

November 2015
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F1 RACING

BIG BOY'S TOY
Kart racing with
Dan Ricciardo

MALDONADO
FESSES UP
"I'm human
... but I'm a
real racer"

AUDIENCE WITH A LEGEND

'F1 is cruel,
but I will fight,
I will *never*
give up'

PLUS

HONDA'S HORROR

Why they're
at war with
McLaren

ALLEZ LES BLEUS!

How Ligier
made F1
look COOL

NIGHT MOVES

The Singapore
F1 experience

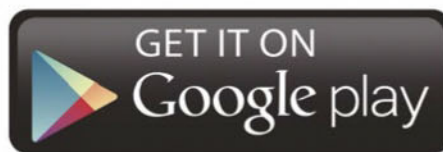




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McLaren: can Ron make it right?



Follow Anthony on Twitter: @Rowlinson_F1

It doesn't feel so long since McLaren were regular race winners. It was 2012, for the record: seven victories – four for Lewis, three for Jenson – a tally that equalled Red Bull's, even if McLaren's third place in the constructors' championship trailed both RBR and Ferrari.

This was the normal order of things. Teams would come and go, occasionally stealing the limelight, but since the '60s, McLaren, alongside Ferrari, have always been there or thereabouts. Even during wilderness periods, such as the late '70s (slow to the ground-effect party) and mid '90s (engine partner teething problems) there was always a sense they would bounce back.

Such was the depth of racing culture in this team, one founded, of course, by a brilliant driver-engineer-entrepreneur, it seemed inconceivable that they wouldn't find a way back to the top of the podium.

This time around, McLaren's fall is so marked that those certainties are being shaken. The winless period has now lasted for 52 races. And despite Ron Dennis's insistence, post-Japanese GP, that his team must endure growing pains before they can succeed with their new manufacturer engine partner, Honda, there's an awful lot of hurt being felt in Woking right now.

Racing director Eric Boullier described McLaren and Honda as "great Formula 1 brands" post-Japan – which indeed they are. But for both, therefore, trailing around

at the back of the pack, with two drivers bemoaning the lack of performance in a very public manner, is invidious and probably unsustainable.

Neither side is happy with the other, as you can read in this month's 'F1 Insider' analysis on page 16, and while both are making public shows of unity, in private, their discontent is clear. Frustrated outbursts from its pair of world champions are understandable: Fernando Alonso (subject of our cover story on page 26) and Jenson Button are used to competing at the front, after all. Less palatable are the briefings and counter-briefings emanating from either side of what should be a tight, cohesive partnership. McLaren-Honda has the feel of a marriage in need of some intensive counselling.

When relationships deteriorate, communication issues are often fundamental to the breakdown. These are at least part of the problem between McLaren and Honda. Money troubles, too, put partners under pressure: McLaren's lack of title sponsorship and their part-reliance on the financial commitment of a major motor manufacturer will not be conducive to harmony.

What's to be done? Is it time, perhaps, for McLaren chairman and CEO Ron Dennis to step back into the F1 breach, rather than maintaining his role as group overseer? Unpalatable as that might be for those used to working around his idiosyncrasies, McLaren is a team needing hands-on leadership from the very top.

When McLaren were in their '80s and '90s pomp (latterly with Honda as an engine partner), there was no doubt as to who was truly in charge: McLaren F1 was the Ron Dennis show. Has his moment come again?



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Stuart Codling

Force India's newest signing needs to pull his socks up

We loaned out Codders to Force India for the Italian GP, so he could get a taste of life as a mechanic (p52). Things started off on the wrong foot. Literally...



Jean-Louis Moncet

Celebrating a Gallic stalwart of the F1 grid

Guy Ligier's eponymous team proudly upheld French honour in F1. We asked one of France's top F1 writers for his memories of *les Bleus* (page 66).



Malcolm Griffiths

Revealing the hidden beauty of a Merc estate

As a frequent contributor to sister mag *Autocar*, Malcy is used to shooting road cars. But the estate we asked him to snap for p38 was a bit special...



Paolo Pellegrini

Applying F1 artistry to shots of the sport's junior class

Karting is the most junior level of racing, but it is still hugely photogenic. Paolo Pellegrini snapped Daniel Ricciardo in the Red Bull man's own kart (p46).



Thanks to Alberto Antonini, Deborah Armstrong, Matt Beer, Matt Bishop, Matteo Bonciani, Alessandro Alunni Bravi, Stephen Carpenter, Steve Cooper, Marc Cutler, Russell Day, Aurelie Donzelot, Will Hings, Silvia Hoffer, Jake Kilshaw, Oliver Kraus, Adrian Myers, Will Ponissi, Steve Robertson, Sanchez Peraza Rodrigo, Eric Silbermann, Andy Stobart, Lynden Swainston, Nicolas Todt, Chloe Wynne



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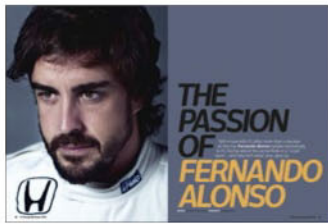
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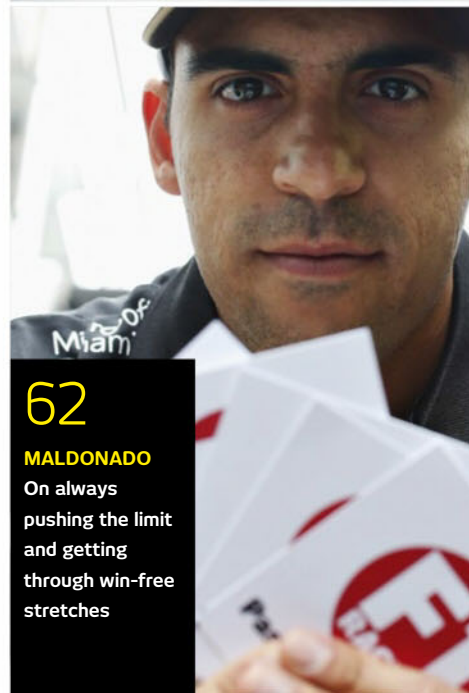
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FERNANDO ALONSO

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DANIEL RICCIARDO

Introduces the 125cc Ricciardo Kart and shows us what it can do out on track



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FORCE INDIA

It's all hands to the deck as F1 Racing joins Force India for a spot of work experience





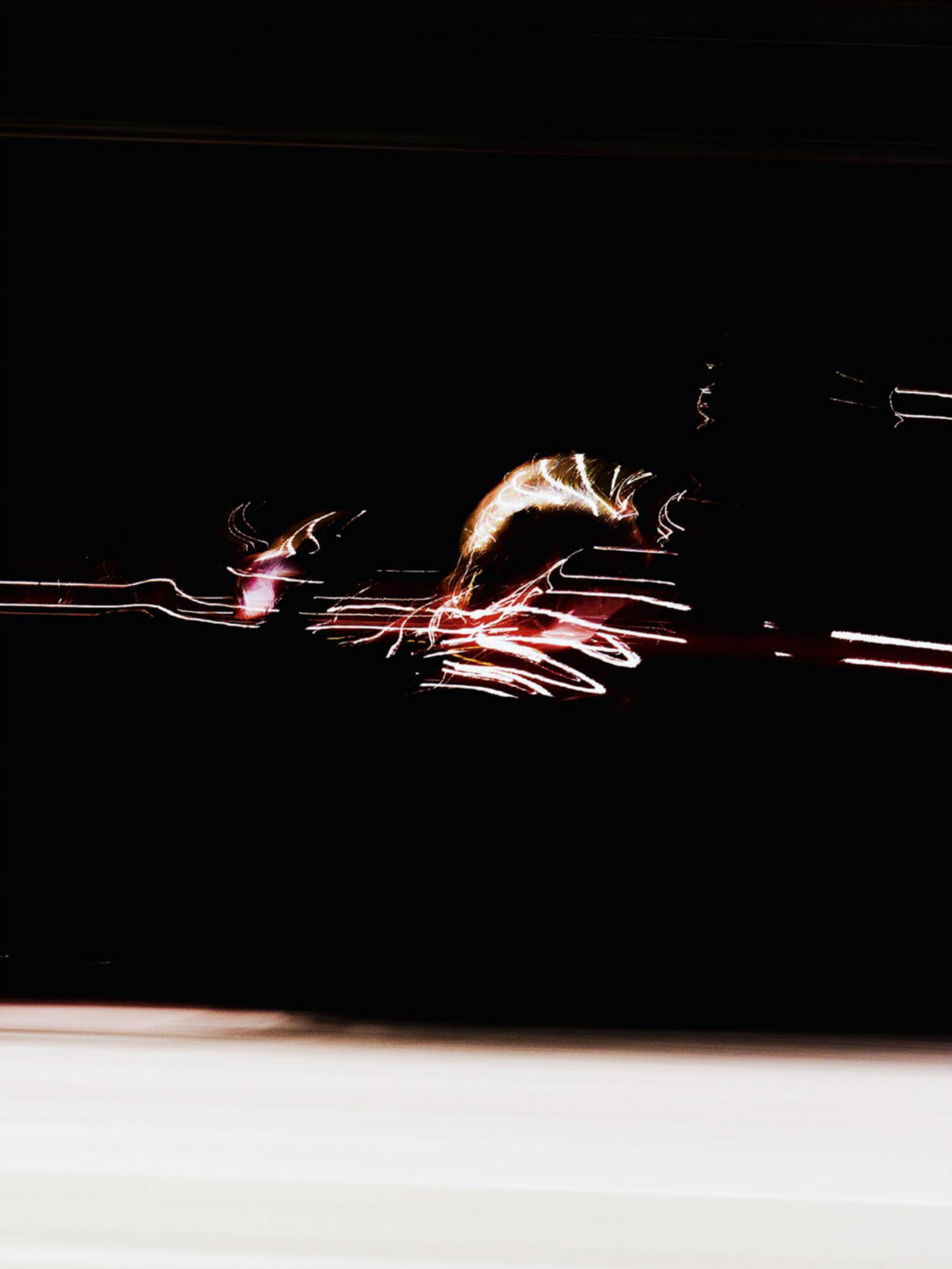
Parade

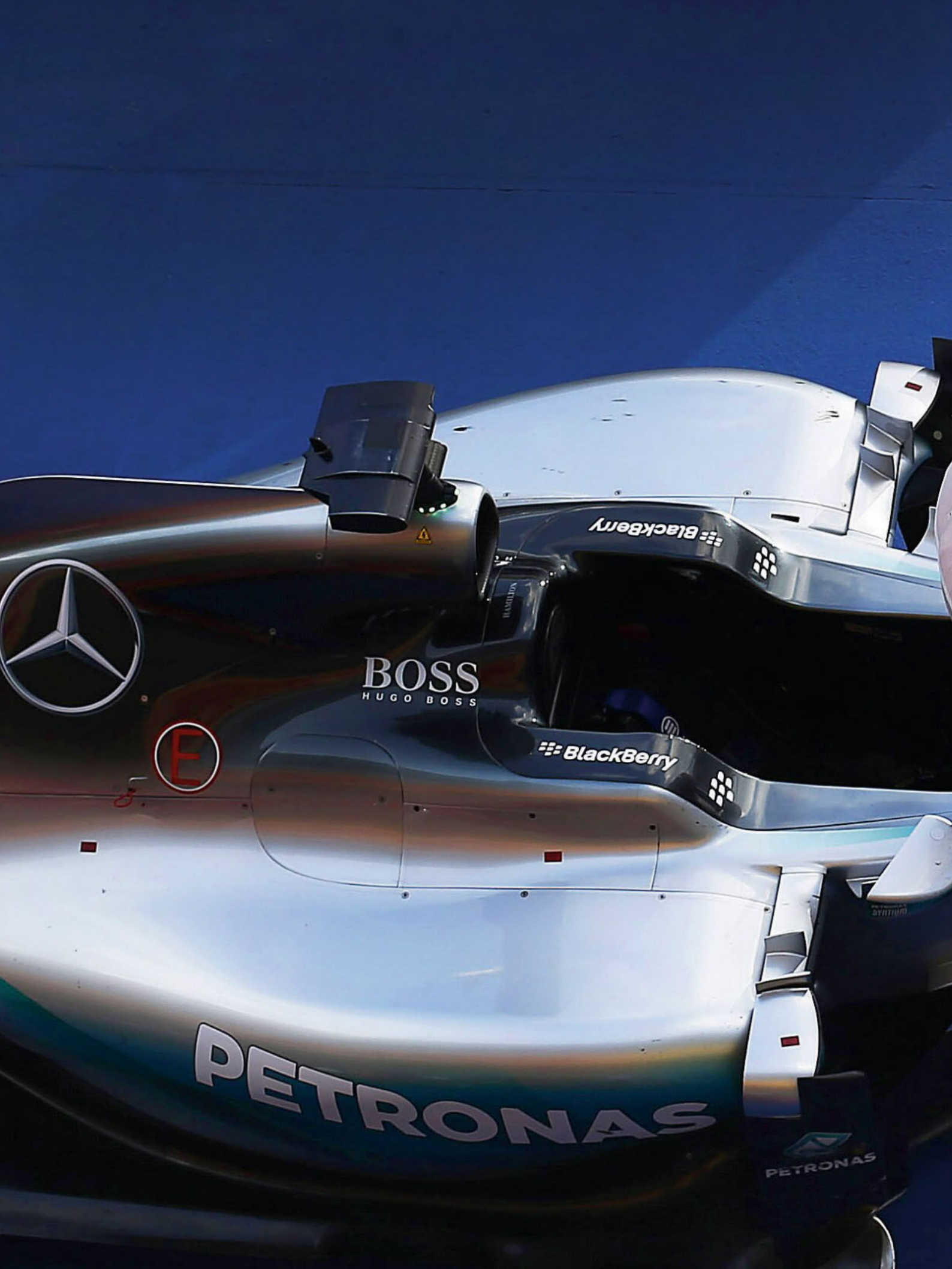
Red car at night In the hot, humid Singapore darkness, it wasn't just the artificial lights that lit up the Marina Bay Street Circuit: Ferrari's Sebastian Vettel was simply supreme. The four-time champion's third win of 2015 was undoubtedly the best: Mercedes had no answer for his pace

Where Marina Bay, Singapore **When** 9.43pm, Sunday 20 September 2015

Photographer Lorenzo Bellanca

Details Canon EOS-1DX, 300mm lens, 1/6th at F13





BOSS
HUGO BOSS

BlackBerry

BlackBerry

PETRONAS





Parade

Back on top A Formula 1 car is a machine of incredible power and brute force, yet it takes a delicate touch to make one truly shine. Lewis Hamilton did just that at the imposing Suzuka Circuit, dominating the race to cast aside the memories of a disappointing Singapore outing for Mercedes

Where Suzuka, Japan **When** 3.36pm, Sunday 27 September 2015

Photographer Steven Tee/LAT

Details Canon EOS-1DX, 50mm lens, 1/250th at F8







Parade

Before the dust settles The whole field is not yet through the first corner in Japan, and already several races have been ruined. While Felipe Massa limps around with a puncture, courtesy of contact with Daniel Ricciardo, Sergio Pérez disappears into the gravel, having gone off in avoidance

Where Suzuka, Japan **When** 2.03pm, Sunday 27 September 2015

Photographer Vladimir Rys

Details Canon EOS-1DX, 400mm lens, 1/5000th at F2.8





RED BULL SPLIT 14



GROSJEAN TO HAAS 16



PIRELLI TESTING 17

FI INSIDER

NEWS ■ OPINION ■ ANALYSIS

NEWS

Tension builds between McLaren and Honda

Honda F1 boss is asked in news conference whether he has apologised to McLaren drivers



Far from emulating their late '80s and early '90s glory days, McLaren-Honda have dropped to ninth in the constructors' championship

The month's big stories at a glance

1.9.15 Nico Hülkenberg signs a two-year deal to remain at Force India



3.9.15 Ferrari agree contract extension to end of 2018 with technical director James Allison

6.9.15 Jenson Button calls on McLaren to make a quick decision over their 2016 line-up. Racing director Eric Boullier hints both Button and Alonso will be retained

9.9.15 Gene Haas says his new F1 team will field a Ferrari reserve driver for 2016 **12.9.15** Melbourne extends deal to host the Australian GP until 2023

15.9.15 Renault CEO Carlos Ghosn confirms his company are re-negotiating their deal with Red Bull, saying their days as an engine supplier "are over" **16.9.15** McLaren reserve Kevin Magnussen falls off his bike and breaks his hand. **20.9.15** Lotus confirm Pastor Maldonado will stay for 2016. His team-mate is yet to be decided



Honda motorsport boss Yasuhisa Arai says he speaks daily with McLaren racing director Eric Boullier

The relationship between McLaren and Honda has become increasingly fraught as they near the end of their first season together.

The link-up started with McLaren CEO Ron Dennis talking of "dominating" F1, as the pair had together in the late 1980s and early 1990s. Fernando Alonso was tempted away from Ferrari on a three-year deal and a £27.1m salary.

But a news conference after qualifying at the Italian GP revealed the extent of the tensions. At McLaren's Saturday press briefing, Fleet Street journalists asked Honda F1 boss Yasuhisa Arai whether he felt he should resign, and whether he had apologised to Alonso and Jenson Button.

Arai was also questioned over his claims that the Honda internal combustion engine was 25bhp more powerful than Renault's. He replied: "I didn't say that exact number but anyway that is the rumour. I talk with other engineers from other teams and it is maybe not so different. I don't know the exact number."

Asked whether he agreed, McLaren racing director Eric Boullier said: "As one team, I have to agree with Mr Arai's statement."

Arai was not happy, reportedly believing the news conference had been orchestrated. Several English newspapers then reported that McLaren were pushing for Arai to be replaced – a leak that can only have come from within the team.

McLaren and Honda have since insisted that all is well. Arai said: "[Between] the engineers trackside working on the car in the garage, the relationship is very close, like a family. The result of [that press conference] was not so good. We have big pressure from the sponsors, the fans and the shareholders – so we have to think about that. It was a very strange feeling, after Monza."

Asked about his relationship with McLaren management, Arai said: "I talk with Eric

[Boullier] every day and we have very good discussions about the current race and the future and we have no problem. [There is] not so much conversation [with Ron Dennis, McLaren CEO]. I understand he is under big pressure from the outside and maybe they are nervous. Unfortunately he is so busy, so it's difficult to make a long conversation with him."

McLaren did not respond to a request from *F1 Racing* for an on-the-record comment. But at the Singapore GP media briefing, Boullier said: "Let's stick on the 'one-team' philosophy. We have had a lot of questions back home and there is a lot of pressure but it's moving forward now and I want to keep this progress going on."

There are indications that trust between the partners is beginning to waver: the MP4-30 has been uncompetitive all season and at the time of writing, post-Japanese GP, McLaren were ninth in the constructors' championship, on 17 points.

The Honda power unit is a major part of the problem, due to issues with the deployment of energy from the hybrid system. On most straights, the engine runs out of hybrid boost before the braking area, leaving the car at least 200bhp down on Mercedes on a longer straight.

It's clear Honda were underprepared for their re-entry into F1. Did they simply underestimate the task involved, or, with McLaren's Mercedes engine deal finishing at the end of 2014, did they enter F1 sooner than they should have done?

Insiders say former engine partner Mercedes offered McLaren an extension for 2015 but McLaren rejected the offer. The team insist they never countenanced any option other than Honda for 2015 – and the partnership is financially compelling for McLaren, being worth £68m a year, through free engines, a substantial contribution to research and development, and

half the drivers' salaries – a total of £16.9m this year. The Honda money is particularly important to McLaren at a time when they have lacked a title sponsor for two years and are expected to lose about £13.6m in prize money for the drop from fifth place (2014) to their current ninth in the constructors' championship.

Questions have also been asked about the car design. This year's MP4-30 is believed by top engineers to be only the fourth or fifth best chassis in F1, with fairly high drag and lack of traction. Insiders say that after switching to the Red Bull philosophy of 'friendly downforce' for the MP4-30, the team have returned to a search for 'peak downforce' – theoretically superior, but potentially making a car less drivable.

So while McLaren's dissatisfaction with Honda is becoming more public, Honda also have good reason to be less than enamoured of McLaren.

Red Bull poised to agree Ferrari engine deal

Red Bull serve notice of termination on engine partner Renault, but fail to secure Mercedes engine-supply contract for 2016



Red Bull could use Ferrari engines in 2016, putting them in direct competition with the Scuderia

Red Bull will most likely use Ferrari engines in 2016 following the collapse of their relationship with Renault. The team's patience with their current engine partner finally snapped during the summer break and Red Bull sent a letter to Renault giving them notice of termination of their contract on the grounds that they have failed to meet performance clauses.

Red Bull owner Dietrich Mateschitz said on his company's Speedweek website: "The separation from our engine partner takes place at the end of the season by mutual consent. It made no more sense to work together."

As *F1 Racing* closed for press Renault had not yet confirmed the move, but Renault CEO Carlos Ghosn said that they were "re-negotiating" the Red Bull contract.

Red Bull took the decision to end the relationship with Renault in the hope of persuading Mercedes to supply them with engines for next season. But Mercedes have decided it would be counterproductive to supply engines to such a competitive rival. Red Bull motorsport adviser Helmut Marko said: "The idea of Mercedes is finished. We are now focusing elsewhere. There were specific

requirements but we did not reach a point at which we would have been able to discuss them in detail. Now let's see what engine we will use. Perhaps we will be able to beat them with the new package. Then it will be much more unpleasant than if we had managed to do that with a Mercedes engine."

Red Bull have looked beyond current F1 engine manufacturers and approached the Volkswagen Group in 2014. In Singapore, the BBC's Eddie Jordan said he believed a deal for the VW Group to take over the team in 2018, with Red Bull remaining as a sponsor, was close to completion. But that deal could be scuppered by revelations that VW used 'trick' engine software to disguise pollution levels of certain diesel cars. The scandal has badly hit VW's share price and led to a huge corporate shake-up.

In the short-term Red Bull's only option for next year is Ferrari, and sources say a deal has been agreed. Ferrari team principal Maurizio Arrivabene said he "did not see any kind of problem to give our engine to any other team or be scared of the competition before they start. This is not the right spirit of competition or what Ferrari represents. We fight with everybody."

Mateschitz stopped short of saying a deal had been agreed, but said that moving to Ferrari was "a very acceptable solution for the next two or three years".

He added: "If Ferrari as a works team cannot win the title with Vettel, it will not be possible for us as a customer. But we can go in the first three rows of the grid and from there on the podium. It will be a first step to finally have a competitive engine again."

QUIZ

F1 Mastermind

Your chosen specialised subject: the world's greatest sport

F1 RACES IN THE USA

- Q1** Which oval race was officially part of the F1 calendar between 1950 and 1960?
- Q2** Which Florida venue hosted the first US Grand Prix in 1959?
- Q3** Who is the only US driver to win a grand prix on home soil?
- Q4** Who won the sole Formula 1 race held at the Riverside circuit in California in 1960?
- Q5** Shoreline Drive featured on which US street circuit?

- Q6** Which driver has led the most laps in the three F1 races held at the Circuit of The Americas?
- Q7** The Las Vegas GP in 1981 and 1982 was run on a street circuit in the car park of which casino?
- Q8** Watkins Glen has hosted the United States Grand Prix more times than any other circuit. How many times did the race run there?

- Q9** Which British racer scored his sole F1 win in the first race held at Watkins Glen in 1961?
- Q10** Which driver won the final United States Grand Prix at Indianapolis in 2007 and the first at the Circuit of The Americas in 2012?
- Q11** Which two drivers share the record of scoring five F1 wins in the United States?

- Q12** John Watson won the 1982 US GP West from what position?
- Q13** Which team qualified on the front row for the only time in its F1 career at the 1990 US GP?
- Q14** How many states have hosted a world championship GP?
- Q15** The Dallas GP street circuit in Fair Park looped around which American Football stadium?

1 The Indianapolis 500 2 Sebring 3 Mario Andretti 4 Stirling Moss 5 Long Beach 6 Sebastian Vettel 7 Caesars Palace 8 20
 9 Innes Ireland 10 Lewis Hamilton 11 Ayrton Senna and Michael Schumacher 12 Zandvoort 13 Mirinda 14 Eight 15 The Cotton Bowl

Renault closing on Lotus takeover bid

Following their split from Red Bull, Renault are keen to buy back Lotus and stay in F1 as a team in their own right

Renault were set to take over the Lotus team as *F1 Racing* closed for press.

The French car company have been in negotiations for months to buy back the team they sold to investment group Genii Capital at the end of 2009. Although both parties want the deal to happen, there have been disagreements over how it should take place.

Renault chairman and chief executive officer Carlos Ghosn said at the Frankfurt Motor Show in September that no decision had yet been taken on the company's future in the sport.

"Our future is the subject of detailed analysis and renegotiating," said Ghosn. "We will either exit or run our own team. We don't have a clear decision yet."

As *F1 Racing* went to press, Renault announced that they had signed a letter of intent to buy the Enstone-based team – which Renault owned until selling it to investors in 2009 – with just a few final details still to be arranged. Ghosn has made it clear that Renault will no longer simply be an engine supplier.

"We said very clearly, it's finished," Ghosn said. "We already alerted the F1 authorities [saying] 'Don't count on us as a provider of an engine. It's over.'"

Renault will split from Red Bull, but the complicating factors in the Lotus buy-out have been the size of the team's debt – much of which is in the form of shareholder loans to the business – and Renault's wish to be treated on the same financial terms as the other leading teams in Formula 1.

Ferrari, Red Bull, McLaren and Williams all receive extra payments of about £23m under what is called the constructors' championship bonus (CCB) scheme. Mercedes will qualify for that, too, when they win the title this year. However, it is understood that Bernie Ecclestone has come to an agreement with Renault that does recognise them as a historic participant with a financial bonus.

Bernie Ecclestone and Renault CEO Carlos Ghosn are understood to have agreed the terms of Renault's return



ON THE TURN

Every corner tells a story...

No 6 Autódromo Hermanos Rodríguez



1 ESSES MOISÉS SOLANA

The chicane, which replaced the circuit's original high-speed first corner, was named after Moisés Solana Arciniega, a Mexican racer who started eight GPs between 1963 and '68. He was killed contesting a hillclimb event in Mexico in 1969.

2 EDE DEL LAGO

This bend (translation: 'the lake turn') is also called the Presidential Curve, because it's close to the cabin where Adolfo López Mateos (former president of Mexico) would spectate.

3 ESSES

This winding sequence has been reprofiled for 2015 and moved slightly to allow for more run-off. To maintain the character of the venue, it remains a rapid series of bends.

4 RECTA DEL OVALO

The name – the oval straight – refers to the fact that this is the back straight of the venue's oval, which uses the Peraltada and an unbanked oval turn.

5 FORO SOL

This corner, reworked from its original version, is named after the baseball stadium the circuit now winds through. The Foro Sol (Sun Forum) is named for its sponsor, Sol beer.

6 PERALTADA

Mexico City's fearsome final corner sadly won't be used in full on the revamped F1 layout, due to a lack of run-off. The name explains why the corner is so revered: it derives from *peralte*, a Spanish word meaning camber or banking.

7 NIGEL MANSELL TURN

The second half of the Peraltada is used in the new circuit, and has been named in honour of the 1992 champion who won the last F1 race held here in his title-winning season.

NEWS

Grosjean to move to new Haas F1 team for 2016

The French racer will leave Lotus to join Gene Haas's team in the hope that it could lead to a Ferrari race seat in 2017

Romain Grosjean will race for the new US-based Haas team next year, with the ultimate goal of securing a Ferrari drive for 2017.

Renault, who are poised to take over Lotus, would have liked Grosjean to remain at the team alongside Pastor Maldonado, who was confirmed to be staying at Lotus for 2016 just a few hours after the Singapore Grand Prix. But Grosjean instead chose to move to Haas, which has strong Ferrari links, because of the potential for a move to Maranello in a year's time. Kimi Räikkönen will remain with Ferrari in 2016, but his future beyond that is unclear.

Potential candidates to replace Grosjean at Lotus include former Toro Rosso driver Jean-Eric Vergne – who is also in contention with Esteban Gutiérrez for the second seat at Haas – along with McLaren reserve driver Kevin Magnussen.

Renault Sport boss Cyril Abiteboul told the Canal+ TV station: "It's a shame we couldn't talk about it, but we maybe were not ready in time. It's all about timing."

"Romain is a great driver, he deserves a great team. There's no national bias; we wouldn't stay in F1 for a particular country. Renault is an international brand, especially in countries like China and in South East Asia. But our project needs a little French touch. There are young Frenchmen pushing, so I'm not worried."

In that context, Vergne's nationality makes him the leading choice. However, Haas, which will enter F1 in 2016 with heavy involvement from Ferrari, are seeking drivers who have experience of racing in Formula 1 this year. They have also said that one seat will go to a Ferrari reserve driver – Gutiérrez or Vergne – with Gutiérrez the favourite at the moment.

Nico Hülkenberg was the team's first choice for the lead drive, but he turned them down in favour of a new two-year deal at Force India. Sergio Pérez had also been under consideration, but it has since been confirmed that he is also staying on at Force India.

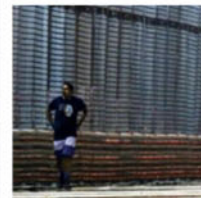
Romain Grosjean is hoping to use Haas F1 as a springboard to join Ferrari – with whom Haas have very strong links



F1 BANTER

PASSNOTES

Your essential F1 briefing
#No 20 Invaders



Name Invaders
Age Varies wildly
Appearance Unwelcome

Ah, *The Invaders*. I remember that show. Stiff little fingers 'n' all. Immolated upon death so the poor protagonist could never convince anyone he wasn't a raving lunatic, right?

Not quite. I speak of a more recent incursion.

Oh, I get it! *Game of Thrones*. Marauding wildlings at the gates. You know nothing, Jon Snow. British thespys suffering death by crossbow while 'at stool'. I'm down with that...

Far be it from me to point out that you watch too much television, but did you not notice the reason for the second Safety Car at the Singapore GP?

Vaguely. I was enjoying a second-screen experience on the iPad, via some app or other, while scrolling through Twitter on my phone with just my big toe. There's only so much data one can absorb.

You missed the man walking on to the track, then? **Walked onto the track? Was he trying to cadge a lift? Take a shortcut home from the pub? Make some form of political statement?**

Unknown.

How jejune! The least he could have done was wear a kilt and carry a banner inviting the drivers to repent their sinful venality.

Quite. The police reported that they had arrested a 27-year-old British national, and he was charged in court with "committing a rash act".

Perhaps he was late for his afternoon tea slot at Raffles. That'd make me break into a trot.

He might not have been able to pay for it – bail was set at \$15,000 and he said he couldn't afford that because he wasn't working. They've impounded his passport.

Uh oh. I understand it's not so nice in the slammer in Singapore. How long can he expect?

Could be a while – a Singapore man was recently sentenced to 14 months in jail after he let a plastic bag full of fruit fall from his window.

Well then I hope he appreciates the gravity of his situation!

Do say Court in the act!

Don't say Pass the porridge.

Pirelli call for increased on-track tyre testing

To prepare for the wider tyres that are likely to be used in 2017, Pirelli want extra testing with the involvement of F1's top drivers



Pirelli have said they cannot continue as F1's tyre supplier beyond 2016 unless there is a vastly increased testing programme next year. Their concern is that without additional on-track test days, they cannot be confident in supplying the revised tyres required by the new rules for 2017.

F1 bosses are still finalising proposals for cars five seconds per lap faster, but it has been agreed that they will have wider tyres and a wider track, with more downforce from the underbody.

Pirelli want 18 days of track testing in 2016 in addition to the usual amount of pre-season testing. They have also stipulated that the sport's top drivers should be involved in development.

Pirelli motorsport director Paul Hembery insists this is non-

negotiable. "We can't carry on in a scenario where we can't do our job," he said. "Without a good testing programme we can't stay in the sport for 2017." Pirelli have persuaded teams to do a two-day tyre test in Abu Dhabi, but nothing more has been agreed so far.

Pirelli's demands came in the wake of a turbulent period in F1 following the tyre failures that afflicted Ferrari's Sebastian Vettel and Mercedes' Nico Rosberg at the Belgian Grand Prix. Pirelli called a meeting involving Vettel, Rosberg, Lewis Hamilton and Fernando Alonso at the Italian Grand Prix to discuss both the company's and the drivers' concerns.

Pirelli had been troubled by criticisms from those drivers, not only of the failures themselves, but of Pirelli's approach to new safety guidelines that were imposed in

Monza. Limits on minimum tyre pressures were changed three times in the lead-up to the race.

Drivers were told Pirelli would prefer them to keep criticisms behind closed doors. In turn, the drivers expressed their unhappiness about the safety and behaviour of the Pirelli tyres. Drivers don't like being unable to push to the limit for more than three laps at a time, which is the only way to stop degradation getting out of control.

It was agreed that F1's bosses would discuss whether Bernie Ecclestone's desire for rapidly degrading tyres and multiple pitstops was the correct philosophy for the sport. But many feel the key question is whether Pirelli are able to build consistent, durable tyres if asked.

This comes in the context of Ecclestone's impending decision

over the next F1 tyre supply contract, from 2017-2019, for which Pirelli are in competition with Michelin. Ecclestone has expressed his support for Pirelli, and after his Japanese GP win, Hamilton made a point of praising his tyres' performance.

Michelin competition boss Pascal Couasnon told the BBC he wanted to make drivers "happy" by providing tyres on which they could race flat-out at all times. He also said he'd told Ecclestone Michelin was "not opposed at all to bringing technology to increase the show. So multiple pitstops is something we are not against".

Michelin has set as a condition a switch to 18-inch wheels along with bigger-diameter tyres. Couasnon said these changes alone would make the cars around three seconds a lap faster.

Australian GP date key to easing 2016 calendar chaos

Bernie Ecclestone agrees to earlier start for opener despite wanting to boost TV audiences

The Australian Grand Prix will move to 20 March for 2016, after teams and organisers complained about the structure of the planned 21-race schedule.

Bernie Ecclestone had planned to move the Melbourne race back from its traditional mid-March date until 3 April in a bid to boost TV audiences in Europe. The later date

meant the race would be held in Australian daylight saving time and European summer time: the 5pm start time would have been 9am in the UK, rather than 7am had the race been held two weeks earlier.

This later date, combined with a record 21 grands prix to cram in before the end of November, created a logjam in the middle of



the year. Ecclestone's solution – as published by the FIA in July – featured a summer break that was reduced to just two free weekends rather than three, and put Malaysia and Singapore back to back in September.

Malaysia had wanted to move from its March slot, but Ecclestone's schedule had the teams up in arms because of the curtailed break, and did not please Singapore because they felt their race would be harmed by running only a week apart from neighbouring Malaysia.

Ecclestone then proposed extending the summer break by moving Belgium back a week to 4 September, with Italy a week later. That would push Singapore back to 25 September, followed by Japan and Malaysia in F1's first ever 'triple header' series of races.

Ecclestone has now agreed to move Australia forward to 20 March, followed by Bahrain, China and Russia, all split by two weeks. That allows for an August break, with Singapore two weeks before Malaysia, which would run back-to-back with Japan. As we went to press, the calendar was to be considered by the World Motor Sport Council.

Tickets for the Australian GP are on sale for the 3 April date, but organisers have said they would be prepared to move the event.



Pat Symonds explains
THE SCIENCE BEHIND...
race starts

F1 TECH

What constitutes a good start?

A good start is a relative thing, of course, but the main metrics we look at are the distance covered in the first three to four seconds. The 0-100kph (0-62mph) time is also recorded, but distance is more visual, and that gives us track position. With a good start we would expect to have covered around 45 metres in the first three seconds, be in second gear and in control of the wheelspin. Four seconds after launch we would hope to have travelled more than 80 metres and be moving at around 100mph in fourth gear. The 0-100kph time is not particularly spectacular at around 2.7 seconds. Many supercars can do this, but the power and grip of an F1 car don't come into their own until further down the road.

So a good start is all about the first four seconds?

No, a good start is about the preceding two days and more. The preparation for the start begins with careful inspection and selection of the clutch and then bedding it in and calibrating it over the practice sessions. During each session we make many practice starts and use the data gathered to tune both the system and the driver in what is, after all, essentially a manual start.

What does the preparation involve?

Different teams have different procedures. Some use new clutches every weekend, while others will use a serviced clutch. But irrespective of this, the clutch plates, which are made of carbon, need bedding in and conditioning. This takes out any high spots and should improve the clutch consistency. The conditioning is done by automatically engaging the clutch while the engine is running and the brakes are applied. The resultant clutch slip prepares the clutch surfaces. This procedure also allows the bite point to be learnt by the control system. This is the clutch position, which allows enough torque to be transmitted from the engine to allow the car to move, and is just the same as we are all

used to when using the clutch pedal in our road cars to move off from rest. A number of practice starts will be made on Friday and Saturday and the data from these recorded and analysed in order for the driver to practise and the engineer to gather data with which to optimise the launch.

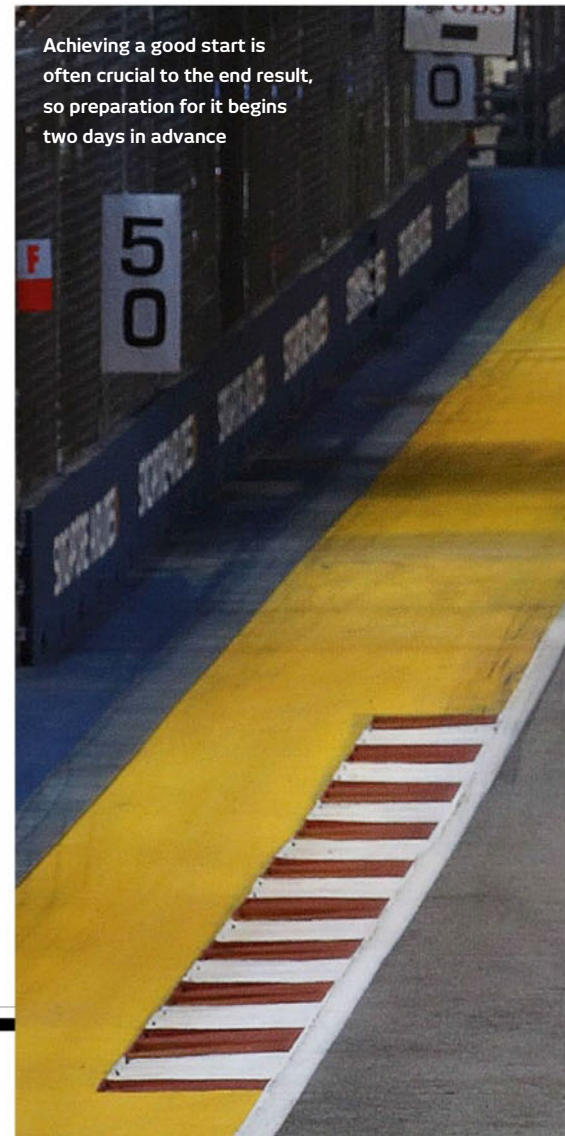
What does the driver do in preparation for the race start itself?

Firstly, if we can, we make some starts as we leave the pits on reconnaissance laps. These starts give us a further estimate of conditions on a race start fuel load. Before leaving the grid for the parade lap the driver will select his race start maps and make a final practice start, although he must not exceed the pitlane speed limit until he passes the pole position spot. During the parade lap he will concentrate on warming his tyres, building core temperature by weaving and loading the tyres and surface temperature by doing 'burn outs' – deliberately spinning the wheels as he approaches the grid.

Once on the grid, he will generally select neutral, engaging first gear only when the last car is in position. On engaging first gear he will pull one clutch paddle fully back while attempting to hold the other one at the pre-determined bite point. As the first starting light comes on he will use about quarter throttle to bring the engine to its pre-start revs, which will vary with different types of engine but is typically around 11,000rpm. As the final light goes out, he will release the clutch paddle that he has been pulling fully back, thereby giving authority to the one that should be at the bite point, and the car will launch. After a short time he will release the second clutch paddle, allowing the clutch to fully engage, and start feeding the throttle in while being careful not to provoke wheelspin. He will shift into second at around 50mph, third at around 75mph and fourth at just under 100mph, although in reality, by the time he is in third, the launch could be considered as completed.

How do the drivers hold the clutch position and the engine speed so precisely?

They are aided by 'start maps'. The clutch paddle and the throttle pedal are electronic devices that feed a signal to the ECU. By means of a map stored in the ECU this input is translated to an output for clutch position and engine demand. For the start we use maps with a flat area so the driver doesn't have to be so precise in finding the right setting. These maps, once selected, have to



Achieving a good start is often crucial to the end result, so preparation for it begins two days in advance

'Start maps' set clutch position and engine demand on the first lap after the race start or a pitstop. They make it harder to control the throttle, which may have caused Kimi Raikkonen's spin in Montréal (right)



be used for a full lap, so controlling the throttle pedal is quite hard until a more linear map is selected. This is probably what caused Kimi Räikkönen to spin after his pitstop in Canada: the same maps are used to launch from a pitstop.

Why has the FIA banned engineers from advising drivers on start settings?

As is the case with most things in Formula 1, a great deal of attention was paid to the launch

procedure to the point where it had eventually become very rare for a race start to be anything other than optimal. It was felt by some that the level of perfection achieved actually re-inforced the problems of professional racing in part brought about by a conventional grid ranking based on car performance. By banning assisted starts, the FIA was hoping that the slight diminishing of the precision of launch might help to mix the field up slightly.

What particular settings did the engineers help the drivers with?

In the time immediately prior to the race start, the only information given to the driver was to slightly alter the predetermined bite point if the final practice launch had shown that the clutch was either over- or underengaged. Typically this would alter the clutch position by around only 0.5mm, so this has not really changed things all that much. **F1**





PETER WINDSOR

RACER'S EDGE

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

On the assumption that very little is left of the Red Bull-Renault relationship, which personally I think is very sad given Renault's success over the years, the future in my view is clear: rather than shilly-shallying with Audi, Red Bull should sign immediately with Honda. Do I hear gasps of horror from the back row? Fret not: what you're seeing of Honda at present is not a true reflection of what they can achieve. Although the front-line McLaren men will tell you that their problem is all engine, some in the team are pretty confident that Honda's deficiencies (on a typical, high-downforce circuit) account for no more than 30 per cent of the gap to the Mercedes factory team. The rest is down to the car – or lack of it.

Having said that, I have no doubt that McLaren-Honda will be frontrunners soon. Even a team as muddled as McLaren, 2015-style, will be capable of benefitting from a very good Honda engine once it's complete – although whether McLaren's operating and development budget will continue to be 'the largest in the history of the company', given the absence of a major sponsor and Honda's current co-lateral funding of the operation is, of course, a key question. At the very least, you could say that McLaren have enough money and enough facility to make it happen. Kind of.

Red Bull-Honda has a certain ring to it...

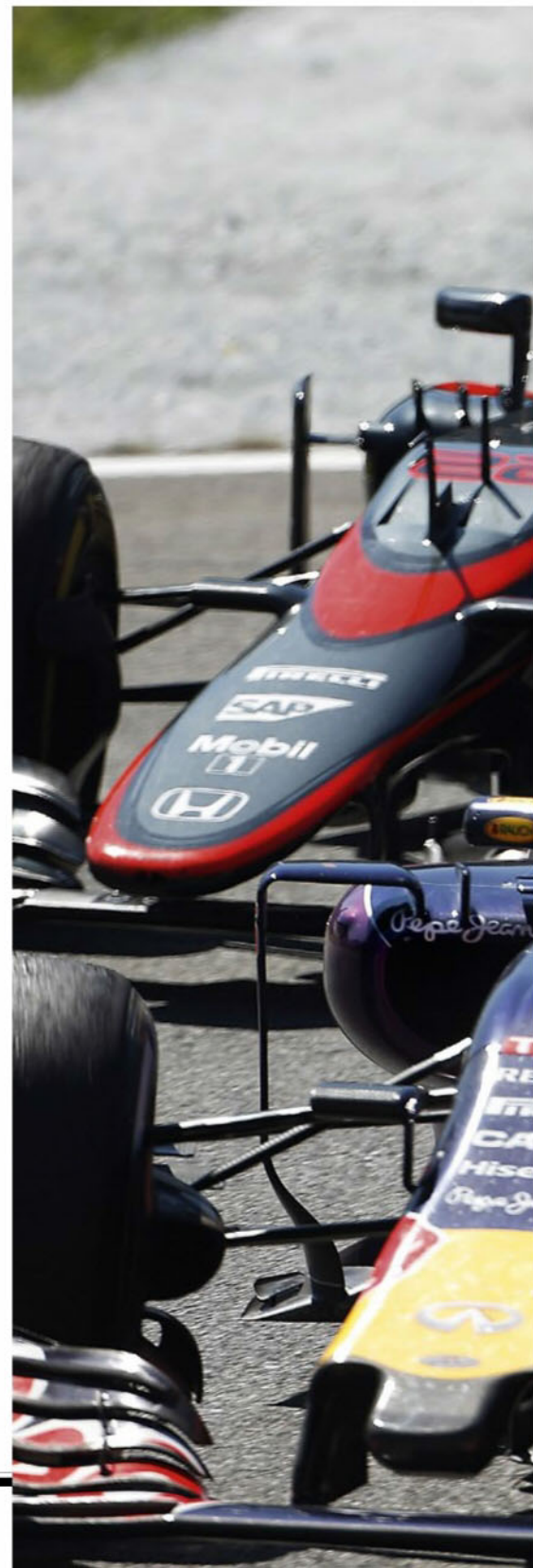
Red Bull is another story. The team are close-knit and well run – a sort of Adrian Newey clone organisation in which all the emphasis is on the right things. That has been particularly clear in 2015, when they haven't been winning. Every race is being maximised and the team are nicely using the situation to bring on new talents and new factory kit (their new chassis dyno being a good example). In other words, Red Bull are currently much better placed to manage Honda the way they need to be managed. Take a look at the way Andy Cowell runs Brixworth, Mercedes' F1 powertrain HQ, and you'll see what I mean. You can still touch and feel its Ilmor origins because the whole place is about good racing people doing precisely what they do well.

This, I think, is what Red Bull would bring to Honda – a cohesive, taut approach at the opposite end of the 'high-tech 2015 McLaren-Honda togetherness project', best summed up by Ron Dennis's early delight in hearing that Honda had built a special 'working capsule' in Japan, specifically to allow the large team of Honda engineers to operate 24/7. (I can hear Sir Patrick Head now: "Frank! That's the last thing we need! All those creative brains flying off in different directions! We've got to keep Honda focussed on the essentials. We'll give them the direction...")

What's that you say? McLaren didn't do too badly with Honda in the late '80s? Well, the best of the McLaren-Honda era was born of a product created by Frank Williams and Patrick Head: indeed, you could argue that Honda's silly decision to design a V12 for 1991-92 was a good example of a direction they will take if you slacken the reins and let them do their own thing (as Honda-powered McLaren did in that period, when they should have been focusing on active-ride).

So now is the time for Red Bull to show complete faith in Honda, to help them

"Now is the time for Red Bull to show faith in Honda and help them harness all that creativity"





Could Red Bull harness the genius of Honda the way Frank Williams and Patrick Head (above) did in the late 1980s to extract better results than McLaren are currently managing?



expand their (existing) operation in Milton Keynes and to harness all that creativity and facility and make something of the time and money already spent. I don't think it matters if contractually they have to wait a year or two to race the engine: there will, by definition be some sort of customer interim PU from Renault, Ferrari or Mercedes. The critical thing is for Red Bull to establish their territory and to show their faith, because there are plenty of good Honda engineers out there in need of some self-esteem and because Honda, as a company, are more than capable of building a very good hybrid F1 engine.


Technology – as Andy Cowell and Mercedes tech chief Paddy Lowe have endlessly proved in 2014-15 – is ultimately about people. If Paddy or Andy are good technical leaders it's not because they are experts in some specific, esoteric field: it's because they're good at understanding the person behind the impressive job title and getting the best from them. Put another way – and this is a question that Honda top management will have been asking themselves during those long-haul flights up and down to Tokyo – if Paddy Lowe is that good at running an operation, why did McLaren ever allow him to leave?

The back end of 2015 provides the perfect window for Red Bull to put a Honda deal together. Nor should they mess about, because McLaren, as I say, are not too far away from some decent results. And when that happens, McLaren will be doing all they can to protect their 'investment' and make it impossible for Honda to supply all but the smallest of teams.

From Honda's perspective, it's also the perfect moment. If they thought about it, they would be very open to the concept of seeing how their engine runs with another top team and to expanding Red Bull in a logical way.

And, from the fans' perspective, where's the downside in Honda producing a better engine in a shorter timeframe to the benefit of the cars raced by Fernando, the two Dans, maybe Max and perhaps even Jenson (or the very rapid Stoffel)?

What's to stop all this? Overtures from Audi, to be sure – but are Audi really ready to forsake the World Endurance Championship (and Jean Todt), to create an Andy Cowell-type F1 engine operation in the UK and to take on arch-rivals Mercedes in a head-to-head fight? It's against Merc that they'll be immediately measured; have no doubt about that.

There's another thing, too: I see I've used the word 'logical' three or four times in this column. In Formula 1 parlance, that's usually the kiss of death... 



DAMON HILL

KING OF THE HILL

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

We can all agree that Daniil Kvyat's Suzuka shunt was monumental. It was also exciting and entertaining, but only by dint of the fact that he escaped unhurt. There are no small shunts in Suzuka – Prost and Senna's last corner tangle in 1989 excepted. A year after Jules Bianchi's accident, no one needed reminding of the dangers of this place.

Daniil was punished severely for the misdemeanor of putting a wheel off the track on the corner entry. I did that once at Thruxton in British F3. I never did it again. In today's world of circuits drawn onto vast expanses of asphalt, perhaps there is less need for pinpoint-precision driving. Maybe Daniil forgot that. He will treat Suzuka with a little more respect next time, I expect. Suzuka is now the most perilous and demanding track on the calendar, but, like mountaineers to K2, we will always be drawn to these dangerous places.

I once had a big shunt while testing for Williams at Estoril in Portugal. Turn 2 was a flat-out, sixth-gear, 80°, slightly banked right-hander with no run-off. As I turned in, the right rear suspension linkage snapped. It all happened so quickly that I cannot remember the car rotating. One second everything was 'normal', the next I was flying

Crashing: it's not really my cup of tea

backwards towards the barrier, which, in true 'old track' style, was only about a foot behind the massive kerbs jauntily painted with yellow and white gloss paint. I used to love those kerbs because you could run the car up against them on a really fast lap and reduce the exit drift. It was a superb feeling of getting it 'just right'. Just don't do it in the wet.

On this occasion, they acted as a launching ramp that possibly reduced the severity of the rearward impact. This was in the days before rear crash structures so the gearbox acted as an anvil and sent all the shock right through the cockpit containing 'yours truly'. Because of the aerodynamic laid-back driving position, instead of the blow being taken directly into the flat of my back I just rode up the seat and was restrained by the shoulder straps from being ejected, James Bond style, into the neighbour's allotment.

As I was still reeling from the sudden change of plan to the testing schedule, the car was sliding down the track towards the barriers on the other side. Unfortunately, I was not too stunned to realise I was in for another dose of extreme deceleration, albeit with the chance of seeing what I was going to hit this time. I hit the brake pedal and turned the wheel in a steering-like motion. All to no avail, of course, because these driver aids depend on some connection, however convoluted, to the road surface. Without that, I was suddenly demoted from being one of the world's top car controllers to a mere passenger on a rather unpleasant fairground ride from hell.

The head-on blow was far more unpleasant than the rearward one, perhaps because I had ample warning that it was most definitely going to happen, like it or not, a bit like a visit

to the dentist. KLANG! Ouch. That one *really* hurt. I was a bit winded. I must have been looking a bit peaky because Williams gave me a sweet cup of tea and put me on a plane home to recover. At least Daniil got massive global TV coverage. All I got was a cup of tea.

Suzuka has barely changed since I first raced there in 1993. I reckon it is the most dangerous circuit on the F1 calendar, but it also demands the most courage and skill. Even Lewis Hamilton admitted that this was the first time in his career he had felt comfortable with it. And well he might. He made it look easy. But it isn't. It is difficult and dangerous. Only a year on from Jules and we're back at it. Who really understands why we do this?



Daniil Kvyat escaped unhurt after a terrifying qualifying crash at Suzuka that meant his Red Bull had to be rebuilt overnight

I made light of my testing shunt, but it is only by the grace of God that I am writing this today. It's a humbling thought that visits me almost every day. I got lucky. Some didn't. But Estoril and Suzuka tested and thrilled me, in a way that few others tracks could. Perhaps the old Silverstone, and Spa, of course. But I loved the old Hockenheim, too. Explain that! Oh. Wasn't part of it designed by the same guy who designed Suzuka, Johannes Bernardus Theodorus 'Hans' Hugenholtz? Respect, John. You gave me the rides of my life. **F1**

"I made light of my testing shunt, but it is only by the grace of God that I am writing this today"

PORTRAIT: BENJAMIN WENCHENJE; PHOTO: GLENN DUNBAR/LAT

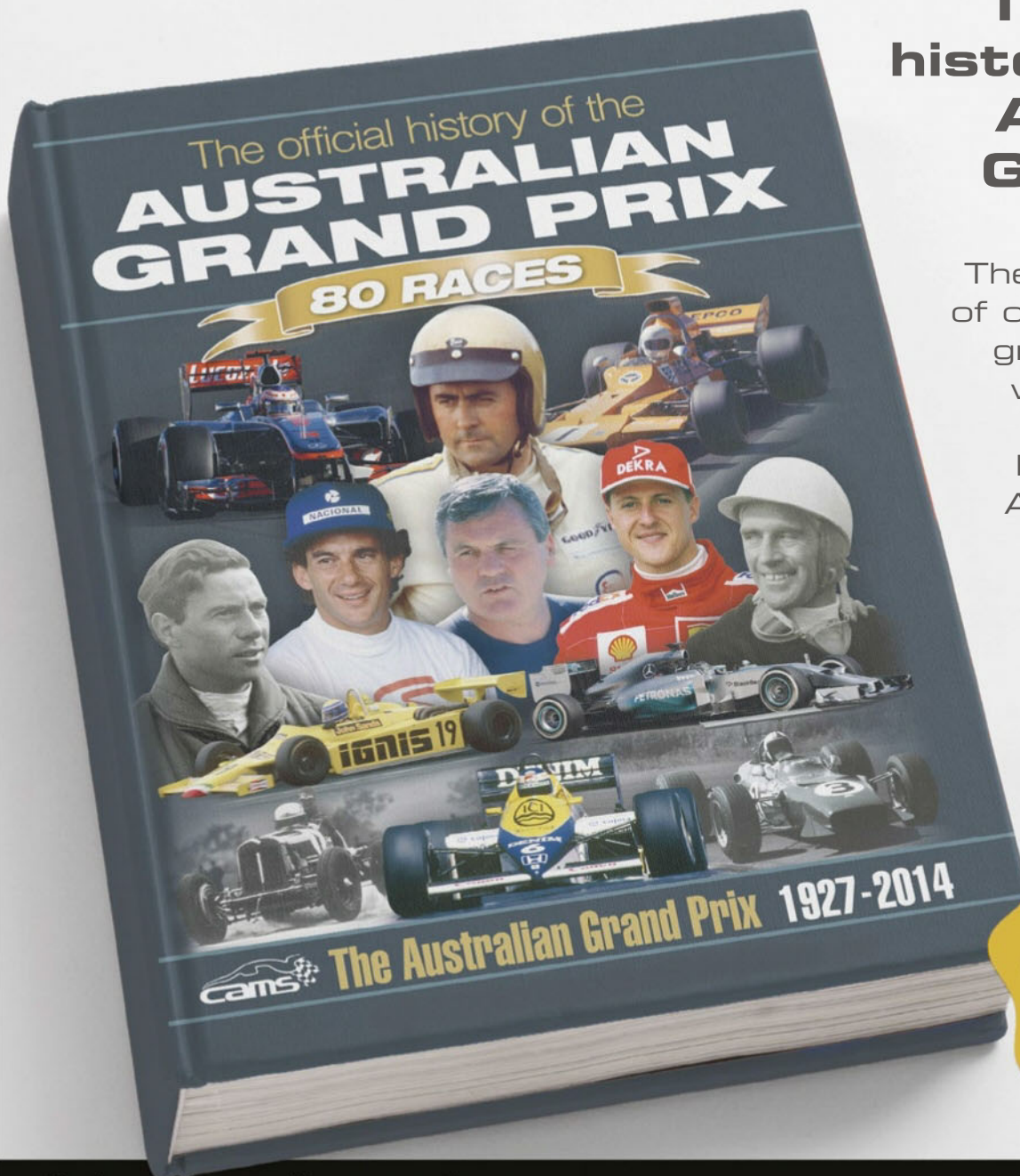


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DIETER RENCKEN

POWER PLAY

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

Nothing better illustrates the challenges posed by the construction of the Formula 1 World Championship calendar than the drawn-out saga surrounding the 2016 edition. It was first leaked to *F1 Racing's* sister title *Autosport* more than a year ahead of the 2016 season opener, since at mid-September various fixtures were still being shifted about – despite the FIA World Motor Sport Council approving the original calendar in June.

Yes, it is a complex task: myriad factors, such as time zones, national holidays, weather, transport/logistics, and, in 2016, disruption caused by Rio de Janeiro's Olympic Games need to be considered before even a draft is prepared, with the gradual creep upwards to next season's record-setting 21 rounds further complicating matters, particularly as the addition (Baku, Azerbaijan) lies on a transcontinental peninsular.

There are other factors, such as minimum periods between the last race of one season and the first of the next, as stipulated in team contracts, along with the now traditional three-week summer break. Very quickly a notional 52-weekend year gets whittled down to 30 or so – into which 21 races must be crammed in as many countries across the globe.

Solving Formula 1's calendar congestion

In building the schedule, commercial rights holder FOM generally start with Ascension Day, traditionally (but not always, due to vagaries of the Christian calendar) allocated to Monaco, with the blue riband race pencilled in for Sunday. Thereafter it is a matter of working outwards, taking into account fundamental factors such as no European races during March and November.

In true venture capital firm style F1's commercial controller, investment fund CVC Capital Partners, chases turnover and slices costs while balancing the value of TV viewers and contractual obligations to events such as Melbourne and Abu Dhabi, which are guaranteed the opener and finale slots.

F1 tsar Bernie Ecclestone has long pushed Melbourne to stage a night event, his logic being that 19:00 local time equates to 09:00 in Britain, and is thus preferable to a 14:00 (04:00 GMT) start. But the city fathers refuse to disturb Sunday nights in suburbs bordering on Albert Park, and thus the event this year started at 17:00 (07:00 GMT) in mid-March.

The FIA's decree issued in the wake of the Jules Bianchi tragedy that there be minimum of four hours between the race start and official sunset poked further spokes in the wheel, but Ecclestone is seldom if ever deterred.

With clocks in both hemispheres converging an hour each at end-March/early-April, he realised that an April race effectively buys


two hours: 17:00 in Australian winter time equals 09:00 BST. Thus 2016's season-opener is scheduled for 3 April, resulting in a compressed 21-race calendar. As a result, F1's summer break was cut to two weeks, with Singapore and Malaysia running back to back despite being just 200 miles apart.

Understandably F1 folk took exception to a shortening of their vacation, while the Asian venues complained bitterly, claiming each would cannibalise the other. Not without precedent, either: when Valencia and Barcelona were staged six weeks apart, both suffered huge losses despite being separated by 600 miles in a country with a strong fan base.

So Ecclestone pushed Malaysia out to Abu Dhabi's 27 November slot and shifted the Middle Eastern race on a week into December, still, though, without providing a full summer break. The teams squealed, so the latest solution is a triple-header, with Singapore, Japan and Malaysia over consecutive weekends, and Belgium/Italy pushed down a week each after a longer break.

Scheduling Malaysia a week later hardly makes a world of difference, but compressing the second half of the calendar keeps Abu Dhabi in November while keeping F1 families sweet. FOM's attitude, though, appears to be that if circuits and teams won't accept the latest version they will be held responsible for any incremental costs, which can be considerable given that FOM covers 300 tons of freight and 500 air tickets per race...

All this effort to fill CVC's coffers by slotting in an extra race in some democratically challenged territory – which, if the failure rate of new additions to the calendar provides any measure, will be history within three years – and to find two hours of European daylight for the season-opener...

The absolute irony is, though, that any viewer gain will probably be lost elsewhere across the globe due to inconvenient scheduling. A revised (Mk3) calendar will most likely be presented to the WMSC in October for confirmation, but beware: the final 2015 WMSC meeting is scheduled for early December, so hold off with flights and hotels until Christmas... 

Bernie Ecclestone has long been pushing for the season-opener in Melbourne to run as a night race



"Any viewer gain will probably be lost elsewhere due to inconvenient scheduling"

PORTRAIT: BENJAMIN WENCHENJE; PHOTO: SAM BLOXHAM/LAT

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THE PASSION

OF

Still in love with F1 after more than a decade at the top, **Fernando Alonso** speaks exclusively to *F1 Racing* about the joy he finds in a “cruel” sport – and why he’ll never, ever, give up...

FERNANDO ALONSO

“I remember a conversation on the telephone with my father, the night before my first grand prix, for Minardi, in Australia, 2001... it was Saturday night. I remember him saying: ‘Tomorrow you enjoy, start the race, try to do as many laps as possible, maybe finish the race. If you do well, maybe you can continue. If you don’t do good enough, maybe they will change driver, but one day you can say that you drove a Formula 1 car and you raced one Formula 1 grand prix.’

“That was the idea. We never thought it would be a success, or a great career. Every race was a gift; we took it and at the end I had competitive cars and could drive at my maximum.”

Behind dark-rimmed, opaque-lensed Oakleys, in the dimly lit upper floor of McLaren’s Brand Centre, Fernando Alonso, the driver regarded by so many as the best of his generation, is remembering how he started out in a sport in which he has twice been world champion and in which he still thirsts for further title success. We’re talking across a small table. Fernando sits hunched; head slightly down; inscrutable. The mood and the early-evening light, shuttered against glare but allowing piano-key shafts to stripe the air, evoke an unmistakable atmosphere: this could be a confessional, were it not for the distant rasp of racing engines screaming against the challenge of Spa-Francorchamps’ crests and swoops.

It’s a tantalising moment when Fernando begins to speak, for, as always, there’s an edge – a true, flinty hardness cast around a raging →

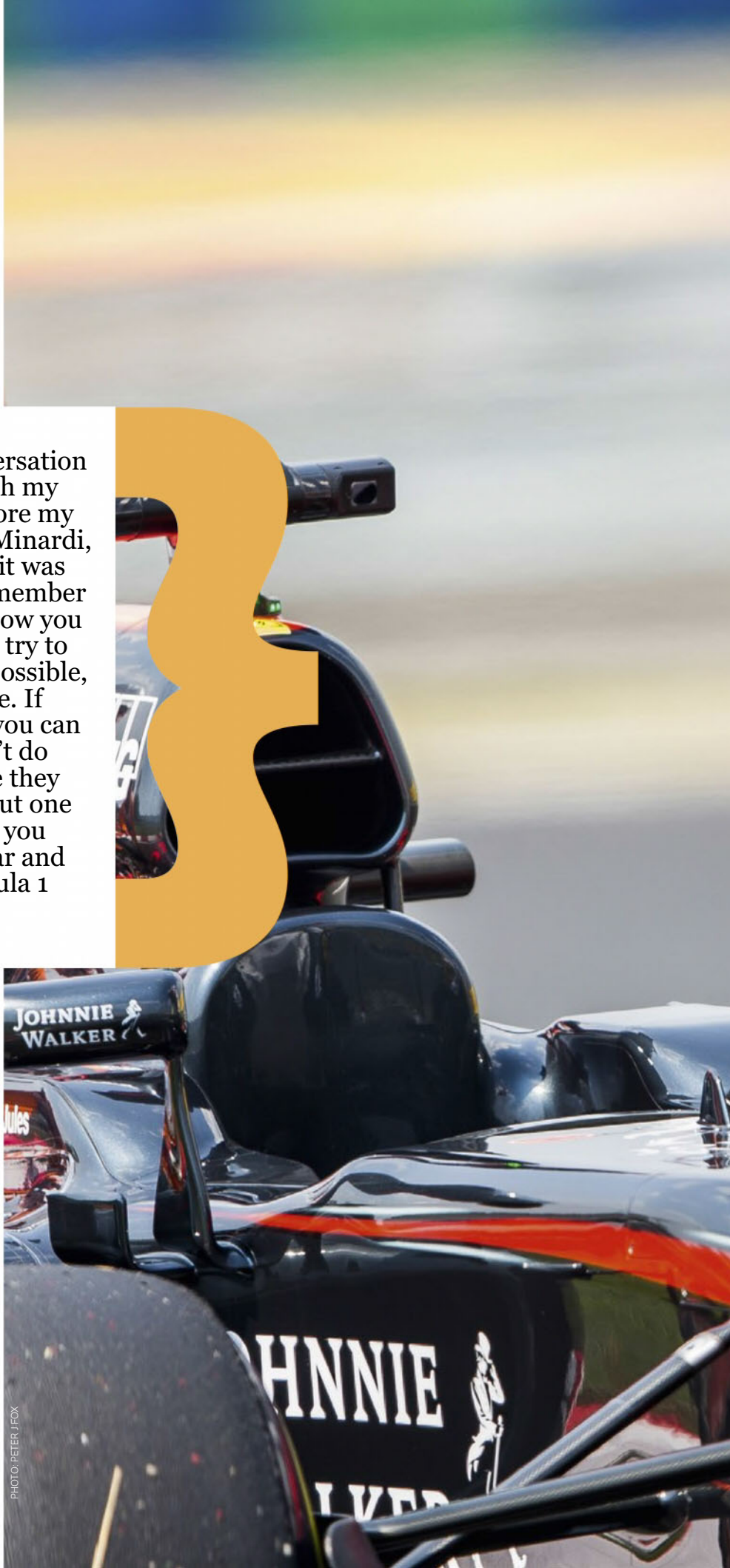


PHOTO: PETER J FOX



Reversal of fortune: Alonso pushes his MP30 back to the pits following a Q2 engine failure at the Hungarian GP. But in the race he fought back from 15th to finish fifth – McLaren's best result of the year so far

“Alonso just nailed him. He was thinking: ‘I know he’ll have to lift.’” And this was a move on *Michael Schumacher*, a driver so ruthless he re-set the parameters of acceptable driving standards.”

core of molten lava that bubbles deep within. It’s there in his racing (did anyone ever make a soft pass on Alonso?); it’s there, hard-wired, in his character. This is not to say he’s unapproachable – he greets *F1 Racing* with a handshake and a genuine: “How are you?” – rather, that by his very nature he commands respect, puts you on your toes. *Which way will this go?* you wonder, always, with Alonso.

There’s a reason for this. His chosen arena is, as we have been so painfully reminded in recent months, a serious one – one in which participants still die – and he demands, by his deeds and his manner, that those around him take it seriously, also. That intensity is evident right now; it has always been evident in Alonso’s driving; it’s the characteristic that makes him such a thrilling competitor to watch. He does not mess around.

At the Nürburgring in 2003, driving for Renault in his first competitive season of Formula 1, he shook down an unsuspecting David Coulthard, by brake-testing him into the uphill Veedol chicane as they fought over fourth place. Coulthard, feathers ruffled, spun off and later complained about how much Alonso still had to learn, feeling aggrieved that Fernando had moved to the left under braking just as Coulthard was preparing to pass him on that side. Alonso raced on to P4, having laid down a very clear marker as to how he intended to go about his business.

Then who could forget that round-the-outside pass he made on Michael Schumacher at Suzuka’s 130R in 2005? Alonso, the newly crowned world champion, simply creamed Schumi’s Ferrari at one of Formula 1’s fastest and most dangerous corners. Schumacher apologists would note that Michael was handicapped in 2005 by Bridgestones that were no match for the Michelin rubber on Alonso’s Renault R25. But the move, nonetheless, was not just hugely brave and skilful, it was utterly uncompromising, prompting commentator Martin Brundle to utter:

A bold opportunist then? The hungriest guy out there? Valencia 2012 brought further evidence of both attributes. He won from 11th, swamping the likes of Sebastian Vettel, Lewis Hamilton, Kimi Räikkönen and Michael Schumacher, in some kind of racing tsunami; indomitable and driving like a force of nature. Spa this year: last to 14th by the end of lap 1.

Not bad for a guy who candidly reveals he was once intimidated by the prospect of racing full-size cars, as opposed to karts, finding himself overawed by their sheer speed: “When I was in karts I really enjoyed it and I thought I had the speed to stay,” Alonso says. “But single-seaters were too big for me, too professional and too difficult. When I first went to watch a Formula Nissan race I saw the cars running close to the track and thought ‘I cannot do that,’ because I thought the drivers had such a big talent to drive

the cars so fast. So just imagine how good they are in Formula 1.” He won the Euro Open by Nissan on his first attempt in 1999.

It’s sometimes hard to equate that astoundingly talented and ferocious competitor with the small, soft-spoken and still slightly shy individual that is Fernando Alonso outside a racing cockpit. Yet this is the stuff of which champions are made – naked ability bundled up with a rage to win; a refusal to be beaten. One ex-tennis professional who now works in F1 for one of its sponsors, commented that Alonso drives in the same way his Spanish compatriot Rafael Nadal plays tennis: “With some guys you know that maybe you have to play like you’re going to lose your house if you don’t win. With Rafa, he plays like he’ll die for every shot. Every single time. And Alonso’s just the same.”

Alonso allows a quick grin when this point is put to him, realising he can hardly deny it’s true. He takes a few moments to reflect before offering this insight: “You know, it’s never been easy, but I never give up. I know there is an opportunity in every corner in every race, right until the chequered flag. I enjoy doing that and it’s the way I’ve been racing all my life.

“I think it comes from difficult times in karts,” he adds, “especially when I was 14 or 15 years old. It was quite hard then, as the races were in Italy and I came from a very modest family. We didn’t have money to travel or keep racing in karts, so I combined studies until it was time to go to university. Then I had to make the choice either to keep racing in karts or start at university. I got lucky, I was sponsored by a kart company; they paid all the fees and the travelling and a small salary. It was a tough decision, but every race from the ages of 14 to 18 could have been the last, because if I was not delivering or if I was not doing okay, probably they could have picked another driver. At that age there are very many talented drivers in karts and I was lucky to have the privilege to not pay anything, but at the same time I had to deliver something. So that way of fighting, of never giving up, comes from →



THE PASSION OF FERNANDO ALONSO

FABULOUS...

THAT SCHUMACHER OVERTAKE

In 2005 Alonso became F1's youngest ever world champion. He won the title again the following year after some epic duels with Michael Schumacher, in Suzuka passing him into the daunting 180mph 130R corner *around the outside*.

WINNING ON FERRARI DEBUT

Only four other drivers have done this: Juan Manuel Fangio, Mario Andretti, Nigel Mansell and Kimi Räikkönen. At the 2010 Bahrain GP, Alonso immediately stamped his authority on the Scuderia.

HOME ADVANTAGE

He's won Spanish races at either Barcelona or Valencia three times, yet there have been some extraordinary performances, such as his incredible launch from fourth to first at the start of the 2011 European GP in Valencia.

BUT FURIOUS

...LOSING THE 2010 TITLE

At the Abu Dhabi finale, Alonso was favourite for the title. A strategic fumble left him stuck behind Vitaly Petrov's Renault and he finished seventh, way behind race winner and newly crowned champion Sebastian Vettel.

BLOCKING HIS TEAM-MATE

In 2007, Alonso was upset that rookie team-mate Lewis Hamilton was allowed to challenge him. During qualifying in Hungary he delayed exiting the pits to scupper Lewis's chance at pole.

BREAKDOWN WITH FERRARI

Alonso's relationship with Ferrari president Luca di Montezemolo fell apart when asked by the media in 2013 what he'd like for his 32nd birthday. He replied: "*La macchina degli altri*" – "Someone else's car."

James Roberts





Can McLaren and Honda recover their '80s and '90s world-beating mojo? McLaren COO **Jonathan Neale** gives his view

"For me it's about being authentic, and if you can't win it next time you shouldn't say you can. There's nothing worse than travelling on false hope – that's just not going to get the job done. High-performance teams, even when they're working well, are not easy places to be: they're full of highly motivated people – it's all about outcome. But the reality behind the scenes is that we can't win it all the time.

"We've made some big decisions for good reasons, we've rebuilt our engineering team, we've moved to a different engine. We know

that Honda are a high-tech superpower and industrial power in their own right but success won't come overnight.

"Fernando has said: 'I don't mind if it's going to be difficult. I just want to know what's coming next so I can manage my expectations.' Expectation management is the hardest thing, so we become issue-focused rather than just emotional. We know where our issues are – we've got to fight back aerodynamically, we've got to get the Honda nicely integrated with us.

"Honda come from a slightly different angle, but there are

things we can learn from each other. Some of the methodical and disciplined ways in which Honda have approached some issues have actually been good for us. On the other hand, F1 moves at a blistering pace and if you drop out for seven or eight years, you forget just how fast-moving and how difficult it is.

"There's a thirst for knowledge on either side, so at the design-engineer to design-engineer level, or at the car-concept to car-layout level, where we come together it's been good. It's just going to take time to build up the

knowledge and experience. We're busting our balls from a chassis and aerodynamics point of view and Honda are working very hard.

"In a short period of time, Honda have come from nowhere to reach a level of power faster than Mercedes did. If we go back 12 months, Honda have achieved a level of power in two years that our colleagues got to in four.

We still have a lot of work to do on reliability and we just need to make sure that race-by-race we've got consistent improvement."

As told to James Roberts

that time in my career."

The hunger, this need to grasp each opportunity for fear of losing everything, made him, in 2003, F1's youngest pole-sitter (Malaysia) and race winner (Hungary); then in 2005 he became the sport's youngest champion, aged 24 years, 58 days. A second title came a year later, but almost a decade on, despite a total of 32 wins and 22 poles, plus runner-up spots in the 2010, 2012 and 2013 championships, he still awaits a third title, while having to watch the likes of Vettel and now Hamilton trample all over his claim to be the definitive driver of the post-Schumacher generation.

Does that bother him, particularly as this season and probably next, McLaren and Honda are unlikely to offer a mechanical package capable of challenging for a world title? If there are inward concerns, today, at least, the answer is philosophical: "This sport is quite..." [he turns to McLaren's ever-attentive polyglot press aide,

Silvia Hoffer, for help with translation] "... quite *cruel*, you know, with so much media attention and interest around the sport. This is not just the racing, but manufacturers, political pressures and all the other things, so you need to open your eyes and realise that things are going in one direction and you can't go against that. You need to adapt. Once you understand that, I think you enjoy the weekends more and you can relax and concentrate more on driving.

"There are no magic solutions on the performance side," he continues, "so it's a question of time and things can get better. At the same time you remain focused on your job and try not to become too frustrated by the hopes, let's say you put in the performance of a new front wing, or new floor. When you are young you are aiming for that extra half-second and you need to find it and prove it, because if you don't, there is something wrong. Now, you know that you don't deliver that much from the

windtunnel to the track, or maybe you improve but your opponents also improve, so the relative gain is smaller."

Lest this sound like the jaded observation of a world-weary veteran contemplating retirement, those inside the team will swiftly counter with evidence of Alonso's continued drive and his tenacity in pursuit of a points score. COO Jonathan Neale has no doubts about his main man's motivation: "He's lost none of the fire in the car," he says. "Watching him throw it around at Silverstone and Hungary, he was out there giving it everything."

Racing director Eric Boullier nods in agreement: "When he decided to join us, he did a race at a kart track in Dubai and took his engineer from Ferrari to develop some software for a strategy to win. Unbelievable! I love it! Like all champions, he wants to win, he wants to be world champion again, he enjoys the racing fight. When there was a sniff of a point in Hungary –



bang – he was on it. It was like a shark smelling blood, it was unbelievable. He’s so driven.”

At time of writing, pre-Singapore GP, that fifth place in Budapest is still McLaren’s best 2015 finish – succour for a long-suffering tech team. Still, though, there’s a lap-time deficit of circa three seconds to a front-running Merc, and little hope of addressing the ERS inefficiency of Honda’s PU until the off-season. Might time be running short for a driver who, at 34, knows that remaining title-winning opportunities are few; might patience soon run out with a partnership high on ‘talk’ but so far low on ‘walk’?

A chuckle from Neale: “Well we’re never sure if there is going to be a helmet-throwing moment – he still has all the attributes of an edgy racing driver that we love [“you can feel his temper, not see it,” confirms Boullier] – but actually when he steps back, he’s got a lot of experience, he’s got more teams under his belt, he’s been there and back, a bit like Jenson. He hasn’t got to prove anything to anyone.”

Except, perhaps, to himself. Ten years ago Alonso opined that the true value of his 2006 title – for him – was that he’d had to beat Michael Schumacher to earn it. It was, therefore, of maximum worth, full kudos. Hampered as he is this season by equipment that’s way below par, he has no chance even to engage with those who are now the accepted benchmarks – Lewis Hamilton and Sebastian Vettel – let alone take them on and beat them.

Boullier recognises how demotivating this could become for his simmering superstar and, intriguingly, hints that he might have “a couple of tricks” up his sleeve to keep him motivated. “I don’t think Fernando will lose patience,” says Boullier. “He is committed to us for a multi-year contract – no option, no nothing – so that’s a real statement. The only danger I can see is that he’s a real competitor and he needs the excitement of the racing, so doing a good lap with a car that isn’t capable of better than 17th [Button and Alonso posted 17th- and 18th-



THE PASSION OF FERNANDO ALONSO



fastest qualifying times respectively at this year's Belgian GP] means he may lose this excitement. You know, it's like a flower that starts to wilt and Honda are very aware of this as well, so we need to deliver what we promised."

Promises. Promise. With these two words, Alonso's return to McLaren is encapsulated: the promises from a management team to an elite driver; the promise of a mighty alliance between McLaren, Honda and Alonso. Will any of it be fulfilled?

In Boullier's view, responsibility rests firmly with team and engine partner "to give him what he wants and what he needs" in pursuit of a third title. As for Alonso himself, we can do no more than take him at his word and note the flickering passion in his eyes (Oakleys long since removed) and voice when he speaks of "the joy

of driving these cars at the maximum, whether it is in P17 or P5. There is still the excitement of driving at full speed." The printed page doesn't do justice to Alonso's delivery. This is human electricity talking.

He remains, don't doubt it, a formidable proposition. A competitor who, with the right set of wheels beneath him, will take on an opponent and most likely beat them. Ask any rival. Ask, in fact, Mark Webber, whose F1 career shadowed Alonso's and memorably brought them together on several occasions in Webber's Newey-Red Bull years, with Alonso at Ferrari.

"The thing with Fernando is that he's relentless," says Webber, sitting in the Porsche WEC motorhome that has become his racing retreat since he quit F1 at the end of 2013. "On Sunday afternoon there was nothing soft


from him in terms of how he would get the most out of his position. For Saturday one-lap pace, maybe he's not on some people's level, but when he's motivated on Sundays he's able to hold a level for a long period of time; he got the big picture; he was always building for when it counted, right to the last sector of the last lap."

Webber was as tough as they come as regards wheel-to-wheel encounters and as brave as any through the fast stuff, yet he's still gracious enough to acknowledge that Alonso in an F1 car is pretty much as good as it gets. "Very few people have been able to race as hard as he did," he says. "In the wet, in any conditions, on any circuit. He always takes opportunities and he has always been able to do that without contact, without damaging his car, and survive."

Then a true nod of respect, racer to racer:



“Fonz was at a little bit of a higher level than me, I’d admit that, but there’s no shame there. I think he’ll go down as one of the absolute legends of the sport.”

It’s a truth simply spoken. Alonso may, or may not, win a third world title with McLaren. Yet for all but the statistician, this milestone has simply ceased to matter. 



In conversation with

Kimi Räikkönen

Kept on by the Scuderia for 2016, the 2007 world champion is still hungry for more success and has high hopes of a strong second half to the season

WORDS ROBERT HOLMES **PORTRAIT** CHARLES COATES/LAT

Your drive for 2016 was confirmed before the Belgian Grand Prix. Taking into consideration the way the team are developing and your own performance level, what are you hoping to achieve together next year?

Well, obviously the aim is the same every year: we want to do as well as we can and hopefully challenge for championships. We are all working well together as a team, I'm sure we can produce a better car for next year, and we all feel very positive. Of course I'm happy to stay here, but we have to try to have a good second part of the year and maximise what we have, and then we can start preparing for next year.

Sebastian Vettel was vocal in his support for you following his victory at the Hungarian Grand Prix. What did that support mean to you?

I know Sebastian well and we have a very good relationship. It's nice. He tells me if I do well, and I tell him if he does well. We have a very good feeling of respect within the team. It's always nice to hear from him. We try to beat each other in the races but we still can be friends as before, and I think that it is also very good for us as a team that we can work together very closely.

Does it help that all the pressure of signing the new contract with Ferrari is now behind you, and you don't have to prove yourself so much any more?

It doesn't change anything. I mean, we still try to do the same as every other race team out there. So that contract is not really going to change our approach for the weekend or for the end result. Hopefully the results will be good, but no, we will still do the same things we have been doing in all the other races. Hopefully we can have more good weekends, without any problems, and see where we end up.

You are approaching your sixth season with Ferrari. Together, you have won a title and nine races and collected 27 podiums. So what else are you still missing in terms of your experience with Ferrari?

Obviously we want more wins, me and the team. I've had good years, difficult years, some ups and downs... but I always enjoy it. Although

FACTFILE

Age 35
Place of birth Espoo, Finland
Team Ferrari
Role Driver

2015 After much deliberation, Ferrari announce he will be retained for 2016

2014 Rejoins Ferrari

2012 Makes his F1 comeback with Lotus and wins two races in his two seasons there

2010 Released from his Ferrari contract a year early, he competes in the World Rally Championship

2007 Switches to Ferrari and wins the world championship at the final grand prix of the year

2002 Moves to McLaren where he finishes as runner-up in the championship in 2003 and 2005

2001 Enters Formula 1 with Sauber. Finishes tenth in championship

2000 Claims Formula Renault UK title, driving for Manor Motorsport

1999 Wins Formula Renault 2000 Winter Championship

I obviously enjoy it even more when things are going more nicely – when you get the results. I've had a great time at Ferrari and I'm very pleased that we can be working together again next year. As a team, as things are now, I really feel that we are going in the right direction and that we can do great things in the future. We are even more happy when we can produce better results. We keep on working hard and we believe in what we're doing, so I'm sure we will get there and that there are many happy days in front of us and a lot of good results to come.

Justin Wilson's tragic IndyCar accident has re-opened the discussion about bringing in enclosed cockpits, or greater cockpit protection, in Formula 1. What's your opinion about that?

Obviously it's a terrible and unfortunate thing, and it's never very nice to hear about events like that. Sadly, it's sometimes part of racing. He had nothing to do with the accident, but because he was hit by debris he paid the price for it. What's my opinion about closed cockpits? It makes no difference to me – drivers don't design the cars or make the rules, and whatever rules are brought in, there are always good and bad consequences. I support all the efforts to improve safety, but you have to remember that odd things can always happen. Accidents can still be severe when, let's say, all the bad things happen in one place. You can hit something when you're driving quite slowly and still hurt yourself, or you can have a massive accident and nothing happens. I don't think there's any one right answer.

After the Pirelli tyre failures in Spa, one of the key recommendations was to run the tyres at much higher pressures. What has been the effect of that?

I don't really want to get into the whole thing or get involved with the politics. Obviously there have been some changes, but we are still learning about how they will make a difference. We've been told to start

at each circuit with a minimum tyre pressure, but every circuit brings different conditions and different downforce levels. It's the same for everyone, though, so it is what it is. **F1**





DOCTOR

I. Roberts

Allianz

AMG

FLYING DOCTORS

Dr Ian Roberts (left), the FIA's F1 medical rescue coordinator and Alan van der Merwe (right), FIA F1 Medical Car driver, flank the Mercedes-AMG C63 S Medical Car



Following the pack closely, while keeping out of sight and staying poised for any emergency, doctor and driver team Ian Roberts and Alan van der Merwe, explain to *F1 Racing* the balancing act that is life in the faster-than-you'd-expect Mercedes C-class F1 Medical Car...

WORDS ANTHONY ROWLINSON

PICTURES MALCOLM GRIFFITHS

A familiar, bull-shouldered frame is hunched over a fat, grippy, leather steering wheel. Squat, wide-necked, purposeful, that must be... *is it really?*

Squint for a second and the decades fall away. Then suddenly – yes! – that is Nigel Mansell, the furiously determined 1992 champion, who was never shy about pushing a car to within an inch of its tyre-protesting life, no matter how unfavourable the circumstances.

Today, on a Silverstone Saturday, he's squatting low in the bucket driving seat of the FIA Medical Car, a specced-up AMG Mercedes C-Class estate. The faintest trace of a smile is discernible (easily visible these days, now the trademark 'tache has gone) and there's a glint in his eyes. On this hallowed circuit, scene of some of his most fabled glory days, he's off to have some fun.

The exhaust rumble that follows seconds later as he blips throttle and flexes digits around rim, announces his imminent departure. And then he's off, accompanied by a sharp chirrup from the Merc's rear Pirellis, to enjoy a perk of his role this weekend as FIA driver steward for the British GP. These will be his requisite circuit inspection laps, accompanied by the likes of Tony Scott-Andrews, a senior FIA race steward and member of its International Court of Appeal. As it happens, Nige has a rather nice machine in which to perform this oh-so-arduous duty. He returns ten minutes later, his grin noticeably wider, as are those of his passengers, who have clearly been entertained.

Mansell parks up deftly in the FIA's dedicated garage area alongside the identical sister Medical Car →





“We don’t want the race leader even to see us, or to have to lift-and-coast for a couple of seconds”

The Medical Car sits behind the back row as the cars line up, ready to follow the pack for the first lap of the race



PHOTO: ANDREW FERRAROLI/AT

and a pair of Mercedes GTS Safety Cars.

He springs out, still nimble, and exchanges racing-driver patter with the car’s regular wheelman, Alan van der Merwe. “It’s quick, isn’t it?” Nigel declares, bushy eyebrows raised in appreciation of the Mercedes wagon’s turn of speed.

“Yep, it’s not too bad,” agrees ‘Swerve’, pleased, though not surprised to receive this seal of approval for his steed from one who remembers the warp-speed craziness of ’80s-generation turbo F1 cars.

Indeed, the Mercedes-AMG C63 estate is quick, because it has to be: it covers the start of every grand prix, lining up behind the last row of the grid, and follows the pack away around the first lap, prepared to deal with any serious incident that might follow an excess of throttle-jockey red mist. This means it has to be able to haul its near-two-tonnes of body mass, driver, up to three passengers (usually doctors) and extensive emergency kit around every F1 circuit fast enough to be well out of the way of race leaders gaining rapidly from behind as they approach the start/finish for lap two. And despite 510bhp and 700Nm of torque under the hood, plus track-optimised brakes and suspension, *and* the driving skills of the 2003 British Formula 3 champion to call upon, that can still sometimes be a close-run thing.

“At Spa or Suzuka,” says van der Merwe, a gym-fit 35, “over the last third of the lap, the field gets close enough that you have to get a move on. We don’t want the race leader even to see us, or to have to lift-and-coast for a couple of seconds.”

More than anything, the Medical Car and those on board seek nothing more than anonymity. If they’re at all visible, aside from those final pre-race seconds of a grand prix when the C63 is stationed on the grid at the back of the pack, then something has gone wrong – be that a serious accident or, heaven forbid, with the Medical Car and crew themselves.

“It’s an anonymous job,” says Alan, who no longer races competitively, despite being qualified to do so. “Most of the time we don’t want to be on the track any more than we need to be – but every now and again, when we have to do something, it can become quite high-profile. Everybody is scrutinising how quickly you got there and what you did when you got there. So most of the time it’s quite a quiet, subdued job, but then every now and again you have this burst of action.”



INSIDE THE CAR



The FIA Medical Car is fitted with specialist communication equipment and is designed to carry emergency medical kit to the scene of a crash as fast as it can. Dr Ian Roberts, FIA F1 medical rescue coordinator, talks us through the on-board essentials...

LARGE MEDICAL BAG

Produced by MDD Europe, this fold-out bag contains a wealth of equipment that I consider essential and need to keep immediately to hand. On one side, we keep all the airway kit – from airway adjuncts and tubes to a video laryngoscope (to view inside a patient's throat). We also have a small portable automatic ventilator and a kit to form a tracheotomy in the event of a compromised airway.

In the other side of the bag we keep the circulation kit. We have intravenous gear along with fluids and dressings, and an intraosseous kit to place fluid directly into the cavity of the sternum (breastbone). We also have a pelvic splint, a neck collar and a selection of burns dressings.

SUCTION MACHINE

If a casualty has any secretion, such as blood, in their mouth or airway, then we use this machine to clear it. It's quite large – but it creates a high vacuum for effective suction.

PHILIPS DEFIBRILLATOR

This is used when a cardiac arrest is caused by a severe disturbance of the heart's electrical activity to reset the heart to its normal rhythm. The FIA technical staff have been trained to use it in case of a cardiac arrest in the scrutineering bay or pitlane, which may have been caused by a shock from the hybrid engine systems.

VISUAL SCREENS

We have three screens in the car. The top one gives us information about the car's dynamics and

other useful technical data.

Below that is an iPad Mini built into the console displaying timing information for all the cars on track. It also shows a live race feed so we're aware of any incidents. Finally, the iPad in front of me acts as a GPS monitor showing the drivers' location. It also highlights yellow flag sectors, red flags, Safety Car periods and even displays the G-force a car has encountered in an accident. I get Race Control messages, too. The car also has its own email address so we can be sent any additional information.

DASHBOARD

Here we control the lights on the car – the buttons all correspond to the colours they display. Yellow and white are warning lights, on the top of the vehicle and at the front and rear. The green button illuminates the Medical Car sign in the rear of the car. Finally, the blue button operates the siren, which we use when entering the pitlane at speed, usually after the opening lap.

PHILIPS VITAL SIGNS MONITOR

We can monitor the casualty's electrocardiogram, oxygen saturation, pulse and blood pressure with this lightweight, compact unit. The colour display is visible outdoors on even the brightest day.

SMALL MEDICAL BAG

I carry a small bag that has all the immediate airway equipment, tools to gain intravenous access and a tourniquet to stop any bleeding from a limb: everything you need to have to hand the first few minutes after an accident.



Large medical bag



Extraction kit, containing lifting straps and head supports



Geudel airways



Combat Application Tourniquet (CAT)



Burns gels and dressings



Philips defibrillator



Airways kit



Pelvic sling



Portable disposable ventilator



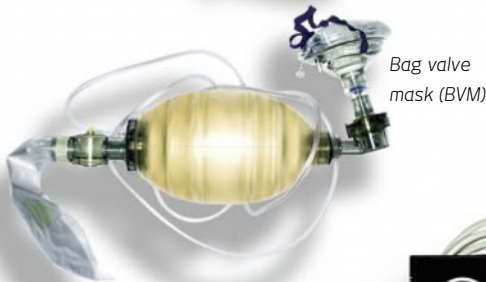
Video laryngoscope



Tuff-Kut Scissors and belt cutter



Airway roll and endotracheal tubes



Bag valve mask (BVM)

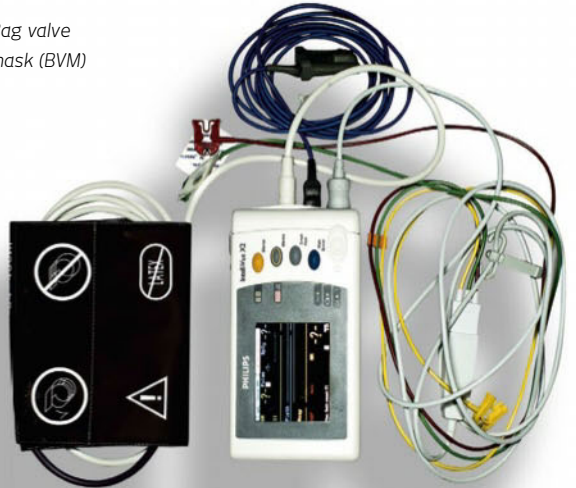


Armoured endotracheal tube and laryngoscope



Intraosseous needle

Philips Vital Signs Monitor



Oxygen cylinder



IV giving set



i-gel supraglottic airway



Chest seal



Resuscitation drugs



Small CO₂ analyser



Pelvic splint

exciting at the start, seeing the grid line up, then the lights coming on and we're on full alert. The pack pulls away from us quickly, but we're in constant communication with Race Control and we're looking for debris or dust into the corners."

Roberts insists that it's not the role of the Medical Car to chase the single-seaters; rather, the Medical Car must follow extremely rapidly, but at sufficient distance to stop safely in the event of an incident ahead.

And it's here that the 'medical' aspect of 'Medical Car' comes to the fore. Roberts, in addition to the senior FIA medical role he has held since 2013, is also a consultant anaesthetist at the UK's George Eliot Hospital by day and has decades of experience in dealing with trauma injury victims. There's very little, he reckons, that he has not encountered in terms of human injury and little, therefore, that will faze him. "Apart from vomit," he adds. "I've never been very good at dealing with that. It just prompts the same reaction in me."

Those years of experience are invaluable in making on-the-ground assessments of whatever drama is encountered on the first lap of a grand prix, for a split-second call may be required on whether to attend a situation ahead, or decide that a post-shunt driver looks unharmed, despite damage to his car. "If we see an incident," says Roberts, "Alan will draw up at a safe point and we have to make a rapid assessment of what's going on and of what we see. The question for us is: 'Does it require immediate involvement?' And if it doesn't, then we carry on. Aches and pains can be dealt with in the medical centre later."

It's a crucial call, because if the Medical Car does stop and Dr Roberts attends an injury, race director Charlie Whiting must deploy the Safety Car to round up the pack and red-flag the race.

"We don't make these judgements entirely alone," Roberts adds. "We have a system in the car that allows us to listen in to what a driver is saying and that can help us tell whether or not he's okay. But the worst times are when you hear nothing. Is the intercom broken? Is the driver just fed up because his race is over? Or is it something much worse? Unfortunately, right there and then, we don't know."

The most serious incident attended by Roberts and van der Merwe was Jules Bianchi's crash at the 2014 Japanese GP. Even for a hardened professional, the scene they encountered at Dunlop Corner on a stormy, brooding 5 October, was disturbing. "It was really shocking," says Roberts, "in that when we got to the incident scene, the damage to the car was so strange. It made us question what we were seeing because the top of the car was taken away."

Bianchi's Marussia had left the circuit at approximately 80mph and collided with a 6,500kg mobile crane that had been moved



from its 'safe' position behind a barrier to lift the Sauber of Adrian Sutil, which had spun off at the same spot one lap earlier.

In striking the crane, Bianchi's car lost its roll-hoop structure at the point of impact. Bianchi suffered serious head injuries and spent nine months in a coma at Le Centre Hospitalier Universitaire de Nice, France, before succumbing to his injuries in July. That he survived at all is testament to the excellence and immediacy of the treatment he received trackside.

As the subsequent FIA investigation noted: "Bianchi's helmet struck the sloping underside of the crane. The magnitude of the blow and the glancing nature of it caused massive head deceleration and angular acceleration, leading to his severe injuries. All rescue and medical procedures were followed, and their expediency are considered to have contributed significantly to the saving of Bianchi's life."

"Sometimes," Roberts reflects, "you look at the damage to a car and the carnage after a multiple-car accident and you wonder 'How could anybody survive that?'"

Yet he insists that he is able to detach himself from any emotions that might arise in dealing with serious injury. "I can deal with blood and bits of body being split apart," he says. "I can just do whatever I have to do, to save a person's life."

Roberts will work at an incident with another senior medic travelling in the rear seat of the

Together with Dr Ian Roberts, the FIA's F1 medical rescue coordinator, van der Merwe is 'on alert' throughout every grand prix weekend. That means being stationed in the pitlane and ready to respond to any accident throughout practice and qualifying, as well as covering the start of the race itself and then remaining 'ready to go'. In addition, the Medical Car team work at the GP2 and GP3 support races, also covering the start of each. "That's useful," says van der Merwe, "as it keeps you sharp."

The packed schedule of a race weekend, particularly in Europe, means a lot of 'car time' for van der Merwe and Roberts and by the end of Saturday, they admit, both are ready to stretch their legs and listen to something other than each other's breathing over the in-car intercom. "It's quite an intimate job," notes van der Merwe.

But during the emergency response moments, those quiet passages are forgotten. "We can be called to go out on to the circuit at five seconds' notice and you just have to spring into action," says Alan. "We might have to overtake the Safety Car, which is holding back the pack, drive faster than it and get Ian to the scene of an accident as quickly and as safely as possible."

Roberts adds: "There's a lot of banter between me and Alan in the car, to help us pass the time. We can be sat in it for up to two hours without much to do, but at the start, or when the call comes, it's full concentration. Of course it's

The Medical Car's dashboard: white and yellow buttons operate warning lights, the green button illuminates the Medical Car sign; and blue starts the siren – used when entering the pitlane at speed





Q&A


Jean-Charles Piette, FIA permanent F1 medical delegate

“I can deal with blood and bits of body being split apart, I can just do whatever I have to do, to save a person’s life”

Dr Roberts



Medical Car – most often the head of the local circuit’s medical team – and they’ll be supported by the extensive medical network assembled around the circuit at every race. Van der Merwe, meanwhile, although not a medical professional, has a key role to play in relaying information about any incident to Race Control, and carrying medical kit from the C63’s boot to Roberts and co.

“It can be a difficult job,” he says, “because of what you sometimes see and because of the level of consistency you have to bring. You just can’t make a mistake. All that cost-effective marketing that Mercedes get from the Medical and Safety Car can be thrown away very easily. Bear in mind that this is the sort of car a lot of people will be expecting to carry a Labrador. Anyone who gets in it for the first time is always amazed at what it can do.” 

What do you do at a grand prix?

During the session at races I am one of the four FIA people in Race Control. We are connected by a radio system to the Medical Car, and to the Safety Car. If there is an accident, we decide how to react. This decision is taken mainly by FIA race director Charlie Whiting.

It’s not only the F1 Medical Car at a circuit. There are also between three and five national Medical Cars – ambulances, and two or three extraction vehicles. But the F1 Medical Car is supposed to give support whatever the location on track and to be the first on the scene. F1 Medical Car personnel are there to act directly and coordinate the national people. It’s a specialised medicine, with an extremely rapid response time of between 30 seconds and not longer than two minutes. The idea is to see the driver as soon as possible, while remaining under safety conditions, assess the medical situation and then organise what happens next.

Your job must veer between relative calm and extreme intensity?

Yes – I come to every race and things can be quite quiet, but if an accident happens, you go from 0-100 like *that*. Fortunately, we have very few accidents in F1, but we also have GP2 and GP3 to take care of. Typically there are between zero and two big accidents per year. The medical team is there for those moments. It might seem like a big and costly operation – until the day you need it.

After an accident like Jules Bianchi’s, how do you feel and react?

Initially, you react in a professional way to ensure that everything is done properly. It was anticipated that we might not be able to use the medical helicopter that day because of an approaching hurricane, so I accompanied Jules to hospital in the ambulance. I went later.

After the operation had been carried out, I spoke with the neurosurgeon at the hospital and there were many more phone calls – for example to FIA president Jean Todt, and to Jules’ father. These were, if you like, the professional aspects. After that come the personal and emotional aspects. I had known Jules since he was 16, when I was introduced to him at the French Grand Prix in 2006. So for the emotional aspects... I do not have words to describe this.

BIG BOYS' TOYS

Daniel Ricciardo is one of F1's biggest stars, so what's he doing messing around in one of these? F1 Racing joined him at a kart track in Italy to find out

WORDS ANTHONY ROWLINSON PICTURES PAOLO PELLEGRINI





There's a whiff of testosterone in the air on this hot, late-summer afternoon at a kart track south of Monza. Two Italian-blooded males are squaring up for a four-wheeled showdown. It's Ricciardo vs Valsecchi for racing honours at an event that isn't intended to be competitive,

but still almost inevitably ends up that way. Both Daniel and Davide are here to showcase the merits of a new line of racing karts blessed by and branded 'Ricciardo', in a venture designed to add some Formula 1 sparkledust to this junior racing category. →





Ricciardo with the 125cc Birel ART kart that bears his name. Aimed at the serious young competitors Ricciardo is hoping to inspire, these karts produce over 40bhp and run in the KZ class



Daniel's exploits are surely familiar to any reader of *F1 Racing*; Davide's, perhaps less so. A few seasons back, he was Italy's 'coming man' in circuit racing: a composed and talented hotshot, who won the 2012 GP2 championship and was waiting in the F1 wings as a Lotus F1 test driver. His understudy role looked likely to push him centre-stage at the end of 2013 when Kimi Räikkönen flounced out of the team amid a pay dispute. His moment had surely come... but no, the drive went instead to proven campaigner Heikki Kovalainen. Abandoned, Davide fell off the racing ladder from a great height and hasn't stepped back on it since, choosing instead to pursue opportunities as an expert eye for Italian F1 television.

But, at 28, he's still young and GP2 champions don't grow slow overnight. So today there are bragging rights at stake.

Around the Laghi kart track, an hour's drive from Milan, Valsecchi allows pent-up racing frustrations to vent, bursting away from a pack of four that includes Ricciardo and two

commentators from Sky Italia. His blue-and-white 125cc machine, built locally by fabled Italian kart manufacturer Birel ART, is identical to those of his track companions for the day, but only Davide is using it to its full potential. The Sky pair are staging a fake dice for the cameras; Ricciardo, as per script, is joining in. Valsecchi, however, has 'forgotten' that he's meant to be there too and has reverted to race-driver type by pushing pedal (a lightweight aluminium tube, anodised bright blue) to metal (the kart's thin-gauge steel frame).

Watching from the sidelines, Sky Italia's producer is performing a highly entertaining sideshow in response to Valsecchi's endeavours, pulling at his hair and windmilling his arms as he watches hours of preparation – and presumably a euro or two – being wasted by an errant racer unable to contain his enthusiasm for the machine at his command. He is not getting the shots he needs for his pre-Italian GP package and hurries off to Race Control, where he urgently seeks a display of the chequered flag.



It's unfurled, the racers are brought to heel, and they re-form for a re-start. After a couple of cursory formation tours, Valsecchi and Ricciardo – instinctively, or as per some mutual agreement – gun it, and suddenly a gaggle of mechanics, family, friends and a few media types are treated to a high-level joust between two talented chargers. The old maxim of 'you only need two cars to make a motor race' has never been more true as Davide and Daniel bring years of karting and single-seater experience to play around this flat, though bumpy, 14-corner 1,300-metre circuit.

Through Turn 1, which it's just possible to take without braking, so long as there's an initial easing of the throttle, both pros casually flaunt the skills that define the chasm between drivers at their level and the happy amateurs also on track – already half a lap behind...

It's not just the obvious car control that you might expect – any decent driver can balance throttle against a 'dab of oppo'; it's more the repeatable consistency of doing lap after lap to occupy the same square footage of Tarmac in pursuit of the best lap time. Or, perhaps, to take a deliberately different line in attack or defence. Drivers like Daniel and Davide have time, that's the thing; despite the speed they're displaying, they're neither rushed nor flustered.

"Karting teaches you that in buckets," says Ricciardo later, over lunch. "It makes you look and think ahead. Things happen quickly and very directly, so you have to anticipate the next corner and prepare for it long before you get there. In that respect, karting is very like F1."

Back on track, Ricciardo is every bit as good as his word, monsterring the leading Valsecchi through Turns 1 and 2, forcing his opponent to adjust his line in defence. Valsecchi then finds himself mugged as he struggles for traction out of Turn 3, where Ricciardo is better positioned for optimal drive from the apex. Ricciardo

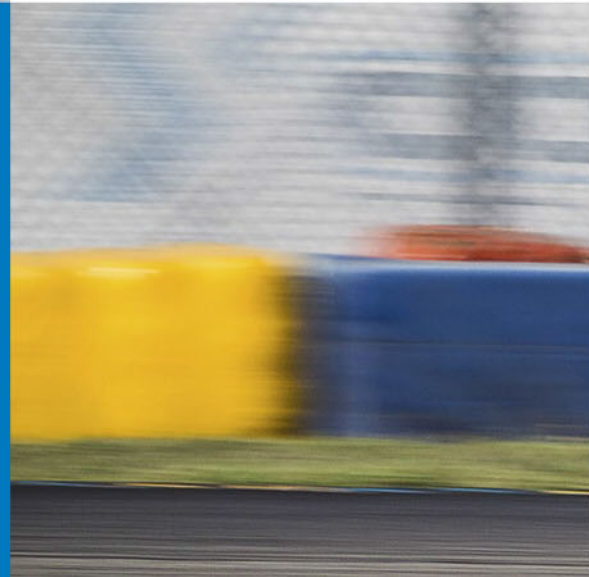
So why has Daniel Ricciardo put his name on a kart? Does that mean he actually makes them?

Er, no. But when an old karting chum suggested he lend the 'Ricciardo' moniker (pronounce it 'Rikkardo') to the products of an established manufacturer, he sensed an interesting business opportunity, along with a chance to inspire up-and-coming young karters.

"The idea was first suggested to me while I was still at Toro Rosso," he says. "I had a bit too much to think about then, but now that I'm more established in Formula 1, the timing is better and I can try to be a bit of a role model for some of the young kids starting out."

Ricciardo's karts are built by Birel ART, a 60-year-old kart manufacturer now co-owned by Nicolas (son of Jean) Todt. They're 'KZ'-series karts, pushing out just over 40bhp and aimed at serious competition karters – most likely teenagers.

They retail at around £3,000 each, so not exactly pocket money. But by the standards of most motorsports, they're cheap as chips.





“Karting makes you look and think ahead. Things happen quickly and very directly, so you have to anticipate the next corner and prepare for it long before you get there” **Daniel Ricciardo**

takes the lead and keeps it till the chequered flag, demonstrating to all present that his ‘honeybadger’ instincts are present and correct, despite this day being ‘just for fun’.

He pulls into the makeshift pits, kills the engine, and emits a long, loud groan of discomfort. As anyone who has ever spent an hour or two in a kart will know, they batter your body, and Ricciardo, despite wearing a kidney belt and being conspicuously F1-fit, is feeling bruised after a morning in the hot seat.

“Yeah, all around my back and through the wrists, it really gives you a pounding,” he grimaces. “I’ll be sore this weekend.”

Sore or not, he will go on to produce an absolute stormer of a drive four days later at Monza, to finish in eighth place at the Italian Grand Prix, having started 19th on account of a multitude of engine penalties.

And if you’ve ever found yourself wondering where guys like Ricciardo learn their skills, refine their car control, and develop the hunger and tenacity that turns them into F1 aces, well, a day spent watching them hoon around in high-spec karts reveals everything you could ever need to know. **F1**

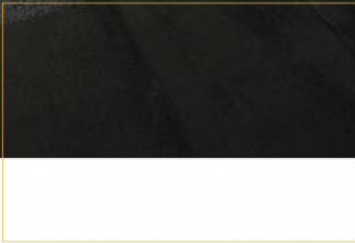
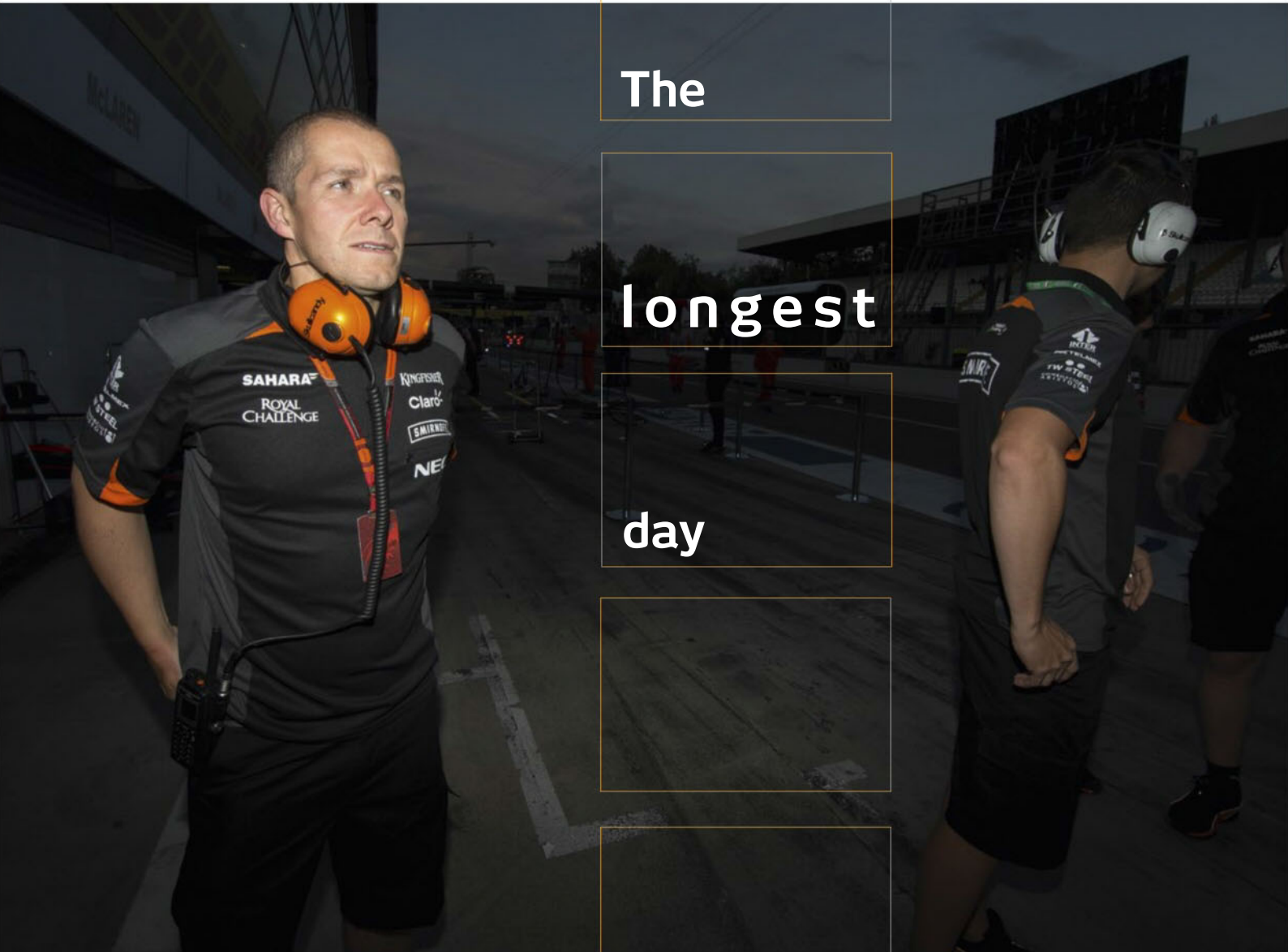




The

longest

day



Friday is the toughest day of a grand prix weekend for a Formula 1 team; a dawn-to-dusk (and beyond) slog to optimise the cars for action. We joined **Force India** for a day at the sharp end

WORDS STUART CODLING PICTURES JED LEICESTER/LAT





First encounter with a Formula 1 wheelgun: "startlingly violent and with a kickback like a shotgun"

6.55am and a queue

is forming outside the paddock gates as the clock counts down to the end of the FIA-mandated curfew. It's like the opening day of Glastonbury, but with added artificial fabrics: uniformed team crews gather in knots to rush through like water from behind a bursting dam at 7am.

Force India have slotted into the queue behind polesitters Ferrari. Behind them, Red Bull and McLaren cluster in anticipation. But as I join my new team-mates for the day, it's clear there's a problem. Two dozen eyes swivel in my direction and contemplate the spectacle: team-issue shirt and shorts, Puma belt and black-and-orange trainers, and... white ankle-length Nike socks, the only element of the ensemble from my own wardrobe. The latter is clearly a sartorial error too ghastly to contemplate. Heads are shaken, slowly. Eyes roll. Tuts are tutted. Air is wearily sucked in through teeth.

"We're going to have to sort you out..."

In fairness, your humble correspondent is not a habitual wearer of leisure garb. But these socks, while perfectly functional for sporting pursuits, are clearly *infra dig* in this environment. At 7am, without fanfare, we are invited to swipe through the gates and the influx begins. As I rendezvous behind the Force India garage moments later with the two Wills – Hings and Ponissi, respectively the team's press attaché and social media guru – it's clear that word travels fast: Will H produces from his pocket a pair of black, low-cut Puma socks.

"It has come to my attention that you're off-brand, Codders," he says, shaking the replacement footwear in a reproachful manner.

With a little under three hours to go until the cars are due to hit the track for the first time this weekend, breakfast isn't the first thing on the agenda. The two VJM08s were unpacked and assembled over Wednesday and Thursday, but as well as functional checks there's the essential process of pitstop practice to get through.

Two garages down, the Ferrari pitcrew are running through a flamboyant physical warm-up and stretching routine, in the manner of a football team pre-match. Force India's bolters view this with some amusement. This team can trace their ancestry back to the 1980s Eddie Jordan Racing Formula 3000 outfit – sporting director Andy Stevenson started his career here



Image is everything and Codders' non-regulation white sports socks do not cut the mustard. Cue stern words from on-high...

as a mechanic – and, though an atmosphere of levity prevails, they are hard-bitten racers all.

Race team coordinator Franco Massaro gives me my first task: I can shove it. The car, that is. Engine off, Sergio Pérez's VJM08 must be propelled by hand into the waiting pit box. Our headphones crackle with radio checks, and then chief race engineer Tom McCullough issues the first drill of the day: "Pérez in the pits... dry tyres... plus one front wing..."

The car is rolled back to the extremity of the team's pit area and three of us – one on either side of the rear wing, me grasping the square

edges of the crash structure and rear light – get ready to push.

"Crew in pitlane," instructs McCullough with the calm, precise, unwavering enunciation of an air traffic controller.

Getting 700kg+ of F1 car up to a jogging pace from a standstill requires a hearty shove – like the front row of a rugby team engaging in the scrum – and sure footwork. The dusty concrete of the pit apron is slippery; at one point my right foot skids out from beneath me and I almost fall.

Time and time again we repeat the routine. McCullough sets a variety of tasks, including →

Pushing an F1 car weighing over 700kg to jogging pace from standstill, across a slippery surface, requires concentration of the extreme variety

late calls and penalties, and the pitcrew dash out of the garage and set to, waiting for us to push the car into their waiting grasp. Afterwards, McCullough reads out the time elapsed, and outlines how precisely the car stopped on its marks, with neither encouragement nor admonishment; his tone wanders no further than that of the reader of Radio 4's shipping forecast. This is not the time to adjust pitstop procedures, it's simply a warm-up. At the end, he thanks everyone for their time and the crew heads off in stages to breakfast.

An hour or so before first practice, there's still plenty of small but necessary detail jobs to accomplish, as well as the main goal of ensuring the cars are functional. The primary cleaning solvent used on the brakes has the side-effect of weathering any decals it comes into contact with, and one of the Skullcandy stickers in the 'Coke bottle' area of Nico Hülkenberg's car is looking grey around the edges. The lifestyle audio brand's distinctive skull-shaped logo is one of several in this sculpted and aerodynamically critical area; I mark two edges with a wax pencil, and pick and scrape off the old decal. There's nothing wrong with its adhesive qualities and it yields only grudgingly. I rub and polish around the vacated area carefully, leaving just a trace of the positional marks, peel the back off a new sticker and press it on carefully, scraping out air bubbles with a straight-edged piece of plastic. *Voilà!* Optimal commercial visibility restored.

Two self-built fuel bowsers, named Bert and Ernie after the *Sesame Street* characters, form the border between the two sides of the garage. Today Ernie is servicing Sergio Pérez's car, and it is with some apprehension that I hold a fire extinguisher – pin out – and aim it at the car while the 10kg of fuel that was in there for the engine warm-up is pumped out, and the first load for practice is decanted into the tank. In the general hubbub of the garage, Ernie's work is virtually silent: the two pipes, one carrying

fuel, the other acting as a breather, twitch like electrified snakes. The amount sent is compared, on a clipboard, with the quantity required. Job done for now.

Both VJM08s are as yet becalmed, aloft on the high-tech equivalent of axle-stands, and without wheels. I am called upon to address this, marrying a Motegi Racing alloy, wrapped in a new Pirelli P-Zero, to the front-right of Pérez's car. It's surprisingly light for its size, but because of the carbon-fibre ducts and shrouds surrounding the actual hub and carrier, bulls-eyeing it onto the spindle takes quite a lot of practice. It's a testament to the skill of pitcrews up and down the grid that we see so few botched pitstops when the cars are stationary for less than three seconds.

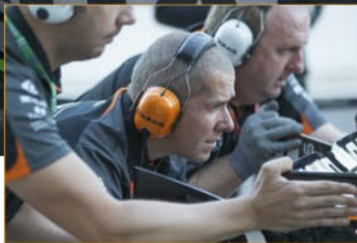
The wheel gun is something else: startlingly violent in motion, and with a kickback like a shotgun. A sliding bolt at its rear controls the direction of motion – righty-tighty, as a bicycle mechanic might say, and anticlockwise to undo. The nut is flanged like a jet turbine, rather than square-edged, so you have to lean in and add bodyweight or the gun just kicks back, skipping fruitlessly over the flanges. Since it tightens the nut to a specified torque, knowing when to let go of the trigger and withdraw is a question of feel and experience. I have neither of these: the first time I let go too soon, the second time I hang on too long – in a pitstop, a waste of time. But at least Pérez can essay his first laps today without fear of returning on three wheels.

As the minutes tick by, the garage becomes even busier, with engineers and mechanics purposefully yet delicately dodging around one another in the confined space. Every minute of Friday seems to be accounted for, with checklists to work through, systems to prepare, tyres to bake gently in their warmers – and, finally, drivers to belt into place. Nico and Sergio arrive at the same time and bid a cheery good morning to their bolters.



Time to step up to the social media plate. Force India are known for their relatively informal, fan-friendly approach, and as Will P hands over his phone he says: "This will be the first session I haven't done in three years..." This is very much his baby. What are those hashtags again? #bestfans. #FeelTheForce. How hard can it be? Moderately, it turns out, as I somehow contrive to switch the iPhone to Norwegian and incur a horror show of autocorrect shunts.

Now, *F1 Racing* has over 133,000 followers on Twitter from all over the globe. Force India has 334,000, similarly geographically disparate. This is not a time for complex wordplay (well, perhaps a little) or easily misinterpreted →



“The car requires a hearty shove – like the front row of a rugby team engaging in the scrum”



Elbow grease at the ready, Codders gets to work washing tyres, replacing worn sponsor decals and giving the front wing a performance-enhancing polish



puns. Or perhaps it is. I quickly take a snap of Pérez's beard and tweet it with the hashtag #FeelTheFuzz. It meets with a positive and amused response. Let's go further. Any requests? Most respondents ask for a picture of "whoever Force India's regular Tweeter is". Will P, it appears, is something of a cultural icon.

During practice the radio dialogue is sparse and functional. It's clear that regardless of the circumstances behind the late introduction of the B-spec VJM08 – in effect what the car should have been at launch – the engineers have a clear understanding of its behaviour. Pérez is evaluating a different Carbone Industrie braking material – and not much liking the feel of it at

first – but race engineer Tim Wright reassures him it will 'bed in', and gently steers the conversation to more germane topics, such as the overall balance of the car. Any changes are made individually and in small increments. There's no question of chasing a setup.

While Sergio's car is on the stands with the front wing off for an anti-roll bar tweak, Franco Massaro reappears with a spray can of cleaning fluid and a rag: some more hands-on work beckons. A clean car is a fast car, after all...

"This is a good opportunity to clean the front wing," he says. "Make sure there are no blockages between the elements, check for any damage – but watch out for sharp edges!"



There's plenty more to do: from dishing up noodles, to running the Force India Twitter feed, by way of lurking behind drivers during press interviews



Not only is polishing the front wing and nose section technically fascinating and somehow therapeutic, but on Sergio's next run he goes fastest of all through the speed trap. *F1 Racing* can truly claim to be an influential publication.

While those watching on television may view free practice sessions as 90 minutes in which little happens, in the garage there is a constant sense of pressure to accomplish the programme. When Hülkenberg has to abort his planned long run after one lap because of a fuel leak – the instruction to have extinguishers to hand and get the blowers on the brakes ASAP is the only time tension creeps into McCullough's voice – the driver fidgets constantly while his car is attended to. No sooner is it ready than he drags his balaclava and helmet back on – not noticing there's only two minutes of the session left.

The chequered flag ushers in the next race against time: two and a half hours to clean, prep and check the cars, and for the drivers and engineers to digest and learn from the data ahead of the next session. Behind the garage I'm introduced to two "paddock legends", Neil Dickie and 'Biscuit' – as you'd expect of a tight-knit globetrotting equipe, Force India is a veritable hotbed of nicknames. Neil has been in and around motor racing since the early 1980s, as a flag marshal as well as a mechanic and tyre technician, while Biscuit warns that his sobriquet's backstory is not suitable for publication in a family magazine.

Throughout the session Neil has been wheeling in stacks of tyres, and constantly checking temperatures and pressures. Now every wheel has to be cleaned and checked for damage before going back on the trolley for conveyance to the Pirelli tent.

"I'm very particular about wheel cleanliness," he warns as I dunk a brush in the roiling cauldron of dilute detergent and agitate it betwixt the alloys' spokes.

While guests in the Paddock Club two floors above nibble at canapés and sip champagne, lunch in the Force India garage is taken standing up whenever a spare moment offers itself. The dispensing area is in one corner, behind a partition, offering a choice of well-stuffed baguettes, tubs of nuts and dried fruit, energy drinks, water, and a main-course choice of pasta in tomato sauce or chicken with noodles. The coffee machine, too, is a popular destination as the crew arrive in bursts to grab and run. From one moment to the next it can go from silence to commotion, and I assist catering supremo



Josie Warrington in dishing food onto plates as she gets on the radio to order up more noodles. Between 60 and 80 people at any given grand prix weekend rely on this service as their sole post-breakfast repast until dinner time, and the delivery mechanism has to run smoothly and quickly so as not to delay work on the cars. A fresh consignment of stir-fried poultry, vegetables and soy-kissed carbohydrate arrives just in the nick of time.

As the clock starts to count down to second practice, the pace of activity within the garage increases palpably. People scurry around. Airguns are stretched on their pneumatic hoses, earplugs are surreptitiously licked, belts are tightened. The following hour and a half are absolutely crucial to the success of the day, and as the crew work hard to extract every grain of meaningful running time from the session, I recommence the Twitter takeover, filling in the informational gaps during the long runs by engaging in ephemeral chatter with the Mercedes and Lotus teams' Tweetists. This also meets with the approval of the Force India fans, one of whom advises, "Don't bother with McLaren. They don't do banter."

Many sports fans rightly consider 'public relations' to be a shady art, but in the midfield of the Formula 1 grid its practitioners are seldom called upon to duck and dive. Hülkenberg's eyes roll as he takes in the sight of a journalist dressed in team garb, but both he and Pérez enthusiastically outline their thoughts on the day into my waiting Dictaphone for the purposes of the team's Friday press release, which is the work of a moment.

"This is a very well-written press release," clucks Will H as he passes an eye over the finished item, "but then of course I'd expect nothing less."

"The crew work hard to extract every grain of meaningful running time from the session"

Less edifying is the curious business of hovering by the drivers as they're interviewed for television. The darkest Oakleys in my collection firmly in place, I retreat as far out of shot as possible while Nico is grilled by RTL outside the team's hospitality tower. One day, when I learn to speak German, I may play back the conversation to hear what was actually said. Almost opposite, by the trucks, Neil and Biscuit chuckle at the scene as they sluice detergent and brake dust from the latest batch of used wheels.

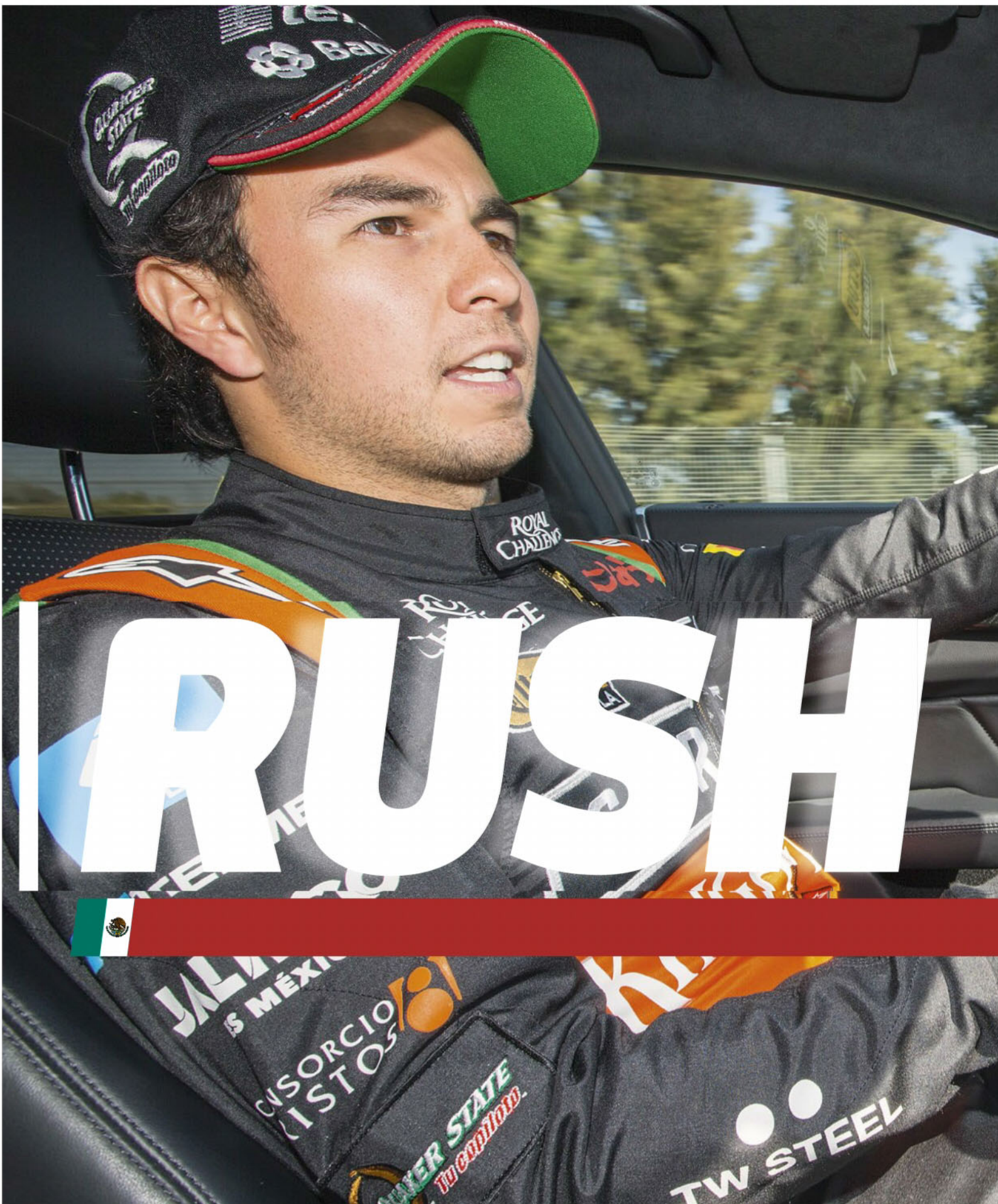
Like the shopkeeper from *Mr Benn*, Franco Massaro manifests himself once more. "Sooty needs your help cleaning the floor," he says. Photographer Jed hoots with mirth at the prospect of committing this image to posterity, but his laughter turns to ashes in his mouth as he is politely denied entry to the back of the garage. It's not *that* floor, you see.

Inside, both cars are now wheel-less and up on stands, partially disassembled: the front suspension, tub, engine and gearbox remain, but the floors – one piece, from splitter to diffuser – have been separated and racked horizontally on a trolley. We vacuum-clean the empty engine bay and polish the whole floor before flipping it over and prying off the front section of the wooden plank, along with its titanium skid plates. The sight of a piece of wood bonded to such a high-tech vehicle never ceases to astound.

"This one's been on since Spa," says Sooty, "so we need to change it, and check the bottom of the floor for damage. The aero guys want it to be as flat and smooth as possible."

He measures the new skid plates with a micrometer, records the results on a clipboard, eases them into place on the new plank, and then we bond it to the underfloor with sealant and double-sided tape. Outside, the track is almost silent in comparison to before; the support categories have finished their running for the day. We rub the leading edges of the diffuser with emery paper and polish away the dust.

There are some *F1 Racing* duties to attend to up in the press room, so at just after 6pm I take my leave. The garage will remain a hive of activity until at least 10pm. So as I bid adieu it's no surprise that one of my new team-mates calls out: "Half day, is it?" **F1**



IRUSH



A close-up photograph of a driver's hands on a steering wheel. The driver is wearing a dark jacket. The steering wheel is black with silver accents. In the background, a speedometer is visible, showing a needle pointing to approximately 100 km/h. The car's interior is dark, and the view through the windshield shows a clear blue sky and some greenery.

HOUR

IN MEXICO CITY

Ahead of the first Mexican GP in 23 years, we join the country's latest home hero, **Sergio Pérez**, for a hot lap of the redeveloped Autódromo Hermanos Rodríguez circuit

WORDS JAMES ROBERTS PICTURES SAM BLOXHAM/LAT



Over the main straight, sunlight streams through the lush parkland. On the inside of the circuit, goalposts are wedged in the long grass; and behind the concrete grandstands, joggers seemingly all kitted out with identical white headphones push against the morning breeze.

This historic location, close to the centre of Mexico City, is undergoing a facelift. The Autódromo Hermanos Rodríguez will once again reverberate with the sound of F1 machinery when the first Mexican GP in 23 years gets underway during the final week of October.

Sitting in a sporty Mercedes SLS on the track's start/finish straight is the Mexican Force India racer, Sergio 'Checo' Pérez. "His fans have been queuing since 5am to see him," says his enthusiastic father, Antonio Pérez. "The young people of Mexico need heroes and so many follow him on social media. Checo is the new, young leader for the Mexican people and he's one of the most followed Mexicans in the world!"

Sitting alongside Pérez Sr in the SLS, the subject of this paternal pride laughs. "He loves to exaggerate," says Sergio. "But it will be a magical race because the people here are excited and very happy to have F1 return to their country."

During *F1 Racing's* visit to Mexico City the circuit is still under construction (fear not, work remains on schedule as this issue goes to press), but 90 per cent of the track is already

"Ever since I've been in F1 there has been talk of a grand prix returning to Mexico. I was like, 'Yeah, it's never going to happen.' When I heard it was definitely going to be on, I thought that was amazing" *Sergio Pérez*

drivable. Pérez engages the throttle and we head down the long straight in a roar of multi-cylinder torque and a blur of colour.

"Every since I've been in F1 there has been talk of a grand prix returning to Mexico," he says. "I was like, 'Yeah, it's never going to happen.' When I heard it was definitely going to be on, I thought that was amazing. It was something I'd always dreamt of. Not many drivers get the opportunity to race in their own country."

Hard on the brakes, Sergio flicks the SLS into the first series of bends, a right-left-right kink, and mid-way through the turn nails the throttle to send the back of the car screaming sideways in a fug of tyre smoke. Our photographer's camera goes flying and Sergio giggles like a schoolboy. He's clearly excited at the prospect of driving on the circuit for real in October.

"Mexico is a beautiful place," he continues, as he enters the semi-built sweeps half-way around the lap. "The food, the people. These are things that make me feel proud about my country. There is also a big history of racing here."

This track is similar in feel to Monza, with its very long, high-speed straight, set amid parkland

with a bustling city on its doorstep, and a rich heritage in motor racing. This track hosted 15 world championship grands prix between 1963 and 1992. Add into the mix 110,000 passionate fans and the race should be an instant hit.

Financed mostly by private companies, with extra money from state and federal governments, an estimated £193.6million has been put into the redevelopment of this 2.73-mile track. Its five-year F1 deal means its investors are confident of a return and it helps that Mexican president, Enrique Peña Nieto, is an F1 fan, who wants to change how Mexico is seen by the wider world.

"With the support of the president and the companies supporting the race, it will be incredible," says Antonio Pérez. "Many people from all over Mexico and from overseas will come to this race, which could generate up to 500 million pesos [about £19.5million]."

The locals cheering on their new hero might be in for a good weekend. On recent form, the B-spec VJM08 could challenge for a decent points finish. With a doubling of CFD capability and access to Toyota's windtunnel, the team has made great progress since the start of the year.



Who were the Rodríguez brothers?

Pedro Rodríguez was widely acclaimed as one of the most skilful and brave drivers of his era, particularly in the wet. Those two qualities are immortalised in an iconic image where he bangs wheels with his Porsche 917 team-mate Jo Siffert entering the daunting Eau Rouge, at the start of a damp Spa 1,000km in 1970.

Pedro raced in F1 from 1963-71, driving for Ferrari, Lotus, Cooper and BRM, and

scoring two wins: Kyalami in '67 and Spa '70. He was prolific in sportscars, the highlight being victory in the 1968 Le Mans 24 Hours. Three years on, he was killed driving a Ferrari at the Norisring.

His younger brother Ricardo was also a successful sportscar racer, but managed only five grand prix starts. He was the youngest driver in F1 to start a race from the front row (aged 19 years 208

days) in a Ferrari guest car at the 1961 Italian GP. After winning the 1962 Targa Florio he entered his home race at the non-championship GP in Mexico City. Driving a Lotus 24, he suffered a suspension failure at the Peraltada and was killed instantly.

In 1973 the Magdalena Mixhuca track was renamed the Autódromo Hermanos Rodríguez in memory of the two brothers.

INSETS: LAT ARCHIVE

Sergio Pérez heads along the reworked Autódromo Hermanos Rodríguez in a Mercedes SLS, ahead of the 2015 Mexican Grand Prix, when these grandstands will hopefully be packed with enthusiastic fans



“This team is on the up and I’m happy to be in the process of growing with them,” says Sergio as he slows the SLS down along the back straight.


“I feel proud about my team and I’ve been giving it my best shot. My dream is to be wanted by a big team again, or to take this team to the top.

“I’m so motivated,” he continues. “Last year I wasn’t, after what happened with the situation at McLaren, but this year I would say I am extremely motivated and preparing myself very

well.” He then breaks off from what he’s saying and adds: “I like this corner...”

Sergio turns in to an arena surrounded by an old baseball stadium. This is the reworked Peraltada. The epic banked right-hander has been softened due to a lack of run-off and the new course twists through a grandstand section, before returning to the second half of the old corner. In this safety-conscious era of F1, the Peraltada as it was could not have been retained.

“I love this bit of the track,” says a wide-eyed Pérez. “Imagine turning in here and seeing 20,000 fans all waving their flags and cheering us on. It’s going to be very special...”

Sergio’s father has the final say. He mentions his other son, Antonio, who races in the Mexican NASCAR Series. “It’s no longer the ‘*Hermanos Rodríguez*,’” says Pérez Sr, gleefully. “It’s the ‘*Hermanos Pérez*’ who are the new faces of motor racing in Mexico...” 

Pastor Maldonado

Ferocious on track, charming in person, there's more to Pastor Maldonado than meets the eye, as this month's interrogation-by-reader reveals

WORDS ANTHONY ROWLINSON PORTRAITS ALASTAIR STALEY/LAT

It's fair to say that Pastor Maldonado has a certain... reputation. A driver both quick and fearless? Most certainly. But he's also incident-prone and incapable of sacrificing valour on the altar of discretion. His abundant natural speed took him to the 2010 GP2 title and, in 2012, at the Circuit de Catalunya, to a grand prix victory – his first, and, to date, Williams' last.

Since then? Regular flashes of talent, recurrent off-track excursions, but little in the way of results. Two dreadful cars, the Williams FW35 and the Lotus E22 gave him just one points finish in 2013 and another in 2014, although his hard-charging style remained unchanged, prompting the launch of two websites dedicated to his exploits: www.hasmaldonadocrashedtoday.com and www.maldonadopenaltycounter.com.

But isn't this all a little unfair? Pastor, as anyone who has met him will confirm, is a lovely chap who lives for racing and who, you could argue, is guilty of little more than excessive enthusiasm and a too-heavy throttle foot.

Where, then, is his head at? We put a selection of our readers' questions to him in an attempt to find out.

Lotus looked quick at the Belgian GP, where your team-mate Romain Grosjean finished on the podium. How close are you to being a winning team again?

Steve Popple, USA

That's a difficult one. I think these kinds of tracks – Montréal, Spa, maybe Monza, Austria – are quite good for the philosophy of the car, so we're able to close the gaps to the top teams and put ourselves in a very competitive situation. It's not the same for all of the tracks, but what I can say is that from the beginning of the season until now, we've had a car that can fight for the top ten and in a few races close to the top five or the podium. It depends a lot on the track.

F1R: Is that because of the Mercedes power unit, or the aerodynamic configuration of the car?

PM: I think we have a very efficient car. On the medium-to-high-speed tracks, it's quite good and for sure we have good power from the engine. But it's not only about the engine. You need to save fuel, tyres... it's many things. From now until the end of the season we should be fighting for good points. We'll see. It will be more difficult at some races than at others.

Can you win another grand prix?

Niral Charadva, UK

For sure, for sure! Maybe not this season because things are very difficult for us this year, as so many teams have more facilities than us to compete against Mercedes. They're dominating everything. When another team win a race it's not because they've won – it's because Mercedes have lost. That's the reality of the moment. But, for sure, I hope to win more than one grand prix and I believe that I can.

F1R: Is that still your goal – to win grands prix and the world championship?

PM: For sure, that's the goal. At the moment we don't have the chance to compete for the championship, but we have a good team to be fighting for good points.

F1R: How important is the experience of winning that grand prix with Williams? How long can you keep the feeling alive inside?

PM: For sure, I keep it. But to be honest it was not only special for me. It was Williams' last win and it was very special for everyone. We'd been working very hard together and everything that weekend was perfect for us. →



LOTUS
F1 TEAM

Microsoft
Dynamics

Microsoft
Dynamics

Pastor Maldonado



Have the ongoing disputes surrounding Lotus distracted you?

Dave Armstrong, Canada

I work more closely with the race team, which is separate from the team management. So I keep my full focus on the track. We have good leaders here at the circuit and we're trying to make up for these external problems with results on the track. We're trying to do our maximum, whatever the situation. It's a difficult moment for all of us, especially on the economic side of the team. But we're not the only ones with problems and it's not the first time that we've heard of things like this happening in Formula 1. I just hope that the team can solve all of these problems and move back to the top.

How do you look to the future when you don't know, from race to race, if your team will still be in existence?

Karl Knight, UK

The future is looking okay at the moment. I have a contract until the end of next season. Formula 1 is, as you know, always up and down. For sure there are always a lot of rumours about Renault coming into the team; there are negotiations and I wish the best for the team, so maybe it will be a good thing to have Renault here leading them. They have always been very successful in motorsport, very professional. Every time they approach this kind of project, they go for everything, which is great.

far ahead of everyone else. We did a few other good races, too. I learnt a lot and had very good support from the team. I grew up with them. It was a fun time in my career and I hope it was for them too. We have a very good relationship even now and I still have a lot of respect for them, for their passion and for their approach to racing. But after three years, maybe it was time to explore something else. I'm very happy they're having more success because they are a good team, a good family and they work very hard.

On the other hand, last year was very difficult for us at Lotus. It wasn't just that we had a slow car; the amount of time we were stopping for problems was amazing – excessive. We had one problem after another, which made progress very difficult. This year we've had a great improvement. Maybe not enough – as a fighter you always want more – but with this team there is great potential. They are fighters, they are very united. Whatever the problems, we are always trying to do our maximum. It's a bit of a different philosophy from Williams, which has maybe helped me to learn something different.

What are the biggest differences between Lotus and Williams?

Brock Bolton, Canada

Maybe the spirit of the team. Williams are bigger, well organised, a very good team. But maybe here at Lotus they are more united. This is the biggest difference.

Are you a better driver now than when you started four years ago?

Stewart Hutcheson, UK

For sure! I'm more experienced and have a different approach on track. I work better with the technical side of the team. I don't think there are specific things I have changed, it's just learning about how to approach the weekend. It's completely different to GP2 or GP3 and, for sure, my first year in F1 [2011] was a big impact.

Do you think your race number 13 brings you bad luck?

Alejandro Ortu, Argentina

I don't think so, but who knows? In Venezuelan culture it's a good number, but in England I hear it's unlucky. It's just a number – I don't believe in these kind of things. I believe in work, passion and consistency. You need to build success.

Have you seen the website *hasmaldonadocrashedtoday.com*?

James Clark, UK

No, but I know about it. There are a lot of things like this about me! It's good that there are people interested in me because most of the drivers in Formula 1 don't make any news. But when something happens to me, it's a big impact around the world. So I feel like a very important part of Formula 1 in terms of the media and having a very big impact on the news. And this is not a worry for me. I have a lot of support for my racing style and for my career – not only in Formula 1, but from years ago. There is support from my country, Venezuela, and many other countries, especially Italy, where I have thousands of fans. My racing career started in Italy, doing Formula Renault Italy and karting. I spent most of my early career in Italy.

Is there any one particular crash that sticks in your mind?

James McNulty, UK

No, there is no special one.

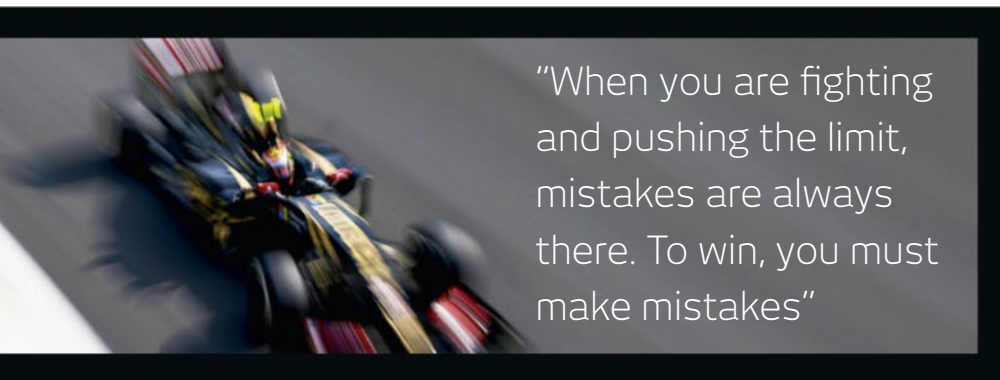
What are your views on closed cockpits?

Roger Sutcliffe, UK

First of all, it's very sad talking about this, after losing Jules, then another one of our big guys, Justin Wilson. But I just don't know if closed cockpits are the solution. What I do know is that the FIA are working on it and I hope that soon we can have something that makes racing even safer. The GPDA have been talking about this for three or four years, very strongly, but then everything went very quiet.

Now the FIA need to revisit this point and do something that won't have a dramatic effect on the car, but that will make F1 a bit more safe.

INSET: GLENN DUNBAR/LAT



“When you are fighting and pushing the limit, mistakes are always there. To win, you must make mistakes”

Will you still be at Lotus next season?

Angus Cameron, UK

Yes, I will be here next season.

Given Williams' improvement in performance after you'd left the team, do you wish you'd stayed on?

Thomas Guilfoyle, USA

Yes and no. Williams are a wonderful team. We did a lot together, even without having the best package. We managed to win a race when Red Bull were dominating everything and were

Jenson Button said recently that the three teams he always wanted to drive for were Williams, McLaren and Ferrari. Is there a team that you always wanted to drive for?

Gary Gardner, UK

Yeah, those three are F1 history – the top teams. But even the Enstone team is one of them, you know. They've been world champions and they're kind of a magic team. They can achieve amazing results with less budget. They're very precise and always working hard. But yes, for sure, the big F1 icons are Ferrari and McLaren.

After the tyre failures at the Belgian GP for Nico Rosberg and Seb Vettel, do you worry about it happening to you?

David Wholihan, USA

No, because I've never had this kind of problem and I hope that I never do. A couple of years ago at Silverstone [at the 2013 British GP] the tyre failures were quite scary, but it didn't happen to my car and I've never had this kind of problem. Anyway that's history. I think that Pirelli learnt their lesson from that and they're fully prepared if they experience something similar.

Who was your racing hero when you were growing up and why?

Lucas Metcalfe, UK

Senna, for sure. In Venezuela he was an icon and all the children and all the people were following him. He wasn't just a world champion, he was something more than that – maybe because of his mentality, his approach, trying always to do his best to win everything.

Sometimes he was criticised by other people because he was making a lot of mistakes, but in the end he was a real fighter on the track. It's all about competition.

There are some drivers today, and not just in Formula 1 but drivers in general, who race only for the team and race simply to finish. That's not motor racing. In the past you would see Senna, or Montoya and maybe some other drivers racing with more than just talent. They were giving something more to the spectacle, to the fans. That was amazing. Maybe there's something in the Latin temperament, but it's not just that, because Michael Schumacher was like that, too, and he was German. He was always fighting, pushing very hard and making a lot of mistakes. When you are fighting and pushing the limit, mistakes are always there. And to win, you must make mistakes.

I remember last year, and this year, Lewis making mistakes in qualifying and practice – like last year in Japan. Everyone was saying he was under pressure, but he was finding the limit and in the end he won. I really like the kind of driver who always tries their best.

Which of the more recent racing drivers have influenced you the most, and why?

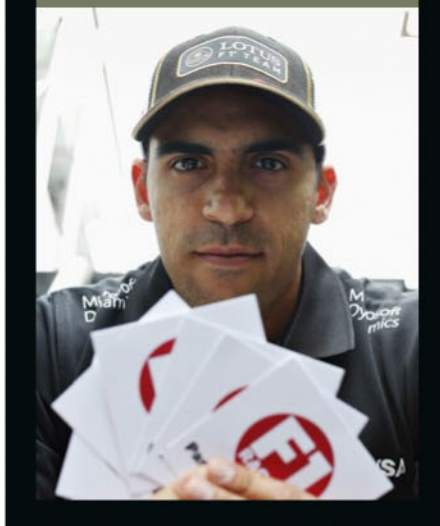
Katie O'Brien, Ireland

Senna was the main influence on my early career. Then, when I was growing up, it was Schumi and Montoya. Fernando Alonso was also a real inspiration for me. He's also always fighting and trying to find the limits, pushing very hard but very precisely. Lewis is a great driver as well. We have a big potential now with drivers – and they're not all from Latin America! They're all

You've endured quite a lot of criticism about your driving, but you're still here and you've won a race. So what motivates you to succeed in F1?

John Slater, New Zealand

My passion motivates me. I have a big passion for racing. For sure, I've made some mistakes in the past, but I'm not the only one who has done that. I remember world champions making even bigger mistakes than me. We're human and part of that, for me, is being a real racer. I always want to gain places and be the number one. This is my motivation and I will never just be happy with the result. I want more and more every single time.



different and have different styles, but they can achieve the same results.

Is there a circuit that's not currently part of F1 that you'd like to see on the calendar?

James Hewitt, UK

Brno in the Czech Republic. It's fantastic. There are a lot of uphill and downhill – it's a very technical track and I think it's great. I don't know if it could be adapted to F1 but I drove on it in Formula Renault and even in Italian F3000,

and it was fantastic – very fast. There were fast corners and a lot of ups and downs.

And there's Imola, another great track. And Mugello, and Donington Park. There are so many, but I am happy with the tracks we race on now in F1, because they are quite good.

What's next in your racing career?

Agustin Casse, Guatemala

I really hope to stay for a few more years in F1. I think I can do more than I have in the past and I want the opportunity to be able to show my potential as I did in the past. I really want to fight for the title and, after that, further in the future, it's difficult to say.


If you hadn't become a racing driver, what would you have done instead?

Tony Shrubbsall, UK

That's a very difficult question. I've asked myself this many, many, many times, but I started racing karts when I was six years old and now I'm 30, so I've spent my entire life racing. That makes it difficult to give an answer, because I don't know anything else that would have given me the same feelings. I've been focused on racing for my whole life, since the age of six, and I've never stopped.

What is your favourite road car?

Ashraf Rahum, Singapore

Ha – there are quite a few I like! I don't actually own any of my favourites, but I would really like to have a Mustang, a Shelby, the 1967 car with the fastback. I really love it: a big, iconic, American muscle car. Then, for sure, there would be a few Ferraris and a few Porsches. They would have to be the iconic ones: like a Ferrari F40 or the Porsche 959. There are many, many cars I like – even today, the McLaren P1, the La Ferrari or the Porsche 918 Spyder. I would love to have them all. Maybe one day... 

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Allez les Bleus!



Guy Ligier, founder of the eponymous and quintessentially French F1 team that raced for two decades until 1996, died in August. **Jean-Louis Moncet**, who knew him for more than 30 years, looks back at a very colourful (but predominantly blue) career...

PICTURES LAT ARCHIVE

When Guy Ligier joined the celestial grid of defunct racing drivers on 23 August this year, Jean-Pierre Beltoise had been waiting for him there impatiently since 5 January. And no doubt they started to insult each other again straight away; maybe they even came to blows. Typically French behaviour, in other words.

Theirs had been a volatile relationship for a long time. Ever since the end of 1974, to be specific, when Matra CEO Jean-Luc Lagardère said that his company, which had proudly flown the national colours throughout its time in racing, was quitting motorsport in all its forms. Matra had departed Formula 1 in 1972, and now their sports prototypes were to be axed as well. *Allez pas, les Bleus*. So what was left of Matra? Some top class cars, good engineers, devoted mechanics, an incomparably sonorous V12 – and, of course, some rather special drivers, including 1972 Monaco Grand Prix winner Beltoise.

Let us quickly shift focus 250 miles from Vélizy, the home of Matra's workshops, to the peaceful and historic town of Vichy, where a local entrepreneur was making a lot of noise, with both the bulldozers of his construction empire and his collection of racing machinery. His name was Guy Ligier. →



Olivier Panis takes the last ever win for the Ligier team in a JS43 at the 1996 Monaco Grand Prix



JS5 1976 Races 16 Wins 0



JS7-9 1977-78 Races 33 Wins 1



JS17 1981-82 Races 21 Wins 2



JS19 1982 Races 9 Wins 0



JS21 1983 Races 15 Wins 0



JS25 1985 Races 15 Wins 0



JS27 1986 Races 16 Wins 0



Guy truly loved racing. He was an accomplished rugby player, with the physique to match, but he had always dreamed of becoming a professional driver. He'd sampled pretty much every discipline going: rallying, endurance, Formula 2, and even F1.

Guy Ligier had the quality of being quintessentially French from his head to his toes. Both as a rugby player and a driver, his heart was true French blue. He could be moody, but he was also, largely, firm in his loyalties. So when Matra withdrew from motorsport, it was clearly impossible for him to let this all-French team die, and he set about acquiring the assets.

Seeking help, he turned to Beltoise, whom he had known for

a long time from racing circuits all over the world. Over several months, they built their dream together: the factory at Vichy, with all the necessary equipment, and even more importantly the necessary funding to run an F1 team. When it came to cash, 'Bebel' (as Beltoise was known) had an ace up his sleeve in the form of backing from Seita, the tobacco company that made France's most famous cigarettes: Gitanes. Naturally, they came in a blue packet.

Everything got under way, but when it came to testing the very first Ligier Formula 1 car – the JS5 – at the end of 1975 Beltoise was suddenly up against the best French driver of the day, Jacques Laffite. Guy Ligier liked to employ French

drivers. And it was Laffite who got the drive for the solitary car during the debut 1976 season, not Beltoise. After all his hard work Jean-Pierre was, naturally, furious.

Laffite was unbeatable back then. He was winning everywhere: in sports prototypes with Alfa Romeo; in Formula 2 where he became European champion; and he even managed to punch above his weight in F1 with an Iso (run by Frank Williams) at the Nordschleife in 1975. And now it was time for Ligier, and a new rhapsody in blue.

There were four pillars to the new Ligier: Guy Ligier ('the big man'), chief engineer Gerard Ducarouge ('Ducared' or 'The Rat'), Georges Martin (the father of the Matra V12) and, of course, Jacques Laffite.

Life within Guy Ligier's team was like something straight out of a novel of the time. Everything danced to the rhythm of Ducarouge's latest inventions (which weren't always exactly compliant with the regulations), Laffite's assorted misadventures (which included wrecking his wrist after falling off a scooter a few moments before the start of the French Grand Prix at Dijon) and Guy's mood. Like all team leaders in his mould, 'the big man' was generally the kindest and sweetest individual you could hope to meet. But from time to time, Jacques Laffite would warn us to "be careful, the big man's on the warpath". And when Guy was set on that particular trajectory, it was best to avoid him.



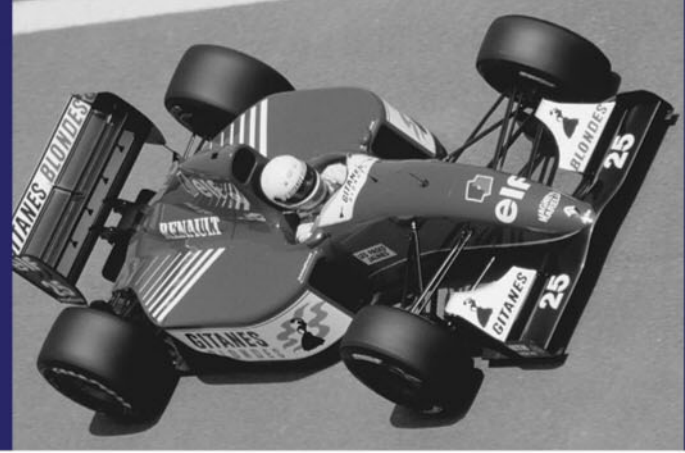
JS11-15 1979-80 Races 29 Wins 5



JS23/B 1984 Races 18 Wins 0



JS29B/C 1987 Races 15 Wins 0



La vie en bleu

Martin Brundle tells Stuart Codling about his two seasons as a British racer at Guy Ligier's French *équipe*

Mark Blundell had already signed for 1993 – I was lucky to get in! I'd lost my drive at Benetton to Riccardo Patrese, so to end up at Ligier, making it two *rosbifs* driving for a thoroughly French outfit, with all these national sponsors – Elf, Gitanes, Lotto, Renault – was quite something.

I remember I was at the Monte Carlo rally (in January 1993), and it was about 3am, in the dark, up on the Col de Turini, and someone tapped me on the shoulder and said, "We pay you..." I was just amazed that Guy knew who I was, and would come out with an offer like that.

We had Gérard Ducarouge in charge of the design, and the JS39 was a good car. We got to a point where we were getting a bit of help from Williams, because they didn't want Benetton to get the Renault engines. I remember getting a very special front wing – the *souple*, as Ducarouge called it – which I had for about eight races until some idiot wiped it out.

The most terrifying thing about racing for a French team was the handshake protocol. You had to shake everybody's hand, but only once a day. But when you went to the factory everybody was moving around, so you had to go and shake 80 hands and hope you weren't approaching someone for the second time – they'd pull their hand away in horror!

But I really enjoyed it. I went back in '95. It was a different setup then, because Tom Walkinshaw and Flavio Briatore were in charge, but a lot of the same people were there. They were proper racers.

Even so, Ligier's rages didn't always have negative outcomes. Throughout 1977 Laffite noticed more often than not that his Goodyear tyres weren't working in the same way as those fitted to Mario Andretti's Lotus, for example, and persuaded Guy that Goodyear might not be supplying everyone with equal equipment. So the night before the Swedish GP at Anderstorp, the pair of them collared the man from Goodyear, and Guy became increasingly irate. The man from Goodyear considered the situation. And then some better tyres suddenly appeared in the Ligier garage. Laffite set fastest time in the warm-up and went on to win the race, assisted by Andretti running out of fuel.

But some things could not be moved by force of will alone. Three years later, Michelin radials were the rubber to have: a key ingredient for victory, as Ferrari and Renault had already capably demonstrated. The only problem was that Michelin didn't want to supply Ligier as well.

Guy asked them once more at Brands Hatch, which was hosting the British Grand Prix back then. The handful of French journalists covering F1 followed the story eagerly, hoping it would end in success. But that turned out not to be the case, and 'the big man' fell into a blind fury, hammering at the door of the Michelin motorhome, which shook under the onslaught. "So... that's what all you big families are like then!" he shouted – an

age-old French allusion to the fact that noble families are perceived to look after only their own interests, leaving the poor to starve. Those of us watching were disappointed to see that Ligier wouldn't be getting the tyres that might allow the team to win, but also amused to imagine various Michelin personnel trembling in a motorhome, rocked by the incessant blows of Guy's fists.

But Guy could be very charming, too. He'd wrap you in a bear hug, and slap you on the back with violent affection. He was always very loyal to his friends: Jo Schlesser, Jacques Laffite, and even François Mitterrand, a left-wing politician who would go on to become president of France. People made fun of Guy for calling upon

his powerful political friends to help keep the blue team from going under, but of course these were the same people he had supported long before they came into power.

In the same way, when war infamously broke out between Jean-Marie Balestre (president of the FIA) and Max Mosley and Bernie Ecclestone, representing the F1 teams' association (FOCA), Guy stayed loyal to Bernie and Max, since he believed that FOCA were his true family. This was despite the fact that at the time Ligier were sponsored by Talbot (and therefore the giant that was Peugeot) at a time when all the big constructors like Renault, Ferrari and Alfa Romeo were pledging their allegiance to Balestre. →



JS31 1988 Races 14 Wins 0



JS37 1992 Races 16 Wins 0



JS39/B 1993-4 Races 32 Wins 0



JS41 1995 Races 17 Wins 0

So the French national team was run along idiosyncratic lines, with corresponding highs and lows. The Ligier motorhome became a well-known watering hole for both French and foreign media. Guy felt he was representing France, and so his motorhome had to be a national ambassador as well. Consequently, the food and wine were excellent.

Still, Ligier always had a fight on his hands, especially when it came to budgets. He struggled to remain competitive against bigger teams: especially against that other French institution, Renault, whose turbo engines had really taken off.

From time to time, there was a flash of promise, such as Canada 1981, when Jacques Laffite won the race in heavy rain (conditions he despised). Before the start he was criticising the car to the gathered media. So after Laffite won, Guy Ligier grabbed me by the arm and frogmarched me to the podium, where his driver was celebrating. In a voice that somehow drowned out the cheering crowd, Guy bellowed from beneath: "So Jacques, this Ligier is a piece of shit, is it? Nothing like a racing car?"

Even the Canadian prime minister, handing out the trophies,

stopped what he was doing to see who was shouting obscenities from below. But Guy was also weeping tears of joy, and Laffite would actually remain in championship contention right up to the final grand prix of the season.

But over time, the atmosphere changed. Lack of success bothered Guy: he became more agitated and spoke non-stop about 'transition seasons' – which somehow seemed always to follow each other, without the slightest sniff of victory. The jokes in the French media slowly but surely multiplied, and this caused the big man genuine pain.

At one private test in Paul Ricard, for example, he spotted a journalist who kept attacking the team in print and making fun of Guy. The man in question was standing just outside the pit garage. Calmly, Guy walked over, picked him up, and placed him on a large bin – which, luckily for the victim, had a lid.

All these anecdotes were the source of much amusement to the paddock, which was largely British back then, but at the same time there was a profound respect for the unstoppable passion of Guy and his team. They knew how to fight. But there were low points that were hard to deal with. In 1982, exasperated by a lack of performance, Jacques Laffite signed for Williams on the spur of the moment, following

"Calmly, Guy walked over to him, picked him up, and placed him on a large bin – which, luckily for the victim, had a lid" – the fate of one journalist who continually attacked the volatile Guy Ligier's team



JS33/B/C 1989-90 Races 30 Wins 0



JS535/B 1991 Races 16 Wins 0



JS43 1996 Races 16 Wins 1

yet another outburst from Guy at Monza. Once Guy understood what was happening, the entire Ligier team was mobilised to try to win him back. But it was too late: the contract had already been signed.

Ligier took it badly: it was several weeks before he could crack a smile. But since Jacques was not one to hold grudges, they soon made their peace. In fact, in 1985, Jacques would come home again to Ligier. In the intervening time, Gérard Larrousse became Ligier's operational boss, and while the atmosphere was undoubtedly more professional, it would never be the same as it was at the start of the 1980s. The truth was, 'les Bleus' weren't quite 'les Bleus' any more.

Even so, the identity of the team continued to be underscored by

Ligier's strong personal attachment. One of the highlights of Guy's driving career had been victory at the 1967 12 Hours of Reims, sharing a Ford GT40 MkII with his friend Jo Schlesser. When Schlesser died in the French Grand Prix at Rouen the following year, Guy felt an indescribable loss. From that point on, he simply couldn't stand accidents: when Andrea de Cesaris dangerously rolled his JS25 several times at Zeltweg in 1985, Ligier sacked him shortly afterwards.

Ligier's mood was tied to the competitive fortunes of his team, so as the 1980s wore on he became increasingly despondent, for there was still no sign of success around the corner. René Arnoux's Mercedes-Benz 500 SEC Coupé bore testament to that sad fact.

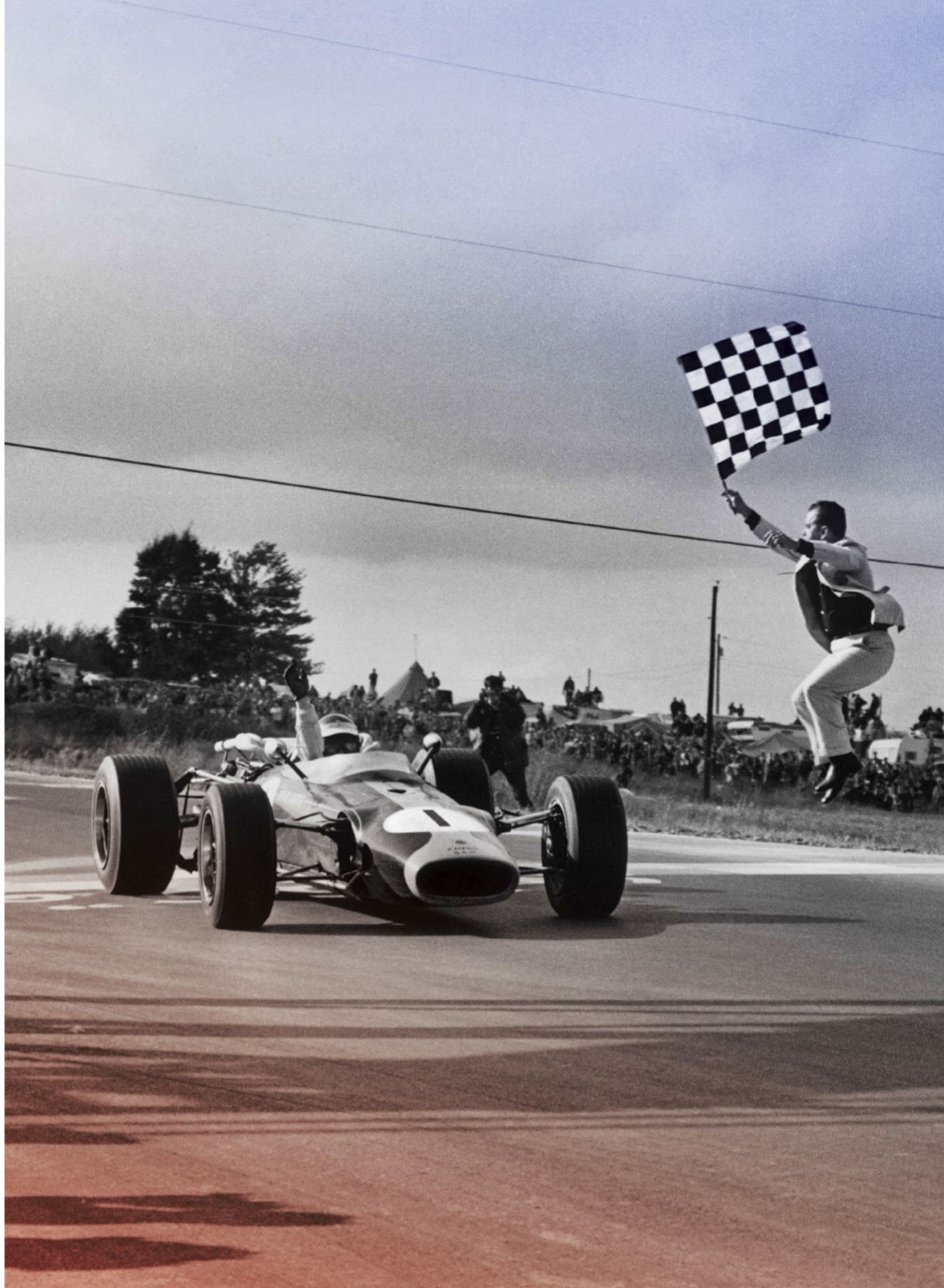
Arnoux had bought the car – one of the fastest road cars on the market at the time – and, as a present to himself, also had a very expensive sound system fitted. After the San Marino Grand Prix, Guy took a lift back to France from Arnoux. Guy liked going quickly as long as he was driving himself, but he wasn't so happy if it was someone else behind the wheel. This was very much the case as they headed towards Paris through the night: Arnoux was taking no prisoners. To ease his nerves, Guy smoked cigarette after cigarette, putting every one out in what he thought was the ashtray. Except it wasn't the ashtray – it was the shiny new sound system. Only the following morning did Arnoux notice the terminal damage.

Maybe it was an omen. Little by little, Ligier abandoned his baby, and it subsequently began to swim into deeper water. And it was a sad day indeed when the Ligier name departed F1 for good, for this was a team that embodied not only a nation's motorsport ambitions, but one man's dream. **F1**

Translation by Anthony Peacock



Guy Ligier, 1930-2015



MEMORIES OF THE GLEN

In an extract from his new book, *Grand Prix Circuits*, **Maurice Hamilton** focuses on the greatest of all the US tracks F1 has visited – Watkins Glen

PHOTO LAT ARCHIVE

Home of the United States Grand Prix for two decades, Watkins Glen established a fine reputation as a challenging and attractive race track set in the beautiful Finger Lakes region of New York State. The permanent circuit, unable to afford the necessary updates to safety and facilities, was dropped from the F1 calendar in 1981.

The first post-war road races in the United States were held in 1948 across six miles (9.7 km) of public roads through and around the village of Watkins Glen in New York State. When a car left the road, killing and injuring spectators in 1952, the course was abandoned.

In 1956 a 2.3-mile (3.7-km) track was constructed as a community project in the rolling countryside above the town. Since the site was only 200 miles (322 km) northwest of Manhattan, it was reasoned there were adequate population centres to draw from if Watkins Glen was to host a successful US Grand Prix in 1961.

Formula 1 was new to the region – indeed, to North America as a whole since this would be only the third running of the US Grand Prix (the previous two having been at Sebring in Florida and Riverside in California).

There should have been the added bonus of having Phil Hill on the entry list but America's first World Champion had won the title under tragic circumstances following the death of his team-mate and championship leader, Wolfgang von Trips, during the preceding Italian Grand Prix at Monza. With the championship decided in this way, Ferrari chose not to travel to North America, leaving Hill as a disappointed spectator for his home Grand Prix.

That did not prevent the F1 teams from being impressed with both the track layout and the hospitality of the locals. The teams and drivers were more than happy to return in 1962, along with enough spectators to make the race a paying proposition.

An investment in track facilities led to construction of the Technical Centre, a unique (at the time) central workspace to house all the F1 teams under one roof. There were other attractions, not least the biggest prize fund on the Formula 1 calendar and stunning scenery accompanying what would become a traditional autumn date. In 1968, there was the added benefit of having Mario Andretti claim pole position for Lotus in what would be the American's first Grand Prix.

The US Grand Prix had become an accepted part of the North American social calendar with up to 90,000 spectators, many crossing the Canadian border, a three-hour drive to the northwest. The organisers responded by adding a new loop (known as 'The Boot') to extend the track length to 3.37 miles (5.42 km) in 1971, with the \$50,000 first prize that year going to Jackie Stewart. In 1975, the Esses was added to reduce speed onto Back Straight.

By 1980, much had changed in the world of Formula 1. Watkins Glen, for all its genuine warmth and endeavour, had not kept pace. The Technical Centre, once the ultimate in working conditions, was no longer adequate and neither were the pits. The circuit itself was deemed to be too bumpy and the spectator enclosures a quagmire at the merest hint of rain.

Over the years, 'The Bog' had become an infamous area to be avoided within the spectator enclosure, the crazed denizens' usual prize being the burning of a commandeered car, none of which improved the event's declining image. The 1980 US Grand Prix would be the last at Watkins Glen. 🏁



Grand Prix Circuits by Maurice Hamilton

Published by Collins and available to buy now from all good bookshops and online for £30

◀ At the 1966 US GP at Watkins Glen, Jim Clark takes his 20th grand prix victory, trouncing his rivals by more than a lap in his Lotus 43



Brabham's Goodyear Gamble

American Fred Gamble, the man charged with the task of establishing Goodyear's international racing division from scratch in 1963, recalls those formative years in the sport for the tyre maker and the crucial role Sir Jack Brabham played in Goodyear's success

PICTURES LAT, GETTY IMAGES

I was hired by Goodyear's Racing Division in January, 1963. Through that year with General Manager of Racing, Tony Webner, we schemed with Carroll Shelby, Dan Gurney and Richie Ginther to get the company involved in international racing.

Gurney was sharing a Ford Galaxie in British touring car races with Jack Brabham, and Dan wanted to run our big NASCAR tyres. We only had those tyres available at that time in the long-wearing, heat resistant compound used on the dry tracks of NASCAR. I shipped the tyres to Dan in Britain with the instructions: 'DO NOT USE THESE IN THE RAIN!'

They were racing at Brands Hatch. Dan started the race, but when Jack took over the car it soon started to rain. It didn't take long before he had spun off the circuit and they were out – those tyres were undrivable in the wet!

This incident generated humorous negative press coverage in England for Goodyear. Our UK executives lambasted the USA head office with the comment: "don't get involved on our side of the pond unless you set up a proper

international racing division."

That was more or less how Goodyear's international racing division got going, in 1964. With Shelby and Ford's plan to challenge Ferrari with their Cobras for that year's GT World Championship, Goodyear couldn't resist the opportunity, via Shelby, to muscle Firestone out of their long time association with Ford.

With Dan Gurney's encouragement, Brabham agreed to test with Goodyear at Riverside, California, after the last grand prix of the 1964 season. Convinced of our technical promise, Brabham signed on for 1965 onwards.

I think Jack Brabham was the most talented test driver of his era. He made a significant contribution to Goodyear's domination of world motor racing in the 1960s. I claim that Jack's testing expertise was as much responsible for Goodyear's achievements at that time as our chief engineer, Walt DeVinney, and his entire staff.

The new racing division which I helped set up was run out of the Goodyear factory in Wolverhampton. As we were literally starting from scratch, most of the staff came with no



racing experience – but lots of enthusiasm.

Our design and production facility was up and running by the end of 1964. Progress was rapid. We quickly overtook Dunlop by developing the fastest tyre compound in Formula One – as attested by Jimmy Clark, who in 1965 commented that the only drivers he saw as a threat were Gurney and Brabham.

Coventry Climax had introduced a new four-cam V8 for what was to be their last year in F1. They supplied the new engine only to Lotus, Cooper and Brabham, but Colin Chapman managed to strongarm Coventry Climax into concentrating their efforts on winning the World Championship with Jim Clark and Lotus.

Brabham qualified on the pole at Monaco ('65) using the new engine. He had heard

about the Climax/Chapman arrangement, so cleverly he marked the block of his engine before sending it back to CC for the rebuild. As suspected, Brabham never got that best-of-the-rest engine back, and Coventry Climax duly powered Clark to his World Championship.

Lotus was on Dunlop tyres but the quicker Goodyears and Brabham's great chassis put Dan and Jack on Clark's tailpipe in every race, as Jimmy admitted. However, what let Brabham down that year was the Climax-prepared engines, not the Goodyear tyres.

But everything was about to change with the engines, as Formula One went from 1.5-litres to 3.0-litres for the '66 season. Through the 1965 season, everyone was concerned about what would happen with the new engine rules. Only Ferrari was able to use their wonderful, bulletproof V12, so it was a step into the unknown for most other teams.

Us 'experts' predicted that 1966 would be a Ferrari walkover. The British teams' only option was

the old Coventry Climax 2.5-litre four-cylinder punched out to 2.7. BRM could expand their 1.5 V8s to only 2.2-litres.

Repcos in Australia had been servicing Brabham's Tasman Series 2.5 Climaxes and they were interested in somehow helping Brabham create a 3-litre engine. They investigated the failed GM aluminium small block V8 as created for Buick/Oldmobile in the mid-'50s.

Those engines had been abandoned due to porous casting problems. Various Americans thought those aluminium engines were the answer for sports car racing, but the blocks couldn't stand up to hot rodding modifications.

The Yanks always wanted more displacement, but fortunately the Repco Brabham/Phil Irving concept required reducing engine displacement to 3-litres (from about 4-litres). What they ended up with was a light, strong and reliable 3-litre V8. Us 'experts' didn't know this at the time; we were still sceptical that the Aussies could be competitive.

Early in the 1966 season, even though the Repco-Brabhams didn't win they were clearly very competitive. As the races moved to the faster Continental circuits, we still doubted the Repco engines could keep up, and so it seemed.

Fred Gamble

Fred Gamble was himself a racing driver. Like Brabham, he even constructed his own car, the Gambini Mk1, in which he started his career. Like Brabham he made it to F1, if for only one race, the 1960 Italian Grand Prix (this was the farcical Italian GP that used the combined Monza road and banked oval, a decision widely seen as a blatant move by the Italians to favour Ferrari's straightline speed advantage – but one which resulted in Lotus, BRM and Cooper boycotting the race in disgust. It was partly due to British teams' absence that Gamble was able to gain a start).

In 1961 he finished third in class in the SCCA national championship, driving a Birdcage Maserati. Ahead of him were Walt Hansgen and one Roger Penske.

Gamble's successes on track were moderate; it was off track where he would leave his mark

on the sport.

A chance meeting with Carroll Shelby late in 1962 led to Gamble getting a job with Shelby. It was an exciting time to be with Shelby as the Cobra programme was about to be launched, but after only a few weeks Gamble received an offer of a senior position in Goodyear's fledgling racing division. Gamble initially declined, but two months later Goodyear's Tony Wehner returned with a more persuasive offer. Gamble discussed it with Shelby, who at the time was Goodyear's racing tyre distributor on the west coast. Shelby said: "Take it. If it doesn't work out your job will always be here."

As Manager of Racing Field at Goodyear, Gamble was part of the company's early Indianapolis efforts and became heavily involved in sports car racing and NASCAR. He

would be at the forefront of Goodyear's expansion of its racing activities, and at the start of 1964 was sent to England to create an international racing programme based at Goodyear's huge British plant at Wolverhampton. This was literally the beginning of what would be a 33-year spell in F1 for the tyre giant.



Off to the ultra-fast French GP at Reims in July. Ferrari was the overwhelming favourite, as proved in practice. However, at the drop of the green flag, Jack made a magnificent start and jumped into the draft of Lorenza Bandini's Ferrari. Off they went away from the field. No way could Jack pass the Ferrari but they were stuck together.

As the race neared the end I was spectating at the final right-hand turn, resigned to watching Jack pull off a great second place. They rounded the corner and, right in front of me, Bandini pulled off the track and stopped with a broken throttle cable. Jack sped off to his first Repco-Brabham win. From there he went on to win the next three races. With the Australian-developed Repco engine which none of the 'experts', myself included, thought could beat Ferrari, Jack had secured his third World Championship – and Goodyear's first.

For the 1967 season, Repco had created four-cam heads and Jack fitted that engine to his car, relegating Denny Hulme to the reliable single-cam engine of '66. With his Can-Am experience with McLaren, Denny had really blossomed as a driver; he was very quick, and his greatest career win at the Nurburgring while Jack was having teething problems with his more powerful engines.

The Repco-Brabham success in 1967 was partly due to Enzo Ferrari's rage at being challenged for two years by these Aussies – so much so that he boycotted several races where the Brabhams were a greater threat. He mainly blamed Dunlop, because at that point Firestone had joined the fray and were competitive with the dominant Goodyears.

Enzo was so upset that he broke his long contract with Dunlop and ran Firestones in the Italian GP. After I turned him down for a Goodyear contract, he signed with Firestone and they won their first Championship together. By the way, Firestone never thanked me for gifting them Ferrari!

Finally, in relation to Jack's testing skill, here is an example of how good he was. During a trial



of our ONE HUNDRETH compound in 1967, he commented: 'this feels just like the number 54' A technical analysis revealed he was right. Talk about seat-of-the-pants sensitivity!

What an honour it was to have shared that era with my good friend Sir Jack Brabham, Ron Tauranac and Repco.

Clockwise from top left: Spa was a different place in 1965; Fred Gamble in discussion with Brabham at Watkins Glen in 1966; same year at Reims, Brabham scored the first GP win with the Repco V8; Brabham setup at Spa, 1965.

SINGAPORE

your one-stop grand prix strategy



There's one place to go to turn a Grand Prix weekend into a once-in-a-lifetime travel experience

WORDS GRAEM SIMS PICTURES LAT, GETTY IMAGES

Pharrell Williams is doing his thing in front of a vast crowd after Friday night practice at the 2015 Singapore Airlines Singapore Grand Prix, wowing the grooving mass of humanity that has flooded into the infield stadium at the Marina Bay Street Circuit. He's happy, apparently! He certainly *looks* happy, and sounds happy, and the vibe has spread throughout this multitude. *Everybody* is dancing to the hit we've all been waiting to hear, the climax to Day One of what will be three days of extraordinary action and entertainment.

But he's certainly not the only one with a massive smile plastered on his face. Sebastian Vettel and the rest of the Ferrari team are happy. Earlier that evening he recorded the fastest time around the twisting Marina Bay Street Circuit, offering the hope for his fans that he will break the Mercedes stranglehold on the F1 Championship this year.

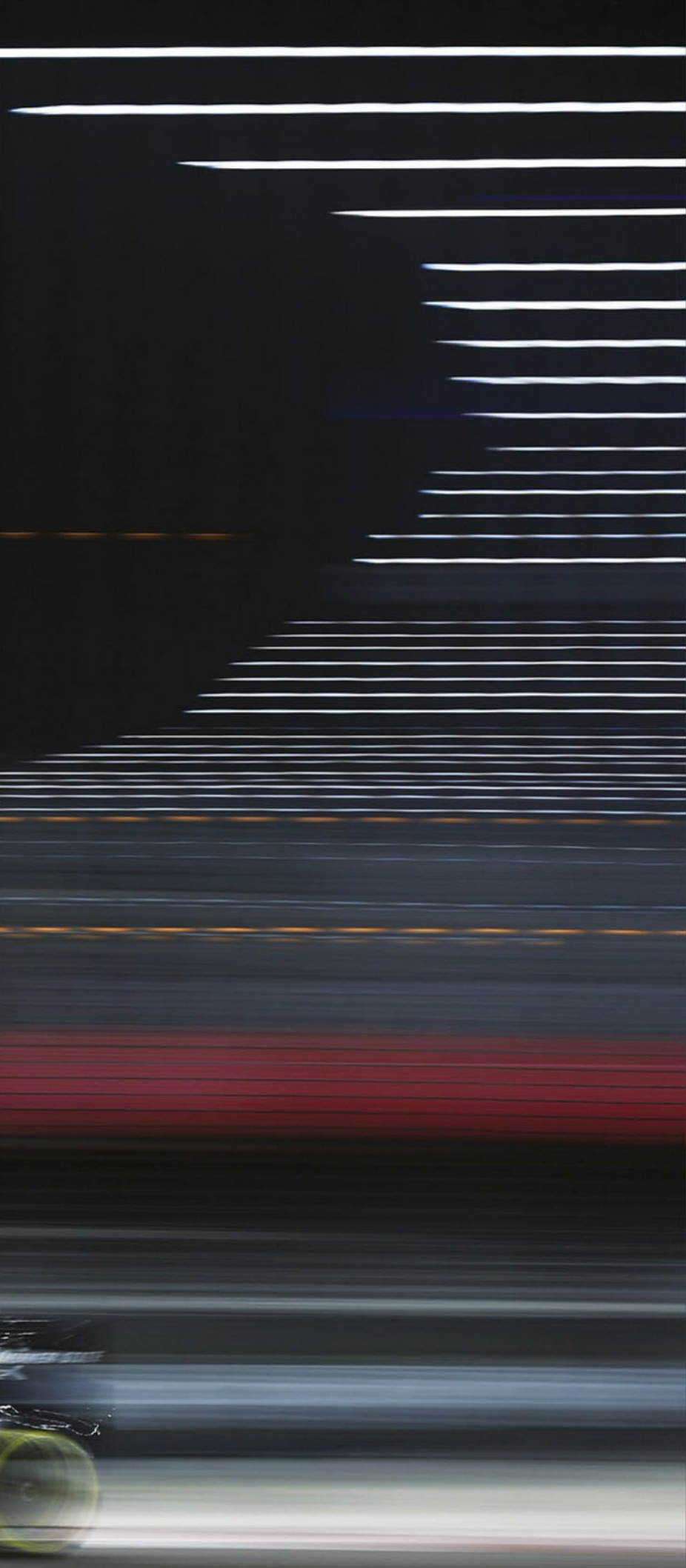
Our own Daniel Ricciardo and Red Bull Racing are happy, too. You can tell by the

megawatt grin he produced when the session had finished.

We haven't seen it too often in 2015, but he too is going to be well and truly in this race, second fastest so far. The technical nature of this tight circuit is a leveller, and on the evidence of practice and qualifying it looks as though the straight-line speed of the Merces has been nullified. For the first time all year, Ricciardo looks a genuine winning chance. Cue Pharrell's world number one hit!

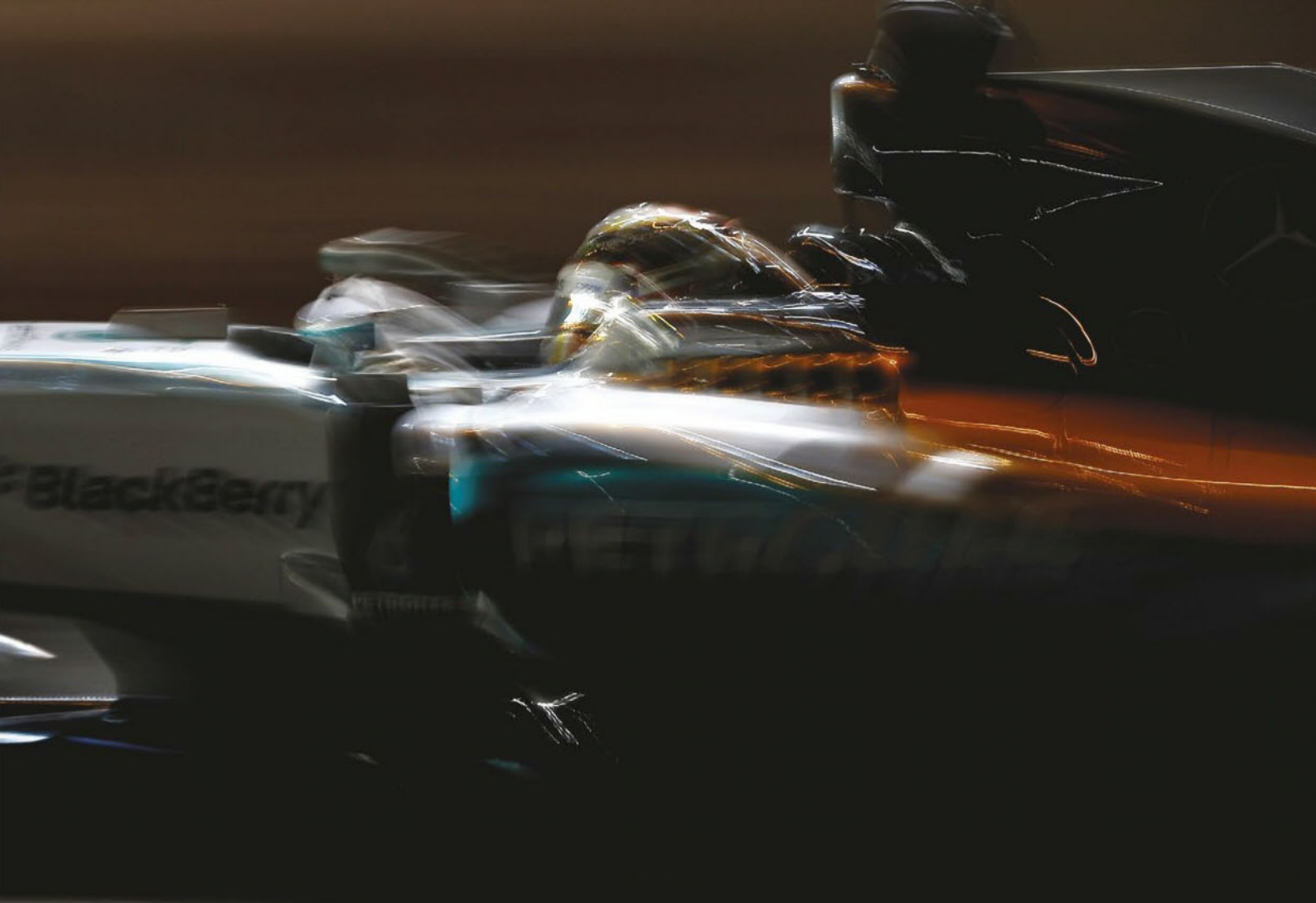
Obviously your correspondent is, yes, VERY happy, too. This is his first visit to Singapore, and it's a revelation. He's watched the race many times on TV; marvelled at the size and scale and amazing architecture of the surrounding cityscape (without *quite* grasping its enormity); knew a little (actually, shamefully little) about this island nation's colourful history; read about Singapore's astonishing economic growth in the last 50 years. But in two short days of touring, it's a happy feeling to actually *get* it: get what makes Singapore such a special place, with such







It's a happy feeling to be swept up in an infectious feelgood sporting experience that rivals anything on the planet



connections for Australians, while being swept up in an infectious feelgood sporting experience that rivals anything on the planet.

For almost two centuries, since 1819, when a certain English officer by the name of Sir Thomas Stamford Bingley Raffles sailed up the Singapore River and decided that a small village of less than 200 people was the place to open a port that would serve as the new trading hub of South-East Asia, the world has been welcomed to Singapore. Its deep harbour frontage made it an ideal port, and its central location in the region has made it an ideal meeting point for traders, businessmen and workers of all races, nationalities and religious persuasion. Fifty years ago (this year!), it became an independent state, determined to take its own place on the world stage, inclusive of all who have called this place home (Chinese, Malays, Indians, Sri Lankans, smatterings of Europeans), but free of colonial political influence. It's now a proud country that embraces its past while focusing its ambitions squarely on the future. It's a welcoming tradition and inspiring vision that remains embedded in this city's DNA.

Cue the Asian economic miracle. And, eight years ago, cue the arrival on the F1 calendar of the Singapore Airlines Singapore Grand Prix. Of all the Asian nations to host an F1 GP, Singapore

seems the most appropriate of hosts. This rolling, vibrant celebration of money, glamour and technology is right at home here on its ultra-modern streets.

The racing is one thing... but what about getting up from your trackside seat after each session and wondering 100 metres or so to take your place in the crowd for a concert performed by the biggest acts in the world? Friday night it's Pharrell, Saturday night it's Maroon 5, and Sunday night, release your inner rock god with Bon Jovi! The race actually begins at 8pm Singapore time, two hours ahead of Sydney and on par with the West. That means the nightly headlining concerts kick off around 10.30 and take us through to midnight each night – worth the price of admission alone! Throughout the evening, on numerous other stages set up around the track, world-class acts have filled every spare moment.

Singapore is unique in being the only night street circuit race on the F1 calendar. Which leaves visitors one challenge: what to do during the day? One motto becomes the theme of your correspondent's tour: so much to eat, so few hours in the day! The melting pots of cultures that make up modern Singapore is literally reflected in the pots of mouth-watering cuisine of astonishing variety found in its hundreds

(probably thousands) of restaurants. No visitor should go home without sampling Singapore's famous chilli crab, or an authentic laksa, or spicy Indian, or Malay-style satay. The streetfood at outdoor venues like Boon Tat Street is world-renowned. Bring your appetite with you. Then, when the heat of the day fades into the glow of twilight, Singapore comes alive in untold bars and clubs.

If your appetite for exotic culture has been whetted by your, er, appetite, the biggest challenge on your F1 weekend is knowing where to start. Let's suggest the National Museum of Singapore: it has recently reimagined and renovated its permanent galleries; now it's a walkthrough immersion in the rich history of this place, taking us all the way back to the 14th century. Australian soldiers and nurses who gave their lives (among other defenders of Singapore) are respectfully remembered here during the harsh years when the Second World War visited the region. It's a solemn place to recall their sacrifice. But ultimately uplifting, as we see where this country has come since – now an international commercial powerhouse. Hosting an F1 Grand Prix weekend of celebration!

For those with a taste for retail therapy, a hike down Orchard Road just might turn into a boulevard of broken credit limits! The world's



biggest luxury brands seem to have agreed that if you're not present here, you're not in the race. Of course you don't have to spend a thing, but here the boutiques and retail spaces attempt to outdazzle each other.

A short drive from the track, you can grab time out to relax at the resort island of Sentosa. Hotels of stunning luxury dot this retreat, surrounded by marinas that would certainly give Monaco and the French Riviera a run for their money.

An overwhelming sense of modernity is carried from the moment you arrive at the ultra-modern Changi airport; five-lane highways carry you into town in a breeze, while a rapid transit network underground has to be experienced to be believed for its efficiency. And economy! Subway connections routinely appear within a minute or two.

But you don't have to travel far to experience the "old" Singapore, with its historic charm. Take a few hours, at least, to visit the Peranakan neighbourhood, and seek out one of those authentic laksas. Or take a walk around Little India. Or bustling Chinatown. Or the lush surrounds of the Botanic Gardens with its exotic orchids. Or the nearby embassy district with its stunning historic residences. There's a heap to see and do. And did we mention ... eat?

Back closer to the track, a walk around Raffles Place and Marina Bay will leave you gobsmacked by the size and scale of the financial district, with the other-worldly Marina Bay Sands Hotel and Convention Centre complex just across the lake. That's the building that looks like it's supporting a suspended cruise ship in the sky... I can report that the Convention Centre, which also doubles

It's a once-in-a-lifetime experience that would tempt *anyone* to go back for seconds

as theatre district, and luxury retail hub, and food court, is the biggest building I have ever been inside. Simply staggering.

At some stage, any visitor is going to run out of superlatives talking about this place and the attractions on offer. So just before we do, let's return to the track and be reminded of Dan Ricciardo's fabulous effort in getting onto the podium in second place – a faultless drive only bettered by Seb Vettel's immaculate effort in streeting the field all weekend in that red Ferrari flash. Neither driver has put themselves very high in the points in 2015, so in a sense, the race was (a bit like Singapore) a blast from the past as well as (hopefully, for us Aussies) a portent of the future.

It was certainly a departure from the current F1 script. For the first time this year, the Mercedes was demonstrably *not* the fastest car. Not only that, but it wasn't even the next best, trailing both Ferrari and Red Bull.

Despite the fact Vettel led from start to finish, the race wasn't short on drama, with an unfortunately timed pit exit bringing together the Force India of Nico Hulkenberg with Williams' Felipe Massa, causing the Safety Car to come out – and on lap 37, the bizarre image of a spectator somehow wandering onto the track. Out came the Safety Car again. One

commentator described the intruder (to all those friends and colleagues who texted me at the time, no, it wasn't me) as looking like a man on the way home after a night on the tiles...

After snapping off a few photos (!) he eventually found his way back behind the barriers. From there he was whisked away by race officials, so that he could assist police with their enquires... A thorough post mortem of the incident will hopefully ensure this kind of thing doesn't happen again.

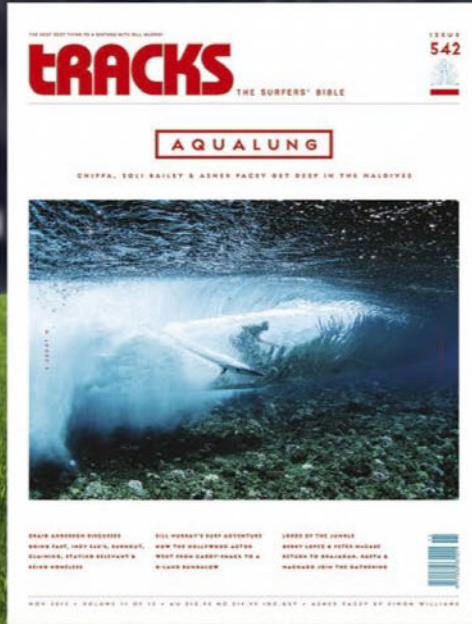
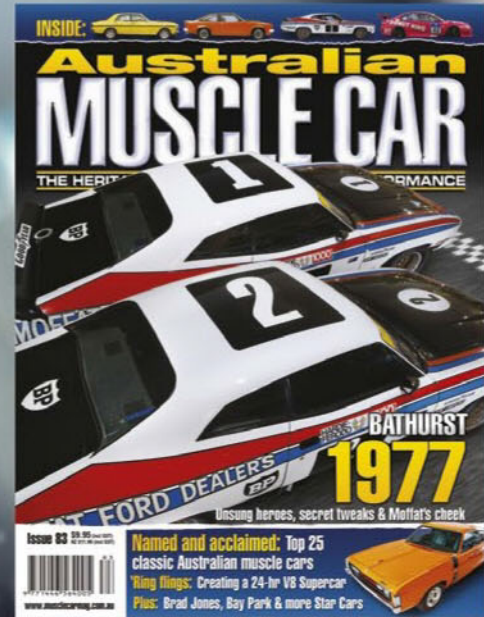
It should be disclosed here that your correspondent travelled to Singapore as the guest of the Singapore Tourism Authority (STA), which you might think has coloured some of these impressions. But I am assured that the type of welcome and hospitality I enjoyed is absolutely typical of the place. Singapore prides itself on being a thriving tourism destination, one that especially welcomes Australians. I flew Singapore Airlines from Sydney, which is a quite pleasant three-movie trip. It is just four hours flying time from Perth; the good people at STA like to remind West Australians that it's closer for them to fly there for a Grand Prix weekend than it is to get to Melbourne.

It's a once-in-a-lifetime experience that would tempt *anyone* to go back for seconds.

Cue "Happy" earworm. **F1**



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RACE DEBRIEF

by Peter Windsor

Italian Grand Prix

06.09.2015 / Monza



Such a perfect day

They kept him hanging on for confirmation of his win, but Lewis owned the 2015 Italian Grand Prix

There's no driver-designated motorhome area at Monza, so Lewis set up home at the nearby high-security Vedano Sports Centre. Wearing a matt-black Bell helmet, he commuted every day on an MV Agusta. On Thursday night, after a day of interviews and briefings and endless questions about his new hair, he wondered if he could keep the momentum, keep on winning. It's impossible to do it forever. Things happen. Things change. Nico is a constant pressure. Ferrari would be strong again. Reliability is always an intangible.

Yet still he had a great car. He was at *Monza*. He'd loved the place since he was a kid. And he'd never felt better, physically or emotionally. He resolved just to focus on the immediate. To give to every millisecond everything he had. He would leave nothing to chance. One step at a time.

He had the pole – the clean side of the road for that long drag down to the first chicane – and he slept deeply on Saturday night. He awoke feeling fit and ready – ready for anything. He knew deep inside, instinctively, that nothing could go wrong but of course as a racing driver you never allow that thought to grow. Things beyond your control *can* go wrong – and sometimes the more invincible you feel the worse it can be.

The start was the critical moment. He hadn't made a great start at Spa under the new regulations, but he'd kept the lead into the short run towards La Source. Monza was different. If he was slow away, and Vettel was quicker from P3, the first braking area would be edgy.

The lights flashed out quickly – so quickly that they caught Kimi by surprise. The Ferrari driver – on the front row at Monza, of all places – forgot to release the engine clutch before the main manual lever. The car went into anti-stall, obliging him to re-boot. Behind Kimi, Nico Rosberg went onto full right lock, feathering the power, while Valtteri Bottas, in P6, passed the blind reflex test to the left with an arm-flick.

Lewis hadn't made a flyer. Seb Vettel's start was faster and he lost no time in tucking in behind and then filling Lewis's mirrors on the outside as the braking zone approached. A full load of fuel. Under-temperature tyres. A thin ribbon of braking area. Lewis had to brake late but not too late. A locked inside front would give the lead to Vettel, poised for the undercut.

Commensurate with how he felt, Lewis braked to perfection, creating no room for Seb. Then came Lewis's trademark extra ounce of steering lock before the second part of the first chicane.

The Wo6's back end jinked a fraction, giving him the straightline exit he loves to find. By the time he was in eighth, there was space between him and Seb. He could focus 100 per cent on the car.

Through the Lesmos there was still understeer, the tyres not yet fully hot. Through the Ascari chicane the car felt good. Out of the Parabolica, with everything now up to temperature, it felt exquisite. The compromise had been for qualifying. In race conditions, with all that fuel, the car had never felt better.

It would be a one-stop race. The soft tyre and then the medium. The job now was to extend that first stint for as long as possible. Lewis began playing with his diff settings, driving the car exactly down the middle with both his inputs and the setup. It was sheer, unadulterated pleasure. He felt as if he could touch the sky – make the fuel and the tyres last for ever. And consistently he pulled away. There was no risk of losing concentration. The pleasure was too intense.

It was only in the closing stages that his blood turned cold. Suddenly they were exhorting him to open up his 20-second lead. Why? Why push so hard late in the race? He expunged the question almost as soon as he asked it, a massive brake lock-up jolting him back to reality. He had margin with which to play, with fuel and power. He could also brake a little later, apply the power sooner. He could do what was needed.

It was over almost too soon: the car and engine had been perfectly reliable. He had won the Italian Grand Prix, last-minute sprint and all. He'd been quickest in every practice and qualifying session, had led every race lap and set fastest lap. He climbed from the car, thanked his god and gently touched Wo6, chassis number 5. Touched its flanks and left-rear tyre (interestingly) and its steering wheel as if he was but a child and this some amazing new toy.

They booed him on the podium – but then the Italian Ferrari fans were always going to do that. He waved and smiled. He knew that he'd spoiled their day but he loved them just the same. He loved everything about this Monza.

It dragged on after the race, for there were doubts about the startline tyre pressures in the left-rear Pirellis of both Mercs. This was a new directive, post Pirelli/Spa drama and, for a while, it seemed Lewis's win would be in doubt. He'd built his margin up to 25s; the team wanted that cushion in the event of a time penalty.

And so he stood alone in the interview area, Vettel and Massa long since departed. He knew the job he and the team had done. A subsequent tech infringement would be for another moment. It never came. Lewis was declared winner of the Italian GP at 18:25 on Sunday afternoon, three hours after the chequered flag. It was all okay. Just as he knew it would always be okay. **F1**

Italian Grand Prix stats

The lowdown on everything you need to know from the weekend at Monza...

THE GRID



1. HAMILTON
MERCEDES
1min 23.397secs Q3



3. VETTEL
FERRARI
1min 23.685secs Q3



5. MASSA
WILLIAMS
1min 23.940secs Q3



7. PÉREZ
FORCE INDIA
1min 24.626secs Q3



9. HÜLKENBERG
FORCE INDIA
1min 25.317secs Q3



11. NASR
SAUBER
1min 24.898secs Q2



13. STEVENS
MANOR
1min 27.731secs Q1



15. BUTTON**
MCLAREN
1min 26.058secs Q1



17. SAINZ****
TORO ROSSO
1min 25.618secs Q2



19. RICCIARDO##
RED BULL
NO TIME IN Q2



2. RÄIKKÖNEN
FERRARI
1min 23.631secs Q3



4. ROSBERG
MERCEDES
1min 23.703secs Q3



6. BOTTAS
WILLIAMS
1min 24.127secs Q3



8. GROSJEAN
LOTUS
1min 25.054secs Q3



10. MALDONADO
LOTUS
1min 24.525secs Q2



12. ERICSSON*
SAUBER
1min 26.214secs Q3



14. MERHI
MANOR
1min 27.912secs Q1



16. ALONSO***
MCLAREN
1min 26.154secs Q1



18. KVYAT‡
RED BULL
1min 25.796secs Q2



20. VERSTAPPEN###
TORO ROSSO
NO TIME IN Q1

THE RACE



FASTEST LAP

Lewis Hamilton, lap 48, 1min 26.672secs

FASTEST PITSTOP



Daniel Ricciardo, 24.259secs (entry to exit)

THE RESULTS (53 LAPS)

1st	Lewis Hamilton Mercedes	1h 18m 00.688s
2nd	Sebastian Vettel Ferrari	+25.042s
3rd	Felipe Massa Williams	+47.635s
4th	Valtteri Bottas Williams	+47.996s
5th	Kimi Räikkönen Ferrari	+68.860s
6th	Sergio Pérez Force India	+72.783s
7th	Nico Hülkenberg Force India	+1 lap
8th	Daniel Ricciardo Red Bull	+1 lap
9th	Marcus Ericsson Sauber	+1 lap
10th	Daniil Kvyat Red Bull	+1 lap
11th	Carlos Sainz Toro Rosso	+1 lap
12th	Max Verstappen Toro Rosso	+1 lap
13th	Felipe Nasr Sauber	+1 lap
14th	Jenson Button McLaren	+1 lap
15th	Will Stevens Manor	+2 laps
16th	Roberto Merhi Manor	+2 laps
17th	Nico Rosberg Mercedes	+3 laps - engine
18th	Fernando Alonso McLaren	+6 laps - electrics

Retirements

Romain Grosjean Lotus	1 lap - collision
Pastor Maldonado Lotus	1 lap - collision

THROUGH SPEED TRAP (QUALIFYING)



Fastest: Pérez,
354.462km/h



Slowest: Verstappen,
249.347km/h

TYRE COMPOUNDS USED



CLIMATE

Sunny 24°C

TRACK TEMP

40°C

DRIVERS' STANDINGS

1st	Lewis Hamilton Mercedes	252pts
2nd	Nico Rosberg Mercedes	199pts
3rd	Sebastian Vettel Ferrari	178pts
4th	Felipe Massa Williams	97pts
5th	Kimi Räikkönen Ferrari	92pts
6th	Valtteri Bottas Williams	91pts
7th	Daniil Kvyat Red Bull	58pts
8th	Daniel Ricciardo Red Bull	55pts
9th	Romain Grosjean Lotus	38pts
10th	Sergio Pérez Force India	33pts
11th	Nico Hülkenberg Force India	30pts
12th	Max Verstappen Toro Rosso	26pts
13th	Felipe Nasr Sauber	16pts
14th	Pastor Maldonado Lotus	12pts
15th	Fernando Alonso McLaren	11pts
16th	Carlos Sainz Toro Rosso	9pts
17th	Marcus Ericsson Sauber	9pts
18th	Jenson Button McLaren	6pts
19th	Roberto Merhi Manor	0pts
20th	Will Stevens Manor	0pts
21st	Kevin Magnussen McLaren	0pts

CONSTRUCTORS' STANDINGS

1st Mercedes	451pts	9th McLaren	17pts
2nd Ferrari	270pts	10th Manor	0pts
3rd Williams	188pts		
4th Red Bull	113pts		
5th Force India	63pts		
6th Lotus	50pts		
7th Toro Rosso	35pts		
8th Sauber	25pts		

For comprehensive F1 statistics visit www.forix.com

*Three-place penalty for impeding another driver **Five-place penalty for additional use of ninth power unit ***Ten-place penalty for first time ninth power unit elements used ****Ten- and 15-place penalties for first time fifth, and sixth and fifth power unit elements used †Two 15-place penalties for first time sixth and fifth, and seventh and sixth power unit elements used, and five-place penalty for replacement gearbox ‡Two 25-place penalties first time sixth and fifth, and seventh and sixth power unit elements used ‡‡ 20-place penalty for first time seventh and fifth power unit elements used and ten-place penalty for removal of FIA seals without FIA supervision

RACE DEBRIEF

by James Roberts

Singapore Grand Prix

20.09.2015 / Marina Bay Street Circuit



Tables turn as Ferrari eclipse Merc

Vettel has rarely looked more accomplished than he did at Singapore. Mercedes, on the other hand...

Was the Singapore Grand Prix a turning point in the story of this year's world championship, or merely a blip in an otherwise straightforward title chase? Runaway leader Lewis Hamilton and Mercedes were all set to break records here.

The standards for consecutive pole positions by both a driver (eight, by Ayrton Senna) and a team (24, Williams) were under threat. As was Senna's position in the all-time winners list. He and Sebastian Vettel were both tied in third place, with 41 victories. Coming off the back of a dominant Monza display, Hamilton looked a clear favourite to draw level with his 41st win.

But after Friday's two practice sessions, it was clear the Mercedes, unusually, lacked the pace of the Ferraris or even the Red Bulls. With its lack of straights and plethora of corners, the tight and narrow Marina Bay circuit rewards machines with strong brakes and good traction.



Surprisingly, both Hamilton and Nico Rosberg found the hitherto dominant Mercedes F1 W06 to be struggling for grip.

Their lack of pace was confirmed on Saturday when a stunning qualifying lap for Vettel gave a car other than a works Mercedes – Seb's Ferrari SF15-T – pole position for only the second time during the 1.6-litre engine formula (now into its 32nd race). More significant was the gap between Vettel's pole time and Hamilton's quickest lap: 1.415 seconds.

Afterwards the Mercedes team were scratching their heads, unsure as to why they were so far off the pace. The balance of the car was good and Lewis said he'd achieved the best lap time he could with the machinery at his disposal.

With the car identical to its Monza-dominating spec, many felt that only the tyres could be responsible for such a performance drop-off. And in a paddock always hungry for intrigue and



The story of the race

▼ Sebastian Vettel leads away from pole in his Ferrari



► Romain Grosjean is the first of the leaders to pit for fresh rubber on lap 9



◀ Felipe Massa exits the pits and collides with Nico Hülkenberg at Turn 1, bringing out the Virtual Safety Car

► The Safety Car is then deployed to clear up the debris at Turn 1



innuendo, wild conspiracy theories were stoked relating to the Pirellis.

“I delivered everything I could today,” said Hamilton to the media late on Saturday evening. “I’m very interested to know what the problem is and I challenge all of you guys to find out where we’ve lost time, whether it’s tyre pressures, temperature, blankets, ride heights...”

His team boss Toto Wolff then made an amusing, accidental slip when he was talking about tyre pressures, saying: “None of the limits set by Ferrari... er, none of the pressure limits set by Pirelli had any influence on our setup.”

The problem seemed to be caused by the Pirellis having a very narrow band of operating temperature, allied with the lack of high-speed turns, which prevented some chassis from being able to raise the core temperatures of their tyres.

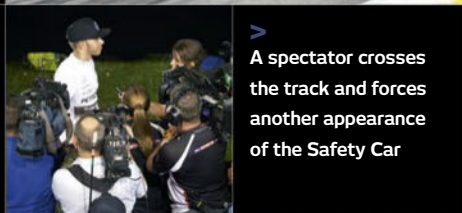
Jenson Button spoke of how quickly the grip changed from one lap to the other on his best run: “Normally you use the brakes to warm the bulk tyre temperature and you don’t want to raise the surface too much. But I was putting too much temperature into my fronts on my second run and picked up massive understeer despite having

► Lewis Hamilton is forced to retire from the race after suffering a loss of power



◀ By lap 26, the top three, Vettel, Ricciardo and Räikkönen, run in close succession

► Jenson Button breaks his front wing on Pastor Maldonado’s Lotus at the restart



▼ Toro Rosso asks Max Verstappen to give way to his team-mate, but Verstappen refuses



▲ Vettel wins his 42nd GP, putting him behind Michael Schumacher (91 wins) and Alain Prost (51 wins)



MAIN PHOTO: ANDY HONE/LAT; ILLUSTRATION: ALAN ELDREDGE. INSETS: GLENN DUNBAR/LAT; SAM BLOXHAM/LAT; STEVEN TEE/LAT; STEVE ETHERINGTON/LAT; ALASTAIR STALEY/LAT; SUTTON IMAGES

a lot of front wing. I struggled with the tyres today, as a few others did, too.”

A little under 24 hours later, as the sun descended behind Singapore’s skyscrapers, the cars took their grid positions. From pole, Sebastian Vettel burst into an instant lead, his superiority evident in his 4.3-second gap over Daniel Ricciardo by the end of the second lap.

Behind him the pack fell into line, with the Mercedes pair running fifth and sixth. The early stages were routine, until Felipe Massa exited the pits from his first stop and made contact with Force India’s Nico Hülkenberg rounding the first sequence of bends. The Force India was in the wall. The Virtual Safety Car was deployed, followed by the Safety Car itself, to enable the marshals to sweep away debris from the shunt.

This allowed most of the field to change tyres and in the next phase of the race, Vettel was much more cautious, running at a slower pace as the top three circulated together conserving their fuel, brakes and rubber.

Then came the first sign there was something wrong with the world championship leader, as Hamilton radioed to his team: “I’ve lost power.” Despite numerous attempts to solve the problem, it was no use, and he was forced to retire. The seemingly bulletproof Mercedes had come to a stuttering halt, for the second race in a row (in Monza, Rosberg’s power unit failed).

Suddenly, more drama when a figure was seen walking along the track towards the Anderson Bridge. Immediately the Safety Car appeared



again and closed the field up once more. “I saw somebody crossing the track and I think I saw him taking a picture. I hope it was a good one at least,” joked race winner Sebastian Vettel, one of the first to come across him.

As the field closed up again, Ricciardo was on Vettel’s tail, but the Manor Marussia of Alexander Rossi was positioned between the Red Bull and the second Ferrari of Kimi Räikkönen. Räikkönen was unable to challenge Ricciardo in the closing stages and finished third – the first

time that both these Ferrari drivers had appeared together on the podium for their team.

But the race hadn’t delivered its final drama: Max Verstappen defied a team order to let Toro Rosso team-mate Carlos Sainz through into eighth. Sainz had fresher tyres and the team felt he could challenge seventh-placed Sergio Pérez. Max refused and held station, saying afterwards that he was thinking what his father, Jos, might have done to him. “He told me if I had let Sainz past he would have kicked me in the nuts...” **F1**



Singapore Grand Prix stats

The lowdown on everything you need to know from the weekend at Marina Bay...

THE GRID

	
2. RICCIARDO RED BULL 1min 44.428secs Q3	1. VETTEL FERRARI 1min 43.885secs Q3
	
4. KVIAT RED BULL 1min 44.745secs Q3	3. RÄIKKÖNEN FERRARI 1min 44.667secs Q3
	
6. ROSBERG MERCEDES 1min 45.515secs Q3	5. HAMILTON MERCEDES 1min 45.300secs Q3
	
8. VERSTAPPEN TORO ROSSO 1min 45.798secs Q3	7. BOTTAS WILLIAMS 1min 45.676secs Q3
	
10. GROSJEAN LOTUS 1min 46.413secs Q3	9. MASSA WILLIAMS 1min 46.077secs Q3
	
12. ALONSO MCLAREN 1min 46.328secs Q2	11. HÜLKENBERG FORCE INDIA 1min 46.305secs Q2
	
14. SAINZ TORO ROSSO 1min 46.894secs Q2	13. PÉREZ FORCE INDIA 1min 46.385secs Q2
	
16. NASR SAUBER 1min 46.965secs Q1	15. BUTTON MCLAREN 1min 47.019secs Q2
	
18. MALDONADO LOTUS 1min 47.323secs Q1	17. ERICSSON* SAUBER 1min 47.088secs Q1
	
20. ROSSI* MANOR 1min 51.523secs Q1	19. STEVENS* MANOR 1min 51.021secs Q1

*Five-place grid penalty for replacement gearbox

THE RACE



THE RESULTS (61 LAPS)

1st	Sebastian Vettel	Ferrari	2h 01m 22.118s
2nd	Daniel Ricciardo	Red Bull	+1.478s
3rd	Kimi Räikkönen	Ferrari	+17.154s
4th	Nico Rosberg	Mercedes	+24.720s
5th	Valtteri Bottas	Williams	+34.204s
6th	Daniil Kvyat	Red Bull	+35.508s
7th	Sergio Pérez	Force India	+50.836s
8th	Max Verstappen	Toro Rosso	+51.450s
9th	Carlos Sainz	Toro Rosso	+52.860s
10th	Felipe Nasr	Sauber	+90.045s
11th	Marcus Ericsson	Sauber	+97.507s
12th	Pastor Maldonado	Lotus	+97.718s
13th	Romain Grosjean	Lotus	+2 laps/gearbox
14th	Alexander Rossi	Manor	+2 laps
15th	Will Stevens	Manor	+2 laps

Retirements

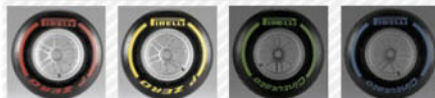
Jenson Button	McLaren	52 laps – gearbox
Fernando Alonso	McLaren	33 laps – gearbox
Lewis Hamilton	Mercedes	32 laps – power unit
Felipe Massa	Williams	30 laps – power unit
Nico Hülkenberg	Force India	12 laps – collision

THROUGH SPEED TRAP (QUALIFYING)



Fastest: Lewis Hamilton, 310.521km/h	Slowest: Will Stevens, 292.329km/h
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TYRE COMPOUNDS USED



Supersoft Soft Intermediate Wet

CLIMATE

Night  30°C

TRACK TEMP

36°C

FASTEST LAP



Daniel Ricciardo, lap 52, 1min 50.041secs

FASTEST PITSTOP



Lewis Hamilton, 28.917secs (entry to exit)

DRIVERS' STANDINGS

1st	Lewis Hamilton	Mercedes	252pts
2nd	Nico Rosberg	Mercedes	211pts
3rd	Sebastian Vettel	Ferrari	203pts
4th	Kimi Räikkönen	Ferrari	107pts
5th	Valtteri Bottas	Williams	101pts
6th	Felipe Massa	Williams	97pts
7th	Daniel Ricciardo	Red Bull	73pts
8th	Daniil Kvyat	Red Bull	66pts
9th	Sergio Pérez	Force India	39pts
10th	Romain Grosjean	Lotus	38pts
11th	Max Verstappen	Toro Rosso	30pts
12th	Nico Hülkenberg	Force India	30pts
13th	Felipe Nasr	Sauber	17pts
14th	Pastor Maldonado	Lotus	12pts
15th	Fernando Alonso	McLaren	11pts
16th	Carlos Sainz	Toro Rosso	11pts
17th	Marcus Ericsson	Sauber	9pts
18th	Jenson Button	McLaren	6pts
19th	Roberto Merhi	Manor	0pts
20th	Will Stevens	Manor	0pts
21st	Alexander Rossi	Manor	0pts
22nd	Kevin Magnussen	McLaren	0pts

CONSTRUCTORS' STANDINGS

1st	Mercedes	463pts	9th	McLaren	17pts
2nd	Ferrari	310pts	10th	Manor	0pts
3rd	Williams	198pts			
4th	Red Bull	139pts			
5th	Force India	69pts			
6th	Lotus	50pts			
7th	Toro Rosso	41pts			
8th	Sauber	26pts			



For comprehensive F1 statistics visit www.forix.com

RACE DEBRIEF

by James Roberts

Japanese Grand Prix

27.09.2015 / Suzuka



Hamilton's vanishing act

After muscling past his team-mate at the start, the Brit disappeared into the distance in Suzuka

Lewis Hamilton proved that the Singapore GP was a blip in an otherwise straightforward march to the title for Mercedes. Normal service was resumed as he dominated the 53-lap Japanese Grand Prix at Suzuka's fearsome figure-of-eight.

There are still five races to go, but almost nothing can now stand in the way of back-to-back world titles for Hamilton, whose lead over team-mate Nico Rosberg is now 48 points. Yet, for a moment during the Suzuka weekend, it looked as though his team-mate would stand in his way, when Rosberg took his first pole since the Spanish GP back in May.

Hamilton was convinced on Saturday evening that he had the speed to take pole. He'd lost 0.15 seconds in the chicane to Rosberg on his first run, but was much quicker by the time he reached Turn 6 on his second. But he wasn't allowed to finish the lap after Daniil Kvyat suffered a huge accident before the hairpin.

Kvyat touched the grass with his left wheels before the braking zone for the right-hander, lost control and flipped after striking the barriers, Suzuka once again proving that it's a circuit that commands respect. Fortunately Kvyat was unhurt, but his Red Bull had to be completely rebuilt and he started the race from the pitlane.

Despite the premature end to the qualifying session, Hamilton knew he had the pace to win this race and the first chance he had to attack his team-mate again was at the race start.

It rained overnight, but race day was hot and humid. On the grid, heavy-hitters mingled with TV crews with cameras, while mechanics tinkered with cars. McLaren's Ron Dennis, delayed in Tokyo by a stomach virus, made his first appearance at the track, accompanied by president and CEO of the Honda Motor Company, Takahiro Hachigo. At this crucial weekend for McLaren-Honda, at the circuit

owned by Honda, it was important to put on a good, professional display.

Fernando Alonso impressed in qualifying, setting a Q2 time just 0.507 seconds shy of putting him in Q3. He later said it was one of the best laps of his career. He lined up 12th on the grid and was ninth at the end of the first lap, benefitting from his rivals being squeezed against each other on the run down to Turn 1.

Red Bull's Daniel Ricciardo couldn't find space between Kimi Räikkönen's Ferrari to his right and Felipe Massa's Williams to his left. His left-rear made contact with Massa's right-front and the pair were both forced to pit with punctures.

Further into Turn 1, Carlos Sainz's Toro Rosso was being squeezed by both Force Indias – Sergio Pérez was an unfortunate victim as he was punted into the Turn 1 gravel.

Meanwhile, there was drama at the head of the field. Lewis Hamilton drew up alongside

Rosberg on the run down to the first corner, then managed to hold the inside line to creep ahead at the right-hander. He drifted wide to take the ideal racing line for Turn 2, forcing Rosberg to run wide, losing out to both Sebastian Vettel's Ferrari and Valtteri Bottas's Williams. You could just imagine Hamilton laughing into his helmet as he rounded the subsequent Esses as he looked in his mirrors and saw his team-mate in fourth. It was the decisive move of the race, and he knew, save for disaster, that the win was his.

"I had the inside line, I had the corner and we were very, very close but I was understeering and running out of grip," said Hamilton post-race. "I imagine Nico was running out of road, but that's what happens when you're on the outside."

Rosberg spent the rest of the afternoon trying to reclaim P2. He outbraked Bottas into the chicane on lap 16, then stopped one lap before Vettel (on lap 29) to emerge just ahead of the Ferrari. But the start, the pitstops and the finish were all you saw of the Mercedes on the world TV feed in this race. For much of the afternoon the focus was on the racing outside the top ten.

One of the highlights was Max Verstappen's charge from 18th on the grid to finish ninth. At one point he attempted to pass Daniil Kvyat around the outside of 130R, but decided to back off once he was on the marbles. Verstappen, who turned 18 the week after the race, passed his Toro Rosso team-mate Carlos Sainz in the closing stages, yet afterwards it was Sainz who described his performance as "one the best races of my career," – until he hit a cone entering the pits and lost 15 seconds to the fitting of a new front wing.

That was nothing compared to the suffering of his compatriot, Fernando Alonso, who was extremely vocal about his underpowered Honda. Over the team radio, Alonso likened his power unit to that of a "GP2 engine." He also added that being passed on the straights was "embarrassing, very embarrassing." Speculation about his desire to continue with McLaren was rife over the weekend. Despite his on-the-record commitment to the cause, this public display, in front of the Honda president, did not go down well with Ron Dennis. After the race he described Alonso's comments as not showing "the professionalism I would like all our drivers to show."

It was heartening to see both Lotus cars finish in the points, with Romain Grosjean seventh and Pastor Maldonado eighth. With unpaid bills mounting, Lotus were locked out of their hospitality unit and had to eat with FOM staff at the back of the Paddock Club kitchens. On Sunday night, they faced an uncertain future – as did many teams up and down the pitlane. But there was one man with a very clear future. With five races to go, Lewis Hamilton just needs to keep collecting points to be assured of that title. **F1**

The story of the race

V Team-mates Hamilton and pole-sitter Rosberg battle for the lead until Hamilton gets past at Turn 2

SUZUKA



> Heading into the first corner, Dan Ricciardo and Felipe Massa clash, while Sergio Pérez runs wide



> Rosberg drops down to fourth, but soon passes Bottas for third at the chicane



< Over the radio, Alonso describes his McLaren-Honda as "embarrassing, very embarrassing"

> Vettel is the first of the leaders to pit for fresh rubber on lap 13



< When Rosberg pits, he manages to emerge ahead of the Ferrari of Sebastian Vettel



< Will Stevens spins in the middle of 130R and just misses his Manor Marussia team-mate Alexander Rossi



> Verstappen passes his Toro Rosso team-mate for eighth at the hairpin in the closing stages of the race

> Lewis Hamilton wins the Japanese GP, equalling Ayrton Senna's record of 41 victories























MAIN PHOTO: GLENN DUNBAR/LAT; ILLUSTRATION: ALAN ELDORIDGE; INSETS: STEVEN TEE/LAT; GLENN DUNBAR/LAT; STEVE ETHERINGTON/LAT; ALASTAIR STALEY/LAT

Japanese Grand Prix stats

The lowdown on everything you need to know from the weekend at Suzuka...

THE GRID

 1. ROSBERG MERCEDES 1min 32.584secs Q3	 2. HAMILTON MERCEDES 1min 32.660secs Q3
 3. BOTTAS WILLIAMS 1min 33.024secs Q3	 4. VETTEL FERRARI 1min 33.245secs Q3
 5. MASSA WILLIAMS 1min 33.337secs Q3	 6. RÄIKKÖNEN FERRARI 1min 33.347secs Q3
 7. RICCIARDO RED BULL 1min 33.497secs Q3	 8. GROSJEAN LOTUS 1min 33.967secs Q3
 9. PÉREZ FORCE INDIA NO TIME IN Q3	 10. SAINZ TORO ROSSO 1min 34.453secs Q2
 11. MALDONADO LOTUS 1min 34.497secs Q2	 12. ALONSO McLAREN 1min 34.785secs Q2
 13. HÜLKENBERG* FORCE INDIA 1min 34.390secs Q2	 14. BUTTON McLAREN 1min 35.664secs Q1
 15. ERICSSON SAUBER 1min 35.673secs Q1	 16. NASR SAUBER 1min 35.760secs Q1
 17. VERSTAPPEN** TORO ROSSO NO TIME IN Q2	 18. STEVENS MANOR 1min 38.783secs Q1
 19. ROSSI*** MANOR 1min 47.114secs Q1	 20. KVYAT**** RED BULL NO TIME IN Q3

*Three-place grid penalty for causing a collision **Three-place grid penalty for stopping in a potentially dangerous position ***Outside 107% qualifying criteria -permitted to start by the stewards ****Required to start from the pitlane

THE RACE



THE RESULTS (53 LAPS)

1st	Lewis Hamilton Mercedes	1h 28m 06.508s
2nd	Nico Rosberg Mercedes	+18.964s
3rd	Sebastian Vettel Ferrari	+20.850s
4th	Kimi Räikkönen Ferrari	+33.768s
5th	Valtteri Bottas Williams	+36.746s
6th	Nico Hülkenberg Force India	+55.559s
7th	Romain Grosjean Lotus	+72.298s
8th	Pastor Maldonado Lotus	+73.575s
9th	Max Verstappen Toro Rosso	+95.315s
10th	Carlos Sainz Toro Rosso	+1 lap
11th	Fernando Alonso McLaren	+1 lap
12th	Sergio Pérez Force India	+1 lap
13th	Daniil Kvyat Red Bull	+1 lap
14th	Marcus Ericsson Sauber	+1 lap
15th	Daniel Ricciardo Red Bull	+1 lap
16th	Jenson Button McLaren	+1 lap
17th	Felipe Massa Williams	+2 laps
18th	Alexander Rossi Manor	+2 laps
19th	Will Stevens Manor	+3 laps
20th	Felipe Nasr Sauber	+4 laps/steering

Retirements 0

THROUGH SPEED TRAP (QUALIFYING)



Fastest: Nico Rosberg, 315.428km/h

Slowest: Alexander Rossi, 272.339km/h

TYRE COMPOUNDS USED



Medium

Hard

Intermediate

Wet

CLIMATE

Sunny 27°C

TRACK TEMP

41°C

FASTEST LAP



Lewis Hamilton, lap 33, 1min 36.145secs

FASTEST PITSTOP



Kimi Räikkönen, 22.584secs (entry to exit)

DRIVERS' STANDINGS

1st	Lewis Hamilton Mercedes	277pts
2nd	Nico Rosberg Mercedes	229pts
3rd	Sebastian Vettel Ferrari	218pts
4th	Kimi Räikkönen Ferrari	119pts
5th	Valtteri Bottas Williams	111pts
6th	Felipe Massa Williams	97pts
7th	Daniel Ricciardo Red Bull	73pts
8th	Daniil Kvyat Red Bull	66pts
9th	Romain Grosjean Lotus	44pts
10th	Sergio Pérez Force India	39pts
11th	Nico Hülkenberg Force India	38pts
12th	Max Verstappen Toro Rosso	30pts
13th	Felipe Nasr Sauber	17pts
14th	Pastor Maldonado Lotus	16pts
15th	Carlos Sainz Toro Rosso	12pts
16th	Fernando Alonso McLaren	11pts
17th	Marcus Ericsson Sauber	9pts
18th	Jenson Button McLaren	6pts
19th	Roberto Merhi Manor	0pts
20th	Will Stevens Manor	0pts
21st	Alexander Rossi Manor	0pts
22nd	Kevin Magnussen McLaren	0pts

CONSTRUCTORS' STANDINGS

1st	Mercedes	506pts	9th	McLaren	17pts
2nd	Ferrari	337pts	10th	Manor	0pts
3rd	Williams	208pts			
4th	Red Bull	139pts			
5th	Force India	77pts			
6th	Lotus	60pts			
7th	Toro Rosso	44pts			
8th	Sauber	26pts			



For comprehensive F1 statistics visit www.forix.com

The Russian GP preview

Round 15 / 9-11 October 2015 / Sochi, Russia



RUSSIAN GP RACE DATA

Circuit Name Sochi Autodrom
First GP 2014
F1 races held 1
Circuit length 5.850km
Race distance 310.067km (53 laps)
Direction Clockwise
Winners from pole 1

RACE NOTES: SOCHI CAN STILL SHINE IN ITS SECOND SEASON

Winding through the spectacular venue of last year's winter Olympics, this track should prove more impressive this year

Last year's inaugural Russian Grand Prix won't be remembered as a classic. The paddock was still coming to terms with Jules Bianchi's terrible accident in Japan the previous weekend, while a circuit that played mainly to the strengths of Mercedes, and a combination of a non-abrasive surface and conservative tyre choice, meant the race was largely processionary.

But a better race could be on the cards for 2015. With greater track knowledge, Pirelli are likely to use softer, more aggressive tyres, and most drivers actually enjoyed the challenge of the impressive-looking Sochi circuit.

Last year, Nico Rosberg's first-lap error denied spectators a fight between the two Silver Arrows, leaving Lewis Hamilton untroubled out front. If the pair make it past Turn 2 this year, the race will be more entertaining.



Rosberg tried to outbrake Hamilton on the first lap last year, but ran wide

PACE NOTES: THE KEYS TO SUCCESS

Balancing act

This street circuit contains a mix of corners, with a couple of long full-throttle sections. Balancing aero stability with engine power is key.

Wear and tear

Last year the track was low grip and easy on the tyres, which meant most drivers ran a one-stop strategy. Pirelli may choose more aggressive tyres this year, which is likely to mix things up.

Off camber – but fun

Several off camber corners make the track more challenging, with the bumpy sections requiring good car balance.

Key corner

At the end of a long flat-out section (including Turn 1, little more than a kink), the 90° right-hander, Turn 2, is the best overtaking opportunity.

WHAT HAPPENED IN LAST YEAR'S RACE...?

Winner Lewis Hamilton
Margin of victory 13.657s
Fastest lap 1m 40.896s, V Bottas
Safety Cars 0
Race leaders 1
Pitstops 23
Overtakes 35

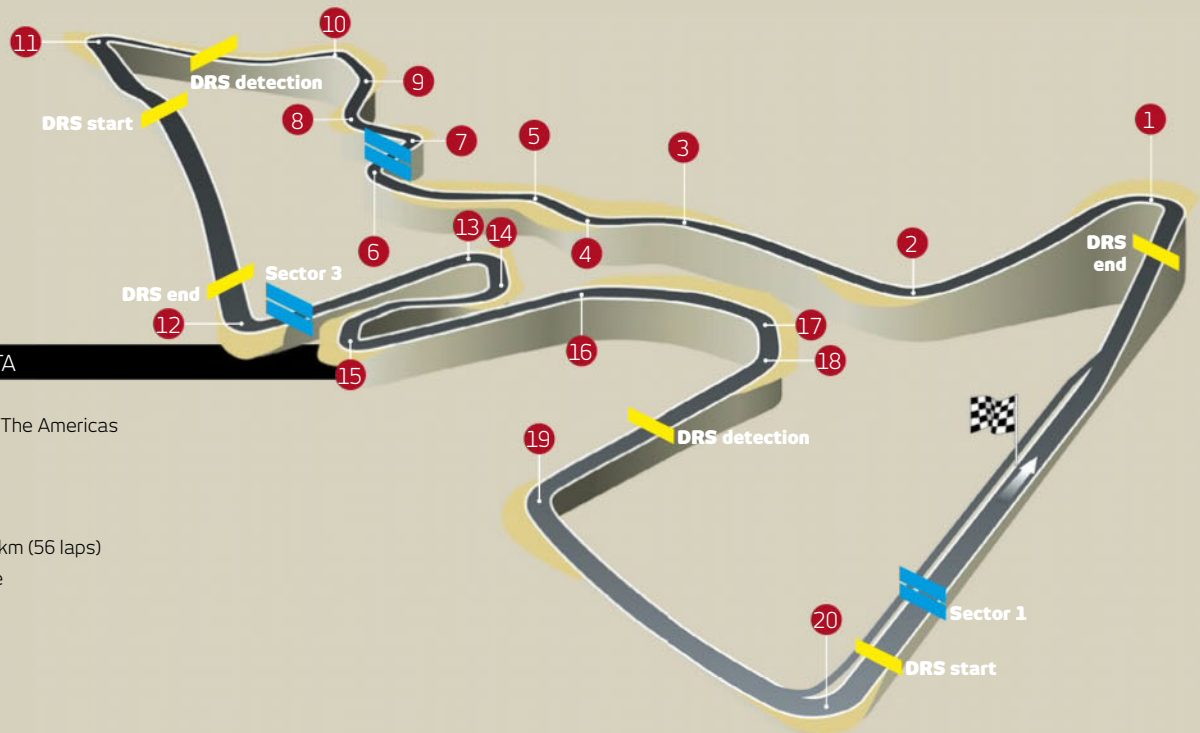


Mercedes clinched the constructors' championship with their ninth one-two of the season, but only once Rosberg recovered from his first-lap error. Attempting to overtake Lewis Hamilton, Rosberg locked up at Turn 2, ran wide and had to pit early. But the hard tyres let him to run to the end without stopping, overhauling Valtteri Bottas for second.



The United States GP preview

Round 16 / 23-25 October 2015 / Austin, Texas



US GP RACE DATA

Circuit Name Circuit of The Americas
First GP 2012
F1 races held 3
Circuit length 5.51km
Race distance 308.334km (56 laps)
Direction Anticlockwise
Winners from pole 1

RACE NOTES: THREE RACES ON, COTA IS ALREADY A CLASSIC

Everyone loves the Circuit of The Americas – none more so than Lewis Hamilton, who'll be looking to add to his win tally here

After just three races, the incredibly popular Circuit of The Americas already feels like an essential part of the Formula 1 calendar. It's a place the paddock and the fans love visiting – and arguably nobody enjoys it more than Lewis Hamilton.

The British racer has won here twice, and last year his manoeuvre when he overtook Mercedes team-mate Nico Rosberg was one of the decisive moments in his championship campaign. That said, Hamilton isn't the only racer who thrives on the Texas track: Sebastian Vettel won here in 2013, and has set the fastest lap in all three previous races.

Drivers are challenged by the circuit's layout, which includes a number of flowing, technical corners inspired by other circuits, making car setup and balance tricky.



Mercedes' Lewis Hamilton has won two out of the three races held here to date

PACE NOTES: THE KEYS TO SUCCESS

Mixing it up

The elevation, technical sections and fast corners are a good all-round test of cars and tyres, requiring decent traction and strong lateral grip.

Wide-open racing

To encourage overtaking, the track is unusually wide at several points. This means a number of different lines are taken through different corners.

Caution over crest

The signature corner is Turn 1, with a blind entry to the apex atop a steep hill. It's hard to judge braking and turn-in, so errors are common.

Key corner

Turn 1 is the best overtaking spot on the circuit, but coming at the end of a DRS straight, the left-hander at Turn 12 also presents a good opportunity for the brave.

WHAT HAPPENED IN LAST YEAR'S RACE...?

Winner Lewis Hamilton
Margin of victory 4.314s
Fastest lap 1m 41.379s, S Vettel
Safety Cars 1
Race leaders 2
Pitstops 36
Overtakes 30

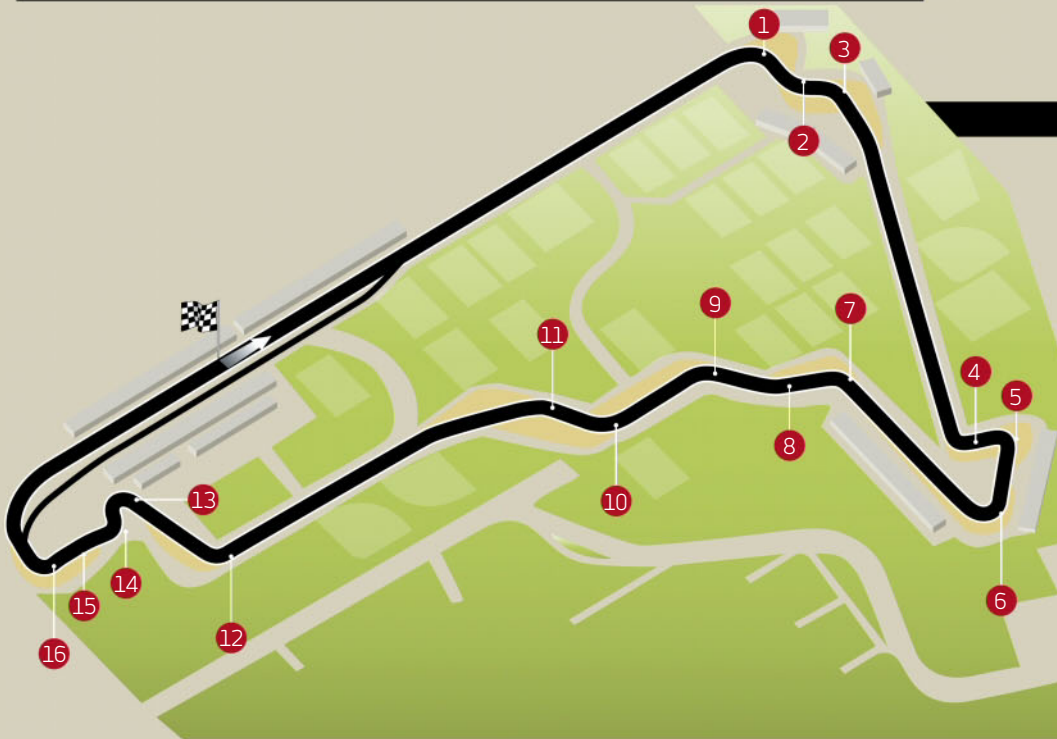


Once again, Lewis Hamilton displayed his overtaking prowess, passing team-mate Nico Rosberg with a late braking move into Turn 12 to seize a decisive advantage. Daniel Ricciardo, meanwhile, managed a sublime early pass on Fernando Alonso in Turn 1, and later got ahead of the faster Williams cars to finish third.



The Mexican GP preview

Round 17 / 30 October-1 November 2015 / Mexico City, Mexico



MEXICAN GP RACE DATA

Circuit Name
Autódromo Hermanos Rodríguez

First GP 1963

F1 races held 15

Circuit length 4.302km

Race distance 305.516km (71 laps)

Direction Clockwise

Winners from pole 7

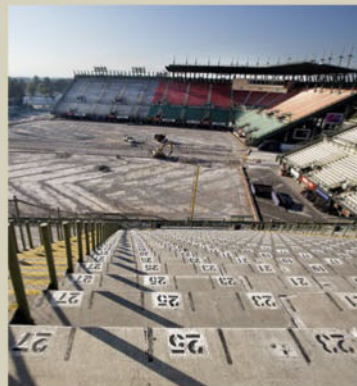
RACE NOTES: WELCOME RETURN OF A MUCH-LOVED CIRCUIT

Designer Hermann Tilke has tried to maintain this track's fast and flowing nature. We'll soon find out whether he succeeded...

The Autódromo Hermanos Rodríguez isn't strictly a new addition to the calendar, but it might as well be. The last Mexican GP was held here in 1992 – five years before Toro Rosso's Max Verstappen was born – and the track has been completely revamped.

Given that this is essentially a new circuit, it's hard to know what to expect. Sadly, the revamp doesn't include the fearsome Peraltada corner, which was unsuitable for this more safety-conscious era of F1 due to its lack of run-off. The circuit has instead been re-routed through an adjacent 30,000-seat baseball stadium.

What we can expect is a large, vocal crowd: the Mexicans are passionate about motorsport, and tickets for this event sold out quickly. It's set in the heart of Mexico City, which should make for a vibrant backdrop.



The revamped circuit threads its way through a 30,000-seat baseball stadium

PACE NOTES: THE KEYS TO SUCCESS

A known unknown

This is essentially a new track, which means Pirelli have no data to work from. So when it comes to tyre choice, a conservative selection is likely.

Nothing like the real thing

Teams will do simulator work to develop a base setup ahead of the event – but many variables cannot be simulated. Friday practice will reveal all.

Finding a balance

Designers have attempted to maintain the track's high-speed attributes. This should reward engine power on the long straights, and aero balance through the twisting 'Esses' section.

Key corner

The main straight will allow for drafting into Turn 1, a tight right-hander that starts a chicane sequence. This is the best overtaking spot.

WHAT HAPPENED AT THE LAST MEXICAN GP IN 1992?

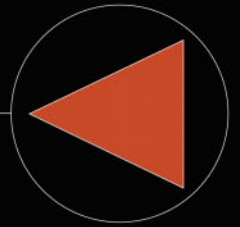
- Winner** Nigel Mansell
- Margin of victory** 12.971s
- Fastest lap** 1m 17.711s, G Berger
- Safety Cars** 0
- Race leaders** 1
- Pitstops** 5
- Overtakes** 41



Williams continued their dominant start to 1992 with another one-two finish. Nigel Mansell and Riccardo Patrese were split by just 0.016s in qualifying – but nearly a second clear of third-placed Michael Schumacher's Benetton. Schumacher finished third to claim his first podium after Ayrton Senna retired his McLaren with transmission woes.

ILLUSTRATION: ALAN ELDORGE. PHOTOS: SAM BLOXHAM/LAT. ARCHIVE

Now that was a car



No. 44: The Surtees TS16

A compromise too far for perfectionist racer-turned-constructor John Surtees



WORDS STUART CODLING PICTURES JAMES MANN



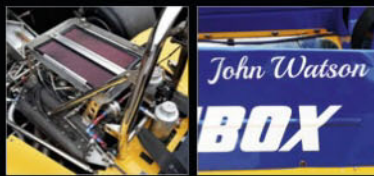
The only man to fight his way to world championships on two wheels and four, John Surtees never enjoyed the same success as a constructor in his own right. Lack of funds meant his team operated a skeleton crew, in which Surtees played a hands-on role out of necessity. He had formed it in the mid-1960s to run in CanAm, but as his driving career wound down he became involved with the Leda Formula 5000 project, a customer race-car operation for chassis designed by ex-Lotus man Len Terry, which numbered *Grand Prix* leading man James Garner among potential clients. Surtees began as a middleman but became chief development driver when the car proved unsatisfactory, then manufacturer and race team operator.

The renamed and redeveloped Surtees TS5 won races in the US in the hands of David Hobbs in 1969, and orders began to flow in as Surtees continued to fettle the car. Money was arriving in sufficient quantities for him to relocate to new facilities in Edenbridge, Kent, and consider assaults on both Formula 2 and Formula 1. The first Surtees F1 car, the TS7, arrived late, but once ready it proved effective enough to claim points in the Canadian Grand Prix and take the victory at the non-championship Oulton Park Gold Cup. It was a decent start for a new constructor, especially one run on a shoestring budget, and with new sponsorship from Brooke Bond Oxo and Rob Walker, Surtees developed the TS7 into the TS9 for 1971 and expanded his project to a two-car entry.

The longer, wider TS9 was also lighter, and while results were patchy Mike Hailwood came within fractions of a second of victory in his at the 1971 Italian Grand Prix. Hailwood won the European F2 championship in 1972 in a Matchbox-sponsored TS10, but in F1 success continued to prove elusive. Surtees' cars were no match for the well-funded machines produced by Tyrrell, Lotus, Ferrari and McLaren, and dropped out of race after race with often trivial – but mostly terminal – mechanical problems. Having tyre supplier Firestone favour Lotus with their choice of rubber didn't help, either.

By 1973 money was running short. Surtees had stood down from driving but continued to lead testing, and a lack of funds meant ambitious plans for a new chassis had to be parked in favour of the more cautious TS16 for 1974. Carlos Pace finished fourth in Brazil but quit mid-season, and a lucrative sponsorship deal with Bang & Olufsen fell through. That meant running the TS16 again in 1975 with just a few in-season updates, including a new radiator position behind the rear axle, as Surtees took his erstwhile backers to courts.

By late August Surtees was worn out. "It's been very hurtful for me, as I'm a stickler for doing things right, to be scratching around as we have this year," he said, announcing his withdrawal from F1. He returned in 1976 with new sponsors and a new car, but found it hard to bounce back. The court proceedings lasted two years and Surtees recovered only his costs. He closed the team at the end of 1978. **F1**



SURTEES TS16 TECH SPEC

Chassis	Aluminium monocoque
Suspension	Independent via lower wishbones and top rockers, coil springs over dampers (inboard at front)
Engine	Cosworth V8
Engine capacity	2,993cc
Power output	450bhp @ 10,800rpm (est)
Gearbox	Hewland 5-speed manual
Weight	540kg
Tyres	Firestone
Notable drivers	Carlos Pace, Jochen Mass, John Watson, Derek Bell

MURRAY WALKER



UNLESS I'M VERY MUCH MISTAKEN...

“Welcome back Mexico – and this time I promise not to affect the result of the Formula 1 World Championship”

I say “welcome back” because Mexico was previously on the F1 calendar for 15 memorable and exciting years, from 1963 to 1970 and then again from 1986 until 1992. Its going to be great to have a ‘new’ historic grand prix where the locals are passionately enthusiastic about Formula 1 and have long yearned for its return, unlike those races at so many current locations where money, as opposed to national motorsport interest, is the motivator.

Mexico has a rich F1 history. It’s where the great Jim Clark won a record three times; where

John Surtees dramatically achieved his brilliant record of becoming the only motorcycle world champion to win the F1 championship; where America’s Richie Ginther gave Honda their first ever F1 victory in 1965; and where Nigel Mansell, in his Ferrari, made one of the greatest passes in F1 history – on Gerhard Berger’s McLaren at the awesome Peraltada corner in 1990.

For safety reasons the Peraltada will not be used at the rebuilt and vastly improved Autódromo Hermanos Rodríguez, named after the brilliant Mexican brothers, Pedro and

Riccardo, who raced in F1 in the 1960s for Ferrari, Lotus, Cooper and BRM. But with 21 million people living nearby, there’ll be a huge sell-out crowd of wildly supportive Mexicans rooting for their fellow countryman and national hero, Sergio Pérez. Like Hockenheim, the drivers race through a stadium section closely surrounded by grandstands containing more than 30,000 spectators.

This year’s Mexican GP will be a joyous occasion but, for me, mostly for emotional reasons, it will have a job to beat 1986 when F1 resumed after a 16-year absence. Mexico City was in a terrible state after a massive earthquake. The smog that enveloped it was foul and masses of people who had been displaced from their homes were sleeping rough in the streets.

It was my birthday and BBC producer Roger Moody had arranged a surprise party in a superb restaurant. For Europeans unused to the local cuisine, Mexico was the home of what was known as ‘Montezuma’s Revenge’ – to avoid which, Australia’s triple world champion Jack Brabham used to exist solely on corned beef sandwiches and Coca-Cola. So when my friend and championship leader Nigel Mansell made an unexpected but very welcome appearance, he was taking no chances. “Just some sliced beef and bread, thanks Murray,” he said.

Which is what he got. I can see the pink cuts and the white rolls on the plate next to mine even as I type. But nevertheless, come qualifying the next day, he was in and out of the car with distressing frequency. So much so that the directional arrow to the Williams position in the pitlane that the team had painted on the Tarmac turned right at its extremity to point through the garage with the boldly lettered word ‘TOILETS’ at its end. A vastly unsettled Nigel, not helped by team-mate Nelson Piquet having deviously removed all the loo roll, qualified third but failed to select first gear at the start and finished only fifth in a race won by Gerhard Berger to give Benetton their first victory.

Nigel lost five points that day and at the next and final round, the never-to-be-forgotten Australian GP, with the title in his pocket, his tyre blew and the title went to McLaren’s Alain Prost by a mere two points. Montezuma’s Revenge? If it was, I’m truly sorry Nigel! 🍌

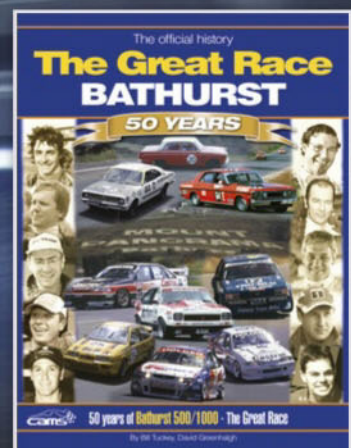
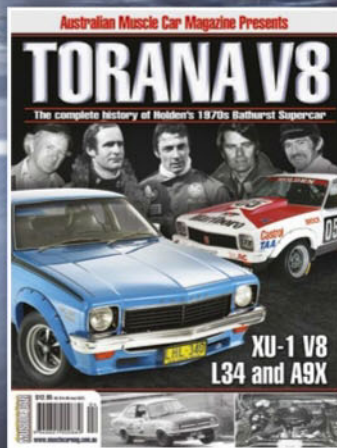
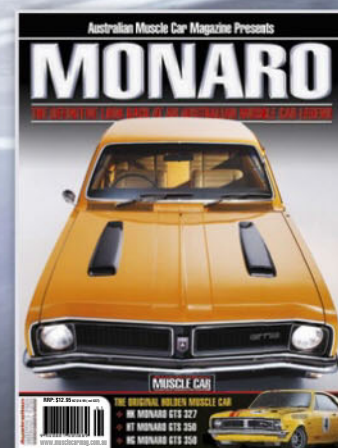
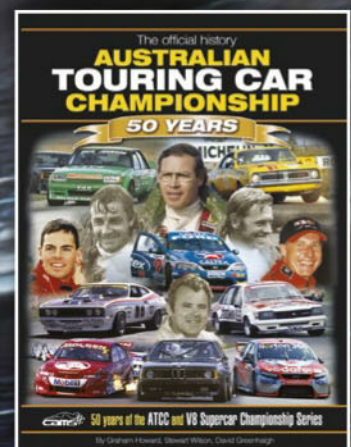
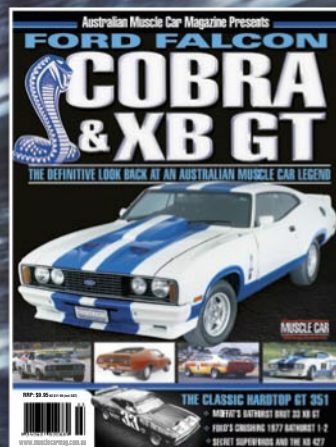
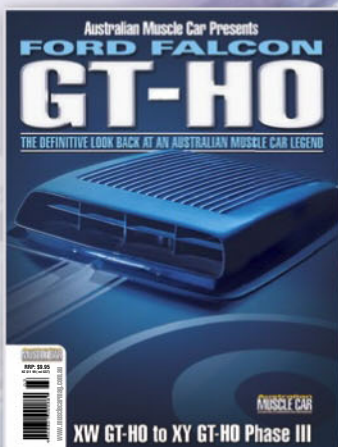
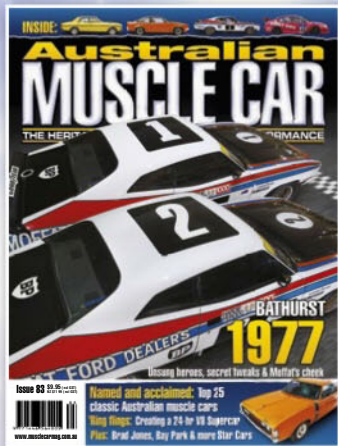


“Come qualifying at the 1986 Mexican GP, a vastly unsettled Nigel was in and out of the car with distressing frequency”



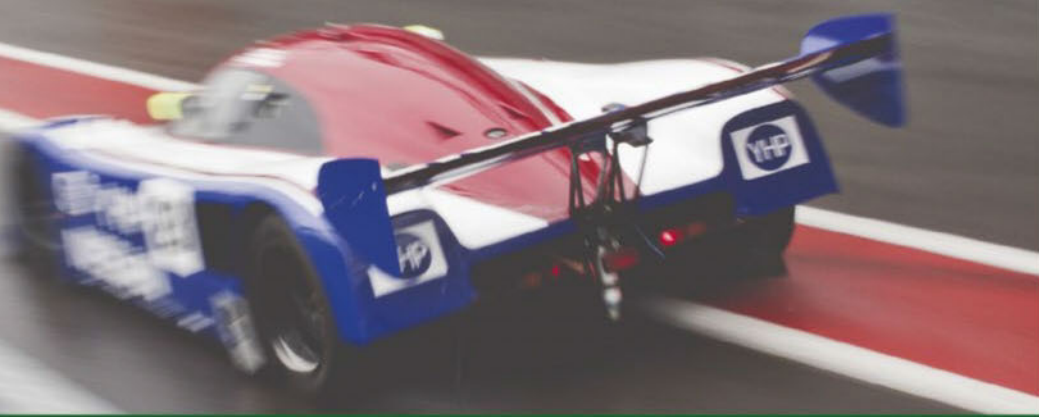
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