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F1 TEST WAR

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How much does Merc have left in the tank?

HAS FERRARI REALLY BUILT A MERCEDES-BEATER?

The first signs are good, with the SF70H high up on the timing sheets and looking impressive on track.

Given Ferrari's poor 2016 and the internal machinations that have been going on, the team's testing form has come as something of a surprise. But if it can continue in this vein then we may just get the battle at the front we've been crying out for.

The one major caveat for neutrals is that it's hard to believe Mercedes has shown its full hand yet. As Lewis Hamilton says in our main feature (page 16), there are still plenty of performance bits to come and the Silver Arrows have little interest in winning the 'winter' world championship.

That's also the view that Red Bull takes, which is just as well given its low-key start to 2017. The team still has a quietly confident air, so it could be that Daniel Ricciardo and Max Verstappen are in the mix at the front when the real action gets going in Melbourne for the Australian Grand Prix at the end of this month.

One thing that does now seem clear is that McLaren-Honda is in trouble. Poor reliability and a lack of pace have been the hallmarks of its early testing days. It's difficult to know who to feel more sorry for: Fernando Alonso watching his last F1 seasons ebb away, or Stoffel Vandoorne, who seems in for a tough rookie campaign.

• Next week is our bumper F1 season preview, with full testing analysis and insight from key players. It will be the essential guide to F1 2017.







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NIGEL ROEBUCK

Over to you, Mr Brawn

WE WON'T, OF COURSE, START TO GET

a true picture of where we stand in this latest incarnation of Formula 1 until Saturday, March 25, when qualifying gets under way in Melbourne — and even then, given the particularities of Albert Park, the shape of the season to come may not be definitive.

Although it is never wise to set great store by the first test session of a season — not least because we don't know who was running how much fuel when — the opening week at Barcelona did seem to present certain fundamental truths, few of them unexpected. Unsightly bargeboards and the like are back in force, and with great swathes of increased downforce, the cars are indeed significantly quicker than those of the recent past, with Mercedes yet again at the top of the pile. This, Lewis Hamilton said, was the fastest car he had ever driven.

So far so good — but Lewis then added that fans should not expect much in the way of great racing this season: already it was proving noticeably more difficult to follow another car through a quick corner. As Dan Gurney has said: "It's simple: more downforce means less racing — I mean, we've known that for more than 30 years, right?" How, then, did this escape the attention of those who came up with the latest rules?

Ross Brawn says he'd like to do away with

DRS, suggesting that its introduction "artificially solved a problem that we didn't want to tackle head-on — it doesn't have the quality or merit of a full-on overtaking manoeuvre..." Ross is right — many of us have always thought DRS an abomination — but if we are to have any overtaking, this may not be the moment to get rid of it.

As of now we have no idea how the post-Bernie Ecclestone era of Formula 1 will turn out, how the influence — good and bad — of Liberty Media will manifest itself, but if we yet know little of Chase Carey and Sean Bratches, the appointment of Brawn is indeed cause for optimism: as evidenced by his thoughts on DRS, Ross is something of a racing purist, and as the future evolution of F1 is discussed he will have firm ideas of a kind, I suspect, likely to sit well with aficionados too long ignored.

Patrick Head always said that, in his opinion, Formula 1 was an activity of itself, with no need to justify its existence as a test-bed for future road car technology, but others — notably Jean Todt — took a more politically correct view, which is why we now have 'hybrid' engines. Apart from anything else, Todt insisted, if F1 were not to go down that path it would be impossible for engine manufacturers to justify their continued involvement. One might point



out that the move to hybrids has hardly had them queuing in the aisles.

Perhaps to some degree influenced by the dogs he has had to drive, Fernando Alonso has loathed the cars of the hybrid era, describing them as heavy and slow, with a constant need to 'save' this and that, be it fuel, battery or





high-degradation tyres, rather than driving flat-out as a racing driver should. Fernando is, of course, one of only a handful with experience of the three-litre V10s of a dozen years ago. "Real racing cars", he calls them.

As we know, Sky TV frequently shows synchronised on-car footage of two drivers — invariably Hamilton and Nico Rosberg — fighting for pole position, but after Monza in 2015 a website named wtf1 imaginatively compared, in just that way, Hamilton that weekend with Juan Pablo Montoya back in 2004. The result was eye-opening.

Most immediately what struck you was the soundtrack. After becoming used to the hybrids, the furious noise from JPM's BMW V10 was startling, but so also was the way the Williams rocketed out of corners. As Montoya went over the line at the end of the lap — nearly four seconds up, despite running on the grooved tyres of the time — Hamilton was coming out of Parabolica.

You can see why Alonso misses the era of the V10s. They had about 900 horsepower, perhaps less than the best engines of today — but crucially the cars were lighter by more than 100kg. Where would Lewis's 2015 pole lap have qualified him for the

"Alonso has loathed the cars of the hybrid era, with their constant need to save fuel, battery or high-deg tyres"

2004 Italian Grand Prix? Nineteenth, ahead only of the Minardis.

I remember interviewing Ecclestone at Spa in 2005, as the V10 era was drawing to a close. Unlike Max Mosley, then president of the FIA, he was not in favour of the switch to smallercapacity V8s, and neither did he care for the appearance of the cars, increasingly festooned by bargeboards and the like. Given a free hand, what changes would he make?

"For a start," Bernie said, "I'd stop them sticking all these horrible-looking bits and pieces on the cars — they'd look better, and it would be easier to tuck in behind another car through a corner. I'd like the weight limit to come down, getting rid of the need for all this ballast; I'd also like to see less efficient brakes.

"Formula 1's got a bit cranky, hasn't it? You take one of the gearboxes to bits, and it's like a

Swiss watch, but the guy sitting in the grandstand hasn't got the slightest idea about that — and if he did, he wouldn't care, any more than he does about thousands of hours in bloody windtunnels. All he cares about is whether the racing's any good.

"It doesn't make me very popular when I say this, but if you were serious about trying to make the racing better, the first thing you'd do is get all the aerodynamicists together, and say, 'We want you to find us a way of not needing you anymore...'"

Perhaps a touch extreme, as Ecclestone invariably was, but you knew what he was getting at, just as you did 35 years ago when Gilles Villeneuve said: "People don't come to races to see brilliant aerodynamicists." I hope Hamilton's fears are exaggerated, but I somewhat doubt it. Get working, Ross... *

FEEDBAC 0 PINION



FORMULA1

Why a pointless race

WHEN ROSS BRAWN, FORMULA 1'S NEW managing director of motorsports, floated the idea of staging an annual non-championship race last week, the proposal met with mixed reaction. Some embraced the idea, particularly given that Brawn suggested it could be used to trial different race-weekend formats, but others criticised it as, literally, pointless.

There was concern among the teams about exactly where the money would come from. After all, their share of revenues is based on championship position so, without some kind of lucrative fund to incentivise participation, it would be a costly exercise. F1 today just isn't set up for such races.

So far the idea has only been presented by Brawn as a "dream", but it is still an interesting proposition.

"In that non-championship race, you could experiment," said Brawn. "It would enable us to vary the format and try something different and evolve it. Like everything else, you'd tune it. Then you could make it better and say, 'Actually, this is better than what we have. The fans love it, everyone loves it, let's swap."

Non-championship races were once a staple of the racing calendar, but they vanished as Bernie Ecclestone homogenised the sport, focusing on the core of the world championship. The last to be held was the 1983 Race of Champions at Brands Hatch, won by Williams driver Keke Rosberg. Only 13 cars took part, due to fading interest in such events.

The key issue for non-championship races is funding. As Haas team principal Gunter Steiner has pointed out, the costs involved in taking part mean such an event needs to be on a sound financial footing.

"My first opinion is why should we go there? It's not part of the world championship, so what do we get out of it? There needs to be a commercial aspect," said Steiner.

"Maybe [Brawn] has a bigger plan behind it, which could be that it's like the old days when you had races outside the championship and you still got spectators. But to stage a race to find out the rules? It would be pretty expensive to do that."

How a non-points race could happen

Steiner is correct that a race run as a rules experiment would be fruitless. But an annual standalone event could present an opportunity to build a different kind of commercial package, with a big-money sponsor and an unusual, eye-catching format that would offer something different from a grand prix.

To make it work, the key will be to guarantee the participation of the big-name drivers and ensure that the format is not too conservative. It needs to capture the imagination; for example, a sprint race would simply be a short grand prix, but something involving heats and a final with mixed-up grids, or a full-length



could work for F1

"The key is to

guarantee big-

name drivers'

participation

race with a reversed grid, would attract genuine fan interest.

NASCAR successfully operates nonpoints races. The NASCAR Clash runs as a warm-up for the Daytona 500, while the mid-season All-Star race has been held since 1985. Both have employed unorthodox formats over the years, and both have their own prize structures.

The NASCAR races use existing teams and star drivers, and any F1 event would have to

do the same — albeit with the possibility of different drivers taking part alongside the established names.

With an attentiongrabbing format, there's also the potential to attract new fans, as well as reinvigorating existing ones.

What happened in the past?

So, what different formats have been tried with non-championship Formula 1 events? In the early 1970s, there was a short-lived vogue for two-part races combining for an aggregate result. The International Trophy at Silverstone and Oulton Park's Gold Cup ran to this format in 1970 and '71, and so too did the Argentinian Grand Prix and Questor GP (at Ontario Motor Speedway) in '71.

Going back a further decade, the Brussels GP at Heysel took this a step further, with an aggregate over three races. In 1967 the Spring Cup at Oulton Park and Race of Champions at Brands Hatch took place over three races, with the result of heat one forming the grid for the second heat, and the result of this deciding the starting line-up for the main event. In the 1950s there were F1 events — including Silverstone and Crystal Palace

where the field was split into two heats,
 with the top finishers

Not strictly raceformat meddling, but the Race of Champions and International Trophy in the early 1970s added Formula 5000 cars to the F1 field, Peter Gethin's Chevron famously beating

progressing to the final.

the F1 brigade at Brands Hatch in '73. The Rothmans 50,000 of '72, also at Brands, took this a step further by opening the floodgates to F1, F2, F5000 and sportscars.

Also, non-championship races gave drivers — including James Hunt and John Watson — a chance to make their F1 race debuts, and also brought tracks such as Jarama, Interlagos and Imola onto the F1 calendar before they were promoted to full world championship events.

EDD STRAW AND MARCUS SIMMONS

IN THE HEADLINES

NO HOPE LEFT FOR MANOR REVIVAL

Manor's hopes for a last-minute rescue deal to return to F1 have evaporated after the team officially withdrew its 2017 entry. Attempts had been made to secure late funding, but now that the entry has been withdrawn, anyone buying the assets would have to apply for a place as a new team.

SIMON LEAVES HONDA ENGINE ROLE

Honda is parting company with engine consultant Gilles Simon as pressure mounts on the Japanese manufacturer to turn around its fortunes in Formula 1. Simon had joined Honda in 2013 after previous spells with the FIA and the stillborn PURE engine project.

FIA CLARIFIES OIL-BURN REGULATIONS

The FIA has reminded Formula 1 engine manufacturers that they are not allowed to 'burn' engine oil as fuel, after Red Bull suspected that Mercedes could have been doing this in qualifying. Mercedes insists it was not employing such tactics and has always complied with the rules.

SYMONDS JOINS SKY F1 LINE-UP

Former Williams chief technical officer Pat Symonds has joined Sky Sports F1 as an analyst and commentator. He left the team last December, with Paddy Lowe agreeing to join Williams as its new technical boss.

FIA WARNS TEAMS ON SUSPENSION

The FIA has warned Formula 1 teams that they could be asked to remove trick suspension systems if they cannot prove aerodynamic performance gain is not the design's primary purpose. All systems will be inspected, with one team already believed to have been told to make changes.

NO EU PROBE INTO SALE OF F1

The European Union competitions commission has rejected calls to investigate the sale of Formula 1 to Liberty Media. UK member of the European parliament Anneliese Dodds has been pushing for an investigation into anti-competition practices and the F1 sale. But Dodds has now received a letter from the European commissioner for competition, Margrethe Vestager, saying the body would not investigate the sale.

HEMBERY LEAVES PIRELLI F1 ROLE

Pirelli has restructured its Formula 1 operations and racing department, with motorsport chief Paul Hembery moving to a new role in Latin America. Hembery helped guide Pirelli's return to F1 in 2011, but from March 15 he will take up a new role as CEO of Pirelli LatAm.

GIOVINAZZI MAKES HIS SAUBER BOW

Ferrari junior Antonio Giovinazzi made his test debut in contemporary F1 machinery at Barcelona last week, filling in for Pascal Wehrlein at Sauber (below). The Italian had previously driven a 2015 Ferrari at Fiorano. Wehrlein has returned to action in this week's second test after recovering from a Race of Champions back injury.



WORLD ENDURANCE CHAMPIONSHIP

Toyota warns against WEC technical 'dumb-down'

A DOWNSCALING OF THE TECHNOLOGY ALLOWED in the LMP1 class of the World Endurance Championship would be unacceptable to Toyota. The Japanese make has made the warning against the backdrop of a drive to reduce costs in an effort to attract more manufacturers.

Toyota Motorsport GmbH technical director Pascal Vasselon said that it "would be almost impossible to accept a step backwards".

"The main reason for Toyota to participate in the WEC is to develop technology and specifically hybrid technology," he explained. "Developing hybrid technology is the raison d'etre of the programme."

The FIA and WEC promoter the Automobile Club de

l'Ouest, together with remaining P1 manufacturers Toyota and Porsche, are looking to lay out a new roadmap for the class in the wake of the rules freeze implemented late last year until 2020. That decision delayed an increase in the scope of hybrid technology set for 2018.

Peugeot has stated its interest in returning to the LMP1 ranks if there was a reduction in costs and has hinted that the level of hybrid technology needs to be reduced in the name of cost-reduction. Vasselon said that the task for the rule-making groups was to "find a solution where everyone can find a level where they want to compete and still have close competition".

GARY WATKINS



THE DEBATE

Who will be Japan's leading 2017 rookie?

Felix Rosenqvist's Super Formula deal at Team Le Mans means a mega fight this year with Pierre Gasly, Nick Cassidy, Jann Mardenborough and Kenta Yamashita



Pierre Gasly

At Mugen, Red Bull Junior Gasly is the only one of the five superrookies in a Honda car. And, as it is in most things at the moment, Honda is behind in Super Formula – but in this category it isn't that far behind. Rosenqvist's Le Mans team had a dismal season in 2016, and the Kondo squad of Cassidy and Yamashita is not exactly Toyota's topline operation. Mardenborough will surprise with Impul, but Gasly should emerge ahead. His experience on the fab Michelin tyres from Formula Renault 3.5 should also help.



Felix Rosenqvist

I overlooked Rosenqvist in a pre-season prediction of mostimpressive rookie performer in Formula E, and I'm not making that mistake again. The Swede is a maverick – he's fearless, ridiculously quick and impressively committed. Super Formula is a huge step from Formula E in performance terms but do not underestimate the challenge of the electric single-seater series. There, Rosenqvist has proven he can master a tough car on tricky circuits – he'll deliver the same jaw-dropping moments in Japan. WEC

JARVIS GETS LMP2 JOTA DRIVE



OLIVER JARVIS HAS PUT together what he is calling "a dream programme" for 2017 after his departure from Audi at the end of last year. The Briton has added an assault on the World Endurance Championship with the Jackie Chan DC Racing LMP2 squad to his factory deal with Bentley in the Blancpain GT Series.

Jarvis, who left Audi after nine seasons in the wake of its departure from the WEC, will drive the lead Jota-run ORECA-Gibson 07 fielded under the banner of Hollywood action legend Chan in the full WEC, including the Le Mans 24 Hours. His team-mates will be sometime Renault Formula 1 test driver Ho-Pin Tung and 18-year-old Frenchman Thomas Laurent, a race winner with the team in this winter's Asian Le Mans Series.

"This is the perfect combination for the year ahead because I'm racing with a manufacturer and continuing in the WEC," said Jarvis, who will race in the BGTS Endurance Cup with the M-Sport Bentley squad. "I love the WEC and have made many friends there, and I also love driving prototypes."

Alex Brundle, a
three-time P2 class
winner with Jota's
G-Drive entry in the WEC
last year, will drive the
second car together with
Tristan Gommendy and
team boss David Cheng,
who appears uncertain
to do all the races.

GARY WATKINS



WORLD RALLY CHAMPIONSHIP

Citroen to strike back?

CITROEN TECHNICAL DIRECTOR
Laurent Fregosi's head has appeared above
the parapet — he's got a message about the
French firm's troubled start to the 2017
season ahead of this week's Rally Mexico.

Despite skipping last season's World Rally Championship, Citroen, it seems, has been short on preparation time for this year. That's the reason it sits fourth of the four manufacturers post-Rally Sweden, despite coming into 2017 as one of the favourites. That favourite tag was fitting too, given the Versailles team's prodigious historic WRC success and 12 months away from the coalface.

Now Citroen is more confident heading to round three. "Our results in the opening two rounds of the season mainly come down to a lack of preparation on our part for the actual race conditions," said Fregosi. "The situation will be different in Mexico, because the C3 WRC has done most of its running on gravel. For this, the season's opening gravel rally, we think and hope that we will enjoy better performance."

Primarily, the drivers need to find confidence in the C3 WRC. Team principal Yves Matton is sure that Citroen's recent test in Spain has helped iron out teething troubles. "During the test we held last week, we questioned certain principles of the set-up and that helped us to identify the areas in which we can improve," said Matton. "We are striving for a good performance level in Mexico."

Matton is also looking for a 2017 reboot from team leader Kris Meeke. A road accident in Monte Carlo and going off the road in Sweden mean Meeke starts at the back of the pack — ironically in the best position given the gravelly nature of the roads in Mexico.

"Given his starting position, Kris will be trying to get among the leaders in the hope of kick-starting his season," said Matton.

Thirty-degree heat and high-altitude roads make Rally Mexico a unique challenge in the WRC season and a ban on testing outside Europe makes recreating those conditions difficult. Southern Spain has been the favoured location for the four teams since Sweden. But, as series leader Jari-Matti Latvala points out, Spanish testing for Mexico is not a precise art.

"You do get some altitude in Spain," the Finn told Autosport. "Our road went as high as 2300 metres, but we could only go to 2000 — it was full snow above that!"

Latvala admitted that Toyota's lack of data from Mexican-type stages is a concern for the Sweden winner: "Mexico is going to be the most difficult rally of the season for us. We are a new team going to Mexico for the first time. The other teams have a lot of experience of this rally and these conditions. Volkswagen went to Mexico and tested there before they were competing in WRC, but there hasn't been time for Toyota to do this."

M-Sport has completed much of its engine work at an altitude of around 43 metres — in Ford's climatic chamber in Essex. The Fiesta WRC's motor was bolted to a bench and run in specific air temperatures and with airflow as rarefied as it will be this week.

All eyes will, however, be on Hyundai. Thierry Neuville has made a scintillating start to the season, leading for 23 of the 32 stages run so far — were it not for two silly mistakes, he would be leading handsomely.

DAVID EVANS

IN THE HEADLINES

GANASSI DOMINATES SEBRING RUNNING

Chip Ganassi Racing dominated last week's Sebring IndyCar test. Scott Dixon headed Charlie Kimball, Max Chilton and Tony Kanaan in a Ganassi 1-2-3-4, with the Penske quartet filling the next four places. Sixteen cars took part, with Andretti Autosport among the absentees.

LOTTERER TOPS SUPER FORMULA TEST

Andre Lotterer topped this week's two-day Suzuka Super Formula test. His TOM'S Dallara-Toyota set a time just 2.344s slower than the Q2 cut-off for last year's Japanese Grand Prix. Team-mate Kazuki Nakajima was second, with Mugen's Pierre Gasly the top rookie – and best Honda runner – in third from reigning champion Yuji Kunimoto (Cerumo-Inging). Meanwhile, Kunimoto is a contender for the third LMP1 Toyota in this year's Le Mans 24 Hours – he has tested the TS050 HYBRID twice in Spain this year.

MARCIELLO JOINS MERC GT SQUAD

GP2 ace Raffaele Marciello is one of three star imports to the French AKKA ASP team's Blancpain GT Series line-up this season, along with DTM refugee Daniel Juncadella and Indy Lights race winner Felix Serralles. Marciello will share a Mercedes-AMG GT3 with Brit Michael Meadows in the Sprint Cup, with Mathias Lauda joining them in the Endurance Cup. Juncadella pairs up with Serralles for the Sprint Cup, with Tristan Vautier staying on at ASP to join them in the Endurance races.

PARRY MAKES GT SWITCH WITH NISSAN

GP3 race winner Matt Parry has landed a drive with the RJN Motorsport Nissan team in this season's Blancpain GT Endurance Cup. The Welshman joins Nissan GT Academy protege Matt Simmons and fellow singleseater convert Struan Moore in the GT-R NISMO.

BENNANI STAYS ON WITH LOEB

World Touring Car Championship race winner Mehdi Bennani will stay on with Sebastien Loeb Racing this year to race a Citroen C-Elysee. The Moroccan takes the last seat alongside Tom Chilton and John Filippi.

MOTOGP LAUNCHES BRITISH SERIES

MotoGP promoter Dorna has launched its new juniorlevel British Talent Cup series for 2018, and it will get a support slot at the British Grand Prix. Ex-MotoGP racer Jeremy McWilliams is on board as talent scout.

AUDI SHOWS OFF NEW DTM RACER

Audi has become the first DTM manufacturer to unveil its 2017 contender, designed to the modified rules. A hike in power above 500bhp, reduced downforce, raised ride heights and softer Hankook tyres are among the changes introduced for this season.





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March 6, 2017

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Stuart Williams
Publishing Director
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BRITISH TOURING CAR CHAMPIONSHIP

New Vauxhall hits the track

THE NEW FACTORY-BACKED BRITISH TOURING CAR Championship Vauxhall Astra underwent its first test session at Donington Park last Thursday.

The two-litre turbocharged car was driven by Senna Proctor, with the Power Maxed Racing team's other signing Tom Chilton due to undertake his first mileage at Snetterton as Autosport closed for press.

Team boss Adam Weaver said he was delighted with the trouble-free initial performance. "It's a credit to everyone," he said. "The project was only started at Christmas and the team has worked hard to get everything right.

"The initial mileage wasn't really a test for us — it was an extended shakedown and a systems check. We have work to

do, but there was no pressure with the Donington outing."

Proctor, 18, said that although he was not going for times as the team bedded in the car, he was impressed. It was the Renault Clio Cup graduate's first time in a top-flight saloon.

"The basics of the car felt very good," he said. "This was not about gunning it and setting records, but it was solid and we didn't have any real problems. I was very proud to be entrusted with its maiden run. I'm looking forward to comparing notes with [team-mate] Tom [Chilton]."

The team is aiming to have a second car running in time for the championship's media day at Donington Park next week on March 16.

MATT JAMES

GT3/SUPERGT

Revamp for Suzuka enduro

JAPAN'S OLDEST ENDURANCE race, the Suzuka 1000Km, will become a 10-hour marathon in 2018. The event will be open only to GT3 machinery in the latest twist in the varied history of a fixture dating back to 1966.

The Suzuka 1000Km has been, among other things, a world championship sportscar round and a points-counter to the FIA GT Championship. The new format is an attempt to put a race that has been a round of the Super GT Series since 2006 back on the world stage.

The revised event is a joint venture between Super GT organiser the GT Association, Stephane Ratel and his eponymous organisation and the circuit. Ratel is continuing a long



association with both the GTA and the track. SRO oversees the Balance of Performance in Super GT's GT300 class for GT3 machinery, while the Suzuka 1000Km was a round of the BPR-run Global Endurance GT Series before becoming an FIA GT event.

"We're continuing the long history of the Suzuka 1000Km and making it a big international event again," said Ratel, who is aiming for a grid of 50 cars split between GT300 regulars and international entries.

GARY WATKINS



FRENAULT EUROCUP

FULL FIELD BUCKS THE TREND FOR RENAULT

THE UPPER ECHELONS
of the ladder to Formula 1
may be struggling to
attract decent grids,
but the 30-car Formula
Renault Eurocup field is
full already, well ahead
of the opening round at
Monza on April 22-23.

Renault Sport's
decision to expand from
seven rounds to 10 has
been a resounding
success. Simultaneously,
the seven-round Northern
European Cup – which all
but a couple of Eurocup
frontrunners contested in
its entirety last year – has
returned to its original
place in the ladder, as a
feeder to the Eurocup
rather than an add-on.

One of the last to sign up was Belgian Max
Defourny – third last year (above) – who remains at R-ace GP as title favourite.
Other leading names from 2016 to return are Sacha Fenestraz (with Tech 1 Racing) and R-ace pair Will Palmer and Robert Shwartzman.

One feather in
Eurocup's cap is that it
has four reigning FIA
Formula 4 champions:
Red Bull junior Richard
Verschoor (the SMP and
Spanish champion, with
MP Motorsport); Renault
protege Max Fewtrell
(British champ, with Josef
Kaufmann Racing); Axel
Matus (NACAM champ,
AVF); and Presley Martono
(South East Asian champ,
Mark Burdett Motorsport).

Add dominant French
F4 champion Yifei Ye plus
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Bull juniors – including
Dan Ticktum – and you
have a series that's got
a lot of people excited.



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American lessons

NASCAR may be mocked by the F1 'snobs', but we could learn a lot from the US sport's dedication to improving the show for spectators

By Tiff Needell, racer and TV presenter



"F1 could learn a lot

about pleasing fans

HAVING JUST RETURNED FROM THE DAYTONA 500 and turned to my weekly dose of Autosport last week, I was surprised to find myself at odds with the best writer in the motorsport business, Nigel Roebuck!

His column comparing the dwindling audiences of both Formula 1 and NASCAR (February 23) didn't get off to a good start as the picture selection did Nigel few favours by using a Daytona shot that was quite obviously not taken during a 500 race. If it had been, instead of one car and a half-empty stand, the shot would have had at least a dozen cars in the frame, with every seat taken.

This is not to deny NASCAR doesn't have a spectator problem at other tracks and, as with Formula 1, the organisers and promoters are trying to address the issue. They started, as Nigel mentioned, by reducing the aero last year, which made for better racing by allowing the cars to run closer - especially on some of the 1.5-mile ovals that have seen some processional races.

However, Nigel seems less impressed by what

he calls the new 'gimmick' of splitting each race into three stages - the first two triggering what they call a 'competition caution' where all cars have to pit before reforming for a normal, post-yellow, packed restart. No-one has to 'park for 10 minutes'!

Now, before you make a judgement on this, you have to understand that NASCAR has a long-established history of 'full course yellows' for even the smallest of accidents or the tiniest bit of debris being spotted. This has been very much part of the show, giving time for fans to grab another beer or a burger before it all kicks off again with another massed restart.

They also already have this 'competition caution' in place on occasions when rain has washed out practice so everyone has to pit on a set lap to get a chance to check tyre wear. All they are doing now is adding two of those set-lap cautions during every race, but now muscling your way to the front when they come will earn you a few bonus points and in all three races over the Daytona weekend it certainly added to the tension and the entertainment. Yes, the points are complicated, but I'm sure they'll look simpler as the season evolves.

Of course, every full-course caution eradicates any lead you may have established. That is something that so upset the purists of F1 we now have our rather bizarre-looking 'Virtual Safety Car' that, while being very fair, just keeps a processional race processional - and can sometimes give a huge advantage to someone who pits for a tyre change.

Now, I'm very much a traditionalist when it comes to fiddling with F1 and have no wish to see two short races, reversed grids, success ballast or any other artificial handicaps ever introduced, but bunching the pack back together and allowing a delayed frontrunner to get on the back of the pack before a restart does liven things up a little...

So have the Virtual thing for a couple of laps if you want, with the pitlane closed, and then bunch them all up behind the pace, sorry, safety car, then open the pitlane and see who wants to gamble and who doesn't.

More full-course yellows would mean more massed pitstops and one of the most embarrassing things about F1 is caused by its 'one pit for two cars' set-up. A grand prix car queuing for service looks ridiculous and the pitstops themselves are too fast to be appreciated. So, cut the

personnel allowed in half, give each car its own stall and have stops where the difference between good and bad is measured in

NASCAR may be much mocked by the European F1 snobs but everyone is crying

from a trip to Daytona" out for a better 'show' and that's what they have, and they keep trying to make it better. Having driven one of the cars around the oval of Charlotte at up to 175mph, I can assure you there is nothing simple about 'just turning left'. If

> you don't believe me, ask Dario Franchitti. As for pleasing the fans before the racing starts, F1 could learn a lot from a quick trip to Daytona, where a Fanzone pass allows you to walk across the track from the stands, peer through windows in the back of team garages, and catch a driver's autograph if they happen to be around. You can look over from the garage roof to watch the cars come and go, and sit on the grass to see all the pre-race driver introductions and razzmatazz. Then when the race starts you can tune in to any driver radio communications you want!

Don't get me wrong, I'm not suggesting stages for F1, but I think they will work in NASCAR. We all know what's wrong with F1 and that's the ridiculous obsession with aero. The problem is all the teams who control the rules are run by aerodynamicists!

Our only hope is that Ross Brawn comes to the rescue. *



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LETTERS/PIT + PADDOCK

FEDBACK

Red Bull: masters of crowdpleasing

This year at Barcelona fan-favourite
Max Verstappen went and greeted
spectators at the Turn 10 grandstand
armed with only a handful of driver cards,
a pen and a team PR man. Something so
random and off the cuff is why Red Bull is
looked up to when it comes to promotion.

This small act was priceless to all who were sitting in the grandstand, and shows them giving something back to us fans.

Thanks Red Bull, much appreciated.

Paul Buckwell

Eastbourne, East Sussex

NASCAR is not too contrived

I have just returned from my first trip to the Daytona 500, and be assured it will not be my last. Sure, NASCAR has a few problems, but the new format seems to work well, with everyone happy, and it's not too contrived.

As for the circuit, everything was well organised, with plenty of off-track activities and very reasonably priced



food and drink. They seem to welcome the fans here, and we didn't feel ripped off in any way. Perhaps Liberty Media will spice up Formula 1 to make it more interesting and affordable.

Finally, well done Kurt Busch. Having followed his career through the ups and downs, it was great to see him curb his natural aggression and run a patient race to win in style.

Paul Drinkwater Byemail

Wake up, Honda

I find myself praying that sleeping giant Honda wakes up and gives McLaren something to silence the critics. We need Honda and McLaren snapping at the axles of Mercedes and the rest. I think we all hoped Honda had a magic ingredient to close the gap. I am still hoping. If not I dread hearing the radio comments from Fernando Alonso.

Paul Caldwell Widnes, Cheshire Red Bull gave fans at Barcelona F1 test something extra to remember

When will fins' number be up?

If the regulations can't legislate against the dreaded fins, can the FIA not mandate they at least display the driver numbers until they find a way to get rid of them?

Paul Bryson By email

Look back with pleasure

I'm 36 and have been getting Autosport since 1995 (stole my dad's before that). I've always classed myself as a motorsport fan, not just F1. I don't know if it is my age, but I used to get excited about F1 launches — the difference in cars was so easy to see.

For the most part I see past series with so much more interest; is it rose-tinted glasses? Old-style DTM, 1990s Indycar, '80s F1. The only series to really grab my attention in the last 10 years has been Supercars. Still love Le Mans, but mainly for GTs and their noise. And WRC this year looks promising. I just wish I could get excited by so much more.

Nick Parrott By email

Time to seek out historic racing - ed

Ferrari's unfair advantage

I'm beyond sick and tired of Ferrari's special treatment in F1. Millions, just to Ferrari, just to keep them in F1? Literally the definition of unfair.

Ronald McIsaac Saint John, New Brunswick

HAVE YOUR SAY, GET IN TOUCH

Autosport editorial

Autosport Network UK Ltd 1 Eton Street Richmond TW9 1EF









Battle of th







e big three





Mercedes and Ferrari looked strong in Spain last week, but Red Bull is quietly confident, too. Could we be in for a proper battle?

By Ben Anderson, Grand Prix Editor

y @BenAndersonAuto

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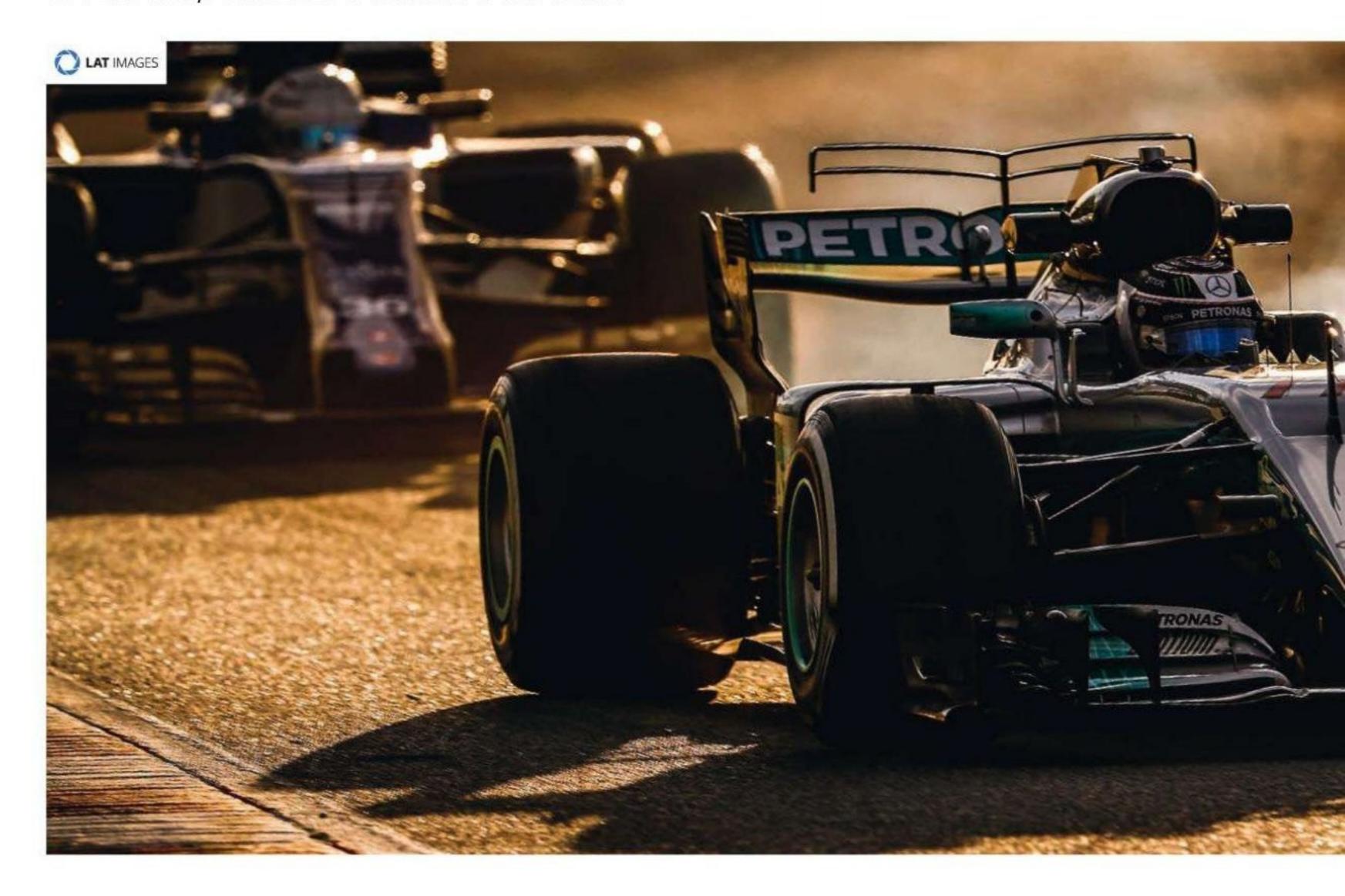
hen they bring out a new car it comes out with one set of bits, so you don't have all the components to make special changes and do all the different things you want to do. That filters in over

the days. In the next test, we'll have a much better chance to work on dialling in the car. Right now, it's just trying to get mileage. That's all we've been focusing on."

Lewis Hamilton's matter-of-fact description of Mercedes' first week of pre-season testing should send shivers of dread down the spines of its Formula 1 opposition.

The reigning triple world champion team was its usual relentless self — logging huge numbers of laps of Barcelona's Catalunya circuit, setting the outright pace, already experimenting with some of the Wo8's aerodynamic appendages, so confident in the reliability of its new engine that Valtteri Bottas and Lewis Hamilton both completed full race simulations.

There were a couple of apparent gremlins on the final day, perhaps even a few handling issues when conditions were >>



windy, but F1's dominant force still managed 558 laps in total over four days of running, equivalent to more than eight Spanish Grands Prix...

Hamilton's new team-mate Bottas set the fastest time of the test on day three, but second-fastest Ferrari was the week's surprise hit. The SF70H recorded 468 laps, looked strong and stable while circulating, and lapped very close to Mercedes' ultimate pace despite generally running on harder compound tyres than its rival.

The Scuderia has been accused of glory running in testing in recent years, but nevertheless looks to have produced a genuinely decent car to F1's new regulations. The SF70H appears to possess a great deal of aerodynamic stability, and decent downforce. The car has also looked particularly strong under braking, an area in which supplier Brembo has paid particular focus coming into this year.

Four-time world champion Sebastian Vettel stopped on the main straight at the very end of his second day in the car, having lapped just 0.247 seconds adrift of Bottas's benchmark for the week. He seemed impressed with his new steed, but also suggested the enhanced aerodynamics and wider tyres had helped solve some of the Scuderia's 2016 problems.

"From a driver's point of view, it's better everywhere braking is better, cornering is better, you've got more grip," Vettel explains. "Then in low-speed, where arguably the downforce effect is less big, you have more grip from the tyres.

"It works pretty much like an aspirin, it fixes pretty much everything. It's difficult to compare, it's a different animal, different beast.

"Everybody is pushing like crazy. I didn't pay much attention to what the others are doing. Everybody is looking at one lap time, but it's much more important what happens throughout the day and that's difficult to read. "There is a lot of work ahead of us. The team is pushing very hard; we had a quiet winter where we really tried to focus on what's important and same here — we try to do our job."

Red Bull is the squad most expect to be Mercedes' main rival in 2017, but its numbers from the first week of testing looked nothing special by comparison. Only 294 laps were logged, the cars never better than third fastest on the timesheets, around a second off Mercedes on the soft tyres, and the chassis has underwhelmed some in the paddock for lacking the aerodynamic details of its major rivals.

But Red Bull remains unmoved. Within the team there is an air of quiet confidence; a deeply held conviction that going about its business, and trusting absolutely in the logic and historic prowess of its aerodynamic solutions, will ultimately pay off when F1 stops testing and starts going racing.

"As a team, we've never, ever won the winter world championship," Red Bull team boss Christian Horner tells Autosport. "We prefer to have the niggly issues here than turn up in Melbourne having a bunch of issues.

"We're going about our own programme, we're learning, the car is behaving as expected, and gives us a good development path. The drivers seem happy and content with the car, so it's positive."

Daniel Ricciardo encountered the bulk of Red Bull's reliability problems — losing much of his first day in the car to engine sensor and battery problems, before an issue with the exhaust limited his running on day three. He says the team "never expects to do 150 laps [per day] like Mercedes", and feels there is much more to come from the RB13 in week two.

"Day one was tough," he says. "It's hard to really know where you are, and getting a comparison is difficult. I would say the high-speed balance so far feels pretty good — there are some good Red Bull characteristics there. The rest I think we are still working on.







"We haven't really got too involved in the performance runs. We know there's a bit more to come, and hopefully this week we can start to push it a bit more, and by the end of the second test everyone will be seeing what they've got.

"The lap times, for now, are still not too representative.

I think we can expect Mercedes and Ferrari to be at the front, but I'm confident we can be a bit closer than we were last year, and we'll see from there."

Red Bull's launch-spec RB13 lacked the "wow factor" of some of the aerodynamic features seen on the Mercedes Wo8 and Ferrari SF70H, according to Autosport's technical consultant Gary Anderson, who predicts Red Bull's rapidly reactive development team will nevertheless come up with more sophisticated solutions before the first race.

Red Bull's chief technical officer Adrian Newey has remarked on the complexity of Mercedes' car, and Ferrari's sidepod arrangement, as well as the high top wishbone sported by the Wo8 and the Toro Rosso STR12, which he compared to a Lotus 49.

Bottas (top) set the fastest time and both he and Hamilton (above) completed race simulations for Mercedes

But he is not yet sure whether there is any merit in Red Bull following these concepts.

Horner says Red Bull is trying to follow its own path within these new aerodynamic regulations, and that the 'basic' lines of the RB13 are a deliberate direction, rather than some kind of attempt at hiding potential.

"There are some interesting conceptual differences between the route we've taken and the route Mercedes has — just different ways of peeling an apple, basically," explains Horner, who remains hopeful the rulemakers will take a "sensible pill" and ban the ubiquitous shark fins and "moustache-like Carey wings" that some cars have sprouted.

"There are different interpretations, particularly around the front suspension layout. It's going to be fascinating to see how that evolves. Some of the cars are looking a bit more complex than others. We've worked quite hard to keep a pretty clean car. Time will tell if that's going to bear fruit."

Assuming Red Bull does not drop the ball aerodynamically this year, and doesn't suffer from the FIA's attempt to clamp down on trick suspension designs, its chances of challenging Mercedes rest largely on the quality of Renault's work redesigning its engine for this season.

The power unit is "95% different" to the 2016 one, according to Renault's engine chief Remi Taffin, and Red Bull is expecting the initial version to deliver the 0.3s per lap gain estimated by Renault Sport managing director Cyril Abiteboul over the winter. It expects the second iteration to deliver a similar amount of lap time on top.

Apart from those problems on the first morning, with a crank sensor then a faulty battery — issues Horner describes as "just annoying time-wasters" — Red Bull has been pleased with the basic specification Renault has delivered, although Max Verstappen reckons that the Mercedes team will still >>>



enjoy an edge at the start of the season.

"For sure they still will have an advantage over us in the beginning of the season, power wise, but I think we are definitely catching up," Verstappen says. "The most important thing for us was trying to make mileage, and seeing if all the parts were holding on. I think everything has been behaving pretty well."

But pressure on Renault will ramp up during this week's second test, as attention shifts to extracting more performance from the cars, especially if Mercedes has found the extra 70bhp from its own new design that some in the paddock predict.

"They've definitely advanced the product," says Horner of Renault's winter work. "It's still early days, but I think the basis of what they now have has got plenty of development scope, and potential. Certainly the work they've put in over the winter has been impressive."

Toro Rosso encountered far worse reliability than either Red

an engine failure on day three and failing to complete more than a single lap on the final day after more dramas. But technical director James Key echoes Horner's positive vibes on the performance side.

"They've definitely turned a huge corner," says Key,

Bull or the Renault works team did in week one, suffering

"They've definitely turned a huge corner," says Key, who reckons Renault's working processes have improved significantly since STR's woeful 2015 experiences with the French manufacturer.

"Our impressions are positive. Exactly where it stands in the order is impossible to say at this stage, but there's definitely a marked improvement from what we saw in the past, and last year as well.

"You can see that — it's real, it's not just a value coming out of a dyno. From a performance point of view, we're happy with what we're seeing so far."

Some in the paddock suspect Ferrari was running light on fuel during the first test, which has amplified its performance, although others believe the encouraging early displays of pace are genuine. Red Bull reckons it was roughly level with Ferrari on fuel-corrected performance, and probably two or three tenths adrift of Mercedes.

"Mercedes are absolutely the favourites," reckons Horner.

"They've been the dominant team the past three years. We've won five races, Ferrari have won three, Mercedes have won nearly 60 races. So of course they're going to be the favourites.

"But the RB13 looks like the basis of a good car and, of course, with immature regulations, development is going to come thick and fast — event to event. It's going to be a development race, really, from this point all the way to [the final round in] Abu Dhabi.

"Mercedes look competitive, Ferrari look competitive — for us, we've had a sensible first week, and got some really good feedback from the car. We're very much focused on our own programme. Early days, but we're content with progress so far."

Mercedes and Ferrari dominated the testing headlines in the first week; at face value, Red Bull looked a little underwhelming in comparison. Still, it remains the dark horse that simply cannot be discounted.

Red Bull had a difficult first day, but is still optimistic about the potential of its RB13

THE MIDFIELD CONTEST

THE HAAS TEAM EMERGED as a strong contender in the battle for best-of-the-rest behind the big three teams during the first Barcelona test.

The American team, entering its second season in Formula 1, is believed to be in a tight group with Renault, Force India and Williams in the battle for fourth. Although the fastest times set by the four teams were covered by 0.722 seconds, fuel and tyre-corrected, the real gap is reckoned to be much tighter, with none emerging with a clear advantage.

Toro Rosso appears to be off the back of that group after completing only 183 laps over four days and losing the final day of running to an engine problem. But technical director James Key believes this part of the field has yet to take shape.

"In winter testing it's very difficult to tell, so this is all with a caveat, but it does appear to be very tight," says Key. "Haas looks quite reasonable. We have to see how that develops next week and into Melbourne, but they have done a good job.

"Renault could be right with them and they look, on balance, more competitive than they did last year. Williams is difficult to tell at the moment, as is Force India. Both will be in good shape. So it's difficult to pinpoint any one person."

A clearer picture should emerge during the second and final four-day test at



Barcelona, which finishes tomorrow (Friday).

Haas driver Romain Grosjean, who split the running at Barcelona last week with team-mate Kevin Magnussen, was cautiously optimistic about the performance of the Haas.

"I think the baseline is pretty good," he said. "Going into high-speed corners, the car feels good and the traction feels good. We just need to work around a few things to make the corners a bit faster and carry more speed."

Williams's first test was disrupted by three incidents suffered by rookie Lance Stroll. On day two, the Canadian spun into the gravel at the fast Campsa right-hander, with front-wing damage meaning he could not run again that day. After posting just 12 laps on day two, he managed 98 on Wednesday, but after a harmless spin into the gravel just before the lunch break, a crash exiting Turn 5 in the

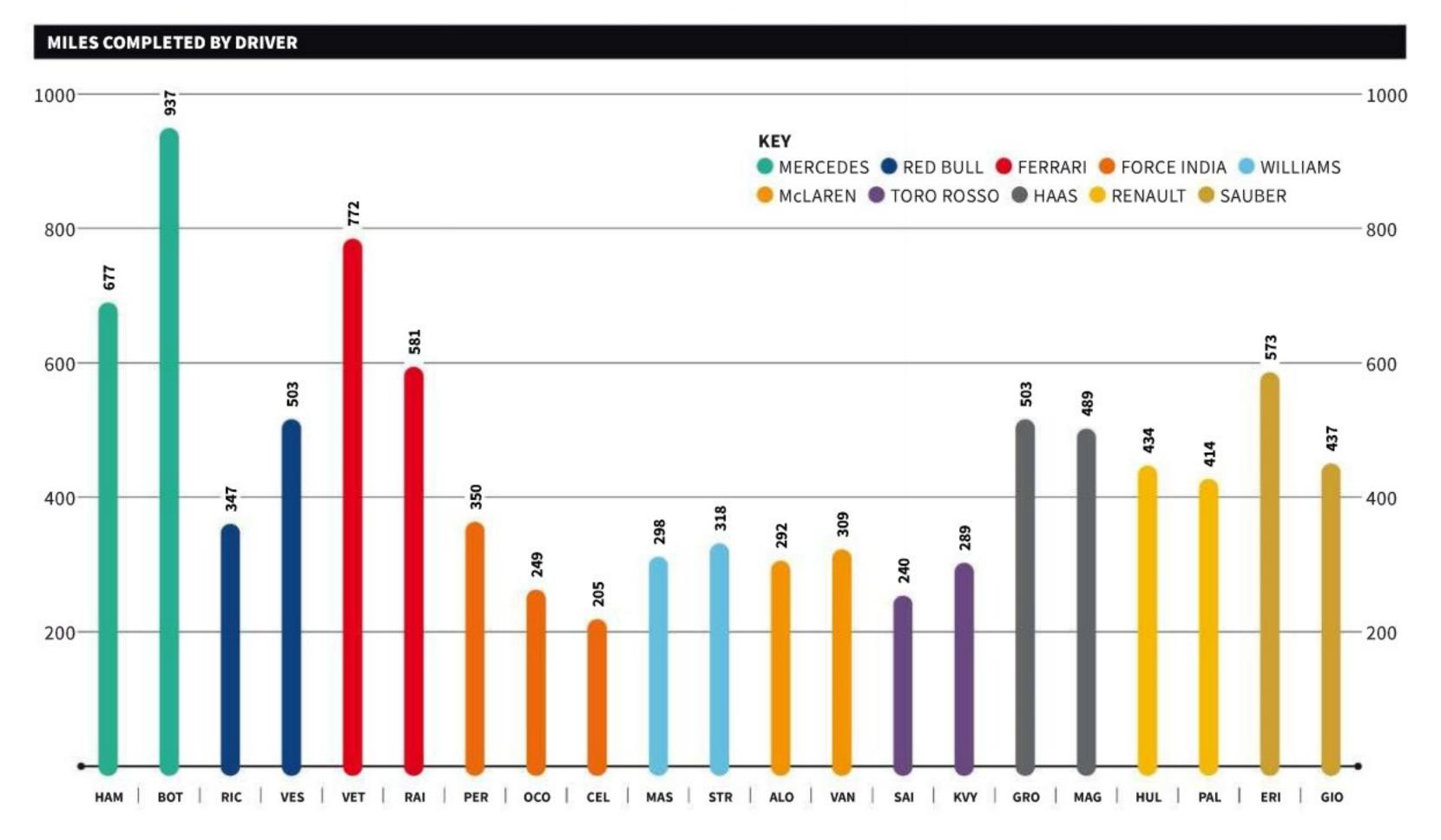
afternoon meant that the car sustained front-end damage and could not run at all on the final day.

Sauber set a fastest lap time, through Marcus Ericsson using ultra-softs, that potentially puts it in this group, although that is believed to have been on low fuel. This suggests Sauber could be lagging behind despite completing more miles at the test than anyone except Mercedes and Ferrari.

EDD STRAW

TESTING DATA BARCELONA, FEBRUARY 27-MARCH 2

TOTAL LAPS COMPLETED 3187 RED FLAGS 7



	NAME OF THE OWNER O		Service Advantage	AND ADDRESS OF THE PARTY OF THE	Wilderson Indiana and American	Service and moreov	PROTECTION OF
POS	DRIVER	CAR	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	LAPS
1	Valtteri Bottas	Mercedes W08	1m23.169s	1m22.986s	1m19.705s	1m23.443s	324
2	Sebastian Vettel	Ferrari SF70H	1m21.878s	-	1m19.952s	9-	267
3	Kimi Raikkonen	Ferrari SF70H	2	1m20.960s	2	1m20.872s	201
4	Lewis Hamilton	Mercedes W08	1m21.765s	1m20.983s	1m22.090s	*	234
5	Daniel Ricciardo	RedBull-RenaultRB13	1m22.926s	2	1m21.153s	-	120
6	Jolyon Palmer	Renault RS17	-	1m24.139s	1m21.396s	1m21.778s	143
7	MaxVerstappen	RedBull-RenaultRB13	8	1m22.200s	-	1m21.769s	174
8	Nico Hulkenberg	Renault RS17	1m24.784s	-	1m21.791s	1m24.974s	150
9	Marcus Ericsson	Sauber-Ferrari C36	1m26.841s	-	1m21.824s	÷	198
10	Felipe Massa	Williams-Mercedes FW40	1m22.076s	-	-	-	103
11	Romain Grosjean	Haas-Ferrari VF-17	+	-	1m22.118s	1m22.309s	174
12	Kevin Magnussen	Haas-Ferrari VF-17	1m22.894s	1m22.204s			169
13	Lance Stroll	Williams-Mercedes FW40	-	1m26.040s	1m22.351s	-	110
14	Antonio Giovinazzi	Sauber-Ferrari C36		1m24.617s		1m22.401s	151
15	Esteban Ocon	ForceIndia-MercedesVJM10		1m22.509s	-	-	86
16	Sergio Perez	ForceIndia-MercedesVJM10	1m23.709s	-		1m22.534s	121
17	StoffelVandoorne	McLaren-Honda MCL32	-	1m25.600s	-	1m22.576s	107
18	Fernando Alonso	McLaren-Honda MCL32	1m24.852s	: -	1m22.598s	-	101
19	DaniilKvyat	Toro Rosso-Renault STR12	-	1m22.956s	1m23.952s	notime	100
20	Carlos Sainz	Toro Rosso-Renault STR12	1m24.494s	-	1m23.540s	-	83
21	Alfonso Celis	ForceIndia-Mercedes VJM10	-	_	1m23.568s	_	71

POS	TEAM	MILES
1	Mercedes	1614
2	Ferrari	1353
3	Sauber	1010
4	Haas	992
5	Red Bull	850
6	Renault	847
7	Force India	804
8	Williams	616
9	McLaren	601
10	Toro Rosso	529

POS	TEAM	MILES
1	Mercedes	3034
2	Ferrari	2345
3	Renault	2226
4	Ferrari ('16)	1010
5	Honda	601



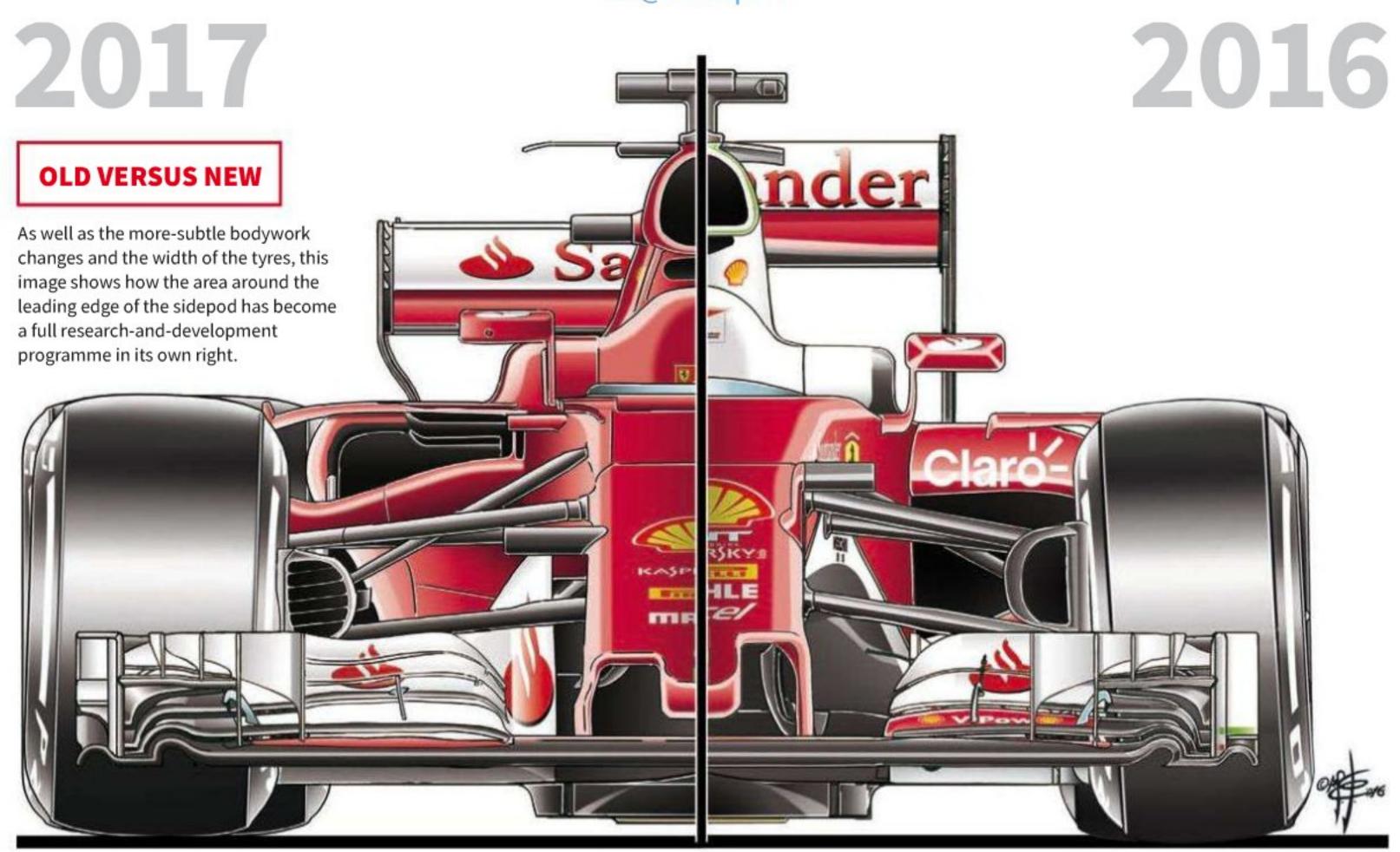
The fastest time for each driver is marked in bold, with fastest time of the day in red.

Technical focus

New regulations have prompted a multitude of distinctive aerodynamic solutions — and there's more to come

By Gary Anderson and Giorgio Piola





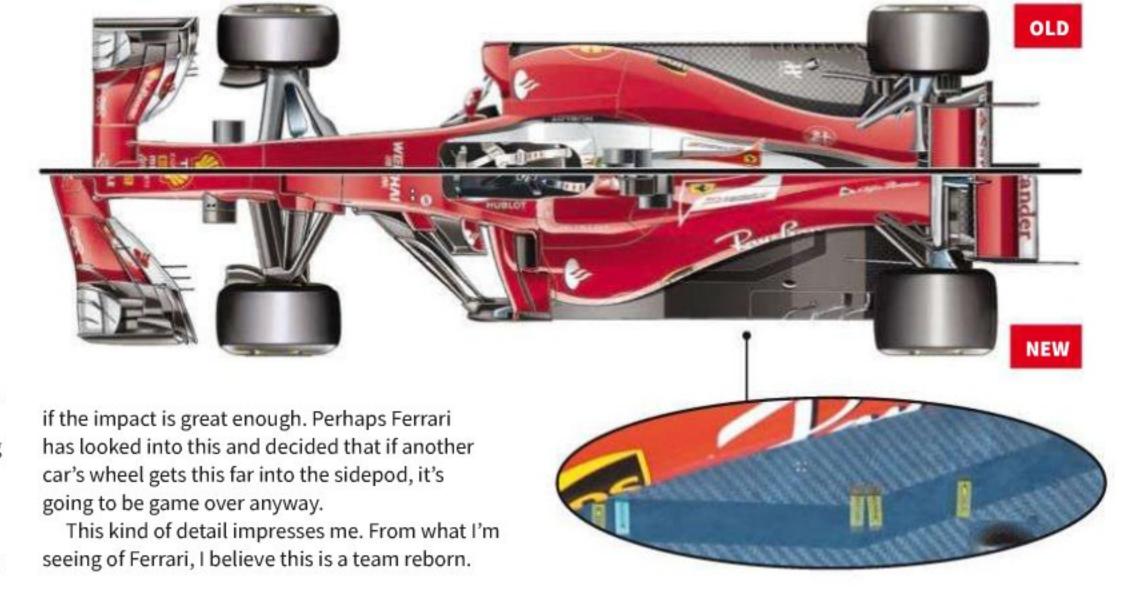
FERRARI COOLING SYSTEM

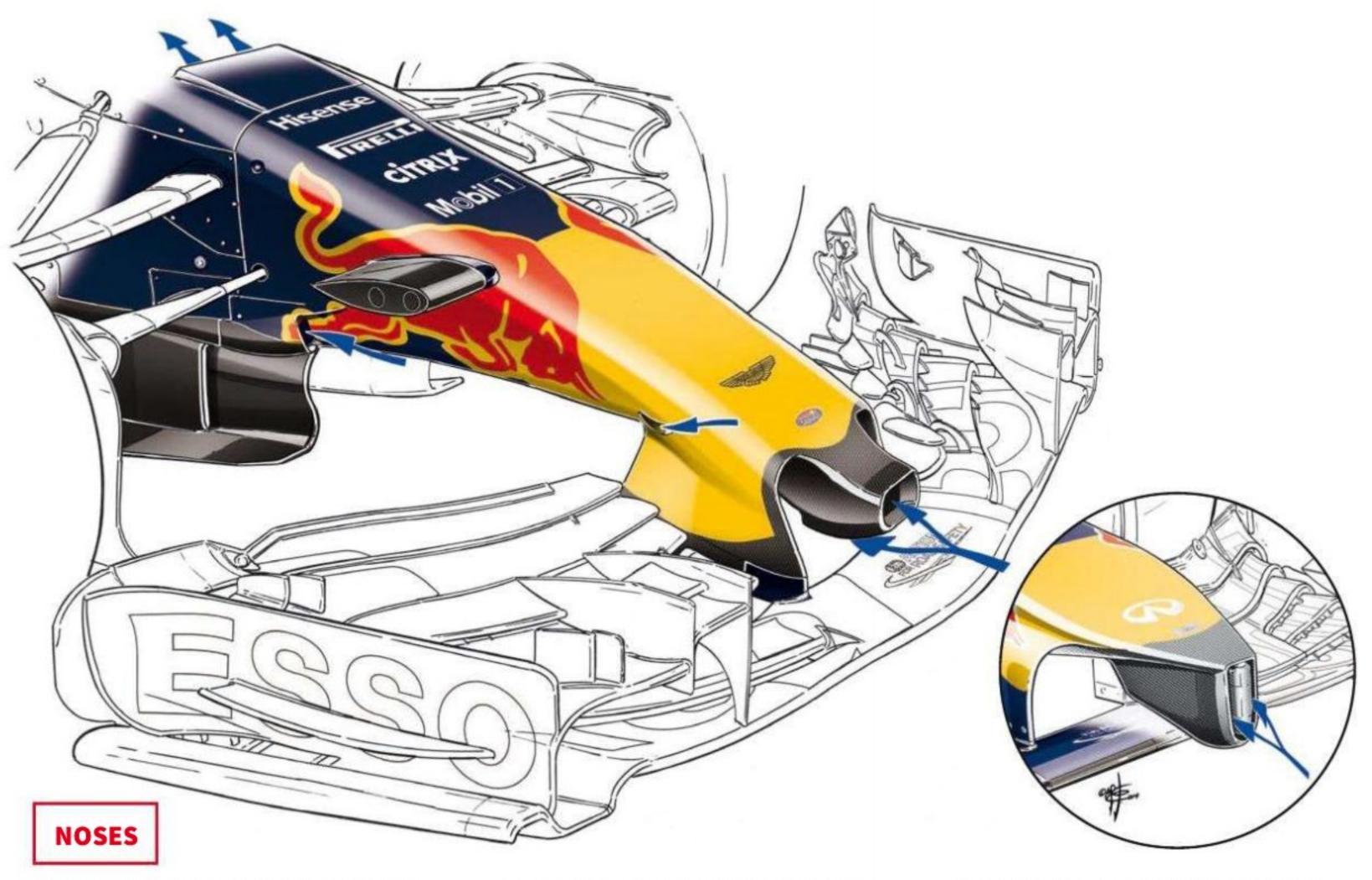
One of the more interesting – but simple – solutions on the Ferrari is this area of the floor, which has temperature stickers on it.

Cooling fluids have to be moved around the car – for example, from the engine to the radiator, or from the gearbox to a cooler buried somewhere under the bodywork. You would use simple pipes to accomplish this, but it appears that Ferrari has embedded this pipework in the underfloor.

There is a small but significant potential benefit in this. With normal pipework, the fluid within it can pick up heat en route through the engine bay. This solution will offer a bit of cooling because of the airflow passing across the floor's upper and lower surfaces. This, in turn, could allow Ferrari to run a smaller cooler.

The only negative would be if your driver collides with someone else, and in turn damages the pipework

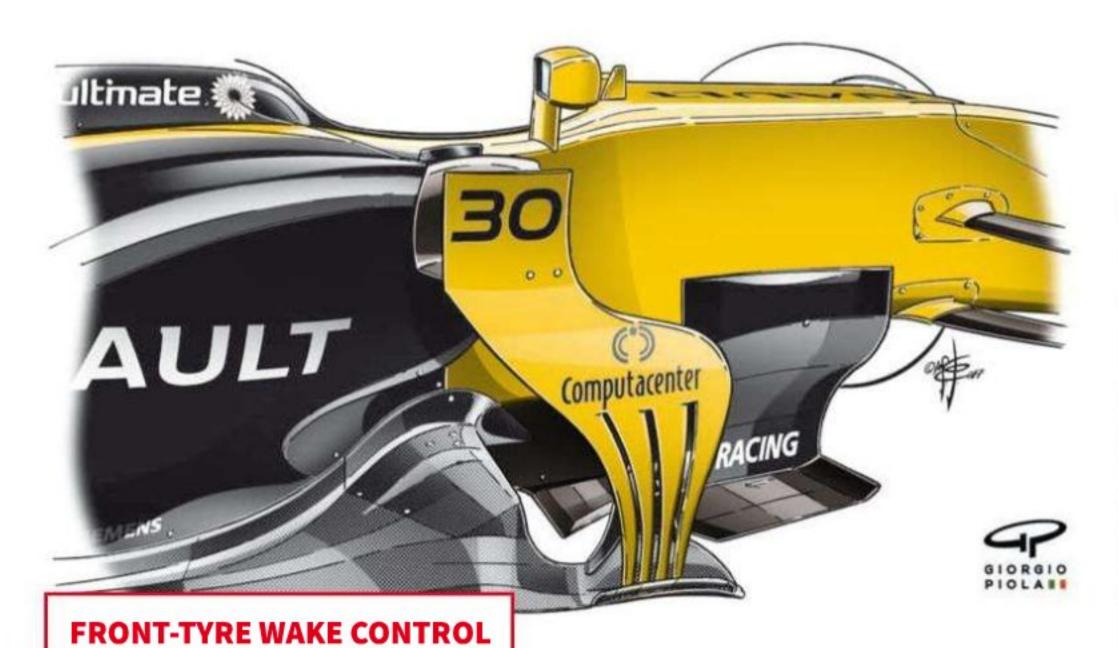




A lot has been made of the hole in the nose of the Red Bull. Basically, it is there to help the aerodynamics and will improve the consistency of the airflow around this area. As a result, this will improve the performance of some of the components downstream.

The arrows show how the airflow will spill off the upper nose surface and go between the chassis and the inner edge of the front tyre. This flow then gets conditioned by some of the suspension components to improve the performance of the underfloor.

The McLaren version has multiple turning vanes coming off the front-wing mounting. These help to turn the airflow into the middle of the car to increase the column of air that is going between the front wheels and the underside of the chassis.



With the wider front tyres, controlling the turbulent wake coming off the trailing edge of the front wing is vitally important to the performance of the sidepod undercut and, in turn, the Coke-bottle area at the rear of the car. Careful detailing is required.

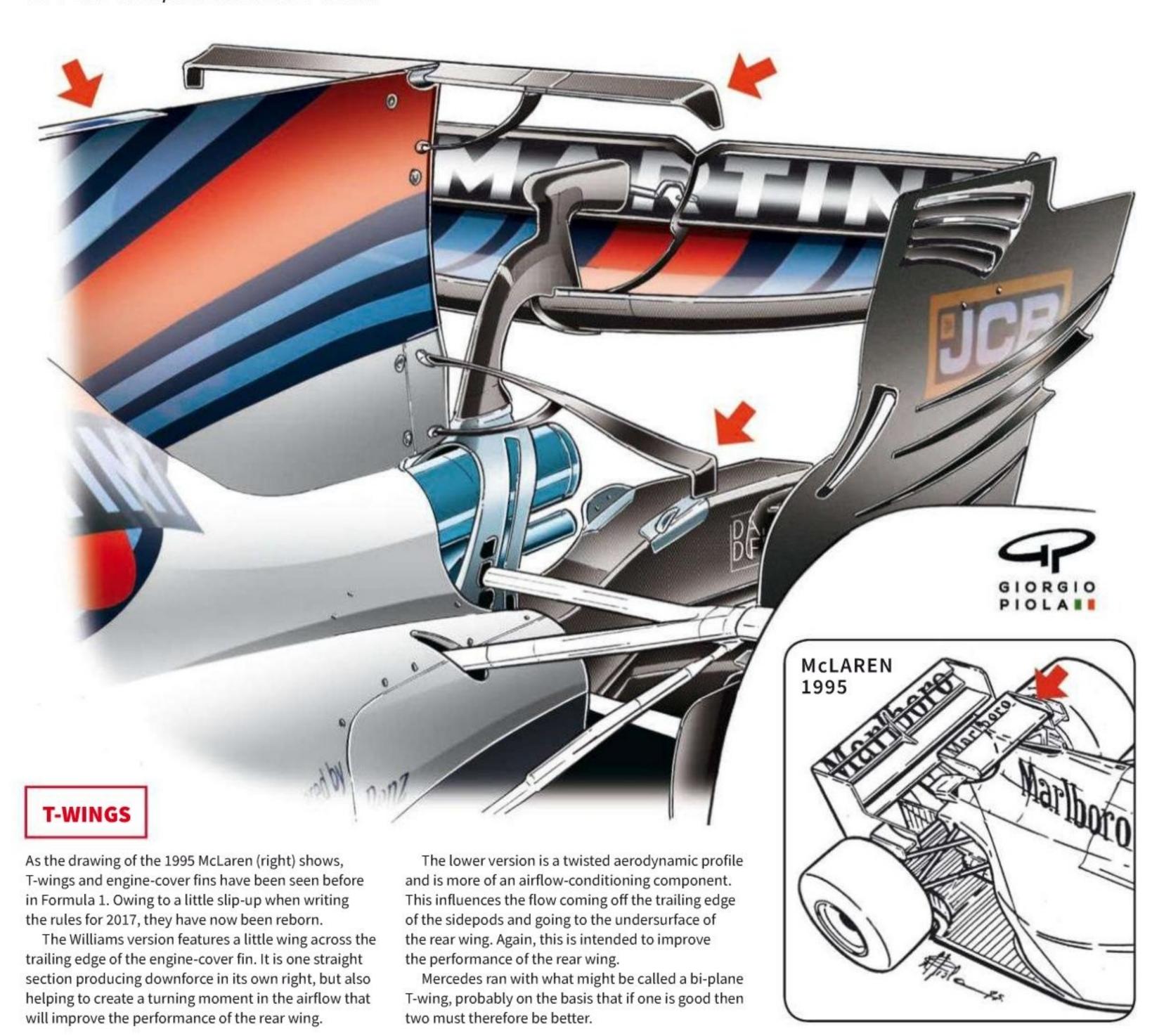
If this airflow is not optimised, the front wing, underfloor and diffuser will all suffer.

Renault has, like most teams, moved the lower part of the vertical turning vane forward, nearer to the front tyre, and turned it into a multi-element component. This improves its performance and makes the airflow more robust. This is particularly important because the system has to function with varying steering lock, which is difficult to simulate.



RENAULT REAR WING

Renault ran an experimental rear wing at the end of the first test. The inset shows how the flap was extended, creating an extended 'V'. This appears to be an experiment designed to simulate higher downforce levels, since it did not appear at the second test and potentially exceeds the maximum dimensions.



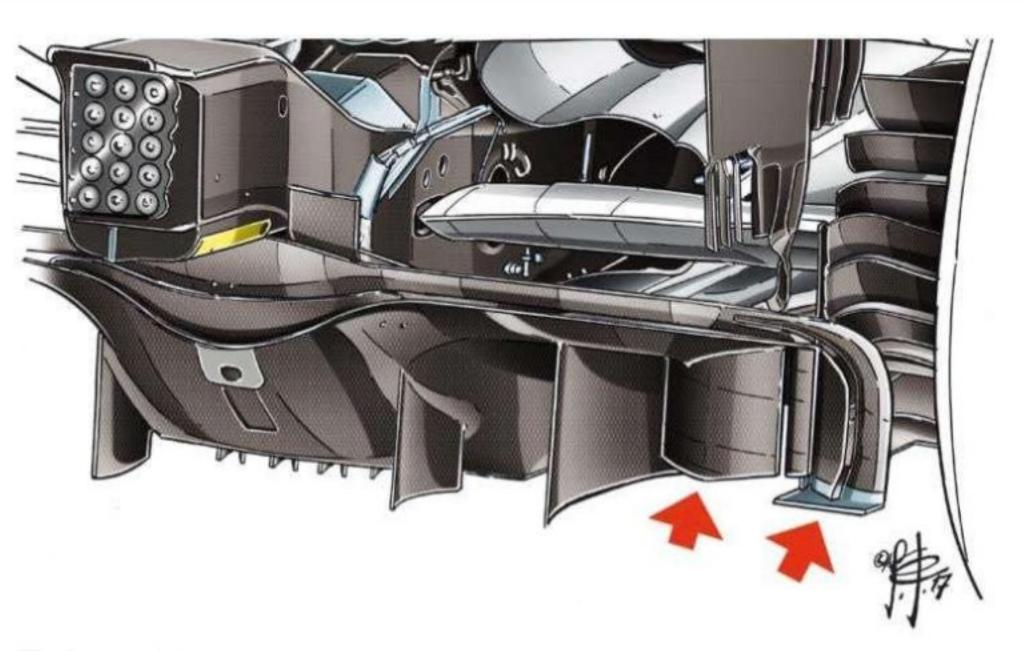
MERCEDES DIFFUSER

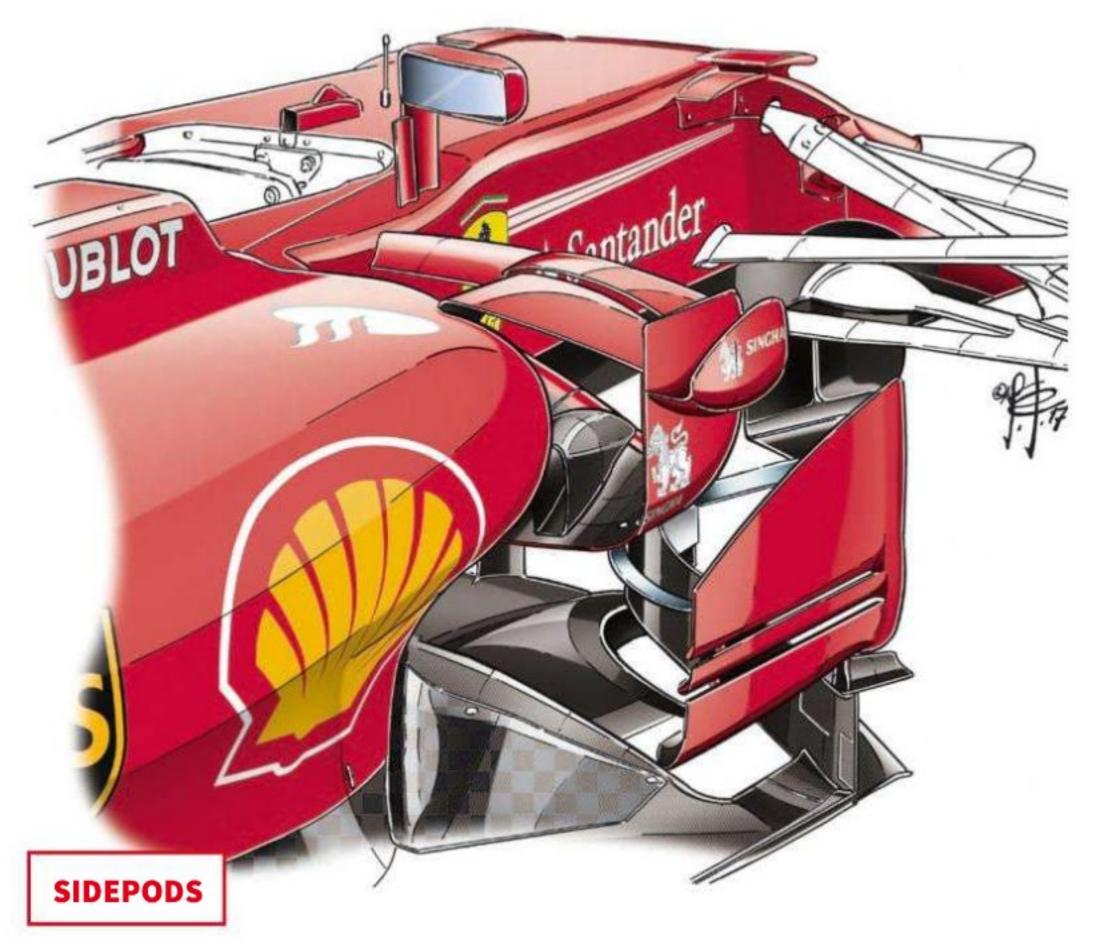
Mercedes appears to have put a lot of effort into its diffuser, and compared with the ones on the Ferrari and the Red Bullit is much more detailed.

The main objective of this area of the car is to work in conjunction with the low-pressure area behind the rear tyre. If this can be achieved, and the low-pressure area helps to suck the air faster, the increase in underbody downforce will be significant.

The detail of the outer turning vane - highlighted here with the two red arrows - is what achieves this, but doing this without optimising the airflow along the full trailing edge would not be enough. Each individual item has to work with the others as one.

Also illustrated here are the multi-tier brake-duct turning vanes. These help with diffuser downforce by reducing the airflow leakage that would normally go under the diffuser at the side of the rear tyre.





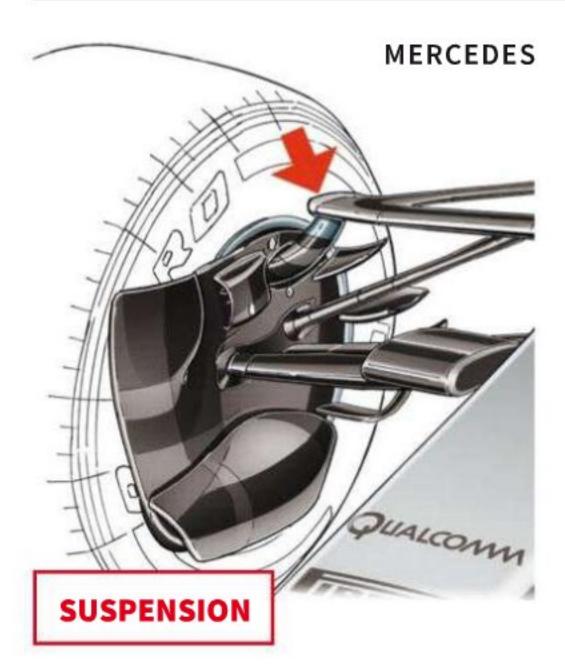
Without doubt, the leading edge of the sidepods and bargeboards is the area that Ferrari has put most of its winter efforts into. There are more turning vanes and widgets in there than on all the other cars in the pitlane put together, and if it all works well it will be more or less impossible for any team to copy at short notice.

The sidepod leading edge is further back than on any other car (except the Haas), and in order to achieve this some of the turning vanes actually house the mandatory

side-impact tubes. Testing has shown the Ferrari is very stable across a wide range of conditions and tyre compounds, so it does look as if this area is working as the team would have predicted.

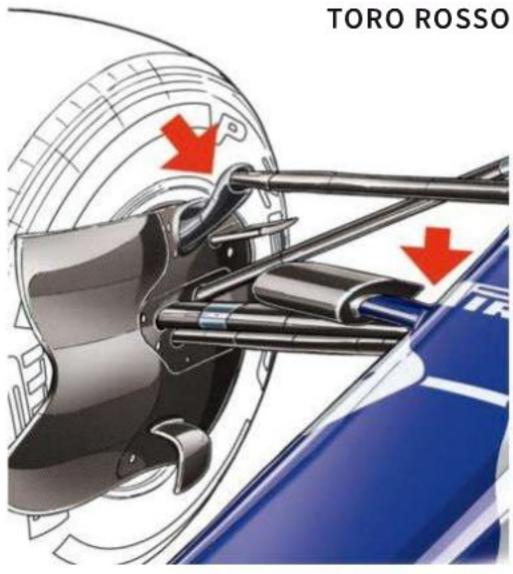
The complexity of the airflow across all of these surfaces around the sidepod leading edge will require a great deal of time to simulate and understand.

Compared with Mercedes and Red Bull, Ferrari has really gone to town in this area.



Both Mercedes and Toro Rosso have raised the height of the outboard ends of their front wishbones to upright pickups.

They have accomplished this with the addition of an 'ear' coming off the top of the front upright around the inner edge of the front rim. The lower wishbone is also higher, and is now above the centre of the axle. In doing this, the wishbones have been moved into a



position where they will do less damage to the airflow coming off the front wing. They will also help prepare the airflow a little better for entry into the underfloor and sidepod leading edge.

The suspension geometry can also be a little more sympathetic to the tyre, improving the consistency of the contact patch. This will help with overall grip, and could also reduce tyre degradation.

DEVELOPMENT OBJECTIVES

Although three teams are clear leaders at the moment – Mercedes, Ferrari and Red Bull – there's still a lot of room for improvement. I've made some suggestions:

FERRARI

DIFFUSERAREA

The Ferrari diffuser is relatively simple and a reasonable chunk of performance can be found in this area. It's not so critical to the rest of the car because the airflow coming off the trailing edge of the diffuser gets left behind for a following car to deal with.

Ferrari can stay away from its front wing for now. The car and its very complicated bargeboard system seems to work, and by changing the front-wing characteristics you run the risk of causing problems downstream.

MERCEDES

BARGEBOARDS

Mercedes already has a relatively complicated bargeboard, but is not using this area to the maximum of the new regulations. By optimising this space, it will be possible to find a reasonable amount of downforce, especially from the underfloor.

Also, Mercedes needs to look at why the car seems to suffer from a touch of inherent understeer. Watching on track, this increases between the soft and the medium Pirelli tyres when on high fuel loads.



RED BULL

BIG UPGRADE DUE

Red Bull has room for improvements on both the bargeboards and diffusers. The car does look pretty good on the circuit, but if anything gives up, it's the rear end under traction.

I'm pretty sure the car that came to the first test was a very basic version. Adrian Newey is renowned for keeping the trick bits hidden until the last possible minute and 2017 will be no different. I would expect a fairly different package to turn up in the pitlane in Melbourne later this month.



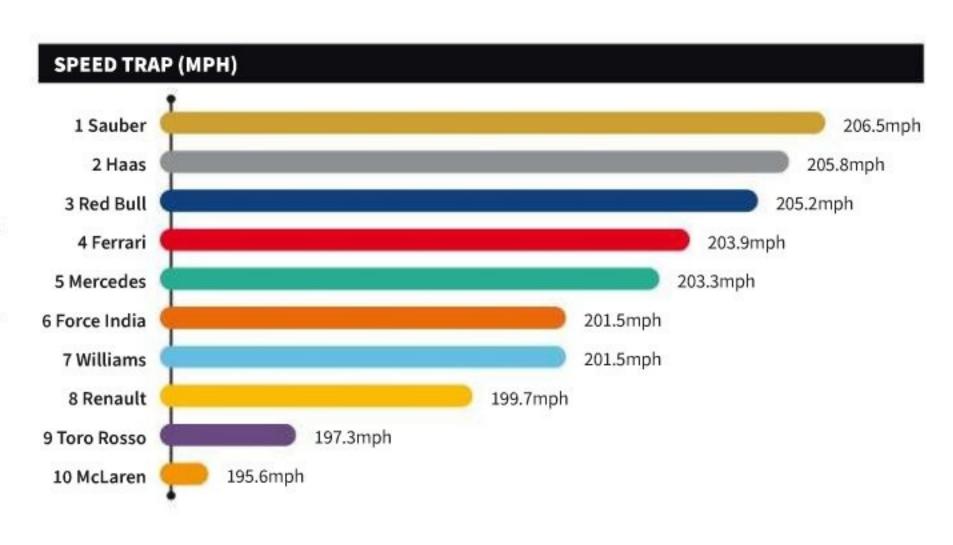


@autosport

udging car performance based on testing can be dangerous, given the number of variables in play. But you can create a more accurate reading of the times based on taking the fastest lap set during the four days of running and then normalising it for tyre compound, using steps of o.6 seconds from medium to soft, o.4s from soft to super-soft and 0.2s from super-soft to ultra-soft.

The fuel load is also accounted for, with 0.05s allowed per completed lap on the run on which the time was set. The lap times created are the ones used for this ranking.

It's not a perfect system but this, combined with trackside observations, has made it possible for me to create some kind of very provisional ranking. I'm not saying Ferrari is 0.353s faster than Mercedes, as the numbers suggest, but these figures do give a rough indication of where things might stand.



ADJUSTED LAP TIME RANKINGS

■ FERRARI●

1m19.202s

The Ferrari looks like the most consistently stable car of all, whatever tyre it's on. It looks very precise, is able to maintain a consistent line through corners and has a good balance.

Other teams are suggesting Ferrari is running a bit light. They may know something we don't, but from trackside it doesn't look too light, and if there is a weight difference compared with Mercedes, it's not too much.

Ferrari has the best car out there, it's painted to the road. The team has taken a step forward from last year.



The Mercedes often looks great on track on the soft tyre. But it didn't seem so planted on the medium rubber during race runs, and I wonder if there's something there that isn't quite right.

I suspect there's perhaps a little inherent understeer in this car.

The Mercedes still gave the impression of being a very good car, but it was strange to see how cautious the drivers had to be in Turn 3 during race runs on mediums to be able to get the nose in. Then they had to delay getting on the throttle.



RENAULT®

Renault has without doubt made progress since last year – but of course, there was a lot of progress to be made. Out of the bunch of cars behind the big-three teams, the Renault looks as good as any of them.

It doesn't have the grip of the Ferrari or the Mercedes, or even the Red Bull, because in the Turn 3 right-hander you can see it using a lot more road. The Renault can carry the speed in, but doesn't have the grip to keep it tucked in. That's usually a good indication that the grip level is just not there.

RED BULL® 1m20.353s

The team has said that it's gone for a fairly simple package. Although we didn't see all this car had in Spain last





week, Red Bull probably does need to find that extra two or three tenths to be at the front, and I'm sure that's coming. Red Bull is very good at showing its true form only when it needs to.

On a few occasions coming out of Turn 2 the rear was getting a bit lively. That, probably, will only require a small balance change.

5 WILLIAMS 1m20.876s

Williams has had a torrid time. The first day with Felipe Massa was OK, but when Lance Stroll was in the car he was still experimenting. He doesn't leave the car alone – I describe it as having too tight a grip on the steering wheel, trying to feel everything the car's doing. He needs to let the car do the work.

The car, from what we saw, looks to be about where it should be. Fourth place back is a tight bunch, and Williams should head that pack. But it could be difficult with only one experienced driver.



6 SAUBER

1m21.374s

This team is definitely out of place in this order, and I suspect the lap time was probably done with little more than vapour in the fuel tank.

On track it doesn't look like it has the grip level to be sixth, as the car runs wider earlier than most. I'm not saying it's bad, and it seems to have no vices, but it can't carry the corner speed with the driver able to keep the throttle on.

HAAS 1m21.818s

Haas appears to be pretty good, better than its pace suggests. This is the team's second year, but it now looks like an established outfit able to turn up get through all the work.

The interesting question, from my point of view, is the similarities with the Ferrari. The sidepod does have some significant differences, but the treatment of the bargeboards and turning vanes is very similar.



This was a fairly low-profile test for Force India. It did waste time on day one with an exhaust-system problem, and it could have used the third day better by not having development driver Alfonso Celis Jr in the car.

The car itself looks pretty decent – tidy with decent balance. But I'd like to see a little more pace. Like I always say, it's hard to hold a good car back. It needs to show more at the next test.

TORO ROSSO 1m22.156s

Everyone has been keeping themselves to themselves; I'm told the team has a lot of new stuff coming for the next test, and used the first four days to log miles and prove it has a reliable car that reacts to set-up changes.

The car looked neat and tidy on day one. But it never built from there. Like Force India, the team needs to do more.



There have obviously been problems with Honda, but this is not a very good chassis being let down by the engine, it's about the whole package.

Watching Fernando Alonso on day three was interesting. Turns 1, 2 and 3 are demanding. He couldn't get the power on between Turns 2 and 3, and had to be very careful on turn-in. Then he had to be delicate on the throttle.



How much trouble is McLaren-Honda in?

There were high expectations when McLaren unveiled its 2017 challenger, but things looked decidedly familiar after the difficult first week of Formula 1 testing

By Ben Anderson, Grand Prix Editor

梦 @BenAndersonAuto

his is a big season for McLaren-Honda.

Two years into the troubled return
of this famous alliance to Formula 1,
it's high time it started consistently
delivering the performance to suggest
that it can carry the fight to the
championship's big guns.

McLaren-Honda arrived at Barcelona

McLaren-Honda arrived at Barcelona with expectations of producing a chassis that can rival the best teams on the grid — Mercedes, Red Bull and Ferrari — mated to a redesigned engine that's supposed

and Ferrari — mated to a redesigned engine that's supposed to be able to at least match the level Mercedes reached by the end of last year, which is reckoned to be about 80bhp up on where Honda got to with its 2016 power unit.

The talk has been of renewal — new regulations, new car, new name, new livery, new engine, new management. A clean break with the past. Time to get serious. But after four days of pre-season testing, it already looks as though McLaren-Honda is seriously struggling.

The first two days were pretty much written off by engine problems. A fault with Honda's oil-tank design lost Fernando Alonso his first morning in the car, requiring an engine change and the shipping of the faulty unit back to Japan for analysis, before Stoffel Vandoorne suffered a significant combustionengine failure on Tuesday.

Two days and two engines down, only 69 laps on the board, and not even a proper run among them, according to Vandoorne.

Like all manufacturers at the first pre-season test, Honda ran its new power unit in a detuned state. It's not concerned by the need to modify the oil tank, but is worried that the second failure could have serious consequences when it comes to



extracting further performance from the engine, an updated Melbourne-specification of which was originally due to arrive for this week's second test.

Mercedes, Ferrari and Renault are likely to stretch further away when they start turning up their new engines, especially if Honda is unable to do the same for fear of further failures.

That's probably why Honda's F1 engine chief, Yusuke Hasegawa, reckoned it was "especially" important to find the root cause of last Tuesday's combustion-engine failure in particular — even though the team played down the likely impact on McLaren-Honda's ultimate development plan.

"We have many issues," admits racing director Eric Boullier. "It is a new layout of the engine from Honda, and obviously [there are] some unexpected glitches, but nothing is fundamental."

Day three was certainly better, with Alonso completing three more laps of Barcelona than McLaren-Honda managed across the previous two days combined. But as Mercedes, Ferrari and Red Bull filled the top three places on the timesheet, Alonso languished in 10th, almost three seconds off the pace.

What's more, the MCL32 did not look particularly impressive when circulating.

"McLaren can't really complain about Honda's engine, because there are still horses left in there that they're not using," says Autosport technical consultant Gary Anderson. "It looks OK on the very softest tyres, but on softs and mediums — the most relevant tyres for this track — it's just not there.

"It doesn't look like it's got a horrendous balance problem, but it does look like it's got a grip problem. The Sauber is not a good chassis — that's one end of the scale. The Ferrari is at the other end of the scale. At the very best the McLaren is in the middle — and that would be giving it a pat on the back."

McLaren is effectively two days behind its major rivals in terms of understanding its new package, thanks to those early engine problems. Disregarding Alonso's 'headline' time on ultra-softs on Wednesday, which team-mate Stoffel Vandoorne beat by fractions on the final day, the McLaren lapped in 1m23.8s on the soft compound. This is around two seconds slower than Mercedes and Ferrari managed on day one, and just under a second shy of where Red Bull got to after its disrupted first morning.

Any way you slice it, there is still serious work to do — with both the chassis and the engine.

"Even the perfect car, when you push to the limit you will always have understeer, oversteer, or something like this," argues Boullier. "But both drivers don't complain, and feel the base of the chassis is good, so we can develop around this. There will be a high development rate, especially for the start of the season. I expect most of the teams to bring nearly a new car in Australia."





First two days of testing pretty much a write-off; Boullier (far right, with aero head Peter Prodromou) admits there are many issues, but nothing fundamental







But can we realistically expect a big shift in the right direction for McLaren-Honda's fortunes? A slow start seems more likely. Honda still appears to be struggling to get on top of this engine formula, which must putt a strain on intra-team relations, even though they have yet to descend to the public recrimination we witnessed between Red Bull and Renault in 2015.

Alonso has put on a brave face in public, but quietly must be seething at the thought of potentially seeing his three-year stint with the team go to waste in uncompetitive machinery.

The more time passes, the more it looks as though McLaren's decision to give up Mercedes customer power for this works partnership with Honda was a big mistake. At least with a Mercedes engine in the back, we would know for sure how capable the McLaren chassis really is.

The McLaren-Honda project feels like *Groundhog Day* — valiant attempts at doing things differently that ultimately lead back to the same starting point.

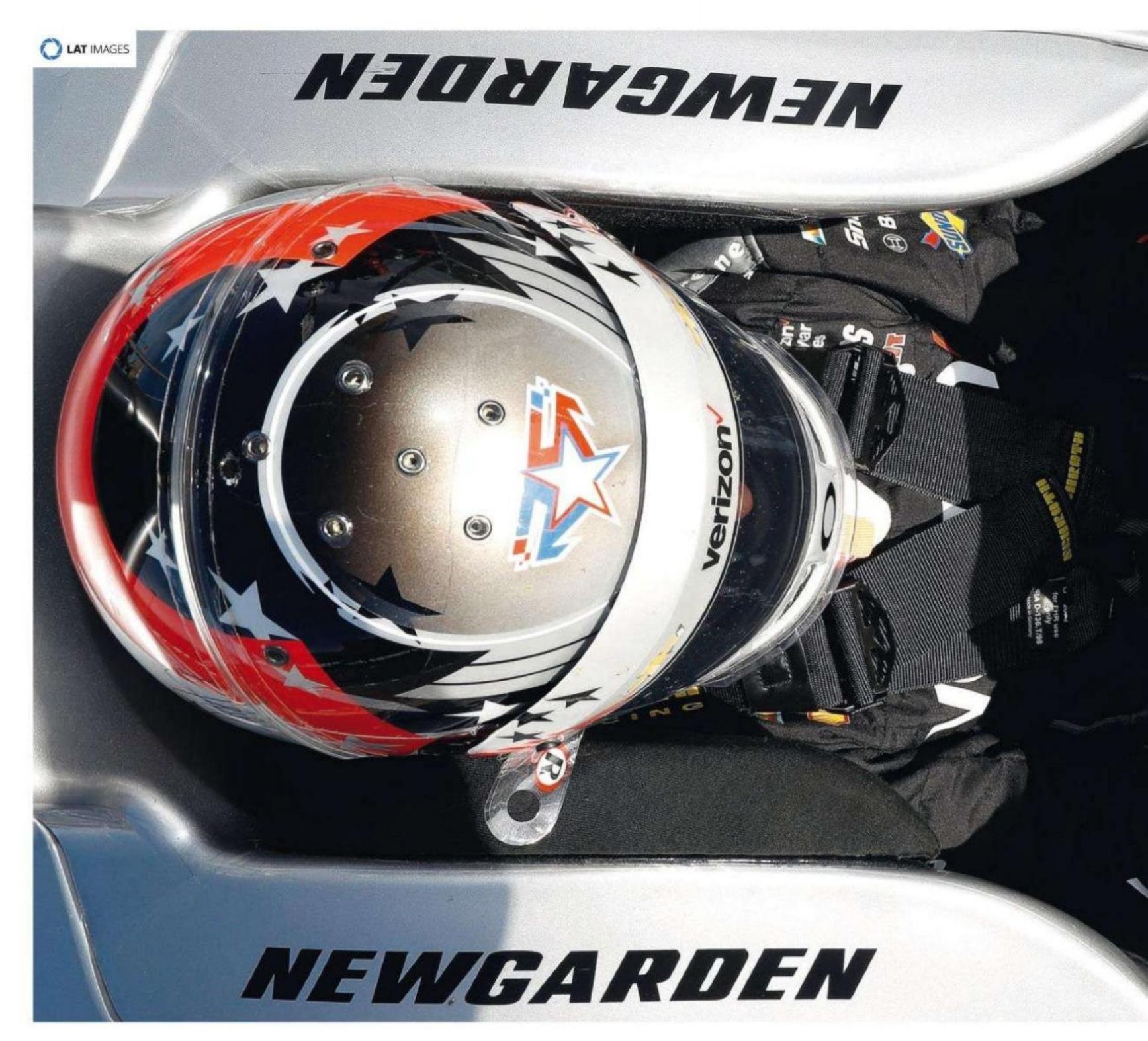
Eventually, serious questions will have to be asked internally about whether this troubled partnership is truly a sustainable proposition. Honda has been successful in F1 before, but during an era when it lacked credible opposition. That is certainly not the case today.

Honda hasn't been properly competitive in Formula 1 since the early 1990s; McLaren hasn't been properly competitive in Formula 1 since 2012. The longer this mutual success drought continues, the more danger there is of both organisations suffering irrevocable damage.

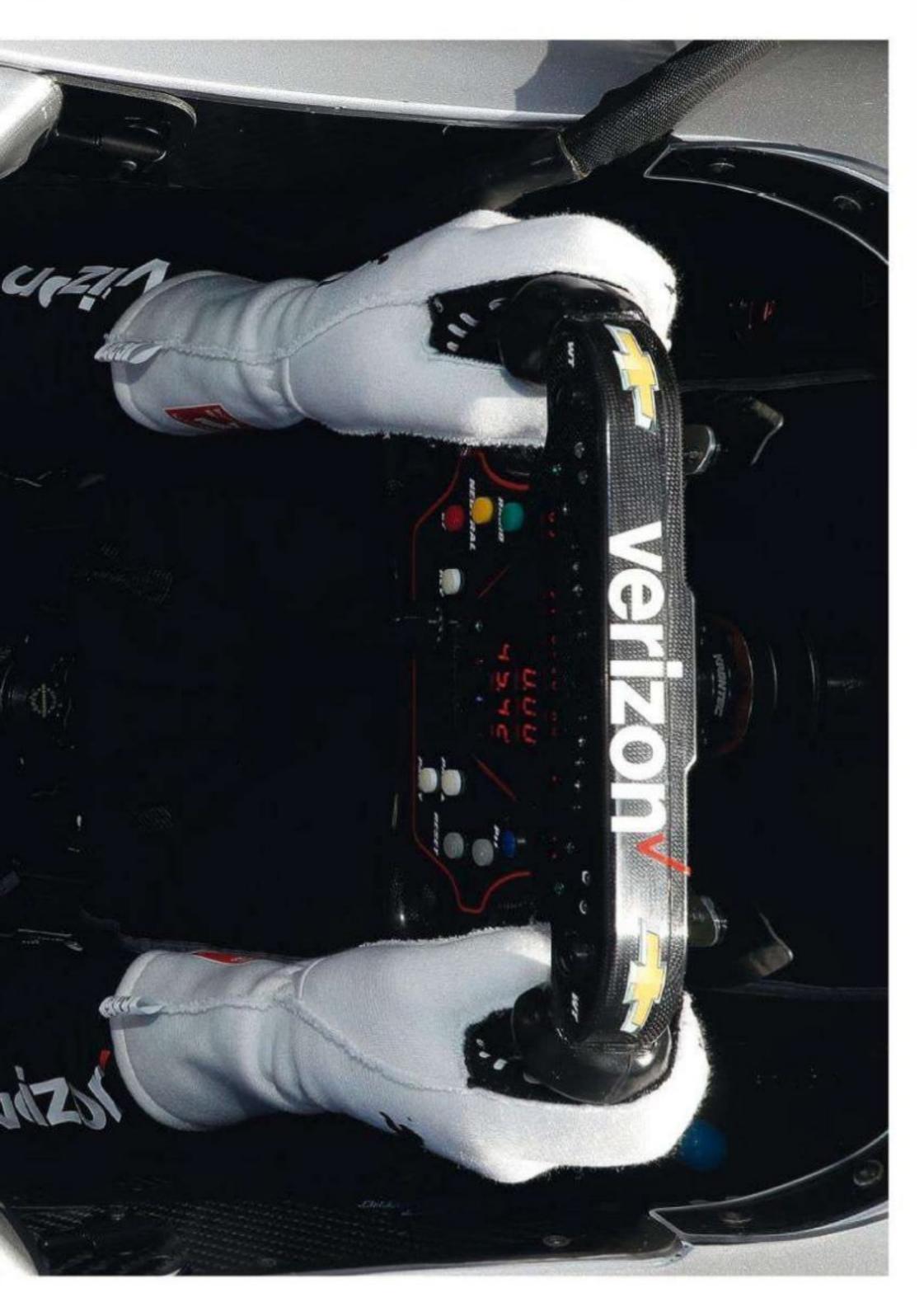
Perhaps all will be well in the end. Perhaps more track time and development and set-up work will bring the MCL32 to life. Perhaps Honda will fix its early problems, turn up its new engine, and finally prove itself to be a serious player in Formula 1's V6 era.

Or perhaps not. In which case the writing could be well and truly on the wall for the McLaren-Honda dream.

JOSEF NE PENSKE'S NEW H



MGARDEN OMEGROWN STAR



He's made a splash in IndyCar as a young charger in a small team. But can he step up to the plate with the legendary squad?

By David Malsher, IndyCar Correspondent

y @DavidMalsher

et's put it out there straight away: there is no way that
Josef Newgarden won't be a success at Team Penske. The debate is only about degree.

He only needs to look around him at his new team-mates or through the Penske annals, to realise that if he's basically quick (and Newgarden certainly is) and applies himself (which he definitely will) he's going to win a bunch of races.

There's a small chance that he may be another Ryan Briscoe and earn seven wins - eight if you include his non-championship triumph - over a five-year period and fumble his one true title challenge. But few would expect him to fall into that number-one-and-a-half role that in Briscoe's case was more down to being outpsyched by Will Power's speed than any fundamental lack of talent. Everything we've seen so far, while not conclusive until he has a fulltime team-mate (or three), suggests that Newgarden is the real deal and is ready to trade racing punches as well as data with three-time Indy 500 winner Helio Castroneves and 2014 and '16 IndyCar Series champions Power and Simon Pagenaud.

It's a notion that hasn't escaped Power, who recently said that a Penske 1-2-3-4 in the championship is a distinct possibility in 2017.

"If you look at the drivers, Simon will be as strong as ever," said Power. "He's the >>

INDYCAR/PREVIEW



benchmark for everyone going into this season. Helio is always a threat on any type of track we run on — still really quick. And Josef is definitely going to have a shot at the title. The way I look at it, he was a contender for most of 2016 even before he joined Penske, so it's logical he's going to be even stronger now he's with us."

The naysayers can and do point to Pagenaud's first season with Penske in 2015 as a reason to not expect too much too soon from Newgarden. But the Frenchman's year was only a disaster

statistically: from mid-season he was firing on all cylinders, and only misfortune kept him outside the top 10 in the points race.

Anyway, the comparison is misleading.

Pagenaud joined a brand new fourth arm of
Team Penske's IndyCar operation and it takes
time for a team of people to be a sum of their
talents. Newgarden has no such worries: he's a
plug-in replacement for Juan Pablo Montoya in
the #2 Penske machine and thus acquires a slick
crew, headed by race engineer Brian Campe, who

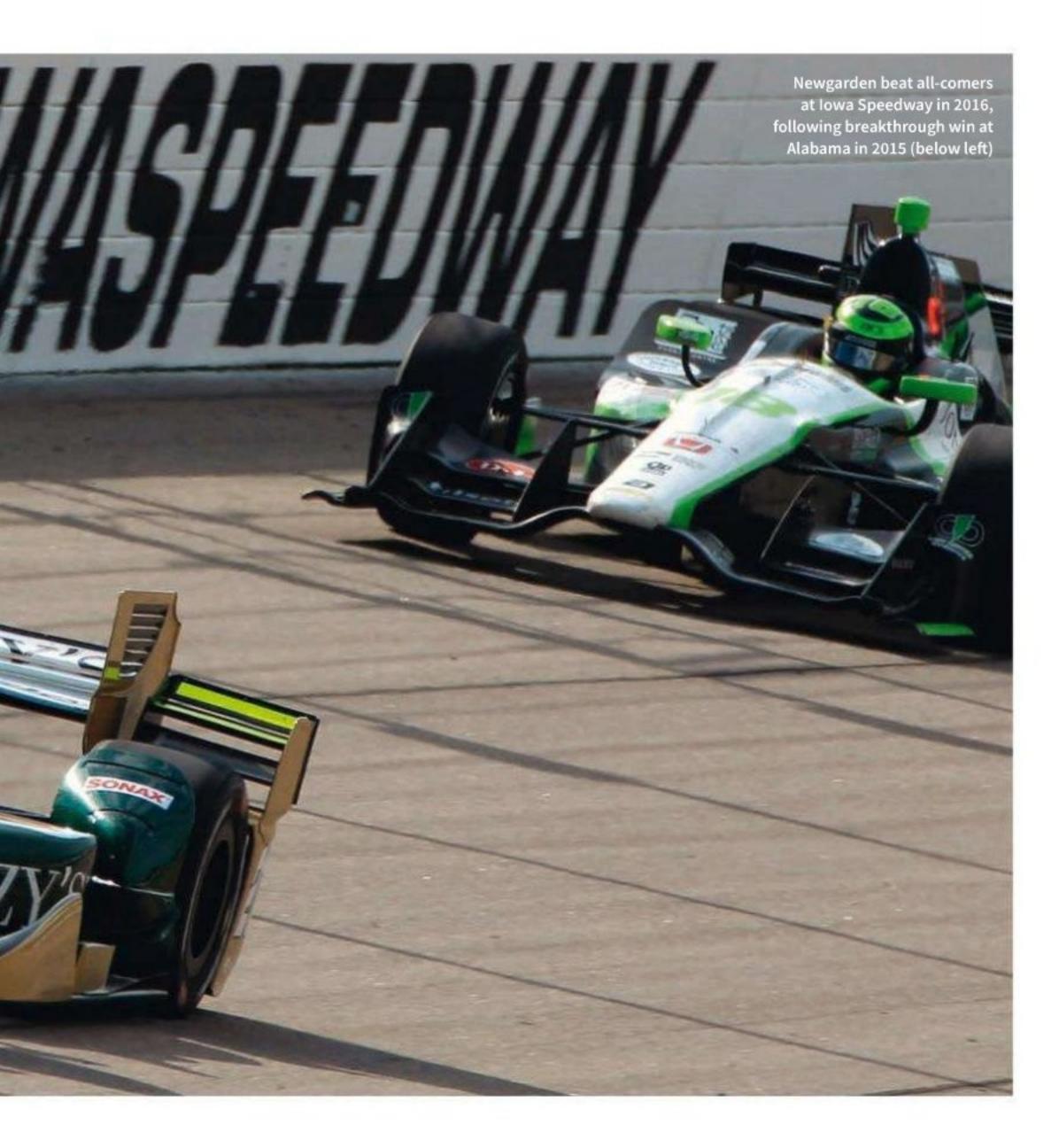
in 2015 guided JPM to an Indy 500 win and damn-near a championship.

Even team president Tim Cindric has switched from Power's car to become strategist for Newgarden. It seems no stones have been left unturned by Penske to ease Newgarden's transition to the team.

That's not to suggest it will be easy. At a very basic level, he has to consider how he will behave both in and out of the car — always a question mark when a driver first gets his Big Chance. Will he drive with the calculated insouciance of a Montoya, the cocky aggression of a Max Verstappen, the axe-to-the-neck desperation of a Paul Tracy, or the humility and willingness to conform exemplified by Rick Mears or Bobby Rahal?

And then there's the practicalities to consider, the actual extracting of speed from the car. Spec though the current breed of IndyCar is, different teams apply different set-up methodologies. Newgarden remarked on that following his first test with Penske last October at Road America; and, five months on, he still notices the difference between Penske's approach and that taken by his previous employers (deep breath): Sarah Fisher Hartman Racing, which merged with Ed Carpenter's team to form CFH Racing, which morphed





into Ed Carpenter Racing.

"To a small degree there is a difference in set-up philosophy," he says. "After five years with the DW12 [spec chassis] — I started when the DW12 was introduced — I know everything everyone else knows about it with regard to rollcentres, springs and some of the more commonly changed items like that. But philosophically there are differences between what we did at ECR and what we do at Penske.

"It's not so drastic that I can't drive the Penske car the way it is, but it does have a slightly different attitude because of that different method of fine-tuning. But obviously Penske won 10 races last year, so they're not having an issue with it!

"The good news is that my driving style will probably suit a lot of what Simon and Will do, so it's fairly easy to get on page with the others. We're all a little bit different — Will's very fast with his hands, Simon's very sensitive with the pedals — but I think in the end we all want the car to be very much the same way."

Newgarden suggests that a bigger change has been in transitioning to a new race engineer, after developing a near-telepathic relationship with Jeremy Milless, who has also left ECR this year, transferring to work with Alexander Rossi at Andretti-Herta Autosport. "Working with Brian has forced me to be more concise and to the point about what I want from the car," says Newgarden. "Over five years with Jeremy, I developed a relationship to where I stopped needing to relay certain bits of information, because we knew each other so well. In a new relationship, I'm having to relearn how to describe what's going on and what I need the car to do.

"Funny thing is, I'd already recognised that I needed to get better at giving feedback, but this change has actually *forced* me to be quicker and more efficient at delivering what a race engineer needs to know. And Brian is very open to suggestions, too. He listens to how I think we can tweak a set-up to help the tyres last longer over a stint, or to how we might have reacted to any issue at ECR.

"In fact, I've gotta say the team as a whole has been encouraging me to do what has worked for me in the past. I thought it would be the other way around, and I came into the team expecting to just kinda mould myself to Penske, and do as they do. But instead they've listened to what I've done before, told me what they've done, and then together we've weighed up the options."

So far, so good it seems, and that's a relief to the many who've been keen for Newgarden to get this chance after a five-year audition. As Indy

TEAM BY TEAM

TEAM PENSKE



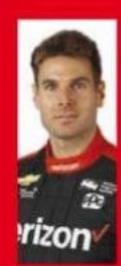
SIMON
PAGENAUD F
AGE 32
CAR NUMBER 1
STARTS 101
WINS 9
DEBUT 2007
BEST SEASON
Champion (2016)



JOSEF
NEWGARDEN USA
AGE 26
CAR NUMBER 2
STARTS 83
WINS 3
DEBUT 2012
BEST SEASON
4th (2016)



HELIO CASTRONEVES BR AGE 41 CAR NUMBER 3 STARTS 328 WINS 29 DEBUT 1998 BEST SEASON 2nd (2002, 2008, 2013, 2014)



WILL
POWER AUS
AGE 36
CAR NUMBER 12
STARTS 172
WINS 30
DEBUT 2005
BEST SEASON
Champion (2014)

AJ FOYT ENTERPRISES



CONOR
DALY USA
AGE 25
CAR NUMBER 4
STARTS 22
BEST FINISH 2nd
DEBUT 2013
BEST SEASON
18th (2016)



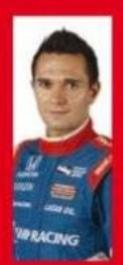
CARLOS
MUNOZ CO
AGE 25
CAR NUMBER 14
STARTS 53
WINS 1
DEBUT 2013
BEST SEASON
8th (2014)

TEAM BY TEAM

SCHMIDT PETERSON MOTORSPORTS



JAMES
HINCHCLIFFE CDN
AGE 30
CAR NUMBER 5
STARTS 90
WINS 4
DEBUT 2011
BEST SEASON
8th (2012, 2013)



MIKHAIL ALESHIN RUS AGE 29 CAR NUMBER 7 STARTS 34 BEST FINISH 2nd DEBUT 2014 BEST SEASON 15th (2016)

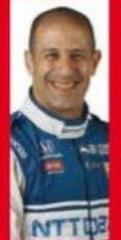
CHIP GANASSI RACING



MAX
CHILTON GB
AGE 25
CAR NUMBER 8
STARTS 16
BEST FINISH 7th
DEBUT 2016
BEST SEASON
19th (2016)



SCOTT DIXON NZ AGE 36 CAR NUMBER 9 STARTS 271 WINS 40 DEBUT 2001 BEST SEASON Champion (2003, 2008, 2013, 2015)



TONY
KANAAN BR
AGE 42
CAR NUMBER 10
STARTS 327
WINS 17
DEBUT 1998
BEST SEASON
Champion (2004)



CHARLIE KIMBALL USA AGE 32 CAR NUMBER 83 STARTS 101 WINS 1 DEBUT 2011 BEST SEASON 9th (2013, 2016) Lights champion in 2011, he fully deserved to graduate to IndyCar in '12, and his immediate form with Sarah Fisher Hartman Racing was as impressive as his results weren't. But he was given a bye: the team had never before been full-time, it was hardly overburdened with funds, and Newgarden was a rookie in a one-car squad. Sure, graduating to IndyCar at the same time as the Dallara DW12 could be construed as a good thing — he knew as much and as little about the car as any of his rivals. But unlike the majority of them, he had no reference points for how a good or bad an IndyCar felt, and he had noone to ask, no-one with whom to exchange data.

It took until 2015, at CFH Racing, for Newgarden to acquire a team-mate and even then it was a different one according to whether the race was on a road/street course (Luca Filippi) or oval (team owner Carpenter). Having suffered a couple of excruciating near-misses the previous season, Newgarden finally scored the first two wins of his IndyCar career, blew away Filippi and finished seventh in the championship. Last year, there was only one more win but car #21 was a factor almost everywhere - and, despite not being allowed to participate in the restarted Texas race (in which he had been eliminated and injured by a shunt in which he was blameless), Newgarden took fourth in the points table.

It's thus easy to understand why Will Power expects his newest team-mate to be a title contender this year. Easy, too, to appreciate why, ever since his deal with Penske became public, at least a quarter of the media's questions for Josef have been about the burden of expectation.

It exists — it has to — but he bears it lightly. At 26, he's the same cheery, amusing and eloquent kid he was nine years ago when he won the Team USA Scholarship, took victory in the Walter Hayes Trophy at Silverstone and stayed on in the UK in 2009 to score nine wins in the Formula Ford championship. The curious failure of his GP3 career aside, it has been an upward trajectory for Newgarden ever since and his



popularity among the IndyCar faithful has been locked in step with his increasing profile. Even fans who are ambivalent about Team Penske admit they will now wave a (small) flag for the homegrown talent in the #2 car.

There's one question about IndyCar's golden child that remains unanswered, however. He's used to being central to a team; sharing data with his few team-mates hasn't been an issue,





"I was actually amazed at the environment between the drivers and engineers – completely open"

Josef Newgarden

because he's had the (fully justified) selfconfidence of knowing he'll still probably end up quicker. At Penske, however, while he'll surely benefit from digesting data from three of the best IndyCar racers around, he must give away his own secrets to team-mates who are capable of using it to improve themselves and possibly beat him. Can he deal with that?

"Good question: let's say I haven't struggled with it yet! But seriously, if I make them better at a certain race track then that's good for the team, and if they make me better at another race track then that's good for me, so I think it will balance out. Honestly, it's like everyone says — Team Penske is truly a team. I was actually amazed at the environment between the drivers and the engineers — completely open about what they're doing, why they're doing it and why it does or doesn't work for them."

Again, all sounds happy and bright. But in this instance, only time and circumstance will reveal whether congeniality can remain intact should the championship fight again filter down to a purely Penske in-house affair. There is a lot of ambition and ego involved in each car.

Sooner than that, however, will be a major

challenge to Newgarden's fortitude — his first Indy 500 for the track's most successful team owner. Josef has always been quick at IMS and has got measurably better, culminating in last year's third place. While so much is in the lap of the gods, especially at the Speedway, it's not too simplistic to expect a Newgarden/Penske combo to be a strong victory contender. Which is why he will grudgingly admit that, in this case, there is indeed some apprehension...

"Everyone has been asking if there's more pressure to perform at Penske," he says, "and I've been saying 'No', because I honestly feel that whichever team you're with, you're expected to win and you expect the best from yourself too. But... yeah, it's hard not to feel that extra magnitude of being with Penske at Indy — the team's won 16 of them and they put everything into it. Roger wants to win the championship but if he could win just one race, it's of course going to be Indy.

"I'm pleased that I'm coming to Penske with my best result at Indy being my most recent one. Does that mean that I'll be right up there from the word go come the Month of May? Who knows? What I do know is that the more

RAHAL LETTERMAN LANIGAN RACING



GRAHAM
RAHAL USA
AGE 28
CAR NUMBER 15
STARTS 162
WINS 4
DEBUT 2007
BEST SEASON
4th (2015)

DALE COYNE RACING



SEBASTIEN
BOURDAIS F
AGE 38
CAR NUMBER 18
STARTS 163
WINS 35
DEBUT 2003
BEST SEASON
Champion (2004, 2005, 2006, 2007)



ED
JONES UAE
AGE 22
CAR NUMBER 19
STARTS 0
BEST FINISH N/A
DEBUT 2017
BEST SEASON
N/A

TEAM BY TEAM

ED CARPENTER RACING



SPENCER PIGOT USA AGE 23 **CAR NUMBER** 20 STARTS 10 **BEST FINISH** 7th **DEBUT 2016 BEST SEASON** 21st (2016)



HILDEBRAND USA AGE 29 **CAR NUMBER 21** STARTS 47 **BEST FINISH 2nd DEBUT 2010 BEST SEASON** 11th (2012)

ANDRETTI AUTOSPORT



TAKUMA SATO **AGE** 40 **CAR NUMBER** 26 STARTS 119 WINS 1 **DEBUT** 2010 **BEST SEASON** 13th (2011)

ANDRETTI USA



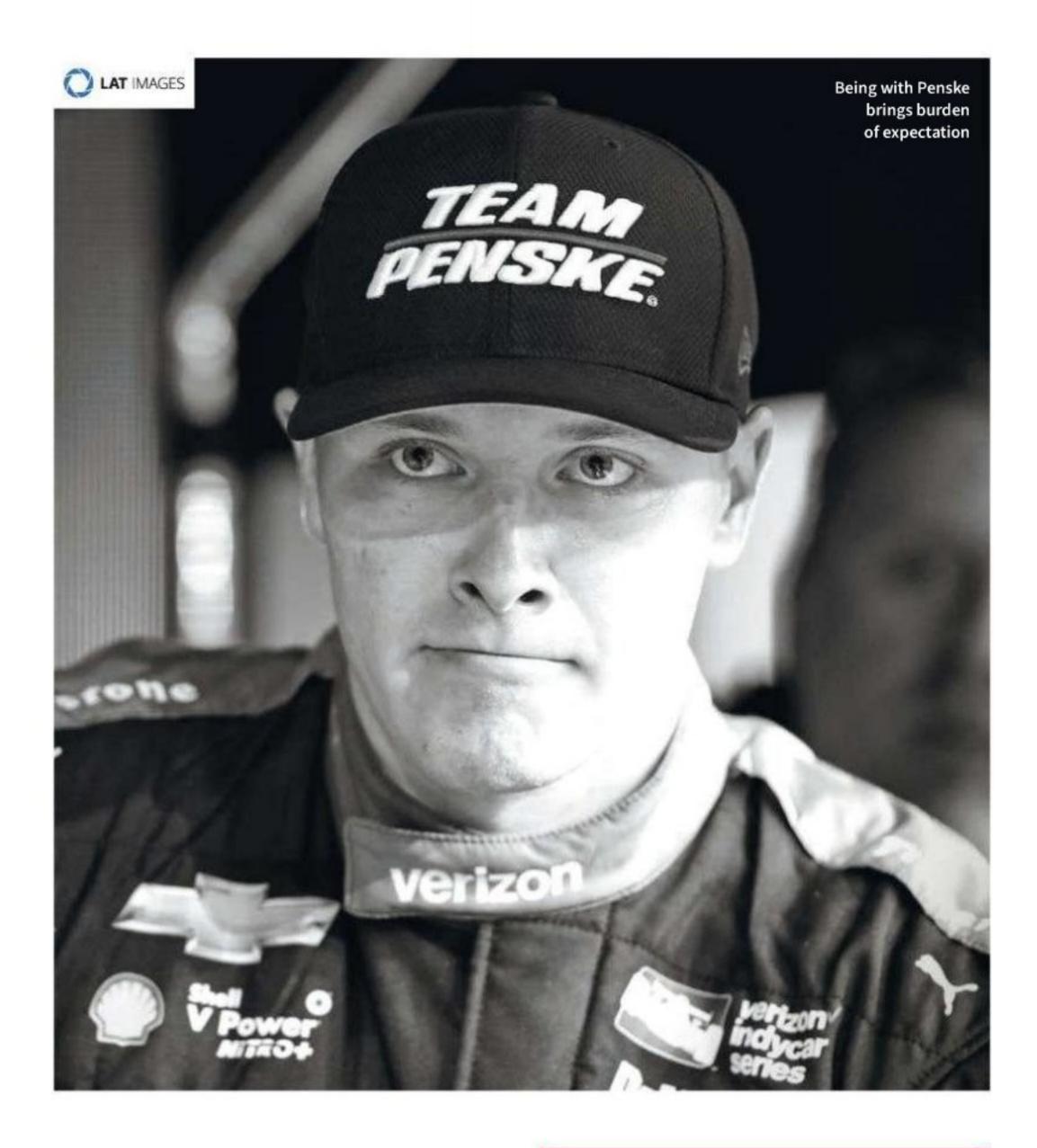
AGE 29 **CAR NUMBER 27** STARTS 184 WINS 2 **DEBUT 2006 BEST SEASON** ihhareaa 5th (2013)



RYAN **HUNTER-REAY USA AGE** 36 **CAR NUMBER 28** STARTS 202 **WINS 16 DEBUT 2003 BEST SEASON** Champion (2012)



ALEXANDER ROSSI USA **AGE** 25 **CAR NUMBER** 98 STARTS 16 WINS 1 **DEBUT 2016 BEST SEASON** 11th (2016)



times you put yourself in a position to win, the more likely it is to materialise. That's just logic."

So what's his logic on the balance of power between teams now that he's had an extensive inside look at the prime squad of the moment? Will static rules on aero and only minor tweaks to engines result in Penske maintaining its advantage, or is that the perfect set of circumstances for the opposition to catch up?

"Well, let's say first of all that I never thought that qualifying or even the race results last year told the whole story," he replies immediately. "This isn't like F1, with one team leaving the others in the dust. Even on road and street courses, where Honda were supposed to struggle, a team like Rahal's [Rahal Letterman Lanigan Racing] proved that it could fight for wins. Honda's main issue has been not having strength in numbers for the weekends when one of its top teams is struggling. Now with Ganassi coming into their mix [at Honda], I think the picture could change, so it's best for us to stay open-minded about it.

"All we can do is focus on what we've got -agreat team with good set-ups, good drivers, good pitcrews, and Chevrolet ready to give us another great product, like they always do."

Tougher though the opposition may become, Newgarden should still shine. He lacks seemingly nothing in 2017; it's time to bring the magic. &

CALENDAR

DATE	EVENT
March 12	St Petersburg
April9	Long Beach
April23	Barber Motorsports Park
April29	Phoenix
May13	Indianapolis
May 28	Indianapolis 500
June 3	Detroit Belle Isle
June 4	Detroit Belle Isle
June 10	Texas Motor Speedway
June 25	Road America
July9	Iowa Speedway
July 16	Toronto
July 30	Mid-Ohio
August 20	Pocono
August 26	Gateway
September 3	WatkinsGlen
September 17	Sonoma



Chip's bargaining could bring success to Honda

CHIP GANASSI HAS ALWAYS marched to the beat of his own drum and has so often been proved right. Two years after acquiring the Pat Patrick team, he caught the Ford wave and switched from Chevrolet in 1992.

Then he became an instigator; while his rivals went the proven Lola route, for '94 he lured Reynard into Indycars – and won first time out. Two years later he switched Fords for Hondas, ditched Goodyear for Firestone and took the

next four Indycar championships.

As the opposition started following the same path, he moved on again, this time to a Lola-Toyota combo. That probably cost his star driver Juan Pablo Montoya a second consecutive crown, but, with the team switching from CART Indycars to the Indy Racing League, he had a strong normally aspirated engine that enabled Scott Dixon to win the title in 2003.

Fast forward to 2013, and

two seasons after IndyCar had introduced the 2.2-litre V6 turbo engine formula, and in the midst of Dixon winning that year's title, Ganassi announced he was switching to Chevrolet for '14. Three years and a championship later, he's heading back whence he came.

The difference is that Honda has been proven to have the lesser of the manufacturer aero kits for road/street/short-oval courses. But Chip is looking ahead to 2018, when IndyCar reintroduces a spec aerokit. In the meantime Ganassi's prospects for this year are strong, despite manufacturers being unable to develop their aero kits and only change minor components in their engines.

At Spring Training in
Phoenix, Rahal Letterman
Lanigan Racing's Graham
Rahal remarked: "[Ganassi]
are going to be damn good.
They're parked next to us
in pitlane here, and we're

seeing aero configurations on their cars that we've never seen on a Honda before. We were sitting there saying, 'Jeez, what have they figured out that we haven't over the last couple years?'"

Two weeks later at Sebring, Ganassi finished 1-2-3-4 on the road course. It's only testing, and they were qualifying sims, but there's a reason that Chip Ganassi Racing is the most successful Indycar team of the past quarter century.

An American legend's greatest year

Dan Gurney is rightly regarded as one of motorsport's all-round greats, with scores of wins to his name in a variety of machinery. No season demonstrated this better than his incredible 1967 campaign

By Kevin Turner, Editor

У @KRT917

coring victories in the Le Mans 24 Hours,
Belgian Grand Prix, Indycar and a toplevel touring-car series make for a pretty
impressive career CV. But to achieve all
that in one season is truly remarkable.

Fifty years ago, Dan Gurney had just started a campaign that would include all of the above successes, some of which he even took with his own team. It was surely

the finest season for one of American racing's all-time greats.

"It could very well have been my best year," reflects the humble 85-year-old. "I've never looked at it with that question in mind."

Gurney was already an established top-liner when 1967 began, having taken the first Formula 1 world championship race victories for both Porsche ('62) and Brabham ('64). He'd also won the '59 Sebring 12 Hours with Ferrari and put in a starring performance at the '60 Nurburgring 1000Km alongside Stirling Moss.

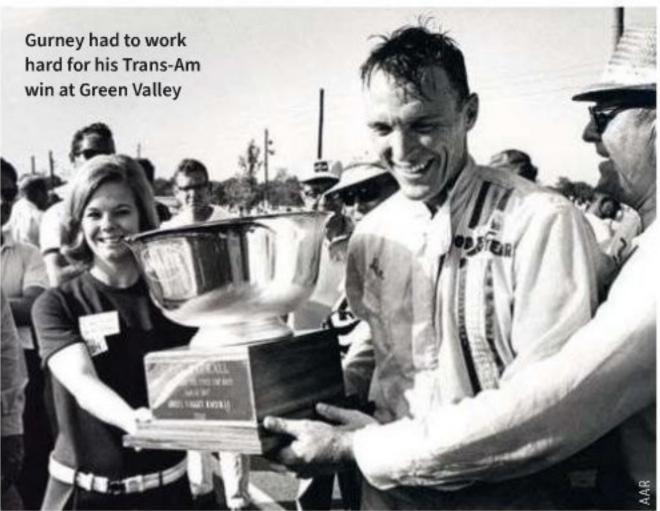
His 1967 season started early — on January 2 with the South African Grand Prix — but not successfully. Suspension failure put his Anglo American Racers Eagle out, setting the tone for the early weeks of the year. Engine failure ended his four-year domination of NASCAR's visit to Riverside, while a troubled run at the Daytona 24 Hours for Ford turned his pole position into a lowly seventh (despite driving two cars).

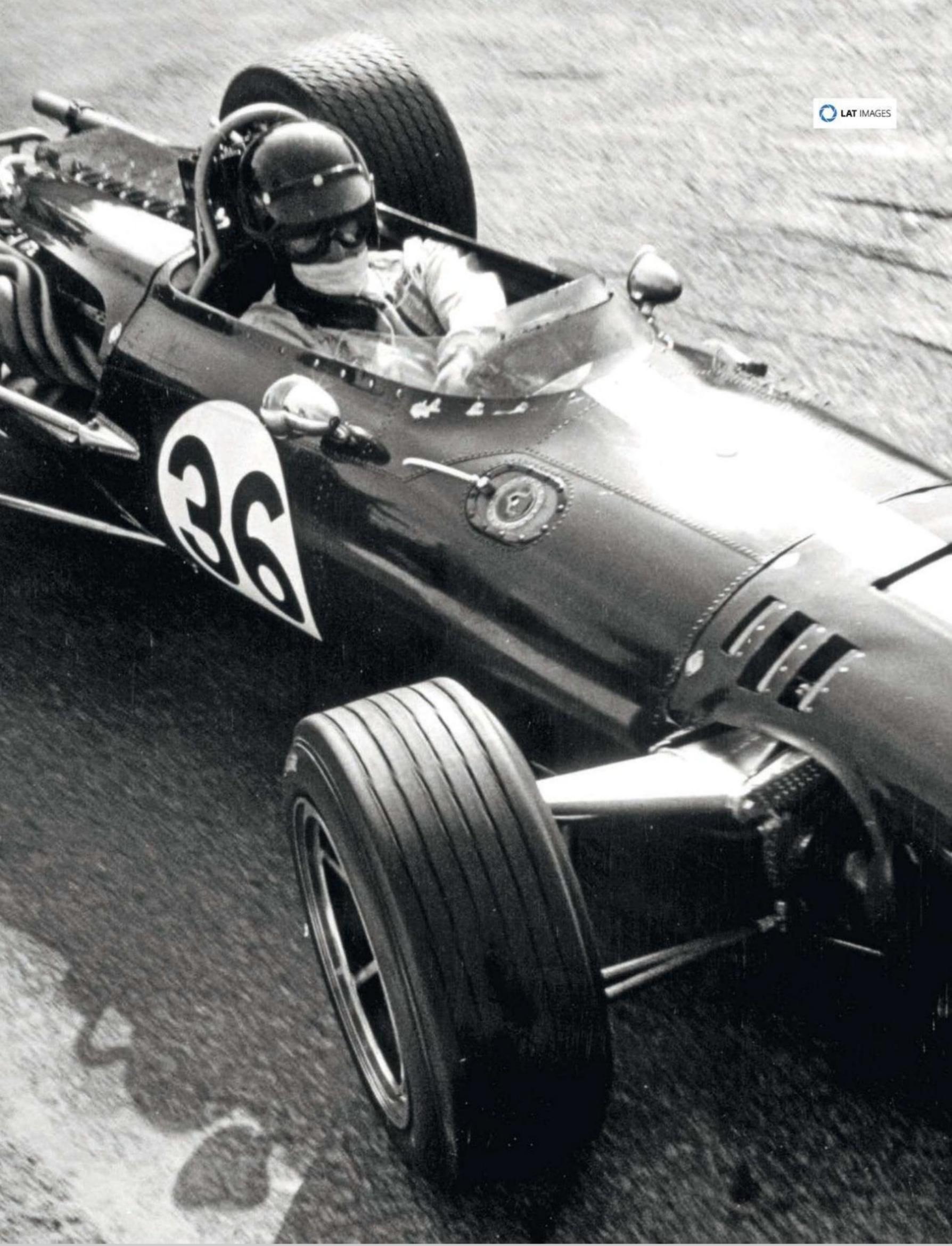
But the start of the European season was a turning point. The Eagle now had the Aubrey Woods-designed Weslake V12 engine installed once more instead of the Climax unit used in South Africa, and AAR entered two T1Gs for the Race of Champions at Brands Hatch. Although a non-championship F1 event, the contest attracted an impressive entry, including two Ferraris, reigning world champion Jack Brabham and the Honda of 1964 title winner John Surtees.

"Even in non-championship races, if you were up against fully fledged factory cars you still drove as hard as you could," says Gurney, who beat Surtees in heat one, with AAR teammate Richie Ginther third. Gurney then led a fine Eagle onetwo in the second and, although Ginther hit late suspension trouble in the final, Gurney narrowly defeated Lorenzo Bandini's Ferrari to complete his domination of the weekend.

"Brands was a great track — I loved watching there and I loved racing there," says Gurney, who then took his first North American success of the year the following month... >>>









Trans-Am had been gathering momentum, attracting manufacturers to the tin-top road-course series. Gurney drove alongside Parnelli Jones, among others, in the Mercury Cougar team and scored the car's first victory at Green Valley in April.

Soon, though, the gremlins struck again. At the Monaco GP Gurney qualified seventh, then shot up to third in four laps before his fuel-pump drive failed. At Zandvoort for the Dutch GP he qualified second to the new Cosworth DFV-powered Lotus 49 of Graham Hill — and half a second clear of the rest — with a revised car. "Extensive use of titanium and clever weight-saving produced a new Eagle some 100lb lighter than the car which won at Brands Hatch," Autosport reported, but the result was the same as Monaco. This time fuel-injection problems downed the Eagle early on.

Between those two GPs, Gurney had again underlined his adaptability in the Indianapolis 500. Despite not focusing on Indycars, he qualified his Eagle-Ford second, beaten only by reigning double USAC champion Mario Andretti. In a race dominated by Jones's Granatelli STP Turbine, Gurney often headed the piston-engined brigade — which could have put him in contention for victory after the flying orange machine hit trouble late on — before a long pitstop dropped him down the order. Engine issues ultimately forced him out anyway.

Fortunately, the next two events would make Gurney's season. The Le Mans rivalry between Ford and Ferrari had stepped up a notch since the American firm's victory in the 24 Hours the year before. Ferrari had responded with the superb 330 P4 and dealt Ford a blow on home ground with a 1-2-3 at Daytona.

Ford's 1967 assault on the race was thus immense, with a septet of seven-litre V8s (three MkIIBs and four MkIVs) starting against three P4s. On paper the MkIV — one of which Gurney shared with Indy 500 winner and Le Mans rookie AJ Foyt — should have been the thing to have. It had more muscle than the four-litre Ferraris and a lighter, more sophisticated chassis than the older MkIIs, but Gurney isn't so sure.

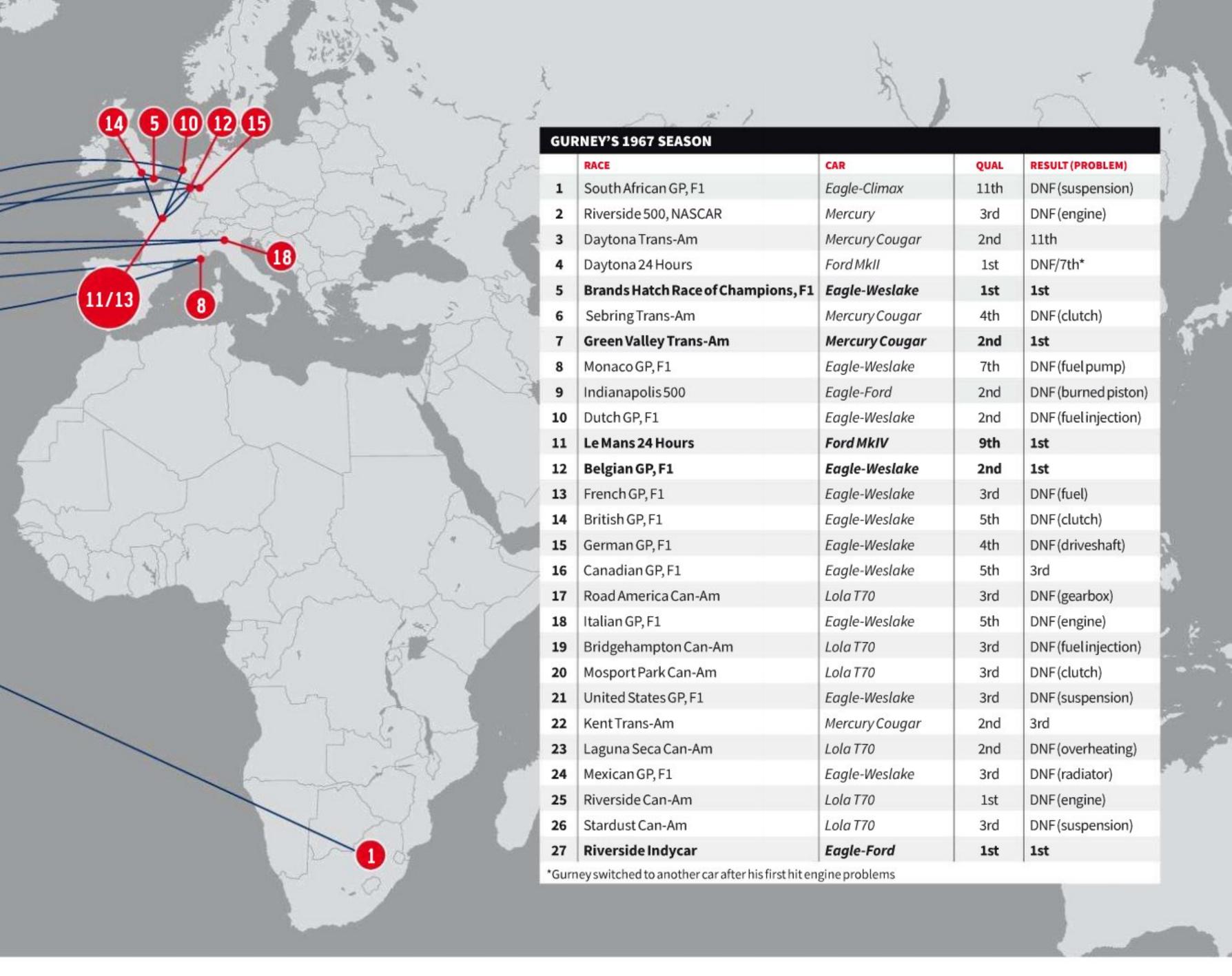
"It was one-twentieth of one per cent better!" he says. "It was an enjoyable car to drive, but I think the 1966 car [the MkII, which had scored a 1-2-3] was capable of winning too."

Gurney's theory is supported by the fact that Ronnie Bucknum led the early stages in one of the MkIIBs, but Gurney/ Foyt still topped the order after two hours. Although up at the front throughout, Gurney insists he and Foyt had a gameplan.

Having been fast but unlucky before — he'd set pole and fastest lap in 1966 — Gurney took a more conservative approach. Even when Mike Parkes in the second-placed Ferrari tried to cajole him into a dice when the Ford was several laps clear, Gurney stood firm, at one stage pulling off the circuit to stay out of harm's way.

"The nature of the race has changed a great deal," reckons Gurney. "Now it's like qualifying, but you couldn't do that with those cars. They had good brakes, but if you ran 10 laps as hard as you could they'd be total junk. It was still a big car.

"I had learned from [former Le Mans racer and team boss]
Briggs Cunningham, who was always ahead of me at the
end of the race! I mentioned that to AJ — I'm not sure he
believed me at first — so we just never ran it that hard."



About to start a trend by spraying the champagne after winning Le Mans



RETRO/DAN GURNEY'S 1967

That was just as well given Ford's various calamities, which included losing three cars in one accident in the early hours of Sunday morning. As dawn broke, only Gurney/Foyt stood between Ferrari and victory. But there were no late scares, aside from some rain, and Ford took its second Le Mans success at record speed. Gurney then started a now familiar tradition by spraying the victory champagne.

A week after winning endurance racing's greatest event, Gurney finally got some F1 luck at one of the all-time classic grand prix venues.

Nobody could live with Jim Clark's Lotus in practice at Spa, his pole time being an incredible 3.1s faster than the next man. But Gurney was that man, putting himself between the 49s of Clark and Hill, the Eagle itself three seconds clear of the next best non-Lotus after nudging 200mph.

Gurney got too much wheelspin at the start and was eighth out of Eau Rouge, but was challenging Jackie Stewart's BRM for second when runaway leader Clark pitted with a spark-plug problem. Although he had a brief stop of his own to complain about fluctuating fuel pressure, Gurney soon closed back in on Stewart, who was suffering gearbox issues. The Eagle broke the lap record before blowing past the BRM with a quarter of the race to go.

Gurney then pulled clear to win the Belgian GP by more than a minute. It was AAR's greatest success in F1 and, with a winning speed of nearly 146mph, it was also the fastest race then run on a European road circuit.

"Belgium was a much bigger deal than Brands," says Gurney. "It was notoriously fast and difficult.

"Our F1 effort was a small, close-knit group and everyone had a 'can-do' attitude."

Gurney's squad could, perhaps should, have added an F1 win on the greatest circuit in the world two months later at the Nurburgring. He hung on to German GP polesitter Clark (driving cautiously with a then-unidentified slow puncture) in the opening laps, then moved to the front when the Lotus slowed with damaged suspension. He was 45s clear of Denny Hulme's Brabham when the Eagle's driveshaft let him down.

Incredibly, apart from his Spa success, Gurney's only other world championship finish that season came with third in Canada. Not including the Climax-powered outing in South Africa, his average qualifying position was 3.9 (world

"The Eagle was quite capable of staying with a really good DFV, but it turned into a washing machine"

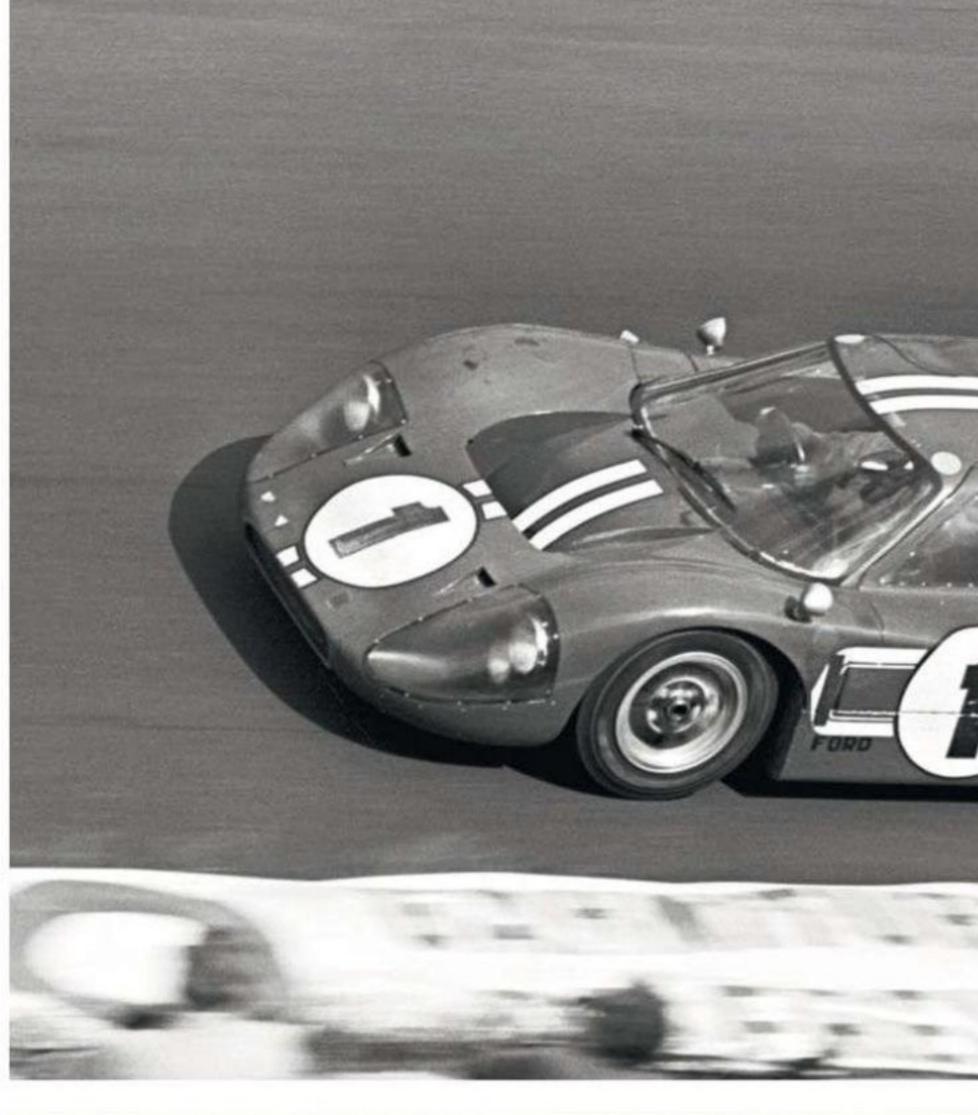
champion Hulme's was 5.5) and he was often the new Lotus 49's closest rival, but AAR could never get on top of reliability. Given the early fragility of Lotus boss Colin Chapman's revolutionary design, it was an opportunity missed.

"The car was quite capable of staying with a really good DFV, but it turned into a washing machine," says Gurney. "It was the oil [system] and meant we lost a certain percentage of power after just a couple of laps. In terms of plain power, when it wasn't being a washing machine, it was fantastic!

"The engine had quite a bit more potential than we allowed it to have. We just didn't quite have the expertise. The scavenger system wasn't right and it was a big thing to change."

"[Former Lotus designer] Len Terry did a terrific job on the car — it was an improved Lotus in many ways — and we built a lot of Indycars the same way."

There was still time for one more success that year.



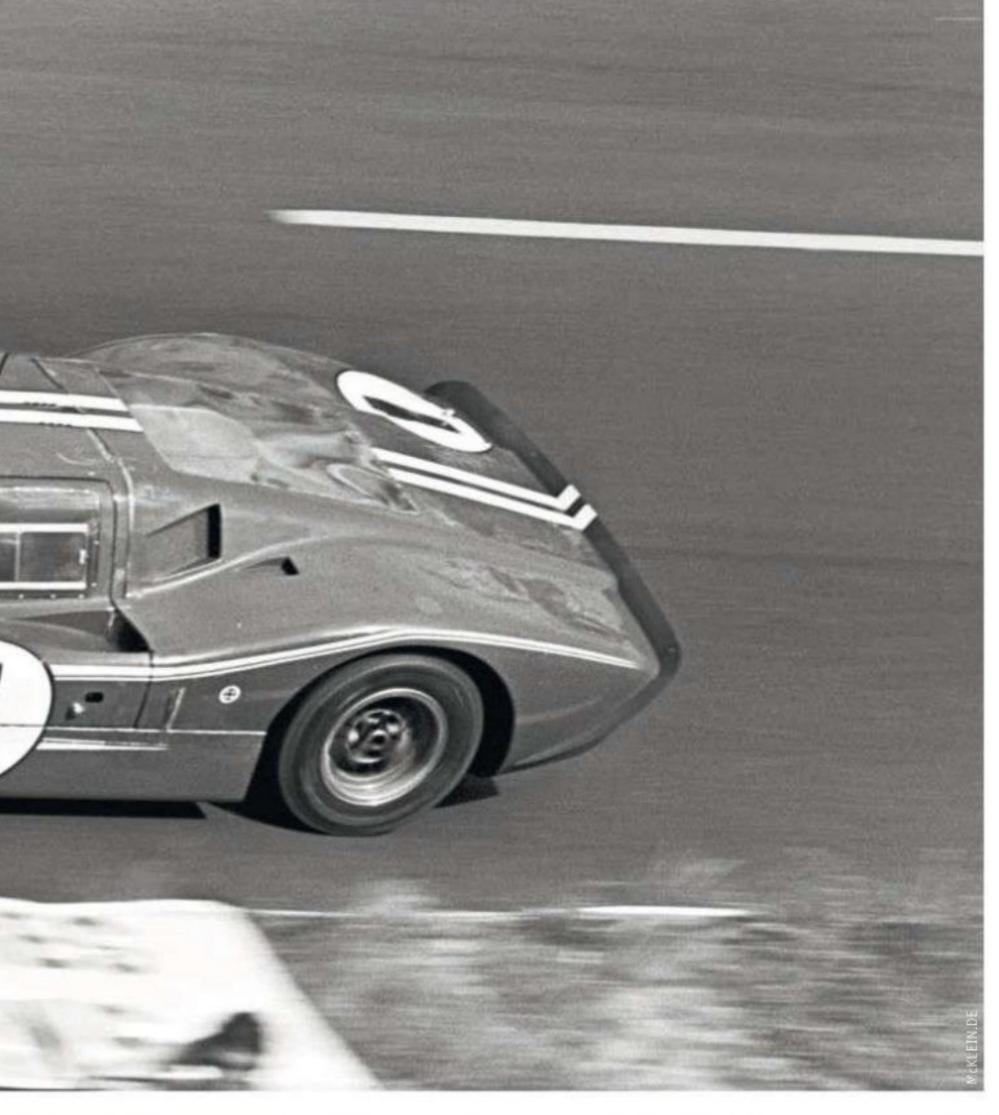


Gurney entered his Eagle-Ford 67 for the Indycar finale at his beloved Riverside circuit in California — scene of the Eagle's first test — at the end of November. Against title contenders Foyt, Andretti and Gordon Johncock, and ex-F1 world champions Clark and Surtees, Gurney took pole.

Gurney and Clark, whose Vollstedt was running with a rudimentary raised rear 'wing' over the exhaust pipes, charged away from the field in the early stages as they battled for the lead. Eventually Gurney ran a little wide and Clark slipped through, only for his Ford engine to break a valve.

Gurney thus looked to be easing to a comfortable victory until a tyre needed changing at his fuel stop and extra time was lost, dropping him to third behind Andretti and Bobby Unser. "Gurney now produced a superb display of just how fast he can drive round Riverside," said Autosport's report. "He was catching Andretti at the rate of 1.5s a lap."

Above: final 1967 win came thanks to a sensational fightback in the Indycar decider at Riverside







Top and above right: Le Mans win was achieved at record speed after Foyt and Gurney came up with a plan Andretti nevertheless seemed out of reach until he ran out of fuel, and Gurney snatched victory from Unser in an exciting climax to the 116-lapper.

Gurney's final 1967 tally stood at five wins from 27 starts and eighth in the F1 world championship, though tellingly he qualified in the top three on 19 occasions. Perhaps more remarkable is that his wins covered the two biggest singleseater series in the world and the Le Mans 24 Hours.

Sadly, he wouldn't get many more chances to impress in F1 in the dramatic and popular Eagles, as funding difficulties struck during 1968. "Then they pulled the plug," recalls Gurney of his support from Goodyear, which had made the project possible. "With Goodyear, certain people wanted the budget we had and they were better connected."

The cars had nevertheless made their mark, and played their part in one of motorsport's greatest seasons of versatility.

OTHER GREAT GURNEY VICTORIES



1960 NURBURGRING 1000KM

The then 29-year-old played a key role alongside Stirling Moss as their American Camoradi-entered Maserati Type 61 defeated Porsche and Ferrari.



1962 FRENCH GP

Porsche's 804 model was a solid Formula 1 performer during 1962 and Gurney took the marque's first – and so far only – world championship success at Rouen.



1963 OULTON PARK BTCC

Gurney joined the British Saloon Car Championship (now BTCC) at Oulton Park and thrashed the field, which included Graham Hill, in an Alan Brown Ford Galaxie.



1964 FRENCH GP

Having come painfully close to winning the Belgian GP, Gurney scored Brabham's first world championship success at Rouen two weeks later in his BT7.



1968 RIVERSIDE NASCAR

Gurney recorded his fifth win in NASCAR's Riverside 500 in six years in a Ford Torino, defeating American legends Mario Andretti, Parnelli Jones and David Pearson.

SUPERCARS/SHANE VAN GISBERGEN





King Giz the Supercars whizz

Is this the beginning of the end of the Craig Lowndes/ Jamie Whincup era? Maybe not, but Shane van Gisbergen is making a bigger mark than ever in Australia

By Andrew van Leeuwen, Motorsport.com Australian Editor

ot since he was a 17-year-old Supercars debutant back in 2007 had Shane van Gisbergen looked quite so awkward in a racing car. It was the first Saturday of last

December, and van Gisbergen's first Supercars title was little more than a formality away. All he had to do was finish fifth in

the first race of the weekend to seal it, and given that he was starting from pole, and hadn't finished lower than fifth since July, it seemed like a no-brainer.

But then something remarkable happened. Van Gisbergen, a man known for never giving an inch, went in to full defence mode for absolutely no reason. He made a slow start, was pushed wide at the chicane and dropped even further down the field, and then earned himself a drivethrough with a clumsy bump on Mark Winterbottom while attempting a half-hearted pass.

Van Gisbergen saved it, of course. Being shunted back to 18th sparked him into life, the Kiwi charging through to finish third and wrap up the championship a day early. But those awkward first few laps still served as a significant wake-up call.

"I'd never been in that position before," he says, looking back on that weird first stint. "I'm usually the one attacking, not defending. It's not how I'd usually drive, and those first 10 laps of the Homebush race it... it wasn't me.

"I approached it the wrong way, because I didn't know how to approach it. I shouldn't have changed anything. The pass I tried to pull on Winterbottom is a pass I'd do any other day of the week and get it done, but I hesitated. I was trying to be conservative, and it didn't come off.

"As soon as I had that incident I was back to normal,
but yeah, next time I'll be much better prepared."

There's little need for 'ifs' and 'buts' when it comes to discussing van Gisbergen's chances of adding to his tally of titles. He's 27, a decade into his Supercars career, brimming with talent, and now all signed up with the best team in the business. Add to that the fact he's got the monkey off his back and won a first title, it seems unrealistic to not see him as a genuine, ongoing threat for the next five years — at the very least.

The shift to Triple Eight Race Engineering has proven to be a pivotal one in van Gisbergen's career. Stepping into the top team, with two of the best drivers Australia has ever produced, was a bold move — but what awaited van Gisbergen in Brisbane was the epitome of a professional multi-car team rather than a lion's den, something he says took him by surprise compared to his time at Stone Brothers Racing.

"Triple Eight now is quite similar to how Stone Brothers was with the three cars, but you work together so much better," he says. "At Stone Brothers we worked together as well, but we were compared against each other to lift each other's game. It was an intra-team fight, which was good — unless you didn't have the best car.

"At Triple Eight we work together a lot. Whenever Craig [Lowndes] or Jamie [Whincup] are ahead of me, everyone, me included, is stoked to see the car going well. It's a very different team environment, and it's great the way it works. Whenever we struggle, the way we group together, and the way you can rely on your team-mates, is pretty cool."

That team-mate relationship was put to the ultimate >>



SUPERCARS/SHANE VAN GISBERGEN



"There are a couple of things left on the bucket list: Le Mans and Nurburgring 24"

test in 2016. The three T8 cars finished first, second and fourth in the standings last year, with the title fight between van Gisbergen and Whincup basically lasting until Bathurst. The two Red Bull Holdens scrapped over the same Tarmac on a number of occasions — Albert Park and Sydney Motorsport Park the standout examples — and they even came to blows on-track at Pukekohe in November.

But there was no Hamilton/Rosberg style blowout. The tin-top aces seem to like each other, as much as their shy natures allow, and van Gisbergen swears the mutual respect is genuine.

"Even after how tough the fight for the championship was last year, right up to Homebush we were still sharing data and working together to make the cars better," he says. "If our cars are out front and we're battling each other, that's a pretty good problem to have. Even when we came together at Pukekohe it was quickly resolved, and away we went."

While van Gisbergen's ability was obvious during his stints with Stone Brothers and Tekno Autosports, the hardware was too hit and miss. The move to Triple Eight has offered him the opportunity to have a frontrunning car week-in, week-out for the first time in his career, and it's been up to him to bring the A-game to match. Consistency became his focus last season,

and it was the key to him winning the title — even if it meant sacrificing speed.

"It was weird because Jamie was the faster driver, particularly at the last five or six rounds of the season," says van Gisbergen. "At the expense of some speed I wanted to be as consistent and mistake-free as possible. I learned a lot. Now I need to do that while being faster.

"At the start of last season there were some mistakes that cost me dearly with points, and then we found a pretty good balance. Now we'll try to get a little bit quicker, but continue not making mistakes."

Heading into last season, few doubted that he would be able to match his high-profile team-mates on-track. The bigger question was whether van Gisbergen, a guy who prefers to keep to himself, would be able to deal with a media and promotion workload fuelled by major backer Red Bull.

"To be honest I was a bit worried about it," he says. "I had it pretty good at Tekno; we did bugger-all media stuff — we were just a race team.

"I was interested to see how it would go, but the way Red Bull does it, it's generally exciting stuff we get to do. Through all of the sponsors and partners, there's a lot of cool stuff. It's always different, and I don't mind doing it when it's fun like that."

He might not mind the media work, but his real passion is driving. When he's at home in New Zealand, it's drifting, quad bikes and remote-control cars. And that love of driving anything he can get his hands on has led to van Gisbergen building an overseas GT3 career that dovetails with his Supercars commitments in Australia.

Last year his focus was on Europe — and he scooped the Blancpain Endurance title as a factory McLaren driver. This year he's switched to Mercedes, and will mostly compete in the US.

"I feel that if I'm out of a car for three or four weeks, I get a

Van Gisbergen celebrates 2016 championship victory in Sydney



The Bathurst 12 Hour shunt that shocked the GT world

a flamboyant, 10-10ths driving style, big crashes are few and far between for Shane van Gisbergen. He tends to have a knack when it comes to being on the limit of not falling on the wrong side of it – at least during races. For a guy who's so spectacular, he's generally a safe pair of hands.

That wasn't the case in the closing stages of this year's Bathurst 12 Hour, though. Chasing down
Supercars team-mate Jamie
Whincup in a Ferrari that
was significantly quicker,
van Gisbergen fired the
Mercedes he was sharing
with Craig Baird and Maro
Engel into the wall.

It didn't cost the trio victory – van Gisbergen was about to be served with a drivethrough for tapping a Porsche off the road anyway – but it certainly cost them second place. "I couldn't remember before then the last time I dropped a car like that in a race, so I was pretty pissed off with myself," says van Gisbergen.

"I spin a lot and go off a lot in practice, because that's the time to do it. In the race, I can't remember having a crash like that all by myself.

"I like to drive on the limit, but that was pretty disappointing. I was very critical with myself about that. I'll never change the way I drive, but, yeah, hopefully that doesn't happen too often."

Even more bizarre
than the crash was when
Engel went on live TV
seconds after being filmed
storming out of the garage
and blasted van Gisbergen
for the last-minute exit
from the race.

The outburst pointed to a simmering tension in the HTP/Scott Taylor Motorsport Mercedes camp.

"I don't know where that came from," is van Gisbergen's cagey response. "If I had a problem like that I would keep it to myself and tell it to them personally, not the way he did it. It was a weird outburst.

"I couldn't care less what he has to say. I was just disappointed with myself and for the team. When you're part of a team and you're the one that let them down, that's the toughest mistake to take."

bit rusty," he says. "It's all driving time. Doing the Daytona 24 and then the Bathurst 12 Hour, one after the other, that's a lot of race miles in preparation for the first Supercars round — because when we get to Adelaide, it's a 250km race. And if you go into that cold-turkey, it's pretty tough.

"For the last couple of years it's been good for me to always be in a car. It's experiencing all different things: different teams, the way engineers work, and the way people work together. And it's also sharing cars with other drivers, and compromising your style, set-up and seating position. It's all part of the learning process. It's made me a better driver."

It's allowing him to check a few items off his bucket list too, and do the travelling he missed out on as a Supercarsbound teenager.

"I never wanted to have a gap year or anything, but getting to race at Monza and Spa, that's something you'd never get to experience if you were a V8 driver your whole life. It's pretty cool. There are a couple of things left on the bucket list: Le Mans and the Nurburgring 24. I just have to wait for the dates to work out."

These little jaunts overseas are all well and good, but van Gisbergen says he's not planning to make a shock full-time move outside of Supercars... unless the upcoming Gen2 era, which will see Holden move to a turbo V6 engine, fails to capture his fancy.

"At the moment I think Supercars is the best series for me. I've tried all these things, but when I come back it's Supercars that I enjoy the most. I love the racing.

"But we have a lot of changes coming up; this year it's the tyres, next year it's the change of engine. As long as the series continues to be exciting and appealing to a driver, I'd love to stay in it. But maybe in five or 10 years I'll want to do something different."







AUSTRALIAN SUPERCARS ADELAIDE (AUS) MARCH 4-5 ROUND 1/14

TRIPLE EIGHT'S SHANE VAN Gisbergen kicked off his Supercars title defence with two victories on the streets of Adelaide, on a weekend when DJR Team Penske cemented its position as an emerging force with a pair of second places for Fabian Coulthard and new signing Scott McLaughlin.

Saturday's race was all about van Gisbergen, even if he only led the final stint. He trailed Coulthard's Ford for the majority of the first stint, Triple Eight then opting to go for a longer fill for van Gisbergen's Red Bull Holden at the first stop. That dropped him back to third behind HSV Racing driver James Courtney for the second stint, but put him well out in front after the second round of stops.

Wanting to see how the newconstruction Dunlops would hold on over a full race distance, van Gisbergen pushed on for the whole third stint, winding up almost 15 seconds clear of Coulthard and Courtney at the finish.

McLaughlin had been in contention for at least a podium as well, but was stung by a mid-race penalty. Thanks to a communication breakdown, he was caught weaving after the safety car lights had gone out during a lap-23 restart, which took him from fifth and right in the mix to the back of the field.

On Sunday, van Gisbergen faced a much sterner challenge, with McLaughlin controlling the first two stints of the race.

With polesitter van Gisbergen having lost out to both Penske Fords at the start, McLaughlin opted to pit early from second - behind team-mate Coulthard to leapfrog into the lead after the first stops. A blinder of a second stint then put McLaughlin the best part of six seconds down the road as the second round of stops shook out, too.

In the end, however, a lack of familiarity with the Penske brake package proved crucial. With van Gisbergen looming in the background, McLaughlin

Reigning champ (97) held off challenges from Courtney (22)

with three laps to go. It sent him wide, and van Gisbergen didn't need to be and Coulthard (12) asked twice, sweeping into the lead. Despite the two wins, van Gisbergen

revealed that he spent the entire meeting battling issues with his new Commodore: "We had some vibrations and stuff like that, so it was a bit of a struggle. The car is still fast, it doesn't cost us any time, it's just uncomfortable knowing that something is up with the car."

locked his rears on the way into Turn 9

McLaughlin, meanwhile, was torn between being impressed with DJR Team Penske's form, and disappointed not to have won on Sunday.

"I'm not confident with the brake package at the moment, I'm still getting used to it," he said on Sunday evening. "I just overstepped the mark. Once you lock the rears, you're done."

High-profile rookie Simona de Silvestro had a tricky start to her career as a full-time Supercars driver. The Swiss finished Saturday's tough 250km test - in searing temperatures - in 20th, on the lead lap. On Sunday, her race was compromised when her Nissan Altima was tapped into a spin by Courtney, which meant she finished down in 23rd. ANDREW VAN LEEUWEN

McLaughlin, Van Giz and Mostert celebrate after race two



RESULTS

Race 1 1 Shane van Gisbergen (Holden Commodore)

78 laps in 1h49m25.8502s; 2 Fabian Coulthard (Ford Falcon FG/X) +14.7120s; 3 James Courtney (Holden); 4 Cameron Waters (Ford); 5 Rick Kelly (Nissan Altima); 6 Jamie Whincup (Holden). Race 2 1 van Gisbergen 78 laps in 1h47m18.8595s; 2 Scott McLaughlin (Ford) +10.1229s; 3 Chaz Mostert (Ford); 4 Courtney; 5 Coulthard; 6 Whincup. Points 1 van Gisbergen 300; 2 Coulthard 249; 3 Courtney 249; 4 Mostert 213; 5 Waters 210; 6 Whincup 204.



Scott wins after Fortec first

EUROFORMULA OPEN WINTER SERIES

PAUL RICARD (F) MARCH4

FORTEC MOTORSPORT'S PAIR OF FORMULA 3 debutants crushed the field at a soaking Paul Ricard, before Formula Renault ace and F3 part-timer Harrison Scott hit back in the reversed-grid race.

German Formula 4 graduate Jannes Fittje put his Fortec machine on pole and pulled out an advantage once the field was released following a safety car start, while Yan Shlom worked his way up from fourth on the grid to second.

Shlom began to close when conditions worsened in the late stages, and a spin for Fittje with a couple of laps to go allowed Italian F4 podium finisher Shlom in front. Nikita Troitskiy made it two Russians in the top three, while

Scott recovered from a spin to beat Thiago Vivacqua to fourth.

Conditions were little better for race two but, gratifyingly, the race started from lights out. Scott (above) instantly opened a lead from third on the grid, as poleman Pedro Cardoso stalled, and the Brit - run by Italian squad RP Motorsport - was never seriously threatened.

Vivacqua held second until the last lap, when Troitskiy slipped past. Fittje comfortably beat Carlin duo Ameya Vaidyanathan and Devlin DeFrancesco to fourth, while Shlom went out on the first lap.

RESULTS

Race 1 1 Yan Shlom 14 laps in 37m14.868s; 2 Jannes Fittje +7.121s; 3 Nikita Troitskiy; 4 Harrison Scott; 5 Thiago Vivacqua; 6 Pedro Cardoso. Race 2 1 Scott 29m56.075s; 2 Troitskiy +4.336s; 3 Vivacqua; 4 Fittje; 5 Ameya Vaidyanathan; 6 Devlin DeFrancesco.

Keselowski's Atlanta steal

NASCAR SPRINT CUP ATLANTA (USA) MARCH 5 ROUND 2/36

KEVIN HARVICK WAS THE CLASS OF THE field at Atlanta but Brad Keselowski came away with the victory after a late-race pit-road speeding penalty cut short Harvick's dominating performance in his Stewart-Haas Racing Ford.

Harvick led 292 of the 325 laps and exited pit road with the lead during a caution with 14 laps remaining, but was sent to the tail end of the longest line on the restart after his penalty.

Kyle Larson inherited the lead and it took just five laps before Keselowski (below) passed him

for his first Cup series victory of the 2017 season. Larson still took second.

Matt Kenseth - who had two speeding penalties himself - rallied to finish third, Kasey Kahne was fourth and Chase Elliott - who was also flagged for speeding once - rounded out the top-five finishers.

Harvick, who leads the series standings after two of 36 races, wound up ninth. He started from pole and relinquished the lead only when pitting — first on a green flag stop on lap 37 and for a second time on lap 267 under yellow when Keselowski exited pit road first but had to return to the pits for loose lug nuts on his left-rear wheel.

Harvick won each of the first two 85-lap stages. JIM UTTER



1 Brad Keselowski (Ford Fusion) 325 laps in 3h33m08s; 2 Kyle Larson (Chevrolet SS) +0.564s; 3 Matt Kenseth (Toyota Camry); 4 Kasey Kahne (Chevy); 5 Chase Elliott (Chevy); 6 Joey Logano (Ford); 7 Kurt Busch (Ford); 8 Martin Truex Jr (Toyota); 9 Kevin Harvick (Ford); 10 Jamie McMurray (Chevy). Points 1 Harvick 90; 2 Kurt Busch 86; 3 Keselowski 84; 4 Elliott 82; 5 Logano 80; 6 Larson 79; 7 Truex 67; 8 Ryan Blaney 63; 9 Kahne 63; 10 Trevor Bayne 58; 11 AJ Allmendinger 50; 12 McMurray 49; 13 Aric Almirola 47; 14 Clint Bowyer 46; 15 Paul Menard 44; 16 Kenseth 41.



IN BRIEF

AUSTRALIAN GT

Tony Bates won the opening round of the Australian GT Championship in Adelaide. The Eggleston Mercedes driver used his short compulsory pitstop times to his advantage all weekend, winning two of the three 40-minute races and finishing third in the other. The other race winner was an Australian GT debutant, Pete Major beating fellow Lamborghini driver Roger Lago.

AUSTRALIAN CARRERA CUP

Supercars outcast and Porsche rookie Andre Heimgartner won the 2017 Carrera Cup Australia season-opener in Adelaide on a countback over David Wall. Heimgartner ended the weekend with two wins and a third, locked on points with Wall, who had a win and two second places. Debutant Jaxon Evans finished an impressive third for the weekend.

AUSTRALIAN DUNLOP SERIES

Paul Dumbrell made a near-perfect start to the Dunlop Super2 Series, the Eggleston Holden driver winning two of the three races in Adelaide. Sunday's finale went to South Australian privateer Todd Hazelwood (Bigmate Holden), who overcame Dumbrell to take an emotional first series win at his home circuit.

NASCAR XFINITY SERIES

Kyle Busch won at Atlanta last Saturday, but his Joe Gibbs Racing Toyota was then found to be too low at post-race scrutineering, meaning the squad cannot use the victory to compete for the owner's title in the NASCAR playoffs. Fellow Sprint Cup ace Brad Keselowski's Team Penske Ford was a close second. Elliott Sadler now leads the championship after taking fifth in his JR Motorsports Chevrolet.

NASCAR TRUCK SERIES

Christopher Bell moved to the head of the standings with victory in Atlanta. The Kyle Busch Motorsports Toyota driver (below) dominated the event, winning all three stages, although he had to hold off Matt Crafton's similar ThorSport machine in a final two-lap dash to the flag. Johnny Sauter and Ben Rhodes are now next in the table after finishing third and fourth respectively.



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Ellinas joins JTR for Carrera Cup assault

JTR WILL FIELD THREE CARS IN its maiden Porsche Carrera Cup GB campaign after signing Formula Renault 3.5 race-winner Tio Ellinas.

The 25-year-old GP3 race-victor, who tested for the Marussia Formula 1 team in 2013, began his car racing career with Nick Tandy's team in British Formula Ford in 2010, finishing fourth in the championship.

"It all began for me with JTR, so when I was invited to test the car [911 GT3 Cup] alongside Nick last November, it was exciting," he said.

"I loved driving the car. It has a lot more weight than I'm used to and not much downforce — it's like racing a Formula Ford again in that respect as all the grip is mechanical. I was close to Nick's times on the test, so we kept talking and this deal happened.

"The competition in the UK is very tough, I remember from before. But I want success and the team will work very hard to win this year, so together hopefully we can be fighting for wins and why not the championship too?"

Porsche factory racer Tandy added: "I've always kept in touch with Tio and followed his career, so when he looked to change to GT racing the Carrera Cup was the perfect option.

"There's a great rookie prize fund [£35,000], meaning Tio can come in and fight for something tangible that can help his career progress. He'll do very well this year."

Ellinas contested two years of GP3 with Manor, winning three races between 2012 and '13, before graduating to GP2 for a half-season the following year. During the 2015 season he drove for Strakka Racing in FR3.5, taking two wins and finishing fourth in the points.

Ellinas joins Dino Zamparelli and Lewis Plato at JTR, making it an all-Pro-class attack for the team.



JTR has been testing since late 2016 ahead of its Carrera Cup GB debut this year • Tom Oliphant has confirmed he will compete in the Carrera Cup again this year, remaining with the title-winning Redline Racing squad. The 2015 Ginetta GT4 Supercup champion finished fourth in the standings last season, but is hoping to challenge for the title.

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BRITISH GT

Robertson to race G55 in British GT

MULTIPLE SPORTSCAR CHAMPION CHARLIE Robertson has joined Ginetta's factory GT₃ attack on this year's British GT Championship.

Scotsman Robertson, 20, will share a Century Motorsport-run G55 GT3 with Texan teenager Parker Chase, who will embark on his first season of British racing after graduating from the US-based Pirelli World Challenge.

Robertson has enjoyed a stellar sportscar career so far. He lifted the Ginetta Junior title in 2012 before racing in BRDC Formula 4 in '13. He then returned to sportscars, winning the GT4 Supercup crown in '14 and the European Le Mans Series LMP3 title the following year.

Chase is a member of Ginetta's young-driver programme after impressing at the wheel of a G50 in the States last year, finishing fourth in

the Pirelli World Challenge GT4 standings.

Robertson and Chase join Century team boss Nathan Freke and another American Ginetta young driver, Harry Gottsacker, in the two factory GT3 entries.

"I've done the majority of my racing on British circuits and I've always wanted to do British GT, so this year is a really cool deal for me," said Robertson.

"It'll be interesting being partnered with Parker since he's a really quick kid, but he'll have the challenge of getting up to speed with both GT3 and the British tracks. That's where the team, and my experience of the car and the circuits, will come in. Century has a great record and we have a strong crew in the sister car too."

This year's Ginetta G55 GT3 features an

all-new powertrain, with a 6.3-litre Chevrolet LS3 V8 engine at the business end, which the Leeds company hopes will help the car secure its first GT3 victory.

"The new powertrain will definitely help the G55," added Robertson. "Before, the car lacked some low-down power delivery, and the Chevy is well-proven. The goal for this year is definitely to go for that first GT3 win for Ginetta, and then we'll see where we get to in the championship."

Chase, 16, added: "I'm delighted to be sharing the car with Charlie because he's got great experience and I can learn a lot from him. It'll be a big change for me.

"I've raced a Porsche 911 GT3 Cup car before so the power of the Ginetta won't be totally alien, but the circuits and the style of racing will be."

BRDC BRITISH F3

Maldonado's cousin to British F3 with Fortec

MANUEL MALDONADO, cousin of grand prix race winner Pastor, will compete in the BRDC British Formula 3 Championship this year with Fortec Motorsport.

Maldonado was the relative carried out of the Williams F1 team's garage by his cousin when a fire broke out at the Spanish Grand Prix in 2012, just hours after the older Maldonado had won the race.

Teenager Maldonado stepped up to car racing last season, competing in Italian Formula 4 before contesting the MRF Challenge over the winter months.

The Venezuelan completes Fortec's three-car 2017 line-up, alongside British F3 sophomore Ben Hingeley and the team's British F4 graduate, Dane Nicolai Kjaergaard.

Maldonado, 17, sampled one of Fortec's Tatuus-Cosworth F3 cars before completing the deal, and had previously tested in the team's F4 machinery.



USF2000

Festival ace Askew to top team Cape

FORMULA FORD FESTIVAL AND WALTER Hayes Trophy star Oliver Askew has joined top USF2000 team Cape Motorsports.

Team USA Scholarship winner Askew was in the top three in last autumn's Festival before a puncture, and took second in the WHT in his first wet race in a car.

Askew then won the Road to Indy Shootout prize after beating single-seater frontrunners from around the world, earning a US\$200,000 subsidy to race in USF2000, which from this year will use Tatuus-Mazda USF17 chassis.

"This is my opportunity, so I want to make it easier on myself going into next year to win the USF2000 title and earn another season scholarship from Mazda," said Askew.

Meanwhile, British powerhouse Carlin will not compete in USF2000 after all this season.

GINETTA JUNIOR

Browning changes up to Juniors

JUNIOR SALOON CAR RACE WINNER Luke Browning has been confirmed as the first driver for Richardson Racing's entry into Ginetta Juniors this year.

The 15-year-old finished eighth in the Citroen Saxo-based JSCC series last season, and now moves onto the British Touring Car Championship support package for the first time.

Richardson has a long history of competing

in Ginetta categories, finishing fourth in the GT4 Supercup with Andrew Richardson in 2012.

Team boss Gwyn Richardson said: "Luke's had one test and that went well considering it was in very challenging conditions and it was slippery. He was very confident and impressive.

"We are hoping that he will be a frontrunner — with his pace and pedigree, that's where he should be."



RENAULT CLIO CUP

Rivett leads confirmed Clio returnees

RENAULT UK CLIO CUP RACE winners Paul Rivett, Josh Price and James Colburn will all remain in the series this year.

Three-time champion Rivett
will continue with the WDE
Motorsport squad (car above)
– where he is also team
manager – and will partner
Paul Streather and Dan Zelos.

"I'm hungrier than ever and want nothing more than my fourth title," he said. "The only way I'll accept not winning it this year is if one of my team-mates beats me.

"It's the strongest line-up we've ever had, and the aim this year is to have a clean sweep of the teams' and the drivers' championship.
There's no reason why we can't do that."

Price – who claimed victory in the final race of 2016 and was sixth in the standings – will stick with frontrunning squad Team Pyro. He also retains the backing of British Touring Car Championship squad Team BMR through its academy.

Colburn has also been confirmed as making a full-time return to the series with the PP Motorsport team, after announcing plans at the end of last season. His last full campaign was in 2014, when he was fifth in the points, but he contested the final two meetings with PP last year.

GINETTA GT4 SUPERCUP

Mitchell and Laser Tools to Ginettas

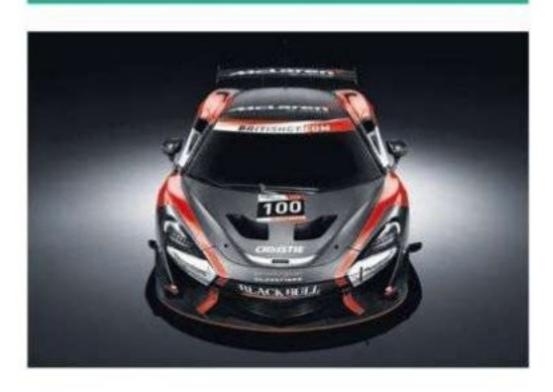
FORMER GINETTA JUNIOR CHAMPION Jack Mitchell is to race in the Ginetta GT4 Supercup this season with the Laser Tools Racing squad that runs Aiden Moffat in the British Touring Car Championship.

It is an extra programme for Mitchell, who already has a British GT campaign this season in an Aston Martin Vantage GT3.

The Laser Tools team, which is run by Moffat's father Bob, is undertaking its first campaign in the Supercup. "Jack and Aiden have been mates for years and showed that they work together very well at the recent Dubai 24 Hour race," said Moffat Sr. "It will be great to see another Laser Tools Racingliveried car out on the track."

Renault UK Clio Cup racer Charles Ladell also joins the GT4 Supercup this season. He will drive for title-winning squad Rob Boston Racing. Former British GT4 runner-up Declan Jones will also complete a full season this year with Century Motorsport.

IN BRIEF



GARAGE 59 ADDS SECOND McLAREN 570S

Garage 59 will add a second McLaren 570S GT4 for its British GT attack in 2017, with Dean Macdonald and Akhil Rabindra joining Ciaran Haggerty and Sandy Mitchell, who were third in the GT4 standings last year. Rabindra joins after a year in BRDC British F3, while Macdonald arrives from a successful karting career.

DEBUTANTS AMONG LEGENDS ADDITIONS

Marcus Pett and Paul Simkiss will both debut in the UK Legends Championship this season, graduating from karting and bike racing respectively. Both will run their own programmes, with Pett favouring a Chevy Coupe and Simkiss an alternative Ford model. They are two of 12 confirmed entries for 2017, which also includes former runner-up Ben Power plus race winners Jack Parker and Steve Whitelegg.

MOYERS BACK TO COMBE FORMULA FORD

Castle Combe Formula Ford runner-up Michael Moyers will return to the championship in a Kevin Mills Racing-run Spectrum. KMR has announced that race winner Nathan Ward will remain with the squad alongside Stephen Masters, who will race in the series for the first time since 2013. KMR is yet to confirm any drivers for its BRSCC National Championship assault.

JHR TO RUN MEXICAN SULAIMAN IN F4

Mexican Manuel Sulaiman will compete in British Formula 4 this year with the JHR Developments squad. The 16-year-old is currently sixth in the Mexican-based NACAM F4 standings and will now compete in the Challenge Cup of the British series.

COATES SWITCHES MUSTANG FOR COBRA

Scottish historic racer Alasdair Coates has swapped his Ford Mustang for an AC Cobra this season. His new car, prepared and run by Classic Race Cars Engineering, was given a shakedown run at Donington Park last week (below). "I hadn't even sat in it before the test, but it's great and I'm planning to do the Masters Gentleman Drivers, then aim for the Spa Six Hours in 2018," he said.





PEMBREY

Chandhok praises changes

CHANGES MADE TO THE PEMBREY CIRCUIT HAVE drawn support after the new layout was tested.

Double R Racing was one of the first teams to run on the modified layout a fortnight ago, and ex-Formula 1 driver Karun Chandhok and GP2 race winner Jordan King both sampled the circuit with the team last week.

The Welsh track is a popular test venue and now features a new sequence, designed to create more of a challenge. After the opening Hatchets, Spitfires and Dibeni bends there is a new tight left-hander before a right-hand corner takes drivers back on to the existing track.

Chandhok says the alterations have added a new dimension to the circuit.

"It has created another good braking zone and a couple of slow corners," he explained. "The problem was that there were too many fast corners to properly test for slow speed and you didn't have enough kerbs, so that's changed things.

"A test circuit is what I think of Pembrey as rather than a race circuit, because there's not many race meetings there now, so this is a good improvement because you can test kerb-strikes and over bumps. The new section has higher kerbs and is slightly off-camber, so you have to ride them.

"It's added an extra dimension to Pembrey that wasn't there before. But more to the point, from a business standpoint, this has made it a much more relevant test circuit, so it's a very good investment."

Further changes are planned, including additional corners to be installed on the back straight.

HISTORICS

MALLOCK TO RACE OLD U2 AT LAGUNA

RAY MALLOCK WILL retrace the wheeltracks of his father Arthur this year by racing the family's Formula Junior U2 at the Monterey Classic at Laguna Seca in the US.

Mallock will ship the car he now owns to America for a leg of the Formula Junior Diamond Jubilee World Tour, which will also take in races at Road America, Lime Rock and Watkins Glen. He plans an early season shakedown race at Silverstone in May before the car is shipped for the August 17-20 event.

"Arthur's last race was in this car at Laguna Seca in 1992, when it was owned by John Streets, so 25 years later I'm going back to the same track," said Mallock.

CREVENTIC 24 HOUR SERIES

FFord dominator Murray in Creventic switch

FORMULA FORD CHAMPION Niall Murray will switch to endurance racing this season after signing with TDF.Geva for the Creventic Touring Car Series.

Murray will share the team's endurance-spec Ginetta G50 with Briton Michael Lyons and Dutchmen Melroy Heemskerk and Sven van Laere. The quartet will begin their campaign at the 24 Hours of Silverstone on the March 31-April 2 weekend.

Irishman Murray made history last season by sweeping the board in FF1600, netting the Martin Donnelly, Formula Ford Festival and Walter Hayes trophies, and winning the BRSCC National title.

The 21-year-old said: "Two years ago this isn't something I saw myself doing, but it's definitely where the market is heading. GT and endurance racing is the place to get deals these days.

"I'll be doing two 24-hour races and three 12-hour ones, so there's plenty of experience on offer.
The car will be very different
from Formula Ford. The only
comparison I have of something
with similar power is a SEAT
Supercopa [which he raced
in Ireland], and that was a
front-wheel-drive car. But
I'm really excited."

FIAMASTERS HISTORIC F1

Hazell switches from tin-tops to Williams F1 car after hiatus

VETERAN RACER MARK HAZELL will make his Historic Formula 1 debut this season as the next step in a career spanning four decades.

The Monmouthshire driver will race a Williams FW07 under the wing of former Historic F1 champion Martin Stretton, and will start his 2017 campaign in Barcelona next month in the opening round of the FIA Masters Historic Formula 1 Championship.

Hazell tested the Williams towards the end of last season and again last week (right).

"I had the wrong earplugs the first time, though, and couldn't hear afterwards," he said. "It was a much better experience this time. I hope to do a lot of racing this year."

The Williams will provide Hazell's return to a single-seater for the first time since he raced Formula Fords in the 1980s.





The golden days of hillclimbs and sprints?

By Marcus Pye, the voice of club racing



TODAY'S SPEED-EVENT ENTHUSIASTS MAY FIND IT

hard to imagine that until 40 years ago the vast majority of competitors relied upon obsolete circuit-racing cars for their hillclimbing and sprinting endeavours against the clock.

Charging up tortuous asphalt inclines, haring round aerodromes or rocketing down seafronts in whatever was available was the norm when the twin specialities evolved from the days of ERA dominance post-WW2.

There had always been specials — indeed the Steyr-Allard, Felday-Daimler, Marsh-Buick and Hepworth-Chevrolet all carried their creators to RAC British hillclimb titles. Designer Mike Pilbeam broke the mould, however; his eponymous marque thrived after Alister Douglas-Osborn snared the 1977 national crown with the Waring & Gillow team's Brabham BT38-derived R22, powered by a decade-old Formula 1 Cosworth DFV engine.

David and Sean Gould's enterprise, whose breakthrough win came with Chris Cramer in 1986, has surpassed Pilbeam's score having landed 18 of the past 19 hillclimb titles (Trevor Willis was the interloper in 2012 with an OMS-Powertec Radical V8). Six of the past nine have fallen to Scott Moran, a tally that equalled the great Tony Marsh's record. Incidentally, Scott's father Roger prevailed in '97, landing Pilbeam's 17th title.

Sprinting, its sister discipline on the flat, continues at national level, with a smaller following for the BMSA-run, SBD Motorsport-backed MSA championship running largely beneath the radar. Scot Colin Calder has been champion for the past four seasons, with a Gould-NME GR55, but daughter Heather won four rounds in the same car last year and finished third overall on a tie-break with John Graham (2.8 Gould GR55).

The RAC British Sprint championship was inaugurated in 1970, when Patsy Burt won in her McLaren-Oldsmobile M3A (aka 'Whooshbonk', now with Julia de Baldanza). When I was covering events for Autosport from the later '70s (and even scored points in friends' 1600cc Modus-BDA M4H and March-BDA 79B, 2.0-litre BRD March-Hart 792 and 2.5-litre Pilbeam-Hart MP43 sportscar) bespoke DFL-powered machines, reworked F2 chassis — many, like the late Nigel Bigwood's Toleman-DFV, with larger engines — and F3000s were at the forefront. And aces such as Chris Hill and Peter Harper still claimed big scalps in 1700cc Ford pushrod-engined Clubmans cars...

Prior to that, American V8 muscle had its heyday with the likes of Roy Lane, 'King of Curborough' Bob Rose and Dave Harris in F5000 McLarens and a McRae GM1. Terry Smith won RAC rounds in a 7.2-litre Cooper-Chrysler T81 and a 5.7-litre McLaren-Chevrolet M14D before hitting top form with Australian 5.0 Repco V8 engines in Brabham BT36X and March 761 chassis. An F1 Brabham BT33 (Simon Riley), a Lotus 76 and 77 (David Render) and John McCartney-Filgate's BRMs, plus others, made their presence felt too.

Even top-level sprinting could not escape the bleakness of cold wet days on remote airfields, but was a buzzing scene at its height. I recall the excitement and incredulity of the 1978 Brighton Speed Trials — the blue riband British Sprint round then — when Harris (McRae) and 'Smiffy' (Brabham) covered the standing-start kilometre in 17.48s, equalling Dutch maniac Henk Vink's mark — straddling his monstrous supercharged Kawasaki-engined 'Big Spender III' dragbike — in an unprecedented three-way tie for Best Time of the Day!



LYONS WANTS MORE HISTORIC GLORY

FIA Masters Pre-'78 Historic F1 champion
Michael Lyons is confident of being able to
challenge for the later category title this year,
having shaken down his Williams FW07 at
Donington Park. Originally a Longhorn Indycar,
it has been rebuilt to the spec of RAM Racing's
Williams driven by Rupert Keegan in 1980.

TERRY SMITH 1933-2017

One of the west country's best-loved racers, Terry Smith, died last week. Part of the 'Bristol Mafia' speed-event elite from the 1960s, when he flew in an 1100cc Cooper-JAP long past its prime, 'Smiffy' switched to racing an MGB V8, then a Lola T70. Although the RAC British Sprint title eluded him - he finished runner-up to Ray Rowan in 1981 - Terry won eight rounds: from Yeovilton's '72 opener (Cooper-Chrysler) to '81 with the March-Repco 761 in which he broke the Isle of Man's Ramsey Road course record and is immortalised (alongside Nigel Mansell, Ari Vatanen and Russell Brookes) in a Manx Post Office stamp series. Predeceased by wife Jean, he is survived by daughters Debbie and Carol. Smith's funeral is at South Bristol Crematorium, BS13 7AS, at 1415 on Friday, March 24.



PEUGEOT 406 FOR NZ SERIES

Kiwi Stephen Grellet has bought an ex-Paul Radisich 1998 BTCC Peugeot 406. He plans to run at July's HSCC Legends of Brands Hatch Superprix before returning home to race the car. Both MSD-built cars went to Oz, from where original teamster Patrick Watts (above in his '97 406) and Malcolm Harrison repatriated them.



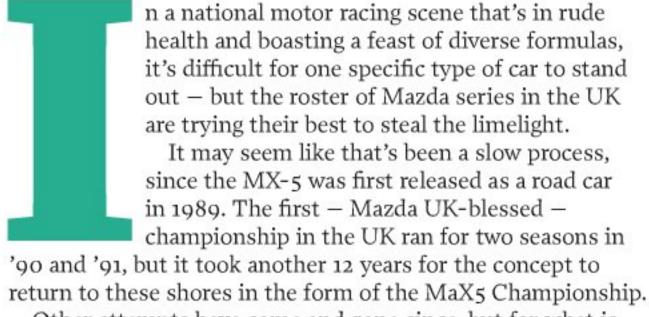
MaXimum fun, minimum spend

Mazda MX-5 racing is booming in the UK. So why not let inaugural champion Patrick Watts loose at Oulton Park to explain its lasting appeal?

By Jack Cozens, Special Correspondent

@JHCozens





Other attempts have come and gone since, but for what is in essence a relatively niche model there are an impressive four championships catering for MX-5 machinery. With that much choice, you'd be forgiven for thinking that participants might be a bit thinly spread in each series — but you would be spectacularly wrong.

Aside from MaX5, which caters for Mk1 and Mk3 models, two championships run with the British Racing and Sports Car Club — the MX-5 Championship for Mk1s, and the MX-5 SuperCup exclusively for Mk3 cars. The 750 Motor Club (expert in making just about any form of racing work) also has its own MX5 Cup for Mk1 machinery, and that's attracted grids of 40-odd cars since its first event in 2014.

In the flesh, it's not hard to see why MX-5 racing is so appealing; the cars look sporty enough and are a strong, reliable

"At the heart of each MX-5 championship's philosophy is a desire to keep things pure"

base for a series to be built upon, while their speed — in the case of the SuperCup — compares favourably with other booming series such as the BMW Compact Cup. On Rockingham's International Super Sportscar circuit, the MX-5s were the best part of five seconds faster last year.

And that's all from cars that, by and large, race as standard. Regulations differ slightly, but at the heart of each MX-5 championship's philosophy is a desire to keep things pure. It's a simple, no-nonsense formula — and one that, at present, is providing a great deal of success.

"The regulations have been written and controlled really well where we've got a brake-horsepower confinement, and it's truly one-make in terms of mechanical components, really," says Paul Sheard, joint-winner of the MaX5 championship in 2007 and team owner of his eponymous SuperCup squad. "It only leaves for a minimal amount of spring poundages and suspension adjustments, otherwise it's driver skill."

Of the four, it's the SuperCup that's highest profile. The MX-5 Championship, the BRSCC's secondary series for Mk1 machines, may boast bigger grid numbers (upwards of 50 >>>





CLUB AUTOSPORT/MAZDA MX-5 RACING



cars are registered for 2017), but it's only the SuperCup that offers a bespoke championship for newer Mk3 machinery.

But what about the product on offer? A two-litre engine, as fitted originally in the Mk3 MX-5 Sport, is the only one permitted, and each unit is fitted with a modified exhaust-manifold system and a competition induction kit. That means that while power is limited to 140bhp at the wheels, that number is about 180bhp at the flywheel. The MX-5's original six-speed gearbox also has to be used, while control rollbars and Avon tyres are also employed.

How that translates into a driveable product is probably not a question for Sheard. An accomplished racer of his own, having competed in everything from bangers to hot rods to the ill-fated ASCAR series, Sheard is nevertheless a man who "fell in love" with the Japanese model, and fits the title of 'Mr MX-5' well. For a properly fair and representative assessment, an independent body is required.

Step forward Patrick Watts. A factory driver for Mazda and Peugeot in the heyday of the British Touring Car Championship's Super Touring era, Watts made a name for himself as a one-make series specialist. He won the Mini 850 and Honda CRX championships and, importantly, was the first MX-5 champion in the UK, in 1990.

"To be honest I'd never driven an MX-5 on the road before," recalls Watts, as he prepares to test one of Sheard's Mk3s for Autosport. "But for a road car on the race track, it was great. It was reliable — and, with stiffer springs and obviously racing tyres and brake pads, all of a sudden you had a race car that was quite impressive. The gearbox didn't wear out, the engine was totally fine. I think that's the key to these one-make championships now. You can take a road car, not modify it or spend money on it and just use a standard engine. When the engine goes wrong you can literally go down to the breakers' yard and get another one.

"When you've got a one-make series, like the Mazda, based on a standard car where you're not allowed to do anything to the engine, it's so much cheaper for everybody and the car is current every year — you just learn how to drive it better." Conditions at Oulton Park means Watts's ability to get a feel for the car is limited. A late arrival to the circuit means only a few sighter laps are possible before the afternoon session, by which time the rain has arrived. A little more than a dozen laps are all he manages, but it's enough to form some representative impressions about the SuperCup.

"It wasn't set up for the wet," he declares. "It was damp and greasy, but just patchy as it started to drizzle. Coming out of Lodge, it would be grippy and then slippery. It was slippery going into the Foulston's chicane and then grippy coming out. Nothing was consistent about the track to draw a conclusion about it, but I'd say it was too stiff for the wet.

"But it was well balanced, and the engine was lovely; it goes up to 7000rpm. It's got a lovely gearbox. The brakes weren't really balanced up for the wet. If I could have changed things, I would have gone a bit softer on the front, put a bit more brakes on the back and softened it all around really. But it felt like my old car did, my old 1600 — I'd like to try it in the dry.

"These cars are never going to be that exciting to drive around a race circuit by themselves — it's when you've got three or four around you that are identical that the fun starts. So I can see the appeal of having one of those in your garage. The other appeal is that if other people have got similar cars to you, but they haven't got wider cars or bigger carburettors or more power, you don't have to spend any more money to keep up with the Joneses.

"You can just get into it and drive it. There are no idiosyncrasies — it's just like driving a road car really. It's not something to scare anybody."

Getting to grips with the car, then, may not be the most difficult thing in the world. But as Watts explains, that makes the challenge of succeeding all the more difficult.

"One thing people used to say to me was, 'OK, you've won the Honda CRX championship, you won the Mini championship, but they're all easy cars to drive'. I'd always say, 'Yes, they are easy to drive, but that makes it harder to win a race and a championship'. It's really difficult to show your superiority over a guy who's not quite as good as you, because the cars are easy





to get a handle on. It means that the guy who wins the series is consistently good, and slightly better than the other people."

The selling points don't stop there. In recent years the SuperCup has also become a challenge in which higher-profile names want to try their hand. BTCC race winner Paul O'Neill has been a 'regular irregular' in the series for the past few years, having built a strong relationship with Sheard, while current Toyota driver Tom Ingram will also make his debut this year at the Snetterton round. As O'Neill points out, though, it's not a challenge to be taken lightly, since the seasoned MX-5 drivers are determined to show up their more illustrious guests.

"You have to be properly on it," says O'Neill, who this year is expected to do as many as five SuperCup rounds. "I can just about win races, but you're properly putting your reputation on the line coming out here."

The championship has also proved itself as a breeding ground for talent, since a number of drivers have progressed to the TOCA support and SRO grids, including Rob Boston, Luke Herbert, Abbie Eaton and Jordan Stilp. And for 2017, multiple Porsche champion Richard Styrin and Compact Cup dominator Steve Roberts are just two drivers switching to the series to try to challenge returning champion James Blake-Baldwin for the overall crown.

There are plenty of selling points for MX-5s but, as Watts argues, it's the level of equality that ultimately makes it such a successful and attractive product. "It gives the opportunity for people to go racing and prove themselves in something they can afford to do," says Watts. "Even in GT racing, the money isn't justifiable because it doesn't get that much publicity — or all that many people watching it.

"So the first thing you've got to do, and the Mazda championships fit in nicely, is to say you want a series that will have the same cars in it. If you take a cross-section of all the people that want to go racing, they've got to be able to afford it. There's no real difference in the spirit of what the SuperCup now represents compared with the 1990 championship."

"The racing is always going to be electric" adds Sheard. "And those cars are always going to be close together until the end." **

Watts on the MX-5

IN 1990 I'D SIGNED UP to do the Honda CRX championship to try and win it for a second time, but I also had an offer from a Mazda dealer in Rugby to do the new Mazda GB-backed MX-5 Championship. I turned it down initially for two reasons: one was that the races were bound to clash with the Hondas, and the other was that I'd never driven a rear-wheeldrive race car before! I eventually

accepted a deal to do MX-5s, but I knew nothing about these little sportscars - so I only met 'my' blue and white beauty for the first time at Silverstone for the opening round. It was a standard car with stiffer springs and dampers rolling on Dunlop slicks but the front was too soft; it gripped there but not at the rear, so it was very twitchy and not much fun. With the aid of stiffer springs and some changes in the adjustable chassis it had developed into a proper race car by the second round.

I ended up being the

hare at most rounds; I won about eight of them and had most of the pole positions, although hot on my heels was a young Mark Lemmer. At the Donington round he planned to follow me around on the first lap of qualifying and be on my tail for my 'quickie', but he was late out of the pits and had new brake pads fitted. So when he tried to outbrake 30 cars to be

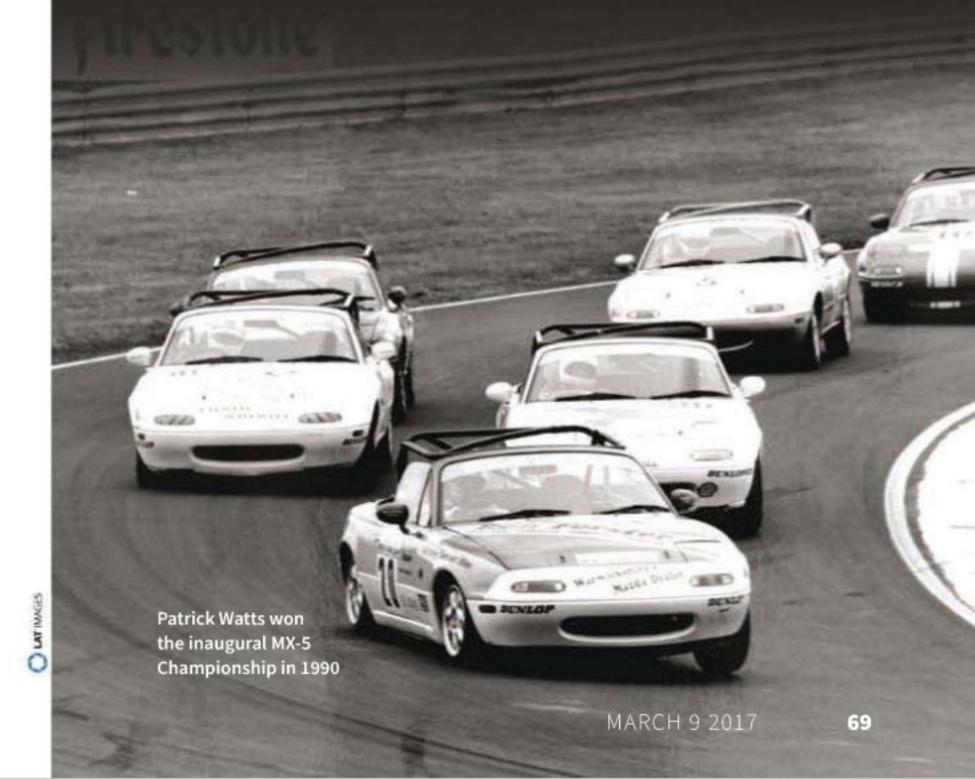
"He ended up parked in my door with both of us in the gravel"

on my tail he ended up parked in my door with both of us in the gravel. He apologised, so I said if you're sorry why not get your dad to write out a cheque for the damage – he did, which makes that a first in motor racing as far as I know! Mark isn't so gullible now...

I ended up winning both championships and winning £20K, a Honda Civic and a Mazda 323 – but more importantly, these
well-policed one-make
series let me show my
skill, which led to a
salaried drive in the
British Touring Car
Championship for
Mazda for two
seasons before
moving to Peugeot.

The Renault 5,
the Honda CRX
and then the MX-5
championships all
showed that a road car
with little changes
could be a reliable,
cheap and fun car to
race for a season. Even
without the backing
of the manufacturer,
the MX-5 SuperCup
still captures the
imagination of the
club racer today.

The MX-5 has evolved over the years, but while like most cars it has got more powerful it's also porkier, so the power-to-weight feels similar, and the good manners of the chassis bring back memories. Speed is relative to those around you and with grids of 40 MX-5s the whole point of the exercise is having good racing. There is little point in having an F1 Mercedes and no-one to race against! **Patrick Watts**



WHAT'S ON

Shining a light on darkest Peru

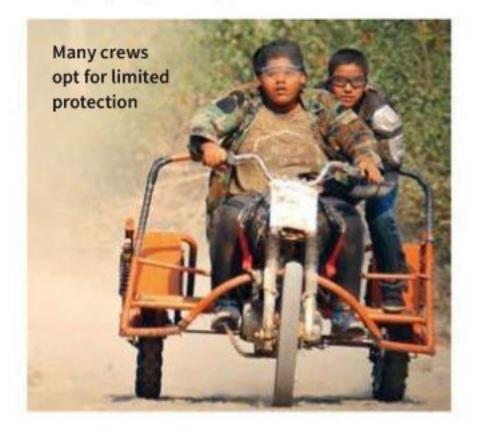
WHEN YOU THINK OF MOTORSPORT, rickshaws and Peru do not immediately spring to mind. But a new minidocumentary produced by Al Jazeera in partnership with Pacha Films and Storytime Films shows that the two have a place in the racing world.

Racing in Cocaine Valley highlights one of the most surprising and frankly bonkers forms of motorsport: moto taxi racing. In an area blighted by extreme poverty and the drugs trade, it illustrates that motorsport can thrive just about anywhere, as well as playing an important role in challenging stereotypes.

If you considered an October club meeting at Pembrey remote, this takes the concept to a completely different level. All thoughts of motor racing being for the privileged few can be forgotten. This is the sport at its most basic. The rickshaws themselves are basic. The safety is basic. But that takes nothing away from how seriously the competitors take it.

The film follows 19-year-old Peruvian soldier Omar Ore Guillen and his battle to be ready for his local Santa Rosa race. There is a profound human-interest story in his preparations for the contest on the South American dirt tracks — the sort of place where errant turkeys on the road cause a hazard.

First, he and his co-pilot — who stands precariously in the back of the rickshaw, hanging on for dear life but also playing an important role in



braking and cornering — have to overcome a lack of money to make much-needed upgrades to Guillen's bike. Then comes a far greater dilemma as he is called back to his army duties on the eve of the race.

While this gives an insight into the preparations for a moto taxi race — as well as the parlous state of the 'Cocaine Valley' — it does mean coverage of the actual race doesn't begin until almost 20 minutes into the 25-minute film.

That is one of the big criticisms of the piece — the dramatic race footage that the viewer is left craving is limited to just a few minutes at the end.

And it certainly is dramatic.
Seeing these rudimentary rickshaws hurtling along narrow lanes at break-neck speeds — competing for a \$170 prize — makes for compelling viewing. Especially when they are running side by side.

It's no wonder that the sport draws the crowds. Locals line the roadside banks, standing within millimetres of the bikes hurtling past. It comes as no surprise that spectators and competitors are regularly killed. It's enough to give World Rally Championship safety delegate Michele Mouton nightmares.

And it just wouldn't be motorsport without some sort of controversy, of which there's a healthy dose at the very end.

Racing in Cocaine Valley provides a fascinating insight into something you're likely to know nothing about, and the characters involved and their struggles. But its reliance on subtitles, and the short amount of footage focused on the actual racing, leaves you wanting to know more.

Through it all the passion for the sport is clear, and despite the tribulations all those involved vow to carry on. And the film also shows how significant motorsport can be, even in the most unlikely of places.

To watch, search for 'Racing in Cocaine Valley — Witness' on YouTube.

STEPHEN LICKORISH







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HOT ON THE WEB THIS WEEK

YOU DO PUT YOURSELF IN RAHAL'S SEAT

Search for Visor Cam: Graham Rahal at Sebring International Raceway

As IndyCar gears up for the start of the 2017 season, get a driver's-eye view of Graham Rahal's preparations as he exercises his Rahal Letterman Lanigan Racing Dallara-Honda on Sebring's far-from-billiard-table-smooth surface.



INTERNATIONAL MOTORSPORT

RALLY MEXICO WORLD RALLY CHAMPIONSHIP

Round 3/13 Leon, Mexico

March 9-12

Live BT Sport 3,
Friday 0200. BT Sport 1,
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Sport 2, Saturday 2000.
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Red Bull TV, Saturday 1650
Highlights Motorsport.tv,
Saturday 0930, Sunday
0930, Monday 0935.
Channel 5, Monday 1900

INDYCAR SERIES

Rd 1/16

St Petersburg,

Florida, USA

March 12

Live DT C

Live BT Sport ESPN, Sunday 1630

INDY LIGHTS

Rd 1/10

St Petersburg, Florida, USA

March 11-12

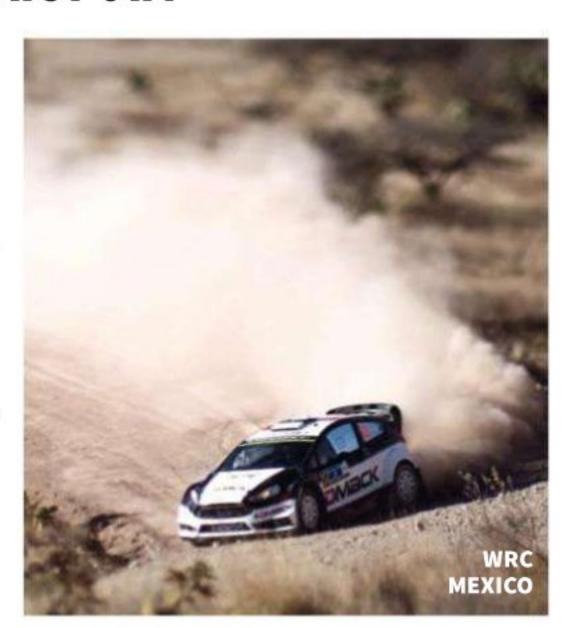
NASCAR CUP

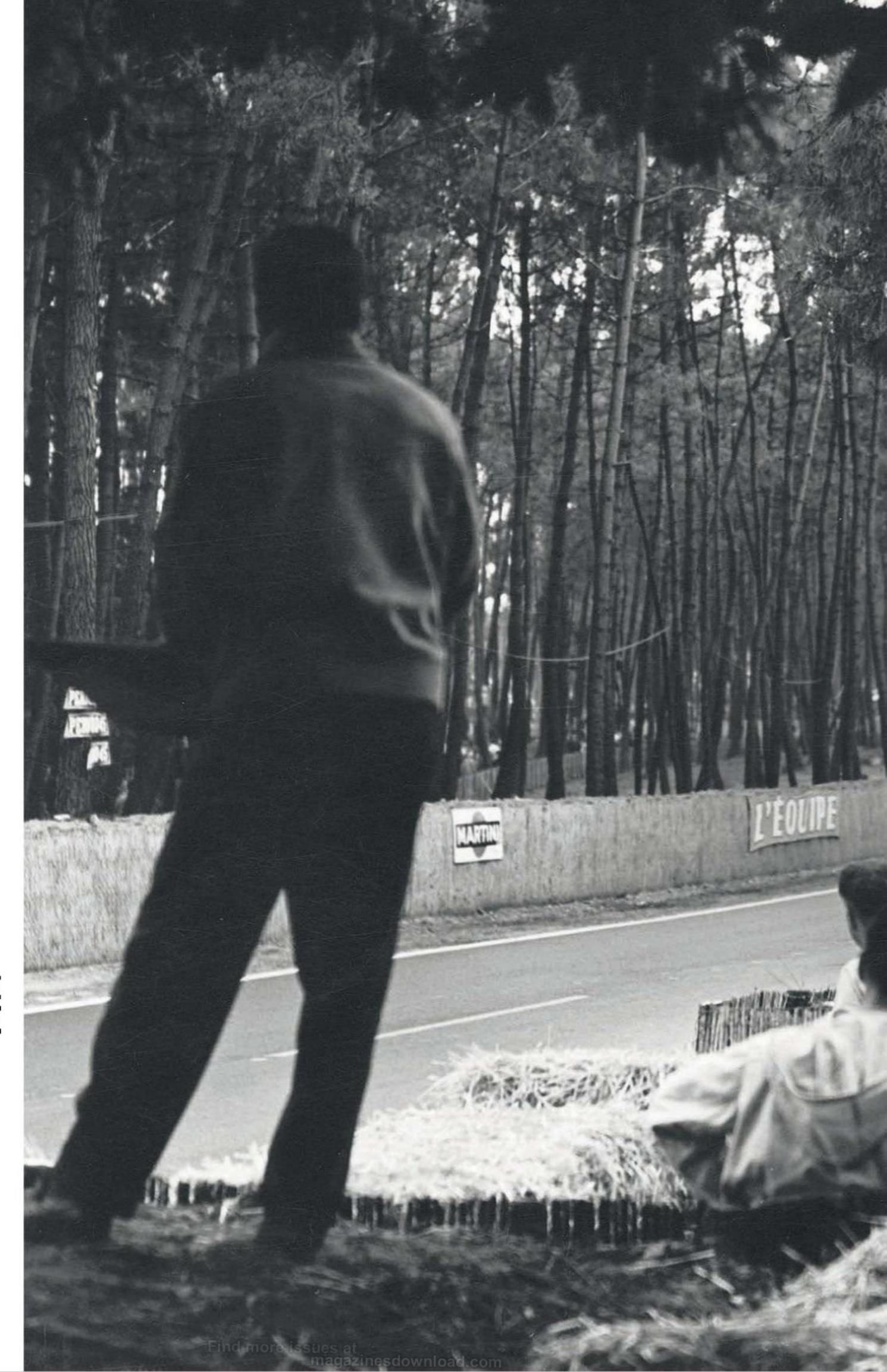
Rd 3/36

Las Vegas, Nevada, USA
March 12

WATCH ON TV

Live Premier Sports, Sunday 1900





FROM THE ARCHIVE

The Jaguar D-type shared by Ninian Sanderson and Ron Flockhart leads the Stirling Moss/Peter Collins Aston Martin DB3S in the 1956 Le Mans 24 Hours. The Aston finished one lap behind the victorious Jaguar after losing second gear on Sunday morning.

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GP2 - 1m26.351s GIORGIO PANTANO When GP2 introduced its second-generation car in 2008, it wanted two things, according to series technical director Didier Perrin: "A car that's still tricky to handle and difficult to drive, but that's quicker than the old car by about 1.5 seconds." When the series went to Barcelona for the first time for a pre-season test, eventual champion Giorgio Pantano set a time that still stands as the quickest sub-F1 lap of the track.

FORMULA V8 3.5 - 1m28.664s TOM DILLMANN Is it ironic that the fastest-ever lap by a Formula Renault 3.5 car came after the series stopped being Formula Renault 3.5? Upon the series' rebranding as Formula V8 3.5, a private test was held at Barcelona in December 2015. Tom Dillmann, who would go on to win the FV8 3.5 title in '16, topped the session and in doing so posted the fastest lap in the Renault-powered Dallara's impressive history at the circuit.





LMP1 - 1m31.875s STEPHANE SARRAZIN Stephane Sarrazin is one of the fastest men in the world over one lap in a prototype, and his late flier in 2008 headed a Peugeot one-two in qualifying for the opening round of the European Le Mans Series. The Frenchman described it as "a real pleasure running at this circuit ever since we arrived", and his lap time in the 908 HDi FAP, while 13 seconds slower than F1's benchmark, backs that up.

GP3 - 1m33.554s OSCAR TUNJO Ferrari protege Charles Leclerc looks set for big things, but last year he was outshone in pre-season testing by the little-known Oscar Tunjo. With GP3 switching to a new car for 2016, the honour of 'fastest lap around Barcelona' - which driver doesn't want that? - was up for grabs in the second of the two F1 feeder series. Tunjo made the most of a much faster morning session, with afternoon times two seconds slower.



MAUTOSPORT

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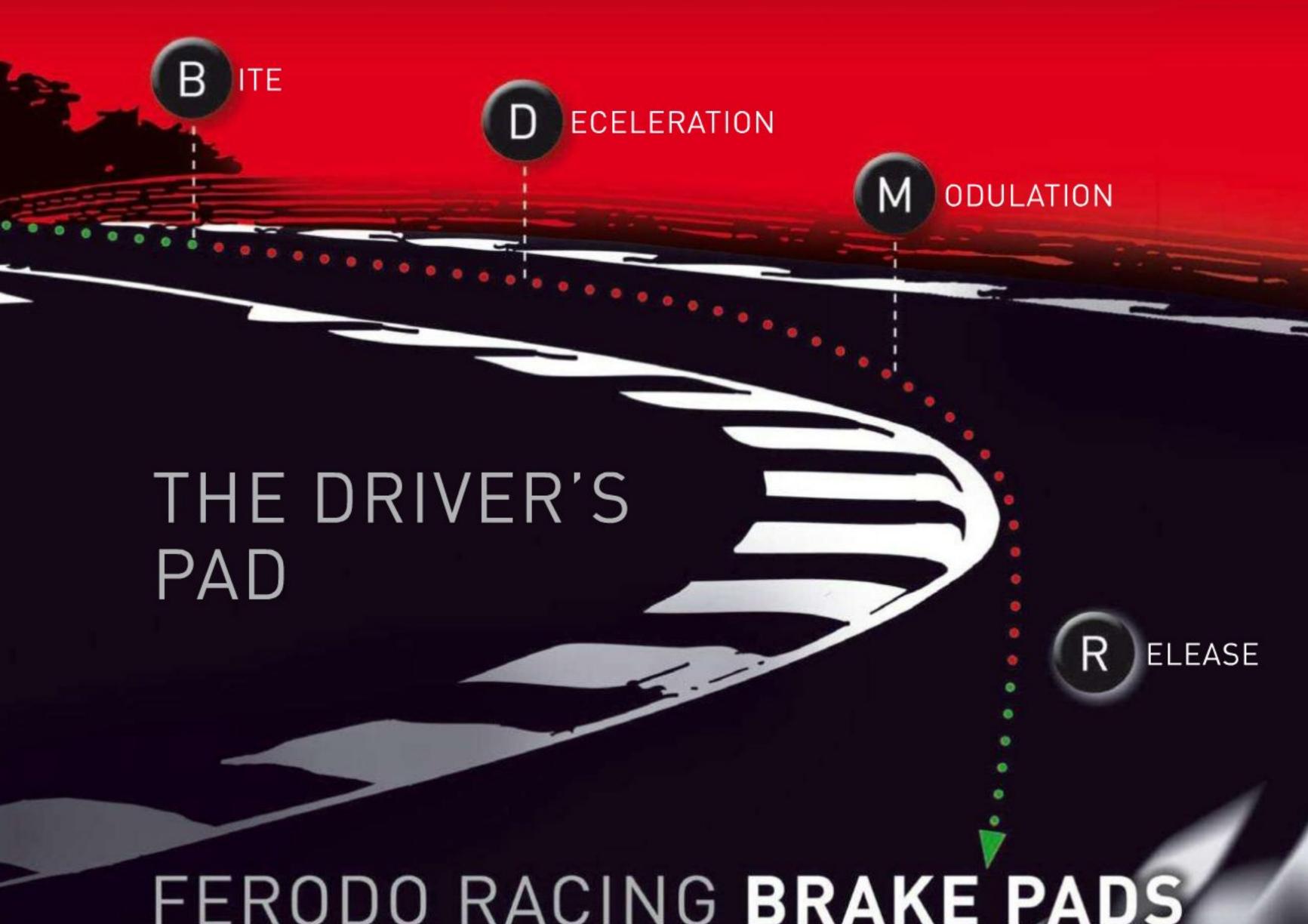


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