

F1 TITLE SHOWDOWN: 18-PAGE SPECIAL

F1 RACING

THE WORLD'S BEST-SELLING GP MAGAZINE

EXCLUSIVE
We talk
to **all four**
F1 title
contenders



BUTTON

"It's hard, but I'm
up for the challenge"

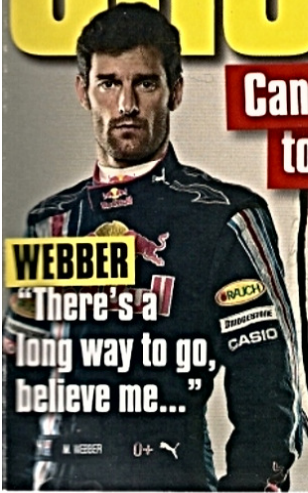


VETTEL

"I'll go for it 'til
it's impossible"

SHOWDOWN

**Can Jenson hold his nerve
to make it two British
champions in a row?**



WEBBER

"There's a
long way to go,
believe me..."

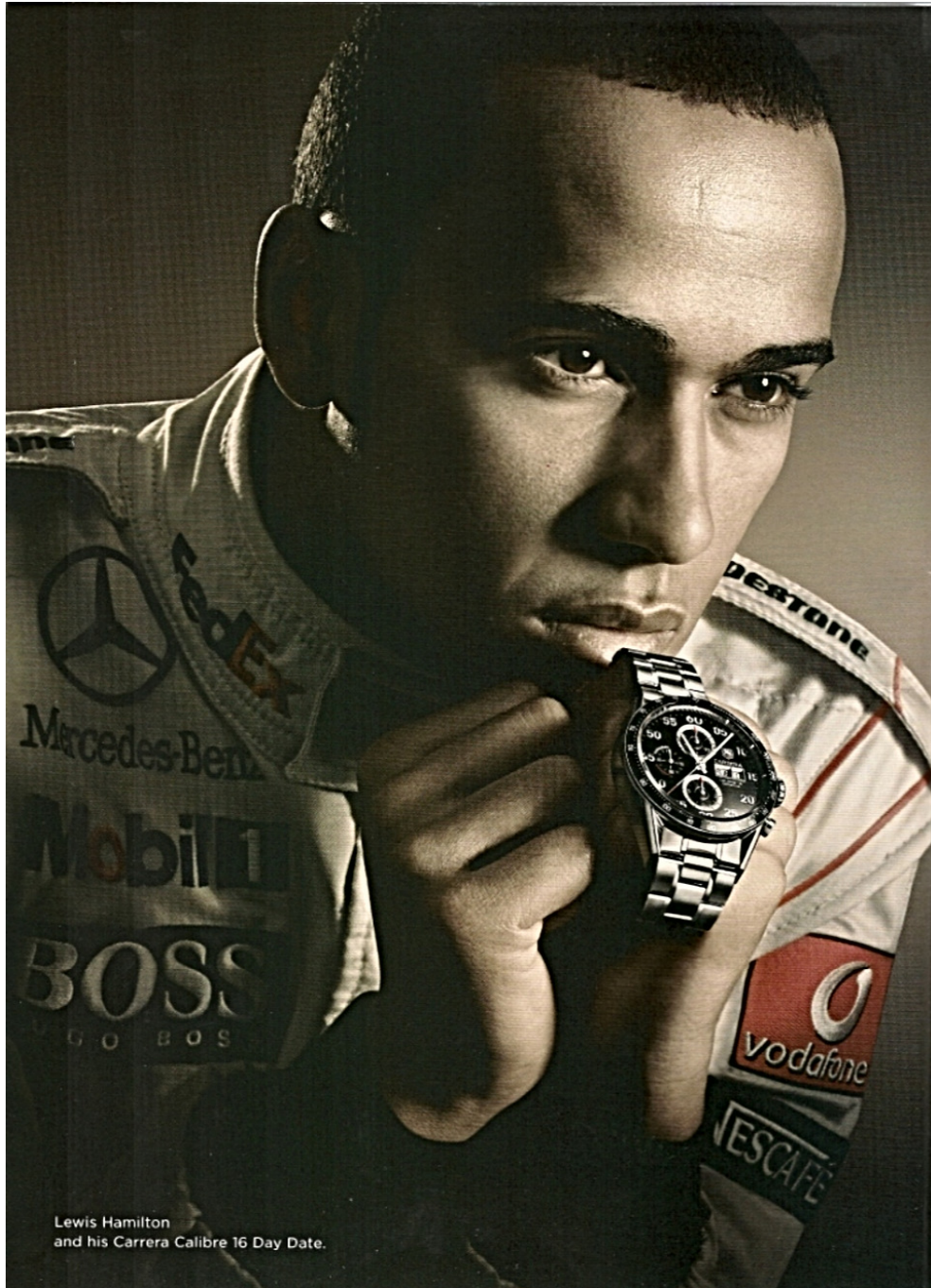


BARRICHELLO

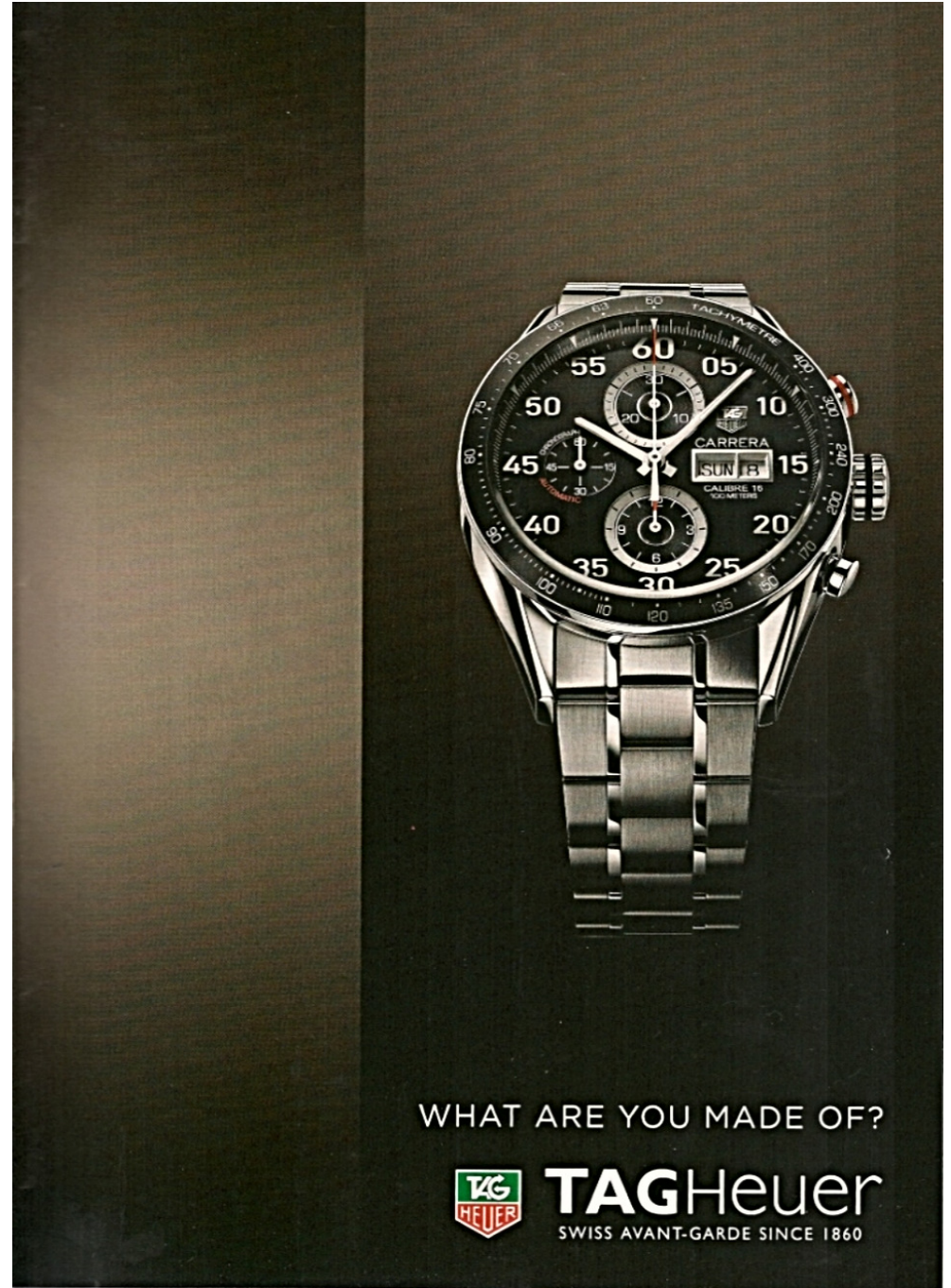
"Jenson has
more to lose.
I'm closing in..."



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OCTOBER 2009
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Lewis Hamilton
and his Carrera Calibre 16 Day Date.



WHAT ARE YOU MADE OF?



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SEBASTIAN VETTEL

Michael Schumacher tells us why 'Baby Schuey' can still win the title in 2009



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JENSON BUTTON

The world thinks Jenson is cracking under the pressure. But Damon Hill doesn't agree...



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RUBENS BARRICHELLO

Emerson Fittipaldi reveals the tips he gave Rubens last winter. Will they help propel him to the title?



COVER PHOTOGRAPHY: SAM BARRETT, ANDREW FERREBOUTAT

F1 TITLE SHOWDOWN: 18-PAGE SPECIAL

F1 RACING
EXCLUSIVE: We take you all the way to the top of the world...
SHOWDOWN
Can Jenson hold his nerve to make it two British champions in a row?
WEBSTER: There's a really way to go before we...
BARRICHELLO: Jenson has all the tools to win. It's closing in...



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MARK WEBBER

Alan Jones reckons Mark Webber's got what it takes to be champ. So does Mark. But are they right?



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THE SECRET WORLD OF CFD

An amazing insight into the mind-bending technology used to develop the latest F1 cars



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KERS: THE VERDICT

If KERS is such a bad thing, why is it winning races? We assess this controversial technology



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WHEN WILLIAMS RULED THE WORLD

30 years ago, Frank Williams' grand prix team were on top of the world - and it was all thanks to a tiny little nose tweak...



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BBC BEHIND THE SCENES

We take a peek at what makes the BBC's F1 broadcasters tick, while Jake and MC ponder Ed's dubious choice of pink and green...

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COVER PHOTOGRAPHY: SAM BARRETT, ANDREW FERREBOUTAT; INTERIORS: BELLA/CAJAL; WILLIAMS F1; CHRIS NASH/GETTY IMAGES; CLENN DUNBAR/SAL LAT ARCHIVE





PARADE

Unwanted man

All eyes were on the unlikely figure of Luca Badoer in Valencia and Spa, as he took on the impossible job of filling Felipe Massa's shoes. Two woeful races later, his brief cameo was over

Where Spa-Francorchamps, Belgium
When 10.22am, Saturday 29 August
Photographer Peter Fox
Details Canon EOS-1DS Mk III,
840mm lens, 1/80 at F5.6





PARADE

Careful, everyone...
Heikki Kovalainen brakes hard at the first corner as he and the cars around him somehow make it through La Source. He would finish sixth; others would come a cropper seconds later...

Where Spa-Francorchamps, Belgium
When 2.04pm, Sunday 30 August
Photographer Steven Tee/LAT
Details Canon EOS-1D Mk III, 35mm lens, 1/800 at F5.6



PITPASS

The stories that matter from the world of Formula 1 this month

RENAULT AWAIT THEIR FATE...

FIA set to give their verdict on whether Piquet's crash at last year's Singapore Grand Prix was deliberate

ALL EYES TURN TO Paris where Renault are set to discover their fate following an extraordinary meeting of the FIA World Motor Sport Council. A verdict is expected today, as *F1 Racing* hits the newsstand.

If the team are found guilty, any punishment, which could range from huge financial penalties to race bans, could have serious ramifications for the future of the Enstone-based outfit.

Representatives of Renault were called to appear at the Paris headquarters of the FIA to answer charges that they breached Article 151c of the International Sporting Code, by conspiring with their driver, Nelson Piquet, to cause a deliberate crash at last year's Singapore Grand Prix. His crash at Turn 17 on lap 14 of last year's race brought out the Safety Car, shortly after his team-mate

Fernando Alonso's first pitstop. Alonso then went on to win the race.

The allegations of race-fixing have come to light since Nelson Piquet was dropped by the Renault team following this year's Hungarian Grand Prix in July.

Piquet gave a statement at the FIA's headquarters on 30 July in the presence of the FIA's chairman of the stewards, Alan Donnelly, and two members of the investigation firm Quest, which has been hired by the FIA to look into the case.

Piquet has alleged the instruction to crash came at a pre-race meeting with team boss Flavio Briatore and engineering director Pat Symonds. The Renault team has not commented on the allegations and said in a statement: "Before attending the hearing, the team will not make any further comment."

Back in April, we asked Nelson Piquet directly whether he deliberately crashed at the Singapore GP and he gave the following answer: "Yeah, sure. I wanted to try and kill myself to help Fernando get a podium... I was at the back, I was pushing really hard and I spun off. Luckily the team called Fernando at the right moment and shit happens for me and he gets lucky."

Fellow Brazilian driver Rubens Barrichello has been at the centre of team order controversies at Ferrari in the past and said at Monza: "It's quite difficult to think that somebody would crash a car because he was told to but, if it's true, it's very, very sad."

Since being dropped from Renault, Piquet has been highly critical of the French team and its boss Flavio Briatore in particular, describing him as his "executioner".

On 28 July, Briatore wrote to Nelson's father, Nelson Piquet Sr, over the matter and confirmed at Monza that he was starting legal proceedings against father and son for "false allegations and a related attempt to blackmail the team into allowing Piquet to drive for the remainder of the 2009 season."

Renault have been in trouble with the FIA already this season. They were suspended from the European GP for breaching sporting regulations in Hungary because they released



The team go wild, celebrating Alonso's victory in Singapore. Events surrounding that win are now under FIA investigation



Renault boss Flavio Briatore with his former driver Nelson Piquet in happier times, before Piquet was dropped by the team

Alonso from the pits with a problem with his wheel. But, on appeal, the FIA Court of Appeal overturned the original suspension instead issuing a reprimand and a fine of £30,000.

In December 2007, Renault were called to the FIA World Motor Sport Council to answer charges that they had breached Article 151c for possessing documents belonging to McLaren. The WMSC found they

"Before attending the hearing, the team will not make any further comment"
Renault

had contravened the rules but imposed no penalty "due to the lack of evidence that the championship had been affected."

Renault's appearance at the FIA World Motor Sport Council in Paris on 21 September is to answer the charges of Article 151c, which relates to: "Any fraudulent conduct or any act prejudicial to the interests of any competition or to the interests of motor sport generally."

When McLaren were penalised over the 2007 'Spygate' scandal, they were stripped of all constructors' points and fined a record \$100 (£50) million.



Piquet hits the wall in Singapore, uttering the track with debris and bringing out the Safety Car

PITPASS

HUGE UPGRADE FOR SUZUKA

Japanese track gets new pits and confirms it will host the grand prix until 2011



The switch new pit and paddock complex and the resurfaced track. But - doesn't it all look lovely?

"This shows good commitment from Japan to invest in Formula 1"

John Howett, Toyota



FORMULA 1 RETURNS to one of the best circuits in the world later this month, and the good news for fans is that the awesome figure-of-eight track has undergone an extensive upgrade to seal its place in F1 for the next two years.

Following a two-year stint at Fuji, the Japanese Grand Prix returns to Suzuka on 4 October and *F1 Racing* has been given a sneak preview of the substantial improvements that have been made to the track's pits and paddock facilities.

Along with Spa, Suzuka is one of the drivers' favourite tracks on the calendar and makes a welcome return to the schedule, having first hosted the Japanese GP in 1987. After Fuji's announcement that it was no longer economically viable for it to host the grand prix, Suzuka has struck a new deal with F1 supremo Bernie Ecclestone to run the race for the next two seasons. It's likely, however, that Fuji could return in the future when economic conditions improve.

Suzuka, which is owned by Honda, has invested in a completely new pitlane, with new garages, new hospitality areas, extra grandstand seats and a new race control, medical and media centre. Paddock access and facilities for the teams have also been upgraded and, in addition to all this, the first sector of the 3.6-mile track has been resurfaced.

The improvements have been welcomed by Toyota's F1 boss John Howett. He told *F1 Racing*: "There has been a massive investment in the track at Suzuka and, while the layout is the same, there has been a lot of resurfacing and the pits and paddock have been totally revised. It shows a good commitment from Japan to invest in Formula 1."

Since they first entered grand prix racing in 2002, the Toyota team have yet to win a race but they have a significant update planned for their TF109 for the flyaway races in Singapore and Japan in a bid to try and break their duck.

"At Suzuka, there are similar downforce requirements to those in Spa," added Howett, "So we could be strong here. It's the ideal place to win."

Despite a promising start to the season and a couple of front-row starts, that all-important victory has proved elusive for Toyota this year but, as Timo Glock told *F1 Racing*, in his exclusive Japanese GP preview (on page 110), the team will be pushing hard at Suzuka. "Toyota has a very loyal following in racing circles. Without Honda on the grid, we are flying the flag for Japan in F1," he said. "With Suzuka being the team's home race, it would be nice to get a good result."



There's brand-new hospitality seating here, currently unoccupied by anyone's buttocks...

F1 SEASON TO START IN BAHRAIN

Provisional 2010 calendar also reinstates Canada

NEXT YEAR'S FORMULA 1 season will start and end in the Middle East as Bahrain is in place to host the opener and Abu Dhabi the season finale. Although not yet official, the proposed 2010 calendar has been circulated among the teams. Included on the 18-race schedule is a welcome return for the Canadian GP at Montreal in June, while both Donington Park and Silverstone are listed in the event of the proposed redevelopment of Donington Park not being finished in time.

Bahrain last held the season opener in 2006 when Melbourne hosted the Commonwealth Games. Next year, the Melbourne date is at the end of March because of the switch to Daylight Saving Time, which coincides with its late start time - again - for the benefit of European TV audiences. The calendar is due to be confirmed by the FIA in December.

PROVISIONAL 2010 F1 CALENDAR

March 14	Sakhir, Bahrain
March 28	Melbourne, Australia
April 4	Selangor, Malaysia
April 25	Istanbul, Turkey
May 9	Barcelona, Spain
May 23	Monaco, Monte Carlo
June 6	Montreal, Canada
June 27	Valencia, Europe
July 11	Donington Park or Silverstone, Britain
July 25	Hockenheim, Germany
August 1	Budapest, Hungary
August 22	Spa-Francorchamps, Belgium
September 5	Romano, Italy
September 19	Maine Bay, Singapore
September 26	Shanghai, China
October 10	Suzuka, Japan
October 24	Interlagos, Brazil
November 7	Yas Viceroy, Abu Dhabi

ABU DHABI SET FOR HD

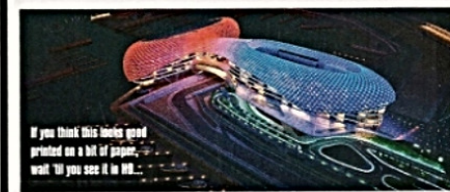
Season finale TV broadcast set for High Definition as a trial for full HD coverage from next year

IT'S THE MOMENT armchair fans have been waiting for - the first grand prix to be broadcast in High Definition. FOM (the firm owned by Bernie Ecclestone that films all the races) are evaluating broadcasting this year's twilight race in Abu Dhabi in HD, with a view to a full season of HD next year.

Ecclestone told *F1 Racing* last month that F1 would be in HD

when "enough people want it". But European broadcasters, including the BBC, are pushing for the upgrade. "We are getting close because I have asked all our broadcasters and probably about 50 per cent of them have said yes," said Ecclestone.

A problem in the past has been getting HD technology into the tiny on-board cameras - but that issue is now resolved.



If you think this looks good printed on a bit of paper... wait 'til you see it in HD...

PITPASS

THIS MONTH'S BIG DEBATE



Ferrari with three cars next year? That means they'll have room to take Luca Badoer back...

Should teams be allowed to enter third cars?

Yes



Riccardo Patrese
Former Brabham and Williams driver

"WHEN I WAS racing, we used to have 26 cars on the grid. We qualified with 32 and there was much more action out on the circuit. I would like it if all of the teams put three cars on the grid, because it would simply be better for the show. We would have more cars, more racing, and I like the idea of that in Formula 1.

"People talk about Michael Schumacher in a third Ferrari, but why Michael? I think he's had enough time to show what he can do. A third car should be used to give young drivers more chances to demonstrate their

ability, and get used to driving in F1. Okay, so we might have some cars that don't qualify, but this is how things always used to be.

"The problem we have for 2010 is that, at the moment, we don't really know how many teams are going to turn up in Melbourne with cars. Perhaps there will be 13 of them, maybe ten – and perhaps even fewer than that. So I don't think it's just a question for Ferrari. I believe all the teams should be running a third car because, quite simply, I think it's better for the sport if we have more cars rather than fewer of them."

No



Adam Parr
Chief executive officer, Williams

"WHAT MAKES F1 exciting, and this year is a classic example, is having a very competitive, close grid with different teams. I don't think it's interesting to have three cars of the same colour on the grid and I don't think it's interesting having a car that can't score points. It clogs up the grid and, if one of those cars is not scoring points, what have they got to lose? They can simply screw up everybody behind them with great glee.

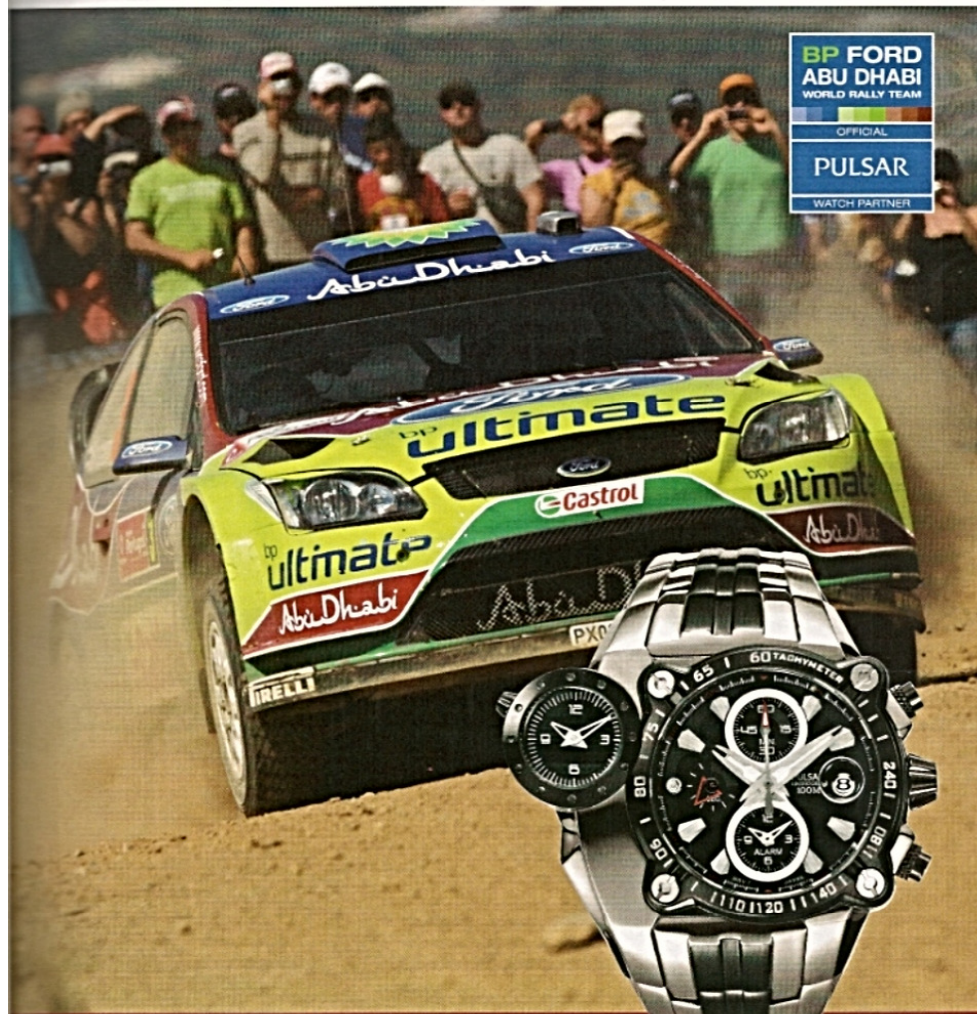
"There are side effects, too. Think of the impact it would have on the driver market. Right now, Formula 1 doesn't have

football-scale wage bills because, although one team is willing to pay double what anyone else is, the fact is they can only do it for two drivers. The minute they can do it for three drivers, they'll want the best three on the grid.

"If we find ourselves in a situation where we have eight teams, which I sincerely hope we won't, then we would be in favour of running third cars. But what we're not in favour of is having three cars because one team happens to have signed too many driver contracts. They think it's sexy to have more cars of the same colour – I don't."

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Paddock Spy

Before Fisichella, 16 other Italians have raced for Ferrari at the Italian Grand Prix



It's a dream come true for any Italian racing driver. Sadly it wasn't to be for Luca Badoer, as Giancarlo Fisichella was given the call-up to replace him at the legendary Scuderia in Monza



Tyrie-born Ludovico Scarfiotti took his solitary Formula 1 world championship victory driving a 3-litre Ferrari 312 back at the 1966 Italian Grand Prix ahead of team-mate Mike Parkes



Giancarlo Baghetti leads a trio of 156s at Monza in 1962. Three years later, Nino Vaccarella took his turn at Ferrari



After the death of Enzo Ferrari, Michele Alboreto finished behind team-mate Gerhard Berger to take an emotional one-two in 1993



In the 1970s, two Italian drivers raced at Monza for Ferrari, Arturo Merzario (pictured here in '73) and Ignazio Giusti



Luigi Musso raced for the prancing horse at the hallowed Autodromo twice, in '56 and here, entering Parabolica in '57



"Oh mate, you can't race that!" Giuseppe 'Nino' Farina's third Italian race was scuppered thanks to tyre problems in 1955



Very tall pit chairs were all the rage when Lorenzo Bandini retired his sleek 312 at the 1966 Italian Grand Prix



Alberto Ascari (left) raced from 1958-59 and, during that time, was joined by Roberto Maglioli and Eugenio Castellotti



Ivan Capelli was the last Italian (before Fisichella) to drive at Monza for Ferrari, but upon the race-critical F121's retirement



Dario Sorafini drove for Ferrari in 1958. He was followed by Piero Taruffi and Luigi Villorzi (pictured in '52)

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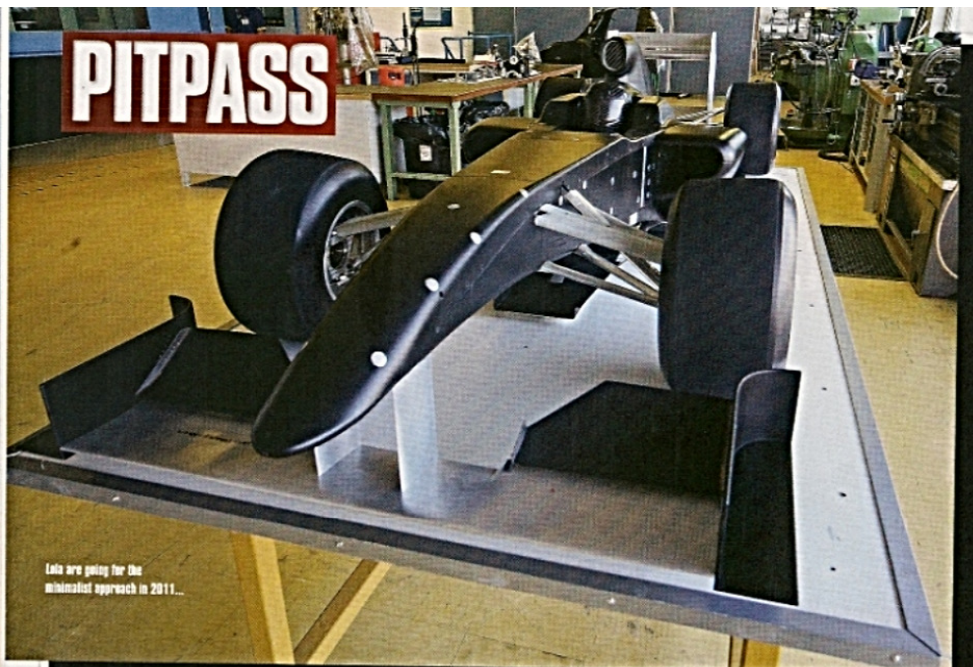
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PITPASS



Lola are going for the minimalist approach in 2011...

NEW TEAMS FINALISE THEIR 2010 PLANS

In just six months, Manor, Campos and USF1 will make their Formula 1 debuts. So just how are they progressing... and are they going to be joined by yet another new team?

ALL OF THE THREE NEW F1 teams are in the final stages of building their cars, upgrading their facilities and talking to drivers ahead of their grand prix debuts, which will be in less than six months time.

Since the FIA confirmed Manor, Campos and USF1 back in June, the three Cosworth-powered outfits have been finalising their funding and furiously working on their designs for 2010. But they could be joined by a fourth new team following BMW Sauber's decision to quit the sport at the end of this year. Teams also considering entry for 2010 include Spanish outfit Epsilon Euskadi, headed up by former F1 men Joan Villadelprat and Sergio Rinland, and the Lotus-Litespeed outfit for which Mike

Gascoyne is a consultant. In addition, Lola have revealed their F1 car, which could yet join the line-up on the grid in 2011 (main picture). But while the bids for BMW (on sale for £50million) continue, *F1 Racing* caught up with the three new teams that are on the entry list for 2010...

New teams could be joined by a fourth, following BMW's decision to quit

TEAM USF1

The main investor behind the new American team is the brains behind YouTube. Chad Hurley, 33, was a visitor to the British Grand Prix and is a big fan of F1. He originally created the PayPal logo before co-founding YouTube and selling it to Google for an estimated £1.3 billion. He is one of the primary backers behind Team USF1, the American-based outfit established by *F1 Racing's* grand prix editor Peter Windsor and former Onyx man Ken Anderson.

The USF1 chassis is expected to be ready next month, ahead of its first run-out in January. The design and manufacture base is the former Joe Gibbs NASCAR facility in Charlotte, North Carolina with

an additional logistics base in Spain. Anderson told *F1 Racing* that the team is working to a military R&D principle known as 'skunkworks', whereby a small team are employed to do their work without the distractions of bureaucracy that hamper larger organisations.

Their US base has a dozen computer numerically controlled (CNC) machines and two autoclaves, plus it is situated close to seven-post rig machines, the full-scale Windshear windtunnel and fabrication shops. The team is looking for one American and one experienced F1 driver for next year and Windsor is on the search for stars of the future with his Grand Prix Shootout competition. US drivers who have been linked to the team include Jonathan Summerton and Alexander Rossi.

MANOR GRAND PRIX

Team owner John Booth was at Spa for the Belgian GP catching up with some of the drivers he used to run in the junior formulae, including Robert Kubica, Kimi Räikkönen, Kazuki Nakajima and, of course, Lewis Hamilton. Booth says he is considering establishing a young driver programme for drivers that could come through Manor's Formula 3 and Formula Renault teams.

He also explained that his Sheffield premises are undergoing a substantial upgrade to accommodate new race bays for the F1 cars. The operation for Manor is being split between three different locations. While the assembly and logistics base is in Sheffield, the main design and manufacturing centre is at Nick Wirth's company, Wirth Research in Biester. The marketing base, not yet confirmed but believed to be Virgin, is located in London and is headed up by Alex Tai who is tipped to oversee the F1 team next year. The car is scheduled to be unveiled in February next year.

CAMPOS META

Adrian Campos's outfit will operate from the same Valencia base as its sister GP2 team Barwa Addax, with an upgrade to the facility planned once the GP2 season has ended. Campos has hired former Super Aguri team boss Daniel Audetto following his consultancy work for the Rome GP project. Design and construction of the car is being carried out by Italian chassis manufacturer Dallara and windtunnel work has been ongoing since July. Dallara has 40 engineers working on the project and they expect to double that figure – they've also employed former Red Bull aerodynamicist Ben Agathangelou. Dallara ran cars in F1 from 1988 to 1992 and recently collaborated with Midland on their entry back in 2005.

Drivers linked to the team include Pedro de la Rosa and GP2 driver Vitaly Petrov, who races for Barwa Addax, although these names are not expected to be confirmed until the end of the season. Marketing and PR will be handled by Madrid-based Meta Image.



JAIME'S HECTIC SCHEDULE

Rookie Alguersuari staying sharp by driving on non-F1 weekends

TORO ROSSO'S YOUNG ROOKIE, Jaime Alguersuari, hasn't got a lot of free time on his hands: between the end of August and the final F1 race in Abu Dhabi he will have raced ten out of 11 weekends.

Because F1 rules prevent any in-season testing, the 19-year-old is staying race-sharp by continuing to race in the Renault World Series. Also, before Monza, he took part in the CIK-FIA Karting World Cup, competing against the top 80 karters in the world.

It has been four years since Alguersuari last raced karts, but onlookers were impressed by his performance at Sarno in

Italy – finishing sixth in the qualifying heats in his 125cc KZ1 gearbox kart – although exhaust problems scuppered his final result.

Despite blistering his hand, he believes racing is the best preparation given his experience and his team bosses support him.

The 19-year-old said: "Both Franz Tost and Giorgio Ascanelli are very demanding but they agree with me that, based on my age, I should continue a process of training at a top level, which I would have developed if I didn't enter in F1 so early."

After Monza he'll resume his challenge for the World Series crown at the Nürburgring.

FOLLOW MORE F1 DRIVERS ON TWITTER

Keep track of Jensen, Rubens... and even Ari Vatanen online

YOU CAN NOW GET even closer to F1's top drivers by following them on Twitter. Racers Jensen Button, Rubens Barrichello and a number of teams are posting on the site.

Twitter provides a forum for fans to follow their favourite drivers. For example, both Brawn drivers have uploaded photos



of themselves at races, and Nelson Piquet amused his 80,000 followers by tweeting "Boa Grosjean" which translates as 'Good Grosjean' when his Renault replacement crashed on the first lap of the Belgian GP...

Ari Vatanen is on Twitter, as are McLaren, Red Bull, BMW, Force India and Renault. Just beware of fake Twitter accounts. Here is a selection of real accounts to search for on twitter.com: Komain Grosjean @RGrosjean; Jensen Button @The_Real_JB; and Rubens Barrichello @rubarrichello; McLaren @TheFifthDriver; and even *F1 Racing's* news editor Jimmy @JRobertsF1.

PITPASS

Why it all went wrong for Luca Badoer

So farewell Luca... after two disastrous grands prix, why was F1's most experienced test driver dropped in favour of Giancarlo Fisichella?



YOU CAN'T BLAME inexperience for Luca Badoer's failure at Ferrari. In ten years, the 38-year-old has clocked up over 80,000 miles in testing, making him the most experienced test driver ever. And he can't be considered too much of a slouch, having won the International FIA F3000 championship in 1992, beating Rubens Barrichello and David Coulthard. But from his first day in practice at Valencia, his dream of racing for Ferrari quickly turned into a nightmare.

His two grands prix were characterised by a glut of indiscretions, mistakes, spins and a very noticeable lack of speed. He has the misfortune of qualifying last on the grid for Ferrari – twice – and extending his record for being the most 'pointless' driver in Formula 1 history – 50 starts without scoring. Ferrari are locked in battle with McLaren for third place in the constructors' championship, so they had no choice but to drop him and draft in Giancarlo Fisichella from Force India.



Back of the grid in Valencia, Badoer's comeback was marred by a speed he was only ever able to unleash in the pitlane...

After the hype surrounding Schumacher's planned comeback and subsequent U-turn, Badoer was never going to set pulses racing. Ferrari wanted to reward him for his long service, but it highlighted the fact that testing and racing are very different disciplines.

Badoer was hampered by rules preventing on-track testing so he had almost no experience of this year's low-downforce-spec

cars and slick tyres. And from day one at Valencia, he made errors, picking up four fines for speeding in the pitlane. He spun during the race then got a drive-through penalty for crossing the white line on the pitlane exit. To cap it all, he crashed into the back of Adrian Sutil's Force India in parc fermé. He also did badly at Spa, crashing in qualifying, recording a time nearly 1.4 secs off Kimi's from Q1. In the race he finished 102.1secs behind his winning team-mate.

"The decision to run him was madness," said one F1 source. "He can drive, he's won a title, but there is no substitute for racing. It doesn't matter how good you are; if you haven't raced for ten years, you will struggle. In testing, you don't take it to the extreme – you're at 95 per cent – the bit that takes you to 100 per cent is competition. He didn't have any experience of that and I can't see why they picked him over their other tester Marc Gené, who won Le Mans this year..."



"I don't have a lot of track running and I don't have a lot of time. That's the problem"

NUMBER OF TESTING MILES IN THE PAST 10 YEARS:

1	Luca Badoer	81,985 miles
2	Alexander Wurz	46,518 miles
3	Nick Heidfeld	64,839 miles
4	David Coulthard	64,810 miles
5	Jarno Trulli	64,504 miles
6	Jenson Button	63,878 miles

*source: f1ex.com

Badoer blamed the media for the fact he was dropped, but conceded that testing and racing are quite different. "The performance of the test driver has to be very close to the performance of the race driver and it was like this for ten years," he said. "The pressure you have in the race is different. In testing, it is more relaxed with less pressure. In the race I don't have a lot of track running and I don't have a lot of time. This is the biggest problem."

Giancarlo Fisichella is now in the Ferrari for the rest of the season and is set to replace Badoer as reserve driver next year, with Vitantonio Liuzzi stepping into the Force India seat. The problem with replacements has highlighted Ferrari's need to establish a young driver programme, like Red Bull, Renault and Toyota have.

Back in Brazil, Felipe Massa has undergone surgery on his fractured skull, which he sustained in his accident in Hungary, and will not drive again until next year.

Close up Luca: you'll be hard in time for Coulthard



F1 MASTERMIND

Test your knowledge with our fiendishly tricky quiz



- At which grand prix did Renault introduce their turbo engine?
- Which Tyrrell driver ran non-stop to finish fifth in the 1997 Monaco GP?
- In 1982, who replaced Carlos Reutemann at Williams from the fifth round onwards?
- In which year did Estoril first host a round of the F1 world championship?
- Which team scored Pirelli's sole victory of the 1986 season?
- Which satellite TV channel sponsored the Simtek F1 team?
- Who is BMW Sauber's test and reserve driver this year?
- Which driver partnered Mario Andretti at Lotus in 1977?
- In what position did Mark Webber finish on his grand prix debut?



Answers 1 British GP 1977 2 Mike Salvo 3 Derek Daly 4 1984 5 Benetton (American GP) 6 MTV 7 Christian Klein 8 Gunnar Nilsson 9 fifth 10 Mercedes

ASK F1 RACING

All your questions answered

Does Luca Badoer break the record for the longest gap between F1 starts? David Stewart, Australia

He comes close – but not quite. The gap between his last race for Minardi at Suzuka in 1999 and Valencia, is nine years and ten months. But the record is held by Jan Lammers who had a break of ten years, three months between racing for Theodore in the 1982 French GP and a comeback drive with March in Suzuka 1992.



Lammers of his last GP in France '82 (top) and his comeback GP in Suzuka '92 (bottom)

Send your F1 conundrums to askfracing@haymarket.com

LETTERS

Your old snaps... plus interesting alternatives to KERS and the mid-season blues



If it truly took Force India six months to sort themselves out, the big teams have an excuse

THINK SMALL FOR BIG CHANGE

On BBC Radio 5 live in Valencia, Ian Phillips said Force India have found 2.7 seconds a lap since the start of the season.

With Williams also having found some pace, isn't it time the big teams began learning from the small ones about how to develop a car on a tight budget?

Paul Murtagh

Belfast, UK

Perhaps they've all been too busy playing Wii Tennis on those supercomputers?

KEEPING THE KIDS OCCUPIED

I can only give my sympathy to any young driver who enters F1 under today's rules.

How about modifying the rules to allow the young stars of tomorrow to have a chance to shine, should they get the call up? Maybe give them a chance to run in F1 machinery on a Friday during practice.

It would be good for the fans as well, and good for the teams to spot their next driver.

Monique Cherrie

Oxfordshire, UK

Eddie Jordan couldn't agree more, Monique. Learn why in *You ask the Questions* on p38...



Young drivers like Jaime Alguersuari could have done with more time in the car to avoid being dropped in at the deep end

LIKE KERS - BUT NOT KERS

I eagerly awaited the 2009 racing season and the positive impact of the new rule changes, as did many F1 fans. Halfway through the season, there has not been the increase in overtaking that was expected.

While KERS has only been adopted by two F1 teams, another option could be the 'push-to-pass' approach currently being used in the Indy Racing League.

It is a simple, cost-effective technology that the driver can use a specified number of times during the race to strategically/tactically use the push to pass button.

More passing opportunities definitely ratchet up the excitement.

Chuck Twilley

North Carolina, USA

So ditch KERS and use an American version of KERS. But is theirs any more popular?

JUST TO CONFUSE MATTERS...

With F1 at a standstill in August, how about giving everyone something really exciting to talk about during this lengthy break?

How about having two seasons, one either side of the summer break, with a winning driver and team for both seasons?

You could then run a single winner-takes-all final race at a rotating venue to determine the overall driver and team winners, based solely upon the respective positions of the first and second season winners at the end of the final race.

Lorenzo DiCarlo

Michigan, USA

Cricket, who said medals were complicated? We rather like the old-fashioned points system...

STAR LETTER

THE WAY THINGS WERE

Reading your feature about the changing faces of Spa and Monza (*F1 Racing*, September) got me on a nostalgia trip.

I first went to the Belgian Grand Prix in 1958, while stationed in Germany, and I took this picture just past Eau Rouge on the day of the race - it's one of several I have in my archives.

Sadly, I never managed to make it to Monza owing to transport problems.

Your magazine continues with good features, which I enjoy greatly. Keep it up!

D Johnston

Renfrewshire, UK

Nice snap D Johnston. Got any other gems lurking in that archive of yours? Have a swanky leather bag for your efforts...



A stunning shot of Eino Borg of the 1958 Belgian Grand Prix, with a surprisingly hairy thumb in the foreground...

STAR PRIZE

D Johnston wins an Italian leather holdall from Caracalle Bagoglio's Commemorative Motorsport Collection. For more information, visit www.cbl.co.uk



MAIN: ANDREW FERRANDIA/AT; INSET: LORENZO BILANCIA/AT

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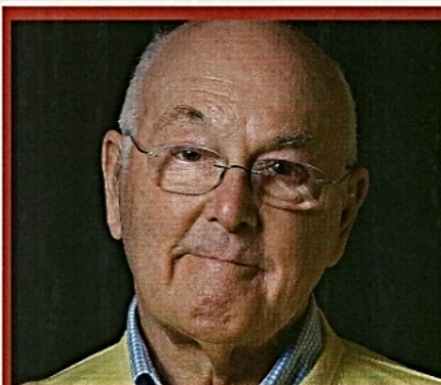
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RX 450h fuel consumption figures: urban 42.8 mpg (6.6 L/100km), extra-urban 47.1 mpg (6.0 L/100km), combined 44.8 mpg (6.3 L/100km). CO₂ emissions combined 148 g/km.



MURRAY WALKER

The voice of Formula 1 speaks his mind every month - only in *F1 Racing*



Brundle and Walker hit Silverstone in the McLaren F1 tandem. Murray describes it as "the ride of my life"

HITCHING A RIDE WITH THE SUPERSTARS OF F1

It's about time we had a bit of light relief in these drama-laden times. So let's put aside the political shenanigans, the misery of not seeing Michael again, the agony of wondering whether Jenson is going to get the job done, the cliff-hanging saga of whether it is going to be Silverstone or Donington Park in 2010, the violent reminders that motorsport is no tea party, the FIA/Renault enquiry and the thought that Jean Todt could be even more controversial than Max. Instead, let me tell you about some of the superstars I've been lucky enough to be chauffeured by - racing drivers who are household names.

Where to start? Stirling Moss in a Ferrari 250 GTO at Rockingham? Five magical days

alongside Chris Amon in the Targa New Zealand? With Australia's speed god Peter Brock at Mount Panorama in, er, an Austin A30 - powered by a race-tuned 3-litre Holden engine? Navigating for Australian icon Colin Bond in the Targa Tasmania? Various occasions with Nigel Mansell? Derek Bell in a Porsche at Silverstone? Hannu Mikkola in an Audi Quattro? Dario Franchitti in a DTM Mercedes-Benz? Frenchman François Salabert in an F1 powerboat? Jonathan Palmer in a Ford Escort (don't ask)? Or European Rallycross champion John Taylor? Been there, done that.

Well none of them, actually. My old mate Martin Brundle, Le Mans winner, World Sportscar champion and the man who gave Ayrton Senna a hard time in F3 and did the same to his Benetton team-mate, Michael

Schumacher, is the person who's given me the most exciting ride of my life.

Scroll back to 1998. McLaren had just revealed their incredible Formula 1 tandem two-seater, powered by the mighty Mercedes-Benz V10 and designed by one of my all-time heroes, Gordon Murray (Brabham BT46B fan car, title-winning Brabham-BMW BT52 turbo, and the fabulous three-seater McLaren F1 road car, to name but three of his innovative creations). "Just 130 people are going to ride in it and then that's it," said McLaren. And, at Silverstone, I was the first, thanks to ITV who were to film a piece for TV round my experience. Lucky me.

Now here's how it worked. First of all, a two-hour medical to prove that I was up to it. Treadmill, X-rays, intimate chat with the doc. The lot. Then a seat fitting at Woking. Sitting

on a bag of hot chemicals. Very stimulating. And then the butterflies-in-the-stomach time when I got into the car at The Home of British Motor Racing. In all the gear. Fireproof Nomex underwear, ditto three-ply overalls, neck brace, balaclava, race helmet and gloves. Drop down into the rear seat, let the mechanics do up the six-point belts, so tight I could hardly move, and then put a constricting great Kevlar bar right up to my chest and dowl it into position. Not the best of situations for claustrophobes. Martin got in with my knees under his elbows and then, finally, there's the head-protecting cockpit collar on the car itself. "Martin," I said, "what happens if you spin off backwards into the scenery and the car catches fire? You'll be out with a spring up your arse and I'll be

we effortlessly slowed to about 75mph and rolled round Abbey. Phew. Deep breath.

Martin and his euphoric passenger were a few seconds off that year's pole position time for the British GP (1min 23.3secs, an average of over 135mph) but it wasn't the sheer speed that impressed me the most. I'd been driven quickly in other things. It was the braking, accelerating and cornering G-forces. I had a panic button which would have lit a big red light in front of Martin if I had released it but, needless to say, I wasn't going to do that, come what may. We also had intercom and if Martin had said, on the last lap, "Want to do some more Murray?" my pride might well have made me say, through gritted teeth, "Yes, I'd love to!" but I wouldn't have really wanted to because I was absolutely shattered.

The driver up front knows where he is going to brake and accelerate and what lines he is going to take but the captive passenger behind him, completely overwhelmed by the whole, enormously physical experience, does not. The noise, the speed, the sheer brute force, drained me. I know I was no spring chicken, but I'd like to think I was fit. How today's drivers race for up to two hours, often in searing heat and high humidity, braking, accelerating, cornering at the limit, thumping across kerbs, trying to pass the man in front while simultaneously trying to stop someone from passing them, talking to their engineers and pressing all the right buttons at the right time is beyond my understanding. They are, indeed, supermen and I am mighty privileged to have ridden with some of the best. **FO**



Strapped into the two-seater with a six-point seatbelt and a big metal bar - there's no escape for Murray now...

trapped." "Don't worry Murray. That won't happen." "Why not?" "Well it never has." "There's always a first time Martin." "It'll be alright - it hasn't got much petrol in it."

It was raining and we did three laps. "That wasn't very exciting," said Martin (I thought it was bloody exciting). "If it dries out over lunch we can have another go." And dry out it did. "Murray, can you stand five laps? Because if you can, that's what we'll do. An out lap, three quick ones and then in." "Martin," I said, "I'll stand five laps if it kills me because I'm never going to have a chance like this again." Now the McLaren may have been a two-seater, but it wasn't much slower than the full-on race cars that Mika Häkkinen and David Coulthard drove, because the extra weight of the passenger was largely cancelled out by a much smaller fuel tank - and Martin wasn't exactly hanging about.

Nearly 190mph down Hangar Straight, heaven knows how much G-force around the corners and over 130mph on the dash up from Club Corner to Abbey. "You'll think I've missed my braking points but I won't have," said the maestro. So I'm sitting in the back, trussed up like a chicken, watching the apex at Abbey get closer and closer at an alarming speed with no reduction of revs from the screaming V10, which was massaging my back. "Ah well" I thought "I've had a good life." But then Martin hit the stoppers and, seemingly, a brick wall at the same time and

"Nearly 190mph down Hangar Straight... 'I've had a good life,' I thought"



Fast driver Brundle: "So can you look your legs yet, Murray?"

US ARCHIVE

{ WHATEVER HAPPENED TO... }



Then Welding his lollipop back in his Honda days in 2007, while eyeing up all that lovely shiny metal...



ALASTAIR GIBSON

USED TO BE HONDA'S
CHIEF MECHANIC.
NOW MAKES SHARKS
FROM LEFTOVER CARS

Armed with little more than a backpack and a bag of tools, Alastair Gibson came to the UK from South Africa to pursue a career in motorsport some 22 years ago. Starting as a Formula Ford mechanic at Van Diemen, he worked his way through F3 and F3000 before getting his first F1 job with Benetton in 1995. After three years, he switched to Tyrrell, which had just been bought by BAR, and then moved with the team to their new headquarters in Brackley. As chief mechanic, it was Gibson's responsibility to oversee all mechanical work on the cars as well as hiring the mechanics and honing operational procedures, such as pitstops. He called time on his job towards the end of 2007 to pursue a new career...

"When I was at Benetton, it was the first time that I'd worked with a car that wasn't a customer chassis. It was my first experience of F1 and I didn't appreciate just how intricate and beautiful some of the bodywork was. Some parts were created through hours and hours of development and were never even put on the car - they just became scrap. Every now and again there were big clear-outs and all these pieces of detailed titanium and stainless steel were just thrown away. I thought it was a waste and started to think about making something out of them.

"Then I was inspired by the shape of a fish. A fish is something that has had millions of years of evolution to give it fluid dynamics and, like an F1 car, everything on it is there to enable it to go faster. Then I developed that idea and drew more parallels with F1 by building sharks out of carbon fibre - they are quick but also predatory.

"I now have a 2,000sq ft studio in Brackley that I'm hoping to fill with autoclaves and moulds. I have a deal with Brawn GP to take uprights, suspension components and any little pieces that are going to scrap.



Now Uses scraps from Brawns to knock up ornamental sharks for £25k a pop

"I've tried to market myself as the world's first carbon-fibre sculptor and I've had my works sold in exhibitions around the world and, most recently, at the Chelsea Art Fair. My most recent work, the Racing Mako Shark, costs around £25,000, which seems like a lot - but then it does feature parts of the exhaust from the Brawn Jenson Button drove to win this year's Monaco Grand Prix. Which makes it pretty unique."

MARIE BAUTIER IMAGES; RIGHT: IAN ARCHER

You might expect us to say the New Clio Renaultsport 200 is 'high on thrills' and 'great value.' But we didn't, Autocar did.



To find out why it is called '200' book a test drive today by visiting renault.co.uk

The official fuel consumption figures in mpg (l/100km) for the Clio Renaultsport 200 are: Urban 25.0 (11.3), Extra Urban 44.1 (6.4), Combined 34.4 (8.2). The official CO₂ emission figure is 195g/km.

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THE TOP TEN...

TEAM AND DRIVER PARTNERSHIPS

Team loyalty might have paid off for Schuey, but that's not always the case...

1 FERRARI & SCHUMACHER 181 RACES

The longest running and most successful partnership in F1 began in Melbourne in 1996 and finished a full decade later. In that time, Michael scored 72 wins and five world titles and was all set to extend his record until that pesky neck injury intervened...

2 McLAREN & COULTHARD 150 RACES

Is it any coincidence that the two most successful teams in F1 also retain the most driver loyalty? Who could have guessed that when DC joined McLaren at the beginning of the 1996 season, he would still be with the Woking-based squad 150 races later?

3 McLAREN & HÄKkinEN 133 RACES

For six seasons, David Coulthard was partnered at McLaren by Mika Häkkinen. The Finn had spent two years at Lotus and then dedicated the rest of his career to racing for McLaren. He was drafted into the team to replace Michael Andretti at the end of 1993 and stayed until Suzuka 2001.



Portugal 1993 and the first of his many races with McLaren... not such a bad team to stick with, eh Mika?

4 LIGIER & LAFFITE 133 RACES

Jacques Laffite scored all six of his grand prix victories for Ligier over the course of his two stints with them. The first of these was from 1976 until 1982 and the Frenchman made a brief return three years later in 1985. His career was ended by a startline accident at the 1986 British Grand Prix.

5 McLAREN & PROST 103 RACES

In 1980, 'the professor' managed to score points on his F1 debut with McLaren, remaining with them for a year before switching to Renault. Prost returned to McLaren in the mid-80s to win three drivers' world titles, but his legendary dispute with team-mate Senna led him to switch to Ferrari.

6 BRABHAM & PIQUEt 100 RACES

Nelson Piquet's first race with Bernie Ecclestone's Brabham outfit was the Canadian GP at the tail end of 1978. He spent the following seven seasons with them, taking 13 victories and two world championships. His final race with Brabham was in Adelaide in '85; he moved to Williams in 1986.

7 MINARDI & MARTINI 107 RACES

The Italian is the least successful driver in this list but, then again, he did enter 107 grands prix with the tiny and woefully underfunded Minardi team. After spending one season with them in 1985, Pierluigi returned to F1 for another four years with Minardi in 1988 and – unbelievably – came back for yet more pain with them in 1993...

8 FERRARI & BARRICHELLO 104 RACES

Ferrari was something of a poisoned chalice for Barrichello: between Australia 2000 and China 2005 he scored nine grand prix wins, but also suffered from a number of strategic decisions that were made in favour of team leader Michael Schumacher.

9 RENAULT & ALONSO 102 RACES

Fernando became the youngest driver ever to win a grand prix with his victory in Hungary for Renault in 2003. He scored 14 more wins and two drivers' titles before that ill-fated year at McLaren. He returned to Renault in 2008 to take another two wins. His total of 102 races includes this year's Italian GP.



Alonso's first win with Renault was Hungary '03. But will he stick with them, or make that move to Ferrari?

10 McLAREN & SENNA 96 RACES

The iconic image of Ayrton Senna is of his yellow helmet at the wheel of a red and white McLaren. He joined the team in 1988 and, after winning three championships, left for Williams at the end of 1993. His final race with McLaren in Adelaide (he won) turned out to be the last race he ever finished.

Australia 1988 – and the start of a beautiful friendship between Schumacher and Ferrari

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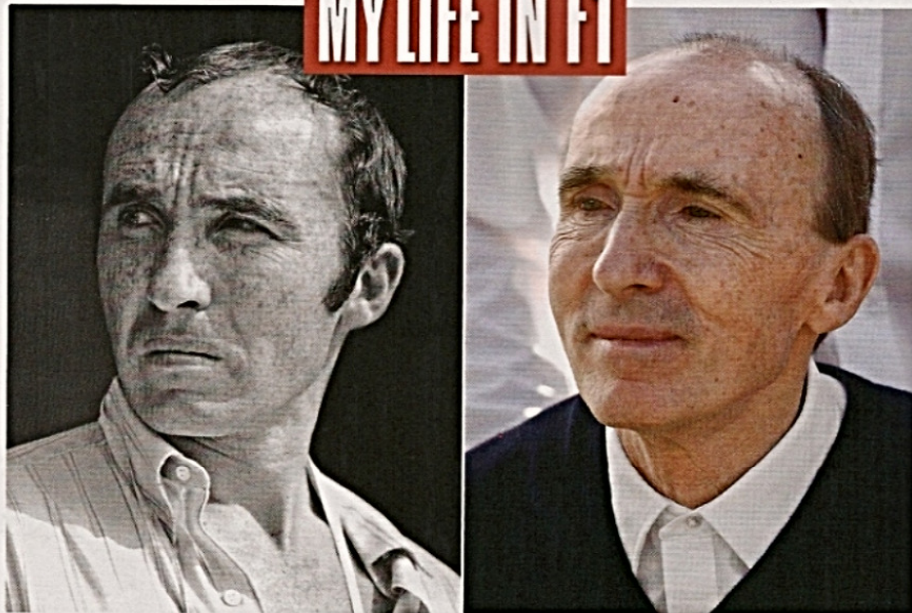
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MY LIFE IN F1



FRANK WILLIAMS

The veteran team owner on great drives – and wild victory celebrations

A VISIT TO HIS FIRST British Grand Prix in 1958 started Sir Frank Williams' life-long love affair with motor racing. He set up Frank Williams Racing Cars in the 1960s, entering cars in F1, F2 and F3. Following a split with business partner Walter Wolf, he set up a new team with Patrick Head that enjoyed regular successes over the following two decades. Alan Jones claimed Williams' first championship in 1980 and Keke Rosberg, Nelson Piquet and Nigel Mansell also won drivers' titles for the Oxfordshire-based team.

There have been setbacks, including the 1986 road accident that left Sir Frank paralysed and the death of Ayrton Senna in '94, but the team's fighting spirit produced titles in the '90s with Alain Prost, Damon Hill and Jacques Villeneuve. Having celebrated their 500th grand prix last year, the team remain a major player in F1.



FAVOURITE GRAND PRIX SOUTH AFRICAN GP 1985

"The easy answer would be our first win at Silverstone, but I remember a race at the old Kyalami where there was a long straight – great for overtaking. I remember Keke Rosberg wasn't near the front yet he slowly picked off everybody else, one by one, including Mansell, Prost and Lauda. There were some very fast sweeps before the main straight and he was just awesome. Marshals were coming up to me at the end of the race just to say "Magic!" There were some superb, classic overtaking manoeuvres at the end of the long straight. That was Keke at ten-tenths: totally balls-out for almost the entire race."

EARLIEST F1 MEMORY BRITISH GP 1958

"At the age of 16, I hitchhiked down from Nottingham to Silverstone at 5am. It took me about six hours. I got there during the supporting touring car race and I just couldn't believe it. I was so late that I got in for free. I was spellbound by the race and, to cap it all, there was a guy called Geoff Gartside who ran in the 500cc F3 race and gave me a lift up the M1 in his Morris 1000 afterwards. I couldn't believe my luck – I felt like I was one of the pit crew! It was a great day and not just for the racing... I was an avid fan of cars as well. I didn't come away thinking 'this is for me', but I did want to see if I could get to the next race..."



FAVOURITE CAR WILLIAMS FW07

"Frank Dernie and Patrick Head made a breakthrough with the FW07 to take our first win at the British GP in 1979. I remember they told me they had added an innocuous little part, Brabham were a few pits down from us, minding their own business. We put this part on, I looked at the stopwatch and the FW07 went two seconds faster – I couldn't believe it! I looked up and Patrick couldn't believe it either. Neither could Brabham – and they didn't want to."



BEST TECHNICAL INNOVATION ACTIVE RIDE SUSPENSION

"Speaking for Williams, the one that I have been most proud of on behalf of Patrick and his gang was the active ride suspension that was developed in 1992. That car also came with hydraulic gear change, electronically controlled brakes and traction control. It was an incredible car and Nigel won the world championship with it. But it's difficult to say whether such technology should be embraced today – I would actually prefer to keep it as simple as possible, because it's cheaper, it's more realistic and it says much more about your car and driver."



FAVOURITE DRIVER ALAN JONES

"He made the most of everything. He was one of the best drivers we've had – as well as being one of the most combative. He was going to win our first race and then he took our first world championship the following year – he was a great friend. Nigel Mansell ticked a lot of boxes and he was the most determined driver – virtually unstoppable. But the main thing with Alan was that he was just such a great bloke."

BEST PIECE OF ADVICE BEING TOLD TO MEET PATRICK HEAD

"I met Richard Scott and the English driver Guy Edwards at Lola and they suggested that I meet someone called Patrick Head. One of them said 'I think he's pretty good...' So I called Patrick and he was working in a boat yard, on his own boat, which was made out of cement! I went in to see him and it was definitely the best piece of advice that I have ever been given."



LEAST FAVOURITE F1 RULE BANNING VICTORY CELEBRATIONS

"Drivers used to pick up national flags on their slowing-down lap, but there were complaints that the flags weighed too much and they were banned. That was nonsense. A driver should be allowed to pick up their flag – but it should be limited by dimension. Only the winner should pick up a flag though: you don't want the drivers at the back waving them."

For more on the FW07 turn to page 82



{ YOU ASK THE QUESTIONS }

EDDIE JORDAN & DAVID COULTHARD

The Morecambe & Wise of F1 have a lot to get off their chests, such as suggestions for the next FIA president and the, ahem, *qualities* of Luca Badoer. But not before Eddie's answered a very serious question: what's going on with those shirts?

WORDS JAMES ROBERTS PORTRAITS LORENZO BELLANCA/LAT

Whether it was intentional or not, David Coulthard and Eddie Jordan seem to have become the comedy double act of F1. Coulthard, recently retired from a 15-year racing career and with no-nonsense opinions, is the perfect straight man. Jordan, the quick-fire ex-team boss, is 'the funny one' – though it's not always intentional (he did call Ralf Schumacher a 'multiple world champion' on air). But the undeniable fact is that largely thanks to these two, the build-up to a grand prix on the BBC is entertainment in itself,

rather than just an excuse to pad out an hour's telly before the proper stuff starts.

F1 Racing pins the two of them down in the Spa paddock, armed with a clutch of questions from the readers of this esteemed organ. Jordan, it seems, is already in feisty mood. "Why does he always have to be the one closest to the interviewer?" he complains as Coulthard innocently takes his seat. DC's response is instant: "People want to hear what I've got to say, not what you've got to say."

This could be trouble. Question one: "What's it like interviewing people you

used to work with?" asks Tom Swinburne from the UK. "Very easy," replies EJ. Coulthard steps in: "That's it, is it? Very easy?" "Well what would you say?" Oh dear, the bickering's started already...

Would David have liked to have worked in a Jordan team – and would Eddie have liked David as a driver?

Garry Robinson, UK

EJ: I think it's very early in the discussion to have that question. Put that one to the back... ➤

{ YOU ASK THE QUESTIONS }

DC: Why are you being so diplomatic now? You're not like that on the TV
EJ: I didn't want you to slag me off as much as I was going to slag you off...

How does the pressure of staging a live broadcast compare with sitting in a cockpit or on a pitwall?

Ewan Marshall, UK
DC: From my point of view there's less pressure working in television because the guy who has the main pressure is Jake [Humphrey] – he has to link it all. For Eddie and I, we pretty much wait until we're asked a question and just look good the rest of the time on screen.
EJ: Er, try to look good in my case. And not swear too much. The pressure of sitting on the pitwall and going into the last few minutes of qualifying or the last few laps of the race is nerve-wracking, it doesn't matter who you are. So this is a walk in the park compared to that.

Who do you think is Jenson Button's main rival for the title?

Sonny Haigh, Spain
EJ: I think it will be Rubens Barrichello. Given the engine situation and the lack of track time, it will be difficult for Red Bull to win. My view is that Barrichello is emerging as Jenson's biggest challenger and Jenson still has it all to lose.
DC: I agree with Eddie. For a moment in the season, it looked like Red Bull were coming on strong and were going to pull back the gap. But they have now slipped to more than two non-finishes behind. It's not impossible; if we remember back to Kimi Räikkönen two years ago, he came back from a large gap to win the championship by one point in the final race. So, with a number of races to go, it's too early to say Red Bull are out of it – but Rubens is his biggest challenger.

Eddie, could you drive that Ferrari faster than Luca Badoer?

Shaun Scanlon, UK
EJ: That's not a fair question and I'll tell you why. People really do underestimate the job Luca's done. They wouldn't have given him that drive if he hadn't done so

much work. But in a sporting context it was the wrong decision – it wasn't fair on him. And it's not fair on Ferrari, the fans or the sponsors. If this was a commercial decision, do you think Luca Badoer would be in a Jordan car? No. He was never a great driver, but Ferrari think he's good enough to drive the car. If you're going to blame anyone, blame Ferrari.

What is the best argument you two have had?

Ben Moody, UK
EJ: Oh, David's just far too smarmy for his own good...



"My goatee's better than yours." "No, mine is..." Coulthard and Jordan compare facial fuzz at Monaco back in 2005

DC: There are too many to single out – the number of times on air when I'm looking on in amazement at some of the things he says, like the £40 million motorhome or Ralf Schumacher being a multiple world champion. It tends to be over facts. Eddie's enthusiasm is infectious and I think it's the old Blarney Stone aspect of being Irish – why let the facts get in the way of a good story?
EJ: Next...

If you could add one more person to the BBC F1 coverage team, who would you pick?

Andrew Bottomley, UK
EJ: Helena Christensen.
DC: Ha ha! You see? That's what I have to deal with. I'm thinking seriously about who to add to the coverage and he starts being smutty again.

EJ: What's so smutty about Helena?
DC: I would say my fiancée Karen. We met when she was doing F1 for French TV, and if she was on the show I'd get to sleep with her at race weekends.

Eddie, with efforts to make F1 more affordable, have you thought about establishing a team again?

Steve Pople, USA
EJ: No. There has to be a time when you leave something. You need to leave the same door you went in and leave with dignity. I got lucky – I left the sport without owing anyone any money.

During your careers you've both had to do a lot of things to keep sponsors happy. What are the best and worst PR stunts that you have had to participate in?

Gregor Murray, UK
DC: Didn't you have to cuddle Melinda Messenger or Katie Price at Jordan?
EJ: I got asked to do all sorts of very weird and wonderful things...
DC: I did a parabolic flight once. That was pretty crazy, getting a Formula 1 car and floating it in the back of an aeroplane under zero-gravity.

If the two of you were ever voted joint FIA President, what would be your first decision?

Christine Swain, UK
DC: I'd ban refuelling, but they've already done that for next year. I've been saying it for years because I truly believe that a grand prix should be a mini endurance event. Without refuelling, you'll unquestionably have cars that stick it on pole, but then in the race they won't be able to manage their tyres and brakes. There will be things that are marginal where the team will have to tell the driver to back off. ▶

"Why are you being so diplomatic? You're not like that on TV" David Coulthard



"Watch the left hand, mate." EJ and the other Jordan at the Hungaroring in 2008

MAIN: SUTTON IMAGES; INSET: AP/CC



{ YOU ASK THE QUESTIONS }

It might even be fuel economy between engines. If you've got a more efficient engine, then you'll run less fuel and although you might have less power, you might have less weight in the car. I think it's a good move.

EJ: I'd change the rules to allow young drivers to test. I really think that we need to have new, fresh blood in our business. Far too many of our drivers are near retirement age and it's not fair. It's also not fair – or safe – to allow young drivers to come in and expect them to learn everything.

In a competition to see who could pick up the most girls, who'd win?

Ondra Machálek, Czech Republic

EJ: David, by miles.

DC: Obviously we'd have to go back to when we were single. In my case that was four years ago and in the case of Eddie that was 30 years ago...

EJ: And I was ugly then.

Which of you has the most money in your pocket at the moment?

Richard Hadley, Spain

DC: I've got no money in my pocket.

EJ: When did you ever see a racing driver with money? It's the most ridiculous thing I've ever heard in my life – they've never knowingly got anything. They're the biggest blaggers, cheapskates and scoundrels of all time!

DC: How much have you got, then?

EJ: About 600 euros. It's because I knew DC wouldn't have any money to pay for dinner tonight.

Why do some of the best drivers ever (Clark, Stewart, DC) come from Scotland, not Ireland?

James Wood, USA

EJ: I think it's because they can speak in a dialect and language that no one can understand...

DC: There are more pubs in Ireland than anywhere else – it's hardly conducive to good driving is it? The Irish spend most of their time in the bar and are reared on a mixture of breast milk and Irish whiskey...

What's Martin Brundle best at: being a racing driver, a manager or a commentator?

Callum Woodhead-McClimens, UK

DC: When he was a driver he never had the opportunity to drive cars that were genuine front-running cars...

EJ: What about McLaren?

DC: When he drove it in 1994, it wasn't a front-running car. It was during McLaren's lull when they had Peugeot engines. He never had a championship-winning car, but what he did have to do



Martin Brundle is rated by Coulthard and Jordan as a commentating great. Finally – they agree on something...

was to go up against two of the best grand prix drivers of the era, in the form of Michael Schumacher and Mika Häkkinen. And Michael has stated that Martin was one of the closest teammates he had. Flavio has said the same. You have to agree that he was a great all-rounder as a racing driver, in sports cars, touring cars and in F1. It's remarkable he's come out alive when you think of some of the accidents he had. As a commentator, I think he's fantastic. He just makes so much sense. He has a turn of phrase that is natural – things like, "He's kissing the apex like it's his favourite granny." The man on the street can understand that. As a manager, he managed me for ten years and we've never had a cross word. Occasionally, I had to take him to one side about what he'd said on TV about my performance, mind you...

EJ: He's an outstanding commentator – one of the greatest. That said, I don't know about him being a manager; I

used to be his manager. In fact, I helped him get the F1 drive with Tyrrell in '83.

What was the worst decision either of you made in your entire Formula 1 careers?

Igor Smolny, Poland

EJ: Not selling earlier.

DC: Really?

EJ: I have really good memories. You always think the world is on top of you when you don't win but I had 35 years doing it. I'd be interested in what David thinks, but I really loved the early years. Formula 3, battling it out, living in the caravan and doing Euro championships. I'm a bit of a knacker – I like the uncertainty of going from one race to the next. Going to Misano with Tommy Byrne and then trying to get enough money to go to Enna. Brilliant.

David, have you paid up on the bet yet? I'm assuming that you did bet Eddie to wear all those shirts?

Stewart Adams, UK

DC: EJ is very rock 'n' roll and I actually bought him a shirt recently – and I don't normally buy clothes for other men. But I bought something I thought was very Eddie. It was a shirt that had loads of little space invaders aliens on it. As Eddie is always invading my space, I thought it was the perfect shirt for him. And he wore it straight away.

EJ: I got rave reviews, too.

Would you both survive each other's company if you spent a weekend camping in the wilderness together?

Saul Mahoney, UK

DC: Hmmm, Eddie's a bit hairy so I wouldn't know whether it was a bear that was crawling alongside me...

EJ: Looking at what he's got attached to his face at the moment, I wouldn't think he should be the one talking about being overly hairy...

DC: We'd have fun. From an entertainment point of view, if you had to be stuck on a desert island with anyone in F1, you'd be in good hands with Eddie. He'd be like Tom Hanks in *Castaway* – he'd end up talking to the coconuts. **FO**

Behind the scenes with the BBC on p44

JOIN OUR READER PANEL

Want to put a question to an F1 star? Visit www.f1racing.co.uk and join the Reader Panel. We'll let you know which interviews are coming up

“F1 drivers are the biggest blaggers and scoundrels of all time!” Eddie Jordan

BEHIND THE SCEN

WORDS BRADLEY LORD
PORTRAITS LORENZO BELLANCA



Ever wondered what it takes to put together an F1 broadcast? It's the small matter of 30 people, F1's biggest 'pitwall' - featuring 37 TV screens - and, curiously, the unexpected eagle eye of Eddie Jordan...

Houston, we have a problem. There are five minutes to go until the start of qualifying and commentators Jonathan Legard and Martin Brundle are about to go live in Valencia. The camera in the commentary box shows their lips moving as they chat away, but hang on... there's no sound. Nothing on the main link back to the

production crew, no sound in London, not a dicky-bird on the back-up system either. Uh-oh. As a techie sprints to the box to find out what's gone wrong, the Beeb's F1 editor, Mark Wilkin, makes the call. "Jake, DC, you're going to have to commentate," he instructs calmly as Humphrey's eyes widen slightly down in the paddock. "We're going to

do this by the seat of our pants. It's all part of the fun." Like any other team in the pitlane, they have to adapt their strategy for the session by switching to Plan B and crossing their fingers. The intro finishes rolling, a brief, uncertain pause follows, then the Beeb's two newest F1 commentators swing into action. Here it goes...

ES WITH THE BBC



The history books are likely to remember 2009 as a blip; a refreshing change from the McLaren-Ferrari stranglehold on the world championship. We've seen new faces on the podium and new teams stealing the headlines as the usual suspects have been left scrabbling in their wake. To be honest, at times it's seemed like the only pre-season favourites who actually delivered on their wintertime promises were the BBC, who re-acquired the rights to broadcast F1 this year after a 13-year break.

The coverage hasn't been perfect - they took some justified criticism for their handling of Felipe Massa's accident in Hungary, and shrill voices on internet forums continue to clamour for changes to the commentary team. But the feeling of every broadcast has been vibrant and enthusiastic and ratings are up, averaging around 4.5million viewers for a European race. What's more, the red-button content has been an unexpected success (free practice sessions and the post-race forum routinely attract over half a million viewers),

and F1 has enjoyed a bigger boost in profile than at any time since it left the Corporation at the end of 1996. Naturally it helps having a British world champion and another Brit leading the title race to ignite people's interest. But what's life like inside the bubble of goodwill and matey bonhomie that the on-screen personalities seem to inhabit every other weekend?

Well, it's all hugs and air kisses as it turns out. At least, that's how it appears when David Coulthard rocks up at the ▶



Beeb's mobile production office on Saturday morning in Valencia clutching two shiny packages, complete with decorative ribbon, for fellow presenters Jake Humphrey and Eddie Jordan. How sweet. "Don't think it's like this at every race," jokes one of the production crew as Jake and EJ unwrap their pressies – a couple of natty shirts as it turns out. Jordan's is even loud enough to be worn on that afternoon's broadcast, which is quite some achievement. "Eddie Jordan, dressed by David Coulthard," there's a sentence you don't expect to write every day. "Mmmwah, mmmwah" laugh the boys, as they ham it up for the rest of the crew.

But if that sounds like exactly the level of serious effort you'd expect the stars to put in, then think again. Everybody's clutching copies of the running order for the afternoon's show and it's time to get serious. The first members of the crew began arriving on the Tuesday before the race weekend in order to set up the production facilities in the TV compound – a kind of mini-paddock for the world's broadcasters, complete with the same level of security overkill to stop any uninvited guests from making their way in.

The BBC set-up includes four editing suites (for cutting together feature packages that are slotted into the broadcasts, and editing interviews and replays during the broadcasts), a mind-boggling sound control booth, the production office (this weekend, the cricket's on all the time so the team can keep track of the Ashes) and the gallery.

The gallery is the equivalent of an F1 team's pitwall, where the main broadcasts are run from on Saturday and Sunday – and it has a total of 37 TV screens of all shapes and sizes.

Given how the tabloids enjoy bashing the BBC for wasting 'our' money, the team are understandably coy about how many staff they bring to the track, but a rough count suggests it's a tad over 30 in all. They stress it's a lean team – there are no wardrobe hussies in sight, and it's just as well. Apparently, ITV once tried to get approval for a make-up artist and had their request turned down by Bernie himself...

By Saturday morning, the crew is in a strangely similar position to every other team in the pitlane. They've done their prep for the afternoon's broadcast – putting together interviews with the drivers, behind-the-scenes features and summaries of what's happened since the last race – and the editor has assembled a running order, timed to the nearest second, which constitutes the plan for the afternoon's qualifying show. There's little difference between this and the way F1 teams figure out what set-up changes they're going to make during practice, and when they do their runs in qualifying.



The show lasts two hours, with 70 minutes of live broadcast to fill



Hours of tea, biscuits, sleepy eyes – known in various guises the world over, the infamous 'morning meeting' (ABOVE) is followed by a review of the pre-recorded features in the gallery (LEFT)

The broadcast lasts for a marathon two hours and while the actual on-track action forms the heart of it, there are still around 70 minutes of live broadcasting to be filled. As they run through the plan, it's noticeable how each key thought chips in with things to add, or thoughts for future shows. DC, for example, suggests they should be thinking about a feature on helmet technology after a presentation from the FIA at the drivers' briefing the previous evening – and it's duly noted. There's no turning up at the last minute and asking: "What's the plan then, chaps?" Everybody rolls their sleeves up and gets stuck in.

With the meeting over, it's time to adjourn to the gallery to review the features that will form part of the afternoon's broadcast. When they're out in the paddock, the boys can't see what's going on out on TV, so viewing the tapes in an essential part of the process in order to understand what they're going to be talking about later on. It's striking that a few small factual errors are picked up by the man people would think was least likely to do so, Eddie Jordan. Forget the slightly madcap



"Look, no autocue!" Jake practices his lines (ABOVE LEFT); Eddie shields viewers' eyes from the glare off that shirt (LEFT) and the clever clips in the editing suite work their magic (ABOVE)



A bank of screens shows off the F1 action – with a sneaky bit of cricket thrown in (ABOVE), while Jake meets the cameras, half of McLaren and the world champ (RIGHT). No pressure then...



TV persona he likes to affect; the attention to detail that made him a race-winning team boss is apparent as soon as his brain clicks into work mode. The presenters rib each other about the features – Humphrey's just taken the first part of his racing licence – and debate other points. For example, there's an audible reaction when Michael Schumacher talks about his aborted race return and says wistfully, "For a moment, I felt back alive," revealing the intense frustration of the retired sportsman. Then there's one tech rehearsal to go, following third practice, which gives Jake chance to practice his lines (for those of you who were wondering, there's no autocue), before the broadcast goes live at 13.10pm. It's show time.

The most impressive thing about spending time as a fly on the wall in the production truck, is experiencing the gap between the smoothness with which events unfold on screen, and the frenetic urgency of operations behind the scenes. As the boys deliver their pieces to camera, the gallery is manned by three key figures – the director, who runs the nuts and bolts of the broadcast like a team manager would for an F1 team; the editor, who coaches Humphrey through the show, giving him reminders of points to be included and chivvying him along when things begin to run over; and the production assistant, who spends the broadcast doing 'counts' to let the team know how many seconds are left until each live or recorded piece ends. The editor has a team of three cameras at his disposal and, while the broadcast is live with two of them, the third is roving around with one of the pitlane reporters to pre-record interviews that can then be dropped into the broadcast later.

It soon becomes apparent that the running order is like every other best-laid plan, as timings go astray and need to be hauled back on track. Interviews run over; the pitlane is full of guests and while the presenters fancy fighting their way through, they're told to stay put; or the talking heads simply natter

"BERNIE SEEMS HAPPY" – SAYS BEN GALLOP, BBC HEAD OF F1

Has F1 been a success for the BBC?
Absolutely. Audience figures have been better than we hoped, with a peak of 5.8 million viewers for the Hungarian GP, and the anecdotal reaction has been positive. Bernie seems very happy, too. We've been surprised by the popularity of qualifying: there's a strong narrative that builds to a frantic final session, and we're getting regular audiences of around 3 million.

What is your target audience for the coverage?
It's a BBC show, with several million people watching, so we're not just talking to the F1 hardcore. I'd like to think we've made it more accessible and more appealing to a younger audience. Not by dumbing it down, but by taking a less formal approach.

How do you respond to criticism of the commentary?
A commentary pairing takes time to gel, but there is so much potential. Jonathan Legard has a strong editorial background, and is good at translating the sport for a wider audience. Martin Brundle has great experience and is doing a great job.

Are you pleased with the extra red-button content?
Our aim was that every time a car was on track, we'd be there showing it. The BBC has really pulled together for F1, with the TV guys popping up on radio, and the Silver team doing commentary for the practice sessions. It's worked very well.

for too long. "Wrap it up, Jake"; "skip the next link, Jake"; "talk to DC only, Jake" are the instructions as they weave their way towards 13.55pm and the moment when they must start broadcasting the world feed – the centrally produced coverage of the qualifying session – over which Legard and Brundle commentate.

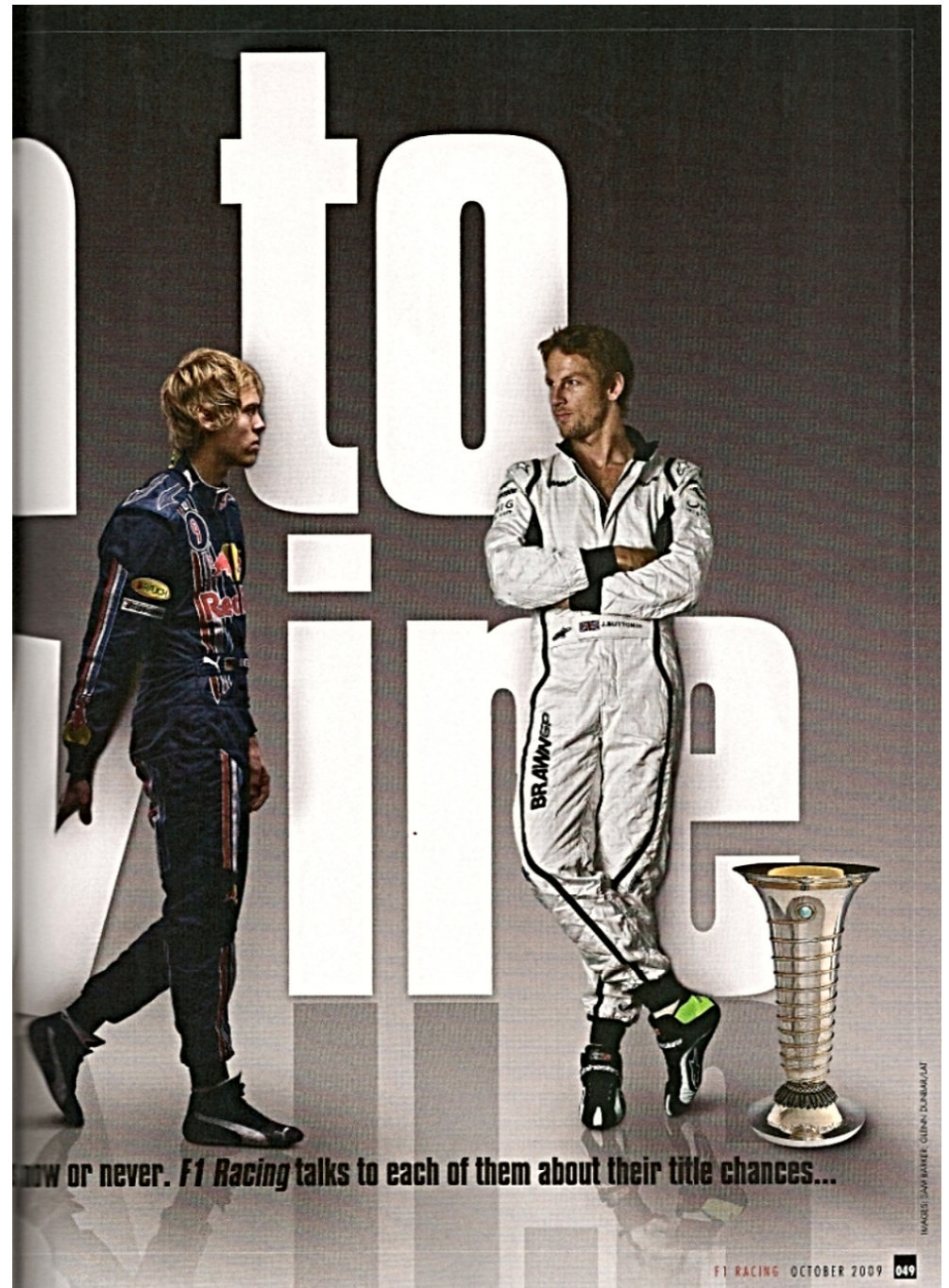
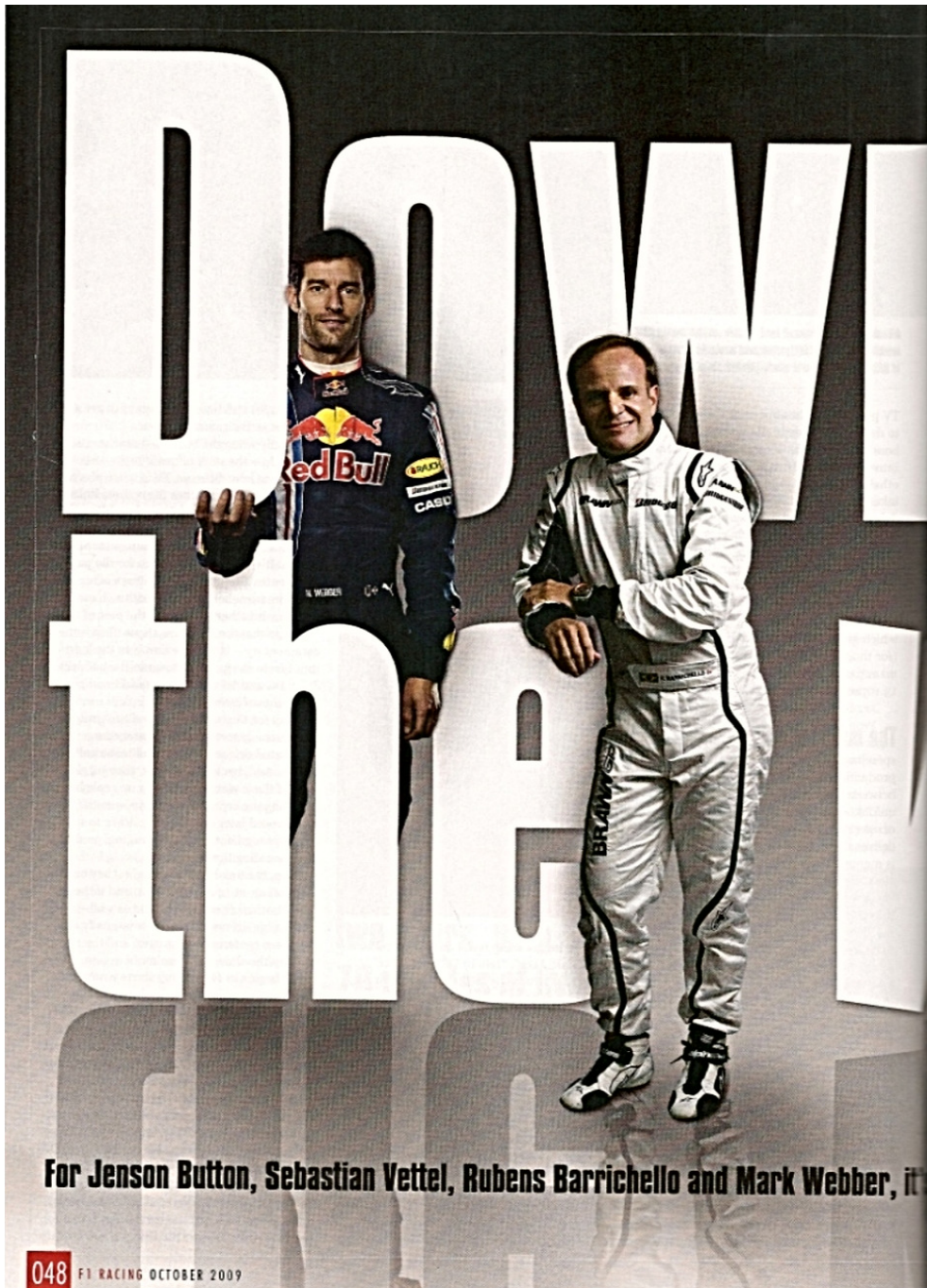
Ferrari boss Stefano Domenicali is a couple of minutes late for his allotted four-minute interview slot, so Jake and co start filling expertly – you'd never realise it was happening if you didn't know – until he arrives. When he does, the presenters push him hard on whether Fernando Alonso will be joining the team next year; his polite evasions are met with a few titters in the production truck. Then it's off to the next VT

(video tape) and time for the guys to get a move-on to their next location.

It's only when the broadcast reaches its crescendo – the start of qualifying – that you realise how different TV is when you're at the business end. Once the comms links have been restored, and Legard and Brundle begin describing the action, everybody breathes a sigh of relief and pauses for breath. It's been all-systems go for the past 50 minutes and the action on track actually gives the team behind the scenes a chance to take a breather; ironically, the part of the coverage that the fans care about most – the commentary – is the one that gets the least input from the gallery. Down in the paddock, Jake, DC and EJ watch the session and pick out points of interest so that replays can be queued up for the interval; behind the garages, the pitlane reporters wait to interview eliminated drivers or team and technical bosses. And, back in the truck, they juggle each of these elements: cueing up replays; watching the reporters' interviews so they can be used later on; counting down to the next live segment; and encouraging, guiding and moulding the broadcast.

Soon, the finish line is in sight: they have to be off air at 14 minutes past, and if they're late, *Football Focus* will be late as well – and that's a big no-no. Noise levels intensify as the press conference runs over, and the need to wrap the show becomes more urgent. The count begins as Humphrey starts wrapping up; he signs off just as it reaches 'zero' and suddenly it's over. Back in the truck, there's a quick "well done" all round and the cricket scores are checked... then it's back to work.

There are trailers to record for later in the day, and the full version of the press conference needs to be sent back to London and published online for content-hungry fans. The bare bones of the running order for Sunday have already been laid out and, soon, the team will be working flat out to prepare for the next day's show. Scripts must be written, interviews edited, stories sourced and confirmed. The pace is relentless. Just like everything else in F1. **FO**



Down to the wire



Jenson Button

"It's difficult, but I'm up for the challenge"

In his tenth year in Formula 1, Jenson Button is on the brink of achieving his dream. As he tells *F1 Racing* how he's feeling, **Damon Hill** lets us know *exactly* what Jenson needs to do now

WORDS HANS SEEBERG PORTRAIT SAM BARKER

The time when you think about F1 the most is when you're on your own. That's the difficult bit, when it's going through your mind non-stop and it's difficult to go to sleep at night." Amid his endlessly pragmatic assessments of improving the tyres and 'winning and losing as a team', this is one of the most telling things Jenson Button has said of late. It puts you in mind of an outwardly confident sports star, pacing around his bedroom in the middle of the night, stressing about work the way normal people do. Millionaire F1 drivers aren't supposed to do that, are they? But then things are a bit different for Button: he's *this* close to achieving his life's ambition... and suddenly, things just aren't going his way.

The statistics, there for all to see, have been mercilessly picked apart by everyone from the media to fans on internet forums: six wins out of the first seven races, no podiums in the five races afterwards. On a bar chart, it would look like the profits of Lehman Brothers just as the financial crisis kicked in. People are queuing up to question Button's confidence, and his lead is being whittled down – not least

by his resurgent team-mate, Rubens Barrichello. The next month will define Jenson Button's entire career, his life and his legacy. To put it bluntly, can he focus, hold his nerve and just bloody well *do it*? *F1 Racing* asked Damon Hill, as well as the man who holds the key to the destiny of this year's championship: Jenson Button himself.

Pressure. It's a strange thing in sport – a presence that can start off as a barely noticeable irritant and end up all consuming. Cast your mind back to win number six for Jenson in Turkey, and it seemed as if the only pressure he'd have this season would be deciding how much of a pay rise to ask for in 2010. People were wondering if he'd do a 'Schuey 2002' and wrap the title up by July. The irony is that if Bernie Ecclestone had got his way about medals – the winner of the most races in a season being champion – then Jenson could have sewn up the title by Monza. Yet even in the midst of his recent woes, he is adamant that he wouldn't have wanted that. ➤

Down to the wire

"Well, it would certainly have made things a lot easier," Jensen laughs. "But this is the F1 World Championship and I don't believe in winning through medals. It's a 17-race season and it's about being the best over 17 races – not just winning races. I like the way it is. It makes it more difficult for me, but I'm up for the challenge."

It's a challenge that seems to be getting more fiddly with each race. "I think Jensen will win but he's going through what I call 'the wobbly bit in the middle'," says Damon Hill. "It seems to happen with every championship. It would have been a tall order for anyone to maintain the winning streak he was having and the opposition has responded, which is great for us watching. But he's still sitting on a good points margin. Put in those terms, he's got a huge advantage over the competition and the good news is that, just as it looked as if Brawn had gone off the boil, they've still got a competitive car."

These are comforting words from a man who's been there and done it. The fact is that winning a major championship in anything is incredibly difficult and, at this stage of the game, Jensen simply needs to follow the rules you hear about in any sport, be it F1, football or golf: stay calm and focus. Easier said than done, perhaps, but Damon believes Jensen just needs to remain pragmatic. "The thing is, it doesn't always go right – it just doesn't – but Rubens has a lot of catching up to do. If you look at the straight performance comparison between them over the season, Jensen has the edge – but Rubens has lifted his game. It'll happen for Jensen and as you get closer to the end, it all comes into focus a bit more. In the middle, the excitement of the start of the season has passed, while the end is still a bit too far away."

There's a feeling that Button just needs to remember what a good position he's in and accentuate the positives. This time last year, and the year before that, and the two seasons before that while you're at it, Jensen had nothing to drive for at this stage of the season except the prospect of making his points tally a bit more respectable. Only his overall third place in 2004's championship created a fleeting morsel of Button excitement, but he still finished 29 points behind second-placed Rubens Barrichello – the man who is putting him under the most pressure now.

"I had a very similar situation to Jensen's current one in 1996," recalls Damon. "I could've sealed it in Monza and then I hit the tyre chicanes. I still had the advantage, though, and I was managing it to the end. My driving didn't go off, I don't think, but I had a stronger challenge from my team-mate, Jacques Villeneuve, and I was in much

the same situation as Jensen is now with his team-mate challenging him. But it's a great situation to find himself in and there's nothing negative about it. He has to remember that."

The difference between the Button of April and now seems startling. 'Early-season Jensen' was all beaming smiles and 'can't-believe-it' positivity – a perfect mirroring of the feel-good factor surrounding Brawn GP. 'Mid-season Jensen' seems to be an understandably rather more nervous character, sometimes sounding borderline hysterical on the car-to-pit radio when talking about the subject that's threatening to derail his title chances: tyres. It's clearly a source of huge frustration for him.

"Aerodynamically the car is so much stronger than it was in Turkey, but we can't use it because we haven't been able to get the tyres working," shrugs Jensen. "When I came back from the F1 break I spent a lot of time working with team, trying to find out what's been

going on with the tyres. The four pieces of rubber are the only things you've got on the road, and if you can't get them working then nothing really matters."

Even so, Hill is convinced that Jensen mustn't let the enormity of what he's trying to achieve burden him. "It's important not to let it over-awe you," says Damon, matter-of-factly. "He's got a job to do, it's a big goal and you have to break it down into bite-size

"They're chasing me. Would I rather be doing the chasing? No." Jensen Button



(Above) That last turn on the podium in Turkey in June seems like a lifetime ago for Button
(Below left) "Where's that Brazilian kid gone?" Jensen is shunted out of the race at Spa

chunks." This is where Hill feels mental strength will play the biggest part of all. "Look at the British Open in golf this year with Tom Watson – it's difficult at the end when you're close, and you start thinking about being there already. It's the same job now as it was at the beginning, but if Jensen starts thinking about what he could lose... you haven't got anything until it's done. I remember seeing Geoffrey Boycott once, and he asked me how it was going. I told him I'd won the last race and he said, 'You've won now till you've won it.' When you're on 99 runs, it's the same ball as the first one, but that's when it plays tricks with your brain. It's easy to sit here and talk about it now, or to sit there at home, but when you're on the grid and you know that in one hour and 45 minutes you're going to get an answer, and it could be good or bad, then it gets very interesting..."

This season is, by Jensen's admission, "very unlike any other season I've ever known in F1." As a driver, it is no doubt bizarre to be at the centre of a title fight in which Ferrari and McLaren are not



It's been a season of two halves for Jensen, but he's still in the hot seat in the title fight

involved, but are now somehow hoovering up all the big points. And if Jensen's position at the top of the championship standings couldn't have been predicted before the start of the season, who could have called it as a four-way fight between him and Rubens Barrichello, Sebastian Vettel and Mark Webber?

Cards are played close to the chest when Button is asked about his title rivals. "Rubens has been very close to me in a lot of races but, with him, he has the same car so I feel I can control him a bit more. With the Red Bulls, it's a bit more difficult. Mark's upped his game recently, and it's good to have him and Vettel competing with each other. Ultimately, winning is important but beating the Red Bulls is more important." Yet even with the erosion of his once hefty lead, Jensen is still pleasingly bullish about his competitors. "Who are they chasing? Me. Would I rather be doing the chasing? No." He's in the best position by a mile, and he knows it.

Button's previous lack of success in F1 means that he'll always have his critics – this is the man Flavio Briatore described as a 'concrete post' after he'd won the first two races of 2009. Jensen accepts that it comes with the territory. "It's the same in any sport – even if you're winning, there will still be negative comments about you. People who

understand this sport know the situation I've been in over the past few years and also the position Lewis was in earlier this season. But if people's opinions from within the sport are negative, I'll talk to them about it – sometimes what they say is due but sometimes it's not."

It's this feistiness, this refusal to duck a challenge, that Button will need to draw on if he's going to be crowned Formula 1 World Champion 2009. He's in the box seat, knowing in his heart of hearts that with the resurgence of Ferrari and McLaren, his immediate rivals may well just run out of races to catch him. "Jensen has won championships before, and it's important to have the experience of leading and seeing how the patterns change," says Hill. "Ultimately, he has a very good attitude to competition – he's honest about himself and he's got a balanced approach. He knows what he's got to do."

With a shrug of the shoulders, Jensen delivers his ultimate assessment as the title fight goes down to the wire: "Whatever happens, happens; I'm not going to think about it. If it's a good end to the season, great; if it's not, I'll move on." For his part, Damon Hill knows exactly the stress, pressure and inescapable anxiety that Jensen Button is going through. And, as he says with unwavering conviction, "There is nothing in the world like it." **FO**



MARK QUINN/FOURNAF/AT; PHOTOS: GUY MASON/CORBIS OUTLINE; JEFFREY MASON/CORBIS OUTLINE

Down to the wire

Sebastian Vettel

"I'll go for it until it's impossible"

Bernie thinks Sebastian Vettel is F1's next big thing. But how does **Michael Schumacher**, the last big thing, rate his countryman's title chances? And does Vettel believe he can be world champion in 2009?

WORDS BRADLEY LORD PORTRAIT SAM BARKER

With hindsight, which makes experts of us all, lap 55 of the Australian Grand Prix was a microcosm of Sebastian Vettel's 2009 season. Vettel had run second all race, keeping Jenson Button honest as the Brawn scorched to a debut win. Then came a late-race charge from Robert Kubica, who was running the better, harder tyre while his rivals struggled on the soft. He closed on Vettel and made his move, but Sebastian, eager to defend his position, eager to lay down a marker, over-eager to win every battle of every race in his shiny new Red Bull, just wouldn't give up. The result? A mess of crumpled carbon fibre and two podium finishes gone begging. Then, to add insult to injury, Vettel owned up to the accident in a refreshingly frank assessment of events – and got slapped with a ten-place grid penalty. It was a bruising welcome to the big-time.

But that series of events encapsulated Vettel's strengths and weaknesses in this, his first season as a title contender. He displayed speed, tenacity and engaging honesty. Yet the accident also showed he's a work in progress: still hot-headed enough that the importance of winning a small on-track battle can outweigh the winning of a title war. The accident was put down to the impetuosity of youth in those early days when nobody knew exactly who would be going for the title. But how precious do those six squandered points look now?

If anybody knows about winning titles, and also about calming a streak of impetuosity under pressure, it's Michael Schumacher. His presence looms large for Vettel – both as an inspiration and also ▶



Down to the wire

as a legacy to live up to. In Germany, Vettel has been identified as the driver with the potential to fill the void left by the seven-time champion. Bernie certainly thinks he can do it; clearly Red Bull do, too. But what does Michael say? "Some of the media are trying to build him up as my 'successor'," answers Schumacher, "but he is not. He is not the next Schumacher, he is Vettel, and I know Sebastian shares this view. When I was entering F1, I did not try to be the next Senna, either. I just tried to do my best, as Sebastian is doing now. And he is doing that brilliantly."

Schumacher has, by his own admission, been impressed with Vettel's season so far. "Sebastian is doing a pretty good job, and he's proved that he has enough talent to really do it," comments Schuey. The raw stats show that Vettel's speed is beyond doubt: of his seven finishes up to Spa, six have been on the podium, including two wins, while the other was a fourth place in Barcelona. That's given him an average finishing position of 2.3 – compared to a third-place average for Webber and Button, and a fourth-place average for Barrichello. Those strong results have kept him in the title hunt, but they've been accompanied by five retirements – and only one of those was reliability-related. It's exactly the kind of roller coaster season that you might expect from a young charger.

Suggest that he's been feeling the pressure, and Vettel shrugs it off. "Not at all," he says, rebuffing the question. "As a racing driver, you have to live with pressure from the beginning of your career." That's true – but it's also a stock answer. And it doesn't admit the fact that although it's still just motor racing, this is F1; it's a different level of pressure to anything that comes before, and its spotlight exposes flaws with a ruthlessness that other series simply do not. Schumacher's assessment is a little more measured and suggests that, while Vettel has made errors, it's his response to them, rather than the mistakes themselves, that matters.

"In my view, he does everything right," analyses Michael. "He has talent; he cares about the details, which is something karting gave him the feeling for, and he learns very quickly not to repeat mistakes." The events of 2009 reinforce this. For example, Vettel was out-muscled at the start in Hungary and retired because of damage sustained during a spot of Turn 1 wheel-banging with Kimi Räikkönen. If that suggested a slightly tentative tightening-up, it was dispelled in the opening stages of Valencia, when he aggressively defended his position against Jenson Button and laid down a marker for his title rival. Vettel had two impetuous accidents early in the year in Australia and Monaco, but there have been none since.

Similarly, Vettel has coped with the unreliability of his Renault engine with admirable poise. In spite of being let down by his V8 in Valencia, following an even bigger failure in practice the previous day, Vettel didn't chuck his toys out of the pram. Instead, he kept his head down, pledged to fight until it was mathematically impossible – and bounced back the next weekend in Spa. But the engine question hangs heavier over him than any of his title rivals. He has blown up



Vettel's engine failed at Monaco (right), and now he's only got four left...



Vettel celebrates his win at this year's British GP with a spot of levitation...

four of his season-long allocation of eight, and had just two fresh engines with which to complete the final third of the season.

While that's do-able, it leaves him restricted on practice mileage at circuits later in the year – hardly what you want if you're chasing the title, especially with the final race at an unknown venue like Abu Dhabi. However, there's also the intriguing prospect that he could find a way of turning the situation to his psychological advantage. It means his team-mate will be doing the greater share of the tyre assessment and set-up work, while Seb twiddles his thumbs then nicks the best settings. This can play out in one of two ways: either Vettel will be disadvantaged by the lack of running time, or he can frame the situation so that he sees Webber as effectively working for him at the coming races. After all, in China Vettel produced stunning qualifying and race performances when mileage-limited (as he was in that race by suspect driveshaft reliability). It will be intriguing to see if this potential weakness can be turned into a strength.

Ultimately, it's that same intra-team battle that Vettel must first win if he's to get an unimpeded crack at the championship – and that may not happen until it's too late if the pattern of inconsistency among Button's main rivals continues. While Red Bull have shown themselves to be admirably even-handed in their treatment of the two drivers, it is Vettel who represents the team's future, having extended his contract to the end of 2011. Webber will also be there next year, but the manner in which the team announced both contracts was significant: "Webber to drive for Red Bull Racing in 2010" read one release, while the other stated, "Vettel commits to Red Bull Racing". The subtle difference in tone, as if Vettel had done the team a favour rather than the other way round, betrays how highly the young German is valued.

The initiative has see-sawed between the Red Bull team-mates all year long, and it's still far too close to call – even though Vettel himself believes that, "At this point, there are three drivers with a realistic chance, but I believe in me and the team." When he spoke those words, he was in the top three along with the Brawn drivers – and, although the team continues to insist that the gap is too close to favour one driver or the other, Sebastian seems to think differently. But the general pre-season expectation was that Vettel would get the better of Webber, especially after the Aussie broke his leg last winter. So has Schuey been surprised by how close things have been between the two team-mates? "To some extent, yes," admits Michael. "It is good for Sebastian to have somebody who pushes him. I think he has enough motivation, but it is good to see that close fight."

Notwithstanding the engine limitations he must cope with for the rest of the year, Vettel is arguably in the strongest position of any of Button's three challengers. The reason for that is as much psychological as it is technical: for Button, Webber and

"We need reliability and performance. It will be hard, but we will try" Sebastian Vettel

this may well be their last chance to win a Formula 1 world championship... and they've waited many years for it.

Vettel, though, has found himself on a seemingly irresistible career trajectory: from BMW as tester in 2006 and 2007, to winning a race with Toro Rosso in 2008, to a title-challenging Red Bull driver this year. Vettel admits it's been a surprise to find himself in this position. "I knew from winter testing that we had a very good car," he says, "but still I didn't think that we would be so competitive this season."

It's tempting to think Vettel's comparative lack of experience could work against him as he goes toe-to-toe with more seasoned rivals, but it may work in his favour: the knowledge that there may be another chance in the future could take the pressure off and help him perform naturally, rather than tensing up as his rivals have begun to do.

Not that Schumacher believes Vettel will rely on, or hide behind, that possibility. "He is very young still – but then he's a racer, and

racers do not think like this," stresses Michael. "They want to fight every race again, they want to win now and not later. You never know what will happen – maybe later the chance is not there any more."

As for Vettel, he has distilled the task down to its bare essentials. Asked what matters most at this stage, psychology doesn't even merit consideration. "Reliability and performance," he believes. "It will be difficult but until it is no longer possible, we will try." There's that tenacity again, the same dogged determination with which he held on to second place in Australia, that will now see him adamant in his refusal to give up hope until winning the title is impossible.

"I've always thought if you have a chance, you have a chance," smiles Schumacher. "Sebastian's chance is smaller than Jenson's, but it is still there. The last part of the season will be tough but can make the difference. I think we will see some good races from him."

And if anybody should know, it's Michael. **1**



WINN: ANDREW FERRIS; JAMES HIRSTS; STEVE EMBERTON/PAF

Down to
the wire

Rubens Barrichello

“Jenson has more to lose. I’m closing in...”

After almost being left on the sidelines, at the age of 37
Rubens Barrichello says his motivation to win the title
is as strong as ever. And Emerson Fittipaldi agrees...

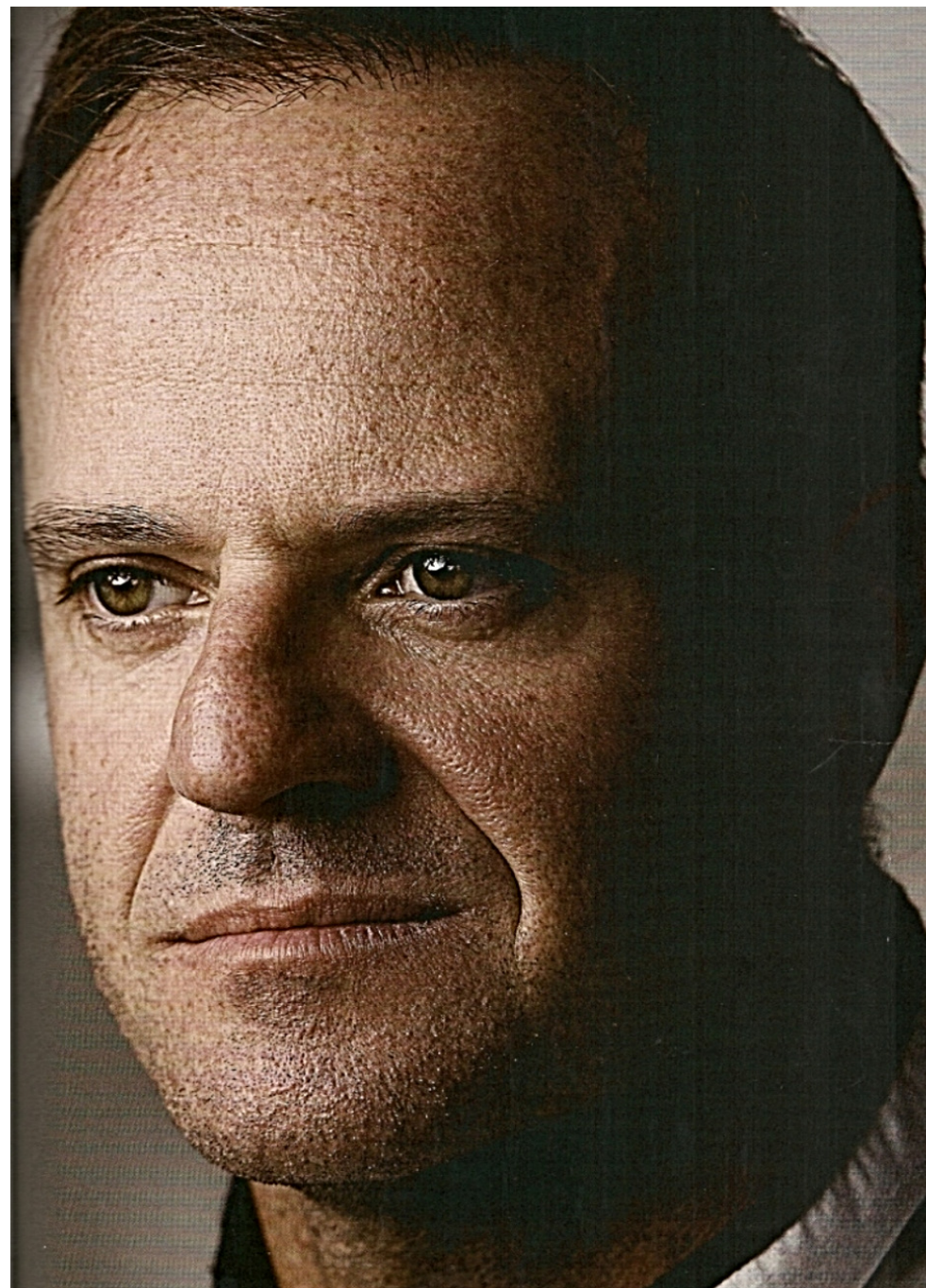
WORDS JAMES ROBERTS PORTRAIT ANDREW FERRARO/LAT

That trademark smile was ratcheted up a notch when Rubens Barrichello coasted down the Valencia pitlane, flanked by mechanics from rival teams who applauded his return to the top of the podium. It had taken Rubinho a month shy of five years to end his personal drought – and he was going to savour every last drop of champagne. Faced with the prospect of being out of the sport last winter, here he was, back in the winners’ circle. And, on a day when his team-mate finished seventh, he could sense that momentum and possibly fate were finally working his way. Was he wondering whether this *really* was the year he could be world champion?

After an early-season trouncing by Button, the swing in Rubens’s favour actually started a few races before Valencia. First there was

the Silverstone podium; then he was up on Jenson again at the Nürburgring (until fuel-rig woes intervened). Suspension dramas thwarted him in Hungary before his demons were finally vanquished with that sublime triumph on the Spanish streets. It was special for Brazil, too. Not only did Rubens pay tribute to the injured Felipe Massa, but it was also the 100th time the Brazilian national anthem had rung out for a winning driver. The man who took Brazil’s first win back at Watkins Glen in 1970 was watching in São Paulo. With two F1 world titles under his own belt, Emerson Fittipaldi knew that Barrichello had taken an important step in the points chase.

“There was a big celebration in Brazil when he won and now there is a lot of expectation here for him to win the championship,” says ▶



Down to the wire

Fittipaldi. "We all know how difficult it will be for him to succeed but I'm sure that after the win in Valencia he has a whole new wave of motivation. It will be hard to close the points gap to Jenson, but does he have a chance? Yes. Will it be difficult? Yes. Can he win it? Yes."

Fittipaldi believes Rubens' motivation is as strong as ever and that there has never been any suggestion his competitive desire is on the wane, despite some 280-odd grand prix starts. It has actually been quite an incredible turnaround for the 37-year-old to return from the prospect of being left on the sidelines, following Honda's withdrawal from the sport, to having a chance of winning the world title. Last winter it would have been so easy for him just to have hung up his helmet, with no way of foreseeing the upturn in fortune that lay ahead. In fact, Emerson reveals that Rubens called him for advice about what to do.

"In my last season of Indycar I was 49 years old. Rubens telephoned me in October last year and asked: 'Emerson, how do you handle racing at that age?' I told him that if you still have the motivation – not just to compete but to *win* – then you know you can do it. He still has the physical ability, so I advised him to put the bit between his teeth and go for it. This point of his career is all about motivation and I've no doubt his motivation is 100 per cent."

Rubens decided that he did want to continue; he knew he had the fire in his belly to start his 17th season in F1 and, likewise, Ross Brawn retained his faith in the Brazilian veteran. But was that because he wanted Barrichello to reprise the role he'd played during those six years they worked together at Ferrari – namely to act as the experienced, yet dutiful, number two?

When Jenson took an early championship lead with those six wins from seven races – and with mid-race strategy calls working in the Brit's favour – it looked that way. But Rubens is no pushover, and if there's one thing he's determined to shake off it's that dreaded 'number two' tag. Hence his extraordinary outburst at the Nürburgring when he criticised the team after his 16-second race lead was scuppered due to the wrong tyre choice and a refuelling problem left him finishing the race sixth and – most galling – behind his team-mate once again...

But that post-race outburst reinforced his competitive desire. He felt he could have won and his determination to conquer his team-mate was as strong as ever – he was just voicing his overwhelming frustration that it still hadn't happened up to that point. "I qualified fantastically well in Germany, then we had the mishap, but from the beginning of the season I should have had more points," says Rubens. "I have to work hard and find out why we lost performance compared to others. We need to get back to the front, scoring pole positions and winning races."

The point of the season when the momentum started to shift towards Rubens ran in parallel, and not entirely coincidentally, with Brawn's drop-off in performance. At the beginning of the year, the Brawns could extract speed from their Bridgestones without too much degradation but,



Well that took long enough... Rubens gets his first win in Valencia, coming into form just as Jenson flounders

since Silverstone, the grands prix with the cooler ambient temperatures have caused the Brawns to struggle to get their rubber up to a decent operating temperature. Jenson is notoriously smooth on his tyres and his recent failures to get heat into the Brawn's rubber has allowed Rubens to take the initiative in the past few races. It might also be that there is less pressure on Rubens regarding the championship. It's his to win, Jenson's to lose. And if it came to a wheel-to-wheel showdown between the two, Rubens is much less likely to back out of a manoeuvre.

"Yeah, but I need the points as well," he says. "In a way if you look at it purely from where Jenson is in the championship and from where I am, he has more to lose than I do. But you need to score points and win races. I feel sorry in a way that he won so many and I didn't. That's a fact."

Rubens failed to take the initiative early in the season when the Brawns were top of the field, and this could now prove to be his undoing. Since his Silverstone renaissance, rival teams have made significant gains.

Red Bull's 75-part update at Silverstone initially put them at the front of the grid, then McLaren and Ferrari revived their fortunes. Valencia aside, the switch in the competitive hierarchy has left the Brawn team scraping for minor points, trying to figure out the mechanical issues that are now hindering their performance.

The problem now for Rubens is that if the Brawn can't fight for wins then, as was the case at Spa, he will only be able to take a handful of points out of Jenson's lead, and as the championship runs out of races, it won't be enough for him to overhaul the Englishman. As a result, that daunting yet inevitable tipping point may well arrive where team orders rear their ugly head and Brawn puts an end to the 'free to race' policy to preserve Jenson's lead. Imagine a situation where Rubens is leading his home grand prix at Interlagos (a race he has never won) and then gets that dreaded call on the radio...

"It's very important for him because he was number two to Michael Schumacher for such a long time and now it could happen again with Jenson," says Fittipaldi. "It's difficult for him, but if he wins then he'll prove that he can be a number one as well. Rubens is clearly still capable of winning races and running at the front and the next few races will be very important to show how fast he can be."

So if Rubens doesn't win the championship this season, will he finally decide to hang up his helmet? "Only he can answer that," says Fittipaldi. "I think that if he wins the championship he will go on for another year."

There's life in the old dog yet and there's still a glimmer of hope for Rubens Barrichello. If you look at his performances compared to Jenson's at the tail end of last season, between Spa and Brazil, Rubens out-qualified Jenson four out of five times and regularly out-performed him when his car managed to finish races.

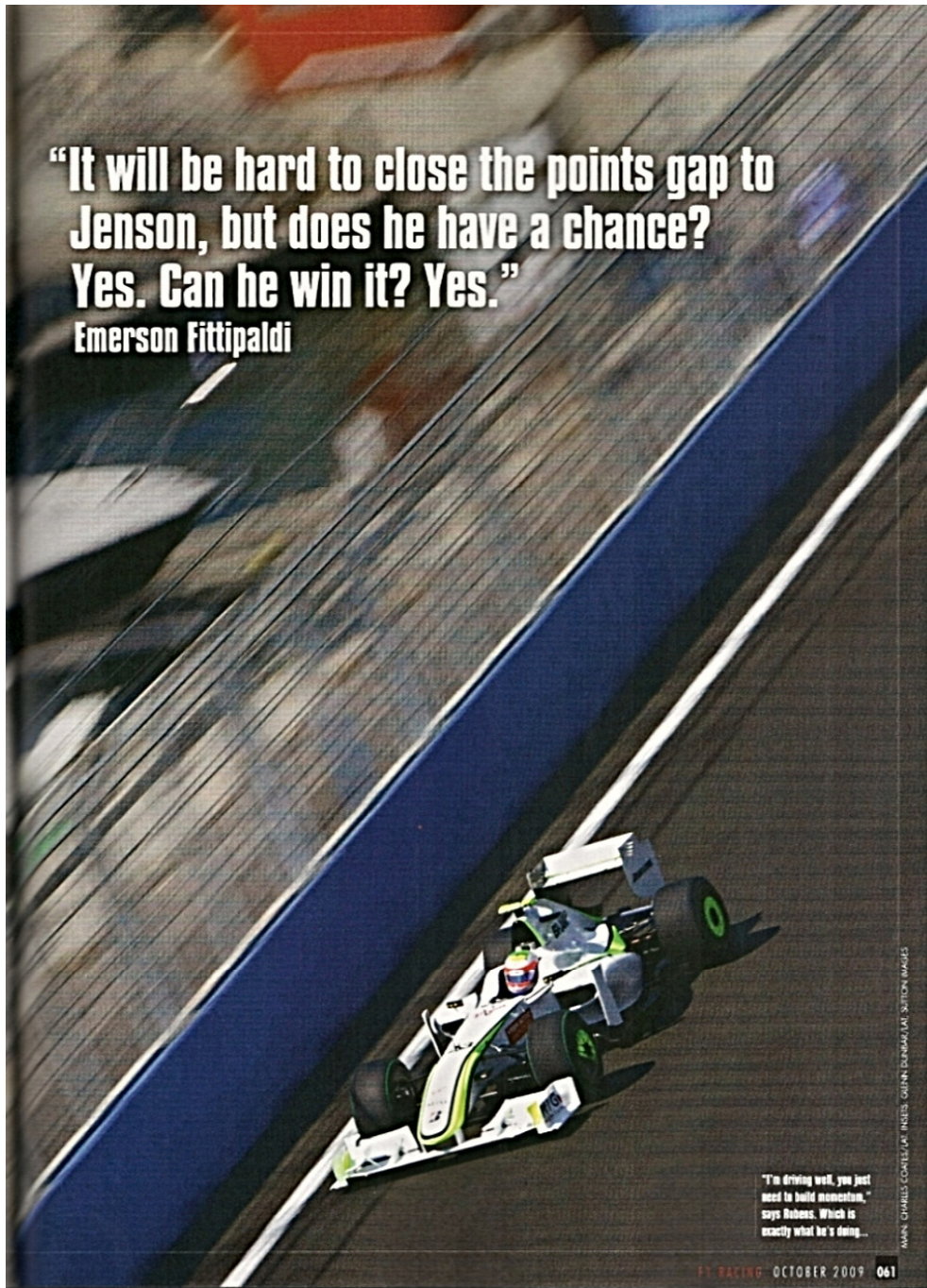
"I am driving well and I am closing in," Rubens states emphatically. "You just need to build the best momentum to keep going, but you are never close enough until you've really won it."

Will we see another line of mechanics clapping him to the podium again this season? If so, imagine how wide that smile will be then... **FO**

As Jenson scores his sixth win in Turkey, Rubens has a spin and seems miles away from a title challenge...



"It will be hard to close the points gap to Jenson, but does he have a chance? Yes. Can he win it? Yes."
Emerson Fittipaldi



"I'm driving well, you just need to build momentum," says Rubens. Which is exactly what he's doing...

Down to the wire



Mark Webber

"There's a long way to go, believe me..."

Mark Webber's already admitted it's a surprise to be challenging for the title. But his country's last champion, Alan Jones, is convinced that Mark can do it, thanks to some good old-fashioned Aussie grit

WORDS BRADLEY LORD PORTRAIT SAM BARKER

We should probably hold our hands up and admit it, shouldn't we? Yep, it was us. We went and put Mark Webber on his first *F1 Racing* cover for four years and look what happened: he stopped scoring points. And it wasn't that the car broke, or that he crashed out from strong podium positions. No, he finished ninth. Twice. In the most painful position of all for a title hopeful who's chasing down a points gap. Did we jinx him?

Fortunately, Mark's not the kind of bloke to indulge in superstition. Neither was the last driver to take the F1 title all the way back to Oz, 1980 champion Alan Jones. In that respect, they're peas in an Aussie pod: straight-talking men who speak their minds, with little more than a passing nod to political correctness. So come on then, Alan, what are Webber's chances of becoming champion?

"It's going to be hard for him," reckons AJ. "At this point in time, Jenson's got to lose it rather than Mark has to win it. But it's not impossible that it could turn around – all it needs is for Button to have a couple of DNFs." That's a typical assessment: pragmatism with

no sugar-coating. The path to the title may not be obvious, or even solely in Webber's hands, but that's no reason to give up. Perhaps the most remarkable thing about Mark's title charge – which was solid, if not spectacular, until that consummate win in Germany – is that it's happening at all. It's been talked about at length, but the guy is lucky to even be driving an F1 car this year – let alone going for the title.

Webber's always been inspired by the character of the Aussie battler, ever since his dad told him tales of Sir Jack Brabham and AJ. This year has proved that Webber is cast in exactly the same mould as he's fought back from those serious pre-season injuries sustained in Tasmania. "He's got this underlying determination," agrees Jones. "He's not a quitter, he's extremely fit – and he's proven even before this year that he's got the speed. But now he's got the sort of machinery under him that allows him to follow up in the race."

Every F1 driver likes to believe that he'd be running regularly at the front if only he had the right equipment – it's often the psychological safety valve that lets them explain away poor performances by hiding ▶

Down to the wire



"I'd like a tenth more in qualify, but you always want more" says Webber

behind the car's deficiencies. But having the car at your disposal brings pressure, that intangible catalyst that can completely alter the chemistry between man and machine. Up to the summer break, Webber delivered – and he was Mr Momentum. In fact, that four-week lay-off probably came at the worst possible time, just as he was on the crest of a wave. "Maybe, yeah," he admits. "But I've got to keep doing what I've been doing. I can't control what Jenson's going to do, or Sebastian, or Lewis or whatever."

Spa was a lesson in taking things step by step and not getting ahead of yourself. While the dip in form in Valencia could be explained – it's the kind of circuit that doesn't show the RB5 to its

best advantage – Spa was supposed to be a nailed-on Red Bull track, where the high-speed corners would play to the car's strengths. But the team got leapfrogged by Toyota, BMW, Ferrari and Force India – definitely not part of the plan. That will put question marks in their minds about upcoming circuits where they are expected to excel, particularly Suzuka. And it reinforces the importance of taking every opportunity, at every type of circuit, regardless of the expectation.

"If I were Mark, I would just be going to every grand prix to try to win it," says Jones, reflecting the elegantly simple challenge of the drivers doing the chasing – they simply have to go all-out to catch the guy up front. "If you're in second or third position, and there's

"It's quite straightforward – you just cut it down into details and do what you're doing" Mark Webber

no chance of winning, then you've got to start thinking about points in that respect. But before I got there, I'd be going with the attitude: 'I'm just going to try and win.' He's got to keep his cool and not be preoccupied by the championship. He needs to be preoccupied with going well in the individual races."

This is a recurring theme for everybody aiming for this world championship – if you don't think about it, everything will go okay. But that's also an ideal-world scenario in which the driver can block out the chance of achieving his life's dream; nobody can really clear the decks to that extent. They've got to learn to deal with the situation and find the best way of striking the balance between the immediate challenge and the overall championship context. Typically, Webber's take is slightly different and absolutely realistic. He concedes his attitude to risk has changed with a title potentially at stake, and his explanation seems rooted in his strong ethic of teamwork and obligation to the people who have made this year possible.

"In my Williams and Jaguar days, I would have fought harder against guys like Hamilton because I was only turning up at one race here and there," says Webber. "Now I'm turning up at every race and we have a bigger picture going on. So I need to take care for the team, and all my guys and myself, to get the best result I can on the day without taking maybe that extra half a per cent or one per cent of risk. But hey, I'm not waving people through..."

That's been clear in his driving. While the other title contenders have been tentative at race starts, Webber invariably comes out of the mix higher up the field; the only exception being from pole at the Nürburgring, when he fluffed his getaway and nearly tangled with Barrichello. Spa was a case in point – from ninth on the grid, he ran sixth at the end of the opening lap and slugged it out, wheel-to-wheel, with his team-mate out of Eau Rouge. That's not nerves talking.

"It's actually still quite straightforward," he says of his situation. "You take each session as you come. We know what we have to do in qualifying, Q3 is important, the first lap's crucial, then you finally get into your rhythm. You just cut it down into details and keep doing what you're doing."



"I never really liked the taste of champagne..." Mark after his first F1 win in Germany

To be honest, it's that idea of 'keep doing what you're doing' that's problematic for Webber, because he also needs to raise his game in one crucial area: qualifying. In the first 12 races, he started behind his team-mate ten times – and one of Webber's 'wins' came in Malaysia, where Vettel was handed a ten-place grid penalty. Of course, fuel weights complicate the situation, but Mark himself has identified Saturday afternoons as the point of the weekend when he needs to up his game. With the field so close this year, as he found to his cost in Valencia, you tend to race where you qualify – without making too much progress either up or down the field.

All in all, it's a strange reversal for a driver who, until this year, was known as a one-lap specialist. "I'm not hanging round in qualifying!" says Webber. "There's only a tenth or two between me and Sebastian – but that's a key part of the weekend. I used to be frustrated in races with the grooved tyres, and it was a bit harder for me. The

peak grip of the tyres used to move around a lot more, whereas the slicks are a lot more stable over their life. In qualifying, I knew how to get the peak grip out of the tyre but now, on the slicks, the peak grip is always higher. I'd like a tenth more in qualify but, bloody hell, you always want more. I wouldn't call it a weakness."

Okay, so if it's not a weakness, it's certainly an area with room for improvement. Race pace, though, has been consistently strong – and that's given the lie to the idea that, while he was a tough competitor, Webber couldn't sustain it over a full race distance. Jones, for one, thinks Webber's upped his game in 2009. "You raise the bar yourself," explains Jones of what happens when you're in the hunt for the title. "Once upon a time, you'd be happy to qualify eighth or ninth; now, you get the shits if you're not in the top four. And, subconsciously, that makes you try harder."

The notion of trying harder would be like a red rag to a bull for Mark – his career has been a story of 100 per cent commitment, verging on overdoing it on occasions. But, as he admitted last month, "You don't know how deep you can go until you get there." This quest for the championship is a voyage of discovery – something about which Webber is totally candid. What's more, the journey is far from over. "I don't feel we're near Brazil or Abu Dhabi yet," asserts Webber. "We're not even near the summit of Everest yet, and we've got to come back down too. There's a long way to go, believe me..."

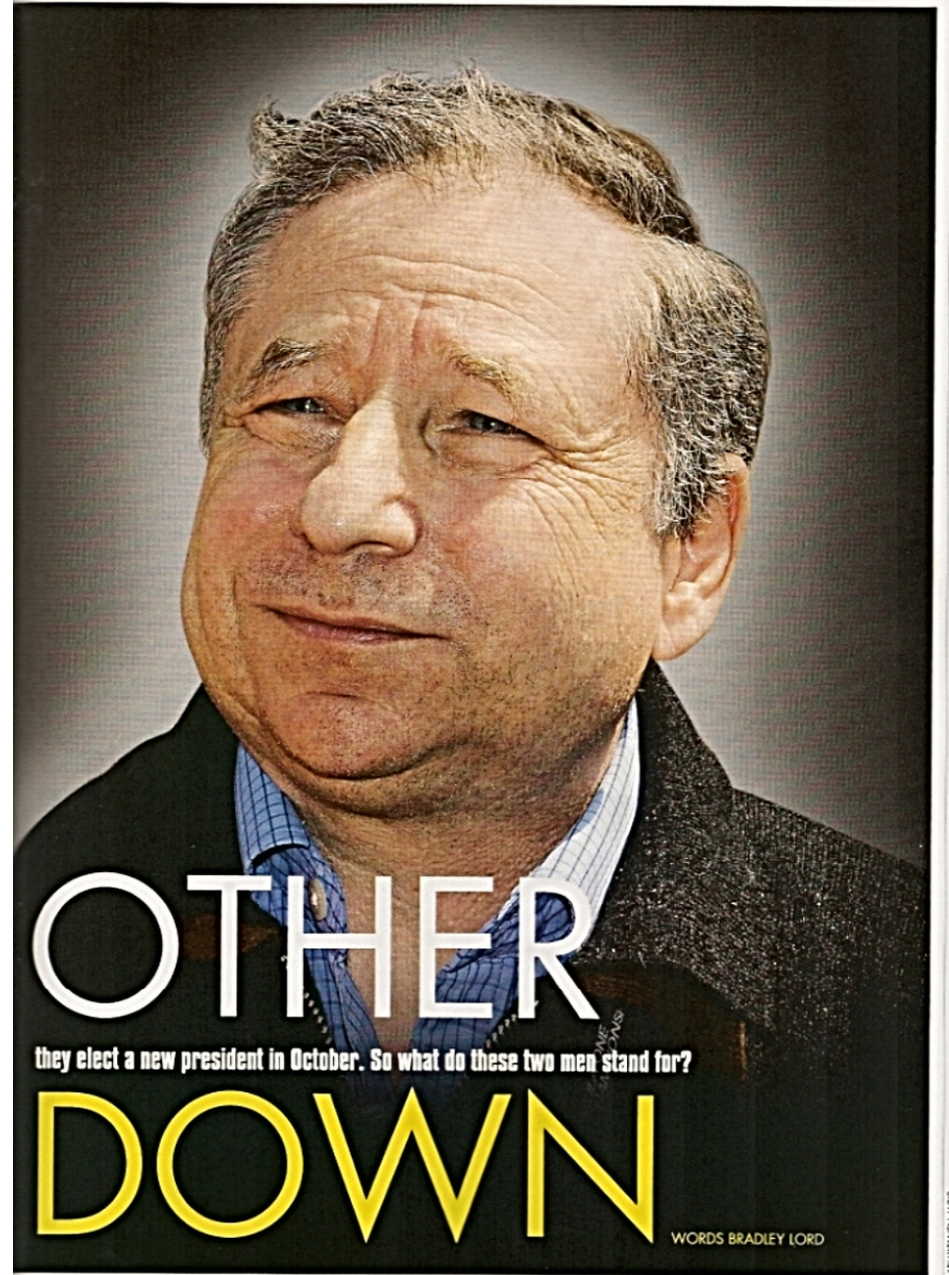
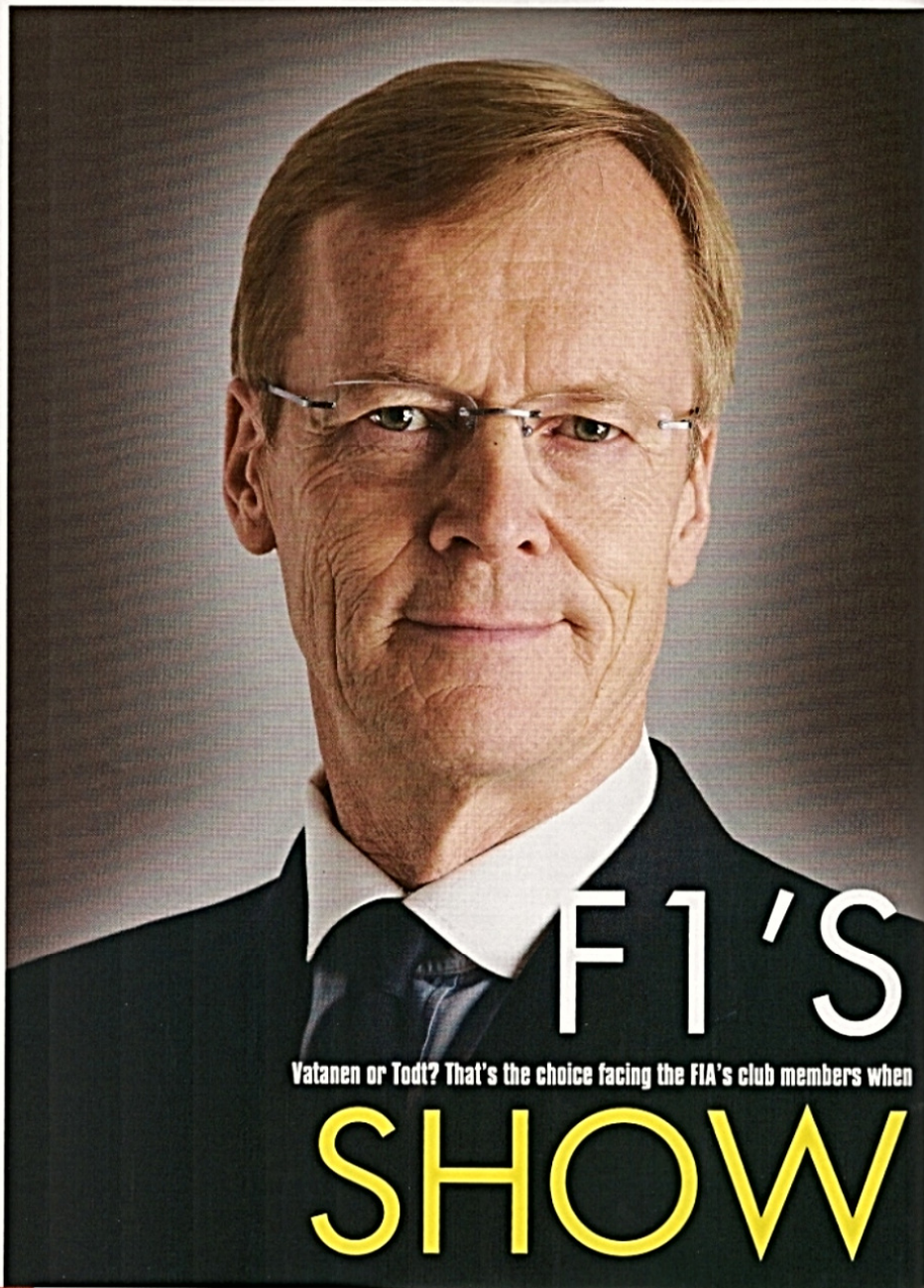
What's more, Webber's success will be blazing a path for young guys following in his footsteps. F1 isn't new in Australia, but it suffers alongside the home-grown pleasures of V8 touring cars. "Mark's win did everyone a favour over here," says Jones. "It brought up the awareness of open-wheeler racing in this country, and more people watch the races now. That helps young people going to businesses to get support to go overseas and race. It broadens people's appreciation of what those young guys may be able to do, and everyone benefits."

So Webber's got a nation cheering him on, from afar at least. Like an ascent of Everest, it's a long road that will be conquered with little steps. Unlike any mountain you've ever seen, though, his challenge is also a bit like climbing the wrong way up an escalator: if you're standing still, you're going backwards, as you begin to run out of races.

That particular race against time happens to be Mark Webber's biggest challenge of all as this fascinating season builds to its climax. **FO**



The first corner of the Australian GP ends in 'non-bonzer' fashion for Webber



The gilded entrance of the FIA HQ in Place de la Concorde, Paris, is a long way away from the harsh expanse of the Sahara Desert. In fact, there's probably no greater contrast in motorsport than that between the hushed corridors of power and the immense, arid heart of North Africa.

But the Sahara is where the story of the 2009 FIA presidential elections began, with the toss of a coin 20 years ago. The ten-franc piece was flipped by the then Peugeot team boss, Jean Todt, to decide which of his drivers would triumph in that year's Paris-Dakar Rally. It came up tails, which meant Ari Vatanen would triumph over Jacky Ickx.

In the days that followed, Vatanen took a wrong turn in the desert, forcing Ickx to wait meekly at the end of the final stages to allow Ari to catch up and win. The then FISA President, Jean-Marie Balestre, was furious at the Peugeot team's actions. Vatanen was diffident in victory, uncomfortable with the method but unwilling to say more about it – and Todt was defiant, having done what was necessary to ensure his team brought home the prize.

In many ways, the tale from the desert runs to the core of the choice facing the FIA's member clubs on 23 October when they congregate in Paris to elect the new head of the federation: should they choose Ari Vatanen, the softly spoken rally ace turned politician, who is determined to find the positive and see the potential in every situation; or Jean Todt, the man who managed Peugeot and Ferrari to unprecedented success, but did so with a ruthless efficiency that left many people questioning his sporting values?

The race is on for the FIA presidency and, this time at least, team orders won't come into play...

THE CANDIDATES

Jean Todt started out as a rally co-driver, his career culminating in a manufacturers' world title win for Talbot Sunbeam Lotus in 1981 – the same year Ari Vatanen became world rally champion in a Ford Escort, a further example of the two men's intertwined careers. Todt subsequently retired, taking charge of Peugeot's motorsport activities and leading the company to World Rally Championship success, followed by victories at the Paris-Dakar Rally and, ultimately, two victories at the Le Mans 24 Hours in 1992 and 1993. He joined Ferrari in 1993, as general manager of its racing division; 16 years later, he left Maranello after rising to the position of Ferrari CEO. During his tenure, Ferrari won 13 world titles – six drivers' and seven constructors'.

Ari Vatanen first competed in the world rally championship in 1974. Known for his spectacularly flamboyant driving style, he was crowned world champion in 1981. He joined the Todt-run Peugeot team in 1984, cheating death in a major accident in Argentina in 1985. When he returned to the sport in 1987, he began competing at the Paris-Dakar Rally, which he won in 1987, 1989, 1990 and 1991. After retiring at the end of 1998, Vatanen was elected to the European

The real question is whether the FIA membership agree it's time for change

Parliament the following year, as a member for Finland in his first term and France in his second. He was defeated in elections in 2009, before announcing his candidacy for the FIA presidency.

THEIR CAMPAIGNS

Vatanen was the first man to declare his candidacy, even before Max Mosley had confirmed his intention to step down as president at the end of his term. Vatanen has been a frequent visitor to the F1 paddock and has run a very public campaign, spreading a positive message about the untapped potential within what he terms the 'FIA family' that can only be unlocked through collaboration. "Independence," he claims, "serves no purpose unless you are strong. What do you do with independence if you are the master of nothing?"

He hasn't explicitly criticised his opponent or Mosley, but Vatanen stresses the hallmarks of his campaign are "values, honesty and transparency" – and observers are invited to draw whatever contrast they believe to be appropriate with the current regime. He has also stressed his credentials on the less prominent, but still crucial, mobility activities that the FIA conducts for ordinary motorists. Mobility votes account for roughly half of the FIA's General Assembly, and Vatanen has a strong track record on this front in the European Parliament. However, the campaign has not been without its gaffes: in July, Vatanen was rebuked by the FIA Foundation for suggesting that the FIA was providing Todt with a private jet with which to conduct campaign work, under the veil of his work for the Make Roads Safe campaign.

Todt's candidacy has been much more carefully stage-managed – indeed, his



It's all changed since '89 when Jean was Ari's Peugeot rally boss. They were both on the same side – and they both had a lot more hair...



Abhh... a big cuddle for Todt from a triumphant Schwyer in Monza '06, at the end of a successful ten-year partnership of Ferrari



Vatanen excelled at the rough and tumble of the Acropolis Rally in '81 but prefers to take the softly-softly approach to politics

HOW DOES THE ELECTION WORK?

The President of the FIA is elected by the governing body's General Assembly, which comprises the organization's 221 member clubs from 137 countries. In the majority of cases, a member country has one vote for its affiliated national club on the 'mobility' (road) side, and one 'sport' vote for its national sporting authority. A small number of countries possess only a mobility club, or a sporting authority, and therefore have only one vote.

The clubs who are eligible to vote must be full members of the FIA and must also have paid their annual dues. The exact composition of the vote is calculated by the FIA Secretariat on the day before the voting takes place, but it is likely to be somewhere around the 700 mark. The best-represented region within the FIA is Europe, which has 45 member countries (including Vatican City), followed by Asia (with 37 member countries) and Africa (26 members).

Candidates must submit their formal candidacy between 11 September and 2 October. The candidacy must include a list of 22 proposed candidates for key positions within the prospective administration – and candidates are not allowed to appear on more than one list. This is a controversial requirement because it makes it more difficult to challenge an incumbent.

Voting is conducted by a secret ballot and is supervised by the FIA's legal department. If there are, as expected, just two candidates, the winner will be the candidate who obtains a simple majority of the votes cast.

campaign manager is the FIA's former head of communications, Richard Woods. Todt has maintained a low public profile and is not expected to visit the F1 paddock until Singapore, once the official candidacy period has begun. He has developed and distributed a slick policy agenda, heavy on detail proposals such as intricate reforms to the FIA statutes, which are of little interest to the outside world but play well to the member clubs, and he has stressed his desire for continuity to build on the FIA's work.

Todt has strong credentials as a manager who can get things done and has pledged his neutrality in spite of his long-standing involvement with Ferrari. The single-mindedness with which he has pursued his targets for different employers backs this up. It's also worth noting that Todt is Mosley's preferred successor, and was endorsed by the outgoing president as "the pre-eminent motorsport manager of his generation".

THEIR POLICIES FOR F1

Todt has made a number of proposals for how F1 would operate under his regime. The most noteworthy suggestion is for an F1 commissioner to oversee the championship – and keep the new president at arm's length from the day-to-day running of the series. This is a change the teams would no doubt welcome after the regular presidential interventions from Mosley, but the identity of the commissioner would be crucial in ensuring the teams' trust in the system.

Similarly, a Stewards Review Group has been proposed to examine improvements to a system whose inconsistencies have long plagued competitors. A new disciplinary panel has also been suggested to carry out investigations into serious infringements of the regulations, before recommending penalties to the World Motor Sport Council. Todt has similarly vowed to continue efforts to cut costs to improve both the sustainability and affordability of motorsport.

Vatanen, in contrast, has not offered detail proposals but has instead laid out the way in which his principles would shape his leadership of the sport. He has stressed the importance of transparent, irreproachable governance and justice systems, and advocated a more hands-on role when required. Similarly, the rallying cry of "less politics and more passion" will resonate well with many people around the sport. "We mustn't see this in terms of a power battle," he stresses. "This cake could be so much bigger. And when the cake is bigger, the slices are bigger." He believes multi-year visibility and stability are required, so that major sponsors and manufacturers (the sport's 'lifeline') can commit to the sport, and that F1 has a role to play in terms of

promoting new technology. The role of the FIA would be to provide the participants with an attractive platform, following consultation, while also making F1 more accessible to its fans. Vatanen's commitment to transparency extends to the sport's governance too: he would be in favour, for example, of making public the parts of the new Concorde Agreement that are not commercially sensitive.

THEIR PROSPECTS

It would be all too easy to dismiss the FIA presidential election as little more than the coronation of Max Mosley's anointed successor, Jean Todt. There is no doubt that the Frenchman is favourite: he has Mosley's backing, knows the FIA well through his involvement in the governing body's road-safety campaigns, and has powerful allies within his proposed team. This was deftly illustrated when, on the day Vatanen published his manifesto, Todt released a lengthy list of messages of support from 20 key players within the different FIA regions.

But the real question is whether the FIA membership agrees with Vatanen that it's time for change. There exists an inherent groundswell of opposition that he could capitalise on: following his personal scandal last year, Max Mosley only won a vote of confidence by two-thirds to one-third. Vatanen himself is adamant that the election is far from a foregone conclusion, and professes his faith in the quality of the member clubs' independent judgement.

There are plenty of people in the F1 paddock who, off the record, are nervous about the prospect of a Todt presidency but, ultimately, those opinions matter little because F1 teams have no say in the outcome. The choice will fall instead to member clubs ranging from the National Federation Motor Racing Eritrea to the American Automobile Association. And their decisions will shape the future of F1 over the next four years.

THE GRAND PRIX YOU NEVER SEE

While the cars are racing, it's amazing what you spot as the paddock goes about its business during the European GP...



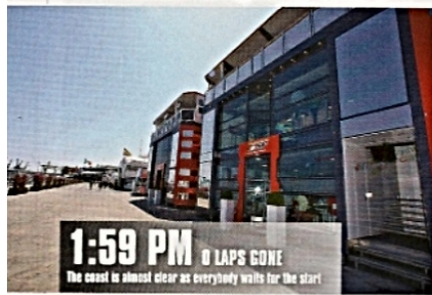
2:00 PM 0 LAPS GONE
Ari Vatanen and AJ shoot the breeze during the parade lap



2:03 PM 0 LAPS GONE
It's an all-McLaren front row for the team's VIPs to enjoy



2:09 PM 4 LAPS GONE
TV crews wait outside BMW - no call for any refreshments



1:59 PM 0 LAPS GONE
The coast is almost clear as everybody waits for the start



2:15 PM 7 LAPS GONE
Hospitality staff grab lunch before starting work on dinner



2:49 PM 28 LAPS GONE
Vettel faces the press after his Renault engine went pop



2:52 PM 30 LAPS GONE
Waterbombers need to be on the road to Spa the same evening



2:35 PM 19 LAPS GONE
Hand-held TVs help the security guards keep tabs on the race



2:39 PM 21 LAPS GONE
Bridgestone 'scrape' the used tyres to analyse wear rates



3:13 PM 41 LAPS GONE
Lewis has just lost the lead; his dad leaves the garage



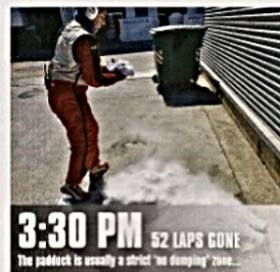
3:16 PM 43 LAPS GONE
Borvis concludes his meeting with Vatanen race officials



3:19 PM 45 LAPS GONE
On the starting blocks for the race to pack up the garages



3:22 PM 47 LAPS GONE
With ten laps to go, photographers queue for podium access



3:30 PM 52 LAPS GONE
The paddock is usually a strict 'no dumping' zone...



3:34 PM 54 LAPS GONE
Three laps left and Borvis scarpers - with Eric Clapton!

SHAWN TELFER

KERS was written off as an expensive irrelevance at the start of the year – but then it suddenly started winning...

WORDS BRADLEY LORD

KERS has travelled a rocky road for much of 2009. So rocky, in fact, that even Luca Badoer would empathise with the pasting it's been given by most people in F1. Some 18 months ago, Max Mosley promised the new energy recovery system would "revolutionise" the sport. This met with scepticism, but he insisted that the competitive culture of F1 would be a development accelerator for road-relevant, efficiency-enhancing technology.

By mid-season, only the sport's top two teams had made KERS work properly and the boss of one, Ferrari's Stefano Domenicali, had written it off as a flop. Prominent FOTA member Flavio Briatore labelled it

KERS

SUCCESS OR FAILURE?

a "money-sucking genius" and FOTA agreed not to use the system in 2010. But since then, a KERS-assisted McLaren-Mercedes has begun leading and winning races with Ferrari racking up regular podiums, too. But although KERS is currently allowed under next year's regulations, it seems increasingly unlikely that any team will actually use it.

"At the end of the day, KERS is a question of philosophy," says FIA technical consultant Tony Purnell. "Do we want these cars to have new technical challenges that connect to the car industry? Or should F1 go the NASCAR route and just be something that entertains? That's the top-level question." To be honest, it's not a question at all – F1 should surely strive to be both relevant *and* entertaining. What's more, KERS could have achieved both of those objectives. So what went wrong?

KERS is one of the most significant technical developments F1 has seen in recent years. Max Mosley termed it "The only serious engineering challenge the teams have had in the last two-and-a-half years," but his

barbed tone concealed the valid point that KERS is a serious technical headache. The challenge came in two parts: first, to harvest, convert and store sufficient energy so that the system could deliver up to 400 kilojoules per lap, at a rate of up to 60 kilowatts, in the form of a performance-enhancing power boost. This brings with it a potential lap-time benefit of up to four tenths of a second, depending on the circuit, but it's not simple 'bolt-on' performance,

and this leads on to the second part of the problem: ensuring the system represents a net performance gain in the context of the 2009 regulations.

The potential downsides were multiple. First, harvesting the energy from the crankshaft can have a detrimental effect on car stability under braking. Essentially, the motor linked to the crankshaft can have the same effect as downshifting too early, potentially locking the rear axle and costing



It was easy to knock KERS when the KERS teams weren't winning. But now Lewis is back on the podium, the tide is turning...

the driver time. Second, there are issues with mass and weight: in the first instance, the bulk of the system makes packaging tricky within the close confines of a modern F1 car; in the second, the system's weight could compromise the car's centre of gravity, tip the car over the minimum weight limit of 605kg (especially with a taller driver) or impede a team's ability to achieve the ideal weight distribution to get the most out of the tyres.

It all boils down to the simple fact that the 2009 regulations were poorly optimised for KERS and the downsides of the system proved greater than intended. "The real problem hasn't been KERS *per se*," continues

Purnell, "it's been that you cannot easily package KERS to keep the car as an effective system design and get the most out of the tyres." This fact certainly caught out teams like BMW and Renault who made significant investments only to find that, in reality, the system was much more performance-neutral than their simulations had suggested.

Ferrari and McLaren are the only teams to develop performance-positive solutions and their value has only been seen in the second half of the year. By common consensus, the battery system developed by Mercedes for McLaren is the best and, to develop it, they drew on resources in Germany, the USA

and the UK and welcomed three road-car engineers on assignment to apply their expert knowledge of road-car hybrid technology. "The target weight was very, very important," explains Mercedes-Benz vice president Norbert Haug. "We set an ambitious target of 25kg. The system weighed 25.3kg at the start of the season and it is now below our target." Mercedes believe another few kilos could be saved with further development.

The other important benefit of Mercedes' choice to use batteries for energy storage was that they brought a packaging benefit, allowing the KERS system to be split into several components. The batteries are ▶



As much for a good first impression: Räikkönen was forced to leap from his car when his KERS caught fire at the second grand prix of the year.

GUYEN OUFAR/MALAY FERRARI

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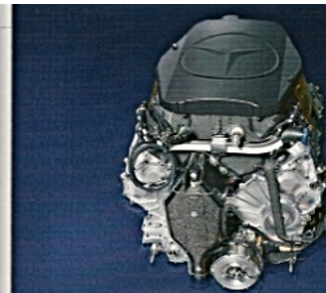
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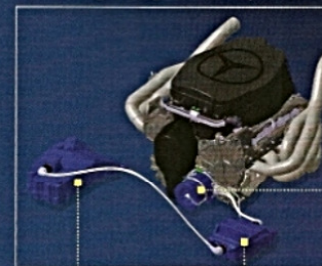


HOW THE MERCEDES-BENZ KERS WORKS

The KERS system includes three primary components: the motor unit, the power electronics box and the energy storage system (ESS).

Kinetic energy is harvested from the crankshaft by the motor unit. This energy is transmitted as three-phase electricity to the power electronics, which convert it into DC (direct current) and transmit it to the ESS. The ESS stores the energy in lithium-ion (Li-on) batteries before the process happens in reverse to release the energy. The batteries, which have good energy-storage capacity, were developed to improve their power delivery.

The Mercedes-Benz KERS system is over 70 per cent efficient, meaning roughly 600kJ of energy must be harvested per lap to deliver the maximum 400kJ. When the project began, efficiency levels were around 30 per cent. The first KERS system weighed over 100kg and the first version tested on track still weighed 37kg – far too heavy for use in a racing environment.



1 Motor unit
Weight: 5.5kg.
The motor unit is gear-driven from the engine's crankshaft

3 Energy storage system
Weight: approx 14.5kg. The Li-on batteries are housed in a Zylon casing for safety

2 Power electronics
Weight: 3.5kg. These are the electronic 'brains' that manage the KERS system

therefore located deep in the right-hand sidepod while the power electronics that manage the system can be found in the left. This enabled the team to mitigate the detrimental effects on the car's centre of gravity and weight distribution.

McLaren's remarkable return to form in the second half of this season has laid to rest the notion that a KERS car couldn't win a grand prix. It proved that the correlation between using KERS at the start of the season, and performing poorly, owed more to coincidence than causality. The challenge of KERS was tough, but Mercedes showed it was achievable. The deeper truth is that KERS has been a victim of circumstance.

First, the new rules made it too difficult to achieve a net performance benefit. This was compounded by the coincidence that the teams who had developed it also failed to spot the loophole permitting the double diffuser. This represented a much greater performance gain and development path, which meant that any positive benefits from KERS were overshadowed by the teams' early-season aerodynamic deficiencies. It's only since McLaren and Ferrari got to grips

with their aero problems that the positive aspects of KERS have been apparent. The irony is that the 2010 regulations would actually make it easier to achieve a net gain from KERS because the minimum weight limit has been raised to 620kg and the front tyres narrowed, which will push ideal weight distribution further towards the rear.

Second, it's been contradictory and controversial that, at a time when the FIA have been pushing the idea of budget capping, they have also introduced a system of marginal benefit on which teams have spent millions of pounds – with absolutely no return in some cases. Within the governing body, a distinction is made between useful expenditure and useless spending on activities such as refining aerodynamics that will never be relevant to the everyday motorist. But no matter how much sense this makes, if you subscribe to the idea that F1 should promote cutting-edge, road-relevant technology (and not everybody does), it's

hard to justify how teams should spend less if they're also having to introduce expensive new technology. Mercedes are adamant that KERS has fed back useful knowledge into the road-car department and, in fact, they are one of just two F1 manufacturers to sell and advertise a road-going hybrid. But not every manufacturer shares those views.

The question, though, is hypothetical, since the FOTA teams have agreed not to run the system in 2010. Williams and Force India are not members and so are not technically bound by that decision. But Williams are not believed to have a race-ready system, and Mercedes would not be willing to violate the spirit of the FOTA agreement in order to supply Force India. Equally, while the three new teams would be free to use KERS under the rules, they have a big enough job just to design and manufacture their cars.

While KERS may have a decisive influence on the final half of the season, the 'technology of the future' seems destined to become little more than an intriguing footnote in F1 history – for the moment at least. The next major change to the power train rules is due in 2013 and hybrid technologies are expected to form part of that rules package. "It's only 42 months until the first race," remarked a senior Mercedes engineer with a twinkle in his eye. "That's not long at all."

KERS may be gone for 2010 but it certainly isn't going to be forgotten. **PO**

"You cannot easily package KERS to keep the car as an effective system design in 2009" Tony Purnell

This strange picture is from a €10 million supercomputer.
It shows *exactly* how a car's aerodynamics are working.
And no Formula 1 team could do without it.

WELCOME TO THE WORLD OF CFD...

WORDS HANS SEEBERG

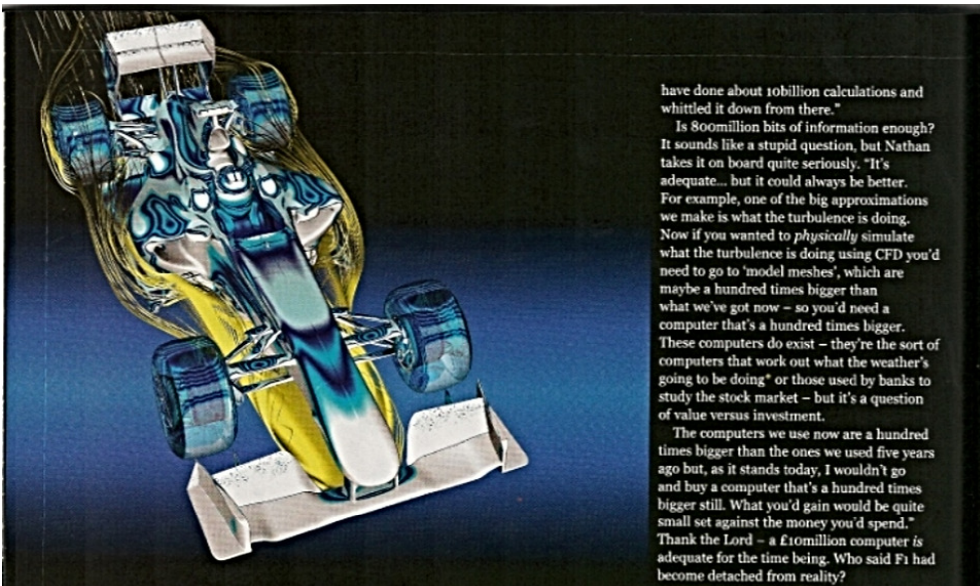


Forty years ago, Tyrrell won the constructors' championship with a car knocked up in a shed. So what on earth would they have made of this room at Williams? Inside it are what look like ten fridge-freezers in a row, with fans whirring noisily to stop them overheating and exploding – just as well, seeing as they're capable of about a trillion calculations per second. This is the team's supercomputer – about £10million worth of state-of-the-art gadgetry that powers one of the most mesmerising, complex and vital things in

F1: Computational Fluid Dynamics. Or to you and me, a windtunnel in a computer.

CFD has been around in Formula 1 for 15 years or so, but it's been transformed by the relentless advance of computers from clunky oblong boxes the size of garages to streamlined, super-fast slivers of metal that can do much more in far less time. Nathan Eagles, Williams' head of computational fluid dynamics, puts it in perspective. "We can do roughly 100 times more work in the same amount of time than we could when I started using CFD ten years ago," he says. But what actually *is* CFD? How does it work? And just what can it do? Get yourself a nice cup of tea and some paracetamol, just in case, because here comes the science bit...

In his Williams office, Nathan Eagles is sitting in front of a computer – an inauspicious PC that wouldn't look out of place in any home in Britain. But on the screen is a 100 per cent accurate model of the team's 2009 car – and when we say accurate, we mean it. "This model is our starting point in CFD," explains Nathan. "It's basically a CAD drawing of the car that features every single part of it. You can take the tyres off, take the engine cover off, see inside all the air boxes and exhaust panels – every nut and bolt if you want to." Nathan duly rotates the car from every conceivable angle, and takes the front left tyre off for a brief guided tour of the brake-duct system to prove the point. How long does it take just to make this Airfix-from-Mars model? "It probably takes two guys about three weeks." >



"If you did this on your PC, it would take four months to calculate"

From here, the *real* magic of CFD begins. The idea is to simulate the aerodynamic performance of an F1 car so you can see exactly how each part is responding to airflow, whether everything's working as it should and if anything needs tweaking. But even this technology isn't yet sophisticated enough to give an exact answer with a few clicks and a tap of the 'return' button. So Nathan and every other head of CFD in F1 has to go through a fiddly process called 'meshing'. It might be easier if he explains it:

"An F1 car is just a piece of geometry, with a set of surfaces that all have certain properties like curvature and tangency. It's the combination of all these things that dictate how the aerodynamics work, so as a CFD aerodynamicist you need to give the computer a representation of this geometry in a way it can understand. That's meshing." So imagine a big fishing net, with thousands of tiny squares, has been draped over an F1 car. Now imagine that each square has been diagonally halved to break the surface of the car down into thousands of little triangles. So what CFD does is show how air moves from one triangle to another?

"Yes, exactly. Now, for each one of these little triangles, we'll get information about how the air flow is moving across it - things like velocity, pressure, temperatures. Even thermals, which is when you want to see how the exhaust gases are exiting the back of the engine and whether they're clearing the suspension and the rear wing. We can also make sure that air isn't getting in the way or burning any of the bodywork." In the days of Tyrrell, this sort of information would presumably only be discovered with a small fire in the pitlane.

The return of this 'meshing' data is what Nathan is really after - and it's also where the supercomputer earns its keep. "If you want to see how a new front wing is going to work, for example, you make your mesh and submit it to the computer so it can run a series of calculations. Now these aren't simple calculations, like 1+1=2. It's more like 1+1=2+ a bit of an error. The next time it does the calculation it slightly reduces the error, and it carries on running these calculations until you think the size of the error gets down to a level that's acceptable."

It's all a bit head-scratcher for those of us who only scraped a 'C' in GCSE maths. "Well, these are incredibly complicated partial differential equations that calculate gradients," continues Nathan. "Say you've got a mesh that has a million cells [he means those little triangles again]. At the end of the calculation you'll have information on pressure, velocity, temperature and turbulence for each one of those million cells. So you'll have about 800million pieces of individual data for the front wing and how it affects every part of the car but, to get to that number, the supercomputer will

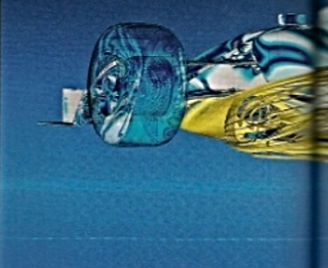
have done about 10billion calculations and whittled it down from there."

Is 800million bits of information enough? It sounds like a stupid question, but Nathan takes it on board quite seriously. "It's adequate... but it could always be better. For example, one of the big approximations we make is what the turbulence is doing. Now if you wanted to *physically* simulate what the turbulence is doing using CFD you'd need to go to 'model meshes', which are maybe a hundred times bigger than what we've got now - so you'd need a computer that's a hundred times bigger. These computers do exist - they're the sort of computers that work out what the weather's going to be doing* or those used by banks to study the stock market - but it's a question of value versus investment.

The computers we use now are a hundred times bigger than the ones we used five years ago but, as it stands today, I wouldn't go and buy a computer that's a hundred times bigger still. What you'd gain would be quite small set against the money you'd spend." Thank the Lord - a £10million computer is adequate for the time being. Who said F1 had become detached from reality?

With 800million bits of data now at Nathan's fingertips, CFD shows just how indispensable it is to the modern F1 team - both as a development tool and as a time-saving device. "I'll give you an example," says Nathan, clicking around on his computer to fish out some supporting evidence for the forthcoming tale. "One of our cars a few years ago had a bargeboard - it was a good part and the car worked better with it. But when we looked on CFD there was a small area where the air wasn't flowing over it very well." Nathan duly brings up a picture that shows nice lines flowing over the bargeboard in question, with the exception of a small collection of messy lines. "This is

(* - or not. 'Barbecue summer', anyone?)



the sort of thing that shows up in CFD all the time, and it illustrates how you get a much better visual idea of how parts are working. If that bargeboard situation had happened today, the part wouldn't even have made it onto the car - and, ultimately, to pick up that level of detail in the windtunnel would be very difficult and quite expensive."

Ah yes, what about the windtunnel that's not in the computer? You know, the massive £25million, real-life one? It turns out that despite Manor announcing they'll make their car using only CFD next season, in most other teams, windtunnels have not been made redundant by computers. "You can design an F1 car using just the windtunnel and you can do it just by using CFD, but you're going to get a better car by using the two side by side - that's how the vast majority of F1 teams do it," says Nathan.

"The windtunnel is better for some things and CFD is better for others. CFD runs billions of calculations to get to the answer you want, which usually takes it overnight. The windtunnel can get you some answers within minutes. Then again, amending your CFD model for a new part takes a couple of hours, whereas building parts for the windtunnel takes days. The main advantage of CFD is that you get the added dimension and visibility of how certain components interact with each other and why certain things are happening - plus you can spot certain problems early on."

Whoah, Nathan - hang on a minute... did you say the supercomputer takes *overnight* to do all those calculations? For £10million? You want to be taking that back to PC World, surely? "Well, if you ran this software on your normal PC at home, and you wanted to make a change to the front wing to see what would happen, you could set your machine

NOW THAT'S A SUPERCOMPUTER

THE PIECE OF KIT THAT MAKES WILLIAMS' SUPERCOMPUTER LOOK LIKE A COMMODORE 64

This is the IBM Roadrunner, officially the world's biggest supercomputer. Taking up 560 square metres (roughly the size of two tennis courts), it weighs a sturdy 227,000kgs - that's the same as 375 F1 cars, or slightly more than an empty Boeing 747. Last year it broke a computer world record, becoming the first beast to perform 1.026quadrillion calculations per second (an American quadrillion has 15 noughts after the number one). In a single week, it could perform a calculation that the world's fastest supercomputer ten years ago would've needed 20 years to complete. It uses 57 miles of cable, 12,960 processors and 3.9 megawatts of power. Quite impressive, really.



going now and you'd have to come back in about four months time. Ours does it overnight. If you need a quick answer from the supercomputer you can send it one problem and it'll come back within hours. What we try to do is find answers to 20 things at once, but the answers come back a bit slower. So we leave the supercomputer on overnight, and the answers are in when we come back the next morning."

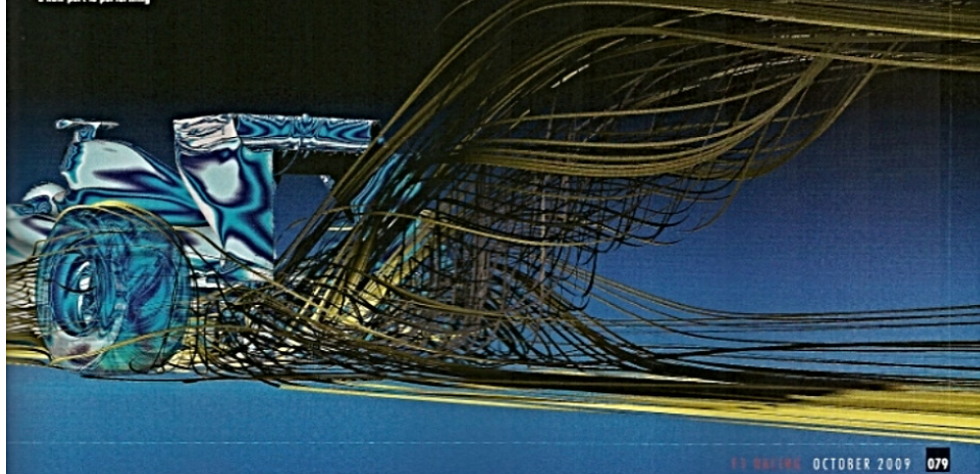
Williams, like many of the teams, are rather coy when it comes to dishing out precise facts about their supercomputer - it's the sort of sensitive information that they really don't want other teams

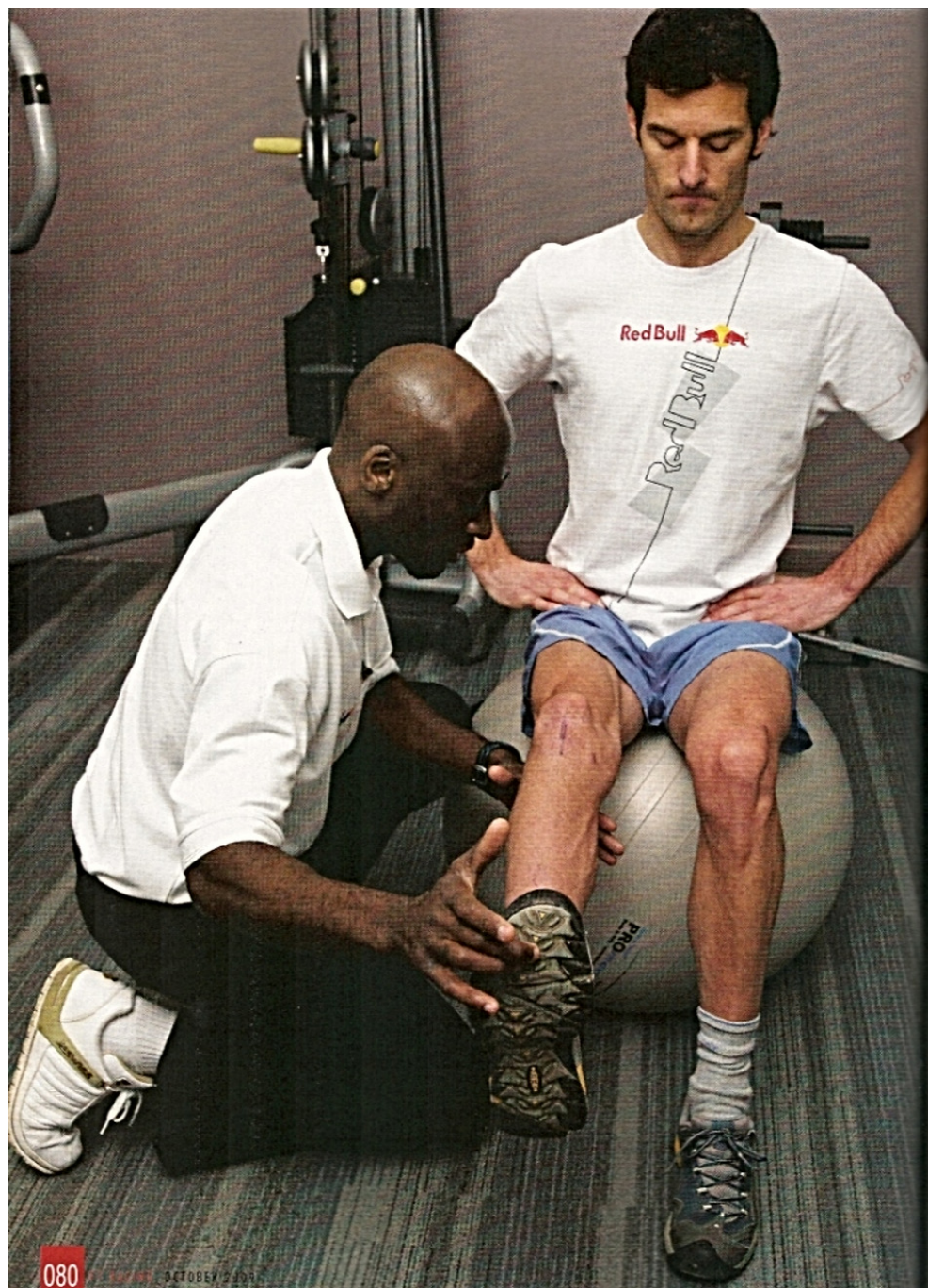
to know. But BMW's famous Albert 2 model is reckoned to have a memory of 12.7 teraflops and a price tag of £12million - Williams' ten-fridge effort is thought to be a bit smaller. But it's on 24 hours a day, 365 days a year - probably just as well considering it takes about an hour to boot up.

Surely they need to have a pretty handy IT department on hand? "You do need to have good IT support because you have to use multiple pieces of software and they all need to work properly," laughs Nathan. Do they ever crash? "You get failures just like you do with your computer at home - you know, the fan will go or the memory will have a bit of an issue, but given how much hardware there is and how many bits there are that could go wrong, it's highly impressive that it doesn't happen very often."

'Highly impressive': that's one way of summing up the concept of supercomputer-powered CFD. In under two decades, it has infinitely improved the understanding of how Formula 1 cars work - while making everyday software like Photoshop look as primitive as Neolithic wall scribbles in comparison. Thanks to the unrelenting march of computer development, Nathan hopes that the Holy Grail of CFD isn't far off - the time when the meshing stage can be completely skipped. Until then, he'll continue to meticulously eke out tenths of a second with his 800million bits of data and ten fridge-freezers, and the nostalgic days of cobbling F1 cars together in sheds will seem more like a different sport altogether with each passing hour. **F1**

Around 800million bits of info will tell Williams how a new part is performing





More than just a physio

Meet Roger: trainer, confidante, motivator, pitboard waver... and the man who helped make Mark Webber a grand prix winner

WORDS TOM CLARKSON
PICTURES MARK THOMPSON/GETTY IMAGES



Roger's job description has only recently returned to normal: he spent the first six months of the year aiding Webber's recovery from his cycling accident. "Racing drivers don't often have injuries," says Roger, "so it was a big thing for Mark to suffer this level of trauma. Football players are used to injuring themselves; but he's a racing driver. He found the early weeks very hard, but once he could see the progress being made he found it much easier."

Roger and Mark spent hundreds of hours together, working on the leg while trying



You may be familiar with Roger Cleary's clenched left fist. He often shakes it at Mark Webber from the pitwall while putting out the pitboard, and that act of encouragement explains a lot about their relationship.

Cleary isn't just a physio to Mark; he looks after every aspect of his driver's physical wellbeing over a race weekend, as well as being responsible for his pitboard. "I don't like to use the term irreplaceable," says Mark, "but Roger is phenomenal. I'm a better driver with him than without him because he enables me to turn up, week-in, week-out, in great shape."

Webber and Cleary started working together at the Spanish Grand Prix in 2006 and, since then, they haven't looked back. Roger immediately eliminated some of the niggles that had plagued Mark's career up to that point, and his diagnostic skills were invaluable during Mark's recovery last winter from his broken leg and shoulder.

At a race, Roger spends more time with Mark than anyone else. He monitors



Whether he's flinging Webber around on a big elastic band or passing him a drink in his car, Roger's a hands-on chap

to maintain Mark's strength. They did a lot of walking in swimming pools, setting themselves regular goals. Then came the first F1 test at Jerez on February 11. "He was anxious," says Roger, "but I was confident he'd be okay. He's a determined guy and we'd already done some karting, which shakes you around."

Mark completed 83 laps of Jerez, teaching him two things: first, he was back in business as a racing driver; and, second, the RB5 is a great car. "That first day was a source of motivation," says Roger. "Doubts about his fitness disappeared after that."

Fast-forward to the Nürburgring where, after much fist-waving from the pitwall, Mark won his first grand prix. When he returned to the Red Bull Energy Station, he found Roger preparing his post-race meal. "We did it, mate," he said. "We did it."

He's more than a physio, is Roger. **FO**

Webber's fluid intake and general nutrition, and prepares his body for the rigours of driving an F1 car. "Ninety per cent of my job is prevention," says Roger. "I'm constantly monitoring Mark, looking for any issues before they become a problem, and I ensure he takes on the right food and fluids for the job. To be honest, though, he's a pro: you only have to tell him something once."

“Our car was going quicker and quicker. The feeling was incredible. The opposition were just looking at their stopwatches... I’LL NEVER FORGET THE DESPAIR ON THEIR FACES”

Frank Williams and his engineers only meant to ‘tidy up’ the legendary FW07 in the summer of 1979. But a simple tweak made it the year’s dominant car. And once it started winning, it just couldn’t stop...

WORDS MAURICE HAMILTON PICTURES LAT ARCHIVE

Williams’s FW07 made its first public appearance at a race and never turned a wheel. It sat in the Long Beach pitlane, engine silent, rivals examining the handiwork of Patrick Head from a respectful distance. That’s how it was in 1979. New cars were raced when they were ready. It may have been the fourth round of the championship but, for Head and Williams, FW07 was not yet race fit. Alan Jones and Clay Regazzoni would continue at Long Beach with the elderly

FW06, Jones finishing third, a minute behind Gilles Villeneuve’s winning Ferrari. It was 8 April and Jones had turned 32 the previous November. He had just one grand prix win to his name. As he walked down the pitlane after two hours of hard slog on the bumpy streets, he jerked his thumb at FW07. “This car had better be fucking good,” he said to no one in particular.

It would be good – arguably one of the best in a long line of competitive cars from Williams Grand Prix Engineering. But it

would also be late. And that would cost Williams and Jones the championship at the end of a few months of almost complete domination in the second half of the season. For now, though, the United States Grand Prix West was done and dusted. Williams could turn their attention to FW07, Head’s answer to the pioneering ground-effect Lotus 79 that Mario Andretti had used to walk the championship in 1978.

“I didn’t go to the last races of 1978,” says Head. “We really were one man and his dog >



at that time. Neil Oatley had joined us in the design office and it was clear that the Lotus 79 had huge amounts of grip. Alan was saying it made him feel silly when a Lotus was ahead of him. In a slow corner he could generally keep up, or actually close up, but in the fast corners he said it was just unbelievable. It was as if the Lotus had tyres five compounds softer than our car. It had to be downforce."

Williams investigated the use of a windtunnel – which was something of a novelty back in 1978 – and a study of data from the Imperial College tunnel began to reveal the secrets within aerodynamics.

"In January 1979, Frank Dernie joined us," says Head. "He's a clever guy and we had a very good skirt system as a result. We didn't get the car ready for the start of the season so we took two FW06s which I thought should be good enough for the middle of the grid. But any sort of ground-effect car was going to be quicker than a non-ground-effect car and we were really blown away."

"We had one FW07 at Long Beach for some of our Arab sponsors to look at. After the race, we took it to Ontario Motor Speedway. Alan did about three laps, came in, pulled up, switched off and said: 'Now I know why those bloody Lotuses had such an advantage. I can't slide this car, whatever I do. It's got so much grip.' Needless to say, another 50 laps and he was sliding the car as he stepped up to the new level of grip. The FW07 was good right from the start."

But, unfortunately, it was not immediately reliable. At the car's debut in Spain, both FW07s retired with various technical problems, but not before Jones had laid down an important marker by setting the second fastest lap. That potential began to be realised a couple of weeks later in Belgium when Jones moved up to the front – the first time since 1969 that a Williams-entered car had led a grand prix. Then, with 30 laps to go, an electrical problem caused the engine to cut out. Jones was not best pleased but he knew his team felt the same way. With six of

the 15 races run, Ferrari led the constructors' championship with 45 points. Williams languished in sixth place with a mere four.

Nothing appeared to be going right when Jones made an uncharacteristic mistake and threw away third place by tagging a barrier at Monaco. But when Regazzoni saved the day with a gutsy second place despite the loss of second gear, things began to look up.

Frank Williams did not see it that way when Renault scored their first win in France: this was an occasion that marked the serious start to the turbocharged era. With the British GP next on the calendar, Frank had visions of the turbos blowing everyone away on the fast expanses of Silverstone. But that did not take into account a clever little aerodynamic tweak that no one could see, deep down inside FW07. The Renaults – and everyone else – were about to be left for dead.

The performance improvement

of FW07 was massively out of proportion to the simplicity of this aerodynamic development. The so-called 'trick' came from sealing off a low-pressure area where the undersides of the car met the Cosworth DFV V8. A gap in this area of low pressure had been letting air leak away. Quite who in the team thought of sealing this gap remains open to debate. But the effect was immense.

"I don't think we realised how important it was going to be," says Head. "We went to the Silverstone test and Alan went and lapped about 1.2 seconds off his time. He said: 'I go into Copse and Stowe and I'm halfway round the corner, thinking to myself, 'Fucking hell, Alan, why are you going so slowly?' It's a question of persuading my foot not to come off the throttle."

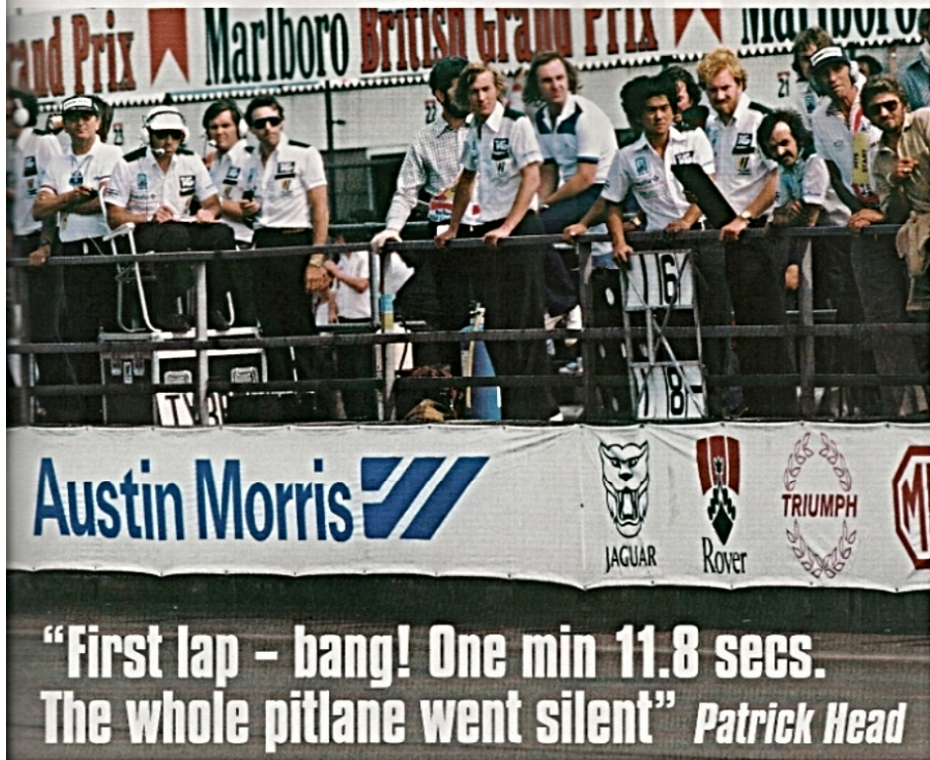
Frank Dernie explains: "Three of us, for different reasons, wanted to tidy up the floor around the engine. I did a fairing that tried to keep the flow attached and it was the biggest single improvement I think I've ever seen in the windtunnel. It was so big



I came back early from the windtunnel and drew it. I think that test was the week of the grand prix, so Monday it looked good, Tuesday I drew it and Thursday we were making it in the factory. We were all chuffed. That was a big step."

So big, in fact, that Frank Williams could not believe what his stopwatch was telling him as practice got under way. He recalls: "The mods put on the car looked like a reasonable step, but nothing more. Suddenly, the car was going quicker and quicker and life was going 100 per cent in another direction. I'll never forget that feeling. I was checking the opposition to make sure they weren't doing those times. Loads of people were looking at their stopwatches; I'll never forget the despair on their faces."

Patrick Head remembers the next step well: "Alan started his first qualifying lap and lost it at Copse. He came in with the rear wing hanging off. We put another one on and sent him out with a new set of tyres. First lap – bang! One minute, 11.8 seconds. Everyone else was doing fourteens. He'd done a 13.6 beforehand; he'd completely missed out the twelves! Literally, the whole pitlane went



silent: the place was stunned. Nobody was going to get near Alan's pole position time. It was obvious we were in good shape, provided we didn't have any reliability problems."

That would be a sore point. Jones would fail to win because of the failure of a water pump outlet. But as Jones's Williams trundled down the pitlane, Regazzoni's shot by on the opposite side of the pitwall to take the lead. Frank had his first win with a car bearing the Williams name.

Neil Oatley explains the feeling: "I was Clay's engineer that year, so it was obviously fantastic that my driver won. Understandably, there were some mixed emotions in the team, because of Alan's rapport with Frank and Patrick and the fact that he'd contributed a lot to how we had developed as a team."

"If there was a celebration, I didn't go to it. Frank's not one for big celebrations. The race was on a Saturday, so we had Sunday off. I had a load of motor-racing mates camping on the infield. After the race was over, I just went and joined them for a few beers. It was obviously a very nice feeling. In a relatively short period of time, I had come into motor

racing and here I was, working on the car that had won the British Grand Prix."

It was considered a luxury for Williams to have a small caravan at the back of the pits. Frank and his wife Virginia retreated there to savour the moment. "We didn't want the day to end," recalls Virginia. "We sat in this little caravan and watched the sun go down. People drifted away and Frank did not want to leave the circuit. There was that overwhelming feeling of 'We've won a grand prix'! It was extraordinary. Unforgettable."

Frank prepared for the remaining six races with relish. Jones led every lap in Germany, all but the first three in Austria and the bulk of the 75 laps, including those that mattered, in Holland. A lengthy pitstop to change a battery would be the prelude to a typical hard-charging drive from the back of the field to an eventual ninth place at Monza, Regazzoni having joined the Ferrari drivers, Jody Scheckter and Gilles Villeneuve, on the podium. A memorable duel with Villeneuve in Montreal gave Jones another win. He might have made it five had a wheel not come off following a pitstop at the final round at Watkins Glen. Williams had moved

up to second place in the constructors' championship. But it was too late.

Neil Oatley says: "We had a lucky escape in Germany. When we went into parc fermé after the race, one of the rear tyres on Alan's car was completely flat. And when we got the car back to the factory, the fuel cell breather had jammed. The fuel cell had literally sucked itself almost inside out. How the thing kept going, I don't know. Alan won every race with FW07 when he didn't have a mechanical problem. But, by then, the Ferraris were too far ahead."

"As I said, FW07 was a good car," says Patrick Head. "We lost out on too many races in the beginning – but we gave them a bit of a fright later on."

And that fright stretched into 1980. This time, Williams were ready, and the B-version of FW07 brought them success in the drivers' and constructors' world championships for the first time. Williams almost did it again in 1981 with FW07C, Carlos Reutemann failing to emulate Jones's 1980 win when he missed out on the drivers' title by just one point.

Williams had come a long way, and very quickly in every sense. **FO**



Plugging a leaky bit of flow around the engine produced astonishing results that blew even the turbocharged cars out of the water. At Silverstone in 1979, Jones (pictured) dropped out with a faulty pump, but Regazzoni blasted ahead to give Williams a first win

HOW F1

USED TO BE
Amazing shots from
the days of yore

MOSS TRIUMPHS THANKS TO DUNLOP

These days, organising an F1 photoshoot is no easy task. Emails fly between driver managers and team PRs. One text message confirms a location and another reveals a time. Today's technologically advanced communication tools only serve to make a simple task more labour-intensive. You didn't get all those problems with mobiles and BlackBerrys back at the 1961 German Grand Prix...

Drivers and team managers are shown here huddling together for a photograph at the Dunlop service bay in the Nürburgring paddock. It later transpired that a set of Dunlop tyres would have a dramatic effect on the outcome of the 15-lap grand prix in the Eifel mountains.

An hour before the start of the race, a brief rain shower sent teams scurrying for wet-weather tyres – but the track quickly dried out. Stirling Moss, at the wheel of his dark blue, RobWalker Lotus-Climax, went against the advice of Dunlop and decided to start the race on 'green spot' rain tyres.

For 13 of the 15 laps Stirling heroically kept in front of the more powerful Ferraris of Wolfgang von Trips and Phil Hill. But as the red cars broke the nine-minute barrier around the 14.12-mile lap in a bid to close the gap, a rain storm at the finish worked in Moss's favour. After managing to preserve his wet tyres he was able to pull further away to take one of the most impressive wins of his career. If only he could have told us how he felt on Twitter...

1 JIM CLARK

With his paper paddock pass tied to his stacks with string, Clark looks quite cheerful. But there was concern earlier in the weekend when his steering failed, leading to a big crash on the opening lap of practice. Thankfully Clark escaped unhurt

2 JOHN COOPER

Clucking away with Clark and James Ireland is the Cooper chief himself. It was a significant weekend for his Sorbion squad as they introduced a new 1.6-Mitre Coventry Climax V8 engine for Jack Brabham that revved to 8,800rpm and produced 170bhp

3 JACK BRABHAM

The reigning champ was allowed an extra practice session to get to grips with his new V8 engine – imagine that happening today! He scalded the head on the opening lap then hit a damp patch on the road, sliding out of the race and into the bushes



4 STIRLING MOSS

In pressed overalls with BRDC logo and smart slip-on shoes, Moss is the most professionally attired of the bunch. Note the silky elasticated trouser cuffs, which means there's no chance of getting these turt-ups snagged on the pedals...

5 HUSCHKE VON HANSTEIN

A former racer who had competed at the Mille Miglia and Targa Florio, aristocratic Hanstein changed direction to run Porsche's racing department. Known as 'the racing baron', he presided over the works cars for Dan Gurney and Jo Bonnier

6 GRAHAM HILL

Hill became the first driver to set a practice lap in under nine minutes. But in the opening lap of the race his BRM was involved in a hairlift with Gurney's Porsche. Hill hit a bank and sailed over the top of a photographer before landing in a field

7 JO BONNIER

With his lightweight, trilly-style 'tiller' and trendy glasses, Jo Bonnier epitomised 1961 chic. The Swede had an eventful race, picking up a puncture on the first lap before retiring in a cloud of white exhaust smoke four laps later

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IMAGES LAT

POSTCARDS FROM VALENCIA



The drivers are wheeled in on a big milk float. Two pins of Gold Top please...



Care should be taken exiting the jet garages if you don't want to end up in the marina



View España!



Crosjean's had an unfortunate run-in with a turbo-charged hairdryer



Schuey keeps the chill off that poorly neck with a nice pair of earmuffs



You've missed a bit...



Yes, it's bloody hot. Perfect. Drawn weather though - just ask Robson



Somewhere out there, a small child wants his sunglasses back. Hand them over, Nice...



A homage to Felipe. Good job they've stood the right way round or it might look more like a homage to PG Tips



Empty grandstands in Valencia. What a stunner



Luca Badoer is stumped to find Ferrari haven't deactivated his pass just yet...



Jenson's keeping a very firm grip on that man bag. He probably doesn't fancy swapping with Jessica...

FINISHING STRAIGHT

PETER WINDSOR'S RACE REPORT THE EUROPEAN GP

VALENCIA 23 08 09



FEELING HAPPIER NOW, RUBENS?

Barrichello's first win of the season puts him back in contention for the championship

This was one of those moments we've seen so many times before: Rubens Barrichello walking alone. Long shorts, trainers, Brawn team shirt, Alpinestars back-pack. No entourage. Just Rubens and his thoughts – probably about his kids and his wife and his parents and Felipe Massa.

It was early Friday morning in Valencia. The start of yet another race weekend in the life of the driver who's seen more races than

anyone else. Rubens 'I'll always believe in myself' Barrichello. He with the wide, soft turn-in; he who still right-foot-brakes when he wants to; he who was nowhere in 2008. And he who awoke in early 2009 to find that suddenly, out of nowhere, Ross Brawn had produced a little gem.

He must have been thinking, then, that Friday morning – before the humidity turned shirts into damp cloths and F1 mechanics

began to drop like flies in the airless garages – that it was all about erasing the past. And here he was, with a Brawn that would love Valencia and the feel of the Spanish heat in its Bridgestones, and with an engine that would feel delicious as it picked up the revs out of slow corners. He would be quick; he had to believe it. He was always good on late-apex long corners and on left-right-left sections. He also loves it when it's Brazilian-



Hamilton's pole position kept him in the lead initially, but he failed to hold back Barrichello – especially after that tyre fiasco

hot. For some reason it seems to induce even more of a rhythm in his driving.

So: no more wondering about his status or his position. No more thoughts about the championship. And no more time for the idiots who ask about the guilt he is supposed to feel because it was a spring from his car that injured Felipe Massa. The team had redesigned the spring's holding bolt for this race and, as he drove out onto the Valencia road course, calm and composed in the heat of the morning, Hungary was already an age away. This was the Valencia-Spa double-header, so Brawn had to assume they would be racing at the extremes of the performance spectrum: in Spain, in the heat, they were, in theory, going to be fine; in Belgium, in the cold, they were, in theory, going to struggle.

Between them, Jenson Button and Rubens tried a bunch of different set-ups (cambers, toe-ins, dampers, springs) and tried precisely to log the differences. Even so, Rubens was convincingly fastest that Friday morning – 1min 42.460secs to Heikki Kovalainen's 1min 42.636secs. Except for one brief run on one particular set-up, the Brawn felt beautifully-balanced and easy to push. Jenson, on a different test path, was 0.6 seconds away.

The track picked up grip in the afternoon but Rubens ran a heavy fuel load, for already his strategy was obvious. The KERS-powered McLarens would undoubtedly be quick – and would of course be passing cars off the line as a function of that pace. So the best chance Rubens had of beating them was to pass them in the pitlane. And to pass them in the pitlane he was going to have to run about four laps heavier. Rubens was P3



Kovalainen did an Alonso, proving three wheels really aren't faster than four when he slipped back after a massive blow out

"In the wake of Lewis's stop, Rubens found the absolute limit. He was six seconds in the lead"



An engine failure on lap 23 spoiled the end of the race for an unlucky Vettel

on Friday afternoon; Jenson, also delighting in the Brawn's Bahrain-level of grip, was P2. Only Renault's Fernando Alonso – light, as he would be in Spain – was faster. Lewis? He clipped the wall and damaged his McLaren's nose in a high-speed spin early in that second session. Because of the factory shutdown, McLaren hadn't produced enough spares in time...

Saturday morning was a mess for everyone. There they were, working on ride heights, and here was Vettel, spewing oil around most of the third sector from his blown Renault V8 engine. The session ended with a mini-Q1-style dash, the cars stacked up in the pitlane, awaiting a green-light start. Adrian Sutil won the sprint in his Force India while Rubens finished merely 12th, unworried about qualifying.

Almost. A P1 lap in Q2: 1min 38.076secs. Fastest lap of the weekend. Almost perfect, give or take a jink or two. Jenson, struggling more on the bumps, was half a second away. Then came the fuel and the guess that could decide the race. Rubens ran slightly heavier than Jenson; both ran at the outer extreme of the first stint envelope. If McLaren were going to second-guess them, they were going to kill their tyres with a heavy fuel load and the graining effect of KERS.

Jack Clear and the boys judged it perfectly. Lewis, as it turned out, ran nearly 9kg lighter than Rubens into Q3. That translated into a four-lap advantage for Rubens – and a car that was still almost capable of taking the pole. Rubens was again near-perfect in Q3... and finished P3, on the clean side of the grid. He was only 0.068sec slower than Lewis. Heikki was second (also relatively light), Seb Vettel fourth (failures aside, the Renault was less torquey than the Mere around Valencia); Jenson, now edgy, was P5. Never before had Rubens had such a clear run to the podium.

Up at Ferrari, meanwhile, with plenty of time to send text messages to Felipe, Rob

DID YOU KNOW?

■ Luca Badoer qualified last for the 11th time in his career, seven short of the all-time record of Tarso Marques, who managed 18 last places from his 26 attempts

■ Sebastian Vettel's retirement extends the record number of failures by cars numbered 15 to 266. Cars numbered 22 are next, with 260 breakdowns

■ Timo Glock is the ninth different driver to set a fastest lap this year, the highest total since 1983. It was also the 100th fastest lap by a German driver

■ This was only the third time that a car numbered 23 has won a GP, alongside Jim Clark in the 1964 Belgian GP and Heikki Kovalainen in Hungary last year

FINISHING STRAIGHT

Smedley (now race engineer to Luca Badoer) had been suggesting to his recuperating driver than he probably would have qualified on the second row. Told of this later, Rubens agreed. "For sure Felipe would have been right up there. All I can say is that I've got a message for him on my helmet. He's my best friend in racing. I'm thinking of him in the background all the time."

The race for Rubens was what you would call a Sunday afternoon breeze – except that there was no breeze this day. He opted for Bridgestone primes for the first stint; the McLaren, hoping to make a break, chose the softer tyre. And break away they did – but only just. Heikki, committing one mistake (missed braking point here, loaded car under braking there) after another, quickly lost ground to Lewis. Soon he was within reach of Rubens and Kimi Räikkönen. Lewis, leading Rubens by 8.8 sec, came in for his first (immaculate) pitstop on lap 16.

Whereupon Rubens went purple. Four laps in the high 1min 39secs, all within a tenth of one another. Michael stuff. Recycled after stint one, Lewis, now with a heavy fuel load, led Rubens by only 3.5 seconds – and was doing so, worryingly, with Bridgestone softs.



Rubens Barrichello, the most experienced driver in F1 history, took his first Grand Prix victory since China 2004

Kimi was P3, Heikki P4. Jensen, nudged sideways on the opening lap and now trapped in traffic, was barely in the points.

So Rubens cruised – sat there, in Lewis's mirrors, saving fuel and tyres. Lewis went into fuel-save mode too but that was his undoing. McLaren called him in for lap 37 – but then calculated at the last minute that Lewis had saved enough fuel to run for one more lap. They radioed this to Lewis, the Bridgestone hards stayed in their covers... but it was too late. Lewis was already in the pit entrance and there were no tyres there to greet him. Roll on 2010, when races will no longer be won and lost by fuel strategy.

As it happened, Rubens would have won in Valencia anyway; he had fuel margin and speed enough. In the wake of Lewis's stop, Rubens found the absolute limit. Now, with more surface grip, it was the 1min 38secs barrier he teased – twice. By the time he emerged from his pitstop he was still in the lead. Six seconds in the lead.

And so he won, at the age of 37, scoring victory number ten. It was five years since he had last done so. Four years after deciding that he was sick of finishing second to Michael. In his 279th GP start. 16 years after he first raced in Formula 1. With Felipe back in Brazil, no doubt, smiling brightly. **FO**

EUROPEAN RACE RESULTS

RESULT	DRIVER	TOTAL RACE TIME	GRID POSITION
1st	Rubens Barrichello (McLaren)	1:38.561 (28th)	3rd
2nd	Lewis Hamilton (McLaren-Mercedes)	+2.35ths	1st
3rd	Kimi Räikkönen (Ferrari)	+15.99ths	6th
4th	Heikki Kovalainen (McLaren-Mercedes)	+20.03ths	2nd
5th	Nico Rosberg (Williams)	+20.87ths	7th
6th	Fernando Alonso (Renault)	+27.74ths	8th
7th	Jenson Button (Honda)	+34.91ths	5th
8th	Robert Kubica (BMW Sauber)	+36.66ths	10th
9th	Mark Webber (Red Bull)	+44.91ths	9th
10th	Adrian Sutil (Force India)	+47.93ths	12th
11th	Nick Heidfeld (BMW Sauber)	+48.82ths	11th
12th	Giancarlo Fisichella (Force India)	+63.61ths	16th
13th	Jarno Trulli (Toyota)	+64.52ths	18th
14th	Timo Glock (Toyota)	+86.51ths	13th
15th	Romain Grosjean (Renault)	+91.77ths	14th
16th	Jaime Alguersuari (Toro Rosso)	+1 lap	17th
17th	Luca Badoer (Ferrari)	+1 lap	20th
18th	Kazuki Nakajima (Williams)	+2 laps – gearbox	17th
Retired	Sebastian Buemi (Toro Rosso)	41 laps – brakes	15th
Retired	Sebastian Vettel (Red Bull)	23 laps – engine	6th

DRIVERS' STANDINGS

POSITION	DRIVER	POINTS
1st	Jenson Button (Honda)	72
2nd	Rubens Barrichello (McLaren)	54
3rd	Mark Webber (Red Bull)	51.5
4th	Sebastian Vettel (Red Bull)	47
5th	Nico Rosberg (Williams)	29.5
6th	Lewis Hamilton (McLaren-Mercedes)	27
7th	Kimi Räikkönen (Ferrari)	24
8th	Jarno Trulli (Toyota)	22.5
9th	Felipe Massa (Ferrari)	22
10th	Timo Glock (Toyota)	16
11th	Fernando Alonso (Renault)	16
12th	Heikki Kovalainen (McLaren-Mercedes)	14
13th	Nick Heidfeld (BMW Sauber)	6
14th	Robert Kubica (BMW Sauber)	3
15th	Sebastian Buemi (Toro Rosso)	3
16th	Sebastian Bourdais (Toro Rosso)	2
17th	Giancarlo Fisichella (Force India)	0
18th	Adrian Sutil (Force India)	0
19th	Kazuki Nakajima (Williams)	0
20th	Nelson Piquet (Renault)	0
21st	Jaime Alguersuari (Toro Rosso)	0
22nd	Romain Grosjean (Renault)	0
23rd	Luca Badoer (Ferrari)	0

CONSTRUCTORS' STANDINGS

1	Brawn 126.5pts	6	Williams 29.5pts
2	Red Bull 98.5pts	7	Renault 16pts
3	Ferrari 46pts	8	BMW Sauber 9pts
4	McLaren-Mercedes 41pts	9	Toro Rosso 5pts
5	Toyota 38.5pts	10	Force India 0pts



It's all change on top of the podium for the fourth time in four races as Rubens finally gets to wave a beady thumb in victory



Timo Glock set the fastest lap in Valencia at 1min 38.863secs

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PETER WINDSOR'S RACE REPORT THE BELGIAN GP

SPA - FRANCORCHAMPS 30 08 09



KIMI WINS BUT FEELS THE FORCE

Räikkönen crowned king of Spa once again, but Fisichella steals the show with P2

You never give up on Kimi Räikkönen: he is what he is – a gifted artist. A genius. Yes, he's probably a tenth or two slower in Q2 now than he was in the McLaren days and, okay, he can sometimes be a little distracted. What he is, though, and always has been, is one superb racing driver, with the emphasis on 'racing'. Placid he may appear; totally committed to beating the next guy he obviously remains. Think of that wheel-banging deal with Seb Vettel in

Hungary, or that pitlane-exit stuff with Adrian Sutil, and you have Kimi '09. The hair's longer, the face now more mature beneath the hip-hop cap. Inside, though, there still lurks the stony, Finnish racer.

His Mum and Dad know this better than anyone on the planet. They know Kimi is still the same karting kid they used to haul around Europe in that old Merc, when they all used to sleep in the car and didn't know in advance how they were going to pay for the next tank

of fuel. And so paddock passes never entered their heads in August 2009. It's the Belgian Grand Prix at Spa – fantastic racetrack. Let's go! But let's not distract Kimi. We don't want to sit around in that little house down the road, buy some tickets and watch from the outside of Eau Rouge. No better place to watch the F1 cars. No better place to watch Kimi.

So that's what they did, Matti and Paula Räikkönen. They spent the weekend at Eau

Rouge on the spectator mound. They brought some lunch and settled down to watch a motor race. To watch, from afar, their very gifted son.

He was brilliant off the line: he released his Ferrari perfectly, then turned left in a reflexed millisecond, avoiding Rubens Barrichello's stationary Brawn-Mercedes. A dash of KERS, a move to centre stage, a heads-up of impending danger at La Source... and then Plan B, out there on the Tarmac, way wide of the corner, where he knew from third practice (and previous races) that the grip was fine. He gunned it. Floored it. He was P3 and right behind Kubica as he dived down into Eau Rouge.

He took the corner almost flat. The only thing that made him lift his right racing boot a fraction was the thought that the front wing might need some free air. That and the bottoming: cold tyres, low pressures...

On tiptoes, Matti and Paula would have seen a puff of scuff smoke signalling Kimi's run up to Les Combes. They'd have known there was no way that Kimi wouldn't be passing Kubica on the straight...

Then came Kimi's only mistake in the Ardennes Forest that afternoon. He had the run on Robert, he had the speed – the KERS speed – but, as Kimi approached the braking area, he skated wide onto the grass. Every driver in the race had spun at this point. The grass was wet or there was a bump.

Kimi recovered with exquisite finesse. No brakes. No throttle. Just fingertips. He regained the Tarmac. Robert, luckily, had braked. Kimi was P2.

Behind, there was mayhem. You don't survive a moment like that on the first lap

without the field bunching up behind and running into itself. And so it did. Lewis Hamilton, who had qualified somewhere near Luxembourg, was whacked by the new guy in the Toro Rosso. This would be the first non-pitlane retirement in Lewis's F1 career. Jenson Button, who also had been nowhere on Saturday, continued the theme in the same pile-up. The pride of England: out on lap 1. Safety Car! Kimi had a big chance. Only Fisichella to pass.

Fisichella? It had been a wondrous Saturday. Those who had been absurdly slow



"Oh – not of the way!" Webber got a drive-through penalty when Red Bull released him into Heidfeld's path on his first pitstop

"Kimi recovered with exquisite finesse. No brakes. No throttle. Just fingertips"

Räikkönen completed his KERS-assisted pass on Fisichella on the run to Les Combes



Bloody learner drivers: chaos of Les Combes as new boy Grosjean tips championship leader Button into a spin...



...and then a careless Lewis Hamilton is tagged by Alonso's start, eliminating both drivers from the race



at Monaco – BMW and Toyota – had suddenly found pace at Spa. A couple of teams with a solid average – Red Bull and Force India – had been okay too. For the rest: nothing. No response from the softer Bridgestone. Not enough grip and/or not enough top speed. No chance.

Conventional wisdom in the sport explains this by pointing to the 2009 aero regulations (restricted room within which to play, the lack of testing and the closeness of the field). According to this theory, cars are designed one of two ways: high downforce and relatively high drag, suiting 14 of the 17 circuits on the calendar; or with a good lift/drag ratio, as an aero-efficient car, in other words – a set-up that suits the three fast circuits on the calendar (Bahrain, Spa and Monza). This suggested that Toyota and BMW are classic 'efficiency' cars rather than

'downforce' cars (probably more by fault than design), and that Red Bull and Force India alone have struck any sort of compromise between the two basic configs. At places like Spa, they said, teams like Williams and McLaren knew they were sunk before they started.

The only problem with this theory is that Williams and McLaren were sunk in different ways. Lewis was slow through the super-fast Pouhon double-apex left-hander (no grip), while Williams' Nico Rosberg was quick at Pouhon but very slow in a straight line. And then there was Brawn. This was a poor tyre temperature race for them, so none of the above counted anyway.

No matter: bottom line was that you need to be clean through the air at Spa – and to have good, high-speed downforce. Force India found that balance, as did ▶

DID YOU KNOW?

■ Force India are the 39th team in F1 history to claim a pole position and, before Spa, were the only team on the grid never to have had a car on pole

■ This was the first all-Italian front row since the Australian GP in 2005 (when the same drivers were first and second) and only the fourth in the past 50 years

■ Jenson Button's first retirement of 2009 at Spa now means that no driver has completed every single racing lap of the season

■ Nick Heidfeld's run just goes on and on. He has now been classified in 40 consecutive races, a run that started at the French Grand Prix in 2007

FINISHING STRAIGHT

Toyota, BMW and, to some extent, Red Bull. But for an uncharacteristic mistake at Turn 14 in Q3 (and a relatively heavy fuel load) Vettel would probably have been on the front two rows. But no one else was in the same class: no one but Kimi and the Ferrari F60.

Less downforce and draggy than the McLaren, the F60 was also half-reasonable on the medium-speed stuff. It wasn't in Force India territory but it was somewhere near the Toyotas. For Kimi, now effectively the centre of a one-car team, it was enough. Seventh to P2 in one lap. And now the restart...

Fisi needed a margin into and out of La Source if he was to stand any sort of chance. I asked him about this later and he took my question to mean 'Why didn't you brake test Kimi into Eau Rouge?' Not even I would have thought of such a thing – but therein lay the answer: it never entered Fisi's head to 'gap' Kimi leading into the restart. Fisi had conceded the lead to the KERS car. Indeed, Fisi made it so easy as they crested Eau Rouge that Kimi almost caught the back of the Force India as he flicked to the outside.

After that, only the pitstops could have beaten Kimi. Apart from a slight, but insignificant, difference in tyre choice (Fisi



To the delight of the pitwall, Kimi Räikkönen takes Ferrari's first win of 2008, closely followed by Fisichella and Vettel

opted for soft tyres off the line and his second stint; Kimi went soft then hard), the two chose the same strategy. Entering the pitlane, Fisi was always there in Kimi's mirrors. Down at Ferrari, the boys were well aware that one bobble with a wheel nut or gun, one fuel-rig drama, and the race would be lost.

But on this day, Ferrari were perfect – as was Kimi. Fisi was close but never close enough. In the final stint, when the Force India was obviously the quicker car, Kimi knew there was just a chance that Fisi might find a tow and try to out-brake him into the

final chicane. And so Kimi revised his KERS usage and saved some for this last part of the lap. He quelled the threat over time.

Vettel finished third – a victim of that Q3 error and a messy (but safe) first lap. Kimi, though, won his first race of the season and his fourth at Spa – or what would have been his fifth if he hadn't dropped it in the wet last year. Kimi was in Jim Clark-land.

He pumped the air, waved to the crowds but soon he was back to normal Räikkönen. Straight face. Minimal words and the old 'let's-get-this-over-with' attitude. **FO**

BELGIAN RACE RESULTS

RESULT	DRIVER	TOTAL RACE TIME	GRID POSITION
1st	Kimi Räikkönen Ferrari	1:23:50.995s	6th
2nd	Giancarlo Fisichella Force India	+0.939s	1st
3rd	Sebastian Vettel Red Bull	+3.875s	8th
4th	Robert Kubica BMW Sauber	+9.964s	5th
5th	Nick Heidfeld BMW Sauber	+11.276s	3rd
6th	Heikki Kovalainen McLaren-Mercedes	+32.763s	15th
7th	Rubens Barrichello Lotus	+35.461s	4th
8th	Nico Rosberg Williams	+36.208s	10th
9th	Mark Webber Red Bull	+36.959s	9th
10th	Timo Glock Toyota	+41.490s	7th
11th	Adrian Sutil Force India	+42.636s	11th
12th	Sebastian Buemi Toro Rosso	+46.106s	16th
13th	Kazuki Nakajima Williams	+54.241s	18th
14th	Luca Badoer Ferrari	+1:02.177s	20th
Retired	Fernando Alonso Renault	26 laps – wheel	13th
Retired	Jarno Trulli Toyota	21 laps – brakes	12th
Retired	Lewis Hamilton McLaren-Mercedes	0 laps – accident	2nd
Retired	Jason Button Brawn	0 laps – accident	14th
Retired	Jaime Alguersuari Toro Rosso	0 laps – accident	17th
Retired	Romain Grosjean Renault	0 laps – accident	19th

DRIVERS' STANDINGS

POSITION	DRIVER	ROUNDS																PTS
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
1st	Jason Button Brawn	10	5	6	18	10	10	10	3	4	2	2	0	-	-	-	-	72
2nd	Rubens Barrichello Lotus	8	2	5	4	8	8	0	6	3	0	10	2	-	-	-	-	54
3rd	Sebastian Vettel Red Bull	0	0	10	8	5	0	6	10	8	0	0	6	-	-	-	-	53
4th	Mark Webber Red Bull	0	15	8	0	6	4	8	8	10	6	0	0	-	-	-	-	51.5
5th	Kimi Räikkönen Ferrari	0	0	0	3	0	6	0	1	0	8	6	10	-	-	-	-	34
6th	Nico Rosberg Williams	3	8	0	0	1	3	4	4	5	5	4	1	-	-	-	-	30.5
7th	Lewis Hamilton McLaren-Mercedes	0	1	3	5	0	0	0	0	10	8	0	-	-	-	-	-	27
8th	Jarno Trulli Toyota	6	2	5	0	6	0	0	5	2	0	1	0	0	-	-	-	22.5
9th	Felipe Massa Ferrari	0	0	0	0	3	5	3	5	6	0	-	-	-	-	-	-	22
10th	Heikki Kovalainen McLaren-Mercedes	0	0	4	0	0	0	0	0	1	4	5	3	-	-	-	-	17
11th	Timo Glock Toyota	5	3	2	2	0	0	1	0	0	3	0	0	-	-	-	-	16
12th	Fernando Alonso Renault	4	0	0	1	4	2	0	0	2	0	3	0	-	-	-	-	16
13th	Nick Heidfeld BMW Sauber	0	4	0	0	2	0	0	0	0	0	0	4	-	-	-	-	10
14th	Giancarlo Fisichella Force India	0	0	0	0	0	0	0	0	0	0	0	8	-	-	-	-	8
15th	Robert Kubica BMW Sauber	0	0	0	0	0	0	2	0	0	0	1	5	-	-	-	-	8
16th	Sebastian Buemi Toro Rosso	2	0	1	0	0	0	0	0	0	0	0	0	-	-	-	-	3
17th	Sebastian Bourdais Toro Rosso	1	0	0	0	0	1	0	0	0	0	0	0	-	-	-	-	2
18th	Adrian Sutil Force India	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-	0
19th	Kazuki Nakajima Williams	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-	0
20th	Nelson Piquet Renault	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-	0
21st	Luca Badoer Ferrari	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0
22nd	Jaime Alguersuari Toro Rosso	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0
23rd	Romain Grosjean Renault	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0

CONSTRUCTORS' STANDINGS

1	Brawn 128pts	6	Williams 30.5pts
2	Red Bull 104.5pts	7	BMW Sauber 18pts
3	Ferrari 56pts	8	Renault 16pts
4	McLaren-Mercedes 44pts	9	Force India 8pts
5	Toyota 38.5pts	10	Toro Rosso 5pts



Could that be – surely not – a hint of a smile on Kimi's face? Fisi's even more thrilled with Force India's first over F1 points



Sebastian Vettel set the fastest lap in Belgium at 1min 47.282secs

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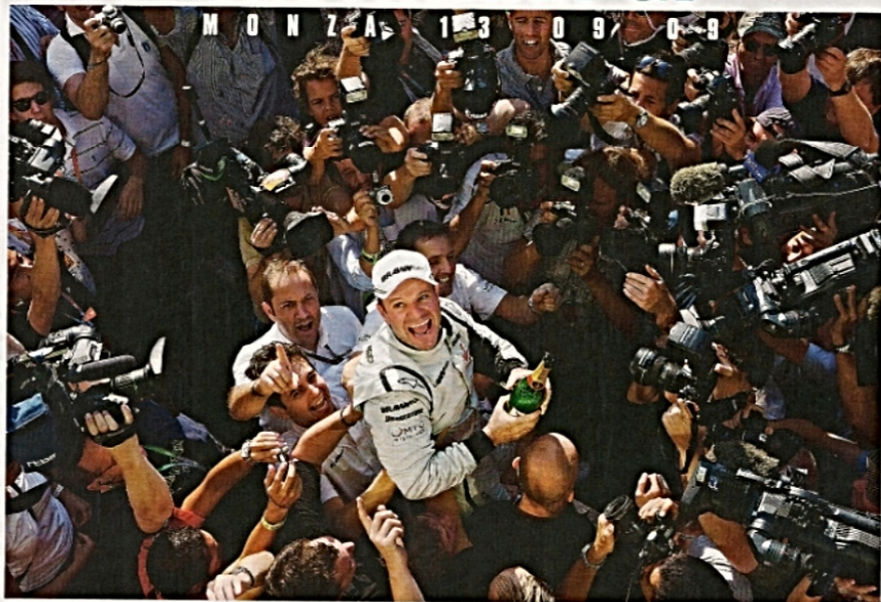
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PETER WINDSOR'S RACE REPORT

THE ITALIAN GP



THE TITLE'S IN FOCUS FOR RUBENS

Barrichello bags his second win in three races to start closing in on Jenson...

Rubens Barrichello is a very different man to the one who signed up with Brawn last February in a final attempt to save his career. Then, he was a driver who knew he could still do it, provided that he was given a half-decent chance. Now he knows he can do it, and he is doing it – with all the polish and finesse that only 17 good years in F1 can provide.

There is also the business of the rear wheel covers. Then, Rubens couldn't run them

because his rear brake caliper temperatures were too high; now, he's switched from Hitco brakes to Brembos. With less brake bias on the rear, caliper temperatures have been moderated. The wheel spats now work. The aero balance is improved.

And so it was Rubens as we've always known him – still commuting, if you please, between home in Brazil and the next Euro F1 race. Jet lag? Not a problem, even at 37. In Brazil, he keeps the kids' hours, falling asleep

at eight or nine and awakening at five or six. Back in Europe he is out of sync by two hours at the most. A quick trip to visit Felipe Massa – “he looks great; he has just had a piece of titanium inserted in the cranium, which was something they always planned – and he is now even working out for 40 minutes or so every day. He'll be back soon, no doubt about that” – before the rush to the racetrack. Come Thursday afternoon in Monza, a day after leaving Brazil, Rubens was sharp and polite



Luzzi, Kovalainen, Pettei and Alonso had a mid-field scrap in the early stages



Recovery vehicles give you wings: Mark Webber's Red Bull is taken away following a first-lap clash with Robert Kubica

and every bit the 2009 phenomenon: who needs young kids when guys like Rubens can be the drivers they are?

A case in point being Jenson Button – a kid at his peak, you could say, given that he went into Monza with a 16-point championship lead and is both hungry and fast in 2009 – and not necessarily in that order. Out of the box, though, Rubens equalled everything that Jenson delivered. Heavy fuel, light fuel, old tyres and new: by the end of qualifying, on a weekend when the Brawn team knew they were again looking at a win, Rubens had out-qualified the elegant Jenson by 0.015secs and, in the process, had used one set less of the prime new Bridgestones.

Brawn, perhaps bravely, had opted for one-stop strategies for both of their cars. It was the quicker plan – by about seven seconds on the simulations – but it also brought the inherent risk of placing Rubens and Jenson somewhere near the third or fourth rows – somewhere near the inevitable opening-lap Monza accident in other words. McLaren, in contrast, split their orders: Lewis, two stops (and let's open out a gap from the pole); Heikki Kovalainen one. So did Ferrari: Kimi Räikkönen ran light fuel and two stops; Giancarlo Fisichella started with fuel for one stop only.

The other factor was KERS: the feeling at Brawn on Friday night was that they couldn't beat the KERS cars (Lewis and Kimi) on a two-stop strategy, regardless of qualifying at the front, regardless of how



After a miserable few races, Jenson Button returned to the podium for the first time since his win in Turkey on 7 June



Lewis stalled at coming out of Curva 1 on the final lap as he complained to press Jenson Button

“Who needs young kids when guys like Rubens can be the drivers they are?”

good they were in the opening laps. The KERS power would kill the Brawns off the line and, from there, it would be an afternoon of catch-up. But on heavier fuel, the Brawns had a chance – providing the key KERS runners started two-stop light. The downside was the risk of being eliminated in some sort of opening lap, traffic-jam skirmish. Hence the concept of splitting the strategies.

Ross Brawn – surprise, surprise – was proved to be 100 per cent right. Adrian Sutil brilliantly qualified his light-fuel, non-KERS Mercedes-powered Force India on the front row but was third by the time they reached Turn 1 and fourth at the end of the day. One of the heavily fuelled Red Bulls (Mark Webber's) was shunted out of the second chicane by Robert Kubica's BMW. Jenson Button played with Heikki a little, out-daring him into the Lesmos, and Rubens hit a kerb

or two. By the end of that crazy opening lap, Rubens and Jenson were fourth and fifth, completely intact – and looking good.

At McLaren, they knew their race (as in Lewis's race) would be against the Brawns. Hamilton was going to stop twice – as early as lap 15 and again on lap 34; the Brawns were going to stop only at mid-distance. To win, Lewis needed to be leading the Brawns by at least 25 seconds by lap 33.

Lewis was up for it: no doubt about that. He worked hard on the Parabolica this year, improving his early-corner rotation and freeing the car of lateral G-force, maybe five metres earlier than he did in 2008 (when Heikki, to his credit, was the faster of the two McLaren drivers on this critical corner). As a result, and making perfect use of his KERS system, Lewis took a fabulous pole. Now, though, trying to ▶

DID YOU KNOW?

■ Adrian Sutil's fourth place for Force India was his highest finish in F1. His previous best result was eighth, when the team was known as Spyker, at Fuji '07

■ Fisichella finished outside the points on his Ferrari debut and in 13 Italian GP starts he's only scored one podium at Monza – back in 2005 with Renault

■ Mark Webber's first-lap clash with Robert Kubica was the Australian's first retirement of the year and his first non-finish since Singapore last September

■ The race-winning speed for the 53 laps at Monza was 149.75mph making it the fastest Italian GP since the 2006 race, which was recorded at 152.74mph

FINISHING STRAIGHT

gain time on free road ahead of him, Lewis was pushing everything to the limit – tyres, fuel consumption, KERS, brakes. He pulled away from Kimi. By his first stop he was an encouraging 17 seconds ahead of Rubens.

Both Brawns started with huge fuel loads; as the loads lightened, so did their climb in performance. In the lead, Rubens was buoyed by his ability to open a small gap over his team-mate. Jenson's greater tyre-set consumption in qualifying had obliged him to start on a new set of soft Bridgestones; Rubens was on a new set of primes. Even so, Jenson could not capitalise on his grip advantage. He didn't crowd Rubens' mirrors; and, gradually, his confidence growing with every lap, Rubens pulled away. A tenth here. Three-tenths there. On tiptoes, but with decent tyre contact patches, Rubens had the edge.

Ah, the gearbox! What about the gearbox? Rubens had 'over-torqued' it off the line in Belgium; there had been some post-race concerns back at base. Changing it before Monza would mean a five-place grid penalty, so the team advised Rubens to treat it softly-softly. No downshifts on bumps. No upshifts on kerbs. Nurse it. Preserve it. Massage it like a baby. Even with the heavy fuel.



For his second place in a row, Kimi Raikkonen was forced to fend off a very quick Force India

Not an easy thing – especially when you're racing your very fast team-mate and looking at a real chance of a win. Yet Rubens did it. Gradually, perceptibly, Jenson grew smaller in his mirrors. The gearbox felt fine...

Rubens was devastatingly fast in the laps leading into his mid-race pitstop. He was only 15 seconds behind Lewis when he re-emerged – and Lewis, his car lighter now, was able to expand that by a few seconds or so. Even so, it just wasn't enough. The McLaren, overall, was inferior. The race now belonged to the Brawns.

Lewis closed on Jenson (now resigned to finishing second) as the race wound down. It was after he had set the fastest first sector time of the race, and was putting the car right over the edge at the Lesmos, that Lewis lost it and hit the tyre wall.

And so Rubens cruised home able, on his closing lap, to nurse that gearbox like he had never nursed it before. He would win his second race of 2009, the eleventh of his career and the eighth for Brawn-Mercedes. He would win Monza again – for the third time in his 280 career starts. **FO**

ITALIAN RACE RESULTS

RESULT	DRIVER	TOTAL RACE TIME	GRID POSITION
1st	Rubens Barrichello Brawn	1:16m27.704s	5th
2nd	Jenson Button Brawn	+2.866s	6th
3rd	Kimi Raikkonen Ferrari	+30.464s	3rd
4th	Adrian Sutil Force India	+31.131s	2nd
5th	Fernando Alonso Renault	+59.182s	8th
6th	Heikki Kovalainen McLaren-Mercedes	+60.693s	4th
7th	Nick Heidfeld BMW Sauber	+82.432s	15th
8th	Sebastian Vettel Red Bull	+85.407s	9th
9th	Giancarlo Fisichella Ferrari	+86.856s	14th
10th	Kazuki Nakajima Williams	+162.163s	17th
11th	Timo Glock Toyota	+163.925s	16th
12th	Lewis Hamilton McLaren-Mercedes	52 laps – accident	1st
13th	Sebastian Bourdais Toro Rosso	52 laps – pit-lap	19th
14th	Jarno Trulli Toyota	+1 lap	11th
15th	Romain Grosjean Renault	+7 laps	72th
16th	Nico Rosberg Williams	+2 laps	10th
Retired	Vitantonio Liuzzi Force India	22 laps – transmission	7th
Retired	Jaime Alguersuari Toro Rosso	19 laps – gearbox	20th
Retired	Robert Kubica BMW Sauber	15 laps – engine	13th
Retired	Mark Webber Red Bull	0 laps – accident	10th

DRIVERS' STANDINGS

POSITION	DRIVER	ROUNDS																	PTS
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	
1st	Jenson Button Brawn	10	5	6	10	10	10	10	3	4	7	2	0	8	-	-	-	-	40
2nd	Rubens Barrichello Brawn	8	2	5	4	8	8	0	6	3	0	10	2	10	-	-	-	-	66
3rd	Sebastian Vettel Red Bull	0	0	10	8	5	0	6	10	8	0	0	6	1	-	-	-	-	54
4th	Mark Webber Red Bull	0	3.5	8	0	6	4	8	8	10	6	0	0	0	-	-	-	-	51.5
5th	Kimi Raikkonen Ferrari	0	0	0	3	0	6	0	1	0	8	4	10	6	-	-	-	-	40
6th	Nico Rosberg Williams	3	0.5	0	0	1	3	4	4	5	5	4	1	0	-	-	-	-	30.5
7th	Lewis Hamilton McLaren-Mercedes	0	0	1	3	5	0	0	0	0	10	8	0	0	-	-	-	-	27
8th	Jarno Trulli Toyota	6	2.5	0	6	0	0	5	2	0	1	0	0	0	-	-	-	-	22.5
9th	Felipe Massa Ferrari	0	0	0	0	3	5	3	5	6	0	-	-	-	-	-	-	-	22
10th	Heikki Kovalainen McLaren-Mercedes	0	0	4	0	0	0	0	0	1	4	5	3	3	-	-	-	-	20
11th	Fernando Alonso Renault	4	0	0	1	4	2	0	0	2	0	3	0	4	-	-	-	-	20
12th	Timo Glock Toyota	5	3	2	2	0	0	1	0	0	3	0	0	0	-	-	-	-	16
13th	Nick Heidfeld BMW Sauber	0	4	0	0	2	0	0	0	0	0	0	4	2	-	-	-	-	12
14th	Giancarlo Fisichella Force India/Ferrari	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-	8
15th	Robert Kubica BMW Sauber	0	0	0	0	0	0	2	0	0	0	1	5	0	-	-	-	-	8
16th	Adrian Sutil Force India	0	0	0	0	0	0	0	0	0	0	0	5	-	-	-	-	-	5
Retired	Sebastian Bourdais Toro Rosso	2	0	1	0	0	0	0	0	0	0	0	0	0	-	-	-	-	3
Retired	Sebastian Bourdais Toro Rosso	1	0	0	0	0	1	0	0	0	0	0	0	0	-	-	-	-	2
Retired	Kazuki Nakajima Williams	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-	0
Retired	Nelson Piquet Renault	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-	0
Retired	Luca Badoer Ferrari	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0
Retired	Romain Grosjean Renault	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0
Retired	Jaime Alguersuari Toro Rosso	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0
Retired	Vitantonio Liuzzi Force India	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0

CONSTRUCTORS' STANDINGS

1	Brawn 146pts	6	Williams 30.5pts
2	Red Bull 105.5pts	7	BMW Sauber 20pts
3	Ferrari 62pts	8	Renault 20pts
4	McLaren-Mercedes 47pts	9	Force India 13pts
5	Toyota 38.5pts	10	Toro Rosso 5pts



Adrian Sutil set the fastest lap at 1min 24.720secs

"This is actually quite heavy..." Rubens enjoys his deserved victory



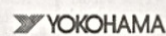
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PETER WINDSOR

Forthright views from our man inside the F1 paddock

Without wishing to state the obvious, let me remind everyone that Ferrari performed well while they ran Luca Badoer. Okay – I know that coincidence is involved: I know the F60 had been getting better with every race, and that

Spa-Francorchamps, in particular, was kind to their lesser qualities.

The stats, though, were inescapable: with Luca trundling round, treating the racing as a test, Kimi Räikkönen became the driver we knew and loved in 2007. He drove beautifully to the podium in Valencia and there are those



Badoer couldn't back the pace when he was out on the track – but back in number one position, Kimi rediscovered his form

out there (I think) who still believe scoring maximum points for the constructors' title is more important than winning the drivers'.

Let's be realistic: equal number one teams have blown more championships than they have won. Williams in 1981 (Alan Jones and Carlos Reutemann) and 1986 (Nelson Piquet and Nigel Mansell) are classic examples. Ferrari could have won the 2008 drivers'

championship if Kimi hadn't taken points from Felipe Massa. And it's not only a maths thing: there is that undeniable ego boost that goes with knowing that your team-mate is out of the frame. A number of pundits believed that Kimi would fall asleep with Luca in the other car; on the contrary, Luca's presence jump-started Kimi from a robotic trance based on his immunity to intra-garage politics and his team-mate's undeniable pace. Kimi awoke and greeted the dawn: 'I'm on my own! I've got a chance! I can do things my way!'

There's a caveat. The number one driver rule applies only to teams capable of winning

"Equal number one teams have blown more championships than they have won"

rates and drivers capable of winning titles. Personally, I think it would be better if McLaren maintained the stability of Lewis-Heikki (a good combination: if McLaren are going to win, Lewis is capable of handling the task on his own with a nice wing man in support); and, as Red Bull continue to gather strength, I can see Vettel being far more comfortable with a Nick Heidfeld in

the other seat – and/or Mark doing a better job if he didn't have to put it on the line every lap in order to beat Vettel.

Team principals love the idea of their drivers fighting it out, but they also have little feel for their team's propensity to self-destruct under the strain. It was when Ferrari ran Kimi against Felipe and then McLaren put Fernando up against Lewis that these teams began to unravel.

Then along came Luca Badoer: suddenly, by default, Ferrari had recaptured the essence of the Michael era, all over again.

NELSON KNEW WHAT HE WAS LETTING HIMSELF IN FOR...

AS MUCH as I think that Nelson Piquet was better than he looked in the Renault F1 car, I don't see any point in his squealing after the event. Love him or hate him, you at least know in advance exactly how Flavio Briatore is going to treat you: the man is an open book.

If Nelson Piquet was expecting equality and a fair crack – and wasn't going to be able to handle it when things turned sticky



Future Renault drivers please take note: if you want a nice cup of tea and a cuddle, Flavio Briatore really isn't your man...

– why did he sign with Flavio? Briatore's teams are for those who keep their mouths shut, deliver under pressure and don't make mistakes. Just ask Jarno Trulli, Jacques Villeneuve, Jenson Button, Franck Montagny, Lucas di Grassi and a bunch of other disgruntled Renault/Benetton signees.

Nelson's father even drove for Flavio, for Pete's sake. So: stay quiet, Nelson, and rebuild your career. And think yourself lucky. At least you got a race drive.

RIP FRANK GARDNER: 1930-2009

I CAN'T let this month pass without recording the death of Frank Gardner, a driver of huge talent. Pigeonholed by the F1 fraternity as a 'good number two', when given the chance to win – in F5000 and touring cars – he dominated.



Frank in '68 demonstrating his not always recognised talent at the Nürburgring

I love his description of why he didn't like the Porsche 917: 'I never wanted to be the quickest bloke in motor racing – I just wanted to be the oldest. And that car was certainly going to interfere with those plans...'



ALAN HENRY

Bad news for Fisi: Italian drivers never do so well at Ferrari

The last Italian called Giancarlo to drive a Ferrari in F1, bequeathed a legacy that nobody, I suspect, will ever match. A little over 48 years before Fisichella was signed for the prancing horse, Giancarlo Baghetti drove a 1.5-litre Tipo 156

to a split-second victory over Dan Gurney's Porsche in the French Grand Prix at Reims, thereby becoming the first – and so far only – driver to win a world championship at his first attempt.

Almost as rare is the sight of an Italian winning his home grand prix at the wheel of a Ferrari. It's only happened on three occasions since the official world championship was inaugurated 60 seasons ago. Alberto Ascari pulled it off in 1951 and '52 but, after that, only Lodovico Scarfiotti's triumph in 1966, the first season of 3-litre F1, gains an entry in the record book. Fisichella has five races in which to make himself an all-Italian hero for ever more.

Of course, there is a peculiar irony surrounding Fisichella's recruitment by Ferrari. The legendary Enzo believed that having Italian drivers in his team only led to the sort of trouble he could do without. Forget the fact that, post-Ascari, there were very few Italian drivers who were really good enough to get the job done, the Italian media would invariably round on the Commentatore if: (a) it seemed as if the car wasn't good enough; or (b) the hapless



It's a thumbs up from Fisi for now... but with Kimi, Fernando and Felipe in the running, his chances of a seat in 2010 are unlikely

who engineered John Surtees' departure from the team with the message 'Soon we will have the most powerful engines so that second-rate drivers will still be able to win.'

Ferrari have been more enlightened, of late, in terms of their management structure. In the 1970s, Luca di Montezemolo and Daniel Audetto helped lay the foundations upon which Jean Todt built a formidable winning machine 20 years later. Yet Italian drivers remain rare beasts within the Maranello garage, which is currently crammed with driving talent in the form

"An Italian has won his home grand prix on only three occasions"

of Räikkönen, Massa, Schumacher, Alonso (perhaps) and Fisichella himself.

As I see it, there is no hope of Fisichella remaining a race driver in the team for 2010, even if he wins the next four of his GP outings. So Alberto Ascari's title crowns in 1952 and '53 look set to remain – for the foreseeable future – the only ones achieved by an Italian in a Ferrari. Sad, isn't it?

IS THE RETURN OF LOTUS JUST A DREAM?

LOTUS COMPETED IN 491 grands prix between 1958 and 1994 and loomed over the F1 community as the sort of dominant colossus that we currently recognise in the shapes of Ferrari and McLaren. As this issue went to press, there were suggestions that the team's name might appear again in 2010 as the 13th team on the F1 grid.

Given the Malaysian connections that link BMW-Sauber (Petronas sponsorship) and Colin Chapman's old team (Proton ownership), surely the



A dominant force in F1 over five decades, could Lotus now make a return as the sport's 13th team?

neatest way of engineering a rebirth would be for Proton to buy Sauber? The more I think

about it, this is the only logical course. Like everything in F1, it may depend on the price...

JEAN VERSUS ARI

THE GREAT THING about F1 is that there is nothing new under the sun. The battle between Jean Todt and Ari Vatanen in the FIA presidential elections is reminiscent of Max Mosley's run against the late Jean-Marie Balestre in 1991.

Back then, Balestre was the old guard, while Mosley was the bright new tomorrow. Todt wants to build on Mosley's legacy while Vatanen wants a new start. I doubt Ari will win, but many believe he is precisely the tonic the sport requires.

FINISHING STRAIGHT



TIMO GLOCK'S RACE PREVIEW

THE SINGAPORE GRAND PRIX

MARINA BAY 27 09 09

LAPS 61 CIRCUIT LENGTH 3.148 MILES START TIME (UK) 13.00

Artificial light, altered sleep patterns and a demanding layout are the challenges posed by the Singapore Grand Prix, and Timo will be hoping to improve on last year's fourth

"The Singapore Grand Prix is an unbelievable event. The track is challenging to drive and the fact that the race takes place at night makes it unique on the Formula 1 calendar. There's also a lot going on away from the racetrack, so it's one of the highlights of the year for everyone in F1.

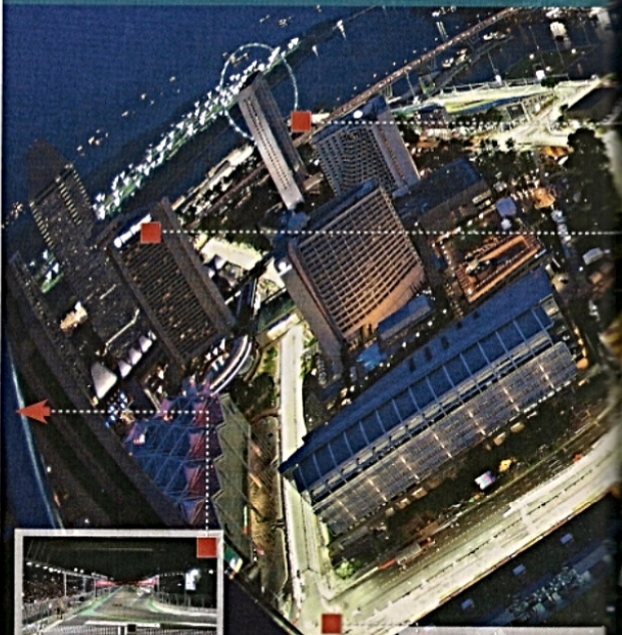
The night-time schedule presents various problems for the drivers. First, we have to get used to the artificial lighting around the track and then there's the issue of sleep. You know how us drivers need to get our beauty sleep...

The visibility is, in fact, remarkably good. Sure, you have to get used to the artificial lights, but they're not a problem. You can see more than enough and I ended up using a slightly tinted visor last year. If it rains, however, it could be a different story because the glare might be very bad.

As for sleep, we have no option other than to go nocturnal. By the time we've completed our post-session debriefs and media work each night, we're not leaving the track until 4am and the only way to survive is to remain on European time. That means going to bed at 5-6am and getting up at lunchtime, which actually feels a bit surreal.

As a driving challenge, the Marina Bay Street Circuit is quite tough. It has some quick sections and the walls are never far away, so you need to give it due respect. It was very bumpy in places last year, but I've been told these bits have now been flattened out, which should make it much easier.

I finished fourth last year, so it would be great to get another good result in 2009. We've had a bit of an up and down season so far, and it would be nice to have a few more ups as we head into the tail end of the year."



TURN 1: 2ND GEAR, 2, 50MPH
"This is one of the corners that has been reprofiled for this year. It's now lighter, which could make it a good overtaking place - and it could get quite lively at the start of the race"

TURN 7: 3RD GEAR, 68MPH
"The best overtaking place on the lap. It's preceded by a long straight, which allows you to get a good tow, and the braking area is wide so you have room to pull alongside another car"



TURN 13: 2ND GEAR, 50MPH
"This is a slow corner, which is followed by a relatively long straight, so you need to have good traction on the exit to ensure you then have good end-of-straight speed"



TURN 10: 3RD GEAR, 85MPH
"Before last year's race, there was a lot of talk about the height of the kerbs at this chicane. When they were reduced in size, it became quite quick and was more enjoyable to drive"

TURN 5: 3RD GEAR, 84MPH
"A medium speed right-hander that opens up on the exit. It's important to get the power down early because the best overtaking opportunity on the lap follows soon after"

FINISHING STRAIGHT

Now permanently back at Suzuka, the Japanese Grand Prix is one of the classic tracks in F1 and Timo is hoping for some enthusiastic home support for his Toyota team

"Last year's Japanese Grand Prix took place at Fuji Speedway, so I haven't driven an F1 car at Suzuka since I raced for Jordan in 2004. But I can remember it vividly because the track is amazing!

The track has a great flow and lots of character, and it's the only figure of eight on the calendar. I grew up watching my heroes racing here on TV, and the layout hasn't changed much over the years. There are still a lot of high-speed corners and fast direction changes, and to be quick you need a good car and you need to get into a rhythm.

Many of the corners are inter-linked, especially in the first sector, and a mistake at one can often punish you through the next as well. As a result, you've got to be very accurate with your line and mistake-free.

It's important to find a good balance because you don't want any unpleasant surprises when you're cornering at more than 150mph. You need to have confidence in your car, which means no understeer or snap oversteer; you want a neutral balance that allows you to make fast direction changes without scrubbing off speed.

A lot of people have asked me whether I'd prefer the Japanese GP to be at Fuji this year. Fuji is certainly a good track, but Suzuka has its merits as well and the most important thing is that there is a race in Japan, especially for Toyota.

Being the team's home race, it would be nice to get a good result. Toyota has a very loyal following in racing circles, and without Honda we are flying the flag for Japan in F1. The fans over there are completely crazy – very passionate – and I think Jarno [Trulli] and I can expect a lot of support."



TIMO GLOCK'S RACE PREVIEW

THE JAPANESE GRAND PRIX

SUZUKA 04 10 09

LAPS 53 CIRCUIT LENGTH 3.658 MILES START TIME (UK) 06.00



SPOON (TURNS 13&14):
4TH GEAR, 115MPH

"A long left-hander. You have to commit to the throttle without being able to see the exit because a long straight back to the pits follows"



HAIRPIN (TURN 11):
2ND GEAR, 45MPH

"This is a constant-radius left-hander, so you can get the power down early at exit. It's the first really slow corner, so it's easy to out-brake yourself"



CASIO TRIANGLE (TURNS 16&17):
2ND GEAR, 58MPH

"This chicane follows the ultra-fast and amazing 130R corner and is the best, and probably the only, realistic overtaking place on the lap"



130R (TURN 15): 7TH GEAR, 190MPH

"This corner was easy-flat when I raced here in 2004, so it will probably be the same this year. It's not difficult, but it's one of the iconic corners in F1, like Eau Rouge at Spa"

DEGNER (TURN 9): 3RD GEAR, 87MPH

"These two right-handers come upon you very quickly, so you have to be accurate with your line. You ride the kerb at the exit of Degner 2 and stay flat all the way down to the Hairpin"



TURNS 3-7: 5TH GEAR, 130-150MPH

"The first section of the lap is fantastic. You're doing a minimum of 130mph up the hill, so the speed and direction changes are amazing. This is an F1 car at its absolute best"

FINISHING STRAIGHT



TIMO GLOCK'S RACE PREVIEW

THE BRAZILIAN GRAND PRIX

INTERLAGOS 18 10 09

LAPS 71 CIRCUIT LENGTH 2.677 MILES START TIME (UK) 17.00

Interlagos poses a physical challenge to the drivers and a technical one for the teams, but Timo will be hoping that the home fans have forgiven him for last year's final lap...

"Interlagos is different to most tracks on the F1 calendar because it runs in an anti-clockwise direction. This makes it very hard on the neck and all the drivers have to do special exercises to prepare.

The track is also very bumpy, despite being resurfaced every few years. That means it's very physical because every time you run over a bump at high speed, you feel it all over your body. It's like sitting on a chair and someone kicking the underneath really hard!

Despite these discomforts, it's a good track to drive. It's a short lap, about 1min 14secs, but there are interesting corners and lots of gradient changes. It's also very technical: set-up is a compromise between straight-line speed up the hill at the end of the lap and slow-corner grip through the twisty infield.

The Brazilian GP has been the scene of a title decider for the last three years and, as a result, there's always been a great atmosphere. It's no doubt helped by the passionate Paulista fans, who love F1 and appreciate the sport's history. After what happened in last year's race, I hope they'll give me a good welcome...

I think some of the fans thought there was a deal between me and Lewis [Hamilton], when of course there wasn't. I was fighting for every position, but there was nothing I could do to stop him passing me on the last lap because my tyres were shot to pieces.

Away from Interlagos, Brazil is good fun because São Paulo is a great city. The food is delicious and there's a good buzz everywhere. And it's not lost on me that Ayrton Senna, one of my heroes, was from São Paulo.

Toyota's pace was good last year – until the last lap! – so I hope we can be competitive this year. I'll be giving it everything I've got."



TURN 3: 3RD GEAR, 67MPH
 "This is the best overtaking point as you can get a tow up the hill and past the pits. The corner dives downhill once you turn in, so you must get back on the power as soon as possible"



TURN 4: 4TH GEAR, 98MPH
 "A potential overtaking place – if the guy in front makes an error exiting Turn 3. There are some grandstands to the right and you can almost hear the crowd above the noise of the engines"

TURNS 6&7: 4TH GEAR, 124MPH
 "This is a really quick corner and there's a crest at the exit, which makes the car go light. This means that you've got to be very accurate with your line through here"

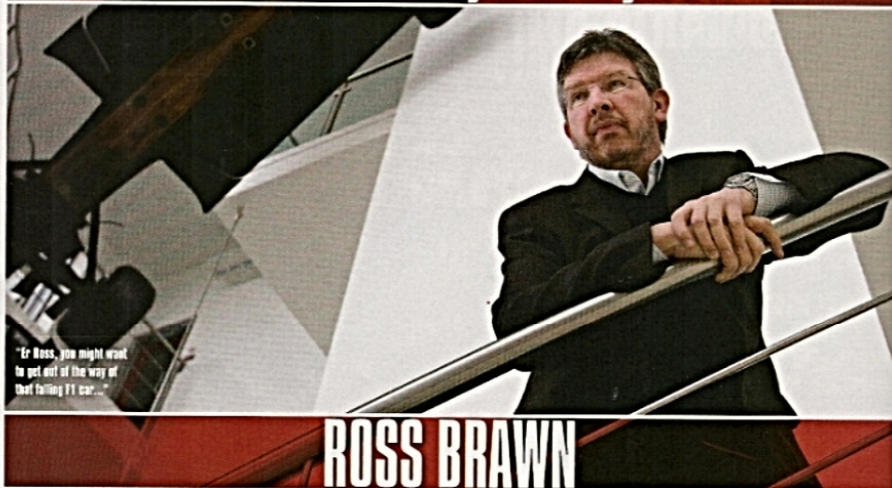
TURN 12: 3RD GEAR, 81MPH
 "One of the most important corners. A clean exit is vital as you carry the speed all the way up the hill towards the start-finish straight. You must be hard on the power before the apex"

TURN 11: 4TH GEAR, 144MPH
 "Another great corner at Interlagos. Because it's downhill and you're accelerating all the way through it, it's a place where you can really feel the G-forces working on you"



MY ADVICE TO YOU...

Personal wisdom from the great and the good of F1



"Er Boss, you might want to get out of the way of that falling F1 car..."

ROSS BRAWN

FISHERMAN'S FRIEND AND F1 TEAM OWNER, 54

1 SHARE THE LOAD

My career has been built around partnerships because you can never achieve anything without a strong team of people around you. That's what I have at Brawn GP: people with whom I can share the load.

2 UNDERSTAND YOUR CAR

To design a race-winning car, you need to understand your performance – good or bad. If you don't understand why you are where you are, how can you make the next move?

3 DUST OFF YOUR VINYL

I've gone back to vinyl over the past couple of years. It has an aura about it. I've had my old record collection cleaned and after a hard day at the office, I like to work my way through it. Some of the old Cat Stevens stuff is fantastic, and I was a Rod Stewart fan in his early days with The Faces. I also play a bit of classical.

4 MAKE YOUR DRIVERS FEEL WANTED

Money is very rarely a source of motivation for a driver, but it can be a huge demotivator. Also, if they feel they're not being trusted, it will cause damage. You need to give them an environment in which they feel comfortable because they're the ones at the end of the chain and have got to produce the results.

5 DON'T TAKE IT PERSONALLY

Such is the nature of F1 that you are not going to agree with everyone all the time, but you mustn't take it personally. I believe in trying to beat each other on the track with every ounce of strength you've got and then having a sensible relationship afterwards – even sharing a beer.

6 TAKE YOUR TIME AT AIRPORTS

I used to be the last of the late brakers at airports, but I like to give myself a bit more time nowadays. It's nice to have the extra time at home, but I'm too old for all the stress it creates. I get there at least one hour beforehand and then do a bit of work in the departure lounge, or hit the magazine racks.

7 MASTER PEOPLE MANAGEMENT

The guy I really admire in football is Sir Alex Ferguson because he's managed to achieve incredible consistency over the years. We manage two drivers in Formula 1; he manages 40 no-doubt delicate characters, and the ability to do that is phenomenal. It's far more difficult than what we do.

8 FISH WITH FRIENDS

Fishing is a great hobby, but the days of old, when I was happy to go off by myself and sit

by a riverbank, are not so appealing now. I prefer to share the experience with friends. As part of my 50th birthday celebrations, I rented a lake for a day and I was the only person who didn't catch anything! But it didn't matter, I still really enjoyed myself.

9 LEARN TO TRAVEL PROPERLY

Travel is fantastic when you haven't got the pressure of turning up and doing a job. I've spent 30 years travelling the world in Formula 1, but it was only during my sabbatical in 2007 that I got to actually travel properly. By that I mean properly taking my time, using flexible tickets and really getting to know some of the places I visited. I have to say, it was fantastic.

10 GO LONG AND SLOW FOR BARBECUES

Barbecuing duties are passed to me in the Brawn household and the key to success is to cook the meat long and slow. On our barbecue at home, the hot coals are in one chamber and the heat then passes through to another chamber where the meat sits. You have to cook the meat for a long time: a brisket might take you about 16 hours, but it tastes absolutely delicious. The only problem is that you have to start cooking Sunday lunch on Saturday night.

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