



SEBASTIAN VETTEL

FERRARI LEGEND...

...IF HE TRUMPS LEWIS – AND HIS CRITICS TOO



PLUS **PRETTY IN PINK**

HOW FORCE INDIA STOLE F1'S LIMELIGHT

'ENGINEERS WILL SAVE THE WORLD'

PADDY LOWE EXCLUSIVE!

No 256
UK £4.99
June 2017



WILLIAMS MARTINI RACING

OFFICIAL PARTNER



Oris Williams Chronograph
Automatic mechanical movement
Matt-satin stainless steel case
Luminescent hands and indices
Water resistant to 10 bar/100 m
www.oris.ch



real watches **for** real people

ORIS
Swiss Made Watches
Since  1904

Ford

FOCUS ST-LINE



Go Further

Official fuel consumption figures in mpg (l/100km) for the Ford Focus ST-Line range: urban 33.2-67.3 (8.5-4.2), extra urban 60.1-83.1 (4.7-3.4), combined 46.3-74.3 (6.1-3.8). Official CO₂ emissions 140-99g/km.
The mpg figures quoted are sourced from official EU-regulated test results (EU Directive and Regulation 692/2008), are provided for comparability purposes and may not reflect your actual driving experience.



CONTENTS

JUNE 2017

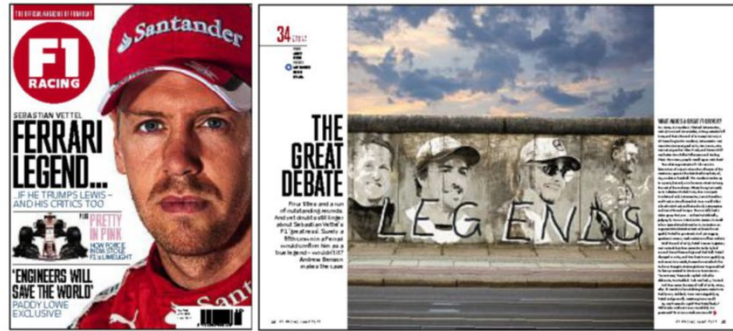
THE OFFICIAL MAGAZINE OF FORMULA 1
1 ETON STREET, RICHMOND, TW9 1EF, UK

SECTOR 1

- 6** **IGNITION**
Alonso's shock announcement
- 8** **PARADES**
The very best F1 photography
- 18** **F1 INSIDER**
Expert opinion and analysis
- 24** **F1 WORLD**
Your ultimate F1 event guide
- 26** **RACER'S EDGE**
Peter Windsor on blue flags
- 28** **THIS F1 LIFE**
Pat Symonds on the new season
- 33** **POWER PLAY**
Dieter Rencken on engine costs

SECTOR 3

- 91** **INBOX**
What's on your mind this month
- 92** **RACE REPORTS**
The Chinese, Bahrain and Russian GPs
- 98** **RACE RESULTS**
Standings and stats so far
- 100** **RACE PREVIEWS**
Our guide to the Spanish and Monaco GPs
- 102** **TRAVEL GUIDE**
The inside line on Japan
- 104** **F1 UPGRADES**
Must-have kit
- 106** **NOW THAT WAS A RACE**
The 1961 Monaco Grand Prix



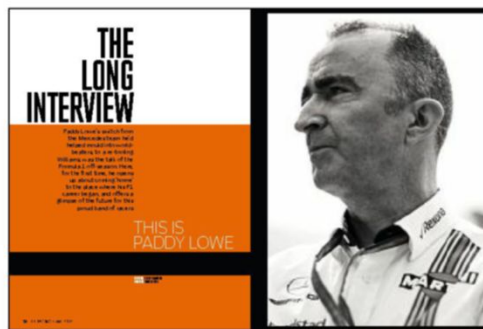
44

PRETTY IN PINK
We talk to Force India about their innovative deal with sponsors BWT, to get the story behind the boldest branding on the grid



56

PADDY LOWE SPEAKS OUT
Long considered one of F1's pre-eminent designers, Paddy Lowe explains his new challenge at Williams



68

GROSJEAN IN CHINA
The Haas ace applies Confucian wisdom to his career trajectory, as he tours a Shanghai temple with *F1 Racing*



SECTOR 2

34

SEB VETTEL: A TRUE GREAT?
In terms of championships and race wins, Seb's up there with the best. So why is he so often described as simply 'lucky'? And can he finally prove his talent this year at Ferrari?

44

FORCE INDIA'S NEW LOOK
From the livery of the VJM10 to the drivers' helmets, Force India have chosen to 'think pink'

50

YOU ASK THE QUESTIONS
Young Esteban Ocon on intra-team rivalry at Force India and the return of the French GP

56

THE LONG INTERVIEW
The architect of Mercedes' title success, Paddy Lowe, discusses his recent move to Williams

66

VIEW FROM THE COCKPIT
What Fernando Alonso can see through his visor, pre-race

68

ROMAIN GROSGEAN
He says he's at the peak of his career and just waiting for his chance to finally prove himself

74

THE FORD-COSWORTH DFV
Matt Youson traces the history of the most successful and ubiquitous F1 engine ever

80

MY DREAM JOB
Sauber's senior strategy engineer, Ruth Buscombe

82

VIVE LA FRANCE!
We take a spin around the returning Paul Ricard circuit with Allan McNish



Damien Smith

[@F1Racing_mag](#)
[facebook.com/fl1racingmag](#)
[instagram.com/fl1_racing_mag](#)

Tales of the unexpected

What's your take on Fernando Alonso and his crack at the Indianapolis 500, at the expense of missing – of all races – F1's signature grand prix?

Do you admire him for not only showing the intelligence to see the bigger racing picture beyond the blinkered F1 world and taking on one of the world's great sporting spectacles, but also possessing the gumption to put himself on the line at an event that is both difficult to master from a cold start and still genuinely dangerous? Or have you decided that missing Monaco is a sure sign he's lost his mojo, particularly since this year's race most likely offers McLaren-Honda their best chance of springing a half-decent result? Perhaps you'd go even further and brand Alonso a traitor to the cause? If you haven't already (see p91), let us know how you judge it. We'd love to hear from you.

Meanwhile, at the sharp end of F1, the duel between Mercedes' Lewis Hamilton and Ferrari's Sebastian Vettel is brewing nicely, and here too there's a welcome ingredient of the unexpected. Formula 1, predictable? Not right now it isn't.

We focus on the driver in the red corner this month and ponder his place in the pantheon. How odd that a man who won four straight titles should still be doubted. As Andrew Benson reminds us on p34, the numbers tell us that he's one of the all-time greats – and yet still the critics mutter. Did the stars align at Red Bull to make Vettel 'lucky' – or has he earned the right to greater respect?

It has been interesting to note Hamilton's regard for the Ferrari man in the early rounds of 2017. At the height of the Red Bull era, Lewis made it clear that his enthusiasm for Seb's talents was well under control. Whether that was driven by a sliver of envy or a racer's instinct for spotting genuine speed, Hamilton was far from the only one to appear underwhelmed. Alonso and Mark Webber (who as team-mate and rival admittedly had a clear agenda) were never members of the fan club either.

But in early 2017 mutual appreciation sprouted between a pair of F1 titans who, somehow, have never faced each other in a consistent head-to-head over the course of a season, despite inhabiting the same era (each took his bow at the pinnacle in 2007). The sportsmanship, in place of the usual brinkmanship, is refreshing, although we're hardly going out on a limb to predict it won't last through to November. We've seen too much to consider them F1's Federer and Nadal and anyway, perhaps it's only fair to admit we wouldn't mind a bit of niggles added to a two-hander that looks set to join the long list of gripping duels from F1 history.

Then again, perhaps the element of surprise will remain and they will play nicely all the way to Abu Dhabi. Whatever – we're hooked. The summer and autumn offer tantalising promise.

Damien Smith
European editor-in-chief

Contributors



ANDREW BENSON
Little escapes the close attention of the BBC's F1 correspondent. This month, we ask him to turn his gimlet eye on Sebastian Vettel (p34)



THOMAS BUTLER
One of our portrait photographers *du choix*, Thomas has trained his lens on Paddy Lowe. Look out for the twinkle in the eye... (p56)



MATT YOUSON
So much more than an engine, the Cosworth DFV was the bedrock of modern F1. Matt talks us through its nuts and bolts on p74



STUART CODLING
'Coddies' is a man of many talents: part-comedian, part-onesie-wearing London Irish fan, and the author of our Ricard piece on p82

Team principals

European editor-in-chief
Damien Smith
Editorial director
Anthony Rowlinson
Managing director
Tim Bulley
Publishing director/licensing
Stuart Williams

Pit crew

Group managing editor
Stewart Williams
Executive editor
Stuart Codling
Associate editor
James Roberts
Chief sub-editor
Vanessa Longworth
Art editor
Frank Foster
Designer
Jack Woolrich

Principal photographers

Steven Tee
Lorenzo Bellanca
Columnists
Peter Windsor
Dieter Rencken
Pat Symonds
Photo agency
LAT Images
Group publishing manager
Sunita Davies

Production controller

Katrina Renwick
Office manager
Joanne Grove
Editorial tel
+44 (0)20 3405 8100

Advertising

Advertising director
Matt Witham
UK sales manager
Ben Fullick

Subscriptions

Email: help@f1racing.themagazineshop.com
Customer hotline/back issues 0344 848 8825

Our partners



F1 Racing is published monthly in the above territories. Formula One, Formula 1 and F1 (trademarks of Formula One Licensing BV, a Formula One Group company) are used under licence.

Circulation queries Seymour Distribution Ltd, 2 East Poultry Avenue, London EC1A 9PT, Tel +44 (0)20 7429 4000. Fax +44 (0)20 7429 4001. Email: info@seymour.co.uk ISSN 13614487. EAN 07713614480012. Printed by William Gibbons & Sons Ltd, 28 Planetary Rd, Willenhall, Wolverhampton WV13 3XT. Colour by Haymarket Prepress © 1996 Autosport Media UK
Reproduction in whole or in part of any photograph, text or illustration without written permission from the publisher is prohibited. Due care is taken to ensure that the content of F1 Racing is fully accurate, but the publisher and printer cannot accept liability for errors and omissions. F1 Racing is a member of the Audit Bureau of Circulations.

Subscriptions F1 Racing subscriptions, Autosport Media UK 3 Queensbridge, Northampton, NN4 7BF, UK. Email: help@f1racing.themagazineshop.com. Tel: 0344 848 8826. Overseas Tel +44 (0)1604 251 454. F1 Racing (ISSN number 74597X) is published monthly by Autosport Media UK, 1 Eton Street, Richmond, TW9 1EF, UK. Airfreight and mailing in the USA by agent named Air Business Ltd, c/o Worldnet Shipping Inc, 156-15, 146th Avenue, 2nd Floor, Jamaica, NY 11434, USA. Periodicals postage paid at Jamaica NY 11431. Subscription records are maintained at Autosport Media UK, 1 Eton Street, Richmond, TW9 1EF, UK. Air Business Ltd is acting as our mailing agent. We abide by the Editors' Code of Practice and are committed to upholding the highest standards of journalism. If you think we haven't met those standards and want to make a complaint, contact 0203 405 8100. Autosport Media UK Ltd is a part of Motorsport Network LLC



NEW ABARTH 595 TROFEO.



WITH ABARTH TELEMATICS, A RECORD MONZA EXHAUST AND 160HP,
THE 595 TROFEO IS READY TO TAKE YOU TO THE TRACK. GET BEHIND THE WHEEL
AND CHOOSE YOUR NEXT CHALLENGE.

PERFORMANCE CONNECTED.

**UNLOCK YOUR DRIVING POTENTIAL WITH
ABARTH TELEMATICS. THE 595 TROFEO'S
UCONNECT SYSTEM ALLOWS YOU TO ANALYSE
YOUR ON TRACK PERFORMANCE AND SHARE
YOUR RESULTS WITH FRIENDS.**

ABARTHCARS.CO.UK



Official fuel consumption figures for the Abarth 595 Trofeo: mpg (l/100km): Combined 47.1 (6.0), Urban 35.8 (7.9), Extra urban 57.7 (4.9), CO₂ Emissions: 139 g/km. Fuel consumption and CO₂ figures are obtained for comparative purposes in accordance with EC directives/regulations and may not be representative of real-life driving conditions. Factors such as driving style, weather and road conditions may also have a significant effect on fuel consumption. Abarth UK is a trading style of Fiat Chrysler Automobiles UK Ltd. Model shown is an Abarth 595 Trofeo with Abarth Red Pastel Paint at £17,360 OTR Price.





Finding the limit in the braking zone


The first session in Bahrain on Friday morning is where the drivers try to familiarise themselves with the track.

During the first half hour of FP1 the teams are allocated an extra set of tyres, so drivers aren't afraid of pushing to the limit. Consequently, you get a lot of brake-locking into Turn 10.

I was positioned on the outside of that tricky double-left, and that's where I took this picture of Valtteri Bottas locking up his front-left tyre as he comes over the crest and descends into the braking zone. You can see that he's looking for the apex because he's preparing to rotate the Mercedes for a good exit out onto the long straight.



Photographer

 **LAT IMAGES:** Lorenzo Bellanca

Where Sakhir, Bahrain

When 4.30pm, Friday
14 April 2017

Details Canon EOS-1DX MkII,
600mm lens, 1/640th @ F8 ▶



MAHLE
K

THE KINGDOM OF BAHRAIN GRAND PRIX WINNER'S TROPHY



Another one for the trophy cabinet


After the Bahrain Grand Prix finished, I headed to the roof that overlooks the podium and waited for the celebrations to end. As Sebastian Vettel was about to leave the rostrum, myself and another photographer called down to him – and he looked up.

Initially he was holding the trophy in his right hand and a bottle of fizz in his left, but then he paused, put the bottle down, and held up his finger instead.

You can guarantee that when Seb wins a race he'll always pose for a picture. It's great, because not all drivers will do that. The other thing I love about this picture is the size of the trophy. It's almost as big as the FA Cup!



Photographer

 **LAT IMAGES:** Steven Tee

Where Sakhir, Bahrain

When 7.57pm, Sunday
16 April 2017

Details Canon EOS-1DX MkII,
200mm lens, 1/320th @ F3.2 ▶

Tripping the light fantastic

This photo was taken around 500 metres from the startline in Bahrain. I knew it would be a great vantage point because the cars, full of fuel, strike the asphalt and create sparks as they hit the bumps on the run down to Turn 1.

The combination of the sparks on the track work well with the coloured lights on top of the grandstand. And because the race starts at twilight, there's a deep-blue backdrop.

Altogether, the mix of four different teams – Ferrari, Red Bull, Williams and Renault – produces this incredibly rich palette of colours. It's shot on a slow shutter speed, so you really get a feel for the excitement of the race start.



Photographer



LAT IMAGES: Lorenzo Bellanca

Where Sakhir, Bahrain

When 6.02pm, Sunday
16 April 2017

Details Canon EOS-1DX MkII,
85mm lens, 1/5th @ F10 ▶







PETRONAS
PRIMIX

AMG
POWER



BOSS
HUGO BOSS

allianz



PETRONAS

44

PETRONAS
Qualcomm
EPSON
ROSE
PIRELLI
WIHURI

PETRONAS

1018
Pirelli



Reversal of fortune

This is another shot I took from the roof of the building overlooking the podium and parc fermé in Bahrain. The strength of the image is the juxtaposition between the contrasting fortunes of race winner Sebastian Vettel and runner-up Lewis Hamilton, who are the two main protagonists in this year's title battle.

Hamilton won in China and then seven days later we came to Bahrain and Vettel was celebrating the race win. With the way the early season has shaped up, I'm sure this scene is going to be replicated many times throughout the year.

The big question obviously is: which driver is going to finish first the most times?



Photographer

LAT IMAGES: Steven Tee

Where Sakhir, Bahrain

When 7.41pm, Sunday
16 April 2017

Details Canon EOS-1DX MkII,
200mm lens, 1/500th @ F3.8 ▶






Crushed dreams for Lance Stroll

At the start of the Bahrain Grand Prix, I took a shot from the inside of Turn 1 to try to catch some of the spectacular sparking from beneath the cars on the run down to the first corner. Then, as the race developed, I became aware of some commotion behind me.

I turned around to face the apex of T1 and saw yellow flags and Lance Stroll's Williams in the middle of the corner. I sprinted down there and captured this shot of him climbing from his wrecked Williams. What's unusual about this is that there are no marshals surrounding the car at this stage, so it's a pure shot. Plus the body language really sums up how he's feeling.




Photographer

 **LAT IMAGES:** Steven Tee

Where Sakhir, Bahrain

When 6.25pm, Sunday
16 April 2017

Details Canon EOS-1DX MkII,
600mm lens, 1/250th @ F5.6 

THE ONLY SHOW IN TOWN



ANTHONY ROWLINSON

[@Rowlinson_F1](#)

01 With a single keystroke, McLaren, Honda and Fernando Alonso have changed the nose-diving trajectory of their 2017 narrative. That keystroke was the pushing of an email icon marked 'send' to circulate news of Alonso's forthcoming assault on the Indy 500 to a dumbstruck media horde.

It's hard to keep a secret in Formula 1; harder still to keep a lid on such a juicy tale, but McLaren managed to do just that. No one saw this coming, although they're going to owe one particular bright young F1 journalist a favour for a very long time...

The dropping of this media bomb had an effect not seen in our cosy little world since the *News of the World* went nuclear on Max Mosley back in 2008 (to that title's terminal cost, it must be noted). Specialist motorsport outlets were sent into swooning meltdown, while even the most sober mainstream publications assented



Alonso's F1 mount is a lame horse. So it benefits everyone to have him racing elsewhere



The expression says it all: Alonso gets behind the wheel of Marco Andretti's IndyCar in Alabama

their respectful nods: "A Formula One Driver in the Indianapolis 500 Is No Longer Blasphemy," declared *The New York Times*. "Fernando Alonso and McLaren should be admired for Indy 500 decision," echoed *The Guardian*.

The Alonso news, unlike the Mosley revelations, has been viewed with almost uniform positivity by all close to the sport and even further afield. By one estimate, the 12 April announcement generated more F1-related media coverage in the US than the entire 2016 US GP.

That says an awful lot about Alonso's star power – a finding shortly to be confirmed when *F1 Racing* publishes the results of the recent global fan survey conducted by our sister titles *Autosport* and *motorsport.com*. It also says a lot about the enduring allure of the Indy 500 – as storied a race as ever there was, and one third of the elusive motorsport 'triple crown' (alongside the Monaco Grand Prix and Le Mans) that Alonso so covets.

"If I want to be the best driver in the world," he said of his new quest, "there are two options: I win eight Formula 1 world championships, one more than Michael Schumacher, which is very unlikely; the second one is to win different series in different moments of my career and be a driver who can race and win in any car, in any series. So that's very challenging – but attractive as well."

Indeed so, and like all the best ideas The Great Fernando's Indy Adventure started as an off-the-cuff remark – a back-of-the-fag-packet sketch, if you will.

"I mentioned to Fernando that it would be cool for McLaren to go back to Indy with him," says the team's executive director Zak Brown, "and man, he bit – hard!" Once he did, a whim that might have withered as nothing more than mere fancy – a happy daydream for incurable racing romantics – took on a harder edge as it became infused with compelling business and sporting logic.

For while McLaren's 2017 F1 season remains blighted by a woefully inadequate Honda power unit, why not go and do something else, something to appease both raging driver and patient backers in need of limelight; something to breathe on McLaren's racing flame; something that, without the corporate blinkers of a Ron Dennis, or the ringmaster clamp of an Ecclestone fist, could actually be made to happen? And more: good ol' Jenson gets to come back in a starring super-sub role for the Monaco Grand Prix! What's not to like?

The Indy 500, then, will be Alonso's release, a grand stage upon which he can *race* once more at the front. This welcome safety valve brings with it the bonuses of being attractive to McLaren's sponsors (currently getting poor bang-for-buck in F1) and the spectacular switching of negatives into a positive. And for Honda, brief respite from being F1's whipping boys (in IndyCar, their V6 turbo motor has won two races from three so far this year).

All this, of course, in advance of the Indy 500, with optimism high and the tantalising prospect of a rich new experience to be savoured. The downside, need it be said, is that Indy is a US oval superspeedway, where lap speeds will top 230mph and where no accident is small. And



“I MENTIONED TO FERNANDO THAT IT WOULD BE COOL FOR MCLAREN TO GO BACK TO INDY WITH HIM AND MAN, HE BIT – HARD!”



It's the biggest race in America and its risk factor and scale are enormous. But that won't daunt a fearless competitor like Alonso

Alonso will be racing there as a rookie – albeit a double world champion rookie rated as an all-time great.

"I would be open to criticism if he hurts himself," Brown told *F1 Racing*. "Everything in motor racing is a calculated risk – even someone making a pass in a grand prix. You can hide from that but, you know, we haven't forced Fernando to do this. He's the guy who is making the decision. It's either going to be one of those things where we go and win the race and we look like absolute geniuses, or the other extreme: he hurts himself and everyone says 'I can't believe they did it'. But we're in a risk-taking business, so you can either be a chicken-shit or be a racer and go for it as best you can."

The perils of oval racing, not to mention the singularly epic scale of the 500, should not be ignored by any who take on their challenge, which helps explain why McLaren have employed former Indy winner and two-time IndyCar champ Gil de Ferran as Alonso's 'driver coach' – although he scoffs at the description. "That terminology is a little bit misleading," he says, "and I certainly don't think I'll be offering Fernando any tips on how to drive! We're talking

about one of the best drivers in history, someone who's very complete and who excels in all the important aspects of being a racing driver. Whenever there are moments of wheel-to-wheel racing in F1, when they're mixing it up, Mr Alonso always seems to come out on top."

Where de Ferran believes he might be able to offer guidance is in short-cutting the learning process of how to go about a long (three hour-plus) race held in a unique amphitheatre setting. "There's no other motorsport experience that can prepare you for racing in an arena in front of 400,000 people for the first time," he says. "Then there's the race itself; it has a cadence, so there are moments when you have to be aggressive and others when you have to chill. It's a very strategic race." ▶

And it's definitely no place for the faint-hearted: "There are certain situations," says De Ferran, "particularly in qualifying, when Indy challenges your courage and your instinct for self-preservation. You qualify on an empty track, on a solo run, and you never really know what the track conditions are going to be like. You don't have time to wait to find out, so you end up telling yourself: 'I am going to keep my right boot flat.' And that's what you do."

Bravery is not a quality Alonso lacks and his speed and racing skills are not in question. Meantime, McLaren's chosen partner, Andretti Autosport, are a blue-riband IndyCar operation: four titles in the series and four Indy 500 wins, the most recent with Alex Rossi. Michael Andretti himself will call race strategy for Alonso.

Might an improbable victory therefore be in prospect? De Ferran, for one, won't rule it out: "I said from the beginning that Fernando Alonso is the kind of guy who could win in anything with four wheels, an engine and a steering wheel. And an IndyCar has all of those things."



LAT IMAGES: STEVEN TEE; GLENN DUNBAR

McLaren maintain they have built a good chassis in the MCL32 and that the problem is with the Honda PU. It's now reported that Mercedes are stepping in to help out...

FRIENDS IN NEED

02

Neither McLaren nor Alonso, nor Honda have much to lose by bunking off the Monaco GP. Fernando's fifth place last year was a joint-best 2016 result for all parties, and prospects even for a repeat seem low. The 2017 McLaren-Honda package remains stubbornly off the pace, despite this being their third year under the 'hybrid' F1 technical regulations. And for Honda, the challenge of engineering sufficiently potent energy recovery systems to couple with their 1.6-litre V6 turbo seems insurmountable; the MCL32 has been near-becalmed, such is the lack of thrust from Honda's RA617H.

McLaren maintain their car's a good 'un, and that GPS corner-speed traces prove that it's fully competitive

“I HAVE NEVER RACED WITH LESS POWER IN MY LIFE!” FUMED ALONSO IN BAHRAIN

through the twisty bits. But down the straights is another story. Over the Bahrain Grand Prix meeting alone, four MGU-H failures blighted the weekends of Alonso and Stoffel Vandoorne, the latter unable even to take the start. "I have never raced with less power in my life!" fumed Alonso in Bahrain and he was seen on the Saturday of the race weekend in a semi-public confrontation with Honda's Yusuke Hasegawa.

There may, however, be the prospect of a less fleeting fix to this unsatisfactory relationship than the temporary succour offered by a jaunt to the Indy 500. *F1 Racing* understands that reports of Mercedes preparing to help Honda get to grips with the furiously complex and multi-faceted F1 hybrid technology are accurate, so it may yet come to pass that Honda, with outside assistance, are able to construct an engine sufficiently powerful to convince Alonso to stick around. ▶

F1 DIGEST THE MONTH'S BIG STORIES AT A GLANCE

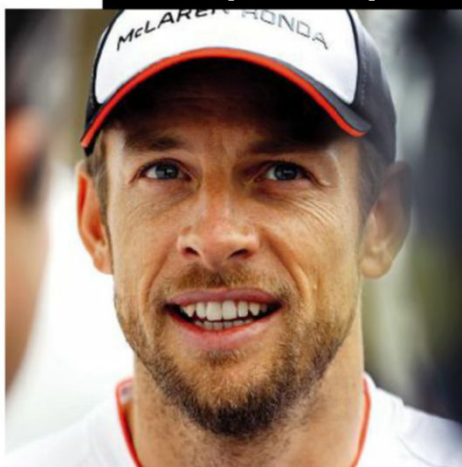
01.04.17 F1 stakeholders meet to discuss cheaper and noisier engines for post-2020 formula

07.04.17 Malaysian Grand Prix to be dropped from F1 calendar after 2017

11.04.17 Pascal Wehrlein cleared to return to cockpit duties after recovering from back injury

13.04.17 Formula 2 racer and former McLaren junior Oliver Rowland lands Renault development driver role

14.04.17 Jenson Button confirmed as McLaren stand-in for Monaco Grand Prix while Fernando Alonso competes in Indy 500



18.04.17 Renault evaluate new hybrid components in Bahrain test

24.04.17 Sauber close in on Honda engine deal

25.04.17 'Halo' cockpit protection concept shelved in favour of 'Shield'; shark fins and T-wings to be banned for 2018





KEVIN DE BRUYNE



RAHEEM STERLING



SERGIO AGUERO

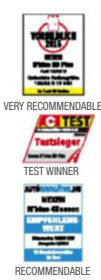


DAVID SILVA



**MOVE
BRILLIANTLY**

N FERA SU1 N blue HD Plus N blue 4Season



NEXEN NEXEN TYRE

NEXEN TYRE GLOBAL HOMEPAGE : <http://www.nexentire.com>
 NEXEN TYRE UK HOMEPAGE : <http://www.nexen-tyres.co.uk>

ENOUGH ALREADY!

03 But what if Alonso cries “enough!” and throws himself into the swirl of the 2018 driver market? Well, things could get interesting, because a number of race seats aren’t being occupied as securely as they might be and for this, we can thank F1’s two Finns – Valtteri Bottas

RUMOURS PERSIST THAT MERCEDES HANKER AFTER SEBASTIAN VETTEL’S SIGNATURE MORE THAN ANY OTHER, AND REGARD HIM AS THE ONLY CREDIBLE SUCCESSOR TO HAMILTON IN TERMS OF TALENT, SPEED AND EMINENCE

and Kimi Räikkönen. Both are notionally out of contract at the end of this year, and while Kimi’s future will most likely boil down to whether or not Ferrari will sign their 2007 champion for one last dance, Bottas’s position is more nuanced.

On paper he’s doing okay, and his hard-edged Sochi win, showing Lewis Hamilton the way all weekend, will have done his prospects no harm. But will that be enough to earn him a second year in silver?

Rumours persist that Mercedes hanker after Sebastian Vettel’s signature more than any other, and regard him as the only credible successor to Hamilton in terms of talent, speed and eminence, should Lewis ever up sticks to pursue more vigorously his non-racing activities.

With Vettel also being out of contract at the end of ’17, a Hamilton-Vettel Merc superteam is a real – if unlikely – possibility, and one that would also open up a Ferrari drive, regardless of Räikkönen’s fate.

And who might be available to answer Ferrari’s call? Remember when no one believed Alonso could ever go back to McLaren...? **10**

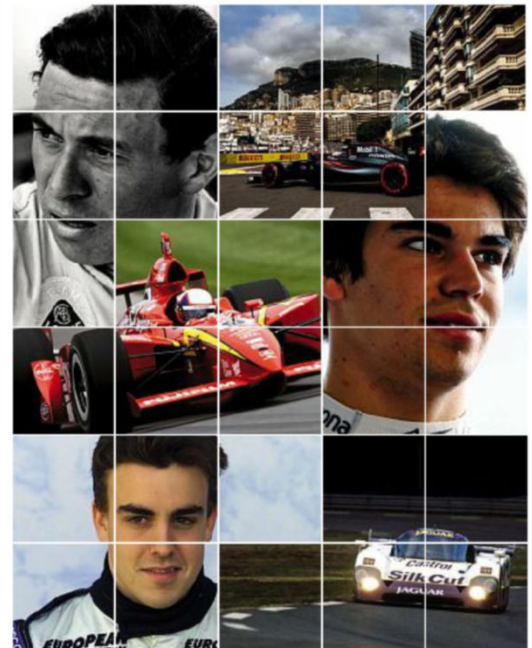
This year they’re great sporting rivals. Next year, there’s a chance they could be team-mates



F1 MASTERMIND

Your chosen specialised subject: the world’s greatest sport

- Q1** In the 1967 Indy 500 there were three drivers on the grid who also completed a full F1 season: Jim Clark, Jackie Stewart – and which other driver?
- Q2** How many starts will Jenson Button have made when he makes his one-off F1 return in Monaco?
- Q3** Five current full-time F1 drivers have one part of the ‘triple crown’ to their name. Who are they?
- Q4** Lance Stroll was born how far from Indianapolis as the crow flies: 652, 702 or 752 miles?
- Q5** Five former F1 drivers are joining Fernando Alonso in the Indy 500. Alexander Rossi, Takuma Sato, Max Chilton and Sébastien Bourdais are four – who is the fifth and only F1 race winner?
- Q6** What was notable about the date of the first ever Bahrain Grand Prix?
- Q7** What has been Alonso’s best result in the six F1 races in which he’s competed at Indianapolis?
- Q8** Sky F1’s Martin Brundle and Johnny Herbert have both won Le Mans, but in which years?
- Q9** Who was the last Finn, prior to Valtteri Bottas, to be on pole for a GP and which race was it?
- Q10** When did Fernando Alonso make his F1 debut?



1 Dan Gurney **2** 306 **3** Alonso, Hamilton, Vettel, Räikkönen and Hülkenberg **4** 752 (from Montréal) **5** Juan Pablo Montoya **6** It was on 4 April 2004 (04/04/04) **7** Second in 2007 **8** 1990 and 1991 **9** Heikki Kovalainen, 2008 British GP **10** 2001

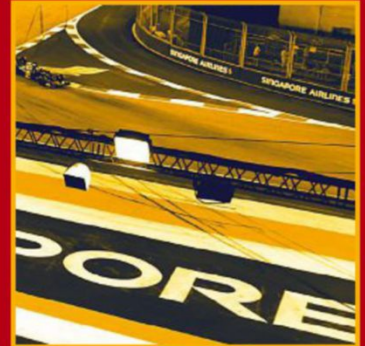
LAT IMAGES: GLENN DUNBAR; ZAK MAUGER; CHARLES COATES



2017 FORMULA 1
SINGAPORE AIRLINES
SINGAPORE GRAND PRIX



15.16.17 SEP 2017
MARINA BAY
STREET CIRCUIT



HOME OF FORMULA 1[®] NIGHT RACING

LIANNE LA HAVAS



15 SEP FRIDAY
16 SEP SATURDAY

ONEREPUBLIC



15 SEP FRIDAY

ARIANA GRANDE



16 SEP SATURDAY

THE CHAINSMOKERS



16 SEP SATURDAY

GEORGE THE POET



16 SEP SATURDAY
17 SEP SUNDAY

DURAN DURAN



16 SEP SATURDAY
17 SEP SUNDAY

SEAL



17 SEP SUNDAY



ARTISTE LINE-UP SUBJECT TO CHANGE. VISIT THE OFFICIAL WEBSITE FOR ARTISTE PERFORMANCE TIMINGS, ZONES AND STAGES.

OFFICIAL WEBSITE

WWW.SINGAPOREGP.SG

AVAILABLE THROUGH ALL AUTHORISED TICKETING PARTNERS

PHONE BOOKING

+65 6738 6738

HOSPITALITY ENQUIRIES

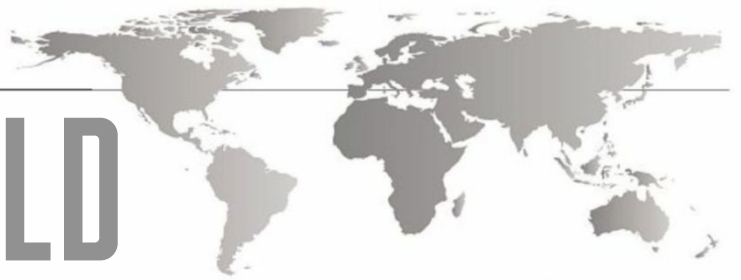
+65 6731 5900

HOSPITALITY@SINGAPOREGP.SG



The F1 FORMULA 1 logo, F1, FORMULA 1, FIA FORMULA ONE WORLD CHAMPIONSHIP, SINGAPORE GRAND PRIX and related marks are trade marks of Formula One Licensing BV, a Formula 1 company. All rights reserved.





Your guide to modern and classic F1 happenings across the globe



20-21 May
Spa Classic,
Spa-Francorchamps

JULY

1-2 July

> FIA Masters Grand Prix de France Historique, Magny-Cours, France

> Goodwood Festival of Speed, Sussex
This year's event features a very special celebration of Ferrari's 70th anniversary, which aspires to be the greatest ever display of Ferrari road and racing cars ever to be seen here.



1-2 July
Goodwood Festival of Speed

MAY

20-21 May

> Silverstone Historic Festival

> Spa Classic, Spa-Francorchamps
Alongside the seventh running of the Spa Classic event for sportscars and junior single seaters, Bonhams will be hosting an auction in which the 1991 Canadian Grand Prix-winning Benetton B191-02 (above) is up for sale. It first saw service at the San Marino GP, and was driven by Nelson Piquet for most of the season before being handed over to Michael Schumacher for the last two races. It's expected to fetch over £630,000.

27-28 May

> Masters Festival, Brands Hatch

28 May

> F1 Monaco Grand Prix, Monte Carlo

JUNE

10-11 June

> HGPCA Grand Prix de l'Age d'Or, Dijon-Prenois
The Historic Grand Prix Association's multi-class contest features veteran pre-war grand prix machinery, as well as world championship F1 cars up to 1966 vintage.

11 June

> F1 Canadian Grand Prix, Montréal

25 June

> F1 Azerbaijan Grand Prix, Baku



28-30 July
Silverstone Classic

9 July

> F1 Austrian Grand Prix, Spielberg

16 July

> F1 British Grand Prix, Silverstone

28-30 July

> Silverstone Classic
On-track action will include demo runs to mark Williams' 40th anniversary, plus HGPCA and FIA Masters races featuring grand prix cars from the 1920s to the 1980s. This is a packed weekend of racing on two wheels and four.

30 July

> F1 Hungarian Grand Prix, Budapest

AUGUST

11-13 August

> Oldtimer Grand Prix, Nürburgring

27 August

> F1 Belgian Grand Prix, Spa-Francorchamps



Sunday 21 May 2017
Spa-Francorchamps,
Motor Circuit, Belgium

Catalogue now online

ENQUIRIES

Europe

+32 (0) 476 879 471
eurocars@bonhams.com

UK

+44 (0) 20 7468 5801
ukcars@bonhams.com

USA

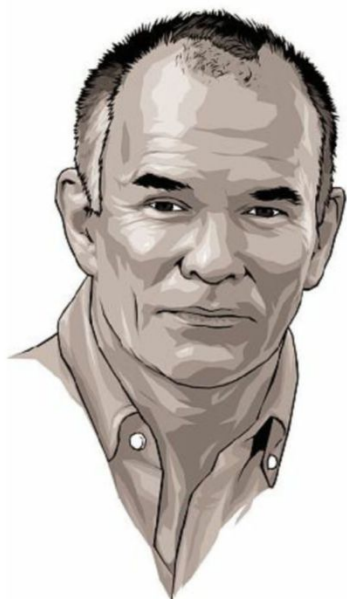
+1 212 461 6515, East Coast
+1 415 503 3285, West Coast
usacars@bonhams.com

*The ex-Canadian 1991 Grand Prix winning,
Nelson Piquet, Michael Schumacher*
1991 BENETTON B-191-02
€750,000 - 900,000





Bonhams

bonhams.com/motorcars



THE RACER'S EDGE

PETER WINDSOR

 @F1Racing_mag
 facebook.com/
 flracingmag

FEELING THE BLUE-FLAG BLUES

I have to admit that I've been in two minds about the blue flag situation, ever since they came up with that rule requiring a blue-flagged driver to move over within three corners. Or, to be more specific, due to the savage penalties incurred by the slower driver for not doing so.

Those of us who were at Zolder in 1982, when Gilles Villeneuve lost his life because a slower driver didn't move over for him in qualifying, have, I think, always been very pro-blue. On the other hand, as you will read on page 106 of this issue, 'using the traffic' is to some extent a part of the racing driver's lost art, which is right up there along with heel-and-toeing, judging gaps and distances, noticing photographers near the apex, and braking to within a millimetre from any given speed.

Stirling Moss could do all that and so much more, and he won the Monaco Grand Prix in 1961, against all the odds, in part because of his perfect 'use of the traffic', by which I mean his innate feel for when to put a back-marker between himself and Richie Ginther, how to wake up said



back-marker in the first place – and exactly where to pass him even when the slower driver was asleep.

That's a lost art, as I say, because these days, all the drivers are spoon-fed down to the lowest common denominator. Now, if you're

about to be lapped by Lewis Hamilton, it makes no difference at all whether you are a Sauber driver on the wrong tyres in 18th place or Fernando Alonso doing valiant battle somewhere in the midfield with a Force India and a Williams. *The leader's behind you! Move over! Ignore him at your peril!*

I've lost count of the number of decent mid-field scraps that have been dissolved by the blue flags induced by a solitary race leader – and all this happening at a time when we need as much racing as we can possibly create.

I mention the lowest common denominator factor simply because there is an enormous difference between a lazy, unaware, slower driver who is suddenly going to move across on you, and a proper racing driver who shouldn't be expected to come right out of the throttle, or put himself on the marbles, just to let the leaders through. Because of the occasional appearances of the former, the latter are now savagely strait-jacketed.

That sort of thing isn't right and it isn't, as I keep saying, good for the show.

The whole situation is further complicated by aerodynamics. In the days of Stirling Moss – pre-wings, in other words – you could run as close to another car as you dared. Today, as Max Verstappen so vociferously informed us in China, where he couldn't get within two seconds of Romain Grosjean because of the understeer that would ensue, it's a much more awkward story. An obvious step forward would be a complete wing/aero ban – something I would absolutely love to see, but presume will never happen.

Option two, we all hoped, was that the new F1 chassis regulations would enable the cars to run closer to one another: that was what the new rear wing, running in more 'benign' air, was all about.

So much for the experts. Benign or not, the wider, more draggy 2017 F1 shapes are actually worse than last year's cars in terms of turbulence. If Max Verstappen couldn't handle the wake of a Haas around the Shanghai International Circuit, then all bets are off. Having said that, Daniel Ricciardo didn't appear to have too much trouble sitting closely behind the rear wing of his team-mate, which suggests that the turbulence varies from car to car... or from monkey seat to monkey seat, if you want to put it that way.

Option three is to go wild with the blue flag rule. *Why three corners? Why not three laps? So what if it bunches up the racing. Isn't that what we want?*

I italicise this because I'm actually paraphrasing the words of a significant Formula 1 official who wishes to remain nameless. Me? I'm not so sure. I do think that Lewis Hamilton, for example, is better in traffic than Nico Rosberg was, and that it would have been nice to showcase that difference from time to time. And I love watching Lewis thinking his way through the lap, be it slowing down by just the right amount before his pole attempt or, when he is given the chance, by weaving his way through the jam when he happens to make a slow start.

I would enjoy a three-lap rule in this respect but then the downside would be the danger. As Mark Webber will tell you a million times over, the most treacherous thing in racing is speed differential, and there's no doubt that giving a slower car

Exciting midfield battles are all too often ruined by blue flags, which ensure that the race leaders can pass through traffic unscathed



“PRE-WINGS, YOU COULD RUN AS CLOSE TO ANOTHER CAR AS YOU DARED. TODAY, IT’S A MUCH MORE AWKWARD STORY”



Stirling Moss on his way to victory at the 1961 Monaco GP, his success largely due to his ‘use of the traffic’

three laps of leniency will induce the drivers of the faster cars to make a wrong pass at the wrong place or time. That’s part of the art – or non-art – of being a racing driver, you might say, but then the whole business of artificially bottling the blue-flag zone is in itself contrary to what the 1961 Monaco GP was all about. Stirling’s ability in traffic was about *choosing* the right moments. His finesse was in the timing as well as the execution.

Option four? Accept the shortcomings of the wider cars and open up the blue flag to a two- or three-second gap (rather than just one second). That’s basically what the Max rant in China was all about: one second of turbulence in the old cars equates to two or three in the new ones.



Me? I still miss Gilles Villeneuve; his was a needless accident. I still thirst for everything I can learn about Moss. I have total respect for Max Verstappen; I love watching Lewis, and Max, in traffic.

So, yes: I think the time is up for wings on Formula 1 cars. Let’s get rid of ‘em. Let’s go back to racing – with and between the back-markers. 🍷



THIS F1 LIFE

PAT SYMONDS

 @F1Racing_mag
 facebook.com/
 flracingmag

environment, it is Fernando. He is a natural driver who is always at the limit and I suspect that finding that limit on a high-speed oval in a car with very different aerodynamic and tyre characteristics will be a challenge that he will rise to and relish. In a broader sense, it is great to see a scenario such as this which is beneficial to all. McLaren have gained admiration, and fans on both sides of the Atlantic get a chance to see a great driver tackle a unique race. It is reminiscent of those days so long ago when F1 drivers would drive anything going. They needed to do so in order to earn a living, and the real winners were the general public who had a chance to see their heroes at many venues and in different situations.

Looking ahead, I am sure the new regulations will accelerate the relentless development race that has been at the core of F1 in recent years. There is no doubt that Barcelona will see a raft of new aerodynamic features as teams are able to realise the fruits of their labours after a period of consolidation. Their focus until now will

have consisted of bringing spares levels up to full operational quantities and, for some, recovering from the accident damage that plays havoc in the early part of the year.

Ferrari however gave an unmistakable notice of intent by bringing four of their new front wings to Bahrain. A remarkable feat that can be achieved only with a great deal of confidence and an even greater budget.

However, some interesting things have already emerged from the season-openers. There is no doubt that Pirelli have achieved the objectives set for them by the teams and the FIA last year. The wider 2017 tyre appears to be a very different animal to its delicate forerunner. We have seen that it certainly has lower degradation than last year, which may or may not be a good thing for exciting racing, but, more importantly, we have also seen that it is able to recover from abuse in a much more normal manner. This means that drivers have had far greater confidence to push their cars to the limit over longer periods, knowing that any slight overexuberance will not spell an end to their afternoon. Couple this with a reasonably generous fuel allowance for 2017 and we, the fans, can expect, and indeed have seen, some full-on competition this year. The downside of this is that the tyres are rather hard and therefore the potential lap-time reduction expected of the high downforce 2017 cars has not been realised.

I am always cautious of trying to predict outcomes from the evidence portrayed by small samples, but if we are to believe that these first races may define the season ▶

THE SHIFTING SHAPE OF THE SEASON AHEAD

On Sunday 9 April, sports psychologists must have thought the world had tilted on its axis. The essence of sport is competition, and the essence of competition is a desire to humiliate your opponent. By definition, therefore, sport is intensely competitive and any participant's self-esteem is of paramount importance. This fact alone leads to a burning desire to win that should preclude the possibility of friendship with a fellow competitor lest it dull the killer instinct that is so vital to success.

Yet in Augusta we saw Justin Rose genuinely pleased to see his great friend Sergio Garcia win the Masters, and, on the opposite side of the world, we saw an unusual kinship between Sebastian Vettel and Lewis Hamilton as their finishing positions from Australia were reversed in China. How this rivalry might develop will undoubtedly become one of the fascinating aspects of what promises to be a thrilling season.

Speaking of competitors, the news that Fernando Alonso will miss the Monaco GP to compete at Indianapolis is further proof that it is



not just politics where the unexpected is becoming ever more commonplace. I, along with most others in the sport, would never have predicted such a thing. While it is true that an F1 car is the ultimate open-wheel racing machine and the top F1 drivers are the

best in the world, we should never underestimate the professionalism and the subtle differences that are required for success in other series. It will not be an easy transition. That said, if ever there were a driver whom I would consider capable of succeeding after such a paradigm shift in his

Alonso's IndyCar stint is reminiscent of the old days, when drivers would compete in many series



GRAND PRIX GUIDE

The most innovative and comprehensive platform for Formula 1™ data and statistics is now MOBILE !



Designed for iPhone and iPad.

Available in SIX Languages !



Download on the
App Store

"The most authoritative and certainly the best guide to Formula 1 data & statistics !"

- The New York Times

- **News:** Latest & most up-to-date global Formula 1 news
- **Season Summary:** Every season since 1950
- **World Championships:** Every Championship since 1950
- **Drivers:** 960+ Detailed profiles
- **Constructors:** 200+ Detailed profiles
- **Grands Prix:** 950+ Detailed results
- **Circuits:** 70+ Detailed profiles
- **Engines:** 100+ Manufacturer profiles
- **Tyres:** 10+ Manufacturer profiles
- **Statistics:** 150+ Dynamically updated tables



WWW.GPGUIDE.COM

GPGuide.com and GPGuide Mobile Apps are exclusive products of RKadia Partners, Ltd.
Copyright © 2017 - All rights reserved
F1, FORMULA ONE, FORMULA 1, FIA FORMULA ONE WORLD CHAMPIONSHIP, GRAND PRIX
and related marks are trade marks of Formula One Licensing B.V.



“ MERCEDES HAVE ENJOYED THEIR DOMINATION BUT NOW WE’RE SEEING FERRARI ARE MORE THAN CAPABLE OF CHALLENGING THEM ”



LAT IMAGES ANDREW HONE OTHER PHOTO: SUTTON IMAGES

may well see close racing swing to favour different teams as these varying circuit characteristics come into play. The battle between Ferrari and Mercedes is titanic and we saw the trajectory of the first races dictated by tyre usage, ambient track temperatures and the

brave strategic decisions that are necessary when the gaps are close.

For the past three years it has generally been all too easy for Mercedes. They have some of the best strategists in the pitlane, but I know from experience that the easiest way to determine a good strategy is to start with a dominant car. They have enjoyed their domination and I admire them for it, but now we’re seeing Ferrari are more than capable of challenging them, and I am sure it won’t be too long before Red Bull, who have had slow starts to the past couple of seasons, join them.

The one area where Mercedes remain unchallenged is qualifying. Their ability to wind the power on for Q3 (and indeed the first lap of the race) is stunning. The speculation is that they use a different piston material that can better cope with the huge cylinder pressures. Perhaps when the others get their power units to near parity, the battle will become even closer. 🏁

ahead, then we can look forward to excitement by the bucketful. Interestingly, these first races provide a spectrum of different conditions. In Australia, we see a circuit where front tyres provide the limit of performance and track temperatures are around average. We moved on to China where the front limitation still applied, but the cooler temperatures differentiated between

those who use tyres hard and those who are more gentle on the use of this precious rubber. In Bahrain, the emphasis switched to the back of the car as rear tyres become the limiting factor for performance, while Russia has always exhibited low tyre degradation and limited overtaking opportunities. With some evidence that the 2017 cars have a much narrower sweet spot of setup, we



The 2017 Pirelli is much more robust than in previous years, giving drivers the longed-for ability to push hard



TOM HARTLEY JNR

EXQUISITE CLASSIC & PERFORMANCE CARS



TWO FACTORY PROTOTYPES

We are very proud to announce the acquisition of these two very important cars. Both are factory prototypes, both with only 1 owner from new, that owner being a Ferrari dignitary of the highest order. In addition, both cars were gifted to the only owner by the Commendatore Enzo Ferrari himself.

Neither car has sustained any accident damage nor received any paintwork whilst in the only owners hands and have both been recently mechanically recommissioned by the factory. Ferrari Red Book Classiche Certification has been awarded to both cars confirming that they were prototypes, who they were gifted to and that it was Enzo Ferrari that granted such.

Two very special cars and an important part of Ferrari's history.

£POA



Tel: +44 (0)1283 761119 www.tomhartleyjnr.com



24h
LE MANS

S E R E N G E T I
E Y E W E A R

OFFICIAL LICENSEE



CARRARA Leather 8549

Polarization / Spectral Control® / Photochromic

S E R E N G E T I
E Y E W E A R

AVAILABLE FROM SELECTED SERENGETI STOCKISTS INCLUDING:

EYESITE OPTICIANS
BRIGHTON. TEL 01273 724111
READING, WEYBRIDGE, WINCHESTER, OXFORD

OPTIX AT BROADGATE
LONDON EC2. TEL 0207 628 0330

ROGER POPE OPTICIANS
LONDON W1. TEL 0207 935 2124
DULWICH SE21. TEL 0208 299 0230

GREGORY & SEELEY OPTICIANS
FLEET ST, LONDON EC4. TEL 0207 353 1408
CRANLEIGH, SURREY. TEL 01483 272629

TOLLEY & PARTNERS
EAST SHEEN, SW14. TEL 0208 878 3415

LEIGHTONS OPTICIANS
PUTNEY, SW15. TEL 0208 789 7300

RICHMOND EYE CENTRE
RICHMOND, SURREY. TEL 0208 948 8882

VENTURI VISION
HASLEMERE, SURREY. TEL 01428 652777

HODD BARNES & DICKINS
LONDON EC2, TEL 0207 600 9861

PAUL WHITEMAN OPTOMETRISTS
REIGATE, SURREY. TEL 01737 223202

DH THOMAS OPTOMETRISTS
CAMBRIDGE. TEL 01223 245222

BRAD ABRAHAMS OPTOMETRY
BATH. TEL 01225 444321

OPTIQUE 2000
WIMBORNE. TEL 01202 848808

EYE CONTACT
LONDON EC2, TEL 0207 626 7232

HAINES & SMITH OPTICIANS
DEVIZES, TEL 01380 723446
MARLBOROUGH,
TEL 01672 513432

GR HARDWICK OPTICIANS
CLEVELEYS. TEL 01253 853030
LYTHAM. TEL 01253 794522

I2I OPTOMETRISTS
GLASGOW. TEL 0141 552 2030

SUNGLASSES.IE
DUBLIN. TEL 01-6618602

MOST MODELS AVAILABLE IN PRESCRIPTION



POWER PLAY

DIETER RENCKEN

[@RacingLines](#)

WHY CHANGE, WHEN CHANGE COSTS MONEY?

Formula 1's current engine formula took six years to not finalise. Conceived by the Max Mosley administration in 2008 and slated for introduction in 2013, it was delayed until 2014 because the goalposts moved after Mosley's departure. In the process, the architecture switched from inline-4 to V6 and certain 'performance-differentiating' technologies were dropped in the interests of cost saving. Yet this has proved to be the most expensive power unit change in F1 history, while post-2014 changes to the concept have opened the door to it becoming more costly still.

The 'hard hybrid' (as opposed to the 'soft' KERS-supplemented V8s) 1,600cc turbo formula was intended to appeal to and appease the fears of the six car manufacturers (plus Cosworth) then in F1. There were high expectations, too, that a more road-relevant engine concept would entice VW and a Korean brand to enter the sport.

As it transpired, the hoped-for entrants stayed away and half the manufacturers (plus Cosworth) walked, leaving Mercedes, Ferrari and Renault, with Honda making an awkward return a year



By 2020, the 'new' F1 V6 PU could be sidelined

inline-4 road-car engines, and therefore there was no marketing kudos. Mercedes, though, now pride themselves on offering the most powerful inline-4 2.0-litre turbo in the industry...

The current formula expires at the end of 2020, prompting the FIA to convene a meeting of F1 engine manufacturers (non-competitors were also invited) to consider what comes next. The meeting, held at the end of March in Paris, was attended by representatives from the FIA, FOM, Ferrari, Mercedes, Renault, Honda, VW and Alfa Romeo, plus independent engineer Mario Ilien.

So far so good, save that no independent teams, who pay through the nose for the exquisite power units the manufacturers provide, were represented. Yes, manufacturers are well placed to frame the technical specifications of whatever formula is adopted, but what use are fancy gizmos if they put half the grid out of business?

Manufacturer priorities are simple: an engineering platform that combines a test bed for road-car technologies with a performance-based marketing pedestal that provides a measure of product relevance. Budgets are immaterial, for once brands are committed to the public spectacle that is Formula 1 they spend whatever it takes to be successful, or face ridicule. Hence engine department headcounts of 600-plus.

Contrast that with the independent team wish list: cheap, reliable engines with 100bhp more than the rest (or, at the very least, power parity), preferably not only supplied free of charge by manufacturers, but accompanied by substantial marketing budgets – in other words, being paid by manufacturers to race with the best engine on the grid. That is just how Williams and Benetton won their titles.

A pipe dream? Seemingly so, for not even McLaren or Red Bull Racing achieve that via their Honda and Renault partnerships. While all commercial boxes are ticked by McLaren's deal, the power unit

is the laughing stock of the field; Red Bull have access to a reasonable engine, although the team cover power-unit costs through a badging deal with TAG Heuer.

Force India, fourth in the 2016 standings, pay full price (£15m) for their supply of Merc units, thus cars and kit do not feature the three-pointed star. The costs are covered by a pink livery deal with water company BWT, which illustrates the lengths independents go to in their quest for budget.

Ultimately, there is a disconnect between the manufacturers and their customers, the independent teams. Hence the presence of Ilien at the engine meeting is a positive sign, for ideally F1 needs an independent engine company to keep the manufacturers honest. However, as Cosworth and Craig Pollock's PURE project engine company can attest, independent suppliers were 'involved' last time round, and where are they now?

The wonder is that all parties are considering a change of engine formula. The staggering development costs for the current engine have now largely been amortised, while the units themselves are mostly reliable despite outputs of close to 1,000bhp. They are also super-economical, consuming half the energy for a given lap time when directly compared with the old-iron V8s. Talk about road relevant.

Surely the answer is to retain the present architecture, but simplify the more sophisticated hybrid systems. That would enable prices to be dropped to around £6.8m per two-car annual supply, which was the target all along. 🚩

WORDS
ANDREW
BENSON

PICTURES
LAT IMAGES
LORENZO
BELLANCA

THE GREAT DEBATE

Four titles and a run of outstanding records. And yet doubts still linger about Sebastian Vettel's F1 'greatness'. Surely a fifth crown in a Ferrari would confirm him as a true legend – wouldn't it?

Andrew Benson makes the case





WHAT MAKES A GREAT F1 DRIVER?

For some, it's numbers. Michael Schumacher, with 91 wins and seven titles, is the greatest of all time, and that's the end of it. Except it's not, is it? According to the numbers, Schumacher was more than twice as good as Ayrton Senna, who was not as good as Alain Prost, and Damon Hill was better than Gilles Villeneuve and Stirling Moss. How many people would agree with that?

The relative greatness of F1 drivers is a fascination of a sport where the influence of the machinery queries the statistical simplicity of, say, cricket or baseball. The numbers matter up to a point, but only as a frame on which to hang the rest of the evidence. Which brings us neatly on to Sebastian Vettel. Forty-four wins puts him behind only Schumacher, Lewis Hamilton and Prost in the all-time list. Four world titles is level with Prost and behind only Schumacher and Juan Manuel Fangio. The win tally looks set to go up this year – as does his title tally, judging by Ferrari's start to the season. It would take a special churlishness to try to sustain an argument that statistics such as these do not qualify Vettel for greatness. And yet nagging questions remain; weaknesses are all too evident.

Until the end of 2013, Vettel's career trajectory was vertical. But then came the turbo hybrid era and Daniel Ricciardo joined Red Bull. Vettel slumped in 2014, and Dan beat him in qualifying and races. As a result, Ricciardo was asked if he had ever thought what might have happened had he been promoted to the senior team sooner. "Sometimes," Ricciardo replied. Asked to elaborate, he chuckled. "Seb was lucky," he said.

And then came the second half of 2016, when, after 18 months of annihilating team-mate Kimi Räikkönen, suddenly Kimi was outqualifying Vettel and generally matching him overall.

So, was Ricciardo right? Was Vettel lucky? Will it take a title at Ferrari to solidify his greatness? Or is it an insult even to ask? ▶

THE
NAGGING

DOUBT

THE PATTERNS OF VETTEL'S CAREER

can be traced by two simple truths: he needs a car to behave in a specific way to be able to perform at his best; if he does not get it, things can quickly head downhill.

As former F1 driver Alex Wurz puts it: "He is a sensational driver – outstanding when things are going his way – with the only drawback being that when they are not, his analytical mindset takes priority over his natural talent, which somehow seems to limit his performance."

Even in Vettel's dominant Red Bull era there were times when this happened. The first few races of 2012 were a case in point: Vettel had romped to his second title the previous year, exploiting the combination of balance and downforce provided by Red Bull and Renault's mastery of harnessing the exhaust gases for increased rear downforce. This led to a counter-intuitive driving style, which dictated that rather than lift off if the rear started to slide, a driver should get on the throttle because the exhaust would provide the downforce to make it stick.

Partly because Red Bull led the way with the technology, Vettel was the first to realise this characteristic *could* be exploited. The car could be deliberately provoked to rotate faster on entry, and the driver could then use the exhaust-generated downforce not only to make the rear stick when it would otherwise slide but also to come off the corner like a rocket.

The rules changed for 2012, and exploiting the exhausts in this way grew harder. In the first few races Red Bull couldn't make it work consistently. Airflow into the diffuser was detaching in an inconsistent way – sometimes downforce was there and sometimes it was not. Without that consistency, Vettel could not rotate the rear on corner entry in the way he wanted.

Team-mate Mark Webber worked out a way to drive around this characteristic and was generally more impressive in the first part of the season. Vettel was unable to adapt, and made compromises on the setup, trying to make the car behave the way he wanted generally by stiffening the front. That made him more comfortable on turn-in, but cost too much general grip.

As the year went on, Red Bull worked on the problem. It improved over the summer, and they nailed it with an upgrade ahead of the Singapore Grand Prix. Vettel won four races in a row, overtook long-time leader Fernando Alonso in the championship and hung on to win the title despite a shaky final race in Brazil. Webber was comparatively lost, and remained so until the end of his F1 career a year later.

All the times when Vettel has struggled in his career, the same fundamental issues have been at play. For 2014, exhaust-blown downforce was banned, and Vettel could never get that year's Red Bull to behave in the way he wanted. The result? Generally, Ricciardo was quicker. The same happened in the second half of 2016. Development took the Ferrari in a direction Vettel did not like and he grew frustrated with it, trying to force it to do things it could not do. The result? His pace fell back towards Räikkönen's.

In these situations, Vettel's sunny side clouds over, and he heads into a downward spiral. His frustration and anger come to the surface. He tries too hard on track. He rants over the radio. And his desire to be involved in many aspects of the team, usually a strength, can backfire.

For the engineers, these are confusing times. Because Vettel can be so exceptional, the tendency is often to assume the problem must be with the car. Consequently both driver and team can get lost, having failed to realise it is the driver who has gone a little haywire and that everyone needs to take a step back. For the team management, too, it can be tough. Vettel is not averse to throwing his weight around even when things are going well – and the same is even more true when they are not.

Tensions boiled over within Ferrari last year. The evidence was there to be heard in many radio conversations – be it Vettel correctly overruling questionable strategy calls from the team, or fuming at Max Verstappen in Mexico. It was also evident in some targeted statements from Ferrari's management, which read very much like warnings to their driver.

Team principal Maurizio Arrivabene, talking about the fact that Vettel's contract was up for renewal in 2017, said in October: "Each of us has goals. So it is only right that anyone, no matter who it is, earns their place and their salary. Sebastian just needs to focus on the car. He is a person who gives so much, and sometimes this means he is interested in a bit of everything – so sometimes you have to refocus him; remind him to be focused on the main job."

Ferrari president Sergio Marchionne has said: "We know Vettel wants to win with us. Can we guarantee it? In return, he must drive with composure, be more calm, less agitated."

TV commentator David Coulthard, whose place at Red Bull was taken by Vettel in 2009 and who remains close to the team, says: "With Seb, as with all these 'lifers' from the modern generation of racing drivers, there is a child-like, spoilt nature. These are people who have been racing their whole lives, so they have extended childhoods; they have gone from boys to men, from poor to extreme wealth, without doing ▶



the university of life. If you are used to having a team of people around you telling you you're great, and facilitating success, the moment when that success is not there, the natural reaction of a hungry competitor is to assume that the problem must be something else other than yourself. But I think once Seb calms down, he is a team player and someone who maybe acknowledges behavioural patterns that he is not proud of and things like that."

By the end of last year, what Vettel needed was a winter away from F1 to refocus his mind, forget the frustrations of 2016 and come back at something approaching his best. So far, that looks to be exactly what has happened. ▶

KEEPING
THE

F A I T H





IF A CAR LACKS PREDICTABILITY

at the rear, it's as if Vettel cannot process it effectively. He also lacks the adaptability to drive around it in the way Hamilton or Alonso would. The flip side comes if he gets the car he wants.

Wurz says: "If in the entry phase his rear reacts suddenly or inconsistently, he doesn't seem to like that. But when the car does not have any surprises, like sudden snaps on entry, or has a very neutral balance and a stable and consistent rear end during the entry phase, he will use all four wheels to extract the most grip, all around the corner.

"Many drivers aim for this style, but only super-good drivers can do it. Seb does it to perfection. The vast majority drive to just one side of the car for grip on corner entry – mainly to the front grip, not using the rears – and, as such, limit the grip potential of the car.

"Seb uses the entry phase to evaluate the grip potential, but at the same time starts to rotate the car well before the apex. He likes to rotate the car a bit more on entry than others, when he still has enough front to end up with a perfect four-wheel slide at the apex, optimising the grip of all four wheels throughout the corner.

"You can influence it as a driver but you need to be really on it. He can do that better than anyone else; in a well-balanced car, he gets way more than anyone else."

That last sentence is worth reading again. Wurz is saying that, with the right car, Vettel is quicker *even than Hamilton*. It marries with an observation that Red Bull motorsport adviser Helmut Marko has made – that Vettel needs a particular kind of car to perform what Marko calls "his tricks". And, if true, it forces a rethink on some of the preconceptions around Vettel.

For some, his struggles with cars he does not like prove he is not at the level of Hamilton or Alonso. Or, after 2014, Ricciardo. But the extension of Wurz's argument is to understand that as an oversimplistic analysis of Vettel's gift. ▶

F1 FACTS OF THE MATTER

To take Ricciardo as an example, it may be that it's not that Vettel is not as quick; it's that he was not as quick *in those circumstances*. And the extension of that is that had Ricciardo and Vettel been together at Red Bull in 2012 and 2013, for example, the outcome might well have been different to what it was in 2014.

Certainly, everyone who has worked with Vettel at his best has come away filled with glowing praise for him. At the end of 2015, former Ferrari technical director James Allison, a huge fan of Alonso's ability, described Vettel's season as "flawless".

"We don't have as good a car as the Mercedes – that's obvious – and yet we won three races," Allison said. "Sebastian has won all three. And the reason he won those three and put it on the podium as much as he did is that we ask him to sort of work miracles to put his car in a competitive position, and he delivers those miracles lap after lap, race after race, weekend after weekend. Then, just occasionally, once or twice in a year, over thousands of laps, you see evidence that there isn't a machine there, there's a human. And that shows the magnificence of the achievement in all the other races."

Allison also has an opinion on the positive side of Vettel's desire to exploit all the advantages a team can offer, by getting involved in how people work together – the big picture, as well as the minutiae of car behaviour.

"I have worked with two guys who really, really understand the value of being in a team," Allison says. "One was Michael Schumacher and the other is Sebastian. That's not to denigrate the others, but it's a particular strength in Michael and it's a particular strength in Sebastian."

IT IS VERY EARLY DAYS, BUT THE

evidence so far is that 2017 could well be a year that plays to Vettel's strengths.

The season has got off to a good start, which should keep the negative internal pressures at Ferrari under control for the time being. The rule changes have given Vettel the rear downforce he likes, and the harder Pirelli tyres have a characteristic that a highly skilled driver such as Vettel can exploit – they are tricky on the limit. It is becoming clear from a series of incidents that the 2017 rear Pirellis will tolerate only so much angle on the car before they let go dramatically.

Wurz says: "The higher the grip with the smaller slip angle – you know, quite peaky around the highest point of grip – that is a very interesting aspect for any driver. But that actually seems more suitable for Seb. It helps him to feel the car more. ▶



BEYOND DISPUTE*

Youngest

World champion
Double world champion
Triple world champion
Four-time world champion
Pole setter
(and second-youngest ever race winner)

Most

Wins in a season: 13
Consecutive wins in a season: 9
Poles in a season: 15

All-time record

Fourth highest number of poles: 46
Fourth highest percentage wins in season: 68.42%
Third highest number of drivers' titles: 4
Fourth-highest number of GP wins: 44
Sixth-highest number of fastest laps: 28

*ALL STATISTICS CORRECT AS OF THE 2017 RUSSIAN GP

du Maurier

Swiss-made limited editions



The Commodore

View the full collection at www.dumaurierwatches.com

Tel: 0845 519 3074

Classic time for creative minds

**FROM FRESH
NEWSPAPERS TO
ALL NEW MUSIC RELEASES**

ONLY ON

AVXHOME.IN



**OUR SEARCH SITE HELPS
TO FIND ALL YOUR
FAVOURITE MAGAZINES**

SOEK.IN

**JOIN US ON
FACEBOOK**



Vettel's intense interest in every aspect of his team, and his mastery of car control, is reminiscent of Michael Schumacher – whose many records he could yet match or exceed



“If you arrive in a corner and the aero and tyres at no point surprise you, a good driver actually likes to have a super-high peaky tyre because it is so rewarding to balance the car on such an edgy peak and get the most out of it.”

Coulthard says: “I can see why his overall performance is being analysed. And if you had to put them in order of who you would put in your car right now, I still think I would be drawn to Lewis and Fernando before Sebastian.

“But if you told me, ‘Too late, you’re going to get Sebastian and then you’re going to get Fernando and then Lewis,’ I wouldn’t be too disappointed, because all three of them are exceptional in different ways.

“Seb has had some periods of growth over his career. The year when Lewis basically kept connecting with Massa at every race – 2011 – well, the equivalent of that for Seb was his last year at Red Bull against Daniel Ricciardo, when there was a lot of frustration and anger. That is the thing that occasionally undoes his exceptional performances.

“I can understand why the jury is still out, because he does not fit into any stereotype of a gladiatorial, hero-type driver. But I just think you need to break down who he has been up against, the opportunities he’s taken. All of those things allow him to be considered one of the greats of the sport.”

If Vettel continues in this vein and ends up winning that fifth world title, as well as bringing Ferrari a first drivers’ championship since 2007 – something Alonso could not do, despite his greater-bandwidth skillset – many doubts about Vettel’s greatness will surely evaporate. And his status as a legend would be secure.

The fact remains, though, that those doubts should not be there at all. It’s not a question of whether Vettel is great – or greater than Hamilton or Alonso, or less so – but of the nuances that define that greatness, and make one driver different from another. 📌

“IF VETTEL ENDS UP WINNING THAT FIFTH WORLD TITLE, HIS STATUS AS A LEGEND WOULD BE SECURE”



Andrew Benson is BBC Sport's chief F1 writer

WIN YOUR DREAM CAR



WIN YOUR DREAM CAR WITH BOTB



Weekly Winner - Neil Read
Porsche 718 Cayman S



Weekly Winner - Mitchell Cowan
Ford Mustang GT + £10k Cash



Weekly Winner - Emmanuel Omubo-Dede
Ford Fiesta ST

WIN YOUR DREAM CAR AT **BOTB.COM**
FREE £5 ON SIGN-UP - WINNER EVERY WEEK!

Not much
stops Formula 1
in its tracks.
But Force India's eye-
popping new livery?
That certainly did.

PRETTY IN PINK

PINK



WORDS: JAMES ROBERTS
PHOTOS:  LAT IMAGES: STEVEN TEE

BWT



CARTESIANO
HOTELS

URALKALI

FELIO  SIBY

PIRELLI



Q



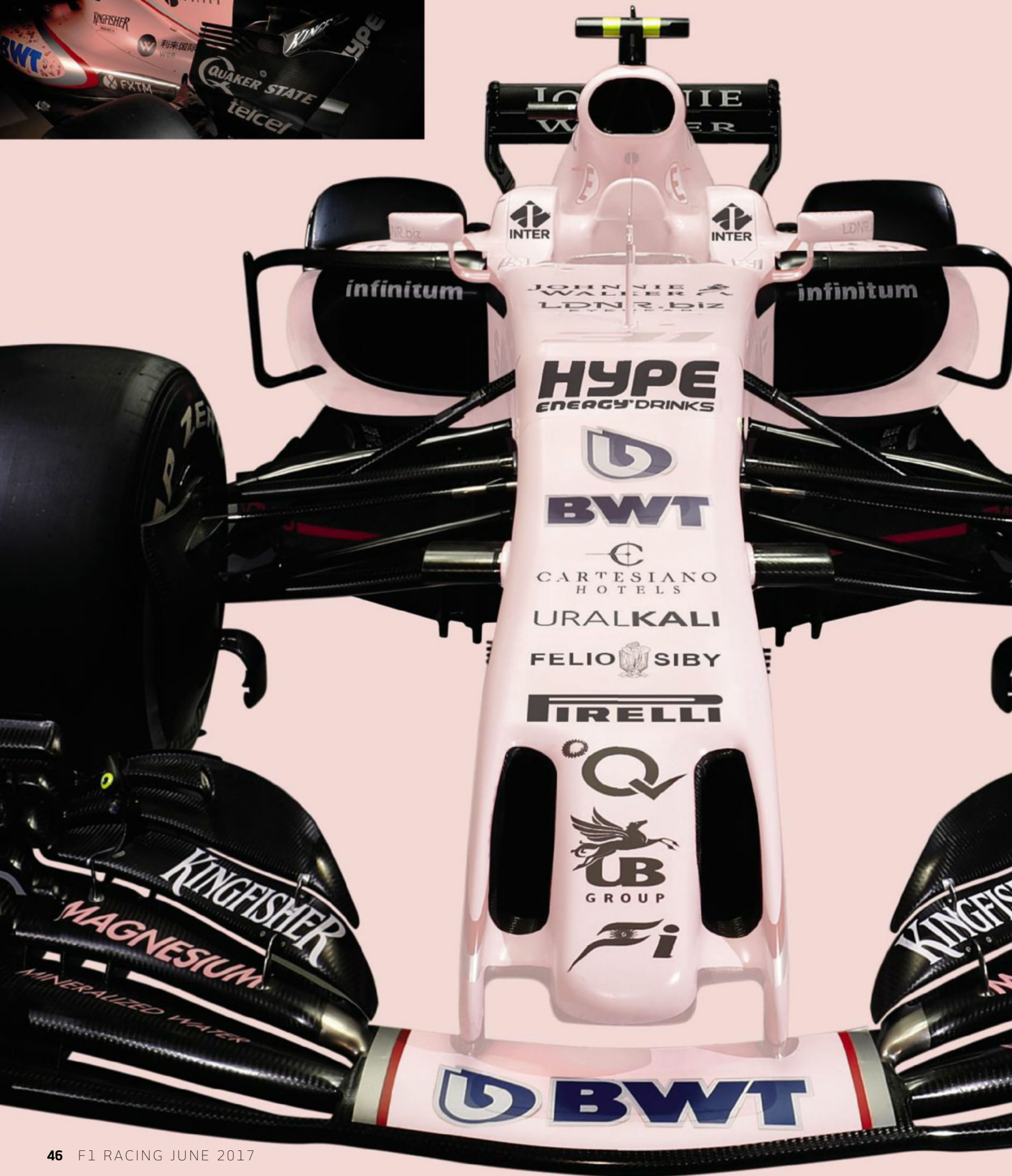
UB
GROUP



BWT

KINGFISHER

SERGIO PÉREZ BREAKS INTO A HUGE



GRIN when he's asked about the reaction to his pink-liveried racing car. "Back home in Mexico, they like it a lot," he says. "Especially the girls – they love it!" Force India love it too, not least because of the amount of coverage it's generated since they unveiled water purification company BWT as a new major sponsor at the dawn of the new season.

In the first week of the livery launch, the team recorded 14.5 million tweet impressions. Even when ex-Force India driver Nico Hülkenberg posted on his Facebook page a picture of the car with the quote: "Now you finally understand why I left Force India", that notched up 16,000 'likes'. Not bad for a sponsor looking to get noticed, and a tidy immediate return on the estimated €18million the deal has cost (covering, in effect, Force India's bill for a supply of Mercedes engines).

For the same amount, BWT could have placed their logos on a front-runner, such as Mercedes or Red Bull, but they found Force India better value for money since the team were willing to re-colour their whole car for the same amount. ▶



MEAN GREEN MACHINE

Technical director **Andy Green** on Force India's machine-shop method

F1 Racing: What's your philosophy for technical development?

Andy Green: We try to focus on the key areas. We use the feedback from the drivers extensively and that's really what we base our development around – where they see the important areas of improvement, from a car-handling perspective. Because it's not just about adding downforce to the car; you've got to add downforce to the car in the right way, and in a way that allows the driver to use it.

So it's important that we always listen to the driver on the areas where he feels the car could be improved.

F1R: And how do you use the simulator?

AG: We back up what the drivers are telling us with work on the simulator to double-check that the car mimics their feedback and that we're getting an appropriate lap-time performance.

After that, it's a case of looking at the car and understanding what areas need to be improved to give that response and the improvement to the driver's handling. That's where feedback from the car and the sensors on it play a vital role in how we go about development.

F1R: What did you find were the biggest challenges of designing to the new regulations for this season?

AG: It really was a case of rebuilding the car from scratch and we're still immersed in that process now. Trying to understand where Pirelli were going to go with the tyres was probably the biggest area of unknown to us, because we weren't involved with any of the testing last year. So we were more or less in the dark as to what to expect from the rubber.

F1R: Will we see big performance gains as the year goes on?

AG: Absolutely. Developments are going to be very steep and if we were to race the early tracks with end-of-season cars, they would be significantly faster.

F1R: By how much?

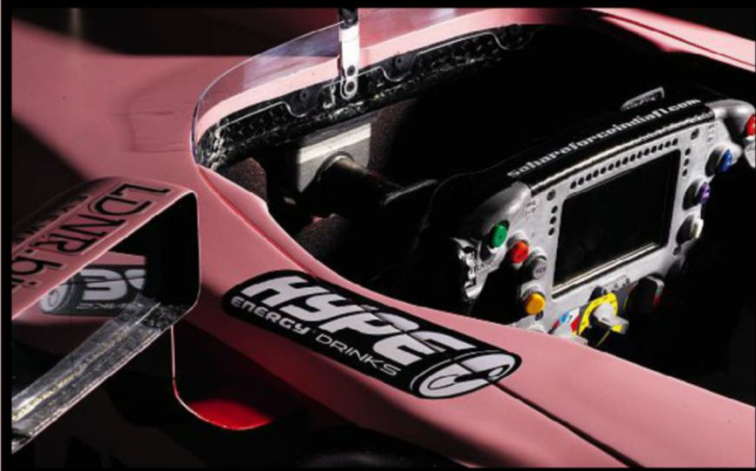
AG: Seconds.

F1R: So what's it like knowing that you've got that much performance to tap?

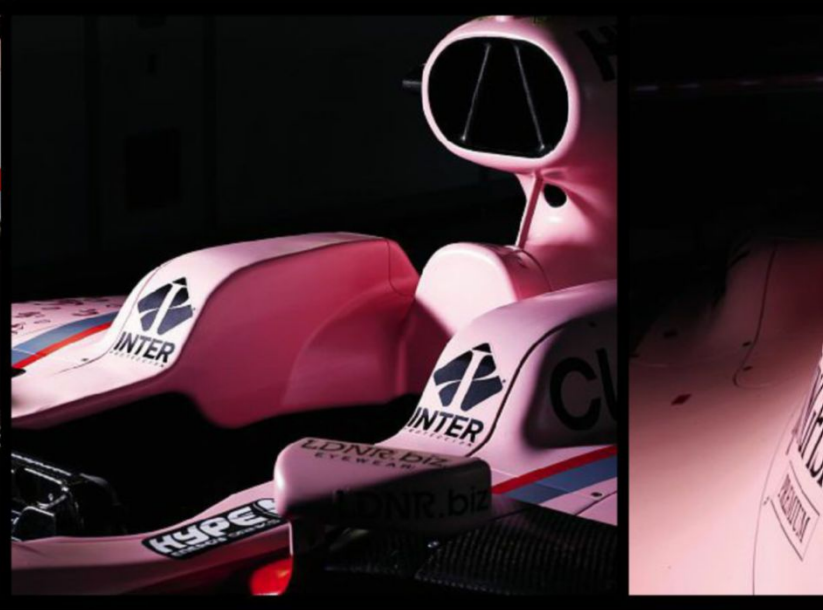
AG: It's frustrating, because I want it now! That's the thing; we want all that performance on the car now, but it's not possible. It takes time to push those developments through the design cycle and manufacturing process, and getting them on the car is incredibly frustrating, because you just want to be able to flick a switch and the parts are there – but for us that's not possible.

F1R: Do you think that's where teams like Red Bull and Mercedes are better able to score so heavily?

AG: Absolutely. They are always able to bring parts to the track way faster than we can.



“WATER IS SEEN AS BEING BLUE



“I’m not sure how many other teams out there would have had the latitude to change the entire car to pink – probably nobody,” says Force India’s chief operating officer Otmar Szafnauer. “Do you think Red Bull would have done it? No. Mercedes are the Silver Arrows, Ferrari have always been red. I don’t think even Williams would, because of their Martini deal. We changed to the colours that BWT wanted and they got a pretty good racing team, too.”

But while the livery shock tactics have drawn a lot of attention, it’s by no means the first time that the team, who started out as Jordan Grand Prix in 1991, and who still operate from the same base in Silverstone, have scorched our retinas. Think of the all-green 7UP paint job from Jordan’s first year in F1, or the gold, then vivid yellow, Benson & Hedges colours that led to the Buzzin’ Hornets design.

The all-pink livery is the boldest bit of branding seen in F1 for years, ensuring BWT and the ‘Pink Panther’ VJM10 really stand out

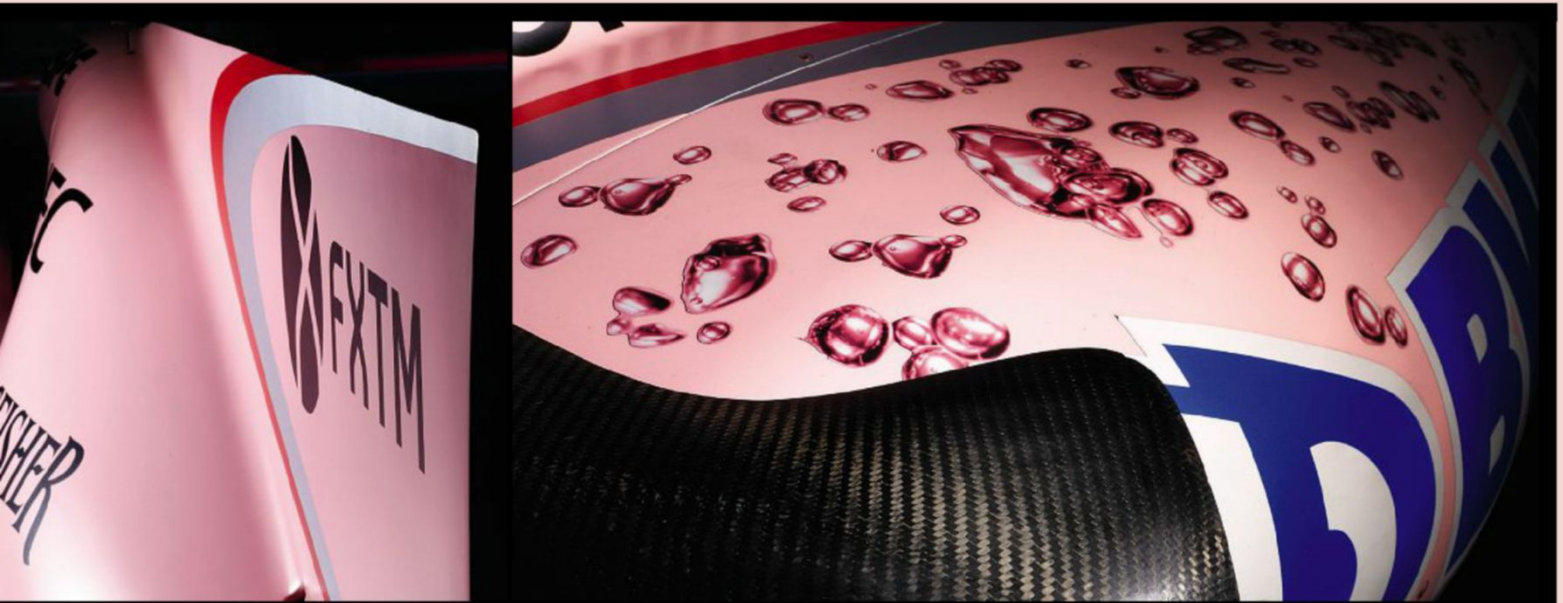
The deal with BWT came together quickly, in just 12 days, and the partnership brought an immediate boost in global awareness. Mention Force India now and – in F1 circles at least – people immediately ‘think pink’.

The colour scheme will extend beyond the VJM10 chassis, since both Sergio Pérez’s and Esteban Ocon’s helmets have been included as part of the deal. And as soon as sufficient team kit can be made, the race team will be walking around the paddock clad in pink from top to toe. Deputy team principal Bob Fernley sported a pair of his own pink trousers on Sunday in the Melbourne paddock, tongue firmly in cheek and loving every minute of it.

“From a sponsor’s perspective it has worked, and for BWT it was strategic,” continues Szafnauer. “They are a water-purification company and their senior management saw an

PRETTY
IN

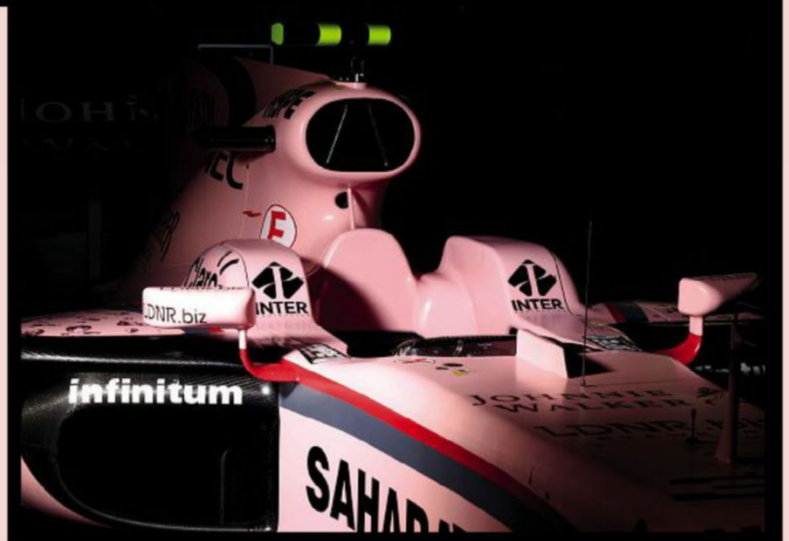
...BWT ARE THE ONLY WATER COMPANY THAT ARE PINK”



opportunity. Whenever they go to a water show everybody else's company colours are blue, because water is seen as being blue. They're the only ones that are pink. So now whenever they do a show they stand out more than anybody – and that's the same now in racing.

“Yes, there have been some contrasting opinions and in some countries pink is considered more of a feminine colour than a masculine one and that can be positive or negative,” Szafnauer continues. “Some people think car racing should be masculine... maybe having a pink car on the grid will attract more women to the sport.”

So the ‘Pink Panther’ (the mechanics placed a sticker of the cartoon character in the cockpit) is most definitely here to stay. Rival sponsors will have to put their thinking caps on if they want to attempt to top its impact. 🐼



{ YOU ASK THE QUESTIONS }

ESTEBAN OCON

Force India's new signing is in the pink and loving it. Your questions reveal a love of Le Mans – but not in a sportscar – inspiration from a French F1 hero of the 1970s, and his attitude to former team-mate Pascal Wehrlein

WORDS JAMES ROBERTS

PORTRAITS  LAT IMAGES: LORENZO BELLANGA

Esteban Ocon extends the top half of his lanky frame over the balcony at the rear of Force India's hospitality unit and peers into the murky water below. Here at the Shanghai International Circuit is a piece of architecturally intriguing but not always user-friendly Hermann Tilke whimsy: the paddock buildings rest on stilts atop the vestigial remains of the swampland that used to dominate this area.

It is upon this Stygian soup that one of our readers' question cards now floats, already well beyond even Esteban's long-armed grasp as the ripples on the surface carry it away from our view. He emits a furtive but good-natured chuckle; fortunately he'd already finished answering all of your questions.

Ocon has quickly settled in to his new home at Force India and it's immediately clear why. He's cheery, good-mannered and entertaining company – not to mention super-quick. And he's not at all perturbed by doing this interview in the cold, while a blanket of fog hangs over the circuit. Rest assured, some of your questions could easily have sent him scurrying back into the warm embrace of the team's hut...

Who is your favourite French F1 driver of all time?

Jim Malone, USA

François Cevert, from the 1970s.

FIR: How come – was it something about his flair?

EO: Yeah, I've always liked him and I've watched a lot of videos of

him racing. I think if he hadn't had his fatal accident he would have had a great career. He was a cool guy. too.

What improvement would you most like to see in the sport?

Bem Ho, Hong Kong

I'd love to see the V12, the V10 or even the V8 engines return.

It's something that's missing at the moment and something we should never have taken

away from the sport. The sound was such an important element for the fans because it was an unforgettable experience and it made Formula 1 so special.

Who's the better driver: you or Pascal Wehrlein?

Richard Bell, UK

Me, of course.

FIR: Pascal would say him.

EO: Yeah, I guess... but maybe not! ▶



SAHARA
Claro
NEC

KINGFISHER
JOHNNIE WALKER
BWT



What's the biggest difference between racing for Manor and for Force India?

Steve Wrench, UK

Manor were a great team who had a lot of motivation and were always pushing for results, and I have to say that Force India are the same in that regard. The biggest difference is that Force

India have a lot more people working for them, and there is more sponsor and PR activity to do now.

F1R: Are you sad to see Manor go?

EO: Yes, very sad. They definitely deserved to have a place here. They were a very competitive team with great people, and I think that what we achieved at the end of the year – even with Pascal Wehrlein and the point he scored – it wasn't just luck. I finished P13 in Abu Dhabi in the dry, so the car was competitive at the end.

F1R: Did you know they are auctioning off their assets? Is there anything you might bid for, like a steering wheel?

EO: I think the steering wheel might be gone already. That's the best thing. I wish I could have my steering wheel, that would be awesome. I had a bike as well, with my name on it – I don't know if it is still there.

Why do you think you got the deal to race at Force India over Pascal Wehrlein?

James Potter, UK

It's not me who decides. Force India wanted me to race for their team and we'd both been testing at the team, so I don't know. They probably got along better with me.

What will it take for Force India to become a big team in Formula 1?

Peter Slaynasky, USA

Well, they *are* a big team in Formula 1, so I have nothing more to comment on that.

F1R: I think the question is more about getting regular podium

finishes, or finally getting that breakthrough win. What will it take? And don't say rain...

EO: I think a little bit more resource. The people who work for Force India work really well; they work as well as other teams, as good as the best teams, so just a bit more resource is needed, I'd say.

What was your toughest race before F1?

Marcel Nicke, Germany

It was definitely the Pau Grand Prix, race two in Formula 3. I was leading the race by 14 seconds and I clipped the last kerb in the last corner, went fully over it, and

was very lucky not to break the car. I broke the wishbone, but I still had to carry on. The car was bottoming and I couldn't steer on one side, so I was six seconds slower for a lap and there were maybe two laps still to go.

I was defending – you can't really pass in Pau – and then the Safety Car came out for one lap, and then released us for the last lap.

So, I lost the race on the second to last corner, but I still managed to finish second in a car that was six seconds a lap slower. That was my toughest race. What a circuit – I wish we could race there in F1.

YOU ASK THE QUESTIONS



Max Verstappen leads former karting rival Esteban Ocon at 2017's season-opener in Melbourne

LAT IMAGES: ANDY HONE

“PASCAL AND I HAD BOTH BEEN TESTING AT FORCE INDIA...”



THEY PROBABLY GOT ALONG BETTER WITH ME”

Do you promise us that your rivalry with Max Verstappen will be replayed in F1?

Kili Liam, Portugal

Yeah, we banged wheels a few times. I wish we could again, but at the moment I think he's a bit ahead of where I am. But definitely it's my target to be at the front in the future. So if we

are together, I don't mind fighting with him again.

F1R: Is he good to race against?

EO: He's very hard, always has been. In karting, we were always fighting and going off quite a lot, touching karts. When you race against him you have to fight very hard; you have to be as bad as he is.

What would your superpower be?

John Klutz, USA

I would like to travel in no time. Just to clap my hand like this and be in a different place. We spend so much time in airports. But you're also going fast when you fly or have a jet, so I'd need an Iron Man suit to fly in, of course.

Did you send a message to Mercedes boss Toto Wolff when you found out about Nico Rosberg's retirement?

Alexander Alexander, Russia

Yes, of course I did! I mean, who *didn't* do that? Yes, I did send a message to Toto. He replied and he told me the truth, telling me what was happening and giving me a general update on the situation. ▶

PREPARE, PROTECT, MAINTAIN

Dragon's Breath is a specialist pH neutral wheel cleaner that reacts with the iron contamination within brake dust to produce a brilliant red bleed from an otherwise colourless gel; showing you that it's working. More importantly, this chemical reaction also turns iron into a water soluble solution which makes it easy to rinse away baked on brake dust. For the most part Dragon's Breath will easily clean general road grime away without a need for agitation, however the stubborn baked on brake dust may still require some agitation for the best results.



Performance you can trust

YOU ASK THE QUESTIONS

What did you think of the pink livery the first time you saw it?

Jason Bird, UK



Well, the first time I saw it I was a bit shocked. Then, obviously, you think more about it and I would say it looks quite good now. And we've got a cool livery altogether with my helmet. It looks quite nice and it's a change from the regular colours. And BWT bring good money to the team, so you have to look at it from that point of view as well.

F1R: Your helmet is now pink...

EO: It was part of the sponsorship deal that we would also have the helmet colour changed. It's such a great help for the team and it will make the car go quicker in the end, so you can't refuse something like this.

F1 is returning to France next year. Is the sport becoming more popular in France now?

William Choi, UK

It is returning, which is awesome news and I'm really excited for it. I was sad when it came away from France. When I first heard the news it was returning, I didn't believe the rumours, but I'm now

really looking forward to it. Paul Ricard is a great facility in a beautiful part of France. The sport is becoming more popular there. I made a video with a famous YouTuber in France called Tibo InShape – he has 3m followers – and a lot of people have come to talk to me about that.

As a Frenchman, would you like to drive in the Le Mans 24 Hours one day?

Jim Factor, USA

To be honest, not at all. I'm not into endurance racing. I think I would get bored. It's so long. I do wake up in the night and watch it, but I've no interest in taking part in it. Maybe I will change my

mind in the future – at the moment I wouldn't be a fan of driving for so long. I prefer sprint racing, where you can push hard for a short period of time.

If the French Grand Prix could be held at any circuit in France, where would you have it and why?

Brian Kenney, USA

In Le Mans actually, that would be nice – but without the chicanes.

F1R: On the full track?

EO: On the full track, that would be awesome. On the Mulsanne straight without the chicanes I bet you'd see four or five passes.

That would be really nice. Or at Paul Ricard without the chicanes. It was disappointing when they said they were using the chicanes. The best race I ever saw was the F3 race when they used the long straight – it was great.



“
DAVE RYAN
TOLD ME JUST
TO DO MY
NORMAL
JOB AND
THE RESULTS
WILL COME
”

Given that both you and Pascal Wehrlein are Mercedes junior drivers, what was the dynamic like between you over at Manor last season?

Jake Nichol, UK

For sure, we were not best friends. This is not a secret. But there was big respect between us. I respect him on the track, I respect him outside the track – he's a very fast driver. What he achieved with Manor is great; he scored one point with the team.

What is the best advice you have received in Formula 1 so far?

Stéphane Halleux,
Belgium

It came from Dave Ryan [former McLaren and Manor team manager]. He's so experienced. He taught me a lot of great things. He told me, when I signed the contract here, not to overdo

anything. He said just to do my normal job and the results will come. He told me that if I have the capability and talent, then I will make it. I will always remember that as a great piece of advice. 🏆



YOU ASK THE QUESTIONS

Next month, Kevin Magnussen is in the hot seat. For your chance to ask him a question, sign up at: f1racing.com/global-fan-community



**BEST RACING SIMULATORS
IN THE MARKET**



**LARGEST LEADING BRAND FOR GAMING CHAIRS
WIDE RANGE TO CHOOSE FROM
IN THE UK**



WWW.GTOMEGARACING.COM

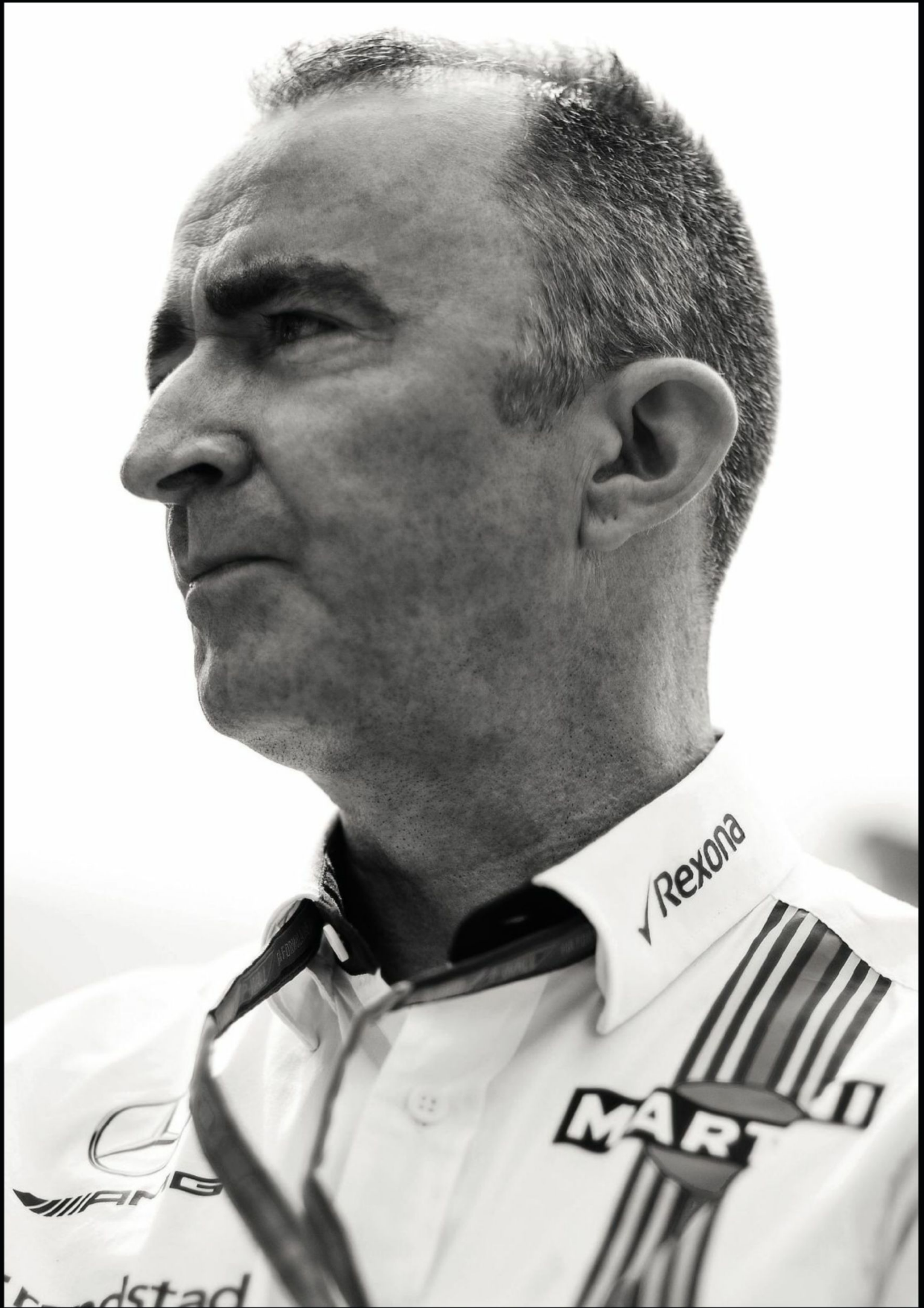


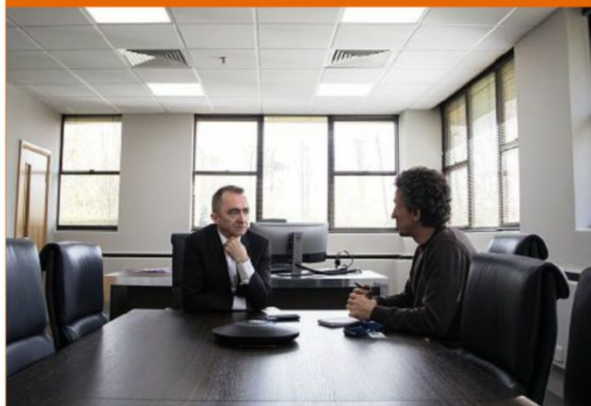
THE LONG INTERVIEW

Paddy Lowe's switch from the Mercedes team he'd helped mould into world-beaters, to a re-tooling Williams, was the talk of the Formula 1 off-season. Here, for the first time, he opens up about coming 'home' to the place where his F1 career began, and offers a glimpse of the future for this proud band of racers

THIS IS
PADDY LOWE

INTERVIEW ANTHONY ROWLINGS
PORTRAITS THOMAS BUTLER





established, although, tellingly, Mercedes have subsequently adopted a more hierarchical structure between team boss Toto Wolff and newly arrived technical director Allison, to replace the 'twin-number-one' set up that existed with Lowe and Wolff, both of whom were 'executive directors'.

Regardless, Lowe, 55, has alighted at his F1 *alma mater* as chief technical officer, a role that gives him great scope to shape its destiny. All the more surprising, then, to find him so devoid of ego and still endearingly enthused by the field in which he operates. Eminent F1 engineers don't really 'do' small talk; their minds are constantly a-whirr with the subtleties of aerodynamic flow over, under and through the bodywork of their latest creation; with L over D ratios and nuances of CAD-realised vortices to be interrogated and resolved. Their mental space is not to be invaded with paddock babble; the only hot air they're interested in is the superheated flow that exits the rear diffuser.

Today, however, Lowe is positively bubbling about his return to the team he left in 1993. And it is here that we begin.

F1 Racing: So you've been back at Williams for a few weeks now. How does it feel to come home?

Paddy Lowe: It's very exciting, actually. I've had a great welcome from everybody and it's good to see some old friends. There are many people here who don't travel to the races, so I literally haven't seen them since I left, which was 24 years ago when we were in a different site – the old factory in Didcot near the cooling towers. There's only one guy, Carl Gaden, who was still with the race team when I was last here in 1993. I need to find out exactly who... I have a list...

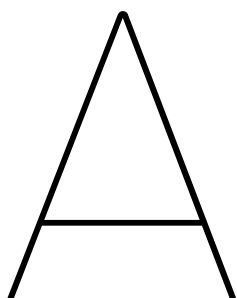
Lowe pauses to pick up a spreadsheet from the desk in his large, but so far un-ornamented office. He counts columns and rows, before a split-second mental calculation...

PL: Sixty-four. There are 64 people still here at the team who were here in 1993.

F1R: So do Williams still feel like the team you left, or have things changed?

PL: It does feel different, because it's a different place and everything is arranged differently. Most of the people are different, too. But what doesn't feel different is when you go to meet the people who were here before and it feels like you know them well already, so you're just kind of carrying on from where you left off.

F1R: The sport is full of Williams graduates who have gone on to other things – you being one, of course, Ross Brawn another. It's a long list...



twinkle in the eye. That subtle signifier of mischief within. It gives Paddy Lowe away as one of the good guys, even as he carries – lightly – the mantle of technical greatness. The warmth of his greeting at Williams' Grove HQ, a readiness to chat. It's disarming in one so accomplished.

This, after all, is the man whose technical leadership helped Mercedes to a period of consummate domination from 2014-16 (in tandem, it must be noted, with engine boss Andy Cowell). And one whose CV encompasses years at Williams during their '90s glory days, then McLaren when they were last frontrunners. Lowe has been at the cutting edge of seven successful world title campaigns, with three different teams, making him one of a tiny elite band of rock-star tech titans active among the F1 tribe. He, along with Adrian Newey, James Allison and Rory Byrne, plus Cowell and – maybe – Ferrari's emerging Mattia Binotto, are those considered sufficiently eminent to be able to *make a difference* by virtue of their presence, nous and method.

None would entertain for a moment the notion that they alone are responsible for creating machines that can outperform those of their rivals. But employing one of these starry individuals is the nearest thing there is to an F1 silver bullet. Bag one and you're probably in the game – because they know what it takes to win.

Which is why his signing by Williams, in a directorial position that makes him part-owner as well as 'just' their technical leader, is a massive coup for this once-great team still brim-full of ambition to rise above their 'best of the rest' status behind mighty Mercedes, Ferrari and Red Bull.

It's also why his departure from Merc at the end of last season is a sensitive topic shrouded in secrecy, and one that is, alas, deemed off-topic for this engagement. The true nature of his split with the reigning champions has yet to be publicly

FRANK AND PATRICK SET A VERY DISTINCT CULTURE THAT HAS REALLY SET THE TONE FOR ME, FOR MY WHOLE CAREER IN THE SPORT. THEY'RE REAL RACERS

PL: All students of Patrick [Lowe grins at the recollection of his famously demanding – and combustible – former boss, Patrick Head]. And many of them have been very successful.

F1R: What would you attribute that to? Is it the culture here? A lot of people say Williams were always the hardest of the hardcore in terms of being an engineering-driven team. Do you think that's true?

PL: Frank and Patrick set a very distinct culture that has really set the tone, for me, for my whole career in the sport. They're *real* racers; they always want to win; they're obsessed with the sport, but they've also got the humility to understand that there's no kind of 'right' to win – and if you don't win, there's respect for the competition who have been better than you. It's your failing, and you have to go and address that failing and meet that competition, rather than just sort of assuming that you should win and anything else is wrong. Patrick and Frank have been very strong in creating that culture within this team and I still feel it today.

F1R: Damon Hill came up with a fantastic line about Patrick Head being the Isambard Kingdom Brunel of Formula 1...

PL: Yeah, that was really nice. I'm a fan of these big, historic engineers and, actually, I love photography as well and there are some fantastic photos of them. One of my favourites is the photograph of Brunel standing in front of all these chains [on the SS Great Eastern]. The other photo I really love is [rocket scientist] Wernher Von Braun standing in front of the Saturn V rocket on its side. I think it's one of my favourite pictures ever – there are so many great elements to it. I actually thought it would be nice to collect some of these pictures together at some point, of the great engineers in great photos.

F1R: I read a book recently called *Empire of the Clouds*. It's about the aviation cottage industry spawned in Britain by World War II. It's a lot like the UK Formula 1 industry now – lots of little independent manufacturers doing insanely brilliant things, just by applying their brains to problems.

PL: There's something about that, because we seem to be particularly good at motorsport in the UK, and Formula 1 in particular. There must be something about the nature and the culture and the approach taken by British engineers that works for Formula 1.

F1R: When you were first at Williams [1987-93], they were a front-running team, but they haven't won a championship since 1997. So what experience can you bring back here from your time with teams that *have* been dominant in that period?

PL: To be clear, Williams continued to be very successful and dominant after I left, up until the late 1990s. But, to answer your question, I think I have a lot of experience and I've been very fortunate to work with teams who have been successful ▶





in the intervening years, so I can bring back that belief. Because that's what's been missing here, inevitably, without many race wins over the past decade-and-a-half.

I suspect people start to lose the belief that they can do it. And I hope I can inspire the team to come back to the front and give them the confidence to do the right things and realise that, actually, they *are* winners. Those 64 people and many more in the team are winners – they know what it's like to win, they know what it takes to win, and I can help bring back the confidence and the belief that we can do it again.

We have the ingredients to do it, and while it's difficult to win in this sport, because it's so competitive, it *is* possible and I hope I can help bring back that feeling and put the right things together, the right programmes that get us back there.

F1R: Is it a case of taking what you saw and implemented at Mercedes and transposing it onto what you have here? Or is it much more complicated than that?

PL: No, and it's really not about that, actually. There may be a perception – understandably – that people can move from team to team and bring ideas that should then just be copied or whatever, but it's really not about that. The teams already operate at a very professional standard – the standard of engineering in Formula 1 teams in general is exceedingly high. It would be presumptuous and, in fact, inappropriate to come in and say 'right, we're all going to do it this way because I know that works'. For me, it's very much about seeing what people are doing, what are the solutions they've already arrived at – many of which are already better than I may have seen elsewhere. But maybe you can migrate the focus here and there and get the right people doing the right things together.

Williams racer Felipe Massa presents Lowe with a cake to celebrate his 55th birthday, at the Chinese Grand Prix



So it's very much about tweaking what you have, rather than imposing some totally new structure or set of systems or set of designs. That's the process I'm starting now.

F1R: Do you think there's a limit to what you can achieve when teams like Mercedes, Ferrari and Red Bull bring such vast resources to their F1 programmes? *[This power trio each spend in the region of half a billion dollars per season on F1; Williams' budget is approximately one-third of that.]*

PL: Well, Williams are a team who have always prided themselves on getting a better job done with low resource, and that was true back in the early '90s – remember at that time McLaren were the big team with their years of dominance with Honda and it felt like they were the Romans, to put it that way. It was a case of: 'When will we ever beat the Romans?' But, actually, we did it, starting in '91 with a strong season [Williams finished a close second in that year's constructors' championship] and then beating them in '92. And we were extremely proud because at that point we'd done it with far lower resources.

A great example of that is the department we had in Williams that did all the electronic and control systems and all the software, which Steve Wise and I had built up – Steve Wise is still here and it's great to be working with him again. We had no more than around ten people, and when I went to McLaren in 1993 they had an entire company for electronics, something like 50-100 people doing what we'd been doing in that small department. They did it in a far more sophisticated way, but we had got the job done and got the result we needed. I think that's a typical illustration of the culture within Williams, which I still detect: 'How can we get the results we need in the most cost-effective manner?'

F1R: Knowing what you know about Mercedes, would you say that it's intimidating to take them on, given their financial and technical firepower?

PL: Quite the reverse: it's an exciting challenge actually. It is exactly equivalent to when I was last here. We knew McLaren had a lot of money, so it was a great point of pride here to beat a team who were spending far more than us.

F1R: But why would you leave a team like Mercedes to come back to Williams?

PL: It's a very exciting challenge. I had a good innings at Mercedes; I really enjoyed my time there [2013-17] and I really loved working with some fantastic colleagues. But I could see the opportunity to move my own career to a different place. It's a different paradigm, to come in as an owner, and I've been fortunate enough to find a way to take a shareholding in the team, having been an employee all my career. In itself that's very exciting.

Then there's the aspect of coming to Williams – a great team where I loved working in the past. I'm a big admirer



“I HOPE I CAN GIVE THE TEAM THE CONFIDENCE TO DO THE RIGHT THINGS AND REALISE THAT, ACTUALLY, THEY ARE WINNERS”

of Frank and Patrick and what they set up. To take on this challenge was very much the no-brainer option from that point of view, because the team have such an amazing history. And if we can create a new chapter in that history, building on what's gone before, taking the place of my original boss in the sport, that's a very exciting prospect. It's quite special.

Many a conspiracy theory has swirled around Lowe since he left Mercedes last January, but there, for the record, is his answer to those who question the motivation for his transfer.

F1R: What was it like to sign the bit of paper that made you a Williams shareholder?

PL: I didn't make any great ceremony of it, actually – I guess I could have done. I wouldn't say I didn't focus on that particular moment itself, it was just the process of getting here... [long pause]... I can't think of the words. I haven't got a good answer for that, to be honest.

F1R: Will you take on some of the team principal-esque responsibilities, such as meeting the media at races?

PL: Some things will get shared around as needs be. Claire [Williams] won't be attending all the races, so there will be races when I'll cover for her, or Mike [O'Driscoll, CEO]. For the moment, I will go to all the races because I need to stay on top of that. We will take it step by step.

F1R: You started to make a name for yourself in F1 circles as something of an electronics guru. Did you ever imagine that you'd end up here, in this position?

PL: No – and it's surreal, but in a really nice way. I don't feel like I'm going backwards, there's no sense of that – it's going forwards, but with some familiar landmarks.

F1R: You're in a unique position now, in F1 terms, being a technical leader but also a part-owner. There's no one else in that position currently – is that correct?

PL: No. I guess we had Ross [Brawn] owning Brawn GP at one point, and then, before that, Patrick here at Williams. But I think that's probably it.

F1R: That's got to be a good thing for any team or organisation with engineering at their heart?

PL: Formula 1 is a fantastic environment for engineering, and while it's a sport and the sporting elements are a crucial part of the spectacle, underneath it there's a very strong engineering element that marks out Formula 1, in particular, as unique and special in the world of motorsport.

We see it all the time, that it's the car that very largely makes the difference, and therefore the engineering behind the car that makes the difference. So I'm a big supporter of ▶

Deputy team principal Claire Williams won't be at all the races this year, so as befits his new role as a shareholder, Paddy Lowe will stand in as necessary





engineering in general and using Formula 1 as a platform to support and to encourage more people to understand what engineering means and to go into it. Engineers build the world – there was a great quote from Prince Phillip last year: “Everything not invented by God is invented by an engineer.”

Engineers will solve the problems of the world, actually, I’m greatly optimistic about that. There are a lot of depressing signs around the sustainability of our planet – global warming, pollution or whatever – but I think that man is so ingenious and creative, particularly when cornered, and it will be the engineers who solve those problems and keep us alive in the centuries ahead. We need more engineers making the key decisions in industry. I’m a big fan of Formula 1 engineers, basically! So that’s a really nice element.

F1R: Are you encouraged, then, by the position Ross has now, as technical and sporting boss of the new Formula 1 Group?

PL: Absolutely. It’s another great example of exactly what I was talking about. It’s fantastic, and to see the

“YOU COULD SAY WE’RE SQUARING UP FOR A FIGHT BETWEEN THE FIA AND FOM, BUT WE SHOULD ALL BE SETTING OURSELVES UP FOR FANTASTIC COLLABORATION”

great support and acclaim he’s had – there’s not a person who isn’t full of praise and support for that appointment.

F1R: How do you think Ross will work that one out? He has a very clear technical ‘map’ but that side of things has traditionally been the FIA’s job. Never before has someone from FOM sat down and said: “This is going to be the technical landscape.”

PL: Well you could look at it negatively and say we’re squaring up for a fight here between the FIA and FOM – obviously the FIA owns the rules and that’s a very important role for them. But then we’re all in it together, so actually we should all be setting ourselves up for fantastic collaboration, and I hope that’s how everybody sees it.

What’s fantastic about what Ross is proposing is that they will also bring resource to the table – the ability to research ideas. Of course they have a slightly different perspective to the FIA, but they are a stakeholder nevertheless – we’re all stakeholders. So it’s great that we now have everybody chipping in to the R&D effort that’s required to keep developing these regulations to be better and better in the future. ▶





WILLIAMS RACE DAY HOSPITALITY & MUSEUM TOURS



RACE DAY HOSPITALITY

Watch an F1 race live at the home of Williams. The Williams Conference Centre offers a unique way to experience the thrills of a Grand Prix with a live link up to the team at the track

MUSEUM TOURS

Housed in the award-winning Williams Conference Centre is Sir Frank Williams' private Grand Prix Collection, the largest of its kind in the world, spanning the history of the team since 1978



F1R: Do you and any of the technical heads from other teams ever just go out for a drink? That would be a great gathering to eavesdrop on...

PL: We don't actually, but that would be a really nice idea. We did have a great meeting a couple of years ago of a smallish group like that, which was organised just to brainstorm where the rules were and what we thought was wrong with them and where we should take it. That was really very interesting. The key thing is to get people thinking long enough into the future so that self-interest isn't coming into play. But I think it would be interesting to see if we could organise some sort of social get-together like that in the future.

F1R: Going back to Williams, what sort of mental timescale do you have for doing everything you need to do? Do you have a clear set of goals?

PL: I haven't really captured it in that way. I've only been here a few weeks and at the moment it's about incremental improvement from where we are.

F1R: Is there an overarching goal? Is it to make Williams a world championship-winning team again?

PL: Absolutely. That is, without question, the objective. That's absolutely where we want to get to.

F1R: One last question, relating to Mercedes. Abu Dhabi last year, the closing stages of the race, Lewis backing Nico up into Sebastian Vettel... and you get on the team radio to order Lewis to speed up. It was incredible to watch but what was it like on the pitwall?

PL: It was interesting. I don't know whether we should get into this or not, but the interesting thing is that there was a degree of panic, let's say, around the idea that we might actually lose the win. So there was a lot of 'incoming' in my direction about telling Lewis to go quicker! But it was pretty clear to me that as soon as he saw a red car in his mirrors, he was going to speed up. But that didn't seem to be obvious to some people. Seb Vettel was coming through because he had a newer set of tyres, so clearly it would have been nice for Lewis to start early to create the gap, create a buffer – but he wasn't going to do that until he really needed to. So Lewis was playing it very cleverly, and I could see that he knew what he was doing, he had it all under control – if the win was ever under any threat he would have been responding because he had lots of pace in hand. If Seb had overtaken Nico, Lewis would have been gone. That was obvious to me, but not to everyone else. So there were some interesting discussions.

I gave Lewis the instruction because it was absolutely the right position for the team to take. Bear in mind – which people often forget – that Nico had let Lewis past immediately in Monaco last year when we asked him to, because we'd given him a one-lap warning that time – 'you need to speed



Lowé made his first appearance on the pitwall in his new role with Williams at the Australian GP

up, otherwise we'll call Lewis past you'. He didn't respond on that lap but pulled over immediately on request. So it was the only other time we've given a team order. In fairness to Nico and the team and our objectives and the championship it was the right thing to tell Lewis that what he was doing was not in the team's interests. But I knew he would ignore it – probably he knew I knew he'd ignore it! That's the right position for the team to take – but I wasn't going to say it twice. We laugh about it now, but Toto [Wolff] was giving me a hard time – "Tell him again, he hasn't done it!" I said: "No, I'll look like a complete prat if I say it again."

It was an interesting race, wasn't it? 📌


SILVERSTONE

WHAT'S ON AT SILVERSTONE 2017

CALL 0844 3750 740
VISIT SILVERSTONE.CO.UK



14-16 APRIL

**FIA WORLD ENDURANCE
CHAMPIONSHIP**

22-23 APRIL

VSCC FORMULA VINTAGE

20-21 MAY

**SILVERSTONE HISTORIC
FESTIVAL FEATURING THE
INTERNATIONAL TROPHY**

10-11 JUNE

**SILVERSTONE 500
FEATURING SUPERCAR
SUNDAY**

13 JULY

TRAVIS CONCERT

14-16 JULY

**2017 FORMULA ONE
BRITISH GRAND PRIX**

28-30 JULY

SILVERSTONE CLASSIC

25-27 AUGUST

**2017 OCTO BRITISH
GRAND PRIX (MOTOGP™)**

8-10 SEPTEMBER

**MCE INSURANCE
BRITISH SUPERBIKE
CHAMPIONSHIP**

16-17 SEPTEMBER

**DUNLOP MSA
BRITISH TOURING CAR
CHAMPIONSHIP**

4-5 NOVEMBER

**WALTER HAYES TROPHY
FEATURING THE
SILVERSTONE FIREWORK
AND LIGHT SHOW**

*KIDS GO FREE AT ALL SILVERSTONE EVENTS WITH THE EXCEPTION OF THE TRAVIS CONCERT, THE SILVERSTONE CLASSIC AND MOTOGP RACEDAY. VISIT OUR WEBSITE FOR INDIVIDUAL EVENT CRITERIA.



DISCOVER YOUR #SILVERSTONEMOMENT

**Kids
Go
FREE**





THE GRID FROM A LID

The view from Fernando Alonso's helmet before a start

WORDS JAMES ROBERTS

PICTURE  LAT IMAGES: STEVEN TEE

1 This is Andrew Salt, Alonso's front-end mechanic. He's making his final checks on the car and is tightening an aerial on the front of the monocoque.

2 Here is one of the many FOM cameramen supplying the live footage that gets spliced into the world feed and broadcast globally.

3 This FIA scrutineer is checking tyre pressures and making sure teams aren't making illegal modifications to their cars.

4 President of Honda R&D, Yoshiyuki Matsumoto, is looking at the 11th-placed Renault of Nico Hülkenberg.

5 Accompanying the two Honda chiefs is Zak Brown, who is the executive director of the McLaren Technology Group.

6 The other head honcho is Masashi Yamamoto who is general manager of the motorsport department at Honda.

7 Standing with the front jack is number one mechanic Marc Cox. Behind 'Coxy' is the Rolex grid girl holding Alonso's grid marker.



7 Keeping a close eye on the Honda bosses and the McLaren team (with his camera) is Tsuyoshi Fukui, the chief editor of the Japanese Formula 1 magazine *F1 Sokuho*.

8 It's not just Sky Sports' Martin Brundle who does grid walks; reporting live for Fox Sports Latin America is Juan Fossaroli, seen here interviewing Sergio Pérez.

9 Alonso's race engineer Mark Temple is monitoring everything on the car and uses his stopwatch to ensure every aspect of the starting procedure is followed to the second.

10 The 600mm and 300mm lenses and trusty Billingham bag belong to LAT photographer Charles 'TooTall' Coates, who will retrieve them from the side of the track before he heads down to the first corner. 



THE PATH TO ENLIGHTENMENT

WORDS CHRIS MEDLAND

PICTURES  LAT IMAGES: STEVEN TEE

ILLUSTRATIONS SHUTTERSTOCK

The ancient Chinese philosopher Confucius was famous for his sage writings on human virtues. So what will **Romain Grosjean** learn from his visit to a Confucian temple in Shanghai?

“What you do not wish for yourself, do not do to others.” Confucian wisdom is mostly expressed in aphorisms. Many sayings attributed to the man himself were committed to paper only after his death. Thus one of the civilised world’s great humanists hovers somewhere out of reach – there and yet not there. So we could be heading for a culture clash today as we escort a driver well known for speaking his mind, plainly and without an f-bomb filter, to a temple devoted to the presence of this great thinker and moralist.

The Confucian temple in Jiading is in itself an unusual sight, a small oasis of tranquility and traditional architecture juxtaposed with chaotic human traffic and new-build concrete in what, up until a few

years ago, was the middle of nowhere. That was before the Shanghai International Circuit was built just up the road, followed by a crashing tidal wave of construction as the city itself enveloped the neighbourhood.

In spite of the pollution, Romain is enthusiastic at this opportunity to break from the usual Chinese Grand Prix grind. He takes in his surroundings, snapping selfies and even breaking into a jog for another photo opportunity. Passing a statue of Confucius reading to a group of students, Romain hails the immobile figure chummily – “Hello, friend!” – and stops for a picture.

When *F1 Racing* enquires what wisdom the statue might have imparted to him, he smiles: “We’ve got a joke in French, but it’s maybe a bit too early for it!”

“Go on...” ▶









“I THINK I’VE BEEN READY TO GET A BIG SEAT - EVEN TO GET THE CHANCE - FOR A FEW YEARS. I’M 31, WHICH IS KIND OF OLD COMPARED TO THE GUYS IN THEIR 20s WE’VE GOT NOW, BUT I DON’T FEEL TIRED; I DON’T THINK I’VE DONE EVERYTHING I WANT TO DO”

“Whoever has an itchy bum in the evening has got a smelly finger in the morning!’ We used to say Confucius said that!”

We’re prepared to bet that the teacher’s *Four Books* and *Five Classics* (the latter of which includes the seminal *I Ching – The Book of Changes*), don’t feature this phrase.

Perhaps his energetic mood is down to the encouraging start Haas have made to their second season in F1; our outing comes ten days after Grosjean’s outstanding – if ultimately unrewarded – performance in Australia. But he has also been cheered by a short trip back to Geneva to see his wife and two children, adding to his good spirits.

Still, if we may be permitted to express something approaching a Confucian truism, talent is no guarantee of success in F1. The combination of the right car, the right team and the right time is essential for a driver to reach the top and become champion. Fernando Alonso’s career, in which those elements have arrived and departed asynchronously, is a prime example.

A temple built in 1219, and taking as long to construct as Romain has been alive, puts the topic of age into perspective as we broach the subject of what is likely to be a crucial year for the 31-year-old.

“I think I’ve been ready to get a big seat – even to get the chance – for a few years,” Grosjean insists. “I’m 31, which is kind of old compared to the guys in their 20s we’ve got now, but I don’t feel tired; I don’t think I’ve done everything I want to do. There will be chances, I think, at the end of the year, but all I can do is the best job I can for the team.”

Walking to the nearby Fahua Pagoda, we must leave the tranquillity of the temple and cross a busy main road, dodging silent scooters and impatient taxi drivers. This is perhaps not the best spot in which to

meditate upon virtue ethics, but in spite of Romain’s earlier diversion into vulgarity, there is perhaps some evidence of the Confucian spirit seeping through. Of the core Confucian teachings, the notion of Ren – meaning humaneness or benevolence – is viewed as the source of all virtues. “One should see nothing improper, hear nothing improper, say nothing improper, do nothing improper,” Confucius is reported to have instructed an acolyte.

“Politeness!” Romain calls out as he observes *F1 Racing’s* photographer shoo a local resident out of shot in front of the ornate pagoda flanked by a murky waterway.

The Confucian principle of Li instructs students to be proactive and positive, and Grosjean certainly followed such a path in joining Haas ahead of the 2016 season. Instead of waiting to see if Renault returned to take over what seemed to be his spiritual home at Enstone, he chose to take his experience to a new team to give himself a better shot at a big seat in the future.

Ferrari are the clear target in this long game, since Kimi Räikkönen, as last year, is on a one-year deal. But Grosjean actually came closest to joining the Silver Arrows, following Nico Rosberg’s retirement. And since Valtteri Bottas is also on a short-term contract, the opportunity may come again. Don’t be fooled by his radio outbursts and emotional character; patience is a virtue Grosjean possesses in abundance.

“We may have spoken to Mercedes,” he says with a grin. “I don’t have Toto’s number but my manager lives in Vienna. There were a few names on the table and a few of them made sense. I believe I was one of the ones making sense, let’s put it that way.

“My manager contacted them. There were a few names that would have made

sense, Valtteri was one of them. I think Nico Hülkenberg was another name. If you look at drivers with experience I think I was one of them as well. Things happen or don’t happen for some reason and, actually, I think I’m good where I am.”

His initial pride in stating he held talks with Merc is clearly tempered with a tinge of regret that the move didn’t happen, but Grosjean knows he has a car with which he can show further progress this season.

“Maybe other opportunities are coming in the near future. Of course, being in a Mercedes is something quite special and if you can make it happen alongside Lewis and get a good year then wonderful. But if it doesn’t happen, then it can be risky. You will tell me F1 is risky anyway, so it’s not a factor! But I’m looking for the positives in it.

“The positives are that my name has been on the table at one point, which shows that the world champion team respects what I’m doing. I guess I’ve proved in the past I could win the championship with a good car.

“It was great that my name was there, but it’s good that I am with Haas for a second year; I want to make the team stronger. I don’t feel as if I’ve done enough to move somewhere else right now, so I’m pretty pleased that I’m here and we can do more.”

A positive outlook sums up Grosjean’s approach. While the Haas team polo shirt he wears is standard attire within the circuit confines, it’s noticeable that he’s wearing it now, with a certain pride, while wandering the narrow streets around the Pagoda.

Amid the bustle, the inquisitive Romain stops at one stage to inspect a stall selling fried chicken. What’s unusual here is the presence of heads and feet alongside the array of wings. Despite *F1 Racing’s* offer to purchase some, he politely declines. ▶



“THE DRIVER MARKET AT THE END OF THE YEAR IS GOING TO BE PRETTY OPEN. NEXT YEAR COULD BE A CHANCE, BUT THINGS THAT MUST HAPPEN, WILL HAPPEN. IF THEY DON’T THERE’S A REASON. HOPEFULLY ONE DAY WE GET A NICE PHONE CALL!”



He might not quite have the stomach for the street food, but Grosjean is up for a fight this season, working with a sports psychologist to maximise his potential.

“It’s an important year. And the driver market at the end of the year is going to be pretty open. Next year could be a chance, but things that must happen will happen. If they don’t there’s a reason, and I’m trying to improve in a lot of areas, to keep learning about F1, to keep delivering, and hopefully one day we get a nice phone call!”

This philosophical approach is paying off. He’s mellowed a lot on the track since his crash-strewn return with Lotus in 2012, coinciding with the growth of his family.

“I think I’m living the best time of my life and I don’t think I’m yet at the peak of everything I can do. So it’s actually very positive because I look to the future, and I don’t think I’m 31 and one of the old guys. I’m 31 but I’m getting better and better.

“I don’t have to ask myself the questions I was asking initially. You still wonder at winter testing: ‘Am I still good? Did I lose it or not?’ Then you get to the first qualifying session of the year, take on that gladiator mentality, go for it and find things are working! As long as I can tell myself I am the best, and I want to be the best – and I think I can be the best – then fine, I’ll keep on going and enjoy it. The day I start to not enjoy it, I’ll stop because it’s too much dedication for not having that extra pleasure.

“Just going away from the kids and so on, it’s hard for them. I dropped my son off at school on Tuesday morning and he knew I was leaving and he wouldn’t let me go; he was sad. But on the other hand, he knows that when I come back I’m happy because I’m doing what I love. So as long as I’m enjoying it as much as I do today, I can have fun driving the car. Hopefully I can fight for some wins and that’s what I want. I want to win more than anything else, but we’re not in a sport like tennis or running where if you’ve got the best legs then you win it.

“You have to start with a wooden racquet sometimes – or sometimes the court is not the same size for everyone!”

That’s an aphorism worthy of Confucius himself. As Romain invites us to squeeze into his car for the short ride back to his hotel, we make a note to look up whether racquet sports existed in the fifth century BC...



**THE OFFICIAL MAGAZINE
OF FORMULA 1**



Subscribe today



THE ENGINE THAT CHANGED F1

Fifty years ago, a lightweight, punchy 3.0-litre V8 took to the Dutch GP grid in a Lotus 49 and launched a new era of affordable competitiveness. All hail the Ford Cosworth DFV!

WORDS MATT YOUSON
PICTURES  LAT IMAGES

Wins 155

Poles 131

1st victory
Jim Clark, Lotus,
1967 Dutch GP

50th victory
Jackie Stewart,
Tyrrell, 1972
Canadian GP

100th victory
Jody Scheckter,
Wolf, 1977
Monaco GP

150th victory
Elio de Angelis,
Lotus, 1982
Austrian GP

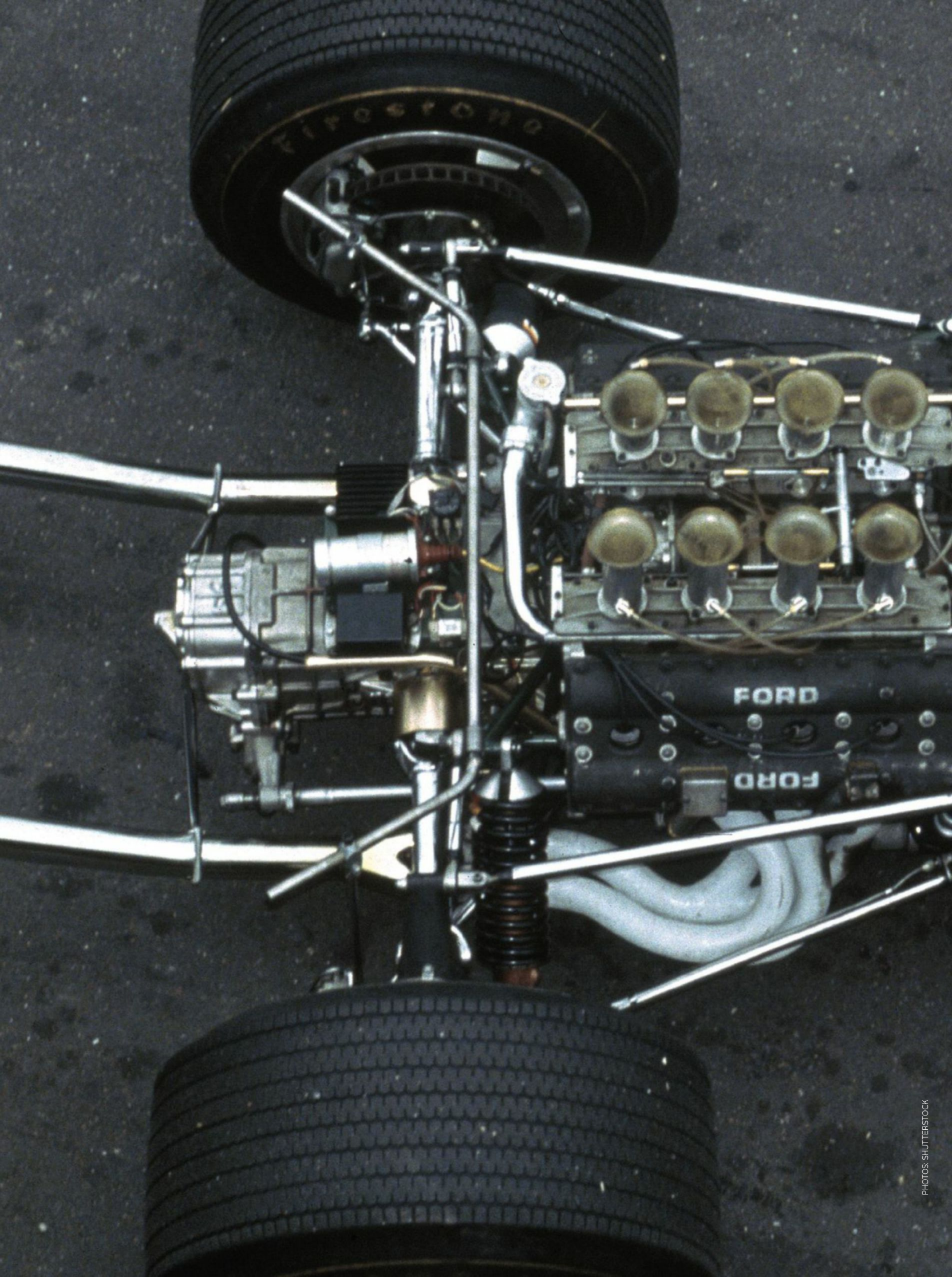
Final victory
Michele Alboreto,
Tyrrell, 1983
Detroit GP

Number produced 500+

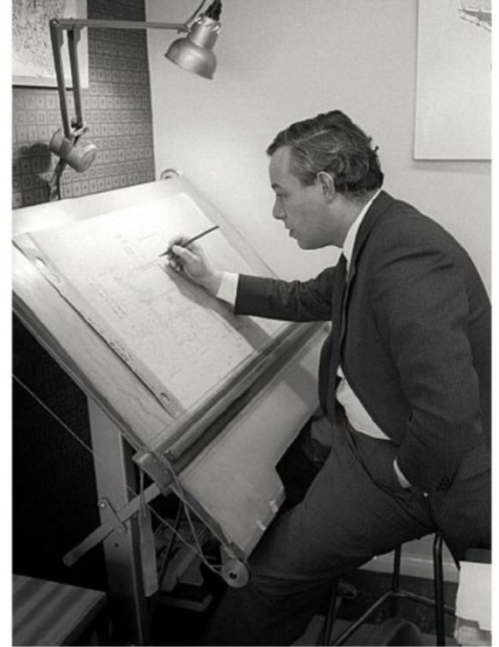
Horsepower
405bhp in 1975,
rising to 500+bhp

RPM
900rpm in 1967,
rising to 11,000rpm

F1 drivers'
championships 12
F1 constructors'
championships 10



Cosworth engineer Keith Duckworth, designer of the Ford Cosworth DFV, the most successful and ubiquitous engine ever to be used in Formula 1



Zandvoort, Holland: 4 June 1967. Formula 1 was about to undergo a momentous change. But, as is so often the nature of these things, only distance and perspective would make it obvious.

Courtesy of Ford's beautifully shot, minimal-propaganda *Nine Days in Summer* documentary, anyone with YouTube access can be transported back to Zandvoort 1967. You'll see a huge crowd gathered on the North Sea dunes, under low, grey skies, to watch Jim Clark come through the field to give the Lotus 49 a victory on its debut. The spindly 49 ducks and weaves across the undulations in a mass of contradictions: mighty but fragile; graceful yet brutal; controlled while on the limit of adhesion.

After the flag falls, Clark appears happy and tired, but also vaguely embarrassed by the adulation as the new Lotus garners weighty nods of admiration from serious men wearing jackets and ties. The VIPs see a new car poised to become a powerful force in Formula 1 for the next three years; the engineers are perhaps looking at the much-anticipated DFV, the new Cosworth engine stamped with the letters 'FORD', installed as a stressed member, bolted to the back of the chassis and with the rear suspension, in turn, bolted to it.

It will dominate F1 for far longer than three years. In fact, over the next decade and a half, it will fundamentally change the sport forever.

That's a big claim to make, but consider the legacy of the DFV: the layout and arrangement still resonate in Formula 1 engine design to this very day. Look past that and instead consider what the DFV enabled. Lotus, as the *de facto* Ford-Cosworth works team, demonstrated that the DFV was a class-leading engine. But from 1968 onwards, they had to accept the position of first among equals. The engine became widely available at a reasonable price and, usually coupled with a Hewland gearbox, this made it easier than ever for eager new teams to enter F1 and for already established independent garages to hit the big time.

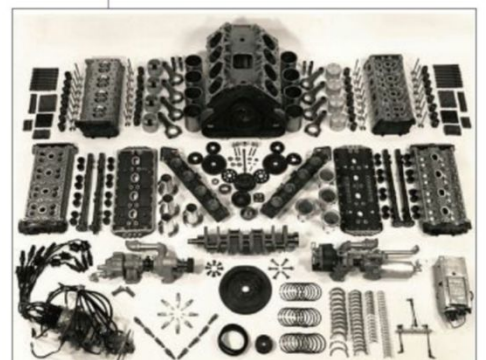
Lotus won titles with the DFV, but so too did Tyrrell, McLaren, Brabham and Williams, while Hesketh, March, Penske, Shadow, Wolf and Ligier all won races. In total, ten constructors' championships and 12 drivers' titles fell to the DFV. It became a superpower – but also the foundation on which others built their own empires. It's impossible to say what F1 today would have looked like without the DFV, but it's safe to say it would have been *very* different.

"It certainly changed the sport," says Howden Ganley, who first tested a DFV-powered McLaren M7 in 1969 and drove DFV-powered machines for the original Frank Williams Racing Cars throughout 1973 before designing and building (but ultimately not racing) his own Ganley-Cosworth 001 F1 car. "It changed the sport because anybody could – and I *did* – go and buy a couple of DFVs, a Hewland gearbox, build themselves a chassis and become a Formula 1 team. It was a brilliant engine, brilliantly packaged, and it offered so much opportunity to so many people."

The back story of the DFV is well documented: Colin Chapman wanted a competitive V8 engine for Team Lotus. Cosworth, the company set up by former Lotus engineers Mike Costin and Keith Duckworth, were of the opinion that they could build a 400bhp, sub-180kg engine for a development cost of £100,000. Chapman set about finding the funding and, after several rejections, finally located an agreeable sponsor in Walter Hayes, PR chief for Ford of Great Britain. Instead of allowing an exclusive Lotus-Ford partnership to dominate and crush the life out of Formula 1, Ford were firmly of the opinion that the best return on their investment required a healthy,



The DFV (shown in pieces, below) was a winner from the word go, with Jim Clark taking it to victory on its debut at the 1967 Dutch GP (left)



PHOTOS: SUTTON IMAGES; MERCEDES; COSWORTH

A DFV FOR THE MODERN AGE?

Question. Would F1 be better in a fantasy land where Mercedes divested themselves of a works team and concentrated their F1 efforts on supplying power units to as many teams as wanted them, in deals set at perhaps half the current price?

It's a ridiculous premise and designed to be so, but it's also analogous to how F1 operated in the 1970s when the DFV ruled the roost. A better question would be to ask if F1 would be more appealing to fans in 2017 with Red Bull and McLaren powered by the Mercedes M08 power unit. Would the midfield battle be more interesting if all the independents ran with the same power unit? Would Manor still be around if good engines were cheaper?

competitive championship. They made the engine widely available. By the early 1970s, F1 fields were composed almost entirely of Cosworth-powered entrants, with works Ferraris and BRMs running as outliers.

"It was cheap!" recalls Jackie Oliver, who inherited a Lotus works drive in 1968 after Clark's untimely death, and later formed the Arrows team that used DFVs. "It produced good horsepower cheaply, so you saw a lot of Cosworth victories. Apart from Ferrari, everybody had one: F1 became virtually a one-engine formula for a while. McLaren and Williams really cleaned up, because when everybody can buy the right engine, engineering in F1 becomes all about the aero – and the designers in the UK were doing that better

than anybody else anywhere else. The DFV basically provided the platform on which they could flourish and expand.

"Setting up Arrows in 1977 I had a budget of £1m, and that was enough to become a mid-grid team that had to buy its own engines. We spent about £200k on the powertrain, which included buying ten DFVs. Two decades later, in the late 1990s, when Tom Walkinshaw and I owned the Arrows team together and we ran V10 Yamaha engines, our budget was around £55million."

Ganley adds further context: "When I came to design and build my own F1 car there really

There is a 'no' argument, but it's a very tough case to make, particularly in the current climate where there is a widely held perception that modern F1 needs *fixing*. In ways that are difficult to articulate, the sport has become less than it was. Money is usually blamed but, in F1 terms, 'money' is simply shorthand for competitiveness. The budgetary gap between the haves and have-nots is no more yawning today that it has been in any period you might care to regard as golden – but the racing gap is.

A class-leading, affordable and readily available power unit isn't a global panacea – but it could go a long way to solving F1's ills. Over the past decade, there has been more than one suggestion that powerful forces within F1 would be pleased to craft a situation where a non-works engine supplier could thrive and compete against the established powertrains. There's a new set of power unit regulations due shortly, and a new commercial rights holder keen to shake up the old order.

Formula 1 cannot and should not go backwards, but when looking ahead, knowing where you've come from makes for a simpler journey.

– ensured that it stayed competitive.

"I drove a lot of cars and certainly the BRM V12s were more powerful than the Cosworth V8s," recalls Oliver. "That was particularly noticeable at places like Spa and Monza where there was a lot of drafting going on. However, what the DFV did better than anything else was the power curve. As the engine developed, they were constantly filling in holes in the power curve, and you could tune the engine to give you power in different ranges depending on the circuit. McLaren were really good at that: they'd have a DFV in Monaco and at Monza but



The Mercedes power unit is currently the best on the grid. Imagine a world where every team ran it

wasn't a choice, because DFVs were so plentiful and cheap. Walter Hayes was very wise in making sure it was available to a lot of teams. It transformed racing. When it first came out, a DFV cost £7,500. Two or three years later Cosworth had dropped the price to £6,500, which was quite incredible – though you could get second-hand DFVs for quite a bit less than that. I bought one from Bernie..."

Availability and price went a long way towards popularising the engine – but the other leg on the stool was performance. Between 1967 and 1983 the DFV won 155 grands prix and took 131 pole positions, records that are unlikely ever to be bested. Rivals perhaps developed more peak horsepower, but the DFV's drivability and clever packaging – it was wider than it was long

the characteristics of the engine would be quite different. They would move the rpm range up or down to better handle a particular circuit, giving you just the right amount of power in places where the V12 didn't have it – or had too much."

Cosworth's DFV production line ensured supply remained plentiful: they manufactured more than 500 DFVs and, to this day, continue to cast and machine components to keep the world's historic F1 cars on track. Serendipitously, the design first tested by Graham Hill at Snetterton in the spring of 1967 had plenty of untapped potential. As raced, the original DFV hit its performance target of producing 400bhp. During its lifetime, as the maximum revs crept up from 9000rpm to 11,200rpm, that steadily increased until the DFV of the mid-80s was developing around 520bhp.

"They were getting more powerful all the time," says Ganley. "The first one I tested in 1969 was in the McLaren that Denny Hulme had just driven to victory in the Mexican Grand Prix, so it was about as good a DFV as you could get – although obviously I had nothing else to compare it to. Later on though, driving with other engines, I did notice that the DFVs were getting better. You could really tell when you came up against them on acceleration."

Ganley's comment about 'as good a DFV as you could get' is telling. While all DFVs were created equal, they did not necessarily stay that way. While Cosworth were able to manufacture the engines, the sheer ubiquity of the product meant they could not hope to keep the entire fleet of DFVs serviced and fettled. Thus, DFV maintenance and rebuilds became a cottage industry, with supertuners, some of them now famed in their own right, themselves pushing the development forwards.

"There was quite a lot of variation," recalls Ganley. "Cosworth couldn't do it all themselves but they could recommend good engine shops, and so there was variation with some people getting more horsepower out of an engine ▶



Michele Alboreto, driving a Tyrrell Ford, scores the last of F1's 155 DFV-powered victories at the 1983 Detroit GP

THE DFV'S REIGN AS F1'S PRE-EMINENT POWERPLANT CAME TO AN END NOT BECAUSE SOMEBODY BUILT A BETTER OR CHEAPER RIVAL BUT INSTEAD BECAUSE AN ENTIRELY DIFFERENT ARCHITECTURE RENDERED IT OBSOLETE.

than others. McLaren set up Nicholson McLaren Engines to do a lot of development work and they were probably at the forefront. In Frank Williams' case, he set up his own engine shop with some very good guys. The mileage between rebuilds depended very much on how much you wanted to rev the thing. If you didn't rev the heck out of it and fitted softer cams they'd go forever: when I was driving for Gulf in sportscars they would do a six-hour race no problem and eventually they were capable of winning the 24 Hours of Le Mans. For a race, you fitted more advanced cams and revved it to the limit, which meant they had to be rebuilt regularly. Revs meant horsepower, so teams were prepared to put up with the rebuild costs for the extra power. It was still pretty cheap horsepower though."

The DFV provides an obvious link between eras that otherwise seem entirely distinct, forming an unbroken chain from Jim Clark to Keke Rosberg. Its reign as F1's pre-eminent

THE TURBO CHARGER

powerplant came to an end not because somebody built a better or cheaper rival but instead because an entirely different

architecture rendered it obsolete.

DFV-powered teams had been able to safely ignore turbo engines in the late 1970s when the impressive horsepower of the diminutive pressure-charged powerplants had been far outweighed by their fabled lack of drivability and alarming propensity to explode. By the early 1980s, however, there was more of a competition: turbo-lag was becoming just about manageable and, assuming the engine didn't go nuclear, the vast horsepower on tap made it a serious challenge on many circuits – although lag ensured the DFV stayed competitive wherever sequences of slow turns required a turbo driver to perform the impossible feat of using clutch,

brake and accelerator simultaneously, getting back on the power *before* the corner to ensure it came in at the right moment on exit. This was short-term equilibrium, however, and eventually the DFVs found themselves outgunned as the turbos developed better electronic control and reduced lag. Rosberg's 1982 drivers' title was the final championship success for the DFV, while Michele Alboreto gave it a last victory at the 1983 Detroit Grand Prix, where the tight corners and attritional nature of the venue were too much for the turbos. The writing was on the wall long before Martin Brundle gave the DFV a final outing at the 1985 German Grand Prix and qualified some ten seconds off the pace in the Tyrrell 012. He tried again a fortnight later in Austria but, nearly 12 seconds off the pace, didn't make the cut – making the 1985 Austrian Grand Prix the first all-turbo affair.

Long before that, the DFV had done more than enough to assure its legend. Today's engines, downsized, highly advanced technological terrors though they may be, carry the DNA of the DFV forwards, while, more than that, there's an aural pattern of recognition for the DFV seated deep within the consciousness of race fans everywhere: even if you don't know what you're listening to, hear a DFV and you know it sounds *right*. Not the insane wailing histrionics of a Honda V12, nor the high-tech whine of a BMW V10 but something altogether more analogue: a deeply satisfying burble at fire-up rising to a power-saw scream at max rpm. Fifty years after its debut, it can still interrupt conversations and cause engineers and mechanics to peer like meerkats out of their pit garages to witness historic machines heading out on track.

The idea that F1 had a golden age is mostly myth – but hear a DFV accelerate down the start/finish straight at Zandvoort – or at Silverstone, Spa and Monza for that matter – and you can almost believe it to be true. 🍷



By 1982 turbo technology had overcome its lag problems sufficiently to overtake the DFV

The Motorsport bibles

Reference guides & mobile applications

Your shortcut to the right people !



Who Works in Motorsports



Who Works in Formula One



Book covers not contractual

Each new edition 100% researched & updated

Everything in the books is available via the app just a click away.

Contact details with direct links to email addresses, websites, phone numbers, Facebook and Twitter accounts. Plus information on teams, drivers, cars, key people, engineers, sponsors, suppliers, marketing, PR and press officers, photographers, journalists, tracks and officials.

10.000 names with positions, 3600 detailed contacts, 430 companies, 190 teams, etc.

All you need to know about the 2017 racing season !

Books & applications available from our website at the start of the season



Tel: +44 (0) 20 71930 686 - Email: orders@whoworksin.com



Order on www.whoworksin.com



Ruth
Buscombe

MY DREAM JOB

No.1



WORDS JAMES ROBERTS

PORTRAITS  LAT IMAGES: LORENZO BELLANCA

Senior
strategy
engineer,
Sauber

CV

Ruth Buscombe
Age: 27

2016
Senior strategy engineer at Sauber, and Dare to be Different ambassador

2015
Strategy engineer, Haas

2013
Factory-based race strategist, Ferrari

2012
Simulation development engineer, Ferrari

2008
BA with MEng in Aerospace and Aerothermal Engineering (distinction) at Cambridge University

Academically, Ruth Buscombe has a perfect score. It starts with 11 A* GCSEs and five As at A level, including Maths and Further Mathematics; it ends with a degree from the University of Cambridge in engineering, including a master's thesis on the study of the Drag Reduction System.

She wanted to work in F1 from an early age, and studied hard to achieve her aim. She's now got her dream job, working on the pitwall and determining race strategy for Sauber.

"There are actually two dream jobs for any mathematician," says Buscombe. "A race strategist for a Formula 1 team or working out the numbers game on the TV show *Countdown*..."

In a bid to reach the top, she chose to follow in the footsteps of some of the sport's most senior technical figures. Having been accepted by Cambridge University, she studied the same degree course as technical directors Paddy Lowe and James Allison, Aerospace and Aerothermal Engineering, and graduated in 2012 with first-class honours. When she wrote her master's thesis, she benefited from the university's links, and former Jaguar team boss Tony Purnell supervised her work: 'The Effect of the Drag Reduction System on the Formula 1 Racing Spectacle' in conjunction with the FIA.

"This was a fantastic opportunity because I got to visit multiple F1 teams to use their simulation tools to get modelling answers for my study," says Buscombe. "I then applied to work at Ferrari as a graduate, and that's where I started my first race strategy role, based at the factory."

After a short stint at Haas, Buscombe joined Sauber last year and now works closely with the team's senior race engineer, Xevi Pujolar, on the pitwall. She analyses everything

related to performance, be it the tyres, track evolution, the weather, the appearance of a Safety Car, competitors, and determining the separation in the field during a grand prix.

"In the race, you look at pitlane loss, undercut potential or things that happen that we didn't anticipate," she says. "You determine whether track conditions have significantly changed from FP2, because some circuits evolve a lot over the race weekend, and how that will affect tyre wear. Every team has an objective function for their race – what do we want to achieve and how do we achieve it – and I do the numbers and feed that into race engineering. You make split-second decisions based on hours of preparation. The better prepared you are, the more likely you are to see a situation that mirrors a previous scenario that you've dealt with. If it goes wrong, it's important to know what systems look like when they fail. The only really bad situation is when you don't have a plan."

As a female race strategist, 27-year-old Buscombe has been hailed as a role model and proves that engineering is no longer a male preserve. Last year she became an ambassador for Susie Wolff's Dare to be Different campaign for women in motorsport. "Getting this job has been a combination of hard work and chance," she says. "There are a lot of people who have the skills and have worked very hard and haven't had the opportunity. You need someone to take a chance on you. [Sauber team boss] Monisha Kaltenborn has put her faith in me, and we need that with the gender offset we have in F1 and the number of women compared to men working in the sport."

"There is no correlation between gender and engineering; there are just fewer applicants who are female. People should be judged on skills, determination and hard work, not by dogma or a pre-prescribed narrow set of ideas."

Buscombe's own skills, determination and hard work have allowed her to forge her own path to a dream role, where she combines her two loves: maths and F1. "Yes, and it's *proper* maths," she agrees. "You have to do your homework. I didn't spend four years in a library in Cambridge to not use it. There are people who are good at maths and people who are good at decision making, and a small subset who get the opportunity to do both – that's what I love about my job." 📌

PARADISE



WORDS STUART CODLING

PICTURES  LAT IMAGES: STEVEN TEE

REGAINED

The sun-kissed charms of Paul Ricard will make a welcome comeback in 2018. **Allan McNish** is our expert guide to the returning home of the French GP



Springtime in this beautiful part of the world: a big sky dappled with Simpsons' cloud; a gentle breeze pattering in off the Med; semi-tropical trees clustering beyond the distant Armco barriers. Why did F1 ever leave Paul Ricard?

That's a rhetorical question, of course, to which the answer is 'politics': Mitterand-era cronyism sent the French Grand Prix north

to Magny-Cours for 18 years before it fell off the calendar for 2009. A better question would be 'Why did F1 ever leave France?' We know the answer to that, too: the lurid allure of filthy lucre.

But now, after a nine-year abeyance, rumours of France's comeback have coalesced into something solid. The money is there, the deal signed, and the race will happen in 2018. *Everybody* is delighted, not least Allan McNish, who's hotfooted it down the coast to give us a tour. You would think, given the thousands of laps he's completed in his capacity as a McLaren, Benetton and Toyota F1 test driver (and, in the case of the latter team, a race driver), not to mention over a decade as part of Audi's sportscar programme, that he'd be a little Ricard-weary.

"Not a bit of it," he says. "I *can't wait* to see what this place is like with an F1 crowd. I brought the kids here a few years ago for an FIA

GT round and the atmosphere was great. You could walk around and sit where you wanted. After all those years in a car by myself here, to sit with my children on the banking overlooking the iconic Signes corner on a sunny day, enjoying the race, was fantastic. The circuit came alive."

He's not the only person salivating at the prospect of the French GP's return. Last night the elderly owner of *F1 Racing's* hotel in the hilltop village of La Cadière-d'Azur ushered us into the bar to show off a wall of signed photos from *temps perdu*. Ken Tyrrell and Colin Chapman stayed here every year, and Elio de Angelis tickled the ivories of the piano; memories the owner dusts down with palpable delight.

Paul Ricard is a busy circuit but the morning has been blocked out and the Audi R8 course car warmed up for McNish and *F1 Racing* to explore its nuances. In the late 1990s it was bought by a company called Excelis (tug the thread of ownership and a bell rings somewhere in Liechtenstein, in the offices of the family trust now under the control of the former Mrs Ecclestone), and redeveloped into a cutting-edge test facility with various layouts, asphalt run-offs, and a sprinkler system to simulate wet conditions. The surface has matured with age, like one of this region's fine Côtés du Rhône.

At Turn 1 the track now opens up like the petals on a flower. As originally laid down, it was a fast left-right sweep that McNish describes as "stonking flat-out, in both a sportscar and an

A veteran of this track, in testing and sportscars, McNish explains the lay of the land to *F1 Racing*



F1 car". It's here that Elio de Angelis went into the barrier during a test in 1986 and died in the burning wreck of his Brabham. In a different configuration used in later French GPs, the cars braked sharply before reaching this point and turned 90° right, cutting out the entire first section, and emerging onto the Mistral Straight. Besides emasculating the track, this routing didn't eliminate shunts, as evinced by Mauricio Gugelmin's famous flip on lap 1 of the 1989 race.

Although the layout for the French GP for 2018 and beyond is yet to be confirmed, it's likely that Turn 1 will be a low-speed left-right flick with changing camber and gradient, a section of asphalt added during Paul Ricard's millennial makeover. The Virage de l'Hôtel 'chicane' presents itself after you crest a slight hump, and it's here that Alex Wurz suffered what McNish describes as "the fastest ever F1 accident" when a tyre blew in a McLaren test, causing him to miss one corner and skip the next before hitting the barrier: a distance of 100 metres. "He covered that a lot faster than Usain Bolt, I can tell you..."

This could be one of the prime overtaking points and, as a plus, there's enough run-off (bordered by the bands of abrasive, coloured asphalt) to gather things up if a passing attempt goes wrong. A succession of slow corners follow, ending with one that spitefully keeps you waiting before the flat-out blast along the back straight.

"This is one of the most horrible corners," says McNish, "because you turn in, you're going slowly so there's no downforce, and then after that you sort of sit in to the left-rear. Then that corner loses grip and begins to push, but you need to get the car over to the right to come clean and flat-out through the kink that leads on to the Mistral Straight. It's called that because of the Mistral wind that blows off the sea, and that's a crucial element of this circuit. Given that it's the south of France, you'd think it would always be warm and sunny, but we're high up and the wind can be strong, you've got the humidity from the sea, and the mountains behind. It can change very quickly. We've had to abandon tests here ▶



"THE MISTRAL STRAIGHT IS CALLED THAT BECAUSE OF THE MISTRAL WIND THAT BLOWS OFF THE SEA. WE'VE HAD TO ABANDON TESTS HERE BECAUSE OF GOMPH WINDS"

CIRCUITPAULRICARD.com



BRINGING BACK THE GRAND PRIX

Hopes that the French GP would return have been dashed so often that when this bid, fronted by racer-turned politician Christian Estrosi, was announced as a done deal, still we sighed. Yet against expectation, Estrosi and his colleagues – including McLaren’s Eric Boullier, who acted as a go-between with Bernie Ecclestone – came away with a five-year deal.

“Estrosi is a racer,” says Boullier. “When he met Bernie it took 20 minutes to agree. They shook hands – done. Because he is a racer, he is straightforward. He’s got a vision; Everything has been backed up. I was just being the negotiator with Bernie, trying to make things go through. But before you go to Bernie, you have to do a huge amount of work to make sure your project is sustainable.”

Summoning the finance and the political will from on high was the main obstacle, since the last attempt to restart the French GP foundered after Nicolas Sarkozy lost the 2012 election. But it was the next round of elections that prompted politicians to look again at this means of boosting the economy in this part of the world.

“For every £1 invested from the public fund, £600 comes back into the region’s economy,” says Boullier. “And because it’s a five-year project, there are now companies who want to relocate or have a presence in the district because it makes sense for them, so it will also be creating jobs.”

The comeback of the French GP certainly chimes with the ambitions of the sport’s new owners, Liberty Media, to focus on F1’s European heartland and the classic races therein. How ironic that they had so little to do with bringing it back.





It's been a high-tech test circuit for some time now, so after a few tweaks, Ricard will be good to go



because of 60mph winds, which would make the findings worthless. You'd still race, though, because you have to race with what you've got."

Mid-way along the straight there are two optional chicanes, one of which – most likely the north – will feature on the grand prix layout. "I'd actually like to see meatier kerbs around the rest of the circuit," says McNish. "Although I know that's not the thing at the moment."

Another mind-blowing moment at the end of the Mistral: Signes, a sweeping right-hander. Was this *really* flat-out, back in the day? Even in a capable road car like the R8, such a thing seems extraordinary.

"Signes is *fast*. Even in a sportscar you're flat-out. You just hang on.

See that newish bit of barrier over there? I went through it and wrote off a chassis. It's a big run-off but you go through it quickly at 198mph."

Our pace, thankfully, is more moderate, so as not to raise the hackles of the circuit director watching in Race Control. Having screamed through Signes flat-out at an absurd velocity, the F1 cars have a short distance in which to square up to the double right-hander at Le Beausset, named after the village at the bottom of the hill.

"It's like a hairpin, but faster. Your left-hand tyres have been through a high-energy corner and now you're asking them to do it again. It's a fast entry, then it tightens, and then you have to get back on the power. There are many lines here, and your line can change depending on what was on the circuit before you, then there's this compression..." The R8 jiggles slightly as it traverses a slight dip in the surface. "That's always been there, and it can trigger oversteer."

There used to be a chicane straight after Le Beausset that required you to clobber the kerbs so as to maintain speed before braking for Bendor, the tightening left-hander. Now you go straight in at undiminished speed, and it's like

"THE FINAL CORNER IS HORRIBLE. DRIVERS MISS THIS APEX MORE OFTEN THAN THEY HIT IT. AND YOU CAN'T GET THE POWER DOWN, SO YOU LOSE ALL THE WAY DOWN THE STRAIGHT"

Turn 1 at Shanghai on a smaller scale, punishing the outer-front tyre.

"You brake straight, but you're still turning, so it's easy to lock up the rear. Then the camber goes away, so it's easy to miss the turn-in to get to the second apex, then wash out and get understeer. You've *got* to get to that second apex. The key thing is to get the car rotated and then get on the power and straighten up."

By now the R8 is flirting with the kerbs at the exit, which are low but enough to provoke a rumble from the suspension – and, in the fullness of time when the grand prix rolls around, complaints about exceeding track limits.

"There *is* time to be found by straddling the whole kerb," confirms

McNish, "but you don't want to go too much over it, because then you'll sit the belly of the car on the heavy section."

The track sweeps right and then comes to a constant-radius left. Overtaking will be tough, since you can sacrifice speed in the early part of the penultimate corner for a faster exit.

"The final corner is horrible, too," says McNish, "because you've come through this section from Le Beausset where the tyres have had a hard time, and then you have to time your braking for this big stop perfectly. Drivers miss this apex more often than they hit it. And you can't get the power down, so you lose all the way down the straight. It can cost you up to 0.3s."

We rip around a few more times before pulling in to the pits to take stock and let the R8 ping gently as it cools down. That's almost every type of corner you could imagine, plus a whacking great straight, all in a little over three miles.

F1 doesn't know what it's been missing. But there's a wall in a hotel bar over in La Cadière-d'Azur with plenty of space for all the new memories, and a proprietor itching to welcome the sport's great and good. 🍷

FREE Amalgam collection NOSE CONE WORTH £100

WHEN YOU SUBSCRIBE TO *F1 RACING*

PLUS SAVE UP TO 46%
ON THE COVER PRICE



Ferrari F2012
1:12 scale
nosecone

Red Bull RB8
1:12 scale
nosecone

Choose between the 2012 Red Bull RB8 or the Ferrari F2012 nosecones. These scale models are hand-crafted and presented on a mounted base. They make a great addition to any collection.



SUBSCRIBE ONLINE AT

asm.secureorder.co.uk/f1-racing/FR617M

Quoting the promotional code **FR617M** for print only or **FR617MB** for print and digital access. Offer ends 11 June 2017

OR CALL 0344 848 8826

PICK AN EDITION

PRINT EDITION

Get 6 issues of *F1 Racing* for only **£22.99!** (FR617M)

- **FREE GIFT WORTH £100**
Ferrari F2012 OR Red Bull RB8 nosecone
- **GREAT SAVINGS**
Save 23% on the cover price
- **FREE P&P**
Every issue delivered direct to your door
- **EXCLUSIVE DEALS**
Subscriber-only offers and discounts



PRINT AND DIGITAL EDITIONS

Get 6 print and digital issues for an extra **£2.99!** (FR617MB)

- **FREE GIFT WORTH £100**
Ferrari F2012 OR Red Bull RB8 nosecone
- **GREAT SAVINGS**
Save 46% on the cover price
- **UNLIMITED ACCESS**
Read wherever and whenever you like
- **EXCLUSIVE DEALS**
Subscriber-only offers and discounts



SUBSCRIPTION OFFER



I would like to subscribe to *F1 Racing* for just £22.99 every six issues and save 23% on the cover price.

Please send me my FREE:

- 2012 Ferrari nosecone **OR**
 2012 Red Bull nosecone

This is a **new subscription**



I would like to add digital to my *F1 Racing* subscription for an additional £2.99 and pay £25.98 every six issues.

Please send me my FREE:

- 2012 Ferrari nosecone **OR**
 2012 Red Bull nosecone

This is a **renewal**

YOUR DETAILS BLOCK CAPITALS PLEASE (must be completed)

| | |
|-----------|------------|
| Mr/Mrs/Ms | First name |
| Surname | |
| Address | |
| | Postcode |
| Telephone | |
| Email | |
| Mobile | |

DIRECT DEBIT DETAILS

Instructions to your bank or building society to pay by Direct Debit



Service user number 161110

| | |
|---------------------------|--|
| To the manager | bank/building society |
| Address | |
| | Postcode |
| Name of account holder(s) | |
| Sort code | Branch/building society account number |
| | |
| Reference number | |

INSTRUCTIONS TO YOUR BANK OR BUILDING SOCIETY

Please pay **Autosport Network UK Ltd** Direct Debits from the account detailed in this instruction subject to the safeguards assured by the Direct Debit Guarantee. I understand that this instruction may stay with **Autosport Network UK Ltd** and, if so, details will be passed electronically to my bank/building society.

| | |
|--------------|------|
| Signature(s) | Date |
|--------------|------|

Banks and building societies may not accept Direct Debit instructions for some types of account

PLEASE RETURN THIS FORM TO:
Autosport Media UK, 3 Queensbridge,
Northampton NN4 7BF

For special international rates:
Please call +44 (0) 1604 251 454 or visit www.f1racing.com

Terms and conditions:

This offer is open to UK residents only. Overseas rates are available on +44 (0)1604 251 454. Please allow 35 days for delivery of your first issue. Direct Debit rates are valid for one year after which they are subject to change. Should prices change, we will inform you in writing. Should you wish to cancel your subscription it will be cancelled on expiry of the current term, which will not be refundable other than in exceptional circumstances. Details of the Direct Debit Guarantee are available on request. The gift will be sent under separate cover from the magazine and will not be dispatched until your first payment has cleared. Should we run out of gifts, you will be offered an alternative gift – there is no cash alternative. Savings for print-only subscriptions are based on the standard UK print cover price of £4.99 and digital cover price of £2.99. Offer ends 11 June 2017.

Autosport Network UK Ltd (trading as Autosport Media UK) uses a best practice layered privacy policy to provide you with details about how we would like to use your personal information. To read the full privacy policy, please visit our website at www.autosport.com/privacy-policy or call us on 0344 543 8035. Please ask if you have any questions, since submitting your personal information indicates your consent, for the time being, that we and our partners may contact you about products and services that will be of interest to you via post, phone, email and SMS. You can opt out at any time by emailing datacontroller@autosport.com or by calling 0344 543 8035.

FR617M/FR617MB

PREMIUM FORMULA 1 RACE SHOP
**START THE SEASON RIGHT
WITH THE BEST GEAR**



SHOP NOW AT WWW.RACE-GEAR.COM



FINISHING STRAIGHT

LAT IMAGES / ANDY HONE, MICHAEL L. LEVITT, OTHER PHOTO: RENAULT



- @F1Racing_mag
- facebook.com/f1racingmag
- instagram.com/f1_racing_mag
- letters@f1racing.com
- F1 Racing, 1 Eton Street, Richmond TW9 1EF

what grands prix they wish to enter, especially when I have particularly wanted to watch them.

Who exactly is calling the shots here? I know who it should be – and that is the team, not the driver.

Michael Brierley
Manchester, UK

All publicity is good publicity

While we all know that Fernando Alonso's decision to tackle the Indy 500 has come about as a result of McLaren's recent poor performances, the simple truth is that the publicity generated by this story has been enormous.

Liberty Media now need to capitalise on this, and make sure that Bernie's decision to, more often than not, schedule a race on the same weekend as the Le Mans 24 Hours is never repeated.

There would then be the opportunity to generate even more positive vibes by encouraging as many F1 drivers as possible to take part in Le Mans, as Nico Hülkenberg did in 2015, and to prove, once and for all, that F1 drivers are the best in the world.

Mark Appleby
By email

All about Alonso: his decision to ditch this year's Monaco GP in favour of the Indy 500 has ruffled some feathers...

A win-win situation

The decision of Fernando Alonso and McLaren to contest this year's Indy 500, thus resulting in Alonso having to skip the Monaco Grand Prix, seems not to have gone down well with Formula 1's purists. Many of them seem to believe that F1 is sacred and should not be forsaken for any other, but I think that it is something to be applauded in what is a very conservative sport.

Sure, had Fernando been in a competitive car he would not have made this decision and McLaren would certainly not have let him go. But he isn't, and they have, so let's get over it and look at the positives.

Admittedly, there is an element of marketing in the switch, but it's probably got more people talking about Indy on this side of the pond

and, crucially, it has hopefully got more people in the US talking about F1. If modern-day F1 is ever to 'break' America in a truly meaningful way in today's crowded sporting and leisure market, it's moves like this that could help pave the way by increasing interest.

Keith Brown
By email

Monaco snub disrespects F1

The circus surrounding Fernando Alonso skipping the Monaco GP in favour of the Indy 500 is a sad indictment of the state of affairs in which he, McLaren and Honda, now find themselves. Nor is it good for the sport.

F1 is cyclical, in terms of who is on top; it always has been and always will be. A change in

regulations allows for that cycle to be broken and provides an opportunity to steal a march on the opposition, but the whole McLaren-Honda F1 project was always doomed to failure, because the decision to enter part-way through the hybrid era has left them playing constant catch up.

The decision to go to America does them little credit either. In the past, the 'triple crown' was high on the list of personal ambitions and probably still is. But it takes something away from the spectacle of F1, the pinnacle of motorsport, to not have one of its star drivers competing at its blue riband event.

While there may be a like-for-like replacement, I'm not sure that as paying fans we should be happy to have drivers picking and choosing

THIS MONTH

GET THE WORLD'S BEST SELLING F1 MAGAZINE WHEREVER YOU ARE



- Read it on your PC, Mac or iPad
- Identical to the print edition
- On sale the same day as the print edition

Go to www.f1racing.co.uk/digital-edition/

NEXT MONTH



ALONSO
We follow his great American adventure



F1 2017
Renault's view of F1 ten years from now



ROSS BRAWN
Meet the man with the mission

ON SALE

JUN 13

- > What YOU want: our full reader survey results revealed
- > For one race only: Jenson Button is back!
- > Behind the scenes – a tour of the F1 paddock by night
- > Kevin Magnussen answers your questions



THE CHINESE GP



Most teams play it safe and begin on intermediates, apart from Palmer and Sainz who bravely start on supersofts. Lewis Hamilton leads away from pole on a damp track



For the second time in two days Antonio Giovinazzi smashes his Sauber into the pitwall. The Safety Car is duly deployed



Seb Vettel's race is compromised by an early stop that leaves him behind both Red Bulls and Ferrari team-mate Räikkönen

LAT IMAGES: CHARLES COATES; GLENN DUNBAR; STEVE ETHERINGTON; ANDY HONE

LAP

LAP 1

Hamilton leads from pole, with Vettel, in P2, under investigation for not properly lining up in his box on the grid

LAP 2

The VSC is deployed, as Lance Stroll's Williams, which was hit by Pérez, is recovered

LAP 4

Giovinazzi crashes heavily, bringing out the Safety Car

LAP 7

Bottas spins to 12th, a lap before race goes green again. Hamilton leads from Ricciardo

LAP 20

After following him for a few laps, delayed Vettel dives inside Räikkönen at Turn 6 for P4

LAP 22

Vettel is all over Ricciardo. They bang wheels but Vettel takes P3 into Turn 7

LAP 28

Verstappen locks up and goes onto the grass into the hairpin, allowing Vettel into second, 11.3s behind Hamilton

LAP 35

After an epic battle with Sainz, Alonso retires with a driveshaft problem

LAP 40

With all the leaders having pitted for the final time, Hamilton holds an 8s lead over Vettel, Verstappen, Ricciardo and Räikkönen

LAP 10

Verstappen passes Ricciardo for P2 and is now 1.5s behind Hamilton

LAP 16

Hülkenberg is handed a penalty for overtaking under the Safety Car

THE STORY OF THE RACE

LAP 56

Ricciardo closes right up to Verstappen but cannot take P3. Hamilton wins comfortably from Vettel

PITSTOP SUMMARY

| Driver | Start | Pit 1 | Pit 2 | Pit 3 |
|------------|--------------|-----------|-----------|-----------|
| Hamilton | Intermediate | Soft | Soft | - |
| Vettel | Intermediate | Soft | Soft | - |
| Verstappen | Intermediate | Supersoft | Supersoft | - |
| Ricciardo | Intermediate | Supersoft | Supersoft | - |
| Räikkönen | Intermediate | Soft | Supersoft | - |
| Bottas | Intermediate | Soft | Soft | - |
| Sainz | Supersoft | Soft | - | - |
| Magnussen | Intermediate | Supersoft | Supersoft | - |
| Pérez | Intermediate | Supersoft | Supersoft | Supersoft |
| Ocon | Intermediate | Soft | Supersoft | - |
| Grosjean | Intermediate | Supersoft | Soft | Supersoft |
| Hülkenberg | Intermediate | Soft | Supersoft | - |
| Palmer | Supersoft | Soft | - | - |
| Massa | Intermediate | Soft | Supersoft | Supersoft |
| Ericsson | Intermediate | Soft | - | - |
| Alonso | Intermediate | Soft | - | - |
| Kvyat | Intermediate | Soft | - | - |
| Vandoorne | Intermediate | Soft | - | - |
| Giovinazzi | Intermediate | Soft | - | - |
| Stroll | Intermediate | - | - | - |



After an old-school move on Ricciardo into Turn 7, Vettel sets off to chase down Verstappen in the second Red Bull



A fantastic battle of the Spaniards inevitably leads to Sainz passing boyhood hero Alonso in a slower McLaren



Happy Hamilton bounces back from disappointment in Australia with a commanding win, the 54th of his career



THE BAHRAIN GP



Valtteri Bottas makes a quick getaway from pole position, even though rear tyre troubles would ultimately hamper his race. Sebastian Vettel, meanwhile, has already got the drop on Lewis Hamilton



Vettel sets out his stall by stopping well before his main rivals, on lap 11



Verstappen is furious to have his race ended by a lap 12 brake failure



Stroll and Sainz are out of the race after a first-corner tangle on lap 12

LAT IMAGES: CHARLES COATES; GLENN DUNBAR; SAM BLOXHAM; ANDY HONE; OTHER PHOTOS: SUTTON IMAGES

LAP

- 01
- 02
- 03
- 04
- 05
- 06
- 07
- 08
- 09
- 10
- 11
- 12
- 13
- 14
- 15
- 16
- 17
- 18
- 19
- 20
- 21
- 22
- 23
- 24
- 25
- 26
- 27
- 28
- 29
- 30
- 31
- 32
- 33
- 34
- 35
- 36
- 37
- 38
- 39
- 40
- 41
- 42
- 43
- 44
- 45
- 46
- 47
- 48
- 49
- 50
- 51
- 52
- 53
- 54
- 55
- 56
- 57

LAP 1

Power-unit problems prevent Vandoorne from starting. First-time polesitter Bottas leads at the start, but Vettel gets ahead of Hamilton

LAP 11

Vettel is first of the leaders to pit. He stays on supersofts so is clearly on a two-stop strategy

LAP 12

After leaving the pits, Verstappen locks up at the first corner with brake trouble and hits the barrier

LAP 14

Sainz exits the pits and hits Stroll. Both retire and the Safety Car appears on lap 16

LAP 24

Alonso, Kvyat and Palmer do battle for 11th, 12th and 13th place

LAP 15

Both Mercedes pit. Lewis is too slow on entry, holds up Ricciardo and gets a 5s penalty

LAP 27

Struggling with his rear tyres, Bottas lets Hamilton through for second

LAP 17

Vettel leads from Bottas, Ricciardo and Hamilton. The Safety Car comes in and Lewis immediately blasts past a struggling Ricciardo

LAP 32

Bottas is the first to pit for a second time, followed by Vettel a lap later. Hamilton leads

LAP 41

Hamilton pits and serves his 5s penalty. He exits third, 19s behind Vettel, with Bottas P2, and queries switch to soft rubber

LAP 48

A charging Hamilton, with a 13s gap to Vettel, is let through by Bottas and sets off to chase down the lead

THE STORY OF THE RACE

LAP 57

Vettel wins by seven seconds with Hamilton P2 and a disappointed Bottas P3

PITSTOP SUMMARY

| Driver | Start | Pit 1 | Pit 2 |
|------------|-----------|-----------|-----------|
| Vettel | Supersoft | Supersoft | Soft |
| Hamilton | Supersoft | Soft | Soft |
| Bottas | Supersoft | Supersoft | Soft |
| Räikkönen | Supersoft | Supersoft | Soft |
| Ricciardo | Supersoft | Soft | Supersoft |
| Massa | Supersoft | Soft | Soft |
| Pérez | Supersoft | Supersoft | Soft |
| Grosjean | Supersoft | Supersoft | Soft |
| Hülkenberg | Supersoft | Soft | Supersoft |
| Ocon | Supersoft | Supersoft | Soft |
| Wehrlein | Supersoft | Soft | - |
| Kvyat | Supersoft | Soft | Supersoft |
| Palmer | Supersoft | Soft | Supersoft |
| Alonso | Supersoft | Soft | Supersoft |
| Ericsson | Soft | Supersoft | - |
| Sainz | Supersoft | Supersoft | - |
| Stroll | Supersoft | Soft | - |
| Verstappen | Supersoft | - | - |
| Magnussen | Supersoft | - | - |
| Vandoorne | - | - | - |



Vettel's early stop is rewarded when the Safety Car is deployed as the Stroll/Sainz shunt debris is cleared away



Further down the order there's a nail-biting battle between Alonso, Palmer and Kvyat – sadly only for 11th place



Hamilton pursues Vettel valiantly in the latter stages, but the gap is too big to close and he has to settle for second



Vettel's second victory of the season moves him into the outright lead of the world championship. Ferrari are back... ▶



RACE DEBRIEF

FINISHING STRAIGHT

THE RUSSIAN GP

LAT IMAGES: STEVEN TEE; CHARLES COATES; GLENN DUNBAR; STEVE ETHERINGTON



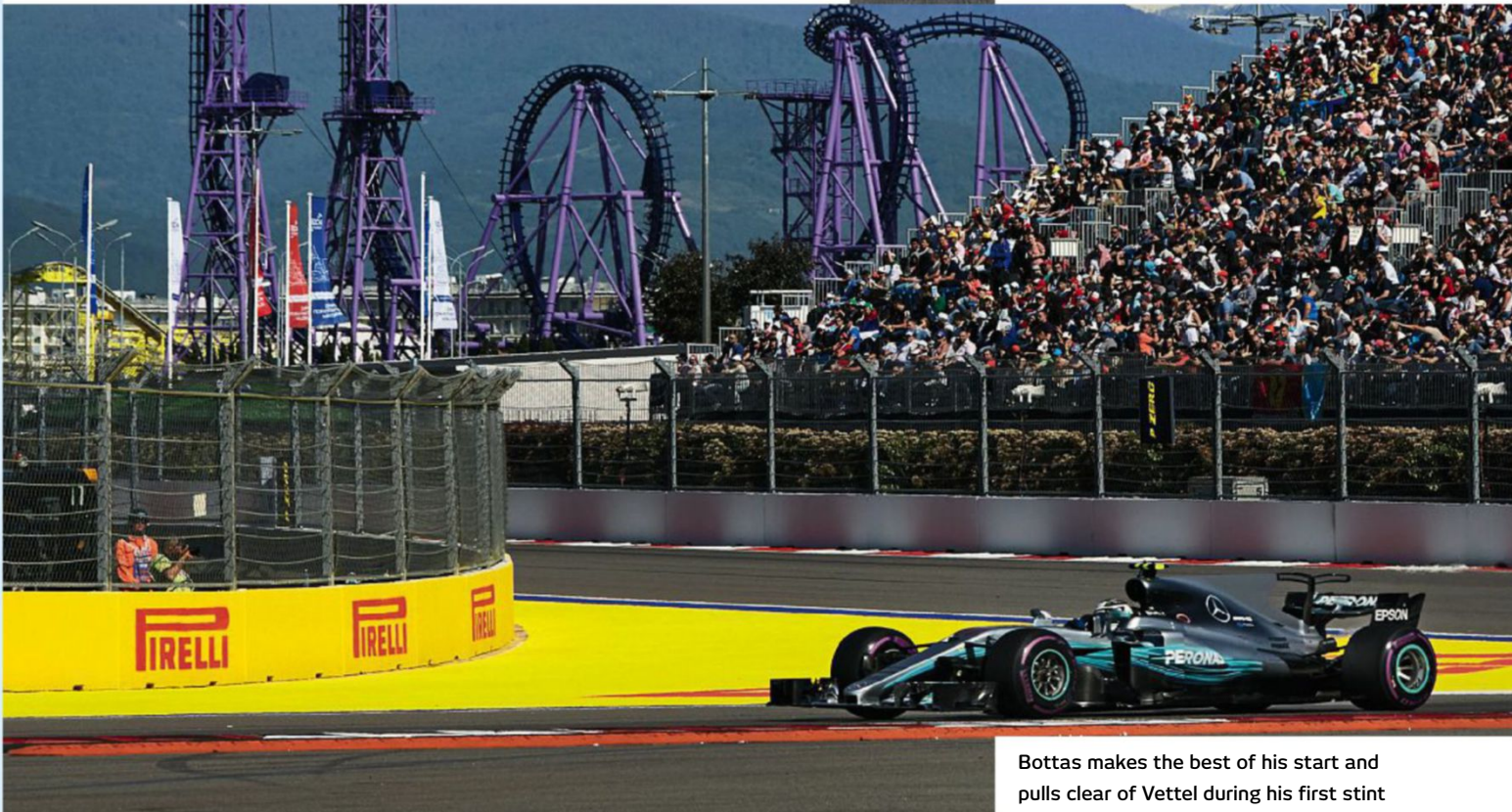
Bottas springs into the lead at the start, while Vettel eventually makes it ahead of a punchy Räikkönen. Hamilton, meanwhile, is unable to follow his team-mate



Grosjean and Palmer tangle at Turn 2. Each blames the other, and both retire



Brake issues hit Red Bull for the second race running. This time Ricciardo has to retire



Bottas makes the best of his start and pulls clear of Vettel during his first stint

FORMATION LAP

The start is abandoned and an extra formation lap ordered as Fernando Alonso breaks down while driving into the pitlane

LAP 1

Bottas overtakes the two Ferraris to take the lead. Grosjean and Palmer collide at Turn 2, bringing out the Safety Car

LAP 8

Magnussen and Vandoorne each receive a 5s time penalty for breaking track limits at Turn 2 on lap 1

LAP 6

Ricciardo is forced to retire his Red Bull after his right-rear brake catches fire

LAP 9

Fourth-placed Hamilton is told by his team to cool his car by getting air into his radiators on the straights

LAP 19

Hamilton sets the fastest lap of the race so far, while Vettel complains that his front-left tyre is blistering

LAP 26

Bottas loses time to Vettel in traffic. The gap between them reduces from 3.4s to 2.6s

LAP 27

Bottas is stationary in the pits for 2.5s as he makes his one and only stop to switch from ultras to supersofts

LAP 34

Sebastian Vettel makes his sole stop and is stationary for 3.4s

LAP 39

Bottas is being chased down by Vettel and locks up his left-front tyre and runs wide at Turn 13

LAP 42

Felipe Massa is forced to pit again with a puncture

LAP 48

The gap between the Mercedes and Ferrari at the head of the field is just 1.5s

LAP

- 01
- 02
- 03
- 04
- 05
- 06
- 07
- 08
- 09
- 10
- 11
- 12
- 13
- 14
- 15
- 16
- 17
- 18
- 19
- 20
- 21
- 22
- 23
- 24
- 25
- 26
- 27
- 28
- 29
- 30
- 31
- 32
- 33
- 34
- 35
- 36
- 37
- 38
- 39
- 40
- 41
- 42
- 43
- 44
- 45
- 46
- 47
- 48
- 49
- 50
- 51
- 52

THE STORY OF THE RACE

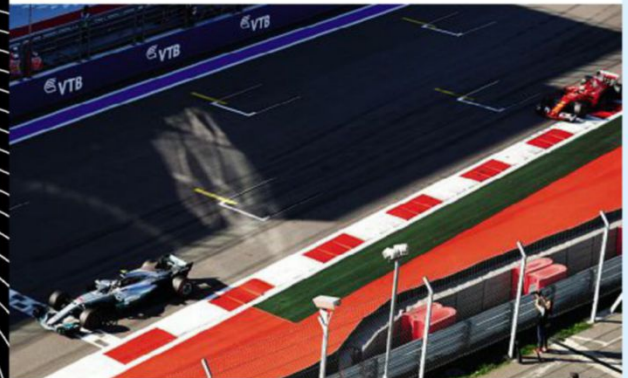
LAP 52

Bottas just holds on to win his first race on his 81st attempt

F1 WORLD CHAMPIONSHIP ROUND



Vettel stays out seven laps longer than Bottas, setting up a chase to the line on much fresher supersoft rubber



Bottas finishes metres ahead of Vettel having struggled with his front tyres at the end due to his earlier lock-up



Bottas celebrates his first win and, in the process, keeps Merc just clear of Ferrari in the constructors' title chase ▶

PITSTOP SUMMARY

| Driver | Start | Pit 1 | Pit 2 |
|------------|-----------|-----------|-----------|
| Bottas | Ultrasoft | Supersoft | - |
| Vettel | Ultrasoft | Supersoft | - |
| Räikkönen | Ultrasoft | Supersoft | - |
| Hamilton | Ultrasoft | Supersoft | - |
| Verstappen | Ultrasoft | Supersoft | - |
| Pérez | Ultrasoft | Supersoft | - |
| Ocon | Ultrasoft | Supersoft | - |
| Hülkenberg | Ultrasoft | Supersoft | - |
| Massa | Ultrasoft | Supersoft | Ultrasoft |
| Sainz | Ultrasoft | Supersoft | - |
| Stroll | Ultrasoft | Supersoft | - |
| Kvyat | Ultrasoft | Supersoft | - |
| Magnussen | Ultrasoft | Supersoft | - |
| Vandoorne | Supersoft | Ultrasoft | - |
| Ericsson | Supersoft | Ultrasoft | - |
| Wehrlein | Supersoft | Ultrasoft | - |
| Ricciardo | Ultrasoft | - | - |
| Grosjean | Ultrasoft | - | - |
| Palmer | Ultrasoft | - | - |
| Alonso | Ultrasoft | - | - |

THE CHINESE GP



| | | | |
|------|------------------|-------------|----------------|
| 1st | Lewis Hamilton | Mercedes | 1h 37m 36.158s |
| 2nd | Sebastian Vettel | Ferrari | +6.250s |
| 3rd | Max Verstappen | Red Bull | +45.192s |
| 4th | Daniel Ricciardo | Red Bull | +46.035s |
| 5th | Kimi Räikkönen | Ferrari | +48.076s |
| 6th | Valtteri Bottas | Mercedes | +48.808s |
| 7th | Carlos Sainz | Toro Rosso | +72.893s |
| 8th | Kevin Magnussen | Haas | +1 lap |
| 9th | Sergio Pérez | Force India | +1 lap |
| 10th | Esteban Ocon | Force India | +1 lap |
| 11th | Romain Grosjean | Haas | +1 lap |
| 12th | Nico Hülkenberg | Renault | +1 lap |
| 13th | Jolyon Palmer | Renault | +1 lap |
| 14th | Felipe Massa | Williams | +1 lap |
| 15th | Marcus Ericsson | Sauber | +1 lap |

Retirements

| | | |
|--------------------|------------|-------------------------|
| Fernando Alonso | McLaren | 33 laps – driveshaft |
| Daniil Kvyat | Toro Rosso | 18 laps – hydraulics |
| Stoffel Vandoorne | McLaren | 17 laps – fuel pressure |
| Antonio Giovinazzi | Sauber | 3 laps – spin |
| Lance Stroll | Williams | 0 laps – collision |

FASTEST LAP



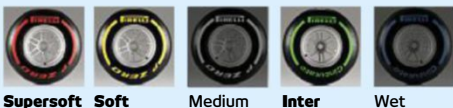
Lewis Hamilton
1min 35.378s on lap 44

FASTEST PITSTOP



Sebastian Vettel
22.243s (entry to exit)

TYRE COMPOUNDS USED



Supersoft Soft Medium Inter Wet

CLIMATE

Damp/
cloudy

AIR TEMP

13°C

TRACK TEMP

16°C

THE BAHRAIN GP



| | | | |
|------|------------------|-------------|----------------------|
| 1st | Sebastian Vettel | Ferrari | 1h 33m 53.374s |
| 2nd | Lewis Hamilton | Mercedes | +6.660s |
| 3rd | Valtteri Bottas | Mercedes | +20.397s |
| 4th | Kimi Räikkönen | Ferrari | +22.475s |
| 5th | Daniel Ricciardo | Red Bull | +39.346s |
| 6th | Felipe Massa | Williams | +54.326s |
| 7th | Sergio Pérez | Force India | +62.606s |
| 8th | Romain Grosjean | Haas | +74.865s |
| 9th | Nico Hülkenberg | Renault | +80.188s |
| 10th | Esteban Ocon | Force India | +95.711s |
| 11th | Pascal Wehrlein | Sauber | +1 lap |
| 12th | Daniil Kvyat | Toro Rosso | +1 lap |
| 13th | Jolyon Palmer | Renault | +1 lap |
| 14th | Fernando Alonso | McLaren | +3 laps – driveshaft |

Retirements

| | | |
|-------------------|------------|---------------------|
| Marcus Ericsson | Sauber | 50 laps – gearbox |
| Carlos Sainz | Toro Rosso | 12 laps – collision |
| Lance Stroll | Williams | 12 laps – collision |
| Max Verstappen | Red Bull | 11 laps – brakes |
| Kevin Magnussen | Haas | 8 laps – electrics |
| Stoffel Vandoorne | McLaren | DNS – power unit |

FASTEST LAP



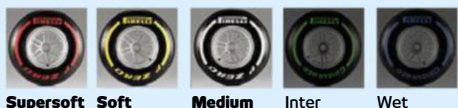
Lewis Hamilton
1min 32.798s on lap 46

FASTEST PITSTOP



Felipe Massa
24.240s (entry to exit)

TYRE COMPOUNDS USED



Supersoft Soft Medium Inter Wet

CLIMATE

Dry/
night

AIR TEMP

26°C

TRACK TEMP

35°C

THE RUSSIAN GP



| | | | |
|------|-------------------|-------------|----------------|
| 1st | Valtteri Bottas | Mercedes | 1h 28m 08.743s |
| 2nd | Sebastian Vettel | Ferrari | +0.617s |
| 3rd | Kimi Räikkönen | Ferrari | +11.000s |
| 4th | Lewis Hamilton | Mercedes | +36.320s |
| 5th | Max Verstappen | Red Bull | +60.416s |
| 6th | Sergio Pérez | Force India | +86.788s |
| 7th | Esteban Ocon | Force India | +95.004s |
| 8th | Nico Hülkenberg | Renault | +96.188s |
| 9th | Felipe Massa | Williams | +1 lap |
| 10th | Carlos Sainz | Toro Rosso | +1 lap |
| 11th | Lance Stroll | Williams | +1 lap |
| 12th | Daniil Kvyat | Toro Rosso | +1 lap |
| 13th | Kevin Magnussen | Haas | +1 lap |
| 14th | Stoffel Vandoorne | McLaren | +1 lap |
| 15th | Marcus Ericsson | Sauber | +1 lap |
| 16th | Pascal Wehrlein | Sauber | +2 laps |

Retirements

| | | |
|------------------|----------|--------------------|
| Daniel Ricciardo | Red Bull | 5 laps – brakes |
| Jolyon Palmer | Renault | 0 laps – collision |
| Romain Grosjean | Haas | 0 laps – collision |
| Fernando Alonso | McLaren | DNS – ERS software |

FASTEST LAP



Kimi Räikkönen
1min 36.844s on lap 49

FASTEST PITSTOP



Valtteri Bottas
29.356s (entry to exit)

TYRE COMPOUNDS USED



Ultrasoft Supersoft Soft Inter Wet

CLIMATE

Sunny

AIR TEMP

27°C

TRACK TEMP

42°C

DRIVERS' STANDINGS

| | | | | | | | | | | | | | | |
|-----|-----------|----|-----|----------|----|-----|--------|----|-----|-----------|----|------|------------|----|
| 1st | Vettel | 86 | 2nd | Hamilton | 73 | 3rd | Bottas | 63 | 4th | Räikkönen | 49 | 5th | Verstappen | 35 |
| 6th | Ricciardo | 22 | 7th | Pérez | 22 | 8th | Massa | 18 | 9th | Sainz | 11 | 10th | Ocon | 9 |



For comprehensive statistics visit www.forix.com

SelectMotorRacing.com

INTERNATIONAL MOTORSPORT TRAVEL ▶ RACE TICKETS ▶ HOSPITALITY



Run by Fans for Fans

Flexible Travel Options

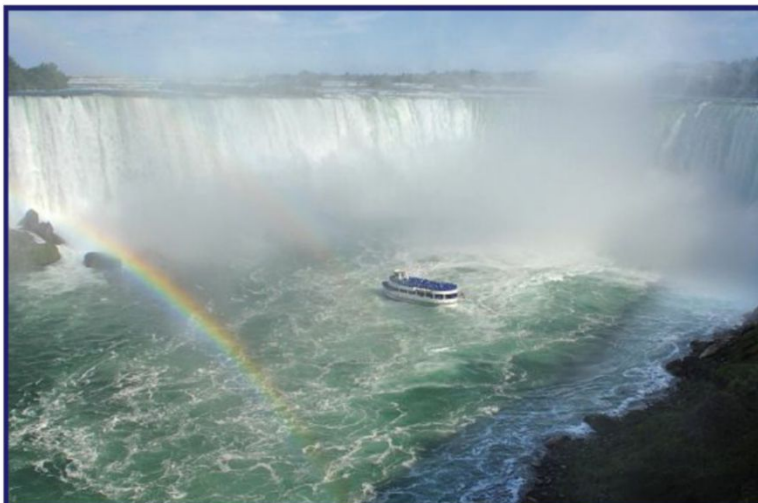
Escorted Tours | UK Travel Team | By Air | Coach Tours | Self Drive



ALL FORMULA ONE EVENTS IN 2017



VIP F1 MONACO GP
YACHTS, APARTMENTS, AMBER LOUNGE



COMBINED F1 CANADIAN GP TOUR
TORONTO, NIAGARA FALLS



US ROAD TRIP - ROUTE 66, GRAND CANYON,
MONUMENT VALLEY, NASA SPACE CENTRE

Book for: All FORMULA ONE EVENTS, MILLE MIGLIA,
GOODWOOD FESTIVAL AND REVIVAL, LE MANS 24HRS,
WEC 6HR SPA & NÜRBURGRING



UK TRAVEL TEAM: +44 (0) 1451 833 721

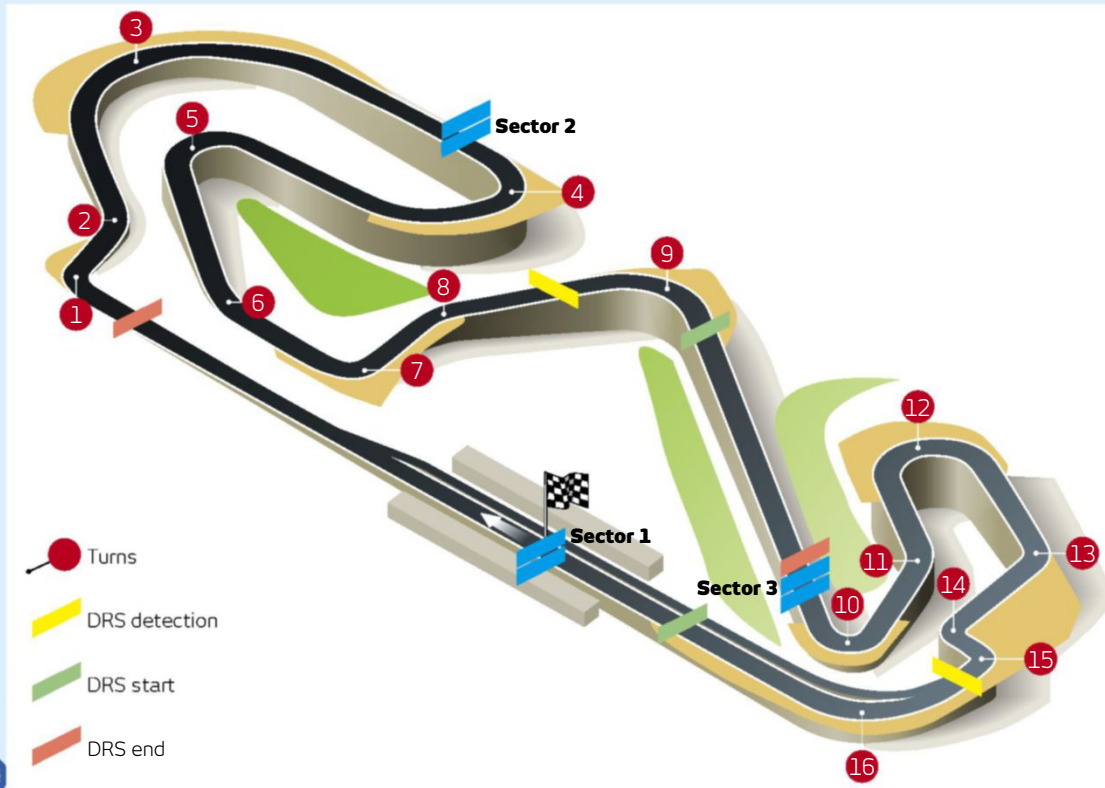
BOOK ONLINE: enquiry@selectmotorracing.com





FINISHING STRAIGHT

THE SPANISH GP



RACE DATA

- Circuit name** Circuit de Barcelona-Catalunya
- First GP** 1991
- Number of laps** 66
- Circuit length** 2.892 miles
- Race distance** 190.826 miles
- Lap record** 1:21.670
- Kimi Räikkönen** (2008)
- F1 races held** 26
- Winners from pole** 19
- Tyres** Soft, medium, hard

TV TIMETABLE

(UK TIME)

Friday 12 May

Practice 1 09:00-10:30

Practice 2 13:00-14:30

Saturday 13 May

Practice 3 10:00-11:00

Qualifying 13:00-14:00

Sunday 14 May

Race 13:00

Live coverage Sky Sports F1

Highlights Channel 4

THE MAIN EVENT

We already have some idea of how the new-spec F1 cars will perform at Barcelona, since the circuit was the venue for pre-season testing. The quickest time of the winter was set by Kimi Räikkönen, who dipped below the 1min 19s mark, to beat Lewis Hamilton's 1m 22s pole lap from the 2016 Spanish GP. But inevitably, in testing, there are always question marks over fuel loads and 'sandbagging.'

The teams have significantly developed their cars since March, and the traditional start of the European season is always accompanied by a major aerodynamic upgrade. So expect a busy Friday as teams run back-to-back comparisons with revised front wings, new aero appendages and upgraded suspension and power units.

Due to the long-radius, high-speed corners, cars with the best aero package will succeed. As we know from previous years, overtaking is difficult here so qualifying is critical.



CLASSIC RACE: 2016

Last year's Spanish GP was arguably the best of the season, and certainly one of the most dramatic races to be held in Barcelona for a while.



If you need reminding, this was where Max Verstappen triumphed on his Red Bull debut after the two Mercedes collided on the opening lap.

Another extraordinary victory was scored here back in 2012. On the occasion of Frank Williams' 70th birthday, Pastor Maldonado sensationally held off home hero Fernando Alonso to take the chequered flag. Then, amid all the post-race celebrations, the Williams garage suffered a ghastly pit fire. It was a weekend no one will forget in a hurry.

THE LAST FIVE WINNERS HERE...

| | | | | |
|----------------|--------------|----------------|-----------------|------------------|
| | | | | |
| 2016 | 2015 | 2014 | 2013 | 2012 |
| Max Verstappen | Nico Rosberg | Lewis Hamilton | Fernando Alonso | Pastor Maldonado |
| Red Bull | Mercedes | Mercedes | Ferrari | Williams |

THE MONACO GP

LAT IMAGES: STEVE ETHERINGTON; STEVEN TEE; ILLUSTRATION: ALAN ELDREDGE



RACE DATA

- Circuit name** Circuit de Monaco
- First WC GP** 1950
- Number of laps** 78
- Circuit length** 2.074 miles
- Race distance** 161.734 miles
- Lap record** 1:17.939
Lewis Hamilton (2016)
- F1 races held** 63
- Winners from pole** 28
- Tyres** Ultrasoft, supersoft, soft

TV TIMETABLE (UK TIME)

- Thursday 25 May**
- Practice 1** 09:00-10:30
- Practice 2** 13:00-14:30
- Saturday 27 May**
- Practice 3** 10:00-11:00
- Qualifying** 13:00-14:00
- Sunday 28 May**
- Race** 13:00
- Live coverage**
- Sky Sports F1 & Channel 4

THE MAIN EVENT



Monaco is still the most iconic race on the calendar. It has everything: sun, sea, style and suspense. And this year there is even greater intrigue. With the increase in aero and speed, the streets of Monte Carlo will be more of a challenge than usual. It's perhaps ironic that the circuit with the lowest lap speed of the year feels the fastest for the drivers.

A bumpy, dirty track surface puts an engineering emphasis on car setup, while from a driving perspective, there is zero margin for error. Drivers' confidence builds once they start to get into a rhythm as the grip levels rise over the course of the weekend, but that confidence drains away the instant they make contact with one of the Principality's unyielding barriers. It's apt that Monte Carlo has a world-famous casino, since this grand prix can truly be a lottery – especially if it rains. 🎰

CLASSIC RACE: 2011

There have been many brilliant races held here – and on p106 of this issue you can read all about the 1961 event. But in recent history, the 2011 grand prix really stands out. Sebastian Vettel won from pole, but throughout the race was closely pursued by Fernando Alonso and Jenson Button. Vettel pitted early and his tyres were shot from mid-distance. It was a thrilling GP that was dramatically interrupted by a late-race red flag when Vitaly Petrov crashed at the Swimming Pool.



THE LAST FIVE WINNERS HERE...

| | | | | |
|---|--|---|---|---|
|  |  |  |  |  |
| 2016 | 2015 | 2014 | 2013 | 2012 |
| Lewis Hamilton Mercedes | Nico Rosberg Mercedes | Nico Rosberg Mercedes | Nico Rosberg Mercedes | Mark Webber Red Bull |



THE JAPANESE GP

Suzuka, Japan, 6-8 October 2017



LAT IMAGES: STEVEN TEE. OTHER PHOTOS: SHUTTERSTOCK.

WHY VISIT?

Aside from being one of the most challenging circuits in the world, Suzuka is a magical place with its own amusement park, and a must-visit for passionate F1 fans.

Getting to the track is an adventure in itself. From Tokyo, you'll need to take various forms of transport, including the Shinkansen bullet train. Remember to sit on the right-hand side of the carriage and, on a clear day, 30 minutes into your journey you will see the majestic Mount Fuji.

Modern Japan has an excitingly foreign feel. A lot of the signage is in English, but away from the big cities few people speak it, so ensure you have the name of your hotel written down in Japanese. And cards don't always work in ATM machines, so do carry cash with you. The Japanese Grand Prix will be a trip you'll never forget.



Take the bullet train for an incredible view of Mount Fuji

WHAT TO SEE

It's 184 miles from the track, but if you fly into the Japanese capital of Tokyo, it's worth spending a few days there. Don't miss the Shibuya Crossing (below), best viewed from the top floor of Starbucks. The Akihabara area has some fantastic gadget shops, while Ginza, the Knightsbridge



Tokyo's iconic Shibuya Crossing is one of the world's busiest intersections

of Tokyo, is great for fashion-conscious shoppers. The adventurous should get up early and go to watch the famous tuna auction at the Tsukiji fish market. To make it onto one of the two tours, be sure to arrive by around 3am.

If you are staying in the Suzuka area itself, visit Toba and take a trip out to Mikimoto Pearls Island. Here you can watch women free dive with knives and bags to bring up pearls from the depths. There's also a museum on site that explains the process of pearl cultivation. Eating out is cheap, and it's good to try the sushi, sashimi and ramen noodles or the local kare-raisu (curry). Quick-and-easy stand-up noodle bars are everywhere, and you'll find that both hot and cold drinks are available from vending machines on the street.



WHERE TO STAY

There are lots of small hotels in and around Suzuka, but if they're all booked up, search nearby towns such as Kuwana, Yokkaichi or Tsu. Another option is to stay in Nagoya (reachable either by plane or bullet train from Tokyo) and commute by train to Suzuka. Wherever you stay, you might want to bring your own pillow. Japanese pillows are very hard and are often filled with beans.

Hilton Hotel

Nagoya



Nagoya is a busy city and the Hilton is a short walk from the train station. This hotel has a gym, pool, sauna and tennis courts. Remember to ask for a non-smoking room.

Associa Marriott

Nagoya



You can choose from a Japanese or Western-style bedroom at this hotel, which is located within the large Nagoya bullet train station.

FAST FACTS

GP tickets A three-day grandstand seat opposite the pits will cost around £600. The hairpin after the crossover is half that price.

Capital city Tokyo

Japanese yen
£1 = 140 yen

GMT +8

Type A

20°C / sunshine & showers

A return flight, in economy, the week of the race, from London Heathrow to Tokyo (direct) on BA, costs around £800 and takes 12 hours



**FAN
VILLAGE
2017**

IN PARTNERSHIP WITH
WHITTLEBURY PARK

Prices start from
£165 per plot



The *F1* Racing Fan Village is back for 2017

If you're going to see the 2017 British Grand Prix and need somewhere to stay, our Fan Village is the perfect place!

British Grand Prix Camping

The Campsite opens from Tuesday 2pm – Monday 2pm

- ✓ Direct Pedestrian access into Circuit
- ✓ Electric pitches available but must be pre booked
- ✓ Main showers and toilet block with mobile units placed around the site
- ✓ Live Bands on Thursday, Friday and Saturday
- ✓ 4 Different bars ranging from beer tent to A la carte restaurant
- ✓ Daily car parking also available
- ✓ 18 holes of golf £20 to all Whittlebury Park campers during the GP

Prices per plot

Farm Sites £165 per plot (7m x 7m)

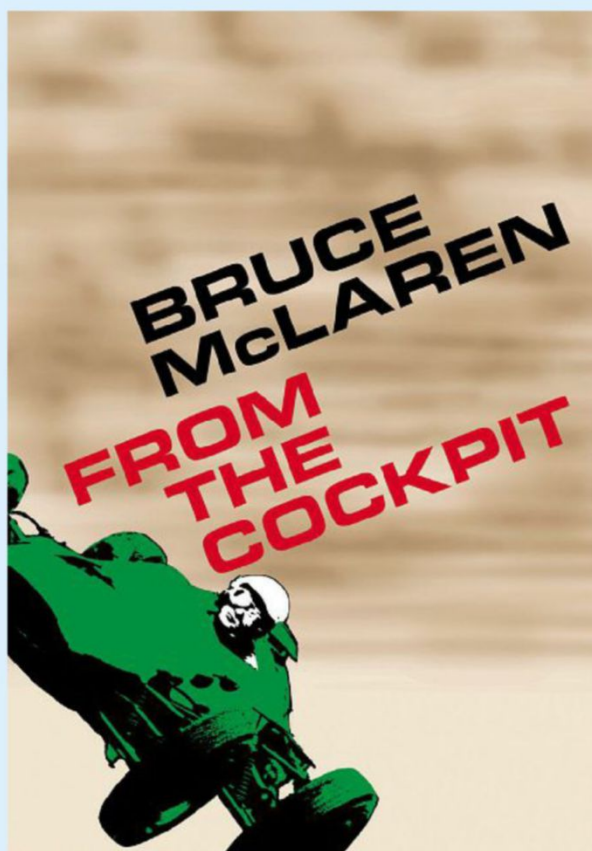
Golf Course £210 per plot (7m x 7m)

BOOK NOW booking.whittlebury.com or call 01237 850 027
or email: camping@whittlebury.com



F1 UPGRADES

Enhance the F1 experience with the latest must-have products



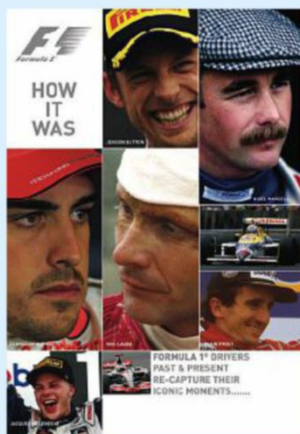
BRUCE McLAREN
FROM THE COCKPIT
Author Bruce McLaren
Price £19.99
www.evropublishing.com

Bruce McLaren was just 27 when he penned his autobiography in 1964 – a tender age for such an undertaking. Then again, he'd already squeezed an awful lot into his short life, enduring a debilitating childhood illness, moving to Europe as a racing driver of promise and making history as the (then) youngest ever grand prix winner. Ahead of him and beyond this book lay the foundation of his own

team, Can-Am glory – and his tragic death in a testing crash at Goodwood in 1970.

His book has long been considered a prime period source, with his optimism shining through his easy narration. So what a great idea to republish it now, just as it was, with an added preface from his daughter Amanda. With all that we know was to come, Bruce's words carry added resonance.

HOW IT WAS
DVD & Blu-ray
Price £20 & £25
www.f1store.formula1.com



In addition to the usual annual season-review discs, FOM have put together this 90-minute bonus disc, which features highlights from their many thousands of hours of archive Formula 1 footage.

Rather than simply dishing out a wide range of vintage material, they have focused on ten classic grands prix (between 1984 and 2010) and have asked the protagonists to look back and recall those events.

Johnny Herbert describes the emotions of that dramatic Nürburgring win for Stewart in 1999; Jean Alesi recalls his duel with Ayrton Senna on the streets of Phoenix in 1990; and Jenson Button relives his extraordinary comeback drive at the 2010 Canadian Grand Prix.

This is great to dip into when you're starved of F1 action and we'd like to see more of these come out of F1's vaults – particularly footage that has never been seen.



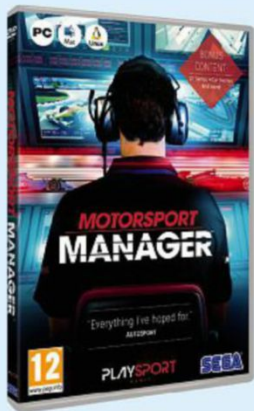


MOTORSPORT MANAGER

PC / Mac

Price £19.99

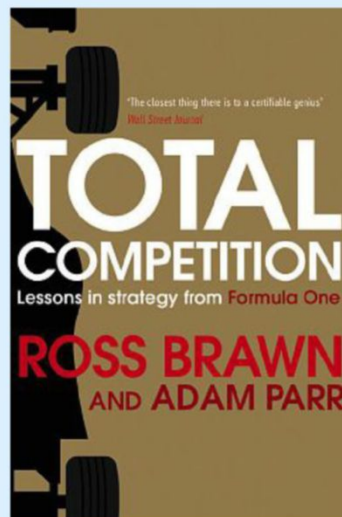
www.motorsportmanager.com



It's been decades since there's been a team-management game worth playing, but Motorsport Manager was worth the wait. What started out as a popular mobile app has become a full-blown simulation experience, to which you can lose hours of your life.

You decide how you spend your team's resources, be it on upgrades to the car, the facility, staffing or drivers. Balance that with finding sponsors while trying to look after the needs of your star racers.

When you get to the race weekend, it's your job to ensure the car is set up to be competitive and you call the strategy shots in the race. There's no hiding if you make a mistake...



TOTAL COMPETITION: LESSONS IN STRATEGY FROM FORMULA ONE

Author Ross Brawn & Adam Parr

Price £20

www.simonandschuster.co.uk

Taking the form of an extended Q&A between ex-Williams boss Adam Parr and F1's new sporting MD Ross Brawn, *Total Competition* offers a series of insights into the mindset of one of F1's most influential figures. The book lays bare Brawn's style of management, while throwing up juicy opinions on leading figures such as Bernie Ecclestone, Sebastian Vettel, Michael Schumacher and Toto Wolff.

FERRARI SF16-H STEERING WHEEL

1:1 scale

Price £2,400

www.amalgamcollection.com



This full-size precision replica of the Ferrari SF16-H steering wheel features working buttons, switches and paddles, and is exactly as used by Sebastian Vettel and Kimi Räikkönen last year.

Like all the car models available from the Amalgam Collection, this replica has

been hand-crafted using original CAD data supplied directly from Ferrari and has come under the strict scrutiny of both the design and engineering teams to ensure it retains a completely authentic weight, look and feel. The wheel measures approximately 330mm (12.9 inches) wide.



CASIO EDIFICE SCUDERIA TORO ROSSO LIMITED EDITION

Price £200 (approx)

www.casio.co.uk

Unveiled at the end of March this year, this Casio watch is the second limited-edition model to be tied in with Scuderia Toro Rosso, with the team's logo clearly visible on the face and back cover.

Adorned with the team colours of blue, red and gold, this model forms part of Casio's established Edifice range. It has all the features you would expect from a quality timepiece, including world time zones, a stopwatch and a calendar. It runs on solar technology and is waterproof to a depth of ten metres.

As this issue of *F1 Racing* went to press, this model was not yet available in the UK market. But we have found various international sellers on the web, offering the timepiece with a retail price of around £200. 📍



Moss on his way to an epic Monaco win, the side panels on his Lotus 18 removed to assist cooling

LAT IMAGES

STIRLING'S DRIVE OF A LIFETIME

Peter Windsor recalls a peerless performance at the 1961 Monaco Grand Prix, in which Stirling Moss took his aging Rob Walker Lotus 18 to a breathtaking victory over Ferrari

Stirling Moss was at the peak of his powers in 1961. Behind him were the Mercedes days alongside Fangio and the dominant Vanwall years with Tony Brooks. Now, in the hype preceding the opening round of the new 1.5-litre F1, Moss was a professional athlete at the absolute pinnacle of his ability – a suntanned, global celebrity who travelled the planet as the greatest driver of them all.

He flew to Nice that year in a dark suit and tie; he zapped around Monaco on a new mini-bike; he was immaculate in the pitlane with his two-piece Dunlop blues, his Herbert Johnson helmet with the leather side covers, Westover moccasins and Mk 1 Pioneer goggles. And he drove, of course, for the small, privately run Rob Walker team. An English Lone Ranger.

Innes Ireland, in one of the new works Lotus 21s, crashed luridly in practice when he selected second instead of fourth in

the tunnel. Stirling was first on the scene, helping to load Innes onto a stretcher before organising the obligatory cigarette. Stirling's Climax engine was for the rest of the day off-song; Alf Francis, Walker's chief mechanic, was in a terrible mood.

Then it all came together. Moss took pole ahead of Richie Ginther's much more powerful 120° V6 Ferrari 156. But there was still more drama before the start.

LAST-MINUTE ADJUSTMENTS

Stirling asked Alf to remove the chassis side panels of his Lotus 18 to allow better cockpit cooling. As Alf set to work he noticed a crack in one of the tubular chassis frames. Without hesitation, he lit up a welding torch and made good the fracture – full fuel tanks and all. Stirling stood calmly by, sipping a cup of water.

Ginther, with 15 per cent more power, won the drag down to the Gasworks

Hairpin. Stirling headed the chase, taking time to wave to photographers and friends as he rounded the Station Hairpin. He was pacing himself, preparing for the punishing two-and-a-half hours that lay ahead.

He began to race on lap 14, darting down the inside of the hairpin as Richie momentarily relaxed. Stirling then drove the next 86 laps of Monte Carlo on the limit. He pulverised his pole time; he perfectly played the back-markers; he maximised the 18's handling. He was flat through a tunnel that invariably induced a throttle lift; he was inch-perfect, lap after lap, through Ste Dévôte – back then a very fast, fourth-gear right-hander. "At the start of each lap," he said later, "I'd say, 'Right. I'll try to do the perfect lap from here. Then, a few corners later, I'd make a small mistake and start it all again...'"

He won it and beat the Ferraris against all the odds. And here's the thing: had Stirling driven every lap at pole speed, his total race time would have been 40s slower.

Stirling's parents were there at the finish (although Princess Grace and Prince Rainier were absent). Stirling stood in disbelief as he was embraced by Louis Chiron.... then 'God Save the Queen', back in the 18 for the lap of honour, cigarette aglow, garlanded by flowers.

Stirling visited Innes in hospital that night. Then he partied deep into the morning. 🍷

1961 THAT WAS THEN...

FILM

Audrey Hepburn sang 'Moon River' in *Breakfast at Tiffany's*. Meanwhile, Jack Brabham, Lloyd 'Lucky' Casner, Roy Salvadori, John Coundley, Steve Ouvaroff and Mike Salmon took roles in motorsport film *The Green Helmet*.

EXPLORATION

Yuri Gagarin became the first human to be launched into space.

MUSIC

The Beatles made their debut at Liverpool's Cavern Club.

POLITICS

John F Kennedy became the 35th US President, and the US unsuccessfully invaded the Bay of Pigs in Cuba.

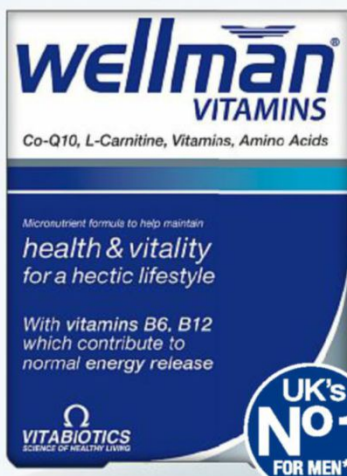
wellmān[®]

Live life well[®]

WELLMAN.CO.UK

I've been taking Wellman since my twenties to support my health and hectic lifestyle.

David Gandy



Made in Britain

From Boots, Superdrug, supermarkets, Holland & Barrett, health stores, pharmacies
*UK's No1 men's supplement brand. Nielsen GB ScanTrack Total Coverage Unit Sales 52 w/e 3rd Dec 2016.


VITABIOTICS



THE NEW LEON CUPRA OUR CUP RACER SET FREE

TECHNOLOGY TO ENJOY

THE NEW SEAT LEON CUPRA WITH 300HP.

We've built the new Leon CUPRA with the soul and the parts of our award winning CUP RACER, with a powerful design and a stylish interior to match. Whether you're in the sporty SEAT Leon CUPRA or the Leon ST CUPRA with 4Drive, it's time to take the adventure to the road.

FOLLOW US ON:     [SEAT.CO.UK](https://www.seat.co.uk)

Official fuel consumption for the SEAT Leon CUPRA range in mpg (litres per 100km): urban 31.0 (9.1) – 33.6 (8.4); extra-urban 46.3 (6.1) – 49.6 (5.7); combined 39.2 (7.2) – 42.2 (6.7). CO₂ emissions 164 – 153g/km. Standard EU Test figures for comparative purposes and may not reflect real driving results.