R of straightline speed.

“They were faster at the beginning of a stint,” reckoned Barbosa, who chalked up a third Daytona victory together with Action Express. “We were better over a long run, but it would have been a great end to the race if we had both run through without problems.”

That didn’t happen. Penske’s challenge started to unravel in the 14th hour when the #6 Acura shared by Juan Pablo Montoya, Dane Cameron and Simon Pagenaud was afflicted by an electrical glitch. The team, back in sportscar racing for the first time since its one-off Grand-Am campaign in 2007, solved the problem by changing the alternator, but lost 24 laps in the process.

The #7 sister car of Helio Castroneves, Ricky Taylor and Graham Rahal went deeper into the race. It was very much in the hunt until the 16th hour when Castroneves sustained significant body damage in an incident at the »

GTLM

THE CYNICS RECKONED THAT THE SIGHT OF two Ganassi Fords running around at the head of the GT Le Mans class provided confirmation that the American manufacturer was playing with its rivals last weekend. The Ford GT did have a significant advantage in the 24 Hours, but Ganassi never invoked any kind of team orders to prevent its crews racing.

The reason that the class-winning #67 Ganassi entry shared by Richard Westbrook, Ryan Briscoe and Scott Dixon appeared to be somehow glued to the tail of the other car was that it had the narrowest of advantages. Enough for it to catch up whenever it lost time — as it frequently did in the pits, particularly in the early stages of the race — but not enough for it to make an overtake with any kind of ease.

Westbrook had twice passed Sebastien Bourdais (who was sharing with Dirk Muller and Joey Hand) in the night only for the car to drop back to second. It wasn’t looking good for the Brit and his team-mates as the race was drawing to a close. But the #67’s crew got creative and short-fuelled the car when Westbrook got in with just over two hours to go. The #66 squad mirrored that strategy, but Westbrook had enjoyed two laps in clear air and was able to get ahead on the undercut as Hand climbed aboard.

The #66 crew tried to reverse the situation by putting less fuel in at the next stops, but couldn’t get out ahead. That meant the #67 needed less fuel at its final stop, allowing Briscoe to complete an 11-second victory.

“I reckon we had a slight edge on the sister

car, maybe a tenth or so,” reckoned Westbrook. “But when you are racing the same car around here, it’s very difficult to pass. We had to try something different and it worked.”

The sizeable advantage of the Ford and the much smaller one enjoyed by the #67 was apparent early in the race. Westbrook made his first pitstop early with a loose wheel, but was quickly able to scoot through the GTLM field and make it back to second position.

Corvette Racing led the chase of the Fords, but knew it didn’t have the pace to challenge them. The Chevrolet Corvette C7.R shared by Jan Magnussen, Antonio Garcia and Mike Rockenfeller finished third, two laps down on the Fords. It had fallen off the lead lap when it underwent an early change of brakes, briefly got back on the same lap as the Fords, and then fell back again when it needed more new fronts in the closing stages.

“We just didn’t have the pace of the Fords,” reckoned Garcia. “Our only hope was that there would be more yellows or rain at the end so we could play around with strategy.”

The sister Corvette, shared by Oliver Gavin, Tommy Milner and Marcel Fassler, ended up fourth, a further lap in arrears, after having to undertake a full brake service while running under green-flag conditions.

The Risi Competizione Ferrari squad showed flashes of speed, at least over one lap, but ended up a distant fifth. Its 488 GTE shared by Toni Vilander, James Calado, Alessandro Pier Guidi and Davide Rigon had an engine problem that cost it power for a short period early on, and it then sustained three tyre failures.



Flawless run proved
to be the key to
Grasser's GTD success



LAT IMAGES

GALSTAD/LAT

GTD

LAMBORGHINI CLAIMED A MAIDEN 24-hour race victory with the Huracan GT3 at the front of a closely fought GT Daytona battle. The Grasser Huracan shared by factory driver Mirko Bortolotti, Franck Perera, Rolf Ineichen and Rik Breukers came out on top in a four-way scrap to the flag.

The Lambo wasn't the quickest car, Bortolotti explained, but it was consistent, and he reckoned that was the key for a car that had started from the back after failing its stall test at post-qualifying scrutineering.

"I don't think we were necessarily the fastest, but I did come back from P21 to

P6 in the opening stint, so we certainly had some speed," he said. "We won because we made no mistakes and had a great strategy. We pushed hard but we never got into trouble."

It looked as though it was going to be a close-run thing at the end for the Lamborghini. Jeroen Bleekemolen

came back at Bortolotti in the Riley Motorsports-run Mercedes-AMG GT3, latching onto his tail with just minutes to go. The German car co-driven by Adam Christodoulou, Luca Stolz and Ben Keating was never going to win the race, however, since the team knew it would need a quick splash of fuel.

Riley had compromised its race six hours earlier when a tranche of North American Endurance Cup points was up for grabs on the 18-hour mark. The safety car was out, but the team opted to keep the car on track when its rivals pitted in order to move to the front of the class leaderboard.

"We didn't think we had a car to win at that stage, so it made sense to go for the points," explained team boss Bill Riley. "When we realised we did have the speed, we didn't have the safety car we needed to get us back in the game strategically."

The late stop for the Mercedes dropped it to fourth behind the best of the Michael Shank Acura NSX GT3s shared by AJ Allmendinger, Alvaro Parente, Katherine Legge and Trent Hindman, and the Paul Miller Racing Lambo of Andrea Caldarelli, Bryan Sellers, Bryce Miller and Madison Snow.



Prioritising North
American Endurance Cup
points cost Riley Merc

GALSTAD/LAT



New Penske Acuras were contenders for win until dramas hit

GAUSTAD/LAT

“All of the alarms were lighting up the steering wheel like a Christmas tree”

first infield hairpin as the race went green after the penultimate safety car. Nasr had been tagged by another prototype and spun towards the inside. That was the way Castroneves opted to go as he tried to avoid the spinning Nasr, but the Acura came out of the incident much worse than the Cadillac, and a total of 22 laps were lost to repairs. The Penske cars would end up in ninth and 10th positions, #7 just ahead of #6.

Action Express looked home and dry, but there was a twist. An overheating problem for the Barbosa/Albuquerque/Fittipaldi car resulted in it being brought into the garage during the third safety car to charge its water system. Little time was lost, but the problem wasn't resolved and continued to get worse through the final third of the race.

“All the alarms were lighting up the steering wheel like a Christmas tree,” said Albuquerque, who was at the wheel for the final stint. “It was difficult to keep the temperatures under control whenever I had to push. I was ready for the engine to shut down at any point.”

Or fail to start. The team began shutting down its engine during pitstops and it didn't want to go again the final

time. The mechanics were just starting to push the car when it fired up to allow Albuquerque to complete the victory.

The sister machine came back at the leader after losing time when Action Express decided to recharge its water system. The problem for Nasr and his team-mates was that the procedure had to take place under green-flag running, took much longer than expected, and dropped them three laps back.

It also wasn't plain sailing for the second-placed car at the finish. It too had a temperature problem, though not as severe as on the leading car, and the team also had to put reigning British GT4 champion Middleton back in the car after he'd fallen short of the required two hours by a handful of seconds. The 18-year old, who earned his place in the car courtesy of his victory in the Sunoco Whelen Challenge, had belied his lack of experience during an early triple stint in the car and did so again when the pressure was on at the end.

CORE had an impressive race on the debut of its new ORECA. The car ran faultlessly, the only unscheduled pitstop resulting from a flat-spotted tyre. The car came from a long way behind to



CORE's new ORECA ran without issue; a flat-spotted tyre caused the team's only unscheduled stop

LEPAGE/LAT

finish on the lead lap — it was six laps down after 52-year-old team owner Bennett, a competent amateur, got out of the car for the final time shortly after the halfway mark.

CORE had signed up for the Trueman Award, which recognises the achievements of amateur drivers and offers the end-of-season winner a guaranteed entry for the Le Mans 24 Hours the following year. The rules dictate that the amateur has to complete five hours at Daytona, rather than the regular two. But for that, the team might have taken an unlikely victory.

The team owed its position on the podium to the high rate of attrition last weekend. The other two Cadillacs both retired: the Spirit of Daytona entry went out after eight hours when a misfire could not be cured, while last year's »



winner Wayne Taylor Racing endured a fraught race in which its car hit a string of tyre problems.

Team boss Wayne Taylor wasn't even sure how many right-rear tyre failures his car had sustained, suspecting it might have been as many as eight. "All I know is that we've gone through three sets of bodywork repairing the damage," he said, explaining that he felt he had no choice but to withdraw the pole-winning car shared by son Jordan, Renger van der Zande and Ryan Hunter-Reay.

The right-rear tyre takes some heavy loads up on the Daytona banking. The majority of WTR's issues were blowouts, though tyre supplier Continental identified two as debris-related punctures. The team was at a loss to explain its problems, insisting that it was running within the set-up parameters laid down by Continental.

The Extreme Speed Motorsports squad, winner of last year's IMSA finale at Petit Le Mans, showed pace with its Ligier-based Onroak Nissan DPis but didn't have the reliability to notch up a repeat result. Its involvement in the race was over early in the 13th hour after gearbox and engine failures.

Mazda, now working with multiple Le Mans winner Joest Racing, went deeper into the event, though it only showed flashes of the form it needs to turn around an underachieving programme. A gear-selection glitch on the grid for Jonathan Bomarito in the #55 RT24-P set the tone for the race. Both cars suffered many problems, including power-steering, intercooler and transmission issues, as well as tyre blowouts, before the #55 car went out with an exhaust fire. With little to gain, the team opted to withdraw

First competitive sportscar outing for Alonso wasn't a success, but was free of engine failures

the delayed sister car.

It wasn't all bad, reckoned prototype returnee Harry Tincknell. "The programme is late and we were never confident going into a 24-hour race," he said. "But there were times that we were the quickest car out there and this isn't our best track."

The same could be said about the United Autosports Ligier-Gibson JSP217s. The Anglo-American team wasn't confident that it was going to have a competitive proposition to give to Fernando Alonso and its other big-name drivers, but it ended up leading the race on four occasions with one car and was unlucky not to make the podium with the other.

The entry Alonso shared with Lando Norris and Phil Hanson on his competitive sportscar debut was in the mix and running fifth when a puncture and bodywork repairs in the eighth hour dropped it three laps off the lead. It did make it back into the top six, before brake and then throttle issues left the car 90 laps down at the finish.

The sister car, which also led, looked good for third in the hands of Paul di Resta, Bruno Senna, Will Owen and Hugo de Sadeleer until it encountered clutch problems in the 19th hour. It still finished fourth, just ahead of the best of the Jota-run Jackie Chan DCR ORECA's shared by Alex Brundle, Ho-Pin Tung, Antonio Felix da Costa and Ferdinand Habsburg, which was delayed by the tyre issues that caused so many teams problems last weekend.

The United drivers had to jam the car in gear as it was pushed by the mechanics to get out of the pits, which harked back to days past at Daytona. It most definitely turned into an old-school event at the end. 🏆



RESULTS DAYTONA 24 HOURS (USA), IMSA SPORTSCAR ROUND 1/12, JANUARY 27-28, (808 LAPS – 2876.48 MILES)

POS	DRIVER	TEAM	CAR	CLASS	RESULTS	GRID
1	FilipeAlbuquerque/JoaoBarbosa/ChristianFittipaldi	ActionExpressRacing	CadillacDPI-V.R	P	24h01m32.128s	3
2	FelipeNasr/EricCurran/MikeConway/StuartMiddleton	ActionExpressRacing	CadillacDPI-V.R	P	+1m10.544s	7
3	ColinBraun/RomainDumas/LoicDuval/JonBennett	COREAutosport	ORECA-Gibson07	P	+1m31.982s	8
4	BrunoSenna/WillOwen/HugoDeSadeleer/PauldiResta	UnitedAutosports	Ligier-GibsonJSP217	P	-4laps	15
5	AlexBrundle/Ho-PinTung/FerdinandHabsburg/AntonioFelixdaCosta	JackieChanDCRJota	ORECA-Gibson07	P	-4laps	11
6	SimonTrummer/RobertAlon/DevlinDeFrancesco/AustinCindric	JDC-MillerMotorsports	ORECA-Gibson07	P	-10laps	12
7	StephenSimpson/ChrisMiller/MishaGoikhberg/GustavoMenezes	JDC-MillerMotorsports	ORECA-Gibson07	P	-10laps	14
8	PatoO'Ward/JamesFrench/KyleMasson/JoelMiller	PerformanceTechMotorsports	ORECA-Gibson07	P	-12laps	4
9	HelioCastroneves/RickyTaylor/GrahamRahal	AcuraTeamPenske	AcuraARX-05	P	-15laps	2
10	DaneCameron/JuanPabloMontoya/SimonPagenaud	AcuraTeamPenske	AcuraARX-05	P	-15laps	10
11	RichardWestbrook/RyanBriscoe/ScottDixon	FordChipGanassiRacing	FordGT	GTL	-25laps	25
12	JoeyHand/DirkMuller/SebastienBourdais	FordChipGanassiRacing	FordGT	GTL	-25laps	22
13	JanMagnussen/AntonioGarcia/MikeRockenfeller	CorvetteRacing(Pratt&Miller)	ChevroletCorvetteC7.R	GTL	-27laps	21
14	OliverGavin/TommyMilner/MarcelFassler	CorvetteRacing(Pratt&Miller)	ChevroletCorvetteC7.R	GTL	-28laps	26
15	RobinFrijns/LanceStroll/FelixRosenqvist/DanielJuncadella	JackieChanDCRJota	ORECA-Gibson07	P	-31laps	6
16	ToniVilander/AlessandroPierGuidi/JamesCalado/DavideRigon	RisiCompetizione	Ferrari488GTE	GTL	-34laps	27
17	LaurensVanthoor/EarlBamber/GianmariaBruni	PorscheGTTeam(CORE)	Porsche911RSR	GTL	-34laps	23
18	JohnEdwards/JesseKrohn/NickyCatsburg/AugustoFarfus	BMWTeamRLL	BMW M8 GTE	GTL	-35laps	29
19	GustavoYacaman/SebastianSaavedra/RobertoGonzalez/NickBoulle	AFS/PR1 MathiasenMotorsports	Ligier-GibsonJSP217	P	-37laps	16
20	PatrickPilet/NickTandy/FredericMakowiecki	PorscheGTTeam(CORE)	Porsche911RSR	GTL	-55laps	24
21	MirkoBortolotti/RolfIneichen/FranckPerera/RikBreukers	GRTGrasserRacingTeam	LamborghiniHuracanGT3	GTD	-56laps	50
22	AlvaroParente/KatherineLegge/TrentHindman/AJAllmendinger	MichaelShankRacing	AcuraNSXGT3	GTD	-57laps	35
23	BryceMiller/BryanSellers/MadisonSnow/AndreaCaldarelli	PaulMillerRacing	LamborghiniHuracanGT3	GTD	-57laps	44
24	BenKeating/JeroenBleekemolen/AdamChristodoulou/LucaStolz	RileyMotorsports	Mercedes-AMG GT3	GTD	-57laps	41
25	SamBird/BillSweedler/TownsendBell/FrankieMontecalvo	ScuderiaCorsa	Ferrari488GT3	GTD	-57laps	42
26	AndyLally/JohnPotter/AndrewDavis/MarkusWinkelhock	MagnusRacing	AudiR8LMS	GTD	-58laps	39
27	Sheldonvan derLinde/Kelvinvan derLinde/JeffreySchmidt/ChristopherMies	Land-Motorsport	AudiR8LMS	GTD	-59laps	36
28	KennyHabul/ThomasJager/MaroEngel/MikaelGrenier	SunEnergy1Racing	Mercedes-AMG GT3	GTD	-63laps	46
29	JackHawksworth/DavidHeinemeierHansson/ScottPruett/DominikFarnbacher	3GTRacing	LexusRCFGT3	GTD	-64laps	32
30	AlessandroBalzan/CooperMacNeil/GunnarJeannette/JeffSegal	ScuderiaCorsa	Ferrari488GT3	GTD	-64laps	33
31	ComeLedogar/JustinMarks/LawsonAschenbach/MarioFarnbacher	MichaelShankRacing	AcuraNSXGT3	GTD	-67laps	45
32	JuanPerez/KentonKoch/RobbyFoley/LorisSpinelli	P1Motorsports	Mercedes-AMG GT3	GTD	-67laps	49
33	ChristophLenz/MaxvanSplunteren/EzequielPerezCompanc/ChristianEngelhart/LouisMachiels	GRTGrasserRacingTeam	LamborghiniHuracanGT3	GTD	-69laps	47
34	CameronLawrence/JensKlingmann/MartinTomczyk/MarkKvamme/DonYount	TurnerMotorsport	BMW M6 GT3	GTD	-75laps	38
35	AlexanderSims/ConnordePhillippi/BillAuberlen/PhilippEng	BMWTeamRLL	BMW M8 GTE	GTL	-77laps	28
36	DominikBaumann/KyleMarcelli/PhilippFrommenwiler/BrunoJunqueira	3GTRacing	LexusRCFGT3	GTD	-89laps	34
37	RyanEversley/ChadGilsinger/SeanRayhall/JohnFalb	HART	AcuraNSXGT3	GTD	-89laps	43
38	FernandoAlonso/PhilHanson/LandoNorris	UnitedAutosports	Ligier-GibsonJSP217	P	-90laps	13
39	MiguelMolina/RicardoPerezdeLara/MartinFuentes/SantiagoCreel/MattGriffin	RisiCompetizione	Ferrari488GT3	GTD	-93laps	31
40	TimPappas/PatrickLindsey/JorgBergmeister/NorbertSiedler	ParkPlaceMotorsports	Porsche911GT3-R	GTD	-133laps	48
41	RobertRenauer/PatrickLong/ChristinaNielsen/MathieuJaminet	WrightMotorsports	Porsche911GT3-R	GTD	-142laps	37
42	AlexPopow/MarcDrumwright/EricLux/BrendanGaughan	BAR1Motorsports	Riley-GibsonMk30	P	-166laps	17
43	SvenMuller/SteveSmith/RandyWalls/HariProcyk/MatteoCairol	MantheyRacing	Porsche911GT3-R	GTD	637laps-throttle	40
44	DanielSerra/PaulDallaLana/PedroLamy/MathiasLauda	SpiritofRace	Ferrari488GT3	GTD	571laps-accident	30
45	RengervanderZande/JordanTaylor/RyanHunter-Reay	WayneTaylorRacing	CadillacDPI-V.R	P	555laps-tyres	1
46	JonathanBomarito/HarryTinncknell/SpencerPigot	MazdaTeamJoest	MazdaRT24-P	P	541laps-fire	9
47	OliverJarvis/TristanNunez/ReneRast	MazdaTeamJoest	MazdaRT24-P	P	530laps-withdrawn	19
48	NicolasLapierre/JohannesvanOverbeek/PipoDerani	ExtremeSpeedMotorsports	NissanOnroakDPi	P	438laps-engine/fire	18
49	RyanDalziel/ScottSharp/OlivierPla	ExtremeSpeedMotorsports	NissanOnroakDPi	P	338laps-gearbox	20
50	TristanVautier/MattMcMurry/EddieCheeverIII	SpiritofDaytonaRacing	CadillacDPI-V.R	P	291laps-misfire	5

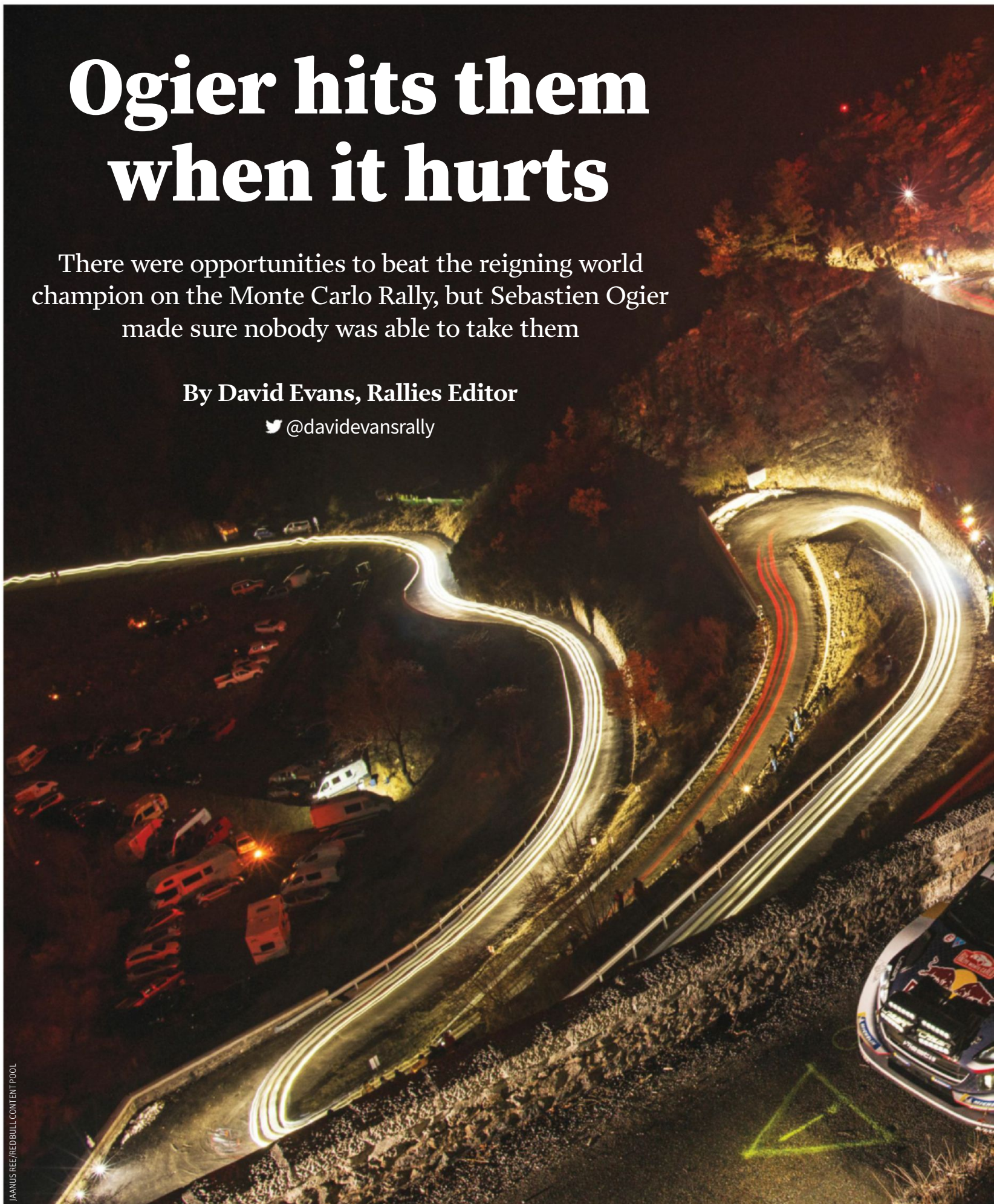
Winners' average speed 119.726mph. **Fastest lap** Nasr 1m37.475s, 131.473mph. **GTL** Calado 1m44.008s, 123.215mph. **GTD** Serra 1m47.663s, 119.032mph. In each car, first-named driver started race.

Ogier hits them when it hurts

There were opportunities to beat the reigning world champion on the Monte Carlo Rally, but Sebastien Ogier made sure nobody was able to take them

By David Evans, Rallies Editor

🐦 @daviddevansrally



JANUS REE/REDBULL CONTENT POOL





High above the village of Aithon, the fireworks lighting up a cloudless night sky were reflected beautifully in

the pure ice topping a series of Sisteron switchbacks. The sense of anticipation for the opening stage of the 2018 World Rally Championship was quite extraordinary. And almost too much for the spectator dressed as a pink rabbit.

Sebastien Ogier's Ford Fiesta WRC was first in, and fever levels went through the roof as the noise of nigh on 400bhp constantly being leashed and unleashed bounced around the valley. When it finally came into view, it was incongruous to say the least. Here was a half-million-pound World Rally Car, quivering with pent-up aggression, tiptoeing its way down the road at what looked to be little more than walking speed. The man in pink let out the sort of noise rarely, if ever, made by a rabbit.

Two minutes later it was all happening again. But Thierry Neuville's Hyundai was carrying more speed, albeit only a handful of miles per hour, more of a jog than a brisk walk. Keeping to the inside of the right-hander, he snatched the



handbrake in an effort to rotate the car and open the apex slightly. Instead the i20 Coupe WRC slewed towards the outside and a small snowbank.

Neuville's response was both instantaneous and fruitless. Power! But to no avail: his four Michelins fought a losing battle with physics and chemistry, shattering the serenity of the night. Slicks on ice. Forget it.

Pink rabbit man to the rescue: quicker than Neuville into the corner, he slipped and slid into the side of the car and then, along with as many mates as he could muster, started heaving. Four minutes

Ott Tanak led the fight against Ogier (top), but finished nearly a minute down

later Thierry was on his way again, Monte hopes shattered for another year. He wasn't the only high-profile casualty of these famously treacherous turns, but he paid the highest price.

One chance to topple the master had passed. Two more would come. Two more would go. Last year in Monte Carlo, Ogier looked vulnerable. Is that an exaggeration? OK, he looked vaguely beatable. This year, Ott Tanak came close but, when the weather closed in and a window of opportunity flew open, it was Ogier who slammed it shut. And he did so with a Saturday morning run through



MCKLEIN

“You have to drive like a grandma, stay calm and wait for the end of the stage”

the snow equally as masterful as he'd been on the opener 36 hours earlier.

Ogier wasn't perfect, though. He'd half-spun in Sisteron but, in conditions that looked like a snow scene on a Christmas card on the road from Agnieres en Devoluy to Corps, he was superb. Granted, since he was running as the last but one World Rally Car, the road was cleaner for him than for his rivals (a superallying Andreas Mikkelsen was behind him and went even quicker), but still the consistency of speed and accuracy of approach were second to none. He went into that stage 14.9s up on Tanak and came out 1m18.4s to the good.

As the drivers lined up for service soon after, there was a debrief. Jumping into Autosport's interview with Tanak, the world champion came up with a far more pertinent question: “Did you spin?” Tanak nodded, looking nonplussed.

“Where? There were so many marks from so many spins!”

Ogier was quick to admit that the

conditions were shocking, even for a driver of his gifts. “It was horrible,” he said. “You are so happy to cross the finish line when it's like this, but you never know how is the time. You could easily have lost a minute or won a minute. We won a minute, but it felt super-slow. It's the same as with Sisteron – you have to drive like a grandma, stay calm and wait for the end of the stage.”

Looking again at the minute-plus gap to Tanak's time, Ogier ventured: “I guess Ott lost the rhythm. Because we have no split times, sometimes you can get in the wrong rhythm and you can lose more. I think that's what happened to him. If you have the split, you don't really get the gap like one minute; it can usually be closer – or you crash!”

Upon learning of Ogier's theory, Tanak – on his first outing with Toyota – considered it before shooting it down: “We had a damper problem. That's where the time went. The car was too stiff and we had no grip.” ➤

A DOUBLE YOU'LL NEVER REPEAT

FIFTY YEARS ON, IT'S NOT POSSIBLE. FIVE decades ago Vic Elford won the Monte Carlo Rally, jumped on a plane, flew the Atlantic and won the Daytona 24 Hours.

Had Sebastien Ogier or anybody had a similar plan, the Monte's decision to move back a week would have scuppered it. The season's first marquee day-long race ran last weekend and it was perhaps fitting to see another megastar of world motorsport – Fernando Alonso – stepping outside his comfort zone Stateside.

Even if Alonso had won, it still wouldn't have rivalled what ‘Quick Vic’ managed in 1968. Back-to-back wins at such hugely different events and in such vastly different cars as the Porsche 911 and 907 is mindboggling these days.

In a year when the crews raced downhill in the famous Sisteron stage for the first time, it's worth revisiting the reason Elford reckoned he won the 1968 Monte.

“Two things helped me win,” he said. “The first of those was the implicit trust my co-driver David Stone and I developed in each other. We developed pacenotes that were head and shoulders above everybody else's; David knew that if I crashed, I was taking him with me!”

“The other thing that won me the Monte was an extraordinary ability to go quicker than anybody else downhill. Anybody can go quickly uphill, but it takes real balls to go down the other side. I developed this on the 1967 Tulip Rally, when we did two runs down the Ballon d'Alsace. At that time, this section was an absolute gift for the Minis – I beat Timo Makinen by a second and everybody else by a long way.”

His Monte win remains the last British success in the French Alps, a stat that still baffles him almost as much as what he did a week later still baffles the rest of the world.

MCKLEIN



As if to demonstrate that, he hit back immediately on the following stage – the one that pretty much runs past the Ogier family’s back door – and took 15s out of the leader. “That wasn’t so good for the local guy,” said Ogier ruefully.

Indeed Ogier wouldn’t beat Tanak again for the rest of Saturday, but he still arrived in Monaco with 33.5s in hand. Had he been managing the gap?

“The plan was to have half a minute in hand before the final day,” said Ogier with a smile. “I’m pretty happy with that. To be honest, I haven’t felt well for the whole rally. I had some flu thing that made it hard to sleep, and then when I was in the stage my eyes were crying a little bit – the adrenalin has been getting me through, but it’s not perfect.”

He would also have to contend with a Toyota attack in the final day. Jari-Matti Latvala was third, a minute down on Tanak, and Esapekka Lappi had been running fourth for much of the event. Lappi momentarily slipped behind Citroen’s Kris Meeke, but would be back in position after the first Sunday stage.

Tanak was primed for a big attack over Col de Turini and Col de Braus. If he dropped it, it wouldn’t be a nightmare: Toyota would still bag big points for second and third. So, what did team boss Tommi Makinen tell Tanak as he headed north from the Monaco harbourside?

“I remember when I was driving on this event,” said Makinen, “it made it more complicated if you were being told how to drive or what to do. We don’t need to tell these guys.”

Happy that he’d got that message across, Tommi added: “But I did say, since I won this rally four times, I think the winner has always been called Seb – so I told them it would be nice to see another name. Ott might be nice...”

Sunday morning dawned and delivered opportunity number three. Despite the heavy snow earlier in the week in the Hautes-Alpes, the thinking was that the more southerly Alpes-Maritimes would be free from snow. Yes, Turini peaked at more than 1600 metres, the rally’s high point, but you could pretty much see the



Mediterranean from there. Sunday would be about sunshine, not snow.

As the crews arrived in the tyre-fitting zone alongside the world’s most famous start-finish straight, word started to come through. The far side of Turini was a shocker. Patches of ice, bits of snow, but a whole load of frostiness.

Citroen’s Craig Breen and Neuville were the first to depart and looked comfortable with a mixture of soft and supersoft tyres. Then people started talking studs. The word began to spread and, almost to a man, the remaining drivers went back to their phones to quiz their ice-note crews again.

Tanak presses on in the slush to second on his debut for Toyota

Softs came out, softs went back. Studs were in, studs were out.

“We’re changing our mind every other minute right now,” said Meeke’s co-driver Paul Nagle. In the end, they crossed slicks and studs.

Ogier was in the box seat. He watched what everybody else took and then had two minutes to make his mind up before he was due out. He followed Tanak down the crossed-rubber route, ruining any hopes the Estonian might have had of gambling and winning big.

As the route crested the Turini and dived back down into the shade, the temperature dropped and the moments began. Again, at the key point, Ogier worked his magic and went fastest.

“The others can push if they want,” said Tanak. “I’m not.”

The gap had rocketed to 45s, sealing the deal in Ogier’s favour. The only remaining clause was the powerstage: Ogier added another point and came home more than happy with his lot.

When he and Julien Ingrassia won this event 12 months ago, the handshakes were just a little bit stiff. These world champions had only known their Cumbrian colleagues a little over a month. This time it took the start-to-finish winners ages to get through the hugs, which were heartfelt, genuine and full of mutual admiration.

The gap to Tanak ended just shy of a



Citroen was a handful for Meeke in poor conditions



minute, but the runner-up was still able to see plenty of positives.

"We were fighting with him in his own back yard," said Tanak. "The next one [Rally Sweden] looks much more like our back yard... I'm happy with how things have gone here. We came to this rally and I thought everything had gone well with the test, I felt quite comfortable with the car – but the test is the test, it's not the rally. To be able to be at this speed here is good."

Ahead of the event, there was much speculation about the possible Latvala meltdown should Tanak get ahead of him from round one. There was no sign of it in Monte. What there was, though, on the first full day was the Finn using the dreaded c-word: confidence.

"We're having too much understeer," he said at lunchtime on Friday. "We have a new front differential and the feeling's not so good. I need to change this."

Oh dear, haven't we heard this all before? And haven't we then watched as Latvala spirals miserably down the order, his only answer seemingly to push his glasses up off his nose and rub the sides of his head in frustration?

Not this time. Instead, he turned sixth to third by the time Sunday rolled around. How had he found a line through the melting snow, precisely the conditions that sent him off the road five years earlier and left him hating this rally? ➤➤

CARLOS SAINZ DRIVES THE MONTE

I GET ASKED TO DO A LOT OF EXCITING THINGS with Renault each year, but when somebody called and asked if I would like to drive two stages of the Monte Carlo Rally... this was definitely the best thing the Formula 1 team could ask the son of a World Rally champion. That's how I ended up at the start of the Col de Turini and Col de Braus stages in a new Megane RS last Sunday.

And I loved it. It was a dream come true to drive over the Turini with three or four kilometres of ice – as you can imagine, my dad has told me so many stories and there are so many anecdotes about these stages, so to be there was so special.

I've been really busy with training for the new season and only flew in early in the morning, so I couldn't do a recce of the stages. I talked to my co-driver earlier in the week and I told him just to grade the notes quite simply: we had one to six for the speed, with six being the fastest. Then he gave me the distances between each corner and the places where you need to sacrifice one corner for the other. Most especially he told me the areas with the ice and gravel – there was a lot of gravel in the powerstage.

This was a lot to take in at the start, but as I got to know the pacenotes, all of a sudden I started to feel more together and I could push a bit more – but only when it was dry and I was confident of the grip.

Before I came here, my dad asked me about 100 times to be careful. It was not a day to try something different and to do something special without proper preparation.

My dad prepares everything in detail and I would have loved to come here two days in advance to put into practice all his tips about how to prepare for a rally stage. That would have given me even more confidence with the new Renault Megane RS, but today was all about enjoying the experience.

Coming up the hill on the Turini stage, I was looking and waiting, then my co-driver said: "The col is coming," and we came through the right and left and over the top: there it was.

Suddenly so many memories came to my mind when we came into this place. The atmosphere was incredible, but it was hard to take it all in. I slowed down over the top, but this was because of the ice. I tried the brake a couple of times to feel everything.

The conditions from there down the hill to the finish of that stage were so slippery and really tricky. There were a couple of kink corners, as we call them on circuits, where it was difficult to keep the foot down. I had the winter tyre, but I didn't have studs, which is why in the ice I was very, very, very steady!

I'd never driven the new Renault Megane RS before, but I'm so impressed – it has so much power and drives really nice through the front wheels. I'm going to ask for one at home now.

Being in Monaco without the Grand Prix being on was quite strange, but it was an amazing atmosphere on probably the best rally in the world.

It's definitely made me more excited to do something in rallying, but some time in the future – it's not my time for this yet.

CARLOS SAINZ





"You remember," he said, "in 2013, when I was 500 metres into the Col de Turini stage and I hit some slush? I went to the wall like a ping-pong ball and there were no wheels left on the Polo... I knew more what to expect after this."

So Latvala had learned from his mistakes. Hopefully for Toyota, Lappi will do the same. Caught out by a particularly gravelly right-hander, he ploughed straight on and bounced his Yaris off a tree. He dropped half a minute extricating his motor and getting back on the road. Such was the intensity of the competition in the middle order, his mistake dropped him to seventh.

"I don't have the words," was all Lappi offered when asked to describe his feelings at the finish. He shut the door quietly and looked like a man who very much wanted to be somewhere else.

A man who very much had been somewhere else was Meeke. In anything other than dry asphalt, the #10 Citroen looked ill at ease and only marginally better than the car that promised much and delivered zero here 12 months ago. But, through dogged determination, misfortune for others and a very different approach, Meeke dragged it

up to fourth. 'Dragged' might be a touch harsh when you consider his sublime five-pointer on the powerstage.

"I gave it everything in there," he said. On a road that for the most part looked more Catalunya than Monte Carlo, Meeke reminded the world what he can do when the conditions came to him. "I've tried to be clever on this rally," Meeke said, adding with a wry smile, "that doesn't come easily to me."

Another driver who salvaged something from nothing was Neuville. Last weekend was something of a microcosm of 2017 for him: nobody set more fastest times than him, but he came away empty-handed. His tenacious drive back into the top 10 was one of the highlights of the event – and a source of genuine comfort for an otherwise deeply disappointed Hyundai team.

Neuville's team-mates Andreas Mikkelsen and Dani Sordo had both fallen by the wayside early on. Mikkelsen lost second with a damaged alternator belt, while Sordo crashed out of third place in the snow.

Neuville's final act was to deny Elfyn Evans fifth place. Evans's rally was ruined when he dropped four minutes changing



Ogier and Ingrassia led from start to finish



a puncture on the opening stage, but like Neuville he stuck at it, set some fastest times and scaled the leaderboard. The Welshman admitted his confidence was shot by a couple of near-misses on the way down the Turini's north face first thing on Sunday, and the frustration was clear after he missed fifth by a second when he knew his Ford should have been knocking on the door of fourth.

Behind Lappi, Bryan Bouffier delivered driver points on his Ford Fiesta WRC debut, with Meeke's Citroen team-mate Breen ninth. Breen's rally was doomed as soon as he found himself first on the road through Saturday. The C3 became a high-speed snowplough as he lost three minutes in the first stage alone.

Two cars at the finish was a positive for Citroen, and it wasn't last in the makes' race as it had been this time last year. The round-one wooden spoon went to pre-season favourite Hyundai.

Up top, it was business as usual for Ogier and M-Sport as they picked up where they left off in 2017. This time, though, the British squad's early series lead was shared with Toyota, a team collectively counting the days until Rally Sweden next month. ❄️



RESULTS ROUND 1/13, MONTE CARLO RALLY, JANUARY 25-28

POS	DRIVER	CO-DRIVER	TEAM	TIME
1	Sebastien Ogier (F)	Julien Ingrassia (F)	M-Sport Ford WRT · Ford Fiesta WRC	4h18m55.5s
2	Ott Tanak (EST)	Martin Jarveoja (EST)	Toyota Gazoo Racing WRT · Toyota Yaris WRC	+58.3s
3	Jari-Matti Latvala (FIN)	Miikka Anttila (FIN)	Toyota Gazoo Racing WRT · Toyota Yaris WRC	+1m52.0s
4	Kris Meeke (GB)	Paul Nagle (IRL)	Citroen Total · Citroen C3 WRC	+4m43.1s
5	Thierry Neuville (B)	Nicolas Gilsoul (B)	Hyundai Shell Mobis WRT · Hyundai i20 Coupe WRC	+4m53.8s
6	Elfyn Evans (GB)	Daniel Barritt (GB)	M-Sport Ford WRT · Ford Fiesta WRC	+4m54.8s
7	Esapekka Lappi (FIN)	Janne Ferm (FIN)	Toyota Gazoo Racing WRT · Toyota Yaris WRC	+4m57.5s
8	Bryan Bouffier (F)	Xavier Panseri (F)	M-Sport Ford WRT · Ford Fiesta WRC	+7m39.5s
9	Craig Breen (IRL)	Scott Martin (GB)	Citroen Total · Citroen C3 WRC	+9m06.7s
10	Jan Kopecky (CZ)	Pavel Dresler (CZ)	Skoda Motorsport II · Skoda Fabia R5	+16m43.0s
OTHERS				
14	Andreas Mikkelsen (N)	Anders Jager (N)	Hyundai Shell Mobis WRT · Hyundai i20 Coupe WRC	+36m52.3s
R	Dani Sordo (E)	Carlos del Barrio (E)	Hyundai Shell Mobis WRT · Hyundai i20 Coupe WRC	SS9-crash

DRIVERS' CHAMPIONSHIP

1 Ogier 26; 2 Tanak 18; 3 Latvala 17; 4 Meeke 17; 5 Neuville 14; 6 Evans 8; 7 Lappi 6; 8 Bouffier 4; 9 Mikkelsen 3; 10 Breen 2.

MANUFACTURERS' CHAMPIONSHIP

1 M-Sport Ford WRT 33; 2 Toyota Gazoo Racing WRT 33; 3 Citroen Total 18; 4 Hyundai Shell Mobis WRT 14.

STAGE TIMES

STAGE	FASTEST	LEADER	SECOND
SS1 Thoard-Sisteron 22.80 miles	Ogier 23m16.6s	Ogier	Mikkelsen +7.7s
SS2 Bayons-Breiziers 1 15.84 miles	Ogier 14m53.2s	Ogier	Mikkelsen +17.3s
SS3 Vitrolles-Oze 1 16.60 miles	Tanak 16m32.3s	Ogier	Sordo +30.0s
SS4 Roussieux-Eygalayes 1 18.98 miles	Ogier 18m25.3s	Ogier	Sordo +38.5s
SS5 Vaumeilh-Claret 1 9.43 miles	Evans 8m42.6s	Ogier	Tanak +40.4s
SS6 Vitrolles-Oze 2 16.60 miles	Tanak 16m45.5s	Ogier	Tanak +33.9s
SS7 Roussieux-Eygalayes 2 18.98 miles	Evans 19m03.5s	Ogier	Tanak +19.3s
SS8 Vaumeilh-Claret 2 9.43 miles	Neuville 8m36.2s	Ogier	Tanak +14.9s
SS9 Agnieres-en-Devoluy-Corps 1 18.12 miles	Mikkelsen 25m11.8s	Ogier	Tanak +1m18.4s
SS10 Saint-Leger-les-Melezes-La Batie-Neuve 1 10.48 miles	Tanak 12m16.8s	Ogier	Tanak +1m03.4s
SS11 Agnieres-en-Devoluy-Corps 2 18.12 miles	Tanak 19m06.4s	Ogier	Tanak +48.1s
SS12 Saint-Leger-les-Melezes-La Batie-Neuve 2 10.48 miles	Neuville 10m48.6s	Ogier	Tanak +39.5s
SS13 Bayons-Breiziers 2 15.84 miles	Neuville 14m32.8s	Ogier	Tanak +33.5s
SS14 La Bollene-Vesubie-Peira-Cava 1 11.44 miles	Ogier 13m51.4s	Ogier	Tanak +45.0s
SS15 La Cabanette-Col de Braus 1 8.44 miles	Neuville 10m34.1s	Ogier	Tanak +46.2s
SS16 La Bollene-Vesubie-Peira-Cava 2 11.44 miles	Neuville 13m07.8s	Ogier	Tanak +57.9s
SS17 La Cabanette-Col de Braus 2 (powerstage) 8.44 miles	Meeke 10m06.7s	Ogier	Tanak +58.3s



Germany's golden boy in the silver racer

Bernd Rosemeyer, who was killed 80 years ago this week in a record attempt, was a supernatural talent behind the wheel. These are the moments that made him a legend

By Paul Fearnley, Special Contributor

[@paulpunter](#)

1

1935 Eifelrennen, Nurburgring

June 16

Rudolf Caracciola, acknowledged master of the circuit and of changeable conditions, had been caught unawares. But how could he have known? For this was a bolt from the blue – and the grey. In a single lap – the seventh of 11 – of the world's most challenging track, of which he had no racing experience be it on bikes or in cars, Bernd Rosemeyer had gained 46 seconds. No matter that his Auto Union was shy two of its 16 cylinders, or that he had lost his skull cap to the unsettling eddies created by a broken aero-screen that had also allowed a stone to smash his goggles, or that the intermittent rain was now at its heaviest, the newcomer in only his second car race was his team's only hope, his more experienced team-

mates having pitted regularly in search of a cure for the misfire caused by changes in weather and altitude, and which Rosemeyer was ignoring. Having been given the 'Faster!' signal, he passed Caracciola's Mercedes-Benz at the first time of asking – "You should have seen his face!" – and held a lead surrendered by the misfiring Mercedes-Benz of Manfred von Brauchitsch until the final rush along the main straight. Deafened by wind roar, Rosemeyer mistimed a shift and Caracciola drafted past to win by less than two seconds. The latter was hardly complimentary afterwards, admonishing his young combatant – "In future, use your head!" – before awarding him a cocktail stick. The unconcerned Rosemeyer wore it on his lapel for months afterwards.



LAT IMAGES

2

1936 Eifelrennen, Nurburgring

June 14

Rosemeyer's sophomore season had endured a difficult beginning: jaundice caused by a dodgy oyster eaten in Hamburg, followed by an ankle broken skiing in Garmisch-Partenkirchen. Crashes at Monte Carlo and Barcelona's Montjuich Park were sandwiched by a brace of fiery retirements in North Africa: Tripoli and Tunis. His confidence, however, was unshakeable. Plus his engine-behind-the-driver machine, in its third year of development, was now boasting 520bhp from 6006cc – increases of 225bhp and 1648cc over its original spec – and also benefiting from a secret weapon: ZF's limited-slip differential. Mercedes-Benz in

contrast was in disarray, as evinced by the engine failure that cost Caracciola his chance here. Rosemeyer's main rival on this occasion, therefore, was the brilliant Tazio Nuvolari – a man who spoke no German but whom Bernd understood implicitly and admired immensely. They were nip and tuck until a thick fog descended. Having set the same time on lap seven (of 10), the German began carving huge chunks from the Alfa Romeo man: 42.3s on lap eight and 48.8s on lap nine. Even Nuvolari was forced to yield in the face of this otherworldly display of balls and eyesight, and Rosemeyer's eventual margin was 2m13s. *Der Nebelmeister* was born.



LAT IMAGES

3

1936 German Grand Prix, Nurburgring

July 26

Upstaged Mercedes-Benz hoped fervently that it had left no stone unturned: stronger cylinders and blocks, a return to a larger supercharger, masses of testing, and five cars entered plus a reserve. In contrast Auto Union had become something of a one-man army: Achille Varzi, addled by drug addiction, was absent; Hans Stuck was out of form and favour; and newcomers Ernst von Delius and

Rudolf Hasse lacked star quality. Fortunately, the just-married Rosemeyer's presence was sufficient to take the day. Reckoning on a two-stop strategy compared to the majority one, he took the lead on the second lap and consolidated it by breaking the 10-minute barrier – 9m56.3s – on the third. Speedy pit work on laps seven and 14 (of 22) allowed him to keep the lead and he won comfortably, barely

slackening his pace even though he was almost four minutes ahead of runner-up Stuck. The best Mercedes-Benz was fifth. And this was Caracciola's third car on an embarrassing day for Daimler-Benz, Unterturkheim's team leader assuming it from hotheaded Italian Luigi Fagioli when Fagioli pitted to complain about its handling after being lapped by Rosemeyer.

4

1936 Swiss Grand Prix, Bremgarten

August 23

Mercedes-Benz had regrouped once more: rear axles redesigned for improved handling. Auto Union in turn had been boosted by Varzi's return at the recent Coppa Acerbo – he was quick in practice and the race, albeit at the cost of too many stops for new rubber. But Stuck's practice crash in Pescara now left

him nursing an injured right arm. The biggest news, however, was Rosemeyer's ongoing battle and feud with Caracciola. According to his aviatrix wife Elly Beinhorn, Coppa Acerbo winner Rosemeyer was unusually edgy – a mood soured by Caracciola's late annexing of pole position on

this fast and difficult circuit. For nine laps they fought for the lead, Caracciola resolutely ignoring increasingly vigorous flourishes of the blue flag – displayed even though they were dicing for position. Once ahead, however, Rosemeyer immediately set a fastest lap and had lowered it

further by the time Caracciola suffered a sticking throttle on lap 18; 11 laps later the Mercedes-Benz broke its rear axle. The dispute continued when they met awkwardly in a hotel lift. Their embarrassed partners left them to it as Rosemeyer got things off his chest – but not the cocktail stick.



5

1936 Italian GP, Monza

September 13

Mercedes-Benz had given up and retreated to base, leaving the door wide open for Rosemeyer and Auto Union. The locals tried to shut it by punctuating a new layout, which linked road circuit to a section of the speedbowl, with five chicanes. Rosemeyer was fastest in practice even so – and surprised to be waved past by both team-mate Stuck and Nuvolari in the early laps; brakes were expected to be at a premium because of those chicanes and the heat. Despite his devil-may-care reputation, Rosemeyer's feedback was said to be excellent, while his ability to pace a race and save his equipment was a match even for the wily Caracciola's. Gradually increasing his pace – he set fastest lap on lap 14 (of 72) – he pulled away from the feisty Nuvolari and discombobulated Stuck. Previously viewed as a safe pair of hands, Stuck suffered another accident – and was thrown from his rolling car – when he misjudged the braking for a chicane while chasing Nuvolari. The Italian did not give up but was again more than two minutes behind Rosemeyer by the finish. Having won three of its four rounds, the German was crowned European champion.

6

1937 Avusrennen, Avus

May 30

This showpiece in the German capital of Berlin was a Formule Libre affair, and Auto Union and Mercedes-Benz both entered cars fitted with all-enveloping bodywork. When combined with this autobahn-based venue's new banking – a 43.6-degree wall-of-death statement in brick – they would set lap speeds unmatched until the late 1950s. Naturally Rosemeyer was in the van, circulating at an unofficial 176.7mph and reaching 225mph on the straights. But he almost went over the banking's lip and thereafter settled for a middle-of-the-road approach. Though he would not win, his dice with Caracciola in the opening heat was for many of the 350,000 spectators the day's highlight. Although they had ended their feud – Rosemeyer cheekily returning the cocktail stick – they circled each other in the opening stages to save their tyres before uncorking their true performance. Had not Rosemeyer's engine dropped three cylinders he might have overturned his rival's narrow advantage. There being insufficient time to fit a new head gasket, Rosemeyer's overheating engine coated him in oil – “like a sardine” – during the final. He had proved his fortitude several times by continuing when others would have stopped because of mechanical problems or physical difficulties, and on this occasion he struggled home fourth after an early stop because of a puncture. Wife Elly had to strip him to his underwear and wash his overalls in benzine to make him presentable to the Nazi top brass, a process gleefully photographed by the spectating Nuvolari.



AUDI AG

7

1937 Eifelrennen, Nurburgring

June 13

When the 750kg Formula was given a year's stay of execution, Mercedes-Benz produced a completely new car – the incredible 600bhp W125 – a feat that Auto Union could not afford. Though Rosemeyer had rebuffed Caracciola's entreaty to join him at Unterturkheim, the line-up of 'Caratsch', von Brauchitsch, Englishman Dick Seaman and Hermann Lang – another ex-motorcyclist who had made a good impression immediately – was among the strongest in the sport's history, whereas Auto Union's was below par: Stuck was away racing in South America; new recruit Fagioli was hobbled by rheumatism; von Delius was hampered by a painful thigh from a crash in testing; and Hermann Paul Muller, another ex-biker, was making his debut and, as handy as he would prove to be, he was no Rosemeyer. But then no-one was. Having set the only sub-10-minute lap in practice, Rosemeyer battled with Caracciola, the pair passing and repassing before Bernd made it stick with an outside move at the Aremberg right-hander on the third lap. That brave effort was matched by his pit crew, which was awarded a standing ovation from the grandstand for having turned its victorious man around in 25s.

FELLOWES/LAT



LAT IMAGES

8

1937 Vanderbilt Cup, Roosevelt Raceway

July 5

Europe's new speed king became an American sensation – and fashion icon – when he won the world's richest race. The 'blonde boy' in the knee-length white socks and his 'silver bullet' were shaded by Caracciola in practice – grid positions were decided by three attempts over a distance of 10 laps – and in the early laps of a race postponed two days because of rain. But when Caracciola succumbed to supercharger failure on lap 17 – his Mercedes-Benz was using a new suction system that improved throttle response at the cost of silencing the marque's trademark scream – Rosemeyer found himself in another race against the clock, as well as Seaman. Forced to make two refuelling stops because his Auto Union's consumption was worse than anticipated, Rosemeyer pushed hard during the second stint to stay ahead of his one-stopping rival. The impressive Englishman remained a threat, however, until forced into a splash-and-dash with two laps to go. Rosemeyer was mobbed on his return to Germany and promoted within the SS. (His star was sufficiently great that he got away with not wearing the uniform.) Though it had not been his greatest performance, this was in many ways far beyond the sport his most significant.

9

1937 Coppa Acerbo, Pescara

August 15

There was a showman element to Rosemeyer's method. He looked the part and was happy to play it. Wearing just cap, shorts, gloves and sandals because of the heat, he set pole position at this daunting 16-mile circuit – a mix of twists through hillside villages and two long straights where 200mph was approached – by a cool 24s, from Caracciola. The 'antics' continued during the race. Leading by almost a minute before his scheduled stop, Rosemeyer clipped a kerb (or kilometre stone) one lap after it, and the damaged right-rear wheel eventually detached and arrived at the team's tyre depot – set up at halfway because of the circuit's length – moments before Rosemeyer crunched into view running on the brake drum. He resumed 30s behind Caracciola but caught him within three laps, whereupon the Mercedes-Benz ace pitted because of a misfire and handed the car to reserve driver Seaman. Rosemeyer's winning margin was 1m42s.

10

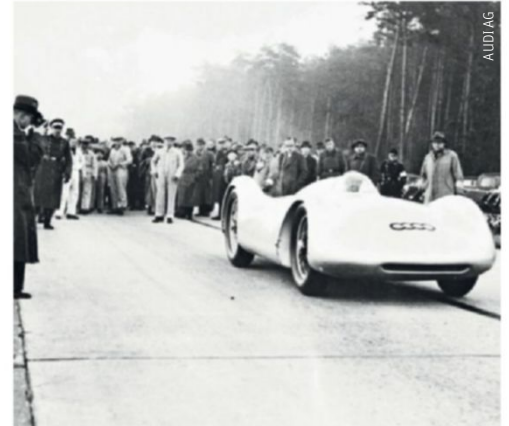
1937 Donington Park Grand Prix

October 2

Despite his successes, it had become clear to Rosemeyer that Mercedes-Benz possessed the superior car. As such he would have happily skipped the last race of the 750kg Formula. Auto Union, however, made a late decision to attend. Second fastest in practice, 1s behind von Brauchitsch and 4.4s faster than the next best Auto Union, Rosemeyer (#5, below) found himself behind four Mercedes-Benz machines after the opening lap, Lang leading from von Brauchitsch, Caracciola and Seaman. The younger, quicker men were planning two stops whereas Caracciola had scheduled one; although he led briefly, his tactical smarts

let him down on this occasion. Lang led until the broken damper that caused his eventual retirement began to make itself felt, and the race boiled down to a spectacular, tuffet-scattering battle between Rosemeyer and von Brauchitsch, the pair sharing the race's fastest lap. Rosemeyer, running longer, was pushing hard prior to his second stop when his rival suffered a front blowout not long after his own second stop. The 30s that this cost the Mercedes-Benz man was the difference at the finish. That the seat of Rosemeyer's overalls had to be taped before the prize ceremony spoke volumes.





Rosemeyer's record running

Rosemeyer's selection to set a swathe of prestigious speed records on Hitler's autobahn was the final feather in his trademark green Tyrolean 'Auto Union' hat; previously this role had been Stuck's. Rosemeyer had set five international and one world record in June, but was disappointed not to have become the first to achieve 400km/h (250mph) on the public road. Though he had been forced onto the grass central reservation twice by pressure changes caused by passing beneath bridges, he was keen to make another attempt. In the space of three chilly days in October 1937 he recorded 16 more records – three of them world marks – across two capacity classes. Among them were a flying kilometre and a flying mile at beyond 250mph. Most remarkable, however, was his flying 5km. Despite being almost overcome by fumes trapped in the cockpit, he averaged 251.41mph – on a two-lane concrete carriageway. He reckoned that the nervous strain this run exacted was greater than that demanded by an entire Grand Prix. And Mercedes-Benz, whose streamliner had exhibited aerodynamic instability, was sufficiently put out to insist on a January 1938 riposte. It was a challenge that Rosemeyer and Auto Union could not ignore. Tragically.



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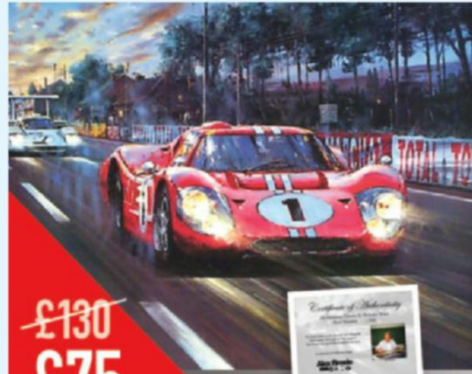


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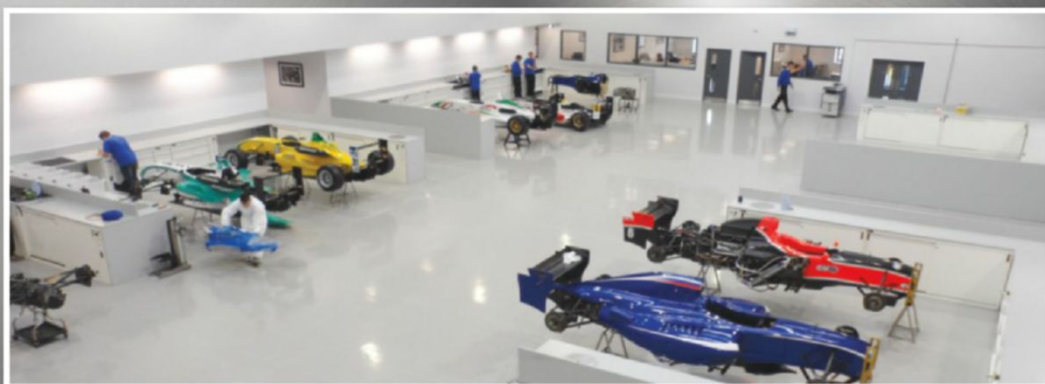
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EBREV/LAT



LAT IMAGES

Fewtrell (r) won
2016 British F4
title with Carlin

BRITISH F4

Carlin squad out of British F4 for 2018

SINGLE-SEATER POWERHOUSE

Carlin has chosen to take a sabbatical from the British Formula 4 Championship.

The team has made the decision due to its new commitments in the IndyCar Series, as well as its return to Formula 2 (formerly GP2) for 2018 after a one-year absence.

The team will continue with existing programmes in the Formula 3 European Championship, Euroformula Open, BRDC British F3 and Indy Lights. It has left the door open to returning to F4 next year.

Carlin was one of the first teams to commit to FIA F4 when the Ford-backed series was introduced for 2015, initially as MSA Formula. The team ran Lando Norris to the '15 title, then Max Fewtrell in '16 and Jamie Caroline last year. It has won 37 of the 90 British F4 races (including MSA Formula) held to date.



EBREV/LAT

A Carlin spokesperson told Autosport: "Due to an increase in the number of programmes the team is involved in this season, we will be taking a sabbatical from British F4 in 2018. Having won every teams' and drivers' title since the series' inception in '15, we're obviously very sad to miss the '18 season, but will watch with interest the next batch of F4

Caroline was dominant
on the way to 2017
British F4 crown

stars coming through the ranks.

"We will continue to make our F4 cars available for testing throughout the year and in preparation for 2019. We'd like to thank the organisers of British F4 and Ford Performance for their support over the past three seasons and look forward to rejoining the series in the future."

CARLIN BRITISH F4 WINNERS

DRIVER	WINS
Jamie Caroline	10
Lando Norris	8
Petru Florescu	5
Colton Herta	4
Devlin DeFrancesco	3
Max Fewtrell	3
James Pull	2
Logan Sargeant	2

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BRITISH GT

Century will run new BMW M4 GT4s

CENTURY MOTORSPORT WILL BECOME the first team to field BMW's new M4 GT4 racer in the British GT Championship this year, and is planning to enter two cars.

Nathan Freke's squad has secured a pair of the new three-litre turbocharged straight-six machines, and is expecting to take delivery of them next month ahead of the British GT season opener at Oulton Park.

The team has signed last year's Ginetta GT4 Supercup runner-up Ben Green and sportscar convert Ben Tuck to race the first car. Freke says a second "high profile" driver pairing is close to being firmed up for the sister car.

Century has been a regular in British GT since 2009 and has run Ginetta machinery each year

before opting for this new relationship with BMW. The German company will supply parts and technical support as part of the deal.

"It's massively exciting to start this new relationship with BMW, and to bring the brand back to British GT," said Freke.

"I tested a few GT4 cars personally before opting for the BMW, because I feel it's the best-developed new-generation GT4 car out there. Some of the other new cars feel a bit too much like a converted road car, whereas the M4 feels and behaves like a true racer.

"In Tuck and Green we've got a really promising young driver pairing. Tuck conducted himself brilliantly in his short time in GT3 with us last year and is very methodical – he

just gets faster with each outing. Green is probably the most focused driver I've worked with and I know the two will work together well to push on."

This will be the first time a BMW has competed in British GT since the Z4 GT3s were phased out at the end of 2016. In the GT4 category the brand has been a rarer sight; its only representatives have been a handful of European GT4 Series teams during their combined guest events with British GT.

BMW Motorsport head Jens Marquardt said: "It's great seeing BMW race cars on the British GT grid again. Century Motorsport are passionate racers with high ambitions. I'm sure that the BMW M4 GT4s will be in good hands."

Gamble (l) and Perez will race in Carrera Cup GB



PORSCHCARRERACUPGB

Perez and Gamble go for Parker Porsches

GINETTA GT4 SUPERCUP DRIVERS George Gamble and Seb Perez will switch to the Porsche Carrera Cup GB this season with the Team Parker Racing squad.

Gamble, who finished third in the Ginetta standings last year and was GT5 Challenge champion in 2014, was a finalist for the Carrera Cup's Junior programme but lost out to Dan Harper.

Despite this, Gamble still wanted to race in the series and will line up alongside Perez in Amigos beer-sponsored cars.

"I'm really excited for it," said Gamble. "One of the things we found with Porsche is that it's much easier to sell [to sponsors]. Since the scholarship we've had good interest.

"We've both driven the old and new cars and it's a cool car to drive. It will take me a few rounds to get my head around it and then I'll try to challenge for some wins. My main objective is to win the rookie championship as there are some great prizes with Porsche."

Perez added: "It's quite a

natural progression from Ginetta as we wanted to stay on the TOCA package. I've driven the old car and the new one so it was interesting to compare. It's a massive step up from the Ginetta with the straightline speed.

"I think I'm going to do the Pro-Am class – it's a good place to start for the seasons to come since it gives me familiarisation with the car. And I'm with Team Parker, an incredibly experienced team with a lot of years in these cars under their belt."



Dailly (following Gornall) is now the champion

JONES

BMW COMPACT CUP

Gornall: Exclusion is a lesson to all

EXCLUDED COMPACT CUP CHAMPION

James Gornall has said he hopes the decision to strip him of last year's title following post-season scrutineering will act as a warning to other club racers.

The 2008 British GT champion had his results annulled because his crankshaft was non-compliant, and an appeal at the National Court earlier this month failed.

In a statement, Gornall said: "We hope our experience will be a lesson to all club racers

to check and double-check your equipment. After so much hard work, to lose a championship in this way is galling.

"Had we not genuinely believed we were not at fault in using a crankshaft which has been previously approved, we would not have used that component nor have gone to the trouble of appealing the decision."

Steven Dailly, who dominated the 2015 Scottish Compact Cup, has now been confirmed as last season's champion.

IN BRIEF



EBREY/LAT

BRITISH F4 SCRAPS CHALLENGE CUP

British Formula 4 has decided to drop its Challenge Cup concept after just one season, and reinstate the Rookie Cup. The Challenge Cup was for drivers contesting no more than seven of the 10 events and aimed at those without the budget for a full season, but only six different drivers entered it in 2017.

FORTEC BRITISH F3 SQUAD TESTS DRIVERS

Fortec tested Pavan Ravishankar and Tristan Charpentier in BRDC British Formula 3 cars at Donington Park last week. Neither driver is committed for this season, but Ravishankar did three races with Double R in F3 last year and contested the MRF Challenge. Charpentier has raced in the UK in Ginetta Junior and last season's British F3 with Chris Dittmann. He was fifth in the 2016 French F4 Championship.

THOMPSON ENTERS THE MATRIX

Former Ford Fiesta Junior champion Aaron Thompson will switch to the new Matrix Motorsport team for his second season in the Renault UK Clio Cup this year. He competed for Jamsport and Ciceley Motorsport last term but will now join Andy Wilmot's squad – which has also announced a tie-up with British Touring Car outfit Power Maxed Racing.

WYLIE JOINS MASON IN BRITCAR FERRARI

Britcar regular David Mason will have a new teammate this year as reigning champion Ross Wylie replaces his long-time co-driver Calum Lockie. The duo will drive an FF Corse-prepared Ferrari 458 GT3.

BENTLEY-ELLIS SWITCHES TO FF1600

Karter Hugo Bentley-Ellis will race in the British Racing and Sports Car Club's National Formula Ford 1600 this season with Kevin Mills Racing. "We had some bad luck in karting and decided to make the move," he said. "We have bought a Firman chassis for testing, but if we get it to go faster than the Spectrum we might change to racing it during the season."



WALKER

TCR UK

TCR UK insists series will go ahead

THE ORGANISER OF TCR UK has confirmed the series will go ahead in 2018 after describing rumours to the contrary as "unfounded".

Reports of a low entry had led to speculation that the series might be put on hold.

In recent weeks the series has announced a tyre and suspension supplier, also adding TV coverage on the

Front Runner channel. It had already confirmed rounds would be streamed online.

"For us, it's very much business as usual and we are working towards our media day and the first round," said Mark James of TCR UK. "If you look at other TCR series around the world, it's quite normal for entry lists to appear relatively late.

"We know that teams are still working on securing sponsorship and pulling budgets together, plus we're talking to a number of drivers and teams who have either bought or are in the process of buying TCR cars.

"As a result, unfounded speculation about the series not happening [this year] is extremely unhelpful."



MSA Billy Monger was presented with his 2018 race licence by FIA president Jean Todt (left) during the Motor Sports Association's Night of Champions event last weekend. Monger, 18, was injured in a British Formula 4 crash last April and is targeting a return to racing in single-seaters. As part of the ceremony, Murray Walker and Sir Frank Williams received Lifetime Achievement awards. **Photograph by Alastair Staley**



Historic Formula 1 cars will add to British GP impact

HISTORIC FORMULA 1

Historic F1 cars to support British GP

THE FIA MASTERS HISTORIC FORMULA 1 supporting act at the British Grand Prix this year will be “the blue-ribbon event” of the season, according to driver Martin Stretton.

Two races featuring around 30 cars from the FIA-badged European series and the corresponding series run by Masters in North America will be held on the weekend of July 7-8.

Most of the field, which consists of cars dating from between 1966 and '85, will run with Cosworth DFV power, more than 50 years on from the introduction of the Northampton-built engine, while one or two V12-engined cars could also be entered, subject to availability.

Masters Historic Racing, which also runs the FIA Masters Historic Formula 1 Championship,

will be responsible for staging the support races. Stretton, who has raced historic cars for a number of years, will miss the event but maintains that it will be the best one of the year.

“Unfortunately it clashes with the Le Mans Classic,” he explained to Autosport. “I’m in a real dilemma because I’m due to drive five cars and I can’t let people down.

“There have been previous historic F1 support races [at Silverstone] years ago where I was party to at least one. It was very well received and this will probably be the same, but in front of a new generation.

“I think it will be the blue-ribbon event of the historic Formula 1 races this year and I expect it will be terrific.”

Jamie Constable raced in the historic F1 events that supported the main F1 races held in Canada, America and Mexico last year.

He will drive at the British Grand Prix support event in a ground-effect Tyrrell 011, previously driven by Michele Alboreto in 1982.

He said: “It’s been a long time since they [historic F1 support races] were held at Silverstone, so it will be fantastic.

“It should be great, I just hope they don’t put it on too early or too late in the day.

“It’s great fun and the spectators love the cars. When you’re a kid you remember certain things and it’s going to bring to life what their father has been telling them about. It’s going to pique their interests.”

MGCUP

MG3s could get one-make series in 2019

THE MG CAR CLUB IS considering introducing a new series for the MG3 in 2019, and has tweaked the regulations of the MG Cup for this year to allow the model to race.

Since the model was first launched in 2011, none have raced with the club. Now that MG3s are beginning to appear on the second-hand market, though, the MGCC is exploring ways of bringing them into the fold.

The MGCC’s Pete Macwaters said: “We’re

looking at a possible standalone series for 2019 to give us a new championship – our last was the MG Trophy.

“We are trying to get a bit of interest and see how they get on in the MG Cup. We want to see the MG3 racing.”

Former X Factor UK contestant Sam Callahan is set to race an MG3 this year, and he put his car on display at Autosport International early last month as part of the bid to stimulate interest in the model.



DUTCH SUPERCAR CHALLENGE

Leaney moves to Dutch Supercar

REIGNING 750 MOTOR CLUB BIKESPORTS champion Stefano Leaney will graduate into the Dutch Supercar Challenge for 2018, sharing a Norma M20FC with Neil Primrose, the drummer from the Scottish band Travis.

The pair are hoping to challenge for overall wins in the championship, and will be ranged against the likes of Ligier LMP3 cars.

“If we can get a hustle on with our car then we should be challenging for overall wins,” said Leaney. “The Norma couldn’t beat them [in 2017], but watching onboard from last year there’s more time to be had in the car.”

Leaney won the Bikesports championship in his first season of racing, while Primrose has competed in myriad categories in recent years. Both will test at Donington Park on February 15.



Robson is building his SDAR/17

750 FORMULA

Robson will return to 750 Formula

DOUBLE 750 FORMULA CHAMPION DAVE ROBSON is planning to return to the series this year at the wheel of a new SDAR chassis.

Robson began racing in the class with his previous chassis, which featured an 850cc Reliant engine, in 1983.

Having taken a sabbatical since moving house, and selling his progressively updated 2009 and '12 title-winning SDAR/83, the Derbyshire railway engineer is well advanced with his SDAR/17.

"I've taken a 'techy' approach to designing and building it," said Robson.

"It's been an interesting journey and has required me to learn new skills, including using a Computer Aided Design (CAD) programme to draw out most components. I used a cheap 3D scanner to capture the shape of the driver, engine, gearbox, differential and steering rack to fit them into the CAD model."

Robson aims to debut the car mid-season.

IN BRIEF



PURLEY HONOURED WITH MEMORIAL

British F1 racer David Purley has been honoured with a memorial near to the entrance of the new Rolls-Royce logistics facility at Bognor Regis. The stone memorial was unveiled last Friday – on what would have been Purley's 73rd birthday. After racing in F1, Purley died in an aircraft accident near Bognor in July 1985.

POPULAR HSF KART RACE CANCELLED

The Henry Surtees Foundation will not organise its popular karting event at Brooklands this year. The charity, which has raised £1.3million to date, has put the event on hold following the passing of John Surtees last March. Surtees' daughter, Leonora, said in a letter to HSF supporters: "This has been a very difficult decision for us to make, but given the events of last year we need time to heal."

BELL AND CO HEAD TO CLASSIC LE MANS

Six Le Mans 24 Hours victors, with a total of 16 wins between them, are to return to La Sarthe for the 2018 edition of the Le Mans Classic (July 6-8). Heading the entry is five-time winner Derek Bell, who is scheduled to race a Porsche 917LH, marking a rare racing appearance for the long-tail evolution of the 917.

EX-GETHIN MCLAREN RACES AT GOODWOOD

The ex-Sid Taylor Racing McLaren M10B of Peter Gethin will be a star car in Formula 5000's 50th anniversary celebrations at Goodwood in March. Now owned by Martin Longmore and driven by Matthew Wurr, Gethin's 1970 title-winning car will take part in high-speed demonstrations.

NEW ZEALAND VETERAN SMITH DOMINATES

Ken Smith, competing in his 60th New Zealand racing season, dominated all three NZ F5000 Tasman Revival races at Hampton Downs last weekend. Fellow Lola T332 pilot Andrew Higgins and the on-form Aaron Burson (McRae GM1) chased Smith home each time. Erstwhile points leader Michael Collins (GM1) fought back to fourth in the feature finale after gear linkage issues forced his retirement from race one.



FIESTA CHAMPIONSHIP

Switch from Dunlop to MRF in Fiestas

THE WINNER OF THE BRITISH Racing and Sports Car Club's Ford Fiesta Championship will race in India following the championship's switch from Dunlop to MRF tyres.

The prize encompasses flights and accommodation as well as a drive in an MRF-backed saloon car series next winter.

Ten sets of tyres and free championship registration will be offered to the winner of the Fiesta Junior Championship, which will also change to an MRF control tyre this year. Its leading rookie will earn free registration for 2019.

Each winner must remain in the championship or graduate to its sister senior

series to claim their prize.

Competitors in both championships will be allowed to use up their remaining Dunlop dry tyres at the first three meetings of the season, while Dunlop wets can also be used at July's Snetterton outing. Thereafter only the MRF control tyres will be permitted.



MRF tyres will be used in both Fiesta series

BARC SALOONS SERIES

New BARC saloon series in 2018

A NEW SERIES OPEN TO ALMOST ANY type of saloon will launch this season and race at six venues across the UK.

The British Automobile Racing Club's Saloons Series will welcome cars from the Classic VW Cup and Honda VTEC series after both were dropped by the Classic Touring Car Club for 2018. Other cars will then be split accordingly based on performance into the two groups for the six-race calendar.

Tracks include Rockingham, Brands Hatch, Pembrey, Snetterton, Cadwell Park and Oulton Park.

One of the organisers of the series, Andy Johnson, said: "We just want people to come along and have some fun, have as close racing as possible, but afterwards the drivers can shake each other's hands."

"Let's not have points and strict rules. We would love to see 15 to 20 regulars. We can achieve that."

Britain's paraplegic trailblazer

Paralysed as a teenager, Nathalie McGloin has quickly established herself as an inspirational figure in motorsport, and now holds an important role at the FIA

By Stefan Mackley

[@Smackley27](#)

For most people involved in a car crash, the prospect of getting behind the wheel of a racing car would be a daunting one. Even more so if they had suffered a life-changing injury in the accident. But Nathalie McGloin isn't like most other people, a quality that has led her to become a role model during her short time in motorsport. The 34-year old is paralysed from the chest down – a consequence of breaking her neck at the age of 16, when the car in which she was a rear-seat passenger hit a tree – and until just over three years ago she had no involvement in racing. "It [the passion] came from just something that I was introduced to in the form of trackdays by a team-mate when I used to play wheelchair rugby," she says. "I got hooked on the trackday and the interest in motorsport just kind of grew from that."

"I think with the trackdays, the appeal for me was that I could do what everyone else was doing, at the same time, on the same circuit with able-bodied men, and I wasn't different. The only difference was the car and the fact that at the end of the session I would get into a wheelchair instead of walking out into the reception to get a coffee, and I loved the appeal of that."

Since 2015 McGloin has been racing in the Porsche Club

Championship, where she uses hand controls aboard her Cayman S. She took her first outright podium in the British Women Racing Drivers' Club's allcomers race at Silverstone in November last year, but it's off the track where she is exerting an ever greater influence.

McGloin is a trailblazer, becoming the first female with a serious spinal injury to hold an MSA competition licence, and has become an ambassador for Dare To Be Different, an organisation helping women to break down stereotypical gender barriers in motorsport. Along with her partner Andrew, she has also created her own charity, Spinal Track, offering car enthusiasts with disabilities the chance to get behind the wheel of a racing car on a trackday.

"It came about when I started racing," she says. "I got a lot of messages through social media from people who were in my position asking how they could have a go at what I was doing, and asking me if they could drive my race car. Obviously that wasn't going to happen, but my partner and I had recently bought a VW Golf track-prepared car from another paraplegic, just as a track toy for ourselves. It just kind of progressed into us thinking that there was a need for something that offered people who didn't have a track car or a suitable car, who drove with hand controls, to be able to experience what I did."

Since Spinal Track was founded in April 2016, more >>



McGloin races in the Porsche Club Championship



Hand controls in the Cayman enable McGloin to race

ECAM



Taking on allcomers is one of the main appeals for McGloin

HAWKINS

than 40 people have had the chance to drive the modified car and plans are in place to expand the operation with a second car.

"We have some people who have never experienced motorsport – a bit like me before I started racing – doing trackdays," says McGloin. "We have ex-racers – bike racers, not usually car racers because they usually find a way to get back into it themselves without our help. Our charity is set up for novices, but if you've done trackdays before your accident we can give you a taster of what it's like post-accident."

"We attract a whole variety of people: male, female, young, old, experienced and inexperienced. We don't discriminate. But we specify that people have at least six months' experience with hand controls on the road. Reactions from people who go on our trackdays are brilliant – someone described it as 'being able to push your boundaries in a way that wasn't possible before.' Another described it as 'the second best day of his life' and said he only said 'second' so his wife didn't kill him!"

McGloin's work has not gone unrecognised. Last month she was given the BWRDC's Lord Wakefield Trophy, which is awarded annually in recognition of outstanding achievement by women in motorsport – past winners include Susie Wolff and Claire Williams. But perhaps the most important acknowledgement has come from the very top – the FIA, which has appointed her as the inaugural president of its Disability and Accessibility Commission.

"I was asked to go over to Paris in October of last year and I thought I was going over to discuss the licensing process," she recalls. "I thought they just wanted to hear advice about what the process was, how I found it, how they could improve upon it. They asked for my CV the week before, which I thought was a bit odd, and I joked with Andrew, 'Oh, what if they offered me a position?' We went over and we spent about 45 minutes talking about the different aspects of racing, and they had put together some documents about best practice and a system to put in place, global advice for disabled drivers getting into motorsports. And they said they were going to set up this Commission and would I be president!"

"I was speechless for a good 20 seconds, and of course I accepted. I can't wait to get started. It's going to be brilliant."

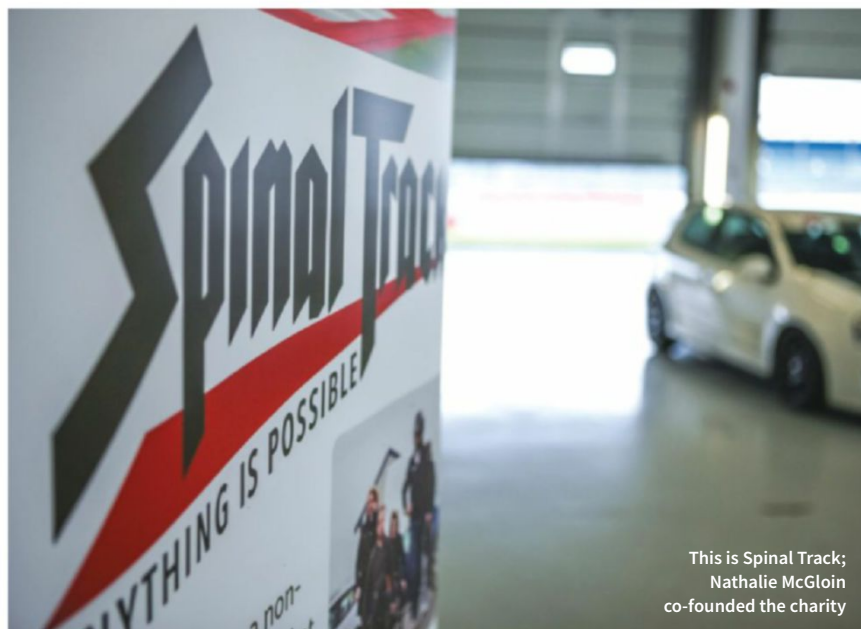
The Commission, which will hold its first meeting next month, will work for global unification of the process of getting a racing licence, and "make sure that motorsport is accessible across the board" by reviewing current rules and regulations to ensure they are appropriate and relevant for disabled people.

McGloin's achievements are remarkable for someone who until little more than three years ago had never driven a car. And while most people who suffer such a terrible injury would never want to get behind the wheel, McGloin is determined not to allow the accident to define her racing career.

"I was a passenger; what I do now is completely different to how I broke my neck"

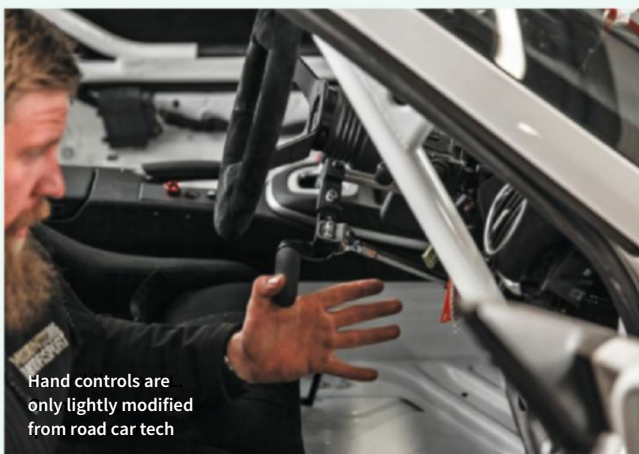
"It's weird, I don't associate them as the same thing, and that's not because I don't want to think about this in a specific way," she says. "I was a passenger in a car before I had my driving licence and what I do now is completely different to how I broke my neck. The only reason I know I think like that is we were at Croft in my first season, I was in the garage with my partner and my mechanic, and we were talking about crashes and I said I've never really been in a car crash. And they kind of looked at me and said, 'Really?' I'd crashed the car in the previous session, a really minor tap, and I said, 'Oh, that doesn't really count'."

"And they said, 'No, what about the one when you broke your neck?' And immediately I said, 'No, that's not the same thing.' I just don't associate them together." ❦



This is Spinal Track; Nathalie McGloin co-founded the charity

Hand-controlling a Porsche Cayman S



Hand controls are only lightly modified from road car tech

The Porsche Cayman S that Nathalie McGloin races in the Porsche Club Championship has been fitted with a hand-control system. This mechanism was installed by Coventry-based Jim Doran Hand Controls, using standard road controls that are available for anyone to buy.

"We've modified them to suit the characteristics of the steering column and my driving style, but it's predominantly a very standard bit of kit," says

McGloin. "I leave it in automatic mode – the car changes gear for me and I have a lever on the right-hand side of the steering wheel. It's push forward to brake and push down to accelerate, and then I just have one hand on the wheel and that's it. The hand control is attached to the pedals."

While many people getting back behind the wheel after paralysis may struggle to adapt to the new way of driving, this

has never been an issue for McGloin.

"I've never driven on pedals with my feet," she says. "I learned how to drive on hand controls. I had to get used to the different types, which on the track wasn't difficult, but I've got them in my road car as well to familiarise myself with them. In traffic it was a bit sketchy for the first day or so, because I was used to a definite on and off, but it didn't take long to get used to it."



Access all areas

Motor racing is one of the few sports in which disabled entrants can compete on a level playing field – and more opportunities are coming

By Stefan Mackley, Special Contributor

[@Smackley27](#)

THE GREAT AND THE GOOD FROM THE WORLD OF motorsport came together last weekend for the Motor Sports Association's Night of Champions, one of the great events in racing's social calendar and a time for celebration, to honour past successes and to look forward to the season ahead.

Among the worthy winners and attendees was a teenager who probably grabbed more headlines than all the other national drivers combined in 2017 – Billy Monger, on hand to receive his 2018 MSA racing licence from none other than FIA president Jean Todt. Monger's story is no less remarkable for having been often told. Suffering a double leg amputation following a horrific British Formula 4 crash at Donington Park in April last year, the 18-year old has gone on to make an incredible recovery thanks to his positivity, determination, and support from the global motor racing community.

Throughout his rehabilitation Monger has stated his goal is to return to racing. Although he has yet to announce his plans for the coming season, a year in single-seaters appears to be his goal. He has certainly gone to great lengths to make a top-flight career in single-seaters possible.

Until the end of last year the FIA had a rule preventing disabled drivers from competing in international single-seater categories. After applying pressure to the international governing body (with support from the MSA), Monger successfully got the rule removed. Another hurdle overcome, and an opportunity created for other disabled people looking to make a career in the sport.

Not since Alex Zanardi suffered similar injuries to Monger in 2001, and made his return to racing in touring cars, has access for disabled people in motorsport been so firmly in the public spotlight. Surely Monger's return to competition, drawing fresh attention to the challenges disabled people face but can overcome through motorsport, can only be a good thing.

Another inspirational figure at the Night of Champions was Porsche Club Championship driver Nathalie McGloin, who was on hand to collect the British Women Racing Drivers' Club's Lord Wakefield Trophy, which recognises outstanding achievement by women in motorsport.

Paralysed from the neck down after being involved in a car accident aged 16, McGloin has been racing competitively for the past three years. She is the first female with a serious spinal injury to hold an MSA Competition Licence, but it's off the track where she is making a difference.

As our feature this week explains (p66), the 34-year old has founded her own charity, Spinal Track, offering disabled people the chance to drive a hand-control adapted car on a trackday. In her words, motorsport offers the chance for disabled people to compete on an equal platform with the able-bodied.

It's a leveller. Stand by the side of a track and, unless you knew beforehand, it would be almost impossible to tell the difference between someone driving with pedals or hand-controls. That's one of the beauties of motor racing.

There are very few, if any, sports that spring to mind that allow able-bodied and disabled people to compete against each other. Racing has also become an avenue for people who have suffered life-changing injuries outside of the world of motorsport – something to work towards and focus on instead of dwelling on past events.

Take Team BRIT, for example. Founded in 2015, it allows ex-servicemen and women injured in the line of duty – whether that be amputations or suffering from Post-Traumatic Stress Disorder – to go racing. Two cars were raced by the team in

the Fun Cup last year and more than 20 drivers have come through the ranks so far.

In the British GT Championship, Jaguar has announced its return to UK motorsport with its F-type SVR GT4

challenger. Joining two professional drivers, four members of the Invictus Games community will also compete this year – a connection created by Jaguar Land Rover being a prime sponsor for the Games, which is a sporting competition created by HRH Prince Harry for wounded, injured or sick military personnel.

Never in the history of motorsport have there been more opportunities for disabled people to get behind the wheel. Advancements in technology and easier access to those innovations have allowed would-be drivers from all areas of life to experience the thrill of racing. And this is just the beginning.

Frenchman Frederic Sausset, a quadruple amputee who has raced at Le Mans in an adapted car, is the driving force behind a scheme aimed at putting three disabled drivers on the Le Mans 24 Hours grid in 2020. Monger has already signed up.

There is still much work to be done. The FIA has set up a Disability and Accessibility Commission with McGloin as president, which will work to ensure that motorsport is accessible globally across the board. Disabled people are being given more of the rights and opportunities they rightly deserve. And motorsport is leading the way. 🏁

“Racing has become an avenue for people with life-changing injuries”

WHAT'S ON

What makes a perfect season review?



A SEASON REVIEW NEEDS TO invoke the action and excitement from motorsport events across a year just past. But it's far from easy to capture the atmosphere and tell the stories of a season while maintaining a lasting appeal to fans months, years or even decades after the final chequered flag.

Precisely how a year's stories are presented can have a huge impact on the overall quality of a review, so we decided to compare a selection from 2017 (Formula 1, World Rallycross, Le Mans,

British Touring Cars, World Rally and MotoGP) to see how they measured up.

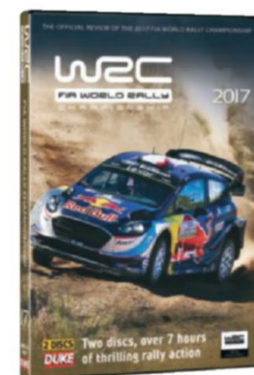
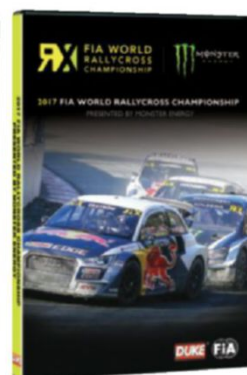
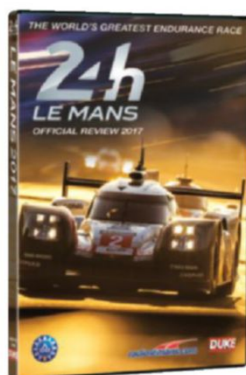
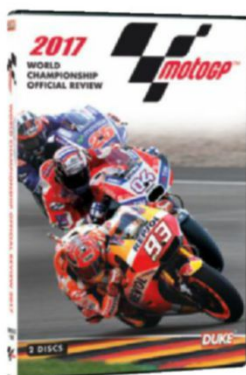
The BTCC's offering presents every race in full – all 30 of them. The championship features battles up and down the field and plenty of off-track drama, but when put back-to-back it results in a rather boring eight hours.

A different approach solves that flaw. In the F1 review, a narrator guides viewers through highlights from each grand prix. This tactic of shaping it into an overall narrative – as opposed to the

Ocon and Perez came together at Spa last year, and a brief focus on the Force India intra-team war forms part of the Formula 1 2017 season review

original race commentary used on the BTCC review – means stories don't have to be told chronologically. Events weeks apart can be connected.

A good example of this is the way the film collected the many clashes between Force India's Sergio Perez and Esteban Ocon throughout the season into one segment, placing the will-they-won't-they saga of team orders into context. If the season review had taken the form of complete race commentaries, viewers would have had to recall details of



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HOT ON THE WEB THIS WEEK

▶ A RARE SLIP IN OGIER'S ONSLAUGHT

Search for WRC - Ogier slipping into a ditch

The 2018 World Rally Championship erupted into life at last weekend's Monte Carlo Rally. Hours after narrowly avoiding an errant dog on the course, Sebastien Ogier got into a spot of bother (and a ditch) on stage seven, but recovered rapidly enough to clinch his fifth Monte win in succession.



LAT IMAGES

incidents seen hours previously, diluting their understanding of the story.

But narration does have its disadvantages. Using race commentary means viewers can experience the tension, excitement, and heartbreak as if they were watching live. Not even the best narration can achieve that.

A third method, used on the WRX review, combines the lessons from the two previous examples. As with BTCC, WRX races are so action-packed that highlights of each heat would be almost as long as showing the full event. To get around that, some qualifying races are reduced to scripted recaps, while the most important races are shown in full with commentary.

Some action is probably lost with this approach, but what is left has a much greater impact and the review is therefore more entertaining as a result, despite actually being even longer than its BTCC counterpart.

The Le Mans recap lacks context – despite its appeal, the race doesn't happen in a vacuum and the World Endurance Championship stories leading

up to the headline event will be a missing piece of the puzzle for future generations who may pick up the review in the future.

A solution to that problem is to give context in an introduction, and the best example of this comes courtesy of the WRC review. Its narrated opening sets the scene well, giving viewers all the big stories from the previous winter and reminding them what was at stake for each driver.

The MotoGP review doesn't start with the same level of context, but it does introduce all the championship protagonists with accompanying dramatic music that builds the tension nicely. But where this review really stands out is its ending, since before the final credits roll, a montage of the best action from the season plays out. This provides a lasting final impression that every other championship review we watched seemed to lack.

While there were no perfect reviews in this group, each one had its own strengths that allowed them to uniquely encapsulate the action.

BETHONIE WARING

NEXT WEEK

📌 F1 TESTING GUIDE

Karun Chandhok on the big questions of pre-season



S. BLOXHAM/LAT

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FROM THE ARCHIVE

Jacques Laffite, who was sharing his Renault Alpine A442 with Patrick Depailler, leads the field at the start of the 1977 Le Mans 24 Hours. The #8 car was the last of the three works Renaults to retire from the race, which was won by the Porsche 936/77 of Jacky Ickx, Jurgen Barth and Hurley Haywood.

INTRODUCING



GUAN YU ZHOU

THE BEST RACING PROSPECT EVER TO COME OUT OF CHINA

Prema Powerteam boss Rene Rosin describes him as “the best Chinese racer in junior single-seater competition”, which admittedly isn’t setting the bar tremendously high. More to the point, Guan Yu Zhou is a genuine talent, backed by the Ferrari Driver Academy, who has a realistic chance of inflaming a passion for motorsport within the enormous population of his homeland. It’s certain that he will be a leading contender with Prema in this season’s Formula 3 European Championship, his third year in the series.

Born in Shanghai in May 1999, Zhou – known paddock-wide as ‘Joe’ – was taken to an indoor kart track by his dad as a kid “just to have fun, and the first time I drove I absolutely loved it. We were driving every weekend.” The move was made to ‘proper’ outdoor karting, and in his third year “I won eight races out of eight – so it was history made. After that we realised I had to go to England.”

On the cusp of his teens, Zhou relocated to Sheffield, where he continued his education while he drove for Strawberry Racing – his soft Chinese lilt punctuated by the odd glottal stop gives away that Yorkshire influence. Helping him to settle was ex-F1 bit-part player Ma Qing Hua, whose father ran the Shanghai Karting Club where Zhou had started out.

British and European Junior Rotax Max titles in 2013 brought Zhou to the attention of Ferrari, which inducted him into its Academy in ’14, and then into Italian Formula 4 with Prema in ’15, when he was runner-up to team-mate Ralf Aron: “Ralf had already done Renault [1600] so the aim was top three. I finished second, so I was happy, but in the middle stages I wanted to win the championship and we had some unlucky moments.”

There was no room at Prema for Zhou’s graduation to F3 in 2016, so he went to Motopark: “Prema only took one rookie [Aron]. I wanted to impress people with one year in a ‘middle’ team. It was a tough season but good learning.” Back at Prema for ’17, he added five podiums to the two gained the previous year with Motopark. “I was quite unlucky [including a hand injury at Pau] but in the mid-stage we came back,” he says.

For some time last autumn it looked as though Zhou was going to graduate to Formula 2 in 2018, but even by the time he tested in the category in November it was all but assured that he was staying in F3. China will be taking notice: “There are people watching and talking about me, especially as I’m a Ferrari driver. It will be interesting when I go to higher categories...”

MARCUS SIMMONS



CV

Age	18
2017	8th in European F3 (Prema Powerteam)
2016	13th in European F3 (Motopark); 6th (1 win) in Toyota Racing Series (M2 Competition)
2015	2nd (3 wins) in Italian F4 (Prema)
2014	2nd in Senior Rotax Euro; joins Ferrari Driver Academy
2013	1st in Junior Rotax Max Euro; 1st in British Super 1 Junior Rotax Max
2007-11	Karting in China

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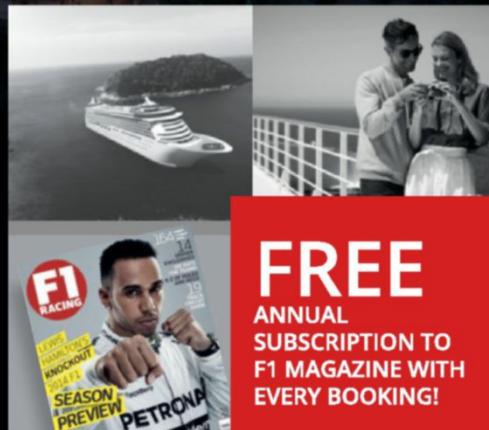
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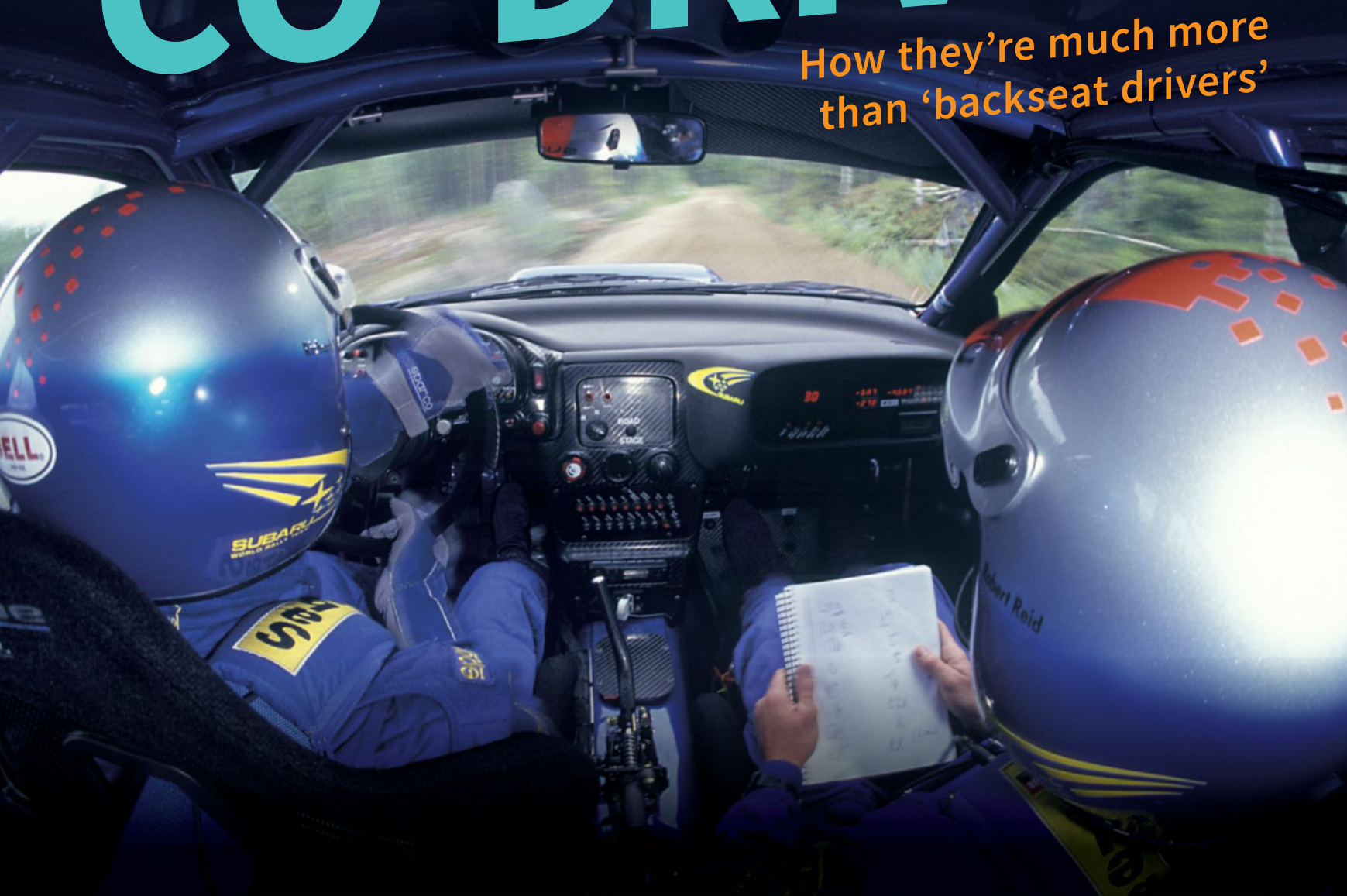
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PERFORMANCE

SECRETS OF THE CO-DRIVER

How they're much more
than 'backseat drivers'



THE PERFORMANCE PANEL

MASTERCLASS MAKING A DIFFERENCE

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DRIVER'S EYE ENDURING SUCCESS

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ANDRÉ LAVADINHO

CO-DRIVING IS NOT A GLAMOROUS

job. Mucking in alongside the driver for long hours in hot, sweaty conditions, with a huge burden of responsibility and none of the same plaudits for doing a good job, the co-driver is the unheralded cog that no rally driver worth their salt can do without.

Tommi Mäkinen describes the relationship as “like a marriage, or more than a marriage when you’re sitting in the same car for hundreds of days” and it’s clear to see why. Trust and accuracy are all-important. Call a note wrong or get their timings muddled and the car won’t win – no matter how fast it is.

As Rob Wilson points out (page 4), even in an age when car performance can determine up to 85% of ultimate performance, human agency still has a vital role to play in building a successful team. Our guest columnist Mäkinen did just that on his way to four World Rally titles at Mitsubishi in the late 1990s and blazed a trail later followed by Sebastien Loeb and Ogier, while Tom Ingram has helped to morph Speedworks Motorsport into the best Independent outfit in the British Touring Car Championship – you can read about his preparations for the new season on page 24.

But, as their stories show, there is no easy route to success. Fine-tuning pacenotes, working with the engineers or on the simulator is all part of the package and it’s up to the person(s) in the cockpit to make it happen.

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AUTOSPORT PERFORMANCE



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MATT SAYLE



LAT

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Loyalty is a rare commodity in motorsport, but still has a valid place at the top level

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MASTERCLASS

WITH ROB WILSON

THE DRIVER COACH EXPLAINS HOW DRIVERS CAN STILL MAKE A DIFFERENCE IN BUILDING A WINNING TEAM



Verstappen has the potential to build Red Bull around him

LAT IMAGES

One of the great questions in motorsport is 'what would happen if we swap all the drivers and teams around?' People often used to ask what would result if we put Fernando Alonso back in his Minardi, and strangely we've seen something resembling that over the past year or two by giving him an underpowered Honda engine.

Had he been a newcomer and the only driver in that team, there would have always been a question mark over how good he was. It goes without saying that the car has a huge effect on a driver.

Stirling Moss once said that while Jack Brabham wouldn't have been as quick as him in Stirling's Lotus 18 around Monaco, Moss probably wouldn't have been as quick as Jack at his peak in the Cooper, because you could personalise your cars. The driver could make a bigger difference then – nowadays some people put it at as much as 85% car, 15% driver.

It takes a certain type of driver to be capable of personalising their car and the team around them. Ronnie Peterson was, for a season or two, probably the fastest driver in the world, but as soon as Lotus lost the development brain of Emerson Fittipaldi, the team's fortunes began to slide. When it was Ronnie's job to lead the team, he couldn't. And despite Felipe Massa's many years in racing, I wouldn't be certain he pointed Williams in the right direction either.

It's actually very difficult for an individual to make a difference, whether that be a driver, engineer or designer. After Alonso moved to Ferrari, he was joined by Pat Fry, who he'd won with at McLaren, and that didn't lead to success. You can be a driver with a great track record of winning races, or an engine builder that is renowned for having the unit that everybody wants, and still not win anything. There are many moving parts to why someone is going to succeed.

So, how easy is it for a driver to move into a team that's been dominated by one particular driver for a reasonable period of time, to the extent that it's viewed as 'their team'? There are many examples

of drivers who have stepped into teams dominated by other drivers and still succeeded.

John Surtees moved into Jochen Rindt's Cooper team in 1966, outqualified him all year and went on to be runner-up in the world championship. Graham Hill had three pole positions in '67, even with Jim Clark in the other Lotus. More recently, Lewis Hamilton came in cold to Mercedes and immediately matched Nico Rosberg. He didn't need time to understand, he just drove the car fast.

If they are good enough, a driver can overcome unfamiliarity, but drivers capable of doing that don't come around every 10 minutes. Alonso and Hamilton



Surtees fared well against Rindt in 1966

LAT



Alonso was unable to dominate Hamilton at McLaren in 2007



Peterson struggled to lead development on the Lotus 76



Hamilton and Bottas have a strong bond



Ricciardo came out on top against Vettel in 2014

“It takes a certain type of driver to be capable of personalising their car and the team around them”

have done it. Max Verstappen went to Red Bull and pretty much matched Daniel Ricciardo from the word go. At no point was he number two.

Alonso is an all-round great driver, so in a way it doesn't matter whether he's driving the most balanced car or not, he will wring its neck and get a lap time out of it. With him, it comes down to who he's up against. When Alonso was across the garage from Hamilton at McLaren in 2007, there was no way that he could dominate him, because as we've seen from his wet-weather performances and his subsequent career, Hamilton is capable of picking a car up and twirling it around his little finger.

Hamilton is more of a thinker than people give him credit for. He can drive a car in a variety of guises, but he will still be telling the team what he wants to feel from the car. I'm not sure he learned it from Rosberg, but I think he's realised the importance of having a harmonised car, so he doesn't have to rely totally on having the world's greatest car control. He's

winning now in a more refined way.

There are drivers, however – world champions, even – who must have a car a specific way to be happy, such as Kimi Raikkonen, Sebastian Vettel and Jenson Button.

Despite his rallying interest, Raikkonen must have a car that can follow its nose, in much the same way as Keke Rosberg. Keke found himself outperformed by Alain Prost, because Prost – like Alonso – could drive a car with understeer and still get it rotated, and therefore take advantage of the traction that gave. There are many examples of this.

This creates a dilemma: whether to build the car around one driver, or find a compromise for both.

Historically, Ferrari used to like having drivers competing against each other, but it learned during the Schumacher years that if you concentrate your efforts on just one driver, the chances of being world champion are far greater. Vettel will drive that hand

as much as he can. That said, if the car isn't completely harmonised to Vettel's way, he's also beatable, as Ricciardo demonstrated at Red Bull in 2014.

Raikkonen will find a way of driving the car, but it's more likely to be to Vettel's liking, whereas with Mercedes and McLaren, they will be team cars.

Valtteri Bottas and Hamilton work well together. Hamilton is the well-established driver, but Mercedes will work very hard to make the car more comfortable for Bottas without affecting Hamilton's speed. I think that will also be the case at McLaren, where they'll make steps for Stoffel Vandoorne without negatively affecting Alonso.

Alonso, Hamilton and Verstappen prove that if you really are on top of your game, you can go anywhere and pretty much get what you want from the word go. Despite the reduced percentage of their input into race success compared to the 1960s, these guys can still make the difference. They drive the car; the car doesn't drive them.

So, if somebody comes to me and says, 'It's so-and-so's team, I need to have them working a bit more towards me', which does happen at all levels of motorsport, I will say, 'Sure, but let's just make sure you are on top of your craft'. Then the amount they require the team to adjust could be a lot smaller.

Learn the craft first and you may find the mountain is not as big as you imagined.



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INSIDE LINE

TOMMI MAKINEN

THE FOUR-TIME WORLD RALLY CHAMPION AND TOYOTA WRC BOSS EXPLAINS HOW SUSTAINED SUCCESS COMES AT A COST



CAREER highlights

- 2003** 8th in FIA World Rally Championship (Subaru WRT), 2 podiums
- 2002** 8th in WRC (Subaru), 1 win, 3 podiums
- 2001** 3rd in WRC (Mitsubishi Ralliart), 3 wins, 4 podiums
- 2000** 5th in WRC (Mitsubishi), 1 win, 5 podiums
- 1999** WRC champion (Mitsubishi), 4 wins, 7 podiums
- 1998** WRC champion (Mitsubishi), 5 wins, 7 podiums
- 1997** WRC champion (Mitsubishi), 4 wins, 9 podiums
- 1996** WRC champion (Mitsubishi), 5 wins, 6 podiums
- 1995** 5th in WRC (Mitsubishi), 1 podium
- 1994** Selected WRC events (Nissan F2, Ford, Mitsubishi), 1 win

Doing all the world championship rounds, it takes so much energy if you really want to win. In Formula 1 they are fighting about how the tyres are performing, how long they're lasting and it's exactly the same with the rally car, but you are there alone. It's mentally very tough and I was absolutely exhausted after every season. You would have to do at least five years in some other job to reach the same amount of energy needed to cope for one season in the World Rally Championship.

One of the secrets for me was that I tried to forget everything between the rallies. I wanted to zero my mind completely and between the season end until it started again, I didn't even think about rally cars at all. I would say that's one of the things that makes drivers stronger and better lasting if they are able to do that – not thinking all the time – but it's a personal question.

It was easy to motivate myself to drive the fastest stages and win the rallies because I wanted to show to myself that I could be the fastest. When we started

and set four fastest stage times until I finally went off completely and retired. That was the best example of how it shouldn't be done!

The next rally in Sanremo, I was in the situation where I had to win because of my behaviour in China where we didn't score any points. After two days, with only four stages to go, I was third with two Peugeots (Gilles Panizzi and Francois Delecour) in front of me. I wasn't sleeping properly on the last night and I felt a little bit tired in the morning, but on the first stage (Monte Ceppo) I was like a robot. It was a 40km stage, I did the fastest time and I won the rally.

I remember thinking after, 'If I could find that mode always, nobody could do anything and I could win easily', but it's sometimes not so easy to find that. Honestly, the year 2000 I was a little bit steady, then '01 I was giving my absolute maximum to go forward again. I won three rallies with the old car, but we had to change to the new car in the middle of the season and that was a big disaster, it was mostly a question of surviving. That was the moment when I decided to leave the team.

“I remember thinking after, ‘If I could find that mode always, nobody could do anything and I could win easily’”

to reach some results and then started winning in 1996, everyone was going in the same direction and it was really bringing the motivation. We knew each other and we knew the way to work – that was a good time.

Most of the time we had many drivers and many manufacturers fighting, everyone was going flat-out. I remember when we were fighting with Colin McRae for example, both of us hardly ever finished the rallies, either he went off or I went off. It was a bit telling about the level of fighting, I would say 125% all the time!

A moment I remember very well was the China Rally in 1999. I was too arrogant, I went there and said, 'I'm here to win the rally'. I was first, then off the road and back, then we came off and I found myself in a rice field, then continued

When I joined Subaru in 2002 it was a very exciting time, but there were a number of technical issues and always something strange was happening. I was a bit disappointed about that because I had many rallies already behind me and the title was my only motivation – I wasn't motivated to try to win one rally. In both years, '02 and '03, exactly the same happened and in the middle of the season I noticed that I had no chance to fight for the title. Rally GB was my last rally where there was no target, no more motivation for the title or anything. I would say it was ordinary driving.

It's sad to think about that season where I made the decision to retire. One of the biggest reasons was because victories were giving such a good feeling, but I realised that I was never going to reach this feeling anymore. It took a long time to settle down from that.

With a little bit more luck in places and fewer technical issues, the result could be completely different, but maybe that was giving me some extra effort to continue towards some other challenges that were slowly opening. We started our current team and now keep working in that way.



THE SECRETS OF A RALLY



CO-DRI



IVER

ANDRE LAVADINHO

CO-DRIVING SECRETS

THERE'S A WHOLE LOT MORE TO CO-DRIVING THAN SITTING AND READING. TO BE ONE OF THE BEST, THERE'S A GREAT DEAL TO MASTER
BY DAVID EVANS

The Finn hesitated momentarily. Had he heard correctly? Best sit and wait. His co-driver repeated the instruction. And that's how a rally car ended up being driven straight through the middle of a traffic roundabout. No sooner had the Opel bumped up the first kerb than the co-driver turned in amazement and asked what on earth was going on. The driver was equally baffled.

"You told me," he says. "You said: 'Go straight across the roundabout'. I went straight across."

The names don't matter, and the driver didn't suffer too much from this early communication hiccup. He went on to become a world champion.

In a rally car, the driver drives and the co-driver does just about everything else.

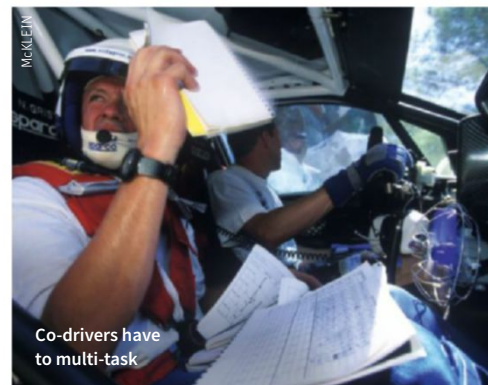
Motorsport is packed with unsung heroes and co-drivers are right up there with the best of them. Regularly and ridiculously seen as frustrated drivers, the men and women who sit in the seat without a wheel are a breed apart; it takes a very special kind of character to become the best in the world at telling the person to the side of you where to go. And how quickly to get there.

If you want an insight into the character of a co-driver, take this simple test. Next time you're being driven, perhaps looking for a junction on an unfamiliar road, try reading a text message at the same time; write yourself a shopping list; change station on the radio; write a reply to that text message; and ask the person chauffeuring you to ask any number of inane questions to which you are expected to know the answer immediately.

The ability to multi-task is fundamental for co-drivers. If focusing solely on the task in hand is your forte, forget it. You'll be better as a driver.

Stripped back to the basics, there are two main elements to the co-driver's job: ensuring the car reaches the stages on time and then reading pacenotes on the stages themselves.

"That's the easy bit," says Paul Nagle, the man who has co-driven Kris Meeke to all five of their world



Co-drivers have to multi-task



Crews make two passes at the stages before competing

rally wins. "The real work, the really important stuff is done before we even get to the start of the event."

It's called the recce. Depending on the length of the rally, two or three days before the start, the crew drives all the competitive sections twice at a maximum speed of 50mph to write the crucial pacenotes. The co-driver will read these back when they're in the rally car, often travelling at twice the speed they managed in the recce.

"If you make a mistake on the recce, you will be found out on the rally," says Nagle. "That's why it's so important to get the notes written first time through – then you've got that second pass on the recce to double check them and make changes if they're needed. Kris will make changes on that second pass if he feels he's noted a corner too slow or too quick – he'll do that when we're competing as well."

Listen carefully to the onboards and you'll sometimes hear the driver say: "Put a minus on that" or "stick a 'nips' on the end there". A minus would instruct the driver to lift slightly ahead of the apex, while 'nips' indicates a corner tightening slightly at the exit.

This is where multi-tasking comes in: you're reading the current note and looking along or down the page for the next one, readying yourself to deliver that, when a voice in your ear tells you to change the previous one. And this can be happening at 120mph when you're six feet in the air between the trees or being thoroughly shaken around as you rip through a super-quick section on asphalt.

"If it's a simple change I'll make it," says Nagle, "but if we're in the middle of a technical section then I'll put a mark by the note and double-check it with Kris as soon as we've finished the stage."

Changing the notes entirely is a reasonably rare



occurrence at the highest level.

"We've got the recce down to a fairly fine art," says Meeke. "We have a routine that works for us. Obviously if we're going to a new rally – such as Turkey this year – then we're making notes from scratch and that's a slightly different process. In places like Mexico, the stages don't change much year-on-year, so at those events we're evolving the notes that we used the previous year."

Robert Reid won the 2001 world championship with Richard Burns and well remembers rewriting notes.

"There were some places that, looking at the map, you'd think hadn't changed at all," says Reid, "but then

you get in to the recce and the road could be quite different. This would happen in some of the stages in south Wales, when Rally GB was based out of Cardiff. From one year to the next the logging trucks might need a road widening; so by the time we got there for the rally, what had been, say, a set of medium-speed corners might have been straightened out with a wider road. You'd rewrite all of that."

When you see co-drivers reading, writing or rewriting, it looks like they're using a regular spiral-bound notebook. Generally speaking, they're not. The professionals are pretty much all using books handmade on a farm in Lancashire by one-time BTRDA Gold Star Rally champion Martin Meadows and his wife Helen. Meadows' brother is John – former Mitsubishi works co-driver – and the Safari specialist was fundamental to what has become something of a cottage industry.

"I was with John after one rally and he was telling me how bad the pacenote books were," says Martin Meadows. "We were talking to Ian Grindrod, who was co-driving Henri Toivonen at the time, and he agreed. I said to them, 'I'm a graphic designer, tell me what you want and I'll put it together'. It started from there. We made some, worked on them and improved them, but really the books haven't changed for the last 30 years."

Dan Barritt, the winning co-driver at last year's Wales Rally GB, wouldn't consider reading from or writing in anything other than one of Meadows' books.

"They're sort of the industry standard," he says.



Removable spine has made Pacenote Book the industry standard



Citroën co-drivers Martin and Nagle compare pacenotes



Reid (left) frequently rewrote pacenotes for perfectionist Burns

“These might sound like really small things, but sport at world championship level is all about chasing tiny percentages”

“I know a lot of co-drivers had input into making them what they are. To all intents and purposes, it’s a notepad, but it just works and it feels normal when you’re using them.”

What is it that makes this book work? The paper, for a start, is just the right weight and shade.

“It’s the paper HM Government and the banks use for their forms,” explains Meadows.

The binding is the other key feature, with its rather tortuous-sounding ‘twist and remove spine’.

“When you do the recce,” says Meadows, “you don’t necessarily do the stages in the order of the rally’s actual itinerary; you don’t always do stage two before stages three. Previously, you would make the notes and then copy them out to make sure they flowed in rally order. Co-drivers like to have the stages for a specific loop or day in one book – there’s less chance of losing them.

“Copying notes can be fraught with risk. A co-driver is usually doing that job at the end of the day of recce, so they’re quite tired and it’s easy to get distracted and miss a note out. What John and Ian wanted was a ring binder-type set-up where you could slot pages in and out – that’s where the removable spine came from; you can take the spine out and reorder the pages as you want. Another key is the strength of the spine. We’ve worked to find one that’s really strong – it doesn’t bend or deform, which means the pages will always turn.

“These might sound like really small things, but sport at world championship level is all about chasing

tiny percentages and that’s what this is about. We could make the whole thing a bit cheaper, but it would be noticed straight away – the consequences of not being able to turn a page cleanly when you’re flat out could be pretty serious. That’s why we’ve continued to make every book by hand. We know it’s done properly.”

In a sport that’s so driven by pushing technological boundaries, it’s remarkable that such a key element of the sport – the business of delivering the vital route information between co-driver and driver – remains so basic. Surely, in this modern era, with the continued advances in satellite navigation, it would be possible to find a solution that betters what’s been around since the sport’s very beginning?

Companies have tried sat-nav-based systems for delivering notes, but it just doesn’t work. Co-driving is such a nuanced craft, even in an ever-changing environment, that it’s almost impossible to see the pencil (which has to be 2B, since the lead offers a perfect range of shade) and paper being replaced.

“Writing pacenotes is still a very personal thing,” says Meadows. “People have thought of trying to computerise the process or using an iPad, but it’s just not quite the same. There’s almost some emotion involved in the thing. For example, quite often a co-driver will use an exclamation mark to note caution, but if there’s something really bad coming up, then each co-driver will have their own little way of making it clear, be that pushing harder on the pencil to darken an underline or something like that. You need to be in

the moment and in the recce to let that emotion and feeling flow into the notes. You just wouldn’t get the same from sitting at a laptop typing them out.”

The non-competitive time-keeping side of the job – the getting of the cars to the stages on time – will change. Currently each crew is given a set of time cards complete with boxes to be filled in when the car is checked in to each control. The time to the next control is still totted up in the co-driver’s head, to ensure they arrive on the allocated minute. Failure to do so will result in penalties added to their accumulated stage times.

For those who find keeping track of time a bit of a nightmare, salvation isn’t far away. Numerous companies are working on systems that will work by tapping a card (think of a hotel keycard) at each control. This will beam the data to the organisers and to a control unit in the car.

A co-driver’s reliance on advanced mathematics was lessened greatly by the introduction of Fastime Copilote Rally Watch. Developed – again with input from co-drivers – by former Subaru and Toyota sporting director George Donaldson and accountant and rally enthusiast Robert Thacker, the watch is another brilliant British contribution to the art of co-driving. The co-driver loads road timing into the watch and is then given a countdown to the scheduled arrival time in the next control. Once there, the watch requests the next time and the process rolls on. The watch also stores stage times, compares them with ▶



McRae favoured a gear-linked pacenote system

the competition, and also tells the time.

When it comes to writing notes, there are two schools of thought in terms of putting the code on the page: horizontal or vertical. Reid started writing across the page, but ultimately followed the lead of Michele Mouton's co-driver Fabrizia Pons.

"If you write the notes horizontally then you could end up with four or five lines of notes," says the Scot, "whereas if you write vertically you get two columns. When you're calling notes, you want to make the process of reading them as easy and straightforward as possible. For me, reading down two columns worked better than across five rows. It's also easier to move your thumb down each note as you read it – so if you happen to look up, when you look down

you know exactly where you are."

Reid's left thumb came in even more useful on the 2001 Rally GB – the event where he and Burns were crowned champions.

Reid remembers: "Richard and I had just left service when I reached over my shoulder to turn on the map-reading light that should have been there. We were only allowed the map light in the car when we were going into night stages – such was designer Christian Loriaux's obsession with keeping the car's weight to an absolute minimum [when Loriaux moved to Ford, he took this a step further and only allowed co-drivers to carry one pencil in the car with them].

"Anyway, the light wasn't there and Richard and I were about to go into two stages in Brechfa in the dark.

I always carried a Maglite in my bag, so I tie-wrapped that to my left thumb, turned it on and read the notes with that."

The ability to think clearly and remain calm under the ultimate pressure is vital. You've got to be ready for anything – as 2003 world champion Phil Mills testifies.

"Petter Solberg and I were competing in the Cyprus Rally one year," he says. "We were going through a stage and everything was fine, next minute there was a bit of a fuss in the car and a bird came in through the roof vent. In those kind of instances, your actions are really instinctive."

Without missing a beat, or a note, Mills grabbed the bird – which had already met its end after bumping into the Subaru – and dropped it into the footwell.

But feeling the pace and direction of the car is what sets the good apart from the great.

"You get that feeling through the seat of your pants," says Colin McRae's co-driver Nicky Grist. "Without looking up, you know where you are from what the car is doing. It takes a while, but it becomes instinctive."

The one thing that upsets that rhythm in the car is fog. Scott Martin remembers some nervous moments guiding Craig Breen through an especially foggy Aberhirnant in Wales last year.

"You're totally focused on reading the notes," says Martin, "but you're subconsciously prepared for what the car's going to do. When you call a hairpin, you know when you're going to be pressed into the belts. But in the fog, it's so strange. I didn't even know we were into the fog and I'd called some quick corners when I felt Craig lifting and braking. You think: 'What's going on? Have I got it wrong? Where are we?' You look



Co-drivers have to be practically minded, as Phil Mills shows



LAT IMAGES



Martin co-drives for Craig Breen

IT'S HARDER THAN IT LOOKS...

The last time I co-drove Kris Meeke, we were in Citroen's equivalent to a transit van at Silverstone rallyschool and Dungannon's finest was telling me what to do in the event of what felt like an almost inevitable accident.

This time it's a bit different: the Meeke company motor, a set of Paul Nagle's pacenotes and a half-decent stretch of gravel road. Nagle seems to find it funny that I'm genuinely having a go at doing his job. He laughs less when I break down his working day into two key areas: sitting down and reading. Ultimately, one of us will be laughing the longest...

I've always quite fancied the idea of co-driving. I once navigated David Higgins into a huge lead on the Kent Forestry Stages, only for him to ruin my moment in the spotlight by dropping us in a ditch after a corner appeared unexpectedly. A corner I might have forgotten to mention.

Strapped into Nagle's seat, I wiped such negativity from my mind and focused on the job in hand. Having already had one go at the stage, Meeke had been given a brief insight into my incompetence.

"Don't just blabber the notes out," he offers helpfully. "Try to feel the car."

Right. Good advice. Second time around, I'm much more relaxed and do actually manage to say the right thing at vaguely the right time. Or at least I thought I did. Kris snatching the book out of my hand and throwing it the footwell might indicate we weren't on the same page.

The inside of Citroen's C3 WRC was a claustrophobic and intimidating place for one so far from their comfort zone, but at the same time it was hugely exhilarating and a real insight into what Nagle does.

Between you and me, there's more to it than sitting down and reading.



Our man Evans joined Meeke in the hot seat

up and you just can't see a thing."

It's in the fog where the level of detail in notes really shows up. McRae, for example, used a gear-linked numeric system where a six right would mean a very fast sixth-gear right-hander. The 1995 world champion liked to keep things simple and so added in very little detail around those numbers. Burns, by contrast, used a far more descriptive system and would regularly make three corners out of one.

"Richard liked a very accurate description of where the car had to be on the road," says Reid. "There was quite a lot to say in our notes – but it definitely helped in the fog."

Nowhere was this seen more obviously on the 1997 Rally GB, when Burns dominated a fog-bound Radnor stage, taking 1m33s out of McRae in 10 miles.

"Even in the fog, driving pretty much blind, Richard

knew what was coming because of the detail in the notes," says Reid.

It's in those trying conditions that a good co-driver will know when to chivvy their partner. Not that this sort of advice is always welcome. Markko Martin was a driver who always struggled in the fog and didn't take co-driver Michael 'Beef' Park's advice particularly well.

"Beef told me I should get a move on," says the Estonian. "He said: 'Come on, you can see more than that...' I said something rude and said he could have a go if he wanted!"

Experienced co-driver Stuart Loudon found himself in the unusual position of guiding former England cricket captain Graeme Swann through Wales Rally GB in 2014.

"Graeme was doing the event as a guest driver," says Loudon. "He wasn't too bad at all, but we rolled

on the first stage. We were on the roof, but the spectators soon had us back on the wheels. The car wasn't bad at all, but Graeme was starting to undo his belts. He thought we were going home. He asked what to do and looked a bit surprised when I told him to fire it up and crack on to the end of the stage!"

Swann's initial response was, of course, completely natural. He'd probably never been upside down in a car before.

"You know when the crash is coming," says Scott Martin. "And that's the time to make yourself as small as you can in the car. I pull my feet back from the footwell to avoid any impacts down there, fold my arms across my chest, and hang on to the pacenote book."

Hang on to the pacenote book.

Told you co-drivers were a different breed. ■

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BEHIND THE VISOR

WITH DON MACPHERSON

AUTOSPORT'S MIND COACH GIVES HIS VERDICT ON HOW FERRARI'S PROTEGE WILL BE PREPARING FOR HIS DEBUT F1 SEASON

S

adly, there are many examples of Formula 1 debutants who were physically fit, but who didn't realise their potential because they were not mentally prepared.

If you were to ask reigning Formula 2 champion Charles Leclerc how he's feeling about his upcoming F1 debut with Sauber, I'm sure he would say, 'I can't wait, I'm ready, bring it on', or words to that effect. What else would he be expected to say?

As the junior driver with the biggest buzz around him in motorsport at present, he has every right to be confident, and not many would doubt he is ready.

But F1 brings extra pressure, more media attention, different challenges... Is he ready?

Let's go behind the visor, and listen in to what the Chinese Buddhists so aptly call the Monkey Mind – that commenting, chattering Murray Walker that we all have in our heads.

So, I've made it to F1. Great, but I've got to make sure I don't mess it up. I've got to be ready for any changes at Ferrari – surely Kimi Raikkonen will be gone before too long. I'm used to winning races and championships, but there's not much hope of that this year. The 'championship' I must win is the one against my team-mate. So, how am I going to do it? OK, how about this...

- 1 I hit the ground running, make sure I'm faster than him right from the first F1 test. Put a psychological marker down, positive body language around the pits – not arrogant, just a bit of Muhammad Ali's 'fake it till you make it'.
- 2 Get the team and mechanics on my side, make sure they know how much I value their work and efforts.



Leclerc made four Friday practice outings for Sauber in 2017

- 3 Always focus on the process of being fast, not just the lap times, and also the process of quality testing, especially regarding accurate feedback to my engineers.
- 4 Bouncebackability – recover quickly when things don't go to plan.
- 5 Be totally prepared physically, technically and mentally, well before the first grand prix.
- 6 Expect to be more excited, even nervous, and deal with it. Stay calm, composed and confident.
- 7 Enjoy the challenges of being an F1 driver. Smile, give myself permission to have fun.
- 8 Never forget... pressure is always a privilege. *OK, let's go. Allez Charles, Allez!*

“Always focus on the process of being fast, not just the lap times”

In the gladiatorial arena of F1 combat, to be the best you can be, the '3Cs' are essential: composure, concentration and confidence. So far Leclerc has exhibited all three very impressively. Will his first F1 season trip him up in any way?

And is his team-mate Marcus Ericsson working on his own cunning plan? He's fast, but he's used to plying his F1 trade at the back of the field, working alongside drivers with nowhere near the hype Leclerc has. Can Ericsson raise his game? Or will he be psyched out by his younger, very highly rated team-mate? I reckon it won't be long before we find out.

Ericsson has to really go for it, in testing and the first three races. I came into contact with him when I was working with Henry Arundel, his Fortec team-mate back in his Formula BMW days. Back then, Ericsson was the blue-eyed boy and he won the 2007 title, but it's been a while since he won the Japanese F3 Championship ('09), or even a race (in GP2 in '13). Nothing boosts confidence more than winning.

He has the usual composure of a Swede and his concentration seems good. But how's your confidence now, Marcus?



Putting down an early marker will be important for Leclerc's confidence





ANGLESEY

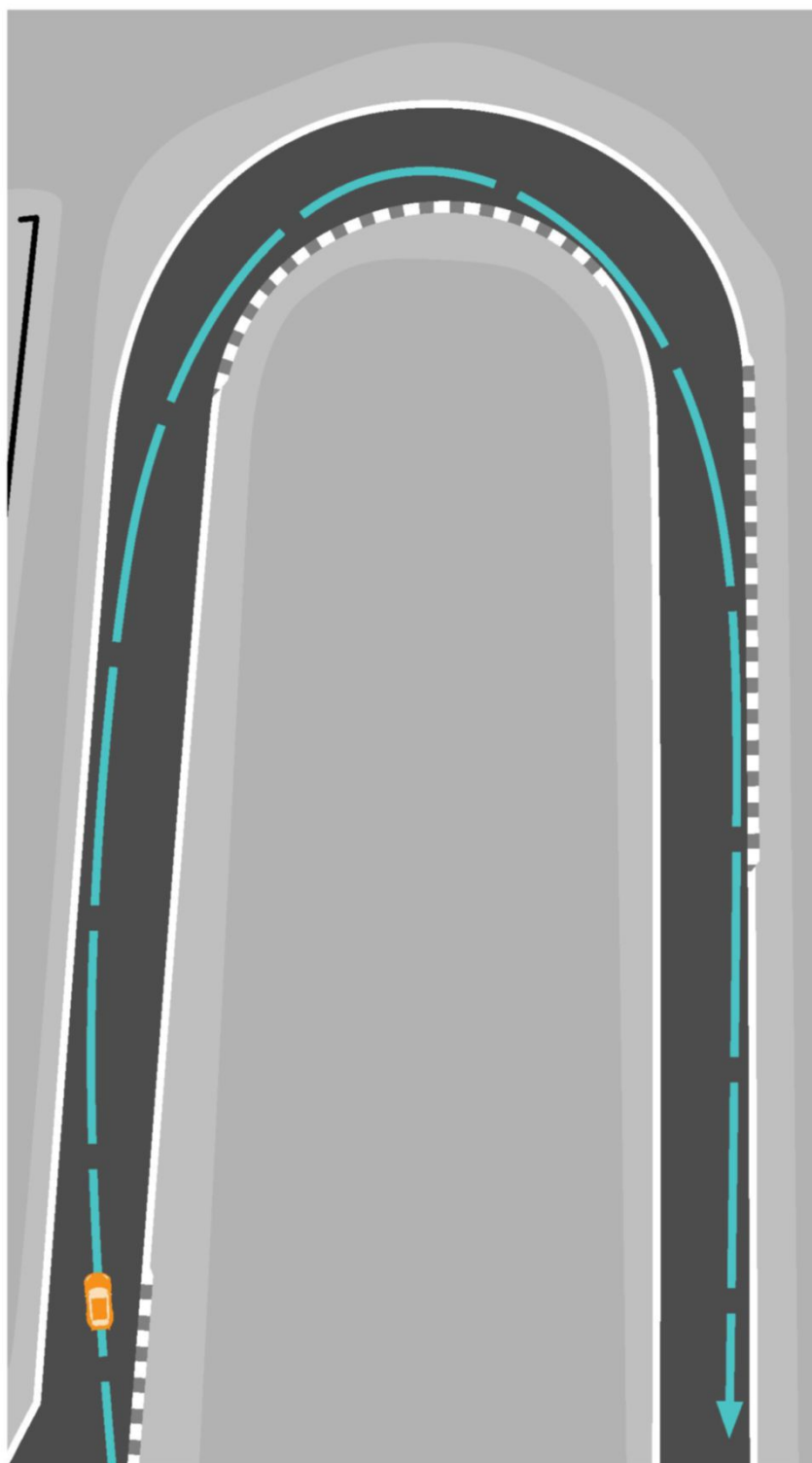
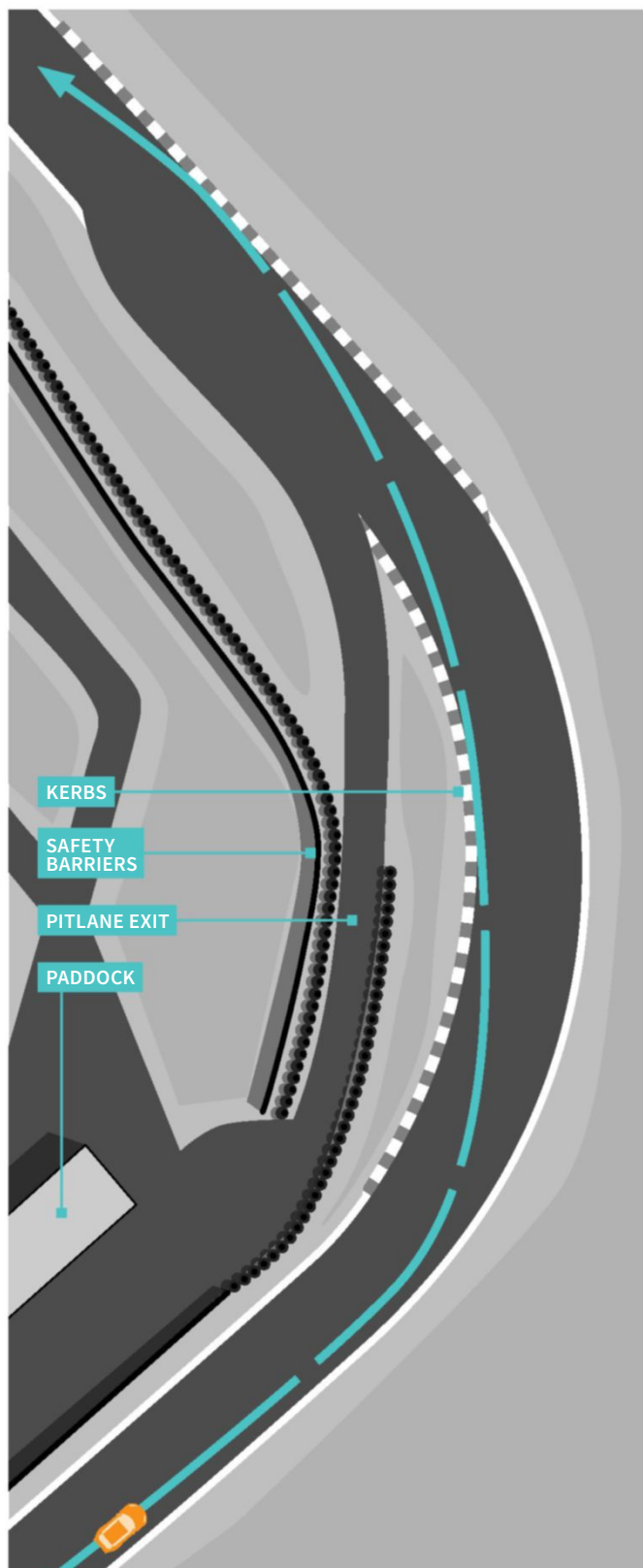
ANTHONY REID

VETERAN TIN-TOP ACE IS AN ANGLESEY REGULAR AND SHARES HIS TIPS FOR A QUICK TIME ON THE WELSH TRACK BY THE SEA



01 TARGET Turn 1

The cars that I've raced there don't require any braking into Target, just a lift. It's actually better to turn in flat and then lift slightly after with a rolling action on the throttle, rather than coming completely off. That gives you better balance. You've also got to push your vision up to the exit as it's easy to run out of road, so it's about looking through the corner before you clip the apex so you're making smaller hand corrections. You're using a lot of kerb at the exit, but you've still got time to get fully back to the left in order to get a straight line for braking for the next corner.



KEY CORNER

02 THE BANKING Turn 2

It's a hard brake but you can really lean on the camber of the surface. You don't take the classic late turn-in, but head in relatively early at a high speed and trail brake all the way to the apex. As the speed drops, you're adding lock and rotating the car so when you get to the apex you've got good attitude to pick up the throttle for a strong exit. The exit is terribly important for a fast lap as the next half a lap is very fast. If you don't get it right, that's time you cannot get back.

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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.

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03 CHURCH Turn 3

There's a nice big gravel trap waiting for you if you go in too hot, but thankfully I've never ended up in there. I've done a 360 at the exit, though! That corner again requires a relatively late turn-in, but you need to approach it flat. I've never driven a car that can take it flat all the way through, but certainly the entry is full throttle. A lot of people make the mistake of turning in early as that feels more comfortable, but you then choke the exit and don't get the strong slingshot to take you up the hill. Turn in as late as you can and then roll the throttle back for greater stability and a straighter exit. It's pretty consistent regardless of what state your tyres are in.

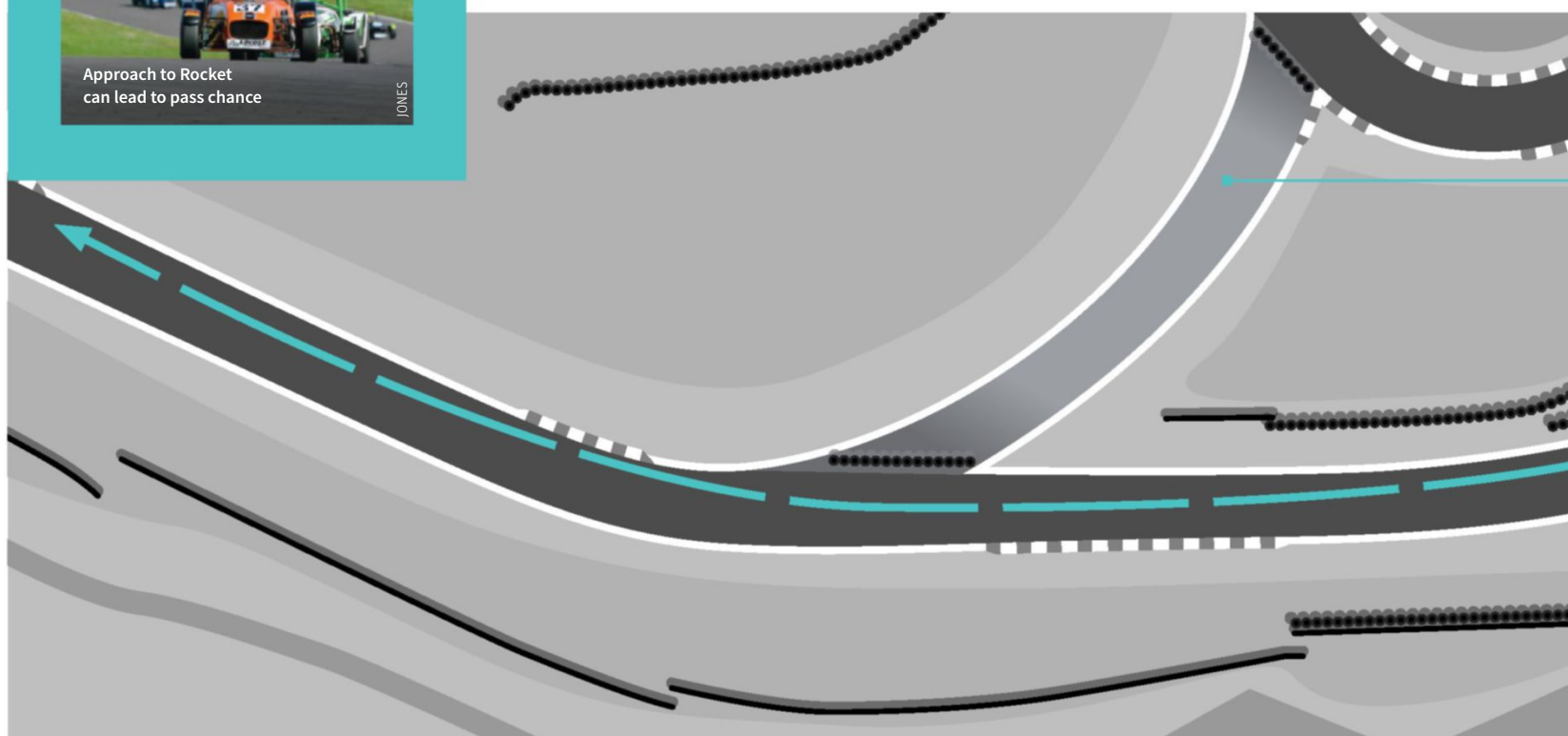
04 BACK STRAIGHT

The later you turn through the flat kink, the sooner you can actually then position your car on the right-hand side of the track for a nice straight braking zone into Rocket. It's quite an art and if you succeed, you can pass people there – to their surprise. If you can get a nice tow up the back straight then you're alongside. Then, with the inside line, you don't even have to brake later than them – just slowing at the same rate as your opponent means you can pass.



Approach to Rocket can lead to pass chance

JONES





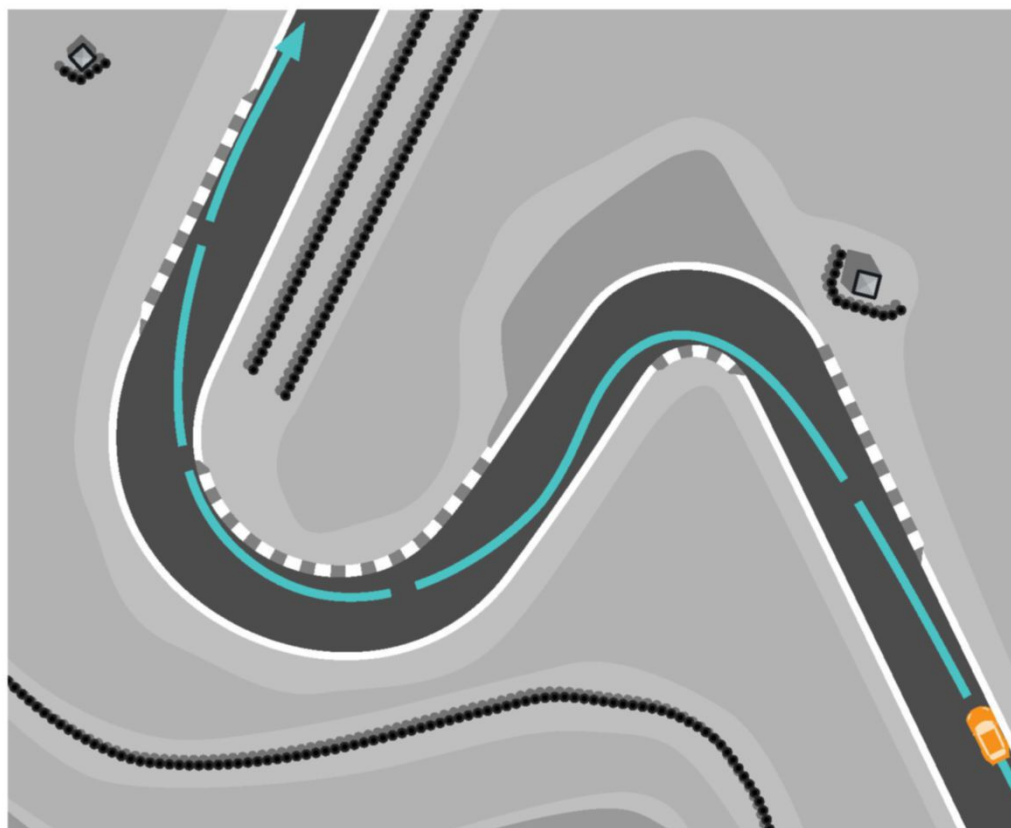
THE WEATHER

Like any good track it's a real challenge – technical in places, fast in others and it produces good racing, but the wind can have a big effect on your speed and lap time, a bit like Snetterton. The thing I like is that when it's a clear day and you come down off the highest corner into the Corkscrew, it's almost like you're driving into the sea. It's pretty spectacular – if you've got time to look!

The weather changes very quickly and the remarkable thing is that Anglesey has a sort of micro-climate in that, when the surrounding areas are wet, it often remains dry.

When it rains, you have to drive the wet line to get the best grip – it's a heavily used surface for testing so the racing line tends to be quite polished. If you drive off-line then there's more coarse asphalt with a lot of extra grip.

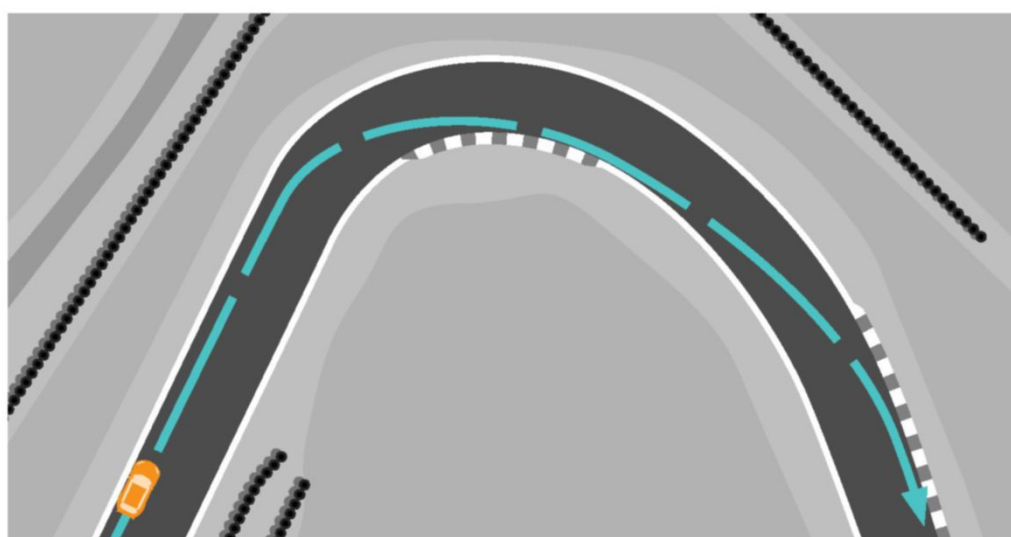
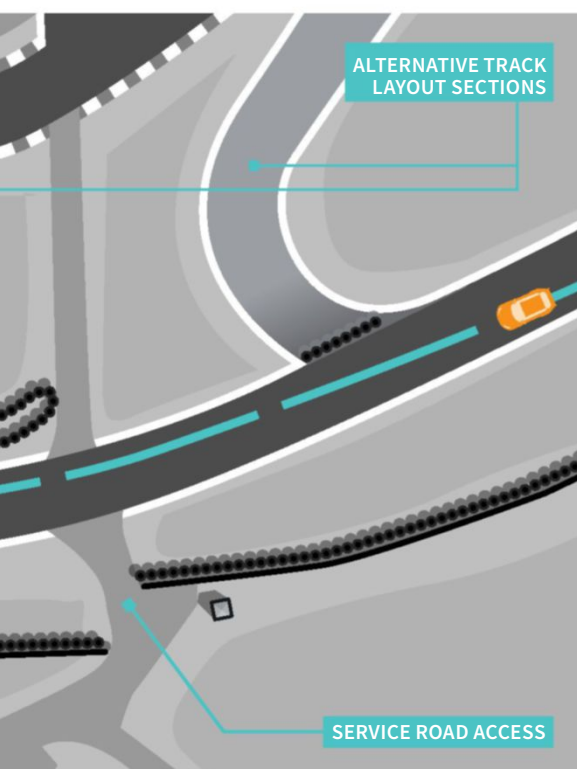
Outside lines are very much the order of the day, except when you're coming down through the Corkscrew – you spend so much time crossing racing lines that you can lose time by covering too much ground trying to avoid the dry line. It's a tradeoff between finding extra grip and making a longer lap. Drainage is surprisingly good given the elevation, where you would expect puddles to accumulate at the bottom of the hills.



05 ROCKET Turns 4,5

You don't want to enter unless the car is square, as the braking area relies on having a settled car. You want to open up the left-hander and you can also brake super-late as the track's going uphill, meaning you can really lean on the front. But it's about how you apply the brakes – snatching them will lock the tyres as the front of the car is unloaded. You have to squeeze and be

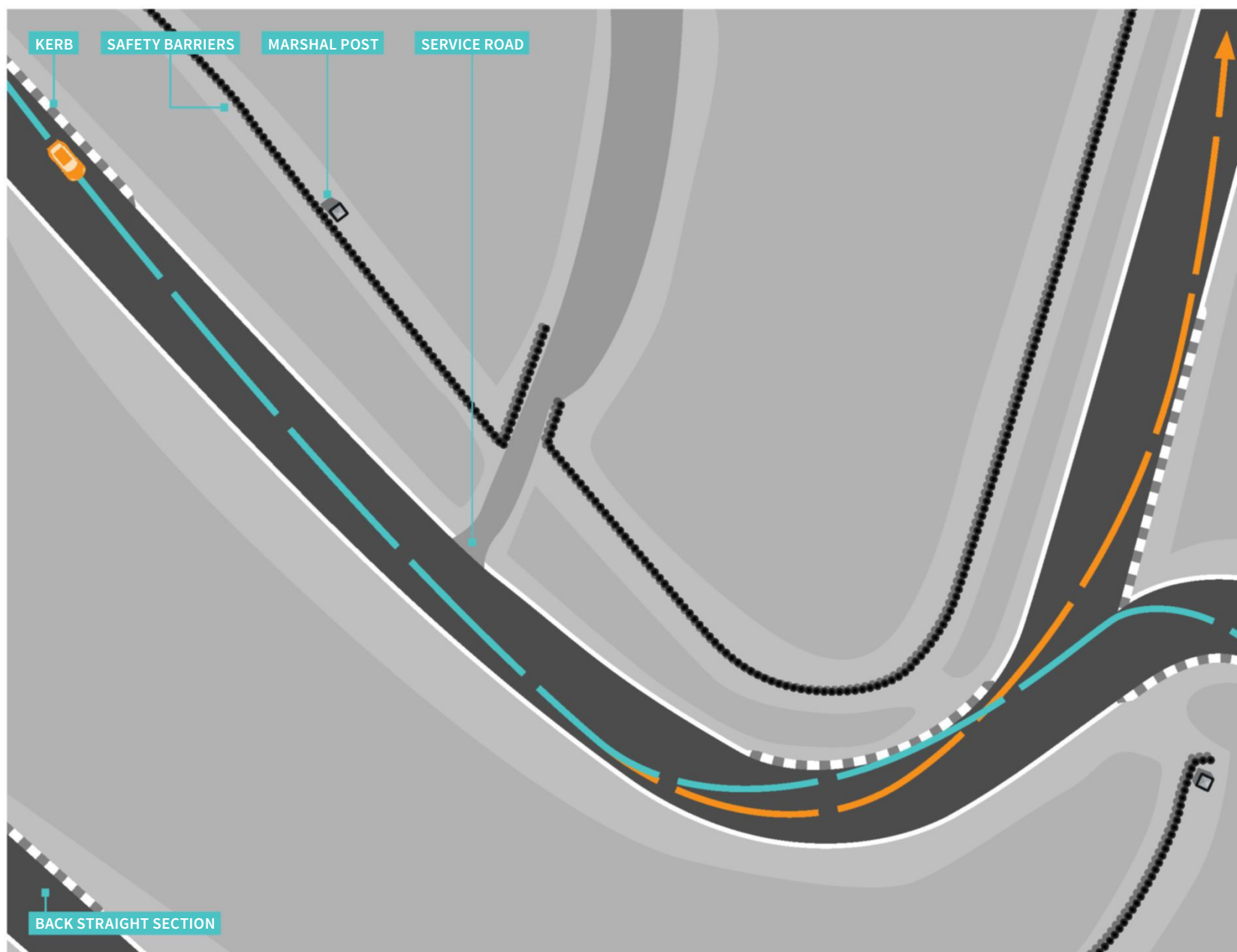
patient, waiting for the weight to transfer. The first part of Rocket can also work as an extension of the braking zone if you enter on an earlier turn-in, then rotate the car to pick up the throttle early. But the second part is a long right and it's easy to be greedy, so patience is needed. You exit the first part almost fully on the right so it's a tight line, hugging the kerb all the way round.



06 PEEL Turn 6

The interesting thing here is that it's an uphill entry that flattens off and drops away at the exit. It's tricky not to enter too quickly on a late apex. Often there's mid-corner understeer, whatever car you're in. As the highest corner on the circuit, you're exposed to the

wind with the sea breeze pushing the car wide. If you try to compensate with an early throttle, you'll run out of road at the exit where there's a nasty serrated kerb. You've got to be disciplined and bide your time, or you won't hook the car up and it'll ruin your exit.



07 CORKSCREW Turns 7,8

Corkscrew is a lot of fun. Many people like to slow the car too much and almost park it halfway down the hill. But although you're going downhill, the rear end rarely tries to overtake you so you can keep some speed. I turn in faster but with a shallower trajectory, trail braking most of the way as I enter the corner. If you enter too quick, your brain tells you to brake hard but that puts your nose in and then that does lighten the rear of the car. You've got to be disciplined to release the braking pressure to stabilise the car.

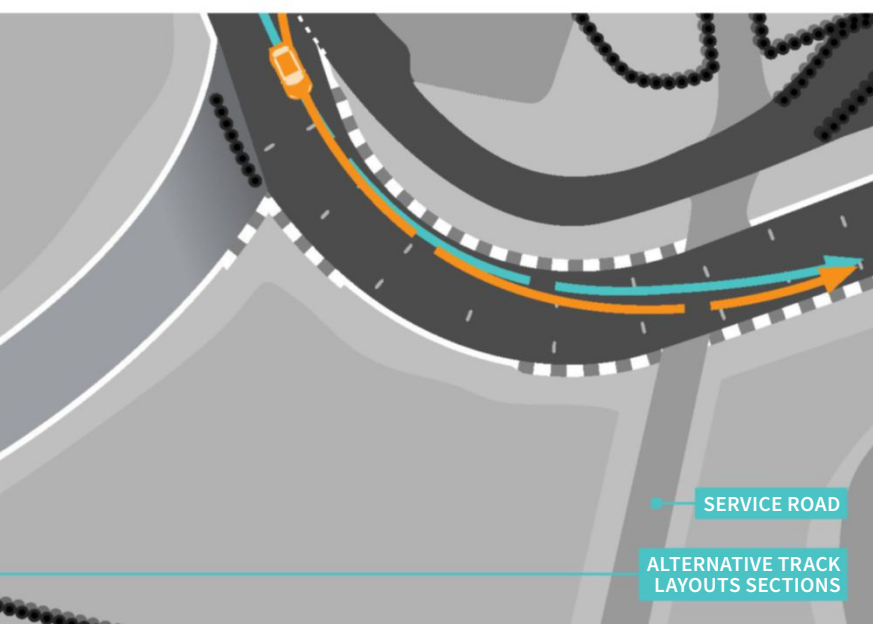
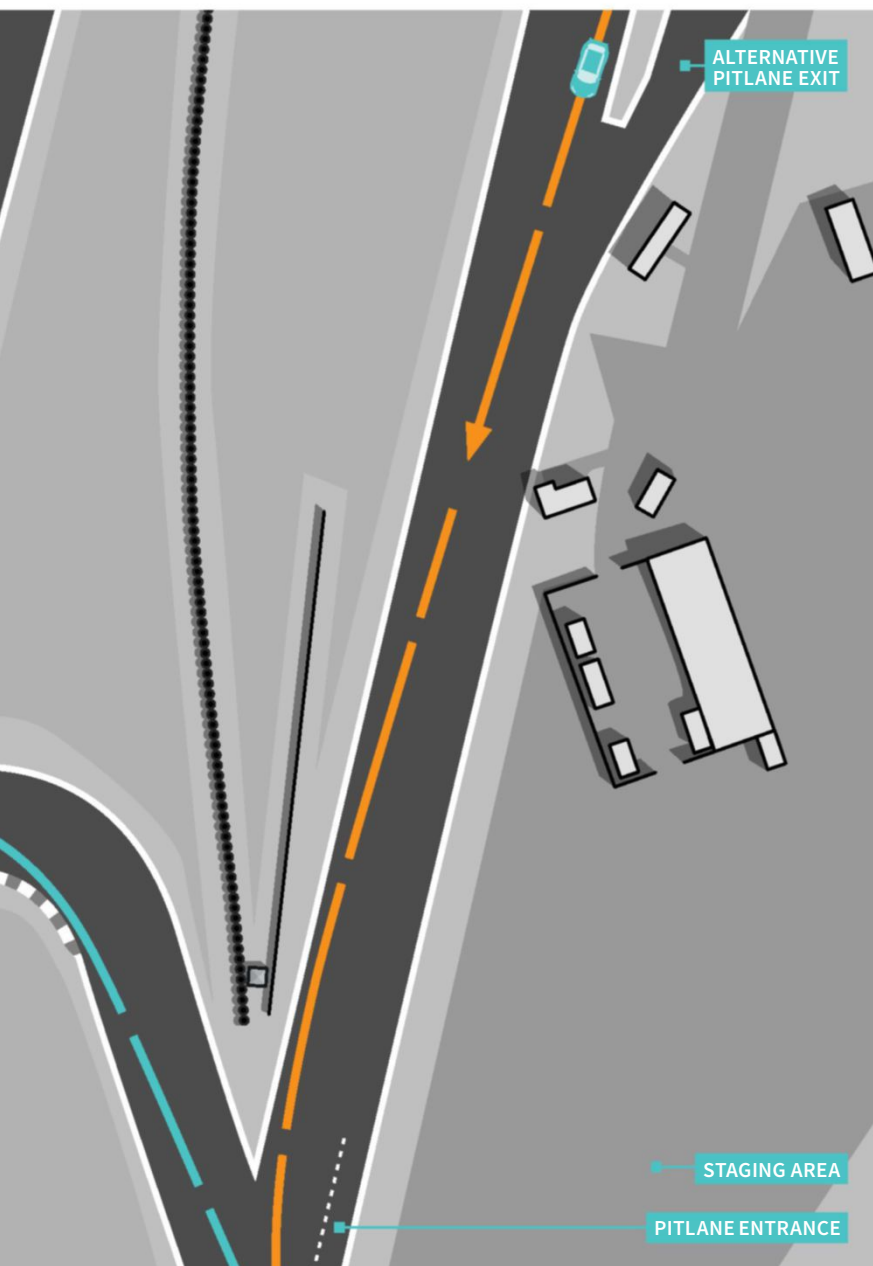
Although it feels counter-intuitive, you can carry the speed. There's a chance for a quick burst of acceleration before the next tight right, but don't be greedy as you'll lose track position and compromise the final corner. Keep it quick but neat, as you're looking to optimise your speed. While it's tight and not an overtaking opportunity, you can close the gap and trouble someone by filling their mirrors and set them up for the start of the next lap if they're a little untidy.

08 BUS STOP Turn 9

In actual fact, it's fair to say that this is where the lap starts. The entire lap time counts on getting a good exit off the final corner to open your lap. The kerb is wide at the exit so you

can straddle it, even though it's quite aggressive, and that gives you the launch. Just be sure to keep on the good side of the stewards and not exceed track limits.

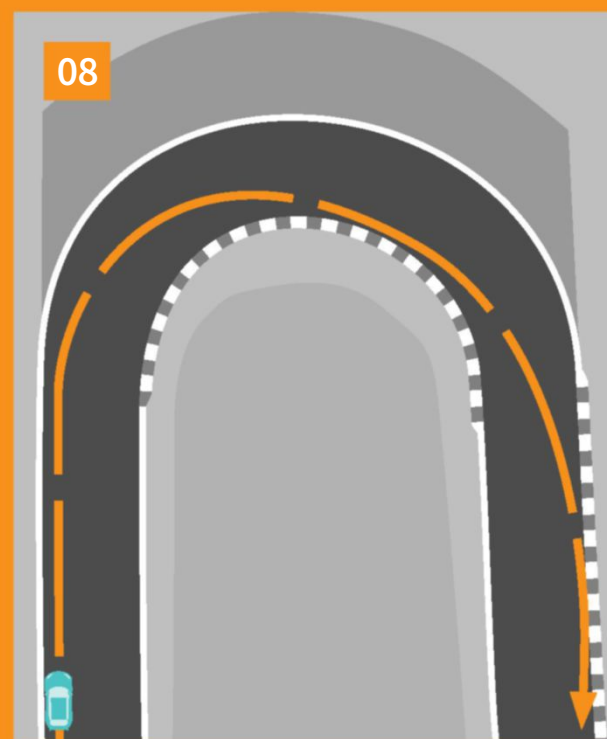




INTERNATIONAL CIRCUIT

07 CORKSCREW Turn 7

The Corkscrew is a very different proposition on the longer International layout. You come out of Peel and down the hill and then it's very much a conventional 90-degree left apart from the elevation. The apex is flat and then you're on the rise through the exit. It's very much a vision corner as you come in. You have to focus on the apex, then look round for your clean exit, almost looking past where you want to turn in. I've been testing on the Coastal circuit in the mornings and then the International circuit later on and it's surprisingly easy to keep focused on what route you're taking, rather than getting the two mixed up.



08 THE HAIRPIN Turn 8

It's a very tight hairpin, meaning there's lots of braking to be done. It's easy to go too deep and go off the track, so you need to be disciplined. But, because it's tight, you need to look for the corner, not where to brake. Trust your brain to move your foot and to judge how hard. If someone's being very defensive, it's easy for them to cock up the exit, so it's a chance to cut back and a good opportunity for overtaking. If you fail to control your balance on the apex and the car doesn't have a good attitude, then it's very expensive in terms of your time. Do not compromise.

09 BUS STOP Turn 9

The last corner is a little different as suddenly it requires a big brake. From the Corkscrew, there's none to be done, but instead you're approaching from a long straight so the entry phase is very different between the layouts. But your exit is no different, getting on the throttle the same way.

PARTNERS' NOTICEBOARD



Villeneuve (right) enjoyed ferocious scrap with Arnoux at Dijon in '79

RSRNURBURG TO HOST DIJON TRACKDAYS

Driver coaching and trackday specialist RSRNurburg has released its calendar of events for 2018. The wide range of experiences at classic European tracks includes, for the first time, the 2.36-mile Dijon-Prenois circuit in France.

A deceptively simple circuit of eight corners, Dijon hosted Formula 1 on six occasions (including the 1982 Swiss Grand Prix). It is perhaps most famous for the spectacular battle for second between Gilles Villeneuve and Rene Arnoux in 1979 (above right).

Dijon is now predominantly used for

endurance and historic events. But trackday enthusiasts can sample its undulating sweeps on 10 dates between May and October, in their own car or using a trackday-prepared vehicle from the extensive RSRNurburg rental fleet, all while improving their technique alongside a qualified instructor.

Dijon joins the Le Mans Bugatti Circuit (October 30), Zolder, Hockenheim, the Salzburgring and the Red Bull Ring on RSRNurburg's tour of Europe, in addition to established favourites Spa and the Nurburgring. Company founder and CEO

Ron Simons counts Dijon among his favourite circuits to instruct at, and believes its place on the expanded 2018 calendar means there is even more value for visitors travelling from afar.

"I love it because it's in the middle of Burgundy, so it's not only very beautiful but also of course the food and wine are sensational," he says. "The track is still the same as it was for that famous battle."

"You always want to do more days. The addition of Le Mans, for example, which is very close to our final date in Spa (November 3), so people from the US or

Australia don't need to fly over only for one day – they can go to Le Mans and then come over to Spa."

The trackday calendar year kicks off at Spa and the Nurburgring GP circuit on March 16, followed by two Premium Trackday experiences organised by RSRIberia at the Ascari Race Resort (March 17-18) and Algarve Circuit (March 20-22). It will be a busy year for RSR, but Simons will have it no other way: "When you have the whole operation, why sit there doing nothing when there are other tracks available?"

FOR A FULL LIST OF TRACKDAY DATES, PLEASE VISIT OUR WEBSITE www.rsrnurburg.com/calendar OR CONTACT US ON sales@rsrnurburg.com

VALETPRO

LAUNCHES SURVEYS IN THE LOTUS EUROPE CUP

ValetPRO plans to launch feedback surveys with Lotus Europe Cup teams to improve the range of car-care products it provides to motorsport and automotive markets.

The pH-neutral specialist will be the title sponsor of the Lotus Europe Cup in 2018. It hopes to benefit from the insight of teams that regularly use its products, and learn about the valeting challenges posed by racing at circuits including Silverstone, Le Mans and Spa.

"We want to identify gaps in the market that will make race teams' lives easier and either increase or better our product range," says managing director Greg Spink. "Initially it will be a case of the teams using our products and then



finding out if there is anything they need that we don't currently provide – whether that is a rain-repellent treatment they put on their windscreens, or a product that helps with the maintenance of the vehicles."

ValetPRO has an in-house team of chemical experts who will conduct feasibility studies on suggestions from the teams as part of its collaborative efforts.

"It will be a continuous process," adds Spink. "As long as we're involved, the feedback will be invaluable."

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ValetPRO wants to introduce new products to its range

WALERO

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Since its launch in 2015, Walero has led the way in fighting dehydration and discomfort in the cockpit with its range of flame-retardant, temperature-regulating base layers. Using technology developed for NASA, Walero absorbs heat as the skin warms up, removing the body's need to sweat, then releases it again as the skin cools to maintain stable body temperature.

Fluid loss and overheating also exert a negative effect on concentration and decision-making, so it's hardly surprising that Walero's message has spread far and wide. Its ambassadors range from BTCC race winner Aiden Moffat and British F4 prospect Seb Priaulx to Porsche Club Championship racer Nathalie McGloin (below), who became the first female MSA Competition Licence holder with a serious spinal injury three years ago.

McGloin, the recently appointed president of the FIA Accessibility and Disability Commission, was introduced to Walero by trackday

guru Calum Lockie after struggling with sizing and temperature control and has worn it ever since.

"My disability means my internal thermostat doesn't function properly so I usually get cold really easily, but I can't sweat, so if I get too hot then I will overheat," she explains.

"The first time I wore the Walero product, I was amazed by its efficiency because I'm usually either too hot or too cold, but I felt I could regulate my body temperature much better."

McGloin admits she sleeps with Walero gear on during winter – "it's so nice against your skin" – and would recommend it to any racing driver looking to stay comfortable and cool in the car.

"Given the comfort and efficiency of the product in all weathers, hot and cold, why would you settle for anything else?" she says.



McGloin uses Walero to help control her temperature in the car



Treated with Envirotech+ anti-microbial agent that defends against 99.9% of bacteria, Walero next-to-skin base layers keep you fresher for longer

Walero garments are tailored for a superior fit, with flat-lock seams and supersoft fabric for maximum comfort under race conditions

Developed by NASA for off-world applications, Outlast fabric technology actively regulates body temperature despite changes in your immediate environment, effectively reducing sweat by 30%



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HOW SIMULATION IS

POWERING A BTCC UNDERDOG TO GLORY

SPEEDWORKS WON THE INDEPENDENT DRIVERS' AND TEAMS' TITLES LAST YEAR AND, WITH IN-HOUSE SIMULATION CAPABILITIES, IT'S AIMING FOR THE VERY TOP IN 2018

BY JAMES NEWBOLD

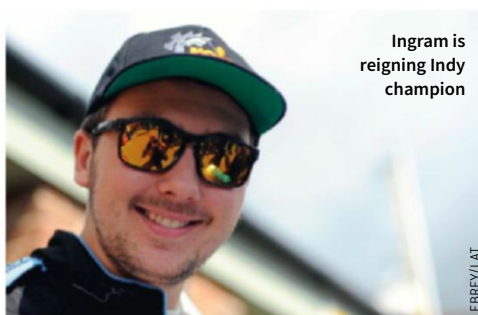


MATT SAYLE

There's an element of romanticism to the story of a single-car independent team holding its own against the British Touring Car Championship's manufacturer-backed giants, but Speedworks Motorsport has no plans to rest on its giant-killing laurels just yet. Independents Trophy champion Tom Ingram won four times on his way to third in the standings last year and returns for a fifth season at the team with the overall title as his stated aim. Ordinarily, that might appear fanciful for an outfit of Speedworks' size, but team boss Christian Dick has an ace up his sleeve.

Since Speedworks installed a Pro-Sim Evolution Simulator, built by GP2 race winner Adrian Quaife-Hobbs, at its Cheshire HQ last March, Ingram is one of a number of regular visitors to make great strides in his driving, helping build Speedworks into a more competitive proposition on the track and off it. Simulation is now a key part of the business model, with on-site coaches provided for the team's sportscar drivers (see panel, right) and private clients alike.

"Simulators weren't accurate enough or readily available when I was driving, so I was a bit sceptical



Ingram is reigning Indy champion

EBREY/LAT

about how much value it would bring to the team," says Dick, who competed regularly until he was injured in a crash at Zandvoort in 2014. "But since we invested and we've had it up here, it's definitely brought something to the table.

"We did have it pre-season last year but it was only just before [the first race], so it's the first winter we've had it in place to keep drivers race-fit.

"There are a number of areas where it can improve drivers, whether that be trying to find those last tenths in a sprint format, or for an endurance racer to focus his attention and bring those concentration levels up.

To do that on-track would cost a fortune, so to have that controlled environment is fantastic. The more of a complete, one-stop shop we can be, the better."

According to Dick, Ingram "knows the sim inside-out" and has been conducting extensive preparations over the winter to be ready for the Brands Hatch season opener, a happy hunting ground in recent times. Should he repeat his trick from 2016 and '17 of winning the first race of the year – the one time all season that the entire field runs on a level playing field without ballast – Ingram would become the only driver in the championship's 60-year history to do so in three successive seasons.

"It is true that you do get rusty," he says. "The first time I jumped in the sim, even after a couple of weeks, everything felt so clunky and disconnected. I really had to think about what I was doing. Within 15 or 20 minutes on the sim, it was back, but that's valuable track time when you're going into practice."

Structuring the sessions is important to make the simulation experience as realistic as possible. Rather than hammering around and logging the laps with no definitive goal in mind, Ingram does a full run-through of free practice one, two and

ROLL OF HONOUR

Ingram is one of only six drivers to have won the opening round of the BTCC in consecutive seasons:

Frank Gardner 1972-73

Andy Rouse 1974-75*, '80-81*, '86-87

Gordon Spice 1976-77

John Morris 1980-81*

James Thompson 2003-04

Tom Ingram 2016-17

* Includes separate races for different classes.



Brands Hatch Indy has been a happy hunting ground for Speedworks

“There’s more to it than just trying to be the fastest person on the simulator”

qualifying in the days before each event.

“I do it as you would do the race weekend because then you’ve gone through all the scenarios,” he says. “If you just go and do an hour straight, then you can guarantee in the last 10 laps of the session you’ll find stuff that you wished you’d done earlier.”

“The fastest person at each circuit won’t win all three races, so there’s more to it than just trying to be the fastest person on the simulator. It’s a case of looking after your tyres, your brakes and having a strategy for everything. By the end you know how you can approach the weekend because you’ve already done it before you get there.”

Dick describes Ingram as “unique” for the time he can spend on the sim without falling into bad habits, and it is this blend of diligence and self-discipline that Pro-Sim founder Quaife-Hobbs believes is crucial to get the most from the tool.

“As more and more people train and practice, just doing a four-hour session or even a day before each race isn’t enough,” he says. “As with anything, doing a little bit every day is better than trying to blast it in one go because that way it sinks in – you’ll be quicker because you’re not trying so hard.”

Taking a team approach to sim work is still somewhat unusual in the BTCC, although many drivers have installed devices in their homes.

Quaife-Hobbs also provides one-to-one coaching services at his own facility in Sussex, but believes more teams can benefit from having on-site simulation capabilities that enable drivers to work closely with their engineers in a more relaxed setting.

“The [engineers] run it and they know their drivers better than anyone else, which makes it a lot more tailored to the drivers’ needs – they can work on exactly what they see,” he says. “It’s not really a one-size fits all, you need to adapt it for each driver.”

“When people come to me they feel like they need to be driving all the time, but at the workshop they can get more out of it because it’s not the same pressured environment.”

Ingram is perfect proof of that and, with a winter of preparation under his belt, heads into the new season in confident mood. Little wonder, given his recent record on the Indy Circuit. After all, it’s not often that a genuine slice of BTCC history comes up for grabs...

“Fingers crossed, that’s what we’re hoping for,” he laughs. “A hat-trick would be pretty cool!”

VERSATILITY AND UTILITY

Unlike Formula 1 teams that use an on-site simulator, the Pro-Sim unit installed at Speedworks is geared more towards developing drivers than the car, which is particularly useful for a team that runs different types of car. Croft in a BTCC Toyota and Dubai in an LMP3 Ligier couldn’t be more different, but the Speedworks sim has models of a wide range of machinery – including GTs and single-seaters – with base set-ups pre-loaded, allowing the driver to focus on improving their technique.

“The sim they’ve got can adjust to any position, they’ve got different steering wheels for GT cars or single-seaters, they’ve got a manual gearbox on it and brakes can be fully adjusted, so with the software they can create any scenario they want,” says Pro-Sim founder Adrian Quaife-Hobbs.

Speedworks kicked off the season by entering its Ligier JS P3 in the 3x3H PROTO Series at Dubai in January, with team regular Jack Butel, Konstantin Gugkaev and 17-year-old Kay van Berlo taking a brace of class victories after a broken driveshaft forced them out of race one.

According to Speedworks boss Christian Dick, simulator time was “invaluable” for learning the track and getting used to how it evolves over a race stint, particularly for car-racing debutant van Berlo.

“Kay did an exceptional job with not only the circuit new to him but the car, the tyres, the brakes, everything,” he says. “But thanks to the accuracy of the sim, he felt comfortable straight away.”

Quaife-Hobbs’ sim has broad uses





BRINGING AN '80s CLASSIC

THE WILLIAMS FW07C IS ONE OF THE MOST SUCCESSFUL CARS ACTIVE ON THE HISTORIC FORMULA 1 SCENE, BUT THE ADDITION OF A SCHROTH iNDi SEAT COULD MAKE IT AN EVEN MORE POTENT FORCE. BY JAMES NEWBOLD

Carlos Reutemann's slump from pole position to eighth place at Caesars Palace to hand Nelson Piquet the 1981 Formula 1 drivers' title is the stuff of legend, a cautionary tale for drivers trying to win a title by playing the percentages. To this day, it's never been satisfactorily explained what caused the enigmatic Argentinian's capitulation in the Las Vegas heat, lapped by victorious Williams team-mate Alan Jones, which has only added to the mystique surrounding the DFV-powered FW07C.

Today, chassis FW07C-14, which Reutemann used to finish fifth in the Austrian Grand Prix, is owned by Max Smith-Hilliard's Forza Historic Motorsport concern and has achieved significant success in historic racing with Nick Padmore at the wheel. In 2016, Padmore won all 12 races he started on his way to the FIA Masters Historic Formula 1 Championship and – stickered up with the #1 as used by Jones in 1981 – won at the Silverstone Classic in his only appearance with the car last year.

So how do you improve on perfection?

The regulations in FIA Masters Historic F1 are tightly governed to ensure cars run in their original specification and use components of a type employed in period. Cars must have a Historic Technical Passport (HTP) to enter, and special approval is required from the FIA technical delegate to use alternative components, if originals are unavailable. Side skirts have to be run at a minimum of 40mm at all times and DFVs are limited to 10,000rpm.

But the regulations do not extend to the latest in seat technology, an often-overlooked yet vital element of a racing car to get right. For proof of that, just ask Toro Rosso's Pierre Gasly, who complained of back pain from an ill-fitting seat on his F1 race debut in Malaysia last year.

Having the correct support from the seat is especially important in a ground-effects F1 machine, with the huge speeds through the corners putting enormous pressure on the body. As Padmore explains, "the load doesn't come through the steering wheel, it comes through the core of your body so you're being

pushed through the side most of the time", and the traditional two-part foam mould does little to help. Primarily designed for loft insulation, it has no shock-absorbing properties and typically lasts only a few race weekends before it begins to lose shape and has to be replaced.

Schroth's pioneering iNDi Seat kit provides a more scientific solution for optimising performance, while also improving the support and protection offered to a driver in a crash.

Devised by Chris Norton in 1996 and tested extensively by independent observers at an FIA Approved Test Laboratory, the Schroth iNDi Seat kit uses a vacuum casting bag with a unique bead and quick-cure resin mix, making it a simple and professional system to fit drivers of all shapes and sizes comfortably into any car. The casting bag has an on/off valve, a mixing jug, funnel and a hose used to suck the air out of the mixture.

The resin can be mixed anywhere, from a clean workshop floor or trackside under an awning, and will work at any temperature since, as Norton puts



Above: Reutemann almost won 1981 world championship with Williams FW07C.
Left: chassis 14 is still a success in historics and won Silverstone Classic with Padmore

JAKOB EBREY

INTO THE 21ST CENTURY

it, “we don’t know whether they will end up in Florida or Norway”, and it’s this versatility that makes it highly appealing to customers across motorsport.

The product is the official seat for leading British marques Radical and Caterham, but can also be found in different series at national and international levels ranging from Formula 1 – Norton’s fondest memory is a seat fit with Michael Schumacher at Fiorano in 1997 – to the British Touring Car Championship.

As long as the driver doesn’t change shape, the INDi Seat can last five seasons or more. It also stands up well in an accident – when Rob Collard’s spinning BMW was collected by Will Burns in the BTCC at Silverstone last year, the West Surrey Racing machine was destroyed and Collard had to miss the season finale as a precaution, but the seat was undamaged.

Historics are a growing market for the INDi Seat, with Padmore the latest to join the trend after spending a day with Schroth fitter Andrew Bentley at Forza’s Reading HQ.

Schroth has a technical partnership with Cobra Seats, so the INDi Seat can be professionally upholstered and embroidered to any specification. As you may expect from someone with a passion for historic motorsport, Padmore was barely out of his new seat before he was deciding where to



Padmore gets comfortable as Bentley fine-tunes his seat

place the period Williams logo.

“The experience with Andrew was great because he races as well, so he knows exactly what the driver wants,” he says.

“Seating position is crucial not only for safety, but also the more connected you are with the car, you’ll be able to commit a bit more to the corners and you won’t get so tired.

“We chatted about how we were going to do the seat and concentrated on getting me as tight in the cockpit as possible, almost to the point where I couldn’t get in or out. We had to shave it down a bit in the end, but it’s going to make a big difference.”

Although the seat fit with Padmore took most of the day, sportscar regular Bentley has had plenty of experience at the other end of the spectrum with ▶

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HOW IT WORKS

STEP 1

Sit the driver in the empty cockpit with no bag at first. Evaluate what the driver requires, and take the measurements and the position. Take these and move the beads to the required thickness and distances. Lay the bag onto a flat surface and form a seat shape. Apply a slight vacuum. Put the bag into the car, and then put the driver in again.



STEP 2

If you have too many beads, remove the bag and the valve and empty the beads. Once the driver is happy with the bead volume, mark on the bag where the driver is sitting, and where the back, the base and the legs were. These will be helpful later. Then remove the driver.



STEP 3

With the driver out, lift out the bag and then remove the valve. Mix the resins and water, referring to the instructions for resin ratios.

STEP 4

Pour resins and water into the bag. You will see the resins settle in the bottom of bag. Refit the valve.

STEP 5

Mix the resins and beads together. The beads will change colour when mixed properly. The process will take 5-10 minutes.

STEP 6

Form a seat shape again. Make sure you use a smooth surface to remove all creases in the front and back.

STEP 7

Put the bag back into the car. Reposition it into approximately the correct position before the driver gets back into the cockpit.

STEP 8

With the driver in, you have approximately 30 minutes to fine-tune their position. Then the seat is cured and ready for excess matter and seatbelt holes to be cut.



car owners who are too busy to do a factory visit and are itching to get out on track. He says the best results come from doing the right preparation, but one of the keys to the iNDi Seat's appeal is the flexibility to take as much or as little time as is necessary.

From marking out the shape of the driver, to mixing the resin and applying the finishing touches with a hot knife, the whole process can be completed in under an hour if you're running short on time.

"The quick-cure kit gives you about 30 minutes of setting time and is a very easy system to use because by the end of that time you can start trimming it, then get it in the car and use it," explains Bentley.

"The key to it if you're doing a fit is to understand that you've got all the time in the world when there isn't any resin in. The best piece of advice I can

give is to spend as much time as you can in the preparation stage and then it becomes easy.

"Normally I will spend a lot of time in the dry-fit process to give the driver an idea of what is achievable and try different things with lumbar support. Then once you've done all of your prep work, the actual fit should be pretty straightforward. If you've got a day to do the seat fit then take a day, take as long as you need to."

As a driver coach, Bentley is well accustomed to jumping between different cars and making do with less-than-optimal seat positions, but says there are still professional drivers in the ranks of touring car and sportscar racing who are unfamiliar with the benefits of a moulded insert.

"Traditionally you don't have a seat fit in a GT shell because it's all soft and squishy. You sit in it, put your

belts in and go, so there's a lot of very experienced drivers who have never had a seat fit," he says.

"When we do a fit for them in a prototype or a GT car for the first time, they're absolutely astounded that they can be as comfortable as they are. They're a bit annoyed that they've wasted 10 years of their career not being in a comfortable seat!"

As for Padmore, there are no concrete plans for him to race the Williams this year, although he has one eye on a winning return to the Silverstone Classic.

"You can imagine this car with this grip around there – the corners are so fast. I'm really looking forward to going back there and the iNDi Seat is going to support me all the way through it."

With his new seat bringing the FW07C into the 21st century, Padmore could take some stopping. ■

WHY LOYALTY IS AN UNDERVALUED COMMODITY

COMMITMENT TO A TEAM OR A MANUFACTURER IS OFTEN ABANDONED IN THE SEARCH FOR INDIVIDUAL SUCCESS, BUT IT STILL HAS A VALID PLACE IN MOTORSPORT

BY JAMES NEWBOLD



Schneider (left) won 2016 Nurburgring 24, eight years after retiring

It is often held that the mark of a truly great driver lies in their ability to win with different teams, but knowing when to stick and when to twist is an art in itself.

Over 60 years on from his fifth Formula 1 world title, Juan Manuel Fangio's record of winning with four different constructors is unlikely ever to be beaten, as huge advances in engineering have made it significantly harder for a driver to have an instant impact at a new team; only three times in the past 30 years – Ayrton Senna (1988), Alain Prost ('93) and Kimi Raikkonen ('07) – has a driver managed to win the world championship in their first season with a team.

Although 68% of drivers who have won more than one world championship did so with two or more constructors, flitting from team to team in search of success is a path strewn with risk, no matter how talented the driver. As Fernando Alonso has discovered, the grass isn't always greener on the other side.

Showing patience and loyalty is unfashionable in a sport that puts a premium on individual success, but drivers who choose to dedicate the best part of their careers to one brand rarely go unrewarded.

Just ask Bernd Schneider. Equally adept across touring cars and sportscars – as proven by his 1997

“Flitting from team to team in search of success is a path strewn with risk”

FIA GT title – Schneider has been a part of all of Mercedes' major motorsport programmes since '91 barring F1 and CART, only missing out on going to the States because then-Mercedes motorsport boss Norbert Haug wanted the '95 DTM champion to race in the revamped series for 2000 and scuppered a test with the Merc-powered PacWest team.

“In 1999 after Le Mans I went over to the US,” ▶

recalls Schneider, whose dalliances with F1 were limited to sub-par Zakspeed and Arrows equipment. “I made a seat in [Mauricio] Gugelmin’s car. I was really looking forward to the test, but two days before it started, Haug said we had to come back immediately. He was too scared I would like to stay there!”

Despite having no other racing options on the table for 1999, Schneider obliged and won three DTM titles in four years, then added a fifth in 2006. Legendary status cemented, Schneider called time on his glittering career amid huge fanfare in ’08, but returned just a few years later to support AMG’s Customer Sports programme and enjoyed a stellar ’13 in which he won endurance races in Dubai and Abu Dhabi, and at Bathurst, the Nurburgring and Spa.

Now 53, Schneider has one eye on a supporting role in the not-too-distant future, but remains active in GT racing and won the Nurburgring 24 Hours for a second time in 2016.

“I think it doesn’t happen very often in motorsport that a driver is connected that closely with one brand, because in motorsport things happen quickly and the relationship can change,” he says.

“When I finished Formula 1 at the beginning of the 1990s and I got an offer from Mercedes, I was really proud to sign the contract and I thought, ‘OK, if I’m good enough I will be here for the long term.’ But I did not expect that it would be the lifetime.”

Although there have been downs as well as ups – Schneider was part of the disastrous Le Mans programme in the late 1990s that ended with Peter Dumbreck cartwheeling into the trees – he describes the set-up as “really close, like a family.”

If that’s perhaps unsurprising after almost 30 years of service, it underlines that when mutual trust exists between team and driver, they can focus on performing to their best in the car, giving accurate feedback and building a rapport with the engineers. Once these relationships have formed, the benefits of staying put can often outweigh the uncertainties that may come with a pay rise or the nebulous promise of a more central role elsewhere.

That’s certainly the opinion of Nissan stalwart Michael Krumm. After two decades representing the make – including 11 straight years with the factory NISMO team in Super GT – the 2011 FIA GT1 world champion is one of Nissan’s most trusted development drivers and in recent years has been involved in projects ranging from road cars to Australian Supercars and Ben Bowlby’s radical DeltaWing.

“It’s good that after so many years I get listened



to and they trust my opinion,” says Krumm, who joined from Toyota to take up the offer of racing a works Nissan in the German Super Touring Championship in 1998.

“Imagine you change and you’re at the end of your thirties, then you have to start from zero. And you have already the other guys that are a long time there, so you have to be faster than everyone, cleverer, better with development... you have to be better than anyone for many years to build that base of trust. Changing to a different manufacturer is always a risky thing.”

But even if a driver is comfortable in a team and wishes to dedicate their future to them, the decision is not theirs alone to make. If it is to last, the arrangement must work for both parties, so drivers must continue giving their best to justify their place.

“As a driver you have a value, but that value isn’t guaranteed forever – you’ve got to keep earning it,” says Darren Turner, a fixture with the Prodrive-run Aston Martin Racing programme since it began in 2005.

“The journey has been magic, it still feels like Peter Pan living my childhood dreams, but it’s a two-way thing. There’s a big marketplace for drivers and there’s only so many jobs there, so you’ve got to make sure

that you’re giving 100% year in, year out, because there’s always someone else who will be more than happy to take your place.”

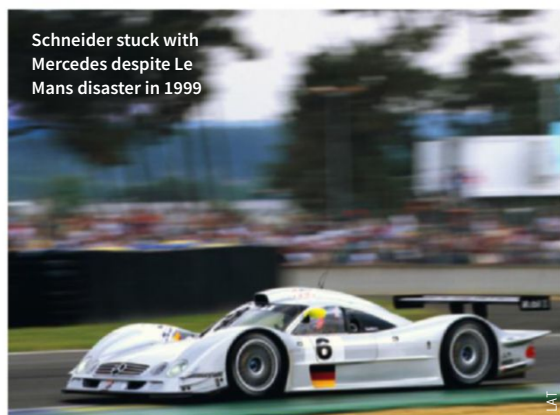
Japan-based Krumm believes loyalty is more culturally prevalent in his adopted homeland, but even there job security can never be taken for granted as motorsport is inescapably a results-driven business.

“It’s a two-way street,” he says. “The manufacturer has to be loyal to you too – many guys don’t get the opportunity like Frank Biela did [at Audi], or Schneider, or myself.”

Aside from the performance benefits of having a driver who knows exactly how a team operates and can serve as a benchmark to compare others against, it is also in the manufacturer’s interest for the long term to build around a driver to sell the merits of loyalty to road-car customers. Not every driver will be worthy of persisting with – as sometime Minardi racer Nicolas Kiesa’s fleeting one-race spell at Aston Martin in 2006 proves – but once a candidate that ticks all the boxes has been identified, manufacturers will invest a lot of responsibility to keep them busy and often do so by promoting from within, a luxury not available to privateer teams with no ladder structure in place.



Krumm developed Nissan’s 2011 GT1 conqueror



Schneider stuck with Mercedes despite Le Mans disaster in 1999



Turner (second right) won Le Mans with Aston Martin last year



Biela earned prototype chance with success in touring cars in the '90s

Audi adopted that approach with great success at the turn of the century when the banning of four-wheel drive in touring cars prompted a switch to prototypes for 1999. As an integral figure in the firm's successes in the '90s, winning domestic titles in Germany, France and the UK, Biela could reasonably expect to be a part of this, but was concerned the marque would instead call on established prototype drivers to lead development. The reality was more a mixture of the two, with Biela and fellow touring car ace Emanuele Pirro and Rinaldo Capello installed alongside Perry McCarthy and '97 Le Mans winners Michele Alboreto and Stefan Johansson at Sebring.

Biela repaid the faith placed in him with five Le Mans victories, each shared with Pirro, who achieved a new record of nine podiums in a row between 1999 and '07.

"That was something very nice from Audi that they trusted enough in our abilities and we had the possibility to grow with this project," says Biela, who is still contracted as a brand ambassador. "For a very long time I was always doing the first rollout. From both sides, there was a lot of trust in each other and it helps a lot, especially developing new things.

"If you look at the very big manufacturers, they stick to the same guys, because it makes working easier. When you get new drivers, new engineers, it always takes a while to find a good way to communicate. Very quickly the test season is over, so you're struggling for the first half of the season and you waste one year. Relying on things you know or set-ups you know can sometimes be an advantage."

This is true for all levels of motorsport, right up to the famously ruthless world of F1 where, as Biela puts it, "five or six years [with a race team] is a very long time".

Never known for being very patient when it isn't winning, Ferrari is often criticised these days for its lack of ambition in persisting with Raikkonen – only last year, president Sergio Marchionne lambasted the Finn for being an occasional "laggard" – but while he



THE PERKS OF LOYALTY

Gordon Shedden's decision to leave Team Dynamics and the British Touring Car Championship after 11 years and three titles demonstrates that sometimes even the best of partnerships can run its course. The eternal question of how to keep a driver satisfied is not easy to answer – a winning car and universal popularity in the team was not enough for a manufacturer-backed squad to keep Shedden – but it is clear that manufacturers with a presence across different categories have an advantage over their independent counterparts in this respect.

BMW employs a pool of works drivers who interchange freely across its programmes in touring cars, Formula E and GT racing, but has also been open to allowing its drivers to race for other brands when they are not in direct competition. Reigning Porsche Supercup champion Philipp Eng had only been with BMW a matter of months when he was called up by Porsche for Le Mans in 2016, while colleague Alexander Sims was given permission to race a Lamborghini in British GT the same year.

BMW is certainly not the only brand to take advantage of a flexible approach, which helps keep drivers motivated while also giving them ideas of how to improve their own team. Works Nissan driver Michael Krumm finished third at Le Mans in 2002 in a one-off appearance for Audi and relished seeing how the Joest team operated from an insider's perspective.

"It's interesting when you work with one



Shedden will not return to Team Dynamics

manufacturer [to see] how the other manufacturer goes about things," he says. "NISMO wasn't involved in LMP 900 at that time and I got called up by Audi. For them it was good because they didn't have to take care of me for the whole year, they could draft me for just Le Mans. I remember it only as an awesome positive experience."

As Aston Martin moves away from running a normally aspirated engine for the first time in the World Endurance Championship era, Darren Turner's experience of driving a turbodiesel SEAT in the BTCC in 2006-07 alongside his Aston commitments is once again paying dividends.

"It does give you an opportunity to see how other teams run a race weekend, and what the engineering level is at different teams," says Turner, who also contested a part-season alongside Krumm with Nissan's GT1 programme in 2010.

"It's a good thing to have drivers that are moving around, and it's good to have drivers that are a mainstay to a programme for consistency and an understanding of how your team is working."



Krumm took third at Le Mans for Audi in 2002



Ferrari gets flak for persisting with Raikkonen, but he still brings a lot to the table

LAT IMAGES

represents a conservative choice, his retention underlines how there are many ways to earn trust.

"The manufacturer has to trust you on many decisions over many years," says Krumm. "Building up that relationship and having good feedback over many years slowly builds a huge base of trust from both sides, so the manufacturer says, 'Let's keep him on.'"

Looking beyond the underwhelming results, Raikkonen's experience is invaluable in the limited pre-season testing period, his technical feedback is among the best on the grid and he is a non-political foil for Sebastian Vettel. Although his best days may be behind him, Raikkonen's pole in Monaco last year showed he can still hit the heights of old, and until Ferrari protege Charles Leclerc has finished his education at Sauber, the Prancing Horse could do much worse than use Raikkonen to keep the seat warm.

Proponents of young talent getting a chance will likely remain unconvinced, but from the

manufacturer's standpoint there is much to be said for a quick driver who won't rock the boat and is happy to put the team first. Turner learned the ropes from one of the best in his early days at Prodrive alongside David Brabham, and believes learning the art of compromise has been a key factor in his longevity.

"I think the reason it has worked so well is being low maintenance, jumping in and doing the job consistently year in, year out," he says. "I don't think I've ever been seen as political – I'm not really that interested."

"As drivers, we're just another element of the team and we have to work as part of that team. There's a lot of compromise in sportscars because quite often you'll have a team-mate that needs more track time or a few more runs on the new tyre and you need your team-mates to give you that benefit as well when you need it. Having that as a skillset, as in you can make the most of that compromise, I think is a winning attribute to a good team player."

At a time of great uncertainty in motorsport, with the World Endurance Championship and World Touring Car Cup entering transitional seasons and the DTM facing tough questions of its own, Biela laments that loyalty is becoming "less and less" important, but for as long as manufacturer stalwarts such as Schneider continue to fly the flag, it will never completely disappear.

When quizzed on the great disappointment of his career, the Le Mans debacle in 1999 that led to Mercedes' indefinite withdrawal from the epicentre of sportscar racing, Schneider's response is telling.

"I had pole position in 1998 and I was really disappointed when we retired after two hours [a steering-pump problem led to engine failure]," he says. "But even after '99 when I realised we never would come back to Le Mans, it was not the end of the world. 'It's just something that happened.'"

Time is a great healer, but you'll find no stronger manifestation of loyalty than in those five words. ■



Turner learned his trade from Brabham (left)

SPINNEVLAT



ENGINEER'S PERSPECTIVE

The UK has had four Prime Ministers and Watford has sacked 14 managers since Aston Martin Racing's Darren Turner began his Prodrive journey in 2003 with the Ferrari 550 Maranello. In the intervening years, Prodrive has also seen plenty of staff turnover – including team principal George Howard-Chappell, who now leads Ford's UK arm in the WEC – but the retention of Turner has provided technical director Dan Sayers with a crucial point of reference to draw from in the development of Aston's new turbocharged Vantage.

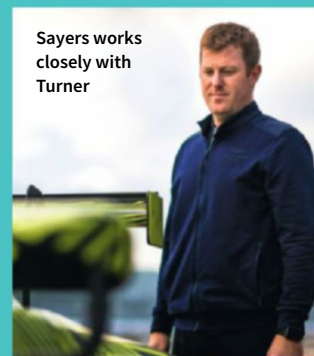
"He's obviously been here a long time and I think we've benefited a lot from it," says Sayers.

"His style is slightly smoother than some of the other guys, he's got mechanical sympathy, and you know his performances are always very solid, so it's quite useful when you go back to certain tracks and you've made developments to use him as a point of reference."

"We've had a few people leave and come back and he's always been around. He's local as well, which is extremely helpful because he can pop into the office a lot. He's always around helping out and he's actually very good at all the detail like cockpit layout as well."

"You could say he's built some things around him and it goes to show for things like Le Mans last year [when Turner, Jonny Adam and Daniel Serra won] that it benefits everyone."

Sayers works closely with Turner





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