

RED BULL'S
ADRIAN NEWEY
ANSWERS YOUR
QUESTIONS **P70**



FERRARI'S
STUNNING
F1 VISION
P26



FORMULA 1'S
GREATEST
EVER CARS
P55

WIN! A DAY IN THE LIFE OF JENSON BUTTON **P38**

Competition closes 30 April 2015. Terms and conditions apply



The
Iceman
speaks

EXCLUSIVE

KIMI

"WE WILL
PUT FERRARI
BACK WHERE
IT SHOULD BE!"

Plus

**The Räikkönen
enigma: is he
a true great?**

DAMON HILL

"Drivers have two
fears: death and losing" **P35**





RENAULT MEGANE RENAULTSPORT

**THE ROAD PROVIDES ITS DESTINY,
THE TRACK ITS DNA.**

After 115 years in motorsport, our name is synonymous with some of the fastest cars on the track: just look at the performance of our partners at Red Bull Racing. Having dedicated this much time to tuning and tweaking F1 and Formula Renault cars, it's no surprise our road cars are so thrilling to drive; the racetrack is in their blood.

Model shown is Renault Mégane Renaultsport 275 Trophy-R. The official consumption figures in mpg (l/100km) for the Renault for the range are 174g/km. EU Directive and Regulation 692/2008 test environment figures. Fuel consumption and CO₂ may



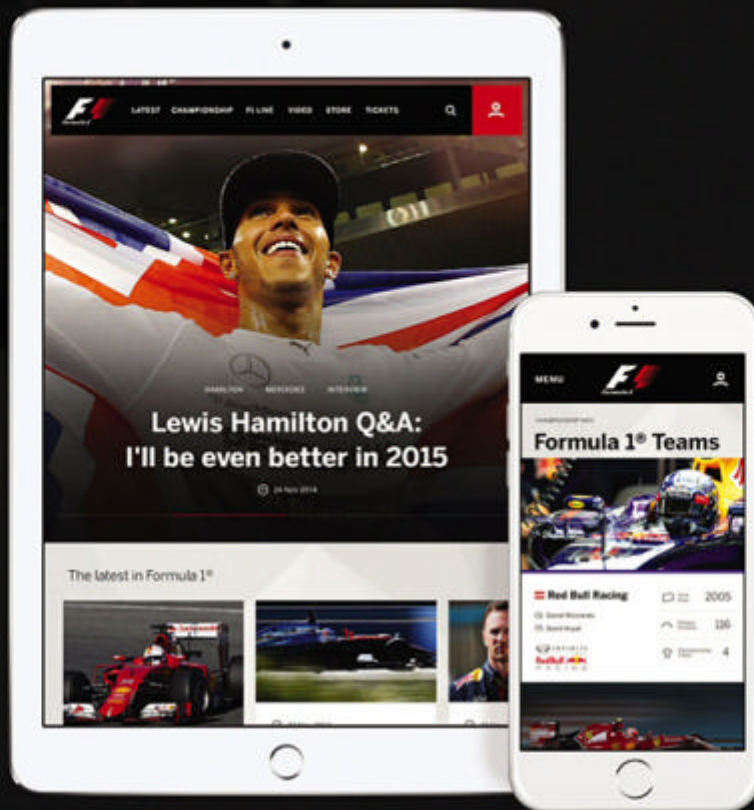
DRIVE THE CHANGE



Mégane Renaultsport core range are: Urban 28.8 (9.8); Extra Urban 45.6 (6.2); Combined 37.7 (7.5). The official CO₂ emissions vary according to driving styles, road conditions and other factors.

ALL-NEW FORMULA1.COM

UNPRECEDENTED LIVE RACE DATA AND EXPERT ANALYSIS.
ALL THE ACTION. ANYTIME. ANYWHERE.



Go beyond what's live.



WorldMags.net



LATEST

CHAMPIONSHIP INFO

F1 LIVE

VIDEO

STORE

TICKETS



FORMULA 1 GRANDE PRÊMIO PETROBRAS DO BRASIL 2014 São Paulo

LEADERBOARD

PERFORMANCE

LIVE COMMENTARY

LAP CHART

SPEED & WEATHER

TYRE HISTORY

Head-to-head

RÄIKKÖNEN ▼	BUTTON ▼
P4	P5
GAP 0.016s	

LAST LAP
1:15.448

LAST LAP
1:14.958

FASTEST LAP
1:14.963

FASTEST LAP
1:14.667

TYRES
S X LAPS

TYRES
X **S** LAPS

PITS
2

PITS
3

AUTODROMO JOSE CARLOS PACE

P	#	DRIVER	GAP INTERVAL			
1	6	N. ROSBERG	LAP	60	1:14.003	18.5
2	44	L. HAMILTON	0.8	0.8	1:14.201	18.4
3	19	F. MASSA	31.6	30.5	1:14.800	18.7
4	7	K. RÄIKKÖNEN	42.2	11.2	1:15.448	18.9



5	22	J. BUTTON	42.2	0.2	1:14.958	18.7
---	----	-----------	------	-----	----------	------

Swiss *movement*, English *heart*

C70 VW4 CHRONOMETER – LIMITED EDITION

The victory of the Vanwall driven by Stirling Moss and Tony Brooks in the amazing 1957 British Grand Prix at Aintree is celebrated in our latest chronometer. Powered by the ETA 251.233 COSC, the 1,957-piece limited edition salutes a race that changed the course of British motor racing for ever. It is, of course, in British Racing Green.

EXCLUSIVELY AVAILABLE AT
christopherward.co.uk

CHR. WARD
L O N D O N

WorldMags.net





COVER STORIES



40 **KIMI RÄIKKÖNEN** Could this be Kimi's year at Ferrari? The signs look good...



55 **GREATEST CARS** F1 designers voted for the winners in ten categories



70 **ADRIAN NEWAY** What next for Red Bull's departing design genius?



80 **NICO ROSBERG** Inside the mind of the man most likely to beat Hamilton

FIRST SECTOR: THE REGULARS

- 10 **IGNITION** DOES ALONSO REGRET THAT McLaren MOVE?
- 12 **PARADES** PHOTOS FROM THE SEASON-OPENER
- 18 **F1 INSIDER** NEWS, OPINION AND ANALYSIS
- 30 **INSIDE TECH** THE SCIENCE BEHIND RACE STRATEGY
- 32 **PETER WINDSOR** THE NEW ENGINES REVEAL ALL
- 35 **DAMON HILL** THE FEAR THAT DRIVES THE DRIVERS
- 37 **DIETER RENCKEN** WILL GERMANY LOSE ITS GRAND PRIX?
- 106 **SUBSCRIBE AND GET A McLaren-Honda TEAM CAP**

SECOND SECTOR: THE FEATURES

- 40 **KIMI: REASONS TO BE CHEERFUL**
A team-mate he actually gets on well with, staff changes throughout Ferrari, and a shift in focus from the other side of the garage: things are looking up for the Finn
- 46 **THE KIMI ENIGMA**
Our Räikkönen analysis continues, as we investigate the stats to see if Kimi can really be considered an F1 great
- 55 **THE GREATEST F1 CARS EVER**
A panel of designers cast their votes for the greatest machines ever to grace Formula 1. Read the results here...
- 70 **YOU ASK THE QUESTIONS**
Red Bull designer Adrian Newey answers readers' questions on what got him started in F1, and what he's doing next
- 78 **MEET THE NEW CHAIR OF THE GPDA**
The man known as 'Ten jobs', the well-connected former F1 racer Alex Wurz, on taking the GPDA in the right direction
- 80 **WHAT'S NICO ROSBERG THINKING?**
We probe three areas of the Mercedes runner-up's psyche, to assess his prospects of beating his team-mate in 2015
- 86 **A CHAT WITH THE OTHER NICO**
Yet to prove his worth in a top team, can Nico Hülkenberg – surely F1's most underrated racer – make it to the big time?
- 88 **LUNCH WITH ALLAN McNISH**
The tenacious star of sportscars and endurance racing tells Maurice Hamilton why F1 never quite worked out for him
- 98 **GO FIGURE**
Calculators at the ready as we present the numbers and stats from Formula 1's pre-season testing
- 100 **ROOKIES HEAD-TO-HEAD**
We talk to Toro Rosso about the prospects of their youthful driver line-up, Max Verstappen and Carlos Sainz Jr

THIRD SECTOR: FINISHING STRAIGHT

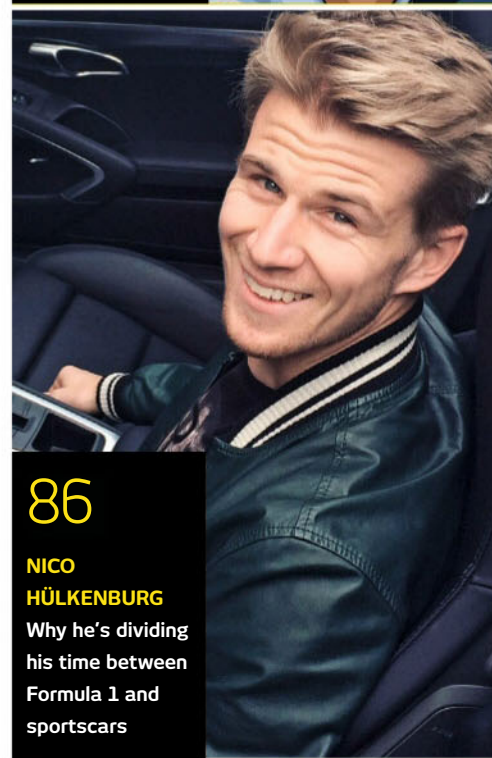
- 110 **AUSTRALIAN GP DEBRIEF** FAMILIAR ONE-TWO FOR MERC
- 114 **MALAYSIAN GP PREVIEW** DRIVERS FEEL THE HEAT
- 116 **CHINESE GP PREVIEW** TWISTS, TURNS AND CHALLENGES
- 118 **BAHRAIN GP PREVIEW** A FLOODLIT DESERT RACE
- 120 **INBOX** READERS SHARE THEIR OPINIONS
- 122 **MURRAY WALKER** F1'S MAGIC NUMBERS



35

KING OF THE HILL

Exclusive insights from the 1996 F1 world champion



86

NICO HÜLKENBURG

Why he's dividing his time between Formula 1 and sportscars

80

NICO ROSBERG

The Mercedes racer opens up about his 'global' approach... to everything





55

THE GREATEST F1 CARS EVER

The most marvellous machinery voted for by 21 experts



70

YOU ASK THE QUESTIONS

Red Bull design guru Adrian Newey submits to a grilling-by-reader



40

KIMI: REASONS TO BE CHEERFUL

The Ferrari return didn't go to plan last year. But now it's all change at the Scuderia





Ignition / Anthony Rowlinson / 04.15

And so it begins again...

We can only imagine what Fernando Alonso, recuperating in Dubai and watching qualifying from Albert Park, must have been thinking as Jenson Button pipped Kevin Magnussen to take 17th place on the grid and complete an inglorious back-row lockout for McLaren.

The most printable version would surely be: "What have I got myself into this time?" But in darker moments, perhaps he has reflected on how, as one of the world's top-two F1 drivers, he has ended up (Manor aside) in the least competitive car on the grid.

For that's the unsavoury reality, and one that's deeply unfortunate for the sport. What could be more satisfying than to see McLaren and Fernando back where they belong, fighting at the front, challenging for wins and championships and performing at their respective peaks? As things stand, the 2015 McLaren-Honda partnership has produced what is (depending on statistical debate) the least competitive McLaren ever, and we take no glee in noting that the Australian GP qualifying pace of the MP4-30 was some *four* seconds off that of the standard-setting Mercedes F1 W06.

A little lap-time analysis suggests that the Honda power unit may be as much as 200bhp down on its rivals, prompting a stoic Jenson Button to smile wryly in response to an observation that his car's speed trap figures 'weren't too bad'. "I don't know which figures you're looking at," he answered, at a post-qualifying press briefing that felt more like a wake. There's a very long road ahead for McLaren this year, and we

await developments there with interest, for no amount of retrospective justification can sugar the pill of painfully poor performance.

How different things were for McLaren-Honda in their late-80s pomp, when the Honda-powered MP4/4, driven by Prost and Senna, so very nearly swept all before it. We celebrate this magnificent machine among many others in our 'Greatest F1 cars ever' feature, on page 55. If nothing else, it should offer some comfort to McLaren fans and remind them of the greatness this team attained so majestically in years gone by.

If McLaren started the season with a down-on-the-power whimper, then Ferrari, F1 yin to McLaren's yang, have entered 2015 with... well, not quite a bang, but they're certainly in far better shape than they were in 2014. Struggling fourth-best last year, they look to be right up there in the fight for 'best of the rest' with Williams. And, even more encouragingly, one Kimi Räikkönen appears to have regained his smile. Okay, it's not the megawatt beam of Daniel Ricciardo, but we've noticed a slight upturn around the far extremities of Kimi's mouth. By Räikkönen standards, this constitutes a remarkable display of emotion, and it's down to the pleasure he's taking in driving a car that's responsive to the particular demands he has of the front end. As you can read in our exclusive Kimi interview and analysis on page 40, he's finding a newly re-invigorated Scuderia a happy place to be and that's parlaying into Vettel-matching lap times. Which rather begs the question: what might Alonso have achieved in the SF15-T...?



HAYMARKET CONSUMER MEDIA, TEDDINGTON STUDIOS, BROOM ROAD, TEDDINGTON, MIDDLESEX, TW11 9BE, UK

THE TEAM

Group editor
Anthony Rowlinson

Group
Managing Editor
Stewart Williams

Deputy Editor
James Attwood

Associate Editor
James Roberts

Executive Editor
Stuart Codling

Chief Sub-Editor
Vanessa Longworth

Art Editor
Frank Foster

Designer
Jack Woolrich

Principal
Photographer
Steven Tee

Office Manager
Joanne Grove

Editorial Tel
+44 (0)20 8267 5806

ADVERTISING

Advertising Director
Matthew Witham

Head of Global
Partnerships
Chris Gowland

Partnerships
Manager
LeAnne Foley

UK Sales Manager
Ben Fullick

Advertising Tel
+44 (0)20 8267 5179/5916

MANAGEMENT

Haymarket
Specialist Media
Group Director
Tim Bulley

Group Commercial
Director
Ben Guynan

LICENSING

Licensing Director
Alastair Lewis

Licensing Manager
David Ryan

PRODUCTION
Production &
Publishing Manager
Sunita Davies

SUBSCRIPTIONS

Email F1racing@
Servicehelpline.co.uk

Fax 01795 414 555

Customer Hotline
0844 848 8826

Subscriptions
Marketing Executive
Kadie Chanter

PUBLISHING

Group publisher
Stuart Williams

Missed an issue?
Back issues hotline:
08456 777 818

Editorial director Mark Payton

Creative director Paul Harpin

Strategy and planning director Bob McDowell

Managing director David Prasher

Chairman and managing director Kevin Costello

F1 Racing published monthly in Australia, China, Germany, Greece, Hong Kong, Hungary, India, Indonesia, Japan, Korea, Malaysia, Mexico, Middle East, Philippines, Poland, South Africa, UK, USA. Formula One, Formula 1 and F1 trademarks of Formula One Licensing BV, a Formula One Group company are used under licence.

Circulation queries

Frontline, Park House, 117 Park Road, Peterborough, Cambs PE1 2TR. Tel: +44 (0)1733 555161. ISSN 13614487. EAN 07713614480012. Printed by Wyndeham Heron, The Bentall Complex, Colchester Road, Heybridge, Maldon, Essex CN9 4NW. Covers printed by Wyndeham Group. Colour by Bom Group, 90-92 Pentonville Road, London N1 9HS. 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.

F1 Racing Subscriptions

PO Box 326, Sittingbourne, Kent ME9 8PA. Tel: 0844 848 8826. Fax: 01795 414 555. Overseas: +44 (0)1795 592 990. Email: f1racing@servicehelpline.co.uk. F1 Racing (ISSN number 74597X) is published monthly by Haymarket Media Group, Teddington Studios, Broom Road, Teddington TW11 9BE, United Kingdom. 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 Haymarket Media Group, Teddington Studios, Broom Road, Teddington TW11 9BE. Air Business Ltd is acting as our mailing agent. F1 Racing is published 12 times a year by Haymarket Consumer Media, © 1996 Haymarket Media Group Ltd



Follow Anthony on Twitter: @Rowlinson_F1

Contributors



James Attwood

F1 Racing's deputy editor – and resident pollster

Dep ed Atters took on the task of totting up the votes from designers who took part in our greatest car poll (p55). The results make fascinating reading



Alan Eldridge

F1 Racing's ace illustrator and guru of graphics

If something needs drawing, be it a simple circuit map (p114) or the epic helmet poster free with last month's issue, this is the man we call on



Maurice Hamilton

Our veteran F1 journalist dines with a racing terrier

Maurice Hamilton caught up with the recently retired Allan McNish to discuss F1, sportscars and the challenge of radio broadcasting (page 88)



Thomas Butler

The star snapper who can coax a smile out of Kimi

Trying to persuade F1's most taciturn driver to show some emotion in a photoshoot isn't easy, but Thomas Butler managed to do just that on page 40



Thanks to Alberto Antonini, Mark Arnall, Nicoletta Baffoni, Lorenzo Bellanca, Ketan Bharadia, Idoia Bilbao, Karun Chandhok, Terry Cimini, Didier Coton, Russell Day, Cristina Diez, Mike Doodson, Lyndsey Fairburn, Kevin Field, Will Hings, Bradley Lord, John Munday, Adrian Myers, Georg Nolte, Sophie Ogg, Steve Robertson, Rodrigo Sanchez, Lynden Swainston, Katie Tweedle, Fabiana Valenti, Tabatha Valls Halling, Steve Waters, and all the designers who voted in our 'Greatest F1 cars ever' poll

INTRODUCING A BETTER WAY
TO GET VIRTUALLY EVERY HAIR



Gillette[®]

THE BEST A MAN CAN GET™

Fusion[®]
PROGLIDE[®]
WITH FLEXBALL™ TECHNOLOGY

FUSION PROGLIDE REBUILT WITH NEW FLEXBALL TECHNOLOGY.

A razor that responds to every contour of your face for maximum contact and gets virtually every hair.

#FLEXBALL

WorldMags.net



Parade

Trailblazing In a blur of vivid sparks, Ferrari's Kimi Räikkönen darts around the Albert Park circuit in Melbourne to record his highest grid position in nearly 12 months. The last time the Finn started as high as fifth was in Bahrain last April. Could this be the start of the Scuderia's long-overdue revival?

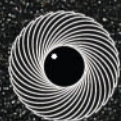
Where Albert Park, Australia **When** 5.51pm, Saturday 14 March 2015

Photographer Vladimir Rys

Details Canon EOS-1DX, 200mm lens, 0.3 sec at F8







Parade

A walk in the park It was seemingly all too easy for Lewis Hamilton at the season-opener in Melbourne. Pole by more than half a second from team-mate Nico Rosberg, and his seventh win in eight races. As the dominant duo cruise to a one-two finish, is this a portent of the season to come?

Where Albert Park, Australia

When 5.10pm, Saturday 14 March 2015

Photographer Steven Tee/LAT

Details Canon EOS-1DX, 200mm lens, 1/1000th at F8



Parade

Masked crusader Racing in scarlet for the first time, Germany's Sebastian Vettel prepares to step into his Ferrari (nicknamed 'Eva') ahead of practice on Saturday lunchtime in Melbourne. It was a triumphant debut, too, as he recorded his first podium for the Scuderia with a third-place finish

Where Albert Park, Australia

When 1.50pm, Saturday 14 March 2015

Photographer Lorenzo Bellanca

Details Canon EOS-1DX, 85mm lens, 1/3200th at F1.2





HAMILTON CONTRACT 21



THE DRIVER'S WIFE 24



FERRARI CONCEPT CAR 26

FI INSIDER

NEWS ■ OPINION ■ ANALYSIS

NEWS

McLaren's year gets off to a tough start

Engine woes and the temporary loss of their star driver mar the start of their Honda partnership



McLaren's MP4-30 put in very low mileage across the three pre-season tests, and was plagued by problems with its new Honda power unit

The month's big stories at a glance

18.2.15 New rules are proposed to ban drivers from changing their helmet designs in-season, which will keep them recognisable to fans

20.2.15 Korean GP chiefs launch a bid to have their race returned to the calendar for 2016 **22.2.15** Toro Rosso boss Franz Tost complains about the decision to restrict pre-season tests to Europe, saying low temperatures hinder preparation

27.2.15 Force India become the final team to run their new 2015 car, with the VJM08 making its on-track debut on the second day of the final pre-season test **5.3.2015** Manufacturers in the DTM touring car series lobby the FIA. Drivers in the series do not earn points towards a superlicence, despite racers such as Paul Di Resta having moved from the DTM to F1 in recent years

6.3.15 Giedo van der Garde launches legal action against Sauber. He claims they reneged on a deal that he would race for them this year, instead running Felipe Nasr and Marcus Ericsson



would expand on that statement. And while Alonso is known to have been conscious until the moment of impact because he was braking at maximum force, it has not been explained why he did not try to steer away from the wall.

McLaren are refusing to give further details, and the FIA has not said if or when it will reveal the findings of its investigation into the accident.

Hartstein says that if Alonso's absence continues through the Malaysian Grand Prix "that would be head-scratching time, for sure. It would be highly unusual – so much so that they'd have to say something. But, for now, concussion is the most likely and it explains everything we know at the moment."



McLaren's Fernando Alonso is taken by ambulance to the Circuit de Barcelona-Catalunya medical centre suffering from concussion, following his high-speed crash on the final day of the second pre-season test

McLaren and Honda have always said it would take them time to get their revived relationship right. But it seems fair to say they probably never imagined it would be this bad.

The MP4-30 barely ran in pre-season testing, completing the lowest mileage of any team other than Force India, whose new car did not appear until two-and-a-half days from the end of the final test. McLaren had endless problems with the new Honda engine, many of them to do with the hybrid system or electrics.

Worst of all, Fernando Alonso, signed on a £27million salary to lead the new partnership to the world title within his three-year contract, crashed on the final day of the second test, suffered a concussion and missed the season-opening Australian GP on medical advice.

As far as *F1 Racing* has been able to establish, the Honda never ran at full power at any point during testing, so it's not possible to form a clear impression of the car's performance. The Australian GP, though, confirmed that the team have much work to do. The car was four seconds off the pace in qualifying, and Kevin Magnussen (standing in for Alonso) failed to start after a power-unit failure on the way to the grid. While Jenson Button did finish, he was two laps down in 11th and last place, making McLaren the only team to finish the race and not to score a point.

Dennis has boasted that the engine contains new technology never seen before in F1, but it is not clear what that technology is nor whether that is what is at the root of Honda's problems.

Even with in-season engine development now permitted this year, there are already questions as to whether, in the context of the increasing restrictions on modifications imposed year-by-year, Honda can close the gap to Mercedes.

Of greater concern, though, is the health of Alonso following his accident. McLaren racing

director Eric Boullier described it as a "normal testing accident", but it soon became clear that this was not so. Alonso was unconscious when officials reached him after he lost control at Turn 3 at the Circuit de Barcelona-Catalunya. He was sedated at the circuit's medical centre before being airlifted to hospital in Barcelona.

McLaren issued a statement the day after the accident, saying Alonso was "fine", but suffering from concussion. He remained in hospital for three nights – the upper limit of what would be expected for someone with the condition. And after returning to his family home in Oviedo, he posted a video on YouTube saying he was "completely fine", describing himself as looking forward to getting back in the car "very soon".

Five days later, McLaren said that on medical advice Alonso would not race in Australia to avoid the risk of 'second impact syndrome', in which a patient with concussion suffers another before the first is healed. This can cause increased intra-cranial pressure, coma and even death.

Leading doctors say that on the basis of what has been revealed publicly, there is nothing out of the ordinary about Alonso's recovery. The Australian GP was less than three weeks after the accident, which is at the maximum limit of what would be expected for recovery from concussion. And as former F1 doctor Gary Hartstein said: "It is consistent with a three-day stay in hospital".

GPS data from the crash revealed that Alonso lost control at 133.6mph, around what would be expected for Turn 3, if a little slow. But he was running wide and going 3-4mph faster than on his previous lap, which was his fastest of the test. Nothing there suggests anything very unusual, but McLaren chairman Ron Dennis has said that Jenson Button looked at the telemetry data – which the team will not make public – and declared it "strange". Neither Dennis nor Button

Energy boss to power revived Manor team

Ovo Energy founder Stephen Fitzpatrick steps in to salvage Marussia, assisted by former Sainsbury's chief Justin King

The Manor F1 team – who formerly competed in the sport as Marussia – have succeeded in their attempt to return to F1. Marussia went into administration in October 2014 and missed the final three races of the 2014 season after racking up more than £30million worth of debts.

But team bosses John Booth and Graeme Lowdon never gave up hope of a return, and the

solution came thanks to a deal with the boss of Bristol-based energy company Ovo, Stephen Fitzpatrick.

The 37-year-old is a lifelong F1 fan who has always dreamed of owning his own team. He has ploughed his own money into the venture, while former Sainsbury's boss Justin King adds clout with his involvement as interim chairman.

The rescue deal came about as Fitzpatrick and Lowdon were able to reach an arrangement with the team's main creditors, Ferrari and McLaren. Fitzpatrick said: "It was one of those situations where more time was needed to understand everything, so it seemed too late, with no realistic possibility of reviving the team.

"It was ironic that after making it through a hard first five years, claiming ninth place last year and reaching the first rung of financial stability the story was to end there. I looked to see if there was a way to help this team cling to survival. I spoke to Graeme, who was very straightforward. There was a long list of challenges, top of which was to re-establish credibility with the main suppliers, like Ferrari.

"It was a complex landscape, with legal and financial challenges but now we have a solid business platform from which we can operate. Justin has been a huge help, especially as this is the first company I've bought."

The team will still be managed by Lowdon and Booth, and they have taken on Spaniard Roberto Mehri to race alongside Briton Will Stevens. The team had a tough start in Melbourne, failing to run in the race there due to an engine issue. The team had wiped software needed to run their Ferrari-powered 2014 car from computers ahead of a planned sale of assets (later canned following the salvage deal), and were unable to develop new code in time. FIA stewards investigated, but decided not to punish them.

The new Manor F1 driver line-up: Roberto Mehri has his seat fitted in the team garage in Melbourne as team-mate Will Stevens looks on



QUIZ

F1 Mastermind

Your chosen specialised subject: the world's greatest sport

KIMI RÄIKKÖNEN

- Q1** In how many car races did Kimi Räikkönen participate before he made his Formula 1 debut with Sauber in 2001?
- Q2** Where did Räikkönen finish in his debut grand prix?
- Q3** Räikkönen's best results in his first season were a pair of fourth-place finishes. In which races?
- Q4** When and where did Räikkönen score his first F1 victory?
- Q5** How many races did Räikkönen win in his five seasons at McLaren?

- Q6** Which car number did Räikkönen use during his first year at Ferrari in 2007?
- Q7** Räikkönen won the world title in his first season with Ferrari in 2007. How many races did he win in total that year?
- Q8** Which driver did Kimi overtake for the lead en route to his sole 2009 win at Spa?
- Q9** Räikkönen contested the World Rally Championship in 2010

- and 2011. In which event did he finish fifth, his best WRC result?
- Q10** What was the name of the team Kimi set up to run his own Citroën DS3 WRC in 2011?
- Q11** Where did Räikkönen score his first victory for the Lotus team in 2012?
- Q12** Räikkönen wore a replica of which Formula 1 world champion's helmet when he raced at the 2013 Monaco Grand Prix?

- Q13** Räikkönen's retirement from the 2013 Belgian Grand Prix ended his record-breaking run of consecutive points-scoring finishes. For how many races in a row did he manage to score points?
- Q14** What caused Räikkönen to miss the final two races of the 2014 season?
- Q15** In what career-worst position did Kimi finish in the 2014 drivers' championship?

Answers 1 23 2 Sixth 3 Austria and Canada 4 2003 Malaysian GP 5 Nine 6 Six 7 Six 8 Giancarlo Fisichella 9 Rally Turkey 2010 10 Ice 1 Racing 11 Bahrain 12 James Hunt 13 27 14 Back surgery 15 12th

Hamilton poised to sign Merc extension

Speculation that talks had floundered due to exorbitant salary demands are quashed by the new world champion

As *F1 Racing* went to press, Lewis Hamilton's new Mercedes deal was with lawyers and about to be signed.

The reigning world champion had recently rubbished claims made in *The Times* newspaper that he was seeking a deal worth £50million a year to stay with the team beyond 2015. His new deal is for less than half of that amount.

This means Fernando Alonso is still F1's highest-paid driver on the £27million contract he secured with McLaren-Honda. Sebastian Vettel, meanwhile, is reputed to be earning £20million at Ferrari.

Hamilton dismissed *The Times* story as "the biggest piece of rubbish that has been written for some time". And he added in his *BBC Sport* column ahead of the Australian Grand Prix: "I keep getting asked why it is taking so long, but that isn't really the case. It's just circumstances. The team wanted to have discussions during last season, but I preferred to concentrate on the racing.

"We planned to talk about it at the end of the season but I had a whirlwind two or three weeks after winning the championship and I simply didn't have a moment to sit there and think about it before I went away for my winter break.

"We spoke on the phone a little bit while I was away in Colorado, but it wasn't until I got back to Europe for the start of pre-season testing that I reached out and said: 'Let's have a chat.' We had a first meeting, then another one, then another. That's what happens when you're negotiating. You also have to bear in mind that this is the first time I have ever done something like this on my own, so it's been a trial-and-error kind of experience for me.

"But there is nothing unusual going on. We are basically there; there's just a few teeny little bits that we will probably iron out over the next few days, and I'd be hopeful that we will have it sorted."

Mercedes F1 boss Toto Wolff said: "We are in really good discussions with him. He wants to stay with the team and we want him to stay and we're in good spirits.

"Contract negotiations are something that take time and we are positive, so this is pretty normal business. Don't forget it is the start of the season and everyone is expecting a contract to be signed soon."

Hamilton's new deal will end any hopes Alonso might have had of securing a Mercedes drive. Nico Rosberg is contracted to the team until 2016, with an option for 2017.

Hamilton: "This is the first time I have ever done something like this on my own, so it's been trial-and-error"



YOUNG GUNS

Nobuharu Matsushita



Finding the stars of tomorrow, today

Nobuharu Matsushita is a 21-year-old racer from Tokyo. He will compete for ART Grand Prix in the 2015 GP2 Series.

Who is he?

Matsushita is the reigning Japanese Formula 3 champion, and is backed by returning F1 engine manufacturer Honda. The firm says Matsushita's new GP2 Series deal with top team ART Grand Prix is part of a new drive with McLaren to help Japanese drivers "succeed on a global scale."

What's he been doing recently?

After a successful karting career, Matsushita won the Formula Challenge Japan title at the first attempt in 2012. That secured him a drive in Japanese F3 with HFDP (Honda Formula Dream Project) Racing – for 2013, and he claimed the 2014 title with six wins.

How good is he?

Domestic Formula 3 series have struggled in recent years, but the efforts of car giants Honda and Toyota have ensured that Japan's version is packed with promising home-grown talent. And Matsushita helped Honda end a long run of dominance by Toyota drivers. Honda support several other drivers in the category, so the decision to back Matsushita's move to the F1 feeder formula is proof of the confidence Honda have in him.

Will we see him in F1?

From Satoru Nakajima to Takuma Sato, Honda have always displayed a firm commitment to placing Japanese drivers in the sport's top flight – even funding now-defunct F1 team Super Aguri to help keep Sato in action. So while we might not see Matsushita in a McLaren-Honda any time soon, if Honda decide to supply engines to a second team in future seasons, don't be surprised if Matsushita comes as part of the deal.

NEWS

Small teams still seeking Formula 1 cash injection

Floundering mid-gridders have been forced to employ pay drivers and seek cash advances from Bernie to make ends meet

Formula 1 is heading for the next round of arguments about the revenue split between the bigger and smaller teams.

Lotus, Sauber and Force India are continuing to push Bernie Ecclestone to give them a greater share of the sport's income, following a challenging off-season, in which all three have struggled to make ends meet.

Force India, who were apparently the worst-affected team, only managed to get their new car finished in time to run for two-and-a-half of the 12 days of pre-season testing, as a result of cash-flow problems. According to Force India's deputy team principal Bob Fernley, these issues were rooted in suppliers, who had been hurt by the collapse of Marussia and Caterham last year, being unable to extend their usual credit terms.

Lotus, Sauber and Force India (left to right) have all suffered financial difficulties lately, and demand a greater share of F1 income

Fernley admitted that he had been forced to ask F1 supremo Bernie Ecclestone for financial assistance, believed to be an advance on the prize money they were due to receive for last year. "Bernie has been extremely understanding," Fernley said. "He's a racer. He understands from his days how difficult it is. I think he realises this is serious."

Force India managed to run their 2014 car in this year's second pre-season test, but only because Mercedes had paid them to give mileage to reserve driver Pascal Wehrlein.

Sauber, meanwhile, were able to carry on only because their two drivers, Marcus Ericsson and Felipe Nasr, have paid £28.5million between them up front for this season.

But the smaller teams still firmly believe that the revenue split in Formula 1 is unfairly skewed towards the bigger teams. The issue, which led to talk of a boycott towards the end of last season, remains very much alive – and it is not going away any time soon.

F1 BANTER

PASSNOTES

Your essential F1 briefing #13 Justin King



Name Justin King
Age 53
Appearance
 "A classic, classless Mars-trained meritocrat from Middle England"

Classless? I'd sue.

But, dear fellow, that the term was not used disparagingly; it was *Management Today* magazine's description of Justin King after he was crowned 'Britain's Most Admired Leader' in 2013, while he was still in charge of Sainsbury's.

Ah, a man of the people. I'm all for meritocracy.

Quite so. And there's more where that came from: "King is British grocery's answer to Russell Crowe's Maximus Decimus Meridius. Minus the furs and the violence."

I'm sold! Get this man in to run Formula 1 straight away.

Hold your horses – although he's been linked with Formula 1's top job in the past, like everybody else who's been tipped as 'the next Bernie' he's done his utmost to distance himself from that tag. He's even said there "isn't a vacancy".

And yet here he is, turning up as a – what?

An interim chairman of the reborn Manor F1 team, soon to become a non-executive director once a full-time chairman can be found.

Well, they're starting with an interim car, so why not have an interim chairman, too. What does a non-executive director do, anyway, apart from not executing?

Directing their son into a development driver role, perhaps? Or maybe crafting missives to their supplicants? Apparently King wrote to an average of 2.9 customers a day during his time at the helm of Sainsbury's.

Blimey. St Paul has nothing on him. What else has he got on?

There's Harbury House, a company formed by King as a vehicle for public-speaking gigs and management consultancy.

Fingers in a lot of pies, then. Keeping his options open until a vacancy arises?

You might like to think so. I couldn't possibly comment on that...

Do say: He's got charisma and would make a great politician.

Don't say: Every little helps.



PHOTOS: SAM BLOXHAM/LAT; PHOTOSHELTER.COM



2015 FORMULA 1
SINGAPORE AIRLINES
SINGAPORE GRAND PRIX



EARLY BIRD TICKETS NOW ON SALE

ENJOY UP TO **25% SAVINGS**
EARLY BIRD BUYERS STAND TO WIN EXCLUSIVE
DRIVERS' AUTOGRAPH SESSION PASSES

18.19.20
SEPTEMBER 2015 **SINGAPORE**
MARINA BAY STREET CIRCUIT

3 DAYS OF NON-STOP RACE ACTION
**FIA FORMULA ONE
WORLD CHAMPIONSHIP**



**PORSCHE
CARRERA
CUP ASIA**

ALSO FEATURING
WORLD-CLASS
ENTERTAINMENT

PHARRELL WILLIAMS
18 SEP FRIDAY ZONE 4 PADANG STAGE

MAROON 5
19 SEP SATURDAY ZONE 4 PADANG STAGE

SPANDAU BALLET
19 SEP SATURDAY ZONE 1 VILLAGE STAGE

MORE ARTISTES TO BE ANNOUNCED

OFFICIAL WEBSITE WWW.SINGAPOREGP.SG

AVAILABLE THROUGH ALL AUTHORISED TICKETING PARTNERS

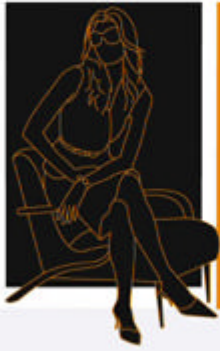
FOR HOSPITALITY ENQUIRIES
+65 6731 5900

HOSPITALITY@SINGAPOREGP.SG

TITLE SPONSOR



COLUMN



THE DRIVER'S WIFE

With friends like these...

Olá queridos, I apologise in advance, but I'm very distracted. I know you count on me to lift the Swarovski-encrusted veil of Formula 1, but today I'm up to my eyelash extensions in contracts, which means I'm not at my insight-revealing best.

One of *Amor's* best qualities, apart from speed, dedication and the muscle definition of a Greek statue, is loyalty. His inner circle have all been his friends since school days, which means, in spite of my best efforts, they come as an extended dysfunctional family, much like the Kardashians.

Of course, I hate it. I mean, I married the hot one and got three half-wit grunTERS thrown in for free. I don't know if they are officially homeless, but they are always at our place, they travel with us, eat with us, wear *Amor's* clothes and fill gaps in the conversation with fart jokes. They do look out for *Amor* and keep him grounded, I suppose, but they also relieve him of free gifts and make him pay for their dinner.

As you know, I am nothing if not selfless and this is just another example of how I've sacrificed myself on the altar of *Amor's* future world championship. I know that when you are a winner, having people you trust around you becomes even more important – like a mobile human shield to protect you from all the non-driving bits of life.

But then, when Uptight Team Boss set an ultimatum to 'lose the entourage', *Amor* magicked up job titles for them. TJ became the trainer and Deano the nutritionist. Then there was Mack, too unfit to be anything sporty, built like a nightclub bouncer and monosyllabic, *Amor* said he'd make the perfect manager.

Mack bought himself a briefcase and a Montblanc pen (on expenses) and printed off some business cards. *Amor* would send him in for silent stare-off meetings with the team boss, just to wind up Uptight – and yes, it turns out he could indeed be wound even tighter.

It was supposed to be a joke, just for a free paddock pass as *Amor's* contract was solid.

Now, suddenly, there are teams of three drivers with valid contracts and only two race seats. Mack's just remembered that he 'might have renegotiated' as well as announcing that he's signed some young drivers to his nonexistent management company. If ever there wasn't a time to have a fake illiterate manager, it's now!

If *Amor's* current contract isn't watertight we are in trouble. Although, that said, it also means if that if no contract is valid, pretty much every seat in F1 is also up for grabs, so maybe it's the perfect time for a great manager/bouncer...

Beijos
Adriana

NEWS

Wolff cuts back Williams shares

To appease the Daimler board, Wolff reduces his Williams shareholding to less than five per cent

Mercedes F1 boss Toto Wolff has reduced his shareholding in the Williams team to less than five per cent, after selling further shares to US healthcare magnate Brad Hollinger.

Wolff says he has "no plans" to sell any more shares, after satisfying an agreement he made with the board of Daimler, Mercedes' parent company, to reduce his holding to a level where it would be merely an investment.

Wolff previously owned a 15 per cent stake in Williams and was the team's executive director when he moved to Mercedes in January 2013.

Hollinger, a keen motorsport fan who collects classic F1 cars, now owns 10 per cent of Williams. Team founder Sir Frank Williams has a 52 per cent stake, co-founder Patrick Head owns 10 per cent, Wolff has just under five per cent, the staff one per cent, and the remainder is floated on the Frankfurt stock exchange.

Hollinger says he sees his shareholding as an investment and has no plans to become involved with Williams on either a management or executive level. He says he feels that F1 could be "on the cusp of another major explosion" in growth, particularly through the exploitation of social media, which Bernie Ecclestone has so far resisted.

"I am never in business not to make money," Hollinger said. "I think there is a huge opportunity in F1. It has not really tapped the whole social-media route in terms of streaming information out to the masses on whatever medium you might choose. F1 has been incredibly successful despite the fact it has not really taken hold in the US and I think the opportunity exists. I think the future is really bright in the US."

The US GP in Austin, Texas, has been a huge success since its 2012 debut and F1 is seeking another venue for a second race in the States.

Wolff (right, with Sir Frank Williams, left), has reduced his shareholding to investment level



PHOTO: SAM BLOXHAM/LAT



BE ONE WITH IT

Be one with your tyres, and the road will be one with you.



ventus S1 evo²

Luxury that never compromises safety

With an advanced VAI system that allows drivers to track vehicle alignment and aerodynamic sidewalls that minimise noise and vibration levels, the ventus S1 evo² delivers the promise of performance and enhanced fuel efficiency.





The Ferrari concept car displays all of F1's proposed changes to dramatic effect

PHOTOS: SAM BLOXHAM/LAT: FERRARI

NEWS

Ferrari reveal their vision of Formula 1's future

Ferrari release dramatic images of their 'concept car' in an attempt to provoke debate about the sport's direction

Ferrari have released images of a concept for a Formula 1 car of the future, in a bid to provoke the ongoing debate on rule changes to broaden the sport's fan base.

The Ferrari concept is related to the current generation of cars, but features dramatically revised aesthetics. The backdrop to its release was the ongoing discussion between teams and stakeholders aimed at changing the look of the current F1 cars by 2017, in an attempt to make them more dramatic.

As detailed in last month's *F1 Racing*, the changes under debate include wider rear tyres, low-profile tyres, a wider track and a lower and wider rear wing. There are also plans to increase the power output of the engines to 1,000bhp, while sticking with the current turbo hybrid concept. This year, engines produce somewhere in the region of 850-900bhp.

The aim was to return cars to a look more akin to that of the early 1990s, when cars were 200cm

wide rather than the current 180cm and had 18-inch rear wheels rather than the current 15.

Senior insiders say a series of visual mock-ups have been created, each with increasing numbers of these changes applied.



The Red Bull X1 concept car is the sort of thing Ferrari's Maurizio Arrivabene wants to see in F1

“Put the one with all of the ideas on it next to a picture of the current car,” one team boss says, “and the current one looks like a model.”

So far, though, no agreement has been reached on a package of rules – and an attempt to bring in the most simple changes for 2016, such as wider rear tyres, was vetoed in February.

Ferrari team boss Maurizio Arrivabene said he hoped Ferrari's concept car would give rise to debate. In a reference to the Adrian Newey-designed Red Bull X1 concept car, which features in the *Gran Turismo 5* computer game, Arrivabene said: “Other teams proposed their own view because we are not talking about ‘my car is better than your car, we were doing this design before you’ – this is stupid, this is crazy.”

“I want to ask every team to try to propose a concept car. In this way we are going to move something. That was a provocation. Our message was mainly: ‘Try to liberate the creativity and create a beautiful car.’ We will not say we were first or second, or ours is better. We are happy to try to move the status quo.”

“If we talk about the future, our competitors are the cars on the video games. If you look at cars on video games, they look fantastic, well-designed and cool. If you are asking guys who are 18 years old, most probably they prefer to play a video game for an hour than to watch the GP.”

“This is one of our competitors. The look of the car is very, very important.”



25 – 28 JUNE

For the latest event news follow us on [facebook](#) and [twitter](#)

Admission strictly by advance ticket only • For hospitality or tickets please call: +44 (0)1243 755055 or visit

www.goodwood.com/tickets

Sauber lose case over van der Garde contract

Court rules Giedo van der Garde does have a valid contract with Sauber, but he drops his demand to race at the Australian GP

The contractual dispute between Sauber and Giedo van der Garde that looked as if it might prevent the Swiss team from competing in Australia will now be settled out of court

Van der Garde had been fighting for his right to race for Sauber in 2015, and courts in both Switzerland and Australia have ruled that he does have a valid contract to do so. However, van der Garde eventually chose to give up his right to race in Australia on Saturday morning in Melbourne, with talks between the two parties due to reach a settlement just after *F1 Racing* closed for press.

Last summer, 29-year-old van der Garde signed a contract with Sauber that involved him paying them a reputed £5.7million, with further payments due at a later date. Finding themselves in desperate financial straits, Sauber then signed up both Marcus Ericsson and Felipe Nasr for a collective fee of £28.5million – money which is believed to have been paid in full and up front.

Sauber's problem was that Ericsson and Nasr then became the fourth and fifth drivers to sign contracts to race for the team in 2015 – the others being van der Garde (Sauber's reserve

driver last year), and their two 2014 race drivers, Adrian Sutil and Esteban Gutiérrez.

Gutiérrez joined Ferrari as reserve driver, thanks to the involvement of a group of Mexican sponsors, but both van der Garde and Sutil were intending to fight for compensation. While van der Garde has pursued this very publicly, Sutil's negotiations have taken place under the radar.

But the situation is understood to be less about who drives for Sauber in 2015 and who is entitled to compensation, and more about the ownership of the team. Colin Kolles, former boss of the Caterham, HRT and Midland/Spyker teams, is believed to be involved behind the scenes, trying to leverage the van der Garde situation to boost his chances of taking over Sauber, something towards which he has been working for over a year now.

An 11th-hour agreement allowed Sauber to race in Australia without the threat of court intervention, with both Ericsson and Nasr finishing in the points.

Van der Garde in Melbourne on the Friday of the grand prix. He later gave up his right to race



GERARD DUCAROUGE

Leading F1 designer Gerard Ducarouge has died at the age of 73. The Frenchman started his career with Matra, helping to design the MS80 Stewart used

to win the 1969 title. He spearheaded the marque's multiple Le Mans 24 Hours-winning sportscar programme in the 1970s, before leaving to join Ligier. After a stint at Alfa Romeo, he joined Lotus in mid-1983, designing race-winning cars for Senna. He then had a spell at Larrousse before returning to Ligier.

CATERHAM AUCTION

The first in a series of auctions of the assets of the Caterham F1 team was held in the build-up to the Australian GP. The first sale included several race cars, along with spare parts, equipment and tyres. Further auctions will be held over the coming weeks.

SAFETY CAMERAS

F1 chiefs want all cars to be fitted with high-speed cameras as of next season to aid accident investigation. This would ensure there is footage of crashes to analyse in a bid to improve safety.

JORDÁ IN AT LOTUS

Spaniard Carmen Jordá has been named as a development driver for Lotus. The 26-year-old, whose best result in three seasons of racing in the GP3 Series is a 13th place finish, will work in the simulator with a view to her testing the car before the end of the year.



FERRARI PROTEST

In the F1 test at Barcelona, Ferrari boss Maurizio Arrivabene protested proposed paddock pass restrictions. Arrivabene and Ferrari personnel sat with the fans in the grandstand. He said: "I heard there will be more restriction in terms of passes and this is not acceptable. So I said: 'if the paddock is going to be empty it's better we start training to go to the people and sit in the grandstands.'"

PHOTOS: CHARLES CONTES/LAT; ARCHIVE: XPBCC

THE ULTIMATE GRAND PRIX. YOUR ULTIMATE EXPERIENCE.

ABU DHABI / MONACO / SPAIN / SINGAPORE / USA / ITALY / BRAZIL / MALAYSIA / AUSTRALIA



VIP
MONACO
day trips from just
£695

There's no greater atmosphere than that of the world's most iconic street race. Experience it for yourself in our VIP Day Trip or extend your trip with our luxury weekend getaway. Paragon can put you at the heart of the action with travel, hotels, tickets, hospitality and more. We have been arranging F1 packages for 15 years, guaranteeing you the quality service and expert knowledge you need to squeeze the very best from your visit. Come and see the world's best drivers fight it out on the racing calendar's tightest tracks with Paragon.

For bookings and further information, please contact:

020 8332 8643

Or visit:

paragonhospitality.co.uk/monaco


PARAGON
HOSPITALITY AND VIP EVENTS



Pat Symonds explains
THE SCIENCE BEHIND...
Race strategy

F1 TECH

What are the basics of determining an optimum race strategy?

Probably the first thing to point out is that a race strategy is far more than determining how many stops to make during a race. In fact, this is just the tactical part of strategic decisions that are made many months earlier. To get a good strategic overview, it is necessary to make some very early judgements that affect the design of the car, such as determining the level of drag that can be tolerated to get the required straightline speed. This, in turn, will determine the wing configurations that may be chosen from an inventory of options. It would be no good turning up at Monza and expecting to achieve 218mph if the specific low-drag wings had not been tested, designed and manufactured many weeks earlier.

What drives your tactical decisions?

There are a few fundamentals that vary from circuit to circuit that will determine an optimum strategy. The most important one of these is tyre degradation. A tyre will generally give its peak performance when new, and, thereafter, lap after lap, the performance tails off slightly. In general, the tyre loses performance in a linear manner – by the same increment lap after lap – until it reaches a point where it has become so worn that its performance drops off extremely rapidly. A pitstop must be planned before this catastrophic condition occurs. At the same time, the car will be burning fuel and therefore getting lighter. This has the opposite effect on lap time, with the car getting quicker as its mass is reduced. Add to this a few more fixed parameters, such as the time taken to enter the pits and for the tyre change itself, and it starts to become possible to calculate a performance profile.

So, from this you simply calculate the minimum time taken to finish the race?

Perhaps surprisingly, this is not the case. Of course the minimum time is of interest, but so

too is track position. I always say you should complete a race in the slowest possible time – providing this time is shorter than that of your rivals. Due to this, we sometimes make stops that are earlier than that which may be determined as optimum, in order to use a boost of performance from a new tyre and get in front of a rival who stays on track. This is known as undercutting and does not come for free. It inevitably means that the next set of tyres will remain on the car for longer. In turn, this may mean that the total race time is longer than the perfectly determined stop pattern but if it works it doesn't matter: the objective is achieved by effectively overtaking your rival in the pits.

What sort of computer-based techniques do you use to assist in tactical decision making?

If the parameters that affect the outcome were all deterministic, we could just use mathematical and statistical techniques to guide us to the best outcome. The primary method we use is one known as a Monte Carlo simulation. This is a long-established statistical technique whereby a large number of virtual races are run, each with different parameters, and pitstop laps are applied to all the cars. The many thousands of results are then analysed to determine the probability of a given outcome for a particular set of decisions. If we relied on this alone, it is likely that everyone would come up with similar answers, so we also apply a technique known as 'Game Theory'. This covers many mathematical techniques but, for example, takes the knowledge that people will deviate from a deterministic optimum to take advantage of the undercut. With this assumption we modify our tactics to try to counter their move.

How do you find the data needed to run models?

It is done by a mixture of lap-time simulation (to measure the effect of fuel mass on lap time) and long runs done on the Friday of the event to

determine tyre life and degradation. These are coupled with simple measurements of the pitlane length and analysis of the previous year's data to get a starting point.




How adaptable are your tactics during the race?

Now refuelling is banned we can be quite adaptable. Before, we could only stop earlier than intended (although the penalty was high), but now we can react in real time to situations such as the tyre performing better than expected. During a race, the computers run the same models we used prior to the event but continually refine the input parameters based on live data.

Can you change the number of intended stops?

Yes, we sometimes have to do this if the tyre performance is different to what we predicted. This can happen, for example, if the track temperature has changed significantly.

How do you handle events such as rain or the deployment of the Safety Car?

Rain always raises the heart rate, but we prepare tables of lap times at which we believe we should change from wets to intermediates and from intermediates to slicks. If the race starts dry and it rains, the onus is on the driver to decide if he needs to change tyres. We can even plan for the Safety Car by running simulations where the Safety Car is deployed and we determine the outcome if we stop or don't stop. From this we prepare for a 'Safety Car window' during which, if it is deployed, we will come straight in. I'm pleased to say that brain power is also used when we see an incident, to try to pre-empt the deployment and steal a march on our rivals. 

PHOTOS: GLEN DUNBAR/LAT; STEVEN TEE/LAT



Strategy is formulated pre-race, but variables are accounted for in simulations, and changes to strategy can be deployed once the race is under way





PETER WINDSOR

RACER'S EDGE

Authority, wit and intelligence
from the voice of *F1 Racing*

Today's hybrid power units may be absurdly expensive (from a customer team's perspective) and unduly complex (from the viewpoint of some fans) but I'll say this for them: they deliver seamless power. The set-up and drivability talk of 2015 is not about turbo lag or throttle response: it is about managing the torque of the power unit – a relatively straightforward box that needs to be ticked in Friday debriefs.

Even the KERS engines that were used on and off until 2013 were difficult to set up, for the driver had to be fully able to harvest energy at the right moment of the lap. Now, in 2015, this requirement has all but disappeared. Significant power and efficiency differences aside, all are basically drivable engines with stunning power throughout the usable range. So comparisons between drivers can now be made from a more stable platform.

And, while the ancient art of heel-and-toeing is today but a memory, new skills are emerging: downshifting at exactly the right point on particular corners can enable today's F1 drivers to have more control of the back end just at the point where the power is being applied. The seamless downshifts of the Mercedes (factory team and Force India) and the Ferrari (factory team and

Smoother engine response reveals all

Sauber) transmission systems have all but eliminated weight shifts as the lower ratio is engaged – but I reiterate that this applies only when the downshift is made at precisely the right moment – ie just as the corner is unfolding. Last year, at short-ratio Williams, the drivers were often having to make additional downshifts (and upshifts) either side of this critical point – and that, of course, was tyre-damaging.

In 2015, Nico Rosberg has emerged as a driver unmatched in his ability to use mid-corner downshift to maximum advantage – particularly on fast and medium-speed corners. Lewis Hamilton, by contrast, has more native 'feel' for the back of the car and thus puts himself under less pressure to control the rear with anything other than the steering wheel or throttle: give or take a metre or two, Lewis just takes the shorter gear when he needs more torque; Nico times the paddle-flick with a steering input that enables him to execute the main part of the corner with a stable rear. And this, in turn, gives him the confidence to enter a quick corner with an early weight transfer (and thus a useful extension of the straight down which he has just been travelling).

The evenness of 2015 engine response now highlights other differences: Jenson Button still takes a soft approach to all corners, widening the entry curvaceously and thus extending the amount of time the car is under load. Because this is safe and consistent (albeit long), this also lets Jenson do what he does best, namely to put the power onto the road. That was evident last year with the Mercedes – very few black lines were left by Jenson – and it's clear now with the Honda. Fernando Alonso begins his weight transfers earlier and more gradually than Jenson, and thus loads the car laterally for less time, but his movements are more abrupt. For Fernando this isn't a problem, and nor has it ever been. Does anyone in the



pitlane have more supple feel (via rapid-foot-movement) for the car mid-corner than him?

Sebastian Vettel loves to brake tangentially to the corner radius in a defined 'V' – to run wide, rotate the car and then accelerate away on another tangent: he does this precisely and with great feel – but last year he was lost because the back end of the Red Bull couldn't take that pronounced mid-corner rotation. The Ferrari SF15-T is better in this respect, even if it lacks the overall downforce of a Mercedes.

Daniel Ricciardo has a Lewis-like ability to manipulate the back end under fire, and you see it in 2015, in the Red Bull, in the way he flicks the car into a medium- or high-speed

"All 2015 engines are basically drivable with
stunning power throughout the usable range"

The seamless power delivery of the new-era hybrid engines has highlighted differences across the field: Nico Rosberg, for example, (below), has emerged as a driver unmatched in his ability to use mid-corner downshift to maximum advantage




corner and then handles the rear's movement with deft, harmonious mini-corrections. Alongside him, Daniil Kvyat suddenly looks a little exposed: he has been taking a softer, longer, safer approach to major corners. He is very clean, but mid-corner, at this early stage of the season, he appears to be much less manipulative of the car than his team-mate.

Both Force India drivers are neat and economical on corner approach, and Sergio Pérez can be seen to be using his velvety right foot with Button-like exits. Both, at this point, look better into corners than Kimi Räikkönen, who, like Valtteri Bottas, has become more Button-like in his early corner phases. The

difference in track position between Kimi and Seb Vettel on the threshold to key corners so far in 2015 has been half a car's width – with Vettel on the inside. In Kimi-world, that's a lot.

Of the rookies, Max Verstappen stands out as a Lewis-like talent. He looks to have the same feel as Lewis for both the front and back end of the car – and for creating little straight sections of road wherever possible – even when there's no room for them. Carlos Sainz Jr, by contrast, loads the STR10 with very high rates of input from very soft approaches. Consequently, his on-the-limit laps are akin to crossing the Grand Canyon on a thread of cotton. The Lotus drivers look good – not too

far off the Force India pair – and Felipe Massa seems now to be right back where he was before his Hungary accident in 2009, falling in between Nico Rosberg and Daniel Ricciardo in terms of his use of the front and rear. Felipe Nasr, meanwhile, is emerging as a sort of B-version of Massa. And Marcus Ericsson is Carlos Sainz Jr minus the excessive flair.

In other words, racing drivers are still racing drivers – despite the advent of MGU-Ks, MGU-Hs and engines that would prefer to be 'power units'. Which is good, of course, because, ultimately, even technology is about that unpredictable and still fascinating commodity they call 'people'. 

PHOTOS: SAM BLOXHAW/LAT, ZAK MAUGER/LAT

WIN 316 HORSES WITH A MOUSE



WIN YOUR DREAM CAR
FREE £5 WHEN YOU SIGN UP
GUARANTEED WINNER EVERY WEEK



MATTHEW ROBERTS
PORSCHE CARRERA GTS
+ £10K CASH



SPENCER HILL
JAGUAR F-TYPE V6S



MATTHIAS TOTH
PORSCHE CAYMAN GT4
+ £10K CASH



STEVE PULLEN
ASTON MARTIN VANTAGE
+ £10K CASH

CLICK TO WIN AT **BOTB.COM**



BOTB.COM
WIN YOUR DREAM CAR

Tel: +44 (0)20 7371 8866
Email: info@botb.com

WorldMags.net



DAMON HILL

KING OF THE HILL

Cockpit savvy from the 1996 world champ, exclusively in *F1R*

As a driver I used to get asked about fear. Well, there's fear and then there's *fear!*

In a Red Bull documentary called *Heaven's Gate* a man called Jeb Corliss jumps from a helicopter in a wing-suit and 'flies' through a narrow crack in a limestone cliff in China. You can look up clips from the film online.

I wonder what the ancient Chinese would have made of Jeb? I suspect they would have reacted in the same way as us: horror, awe and concern for his safety. They might also have asked why anyone would do such a thing, for the man risked his life in a public display that could only have proved his skill and bravery, or his lack of skill and folly. Happily for him and his mother, who stood with thousands of onlookers as he hurtled past only a few feet overhead, the outcome was positive.

What struck me about Jeb was his convincing and considered explanation of his philosophy. This was a man who was in no doubt about the risks, and had consciously chosen this way to express his life. Because of that I respected him more than I would have if he had simply said: "Nah! I don't get scared." In fact, that would have had me more worried...

There was a time when Formula 1 was only a little less risky than base-jumping and

Feel the fear... and do it anyway

drivers were similarly regarded as 'life-gamblers'. Mercifully, the chances of survival have since improved. But racing is different to base-jumping. Survival is not enough. The overriding objective is winning, which becomes a metaphor for 'living'. By extension, losing becomes a kind of 'death'. In fact, the thought of losing is so bad in some people that it is feared almost as much as if it were death. The racing driver has two fears: the fear of injury or death, and the fear of losing.

If a racing driver were to say: 'I'm not scared of accidents, but I am scared of losing,' we'd call him a hero. If he were to say: 'I'm not scared of accidents *or* losing,' you'd either question whether he wanted to win at all, or whether he was so confident in his ability that he was being bullish.

But what people say about their fears isn't always an accurate indication of their true feelings. I'd argue that a driver lacking a significant level of fear (of accidents or of losing) has either not understood the risks, or has underestimated the competition.

Ayrton Senna famously said that on entering the cockpit, 'fear comes around'. I think he contemplated fear and risk more deeply than any driver. Fear can be a great spur to concentration and motivation. So be afraid. Be very afraid!

Now we have worked ourselves up into a state of pure terror, how do we drive without becoming catatonic? Special skills must be employed. Not only must we have high levels of driving skill, we must also have the skill of mind and gut management. In a state of extreme fear, the mind freezes and we are unable to move or think. However, in a state of 'optimal' fear, the body produces chemicals, such as adrenaline, that enable us to have almost super-human powers. The most important gain in this state is alertness.

Being a little nervous is good for focusing attention. But remember that laid-back driver who sunbathed on the pitwall having a cigarette prior to qualifying? What was his name... Keke something? Well, he was acting cool, with the emphasis on the word *acting*.


I suspect acting is a technique racing drivers routinely employ to control their fear without being aware of it. We can fool our minds that something is not frightening by talking to ourselves. It's called cognitive behavioural therapy now, but racing drivers have been using it for ages, in some form or other.

Another method is flat denial, but as Freud showed, what we suppress finds expression in other ways. Your guts will always feel the



"Senna said that on entering the cockpit, 'fear comes around'. He contemplated fear and risk more deeply than any driver"

fear and if you don't give them some plausible reason to relax, it will bubble up to the surface somewhere. Odd behaviour in drivers is not uncommon, let's be honest. Anger is a common way to vent anxieties, as is excessive partying. But sooner or later we have to deal with the scary reality of life. No one gets out alive.

One way to block out the negative voice in your head that screams, "Look out! Look out! You're going too fast!" is the method employed by ex-para-turned-F1-racer, David Purley. He used to 'out shout it' in his helmet as he tried to stay flat through the scary corners – the same technique soldiers use to put the fear of God into the enemy. But in a helmet, no one can hear you scream, at least not in Purley's days. Now we have quieter engines, so maybe that's not tyre-squeal we're hearing after all... 

"The racing driver has two fears: the fear of injury or death... and the fear of losing"

WORLD ENDURANCE CHAMPIONSHIP

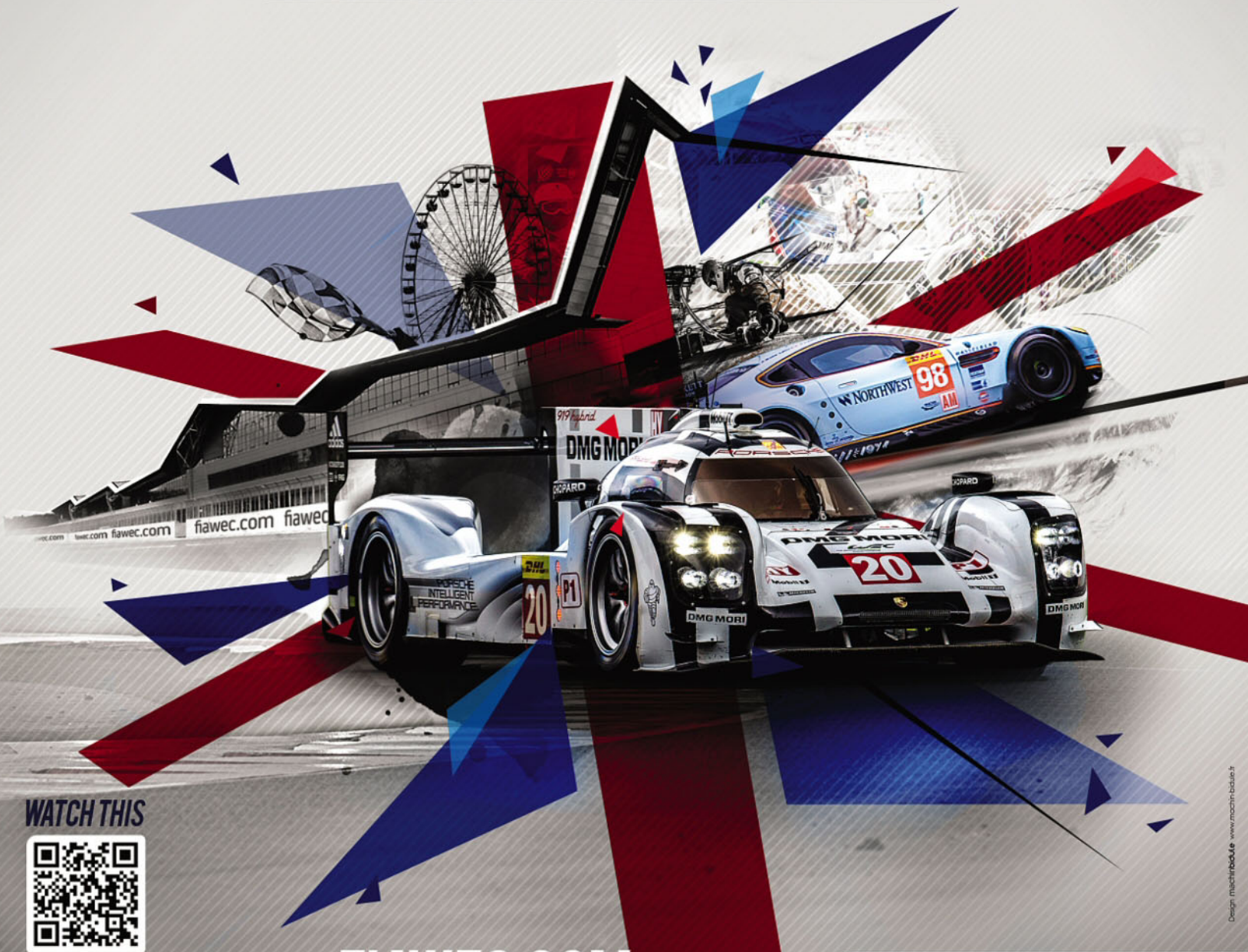
6 HOURS OF SILVERSTONE

10 - 12 APRIL 2015

SPIRIT OF LE MANS IS COMING TO THE UK

FROM £20

FREE UNDER 15



WATCH THIS



AND BOOK NOW ON [FIAWEC.COM](http://fiawec.com)

SILVERSTONE
Experience is everything



FIA WORLD ENDURANCE
CHAMPIONSHIP
A PARTNERSHIP





DIETER RENCKEN

POWER PLAY

The stories F1's bigwigs would rather you didn't know...

As this column is written, just ahead of the season-opener, the hosting of a 2015 German GP, by whichever of the country's two eligible circuits holding the applicable Grade 1 Circuit licence – the Nürburgring and Hockenheim – seems further off than ever, primarily due to either facility failing to agree terms with the commercial rights holder.

Thus the nation that invented the automobile and every form of internal combustion engine currently in use; the homeland of two world champions who over the past two decades have delivered 11 drivers' titles between them; a country on a list of five 'protected' events (the others being Great Britain, Italy, Monaco, France – now long gone); and the HQ of all-conquering Mercedes stands every chance of losing its grand prix in the iconic marque's glory year.

Ten years ago, Germany hosted not one but two grands prix, with each circuit vying for the honour of hosting the Großer Preis von Deutschland, with the loser (invariably the Nürburgring), taking the consolation prize of staging the European Grand Prix. That event next year (allegedly) passes to Azerbaijan.

How has this come about? Look no further than a complex set of 'time-share' deals struck

What future for the German Grand Prix?

in 2006 by FOM CEO Bernie Ecclestone with each circuit individually, after it became apparent that – mainly due to escalating ticket prices – German interest in F1 had declined significantly from the heights enjoyed by both circuits during the Michael Schumacher/Ferrari hegemony.

Thus Hockenheim holds the six-year rights (since renewed) to host the German GP on even years, with the Nürburgring gaining odd-year rights. However, neither circuit is obliged to step into the breach should the other default. A further downside is improvements made to either facility are amortised over alternate paydays, resulting in extended return-on-investment periods.

The Nürburgring, long propped up by local state aid since deemed illegal by the EU Commission, plunged into bankruptcy in 2013 after the leaseholding public/private partnership overextended itself. Crisis was averted after Ecclestone took over promotion of the race via local management and discounted the hosting fees. Still, race day attracted but 50,000 fans.

Thereafter, the Nürburgring was sold on auction, although its ownership structure is unclear after successful bidder Capricorn Holdings sold majority ownership to Russian oligarch Viktor Charitonin, subject to EU

Mercedes are keen to parade their success, so Ecclestone suggests they help fund their home GP



approval. Charitonin insists he has no intention of posting more than a 'proportionate loss' – whatever that means – on any event.

Subsequently Hockenheim, owned by the local community, kept its side of the deal, hosting the 2014 round to modest crowds and posting red figures – a situation the tiny town (population: 20,000) can ill afford, but it is prepared to carry on for alternate years to sustain the iconic circuit, which over the past decade demanded substantial investment.

With a GP at the Nürburgring seemingly ruled out for 2015, the event's salvation lies in the hands of Ecclestone and Hockenheim mayor Dieter Gummer, armed with a directive to ensure the event does not further drain his good burghers' pockets. On the flipside, Ecclestone is mandated to maximise F1's revenue streams to satisfy the voraciousness of FOM's owner, CVC Capital Partners.

It's claimed Gummer and Ecclestone are around £8m apart, with neither willing (or able) to yield a penny – Gummer due to his election mandate, and Ecclestone because he does not wish to be seen to be caving in, thereby devaluing future German Grands Prix.

So Ecclestone has suggested that Mercedes, who hold the rights to a 7,000-seat grandstand on the spectacular Turns 8-10 complex and thus clearly wish to parade their domination on home soil, step in and fund said shortfall. After all, what is the shortfall on a combined team/engine budget of £300m – before marketing/below-the-line activation costs?

Therein lies the rub: Mercedes have no wish to intervene in a squabble between the CRH and race promoter, arguing that underwriting an event it is – in terms of its covenants with the CRH – obliged to enter is not its affair.

Equally, funding Germany's race would leave Mercedes wide open to future pressure from Ecclestone; worse, it would create worrying precedents for Monza (Fiat/Ferrari) ahead of fraught extension negotiations, then for Suzuka (Honda). Both are said to be jittery, as well they should. Who knows who's next...

This points to no German race in Mercedes' first year as reigning champions unless FOM takes a big bath – which sources believe highly unlikely as that, too, would set precedents...

“The nation that invented the automobile stands every chance of losing its grand prix”



F1 Racing in partnership
with Hilton HHonors™

TECHNOGYM



WIN A DAY IN MY SHOES

Explore the McLaren Technology Campus as a guest of **Hilton HHonors™**

WorldMags.net



Want to follow in Jenson Button's footsteps and get to know the McLaren Technology Campus? One winner and guest will be able to explore parts of the iconic building usually reserved for team members. Enjoy the VIP treatment with this unique prize from Hilton HHonors™

Luxury experience

Following an overnight stay at the Hilton London Syon Park, you'll be driven in a McLaren 650S to the McLaren Technology Campus.

Fanatical about his health, Jenson hates greasy food and maintains a low-carb diet. Breakfast is a mushroom omelette, with cheese, tomato, onion and broccoli on the side. Lunch is salmon and vegetables, with a steak for dinner. Jenson loves banoffee pie, but only as a treat.

Join a pit stop

Practise with the McLaren-Honda pitcrew, who are legendary for pushing the limits.

Private lunch

Enjoy the kind of food that fuels Jenson's push for total fitness.

Arrive at the McLaren Technology Campus

You'll receive your McLaren-Honda team kit and briefing for the day ahead.

Jenson spends countless hours at the McLaren Technology Campus. He's one of the fittest drivers and right now he's training for a marathon, which he wants to complete in under three hours! That means he's running a lot - about 65km per week, which equates to eight hours on the road.

On a mission

You'll get an exclusive insight into a McLaren-Honda strategy session.

The real stars

Get up close with the iconic cars that tell the team's story of innovation.

Simulator session

You've spent the day in his footsteps, but now can you drive like Jenson?

Feel the burn

Experience a real driver training session in the Fitness & Wellbeing Centre.

As well as running, Jenson's endurance training includes three hours swimming and five hours cycling per week. Using the McLaren Technology Campus gym, Jenson also does significant upper and lower body strength work, varied to maintain optimum performance.

By 4pm you'll be exhausted...

but this is just the beginning! Following your experience at the McLaren Technology Campus, Hilton HHonors™, will help you discover new places and new adventures.

How To Win!



To win a day in Jenson's shoes on 27 May, visit: www.hhonors.com/f1racing

Runners-up will win one of ten signed Jenson Button mini-helmets or one of five tours of the McLaren Technology Campus for you and guest.

Plus!

By entering the competition you will also join the award-winning Hilton HHonors™ guest loyalty programme and can enjoy Member benefits at all Hilton destinations.



Abbreviated Terms and Conditions: No Purchase Necessary to Enter or Win. Must be a legal resident of Great Britain, 18 or older. Starts 12:00:01 a.m. GMT 16/03/2015 and ends at 11:59:59 on 30/04/15. The first prize is an overnight hotel stay, and a day at the McLaren Technology Campus, including a one-way transfer from the hotel to MTC in a McLaren 650S, of an approximate value of GBP £4,475 (exc. VAT). Ten (10) runners-up will each win either a signed Jenson Button mini-helmet worth GBP £56.30 (exc. VAT) or five (5) McLaren Technology Campus tours for five (5) runners-up and one (1) guest at a total value of £2,500 (exc. VAT). There is no cash alternative. Prizes are non-transferable. Only one entry per person. Winners will be selected at random by Haymarket Media Group. F1 Racing Great Britain Prize Draw SPONSORED BY Hilton Worldwide. The Promoter: Haymarket Media Group, Teddington Studios, Broom Road, Teddington, Middlesex, TW11 9BE, UK & Hilton Worldwide, 7930 Jones Branch Drive, McLean, VA 22102, USA. Void where prohibited. Additional terms, conditions & restrictions apply. To enter and see complete Terms and Conditions visit www.hhonors.com/f1racing

London overnight stay: Tues 26.05.15 / 'A Day In My Shoes' experience: Weds 27.05.15. Schedule subject to change.



Reasons to be cheerful

Araw Barcelona test day.

It's dark in the pitlane, thanks to the shadow of that huge, looming grandstand opposite. And after lunch, the distant winter sun unleashes only a few hours of weak warmth, before fading away once again to be replaced by a cool wind whipping between the paddock trucks.

Testing involves long days. Short runs, interruptions, long runs, drizzle, red flags, sunshine and a soundtrack of cars hurtling around that spectacularly re-purposed industrial estate on a Montmelo hillside, 20 miles away from Barcelona proper, for lap after lap after lap.

Today is the first day of the final pre-season Barcelona test (T3 in F1-speak) and *F1 Racing* is sitting at one of the freshly laid tables in Ferrari's testing motorhome/feeding-station, as the day's running draws to a close.

Track temperatures have failed to creep beyond 12°C, and the air temperature offers no more comfort. Kimi Räikkönen has just completed 80 laps at the wheel of the Ferrari SF15-T, but it's been a frustrating day for his team. Technical director James Allison is blaming "annoying reliability problems".



If you're lucky you might just catch Kimi Räikkönen breaking into a smile this spring. After the *annus horribilis*, of his 2014 season, all signs point to a dramatic upswing in performance as the new campaign gets under way.

But is he happy? Judge for yourself in this rare and exclusive interview with the Iceman...

WORDS JAMES ROBERTS
PICTURES LORENZO BELLANCA
& THOMAS BUTLER

Just before our early evening appointment with Kimi, he spoke briefly to a small huddle of TV media. Typically, he gave nothing away, in response to the usual line of questioning:

Where are you in relation to the Mercedes? Is the headline lap time a genuine reflection of pace? How will you perform in Australia?

He has heard it all before and retreats wearily to the sanctuary of the Ferrari paddock villa, keeping his shades

on despite the fading light; not breaking his stride even for a moment.

Calls for autographs and selfies from fans in the paddock are ignored. Has any other driver spent less time engaging with their followers? Maybe that's why they love him so: ever the enigma, to friend and foe.

Still, we're encouraged by the upbeat mood back at camp. Could today be the day we manage to coax a smile from the famously frosty Iceman?

In comparison to last year, the mood inside the Scuderia has lifted. There have been seismic personnel changes across the organisation, most notable of which were Sebastian Vettel's replacement of the departing Fernando Alonso, and the arrival of a new team boss, the charismatic ex-Philip Morris (Marlboro) man, Maurizio Arrivabene. After an eight-month stint at the top, Marco Mattiacci was dethroned at the end of last year by Arrivabene, who was appointed managing director of the *Gestione Sportiva* and team principal of Ferrari by the CEO of the Fiat Group, Sergio Marchionne.

Arrivabene has a background in marketing, and was vice-president of Marlboro's global communications operations back in 2007. Since 2010, he has sat on the F1 Commission representing the sport's sponsors. In his short time at the helm of Ferrari he has already ruffled feathers among F1's rule makers. First, in early February, he provoked debate by releasing a concept illustration of a dramatically →



Kimi's already enjoying the feel of the Ferrari SF15-T compared to last year's undrivable F14 T



Clocking up the miles

Kimi completed 537 more miles in testing this winter than last year...

Jerez 1st test

2014

214miles

2015

550miles



Second test

2014 Bahrain

423miles

2015 Barcelona

474miles



Third test

2014 Bahrain

474miles

2015 Barcelona

624miles



Total

2014

1,111miles

2015

1,648miles



According to Kimi:
"You always want to go faster. But where we are starting from compared to last year is a big step"

restyled Ferrari F1 car, and, second, at this very test, he chose to sit among the fans in the grandstands to protest against restrictions on teams' paddock-pass allocations.

Arrivabene has not been shy in communicating his thoughts to the wider world either. He's commented on the lifting of spirits within the Ferrari camp and has revealed that Kimi has been acting most, well... *oddly*. In a departure from his usual stiff demeanour, the Iceman has seemingly thawed and was even discovered by his new boss lying on the floor of the Ferrari garage.

"Maybe I was sleeping..." jokes Kimi in his usual laconic drawl, when we ask about the moment. But the truth is more innocent, as he reveals he was schooled as a mechanic when he was young and was curious to watch some more detailed fettling of the SF15-T.

Arrivabene jokingly said he thought Kimi was ill, given his new found zeal for racing: "All the guys around him were surprised to look at him and hear him talking and talking and talking," said Arrivabene. "I thought he was *sick*, really! But he is not, it is just the enthusiasm Kimi has – this is the atmosphere in the team at the moment. He is smiling and that is very strange."

According to insiders, part of the improved mood can be attributed to the switch of drivers on the other side of the red garage. Since 2010, Alonso had become the focal point for much of the team's operations, but with the staff changes over the past 12 months, and Alonso's subsequent departure for pastures new, that culture exited with the Spaniard.

The arrival of a newly motivated Sebastian Vettel, a driver Kimi has been openly supportive of in the past, has changed the working environment. And Kimi again reiterates his liking for the four-time champ. Who knows, perhaps they share parenting notes? Kimi's partner Minttu Virtanen gave birth to their son, Robin Räikkönen, at the end of January this year, while Sebastian Vettel and long-term girlfriend Hanna Prater became parents to a daughter, Emilie, last February.

"Yeah, I know him best out of all the other drivers," confirms the softly spoken Finn. "He's still a very normal guy and I'm sure we can do a good job for the team. Obviously we'll try to beat each other in the races and we'll try to push in the same way, but the team comes first. We'll try to put the Ferrari where it should be."

Where it *should* be. As Ferrari's last world champion, a distant-seeming eight years ago now, Kimi understands what is required from a team to challenge for top honours – and first priority is the car. In 2014 he failed to score a single podium. The last time that happened was 2001, his debut season with Sauber. He also finished six places below Alonso in →



He's enjoying fatherhood, a car that suits him, and a more positive working atmosphere: Kimi is looking forward again

the drivers' standings in 2014 in 12th, with a points deficit of 106. But the problem lay not with Alonso, or his own motivation, it was the fundamental characteristics of the F14 T that didn't suit his style.

"Last year was not that bad," says Arrivabene, when asked about Räikkönen's disappointing 2014. "He had problems, but those were because he could not feel the car, especially at the front.

This car was not adapted to his style. Now he is demonstrating these days that the car feels better."

From the moment the SF15-T appeared on track at the first pre-season test in Jerez, Kimi has felt more comfortable behind the wheel. And although headline lap times fail to reveal a true competitive order, the handling and drivability of the car has improved. Given that James Allison was technical director when Kimi won a race on his return to F1 with Lotus (following his two-year rallying sabbatical), it's no surprise there is technical synchronicity between the pair.

"Overall the team has done a good job over the winter but there is always guessing in testing, so we'll have to see where we are in the first couple of races," says Kimi when quizzed about the improvement to the chassis. "I am sure we are in a better position."

Räikkönen's driving style causes him to lean heavily on the front axle on corner entry, and he's subsequently gentle on the rears on exit. Last year's F14 T was a notoriously poor-handling machine with unpredictable characteristics. It lacked downforce and had a not particularly drivable turbocharged V6. As a

result, Räikkönen was unable to extract the maximum from the recalcitrant chassis. But that's not the case with the new machine.

"Yes, but there are still things that we have to improve and areas that are not as we hope," Kimi says when grilled on the feeling from inside the

cockpit of the new car. "You always want more grip, more power and to go faster. But where we are starting from compared to last year is a big step. You're never happy, but we have to be happy with where we are so far."

This season, Kimi has a new race engineer, former Marussia man Dave Greenwood. He had started 2014 working with Antonio Spagnolo, but communication problems (Kimi favours English-speaking engineers – think Mark Slade at McLaren and Lotus) led to the appointment of David Lloyd, and now Greenwood takes up that mantle for 2015 – more alterations made for the benefit of Räikkönen.

"Obviously there have been some changes," he says, a glimmer of a smile emerging. "We started the first test and the atmosphere is much better – people seem to be a bit happier and working together more. Overall, I think it has changed a lot since last year and it feels like it *should*. It was a difficult time last year for the whole team, it was hard, but I think all the changes have been good. And with Marussia, and all the guys coming in [Dave Greenwood] I think we'll start seeing results – it's a good thing."

As we talk, the new grand prix season is still two weeks away, so while the competitive order has yet to be established, there is quiet confidence that 2015 will certainly be an improvement on the previous year.

But what of the future? Could this season – the 13th of Kimi's Formula 1 career – be the final one? Although not yet signed, there is an option for him to continue with Ferrari into 2016. "Yes, there is an option in the contract," says Kimi. "It's up to me and the team to do a good job this year. If it goes badly and I don't sign it, then I don't sign it. It's not the end of the world. The aim is to do well and have good times and for everyone to be happy..."

Although it's notoriously difficult to get the stony-faced Iceman to break into a smile, the omens for the upcoming season are good. The confidence around the SF15-T offers a glimmer of hope and with his one-time badminton partner Seb Vettel on the other side of the garage, allied to the charismatic drive of new team boss Arrivabene – there are reasons to be cheerful about life here at Ferrari.

The Barcelona air is still crisp and cold as we slink out of the Scuderia's hospitality unit, but before we part company, we have a little chat about the arrival of Robin Räikkönen, just under a month old. "All going well?" we enquire.

"Yes, he's a lovely boy, his health and his mother's health are all good. And it's all new and that's the best thing."

F1R "Another reason to be cheerful?"

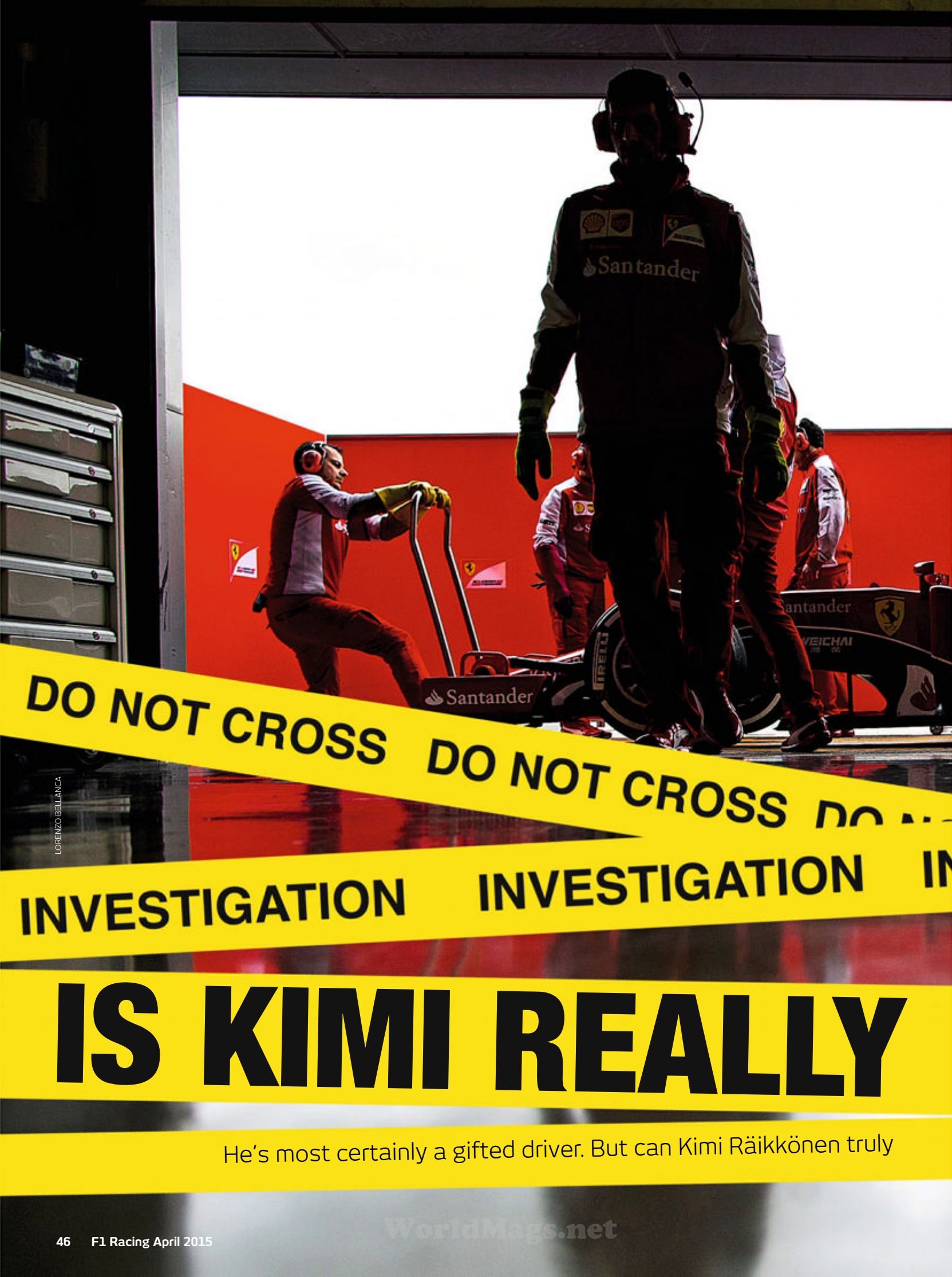
KR "Yes, definitely..."

It worked. The Iceman is smiling again. 

THE STORY SO FAR

Year	Championship position
2014	12th (one fastest lap)
2013	5th (one win)
2012	3rd (one win)
2009	6th (one win)
2008	3rd (two wins)
2007	1st (six wins)
2006	5th (six podiums)
2005	2nd (seven wins)
2004	7th (one win)
2003	2nd (one win)
2002	6th (four podiums)
2001	10th (sixth on debut)

NB 2010-11 Finished tenth in two seasons of the World Rally Championship with Citroën. Also competed in a couple of lower-level NASCAR races



LORENZO BELLANCA

DO NOT CROSS DO NOT CROSS

INVESTIGATION INVESTIGATION

IS KIMI REALLY

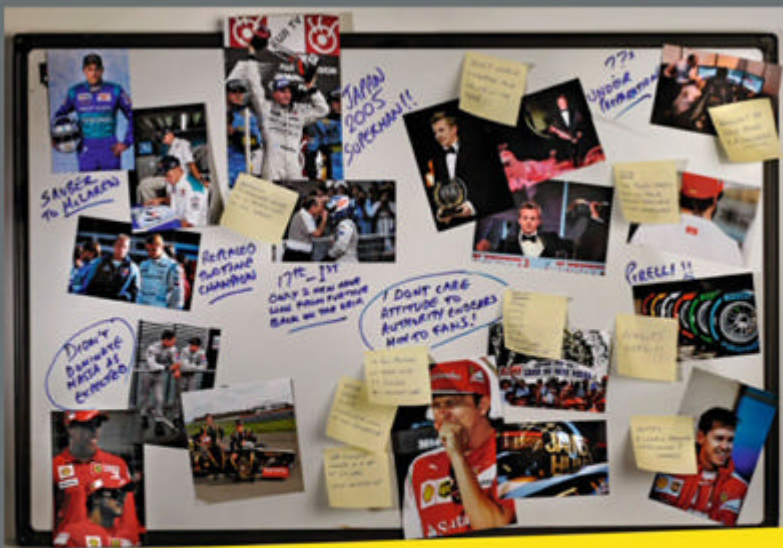
He's most certainly a gifted driver. But can Kimi Räikkönen truly



INVESTIGATION INVESTIGATION INVESTIGATION
DO NOT CROSS DO NOT CROSS DO NOT CROSS

AN F1 GREAT?

be considered a star talent? **Andrew Benson** considers the evidence
PICTURES STEVE WATERS



Making sense of the Räikkönen enigma

Kimi Räikkönen is different.

All drivers have fans, but as anyone who writes about F1 in this social-media age knows, Kimi attracts a special following, comprised of fans who regard him as close to infallible. Make comments that could be construed as anything other than praise for Kimi, who they see as the greatest natural talent of his generation, and the response is vitriolic.

Within the F1 paddock, though, among people who have competed against him, worked with him and dealt with him, the attitude is more ambivalent.

“It’s quite difficult to break down Kimi’s career,” says his former McLaren team-mate David Coulthard, now BBC F1’s co-commentator. “To do it properly, you have to look at his averages compared to those of his team-mates. If you just glance at his career, there wouldn’t be a discussion – world champion, exceptionally talented winner of 20 grands prix and one of the highest earners of his generation. And people in F1 are not stupid: they don’t just give money away.

“He has a reputation and an ability to excite not only the person who signs the large contract, but also the fans. He is almost untouchable; criticise him and you’ll hear about it very quickly. But he’s an enigma in as much as there have been periods of his career that have been anonymous, and the *really* exceptional drivers don’t really have bad days. They might have a crash – but when do the exceptionals ever screw up or look anonymous? It just doesn’t happen.”

A WORKING HYPOTHESIS

And here’s the thing.

Being ‘exceptionally talented’ and ‘really exceptional’ are not the same thing. Is Räikkönen the former? The answer is a

resounding yes. Performances such as the 2005 Japanese Grand Prix – arguably his greatest win, when he came through the field to win from 17th on the grid – will resonate for as long as people talk about motor racing. But was he ever an ‘exceptional’ in the manner of Ayrton Senna, Michael

**Team mate
qualifying
head-to-heads
(Kimi’s
statistic first)**

2001 Sauber
Nick
Heidfeld
7-10

2002 McLaren
David
Coulthard
10-7

2003 McLaren
David
Coulthard
10-6

Schumacher or Fernando Alonso? A driver who, come what may, just performed; who dragged the last ounce of performance out of whatever car he was given and performed for year after year at the highest possible level?

A holistic view of Räikkönen’s career raises awkward questions. For example: just how good were those McLarens in which he excelled in 2003 and 2005? Why was he generally shaded by Felipe Massa at Ferrari from 2007-2009? Should he have been annihilated in the way he was by Alonso last year? Such doubts resound throughout his 13 years in F1.

In his first season, he was shaded by Sauber team-mate Nick Heidfeld, who outqualified him ten-seven and scored three more points than him. Despite that, Räikkönen had shown enough flashes of star quality for Ron Dennis to choose him over Heidfeld, when replacing the departing Mika Häkkinen, to race alongside Coulthard at McLaren for 2002.

In their three seasons together, Räikkönen certainly had the better of Coulthard. But did he outperform Coulthard to the same degree that Mika Häkkinen had?

“To judge speed is very difficult,” Coulthard says. “Kimi and Mika were both incredibly naturally talented – they would jump in the car and without appearing to have done any analysis into how they were going to do it, they just drove exceptionally quickly. They are both better, faster, more talented drivers than I was. But the work ethic of Mika was much better in and around the team than I could see in Kimi – right from the word go.”

Both Coulthard and former F1 driver Alex Wurz, who was McLaren’s test driver at the time, believe Räikkönen was at his best in those mid-noughties years at McLaren, with Coulthard and then Juan Pablo Montoya as his team-mates.

But it is difficult to equate the driver of those years with the man who was outqualified 25-20 and outscored 213 points to 195 by Massa over two-and-a-half seasons at Ferrari, and who was made to look very ordinary indeed by Alonso.

Could it simply be that while Kimi Räikkönen remains a *very* talented grand prix driver, who is capable of phenomenal feats when he’s driving the right car, his ability is simply just not rounded enough to allow him admittance into the pantheon of true greats?

THE STATISTICAL EVIDENCE

Those words will sound

like sacrilege to some, but the evidence is strong, especially if you analyse the intertwining careers of Räikkönen, Massa,

Alonso and Romain Grosjean at Renault/Lotus and Ferrari over the past few years.

Räikkönen won the title in 2007 at Ferrari, and remains Maranello’s most recent world champion. But as Coulthard puts it: “For a large part of that championship year Massa was in front of him, and we weren’t used to seeing Massa in front of Alonso or Schumacher.”

Massa outqualified Räikkönen nine-eight over 2007 and after Räikkönen made a strong start, Massa mostly headed him in the championship, from winning the fourth race of the season in Spain until he suffered suspension failure at the Italian GP. Räikkönen had a streak of three wins and a third place to clinch the title, but needed both McLaren drivers, Alonso and Lewis Hamilton, to make mistakes, and for Massa to hand him victory in the final race of the season to do it.

In 2008, Massa was Ferrari's unquestioned title contender, outscoring Räikkönen by 22 points over the season and outqualifying him 12-6.

In 2009, it was five-four in qualifying in Räikkönen's favour after nine races, but Massa was still the leading Ferrari driver when he suffered the accident in Hungary qualifying that left him with a fractured skull and out for the rest of the season.

Meanwhile, in the seven races Grosjean spent as Alonso's team-mate in 2009 – admittedly in a difficult car and in his rookie year – his average qualifying deficit was 0.538 seconds and the closest he ever got was 0.231secs.

As Grosjean's team-mate in 2012-13, Räikkönen was the more convincing racer, at least until the second half of 2013 when Grosjean finally built the confidence he needed after his crash-strewn and nervy first season and a half, and surpassed his illustrious team-mate as the better driver all-round.

On pure pace in qualifying, it was very close. On weekends where a comparison is valid, Grosjean outqualified Räikkönen ten-nine in 2012 and Räikkönen returned the favour ten-seven in 2013. Räikkönen's average advantage was 0.108secs.

Over four years as Ferrari team-mates, Massa scored 48.2 per cent of Alonso's points, his average qualifying deficit was 0.409secs, and he was outqualified 69.5 per cent of the time, including the latter part of 2013 in which Alonso suffered a dip in qualifying form. Before that it was 76.79 per cent.

Räikkönen scored 34.2 per cent of Alonso's points in 2014, and was outqualified 16-3 over the season (81.25 per cent), at an average of 0.529secs. The only times Räikkönen finished ahead in a race were when Alonso had a penalty in Spa and suffered an engine failure in Monza.

2004 McLaren
David Coulthard
12-6

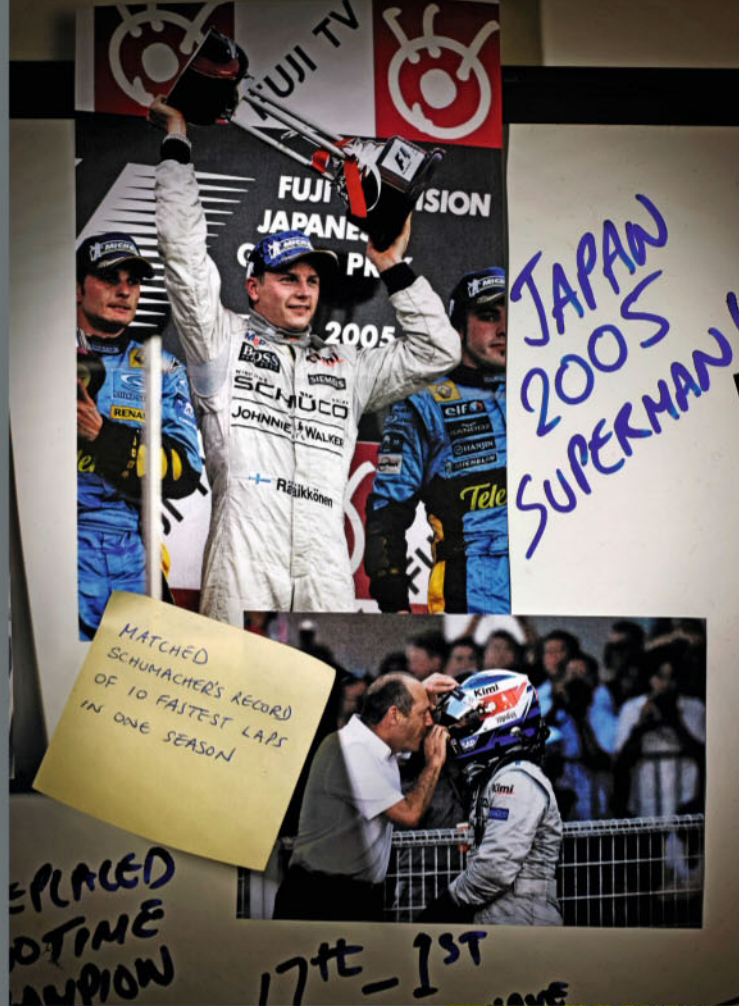
2005 McLaren
Alexander Wurz
1-0

Juan Pablo Montoya
9-8

Pedro de la Rosa
0-1

2006 McLaren
Juan Pablo Montoya
7-3

Pedro de la Rosa
8-0



INVESTIGATION INVESTIGATION INVESTIGATION INVESTIGATION INVESTIGATION INVESTIGATION INVESTIGATION INVESTIGATION INVESTIGATION INVESTIGATION



SAUBER TO McLAREN



THE STORY BEHIND THE STATISTICS

Räikkönen blames his dip in form in the second half of 2013 on Pirelli's change in tyre construction following the failures at Silverstone. And he argues that he did not get on with the Ferrari last year. In both cases, the problem was a lack of front-end grip preventing him from exploiting his ability, which requires a responsive front end. →

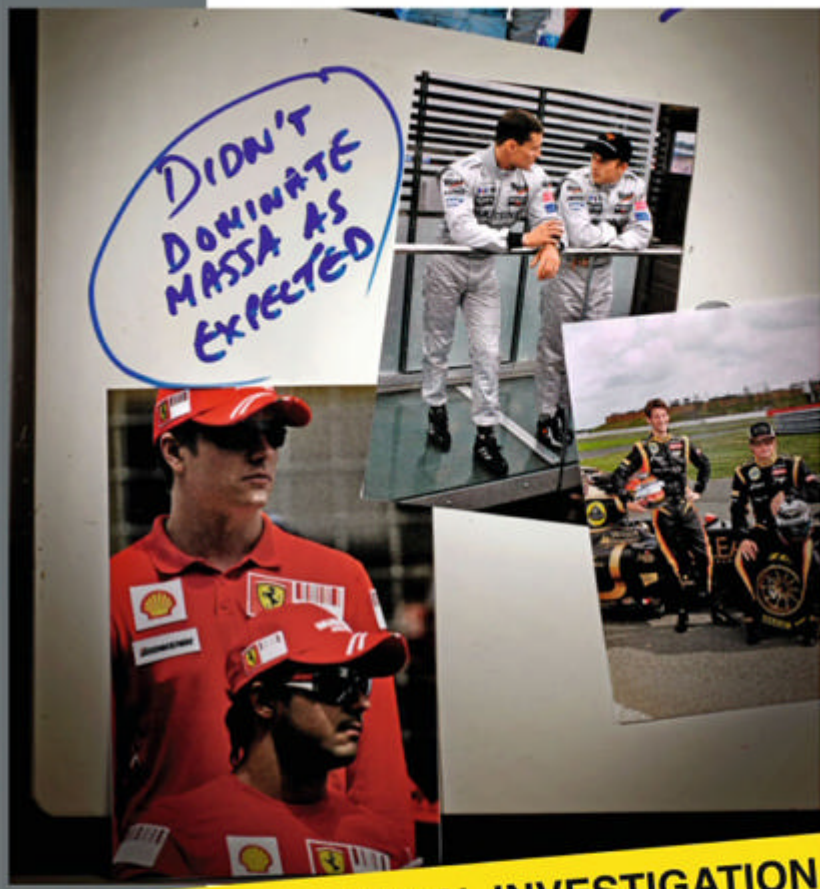
An F1 team boss, discussing the problems of Räikkönen and Vettel in 2014, put them down to the inherent lack of front grip of last year's cars and tyres. "Kimi leans on the outside front wheel, like Vettel," he said. "You can't drive that way with these cars and tyres. That's why they're struggling."

On the rare occasions Räikkönen found the grip he wanted from the front of the Ferrari last year, he was pretty much on Alonso's pace. But when the car did not behave that way, he was miles off, and didn't seem to be able to do anything about it. Alonso didn't like the Ferrari's lack of front bite either; he just adapted his style to compensate.

Pat Fry, engineering director at Ferrari last year before he was ousted, has worked with Räikkönen and Alonso at both Ferrari and McLaren. He said towards the end of last year: "There are two parts to it. One is that Fernando is more adaptive anyway, and the other is that the limitation with the car and tyres specifically hurt Kimi's way of driving."

"Often by the time you get the front end he needs into the car, the rear becomes a problem. To some degree on the softer compound tyres it's not bad – look at Singapore; when he went onto the supersofts he found a huge amount of time."

"Generally with this car and tyres, this sort of problem compounds. Save fuel and you lose tyre temperature and can't get a balance, then you push and it comes back. Fernando works the car and tyres and drives around problems. The harder you are on the fronts, the better you'll be."



THE QUESTION OF ADAPTABILITY

This lack of adaptability has always caused Räikkönen problems. His acute sensitivity to front-end grip means he can achieve remarkable things when the car is just so. But, as with Jenson Button and his

need for a stable rear, that sensitivity can be a hindrance in some circumstances as much as it is a help in others.

"For sure the car is not 100 per cent where Kimi needs it to be," Massa said towards the end of last year, "but I know what his big problem is. To be in a team with Fernando is not easy, because you need to have the car suited to your style, to have the team helping you, and you have to be 100 per cent perfect in your driving because otherwise he will be quicker than you."

"Fernando is the top driver and to beat him you need to be on the level of perfect. If you're not in just one little way, you will be behind him."

Arguably no one is better at adapting to the demands of a difficult car than Alonso, and most other drivers struggle to a greater or lesser extent with a car that is not balanced the way they would like. But because Räikkönen's natural talent is clearly so high, because he engenders such devotion, much more is expected of him.

One accusation that has haunted him throughout his career is that he is not helped by his singular attitude.

"He makes up in talent what he lacks in preparation," says a senior figure who worked with Räikkönen at McLaren. →

Team mate qualifying head-to-heads (continued)

2007 Ferrari
Felipe Massa
8-9

2008 Ferrari
Felipe Massa
6-12

2009 Ferrari
Felipe Massa
5-4

Giancarlo Fisichella
5-0

Luca Badoer
2-0



Speed. Courage. Glory.



C70 D-TYPE – LIMITED EDITION

Sir William Lyons designed Jaguar's legendary D-Type Long Nose racing car with one purpose in mind – to win at Le Mans. In 1957 the non-works Ecurie Ecosse team's resplendent Flag Metal Blue D-Type, driven by Ron Flockhart and Ivor Bueb, completed a stunning hat-trick of victories for the marque.

This 500 piece limited edition is a tribute to one of the finest cars and greatest achievements in British motorsport history.

EXCLUSIVELY AVAILABLE AT christopherward.co.uk

CHR. WARD
LONDON

WorldMags.net

“Years ago when we were first developing simulators, round about 2003-05, the simulator was just becoming useful to us and we were trying to get the proper race drivers to use it. David would come in and do a load of homework in the simulator, which we wanted. But you couldn’t get Kimi to turn up: ‘I don’t care about that; it’s just a computer game, I don’t want to waste my time.’

“So he’d slag off the machine mainly because it meant he didn’t have to spend time, because he’s lazy basically. David would do all this preparation and think, ‘Yeah, I’m really going to nail it on Friday.’ And Kimi would just walk in and blitz him, having done nothing. Which used to destroy David of course, and didn’t do our simulator cause any good either.

“But you’d have to say that if Kimi had spent the time in the simulator, if he’d done a bit more homework, he’d have been even better.”

There is a stubbornness to Räikkönen’s character that makes it tempting to believe that he almost wills himself not to do as well in an imperfect car; to make it more obvious to his engineers that it needs to be changed.

But ask Coulthard whether he thinks Räikkönen’s relatively narrow performance window is because he can’t or won’t adapt his driving, and he says: “You have to presume he can’t,

Team mate qualifying head-to-heads (continued)

2012 Lotus F1
Jérôme d’Ambrosio
1-0

Romain Grosjean
9-10

2013 Lotus F1
Romain Grosjean
10-7

2014 Ferrari
Fernando Alonso
3-16

because fast racing drivers are not stupid when it comes to finding performance.”

It’s not hard to see where Räikkönen’s public appeal lies. In an age of PR-conscious drivers who are all too aware that they need to be seen to be saying the right thing, he bucks the trend. His lack of loquaciousness in news conferences is overstated. If he is in the mood, he can be almost chatty, sometimes wryly amusing. It’s more the thumbing his nose at authority that strikes a chord.

Whether it’s admitting he did not ask Ferrari for permission to take part in a snowmobile race and entering it under the name ‘James Hunt’, saying live on television that the reason he missed a speech by Pelé in honour of Michael Schumacher was because he was “taking a shit”, or ordering his engineer while leading the Abu Dhabi Grand Prix in 2012 to “leave me alone, I know what I am doing”, there is an appealing lack of conformity about Räikkönen.

But being your own man does not make you a better racing driver. And even some of his most committed fans accept that. One Twitter user, who has vociferously championed Räikkönen to this writer in the past, wrote recently: “Kimi has been M.I.A. since 2007, frankly. This is the year he returns, if that car suits him.”

WHAT NEXT FOR KIMI?

Räikkönen is joined at Ferrari in 2015 by Sebastian Vettel and, although they have five world championships and 59 race wins between them, both have something to prove; each was comprehensively

beaten by their team-mate last season.

In theory, they should make a good team. They get on as people, and it would appear they like the same things from their cars. But what will it prove if Räikkönen is on Vettel’s level this year, or even beats him? Will it mean Vettel is nowhere near as good as Alonso? That Räikkönen has got his mojo back? Or that the car is more to his liking?


“We’re never really going to know,” Coulthard says. “But it’s fair to say that both Sebastian and Kimi are going into their season as team-mates off the back of their worst seasons in F1.”

And what if Vettel does to Räikkönen what Alonso did? Räikkönen is 35 and his contract is up for renewal at the end of 2015, although there is an option to extend it into 2016.

“Is he one season away from disappearing off into whatever it is he’s going to do next?” ponders Coulthard. “Or can he discover something in this Ferrari alongside Vettel and we get Kimi back?”

When Coulthard retired, he asked Räikkönen to sign a helmet for him as a keepsake.

“Happy holidays, old fart,” he wrote.

Can Räikkönen tip the balance back from ‘anonymous’ to ‘exceptional’ sufficiently this year to delay his own, permanent, holiday from F1? 

Andrew Benson is BBC Sport’s chief F1 writer





DOM  REILLY
ENGLAND

MICHAEL JOHNSON PERFORMANCE

The new limited edition hold-all
from Dom Reilly

Michael Johnson, a legendary athlete.
During his career he won 13 Olympic and
World Championship medals.

All of which were gold.

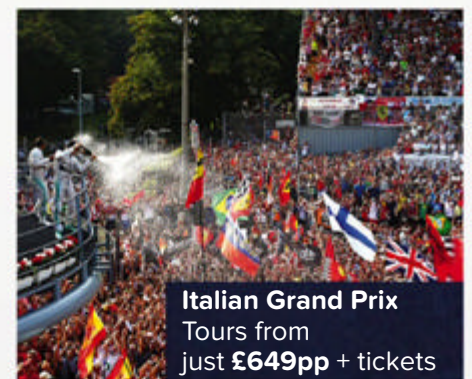
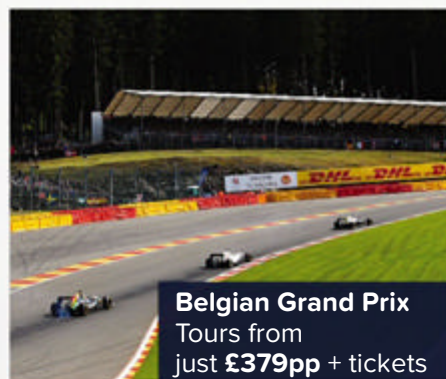
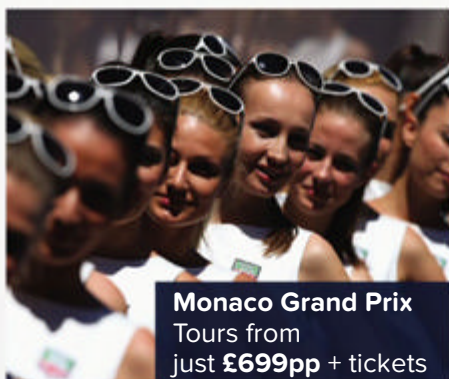
The world's greatest choose Dom Reilly.

Exclusively available at
WWW.DOMREILLY.COM

WorldMags.com

MOTORSPORT TOURS 2015

GREAT VALUE PACKAGES AVAILABLE NOW



**OVER 40 YEARS'
EXPERIENCE IN
SPORTS TRAVEL**

BOOK ONLINE NOW
gulliverstravel.co.uk

OR CALL

01684 878867



Images courtesy of Getty Images and Circuit de Barcelona-Catalunya

All prices shown include travel to your chosen Grand Prix. Hotel and transfer packages also available.

WorldMags.net

THE GREATEST F1 CARS EVER

THE F1 RACING AWARDS... BUT FOR CARS



The voting panel



Jo Ramirez



Neil Oatley



Sergio Rinland



Enrique Scalabroni



Guenther Steiner



Andy Stevenson



Pat Symonds



Otmar Szafnauer



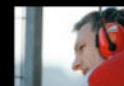
Willem Toet



Jonathan Williams



Peter Wright



James Allison



Nick Chester



Andy Cowell



Frank Dernie



Andrew Green



Robin Herd



Dominic Harlow



Paul Hembery



Paddy Lowe



Steve Nichols

WORDS JAMES ATTWOOD & STUART CODLING PICTURES LAT PHOTOGRAPHIC

Formula 1 cars straddle the blurred boundary between science and alchemy. At their most basic, they are simply machines designed to do a job. Yet the finest of their breed cast off their shackles as mere mechanical instruments, developing their own character and adding to the beauty of grand prix racing. Such cars are rare: there

are plenty of good F1 machines, but only a handful can be considered great. So which of those are the best? To find out, *F1 Racing* asked the people who know best: the designers and technical staff, past and present, who have devoted their lives to improving the breed of F1 cars. These are the results of that poll: these are *F1 Racing's* Greatest Cars.

CONTENTS

- Game-changer [p56](#) Most radical car [p57](#) Best-looking car [p58](#) Best tech [p59](#) Most unusual car [p60](#) Giant-killer [p62](#)
- F1's coolest car [p63](#) Most wins [p64](#) F1's fastest car [p65](#) F1's all-time greatest car [p66](#)



PHOTOS: LAT ARCHIVE; MARK THOMPSON/GETTY IMAGES; SUTTON IMAGES

GAME-CHANGER

Lotus 49

The car that had the most impact on F1 design and technology through clever, innovative design

Designer Colin Chapman
Chassis Aluminium monocoque
Engine 3-litre Ford Cosworth DFV V8
Power 409bhp
Transmission Hewland FG400
Wheelbase 241.3cm
Weight 510kg
Tyres Firestone



From the moment the new – and slightly late – Lotus 49s rolled out of the trucks, down the ramp and on to the sandy grass of the Zandvoort paddock in June 1967, change was inevitable in Formula 1. Colin Chapman had already rendered conventional F1 chassis design obsolete in 1962, with his monocoque Lotus 25, and now he would reboot a concept first tried in the 1950s to move the game on again.

Making one item fulfill more than one function is among the holy grails of engineering. By using the skin of the 25 as a load-bearing part of the chassis, with integrated fuel tanks mounted on each side of the driver in a folded steel structure, Chapman had eliminated the inherent wastefulness of the steel spaceframe concept.

This was perfect for the 1.5-litre F1 era, when engines were underpowered and lightweight, and aerodynamic efficiency was the key competitive differentiator. And after the three-litre formula began in 1966, the 49, designed by Chapman and Maurice Philippe, took this a step further, by using an *engine* specifically created to act as a structural element of the car.

Lotus, like other British teams, were initially caught out by the new formula;

engine manufacturers such as Climax had wasted development time by complaining about the change and lobbying against it rather than designing units to suit it. That left Lotus struggling to design their 1966 car around BRM's absurd H16: two flattened-out 1.5-litre V8s mated at the crank. The only advantage of this overweight behemoth was its strength, meaning the car could lose the subframes used at the rear to carry the engine and absorb suspension load. Instead, the engine could do both jobs.

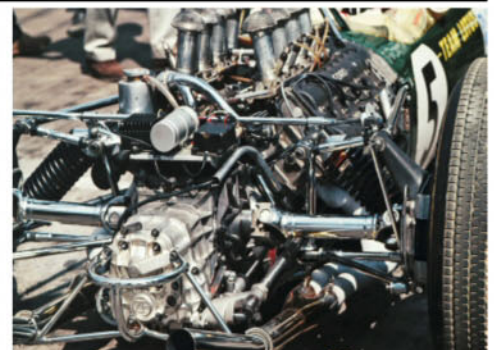
The 1966 Lotus 43 might have been more successful but for the BRM engine's weight and unreliability – Jim Clark managed just one grand prix win – a fact that was not lost on Chapman. He needed a different, better engine. Having just won the Indy 500 using Ford power, Chapman deployed his legendary charm to persuade Ford's Walter Hayes to underwrite the costs of developing a new aluminium V8 to be designed and built by Cosworth.

Modern Formula 1's Year Zero began in 1967. Graham Hill set pole position on the 49's debut at Zandvoort, and after he retired from the lead team-mate Jim Clark won. Rivals were soon lining up to obtain Ford-Cosworth power for themselves. Poor reliability cost Lotus the 1967 title, but every championship since then has been won with an engine acting as a structural element of the car.





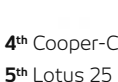
In 1966, the Lotus 49, designed by Chapman and Maurice Philippe, used an engine specifically created to act as a structural element of the car



Jim Clark (above) and Graham Hill (below left) in the 1967 Lotus 49; the revolutionary Ford V8 (below)



How the voting went:

- 1st Lotus 49 
- 2nd Lotus 78 
- 3rd McLaren MP4/1 
-  4th Cooper-Climax T43
-  5th Lotus 25

MOST RADICAL

Brabham BT46B

The car that featured the most radical single design concept or feature

Designer Gordon Murray
Chassis Aluminium monocoque
Engine 3-litre Alfa Romeo flat-12
Power 520bhp
Transmission Brabham/Alfa Romeo six-speed
Wheelbase 259cm
Weight 595kg
Tyres Goodyear



The greatest designers are at their brilliant best when faced with a seemingly unsolvable problem. For talented South African designer Gordon Murray, the problem that wasn't going away any time soon was Alfa Romeo's cumbersome and thirsty flat-12 engine.

Young Murray's designs had already caught the eye of Brabham team owner Bernie Ecclestone, but the 1978 concept was something else entirely. Ferrari had won championships with flat-12 engines, but the Alfa lump used by Brabham wasn't in the same league, and the arrival of ground-effect aerodynamics in the late 1970s made flat engines a disadvantage – the cylinder heads blocked the airflow that designers were trying to channel through the sides of the car to develop downforce. The BT46 was Murray's innovative riposte.

Murray figured that if he couldn't use the car's sidepods to create ground effect he would minimise them, and compensate for the relative lack of downforce with an ultra-low-drag car concept. This meant getting rid of the radiators – which would normally occupy most of each sidepod – and replacing them with a complex system of surface-mounted heat exchangers.



So far so good – but it didn't work. On a winter morning at Donington Park, the BT46 immediately overheated. Tests revealed that the expansion and contraction of the heat exchangers as temperatures rose and fell was causing the chassis to twist. Murray quickly redesigned the BT46 with radiators in the nose, but refused to admit defeat. He was determined to crack ground effect, so rather than using sidepod air-flow to create low-pressure beneath the car, he decided to use a giant fan to suck the air out.

That description hugely oversimplifies what was actually a very sophisticated piece of engineering. The Chaparral 2J Can-Am car had tried the same trick using a pair of snowmobile engines to drive its fans – and was swiftly banned as a result. Murray designed his fan to run off the car's own engine, matching its speed to the engine revs, and sealing in the entire engine bay area with rubber skirts.

The BT46B's only race outing came at the 1978 Swedish GP, where it proved invincible in the hands of Niki Lauda. Brabham's rivals were furious, and they lobbied to have the car banned on the grounds that the fan was a moveable aerodynamic device. Murray stood by his claim that the fan was necessary for cooling and therefore legal.

Ecclestone, looking to the long political game, decided not to run the 'fan car' again. →

The BT46B proved invincible... Brabham's rivals were furious and lobbied to have the car banned on the grounds that the fan was a moveable aerodynamic device

How the voting went:

1st Brabham BT46B

2nd Lotus 88

3rd Tyrrell P34



4th Lotus 78

5th Mercedes W196

The BT46B used a giant fan system to suck out air from beneath the car, thereby boosting downforce



worldmags.net

BEST-LOOKING

Jordan-Ford 191

The most beautiful Formula 1 car ever created

Designer Gary Anderson
Chassis Carbonfibre monocoque
Engine 3.5 litre Ford HB4 V8
Power 730bhp
Transmission Jordan transverse
Wheelbase 289.5cm
Weight 505kg
Tyres Goodyear



When you need to design a Formula 1 car with a minimal staff and limited access to a windtunnel, your solutions had better be as simple and as effective as possible.

The young Gary Anderson was a mechanic under Gordon Murray at Brabham at their inventive zenith in the 1970s, but he had a yearning to build his own cars. First at weekends, then full-time in partnership with ex-Tyrrell mechanic Bob Simpson, he designed the moderately successful Anson Formula 3 cars. Racing on a shoestring did not suit him, and he headed to America to work as a race engineer for Roberto Moreno in IndyCar (racing against Adrian Newey-

engineered Bobby Rahal, among others) and ultimately secured a design job with the Brackley-based customer chassis builder Reynard.

Not long after Jean Alesi had won the 1989 Formula 3000 championship in an Anderson-designed Reynard-Mugen run by Eddie Jordan Racing, Anderson received the first of many phone calls from Jordan, who claimed to have secured enough budget from his sponsor, Camel, to build and run an F1 car. Anderson eventually submitted to Jordan's charm offensive and accepted a job.

The Jordan F1 project began in February 1990. Anderson and his staff of two – Andrew Green and Mark Smith – had a mountain to climb. There was little money for windtunnel testing and, since the F1

"The 191 had to be quick out of the box, easy to understand and quick and easy to adjust. That dictated both its elegant shape and its neat suspension"

grid was oversubscribed in those days, any new team would have to pre-qualify – a short and vicious Friday-morning session in which only the four fastest cars fielded by the championship's lowest points scorers got through to qualifying proper. Thus the 191 was shaped by expediency. With track time in short supply, it had to be quick out of the box, easy to understand and quick and easy to adjust. That dictated both its elegant shape and its neat suspension.






Jordan had a rough introduction to Formula 1. They managed to secure a supply of Ford customer engines in place of the anticipated Judd V10 – forcing Anderson to redesign the 191's engine cover with a slight bulge – only for Ford to then whisk Camel off to their works team, Benetton. No matter: the car looks so much better in the green of 7-Up, a deal Jordan put together at the last minute.

By mid-season the 191 had made it out of pre-qualifying and was carving its place in history: Michael Schumacher made his debut in one at Spa, while in the same race the often erratic Andrea de Cesaris heroically pursued Ayrton Senna for the lead until his engine blew. Expediency had shaped not just a beautiful car, but a quick one, too.



Michael Schumacher makes his F1 debut in the Jordan 191 (above); Jordan's Andrea de Cesaris (below)

How the voting went:

- 1st Jordan-Ford 191 
- 2nd Eagle-Weslake Mk1 
- 3rd Brabham-BMW BT55 
- 4th Maserati 250F 
- 5th Ferrari 312 T2 



BEST TECH

Williams FW14B

The car that featured the most advanced technology for the era in which it raced

Designers Patrick Head and Adrian Newey
Chassis Carbonfibre/honeycomb composite
Engine 3.5-litre Renault RS4 V10
Power 750bhp
Transmission Williams six-speed
Wheelbase 292.1
Weight 505kg
Tyres Goodyear



Had this category been for the most technically advanced F1 car, the Mercedes W05 Hybrid would have won. And, in fact, it almost did. But we had also asked our panel of designers to consider how technologically advanced each car was *for the era in which it raced*. That resulted in a narrow win for the Williams FW14B, the first car to truly master active suspension in the driver-aid-fuelled early 1990s.

The machine was an evolution of the FW14, which combined the aerodynamic wizardry of Adrian Newey with the engineering nous of Patrick Head. Thanks to Renault's potent 3.5-litre V10 engine and a semi-automatic gearbox, the FW14 was the fastest car on the 1991 grid by season's end. However, early unreliability, much of it linked to the gearbox, let McLaren's Ayrton Senna build up an unassailable points lead.

For 1992, Newey and Head opted for evolution with the FW14B chassis now enhanced by an active-suspension system, developed by current Merc tech chief Paddy Lowe. This meant the suspension could be automatically adjusted for each corner to ensure a consistent ride height, thus greatly increasing cornering speed. Such was the team's dominance that Nigel Mansell and Ricardo Patrese often qualified several seconds ahead of their rivals.



While rivals teams ran their own active-suspension systems, none of them were able to match that of the Williams unit, and the following year's more refined Williams FW15C remained dominant – indeed, it finished third in this very poll.

The following year, the FIA banned active suspension, traction control and other driver aids. It wasn't until the introduction of the 2014 hybrid power units that F1 really placed itself near the cutting edge of road-car-relevant technology again.

The FIA's argument for banning driver aids in 1994 was to put the emphasis back on the driver, the implication being that the active cars were becoming too easy to drive. Yet, ironically, the qualities needed to extract ultimate speed from the FW14B's incredible technology were very human: brute force and immense self-belief.

"The commitment was such that, if it didn't stick, there would be a big accident," said Nigel Mansell, whose perfect mix of brute force, finesse, and immense self-belief had helped him to dominate in the Williams FW14B in 1992. "You almost had to hang onto it. If you had to alter it halfway through the corner, you almost didn't have enough strength to catch it. It was terrifying. But if you got it right, it was satisfying – and it was quick." →

"You almost didn't have enough strength to catch it. It was terrifying. But if you got it right, it was satisfying – and it was quick" **Nigel Mansell, FW14B driver**

How the voting went:

1st Williams FW14B

2nd Mercedes W05 Hybrid

3rd Williams FW15C



4th McLaren MP4/1

5th Mercedes W196

The FW14B: active suspension made it invincible



MOST UNUSUAL

Tyrrell P34

The car that featured the most unusual or outlandish design concept

Designer Derek Gardner
Chassis Aluminium body on tubular frame
Engine three-litre Ford Cosworth DFV V8
Power 485bhp
Transmission Hewland FG400
Wheelbase 245.3m
Weight 595kg
Tyres Goodyear



The six-wheel P34, with its nine-inch front tyres



This category is all about those cars that dare to be different by challenging convention.

And although Derek Gardner didn't set out to reinvent the wheel when he penned the Tyrrell P34, he did something almost as bold: he added two more of them.

Gardner's thinking was that, at a time when most teams used the same Ford Cosworth DFV engine, the difference had to be in the chassis. He believed Tyrrell could gain an advantage if they designed a car that created less drag than their

rivals. Since the front tyres of an F1 car are a major source of drag, running smaller wheels would achieve that goal – and, happily, the F1 rulebook didn't stipulate a minimum wheel size.

Tyrrell convinced Goodyear to produce bespoke nine-inch-wide front tyres, and to ensure the same amount of rubber was in contact with the road as before, Gardner added an extra pair. Thus, in theory, the six-wheeled P34 had the same amount of tyre in contact with the ground as a regular F1 car, but with less drag and aerodynamic lift.

That innovation came at a price: the extra suspension for the extra wheels meant extra weight, which gave the team an extra set of complications when it came to balancing the brakes. It was a hard car to set up, and front-suspension problems caused big crashes for drivers Jody Scheckter and Patrick Depailler. But, when it *was* running, it was competitive: Tyrrell finished third in the 1976 constructors' championship, with Jody Scheckter winning the Swedish Grand Prix.

The limitations of the design were beginning to show by the following season; Goodyear stopped development of the bespoke tyres and the car slipped down the order. The subsequent rise of ground effect effectively rendered the concept obsolete. Tyrrell's 1978 car, the 008, had four wheels.

While the P34 was a clear winner in this category, not every designer – including several who voted for it – was a fan. One described the concept as “plain stupid”; another termed it “outlandish”, adding: “It was ‘wrong’, in as much as the stated objective was to reduce frontal area and since the proper definition of

frontal area is a front elevation silhouette, it did nothing in this aspect, dominated as it was by the rear tyre. They misunderstood the physics.”

The P34 is the only six-wheeled car to compete in and win a GP. March, Williams and Ferrari later experimented with six-wheeled test cars with the extra wheels at the rear to boost traction. But the FIA banned them all before they could race. →

How the voting went

1st Tyrrell P34



2nd Brabham BT46B



4th Ligier JS5

5th March 240

Derek Gardner believed Tyrrell could gain an advantage if they designed a car that created less drag than their rivals – and front tyres are a major source of drag

SelectMotorRacing.com

INTERNATIONAL MOTORSPORT EVENTS ▶ RACE TICKETS ▶ HOSPITALITY & TRAVEL



Run by Fans for Fans

F1 VIP PACKAGES EXPERIENCE MOTORSPORT IN STYLE **CIRCUIT HOSPITALITY, PADDOCK CLUB, TEAM PACKAGES, AMBER LOUNGE PARTY**



F1 MONACO GRAND PRIX A JEWEL IN THE CROWN



F1 SINGAPORE GRAND PRIX NIGHT RACE



F1 ABU DHABI GRAND PRIX SEASON FINAL JOIN US AND PARTY WITH THE DRIVERS

LE MANS 24 HOUR

- Tickets & Hospitality
- Circuit Camping

Travel Packages

Coach Tours, By air options,
Self-drive packages



HISTORIC TOURS

- Monaco Historic
- Mille Miglia
- Le Mans Classic
- Goodwood Festival
- Goodwood Revival

FORMULA ONE GRAND PRIX

- Flexi Travel Packages to all events

PLUS MOTOGP AND SUPERBIKES

**BOOK
NOW!**

GET IN TOUCH FOR A FREE BROCHURE

TELEPHONE +44 (0) 1451 833 721

EMAIL ENQUIRY@SELECTMOTORRACING.COM

WorldMags.net





GIANT-KILLER

Brawn BGP 001

The car that most exceeded expectations by punching above the weight of the team that ran it

Designers Jörg Zander and Loïc Bigois
Chassis Carbonfibre & honeycomb monocoque
Engine 2.4-litre Mercedes FO 108W V8
Power 760bhp
Transmission seven-speed Brawn
Wheelbase data not released
Weight 595kg
Tyres Bridgestone



The Brawn BGP 001: light on sponsorship, but loaded with Honda brilliance

Let's start with a point of order. As one of our panel of expert witnesses – one who *didn't* vote for the Brawn – pointed out: "It was really a giant itself, being the culmination of the billions Honda had spent..."

That much is true, because had it not been for the catastrophic global financial meltdown of 2008, this car would have raced as a Honda in 2009. After returning to F1 as an engine supplier in 2000, then buying a stake in the BAR team before buying them outright, Honda had little to show for their investment as the global clock wound down. In fact, results had been getting worse: the 2007 car was a dog and its successor not much better.

Behind the scenes in 2008, while the Honda RA108 brought fortnightly humiliation on the racetrack, new team principal Ross Brawn focused his attention and resources on finding a way to exploit the new aerodynamic rules that would come into play in 2009. Not only were the finest minds (many newly recruited) at Honda's Brackley F1 HQ working full-time on the 2009 car, so too were engineers from Honda's recently defunct satellite team, Super Aguri, as well as engineers at Honda's Tochigi Technical Centre in Japan. As the product of three design teams, working with at least three windtunnels, the BGP 001 makes a compelling case for being among the most expensive F1 cars of all time.

Yet it might never have made it to the racetrack at all after Honda pulled the plug in December 2008. January and February came and went, along with several potential purchasers (as ever in the case of distressed assets, the moribund team attracted a great number of shysters).

The BGP 001 is among the most expensive F1 cars of all time... yet it might never have made it to the racetrack after Honda pulled the plug

It was Brawn himself who rescued the team through a management buyout, armed with a parachute payment from Honda and a little help from Bernie Ecclestone. McLaren's Martin Whitmarsh – and how he must have kicked himself over the coming months for doing so – greased the wheels for Mercedes to supply Brawn with a powertrain.

Carrying little sponsorship, the BGP 001 set the pace from the minute it took to the track. Jenson Button won six of the first seven races and Rubens Barrichello a further two, but lack of development began to bite in the second half of the season. The brutally downsized team struggled with their tiny operating budget, while their rivals aped the clever aerodynamics that had been developed in secret but had cost so much. However, their early success was enough to give them the fairytale ending: both drivers' and constructors' championships.

How the voting went

1st Brawn BGP 001

2nd Jordan 191

3rd Tyrrell 018



4th Jordan 199

5th Wolf WR1



F1's COOLEST CAR

Mercedes-Benz W196

The car, whether a consistent on-track success or not, that you were most attracted to, or would like to have designed

Designer Rudolf Uhlenhaut
Chassis Tubular spaceframe
Engine 2.5-litre eight-cylinder in-line
Power 290bhp
Transmission five-speed manual
Wheelbase 235cm
Weight 720kg
Tyres Continental



Defining what's 'cool' isn't easy – after all, 'cool' is a very personal thing. So what makes a 'cool' car? We asked our panel of designers to pick the machine they best connected with... that they were most drawn to... that they *wished* they had designed. No surprise, then, that this category attracted the widest range of responses

The Mercedes-Benz W196 is a very worthy winner. After all, how cool is a car that won nine of the 12 grands prix it entered over the course of 1954 and 1955, as well as two world championships in the hands of Juan Manuel Fangio? And how cool is a car that was withdrawn from competition before it could be eclipsed by the opposition? And how cool is a car that featured two distinct bodywork types, and engine technology inspired by fighter jets?

In the aftermath of World War II, Mercedes-Benz rebuilt their racing division, committing considerable resources to the sport with a team of more than 200 designers and engineers creating machines for multiple categories. The W196 first ran at the French Grand Prix at Reims in 1954 and won first time out in the hands of Juan Manuel Fangio. For that race, it sported Streamliner bodywork that enclosed the wheels for maximum efficiency. That bodywork was also used at Silverstone and Monza – hence the 'Type Monza' tag – and elsewhere the car ran in substantially altered open-wheel form.

Reflecting the effort the modern Mercedes team has put into engine development, the W196 featured a cutting-edge 2.5-litre straight-eight (complete with a direct injection unit developed for Messerschmitt), with power rising from 257bhp to 290bhp over the car's two-year life. Other notable features included huge inboard drum brakes and a lever that allowed the driver to change

the oil pressure in the shock-absorbers mid-race, effectively altering the suspension feel to aid handling as fuel loads fell. It was the sort of attention to detail that could come only from a well-funded manufacturer effort.

The W196's incredible two-year domination of grand prix motor racing

How cool is a car that won nine of the 12 grands prix it entered in 1954 and 1955, as well as two world championships?



The W196, in closed-wheel 'Streamliner' format, on its way to a debut victory at Reims in 1954

How the voting went

1st Mercedes-Benz W196

2nd McLaren-Honda MP4/4

3rd Lotus 79



4th Ferrari 126C

5th Benetton-BMW B186



came to an abrupt end when Mercedes suddenly withdrew from motor racing altogether, following a terrible accident at the 1955 24 Hours of Le Mans, when their driver, Pierre Levegh, lost his life in a crash that killed 82 spectators and injured 120 others. That tragic end to the car's competition career leaves questions over the unfulfilled potential of the machine. →

MOST WINS

McLaren MP4/2

The car with
the most grand
prix victories
(22 wins)

Designer John Barnard
Chassis Carbonfibre and honeycomb monocoque
Engine 1.5-litre TAG-Porsche Turbo TTE PO1 V6
Power 750bhp
Transmission McLaren/Hewland five-speed
Wheelbase 276.8cm
Weight 540kg
Tyres Michelin/Goodyear



We gave our panel of designers a break with this award, determining the most successful car in F1 history by the ultimate performance criteria: number of wins. And while you might naturally think of single-season sensations such as 1988's McLaren MP4/4 or the Mercedes F1 W05 Hybrid from 2014, this award went to a machine that was a consistent frontrunner across three seasons, 1984-86.

Having pioneered an all-carbonfibre monocoque with the MP4/1, which was used from 1981-83, McLaren designer John Barnard refined the concept to produce 1984's MP4/2. The key to the MP4/2 was that it was designed around a purpose-built engine, a compact TAG-funded, Porsche-built bespoke turbo, which replaced the Cosworth DFV. It was made to fit Barnard's exacting size, shape and weight requirements – letting him sculpt the car to his precise aerodynamic specification.

The finely balanced car was among the first to feature carbon-fibre brakes, and the TAG-Porsche engine, helped by Bosch's electronic management system, was ultra-efficient, giving superior fuel consumption to its rivals, but retaining enough horsepower for it to win in race-trim. The MP4/2 wasn't always the fastest car in qualifying but it was dominant in



Alain Prost (above) and Niki Lauda (below) between them won 12 of 1984's 16 races in the MP4/2

races, where rivals struggled to match its combination of pace and reliability. Between them, Niki Lauda and Alain Prost won 12 of 1984's 16 races, Lauda snatching the title by half a point.

The B-spec car that ran in '85 featured revised aerodynamics (in part due to new rules banning winglets), a more powerful engine and suspension tweaks to account for a change from Michelin to Goodyear tyres. Without the qualifying engines used by their rivals, the machine was again generally outclassed on Saturdays, but Prost was the form man on Sundays, winning five races over the season to claim his first world title. Lauda won once in a low-key final season.

By 1986, the opposition had caught up, despite a series of aerodynamic revisions to the MP4/2C. New signing Keke Rosberg struggled to adapt to the car and was hampered by understeer. With the team needing to push harder to keep up with the opposition, the machine no longer had an edge on fuel consumption. Prost still claimed four victories, and his consistency let him snatch an unlikely title over Williams duo Nigel Mansell and Nelson Piquet.

Over three seasons of competition, the McLaren MP4/2 collected three drivers' and two constructors' championships to go with its record 22 race wins. John Barnard's departure from McLaren towards the end of 1986 led to an all-new, Steve Nicholls-designed MP4/3 for the following year. While still very much a race winner, it was no match for the Honda-powered Williams FW11B in 1987 – but it did lead to the following year's rather more successful MP4/4...

Over three seasons, the MP4/2 collected three drivers' and two constructors' championships to go with its record 22 race wins



Wins by car:

- 1st McLaren MP4/2 
- 2nd Lotus 72 (20 wins) 
- 3rd Williams FW14 (17 wins) 
- 4th Mercedes F1 W05 Hybrid (16 wins) 
- 5th McLaren MP4/4; Ferrari F2002; Ferrari F2004 (15 wins)

F1's FASTEST CAR

Williams-BMW FW26

The car that set the fastest lap, determined by highest average speed in an official timed grand prix session

Designers Patrick Head, Gavin Fisher, Antonia Terzi
Chassis Carbonfibre/epoxy composite monocoque
Engine Three-litre BMW P84 V10
Power 865bhp
Transmission Williams seven-speed
Wheelbase 276.8cm
Weight 605kg
Tyres Michelin

What's the ultimate criteria to determining how great an F1 car is? How fast it is, surely? And when it comes to fast, no car in F1 history can beat the Williams FW26. In the first qualifying session for the 2004 Italian Grand Prix, Juan Pablo Montoya lapped Monza in the BMW-powered machine at an average speed of 162.95mph, the highest lap speed ever seen in an official F1 race weekend session. Montoya eclipsed his own record set at the same track in the FW24 two years earlier. In turn, that 2002 record had eclipsed Keke Rosberg's mark set in a Williams-Honda FW10, in qualifying for the 1985 British Grand Prix: a record that had stood for 17 years.

While Rosberg's long-standing record – set at a pre-chicane Silverstone at the height of F1's turbo era, despite a slow puncture on his front-left tyre – remains a celebrated piece of F1 folklore, Montoya's mark is seemingly a minor footnote in the sport's history. That's partly because subsequent rule changes – notably aero restrictions and shrunken engines, and a change

in circuit design philosophies – are the primary reason why the FW26's record remains unchallenged 11 years on. For all the hybrid technology aboard the Mercedes F1 W05 Hybrid, Lewis Hamilton's pole-lap at Monza last year was set at an average of 154.07mph. But it's also because a *fast* F1 car isn't necessarily a *winning* F1 car.

The FW26 wasn't, strictly speaking, a great car: it won only one race (the 2004 Brazilian GP), and Williams finished fourth in that year's constructors' championship. It is probably better remembered for its ungainly 'walrus nose' – which was thankfully ditched for a more standard front-end a few races prior to Monza. While the FW26 had pace, it was difficult to set up, and lacked the downforce and all-round strength to take the fight to Ferrari's dominant F2004. But at Monza – an anomalous throwback track comprised of long straights and tight chicanes that rewards straight-line speed more than mid-corner grip – that lack of downforce, combined with the grunt of the hugely powerful BMW three-litre V10 engine, made it phenomenally fast.

Despite Montoya's record lap, he didn't qualify on pole: under the bizarre two-part single-lap system in place for 2004 the results of first qualifying, when he set his mark, determined running order for second runs. Ferrari's Rubens Barrichello was fastest in that session (averaging a 'mere' 161.8mph) to set pole, with Montoya second. Barrichello won the race while Montoya faded to fifth.

The FW26's tale is proof that in F1, outright speed isn't everything. But in a sport that prides itself on being the fastest in the world, the fastest car in F1 history surely deserves celebration. →

At an average speed of 162.95mph, Montoya eclipsed his own record set at the same track two years earlier

F1's record breaking fastest laps

1st Williams-BMW FW26 (Juan Pablo Montoya, Monza, qualifying, 11 September 2004) **162.95mph**

2nd Williams-BMW FW24 (Juan Pablo Montoya, Monza, qualifying, 14 September 2002) **161.46mph**

3rd Williams-Honda FW10 (Keke Rosberg, Silverstone, qualifying, 20 July 1985) **160.92mph**

4th Ferrari 126 C3 (René Arnoux, Silverstone, qualifying, 15 July 1983) **151.96mph**

5th Renault RE30 (René Arnoux, Silverstone, qualifying, 17 July 1981) **148.66mph**



Montoya's Monza exploits have ensured that the FW26 will be remembered as a record-breaking car



F1'S ALL-TIME GREATEST CAR

McLaren-Honda MP4/4

Designer Steve Nichols and Gordon Murray
Chassis Carbonfibre monocoque
Engine 1.5-litre Honda RA168-E V6 turbo
Power 650bhp
Transmission McLaren six-speed
Wheelbase 287.5cm
Weight 540kg
Tyres Goodyear



While beauty, innovation, lateral thinking, speed and style all mattered to our panel of designers when it came to picking the greatest car of all time, it was clear that one criteria outweighed all the others: winning.

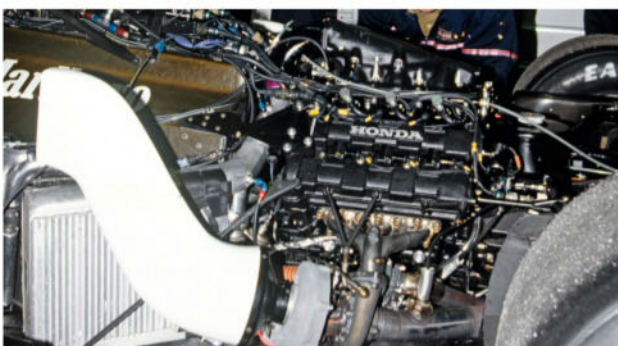
One designer who picked the McLaren-Honda MP4/4 described his choice as: "By percentage, the car with the winningest season in F1 history." Another added: "The most successful car, winning 15 of 16 races." That explains how a car that didn't win in any of the nine other categories comfortably led the way in voting for the one that mattered most of all. The McLaren MP4/4 wasn't particularly revolutionary, radical, or unusual: it was simply dominant.

From the first time they drove the MP4/4 in testing, Alain Prost and Ayrton Senna knew they had been handed a machine capable of winning. But they couldn't possibly have realised the MP4/4 was capable of taking 15 pole positions, 15 wins and ten further podiums over a 16-race season – or that McLaren would score three times as many points as runners-up Ferrari.

The MP4/4 was developed by Steve Nichols and Gordon Murray. Murray had just arrived from Brabham, and the MP4/4 adopted many of the ideas seen on his ambitious BT55, including the low, sleek appearance. The Honda engine was mounted lower than on previous McLaren cars to reduce the centre of gravity and improve aerodynamics, while sophisticated rear suspension made it stable on the brakes and hugely quick in traction zones.

Another key was the new engine, McLaren having switched from their Porsche-built TAG units to the turbocharged Honda RA168-E V6. Honda pushed to the limit and produced a unit that could put →

"Prost and Senna couldn't possibly have realised the MP4/4 was capable of taking 15 pole positions, 15 wins and ten further podiums"



Senna prepares for his sixth win of 1988, in Hungary





With a Honda unit that could put out 700bhp, incredible reliability and the world's two best drivers, the result was utter dominance



The McLaren-Honda MP4/4 in the pits at Estoril

out well in excess of 700bhp. Throw in the car's superb reliability and the world's two best drivers, and the result was utter dominance. Had it not been for Senna's Monza clash with Jean-Louis Schlesser, the MP4/4 would have won *every* race.

That domination was all the more impressive because it didn't come from McLaren exploiting a rules loophole, or a change in technology: the MP4/4 was simply a better car than its 1988 rivals. In fact, its dominance came despite the best efforts of rule-makers: in the final year of turbo engines, forced-induction units had to overcome some harsh restrictions, including a huge reduction in boost and fuel allowance and a weight advantage for naturally aspirated cars.

The MP4/4's record of 15 wins in one season was finally bettered by Mercedes last year, although the W05's 16 victories came from 19 races, and as a result the MP4/4 has a better strike rate – 93.75 per cent. Such numbers are incredible, but the MP4/4 isn't just about the stats: it was the car in which the epic Senna/Prost rivalry really kicked off; the two legends engaged in an escalating private battle. Prost scored more points, but Senna won the title on dropped scores.

How would the course of the Senna/Prost rivalry have differed if the MP4/4 hadn't been so dominant in 1988? If another car had provided a challenge, would tensions between the two drivers have been diffused by the need to address an external threat? That's a matter for debate. What *isn't* up for debate is that the McLaren-Honda MP4/4 is a great F1 car – a worthy recipient of the title 'greatest of all time'. 🏁

How the voting went

1st McLaren-Honda MP4/4



2nd Williams-Renault FW116

3rd Lotus 25



4th Mercedes-Benz W196

=5th Lotus 78

=5th Mercedes F1 W05 Hybrid



DESIGNER'S VIEW

"We were working with regulations designed to ensure that a normally aspirated engine would win. The non-turbo cars had more engine capacity: 3.5 litres. We had 150 litres of fuel, a 1.5-litre engine and limited boost. That meant, on average for a race distance, we probably had about 600bhp. Even so, we regularly beat the normally aspirated cars and beat and occasionally lapped the Lotus with the same engine.

"The MP4/4 was the culmination of all of McLaren's experience at the time and a perfect expression of the value of teamwork. It is a testament to the fantastic effort of all those McLaren people who produced and raced this wonderful car."

STEVE NICHOLS,
CO-DESIGNER,
MCLAREN MP4/4



1988 RACE HISTORY

Race	Alain Prost	Ayrton Senna
Brazil	1st	DSQ*
San Marino	2nd	1st
Monaco	1st	DNF
Mexico	1st	2nd
Canada	2nd	1st
USA	2nd	1st
France	1st	2nd
Great Britain	DNF	1st
Germany	2nd	1st
Hungary	2nd	1st
Belgium	2nd	1st
Italy	DNF	10th
Portugal	1st	6th
Spain	1st	4th
Japan	2nd	1st
Australia	1st	2nd
Championship	2nd	1st

*Senna excluded for changing to spare car on race restart

Adrian Newey

Red Bull's design guru explains how making kit cars with his dad got him started, and what prompted his recent move from wheels to sails

WORDS JAMES ROBERTS PORTRAITS GLENN DUNBAR/LAT

As the pre-eminent racing car designer of his era, Adrian Newey has struck gold with most of his creations to date. He's won world championships with Williams, McLaren and, most recently, Red Bull. But now he's starting to wind down the amount of direct involvement he has in Formula 1, in part because of the ever-tightening rules and regulations that restrict design freedom and creativity.

Newey's focus has instead switched to the high seas. This year, he will be helping Olympian Ben Ainslie create a catamaran to compete in the America's Cup sailing competition.

But our meeting with Newey takes place on familiar turf: the Formula 1 paddock for the first pre-season test of the year in Jerez. It's chilly outside, but Newey's eyes shine brightly as he enthuses about his first love: racing car design.

While the air is punctuated with the frenzy of the Red Bull RB11 (among others) lapping the Jerez circuit in its dazzle camouflage livery, Newey, in contrast, takes a measured and thoughtful approach, as he responds to the many questions you sent for him to answer.

If you could change one regulation in Formula 1, what would it be?

Toby Middleton, UK

My answer to that would be to throw out most of the technical regulations and come up with a simpler set of regulations that allow designers much more freedom.

Which F1 car not designed by yourself is your favourite car of all time?

Michael Filletti, Malta

It depends on what you mean by 'favourite'. The best-looking car was the Eagle Westlake from 1968. That was a *very* pretty car – beautifully proportioned. Then, after that, it would be between three Lotus cars: the 49, 72 and 79. The 49 was the first Cosworth car and the first Tamiya model kit car I built as a child, so that made quite an impression on me. The 72 represented a real sea change with side radiators and in-board brakes, and the 79 was the first properly evolved ground-effect Formula 1 car – not the first ground-effect car ever built, as that honour goes to Donald Campbell's Bluebird

land speed record car in the mid-1960s. I would say that, for its time, it was the most technically advanced vehicle ever built.

Would you like to buy back your old Moonstone RS500 Cosworth? I know where it is...

Paul Stevens, UK

[Laughs] I had a lot of fun in that car. It was a real 'wide boy' car of the time, I guess. It had its time and place, but it isn't a car that I have a huge amount of sentimental attachment to.

Had things not gone belly-up at Leyton House, do you think you could have won a race in 1990?

Greg Alexander, UK

Yes, I think we could have done if we'd had a bit more funding and been able to develop it. We very nearly won at Paul Ricard and took the fastest lap at the next race at Silverstone. I do very much have that feeling of unfinished business at Leyton House, and indeed it was that feeling that attracted me to join Red Bull, in →



YOU ASK THE QUESTIONS

as much as Red Bull were an embryonic team and having been involved with two great teams in Williams and McLaren, I had the chance to be involved with something from the start and work on developing it.

What is the funniest moment you've had with Red Bull over the years?

Maddy Coulston, UK

I did have one slightly embarrassing moment. The reception in Milton Keynes was being rebuilt and we were meant to go out of a side door at the front if we left before eight in the evening. After that time, we had to go out through the back of the building, which was a long way round. So I went down to reception, pressed the sliding door of the main entrance where the work was being done, and lo and behold, the doors opened. I walked out towards a gap in the safety fencing and I fell – complete with briefcase and everything – straight through a piece of plywood

that was covering a very large hole about five foot deep. I managed to climb out and looked around hoping nobody saw it, only to discover later that it had been recorded on CCTV...

Were you friends with Jeremy Clarkson at school [they both attended Repton School in Derbyshire]? And is it true that you were both expelled?

Jozef Ostrowski, UK

The honest truth is that Jeremy was in the year below me, and at school you tend only to remember those in the year above you rather than in the year below. Added to my poor memory, I can't remember him, but apparently Jeremy remembers me from Repton. I think he was expelled, and I was asked to leave three weeks before the end of school and asked not to return – I'm not sure if that counts as being expelled or not. I'd tampered with the volume at a Greenslade concert...

Can you describe your whole career in one sentence?

Lauren Fuller, UK

Can't believe it happened to me, I suppose?

Do you shave your head to provide extra brain cooling?

Nick Robinson, UK

[Laughs] Is that the BBC political correspondent? I can't think of a witty answer to that question, I'm afraid.

If you had the choice, in which period of Formula 1 would you have liked to be designing cars?

Albert Legutko, Poland


I'm very happy to have been born in the year I was and to have been involved in the era of cars I was. But what has marked that era more than anything has been the huge budgets available to Formula 1 teams, coupled with the advances in research and simulation capacity they now have. What that means is that we have big windtunnel and CFD resources that allow us to understand the cars to a high level of detail. That's great and it enables you to have a good feel for what you're designing and you hope for a good correlation between what you believe the car will do and what it achieves.

The downside is that the regulations have become restrictive, so creativity is inhibited. If you go back to the previous generation and the 1970s in particular, then you see the realisation among the designers that aerodynamics and downforce are very important. It was a very open rulebook, but at the same time there was very little resource to understand what they were designing. As a result of that, you see the huge variety of shapes in 1970s racing cars where they looked very different to each other. But you also saw designs that disappeared after only a few races as a concept didn't turn out to be a good one. So I guess to be involved at that time it would have been fascinating to have that freedom – but it also must have been so frustrating when you thought you'd come out with a good idea and it didn't work and you didn't understand why.

Which car inspired you to choose your profession as a designer?

Marcel Correa, Spain

There wasn't a single car. My dad was a vet, but he was also a car enthusiast and model engineer. He'd tinker around on his own cars, Lotus Elans and Mini Coopers. That rubbed off on me and coupled with my interest in motorsport it resulted in my desire to be a racing-car designer, which I had from the age of ten. →



The Newey-designed active-suspension Williams FW14B, which took Nigel Mansell to championship glory in 1992

What banned technology (ie ground effect or active suspension) would you most like to see return to the sport?

Casper de Kort, Netherlands

Ground effect is still legal. It's a physical thing – you can't ban it – but it goes back to the earlier question where a much simpler rulebook would give the designers more freedom. It has been much debated whether active suspension should be re-allowed or not. I'm not sure about it, but I think there should be more freedom. For me, F1 is a mixture of driver, chassis and engine, and where we are at the moment the chassis is overly restricted and the engine has been allowed to become the dominant factor.

Newey inspects Mark Webber's Red Bull RB9 prior to the 2013 Indian Grand Prix



YOU ASK THE QUESTIONS

FIR: That conjures up images of you doodling in your books instead of listening to the teacher...

AN: Constantly. French was the worst. I came away from those lessons with a lot of drawings of racing cars, but an unclassified mark in French.

Is F1 doing enough to encourage the next generation of designers and engineers?

Stephen Higgins, UK

One of the main problems is that the apprenticeship that we used to be able to serve in the junior formulae with the production car companies such as March, Lola and Reynard has largely disappeared from this country. Dallara have cornered a lot of the market in the one-make formula, and while there is nothing wrong with jumping straight from university into a Formula 1 team. They have big design teams and it's difficult for us to provide a broad experience, which means you tend to specialise very quickly. That's how we operate. It would be great to have regulations in the lower levels that broke away from one-make series and encouraged competition, but it has to be done in a way that controls cost. →

Newey's first Formula 1 design was the March 881 of 1988, a normally aspirated car that acquitted itself well in a turbo-dominated era



In your opinion, which of the F1 cars that you designed was the best?

Agne Lazauskaite, UK

The car that I'm most fond of was my first, the March 881. It was a normally aspirated car competing against the turbos of the time. The turbo cars had become quite clumsy in that they generated huge power, but the aerodynamics were pretty basic – essentially it was a case of bolting on ever bigger rear wings to compensate for the powerful engines. With the normally aspirated car we couldn't do that. So we set out to design it as an aerodynamic vehicle and the aim was to get the highest efficiency possible and

then package the mechanical components around it. In the process we came up with a car that changed the shape of F1. If you look at the cars that came out of the following seasons they copied that principle: ours was the first car to have a raised chassis and to treat the nose as an integral piece. It had sculpted front-wing endplates and an elaborate diffuser, so aerodynamically it was a lot more efficient. As is famously known, we got the mechanical package a bit too tight – especially for the drivers.



PHOTO: LAT ARCHIVE



**FAN
VILLAGE
2015**

IN PARTNERSHIP WITH
WHITTLEBURY PARK
FEATURING THE
**ABU DHABI
FANZONE**



The F1 Racing Fan Village returns

If you're going to see the 2015 British Grand Prix and need somewhere to stay, our Fan Village is the perfect place!

Where will you be staying?

The F1 Racing Fan Village is adjacent to the Silverstone circuit and is an easy ten-minute drive from the M1

Plenty of space

Book now to reserve your spacious 7x6m plot on a campsite with excellent facilities. Or, for a more luxurious experience, book one of our en-suite bedrooms

Affordable prices

Prices for the whole British GP week start from just £165 per plot.

Free wi-fi on site

Stay connected with the latest news, or watch the highlights on your mobile device, with our free wi-fi service, provided by title sponsors Yas Marina Circuit

F1 Racing Quiz Night

Take part in a special Formula 1 quiz, with questions supplied by the team from F1 Racing and great prizes to be won

Beer tent

The beer tent is the social centre of the Fan Village, and will feature live bands on both Friday and Saturday evenings

Big Screen

The big screen will keep you in touch with everything that's going on, including news updates and your thoughts on the Twitterwall

Competitions

There will be chances to win great prizes throughout your stay, including race tickets, watches and champagne. One golden ticket winner will win flights, accommodation and tickets to the #AbuDhabiGP, courtesy of Yas Marina Circuit

Freebies and goodies

Goody bags and free stuff available for every camper.

Keep up to date

For the latest news, check us out on Facebook or follow us on Twitter @F1R_FanVillage

Share your
memories with us
on our Facebook
page or on Twitter



Check out our video by scanning
the QR Code with your phone ▶

www.f1racingfanvillage.com





because I hadn't done A-level maths. I'm okay at maths, but I certainly wouldn't say it's my forté. Engineering is not necessarily maths – it's more about applying physical laws. You often see people come up with ideas that don't obey actual physical laws. Simple laws like Newton's Law even. Coming up with new ideas is, for me, definitely all about art and creativity, but my ideas must respect those physical laws. You have to have the honesty to stand back and critique your own works and see if it's worth pursuing, or whether it seems like a good idea but actually doesn't make the car go faster. It is discipline in objectivity which is one of the key things to being a good engineer.

How close were you to actually joining Ferrari?

Adam Morilla, UK

I think I'll leave that one.

Have you ever made modifications to your own road cars? If so, what was the first modification you made?

Dave Moon, UK

Yes I have done a bit. It happens less so now because I just don't have the time to do it. The very first modification I made was to my dad's Lotus Elan Sprint. I was about 12 when he bought it, and in those days every Lotus came with a kit – I think it was a way of avoiding car tax at the time. And theoretically you could build up a car over a weekend. Well, it took my father and I about two months to do it. But because we were doing it together, it was great fun. He then set about modifying it and he put a ZF gearbox in it. He wanted some Minilite wheels that didn't clear the wheel arches, so I built some new wheel arches for it with a bit of fibreglass. And then I made some bits to tune the engine. All of this inspired my desire to become involved in motor racing. 🏁

Why is it that speed under sail excites you as much as designing a successful Formula 1 car?

Clive Hill-Archer, UK

That must be a reference to our involvement with Ben Ainslie's America's Cup project. To me, what I've found really tremendous about my career in motor racing is the immediacy of combining man and machine and sport, hence the development is very fast and you live or die depending on how well your vehicle goes.

If you look beyond motor racing in its broadest sense, where else can you find that combination of big budget engineering and sport? Sailing, and in particular the America's Cup, is the only one I can think of. Sailing is a fascinating challenge

and one that has huge parallels with motor racing. The aerodynamics are very similar: lightweight structure, control, simulation, how you integrate the sportsmen with the engineering team, then operate the strategy during a race – it's all the same basics, but applied very differently. So trying to take those lessons and assist Ben is very interesting.

How much of what you do is pure maths, and how much is art and creativity?

Ed Stone, UK

This is actually quite an interesting question. Personally, I've never been a pure mathematician. I was good at maths up until the age of 16, and then I struggled at university,

JOIN OUR FAN COMMUNITY

Want to put a question to a big name in Formula 1? Visit www.f1racing.co.uk and join our Global Fan Community, where you'll get to do just that. We'll let you know which interviews are coming up.



Scan this code with your smart phone and you'll be taken straight to our reader panel page

AUTOSPORT **GRAND PRIX PREDICTOR**

**NEW
LOOK
FOR
2015**

ARE YOU ON THE GRID YET?

**REGISTER TODAY AND PICK
YOUR TOP 10 FINISHERS FOR THE
2015 FORMULA ONE™ SEASON**



- **Win A PlayStation 4 Drive Club Bundle!**
- Compete against your mates in private mini-leagues!
- It's free and easy to play for great prizes every race!

**PLAY NOW AT
GPPREDICTOR.COM**



THE GPDA

UNMASKED!

Recently appointed chairman of the Grand Prix Drivers' Association, **Alex Wurz** has big plans for this traditionally secretive body

WORDS ANTHONY ROWLINSON PORTRAITS THOMAS BUTLER

“We just want to make sure F1 is safe, it’s cool, it’s what it was originally intended to be – a sport – and that we are here for the fans”

We’ve all heard of Alex Wurz, right? A podium-scoring F1 racer who burst on to the scene in 1997, but whose grand prix career never fulfilled the promise and potential of that evident, early speed. A long-term valued member of the McLaren test team, latterly a sportscar racer with Toyota, still pursuing, now aged 41, the elusive goal of a third Le Mans win.

But there are a few things that might not be so apparent about Herr Wurz – for example, his multi-layered inter-connectedness within the F1 paddock, be that as a commentator for Austrian broadcaster ORF, an adviser to the Williams team, or a chum-since-teens of Mercedes team boss Toto Wolff.

Friends refer to him affectionately as ‘Ten-jobs’ on account of the number of professional plates he spins. And it’s precisely this degree of polymorphous paddock engagement that prompted Seb Vettel (a director of the Grand Prix Drivers Association along with Jenson Button) to hit the ‘Wurz’ speed-dial button last summer, when Pedro De La Rosa stepped down as GPDA chairman. Few F1 doors, you see, are closed to Alex. A series of meetings followed, resulting in agreement that Wurz was the right man, at the right time, to bring the GPDA out of its cocoon and act more pro-actively on behalf of its members.

Like many before and doubtless many to come, Wurz had been impressed, then won over, by Vettel’s intelligence and firm convictions and found himself taking on a role he hadn’t previously coveted: “Yeah, Seb’s positivity, views and vision kind of convinced me to say ‘Okay, let’s give it a shot.’ I made a full presentation to the drivers about where the GPDA should position itself, how to serve their best interests and so on, and 100 per cent of them said ‘yes’. I was a little wary, because my schedule is already pretty full, but in the end I couldn’t say no because it was Seb and the drivers who convinced me. And I feel a responsibility for an organisation like this.”

Fundamental to the GPDA’s nature is its existence as a drivers’ organisation, free of pressure or interference from teams, the governing body, or the many commercial

organisations that operate around F1. And this, reckons Wurz, positions the GPDA uniquely, and powerfully, at the heart of the sport.

“The reason it will always be strong,” he says, “is that the drivers’ intentions are the purest intentions. We all start because we love the sport; we want to compete, we want to live on the edge of the laws of physics. No one goes in thinking he wants to be a millionaire or that he wants to have global media power. So the GPDA could be and should be a body that represents the views of these guys, who all do it with the pure emotion of just wanting to race. It’s why fans watch, after all.”

They watch, too, because in a sanitised age, motor racing remains a somewhat perilous activity, in which drivers still risk their lives.

Those dangers, though greatly lessened since the GPDA’s inception in 1961, were thrown centre stage at last year’s Japanese GP, during which race Jules Bianchi was gravely injured in the ever-more-gloomy closing stages.

The weekend was Wurz’s first in his new role, and after fielding the initial media onslaught in as calm a manner as possible, he was immediately drawn into the FIA-led accident investigation. “I took it as my part to look on the drivers’ end,” he says, “checking all the data from each and every one – tyre and brake temperatures in the laps before the accident and so on. Everyone was very helpful and one thing that became clear was that Jules was incredibly unlucky in so many ways.”

Also clear, in those most unfortunate circumstances, was the need for a body acting solely on behalf of grand prix drivers and in their collective interest.

“What sort of an image do we present,” asks Wurz, “if a bunch of guys who are not ‘on the breadline’ shall we say, and who are able to do their hobby for their living, cannot manage to be united and show they are going in one direction? We are not after a part of the cake financially, we just want to make sure F1 is safe, it’s cool, it’s what it was originally intended to be – a sport – and that we are here for the fans. Formula 1 is watched by so many people and we are heroes to people, so it’s pretty sad if we cannot be united.”

To this end, Wurz and one or two influential allies have devised a new hallmark and hashtag to flag GPDA activities: #RacingUnited. Don’t be surprised to see this banner coming to a Twitter timeline near you soon.

In order to be effective, Wurz reckons, the GPDA must promote itself with a modern multi-media strategy and step out from the silent shadows it has habitually occupied. “It’s part of our new society. You have to be known and visible for two reasons: first of all to represent what you stand for and also so that your own members believe in what you do.”

And if one or two F1 drivers can’t be won over by the appeal of GPDA membership? “Well,” Wurz reflects, “I’m 82kg and tall – so maybe I’ll just sit on them till they join.”

GPDAFACTFILE

1961 GPDA founded in May. Stirling Moss elected as first chairman

1963-1982 Moss retires and Jo Bonnier, Jackie Stewart, Jody Scheckter and Didier Pironi succeed him. GPDA is behind boycott of Spa in 1969

1982 GPDA disbanded, partly due to GPDA-organised strike at the South African GP

1994 Drivers propose reforming GPDA on morning of San Marino GP. Ayrton Senna is appointed a director hours before his death

1994 GPDA is re-established in December. Michael Schumacher is appointed chairman

1996 Incorporated in UK as limited company. Membership of the GPDA is not compulsory

2005-2014 David Coulthard, Ralf Schumacher, Pedro de la Rosa (twice), Nick Heidfeld and Rubens Barrichello all take turns as chair

2014 Wurz is appointed chairman in late 2014

THREE POINTED STAR

Beaten to the world title by Lewis Hamilton in the final race of last year, **Nico Rosberg** has spent the winter analysing how to steal the 2015 title away from his Mercedes team-mate. In this revealing interview, we tap into three main areas of the German racer's psyche...

WORDS JAMES ROBERTS
PORTRAITS GLENN DUNBAR/LAT





BlackBerry

BS

TRONAS



Thomas Sabo

BOSS
HUGO BOSS





Point 1

THE RACER

As the desert dust settled following last November's Abu Dhabi season finale, Nico Rosberg was gracious in defeat. Despite the anguish in his eyes, he found the strength to publicly congratulate Lewis on his world title win and vowed to come back stronger in 2015.

The quest for the crown took its toll on Nico over the course of 2014. It was a new experience for him to compete at such an intense level, and as the season neared its end, mistakes crept in. Think of the engine-management error on the Austin back straight; the brake-locking at Sochi; or the infamous coming-together with Lewis at Spa – still a sore point for discussion.

Speed isn't a problem for the son of 1982 world champion Keke, born with a natural feel for velocity *in extremis*. His excellent 12-7

everything working in unison, he can build on his pace to mount a challenge for the world title and dethrone his team-mate second time round.

We caught up with Nico at the first test of 2015 in Jerez. He'd just driven 157 laps in the new Mercedes F1 W06 Hybrid – one of the most impressive first days of testing a new car has ever enjoyed. But even Nico concedes he was a bit rusty during his first day back in the cockpit in over two months. That said, how much does he think about the actual process of driving?

"It's a very 'global' approach that I have to my racing," he says. "It's all the different aspects that come together, be that positioning within the team or getting to work well with everybody and having their support and improving as a driver. There are so many things that come together."

"I'm not only improving Sundays, I'm improving everything. It's details. Tiny, tiny details" Nico Rosberg

qualifying record against Lewis in 2014 clearly proved that – but it's every other aspect of his game that Rosberg has vowed to improve. His fitness regimen, understanding the car, solving problems with his engineers, working in harmony with the team and ensuring his relationships, at home, with the media, with his mechanics, are all optimised for his benefit. With

Beyond his driving, Rosberg is probably reflecting on the continued stability in his life, such as his recent marriage to long-term partner Vivian, or the fact he is entering his fifth consecutive season with Mercedes. Plus, in his nine years in the sport, in all but one of them he has worked with the same engineer, Tony Ross – a relationship that began at Williams in 2006.

A week prior to this interview, *F1 Racing* had spoken to Lewis Hamilton in Brackley and one of the questions we asked him regarded his qualifying deficit to his team-mate. It was an area that irked Lewis, and he was only too aware of the blemish on an otherwise excellent season.

"I'm sure it *does* annoy him," remarks Rosberg. "Because he is someone who wants to be the best at everything. It must be a thorn in his eye – is that the English saying?"

Nico, now, could be forgiven for thinking about last year's Monaco GP when Lewis was forced to slow his pace during the race after he had something stuck in his left eye.

"A thorn in his side," he corrects himself. "Qualifying is his discipline, it's always been his speciality. It was great to beat him and it's an important building block for my season this year.



Because it is a big step towards *globally* beating Lewis. Having the qualifying advantage means I'll start ahead more often than not. So it's a very important aspect and it gives me a lot of hope."

There it is again, Nico's use of the phrase 'globally'. It's clear it's not just his driving he's planning to improve in 2015. So what about the thorny issue of improving his performances on Sundays? Just as Lewis was annoyed when questioned about Saturdays, so Rosberg frowns when quizzed on this area...

"I'm not only improving Sundays, I'm improving *everything* – Saturdays and everything else," he says curtly. "It's details. It's tiny, tiny details and I want to find a little bit more and I need to, to beat Lewis. He's one of the best, so I need to find that little bit more..."



PHOTOS: GLENN DUNBAR/LAT; STEVE ETHERINGTON/LAT



Point 2

THE THINKER

It's clear that Nico has been studying every area of performance outside of the cockpit. This is known as the 'marginal gains' theory, used successfully in the past by England rugby team coach Sir Clive Woodward and pro-cycling coach and manager Dave Brailsford. The idea is that you break down every single aspect of your performance and if you improve on each one by, say, one per cent, when added together you gain a significant chunk of performance. It helps that Nico's a bright bloke. He was all set to study aeronautical engineering at Imperial College London, until racing got in the way.

"Every day of my life evolves around the sport. Even when I have a day off at Christmas or something like that, at the back of my mind I'm thinking: 'How can I make most use of this day off to recover, so that when I come to 1 January I can flat-out kickstart my training regimen?' So it really is intense because I want to give it my best shot. It sounds quite extreme but that's the way it is. Even a day-off counts in the overall picture.

"I think about the best training regimens to improve my driving. A few years ago I'd do a triathlon thinking that the fitter I got in triathlons the better I would be, but it doesn't

work like that. Triathlon training tired me out – there were races where I wasn't at 100 per cent because of it. So it's all experience. It's difficult because we can't practice driving an F1 car and that's different to other sports. A tennis player can practice playing and we can't do that, so we need to optimise my training to be as adequate as possible for my performance in a race car."

It's clearly something to which he's given great thought. Given that drivers such as Jenson Button promote their triathlon achievements, it's a surprising admission that Nico doesn't find them helpful. So how *does* he train? →

“Have you seen my torture machine? If not have a look at it, Georg have you got the torture machine on your mobile?”

He turns to his obliging PR Georg Nolte, who digs out his mobile phone from his jacket pocket and plays a video of Nico wearing a helmet in a technogym-type machine, connected to various weights to try to build up his neck muscles. It's a bit like a rowing machine with a racing seat and steering wheel – search 'Rosberg Folterkammer' on YouTube and watch it for yourself.

If you need another example of the level of strategic detail that Rosberg uses to optimise his performances, look no further than something as simple as breathing. He'd noticed that in high-speed corners he was holding his breath as he braced against the G-forces. Over the winter he integrated into his training regime the ability to correct this deficiency. In such a physical environment, nothing should restrict the flow of oxygen to the muscles and the brain.

“It's something I'm interested in, I read about it and it's something I do spend time on. I criticise myself quite a lot in that sense because I want to become a better person and optimise my actions and things like that. For example, Spa last year, I didn't get it right. What I did...”

At this point, Nico struggles to find the words and his voice begins to break up. Spa. Colliding with Lewis on the second lap of the race. The fury of the team. Clearly it's still a traumatic memory.

“So all these things. Spa. That's something I'll rework and think about and try to improve.”



Point 3

THE GLOBAL VIEW

Nico's dad, Keke Rosberg, was known as the 'Flying Finn' but for German born, Monaco-raised Nico Rosberg, he can't be so easily stereotyped. He's multi-lingual, cosmopolitan and cultured, and it's easier to think of him in a global context. 'Global', as you will by now have noticed, being one of his most used adjectives.

Although we don't discuss it, as no driver would want to discuss subjects such as Syria and Ukraine on the record, you know that he would have a view and appreciates the place Formula 1 has in the wider world.

“I try to think that, yes. Well, actually. I would love to have that approach, but unfortunately no,

it still has too great an importance for me. I want to have success here. I live in the moment and F1 is a big, important thing in my life. So the truth is that it's a sport that isn't really important for anyone's life, but I'm not in that place yet...”

But as he dwells on what he's just said, he begins to contradict himself.

“What I'd like to add, is that naturally I realise F1 isn't the most important thing in life. After losing the title in Abu Dhabi at the end of last year, two days later I was back to my usual well-being in life. That's where you see that winning or losing in sport doesn't have an impact on the global well-being of life. That was very good in

that instance.” He laughs: “It could have been a painful winter otherwise!”

Just one day earlier, Nico's charismatic boss Toto Wolff, the head of Mercedes-Benz Motorsport, added how impressed he'd been by Nico's resilience in the face of losing the world championship, and how he doesn't expect this experience will derail him this season.

“The way Nico recovered and the speed of his mental recovery was pretty amazing; he was over losing the championship in a couple of days,” confirms Toto, speaking through gritted teeth thanks to the pain of a broken kneecap, caused by falling off an exercise ball.



“I missed the match yesterday. Wow, nicely played. Pity, eh? As he [Murray] broke down in the end yesterday.”

It’s a little insight into one competitive sportsman watching another compete at the highest level. One who is always looking for that weakness in others and to improve himself.

But forget about all of that for a moment. What we want to know is whether we’ll get the ding-dong title battle we saw last year – and if, this time, Rosberg is going to emerge on top?

“This year I want to enjoy my racing because I’m very fortunate to be a part of this awesome team. The unique thing about this job is that



“Nico was over losing the championship in a couple of days. Mental strength is something you need to perform” *Toto Wolff*

“Mental strength is something you need in order to perform,” he continues. “He has the ability to stay calm and continue to analyse where he needs to improve. That is eventually going to get you to a point where you are successful. What I see in him is that he is doing exactly that. He’s not diving into a black hole, he’s not exuberant either. He’s stable and I think that is necessary if you want to be successful.”

Stability. Control. Strength. These are all qualities that radiate from Nico Rosberg the sportsman, the husband and the soon-to-be father. As we talk, he’s distracted by a news item showing highlights from the Australian Open tennis final. Novak Djokovic faces a tough early challenge from Andy Murray, before turning the game around to emphatically beat the Scot. Rosberg pauses to watch the winning point.

As the allotted interview time draws to an end we talk a little about life outside racing, the brief time Nico spent in London and the property he owns there. And did you know one of his favourite restaurants is a Japanese establishment in Monaco? Or that he and his new wife would one day both love to live in New York City?


Vivian and Nico also own their own business in Ibiza old town. A couple of years ago they established ‘Vivi’s Creamery’, a high-end ice cream parlour that has won rave reviews. A recent new recipe is orange blossom and the company has a fairly impressive annual turnover, employing a dozen people. A multi-lingual, German-born Monegasque with a Finnish father, who enjoys Japanese food and has built himself a ‘torture machine’ has an ice cream business – Nico Rosberg is not your average F1 driver.

we are so dependent on our car. For tennis players it comes down to their own form on their day – while for us it comes down to the car. I appreciate that.

“I’m here to win, that’s what I want to do. And now I have that opportunity, now I know what it feels like for Vettel to have the most awesome car for four years in a row on the road. Now we have that. I don’t know exactly how the year will pan out, but I’m aware of my good fortune....”

So will we get a repeat of the 2014 intra-team dog-fight? Toto Wolff suspects it will be equally close again. “How it’s going to go, we don’t know,” he says. “It was very intense and very close between the two last year so I don’t expect it to be somewhat different this year.”

That’ll be a yes then.

Bring it on. 



CHOPARD

DMG MORI

PORSCHE
MOTORSPORT

Mobil 1

MICHELIN

WEC
FIA WORLD ENDURANCE
CHAMPIONSHIP

WEC
FIA WORLD ENDURANCE
CHAMPIONSHIP

vodafone

DMG MORI

★  Nico

DMG MORI

DMG MORI



WEC

NICO'S NEXT BIG

OPPORTUNITY

Perennially underrated **Nico Hülkenberg** is still trapped in F1's midfield; he hopes to escape with Force India this year but, if not, a sportscar project could open new doors...

WORDS STUART CODLING

PICTURES PORSCHE



'F1's most underrated driver.' As epithets go, clearly the opposite would be much worse – but that knowledge must give little satisfaction to Nico Hülkenberg. Jobseekers the world over live by the maxim “as one door closes another one opens”, but rarely has Nico been standing by the correct entrance as the gate opened: time and again he's been caught in the wrong team at the wrong time, although he'll be pleased to have left Sauber ahead of last season's point-free farrago.

So could adding a little sportscar sideline pay off for Nico this year? Speaking to *F1 Racing* in Mexico at the launch of Force India's 2015 livery, he's as bullish as can be expected.

“Ever since I arrived at Force India, I felt comfortable with the people there,” he says. “It really has become my family and I'm happy and proud to be part of this whole process.”

“A lot of encouraging things are happening. We have use of the Toyota windtunnel, and we have new personnel on the aero and engineering side, which should make a difference. The team is in the best position; the infrastructure has grown, we've built a solid foundation over the past few years, and now it is our job to grab the opportunity and make the most of it. If we do the right things then it should be a very good year.”

You might dismiss this as the usual pre-season cant if so much of it didn't ring true. The team have doubled the processing capabilities of their Computational Fluid Dynamics (CFD) cluster from 15 to 30 teraflops, and their shift to using Toyota's windtunnel, while very necessary (they admitted last year that their late-season slump was partly caused by concepts that looked good in the tunnel failing to deliver on track), shows money is being spent in the right places.

They now have a seat on Formula 1's powerful Strategy Group, as a result of finishing sixth in the 2014 constructors' championship – and there'll be a delicious irony in watching deputy team principal Bob Fernley take his seat in a body he has regularly declaimed “illegal”. Whisper it, but that finishing position could have been fifth had it not been for the technical team's aerodynamic development imbroglio.

“Last year I said that at one point I wanted to crack the 100-point mark,” says Nico. “I missed that by just two points, so it would be really nice to break it in 2015.”

“I want a year where my performances are really consistent, I make no mistakes and then I can tell myself that every weekend I have got the most out of myself and the car. That's pretty much all you can do in Formula 1. Because you are so dependent on everyone else, as it's a team sport, you can only influence so much – if you know what I mean.”

So how much should we read into Nico's decision to race for the works Porsche team in this year's 24 Hours of Le Mans? This is a move almost unthinkable in the modern F1 era, not least because Bernie Ecclestone tends to place a grand prix on the same weekend to keep the legendary endurance out of the limelight. The World Endurance Championship enjoys manufacturer involvement from the likes of Porsche, Audi and Toyota and offers drivers a chance to earn a salary rather than having to scrape sponsorship together to pay their way in F1.

“Vijay [Mallya, Force India team principal] said ‘Yes, cool, I like it,’” says Nico of the moment he sought permission to dabble in the dark arts of the closed-cockpit. “The only condition is that he wants a pass to come and support me...”

“I've tested the Porsche over the winter [at Motorland Aragón], and that was quite positive. It is different to F1. The car is closed cockpit, it's quite tight, with even less room than an F1 car. It's also four-wheel drive and you have traction control on both axles – and that's quite a new sensation for me. In F1 we have the rear axle massively over-powered and you have to modulate it all yourself with your right foot.”

Lack of finance has already driven one constructor off the grid in recent months. As the remaining teams shore up their budgets by demanding drivers bring in money, who could blame the midfield's more talented hands for seeking a paid berth in a decently competitive championship? If so, F1's most underrated driver could become sportscar racing's hottest property – and that would be a great loss. 📌

“F1 was an itch that hadn't been scratched, so I took a risk. I was naive, but not as naive as Toyota. We were told: ‘We want to finish sixth in the constructors' championship.’ That was just impossible”

Allan McNish enjoyed huge success in sportscars and endurance racing, but his foray into F1 proved rather more fraught, as he tells Maurice Hamilton

PORTRAITS MALCOLM GRIFFITHS/LAT

We have a Border Terrier at home, described by canine experts as a big dog inside a little dog. Allan McNish reminds me of the breed, not just because he was born in southern Scotland, not far from the border region that gives the feisty terrier its name, but also because he is a bright-eyed, fearless little guy with a distinctive bustling walk and a willingness to tackle anything. McNish's CV leaves you in no doubt about that.

In a motorsport career spanning 33 years, he has won in just about every category you can think of. The only exception is Formula 1, but that difficult year with Toyota in 2002 is dwarfed by three wins at Le Mans and countless podiums in the endurance racing classics. In between, he was test driver for Benetton and McLaren-Honda in the days when this was a highly responsible, full-time nine-to-five job.

He will forever be associated with Audi sports prototypes when laying justifiable claim to being one of the most successful sportscar drivers of all time. Now retired from motor racing, McNish is an ambassador for the German marque, flitting from his home and family in Monaco to Audi



functions around the world and attending grands prix in his capacity as a summariser for BBC Radio 5 Live.

I caught up with him at the Autosport International show as he did his usual round of interviews and appearances. It was immediately noticeable that he seemed to know everyone, from every class of racing. A lunch without interruption being out of the question, we repaired to The Orange Tree in Solihull for a lengthy and very enjoyable dinner.

Maurice Hamilton: You're no longer racing but observing from the sidelines, so do you have a different take on everything now?

Allan McNish: I noticed that as soon as I started working with Audi on the ambassadorial side of things. When I was racing, I looked at things through very selfish eyes. I wanted to win; I thought only about my car and nothing else. Then you step back and see everything from a global point of view and how that interacts with the other cars in the team. When you're racing, you're so intensely into it that everything else doesn't really happen. Suddenly, you stand back and see a much bigger picture – and that definitely applies for obvious reasons when I'm working on the race commentaries with James Allen. I really enjoy that, but the way I look at what I'm doing from a media point of view is that it's like an apprenticeship. I know the subject matter pretty well, having lived it for most of my life. But now I'm learning how to exploit it.

As a former driver, it also suits me because broadcasting has a competitive nature about it, insofar as I still want to improve, I still want to be better. I realise that I've got a lot to learn but I'm enjoying the process and the technical aspects. I also like the fact that it's still the same group of people in the same industry that I've lived with for such a long period of time. →



I feel I'm in a privileged position where I'm allowed to talk about it. Anyway, if I wasn't, I'd be talking about it at home!

MH: Exactly. Somebody's paying you to talk about something you love. You used to help us out from time to time on 5 Live and I remember telling the guys: "When Allan retires, he's got to do radio!" You've been blessed with a fantastically resonant voice – and the accent helps, too. I don't suppose you would ever have dreamt you'd be doing something like this when you were a kid in karting?

AM: Never in a million years.

MH: When you started karting, was there a moment when you realised 'this is for me'?

AM: When I first got in a kart, I wouldn't necessarily say I thought: 'Fantastic, this is it – this is brilliant.' But there were two defining moments. At the end of 1981, I was racing at Morecambe – it was only my third or fourth race. I was on pole for the first final. On the warm-up lap, you accelerate, brake, accelerate, brake, and the kid in third place misjudged, drove over my back and ripped off the plug lead. I didn't get to start the race and I was real pissed about that – but I didn't know why.

We went back to Morecambe at the beginning of the next year for the first race of the 1982 season – and I won. That first victory was really important because I wasn't fantastic at football or anything else. I'd wanted to be a football player like every other kid, but I was nowhere near good enough even to get in the school team. That karting trophy was pretty special because it was the first time I realised that I could do something.

You've got to remember I was just a tiny wee kid in south-west Scotland in a school that catered mainly for rugby and football – and tiny wee kids didn't really survive too well in that. But once I started to win, it bred a winning mentality and my confidence grew. And I was very fortunate because Frank Williams had been at the same school in previous years and his physics teacher was my maths teacher.

The school was very, very accommodating. As long as I did my homework I would get a little bit of leeway because I think they realised there were other careers beyond the academic. They realised that I was maybe quite good at something. Very quickly I was winning races and winning championships. That had a positive impact on me, without a shadow of a doubt.

MH: How were you when you were beaten?



"I was just a tiny wee kid... but once I started to win, it bred a winning mentality and my confidence grew"

AM: Oh, I was awful. I wouldn't like to have lived with me. That didn't change all through my racing career. But I don't think you can be successful without having that sheer disappointment when you lose. There have been moments when I've woken up in the middle of the night with my stomach twisting in knots because we haven't won something.

Probably the biggest disappointment of my whole career was the 1985 karting world championship at Le Mans. I was very small and light as a kid and I used to get a lot of tonsillitis, which meant that I couldn't go to the world championships the first time round. The following year I was on the front row and got jumped into the first corner, basically through a little bit of inexperience and naivety, by Michael Schumacher. That was my one chance of a world championship because in seniors there was a European and never a world championship

unless it was a different category. I finished third; my one chance had gone.

It took me six months to get over that. I was devastated. But the important thing was being able to understand it and channel it. There was no psychologist or anything else at that time. I had to work out how to switch myself on and off. I hadn't been very good at trying to keep all that emotion at peak point. There were things that just took my focus away from what I needed to do but, in the last 15 years of my career, I could turn it on and off as I needed to. It was about understanding the animal and controlling it.

MH: Talking about focus, this is maybe a good moment to mention the testing contracts in Formula 1 and the need to concentrate totally on what you're doing. We tend to forget that after moving through the junior formulae and helped by your growing connection with Marlboro, you took on a role as test driver for McLaren-Honda.



Ron Dennis presents McNish with the Autosport 'National Driver of the Year' award in 1989 (left); McNish testing the 1990 McLaren at Estoril (above)

That's quite some accolade because there was serious work to be done.

AM: Even though Ayrton Senna and Gerhard Berger were well-established, it was a fantastic opportunity to get behind the wheel of a good car. I signed the deal the week before the British Grand Prix in 1989. Securing it depended on two things: winning the F3 championship and a successful test in Estoril at the end of the year. I did both and that was it – signed, sealed and I went off to race in Macau.

Much of the testing was at the end of 1990 and through 1991 at Suzuka with the V12. There was also the semi-automatic gearbox and the active-ride programme as well. So I had suddenly gone from F3 to this: it was quite mind-blowing.

Suzuka was one of the hardest circuits to go to because the cars were still pretty quick. It was a massive jump. We would test all day for three days and then, on the final day, we would do one-and-a-half or two race distances. We'd get to the end of the day, catch the bullet train back to Tokyo – and I'd be asleep. Next morning, I'd take the flight back home. It was roughly about one test – or five days – per month, which was

In 1998, driving a Porsche, McNish took the first of his three victories at the 24 Hours of Le Mans

very good in one way but, looking back, it was detrimental to the F3000 programme because of the travelling and the split focus. There were times when I wondered if it was the right thing to do. Then again, if I hadn't have done it, I'd have kicked myself till kingdom come.

MH: When you started testing, did you suddenly feel that this was a serious job? No romance or the joy of driving – just bloody hard work? Honda would have worked your socks off...

AM: That first test at Estoril was when I realised it was not just about fun and having a nice time driving a race car. Ayrton was there and he was talking – I remember vividly – about the friction

of the engine. I was thinking: 'Friction? What's he on about?' My benchmark up until that point had been the people I was racing against in F3. I was usually beating them, so I felt I was doing okay. Suddenly, there was a world champion, who was a huge step ahead of me in so many areas. That's when I realised I had to put in a lot more effort than I was used to if I wanted to have a chance of being successful as a racing driver.

MH: Your career has embraced so much as a racing driver. You've had fantastic success in sportscars, particularly with Audi, and that must mean a great deal to you now. But, be honest Allan, what was your first thought when you →





McNish celebrates his 2013 Le Mans victory with Dr Wolfgang Ullrich, the head of Audi Motorsport

“I’ve got a massive amount of respect for Dr Wolfgang Ullrich. It’s his ability that kept Audi running and evolving”

went sportscar racing in 1997? You’d been a test driver for McLaren and Benetton by then.

AM: I thought it was for old people who were retiring. I thought: ‘I’m 27 and now I’m going to be retiring from racing!’

MH: I’ll bet that soon changed though when you won Le Mans in the Porsche in 1998. In fact, did you perceive any change in the way people thought about you?

AM: Immediately. The first thing was my telephone bill was huge because of the number of people phoning. I remember driving from Le Mans to Hockenheim for a test and never being off of the phone. Instantly, it opened up doors. I think it reminded people: ‘That kid can drive.’ And it alerted me to the fact that there’s a big world outside F1.

MH: And what about the entire experience that came later on with Audi? That must be a mighty impressive organisation.

AM: I could probably talk all night about that. In general terms, one of the things that impressed me the most was that when the financial crisis happened and there was a mass exodus from motorsport, Audi reduced, but kept everything in place. They were ready to rock and roll when things came back again. Other manufacturers just disappeared off the face of the earth. And of course I can’t talk about Audi without mentioning Dr Wolfgang Ullrich [the head of Audi motorsport]. I’ve got a massive amount of respect for him as a human being, for his capability and for what he’s done for me. It’s his ability that kept such a big company running and evolving. I would say that he’s got to be one of the most successful team bosses in the history of motorsport.

MH: How about being a driver in this environment? What impressed you and made you feel comfortable?

AM: Two points: Having the knowledge that I was going into each season with the chance of winning big races and a championship. And second, the feeling of security that came from seeing board members front up at the big races. They weren’t there to sip champagne; they were hands on, looking at the data, getting involved.

We had a diff failure on our car in the warm-up at Le Mans in 2006, the first year of the Audi R10 TDI diesel. Dr Martin Winterkorn and Ferdinand Piëch, the boss of the whole thing, were in the back of the truck with the head of gearbox and development, as well as myself and [team-mate] Tom Kristensen. You would think there would be panic because this part failed just as the pole-position car was getting ready for potentially the first ever diesel victory at Le Mans. There was a huge amount riding on it, but they were calmly asking what did we need to do to stop this happening – and then actioning it. I tell you, that was mighty impressive.

MH: Perhaps this is a good moment to go to the other extreme and reflect on your year with Toyota in Formula 1?

AM: Yeah, the exact opposite. It was frustrating – and too late in my career. I was 32 which, in reality, is ten years too late. Bear in mind, I was 19 when I was testing with McLaren but the momentum hadn’t carried me through. So, Toyota come along: I’m going to be the first driver to sign on the dotted line; the biggest car manufacturer in the world with pretty much an unlimited budget, a huge facility – and they were going for it.

If I look at it bluntly, I had already established myself in sportscars. I’d won Le Mans; I’d just won the American Le Mans Series with Audi. I felt that if F1 went wrong, I would have a pretty good chance of coming back because I was established. F1 was an itch that hadn’t been scratched, so I took a risk; I took a chance.

I was probably naïve, but I don’t think I was as naïve as Toyota were in terms of their expectations. Initially, it was all about them gaining respect or something, but then, after about four races, we were all taken to Cologne and told: “We want to finish sixth in the constructors’ championship.”

That was just impossible, because the car didn’t develop from the beginning to the end

of the year. We had a new floor that didn't work and we had a small engine upgrade. I have to say the engine was pretty good, but don't forget you could only score points down to sixth place back then. We managed a couple of sixth places in the first few grands prix because we were reliable. That's because we'd been out testing since November the year before with that car. So, when we got to Australia, we hadn't done just two weeks of testing like everybody else; we'd done four months until we were bulletproof, which was a clever idea.

But the pace of development when everybody else got into their stride was mind-blowing. There was a lot of change at Toyota. Ove Andersson, who was running the programme, got pushed to the side a little bit. He was still very involved, but he was having to work on the politics as opposed to the team aspect. The politics became a bit of an animal on its own.

It was frustrating for me to have a season without any points, but we had been in the points in Malaysia until there was confusion in a pitstop and they put Mika Salo's old tyres

on. We were fifth at Monza when the front suspension fell apart because they designed the wrong-sized hole for the bolt to come through the top wishbone. There were other occasions when points were going begging.

They decided that they wanted to have two new drivers on board for 2003, so Mika and I were on our way out. As soon as that happened, Flavio Briatore [then the team principal of Renault] was on the phone. I went to see him. A deal to be the Friday driver and test driver was done and dusted in 30 minutes.

My first test was in Barcelona. My first ever lap in the Renault was quicker than my qualifying lap in the Toyota. First lap! It was hard to take in and it put things in perspective. That's when I realised the gap between the 'wannabes' and the 'haves' was massive. You'd sit down with Pat Symonds and talk about tyre choices. Decision made. Next? Jarno Trulli and Fernando Alonso were the two race drivers. Everybody knew what they were doing and it was a huge difference. I had the feeling that I'd got something I could actually work with.

MH: Was part of the problem at Toyota having to go back to Tokyo for decisions to be approved instead of them thinking on their feet like a good team should?

AM: I wouldn't have been allowed to speak to you until I had written authorisation from Tokyo. Guys on the team were fighting very hard to try to bring a real-world approach to it. That aside, the car had its limitations and by the time we got to Australia, there wasn't really a lot else you could do. The car had no low-speed grip, no traction, not enough downforce.

MH: The memory I've got was from Suzuka that year when I was with BBC Radio 5 Live. We weren't covering qualifying live, we were just doing 30-second updates in the sports bulletins on the hour and half-hour. They'd come to us for a quick summary, I'd just started talking and... boom! Huge accident for Allan McNish. Massive. It didn't look good.

AM: It didn't feel good from where I was sitting!

MH: The clock was ticking, my 30 seconds were up and I looked across at our producer, Jason Swales, and he's mouthing: "Keep going! Keep →

Toyota gave McNish his first F1 race seat in 2002. The car didn't develop over the season and the team collected just two points





INSETS: STEVE ETHERINGTON/LAT. ARCHIVE

McNish crashed at high speed while trying to take 130R flat-out during qualifying for the 2002 Japanese GP at Suzuka. It would be his final race in Formula 1

going!” All I wanted to see was some movement because, to be honest, I thought the worst. By the time I could reassure listeners at home you were at least looking okay, the report had gone on for nearly three minutes. So I finish, hand back and the producer back in London says matter-of-factly: “That was a bit long, wasn’t it?” I mean, it had been a huge shunt! What was I supposed to say? “Oh, and Allan McNish has nearly killed himself. Now back to Jonathan Agnew and the cricket.” Had you been trying to take 130R flat?

AM: Yeah, I had. And it wasn’t.

MH: Had you ever taken it flat in the McLaren?

AM: It was no way near flat in those days. In the McLaren, you had to have a bit of a brake and a lift and float through. But, with the Toyota, this was the last run on qualies. I was seven-tenths up through the second split and I thought: ‘Well, I’ve got to give it a go.’ Everything was fine until I reached a wee compression, the floor stalled and the back end snapped. I caught it, which I shouldn’t have done because the car immediately

snapped the other way. If I’d left it going, I’d probably have gone to the inside. But it flicked and away I went. That was a big impact.

MH: Do you remember what happened once the car hit the barrier and went through it?

AM: I was consciously doing things but I can only remember a couple of little things. I remember the French cameraman, Jean Michel Tibi, telling me to breathe, because I was gasping for breath. Then I remember walking down through the hole in the barrier with Professor Sid Watkins and, like a little Post-it note in my head, saying to myself: ‘Christ, I must tell Charlie that’s a stupid place for them to put a hole in the barrier.’ I was oblivious to the fact that a steaming, smouldering wreck of a Toyota on the other side had caused it.

MH: Given your extensive career, you’ve been blessed with very few shunts. But the two at Le Mans were pretty startling.

AM: In 2004, I was coming up to the entry to the Porsche Curves and I just saw this puff of smoke.

It was the GT Porsche in front blowing its engine and oil. I was at the point of turn-in. I went straight off and JJ Lehto followed me. I hit my head on both sides.

MH: The one in 2011 looked horrifying.

AM: I didn’t see the other guy; he didn’t see me. It’s the law of averages given the number of cars you overtake during your career. There is also a bigger speed differential between prototypes and GT cars in the corners than before and that’s where you do more of your overtaking. I don’t think that, or the threat of an accident, had any influence on my decision to retire.

Allan Simonsen’s fatal accident, and then Sean Edwards’, had a bearing because that affected Kelly [Allan’s wife] as well. Both of them were living in Monaco and close to us; kids and things like that. It wasn’t a big factor, but it’s probably one of 15 small bits that would go with the three or four big bits.

MH: Being the realist that you are, and that’s become apparent from what you’ve been saying, I’m sure there must have been an element in your decision about wanting to do it on your terms and not because people start to say: “It’s about time Allan went.”

AM: Yes, you’re better to go a year early than a year late. Jackie Stewart was very, very good at getting in but he was even better at getting out. I didn’t know him from his racing career; I’m talking about his business deals when I raced →

“The back end snapped and I caught it. I shouldn’t have done because it snapped the other way... That was a big impact”

James Anderson

England's No.1 wicket taker of all time*

"Wellman® has helped my energy release, stamina and focus during long matches. Since using this supplement, I feel fantastic thanks to Vitabiotics!"



wellman®

advanced nutrition just for men

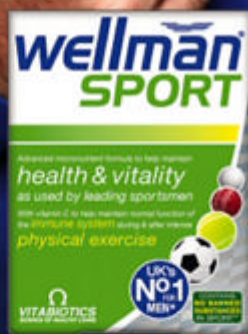
Wellman® is an advanced range of nutritional products, tailored to the specific requirements of men.

It has helped world renowned Test Bowler James Anderson so whether you are playing or not, why not see what it can do for you?

www.wellman.co.uk



Original



Sport



50+


VITABIOTICS
SCIENCE OF HEALTHY LIVING

 **QUEEN'S AWARD
INNOVATION**
IN VITAMIN RESEARCH


Britain's No.1[†]
supplements

From Boots, Superdrug, supermarkets, Holland & Barrett, pharmacies & health stores

*England's all time highest international wicket-taker, 380 test wickets correct at 16 Jan 2015.
Source: www.jamesanderson613.com ** UK's No1 men's supplement brand. IIRI value sales. 52 w/6 6th September 2014.

From selected
   



**ALSO
VITAMIN
DRINK**
Tasting is believing!



“I saw drivers who held on too long and were no longer seen as competitors. I didn’t want to end up in that position”

for his team and the way he worked those so well. There have been quite a few influential people in my career and Jackie is one of them from that point of view. Also, my parents had a very realistic way of saying things; sometimes they could be very blunt. I saw drivers who held on too long and were no longer seen as competitors in the way they had been. I didn’t want to end up in that position. What I *did* want to do was to win the World Endurance Championship. So when that opportunity came along in 2012, that was something I wanted to win. It was like a final tick of the box. [McNish succeeded in his aim by winning the FIA World Endurance championship for Audi Sport Team Joest alongside Tom Kristensen and Loïc Duval in 2013]

MH: Speaking of those who have influenced your career, I’m sure you’ve got good memories of your year with Mika Salo at Toyota. He’s quite a character, and he’s got his head screwed on.

AM: He has, even though he puts on the ‘I don’t care’ personality. He was actually a very, very fair team-mate because he could so easily have screwed me over. He had so much more experience than I had. We fell out at one or two races over track position but nothing too serious. I’ve got a lot of time for Mika, even if I now know to steer away from the Finnish vodka-drinking games. We did spend a lot of time together over the course of a pretty difficult year.

MH: Speaking of difficult years, there can be no doubt that 1990 was the worst for you because of

the accident during the F3000 race at Donington Park [McNish’s Lola was launched into a series of barrel rolls when another car moved across as he drew alongside. The Lola hit a wall and broke in two, the engine and transmission ended up in a group of spectators. One man was killed and three were injured. The front of the car, with the unconscious McNish inside, landed below the track at the entrance to a tunnel]. That must have been unimaginable. You were just 20.

AM: That was, without a shadow of a doubt, the darkest time of my life; my career. I had no experience of how to deal with it; I don’t think I understood the effect that it had in lots of ways. I wasn’t able to drive for a couple of months because of concussion but, in terms of how you deal with something like that at that age, I was lost. Jackie Stewart was very good then.


MH: Apart from being a caring individual, I’d assume that’s because he raced through an era when that sort of thing happened fairly regularly.

AM: Yes. Sid Watkins was also very good. I went to see him at his home in Coldstream the next day. It was a very ‘feet on the ground’ discussion and that helped. Ron Dennis, considering his reputation and his way of working, was very compassionate. As was Flavio, surprisingly.

That said, from a personal point of view it took me longer to get over it than I realised. I don’t think it affected my driving, but I think other people thought it did. And ultimately a lot of this game is about perception. The following year, I won races; I was fighting for the championship until two races from the end. But then, when I switched cars and had a bad season the following year, it was ‘because of the accident’. I heard that so many times. Which was stupid because, if that was true, I would have been affected the previous year. But that’s the way the world is and I wasn’t quite ready to deal with that part of it.

MH: What do you miss since stopping driving?

AM: I actually didn’t enjoy driving that much; I enjoyed winning. I enjoyed qualifying on pole position, pushing for that, being better than the next man. It wasn’t the driving that made me get up in the morning; it was everything else. It was the sheer competition side of it and I ran out of a little bit of energy to put that intensity into what I needed to do. That’s natural and there’s an age thing to it. More than 30 years is a long time trying to perform. In terms of missing it, I haven’t missed the driving. Besides, I’m too busy.

MH: Indeed! It’s been great to have this chance to grab some time. Many thanks, Allan. 



Ever thought about the morning after?

If you drank 4 pints between 9pm and midnight, you could still be over the limit until 11am the following day*. That's why almost 1 in 5 drink drive accidents happen the "morning after"***.

AlcoSense quickly and accurately shows your alcohol level, so you know when you're clear. Keep you and your loved ones safe this season, order yours today.

AlcoSense Single Use Only £2.99

- Single use, disposable breathalyser
- Works with all UK limits including the new Scottish limit
- Results in 2 minutes
- Blow bag for greater accuracy



AlcoSense Lite Only £39.99

- Reliable
- Intermediate level sensor for good accuracy, blow tubes for improved sample quality.
- Clear
- Results in seconds. Alerts you when close to or over the drink drive limit.

WHATCAR?
BEST BREATHALYSER UNDER £40



AlcoSense Elite Only £59.99

- Accurate
- Premium semi-conductor sensor for high accuracy, blow tubes improve sample quality.
- Consistent
- Blow Pressure Sensor and self cleaning increases accuracy and consistency.
- Clear & Future Proof
- Results in seconds. Alerts you when you when close to or over the limit. Recalibratable for many years of use.

WHATCAR?
BEST BREATHALYSER UNDER £100

Available nationwide at Halfords & in selected Boots Stores. Find your local outlet at alcosense.co.uk/dealer-location/



Order at www.alcosense.co.uk or call 0800 195 0088

** 17.1% of drink drive accidents are between hours of 5am and 1pm (Source: Dept. for Transport, Road Accidents and Safety Annual Report 2010)

* 4 Pints of Abbot Reserve contain 14.8 units of alcohol (Source: Greene King) and each unit takes 1 hour to leave the body (Source: NHS). Therefore 14.8 hours after 9pm the alcohol will have passed from the body.

GO FIGURE

Testing, testing... one, two three. We present the stats from the pre-season tests

759

The highest number of laps run by one driver
– Nico Rosberg – 110 more than Felipe Nasr



TWENTY-TWO




drivers took part in the three tests that made up pre-season testing


25,566.28

miles were completed by all drivers in all three tests – enough for 7,759 laps of Albert Park

357

days of testing have taken place at Barcelona from 1995-2015, compared to 316 days at Jerez

2015 

2014 

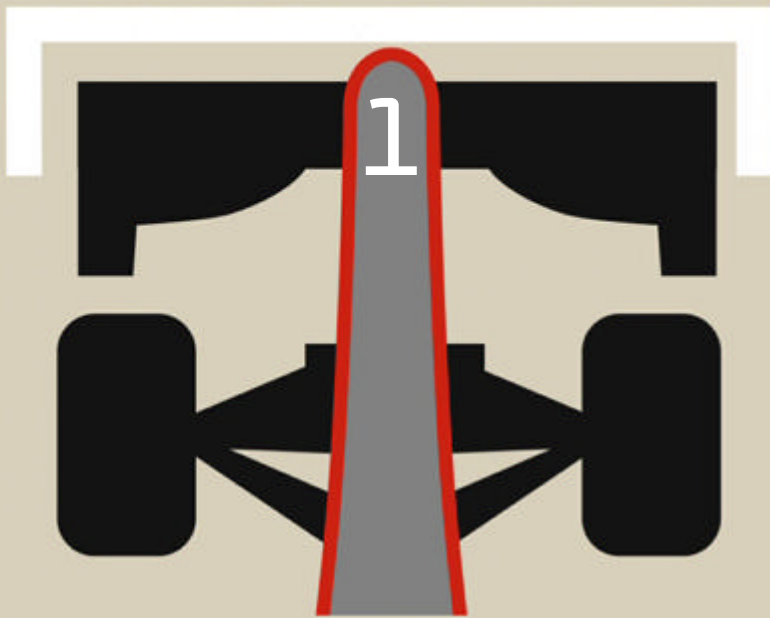
There was a 56% increase in laps run in the first test at Jerez in 2015 compared to 2014 (2,294 to 1,470), with two fewer teams

39

Kevin Magnussen's total laps run in pre-season testing



of pre-season testing this year. In 2005 Ferrari's Luca Badoer did 79 days on his own



TEN



different drivers recorded a quickest time of the day during testing: Sebastian Vettel (twice), Felipe Nasr, Kimi Räikkönen, Pastor Maldonado (twice), Daniel Ricciardo, Romain Grosjean, Felipe Massa, Nico Rosberg, Lewis Hamilton and Valtteri Bottas

Kevin Magnussen's fastest time in testing at Barcelona (1min 25.225secs) would have been good enough to set pole position at the 2014 Spanish GP



685 MILES



The distance by road from Jerez to Barcelona, which would take around 10 hours 6 minutes to drive

Barcelona
02:07.9 & **02:33.5** Jerez

The number of seconds quicker the fastest laps set at Barcelona and Jerez this year were compared to 2014




session-stopping red flags were needed: ten in Jerez and 16 and nine in the first and second Barcelona tests

36° NORTH

The latitude on which Jerez sits. It shares it with a former grand prix venue – Las Vegas



331 sets of medium tyres

sets of Pirelli tyres were used in pre-season testing. Medium was most popular, with 331 sets used 

ROOKIES



HEAD-TO-HEAD

Toro Rosso start the new season with fresh-faced and inexperienced **Max Verstappen** and **Carlos Sainz Jr.** At the final pre-season test, we spoke to their team to discover just how prepared the two young racers are for their debut F1 season

WORDS

JAMES ROBERTS

PICTURES

SCUDERIA TORO ROSSO

As a passing observer,

you might consider Toro Rosso's decision to thrust two inexperienced drivers into Formula 1 to be a bold,

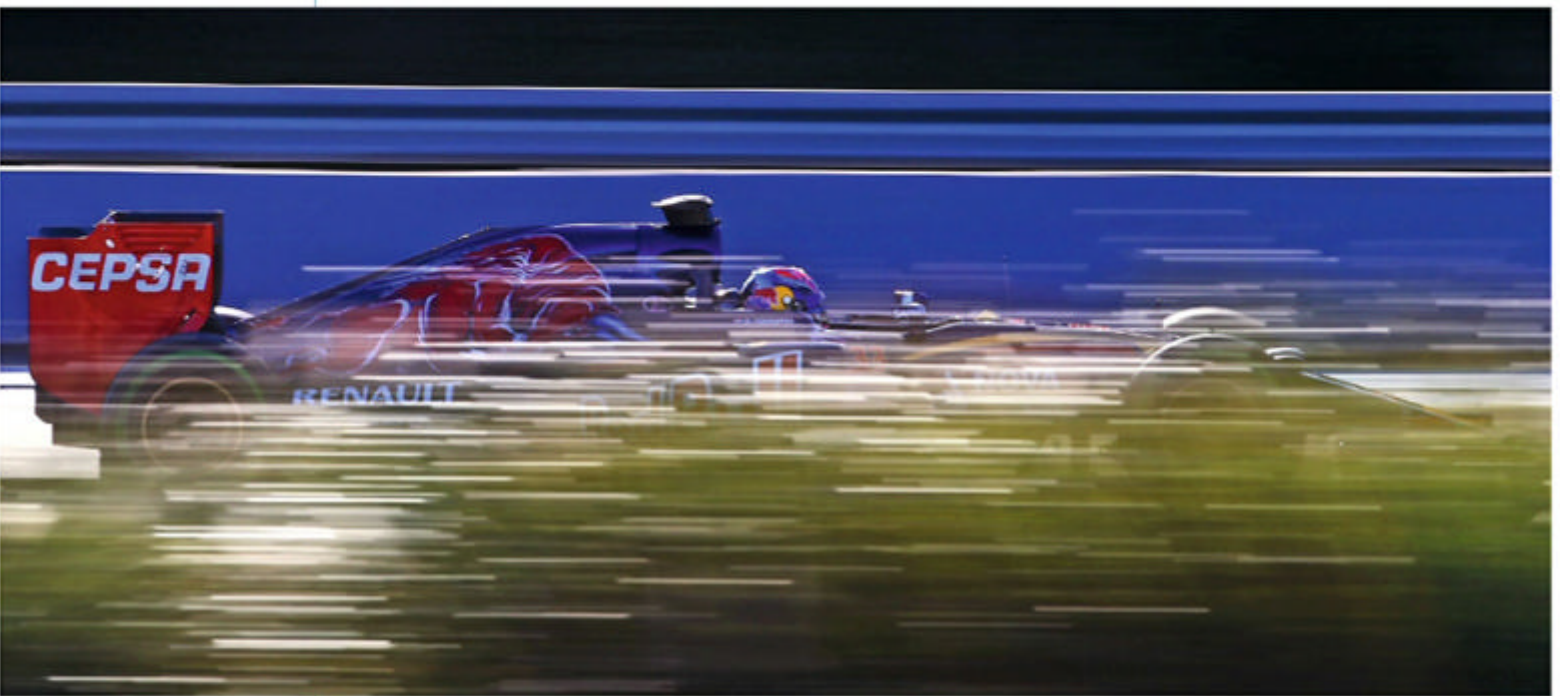
almost reckless, move. Particularly when one of them, Max Verstappen, is just 17 years old. But while the 2015 Australian Grand Prix will be the first F1 start for both Verstappen and Carlos Sainz Jr (20), they will enter the event as two of the most prepared rookie drivers of recent years.

In terms of on-track mileage, both young racers have driven the equivalent of approximately 12 grand prix distances each – a combined total of 4,769 miles and 20 days in F1 machinery. Add to that an intensive winter training programme on the Red Bull simulator in Milton Keynes, to bring them up to speed with the operational procedures of their cars (and to learn the circuits), and you begin to appreciate that Toro Rosso's decision isn't so reckless at all.

"We've said from the outset that these guys are not rookies, they are Formula 1 drivers," says Toro Rosso's technical director James Key at the final Barcelona test. "We have spent the winter getting them and the team into that state of mind so that when they get to Melbourne, they shouldn't have any shocks. For them, their debut should just be another race. Yes, the pressure will be there, but they know what to expect." →







Xevi Pujolar on Max Verstappen (above): "What has impressed me most about Max is the way he absorbs information. He's adapting very well to different scenarios"

In the 12 days of testing in February, split between Jerez and Barcelona, Verstappen and Sainz Jr each did six days at the wheel of the STR10. Toro Rosso's pre-season programme aimed to provide their drivers with every possible variable in car setup and procedure that they would experience at a grand prix weekend. No stone was left unturned, so there would be no surprises when they boarded that long flight to Australia.

"We have a huge matrix of variables for the drivers to test and they tried to logically work through it," explains Key. "For example, they ran on high fuel loads, low fuel, a short soft-compound run and a longer hard-tyre run. Then we'd try an outlap, an inlap and a formation lap. Then we'd focus on pitstops, race starts, and starts in wet conditions. In modern F1 there's the idea of fuel management, so we'd teach them about lift and coasting, changing engine settings and electrical control. In terms of engine-management systems, these cars are very different to anything they have ever driven before."

At the first test in Jerez and the second in Barcelona, where the priority was reliability to ensure the maximum amount of running, Toro Rosso used a standard launch chassis. That paid off as Verstappen completed more running than any other driver in Barcelona, topping 645 miles.

"What has impressed me most about Max is the way he absorbs information," says his engineer Xevi Pujolar. "Just 18 months ago he was in karts and now he's running in an F1 car. He's adapting very well to different scenarios. When he switches from a short run to a longer run he's able to look after the tyres. He understands it. It's not like you need to remind him 20 times, he gets it straight away, even with all the energy-management systems. He has extra capacity when he's in the car to deal with anything else that requires attention and I'm quite surprised at how well he is adapting."

Perhaps even more remarkable is that Verstappen's impressive mileage has come as a result of him being error-free in testing. There haven't been any off-track misdemeanours, whereas his team-mate Sainz Jr was caught out – once – which did enough damage to his car to curtail a significant proportion of his running on his allocated day.

"We can see that Max is getting more confident with the car because he wants to push and when you start doing that, the risk begins to increase," warns Pujolar. "If he continues like that he will be very strong, but we have to keep him tempered. All of this is the revision – the first race will be the exam."

On the other side of the garage, Sainz Jr has also shown promise, despite that one incident, blamed on a gust of wind that unbalanced the car at Barcelona's Turn 3. He has been around Red Bull slightly longer than Verstappen, running with the senior team in young driver tests, and has built up experience in the Milton Keynes simulator. He also has more single-seater experience, last year winning the Formula Renault 3.5 title. According to high-level sources, that extra bit of experience is having a slightly detrimental effect because he's now struggling to adapt to the Pirelli tyre used in F1. He's pushing the car like he would a Renault 3.5 machine, which runs on Michelin tyres with very different characteristics. He's too aggressive on turn-in, so the team have been asking him to adapt his style to make it smoother to preserve the rubber.

"He's adapting well, but he is quite sensitive with the tyres," says Sainz's engineer Marco Matassa. "He's keen after the session to look at the data to try and improve his style. And he is improving – we make suggestions that he takes on board."

"What impresses me most about him is his capacity to stay cool and to understand what is happening around him when he is in the car. He's always thinking about how he can improve, lap by lap, run by run. He has a lot of experience in different categories and still he has a lot of things to learn because it's a new world, but he's getting up to speed."

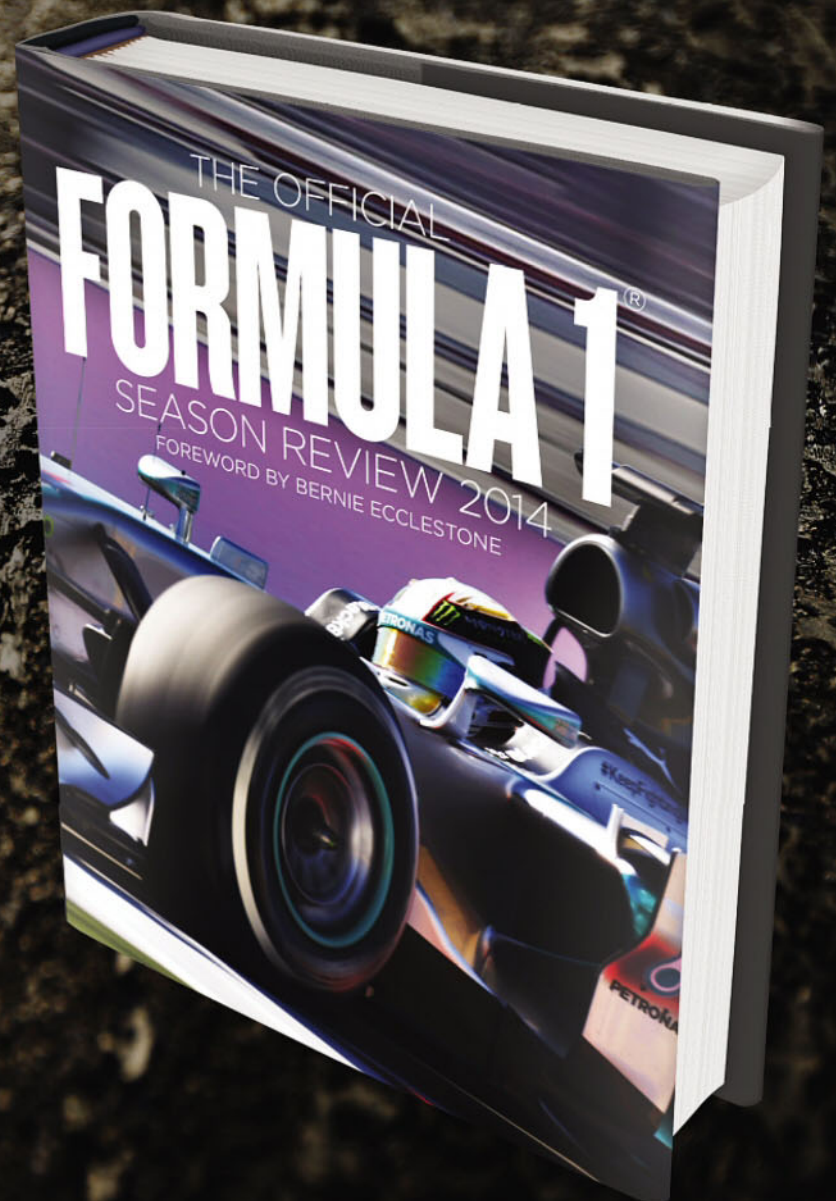
Despite being three years older than Verstappen, Sainz Jr has less mileage in an F1 car, largely because Max benefited from three Friday practice sessions at the end of 2014. →

"We have a huge matrix of variables for the drivers to test... these cars are different to anything they have driven before" **James Key**

THE OFFICIAL
FORMULA 1[®]
SEASON REVIEW 2014

**AVAILABLE FROM
ALL GOOD
BOOKSELLERS**

THE 2014 YEARBOOK
GIVES A UNIQUE,
ACCESS-ALL-AREAS PASS
BEHIND THE SCENES OF
ONE OF THE MOST
THRILLING F1 SEASONS
OF RECENT YEARS



WWW.F1YEARBOOK.COM



MAX VERSTAPPEN



CARLOS SAINZ JR

Who has done the most miles?

	Date	Event	Venue	Laps	Miles
1	03.10.14	Japanese GP FP1	Suzuka	22	80 miles
2	02.11.14	United States GP FP1	Austin	32	110 miles
3	07.11.14	Brazilian GP FP1	Interlagos	26	69 miles
4	25.11.14	Young driver test	Yas Marina	55	189 miles
5	26.11.14	Young driver test	Yas Marina	78	269 miles
6	02.02.15	Testing	Jerez	73	201 miles
7	04.02.15	Testing	Jerez	97	267 miles
8	19.02.15	Testing	Barcelona	94	272 miles
9	21.02.15	Testing	Barcelona	129	373 miles
10	27.02.15	Testing	Barcelona	139	402 miles
11	01.03.15	Testing	Barcelona	85	245 miles

MAX VERSTAPPEN Toro Rosso mileage prior to 2015 Australian GP **Total mileage** 2,477 miles



CARLOS SAINZ JR Toro Rosso & Red Bull mileage prior to 2015 Australian GP **Total mileage** 2,292 miles

	Date	Event	Venue	Laps	Miles
1	18.07.13	Young driver test	Silverstone	35	127 miles
2	19.07.13	Young driver test*	Silverstone	39	143 miles
3	25.11.14	Young driver test*	Yas Marina	100	345 miles
4	01.02.15	Testing	Jerez	46	127 miles
5	03.02.15	Testing	Jerez	137	377 miles
6	20.02.15	Testing	Barcelona	100	288 miles
7	22.02.15	Testing	Barcelona	88	255 miles
8	26.02.15	Testing	Barcelona	86	249 miles
9	28.02.15	Testing	Barcelona	132	381 miles

James Key on Carlos Sainz Jr (below): "Carlos is doing very well and his technical feedback is very good – way beyond his experience"



And while it's hard to determine pace, Verstappen has emerged from testing with the quicker laps of the two. Trying to rank one ahead of the other is difficult and Key has been impressed with both, particularly in terms of their maturity.

"Max is very relaxed, very focused on the job in hand and not fazed by it at all," says Key. "He's slotted in well with good accurate feedback and already he's thinking about what he's trying to achieve. He's almost getting to the point where he's anticipating certain things, so if we put him on a 15-lap run then he's suggesting things like a little less front wing."

"Carlos is similar. Unfortunately he had more problems with reliability so hasn't quite had the flow but his experience is different. He has a different set of things to cover than Max. He's done a lot more racing, so he has that expectation of what the tyre should do, so with him it's more a case of adapting to what he already knows. He's also doing very well and his technical feedback is very good – way beyond his experience."

Insiders suggest that Verstappen has the early edge on Sainz, but it's the pressure of competition that will really determine rank. Both know that the opportunity at Toro Rosso is huge. Perform, as both Daniel Ricciardo and Daniil Kvyat have done, and there's the prospect of a Red Bull seat. Fail... and join the growing scrapheap of drivers who have left F1 sooner than they would have liked. **F1**

*Driving for Red Bull



10nts From
£1199 pp

THE FORMULA 1 SPANISH & MONACO GRAND PRIX™

EXCLUSIVE OFFERS



Join Adore Cruises on a choice of 2 fantastic voyages featuring 2 of Formula 1's most revered events in 2015; the Formula 1 Spanish Grand Prix™ and Monaco Grand Prix™. The Spanish race course has changed dramatically over the years; with its current track Circuit de Barcelona-Catalunya being used for over 20 years, providing ample high-throttle entertainment for the spectator. Over to France; each year, the picture-perfect Principality of Monaco transforms into a formidable racing circuit, where the world's driving elite take battle on its notorious hairpin turns, chicanes and corners which are negotiated at breakneck speeds - another thrilling spectacle. Depending on which voyage you opt for, the thrilling F1™ proceedings are coupled with many stops in the stunning Mediterranean, and full board cruises with MSC Fantasia or Preziosa - 2 charming vessels which will act as your home-from-home during your time spent shore-hopping. You'll also enjoy hotel stays in either beautiful Barcelona or San Remo, thus further enhancing these truly memorable cruise experiences. One thing's for sure; come race time, you'll be in pole position! Call one of our friendly specialists to discover more today.

BENEFITS YOU WILL SIMPLY ADORE:

- Choice of 2 spectacular F1 Grand Prix™ trips
- Includes full board cruises to the glorious Mediterranean
- Includes hotel stays in Barcelona or San Remo
- Includes return flights
- Grand Prix™ ticket upgrades available on request

ADORE EXCLUSIVE: MSC SPANISH GRAND PRIX™



AMAZING VALUE
ADORE CRUISES
EXCLUSIVE

MSC Fantasia

10nts From
£1199 pp

Fly to Barcelona, Spain where you'll embark the stunning MSC Fantasia for your 7 night full board Mediterranean cruise to Marseille, France - Genoa, Italy - Naples, Italy - Messina (Sicily) - La Valletta (Malta) - La Goulette, Tunisia - Arrive Barcelona to relax and enjoy this city during your 3 night hotel stay. On the Sunday transfer to Circuit de Barcelona-Catalunya to watch the adrenaline-fueled FORMULA 1 GRAN PREMIO DE ESPAÑA 2015. You'll then transfer back to Barcelona for your final night stay before flying back to London (regional air on request)

INCLUDES 7 NIGHT FULL BOARD CRUISE, 3 NIGHT BARCELONA HOTEL STAY AND GRANDSTAND TICKETS TO THE FORMULA 1 GRAN PREMIO DE ESPAÑA 2015

Departure Date	Inside	Outside	Balcony	Suite
1 May 2015	fr £1199	Sold Out	fr £1399	fr £2199

ADORE EXCLUSIVE: MSC MONACO GRAND PRIX™



SAVINGS OF UP TO
£400 PER COUPLE

MSC Preziosa

10nts From
£1299 pp

Fly London to Genoa and spend 1 night in this Italian city before you embark MSC Preziosa for your 7 night cruise visiting Civitavecchia (Rome), Italy - Palermo, Sicily - La Goulette, Tunisia - Palma de Mallorca, Spain - Valencia, France & Genoa. Transfer to picturesque San Remo for a 2 night hotel stay in this pretty and tranquil Riviera city. Enjoy the thrill of the Monaco Grand Prix™ with Rocher Secteur tickets included plus scenic coastal transfers to/from Monaco. The next day transfer to Genoa Airport for your flight back to London (regional air on request)

UPGRADE YOUR MONACO GRAND PRIX™ EXPERIENCE WITH FANTASTIC VALUE FOR MONEY Z1 TICKETS FROM JUST £100PP

Departure Date	Inside	Outside	Balcony
15 May 2015	fr £1299	fr £1399	fr £1499



0800 840 1447

www.adorecruises.uk



Prices are pp, based on 2 sharing, correct at time of print & subject to availability/change. Prices applicable to selected departures & to new bookings only. Credit card charge 2.5%. Customers responsible for any visas/inoculations that may be required. Transfers not included unless stated. Flights based on London unless otherwise stated & may be indirect/overnight. Regional air available at a supplement. If Formula 1 Spanish or Monaco Grand Prix™ does not go ahead or date is changed due to unforeseen circumstances, the rest of the holiday will still operate without the Grand Prix™. F1™, FORMULA ONE™, FORMULA 1™, FIA FORMULA ONE WORLD CHAMPIONSHIP™, GRAND PRIX™ and related marks are trademarks of Formula One Licensing B.V. All rights reserved. Tips not included on ships and are at your own expense. Further Ts&Cs online. E&OE

FREE

McLAREN-HONDA CAP

WHEN YOU SUBSCRIBE TO *F1 RACING*



- Choose between 'Team Button' or 'Team Alonso' McLaren-Honda cap
- Cap features your chosen driver's unique racing number on the front and their signature embroidered on the back
- Stylish, brand-new replica teamwear for 2015 season

ORDER ONLINE AT

www.themagazineshop.com/tfone-april15

OR CALL 0844 8488 826

Quoting the promotional code M0415P for print only or M0415B for print and digital access. Offer ends 30 April 2015

PICK AN EDITION

SUBSCRIPTION OFFER



PRINT EDITION

Get six issues of *F1 Racing* for only £22.99

● **FREE GIFT**

Choose a 'Team Button' OR 'Team Alonso' McLaren-Honda cap

● **GREAT SAVINGS**

Save 23% on the cover price

● **SPREAD THE COST**

Pay just £22.99 every six issues

● **FREE P&P**

Every issue delivered direct to your door

● **EXCLUSIVE DEALS**

Subscriber-only offers and discounts



PRINT AND DIGITAL EDITIONS

Upgrade to digital for just £2.99 extra

● **FREE GIFT**

Choose a 'Team Button' OR 'Team Alonso' McLaren-Honda cap

● **GREAT SAVINGS**

Save 46% on the cover price

● **SPREAD THE COST**

Pay just £25.98 every six issues

● **UNLIMITED ACCESS**

Read wherever and whenever you like

● **EXCLUSIVE DEALS**

Subscriber-only offers and discounts



YES

I would like to subscribe to *F1 Racing*, paying £22.99 every six issues and saving 23% on the cover price. Please send me my **FREE** McLaren-Honda Cap Team Button Team Alonso

YES

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** McLaren-Honda cap Team Button Team Alonso

This is a new subscription 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)

To the manager Bank/building society

Address

Postcode

Name(s) of account holder(s)

Sort code

Branch/building society account number

Reference number (for office use only)



Originators ID No. 850699

INSTRUCTIONS TO YOUR BANK OR BUILDING SOCIETY

Please pay **Haymarket Media Group** 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 **Haymarket Media Group** and, if so, details will be passed electronically to my bank/building society.

Signature Date

PLEASE RETURN THIS FORM TO:
F1 Racing, FREEPOST RSBU-TALE-BXJT,
PO Box 326 Sittingbourne, Kent ME9 8FA

For special international rates:

Please call +44 (0) 1795 592 990 or visit www.themagazineshop.com

Terms and conditions:

This offer is open to UK residents only. Overseas rates are available on +44 (0) 1795592 990. Please allow 40 days for delivery of your gift and first issue. The gift will be sent under separate cover from the magazine. Should we run out of gifts, you may be offered an alternative gift - there is no cash alternative. If you subscribe to a bundle offer, you will be emailed instructions on how to access your digital subscriptions within 24 hours of your order being processed. Direct Debit rates are valid for one year after which they are subject to change - should prices change we will inform you in writing. We ask that you enter into a Direct Debit agreement with the intention that your subscription will continue for a minimum period of 12 months, even if the frequency of payment is for a shorter period. However, you will still have the right to cancel your Direct Debit in accordance with Direct Debit Guarantee. 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. If a gift is included as part of the subscription offer, we reserve the right to request the return of the gift. Details of the Direct Debit Guarantee are available on request. Savings are based on the standard UK print cover price of £4.99 and the UK digital cover price of £2.99. Offer ends 30 April 2015.

Haymarket Media Group Ltd 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.haymarket.com/privacy or call us on 08448 482 800. Please ask if you have any questions because 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@haymarket.com or by calling 08448 482 800.



June 13/14

LE MANS 24 HOURS

Self-Drive Packages with
Hotel or Camping
Coach Tours & Paris Stop-Overs

Indianapolis - 24 May

INDY 500

"The Greatest Race in the World"
4 Nights in Indianapolis

Melbourne - 15 March

AUSTRALIAN GRAND PRIX

5 Nights Melbourne
Melbourne & Sydney
2 Centre Holiday

Montreal - 7 June

CANADIAN GRAND PRIX

4 Nights in Montreal
Niagara Falls Extension

Silverstone - 5 July

BRITISH GRAND PRIX

Tickets, Hospitality
& Hotels

Sepang - 29 March

MALAYSIAN GRAND PRIX

5 Nights in Kuala Lumpur
Penang & KL
2 Centre Holiday

Motor Racing International



Spa - 23 August

BELGIAN GRAND PRIX

Selection of Tours by Coach,
Air or Eurostar
Self Drive Packages

Sakhir - 19 April

BAHRAIN GRAND PRIX

Direct Flights
5 Nights in Manama

Monza - 6 September

ITALIAN GRAND PRIX

Weekends & Longer Tours
Based in Como

Barcelona - 10 May

SPANISH GRAND PRIX

Selection of Weekend &
Longer Tours by Air

Austin - 25 October

UNITED STATES GRAND PRIX

Texas Hosts
F1's Instant Classic

Monte Carlo - 24 May

MONACO GRAND PRIX

Full Programme of
Arrangements including
Flights & Hotels

Spielberg - 21 June

AUSTRIAN GRAND PRIX

Weekend in Graz
Vienna & Graz
2 Centre Holiday

Mexico City - 1 November

MEXICAN GRAND PRIX

5 Nights in Mexico City
F1 Returns to the Autodromo
Hermanos Rodriguez

www.motorracinginternational.uk.com

The 23rd edition of the MRI Tour Collection is now available. Visit our website for full details. As ever, we will be featuring the F1 World Championship the Indy 500 and the Le Mans 24 Hour Race. A small selection of our vast choice of travel arrangements is outlined above.

Put your trust in the UK's only fully bonded, independent motorsport travel specialist.



Apply NOW for your FREE brochure. Ring our 24 hour dial-a-brochure service quoting reference: 'F3'
01304 612424 info@motorracinginternational.uk.com

WorldMags.net

FINISHING STRAIGHT

Reports Previews Analysis Opinion Stats

MAIN IMAGE: GLENN DUNBAR/LAT; INSETS: STEVEN TEE/LAT; STEVE THERINGTON/LAT



A stroll in Albert Park

Lewis Hamilton makes easy work of the season-opener, taking the first win of 2015, with Mercedes team-mate Nico Rosberg in hot pursuit in second place

REPORTS



110 AUSTRALIAN GP REPORT

Mercedes start as they must surely mean to go on: with another one-two

PREVIEWS



114 MALAYSIAN GP PREVIEW

Drivers will feel the heat at one of the most physically tough races in F1



116 CHINESE GP PREVIEW

Fast corners, slow corners, long straights – Shanghai has it all



118 BAHRAIN GP PREVIEW

The lights come on for Formula 1's popular new twilight race

OPINION

120 INBOX

Support for the small teams and a critique of F1's move towards bringing in more street circuits



122 MURRAY WALKER

Musings from Murray on the most memorable race numbers ever used in Formula 1



WorldMags.net

RACE DEBRIEF

by Anthony Rowlinson

Australian Grand Prix

15.03.2015 / Albert Park



One down under; nineteen to go

Lewis and Mercedes picked up the new season where they left off, with a crushingly dominant win

Of course Formula 1 loves Melbourne.

This is hardly news. How could it not? Brilliant city, humorous populace and an atmosphere like no other. As a race track, Albert Park is nothing special. But as a race weekend, the Australian Grand Prix is rarely less than memorable and so it proved in 2015.

At the front (Mercedes) and at the back (McLaren) – scripts were followed to the letter; Merc excelling, McHonda enduring. And beyond the grid, things were much as predicted. After the last-gasp reprieve that allowed Manor-née-Marussia to attend the 31st Australian GP, they were not expected to shine – and they didn't. Endless electronic interfacing difficulties, resulting from the wiping clean of legacy IT equipment (on the orders of the administrators, who until very recently were working out how best to dispose of the team's assets) meant that neither Will Stevens nor Roberto Mehri were able to turn a wheel all weekend.

Between these extremes, everything else was a little more nuanced. Red Bull fallibility, for example, something that had occurred early in 2014 but was licked by season's end, returned to haunt this once imperious team. There was an engine failure for local hero Dan Ricciardo in practice, then on the parade lap Daniil Kvyat ground to a halt with gearbox problems.

Then there was the peculiar back injury suffered by the exceptionally-fit-without-needing-to-flaunt-it Valtteri Bottas. Approaching Turn 13 on his Q2 lap, he braked, hard, and felt a sudden, sharp pain in his lower back. He continued the lap and went on to set sixth-fastest time in Q3, despite the discomfort and what he described as a problem with the brakes. Turns out Bottas' braking problem was bio-mechanical, rather than hydro-electro-mechanical: he'd been unable to exert the usual amount of leg power on the brake pedal, on account of his back pain. So, no Manors, no Kvyat, no Bottas... and then no

Magnussen, following an unspecified mechanical failure on the parade lap.

That meant just 15 starters – the fewest on the grid since the 1982 San Marino GP (discounting the 2005 'Michelin-gate' debacle at Indy). These are indeed uncertain times for Formula 1, with the wealth divide between the 'haves' and the 'have nots' never more sharply drawn.

Even so, the Australian Grand Prix Corporation put on a truly magnificent weekend of on- and off-track entertainment for the 300,000-plus race fans who trooped to Albert Park in hope of a win for their man Dan. They've always displayed affection and respect for their last F1 winner Mark Webber, but they've taken Ricciardo to their hearts in that magical, unfakeable way that happens all by itself when a sports star connects with the common man. Alonso in Spain, Mansell for the Brits, Schumi for the Germans: Ricciardo's hold on the popular Aussie imagination is akin to this.

He did his best, too, in his second fully competitive crack at the race, qualifying seventh and gaining a place by flag-fall. This year's RB11 is a lesser machine than the RB10, though. While the Newey-chassis virtues of efficient downforce and high cornering speeds remain in abundance, the Renault engine lacks the drivability and throttle-response needed for Ricciardo to maximise his driving style. It's obvious that something's amiss when a Red Bull guided by as skilled a pilot as Ricciardo can't get on terms with a Sauber driven by a rookie, one Felipe Nasr.

Those who've followed Nasr's career through junior formulae, where he dazzled, for example, in British Formula 3, won't have been surprised that he laid down a marker here in Melbourne. From tenth on the grid he benefitted from a first-corner kerfuffle between himself, Seb Vettel, Kimi Räikkönen and Pastor Maldonado to emerge in fifth place – a position he held to the flag despite the race-long attentions of Ricciardo.

This was the feel-good story of the weekend, for events at Sauber had turned toxic on the Thursday morning, after the Supreme Court of Victoria upheld an earlier tribunal verdict that ex-Sauber reserve driver Giedo van der Garde had a valid 2015 race contract. This farcical, though bitterly fought, state of affairs resulted in Sauber being unable to run in FP1 under threat of having their assets impounded, then van der Garde appearing briefly in Marcus Ericsson's overalls looking set to drive, before an uneasy accommodation was reached in court that allowed Nasr and Ericsson to continue. The situation was unresolved as the circus left town.

That Nasr and Ericsson, who scored his first F1 points in eighth, managed to put aside these distractions said much for their composure. A double score for a team who endured a 'points-free' 2014 was balm for embattled team boss Monisha Kaltenborn and chairman Peter Sauber, who jetted in late, in a very public show of support. It was a gesture as classy as Nasr's drive.

As for the rest, Williams were disappointed to have finished 'only' fourth with Felipe Massa, while a Ferrari debut podium for Vettel was as sweet a result as he could have hoped for in this era of Merc supremacy. The good spirits and sharp wit he displayed in the post-race press conference were evidence of the feel-good vibe emanating from Ferrari after its winter reset.

No one, though, was feeling better than Lewis Hamilton after his thuddingly emphatic victory. Rosberg was in his pocket all weekend and the pair had 30 seconds on next-best Ferrari over a race distance. His podium 'I'll be back' riff with Arnold Schwarzenegger was as cheesy as it was amusing, and somehow suited the tone of an endearingly wonky Australian GP weekend to a T. That's how Melbourne rolls. **F1**

The story of the race

V Kevin Magnussen and Daniil Kvyat both break down pre-race on their way to the grid

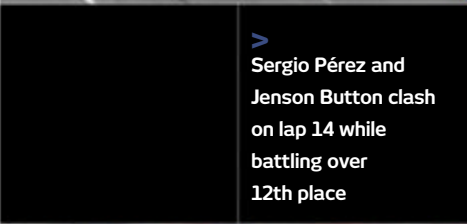
V Hamilton leads away from pole, ahead of team-mate Rosberg and Massa and Vettel



ALBERT PARK



^ Following a Safety Car period, Nasr passes Sainz Jr for fifth on the lap 4 restart



> Sergio Pérez and Jenson Button clash on lap 14 while battling over 12th place



< Vettel vaults Massa for third after staying out longer before his sole pitstop on lap 24



> Teenage rookie Max Verstappen retires from a potential points-scoring position on lap 34



^ Kimi Räikkönen stops on lap 41 after Ferrari fail to securely fasten a wheel to his car on his stop

> After 55 laps, Hamilton takes victory with Rosberg 1.697secs behind for the first Merc one-two of 2015



MAIN PHOTO: SAM BLOXHAM/LAT; ILLUSTRATION: ALAN ELDRIIDGE; INSETS: STEVEN TEE/LAT; GLENN DUNBAR/LAT; SAM BLOXHAM/LAT; CHARLES COATES/LAT

Australian Grand Prix stats

The lowdown on everything you need to know from the weekend at Albert Park

THE GRID



1. HAMILTON
MERCEDES
1min 26.327secs Q3



3. MASSA
WILLIAMS
1min 27.718secs Q3



5. RÄIKKÖNEN
FERRARI
1min 27.790secs Q3



7. SAINZ JR
TORO ROSSO
1min 28.510secs Q3



9. MALDONADO
LOTUS
1min 29.480secs Q3



11. VERSTAPPEN
TORO ROSSO
1min 28.868secs Q2



13. HÜLKENBERG
FORCE INDIA
1min 29.208secs Q2



15. ERICSSON
SAUBER
1min 31.376secs Q1



17. MAGNUSSEN
McLAREN
1min 32.037secs Q1



STEVENS
MANOR
DID NOT PARTICIPATE



2. ROSBERG
MERCEDES
1min 26.921secs Q3



4. VETTEL
FERRARI
1min 27.757secs Q3



6. RICCIARDO
RED BULL
1min 28.329secs Q3



8. GROSJEAN
LOTUS
1min 28.560secs Q3



10. NASR
SAUBER
1min 28.800secs Q2



12. KVYAT
RED BULL
1min 29.070secs Q2



14. PÉREZ
FORCE INDIA
1min 29.209secs Q2



16. BUTTON
McLAREN
1min 31.422secs Q1



DNS. BOTTAS
WILLIAMS
1min 28.087secs Q3



MERHI
MANOR
DID NOT PARTICIPATE

THE RACE



FASTEST LAP



Lewis Hamilton, lap 50, 1min 30.945secs

THE RESULTS (58 LAPS)

1st	Lewis Hamilton Mercedes	1h31m 54.067s
2nd	Nico Rosberg Mercedes	+1.697s
3rd	Sebastian Vettel Ferrari	+34.523s
4th	Felipe Massa Williams	+38.196s
5th	Felipe Nasr Sauber	+95.149s
6th	Daniel Ricciardo Red Bull	+1 lap
7th	Nico Hülkenberg Force India	+1 lap
8th	Marcus Ericsson Sauber	+1 lap
9th	Carlos Sainz Jr Toro Rosso	+1 lap
10th	Sergio Pérez Force India	+1 lap
11th	Jenson Button McLaren	+2 laps

Retirements

Kimi Räikkönen Ferrari	40 laps - wheel
Max Verstappen Toro Rosso	32 laps - engine
Romain Grosjean Lotus	0 laps - engine
Pastor Maldonado Lotus	0 laps - accident
Daniil Kvyat Red Bull	DNS - gearbox
Kevin Magnussen McLaren	DNS - engine

Did not participate

Valtteri Bottas Williams	Injury
Roberto Merhi Manor	Software
Will Stevens Manor	Software

THROUGH SPEED TRAP (QUALIFYING)



Fastest: Valtteri Bottas, 204.43mph



Slowest: Kevin Magnussen, 194.18mph

TYRE COMPOUNDS USED



Soft

Medium

Intermediate

Wet

CLIMATE

Sunny

19°C

TRACK TEMP

32°C

FASTEST PITSTOP



Nico Hülkenberg, 21.612secs (entry to exit)

DRIVERS' STANDINGS

1st	Lewis Hamilton Mercedes	25pts
2nd	Nico Rosberg Mercedes	18pts
3rd	Sebastian Vettel Ferrari	15pts
4th	Felipe Massa Williams	12pts
5th	Felipe Nasr Sauber	10pts
6th	Daniel Ricciardo Red Bull	8pts
7th	Nico Hülkenberg Force India	6pts
8th	Marcus Ericsson Sauber	4pts
9th	Carlos Sainz Jr Toro Rosso	2pts
10th	Sergio Pérez Force India	1pt
11th	Jenson Button McLaren	0pts
12th	Kimi Räikkönen Ferrari	0pts
13th	Max Verstappen Toro Rosso	0pts
14th	Romain Grosjean Lotus	0pts
15th	Pastor Maldonado Lotus	0pts
16th	Daniil Kvyat Red Bull	0pts
17th	Kevin Magnussen McLaren	0pts
18th	Valtteri Bottas Williams	0pts
19th	Will Stevens Manor	0pts
20th	Roberto Merhi Manor	0pts

CONSTRUCTORS' STANDINGS

1st Mercedes	43pts	9th Lotus	0pts
2nd Ferrari	15pts	10th Manor	0pts
3rd Sauber	14pts		
4th Williams	12pts		
5th Red Bull	8pts		
6th Force India	7pts		
7th Toro Rosso	2pts		
8th McLaren	0pts		



For comprehensive F1 statistics visit www.forix.com



TOM HARTLEY JNR

EXQUISITE CLASSIC & PERFORMANCE CARS



1965 FERRARI 275 GTS RHD

- 1 Of Only 14 UK RHD Cars
- Dark Blue/Black Leather
- Total Matching Numbers
- Complete With Books & Tools
- Ferrari Classiche Certified
- Elegance Personified

£POA

A HANDPICKED SELECTION FROM OUR CURRENT STOCK

1953 FERRARI 212 INTER VIGNALE COUPÉ

Green Over Black, 1 Of Only 6 Built Known As The 'Genève Coupé', Original Matching Numbers Engine, Platinum Award-Winning Restoration, Complete with Books, Tool Roll And A Comprehensive History File, Undergoing Ferrari Classiche Certification, A Very Special Car £POA

1992 FERRARI F40

Rosso/Red, S/Seats, Cat Car With Adjustable Suspension, 13,000km, Only 1 Owner, Complete With Original Service Book, Handbooks, Wallet & Tools, Indistinguishable From New £POA

1960 ASTON MARTIN DB4 GT

British Racing Green, Black Connolly Leather, Body Off Restoration By Spray-Tec & Bodylines, Original Matching Numbers Engine Upgraded To 4.7 Litres By R.S.Williams, 1 Owner For Over 40 Years, One Of The Very Best Examples £POA

2007 ASTON MARTIN VANQUISH 'S' 2+2

Meteorite Silver/Black Cherry, Satellite Navigation, H/F/Screen, Full Spec, Only 3,900m With FSH, Recently Serviced By Aston Works, As New £134,950

1987 PORSCHE 959 KOMFORT

Guards Red/Triple Grey Leather, H/S/Seats, 21,000m, Recent Major Service By Porsche Reading, Impeccable Throughout, One Of The Very Best Available..... £POA

1988 PORSCHE 911 3.2 CARRERA

Dark Blue/Black Leatherette, 16" Alloy Wheels, Only 6,000km From New, Original Books & Wallet, 1 Owner Until Recently, Exceptional.....£114,950

1995 AC COBRA 289 MK11 'CONTINUATION'

Dark Blue/Black Leather, 1,600m From New, 1 Of Circa 10 Cars Constructed By AC Cars To Exact Period Spec, Amazing Value£235,000

1959 MERCEDES-BENZ 190SL ROADSTER

Ivory/Red, Original Colours, Original Engine, Only 12,210km From New, Time Warp Example, Must Be One Of The Best In Existence £165,000

1960 MERCEDES-BENZ 190SL ROADSTER

White/Blue Leather, Original Colours, Right Hand Drive, Original Matching Numbers Engine, Fitted Luggage, Fresh From Restoration £145,000

1965 JAGUAR E-TYPE S1 4.2 FHC

Carmen Red/Black, Matching Numbers, Restored By XK Engineering, Good History File, Very Good Example..... £99,950

1988 DE TOMASO LONGCHAMP GTSE

Metallic Brown/Cream Leather, Upgraded 4 Speed Auto Gearbox, Only 1,200km From New, 2 Owners, Time Warp Example£59,950

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

WE ARE ALWAYS LOOKING TO BUY SIMILAR VEHICLES
Call today for an instant quote and decision





The Malaysian GP preview

Round 2 / 27-29 March 2015 / Sepang International Circuit, Kuala Lumpur



MALAYSIAN GP RACE DATA

Circuit Name Sepang International Circuit
First GP 1999
F1 races held 16
Circuit length 3.444 miles
Race distance 192.878 miles (56 laps)
Direction Clockwise
Winners from pole 9

TV TIMETABLE (UK TIME)

Friday 27 March
Practice 1 02:00
Practice 2 06:00
Saturday 28 March
Practice 3 06:00
Qualifying 09:00
Sunday 29 March
Race 08:00
Live coverage BBC and Sky Sports F1

RACE NOTES: THE HEAT IS ON AT F1'S MOST HUMID VENUE

Climate conditions make Sepang the first real challenge of the season – but it's also the venue for some very enjoyable battles

As the first of the grand 'Tilke-dromes' to be built, the Sepang International Circuit is still regarded as a 'new' grand prix, even though this will be the 17th running of the event. While it lacks the sheen of modern creations such as Singapore or Abu Dhabi, drivers love Sepang's fast, sweeping turns, while the stadium section, featuring two long straights leading into tight hairpins, has made for some hugely entertaining duels over the years.

After the season-opener on the Melbourne street circuit, this is the first chance to see the new cars run on a 'proper' race track, and this venue usually highlights which cars are working well aerodynamically.

The biggest challenge for the drivers is the conditions, which are uncomfortably hot and humid, often with heavy thunderstorms that can flood the track in minutes.



Hairpin bends link the two long, fast straights at Sepang's stadium section

PACE NOTES: THE KEYS TO SUCCESS

It's a scorcher

Sepang's long straights and fast corners mean a lot of time spent at full throttle. Cooling is therefore an issue, especially with the high ambient temperatures.

A balancing act

The multitude of high speed corners puts lateral loads on the tyres, which make balance a problem and can cause understeer. The high temperatures also make thermal degradation an issue.

Time for a drink

Drivers need to keep hydrated during this hot and demanding race to perform properly.

Key corner

Turn 15 is a second gear left hand hairpin. It's an overtaking spot, but also a place to line up a move heading into Turn 1.

WHAT HAPPENED IN LAST YEAR'S RACE...?

Winner Lewis Hamilton
Margin of victory 17.313secs
Fastest lap 1m 43.066s, L Hamilton
Safety Cars 0
Race leaders 1
Pitstops 55
Overtakes 20



Last year, Lewis Hamilton produced a display of absolute domination. The Mercedes racer qualified on pole (drawing level with Jim Clark's record of 33 poles for a British driver), and then led every lap and set the fastest lap on Sunday. Hamilton's team-mate Nico Rosberg pulled clear of countryman Sebastian Vettel to win the battle for second place.

DRIVING INNOVATION FORWARD IN WORKSHOP DESIGN & STORAGE SOLUTIONS



- ✔ New race bays
- ✔ Machine shops
- ✔ Stand-alone workstations
- ✔ Mobile storage units
- ✔ Workbenches, trolleys & racking for workshops

System Store Solutions are pioneering the latest design and installation of motorsport workshops and transporters to teams in classic/historic racing right through to Formula One.



Providing a total design, layout and installation of storage products from the FAMI range including project management, consultation, technical advice and no obligation site surveys.



**SYSTEM
STORE
SOLUTIONS LTD**

Ham Lane, Lenham, Maidstone,
Kent ME17 2LH
Telephone: 01622 859522



The Chinese GP preview

Round 3 / 10-12 April 2015 / Shanghai International Circuit



CHINESE GP RACE DATA

Circuit Name Shanghai International Circuit
First GP 2004
F1 races held 11
Circuit length 3.387 miles
Race distance 189,558 miles (56 laps)
Direction Clockwise
Winners from pole 6

TV TIMETABLE (UK TIME)

Friday 10 April
Practice 1 03:00
Practice 2 07:00
Saturday 11 April
Practice 3 05:00
Qualifying 08:00
Sunday 12 April
Race 07:00
Live coverage Sky Sports F1
Highlights BBC

RACE NOTES: THE GP THAT'S GOT A BIT OF EVERYTHING

What Shanghai lacks in home support, it makes up for in multiple technical challenges, as teams struggle to find the right setup

Shanghai isn't a venue that Formula 1 really seems to love, and the feeling seems to be mutual: Chinese fans have never really taken to the race.

Lewis Hamilton, however, clearly enjoys racing here. The British ace has won in China on three occasions, including last season for Mercedes on his way to the title. That said, Nico Rosberg also has a soft spot for this venue: he took his first victory, and the maiden win for the revived Mercedes team, at the track in 2013.

With a real mixture of slow and fast corners, the big challenge at Shanghai is the long back straight: drivers have to find exactly the right balance to ensure their cars have enough top speed to make use of the DRS when running down it, without it costing them too much pace later on in the corners.



Lewis Hamilton is a three-time winner here. Can he make it four wins in 2015?

PACE NOTES: THE KEYS TO SUCCESS

Pick and mix

There's such a mixture of slow, medium and high-speed corners, plus a very long back straight, that getting the right setup is a real challenge.

Grain and bear it

With cool ambient temperatures and a track that lacks grip, the biggest issues with tyres here are graining and getting them properly warmed up.

Watch out for bumps

The circuit is built on reclaimed marshland, with buoyant polystyrene sunk into the ground for stability. It's prone to subsidence, so drivers must watch out for new bumps that have appeared.

Key corner

Turn 1 is a long right hander that squeezes the pack together before a blind apex. This can lead to front wing-damaging clashes in the pack.

WHAT HAPPENED IN LAST YEAR'S RACE...?

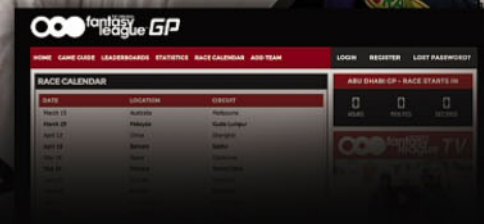
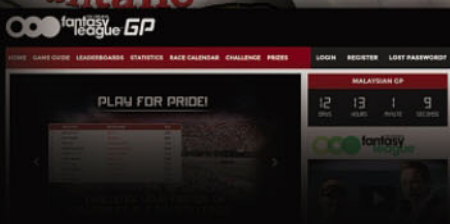
Winner Lewis Hamilton
Margin of victory 18.062secs
Fastest lap 1m 40.402s, N Rosberg
Safety Cars 0
Race leaders 1
Pitstops 45
Overtakes 24



More Mercedes domination, with Lewis Hamilton starting from pole and leading all the way. His team-mate Nico Rosberg was clear of the rest, but unable to mount a challenge. Fernando Alonso finished third, and reigning champion Sebastian Vettel was fifth behind Red Bull team-mate Daniel Ricciardo, scoring his first points of 2014.

STILL SPACE ON THE GRID!

DON'T MISS OUT
MAIN CHAMPIONSHIP STARTS MARCH 29TH

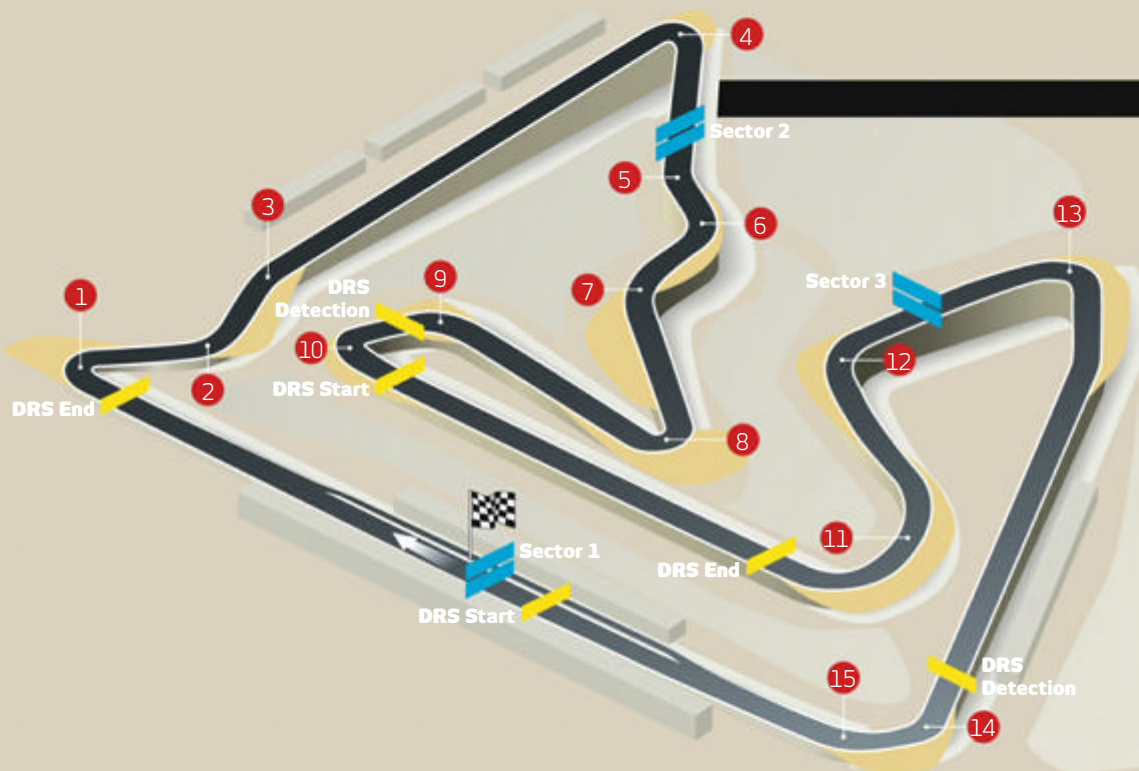


\$100M BUDGET - LIVE SCORING
VARIOUS COMPETITIONS
FANTASTIC PRIZES - PRIVATE LEAGUES

**BUILD YOUR ULTIMATE GP TEAM AT
AUTOSPORT.FANTASYLEAGUEGP.COM**

The Bahrain GP preview

Round 4 / 17-19 April 2015 / Bahrain International Circuit, Sakhir



BAHRAIN GP RACE DATA

Circuit Name Bahrain International Circuit
First GP 2004
F1 races held 10
Circuit length 3.362 miles
Race distance 191.529 miles (57 laps)
Direction Clockwise
Winners from pole 4

TV TIMETABLE (UK TIME)

Friday 17 April
Practice 1 12:00
Practice 2 16:00
Saturday 18 April
Practice 3 13:00
Qualifying 16:00
Sunday 19 April
Race 16:00
Live coverage BBC and Sky Sports F1

RACE NOTES: F1'S DAZZLING DESERT DUEL IN THE DARK

This night race offers much-needed respite from the intense sun – but there's no escape from either the heat or the dust

A wide circuit, a series of long straights and hairpins and the need to strike a compromise over setup has led to plenty of overtaking at Sakhir in recent years. And last year's switch to a night-race format was a spectacular success, with Lewis Hamilton and Nico Rosberg's fight for victory becoming an instant classic.

The long straights are seemingly designed to offer up DRS-enhanced overtaking opportunities, although Hamilton proved last year that it's possible to rebuff a strong challenger with firm but fair defensive driving.

Running after sunset has made life a little easier for the drivers, because it means they no longer have to race in the full glare of the desert sun. But heat – and dust – remain a challenge for drivers, engineers and the cars when racing in the desert.



The Bahrain GP became a night race for the first time in 2014, and proved a hit

PACE NOTES: THE KEYS TO SUCCESS

Stop/start strategy

The mix of long straight and tight corners puts an emphasis on finding the correct gear ratios, and also produces higher than average brake wear.

Enter sand, man

Despite the efforts of the organisers, sand blown onto the circuit by the strong winds costs grip and plays havoc with the cars' mechanical elements.

Gripping granite

The circuit surface is made from granite, which is very abrasive on tyres. Combined with the stop/start nature of the track, having a car that performs well under traction is key.

Key corners

Turns 9 and 10 are both blind left handers that drivers brake, turn and downshift for at the same time. That makes locking a tyre all too easy.

WHAT HAPPENED IN LAST YEAR'S RACE...?

Winner Lewis Hamilton
Margin of victory 1.085 secs
Fastest lap 1m 37.020s, N Rosberg
Safety Cars 0
Race leaders 2
Pitstops 57
Overtakes 51



This one was an early contender for race of the season, with Lewis Hamilton and Nico Rosberg staging a thrilling race-long battle for the lead that kept the Mercedes pit wall on edge. Hamilton just held on for victory, although Rosberg seemed to have the edge on pace. Sergio Pérez drove a strong race to take Force India's second ever F1 podium.



EUROPEAN FORMULA 1 AND LE MANS TRAVEL PACKAGES



No Overnight Travel - Client Focused Friendly Travel

Multiple on Route Pickup Points - Le Mans 24hr Specialists

Luxury VIP Mini Coach - Competitively Priced Holiday Packages

Grand Prix Breakaways is a family run business with comprehensive knowledge and personal experience of the European Grand Prix circuits. Our VIP Executive coaches are equipped with "Captain Style" reclining leather seats situated around tables and fitted with: seat belts for your safety, air-conditioning for your comfort and media entertainment for your enjoyment whilst travelling.

www.grandprixbreakaways.co.uk

enquiries@grandprixbreakaways.co.uk +44 (0) 114 287 5201

Graham & Leigh

ANY CIRCUIT - ANY LAYOUT - ANY YEAR



www.grahamandleigh.co.uk

Inbox

@F1Racing_mag
facebook.com/f1racingmag
letters.f1racing@haymarket.com
F1 Racing, Teddington
Studios, Broom
Road, Teddington
Middlesex TW11 9BE



★ STAR LETTER



Britain's Will Stevens joins the former Marussia team for the 2015 Formula 1 season

Let's welcome F1's returning minnows

I was thrilled to hear Marussia were to be included on the 2015 grid, now racing under their original name of Manor. What I liked even more was that F1 now has a true backmarker who people can root for. A team who qualify last at every race, but in a race of attrition (like a wet Monaco, for example) a team that everyone hopes *could* score a couple of points, just as Jules Bianchi did in 2014.

What has impressed me most, is the way they have fought to be included on the 2015 grid. Caterham fell by the wayside, but Manor want to be a part of F1. And they want to race. F1 needs teams like them. The history books will show that most of the world champions started out in backmarker teams. Who can forget Alonso in the Minardi in 2001?

I for one will certainly be rooting for Manor in 2015. If they fight the way they did over the winter and get the right people running the team, they will become the people's champions.

Craig Curtis
Swansea, UK



STAR PRIZE

Craig Curtis wins a pair of three-day general admission tickets to the 2015 Formula 1 Santander British Grand Prix. For more details, visit www.silverstone.co.uk/events. Hotline number: 0844 3728 300

Take F1 off the streets

Every year I grow increasingly frustrated with the F1 calendar as the ratio of classic racing circuits to street circuits becomes unhealthily skewed.

I am 19 years old, and have grown up watching F1. But I only became a fanatic during the 2007 season, which had just three street circuits out of a total 17 races. Two of those circuits (Melbourne and Montréal) are semi-street circuits, while the other race was, of course, Monaco. This season, five races out of 20 will be street circuits, Singapore and Sochi being the two new additions.

Many people will think that I don't have much of an argument based on those figures alone, but most proposed new circuits now seem to be street circuits, such as New Jersey (USA), Baku (Azerbaijan), and Qatar, to name but a few.

F1 Racing's February issue lifted the curtain on the new street circuit in Baku, which should be ready by 2016. The layout, in my opinion, is awful and will deny fans the high-quality racing you would see at Silverstone, for example. The first sector alone is made up of 90° corners with the other two sectors only wide enough for one F1 car. It's reminiscent of Valencia's street circuit, don't you think?

What makes it even worse is that classic circuits like Hockenheim and the Nürburgring are struggling even to put on a race due to financial difficulties and they seem to be going the same way as Magny-Cours and the French Grand Prix. I suppose at the end of the day, though, money talks. Much more than the fans ever could.

Ben Herrick
By email

Look to the future

I watched my first race, the Australian Grand Prix, in 1998. At the age of 19, I was a latecomer to the sport, but I have loved Formula 1 ever since.

I have watched every race since then on TV, the only exceptions being two Australian GPs that I had the pleasure of attending in person, and six races in the middle of 2003 when I was living in Dallas and had no access to cable (thankfully I had them recorded for me and binge-watched them upon my return) and the 2006 USA GP, which was rescheduled without proper notice. I later found this online to watch.

F1 is the only sport I watch and have any interest in. Now this is being taken away from me as Australia's Network 10 has decided it will not show us the full season. We are being stripped of half of the races while Foxtel will be showing all of them. But there aren't enough good things on Foxtel to justify spending \$50 per month on a sports package just to watch two weekends of F1 per month for only nine months of the year.

When Mark Webber retired, I was excited that he was being replaced by another Aussie. Last year, Daniel Ricciardo showed he has the talent to be a contender. I will be unable to fully enjoy that journey with him this year.

Decisions like this are part of what is killing this sport. Without proper television coverage how is a fan supposed to stay interested? Will I care enough to consider going to Melbourne for the 2016 GP? Will I care enough to buy the next instalment of Codemasters' excellent *F1* series of PC games? Will I care enough to renew my magazine subscriptions?

I was looking forward to one day introducing my kids to the sport I love, and being able to enjoy sharing this love with them. F1 may have lost potential future fans. And it remains to be seen if it can retain the interest of this current fan.

Dave Beer
Sydney, Australia

The stuff of legend

Throughout the discussion about Ferrari's constant staff turnover, and whether Sebastian Vettel has made the right decision in moving there, one thing has been overlooked; the real reason Vettel has switched is his legacy. He knows that since motor racing began, a drive at Ferrari and, more to the point, a *successful* drive at Ferrari will secure this.

His world championships at Red Bull were history-making, but a championship at Ferrari is still deemed the pinnacle of F1.

Since Fangio in the '50s, all the great drivers have tried to crown their career with a Scuderia title. Lauda and Schumacher did it, but Andretti, Villeneuve, Mansell, Prost, and finally Alonso all tried and failed to secure the holy grail: a Ferrari world championship. Vettel knows this is his big chance.

Alan Davison

By email

Rejig the points

Although most attention is given to the hype of the driver's title in F1, the main championship has always been the constructors' trophy.

To make the system fairer and to create more interest, I believe the points-scoring system should be changed so that only the leading car in any team receives points.

This will result in a number of benefits, such as one constructor not being able to run away with the championship as Mercedes did in 2014. I feel there be will be a

closer battle between the top teams, generating more interest and excitement for viewers. A further bonus is that the smaller teams will have a better chance of scoring more points, which will mean more money and a better chance of remaining in F1.

Merril van Rensburg

By email

The show behind the show

As a lifelong fan of F1, I would like to give a mention to the people behind the scenes who keep the show on the road.

My fiancée and I have been to a grand prix every year for the past five years now, and we have met some fantastic people.

Last September we visited Singapore, which was easily the most welcoming city we have ever visited. The staff at the circuit could not do enough for the fans, and we have several pictures to remind us of the fact. As a bonus we stayed in the same hotel as a team of guys who were responsible for putting up the sponsors' livery around the track. This crew from Belgium worked antisocial hours and sacrificed time with their families to follow the circus around the globe.

I would like to give a shout out to Martin, Seb, Ronnie, and the rest of that crew, plus everybody else who works behind the scenes to deliver the glitz and glamour to which we have become accustomed. Thanks guys, and keep up the good work!

Richard Quinn

By email



He's got four titles, but next on Seb's wish-list is a championship with Ferrari

Exclusive stories, unrivalled F1 coverage – wherever you are in the world



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

**FULL
DIGITAL
EDITION
ON SALE
NOW**

GO TO www.f1racing.co.uk/digital-edition/

NEXT MONTH...



VALTTERI BOTTAS

How a breakthrough performance this year can propel Formula 1's next big Finn right to the top

- > Peter Windsor on Red Bull's new leader – Daniel Ricciardo
- > Merc motorsport boss Toto Wolff answers your questions
- > F1 bargain hunt: what happens when a team is sold off?

ISSUE ON SALE 23 APRIL*

*CONTENTS SUBJECT TO CHANGE

MURRAY WALKER



UNLESS I'M VERY MUCH MISTAKEN...

“What’s the most famous race number in the history of F1? For me it’s ‘5’ and I like to think I had a bit to do with it”

Number five belonged to my old mate Nigel Mansell in his glory years with the superb Williams team. In 1986 with both his car, number five, and his team mate Nelson Piquet’s, number six, having identical Canon-dominated liveries Williams differentiated between them by putting a big red ‘5’ on the front of Nigel’s car and a big white ‘6’ on Piquet’s. As a commentator this was just what I wanted to build drama and, I took to calling Nigel ‘Red Five’ in my more excitable moments. Why didn’t I call Piquet ‘White Six’ then? Pass – I don’t know. Something

to do with their very different personalities I suppose. Anyway, ‘Red Five’ stuck and certainly got a lot more publicity than any other number.


It got me thinking about other famous F1 driver/number associations. For instance, 27 will forever be associated with Alan Jones, who won the title for Williams in 1980 and, subsequently, with the never-to-be-forgotten Gilles Villeneuve whose brilliant Ferrari career was so tragically terminated at Zolder in 1982. Stirling Moss insisted on using the number seven whenever he could – irrespective of the car, or class, in which

he was racing. Only one driver in the 64 year history of F1 has raced as a permanent number ‘0’ and that was Damon Hill for Williams in 1993 and 1994, in both years due to the departure from the sport of his champion team-mates Nigel Mansell and Alain Prost, who were solely entitled to use the much coveted ‘1’. And I can think of only one driver who has ever raced full-time with the number 13 – Lotus’s Pastor Maldonado, who does so following the 2014 decision to let drivers choose a permanent number.

But what’s in a number? Well, it’s primarily there to let spectators know who they’re looking at. But now that drivers are allowed use the same number every year, the drivers can use it as a part of their image to enthuse their fans and swell their incomes through merchandise sales. That’s something they do very well in the MotoGP world. Go to any of its events and you’ll see thousands of enthusiastic fans wearing baseball caps and waving flags flaunting their heroes’ race numbers – 46 for Valentino Rossi, 93 for the all-conquering young Marc Marquez and 99 for Yamaha’s Jorge Lorenzo.

But there’s a major difference between the MotoGP way and the F1 way: on the bikes you can very clearly see the numbers, whereas on the cars you can’t. Sponsors understandably don’t like their carefully designed liveries, which cost them huge amounts of money, being marred by a socking great race number. So if most people don’t know what the drivers’ numbers are or can’t see them if they do, what’s the point of having them? Do you know Lewis Hamilton’s number (44)? Jenson Button’s (22)? Fernando Alonso’s (14)? Or anyone else’s? And if you do, can you actually see it on their cars?

It’s not a big problem for TV viewers, who have the commentators to tell them who they’re looking at, but it’s a different story for spectators at the circuits. So let’s go back to the good old days of having standard-size and format numbers on the car’s front and sides on a nice white roundel background. They should be big enough to see, so we can all identify the drivers, which will add to enjoyment of the experience and also have major promotional benefits.

Yes, there’d be cries of outrage from disgruntled sponsors. I’m basically whistling in the wind – but it’s worth thinking about. 



“I took to calling Nigel ‘Red Five’ in my more excitable moments. It stuck and got more publicity than any other number”





emmo

A Racer's Soul

TALES FROM THE RACING CAREER OF EMERSON
FITTIPALDI – TWO-TIME WINNER OF THE
BRITISH GRAND PRIX (1972 AND 1975)

Available from 19 September 2014, from amazon.co.uk

WorldMags.net

THE ALL NEW LEON ST CUPRA 280

CAPABLE, WHICHEVER
WAY YOU LOOK AT IT



TECHNOLOGY TO ENJOY



587 LITRE BOOT

Room for an active lifestyle.



280PS CUPRA ENGINE

Guarantees precision-driving fun.



CUPRA DRIVE PROFILE

Dynamic driving at your fingertips.

Standard EU test figures for comparative purposes and may not reflect real driving results. Model shown is a Leon ST CUPRA 280 with optional Sub8 Performance Pack, CUPRA Black-Line and Nevada white metallic paint.

Official fuel consumption for the SEAT Leon ST CUPRA in mpg (litres per 100km); urban 32.1 (8.8) - 33.6 (8.4); extra-urban 50.4 (5.6) - 49.6 (6.6); combined 42.2 (6.7) - 42.8 (6.6). CO₂ emissions 157 - 154 g/km.