

F1 2019

**Will the new rules
improve the show?**

WRC showdown

**Ogier takes sixth crown
after 'toughest fight'**

Macau Grand Prix

**Ticktum wins as Florsch
survives horror shunt**



AUTOSPORT

BRITAIN'S BEST MOTORSPORT WEEKLY

NOVEMBER 22 2018

THE FASTEST CAR IN THE WORLD

**The inside story of how
Porsche built an F1 beater**

**919 EVO
NURBURGRING
RECORD**

**5m19s
1160bhp
229mph**



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INSIDE THE SPECIAL PORSCHE THAT STOLE THE SHOW

Without doubt one of the coolest cars to hit a race track in 2018 was the Porsche 919 Evo. Neel Jani captured the imagination when he took this unrestricted sportscar around Spa quicker than Lewis Hamilton's 2017 Belgian Grand Prix pole time, then Timo Bernhard recorded a scarcely believable 5m19.5s lap of the Nurburgring's fearsome Nordschleife.

When Porsche offered Autosport the chance of a behind-the-scenes look at the incredible car and to talk to the engineers and drivers involved, it was an easy decision to make. The World Endurance Championship-winning 919 Hybrid was a good place to start and the Evo is a fitting tribute to the car that won the Le Mans 24 Hours three times.

As well as explaining why and how the car came to life, Tom Errington's piece (see page 12) also includes accounts from Jani and Bernhard. Some of their descriptions – and the numbers involved on their record-breaking laps – are truly remarkable. It's great that Porsche built the car simply because it could.

While it is tempting to suggest the 919 Evo is the sort of machine that we should see racing, it wouldn't work. Quite apart from the costs involved, the racing would be terrible. With the incredible grip and downforce levels involved, overtaking would be at a premium, even if the cars proved to be less susceptible to dirty air than their single-seater counterparts. It's probably also fair to say that there are few tracks that could contain cars with such performance.

Aerodynamic turbulence, and particularly its impact on front wings, is the key issue that the 2019 Formula 1 rule tweaks are designed to address. The fact that leading figures already disagree (p4) on how helpful the changes will be is concerning, but perhaps this should be seen as a small step in the right direction for '21.



Kevin Turner

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WILL THE NEW 2019 FRONT

FORMULA 1

Expectations are high that Formula 1 racing will be closer and more spectacular next season. The sport's stakeholders promise a noticeable impact from 2019 rule changes designed to make it easier for cars to follow each other.

Simplified front and rear wing regulations will be introduced next year with the aim of improving on-track action by reducing the front wing sensitivity in turbulent air and minimising the difficulty of following another car closely.

The FIA believes the changes will reduce the effect of running in 'dirty air' by one third, while F1 sporting boss Ross Brawn says simulations suggest a "tangible" effect on overtaking.

However, leading team personnel have warned the changes may have a limited impact. Williams performance chief Rob Smedley raises FIA single-seater head Nikolas Tombazis's point that F1 cars will never race like touring cars. "It just won't happen, physics won't allow that to happen," says Smedley. "So, you have to accept that cars are difficult to follow – especially with this generation of cars and the amount of downforce they generate.

"It will be a little bit better, but we'll all iterate to solutions to get us back to where we are in about six months."

Patience needed for full impact

Over the final few grands prix of 2018 the top three teams – Mercedes, Ferrari and Red Bull – have been very close in terms of performance. This has prompted three things: different strategies, smaller gaps between the cars on track in the race, and more on-track overtaking for position.

Senior Ferrari engineer Jock Clear points out that the 2019 rule changes are not about promising overtaking. They are simply aimed at allowing cars to follow more closely, which could – perhaps should – facilitate good racing.

"Of course 10 teams will come up with 10 solutions, some of which we won't even have thought about and then that may well move the goalposts slightly," says Clear.

"Close racing doesn't necessarily mean everybody can overtake easily, but it does mean that cars can follow and pressure each other."

Renault chassis technical director Nick Chester agrees that the FIA is trying to

**"IT WILL BE A LITTLE
BIT BETTER, BUT WE
WILL GET BACK TO
WHERE WE ARE"**



Richards: Keep the GP off UK streets

FORMULA 1

Motorsport UK chairman David Richards believes a British Grand Prix on a street circuit would be “inappropriate”, and he has backed Silverstone to retain its Formula 1 spot.

The Prodrive boss and 1981 World Rally champion co-driver has been the chairman of the UK motorsport governing body since January, and says it is “critical” that Britain maintains an F1 race amid speculation it could miss out on a calendar place in 2020.

In July 2017, the British Racing Drivers’ Club, which owns Silverstone, exercised a break clause with F1 promoter Liberty Media. That means the ’19 GP could be the last at the venue.

For more than 10 years a London street race has been mooted, but any prospective event would face extensive red-tape and logistical issues, such as closing busy roads, and the streets would need work to be suitable for F1 cars to use in competition.

“Silverstone is the only place in my view that can host the race,” said Richards. “Putting anything on in a different place like a street circuit is inappropriate, because it doesn’t leave a legacy and use the infrastructure we have built over the years [at the circuit].”

“It’s critical, in my view, to this country, to UK motorsport’s good health, that we have a Formula 1 race.”

Motorsport UK provides the infrastructure for the British GP, but Richards says there are other things that can be done to support the race from the organisation’s perspective.

“Obviously we are a little bit on the sidelines because the commercial relationship is between F1 and the BRDC,” he added. “We can help enable that as best we can.”

“I attend a number of meetings with politicians at the moment and it’s ongoing. We are hopeful that it will come to a strong conclusion.”

JACK BENYON



WINGS IMPROVE F1?

target “the right thing” but warns any gain next year will be minimal. He also reckons the bigger rules overhaul in 2021 will produce better results.

“In one year you couldn’t do all of the changes that are planned,” says Chester.

“I think it’ll make a small difference. The following will be a little bit improved. But we probably have to wait until 2021 to see what the full package can deliver.”

Changes will spark early 2019 development race

While the target of the changes – which include paring back increasingly complex brake ducts and bargeboards – is to improve racing, they will also leave teams with aerodynamic performance to recoup over the winter.

Chester says: “We’re only part-way through the tunnel programme and we’ve taken a bit of a hit with the new rules. It’s a question of how fast we can develop.”

“The key is going to be how teams come back and how they develop over the next few months and into next year.”

Clear believes teams could be in trouble if a rival steals a march. “We’ve probably all taken a step back, and then gradually we will recover,” he says.

“We will do our best, but if somebody else has done a better job it won’t be enough. We simply don’t know.”

The consequence of development

As Smedley warns, whatever benefit is found from the rule changes could be eradicated by aggressive development programmes as teams look to recover lost aerodynamic performance.

That will not necessarily have a linear relationship with reducing the car’s ability to follow in dirty air. The underlying philosophy of the rules is not to seek to improve racing by removing downforce; the fact that the front wings will be larger means that they will produce a bigger aerodynamic load. It is the simplicity of those wings, which should make them less sensitive to dirty air, that is key.

However, if the teams’ solutions make the cars more aerodynamically sensitive in another way then this will have an impact.

Another factor will be the ingenuity of the respective designs. Teams are now presented with an opportunity to go in different directions on the front wing and bargeboards, but inevitably they will converge as one idea proves superior.

“It will be very, very interesting, at the start of the season, to see the different concepts that come out,” says Smedley. “Then you’ll probably find that there’ll be a really quick convergence, as usual, as we take the best concepts and blend that into the normal lookalike Formula 1 car.”

SCOTT MITCHELL



Paralysis fears over after Florsch has nine-hour surgery

MACAU GRAND PRIX

Formula 3 European Championship racer Sophia Florsch underwent nine hours of surgery on Monday following her horrific accident in the Macau Grand Prix.

The 17-year-old Van Amersfoort Racing driver miraculously sustained no life-threatening injuries in the 170mph crash at Lisboa. She had cannoned into the car of Japanese F3 champion Sho Tsuboi, launching her above the barrier, through the top of a safety fence and into a photographers' stand, before crashing down to the ground.

A bone splinter that was dangerously close to her spinal cord was removed in the surgery. Her team principal, Frits van Amersfoort, told the BBC World Service: "We are extremely happy that she is now recovering and that everything went extremely well. There's no fear of paralysis whatsoever."

Tsuboi was also taken to hospital to treat lumbar pains, but he reported on Tuesday morning that he had returned home safely.

While Florsch's impact with the temporary structure of the photographers' stand arguably saved her life — had the car's flight not been halted here it could have made contact with solid buildings — it did result in injuries to two photographers and one marshal. One of the photographers, Japanese Hiroyuki Minami, was already flying home on Monday, but

the condition of his Chinese counterpart Chan Weng Wang is considerably more serious, with a liver laceration. Marshal Chan Cha In suffered a laceration of his face, abrasion of his upper abdomen wall and a fractured jaw.

The accident came during the most impressive weekend of Florsch's F3 career, following a part-season in Ginetta Juniors in 2015 and two German F4 campaigns in '16 and '17. She missed the first three rounds and made her F3 race debut in July, with very little test mileage under her belt compared with the other series rookies. Understandably, she struggled on the technical circuits where testing mileage is crucial, but did score points.

Macau was her street-circuit debut, yet on a track that rewards a driver's improvisational skills to a greater degree than any other she was instantly impressive, qualifying 15th on the first day and showing great commitment. A suspension-damaging incident on the second day dropped her down the order.

Should she recover to race again, she will be a prime target for the women-only W Series, but she told Autosport in Macau that she is not interested in the concept. She is aiming for a full season of mixed-gender F3 competition in 2019 and is in discussions to stay at VAR.

MARCUS SIMMONS



Alonso's team joins Eurocup

FORMULA RENAULT EURO CUP

Fernando Alonso's FA Racing team will step up to the Formula Renault Eurocup in the 2019 season, as the series introduces a new car.

The two-time Formula 1 champion's squad already competes in Spanish Formula 4, karting and Esports, but will now expand into its most high-profile championship to date.

The Eurocup competition has confirmed the 10 teams that will take part next season, and FA Racing is one of three new outfits on the list.

"It's a real honour to have FA Racing by Drivex pre-selected to participate in the 2019 Formula Renault season," said Alonso.

"This series has provided some of my toughest competitors in F1 and this highlights its very high competitive level.

"After karting, Esports and F4, Formula Renault is for FA Racing the logical step in our development.

"The arrival of the new car was the opportunity to start on the same level as all the teams and we are now eager to be on the starting grid to show what we are made of.

"On a more personal note, it is a great pleasure to continue my history with Renault."

The FR Eurocup had ambitions to become the official FIA Regional Formula 3 series, but the tender was instead handed to the Italian federation — the ACI — which had tendered on behalf of karting and Italian Formula 4 promoter WSK.

Eurocup confirmed it would carry on with its plan to run a Regional F3-specification car complete with a halo cockpit-safety device.

The other new entries are BhaiTech Racing — an Italian F4 team — and Toyota Racing Series outfit M2 Competition. They join current Eurocup competitors R-ace GP (which won both titles last season), Josef Kaufmann Racing, JD Motorsport and Tech 1 Racing, AVF by Adrian Valles (winner of the rookie title in 2016, '17 and '18), Arden Motorsport and MP Motorsport.

JACK BENYON



Wehrlein tied up so Rosenqvist is recalled

FORMULA E

Felix Rosenqvist's Formula E exit has been postponed by one race since he will step back into the Mahindra Racing line-up in place of Pascal Wehrlein for next month's 2018/19 season-opening Ad Diriyah ePrix.

Rosenqvist raced for Mahindra in the past two FE seasons, but signed a deal to compete in IndyCar with Chip Ganassi Racing for 2019. Mahindra subsequently announced that it would field ex-Formula 1 racers Wehrlein and Jerome D'Ambrosio.

Last week, Mahindra revealed that Rosenqvist would return for the Riyadh race, and said it was "looking ahead to January when Pascal will join us". It is understood that this relates to issues with Wehrlein's Mercedes contract – he will leave the manufacturer's fold at the end of 2018, but it has been suggested this means he cannot drive for another team until January 1 '19. That means he is unable to make his FE debut until the second race of the season (Marrakech) on January 12.

Shortly after Mercedes announced that it would be splitting with Wehrlein, it was reported he had turned down an FE seat with Mercedes-affiliate HWA. Team boss Ulrich Fritz said at the time that this was because Wehrlein was focused on F1.

"We are currently in talks to find a solution to prematurely dissolve Pascal's contract," said Mercedes in a statement supplied to Autosport. "Please understand that we do not comment on further details regarding contracts or negotiations."

Although he did not drive in last month's pre-season FE test at Valencia, Rosenqvist took part in the early development stages of Mahindra's Gen2 car. The Swedish driver has taken all three of the team's FE victories.

In other Formula E news, seven female drivers will represent teams at an in-season test after the season opener.

Jamie Chadwick (NIO), Simona de Silvestro (Venturi's new official test driver), Carmen Jorda (Nissan e.dams), Tatiana Calderon (DS Techeetah), Katherine Legge (Mahindra), 2018 Italian Formula 4 racer Amna Al Qubaisi (Virgin Racing) and BMW junior Beitske Visser (BMW Andretti) will take part in the event. HWA and Dragon are still working to secure deals for female drivers to take part.

The test has been organised at the request of the Ad Diriyah race promoter. Teams have been given an extra car slot for their regular entrants if they run a female driver. Audi and Jaguar will field single-car entries for Nico Muller and Mitch Evans.

ALEX KALINAUCKAS



Wehrlein completed Valencia pre-season testing for Mahindra



Rosenqvist won the Marrakech Formula E race last season

Auer, Ticktum set for Super Formula move

MOTORSPORT IMAGES/TRIENITZ/LAT



Auer is without a drive for next season after Mercedes' DTM exit

SUPER FORMULA

Mercedes DTM refugee Lucas Auer is set to join double Macau Grand Prix winner Dan Ticktum in Red Bull's stable for next season's Super Formula season in Japan, Autosport understands.

While Ticktum looks almost certain to drive for Team Mugen, Auer is tipped to join the new joint effort of B-Max Racing and German squad Motopark.

Ticktum raced for Mugen in two Super Formula races this season alongside his Formula 3 European Championship campaign, in which he finished runner-up.

His placement at this team would replicate the programme of Red Bull Junior predecessor Pierre Gasly, who came close to winning the 2017 Super Formula title with Mugen after claiming the '16 GP2 crown.

Ticktum also has his eye on a Formula 2 programme, but is not too hopeful of securing a seat in the Formula 1 support series.

"Super Formula is looking almost 100%," he said after his victory in Macau last Sunday.

"As far as F2 is concerned, it's not the teams' fault that it's so expensive, but if we can come to a reasonable deal I'd like to do that as well."

Ticktum said that the deal with Honda-powered Mugen is very close.

"It's not confirmed yet – it's a great car and a great championship, arguably better than F2 in terms of how the car is and how the tyres are."

"Helmut [Marko, Red Bull Junior boss] has enough confidence that if I perform well next year, I can perform well in Formula 1, because the [new Dallara SF19] Super Formula car is going to be even quicker next year."

Auer appears likely to take part in the Suzuka SF test on December 5-6 for B-Max with Motopark as he rekindles his single-seater career after four years in the DTM.

The 24-year-old Austrian is understood to have been picked up by Red Bull, which has long backed Motopark-run drivers.

Motopark boss Timo Rumpfkeil did not want to comment on the speculation, telling Autosport that "the drivers are not decided yet". It follows on from the team being snubbed for the new Formula 1-supporting F3 series, although F3 European Championship rival squad Prema Powerteam was granted entry.

Other than Ticktum, fellow F3 European Championship drivers Alex Palou and Ralf Aron are planning to take part in the Suzuka test with a view to racing in Super Formula.

MARCUS SIMMONS

IN THE HEADLINES

McLAREN HIRES FERNLEY

Former Force India Formula 1 deputy team principal Bob Fernley has been named president of McLaren's IndyCar programme. He will build and lead a technical team for the 2019 Indianapolis 500 as Fernando Alonso returns to the event. Fernley has previous US racing experience, most extensively with Ensign in Can-Am in the 1980s.

ILLEGAL DATA COSTS WEC TEAM ALL OF ITS POINTS

The Dempsey-Proton Racing Porsche GTE Am team has lost all 2018/19 World Endurance Championship points scored before last weekend's Shanghai round for manipulation of its two cars' data loggers. The electronics were found after last month's Fuji round to have an extra line of code inserted "with the purpose of increasing the time of the refuelling sensor signal sent to the official FIA/ACO data logger by two seconds", according to a stewards' bulletin.

MULLER JOINS CHAMPS

Yvan Muller will join Thed Björk at the new Cyan Racing Lynk & Co team in the World Touring Car Cup next season. Cyan did not enter the first year of WTCR, but has spent 2018 working on a programme using its 03 model developed by Geely Group Motorsport – the parent company that owns Volvo and Lynk & Co.

BTCC'S NEW RECRUITS

Ginetta Supercup racer Michael Crees will join the British Touring Car Championship next season with Team Hard in one of its Volkswagen CCs. Meanwhile, Ciceley Motorsport has signed Renault Clio Cup driver Daniel Rowbottom for its Mercedes-Benz A-Class, and the new Excelr8 outfit will run Mini Challenge race winner Rob Smith as its first driver for the MG6 machines.

GRAN TURISMO WINNERS

The first FIA-certified Esports competition on the PlayStation-exclusive *Gran Turismo Sport* video game concluded last weekend at the World Finals in Monaco. Brazilian Igor Fraga, 20, was crowned champion in the Nations Cup final, beating 16 others. Lexus won the manufacturers' title.



Tractor distraction caused Mikkelsen to crash out



Police have traced reckless spectators who got too close

Fury over Oz rally danger

WRC

Last weekend's Rally Australia sparked investigations from both the sport's governing body and the New South Wales police after bizarre incidents on the stages.

Hyundai driver Andreas Mikkelsen crashed his i20 Coupe WRC after meeting a tractor on the last stage of Friday morning's loop. A marshal had taken the decision to drive the tractor onto the stage to reassemble the straw bales in a chicane that had been hit by Jari-Matti Latvala.

Mikkelsen rolled shortly after passing the tractor and was forced out of the opening day's action. He said: "I was distracted. I was asking my co-driver what we should do and then I missed my braking."

Fellow drivers were furious at the tractor's presence on the stage. Esapekka Lappi, who moves from Toyota to Citroën for next season, said: "There is no excuse for this, it's absolutely stupid. Somebody could have been killed."

When the stage is running, we cannot ever have something like this."

FIA rally director Yves Matton added that lessons needed to be learned from the incident. "The tractor was positioned there to ensure the stage didn't get blocked by a displaced chicane," he said. "But greater co-ordination of its movement was required."

The police were contacted after spectators were spotted lying next to the Welshs Creek stage on Saturday. Onboard footage showed Thierry Neuville's car passing within inches of two people at 80mph. Rally organisers confirmed the police had identified and contacted the pair, but were unable to comment further due to the ongoing investigation.

One driver told Autosport: "What's wrong with these people? If anybody had cut that corner a little bit, they'd have driven straight over their head. Unbelievable."

DAVID EVANS

P30 RALLY REPORT



Lappi was enraged by the tractor incident

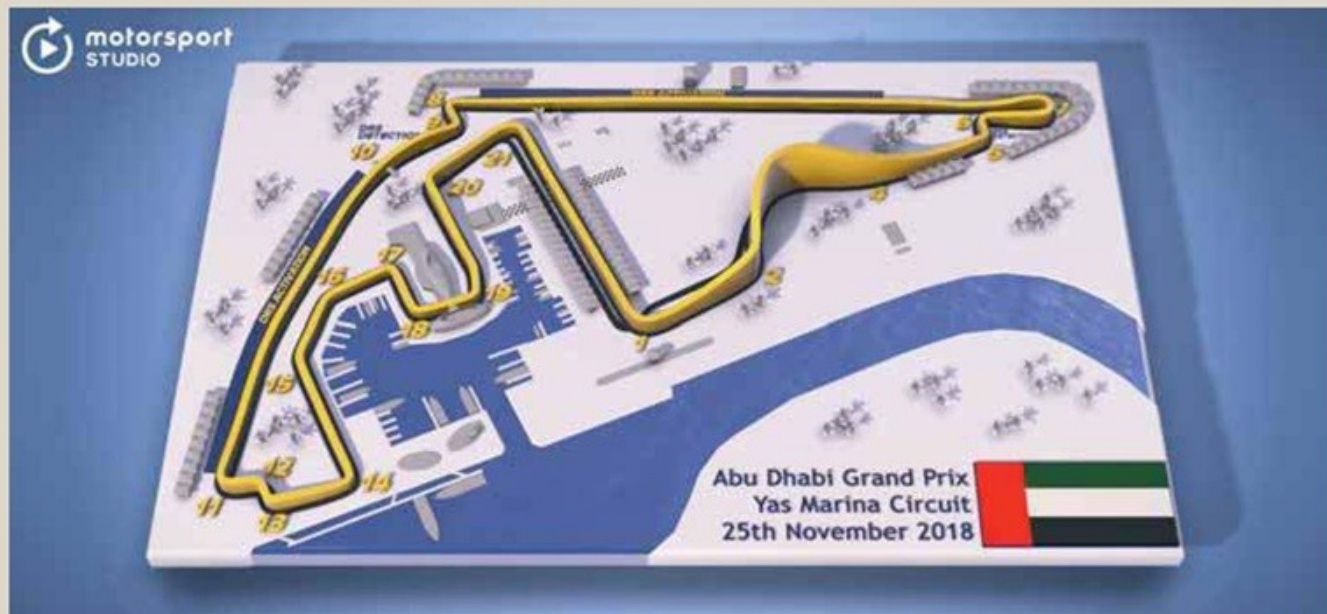


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F1 ABU DHABI GRAND PRIX PREVIEW



UK START TIMES

FRIDAY

FP1 0900 FP2 1300

SATURDAY

FP3 1000 QUALIFYING 1300

SUNDAY

RACE 1310

LIVE ON SKY SPORTS F1 1130

CHANNEL 4 1200

BBC RADIO 5 LIVE 1300

DRIVERS' CHAMPIONSHIP AND CONSTRUCTORS' CHAMPIONSHIP SO FAR

1	Lewis Hamilton	383
2	Sebastian Vettel	302
3	Kimi Raikkonen	251
4	Valtteri Bottas	237
5	Max Verstappen	234

1	Mercedes	620
2	Ferrari	553
3	Red Bull	392
4	Renault	114
5	Haas	90

TYRE ALLOCATION

SUPERHARD

HARD

MEDIUM

SOFT

SUPERSOFT

ULTRASOFT

HYPERSOFT

INTERMEDIATE

WET



▲

▲

▲

▲

▲

TRACK STATS

LENGTH 3.451 miles

NUMBER OF LAPS 55

2017 POLE POSITION

Valtteri Bottas 1m36.231s

POLE LAP RECORD

Valtteri Bottas 1m36.231s (2017)

RACE LAP RECORD

Sebastian Vettel 1m40.279s (2009)

PREVIOUS WINNERS

2017	Valtteri Bottas	Mercedes
2016	Lewis Hamilton	Mercedes
2015	Nico Rosberg	Mercedes
2014	Lewis Hamilton	Mercedes
2013	Sebastian Vettel	Red Bull
2012	Kimi Raikkonen	Lotus
2011	Lewis Hamilton	McLaren
2010	Sebastian Vettel	Red Bull
2009	Sebastian Vettel	Red Bull



Lewis Hamilton's first Abu Dhabi Grand Prix win came in 2011, when he beat Fernando Alonso's Ferrari and McLaren team-mate Jenson Button

THEMES TO WATCH

CAN VETTEL BOUNCE BACK IN THE FINALE?

Sebastian Vettel has had a torrid time since August, finding himself facing the wrong way on too many occasions. Ferrari doesn't have the best record in Abu Dhabi, but this weekend would be a timely return to form ahead of new challenges in 2019.

BOTTAS v VERSTAPPEN

Valtteri Bottas won last year's Abu Dhabi GP, while Max Verstappen *could* have won last time out in Brazil had it not been for the clash with Esteban Ocon. Bottas leads the Red Bull man by just three points. Can he do enough to hold on to fourth place in the drivers' championship?

SAUBER TO GRAB ONE MORE SPOT?

Sauber's revival this season has taken it to within six points of Racing Point Force India in the constructors' table. In his last race before joining Ferrari, can Charles Leclerc help the Swiss-based squad to snatch seventh spot and the extra 'prize' payment it would bring?



ENDING ON A HIGH

Two drivers — Valtteri Bottas and Sebastian Vettel — could really benefit from the psychological fillip that winning the final race of the season provides

EDD STRAW

According to conventional wisdom, momentum is crucial in sport. This is particularly true when it comes to the final race of the season, because it sends you into the winter on a high. If you're only as good as your last race, nobody is so good for as long as the winner of the season-ending Abu Dhabi Grand Prix.

For that reason, two drivers who have a realistic chance of winning in Abu Dhabi this weekend stand out as the ones with most to gain from a final-race success. Namely, Valtteri Bottas and Sebastian Vettel.

Neither has had the season they wanted, so the idea is that finishing it off on a high will have a cleansing quality and act as a factory reset as they head to the green and luscious pastures of 2019. That's perhaps overstating the case, but it certainly would be a positive way to end their character-building years.

In the seven races since he claimed his most recent win in the Belgian Grand Prix three months ago, Vettel has accumulated just 88 points — only the fifth highest tally during that period. Team-mate Kimi Raikkonen has managed 17 more points in that run of grands prix, and achieved something that has eluded Vettel by winning a race.

"AN ABU DHABI WIN WON'T SOLVE ALL HIS PROBLEMS, BUT IT MIGHT JUST TAKE THE EDGE OFF"

Vettel is a man adrift and lacking in confidence, particularly in racing situations. While he can't be blamed for the sensor problem that compromised his race at Interlagos, there have been significant on-track errors in three of those seven grands prix. What's happening extends beyond bad luck and, while he's the one making the errors, part of the problem seems to stem from instability within the team.

Bottas is in a different situation. His season has been better than it appears on paper, and he shouldn't be the only driver from the top three teams without a win. He effectively did win the Russian Grand Prix, which he gave to team-mate Lewis Hamilton, while only a late-race puncture cost him victory in Azerbaijan.

He could well have won in China but for the intervention of the safety car, having undercut his way past Vettel, and had the Mercedes pitwall cottoned on to the Ferrari driver's one-

stopper in Bahrain earlier it's possible he'd have won there too.

If Bottas doesn't win in Abu Dhabi, at least he can look back at the season and know that, while the record books don't reflect it, he was effectively a race winner. Were he sitting on three or four victories now, his season would look very different. What's more, as promised he has raised the level of his weakest performances and has been closer to Hamilton in qualifying than in 2017. Not good enough for a title push, even had he not lost those wins, but the season of a decent enough number two.

Bottas won the Abu Dhabi finale last year, which didn't appear to make much difference to his 2018 season, although he did start strongly. That, however, is perhaps more down to his tendency to show well against Hamilton when Mercedes is struggling, and the fact that he'd built up a year's experience at the team. So while Bottas deserves a win to reflect his performances this season, it probably won't make so dramatic a difference to him.

It's a different story for Vettel. A consolation victory would not represent redemption for a year of wasted opportunities, but it might at least bring to an end the spiral of failure and help him head into 2019 on an even keel.

The cleansing effect of a season-ending victory is clear. But we should be very careful about overstressing the point, as history does not suggest there is any strong correlation between last-race success and following-year glory.

Only 18 times has the driver winning the final race of a season gone on to win the title the following year. Hamilton has done it twice in recent seasons, while erstwhile team-mate Nico Rosberg took the 2015 finale then the '16 championship.

Bottas's Abu Dhabi 2017 win underscores the fact that if you're driving for the team that is winning a significant proportion of the races, you probably do have a strong chance of winning any given race. As such, you can't read too much into it.

You can make a case for any of the realistic victory contenders having the means, motive and opportunity to do so. But none of them is in as bad a need of victory as Vettel. There was a time when his determination and relentlessness meant he was able to keep racking up the wins long after the title was won — just look at his sensational run of nine victories at the end of the 2013 season.

If he can pick himself up and show he's still got it, even after a difficult second half of the season, that will be far more valuable than if he fades away and expects to come back at the top of his game next year. That's doubly important given he must not only raise his game dramatically to be able to take on Hamilton, but he faces a very quick enemy within at Ferrari next year when he's joined by Charles Leclerc. An Abu Dhabi win won't solve all his problems, but it might just take the edge off.

After all, the 2019 season starts here. ❧

YOUR SAY

This simple rule is broken carte blanche. Martin Brundle calls it 'taking the racing line'; I call it forcing a driver off the track

PHIL ALLEN

Good news that Formula E will be on the BBC

What wonderful news it is that Formula E will be broadcast on the BBC next year! Yes, I know there'll be cynics out there saying that it's only on the red button, but it's still a good move when you include the BBC's online platforms and the fact that the races will be on iPlayer for a month after the chequered flag falls.

If the BBC follows up on FE's promise of at least one race to be broadcast live on BBC One or BBC Two, then I believe it will receive the exposure it deserves. Oh, and don't forget – advert-free broadcasts! Well worth your licence fee...

Joshua Kerr

Kidderminster, Worcestershire

Mercedes' long-term winning pedigree

Edd Straw ('How great is Mercedes?', November 15) was quite right to qualify the ranking of F1's great teams, but understated the success of the Mercedes marque and the Daimler-Benz (Daimler before 1926) management direction.

Grand prix racing did not begin with the first modern F1 championship in 1950, but in '06, and that's not counting the great races held to given formulas before that! The Daimler Company launched the first ground-breaking Mercedes in '01 and it was a major race winner straight away. Mercedes won the '08 and '14 (right) French GPs: each the race of the year.

There were lesser GP successes in the troubled 1920s. Then from 1934-39, Mercedes and, to a slightly lesser extent, Auto Union, dominated grand prix racing.

It is worth emphasising that there was a strong carryover from the 1934-39 era to the successes of the '50s, headed by design director Rudolf Uhlenhaut and team manager Alfred Neubauer, and to a lesser extent driver Hermann Lang.

So, the roll call of Mercedes champions should certainly include Christian Lautenschlager, Rudolf Caracciola and Lang, even though only the last two were awarded European crowns in the absence of world titles, and Lang's was a tad unofficial.

Whenever the Daimler-Benz Company announces a return to GP (F1) racing after an absence, rivals are apprehensive for



very good reasons. Even Enzo Ferrari's Scuderia Ferrari can't match that long history of top-level success. The team structure may change, but the company values do not.

Chris Mason

Riccall, York

Ocon/Verstappen clash highlights a bigger issue

The views expressed about the Ocon/Verstappen collision fail to identify a real issue in F1 and probably the majority of racing classes. Can one driver force another, where there is any 'overlap' at all, off the track, ie the driver behind would have to exceed track limits to avoid a crash? The answer (should be) definitely no.

This simple rule is broken carte blanche. Martin Brundle calls it 'taking the racing line', I call it forcing a driver off the track. When the track limit is a barrier it doesn't happen, so why does the FIA allow it when the track limit is a white line?

Ocon had overlap on Verstappen, Verstappen drove to the inside track limit so Ocon was forced off the track (and also collided). What example is that?

Phil Allen

StAnnes-on-Sea, Lancashire

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INSIGHT

PORSCHE 919 EVO • TECH FOCUS • RECORD LAPS



PORSCHE 919 EVO

How Porsche made the fastest car in the world..... P12

Tech focus..... P18

Neel Jani's Spa record..... P21

Timo Bernhard's Nurburgring record..... P23

HOW PORSCHE MADE THE FASTEST CAR IN THE WORLD

It's never raced, but the 919 Evo has been one of the cars of 2018

TOM ERRINGTON



P

orsche's withdrawal from the World Endurance Championship ended a great period for sportscar racing. Some of the battles against Toyota and Audi between 2014 and '17 were epic, and Porsche's exit – following that of Audi – put the championship at a crossroads.

Dissatisfaction with future regulations, which Porsche felt “simplified” the high-tech hybrid class, and a new focus on its Formula E entry in 2019/20, contributed to that decision. But that wasn't the end of the 919's story, which includes three drivers' titles, three manufacturers' crowns and a trio of Le Mans 24 Hours successes. Despite not racing, the 919 made the 2018 headlines – perhaps more than any other sportscar story, with the exception

of Fernando Alonso's ultimately successful Le Mans bid – with two laps, one at Spa and one at the Nurburgring Nordschleife.

In April, works driver Neel Jani recorded a Formula 1-beating 1m41.770s at the Belgian Grand Prix venue, while in June Timo Bernhard went around the fearsome Nurburgring quicker than anyone ever: 5m19.546s. Those runs, along with appearances at Brands Hatch and Laguna Seca, were part of a 919 farewell tour conducted by a special version: the 919 Evo.

In some ways the car is a throwback to a time of fewer rules restrictions, while in others it is a glimpse of the future, a hint of just how far hybrid technology can go. Porsche recently decided to reveal all (well, nearly all!) about the project and invited Autosport to its Weissach base. »



PORSCHE 919 HYBRID WORLD ENDURANCE WINS

2014

Interlagos 6 Hours Romain Dumas/Neel Jani/Marc Lieb

2015

Le Mans 24 Hours Earl Bamber/Nico Hulkenberg/
Nick Tandy

Nurburgring 6 Hours Timo Bernhard/Brendon Hartley/
Mark Webber

Austin 6 Hours Bernhard/Hartley/Webber

Fuji 6 Hours Bernhard/Hartley/Webber

Shanghai 6 Hours Bernhard/Hartley/Webber

Bahrain 6 Hours Dumas/Jani/Lieb

2016

Silverstone 6 Hours Dumas/Jani/Lieb

Le Mans 24 Hours Dumas/Jani/Lieb

Nurburgring 6 Hours Bernhard/Hartley/Webber

Mexico 6 Hours Bernhard/Hartley/Webber

Austin 6 Hours Bernhard/Hartley/Webber

Shanghai 6 Hours Bernhard/Hartley/Webber

2017

Le Mans 24 Hours Bamber/Bernhard/Hartley

Nurburgring 6 Hours Bamber/Bernhard/Hartley

Mexico 6 Hours Bamber/Bernhard/Hartley

Austin 6 Hours Bamber/Bernhard/Hartley

The camouflaged 919 prototype catches the eye when Autosport is allowed in to Porsche's LMP1 nerve centre, but there is still an element of secrecy. Our phone is confiscated in order for the camera to be covered up.

Inside, the 919 Hybrid Evo's elements are stripped down to the most minute detail – alongside its racing predecessor. At the same time, the 'real' Evo is on its way to Laguna for the Porsche Rennsport Reunion, its final outing before the car takes its place in Porsche's museum via a drive on Stuttgart's public roads.

Perhaps the first thing to point out about a car that has pushed motorsport engineering limits is that it was Porsche's media and marketing team that made the Evo project possible.

"The idea came shortly after we stopped the LMP1 programme," explains Porsche's LMP1 boss Andreas Seidl, who is now expected to head to a job in Formula 1. "We had a discussion with our PR and marketing team and the idea was born to do a classic farewell tour."

Porsche has history in this respect and it was its own Talladega closed course land speed record-breaking run with Penske and the fearsome 917/30 Can-Am car in 1975 with Mark Donohue that inspired the manufacturer's tour.

"One of the ideas was a record attempt, comparing it to stuff done in the 1970s by Penske," confirms Seidl. "I was a bit sceptical at the beginning, as there is risk in these records. But the idea was so convincing that we said, 'OK, if we can find the budget let's go for it.'"

That was Porsche's first stumbling block. Why pile boatloads of cash into an existing car – that in its active life had reached F1 proportions of budget in the WEC – in order to beat several records for some PR goodwill? Unsurprisingly, this thought had crossed the finance department's mind too.

In short, Porsche was given a budget that Seidl describes as "very

Bernhard
smashed
Nurburgring
lap record



low". It was topped up by Porsche's many sponsors and supporters.

Although there were developments planned for its never-to-be-raced 2018 LMP1 car, several team members point to the fact that some of the ideas were never made as physical parts. But for the record runs, Porsche was able to scrap elements such as air conditioning, light systems and the pneumatic jack system to save weight — losing a total of 39kg.

Yet one of the most incredible aspects of the 919 Hybrid Evo is the fact that it is hardly a departure from its predecessor. It was instead about maximising existing elements such as the V4 engine to its peak performance, and developing existing areas to withstand a more extreme level of power, downforce and grip.

Chief race engineer Stephen Mitas describes the Evo as an "engineer's dream come true", but adds that it did not "fully exploit the technical potential". There were still time and money restraints.

Nevertheless, the resulting machine had an entirely new level of performance. On the 'super' Porsche's first visit to Spa, the plan was to shake the car down and get an idea of its performance for its proper record bid.

"In the beginning we had three days at Spa, and as I understand it the aim was always to see [how it worked] and check the car and then come back at a later stage to try to actually go quick," says Jani.

But straight out of the box, the Evo smashed the 919 Hybrid's qualifying time at Spa — 1m54.097s — by 12 seconds. Jani's best mark was 0.783s quicker than Lewis Hamilton's pole lap for the 2017 Belgian Grand Prix, in the dominant Mercedes W08 package, setting a new unofficial record of the Spa circuit.

Later in the year Sebastian Vettel took the record back for F1 with a time of 1m41.501s in August, but the Porsche mark was still good enough for fourth fastest in Belgian GP qualifying.

The grip was a "new dimension" for Jani as Michelin compared the entire lap's tyre demands to the "peak" it has on the run up Eau Rouge.

While Jani could enjoy a car that pushed him beyond his limits, Porsche did lose time with a Spa-specific struggle due to its movable skirts, which made front-end balance more difficult to find.

In hours of discussion about the Evo's records, it's almost alarming how often the Porsche engineers mention that the record run was not the limit of the car. Aero specialist Matthew Jacquemont points to changing temperatures that prevented the Evo maximising its new aerokit, and the fact that Porsche decided to end its Spa trips after the record run, rather than come back as planned for a 'real' attempt.

Michelin and Jani both felt the tyre was running on high pressures in a conservative approach for safety, which also hindered performance. "We didn't manage to get everything together between track temperature, air temperature, tyres and the skirt," says Jacquemont. "I think we could have been a little quicker."

"We were quite happy with the lap time, but at Spa we finished the test thinking there could have been a little more..."

But in other aspects, Porsche was pushing the car to its limits, particularly in cooling, which restricted the Evo to short runs, and dramatic tyre drop off, a deliberate factor Michelin implemented for safety reasons.

There were other factors to consider at the Nordschleife, which is three times longer than Spa. Timo Bernhard avoided using the kerbs and spent swathes of time learning how to approach a lap in such an extreme car. There's no such thing as a reference point in a record run, only intense preparation on the simulator to avoid errors such as deploying electrical boost over a bump or crest and unsettling the car.

"The Nurburgring Nordschleife is the toughest track," says Porsche consultant Georg v. Tardy. "For one, the compressions and shocks

"WE DIDN'T GET EVERYTHING TOGETHER AT SPA. WE COULD HAVE BEEN A LITTLE QUICKER"

you have, and the risk because it has no space.

"As we weren't running for 24 hours we built in safety fatigue [particularly on the suspension] so we did not have to modify everything. If we had run Le Mans or a 24-hour race on the Nurburgring we would have had to change a lot more. After that, we would have had to trash the parts."

Such was the stress on the car, Michael Engelmeier — tasked with the 919 Evo's cooling aspects — knew that they were restricted to two laps per run. If temperatures got too hot Porsche would also have had to turn down the engine to complete the run.

Eight years earlier Porsche had taken another space-age car to Germany's most famous circuit, with its first hybrid racing car, >>

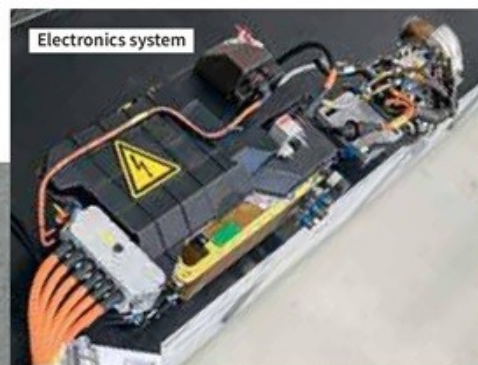




Front suspension



Crash structure/gearbox casing



Electronics system

"IT'S VERY ENCOURAGING TO SEE THIS BIG ECHO FROM FANS. PEOPLE LIKE RAW PERFORMANCE"

the 911 GT3 R Hybrid, leading 22 hours of the Nurburgring 24 Hours. Porsche has come a long way since then, underlining the strides that have been made when it comes to combining internal combustion and electric power.

There can be little doubt the 919 Evo is a fitting tribute to the successful 919. One feature of Autosport's visit was some of the engineers' stories of the car. Knowing the journey was coming to an end, one snuck away into the Bahrain grandstand at the 2017 WEC finale to see the 919 Hybrid pushed to its limits one last time in the six-hour race.

It was the sort of misty-eyed tale that proved revealing, with others talking about moments from the 919 Hybrid's history that had not been mentioned before, such as the early teething problems with the original car.

In the space of seven years, beginning with five employees studying new-age powertrains while WEC/Le Mans organisers the FIA and the Automobile Club de l'Ouest worked on what would become LMP1 regulations, the 919 Hybrid grew out of what looked like a building site, pushed to the outer fringes of the enormous Weissach facility. As the project quickly grew to 260 people, Porsche's expectations remained daunting through the following year.

There were some early wobbles, such as a fundamental problem with its gearbox-to-engine shaft that snapped the instant the clutch was pressed when starting the V4 engine. Once that was addressed, there was a bizarre vibration from the engine that perfectly matched the human body's natural frequency and ended up causing breathing and eye problems.

The first season in 2014 was promising, even though Toyota won the championship and Audi took Le Mans. But Mark Webber's serious crash in Brazil caused concern, the electrical charge of the car worrying Porsche that an inexperienced marshal could be put at risk.

Ultimately, though, the 919 more than achieved its goals, with Porsche's Le Mans victory tally of 19 now being six clear of Audi. It seems a shame to retire the Evo when it could still stake a claim to being the fastest car in the world. Is there not a temptation to go back to Spa to take back the record from Vettel?

"No, the run was a one-off," says Seidl. "In the end it was about records as well, but even more we wanted to show what a modern hybrid sportscar can do in terms of performance."

"We set targets for lap times and tracks we wanted to go to and we hit those targets. That's it, no temptation to go back."

Despite the obvious overtaking and stamina issues that it would create, could the 919 Evo provide a template for what a modern-day sportscar should be as the WEC does some soul-searching with its hypercar concept?

"Yeah, definitely," says Seidl. "It's very encouraging to see this big echo we got from the fans and the internet. It shows enough people like raw, unlimited performance on a traditional race track."

Awesome 917/30 inspired 919 Evo's record breaking



Porsche will join the Formula E family for 2019/20 season





THE 919'S TRUE LEGACY?

While Porsche was proudly unveiling the inner workings of its 919 Hybrid Evo machine to a select group of media in Stuttgart, there was one other project that caught the eye: Formula E.

No, Porsche did not have a Gen2 car sitting ready to go for its impending move to the all-electric series, but there were sizeable crates labelled for Formula E.

Depending on your motorsport perspective, it's either a damning sign of the times or a major manufacturer sensing the winds of change and throwing its chips into the electric revolution.

The 919 is now a museum piece, but that does

not mean it is irrelevant. It could be invaluable for Porsche's Formula E programme. "There is a lot of carryover, not just from the Evo, but from the 919 Hybrid," explains Andreas Seidl, head of Porsche's LMP1 programme. "Everything we have learned on the hybrid system side, the gearbox side, the suspension side – as there is some room for development in those areas.

"We are using the same guys for Formula E. There is a lot of carryover."

With the arrival of Formula E's dramatic Gen2 car, development becomes more open, the very aspect that attracted Porsche to enter in 2019/20.

Able to design its own electric powertrain and use the knowledge of the LMP1 car, Porsche has found its moment to join the increasingly fierce manufacturer battleground.

Porsche can extend that database of alternative power into an electric motor, inverter, brake-by-wire system and other areas such as the rear axle, cooling and the ECU.

There was an air of sadness from staff as they said goodbye to the extreme version of the LMP1 machine they began work on in 2013. Formula E may not be as glamorous as the record-breaking car, but it could turn out to be the 919's real legacy.

PORSCHE 919 EVO



WEIGHT

Porsche saved 39kg by removing the air-conditioning unit, lights systems, windscreen wiper, several sensors, race control-related electronic devices and its pneumatic jack system. The removal of endurance elements no longer needed for a

record run was important, because the reinforced power-steering and suspension added weight to the 2017-spec 919 Hybrid.

Including the driver, the 919 Evo lowered the car's weight from 888kg to 849kg.



AEROKIT

Porsche created three aerokits last year: high-downforce, Le Mans and the Evo. The Evo is by far the most dramatic, offering a 53% increase in downforce.

"The idea was to start with the Le Mans 2017 car [driven by Nick Tandy, Andre Lotterer and Neel Jani]," says Porsche's leading LMP1 aerodynamicist Matthew Jacquemont. "[There were] very little elements from the [planned 2018 car] because even though it was in development, we didn't have the parts."

Free from aerodynamic regulations, Porsche extended

the front diffuser and revised the turning vanes to increase front-end downforce. It also reduced the rideheight.

The floor underwent minor changes, adding packers – helping the high loads generated by increased downforce – and improving cooling.

Porsche also enlarged its rear diffuser and added a much larger rear wing.

Other additions included an active front diffuser and active rear wing, allowing the Evo to run at full throttle on some of the more difficult corners.

SUSPENSION

Unsurprisingly, more power and higher downforce put a huge amount of stress on the 919 Hybrid Evo's suspension. Loads reached as high as 6G, a rise of 25% on the 2017 race car.

To counteract the g-force, Porsche reinforced the links between the steering and the wheels, with different, more resilient springs also required. More dramatically, the lower wishbone needed significant

strengthening, with some of the Evo's brackets requiring a redesign.

While Spa's demands were extreme, the Nordschleife was an altogether different challenge. Measuring equipment used to help Porsche at some of the WEC circuits' trickiest corners, such as the Porsche Curves at Le Mans and the final corners at Shanghai, was used to find the right settings for suspension loads.



SOFTWARE

Jens Maurer (right), Porsche's software expert, knows how tricky it can be to get a software package that works across a car shared between three drivers – pointing to Mark Webber's precise steering-wheel demands during his spell with the team as an example. So, in some respects, it was a relief to only have to cater for Neel Jani at Spa and Timo Bernhard at the Nordschleife.

The freedom from the technical regulations also allowed Maurer

and Porsche to find a further 50% of energy in the hybrid system, which Maurer believes was a “key part of lap time” in the record runs.

That hybrid efficiency allowed the 919 Hybrid Evo's total power output to rise from 6.37 megajoules of energy per lap for the WEC's qualifying at Spa in 2017 to 8.49MJ – with its final output boosted by another 40bhp to reach an all-encompassing figure of 1160bhp.

The software also included

provision for DRS activation at various points of the two circuits, removing a margin for error from the driver's hands during “three or four uses” per lap. The DRS system was automated after simulation worked out the best places for it to be deployed.

Finally, a four-wheel brake-by-wire system was included – a steep learning curve for the engineers – which gave the driver more control in yaw, helping to reduce understeer and improve turn-in.



ALL PICS: PORSCHE



ENGINE

Porsche is proud of its “powerful midjet” turbocharged two-litre V4 petrol engine and it chose not to touch the engine for the 919 Hybrid Evo, partly due to the cost of development. Instead, free from regulations, Porsche upped the fuel-flow rate by around 35% to 3.3264 litres per lap from the 2.464 litres mandated in the 2017 WEC, meaning its power output went up to 720bhp from its standard 550bhp. Porsche

engineers admitted it was the “maximum” the car could handle.

Esso also provided a special oil to help improve cooling in the face of the higher demands of the Evo, helping the performance of the seven cooling units that looked after areas such as the engine, engine oil, intercooler, electric motor and battery.

The Evo retained the 919 Hybrid's fuel mix of petrol with 20% bio-ethanol.

TYRES

Michelin tuned a standard WEC LMP1 tyre for the record runs. With tyre suitability critical in transferring the car's performance potential onto the track, Michelin had to create a tyre that matched the altered suspension and extreme

downforce aerokit of the 919 Evo.

Tyre performance was enhanced by 15% compared to the 2017 WEC compound. The extra downforce, particularly in fast corners, also meant the tyres dropped off significantly at the end of a flying lap.

Simply creating a supersoft-style tyre would not work because the downforce levels would demand too much of the tyre. Instead, Michelin focused on improving grip and sacrificing elements of consistency.

Michelin shies away from the term ‘qualifying tyre’ as it ran at a much higher tyre pressure to increase the contact patch and to help safety. It also created a wide working range for Spa and the Nordschleife, so it could account for different tracks and conditions.





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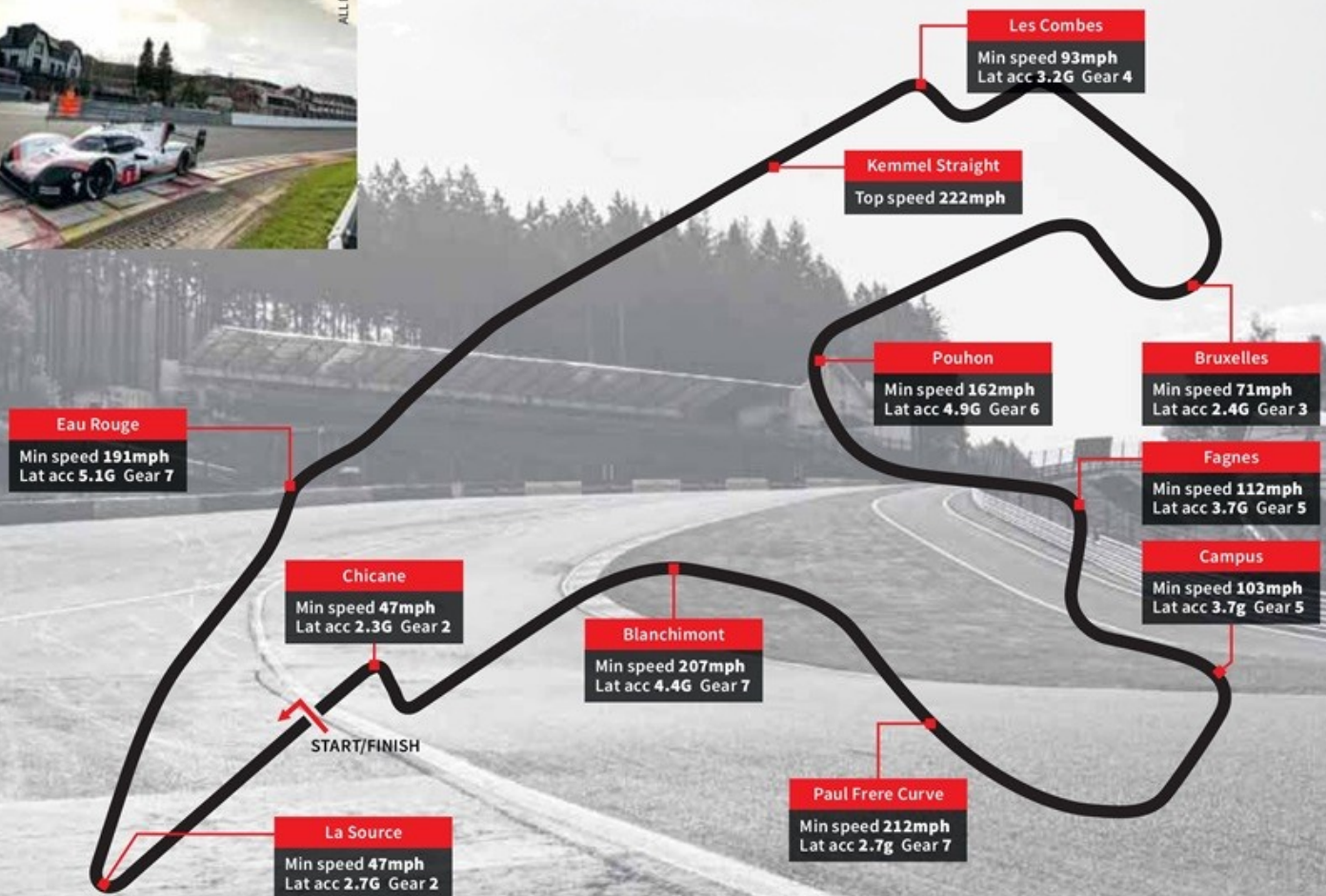


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LAP RECORD - 1m41.770s

NEEL JANI ON HIS SPA LAP

It was the first time we had the car on track. It had run at Weissach (Porsche's base) a little bit, but at Weissach you cannot go fast.

The car was bouncing in the runs and it could not go any quicker than 340km/h (approx 210mph). We did Eau Rouge at 325km/h already.

Michelin were on the safe side with tyre pressures, we ran super high. At the beginning it was a little tricky to drive because you know high tyre pressures make the car feel a little bit light. The sidewall and construction were for a load with more downforce, so we had to run a lot more tyre pressure, which made the car – not let's say super-easy – and it didn't help performance either.

What is interesting, is that most things worked together. I felt them while driving and I felt good improvements for fast times. On to the track it worked. That was quite remarkable because basically out of the box we went 12 seconds quicker than normal with the same chassis, basically the same car. We changed the nose and had more power, the engine was the same but with more fuel flow.

The most impressive thing with this car was that, from a driving point of view, it was man



against machine. The machine is stronger than the body so you can do the limits of everything.

Braking for La Source was amazing. I arrived at around 285km/h (175mph) on the straight, you brake at the 100m board and actually people watching from the outside said from braking you could see the dark tyre marks and rubber on the ground. I wasn't locking the wheels, it's just so much downforce and grip and braking power that you left black marks on the ground without locking up.

Then Eau Rouge, the minimum speed at the end of the day was 311km/h (193mph) and exiting Eau Rouge was 325km/h (202mph). The car was giving over 150kg of load more than an F1 car.

We feel that in the corners.

The main thing in Eau Rouge was the load laterally, which was 5.4G, the side was 1.4G, and vertically 4.6G or 4.7G. There was a lot of pressure on the body.

Usually, the problem is overdriving – 'The car can't take it, the car can't do it'. You have to drive slower than what you imagine you can and that's where your lap time comes from. This car was the opposite, you have to push more and more and push the boundaries in the head. And it would still go. That's what made it very special.

Arriving at Blanchimont and onto Kemmel Straight was not easy because of aero bouncing. The first time we drove it, the car actually bounced quite a bit into the corner – and it's hard to brake and corner.

But then we took aero off the car, and it looked like it was on rails. You could turn in, in fifth gear, and then flat back on the throttle all the way through. That felt amazing.

It was also amazing in Pouhon, it was just a little lift. It was still a lift for us, but no braking.

The last chicane was very tricky, with braking and not losing the rear, as the tyres degraded.

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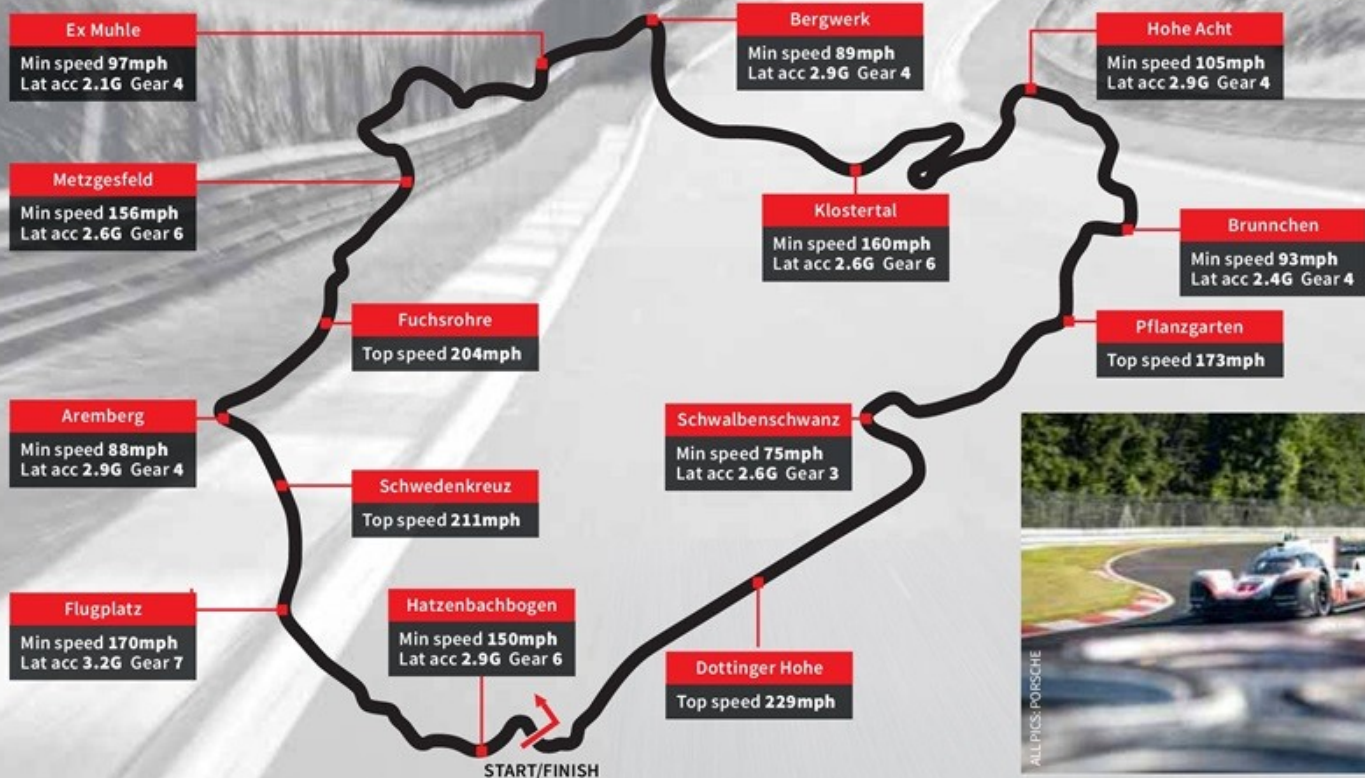
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LAP RECORD - 5m 19.546s

TIMO BERNHARD ON HIS NURBURGRING LAP



You had to have a strategy, with all the crests. We didn't know it all because no-one had done that speed at that track. How to attack or not attack the kerbs and the crests. With this track and this speed, there is no safety net. If you have the wrong line or hit a kerb, you can't get the car back.

The first section Hatzenbachbogen is very slow and becomes quite quick and you have a lot of direction changes. We decided not to run the kerbs.

Over the crest before Flugplatz there is a little bit of movement at the braking point. The two right-handers were flat. It was here I opened the DRS for a spell and just tapped the brakes just before Schwedenkreuz and then closed the DRS.

Then going down to Kallenhard – which is a very quick right/left – you have to be careful and very precise, because the kerbs are from the 1970s and '80s, so are very high. If you hit a kerb there at that speed it's very brutal.

The triple right-hander (Wehrseifen to Ex Muhle) is a bit off-camber and the downforce was very good there. It's a bit bumpy, but the cornering speed was amazing, the g-force was high.

After Lauda it was more than 300km/h (186mph), completely flat, into a very bumpy braking section up into the right-hander at Bergwerk.

One of the most spectacular sections was up



the hill out of Kesselchen. We accelerated out with boost and the long triple left-hander was flat with DRS closed. Just after that we opened the DRS for the left-hand kink, flat, and then boosted up to 340km/h (210mph) up the hill. A street car would get to maybe 100km/h (62mph), and you feel the true power with the DRS and boost.

Into the Karussell we had to take the outside line, as otherwise it would ground and hurt the skirts. It's very bumpy going in and one of the sections that was tricky and very tough under braking, even though it's slow. The trick to accelerating out of there was short-shifting to get all the power down.

At the highest part of the circuit, Hohe Acht, we again used no kerbs. It's probably the most

demanding part of the circuit. The next four or five kilometres is corner after corner, lots of direction changes in fourth and fifth gears, with no kerbs used, and it's hard on the tyres.

Then it's up to Pflanzgarten 1 and to a little jump. It was crucial for the car not to jump. I think the front wheels lifted a little bit. It's quite a big crest and you brake before and release the brake after and take momentum of fifth gear into the hill. Once over the crest, it's down into the most technical part, where we had to slow down the car into the left-hander Pflanzgarten 2 and Stefan Bellof S.

We came down the crest in sixth and then it is a quick right-hander and we boosted up to nearly 200mph at the end of the section. You could feel the speed, full downforce – an incredible sensation.

The double right-hander Galgenkopf opens onto the long straight. When we reached the straight we got to the top speed of 369km/h (229mph). We were flat going down the kink and the compression at the exit. We started to lift a little for the quick left-right combination into the chicane – all very quick, all around 180mph – and then braked into the line with no inside kerb, then into the right-left and the right-hander onto the front straight.

It was very exciting. It felt like a 20-minute lap because there was a big preparation for it. 🏆

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Luck dictates Toyota order in Shanghai

Pitstop timing around a yellow-flag period helped Jose Maria Lopez, Kamui Kobayashi and Mike Conway win the Toyota battle as the privateers edged closer

GARY WATKINS

ALL PHOTOGRAPHY: LAT  **motorsport
IMAGES**

Another race and another dominant one-two for Toyota. But there was as much good news as bad for the World Endurance Championship last weekend in Shanghai as it attempts to retain interest – and perhaps even credibility – through an hour of need also known as the 2018/19 superseason.

The Toyota trio behind in the points, Jose Maria Lopez, Kamui Kobayashi and Mike Conway, pretty much lucked in to a victory over team-mates Sebastien Buemi, Fernando Alonso and Kazuki Nakajima to reduce the gap at the head of the championship. More importantly there was evidence – albeit largely circumstantial for the moment – that the privateers are edging closer to the one manufacturer left standing in LMP1.

On top of that, SMP Racing finally had a clean run on the way to a first on-the-road podium with the #11 entry shared by Jenson Button, Mikhail Aleshin and Vitaly Petrov. That suggested the ART Grand Prix-run team, as well as Rebellion Racing, might be ready to take the fight to the Japanese factory hybrids some time soon.

That was the good news. The bad news was Toyota's dominance, and the two TS050 HYBRIDS were dominant even if the margin of victory at the end of the Shanghai 6 Hours was a single lap. That's a trifling 25% of the advantage it held over the leading independents at Fuji last month.

Comparisons are pointless, because this was a topsy-turvy race held entirely in wet conditions, one that was red-flagged twice – for over an hour in total – and included no fewer than six safety car periods. How close the privateers would have been at the end of an unfettered dry race can only be a matter of conjecture.

But the privateers were closer in qualifying thanks to the latest round of Equivalence of Technology changes, designed to prevent the indie drivers from having to lift and coast to hit their fuel targets. They can now use their weapons to their full potential.

Toyota had the expectation that it was going to be so because it went into the 20-minute qualifying session with the plan to give one of the drivers in each of its cars an extra run on a fresh set of Michelin tyres. It turned out to be a prescient move, because



“Running a four-wheel-drive hybrid system proved more decisive than ever in the heavy rain”

if it hadn't, a non-hybrid car would have got between the TS050s at the top of the timesheets for the first time this season.

Andre Lotterer also went for a second run aboard the #1 Rebellion-Gibson R-13 in which he shared qualifying duties with Bruno Senna. It produced a 1m42.868s lap on an improving circuit, which was only a tenth and a half behind Kobayashi's session best in the #7 Toyota. More significantly, it was faster than Alonso managed on either run in the sister car, and would have been quick enough to give Rebellion the outside front row spot if Alonso had not climbed back aboard the #8 TS050 to lower his and Nakajima's average by just enough to hang onto second.

Rebellion wasn't confident it could run with the Toyotas in the race whatever the conditions, and the advantage that comes

with running a four-wheel-drive hybrid system proved more decisive than ever in the heavy rain that looked for a while as though it would bring an early halt to proceedings.

It also offered a secondary benefit: the power going through the front axle keeps the forward set of tyres up to temperature. And this was where Rebellion in particular suffered more than SMP's BR Engineering BR1 contender with the AER engine.

The Rebellion drivers struggled at the beginning of a stop-start race that didn't really get going until halfway through its six hours. A traction control system that has yet to be optimised only added to their woes in the rain, as Thomas Laurent found out when he spun behind the safety car on lap five. He had a wobble out of the Turn 6 hairpin and didn't get the help he required from the electronics as he corrected and ended up in the wall. It was a carbon copy of Gustavo Menezes' shunt at Fuji, only this time the car made it back to the pits for repairs.

“We couldn't switch the front tyres on in those conditions, whereas the SMP drivers can get them up to temperature much quicker,” said Rebellion team manager Bart Hayden. “That made them significantly better in the really wet conditions.”

It was more equal as the track got drier in the penultimate hour; the two Rebellions were actually a tad faster than the best of the BRES in the latter stages. A drivethrough for a pitlane speeding offence, a need for a splash-and-dash for #11 and then a last-gasp safety car gave Lotterer a sniff of the podium heading in to a six-minute dash to the flag. But the conditions had worsened again and he had nothing for the SMP car.

Button was happy with his team's efforts in China, especially after a set-up mistake had blunted its efforts in qualifying. “Today we did a good job as a team and the guys stayed calm and made really good calls,” he said. “We didn't do that in Fuji and we





learned from that. We had no major issues apart from the drivethrough and a little spin."

Toyota didn't have any major issues, as we've come to expect, but one minor one for the #8 car deprived Buemi, Alonso and Nakajima of victory. Lopez, Kobayashi and Conway had enjoyed a narrow edge at Fuji, but a second consecutive victory was essentially down to good fortune. They didn't have the pace of their team-mates, they just got plainly lucky in a rather bizarre set of circumstances.

Kobayashi was trailing Alonso by a big margin when he needed to make his second fuel stop late in the fourth hour. The safety car was out and taking the field through the pitlane because the ByKolles CLM-Nissan that had come to halt on the start-finish straight had also parted company with most of its engine oil. Kobayashi simply ducked into his pitbox after Alonso continued past.

Next time around, with the clean-up operation complete, the safety car queue didn't trundle down the pitlane. So Alonso, who now also required a tank of gas, pitted and lost out hand over fist to his team-mate. Before the safety car, Alonso had been 22 seconds to the good; two laps after rejoining when the race went green, he was 19s behind.

It was a body blow from which Alonso and his team-mates in the #8 TS050 could not recover despite a clear, if narrow, performance advantage in their favour.

The gap was still 24 seconds when the safety car came out for one last time with 20 minutes of the race remaining. The fact that it was only a shade over a second when the green flags waved with six minutes remaining was irrelevant. The positions were fixed: Toyota doesn't allow its drivers to race right down to the flag.

"We got the luck today, but that's the way it goes sometimes in endurance racing," said Conway. "There have been races when we've missed out on the win through misfortune." >>

LMP2: JACKIE CHAN WINS AT HOME



Chinese entrant Jackie Chan DC Racing notched up a hometown victory in Shanghai with another solid performance from Ho-Pin Tung, Stephane Richelmi and Gabriel Aubry. It would be wrong to say that the winning crew in the Jota Sport-run ORECA-Gibson 07 had a faultless run, they just mounted a more coherent assault on a difficult race than their rivals.

Tung struggled initially with incorrect tyre pressures, which explained an early stop to hand over to Richelmi. It resulted in the team taking the lead when the DragonSpeed ORECA that Anthony Davidson had propelled to the front during the opening stint came into the pits. Richelmi established the car in a lead it held for the majority of the race, despite a gearbox glitch and misting problem in the cockpit.

Aubry had a couple of off-track excursions in the winning car, before the final safety car allowed the DragonSpeed machine, now with Roberto Gonzalez at the wheel, to close up. The Chan/DC driver was on intermediates, whereas his pursuer had wets under him. It looked like the late downpour might undo all the good work, but Aubry was able to rebuild his advantage over Gonzalez.

"It's good to finally crack our home race, because we've always had bad luck here," said Tung. "Stephane flew after we got the pressures right and I think the team did a strong job."

The DragonSpeed entry shared by Davidson, Gonzalez and Pastor Maldonado finished 13s down at the flag. Davidson

was able to exploit the superiority of the Michelin wet tyre early in the race, but the Dunlop intermediate used by his rivals was the rubber to have as the track dried. An extra pitstop after the car had to make an emergency fuel stop when the pits were closed didn't help DragonSpeed's victory bid.

The Signatech Alpine squad maintained its run of podiums, even if it rarely looked like a race winner. Nicolas Lapierre had a moment at the first corner early on, but the real problem for the team was Pierre Thiriet. The team's silver driver was entirely out of sorts at a track he was sampling for the first time, an issue that was compounded when the squad had to put him back in the car for the run to the flag to achieve his minimum drive time.

The TDS Racing ORECA shared by Matthieu Vaxiviere, Loic Duval and Francois Perrodo was established in third in the closing stages. The team was confident it could maintain that position even though it knew it had to put amateur Perrodo back behind the wheel because he too was missing some drive time, albeit just under a minute. That was until the late safety car, which allowed the Signatech ORECA to close up, and the tactic of pitting at the last possible moment backfired when the winning Toyota took the chequered flag before Perrodo could make it out of the pits.

Fuji winners Jazeman Jaafar, Nabil Jeffri and Weiron Tan ended up fourth after Tan lost a lap stranded in the gravel in the second Chan/DC entry.

Aston was kind to its tyres and the team made the right tactical calls to secure the Vantage's first win

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GTE: new Aston gets its first win

Aston Martin might have claimed a first pole with its new-for-2018 GTE Pro contender last time out at Fuji, but it ended up nowhere in the Japanese race because it got its tactics wrong and the second-generation Vantage GTE didn't look after its tyres. Those wrongs were righted at Shanghai to enable Marco Sorensen and Nicki Thiim to notch up victory number one for the car at only the fifth time of asking.

The Vantage was the fastest car in the race in China, one that looked after its grooved Michelin rubber much better than its slick tyres a month ago. The Prodrive-run Aston Martin Racing squad also got its tactics right this time around. At Fuji it had left its two cars out too long on wet tyres as the track dried in the expectation of further rain. This time it split its strategies, as did all the other GTE Pro manufacturers, and got it spot on tactically with the winning car.

Sorensen was the best-placed of the early pitcallers when he was brought in

to hand over to Thiim in the third hour. When the next group pitted under green-flag conditions after the halfway mark, Thiim moved the #95 Aston into a lead it would never relinquish.

Aston might have made it a one-two, but the second Vantage driven by Maxime Martin and Alex Lynn remained on a bet-hedging strategy for the remainder of the race. That left Martin on older intermediates than the cars around him in the latter stages. The Belgian was second going into the final hour, but lost positions to the two factory Porsche 911 RSRs driven by Richard Lietz and Michael Christensen.

It took only a hint of the shine off a first win for a car that had endured a difficult entry into the ultra-competitive WEC GTE Pro arena. AMR technical director Dan Sayers was happy to admit that Martin and Lynn had lost out on strategy for the greater good of the team.

"We made all the right strategy calls in the race – I thought the team was exceptional today," said Sayers. "The

car is phenomenal in the wet, a real improvement on the old Vantage. It's got a wider track, more downforce and seems to like the wet and intermediate tyres. It heats them up really well."

The rain undoubtedly played into Aston Martin's hands last weekend. It wiped out one weakness for the car – its inability to make its slicks last – while allowing it to continue to exploit a strength, the car's prodigious straightline speed.

The Porsche Lietz shared with Gianmaria Bruni was among the early stoppers. It finished just nine seconds down and might have been able to mount a challenge but for a late clash for Lietz with a prototype.

Christensen and Kevin Estre were a further five seconds behind in third. Estre had taken the class lead early in the race after a slightly contentious move that pitched Olivier Pla's Ford into a spin at Turn 1, but fell back because he was among the second group to stop.

Ferrari took fifth behind the second Aston with the AF Corse-run 488 GTE shared by James Calado and Alessandro Pier Guidi. Calado had been pessimistic about the pre-event Balance of Performance changes, but still reckoned they might have sneaked a podium but for tyre inconsistencies.

The Dempsey Proton Porsche squad claimed GTE Am class honours less than 24 hours after losing all its points for the season courtesy of a refuelling system irregularity uncovered at Fuji. Team boss Christian Ried, Julien Andlauer and Matt Campbell came back from some early tyre problems to take the win. ✖

Porsche finished second and third, unable to match the leading Aston





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RESULTS ROUND 5/8, SHANGHAI (PRC), NOVEMBER 18 (113 LAPS – 382.742 MILES)

POS	DRIVERS	TEAM	CAR	CLASS	TIME
1	Jose Maria Lopez (RA) Mike Conway (GB) Kamui Kobayashi (J)	Toyota Gazoo Racing	Toyota TS050 HYBRID	LMP1	6h01m46.414s
2	Sebastien Buemi (CH) Kazuki Nakajima (J) Fernando Alonso (E)	Toyota Gazoo Racing	Toyota TS050 HYBRID	LMP1	+1.419s
3	Jenson Button (GB) Mikhail Aleshin (RUS) Vitaly Petrov (RUS)	SMP Racing	BRE-AER BR1	LMP1	-1 lap
4	Neel Jani (CH) Andre Lotterer (D) Bruno Senna (BR)	Rebellion Racing	Rebellion-Gibson R-13	LMP1	-1 lap
5	Thomas Laurent (F) Mathias Beche (CH) Gustavo Menezes (USA)	Rebellion Racing	Rebellion-Gibson R-13	LMP1	-3 laps
6	Renger van der Zande (NL) James Allen (AUS) Ben Hanley (GB)	DragonSpeed	BRE-Gibson BR1	LMP1	-3 laps
7	Marco Sorensen (DK) Nicki Thiim (DK)	Aston Martin Racing	Aston Martin Vantage GTE	GTE Pro	-4 laps
8	Stephane Richelmi (MC) Ho-Pin Tung (PRC) Gabriel Aubry (F)	Jackie Chan DC Racing	ORECA-Gibson 07	LMP2	-4 laps
9	Gianmaria Bruni (I) Richard Lietz (A)	Porsche GT Team	Porsche 911 RSR	GTE Pro	-4 laps
10	Kevin Estre (F) Michael Christensen (DK)	Porsche GT Team	Porsche 911 RSR	GTE Pro	-4 laps
11	Maxime Martin (B) Alex Lynn (GB)	Aston Martin Racing	Aston Martin Vantage GTE	GTE Pro	-4 laps
12	Anthony Davidson (GB) Roberto Gonzalez (MEX) Pastor Maldonado (VV)	DragonSpeed	ORECA-Gibson 07	LMP2	-4 laps
13	Alessandro Pier Guidi (I) James Calado (GB)	AF Corse	Ferrari 488 GTE 'evo'	GTE Pro	-4 laps
14	Nicolas Lapierre (F) Andre Negrao (BR) Pierre Thiriet (F)	Signatech Alpine Matmut	Alpine-Gibson A470	LMP2	-4 laps
15	Sam Bird (GB) Davide Rigon (I)	AF Corse	Ferrari 488 GTE 'evo'	GTE Pro	-4 laps
16	Olivier Pla (F) Stefan Mucke (D)	Ford Chip Ganassi Team UK	Ford GT	GTE Pro	-4 laps
17	Tommy Milner (USA) Oliver Gavin (GB)	Corvette Racing	Chevrolet Corvette C7.R	GTE Pro	-4 laps
18	Martin Tomczyk (D) Nicky Catsburg (NL)	BMW Team MTEK	BMW M8 GTE	GTE Pro	-4 laps
19	Andy Priaulx (GB) Harry Tincknell (GB)	Ford Chip Ganassi Team UK	Ford GT	GTE Pro	-4 laps
20	Antonio Felix da Costa (P) Tom Blomqvist (GB)	BMW Team MTEK	BMW M8 GTE	GTE Pro	-5 laps
21	Christian Ried (D) Julien Andlauer (F) Matt Campbell (AUS)	Dempsey-Proton Racing	Porsche 911 RSR	GTE Am	-5 laps
22	Egidio Perfetti (N) Jorg Bergmeister (D) Patrick Lindsey (USA)	Team Project 1	Porsche 911 RSR	GTE Am	-5 laps
23	Khaled Al Qubaisi (UAE) Riccardo Pera (I) Matteo Cairoli (I)	Dempsey-Proton Racing	Porsche 911 RSR	GTE Am	-5 laps
24	Jazeman Jaafar (MAL) Weiron Tan (MAL) Nabil Jeffri (MAL)	Jackie Chan DC Racing	ORECA-Gibson 07	LMP2	-5 laps
25	Francesco Castellacci (I) Thomas Flohr (CH) Giancarlo Fisichella (I)	Spirit of Race	Ferrari 488 GTE	GTE Am	-5 laps
26	Paul Dalla Lana (CDN) Pedro Lamy (P) Mathias Lauda (A)	Aston Martin Racing	Aston Martin Vantage GTE	GTE Am	-5 laps
27	Motoaki Ishikawa (J) Olivier Beretta (MC) Eddie Cheever (I)	MR Racing	Ferrari 488 GTE	GTE Am	-6 laps
28	Mok Weng Sun (MAL) Keita Sawa (J) Matt Griffin (IRL)	Clearwater Racing	Ferrari 488 GTE	GTE Am	-6 laps
29	Salih Yoluc (TR) Jonny Adam (GB) Charlie Eastwood (GB)	TF Sport	Aston Martin Vantage GTE	GTE Am	-8 laps
30	Mike Wainwright (GB) Ben Barker (GB) Thomas Preining (A)	Gulf Racing	Porsche 911 RSR	GTE Am	-13 laps
31	Giedo van der Garde (NL) Frits van Eerd (NL) Nyck de Vries (NL)	Racing Team Nederland	Dallara-Gibson P217	LMP2	-14 laps
32	Enzo Guibbert (F) Erwin Creed (F) Romano Ricci (F)	Larbre Competition	Ligier-Gibson JSP217	LMP2	-38 laps
R	Matthieu Vaxiviere (F) Francois Perrodo (F) Loic Duval (F)	TDS Racing	ORECA-Gibson 07	LMP2	108 laps-not running
R	Stephane Sarrazin (F) Egor Orudzhev (RUS) Matevos Isaakyan (RUS)	SMP Racing	BRE-AER BR1	LMP1	100 laps-accident damage
R	Tom Dillmann (F) Oliver Webb (GB) James Rossiter (GB)	ByKOLLES Racing Team	ENSO CLM-Nissan P1/01	LMP1	50 laps-engine

Winner's average speed 63.477mph. **Fastest lap Nakajima** 2m01.381s, 100.456mph.

LMP2 de Vries 2m09.817s, 93.928mph. **GTE Pro Christensen** 2m14.080s, 90.942mph. **GTE Am Preining** 2m16.657s, 89.227mph.

QUALIFYING

1 Kobayashi/Conway 1m42.931s;
2 Alonso/Nakajima 1m43.159s;
3 Lotterer/Senna 1m43.218s; 4 Orudzhev/Sarrazin 1m43.870s; 5 Laurent/Beche 1m44.179s; 6 van der Zande/Hanley 1m44.612s; 7 Button/Petrov 1m44.789s;
8 Webb/Dillmann 1m46.353s; 9 Aubry/Tung 1m48.888s; 10 Jaafar/Jeffri 1m49.138s; 11 Maldonado/Gonzalez 1m49.857s; 12 Lapierre/Thiriet 1m50.206s; 13 Duval/Perrodo 1m51.006s;
14 van der Garde/Eerd 1m51.657s; 15 Guibbert/Creed 1m51.925s; 16 Mucke/Pla 1m58.627s; 17 Catsburg/Tomczyk 1m58.874s; 18 Martin/Lynn 1m59.000s;
19 Estre/Christensen 1m59.031s; 20 Blomqvist/da Costa 1m59.055s; 21 Sorensen/Thiim 1m59.157s;

22 Tincknell/Priaulx 1m59.278s; 23 Lietz/Bruni 1m59.286s; 24 Pier Guidi/Calado 1m59.454s; 25 Bird/Rigon 1m59.689s;
26 Gavin/Milner 2m00.228s; 27 Lamy/Dalla Lana 2m01.884s; 28 Campbell/Ried 2m01.951s; 29 Fisichella/Flohr 2m02.090s; 30 Cairoli/Al Qubaisi 2m02.115s; 31 Adam/Yoluc 2m02.211s;
32 Griffin/Mok Weng Sun 2m02.400s; 33 Bergmeister/Perfetti 2m02.429s; 34 Barker/Wainwright 2m04.241s; 35 Cheever/Ishikawa 2m04.648s.

Fastest in each class

LMP1 Kobayashi 1m42.708s;
LMP2 Lapierre 1m48.598s;
GTE Pro Catsburg 1m58.441s;
GTE Am Cairoli 2m00.128s.

CHAMPIONSHIP**LMP1 drivers**

1 Alonso/Nakajima/Buemi 102; 2 Lopez/Kobayashi/Conway 97; 3 Menezes/Beche/Laurent 73; 4 Lotterer/Jani 63; 5 Senna 45; 6 Aubry/Tung/Richelmi 38.

LMP1 manufacturers

1 Toyota Gazoo Racing 118; 2 Rebellion Racing 90; 3 SMP Racing 52; 4 ByKOLLES Racing Team 22; 5 DragonSpeed 8.5; 6 CEFC TRSM Racing 1.

LMP2 drivers

1 Aubry/Tung/Richelmi 112; 2 Negrao/Lapierre/Thiriet 102; 3 Jaafar/Jeffri/Tan 98; 4 Maldonado/Gonzalez 73.

GTE drivers

1 Estre/Christensen 111; 2 Pla/Mucke 68; 3 Bruni/Lietz 68; 4 Pier Guidi/Calado 65.5;

5 Sorensen/Thiim 55.5; 6 Billy Johnson 48.

GTE manufacturers

1 Porsche 181; 2 Ford 105; 3 Ferrari 102; 4 Aston Martin 94; 5 BMW 56.

GTE Am drivers

1 Perfetti/Bergmeister/Lindsey 84; 2 Lauda/Dalla Lana/Lamy 64; 3 Eastwood/Yoluc 58; 4 Sawa/Griffin/Mok 57.

Ogier gives M-Sport the perfect goodbye present

Citroen-bound Sebastien Ogier could only manage fifth in Australia, but it was enough to claim the World Rally Championship drivers' title

DAVID EVANS

ALL PHOTOGRAPHY MCKLEIN





A

dramatic finale provided a fitting conclusion to one of the hardest-fought World Rally Championships ever.

Toyota could argue it had the fastest car in 2018 and Hyundai's Thierry Neuville led the points standings for much of the way, but in the end the title went to the man who has been here before. Sebastien Ogier secured a historic sixth crown in his final outing aboard an M-Sport Ford Fiesta WRC.

Not since 2003 had three drivers arrived at the final round with a chance of the championship crown, but the three crews in question had little interest in the past. It was the immediate future that interested them more.

Following a near-perfect penultimate round in Spain last month, Ogier was back in front and busy telling everybody that it was better to have the points rather than a preferable position on the road. Hyundai's Neuville was similarly sure second on the road would pay dividends more handsome than his three-point deficit. And Ott Tanak? The Toyota ace wasn't really saying much at all. As he had for the rest of the season, he was ready to let his driving take a lead in conversation.

In an effort to tally tiredness with a time zone turning a European evening into a bright Oz morning, the teams arrived earlier than ever. For the drivers, there had been photoshoots alongside Sydney's opera house, even a stroll along Bondi beach. The move up the coast to Coffs Harbour meant more manufactured smiles and a toboggan ride for Ogier, Neuville and Tanak.

M-Sport's service park manager Stewart Berry couldn't keep still. Walking, stalking, prowling. "We just need to get on with this now," he said. "We've been waiting for long enough."

He spoke for the entire service park. But, just at that precise moment, another minute or two wouldn't have gone amiss for any of the drivers.

Ahead of the final Friday's first loop, the teams were staring at the sky and wondering. What would the weather do? The drizzle intensified into rain. Then it

lifted, and the skies lightened. But the clouds were sitting heavy over the hills into which the cars were heading.

Ultimately, tyre choice was straightforward. With cooler ambient temperatures, everybody went with the softer choice.

Championship leader Ogier sat at a desk in M-Sport's command centre, cogitating in splendid isolation. Nobody said a word. Nobody needed to. There was no witty banter, no one-liners. Not this time. An entire season and the champion's reign was on the line.

Team principal Malcolm Wilson emerged, serious race face set. "He's up for it," he said. "It's going to be some day..."

It was the same story next door at Hyundai. The atmosphere was an odd one. So many questions were about to be answered. For team manager Alain Penasse, this was just the beginning of a very long three days. "Today is not so bad," he said. "It's tomorrow [Saturday] and Sunday when the pressure comes, that's when we start to know which way this one's going."

"Then again, Ogier could put it up against a tree, damage the rollcage and it could be all over within the hour. They could put it on a plate for us in the first stage... or we could put it on a plate for them."

None of those outcomes came to pass in the first hour. And neither did the rain Ogier had hoped for so badly.

Regular readers of these pages will be painfully well acquainted with the consequences of leading the championship into a warm, dry gravel rally. For the uninitiated, the gravel-strewn surface gets 'cleaned' – and faster – with each passing car when it's dry. Rain is what you want if you're first on the road.

The road stretching away in front of Ogier on Friday was water-free. There was no point in being philosophical; this was a crisis in danger of becoming a disaster.

"Today's stages are bad for cleaning," he said, "but it's even worse tomorrow. Tomorrow is a disaster to be first on the road. And right now, that's me..."

Utterly hamstrung as his Fiesta floated across the loose surface, Ogier spent the

morning spreading the stones and digging out a faster line for those following. The only crumb of comfort was that Neuville was only one place ahead.

"It's very difficult," said Neuville. "I had a really big moment on the last stage, the car was on its nose over some of the jumps – I backed off a little bit after that. If it stays like this, the powerstage will be very, very important."

'Like this' was ludicrous. 'Like this' surely couldn't continue. 'Like this' was Neuville ninth and Ogier 10th overall. The title race's top two were propping up the top 10.

"It makes us look stupid," said Ogier. "The best drivers in the championship and we're all in these positions. Try to explain that to your readers..."

Third on the road and 'enjoying' conditions fractionally better was Tanak. The current form man showed flashes of the speed that has provided the talking point for the season's second half. Sherwood, in particular, was a blast. Until the bumps. Remember the ones that almost caught Neuville? They got Tanak.

As he struggled to get the Toyota slowed for a right-hander after the Yaris WRC had put its nose in the dirt, the rear slid wide, bounced off the bank on the outside, and pivoted the front up and into the greenery.

Asked how close to the limit he'd been through the morning, Tanak smiled thinly. "I think I have been a little bit over it," he



Pre-Australia wait
had been a long one for
Ogier, Tanak and Neuville

TOMMI'S TAKE

Over a cup of coffee with Tommi Makinen at lunchtime last Sunday, we crunched the maths of the potential championship outcomes. At one point, his eyes widened: "And if this stays like this, then they all end up on 211 points. All three of them! Unbelievable."

Who could imagine a more extraordinary end to a rally? Suddenly there was the surreal moment when we realised one of us really could imagine it. Because he'd been there. Twenty years ago, Makinen scooped his third straight drivers' title in the most extraordinary circumstances after the engine failed on Carlos Sainz's Toyota within sight of the finish of the final stage.

"I remember that telephone call from my brother," said Makinen. "That was unbelievable!"

It's taken him two decades, but Makinen – then a Mitsubishi driver – can be sure he has repaid his current employer Toyota. What Makinen has achieved with the Yaris WRC is nothing short of remarkable. In just its second season, the Japanese giant has topped the world. Of course, Volkswagen remains the benchmark – bringing its Polo R WRC to the table and winning four straight titles is pretty special – but the WRC is a different place today. It's never been as competitive as it is now.

Toyota man Ott Tanak might have missed out on a maiden drivers' title, but there can be no doubt he'll be in the thick of the fight next year. And, on the strength of team-mate Jari-Matti Latvala's Rally Australia showing, there could be two Toyotas in the hunt.

Latvala has borne the brunt of Toyota's frailties, overshadowing his efforts. Not now. His win last week was as strong as anything we've seen from him. Twelve months ago, he looked to go into the off-season on the back of a powerstage win – and crashed.

"I didn't want a sad Christmas this year," he said. "This definitely makes up for last year. I think this year will be a happy Christmas."

To be followed, quite possibly, by a great new year.



Neuville pushed hard but fell short once again

"Now forced to run first on the road, he was beginning to find the challenge insurmountable"

said. "Any time you go off the road and you don't find the tree, you are lucky. I was lucky this morning."

Fastest time on the first Friday rerun stage and Tanak was up to fourth. Worse was to follow for Ogier as Neuville went fastest in SS5, putting himself into seventh spot. Ignoring the powerstage connotations, that meant the title would be heading to Belgium for the first time in history.

That was as good as it would get. The Sherwood stage had provided plenty of drama through the morning, during which Andreas Mikkelsen crashed after being distracted by a tractor which had entered the stage to put a chicane back in place (see Pit and Paddock).

The histrionics continued into the afternoon. An awkward landing knocked the left-rear tyre off the rim of Neuville's i20 Coupe WRC. Having been eight tenths of a second up on Ogier at split two, Neuville started to lose time into the

second half, but it was only when he got to the scene of the tractor drama that the significance of his problem was laid bare. Unable to slow the car, he slammed into the bales and lost more time.

He arrived at the finish 54.4s down on fastest man Craig Breen, but had little interest in the Irishman. He was looking at only one time. He'd dropped 40.2s to Ogier and thereby relieved his rival of the unwanted 10th place.

Asked what this might mean to his title challenge, Neuville took one last look at the time, pursed his lips, and said: "I have no idea." As he selected first gear and drove away, he knew only too well what it meant. It was nothing short of a disaster.

Rubbing salt into a wide-open wound, Ogier's M-Sport team-mates Teemu Suninen and Elfyn Evans pulled absolute blinders to slow down just enough to allow Ogier ahead of them, while keeping Neuville behind. Saturday's running order was decided after SS6. The gap between ninth-placed Evans and Neuville? Two tenths of a second.

Team orders will forever remain one of motorsport's most controversial topics, but the British squad's decision was as understandable as the deployment was well-executed. Not that anybody ventured such a point with Neuville. Now forced to run first on the road, he was beginning to find the challenges insurmountable. >>



Ingrassia, Wilson and Ogier celebrate the drivers' title

The Argents Hill and Welshs Creek stages were by far the worst for those running first on the road. Fast and flowing, these two most southerly stages carve their way through the countryside across a surface inches deep in dry, dusty gravel.

Neuville did everything he could, but he was ultimately powerless. "It's so frustrating," he said. "I can see no line. Every corner, I know they take more."

Urunga, the final stage of the loop, takes the competitors back between the trees and offers a slightly better surface. Neuville knew he had to push here, so he pushed... And it went wrong again. He slid wide, flirted with the trees, and was fortunate to escape with just a damaged left-rear

suspension arm. "It's OK," he said, sounding like a man trying desperately to convince himself. "I can still drive."

"What can I say? I will never give up. Let's try again and see what happens."

Another ninth-fastest time, another 8.5s shipped. "I cannot do more," he said. "I really pushed in there. That one was flat out."

The last remaining hope appeared to be the weather. Neuville had managed to elevate himself past Breen and Suninen, but still Sunday would bring more cleaning. Unless it rained – and, finally, something went right for Neuville. His rain came.

Going into the season's final day, the provisional championship had sixth-placed Ogier on 212, seven ahead of Neuville. But

now Tanak had come into play. Toyota's strong second half of the season continued right to the end, as the Yaris WRCs knocked Citroen's Mads Ostberg and Breen out of their Friday night one-two and replaced them with Tanak and Latvala. Leader Tanak sat in a provisional second in the title race, one point up on Neuville.

Climbing aboard the i20, Neuville looked up at the grey skies, shortly after six on the season's final Sunday morning. The weather brought an opportunity. "Now we have to use it," he said. "We have to gamble. We have to push. We have nothing to lose."

Wilson looked a troubled man as he prepared for the last 50 miles of 2018 competition. "I never sleep particularly



Latvala's win secured the manufacturers' crown for Toyota...



...but things went wrong for Tanak

well, but last night really wasn't so good," he said. "I kept thinking about all that rain and now this morning I've seen some pictures of the stages..."

"There's just so much riding on this. Everybody's up in Dovenby [M-Sport's Cumbrian base], they've got a big screen and they're all watching. I just hope we don't let him down."

Ogier was classic Ogier: utterly self-confident. Everything would be fine. Of course it would. Still, watching the early onboard action did little to calm Wilson's nerves: cars were all over the place, and having moments at every corner.

"It's horrendous," said Wilson grimly after the first loop. "What I wouldn't do to fast forward a few hours... Seb's fine, so relaxed. He keeps telling me, 'Malcolm, don't worry; we'll be world champions'. But it's still all so close."

Ogier just kept on with his signature relentlessness. Mistakes had been for others on Friday and Saturday — why would Sunday be different? It wouldn't.

On the first stage of the last loop, Neuville's dream was done. Visibly right on the ragged edge, he battled valiantly but lost a wheel — and with it, the championship.

"It's the way it is," he said. "We had to push, it was all or nothing."

One stage later and it was everything for Ogier as Tanak pinged his Yaris off another solid Australian gum tree.

For 23 of 24 stages of the finale, the WRC had delivered an absolute thriller, mirroring the extraordinary twists and turns of this most compelling season. But then M-Sport was able to radio a message to Ogier's #1 car: "Tanak out."

Driving down the road to the final stage wasn't how Ogier had imagined winning a sixth title. "It killed the moment a little bit," he said. "But then there was a big relief. This was definitely the toughest fight we had for the championship. It's been so intense."

With intensity comes emotion. And there was no shortage of that when Ogier arrived at the end of the final test, having won the powerstage.

"It's incredible," he said, as Wilson appeared on the scene. "I'm so happy to have done this for my team and for this guy... the best boss I ever had."

Rarely — if ever — on these pages has fifth place been so thoroughly documented. For the record, Jari-Matti Latvala won Rally Australia. In doing so he maintained an 11-year record of winning at least one WRC round each season. More important than that, victory sealed the manufacturers' crown for Tommi Makinen's Toyota squad.

More than anybody, Makinen understood the hurt Tanak felt. "Next year," he said.

Forget next year, it's next week that Ogier is focused on now: his first meaningful test in a Citroen and the start of another new adventure. But what a way to say goodbye to the old one. ✎

RESULTS ROUND 13/13, RALLY AUSTRALIA, NOVEMBER 15-18

POS	DRIVER / CO-DRIVER	TEAM / CAR	TIME
1	Jari-Matti Latvala (FIN) Miikka Anttila (FIN)	Toyota Gazoo Racing WRT / Toyota Yaris WRC	2h59m52.0s
2	Hayden Paddon (NZ) Sebastian Marshall (GB)	Hyundai Shell Mobis WRT / Hyundai i20 Coupe WRC	+32.5s
3	Mads Ostberg (N) Torstein Eriksen (N)	Citroen Total / Citroen C3 WRC	+52.2s
4	Esapekka Lappi (FIN) Janne Ferm (FIN)	Toyota Gazoo Racing WRT / Toyota Yaris WRC	+1m02.3s
5	Sebastien Ogier (F) Julien Ingrassia (F)	M-Sport Ford WRT / Ford Fiesta WRC	+2m30.8s
6	Elfyn Evans (GB) Daniel Barritt (GB)	M-Sport Ford WRT / Ford Fiesta WRC	+3m05.1s
7	Craig Breen (IRL) Scott Martin (GB)	Citroen Total / Citroen C3 WRC	+8m59.0s
8	Alberto Heller (RCH) Luis Diaz (RA)	M-Sport WRT / Ford Fiesta R5	+22m28.5s
9	Steve Glenney (AUS) Andrew Sarandis (AUS)	Steve Glenney / Skoda Fabia R5	+27m01.8s
10	Jourdan Serderidis (GR) Lara Vanneste (B)	M-Sport WRT / Ford Fiesta WRC	+35m14.1s

OTHERS

11	Andreas Mikkelsen (N) Anders Jager (N)	Hyundai Shell Mobis WRT / Hyundai i20 Coupe WRC	+43m21.9s
R	Teemu Suninen (FIN) Mikko Markkula (FIN)	M-Sport Ford WRT / Ford Fiesta WRC	SS24-accident
R	Ott Tanak (EST) Martin Jarveoja (EST)	Toyota Gazoo Racing WRT / Toyota Yaris WRC	SS23-accident
R	Thierry Neuville (B) Nicolas Gilsoul (B)	Hyundai Shell Mobis WRT / Hyundai i20 Coupe WRC	SS22-accident

DRIVERS' CHAMPIONSHIP

1 Ogier 219; 2 Neuville 201; 3 Tanak 181;
4 Latvala 128; 5 Lappi 126; 6 Mikkelsen 84;
7 Evans 80; 8 Paddon 73; 9 Sordo 71;
10 Ostberg 70.

MANUFACTURERS' CHAMPIONSHIP

1 Toyota Gazoo Racing WRT 368; 2 Hyundai Shell Mobis WRT 341; 3 M-Sport Ford WRT 324;
4 Citroen Total 237



Ostberg took third after leading early on

STAGE TIMES

STAGE	FASTEST	LEADER	SECOND
SS1 Orara East I (5.45 miles)	Lappi 4m45.5s	Lappi	Tanak +0.8s
SS2 Coldwater I (8.77 miles)	Latvala 7m56.3s	Latvala	+12m43.0s
SS3 Sherwood I (16.58 miles)	Ostberg 12m49.0s	Ostberg	Lappi +5.4s
SS4 Orara East II (5.45 miles)	Tanak 4m43.5s	Ostberg	Lappi +4.5s
SS5 Coldwater II (8.77 miles)	Neuville 7m51.1s	Ostberg	Latvala +5.9s
SS6 Sherwood II (16.58 miles)	Breen 12m35.6s	Ostberg	Latvala +6.2s
SS7 Destination NSW - I (0.79 miles)	Ogier 1m23.4s	Ostberg	Breen +7.6s
SS8 Destination NSW - II (0.79 miles)	Tanak 1m23.0s	Ostberg	Breen +6.8s
SS9 Argents Hill Reverse I (8.16 miles)	Paddon 7m20.9s	Ostberg	Latvala +7.0s
SS10 Welshs Creek Reverse I (17.91 miles)	Tanak 15m12.6s	Ostberg	Latvala +3.7s
SS11 Urunga I (12.50 miles)	Tanak 11m32.3s	Latvala	Tanak +4.6s
SS12 Raleigh I (1.24 miles)	Evans 1m33.1s	Latvala	Tanak +3.2s
SS13 Argents Hill Reverse II (8.16 miles)	Paddon 7m16.8s	Latvala	Tanak +3.2s
SS14 Welshs Creek Reverse II (17.91 miles)	Tanak 15m01.4s	Tanak	Latvala +0.8s
SS15 Urunga II (12.50 miles)	Lappi 11m32.5s	Tanak	Latvala +7.4s
SS16 Raleigh II (1.24 miles)	Tanak 1m32.2s	Tanak	Latvala +9.7s
SS17 Destination NSW - III (0.79 miles)	Tanak 1m23.1s	Tanak	Latvala +20.0s
SS18 Destination NSW - IV (0.79 miles)	Neuville 1m24.1s	Tanak	Latvala +21.9s
SS19 Coramba I (9.66 miles)	Latvala 9m38.1s	Tanak	Latvala +12.6s
SS20 Sapphire I (11.97 miles)	Paddon 11m30.2s	Latvala	Tanak +5.0s
SS21 Wedding Bells 18 I (4.45 miles)	Lappi 4m14.9s	Latvala	Tanak +5.0s
SS22 Coramba II (9.66 miles)	Latvala 10m05.1s	Latvala	Tanak +6.3s
SS23 Sapphire II (11.97 miles)	Latvala 11m48.1s	Latvala	Paddon +32.1s
SS24 Wedding Bells 18 II (powerstage) (4.45 miles)	Ogier 4m16.2s	Latvala	Paddon +32.5s

Brilliant Ticktum proves his F1 worth

Red Bull Junior Dan Ticktum was unbeatable on the way to his second Macau GP triumph, in a race marred by a horrific shunt

MARCUS SIMMONS





Dan Ticktum is now a two-time Macau Grand Prix winner, and the manner of his victory last weekend on the famed Guia circuit was crushing, whereas in 2017 it was rather less so. "The best way to describe it would be to say 'less surprising but more enjoyable,'" he reflected in the wake of his latest triumph. "I don't want to sound overly cocky, but it's been a pretty perfect weekend on my part and the team's part."

That's not cocky at all – it's a perfect summation of the event. No-one had an answer to the pace of Ticktum or, once he'd got up to second place, his Motopark team-mate Joel Eriksson. As it had done in 2017, the German squad had the edge through qualifying and the two races. Nobody could match Ticktum's sector times on the challenging mountain section of the course, for which you need a bit of downforce, yet other teams were scratching their heads that they couldn't match the Motopark pace on the flat-out blast from R Bend to Lisboa either.

It was that blast that, sadly, precipitated the accident that overshadowed Ticktum's victory. Macau 2018 will be remembered for the shocking crash involving Sophia Florsch and Sho Tsuboi. Thankfully, it will also be remembered for the fact that none of the five people hurt sustained life-threatening injuries – and that's a miracle.

Four cars had shunted at Lisboa on the opening lap, meaning the safety car was called. Ticktum made a perfect restart to enter lap four with a handy advantage over second-placed Sacha Fenestraz, who had Eriksson tucked into his slipstream. The first sign that something odd was happening was when Eriksson backed out of what seemed to be an easy pass on the Carlin car of Fenestraz on the approach to Lisboa. This wasn't the fighting form we normally expect of the BMW DTM racer, who was returning to Formula 3 for a crack at Macau glory. "I tried to pass him but I had to back off for yellow lights," he explained.

Somehow, those yellow lights between the Mandarin kink and Lisboa had been left on, even though the race was now green. Some backed off and braked earlier than usual, including 15th-placed Jehan Daruvala, who had Florsch tucked into his slipstream. Florsch had no time to avoid the Carlin machine and, according to the following Guan Yu Zhou, she hit Daruvala's right-rear wheel. She spun around, the left-side wheels torn loose, and entered Lisboa out of control at a crazy velocity – she'd been travelling at 276km/h (171mph) in the speed trap just before the braking area. Japanese F3 champion Tsuboi was minding his own business as she smashed into the TOM'S machine, and the impact launched the Van Amersfoort Racing Dallara over its rollhoop and into the sky. Florsch cleared the barrier, clipped the top of the



No-one had an answer for polesitter Ticktum (1), here chased by Fenestraz

fence, and her flight was only halted by the photographers' bunker, before the car crashed down.

Florsch sustained a spinal fracture, Tsuboi had hospital attention to his back, while two photographers and one marshal also suffered injuries – but by a freak set of circumstances it was a whole lot less serious than it could have been. "We have to thank the angels she had with her today, and for the fantastic strength of the Dallara car," said shaken team boss Frits van Amersfoort.

The F3 crowd is a close-knit bunch, and news was soon filtering through from photographers at the scene that Florsch was moving in the car – an enormous relief. A lengthy delay was caused by repair work on the fence, and then Ticktum did his stuff. It was an expression of joy in driving his perfect car around this perfect race track, a stretch of asphalt unmatched anywhere in

the world. His qualifying effort had been superb, unleashing two awesome laps at the end of the session that finally broke Marcus Ericsson's long-standing qualifying lap record from 2009. Other drivers – notably Eriksson, Callum Irott, Juri Vips and Jake Hughes – probably would have got very close without the usual Macau litany of yellow flags and crashes ruining their hot laps, and many predicted that Eriksson, once he got up to second place, would be tough for Ticktum to keep behind.

The Swede managed that when the race finally went green, once again catching Fenestraz's tow and just about squeezing down the inside with a late-braking effort at Lisboa. Now the chase was on, but Ticktum was keeping Eriksson at arm's length when Enaam Ahmed found his third different location of the weekend at which to crash, thumping the wall at Moorish. That's a



On a collision course: Florsch between hitting Daruvala and Tsuboi



NO PREMA AND SCHUMACHER REPEAT



tough place for the efficient Macau marshals and their cranes to recover a car from, and once again the safety car was called out. The race went green with four laps to go.

Yet again, Ticktum not only made a fantastic restart but also carried awesome pace through Fishermen's Bend and R Bend so that he held a 0.721-second advantage over Eriksson as they crossed the start/finish line. Eriksson was able to draft Ticktum, but only to the extent of pulling alongside to the left as they entered the braking area for the right-handed Lisboa. Ticktum held the advantageous line, then blitzed the rest of the lap to be 1.028s in front with three tours remaining. He then extended that to 1.513s, and 1.550s with one to go. Eriksson simply had no answer.

"I was not really on it at the restarts," admitted Eriksson. "I lost a few metres and that was the saving moment for Dan. It was super work for Dan, super work for the team, and I'm just happy that Motopark had a one-two."

"We've seen that Dan really deserves this weekend," said Motopark boss Timo Rumpfkeil, his team celebrating Macau glory for the second year in succession. "I can't remember someone topping both qualifying sessions and winning both races. We had 35 people working their asses off this weekend, so we had a chat with Dan and Joel before the race, but they know how to race each other and I have to say I was pretty chilled – surprisingly." He then added, tongue-in-cheek: "I was more nervous to see Callum around because we've had incidents with him in the past!"

Ilott wasn't around for long though. He'd been a force all weekend on his return from GP3 with Carlin, and sat on the front row for the qualification race. His final >>

For all its usual domination of the Formula 3 European Championship, Prema Powerteam occasionally has an off-colour Macau Grand Prix, and that's what it experienced in 2018. Unfortunately so, because title sponsor Theodore Racing is next-to-sacred in Macau, and the Italian team's pit is a hive of media activity throughout the event.

European champion Mick Schumacher was the team's best finisher in fifth, but apart from in free practice – he topped both sessions – he didn't look like repeating the Macau victories of dad Michael and uncle Ralf. To be fair, Prema did seem to have good pace through Thursday and Friday, and it was a minor Schumacher incident that adversely affected almost the entire team's bid to qualify up near the front for Saturday's preliminary race.

Schumacher touched the Moorish wall in the closing stages of the all-important Friday qualifying session. 'No apparent problem', he thought as he pressed on to complete the lap – only to almost shunt at the following Dona Maria. He then realised he had a left-rear puncture, and toured around to the pitlane, only to delay team-mates Ralf Aron, Robert Schwartzman and Guan Yu Zhou. Chinese racer Zhou did improve to put himself fifth on the grid for Saturday's race, but lost the best part of four tenths. Aron was incredulous that what he described as an earlier preparation lap was good enough for 10th. A bemused Marcus Armstrong, who had already shunted at Melco hairpin and stayed nearby to watch the rest of the session with a local family, was laughing that this intra-team self-

mutilation kept him on the fourth row.

Zhou was running fifth on the final lap of the qualification race when he lost concentration – he'd backed off for the run to the flag – and suffered a crash that started at the Solitude Esses and finished at Paiol. So big was it that it tore off all four corners of the car, and the devastated Ferrari junior needed a new engine for the final, putting him at the rear of the grid. It was left to Schumacher to uphold Prema/Theodore honour with fifth from Aron, while Armstrong and Schwartzman completed the top 10 on the road.

The latter pair were promoted one place each when Juri Vips was penalised 40 seconds after finishing seventh. He was just passing Armstrong when he spotted a red flag, and gave the place back, but that wasn't enough for the stewards. This was a tough weekend for Vips, whose father Juri Sr had succumbed to illness less than 48 hrs before his son flew out to Macau to sport Red Bull Junior colours for the first time.

At times Vips had sensational pace on his Macau debut with Motopark, and said he was 0.05 seconds up on Ticktum's Friday pole time exiting the Melco hairpin, only to be scuppered by yellow flags for a crash at R Bend between team-mate Joel Eriksson and Ukyo Sasahara. That left him 14th on the grid, but he charged to seventh in Saturday's race, before losing out in the slipstream on Sunday. Ferrari protege Armstrong therefore took bragging rights as the top Macau debutant, but it was Vips who'd starred. Both should be considered among the favourites in 2019.

IN THE HEADLINES



MOTORSPORT IMAGES/TRIENITZ

B-MAX TEAM FADES

Leading Japanese Formula 3 team B-Max Racing was a force on the first day of qualifying, with Yuhi Sekiguchi fifth and European import Alex Palou eighth. It was the first weekend of the team's tie-up with Motopark, with the German squad supplying engineering support. The cars were set up for Thursday on Motopark's flat-patch, but fell gradually off the pace as they subsequently used the B-Max flat-patch, which gave wrong measurements. That was fixed for Sunday's race, but Palou (above) crashed at Lisboa on lap one, and Sekiguchi was on the fringes of the top 10 when he went into the escape road at the same corner.

TOUGH FOR HABSBURG

Macau Grand Prix almost-winner from 2017 Ferdinand Habsburg had a tough sequel on his switch from Carlin to Motopark. He qualified 15th for Saturday's race, only for the clutch to burn out at the start and cause a slow getaway. Habsburg recovered to complete the top 10 once team-mate Juri Vips's penalty was applied.

SASAHARA STRUGGLES

Ex-Formula Renault Eurocup ace Ukyo Sasahara had a tough Macau debut with a ThreeBond Racing car that was bottoming so badly on the straights early in the weekend that he could hardly see where he was going. The Honda protege hit the wall at the Paiol left-right in the race thanks to sustaining a puncture in the first-lap Lisboa melee, and retired to the pits.

TICKTUM IMPERFECTION

When Dan Ticktum was describing his weekend as perfect, it obviously slipped his mind that he'd incurred the wrath of the stewards on Saturday morning. What had he done this time? He'd turned up 10 minutes late for the group photo of the drivers, a heinous crime for which he was fined.



Despite strong pace, Iloft faded to eighth on the road in the final

qualifying lap looked like a Ticktum challenger, only for Marino Sato to crash in front of him at the narrow Police bend – Iloft's avoidance was incredible, illustrating his remarkable reflexes.

He got into Ticktum's slipstream and swept around the outside at the Mandarin kink to take the lead at the start of the Saturday race. Ticktum challenged again, and Iloft had to brake as late as he dared at Lisboa to stay ahead, the left-rear flicking out and almost kissing the barrier. "I used Dan as a reference for my braking because I know he's quite good on the brakes," grinned Iloft, "but I wasn't stopping! I went down the gears, went down one more and it nearly bumped the wall. It was a bit lucky."

Ticktum got back ahead around the outside into Lisboa on lap two, and within half a lap both knew that Ticktum had a pace advantage. Iloft later dropped behind Eriksson in a pass in which Eriksson scuffed the wall on the approach to Lisboa, and

he nearly lost third place too to Fenestraz, while Ticktum's only real worry in that race was a stray dog on the racing line at Dona Maria. He gave the dog a wide berth, and the safety car was called out while the marshals retrieved it.

Iloft didn't make the greatest of starts to the Grand Prix the following day, but it looked as though the slipstream would save him until he found himself on the wrong side of the track into Lisboa, and he slipped to fifth. It was a similar story after the stoppage, and Iloft eventually crossed the line eighth, although he was promoted one position when Vips – who had passed him on the final lap – was penalised 40 seconds after the race for overtaking under the red flag. "I didn't have the pace – the car felt all right but it wasn't perfect," he said. "I was just in the wrong position and the guys behind were a lot quicker where I wasn't, which was down the straights."

Fenestraz upheld Carlin honour superbly,



Fenestraz (19) upheld Carlin's honour but would lose out to Eriksson (2)

TRIENITZ
motorsport
IMAGES



after a generally unimpressive season in the F3 European Championship. In typical Fenestraz style, his hands were a blur of activity on the steering wheel on the mountain section, and he even challenged Ticktum for the lead at the start of the final, getting ultra-close to the barrier as the cars approached Lisboa. "It was going to be hard to beat Dan," he admitted. "I had an advantage with the new tyres [Fenestraz and Iloft had four fresh Yokohamas remaining for the race, while most of the other top runners had two], but with the red flags you cannot take the most out of it."

While Iloft faded, another Brit from the GP3 ranks had a superb Macau GP. Jake Hughes has had a sorry season for various reasons, but looked terrific on track with his Hitech GP car. His pace on the mountain was so impressive in Friday free practice that some erroneously thought he had new tyres on, and he was another to have genuine Ticktum-matching pace in qualifying only to be scuppered by yellow flags. His form in the races was solid rather than spectacular, but fourth position – and best Mercedes-engined runner behind the Volkswagen-powered top three – was a great achievement.

Hitech, of course, stays in F3 in the new FIA championship next season; Motopark's F3 activities are confined to the existing cars in the DTM-aligned series after it disgracefully wasn't accepted for the sparkly new Formula 1-supporting show. "It's an emotional way for us to say goodbye to F3," said a teary-eyed Rumpfkeil, whose cars sported logos paying tribute to the late former Macau GP coordinator Barry Bland. If the new F3 cars race in Macau next year, there will be a hollow victory, because no team has a better car around these streets than the squad that will not be there. ❧



RESULTS MACAU (PRC), NOVEMBER 17-18 (15 LAPS – 57.042 MILES)

POS	DRIVER	TEAM/CAR	TIME
1	Dan Ticktum (GB)	Motopark/ Dallara-Volkswagen F318	1h46m22.108s
2	Joel Eriksson (S)	Motopark/ Dallara-Volkswagen F315	+1.208s
3	Sacha Fenestraz (F)	Carlin/ Dallara-Volkswagen F317	+2.505s
4	Jake Hughes (GB)	Hitech GP/ Dallara-Mercedes F316	+3.521s
5	Mick Schumacher (D)	Prema Powerteam/ Dallara-Mercedes F318	+4.542s
6	Ralf Aron (EST)	Prema Powerteam/ Dallara-Mercedes F317	+6.406s
7	Callum Iloft (GB)	Carlin/ Dallara-Volkswagen F317	+8.340s
8	Marcus Armstrong (NZ)	Prema Powerteam/ Dallara-Mercedes F317	+9.597s
9	Robert Schwartzman (RUS)	Prema Powerteam/ Dallara-Mercedes F314	+11.840s
10	Ferdinand Habsburg (A)	Motopark/ Dallara-Volkswagen F316	+12.793s
11	Guan Yu Zhou (PRC)	Prema Powerteam/ Dallara-Mercedes F315	+13.461s
12	Jehan Daruvala (IND)	Carlin/ Dallara-Volkswagen F312	+13.985s
13	Ritomo Miyata (J)	TOM'S/ Dallara-Toyota F317	+16.934s
14	Yuhi Sekiguchi (J)	B-Max Racing Team/ Dallara-Volkswagen F314	+18.697s
15	Frederik Vesti (DK)	Van Amersfoort Racing/ Dallara-Mercedes F316	+19.773s
16	Toshiki Oyu (J)	Toda Racing/ Dallara-Toda F316	+23.348s
17	Yoshiaki Katayama (J)	Carlin/ Dallara-Volkswagen F312	+32.873s
18	Sena Sakaguchi (J)	Toda Racing/ Dallara-Toda F316	+35.245s
19	Juri Vips (EST)	Motopark/ Dallara-Volkswagen F315	+46.952s*
20	'Dragon' (J)	B-Max Racing Team/ Dallara-Volkswagen F312	+1m48.963s
R	Enaam Ahmed (GB)	Hitech GP/ Dallara-Mercedes F315	8laps-accident
R	Sho Tsuboi (J)	TOM'S/ Dallara-Toyota F317	3laps-accident
R	Sophia Florsch (D)	Van Amersfoort Racing/ Dallara-Mercedes F316	3laps-accident
R	Ukyo Sasahara (J)	ThreeBond Racing/ Dallara-Tomei F318	1 lap-puncture/accident damage
R	Marino Sato (J)	Motopark/ Dallara-Volkswagen F314	0laps-accident
R	Alex Palou (E)	B-Max Racing Team/ Dallara-Volkswagen F312	0laps-accident
R	Charles Leong (PRC)	Hitech GP/ Dallara-Mercedes F317	0laps-accident
R	Keyvan Andres (D)	Van Amersfoort Racing/ Dallara-Mercedes F317	0laps-accident

Winner's average speed 32.176mph. **Fastest lap** Ticktum 2m10.246s, 105.109mph. * Includes 40-second penalty.

GRID Decided by result of qualification race. Zhou put to back with grid penalty.

QUALIFICATION RACE (10 LAPS – 38.028 MILES)

1 Ticktum 2m41.034s; 2 Eriksson +1.563s; 3 Iloft +3.165s; 4 Fenestraz +3.948s; 5 Hughes +11.098s; 6 Schumacher +11.878s; 7 Vips +12.518s; 8 Armstrong +13.713s; 9 Aron +14.199s; 10 Schwartzman +16.535s; 11 Sato +18.374s; 12 Palou +19.602s; 13 Habsburg +20.235s; 14 Sekiguchi +21.445s; 15 Ahmed +22.161s; 16 Tsuboi +24.244s; 17 Daruvala +24.763s; 18 Leong +27.513s; 19 Florsch +29.159s; 20 Andres +30.851s; 21 Oyu +32.442s; 22 Sasahara +33.995s; 23 'Dragon' +1m58.193s; 24 Zhou 9laps-accident; R Vesti 6laps-spun/stalled; R Miyata 6laps-accident; NC Katayama-8laps; R Sakaguchi 0laps-accident.

Winner's average speed 96.338mph. **Fastest lap** Ticktum 2m10.620s, 104.808mph.

QUALIFYING 1 Ticktum 2m09.910s; 2 Iloft 2m10.353s; 3 Fenestraz 2m10.580s; 4 Eriksson 2m10.991s; 5 Zhou 2m11.130s; 6 Hughes 2m11.155s; 7 Sato 2m11.262s; 8 Armstrong 2m11.329s; 9 Schumacher 2m11.382s; 10 Aron 2m11.446s; 11 Sekiguchi 2m11.674s; 12 Schwartzman 2m11.746s; 13 Palou 2m11.775s; 14 Vips 2m11.855s; 15 Habsburg 2m11.917s; 16 Tsuboi 2m11.966s; 17 Ahmed 2m11.998s; 18 Vesti 2m12.104s; 19 Daruvala 2m12.189s; 20 Florsch 2m12.517s; 21 Miyata 2m12.646s; 22 Leong 2m12.943s; 23 Sakaguchi 2m13.041s; 24 Sasahara 2m13.514s; 25 Oyu 2m14.067s; 26 Katayama 2m15.681s; 27 Andres 2m13.554s; 28 'Dragon' 2m21.771s. * grid penalty.

FINAL STANDINGS

1	Gabriele Tarquini (Hyundai)	306
2	Yvan Muller (Hyundai)	303
3	Esteban Guerrieri (Honda)	267

For more info: autosport.com/wtcrWTCR
MACAURace 1 Jean-Karl Vernay
WRT Audi RS3 LMS TCRRace 2 Frederic Vervisch
Audi Sport Team Comtoyou
Audi RS3 LMS TCRRace 3 Esteban Guerrieri
Munnich Motorsport
Honda Civic Type R TCR

GUILLAUMOT/DPPI

Tarquini hangs on for inaugural honours

WTCR
MACAU (PRC)
NOVEMBER 17-18
ROUND 10/10

For the best part of an hour, around 40 people stood crowded around the BRC Racing garage in the Macau Grand Prix car park 'paddock' between the final two World Touring Car Cup races on Sunday morning.

They weren't clamouring around the car of a new world champion, though – they were waiting to see if Gabriele Tarquini would even make it out for the season finale. Tarquini headed into the Macau Guia weekend with a 39-point cushion over nearest rival Yvan Muller, but by the end of the meeting's second race that lead had been slashed to 18 points – with 30 on offer in the final race.

Tarquini's weekend hadn't started too badly, but it was in danger of unravelling by the end. He was seventh on the grid for Saturday's opening race and finished fourth – a decent result that meant Hyundai driver Muller, who led the opening three laps but was ultimately beaten by the slippery WRT Audi of Jean-Karl Vernay, only reduced his deficit by six points.

But a clash in which Tarquini was a casualty in race two was a legacy of a poor second qualifying effort. The Italian was inside the cutoff point for a spot in Q2 with

minutes to go in the first part of the session, but put his Hyundai i30 N into the barrier at Lisboa. Although he tried to get going again, he was done for. Improvements by other drivers dropped him to 14th, which would be his starting position for both Sunday races – nine and eight positions respectively behind Muller's grid spots.

Worse was to come, though. While Muller made it safely through Lisboa on the opening lap of race two in fourth, and finished third, Tarquini was caught up in a tangle that forced his retirement.

The circuit was temporarily blocked when Pepe Oriola ended up in the barrier after getting together with Yann Ehrlacher in the braking zone, delaying those behind. Tarquini managed to avoid running into the back of Muller's team-mate Thed Bjork as he slowed initially, but a bump from behind then forced the front of his car into contact Bjork's YMR Hyundai – leaving Tarquini's car with front and rear damage.

Tarquini was an innocent victim this time, and it was the sort of predicament he could have been caught up in anyway even if he had started higher. But the consequences might have been less severe without his qualifying error.

"I cannot blame anybody else, it was my mistake in qualifying," said Tarquini. "Without this it would probably have been easier, but starting P14 in the second and

third races I knew something could happen during the start."

The race to repair the cars – team-mate Norbert Michelisz suffered far more damage to his front-right suspension – was on. BRC was ultimately successful, and Tarquini this time made it through the first corner without issue, soon climbing his way into the points.

Muller briefly got up to fourth ahead of nephew Ehrlacher (perhaps unsurprisingly) and Vernay's Audi RS3 off the line, but Vernay quickly repassed at the approach to Lisboa. Vernay was then gifted third by Michelisz, who put up a stout defence against Muller – leaving a decent gap between himself and the top three that Muller needed to crack to have any chance of winning the title.

Those hopes ultimately faded, even with Vernay's late retirement after an off at Lisboa, and Tarquini could afford to drop back to 10th behind Nathanael Berthon before his second world title was confirmed by a mere three points.

While the celebrations were spectacular, it's still difficult to determine whether Tarquini's stumble over the line was a wholly satisfactory way for the inaugural WTCR crown to be won. He was imperious at times this season – five victories, more than any other driver managed, back up that claim – but he was out of sorts in Macau.





But perhaps it was the perfect set-up for a tense final-race showdown for a title fight that raged for most of the season between two of the biggest names in World Touring Car history. You need to be best over the entire year to end up on top, especially to beat Muller at the peak of his powers, and that's exactly what Tarquini was.

"I said at the beginning of the year, it will probably not be the fastest guy who wins the title but probably the luckiest guy or the cleverest guy, because it's a long season with 30 races," said Tarquini.

Michalisz's role in securing Tarquini's title shouldn't be underplayed either. In a car that an hour earlier had a deranged front-right corner, Michalisz played the team game perfectly to keep Muller behind. Although Tarquini made it to the points and played things cool thereafter, had he been without his team-mate it's inevitable he would have been forced to sweat more.

Although Muller was defeated, this was a brilliant campaign from the four-time World Touring Car champion. In stark contrast to the manner in which his original WTCC career ended, Muller was back at his ruthless best, and had he swung the points in his favour he would certainly have been a worthy champion.

Vernay's late retirement allowed race three winner Esteban Guerrieri to seal third in the championship. Guerrieri had been second on the grid for the opener but finished sixth, largely as a result of being swallowed up on the run to Lisboa, so

there were concerns – particularly after he bogged down on the formation lap getaway – that his hopes might be dashed again. But there were no such issues this time as Guerrieri beat Rob Huff off the line, then controlled the race to beat Huff's Sebastien Loeb Racing Volkswagen Golf GTI to claim a second win of the year.

That final placing perhaps slightly flattered Munnich Motorsport Honda driver Guerrieri's campaign, but it nevertheless underlines his potential to mount a title challenge should everything come together.

Victory in race two for Comtoyou Audi driver Frederic Vervisch meant 15 different drivers won from 30 races, including representatives from all seven participating brands. Considering WTCR was dogged by Balance of Performance complaints in the first half of the season, that's not a bad signal of the progress made during 2018 with the levelling system.

Tarquini admitted after the final race that he had considered retiring after his first world title in 2009, but said he can't help falling in love (coincidentally, the name of the Elvis Presley song that was number one when Tarquini was born in 1962) with new challenges to keep racing tin-tops.

Since Tarquini is now 56, it seems unfathomable he will still be disputing world titles in another nine years' time. But for the time being, he is likely to return to defend his crown in 2019 while he remains at the top of the world order.

JACK COZENS

UNJUST DESERTS



Esteban Guerrieri looked somewhere between crestfallen and embarrassed after first qualifying on Friday morning. The Munnich Motorsport Honda driver had just set the fastest time of the opening WTCR session and, with a handful of minutes left, returned to the pits to begin celebrating his first pole of 2018. The party proved to be slightly premature.

An apparent timing screen glitch showed Rob Huff was a long way short of Guerrieri's splits, yet when he crossed the line Huff ended up on pole by 0.479 seconds. Guerrieri was shell-shocked – doubly so later on when he was again beaten to pole for race three by the Sebastien Loeb Racing driver.

A nine-time winner of the Macau Guia race, Huff was expected to be quick – but the margin he appeared to have over the rest in his Volkswagen Golf GTI, particularly in the mountain section, was remarkable.

What was more astonishing, then, was that from that position the Macau master failed to win a race. Both his defeats – to Jean-Karl Vernay in race one and a rejuvenated Guerrieri (above) in the finale – were rooted in issues at the start. Although he had prodigious pace through the sweeping turns of the circuit, a straightline-speed deficit meant Huff had no way of fighting back on the long run to Lisboa. He admitted after the race that he and SLR "didn't find the ideal Macau set-up".

That disappointment was in keeping with a season in which Huff has arguably performed better than in any season since his world title in 2012, but has not had the results to back that up. It was undoubtedly little short of a travesty that he failed to win in Macau.



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Farfus (r) celebrates win alongside outgoing Schnitzer boss Lamm

BMW legend signs off with a victory

**GT WORLD CUP
MACAU (PRC)
NOVEMBER 18**

Schnitzer Motorsport is a 13-time winner of the Macau Guia race under Charly Lamm, so it was only fitting that he ended his spell as team boss by winning the GT World Cup with Augusto Farfus and BMW.

But while Lamm's presence will be missed, his imminent departure provided a race that otherwise featured a thin entry and a decided lack of overtaking with a suitably stirring narrative.

As events go, this was about as processional as they come – just three on-track overtakes were completed in the main race – but that shouldn't take anything away from Farfus's performance. The Brazilian announced during the weekend he would step away from his DTM commitments with BMW to focus on GT racing, and vindicated that decision by preventing what should have been a Mercedes whitewash.

He looked set to seal pole, only for a stunning Raffaele Marciello lap to deny him from the rolling grid for the qualification race. Marciello's lap in his Mercedes-AMG GT3 was a full half-second clear of Farfus's, but came from absolutely nowhere – so it wasn't too surprising to see Farfus take the lead at the start with a bold move around the outside of the Reservoir kink.

Laurens Vanthoor was then eliminated from the remainder of the weekend when

Edoardo Mortara, reacting to a jink from Earl Bamber, made contact with Vanthoor's Manthey Porsche 911 GT3-R and sent him spinning on the approach to Mandarin.

Farfus executed a fine restart after the subsequent safety car and was consistently quicker than the pursuing Mercedes over the remaining 10 laps, winning by a comfortable 3.812 seconds.

In the post-race press conference he said that he expected the chasing Mercedes trio (Marciello was second ahead of Maro Engel and Mortara) to pose a sterner challenge in the main event. Ultimately, though, Farfus proved to be up to it.

Marciello, who said on Saturday night he was "not happy" after finishing second, was a far more imposing sight in the BMW M6 GT3's mirrors come Sunday. He ate into Farfus's early lead by a tenth of a second each tour until lap eight of 18, when he went far too deep into Lisboa, leaving his car stuck by the outside barrier.

With one Mercedes out of the picture, 2014 and '15 GT winner Engel was left to take up the Silver Arrows charge – and, like Marciello, he knocked a tenth or so from his deficit with each lap. But Engel never really got close and Farfus, with sufficient straightline speed off the final corner to rebuff any attack, ran on to victory.

Engel and a subdued Mortara (last year's winner) completed the podium ahead of Porsche driver Bamber – the only other driver who was even close to contending with Farfus and the Mercedes trio.



BMW driver Farfus (leading) will focus solely on GTs after announcing his DTM exit

BMW became the third manufacturer to win the World Cup since it gained FIA status in 2015, and also denied Mercedes a third win in five years (the farcical 2016 edition won by Vanthoor for Audi after his high-speed roll is the other outlier).

Further down the order, Oliver Jarvis's return to Macau for the first time since his Grand Prix victory in 2007 was not a success. Driving one of three KCMG Nissans, Jarvis was never within three seconds of the pace in practice or qualifying as the GT-R NISMOs struggled around the Guia circuit, and finished the race 12th.

The last word belongs to Lamm, though, who bowed out with a result he described as a "dream come true".

"Augusto couldn't afford to make even the smallest mistake, otherwise his rivals would have pounced," said Lamm. "He drove a perfect race. I have experienced many wonderful moments in my career – and the win today was definitely one of them."

JACK COZENS



Jarvis struggled during his Macau return, aboard a Nissan GT-R NISMO

ALL PICS: TRIENITZ/LAT
motorsport
IMAGES

RESULTS

- 1 Augusto Farfus (BMW M6 GT3) 18 laps in 41m45.992s;
- 2 Maro Engel (Mercedes-AMG GT3) +0.981s;
- 3 Edoardo Mortara (Mercedes) +1.823s;
- 4 Earl Bamber (Porsche 911 GT3-R) +3.283s; 5 Robin Frijns (Audi R8 LMS) +4.549s; 6 Christopher Haase (Audi) +6.588s.

QUALIFICATION RACE

- 1 Farfus 12 laps in 29m35.782s; 2 Raffaele Marciello (Mercedes) +3.812s; 3 Engel +5.022s; 4 Mortara +5.706s;
- 5 Bamber +6.296s; 6 Frijns +13.102s.

WORLD OF SPORT

ALL PICS: GOLD AND GOOSE
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Dovizioso dodges the deluge drama

MOTOGP
VALENCIA (E)
NOVEMBER 18
ROUND 19/19

An Andrea Dovizioso and Ducati victory in wet conditions would appear nothing out of the ordinary, but this race was anything but. As rain lashed the Ricardo Tormo Circuit, the final chapter of MotoGP 2018 proved to be its most spectacularly dramatic.

On a grid almost unified in its choice of soft wet rear tyre, world champion Marc Marquez was the only one to opt for the medium option. Inspired, so very nearly.

While the track was wet, the rain stayed away as the start time edged nearer, and echoing a strategy that Honda stablemate Cal Crutchlow used to perfection at Brno in 2016, betting against Marquez seemed folly.

Not least because he had recovered to within 0.130 seconds of pole in qualifying, despite popping his shoulder out of its socket in a crash at the start of Q2. Qualifying fifth, he later proclaimed he did not "want" pole after the tumble.

But the rain came back with a vengeance, and Marquez suffered. Battling with KTM's Pol Espargaro in the early stages for third, it was clear the Honda man was struggling.

He would highside out of the race on lap nine of the first start, later branding his tyre choice his "biggest mistake of the season".

He was not the only one in trouble. Espargaro fell foul of the conditions and had to rejoin with a damaged RC16, while brother Aleix (Aprilia) was an early victim, as were proven wet-weather riders Jack Miller and Danilo Petrucci of Pramac, and poleman Maverick Vinales.

The race was red-flagged at the start of lap 15 as the conditions worsened. Mercifully, the track was cleared and the finale entered its second act, once more with the Suzuki of Alex Rins hitting the front.

The Valencia race had shades of the 2007 French Grand Prix, when Chris Vermeulen gave Suzuki its last MotoGP win until '16. But there would be no repeat. A calm and collected Dovizioso, who led across the line when the red flag was flown, eased ahead of the Suzuki rider and never looked back.

Given the pace Ducati has had all season, not least at venues that proved to be its bane in the past, this victory could well have represented so much more for the Italian marque had earlier results gone its way.

Rins faded, but kept his head and delivered Suzuki its ninth podium of the year – its greatest tally for one season in the MotoGP era. Now with the championship as a target, Rins displayed qualities in both parts of this



Rins starred for
Suzuki on his
way to second



Espargaro (right)
joined Dovizioso
on the podium

race that should make his rivals nervous.

The shock of the day came from KTM and Pol Espargaro. Battling back into the top 10 on a damaged RC16 before the pause, he overcame knocked confidence to transform a KTM-best of sixth in qualifying to a first podium for himself in MotoGP – a result that was hard to imagine after Mika Kallio failed to finish KTM's first race as a wildcard at the very same venue in 2016.

A late crash for Valentino Rossi while running second proved useful in Espargaro's charge. The Yamaha rider rejoined to finish 13th – a miserable end to his first winless campaign in Yamaha colours. But there is hope. Rossi started from 16th and made a play for the lead just before the red flag, while Vinales felt a Yamaha one-two was on the cards had the race been stopped a few laps earlier.

Jorge Lorenzo brought his Ducati tenure to an end ahead of Rossi in a low-key 12th as he returned from injury. Now Honda-bound, Lorenzo leaves Bologna safe in the knowledge that its recent successes would not have been possible so soon without his input.

The man he replaces, Dani Pedrosa, signed off his MotoGP career with an unspectacular fifth. But it clinched Honda the teams' title and completed its triple crown for 2018. A fitting parting shot from Honda's most loyal figure. His void will not be so easily filled.

LEWIS DUNCAN

RESULTS ROUND 19/19, VALENCIA (E), NOVEMBER 18 (14 LAPS – 34.840 MILES)

POS	RIDER	TEAM	TIME
1	Andrea Dovizioso (I)	Ducati	24m03.408s
2	Alex Rins (E)	Suzuki	+2.750s
3	Pol Espargaro (E)	KTM	+7.406s
4	Michele Pirro (I)	Ducati	+8.647s
5	Dani Pedrosa (E)	Honda	+13.351s
6	Takaaki Nakagami (J)	LCR Honda	+32.288s
7	Johann Zarco (F)	Tech 3 Yamaha	+32.806s
8	Bradley Smith (GB)	KTM	+33.111s
9	Stefan Bradl (D)	LCR Honda	+36.376s
10	Hafiz Syahrin (MAL)	Tech 3 Yamaha	+37.198s
11	Scott Redding (GB)	Aprilia	+44.326s
12	Jorge Lorenzo (E)	Ducati	+46.146s
13	Valentino Rossi (I)	Yamaha	+52.809s
14	Karel Abraham (CZ)	Aspar Ducati	+1m10.628s
15	Jordi Torres (E)	Avintia Ducati	+1m16.739s
R	Alvaro Bautista (E)	Aspar Ducati	7 laps-accident
R	Maverick Vinales (E)	Yamaha	0 laps-accident
R	Danilo Petrucci (I)	Pramac Ducati	0 laps-accident
R	Marc Marquez (E)	Honda	0 laps-accident
R	Andrea Iannone (I)	Suzuki	0 laps-accident
R	Alex Espargaro (E)	Aprilia	0 laps-accident
R	Jack Miller (AUS)	Pramac Ducati	0 laps-accident
R	Franco Morbidelli (I)	Marc VDS Honda	0 laps-accident
R	Thomas Luthi (CH)	Marc VDS Honda	0 laps-accident
NS	Xavier Simeon (B)	Avintia Ducati	

WEEKEND WINNERS

MOTO2 VALENCIA

- 1 Miguel Oliveira
KTM
- 2 Iker Lecuona
KTM
- 3 Alex Marquez
Kalex

MOTO3 VALENCIA

- 1 Can Onu (below)
KTM
- 2 Jorge Martin
Honda
- 3 John McPhee
KTM



Winner's average speed 86.895mph. Fastest lap Dovizioso 1m41.863s, 87.950mph.

QUALIFYING 2 1 Vinales 1m31.312s; 2 Rins 1m31.380s; 3 Dovizioso 1m31.392s; 4 Petrucci 1m31.414s; 5 Marquez 1m31.442s; 6 P Espargaro 1m31.577s; 7 Iannone 1m31.629s; 8 A Espargaro 1m31.630s; 9 Pedrosa 1m32.140s; 10 Miller 1m32.145s; 11 Zarco 1m32.179s; 12 Pirro 1m32.310s.

QUALIFYING 1 1 Iannone 1m31.382s; 2 Vinales 1m31.858s; 3 Lorenzo 1m31.900s; 4 Nakagami 1m31.928s; 5 Morbidelli 1m32.385s; 6 Rossi 1m32.452s; 7 Luthi 1m32.545s; 8 Abraham 1m32.547s; 9 Bautista 1m32.568s; 10 Bradl 1m32.708s; 11 Syahrin 1m32.749s; 12 Smith 1m33.011s; 13 Torres 1m34.427s; 14 Redding 1m35.171s.

RIDERS' CHAMPIONSHIP 1 Marquez 321; 2 Dovizioso 245; 3 Rossi 198; 4 Vinales 193; 5 Rins 169; 6 Zarco 158; 7 Cal Crutchlow 148; 8 Petrucci 144; 9 Lorenzo 134; 10 Iannone 133; 11 Pedrosa 117; 12 Bautista 105; 13 Miller 91; 14 P Espargaro 51; 15 Morbidelli 50; 16 Syahrin 46; 17 A Espargaro 44; 18 Smith 38; 19 Tito Rabat 35; 20 Nakagami 33; 21 Redding 20; 22 Pirro 14; 23 Abraham 12; 24 Bradl 10; 25 Mika Kallio 6; 26 Katsuyuki Nakasuga 2; 27 Simeon 1; 28 Torres 1; 29 Luthi 0; 30 Mike Jones 0; 31 Sylvain Guintoli 0; 32 Christophe Ponsson 0.

MANUFACTURERS' CHAMPIONSHIP 1 Honda 375; 2 Ducati 335; 3 Yamaha 281; 4 Suzuki 233; 5 KTM 72; 6 Aprilia 59.



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New Cup champion Logano upsets the NASCAR order

NASCAR CUP
HOMESTEAD (USA)
NOVEMBER 18
ROUND 36/36

Few would have expected NASCAR's regular season-dominating 'Big Three' of Martin Truex Jr, Kyle Busch and Kevin Harvick to be back facing the media while Penske's

Joey Logano celebrated his maiden Cup series title after victory at Homestead.

Logano had anticipated it, declaring in the build-up that he was the favourite, even though he had only scraped through to the final four thanks to a last-lap victory at Martinsville last month. Truex, enraged at being shoved out of the way by Logano in that race, had warned he would battle

Logano "differently" if he was in front of him at Homestead. And that was what transpired after Joe Gibbs Racing's Daniel Suarez picked up a puncture that caused a caution and set up a 15-lap shootout for victory.

At the restart, Busch – saved by the timing of the caution after two bad pitstops – fell back from the lead as Truex stormed clear and Logano chased. Earlier, Truex had barged into Logano, and the latter took his revenge when Truex rode the high line twice as he struggled for comfort in his Toyota Camry – enabling the Ford Fusion to surge past for victory.

"I told you we weren't [underdogs] and showed you why not," said Logano. "We were the favourite before the race started."

"I am so proud of everybody for rising to the occasion. We executed down the stretch like nobody's business."

And his words had merit. Truex, after a middling playoff run, was unable to give the soon-to-close Furniture Row Racing a high note on which to exit.

The other two of the 'Big Three' had similar runs. Busch was average in the playoffs before a win last time out at Phoenix, and he battled his car throughout the Homestead race.

Stewart-Haas Racing's Kevin Harvick had been hit hardest after an illegal spoiler at Texas threw him out of an automatic final four place and lost him his crew and car chief for the remaining races.

Though Harvick led the second highest number of laps and won the first stage at Homestead with a new-look crew, a poor final pitstop resigned him to third.

Worst of all? Harvick's Busch Beer sponsor had promised to run him in a "millennial-inspired", emoji-filled livery in 2019 if he failed to win the crown – a nod towards NASCAR's younger generation, which has been unable to match the 'Big Three'. The problem for that trio was that they couldn't match Logano either.

TOM ERRINGTON

NASCAR XFINITY
HOMESTEAD (USA)
NOVEMBER 17
ROUND 33/33



Reddick charges to Xfinity crown

At three-quarters distance, it looked like the Xfinity title was going to Cole Custer as he picked up his Homestead dominance from last year and ran with it.

Rising star Christopher Bell has been the shining light of the series this term with six wins, more than anyone else. But he lost out from second on the grid with wheelspin. That released Custer to lead through the first and second stages until a pit disaster – running four laps longer than his rivals before stopping.

JR Motorsports' Tyler Reddick, not a factor in the race until that point, made up places in the pits to take an unlikely victory after Custer's new tyres counted for little as he encountered traffic. Although it was only Reddick's second win of 2018 after the season-opener, it was enough for the title in his last race with the squad.

NASCAR TRUCK SERIES
HOMESTEAD (USA)
NOVEMBER 16
ROUND 23/23



Trucking underdog Moffitt won title

Brett Moffitt's NASCAR Trucks title came as a surprise. He held off Grant Enfinger for the win at Homestead after an early scrap with Noah Gragson gave Moffitt a tyre-management headache.

The 26-year-old was the least fancied of the final four contenders, which also included Gragson, Justin Haley and Johnny Sauter. So small is Moffitt's Hattori Racing outfit that it has come close to pulling the plug on several occasions during 2018.

Three years ago the journeyman was Rookie of the Year in the NASCAR Cup. Six wins in this, his breakthrough season in Trucks, set him on his way to the championship spoils.

No surprise, then, that the underdog is searching for a cash injection to shore up his future racing prospects.

WEEKEND WINNERS

NASCAR CUP
HOMESTEAD
Joey Logano
 Team Penske
 Ford Fusion

NASCAR XFINITY SERIES
HOMESTEAD
Tyler Reddick
 JR Motorsports
 Chevrolet Camaro

NASCAR TRUCK SERIES
HOMESTEAD
Brett Moffitt
 Hattori Racing Enterprises
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AWNINGS



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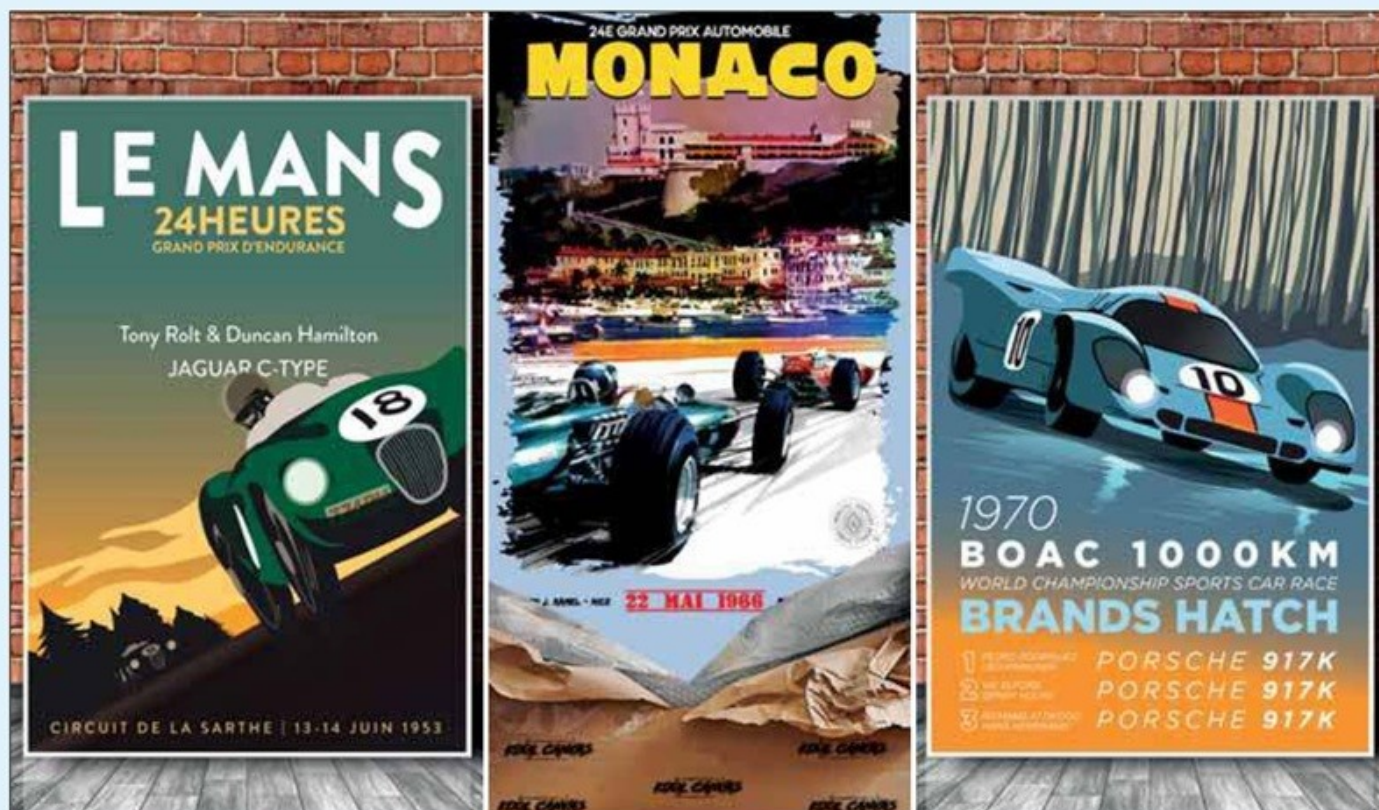
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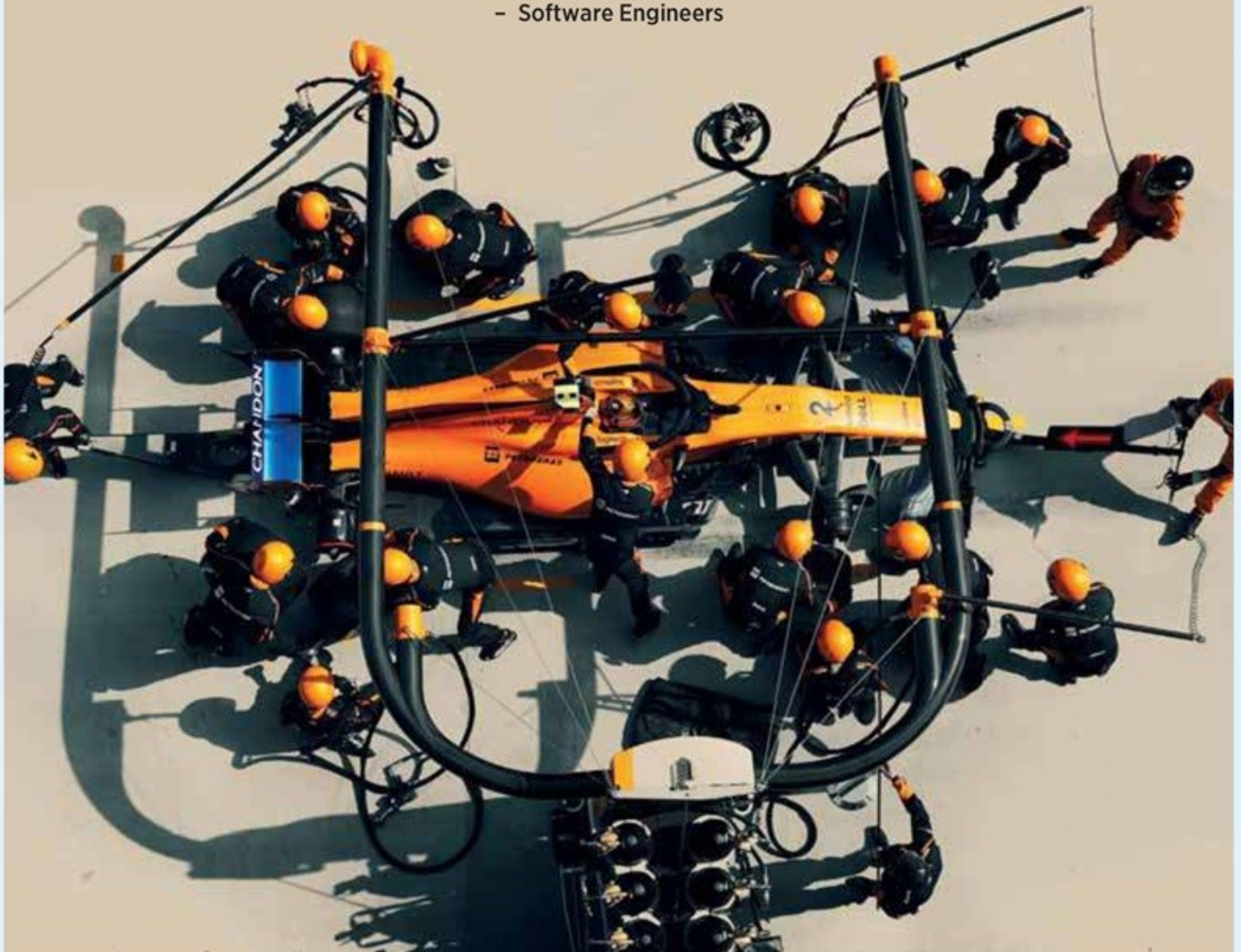
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EU BREAKTHROUGH OVER THREAT TO MOTORSPORT

VNUK

Let's get one thing straight. Motorsport isn't clear of the potential doomsday scenario represented by Vnuk, the interpretation of which threatens the future of the sport in the European Union.

But last week we witnessed a step towards the light, common sense and an extended future when, for the first time, a body of importance within the EU suggested motorsport be spared.

The 2014 Vnuk court case set a precedent that all vehicles should have insurance, even if they are being used on private land. That would mean all cars competing in motorsport events in Europe would need to be insured, and any crash between cars would be treated as a road traffic collision. Most insurance firms have confirmed that this would make motorsport uninsurable.

But the European Parliament's Internal Market and Consumer Protection

Committee (IMCO) issued a draft proposal last week that demonstrated a glimmer of sense. It has recommended that the phrase 'in traffic' to be inserted with the intention of making the sport exempt from the Vnuk precedent.

Why shouldn't we be hanging out the bunting just yet, then? Unfortunately at this stage it's merely a baby-step towards a resolution. The change still needs to be successfully voted on by the Parliament, Commission and Presidency of the EU. But it does mark the first time the EU has outwardly recommended motorsport be exempt, at any level.

Motorsport UK (the body previously known as the MSA – see Autosport, November 15) has been campaigning behind the scenes with key politicians within the British government, while also pleading the case for the FIA to take the threat seriously.

New Motorsport UK chief executive officer Hugh Chambers said: "We



Chambers is new
Motorsport UK CEO

"THE VNUK THREAT HAS NOT GONE AWAY, BUT THE DIRECTION OF TRAVEL IS MORE FAVOURABLE"



welcome this latest development, which appears to be heading in the right direction, and will be working with the FIA to ensure a positive outcome.

"Motorsport UK has been making the case for excluding motorsport from the Motor Insurance Directive since 2014.

"The Vnuk threat has not gone away but the direction of travel is looking more favourable and we will continue to lobby on behalf of all our members and stakeholders."

Some readers may nurture the hope that Brexit will exclude the UK from such legislation, but this is not the case.

If Britain successfully leaves the EU in March next year through Brexit, a transition period has been agreed where Britain would follow EU law until the end of 2020. This means that unless motorsport is made exempt from the Vnuk interpretation, there would still be a period in which motorsport is uninsurable and unable to go ahead in the UK until the end of 2020, despite Brexit.

Last month the Motorsport Industry Association launched a campaign to make it easier for people to contact their relevant MEP in the EU to raise Vnuk as a threat to motorsport.

It has created draft letters in multiple languages to make contacting the correct person easier. More information can be found here: the-mia.com/MIA-Social-Media-Campaign-launched-to-save-Motorsport-from-VNUK-2.

We're still a Neil Armstrong-sized step from heading off the effects of Vnuk on motorsport. But at least the topic is being discussed. The fact that an influential committee has even acknowledged the existence of motorsport is a breakthrough, and a reason to be hopeful ahead of an important few months when the votes will be cast.

JACK BENYON



Spa overseas visit for TCR

TCR UK

TCR UK will have an overseas round for the first time next year as Spa joins the calendar for the category's second season.

An exact date for the trip to the Belgian Grand Prix venue in June has yet to be confirmed, and more details about the event should be announced soon.

The series will also visit Snetterton in 2019, while both Castle Combe and Knockhill drop off the calendar. Oulton Park, Croft, Brands Hatch and Donington Park retain their places in the seven-event schedule, while the Silverstone fixture will use the Grand Prix circuit next season because the championship will appear on the support bill of the International GT Open meeting in September.

As with the inaugural season, there are no date clashes with the British Touring Car Championship, opening the possibility

for teams and drivers to compete in both series should they wish.

Both Castle Combe and Knockhill were popular rounds this season and the series insists it is open to returning to both venues in the future.

A TCR UK spokesperson said: "We are trying to keep things fresh and take TCR UK to areas it's not been to before – we don't have any issues with either Castle Combe or Knockhill. The fact we are able to go to Spa is a huge opportunity to go to a classic circuit. We're also going to be on the Silverstone GP circuit, which doesn't often see touring cars.

"The feedback we have had from teams and drivers [on the calendar] has been really positive."

TCR UK struggled for entries this season, featuring a high of 14 cars at Brands but just eight at Croft.

STEPHEN LICKORISH

New team joins Ginetta

GINETTA JUNIOR

Motorsport engineering specialist GPRM has joined the Ginetta Junior grid for the first time.

The team, which used to supply standard parts to the British Touring Car Championship and previously ran cars in British GT, competed in the Ginetta Winter Series last weekend with karter Roman Bilinski. The 14-year-old, who impressed in this season's Ginetta Junior Scholarship, claimed second in the rookie class and sixth overall ahead of a full campaign in 2019.

"For us it's a first in terms of running in this championship," said GPRM team

manager Richard Williams. "He [Roman] has done very well and we plan to do the full championship next year, we plan to run two cars.

"It's mainly been driven by Roman. We've got a good relationship and it's something he wanted to do from karting."

Winter Series champion James Hedley is set to compete in the main championship again next season.

Elite Motorsport boss Eddie Ives says Hedley is "90% signed up" for 2019, while Tom Emson will definitely be returning with the team.

Winter Series runner-up Ruben Del Sarte won't race in Ginetta Junior again because he will be too old.

STEFAN MACKLEY

Barcelona round added to tweaked Porsche schedule



Carrera Cup's last visit to Thruxton was in 2014

PORSCHE CARRERA CUP GB

The Porsche Carrera Cup GB will head to Barcelona for the first time next year after making a number of changes to its provisional 2019 calendar.

The series had originally pencilled in a round at Spa or Monza when its draft schedule was unveiled in September. But since then, an opportunity to race at the Circuit de

Catalunya in support of the European Le Mans Series has arisen and organisers have elected to go to Spain in July instead.

This in turn has had a knock-on effect with the rest of the calendar. The series will still feature at seven of the 10 British Touring Car Championship events, but instead of skipping Donington Park and Thruxton it will now not compete at Knockhill and Snetterton. That means

a first visit to Thruxton since 2014, but the series will continue to miss the first of the two BTCC visits to the Hampshire venue.

"We've effectively got three new circuits for next year [the series will also make a first Croft trip since '16]," said Porsche GB motorsport manager James MacNaughton. "It's a shame we're missing Knockhill and Snetterton as they're great circuits and everyone enjoys going there. But we have to see what's offered to us outside of TOCA."

"We're really looking forward to going to Barcelona – it gives the teams a bit of variety and it's important for us because we spread ourselves around the country."

JTR team boss and factory Porsche driver Nick Tandy is cautious about a British series including rounds abroad, but believes the Carrera Cup has chosen its rounds carefully.

"We have such a good array of circuits in Britain, but when we get the chance to race at, for example, Le Mans, this is clearly a no-brainer," Tandy said.

"Barcelona is another mega circuit and very well suited to these cars. Of course, it puts an added strain on teams and budgets due to the time away and logistical costs involved, but it's always good for drivers to experience new tracks and this is one of the best in Europe."

MacNaughton added he is encouraged by the amount of interest in the series for next year, with a record number of drivers taking part in a taster day at the end of last month.

STEPHEN LICKORISH & KEVIN TURNER

Arif makes turbo racing debut in a Saab

MODIFIED SALOONS

Formula Ford stalwart and historic racer Wil Arif got his first taste of racing a turbo car last weekend when he drove a Saab 9000 at Brands Hatch in the Modified Saloon races.

Having raced since the 1970s and competed in nearly 800 races, Arif has acted as a driving coach for Classic Touring Car

Racing Club Pre-'93 Touring Car driver Stephen Field this season.

As thanks for his work, SBG Racing – which runs the Saab – gave Arif the chance to get behind the wheel.

"It's the first time I've actually raced a turbo. The best thing to do is not to play with the throttle but feed it and just find the grip," said Arif after qualifying.

"I thought I would be at the back, but the power is going to come by us [in the races]. We only qualified so high because it was slippery, but I will drive it as fast as I can in the dry."

After qualifying third for the first race, Arif slipped back against more powerful opposition to sixth before failing to finish the second contest.

STEFAN MACKLEY



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JHR to expand into F3

BRDC BRITISH F3

Leading British Formula 4 squad JHR Developments will expand into the BRDC British Formula 3 Championship in 2019.

It is understood that two cars will be entered for British F3 next season, but no drivers have been confirmed.

The team has powered Sennan Fielding (2016) and Ayrton Simmons ('18) to runner-up spots in the F4 standings, having previously fielded cars in a variety of tin-top and sportscar series.

JHR had been evaluating a move into F3 for a number of months and is set to become the first new team to enter the series since the category adopted its current regulations in 2016, after a proposed Stratton Motorsport entry failed to materialise this season.

"We're very happy to be joining the BRDC F3 Championship," said team principal Steven Hunter. "It is a strong championship that runs on an impressive package and is exceptionally well organised."

"We've travelled to a few meetings this year and have been very impressed with not only the championship itself but also the way that it has been put together."

"We are currently utilising our bespoke, in-house simulator, which mirrors the on-track performance of the cars, so drivers will be able to gain knowledge and develop their skills in conjunction with a comprehensive on-track test programme."

British F3 recently announced its eight-round calendar, seven of which will support British GT.

STEFAN MACKLEY

Eastwell secures ticket

MAZDA ROAD TO INDY

Formula Ford racer Michael Eastwell is the latest UK driver in with a chance of winning a \$200,000 scholarship in the USA courtesy of the Mazda Road to Indy Shootout.

The Kevin Mills Racing driver confirmed his place in James Beckett's SuperSeries Shootout earlier this month with four Champion of Brands victories this year. Ollie White – who won the other two Champion of Brands races – is too old to compete in the MRTI Shootout, meaning Eastwell

was guaranteed the ticket.

"It was one of my main aims for the year," said Eastwell, who was second in the National FF1600 series. "I really do intend to race in America next year and this could be a life-changing opportunity."

He will join Josh Smith (Festival winner), Matt Round-Garrido (Northern Ireland champion) and Ross Martin (Scottish champion) next month at Bondurant Racing School in Arizona.

National champion Niall Murray has declined his ticket having contested the Shootout for the past two years.

STEFAN MACKLEY

IN THE HEADLINES

BRYAN BROPHY 1949-2018

We regret to report the death of Bryan Brophy, following a series of health issues. The Irishman raced and rallied some interesting GT and touring cars at home in the 1970s and '80s, but was better known as an FIA steward at Thoroughbred Grand Prix (now Masters Historic F1) events. For 10 years the Galway solicitor also served on the panel of Formula 1 stewards, typically attending half of the rounds per season. Autosport offers its condolences to Bryan's wife Brige, daughters Joanna and Emma, and son Robert.

SMITHS MOVE TO G40 CUP

New Intermarque champion Lewis Smith will switch to the Ginetta G40 Cup with his father Richard and brother Daniel next year. Richard Smith says the decision to switch series was reached before the announcement that Intermarque would be reborn as Super Silhouettes under Pickups chief Sonny Howard next year.

ROTHERY'S CAR DASH

Steve Rothery arrived at Brands Hatch last weekend with a Peugeot 308 TCR car fresh off the ferry for the last round of this year's Modified Saloons championship. He collected the car in Belgium on the day before the meeting, taking to the track for the first time in Sunday qualifying. Rothery took two podiums at Brands Hatch, with a best result of second in race two.

F1000 LEAVES BRSCC

F1000 has decided to leave the British Racing and Sports Car Club after 21 years and will be administered by the 750 Motor Club next season. The bike-engined single-seater category has been a BRSCC series ever since it was founded but has now decided to switch to the 750MC, which focuses on affordable motorsport, for 2019. "This will enable drivers, teams and the championship to build on the current growth of our grids and also ensure its long-term sustainability," said championship manager Frazer Corbyn.

MINI GOODWOOD RACE

Sixty years of the Mini will be marked by an all-Mini race at the 77th Goodwood Members' Meeting in April. A decade after a similar race at the Goodwood Revival, the Betty Richmond Trophy will be run for pre-1966 Mini saloons and variants. Mini aces Nick Swift, Nick Padmore and Jonathan Lewis are likely contenders. The race is named after the current Duke's grandmother, Elizabeth 'Betty' Richmond, who was an early Mini owner.



YRDA ace Foster takes maiden win

BRSCC

Young Racing Driver Academy member Tommy Foster has moved another step closer to competing in the Formula Renault Eurocup next season after taking his first win in cars.

The teenager is trying to obtain enough signatures to move into the international category next season and has already tested with Arden.

Driving an Oldfield Motorsport-prepared Van Diemen at Anglesey last weekend, Foster took pole and won in just his third appearance aboard a Formula Ford.

Third place and fastest lap in race two was also enough for him to secure the Brian Linley Memorial Trophy.

"He's really calm and really mature, he behaves as though he's 19 or 20 instead of 16 years old," said James Oldfield, who ran Foster. "He's got his National A licence now, but he needs a few more signatures to upgrade it to an International C, and they're looking at other avenues."

• British Formula 4 driver Jamie Sharp finished second in race two driving Niall Murray's Team Dolan-run Van Diemen RF99, which won this season's National Formula Ford 1600 title. Neil Harrison won both Tiedeman Trophy races aboard a Dallara F302, as Conor Farrell, Peter Drennan and Mark Braden each won an Irish Global GT Lights race. Radical drivers Nicolaj Lindberg and Doug Carter took a Sports, Saloon and Caterham race victory apiece.

STEFAN MACKLEY

Historic Formula 2 to Classic

SILVERSTONE CLASSIC

Single-seaters of the 1970s will play a central part in the 2019 Silverstone Classic as standalone Historic F2 makes its debut at the historic racing festival, joining Historic F1 and Classic F3 in celebration of international-level single-seater racing.

Alongside the regular races for the FIA Masters Historic Formula One Championship, the Historic F2 and Classic F3 categories from the Historic Sports Car Club will feature.

The addition of the Silverstone Classic date is another major boost for the Historic Formula 2 FIA International Series, which is enjoying unprecedented levels of support for the 1600cc and two-litre cars from 1967 to '78. The short-lived rival

series run by Peter Auto has been dropped for 2019 due to lack of support.

Formula 2 grids during 2018 were regularly between 25 and 30 cars and, with more cars being prepared for next season, a grid of up to 40 cars is possible. If so, it could be the biggest-ever F2 grid.

A similar-sized entry is expected for Classic F3 – for 1600-2000cc F3 cars built between 1971 and '84 – as French series competitors will also join the field at Silverstone.

Grahame White, CEO of the HSCC, said: "The chance to race at the Silverstone Classic is very special and I'm delighted that our Formula 2 and Formula 3 grids will get this opportunity. I think we will be able to deliver bumper grids and showcase these categories to a very big audience."

PAUL LAWRENCE

HSCC to visit Anglesey

HSCC

The Historic Sports Car Club's first race meeting at Anglesey is the key change for the club's 2019 race programme.

The July 13/14 meeting at Anglesey features in an expanded 10-event schedule that takes in three flagship race weekends: the Silverstone GP International Trophy (May 18-19), the Legends of Brands Hatch Superprix on the GP circuit (June 29-30) and the Oulton

Park Gold Cup (August 24-26).

The club's 53rd season starts at the end of March at Donington Park and concludes with the two-day Finals Meeting at Silverstone in October.

HSCC CEO Grahame White said: "I'm pleased to confirm the club's first race meeting at Anglesey. We've been trying to make it happen for several years. It is a tremendous venue for a mid-summer event and we will take most of our classes and give them good track time with double-header races."

PAUL LAWRENCE





DAVIDSON AND ADAM: 2019 BRITISH GT FAVOURITES

Very few British GT Championship driver line-ups are confirmed for next year, and yet one in particular has caught the eye

JAMES NEWBOLD

It's early days yet, but we may already have a favourite for the 2019 British GT season. That's a dangerous phrase to write when there have only been three GT3 line-ups confirmed so far and championship organiser the Stéphane Ratel Organisation is optimistic of having another well-stocked grid next year, despite losing its three most recent champions and the runner-up of the past three years in one fell swoop.

But the news earlier this month that the series' most successful driver and defending champion Jonny Adam will be returning to TF Sport, to be partnered by former GT Cup champion Graham Davidson, should be taken very seriously. Davidson has said that he doesn't intend to leave anything to chance.

His first task will be to learn the new Aston Martin Vantage GT3, having only tested it in the wet so far, but moving from the single-car Jetstream set-up to experienced Aston crew TF Sport alongside Mark Farmer and an as-yet-unnamed Pro will only help to smooth the learning curve.

Teething problems are to be expected with any new car,

"DAVIDSON ADMITS HE WAS UNPREPARED FOR THE FEROCITY OF COMBAT IN BRITISH GT"

but the GT3 Vantage – which has been extensively tested, with gentleman drivers giving feedback – is based on the same chassis as the GTE machine that scored its first World Endurance victory last weekend, so it *should* be fairly sorted when the action gets under way in April. Since TF is expected to race the GT3 for the first time in Abu Dhabi next month, it would be a surprise if the car proves to be the limiting factor once the season starts.

There can be few complaints about Davidson's choice of Pro either. Adam is the gold-standard at Pro-Am level, with a proven track record of improving the drivers he partners and racking up silverware. Winning titles alongside three different drivers at as many teams is a unique accomplishment and the Scot's diligent work to unlock the latent potential from Flick Haigh and Optimum Motorsport – both new to the V12 Vantage – was integral to them beating the four other works-supported Astons to this year's crown.

That Aston opposition included Davidson himself, who had a scrappy first year in the championship with Jetstream, although he took a breakthrough win at Spa with local hero Maxime Martin. There could be no doubting Davidson's speed, and his charge from ninth to second at Rockingham was a particular highlight. But there were also a few costly incidents that incurred the stewards' wrath – including penalties for contact at Rockingham and Silverstone – which contributed to an unrepresentative seventh in the final rankings.

Stepping up from a dominant year in GT Cup where his greatest rival was often himself, Davidson admits he was unprepared for the ferocity of wheel-to-wheel battle in British GT and "never felt 100%" as he learned the ropes. But the knocks and scrapes of 2018 have served to toughen him up and Davidson has already shown signs of learning from his mistakes, although a quietly impressive opening stint at Brands was overshadowed by the chunk of kerbing that pierced the windscreen after the pitstop.

"There wasn't enough of a speed differential to make the passes in the places I tried," he says. "If I had been more patient and a bit more experienced then I would have known to just wait for the pitstops. There was no harm in sitting in second at Silverstone because Mark Farmer had a longer pitstop penalty. I know that now, I've thought through these things, so when we went to Spa I was much more relaxed and the race came to me."

Being paired with Adam, who has worked as a coach for most of his professional career, will help accelerate this process. It should also be noted that 2018 was Davidson's first time sharing a car, and while he got on well with Martin, the amiable Belgian's unfamiliarity with the UK circuits – having only previously raced at Silverstone – and with the car meant his input was limited.

Davidson also says he has cultivated an appreciation of the value of poring over data and video together with a team-mate. "Before I thought it was better to be in the car and doing laps than looking at a laptop, I would have kept charging around pushing harder and harder until something went wrong."

"I think I'm a lot more mentally prepared. Now I've had all that bad luck thrown at me, I know what to expect and I feel more prepared for how to deal with that, how to read situations better and not think about winning at all costs."

Significantly, Davidson knows having Adam alongside him won't be enough by itself. He also recognises that the work put in away from the track this year by Haigh was crucial to her success – and that he will have to apply himself just as much to make a serious run at the title. If he can marry that work ethic with speed and consistency, he and Adam will take some stopping. ✎

Hedley shines in Ginetta Winter Series

BRANDS HATCH
BARC
NOVEMBER 17-18

Two wins at Brands Hatch were enough to earn James Hedley the 2018 Ginetta Junior Winter Series title, but thoughts of such success were a long way from his mind last Saturday evening.

A heavy crash in the eventually cancelled second race put the Elite Motorsport driver on the back foot as red flags and big accidents developed into a theme of the weekend. There were seven stoppages across the two qualifying sessions and four races.

Ruben Del Sarte was the favourite, competing in his third winter series and having finished fifth in the Ginetta Junior standings this season. But it was Douglas Motorsport drivers Gus Burton and Lorcan Hanafin who were initially the ones to beat after locking out the front row for race one.

In typical Ginetta Junior fashion, the racing was frenetic and the safety car was called after only three laps to recover two stricken cars on the entry to Clearways.

On the restart, leader Burton found a wet patch on a damp-but-drying track in the middle of Clark Curve and skated through the gravel. Then Del Sarte lunged up the inside of Tom Emson at Paddock Hill to move from third to first in the space of a few hundred metres.

While Burton rejoined from his excursion, team-mate Hanafin wasn't so lucky the following lap. When he was joined in the Clark Curve gravel

by Theo Edgerton a tour later, the officials stopped the race and declared Del Sarte the winner from Emson and Harry Dyson.

"At the safety car [restart] I was third and I knew there was going to be a battle for first," said Del Sarte. "And I'm lucky that [the front two running wide] happened so early on because on a damp track it's quite difficult to overtake someone."

Hedley had managed to gain third at the red flag but was demoted to fourth on countback. If that were not disappointing enough, his hopes of clinching the title seemed to have vanished entirely when he lost control heading into Paddock Hill on the second lap in race two, colliding with the outside wall before rebounding into the path of team-mate Casper Stevenson.

On the restart Burton again made the best start from pole but, coming into Graham Hill Bend on lap two, he spun on dropped fluid. Facing the wrong way, he was hit head-on by Elite Motorsport's Joel Pearson.

Since the light was fading and a lengthy

clear-up was required, the second race was declared null and void.

"The worst day [for us] I have ever seen in five years we have been competing," was how Elite Motorsport team boss Eddie Ives described it, as his mechanics worked until the early hours of Sunday morning fixing three badly damaged cars.

But Hedley repaid their hard work with pole for both remaining races and a realistic chance at the title.

On the opening lap in race three, Dyson went heavily into the tyre barrier after being pushed wide at Druids. Then, as the safety car was deployed on the start/finish straight, Pearson and Ben O'Hare collided, bringing about another stoppage.

At the restart, front-row starter Burton again beat Hedley off the line and drove defensively throughout. But on the drag to the chequered flag, Hedley managed to reach the line first by just 0.133s, having rehearsed the manoeuvre the previous lap.

Del Sarte climbed to third, once again



Hedley clinched title with second win of weekend

HAWKINS



Burton was rapid but results didn't go his way

HAWKINS

BRANDS HATCH
WEEKEND WINNERS

GINETTA JUNIOR WINTER SERIES

Race 1 Ruben Del Sarte

Race 2 & 3 James Hedley

BRITCAR

Enduro Simon Rudd/Tom Barley (Ginetta G55)

Sprint race 1 David Brise/Alan Purbrick
(Saker RAPX)Sprint race 2 Ross Wylie/David Mason
(Ferrari 458 GT3)

HYUNDAI COUPE CUP

Race 1 Wayne Rockett

Race 2 Steve Kite

TIN TOPS

Race 1 Alfie Brooker (Vauxhall Astra VXR)

Race 2 Kamran Tunio (Honda Civic)

INTERMARQUE

Race 1 Chris Brockhurst (Vauxhall Tigra)

Race 2 Steve Burrows (Peugeot 206cc)

MINI MIGLIA/MINI SE7EN

Race 1, 2 & 3 Rupert Deeth

MODIFIED SALOONS

Race 1 & 2 Rod Birley
(Ford Escort WRC)For full results visit:
tsl-timing.com

hampered by a poor qualifying that left him sixth for both of Sunday's races, but he still led the standings by four points from Hedley heading into the final race.

Any slim chance for Burton to win the title disappeared just before the lights went out as he jumped the start from the front row.

Informed by his team of Burton's 10-second penalty, Hedley followed for a while and then, when he had built a sufficient gap to the bunch behind, he lunged up the inside into Druids five laps from home to clinch the win and the title.

"I wanted to win it on the track to show that I could do it," said Hedley.

Del Sarte was promoted to second and claimed the series runner-up spot, two points behind Hedley, with Elite's Emson third overall. Total Control Racing's Daniel Gale claimed the Rookie title.

STEFAN MACKLEY

BRITCAR SEASON ENDS ON A HIGH



Simon Rudd and Tom Barley guided their Ginetta G55 to a one-lap win in the two-hour 'Into the Night' Britcar finale at the Brands Hatch Indy circuit last Sunday, beating the SEAT Cupra of Ashley Woodman and Martin Byford.

Rudd and Barley took charge after the Sprint competitors finished their involvement with slightly less than half of the Enduro completed. Sam Randon, sharing a Toyota Avensis with aspiring touring car driver Michael Crees, suffered the embarrassment of beaching his car on the way to the grid.

He started from the pits and made it into the lead before making way for Crees. The Avensis lacked a rapid refuelling system and dropped well back, and then during his recovery charge Crees picked up a drivethrough penalty for a pitstop offence. Crees also had to stop again for attention to a dragging front splitter.

A third place finish rewarded the Team Hard crew, who had been up until 3am to replace a broken gearbox.

Matt Le Breton had the distinction of finishing both fourth and fifth, sharing the driving duties in an Audi RS3 TCR and a McLaren GT4.

In Saturday's 50-minute race the lead changed with a lap to go as the top three finished within four seconds. The winners were David Brise and Alan Purbrick, giving their Saker RAPX its best result yet. Purbrick passed the David Mason/Ross Wylie Ferrari 458 on the final tour.

A Ginetta G55, started by Lucky Khera and finished by Declan Jones, lapped faster than both at times but fell just short of victory, crossing the line third.

Mason and Wylie gained from a caution period to beat the Saker in the sprint half of Sunday's race, even though Mason lost

much of his advantage with two gravel trap visits. Khera and Jones were third.

The Ginetta G50 of Sarah Moore and Matt Greenwood secured the Britcar Endurance Championship, and the Sprint title winners were Jon Watt and Kristian Prosser in their BMW M3.

The aptly named Wayne Rockett shot into the lead of the first Hyundai Coupe race, hanging on under pressure from Steve Kite, who made a mistake on the first lap. Rockett's getaway was more of a damp squib in race two. Although Rockett took the lead when Kite missed a gear, Kite eventually got back in front.

Nobody else was in the hunt for victory, but there were plenty of exciting battles further down the order.

The South Eastern Tin Tops championship was decided in Ford Fiesta driver Rikki Taylor's favour when main points rival Alfie Brooker had his Vauxhall Astra blow up at the beginning of race two.

Brooker had kept his title chances alive by winning race one overall, with Taylor top of his class.

Kamran Tunio's Honda Civic took race two in near darkness after delays caused by Ginetta Junior mayhem, but only after contact with Dave Charlton's SEAT Leon, which broke one of Charlton's driveshafts.

Steve Burrows (Peugeot 206cc) scored his first Intermarque win of the year on Sunday after a series of podium finishes, but it wasn't enough to beat Lewis Smith (Vauxhall Tigra) to the championship. Smith finished second to Chris Brockhurst (Tigra) in race one with Burrows third.

Taking a cautious approach to avoid trouble from ninth on a part-reversed grid, Smith reached third in race two.

BRIAN PHILLIPS

THE GROUP C SWANSONG



DVD
1990 WORLD SPORTSCAR CHAMPIONSHIP REVIEW
 RRP £16.99

There was an air of the inevitable about the Silver Arrows

claiming the title. Just like last year, their rivals have floundered at the business end of the year, the championship challenge grounded on a stretch of unanswered wins.

But this isn't Formula 1 in 2018, rather the 1990 world sports championship, which is available on DVD for the first time from Duke. But don't let the Mercedes C11's domination of the season put you off. This was the end of an era for sportscar racing, the final year for the Group C fuel restrictions before the introduction of the 3.5-litre Formula 1-inspired regulations for '91. The introduction of the screaming atmospheric Peugeot 905 at Montreal gave a tantalising taste of what was to come.

As such, 1990 marked the zenith of sportscar racing's golden era, with Jaguar – which scored a popular home win at Silverstone – Nissan, Toyota and Porsche all taking turns at challenging Mercedes throughout the season, not to mention the normally aspirated Spices that punched above their weight to claim two podiums.

The two-disc, 424-minute review – yes, this is one for aficionados – covers all nine rounds of the championship from Suzuka to Mexico City, where Martin Brundle's spirited defence from the Mercedes onslaught in the unwieldy Jaguar XJR-11 was one of the highlights of the year.

A well-timed switch to wet tyres meant champions Mauro Baldi and Jean-Louis Schlesser claimed victory on the road. But



Schumacher prepares to climb aboard for practice at Silverstone, before being banned from starting

a post-race disqualification for adding too much fuel meant that the race went to the sister car of Jochen Mass and his young team-mate – a certain Michael Schumacher, who had earlier performed a bold manoeuvre on team-mate Schlesser.

In this first year of the Mercedes junior team, with Schumacher, Karl Wendlinger and Heinz-Harald Frentzen sharing alongside Mass, it's Schumacher who gets the best storylines in this review. From his exclusion for an infringement in practice at Silverstone – showing a proclivity for controversy that would become a theme of his career – to halving the gap to Baldi on his actual debut in the heat of Dijon, the future seven-time F1 world champion showed a mastery of watching the fuel gauge while going very quickly. It would have served him well had he contested the full championship.

Wendlinger started the year alongside Mass with a pair of second-place finishes, only losing out on a debut victory at Suzuka to a stop/go penalty for a too-fast pitstop. He then capitalised on electrical problems for the sister car to win a wet-dry thriller at Spa. Having chosen to prioritise his season in F3000, Frentzen's sole outing came at Donington, where he did himself no favours with a high-speed spin at the Old Hairpin.

"THE 1990 SEASON MARKED THE ZENITH OF SPORTSCAR RACING'S GOLDEN ERA"





SUTTON IMAGES
motorsport
IMAGES

He did still beat the solo-driven Jaguar of Brundle; both XJR-11s were subsequently disqualified for a similar offence to Mercedes at Mexico – although TWR's blaming of television crews in the pits did little to change the fact that they had committed the offence in the first place...

There were plenty of other highlights. Schlesser drove the old C9 to victory from the pitlane at Suzuka after a practice shunt destroyed his new C11. Julian Bailey was forced to miss the Nurburgring after an oversight from Nissan – who 'forgot' to give him the required timed laps in qualifying. And there was a swansong podium for the venerable Porsche 962 in the shortened Montreal race for Richard Lloyd Racing's Manuel Reuter, confusingly called 'Carlos' during the Dijon round. We wonder which Argentinian Grand Prix winner he might have been muddled with there...

That misnomer aside, the 1990 DVD is an extraordinarily detailed record of the season that outweighs previous season reviews. With extensive pre-race coverage documenting driver changes and in-race interviews, it makes for a very satisfying watch and should be owned by any self-respecting sportscar connoisseur.

JAMES NEWBOLD



Brundle (l) defends in the XJR-11 from Mass's C11 at Mexico City

YouTube

youtube.com/AUTOSPORTdotcom



Why the Indy 500 will be tougher for Alonso in 2019

Fernando Alonso is returning for a second bite of the Indianapolis 500 cherry as he pursues motorsport's unofficial 'triple crown'. But two years on from his IndyCar debut, the landscape has changed significantly. Autosport assesses the Spaniard's chances during the Month of May. Go to <http://bit.ly/Alonso19Indy>

THIS WEEKEND'S EVENTS

INTERNATIONAL MOTORSPORT

Abu Dhabi Grand Prix

Formula 1 World Championship
Rd 21/21

Yas Marina,
United Arab Emirates
November 25
TV Live Sky Sports
F1, Sunday 1130.
Channel 4,
Sunday 1200

DON'T MISS



ABU DHABI GRAND PRIX

Formula 2

Rd 12/12
Yas Marina,
United Arab Emirates
November 24-25
TV Live Sky Sports
F1, Saturday 1430,
Sunday 0930

GP3 Series

Rd 9/9
Yas Marina,
United Arab Emirates
November 24-25
TV Live Sky Sports
F1, Saturday 0825,
Sunday 0805

World Rallycross

Rd 12/12
Killarney, South Africa
November 24-25

Super TC2000

Rd 12/12
Cordoba, Argentina
November 25

Asian Le Mans Series

Rd 1/4
Shanghai, China
November 25

Australian Supercars

Rd 16/16
Newcastle, New
South Wales, Australia
November 24-25

UK MOTORSPORT

Rockingham BARC

November 24
Super Send Off
Meeting: Saloons,
Sports/GTs, Single-
Seaters, One-Hour
Race, demonstrations

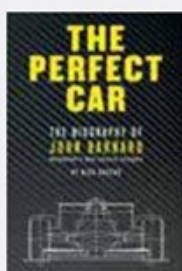


ROCKINGHAM

CHRISTMAS GIFT GUIDE

Only a month remains before the big day, so here are some of Autosport's favourite 2018 motorsport gift ideas...

BOOKS



THE PERFECT CAR
RRP £40
Website
evropublishing.com

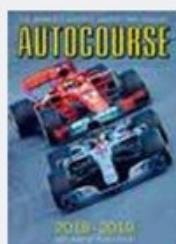
Recounting the technological revelations eminent designer John Barnard brought

into Formula 1, this biography lifts the veil on a flawed genius whose stubbornness and snap decisions mean raw statistics don't come close to telling his full story.

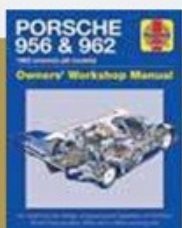
**AUTOCOURSE
2018-2019**

RRP £47.50

Website
autocourse.com

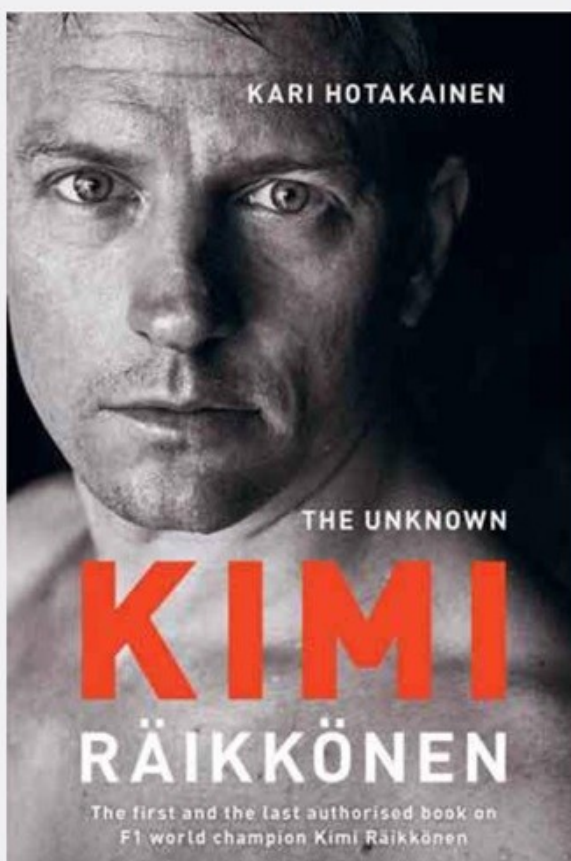


Now in its 68th year, the world-famous Autocourse annual includes detailed race-by-race reports from the 2018 Formula 1 season, in-depth features, comprehensive statistics, technical illustrations and stunning images.



PORSCHE 956 & 962
RRP £25 Website haynes.com

Rather than walk you through the way to service your Ford Fiesta, this Haynes Owners' Workshop Manual reveals the anatomy of the apogee of Group C sportscars – the Porsche 956/962. It's a fine marriage of classic photography and an accessible narrative.



**THE UNKNOWN
KIMI
RAIKKONEN**
RRP £20
Website
simonandschuster.co.uk

Renowned Finnish novelist and screenwriter Kari Hotakainen offers readers a rare glimpse into the life of the notoriously reclusive, and monosyllabic, Kimi Räikkönen. The 2007 Formula 1 world champion's childhood, thoughts on Ron Dennis, personal life and more are set against a backdrop of never-before-seen photographs from the driver's own collection. As Hotakainen also won the trust of Ferrari, *The Unknown Kimi Räikkönen* takes you behind the scenes at grands prix as race strategies are formulated. Complaints about the direct, and therefore shaky, translation from Finnish are fair, but given it's billed as 'the first and last authorised' book on Räikkönen, it's likely to be the best we're ever going to get.

OR TRY
THIS

GAMES



FORZA HORIZON 4
RRP £49.99
Website
forzamotorsport.net

The *Horizon* series, which alternates with the more racing-focused

Forza Motorsport titles, is in a league of its own when it comes to bringing a realistic handling model to the public roads – albeit for Xbox One users only. This time around, it's time to *virtually* disobey the local traffic laws in and around Edinburgh. For hardcore motorsport fans, there's still a lot to draw you in thanks to the diverse ensemble of cars – a 1992 Ford Escort RS Cosworth is among the options for your first set of wheels. But if sticking to the racing line is more appealing, the 1971 Porsche 917/20 complete with its iconic 'Pink Pig' livery is well worth saving your credits for. Fortunately, the Scottish constabulary are willing to overlook its road illegality.



F1 2018
RRP £44.99
Website
formula1game.com

Codemasters hasn't tried to reinvent the wheel for its latest Formula 1 title, and *F1 2018* is all the

better for it. The AI has been overhauled compared to the game's predecessor, which means rivals are smarter and more daring in wheel-to-wheel battles, and that helps to make racing more thrilling. Off track, interviews have been reintroduced into the franchise and the greater variation, plus the fact that a player's responses directly impact your career, avoids past complaints of repetition. Thanks in part to enhanced audio, expect a more immersive career experience that justifies upgrading to this latest instalment. Further additions to the line-up of classic F1 cars ensures that there's many a reason to keep coming back.



DAKAR 18
RRP £49.99
Website dakarthegame.com

Autosport's left-field pick for the gaming Christmas wishlist comes in the form of taking on the gruelling Dakar Rally. It's the first game to offer users a taste of the South American enduro in 15 years. There are 20,000 square kilometres of open world to explore in machinery ranging from motorcycles and quadbikes up to the Peugeot 3008 DKR that Carlos Sainz used to win the 2018 event. *Dakar 18* is not the last word in refinement, although a series of updates since its release means you'll be buying a far more polished title than at first. What

the game does offer is an authentic homage that captures the scale of the rally, and its incorporation of navigational driving sets it apart from almost any other racing title on the market.

OR TRY THIS

Work your way up the foodchain to Porsche's 911 GT3 RS



DRIVING

RSR DRIVING EXPERIENCES
RRP From €75 a lap
Website
rsrnurburg.com/rsrspa.com

While the games listed above offer motorsport enthusiasts a chance to virtually master some of the world's most iconic racing venues, they don't come close to providing the sheer adrenaline hit that getting out on track in person can. That's where a day with RSR can help. RSR's set-ups at Spa and the Nurburgring offer taxi laps and driver tuition for those wanting a seat-of-the-pants thrill at Europe's definitive drivers' circuits. A range of cars that spans from the Volkswagen Up! GTI through to a Ferrari F12 and 991-generation Porsche 911 GT3 RS means there's machinery for all abilities.

SCALEXTRIC

LEGENDS LE MANS 1967

LIMITED EDITION 50 YEARS OF FORD TWIN PACK

RRP £85.99 Website scalextric.com

This brand new limited edition celebratory twin pack includes the 1967 Ford MkIV that Dan Gurney and AJ Foyt took to Le Mans victory, plus the 2017 challenger in which Harry Tincknell/Andy Priaulx/Pipo Derani finished second in the GTE class. Beautifully presented in a display case for when they're not being ragged around the living room floor on Christmas Day, these cars hold up on their own as something to have on show on the shelf. Working lights all round, the bubble on the MkIV's roof to accommodate Gurney's lofty frame, plus the sizeable and intricate diffuser on the contemporary GT are all welcome details.



McLAREN F1 GTR LE MANS 1995 #59 & #24

RRP £40.99-£45.99 Website scalextric.com

Also fresh onto the market are a brace of McLaren F1 GTRs from the 1995 Le Mans 24 Hours. The winning Kokusai Kaihatsu Racing car, limited to a build run of 2000 units, commands a £5 premium over its Gulf-liveried counterpart. There's no discernible quality difference between them, so we've decided to pocket the cash and take the blue and orange machine that wears Autosport branding...

FORD FALCON XC BATHURST 1978 #17

RRP £40.99 Website scalextric.com

And now for something completely different – a model that neither has Le Mans nor winning pedigree. Scalextric's copy of the Ford Falcon XC that Dick Johnson and Vern Schuppan shared to fifth in the 1978 Bathurst 1000 probably isn't going to be Scalextric's biggest seller. But it makes for a pleasing addition to the range thanks to its impressive detail, sheer size and oddball value.

OR TRY
THIS

CALENDARS

AUTOCOURSE

RRP £11.99

Website autocourse.com

The 2019 edition contains more than 70 images, 13 of which are full-page, courtesy of Autocourse's photographer Peter J Fox. It's ready for use straight away, as the final months of this year are also included.



JAKOB EBREY

RRP £13.50

Website ebay.co.uk

Jakob Ebrey Photography captures an action-packed 2018 British Touring Car Championship. All the race meetings for the '19 season are pre-marked so you can plan your year accordingly.

OR TRY
THIS

McKLEIN

RRP £34.99

Website mcklein-calendars.com

If you're looking to fill a lot of wall space, then McKlein's sizeable Motorsport Classic calendar will see you through from January's Ferrari 275P to the Lancia Fulvia and Mercedes W196 this time next year. For rally fans, McKlein's renowned World Rally Championship calendar is also on sale.



GIORGIOPIOLA.COM

WATCHES

**STRAT-3 CHRONO**RRP \$500 (approx £380) Website giorgiopiola.com

Treat unpunctual motorsport fans to the Chrono. Available in a range of colours, it is a light and durable timepiece designed to suit an active lifestyle. Channelling Autosport technical illustrator Giorgio Piola's life's work in the Formula 1 paddock, the sub-dials are a nod to steering wheel design.

**STRAT-3 HMS**RRP \$455 (approx £355) Website giorgiopiola.com

The HMS employs a simpler look, but still arrives with the full complement of motorsport-inspired details. Its rubber strap mimics a grooved slick tyre and the perimeter of the watch face, one third of which is red, will be instantly recognisable for those who enjoy revving to the most exciting part of a tachometer.

ARTWORK

RRP \$100-160 (approx £78-£125) Website giorgiopiola.com

To settle a debate between him and his brother as to who was the better artist, Giorgio Piola sent two drawings to a magazine to see which it would print. The answer was definitive. Piola was asked to attend the 1969 Monaco Grand Prix as the title's technical correspondent.

Since then, he has been to more than 750 grands prix to tell the story of the Formula 1 arms race. It's his drawings that help readers to understand the ever-changing face of motorsport technology.

"My motto is 'try to avoid mistakes,'" Piola says. "If you do, you have to cancel and start again. I have a wide-angle view, but I see all details. I just want the people at home to have the feeling and emotion as much as the people who work in F1 do."

Piola is firmly of the old school, plying his trade by hand. Over the course of three or four grands prix, he can take up to 200 shots of each car (in and around engineers who try to block the view) before picking up a technical pen to start drawing.

He then settles for a long stint at his back-lit desk. The two-metre illustration of the Lotus 72 took 45 days to complete thanks to the shadowing being drawn dot-by-dot – causing Piola to temporarily lose all feeling in his fingers!

It's not just the fans who are drawn to his work. The Italian willingly admits he's no engineer,

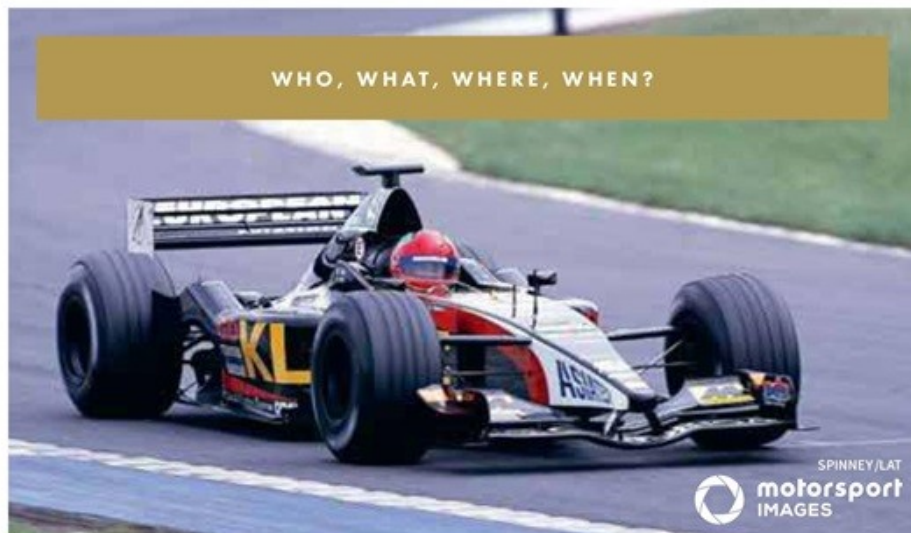
but that didn't stop the likes of Gordon Murray, Paddy Lowe and Patrick Head all using his artwork to keep tabs on their rivals' latest innovations thanks to the absolute precision of Piola's work. This Christmas, you can have one of his prints hanging on the wall.



TEST YOUR KNOWLEDGE

QUIZ

WHO, WHAT, WHERE, WHEN?



WHO IS THIS?

This crash-prone emperor of a golden era set an unenviable record.

Having conquered all at ground level, he made a big move abroad and fell just short of glory. With backing from flavour (sic) country he joined forces with a future giant as it was beginning its journey.

A reputation was forged with some erratic showings, belying his endurance success.

Colours were reversed as he travelled home for his best chance in the big time, but bad luck and a short-fuse denied him.

By a journeyman par extraordinaire, there would be the occasional moments of brilliance to keep the fans entertained.

After finally calling time, he vanished from the scene to make lots of money. He was tempted out of retirement to join old masters before being taken before his time on the ride home.

ON THIS DAY

1 Who won the World Rally Championship title on this day in 1995?

2 Which South African driver, born on this day in 1934, entered four Formula 1 world championship grands prix between 1965 and '73?

3 Who claimed their only Formula E front-row start on this day in 2014 in Putrajaya?

4 Which driver won their first, and so far only, NASCAR Cup title on this day in 2015?

5 Who won the 2000 Macau Grand Prix, which was held on this day?

NAME THE HELMET



LAST WEEK'S ANSWERS

Who, what, where, when Brian McGuire, the McGuire BM1 makes its only world championship appearance at the British Grand Prix, Silverstone, 1977. **Who is this?** Christian Fittipaldi. **On this day 1)** Stefano Modena.

2) Pastor Maldonado. **3)** AGS. **4)** Eric van de Poele. **5)** 1184. **Name the helmet** Riccardo Patrese.

IN NEXT WEEK'S ISSUE



ABU DHABI GRAND PRIX: F1 2018'S CURTAIN CALL

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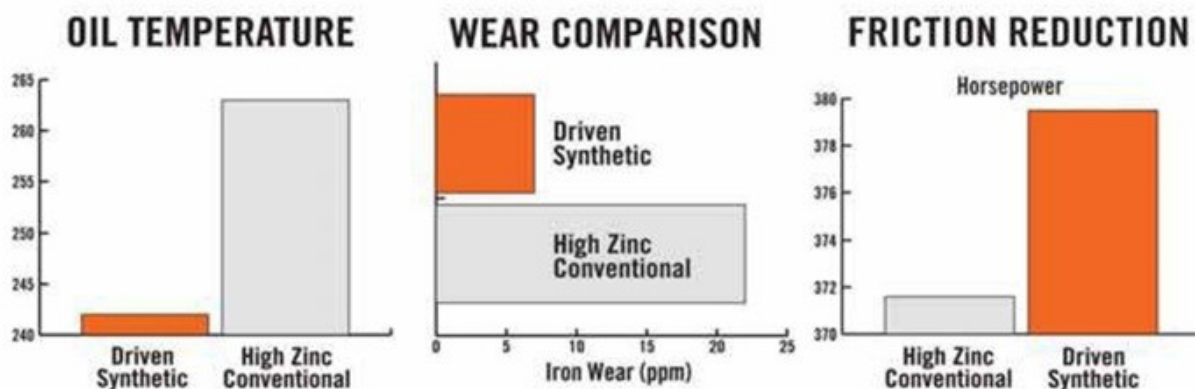
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Image is not SEAT UK specifications.

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