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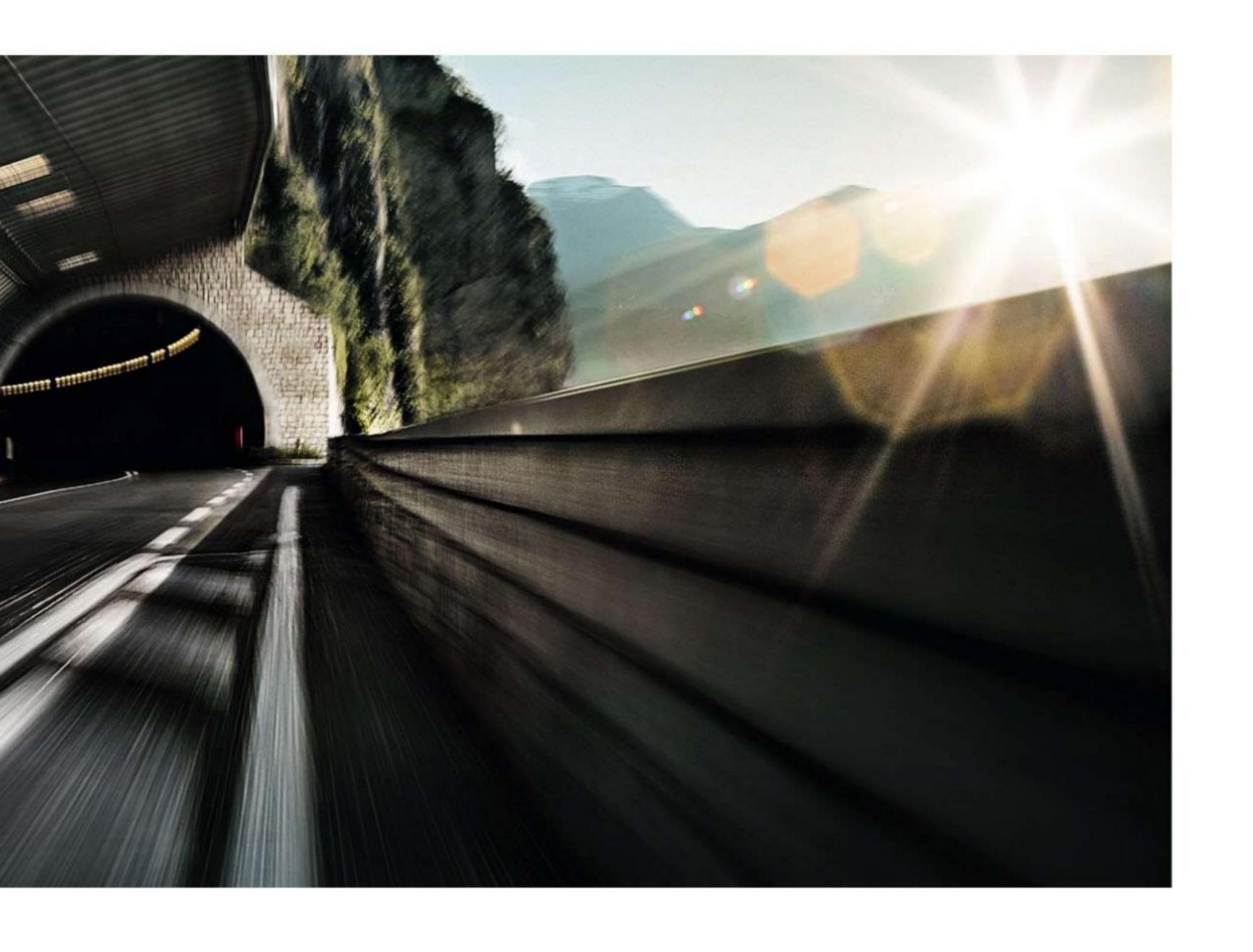
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#### FIRST SECTOR: THE REGULARS

- **IGNITION WHY McLAREN HAVE A LOT ON THEIR PLATE**
- PARADES PHOTOS OF F1'S NEW WORLD CHAMPION
- F1 INSIDER NEWS, OPINION AND ANALYSIS
- INSIDE TECH THE SCIENCE BEHIND TRANSMISSIONS
- PETER WINDSOR IN F1, DOES DEMOCRACY MATTER?
- **EMERSON FITTIPALDI SMALL TEAMS NEED URGENT HELP**
- **DIETER RENCKEN MID-GRID IN CASH CRISIS** NOW THAT WAS A CAR THE FERRARI 312T3
- SUBSCRIBE AND GET A MERC LEWIS HAMILTON CAP



#### **SECOND SECTOR: THE FEATURES**

#### **NICO VS LEWIS**

A blow-by-blow account of an epic title battle that went down to the wire - from the mouths of the protagonists

Peter Windsor looks back at the drivers, the cars and

We talk to Lewis about his triumphant 2014, and learn why that second championship felt even better than the first

#### MAGNUSSEN: MY ROOKIE SEASON

The McLaren racer talks us through a respectable first year

#### YOU ASK THE QUESTIONS

Force India's Sergio Pérez is only too happy to answer your questions on the pleasure of beating former team McLaren

#### **F1 RACING AWARDS 2014**

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#### **MOSLEY ON F1'S CASH CRISIS** 82

As money woes loom large, the FIA's former president recalls his failed attempt at tightening F1's purse strings

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Maurice Hamilton meets the affable Italian and learns how his dream of racing for Ferrari turned sour

#### ANDREA DE CESARIS REMEMBERED

The F1 racer nicknamed 'De Crasheris', who died in October 2014, had a courage and skill that belied his nickname



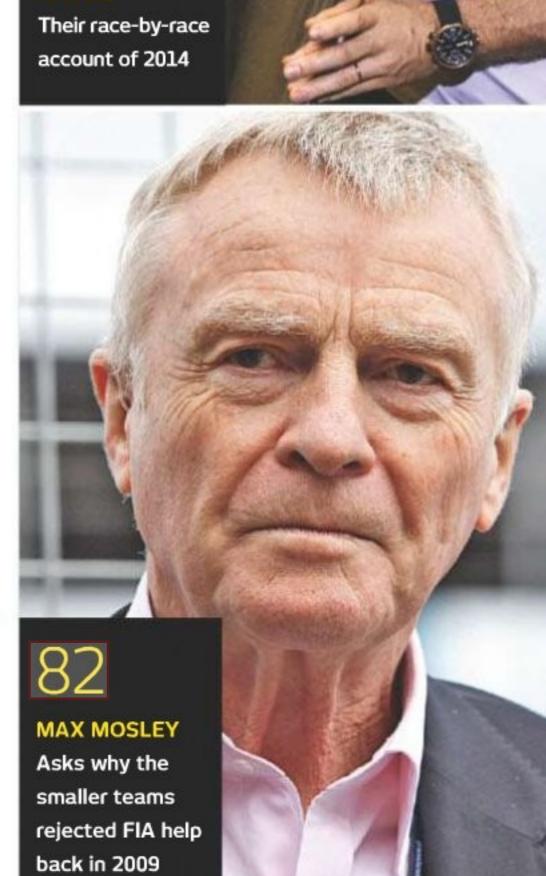
69 F1 RACING AWARDS You voted in your thousands to decide our winners



THIRD SECTOR: FINISHING STRAIGHT

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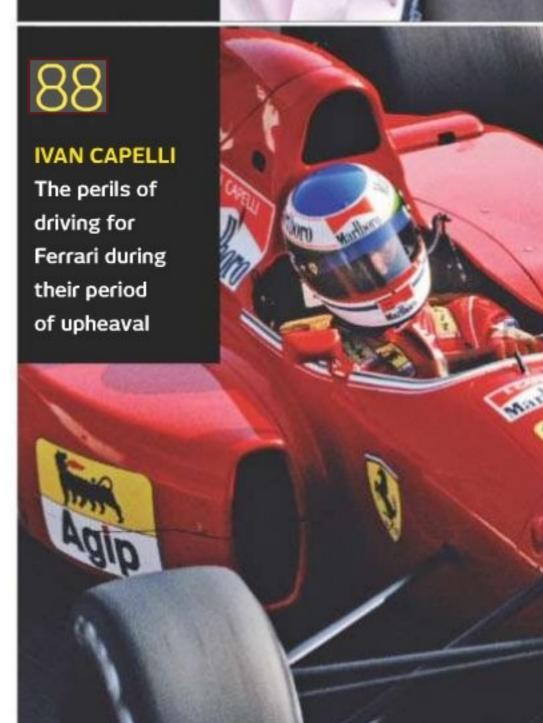


CEDES/AIMIE

**NICO VS LEWIS** 

IN THEIR OWN

WORDS







## 58 KEVIN MAGNUSSEN He talks us

He talks us through his rookie year at McLaren







SWARA=

36

#### NOW THAT WAS A CAR

The Ferrari 312T3 came so close to success in 1978





### Ignition / Anthony Rowlinson / 01.15

#### What next for McLaren?

Flying home from Abu Dhabi a few weeks ago, season done,

champagne barely dry on the Yas Marina podium, where Lewis Hamilton's brilliant title win had been riotously celebrated, I caught a few seconds of *Senna* on a fellow traveller's in-flight infotainment hub.

An '80s-era Ron Dennis was pictured in his pomp, lobbying the FIA over the outcome of the 1989 Japanese GP, where his driver, Ayrton Senna, had been stripped of a win for "missing a chicane". Dennis was confident, authoritative, a serious player with clout and credibility at the highest levels of Formula 1.

These days, as McLaren's chairman and group CEO, Dennis is still very much at the heart of F1's power game, though out of the spotlight, leaving most front-ofhouse duties to racing director Eric Boullier. Gone is the era of his 4pm media briefings on grand prix Saturdays, known affectionately among the press as 'Meet The Ron' (a riff on the proper title, Meet the Team.)

Alas, we don't get to meet The Ron so much now, which is a shame for media types, because his shared insights, offered in his opaque-yet-enlightening 'Ronspeak' did much to set the F1 news agenda.

It's a shame, too, for his team, because with Ron now largely a hidden figurehead, rumour and counterrumour about what's *really* going on in charged board meetings down Woking way is rife.

Could it really be that Dennis is fighting for survival at the helm of the company he's done so much to build? Is he really about to succumb to pressure from fellow shareholder Mansour Ojjeh? Should we believe that Mumtalakat, the investment arm for the Kingdom of Bahrain, which is a 50 per cent shareholder in McLaren, really wants out, after two seasons of so-so F1 performance? Could Christian Horner really be parachuted in to head up the F1 team?

All of these things may be true; all may be false. But the rumours are real rumours and they rarely arise without at least some substance. So it's in this context that we should view the exasperation of team insiders when quizzed as to why the team's 2015 driver line-up still wasn't settled as F1 Racing closed for press.

However much McLaren lieutenants would like to be giving out messages of clarity, stability, decisiveness and rigour – all McLaren watchwords – they're hamstrung by uncertainty on high. For rest assured the allocation of driving roles between Kevin Magnussen (subject of our 'rookie year' feature on page 58), Jenson Button, Fernando Alonso and GP2 ace Stoffel Vandoorne is not the most pressing matter in the Dennis in-tray.

The Ron himself would doubtless present a somewhat different interpretation of the circumstances outlined here and only a fool would underestimate his proven ability to survive – and thrive – in the F1 Piranha club. Yet the feeling remains that these are unsettled times at McLaren, as they have been for a season or two.

With Honda now a partner and Alonso's arrival imminent, we wish McLaren well, as we do every F1 participant, in this festive moment. We can only hope the new year is a happy one.

# RACING

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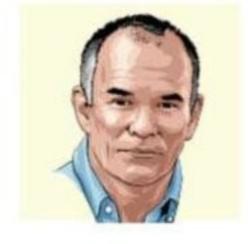
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#### Contributors



Max Peef
Italian photographer who
knows his way around Milan

Top snapper Peef joined Maurice Hamilton at the Automobile Club of Milan for a compelling lunch with former Ferrari racer Ivan Capelli (p88)



Peter Windsor
Unrivalled insight into the key events of the F1 year

The 2014 season was packed with highs and lows, joy and sadness. Peter Windsor analyses the key events in our season review on p46



Steven Tee
Our principal photographer
has followed KMag all year

To help spark Kevin
Magnussen's memories of
his rookie season (p58),
Steven Tee provided a
handful of his finest shots
of McLaren's Danish ace



Max Mosley

Former president of the FIA, well versed in F1 politics

Serving 16 years as head of F1's governing body gives Mosley a unique view on F1's current state. Writing exclusively for F1 Racing, he pulls no punches (p82)





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## Champion's parade

**The road to glory** Before the celebrations come the hard yards. On Friday afternoon at Yas Marina, Lewis Hamilton puts in the mileage in his W05 Hybrid as he prepares for the last race – and, as it turned out, his last win – of a dominant 2014 season

Where Yas Marina, Abu Dhabi

When 2.10pm, Friday 21 November 2014

Photographer Steven Tee/LAT

Details Canon EOS-1DX, 600mm lens, 1/500th at F8











FERRARI WOO BOTTAS 22





### Renault debate future involvement in F1

Engine manufacturer reviews options at board meeting after an uncompetitive 2014 season

As F1 Racing went to press, Renault had arranged a special meeting in which their company directors were to discuss their future F1 involvement. Options to be considered included pulling out of F1 altogether at one extreme, to buying back the Lotus factory at Enstone to run their own works team again at the other.

A complete withdrawal is thought to be highly unlikely, but the ongoing issue of costs in F1, Renault's lack of competitiveness compared to that of Mercedes, and the uncertainty over the engine rules will have provided an uncomfortable backdrop to the meeting.

Renault-powered Red Bull have been campaigning in recent weeks for a change in the current engine formula, but it is not clear what team principal Christian Horner is hoping to achieve. He has variously proposed a reversion to the naturally aspirated V8 engines F1 abandoned at the end of 2013, or what he claims would be a cheaper hybrid twin-turbo engine, with frozen or standard energy recovery systems.

Rivals have questioned his thinking - pointing out that Renault had backed the current engine formula and that both they and Mercedes would quit if F1 returned to the outdated V8s. They are also at pains to stress that a new engine design would inevitably increase costs.

Mercedes boss Toto Wolff says Renault and Mercedes agree at board level on their desire for the current engine formula to remain in F1.

"Where Renault and Mercedes are 100 per cent aligned is that the current V6 technology is state-of-the-art, road-relevant and it is the future," said Wolff. "So on a motorsport level, between Renault Sport and Mercedes motorsport, we are fully agreed and have full alignment on that.

"This is clearly where we are. Renault were very vocal in introducing these engines as a condition of staying in Formula 1 and this is where we are today. So all the other things that are being discussed are just funny.

"We all agree development of the internal combustion engine and hybrid system will remain part of the rules. If we want to adapt the engine regulations, we will discuss that. It's nice to hear the views of individual teams as part of that discussion but they do not reflect the views of the manufacturers."

Horner, meanwhile, insists that the current engine rules - with no in-season development and a complex set of rules defining how much engines can be changed from one season to the next - do not allow Renault and Ferrari enough facility to catch up with Mercedes.

"Leave it as is, and you'll probably drive Renault and one or two others away," Horner said. "So, you have to do what is right for the sport rather than what is right for an individual manufacturer."







Red Bull's Christian Horner (left) and Mercedes' Toto Wolff (below) are on opposite sides of the engine debate. Having won a title double, Wolff wants the situation to remain as it is, while Horner is seeking change

Sources say Renault and Ferrari would like a lifting of the ban on in-season engine development for 2015 to allow them to catch up with Mercedes, followed by a solution for 2016 that reduces costs dramatically. So far, attempts to reach the unanimous agreement required for a change in the engine rules for 2015 have failed.

At the moment, manufacturers can change a limited number of parts in the off-season, defined by a system of 'tokens'. Renault and Ferrari had demanded an in-season step of a given amount of performance-related tokens; Mercedes have offered a compromise of fewer tokens, which their rivals have rejected.



To try to force a compromise Horner has threatened to team up with Honda (who are entering F1 in 2015 with McLaren) and Ferrari, to demand free engine development from 2016.



#### **NEWS DIGEST**

#### The month's big stories at a glance

5.11.14 Sauber sign Williams test driver Felipe Nasr for 2015 14.11.14 The Honda-powered McLaren MP4-29H development car makes its first run on a filming day at Silverstone 17.11.14 McLaren split with longterm test driver Gary Paffett 22.11.14 Sergio Pérez seals a deal to continue with Force India in 2015

28.11.14 Carlos Sainz Jr secures the vacant Toro Rosso drive alongside Max Verstappen for 2015



1.12.14 Caterham are given special dispensation to run their 2014 car in 2015, to make them more attractive to potential buyers 3.12.14 The World Motor Sport Council approves a 21-race F1 calendar for 2015, with the addition of a race in Korea on 3 May. The race is not yet confirmed and is unlikely to take place 3.12.14 The WMSC axes the controversial double points rule, plus plans for standing restarts after Safety Car periods

But Wolff says that neither Mercedes or Renault would be in favour of that approach.

"No serious company would allow a complete lifting of restrictions," Wolff said.

Horner says the Renault board meeting is nothing out of the ordinary, that such matters are discussed regularly at that level, and that as far as he is concerned, Renault remain fully committed to F1. But it seems commitment might depend on a satisfactory solution to the debate over the engine rules - in short, the facility for Renault to be competitive again and for costs to be reduced.

A Renault spokeswoman said: "Every year the board meets at the end of the season for a review of the year. And we have a two-year contract with Red Bull, Toro Rosso and Caterham."



## Ferrari cull continues as they axe new team boss

After just seven months in the job, Marco Mattiacci has been dropped by the Scuderia in favour of Maurizio Arrivabene

Ferrari's year of revolution turned bloody at the end of the season when within days of announcing that they had signed Sebastian Vettel to replace the departing Fernando Alonso, they sacked team principal Marco Mattiacci.

Just seven months after being moved to the position from his former role as head of Ferrari North America, 43-year-old Mattiacci was dismissed and replaced by Maurizio Arrivabene, the former vice-president of global communications at title sponsor Philip Morris.

Ferrari have not explained why they have replaced Mattiacci after such a short tenure, but a letter written by president Sergio Marchionne to Ferrari's racing department, the Gestione Sportiva, offered some insight. It made reference to Arrivabene's "thorough understanding of governance mechanics and requirements of the sport, the level of competition and the requirements of the circuit".

This suggests Marchionne felt Mattiacci was not performing effectively in key

decision-making circles, such as the Strategy Group and F1 Commission (of which Arrivabene has been a member for some years). This may be linked with the failure to secure any decisions in favour of Ferrari on engine development. However, it does not explain why Mattiacci - formerly a protégé of Marchionne and Fiat president John Elkann - has left Ferrari entirely.

The letter added: "In Maurizio, I see the qualities of someone who leads by his strong personal example, his professionalism and the integrity of his decisions."

Whatever prompted the move, it leaves Ferrari in turmoil as they welcome the man on whom they have pinned hopes of future success. Ferrari made a play for Vettel as soon as it became clear Alonso wanted to leave, fulfilling a long-term agreement that Vettel would join them when he left Red Bull. The confirmation of Vettel's arrival had therefore been expected since the Japanese GP when Red Bull announced his departure.

For Vettel, Ferrari's approach could not have been better timed. He has said he is "not running away from anything", but one season of being beaten by Daniel Ricciardo has affected his reputation and another would inflict serious damage. Moving to Ferrari and accepting he is in it for the long haul as they rebuild will be good for him. Plus Ferrari have given him a lucrative deal, reputed to be in the region of €25million.

Maurizio Arrivabene is believed to wield more influence at governance level than Marco Mattiacci



QUIZ



## F1 Mastermind

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#### TAIL-END TEAMS

Ol With which team did Daniel Ricciardo make his F1 debut?

Q2 Complete the following sequence: Jordan, Midland F1, Spyker, ---

Q3 Which constructor's 1997 comeback ended after failing to qualify for the season-opener?

Q4 How many races before Virgin/ Marussia scored their first points?

Q5 Which family team did Emerson Fittipaldi leave McLaren to join for 1975?

Q6 Which Italian team set the record for the most Formula 1 starts without a win?

Q7 Aguri Suzuki claimed Larrousse's only podium with third place at which circuit in 1990?

Q8 The appropriately named FA1L car was run by which team in the 1988 season?

Q9 Which Japanese firm, better known for rallying success, briefly partnered with Coloni in 1990?

Q10 Charles Pic drove for Marussia in 2012 and then Caterham in 2013, With which of these teams did he achieve his best race finish of 12th?

Oll Which short-lived team signed a deal to run using Team Lotus branding in 1995? Q12 Name the Japanese-owned former Formula 1 team, who now

compete in the electric Formula E

championship.

Q13 Pedro Diniz partnered with which Brazilian veteran of Formula 1 at new team Forti back in 1995?

Q14 Minardi led only one lap during their F1 career, with Pierluigi Martini briefly heading the field in which race?

Q15 Two Formula 1 grand prix winners have driven for the Caterham (formerly Lotus) squad. Who are they?

12 Super Aguri 13 Roberto Moreno 14 1989 Portuguese GP 15 Jamo Trulli and Heikki Kovalainen Answers 1 HRT 2 Force India 3 Lola 4 73 5 Copersucar 6 Minardi 7 Suzuka 8 Osella 9 Subaru 10 Marussia 11 Pacific

## Volkswagen Audi Group consider Formula 1 entry

Inspired by Mercedes' sporting and commercial success, the German car giant are looking into running their own works team



The Volkswagen Audi Group (VAG) are conducting a feasibility study on entering a team into Formula 1.

VW had participated in the manufacturer discussion groups that paved the way to the introduction of the turbo hybrid formula, but decided against entering their own team immediately. However, the success of Mercedes has made them think again and they have hired former Ferrari team principal Stefano Domenicali to investigate what it would take for the German group to enter F1.

Mercedes have a net F1 spend of €130million per year – but the media value of their television exposure during their double title-winning 2014 season was €2.3bn.

The VW Group's Audi brand spends €320m a year on their involvement in the FIA World Endurance Championship, which includes the Le Mans 24 Hours, and the DTM German touring car series, with approximately €24m in media value from TV coverage.

VAG is the world's second largest car company, after Toyota, and includes a number of brands, such as Porsche, Audi, VW, Seat and Skoda. Any F1 involvement would most likely use either the Audi or Porsche brand, with Audi the natural choice.

Porsche have just completed the first year of a three-year commitment to sportscar racing, which they decided to enter after considering an F1 project. Porsche bosses Audi currently compete in the World Endurance Championship and their next natural step is F1

felt sportscars were a better 'fit' for Porsche, but needed permission from the VAG board because it meant entering into direct competition with Audi.

While Porsche has just returned, Audi scored their 13th Le Mans 24 Hours win in 15 years last June, and have little more to prove in the world of sportscar racing. Moving into F1 would be the next logical step.

Whichever brand is chosen, the most likely route into Formula 1 would be to either buy into, or take over, Red Bull Racing. VW already have strong links with Red Bull co-owner Dietrich Mateschitz.

However, at least one of two things would have to change. Bernie Ecclestone would have to leave his role as the chief executive of Formula 1, or Ferdinand Piëch would have to move on from his current position as chairman of the supervisory board of VAG. Piëch has a strong dislike of Ecclestone, and insiders say that he would never allow VAG to enter Formula 1 while the 84-year-old remains in charge.

Force India's Nico Hülkenberg will contest the 2015 Le Mans 24 Hours and Spa WEC race with Porsche. He will be the first active F1 driver to enter Le Mans since Sébastien Bourdais raced for Peugeot in 2009, while competing in F1 for Toro Rosso.

F1 BANTER

### **PASSNOTES**

Your essential F1 briefing #10 L Hamilton, recording artist



Name Lewis Hamilton
Age 29
Appearance
Near to the top of the
hit parade, hopefully

#### Recording artist? Racing driver, surely?

Well, it seems that Lewis Hamilton's method of keeping calm during his intense title battle with team-mate Nico Rosberg was to indulge his musical ambitions.

#### Well, he was already a fan of baggy trouser enthusiast MC Hammer's musical offerings.

Possibly, although, somewhat depressingly, Lewis was only five years old when *U Can't Touch This* was released.

#### As I approach my dotage, I tend not to stray much beyond Magic FM now. So what exactly is this all about, anyway?

Lewis divulged in an interview with Radio 1 in November 2014 that "music is everything to me" and that he's been working on an R&B album. He said, "I've been writing a lot, even on race weeks. It's something I'm very passionate about. It keeps me chilled and doing things you love is a good thing. When I was in Japan, I was in the studio, Monday to Wednesday. Then, Thursday to Sunday, I was racing. Then I was straight back in the studio."

#### I thought Nicole Scherzinger was the musical talent in that household...

Actually, in the same interview, he failed to recognise a song performed by Scherzinger's old Pussycat Dolls troupe.

#### We've all been there. I'm naked without Shazam these days.

Somehow I feel you're not taking this seriously.

I am! Only I have this mental image of Chris Waddle and Glen Hoddle singing *Diamond Lights* on Top Of The Pops in 1987.

Perhaps that might work as the B-side of his debut single?

#### He's more likely to do that than Oh Lord Won't You Buy Me A Mercedes-Benz.

Quite. We'll leave that to Fernando, shall we? Stop.

Hammer time.

**Do say:** Well, it will be better than Jacques Villeneuve's album

Don't say: Have you got this on 78?

### **INSIDER**



## FIA safety panel reports findings on Bianchi crash

Panel concludes Bianchi failed to slow sufficiently and recommends use of new Virtual Safety Car system

A number of F1 safety changes have been recommended following an investigation into Jules Bianchi's accident at the Japanese GP.

The Marussia racer was severely injured in October 2014 when he left the track at Suzuka and struck a recovery vehicle. As F1 Racing closed for press, he remained in a critical but stable condition in hospital in France.

The FIA commissioned a ten-person panel, including Ross Brawn, Emerson Fittipaldi and Alex Wurz, to investigate the accident. The panel's 396-page report has concluded that a number of key issues contributed to the crash.

Bianchi left the track at Turn 7 where a recovery vehicle was removing Adrian Sutil's Sauber, which had gone off on the lap before. The panel found Bianchi had not slowed sufficiently to avoid losing control, and had then 'over-controlled' his oversteering car, causing him to leave the track at an earlier

The Virtual Safety Car will limit drivers' speed through neutralised sections of track after an accident



point than Sutil. In crossing the run-off area, Bianchi applied both throttle and brake. This should have triggered the FailSafe device, which is designed to cut the engine, but the rear brake-by-wire system on his Marussia was incompatible with the algorithm.

The report noted that actions taken following Sutil's accident were consistent with FIA regulations and that rescue procedures were followed and contributed to saving Bianchi's life. It also noted that there was no reason why the Safety Car would have been deployed before or after Sutil's accident. However, it found it was 'imperative' to prevent a car ever hitting a recovery vehicle.

The key change suggested by the panel is to impose a speed limit on any section of track where double yellow flags are displayed. This will be introduced from next year using a Virtual Safety Car system, which will enforce

> a minimum time cars can set through the neutralised sector.

> Other recommendations include reviews of safety software and circuit drainage, safety training for new superlicence holders, an F1 risk review, wet-weather tyre testing, and ensuring the start time of an event is no less than four hours before sunset (except in the case of night races).







Finding the stars of tomorrow, today

Nineteen-year-old Nyck de Vries comes from Sneek in the Netherlands. He is a member of the McLaren Young Driver Development Programme and will race in the 2015 Formula Renault 3.5 Championship.

#### Who is he?

De Vries impressed enough in karting to be signed to McLaren's driver development programme at 14, before he'd even sat in a racing car. His singleseater debut came in Formula Renault 2.0 in 2012, and he has just finished his third year in the class.

#### What's he been doing recently?

De Vries wanted to step up from Renault 2.0 for 2015, but McLaren insisted he stay in that category to prove he could win a title. He did that in style, winning the Eurocup and Alps crowns. He will graduate to Renault 3.5 in 2015, driving for the DAMS team that ran Kevin Magnussen and Carlos Sainz Jr to the 2013 and 2014 titles.

#### How good is he?

Good enough to potentially give McLaren more driver-based dilemmas in the not-too-distant future. It took De Vries a while to settle into single-seaters, but he has shown he has pace.

#### Will we see him in F1?

With his McLaren links and plum Renault 3.5 drive, De Vries has every chance. McLaren have vowed not to rush him, which should set him up for longterm success. That does, of course, depend on McLaren being able to find room for him.

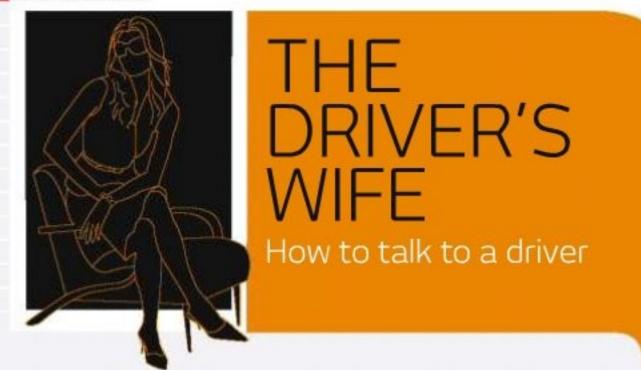
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#### COLUMN



In view of the holidays, rare visits home and ultra-extended families, I'm going to impart some Adri-wisdom in the hope at least some of it will spread as far as São Paolo.

Usually around the beginning of October the phone calls begin, friendly requests at first that grow increasingly pleading as the weeks pass. Only by 23 December, can Amor ever be completely sure he has no commitments, and that is when I make the call to tell my family we really are coming for Christmas this time. There's silence for the next 24 hours, and the São Paolo power grid lights up in its own premature festive celebration as my extended family binge on autosport.com and Wikipedia.

I have dropped huge unsubtle hints of course. Multiple times. Since early October. But the day will play out like this: Amor will just have got through kissing my parents, grandparents, sisters, cousins, nieces and nephews, when an awkward silence will follow, combined with a wall of smiles. Then my semi-deaf 87-year-old great-aunt will break the silence with, "So, the co-ordination between MGU-K and MGU-H has made things difficult for you this year?"

The smiles will turn to furrowed concentration as Amor attempts a layman's response (spoken loudly and simultaneously translated, badly, even louder by my niece, Beatriz).

Next up it will be Tio Leandro on brake-by-wire, and then Mamãe will pitch in about the optimisation of the deployment of kinetic energy.

Amor will do a good job of patiently answering each question to his audience who are just proud they got the question out and forget they are supposed to be paying attention to the answer. I won't get a chance to mention my album or my new underwear line without being collectively shushed.

We'll end up leaving straight after dinner, claiming a sudden sponsor appearance, as Amor will have lost his voice after his day-long monologue. The family will be mortified, mainly because they never got to ask what they really wanted to know which is did his team-mate split up with his fiancé (Beatriz), why doesn't he win more (Tio Leandro) and who washes the overalls (Mamãe). Of course, I could have answered had anyone thought to ask me!

So here it is, for all of you who are expecting a driver for Christmas (São Paolo, sit down and listen for once, por favor): Drivers do not need to talk about driving all the time. In fact, they'd rather discuss anything but driving unless you are an engineer with the direct ability to make them faster.

So if you are stuck for conversation, talk about food, travel, the weather or, here's a crazy thought, maybe even talk to ME.

**Boas Festas** Adriana

**NEWS** 

### Ferrari woo Bottas for 2016 race seat

The Scuderia have opened talks to replace Kimi Räikkönen with the highly rated Williams driver

#### Ferrari have approached

Williams racer Valtteri Bottas about driving for them from 2016 onwards.

The Scuderia are interested in taking on the 25-year-old to replace fellow Finn Kimi Räikkönen, whose contract expires at the end of next season. Sources say Ferrari have contacted Bottas, who expressed an interest in the move and agreed to talk in more detail at a later date.

Bottas's reputation has grown after a strong season at Williams, in which he finished fourth overall, scored six podiums and outperformed his experienced team-mate Felipe Massa.

Mercedes are also a possibility for Bottas in 2016 – but only if Lewis Hamilton fails to agree terms on a contract. But even if such a situation were to arise, Bottas would likely be up against Alonso for that seat.

Mercedes' preferred outcome is to retain Hamilton alongside Nico Rosberg, whose deal runs at least until the end of 2016. But the new world champion is expecting a battle over

money, believing Mercedes will want to reduce his current £20m retainer.

Mercedes can play hardball because they hold all the cards. Hamilton has a global appeal beyond anyone, with only Alonso coming close. But Mercedes have the best car and everyone wants to drive it.

Hamilton won't be too worried about Bottas, even though he knows Bottas would sign for not much more than 10 per cent of Hamilton's salary. He might well feel that Bottas is not yet a big enough name. But he does know Alonso is desperate to get into a Mercedes - and the Spaniard is said to be prepared to sign for as little as £13m - a figure Hamilton would be reluctant to accept.

Hamilton does have other options. He could swap with Alonso and return to McLaren, although he would have to rebuild bridges with Ron Dennis. Or he could partner Sebastian Vettel at Ferrari.

Bottas impressed with Williams in 2014 and has been earmarked as a future world champion



PHOTO: GLENN DUNBAR/LAT







## Alonso's team-mate not yet confirmed by McLaren

While other 2015 driver line-ups fall into place, McLaren remain unable to choose between Jenson Button and Kevin Magnussen

Fernando Alonso will drive for McLaren in 2015, sources have confirmed, although the identity of his team-mate was still a mystery as F1 Racing closed for press.

Alonso's contract is for two years with an option for a third, and was finalised some weeks ago. He is believed to have an exit clause at the end of 2015 if his performance does not reach a specified level. His salary will be a reputed £25.5m, which would make him the highest-paid driver on the grid by some margin.

McLaren claimed they would announce their line-up at the start of December. The team are leaning towards keeping Kevin Magnussen over Jenson Button, but chairman Ron Dennis has insisted on taking his time over the decision.

Complicating matters is the team's failure to secure new title sponsorship, combined with uncertainty over Dennis's future. Dennis has a strained relationship with fellow shareholder Mansour Ojjeh, and there are machinations in the

background that could change the ownership split of the team. As things stand, Dennis and Ojjeh own 25 per cent each, and Mumtalakat, the investment arm for the Kingdom of Bahrain, owns the remaining 50 per cent.

Elsewhere, Force India have re-signed Sergio Pérez, while Sauber's all-new line-up will comprise ex-Caterham Marcus Ericsson and Williams reserve Felipe Nasr. Ericsson and Nasr are supplying a reputed £31.6m between them for their drives, fulfilling Sauber's need for cash after their worst season ever. In 2014, Sauber finished tenth behind Marussia, with no points.

Sauber's decision spells the end of the Formula 1 careers of Adrian Sutil and Esteban Gutiérrez - at least for now.

McLaren are torn between veteran champion Button and highly rated rookie Magnussen



#### F1 STUFF



#### F1 2014 OFFICIAL SEASON REVIEW

Available on DVD (£16.99) and Blu-ray (£19.99) and likely to be very popular in Brackley, this official review features the highlights of 2014 distilled into four hours of dramatic action. www.dukevideo.com/F1



**GRAND PRIX POSTERS** 

Artist Alan Walsh has developed a series of stylish posters for races including Silverstone, Spa and Monaco. The retro designs come as A2 prints (£40; framed £90) or as limited edition framed pieces on A0 fine art rag (£650). www.grandprixartworks.com

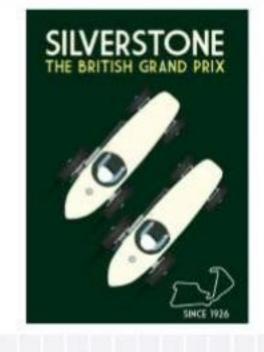


This year's F1 release by Codemasters is available on PC, PS3 and Xbox 360 (£24.99-£34.99). It includes turbocharged cars, and features all the tracks on the calendar, including the Red Bull Ring and Sochi. www.formula1-game.com



#### LOTUS F1 TEAM RAIN JACKET

This official Lotus F1 unisex rain jacket (£120) is made from ripstop nylon. It features vented under arm zip panels, while reflective Velcro strips ensure the predominantly black jacket will still be visible at night. www.lotusflteam.com



HOTOS: STEVEN TEE/LAT; CHARLES COATES/LAT



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nivagni, boots.com, Jan 2014

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## Join F1 Racing at the 25th Autosport International Show

Tickets are on sale for a star-studded celebration of all things motorsport at the NEC this January

With the teams locking themselves away in their factories to work on their new machines, January can seem like a quiet time for F1 fans. But you can get fired up for the new season with a trip to the 25th Autosport International show.

Held at the NEC in Birmingham, the annual event is a celebration of all forms of motorsport, and offers F1 fans an amazing opportunity to get up close to the sport in both its past and present forms.

The main attraction will be the *F1 Racing* grid, featuring cars from every 2015 team. A string of stars will also be interviewed on the grid about the season just gone and their thoughts on the coming year.

Meanwhile, the Autosport
Central Stage will host interviews
with big names of the sport. As
we went to press, this year's guest
list was yet to be finalised, but
confirmed names include Britain's
newest F1 racer, Will Stevens, plus
BBC F1 pundits David Coulthard
and Allan McNish.

Autosport International will also celebrate some notable anniversaries this year. Classic Team Lotus will mark the 50th anniversary of Jim Clark's second F1 championship by displaying his title-winning Lotus 33. Nigel Mansell's 1981 Lotus 87 will be on show in a special Historics display. And the 25th anniversary of Autosport International itself will be highlighted in a display from top photo agency LAT, documenting some of the star appearances over the years.

The show is also a great place to pick up F1 merchandise, with stands selling books, models, clothing and other memorabilia. And for those who want to show their support for Britain's newest world champion, Lewis Hamilton, Mercedes will also have a stand.

All tickets to the show include entry to the Live Action Arena, which will be hosted by Sky Sports F1's David Croft and will feature demo runs from cars from all genres of motorsport. Aspiring racers can also sample karting on a special indoor circuit.

#### Essential information

#### When:

10-11 January, 10am-6pm

#### Where:

The NEC Birmingham, located off Junction 6 of the M42 (postcode B40 1NT)

#### Tickets:

Standard advance tickets: adult £32, children aged 6-15 £21 (under six free). All tickets include entry to the Live Action Arena

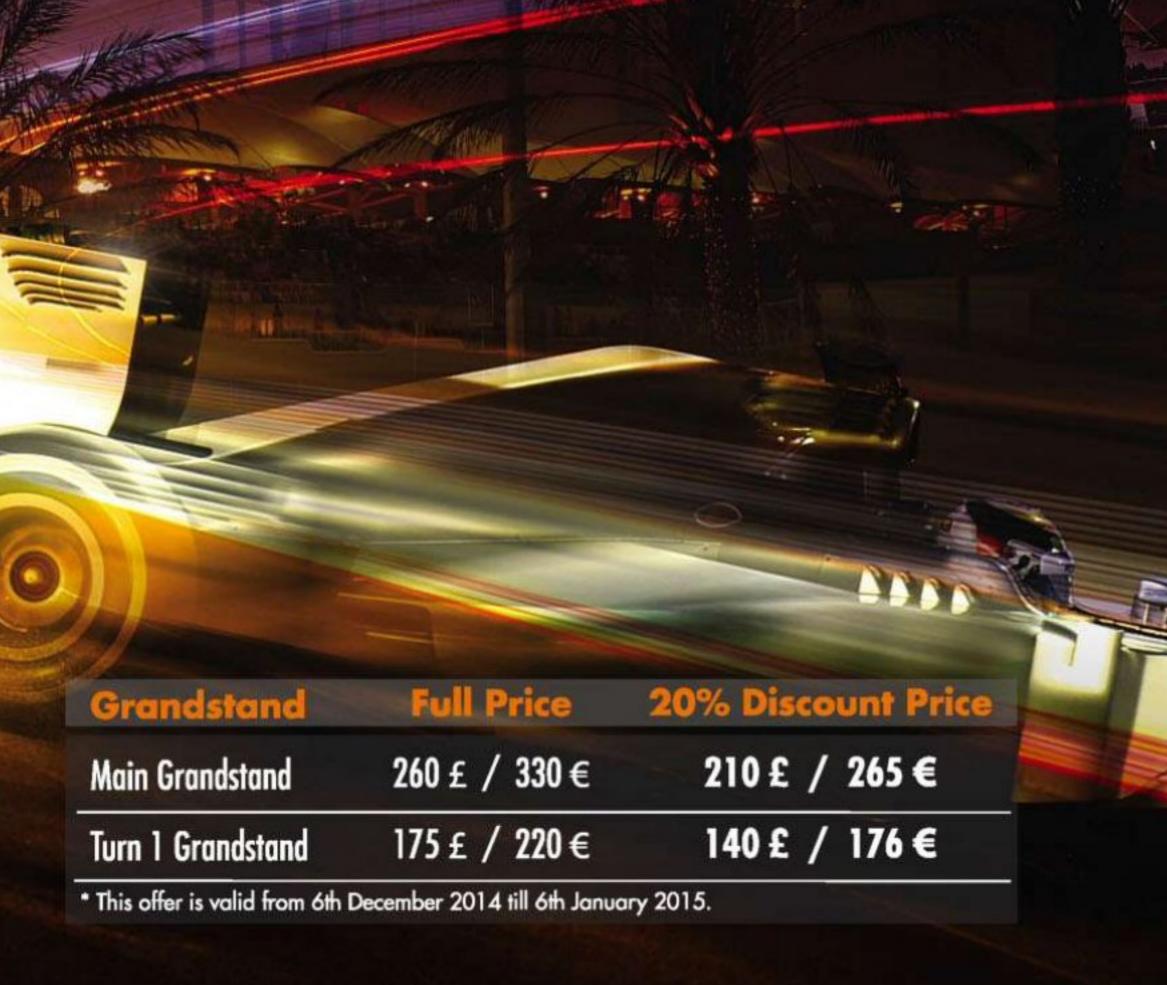
#### More information:

Visit the website at autosportinternational.com or call 0844 581 1420

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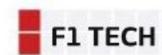


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## Pat Symonds explains THE SCIENCE BEHIND...

### Transmissions



#### What are the fundamentals of an F1 gearbox?

While we always refer to the transmission as a gearbox, in reality it performs many more functions than the name implies. As well as the obvious requirement to house the gears to multiply and transfer the torque from the power unit to the wheels, it also forms the structure of the rear of the car. In this capacity it has to bear the enormous suspension forces as well as the aerodynamic loads from the rear wing. It also forms part of the safety structure of the car, having to transmit loads from the rear crash attenuator, and it acts as an anchor for the rear wheel tethers.

#### Why does a car need a gearbox?

To be pedantic, a car doesn't need a gearbox. It is the poor torque characteristics of the normal piston engine that necessitate the fitting of a means of altering the speed ratio between the engine and the wheels. A car that is powered by a gas turbine engine or an electric motor could quite happily perform with a fixed ratio between motor speed and wheel speed.

The current heavily hybridised F1 power units have a much more flexible torque delivery than the previous V8 engines and are therefore much less reliant on having multiple gear ratios to keep them within a narrow power band.

## And yet 2014 saw quite a change, with gearboxes now required to have eight speeds with fixed ratios. What brought that about?

It seems incongruous that we are using more ratios with a more flexible engine but the real difference is that now, once we have selected the ratios, they have to remain the same all year. This means we have to use the same gear ratios around the streets of Monaco as we do at a high-speed circuit such as Monza. If not for that, we could quite happily run the hybrid cars with a five- or six-speed gearbox. The multiple gear ratios also help us with our fuel economy.

The idea of fixing the ratios for the whole season was to make cost savings. There was a time not so long ago when even though we had six-speed gearboxes we were choosing the gear ratios from an inventory of around 70 different sets. In later years this was reduced by regulation, but still, with first gear sets (which are machined directly onto the shafts) costing around £2,000 and even simple gear pairs costing around £700, it made sense to reduce the number available and make them last longer.

#### Are exotic materials used in the gearbox?

Not particularly. The casings are usually made of carbon fibre, although some are cast in either titanium or aluminium. Within the gearbox we have a significant amount of steel, a material not used much elsewhere in F1. This steel is of a very high quality and is generally double vacuum melted to remove impurities. The bearings must withstand high loads and high speeds so are usually made from very expensive ceramics.

#### How does an F1 transmission differ from the gearbox in a road car?

F1 brought the paddle shift to road cars and in the early days these controlled simple hydraulic cylinders, which operated a conventional shift mechanism. This soon changed to systems based on barrels similar to those that have been used on motorcycles for many years. This design gives a sequential shift, eliminating the chance of accidently selecting the wrong gear.

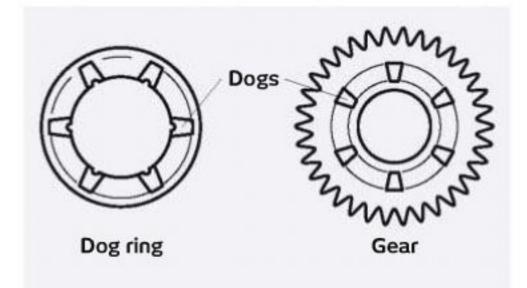
#### We hear teams talking about 'seamless shifts'. What does that mean?

With single barrel sequential shifting and good control systems it was possible to make extremely rapid shifts, in the order of tens of milliseconds. The shift though was still an interruption to the transmission of torque and hence reduced the acceleration of the car. A seamless shift is now used, which can change

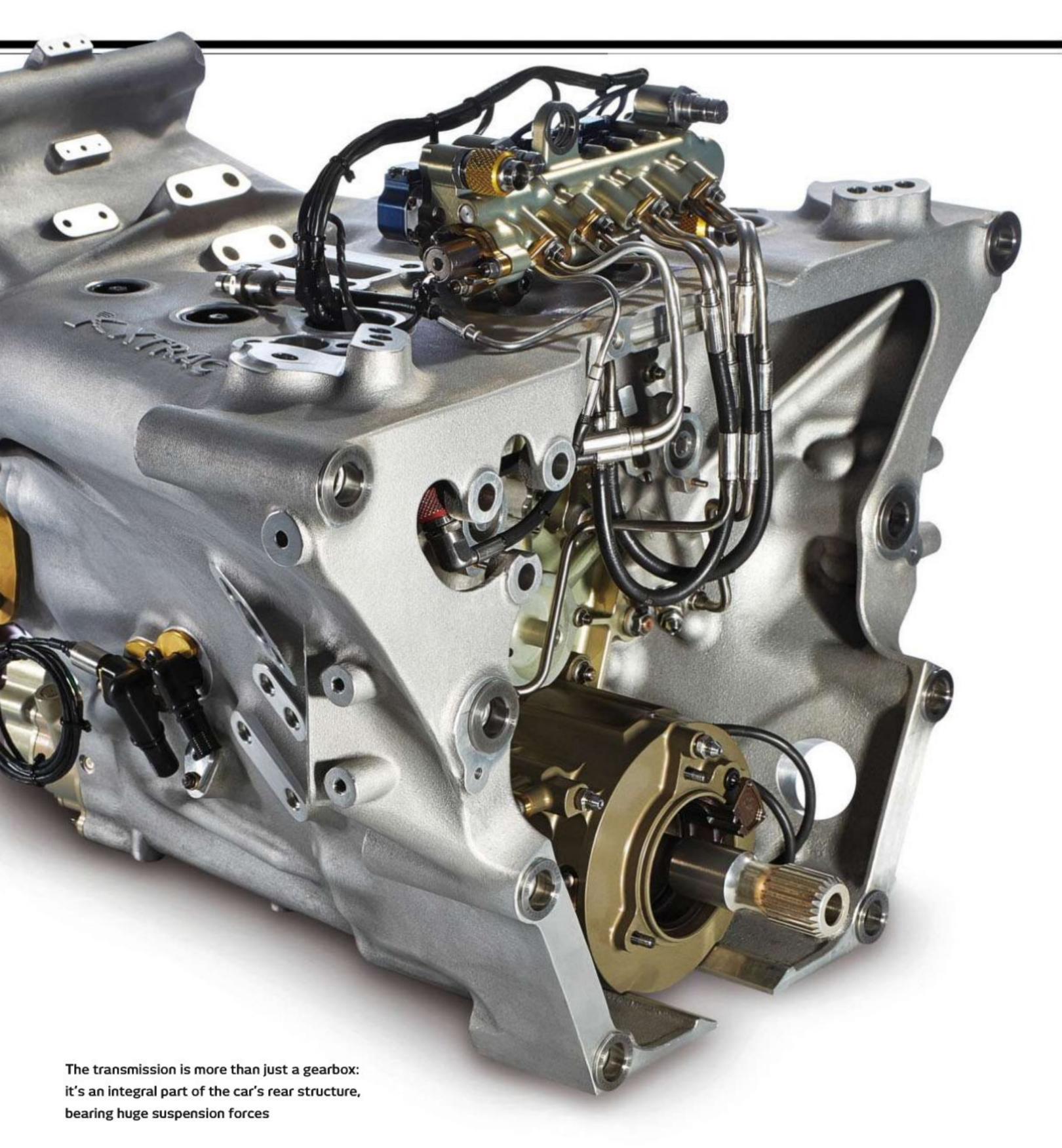
gears with no measurable interruption to torque transmission. This alone is worth around 0.3 seconds in lap time.

#### So how, in simple terms, does that work?

It isn't easy to explain but let's try. The system relies on having two shift barrels. One operates first, third, fifth and seventh gear and the other second, fourth, sixth and eighth. Now bear in mind that the gears are dog driven. This means that dogs, or protrusions on the side face of the gear, are what transmit the torque through the gears. The gears are keyed onto the input shaft on one side and the mating gear drives through



The dogs on the gear side face are what transmit the torque through the gears



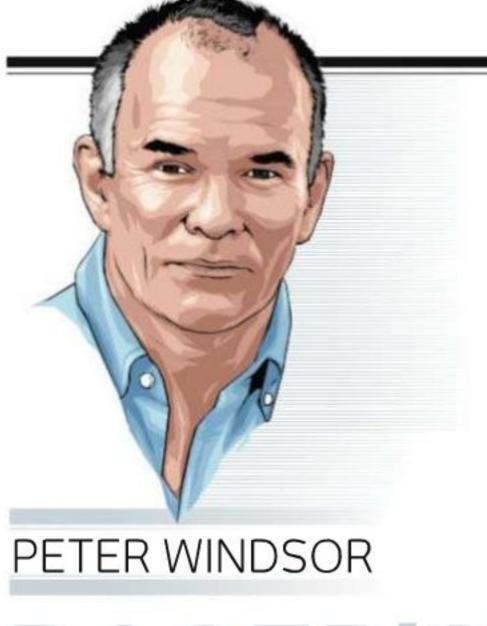
a keyed dog ring on the layshaft. The dogs on the dog ring are significantly narrower than the gap between the dogs on the gear side face. This means that it takes a finite time for the dog to move from the overrun side of its mating dog to the drive side. To achieve a seamless shift we essentially engage two gears at once by moving the separate barrels and rely on the fact that it takes this finite time (just a few milliseconds) before both gears would actually engage and lock the gearbox with disastrous results. In this very short period we have to disengage the previous drive gear to ensure we avoid such a catastrophe.

It sounds complex and, indeed, it is: it fundamentally depends on knowing the precise position of the dogs in a shaft. This is complicated by the fact that the shaft is not only spinning at many thousands of rpm but is also, in engineering terms, relatively flexible. It is this process of sensing and recording the position of each gear in the ECU that is known as 'learning' the gears, something you will often hear the

drivers and engineers referring to during their radio conversations.

#### It all sounds very expensive. Is it?

The simple answer is yes. Even today with long-life units, we would expect to spend at least £4million a year on gearboxes once the design, build and maintenance are all taken into account. A replacement gearbox costs us around £150,000 in parts alone. And, of course, the best never comes cheap.



## RACER'S EDGE

Authority, wit and intelligence from the voice of F1 Racing

y history teacher, Harry Nicholson, had no doubt: Governor Arthur Phillip, founding father of New South Wales, was a benevolent despot. "The best kind of leader," he would say, as we sat gazing at the yachts on Sydney harbour, "is an autocrat – an autocrat who cares about people and cares about his country. Governor Phillip was one such."

The phrase stayed with me, even as I toured Argentina in the 1970s, where the word 'despot' took on more sinister meanings. I'd sit at the Sheraton, chatting to Ken Tyrrell, the masts of the nearby trading ships swaying on the water. "What we need in F1," Ken would say, "is a dictator. None of this democracy — committee stuff — and none of this FIA blue-blazer rubbish. Look at NASCAR. It's all Bill France. If he doesn't like something he changes it. He gets on with it. That's what we need in F1. Someone who can take the sport by the scruff of the neck and make it work."

I haven't always been a fan of Bernie
Ecclestone's methods; there's never been any
doubt, though, about their effectiveness. It was
at Hockenheim, in about 1979, that I watched
wide-eyed as one of the FOCA (Formula One
Constructors' Association) guys dragged a
screaming Brazilian cameraman out of the
paddock, heels of said TV man scraping the

## The failings of F1 democracy

ground as he tried to explain that his rights sticker had been soaked away in the rain. For an F1 paddock hitherto used to white wine at the Elf motorhome or chocolate brownies at Goodyear, this was a shock.

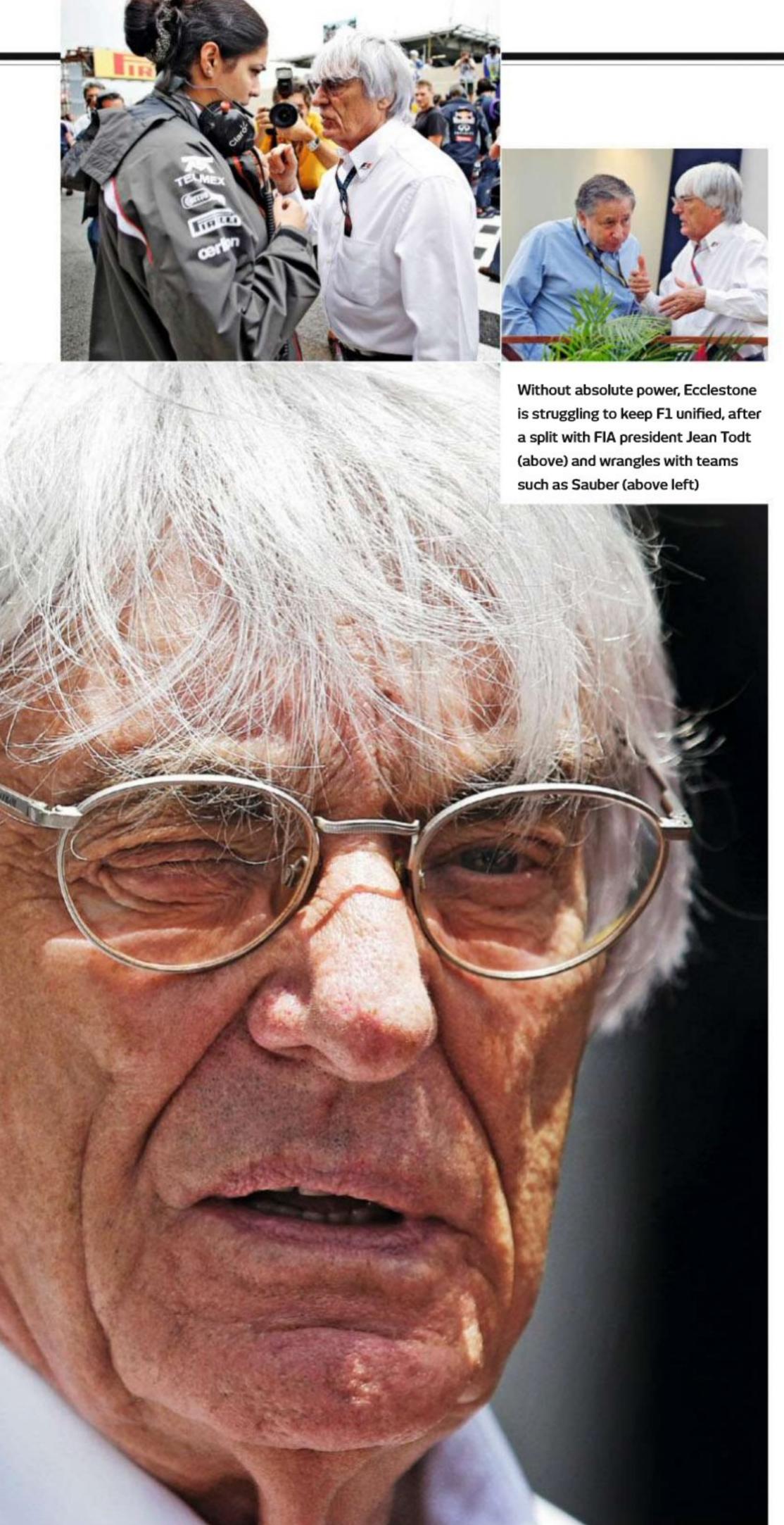
From there it was but a short step towards total control. Bernard ran the teams, the TV and the circuits, Max Mosley the FIA. The nursery was theirs - and the F1 team boys loved the milk they sucked from the bottles. The bank accounts of Frank and Ron jumped from the red to the black; and the ramparts were strengthened specifically for the protection of the incumbents: from now on, you had to build and run two cars in every round if you wanted to be a race team. The dross - and the next generation of Franks and Rons were expunged. F1 had become the world's most expensive private club. Its currency? The FOCA (later to be FOM) paddock pass.

From my perspective the despots never became benevolent in the Governor Phillip sense, but there was no doubting the results of the autocracy. TV rights and government race underwriting became the substance of the F1 cake; tobacco money was its icing.

I spent many F1 years wondering whether I had got it right. Maybe the despots, as personified by Bernard and Max, supplied the answers. The evidence was in the bank accounts of F1's major players and the global success of the sport. We were all horrified when Bernie doubled the admission prices at Jerez when the Spanish GP was in its death throes... but the gamble worked. And who else was out there all those years, underwriting races like Brazil and Belgium and funding the bulk of the TV coverage?

We have had a chance in recent years to come to a conclusion; we've had a taste, in the 21st century, of the other side. For Bernie couldn't resist the temptation in 2000 to sell the rights to "all that he had created" to a German 'banker' named Leo

"CVC do not appear to be easily led. Bernie is their representative, but he has to answer to a board"



Kirsch. Mr E made €2bn overnight. The plan then was for the control of F1 still to remain with the despots. Then Kirsch got arrested and the legalities spiralled.

The last gasp was Ecclestone's backing of the Todt FIA presidency. Surely, after all that had been done for Ferrari, the Mosley-to-Todt transition would be seamless? No. Early in his term, Todt felt exposed by the political drama in Bahrain; that wouldn't have happened, we all knew, if Max had been president.

Far from being a double act, Ecclestone and Todt went their separate ways. Todt wanted a hybrid V6 turbo engine; Ecclestone wanted status quo. Todt likes the new engine noise; Ecclestone hates it. Ecclestone wants nothing to detract from F1; Todt sold the commercial rights to Formula E. Todt promised an FIA F1 'envoy' at every race; that has never happened. I daren't ask where the two of them stand on cost-saving or third cars.

As a double-whammy, the latest owners of the F1 rights – CVC – do not appear to be easily led. Bernie is still their representative. but now he has to answer to a board. And the teams, as a consequence, are now tied to a transparent, democratic rule-making/voting system that inevitably results in the lowest common denominator. No longer, in other words, can Bernie chair a meeting, take Ferrari into one room, Frank and Ron into another, tell everyone to shut up and then finish the day with the decision that he – Mr E – knows will be best for their collective bank balances.

Now we have lots of silly ideas from team people who, at best, are acting out of self-interest and, at worst, have no serious knowledge of what F1 is all about. Sauber are a good example: their complaints about money have been endless in 2014 but how many times do you hear them taking responsibility for "cashing in" to BMW when it suited them (Frank Williams' words, not mine)? "Can't wait for Ecclestone to go," scream the new guard. "Then F1 can move upwards."

We should be careful of that for which we wish because, on balance, old Harry Nicholson was right. Today's F1 – the nearest it's been to a democracy since 1979 – is a mess. I've missed the benevolence, but there's no doubt that the despotism, on its own, was better than the bureaucratic mire of today. The shame, I guess, is that Bernie sold out when he did because it's clear that he no longer runs the zoo as he used to be able to, silly comments about the internet, social media and the next generation of viewers notwithstanding.

And that's a worry, because the door to the monkey pen is now half-open.





**EMERSON FITTIPALDI** 

## SPEED KING

The double world champion writes exclusively for F1 Racing

or me, it's very important that F1 has a large and healthy grid of cars, because from there the virtues flow: more excitement for the spectators, and more chances for young drivers and engineers to push through and make their mark. So it's been disappointing to see a year when we've had close, competitive and exciting racing end on a mixed note. On the one hand, an exciting title showdown between two great drivers, and on the other two teams shuttering their garage doors and letting staff go.

Regular readers will know I'm a fan of the new rules the FIA brought in this year. As well as making F1 more road-car-relevant, they've provided a platform for close and exciting racing. This is a great story, yet time and again we've been distracted by complaints that the engines aren't loud enough, that spectator numbers are down, that the tyres are too limiting, and so on. There's been too much emphasis on the negatives – the double-points rule, for instance, was much maligned even though it set up a dramatic season finale.

What's clear from the struggles of Marussia and Caterham – and the other midfield teams who have indicated they're financially stretched – is that it costs too much to run a small team. We must find a way to reduce costs

## How can we make F1 small-team friendly?

to a sensible level and create an environment where more teams can be competitive.

That will be hard to achieve, because F1
needs to stay at the pinnacle of technology
– which means it's hungry for investment.
Any team boss will tell you that unless you're
pushing forwards with car development, your
competitiveness goes backwards. To be what
it is, to command the audience that it does, F1
needs what economists call 'barriers to entry'
– but in my opinion these barriers shouldn't
be as high as they are at the moment.

What should we do, then? There's been talk of boosting grid numbers by having some teams run three cars. This is unpopular, and not only with the smaller teams who feel

they're being edged out of the sport. Some of those who'd be called upon to field a third car don't like the idea either, because at the moment that's a recipe for an all-Mercedes podium.

I hear Bernie Ecclestone has suggested a two-tier system, with five or so manufacturer teams running current cars and another five or more customers with 'Super GP2' cars from a single manufacturer. It's not very F1, and in any case GP2 is already very expensive – just look at Felix Rosenqvist, the guy who's just won

the Macau GP. He's talking about racing in Japan, in Super Formula, because he can't put a budget together to race in GP2 or F1.

Red Bull's Christian Horner has suggested that F1 should go back to running the old V8 engines because they're less expensive. I don't agree with that entirely, but what if we combined it with the two-tier idea?

My ideal would be six constructors and six private teams running same-year cars, one per constructor. Points for every car in the constructors' championship and no testing, to incentivise the constructor to give the teams the real thing and even test the new parts in their cars from time to time. Cost would be between the \$4-5m that GP2 costs and the \$100m+ for the current back markers. And good racing through the field.

You could have manufacturer teams running hybrid powertrains, while privateers run V8 engines. The trick would be to balance the performance, but in the modern age we have a rich resource of data that can help us arrive at that balance. You could have restrictor plates, like the Toro Rosso that ran with the three-litre engine in 2006. Or, more imaginatively you could balance the performance by giving privateer cars a lower minimum weight. This would make up for the fact that they'll have to



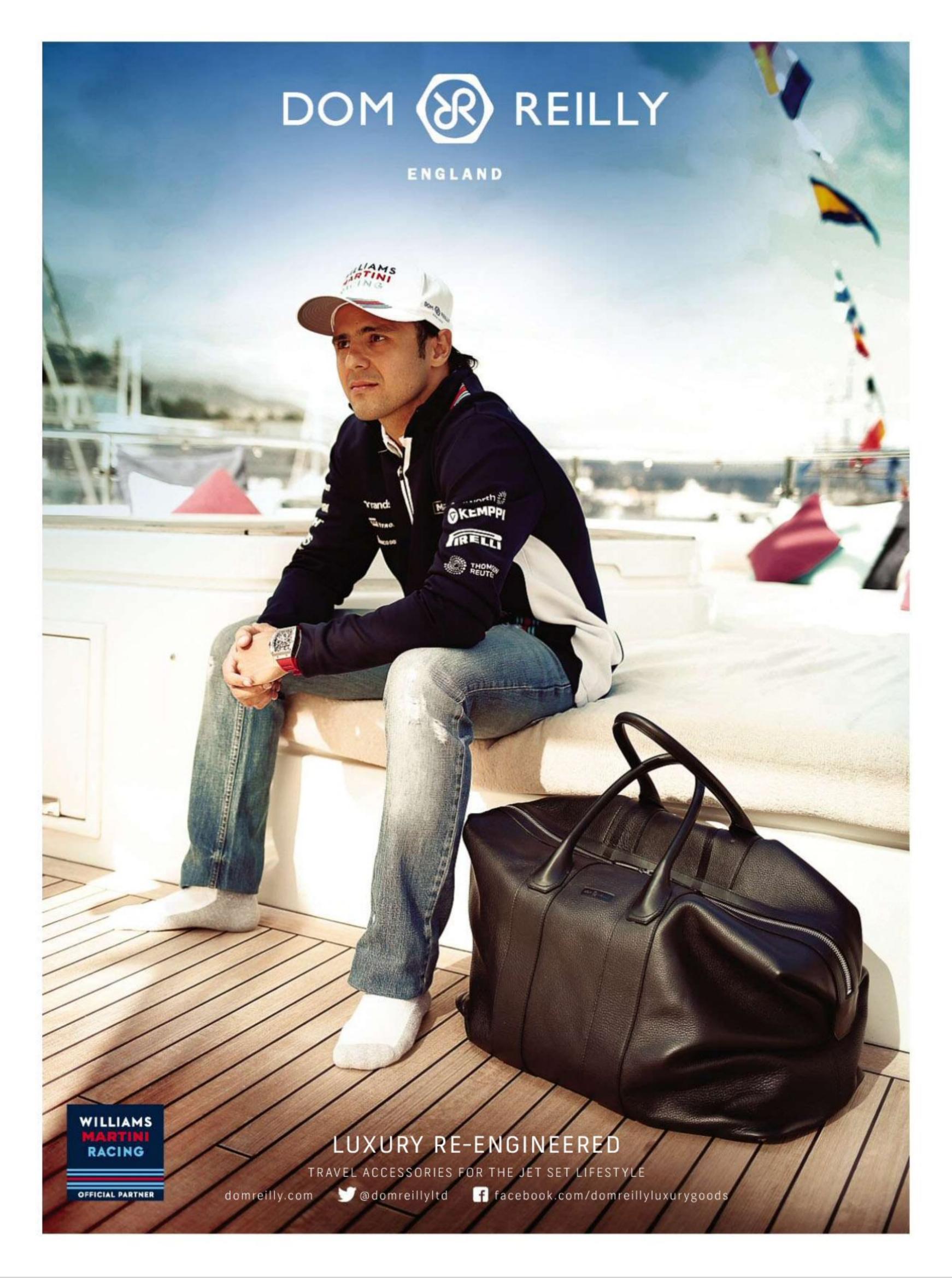
Crowdfunding helped get a struggling Caterham onto the grid in Abu Dhabi, but can this work as a long-term solution?

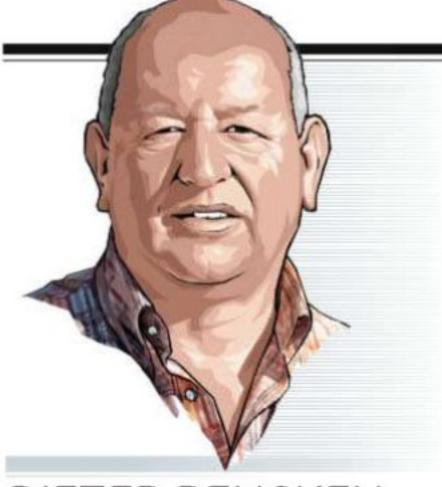
carry more fuel at the start because they're less efficient. Finding the right balance would be hard, and we might not get it right first time, but it would be worth it to preserve F1's future.

On the commercial side, it was interesting to see Caterham launch a crowdfunding model to get to Abu Dhabi. I hope this model works and generates some benefit for those who invest. Similarly, it was fantastic to see that Project Brabham have exceeded their target by offering a range of incentives to investors: £1 gets you the satisfaction of having contributed, £5,500 gets you a pitpass at Le Mans as part of the team with special engineering tasks. That's the kind of thing that really gets fans involved.

Besides my pleasure at seeing a great name return to motorsport, it's good to see a new enterprise succeed by thinking differently.

"What's clear from Marussia and Caterham is that it costs too much to run a small team"





DIETER RENCKEN

## POWER PLAY

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

f all the issues faced by F1 – ranging from grossly inequitable payments for identical championship results to a Strategy Group that blocks crucial issues through self-serving votes and grids perilously close to the minimum 16-car level, the greatest danger is arguably the expedient U-turning by F1's custodians amid vociferous denial that the sport is in crisis.

These abrupt about-faces, often occurring during consecutive TV interviews with rival broadcasters, simply confirm that this once proud and independent sport has lost its way under the commercial control of a venture-capital firm, whose short-term mission appears to be to milk 'their' property for all its worth.

The mid-grid cash crisis – long predicted by this column – which exploded in Austin after the simultaneous administrations of Marussia and Caterham, provides a perfect example of F1's about-turns in the face of controversy.

Having accepted the crisis "is probably my fault" and admitting he knows "what's wrong, but not how to fix it", Formula One Management CEO Bernie Ecclestone requested that mid-gridders Lotus, Force India and Sauber present proposals for more equitable revenue distribution, hinting that CVC Capital Partners would match the sum.

## Help for the midfield offered then denied

The independents did as bid, targeting the forfeited revenues of the two 'fallen' teams, and headed for Brazil, unaware that Ecclestone had seemingly not cleared the full implications (potentially up to £200m/pa) with CVC co-chairman Donald Mackenzie.

Imagine their shock when they arrived in São Paulo to be told that the solution to the crisis lay not in a fairer financial playing field, that would allow them to race on level terms against five top teams who enjoy premium pay-outs varying from £75m to a fifth of that, but in reductions to their own budgets.

This notwithstanding the Strategy Group in March 2014 blocking cost caps ahead of ratification by the FIA's World Motorsport Council; notwithstanding calendar expansion; and notwithstanding the costs of hybrid power units, which have seen engine costs double.

Add in a backdrop of falling live audiences/reduced global TV interest with a commensurate reduction in sponsor interest and renegotiated race promoter contracts, whose price tags increasingly head south – further reducing F1's 'pot' – and it is little wonder the trio face bleak futures.

Worse, the independent trio were then allegedly informed that two primary teams – Red Bull and Ferrari – would be called upon to enter third cars in 2015 to bolster grids

Lotus's Gerard Lopez was one of three midfield team bosses tasked with seeking Ecclestone's help



"Mid-gridders were told the solution to the cash crisis lay in reductions to their own budgets"

to ensure F1 does not breach its covenants, with full-scale introduction of customer cars to follow in 2016: moves that would totally destroy their business models.

These suggestions were immediately denied by said teams, despite such clauses existing in their contracts, and Ecclestone switched tack, alluding to a sort of 'Super GP2' to bolster grids, which would also decimate the independents. That such unlikely rule changes, including the possible switch to V8s, would require ratification by a sceptical FIA (by 1 March) seemed not to faze the 84-year-old.

The engine situation is equally farcical:
As soon as the energy-efficient engines were introduced in January, Bernie Ecclestone and Ferrari's then president Luca Di Montezemolo immediately ridiculed the complex 'green' power units and called for a return to gasguzzling V8 power, before flip-flopping in the face of heavy criticism.

Was that the end of it? No. The saga rumbled on, rearing its head in Austin, where the lack of noise was blamed for a drop in crowds – when the major contributing factor was arguably the familial significance of the USA's Halloween celebrations, which appeared lost on FOM when they devised the 2014 calendar.

Not content with inflicting damage on the efforts and costs (£500m plus) of upwards of 1,000 engineers spread over four major motor manufacturers, the issue was revisited in Brazil during ongoing disputes over engine homologation tokens and 'unfreezes'.

In a masterclass of U-turning, the issue has now been subject to four different meetings at successive GPs, resulting in as many nonresolutions. Then, at Interlagos, Ecclestone and others, including Red Bull team boss Christian Horner, argued that F1 should revert to V8 units, which have their roots in last century's V10s. The regulatory and operational implications were conveniently overlooked.

The costs of introducing such knee-jerk regulations to avert Formula 1's financial crisis would be astronomical. It would be cheaper to level the playing field by redistributing F1's revenues, but that would have the independents snapping closer to the heels of the majors. Hence the clumsy flip-flops. 

1. \*\*The costs of introducing such knee-jerk regulations\*\*

The costs of introducing such k

## Now that was a car

## No. 34 The Ferrari 312T3

Its flat-12 grunt wasn't quite enough to take on Lotus

**Ferrari's 312T2** had been good enough for Niki Lauda to *almost* win the 1976 drivers' title, despite missing several races after his terrible Nürburgring accident. The following season he built up an unassailable lead with three races to go, declared the car "useless and finished", then quit the team after the US Grand Prix, having secretly signed for Brabham that summer.

Enzo was nothing if not pragmatic — after all, he had drafted in Carlos Reutemann to replace Lauda in 1976 while Lauda lay gravely injured in hospital. Even before his star driver dropped the bombshell that he was leaving, Enzo had noticed a promising young talent who, inexplicably, McLaren had let slip through their fingers after he'd made his debut in their third car at Silverstone: Gilles Villeneuve. At the same time Lauda was agreeing terms with Bernie Ecclestone at Brabham, Villeneuve was visiting the Old Man at Maranello.

So Ferrari had a new driver for the last two races of 1977. And the team had new tyres for 1978 because Enzo felt Goodyear were giving Lotus too much attention and he wanted more exclusivity. But they also needed a new car because the 312T2 was, indeed, outclassed.

Chief engineer Mauro Forghieri completely revised the car, and the 312T3 was ready for the third race of 1978, in South Africa. Outwardly similar to its predecessor, the T3's bodywork had been finessed in Pininfarina's windtunnel and the monocoque was completely new – as was the suspension geometry, to make the most of the new Michelin radial tyres. Up front, Forghieri changed from a rocker-arm setup to a

rigid double-wishbone arrangement; at the rear he rearranged the mounting points on the casing of the transverse gearbox.

The car's debut was a crushing disappointment: Villeneuve's engine blew up and then Reutemann spun off on the oil it deposited on the circuit. Villeneuve crashed out of the lead at the next race, at Long Beach, but Reutemann held on for victory. Reutemann could have done it again at Monaco, but made a mess of the start from pole position and collided with James Hunt.

Still, the car was quick enough — until the sixth round of the season. Lotus then abruptly moved the game on with their 79, as featured in *F1 Racing* last month. Its innovative aerodynamics put Ferrari's in the shade — and, since the Ferrari engine was a flat-12, there was no way of effectively copying the 79's sidepod-mounted venturi: the cylinder heads would block the airflow.

When Ferrari picked the right tyre compounds, the sheer grunt of their flat-12 would usually enable Reutemann or Villeneuve to parlay their T3s into best-of-the-rest positions — higher still when the Lotus cars broke. Reutemann won at Brands Hatch and Watkins Glen, finished third in the championship, and promptly departed for Lotus.

Villeneuve had a ragged year, prompting calls from the Italian press for him to be fired. But by season's end, they and the fans, had grown enraptured by his aggression behind the wheel. He closed the season with victory at the new home of the Canadian GP, Montréal, in chassis number 34, the car featured here. A legend was born.



WORDS STUART CODLING PICTURES JAMES MANN









#### **FERRARI 312T3 TECH SPEC**



**Engine** Layout

**Brakes Fuel** 

Gearbox Weight

**Notable drivers** 

Ferrari

3.0-litre flat-12

Brembo

Agip

5-speed manual

580kg

Carlos Reutemann Gilles Villeneuve





## NICO VERSUS LEWIS





## in their own words...

From the opening day of pre-season testing, it was clear that the 2014 drivers' championship would be slugged out between Mercedes duellists Lewis Hamilton and Nico Rosberg. With the pair free to fight, and both desperate to capitalise on a dominant machine, flashpoints were inevitable and tensions soon soared. This is the tale of an unforgettable F1 title battle, as seen through the eyes of the main men – and in their own words.

**COMPILED BY JAMES ATTWOOD** 



A Rosberg: 1st 25pts
W Hamilton: DNF, power unit 0pts

Rosberg: "I had an unbelievably quick car. It was such a pleasure to drive, such a great car."

Hamilton: "I'll try to be positive and put my focus on the next race. This is a new era; you can't expect us to all finish."



Rosberg: 2nd 43pts
Hamilton: 1st 25pts

Hamilton: "I'm incredibly happy. It's quite special to get a one two finish. My eighth year here, and I finally got that win."

Rosberg: "I was trying to chase Lewis, but he was just too quick."

#### Bahrain Grand Prix 6 April

■ Rosberg: 2nd 61pts
■ Hamilton: 1st 50pts

Hamilton: "Winning the race is the greatest thing, but deep down inside I didn't have the pace. A lot of the advantages I had in the last race, Nico found when we came here. He did better than me."

Rosberg: "I strongly dislike coming second to Lewis, but it was the most exciting race I've ever done."

"Imagine if we had imposed team orders from lap 2 or something – what a terrible thing that would be for F1 and for the philosophy of Mercedes in motorsport"



Paddy Lowe, Mercedes executive director (technical)

## Chinese Grand Prix

■ Rosberg: 2nd 79pts
■ Hamilton: 1st 75pts

Hamilton: "This team is a on a roll, that's for sure. We're going to keep pushing, we're going to keep moving forwards."

Toto Wolff (Mercedes motorsport boss): "Nico lost telemetry before the formation lap. It was like driving the car blind, and he was really doing an awesome job."

Rosberg: "The whole weekend was really bad. It went completely wrong in so many respects."

## Spanish Grand Prix

▲ Hamilton: 1st 100pts
▼ Rosberg: 2nd 97pts

Hamilton: "Nico was very, very close to taking it, and I don't like that, being in that position. I would like to say it was no problem and under control, but it wasn't. I feel it shouldn't have been that close."

Rosberg: "On the last lap I could have gone for a kamikaze move [on Hamilton], but it wouldn't have worked. I wasn't close enough – but with one more lap I would have been."

#### Monaco Grand Prix 25 May

▲ Rosberg: 1st 122pts
▼ Hamilton: 2nd 118pts

Rosberg (after qualifying): "I tried to make it, but it turned out I was going to hit the tyre wall. It was close but I managed to go into the escape road. I tried to push a bit more and went over the edge."

Hamilton: "I should have known that was going to happen. I don't know if Senna and Prost talked about it, but I quite liked the way Senna dealt with that so I'll take a page out of his book."

**Toto Wolff:** "Nico missed his braking and he took the exit. There is no more to add. I know you guys want a spicy, controversial story, but it's all bullshit."

#### Niki Lauda (Mercedes non-executive director):

"They were arguing about it, that Nico did it deliberately, but the stewards cleared him...We had a race incident before in Barcelona where Lewis [changed his engine map] and then we said 'Hey, this is not correct!' and he said 'I'm sorry."' Hamilton: "In the last race it was an engine mode that didn't affect the outcome of the race. We were told we had to stay in a certain mode. Nico changed engine mode in Bahrain and I did it in Barcelona." Rosberg (after the race): "It's a special win, definitely, because Lewis has had the momentum and I really needed to try to break that momentum." Hamilton: "We're fierce competitors, so you can never expect us to be best friends and compete as fiercely as we do. But we will remain respectful, I think. Or I will try to remain respectful."

## Canadian Grand Prix 8 June

■ Rosberg: 2nd 140pts
■ Hamilton: DNF, brakes 118pts

Rosberg: "When you lose ERS it doesn't harvest any more and then any braking is done by rear braking, so that is why the rear brakes overheated. I was able to hold off the pack behind me until two laps before the end."

Hamilton: "We had some brake issues in the second stint, but we thought we would be able to manage it. I got him in the stop and was thinking 'Finally, wow, what an amazing feeling.' Then straight away the brakes failed. That's now two DNFs I've had and none for Nico."

Daniel Ricciardo (race winner): "I'm in a bit of shock. We saw Hamilton had a problem and then we saw Rosberg was slow on the straights."





Rosberg led for most of the year in the points, but in terms of pace, Hamilton (leading here) had the edge, taking 11 wins to Rosberg's five

#### Austrian Grand Prix 22 June

■ Rosberg: 1st 165pts
■ Hamilton: 2nd 136pts

Rosberg: "It wasn't easy, trying to manage things that were a bit on the limit on the car."

Hamilton: "It would have been great if I'd started

where I should have started. To get from ninth [on the grid] to second and be pressuring Nico at the end shows the pace that I had this weekend."

## British Grand Prix 6 July

■ Rosberg: DNF, gearbox 165pts
■ Hamilton: 1st 161pts

Hamilton (after qualifying): "I made a mistake and pulled out of the lap when I should have kept going. It was my decision, a bad call."

Rosberg: "At the moment the momentum is on my side, and I have to make the most of it."

Hamilton (after the race): "I came into this weekend saying it would be great if the fans could put the wind in my sails to regain the momentum. I have been chasing all year after losing points in the first race; it has been very, very difficult. Now I feel we are back and close. Yesterday was a kick in the balls and I had to pick myself up."

Rosberg: "I can do some pretty radical things to keep this gearbox alive. But since it was mechanical, there wasn't anything that could be done."

#### German Grand Prix 20 July

■ Rosberg: 1st 190pts
■ Hamilton: 3rd 176pts

Hamilton (after qualifying): "I braked in the same place as I have been and I suddenly lost brake pressure. The failure spun the car into the wall."

Rosberg (after the race): "Getting married was the best feeling. But everything has been special. Many positive things happened in the last two weeks, and this weekend with pole and the win."

Hamilton: "It was very hard to get through the pack safely. I had a little bit of a collision with Jenson [Button]. I honestly thought he was opening the door to let me past. My bad on judgement there."

Jenson Button: "Why would we let anyone through? It's strange: when the car's so much quicker, you'd think he wouldn't get into so many fights."

Tension escalated between Hamilton and Rosberg over the course of 2014, but there were moments of levity – such as this podium celebration in Bahrain

### Hungarian Grand Prix

■ Rosberg: 4th 202pts
■ Hamilton: 3rd 191pts

Toto Wolff (following Hamilton's engine failure in qualifying): "We must solve the reliability problems. This is not something we can accept."

Peter Bonnington (Hamilton's race engineer, over the team radio): "Okay Lewis, if you let Nico past this lap, please. Let Nico past on the main start/ finish straight."

Hamilton (team radio): "I'm not slowing down for Nico. If he can get close and overtake, then he can overtake."

Rosberg (team radio): "Why is he not letting me through?"

Rosberg (after the race): "I didn't want [team orders], it was the team that informed me he was going to let me past. That was it."

Hamilton: "If I let him past then he could pull away and come back at me later. I was very, very shocked that the team would ask me to do that."

Niki Lauda: "If [Nico] had been in the DRS position, [Lewis] would have let him by. But Nico never got that close. Therefore I do understand that Lewis said 'Why?' He is fighting for the championship. From my point of view Lewis was right."

## Belgian Grand Prix 24 August

■ Rosberg: 2nd 220pts
■ Hamilton: DNF, collision damage 191pts

Hamilton: "I didn't understand what happened.
I felt a big thud at the rear. I gave the guy space."
Rosberg: "I have seen it and I don't want to say

- but definitely, as the stewards judged it a racing incident, that is the way one can describe it."
Hamilton: "We had a meeting about it and he basically said he did it on purpose. He said he could have avoided it, but he didn't want to.
He basically said: 'I did it to prove a point'."
Rosberg (on post-race website video): "I've been told what Lewis said in the press. He stated his version of the events. All I can say is that my view of the event is very different."

Daniel Ricciardo (race winner, asked about his title hopes): "If I am within 50 points coming into Abu Dhabi, then yeah. While it is still mathematically possible, we will keep fighting." Mercedes team statement, 29 August: "During [a post-event] meeting, Nico acknowledged his



responsibility for the contact that occurred on lap 2 of the Belgian Grand Prix and apologised for this error of judgement. Suitable disciplinary measures have been taken... another such incident will not be tolerated."

Rosberg (on Facebook): "I have already expressed my regret about the incident but, after meeting

with Toto, Paddy and Lewis, I wish to go a step further and describe it as an error of judgement on my part. For that error of judgement, I apologise to Lewis and the team."



■ Rosberg: 2nd 238pts
■ Hamilton: 1st 216pts

Rosberg: "It was the other guy's fault... just kidding!
Lewis was quick, coming from behind. I needed to
up my pace and as a result just made a mistake."

Hamilton: "I was pushing to overtake him, that
meant it opens up doors for everything."







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Subject to official confirmation by the FIA of the results of the 2014 FIA Formula One World Championship.

Rosberg led Hamilton in Austin, but slipped back after making an error with his ERS. Lewis won by 4.3 seconds, extending his lead to 24 points



## US Grand Prix 2 November

■ Hamilton: 1st 316pts
■ Rosberg: 2nd 292pts

Abu Dhabi Grand Prix 23 November

 ★ Hamilton: 1st
 384pts

 ■ Rosberg: 14th
 317pts

## Singapore Grand Prix 21 September

 ▲ Hamilton: 1st
 241pts

 ▼ Rosberg: DNF, electrics
 238pts

Hamilton: "I was looking for that clean weekend and this has been it. Momentum is not something I generally think about because it can be snatched away. Look at Nico, he has had good results and momentum from that but one DNF changes things."

Rosberg: "The steering wheel didn't work and so the whole car wasn't working. We've had quite a few [reliability issues] this year."

Toto Wolff: "We don't want to have the spin in there that the championship was decided because one car let the driver down. We need to work out what we can do to prevent reliability problems."



■ Hamilton: 1st 266pts
■ Rosberg: 2nd 256pts

Hamilton: "I was able to get quite close to Nico in the last corner and I think he had a small oversteer moment. The DRS enabled me to get alongside. I was fairly confident with the balance of the car, so I put it there and stuck it out. It was a great result for the team, but we're all very concerned about our colleague Jules Bianchi."

Rosberg: "Lewis did a better job and deserved to win the race."

## Russian Grand Prix 12 October

■ Hamilton: 1st 291pts
■ Rosberg: 2nd 274pts

Hamilton: "I'm just so proud to have worked with this great team, to get the first constructors' championship for Mercedes-Benz. Once I was out in the lead I was really just having to control [the race]."

Rosberg: "It was just a mistake on my side [at the first corner]. I braked too late, that's it. Very unnecessary because it was my corner." Hamilton: "There was a big headwind into
Turn 12, and I was waiting for the moment to be
just close enough to throw it up the inside. You
have to decide how much of a risk you're willing to
take. It's not just about starting from pole. Races
like this feel even better; you have to outsmart the
guy ahead of you."

Rosberg: "I made a mistake, I used the wrong thing to get more ERS. When I saw him coming I went for the extra boost but never got it. With the switch [I used] there is a delay, so I never got the extra ERS."



■ Hamilton: 2nd 334pts
■ Rosberg: 1st 317pts

Rosberg: "I learned from Austin and did better, so that's a big step in the right direction."

Hamilton: "I think ultimately [my spin] cost me the win. I was much quicker up until that point. I made a mistake. No one's fault but mine."

Rosberg: "It's good to see [Hamilton's spin], and I hope that it's slightly dented his confidence. I need to win in Abu Dhabi and he needs to help me out."

Hamilton: "I can't really explain how much this means. It means even more than the first one. It feels like it's the first time. I feel so blessed. It was probably the best start I ever had. I knew from then on, straight away, that I was in the lead. Obviously going into the race I had a couple of different options of how to approach the race. If I was behind then we would see how it goes until the first stop, but if I was ahead I knew I had to really, really race."

Toto Wolff: "We knew it was going to be a challenge to stay neutral between the drivers. That is over and it's a relief. Lewis won 11 races and deserved to be champion. The bittersweet part is that we worked so hard to make the car reliable to enable the boys to fight it out on track. We let [Nico] down a little bit."

"I'm very disappointed. It didn't work out, but my race didn't make a difference because Lewis won fair and square. I won't dwell on my [ERS issue] – he deserved to win today and he deserved to win the championship. He was the best driver on the grid this year" Nico Rosberg





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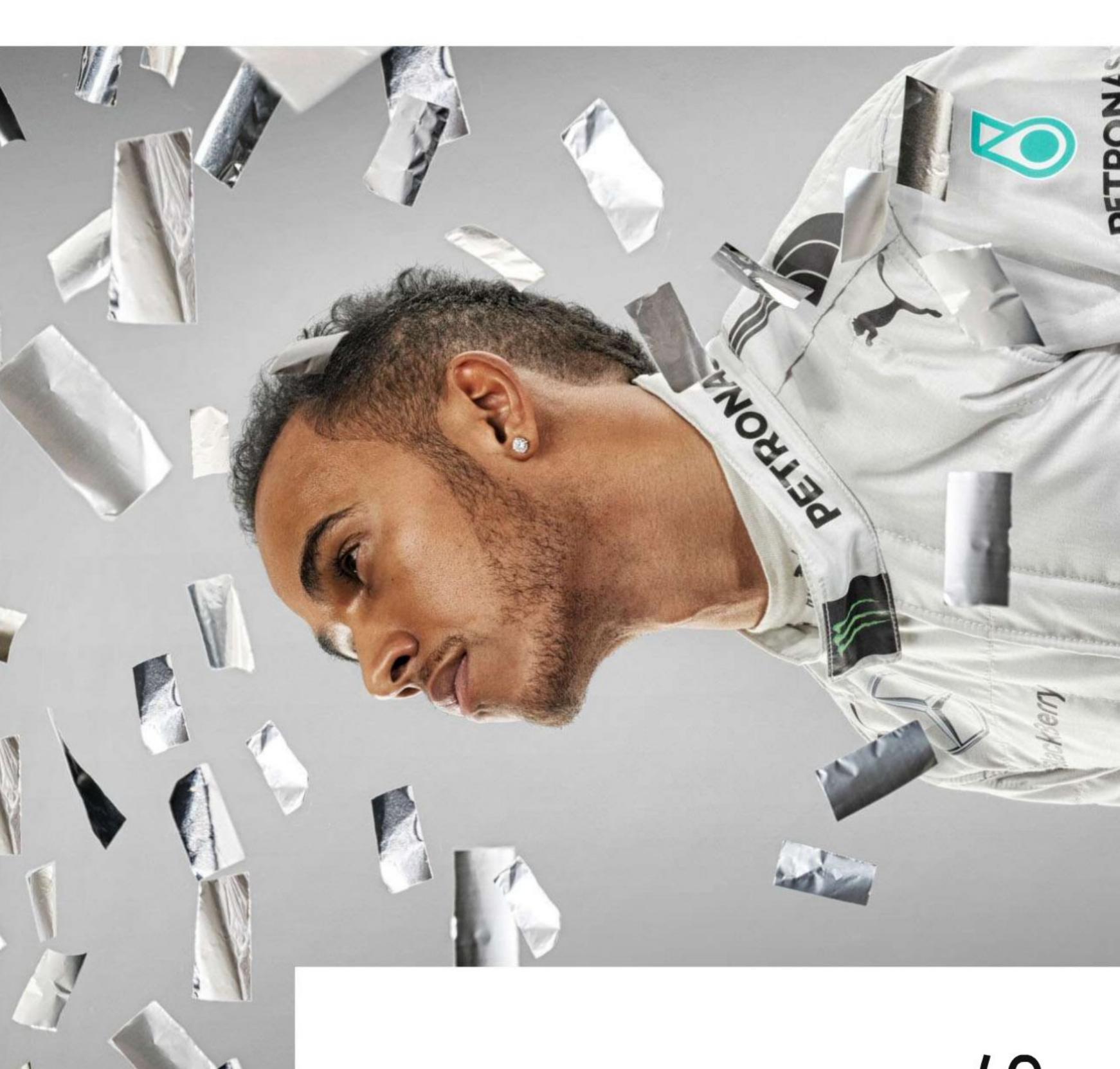
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## year of and and tears



Tragedies bookmarked the 2014 season, leaving behind a sadness that will always taint a classic year of Formula 1

WORDS PETER WINDSOR PORTRAIT ADRIAN MYERS

hose who lived it will remember
2014 as one of those bittersweet
years of the type that characterised
the 1970s and 1980s. One minute
they were on the podium, having a laugh; the
next they were in despair, wondering if the
racing life was really what they wanted.

It began with the news, deep in winter, that Michael Schumacher had suffered head injuries from a skiing accident in France. Those who never knew Mark Donohue shrugged off the incident as a slight setback from which Michael would surely recover. Those who had been at the 1975 Austrian Grand Prix feared the worst.

And they were correct to do so. Brilliant medical attention saved Michael's life, but still he remains confined to a special intensive-care unit within his home in Switzerland. After all the races, all the wins, all the glory and, yes, all the recoveries, Michael was completely absent from the motor racing world in 2014.

Then, in late October, Marussia's Jules Bianchi crashed heavily at Suzuka in freak circumstances

– as freakish as those that in October 2013 had ultimately claimed the life of Marussia's test driver, Maria de Vilotta.

Two punctuation marks in an otherwise florid season – two reminders that the rest of it – the politics, the massive budgets, the back-biting and the ego-tripping – amount to nothing more than playthings in the context of the causalities of life. Few F1 people went as far as Socrates – "Of one thing I am sure: and that is that I know >

nothing" - but there were definite swings in the direction of real humanity in 2014, with Lewis Hamilton continuing to publicly proclaim his spiritual beliefs (against the F1 norm); stars like Valtteri Bottas bringing new standards of class and behaviour to the F1 pitlane; and the drivers uniting in their support of the Bianchi family.

Bernie Ecclestone's two legal trials meanwhile provided much of the colour. Those who grew up with the 21st-century belief that F1 is a decorous, truly global business, subject to the same laws as Wall Street, were aghast when Bernie emerged from his torments without penalty. Those of us who knew Mr E in the 1970s, and who therefore remembered his rapid rise to presidency of F1's private club, were singularly unsurprised. Very quickly, post-trial, it was back to business... except, that is, for those who had doubted him.

This was also the first year of a new era - the first look at F1's environmentally friendly public face. Countless discussions over the previous six years had preceded the launch. The key issue: should F1 retain its technical integrity (ie, stipulate that even to enter it is necessary to design and build your own car) - or should F1 become yet another customer-car category, with more emphasis on the drivers than on the cars, and therefore more emphasis on the TV show?

In reality, the arguments went much deeper than that. Part of the reason customer cars were excluded from F1 (and why teams who did not complete the entire championship with two cars were also excluded) was to reinforce the battlements for the incumbents. Make the entry fee high enough, and today's equivalents of Frank Williams, Eddie Jordan and Peter Sauber would have next to no chance of even crossing the moat let alone breaching the walls.

On top of that, Max Mosley's replacement at

was definitely no Mosley/Ecclestone clone, Jean Todt solidly backed the concept of an energyconserving F1 'power unit' for 2014 onwards. Although he had supported Todt's candidacy, Ecclestone quickly made it clear that he was against such a concept. Why treble the cost of the power units, he argued, when F1 had enough problems sustaining the show as it stood? The flatter, softer noise of the new engines, moreover, would in Ecclestone's view do nothing to excite the fans either on TV or in situ.

Todt nonetheless forged ahead, enlisting the support of F1's big car manufacturers (Mercedes and Renault) for his V6 turbocharged hybrids. With Ecclestone distracted by his impending court cases, and therefore in no mood for another split with the FIA, the rest of the F1 world followed suit. The feeling was that they would somehow make it work.

By season's end, among the big spenders you could hear nothing but self-satisfied plaudits for the new era. As an engine formula designed to hook the decision-makers at Mercedes, Renault, Ferrari and Honda, the concept has succeeded. The hybrid units are as ingenious as they are forward-reaching - even if the PR people still face the problem of how really to tell their complicated story to the public at large.

Against that, F1 received public scorn for its new, watered-down engine noise; two teams

From the dramatic front-wing failure at pre-season testing in Jerez (below), Lewis had to hold his nerve to make it to the race win in Abu Dhabi (right) that made him champion for a second time





new green power units were a step too far for cash-strapped Caterham (above) and Marussia (below), both of whom went into administration and were forced to miss races

## R F V I F W



- Caterham and Marussia - missed races post-Suzuka due to a lack of funds (exacerbated by the increased cost of the power units); Sauber also struggled to survive; and, most worrying of all, F1's TV ratings continued to decline. As fascinating as the new power units are to those who take the trouble to understand them, even the German fans stayed away from Hockenheim, despite the national team being assured of victory, the incumbent champion being German and Nico Rosberg, another German, starting from the pole (and romping to yet another win). Having been proved correct on virtually all points - but powerless to do much about it - Ecclestone's last throw of the 2014 dice was characteristically outlandish: he pushed through a motion for the double-points concept. In the face of sophisticated F1 technology - and the long-term argument about how much of F1 is 'sport' and how much is 'technical exercise' this appeared to be nothing more than a trite gimmick. Which, given the way things had gone, was probably Bernie's intention.

As with many new regulation changes, the 2014 season was dominated by the one team that got it right. Lewis Hamilton's first test run in the **Mercedes W05** was characterised by a dramatic front-wing failure, but that messy problem in Jerez belied the success that was to come. The Mercs were as dominant as they had been in 1954-55 (when the F1 formula had also changed); and just as in 1955 when Stirling Moss stretched Juan Manuel Fangio to the limit, the racing between Lewis Hamilton and Nico Rosberg was spellbinding.

After a first half-year of evenly split results, Spa was the turning point — literally and figuratively. Lewis was clearly in front as they approached Les Combes, Nico a very close second. It was lap 2 of the Belgian GP. Then, in a millisecond that would induce months of anguish, Nico's right front-wing endplate slit the sidewall of Lewis's left-rear Pirelli.

For both drivers it was a cathartic moment.

Lewis was initially incensed, furious that Nico could have been so brutal. Nico, by contrast, had an hour in the car to think about what he was going to say. He'd made a mistake. He'd misjudged the moment. He hadn't intended to take Lewis out; he'd just wanted to crowd him.

Could he, though, admit that he'd got it wrong?

Drivers of his calibre aren't supposed to make these sorts of errors; they are presumed to have perfect judgement.

#### TEAM BY TEAM

**WORDS JAMES ROBERTS** 

## 1 MERCEDES

F1 Racing's verdict: Even before pre season testing it was clear that Mercedes had an advantage thanks to the fully integrated nature of the W05. The millions invested into Mercedes AMG High Performance Powertrains meant the new power unit fitted the car like a glove. With such an advantage, team chiefs Toto Wolff and Paddy Lowe must be applauded for letting Hamilton and Rosberg fight it out to the end. There were headaches, but the result was



## RED BULL

F1 Racing's verdict: Renault's deficient power unit meant a bad start for the reigning champions, but their season was salvaged by Daniel Ricciardo who thrilled fans with his late-race passes for victory in Canada and Hungary, plus an emphatic win at Spa. Ricciardo aside, the dream team has unravelled. Tech whiz Adrian Newey has stepped aside, and now Vettel is off to Ferrari.







The turning point: when Nico struck Lewis at Spa, Lewis lost the race but gained the moral high ground that motivated him all the way to his second title

As the race progressed, Nico became more confused. His mind wandered into time-wasting, tyre-damaging passes down the inside in vain attempts to overtake Seb Vettel. Despite driving the fastest car, and being on fresher, softer tyres, he could do nothing about Daniel Ricciardo's Red Bull in the closing laps. He finished second but by then he had composed his story. Far from admitting a mistake, he would instead tell the team that he'd hit Lewis intentionally. That was the macho thing to do.

And while Nico had to live with that, and with the impact it made on the team, his words had an unexpected effect on Lewis. Initially incensed, by mid-week Lewis had found a new level of confidence. It went like this: 'If Nico has to resort to that sort of stuff to beat me, then he's never going to outrace me or outdrive me. Assuming mechanical reliability, I'm going to win.'

Therefore it was a new Lewis Hamilton who raced at Monza - just as it was a new Nico Rosberg who raced in front of the Italian crowds. Lewis Mk II (Mercedes era) had never been more confident, more sure of his car, more comfortable with his team and his position within it. By contrast, Nico Mk II was less confident, chastened by the fine imposed by

the team management, and confused by his own understanding and explanation of what had happened at Spa.

Suddenly it was Nico who was locking-up the front Carbone Industrie brakes and using second gear where Lewis would be snicking it into third. Suddenly it was Nico who was using more fuel than Lewis. Suddenly it was Nico who was making major unforced errors in race conditions. The momentum shift was enormous.

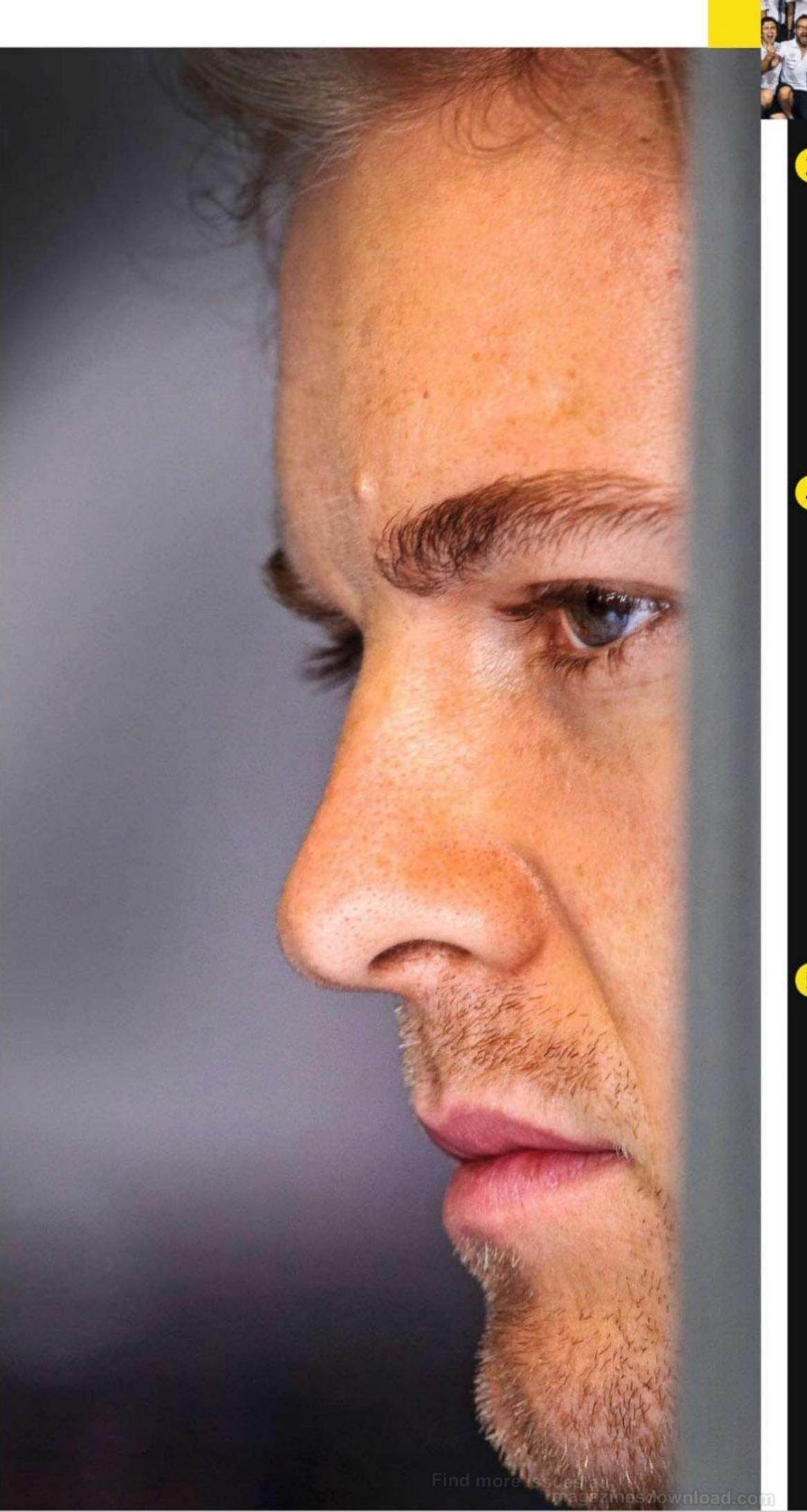
Both Mercedes drivers struggled with brake temperatures in Hungary, in the wet - and with the potential for glazed discs - but it was Lewis who better managed the small-window CIs. He started from the pitlane in the spare W05 (Rosberg raced the same chassis - 04 - all year; Hamilton raced 05 apart from in Hungary, where he raced the spare chassis - 03 - after his race car caught fire in Q1), worked his way through the field, lost time to the leaders when Nico became trapped behind Jean-Eric Vergne's Toro Rosso, and then ignored 'instructions' when informed from the pitwall that Nico was on an alternate tyre strategy. Although Toto Wolff told the Austrian press immediately after the Hungarian GP that Lewis's lack of response had cost Nico a win, it's clear that Lewis was correct

to ignore the instruction and that Mercedes were wrong to give it to him: Lewis's car lost fuel pressure over the last six laps in Hungary. He would undoubtedly have won that race with a healthy engine. And his tyres were in good enough shape, contrary to explanations given at the time. No mention was made of the fuelpressure problem because Mercedes were at that stage becoming increasingly sensitive about their relatively poor reliability.

Nico's excessive rear intermediate tyre wear in Japan remains a mystery: F1 mathematical models are still years away from accurate dynamic analysis in the wet. Lewis's pass in the race was nonetheless decisive. He focused on Turn 1 and began to play with the DRS. For how long could he leave it open? Normally, on most circuits, the brake pedal makes the decision for you: into Turn 1 at Suzuka, still flat on the throttle, Lewis sensed an area where other drivers would fear to tread...

Lewis doesn't drive according to results from the simulator; he isn't programmed into using brake-balance adjustment at this point or differential changes at that point, or DRS in the conventional way. He plays with the gadgets, feels the results, finds what suits him – and drives. →

## REVIEW



#### 3 WILLIAMS

#### 320 POINTS

F1 Racing's verdict: The team's long-overdue resurgence was one of the feel-good stories of the season. Their lavish Martini-livery launch pre-season marked a new optimism and spirit, while their points turnaround was huge – five points in 2013 compared to 320 this year. But there could be some regret they didn't capitalise on chances to win – notably in Austria.



#### FERRARI

#### 216 POINTS

F1 Racing's verdict: Ferrari lost various key players in 2014, notably Fernando Alonso, whose 2010 arrival should have sparked a Schumi-esque series of titles. Instead he grew frustrated by pushing his Ferraris further than they were designed to go. His exit followed those of Stefano Domenicali and Luca Di Montezemolo. New boss Maurizio Arrivabene has his work cut out.



#### McLAREN

#### 181 POINTS

F1 Racing's verdict: This was the end of a 20-year partnership with Mercedes, and despite having the best power unit, it wasn't a season to savour. The return of Ron Dennis ushered in an environment of fear at the Woking-based team. Confidence is low, but the arrival of former Red Bull aero man Peter Prodromou, new Honda engines and Fernando Alonso could bring an upshift.





## What will happen in 2015?

In the first year of a new engine formula, dominant teams (Ferrari in 1961, Brabham-Repco in 1966) seldom carry their major advantage into year two. That's because F1 people are very good at imitating and improving, and 2015 will be no different. It's hard to imagine that Rob White and the Renault boys at Viry-Châtillon won't produce a package that sits close to Andy Cowell's Merc power unit; and Ferrari should also have learnt from experience... although the absence of Luca Marmonini won't help.

That being so, the importance of Lewis and Nico taking points from one another - something Michael Schumacher successfully controlled in his Ferrari years could be decisive. Weak driver management at Mercedes increases the championship potential of Daniel Ricciardo at Red Bull - and possibly of Sebastian Vettel at Ferrari, assuming, of course, that James Allison has been allowed to create the car he actually wants.

So let's (for the fun of it) make a few predictions: Daniel will win the drivers' title, Merc the constructors'. Valtteri Bottas will win a race. Vettel will score more points than Alonso did in 2014. Alonso, in turn, will be on the podium for McLaren within five races and will win one before the end of the year. Max Verstappen will finish in the top six on his debut. And Force India will outscore McLaren in the constructors' standings.

Over to you, dear readers...



Young Daniil Kvyat impressed by regularly outqualifying and outracing established Toro Rosso team-mate Jean-Eric Vergne, justifying his promotion to Red Bull for 2015



Felipe Massa and champion-in-the-making Valtteri Bottas were often the best of the rest, helping to take a rejuvenated Williams to third in the constructors' championship after years in the doldrums



## REVIEW



The upheaval at Ferrari continued, with Marco Mattiacci (top) replacing Stefano Domenicali and Sebastian Vettel (above) signing up as their new star driver. Meanwhile at Red Bull, Daniel Ricciardo (left) is set to assume Vettel's mantle

So it was into Turn 1 on lap 28 in Japan. He ran too late with the DRS still open, he took to the run-off area... and then, on the following lap, knowing exactly how long he could leave it, he zapped Nico. It was a racing driver's pass on a racing driver's corner.

It was Lewis Hamilton at his all-consuming best — as we saw him again in Russia and then in Austin, where again he made better use of the back end of the car when there was less grip midrace. Brazil, by contrast, was all Nico. This was no surprise, given: a) the law of averages; b) a grippy new track surface; and c) Pirelli tyres soft enough to neutralise anything too creative.

Despite another excellent P3 finish, Daniel Ricciardo's championship chances ended in Austin. His **Red Bull RB10** had never been a match for the Mercedes but Daniel consistently extracted the maximum from the car from day three of the pre-season test in Bahrain, when finally he was able to string together a 15-lap run.

I called it a eureka moment at the time - and so it proved. Christian Horner inexplicably ignored FIA instructions regarding a faulty fuel-flow meter and cost Daniel a second-place finish on his debut with the team, but Daniel was unfazed and recovered beautifully. His manipulation of the car's rear inspired comparison with Jochen Rindt; and Sebastian Vettel, sated after his four titles and confused by a looser rear end than he'd ever known in F1 (thanks to tighter rear aero regs for 2014) was never in Daniel's class. Daniel scored his first F1 win in Canada, raced beautifully through the second phase of Hungary to win there and then won again at Spa thanks to Rosberg's error. It was largely due to him that Red Bull were able to beat Williams, Ferrari and McLaren in the constructors' championship.

Williams nonetheless produced an excellent car for 2014, in part due to their Mercedes power unit, in part due to efficient aerodynamics. But more than anything, their success was a case study in allowing Jason Somerville and his team to do their thing in the windtunnel and on CFD despite the major disappointments of the year before. Ferrari, by contrast, continued their inexplicable scapegoat policy: Aldo Costa was fired in 2011 and Felipe Massa in late 2013. In 2014 it was the turn of Stefano Domenicali, their popular team principal, and Luca Marmorini, the very experienced engine designer.

Domenicali's sacking inevitably had long-term repercussions. Marco Mattiacci, the new Ferrari leader, failed to harmonise with Alonso, who continued to underline his status as an F1 great. And then, after just seven months in the job, Mattiacci was replaced by Maurizio Arrivabene. A frustrated Seb Vettel gazumped everyone by announcing his departure from Red Bull, leaving Alonso to scrape together a deal with McLaren. It is very much to the detriment of F1 fans that neither Ferrari – nor Red Bull for that matter – wanted to race with Alonso into 2015.

Ferrari were largely uncompetitive in 2014, thanks mainly to a weird front suspension geometry that required the car to be run excessively stiff. Alonso alone could manhandle the car in all conditions; Kimi Räikkönen, a front-end driver of enormous sensitivity, had no chance of showing his wares, other than on high-grip, billiard-smooth surfaces with innocuous kerbs (as per Interlagos). Ferrari's engine was no match for Mercedes, but, as Daniel Ricciardo proved with the Renault V6, chassis balance, wheel compliance and aerodynamics still count for much in F1. **McLaren** were on average

#### 6 FORCE INDIA

#### 155 POINTS

F1 Racing's verdict: Given the limited resources at this little team, the results throughout 2014 were clearly down to hard work and efficiency. Having a Mercedes power unit has obviously helped, but with McLaren refugee Sergio Pérez and the talented Nico Hülkenberg spurring each other on, Force India spent much of the year ahead of McLaren in the points standings.



#### TORO ROSSO

#### 30 POINTS

F1 Racing's verdict: One of the surprises of the year was the maturity of young rookie Daniil Kvyat in competing against and beating the established Jean-Eric Vergne.

So when Vettel decided to leave Red Bull for Ferrari, it was Kvyat who got the nod to replace him. Vergne has now been given his marching orders, and next year 17-year-old Max Verstappen will partner Carlos Sainz Jnr.



#### LOTUS

#### 10 POINTS

F1 Racing's verdict: After such a strong run despite tight cashflow, the absence of key players, Kimi Räikkönen, Eric Boullier and tech chief James Allison, combined with unreliable Renault engines resulted in a slump. Pastor Maldonado's millions have eased the financial side, but the performance of the E22 meant both he and Romain Grosjean struggled to keep the car on track.







even slower than Ferrari, although one suspects that an Alonso or even a Ricciardo would have extracted more from a car that in the garage, and on blemish-free surfaces with decent tyres, looked very good indeed. Jenson Button was never going to be a fan of the 2014 rear aero balance and rookie Kevin Magnussen therefore raced for much of the year without real direction. McLaren further underlined F1's woes by failing to attract a title sponsor, despite the extravagance of Ron Dennis's pre-season exhortations. McLaren, in addition, set some sort of record by effectively running four team managers in 2014 – Dennis, Jonathan Neale, Sam Michael and Eric Boullier.

They lacked a chassis anything like as quick as the Williams due to their smaller budget, but **Force India** performed strongly for most of 2014. Their team management, resource allocation and driver choice were all examples of how to do it right – and exposed **Sauber**, where constant complaints about F1's financial structure seemed to dominate the racing.

From the high midfield moving downwards, Valtteri Bottas shone brightly as a driver with championship-winning potential and demeanour; Sergio Pérez combined a fiery temperament with exquisite racing ability (his drives in Canada and Russia were exemplary); Nico Hülkenberg had a very good first half-season and stood out once again at Interlagos, where he outraced Magnussen; Daniil Kvyat justified his promotion to Red Bull for 2015; Jean-Eric Vergne gave us plenty of dazzling car control; Felipe Massa again made you wonder why Ferrari ever fired him; and Esteban Gutiérrez displayed flashes of brilliance in the difficult Sauber (particularly at Monaco and Suzuka) – to no avail.

So Mercedes dominated, and, from within that domination, came much technology and much back-slapping. Lewis Hamilton was in my view the driver of the year — by a significant margin — with Fernando Alonso, wrestling his clumsy Ferrari, next in line. Then came Daniel Ricciardo, Nico Rosberg and Valtteri Bottas.

This, then, was a year of great change, of great intra-team rivalry and of great sadness. Of highs and lows. Of champagne and tears.

Of memories that will remain bittersweet.

#### TEAM BY TEAM



### **9** MARUSSIA

#### 2 POINTS

F1 Racing's verdict: When Jules Bianchi finished ninth in Monaco, there was joy that this hardy team had at last scored points. But then Bianchi was gravely injured in a crash at Suzuka. At the time of writing, he has been brought out of his artificial coma, but his condition remains critical. Marussia's lack of cash meant they went into administration with three races to go.

## 

## O SAUBER

F1 Racing's verdict: Cash-strapped Sauber's lack of investment had a noticeable effect on performance. Adrian Sutil returned full of optimism, but his relationship with team boss Monisha Kaltenborn quickly deteriorated. When Caterham imploded, she wasted no time in snapping up Marcus Ericsson's millions for next year – despite having other drivers "signed" for 2015.



#### CATERHAM

#### 0 POINTS

F1 Racing's verdict: Caterham lurched from one crisis to the next in 2014. Troubleshooter Colin Kolles was drafted in post-Bahrain to keep a sinking ship afloat, but the damage now seems irreparable. A desperate attempt was made to get to the Abu Dhabi grid, providing an F1 debut opportunity for Will Stevens, but ultimately it was all... pointless.



#### YOUR MISSION, SHOULD YOU CHOOSE TO ACCEPT IT



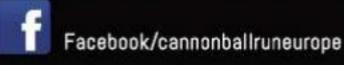
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#### In conversation with

## Lewis Hanilton

## Britain's newest double Formula 1 world champion takes time out from his celebrations to talk title number two

INTERVIEW JAMES ROBERTS PORTRAIT CLIVE ROSE/GETTY IMAGES

## What did you do the night you won your second world championship?

I had a great evening. I went back to the hotel with my family and over dinner we reminisced about the past. I was talking with my dad about the days when we used to sit in the back of our trailer with a flask of chicken noodle soup by a gas heater. After that we went to the Mercedes party and all the team were there celebrating. This team has been through a huge amount, even before I came here, and the happiness was amazing to see. I had one drink and that was more than good enough for me. Unlike [Mercedes boss] Toto [Wolff], he definitely felt it more than I did the next day...

## You said after Abu Dhabi that the second world title means more than the first one. Why?

For a lot of reasons, really. The first title was exceptional, but I don't know if I was in the place to really embrace it and absorb it in the way that I can today. I guess being in a different stage of my life it just feels sweeter, whether that's because I'm a bit older I don't know. It's a very special and humbling

experience. This season was one of the toughest of all, to stay focused with so many ups and downs. But being able to stay in control in spite of a lot of moments shows the strength in depth we have here as a team.

## How are you and your team-mate Nico Rosberg going to improve your relationship into 2015?

Well, it has been intense between us all year long: there have been good and bad moments. We've had a friendship that we built a long, long time ago, so that will always be there. He was a very, very fierce competitor in 2014, he did an exceptional job and he's going to be quick for a long time and perhaps things naturally will ease up a little now. He was gracious enough to come up and see me after the win, which I really appreciated. It was really big of him to be able to do that because I know what it's like losing a championship.

As team-mates our ultimate goal is to make sure we get those two cars across the line first and second, but we also want to be the first one ahead of the other, so there is that internal competition and external competition.

## FACTFILE

Date of birth 7 January 1985
Place of birth Tewin, UK
Team Mercedes

2013 Moves to Mercedes where he is reunited with Nico Rosberg, his former karting team-mate, winning the 2014 world title by 67 points

2008 World champion with McLaren after a dramatic final-race title decider. Remains with McLaren for the following four seasons

2007 Finishes second in the world championship in his rookie year, tied on points with team-mate Alonso

There will be a lot of learning to be done by both me and Nico about how to handle things, and I'm sure we will come back and handle it better next year.

### In terms of team-mates, was Rosberg more difficult than Fernando Alonso to beat?

It was different. Naturally as a rookie [taking on Alonso at McLaren in 2007] it was harder, and back then I didn't have any F1 experience. Coming in at such a high level and being able to match a talented driver like Fernando was way beyond anything I thought I could do. That was tough in itself, as was staying focused, particularly in my maturing days.

## Would you agree you need to improve on your qualifying performances?

It definitely makes the race twice as hard when you're not ahead of your team-mate who has the same car. In recent years all the talk has been about whether I can make my tyres last, or my aggressive driving style, but I think throughout this year I've proved I use less fuel. I am able to utilise my tyres as well as anyone and position my car in the right way to get past people and

to use my racecraft. Of course qualifying is an area that I will work hard to improve on for 2015. Nico did a great job – in his qualifying laps he was especially on it. I will look into how I can improve in that area.

#### How excited are you about 2015 and challenging for a third world title?

Well, naturally it's a dream to be able to go into next season and compete again and learn from this year to be even stronger – if that is possible. That will be the goal and I have absolute faith in the team that we will be very, very strong next year. That is what every driver dreams of. I do believe that we're going to work very hard to improve the engine and the car. I know the team are pushing already and we are making positive steps in that way.

## You're a double British world champion, joining the likes of Jackie Stewart and Graham Hill. Could this be the start of a Lewis Hamilton era?

I don't know. What this team has put together is incredibly special, and we've got great people in the right positions. Me and Nico will continue to push the team and I'm looking forward to the battle once more.



From a podium in his very first race to a series of on-track clashes, Kevin Magnussen's rookie season was packed with drama from start to finish. Here, the McLaren star looks back at 2014 and reflects on what he has learnt

**PICTURES STEVEN TEE/LAT** 

#### IN THE BEGINNING

Looking back over my first year here, I can honestly say that even though I'm a rookie, Formula 1 has come pretty naturally to me. Compared to other categories I've raced in, it hasn't come as such a big shock - but maybe that's because I haven't dwelt on it too much.

Before my first grand prix in Australia last March, I've never been so relaxed. Maybe

because it was all a bit surreal, but I felt very calm and I did think to myself at one stage: 'Is it a bit strange to be so relaxed?'

I was fastest on the first day in the car at the pre-season Jerez test, but I knew it was a lowfuel run. Secretly I was dreaming that I could win the first race, but I had to be realistic.

Off the start line on my F1 debut in Australia, I had a bit of wheelspin and nearly lost control.

That was almost the worst possible start to my F1 career, but luckily I caught it and managed a great result. A podium on your debut is pretty special - if you'd told me before the weekend that I'd finish second, I would have taken that.

Still, even with second place - after Daniel Ricciardo was handed his penalty - I was slightly disappointed. It isn't the top step and it means there is still more to come from you and the car.



The one thing last year that surprised me about Formula 1 compared to all the other categories I've raced in, is just how tough it is to win in a car that isn't competitive. On the outside looking in, you always think you can make the difference. I believe in myself and my abilities and think I can make it possible but, in the end, if you don't have the best car, you can't take it to the top step of the podium easily.

In many ways that's the same as when my father, Jan, was racing in Formula 1. He's found a new career racing sportscars in America and is still going flat-out. We've spoken many times over the year about the sport, how much it's changed and what aspects are the same since he drove for McLaren and Stewart GP in the 1990s. It's cool to have two professional racing drivers in the same family chatting about racing, and



whenever I see Jackie Stewart now he's always very keen to tell me how good my dad was.

#### RACING WHEEL-TO-WHEEL

Early on in the year I had a number of close battles with Kimi Räikkönen and we made contact a few times, in Malaysia, Bahrain and





Monaco. On different occasions it went against one of us, but Kimi is a very good driver and someone I've always looked up to and rated very highly. I still have mega respect for him, as I do with all the world champions – but I'm racing with them on equal terms now.

It's been hard on some occasions as I've received some drive-through penalties for what's happened on track, so obviously I've messed up in some of those battles.

At Spa, I thought the penalty I was given for the move on Fernando Alonso was very harsh, although I probably deserved a reprimand of some sort. I overstepped the mark and I did something that was clearly against the rules.

#### MAI AYSIA

"I'm so sorry that I messed things up in the second corner with Kimi. I shouldn't have made a mistake so

#### BAHRAIN

"It was really disappointing that we didn't manage to score any points today. Two DNFs is never pleasant for any team."

#### CHINA

Grid 15th Race 13th

"There wasn't much
I could do on this
occasion. Our cars lack
downforce – that's the
main problem. They're
just low on grip."

#### SPAIN

"I knew that it would be difficult to go forward from 14th. The midfield is very tight, so making progress is extremely tough."

#### MONACC

Grid 8th Race 10th
"I went to the inside to
block Kimi's entry into
the hairpin, but he made
a move anyway. It's hard
to pass here; he tried
and it didn't work."

#### CANADA

"Getting both cars into the top ten was great for us, but we know there's still work to do to catch up with the teams ahead."

Grid 12th Race 9th

early on."



race penalty was a bit over the top. Generally
I think the FIA makes good calls, but this was
a shame because it was a really good fight.

At the first corner at Hockenheim when I made contact with Felipe Massa, I was very disappointed. He blamed me for the accident and I disagreed. There was a bit of misunderstanding from him. Again, I really respect Felipe, as I do all the drivers, but it was disappointing for the moment to turn out like this.

It goes back to the duels I had with Kimi.

Although he is a world champion he could have made it easier for us on certain occasions. We didn't need to discuss it afterwards, though,

Meeting his fans
(above) and seeing
old friends (left):
"Whenever I see
Jackie Stewart now
he's always very
keen to tell me how
good my dad was"

#### AUSTRIA

all the time."

Grid 6th Race 7th
"It's maybe difficult to
see this when you look
in from the outside,
but, believe me, we are
making improvements

#### **GREAT BRITAIN**

Grid 5th Race 7th
"It's been fantastic
racing in front of the
McLaren fans. I'd love
to have finished a bit
higher for them, but we
didn't have the pace."

#### GERMANY

"If I'd had anywhere to go, there wouldn't have been contact with Felipe. I did my best to avoid it, but there wasn't much I could do."

#### HUNGARY

"I want to thank
everyone for their
hard work, spirit and
determination – we can
achieve more in the
second half of 2014."

#### **BELGIUM**

Grid 7th Race 12th
"I had great fun out
there this afternoon,
but it was a tough
challenge because
everyone else had
fresher tyres than I did."

#### TALY

Grid 5th Race 10th

"I made a great start, second at the first corner, but I knew I wouldn't be able to keep that position and inevitably fell back."



"Jenson Button has been very open, very kind, and he's done a great job of teaching me"



we both knew the score as we are all human but none of us are perfect.

Another race where I received a penalty was
Monza when I was racing Valtteri Bottas. That
was actually a really good start for me, getting up
to second exiting the first corner and from there
I watched Nico Rosberg's Mercedes just
disappear in front of me. He was gone.

I was thankful to score points at Monza, and also again at the next race in Singapore, which I think was my toughest race of the year. We had a bit of a problem with the seat; it was overheating and wasn't fixed over the weekend.

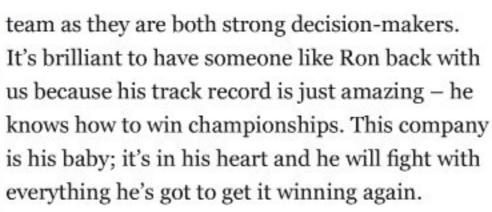
On the Sunday it got really bad – so bad that it just destroyed my race. It's just one of those

"It's brilliant to have Ron Dennis back with us – he knows how to win championships"

things where you have to fight through it despite the heat and the pain and at least I managed to get something out of it: a point.

#### WORKING WITH WOKING

For 2014, Ron Dennis returned to McLaren and Eric Boullier arrived. This has been good for the Magnussen suffered burns when his seat overheated in Singapore: "it was my toughest race of the year"



I've also really enjoyed working with my engineer, Mark Temple. He's a great guy. I've worked with him and my performance engineer for a few years because I spent time in the simulator before getting a race seat. I live close to the factory, so when we are not emailing or phoning, I'm back there on the simulator.

Someone else I really get on very well with is my trainer, Antti Vierula, and I can really call him my friend in the team. I have fun with him and it's nice to have someone you can laugh and joke with. He's a tough guy when it comes to training – his stamina in the sauna heat is amazing, and probably the hardest thing he has got me to do is drink neat vodka. That's hard.

Lastly I have to thank my team-mate Jenson Button for all the help he has given me in my first year of F1. He has been very open, very kind, and he's done a great job of teaching me things often without even trying. He's shown me the way so much in my rookie year: listening to him in debriefs has been hugely useful. He's a great driver and a really good guy. It's been a brilliant year: let's see where we can go from here.

Kevin Magnussen was talking to James Roberts

### KMAG'S 2014 RACE-BY-RACE REVIEWS (CONTINUED)

## Grid 9th Race 10th "It was a very, very tough grand prix. My seat started getting very hot and made things extremely

uncomfortable for me."

# Grid 7th Race 14th "We did the best we could today, but we had a problem with the steering wheel that basically dropped me out of the race."

# Grid 11th Race 5th "I was easing off the power 200 metres before the corners to save fuel. I guess those behind me must have had the same problem."

USA	
Grid 7th	Race 8th
"Eighth position isn't	
a fantastic	result, but
I honestly don't think	
we could ha	ve got
much more out of the	
car this afte	ernoon."

DRAZIL	
Grid 7th	Race 9th
"That wasn	ı't a great
race for me	, which is
disappointi	ing. I tried my
best to tak	e care of
my tyres, b	ut I had a lot
of degrada	tion."

# Grid 9th Race 11th "I had contact with Adrian Sutil on the first lap – and, after that, the front of the car never felt quite right. But I carried on."



## YOU ASK THE QUESTIONS

# Sergio Pérez

After being ditched by McLaren, Sergio Pérez landed on his feet at Force India, where he's taking particular delight in beating his old team

WORDS JAMES ROBERTS PORTRAITS GLENN DUNBAR/LAT

Between the McLaren and Force India hospitality units in the centre of the Sochi paddock, Sergio Pérez poses for some photos. He's in a relaxed mood and as the minutes tick down to our interview slot, he pauses to exchange a few words with Jenson Button.

As he later reveals, unleashed from the shackles at McLaren, he's on more friendly terms with JB now they're no longer teammates. 'Checo' was unceremoniously dropped by McLaren at the end of 2013, picked up by Force India for the 2014 season... and swiftly collected a podium at the 2014 Bahrain GP.

Pleasantries with Jenson exchanged, Pérez steps into Force India's hospitality unit and we make our way out onto the sun terrace. With a stack of readers' question cards at the ready, he turns over the first one, and we begin...

## Do you have fond memories of Malaysia 2012, or is that the one that got away?

Simon Longley, United Kingdom

I have good memories of course. It was my first podium ever in F1, coming close to a win then running wide. The conditions were very tricky. But I have great memories of that weekend and the result I scored with Sauber. It was an event I'll remember for the rest of my life.

#### What memories do you have of the Autódromo Hermanos Rodríguez, which will host the 2015 Mexican Grand Prix? Have you raced there before?

I don't have very good memories of that circuit.

The last time I was there was ten years ago. I was doing a national karting championship on part of it. It was a very important race for me to try to demonstrate my talent to the IndyCar teams.

I had a special licence in Mexico and I was 14 years old and racing against people twice my age. I crashed with another driver in the race before and they took my licence away. It was a big fight to see if I could race or not and we had to go to see the federation. In the end they said no, but they did let me qualify without practice and I qualified second. But finally, on race day, they took my car away. I tried hard to fight it, but had to give up. But that's when my career took off as Carlos Slim and Telmex found out about it. They

called me and gave me the chance to race outside of Mexico. So that was the last time I raced there.

#### What is your favourite Mexican dish?

Tortas ahogadas — you know them? They are my favourite and they're from Guadalajara, my home city. It's the food that I miss the most when I'm away from home. It's bread with a lot of hot sauce on top, then you add beef and lemon and stuff like that. It's fantastic. I'm on a very strict diet, but if I'm in Mexico at the beginning of the week or at the end of the weekend, I'll have one then. No doubt about it.

#### Why are you nicknamed Checo?

Colin Rees, United Kingdom

In Mexico, Sergios are called Checos in the same way Franciscos are called Franc. It's common.

#### What kind of tequila do you prefer – silver or gold – and why?

Pawel Rozwadowski, Poland

Gold: just because of the colour, I think. I'm not a big fan of tequila, I don't drink much, but if →





"It always feels great to be in front of a team you left a year before. We want to finish ahead of McLaren, too, but that's a big ask"

I'm in Mexico and I go out I might drink gold tequila. It's the one I get the least hangover from. F1R: Do you have it neat or in a cocktail?

SP: No, I have it with lemonade. It's very nice.

## Force India have often been faster than McLaren this year. How does that feel?

Ondrej Sembera, Czech Republic

[Smiles] Great. It always feels great to be in front of a team that you have left a year before. We want to finish ahead of them, too, but that's a big ask. We are doing a great job, but at the moment [pre-2014 Russian GP] they are faster so we need to keep going.

Have you apologised to Felipe Massa and Williams for the incident at the 2014 Canadian Grand Prix? [Pérez received a five-place grid penalty for colliding with Massa while trying to pass him on the final lap, forcing both cars into a highspeed crash]

Gergely Jaksa, Hungary

No, because I still think it was not my fault. It was fifty-fifty.

#### Would you consider a return to McLaren?

José Garcia, United States

All I have to say is that I want to be world champion and if in the future McLaren are a team that could offer me the opportunity to fight for a championship, then definitely. It's not that I had a bad relationship with them, or a fight with anyone. It just didn't work out. I had a good relationship and good friends around the team.

#### Why are Latin American drivers like you, Pastor Maldonado, Juan Pablo Montoya and Ayrton Senna perceived as having such a hard-as-nails bad-boy image? And does it help or hinder you?

Matt Lloyd, United Kingdom

I don't know if it helps. When you come to F1, it's important to keep your own personality and say what you feel. In this business it is hard to do that, but I always say what I feel I should say. Probably that leads to a bad image, but I want to be honest with my fans.

## What did you think of Kimi Räikkönen's comment about punching you in the face after on-track contact at the 2014 Monaco Grand Prix? Did you clear the air later?

Andrew Creed, United Kingdom

I was upset: I thought I was ready for a fight! But in the next few hours I calmed down. Afterwards you realise it's just a hot moment. I don't speak much with Kimi, but everything is clearer now.

#### What are your three favourite tracks?

Clement Bouchet, France

Monaco is one, because of the challenge it offers. To do a qualifying lap there is one of the best Saturdays on the calendar. Spa, as well. And Monza. That's because it's a very historic place and with the *tifosi* there it's one of those weekends where you feel the passion for the sport. I always enjoy being there.

## It's been decades since Formula 1 last visited Mexico. What sort of following does the sport have there now?

Chris Molyneux, United Kingdom

Very big. You can't imagine. People are really interested. The return of the sport to Mexico will be huge. I'm privileged to have such support from my home country. When I went to McLaren they got behind me, and when I left I got more support as they knew the situation. I'm a unique driver in that respect, which feels special.

## Of all the team-mates you've had in and out of F1, who has been the friendliest?

Roberts Graudins, Latvia

My closest friend is Kamui Kobayashi. He's a funny guy. I get on well with Jenson, too, but I get on better with him now we're no longer team-mates. Kamui was the same. When you are no longer team-mates, there is less competition between you and the relationship gets better.

#### What is Vijay Mallya really like?

Meldoee Ghosn, United States

He's a funny man. He's a laugh. As soon as he comes into the motorhome you hear him talking.



Sergio Pérez leads McLaren's Jenson Button at Monza, finishing one place ahead of him in seventh

F1R: Does he tell jokes?

**SP:** I think he's a joke. He doesn't necessarily tell a lot of jokes, his personality is a joke. I find him so funny. He's a good person, he's just a funny man to have around. And when you do a good race for the team he's a very emotional guy, too.

#### Do you compete against your brother Antonio [who races stock cars in Mexico] much? If so, who wins?

Paul Attard, Australia

Yes, we race every time I'm in Mexico. Whenever I'm back there we go karting together. Maybe four times a week. We bet each other, do kart races just five laps at a time and compete a lot against each other. Most of the time I win...

#### Sergio, where did Martin Whitmarsh go?

Idoia Bilbao, Spain

He just disappeared. The last time I spoke with him he told me he was leaving McLaren. It would be good to catch up with him now.

#### Did you ever go out to dinner with Ron Dennis? What did you talk about?

Paul Manning, United Kingdom

When I was at McLaren, Ron wasn't really part of the F1 team. We planned to have dinner, but didn't make it. He was looking after so many other things. He's a funny man, too.

## We have almost the same name! What are your 2015 plans? You deserve better.

Sergio Pirez Albuquerque, Brazil

Thanks Sergio. I'm looking forward to a new agreement with my current team. I want to establish myself here, as I did with Sauber. It's not so nice to change teams one year after the other. I'll have to see what comes in the future.

## Your elbows don't seem to be out as far now. Has that been a conscious decision?

Thomas Siegner, Canada

It's a popular phrase, because Martin Whitmarsh said publicly after my third race with McLaren that I should get my elbows out. Then the race after, I had a big battle with Jenson in Bahrain. I'm more mature now, but I'm still aggressive. I can control that side well now.

#### How hard was it to live by yourself in Germany in 2005 when you were just 15?

Christian Cruz Canseco, Mexico

Imagine yourself aged 15 giving up everything.

Getting on the plane to fight for your dream and leave everything behind: friends, your family, your home. As Mexicans we are close families, so it was hard. It was not so hard in terms of racing, but it was harder in terms of living.



## What will the atmosphere be like at your home grand prix in Mexico in 2015?

John Baker, Australia

It will be one of those weekends that Formula 1 will remember for quite a while. Just because of the atmosphere itself. Mexico is very much looking forward to having a grand prix, so it's going to be a weekend that people are going to remember a lot. The last one was 1994... no, actually it must have been '92 as it's been 22 years.

F1R: They're big motor racing fans in Mexico aren't they?

SP: They certainly are.

#### You're part of the Ferrari Driver Academy, so why were you overlooked for the Ferrari seat this year and do you think you will get another chance?

Alex Hazeldine, United Kingdom

I was part of the Ferrari Academy in 2011 and 2012. I had the possibility to go to Ferrari for 2014, then the opportunity came up in 2012 to go to McLaren for 2013. McLaren were doing so well and Martin Whitmarsh convinced me to go there because it was a good place. But that turned out not to be the case. Who knows – there might be a chance to go to Ferrari in the future.

## Why did you drive to Pembrey when your F3 race team was setting up for the first race at Oulton Park?

Russell Eacott, United Kingdom

Ah, Russell – my old team boss [at British Formula 3 squad T-Sport]! I basically made a mistake. I was young and I was not paying attention. Instead of putting in Oulton Park, I put Pembrey into the sat-nav. It was a long way.

F1R: Didn't you call him to say you'd driven over the big bridge and he said 'Er, what big bridge?'

SP: Yes, I was going into Wales and I had to turn around straight away. They waited for me as it was the first race of the season. It was a long time ago. I'm glad he still remembers!

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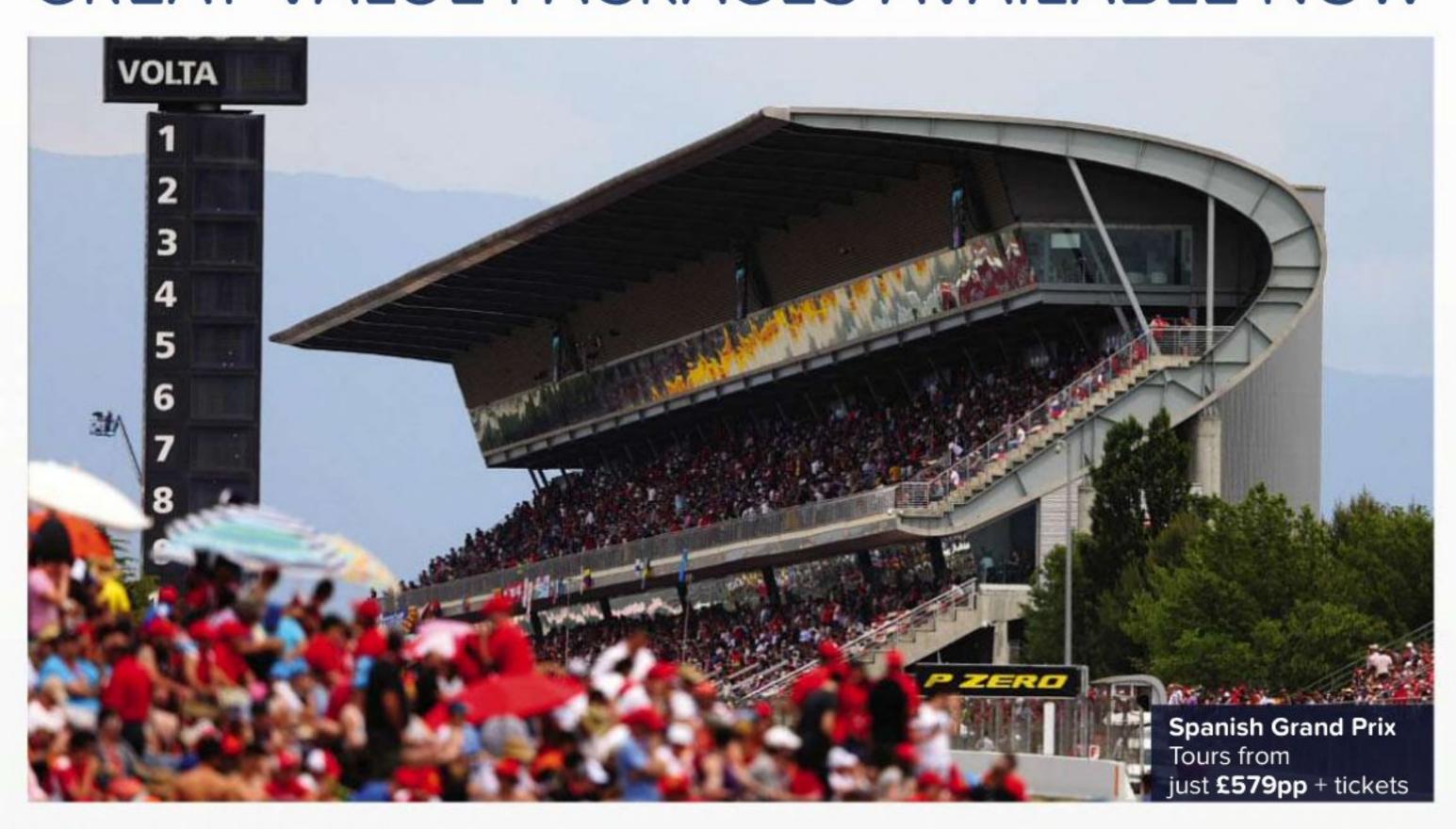


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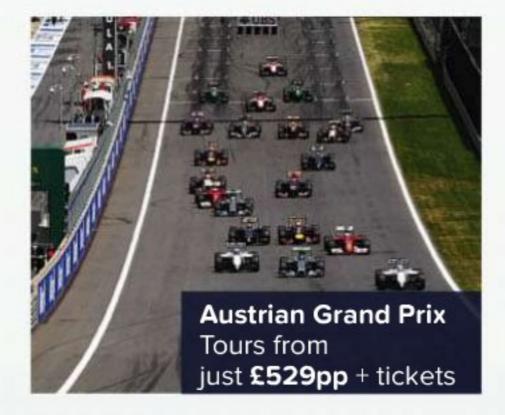


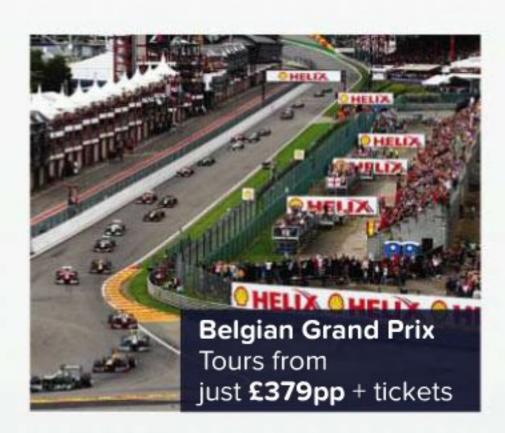
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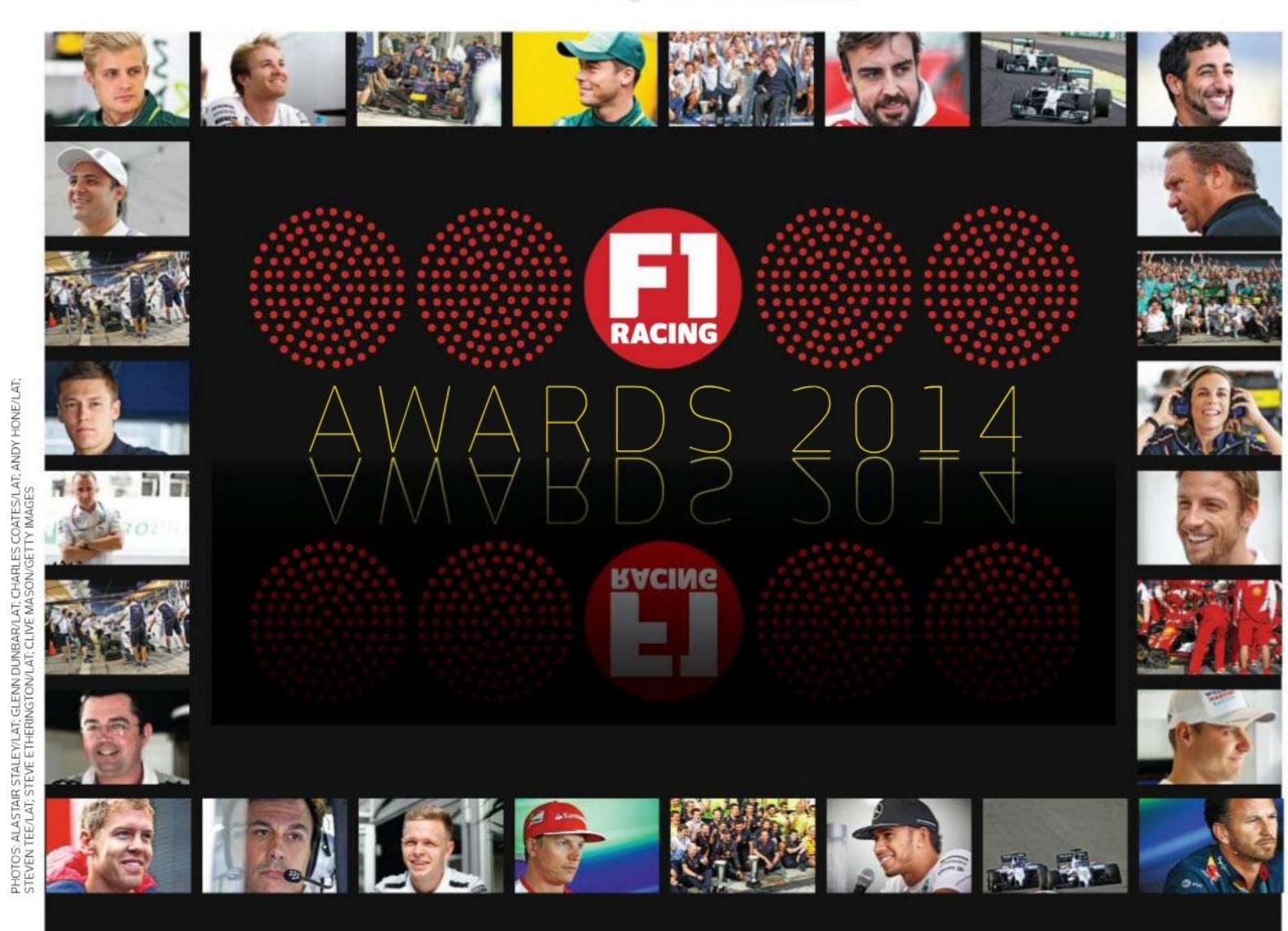






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OR CALL



## Some 79,388 of our readers were polled worldwide to vote in the following 12 categories:

Most improved team of the year p70

Pitcrew of the year p71

Team principal of the year p72

Drive of the year p73 Technical director of the year p74

Start of the year p75

Qualifier of the year p76

Overtake of the year p77

Rookie of the year p78

Car of the year p79

Driver of the year p80

Man of the year p81

Here are the results of the 2014 F1 Racing Awards, as voted by **YOU** 



We are delighted to receive this prestigious accolade. This is great recognition from the fans that we've made progress up the grid. We've improved from ninth to third, which is no mean feat and is down to a lot of hard work by a lot of people. So thank you to everyone at Grove."

#### Claire Williams

Williams deputy team principal

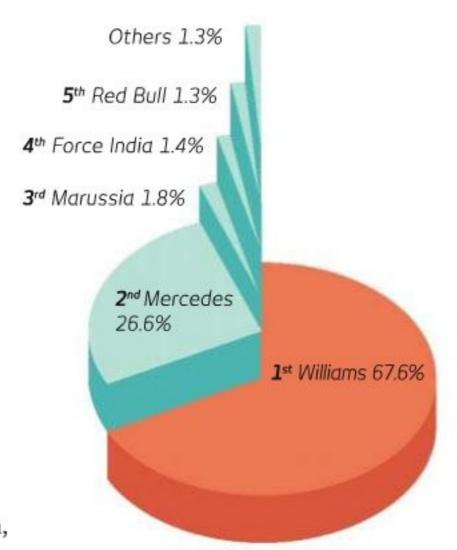
#### IN THE CURRENT ERA OF F1,

improvement, generally speaking, is a gradual process. Restrictive regulations, the ever-increasing complexity of F1 machines and the relentless development undertaken by every team means that even the smallest step forward requires thousands of tiny advances. In this context, what Williams achieved in 2014 is remarkable.

Over the past ten seasons, Williams - winners of nine constructors' titles - have found themselves in a downward spiral. In 2004, they won one race and finished fourth in the constructors' standings. Since then, they have managed fifth, eighth, fourth, eighth, seventh, sixth, ninth, eighth and ninth. In the five seasons prior to 2014, Williams took a single podium: Pastor Maldonado's anomalous, tyreinfluenced victory at the 2012 Spanish GP. Last year, despite using the same Renault engines as title-winners Red Bull, there were just two scoring finishes, adding up to five points.

In 2014, Williams doubled their 2013 points haul in the opening race. And they continued to rack up points and podiums throughout the season. Their potent FW36 chassis even, on occasion, displayed Mercedes-bothering pace. It was not simply an improvement, it was a transformation; a giant leap that had the team believing they could shake off

#### How the voting went



the pain of the past decade and return to their former glory. Yes, the switch to the dominant Mercedes power unit helped, but that wasn't the whole story.

The revival of Williams is the result of a new management structure and revamped tech team that meant the team entered the hybrid era with a fresh outlook. The FW36 was a simple but effective design; Valtteri Bottas established himself as a future star; and Felipe Massa was rejuvenated by his switch from Ferrari.

Having halted their decline, the next challenge for Williams is to build on the momentum of this impressive season.









STOP. WHEEL NUTS OFF. TYRES OFF.

New tyres on. Wheel nuts on. Go. Simple.

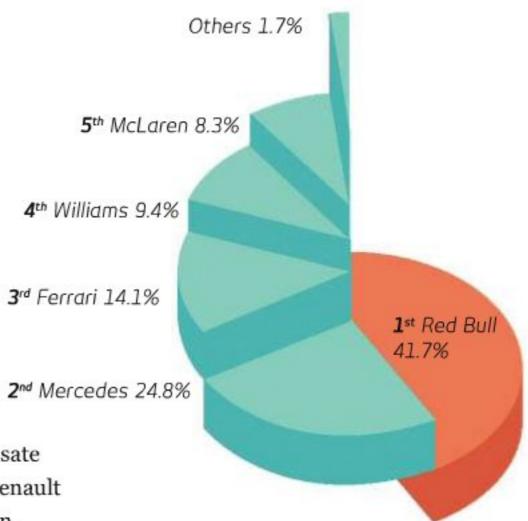
That sequence is an F1 pitstop distilled. But it underplays the art of changing four tyres amid the intense pressure of a grand prix, without making a mistake. Ideally in no more than two seconds. And it's an art that no team has mastered better in recent years than Red Bull.

In 2013 Red Bull's pitcrew set a new record for an F1 pitstop at the US GP, changing four wheels on Mark Webber's RB9 in 1.923 seconds. And while they didn't quite hit that mark in 2014, there was still no team who could match their consistent ability to make such near-perfect stops.

That was just as well, since 2<sup>nd</sup> Merce Red Bull's pitcrew had to be on top of their game to compensate for the lack of grunt from the Renault power unit. With the RB10 often lagging behind the Mercedes machines on the straights, on-track overtaking was hard, prompting the team into some notably aggressive race strategies. The margin between success and failure on many of those strategies was so tight they could work only if the team minimised time lost everywhere else – especially in the pits.

Red Bull's pursuit of the perfect pitstop has been a study in attention to detail. They have a practice area at their Milton Keynes factory, where the floor has been treated to more closely resemble pitlane Tarmac. And they record practice stops using specialist equipment that lets them replay and study each sequence in detail.

#### How the voting went



It's these efforts that have made
Red Bull so consistently good at
pitstops. And that consistency is key:
it's less about the time a team can gain
in the pits and more about reducing
time lost. Red Bull have really only had
one major problem in the pits all year:
when Daniel Ricciardo was released
early at the Malaysian GP. →



This award stands as a testimony to the hours of practice and dedication that go into the work carried out by the whole of the pitcrew – and obviously we've had a fantastic year in the pitlane. This year it has been much harder out on track, but by carrying out some of the fastest stops of the year the boys' work has contributed to the race wins that we've had. So it's a thoroughly well deserved award."

#### Christian Horner

Red Bull team principal

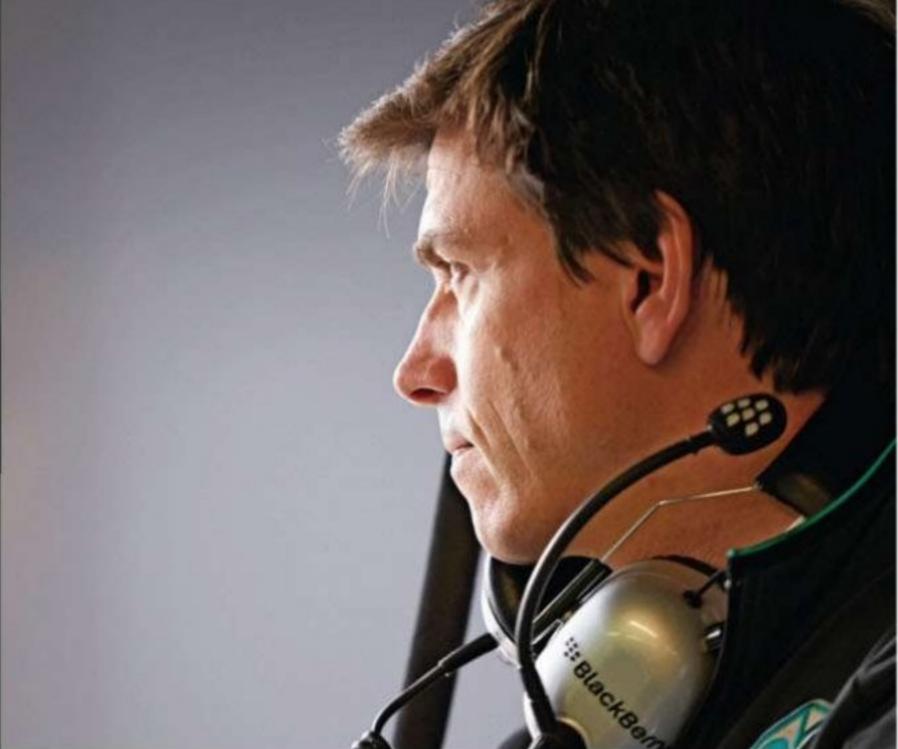






"It is a great honour to be number one in this list in a vote by the fans. But this is not the achievement of one single person. It's the achievement of the whole team, where everyone contributes a lot. So I'm honoured to accept this award for Mercedes as a team."





#### IN THE AFTERMATH OF THE TITANIC

scrap between Rosberg and Hamilton at the 2014 Bahrain GP, Toto Wolff endured his first grilling by the press. But he handled the questions with aplomb. Fans feared that Mercedes would impose team orders to ensure the world championship wouldn't slip through their fingers – as had happened to Williams in 1986 when in-fighting between joint 'number ones' allowed McLaren's Alain Prost through to snatch the title from Nigel Mansell at the final race of the season.

There was no appetite for a repeat of the Schumacher-dominated years, so Wolff deserves credit for continuing to allow his two drivers to race, despite the close-quarters dicing earlier in the season at the Bahrain GP And while that decision may have caused a few headaches, it handed fans a thrilling contest for world title honours.

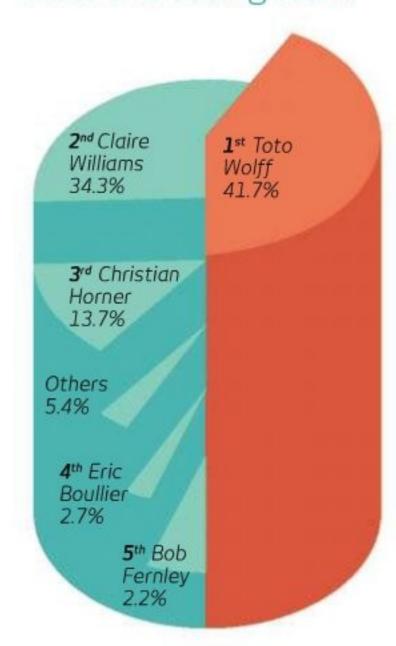
The result was inevitable acrimony and in-fighting behind closed doors at Mercedes. Bleating to the press followed; talk of revenge and retribution. Air needing to be cleared. And yet... Toto, so very ably assisted by Paddy Lowe, did a superb job of controlling Mercedes' two hotshoe racers by giving them the same equipment in which to flourish, and by allowing them to slug it out on track.

It was only when they made contact at Spa that we saw a different side to the normally jovial Wolff. But again, in the pitlane, live on TV he was honest. He scowled with anger, repeating "this is unacceptable" when asked about the clash between Rosberg and Hamilton. Make no mistake: someone – Nico – was about to find themselves on the receiving end of an almighty bollocking. And in doing so, Wolff was proving precisely who was boss.

In many ways Marco Mattiacci achieved the same thing at Ferrari during the latter part of 2014. Once he stepped in, Fernando Alonso no longer ruled that team. A strong-willed manager had taken control.

In 2012, Toto and Paddy were close to taking over Williams, but were instead lured to Mercedes. They took over systems established by Ross Brawn and are keen to acknowledge him for their inheritance whenever they get the chance. It has led them a remarkably dominant double: constructors' and drivers' world championships.

#### How the voting went





#### 1st place, Canadian Grand Prix

I'm very proud to get this award and I don't disagree with the vote. Canada was awesome – the race was crazy. There were five or six of us within a few seconds of each other and that's incredible to see in Formula 1. It was great how it all came together and

#### IT WAS SIGNIFICANT THAT ON THE

day it was revealed that Adrian Newey was to step back from his day-to-day technical role at Red Bull, the RB10, so calamitous in pre-season testing, became the first car to halt Mercedes' domination of the 2014 season.

It was also significant that the man who delivered the 3rd Daniel Ricciardo, win (his first in F1) Belgian GP 6.5% would prompt the

exit of the man who had won the past four world titles for the team. Times are a-changing at Red

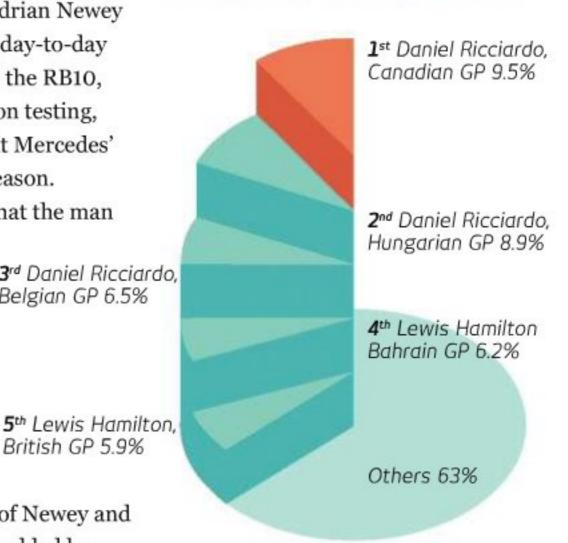
Bull and as the old guard of Newey and Vettel depart, the new guard led by Ricciardo is worth keeping an eye on.

Admittedly Ricciardo benefitted from the mechanical maladies that struck the Mercedes duo at the Circuit Gilles Villeneuve back in June. Hamilton retired, while Rosberg was forced to nurse his energy recovery system.

But as we grew used to seeing over 2014, Ricciardo also had the measure of his highly rated four-time world champion team-mate Sebastian Vettel.

In this race, it was the speed of his in-lap on lap 37 that put him in contention for the win: "Dan's in-lap was massively impressive," Horner said afterwards. "The pitstops were within 0.2secs of each other, but Dan's did the damage to give him the jump on Seb."

#### How the voting went



Ricciardo still needed to perform on track to seal the deal, and with Montréal's long straights not suiting the underpowered Renault power unit, straightline speed was compensated for by running less wing. That meant a more skittish car in the corners, but an unfazed Ricciardo clawed his way through the field, brilliantly overtaking Sergio Pérez, with two wheels on the grass around the outside into Turn 1.

Then, with four laps to go, he passed Nico Rosberg for an emphatic win. The crowd were delighted to see a fresh face on the rostrum and Dan's grin earned him new fans around the world. As Newey looked up from the podium, he knew the future was in safe hands.









This is a great honour and I'd like to accept it on behalf of the many great engineers who have put this car together and who have brought it to the circuit to race. Formula 1 is a real team effort and the exciting thing about this season and the allnew rules is that it's a clean sheet of paper and the Mercedes-Benz works F1 car is probably the most complex car that has ever been put together in Formula 1. It's a great honour to represent that huge team of people who have put together such an innovative package and have brought such tremendous results from it. Thank you very much to the readers of F1 Racing for this honour."



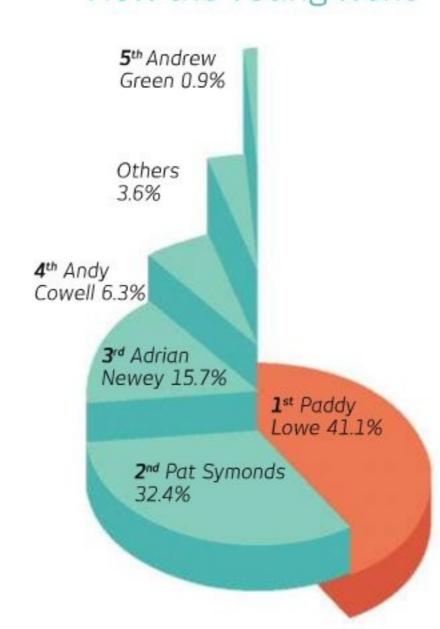
#### WHEN PADDY LOWE TOOK UP THE

technical reins of the Mercedes F1 team for 2014, he had a solid base to operate from. His predecessor, Ross Brawn, had done much of the groundwork in restructuring the team to work effectively as a full manufacturer outfit.

But inheriting solid foundations means nothing if you're not able to build on them. That was not the case with Lowe, who demonstrated the breadth of his construction skills this year to unlock the full might of Mercedes' potential. The destination of the 2014 championship titles never looked in doubt from the moment the car hit the track in pre-season testing.

The 2014 Silver Arrow was fearsomely quick and, crucially,

#### How the voting went



reliable throughout testing; most rival machines were neither. The 2014 regulations, with added emphasis on turbocharged power units and energy recovery, had offered an advantage to works teams able to develop chassis and power unit in tandem, but as Ferrari proved, that doesn't automatically translate to success.

Key to the W05's achievements was the integration between chassis and power unit, and while Mercedes had a natural edge in that department, they had to further tighten bonds between race team in Brackley and engine shop in Brixworth. Lowe spearheaded the processes that created such effective links between the two factories.

Lowe was also responsible for sporting aspects of the team on race weekends, managing the escalating tension between Lewis Hamilton and Nico Rosberg during and after races. His radio calls to both drivers during the Safety Car at the Bahrain GP empowered the pair to fight for the win, but 'suggesting' they do so carefully was emblematic of Lowe's measured approach. His calm application of that philosophy helped Mercedes to weather the inevitable flashpoints – particularly Monaco, Hungary and Belgium – comparatively unscathed.

Shortly after Lowe left McLaren for Mercedes in mid-2013, McLaren's COO Jonathan Neale bemoaned rival teams offering "telephone number" salaries to poach technical staff. A glance at the Mercedes F1 trophy cabinet would suggest it was money well spent.

### FELIPE MASSA

#### 7th to 3rd, Bahrain Grand Prix



It was a great start, but I've had many good starts this season. At the Bahrain Grand Prix I overtook more cars than at any other race and it was a great feeling. My only hope now is that I can go on and beat that in the future."

#### SITTING WITH HIS YOUNG SON,

Felipinho, on his lap, Felipe Massa spoke about his incredible start to the 2014 Bahrain GP just a few hours earlier. His Williams had burst out of the shadows of the first-ever night race to be held in the Gulf kingdom, and he was matter-of-fact about his launch from seventh to third place – passing four cars on the charge down to Turn 1.

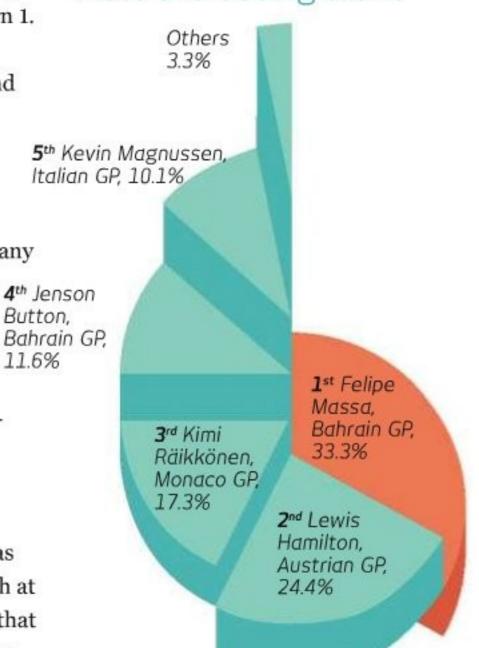
In the early part of 2014 the Williams FW36 ran substantially shorter gear ratios than other Mercpowered teams, and while that put more load into its tyres mid-corner, it had its benefits for acceleration.

Massa's brilliant start in Bahrain was backed up with a tremendous launch at the following race in Shanghai, but that caught him and his rivals by surprise as he cannoned into the pack at T1.

For the best launch, everything needs to be perfect. The temperature of the tyres and clutch needs to be optimum (the latter at 200°C), the rear wheels need to be travelling 8-10 per cent faster than the fronts and the pre-start revs needs to be just right to use the engine inertia to jolt the rear wheels, although not so great as to cause excessive wheelspin.

But what was so impressive about Bahrain was the ease with which Massa blasted through the pack and braked ahead of team-mate Valtteri Bottas at the first corner. Having been beaten in qualifying and with team orders in Malaysia still fresh in his mind, this was Massa reaffirming his authority. And to pass four cars in a few hundred meters is a real rarity nowadays.

#### How the voting went





Gulf



### QUALIFIER OF THE YEAR



### LEVVIS HAMILTON



I'm not really one for knowing what to say when I receive an award, but this is something I am very proud about. This has been an amazing year and the support that I've had from the fans has been incredible. To know that the readers are supportive of the work that the team and I have done is a great feeling. So I accept this award on behalf of my team as I wouldn't have been able to do it without them."





#### THAT LEWIS PLACED HIMSELF ON

pole position for this award in spite of several high-profile slip-ups at crucial moments during Q3 sessions in 2014, is a testament to the sheer excitement he brings to qualifying hour. Put simply, Lewis is the big beast of those 60 minutes, bang at the centre of the drama even on those occasions when he isn't slam-dunking his W05 Hybrid onto pole position by a commanding margin.

Rain added tension to the first two qualifying sessions of the year, and in both of them Lewis took it to his teammate, Nico Rosberg. But it was in the second, at Sepang, that we glimpsed his occasional tendency to push a fraction too hard: on his flying lap he went off track, temporarily unsighted by the spray, and failed to improve on the banker lap he'd set earlier. Lewis being Lewis, though, that deposit was good enough for pole.

Hamilton dominated practice
in Bahrain but then blew his final
qualifying lap by locking his wheels
at Turn 1 (for the first time this year,
but not the last), enabling Rosberg
to usurp him on the front row. And
although Lewis smoothly claimed
pole position in China and
Spain, that would be his lot
– for nearly three months.

Read through the statistics and it would be easy to write this off as a mid-season slump, but in truth Lewis blew it in only two races: Austria, where he spun in Q3, and Silverstone, where he inexplicably decided to 'fold' and abort his final flying lap

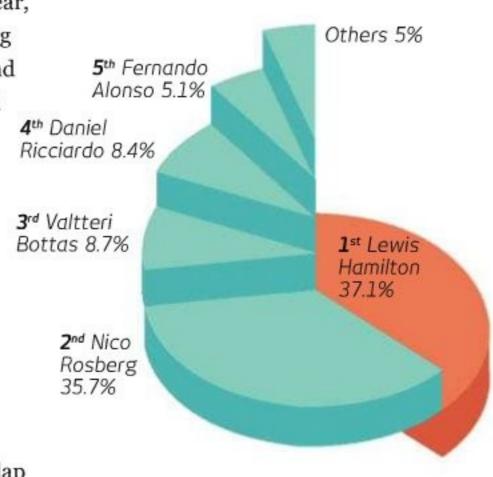
during changeable conditions. While Hamilton's brain was out of gear, Rosberg took advantage of a drier track in the final sector to waltz to pole while car 44 languished sixth on the grid.

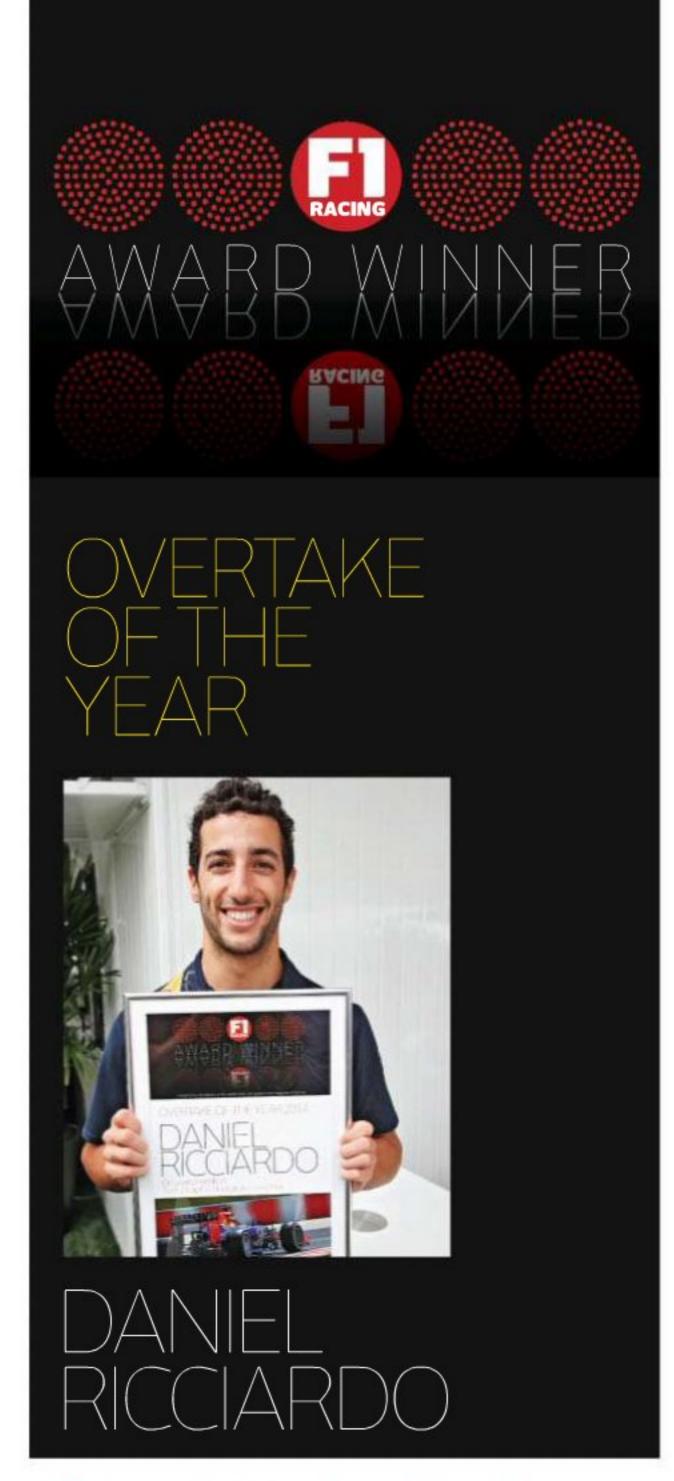
In Monaco, Lewis was denied pole by what many suspected to be his team-mate's subterfuge; at other races Rosberg outpaced him fair and square, albeit by a whisker. There were also two mechanical disasters in Germany (brake failure) and Hungary (fire).

In the latter part of the season, Lewis rediscovered his mojo and claimed pole after pole. When he's on fire – so to speak – Lewis can always reach that little bit higher than anyone else.

Having wrung his own Mercedes to the maximum around Singapore's peril-strewn streets, only to be told that Lewis (in spite of locking his brakes into Turn 1) had snatched pole position by 0.007 seconds, Rosberg's shrill response said it all: "Dammit!"

#### How the voting went

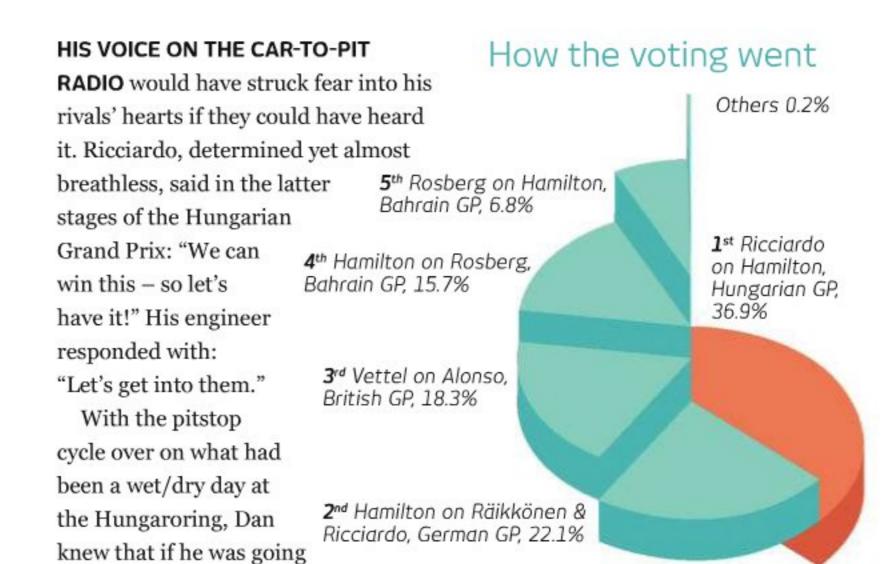




#### On Lewis Hamilton, Turn 2, Lap 67, Hungarian Grand Prix



I was pretty fortunate to have had a few good overtakes in 2014, and this one was cool. I gave it a crack a couple of laps earlier, but it didn't work. Then afterwards I passed Fernando so, in a way, that move set up the win. That move on Lewis needed to be done. I later said: 'That's how it's done ladies!' on the radio – maybe I had a bit of adrenaline running through me..."



Ricciardo had repeatedly proved in the early part of the season that he wasn't intimidated by racing the big guns wheel-to-wheel, pulling off some of the bravest and most audacious overtaking moves of the season.

to win he had to pass two of the hardest

racers in Formula 1, Lewis Hamilton

and Fernando Alonso, on the track.

What about his desperate dive around the outside of Sergio Pérez, two wheels on the grass in pursuit of his first grand prix victory in Montréal? Or the dummy switchback he pulled on his team-mate Sebastian Vettel at the second chicane at Monza? Both were assured and ballsy. But two of his best moves came in the one race: in the tricky conditions of that Hungarian GP.

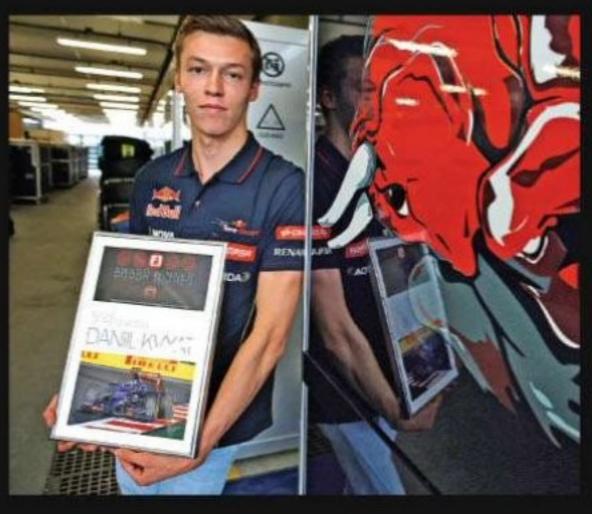
The first move – and the winner of this year's overtake of the year – wasn't for the race lead, but significantly it was against the best driver/car combo of the year. Lewis Hamilton was beaten and at a track where he has been dominant in recent years. The move was around the outside of Turn 2 and as they ran wheel-to-wheel into the kink at T3, Daniel wasn't intimidated. Yes he was on the newer, softer tyre, but watch as he locks up and cadence brakes around the edge of the corner — he's right on the limit of adhesion on the slippery surface.

A few laps later he had Fernando
Alonso in his sights and with DRS
assistance slammed on the brakes to
take the lead into Turn 1. Just three
laps later, he rounded the final corner
to take the second win of his career.





### ROOKIE OF THE YFAR



### DANIIL Knyat



It's always nice when people appreciate the job that you are doing and always a pleasure, too. To receive any award is nice because it recognises the achievement. Obviously Kevin Magnussen has also done a fantastic job this year... but if I'm honest, I agree with the readers' vote!"

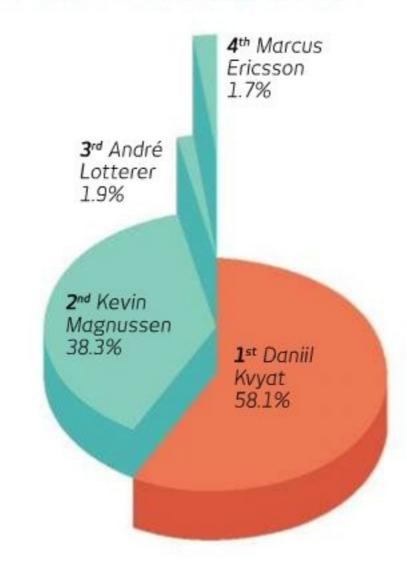




Dr Helmut Marko runs the Red Bull junior team like the abrasive proprietor of a small boating lake – "Get out! Your time's up!" – you can judge, with hindsight, that he made the right call just over a year ago to elevate Daniil Kvyat to Formula 1. It came as a shock at the time, since António Félix da Costa was theoretically next in line for an F1 break with Toro Rosso... but da Costa had been delivering inconsistent results in Formula Renault 3.5.

Red Bull's junior team is a relentlessly up-or-out environment, as da Costa discovered when Marko chose Kvyat over him for the Toro Rosso seat vacated by Daniel Ricciardo. And Kvyat – then just 19 years old, and still looking every inch the gawky teenager – knew it. Kvyat had already been yellow-carded by Marko for underperforming in his first year on the

#### How the voting went



programme, so the additional pressure of being in F1 was simply a ramping-up of expectations that already existed.

Kvyat, though, is no self-indulgent playboy taking Red Bull's backing for granted. He's mature, smart, eloquent, fluently quadrilingual – and, most importantly, focused.

In F1 the most important barometer of a driver's performance is their teammate, and Kvyat was up against Jean-Eric Vergne, who had two full seasons of experience. And even if Vergne hasn't *quite* set the world on fire – not enough to get the nod over Ricciardo for the Red Bull vacancy last year – he is a consistent, quick and underrated performer who usually qualifies and races strongly, given the limitations of his equipment.

What was immediately impressive about Kvyat was not that he beat Vergne in qualifying (over the course of the season, he outqualified Jean-Eric ten-nine), but how quickly he got into the ballpark, given the lack of running Toro Rosso had in pre-season testing. Right from the start, he was bringing the STR9 through to Q3 or only just missing the cut.

Where there have been mistakes in races, he hasn't disgraced himself. Due to severe dehydration in Singapore, his performance fell apart to the extent that team principal Franz Tost had his head in his hands at one point. But Kvyat is learning from his mistakes and, in turn, hasn't pointed the finger of blame when his machinery lets him down, as it did at his home grand prix where he limped across the line in 14th having qualified a superb fifth.



### CAR OF THE YEAR



### MERCEDES F1 W05 HYBRID



This is the first Mercedes to win the F1 constructors' world championship, which is a curiosity because there wasn't a constructors' championship in the mid 1950s when the Silver Arrows were dominant. I feel proud to be part of the team that has brought Mercedes back to prominence with a car that is really memorable."

#### Paddy Lowe

Mercedes executive director (technical)





#### WHEN WORD BEGAN TO FILTER

January 2014 that the new Mercedes turbocharged hybrid 'power unit' was likely to be the class of the field, and that their rivals – Renault in particular – were struggling, it seemed likely that whatever car emerged from Mercedes' Brackley factory ought to do pretty well. And yet Mercedes haven't always been able to field a car regularly capable of beating their engine customers. Why then, would 2014 be any different?

The answer to that question was clear from the first of the pre-season tests, and underlined as Nico Rosberg streaked to victory at the Australian Grand Prix. It would have been a runaway one-two had Lewis Hamilton's W05 Hybrid not succumbed to the failure of a surprisingly inconsequential component – a rubber gaiter holding one of the spark plugs.

Success, though, has come at a price. Ross Brawn, the architect of the technical restructure that spawned the W05 Hybrid, was pushed out as the Mercedes board grew impatient for success. While the car was topping the timesheets in those pre-season tests, Brawn was indulging in his favourite hobby of angling, making a conspicuous public appearance in Scotland to officially open the salmon fishing season on the River Dee.

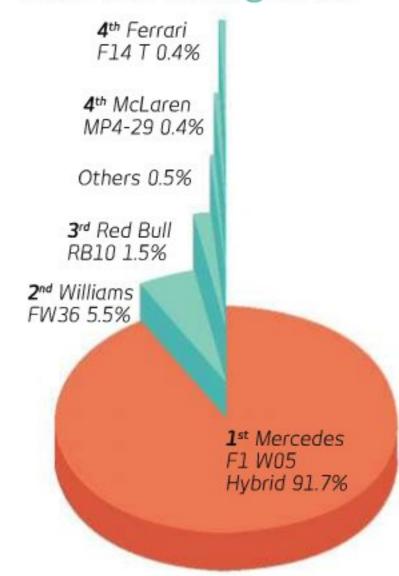
It's been said that had the Mercedes power unit been bolted to the back of Red Bull's RB10, that car would have been the technical package of 2014. But that glibly overlooks the real reason for the W05 Hybrid's supremacy: a beautifully integrated approach to

designing the whole package. The unpalatable truth for Mercedes' rivals was that the car's edge came from an accumulation of small details. If only fitting a great engine to a great chassis was as simple as it sounds.

From the earliest conceptual discussions, delegates from Mercedes AMG High Performance Powertrains in Brixworth sat down in the same room as the chassis designers and aerodynamicists. All the department heads – Andy Cowell from Mercedes AMG HPP, Paddy Lowe, Geoff Willis, Bob Bell and Aldo Costa from Brackley – pushed their teams to aim high, but worked together to ensure that the whole package was a success.

So it wasn't just the famous split turbo, or the clever gearbox-within-agearbox, that made the W05 Hybrid a title winner. It was ego-free teamwork, pure and simple.

#### How the voting went







# HAMILTON



That's cool. That's the award I was working towards. Thank you very much. This wouldn't have been possible without the team behind me and also my family, too, as they have got me to where I am today. Also my fans: I never thought in a million years that I'd have so many people supporting me – that has been something that has really spurred me on this year. So this award is ours we win and we lose together."





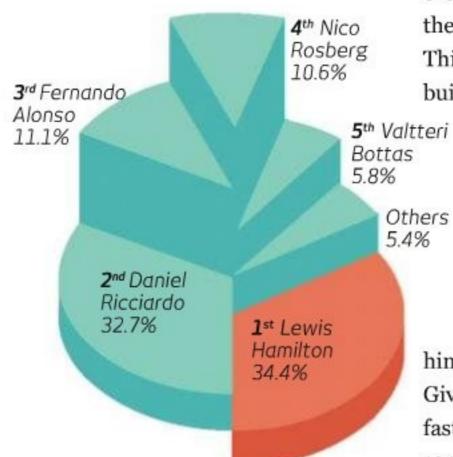
#### THE MERCEDES W05 HYBRID WAS

the car Lewis Hamilton had been waiting for for a long time. Five years, to be precise, since he won his first world championship in November 2008. Five years of frustration at being handed largely inferior machinery; five years of feeling his immense talent was being squandered; five years of watching Sebastian Vettel rack up four world championships in a series of dominant Red Bulls.

Hamilton can be a polarising figure; compelling, intense and complicated. But in a vote for Driver of the Year, it doesn't matter. What matters is that Hamilton is fast. When he is given a car to match his talent, few can match him for raw speed. And the Mercedes W05 Hybrid was a match for his talent.

Yes, Nico Rosberg led the championship for much of the season, but even when all things were equal, he never had his team-mate's raw pace. In the 14 races when both Mercedes drivers finished, Hamilton finished

#### How the voting went



ahead of Rosberg on ten occasions. In three of the other four, Rosberg beat Hamilton, Lewis having started well down the grid after problems in Germany and (admittedly of his own making in Austria) in qualifying. The other race was Monaco, where that off by Rosberg in qualifying leaves a lingering question mark.

In recent years, Hamilton has developed a reputation for getting himself into scraps and making the odd mistake. He's seen as quick but, unlike Sebastian Vettel and Fernando Alonso, not quite a rounded package. But that reputation was formed in the years he was trying to make up for the limitations of his racing machinery, struggling to match Red Bull's mighty combination of Sebastian Vettel and Adrian Newey through sheer willpower and a heavy right foot.

In 2014, Hamilton was all but errorfree during races. He had the best car and, when he was able to get on and drive it, he generally won.

When pushed, he was often even better. Think of his charge through the order in Hungary, from spinning off on the first lap to a place on the podium. Think of his sprint in Singapore, to build up the time needed to make a

> pitstop after a badly timed Safety Car. Think of his defence of his lead in Bahrain, or his epic round-the-outside overtake on Rosberg at Turn 1 in Suzuka.

> > Hamilton might not be the

most rounded driver, but give him a great car and that doesn't matter.

Give him a great car and he'll drive it faster than anybody else. That's all you can ask from a Driver of the Year.





Is this an award for the best-looking man of the year, too? It's really nice to accept this. For me it's been a really fun season and I've started to get a bit of a following from the fans. People are enjoying watching me on track, which makes me feel good about what I'm doing. Whether that's the team or the other drivers, I feel as though I've earned respect from my peers this year, which has been nice. So thanks to the fans for thinking the same. Awesome!"

#### ONE OF THE SECRET JOYS OF F1 IS

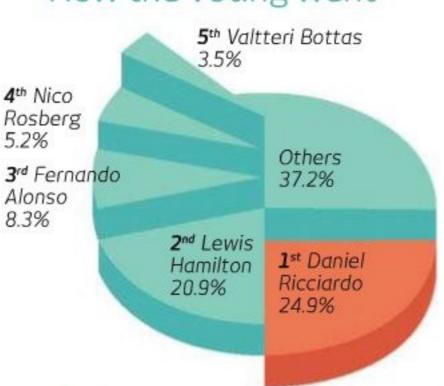
seeing established wisdoms overturned.

That Daniel Ricciardo – just another
young guy living the carefree dream
with a walletful of Red Bull money,
eh? No real ambition, never likely to
amount to much, qualifies well but
barely turns up in the race, no? No!

Even when Daniel was picked to succeed Mark Webber at Red Bull, the impression emanating from the likes of Christian Horner and Dr Helmut Marko was that he was not so much Mr Right as Mr He'll Do. Sebastian Vettel was the number one driver and all they needed was someone who could bank enough points to ensure that the constructors' trophy also garlanded the cabinet back in Milton Keynes.

Daniel didn't bother to read the script. Over the winter of 2013-2014, he sculpted himself into a leaner, tougher fighting machine. Still smiling, but coiled and waiting to pounce.

#### How the voting went



After Red Bull completed low testing mileage, Daniel stunned everyone – not least the denizens of the RB pitwall – by driving to second place in Melbourne, only to be robbed of the points on a technicality. But still – well, Sebastian had *issues*, didn't he? Yes, everything will fall back into its expected place next time around...

And so it did, but not for long. Sebastian qualified second at Sepang and finished on the podium, while Daniel started fifth, then retired after a botched pitstop (which earned him a ten-place grid penalty for the next race) and a wing failure. Daniel's response? Knuckle down, pull out an incredible Q3 lap in Bahrain (third fastest, which became 13th with the penalty applied) to minimise the damage, then run an incredible race, passing his team-mate on the way to harrying third-place finisher Sergio Pérez to the chequered flag. "One more lap and you'd have done him, mate," confirmed engineer Simon Rennie over the radio.

And that was Daniel Ricciardo's season in a nutshell: all smiles outside the car, combative once he slams his visor down. So Seb won't play the team game and move over? Fine – just overtake him anyway. Take an underpowered car to three wins, only one of which owed much to good luck.

When you outshine a four-time world champion, you know you're doing something right. ②



find more issu

# "Most see their



# before their eyes; but they go on into it"

- Leopold von Ranke

With two teams closing, talk of race boycotts and a financial malaise seeping through the grid, something seems to be rotten in the F1 state. Is this a sport in crisis? Max Mosley, former president of the FIA, offers a very personal view

PHOTOS ANDY HONE/LAT & BRYN LENNON/GETTY IMAGES

It's been plain for a long time that there is something fundamentally wrong with Formula 1. You don't get vacancies in the Premier League or the Bundesliga, yet there's been at least one space on the grid for years. So what's the problem?





First a bit of history: by 2002, excessive cost was a real threat to Formula 1 but the teams could not agree on how to reduce it. Starting in 2003, the FIA took the initiative and controversially abolished qualifying cars, restricted engine development and prevented excessive engine changes, plus other measures. But by 2008 we realised we could not control costs by regulation alone. With a financial crisis driving the big car companies out of Formula 1 and rising costs making things very difficult for the smaller teams, a radical new rule was needed. It was time to limit what a team was allowed to spend.

If pitched at the right level, a cost cap would make all teams financially viable and the well-sponsored ones very profitable. It would also level the playing field; a team with three times more money might as well have a bigger engine. Most of us would like to see what the engineering talent in the smaller teams could achieve if all teams spent the same.

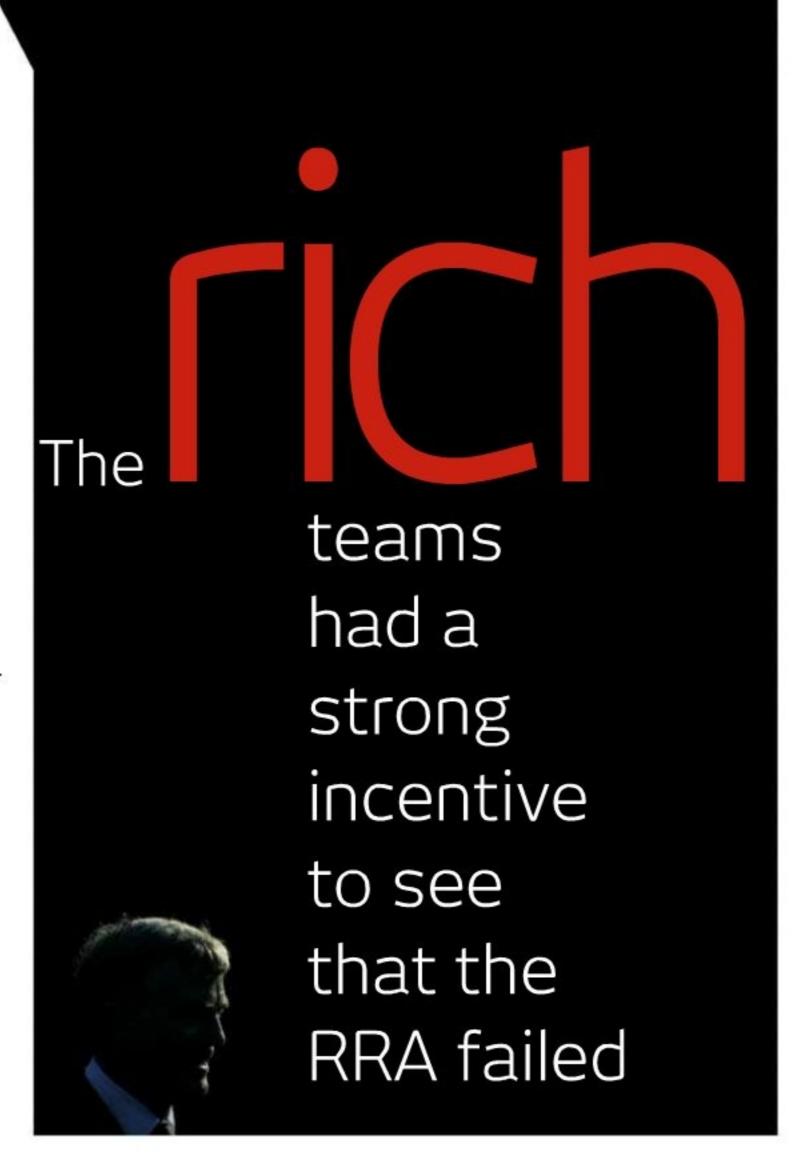
The immediate objection was that you couldn't enforce a cost cap. But between January 2008 (when we proposed it) and the following May, the finance directors from the teams, two specialist partners from Deloitte and a former F1 finance director got to work under the chairmanship of former Jaguar Racing team principal Tony Purnell. They produced a foolproof scheme for scrutinising each team's financial activity and accounts.

There was absolutely no doubt it could be enforced, but over the winter of 2008/9 the teams decided they did not want an FIA-regulated cost cap. They told us they would make a 'Resource Restriction Agreement' (RRA) among themselves. I was surprised that the smaller teams went along with this. It seemed obvious that without independent enforcement, the RRA would fail. It was also obvious that the biggest teams did not genuinely want to restrict spending because they would lose their advantage: easier for them to compete with two or three other rich teams and have the rest handicapped by a lack of money than to face ten teams with equal finance. The rich teams had a strong incentive to see that the RRA failed.

So why did the smaller teams agree to the RRA rather than back FIA regulation? I think they were probably swept along in the campaign for more money from Formula 1's owners, CVC. Ferrari's then president Luca Di Montezemolo and others were complaining that Bernie and CVC were taking too big a proportion of the receipts. That was certainly arguable, but was, for the time being, a side issue. The urgent need was to restrict spending and divide the CVC money (such as it was) fairly. But like a conjuror distracting his audience, Luca focused the smaller teams on the amount CVC were paying rather than the immediate problem.

Back in 2008, if the smaller teams had asked, the FIA could have pressed for a fair distribution of the CVC money. The 1998 Concorde Agreement had expired on 31 December 2007. Bernie and CVC wanted it renewed. The financial arrangements for the teams were part of Concorde. It needed the FIA's signature, so we were in a strong negotiating position. We might not have achieved equality but we could have got a much fairer division.

Bernie understood this. He would not send us the financial schedule he had already agreed with the teams, saying it was none of the FIA's business; it was between him and the teams. We replied that we would not sign a new Concorde without seeing and approving all of it, including the payments to the teams. Bernie and I had a rare public disagreement about this at the June 2008 World Motor Sport Council. Another 12 months followed with no movement, so no Concorde Agreement.



Bernie claimed the money was not our concern because we had agreed with the European Commission that we would have no commercial interest in any FIA championship. But in return for official recognition as the sole body governing international motorsport, we had agreed to ensure fairness and safety. This meant the commercial arrangements had to be fair – a separate matter from the FIA participating financially in F1. For example, we would have had to intervene had CVC given all the money to just one team. The problem was that the smaller teams were not complaining. I was being labelled a dictator because of the cost-cutting and we could not force through fairer payments without the support of the smaller teams.

We nevertheless tried to introduce a cost cap in 2009 by offering greater technical freedom (for example, movable aero) to any team prepared to operate on a greatly restricted and rigorously checked budget. The idea was to make up the grid with cars that would be up to F1 performance levels rather than admit GP2 or allow third cars. It would also have shown that from the grandstands and on television, a £40million team was indistinguishable from a £200million team. The big teams were strongly opposed saying it would lead to 'two-tier racing'. It seemed they hadn't noticed we already had that.

By 2009, CVC's need for a new Concorde Agreement had become urgent. If the smaller teams had backed the FIA we could have insisted on a cost cap and fair distribution of the money in return for signing. The rich teams might have tried a breakaway (as they repeatedly threatened) but it would have collapsed by early 2010 once they realised our deal with the European Commission meant their series would have to run under the FIA and, worse, that their bargaining position with race organisers and TV companies was hopeless. But the smaller teams had chosen to back FOTA against the FIA. We decided to leave them to it.

So where are we today, five years on? The problems are pressing, but I think a properly enforced cost cap combined with a fair division of the



























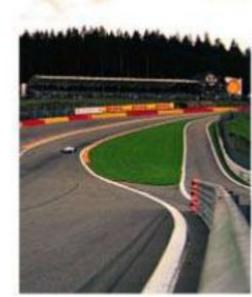




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# Perhaps I used to be too quick to Intervened in the present situation

FOM money could be the solution. A cost cap would mean the engineering contest between teams would no longer be hopelessly skewed, and an equal distribution of the current prize fund would give each team around £50million – a good starting point for a cost-cap budget. A team's sponsorship would be its profit, and the contest would be fair.

The cost cap would have to include a rule that to be eligible for Formula 1, an engine must be available for a maximum of, say, £3million a year. The massive R&D costs of the new modern-technology engines are directly road-relevant and should be borne by the manufacturer, not passed on even partially to the teams. If a car company wants to showcase its technical ability in F1, it should do so at a price the teams can afford.

But how could this be done? The cost cap would need a rule change; likewise the engines. Rule changes are relatively straightforward, but redistributing the money would be more difficult. Contracts are now in place and the teams currently receiving the lion's share would resist strongly. I believe that the FIA could do it, but it would have to adopt a very radical approach.

From a purely FIA perspective, there are reasons for leaving well alone. Perhaps I used to be too quick to intervene and I would certainly have intervened in the present situation. However Jean Todt is more restrained and he may well be right. There is a case for keeping out of these disputes and letting nature (or the law) take its course.

After all, the FIA's primary task in motorsport is safety and it is not generally understood that much of the FIA's work is also about improving safety on the roads. Here Jean Todt and his team are working hard. He may feel that he should concentrate on this rather than the commercial interests of the smaller teams. It's not just about the occasional life in motorsport, important though that is, it's literally thousands of lives. The FIA in Brussels, and later all over the world, has had a massive positive effect on reducing road casualties. It all started following the death of Ayrton Senna when Professor Sid Watkins, the FIA's F1 safety delegate, asked what the EU governments were doing to protect car passengers. With around 50,000 people dying on the roads in the EU each year we decided there needed to be a major research effort. Surely we could learn from this to help make F1 cars safer? To our astonishment, we found that there had been no change to the EU crash test legislation since 1974. The car industry's Brussels lobby was blocking all new proposals from the European Commission. This led the FIA to mount a big road safety campaign in Brussels.

There was a hearing in the European Parliament arranged by Alan Donnelly, then a senior MEP and the Parliament's rapporteur for the automobile industry. I took part with Gerhard Berger and David Ward. David ran our Brussels office and later the FIA Foundation. Gerhard made a great impression, we got a lot of publicity and Alan pushed amendments through the Parliament establishing effective modern EU car safety regulations. These were eventually adopted by the United Nations for the rest of the world. (The amendments were originally drafted for us by an expert in the UK Department of Transport, who raced Clubmans sportscars at the same time as I did in the 1960s.)

Then we started Euro NCAP, publishing the results of crash tests on popular cars with the media strategy coordinated by Richard Woods. As a result of this, most of the cars that are sold in Europe now exceed the EU mandatory requirements. Numerous road safety projects in Brussels followed and Global NCAP today brings together nine NCAP organisations from different parts of the world. It recently held its latest annual meeting in Tianjin, China.

At the same time, Jean Todt has been carrying on the road safety work of the FIA itself. Jean has travelled tirelessly to promote road safety all over the world, often assisted by his partner, the film star Michelle Yeoh.

The FIA's road safety work all started with F1, and the FIA Foundation still pays for most of it. F1 is therefore important, if only for the impact it can have in other areas, but I can nevertheless understand that today's FIA may feel it wiser not to get involved in the current crisis.

The above account only skims the surface. There's much more than there is space for here. The full story of the FIA's dealings with Bernie and the Formula 1 teams must await my forthcoming book... ①

The problems

are pressing





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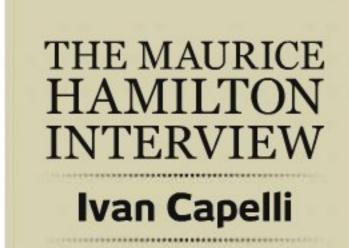
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"I was taken to a room. The desk was clear, except for one sheet of paper. Ferrari said this was the press release that would be released in half an hour saying our relationship was over. 'That's it. You are out of our team"

A close encounter with Niki Lauda's Ferrari led a young Ivan Capelli to dream of racing for the Scuderia. But when it became a reality, it quickly turned sour

**PORTRAITS MAX PEEF** 

ust like the man himself, the office of Ivan Capelli is quietly understated. Capelli was recently appointed president of the Automobile Club of Milan (ACM), yet he does not flaunt the authority that comes with high office and embraces, among many things, the Monza circuit and the Italian Grand Prix. Capelli prefers instead to work with the same gentle enthusiasm he brought to a career spanning karts, F3, F3000 and 93 Formula 1 grands prix. He led a couple of races and managed to split the all-conquering McLaren-Hondas with his March-Judd 881 at Estoril in 1988. But the prevailing memory, in Italy at least, is of his struggle in 1992 with one of the lemons that appear periodically from Maranello.

The disappointment associated with a dream turning into a career-wrecking nightmare in a matter of months is something he addresses with honesty and good humour as we adjourn for lunch in a classic Italian establishment close to the imposing automobile club headquarters. It may be a short walk but it's quite a step in another sense. Had you asked Ivan 40 years earlier, he would have known everything about AC Milan and precisely zero about the ACM.



Ivan Capelli: I was a soccer player from the ages of ten to 14. Like all Italian children, I dreamt of playing for the national football team. My father was a cameraman for Italian TV before he started his own company in the publicity business, mainly in sport. One of his clients was Parmalat, who sponsored Brabham and a number of drivers including Niki Lauda and Clay Regazzoni when they were Ferrari drivers.

My father went to Maranello one day to produce some footage and he took me with him. I was 13 years old and I loved his work because every sport was something different. My father was very strict, watching me all the time and saying: "Do not move!"

Ermanno Cuoghi was Lauda's mechanic.

We were in the garage at the Fiorano circuit and Cuoghi said: "Come with me." I was really worried about moving from the spot, but I looked at my father and he said "Okay." Ermanno said: "I am giving to you the possibility to dream. Take this as a very big opportunity – but do not touch anything." He put me inside the Ferrari 312T.

Maurice Hamilton: What year was this?

IC: It was 1977. So I'm 13 years old, sitting in

Niki Lauda's car, the steering wheel right in front
of me with Prancing Horse in the middle. It was
like a hammer between my eyes! I didn't touch
anything; I just sat there, experiencing the smell
of motorsport – the fuel, the oil, the rubber.

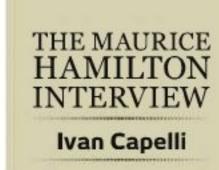
Seeing this steering wheel. Incredible.

Without saying anything to my father, I started to buy motorsport magazines. I was reading, drawing the cars, understanding the technology they were applying in F1... trying to get closer to that world.

MH: Were you thinking about racing then?

IC: I had no thoughts about that, but I was fascinated by what I saw. That increased when I went with my father to the Italian Grand Prix at Monza in 1977. There were no restrictions







Niki Lauda in his 1977 Ferrari 312T, the car a 13-year-old Capelli was briefly allowed to sit in by Lauda's mechanic Ermanno Cuoghi, and the machine that fired his dream of one day driving for the Scuderia

like there are now, and I was behind the guardrail with the cars 50 metres from me. Now I had even more intense feelings. But still I didn't say anything about it to my father.

One day, we were watching TV and there was footage of a kart race. I said to my father: "I wonder how it feels to drive a car like that?" He didn't say anything. About 15 days later, we had a kart, engine, tyres, everything. He was crazier than me! But it was the worst kart we could have bought because it was the wrong one: a 125cc engine with gears. It was like starting with F1.

We went to a kart place and the guy said to my father: "You are crazy because you bought a kart you cannot use. Maybe for you, but not for your son." They told us what to do and we spent one winter organising ourselves, understanding how my father should become a mechanic and I should become a driver. That's how we started. MH: When you finally drove a kart, did you like it?

IC: I can clearly remember my first lap of the San Pancrazio track in Parma. I was cruising and smiling; big grin, like an idiot. I was very lucky because I found a driver called Pietro Sassi, who was already competing in the top class. He had a very clever mechanic called Vittorio. Pietro gave me the first idea of the racing line, teaching me how to drive. And Vittorio instructed me how to feel the differences and how to find the right setup. They were surprised by my consistency in lap time and this made them think it was worth putting in more effort to help me.

I didn't have much money. I worked for a shop connected with the circuit and would test new things they were trying and run in engines for other drivers. I was learning all the time because at that age you are a blank page. You record all the feelings; remember everything you're told.

Vittorio became my mechanic. Towards the end of my first season in 1978, he said: "Look, you have to come with me to see a driver who is competing in the world championship. You need to spend time watching him." I agreed to fly to Estoril. Vittorio didn't point out which driver, but I watched and noticed one guy doing something completely different. He had a yellow helmet. Vittorio said he was the guy. It was Ayrton Senna. I immediately understood that he was the driver I should follow. Later, in 1981, he returned to compete in the world championship at Parma. We were racing against each other and he was just in front of me on the track.

MH: Did you still think he was very special? IC: Absolutely. He was the first driver to combine a lot of things: speed, the ability to set up the car, managing the team, attention to every detail.

MH: By today's standards, you had started karting quite late because, in 1978, you were 15. IC: Yes, now they are starting at eight years old! I was 22 when I got into F1; now they are 16.

MH: Is it too young, in your opinion?

IC: It's not like it was. The cars are easy now.

MH: Certainly compared to your first F1 test which was in a Brabham-BMW turbo, wasn't it? IC: Yes, the BT53. And it was at Brands Hatch. Can you imagine that car round there? It was only a small circuit - but that was enough. Parmalat supported Brabham and I was invited by them because I was winning the Italian F3 Championship. I stopped after ten laps, like they told me to do. Herbie Blash was team manager, and he said I had to get out because Davy Jones was going to have a turn. I said to Herbie that he would have to help me get out. I was holding the steering wheel and couldn't let go! I was so shocked by the power of that engine. I was asking why I had put myself in this situation, because it was really crazy to drive that car on that track.

MH: In fact, your first F1 drive would be with Tyrrell. How did that come about?

IC: I was competing in Formula 3000 and had a good race at Donington Park, which was the final round of the 1985 championship. I came through from the back of the grid - there had been a problem with my gearbox in qualifying - and

"I clearly remember my first lap of the karting track in Parma. I was cruising and smiling; big grin, like an idiot"



finished third in wet conditions. Ken Tyrrell was at that race and came to see me afterwards. He said I did a very nice race, I was quick, and so on. He didn't say anything else.

MH: That would be typical Ken, giving nothing away. But you knew he was looking for a driver because Stefan Bellof had been killed in a sportscar race a few weeks before.

IC: That's right. I was still living with my parents. Not long after, my mum answered the phone very early in the morning. She realised it was someone speaking in English - which she couldn't understand - and handed the phone to me. The voice at the other end said: "This is Ken Tyrrell." I said: "Yeah, yeah. I'm Niki Lauda. Very funny." My friends were always making jokes like this and it wasn't until he said: "No, this is Ken Tyrrell" that I realised. He asked if I would like to race for him in the European Grand Prix at Brands Hatch, which was coming up very soon. I said I would, but I'd like to try the car first. He said: "We only have engines for the races, so you cannot try the car." So I said: "Okay, but I've only ever done a few laps in a F1 car and that was a couple of years ago on the short circuit at Brands Hatch. Maybe I can do a test with a Formula 3 car to learn the grand prix circuit?"

"No money, no time. Do you want this drive or not?"

"I don't have any money."

"Don't worry. You just have to pay the travel and the hotel. We'll take care of everything else." "Okay. I'm coming!"

**MH:** How difficult was that weekend for you? The Tyrrell-Renault turbo wasn't an easy car.

IC: It was very difficult. I remember, on the dash, we had the turbo gauge which was right in front of me and really big, but the rev-counter was very small. When I said to a mechanic they were the wrong way round, he just smiled and said: "No, they're not. You'll sound find out why." I soon learned that the most important thing was to have the turbo always on boost, especially coming out of the corners.

**MH:** Drivers always say that Ken was a fantastic teacher for a young racer.

IC: Incredible. I learnt so much. He was so professional, the way he did his job. I have two memories of him which explain that. On the Friday, I made a very big mistake at the exit of the last corner [Clearways]. I was in fourth gear, pushing too hard, and I lost control. I spun four or five times, right in front of the mechanics who were having to pull their pitboards back! I got

going again, but instead of just having a flat spot, the compound had actually come away on the tyres. That's how fast the spin had been.

I came down the pitlane and as I approached my pit, nobody was there. Everybody was inside the garage – except Ken. He was standing on the pit apron waiting. He signalled for me to get out of the car. I was stood in front of him – remember, Ken was nearly two metres tall – and looking up at him. He told me to take the helmet off. Then the balaclava. Then he signalled for me to remove the ear-plugs. Now I was ready to receive, you know...

MH: A telling-off?

IC: That's what I thought. But he looked me in the eye and asked what happened. I said: "I did a mistake because probably the tyres were not warm, and I was overdriving." He said: "Now you understand the risks you had spinning like that?" I said I did. He nodded and told me to put my helmet on and get back in the car. Only then did the mechanics come out to work on the car.

**MH:** Absolute classic Ken Tyrrell. What's the other story?

asked why the front wing was broken, I explained what had happened.

After practice, he said: "Come with me. Now we have to speak to Keke." I said: "No, no. It's okay." But Ken said it definitely wasn't okay. We walked into the Williams garage and Ken went up to Keke, who said he didn't want to talk about this. Ken said: "No! No! No! You are an experienced driver and you have to teach this young man how to behave on the circuit. You don't to have to do things like that." They start to argue and Keke says: "This guy's a fucking idiot." And Ken says: "No, you are a fucking





Capelli makes his F1 debut at the European Grand Prix at Brands Hatch in 1985 (above), racing for Ken Tyrrell (top): "Ken was incredible. I learnt so much. He was so professional, the way he did his job"

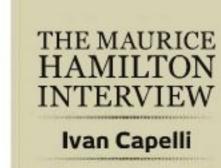
IC: During qualifying, Keke Rosberg was on a flying lap in his Williams and I found myself in the middle of the road. I had spoiled his lap. He is alongside me, making gestures and I'm trying to say I'm sorry, that I didn't do it on purpose. At the corner before the hairpin, I was behind Keke's car and he braked. I crashed into the back of him. I came back into the pits and when Ken

idiot." Can you even begin to imagine something like that happening these days?

MH: I can't. We are talking about a completely different era and way of working. As far as Ken was concerned, these things were very clear and needed to be dealt with. Straight away.

IC: The next race was in Adelaide, the last of the season, and Keke won. I finished fourth but

PHOTOS: LAT ABCHIVE: GETTY IN



my seat was broken and I had pain in my back. In parc fermé, Keke took time to try to help the doctor get me out of the car before he went to the rostrum. Maybe he understood he'd done the wrong thing at Brands Hatch. Or he remembered the lesson Ken Tyrrell had taught him...

MH: That was a very brave performance on the bumpy streets of Adelaide. What caused the seat to break, because that's very unusual?

IC: I'd gone backwards into the barrier on Friday. The carbon-fibre seat had cracked and then it started to bend. To stay upright, I had to hold the steering wheel under acceleration and brace myself when braking. Doing this for an hour meant my back was completely finished.

MH: Afterwards, we were on the same flight home. It was in a jumbo in the days when there were economy seats in the bubble upstairs.

IC: And we had to go up a spiral staircase.

MH: Correct. You were in the middle of three seats and the flight lasted for 26 hours because it went to Sydney, Singapore and Muscat. Each time we stopped, you could barely get up.

IC: Yes, yes, I remember. It was absolute agony. And then I had to fly to Italy after that.

MH: Fourth place in Adelaide was a fantastic result. But you didn't have the money for F1 in 1986, so you did F3000 and won the title.

IC: It's funny how things work out. That's when I met Akira Akagi, the owner of Leyton House...

MH: ...which led to F1 in 1987 and the eventual formation of the Leyton House March team.

IC: The first race was at Jacarepaguá in 1987. Including me, my father, my manager Cesare Gariboldi, the translator, Akira Akagi, his girlfriend and another person from Leyton House, the total team was 17 people. Total!

MH: But you still managed to finish sixth at Monaco. That was quite a result.

IC: It was, because I think it helped convince Akira Akagi that the project was an important one for him. As soon as he started his deal with March, he learnt that becoming an owner of a Formula 1 team put him at a high social level in Japan. He was obviously already very rich, but in Japan you need to be more than rich to be

considered on a very high level. The F1 team gave him the credentials to enter in some higher areas.

MH: The next big thing then was getting Adrian Newey on board. Did you know about him?

IC: They told me this clever young engineer was going to draw our car. Other than that, I didn't know much about him The 1988 car [the March 881] was very nice, opening a new F1 concept.

MH: But it was narrow... very narrow.

IC: When I first tried it, I discovered how small the hole for the driver's legs was in the bulkhead: 25cm by 25cm. I had to get in with one leg on top of the other. The steering wheel was 25cm; it was like driving without power steering.

MH: And what about your knuckles?

IC: The monocoque was very high, so the steering wheel was inside and so close to the carbon fibre. It was painful to drive that car.

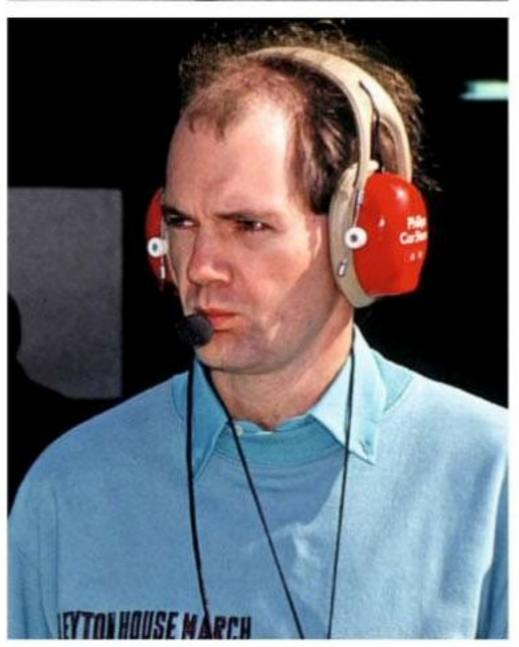
MH: Wasn't there a regulation that you had to be able to evacuate the cockpit in a certain time?

IC: There was, yes. We had to make a special seat to get out. And a special steering column to help get your legs out. We were crazy! The

"The hole for the driver's legs in the 1988 March 881 was 25cm by 25cm. I had to get in with one leg on top of the other"







Capelli in the March 881 (top) created by a young Adrian Newey (above). It was uncomfortably narrow for its driver, but ground-breaking in its design

other thing I found when I first sat in the car was that I couldn't actually get my hand around the gear lever. I asked Adrian what we could do. He said: "Stay there," and called a mechanic. They took out the gear lever and went to the back of the garage. I heard this 'Bang! Bang! Boom! Boom!' and Adrian came back with the gear lever completely bent forward at an angle. He said: "Can you get it now?" When I said I could, he said I'd have to learn how to use it like that. MH: So the lever was now more or less parallel with the chassis and you were having to lift it up and down instead of going back and forward? IC: That's right. We did one season like that. MH: That can't have been easy. And yet you had some good results that year. IC: We finished second in Estoril, third at Spa. MH: Respect! And you briefly led at Suzuka. IC: Yes. Again, with rain, I was between Alain Prost and Ayrton Senna in the McLaren-Hondas. MH: It's typical of F1 that after a good season '89 was bad. In fact, it was bad in many respects... IC: It was. Cesare Gariboldi had a fatal accident in his car. He started the Leyton House project and I had a fantastic relationship with him. In 1989, the car was no good and we also had the problem that Adrian chose to move to Williams. MH: But you survived and 1990 and '91 were

good. Which led to the offer from Ferrari. A time

when you must have wished Cesare was by your

side was when the Ferrari season went so wrong.

IC: When Ferrari said they would like to give me

I don't know how much you want to talk about

that. It's probably pretty painful, even now.

the chance to drive with Jean Alesi in 1992, I

already had a contract with Scuderia Italia, but

Ferrari said it was no problem. But the Ferrari

contract was blind in terms of understanding the

kind of project they were developing; what kind

of car. But it was Ferrari. So I signed and found

myself, 29 years old, at Ferrari with the F92A.

When I saw it for the first time I thought it must be a fantastic car with its double flat bottom; it looked like a fighter. At the first test in Estoril, Williams were developing electronic suspension and were 1.5 seconds quicker. And we realised immediately we had a big problem. At that test, Jean had the F92A and I had the old car. I always had to carry at least 150 litres of fuel to keep the car slow. Meanwhile, Jean was saying the car was fantastic – that we would win races.

On the last day, they let me drive the car in the afternoon. I found that Jean was driving with a different setup to what I liked, so I tried



Capelli at Monza in 1992, having finally realised his long-held dream of becoming a Ferrari driver. The dream soon faded due to politics and the expectation that he would be clear number-two driver behind Jean Alesi

to change it. The car had a lot of problems; the mono-shock system did not work well, the car bounced a lot and I couldn't feel the downforce you would expect from the double floor.

So, one driver is saying he'll win, and the other driver is saying the car is — without using the word — shit. I said we'd have to work hard to put together a car that let me compete with the others. They said, no; they had to follow Jean. From the start, I was outside the team.

**MH:** Was the pressure of being a Ferrari driver worse than you expected?

IC: In Italy, there is a big difference between the two Ferrari drivers and everyone else on the grid. When I was a Leyton House driver, I could go to the pizzeria near my house with friends. I would say, "We are four people," and they would say, "It's a 20-minute wait." After I became a Ferrari driver, same place with my friends, they threw people out to give me a table. I said I would wait but they insisted I come in and sit down.

Going from Milan to Maranello to sign the contract, I stopped for petrol on the motorway near Piacenza. It was about 7am. I paid and went on. Later that day, Maranello issued the press release that said Ivan Capelli is becoming a Ferrari driver for the '92 season. In the evening, going back to Milan, I stopped in the same petrol station but on the other side of the motorway. I was there for nearly 20 minutes because people were taking photographs, getting autographs. In 12 hours, my life had changed completely.

MH: So you had all that, but you were struggling with the car and not getting results. That must have been very hard, particularly for an Italian?
IC: Very hard because I had been dreaming about this from the very beginning. When I tested the car for the first time in Fiorano, I closed my eyes in the cockpit just for a few seconds and I was thinking of my father, of Ermanno Cuoghi putting me in Niki Lauda's car. And now I had the Prancing Horse on my steering wheel; my





### "At Ferrari I felt very alone. I felt everybody was trying to push me down. They were so quick to criticise"

car. It was a nice moment. But can you imagine the pressure that brings?

MH: I can only begin to understand. How did you feel at the end of that year?

IC: I felt very alone because I didn't have anyone to help me. I felt everybody except my mechanics and my engineer was trying to push me down. They were so quick to criticise.

**MH:** Even worse, you weren't allowed to finish the season. How was that handled?

IC: I'll tell you exactly. After Estoril, the third race from the end of the season, I received a phone call from the secretary of Luca Di Montezemolo, calling me to Maranello. I got

there, but, instead of going to the president's office, I was taken to a room where there was the team manager Sante Ghedini, the press officer and Harvey Postlethwaite. Three chairs on one side of the table and one for me on the other side. The desk was clear, except for one sheet of paper, face down. They said this was the press release that would be released in half an hour saying our relationship was over. "That's it. We will pay all of the contract in terms of money but because we want to develop the suspension for next year with Nicola Larini, you are out of our team."

I didn't have a manager, so I asked if I could make a phone call. I went into another office and called my father and told him they were giving me half an hour. He said: "Don't worry. We don't need this any more. Just say goodbye" – he used other words – "and come home."

It was like a dream that became a nightmare, every day getting worse and worse. I was sharing my life with the woman who in 1993 would become my wife, and I remember I developed a rash because I was so anxious. She almost had to tie my hands to stop me making it bleed because of the situation where, even if everybody knew the car was not good, Capelli was at fault.

**MH:** And then your old friend Ian Phillips invited you to try the Jordan.

IC: Yes, let's say I found another new experience. If Ken Tyrrell and Akira Akagi were icons in my F1 life because of their attitude, we can say that Eddie Jordan had another kind of attitude even though he was an icon, especially in that period. Eddie was really tough because I should have put together \$1million of sponsorship to race for him. I was able to find just \$250,000.

The Jordan was no good, and I put pressure on myself by approaching F1 with revenge. That's the worst thing you can do because you overdrive the car and can't control the situation. After two races, Eddie said that if I didn't have the money, I couldn't race. I said to Eddie: "If after 93 races I still have to pay to drive, there is something wrong with F1". So I stopped.

MH: One thing before we finish. In 1988, I was in the press room after the race in Montréal. I looked out the window and saw you feeding seagulls on the pit straight. I went down and took a photo. Do you remember what happened?

IC: Yes, I remember it well. I was giving them some food and a van with McLaren mechanics came through and killed at least two or three.

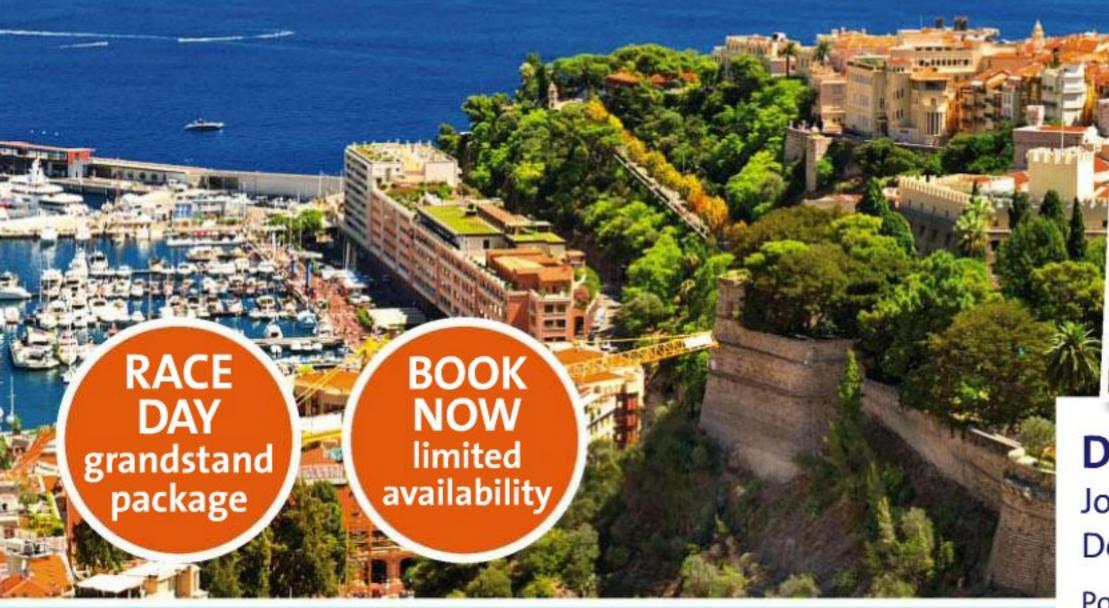
We reported this to Ron Dennis and, I remember very well, Ron fined the mechanics and this money went to an association to save wild birds.

MH: You seemed very at peace out there on your own until this happened.

IC: I liked that time of the weekend. It was important to me to have all the pictures of the weekend; starting on Thursday with all the preparation, then practice and qualifying, then the race when the noise and atmosphere is at its peak. In the evening after the race, at Hockenheim for instance, I would walk into the middle of the *autodrom* to experience the silence. That really gave me a special feeling.

MH: And I have to say, Ivan, this has been very special, too. Thank you so much.

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# M(x)



Andrea de Cesaris: an appreciation

He became known as Andrea de Crasheris, but there was much more to this veteran of 208 race starts than a string of sizeable shunts. We pay tribute to the hugely passionate and courageous racer who died on 5 October 2014

WORDS ROBERTO BOCCAFOGLI PICTURES LAT ARCHIVE

Life departed Andrea de Cesaris in the same way it accompanied him every day of his sojourn on this planet: with a hurricane.

The world of motorsport got to hear about him soon enough. It was the fearsome 1970s, towards the end of the era when racing was still truly dangerous. Andrea came from karting, starting at 13 and winning multiple championships. His calling card was the same set of values he displayed in F1: courage, determination, speed and aggression. Adding calculation, methodology and tactics would have produced the perfect champion. And so the portrait of the Roman who was killed in a motorbike accident on 5 October 2014, begins to take shape. But it would be unfair and above all incorrect to distil the 22 years that de Cesaris spent racing and the 55 he spent on this earth into that simple conclusion.

There was more to him than the statistic of 208 grands prix contested over 15 seasons without a single victory - a record in F1 - suggests. Had Andrea enjoyed a bit more luck in his choice of team, it could have been so very different.

We will remember the courage, determination, speed and aggression. They were there in 1978, when de Cesaris embarked on British F3. He made his mark there, fighting for the 1979 title against Chico Serra, who eventually beat him, following mistakes on de Cesaris's part. Predictable mistakes, which sometimes wasted all that bravery with no regard for fear. By the age of 20, he had already been dubbed Andrea de Crasheris, a moniker that would stick.

De Cesaris made his F1 debut at Mosport in Canada in 1980 for Alfa Romeo: he was eighth in practice (earning the praise of Alfa's renowned

engineer Carlo Chiti for his technical sensitivity) but retired with a mechanical problem. Possibly due to a brake failure, he went off early at the next race - the last of the year - at Watkins Glen in the US. And then came the call from McLaren.

Andrea's first full season was 1981, as number two to John Watson. It wasn't easy either for him or McLaren. The end-of-year reckoning told the whole story. Watson: one front row in qualifying (Paul Ricard), a fastest lap (Canada), one win (Silverstone), three other podiums and 27 points, all adding up to sixth in the drivers' standings.

De Cesaris: one point (Imola) and six race accidents (18 accidents throughout the year including practice and qualifying). De Cesaris was even made to skip the Dutch Grand Prix as punishment. When he returned at Monza, there was another accident. It wasn't just any old ->



"This, most of all, is the de Cesaris we will remember. Energetic, balletic, coursing with adrenaline and loving life"

accident either: when he crashed, the cars tended to end up either vertical against the catch fencing (as was the case in Monza) or simply fit for scrap.

"I can't recall any other driver who gave the mechanics so much work," said Tyler Alexander, one of McLaren's founders, many years later.

"Once when, after yet another night without sleep, we had one more destroyed car delivered back to the pits as soon as we had fixed it, some of the mechanics actually started to cry."

People wondered how de Cesaris got to stay in F1... and Marlboro emerged as the answer. Andrea's father held a senior role in the tobacco industry, and there are some who claim to have heard de Cesaris Junior say, in moments of contractual difficulty, "I'll call Aleardo Buzzi [global head of Philip Morris]: he'll help me."

In any case, the tobacco giant supported him faithfully over many years. In 1982, he was back with Marlboro-sponsored Alfa Romeo. And that presaged de Cesaris's zenith in Formula 1.

At Long Beach he set pole and maintained the lead in the race until Niki Lauda got past him and de Cesaris subsequently retired. This time it was a simple brake problem. Monaco: third place and the victory that got away, as his car ran out of petrol a few corners from the end.

At last de Cesaris was putting his errant ways behind him and 1983 turned out even better: two second places (Germany and South Africa), one fastest lap (Belgium), 15 points and eighth overall in the championship: his best result. This, most of all, is the de Cesaris we will remember. Energetic, balletic, coursing with adrenaline and loving life. There was Spa, when he took the lead after a mesmerising start from the second row. He did the same again on the re-start. And the drivers he overhauled were top-notch: Alain Prost in the Renault and Patrick Tambay in the Ferrari.

#### De Cesaris's F1 career

Team	Year	Points
Alfa Romeo	1980, 1982-'83	20
McLaren	1981	1
Ligier	1984 '85	6
Minardi	1986	0
Brabham	1987	4
Rial	1988	3
BMS Scuderia Italia	1989-'90	4
Jordan	1991, 1994	12
Tyrrell	1992-'93	8
Sauber	1994	1

By now F1 had entered the turbo era, with more than 1,000bhp in qualifying and Andrea was one of the bravest drivers of all. Maybe too brave, according to Chiti, who attributed to de Cesaris part of the responsibility for a number of technical failures that dogged the Alfa.

This was a factor in Andrea's move to Ligier for 1984. It was time of high expectations, few results, and rows with team boss Guy Ligier, who felt he wrecked too many cars. After a big accident in Austria in 1985, Andrea was benched. That accident was a *de Crasheris* special: a multiple barrel roll, followed by the explanation: "I spun. I had a problem with the clutch."

It was potentially a career-ending moment. Instead, seven other teams would follow before de Cesaris bade farewell to F1, two races before the end of the 1994 season. Twelve years, with highlights such as the 1987 Belgian GP, where he finished third with Brabham, or another hard-

fought third place – his final career podium –

fought third place – his final career podium – with Dallara at the 1989 Canadian GP.

Typical of Andrea's polarised life was 1991, in Belgium. His Jordan team-mate was Michael Schumacher, brought in to replace Bertrand Gachot (imprisoned for attacking a taxi driver in London). More than ten years and 150 grands prix separated the new team-mates. On Saturday night, seeing the data of the German debutant who had beaten him by more than half a second in qualifying, a disbelieving Andrea said: "Don't tell me this guy didn't even lift for Eau Rouge."

Then, in the race, Schumacher stopped with a broken clutch, while de Cesaris fought back to an incredible second place, before his engine broke: what would it have meant for their futures had de Cesaris eclipsed Schumacher that weekend?

After Formula 1, de Cesaris continued to follow old passions, such as motocross, going head-to-head against the world's two-wheeled aces at the Bologna Motor Show, and developed new ones, such as windsurfing. Such was his dedication that he even moved to Hawaii for a few years, following in the footsteps of multiple windsurf champion Robby Naish.

A life less ordinary, lived on the edge. Until that final accident on the Rome ring road. ②



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## FINISHING STRAIGHT

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# Champion!

Lewis celebrates "the greatest day of my life" as he takes title number two in Abu Dhabi

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Rosberg keeps his title dream alive that little bit longer, taking the win when Hamilton spins



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Are three car teams a good idea and why isn't F1 TV coverage more wide ranging?



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Murray remembers the man who made Formula 1 a safer place for everyone: the late, great Professor Sid Watkins

### RACE DEBRIEF by James Roberts



# A lap too far for Lewis

Hamilton's tyres couldn't keep up with his performance and a spin handed the win to Rosberg

One lap. One error. One chance of victory gone. With the world championship going down to the wire, the Brazilian Grand Prix showed that it would be decided by the tiniest of margins. As the intensity built towards the showdown, every turn on every lap came down to the self-belief of both title protagonists and their ability to prevent mistakes creeping into their game.

After Sochi (first corner lock-up) and Austin (defensive error), Nico Rosberg was determined in Brazil to convert his qualifying pace into victory to reverse the momentum that saw his title aspirations drift away over the course of the year. He did – and this time it was Lewis Hamilton who made the mistake.

Rosberg's fifth win of 2014 came in the sultry heat and humidity of Brazil, more than three months after his last win at the German GP. It was important for Nico to re-assert his authority over his all-conquering team-mate before we headed back across the globe for the showdown in the dusky desert of Abu Dhabi.

The sun-kissed Interlagos circuit is still a wonderful throwback to a former era of F1. The tight, narrow confines of the track surrounded by the concrete jungle in the heart of São Paulo command an intensity unlike any other venue.

From the undulating start/finish line to the steep, grandstand-lined sweep up through the final corner Junção, the Autodrómo José Carlos Pace is a magical place – and fast, too.

For the past ten years, the pole-position record has remained the preserve of Rubens Barrichello, who set a 1min 10.646sec lap in his 2004 Ferrari. This was in the era of three-litre V10 engines and during a tyre war. In qualifying in Brazil this year, Rosberg set a new pole record of 1min 10.023secs in his Merc, 0.623seconds quicker than the old record. Where the 800-metre altitude of São Paulo used to reduce the power

output of the normally aspirated units by eight per cent, that's not the case with today's turbochargers. And the power and top speed of the new efficient engines was impressive. Williams' Felipe Massa rocketed through the speed trap at 213.1mph before braking hard into the Senna Esses.

Pirelli boss Paul Hembery was noticeably exasperated in the paddock on the Friday evening after practice. Pirelli had been planning to bring the medium and hard compound tyres to Brazil, but under pressure from the drivers — in particular an outspoken Felipe Massa — they switched to a softer compound.

But the track had only recently been relaid and with unusually high temperatures, added to the forces of an F1 car running over its surface, the asphalt started to seep oils. According to Hembery, it was half as abrasive as in 2013 and those factors combined to cause significant blistering to both front and rear tyres in practice. These sessions were red-flagged a number of times, which meant teams had no idea how long they could run on the medium tyre. Allied with a constant threat of rain (that never materialised) it meant a lot of unknowns come race day.

Once the race was under way, it was a return to the old situation of drivers struggling to balance tyre wear against speed. Rosberg led from the start, with team-mate Hamilton slotting into second, and both comfortably switched from the soft to the medium tyre within the first nine laps. At this point, Force India's Nico Hülkenberg and Toro Rosso's Daniil Kvyat were an unexpected one-two, having started on the medium tyre, but were quickly overtaken by the Mercedes duo to reaffirm the status quo.

The lead-up to the Mercs' second stops proved to be the decisive segment of the race. Rosberg had first call to pit on lap 27, so Hamilton was given the order to push.

"He got the call 'Hammer time' and he really squeezed all the performance out of the car," said Mercedes boss Toto Wolff. "Because he was so quick and delivering purple sector times that stint was extended by another lap." That turned out to be crucial.

"Just before the pitlane," said Lewis, "as I was coming up the hill, the team said keep pushing and I was like: 'I don't think they've told me to come in this lap,' so I kept going."

But his Pirellis, which had been nursed so well up until this point, couldn't cope with his sudden performance surge and they began to drop off on the exit of Turn 3. As he flew down the back straight he made a change to his ERS, but not to the brake bias. When he hit the brakes for T4 the rears locked and he spun through the corner.

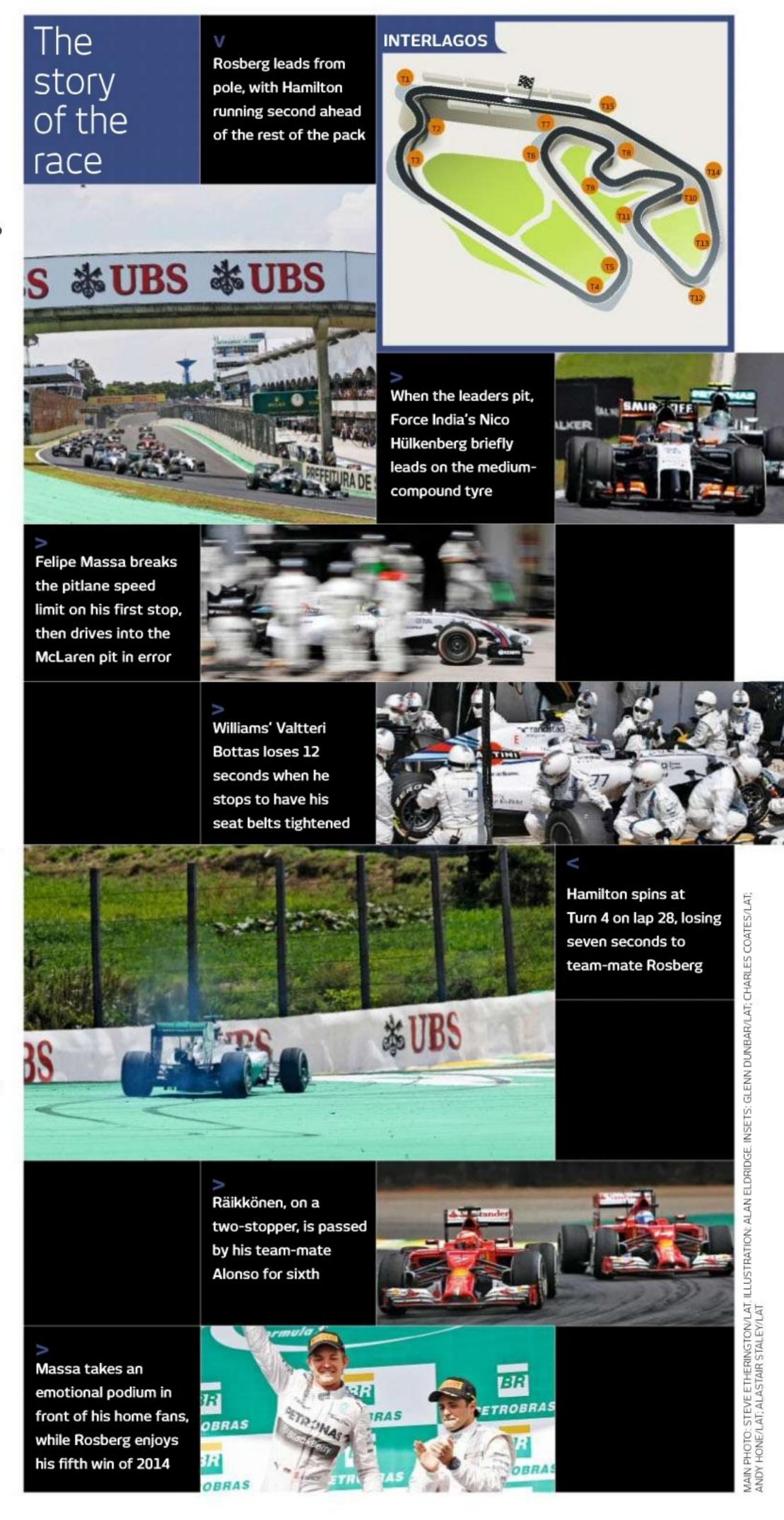
The chance to beat Rosberg was lost there and then. Seven seconds on the road was enough — despite a late surge by Hamilton — for the German to stay ahead on the road, for once. And Lewis, despite the error, was to keen to underline the measured way in which he drove.

"People over the years have reported how I
[over] used tyres and all that sort of stuff, but
today shows that I utilised my tyres better than
anyone I've raced and I'd utilised them more
today than Nico.

"He was in front and I was always behind, I was always in his dirty air, scrubbing the life out of the tyres but still staying with him and then when he pitted I had extra pace," he added.

That Rosberg was able to stay ahead, despite that "extra pace" was testament to his resilience in overcoming recent defeats. Clearly he has the pace over Lewis in qualifying, but retaining that advantage in races has been harder. Lewis's damage all came in one moment; in one lap.

And so it all comes down to the final round.



# Brazilian Grand Prix stats

The lowdown on everything you need to know from the weekend at Interlagos...

#### **THE GRID**



2. HAMILTON **MERCEDES** 1min 10.056secs O3



4. BOTTAS WILLIAMS 1min 10.305secs Q3



6. VETTEL **RED BULL** 1min 10.938secs Q3



8. ALONSO **FERRARI** 1min 10.977secs Q3



10. RÄIKKÖNEN **FERRARI** 1min 11.099secs O3



12. HÜLKENBERG FORCE INDIA 1min 11.976secs Q2



14. GROSJEAN LOTUS 1min 12.037secs Q1



16. MALDONADO LOTUS 1min 12.233secs Q1



18. PÉREZ\*\* FORCE INDIA 1min 12.076secs Q1



1. ROSBERG **MERCEDES** 1min 10.023secs Q3



3. MASSA WILLIAMS 1min 10.247secs Q3



5. BUTTON McLAREN 1min 10.930secs Q3



7. MAGNUSSEN McLAREN 1min 10.969secs Q3



9. RICCIARDO **RED BULL** 1min 11.075secs Q3



11. GUTIÉRREZ SAUBER 1min 11.591secs O2



13. SUTIL SAUBER 1min 12.099secs Q2



15. VERGNE TORO ROSSO 1min 12.040secs Q1



**17. KVYAT\*** TORO ROSSO NO TIME IN Q2

\*Remainder of ten-place grid penalty for using a sixth power unit

#### \*\*Seven-place grid penalty for causing a collision in US GP

#### THE RACE



THE RESULTS (71 LAPS)

lst	Nico Rosberg Mercedes	1h40m 04.785s
2nd	Lewis Hamilton Mercedes	+1,457s
3rd	Felipe Massa Williams	+41.031s
4th	Jenson Button McLaren	+48.658s
5th	Sebastian Vettel Red Bull	+51,420s
6th	Fernando Alonso Ferrari	+61.906s
7th	Kimi Räikkönen Ferrari	+63.730s
8th	Nico Hülkenberg Force India	+63,934s
9th	Kevin Magnussen McLaren	+70.085s
10th	Valtteri Bottas Williams	+1 lap
11th	Daniil Kvyat Toro Rosso	+1 lap
12th	Pastor Maldonado Lotus	+1 lap
13th	Jean-Eric Vergne Toro Rosso	+1 lap
14th	Esteban Gutiérrez Sauber	+1 lap
15th	Sergio Pérez Force India	+1 lap
16th	Adrian Sutil Sauber	+1 lap

#### Retirements

Daniel Ricciardo Red Bull 39 la	aps – suspension
---------------------------------	------------------

Romain Grosjean Lotus+8 laps/DNF - power unit

#### THROUGH SPEED TRAP







Slowest: Adrian Sutil, 193.62mph

#### TYRE COMPOUNDS USED



Soft

CLIMATE

Medium

Intermediate Wet

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47°C

TRACK TEMP

**FASTEST LAP** 

Lewis Hamilton, lap 62, 1min 13.555secs



Jenson Button, 22.620secs (entry to exit)

#### **DRIVERS' STANDINGS**

lst	Lewis Hamilton Mercedes	334pts
2nd	Nico Rosberg Mercedes	317pts
3rd	Daniel Ricciardo Red Bull	214pts
4th	Sebastian Vettel Red Bull	159pts
5th	Fernando Alonso Ferrari	157pts
6th	Valtteri Bottas Williams	156pts
7th	Jenson Button McLaren	106pts
8th	Felipe Massa Williams	98pts
9th	Nico Hülkenberg Force India	80pts
10th	Kevin Magnussen McLaren	55pts
11th	Kimi Räikkönen Ferrari	53pts
12th	Sergio Pérez Force India	47pts
13th	Jean-Eric Vergne Toro Rosso	22pts
14th	Romain Grosjean Lotus	8pts
15th	Daniil Kvyat Toro Rosso	8pts
16th	Pastor Maldonado Lotus	2pts
17th	Jules Bianchi Marussia	2pts
18th	Adrian Sutil Sauber	0pts
19th	Marcus Ericsson Caterham	0pts
20th	Esteban Gutiérrez Sauber	0pts
21st	Max Chilton Marussia	0pts
22nd	Kamui Kobayashi Caterham	0pts
23rd	André Lotterer Caterham	0pts

#### **CONSTRUCTORS' STANDINGS**

1st	Mercedes	651pts
2nd	Red Bull	373pts
3rd	Williams	254pts
4th	Ferrari	210pts
5th	McLaren	161pts
6th	Force India	127pts
7th	Toro Rosso	30pts
8th	Lotus	10pts

9th	Marussia	2pts
10th	Sauber	0pts
11th	Caterham	0pts



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### RACE DEBRIEF by Anthony Rowlinson



# "You made me believe that I can do anything"

Fuelled by his fans and armed with one of the finest cars ever built, Hamilton sails to a second title

Fate, destiny, kismet... call it what you will, but there can be no argument that the right man won. Not only the Abu Dhabi Grand Prix, of course, which Lewis Hamilton despatched in commanding style, but the 2014 world championship contest, from which he emerged a wholly convincing victor.

Circle completed, he took the winner's 50-point haul at this final race, while team-mate and sole title rival Nico Rosberg suffered engine gremlins (chiefly ERS failure) that dropped him to 14th, lapped and pointless, by the chequered flag. Nine months ago, half a world and a lifetime away in Melbourne, it was Rosberg who prospered as Hamilton's PU106A dropped a spark plug and forced a retirement. On this heady Emirati night, it was Nico's turn to suffer, the fight snatched from him through no fault of his own. And certainly not from lack of spirit. As electrical woes seeped like a virus through his W05 Hybrid from lap 26, Nico became ever

more urgent in his demands for information from his pitcrew, desperate to know if there was a sequence of buttons to push, a reset to perform, that might re-energise his ailing craft.

When he slid off at Turn 1 on lap 47, having missed his braking point because of the reduced braking capacity resulting from ERS failure, he seemed wounded prey: refusing to die, but battling insurmountable odds.

He went down gallantly, ignoring a team call to retire, insisting that he push his car over the line and declaring: "I want to go to the end".

And that says so much about his role in the epic season just gone — as did his immensely sporting gesture of seeking out Hamilton in his moment of triumph to congratulate him, publicly, before a billion global eyeballs.

But could the year ever have been his? He contributed massively to 2014 – offering speed (11 poles), guile (Monaco), skulduggery (Spa) and nous (Canada) – but on race day, all year long,

Lewis was the faster man. And for this alone, not to mention a new-found grace under pressure, Hamilton deserved this title more than any other. He had a brilliant car, yes, but he also drove quite brilliantly, as much here as anywhere.

As with any race or title success, the foundations were laid long before the competitive moment - years ago, in fact. Post-race, Hamilton was swift to praise the likes of Mercedes F1 architects Ross Brawn and Niki Lauda for luring him to the team in 2012 and convincing him that together they could continue building the dream of sporting deification. On a more prosaic level, Lewis spoke, too, of the visit to his hotel room by his clutch engineer on race morning, to check through the settings he'd want on this title-deciding day. In the complex and delicately balanced world of Lewis Hamilton, questions of 'torque versus slip' are as vital a component of success as existential considerations of man versus god.

And incomprehensible as it might seem to the majority of the tech-wired, cash-driven F1 world, achieving spiritual harmony was as vital to the rocket start that speared him to a Yas Marina victory, as was the sweet-slipping launch from the grid that took him from P2 past pole man Nico and into a 100-metre lead before the first corner. He never looked back.

"Normally you go in with butterflies in the stomach," Lewis reflected, "a bit nervous. Today I was going into the race thinking 'I feel extremely calm', which is really weird. Is that a good thing or a bad thing? Obviously it was a really good thing!"

The contrast between this Lewis Hamilton, fast maturing into a global sporting icon, and that Lewis Hamilton, the one who scrabbled and scratched his way to the '08 title, all speed and emotion, could hardly be more marked. The boy has become a man, ready, now, to enjoy and revel in his experience and growing eminence. Who knows, maybe this is the start of F1's Lewis Hamilton era, for certainly there's enough stability and layered excellence at Mercedes to allow this superteam to flourish further. "It's really something incredibly special, what this team has put together," Lewis remarked. "We'll be there fighting with people for some time."

Ominous words for those who spent the season staring at the swoopy rear curves of two fleetly driven Silver Arrows, and nowhere did the tang of defeat taste more bitter than at Red Bull, double championship winners these past four seasons. As Christian Horner spoke with passion post-race about the need to change engine regulations 'for the good of the sport' he was the man railing at the rules without realising the game has changed.

And this despite another stirring, Vetteleclipsing, drive from future-superstar Daniel Ricciardo: P4 from a pitlane start, enforced when Red Bull were busted for running illegal front wings in practice.

It was a different F1 this year – one where engines and *power* came to the fore after a generation of iterative aerodynamic gain. With the 'Newey factor' no longer definitive, the once impregnable Red Bull fortress became suddenly vulnerable, and who knows what resurgent Williams might have achieved without their early-season ring-rustiness.

That this much-loved team finished the year with their best result told everything about the dramatic progress from a 2013 championship P9 to this year's feisty and Red-Bull-chasing P3.

"There were a few tears," admitted Claire
Williams as her white cars crossed the line in
second and third, "especially when people kept
saying how proud mum would be."

The Fates, indeed, were smiling. @



# Abu Dhabi Grand Prix stats

The lowdown on everything you need to know from the weekend at Yas Marina...

#### **THE GRID**



2. HAMILTON MERCEDES 1min 40.866secs Q3



4. MASSA WILLIAMS 1min 41.119secs Q3



6. BUTTON McLAREN 1min 41.964secs Q3



8. ALONSO FERRARI 1min 42.866secs Q3



10. VERGNE 1min 42.207secs Q2



12. HÜLKENBERG FORCE INDIA 1min 42.384secs Q2



14. GUTIÉRREZ SAUBER 1min 42.819secs Q1



16. KOBAYASHI CATERHAM 1min 44.540secs Q1



18. GROSJEAN\* LOTUS 1min 42.768secs Q1



RED BULL

1min 41.893secs Q3

\*20-place grid penalty for power unit changes. In-race penalty added for undropped places \*\*Excluded from qualifying for breach of technical regs. Required to start from pitlane as car modified under parc fermé conditions

1. ROSBERG MERCEDES 1min 40.480secs Q3



3. BOTTAS WILLIAMS 1min 41.025secs Q3



5. KVYAT TORO ROSSO 1min 41.908secs Q3



7. RÄIKKÖNEN **FERRARI** 1min 42.236secs Q3



9. MAGNUSSEN McLAREN 1min 42.198secs Q2



11. PÉREZ **FORCE INDIA** 1min 42.239secs Q2



13. SUTIL SAUBER 1min 43.074secs Q2



15. MALDONADO LOTUS 1min 12.23342.860



17. STEVENS CATERHAM 1min 45.095secs Q1



**EXC RICCIARDO\*\* RED BULL** 1min 41.267secs Q3

#### THE RACE



THE RESULTS (55 LAPS)

IIIL	KESOLIS (SS EAFS)	
lst	Lewis Hamilton Mercedes	1h39m 02.619s
2nd	Felipe Massa Williams	+2.576s
3rd	Valtteri Bottas Williams	+28.880s
4th	Daniel Ricciardo Red Bull	+37.237s
5th	Jenson Button McLaren	+60.334s
6th	Nico Hülkenberg Force India	+62.148s
7th	Sergio Pérez Force India	+71.060s
8th	Sebastian Vettel Red Bull	+72.045s
9th	Fernando Alonso Ferrari	+85.813s
10th	Kimi Räikkönen Ferrari	+87.820s
11th	Kevin Magnussen McLaren	+90.376s
12th	Jean-Eric Vergne Toro Rosso	+91.947s
13th	Romain Grosjean Lotus	+1 lap
14th	Nico Rosberg Mercedes	+1 lap
15th	Esteban Gutiérrez Sauber	+1 lap
16th	Adrian Sutil Sauber	+1 lap

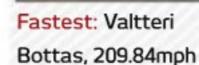
#### Retirements

Kamui Kobayashi Caterham	42 laps – vibration
Pastor Maldonado Lotus	26 laps – engine
Daniil Kvyat Toro Rosso	14 laps - electrical

#### THROUGH SPEED TRAP

Will Stevens Caterham







+1 lap

Slowest: Kimi Räikkönen, 193.37mph

#### TYRE COMPOUNDS USED







Intermediate Wet



Supersoft Soft

TRACK TEMP



33°C



Daniel Ricciardo, lap 50, 1min 44.496secs



Kimi Räikkönen, 21.546secs (entry to exit)

#### **DRIVERS' STANDINGS**

1st	Lewis Hamilton Mercedes	384pts
2nd	Nico Rosberg Mercedes	317pts
3rd	Daniel Ricciardo Red Bull	238pts
4th	Valtteri Bottas Williams	186pts
5th	Sebastian Vettel Red Bull	167pts
6th	Fernando Alonso Ferrari	161pts
7th	Felipe Massa Williams	134pts
8th	Jenson Button McLaren	126pts
9th	Nico Hülkenberg Force India	96pts
10th	Sergio Pérez Force India	59pts
11th	Kevin Magnussen McLaren	55pts
12th	Kimi Räikkönen Ferrari	55pts
13th	Jean-Eric Vergne Toro Rosso	22pts
14th	Romain Grosjean Lotus	8pts
15th	Daniil Kvyat Toro Rosso	8pts
16th	Pastor Maldonado Lotus	2pts
17th	Jules Bianchi Marussia	2pts
18th	Adrian Sutil Sauber	0pts
19th	Marcus Ericsson Caterham	0pts
20th	Esteban Gutiérrez Sauber	0pts
21st	Max Chilton Marussia	0pts
22nd	Kamui Kobayashi Caterham	0pts
23rd	Will Stevens Caterham	0pts
24th	André Lotterer Caterham	0pts

#### **CONSTRUCTORS' STANDINGS**

1st	Mercedes	701pts
2nd	Red Bull	405pts
3rd	Williams	320pts
4th	Ferrari	216pts
5th	McLaren	181pts
6th	Force India	155pts
7th	Toro Rosso	30pts
8th	Lotus	10pts
	2nd 3rd 4th 5th 6th 7th	1st Mercedes 2nd Red Bull 3rd Williams 4th Ferrari 5th McLaren 6th Force India 7th Toro Rosso 8th Lotus

9th	Marussia	2pts
10th	Sauber	0pts
11th	Caterham	0pts



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#### Three cars or... three cars?

One of the current talking points in F1 is: should some teams field three cars? While there are pros and cons for the idea, I wonder why the question is even being asked.

Possibly the televison coverage of a race like the Brazilian Grand Prix is part of the reason. We mostly got to see the frontrunners and a couple of repeats of overtakes/battles, but little of the minnows. Okay so far, but then at the finish we got to see three cars: Rosberg, Hamilton and eventually Massa. What – no one else finished?

I did hear excited commentators mentioning other close finishers as we were shown images of happy families and celebrating crews, but somehow this wasn't deemed important enough to show on the box. Perhaps we were meant to read about the other finishers in Monday's newspaper? Potential sponsors aren't going to rush to get no air time on TV, are they? How can you encourage new sponsors or fans if TV will only show... three cars?

#### Peter Horton

By email





#### **STAR PRIZE**

Peter Horton 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



#### Change is needed

Reading Peter Windsor's column in the December issue of *F1 Racing*, I'm starting to agree the sport needs to go down the three-car-team path.

I've followed the sport since the early '90s and while a big Williams fan would enjoy it when a Tyrrell or Minardi or even an Arrows sneaked into the points, this was at a time when only six cars would score points. But now that reliability is such that the top teams rarely fail to finish, teams like Caterham and Marussia stand no chance.

I had high hopes when Lotus and Virgin, as they were then called, joined F1, but the harsh reality is that now I would rather see another Ferrari up front than Caterham bringing up the rear again.

Colin Davies Broughton, UK

#### Look forwards - not back

I'm a 16-year-old A-level student and a big F1 fan, so I am concerned by Bernie Ecclestone's remark that F1 doesn't need young fans.

In a school of around 1,500 boys, I know only two with whom I can talk about F1, and neither will discuss it in technical depth. Most would rather discuss what has just happened in the Premier League. F1 hasn't changed with the times and most people my age claim it's "just cars going round for hours on end".

F1 has lost status. I get the impression that during the Senna vs Prost era, everyone was aware of what happened last week at the Spanish GP or the French GP. But I think most people in my school wouldn't even have heard of Nico Rosberg. My point is, if F1 doesn't need the young fans, then what is the future of Formula 1?

Jozef Ostrowski By email NOTICES

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PHOTOS: ANDY HONE/LAT \*CONTENTS SUBJECT TO CHANGE





# MURRAY



# MALKER

UNLESS I'M VERY WICH MISTAKEN...

# "When I began commentating in 1948, attitudes towards the dangers of motorsport were very different...'

The front-engined cars were flimsy contraptions built with no regard to impactresistance. Drivers wore T-shirts, cotton trousers and linen skullcaps, their bodies jutted out of the car, they had no safety belts, circuits lacked barriers and run-off areas, and medical facilities were basic at best. "The throttle works both ways - if you can't take the heat keep out of the kitchen," was the general view.

In those circumstances, it was no surprise that there were frequent deaths. The great Sir Jackie Stewart reportedly lost more than 30 of his

friends during his racing career, and it was he who had the courage to stand up and make a fuss about the appalling race-track carnage, having had a near-fatal accident of his own at Spa in 1966. "It's a sport," he kept saying, "we're not meant to be killing ourselves." Some regarded him as a whinging wimp, but he commanded far greater general respect as a caring world champion. He had the guts to stick to his guns and, by doing so, started to change attitudes.

In the late 1960s the autocratic boss of BRM, Louis Stanley, created a properly staffed mobile hospital that went to circuits. Thwarted by the obstructive attitudes of national motorsport bodies and circuit owners, it didn't last long, even though it did good work when allowed to.

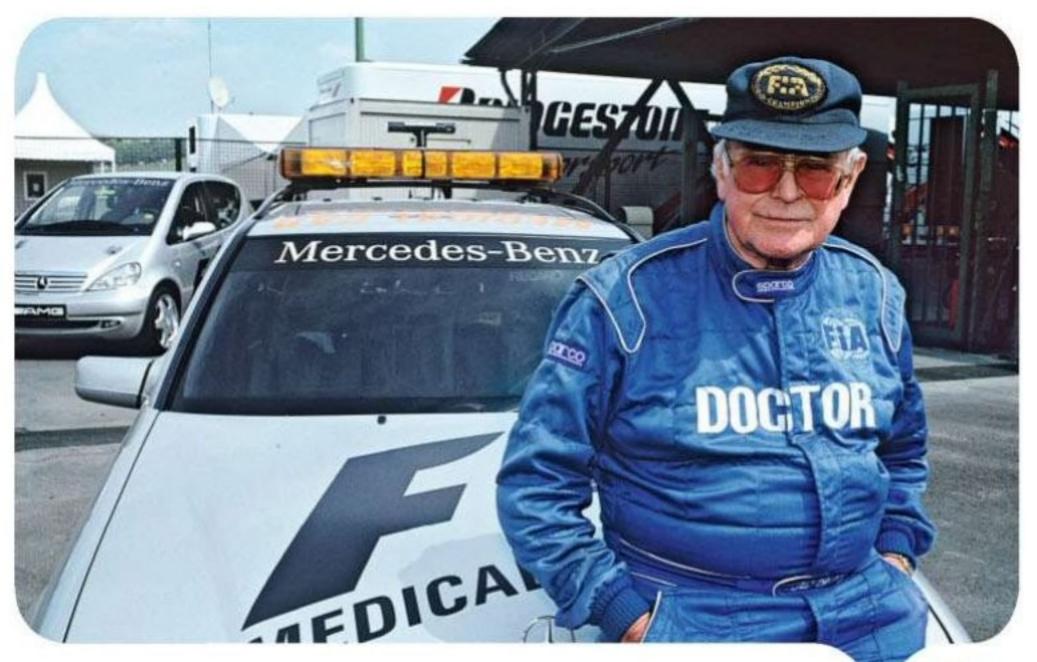
However, cometh the hour, cometh the man, and in 1978 decisive action was taken by Bernie Ecclestone, as it has been in so many other areas of F1, when he identified and recruited one of the most outstanding men in the history of our sport - Professor Sid Watkins - and invited him to make F1 safer. Sid, one of the world's leading neurologists and a passionate motorsport enthusiast already well versed in its specialised medical needs, willingly accepted, adding Bernie's brief to his massive workload, and set about improving matters with missionary zeal.

It is impossible to imagine anyone better suited to transforming F1's once rickety medical structure than Sid Watkins. His no-nonsense but warm and friendly personality, his sharp sense of humour and his impressive ability to lead from the front by getting on with things and inspiring people made him ideal for the arduous task. He knew everyone who mattered in the medical world and, backed to the hilt by the FIA, Sid, over a period of 30 years, absolutely transformed F1's safety situation.

Ever more stringent regulations concerning car design and driver protection were, and continue to be, made. Properly equipped medical centres became a requisite at every circuit, local hospitals with trained staff were appointed to act as comprehensive back up, helicopters had to be on standby at tracks to rush casualties away, and Sid himself would be in the Safety Car, along with an anaesthetist, to follow the competitors around the circuit on the first lap of the race. All this and much, much more was down to 'The Prof who brooked no opposition to his ceaseless and successful efforts to make things better.

Sadly this great and lovable man died two years ago. And even he could never have made F1 entirely safe - and it never will be. Jules Bianchi's tragic accident at Suzuka, recently investigated by an F1 commission, sadly emphasises that wheel-to-wheel racing at 200mph will always be hazardous.

But F1 owes a huge debt of gratitude to Sid Watkins and all the selfless people who helped him progress what Jackie Stewart started. @



"With his ability to lead from the front by getting on with things and inspiring people, Sid Watkins transformed F1's safety situation"

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