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PEUGEOT

Urban 47.1 – 65.7 (6.0 – 4.3), Extra Urban 65.7 – 85.6 (4.3 – 3.3), Combined 57.6 – 76.3 (4.9 – 3.7) and CO<sub>2</sub> 114 – 96 (g/km). For the 3008 SUV all-new 5008 SUV Range are: Urban 36.2 – 62.8 (7.8 – 4.5), Extra Urban 53.3 – 72.4 (5.3 – 3.9), Combined 46.3 – 68.9 (6.1 – 4.1) and CO<sub>2</sub> may not reflect actual on-the-road driving conditions.

Allure 1.2L PureTech 130S & S with optional Black Diamond Roof and optional Grip Control.\* Award logos relate to the following awards: 2008 SUV won Best Small SUV in the Driver Power 2017 New Car Survey, 3008 SUV won Best



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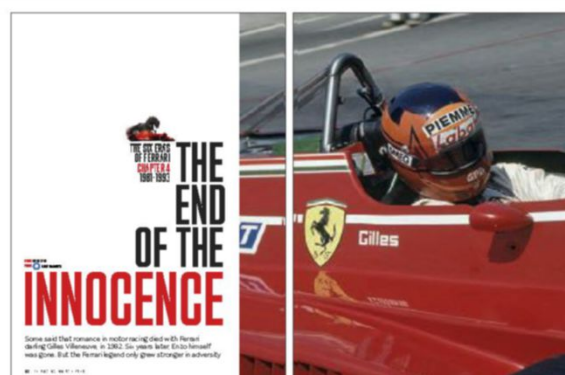
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Anthony Rowlinson

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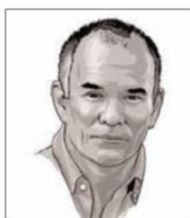
Contributors



**PAT SYMONDS**  
Formerly a senior engineer at Benetton, now helping Liberty to shape the future of F1, Pat looks at what's in store for 2018 (p38)



**ANDY HONE**  
Ace snapper Andy will be doing Toro Rosso's official pictures this season; he warmed up with a trip to Honda's heartland. See p48



**PETER WINDSOR**  
Turn to page 70 to witness our sagacious columnist and Motorsport TV host take on Kimi Räikkönen in a kart – on ice!



**STUART CODLING**  
Have you recovered from seeing 'Codders' in action at Autosport International? On p48 he does his bit for international relations

## Halo: there's no going back

**Blink and you'll miss it.** The halo, that is. Ten kilos of steel and carbon looping round drivers' helmets, protecting them from flying missiles.

It's been the subject of much sound and fury over the past 18 months, but now it's here, so we'd better get used to it. And, honestly, does it really look that bad? Not to these eyes; not when it's been integrated into a chassis 'whole', with matching paintwork and complementary branding. Judge for yourself with our exclusive first image of the Williams FW41 on this month's cover.

We will, surely, get used to it, when it becomes apparent just how easy it is still to see helmet liveries. And when a driver is saved from death or serious injury because the halo has worked as intended, will the siren voices still be saying 'Away with this dreadful thing. Let the drivers accept the risk of mortal danger. It's part of the sport'?

Maybe it was, once – but not any longer, not when technology makes fatal injury avoidable. Indeed, one aspect of the halo debate I've found puzzling is the apparent disconnect between those who profess to love the sport and declare its drivers heroes, and the notion that somehow death or grave mental incapacity is an acceptable outcome for participants.

This still-vocal anti-halo camp seems content to accept the continued risk of certain types of driver mortality, because the device that would prevent

those very deaths is ugly. Really? *Really?*

I, for one, would certainly rather that Justin Wilson, Dan Wheldon and Henry Surtees were still alive and racing hard, having survived accidents in their 'ugly halo' cars, than being remembered both as terrific racers and guys who died way too young.

Motorsport remains dangerous, let's not forget – racing a prototype vehicle 21 times a season is an inherently perilous pursuit. Jules Bianchi's brain injury at the 2014 Japanese GP (which the halo would have done nothing to prevent, of course) is reminder enough of that.

But it is no longer the killing field it was during the early '70s and for that we should thank decades of continual, deliberate progress on safety, tighter regulation, better technology and, perhaps above all, an acknowledgement that drivers' lives matter.

That, surely, should convince sceptics to welcome, not shun, the halo: it's simply part of a technological evolution that has been in train in Formula 1 for more than 40 years. From flame-retardant overalls to TecPro barriers... each of these has helped prevent driver injury or fatality, as the halo surely will, too.

And for that, myriad drivers can be thankful.

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## 1968

Bruce himself takes McLaren's first win

After the pain, the joy. Success in Formula 1 came in slow-burn form for Bruce McLaren's ambitious little team, hamstrung by lack of access to a competitive engine – until they got their hands on the Cosworth V8.

Already winners in other categories and non-championship F1 events by 1968, they'd earned a reputation for quality and invention. The M7A, designed by Robin Herd and Gordon Coppuck (with input from Bruce, natch), took two non-championship scalps before Bruce drove it to victory in its third grand prix.

Not that he knew he'd won until afterwards; he hadn't seen erstwhile leader Jackie Stewart break for the pits, out of fuel, with a lap to run.



**Where** Spa-Francorchamps, Belgium

**When** Sunday 9 June 1968



## 1978

The Marlboro man takes flight

James Hunt's Formula 1 career lasted just six years. But between his colourful if underwhelming debut (a DNF at Monaco in 1973 in a Hesketh-run March-Ford) and duntrodden, downbeat retirement (he quit mid-season in 1979) his singular talent shone brightly and inspired a generation of F1 fans.

It was at McLaren that he made the transition from have-a-go hero to sporting icon, taking over Emerson Fittipaldi's Marlboro-Texaco-sponsored M23 for 1976 and seizing the drivers' championship in a dramatic showdown with Niki Lauda.

But McLaren failed to adapt to the 'ground effect' age and by 1978 he was considering his options...



**Where** Hockenheim, Germany

**When** Saturday 30 July 1978







JAMES

HUNTER

GOODYEAR





**Marlboro**





## 1988

Greatest driver,  
greatest car

Thursday on the hallowed but still-green asphalt of Monte Carlo, and it's raining. And Ayrton Senna is already almost two seconds a lap faster than team-mate, Alain Prost.

1988 would be an epoch-making year: 15 out of 16 grand prix wins for McLaren's sensational low-line MP4/4 and its devastatingly grunty Honda V6, a triumphal hurrah for the forced-induction art before natural aspiration became mandatory for 1989. It was a time, too, of rancour: specifically, that between the two greatest drivers of the era, both driving MP4/4s.

Forty-eight hours after this picture was taken, Senna "saw God" during what's still viewed as the greatest qualifying lap of all time.



**Where** Monte Carlo, Monaco

**When** Thursday 12 May 1988









## 1998

Häkkinen's yen for glory

With Adrian Newey now manning the drawing board, McLaren made a searing return to form in 1998 as the neat MP4/13 bossed the first year of the maligned grooved-tyre era and enabled Mika Häkkinen to deliver on his massive promise.

The car remained competitive even after the controversial 'fiddle-brake' – worth half a second per lap, and first exposed by *F1 Racing* and photographer Darren Heath the previous summer – was banned. Ferrari's Michael Schumacher fought back after Mika won the first two grands prix of the year, but when Michael squandered pole at the Suzuka finale by stalling on the grid, the world championship was Häkkinen's to lose.

 **LAT IMAGES**

**Where** Suzuka, Japan

**When** Sunday 1 November 1998



## 2008

### Lewis's appointment with racing destiny

In this era of Todt-engendered political harmony, it's easy to forget how toxic the atmosphere was in 2008. Post-'Spygate', McLaren began the season shorn of their '07 constructors points, \$100m lighter of wallet, and facing a barrage of innuendo about the intellectual provenance of their new car.

Nevertheless, Lewis Hamilton hauled himself into title contention even when the odds seemed stacked against him, as when he was handed a fatuous time penalty that cost him victory in Belgium. Going into the final weekend of the year he had a seven-point lead over Ferrari's Felipe Massa. Lewis, seen here in qualifying, could scarcely believe what was about to happen...



**Where** Interlagos, Brazil

**When** Saturday 1 November 2008











DAN R: A MERC FUTURE?



KIMI'S FINAL SEASON?



WHAT NEXT FOR BOTTAS?



SEB STAYS AT FERRARI



WHO GOES WHERE IN 2019?



PROMOTION FOR OCON?



A NEW DEAL FOR LEWIS?



MAX STAYS AT RED BULL



LECLERC TO FERRARI?

## THE 2019 SILLY SEASON BEGINS

01

**Every Formula 1 season** has a series of narratives running through it, issues on which the news agenda is focused for much of the year. Many times a number of these are obvious before the action on the track has even started. This year is no different.

It does not take a genius to work out, for example, that when Lewis Hamilton's contract runs out this year, that is going to be a talking point until his plans are clarified.

On the face of it, there may not be much of a story there, in the end. Right now, all the evidence is that his foreseeable future is very much the same as his past.

Mercedes F1 boss Toto Wolff admitted just before Christmas that Hamilton "is a *frei-geist* – a free spirit – and he wants to keep his options open whether he stays a



**Mercedes boss Toto Wolff hopes the successful partnership with Lewis Hamilton will continue**

racing driver in 2019 or becomes a fashion entrepreneur".

But he also added for clarification: "We are in negotiations about a new long-term contract. Hopefully Lewis can stay with us for many more years. This is the wish of all the parties. But at the same time I think he just needs to have the peace of mind that whatever he decides to do in the future, he can do it.

"At the moment, he loves F1 and he doesn't want to do anything else and all the rest is hobbies, but maybe, two or three or four years down the line, he changes."

There is wriggle room there for any eventuality, but Mercedes say there is no reason to think they will not end up with Hamilton staying, and there are no obvious issues that will prevent him from doing so.

Hamilton will likely commit to Mercedes at least until 2020, when Sebastian Vettel's Ferrari deal and Max Verstappen's Red Bull contract both expire. That being the case, the topic that may end up dominating talk more than Hamilton himself is the identity of his future Mercedes team-mate.



F1 has new TV deals in some territories that keeps the sport free-to-air but also on pay TV

Valtteri Bottas, who had an up-and-down first season at Mercedes in 2017, stays for 2018, but on another one-year deal, which Wolff did with a view to 2019.

Bottas's apolitical approach and willingness to be a team player has brought the best out of Hamilton, who has admitted he thought the new-found atmosphere of trust in the team much more conducive to him performing consistently at his absolute best than the poisonous environment that prevailed when Nico Rosberg was there.

Wolff has said that Bottas's arrival, and the way he has worked with Hamilton, has changed his thinking on driver line-ups.

"We are on a learning curve every day," Wolff said, "and if you had asked me the question one year ago, I would have said [the ideal combination was] having Lewis and Nico, two drivers who have a strong rivalry and are pushing each other.

"But we have realised that the positive dynamics we had between Valtteri and Lewis in a difficult season like we had in 2017 was an asset."

That does not mean, however, that Bottas is a shoo-in at Mercedes for 2019.

"In so far as I would like the pairing to continue," Wolff adds, "we are committed to both of them in 2018. But having said that, 2019 is a very exciting new year. There are young drivers that will have gained more experience and some of the very good ones like Daniel (Ricciardo) become free.

"And what we want to see is how the first third of the season pans out, whether our car is good enough and strong enough, and this is what we are actually concentrating on and then we will analyse and take the right decisions – hopefully."

In other words, a seat in the best team in Formula 1 is up for grabs. Reading between the lines of Wolff's quote, Mercedes seem to be weighing three main options.

One is to keep Bottas. This will probably depend on whether the Finn performs in the first part of the new season as he did in the first half of last year, when he was generally pretty impressive, or like the second half of the year, when he often was not.

A second option could be to take Ricciardo from Red Bull. He and Hamilton would make a strong pairing, most would expect him to be quicker than Bottas, if not quite as quick as Hamilton. The Australian is just the sort of relaxed, uncomplicated character who could, like Bottas, be relied upon to keep the intra-team battle in the right spirit.

Then there is French rising star Esteban Ocon, who impressed enormously in his first full season in F1 with Force India last year and looks a very good long-term prospect. There are caveats there, too, however. Ocon is Mercedes-contracted and he is effectively on loan to Force India.

Falling revenues put pressure on midfield teams such as Williams to sign pay drivers

**“2019 IS A VERY EXCITING NEW YEAR. THERE ARE YOUNG DRIVERS THAT WILL HAVE GAINED MORE EXPERIENCE AND SOME OF THE VERY GOOD ONES LIKE DANIEL (RICCIARDO) BECOME FREE”**  
TOTO WOLFF

Ocon was, ultimately, pretty equal with team-mate Sergio Pérez last year, but his second half of the season was definitively stronger than his first, in that he was usually a little bit ahead, rather than a smidge behind. Wolff will want to see that momentum continue and for Ocon to make a clear step forward in performance this coming season.

The other question is what Ocon would do to the stability of Mercedes if he joined in 2019. He is a steely character, as his numerous run-ins with Pérez attest, to the extent that the Force India management eventually had to knock their drivers' heads together last year after one crash too many.

So before taking him on, Wolff would probably have to make it clear to the young Frenchman that he would be on a very short leash alongside Hamilton, at least for his first season or so.

It's a difficult decision for Wolff and the Mercedes board – and it's guaranteed to be a major talking point of the new season.

## TV DEALS ARE F1'S BIG GAMBLE

02

**Mercedes are not the only entity** over which question marks hang at the start of the new season. Another is the F1 Group itself.

US corporation Liberty Media bought the commercial rights to Formula 1 before the start of last season and 2017 was very much a honeymoon period for them.

People were generally glad to see the back of the increasingly idiosyncratic Bernie Ecclestone era, and the sport's new bosses were making all the right noises about wanting to grow the sport.

By the end of the year, however, bumps in the road were starting to appear, as the teams began to view the approach of the new owners as somewhat haphazard and ill-conceived.

A couple of potential difficulties have been ironed out in the past weeks. A proposal by Liberty to have an official launch, featuring all the teams, in Barcelona ahead of

pre-season testing was immediately pushed back against: too impractical and commercially undesirable, said the teams. Instead, the launch is expected to be held on the eve of the new season in Melbourne, Australia. ▶



**The TV model for F1 is a mixture of pay TV, free-to-air and new-for-'18, direct to consumer (OTT)**



An attempt at a meeting of the Strategy Group in January to simplify the front wings of the cars, pushed by Liberty, was also headed off on the basis that the cost and time implications were too big, especially as F1 is already undertaking a major research project into how to change the cars to make following and overtaking less difficult.

And there are whispers of progress on the engine rules for 2021, although talks hit an impasse after the first proposal from F1 and the FIA was met with resistance by the engine makers.

The manufacturers have come up with a counter-proposal they believe will address Liberty's desires to lower the barriers to entry and allow other manufacturers to compete, but the response to this idea, the details of which are still under wraps, remains to be seen.

But one of the biggest question marks surrounds Liberty's approach to F1 broadcasting, which is a fast-changing situation. They have offered a very broad-brush synopsis of their ambitions, which is a combination of free-to-air television, pay TV and what is known in the industry as 'OTT' (Over The Top) – or direct-to-consumer broadcasting. What have not yet been specified are the proportions of that split, and there are growing signs that free-to-air TV, which still draws the biggest audiences, is being squeezed out.

There have been new free-to-air deals in France and Germany – the last of which was touch-and-go for a while, with Sky Germany pushing for an exclusive deal. But most recently Italy has gone almost fully pay TV.

From this year, F1 will not be carried on national broadcaster RAI for the first time since 1953. Liberty's explanation is that RAI did not offer enough money to continue their shared deal with Sky Italia. This mirrored the existing one between Sky and Channel 4 in the UK, with just under half the races carried live on RAI.

**ONE OF THE BIGGEST QUESTION MARKS SURROUNDS LIBERTY'S APPROACH TO F1 BROADCASTING. DESPITE NEW DEALS, THERE ARE GROWING SIGNS THAT FREE-TO-AIR TV, WHICH STILL DRAWS THE BIGGEST AUDIENCES, IS BEING SQUEEZED OUT**



LAT IMAGES: STEVEN TEE; SAM BLOXHAM; RICK DOLE

**Sponsors want maximum exposure, but a move away from free-to-air TV would reduce audiences**

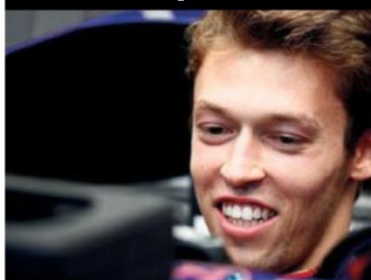
This deal guarantees a substantial drop in audience in F1's second biggest European market, with another to come in 2019 when Sky's exclusive deal in the UK kicks in. Sky have a contractual obligation to show some F1 on free-to-air in Britain, but have not yet said on what platform this would be. The first versions of F1's OTT offering will be broadcast in some territories this year, including Germany and the US.

All in all, 2018 is when it become clear not only what Liberty's plans are, but whether they are working or not. ▶

## F1 DIGEST THE MONTH'S BIG STORIES AT A GLANCE

**05.01.18** F2 racer Nicholas Latifi is named as Force India's reserve and test driver for 2018

**10.01.18** Former Red Bull driver Daniil Kvyat will remain in F1 as a Ferrari development driver



**15.01.18** The racing community mourns the passing of US legend Dan Gurney (obit p26)

**16.01.18** Former McLaren boss Martin Whitmarsh takes up an FIA consultancy role to help with cost-control rules in F1

**16.01.18** Williams announce Sergey Sirotkin as their 2018 race driver with Robert Kubica getting a reserve driver role

**19.01.18** Sir Stirling Moss announces he is to retire from public life at the age of 88

**25.01.18** Force India and Sauber drop their EU complaint against F1's governance and payment structure

**28.01.18** McLaren's Fernando Alonso finishes 38th at the Daytona 24 Hours with brake problems



**01.02.18** Liberty abolish 'grid girls' from start of 2018 season





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**WILLIAMS INSIST SERGEY SIROTKIN WAS HIRED BECAUSE HE WAS THE BEST AVAILABLE DRIVER, ALTHOUGH HE HANDILY BRINGS A BUDGET OF AT LEAST £13 MILLION**



According to the data, Sirotkin was quicker than Kubica at the Abu Dhabi test, but still slower than Massa

**03 Falling sponsorship revenues** is one of the factors pushing the less successful teams towards pay drivers, such as Williams' Lance Stroll, whose three-year deal enters its second season in 2018.

The Canadian's new team-mate was finally confirmed in mid-January, as Russian Sergey Sirotkin got the nod over Robert Kubica. The Pole, passed over after a less-than-convincing performance during the post-season Abu Dhabi test last November, is being given another chance to prove he can make a comeback from the debilitating injuries he suffered in a rally crash in 2011. His reserve driver role will encompass some tests and a number of Friday practice outings.

Williams insist Sirotkin was hired because he was the best available driver, although handily he brings a budget of at least £13m. Add that to Stroll's budget of at least that much again and Williams are well set, financially at least. The competitiveness of that driver pairing remains to be seen, however.

Sirotkin may have been quicker than Kubica in the Abu Dhabi test, but Williams' calculations said he was still about 0.4secs off the pace Felipe Massa, now retired, had produced in the race.

Sirotkin, a former Renault reserve driver, is also unproven, which means there will be no benchmark for the car's performance. That in turn raises some difficult questions.

Firstly, for Williams themselves: if they qualify 13th and 15th, or wherever, how will they know how much of that deficit is the car? Equally, if they are trying to attract a higher-level driver for 2019, which they surely must be, how will that driver know what he is letting himself in for? Kubica's involvement should at least allow Williams to establish some consistency of baseline performance, through his work in the simulator and on track. He is renowned as a fastidious and

relentless technical development driver.

Williams expect to make a step forward with the first car designed under new technical chief Paddy Lowe, who joined from Mercedes last winter. But they also face a tough challenge from the resurgent Renault and McLaren teams. Their raw driver line-up is inevitably going to make judging progress harder than it might otherwise have been.



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- Q1** At which two races did Pascal Wehrlein score Sauber's only points in 2017?
- Q2** Of Jackie Stewart's three world titles, which one did he win by the biggest points margin?
- Q3** Who was the only driver to win an Australian GP at Adelaide for two different teams?
- Q4** True or false: Valtteri Bottas is the last driver to lead a lap of a GP in a car that wasn't a Mercedes, Red Bull or Ferrari?
- Q5** Who was the last Japanese driver to race in Formula 1?
- Q6** Who were the only race winners in the first season of Formula 1, discounting the Indy 500?
- Q7** What was unusual about Mercedes' points tally in 2017 compared to their titles between 2014-6?
- Q8** Of the seven other finishers in the sole Dallas GP, in 1984, how many were on the same lap as winner Keke Rosberg: 1, 3, or 6?
- Q9** Excluding wins, who had more podiums in 2017, Mercedes or Ferrari?
- Q10** What was the first season in which Force India was listed as a constructor?



1 Spain & Azerbaijan 2 1971, by 29 points 3 Gerhard Berger 4 True, the 2015 British GP for Williams 5 Kamui Kobayashi 6 Farina & Fangio 7 It was the first time they won scoring under 700 points 8 1 9 Ferrari (15 to 14) 10 2008





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# DAN GURNEY

1931-2018

**Cut from the same** gifted but wilful cloth as his contemporaries Stirling Moss and John Surtees, Dan Gurney, who died aged 86 on January 14, forged his own quietly determined path during a motor racing career of which Formula 1 was but one facet. And, just like Moss and Surtees, he leaves a parallel track of what-might-have-beens alongside his remarkable accomplishments – which include, as well as four grand prix wins, taking Sir Jack Brabham’s first win as a constructor, playing a key role in the mid-engine revolution at Indianapolis, pioneering the full-face crash helmet, and saving the McLaren team from implosion after Bruce McLaren’s tragic death.

Speaking to the US writer Robin Miller after Gurney’s death, Mario Andretti said: “If Dan would have driven for Lotus or Ferrari he’d have been a multi-world champion. But he did it his way, be it Formula 1 or Indycars, and he paid dearly. But you have to admire him for that. In my book he was a world champion. He just didn’t have the trophy.” ▶

LAT IMAGES





**“EVERY TIME A DRIVER IS SAVED FROM INJURY BY A FULL-FACE HELMET, OR SPRAYS CHAMPAGNE, HIS LEGACY LIVES ON”**

A tradition is born: spraying champagne after victory at Le Mans in 1967. Many have since followed suit, but Gurney was the first

Approaching maturity as his family moved from New York to southern California during America's post-war economic boom, Gurney became entranced by the hot rod scene that would later inspire cinematic tales such as *The Devil On Wheels* and *Rebel Without A Cause*. It was here that he would first demonstrate both extraordinary bravery (though he would later serve in the Korean War) and engineering aptitude, falling just shy of 140mph on the Bonneville Salt Flats in a self-built car aged 19.

Sportscars would provide Gurney's entry to European single-seater racing, though his career almost fizzled out before it began. In 1957, after a handful of sportscar races, he was among a small group of up-and-coming drivers (Richie Ginther was another) invited by Californian builder Tony Parravano to audition for a race seat in one of Parravano's Ferraris during a test session at

Willow Springs. Gurney spun off, damaged the car, and was instructed to take his leave.

A win later that year at Riverside, in a Corvette, rebooted his career in that it caught the eye of Frank Arciero, another property developer and racing enthusiast. A series of wins in Arciero's 4.9-litre Ferrari-engined special set the grapevine buzzing, and Gurney received a call from Luigi Chinetti – Ferrari's US importer and double Le Mans winner – to drive a North American Racing Team Ferrari in Europe.

Gurney's pace and finesse earned him the attention of Enzo Ferrari, who was in the market for new drivers following the deaths of Luigi Musso and Peter Collins and the retirement of Mike Hawthorn. During a multi-discipline test at Monza he did enough to earn a drive in the 1959 sportscar world championship, wherein he won the Sebring 12 Hours (sharing with Phil Hill,

Olivier Gendebien and Chuck Daigh) and led at Le Mans, partnered by the legendary Jean Behra. Then, in spite of bending a Dino 246 in testing at Monza, Gurney found himself completing a five-car Ferrari entry in the French GP at Reims.

The 1959 race in Champagne country was usually blessed by fine weather but 1959 was a scorcher. As the track surface melted and broke up under the pitiless sun, Tony Brooks and Phil Hill took advantage of the 246's straightline pace to notch up a Ferrari 1-2, Behra blew his engine in pursuit, and Gurney, in what was only his 31st car race, retired when one of the loose chunks of bituminous aggregate punched a hole in his radiator. Hours later, Behra punched team manager Romolo Tavoni in the face and earned himself the sack, inadvertently stitching Gurney into the team's line-up for the following races.

Securing a podium in only his second F1 race, the peculiar two-part German Grand Prix at Avus, gave Gurney confidence that he could make it at this level, but not with Ferrari, not for now; his keen mechanical eye could discern that front-engined cars were going the way of the dodo. Gurney went to partner Graham Hill at BRM in 1960, was immediately shocked by the poor quality of his machinery, and famously the two threatened a strike unless a management reshuffle placed a competent engineer at the design helm. A brake failure at Zandvoort that sent him vaulting over the dunes, breaking his arm and killing a spectator, hardened Gurney's resolve. Hill would persist with BRM and be rewarded with the world championship in 1962, while Gurney threw in his lot with Porsche.

It ought to have been a perfect match, for Weissach's engineers were single-minded





Just a year after the team's debut, Gurney took his own creation, the AAR-Eagle, to victory in the 1967 Belgian GP at Spa



and strong-willed but HQ's commitment to single-seaters was on-off, and the programme terminated in 1962 with just one win on the board. In '61, in the four-pot car, Gurney had only been thwarted by Giancarlo Baghetti by 0.1s in a tense slipstreaming finale at Reims; in '62, with the French GP at Rouen, he won by a lap.

That year he also completed his rookie orientation at Indianapolis, clocked the fact that it would be a fertile hunting ground for a mid-engined car, and paid to fly Colin Chapman out there to see for himself. Sold! Problems would put paid to the Lotus-Ford Indy 500 entries in 1963 and '64, but Gurney's prescience paved the way for Jim Clark's eventual victory in '65.

Having secured the first two F1 victories for Jack Brabham's eponymous team in '64, Gurney was emboldened to start his own organisation, All American Racers. Perhaps he was trying to

do too much at once with too little budget in running USAC and F1 campaigns, one with a quad-cam Ford V8, the other with a bespoke Weslake V12 designed to suit the new-for-1966 3-litre formula. Len Terry's exquisite Eagle TG1 is rightly considered to be among the most handsome grand prix cars of all time, but the Weslake engine's shortcomings would confine it to just one world championship victory.

In the non-championship Race of Champions at Brands Hatch in March 1967, the TG1 delivered Gurney to victory at the outset of what would be a gilded multi-disciplinary season for him. The prize was 100 bottles of champagne; perhaps he wasn't sure what to do with it, for under three months later, atop the podium after securing Ford's second Le Mans victory, he put his thumb over the top of the bottle, shook it... and a tradition was born. The following weekend

he won by over a minute at Spa in the AAR-Eagle, one year on from his team's F1 debut.

Lack of funds prompted Gurney to shutter his F1 effort in 1968 but AAR raced on in various formulae, and Gurney campaigned in all manner of machinery until he hung up his (full-face) helmet in 1970. Bruce McLaren's death was the tipping point, but he stepped in and galvanised the team following Bruce's accident that June, winning the first CanAm race of the season less than a fortnight later and filling in at GPs until a clashing sponsor nixed his involvement.

Gurney energetically pursued new projects, including the unusual Deltawing sportscar and Alligator motorcycle, until the end. But it is only an end of sorts: every time a driver is saved from injury by a full-face helmet, or sprays champagne in post-race exuberance, his legacy lives on. 🍾



Stuart Codling





# THE RACER'S EDGE

PETER WINDSOR

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## A MECURIAL TALENT AND A SUPREME YEAR

**It began in the deep winter**, on the Col de Turini, in the third week of January, 1968. Inside his red Porsche 911, Vic Elford, in silver Les Leston Nomex overalls, checked once again that the heating was turned up full. He hated the cold – but loved the snow and ice. They were his friends; he used them to his advantage when others would back away. Vic would relish the high-speed oversteer, the tip-toeing through the mountains on a narrow ribbon of grip, the balancing of the steering and throttle, David Stone to the right of him, rock faces to the left. The previous year on the Monte, with an obscure tyre regulation making it impossible to switch rubber, the heavy snow on the last night had stolen a victory. This year, with only light snow forecast and no rules to thwart him, he was on full racing rubber.

Vic stubbed out a last cigarette, selected first and crept forwards. It was time. After just over a year as a Porsche factory driver, here was the moment.

Then they were away, with Vic feeling the grip of the race Dunlops even as the first, fast kink flicked him onto opposite lock. The front-wheel-drive

Mini Coopers would thrive in these conditions but Vic had always been a rear-wheel-drive man. Caressing oversteer: that was his trademark.

By the end of that 26 kilometre, 17 minute opening stage, Vic Elford had pulled out more than a minute over his nearest rivals. No-one could believe it. Yet it was real. David Stone never wavered. The 911 was perfect. And Vic, a first-class journalist with *Autosport* in his early days, would later write in his autobiography, “As we crossed the finish line, I felt that I had never stretched myself, particularly my nerves, to such an extent before. It took me three attempts before I was able to light a cigarette...”

**Cigarette in hand, Elford relaxes in the drivers' parade, prior to his F1 debut in France**



Elford's 1968 was spectacular with victories on the Monte (right), the Targa Florio (far right), and the Daytona 24 Hours (below right), and a fourth on F1 debut (below, far right)

On Monday, Vic was up early, taking a connecting flight from Nice to Paris for the long-haul trek to Miami.

Vic had not raced before at Daytona; all he knew was that the circuit was in Florida. And yet here he was, preparing to race a yellow-coded, long-tail factory Porsche 907 in the Daytona 24 Hours. His overalls were still damp from the Monte; the trophy bulged in his overnight bag. He lit another cigarette, then sat back. He desperately needed some sleep.

Vic was instantly quick in the 907 – the fastest racing car he'd ever driven. And his judgement was perfect as darkness fell in Florida. Masten Gregory's Ferrari blew its gearbox and sprayed oil across

the circuit. Gerhard Mitter, in another 907, spun wildly into the wall, upside down. Vic, just behind Mitter, weaved and dodged and emerged unscathed.

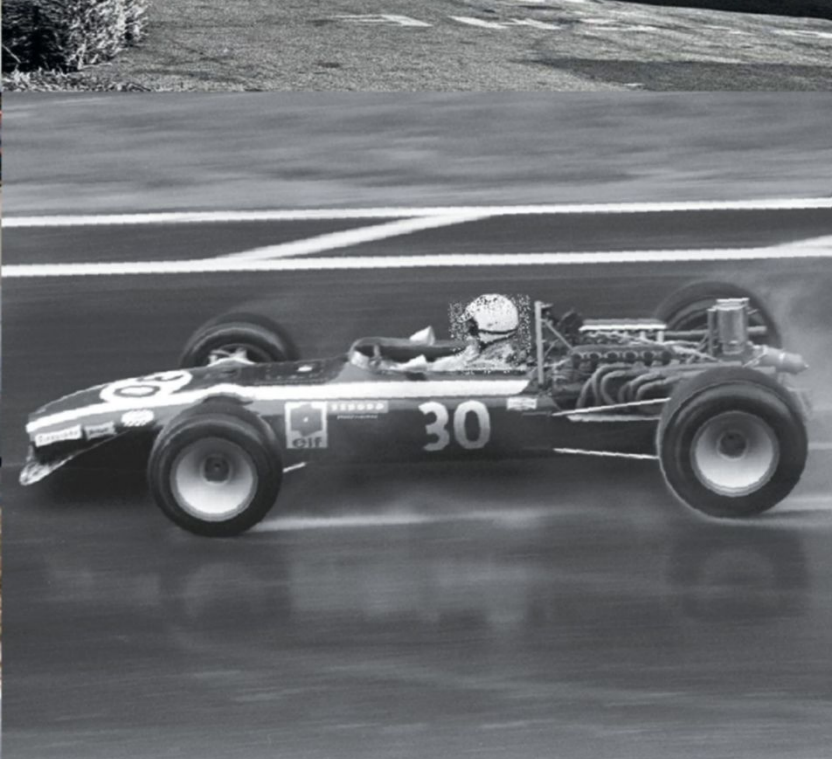
He and Rolf Stommelen were leading easily as the end approached. Huschke von Hanstein, who had given Vic his first chance at Porsche in early 1967, then asked Vic the impossible: would he and Rolf allow Jo Siffert and Hans Herrmann to drive a few laps in the lead car so that they could also be a part of the winning team? Vic agreed without hesitation. It was Porsche's first long-distance sportscar victory of any kind.

“Incredibly,” Vic wrote later, “the winning garland was big enough for all of us to fit in it together...”

Vic had finished third at the Targa Florio in 1967, driving a works 910 – and had learned then how to apply his razor-sharp feel for what was coming next: “While most drivers would drive round and round, hoping to learn a little more each time, I would drive a couple of laps at a fairly brisk speed and then stop for a coffee while I went over it all in my mind. Then I would go out again and talk out loud, describing in advance everything that was coming...”

In 1968, Vic drove a short-tail 907 with yellow-and-orange colour-coding as Porsche initiated a whole new era of car graphics and livery. Vic lost 18 minutes on the opening 72 kilometres lap due to wheel nut problems. Yet the closing stages of the race were another Col de Turini as he closed in on the factory Alfa of Ignazio Giunti/Nanni Galli, and then by three minutes scored one of the greatest Targa





victories of all time. “As I entered parc fermé I felt totally drained,” he wrote later. “Two mechanics had to lift me out of the car...”

Then, in a break from a car-orientated tradition, Porsche would feature Elford’s ecstatic, winning expression on their victory poster a month later.

It wasn’t over: Vic cajoled BRM into giving him a Formula 1 test at Silverstone just a few days after the Targa. As a result of that, Cooper offered him a drive in the French GP on July 7.

The Cooper-BRM was a cumbersome and ill-balanced F1 car; on the perilously fast Rouen circuit, Vic qualified on the last row alongside another rookie – France’s Jo Schlesser, who was racing a new, experimental Honda.

It was wet, though, on race day. It was Vic Elford weather. He chose to race shallow-groove Dunlops, figuring that he could handle the heavy wet via his natural skill and could benefit with track position if the rain began to ease. He looked across at Schlesser’s car. A local boy desperate to impress, Schlesser had chosen the wet tyres.

On lap three, on a full load of fuel, Schlesser lost the Honda on a fast, downhill sweeper. The magnesium-chassis car exploded into flames, incinerating the driver in full view of the public – and of the other drivers, who, for lap after interminable lap, slowed to a walking pace as they passed the carnage before accelerating again back up to racing speed.

The weather didn’t improve. Vic kept his goggled head down. He found the grip off-line. He never lost focus for two hours and 25 minutes, despite Schlesser, despite the incorrect tyre choice.

And by the end of it he was fourth. In his first Formula 1 race.

**“ THEN, IN A BREAK FROM CAR-ORIENTATED TRADITION, PORSCHE WOULD FEATURE ELFORD’S ECSTATIC, WINNING EXPRESSION ON THEIR VICTORY POSTER A MONTH LATER ”**

Vic would go on. Two weeks after the Targa he would win the Nürburgring 1,000km in the new Porsche 908; in August, he would qualify the unwieldy Cooper fifth for the German GP at the same imposing venue.

Nothing, though, in motor racing history will match those heady times from mid-January to early July, 1968. In rapid succession, Vic Elford won the Monte Carlo Rally, the Daytona 24 Hours, the Targa Florio and finished an emotional fourth in his F1 debut on one of the world’s most dangerous circuits. In the rain and the snow, on road circuits and ultra-fast ones and through those endless nights.





# THIS F1 LIFE

PAT SYMONDS

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## THE PROBLEMS FACING CIRCUIT DESIGNERS

**When we debate** how to create more exciting racing, the focus inevitably falls on the cars themselves – but there are many other elements of our sport that have primary influences on the spectacle. One of the most significant of these is the design of the circuits.

Many have already earned unfavourable reputations, such as Abu Dhabi for its lack of overtaking and Sochi for its unique effect on tyres. So why can't we come up with a recipe for circuit design that provides the parameters necessary for exciting racing?

If only it were that simple. Circuit designers labour under many constraints, not all of which are visible to the spectator. The current leader in the field of circuit design is Hermann Tilke, whose company has now built or modified 75 circuits around the world, 12 of which are on the 2018 Formula 1 calendar.

The design and construction project required to commission a new circuit is enormous. From beginning to end will take up to three years, and at its peak may employ 3,000 construction workers.

When one considers how much the performance and the rules of F1 can change in that three-year construction period – let alone the lifetime of the track – one starts to understand some of the problems a circuit designer faces.

A track layout isn't limited only by the designer's imagination. The project is boxed in from all sides: the potential for noise and environmental impacts, local planning constraints, the size and shape of the plot allocated for construction, the topography of the site, and the local infrastructure surrounding it.

Let's face it, no one is going to allocate prime land near a city to a race track. Shanghai, for

**Austin's USGP circuit suffers from a movement of underlying clay that leads to new bumps each year**



example, was built on poor-quality reclaimed swampland, of low value owing to its unsuitability for building; until the city's rapidly expanding limits caught up, it was miles from anywhere and remains remote from the centre. The Circuit of The Americas suffers from continual track movement owing to the process of solifluction, a movement of the underlying clay on which the circuit is built, which leads to new bumps appearing each year.

Venues also have to be used by many other non-F1 disciplines in order to be a viable business proposition, and that can place yet more constraints on design. MotoGP's governing body forbids kerbs over 2.5cm in height (a minor disturbance for a touring car and

insignificant even for an F1 car).

Many circuits derive vital income from track days, and participants in this type of activity don't like gravel traps since they cause frequent delays as errant vehicles are retrieved from unplanned resting places. So while many observers say gravel traps are the answer to enforcing track limits in F1, they provide problems for other users.

The track surface itself also has a major influence on racing. Tyres have two mechanisms of grip. The majority of grip is hysteretic and relies on the tyre deforming over the larger structure of the aggregate that forms the surface layer. The second, and lower, level of grip comes from the chemical adhesion of the tyre to the surface of each piece of aggregate. The hysteretic grip therefore is a function of the macro-roughness in the one to 10mm range, and the adhesive grip is a function of the micro-roughness in the 10mm to one micron range.

This first mechanism not only provides the majority of the grip but is also accountable for tyre wear; and that in turn is responsible for the reduction in tyre bulk temperature that leads to unrecoverable degradation. So to promote good racing through high tyre wear we therefore require a coarse aggregate.

Sochi, for example, has a very smooth surface, and although it yields quite high grip it doesn't degrade the tyres, which means the cars have a similar performance profile throughout the race. This isn't conducive to exciting racing. ▶



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The Bahrain International Circuit features a very coarse track surface made from greywacke stones shipped over from a Shropshire quarry



LAT IMAGES: GLENN DUNBAR, STEVE ETHERINGTON

“ VENUES ALSO HAVE TO BE USED BY MANY OTHER NON-F1 DISCIPLINES IN ORDER TO BE A VIABLE BUSINESS PROPOSITION, AND THAT CAN PLACE YET MORE CONSTRAINTS ON DESIGN ”



Bahrain is one of 12 tracks on the 2018 Formula 1 calendar that have been built or modified by Tilke

Why is it like this? The answer illustrates how the advice of circuit designers is sometimes ignored: the owners of the track were insistent that the track surface had to be the same as the very smooth road surfaces found in the remainder of the Olympic village around which it was built.

Bahrain, on the other hand, provides an excellent surface. This is because it was decided that to mitigate the effects of the sandstorms that would cover the track with slippery dust, a very coarse, hard, open aggregate would be used.

The stones for this, called greywacke, came from a small quarry in Shropshire and were shipped to Bahrain in spite of the enormous cost relative to using a local aggregate. As a further measure to prevent sand ingress, the builders sprayed nearby dunes with glue to seal the surface.

When money is less of an object some remarkable things can be achieved. So how much does a circuit cost to build? The budget for Bahrain was \$150 million, but that was 14 years ago.

The extreme was Abu Dhabi. This was built on reclaimed land and included a luxury hotel and marina. The total project is said to have amounted to \$1.3 billion. More typical is COTA in Austin, which cost \$271 million and provided an exciting modern circuit without excessive infrastructure costs.

Since the fabric of the asphalt has such an impact, why can't a track such as Sochi just be resurfaced with a more aggressive finish? The answer lies in cost. At just over 5.8 kilometres in length and with an average width of 14 metres, it has a surface area of around 82,000 square metres. At a cost of around \$15-20 per square metre, the near \$1.5 million required is a lot even by Russian standards.

So as we move toward a new era where entertainment will be top of the list for Formula 1 races, we need to remember that the best car design and the most intelligent sporting regulations can easily be negated unless we also look at the ground beneath our feet.



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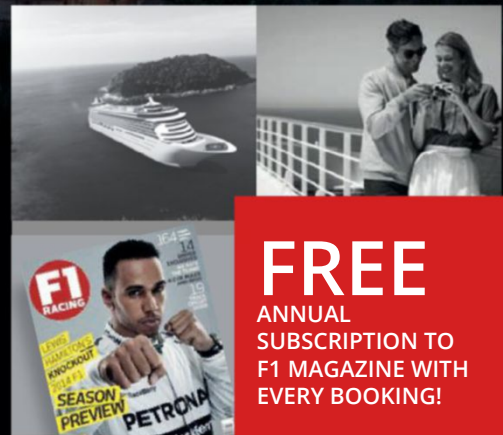
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# STRANGE TIMES

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## CAN FORMULA 1 BUDGETS EVER BE CAPPED?

Somehow it feels like *déjà vu* all over again, to quote Yogi Berra, the great New York Yankees baseball catcher. Berra had a reputation for mangling English as a player and manager, but maybe he was on the money with this one.

As if Martin Whitmarsh, the former McLaren chief executive, making a comeback to Formula 1 was not enough of a trip down memory lane, he is charged with taking us back to the hapless concept of the Resource Restriction Agreement.

The premise is simple: the ten teams spend astronomic amounts of money on staff and technology to devise stuff that has no use to anyone outside of Formula 1. There are chaps with PhDs and Masters degrees, who might otherwise be employed on space-programme research, but instead sit hunched in front of a windtunnel blowing over bits of carbon fibre. They tell me that a lovingly crafted front wing of an F1 car can cost as much as £200,000 and the teams go through dozens of them in a season. Madness, eh?

The result is an arms race on an alarming scale that has allowed the biggest and best-funded



**Max Mosley and Jean Todt clashed over budgets, though Mosley backed Todt as his FIA successor**

teams to race away with all the prizes. And all of the money. FIA President Jean Todt, who should know something about this after running Ferrari for more than a dozen years, has asked Whitmarsh to look into how he can force the teams to save cash. I say Todt should know because Ferrari, chief among the big spenders, were in the front rank of opposition cheerleaders when the notion of resource restriction – let's you and me call it a budget cap – was raised in the recent past.

In fact, the RRA could be said to have cost former FIA President Max Mosley – Todt's predecessor – his job. Being Mosley and somewhat impervious to criticism, he went for the jugular and tried to impose an annual spending limit of 40 million Euros, but the teams closed ranks and the row culminated at the 2009 British Grand Prix. I remember being summoned that weekend to a cheerless Silverstone prefab fitted out as an executive box – although presumably for cheerless

and somewhat down-at-heel executives. It was wet and cold (it was Silverstone in June), but the atmosphere was sufficiently charged to warm us up when Mosley called the team principals – led by Ferrari's Luca di Montezemolo and Flavio Briatore at Renault – “loonies” because they would not bend to his will.

That hurt, and their dispute continued to fester until Mosley opted, later that month, not to stand for re-election. His departure was ultimately agreed as a condition for bringing peace to F1's warring factions, although, politician to the last, he soon claimed to be under great pressure to stand once more. Ultimately he resisted the temptation to return and instead lent his backing to Jean Todt.

Somehow, I doubt that a new attempt to curb the excesses of F1 spending will have same entertainment value as the 2009 version. Most of that era's big beasts – Briatore, di Montezemolo and Ron Dennis among them – have left the jungle. The players now are a good deal more polite, altogether more corporate animals.

A second attempt at budget control was attempted, this time a voluntary code introduced by the Formula One Teams' Association, headed by Whitmarsh. But within weeks, Ferrari and Red Bull had walked out of FOTA and were decidedly iffy about handing over their accounts. According to one very reliable source, they eventually opened their books in a hotel bar and then sat behind the forensic accountants checking the numbers. The suspicion, of course, was that they were spending like drunken Lottery winners while the obedient teams were on a bread-and-water diet.

You'd have to think Whitmarsh knows the loopholes and there is sensible discussion to be had about sharing common components that no one can see, or cares about, to cut costs and slashing the daft amount of time teams spend in windtunnels.

But it feels like looking down the wrong end of the telescope again. Huge budget cuts would inevitably lead to redundancies among hundreds of talented engineers and support staff. Who wants that?

Wouldn't it be easier to end the iniquitous payments system that handed Ferrari an estimated £161 million more than tenth-placed Haas last year, and £9 million more than the Mercedes team that beat them to the world title?

Is that daft, or is it just me? Or is Yogi the only man talking sense?

*Kevin Eason is The Times' former F1 correspondent*



# HALO AND WELCOME TO THE FASTEST EVER FORMULA 1

WORDS PAT SYMONDS AND JAMES ROBERTS

MAIN IMAGE WILLIAMS F1

Few Formula 1 technical changes in recent years have been as divisive as the introduction for 2018 of the halo head protection device.

It has been variously branded as “hideous” and as something that will herald the death of spectator interest in F1. Others, not least FIA President Jean Todt, are adamant in their conviction that it will help *secure* motorsport’s future in an ever more safety-aware and litigious society.

Regardless the halo – or a refined future iteration of it – is here to stay and more optimistic readers will surely become used to it, as they have in the past to skinny cars with grooved tyres (1998); high noses and ‘anvil’ engine covers (2010); stepped noses (2012)... even the ghastly ‘anteater’ nose of 2014. (No, scratch that, we never got used to the ‘probe’.)

Much more excitingly, F1 2018 is going to be *fast*. Last year fatter tyres, wider track and better aero combined to increase cornering speeds by up to 20mph. This year,







Pirelli's aggressive new 'hypersoft' could shed a further second from lap times compared to last year's ultrasoft compound.

There's much else to get excited about; the return of the French and German GPs; Alfa's return with Sauber; fan festivals; new race drivers and the still-hard-to-believe comeback of Robert Kubica, as Williams reserve.

Much, then, to get the racing juices flowing – but first, some technical nitty-gritty from our own Pat Symonds.

## HEAD START

**The halo, or to use its official name, the Additional Frontal Protection (AFP), has had a reasonably long gestation period, with several different solutions having been evaluated.**

The need for additional driver head protection in open-cockpit cars has been the subject of debate for many years. But perhaps Henry Surtees' fatal Formula 2 accident at Brands Hatch in June 2009 and the significant injury suffered by Felipe Massa in Hungary a month later, when he was struck on the head by an errant spring from the car he was following, accelerated the quest for a solution.

In November 2010, after a further incident between Michael Schumacher and Vitantonio Liuzzi on the opening lap of the Abu Dhabi GP the previous month, FIA race director Charlie Whiting told Formula 1's technical working group that he wanted a solution found. In the Abu Dhabi accident Schumacher had spun and was facing the wrong way when Liuzzi hit his ▶



## THE RED BULL AEROSCREEN

**For** vision

**Against** not rigorously tested

## FIRST IMPRESSIONS

"The engine and everything sounds a bit different, you don't have the interference with the wind. In all honesty the vision is alright, that seemed OK, so first impressions were fine. It was definitely driveable." **Daniel Ricciardo**

stationary car. Liuzzi's Force India effectively climbed up the monocoque of the Mercedes coming to rest very close to Schumacher's head. It showed that increased frontal protection was required to mitigate the effect of a number of different scenarios.

Initial research by teams, together with the FIA Foundation, focused on providing a device that could deflect a wheel and tyre assembly away from the driver if it were to be projected toward his head. While the introduction of wheel tethers has significantly reduced the likelihood of this happening, it provides a standard with which to assess design concepts which are viable in a wider variety of scenarios.

# BACK TO THE DRAWING BOARD

So it was that a tubular structure was chosen – although when this became public knowledge, the reaction from fans was intense enough to provoke a return to the drawing board and the development of a small transparent device which came to be referred to as the shield.

This was a smaller and less structurally comprehensive device, incapable of withstanding the forces associated with deflecting an errant wheel. It was designed, instead, to deflect lightweight objects such as that which had caused injury to Massa. But

when Sebastian Vettel declared he had inadequate vision through a test device, it was quietly put away, and the halo was thus declared the only viable solution to the problem.

At this point, in early 2016, there was still hope of a 2017 introduction but this timescale proved too optimistic and after further development Halo 3, the current model, was cleared for 2018 introduction.

It has been rigorously tested and risk-assessed by the FIA. Every scenario was investigated, from the obvious – an object hitting the AFP – to the less likely such as might have occurred in the Schumacher-Liuzzi contact. In this type of accident, could the sharp part of the forward floor of Liuzzi's impacting car be snagged on the hypothetical halo of Schumacher's car, breaking off and acting as a blade, which might then impale the driver? ▶





## THE FERRARI SHIELD

**For** fan choice  
**Against** driver extraction

## FIRST IMPRESSIONS

"We had a run planned with it, but I didn't like it, especially looking forwards because of the curvature. It had a lot of distortion and I got a bit dizzy. There was a lot of downwash coming off the back of my helmet and pushing my head forward, so we decided to take it off." **Sebastian Vettel**

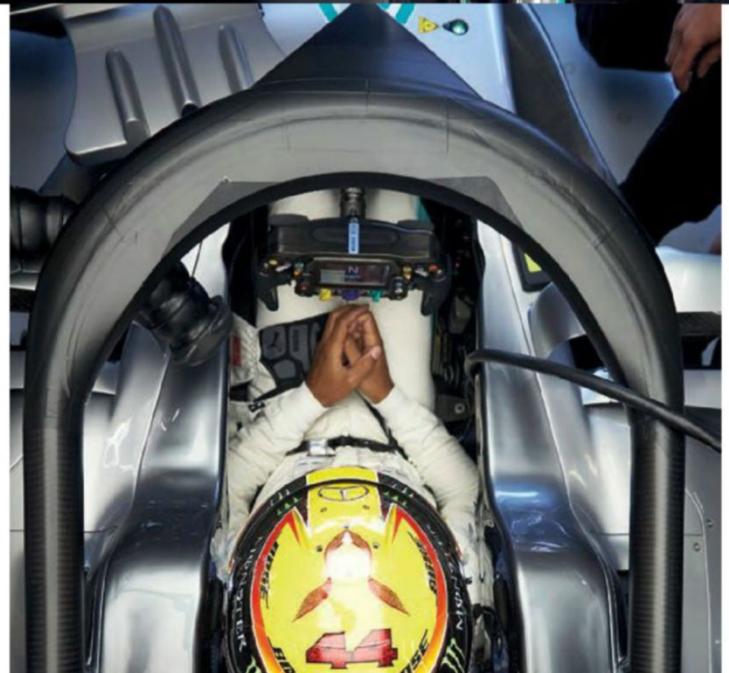


## THE FIA HALO

**For** 17 per cent survival increase  
**Against** looks

## FIRST IMPRESSIONS

"I barely noticed it, apart from in the garage when I couldn't see the TV (timing) screen. It blocks a bit in the mirror, but going forward I didn't notice it. It doesn't look good, but when you go back to that 17 per cent, it's better than nothing." **Lewis Hamilton**





**HEAVY LOAD** Teams now started to undertake the practicalities of installation – no trivial task. Their initial aerodynamic studies indicated the halo would definitely have a detrimental effect on engine inlet airflow and any high-mounted ducts for cooling were also suffering. An allowance of a light composite 20mm fairing on the halo helped to divert the flow and minimise this effect, as well as controlling the halo wake, which is projected rearward toward the rear wing.

Much more significantly, designers have had to consider how to strengthen their 2018 monocoques to cope with the tests involved in signing off the halo installation. These consist of two loads which have to be applied to the structure once fitted to the chassis. Here, the AFP will also act as the secondary roll structure.

Test loads apply a resultant force of 125kN to the device – equivalent to resting the anchor of the Queen Elizabeth II on top of the halo.

**WORTH THE WEIGHT?** This is a stressful time for teams: even a small error in manufacturing can lead to the catastrophic loss of a chassis and a significant set back in the development programme, which might take months to recover from.

Halo testing has been carried out under FIA supervision, with loads applied via a powerful hydraulic ram onto a fully homologated Halo 3 structure – each one costing £12,500. To pass, it must be shown that the structure can withstand 150kN and the ability to resist such loads comes at a cost. While the tubular part of the halo weighs 5kg, the teams estimate a further 5-7kg of carbon fibre and inserts need to be added to the chassis.

For 2017, the minimum weight limit was increased from 702kg to 728kg, to account for the increased width, tyre sizes and fuel capacity, as well as the halo that was supposed to be introduced.

Even so several teams still struggled to hit that target and this year we'll likely see more of the same, so drivers will once more be forced to shed body weight.

**TRANSPARENT SOLUTION** It's unlikely the halo we see in 2018 will be the ultimate AFP solution, although the various transparent devices trialled already bring their own problems – even if they do look cool and futuristic. And while the engineering and operational aspects of screens could and would be overcome, screens do have one major negative: they tend to hide the driver. No-one will pretend the current system is aesthetically pleasing and the cost of developing alternatives cannot be ignored. But that shouldn't preclude the possibility of the design being better integrated in future.

Indeed, F1 will undoubtedly see some major visual changes to the cars in 2021 when the first fruits of the work being done by the FIA with input from FOM bear fruit. It should be feasible to achieve a design in which the

AFP appears to be an integrated part of the chassis, rather than something that happened to land on an F1 car. The concepts of a frontal roll-hoop structure and a clear cockpit canopy were both extensively evaluated before halo was settled upon as the best AFP solution.

Indeed, early tests in 2011 were on an F16 aircraft canopy. These FIA tests fired a wheel assembly directly at the canopy. It had been calculated that the energy of impact in Henry Surtees' accident was around 40kJ – equivalent to a 20kg wheel assembly impacting at about 140mph. The F16 canopy was designed to withstand a 73kJ bird strike. To put this in context a helmet visor can only withstand an impact involving energy of about 500 joules, around 1.25 per cent of the requirement of the halo.

From these tests it was obvious that stopping an errant wheel was impractical: the energy involved implied a force of nearly 40 tonnes would be applied to the structure. Deflecting the wheel over the driver's head, however, reduced the load to around six tonnes. This is still a significant force, equivalent to a fully-grown elephant sitting on the structure, but one designers felt they could manage.

It was further decided at this time that a fully closed canopy was not desirable either from the recognition of F1 as an open-cockpit formula or from the standpoint of safely extracting a driver after an accident.

While this work was going on, Red Bull continued to develop an open-screen concept. This consisted of a 30mm thick laminated canopy which was subjected to intensive FIA testing. Mercedes and Ferrari meanwhile championed a tubular structure.

Unfortunately, with two different concepts and considerable testing and development required, the project was in danger of turning into a never-ending science project and some decisions had to be made. Around this time the canopy suffered a catastrophic test failure which, although perfectly capable of resolution, polarised opinion with deadlines looming.

## A NEW LOGO

At the end of last season, as the Abu Dhabi GP podium celebrations ended, a new 'F1' logo was unveiled by the sport's owners, Liberty Media.

The replacement of the 'Flying F' logo that had been used since 1994 was as clear a break from Ecclestone-era F1 as had been seen all year and despite initial fan backlash, Liberty's marketers argued that the previous '1' on the old logo occupied a "negative space".

Commercial chief Sean Bratches explained: "A number of brands are trying to simplify their marks as they enter the digital space. We are relaunching the brand and we are also going to





introduce a new graphics package for our television production.”

The new visuals are said to represent two cars rounding a corner reaching for a finish line. It remains to be seen whether the new ‘F1’ will be deemed to be a winner.

## FAN FESTIVALS

First introduced at the Spanish GP last year, a new fan zone featured pitstop challenges, simulators and driver appearances. Formula 1 is planning to introduce more of these events in the centre of five cities – Melbourne, Shanghai, Berlin, Marseille and Miami – ahead of the Australian, Chinese, German, French and US Grands Prix.

F1 bosses had also hoped to stage a ‘season launch’ at the first test in Barcelona, but encountered resistance from teams, who argued their new

cars would not be ready in time.

Not all of the festivals will feature London Live-style car demos, as funding for them has not been settled (ie teams are pushing back against paying for their involvement). One race promoter told *F1R* that street demos don’t automatically help their associated grands prix, as some fans choose to get their F1 ‘fix’ for free, rather than paying to attend the race. ▶



Getting F1 closer to the fans: more events like F1 Live London are planned for 2018



F1 heads to Paul Ricard for the first time since 1990, marking the return of the French Grand Prix



## NEW RACES

This year's Formula 1's calendar swells to 21 rounds, as the French Grand Prix returns after a ten-year hiatus. But rather than return to the unloved Magny-Cours circuit, Paul Ricard will once again host the action, for the first time since 1990.

Built in the late '60s by the man behind the famous pastis, the circuit hosted 14 F1 races between 1971 and '90. Following Ricard's death the track was purchased by Bernie Ecclestone in 1999 and rebuilt. Since then it has been principally used as a test track.

The French event also forms the opening race of the first ever F1 triple-header, with the Austrian and British GPs over the following weekends. Malaysia is no longer part of the schedule, but the German GP is back, at Hockenheim, having skipped a year in 2017 owing to a funding shortfall.

## RETURN OF A LEGEND

In early December, Sauber announced their 2018 drivers – Charles Leclerc and Marcus Ericsson – alongside a car adorned with Alfa Romeo branding. The sponsorship tie-up marks the formal return of a legendary Italian car maker to F1 for the first time in 30 years.

Alfa was part of the original F1 championship in 1950 and Giuseppe Farina won the first drivers' title with Alfa that year – an achievement matched by Juan Manuel Fangio in '51. And had the constructors' title been awarded in those years, Alfa would have won it.

Sergio Marchionne, chairman of Fiat Chrysler Automobiles Group, is keen to use F1 to help the brand recapture past glories. The signing of Leclerc to Sauber-Alfa is part of that plan: he's set for a 'grooming' year at Sauber, ahead of an anticipated elevation to a Ferrari drive in 2019. ▶



## COMEBACK KING

Williams announced in January that Robert Kubica will become the team's 2018 reserve driver, seven years after he suffered life-threatening injuries in a rally accident. Kubica, 33, harboured real hopes of a racing return when he tested for Renault last August and then Williams in Abu Dhabi at the end of the season. But following Williams' race data evaluation, they opted for Russian rookie Sergey Sirotkin.

Kubica's rallying injuries have left him with only partial movement in his right arm, but his role may yet lead to something more: Williams plan to run him in tyre tests and the occasional Friday practice session.

Sirotkin, meantime, brings substantial backing from SMP Bank, estimated to be around £13.3 million. The bank is owned by Arkady and Boris Rotenberg, close associates of Russian president Vladimir Putin. Sirotkin, 22, scored two 2016 GP2 wins and last year took part in four F1 practice sessions for Renault. He'll partner Lance Stroll, as one half of the youngest driver line-up on the grid.



Kubica (top) is Williams' reserve driver, while Sirotkin (left) gets the race seat; Leclerc (right) is at Sauber



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The number of power units for each driver has been reduced from four to three for the coming season



## NEW ENGINE REGS

The number of internal combustion units (ICU) available to each driver over the 21-race season has been reduced from four to three, which corresponds to a 40 per cent increase in mileage for each unit.

The idea is to force suppliers to make power units more reliable and reduce costs, although manufacturers now have one less chance to introduce a significant upgrade in the year.

However, the increase in each power unit's required lifespan is likely to increase the chance of failures and concomitant grid penalties. Happily, engine penalty rules have been simplified to avoid confusion. Previously, multiple changes to power unit elements resulted in multiple grid penalties; for 2018 any driver who earns a grid penalty of 15 places or more will start at the back of the grid. And if more than one driver is penalised, the order is decided by who changed engine elements first.

In addition, following the controversy over oil burning last season, there has been a subsequent clampdown on consumption. Just one type of lubricant is allowed over a GP weekend and at a maximum consumption rate of six litres every 100km.

LAT IMAGES

## NEW CHASSIS

As well as the introduction of the halo in 2018, there are a number of other minor changes to the chassis regulations. At the rear of the cars, the most obvious change is the removal of the transversally mounted T-wing – the ungainly device that helped aid airflow over the rear wings. Last year there was a loophole that allowed teams to develop the centreline of the car, but that has been closed off for 2018 which means engine covers will feature a small fin, rather than the large shark fins displayed last year.

In addition the 'monkey seat' that was positioned within the rear wing structure has gone for 2018 and the exhaust exit has been shortened.

A stronger front impact test has been introduced and wheels will have three cable tethers to reduce the risk of them escaping from the car.

## MAGNIFICENT SEVEN

2018 is set to be the fastest F1 season in history, thanks to a more aggressive set of tyre compounds. Pirelli have introduced a new pink-walled 'hypersoft' compound, which is a second quicker than the latest ultrasoft – and that is half a second quicker than its predecessor.

Pirelli racing manager Mario Isola has admitted to *F1 Racing* they were conservative with their compounds last season and the aim of the new rubber is to move away from one-stop races.

"For 2018 we decided to move all the range one step softer and to add an additional hypersoft compound," said Isola. "The target is to have more than one stop at races and added to the development of the cars, which could be a second per lap, then we're ready to see new records."

Pirelli will once again make three dry-weather compounds available at every race from the seven-strong range: hypersoft (pink); ultrasoft (purple); supersoft (red); soft (yellow); medium (white); hard (blue); superhard (orange).

Pirelli's F1 supply deal continues until the end of 2019 although Isola added that talks will begin with F1 bosses this year with a view to continuing into 2020 and beyond. "It's not a secret that we are happy with the current situation and we would like to continue," said Isola. **F1**



Pirelli's racing manager Mario Isola unveils the seven new dry-weather compound tyres for 2018





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# ORIENT





# EXCESS

Every year Honda put on a party for their fans: the Honda 'Thank You Day'. F1 Racing joined Jenson Button and Stoffel Vandoorne for this madcap affair

WORDS STUART COOLING PHOTOS  IMAGES: ANDY HONE



Jenson announced his Super GT deal during the weekend – he'll be sharing a brand new NSX (pictured right, in partial disguise livery) with Naoki Yamamoto



**T**he trees haven't yet shed their coat of richly auburn autumn leaves; only the chill, when you step out of the low sun's glare, reminds you that winter holds this hemisphere in its grip. Motegi may not be the most remote race circuit in the world – that honour probably rests elsewhere in Japan, atop the extinct volcano wherein nests Autopolis – but it's admirably bucolic, being a 100-mile schlep from the heart of Tokyo and buried within dense woodland. Next to this, even majestic Spa-Francorchamps seems positively suburban.

For *gaijin* such as we, reaching Motegi is an adventure in itself: the bullet train from Tokyo kicks off at the nearest city, Utsunomiya, a 90-minute bus ride away (when they're running, and if you can get on the right one). Car it is, then, and *F1 Racing's* wheels for the weekend – a cuboid Mazda 'Flair Wagon' hustled along by an enthusiastic 660cc triple – couldn't be more Japanese. Arriving well after dark, we're only aware of the terrain's gradual incline over the last 20 miles thanks to the screech-signalling of that industrious engine and its rubber-band CVT gearbox. The vista next morning of this unusual two-circuits-in-one is truly extraordinary.

Jenson Button has been starring at Honda's annual Thanks Day for more than a decade and he's still one of the biggest draws in a show that this year also boasts McLaren's Stoffel Vandoorne, Toro Rosso's Pierre Gasly (here on account of racing for Honda in Super Formula, Japan's biggest domestic single-seater series), Honda-powered Indy 500 winner Takuma Sato and MotoGP riders Marc Marquez and Dani Pedrosa, along with a host of Honda-affiliated domestic riders and drivers.

Judge Jenson's popularity not just on the substantial crowd who've descended on the circuit from far and wide, but also by the eye-gouging array of coloured blocks on a fiendishly complicated spreadsheet that accounts for every



celeb's where-and-when. Each minute of Jenson's next eight hours is spoken for, a frantic rush of fan engagements, demo laps in an immaculately preserved 1991 McLaren-Honda MP4/6, and a handful of races in Super GT machinery, karts, and – ahem – a Honda Jazz; whenever we speak to him, he's rushing from one end of the pitlane to the other, chasing his next appointment.

So you thought Jenson was edging into a comfy retirement? Wrong on all counts. Amid the hustle of the day – shortly after running out of fuel before the end of the Honda Jazz 'economy race' – he casually drops the news that he's going to be racing full-time in 2018 in Super GT, Japan's most popular tin-top racing series. If that sells it a little short, chew on this: the Honda NSX he'll be racing is *blisteringly* quicker than most non-prototype sportscars.

"I'm very excited," he says. "It all started here [Motegi], actually, at the end of 2006. I spoke to Yamamoto-san from Honda and said I'd love to have a go in a Super GT car at the Thanks Day. I didn't actually drive on the day, but they gave me half a day's testing and it was a great experience.

"That led me to saying that I'd like to do the Suzuka 1,000Kms, which I did, and I really enjoyed it, so here we are. Towards the end of 2017 Yamamoto-san asked me if I'd like to do a full year of racing, and I said I'd love to do that.

"On most circuits the NSX Super GT car is 8-10 seconds faster than a GT3. These are super-quick cars with lots of downforce. The straightline speed compared with an F1 car is obviously miles off, but in high-speed corners it's really good. At Suzuka, the Esses are very special."

Inside one of the garages, partially screened





**“I’M VERY EXCITED. IT ALL STARTED HERE [MOTEGI], ACTUALLY, AT THE END OF 2006. I SPOKE TO YAMAMOTO-SAN FROM HONDA AND I SAID ‘I’D LOVE TO HAVE A GO IN A SUPER GT CAR AT THE THANKS DAY’”**

JENSON BUTTON

off from prying eyes and cameras, is the brand new NSX-GT Jenson will be racing this year.

What a beast! Honed in the 60 per cent windtunnel Honda built during their time as an F1 ‘works’ team, the basic outline of the already racy road car is garlanded with dive planes, splitters, skirts and an enormous rear wing. Jenson looks on with some bemusement as *F1 Racing* attaches a GoPro camera to the inside of the windscreen with a suction clamp, having first assured the team’s chief engineer – via the medium of mime – that the clamps are sturdy enough for a human being to use them to climb an invisible glass wall (you can view the footage – of the driving, not the miming – on our sister website [motorsport.tv](http://motorsport.tv)).

As Jenson clambers in, wriggles back in his seat, flexes his gloved fingers on the wheel and

surveys his new working environment, all under the watchful gaze of our camera, there’s a flurry of excitement without as another racing engine – some way distant – clears its throat. It’s Takuma Sato, Jenson’s Honda F1 team-mate many moons ago, about to embark on a historic lap.

Motegi was built almost 20 years ago as a mixed-use destination – out in the country park there’s a camp site and a zipwire, along with driver-education facilities on the campus as well as a museum chronicling Honda’s fascinating vehicular history. The track itself has a 1.5-mile unequal-radius oval, built with the aim of luring NASCAR and IndyCar to Japan, and a three-mile road course weaving into, around and out of the centre of the oval via a pair of tunnels.

Danica Patrick became the first woman to win an IndyCar race here in 2008; and Dale Earnhardt

and his son competed against one another for the first time in a NASCAR Cup race here in 1998, the only occasion on which Japan has hosted America’s top-echelon stock car championship.

But the catastrophic effects of the Tōhoku undersea earthquake in March 2011 – which precipitated the Fukushima nuclear meltdown and accounted for nearly 16,000 fatalities – also reached here, 160 miles away from the epicentre. Measuring nine on the Richter scale, the tremor shifted the entire island of Honshu just over two metres to the east and tilted the earth on its axis; Motegi’s oval circuit was among the smaller elements of collateral damage in the disaster, but it has been out of use ever since.

Until now. While the track has been considered beyond economic repair since 2011, Sato’s 2017 Indy 500 win generated enough ▶



Stoffel Vandoorne joined Jenson to entertain the crowd – driving, amongst other things, a classic McLaren MP4/4 and MP4/6, lovingly maintained on-site



**“THIS YEAR OFF FROM FORMULA 1 HAS BEEN THE BEST THING I COULD HAVE POSSIBLY DONE BECAUSE MY LOVE FOR RACING IS BACK. THE SUPER GT RACE I DID LAST AUGUST [THE SUZUKA 1,000KMS] WAS SO EXCITING”**

**JENSON BUTTON**

excitement and publicity to warrant patching the damaged surface enough for Taku to essay some demonstration laps in his winning car. The celebrated Borg-Warner trophy is also here, having left the US for the first time ever. A reverential silence falls over the 80,000 crowd as they savour the moment: Sato revs the engine, hooks a gear, and guides the sleek blue-and-white Andretti Autosport IndyCar out of the pitlane and up onto the banking.

“There’s still a bit of a bump where the track has been fixed,” he told *F1 Racing* earlier. “So we’ve had to raise the ride height of the car a bit. But I’m so excited to be doing this.”

So too are the crowd, many of whom leap to their feet as Taku essays his victory laps, brings the car in, then completes the display with an enthusiastic series of tyre-smoking donuts.

Despite a third season of rancid F1 headlines for Honda, Sato’s landmark achievement, plus another MotoGP title for the unstoppable Marc Marquez, ensures the Thanks Day remains on an upbeat note. But that’s not to say that F1 has been elided from today’s order of play, just that the occasion lingers on much more cherished *temps perdu*. In the paddock, surrounded by selfie-stick-bearing enthusiasts, a replica (the original is in the Honda Collection Hall) of the dainty 1.5-litre V12-engined RA272 in which Richie Ginther won the 1965 Mexican GP sits under an awning next to a road car in Toro Rosso’s F1 livery – a marker of hope for 2018.

And, in a garage further down the pitlane, two examples of living F1 history, beautifully maintained in working order by the Collection Hall team: a McLaren-Honda MP4/4 and an

MP4/6. Technicians mill around the cars, one now three decades old, the other a mere slip of a thing at 27. The aero might seem blunt and unsophisticated compared with the modern era, but these machines are rich in detail: take, for instance, the stacked gearbox on the 1988 car, which seamlessly transmitted torque from the V6 turbo’s lowline crank without the need for potentially unreliable angled driveshafts.

The drivers care little for these intricacies; they just want to drive: Stoffel in the MP4/4, Jenson in the MP4/6, after a swift dash along the pitlane following the end of the Super GT demo race. “This is my favourite F1 car, ever,” beams Stoffel. “I’d drive it every day if I could.”

“You just wouldn’t believe the power of this thing,” Jenson gushes, gesturing towards the 3.5-litre, 60-degree V12 concealed within the





white-and-red shroud of the MP4/6's all-enveloping rear bodywork.

How the passage of time shifts perceptions. History records that, in period, Gerhard Berger greeted the then-new V12 with something of a 'meh' in testing, prompting Ayrton Senna to stamp his feet and usher Honda back to the drawing board to conjure a more grunty spec which arrived mid-season. By then, Senna had bagged enough wins in the opening races at Williams-Renault's expense – largely through reliability – that he held Nigel Mansell at bay to secure the drivers' and constructors' titles. 1991 was the last time a car with a V12 engine and/or a manual gearbox was the vehicle for those trophies. Indeed, the RA121-E is the only V12 ever to have won F1 world championships.

If Jenson is a touch disappointed that neither

of the cars were ones driven by childhood hero Alain Prost, it doesn't show. Neither do the classic McLarens disappoint aurally: the V6 turbo barks and growls into life before settling into a churlish idle, the inevitable consequence of the ugly firing order; the V12 is simultaneously muscular yet shrill, and fingers-in-ears loud when Jenson dabs the throttle. It's almost a relief as they drive off for a combined lap of both layouts, cheered on by the fervent audience. Appropriately, perhaps, this highlight of the day begins as the sun gradually dips behind the spectator enclosure and the shadows lengthen.

The crowd, though, are too busy applauding Jenson and Stoffel to rage against the dying of the light. They've more than had their money's worth; the Thanks Day, after all, is free to enter.

Jenson, we can predict, will be here for the

next one. MP4/6 parked, helmet off, barely breaking a sweat, he watches approvingly as the technicians swoop to attend the becalmed machine; polishing cloths swat away errant dust particles, and a spotlessly white catch tray is placed delicately under the engine's oil breather pipe, which declines to emit a single drop.

"This year off from Formula 1 has been the best thing I possibly could have done because my love for racing is back," he says.

"The Super GT race I did last August [the Suzuka 1,000kms] was so exciting, there was so much fighting and overtaking, and it was really challenging – there's a lot of manufacturer competition, and a lot of talented drivers. That's what gets you excited, that competition.

"F1? My time was done there, but for racing itself my love is well and truly back." 🍷



# F1'S FASTEST PANORAMIC



WORDS JAMES ROBERTS

PHOTO  LAT IMAGES: GLENN DUNBAR

# PITSTOP

For the second consecutive year, Williams hold the record for the quickest in-race pitstop, a 2.02s on Felipe Massa's car during the British Grand Prix. In a specially composed 360-degree image, we look at who does what...





**1 Left-front wheel off**

Each wheel has three mechanics: one to take the old wheel off, another to operate the wheel gun, and a third to locate the new wheel on the hub. These mechanics make up 12 of the 21 personnel deployed in a pitstop.

**2 Left-front wing adjust**

This mechanic adjusts the flap angle of the front wing, as requested by the driver, to fine-tune the car's aerodynamic characteristics

for different tyre compounds or weather conditions. Another crew member also cleans the rear wing to ensure aero performance isn't compromised by debris caught in the slot gaps.

**3 Front jackman**

Raises the front of the car as quickly as possible when the car stops in the pitbox. A corresponding jackman lifts the car at the rear. There are also spare hydraulic jacks on standby in case of a malfunction.

**4 Controller**

Ultimately responsible for overseeing the pitstop, the controller holds the car in position (by operating the red and green traffic light with remote control) to ensure that the car isn't unsafely released into traffic.

**5 Right-front wheel gunman**

The art of loosening and connecting the wheel nut takes hours of practice. Fixed too loosely, the new wheel could come off; whereas a nut fixed

too tight might be slow to release at the next stop. During the off-season Williams personnel will practice up to 300 times in the factory, and they'll carry out around 70 further drills every GP weekend. That's a total of 1,700 practice pitstops a year.

**6 Right-front wheel off**

Once the nut is removed, the wheel has to be pulled well clear. In 2017 the size of the fronts increased in width to 305mm from

245mm, and the rears went from 660mm to 670mm. Williams's fastest pitstop time in 2017 was a 2.02s (for Felipe Massa at the British GP), compared with their quickest time of 1.92s with the smaller tyres in 2016.

**7 Marker holder**

As a visual aid for the driver, one member of the pitcrew holds a fluorescent chevron marker at the point where the front-right tyre needs to stop in the pitbox.

**8 Left-rear off**

Every member of the crew is trained in another role (in addition to their own), although this will always be on the same side of the car to avoid confusion.

**9 Car steady**

Two people (either side) hold on to the car to ensure it doesn't pivot on its jacks, which would make the tyre-changing process more difficult. Last year, Williams recorded the fastest pitstop in eight of the 20 races.









# HOW THE

# FIA

# RUN A GRAND PRIX



WORDS  
ANTHONY ROWLINSON  
JAMES ROBERTS

PICTURES  
 LAT IMAGES  
LORENZO BELLANCA

A **Formula 1 grand prix** is one of the most complex and sophisticated sporting events staged anywhere in the world. These festivals of human excellence demand the minutely choreographed interactions of thousands of people. Those in charge of making it all happen? The Federation Internationale d'Automobile, motorsport's governing body. And here, thanks to unprecedented access to their normally behind-closed-doors operations, *F1 Racing* showcases their largely unheralded work, without which no grand prix could ever happen. ▶



# THE HEADMASTER'S OFFICE

Race director Charlie Whiting and key lieutenants meet for a briefing every morning of a grand prix weekend. This is what they talk about



The whole team congregates every morning at race director Charlie Whiting's office for a daily briefing to discuss any issues that have arisen

**It's 8.30am, Saturday morning** at Interlagos. FIA race director Charlie Whiting is sitting at his desk in a spacious office. Windows on two sides offer a panorama of the twisting Autódromo Carlos Pace, home of the Brazilian GP.

Filing into his office are the 20 or so white-shirted FIA crew – those collectively responsible

for running the grand prix. Opposite Whiting is deputy race director (and former Toro Rosso chief engineer) Laurent Mekies. Technical delegate Jo Bauer stands with his back to the wall, while sitting amongst the team are FIA stalwarts such as Kris De Groot (responsible for tyre usage) and John Marson (power units).

This is a rare glimpse into the inner sanctum of a grand prix, and Whiting acknowledges it as such: "We have to be on our best behaviour this morning," he smiles. "We're being watched."

First, an update on yesterday from Bauer: "We had no major incidents. There were power unit problems for Toro Rosso. The scavenge pump failed on Brendon Hartley's engine [he came to a smoky halt in FP2], while [Pierre] Gasly had a brand new MGU-H which failed."

A brief discussion follows about a conspiracy theory doing the rounds; it relates to the Renault works team now being just five points behind Renault-supplied Toro Rosso in the constructors' championship. For some in the media, the rash of Toro Rosso engine failures in recent races suggests foul play. Wiser heads point out that correlation doesn't equal causation.

Whiting interrupts the chatter by focusing on the change in the regulations governing work allowed on cars when the race is suspended: "Last year, it was confusing for everyone," he says. "Can we get an update on the weather today?" It'll come at 9am, he's told.

## THE INSIDE LINE MATTEO BONCIANI FORMULA 1 HEAD OF COMMUNICATIONS AND MEDIA DELEGATE



A familiar face in the paddocks of the F1 world tour, Bonciani has the (un)enviable task of trying to keep the grand prix reporting media to heel

### F1 Racing: What is your job?

**Matteo Bonciani:** Primarily I am responsible for all the journalists' accreditation and I co-ordinate all the team PR activities. That could even mean there are disciplinary aspects to the role [in the case of mis-reporting, for example], but primarily the aim of the current administration is to promote transparency and openness with the media.

### F1R: How has your role evolved since you started in 2011?

**MB:** Enormously. At the beginning we had to deal with the prominent and important

commercial rights holder [Bernie Ecclestone's Formula One Management]. In addition we have tried to move the FIA away from being 'the bad boy' – very much with [FIA President] Jean Todt's support.

We have tried to adapt and provide a sort of service and improve the working conditions of the journalists, by working with the promoters, to apply certain FIA rules and guidelines – food and better internet connections, for example.

In the meantime, we've tried to be more open, with a more transparent and clear behaviour.

### F1R: So what is the FIA's message?

**MB:** The FIA is the sport's regulator, the governing body – and we need to say so. I, and others, have tried to progressively open up more of an understanding of what the FIA does. It's no longer the era of journalists receiving declarations of FIA decisions via pieces of paper that land on a desk. The dynamic is much more interactive now – for instance, we arrange briefings for you with people such as the race director. Communications are much more open... Less political, I would say.





Then he adds: “Haas broke the curfew last night.” To which Bauer replies: “I haven’t heard anything...” But then Whiting: “I got an email from [team manager] Peter [Crolla] this morning.” Business is routine and succinct.

Talk follows about deflection tests due to take place in scrutineering after qualifying; Whiting

mentions Mercedes’ new floor, due to run on Valtteri Bottas’s car on Sunday. Despite having wrapped up both titles, Merc are still pushing development, ready for next year’s campaign.

“Incredible the lengths they go to,” says Whiting, directing his comment as much to himself as anyone else.

Finally, Medical Car driver Alan van der Merwe is directed to look out towards Turns 5 and 11. “There’s a shortcut, Alan,” says Whiting. “You can save 30 seconds if you need to.”

With that, van der Merwe compares notes with Safety Car driver Bernd Mayländer and the meeting comes to a natural conclusion. ▶

## THE INSIDE LINE LAURENT MEKIES

F1 DEPUTY RACE DIRECTOR  
& FIA SAFETY DIRECTOR



The man who heads up the FIA’s ongoing safety work – responsible most recently for overseeing research into cockpit protection devices

### F1R: What is your job?

**Laurent Mekies:** Primarily, I look after the safety department of the FIA, which supports all of our championships from karting to F1, from a safety point of view. We try to deliver the best safety level possible for these categories with the help of each championship’s stakeholders.

Our department in Geneva covers pretty much all aspects relating to safety – crash tests, equipment and so on.

**F1R: So you know what’s coming a long time before we see it in racing?**

**LM:** Yes – typically we have about 15 research projects under way. You might have heard about biometric gloves?

### F1R: No, actually.

**LM:** They will give our rescue team in the Medical Car live information about the vital signs of the drivers thanks to biometric sensors in the gloves. So the rescue team would know, for example, if an injured driver has stopped breathing.

### F1R: And at a race weekend?

**LM:** I have a ‘parallel hat’ as deputy race director, whereby I

support Charlie [Whiting] in his sporting functions – beginning with interactions with circuit staff to the running of the stations in race control.

### F1R: What’s a surprising aspect of your job?

**LM:** People might not know how many track inspections we do – three to four times a day. And there are many meetings with teams – for F2 as well as F1.

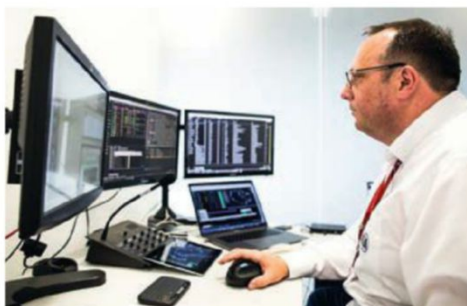
### F1R: You’re a busy man...

**LM:** We all prefer to be busy, don’t we? That’s why we’re here. It’s good busy!



## THE FIA'S ALL-SEEING EYE

Every millisecond of on-track Formula 1 activity is recorded



Nothing happens without Chris Bentley's knowledge. His servers record everything from marshal LED boards to CCTV footage

**Chris Bentley sits alone** in the tower above the pits at every grand prix. Nothing escapes the attention of the FIA's eye in the sky. Presiding over a plethora of computers (each with a colour-coded mouse) and monitors, he records everything. Every driver's every turn of the wheel is captured and stored securely on 80TB 'Storage Area Network' servers.

We visit the man responsible for all the FIA's IT systems during FP2 on Friday afternoon in Brazil and he gives us a glimpse into the breadth of data he is managing.

It ranges from the marshalling system (which displays the electronic boards and coloured LEDs in the drivers' cockpits) to weather data, monitoring the position of every car via GPS, collecting the images from all the CCTV cameras trackside and in the pits, as well as the FOM 'world feed', plus tyre and scrutineering data.

If a scrutineer spots damage to a car, he can take a photograph which is instantly sent to FIA technical delegate Jo Bauer for his observation, but is then wiped from the scrutineer's own screen to prevent sensitive images being observed by rival teams.

Bentley's IT system enables each team on the pitwall to follow their cars around the track with automated CCTV cameras, so they don't have to rely on the pictures FOM is broadcasting to keep an eye on their drivers. To ensure total accuracy, the cars are tracked using a



### THE INSIDE LINE JO BAUER FIA TECHNICAL DELEGATE



Keeping Formula 1 honest

**F1 Racing:** You've been described to us as 'The Law', but...

**Jo Bauer:** No, that's a big misunderstanding. We scrutineer the cars, of course, but if there is something not legal we report it to the stewards and they enforce the law. Initial scrutineering starts at 10 o'clock on Thursday and involves checking that all the safety items are there.

When initial scrutineering is finished, I report to the stewards so that they can publish the entry list. After this we apply the scrutineering stickers.

That's very old-fashioned, but the teams are very keen to get these, even though it's not really necessary any more. It's a relic from old times...

At 4 o'clock every Thursday, we have the team managers' meeting. We discuss the previous race and sometimes we get asked technical questions.

The teams have to present a legal car and we make random spot checks during and after the sessions throughout the event. But it's impossible to check every car for legality every day – that would require each car to be stripped down every night.

**F1R:** What is the Bridge of Doom?

**JB:** Ha! The scrutineering platform. It weighs the cars and makes basic dimensional checks. And we're always checking for compliance – constantly answering emails and having correspondence with the teams.

**F1R:** It must be a relentless process...

**JB:** It never stops. In the gap between the Brazilian and Abu Dhabi grands prix last year we did three crash tests. Formula 1 never rests.





The FIA's technical delegate Jo Bauer scrutineers Kimi Räikkönen's Ferrari after qualifying to check everything is in order from a legality point of view

combination of GPS, radio loops and direct telemetry measuring wheel speed.

"We synchronise the GPS, all the onboard, our four pitlane cameras, the audio from every car, timing and positioning to end up with a complete picture of what's going on – everywhere around the track – at any one time," says Bentley. "If there's a yellow-flag zone, then we can instantly look into the data of every car travelling through that part of the track."

At last year's Belgian GP, Kimi Räikkönen was penalised after he passed through a yellow-flag zone and failed to ease off the throttle. Using the technology that Bentley controls, the stewards could see Räikkönen's transgression in his car's telemetry. Guilty as charged, your honour.

As well as recording everything, Bentley can replay or access footage from previous grands prix in an instant by tapping into a vast archive of data. He says this has become invaluable for the stewards when it comes to making decisions: "We can show every single incident from the past two years where a driver has left the track and gained an advantage – and been awarded a two-second time penalty."

Bentley is also responsible for typing up every steward's decision and electronically distributing all the documents to the wider world, be that team managers or media. He might sit alone, but he's connected to virtually every single person working at a grand prix. ▶

## THE INSIDE LINE CHRISTIAN BRYLL LOGISTICS EVENT MANAGER



Keeping the grand prix show on the road

### F1 Racing: What's involved in managing the FIA's logistics?

**Christian Bryll:** It's really a wide spectrum – everything from ensuring we take everything we need to making sure our trucks are properly parked to setting up the temporary offices we have in race control.

So I prepare a kind of 'event guide' for each circuit, detailing everything we need to go to work – telephones, tables, chairs and so on.

There are also things like taking care of the credentials for the FIA – sending the request forms to each circuit, so they

can let us know how many stickers and passes they will need. I take care of all the guest pass requests, too.

### F1R: That sounds like an awful lot to keep an eye on...

**CB:** It is! And to give you an example... We have seven trucks in total and all our loose bits in containers. When it comes to organising the fly-away events, we have sea freight and air freight to consider.

Months in advance we have to prepare the sea freight – equipment for Australia in March is prepared for shipping from our

logistics centre in France the previous November. For us the new season begins a long time before the current one finishes.

### F1R: How do you get into a job like yours?

**CB:** I worked for 12 years for German broadcaster RTL on their F1 shows. I was their production engineer and that involved a lot of technical stuff and freight movement.

I've spent quite a lot of time in Formula 1 and had a chance to see it from so many different angles – from the outside and now from the inside.



## ON BOARD THE MEDICAL CAR

We take a back seat for a few laps of Interlagos with the FIA's rescue team



2003 British F3 champion Alan van der Merwe is responsible for driving the Mercedes-AMG Medical Car quickly at every grand prix

It's just a Sunday morning drive with an old friend – except the car is a 4-litre twin-turbo Mercedes-AMG C63S and the man behind the wheel is ex-British F3 champion Alan van der Merwe. And the location is Brazil's fiendishly sinuous Interlagos circuit.

Even at 8.30am the São Paulo sun is baking the asphalt. Ahead of us is Bernd Mayländer's Safety Car, which van der Merwe chases around the 4.3km lap, regularly unleashing the brutal 550hp under his right foot. As a final preparation to ensure the track is in perfect working order for the afternoon's Brazilian GP. The two machines

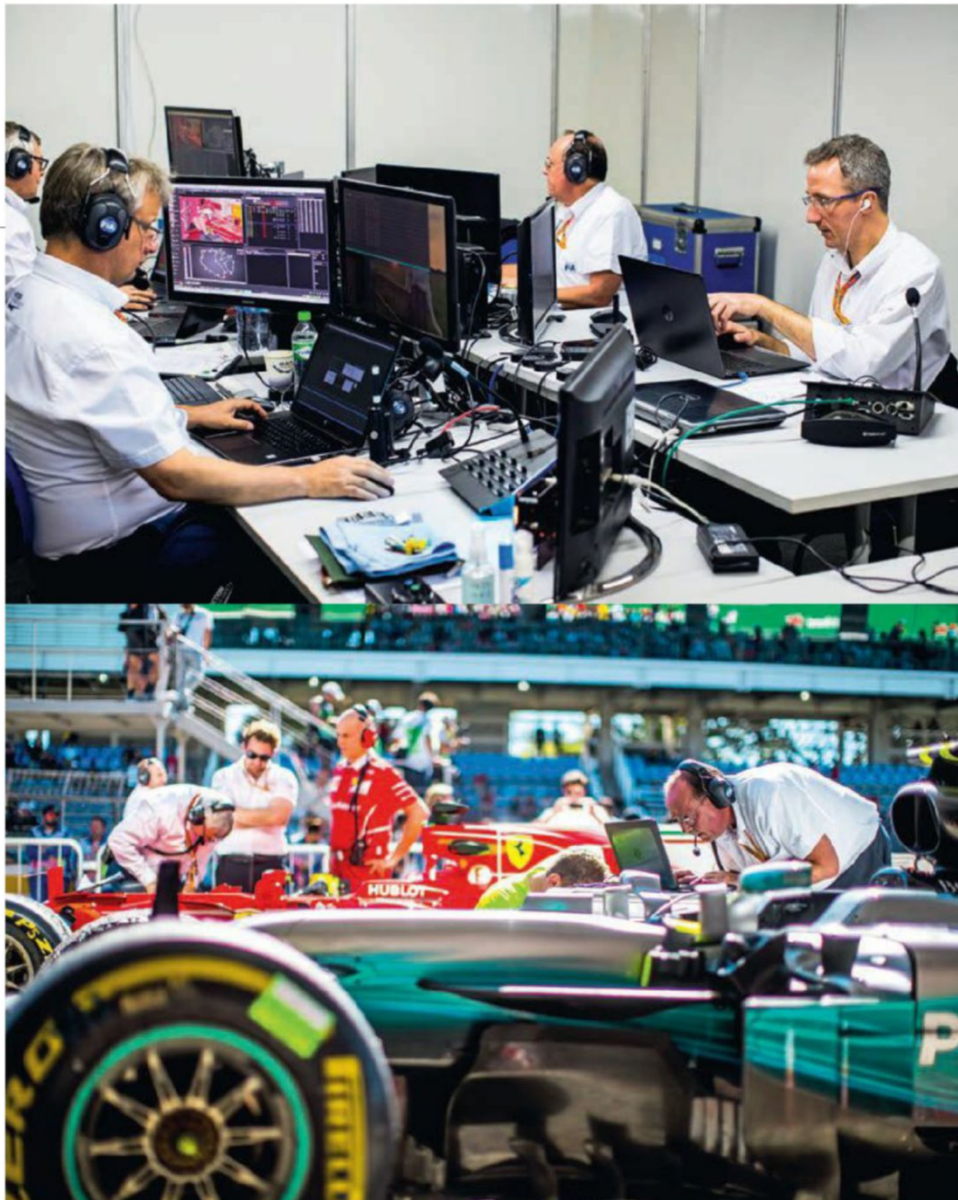
are conducting a test of all the circuit's electronic equipment: GPS, timing and marshal boards.

Very quickly, we are dipping, rising, sweeping right and left with the rear end sliding, beautifully controlled by 'Swerve' as he tucks the nose into each apex. It's a joy to watch a professional driver ply his trade.

In the front passenger seat is medical rescue co-ordinator Dr Ian Roberts, and in the boot all the kit required for an immediate medical intervention. It's a heavy but fast car, and could be the difference between life and death for a driver involved in a serious shunt.







The standard Electronic Control Unit (ECU) prevents the use of driver aids such as traction control

## DATA CAPTURE

Electronic control units scrutinise the drivers' tiniest inputs

As power unit technology has become more sophisticated, so the FIA have had to police opportunities for any 'unfair advantage' more closely. When driver aids were banned in 2008, for example, FIA techs had to ensure no artificial wheelspin management had been electronically engineered in. The standard Electronic Control Units (ECUs) enabled this to happen.

In a garage space alongside the Safety and Medical Cars, the FIA's Andy Leitch receives real-time fuel use and fuel-flow data from sensors on every car.

Olivier Hulot, the FIA's Head of F1 Electronics, says: "We receive live data from all 20 cars and when something appears that is abnormal, we investigate it. Before every race we work with the teams and give them specific circuit information, such as DRS calibrations or delta times for a Virtual Safety Car. If a driver then fails to adhere to that speed profile, we can see he's been too fast and we'll notify race control and can supply evidence if the stewards need to penalise that driver. This can all be done in real time."

ECUs record between 1.5 and 2GB of data during a race. Additionally, the Scrutineering Data Recorder (SDR) gathers information that monitors deceleration forces in an impact and transmits that to the Medical Car. It also records images from a cockpit-mounted high-speed camera looking at the driver, which monitors his head movement during an accident. ▶

### THE INSIDE LINE COLIN HAYWOOD RACE CONTROL SYSTEMS MANAGER



Heads up track marshalling – both electronic and physical

**F1 Racing:** How would you explain your job?

**Colin Haywood:** I operate the GPS marshalling system, which covers all the cars across all the series on an F1 race weekend.

**F1R:** That sounds tricky...

**CH:** It involves the 20 light panels around the track and I oversee those functions, in terms of receiving signals from the marshals, then sending signals to those light panels. So, things like the deployment of the Safety Car or Virtual Safety Car, that's what I do – under Charlie [Whiting]'s instruction.

**F1R:** So you have to watch what's going on very closely?

**CH:** Yes, I'm watching the cars go round a map on the screen and following the cars on the CCTV in race control – making sure they actually are where they're shown on the map. And being aware of any incidents that might crop up. If a marshal puts a yellow flag out on the circuit, obviously cars have got to slow down.

**F1R:** Marshals have their own button system, don't they?

**CH:** There are separate marshals: flag marshals, plus up to 20 light panel operators,

who are responsible solely for the light panels.

**F1R:** And do they act on your instructions?

**CH:** No, they're independent, but working with their post chiefs.

**F1R:** And you throw the 'blue flag' don't you?

**CH:** It's an automated system but I monitor it as the cars are being lapped. At [a gap of] 1.2 seconds, the system will send a blue flag to the car. The drivers have cockpit lights and since we've gone from 1s to 1.2s, the drivers have been very good.



# INSIDE RACE CONTROL

The operations centre of a grand prix is surreally calm



sector times, marshalling info, mini loops data and the FOM feed.

Everyone communicates with headsets and the windowless room is soundproof, creating a disconcerting detachment from the ferocity of the 20 1.6-litre V6s outside. There is an air of controlled calm, with race director Charlie Whiting at the centre. Satisfied that the supervisory machine is purring along efficiently, he has time to speak to *F1 Racing*.

“The first race I did here in Brazil as race director was in 1997 and we had no cameras at all then,” he says. “We had to go to the top floor of the tower and use binoculars. Now we have almost 40 cameras around the track.”

Whiting can communicate with every team on the pitwall and listen to every driver – hearing with great clarity those who have the audacity to criticise his judgements, as Sebastian Vettel memorably did in Mexico in 2016.

“We’re actually trialling a new system here today,” continues Whiting. “The electronic marshal boards around the track flash blue to warn a driver that a faster car is approaching and this is automatically activated with their car number when another car is 1.2 seconds behind.”

The only moment of the grand prix when Whiting isn’t in position is during his rush from the gantry – where he oversees the race-start procedure – to race control. During that time his deputy, Laurent Mekies, is at the helm. ▶

There are 43 screens on the wall in front of race director Charlie Whiting and his deputy Laurent Mekies, showing timing data and every corner

In the nerve centre of a grand prix you can hear a pin drop. Four rows of desks lined with FIA personnel, medical delegates and local track supervisors face a wall featuring 43 screens. A camera is positioned at every corner of the Interlagos lap and they are relayed in order here. There are also GPS displays, timings screens,

## THE INSIDE LINE CHARLIE WHITING FIA DIRECTOR OF F1



The man with his finger on the button – in every sense. Without his say-so, F1 is no-go

**F1 Racing: We know your job title – but as Race Director, what are the main challenges you face?**

**Charlie Whiting:** I’m responsible for all decisions regarding the running of events and the compliance of the circuit with the requirements of the licences. So, for instance, circuit safety. And starting the race.

I’m ultimately responsible for the technical department as well.

**F1R: How do you manage the various demands?**

**CW:** Safety at a track is generally dealt with before

we arrive. There’s a pre-event inspection and any follow-up work is normally dealt with by email. Generally you don’t get any nasty surprises.

On the technical side Jo [Bauer, technical delegate] gets on with his job – I don’t tell him what to do. But if anything unusual happens, he reports that to me and we decide what action to take.

**F1R: Have these aspects got any easier as tracks have got more sophisticated?**

**CW:** As with everything in F1 especially, it’s become more

sophisticated and the standards are much higher than they were even 20 years ago. There have been massive advances through our own research.

Much more proper testing is done in order to try to find out the best solutions. That takes time because these things are invariably expensive. It’s a gradual process.

**F1R: Do you still get a buzz from standing at the pitwall?**

**CW:** Very much so, yes.

**F1R: Even after 40 years in F1?**

**CW:** Yeah, I still love it.





ROAD ACTION  
FOR ROAD SAFETY



# ALL THE PRESIDENT'S MEN







## WHO'S WHO?

Here are the 22 people at the FIA who make a grand prix weekend run smoothly...

**1 Pierre Guyonnet-Duperat**  
F1 Deputy Media Delegate

**2 Alan van der Merwe**  
F1 Medical Car Driver

**3 Neil Callender**  
F1 Operations Manager

**4 James Turner**  
F1 Analytical Chemist

**5 Bernd Mayländer**  
F1 Safety Car Driver

**6 Kris De Groot**  
F1 Technical Assistant

**7 John Marson**  
F1 Power Unit Engineer

**8 Colin Haywood**  
F1 Race Control Systems Manager

**9 Alan Prudom**  
F1 Software Analyst Engineer

**10 Laurent Mekies**  
F1 Deputy Race Director / FIA Safety Director

**11 Chris Bentley**  
F1 Head of Information Systems Strategy

**12 Jean Todt**  
FIA President

**13 Jo Bauer**  
F1 Technical Delegate

**14 Richard Darker**  
F1 Technical Assistant

**15 Charlie Whiting**  
FIA Director of F1

**16 Simon Busby**  
F1 Software Analyst Engineer


**17 Andy Leitch**  
F1 Software Analyst Engineer

**18 Christian Bryll**  
F1 Event Logistics Manager

**19 Ian Roberts**  
Deputy F1 Medical Delegate

**20 Matteo Bonciani**  
F1 Head of Communications & Media Delegate

**21 Alain Chantegret**  
F1 Medical Delegate

**22 Olivier Hulot**  
Head of F1 Electronics 







Sophie  
Ogg

# MY DREAM JOB

No.7



WORDS ANTHONY ROWLINSON

PORTRAIT  LAT IMAGES: LORENZO BELLANCA

Williams F1 head of  
communications

CV

Sophie Ogg  
Age: 35

**2012-present**

Williams head of F1  
communications

**2010**

Williams F1 press  
officer

**2010**

WTCC FIA press officer

**2008-09**

A1GP media manager

**2007-08**

A1GP Team Ireland  
and Canada comms  
manager

**2006-07**

Formula BMW UK  
press officer

**“I get so many emails** from people saying ‘how do you get into Formula 1?’ I think people see it as a goal.”

Indeed it is for many with hearts and minds set on a career in motorsport, but Sophie Ogg, head of F1 comms for Williams, would counsel any young hopeful against donning ‘F1 blinkers’, for fear they might miss out on so much else that the motor racing world has to offer. She was bitten by the sport instantly, on her first visit to a race, aged 14, and right away she knew “it was what I wanted to do”.

“That meeting was a British Touring Car race at Oulton Park,” she continues, “and even though my family are not into racing at all, literally the minute I walked into the paddock I fell in love with motor racing. I loved the whole environment of being in a paddock, being in a team and being around racing cars – and I still do. It’s phenomenal. But I had to work out how to get in.”

As for so many, F1 was Ogg’s goal, but soon she realised “it’s not the be-all and end-all. I was quite happy doing A1GP and World Touring Cars at the time and then the opportunity for F1 came up. It was at a point where I thought if I didn’t take the opportunity I probably never would.”

That happened in 2010, when Ogg joined Williams as the team’s F1 press officer, but it was quite a shift from her original F1 goal: becoming an aero engineer. “I was really committed to the engineering side,” she says, “and I chose my A-levels accordingly: maths, physics and computing, but at university I didn’t really know what to do to get where I wanted. I did two years of a law degree before deciding I should probably work in something specific and switched to a

PR degree, while still doing weekend jobs for race teams. My mum hated that because I was off to places she didn’t know, with a group of blokes she’d never met!”

A decade or so on Ogg is a familiar figure as Williams’ head of F1 communications, always alongside drivers being interviewed in the TV pen, or shuttling between garage and motorhome, fielding incessant media demands on her iPhone. It’s a relentlessly busy role, like so many in F1, but Ogg thrives on the constant buzz: “I can honestly say this is my dream job,” she says, “and the best bit is definitely being trackside, being part of a team.

“It’s like a family and there’s a camaraderie. The highs are very high and the lows are very low, but you do it together and that really makes the job enjoyable.”

The current of constant change inherent to any job that follows a world championship around the globe is a further appeal. “I could never just do a nine-to-five office job,” she says. “I’m just not wired that way. The bit that I love about this work is constantly reacting to something, and that feeling of never knowing what’s coming next keeps it really exciting.”

Wrapped up in that unpredictability are extreme highs and lows, such as the (in)famous occasion of Williams’ last grand prix win – the 2012 Spanish GP.

“We had the incredible high of Pastor [Maldonado]’s win,” says Ogg, “then the chaos of not really knowing what you do when you win because it had been so long since the last one [the 2004 Brazilian GP]. I remember asking one of the Red Bull guys ‘where do I go for the podium?’”

She describes the “massive euphoria” of victory on the weekend of Sir Frank Williams’ 70th birthday celebrations, followed by the crashing low of a garage fire that endangered team members’ lives and torched expensive kit.

For all the fickleness of F1 – and the “ultimate lows” of an injury (or worse) to a driver, Ogg has no hesitation in recommending life on the road. “You have to be enthusiastic and passionate,” she says, “because it’s not really a job so much as a way of life. You constantly have a bag packed and for some that would make it the worst job on the planet. But if you decide it’s for you, there’s nothing else like it.”



# FIRE ON





# ICE



17 years on from his Formula 1 debut, Kimi Räikkönen is determined to prove, in his own quiet way, that there's no crushing this ice(man)...

WORDS PETER WINDSOR PICTURES  LAT IMAGES: ZAK MAUGER

## SNOW-KARTS? REALLY?

We knew not what to expect even as the mini-coach grunched its way into the mountains, creaking mightily as steering lock strained the diff. Kimi Räikkönen? In winter? No word-pictures sprung to mind.

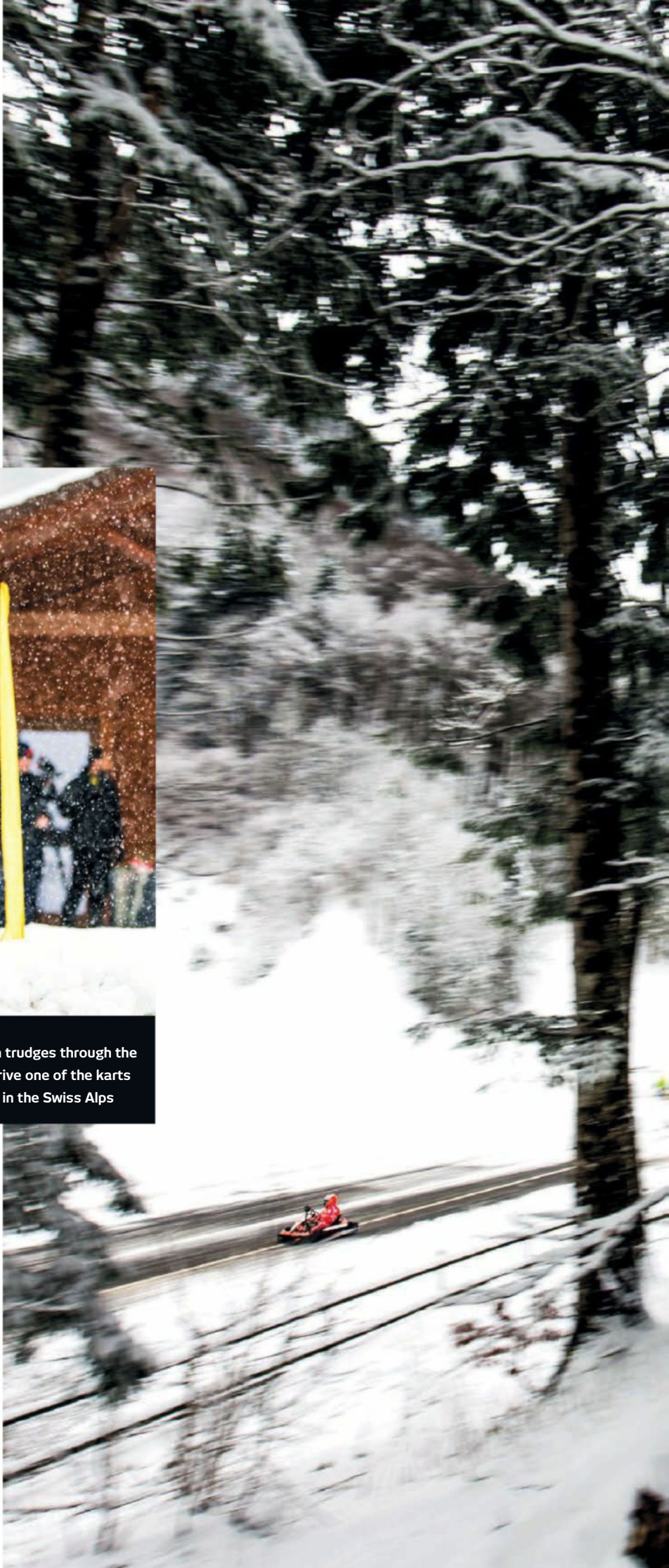
I always imagined the Kimster to be in Dubai come December and January, or perhaps in some remote castle in darkest Finland. I mean, he isn't your ordinary person, let alone your classic, 2018 racing driver. He isn't affected; he isn't interested in celebrity; he once even told me, late at night in darkest São Paulo, that he doesn't really like F1.

So what does get him out of bed? Two spread-eagled balcony windows, so I'm told, perfectly designed to enable him to fall from mattress to swimming pool in one easy movement. And driving. Fast cars and F1 cars specifically, give or take a motocross bike, a decent rally car and a snowmobile or two.

The rest of life, I guess I always imagined, is something that Kimi merely tolerates. A corporately induced Instagram account but not for him Twitter or Facebook. Just lie low. Say nothing.

This, though, is after all a 2018-spec Kimi. Lots of people give him lots of flak for not being as consistently quick as Sebastian Vettel, but I'm not one of them. For the reasons above, and also because he's still about the only fast racing driver in the world who would be able successfully to play a second-tier role to Vettel – and when I ►





say 'fast' I mean 'fast enough to take the pole at Monaco' – I'm still glad that Kimi is around.

True, I'm looking forward to seeing Charles Leclerc race for Ferrari. Cramped Seb Vettel's style will thereafter be, assuming the multi-world champion is prepared to stick around for the dogfight. For now, though – for the era in which Ferrari are still living with the honour of running a four-time champion (even if none of those titles was won in a red car) – we have what we have: the great Sebastian with another world champion alongside him who isn't allowed to be (a) faster; (b) annoying; (c) more popular than his team-mate or (d) more dextrous than Vettel.

So what do we have in this latest F1 rendition of the Great Kimster?

As I say, I'm not sure. I step tentatively out of the bus into the soft snow, squinting within the cloud cover. A film crew – not ours – mills around outside. Lots of Shell people, with name ▶

**Räikkönen trudges through the snow to drive one of the karts on a track in the Swiss Alps**









Our man Peter Windsor takes to the track with the Ferrari world champion



tags on red lanyards, hustle about.

“You need to check-in here and kit-out there. They’ll give you a helmet, gloves and a jacket.”

I point out that I’ve brought my own Arai and A-star gloves.

“Should be okay. Health and Safety, you know. Can’t be too sure...”

Kimi, I see, is inside the Welkom Center, near an open fire, chatting to Ferrari people. Team jacket and cap. Very corporate.

Outside, snow slants across the little stadium. Our crew set up cameras, drone and mics. I stand there, a pawn, as they check positions and sound levels. My teeth chatter.

“OK. Ready? Here’s Kimi.”

He wanders over. There’s a smile and then a laugh as he describes the hectic drive over from Zug in his rear-wheel-drive Alfa.

As the cameras run he plays the teamster to perfection, saying not much but actually filling

the spaces with enough laughs to keep us happy. Ferrari are tight these days on what the drivers are and are not allowed to talk about – and about what you, the journalist, are allowed to ask them – so we both keep to script. Shell have invited us; it would be churlish not to oblige.

There are, though, some moments: “If I didn’t want to win I wouldn’t be racing. It’ll be nice to start again with a clean sheet...” and, when I ask him about oversteer versus keeping-it-clean, “of course I like to slide the car a bit.”

We switch to the karts. Kimi asks me to lead away, then to wave him through. Sitting behind him – for a corner or so – I watch his natural balance and feel. Years ago I was mesmerised by Allan McNish in his karting days at Rye House in the wet, and the image remains: Kimi’s subtle initial flick initiates a perfect, neutral balance. This is what we see now: Kimi the 14-year-old karter, absolutely the artist. ▶

FERRARI  
AND  
SHELL  
FUELS  
A SIX  
DECADE  
AFFAIR

# 1% MAKES ALL THE DIFFERENCE

How to lure Kimi Räikkönen out into the mountains in the middle of winter? It helps considerably if you have friends in the right places.

Last year Shell and Ferrari hit a major milestone together, notching up their 600th Formula 1 start together. It’s a partnership that has garnered 171 victories, which includes all nine of Kimi’s Ferrari race wins and, of course, his 2007 world championship, the 12th such Ferrari drivers’ title with Shell support.

Although the fuel and lubricants used in the Formula 1 Ferrari are bespoke, the unleaded fuel contains 99 per cent of the same type of compounds used in the V-Power available worldwide at the pump.



The new-generation Dynaflex additive, which was introduced to V-Power (in Formula 1 as well as in the pump product) last year, is claimed to include friction modifiers as well as 20 per cent more cleaning molecules than were in the previous additive.

**Stuart Codling**



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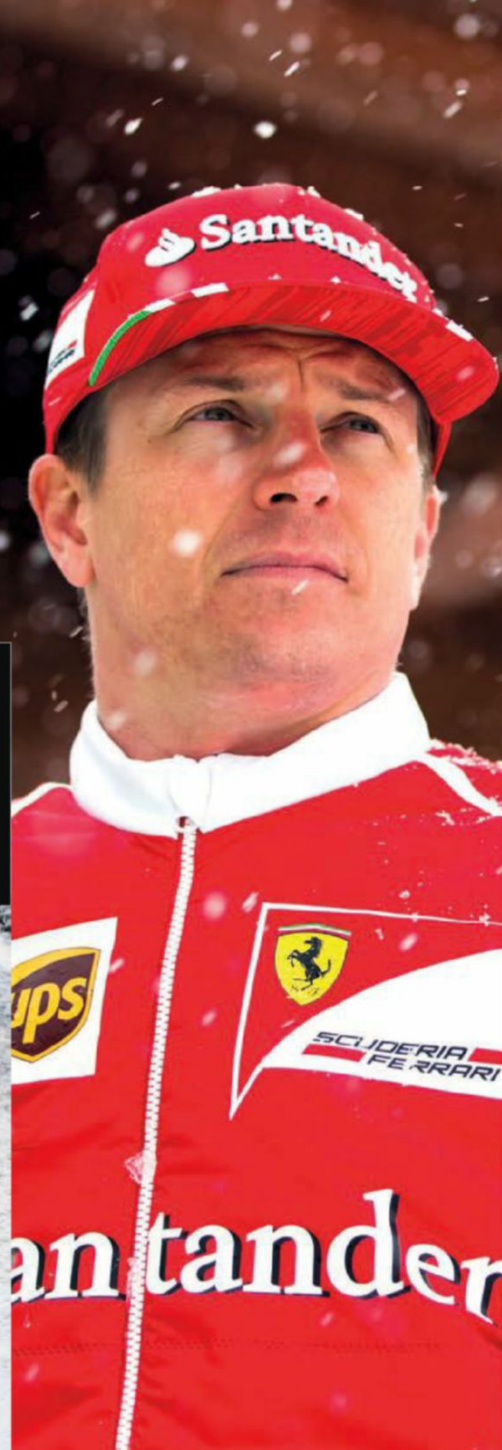
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**“KIMI ASKS ME TO LEAD AWAY, THEN TO WAVE HIM THROUGH. SITTING BEHIND HIM, I WATCH HIS NATURAL BALANCE AND FEEL”**



Kimi's subtle touch at the wheel makes him a difficult man to beat in the snowy conditions



Later he is with his entourage: he works the partner's guests as smoothly as he complies with the next Ferrari request. Over lunch – pasta and salad – he sits by the fire, explaining the banalities of simulators to a Shell man of privilege. He speaks much; he says little. He's the perfect Ferrari clone.

Really?

The layers remain... until now. Now he's standing alone, awaiting a short Q&A. Ferrari jacket and cap. Puma race boots dry by the fire; black trainers, black joggers.

I ask him about rallying and his eyes light up. "I love the rally cars. I would like to try the new ones. One day again."

And I talk to him about kids, comparing notes. "Robin is already riding the bike in the house, around everything. Not hitting anything. And he wants to sit next to me in the Alfa, with his

own steering wheel. I don't do it yet but he is pushing me hard."

He laughs the Kimi laugh and stares into the middle distance.

Eventually it is over: only one more 'partner day' before he's at home, on holiday, playing with the kids. The black Alfa disappears in a haze of snow, kid's seat in the back, umpteen bottles of mineral water in the front, ready to go.

Enter the New Kimi.

He's the ultra-professional Ferrari driver still imbued with the velvet touch, whose Friday setup very often determines the one that will be raced by Vettel, who doesn't complain other than on the radio during the race, when he likes to stir 'em up a bit, who works with Mark Arnall at just the right fitness level – nothing cosmetic – and who is clever enough to know that, if he plays the support role expected of him, and if the car is

quick, he'll be winning races again.

Not because Ferrari or Vettel will let him win and not because, in this, his 17th year near the top, he is the fastest F1 driver on the planet.

He'll win because that is the way of things in this world, this world of keeping it straight and narrow; of loving the purity of racing and driving; of slightly older values that out-live DRS or fuel-saving or dash switches or MGU-Hs and outlandish run-off areas and reward instead the guardrails of Monte Carlo; of staying quiet; of using the system around him; of not indulging the glamour; of not carving up other drivers because it's easy to do and no longer dangerous; of saying what he thinks (providing it doesn't hurt anyone); and, above all, of doing his duty as a Ferrari driver, as a dad and as a human being.

Of being a stand-alone, and completely unique, Kimi Räikkönen. 🏆





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NOW  
THAT  
WAS  
A  
CAR

No. 66

WORDS DAMIEN SMITH  
PICTURES JAMES MANN

# THE RENAULT R25

Respect is due to Alonso's first title winner, but the R25 is still not recognised as a classic F1 car





**T**he car that finally prised Michael Schumacher and Ferrari's five-year grip from the throat of F1; the car that delivered Renault their first title as a full-blooded constructor; the car that made Fernando Alonso the youngest ever world champion; and remarkably, the first title winner since 1991 *not* designed by either Adrian Newey or Rory Byrne.

Yet the Renault R25 that set these landmark records wasn't even considered by many as the best car of 2005, never mind an F1 great. Surprising? In the context of Alonso's ever increasing standing within grand prix history, it should be. After all, the R25 represents exactly half of his world title-winning tally, from a career that has promised so much more than 'only' two championships.

The tendency for Renault's R25 to be overlooked lies within the extenuating circumstances to Alonso and Renault's breakthrough season: for one thing, Schumacher and Ferrari were effectively out of the game thanks to a rule change on tyres and Bridgestone incompetence; for another, McLaren-Mercedes built a quicker car.

McLaren's MP4-20 won ten races to the R25's eight in 2005, only for poor reliability to cost McLaren their first titles since 1999. Kimi Räikkönen led the charge, winning seven races to match Alonso's tally, while Juan Pablo Montoya – in from Williams – took three.

## NOW THAT WAS A CAR

No. 66



## THE RENAULT R25

This was the one-off season in which it was decided F1 cars should complete both qualifying and races on one set of tyres, a throwback to a distant past and an extreme method to end the era's sprint-stop-sprint race pattern. Only a change in the weather or a puncture could allow a tyre swap, although Räikkönen's suspension failure caused by heavily worn rubber at the end of the Nürburgring race highlighted a serious safety issue with this format. Still, the racing was invariably great.

The change threw Bridgestone, which struggled to provide Ferrari with rubber that would both perform and last the duration of 200-mile races. But Michelin managed it, opening the door to a Renault vs McLaren duel and the French tyre supplier's first F1 titles since the 1980s. The only anomaly was Indianapolis, the infamous race where Michelin's tyres failed to withstand the forces pushed through them on the banked final turn. Their teams felt compelled to pull in at the end of the formation lap, leaving just six Bridgestone-tyred runners to take the start. The debacle would lead to Schumacher's only victory of the campaign and cast a long shadow over what should have been a wonderful year for Michelin.

But does any of this take anything away from R25's claims to greatness? It shouldn't – because this rare example of a genuinely harmonious Anglo-French alliance represents F1 at its best: clever, neat and efficient engineering from a well-honed team that simply did a better job than their opposition.





Despite the extravagant personality of frontman Flavio Briatore, there was nothing flash about this team. Under the steady influence of engineering chief and future *F1 Racing* columnist Pat Symonds, a crack collective of seasoned racing professionals led by tech director Bob Bell, chief chassis designer Tim Densham and aerodynamicist Dino Toso, conceived a car built on sound principles (and the corrected mistakes) established during the preceding five seasons.

There was no 'silver bullet' innovation that separated R25 from the rest – perhaps another clue to its relative under-appreciation. But it did

feature tidy design solutions such as the pioneering V-keel suspension mounting under the nose and a clever, all-new and lighter electronics system that controlled engine and chassis.

Over the Channel, at Viry-Châtillon, Rob White devised a second generation of his narrow 72-degree V10 that was both lighter and more powerful. Fully integrated, the potency of the chassis/engine package could not be underestimated. For the first time in his (short) career, Alonso had a car he could fully believe in, with perfectly neutral handling that allowed him to exploit his naturally aggressive cornering style. The glimpses of promise had always been there. Now F1 got full sight of what this young man could be.

Rather than the Spaniard, it was Giancarlo Fisichella – back after spells at Jordan and Sauber – who struck first with victory in Australia. Then his precocious team-mate swiftly ended any pretensions of an Italian-led title charge, with a hat trick of victories in Malaysia, Bahrain and Imola to open a healthy points lead. Further wins would follow at the Nürburgring, Magny-Cours and Hockenheim, but still it was clear that McLaren carried the ultimate pace. Then Symonds' experience really kicked in. Ever the pragmatist, he accepted McLaren's edge and chose a conservative course through the rest of the season that prioritised reliability, thus protecting the team's hard-won points lead and ensuring they deliver the spoils his French paymasters demanded. By Spa, Alonso was openly admitting the policy was costing Renault "three or four tenths a lap" yet he continued to rack up the points.

Third place at Interlagos, with two races still to run, wrapped up Alonso's historic first title. No nonsense, clinical, admirable – just hardly the stuff of legend. So when Räikkönen scored his career signature victory from the back

## “THERE WAS NO ‘SILVER BULLET’ INNOVATION THAT SEPARATED R25 FROM THE REST”



### RACE RECORD

<b>Starts</b>	19
<b>Wins</b>	8
<b>Poles</b>	7
<b>Fastest laps</b>	3
<b>Other podiums</b>	10
<b>Retirements</b>	6
<b>Points</b>	191

### SPECIFICATION

<b>Chassis</b>	Moulded carbon fibre and aluminium honeycomb composite monocoque
<b>Front suspension</b>	Top and bottom wishbones with inboard titanium rocker via a pushrod system
<b>Rear suspension</b>	Top and bottom wishbones with vertically mounted torsion bars and horizontally mounted damper units. Bottom wishbone attached by V-keel mounting
<b>Engine</b>	Renault RS25 V10 72° v-angle
<b>Engine capacity</b>	3,000cc
<b>Power</b>	900bhp @ 19,000rpm
<b>Gearbox</b>	six-speed semi-automatic
<b>Tyres</b>	Michelin
<b>Weight</b>	605kg including driver, camera and ballast
<b>Notable drivers</b>	Fernando Alonso, Giancarlo Fisichella

of the grid a race later at Suzuka, Alonso was already safely installed as champion. A final victory for Fernando in China at the season's conclusion ended a McLaren streak of six straight wins, and emphasised that Renault deserved their titles. As Symonds put it, "The majority of the season, [the McLaren] was the faster car, but I will not accept it was a better car."

Ferrari and Bridgestone would be back to full strength in 2006, for the new 2.4 litre V8 formula, and Renault and Alonso would have their work cut out to defend their titles. But as history relates, they were more than up to it. 🏁





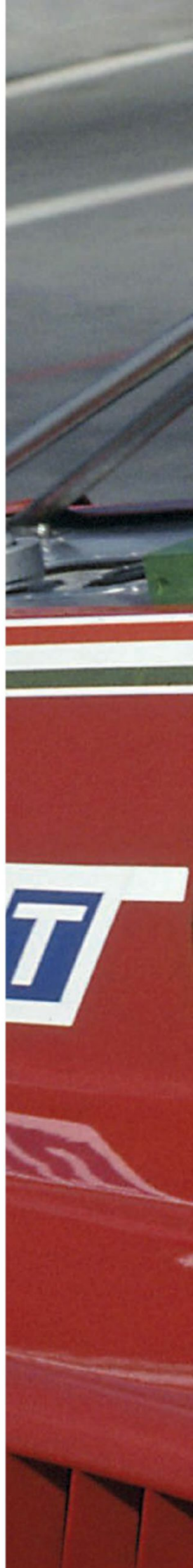
THE SIX ERAS  
OF FERRARI  
CHAPTER 4  
1981-1993

# THE END OF THE

WORDS DAMIEN SMITH  
PHOTOS  LAT IMAGES

# INNOCENCE

Some said that romance in motor racing died with Ferrari darling Gilles Villeneuve, in 1982. Six years later, Enzo himself was gone. But the Ferrari legend only grew stronger in adversity







PIEMME

Labatt

SMEG

GPA



Gilles

01162





# ONE FATAL MISJUDGEMENT. THAT'S ALL IT TOOK TO JOLT THE TRAJECTORY OF FORMULA 1 HISTORY DURING THE SUPER- POWER 1980s.

Had Gilles Villeneuve backed off and missed the rear of Jochen Mass's cruising March at Zolder in May 1982, who knows what glories would have abounded?

But even had he lived and won the world title that should have been well within his reach during that tumultuous season, Ferrari might still have missed the full benefits. Villeneuve was imbued with the mysticism of Enzo's magical Scuderia and, 36 years after his violent death, still remains the ultimate embodiment of what a Ferrari F1 driver should be. And yet even he, despite the competitiveness of his 126C that year and the loved-like-a-son bond with the Old Man, was growing tired of the politics that poisoned Maranello. Ron Dennis, building a formidable new empire at McLaren, wanted Gilles – and the consensus is, for '83, he would have got him.

Alain Prost? His destiny would probably still have carried a white-and-Dayglo hue – but with his friend Villeneuve still around, the timeline of his wondrous era might have shifted a year or three (and as a consequence, the same goes for Ayrton Senna's...). It's easy to lose oneself in the intrigues of conjecture. But the harsh reality was the brilliance of the French Canadian's burning light blew out that day in May – and the ensuing darkness foreshadowed a gloom that would be hard to escape.

On the back of a disastrous 1980, in which defending champion Jody Scheckter and Villeneuve would amass a miserly eight points

between them, Ferrari would finally embrace the turbo revolution for '81, as Dr Harvey Postlethwaite added some Anglo-Saxon salt to Mauro Forghieri's latin brew. The hefty, slab-like 126CK was no beauty, but still Villeneuve worked wonders. His two victories that year, at Monaco and Jarama, were markers of his increasing maturity that belied the lazy 'wild man' stereotype detractors rolled out before and since the three-wheeling madness of Zandvoort '79.

Despite a trying start to '82, Villeneuve knew that this time Forghieri and Postlethwaite had given him a ride worthy of his talents. But his new problem was the guy in the other one. He and Pironi were close, but after struggling to manhandle the 126CK, the fast Frenchman was now a serious threat. And at Imola, their friendship ended.

Pironi's "betrayal", his apparent refusal to honour a pre-race team orders agreement, would forever cloud his reputation – particularly in the circumstances of the horror that would soon unfold. Villeneuve's fury and expression of cold disgust on the chaotic podium would carry over into the following race weekend: Zolder.

What was Villeneuve's state of mind when he blasted out of the pits for that fateful qualifying run on the Saturday afternoon? Its storm had certainly not been quelled by the public silence from Ferrari. Marco Piccinini, the arch politician now at the helm, refused to condemn Pironi for his actions, further stoking Villeneuve's ire – and

inflaming the conjecture that Gilles would have walked at season's end, champion or not.

As it was, Pironi's supposed part in Villeneuve's death would hang as heavy as the thick mist of rain in Hockenheim's trees that would lead to Pironi's own downfall later that summer. Unsighted, he'd be launched over Prost's Renault and into an accident that would demolish his legs. His death five years later, while racing a powerboat off the Isle of Wight, offered a devastating coda to a tragic tale that carried echoes of Ferrari's 1950s horrors.

Like some who lived through Jim Clark's era, there are those who say their love for F1 was forever tarnished once Villeneuve was gone. The same has been said of Enzo Ferrari himself. Now in his eighties and in ill health, the Old Man was less able or inclined to manage the Machiavellian swirl around Maranello. The Fiat vultures were circling their prized asset, by this time the most famous and celebrated automotive brand in the world. But the F1 team, the heart of the precious jewel, was corroding from within.

Back-to-back constructors' titles in '82 and '83 hardly shrieked crisis, but much like Manchester United's pair of FA Cup successes in football's corresponding era, they were a diversion from what really mattered. Both were out of step with their time, with no hope of competing for the prize that counted: in United's case the English First Division; in Ferrari's the search for a successor to Scheckter's increasingly distant title.

**“VILLENEUVE'S FURY WOULD CARRY OVER INTO THE FOLLOWING RACE WEEKEND: ZOLDER. WHAT WAS HIS STATE OF MIND WHEN HE BLASTED OUT OF THE PITS FOR THAT FATEFUL QUALIFYING RUN?”**





## A SECOND'S MISJUDGMENT, A LIFETIME OF CONSEQUENCES

In qualifying at Zolder in 1982, Jochen Mass went right to free up the racing line just as Gilles Villeneuve also jinked right in an effort to go by without lifting off. The impact sent the Ferrari flying into the trackside barriers



Little René Arnoux gave it a decent shot in '83, but his natural flair could never quite be harnessed with the consistency required to match Nelson Piquet and Prost. Then in '84 he and team-mate Patrick Tambay failed to win a race as Ferrari's fourth-generation 126C lost Ferrari's mojo. Forghieri, for the third and final time in his life, paid the price: he was appointed director of something called the 'advanced research office'... The bespectacled legend would finally quit the company in May 1987.

Michele Alboreto offered brief hope and the tantalising promise of a first Italian drivers' champion since Ascari. But despite leading the points after victory at Montréal in the attractive 156/85, his challenge wilted in the face of a Dayglo onslaught. This was the bigger picture that Ferrari's pollution of politicians kept missing – even though Ron Dennis was effectively smearing it into their faces.

His empirical ambitions at McLaren had born wondrous fruit. In partnership with design genius John Barnard, Dennis had recognised where investment was required to nurture an F1 superpower. Thus, the British company led the way in pioneering the use of materials such as carbon fibre, and built a lithe business structure that ensured strength in depth.

For all McLaren's further success, this was the apex of Dennis' contribution to F1 history. He set the template – the pristine, OCD, quest-for-perfection standard – of what a proper grand prix team now had to be. But in the mid-1980s, when first Niki Lauda and then emphatically a game-changing Prost reaped the dividends, Ferrari was too busy tearing itself apart to notice.

Instead of investing Fiat wedge into future technologies and a modern team structure, they were led by a reactive instinct for a short-term solution: hire Barnard. The offer was clearly ▶





## “BARNARD FACED MACHIAVELLIAN MACHINATIONS FROM WITHIN FIAT, WHO NOW HELD THE PRANCING HORSE’S REINS. RUMOURS WHISPERED OF A BREAKAWAY DESIGN FACTION”



F1 was preparing itself to consign turbos to history (for now!) in favour of a return to atmospheric engines. McLaren and new engine partner Honda were confident of hitting the ground running with a potent V10 for '89, but in the meantime would give the manufacturer's powerful V6 turbo one final hurrah. And what a hurrah it was: 15 out of 16 victories for Prost and new team-mate Senna, a near-whitewash.

As bad as it was for Ferrari, it could have been worse – especially if Barnard had pushed through his revolutionary new car. The inevitable teething problems might have spelled a rapid end to his Ferrari career, especially now his champion Enzo was no longer around.

Yes, the Old Man was gone, finally proving mortal at the age of 90 on August 14, 1988. Without their founder, Ferrari would never – *could never* – be the same. At Monza, 28 days after Enzo's passing, Berger and Alboreto delivered an unlikely Ferrari 1-2 after Senna tripped over Jean-Louis Schlesser – thus blotting McLaren's perfect season and delivering a fairy-tale tribute. Only Ferrari.

Meanwhile, Barnard faced the machinations from factions within Fiat, who now held the Prancing Horse's reins in the tightest of grips.

The new 'atmo' era dawned in '89 with the promise of more McLaren domination. Meanwhile at Ferrari, Barnard's striking new F640 was failing to complete a race distance in testing. New recruit Nigel Mansell, one of the Old Man's final contributions, appeared to have little to hope for at the Rio season opener.

But then, unbelievably, he won, as if it was pre-ordained. Barnard's revolution, led by a hydraulically operated paddle-shift semi-automatic gearbox, had even survived a mid-race steering wheel change. Again, only Ferrari.

But Mansell subsequently failed to finish the next four races, while team-mate Berger escaped a fiery horror-crash at Imola with relatively minor burns. In Maranello, rumours whispered of a breakaway design faction, with the backing of Piero Lardi Ferrari (Enzo's illegitimate son). Meanwhile, Barnard fumed that his clever gearbox took the brunt of blame for the DNFs, when the truth lay in the externally supplied

### A MIRACULOUS MONZA 1-2 AFTER THE DEATH OF ENZO FERRARI

McLaren were peerless in 1988, Ferrari seemingly rudderless – especially after Enzo's death that August. But just 28 days later the clouds parted as an accident up front paved the way for an historic Ferrari 1-2 finish



too good to resist – but when the Englishman succumbed, he only did so on his own terms. And he refused to leave his homeland.

Determined to avoid the distractions of the invidious Maranello life, Barnard set up the suitably named GTO (Guildford Technical Office – slightly more prosaic beyond the acronym), in the belief that he could knuckle down to sculpting a new generation of F1 car in peace.

Barnard's first impressions of his new employer came as a shock. While Ferrari, as ever, prided themselves on engines, chassis facilities were way behind what he'd been used to at McLaren. With the company's first windtunnel only just coming into commission, Barnard must have winced at the full realisation of his task.

While he began work on a new car for '88, his input on the evolved F1/87 bore some fruit. Gerhard Berger won the final rounds of 1987 in Japan and Australia, thwarting a worrying winless streak that had stretched for more than two years. But still the pressure on Barnard was building, especially when it emerged his new baby wouldn't be ready for the following season.





## FERRARI'S WINNING DREAM SMASHED BY SENNA'S MOMENT OF MADNESS

When the FIA blocked Ayrton Senna's request to move pole position to the other side of the Suzuka track it reignited Senna's simmering feud with Alain Prost. At Turn 1 Senna drove into his old rival, taking them both out



electronics systems. Mansell would cement his heroic *Il Leone* status with a magnificent charge (and defeat of Senna) in Hungary, and Berger would win in Portugal, but Ferrari remained resolutely in McLaren's shadow.

Then came Prost and the full realisation of Barnard's vision, complete with sorted electrics. Except John wasn't there to conduct it. Benetton had come calling with a "fairly impressive" offer and, worn down by the politics, he jumped at it.

Prost came in as reigning champion after beating Senna to the '89 title. But success had come at a heavy price. After two seasons of increasing bitterness in the same team, pragmatic Prost had come to the only logical conclusion: while he was equal to Senna in most respects, he couldn't quite match the Brazilian for out-and-out pace. To beat him again, he would have to do something different.

In the 641 Prost would win five times to Mansell's single victory, driving *Il Leone* to distraction and eventually out of the team. More importantly, he pushed Senna all the way to another Suzuka title showdown, which his

enemy concluded with the most reprehensible piece of driving in F1 history.

Had Senna not driven into Prost at the first turn at 150mph, and Alain had won the championship, how would the story of 1991 have played out? In truth, with Barnard gone, Fiat's suits still rife in Maranello and no solutions in place to solve the age-old problems, the story would probably have been the same.

By the end of that season, a disillusioned Prost had been sacked, remarks comparing his revised 641 to a "truck" allowing Fiat to use him as a scapegoat. But dazzling, perfectly groomed – and familiar – hope had wafted over the horizon.

Fresh from masterminding a successful Italia '90 football World Cup, suave Luca Cordero di Montezemolo received a call from his old mentor Gianni Agnelli at Fiat: come and sort our troublesome Ferrari. And not just the F1 team, as he had way back in '75: this time he was chairman and president of the whole shebang.

To tackle F1, he called on old friend Lauda for advice and hired back Barnard after what had turned out to be two unhappy years at

Benetton. The fix would not be immediate, an overly ambitious twin-floor chassis and disastrous active suspension ensuring further nightmares in 1992. But for clear-of-mind Montezemolo, the penny had dropped: Ron Dennis had shown the way years earlier.

No 'silver bullets' this time. A new and lasting approach was required, and if he was to rejuvenate Ferrari's underperforming road cars too, he needed help to lead it.

The call he made – arguably the most important and decisive in Ferrari's history – was to a steely-eyed Frenchman, with no direct experience of F1. Jean Todt had single-mindedly nurtured Peugeot into winners on the rally stage and then Le Mans. But this was something else.

Did Todt really have the chops to lead the biggest name of them all, on the greatest and most demanding stage? Ferrari's F1 future was counting on it. 🏁

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FINISHING STRAIGHT



Our readers are keen for Sergey Sirotkin (above) and Lance Stroll to have an opportunity to shine at Williams

**Give youth a chance**

I know not everyone is enamoured with the Williams line-up, now that Sergey Sirotkin has been confirmed alongside Lance Stroll for this season, but let's at least give the duo an opportunity to shine before condemning them.

So what if they have a combined age of 41, and that Sirotkin was only two and Stroll hadn't been born when Williams last won a title. Stroll kept his head when presented with his chance in Baku last year, and was only narrowly beaten in points terms by Felipe Massa, a driver with over 250 starts. Yes, Sirotkin is a bit of an unknown but he has twice finished third in GP2 so isn't a complete mug.

Possibly the problem with the pair goes a little deeper on two

levels. Firstly, that a team with 16 world titles needs two young drivers (neither of which is a talent like Max Verstappen) who have brought a large wedge with them?

And secondly, and probably more pertinently, is part of the downer on Sirotkin because he is preventing the fairy-tale comeback that is Robert Kubica sitting in a Formula 1 race seat again? I suspect that plays a big role in all of the negativity surrounding the Williams drivers.

**Jim Black**  
By email

**Taking liberties?**

I can't help wondering whether Formula 1's new owners are using a venerable *F1 Racing* feature [Blueprint for a new Formula 1, *F1 Racing*, December 2016] as

the actual basis for changing the sport. Back then you suggested ten ideas to change grand prix racing for the better, and most of them are now being taken on board.

The latest idea I've seen is that F1 bosses are going to change the race start to 3.10pm local time instead of the usual 2pm. I think it's a great idea to shake up the weekend timetable if it means more support races, or that drivers have greater interaction with the fans.

I also welcome the idea of fan festivals and street demos to take the sport to a wider audience (like the F1 Live London event) and having races in new locations such as Miami or Hanoi in the future.

Finally, you suggested F1 cars need to be 'fast and exciting' and the racing 'unpredictable'. Those

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are the areas which will need a long-term solution rather than a quick fix. I understand F1 chiefs have established a working group to solve this conundrum. Because for F1 cars to be 'fast' they need to utilise aerodynamics – something that doesn't make for exciting racing. Alternatively we could reduce grip (through the tyres) but that won't make them fast...

Good luck to the brains who are working on this problem – it won't be an easy fix.

**Stavro Lexo**  
Athens

**Where next?**

I've only come to Formula 1 in recent years and have taken in Silverstone (twice) and a fantastic trip to Monaco – albeit on a budget – in the past couple of years.

My question now is, where next? I'm tempted by Belgium, France and Germany because of their proximity to the UK, but really want to broaden my horizons.

My first options are Singapore and Austin. Anybody got any advice on which of these two to choose?

**Darren Smith**  
By email

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F1 champion looks ahead to 2018



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How Fernando will fight back in 2018



**MERCEDES**  
Behind the scenes of new car launch

ON SALE

**MAR 15**

- > Full season preview: all the new cars and circuit info
- > Testing with Williams new boy Sergey Sirotkin
- > We catch up with Renault's Nico Hülkenberg in London
- > Otmar Szafnauer on Force India's 'spicy' drivers rivalry





# GO FIGURE

We have a look at how the F1 numbers stack up for March, now the season's traditional starting month

# FOUR

The most number of wins in the month of March by a current driver, Sebastian Vettel



# 57% OF DRIVERS

who win the first race in March have gone on to become world champion

# 1

The number of times Albert Park has not held the Australian GP in March. 2006 was the exception

# 1997

Lola's last foray into F1 started and ended in March of this year when they were 11 seconds off the pace in Australian GP qualifying



# 35

times the season has got underway in March, starting in 1970



# TWENTY SIX

March cars have started grands prix in the month of March



# 24,373 MILES

travelled from the UK to the three races held in Australia, Malaysia and Brazil in March 2002

# 40 WEEKS

between the start of the 2018 Formula 1 season on March 26 and the finish on November 25



# 21

Ayrton Senna was born on this March day in 1960





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# THE FRENCH GRAND PRIX

Paul Ricard, France 22-24 June 2018



28 years on Paul Ricard is back

LAT IMAGES; STEVEN TEE; OTHER PHOTOS; SHUTTERSTOCK.

## WHY VISIT?

After a ten-year hiatus, this year F1 will welcome back a true classic – the French Grand Prix, creating the perfect opportunity to explore the nearby city of Marseille.

Present on the sport's inaugural calendar back in 1950, it kept its place for some six decades, with Magny-Cours as the most recent host, between 1991-2008.

Several comeback attempts followed, but none were realised until Paul Ricard – which staged 14 French GPs between 1971 and 1990 – emerged with a concrete plan, supported by officials in the south of France.

Predominantly used as a test track in recent years, the renovated venue may discourage fans with its huge run-off areas, but early simulations are rather exciting. It is expected that current-spec cars will take the mighty right-hand Signes corner at around 210mph, despite the Mistral straight being broken up by a chicane, one of several moves to create overtaking opportunities.

Paul Ricard will also make a little bit of history on its return, as it kicks off Formula 1's first ever triple-header sequence, with Austria and then Silverstone following hot on its heels in the first two weeks of July.

## WHAT TO SEE

**The Old Port (Vieux Port) of Marseille**

Perfect for those who want to stroll or dine in an idyllic setting, the marina is bustling with waterfront cafes, stylish bars and seafood restaurants serving fresh lobster.

Described as the beating heart of the city, the port was once the main source of income in Marseille and, with over 3,000 berths, is still home to a great number of boats. If you're an early riser, take a stroll down to the port to see the old fish market in all its glory, or visit one of the many eateries in the evening to try the catch of the day.







The Old Port (Vieux Port) of Marseille



Le Panier Old Town



Palais Longchamp



Notre-Dame de la Garde

#### Notre-Dame de la Garde

Translated as 'Our Lady of the Guard', the Notre-Dame de la Garde was built on the highest natural point in the city, using the foundations of an old fort as its base. This one is a must-see for those interested in the history of Marseille and is the city's most visited attraction.

#### Palais Longchamp

Housing both the Musee Des Beaux-Arts and the Natural History Museum, Palais Longchamp is an architectural spectacle that needs to be seen to be truly appreciated.

## FAST FACTS

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**Plug type** Type F

**Weather** 23° C / sunny

**Flight Time** London to Nice, 2hrs

**Transfer Time** 1hr 30mins (hotels to track)

Although the foundations were originally laid in 1839, the building took more than 30 years to complete and is now home to some of the most beautiful gardens in France. The Palais contains an observatory, which never closes, and if you don't have time to visit during the day, the park is well lit and looks just as stunning at night.

#### Le Panier Old Town

Picturesque streets, restaurants and art galleries make up Le Panier Old Town, as well as incredible street art and religious landmarks. Whether you want to aimlessly stroll the streets and enjoy the atmosphere, or soak up the stark contrasts between old and new, this is a neighbourhood that offers something for everyone.

Need some last-minute souvenirs? Pay a visit to one of the many boutique shops where you can pick up something truly unique.

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- Service charges, taxes, ATOL protection

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- Ticket upgrades
- Qualifying day (Saturday) return circuit transfers by coach

## WHERE TO STAY

### Staycity Aparthotels Centre Vieux Port, Marseille

Set on the outskirts of Centre Vieux Port, these self-catering, one-bedroom serviced apartments are great for those who want to explore. You're just a short walk away from the Cathedrale de la Major and the Museum of European and Mediterranean Civilizations (MuCEM).

### Ibis Marseille Centre Vieux Port, Marseille

Perfect for those who want to get out and experience all Marseille has to offer, such as the Old Port, the Old Town, and Notre-Dame de la Garde. The rooms are comfortable, quiet, air-conditioned and breakfast is served until 11am.

### NH Collection, Marseille

A new hotel, the NH Collection offers a gym, bar and restaurant. With shopping malls and historic attractions close, visitors can also use the tram from outside the hotel for attractions further afield.

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If you don't have a racing seat, then we highly recommend buying a separate stand, unless you play at a desk. The mounting points screw very tightly, so there's no chance of the wheel shifting during a sharp hairpin right. An absolute must for the keen racing gamer.

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The annual Formula 1 review once again follows the tried and tested format with a synopsis of each race broken into 20 chapters, narrated by Channel 4's Ben Edwards.

The two discs extend to 4 hours and 46 minutes with 26 mins of bonus features – and this is where the review excels. There is some brilliant onboard footage, including Esteban Ocon's frenetic Belgian GP start where he makes contact with Force India team-mate Sergio Pérez heading towards Eau Rouge.

There are also a couple of nice features, such as Stoffel Vandoorne taking on his engineer, and Olympic medallist, Tom Stallard in a rowing competition in Montréal's lake, and an exclusive peak inside the drivers' briefing in Suzuka.

A must for every F1 fan.

**FORMULA 1 CAR BY CAR 1970-79**

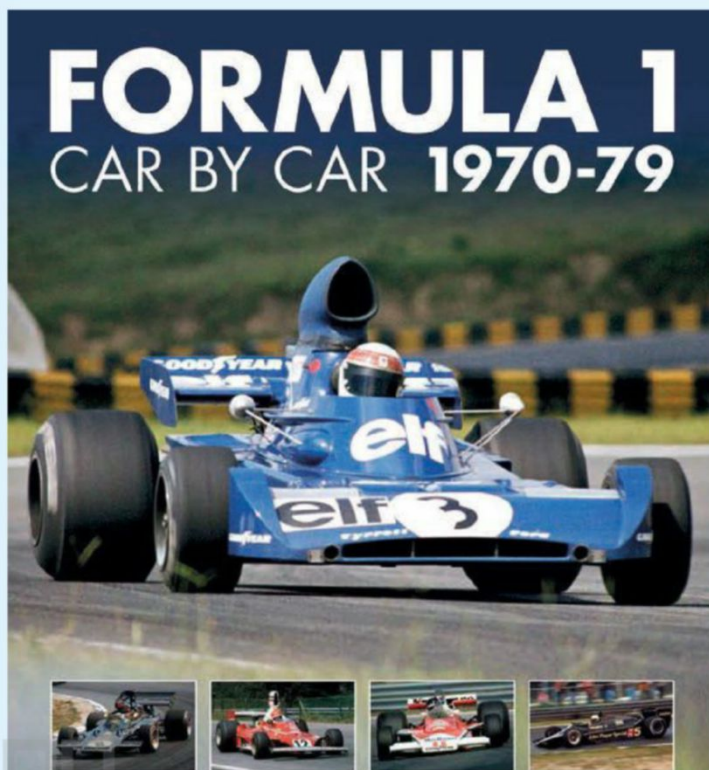
**Author** Peter Higham

**Price** £50

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Performing the same service for the 1970s as the author's previous book did for the 1960s, this tome aims to cram the racing narrative of an entire

decade – including every participant – into just 304 pages. Higham's detailed research adds fascinating nuances to familiar elements, but the real joy comes in sifting through the obscurata (such as Tony Trimmer in the Maki, or a young Bobby Rahal's cameo in a Wolf WR5), photographed throughout in full colour.



Peter Higham





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#### GRAND PRIX DRIVER

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Subscription price £7.99 per month

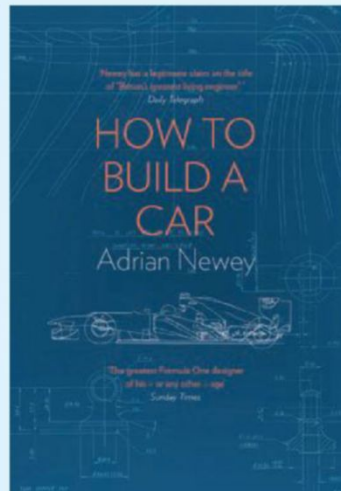
[www.amazon.co.uk](http://www.amazon.co.uk)

In the secretive world of Formula 1, being granted warts-and-all access is rare. Many documentaries claim to have behind-the-scenes footage, but this new Amazon Prime series, narrated by Michael Douglas, really is a detailed snapshot of the inner workings at McLaren.

The focus of the four-part programme (running to two hours in

total) is the run-up to the start of the 2017 season. That includes Fernando Alonso's explosive reaction to the new Honda engine in testing and the concerns from the senior McLaren management that he might walk away from the team.

Most of the action takes place at McLaren's Woking base and viewers get to see the inner workings of the team. The only place to watch is on Amazon's streaming TV service, Prime, which is £7.99 a month, or there is a 30-day free trial. All four episodes are available from 9 February.



#### HOW TO BUILD A CAR

**Author** Adrian Newey

**Price** £20

[www.harpercollins.co.uk](http://www.harpercollins.co.uk)

Following our interview with Adrian Newey last month [*F1 Racing*, February 2018], the topics he discussed are pursued at length in this long-awaited autobiographical hardback. From the welding lessons he took in his school holidays to his latest project to design a supercar, his 35-year career is charted in detail in this book.

Right from the off, Newey pulls no punches and you are in for quite a ride. Of much amusement to the reader will be the snippets of his school reports which are reproduced. One English teacher writes of Newey: "He has some flair. He would excel if he could only raise the energy," while his French teacher notes: "I regret that his behaviour in class has too often been extremely silly."

The book also features a few of Newey's sketches from his personal notebook and the chapters each focus on a significant car he has worked on, starting with a March 83G, through his time at Williams and McLaren before finishing with the Red Bull Racing RB8.

In what is a very crowded market place of motorsport books, this is one that is most definitely worth seeking out.





# ROMAIN GROSJEAN ME AND MY LID

Frenchman Romain Grosjean likes bold colours and his designs are relatively straightforward, with a touch of patriotism thrown in



LAT IMAGES: STEVE EATHERINGTON; GLENN DUNBAR



**I've got a friend of mine** – Adrien Paviot – who does helmet designs for quite a lot of drivers, including Sebastien Loeb, Sebastien Ogier, and he also helped Max Verstappen last year as well as Pierre Gasly. Adrien really knows my taste and what I like.

I like blue, orange, yellow – the colours I've usually had – as well as quite a lot of effects and crossing of the lines. I've more or less always kept the orange at the front and we've got the number eight on the top for the regulations, as well as the French stripe.

There are a few small details on it, and I've got some effects on the blue because I can play around with that under the regulations as long as it stays blue. My name is on the back and also on the top I've got JB17 for Jules [Bianchi] which will always be there.





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