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### "I MET ENZO"

True stories from the men who press the flesh with a legend

### WORLD EXCLUSIVE SCHUMPIER'S DATA

We uncover Michael's telemetry - and compare it with Rubens'. Ouch!

### TOP BRIT' INTERVIEW JUSTIN WILSON

One-on-one with Jag's new man. But can he match Mark Webber?

14-PAGE SPECIAL: IT'S THE 'KIMI v FERNANDO' SHOW

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September 2003



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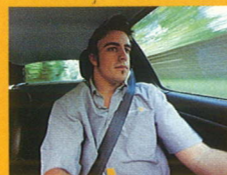
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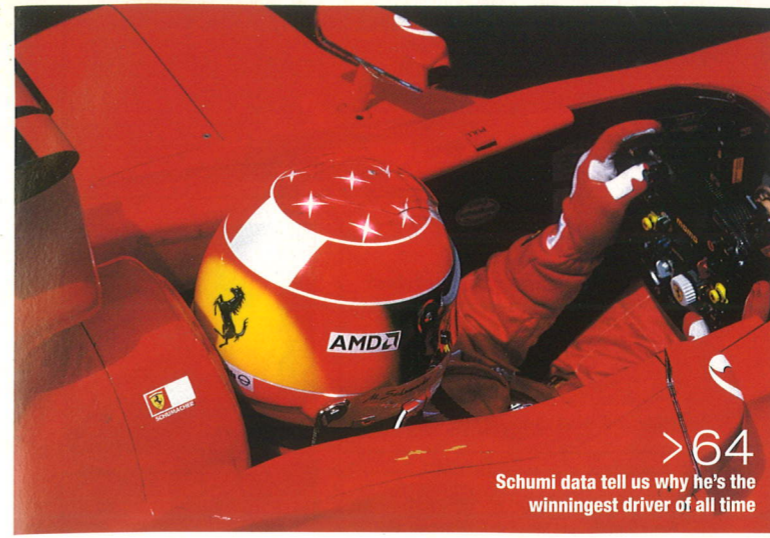
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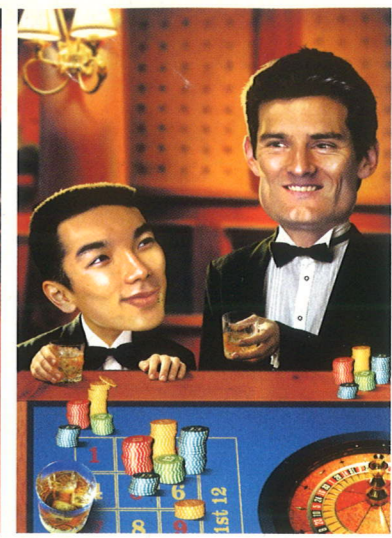
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**Fernando Alonso v Kimi Räikkönen**  
They're young, they're savvy, and they're fearsomely quick. In a 14-page special, *F1 Racing* gets to know the two drivers most likely to keep us on the edge of our seats in seasons to come



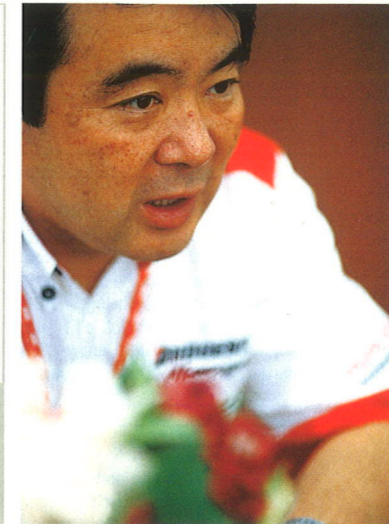
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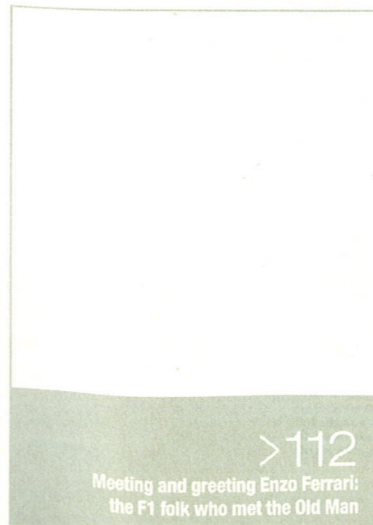
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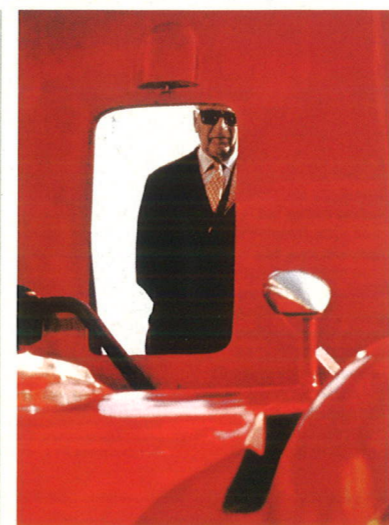
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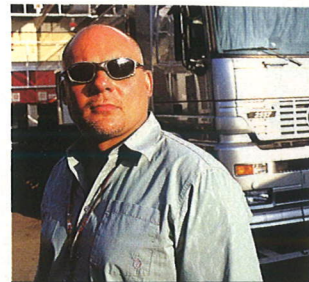


Cover photography Neil Cooper. Contents photography James Braham, Michael Cooper/LAT, Nelli Cooper, Dippi, Richard Hart, Ted Humble-Smith, Schlegelmich, Steven Tee/LAT, Mark Thompson/Getty Images. Special thanks to Wayne Bruce, Tracey Clinton, Luca Colajanni, Stuart Dyble, Chris Jewell, Graham Jones, Eilon Kolby, Stefano Luzzatto, Ruth Mathewson, Tracy Novak, Lara Richards, Martin Rossler, Boris Schlegelmich, Nav Sidhu, Patrizia Spinelli, Helen Temple, Desmond Tumulty, Bob Wright

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## It's the Kimster, the Fernster...

... and, lest we forget, it's the Juanster, too. And the Juanster could well be champ



Bishop: ready to bet his shirt on JPM

'MICHAEL LEADS, BUT JUAN PABLO AND KIMI ARE FAR TOO CLOSE FOR COMFORT. AND THEY'RE BOTH ON MICHELINS'

mechanics call him) and the Fernster (as, I fancy, no one has called him until now) who came out top. (Did anyone take any notice? It would appear so: the wretched Antonio Pizzonia came out bottom, and look what happened to him.)

At Hockenheim Juan Pablo Montoya (who came fourth in H-TR) reminded anyone who needed reminding that he, too, is very much part of the future of F1. Indeed, if you were to ask me to bet my house (okay, flat) on who will win the 2003 world drivers' championship, it is JPM who would get my vote.

But it really is too close to call. Yes, Michael Schumacher still leads (with 71 points), but Montoya (65) and Räikkönen (62) are far too close for comfort. Besides, and this is probably the most important bit, they're both on Michelins, whose superiority over the Bridgestones on which Michael is struggling so valiantly was never so obvious as on the burning tarmac of the Hockenheimring.

Next we go to the Hungaroring, which is always sweltering; then to Monza (ditto, often); then to Indianapolis (unlikely to be anything other than warm-to-very-warm); and finally to Suzuka (hot-to-very-hot, I'll warrant).

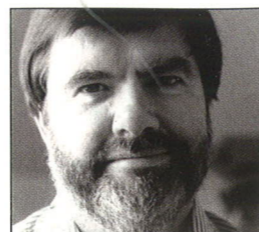
Post-Hockenheim, William Hill quote Montoya 9/4 for the title. Tempting...

**Matt Bishop** editor in chief

## contributors

### > Philip Beresford

Only one man has the resources and sheer financial savvy to pull together the definitive Formula 1 Rich List, and that's Beresford. Why? Because he's also the brains behind the *Sunday Times* Rich List, a monumental undertaking that pins down the best-heeled in the land. Read all on page 92.



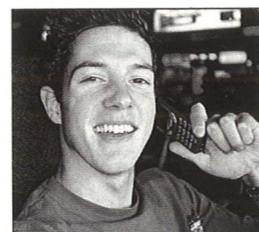
### > Peter Windsor

From Fangio and Moss to Räikkönen and Alonso... Look no further than Windsor for the most insightful commentary on such rivalries, and on F1 generally – today and yesterday and over the past three decades. This month he debates the above clashes, and more, on pages 56 and 40.



### > Dom Taylor

F1 Racing's new marathon man is young Dom – he ran the New York this year in just under four hours. He did his degree in philosophy and psychology – excellent preparation for his first job in F1 journalism – at New College, Oxford, and you'll find his Jordan trucking feature on page 100.



### > Neil Cooper

Between assignments, portrait snapper Neil Cooper likes to spread his wings. Work for *Radio Times*, the *Sunday Times* and *Marie Claire* has been interspersed with fashion shoots and this month's F1 Racing cover. Other favourite recent subjects have included Gemma Kidd and Ray Winstone.



### > Richard Hart

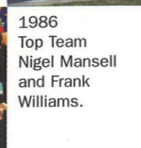
This month we're tapping into just one of Richard's talents – and the first of his F1 Rich List illustrations is on page 92. He's based in South Africa and also runs a graphic design shop, restaurant, bookshop and gallery, but enjoys nothing more than a little crocodile wrestling in the bushveld.



1979  
The first Williams  
victory by  
Clay Regazzoni at  
Silverstone.



1986  
Top Team  
Nigel Mansell  
and Frank  
Williams.



1996  
Damon Hill  
wins F1 world  
championship  
at Suzuka.



2003  
Oris becomes  
Official Watch  
Partner to the  
BMW WilliamsF1  
Team.



[ The Oris WilliamsF1 Team Chronograph Limited Edition. ]

## Catch it if you can.

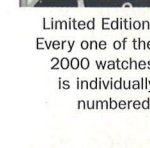


Since becoming the Official Watch Partner to the BMW WilliamsF1 Team, the pace has grown faster at Oris. We have now reached the limit with this chronograph, available in only 2000 units, all individually numbered and engraved with the WilliamsF1 Team logo. It is not just the rubber strap that has the racing profile.

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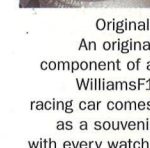
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F1 Racing is published monthly in Australia, Argentina, Brazil, China, the Czech Republic, Finland, France, Germany, Greece, Hong Kong, India, Indonesia, Italy, Japan, the Netherlands, South Africa, Spain, Sweden, Turkey, UK and USA by Haymarket Autosport Classic Publications Ltd, which is a subsidiary company of: Haymarket Magazines Ltd  
**editorial director** Mal Nichols, **finance director** Brian Freeman, **chairman** Eric Verdon-Roe  
**Circulation enquiries to:** Frontline Ltd, Park House, 117 Park Road, Peterborough, Cambs, PE1 2TR. Phone 01733 555161  
ISSN 13614487 EAN 03713614480009  
**Printed by:** Southern Print (Web Offset) Ltd, Upton Industrial Estate, Poole, Dorset, BH16 5SN.  
**Colour by:** Colour Systems Ltd, 90-92 Pentonville Road, London, N1 9HS.  
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**US subscriptions from: F1 Racing Subscriptions, EWA, 205 US HWY 22, Green Brook, NJ 08812, USA.** Tel: 732 424 7811. Fax: 732 424 7814. Email: ewa@ewacars.com  
\* F1 Racing is published monthly by Haymarket Magazines Ltd, c/o Mercury Airfreight International Ltd, 365 Blair Road, Avenel, New Jersey 07001. Periodicals postage paid at Rahway, NJ and additional entries. Postmaster please send address corrections to: F1 Racing, c/o Mercury Airfreight International Ltd, 365 Blair Road, Avenel, New Jersey 07001.  
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Lowland gorilla



Warthog



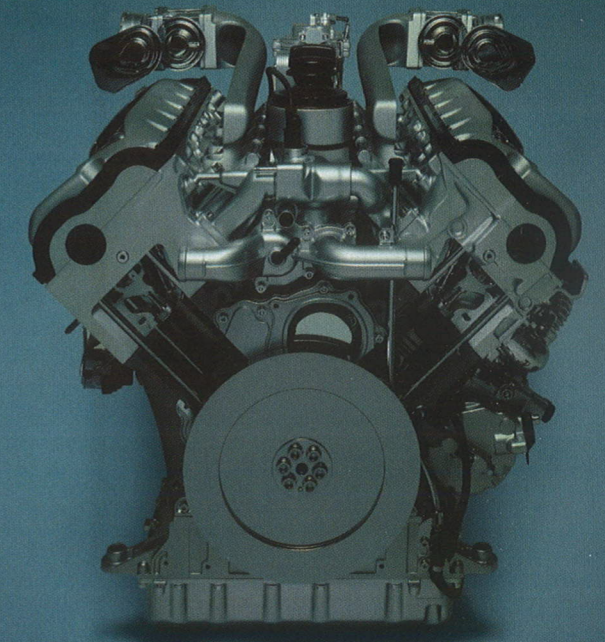
Siberian tiger



Hippopotamus



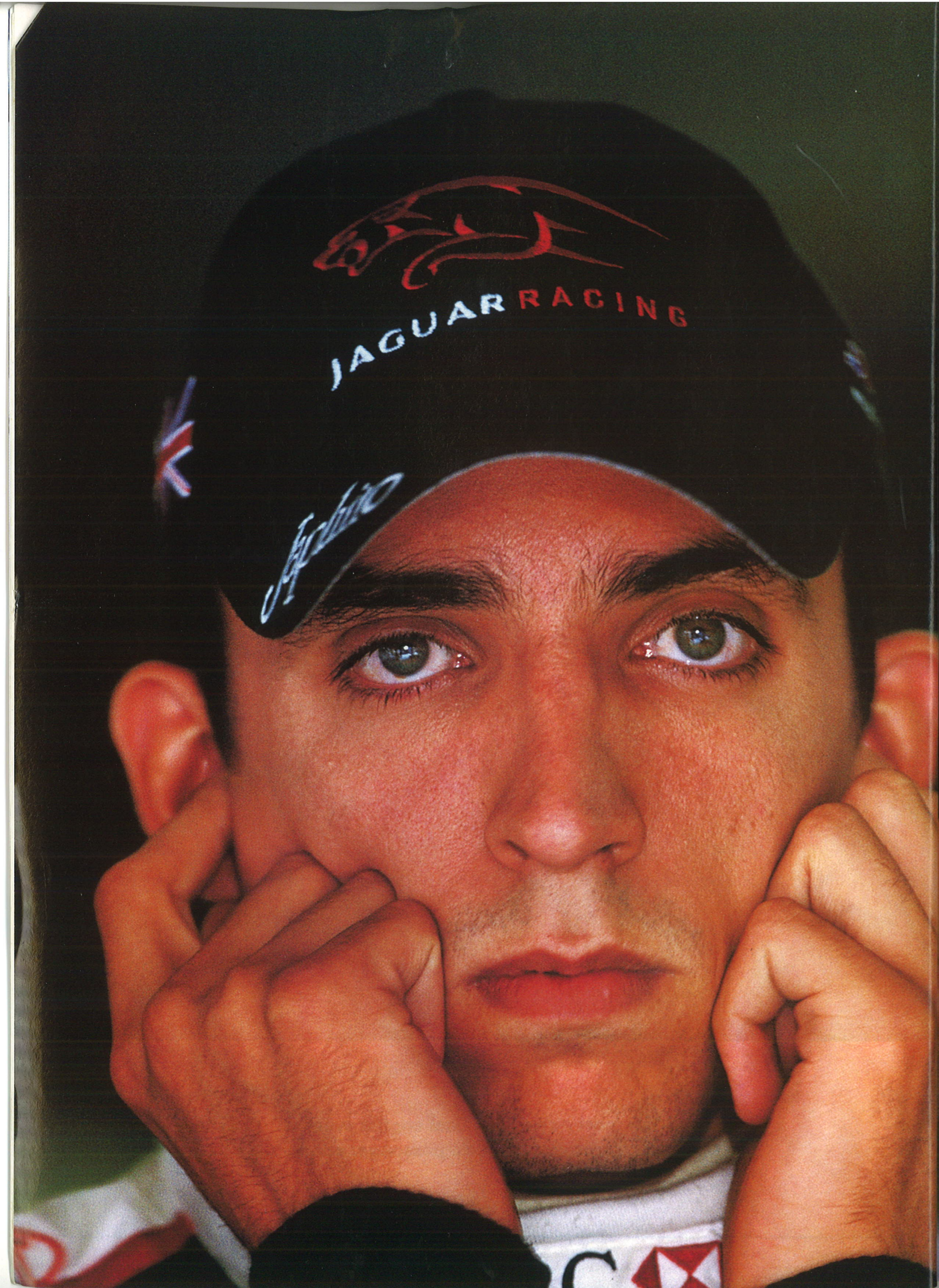
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**In at the deep end**

Justin Wilson has just seen team-mate Mark Webber bag P4 in Friday qualifying. Big, big pressure. But his response, when it comes, is seriously gutsy: P7

**Circuit** Hockenheim, Germany

**Time/date** 1.32pm, Friday August 1

**Photographer** Darren Heath, Canon EOS 1V, 600mm lens, Fuji Velvia film, 1/30 at F4

**Slide rules!**

Good on ya Heinz-Harald, for hanging out the arse of of your C22, just like Jochen, Ronnie, Gilles and Keke used to. Who said traction control killed oversteer?

**Circuit:** Silverstone, United Kingdom

**Time/date:** 9.11am, Saturday July 19

**Photographer:** Darren Heath, Canon EOS 1V, 600mm lens, Fuji Velvia film, 1/500 at F9





**Gold leaf**

It's nothing more than a piece of tape marking out territory between garages. But savaged by F1 tyres, dirtied, then shot in late afternoon light, it's a work of art

**Circuit:** Silverstone, United Kingdom

**Time/date:** 4.25pm, Sunday July 20

**Photographer:** Darren Heath, Canon EOS 1V, 200mm lens, Fuji Velvia film, 1/1000 at F2.8

PlayStation 2

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### Slipstreaming



*Martin says:* "You have to make an allowance for the turbulent air produced by the car in front. If you can get close enough and pick up the tow, you will get sucked along and then you can try and out-brake the guy in front. If you can move over so that half of your car is out of the dirty air, you have halved the problem."

### Attack and defend



*Martin says:* "If you make a move that slows you both down, you could both end up losing a place. Attacking and defending can also limit your overtaking opportunities because you are concentrating on one car. If you are struggling to overtake, maybe try easing off a little and wait for the driver in front to make a mistake."

### Late braking



*Martin says:* "Yeah, you can have a lunge, especially on the PlayStation2. It depends on how the damage settings are configured. You have got to concentrate on your braking point and where you are going to turn in to the corner, and don't worry about the other driver. Otherwise you will lock up and skid straight on."

### Assessing weakness



*Martin says:* "My instinct is that, if you catch up to somebody quite quickly, then you want to pass them quickly, while they are not sure about you and on the defensive. If you get stuck for a few laps, the driver in front will soon start to get comfortable and begin to understand your strengths and weaknesses."

### Racing tactics



*Martin says:* "A lot of people get themselves wound up for a big move. But you should not decide that you are going to overtake whatever the risk. And, if you make the move, be defensive straight away in case the other guy has a cleaner exit out of the corner. You may have to move across and block the guy behind."

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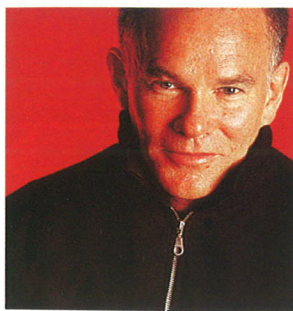
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## NEXT MONTH!

How to set up your FORMULA ONE car



## Peter Windsor

Ferrari no longer seem the exemplars of cool efficiency as Williams prove as quick in the pits as they are on the track

Time to set the record straight: some very brilliant things also happen in F1. We tease, we cajole, we criticise in the name of being constructive – yet often we miss the obvious. We do so, of course, because the innovative technical solution of the day is hidden under beautifully sculpted bodywork, because the genius who composed the strategy is stationed behind security-controlled garage doors. Occasionally, though, you see it in Technicolor – see the way they work their minds.

One such example was at Silverstone, where Williams used their stacked pit stop to enable Juan Pablo Montoya to pass Michael Schumacher. Force of circumstance, you might say. The lucky breaks – or otherwise – of pit lane congestion. And, yes, there was an element of good fortune: as Juan Pablo cruised towards the Williams 'box', trying to time his arrival to coincide exactly with Ralf's departure, he inadvertently blocked the exit path of Ferrari's Rubens Barrichello. Rubens was delayed – and so, therefore, was Michael, who was stacked up behind his team-mate.

For that sort of advantage you can't plan; it is just the way things go. About the most you can say is that Williams brought Montoya in very slowly, knowing that he could not be passed under yellows and minimising the time he would have to spend stationary in the pit lane, waiting for Ralf to clear the box. Nothing new in that: most top teams bring their second driver in slowly. Ferrari did likewise with Michael.

This, though, did not alone account for the difference in pit-stop times. If Michael hit his box later than did Juan Pablo, then the difference was maybe a second or two. No, the advantage came from another source.

For the past 18 months Williams have been practising a new stacked pit-stop technique, taking into account two obvious limitations: first, putting the wrong tyres on the wrong car results in

disqualification from the race. At Silverstone there was no doubt about the order in which the drivers would stop because they were doing so under the yellow. If it suddenly started to rain, though, and stacked pit stops were inevitable, a pit crew would not know which car they would be servicing until it appeared in the pit lane. To avoid confusion, therefore, teams tend to leave their tyres in the front of the garage, clearly marked with the driver's name; on top of that, the most time-consuming of the two stops is the last one. The second driver waits while his tyres are rushed to the box.

What Williams did at Silverstone was this: they put both sets of tyres in the box – eight in all, two by each wheel. One for Juan Pablo, one for Ralf. As a belt-and-braces, chief mechanic Carl Gaden shouted "Ralf" as the number four car approached, and the boys went to work, shuffling around the other stationary tyre. Ralf was out in 8.3sec – about normal; then so was Juan Pablo – very abnormal, given the time it was taking the Ferrari mechanics to lift Michael's tyres into place.

The system works because Williams have spent an awful lot of time defining their movements at short notice: during practice sessions at the factory, Gaden would shout "Montoya" and the boys would have to respond, reaching over for the other tyre while moving Ralf's a few metres to the side.

Brilliant attention to detail? Certainly – because, on average, F1 teams face stacked pit stops maybe once a season. Critically, Williams's technique allowed them to pass Michael in the pit lane and thus to reduce Michael to a fourth-place finish on a circuit on which he should have finished at least second. It was a master-stroke.

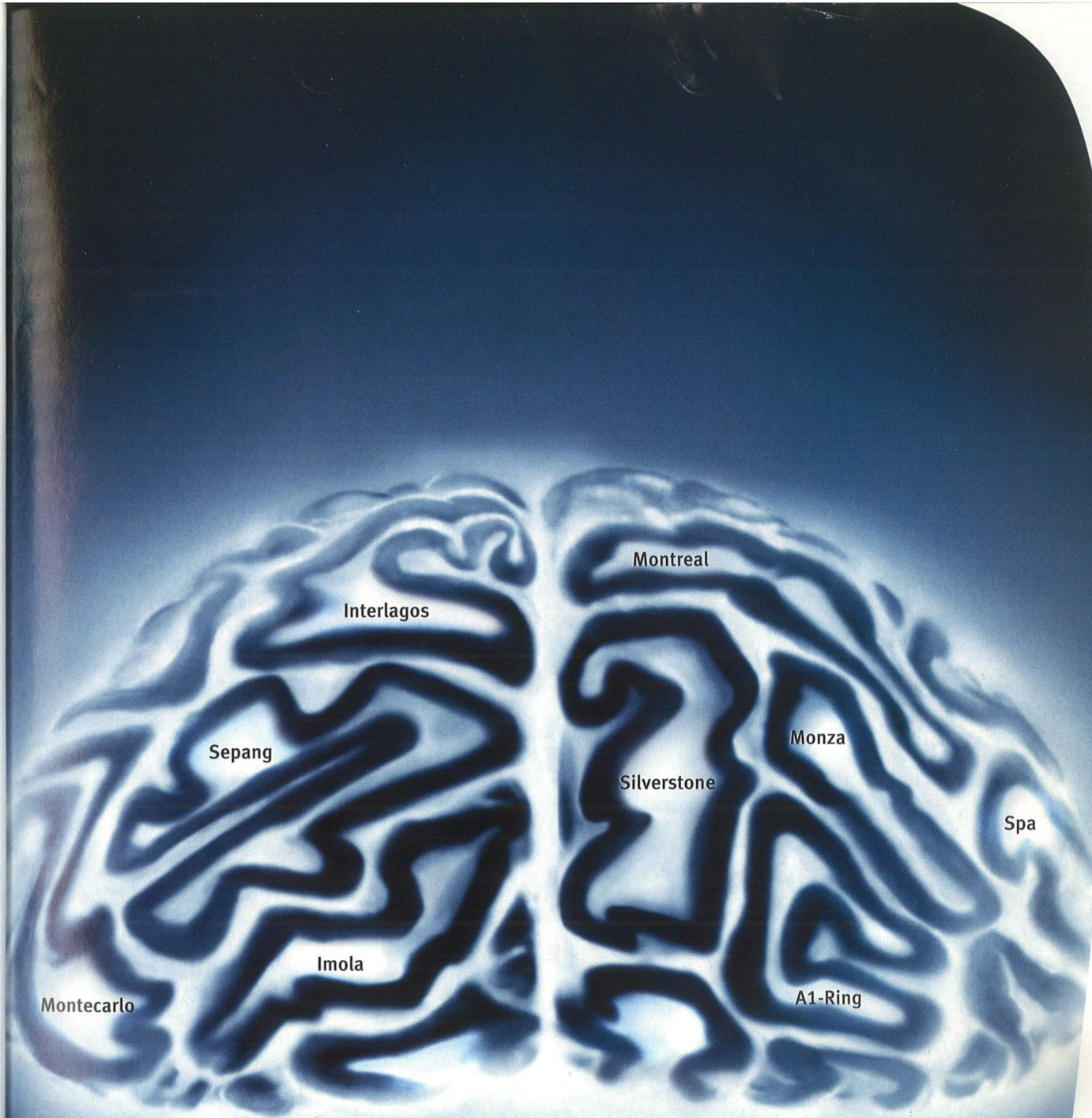
As was Renault's Hungary tyre test session on the Friday morning at Hockenheim. In the middle of the F1 testing ban. With track conditions and ambients just about perfect. A lot of people sniggered when Renault opted for the limited-test regime last winter, but how many of them thought ahead into August and to unforeseen advantages? Yet there Renault were, churning out data with two tyre test cars (McNish and Alonso) completing a full quota of laps.

Renault have made perfect use of their Friday morning test sessions, not only for the weekend in question but also for the races ahead. The track surfaces (Montreal aside) have been much cleaner than expected; and Renault have run four cars superbly on Fridays – the test car and the three racers. Multiply that by the August test ban and you've got a Pat Symonds-induced triple-whammy the like of which is rare.

On another note, do not miss the recently published *Piers Courage: Last of the Gentleman Racers*. Piers was a gem – a great racing driver and a sweet person. Adam Cooper's book includes extracts from Piers' photo album, with Frank Williams looking pensive at the wheel of his Ford Zodiac, wearing exactly the expression we see today as he stares at the timing monitors in the pit, pressure mounting around him.

It is a reminder that nothing – and everything – has changed. 1

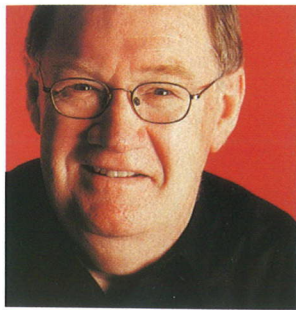
**'Brilliant attention to detail by Williams? Certainly – because, on average, F1 teams face stacked pit stops maybe once a season'**



We've racing on the brain

This year we've invested in The Holiday Inn SEAT Cupra Championship to help young drivers make their name in the racing world. Following the driver's progress is a new ITV series called Racing Rivals. With the grand prize of a place in the SEAT team in next year's European Touring Car Championship, it's a no brainer that the SEAT Leon Cupra R race car will be put through its paces.





## Alan Henry

DC is under pressure, and Bernie's bombshell didn't help. Now there's talk of McLaren dropping him

When Bernie Ecclestone voiced the thought that David Coulthard might best serve his career by quitting McLaren-Mercedes, he was publicly expressing the views of many people in the Formula 1 pit lane. Playing the supporting role to a succession of Finns may not be everybody's idea of a trip to Paris, but DC had always put an upbeat gloss on what has all too frequently appeared to be the thankless task of being put through the mill first by Mika Häkkinen and then Kimi Räikkönen.

Digital trickery offers us a look (below) into one of JPM's possible futures – if talk in the pits is taken to its logical conclusion. You've got to admit that his face fits

It was all most unfortunate that the speculation over DC's long-term F1 future spilled over into the public domain in the run-up to the German Grand Prix. As a direct consequence, David chomped his way through the entire sweltering weekend with a slightly rictus grin on his face. This was Mercedes' homeland, which meant that just about every minute when he wasn't strapped in behind the wheel of his MP4-17D he was being asked to schmooze the media or glad-hand the sponsors. All part of the F1 job, of course, but understandably not what you really want to do if all anybody can talk about is your impending dismissal from the McLaren squad.

There's no point beating about the bush. If you are going head-to-head with Michael Schumacher, even if his F1 genius might conceivably be waning by 2005, you'd better have a Kimi Räikkönen, a Juan Pablo Montoya or a Fernando Alonso on your driving strength. Ron Dennis already has Kimi

contracted for who knows how long, and it is a bare fact that DC has been put through the psychological wringer as a result of his abjectly disappointing '03 season.

I believe he has never quite recovered from the personal anguish generated by that fiasco at Interlagos, a race he held in the palm of his hand until it was red-flagged just after he'd made his second scheduled refuelling stop. A fortnight later he comprehensively screwed up his qualifying run at Imola, where at one point he looked on schedule to pip Räikkönen. Since then his season has unravelled into a mish-mash of inconsequential results that seem to be leading him nowhere.

It's worth making the point here that McLaren have traditionally sought to bring out the best in their drivers, playing to their strengths and tutoring them to iron out their weaknesses. Yet this wretched business of one-lap qualifying has all but destroyed Coulthard's reputation. That sounds brutal and unyielding. But it is also the truth.

The way I see it, Ron Dennis could now hold most of the F1 negotiating cards for '05. He's already got Räikkönen on board, he has the financial firepower to outbid Williams for the services of Montoya for '05, if the opportunity arises, and the MP4-18. A fiasco has bought him enough time to transmute this complex, but hopefully very quick, racing car into a seriously reliable MP4-19 by the time the '04 season gets under way in Melbourne next March.

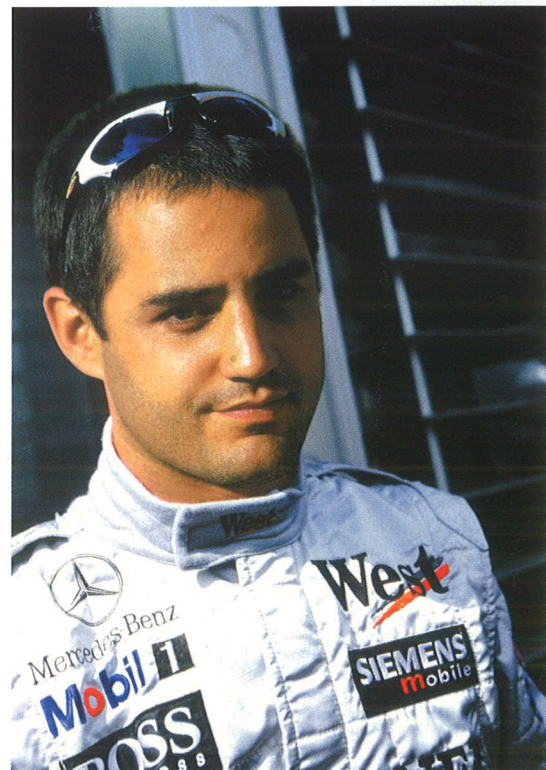
Of course, the subliminal subtext to all this manoeuvring is the need to second-guess what Michael is really going to do. If he abruptly changes his mind and retires before the end of '06 – or even gives a hint that he might – then it will be even more important to keep Montoya out of a situation whereby he might be snapped up by Maranello as the next potential Messiah.

Coulthard is a safe pair of hands who will hold the fort at McLaren until the end of next season. Anyway, ditching him now makes no sense at all, because there is a much smaller pool of alternative talent from which to choose than will be the case in 12 months' time.

Ralf Schumacher, JPM, Rubens Barrichello: their contracts all expire at the end of '04. If I were a betting man, on balance I would just back Montoya for McLaren in '05 and Ralf to stay where he is. And what about the prospect of Rubens Barrichello – or even Mark Webber – in a Williams-BMW?

It could be the biggest F1 shake-up in years. **1**

**'I believe DC has never quite recovered from the personal anguish generated by that fiasco at Interlagos. A fortnight later he comprehensively screwed up his qualifying run at Imola... Since then his season has unravelled'**



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## DRIVER MOVEMENTS

# Will Montoya join McLaren for 2005?

In this round of contractual musical chairs, Ron Dennis won't stop the music until the Colombian is ready to sit

Juan Pablo Montoya is the key piece in a Byzantine game of Formula 1 chess involving the drivers of the top four teams. The pilots and their managers are vying for seats which may, or may not, become available as a number of contracts expire at the end of the 2004 season – or possibly even earlier.

Montoya's name has been linked to a McLaren drive alongside Kimi Räikkönen in '05, replacing David Coulthard. Under Coulthard's existing contract, which expires at the end of the '03 season, the team have until the end of August either to re-sign or release him.

McLaren boss Ron Dennis has refused to make any comment on the contractual situations of any of his three leading drivers – Coulthard, Räikkönen and Alex Wurz – until the end of August. There is more to his silence than mere non-cooperation; he is waiting for a resolution of a contract tussle at Williams before finalising his '04 line-up. Montoya's manager Julian Jakobi wants to increase the amount of money his driver gets from his current contract; Frank Williams is having none of it, despite Montoya's ever-more convincing credentials as a genuine title contender. In the unlikely event that Montoya decides to walk out of Williams (a possibility refuted by Jakobi), in the wake of a dispute over money, Ron Dennis wants to be in a position to snap him up: hence his prevarication

**JUAN PABLO'S MANAGER WANTS TO INCREASE HIS DRIVER'S SALARY. FRANK WILLIAMS IS HAVING NONE OF IT**

over re-signing his current trio.

Frank Williams made it clear, however, that he has a bulletproof contract with Montoya until the end of 2004 and, even though some tentative approaches have been made on McLaren's behalf, there is no question of his being released earlier.

It seems increasingly likely, therefore, that David Coulthard, who qualified five places and 0.8sec behind Räikkönen at Hockenheim, will be winding up his McLaren career at the end of next season.

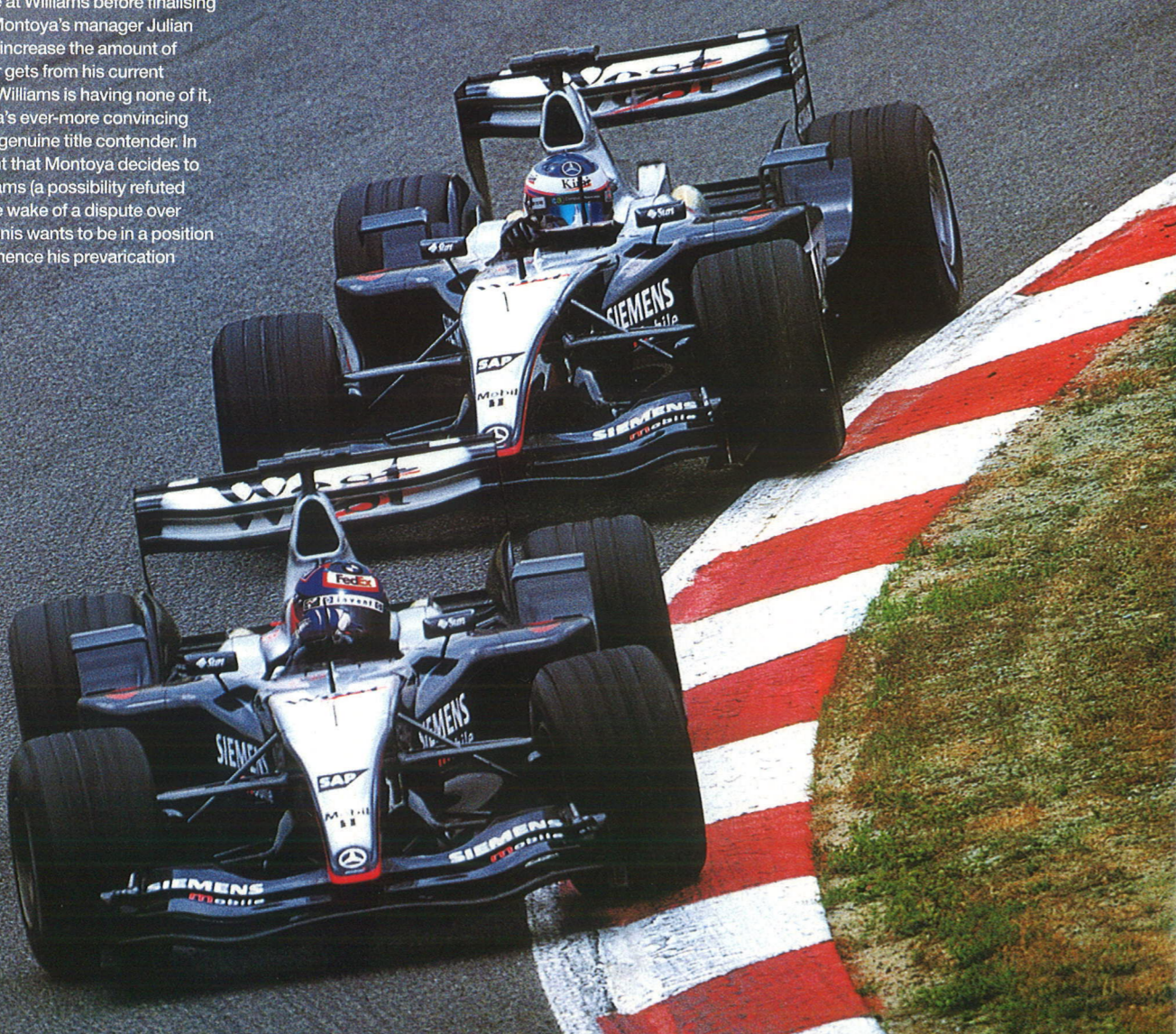
Nevertheless, the element of uncertainty surrounding Montoya's status has been cleverly exploited by Willi Weber, manager of Michael and Ralf Schumacher.

The ever-astute Weber is understood to have murmured into Frank Williams's ear that it might be a wise idea to sign up Schumi Jr on an extended long-term contract to guard against the possibility of the BMW-propelled team being left in the lurch with neither of their two winning drivers at the end of '04.

Williams is too canny to buy into this line of thinking, having already seen Weber's sales pitch to Toyota and McLaren on Ralf's behalf meet with an underwhelming response.

Ralf, who earns around \$10m with Williams, is in no position to play hardball and – with the anticipated glut of top-line drivers likely to be available at the end of '04, he will probably have to take a pay cut to stay in his current job.

**F1 Racing** has taken a speculative look at how the future McLaren driver line-up might look. What price Räikkönen and Montoya in MP4-20s for Melbourne 2005?



## 2004: static at the top, all change in the midfield

Ferrari, Williams, McLaren and Renault will run unchanged line-ups. Below that, it's gonna be a right old switcheroo. The Minardis, as usual, will go to the highest bidders (whoever they are)

### > Ferrari



M Schumacher R Barrichello

Schumi is signed to the end of '06 and likely to honour the contract. Rubens, despite his majestic Silverstone win, is contracted for just one more year. Who will replace him for '05? Fisichella and Massa have high hopes, but Rubens himself is still favourite. Michael doesn't want a megastar team-mate, remember.

### > Williams



JP Montoya R Schumacher

Next year, Ralf will become the longest-serving Williams driver of all time. Despite interest from McLaren, JPM will probably stay at Williams for '04 – but he is likely to move to Woking for '05. Why? Because (1) he feels underappreciated at Williams, and (2) Schumi won't allow him to join Ferrari in 'his' time.

### > McLaren



D Coulthard K Räikkönen

It suits Ron Dennis to re-sign poor DC for one more year – if only to widen his options in terms of replacements (choose from Montoya, R Schumacher, Barrichello and Fisichella – whose current contracts expire at the end of '04). As for Kimi, a McLaren man through and through, he ain't going nowhere else.

### > Renault



J Trulli F Alonso

Alonso, the most highly rated member of Flavio Briatore's personal stable, will be aiming to give Renault their first 21st-century grand prix win next year – but he may then be targeted by a big-three team. Trulli will keep his drive for '04, despite early-season speculation that he might be ditched in favour of Webber.

### > Sauber



G Fisichella F Massa

Next year, Sauber may become a test bed for aspiring Ferrari drivers – led by the mega-talented Fisichella. Alongside Massa (who is part-managed by Jean Todt's son Nicholas), he hopes to force his way in at Maranello via the sheer quality of his performances. Trouble is, feisty Felipe has exactly the same plan.

### > Jordan



A Wurz R Firman

If, as mooted, Mercedes come up with a deal to supply Jordan with customer V10s, the highly regarded Wurz could get the race drive he so richly deserves. He'd bring EJ's team plenty of valuable McLaren know-how, too. Firman might well hold onto his drive in '04 – thanks to title sponsor B&H, who want a Brit.

### > Jaguar



M Webber J Wilson

Webber is rapidly making Jaguar Racing his private fiefdom and is contracted until the end of '05. Wilson had a rather troubled Jaguar debut at Hockenheim but is clearly very quick. If he continues to impress his new bosses, he could well drive for the team in '05 – unless Wurz or Davidson gets the nod instead.

### > B.A.R



J Button T Sato

David Richards is a very big fan of 'Our Jense' and has repeatedly talked about winning championships with him. It's rumoured that Sato has a firm race contract with B.A.R for '04, reflecting Honda's steadily increasing input to the technical equation. But the canny Villeneuve will already be lobbying hard.

### > Toyota



O Panis C da Matta

Next year will be crucial for Panis, who will be looking to translate his excellent technical feedback into hard results. If he manages it, Toyota will probably take up the option on his contract for '05 and '06, despite his advancing years. CdM will stay for '04 and may be re-signed for '05, as long as his improvement continues.

### > And it'll (probably) be bye-bye to...

If our extrapolations prove correct, Heidfeld, Frenzen and Villeneuve will be out in the cold for '04. Heidfeld has conspicuously failed to shine this year and may therefore struggle to stay in F1 in any way, shape or form. Frenzen could replace Wurz as McLaren's 'third driver' if Alex gets a race drive elsewhere (eg, Jordan, Jaguar or even Sauber) – while Jacques just might hang on at B.A.R if he cuts his \$19 million salary by about 80 per cent.



N Heidfeld H-H Frenzen J Villeneuve

## Splash 'n' dash

### Man of the Year: get ready!

MOTY – the 'Oscars' of F1 awards – is almost with us again. Winners of these most coveted gongs will be revealed in our December issue, but before then, we need your input. The next two issues of *F1 Racing* will carry MOTY voting slips. Use them to make your hero a Man of the Year.



### F1 puts best feet forward

F1 stars including Nigel Mansell, Martin Brundle and Stirling Moss have donated copies of their footprint to the Footprint Campaign organised by Starlight, a charity for terminally ill kids. The footprints will be auctioned to raise cash in aid of Starlight. Call 0207 262 2881 or email info@starlight.org.uk or get full details from www.starlight.org.uk

STARLIGHT children's foundation



### Vote Lou – you know you want to

Louise Griffiths, oft-seen in the F1 paddock in the close company of boyfriend Jenson Button, is sixth favourite to win series two of *Fame Academy* (at odds of 8/1 with Coral). She can't half sing – use your vote to help make her a winner!



Splash 'n' dash

▽ FIA reveal 'get tough' policy

A British Army Apache helicopter was one of the star attractions at the British GP. It flew in to Silverstone as a 'thank you' to FIA staff who helped the army revise their helicopter refuelling tactics by teaching them a few tricks of the F1 pit crew trade. Apache refuelling times have been cut by 50 per cent.



▽ Big Arnie: he's back in white

Hollywood hyperhunk Arnold Schwarzenegger (below) trumped even the grandest of F1 egos when he toured the Silverstone paddock at the British GP. His visit was courtesy of Jaguar Racing, whose cars carried logos for his new blockbuster, *T3*. His only comment? "Asta la vista, baby." Golly...



▽ F1 Racing: on the road again

Did you see us? The *F1 Racing* crew were out in force at the British GP: editor in chief Matt Bishop drove a Jaguar XJR; executive editor Anthony Rowlinson pedalled a Nissan Patrol (and his bike); Stewart Williams, managing editor, chose a Nissan Almera Tino; while art editor Alison Lane opted for a Nissan Terrano.



Bridgestones could be losing their grip on at least one of their F1 teams – if the FIA plays ball

BRIDGESTONE v MICHELIN

F1 rubber: the tyres that bind

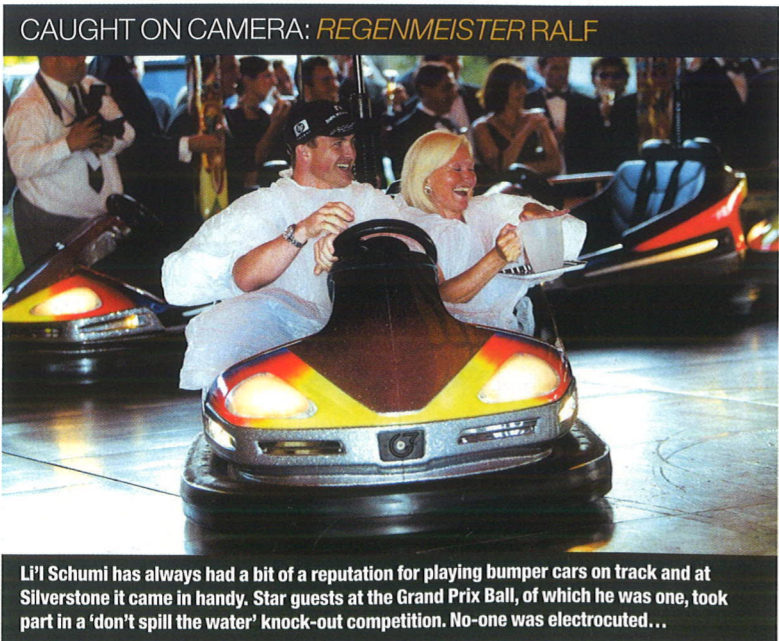
Of the five teams currently contracted to run Bridgestone tyres, only Ferrari, whose relationship with the Japanese company is legendarily close, are not exploring the possibility of switching to Michelins for 2004. But while Michelin have been approached by B.A.R., Jordan, Sauber and Minardi, it is far from certain any of them will get lucky.

Each has a binding Bridgestone contract, which it would be legally tricky to side-step. In addition, the FIA's sporting regulations stipulate that no tyre manufacturer may supply more than 60 per cent of the field. Assuming 10 two-car teams for 2004 – just as there are this year – that means only one would be allowed to switch. (Should any of the Bridgestone five go to the wall over the winter, Michelin would be left with five-ninths of the field, or 56 per cent. It would then be impossible for any team to switch

to Michelins, since doing so would push their share to an illegal 67 per cent.)

Moreover, it may well be that Michelin don't even want a sixth team. Their current quintet is already blue-chi – Williams, McLaren, Renault, Jaguar and Toyota – and adding to their client base would increase costs without conferring any tangible benefit... unless, of course, an OE (original equipment) arrangement were to be struck with Honda. If a deal to equip new Honda road cars with Michelin tyres were done – a highly lucrative contract – then the Michelin board might well be persuaded to add B.A.R.-Honda to its stable.

And, yes, Michelin boss Pierre Dupasquier has been seen talking to David Richards in the B.A.R. motorhome on more than one occasion at recent grands prix. • See Bridgestone feature, page 72



Li'l Schumi has always had a bit of a reputation for playing bumper cars on track and at Silverstone it came in handy. Star guests at the Grand Prix Ball, of which he was one, took part in a 'don't spill the water' knock-out competition. No-one was electrocuted...



That gaffe: not R Dennis's fault after all

NOBODY'S FUEL: EXCLUSIVE

"It were me," says Goozée

For 30 years it has lingered as the tale of the champ, the mechanic and the dodgy fuel mixture which cost Jack Brabham a race win. But now, for the first time, *F1 Racing* can reveal the truth behind one of Formula 1's most enduring myths.

At the 1970 British Grand Prix, Jack (now 'Sir Jack') Brabham, leading, ran out of fuel within sight of the chequered flag and was passed by Jochen Rindt, who took the victory. Brabham coasted across the line to finish second (pictured above), but was livid at having lost the win. It emerged later that the fuel metering unit on his Brabham BT33 had been set on 'full rich' rather than the correct 'lean' setting appropriate for the race. The error increased the fuel consumption of the Cosworth DFV engine sufficiently to take the wind out of Black Jack's sails.

So who was the culprit? Legend has had it that the guilty party was none other than McLaren supremo Ron Dennis, that year working as a mechanic on Brabham's car.

But, no, the error was in fact made by Nick Goozée, co-mechanic with Dennis on Brabham's car.

Goozée, who is now managing director of Penske Cars, told *F1 Racing*: "It was my mistake. We were at Brands Hatch and there had been a bit of a panic getting the cars ready for the start. We always warmed up the DFVs with the metering unit set to 'full rich' but we were supposed to put them back to 'lean' for the race. In the mêlée I left the little wheel at 'full rich' and Jack ran out of fuel, as we know. I got quite a bollocking for it after the race, but fortunately Jack had already goofed once that year when he crashed out of the lead on the last corner of the last lap of Monaco, giving Jochen another win. It was kind of quits after that."

"For some reason Ron, who's still a good friend, incidentally, has always been blamed. It's good to set the record straight after so long."

Relations between Dennis and Brabham have been strained since Brands 1970. Maybe now's the time for them to bury the hatchet.

GOING UP

How Wilson bagged his Jag

Emerging Brit driver Justin Wilson lands deal with emerging Brit team, Jaguar Racing. Huzzah, yes? Well, yes... but, as always in F1, there's more to his elevation (for five races, at least) than meets the eye. *F1 Racing* has the low-down

Justin Wilson richly deserves his chance at Jaguar Racing, and the signs are that he is already impressing his new bosses with his speed, his enthusiasm and his no-nonsense attitude. And yet, although it had been clear for some time that the appointment of Antonio Pizzonia was ill-judged, and that Jag's bigwigs were becoming ever more impatient with Jungle Boy's inability to match Mark Webber's pace, the suddenness with which the sword of Damocles fell still came as a surprise even to the most well-informed Formula 1 insiders.

So how did it come about? *F1 Racing* suspects that the precarious financial position of Wilson's former team, Minardi-Cosworth, may have had something to do with it. In other words, although Minardi boss Paul Stoddart has publicly singled out Cosworth as one of his more

sympathetic creditors, the truth is that Ford Motor Company high-ups in the US view their wholly owned subsidiaries (such as Cosworth) as profit centres. They were therefore getting jumpy about the fact that Minardi were struggling to stay afloat. As a result, despite months of being patient, they wanted their cash. Problem was, Minardi couldn't pay.

Step forward Formula 3000 driver Nicolas Kiesa, a 25-year-old Dane with money behind him – a typical Minardi driver, in other words. Trouble was, Stoddart had no vacancy, and sacking either Wilson or team-mate Jos Verstappen was not a viable or sensible option – not from a performance, public relations or even legal perspective. Unless, of course, another suitable berth could be found for one of them.

Step forward Ford-owned Jaguar Racing, who were anyway looking to

off-load Pizzonia. They had already tried, and failed, to replace him with Alex Wurz earlier in the season, and were known to be considering Wilson, among others, as a possible Pizzonia replacement for next year.

Quickly and quietly, the relevant parties got together to strike a deal. In terms of expediency it suited everyone except Pizzonia: Wilson would go to Jaguar; Kiesa would go to Minardi; Kiesa's money would go to Cosworth; Minardi would live to fight another day; and everything in the garden (if not the jungle) would once again be rosy.

Wilson's long-term future is still not assured, however. His Jaguar deal is for the remaining five '03 races only and in that time he will have to prove he is worthy of a drive in '04's R5.

Jaguar announced Wilson's appointment on the Monday after the British Grand Prix. Their press release

expressed the hope that Pizzonia would remain as test and reserve driver, but the next day a statement from Pizzonia said: "Jaguar have offered me a reserve and testing role, but I have declined this. I now have to reflect on what happened and decide the best course of action to take." Anthony Davidson therefore remains the team's reserve driver.

In time Pizzonia may have to admit, whether he likes it or not, that while much of what happened to him was out of his control, he did not play a great hand at Jaguar – and that neither, more to the point, did his manager Jaime Brito (an experienced Brazilian TV journalist).

Senior Jaguar Racing sources indicate that Brito failed to ingratiate himself with the team at any level, and that the 'Brito factor' may well have hastened Pizzonia's demise.

• See Justin Wilson feature, page 86

LORENZO BELLIANGAI/AT; GLENN DUNBAR/AT; GARY HANKINS/AT; LAT; ARCHIVE; BRUNO LENOIR/GETTY IMAGES; OPPOSITE: MARK THOMPSON/GETTY IMAGES



'Our Jus', quietly confident in BRG. In his first Jag race, Hockenheim, he was quick straight out of the box

# F1 RACING

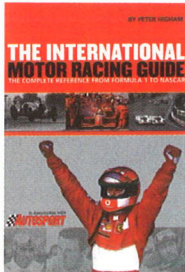
## Experience

Phone fans: win a mini moby Panasonic's delightful GD55 mobile phone is fast becoming the most desirable gadget in the Formula 1 paddock. Used by Olivier Panis and Cristiano da Matta, the GD55 is the world's smallest tri-band mobile phone. Just 75mm high and weighing only 65g, it is the next generation in miniature mobile phones. The picture below is a little smaller than actual size – but not much! To win call 09079 390006 and quote 'F1 Racing'.



## New bible of motor racing

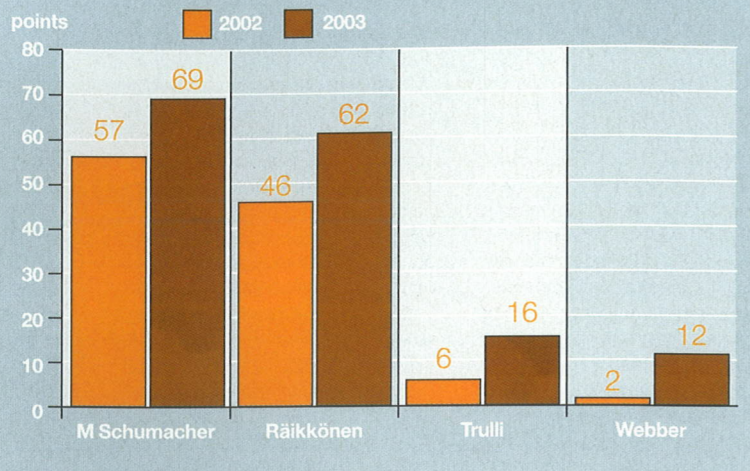
The International Motor Racing Guide compiled by noted stats guru Peter Higham has instantly become an invaluable reference work – and we have six to give away. It is an expanded edition of Higham's 1995 Guinness Guide to International Motor Racing and its fully updated F1 section gives GP fans a feast of figures to savour. To win a copy, call 09079 390007 and quote 'F1 Racing'.



**TERMS AND CONDITIONS**  
Winners will be selected at random from all phone calls logged by midnight on September 11 2003. Calls should cost no more than 30p. See page 4 for details

## GETTING THE POINT(S)

The chart shows how four drivers would have scored this year if their 2003 results (up to and including Silverstone), had been scored under the '02 points system. Looks good for Michael...



## TURNING THE TABLES

# New scoring system makes point

Among the myriad tweaks made to the F1 rules and regulations in advance of the 2003 season, was the introduction of a new points system. The 10-6-4-3-2-1 scoring table for the first six finishers, which had been in place since 1991, was replaced by scores for the first eight: 10-8-6-5-4-3-2-1.

The rationale for the change was a closer title race since repeat winners wouldn't be able to run away with the series, as happened in '01 and '02 when Michael Schumacher leapt four points further into the lead with every victory. This thinking contrasted with the philosophy behind the 1991 revision, when wins were rewarded with 10 points rather than the previous nine.

This year's change was also intended to reward more lowly teams than the big four of Ferrari, Williams, McLaren and Renault. With contemporary F1 cars achieving hitherto

unknown levels of reliability, the opportunities for lesser teams to score points were becoming ever fewer.

The new system has worked on both counts. World championship leader Michael Schumacher is only seven points ahead of second-placed Kimi Räikkönen, despite Michael's having won four times to Kimi's single victory. Under the '02 system he would have had an 11-point lead.

Lesser teams, too, are bringing home more points. Mark Webber, who this year has scored 12 points for finishing seventh three times and sixth twice, would have scored only two points under the '02 system.

Arguably the biggest loser this year is Giancarlo Fisichella. His sole score – 10 points for his Brazil win – places him 11th in the championship as of the British GP. Under the '02 system, he would have been eighth.

# The boy's a bit special

Your guide to F1's next hot property: Nicolas Kiesa

So, the young lad Kiesa is finally bringing home the bacon? Sorry?

He's D-D-D-Danish, silly. Ah yes. Très witty. The 25-year-old from Copenhagen replaced Justin Wilson at Minardi for the German GP to become the third Dane to race in Formula 1, following in the footsteps of Tom Belso and Jan Magnussen.



Fair to say the Minardi drive is a bit of a surprise then?

Not completely. Nic was British Formula Ford Champion in 1999, and while he showed little star potential in British and German F3, or his first year in F3000, things have improved greatly with Den Blå Avis in 2003.

Indeed. Won at Monaco, didn't he? He did, and while that was only because the certain winner, Bjorn Wirdheim, slowed just before the chequered flag, allowing Kiesa past, Nic had powered through from sixth on the grid. He was also third at the Nürburgring.

So is Kiesa's money talking, or have Minardi spotted a decent talent? Do you mean is he an Alex Yoong or a Mark Webber?

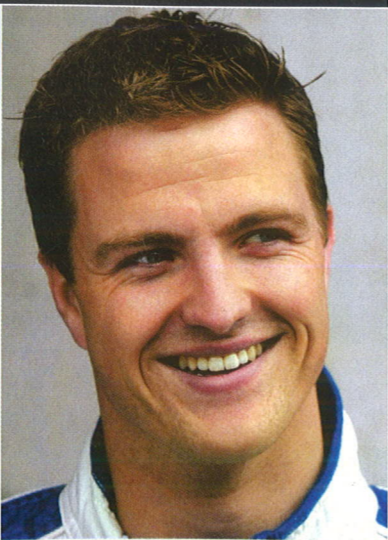
Precisely. He may not be as good as some stellar Minardi graduates such as Webber, Jarno Trulli, Fernando Alonso or his immediate predecessor, Wilson, but he's not an Alex Yoong, Fabrizio Barbazza, Esteban Tuero, Tarso Marques or Giovanni Lavaggi.

But surely he's only got a drive because his wallet's fat? Well, yes, he is hauling much-needed funds to Minardi, mainly from Peugeot, who have been backing his F3000 efforts (sad for them that Kiesa's cash will help foot Minardi's engine bill from Ford-owned Cosworth). But he'll keep Jos Verstappen honest this year.

## LOOKY-LIKELY No 41: WINNING SMILES



Ralf Schumacher  
Grin when you're winning



Justin Timberlake  
Groan when you're singing

## McLAREN: READY OR NOT?

# Why McLaren's MP4-18A may go west

It was trumpeted as the white knight of F1: the car that would end Ferrari's F1 hegemony. But, in truth, McLaren's MP4-18A has become more of a white elephant. Beset by a series of complex failures, this sophisticated stunner may never race

Highly placed sources within McLaren have confirmed that Martin Whitmarsh, the company's 44-year-old managing director, has survived an attempt by some insiders to be made the fall guy for dramas surrounding their new MP4-18A, which, it now emerges, may never race.

Despite a carefully crafted charm offensive designed to put an upbeat gloss on the new car's delayed debut, sources say Whitmarsh has been accused of not pushing the new project along with sufficient speed, after the initial 2003 F1 project was scrapped last August. McLaren at that point decided they would need to make a bigger step in performance than originally envisaged, hence the radical nature of the MP4-18A.

"That may have been the case, but Martin has survived to fight another day," *F1 Racing* was told.

Although the new car will take part in the pre-Italian GP test at Monza, it is not certain that the car will make its debut at the Italian GP proper – the last race of the European season. An appearance is even less likely if Kimi Räikkönen is still in contention for the world championship at the wheel of the current MP4-17D.

The MP4-18A has a lower centre of gravity and has proved very quick in recent tests. But it has also been beset with mechanical and structural problems. It has thrice failed the FIA

Testing times for McLaren and the troubled MP4-18A (below); it seems likely that that's all there will ever be. It may be doomed never to race

'IN REALITY THE MAIN ROLE OF THE MP4-18A WILL BE TO HELP DEVELOPMENT OF THE MP4-19'

side impact test. It has also been plagued with excessive vibration from Mercedes' all-new and lighter F0110P V10 engine. The vibrations have caused a number of secondary component failures. In addition, sources say the car has suffered from overheating because its exhausts are set too close to the gearbox and some rear suspension components. Mechanics have also complained that the car's packaging is so tight that it is extremely difficult to work on.

Whitmarsh would not be drawn on specific areas of concern, but said he was still hopeful that it would race. A number of barriers to its introduction remain, however.

"I guess it becomes unfeasible if it's delayed until Suzuka," he said.

"I still think we will race the MP4-18A, but with the self-imposed test ban, it is not appropriate to introduce it before Italy [September 14].

"We've got a test after the end of that ban, at Monza, and we will be taking it there. We are doing a fair amount of work on the car in the intervening period and that has got to be our goal – to be racing in Italy. But we will decide after that test if we are comfortable with the reliability and performance of the car."

In reality, whether or not the car races before the end of the season, its main role will be as a development vehicle for the MP4-19, a car that McLaren boss Ron Dennis says will be ready to run before the end of '03.

And whatever its nomenclature, the MP4-19 will share a great deal of the MP4-18A's heritage.

"We laser-etch the chassis type onto most of our cars' components," said one McLaren insider. "Our rivals might be interested in trying to get close enough to the MP4-19 to see how many of its parts have 'MP4-18' etched on them."

## > Feeling 18 again



M18 was poor in F5000 circa 1971...



... M19 won South African GP in '72

McLaren engineers despairing at the continued problems of the overdue MP4-18A can look to their own history for solace. The M18, built in 1971 for Formula 5000, was a bit of a hound. It won its first race, but then proved to be slower than its predecessor, the M10B. McLaren's next chassis, however, the M19, built for the '71 and '72 F1 seasons, was a much more competitive machine. Denny Hulme drove it to victory at the '72 South African GP and it took him to third in the drivers' championship, behind Emerson Fittipaldi (Lotus) and Jackie Stewart (Tyrrell). McLaren also finished third in that year's constructors' championship. So if history repeats itself, McLaren should be able to hope for much better fortune with the MP4-19 – which will start 2004 – than they have had so far with MP4-18A.

THIS PAGE: STEVE ETHERINGTON/LAT; REX FEATURES; OPPOSITE MAIN: MALCOLM GRIFFITHS/LAT; LAT ARCHIVE





At least the punters enjoyed the British GP, to judge from *F1 Racing's* bulging mailbag

Andrew Hall, our star letter writer, wins the superb Panasonic D-Snap SV-AV20 pictured below. It is a combined MPEG video camera, still camera, MP3 player and dictaphone

star letter

Open handicap

Having been to both The Open at Royal St George's and to Silverstone this week, let me say it's a good job Bernie Ecclestone doesn't have the power of life and death over the golf. The approach roads and toilet facilities make Silverstone's look five-star, and they never seem to have heard of electronic scoreboards. And do the true golf fans complain? They do not. Hands off Silverstone, Bernie – if you want to see true Third World facilities, go to an Open Golf Championship.

Andrew Hall  
Via email

Stag-gering good time

What is so bad about the British GP? I went to my first live GP for my stag day at Silverstone last weekend, and have to say it was the most amazing race experience. The facilities I had been told were disgraceful were more impressive than I imagined. The parking was well controlled and the traffic jams mild by commuter standards.

Andy Swanson  
Glasgow

Grand pix of the bunch

What can I say? I had a fantastic weekend at this year's British Grand Prix. Having now attended

several around the world including Australia, Barcelona, Monaco, Canada, Belgium and, of course, Silverstone, many times, I feel I have to congratulate all involved. It was the best I have attended. My husband took a group of 26 and all thoroughly enjoyed it.

Catharine Driver  
Rossendale, Lancashire

Hangaring it out at Copse

I don't know whether I was more amused or horrified to see that God-bothered track invader prancing up Hangar Straight, but it reminded me that the last time I saw anything like it was also at the British Grand Prix, in 1998, when a streaker leapt onto the circuit at Copse. Shame it was a bloke.

Jes Holland  
Dalston, London

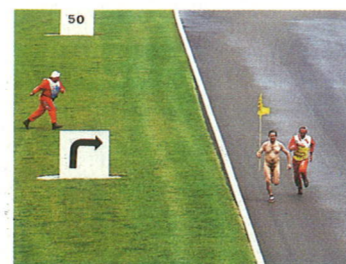
Pizzaman is topped

I read on a website that Jackie Stewart would rather "have given Pizzonia more time". I, too, feel sorry for Pizzonia, but Jaguar don't have that time. They need two bullets to realise their true pace. Let's hope they have them now.

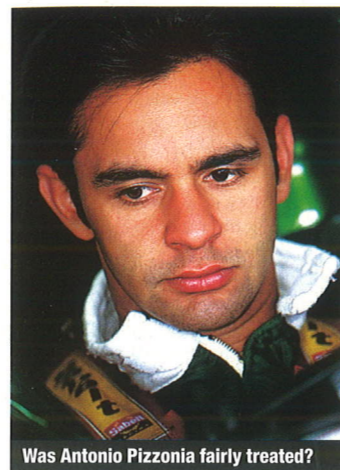
Bevan Oakes  
Via email

Brazilian bloodshed

This is the 'winter' of discontent for Brazilian drivers. Following the displacement of Bernoldi, Burti, Massa and, most recently, Jungle Boy Pizzonia, it now looks more than just a fluke. They left the grid for various reasons, but at least a couple of them were given the sack after being



Grand Prix, or merely grand-standing?



Was Antonio Pizzonia fairly treated?

out-raced by their team-mates.

Seeing that Rubinho still hasn't been offered a contract by Ferrari beyond '04 and noting the mixed fortunes of da Matta at Toyota, this once proud nation might soon be off the grid completely.

Daniel Dencik  
Copenhagen, Denmark

Fuelling the debate

There has been much debate recently about whether the FIA should publish fuel loads after qualifying. The simple answer is not to make teams carry race fuel on Saturdays. The cars can still go into parc fermé, but should be allowed to run low fuel levels for qualifying, then top up for the race.

Daniel Henderson  
Via email

Power players

I do not expect you to publish this letter since it promotes, albeit infinitesimally, one of your rivals. However, I very much enjoyed the latest *Business F1* magazine, and was interested to note that it listed no fewer than three *F1 Racing* journalists (Matt Bishop, Peter Windsor and Alan Henry) in its 'We name the 150 most powerful people in F1 today' cover story. More, er, power to your collective elbow, gents.

Jack Puttick  
Pulborough, West Sussex



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The official fuel consumption figures in mpg (l/100km) for the Clio 172 2.0 16V are: Urban 25.2 (11.2), Extra Urban 44.8 (6.3), Combined 34.9 (8.1). The official CO<sub>2</sub> emission is 194g/km.



# Tyred and emotional

From lost cause to racing sensation, the Williams-BMW FW25 has gone through a total character transformation, courtesy of a radical rethink on which comes first – aero or tyres. Meanwhile, what of Ferrari's reverses? Do they start to explain why Williams are suddenly looking so good?

Words Peter Windsor Photographs Darren Heath

Juan Pablo Montoya and BMW-Williams made nonsense of their opposition at Hockenheim, winning by 65.4sec from the pole, setting fastest lap by nearly a second and, in the absence of their closest rivals, taking a giant leap towards Michael Schumacher's world championship. It was a fluid, beautiful drive, devoid of error and perfect in its three-stop symmetry – an age away, it seemed, from days earlier in the year, when the FW25 was

still young and even engineers close to the car were writing it off as a lost cause: the FW26 was actually the talking-point as April turned to May.

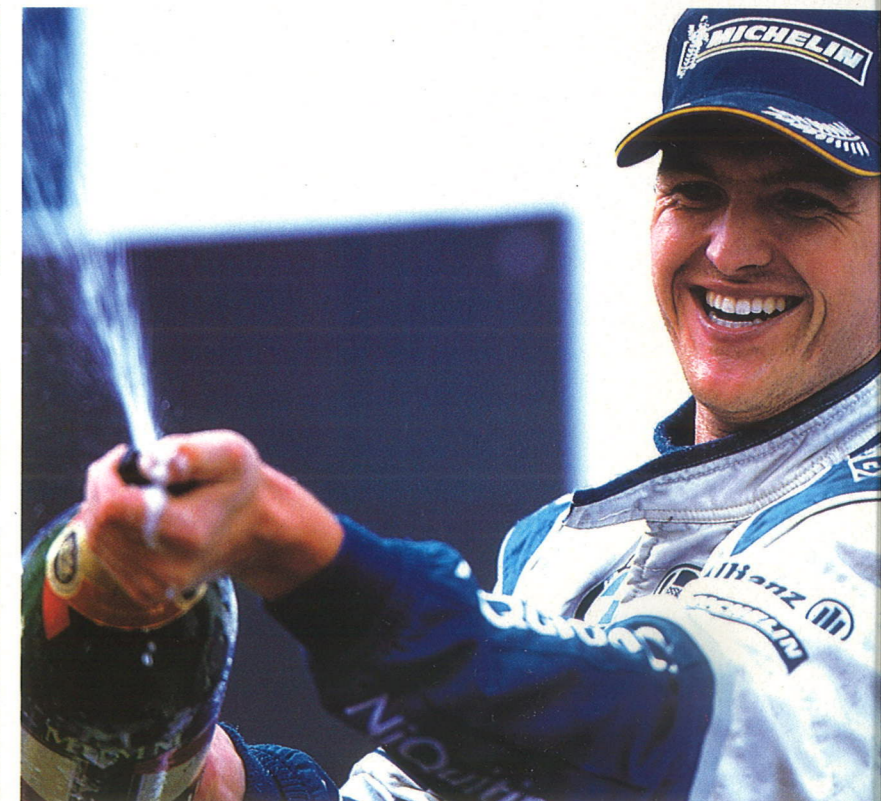
Yet a change in ethos, as well as a change in set-up, breathed new life into the unloved FW25. Consistent with Williams's partnership with BMW, and with their potential ultimately to sell out to the German company, the average age of Williams engineers had dropped rapidly over the previous few

years; and, out of character for a team renowned for their low head-count, but again in concert with merger patterns, Williams now have about as many engineers at the factory as do arch-rival McLaren.

And, of course, there had been growing pains. Williams's aero department had been as unstable as the air behind the FW24's rear wing. Geoff Willis, one of the old Williams stalwarts, left for B.A.R. Others in his team departed shortly afterwards. On the track in



'EVERYTHING CHANGED AT MONACO – WHEN A NEW CHARACTER WAS INSTILLED IN THE CAR'



The pain in Spain (top) would soon go; Monaco (above) was the big turning point – leading to the European GP (opp), a Williams one-two and joy for Ralf (above right)

2002, meanwhile, the FW24 seemed to eat its rear tyres. As a result, for their next car, the Williams designers moved as much weight as possible towards the front of the FW25: it is a short-wheelbase car with a six- rather than a seven-speed gearbox.

The FW25 from the start appeared to be more agile through slow-speed corners – more driveable – but its overall grip level, whether aerodynamic or mechanical, quickly proved not to be superior to that of its nearest Michelin rival, the year-old McLaren MP4-17D. Williams spoke optimistically of the FW25's development stages being much faster than those of its predecessor, of its production systems being hugely streamlined, but still the bare fact remained: the Williams FW25-BMW, armed with a brilliantly quick engine, was not going to win the championship; that, in any event, was how it seemed in early April.

Everything changed at Monaco, on the Friday rest day, when new suspension settings were fitted to the car – no, more than that, when a new character was instilled in the car. Rather than trying to maximise downforce by running the FW25 as stiff as possible, as they had run FW24, on Friday at Monaco the FW25 was changed into a much more compliant car. *Make the tyres work. Make the tyre compound work. Maximise their stiff sidewalls, soft compounds and large contact patches. Give the car more suspension travel. Sit the tread on the surface.*

Of course, it wasn't easy. Every engineer in the business wants to maximise the performance of his tyres. In F1, though, aerodynamics rule. Set-up is compromised if aero can be improved – and, after that, things get blurry. Here, at Monaco, Williams were taking a different route: make the tyres

work, then build in the aero.

And – just like that, having in effect desensitised the aerodynamics – Williams suddenly found their sweet spot. They could have an imbalance – too much understeer, too much oversteer – but still they could produce the lap times. They could find near-perfection the logical way – less front wing, more rear wing – but now the talk was of taking poles and winning races.

No one at Williams steps forward to take credit for these changes; BMW-Williams today (with emphasis on the BMW) is as corporate as... McLaren-Mercedes. Only the very top guys are allowed to give interviews. There's no doubt, though, that Frank Dernie's return to the team as an 'engineer without portfolio' is a good example of an experienced, broad-brush engineer working in apparent harmony with less experienced, but highly specialised, ►



# RACE READY!

Sunday afternoons (and come to think of it, every other day) will never be the same if you win Panasonic's European TV of the year, complete with DVD home cinema system. And you know what? We'll throw in a set of Olivier Panis' racegear as well.

## > Title chase: too close to call

Williams's return to form – from zeros to heroes in half a dozen races – may not be the miraculous renaissance it appears. Granted, the Grove team have done an excellent job, and the FW25 is now a far-better sorted machine than it was when the paddock was alive with whispers that Frank's boys had lost the plot. But, hands on hearts, they know their improvement has been flattered by the failings of others – and first among those

others is Bridgestone, whose tyres have been outclassed by Michelin's ever since Monaco. At sunny Hockenheim the gulf was wider than ever. So, although Michael still leads the championship, will he win it? Or will Bridgestone lose it for him? Chances are, with the Hungarian Grand Prix next (whose high temperatures are likely to favour Michelin by some margin again), Juan Montoya will score heavily – as, indeed, he also should

at Monza, where his BMW engine's 920-odd horses will take some beating. Then there's that man Kimi Räikkönen, who is only nine points behind Schumi in the title chase – in other words still very much in touch. His MP4-17D should go well in Hungary – and, if it should fail to shine at Monza, it's still possible that the fast-but-fragile MP4-18A could make a surprise appearance at Indy and/or Suzuka. Grippin', innit? **Robert Holmes**



'WOULD THE FW24, FITTED WITH THE FW25'S LATEST SUSPENSION GEOMETRY, HAVE BEEN A BETTER CAR?'

colleagues. Engineers like Dernie, who have been around since the early days of ground effect, bring an overview of *what makes a racing car work*. The trick, of course, is to be able to impart that knowledge without ruffling feathers. As a number of good engineers have found to their cost in the past – Sergio Rinland and Tim Preston at Sauber being good examples – massaging the egos of the incumbent is actually more difficult than identifying an engineering problem and designing a solution.

We have, then, a very quick, short-wheelbase, conventional-aero FW25. Where does this leave the long-wheelbase Ferrari F2003 and the twin-keeled McLarens?

On paper, the F2003 makes perfect sense. You make a great racing car greater by... giving it more downforce. And a longer car, on paper, will generate more downforce than a shorter one, give or take the

mechanical implications and the importance of the position of the wheels relative to wings, exhausts and radiator ducts etc. Yet, when Michael Schumacher and Ross Brawn look at Williams's slow-corner performance, one wonders whether they yearn for a Ferrari slightly more nimble – for the F2002, indeed; equally, when they see that Williams and Renault are able to run ridiculously soft compounds for full race stints, do they wish for stiffer-sidewalled, squarer-shouldered Bridgestones?

Brawn no doubt believes 100 per cent in the concept of the F2003, a car which is perfectly adapted to its Bridgestones – but this in turn begs a question of Williams: would the FW24, fitted with FW25's latest suspension geometry, have been a better car? Some Williams insiders say yes, for a good long-wheelbase car should in theory always generate more downforce than a

good short-wheelbase car. McLaren? With car systems and packaging inferior to those on both the Williams FW25 and the Ferrari F2003, the old MP4-17D nonetheless continues to develop remarkably high – and race-winning – grip levels. Williams, with their new ethos, are looking again at the twin-keel concept – something that should look very nice indeed when their new (yaw, roll, twin-car) wind tunnel is up and running. Ferrari, meanwhile, look set to stay more or less on the same development stream. It currently features so many great individual components that the risk of designing a completely new car around the twin-keel concept (less rigid structures, more pitch sensitivity) is not worth taking.

For now. **1**  
 • See Hockenheim race report on page 134

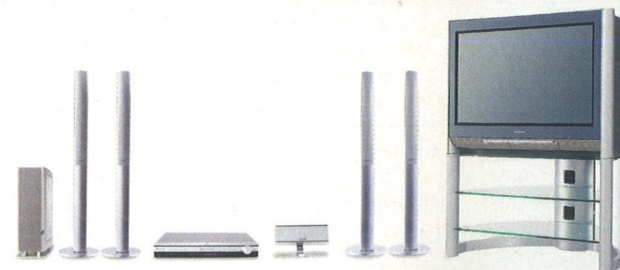
Montoya (above) was almost embarrassingly superior in Germany, and claimed second in the French GP (top), two of six podium spots in a row, and quite possibly of more to come



Question: What are the nationalities of Panasonic Toyota Racing team drivers, Olivier Panis and Cristiano da Matta?  
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**TECHNICAL DIRECTOR:** BMW.WILLIAMS F1

# Patrick Head

On why the car's better, sorting the BMW deal, Ralf and Juan – and retirement

**You started the season a long way back, but now you're title contenders. How did you do it?**

With a lot of effort. Part of the reason why the slope of improvement seems dramatic is that the car was a long way behind its potential. We knew the aero figures were not especially strong and knew what we needed to do. We were confident that the fundamentals of the car, mechanically and structurally, were good. But it wasn't as if the car, *boof*, came good at Monaco or something like that.

**How big an influence has Michelin's apparent improvement been?**

Certainly the Michelin tyres took a good step forward over the winter and towards the end of last year with improved consistency and tougher compounds and improved stability. It just strengthened the whole programme.

**You have finally signed the BMW deal. Why did it take so long?**

It was a pity it got spoken about outside, and it wasn't us saying things. There was a discussion about establishing the principles on which we would work together technically, and areas in which BMW would be involved, how the responsibilities and authorities would be split, the mechanisms by which we'd work together. And that took two or three months. Then there were commercial discussions.

They came out of the box with a very aggressive approach commercially, which was unsustainable from our viewpoint, without considerable changes to the authority over areas of the car. They started in a position saying they were going to provide less money and we couldn't have more space to sell on the car. It was an unworkable situation for us and it just took a long time to get something sorted out which we were comfortable enough that we could work with.

**Did BMW ever want to take a percentage of the team?**

No.

**Were the talks as difficult as they appeared to be from the outside?**

I don't know whether Gerhard [Berger] felt it was a good thing to rattle our cage or something like that, but Frank and I have been around for quite a long time. We weren't

at all happy about the performance we had on the track, but we hardly needed to read negative comments in the press in order to say: "Ooh, that's a negative comment. I'll go and work harder, or go and do a better job." BMW considered that their engine had been fully competitive from the beginning of 2001, which I think is correct. Therefore their view was that it was up to us to match them. I couldn't argue with that. But I'm not sure that complaining to the press is that effective [a way] to make their situation better. But in this business everybody gets on when you're winning, so since Monaco the relationship has improved.

**In what way were Williams not happy with Ralf Schumacher's performances at the beginning of the season?**

I think Ralf was disappointed that the new car wasn't quicker and meanwhile there were races where Juan [Pablo Montoya] was qualifying third and Ralf was 16th or 17th or something, which was hardly ideal. I think Frank had a quiet word.

**How has Ralf turned himself around?**

As the car has improved, I think Ralf has been able to extract more from it.

**Is it fair to describe Ralf as a very fast driver but not a racing driver?**

It has been suggested that if he qualifies on pole and goes driving off into the distance that he goes very well, but if he has to mix it that... [pause] I can't really comment on that. I have seen Ralf overtake people on the track.

**Do you think Ralf has more difficulty than other drivers challenging Michael?**

No.

**How has Ralf been able to turn the tables on Juan this season?**

The qualifying comparison [eight-three to Ralf as of the British GP] is a concern. One would have to say that Juan and his engineering team are not doing as good a job as Ralf and his team and we have to work out why. Juan has very fast hand speed [on the steering wheel] and I think Ralf doesn't. If the car is tail-endy and inconsistent, then Juan is prepared to go closer to the edge. And if the car gets better and is less likely to step out, then Ralf is able to exploit the potential better.

**You've said you would stay at Williams at least until you were in a position to compete for the championship again, and now you've achieved that. So how long do you see yourself staying on?**

It is very dangerous to give absolute dates. I know this business needs 100 per cent commitment. I'm a fairly realistic person and if I think I can't bring to Williams what I think a technical director needs to bring and we can find somebody better, then I will step down.

**Are there any plans in place for a handover from you and Frank?**

There are no specified times, but Frank and I are well aware that we must build a structure which doesn't rely solely on ourselves.

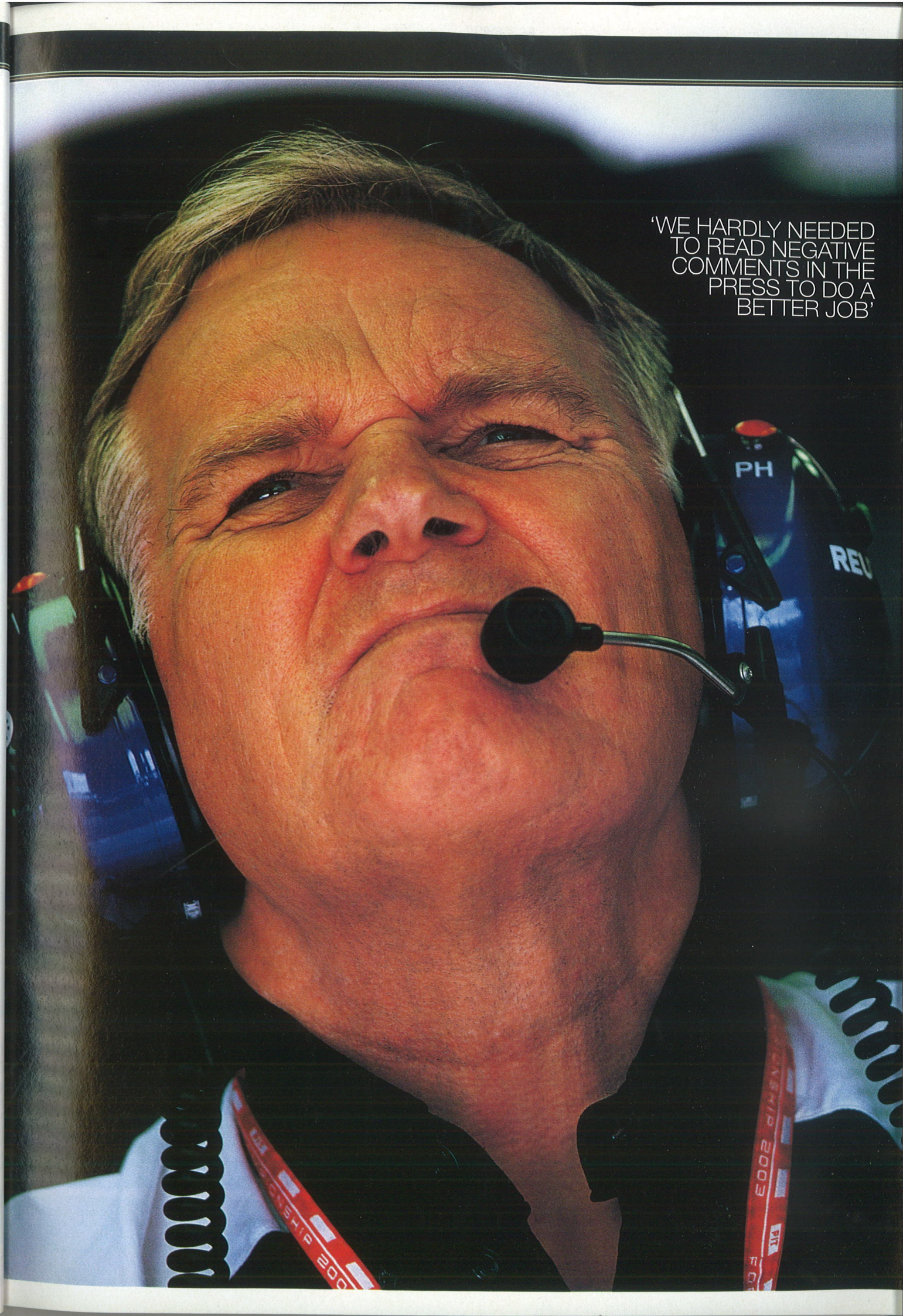
**How close are you to that?**

We're working on it. **i**



With Ralf Schumacher in Canada, 2003: "When Ralf hasn't overtaken his brother, there's always been a very good reason"

MAIN: DARREN HEATH; BRYN LENNOX/GETTY IMAGES



'WE HARDLY NEEDED TO READ NEGATIVE COMMENTS IN THE PRESS TO DO A BETTER JOB'

 **SEAT** *travel alternatives*  
**Hungarian Grand Prix**

THERE'S MORE TO BUDAPEST THAN THE DANUBE. IT HAS A THRIVING ARTS SCENE, CAFÉ CULTURE AND A RATHER BIZARRE CELEBRATION OF ITS CHEQUERED COMMUNIST PAST



It has been a long journey to the Hungaroring – if only you could handle it as easily as the car has – was it two or three days on the road? Hmm, brain's not responding.

The grand prix's over and the grandstands are empty, but before contemplating your next move, find a bed and catch some kip – adrenaline's a great thing until it exhausts even itself.

Now it's fairly safe to say that Hungary isn't a country on most people's 'places to see' list, which in a way is one reason why you should make the most of being in the land of the Magyars. Another is that this European city is so packed with sights that it'll make your eyeballs pant – there are 223 museums and galleries, 35 cinemas, 12 concert halls and – well, that's just the cultural stuff and you've long since run out of fingers, thumbs and toes.

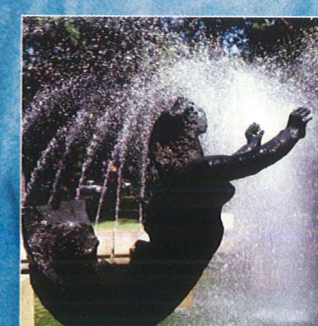
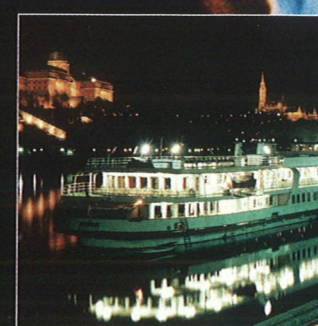
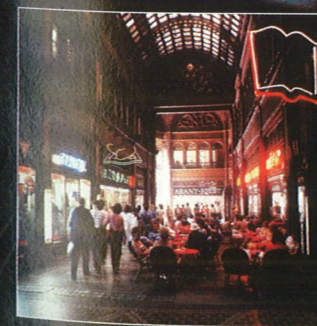
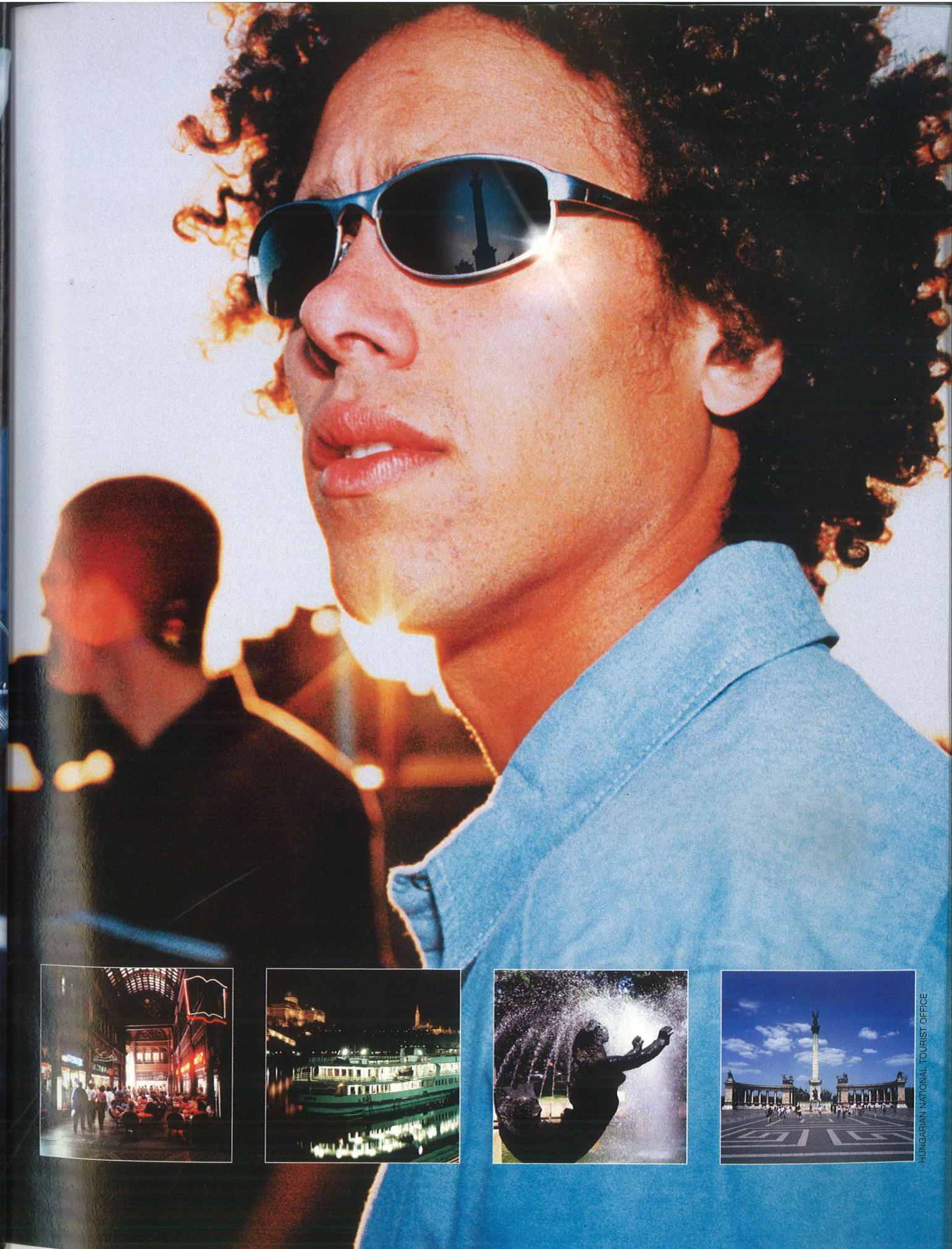
Head south-west from the Hungaroring for about 20km and you'll be right in the midst of Hungary's capital, Budapest. Flowing through

the heart of this city is the mighty Danube river – not bisecting it because this was once two cities: on one side there are the hills and valleys of Buda; on the other is the low-lying flatness of Pest.

Take advantage of this time of year. Like many European cities, it is holiday time here, so most Hungarians will be elbow wrestling and trying not to sit on each other in one of the many crammed coastal resorts. Nice weather, unpleasant experience.

Once you've splashed in the thermal baths, lounged about in cafés, goulashed in the restaurants and enjoyed bar life, take to the road for some old-fashioned sightseeing in this very architecturally diverse city.

Take a closer look at the Danube – is that *really* blue? – by ambling over a footbridge to Margit Island. On the island, you exchange the city and its urban furniture for peace, idyllic gardens and a bird-song soundtrack. If the summer heat is getting to you, then why not dive into the open-air Palatinus swimming pool? Ah, cool water.



HUNGARIAN NATIONAL TOURIST OFFICE

'INSTEAD OF PULLING DOWN AND VANDALISING THE INSPIRATIONAL LEFTIST STATUES, the Szoborpark Museum has turned them into a sort of Communist theme park'

Make the most of the thriving arts scene in the capital with a visit to the exhibition hall on Heroes' Square, which will never disappoint the cultured observer with its lavish, tongue-twisting selection of temporary contemporary artists' exhibitions.

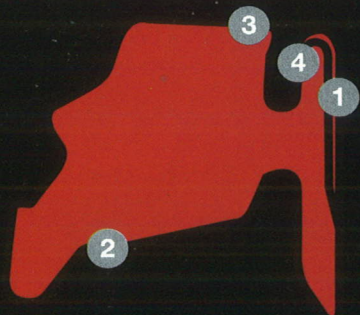
What has that got to do with heroes? Well, the centrepiece of the Square is the Millennium Monument – a 36-metre tall column with the Archangel Gabriel on top towering over a congregation of statues, which are framed by two giant colonnades. Who are they? These large bronze representations are Hungary's finest kings, princes and commanders. It was built for the Millennium celebrations held in 1896 to commemorate 1000 years of Hungarian history. Needless to say, as Hungarian is only spoken in Hungary, their names are quite unpronounceable.

When you've finished moseying along, return to the car and go off the beaten track to see more of this bohemian city's illogical nature in the South Western district. Dodge, weave, nip and tuck is the driving

style to adopt – keep your wits on board, be assertive and you'll be awarded respect on the road. Well, at least the car will as the locals check out the moody stance, spoilers and gunmetal rims that hint at the SEAT Leon Cupra R's menacing potential.

Far from getting all stropy and sulky about its Communist past prior to the political changes in 1989-90, Hungary has come up with one of the most unusual – no – extraordinary sights in the whole of Europe. Instead of pulling down, bashing and vandalising all the inspirational leftist statues which once dominated large open spaces like a school bully, the Hungarians kept them and the Szoborpark Museum has turned them into a sort of Communist theme park. Lenin, Marx, Engels, Dimitrov and Ostapenko all strike such uplifting poses, while others feature mere mortals struggling in their toil for some unattainable social nirvana. As fascinating as it might be for tourists, it does make you wonder if the locals really like being reminded of this former life.

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## Hungaroring

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**3 Corners 12-13:** The second new section is the final chicane. The track between corners 12-13 has been straightened to encourage closer racing and overtaking.

**4 Corner 14:** The final hairpin before the start/finish line. Entry speed and track position are key to a decent 'drive' out of the hairpin and the chance to overtake.

# RAIKKONEN VS ALONSO

## Welcome to the future

And here it is, in the form of two F1 young guns who look like they've been sprung from central casting: enter stage left Kimi Räikkönen, the Espoo ice man; and stage right Fernando Alonso, the Latin bullfighter from Oviedo. Still in their early twenties, they hold the future of F1 in their awesomely skilled hands. Sit back and watch...

Words Peter Windsor Main photograph Neil Cooper

They are in many ways interchangeable, but the one thing that's clear is this: Kimi Räikkönen is now what he is because he is a winning driver for McLaren-Mercedes – just as Fernando Alonso is very much defined by the Renault/Flavio syndrome. Swap them around and things wouldn't be the same.

You can imagine it: Flavio mumbles something incomprehensible to Kimi; Kimi

monotones back. Or, worse: Fernando and his mates are in the McLaren Communications Centre, savouring a Spanish moment – keep the noise down please, keep the noise down...

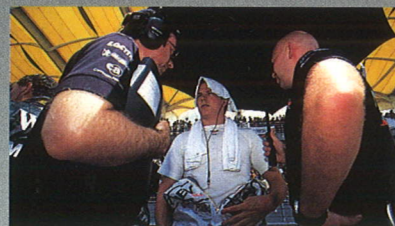
These things add up, of course. Kimi knows when to smile, when to talk and when to stay silent; and, because of that, he optimises his job parameters in a very meticulous McLaren way. When he was in

trouble in practice on Friday at Silverstone, with his car lacking balance and his pre-qualifying lap ruined by a major moment, he locked himself quietly in his motorhome room. No questions, no intrusions. Thirty minutes or so later, showered and fresh, he emerged to debrief and to attempt to make things better. Of frustration or anger there was no sign.

Equally, Fernando is now beginning to ►

Even the choice of teams gels perfectly for F1's hottest pair: Räikkönen (left) embraces the clinical excellence of McLaren, and Alonso the warmth and camaraderie of Renault





A pit lane start and puncture in Canada (above) for Kimi after a second in Brazil (far left) and his first win, in Malaysia. Car trouble hit Alonso (opp) at Nürburgring

feel the moves before they happen – even when those calls emanate from the brain of one of the sharpest men on the pit wall, Renault's executive director of engineering, Pat Symonds. Only once this year has Fernando not been in immediate, anticipatory agreement with Symonds over fuel strategy; on that one occasion he was subsequently shown to have been correct.

And so we have them – two jewels of the next generation, both learning and maturing in environments for which they seem to have been born. Then they were relatively puny prodigies; now they are supremely fit. And, no, they are not dissimilar...

Even before he became a regular Renault F1 driver, Fernando Alonso decided that the best place in which to base himself was England. One, it was good to be away from the colour of Spain – from the late dinners, from the potential dramas; two, England is still the centre of things; three, as a Renault test driver, he could use the factory gym, hang with the guys, talk to the engineers. He lives, then, still in Oxford. Most days, he and his trainer work out for a couple of hours, maybe three, in the Renault gym at Enstone. Then it's lunch with the team guys before driving back to his flat in the early evening.

He meets up with some mates (a couple of whom are Spaniards studying at Oxford), plays with his computer, then often cooks a meal – minus salt; Fernando does not like salt. And although his Spanish girlfriend, whom he has been dating since he was 16, plays cello, he also has no time for classical music. Not yet, anyway.

It is a calm, efficient existence – very different from the money-is-everything world of Monaco gossip and conspicuous consumption, or from Spain, where he is now mobbed wherever he goes. With Flavio as a boss, nothing would be easier than for Alonso to find social fame and glamour. Of course he can afford the boat, the apartment and the entourage. In reality, though, he needs the opposite: he wants the quiet life that will best enhance his career. The luxuries are limited to a better house for his parents or to buying dinners or plane tickets for friends.

Which is one of the reasons he has such a strong friendship with Jarno Trulli, for Jarno, too, is low-profile. If Fernando's team-mate was, for example, Jenson Button, you can imagine that the synergy would be less. As it is, Trulli is already unwittingly part of the Alonso package: he is a team-mate that Fernando can trust and therefore a

'BOTH FERNANDO'S AND KIMI'S CAPACITY FOR A QUICK LAP IS BROADER THAN THAT OF THEIR TEAM-MATES'

team-mate who can enhance the quality of Fernando's work. In return, Fernando genuinely wants the best for the guy. Jarno is Fernando's *team-mate* in the anachronistic – traditionally Spanish – sense of the word.

The relationship between the two is typical of Alonso's approach to life and to racing. When he was first selected to drive for Adrian Campos, in 1997, aged 17, he stunned the dignitaries at the award ceremony by congratulating his predecessors and promising that he would do all in his power not to betray their standards. A year later, with new records and the championship won, a replay of the year-old acceptance speech brought tears to the eye and new depths to the meaning of humility.

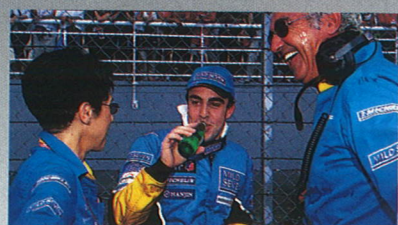
Kimi Räikkönen, too, could have gone the standard F1 driver's route – with the Rosberg management package favoured by his compatriot, Mika Häkkinen, a Monaco apartment and lifestyle-magazine glitz. Indeed, Kimi did approach Keijo Rosberg in his early days. Rosberg was already committed to other drivers and declined the offer. Kimi turned, instead, to Steve Robertson, the son of Dave, who was at that stage managing Jenson Button. Steve, too, is quiet and efficient – an anglicised Kimi ▶



THIS PAGE: STEVEN TEE/LAT; OPPOSITE: MANU DARREN HEATH; INSETS: STEVEN TEE/LAT; BRYN LEWIS/GETTY IMAGES



Just putting in a few practice laps.



Tyre trouble and failing brakes hurt Alonso at the European GP (above and far left). With Renault media chief Patrizia Spinelli and Flavio Briatore at Sepang, Malaysia

in some ways and a perfect man for McLaren, as it turns out. Fit and unobtrusive, he blends comfortably with the mood in the McLaren Communications Centre.

So no Monaco for Kimi: it is incestuous, too brash... and, yes, too close to Mika. The two Finns have enormous mutual respect. They are friends; they share snippets of life. Yet they are also too big for one another. Kimi is too successful to live in Mika's shadow; and Mika's achievements require their own space, their own world.

Kimi, then, lives in Switzerland, where the mountain air is rich, the tax is low and the people on the street let him be. He and Mark Arnall train regularly there and in the evenings Kimi, too, stays quiet, eating with friends, watching movies, playing with computers.

At the track, David Coulthard is the perfect team-mate for Kimi. He is experienced enough to be able to help with many answers; he has no 'side' in the sense that he wants to monopolise information, or, worse, hurt his opposite number; and Coulthard is intelligent enough to be able to piece together the jigsaw: McLaren worked beautifully with Mika, with Mika's Finnish way of life, and so it is with Kimi. He, DC, can still win with the right car on the right day but Kimi, clearly, is a perfect Mika replacement. While there are no number ones or number twos at McLaren, it's also

clear that DC's job is part-race driver, part-McLaren man. As a McLaren man, he cannot help being a part of the Kimi Championship Machine.

Close to both Fernando and Kimi in the garage are similarly minded race engineers. Paul Monaghan runs 'Gonzo' (as the team refer to Alonso); Mark Slade engineers Kimi. Paul worked at McLaren alongside Mark in the drawing office, earning the nick-name 'Pedals' because he forever seemed to be redesigning pedal layouts for Gerhard Berger. He left McLaren in 2000 to join Benetton and now runs the Alonso car with Rod Nelson. Monaghan says that Fernando remembers virtually everything he is told and adapts astonishingly quickly to new processes and concepts. "I think there's only been one occasion this year when he has forgotten to do something," he says, "and it wasn't that important. He is amazingly disciplined." (That "something" was to request a drink bottle before the Spanish Grand Prix: like most race engineers, Monaghan is reluctant to fit an accessory that potentially brings complication and weight unless his driver insists on it. He made this clear to Fernando at the start of the year.)

Mark Slade, who met his wife through Paul, has had to make few operational changes in the switch from Mika to Kimi. ▶

### >CV: Kimi & Fernando

**Kimi Räikkönen**  
**Job** McLaren driver  
**Born** October 17, 1979, Espoo, Finland  
**Lives** Espoo and Zurich, Switzerland

**Fernando Alonso**  
**Job** Renault driver  
**Born** July 29 1981, Oviedo, Spain  
**Lives** Oxford, England

**Career profile**  
**1987-1999** Karting  
**1999** Third in first car race in Formula Renault. Wins F Renault Winter Series with four wins from four races  
**2000** British F Renault champion. Seven wins, six poles and seven fastest laps from 10 races. Two wins from three races in European F Renault ch'ship  
**2000** Tests for Sauber-Petronas  
**2001** F1 debut for Sauber-Petronas; 10th, 9pts  
**2002** McLaren-Mercedes, 6th, 24pts  
**2003** to date McLaren-Mercedes, 2nd, 62 points (as of British GP)

<b>F1 races</b>	45
<b>Wins</b>	1
<b>Poles</b>	1
<b>Fastest laps</b>	4
<b>Points</b>	95

**Career profile**  
**1988-1998** Karting  
**1999** Euro-Open Movistar (Formula Nissan) champion. Six wins, nine pole positions and eight fastest laps from 16 races  
**2000** Fourth in FIA F3000 ch'ship. One win  
**2001** F1 debut for Minardi, unplaced, 0pts; Benetton-Renault test driver  
**2002** Renault F1 test driver  
**2003** Renault F1, 6th; 39pts (as of British GP)

<b>F1 races</b>	27
<b>Wins</b>	0
<b>Poles</b>	1
<b>Fastest laps</b>	1
<b>Points</b>	39



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## KIMI & FERNANDO



First for Kimi in Malaysia (far left) and third for Alonso after being F1's youngest-ever pole sitter; Alonso fourth at the European GP (left); Kimi in repose in Austria (below)

Obviously Kimi has been starting from a lower baseline of knowledge and experience but, in another sense, he is light years ahead because of his familiarity with computer analyses and systems. Like Mika, though, he would seem to have a relatively low threshold of boredom. Because he knows he can rely on guys like Slade and the other engineers, not to mention DC, who is meticulous in his analyses, Kimi isn't averse to sliding out early from debriefs and to leaving the track as soon as possible, back-pack in place, cap pulled down. This is McLaren at its best: the driver does the job, the team improve the car. It is never as simple as that, of course, as current life with the unraced MP4-18A clearly reminds us. Kimi, Mark Slade and the boys make it look pretty good, in any event.

Both drivers look great on the track, meanwhile. They use the road in more or less the same way – with relatively late views of the apex and with a touch of oversteer at turn-in – Kimi probably more so than Fernando. Both use auto upshifts but manual downchanges; and both, significantly, are complemented by early

turn-in team-mates, the presence of which is only beneficial: when a McLaren or a Renault handles the way DC or Trulli want it to handle – with a brilliant front but without being 'pointy' – then both of them are super-quick. Kimi and Fernando don't mind those qualities, either – but, because they can more naturally compensate with their use of the back of the car, they can live with degrees of understeer, too. In other words, their capacity for a quick lap is broader than that of their team-mates – and that, of course, puts them in an immensely strong position, particularly in this era of one-lap qualifying.

Compared with DC, Mika was generally slower in the first phase of medium-speed corners but picked up pace from the apex onwards. DC had the edge in heavy braking areas but Mika excelled on fast corners, particularly those that required just a dab of left-foot braking. Kimi, by comparison with Mika, seems to be more consistent everywhere but therefore not exceptional in any specific area. He is very smooth, very fast and very undeviating. Nor does he give up easily: Silverstone, where he was

**'THEY CONTINUE TO SCORE WELL AND DRIVE WELL EVEN WHEN CIRCUMSTANCES ARE AGAINST THEM'**

struggling with grip, was a good example of that; Rubens Barrichello inevitably passed him but at no stage did Kimi acquiesce.

Fernando's data look very similar to Jarno's in terms of brakes, throttle and speeds – but, again, he is more consistently able to extract the most from a less-than-perfect car.

There are other similarities – some trivial, some perhaps significant; both wear Arai helmets with designs incorporating the colours of their country; both were karting prodigies; both missed at least one lower-rung formula (Alonso F3, Räikkönen F3 and F3000); both have been well-managed and have raced competitive cars, virtually from the start of their careers; both are young (Alonso is 22, Räikkönen almost 24); and both are mature beyond their ages.

More than anything, though, they share two qualities with all great athletes and with the best F1 drivers in particular: they continue to score well, to drive well, even when circumstances are against them. And the bigger the occasion – the greater the pressure – the richer the quality of their work.

They are indeed the future of F1. **1**



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# RAIKKONEN

## To Le Manoir born

Kimi Räikkönen is a natural – wickedly quick, deceptively savvy and scarily cool. Already he's an F1 aristocrat and during British Grand Prix weekend he stayed a chopper-ride from the circuit at super-exclusive Le Manoir aux Quat' Saisons, where Matt Bishop met the Finn, clocked the 'ice-man' vibe, and chilled...

Photographs James Bareham



KIMI & FERNANDO



'I'M JUST THE DRIVER. IT'S UP TO THE TEAM TO DECIDE WHEN THE NEW CAR SHOULD BE RACED'



The sybaritic perks of F1 stardom – including being holed up in one of the UK's best bijoux hotel/restaurants – are all very nice, but not for a moment does Kimi seem to be seduced by it all

Silverstone isn't Monaco, you may have noticed. For multi-millionaire Formula 1 drivers, therefore, accommodation can be a tricky issue – because, when you're used to the Hotel de Paris in Casino Square, a B&B in Towcester is a tad too 'council', really, innit?

McLaren's elegant solution consists of a helicopter and Le Manoir aux Quat' Saisons – Raymond Blanc's architectural and, above all, culinary marvel just outside the picture-postcard village of Great Milton in rural Oxfordshire.

Kimi Räikkönen checks in at 5.45pm on the Thursday before the race, by which time *F1 Racing's* ace portrait photographer, James Bareham, and I have already been location scouting for a couple of hours among Le Manoir's most photogenic curlicues. As his standard-issue silver Mercedes-Benz S500 crunches to a stop on Monsieur Blanc's fastidiously raked gravel,

its driver's and front passenger's doors open simultaneously – to reveal, respectively, Mark Arnall (Kimi's personal trainer) and Ellen Kolby (McLaren's head of PR). A lazy five-or-so seconds later the back doors do likewise, to reveal Jenni Dahlman (Miss Scandinavia 2001) closely followed by her doting and attentive boyfriend.

"Hi, Kimi [for it is he]," I offer, striding towards F1's most insouciant megastar, my palm outstretched. With palpable, if understandable, reluctance he removes his hand from the pencil-slim Dahlman waist in order to greet me formally, half grins then re-engages digitally with his beloved's adored midriff.

"I need to have a shower and a rest, Matt," he says. "See you at, say, 6.30pm. Is that okay for you?"

I look at James, and at Ellen, and at Mark, and receive three confirmatory nods. I nod myself, and with that Finland's

equivalent of Posh 'n' Becks scamper up the stairs and out of sight.

Thursdays involve no on-track action, of course, but for the drivers they are hardly down-time. Over the past six hours, for example, Kimi has been if not exactly flat-out (the favourite racing epithet of all fast Finns) then certainly busy. At lunchtime he, Jenni and Mark flew in from Zurich, which is home these days, landing at Cranfield Airport near Milton Keynes, from where a silver Mercedes E320 CDI whisked them to Silverstone. There Räikkönen was serially interviewed by Silverstone TV, ITV, RTL (Germany) and MTV3 (Finland), then grilled by newspaper journalists from France, Germany, Italy and Sweden. Last, as always on the first day of a grand prix weekend, he mumbled a few bespoke remarks into the Dictaphones of F1's quartet of Finnish journos, whose rapacious sports editors can never get enough Kimi sound-bites. ▶



Next, following an autographing stint – signing, among other promotional material, a batch of *Mac & Lauren* paperbacks (the *Thomas the Tank Engine*-esque stories written by Ron Dennis's wife, Lisa) – he immersed himself in a serious briefing session with his engineers, the better to hatch a competitive race strategy for the morrow and beyond.

No wonder he needs a rest and a shower. At 6.35pm Kimi reappears. We stroll around Le Manoir's exquisitely manicured lawns – greeting Alex and Julia Wurz and their son, Felix, who are also taking the pre-prandial air. James's shutter clicks away, unsettling Kimi not one jot, while he and I chit-chat.

"Do you like Le Manoir, Kimi?"

"Yeah, it's great. I hear it's got mega food, but I shouldn't eat it – too rich."

"That's a shame. Will you stick to grilled chicken and pasta, as usual?"

"Yeah, I guess."

(Later, I checked out the menu and can confirm that Le Manoir offers little to warm the cockles of a sports physio's heart. How about 'Ballotine of foie gras with soused cherries and spiced duck', for example? Or 'Roasted loin, braised cheeks and belly of suckling pig with marjoram-scented jus'? Lite it ain't.)

By now James has all the natural-light photographs we need, so it's time to troop into Kimi's £850-a-night suite. As light meters are consulted, I ask Kimi about the MP4-18A – a thorny subject. "Well," he says, frowning, "I'm just the driver. I'll drive whatever they give me – and the MP4-17D is very competitive, so I'm happy. It's up to the team to decide when the new car should be raced." I shoot a glance at Ellen, who gives Kimi an approving that's-my-boy beam. The lad is learning fast.

James is ready, and Kimi hits the mark.

More than that, though, he seems to be enjoying himself. Post-shower, his studiously raffish haircut has been meticulously arranged and gelled – by Jenni? – and now rivals Le Manoir's gravel for manicured precision. As James goes into his "Like it, head up, like it, super, like it, smile, like it, love it" mode, cajoling ever-cooler poses from his subject, it is clear that Kimi is genuinely having a good time. No 21st-century F1 driver actually enjoys media work, but it is abundantly clear that Kimi prefers being given the Dahlman treatment than he does, for example, being interrogated about the MP4-18A.

In truth, he is far more media-savvy than he was even six months ago – and when you drive for McLaren that kind of stuff is seriously important, for there is no team within which being 'on message' is so highly esteemed. Even the smiley-face tattoo on his forearm has recently been

**Kimi well knows that driving is only part of the deal; but if media and sponsor demands ever threaten to overheat the 'ice man', he's showing little sign of it**

**'HE'S MORE MEDIA SAVVY THAN HE WAS SIX MONTHS AGO, AND AT McLAREN THAT'S IMPORTANT'**

pressed into sponsor-endorsing service; when an Australian photographer asked if he could photograph it in the Melbourne paddock, Kimi smiled his assent and slipped his TAG Heuer Kirium F1 a few inches down his wrist until it lay partially atop the object of the snapper's desire. "Go ahead," he had said, smiling brightly.

Similarly, when, during a Barcelona test, he had been spotted – and photographed – at the wheel of a non-Merc hire car, he had asked the lensman concerned not to embarrass him by distributing the picture, and had warned Ellen about the protocol slip just in case. He always keeps his overalls zipped up to his chin, whatever the weather, the better to display those all-

important logos. And even when he cannot but be upset – as at the Nürburgring this year, when a blown Mercedes-Ilmor V10 cost him certain victory, ceding his world championship lead to Michael Schumacher – he did not castigate Jürgen Hübbert or Norbert Haug or Mario Illien or even the engine itself. Instead he shook each man by the hand, on the pitwall, at the end of the race – a gesture of public support that, I'm very reliably informed, played fantastically well in the Stuttgart boardroom the following day.

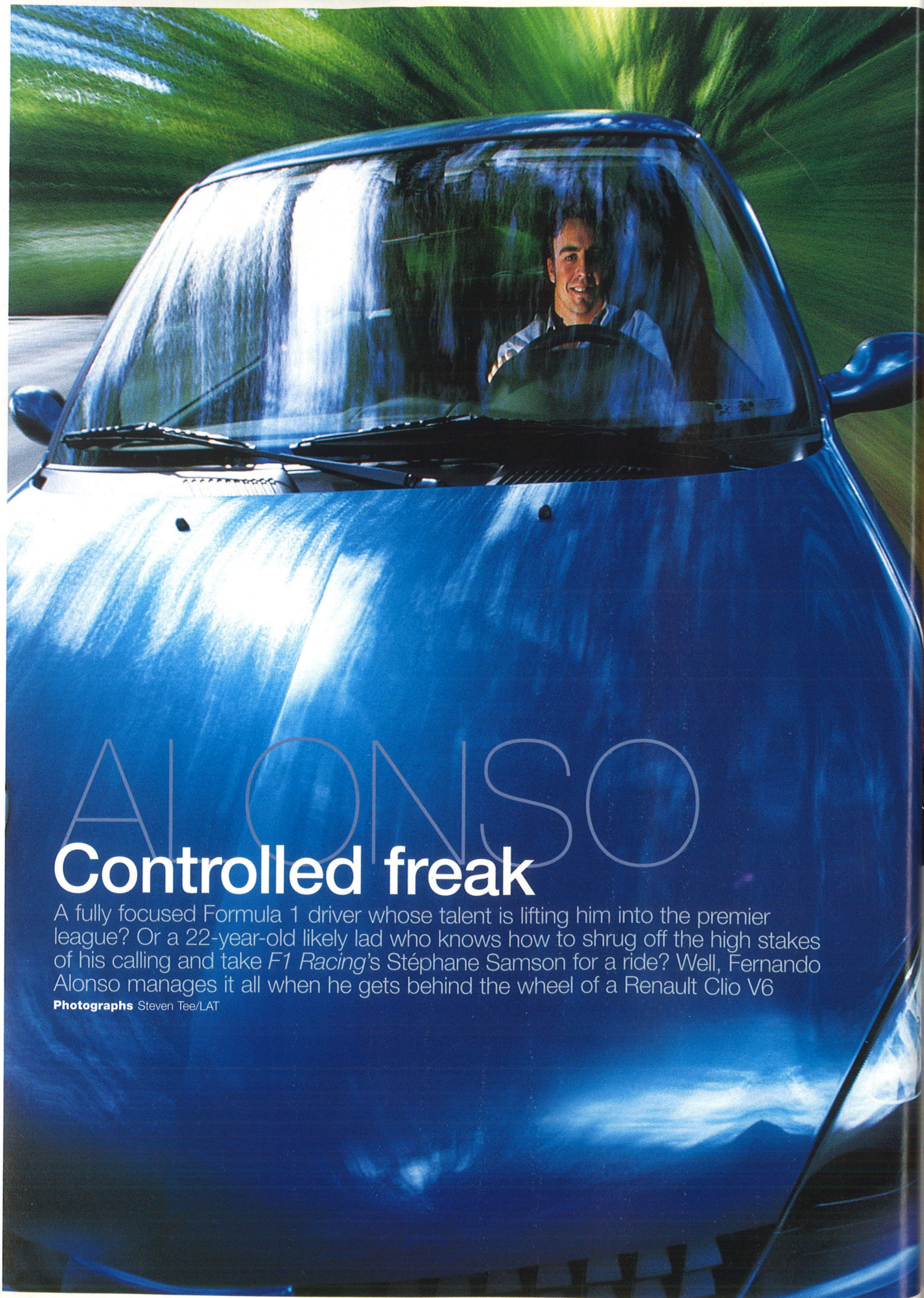
And, as Peter Windsor so revealingly explains on pages 40 to 46, he is fast. Fabulously so.

No, Kimi Räikkönen will never be given

his own chat show. But he is focusing on the things that really matter – which, in no particular order, are his Jenni, his racing, his fitness and his image. And no, he does not glad-hand sponsors ('partners' in McLaren-speak) in the easy, witty, affable way of a David Coulthard – but he does not need to. McLaren's marketers call him the 'ice man', and are happy to see him play up to that image. Again, he does not have to; so absolute and instinctive is his sang-froid that it is a role, a brand identity if you like, that comes to him completely naturally.

Quietly and quickly he has found a way of delighting his pay-masters while still remaining his own man. **1**





# ALONSO

## Controlled freak

A fully focused Formula 1 driver whose talent is lifting him into the premier league? Or a 22-year-old likely lad who knows how to shrug off the high stakes of his calling and take *F1 Racing's* Stéphane Samson for a ride? Well, Fernando Alonso manages it all when he gets behind the wheel of a Renault Clio V6

Photographs Steven Tee/LAT

"I love road cars, and this one really isn't bad," says Renault F1's hottest property. Jaunting around the back roads of rural Oxfordshire, he's both gentle and boisterous

'I'M STILL THE SAME DRIVER I WAS TWO YEARS AGO. BUT THEN I WAS COMING 21ST IN A MINARDI'

Despite the tumult surrounding him these days, Fernando Alonso keeps things understated, betraying little emotion when he speaks. Yes, his results are a real surprise this year. Yes, Renault is a team of the future. Yes, he's here to learn his trade and doesn't yet know all the tricks.

He gazes fixedly ahead, but his hands are drawn to multi-coloured marbles in a small glass dish in front of him. Without seeming to realise what he's doing, Fernando sorts them by colour. They begin to look like an anti-stress device, likely to do regular service in the F1 Renault meeting room we're chatting in while waiting to take a spin around Enstone, Oxfordshire, in a 250bhp Clio V6 – the feistiest road car in Renault's range.

"I wasn't impressed by Michael Schumacher's manoeuvre at the start of the British Grand Prix," he says. "If it had been

me who'd done it, I'd have been up before the stewards for half-an-hour at the end of the race." The world champion had no qualms about cutting up the Renault at 190mph, forcing Alonso to put two wheels on the grass, then getting back on his line as if nothing had happened.

When it comes to stewards' inquiries Fernando knows of what he speaks. First he was summoned after that spectacular crash in Brazil; then after the incident at the Nürburgring chicane, which caused the close-following David Coulthard to spin off. "On each occasion I was able to prove I wasn't to blame," he says. Sometimes F1 is rather demanding on a 22-year-old driver, is it not? He agrees with a sigh. "People expect us to behave perfectly in every situation when we're only half their age. In the same way, many commentators jump at any opportunity to talk of a huge mistake. Sometimes, though, there's just nothing to

say because there simply was no mistake."

In 12 races so far this season, Alonso has, however, managed to get the paddock to agree on at least one thing: the boy has something special. When he hears such murmurings of approval, though, he doesn't delude himself about the importance of his present status – as someone likely to rival Schumacher in the future.

"I might have the wind in my sails for now, but I know that if for whatever reason I started performing less well, I'd soon be forgotten about," he says. "I'm still the same driver I was two years ago. But then I was coming 21st in a Minardi."

The choreography of the marbles continues. Very precise, very controlled. Now they're lined up in threes, perfectly parallel – first the red ones, then the blue, then the green. At last the phone rings: Renault's rear-engined Clio missile is ready for take-off. Fernando is immediately on ▶





his feet, heading for the door. What a contrast with the last few minutes. He casts a backward glance, takes in my surprise and bursts out laughing. "Make your hand into a really tight fist," he says. "I bet I can open it with just two fingers." The fist is proffered, the deed done. Result: stinging pain for one crestfallen journalist, and a dramatic diversion for one racing driver hoping to draw attention away from his rather obsessive game of marbles.

No sooner are we in the steroidal Clio than Fernando is playing the accelerator. Drawn by the noise, the noses of those inside the Enstone factory are soon pressed to the office window. A few more revs and the rabbits that have taken up residence on the nearby lawns scarp.

"I love road cars," says Alonso. "And this one really isn't bad." The supercool driver who only moments ago was marshalling marbles is replaced by a joyously hare-

brained loon. Dr Fernando and Mr Alonso?

The Clio erupts forward in a cloud of blue smoke. Seated as low as possible, Alonso hums along to Spanish pop on the stereo. There haven't been too many carefree moments since the start of the season. "I really haven't had a moment to myself," he says. "So I'll have a few days' holiday after Hockenheim." The Oxfordshire bends are picked off, surprisingly gently it has to be said, vibrations intruding from a chassis that's as stiff as a chopping board.

"Driving has always been a passion," he says. "And I'm lucky enough to be able to adapt really quickly to anything with an engine." Give him a 4x4 or full-blown supercar and he'll grasp its character in an instant, not only finding the limit quickly, but holding it there at will. It's a rare quality that can cause him problems on the track – even if he appears to have got to grips with being an F1 driver pretty quickly,

Alonso knows he still has work to do.

"I make up for a car's shortcomings by changing the way I drive it," he says. "So sometimes my lap times are very similar and that can conceal a potential problem. I need to listen to the car a bit more." The R23's traction control, for example, gave up the ghost half way through the Silverstone race. But that didn't stop the Spaniard notching up the same lap times he had in the earlier part of the race.

"I couldn't explain it if I tried," he says. "It's just automatic. I change the way I drive without realising I'm doing it. I mean, there's no way I could tell you what I changed at Silverstone. I just did it, it worked and that's it." Alonso thinks a podium finish was well-nigh guaranteed at the British Grand Prix: "If I hadn't had technical problems, it was mine. The car was flying."

At the wheel, Fernando belongs to the new generation of drivers who keep the car

**Whether it's the sort of car anyone can buy, or rarefied F1 machinery, Alonso can effortlessly unpick the secrets of its handling. The best thing about the Clio? It gives him the chance to relax**


## 'WE NEVER KNOW WHAT TO EXPECT AT EACH NEW CIRCUIT, AND THAT'S REALLY MOTIVATING'

steady with subtly modulated left-foot braking. He prefers a slightly oversteery set-up on the R23 as he comes into a bend. He brakes quite strongly – later than teammate Jarno Trulli – and locks the wheels more often. Understeer on entry has been eliminated. Basically, he drives aggressively – a plus in qualifying because the R23 is so easy on tyres that a little bit of belligerence helps get them up to the right temperature. As for overtaking etiquette, Alonso already has quite a reputation. "When you're trying to overtake, you don't care about who the driver in front of you is," he says. "But when

you manage it and see Schumacher's or Villeneuve's helmet in your mirror, you feel enormous satisfaction." Huge smile.

The closing stages of the season certainly won't be plain sailing for Renault. Budapest, Indianapolis and Suzuka could be kind to the Franco-British outfit, but the power deficit is being felt more and more. At Silverstone, only the R23's poor top speed deprived Trulli of a podium finish.

"To compete with the likes of Ferrari, McLaren and Williams, we can't allow any margin for error," Fernando says. "Everything – technically, as regards reliability and the way we drive – must be 100 per cent if we want to compete. Even the tiniest mistake costs us dear."

But his confidence levels seem limitless. "The funny thing is, we never know what to expect when we come to each new circuit – top eight or pole, getting in the points or a podium finish, you never know. And that's really motivating." In an exuberant demonstration of his joy, he shunts the Clio from side to side on the Enstone tarmac, shaking me around like a loose parcel. Then he bursts out laughing again. Maybe he's lost his disciplined marbles after all. Definitely Dr Fernando and Mr Alonso. 

FANGIO v MOSS  
 STEWART v RINDT  
 HUNT v LAUDA  
 JONES v REUTEMANN  
 VILLENEUVE v PIRONI  
 PIQUET v MANSSELL  
 SENNA v PROST

## F1's best head-to-heads

What every Formula 1 devotee craves: great rival talents pushing each other to ever more heroic deeds. Sometimes it was respectful – sometimes not...

Words Peter Windsor

The greatest F1 head-to-heads, of course, were fought in similar team cars. Managers stood sweaty-palmed on the pit wall, trying to look calm for the cameras. Their drivers, you can be sure, were tip-toeing over the edge...

### >FANGIO/MOSS

It was thus at Aintree in 1955, when Stirling Moss and Juan Manuel Fangio dominated the field in their works Mercedes-Benz W196s. Fangio took the lead near the end of the opening lap – then lost it again when the pair came up to lap a slower car. Mercedes' team manager, Alfred Neubauer, hung out the 'PI' sign – 'PI' for 'Piano' or 'take it easy'

– but that was the full extent of his orders. Within the limitation of reduced revs, it was Moss vs Fangio.

They raced closely – wheel-to-wheel on many occasions. And they raced long and hard, for this was a 90-lap, 270-mile grand prix. By the end, Stirling crossed the line with the nose of Fangio's W196 creeping into his peripheral vision. Moss had become the first British driver to win his home grand prix – but had it been a fix?

For many years, Moss contended that Fangio had given him the race – that it was a gift from the master to the prize pupil. It wasn't until about 10 years ago, when we

were filming a Moss feature for Channel 4, and a bunch of colleagues and I kept pushing Stirling for the truth, chipping away at his emotions, that he finally said it: "Well, yes, probably it was a straight race. I think I did beat him fairly..."

### >STEWART/RINDT

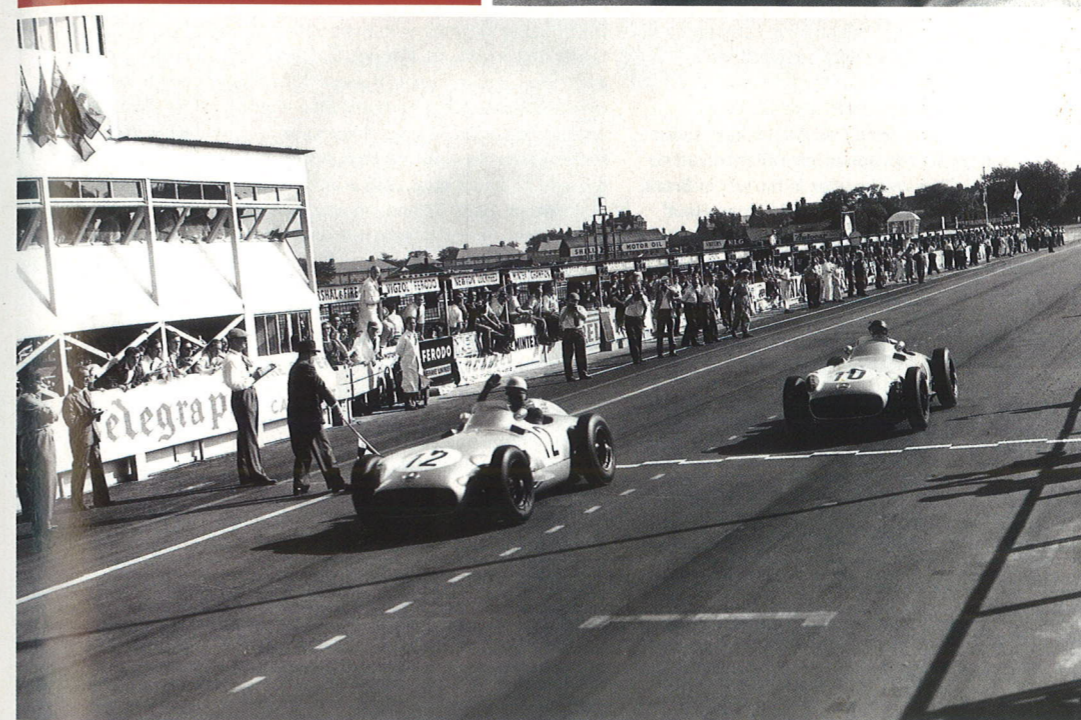
The British Grand Prix, strangely, features in other titanic battles. In 1969, Jackie Stewart and Jochen Rindt raced as aggressively and as closely as two great drivers can. Stewart was en route to winning his first world title with the Tyrrell Matra; Rindt was the bright young star who had at last found a competitive car (the Gold Leaf Team Lotus

**One of the Boys' Own specials – decent, hard and drenched in fair play all round: in 1969 Stewart (near right) takes on the brilliant young Rindt at Silverstone and finally prevails**

'STIRLING MOSS BECAME THE FIRST BRITISH DRIVER TO WIN HIS HOME GRAND PRIX. BUT HAD IT BEEN A FIX?'



Fine and fair deeds at the British Grand Prix: Moss keeps right at the flag to allow Fangio space at Aintree in 1955 (left); mutual congratulations (above left); a capped Stewart (above) with Rindt, won the '69 battle



49B). They were friends, they both used Ford Cosworth DFV engines and Silverstone in those days was a fast, brilliant, driver's circuit, bereft of chicanes. And, because the cars were still on treaded tyres (Stewart on Dunlops, Rindt on Firestones) four-wheel-drifts were still very much a part of it.

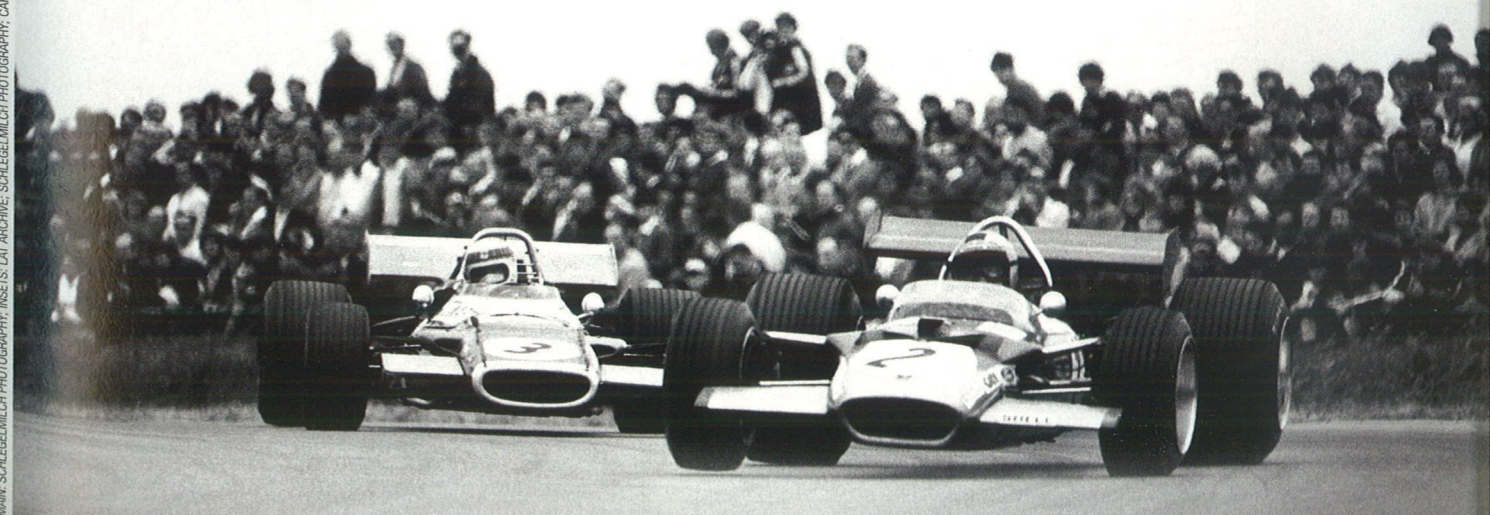
Rindt took the pole – 0.4sec ahead of Stewart, who ran over a piece of concrete

in practice and badly damaged his race car. Stewart thus started in the Matra MS80 of his team-mate, Jean-Pierre Beltoise. He had 600 revs less with which to play, plus a dodgy clutch.

The race, nonetheless, was breathtaking. Stewart shadowed Rindt away from the line and passed him after seven laps. Rindt retook the lead after 16, then pulled out a whole three seconds as

the pair hit traffic at half-distance. On a free road, though, Stewart, wound back the gap, recording fastest race lap. Then Rindt stopped to repair a broken rear wing mounting. The race – and, remorselessly, the championship – swung Stewart's way. Rindt won his first grand prix three months later, at Watkins Glen; in 1970 he posthumously won the world championship. ▶

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HEAD TO HEAD



'PIRONI EVENTUALLY WON THE RACE, STEALING VICTORY FROM THE TEAM-MATE WHO HAD TRUSTED HIM'

>HUNT/LAUDA

Just as Kimi Räikkönen is today, James Hunt was always there in the background in 1976, chewing away at what appeared to be Niki Lauda's world championship. They did not fight as closely on the track as had Stewart and Rindt, or Moss and Fangio, but their rivalry was just as intense. They were mates, they were folk heroes and 'Ferrari vs the Brits' was the song of the tabloids and the theme of the decade. And, like all men of stature, they pushed each other to new heights. Lauda made a staggering recovery from burns; Hunt was dominating and decisive under pressure. He won the world championship by a single point.

>JONES/REUTEMANN

This was in many ways the opposite of the Hunt-Lauda struggle. Alan Jones was king of the Williams team in 1978-79, when Frank Williams and Patrick Head were building the first of their world-beating F1 cars, but Carlos Reutemann's arrival in 1980 changed everything. The Williams philosophy was: "We are building two race-winning cars and therefore we should employ the best two drivers available"; Jones's was: "Why rock a happy ship?" A brash, confident oversteer driver, Jones was the opposite of Reutemann - an introverted, retiring turn-in man. The two rarely spoke to one another and

Reutemann's complicated 'number two' contract, which allowed him to finish ahead of Jones only if they were more than 20sec ahead of the opposition, was compromised by Reutemann's ability frequently to out-perform Jones.

The matter came to a head at Long Beach, 1981, when - as Reutemann saw it - he slowed to let Jones win but received no thanks. Two weeks later, in the wet in Brazil, Reutemann ignored several 'Jones-Reut' signals while dominating the race from the start. Jones never forgave Reutemann for what he saw as a betrayal. In Germany, despite Reutemann being way ahead on points, Jones asserted his number one status by demanding that he race an engine set aside for Reutemann; and at Las Vegas, where Reutemann alone of the Williams drivers could have won the championship, Jones insisted that the team take four cars - two racers and two spares. The consequent confusion cost Reutemann the title; Jones, in his last race for Williams, won the Caesars Palace Grand Prix.

>VILLENEUVE/PIRONI

Gilles Villeneuve was not only a great racing driver but also an honest and trusting friend. He expected others to behave the same way; he was never a part of the James Hunt-Niki Lauda-Alan Jones in-crowd.

When he failed to receive an invitation to the 1982 wedding of his Ferrari team-mate, Didier Pironi, therefore, he put it down to Didier being forgetful or to the bride wanting family only to attend. Wrong. And when he and Pironi agreed that, in the event that they were dominating a grand prix, they would finish in the order in which they were running over the opening laps, Gilles also thought he had a deal. Also wrong.

At Imola, 1982, Villeneuve was leading Pironi when Ferrari's team manager, Marco Piccinini, ordered both drivers to slow and maintain position. Conserving the engine, but aware that the win was his, Villeneuve throttled back on the straight. Pironi passed him, flat-out in top gear. Gilles re-passed, stretching his car to the limit under braking. Again, on the straight, he backed off. Again, flat-out, Pironi passed him.

You know the rest. Pironi eventually won the race, stealing victory from the team-mate who had trusted him. Two weeks later, desperate to beat Pironi in qualifying for the Belgian Grand Prix, and on his final set of qualifying tyres, Gilles was killed while trying to pass a wayward back-marker. Pironi, with the 1982 championship almost in the bag, was critically injured three months later when he rammed the back of a slower car at a wet Hockenheim. He was killed in a powerboating accident in 1987. ▶

Imola '82 - the dice and the outcome (above right): Pironi leads Villeneuve, contrary to team orders, and claims the champagne while Villeneuve (in white) looks on. Lauda (below), his post-Nürburgring scars still fresh, had a straight fight with Hunt (below right)



>Senna v Schumacher

This was going to be good: Ayrton with his ability to reach the stratosphere still intact; Michael finding that he could fly there, too. Each had much to prove in 1994.

Senna wanted the championship as hard as ever (and to show the world he could win a title without Ron's paternal hand on his shoulder); Michael knew his Benetton B194 had the beating of the tetchy Williams FW16. Pumped up and primed, he was ready. Senna? Ha! Who's he?

Three races together at the top of the ziggurat was all they got. They brought three Senna poles, three Michael wins. And then the accident. Statistics became irrelevant after May 1. Ayrton was gone,

Michael won his first championship.

What had we seen? Michael was the year's dominant driver, but Damon Hill, Ayrton's team-mate, took the fight all the way to Adelaide after Benetton crashed into the rule book mid-season. It's fair to assume there would have been more pressure, earlier, from Senna. How would Michael have handled it? Unknown.

But then, if Senna had been pushing Benetton, would they have developed their car earlier and better? Unknown. Questions, anyway, became irrelevant after Senna's death. The world wanted answers.

We can now only dream of what might have been. Anthony Rowlinson



Senna did not appreciate being brake tested by Schumacher during testing for the '92 German GP (far left). Reutemann leads Jones before slowing to let him by at the '81 US GP at Long Beach; Jones (below left) and Reutemann became bitter rivals. Lauda (bottom) leads Hunt in Spain in '76

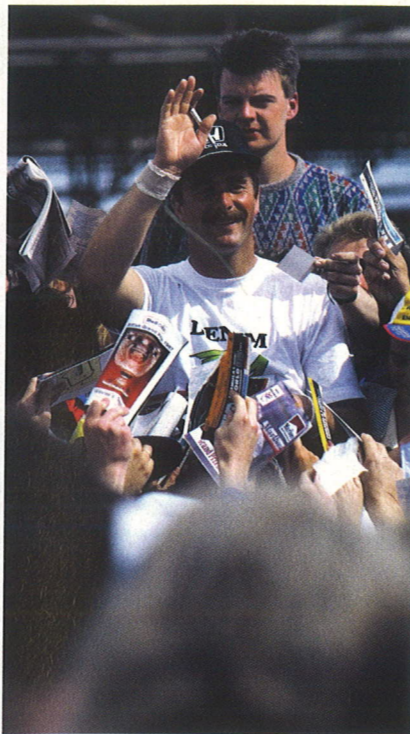


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## HEAD TO HEAD

'THIS ONE WAS MORE CEREBRAL. FOR THE MOST PART, PROST WAS TOO CONSERVATIVE TO TAKE ON SENNA'



Before Michael Schumacher, Prost and Senna (above left) were F1's two most successful drivers; Mansell milks the crowd (above) at the '87 British GP; and (left) leads Piquet to win the '86 British GP at Brands Hatch; Senna chases Prost (below) at Paul Ricard in 1988

### > PIQUET/MANSELL

Again there was confusion at Williams: Nelson Piquet was signed as number one driver for the 1986-87 seasons; Nigel Mansell, contracted merely as "a driver", generally proved to be quicker.

In two consecutive British Grands Prix – at Brands Hatch, 1986, and at Silverstone, 1987 – Mansell raced from behind to beat his team-mate. This was raw, dangerous motor racing, with Mansell leaving no margin at all and Piquet responding in every way he knew. What Piquet really wanted, of course, was for Williams to hold out a "Piquet-Man" signal – something to which he felt entitled thanks to his contract. The signal never came,

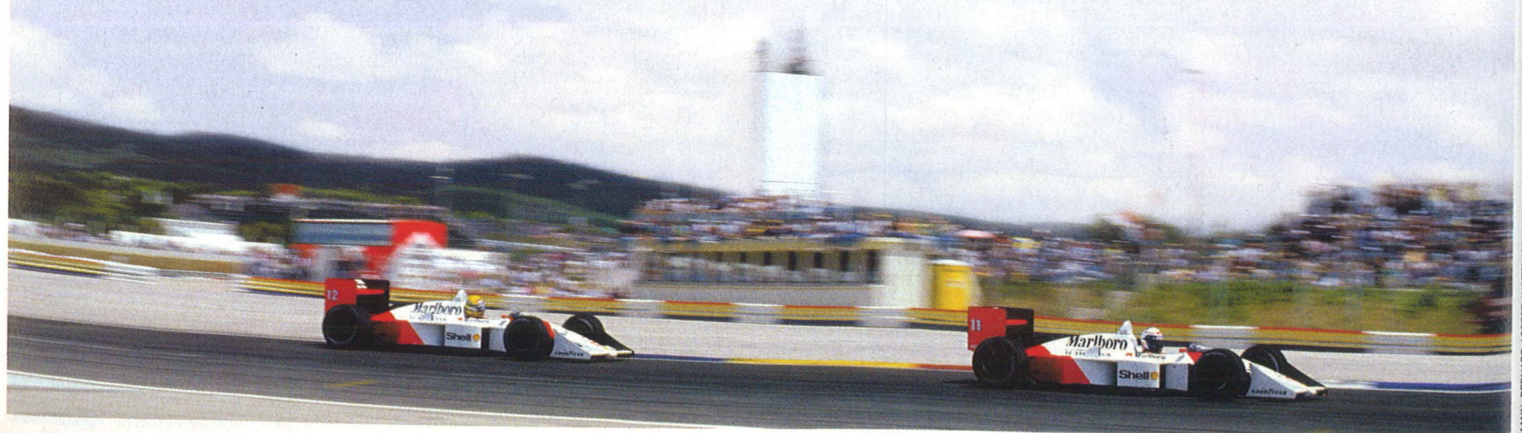
however: Frank and Patrick loved the freedom of the racing.

It is doubtful, what's more – then and in modern retrospect – that Mansell would have paid any more attention to a "P2" instruction than had Carlos Reutemann.

### > SENNA/PROST

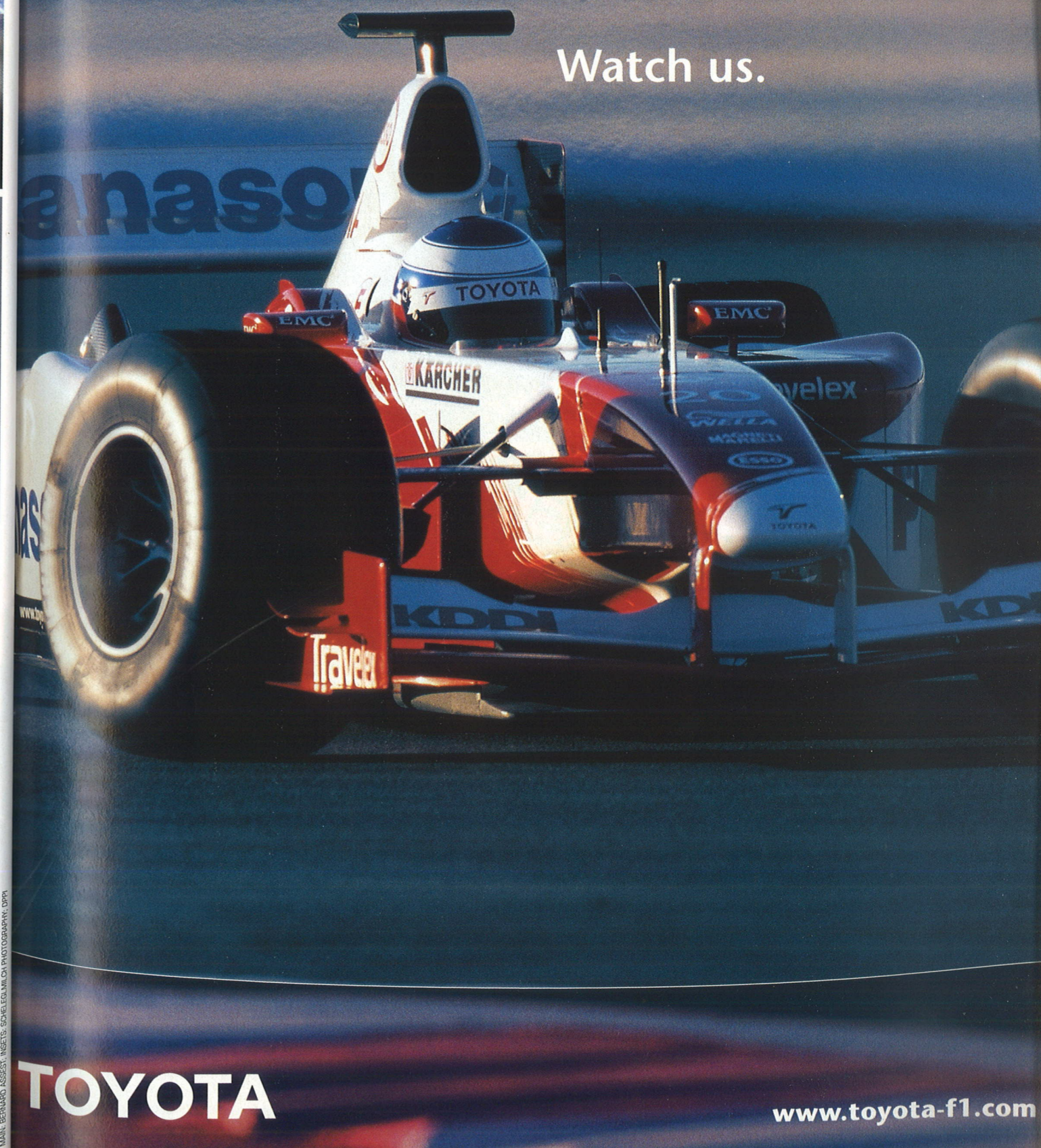
This one was more cerebral than it was physical. McLaren-Honda drivers Ayrton Senna and Alain Prost vied with each other in terms of their championship positions, and frequently induced the best from one another, but rare were the occasions when they actually *raced* on the track – not in the sense that Stewart, Rindt, Mansell and

Piquet exchanged blows. There were the famous championship finales, of course, with Ayrton no doubt showing a young kid named Michael Schumacher how to clinch a title by shunting his opponent into the boondocks – but, for the most part, Alain Prost was too conservative to take on Ayrton Senna. The defining moment, probably, was in 1988, when Ayrton blew a massive lead and an easy win at Monaco by misjudging an apex and clouting a barrier. A few laps before, he'd learned that Prost, *lying 49 seconds behind*, had just lapped in 1min 26.714sec. Pride exposed, Senna responded with a 1min 26.321. Then he relaxed, lost concentration... and hit the Armco. ❶



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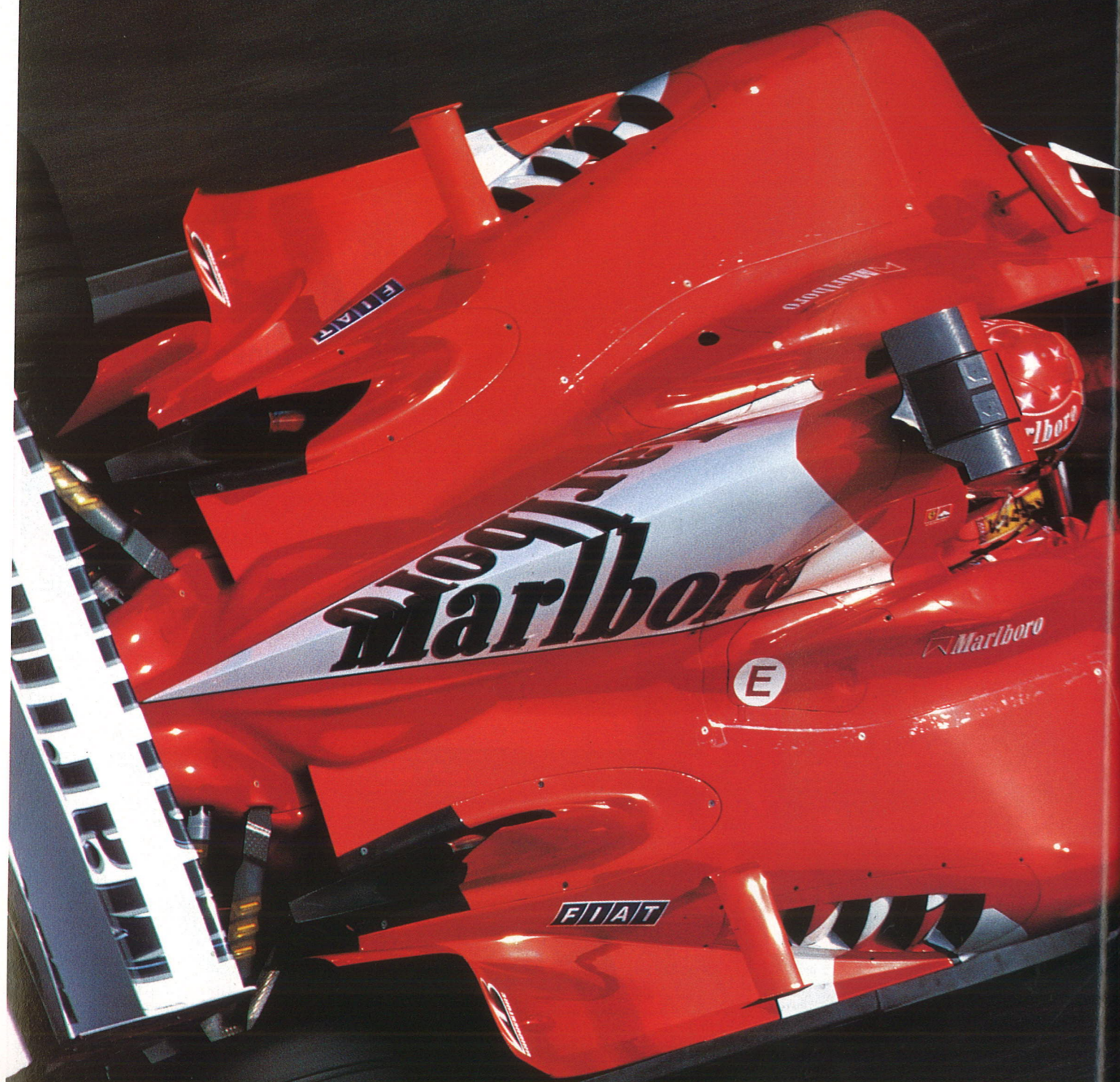


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# FIGURING SCHUMI

And that's exactly what we've done. In a world exclusive, *F1 Racing* lifts the lid on the hush-hush telemetry that explains Michael Schumacher's speed

Words Stéphane Samson

Schumacher (above) in search of the limit: "Finding a point that you know you couldn't possibly go beyond - that's what gets me buzzing"

The preparation ritual is second-nature now, an art so refined that he's barely aware of it. Overalls, balaclava, helmet, gloves. Like everyone else. But then you notice the physical routine - the series of little exercises, such as working his head from side to side to warm up his neck. This is typical Michael Schumacher: touches that heighten his readiness and set him apart from the others; a mental and physical countdown that has its pay-off in raw speed

and lap times that *F1 Racing* is now able, exclusively, to analyse and dissect using the previously confidential telemetry you'll see over the page. Loosening-up complete, Schumacher climbs into the F2003-GA with an easy grace. The team have decided on last-minute set-up changes and fuel load, and in another couple of minutes he'll be giving his all in single-lap qualifying. But Michael Schumacher is somehow removed from the mêlée around him. The media hysteria, ►



the lenses, flashes and onlookers crowding the garage exit are simply shut out. He closes his eyes, withdraws, and before he has turned a wheel he's assessing the first bends at Silverstone, considering his braking points, visualising the line he'll take. Soon, it will just be him and the car – a devastating combination we've long been familiar with and which few rivals have found an answer for. So naturally does he take his car to the limit that he would be pushed to explain precisely what is going on. The pleasure it gives him, however – that he can explain.

"Finding the point of optimum performance, a point that you know you couldn't possibly go beyond, that's what really gets me buzzing," he says. "I just love driving. And I'll carry on racing for as long as I get that buzz when I'm behind the wheel. Winning isn't an end in itself, but it's a very nice bonus..."

In short, Michael Schumacher's driving is beyond the rational; it isn't a conscious process. As with plenty of other drivers on the grid, it's instinctive. "Every driver tries to find the limit," he says. "And then there's understeer, oversteer, wasted time and tyre degradation to think about. There's also the risk of coming off the track. On every bend, I go for the limit, I have a feel for it. But to hit the limit spot on, I go into the bend quicker than seems theoretically possible. That's the only way for me to see how far I can go."

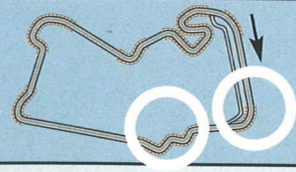
All of which is a nice little thumb-nail of the Schumacher method: the important thing, the telling difference, is that Michael's driving concerns itself with what happens before the corner, during the approach. That's why, for him, the exit is of secondary importance – in any case, these days, it is

**'TO HIT THE LIMIT SPOT ON, I GO INTO THE BEND QUICKER THAN SEEMS POSSIBLE'**

mostly taken care of by traction control. Yet even if the idiosyncrasies of Michael's approach appear obvious at the trackside, until now there has been no way of actually quantifying what is going on. Of course, he brakes in a distinctive way which allows him, in qualifying, to find precious tenths. Of course, he balances his car by using his left foot to limit longitudinal weight transfer and therefore steal a few extra km/h. But how exactly does he do it?

The data that *F1 Racing* publishes here for the first time, reveal many of the answers that only Ferrari engineers, deep in their motorhomes, have known until now. Our print-outs show how Michael Schumacher

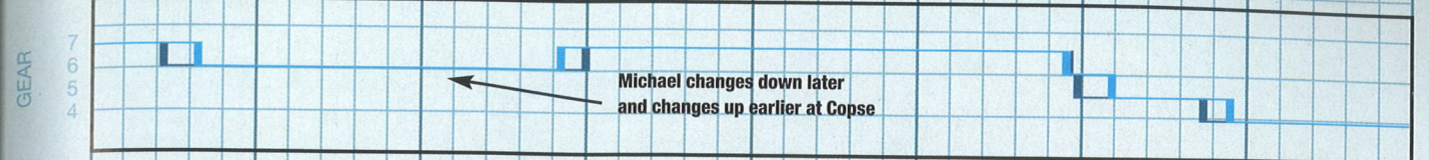
Over the edge and on the limit through the Melbourne esses; Michael has completed the right turn and corrects as he tackles the left



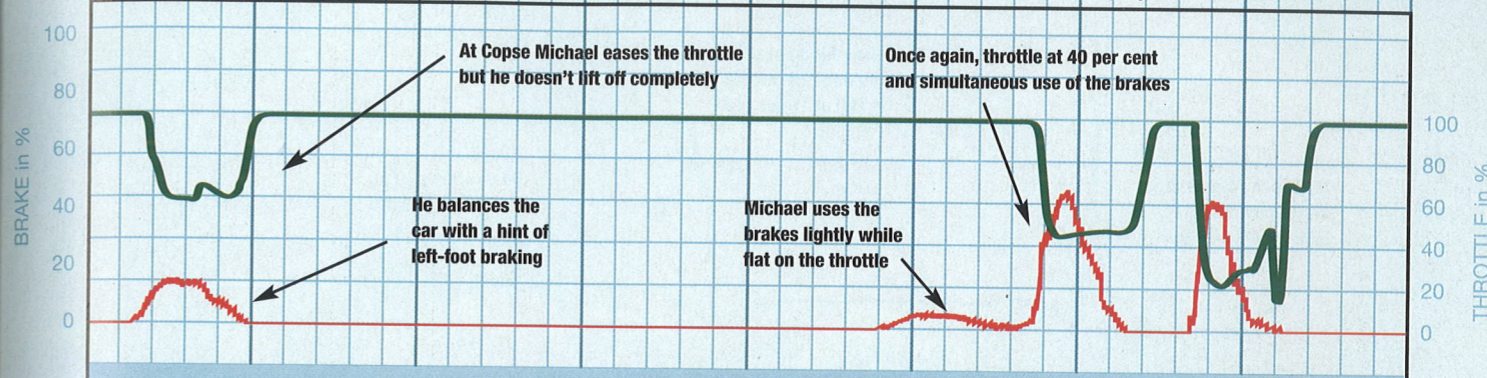
**SILVERSTONE COPSE TO BECKETTS**

Copse, Maggotts and Becketts are three of the keys to a quick lap of Silverstone. Momentum through them is all, but Michael and Rubens take different approaches. Who's quicker? The telemetry reveals all.

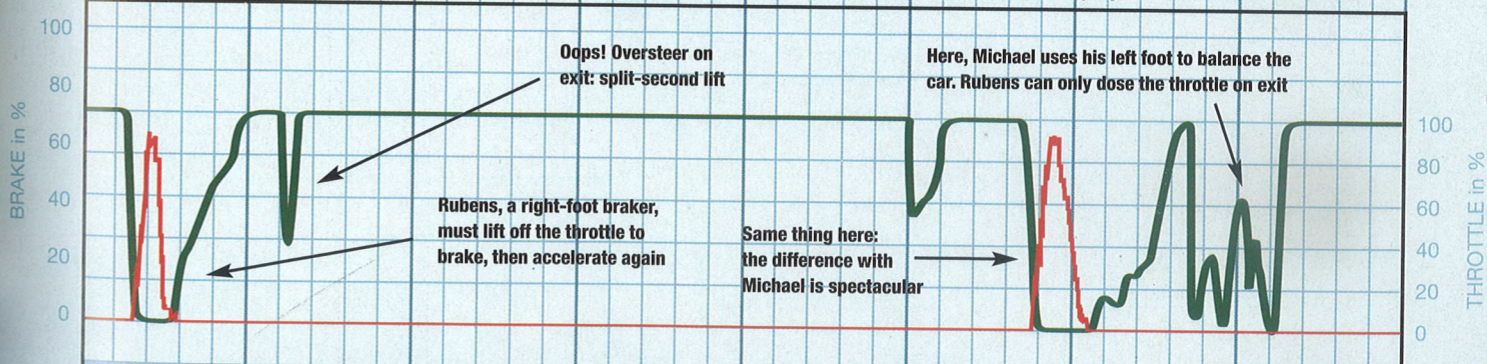
**> GEAR COMPARISON : SCHUMACHER (■) BARRICHELLO (■)**



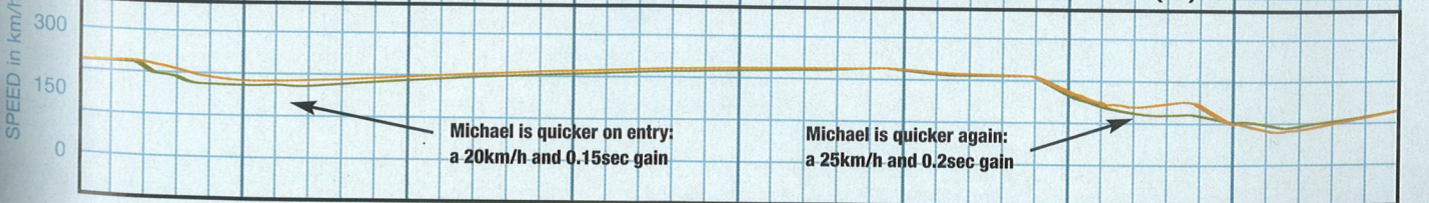
**> MICHAEL SCHUMACHER: THROTTLE (■) AND BRAKE (■)**



**> RUBENS BARRICHELLO: THROTTLE (■) AND BRAKE (■)**



**> SPEED COMPARISON: SCHUMACHER (■) BARRICHELLO (■)**

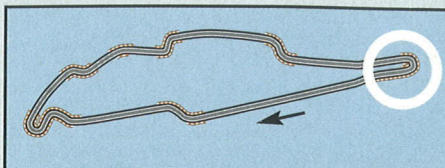


THIS PAGE: It is impossible to take Copse without lifting. Deceleration is only slight, however, but the two Ferrari drivers use quite different techniques. Schumacher eases the throttle (from 100 per cent to 60 per cent) while pressing the brakes by 20 per cent to keep the car balanced. Barrichello uses his right foot only, so can't take the same approach: he must lift off, brake heavily if briefly, and then come back on the throttle. While traction control allows both drivers to accelerate at the same

pace, the Becketts complex illustrates once again the massive difference between Schumi's and Barrichello's styles: Michael never lifts off completely, and plays with the brake pedal at the same time in order to preserve his car's stability. Rubens brakes only once, and then uses the throttle to keep his Ferrari balanced.

Schumacher exits Copse with a 20km/h head start on Barrichello, and pulls the same trick at Becketts

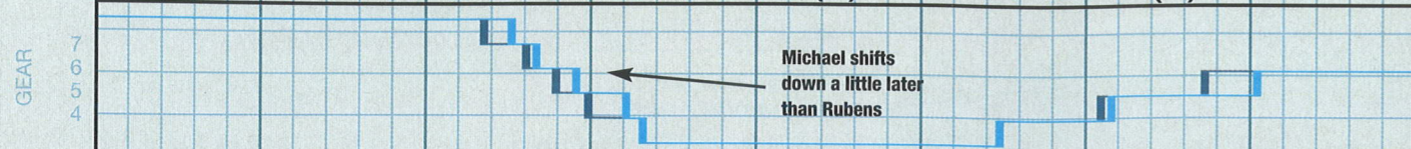




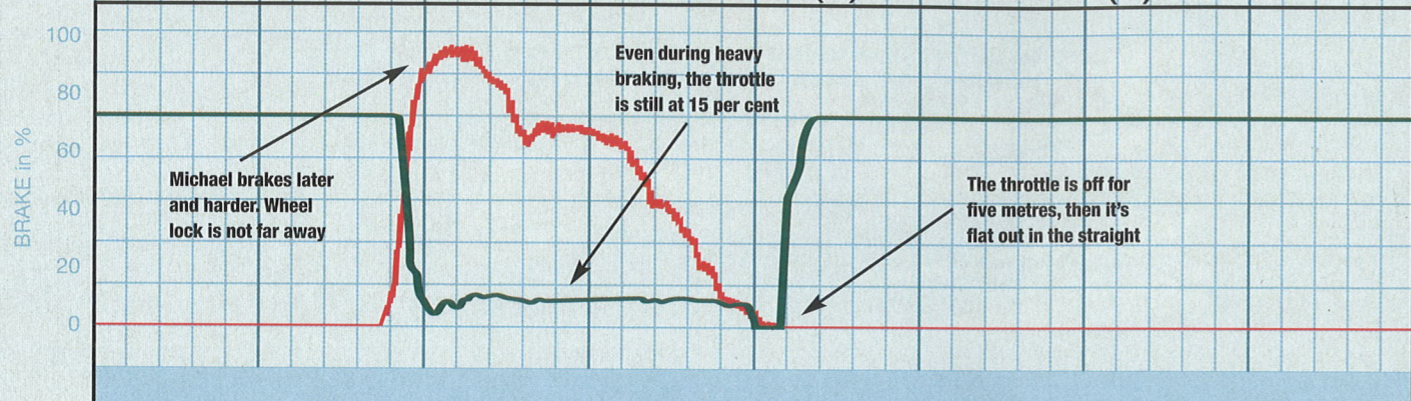
### MONTREAL HAIRPIN

The charge down to turn 10 at Montreal highlighted Schumacher's adaptability as well as his speed in 2003. Although failure of his overheating brakes was predicted, he was able to nurse them – and win

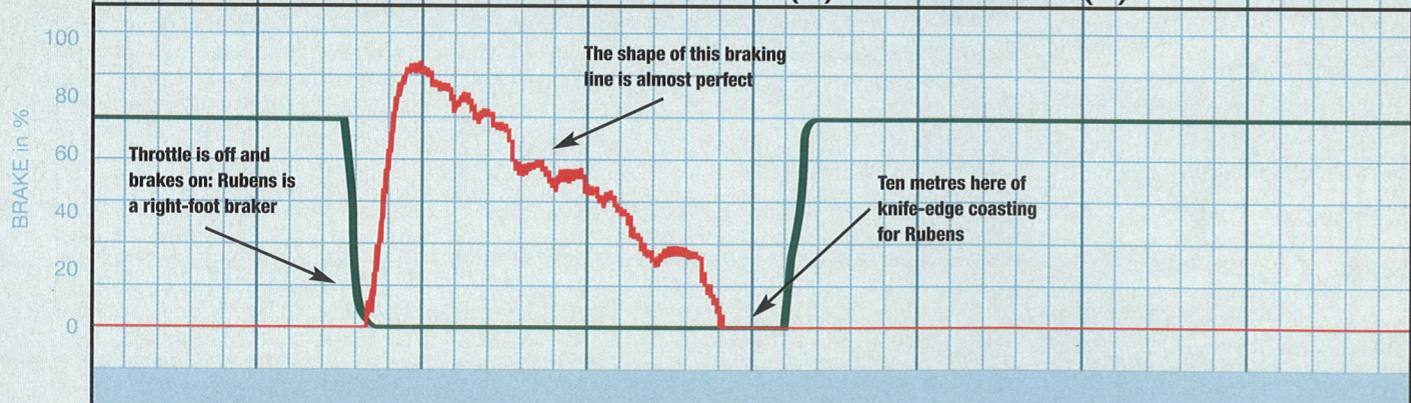
#### > GEAR COMPARISON: SCHUMACHER (■) BARRICHELLO (■)



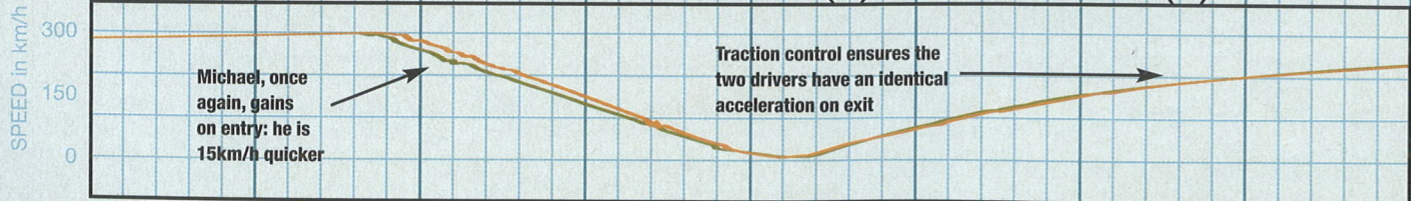
#### > MICHAEL SCHUMACHER: THROTTLE (■) AND BRAKE (■)



#### > RUBENS BARRICHELLO: THROTTLE (■) AND BRAKE (■)



#### > SPEED COMPARISON: SCHUMACHER (■) BARRICHELLO (■)



THIS PAGE: Another type of corner which demonstrates the extraordinary efficiency of Schumacher's method. He brakes nine metres later than Rubens, but is close to locking his wheels. He then eases off the pedal, and then presses it strongly again in order to find grip: this action explains the shape of his braking graph. Rubens' line, on the contrary, is almost perfect. The main difference between the two men? Michael lifts off completely only at the very end

of his braking, for five metres. All the way through his heavy braking zone, he keeps his right foot on the throttle (about 15 to 18 per cent). The reason is to limit longitudinal weight transfer which would cause understeer on entry. Rubens is as quick as Michael from the mid-braking zone onwards, but by then it is too late.

Technique triumphed at Montreal in '03 as Schumi rose above a failing car to keep his faster rivals behind him



### 'PUSHING BACK THE LIMITS IS WHAT MAKES THIS SPORT INTERESTING'

Talent and technique get Schumacher a long way, but not quite all the way. There's a brilliant team around him, hand-picked – and led – by Jean Todt

takes four of the most important bends in the F1 calendar, four sections of track which have a big impact on lap times: Copse and Becketts at Silverstone; the hairpin in Montreal; and Turn One at Suzuka. These four bends illustrate the Schumacher method with crystalline clarity.

As our examples show, the world champion finds his edge in the way he enters a bend: he brakes late, sure, but

a wide range of other options also come into play. For instance, at the first bend at Silverstone, Copse, he eases off the throttle by just 40 per cent while simultaneously and gently applying the brakes. The goal is not so much to wipe off speed as to keep loss of momentum to an absolute minimum. To achieve that the car's balance must be disturbed as little as possible, and that is why the delicate play-off of throttle against brake, the limiting of longitudinal weight transfer, is so vital.

The same is true of the first bend at Suzuka where, once again, Schumacher does not fully lift off the throttle, even during heavy braking. A similar approach is taken to the hairpin at Montreal; Michael lifts completely for only about five metres, right at

the end of the zone. The pedal action itself, though the braking effort is applied very late in the cycle, can justifiably be compared to that of other drivers – about 18 of the current crop of 20 do left-foot brake – but the subtlety and stability of Schumacher's control can still surprise his team, even now.

"Pushing back the limits is what makes this sport interesting," he says. "Qualifying at Suzuka in 2002 was a good example. Pulling off a good lap there gives you such an indescribable feeling. You have to go beyond yourself, and at times like that you feel... alive. Last season I gave it everything I had and when I crossed the line the clock said 1 min 32.484sec. It was eight-tenths better than in our simulations. That's the sort of emotion that really gives you a lift." ▶



## 'WHAT MAKES MICHAEL UNIQUE ISN'T JUST HIS DRIVING OVER ANY ONE LAP'

To achieve such an undreamt of result, Michael's car has to be set up exactly as he wants it. And, for him, the most important thing about his F2003-GA is the precision and efficiency of its front end. "I can cope with a car that oversteers slightly going into a bend," he says, "but I need to know that the moment I touch the brakes, the car will take exactly the trajectory I want, without the slightest deviation."

So the predictability and grip of the front wheels are of paramount importance. To achieve this the front dampers and torsion bars are normally more softly set on Schumacher's car than they are on his team-mate's. Indeed, Rubens Barrichello prefers quite a different set-up: a car that

**No driver works harder or debriefs longer than Michael (above with his race engineer Chris Dyer) to ensure every glitch is sorted**

will be stable and neutral in its braking. He doesn't mind understeer going into a bend but he wants it gone by the middle of the corner. All of which means that Michael, with his car's more incisive front end, can get on the brakes a little later. It's the sort of driving you see in a good many drivers of the younger generation: Fernando Alonso, Kimi Räikkönen, Juan Pablo Montoya and Felipe Massa all prefer subtle oversteer, unlike David Coulthard or Olivier Panis.

There's a downside to the world champion driving on the limit, however: he is tough on tyres. Michael suffers more in this regard than Rubens and his tyres degrade more quickly simply because he comes into a bend faster and harder.

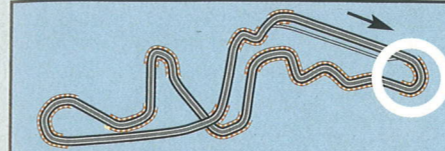
"Overall what makes Michael unique isn't just his driving over any one lap," says Ferrari's technical director, Ross Brawn. "You've got to associate two other essential features with his speed: consistency and an ability to adapt." The first has often been quoted as a prime example of his qualities. "From the very first time Michael gets

behind the wheel of a new car, he'll quickly find its limits," says Brawn. "But that's not the only thing. He'll be able to keep the rhythm up from the first lap to the last, without fault or flagging. That's essential for working out tyre degradation over a race, or working out daring strategies."

The ability to adapt is one of Schumi's greatest qualities. Whatever the track conditions or mechanical problems, he will always extract 100 per cent from his car. That was particularly noticeable at Magny-Cours this year, where the Bridgestone tyres caused problems. Or at Montreal, where the Ferrari's brakes got so hot that for a while the team didn't believe Schumacher would be able to finish the race.

As for weaknesses in the world champion's driving, there's probably only one: he can sometimes lose concentration when he's out on his own. "When he's dominating a race and has a big lead, Michael never stops using the radio to ask questions or just to talk to me," says Ross with a smile. "How many laps are left? Where's his brother? Sometimes I have to reason with him and ask him to concentrate on what he's doing. I'll remember for a long time the little radio silence that came when he spun off at Indianapolis in 2000. 'Everything okay, Michael?' I asked. 'Yep,' he replied. Pause. 'I think you're right, Ross. I'll start concentrating again.'"

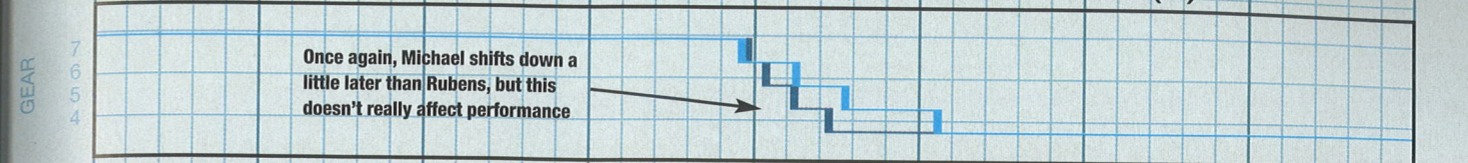
And, as ever, he still carried the day. **1**



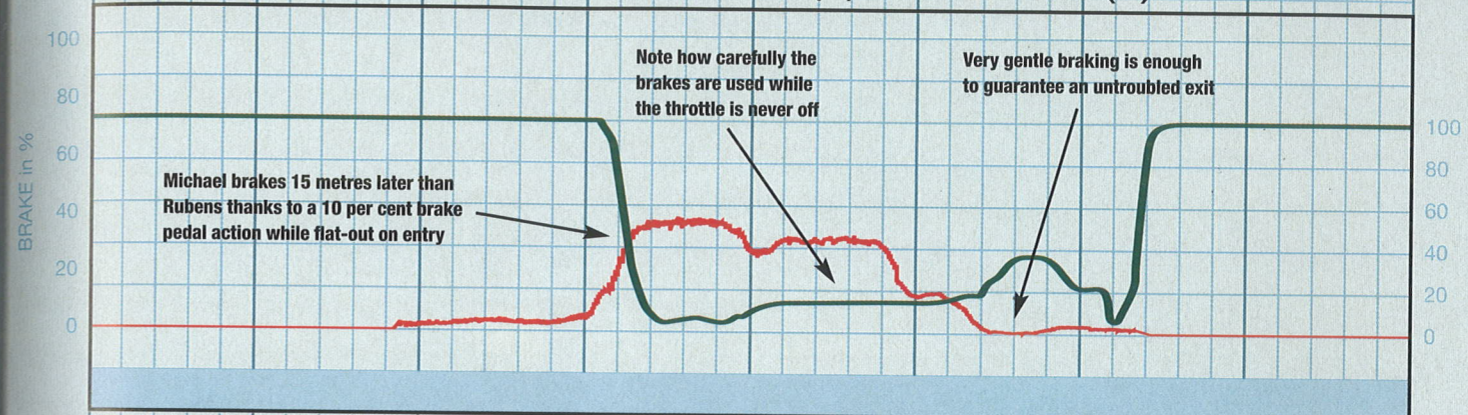
### SUZUKA TURN ONE

The long 180-degree Turn One is an exercise in both patience and smoothness. Schumacher's ability to balance and steady the car on both throttle and brake helps him find more speed than Barrichello

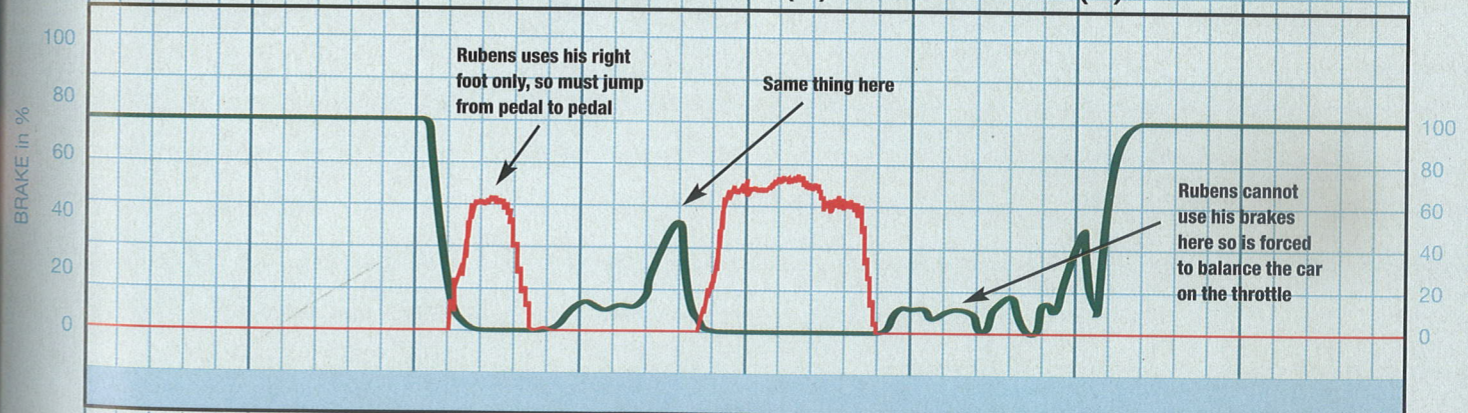
#### > GEAR COMPARISON: SCHUMACHER (■) BARRICHELLO (■)



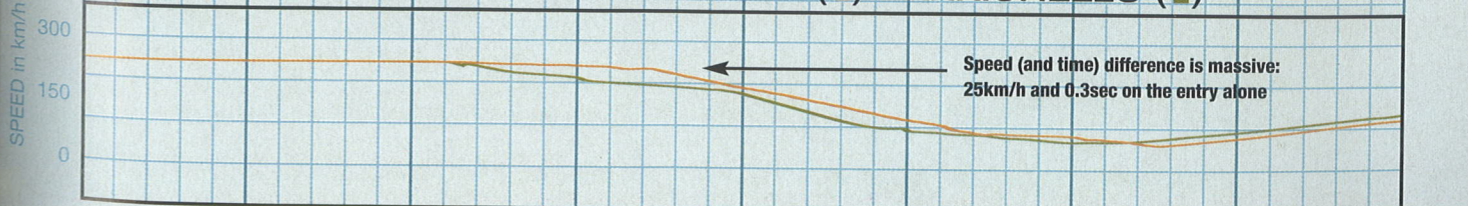
#### > MICHAEL SCHUMACHER: THROTTLE (■) AND BRAKE (■)



#### > RUBENS BARRICHELLO: THROTTLE (■) AND BRAKE (■)



#### > SPEED COMPARISON: SCHUMACHER (■) BARRICHELLO (■)



THIS PAGE: This is the most spectacular example of Michael's unique driving style. He brakes 15 metres later than Rubens, but this is just a detail. While the Brazilian keeps switching from the throttle to brakes and from brakes to throttle, Michael is working both pedals together. He starts his braking action long before Rubens (five per cent on the pedal) but is still flat out: he then slows using less brake-pedal pressure than his team-mate. Then, through the corner, Schumacher never

releases the throttle completely. He accelerates a little more on the exit, but keeps his foot on the brakes (2-3 per cent). Rubens, however, must use his brakes and throttle alternately. He is much slower on entry and through the majority of the corner, but is back on the throttle fractionally earlier for a quicker exit, but by now is playing catch-up.

Earlier and lighter braking and a complementary throttle ensure weight transfer is minimised on Michael's car





## Tyre pressures

Bridgestone are feeling the heat as never before. With Michelin well on the pace, *F1 Racing* asked the Japanese tyre maker what they're doing about it

Interview Anthony Rowlinson Photographs Steven Tee/LAT

**Bridgestone's Hirohide Hamashima has never felt more bullish. A class act by Michelin merely provokes him: "Revenge is important. If Michelin are here, we are here"**

**T**his time last year Bridgestone were basking in Ferrari's fourth successive constructors' world title. A one-two at Budapest put the Scuderia beyond reach and left the media agog at the near-perfection of the Ferrari-Bridgestone relationship. How could this partnership ever be challenged?

Well, it has been. Michelin, tyre supplier to Williams, McLaren, Renault, Jaguar and Toyota, spent the winter listening hard to their teams who believed 2003's looser regulations could work to their advantage.

They were right: after 11 rounds, Michelin teams had won five races, Bridgestone teams, six. At the same point last year the tally read: Michelin two, Bridgestone nine.

But have any of them produced a car/driver/engine package as good as Ferrari's? Many senior technical personnel in F1 think not. They believe, in fact, that only Bridgestone's relative under-performance is allowing Ferrari's rivals to get close. So, as the Japanese push their development programme at a hitherto unknown pace,

*F1 Racing* asked Hirohide Hamashima, Bridgestone's head of motorsport tyre development, the difficult questions...

**What developments are you making with compounds at the moment?**

In the last two races [our interview on the eve of the British Grand Prix followed the French and European Grands Prix] our performance was not too good so, of course, we recognise some part of losing the race is our responsibility. At the moment we would like to develop our ►

'THE BEST STRATEGY IS TO DEVELOP THE COMPOUND FOR BROADER PERFORMANCE'

Hamashima talks strategies, compounds and tread widths with F1 Racing's Rowlinson: "We have to look to the future, and then we will want to make not just small changes, but take very big steps"

compound quickly. But the current cars are very sensitive to the tyres – both their shape and their construction – so if we change the construction or shape dramatically, the car has to change, too.

There aren't many more races this season so we decided we needed to develop the compound quickly. I think our fault over the last two races [the European Grand Prix and French Grand Prix] may be that our prediction measure was wrong. So we checked our baseline again and the development direction. The week before Silverstone we tested at Barcelona, Fiorano and Mugello and we found the direction in which to go. I believe we have now recovered and that we will be able to be competitive at the remaining races.

We also have to look to the future, so we would like to test many different tyre constructions. Not just small changes, but also very big steps. When you take a big step, of course, you may not get a good result quickly. But we expect some of those new constructions to be working well for the future.

**What can you tell us about the construction of the new front tyre we saw on the Ferrari at Silverstone?**  
Those constructions and that shape were

introduced at Monaco, actually. The tyres feature good turn-in and a reduced tendency to understeer in the middle of the corner. The changes demand some modification to the front area, but our tyres must be effective for all our teams. Ferrari have made changes to accommodate our new constructions.

**What sort of modifications have Ferrari made?**

They have modified their aerodynamics and their suspension geometry settings.

**What have you tried to achieve by changing the construction?**

Our drivers pointed to our front tyres, saying there was some understeer during the corner. We wanted to try to find a better construction and shape to reduce the problem. And we found it.

**Do you have a strategy for developing the tyres in the face of increased competition from Michelin?**

Williams are much stronger than at the beginning of the year, so we would like to support Ferrari a little more. I believe the best way is to concentrate on developing the compound for broader performance. The compound we have used so far has been a little peaky and we have needed something a bit more robust. Just before ►

### > CV: Hamashima-san

**Job** Head of Tyre Development  
**Date/Place of Birth** 1952, Tokyo  
**Lives** Tokyo, Japan  
**Personal** Widowed; two children  
**Hobbies/leisure** Championship wins, wine

#### Career profile

**1977** Joined Bridgestone after graduating in polymer physics.

**1977-80** Assigned to Bridgestone's tyre research and development motorsport department.

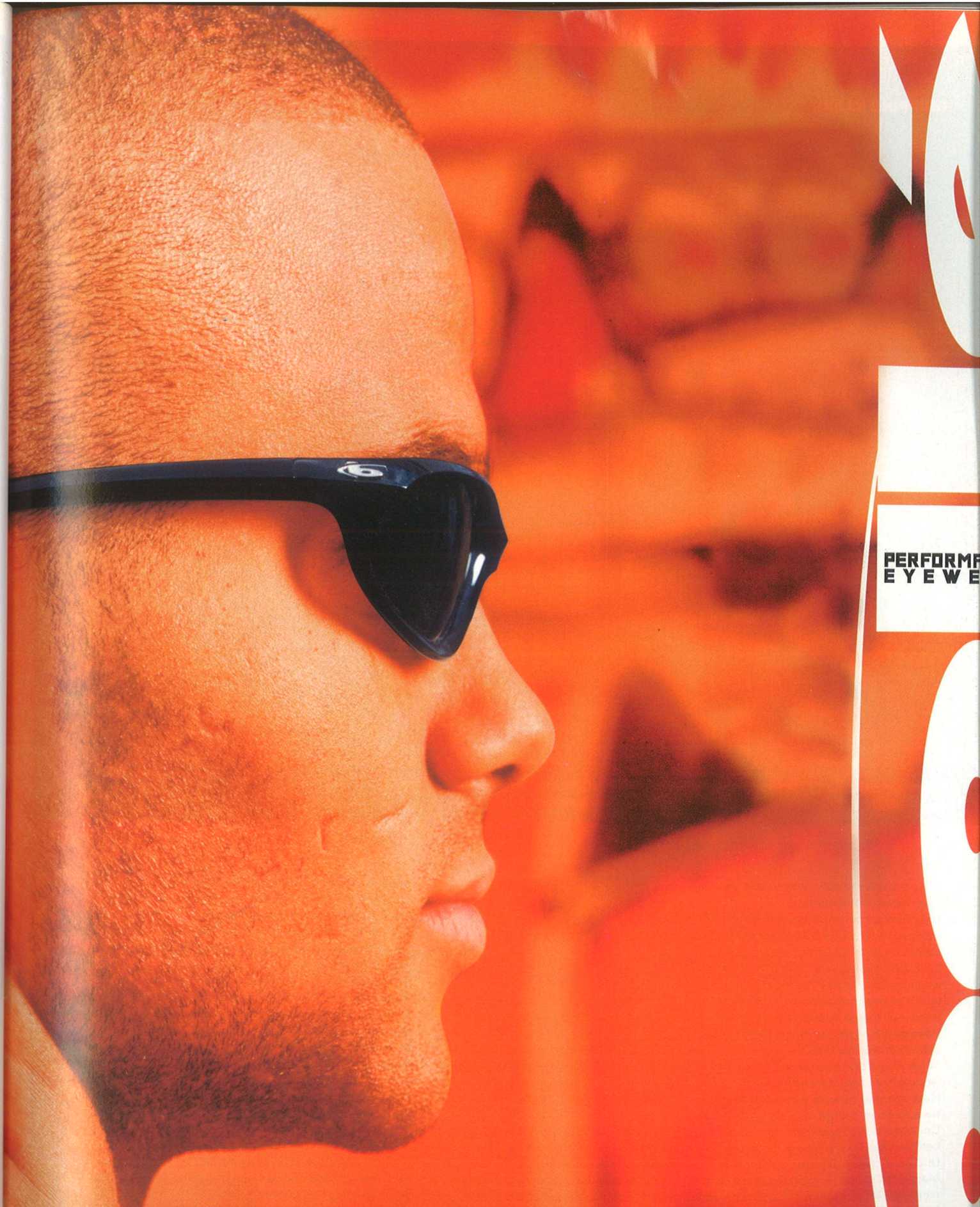
**1980-81** Moved to the passenger car tyre development department.

**1981-83** Moved to the UK as technical manager for motorsports.

**1983-96** Returned to R&D Japan, and to technical support of F2, F3000, Grand Champion, Touring Cars and Group C.

Also involved in the following – 1989: Early development for F1 programme; 1992: Responsible for DTM technical project and subsequent ITC project; 1994: Responsible for start-up of Indy Car project; 1995: Responsible for start-up of F1 project.

**1997** Head of tyre development of Bridgestone Motorsport, based at the technical centre in Tokyo.



PERFORM  
EYEWE



Schumacher and Ferrari at the British GP: "The constructions used at Silverstone were introduced at Monaco. The tyres feature good turn-in and a reduced tendency to understeer in the corner"

Silverstone we found a way to give us a more robust compound.

**Only Ferrari seem to be able to use the Bridgestone really effectively. Why?**

Maybe some of that is our responsibility, but I believe if we give them a more robust specification, maybe their position will go up. Or at least not go down. I think that is true for all teams, in fact, not just Ferrari.

**How much of Ferrari's performance comes from the tyre?**

I think about one quarter each from the tyres, the chassis, the engine and the driver.

**How are you able to use what looks to be a narrower front tyre than Michelin?**

Our width is the maximum permitted. I believe Michelin are also at the maximum. But the shape of the tyres is different.

Maybe the shape is what makes our tyre narrower. Tread width is the only difference between the two, I believe, but I have never measured a Michelin, of course.

**The tyres do look very different. How does your tyre work with its rounder construction?**

We use 'camber thrust' so that when you lean a tyre inwards it wants to turn in that direction. That generates some cornering force. When you look at the front suspension of the Ferrari, for example,

**'WE HAD TWO VERY GOOD YEARS WITH McLAREN, BEATING MICHAEL AND FERRARI'**

you can see that it has negative camber settings [the tyres lean in towards the chassis] to use our tyres' camber thrust.

But the Michelin would like to stand up vertically and be used in that position. So they could not be using camber thrust, but instead use maximum cornering power. So, I guess, their tyre has very high cornering power. We believe Michelin's philosophy of cornering is different because they use cornering power only and do not adopt camber thrust at all.

**Have you been able to maximise your 'quarter' in recent races?**

No. Of course, we have needed to improve a little bit more. If we improve our tyre performance maybe we have a bigger chance to get the championship this year. The package is very important. The cars are very sensitive to tyre performance, so if we improve grip levels or robustness or durability, maybe the teams can create

wider windows of strategy in the race. This is important with the current regulations, because teams can introduce many strategies. It was very simple last year, but now they need to be able to react during a race to what the other teams are doing. If we give them a tyre suitable for a number of strategies brought on by reacting to rival teams, their performance will be stronger.

**Some Bridgestone teams are thinking of switching to Michelin.**

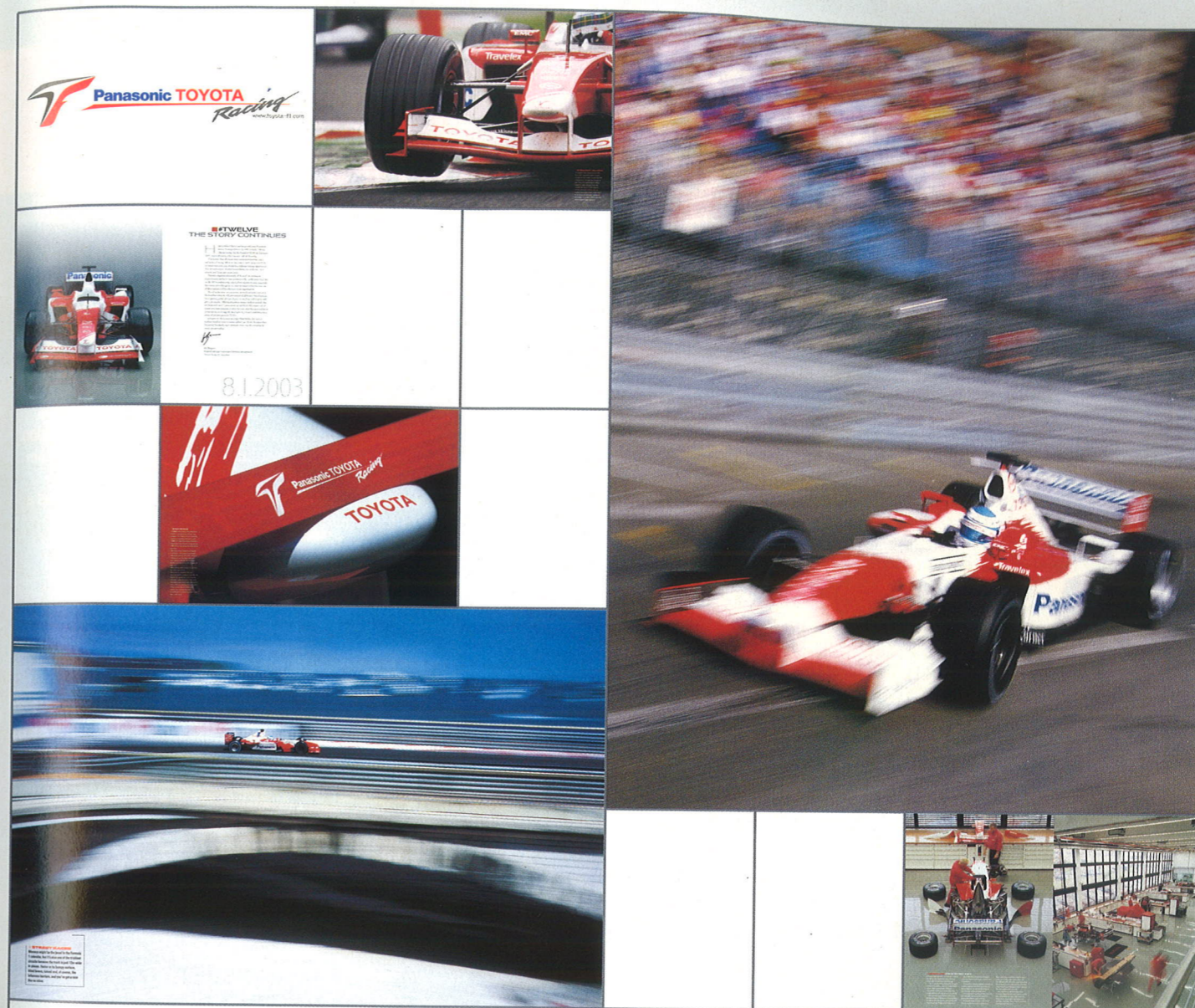
It's up to the teams. No problem. We can accept their decision.

**But if Ferrari wanted to go, would that be a bigger problem?**

Of course. We need at least one top team. In 1997 we didn't have a top team so we couldn't win. After 1997 we went with McLaren for 1998 and had two very good years, beating Michael and Ferrari.

**If a Michelin team win the title this year would that affect Bridgestone's desire to stay in the sport?**

We would have to come back. Revenge is important. If Michelin are here, we are here. At the start of July I met our president and he strongly said to me that if Michelin are here we have to get the championship under any conditions. It is a long-term commitment. Never withdraw. **1**



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# Testing the testers

Mile after thankless mile the F1 testers drive, seeking the tenths that make good cars great, and great cars invincible. So how good are these hidden heroes? *F1 Racing* has dissected each of them – attribute by significant attribute

Words by Alan Henry

Test drivers are not a new Formula 1 accessory. If you'd hung out in Modena during the late 1950s, you'd have seen Ferrari's test drivers piloting road-registered F1 machines to the local *autodromo* with all the insouciant skill of a taxi driver weaving through rush-hour traffic. These days, though, things are more structured – and

vastly more high-tech, of course. That's why, today, a test driver is a much more crucial part of the armoury of any F1 team expecting to be taken seriously.

Indeed, today's F1 testing demands can be overwhelming. During the week following their rout at the French Grand Prix at Magny-Cours, Ferrari deployed both Luca Badoer and Felipe Massa – as well as race drivers Michael Schumacher and Rubens Barrichello – in a Bridgestone development counter-attack in which more than 50 different tyre compounds were assessed at Mugello, Fiorano and Barcelona over a five-day period.

A top test driver therefore has to be quick enough to run at speeds that make his feedback worthwhile, technically adept enough to sift and prioritise the data helpfully – and, on occasion, to be ready to step up to the plate as reserve driver if one of the regulars dislocates his wrist lifting his wallet. The tester's role is arguably more demanding than that of the race drivers, and just as important: a test driver's efficiency or otherwise can have a crucial effect – for good or ill – on the race programme if he makes an important interpretative wrong slot. They have the whole team in their hands...

Alex Wurz (below) has been with McLaren since the end of 2000. He has the lot – from raw speed to PR skills – and scored a podium finish for Benetton in '97



**15th NEEL JANI (CH)**  
Sauber-Petronas Age 19 No grands prix

TECHNICAL FEEDBACK	8/20
RACECRAFT	10/20
RAW SPEED	12/20
FITNESS	11/20
PR ABILITY	12/20
TOTAL	53 PER CENT

**14th MATTEO BOBBI (I)**  
Minardi-Cosworth Age 25 No grands prix

TECHNICAL FEEDBACK	10/20
RACECRAFT	12/20
RAW SPEED	11/20
FITNESS	11/20
PR ABILITY	12/20
TOTAL	56 PER CENT

in the style of Darren Turner at McLaren. Drives for Coloni in F3000 and was originally signed by Williams as a test driver after scoring an impressive win at Spa in 2001. So far used mainly for straight-line aerodynamic testing. Quick, but needs consistency to go further.

**12th DARREN TURNER (GB)**  
McLaren-Mercedes Age 29 No grands prix

TECHNICAL FEEDBACK	12/20
RACECRAFT	10/20
RAW SPEED	12/20
FITNESS	11/20
PR ABILITY	14/20
TOTAL	59 PER CENT

Having spent a couple of years racing for Mercedes in the DTM, popular Briton Darren Turner is still employed from time to time as a back-up on the McLaren F1 team with which he has a contract. Darren has worked hard to sustain his fitness at the sort of levels required for this job but, as McLaren MD Martin Whitmarsh points out, "Lack of regular mileage means he struggles to keep his neck muscles as strong as he would ideally like. But that's one of the problems when you don't drive a grand prix car on a regular basis." ▶

Gifted youngster plucked from the Formula Renault Europe firmament in Sauber's latest bid to bring on another talent in the Kimi Räikkönen mould. So far Neel has had only a handful of preliminary test outings, but promise has already been shown. Running this season in a Formula Renault V6 where his speed and potential have shone through. Tipped as a future star, but being brought on gently over the next couple of seasons. Has lots to learn but has time on his side.

This pleasant Italian has been under-utilised on the track. But underestimating him might be a mistake. A better sign of his potential is probably his competitiveness in the Scuderia Italia Ferrari 550 in GT events. One Minardi insider calls him the "genuine article". Bobbi offers quite good technical feedback and is popular with the team. Did a Friday test session at San Marino GP.

**13th RICARDO SPERAFICO (BR)**  
BMW-Williams Age 24 No grands prix

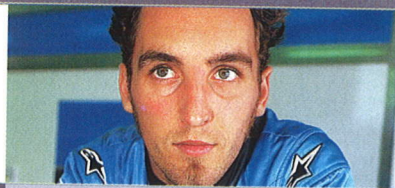
TECHNICAL FEEDBACK	10/20
RACECRAFT	12/20
RAW SPEED	14/20
FITNESS	12/20
PR ABILITY	10/20
TOTAL	58 PER CENT

Talented Formula 3000 driver who is very much the Williams team's back-up tester

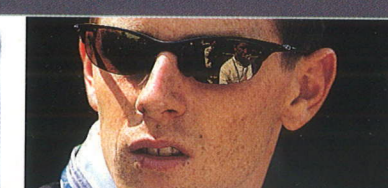
'JANI IS TIPPED AS A FUTURE STAR BUT IS BEING BROUGHT ON GENTLY OVER THE NEXT COUPLE OF SEASONS'

Clockwise from left: Jani is full of promise; Sperafico is strong in F3000; Turner races in DTM; Bobbi is the "genuine article"





Montagny (above) used mainly for straight-line work at Renault; gutsy Briscoe has suffered from divided loyalties



Sato (above) has matured impressively at B.A.R.; Zonta could easily step in for Panis or da Matta; Davidson has GP racing promise

**11th FRANCK MONTAGNY (F)**

Renault Age 25 No grands prix

TECHNICAL FEEDBACK	11/20
RACECRAFT	12/20
RAW SPEED	12/20
FITNESS	14/20
PR ABILITY	12/20
<b>TOTAL</b>	<b>61 PER CENT</b>

Montagny's testing expertise has largely been limited to straight-line runs up the Santa Pod drag strip, testing the Renault's suspension with punishing trips over artificial aluminium kerbs laid down for the purpose. Yet, as a bonus, he replaced McNish on a one-off basis to carry out the Friday morning test session at the French Grand Prix. Despite his inexperience, his feedback was mature and considered for one so young, and he was both definite and specific in his views, despite having his progress disrupted when he switched to the spare R23. Races in the Nissan World Series.

**10th RYAN BRISCOE (AUS)**

Toyota Age 22 No grands prix

TECHNICAL FEEDBACK	12/20
RACECRAFT	13/20
RAW SPEED	10/20
FITNESS	12/20
PR ABILITY	14/20
<b>TOTAL</b>	<b>61 PER CENT</b>

Briscoe is part of the Toyota driver academy, based at Viareggio, Italy, and an informal test driver for the F1 team. Last year he was a fully contracted test driver, but it was felt that this work rather took the edge off his German F3 campaign and the team wanted to free him up to concentrate on this season's Euro F3 series with the PrimaPower team. A gutsy racer with a blend of natural talent and doggedness, Briscoe has clear ideas about what he wants from a race-car set-up. His technical feedback is good.

'DESPITE HIS INEXPERIENCE, MONTAGNY'S FEEDBACK WAS MATURE, AND HE WAS DEFINITE AND SPECIFIC IN HIS VIEWS'

**9th TAKUMA SATO (JAP)**

B.A.R.-Honda Age 26 17 grands prix  
Best result: 5th, Japan (2002)  
for Jordan

TECHNICAL FEEDBACK	12/20
RACECRAFT	11/20
RAW SPEED	14/20
FITNESS	13/20
PR ABILITY	12/20
<b>TOTAL:</b>	<b>62 PER CENT</b>

After a somewhat wild and woolly freshman F1 season with Jordan in 2002, Sato has matured into an accomplished and valued test driver for B.A.R.-Honda. "I think his new role has taught us a lot and taught him a lot," says team principal David Richards. "He is also a valuable bridge to our Japanese partners and has contributed a lot in that respect." Sato has worked hard on his fitness and has been a popular PR asset. The feeling is that he has the ability to revive his racing career - if he gets the chance.

**8th RICARDO ZONTA (BR)**

Toyota Age 27 31 grands prix  
Best result: 6th Brazil, Italy and USA (2000) for B.A.R.-Honda

TECHNICAL FEEDBACK	13/20
RACECRAFT	13/20
RAW SPEED	14/20
FITNESS	13/20
PR ABILITY	12/20
<b>TOTAL</b>	<b>65 PER CENT</b>

The popular Zonta was never in the right F1 team at the right moment to develop his racing career. He had a disappointing time with B.A.R., but his testing skills were honed at McLaren in 1999. He was therefore a logical choice for lead test driver for Toyota this year because the Japanese squad were already benefiting from Woking old boy Olivier Panis's input. Zonta is now a valued member of the team. Quick, experienced and nicely matured, he has sufficient F1 experience to step in for either of his two colleagues.

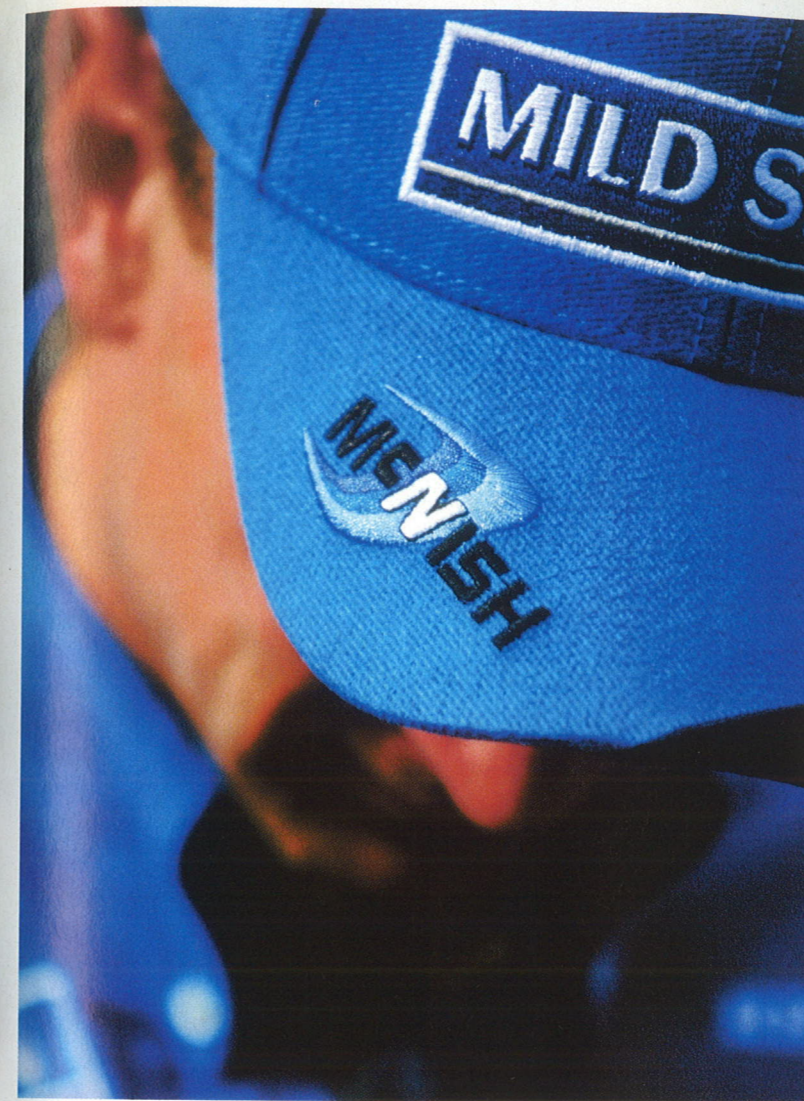
**7th ANTHONY DAVIDSON (GB)**

B.A.R.-Honda (and reserve driver, Jaguar Racing) Age 24 Two grands prix  
Best result: no finishes

TECHNICAL FEEDBACK	14/20
RACECRAFT	12/20
RAW SPEED	15/20
FITNESS	14/20
PR ABILITY	15/20
<b>TOTAL</b>	<b>70 PER CENT</b>

Davidson has earned strong regard as the backbone of the B.A.R.-Honda test programme over the past two seasons, his disciplined approach and mature style earning him the bonus of a few GT race outings in the Ferrari 550 Maranello prepared by David Richards' company Prodrive. Although he spun off in both his GPs for Minardi last year, a close check on his performances - especially his second race, at the Belgian GP - establishes his true calibre. He was inching closer to Panis's B.A.R. and Sato's Jordan when he finally made the slip which cost him a chance of finishing. Anthony is also Jaguar's reserve driver. ▶

MAIN (THIS PAGE) MARK THOMPSON/GETTY IMAGES; MAIN (OPPOSITE) LORENZO BELLIANGARI; CHARLES COTES/AT; PETER SPINNE/AT



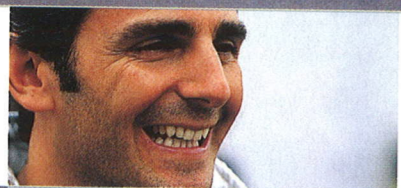
## TEST DRIVERS

### 3rd ALLAN McNISH (GB)

Renault Age 33  
16 grands prix  
Best result: 7th Malaysia (2002) for Toyota

TECHNICAL FEEDBACK	17/20
RACECRAFT	16/20
RAW SPEED	15/20
FITNESS	16/20
PR ABILITY	18/20
TOTAL	82 PER CENT

Employing McNish has been a major bonus for the Renault team because it has helped them maximise their Friday morning testing option. Previous testing roles at McLaren and Benetton have honed his technical know-how to a high level, while last year's race seat at Toyota ensured that he had invaluable knowledge of every circuit. Quick enough, he also has matchless PR ability, as he proved on ITV during the Canadian GP weekend. Trusted by both Fernando Alonso and Jarno Trulli to produce results which correlate accurately with their own data.



Badoer (above) is as experienced as test drivers come; de la Rosa thrilled to be at McLaren; Massa blossoming at Ferrari

#### 6th PEDRO DE LA ROSA (ESP)

McLaren-Mercedes Age 32  
63 grands prix  
Best result: 5th Italy (2001) for Jaguar

TECHNICAL FEEDBACK	15/20
RACECRAFT	12/20
RAW SPEED	14/20
FITNESS	16/20
PR ABILITY	14/20
TOTAL	71 PER CENT

When Pedro was bought out of the balance of his \$6m contract with Jaguar, his shrewd manager, Julian Jakobi, immediately negotiated him a deal with McLaren as their second test driver. Within weeks of taking the job, Pedro was telling anybody who would listen: "I've learned more with McLaren in a month than I did with Jaguar in almost two years." He is now a valued member of the team, following in Wurz's well-groomed wheel tracks, and has produced consistently impressive work with the team's dedicated Michelin test programme.

#### 5th LUCA BADOER (I)

Ferrari Age 32 50 grands prix  
Best result: 7th San Marino (1993) for Scuderia Italia

TECHNICAL FEEDBACK	16/20
RACECRAFT	12/20
RAW SPEED	13/20
FITNESS	15/20
PR ABILITY	16/20
TOTAL	72 PER CENT

Seasoned and highly experienced, Badoer has been a crucial element in the Ferrari team's world championship domination of the past three seasons. The former Minardi driver is relied on and completely trusted by Michael Schumacher and the team's senior engineers, and is as happy testing engines or tyres at Barcelona as he is shaking down the race cars at Fiorano prior to each event. Badoer's previous racing experience with the Minardi squad has also contributed to his considerable mental bank of F1 data and he now seems to have overcome any disappointment which goes with the knowledge that he is unlikely to win a regular drive in the future.

#### 4th FELIPE MASSA (BR)

Ferrari Age 22 16 grands prix  
Best result 5th: Spain (2002) for Sauber

TECHNICAL FEEDBACK	16/20
RACECRAFT	14/20
RAW SPEED	15/20
FITNESS	15/20
PR ABILITY	13/20
TOTAL	73 PER CENT

Ferrari customer Peter Sauber is proving particularly adept at finding promising new talent to feed into the top teams. In 2001 he provided the foundation for Kimi Räikkönen's career, and Felipe Massa certainly benefited from the same treatment last season. Having been dropped from the Sauber line-up, albeit perhaps temporarily, Massa seems to be blossoming in his role as Ferrari's second test driver. Much of his work this year has been Bridgestone tyre testing at the wheel of an F2002, a task in which he has proved increasingly consistent and capable. The rough edges are being steadily smoothed off.

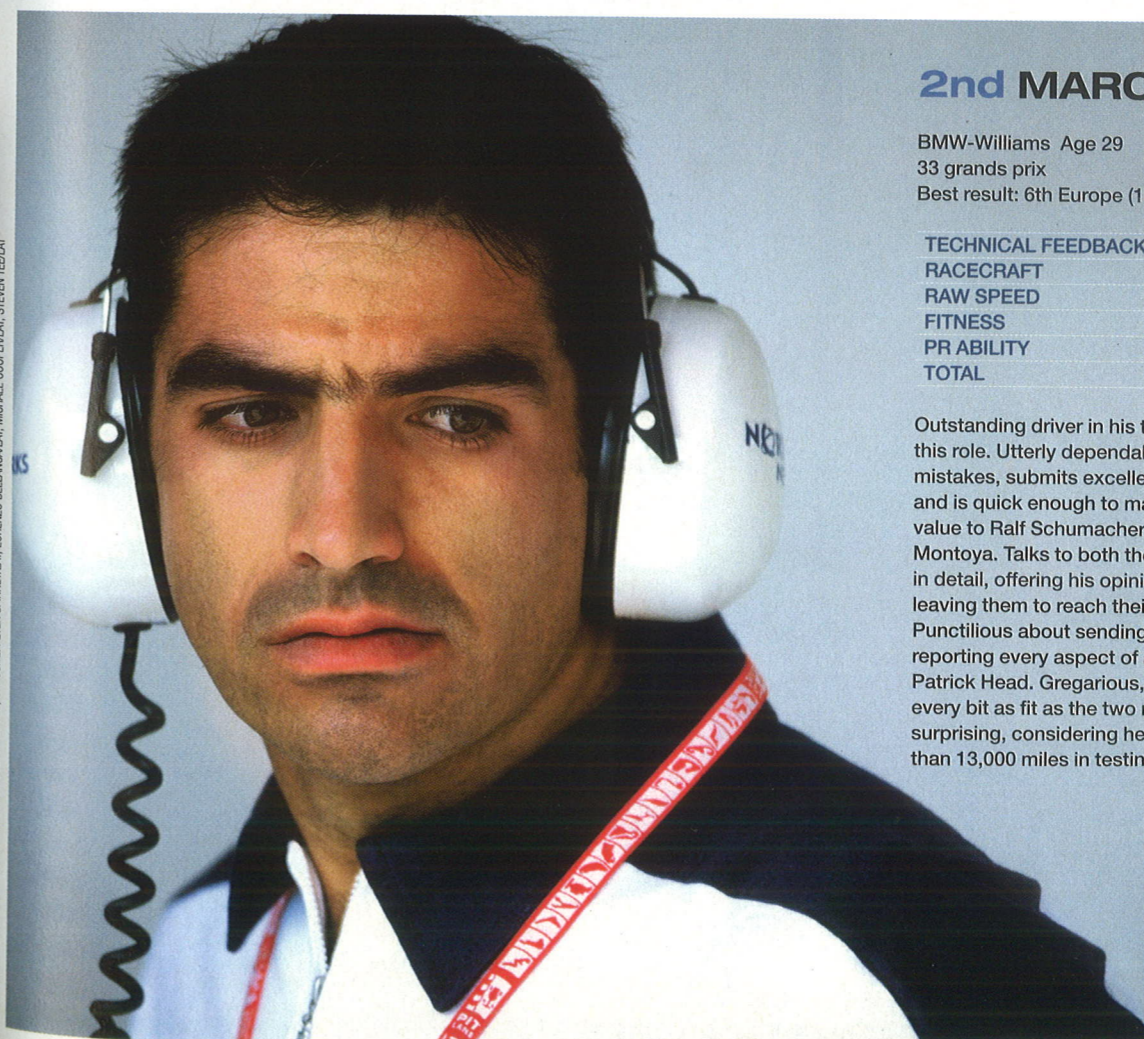
### 2nd MARC GENE (ESP)

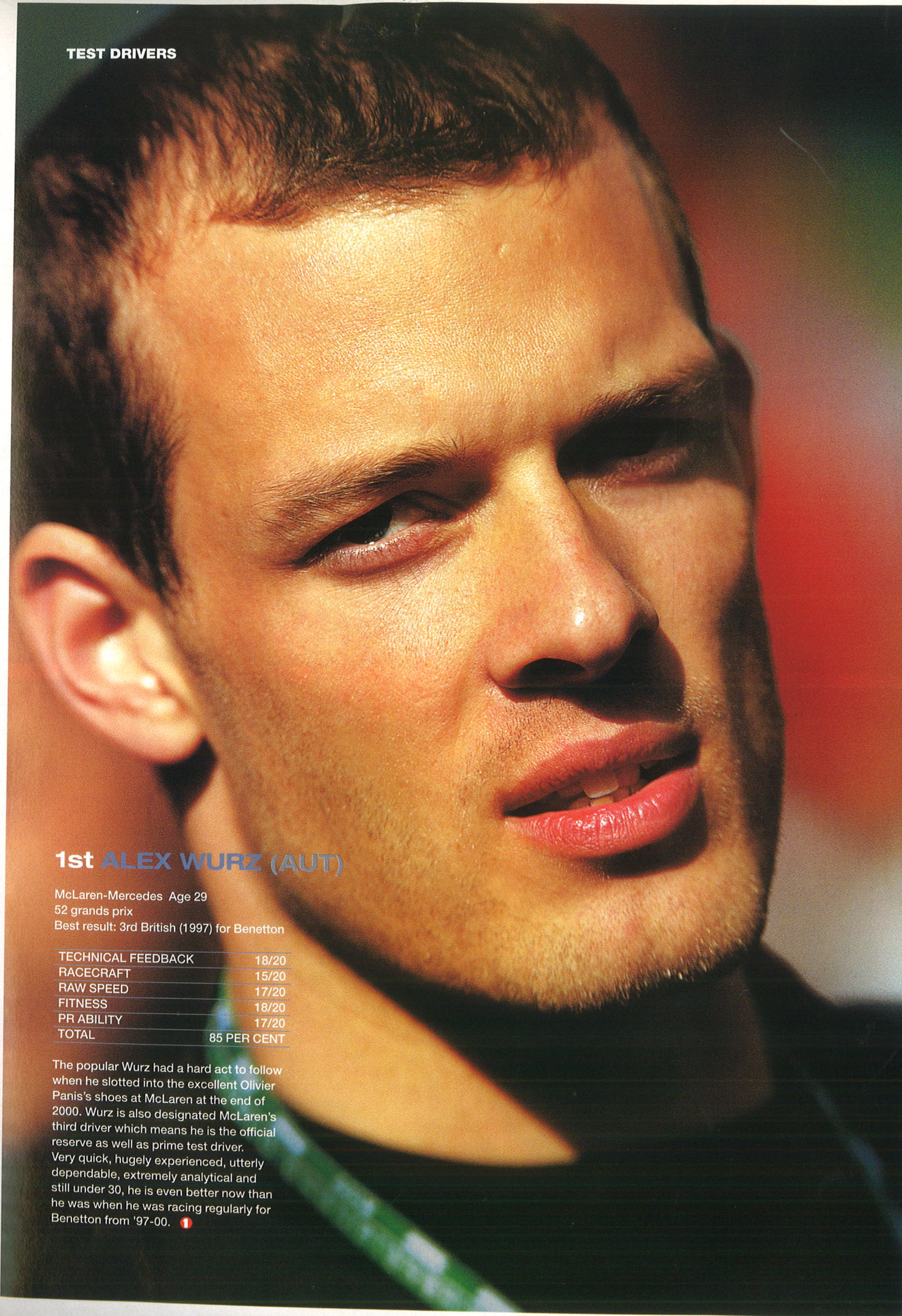
BMW-Williams Age 29  
33 grands prix  
Best result: 6th Europe (1999) for Minardi

TECHNICAL FEEDBACK	18/20
RACECRAFT	12/20
RAW SPEED	17/20
FITNESS	18/20
PR ABILITY	19/20
TOTAL	84 PER CENT

Outstanding driver in his third year in this role. Utterly dependable, makes few mistakes, submits excellent technical data and is quick enough to make his input of value to Ralf Schumacher and Juan Pablo Montoya. Talks to both the regular drivers in detail, offering his opinion and then leaving them to reach their own verdicts. Punctilious about sending detailed e-mails reporting every aspect of a day's test to Patrick Head. Gregarious, PR friendly and every bit as fit as the two race drivers. Not surprising, considering he covered more than 13,000 miles in testing last year. ▶

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**1st ALEX WURZ (AUT)**

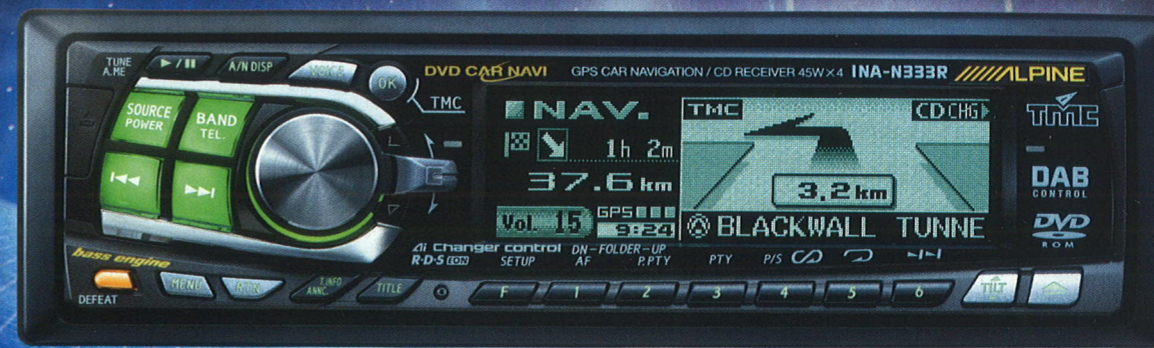
McLaren-Mercedes Age 29  
 52 grands prix  
 Best result: 3rd British (1997) for Benetton

TECHNICAL FEEDBACK	18/20
RACECRAFT	15/20
RAW SPEED	17/20
FITNESS	18/20
PR ABILITY	17/20
TOTAL	85 PER CENT

The popular Wurz had a hard act to follow when he slotted into the excellent Olivier Panis's shoes at McLaren at the end of 2000. Wurz is also designated McLaren's third driver which means he is the official reserve as well as prime test driver. Very quick, hugely experienced, utterly dependable, extremely analytical and still under 30, he is even better now than he was when he was racing regularly for Benetton from '97-00. **1**

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# BLACK MAGIC

Nothing shouts louder about a driver's skill than promotion to a stronger team – and when it happens mid-season, you know something special is going on. P19 to eighth on lap one at Sepang? That's the sort of talent Jaguar crave and Minardi will miss

Interview Peter Windsor Photographs Darren Heath



It was clear that Justin Wilson was going to make it even before he was announced as a Jaguar man: he drives beautifully; he has a very strong sense of inner belief; and he is uncomplicated, by which I mean that he has his priorities right and that he is disciplined in their application. Similar generalities apply to other drivers, of course: all of them are talented, most of them are confident and not a lot of them drink beer. You sense, though, that Justin is different

even from them. You see it, for example, in the way he deals with the height question: at Magny-Cours, where we spoke a few hours before the French Grand Prix, he threw it in the garbage like a used Evian bottle.

"I don't see what the problem is," he said quietly – as quietly as he usually speaks. "Yes, I can look at pictures of me in the car and, yes, maybe I am sitting a little higher. It doesn't have any effect, though. It's just a visual thing. I've done a couple of tests and

especially the one at Jordan (in October, 2001) showed that an inch or so below the airbox made no difference at all to engine performance or to drag. A much bigger factor is weight – and there are plenty of guys out there heavier than I am." (For the record, Justin is 6ft 3in and weighs 80kg.) End of story. For Justin, there are plenty of other subjects more interesting and more important. Like driving in general.

"I think the most enjoyable car/corner ▶

Nobody does it better: Justin Wilson's starts are among the must-watch moments of F1 2003. At no other time over a GP weekend is his playing field so level

HIGH FLYER



'WILSON HAS TO USE ALL OF HIS ABILITY TO SCREW THE BEST FROM THE MINARDI'

moment I've had so far was in the Formula Vauxhall, at Thruxton, round the back, where you've got to get the left kink perfect in order to be able to drift through the long right-hander. My car was just fantastic that day. I could pitch it towards the apex bump and take the whole corner in a four-wheel-drift. It was fantastic – amazing. The best moment I've ever had in a racing car."

No "I'll never forget my first F1 race" or "I felt great the first time I out-qualified Jos Verstappen". No, Justin Wilson touches racing in general with every extremity of his body. F1 is where he wants to be because F1 is the pinnacle. Anywhere good, though, is where he'll want to pause. Great talent shows through in Formula Vauxhall perhaps more effectively than it does in a Minardi-Ford. At Jaguar, at last, he'll be able to display the full extent of his repertoire.

At Magny-Cours, where of course he was still racing for Minardi, he was much less decisive. Not because he was unsure of his own ability, but because the shortcomings of Minardi – their lack of testing (only one shakedown run this year) and subsequent technical glitches (launch control only just introduced; manual starts have so far been more effective than buttons) – had not yet enabled him to drive the car absolutely at the maximum. He had to use *all* of his ability to screw the best from it, to sidestep the lack of running and the inevitable mechanical

problems, but he was not able to use *all* of his ability in the way it should be used.

By which I mean that Justin was born to turn in to the apex early, using the front of the car, and then the car's body weight, to extend the straights and to gain advantage into the first phase of the corner. The weak moment for any driver of this style is the middle of the corner, when he needs to turn and is usually travelling too quickly to do so. In eras past, turn-in drivers at that point used to live with the understeer. If it was minimal, drivers like Jacques Laffite were brilliantly quick; if it was 'terminal' they were dead. The advent of traction control and left-foot-braking, however, has in recent years changed the art. Use the rear to tuck in the front – and then use the TC, in varying degrees, to control the rear. For further evidence, watch Michael and Raif Schumacher, David Coulthard and Jarno Trulli when all is right. Their margin of performance is still incredibly fine (see DC again!) but the scope is there nonetheless.

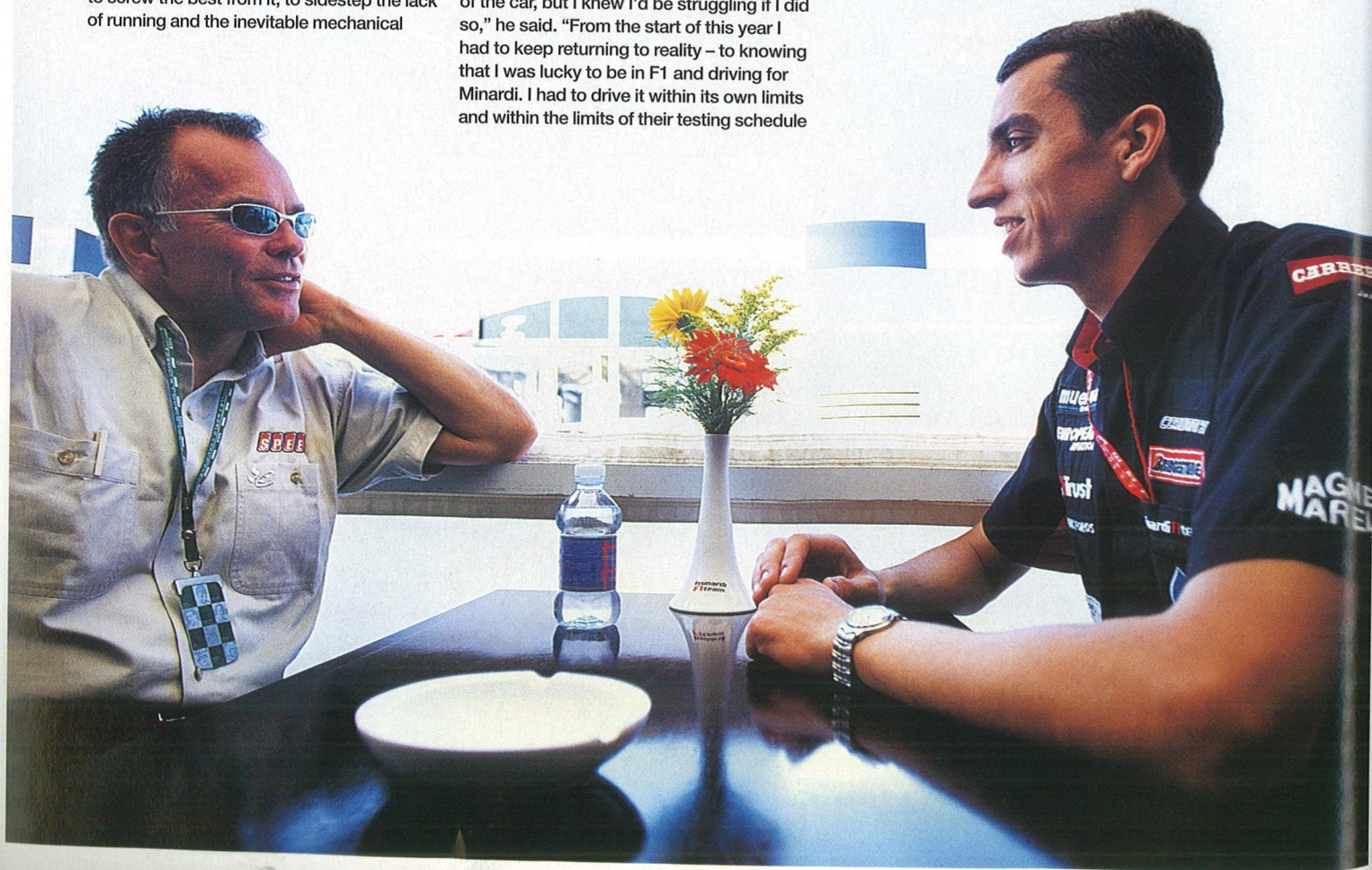
Justin Wilson obviously drives with the front of the car (more so, I think, than Mark Webber), but did so at Minardi within that car's limitations of a general lack of grip and, beyond that, its generally unrefined TC. "There were moments when I wanted to lean on the back, to get it to work the front of the car, but I knew I'd be struggling if I did so," he said. "From the start of this year I had to keep returning to reality – to knowing that I was lucky to be in F1 and driving for Minardi. I had to drive it within its own limits and within the limits of their testing schedule

and their budget. That was my job."

At Jaguar, of course, it will be very different. Wilson is joining a well-funded, technically competent team on the rise. No longer does he need to worry about the direction his career will take – about raising funds, about letting others down. He is now a racing driver, pure and simple. Now he can do what he was always destined to do.

And, along the way, to continue to make those great starts, for this is the one area that escapes the physical limitations of any modern F1 car – the moment of reflex, judgement, of seeing the gap. Your car is irrelevant; it is you versus the others. Wilson is usually very calm on the grid – resting pulse low, demeanour neutral – but rarely, if ever, does he miss a trick. Of course, when he was a Minardi driver he was naturally attuned to making the most of the start, for it is almost a certainty that he was going to qualify at the back and that any overtaking he did was therefore going to be in the first couple of corners, but then racing drivers are racing drivers and gaps are there for everyone to use. Justin has on occasions this year passed four to five cars on the opening lap – 11 in Sepang – using hesitations and pauses from others, ▶

Jos 'not quite the boss' Verstappen (above right) had to measure himself against Wilson's mercurial talent; JW (above left) in his new Jaguar livery. Smile of a guy (below with F1 Racing's Windsor) who knows that all he needs to deliver results is the right machinery



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MARK LORENZO/REUTERS/CONTOUR/AGF/INSTIT. JAT/ALPINE

creating gaps. Bear in mind that in this area he has this year also out-performed his former team-mate, one Jos Verstappen, who is not known for his reticence in traffic, and you begin to see the standard. (Justin compared well with Jos in other departments, too. He was quicker in the wet at the Nürburgring, for example, although too much should not be made of this: unlike front-running teams, Minardi are rarely able to run two cars equally).

He used to live in his home town of Sheffield but has now moved to Northampton, to the centre of things in the F1-valley sense – and near to Jaguar in particular. He works out with a trainer, concentrating on cardio one day (90 minutes) and weights the next, but doesn't do too much else: at present, the desire to maximize his F1 chance, and to display his talent, is overwhelming. On the drivers' parade, he will chat to DC or to Jos, or perhaps to his new team-mate, Mark Webber, against whom he raced in European F3000 (Justin won the 2001 championship.) He is softly spoken and very apolitical: he respects others and always worked as a team player at Minardi. It is a given that he will work closely and well with Webber.

It is also clear that his prodigious natural talent has given him a very high level of self-confidence. Of the type of large ego that predominates in F1, meanwhile, there is so far no sign; his demeanour – both in and out of the car – suggest that he knows that an inflated ego would detract from the business of racing. And that, in turn, means that he is not in need of role models – of other standards to which he must relate. Justin Wilson can do it his own way, with his own talent.

Watch. **i**

**At Monaco, Wilson stole two places on lap one, here lifting a wheel in an unrestrained fight against understeer and topography at Mirabeau**

## >A slice of the action for Wilson fans

Justin Wilson stands out in the Formula One paddock for reasons beyond his height and uncanny ability to steal places on the opening lap of a race. He may be a good half-foot taller than most rivals, but his uniqueness extends to being the only grand prix driver who is actually owned by his fans.

This unusual arrangement, dreamed up by Wilson's manager, the former F1 driver Jonathan Palmer, came about because, like most F1 rookies, Wilson needed to pay for his big break himself. Having to raise almost \$2 million to keep him in his Minardi drive, Palmer came up with the ground-breaking idea of selling shares in Wilson. For a minimum fee of £500 (\$813), investors were offered the chance to double their money within the next three



Palmer: "Issue was risky"

years – and receive between them 10 per cent of his income after that. How the Jaguar move will affect that remains to be seen. It sounds like a typical F1 dodgy deal, but the theory is simple. Wilson's salary is limited until investors have received the initial dividend. If and when the 'double your money' pledge has been honoured, the next stage kicks in.

It was a big gamble, as Wilson and Palmer acknowledge, but they had no choice. The global economic slowdown combined with Ferrari's

domination of 2002 has meant that less money is swilling around F1 than there has been for some time – and very little of it filters down to Minardi's drivers.

The risk was also the investors', of course. But by demonstrating either their faith in Wilson's ability – or their credulousness, if you prefer – not only did the 'Invest in Wilson' scheme hit its target, it was actually over-subscribed.

"It has exceeded our expectations by quite some way," says Palmer. "The share issue was risky, but Justin is a driver who has deserved this."

Now, of course, things are looking decidedly rosier. Surely, the value of the investment will rise with Justin's promotion, and those who showed faith will share his elation. **Andrew Benson**



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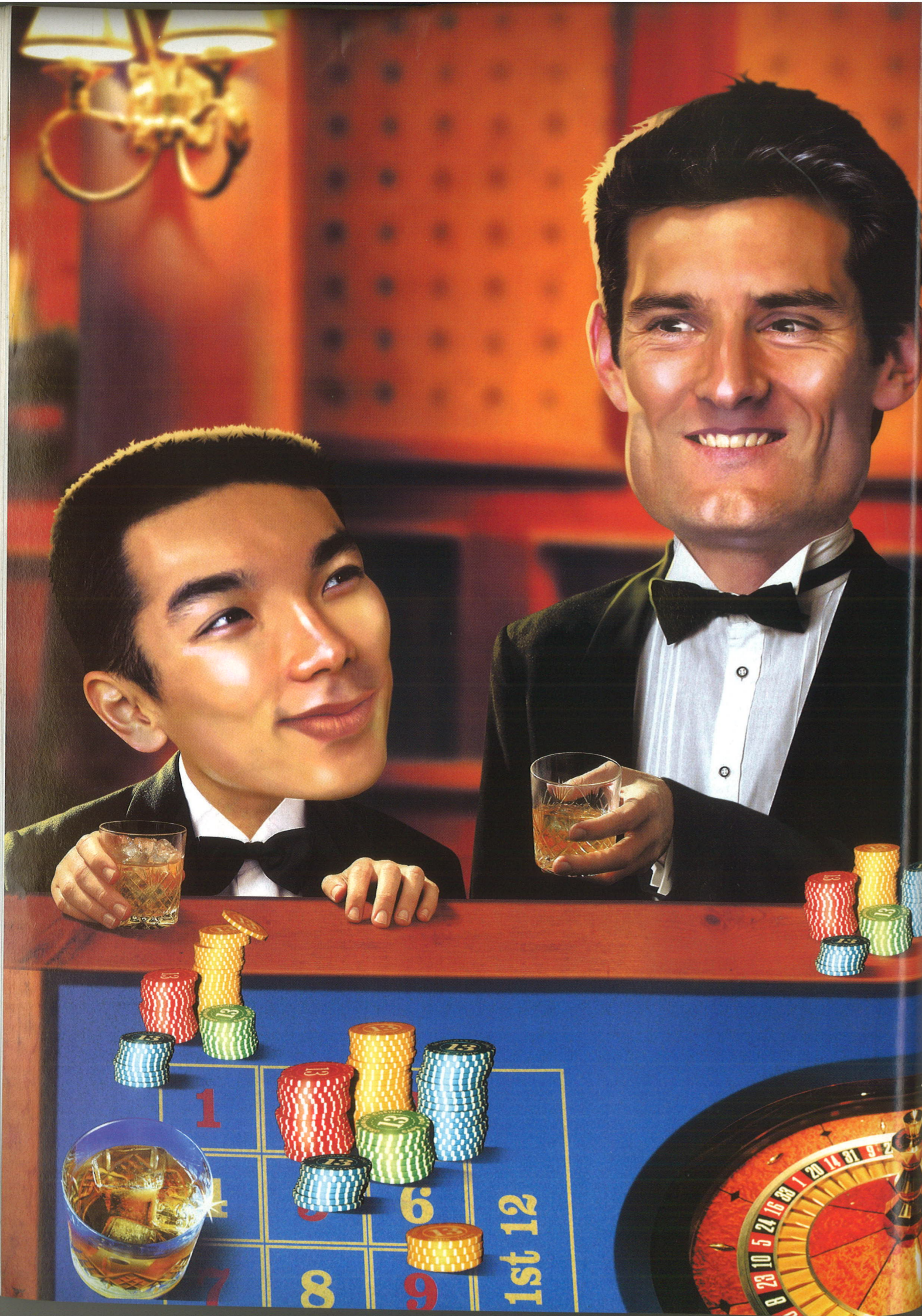
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# F1 RICH LIST

# 2003

The sound of money sloshing around Formula 1 would drown out the scream of an F1 engine on a qualifying lap. So how much is there and who has it? Philip Beresford, compiler of the *Sunday Times* Rich List, has been digging for gold

Illustrations Richard Hart Photographs LAT, Getty Images

**50 MARK WEBBER \$1.0m**  
Driver, Jaguar  
Age 26

Australian who moved into Formula Ford in '91-93. Runner-up in the British FF Championship in '96 and '98 GT championship in '98. Raced for Mercedes at Le Mans in '99; raced F3000 in '01. F1 debut in '02 with Minardi, then Jaguar in '03. Career earnings around \$1m.

**49 MARC GENE \$1.1m**  
Test driver, BMW-Williams  
Age 29

Gene raced in F3000 before moving to Minardi in F1 in '99-00. The Spaniard has since been a Williams test driver. Career earnings are around \$1.1m.

**48 FELIPE MASSA \$1.2m**  
Test driver, Ferrari  
Age 22

Brazilian karting champion '90-97, graduating to Formula Chevrolet; in '01 won the F3000 Euro-series, and drove for Sauber in F1 in '02. Now a Ferrari test driver, earnings are reckoned at about \$1.2m.

**47 TAKUMA SATO \$1.7m**  
Test driver, B.A.R.-Honda  
Age 26

Japanese driver who graduated to F3 in Europe, notching up a record number of wins in British F3. Noticed by F1 teams and in late '00 signed for B.A.R. as a test driver. In '02

joined Jordan as a fully fledged F1 driver, then in '03 returned to B.A.R. as a tester. F1 earnings are reckoned at about \$1.7m.

**46 NICK FRY \$2.9m**  
Group MD, B.A.R.-Honda  
Age 47

MD of automotive group Prodrive, and runs the business and B.A.R. F1 team day-to-day. Was previously a Ford director and MD of Aston Martin. We assume he has Prodrive share options as the group prepares for flotation. Past salaries etc should take him to around \$2.9m.

**45 LUCA BADOER \$3.0m**  
Test driver, Ferrari  
Age 32

Has the dubious distinction of competing in the most grands prix (from '93-99) without scoring a single point; but gearbox failure in '99 robbed him of fourth at the Nürburgring in sight of the finish. Now Ferrari's test driver, the Italian also raced in karting, F3 and F3000. F1 career earnings reckoned at about \$3m.

**44 ALLAN McNISH \$3.2m**  
Test driver, Renault  
Age 33

Won the Scottish and British karting titles before moving to FF and F3. In '89 made his F3000 debut, and in '93 test drove for Benetton in F1. Switched to sports cars and won Le Mans in '98; moved to Toyota in '00 as their F1 development driver. Now with Renault, McNish's F1 career earnings total \$3.2m.

**43 JOS VERSTAPPEN \$3.3m**  
Driver, Minardi-Cosworth  
Age 31

Dutchman Verstappen was German F3 champion in '93. Joined Benetton as tester in '94, then replaced the injured JJ Lehto as a driver. Dropped by Benetton in '95, Verstappen moved around, sometimes going for seasons without a seat. Joined Arrows in '00, only to be dropped in '02; joined Minardi this year; career earnings are put at \$3.3m.

**42 CRISTIANO DA MATTA \$4.0m**  
Driver, Toyota  
Age 29

Brazilian da Matta won many major karting prizes in the early '90s before moving to F3 and F3000. Later moved to CART in the US and by '02 won the championship with Newman-Haas and Toyota. In '03, started a two-year F1 contract with Toyota. Total F1 earnings about \$4m.

**41 MARTIN BRUNDLE \$4.5m**  
Manager, David Coulthard  
Age 44

After battling against Ayrton Senna in the '83 British F3 championship, graduated to F1 in '84, racing for Tyrrell. Came fifth on his debut in Brazil and second in only his eighth grand prix. Raced for nine teams in a career that ended in '96, making 158 starts and coming second twice. Career earnings were \$4.5m. Now a member of the ITV commentary team and manages David Coulthard. ▶

**Rules of engagement:** Earnings, share values and other assets have been calculated from published data in financial and business newspapers, daily papers and available information on drivers' sponsorship deals (less living, tax and managers' fee expenses). Team valuations have also been gleaned from City valuations and analysis of accounts filed at Companies House. Quoted company valuations have been taken from stock market prices current at the end of May 2003.

TOP FIVE DRIVERS: **1 MICHAEL SCHUMACHER** (05) \$285m; **2 JACQUES VILLENEUVE** (11) \$91.0m; **3 RALF SCHUMACHER** (15) \$44.0m; **4 DAVID COULTHARD** (16) \$42.0m; **5 RUBENS BARRICHELLO** (20) \$35.0m

## 40 RICARDO ZONTA \$6.0m

Test driver, Toyota  
Age 27

Brazilian Zonta went into F3000 racing in Europe in the mid-'90s, winning the European championship in '97 after battling Juan Pablo Montoya. Joined B.A.R in F1 in '99 and scored his first point with a sixth at Melbourne in '00. After '00, moved to Jordan as test driver, later replacing Frentzen, and is now test driver for Toyota. Career earnings are around \$6m.

## 39 RORY BYRNE \$6.5m

Chief designer, Ferrari  
Age 59

South African Byrne started as designer for Toleman, and remained when they were taken over by Benetton. Moved to Reynard to design its aborted F1 chassis, returning to Benetton in '92. His designs became the all-conquering Benettons of the mid-'90s. They both joined Ferrari in '96. Byrne's earnings and bonuses should amount to at least \$6.5m.

## 38 ROSS BRAWN \$6.6m

Technical director, Ferrari  
Age 48

One of reasons Ferrari is currently supreme. The Mancunian-born technical director is the brains behind the driving of Schumacher. Started with Williams and joined Tom Walkinshaw in '88 to help design the Jaguar XJR-14. Moved to Benetton in F1 and teamed up with Schumacher who won the '94 and '95 drivers' titles. Lured to Ferrari in '96, we reckon his bonuses and earnings at \$6.6m. We go no higher because he has made it clear he isn't chasing money and effectively dismisses any idea of being poached by other teams. We can see \$450,000 of assets in his British company called Hedera.

## 37 NICK HEIDFELD \$6.8m

Driver, Sauber-Petronas  
Age 26

Became a regular F3000 winner in the '98 world championship. Joined McLaren as an F1 test driver, switching to Prost in '00, and Sauber as a driver in '01 where he remains. Seventh in the '01 championship with a career best third place at Interlagos. Total career earnings are put at \$6.8m.

## 36 FERNANDO ALONSO \$7.2m

Driver, Renault  
Age 22

Won the Spanish 'infants' karting title at eight. By '96 was world champion; graduated to F3000 in '00, and made his F1 debut with Minardi in '01, achieving one top 10 finish. Moved to Renault as test driver last year and in '03 became a Renault race driver. F1 career earnings are about \$7.2m.

## 35 JULIAN JAKOBI \$8.0m

Drivers' manager  
Age 52

An accountant, Jakobi worked for IMG, the sports management group before managing Ayrton Senna full-time from '92. After the Brazilian's death in '94, ran the Ayrton Senna Foundation. In '97, co-founded the Stellar Management Group which merged with CSS Promotions to form the quoted company, CSS Stellar. Aside from drivers such as Montoya, McNish and de la Rosa, CSS Stellar handles film and TV stars. Jakobi is CEO of the London-based operation with a \$5.0m stake. Other assets and past salaries etc should easily take him to \$8m.

## 34 ALEX WURZ \$8.4m

Third driver, McLaren-Mercedes  
Age 29

Austrian-born driver became youngest-ever Le Mans winner at 22 in '96. Joined Benetton F1 as a test driver in '97, competing in three races as a substitute for the injured Gerhard Berger. In '00 switched to McLaren as a test driver where he remains. Career earnings in F1 are put at \$8.4m.

## 33 HUGH CHAMBERS \$9.8m

Group marketing dir, B.A.R-Honda  
Age 46

A director at David Richards' Prodrive Holdings, which runs the B.A.R team. Has a small stake in the operation worth around £6m. Now playing a more significant role in the F1 side of the group's operations.

## 32 ADRIAN NEWAY \$10.0m

Technical dir, McLaren-Mercedes  
Age 44

Regarded as the most brilliant engineer in F1, Neway made his name designing cars for March, winning three consecutive Indy 500 titles. Later produced Williams cars that won 58 grands prix. Left in '97 for McLaren where his cars won two championships; reported to have signed a five-year \$5.7m contract with Jaguar in '01, but after legal wrangling and confusion, Neway stayed at McLaren. Should be worth perhaps \$10.0m.

## 31 PEDRO DE LA ROSA \$13.4m

Test driver, McLaren-Mercedes  
Age 32

Spaniard who won the British Formula Renault Championship in '92, moving to F3 a year later. After a spell in F3000, moved to Arrows in '98, then Jordan as a test driver. Signed for Arrows in '99, but was replaced at the end of '01. Signed for Prost as a test driver before moving to Jaguar also as test driver and later as a race driver. Now a McLaren test driver. Career earnings are about \$13.4m.

## 30 JEAN TODT \$16.0m

General manager, Ferrari  
Age 57

Frenchman who won the World Rally Championship as co-driver before becoming motorsport boss of Talbot-Peugeot, winning the world championship twice. Took over Peugeot's sports car team in '90, winning the sports car world championship. Moved to Ferrari as team boss in '93 and set about reviving the team. Ferrari gave Todt a \$3.3m bonus in '02. Worth about \$16m.

## 29 MAX MOSLEY \$16.1m

President, FIA  
Age 63

Mosley sacrificed a career at the Bar to try his hand as a driver. Has since been Bernie Ecclestone's right-hand man building F1 into a mass-appeal sport world-wide. Wealth comes from the sale of his 25 per cent stake in the March F1 team in the '70s, property dealing and inheritance. Now the president of the FIA, he should be worth \$16.1m.

## 28 KIMI RAIKKONEN \$16.3m

Driver, McLaren-Mercedes  
Age 23

Finnish karting champion who by '00 was UK Formula Renault champion. Went into F1 with Sauber in '01, ending the season 10th. In '02, moved to McLaren and finished sixth overall. Total career earnings reckoned at \$16.3m.

## 27 OLIVIER PANIS \$17.5m

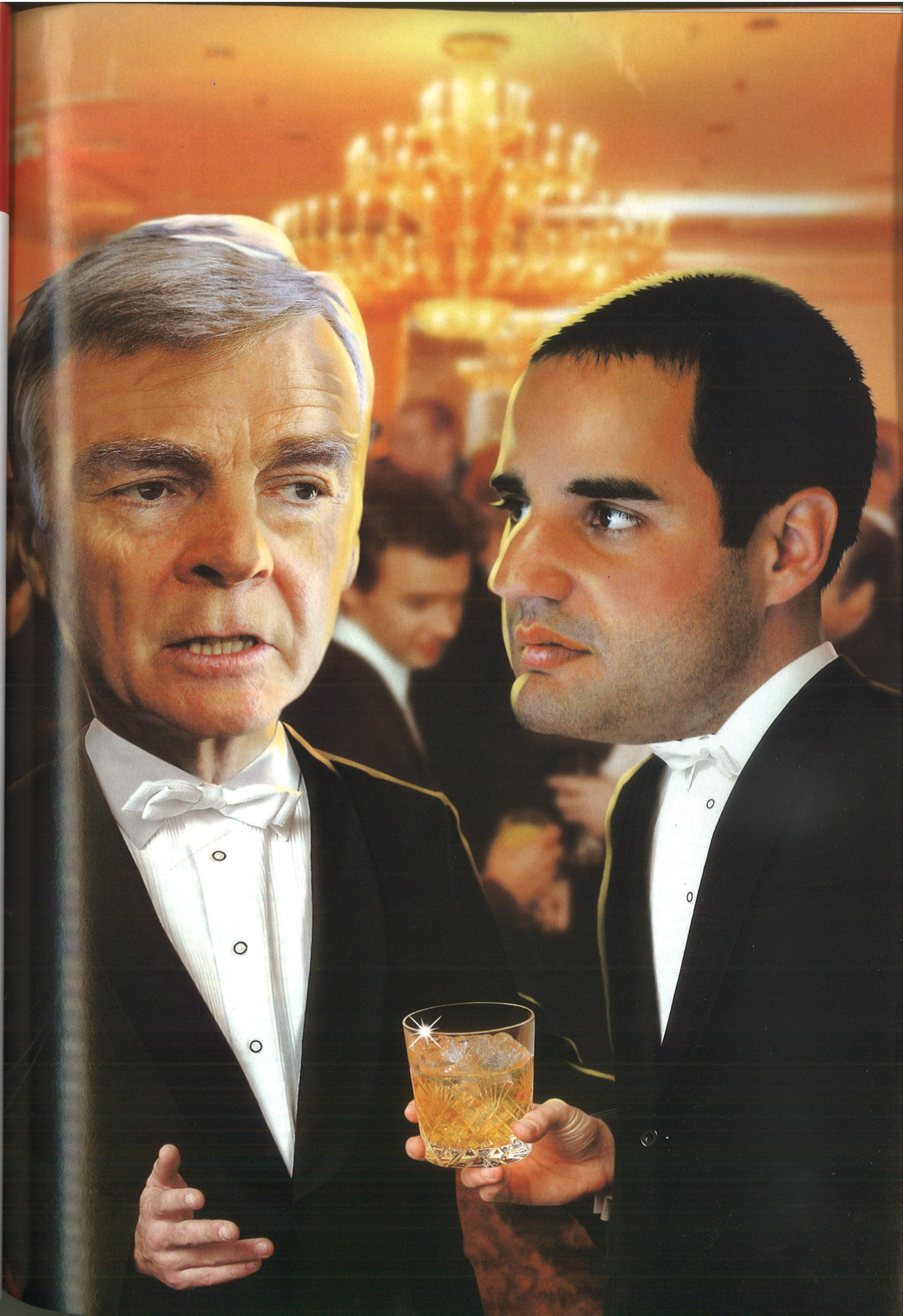
Driver, Toyota  
Age 36

French Formula Renault champion in '89 and later French F3 champion. Made his F1 debut with Ligier in '94, scoring a win at the Monaco GP in '96. After a spell as test driver with McLaren in '00, moved to B.A.R and now drives for Toyota. Total career earnings are reckoned at around \$17.5m.

## 26 JUAN PABLO MONTOYA \$18.5m

Driver, BMW-Williams  
Age 27

Won the world junior karting championship in Italy in '91 and '92 and British F3000 champion in '98. Signed a part-time contract with Williams and was sent to America where he stormed to the '99 Champ Cars title. Won 10 of his 40 races in two years, after which a deeply impressed Frank Williams recalled him to partner Ralf Schumacher in F1. In the US Montoya was reckoned to be on a contract of around \$13m a year at least, while his Williams contract is said to be up to \$9.8m. Even after tax and his generosity (often splits his prize money at Champ Cars races between children's hospitals in his native Columbia and America) Montoya should be worth \$18.5m. ▶



**TOP FIVE ENGINEERS: 1 PATRICK HEAD (12) \$82.0m; 2 MARIO ILLIEN (17) \$41.0m; 3 ADRIAN NEWEY (32) \$10.0m; 4 ROSS BRAWN (38) \$6.6m; 5 RORY BYRNE (39) \$6.5m**



**25 MARTIN BROUGHTON \$19.6m**  
Chairman, BAT  
Age 56

Accountant Broughton chairs BAT, the tobacco multi-national. A leading player in F1 through its B.A.R. team, BAT is a financial giant worth \$21bn. Broughton collects a \$2.5m salary, and his stake in the firm is worth \$7.2m; sold shares in early '03 worth \$1.3m. With share options and past salaries he is easily worth \$19.6m.

**24 JARNO TRULLI \$21.8m**  
Driver, Renault  
Age 29

Italian Trulli won the world and Italian kart titles before moving into F3. Made his F1 debut with Minardi in '97, later driving for Prost, Jordan and Renault. Has made 105 F1 starts and total career earnings are about \$21.8m.

**23 JENSON BUTTON \$23.0m**  
Driver, B.A.R.-Honda  
Age 23

With B.A.R. after three-and-a-half years in F1; has also had spells with Williams and Renault. Though labelled a playboy or unworthy of respect by fellow B.A.R. driver, Jacques Villeneuve, Button is training hard and scoring points. Now lives in Monte Carlo where his contract - reckoned to be worth \$6.5m a year, lets him indulge his passion for water sports on his \$2m boat, *Little Missy*. Sponsorship and endorsements, plus his B.A.R. contract have earned him over \$23m since his debut in 2000.

**22 GIANCARLO FISICHELLA \$33.0m**  
Driver, Jordan-Ford  
Age 30

Won the Italian F3 title in '94. After a spell as test driver he raced with Minardi in '96 and Jordan a year later. From '98-01 drove for the Benetton team before returning to Jordan. His earnings have netted him about \$33m.

**21 HEINZ-HARALD FRENTZEN \$34.0m**  
Driver, Sauber-Petronas  
Age 36

Started his F1 career in '94 racing for Sauber. But the Monaco-based German driver, who has made 97 starts (winning three races) moved from team to team, ending up with Arrows in '02. Has earned about \$34m.

**20 RUBENS BARRICHELLO \$35.0m**  
Driver, Ferrari  
Age 31

Brazilian plays second fiddle to Michael Schumacher at Ferrari, but is well-rewarded. Has had his annual contract of around \$6.5m extended. Made his debut in the '93 South African GP. Was injured in qualifying at the '94 San

Marino GP and visited in hospital by his mentor, Ayrton Senna, who was killed in the race the next day. Endorsements and past salaries should have lifted Monaco-based Barrichello to perhaps £35m.

**19 PAUL STODDART \$38.0m**  
Team principal, Minardi-Cosworth  
Age 48

Acquired Minardi F1 team, based in Italy, in '01. Spent around \$13m keeping them afloat in his first year. It hasn't got any easier. Stoddart, a former Australian car dealer, made his fortune buying up surplus aviation assets from the Australian government in '89. Has now built a huge spare-parts operation based in Herefordshire, and his airline, European Aviation, carries more than a million passengers a year and made \$5.2m profit on \$76m sales in its last accounts. There has been talk of a \$245m management buy-out later this year so Stoddart can concentrate on Minardi. So we're cautious in valuing Stoddart. We reckon his assets less any debt would leave him with around \$38m.

**18 PETER SAUBER \$40.0m**  
Team principal, Sauber-Petronas  
Age 59

From the '70 Swiss hillclimb championship to Le Mans, which his team won in '89 and '90, car dealer Sauber has done it all from his factory at Hinwil, Switzerland. Entered F1 in '93 and, operating with a much smaller budget than most rivals, has performed miracles, finishing fourth in '01 and fifth in '02. In '00, *Investors Chronicle* valued the business at around \$100m. Sauber's 40 per cent stake in the operation is worth perhaps \$40m.

**17 MARIO ILLIEN \$41.0m**  
Technical director, Mercedes-Ilmor  
Age 53

Co-founded Ilmor Engineering, a small Northamptonshire group, in '83 with his partner, the late Paul Morgan. Design and build engines powering McLaren F1 cars. Backed by Mercedes and Roger Penske, the American Indycar team owner, Illien and Morgan built Ilmor into a firm making over \$6.5m profit in '00. Profits rose to \$36m a year later, but the rise was largely explained by an insurance payout following Morgan's death in a plane crash in '01. Mercedes through its parent, DaimlerChrysler, took control of the company after the accident, but Illien remains and his 25 per cent stake should be worth perhaps \$33m. Other assets and past salaries take him to \$41m. Ilmor is now a co-partner of Mercedes, hence Mercedes-Ilmor.

**16 DAVID COULTHARD \$42.0m**  
Driver, McLaren-Mercedes  
Age 32

After starting his F1 career in '94-95 with Williams, Coulthard has been with McLaren since '96. Total career earnings on track are put at over \$26.5m. The Scot's annual earnings

are now over \$6.5m. Off track, Monaco-based Coulthard has a three-year deal with Warsteiner beer, reckoned to be worth \$16m. Coulthard is investing shrewdly, particularly in the recently opened Columbus Hotel in Monaco.

**15 RALF SCHUMACHER \$44.0m**  
Driver, BMW-Williams  
Age 28

The younger brother of Michael Schumacher, the F1 world champion, whom he followed into F1, first with Jordan in '97-98, and since then with the Williams team. Career earnings from racing now total \$44m.

**14 GERHARD BERGER \$65.0m**  
Motorsport director, BMW  
Age 43

Austrian Berger's F1 career lasted from '84-97. He won 10 races in 210 starts with five teams including Ferrari and McLaren, earning over \$65m. Now works as BMW's Motorsport director and lives in Monaco.

**13 WILLI WEBER \$81.0m**  
Manager, Michael & Ralf Schumacher  
Age 61

Weber's fortune was made in '91 when Michael Schumacher raced his first GP for Jordan. As Schumi's manager he takes 20 per cent; also manages younger brother, Ralf, and between them, the Schumachers pay him around \$12m a year. Weber, who also manages super-models such as Naomi Campbell, should make at least \$16m a year. Other interests in racing, property etc, lift him to \$81m.

**12 PATRICK HEAD \$82.0m**  
Technical director, BMW-Williams  
Age 53

Technical director at Williams F1. Regarded as a design genius, he left Wolf Racing with Frank Williams in '77. Between '80-97, won half of Williams' constructors' titles with his designs. With a \$245m valuation on Williams (see p94), Head's 30 per cent stake is worth \$74m. Property and at least \$8m in salaries and dividends lift Head to probably \$82m.

**11 JACQUES VILLENEUVE \$91.0m**  
Driver, B.A.R.-Honda  
Age 32

Son of the late Gilles, the Canadian driver killed at Zolder in '82. A former IndyCar champion, Jacques made his debut with Williams in '96 and became world champion in '97. Signed for B.A.R. in '99 and has remained loyal, but has not been able to match his Williams form. Commands a \$19m basic salary. In all, his total earnings from driving are reckoned at around \$91m; a \$3.5m Monte Carlo penthouse and endorsement income make him easily worth that sum. ▶

**TOP FIVE BRITS: 1 BERNIE ECCLESTONE (01) \$3.9bn; 2 PADDY MCNALLY (03) \$410m; 3 RON DENNIS (04) \$287m; 4 SIR FRANK WILLIAMS (06) \$188m; 5 DAVID RICHARDS (07) \$135m**

**10 EDDIE JORDAN \$99.5m**  
Chief executive, Jordan-Ford  
Age 55



Won the Irish kart championship before progressing to F2 and finally setting up his own F1 team in '91. Years of financial woe ended in '98 when Warburg Pincus took a 49 per cent stake for \$58m that effectively valued Jordan at \$118m. In '01, Jordan made a \$5.1m profit on higher sales of \$111m. In the current climate we cut our valuation to perhaps \$100m. All shares in the Isle of Man-based company are held by a trust company, but we assume EJ is the ultimate owner. That values Jordan's stake at \$52m. After-tax share of the sale and other assets nudge him to \$100m.

**09 FLAVIO BRIATORE \$100m**  
Managing director, Renault  
Age 52



Italian team leader at Renault established the Benetton company in America in '77, and saw his first-ever GP only in '88. He was hooked and in '89 took on the Benetton team. Despite his inexperience, led the team to victory for the '94 drivers' title and both drivers' and constructors' titles in '95. With his yacht, bonuses and homes, Briatore is worth perhaps \$100m.

**08 LUCA MONTEZEMOLO \$102m**  
President, Ferrari  
Age 55



After managing Ferrari's racing team from '74-76, Montezemolo worked for Fiat and Cinzano, and later ran Italy's first America's Cup yachting challenges. He organised the '90 World Cup in Italy and returned to Ferrari in '92, since when the team has been transformed. Montezemolo received a \$20m bonus in '02 from Ferrari, and the company is looking to a stock market flotation. Other ventures and past salaries and bonuses should easily be worth \$102m.

**07 DAVID RICHARDS \$135m**  
Team principal, B.A.R.-Honda  
Age 51



Could be the next Bernie Ecclestone. Runs the B.A.R. F1 team and in '00 bought the media rights to the World Rally Championship from Ecclestone. It is already being turned into a rival to F1 for world TV audiences which increased 25 per cent in the past year. Channel 4 has paid \$33m over three years for rally broadcast rights. A former rally co-driver from North Wales, Richards won the WRC in '81. Three years later he set up Prodrive engineering consultancy, which won five WRC and five BTCC titles. In '99 sold a stake in the parent Prodrive Holdings business which effectively valued his shareholding at \$82m. In '01, Prodrive turned in profits of \$6.9m on sales that soared to \$164m. We still value Prodrive at £150m and Richards' stake at £50m. We add \$51m for past salaries and Prodrive Properties which we have found this year (with \$49m in net assets in '01).

**06 FRANK WILLIAMS \$188m**  
Team principal, Williams-BMW  
Age 61



Born in South Shields, he didn't make it as a driver but launched his own team in '69. Williams Grand Prix Engineering was formed in '77 and has won nine constructors' and seven drivers' titles. Paralysed in a motoring accident in '86, but works as hard as ever. Owns 70 per cent of Williams GP Engineering, the balance being held by technical director Patrick Head (see p93). In '99, the *Financial Times* reported talks over a possible part sale or flotation, analysts putting a \$205m value on the business. Even though the '01 figures showed a \$16m profit on nearly \$140m sales, the City valuation may be low. A \$245m valuation is now appropriate. That values Williams' stake at \$172m. Past salaries, dividends and property interests lift him to \$188m.

**05 MICHAEL SCHUMACHER \$285m**  
Driver, Ferrari  
Age 34



Based in Switzerland, the five-times world champion has earned nearly \$230m from his F1 driving contracts alone, making him easily the best-paid driver in F1 history. His contract with Ferrari is worth \$32m a year up until '04. In addition, 150 endorsement and sponsorship deals rake in a further \$25m, taking his total earnings to nearly \$60m annually. After his debut in the '91 Belgian GP in a Jordan, Schumacher was snapped up by Benetton, and went on to win two world titles with the team before signing for Ferrari in '96. Allowing for manager Willi Weber's 20 per cent (see p93), Schumacher should still easily be worth \$285m. He invests in property and spent, for example, a small fortune on a luxury Majorca development last year.

**04 RON DENNIS \$287m**  
Chairman and CEO, McLaren-Mercedes  
Age 56



Under Dennis, McLaren have won 11 drivers' and eight constructors' titles. He was infuriated by Ferrari's dominance in '02, but TAG McLaren Holdings, the race team's parent company, made a record \$52.7m profit on \$262m sales in the year to October '01. Dennis rose to be chief mechanic at Brabham in the late '60s before launching his own team which merged with McLaren in '80. Now has a 30 per cent stake in a business that is still worth perhaps \$656m. Share sales, as he reduced his stake, past salaries and property lift him to \$287m.

**03 PADDY MCNALLY \$410m**  
President, Allsport  
Age 65



A recent study of McNally's Swiss-based set-up reckoned that his two areas of operation – Trackside advertising at F1 Races and the Paddock Club hospitality operation

– generate around \$260m a year in pure profit. Not bad for a former *Autosport* journalist best known as a one-time boyfriend of the Duchess of York. Working under the wing of Bernie Ecclestone, McNally's breakthrough came when he developed a system of signage that gave advertisers maximum TV exposure. We'll remain cautious in our valuation of McNally at \$410m until we see how F1's future, and his role in it, pans out.

**02 MANSOUR OJJEH \$1.3bn**  
Shareholder, McLaren International  
Age 50



Ron Dennis with his long-time partner, Ojje, who runs the Swiss-based TAG group (Techniques d'Avant-Garde). TAG invests in businesses exemplifying leading-edge technology and outstanding style and quality, and in line with such touchstones Ojje began working with Dennis in the early '80s. In '84 TAG then took a 60 per cent stake in McLaren International and the team won three successive world titles and 25 grands prix. Aside from its McLaren stake, TAG's other activities include consumer products, aeronautics, property and finance. Although its stake in McLaren fell to 30 per cent in the wake of a '99 deal in which DaimlerChrysler bought a 40 per cent stake for between \$245m and \$500m, Ojje and Dennis vote in tandem (Dennis has the remaining 30 per cent), which gives them control. The DaimlerChrysler deal effectively valued the Ojje stake at about \$330m. But other interests lift him to billionaire status.

**01 BERNIE ECCLESTONE AND FAMILY \$3.9bn**  
Commercial rights holder F1  
Age 72



Death will be Ecclestone's chequered flag. The F1 boss claims, "I'll never retire. I'd get bored and probably die if I did." And at 72, he should still have plenty of petrol in the tank – heart surgery three years ago was both a warning and a retune. The son of a Suffolk trawler skipper, his entrepreneurial skills emerged when he started selling cakes to his schoolmates. Began racing in '49, a career cut short by an accident two years later. Turned next to team management, eventually taking over the whole show. Today it's a money-making machine whose TV audiences are second only to those of the World Cup. Selling stakes in the business and a bond issue between '99 and '01 flooded the family trusts controlled by his wife, ex-model Slavica, with \$3.4bn in cash and still left him with a 25 per cent stake in F1. Since then TV audiences have been down owing to the predictability of Ferrari victories in '02, and the big auto groups are now threatening to set up a rival championship. So we've cut our valuation of the Ecclestone family's stake in F1 to perhaps \$330m. From '89-96, Ecclestone took \$216m in salaries before tax. His other assets – ranging from Asian shopping centres, a Swiss hotel, jets, a \$6.5m Swiss chalet and a London home – easily take his family total to \$3.9bn, although some of his closest associates insist he is worth considerably more. **1**



# KEEP ON TRUCKIN'

Without its truckies, the wheels would come off the Formula 1 machine. They keep the show on the road, and get the cars to the track. And that's just the start of it...

Words Dom Taylor Photographs Neil Cooper



## KEEP ON TRUCKING



“Only two things scare me, and one is nuclear war,” declared Austin Powers, International Man of Mystery, during one of his more reflective moments. The other frightener, obviously enough, was... “Carnies. Circus folk. Nomads, you know. Smell like cabbage. Small hands.”

You can see where this is heading: if Formula 1 is a circus, albeit with less than the usual quota of clowns, then somewhere in the paddock complex you'll find the F1 carnies – the fastest, most technologically advanced, most overtly branded, sponsor-conscious circus folk in the world. They scuttle in the shadows, quietly, efficiently, making the whole thing happen. They build the circus ‘tents’, take them down, drive them somewhere else and erect them again, ignored by the paying punters who never get around to wondering how the complex logistics of this travelling road show actually work.

So who, exactly, are the F1 carnies (minus the smell of cabbage)? Look no further than those unheralded heroes, the

Tyres, cars, every last nut, bolt and wrench, are slotted into their specific place in trucks Y3 and Y2 (below) of the three-truck convoy. Chassis is rolled home by Chris and Carl (above). Later Carl (right) in Y3 takes a break en route

truckies. I recently spent a week with the Jordan lot as they transported their whole kit and caboodle from their Silverstone base to the Nürburgring for the European Grand Prix; and what a salutary experience it was because, no doubt about it, they are the foundation on which the whole F1 pyramid rests. Without them, those at the pointy end of the structure – the Bernies, team principals, star drivers and media scrum, from whom the rest of us get our fix – would have no toys to play with.

Take away the truckies and not only would there be no cars, but no pit-lane garage, either. Indeed, ‘truckies’ is really a misnomer because driving ties up only about five per cent of their time. Over a race weekend they’ll work their socks off, organising tyres and fuel, maintaining equipment and generally doing whatever the mechanics (‘bolters’) ask of them.

When we say ‘race weekend’, we mean nothing of the sort, of course. In one sense a grand prix occupies an hour-and-a-half on a Sunday afternoon, but in the world of the F1 trucky ‘race weekend’ begins at

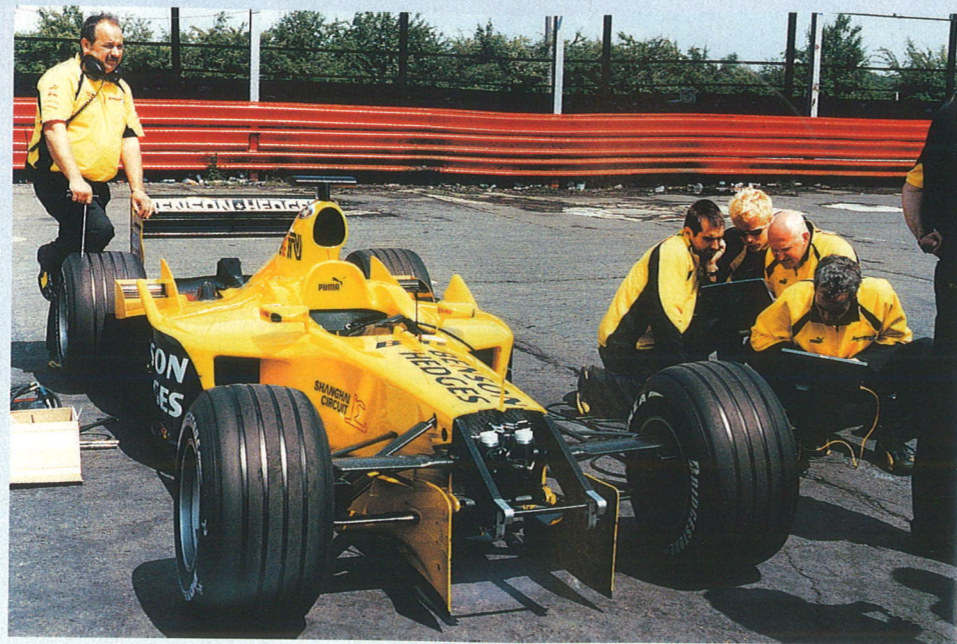
“‘TRUCKIES’ IS A MISNOMER BECAUSE DRIVING OCCUPIES ONLY ABOUT FIVE PER CENT OF THEIR TIME’

5am the previous Monday. So, feeling more than a little sleep-deprived that’s when I rocked up at Jordan HQ – just in time to see the truckies (Chris, Carl, Nessie, Franco, Foggy, Hadley and Marcus the Tired One) and their team manager, Gerard O’Reilly, finish loading the three race trucks.

The work had actually kicked-off an hour before my arrival, and this was the final wrap-up of a process that had begun the previous Friday. As I looked on, the truckies hurriedly yet systematically stuffed the entire racing assets of Jordan into the three yellow liveried trailers. Hurriedly, because they were being hit by big-assed wet British rain; systematically because, well... you gotta have a system. ▶



KEEP ON TRUCKING



Everything the team might need at the track was packed with a certain orientation, in a certain place, in a certain truck, so that: a) everything fitted in; b) nothing was forgotten; and c) the mechanics knew where to find stuff.

"The bolters are always forgetting where things are kept," one trucky told me. Apparently truckies often have to find things for mechanics who "should know perfectly well where to look by now". Which isn't to say that the truckies don't occasionally forget things themselves. One who is no longer with the team once forgot to take wheel rims... to a tyre test. Where the parts forgotten are less crucial, however, a fair amount of consensual 'borrowing' goes on between the teams. McLaren, for example, have something of a reputation as serial borrowers. But, as one of the Jordan boys put it, "If someone comes borrowin', it's worth givin' 'em what they want. You never know when you might want to borrow back."

Finally, we headed off in convoy, diverting initially to Santa Pod for a final shakedown test of the launch control software on Ralph Firman's car. Missing from our little team, unfortunately, was Paul Pinney, Jordan's head trucky, but we resolved to find the Nürburgring without his legendary map-reading skills. It was a decision that resulted in only three wrong turnings in the space of two days.

Of the three trucks, undoubtedly the sexiest is the transporter. Every team has at least one for the races. Those with a dedicated test team will have two or more. Jordan, who are not running a test team this season, have a sole transporter known as 'Y3', on account of its registration - Y3 JGP. It holds all three cars - both drivers' chassis and the T-car, although it can hold four - as well as bodywork spares and wheel rims. The cars are rolled on by hand, complete with engines but minus their noses, on two levels - one up, two down. At the circuit, Y3 is parked in the paddock,

where, once the cars are unloaded, it becomes a workshop area for machining new parts and mending old ones. Fully laden, Y3 weighs 36 tonnes. The empty trailer alone is worth over £400,000, and since each Mercedes tractor unit is worth £75,000 and each F1 chassis about £1 million, the on-the-road value of Y3 is nearly £4m. That's a trucking lot of money. The other trucks are Y2 and Y5. Y2 is the support truck, containing all non-bodywork parts such as gearboxes and electrical spares as well as the consumables - nuts and bolts, grease, oil etc - needed for the entire week. Y2 also has a separate front section, the office, which at the track is where Eddie Jordan, the drivers and engineers meet to discuss such things as strategy and the price of engines. Y5 is the garage set-up, otherwise known as the 'empty box'. Even though it has to be packed as tightly as a high-scoring round of Tetris, once unloaded it isn't used for anything, hence the 'empty

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> Meals on wheels

A grand prix may stretch to a long and demanding week for the race team, but spare a thought for the hospitality truckies. Those guys have to transport and build the various motorhomes providing food, drink and shelter for teams and sponsors throughout the week.

varies according to team - are arranged along the paddock in the same pecking order as the garages along the pit lane.

Jordan's is typical: two trucks and a bus form two hard-topped central sections where people can sit, eat, meet and greet in relative comfort. McLaren, by contrast, use six trucks for their exclusive 'communications centre'. In fact, it takes so long to build and dismantle that the McLaren motorhome trucks never make it back to the UK during the European season. They leave one race, park up at the next and do it all again.

As such, they're first in and last out of the paddock, arriving at the track by Saturday night ahead of Monday's paddock set-up.

This articulated ballet is choreographed by Pasquale Latuneddu, Bernie's right-hand man. The motorhomes - the architectural grandeur of which

"Dammit, according to this map we're on the autobahn." Finally, the crew make it to the Nürburgring (above and below) and set up shop. Cars, garages (above right after several hours work) and hospitality suites are readied



box' tag. As its official name suggests, however, Y5 contains everything needed for setting up the pit-lane garages.

Garage set up usually begins on the Tuesday, immediately after the trucks have been thoroughly washed down and polished on arrival at the circuit. At this point the paddock is a very different place from the PR fish farm it becomes a couple of days later. The truckies rule and it's a seriously nice place to be. Everyone works hard, of course, but the atmosphere is definitely chilled, each garage blaring out their preferred style of music, some showing better taste than others.

Sauber's penchant for European techno and Swiss folk is notorious for being the cheesiest in the pit lane, especially among the Jordan boys who are their next-door neighbours. (Teams are arranged along the pit lane in the order of the previous year's constructors' championship. The higher the team's position, the closer they are to the pit-lane entry.) Strangely, no one seems to know what music Ferrari play, such is the air of mystery they nurture.

Also wonderfully faithful to their hardboiled corporate stereotype are McLaren who, having forbidden their team to play any music at all in the garage, have recently re-branded their truckies more politically correctly as 'Garage Operatives'. Nor do McLaren truckies now do any

'EACH GARAGE BLARES OUT THEIR PREFERRED MUSIC, SOME SHOWING BETTER TASTE THAN OTHERS'

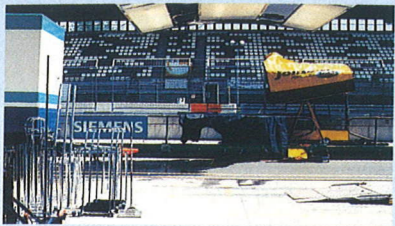
actual driving. They're flown to and from the circuits while specialist relief drivers bring the trucks over. I rather naively asked McLaren's head trucky 'Tats' about this, but he didn't feel free to speak to me because I hadn't cleared it with his team manager.

At each circuit, the specification of the garages differs slightly, so every facility is a bespoke construction. The Nürburgring, for example, has some of the best: big, modern garages, plenty of plug sockets and even clean toilets. The same cannot be said of Imola where the garages are notoriously ancient and cramped. In Monaco the whole business is pretty much improvised.

The teams have to bring absolutely everything with them - the timing screens, the cabling (over 500 metres on an average set-up), the rig from which to hang the car pods, the pit-wall podium ('prat perch' as it's often described), not to mention all the branded wall panels that make it actually look like a Jordan garage. ▶



KEEP ON TRUCKING



The pit lane and main grandstand from Jordan's garage (far left); F1 Racing's man surrounded by the boys - Jordan's truckies and their priceless cargo; on arrival (below) the first chore falls to the spit-and-polish brigade

'A TRIP TO IMOLA OR MONZA CAN MEAN FOUR OR FIVE STOPS FOR THE BENEFIT OF NOSY POLICEMEN'

The build generally takes the best part of two days. Of course, come Sunday evening it all has to be packed away again. But, in between, the truckies have plenty of hard work to do, especially the tyre men who have to collect, pressurise, mark-up, log, bag, heat and deliver tyres pretty much non-stop from Thursday. Jordan's participation in the Friday morning test session requires the readying of anything up to 40 sets of tyres, and that's serious, heavy labour.

But it ain't all work, work, work. Every trucky gets a day off during race week, so they're legally entitled to drive the return leg. European haulage law is strict, so F1 truckies are careful not to transgress the driving-hours, time-off and speed-limit rules. But when F1 trucks do get pulled

over, it's usually because the police simply want to check out the cars.

"They can be very disappointed if they pull over the garage set-up truck," laughed Jordan trucky and PR guru Nussy McNess, relishing the thought. "The Italians are the worst, but the French are pretty bad, too, although they're very polite. A trip to Imola or Monza can mean four or five stops for the benefit of nosy policemen, which is incredibly frustrating when you're trying to get somewhere as quickly as possible and you're limited to 56mph. We used to have to take a load of caps and T-shirts just to get through border crossings in good time, but now they've opened all the EU borders we don't have to. Customs are still a nightmare when we go to Hungary, but we've learnt that it's good to take caps and T-shirts for that."

So if you see an F1 truck on the road, feel free to beep your horn and wave. There's no need to be scared. Just don't get in their way. And stop asking them for souvenirs. They're on a mission - at a constant 56mph in the slow lane.

Nomads, you know. Carnies. And these ones smell of garage. ①

>The trucky's lot...

Inter-team camaraderie between the F1 truckies is strong - there's so much common ground, whatever the colour of the cab. But how does the job at Jordan compare, say, with the same post at Ferrari?

The most obvious difference is that Jordan don't have a dedicated test team. The race team truckies have to satisfy both roles - very much to the detriment of their private lives, one assumes. After back-to-back races at the Nürburgring and Magny-Cours, the Jordan truckies headed straight down to Barcelona for a pre-Silverstone test. So they were away from the UK for well over three weeks. That same week, Ferrari had three test teams running concurrently in three locations (Barcelona, Mugello and Fiorano).

This is typical of how

far F1's smaller teams have to stretch their resources. Very often Jordan will have one man doing jobs that other teams might employ three or four men to do. For example, most teams have at least three truckies to look after tyres during the race weekend. Jordan make do with two.

In a paddock where the gulf between rich and poor grows ever wider - overall Ferrari probably run at least five times as many trucks as Jordan - it is the individual mechanics and truckies employed by the smaller teams who, in terms of increased workload, feel the strain the most.

Jordan's EJ13 may not be the most aerodynamically efficient car on the grid, but you'd be hard pressed to find a more streamlined operation than the yellow team.

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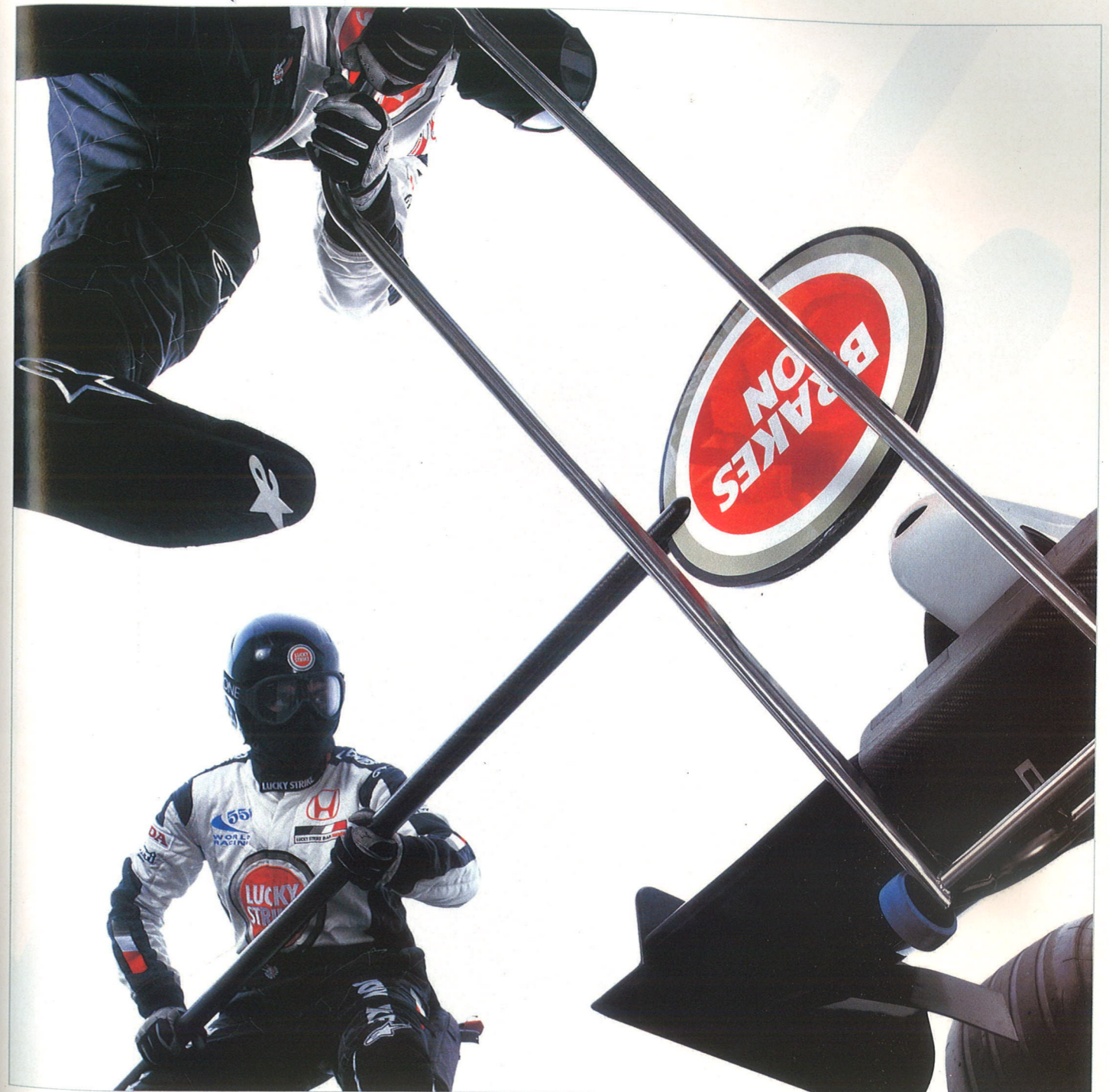
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# Seven-second miracle

You have never, we promise you, been closer to the action. *F1 Racing* gets in real tight with the boys at B.A.R to bring you images of a pit stop as you've never seen it before. . .

Words Alastair Gibson, B.A.R chief mechanic Photographs Ted Humble-Smith

Personnel Barry Gough (front jack); Alastair Gibson (lollipop)

"The car has just arrived so it's coming in to stop at the mark. It will pull up to the front jack. As soon as it's stationary, the guys will start working on the car, start taking the wheels off. The car's arrival is a particularly tense moment – probably the most tense of the entire pit stop. The most important thing is for the driver to stop on the mark. That's absolutely critical. If he goes short or too long it costs a lot of time because all the personnel have to readjust their position. Once the car is stationary it's easier. Until then anything can happen."



**Equipment** rear jack, knee pads, boots, personal fire extinguisher, helmet, goggles, overalls, gloves



**Equipment** refuelling nozzle and hose, refuelling helmet, breathing apparatus, fire suit, boots, helmet, goggles, overalls, gloves

**Personnel** Jon Middleton (rear jack); Martin Pople (large extinguisher); Trevor Bailey (small extinguishers)

"As soon as the car has stopped the rear jack man shoots in and attaches the rear quick-lift. He raises the car so that the wheels can be taken off, and he has to be very vigilant in case of fire. It's not uncommon for a car to have a small fire in the pits, and the rear jack man has to keep cool if that happens. The worst thing he can do in that situation is panic and drop the car. He has to be calm, stand there until it's ready to be lowered, and then let it down. Only then can he use his extinguisher. But the two men behind him are much better placed to fight a fire."

**Personnel** Andy Covell (dead man rigs); Mark Willis (hose); Chris Fry (hose support); Chris Slark (left radiator); Dave Timson (fuel rig control); Chris Bagg (fuel splash); Simon Harper (reserve fuel rig)

"Stopping the car on the correct spot is more important for the refuelling guys than for anyone else. If they have to move a foot or two with a 35kg hose on their back, we can lose a few tenths or even half-a-second. The hose man wants to get the fuel nozzle locked in as straight and securely as possible. He watches for the lights which monitor the fuel flow – and when he gets a red one, he releases the hose."



Equipment boom, wheel gun, airline, wheel, tyre, boots, personal fire extinguisher, helmet, goggles, overalls, gloves



Equipment nose change keys, spare nose/wing, scissor jack, boots, personal fire extinguisher, helmet, goggles, overalls, gloves

**Personnel** Paul Bennett (right rear off); Claudio Corradini (rr on); Darren Beacroft (rr gun); Dave Fraser (left rear off); Dave Hopkinson (lr on); Graham Watson (lr gun); Ian Gluyas (right front off); Terry Wasyliv (rf on); Paul Johnstone (rf gun); Vince South (left front off); Garth Harradine (lf on); Trevor van Popering (lf gun)

"Wheel change guns operate at 20-bar pressure, to produce a turning force of 650 Nm. The wheel nuts are very finely made. It's rare that we get crossed threads. The right-rear-wheel-on man has two jobs: if the engine stalls, he has to be ready with another airgun to re-start it."

**Personnel** Tim Broom (right radiator); Wayne Hazell (car support)

"We do a nose change whenever the driver damages the car's front wings. When we do it we also change all four wheels. We can do the whole thing in 12 seconds, even though it's quite an involved process. We have to use a scissor jack – which is put under the side of the car – along with the rear jack, to get it off the ground. The front jack we would normally use attaches to the nose assembly, so if the nose is damaged or not even there, we can't get a jack under it. We use our own tailor-made tools to bolt the wing assembly to the chassis."

# EVER MET ENZO?

The greatest name, ever, in motor racing – Enzo Ferrari – lives on undimmed, even though the man himself died 15 years ago this month. And to mark the anniversary, *F1 Racing* here talks to everyone still in F1 who actually met him

Words Alan Henry



Ferrari (above) inspects a 330 P4 prior to the start of the 1000km of Monza in 1968; and (opposite) he prepares to welcome home to Brescia the winning 340MM of Giannino Marzotto in the 1953 Mille Miglia

MEETING ENZO



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MEETING ENZO

Fifteen years have passed since the great man himself, Enzo Ferrari, last of the motor racing titans whose links extended back to the very dawn of the sport, died in the small bedroom on the first floor of his house in Modena's Largo Garibaldi.

His passing, in the small hours of August 14 1988 meant that nothing in Formula 1 could ever be quite the same again. By whatever name he was affectionately known – Commendatore, Cavaliere, the Old Man or simply Ferrari – he was one of the defining personalities in the history of motor racing. And, of course, his is still the sport's most charismatic name.

To mark this anniversary of his passing, F1 Racing has canvassed everyone still actively involved in Formula 1 who met Ferrari and who can remember, in many cases vividly, "the day I met Enzo".



**MAX MOSLEY**  
FIA president

"I met Mr Ferrari first in the late 1970s when the Formula 1 Constructors' Association was seriously

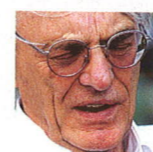
getting established and we used to meet at Maranello. I was always very impressed with him – he was such a figure, such a name. Meeting him for the first time was rather like a young driver in the '60s, say, being introduced to somebody like Graham Hill."



**HERBIE BLASH**  
FIA observer

"I first saw him in the pits at Monza sometime during the late 1960s, it must have been, when I

was working for Rob Walker as a junior mechanic on his Lotus 49B. I remember being really impressed. I mean, seeing Enzo Ferrari was a really big deal. I felt I'd now arrived in the F1 big time."



**BERNIE ECCLESTONE**  
Commercial rights holder, Formula One Management

"I obviously saw him at Monza during the 1960s, but I really didn't get to know him until we went to the constructors' meetings at Maranello. He was a powerful figure, knew what he wanted and always had a shrewd understanding of the value of the Ferrari name."



**LUCA MONTEZEMOLO,**  
President, Ferrari

"I first met Mr Ferrari about a year before I began working for him. It was quite an experience

as he was a very powerful man and had a very forceful character. The first race I attended for him was the 1973 British Grand Prix where we went so badly that he wanted to pull the cars out of the event. Thankfully I managed to persuade him not to and things gradually improved from then on."



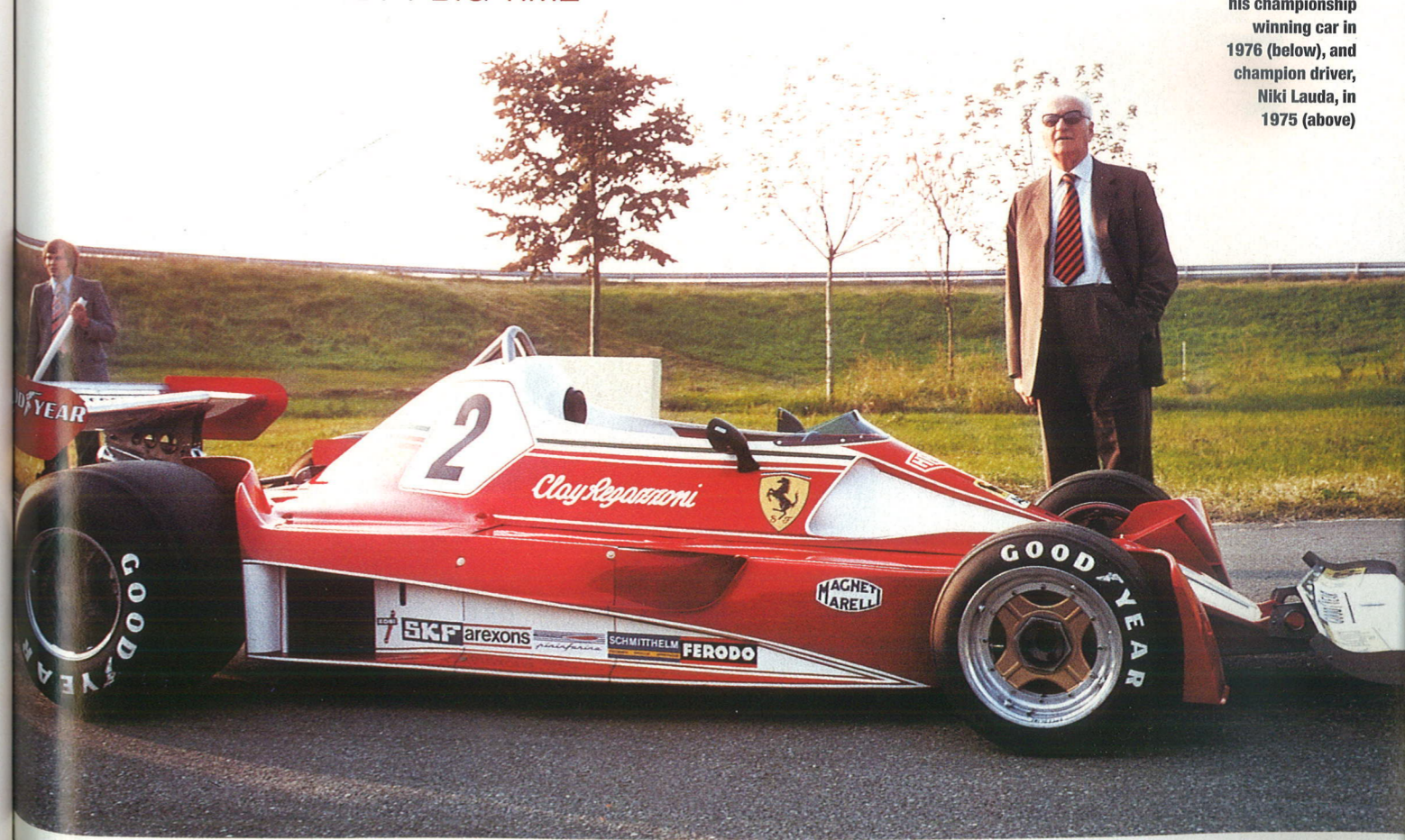
**JEAN TODT**  
General manager Scuderia Ferrari

"I met Mr Ferrari on two occasions. The first time was when I was quite

young and was introduced to him by my friend Jean Guichet, who won Le Mans for Ferrari in 1964 when he was sharing with Nino Vaccarella. The second time was in 1985 when I wrote a book on the Peugeot 205 rally car and asked him if he would do the foreword. I thought he was the only man to do it." ▶

**'I WAS REALLY IMPRESSED. SEEING ENZO FERRARI WAS A REALLY BIG DEAL. I FELT I'D ARRIVED IN THE F1 BIG TIME'**

Time out in 1953 (opposite), and with his championship winning car in 1976 (below), and champion driver, Niki Lauda, in 1975 (above)



MEETING ENZO



**PAOLO MARTINELLI**

Ferrari F1 engine technical director  
 "In 1978 we had been testing a prototype of the 208 Turbo when Mr Ferrari walked into the Fiorano garage. I told him we were still a bit concerned about the standing start. 'What's the weight?' he asked. 'About 1240kg,' I replied. 'Really,' he said. 'You tell [Angelo] Bellei [the technical director] that a Ferrari of 2000cc cannot weigh more than 1200kg.' A few minutes later I was back in my office and heard that Bellei had already been called by Ferrari to deal with the problem. That showed me how quickly the Old Man - he was already 80 - was able to react."



**BEPPE VALPREDÀ**

Ferrari F1 engineer  
 "I first met Mr Ferrari at Fiorano after I'd joined the team in 1972. 'Who are you, what are you doing here?' he asked. Then in the late '70s when he gave me a watch, and a few years later when he gave me a copy of his memoirs with a special dedication. I still treasure that."



**FRANK WILLIAMS**

F1 team principal  
 "We'd see him at Monza, usually on practice days. The first time must have been in 1969 when we went there with Piers Courage. He wanted Piers for 1970, but we kept him and made up his money by arranging an Alfa sports car drive. Mr Ferrari was very charismatic and persuasive, as we got to know during the FOCA/FISA wars of the early 1980s."



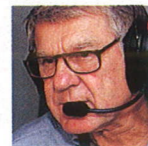
**GERHARD BERGER**

BMW Motorsport director  
 "I was privileged enough to be the last driver actually to sit in front of Enzo Ferrari to sign a contract to drive for his team. The team manager, Marco Piccinini, invited me to Maranello in the summer of 1986 and I was bundled into a car with a blanket over my head and driven to Mr Ferrari's office at the Fiorano test track in great secrecy. There was a dark, almost funereal atmosphere in the room and it was all a great honour. The upside was signing the deal in front of him, the downside was the fact that he simply told you what the deal was. And that was it."



**RON DENNIS**

Chairman and CEO TAG McLaren  
 "I remember that I once had an invitation to see him and for some reason I couldn't go. I finally first met him at Imola, by which time he was a frail old man nearing the end of his life, but he still certainly had a special aura about him."



**TYLER ALEXANDER**

McLaren engineer  
 "We were testing with McLaren at Imola with Niki Lauda in 1984, I think it must have been, and I'd gone out the back of the garage into the paddock and when I tried to return there was this extremely elegantly dressed,



Champions both (left): Ferrari and his driver, Juan Manuel Fangio, in 1956; testing at the Autodromo Modena in 1958 (below)

**'I WAS THE LAST DRIVER ACTUALLY TO SIT IN FRONT OF FERRARI TO SIGN A CONTRACT TO DRIVE FOR HIS TEAM'**

rather elderly gentleman attempting to bar my way. I eventually said 'look, I work here' or somesuch and went in where I found Niki talking to Mr Ferrari and another well dressed elderly guy. I was briefly introduced and later I asked who the hell the other fellows were. Niki just replied, 'the bodyguards, of course' which I suppose made sense." ▶



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## MEETING ENZO



**NORBERT HAUG**  
Head of motorsport,  
DaimlerChrysler

"I saw him first in the pits at Imola when I was a journalist, and later in the Ferrari road car headquarters at Modena. I considered him a God-like figure, and I still understand why he is regarded as the most important person in motor racing history."



**JOHN HOGAN**  
Sporting director,  
Jaguar Racing

"I first met Mr Ferrari when I was working for Philip Morris in the early 1980s and we were negotiating to have the first Marlboro identification on his cars. It was incredible. Within three sentences of starting to talk to him it became clear to me that he was just as madly passionate a car enthusiast as he'd ever been and all the stories came tumbling out about the great drivers who'd driven for him – Peter Collins, Chris Amon, Jacky Ickx and so on. It's no exaggeration to say he was a genuinely dynamic presence and had an amazingly sharp mind. He was right up to speed on everything, even though by then he was well over 80."



**GIAN CARLO MINARDI**  
Managing director,  
European Minardi

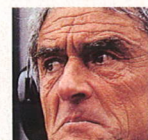
"The first time I met Enzo Ferrari was in November 1974. I spent almost three hours with him, just talking. At that time, I was a smoker, but I was not

aware of his dislike for smoking. Once I left his office a startled Sante Ghedini, the chief press officer, rebuked me, saying, 'What have you done? Did you smoke in front of the boss?' I could do nothing but apologise, justifying myself by saying that I had not realised I had smoked so much. Apart from this little incident, the meeting definitely turned out to be an unforgettable experience for me."



**GUSTAV BRUNNER**  
Chief designer,  
Toyota Racing

"I was skiing in Switzerland over Christmas 1985 when I was contacted by Marco Piccinini, the team manager, and asked to go to Italy. The factory was closed for the holidays but I was taken into Mr Ferrari's office which was dark and dimly lit, as I obviously expected. It was like meeting the Godfather. He made me an offer which I could barely turn down... So I didn't."



**PIERRE DUPASQUIER**  
Competition director  
Michelin

"I will always keep in mind how impressed I was the first time I passed through the door of the Ferrari factory in Maranello. When I went into his office I remember that he had a picture of his son Dino attached to the wall in front of him. When you enter into the office you can't see it. It's only when you turn round to leave that you see it, just on the right of the door."



In the first year of the official world championship, 1950, Ferrari talks tactics with Alberto Ascari (left); 17 years later (below), Ferrari was possibly as widely revered as the Pope himself

**'IT WAS LIKE MEETING THE GODFATHER. HE MADE ME AN OFFER I COULD BARELY TURN DOWN...'**



**KEKE ROSBERG**  
Manager, Olivier Panis

"I was sitting in the Williams pit while we were testing at Imola; it must have been some time after I won the 1982 world championship. He came over and shook my hand and I can recall being so over-awed that I almost fainted, I was that impressed." **1**



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# Exclusive reader dinner



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The Belgian GP could make a return to the 2004 calendar after the country's senate voted to tighten the ban on tobacco advertising.

The popular event was taken off the calendar last year after Belgium banned tobacco advertising - the source of revenue for many of the F1 teams.

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DRIVERS

Profile

Michael Schumacher

Team

Stats

GP Starts: 178  
GP Wins: 94  
Pole Positions: 64  
F1 Starts: 51  
F1 Wins: 50

GP Starts: 199  
GP Wins: 35  
Pole Positions: 15  
F1 Starts: 199  
F1 Wins: 50

Team: Rubens Barrichello

Web Site: <http://www.codas.net/br>

Like a fine wine, Michael Schumacher just gets better with age. Just when you were thinking he would struggle to match the incredible feat of 2002 and 2001, he puts together the most successful season in F1 history.

His stats are almost scary. A record 11 victories in one season in 2002, 14 in total, and he has now also equaled Juan Manuel Fangio's record of five world championships. Only a fool would bet

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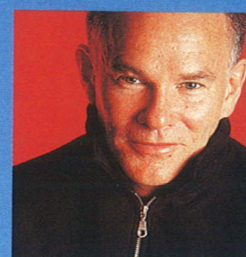
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093SP

# Race report

As the once-flawless Ferrari machine falters, Williams are looking good. By Peter Windsor

Contents: British GP report: page 124 • German GP report: page 134  
Hungarian GP preview: page 144



> Just four races left, but Michael might still make it

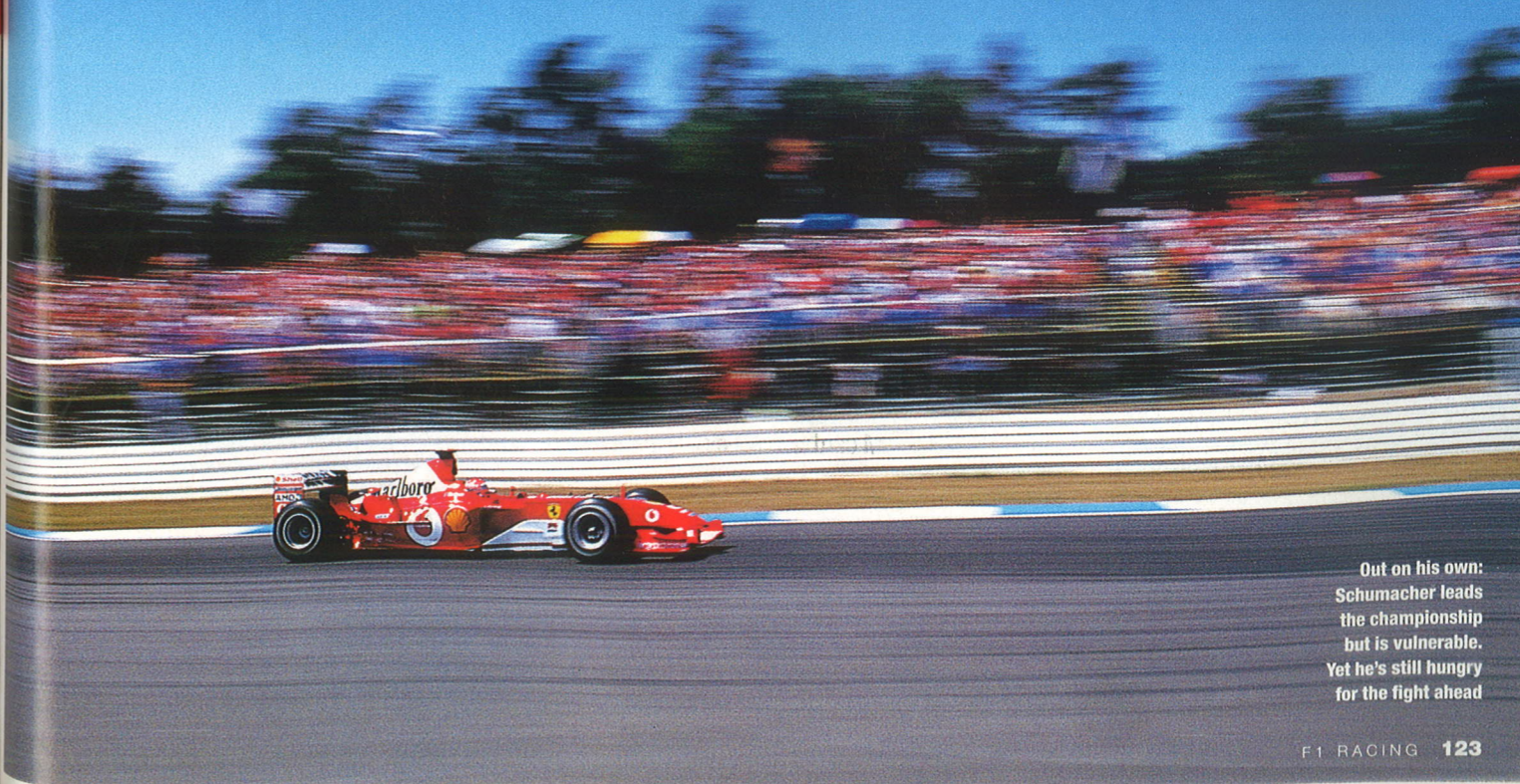
They wanted a close championship, something to shout about, and now they've got it: it's not so much the slender lead that Michael Schumacher holds as the championship faces its final four races. It's the way he has been squeezed remorselessly – away from the front row of the grid, into the danger zone, and then into the minor placings. It has been two years since Michael has gone so long without even leading a race.

And, on the face of it, things are not getting easier. Hungary has not only been resurfaced for 2003; two of its faster corners have also been replaced by slower ones. That's good for Michelin. Spa is off the calendar; that's bad for Ferrari and Bridgestone. Monza should be okay for Ferrari and Bridgestone, but who can imagine the Williams-BMW FW25s being slow on those long straights and into the tight chicanes?

Indy is at best 50-50 and Suzuka we know about. It's all Michael – or has been for the past few years. What Michael doesn't need, though, is to be going to Suzuka with a one- or two-point lead. There are so many quick driver/car/tyre combinations, and his starts are so consistently mediocre that he can't rely on just one race in which to do the job.

What's impressive, though, is that Michael still looks very calm and very under control. It's almost as if he's enjoying the challenge. He was wheel-to-wheel at 180mph with Fernando Alonso at Silverstone – "I'd say he was right on the edge of what is okay," said Fernando politely – and he's slugged it out with the Renaults, the B.A.R.s and the Toyotas; a lesser man, with Michael's record, would be wondering if he still needed the aggro.

Which is why, of course, this five-times world champion is still capable of winning. A Williams man at Hockenheim put it best: "I think Michael will win because it's when he's really having to fight, and he's really under pressure, that he always produces the goods."

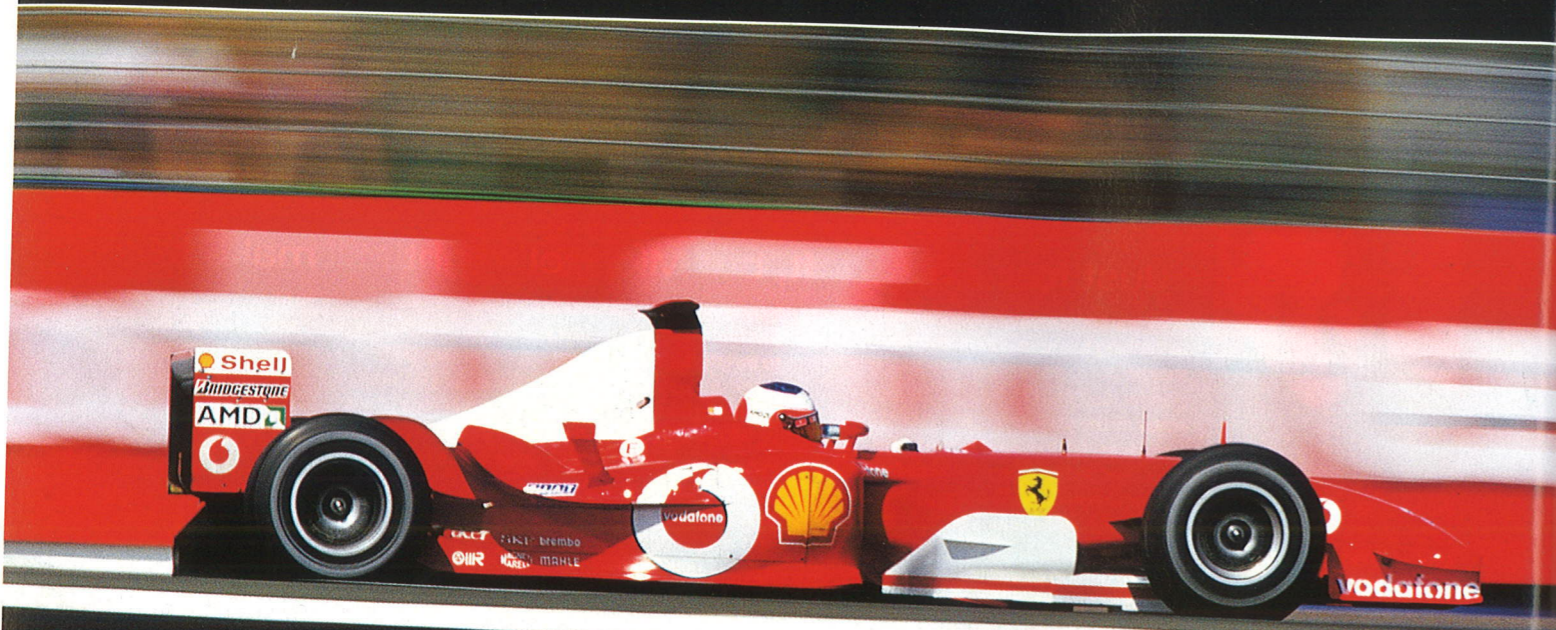


Out on his own: Schumacher leads the championship but is vulnerable. Yet he's still hungry for the fight ahead



# #11: Accentuate the positive

From a disastrous Friday and mayhem on race day Rubens Barrichello contrived an inspired win, says Peter Windsor



'RUBENS TOOK THE POLE, AND TOOK IT MAGICALLY, THEN WAITED AROUND FOR SOMEONE TO BEAT HIM'

Twelve-year-old Timothy Johnston, who hasn't been too well recently, eventually got to meet Rubens Barrichello at 22:45 on Thursday night. Rubens had stayed late at the track, dining with the team, and was still feeling the effects of the massive testing work load from the week before. Even so, he sat down patiently with Tim, answering his questions with thought and care.

"No, I like to drive big cars on the road and I usually drive pretty slowly."

"Ayrton or Michael? Difficult to compare.

In this era, I think Ayrton would have found it very difficult to beat Michael."

"I became a fan," said Tim, "when I saw you last year, driving from the back to finish second. That was cool. And you always go well in the rain. Why?"

"Why?" said Rubens, pausing for thought. "Why? Because I tell myself that I don't dislike the rain. In racing, and in life, it's very important always to see the good in everything. No matter what happens – no matter if I'm last away from the grid or whatever – I always try to see

the good and to be positive."

So it was at Silverstone. Rubens blew it big-time on Friday, ruining what would have been second-fastest lap with a pretty rudimentary spin on a slow corner. The Ferrari-Bridgestone combination was back where it used to be – on top – and Rubens had been beautifully clean and smooth where it mattered: through Copse and Becketts. Then he touched an entry kerb to the Complex, ran deep into the corner and slid straight off the road. On the Ferrari pit wall, watching from

The groove, the zone – whatever you want to call it – Rubens (above) found it on Saturday and Sunday, scoring probably the most convincing win of his career

## > Drivers' championship: Round 11 Britain

1 Michael Schumacher	69	11 Giancarlo Fisichella	10
2 Kimi Räikkönen	62	12 Heinz-Harald Frentzen	7
3 Juan Pablo Montoya	55	13 Cristiano da Matta	5
4 Ralf Schumacher	53	14 Jacques Villeneuve	3
5 Rubens Barrichello	49	15= Nick Heidfeld	2
6 Fernando Alonso	39	15= Olivier Panis	2
7 David Coulthard	33	17 Ralph Firman	1
8 Jarno Trulli	16		
9 Mark Webber	12		
10 Jenson Button	11		

## > Constructors' championship

1 Ferrari	118
2 BMW-Williams	108
3 McLaren-Mercedes	95
4 Renault	55
5 B.A.R.-Honda	14
6 Jaguar-Cosworth	12
7 Jordan-Ford	11
8 Sauber-Petronas	9
9 Toyota	7



OPPOSITE: CARREN HEATH; JACK ATKIN; CLIVE MASON/BETTY IMAGES; MARK THOMPSON/BETTY IMAGES

Räikkönen (above and right), and a smart Trulli (right) got the jump on Rubens when they left him cooling his heels on pole and then made the sharper getaway



the temporary pole, Michael put his head in his hands.

That night, however, Rubens continued to think positively. He had been trying a different Bridgestone; he would now stay with the obvious choice. And, yes, it had been raining a little bit there. This was no excuse but it was an explanation. He didn't go on about it; he filed it away.

On Saturday, then, he took the pole – took the pole magically, after being second out and then having to stand around for about an hour, waiting for someone to beat him. It was going to be Michael, of course, but then Michael committed an astonishing mistake at the exit from the tight Abbey chicane, running wide on the grass and dropping as a result down to fifth.

An astonishing mistake. With this year's long-wheelbase Ferrari not being as nimble on slow corners, and with the Michelins not only much better in themselves but also

enhanced still further by modifications to circuits like Monaco and Nürburgring, Silverstone for Michael was going to be a pleasant return to normality. Whichever way you looked at it – from the point of view of changeable weather, or a bunch of long, fast corners or rapid change-of-direction corners, or even a track surface that was causing the Michelins to grain badly – this was going to be a Ferrari-Bridgestone race. It was clear.

Yet Michael made that mistake. He hasn't made too many in qualifying this year, to be fair, but he has made a number of them throughout weekends as a whole. This one came at the worst possible moment. He lost the pole. And the race win, therefore, was now a hope rather than a formality. With the championship tightening and with circuits like Hockenheim, Hungary, Monza and Indy ahead of him – circuits where Michelin ▶

## TECHNO FILE

### Wind tunnels were blowing overtime

Silverstone calls for complex aero compromises says Steve Matchett



Contemporary Silverstone is split into two distinct halves: the first, from the start/finish line, through Becketts and

round to Vale is extremely fast; the second, leading up from Club to Woodcote is significantly slower.

Priory and Brooklands require more downforce than any other point on the track. So the engineers needed a compromise – aero settings that helped the drivers through the turns without sacrificing too much speed.

Renault produced so many modifications that they tagged a B suffix to their R23 car; however the actual monocoque was unchanged. The R23B introduced a further refinement to their rear wing to reduce drag. During the damp, heavy practice on Friday it was clear that it was producing smaller contrails than those cars running 'straight' elements.

For their part Williams continued to fine-tune the FW25. On Friday evening the team equipped the car with new bodywork, one featuring a distinctive 'spine' beginning at the top of the airbox and leading towards a small fin located just ahead of the rear wing's mounting element. Although this fin should help with high-speed stability I suspect the design was compromised at Silverstone by the cross winds blowing during Saturday's qualifying; Montoya's car looking very skittish as he negotiated Becketts.

#### Renault refined their swoopy rear wing





**'THE FERRARI BOYS WILL BE STUDYING WILLIAMS' STACKING TECHNIQUE OVER THE NEXT FEW WEEKS'**

will not be slow – Michael didn't need this at Silverstone.

So why did it happen? The evidence shows that a strong sidewind hit the Ferrari at this point, moving it a couple of feet or so; other drivers complained of similar problems. Earlier in the session, when Rubens and Kimi recorded their times, the wind was quieter. Even so, Michael had been brilliantly quick through Copse and Becketts – quick enough for the pole – and thus could have left some margin among the gusts.

So it was Rubens on the pole on Sunday – a mildly irritated Rubens, it must be said, because he looked in his mirrors as he cruised up to his grid mark... and saw nothing. Jarno was hanging way back, dictating the pace of the pack behind him.

Rubens was now stranded on the line, tyre and brake temperatures dropping rapidly. Rubens remarked later that Jarno should have matched the speed of the pole man. I would bet that the very sharp Renault team had been holding Jarno back, hoping that Rubens would break away. (It is for this reason that Michael always slows towards the end of his pole formation laps, bunching up the guys behind him.)

Thus Jarno took the lead of the Foster's British Grand Prix, capitalising on Renault's sizzling launch strategy and on Rubens' temperature drop-offs.

Kimi Räikkönen, too, had benefited from Jarno's ploy. In second place, he pushed Jarno hard over the opening couple of laps but then backed away slightly, awaiting the Michelin drop-off cycle. Rubens was third

and the Schumachers fourth and fifth, Ralf ahead (but nursing flu and about to collect DC's stray cockpit surround).

One safety car (the cockpit surround) and then another (Hockenheim loony two): in the cockpit of his F2003, Rubens never even saw the guy. Instead, he talked instantly on the radio about stopping early, under the yellow, for fuel and tyres. It would be a stacked stop, with Michael behind him.

Down at Williams, Sam Michael was issuing similar instructions. Ralf would stop first, followed by Juan Pablo Montoya, who had been running behind Michael. Juan Pablo hung back as he cruised into the pit lane, timing his arrival at the box to perfection, and the Williams boys were lightning-fast with that second set of tyres.

**It took a one-man track invasion to send most cars scurrying back to the pits (above, left); Williams (top) reacted more sharply than Ferrari as Ralf (yellow helmet) and Juan Pablo timed things to perfection**



**FACT ATTACK:** Michael Schumacher has not led the race during the last three grands prix, and this was Rubens' sixth career win



OPPOSITE MAIN: CLIVE MASON/GETTY IMAGES; STEVEN TEEL/AT; THIS PAGE: DARREN HEATH

Rarely has a win been more deserved than Barrichello's (left and above left with Montoya), especially as he really had to fight for it. Button (above right) came back to eighth after starting 20th and last

A pent-up Michael had meanwhile lost maybe five or six seconds in the traffic jam and the tyre swap. Ferrari's second and fifth places (Rubens had set fastest lap and had beautifully passed Kimi just before loony two) were converted into eighth and... 14th. More significantly, Michael rejoined behind Juan Pablo, which ultimately meant that Michael could have been second at Silverstone had Ferrari's pit work been equal to that of Williams. The Ferrari boys will no doubt be studying videos of Williams' 'stacking' technique over the next few weeks.

Rubens, for his part, could have been excused for wondering why yet another win had slipped away in a maze of safety cars and pit stops. From eighth place, though, he ground away, head down, senses alive.

This was Rubens driving absolutely at his best. He is beautiful to watch in the wet because he makes incredibly small but rapid movements on the steering wheel; and so it was in the dry at Silverstone, on all the bits of road that Rubens was having to use off-line in order to unsettle the Toyotas, or Trulli – and, yes, even Kimi. Through the fast corners, too, he was making two or three little jinks at turn-in, using much less slip angle than Michael, the man who never seeks anything less than perfection in his trajectory, but sometimes loses out in race conditions on circuits such as this because he has *too much* tyre distortion on the very long corners and therefore can't be as free with the car as a late-apex, right-foot-braker like Rubens.

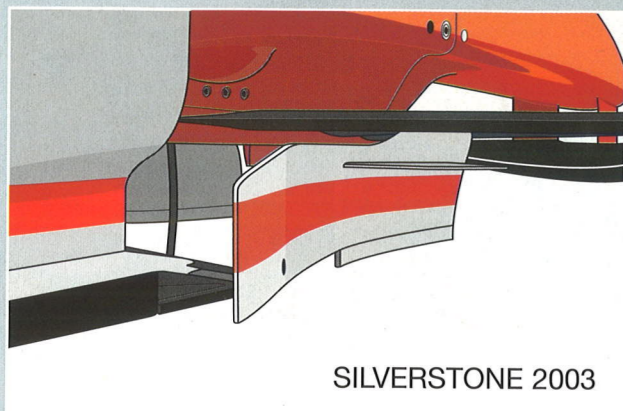
Rubens spoke later, of course, with

words that added up to him having spent the last 90 minutes or so in nothing less than The Zone: "Coming out of corners the car was just fantastic. It wasn't a question of great traction control and just flooring the throttle. It was great traction control but still *feeding* in the power, you know, just perfectly, and I was just catching everyone there. They knew it, too, because they would be covering the road as we would get to the next corner, and I could just choose the place I needed to be."

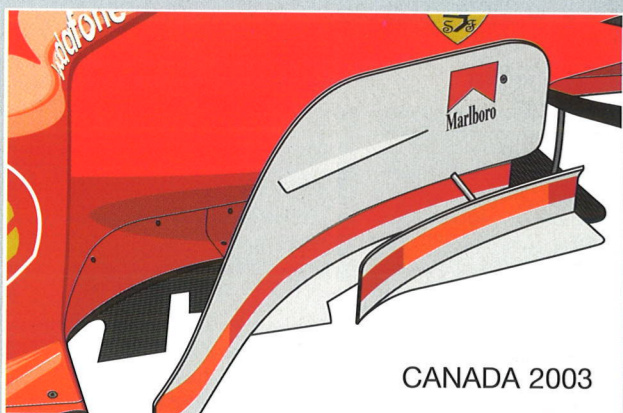
A classic Rubens move, on this day at Silverstone, was to dart to the outside, Mansell-style, to wait for a response – and then to dive to the inside, taking the gap. He was devastating. And positive. And everything else that, a few nights before, he had tried to put into words. **1**

# Sssh! Do not disturb...

Silverstone's capricious winds exercised everyone in the run up to the British GP. Illustrations by Patricia Soler



SILVERSTONE 2003



CANADA 2003

### ◀ Ferrari barge further forwards

Ferrari arrived at Silverstone having undergone an intensive test session in which they accumulated more than 4000km on three different tracks.

Jean Todt keeps saying there's more to the team's problems than the Bridgestone tyres; even so, they've recently tested 20 different compounds. The result could be seen as a new tyre design philosophy for the final two races of the season.

Development work on the car continued for the British Grand Prix as well, both F2003-GAs being fitted with new barge boards. The second element is now installed much closer to the front wheels, à la McLaren. Our illustrations show the main evolution of this device since the start of the season. The diffuser of the F2003 was also modified slightly.

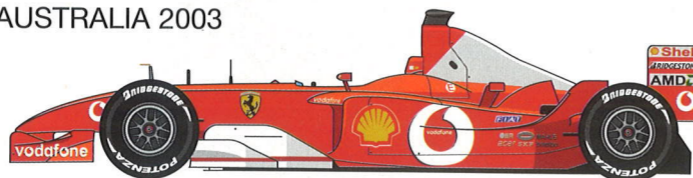
At Silverstone, Michael and Rubens decided not to use the same tyres. Schumacher chose a specification he'd

**'RUBENS' TYRES MADE THE CAR EASIER TO DRIVE, EVEN IF HIS FRIDAY SPIN COULD BE BLAMED ON THEM'**

already run in Barcelona. Rubens tried the new shape option, with a different compound. His choice made the car a little easier to drive, even if his spin during Friday qualifying could, it is claimed, be blamed on the new rubber – he wasn't familiar enough with it at the time.

Barge board evolution during 2003 (below and left); the second element gets closer to the front wheels

AUSTRALIA 2003

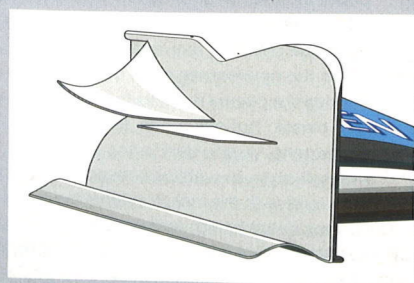


### ▶ Ferrari add suck to their endplates

Renault introduced new front-wing endplates at Imola this year (below). Consider the wave shape of the lower extension: this device creates a mini-venturi effect at the front. It's a very sensitive area and one of the most complex on a Formula 1 car because the open wheels disturb the aerodynamic flow so dramatically (the wheels are said to contribute a massive 30 per cent, at least, to a car's total drag).

At Silverstone, Ferrari came up with a similar concept, although their lower element (right) was much thicker than Renault's. The rest of the front wing was identical to that already used by the team so far this season.

In the eternal fight between wheel disturbance and smooth aero flow, the front wing endplates play a crucial role. Ferrari (right) produced a similar lower element to Renault's (below)

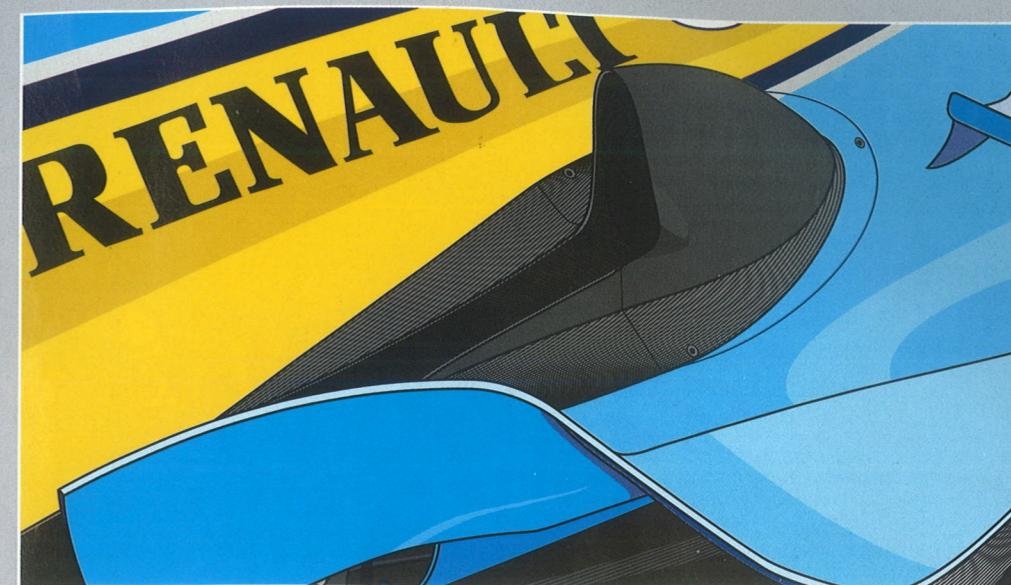


### ▶ Renault's R23 is now the R23B

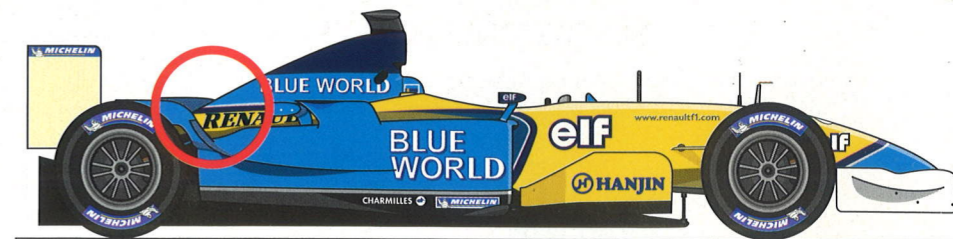
Renault made a significant step forward at Silverstone: their latest aerodynamic package was seen for the first time and it comprised 70 modified parts, including rear-top bodywork, floor and diffuser. Off the record, the team reckoned the fine-tuning was good for about 0.3sec per lap.

The details (right) show the new exhaust system as well as the much narrower side pod. The package also included a smaller chimney and bigger winglets on the sides. Finally, the upright bodywork element located inside the rear wheels was shorter.

Their fuel company, Elf, introduced a new oil for the RS23 engine at Silverstone. The company claimed its reduced friction properties produced a 1.5 per cent power gain. That's a significant hike of roughly 12bhp. The team were also supposed to get a new-spec for Germany.



Renault's revised exhaust and slimmer side pods (circled, right, in early season form and above right in R23B guise) were among an array of changes seen at Silverstone



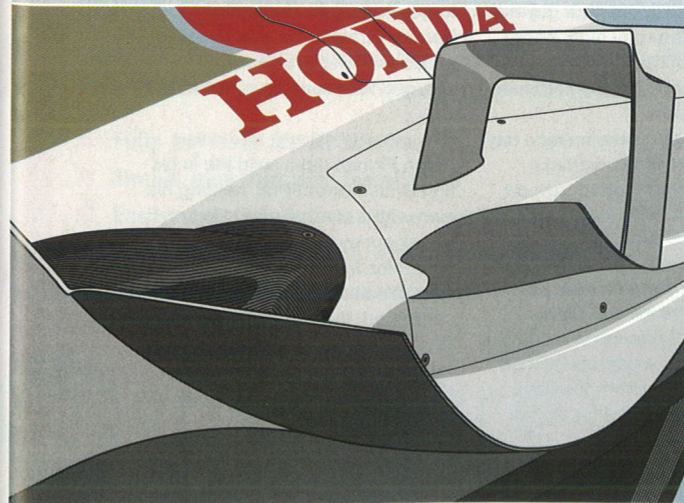
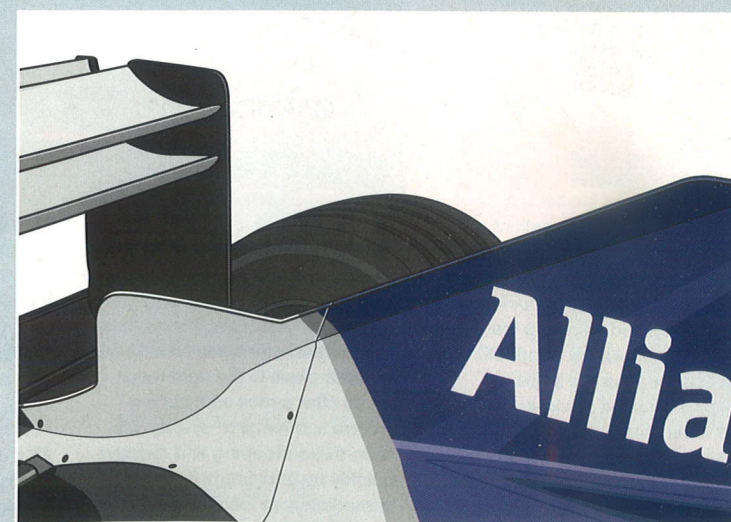
### ▼ B.A.R also find an extra 0.3sec

Geoff Willis was proud of his new – and very elegant – aero package. It included revised bodywork, a new diffuser and floor, and a modified air intake. The side pods remain asymmetrical because the car's cooling is split between water (right of the car) and oil (left), and their shape is much narrower towards the back.

The engine cover is more than 500g lighter and set a little lower. According to the team these new devices gained them 0.3sec. "Moreover, the car is less sensitive to pitch," said Willis.

Honda brought a new-spec engine to Silverstone said to be 1kg lighter and 10bhp more powerful. Jacques Villeneuve, though, is still unhappy with his Bridgestone tyres and wants to see more development.

Like Renault, B.A.R are delighted with their aero improvements which save them a significant 0.3sec in lap time. The swooping upward elements (below) and arch winglets are parts of the new package



### ▲ Williams learn from Indycar experience

Williams know Silverstone very well, of course, and tried a new device which they hope will minimise the effects of wind on the car's behaviour. The dorsal fin (above) conforms to the maximum dimensions allowed by the regulations and helps to reduce the car's susceptibility to yaw pressures. That, of course, should improve the car's stability, as Indycar engineers discovered a few years ago. The only disadvantage is that the air flow over the rear wing becomes more disturbed than usual.

Williams expected to be slower than the Ferraris at Silverstone, so their competitiveness came as a nice surprise. The team now believe they can go for the win in every race until the end of the season. 1

A radical dorsal fin was introduced by Williams (above). It's a familiar device to Indycar aerodynamicists, and helps the car to resist rogue yaw pressures



# #11: Race shorts

The two safety car periods had wildly varying effects on many team fortunes, as Maurice Hamilton reports



DC (left) had to pit for a new cockpit head restraint; Toyota (top) had to pinch themselves as they ran one-two at one point; Bible basher Neil Horan (above) seemed keen to meet his maker

MAIN: MARK THOMPSON/GETTY IMAGES; STOLE: ETHERINGTON/LAT; GARY HAWKINS/LAT

### Keeping his head up

David Coulthard's excellent start as he moved from 12th to ninth was wrecked a few laps later when the mountings for the cockpit head restraint failed, allowing the protective collar to fly off. DC tried to continue but the buffeting forced his head back so much that he could barely see where he was going. The stop for a replacement sent him to the back of the field and all seemed lost. The second safety car period changed all that, David leaping from 17th to third in one lap, his car having been fuelled during that first stop. He then drove strongly to take fifth place.

Kimi Räikkönen, meanwhile, led for eight laps but struggled with the balance on his last set of tyres and had to give best to Barrichello, in a move that put the McLaren on the grass at the exit of Bridge. Whether that caused damage to Kimi's car is uncertain but it could have accounted for the back end suddenly breaking loose going into Stowe, an excursion that allowed Montoya to snatch second.

### The car in front really is a Toyota

Ove Andersson remained sanguine even though Cristiano da Matta had led for 18 laps. "We shouldn't get too carried away," smiled the Toyota team principal. "I think seventh place is the right result for us after a race with such a bizarre sequence of events. We were three-stopping and reacted quickly by bringing both cars in immediately at the first safety car. That put us into the lead when everyone else stopped during the second safety car period. It was incredible to see Toyota first and second, Cristiano did a brilliant job throughout the race, as did Olivier. The team responded magnificently to the pressure of dealing with pit stops when we were leading."

### More heat

Jarno Trulli was the only Michelin runner to choose a softer compound. It worked well during the heat of qualifying, and the front-row start allowed the Renault to lead for 11 laps. The pace may

have been hot, but not on the track as Trulli felt the grip go away. "I lost performance with the second set," said Trulli, who eventually finished sixth. Fernando Alonso, bundled onto the grass at 180mph by Michael Schumacher on the first lap, was one of only three retirements.

### Kerb crawling? Hardly...

As if Jenson Button's embarrassment wasn't bad enough following his mistake during qualifying, the poor guy had to endure a Saturday night social at the home of David Richards as the B.A.R.-Honda boss entertained the British media.

Worse was to come on race day as the *Sunday Times* carried a graphic of Silverstone to support 'The Ideal Lap' with... guess who? Yep, the Boy Button. His comment on Becketts was: 'You enter very fast and take as much kerb as possible on the inside.' Right, Jense. But not enough to break the suspension. He made up for it on race day, starting from the back and collecting a point for eighth.

### Help from above

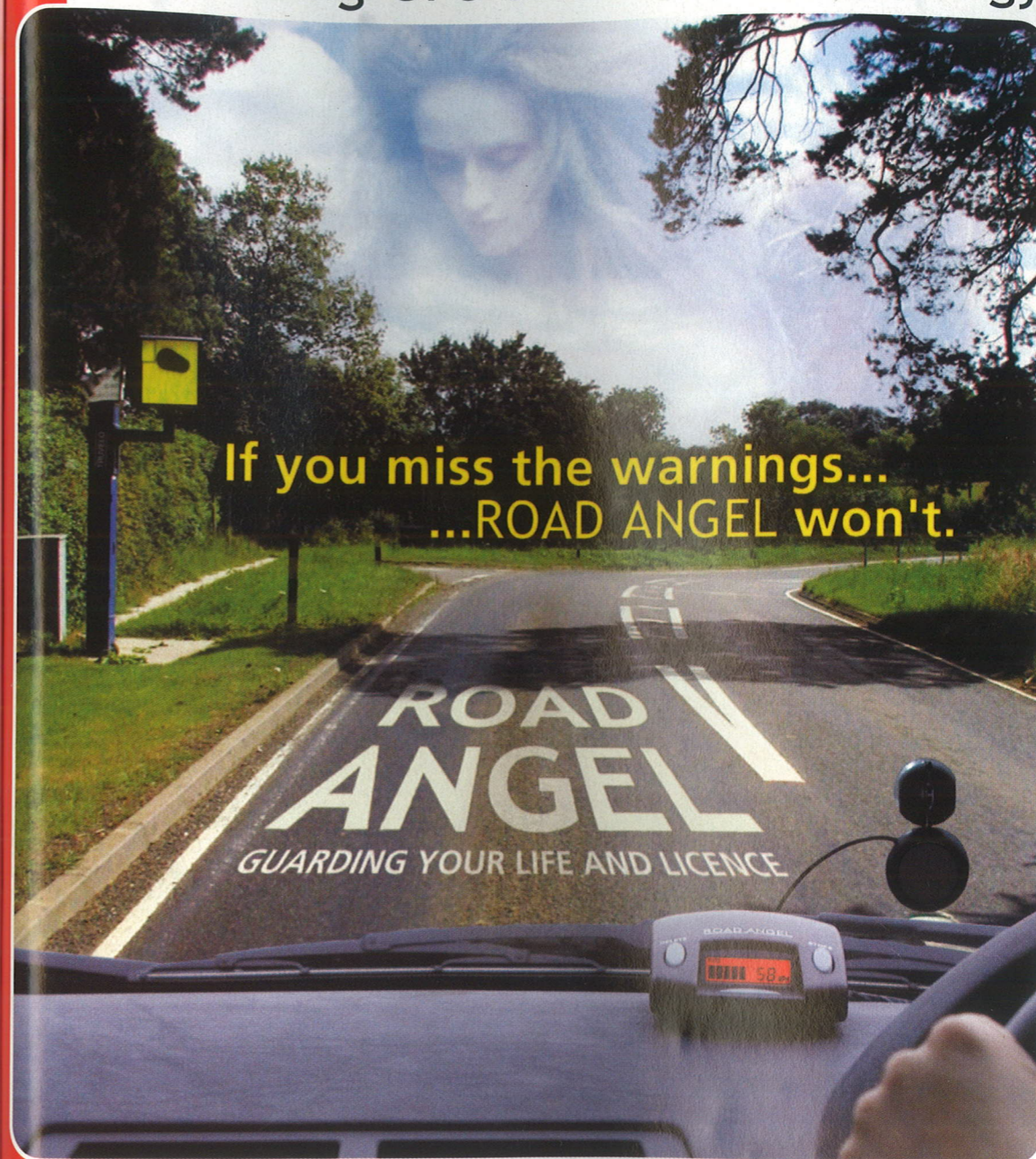
Barrichello reminded us that this was the second race he had won after someone had invaded the track (the first being his maiden victory at Hockenheim in 2000).

"I never actually saw the man," said Barrichello. "I was concentrating so hard. But I suppose everyone will say he was a Brazilian." In fact, he was a kilted Irish priest, Neil Horan, brandishing religious tracts at the drivers as they swept by at 185mph on Hangar Straight. He was arrested and, according to one wag, charged with causing a motor race.

### Encouragement at home

Ralph Firman did a solid job in his first British Grand Prix, holding his own with a car that was short of just about everything but massive oversteer. In the points following a good call during the first safety car period, the Brit with the Irish licence eventually dropped to 13th on a day when a strong drive by Giancarlo Fisichella was ended by rear suspension failure. 1

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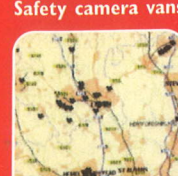
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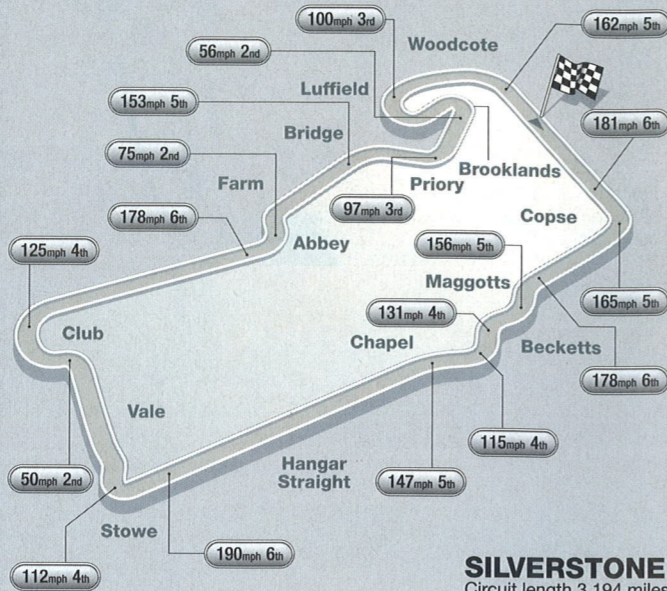


# All the facts Silverstone

Date July 20 2003; Weather Warm and dry, 24°; Track temperature 29°; Laps 60; Race distance 191.692 miles; Attendance 70,000

## Qualifying times

Position	Driver	Time
1	Rubens Barrichello	1m21.209s
2	Jarno Trulli	+0.172s
3	Kimi Räikkönen	+0.486s
4	Ralf Schumacher	+0.518s
5	Michael Schumacher	+0.658s
6	Cristiano da Matta	+0.872s
7	Juan Pablo Montoya	+1.005s
8	Fernando Alonso	+1.195s
9	Jacques Villeneuve	+1.382s
10	Antonio Pizzonia	+1.425s
11	Mark Webber	+1.438s
12	David Coulthard	+1.602s
13	Olivier Panis	+1.833s
14	Heinz-Harald Frentzen	+1.978s
15	Giancarlo Fisichella	+2.365s
16	Nick Heidfeld	+2.635s
17	Ralph Firman	+3.176s
18	Justin Wilson	+4.259s
19	Jos Verstappen	+4.550s
20	Jenson Button	no time



## Lap by lap

**START** Barrichello slow away, Trulli leads  
**LAP 6** Coulthard's cockpit collar flies onto the track. Safety car, and da Matta, Panis and Firman join DC in the pits  
**LAP 8** Trulli stays ahead at restart  
**LAP 11** Barrichello takes second  
**LAP 12** Man on track; 14 cars into pits under safety. Several drivers are delayed  
**LAP 16** Da Matta, Panis 1-2 at restart; Räikkönen passes Trulli and DC for third  
**LAP 17** Räikkönen second. Barrichello up to sixth  
**LAP 26** Barrichello takes fifth from Trulli  
**LAP 28** Barrichello fourth when DC pits, then overtakes Panis for third  
**LAP 30** Räikkönen leads when da Matta pits. Barrichello second  
**LAP 35** Barrichello leads when Räikkönen pits  
**LAP 39** Barrichello pits; Räikkönen leads  
**LAP 42** Barrichello overtakes Räikkönen  
**LAP 48** Räikkönen runs wide at Stowe; Montoya second  
**LAP 60** Barrichello wins from Montoya

## Speeds and stops

**FASTEST LAP**  
 Rubens Barrichello  
 1m22.236s on lap 36 (139.840mph)  
**FASTEST THROUGH SPEED TRAP**  
 Ralf Schumacher 165.533mph  
**SLOWEST THROUGH SPEED TRAP**  
 Jos Verstappen 152.111mph  
**FASTEST PIT STOP**  
 David Coulthard 30.953s  
**SLOWEST PIT STOP**  
 David Coulthard 52.877s

## SILVERSTONE

Circuit length 3.194 miles

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## Did you know?

McLaren have won the British GP more often than any other constructor, scoring points in all but one of the 36 events they have entered. Räikkönen's third place was the team's 24th podium. Barrichello's win was the 11th for Ferrari; McLaren have 12.

## Final standings

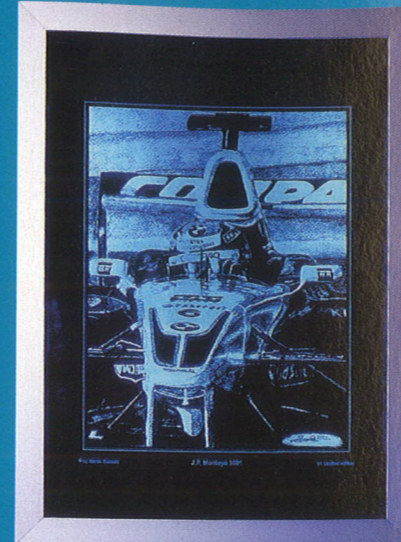
Final position	Driver & car	Total race time	Pos after lap 1
1	Rubens Barrichello Ferrari F2003-GA (Bridgestone)	1h28m37.554s	3
2	Juan Pablo Montoya Williams-BMW FW25 (Michelin)	+5.462s	6
3	Kimi Räikkönen McLaren-Mercedes MP4-17D (Michelin)	+10.656s	2
4	Michael Schumacher Ferrari F2003-GA (Bridgestone)	+25.648s	5
5	David Coulthard McLaren-Mercedes MP4-17D (Michelin)	+36.827s	9
6	Jarno Trulli Renault R23B (Michelin)	+43.067s	1
7	Cristiano da Matta Toyota TF103 (Michelin)	+45.085s	8
8	Jenson Button B.A.R.-Honda 005 (Bridgestone)	+45.478s	15
9	Ralf Schumacher Williams-BMW FW25 (Michelin)	+58.032s	4
10	Jacques Villeneuve B.A.R.-Honda 005 (Bridgestone)	+1m3.569s	11
11	Olivier Panis Toyota TF103 (Michelin)	+1m5.207s	13
12	Heinz-Harald Frentzen Sauber-Petronas C22 (Bridgestone)	+1m5.564s	20
13	Ralph Firman Jordan-Ford EJ13 (Bridgestone)	+1 lap	18
14	Mark Webber Jaguar R4 (Michelin)	+1 lap	12
15	Jos Verstappen Minardi-Cosworth PS03 (Bridgestone)	+2 laps	19
16	Justin Wilson Minardi-Cosworth PS03 (Bridgestone)	+2 laps	17
17	Nick Heidfeld Sauber-Petronas C22 (Bridgestone)	+2 laps	14
NOT CLASSIFIED			
	Fernando Alonso Renault R23B (Michelin)	electrics - 52 laps	7
	Giancarlo Fisichella Jordan-Ford EJ13 (Bridgestone)	suspension - 44 laps	16
	Antonio Pizzonia Jaguar R4 (Michelin)	engine - 32 laps	10

## Races to date

Driver	Australia	Malaysia	Brazil	San Marino	Spain	Austria	Monaco	Canada	Europe	France	Britain	Germany	Hungary	Italy	USA	Japan
Michael Schumacher	4	6	R	1	1	1	3	1	5	3	4	-	-	-	-	-
Rubens Barrichello	R	2	R	3	3	3	8	5	3	7	1	-	-	-	-	-
Juan Pablo Montoya	2	12	R	7	4	R	1	3	2	2	2	-	-	-	-	-
Ralf Schumacher	8	4	7	4	5	6	4	2	1	1	9	-	-	-	-	-
David Coulthard	1	R	4	5	R	5	7	R	15	5	5	-	-	-	-	-
Kimi Räikkönen	3	1	2	2	R	2	2	6	R	4	3	-	-	-	-	-
Jarno Trulli	5	5	8	13	R	8	6	R	R	6	-	-	-	-	-	-
Fernando Alonso	7	3	3	6	2	R	5	4	4	R	-	-	-	-	-	-
Nick Heidfeld	R	8	R	10	10	R	11	R	8	13	17	-	-	-	-	-
Heinz-Harald Frentzen	6	9	5	11	R	R	R	R	9	12	12	-	-	-	-	-
Giancarlo Fisichella	12	R	1	15	R	R	10	R	12	R	R	-	-	-	-	-
Ralph Firman	R	10	R	R	8	11	12	R	11	15	13	-	-	-	-	-
Mark Webber	R	R	9	R	7	7	R	7	6	6	14	-	-	-	-	-
Antonio Pizzonia	13	R	R	14	R	9	R	10	10	10	R	-	-	-	-	-
Jacques Villeneuve	9	R	6	R	12	R	R	R	9	10	-	-	-	-	-	-
Jenson Button	10	7	R	8	9	4	NS	R	7	R	8	-	-	-	-	-
Justin Wilson	R	R	R	R	11	13	R	R	13	14	16	-	-	-	-	-
Jos Verstappen	11	13	R	R	12	R	R	9	14	16	15	-	-	-	-	-
Olivier Panis	R	R	R	9	R	R	13	8	R	8	11	-	-	-	-	-
Cristiano da Matta	R	11	10	12	6	10	9	11	R	11	7	-	-	-	-	-

KEY: R Retired/NS Non-starter

# WIN F1 art: original and limited edition



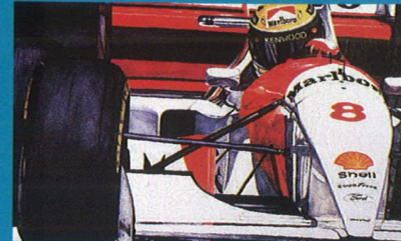
Juan Pablo Montoya. Laser art painting with LED frame



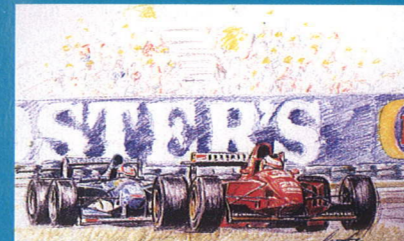
Michael Schumacher - world champion 2002



Michael Schumacher and Damon Hill at Spa



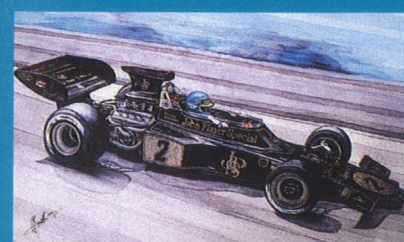
Ayrton Senna in McLaren



Gerhard Berger and Michael Schumacher



Michael Schumacher at Monza



Ronnie Peterson in JPS Lotus

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### 3rd prize

1 x Michael Schumacher at Monza, by Peter K Neubauer, from a limited run of 150 prints

### 4th prize

1 x Ronnie Peterson in JPS Lotus, by Martin Bunnett, from a limited run of 150 prints

### 5th prize

1 x Ferrari special by Peter K. Neubauer, from a limited run of limited 200 prints

### 6th prize

1 x Schumacher special (not shown) by Martin Bunnett, from a limited run of 300 prints

Q: Which F1 driver has just moved from Minardi to Jaguar?

A:

Tie-breaker in 25 words or less

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# #12: Montoya waltzes as Ferrari wilt

JPM danced home a minute clear – which gave him time to watch Schumi drift in a sad seventh. Peter Windsor reports

An informal survey taken in the Hockenheim paddock on Thursday afternoon established the earth-shattering statistic that the majority of Formula 1 people think that Michael Schumacher will win the 2003 world championship. The dissenters were obvious: Ron Dennis was one; Pablo Montoya, Juan Pablo's father, was another. "There are many strong Michelin circuits ahead," said Pablo, "and that includes

Hockenheim. I think it's going to be very difficult for Michael. I don't think he's going to do it..."

Which was more than most were prepared to say: even Michael Schumacher (surprisingly) thought that Hockenheim was going to be 50-50, Bridgestone-Michelin. As it turned out, the balance on race day was about 90-10 in favour of Michelin.

And it's not difficult to see why. As our feature on the development of the Williams

FW25 describes on page 30, the big, square-shouldered, stiff-sidewalled Michelins are a definite advantage – particularly in traction and braking – when the track surface is smooth and the kerbs are low. That's been clear for about 24 months. What's different about 2003 is that the number of smooth circuits has increased (add Monaco, Hockenheim and Hungary to an already long list), kerbs have been lowered (Nürburgring) and more slow

Schumacher is still leading the championship – and most people believe he'll win it – but Hockenheim shows that the fat lady isn't clearing her throat just yet

**'FERRARI WERE IN CONSTERNATION. MICHAEL AND RUBENS WERE BLOWN AWAY BY MICHELIN TEAMS'**

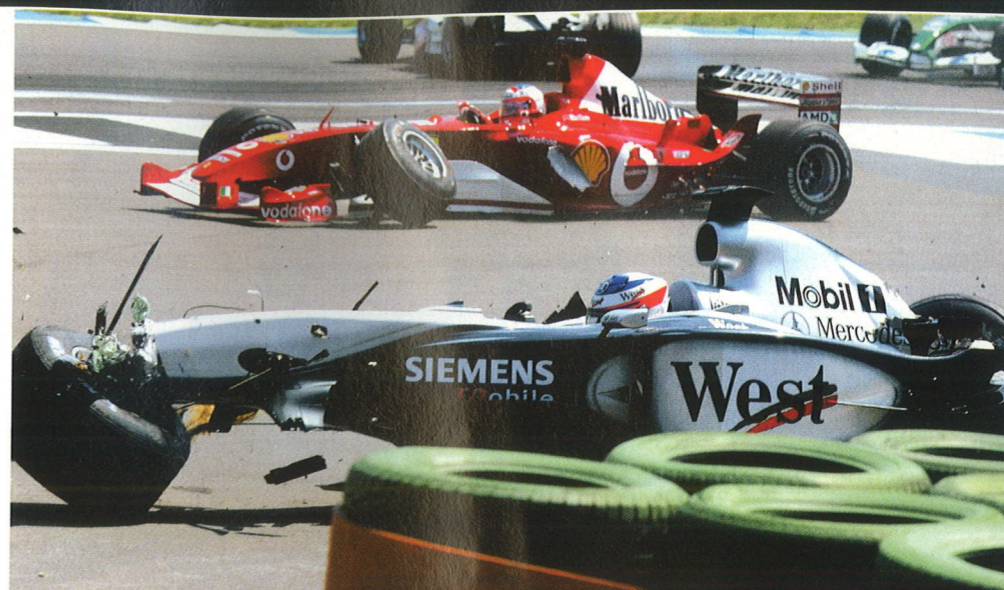


## > Drivers' championship Round 12 Germany

1 Michael Schumacher	71	11 Giancarlo Fisichella	10
2 Juan Pablo Montoya	65	12 Cristiano da Matta	8
3 Kimi Räikkönen	62	13 Heinz-Harald Frentzen	7
4 Ralf Schumacher	53	14 Olivier Panis	6
5 Rubens Barrichello	49	15 Jacques Villeneuve	3
6 Fernando Alonso	44	16 Nick Heidfeld	2
7 David Coulthard	41	17 Ralph Firman	1
8 Jarno Trulli	22		
9 Jenson Button	12		
10 Mark Webber	12		

## > Constructors' championship

1 Ferrari	120
2 BMW-Williams	118
3 McLaren-Mercedes	103
4 Renault	66
5 B.A.R.-Honda	15
6 Toyota	14
7 Jaguar-Cosworth	12
8 Jordan-Ford	11
9 Sauber-Petronas	9



(Above) Barrichello and Räikkönen were early casualties – leading to yellows and the safety car



DARRIN HEATH/STEVE ETHERINGTON/LAT

corners have been inserted (Magny Cours and Hungary). On the plus side, the Bridgestones still have a big advantage in the wet (smaller footprint) and in the cold or semi-wet (when the rounder shoulder lends itself to camber adjustments).

From Ferrari's standpoint, however, time is certainly running out. Two potential wet wins disappeared when Michael chose to start on wets (instead of dries) in Australia and spun into retirement while cruising under the yellows in Brazil. That leaves the 'Bridgestone' circuits – Imola, certainly, where Michael won, and Silverstone, where Michael made an unforced error on his qualifying lap and eventually finished fourth. With the Renaults running uncomfortably quickly in Malaysia and Barcelona, with the Williams-BMWs being the quickest cars in Canada and France, and with McLaren looking very fast at Monaco and the Nürburgring, you don't have to be an

F1 genius to see the pattern: generally speaking, give or take a few variables, Michelin have got it right.

And, by implication, Ferrari-Bridgestone have got it wrong. I say "Ferrari-Bridgestone" because a B.A.R.-Honda engineer suggested after Hockenheim that Bridgestone "might make more progress – ie, build Michelin-shaped tyres – if they stop following exclusively the ideas of Ferrari". (Bridgestone deny this completely, of course, pointing out that they are currently producing some new designs that are not only specifically tailored to B.A.R. but also contrary to Ferrari's concepts.)

Whatever. At Hockenheim, at least, despite Michael's assertion that Bridgestone would be competitive, it was predictably Michelin all the way. Williams-BMW stole the front row and Juan Pablo three-stepped his way to a 65sec victory. That isn't a race; it's a Sunday ▶

## TECHNO FILE

### Brute power is out – downforce is in

Adjustments to the Hockenheim course have forced teams to rethink



After the 2001 race, Hockenheim's two long straights were severely cropped. Up until then, the engineering emphasis

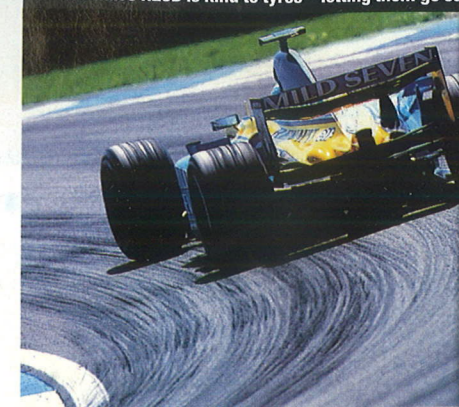
was on brute horsepower. You got a quick lap by trimming the wings to a minimum. Lowered downforce did compromise grip in the stadium section, but the impressive straight-line speeds more than made up for it.

Today, it's the exact opposite. The teams need to crank up the downforce and concentrate on mechanical grip and low-speed traction; the car must remain stable through both the new stadium section after Spitzkehre and the old looping Sachs Kurve.

Tyre choice is crucial. All Michelin teams would have preferred to use the softer of the two compounds, but the exceptionally high ambient temperatures caused concern over premature degradation in the race. In the end only Renault dared risk it.

The R23B chassis is wonderfully kind to its tyres, and there is no question that the soft rubber helped both drivers give fine performances. Trulli's first two sets survived well, the second set being pushed hard for 24 laps. His third set, however, needed to run 30 laps to the end of the race, and these extra 18 miles very nearly proved too much; his car sliding wildly as he tried to hold off late charges from Michael's Ferrari and Coulthard's McLaren.

Renault's R23B is kind to tyres – letting them go so



'JUAN PABLO THREE-STEPPED HIS WAY TO A 65SEC VICTORY. THAT ISN'T A RACE; IT'S A SUNDAY CRUISE'

afternoon cruise with the revs toned down and the driver emerging sharp and fresh, despite the 36C heat. Juan Pablo worked conscientiously throughout – even on the Friday, when he sensibly opted to run the Michelin prime tyre instead of the (quicker) option used by Ralf. The choice enabled him accurately to dial in the car on Saturday (when he took the pole, despite having to blink a piece of grit out of his eye halfway through the lap), allowed him to start the race with two holes less front wing than his team-mate and to lose a further hole in his first pit stop. His car, in short, was perfect.

At Ferrari, meanwhile, there was consternation. Michael and Rubens were blown away by the Michelin teams in the light-fuel runs on Friday (when they were ninth and eighth) and Michael was again nowhere (eighth) on Saturday morning, when he was running two-stop fuel on the harder of the two Bridgestones. Worse, he missed the last 20 minutes because of what Bridgestone described as a punctured left-rear tyre. A brave pigeon had been wandering onto the track, only to vanish in a cloud of feather and bone. The engineers joked later that maybe Michael's puncture had been caused by one of the fragments.

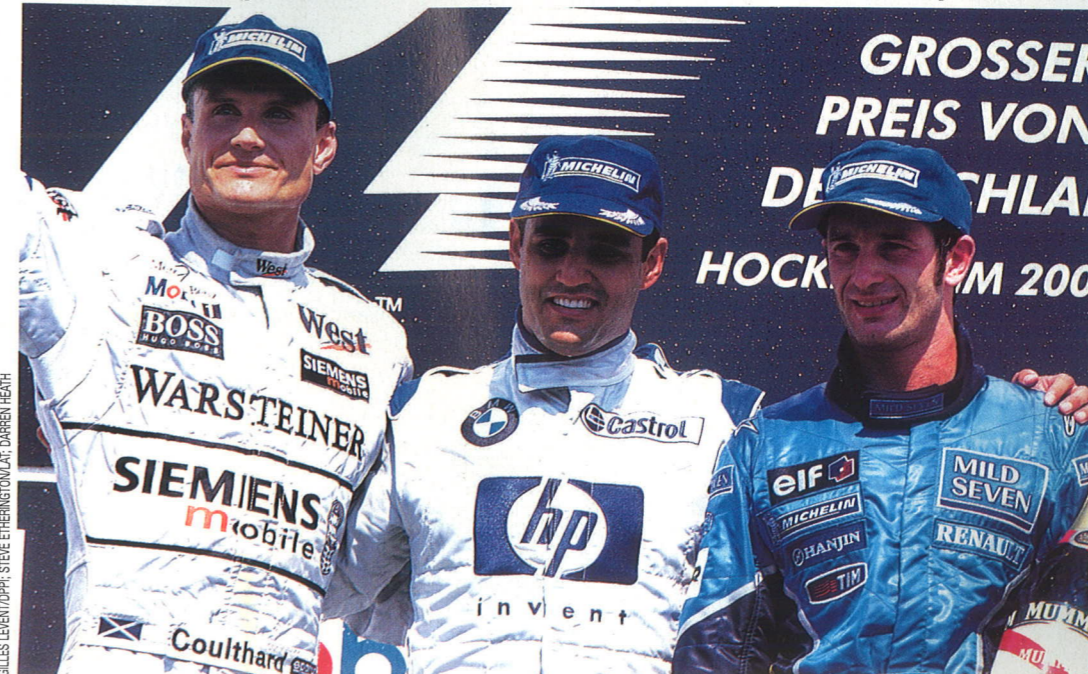
Rubens qualified third on Saturday – but it was a long shot: he opted for the softer Bridgestones and a three-stop strategy. Michael, slowish everywhere on a track that had yet to find its peak, qualified sixth. He hoped that the Michelin runners, particularly the Renaults, would be on lighter fuel and tyres too soft; as it was, he was potentially right in the middle of the first-corner accident – a position in which the championship leader, with but five races to go, did not need to find himself.

Michael avoided the accident, as it happens. Perhaps it was because, like Rubens, he again made an atrocious start

Montoya built on a sensible tyre choice to get a perfect car beneath him – and stroll to win



**FACT ATTACK** The top three teams – Ferrari, Williams and McLaren – have had only 13 retirements out of a possible 72 in 12 races



Happy days (left) for victor Montoya, flanked by Coulthard and Trulli. But points leader Schumacher (above) is reflective – perhaps about the puncture (top left) that cost him six invaluable points

(losing ground instantly to both Fernando Alonso and Olivier Panis): he was in clear air as the mayhem began (see panel) and found himself fourth, behind Juan Pablo and the Renaults, as the safety car emerged. Not bad. Pretty good, indeed – and from fourth, behind the Renaults, he could, in theory, be assured of at least second.

It so proved – but it took forever and it wasn't easy. By the time Fernando eventually ran wide at turn one (lap 31), Juan Pablo was leading Michael by nearly 30 seconds; and then Michael could do nothing about actually passing Jarno Trulli until the Renault's rear Michelins began to blister with about 10 laps to run. He passed him on the outside of the hairpin, where the debris is greater but the grip still good, and for a while – for five, klaxon-deafening laps

– Michael looked as though he would indeed finish second. It was going to be another *Great Escape* – another reason why the survey had it right.

David Coulthard, though, who drove brilliantly from 10th on the grid up to Michael's rear wing (his poor qualifying results are at last paying off) remarked later that Michael seemed to be reasonably quick at turns one and two (medium speed) but very slow at the hairpin and in the stadium, particularly at Turn 8 (which are all about sheer grip, of course). On this day in Germany, the Ferrari was at least a second a lap slow.

And then its left-rear tyre failed again. Both Ferrari and Bridgestone said later that the cause was a puncture (translation: it could happen to anyone). But the coincidences are too great to be ignored:

two loaded rear-tyre failures in two days, both near the end of long runs, both on the Bridgestone car that generates the greatest amount of energy.

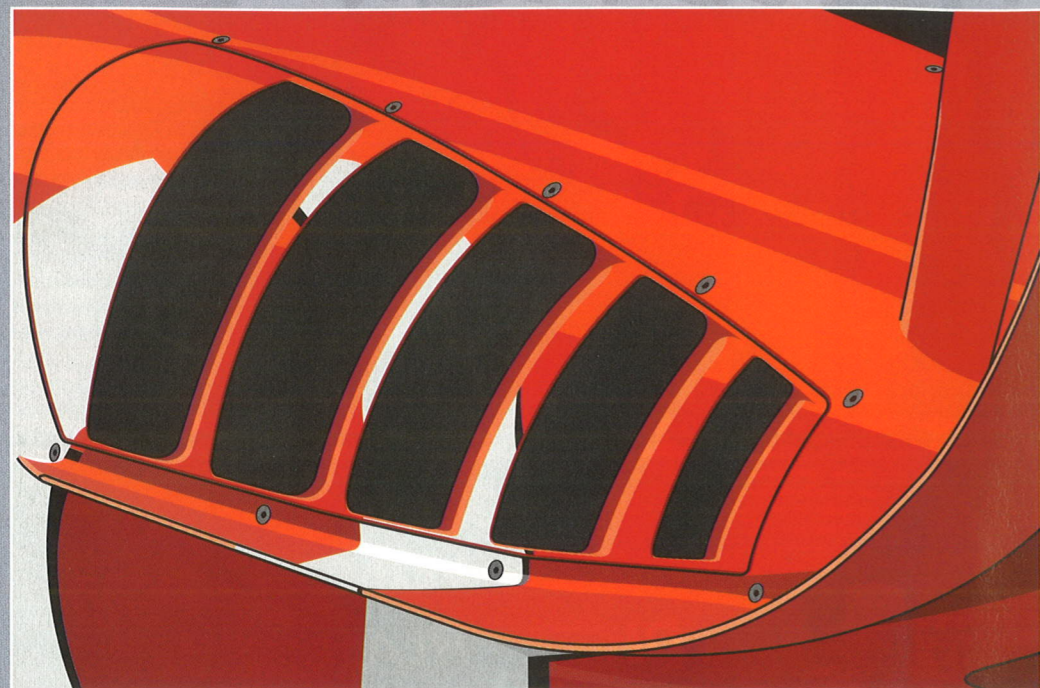
For Michael's, Ferrari's and Bridgestone's sake it would be nice to think that it wasn't like that – that it was as simple as Michael running wide over the hairpin debris and puncturing the tyre as a result. Certainly Michael's demeanour after the race – ice cream in hand, smiling away queries – suggested that he was not worried by the events of Hockenheim and that all in the future is bright.

You can be sure, though, that it will be different come September. Ferrari, and Michael, will at that point go into the most intensive race-test-development period in the history of the four-wheeled car. **1**

• See Williams FW25 feature, page 30

# Blowing cool when it's hot

Bigger air vents, 'aero' brakes and wonder winglets. Stéphane Samson reports; illustrations by Patricia Soler



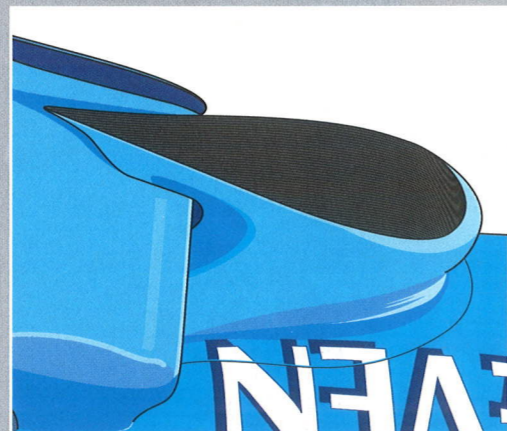
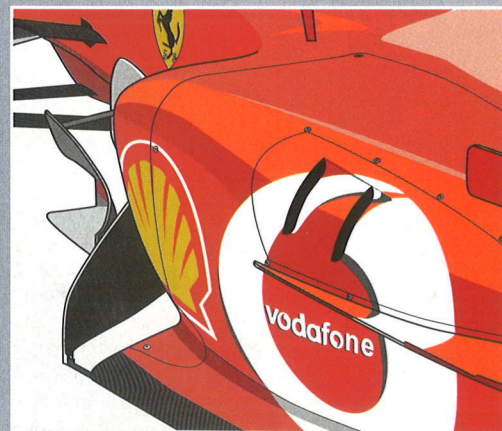
## ◀ Keeping it cool

Hockenheim was going to be one of the hottest races of the year and, with the teams being unable to change the settings of the cars between Saturday and Sunday, they had to guess the best race conditions from qualifying. It was more than hot by the end on Sunday: 35C in the air and 49C on the track. In these conditions, the most important thing was to guarantee the optimum cooling for the engine without disturbing the aerodynamic efficiency. As you can see, Ferrari used significantly bigger holes in the F2003-GA's sides than they had in Barcelona earlier in the season.

Renault also used bigger chimneys on their side pods: these elements blended with the winglets located behind them. The R23B is very efficient in its cooling: in 2002, the Renault was losing two per cent in aero efficiency from its engine cooling. This year, those losses have been halved.

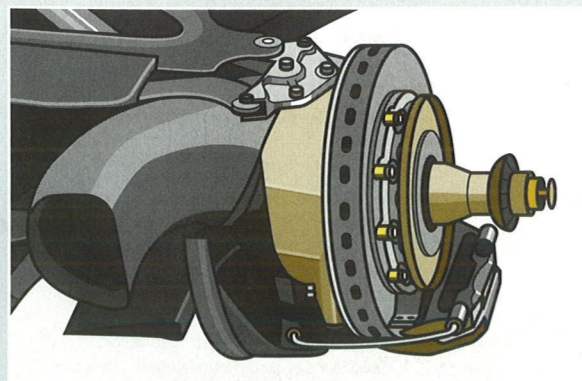
THE IMPORTANT THING WAS TO GUARANTEE THE COOLING WITHOUT DISTURBING THE AERODYNAMICS'

Ferrari (left above) had more and larger cooling vents in the side pods than previously (far left); Renault (left) used bigger chimneys

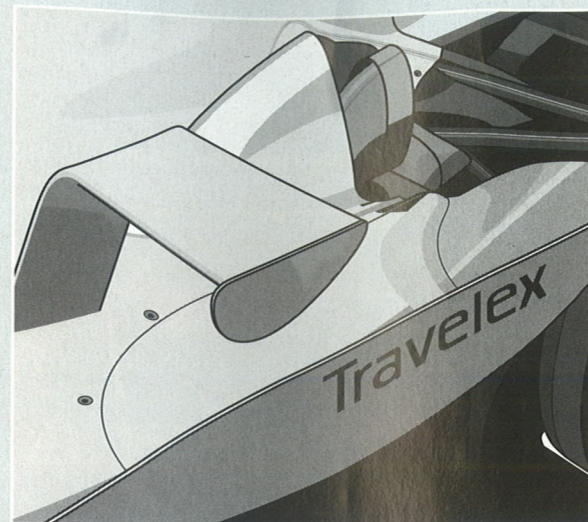
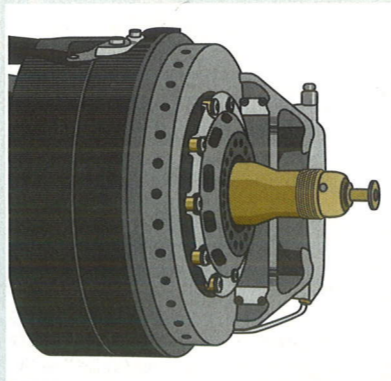


## ▶ New brakes for McLaren

McLaren had been the only team to use a front brake calliper sited at the very bottom of the disc (near right). But at Hockenheim the team developed a more conventional location (far right), which allowed them to use the circular air intakes first introduced by Ferrari quite some time ago. This system seals the inside of the brake disc and plays a useful aerodynamic role by tidying up the air flow around the front wheels. The downside is that it could lead to over-heating of the disc.



In Germany, McLaren backed away from their unique – among current F1 teams – location of the brake calliper at the bottom of the brake disc (above); the position is now more orthodox, which also allows a more aerodynamic cooling system (above)



## ▲ Toyota find aero efficiency

The new aero package designed by Toyota for Silverstone was used again at Hockenheim. The new side-pod shape includes a more obvious 'Coke bottle' profiling at the back, more integrated winglets, a new diffuser, and Ferrari-like cooling grills. Chief designer Gustav Brunner says the car is now two per cent more efficient aerodynamically, which brings a 0.25sec gain per lap. The difference between the old

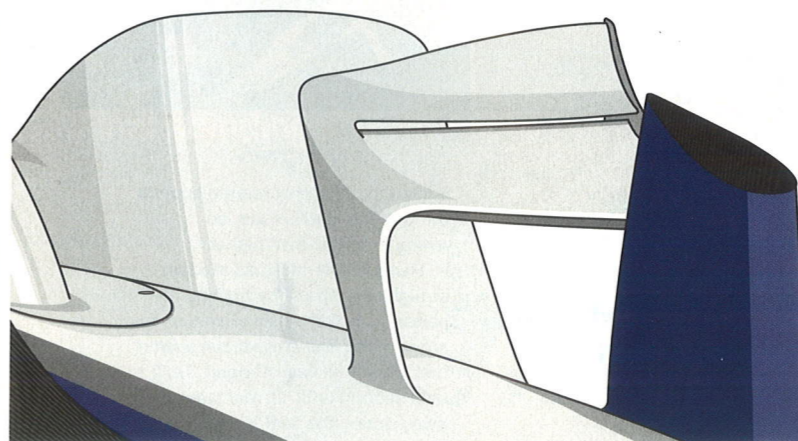
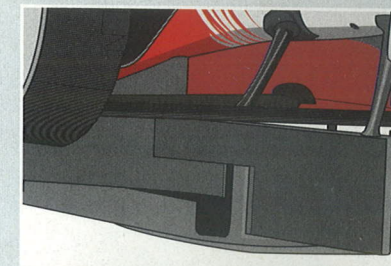
package (above left) and new (above right) is plain to see.

One of the main problems of the TF103 has not been fixed, however: the car is too hard on its rear tyres and forces Toyota to go for three-stop strategies. This flaw is caused by poor weight distribution which cannot be cured on the 2003 car.

At Hockenheim, the TF103 used brand-new barge boards: these are now very small and pushed forward inside the front wheels (right).



New side-pod aerodynamics (above right, compared with the old, left) help save the car an 0.25sec per lap. Radical new barge boards (right) are smaller and set inside the front wheels



## ◀ Williams keep pushing

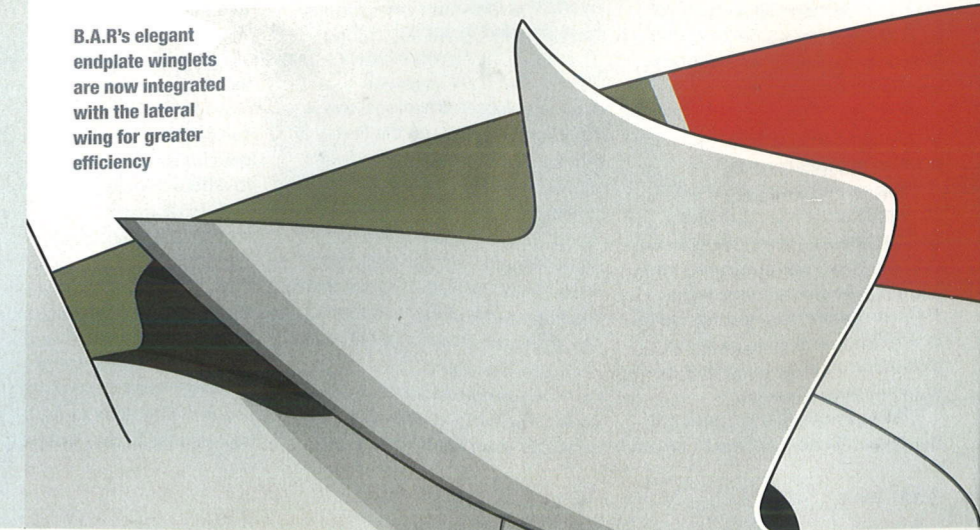
Though there is a testing ban until the end of August, Williams introduced another revised engine cover at Hockenheim. Its winglets are quite different from the previous design: they are split into two planes and their profile is no longer horizontal. Even in Hockenheim's high temperatures the chimneys remained quite small (although they were bigger than usual). The extra cooling was produced by a small air exhaust situated on the side of the side pods.

Side-pod winglets were revised again for Hockenheim; Williams's ingenuity also keeps the chimneys on the small side

## ▶ Blowing hotter and happier

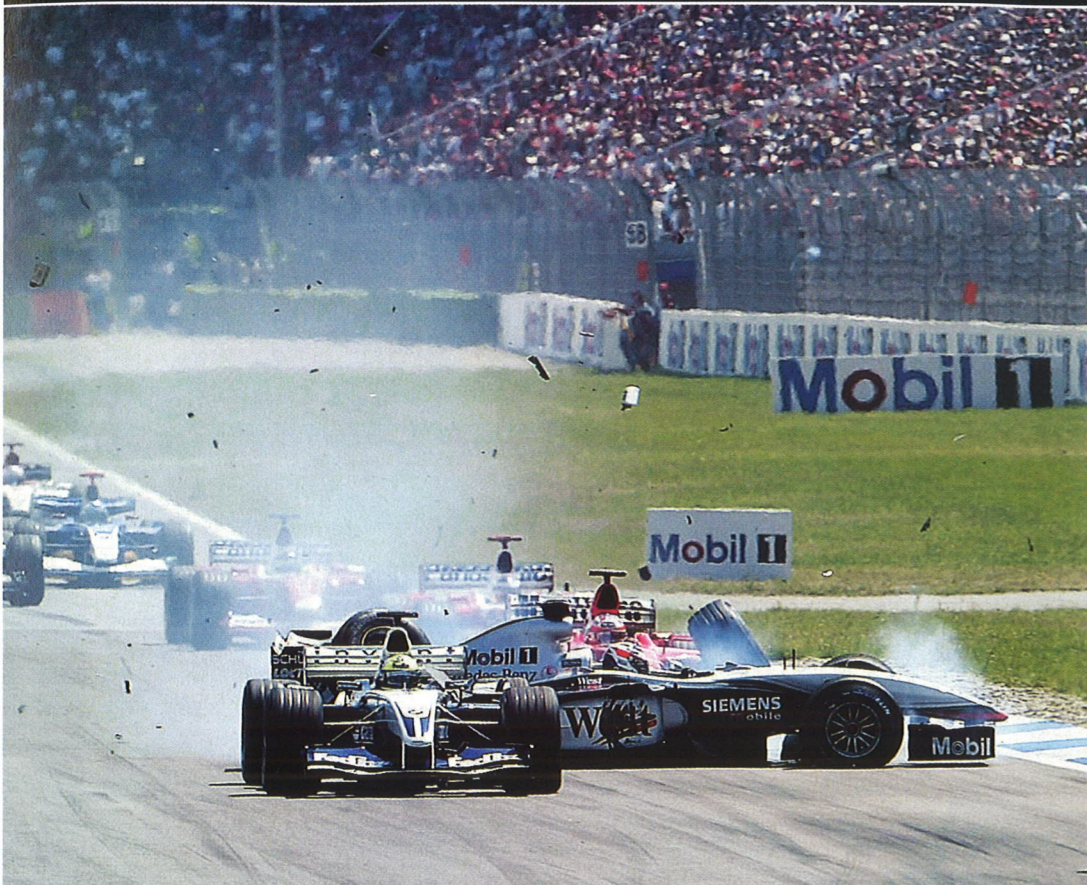
The B.A.R. chassis looks fairly efficient and the tyre policy now seems more aggressive. The aerodynamic package introduced at Silverstone was used again in Germany: the integration of the winglet's endplate with the lateral wing allowed Geoff Willis to include a hot air exhaust. From the side, this device looks very unusual (right), but is apparently very efficient. Jenson Button scored twice in a row (at Silverstone and Hockenheim) but started from an unpromising grid position each time. "I'm making life harder for myself and I need to improve my qualifying performance," he admitted. ❶

B.A.R.'s elegant endplate winglets are now integrated with the lateral wing for greater efficiency



# #12 Race shorts

Ralf is dumped on by the stewards; Toyota get their best result; Justin goes nowhere. Maurice Hamilton reports



"Who me?" Ralf Schumacher (left) is blamed for the chaos behind him; Sauber (above) get horny; and it's crunch time for Justin (below)



STEVIE ETHERINGTON/ULI; MARK THOMPSON/GETTY IMAGES; DPPI

**One move too many**  
After being struck by Räikkönen's wayward McLaren at the start, Ralf Schumacher was hit even harder after the race by a 10 grid-position penalty for the next race, in Hungary. Schumacher, starting from the front row, had moved from right to left to take his line into the first corner. In the process the Williams squeezed Barrichello, who had Räikkönen alongside. The Ferrari pinballed into the McLaren, sending it sideways into Schumacher's side pod. The Stewards decided that Barrichello and Räikkönen were hapless victims after "Schumacher admitted to paying no attention to the position of the other cars".  
"You cannot think about what 20 people around you are doing and sometimes these incidents do happen," said Schumacher. "I was just trying to defend my position and didn't make any sudden move or anything, so there was all the time in the world for the other cars to move away from me."  
Not surprisingly, the others did not agree. "I had nowhere to go at

the moment of the accident," said Barrichello. "I think Kimi and Ralf took big risks."  
"I got off the line very well and went straight down the outside," said Räikkönen. "I was past Barrichello when he hit my rear tyre. There was nowhere for me to go."  
The decision of the stewards, led by the controversial Nazir Hoosein, is particularly harsh since Hungary is second only to Monaco for poor overtaking opportunities. Williams have decided to appeal.  
**The sound of music?**  
Sauber celebrated National Swiss Confederation Day on the Friday at Hockenheim by having two Swiss alphorn players blasting away in the pit lane. It didn't do anyone much good, least of all the drivers as Heinz-Harald Frentzen was struck from behind by Ralph Firman during the first-corner chaos and Nick Heidfeld had another mediocre race into 10th place.  
"For reasons that escape me, Nick could not do better than 10th position," said Peter Sauber.

**Two-points finish**  
Toyota scored their first two-car points finish by being the only leading team, apart from Williams, to opt for a three-stop strategy. "The seven points we got for Olivier [Panis] and Cristiano [da Matta] finishing fifth and sixth moves us into sixth in the championship," said Ove Andersson.  
"The race was trouble-free," said Panis, after starting from seventh, "and the car was perfect."  
**Change for the better?**  
The changes to the circuit layout introduced last year have made Hockenheim, once a unique flat-out forest blast with a stadium section, no different from anywhere else.  
"Even the unchanged stadium section is totally different," said Pat Symonds, Renault's engineering chief. "Previously we were tackling this series of corners, requiring high downforce, in a very low-downforce configuration. Now the set-up compromise is much closer to other circuits'. The entry to the stadium is taken some 25 per cent faster than

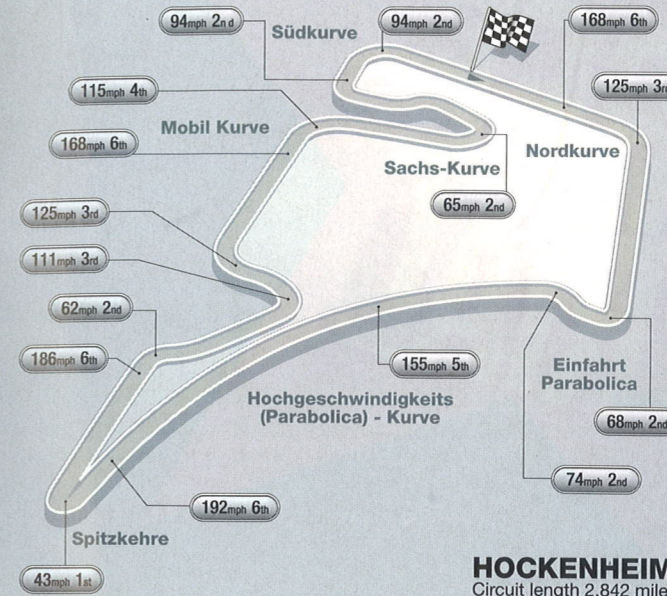
it used to be, and cornering speeds through the stadium are, on average, 15 per cent higher."  
Renault side-stepped modest straight-line speed by running the softer Michelin to gain places on the second and fourth rows, ran a short first stint, then two-stopped. Trulli held second until his rear tyres went away during the final 15 laps – when he slipped to fourth. Michael's puncture elevated Jarno to his first podium since Monza 1999. Alonso ran wide on entry to the stadium on lap 31 and finished fourth.  
**Great to good to godawful**  
Justin Wilson's brilliant start to the weekend, as he set seventh-fastest time when under pressure during Friday qualifying, slipped down a gear on Saturday as unexpected handling problems dumped the Jaguar debutant into 16th place. His race was short-lived as the effects of the first-corner collision forced him to take avoiding action; he was then struck from behind. Wilson had hoped to continue his dramatic starts – but not like this. ❶

# All the facts Hockenheim

Date August 3 2003; Weather Very hot, sunny, 35°; Track temperature 49°; Laps 67; Race distance 190.433 miles; Attendance 103,000

## Qualifying times

Position	Driver	Time
1	Juan Pablo Montoya	1m15.167s
2	Ralf Schumacher	+0.018s
3	Rubens Barrichello	+0.321s
4	Jarno Trulli	+0.512s
5	Kimi Räikkönen	+0.707s
6	Michael Schumacher	+0.731s
7	Olivier Panis	+0.867s
8	Fernando Alonso	+1.316s
9	Cristiano da Matta	+1.383s
10	David Coulthard	+1.499s
11	Mark Webber	+1.608s
12	Giancarlo Fisichella	+1.664s
13	Jacques Villeneuve	+1.923s
14	Heinz-Harald Frentzen	+2.002s
15	Nick Heidfeld	+2.390s
16	Justin Wilson	+2.854s
17	Jenson Button	+2.918s
18	Ralph Firman	+3.174s
19	Jos Verstappen	+3.856s
20	Nicolas Kieser	+4.007s



**HOCKENHEIM**  
Circuit length 2.842 miles  
© 2003 Federation Internationale de l'Automobile, 8 Place de la Concorde, 75008 Paris, France

## Did you know?

The state of Baden-Wurtemberg paid €15m of the €62m bill for course improvements, which included another grandstand. Fans ate 125,000 sausages and drank 85,000 litres of beer. There were 248 track marshals and 800 policemen on duty

## Lap by lap

**START** First-corner collision takes out Räikkönen, Barrichello and Firman, with Ralf Schumacher and Frentzen limping to the pits. Montoya leads from Trulli. Safety car out for three laps  
**LAP 14** Trulli pits, leaving Montoya with an 8.8-second lead over Alonso  
**LAP 17** Montoya and Michael Schumacher pit; Alonso leads  
**LAP 18** Alonso and DC pit. Montoya leads Trulli by 12sec  
**LAP 31** Montoya leads by 25sec. Alonso runs wide and Michael takes third  
**LAP 33** Montoya pits and retains lead.  
**LAP 42** Two-stoppers completed with Trulli second ahead of Michael. DC takes fourth from Alonso  
**LAP 50** Montoya, a minute ahead, makes third stop and keeps lead  
**LAP 59** Michael takes second from Trulli  
**LAP 60** Coulthard passes Trulli for third  
**LAP 63** Left-rear puncture and pit stop drops Michael from second to seventh  
**LAP 67** Montoya wins by over a minute

## Speeds and stops

**FASTEST LAP**  
Juan Pablo Montoya  
1m14.917s on lap 14 (136.574mph)  
**FASTEST THROUGH SPEED TRAP**  
Jacques Villeneuve 207.102mph  
**SLOWEST THROUGH SPEED TRAP**  
Heinz-Harald Frentzen 114.332mph  
**FASTEST PIT STOP**  
Cristiano da Matta 27.794s  
**SLOWEST PIT STOP**  
Justin Wilson 5m56.415s

## Final standings

Final position	Driver & car	Total race time	Pos after lap 1
1	Juan Pablo Montoya Williams-BMW FW25 (Michelin)	1h28m48.769s	1
2	David Coulthard McLaren-Mercedes MP4-17D (Michelin)	+1m5.459s	7
3	Jarno Trulli Renault R23B (Michelin)	+1m9.060s	2
4	Fernando Alonso Renault R23B (Michelin)	+1m9.344s	4
5	Olivier Panis Toyota TF103 (Michelin)	+1 lap	8
6	Cristiano da Matta Toyota TF103 (Michelin)	+1 lap	9
7	Michael Schumacher Ferrari F2003-GA (Bridgestone)	+1 lap	5
8	Jenson Button B.A.R.-Honda 005 (Bridgestone)	+1 lap	12
9	Jacques Villeneuve B.A.R.-Honda 005 (Bridgestone)	+2 laps	15
10	Nick Heidfeld Sauber-Petronas C22 (Bridgestone)	+2 laps	11
11	Mark Webber Jaguar R4 (Michelin)	spin – 64 laps	6
12	Nicolas Kieser Minardi-Cosworth PS03 (Bridgestone)	+5 laps	14
13	Giancarlo Fisichella Jordan-Ford EJ13 (Bridgestone)	overheating – 60 laps	10
<b>NOT CLASSIFIED</b>			
	Jos Verstappen Minardi-Cosworth PS03 (Bridgestone)	hydraulics – 23 laps	13
	Justin Wilson Jaguar R4 (Michelin)	accident damage – 6 laps	17
	Ralf Schumacher Williams-BMW FW25 (Michelin)	accident damage – 1 lap	3
	Heinz-Harald Frentzen Sauber-Petronas C22 (Bridgestone)	accident – 1 lap	16
	Rubens Barrichello Ferrari F2003-GA (Bridgestone)	accident – 0 laps	-
	Kimi Räikkönen McLaren-Mercedes MP4-17D (Michelin)	accident – 0 laps	-
	Ralph Firman Jordan-Ford EJ13 (Bridgestone)	accident – 0 laps	-

MAP: ALAN ELDREDGE

## Races to date

Driver	Australia	Malaysia	Brazil	San Marino	Spain	Austria	Monaco	Canada	Europe	France	Britain	Germany	Hungary	Italy	USA	Japan
Michael Schumacher	4	6	R	1	1	1	3	1	5	3	4	7	-	-	-	-
Rubens Barrichello	R	2	R	3	3	3	8	5	3	7	1	R	-	-	-	-
Juan Pablo Montoya	2	12	R	7	4	R	1	3	2	2	2	1	-	-	-	-
Ralf Schumacher	8	4	7	4	5	6	4	2	1	1	9	R	-	-	-	-
David Coulthard	1	R	4	5	R	5	7	R	15	5	5	2	-	-	-	-
Kimi Räikkönen	3	1	2	2	R	2	2	6	R	4	3	R	-	-	-	-
Jarno Trulli	5	5	8	13	R	8	6	R	R	R	6	3	-	-	-	-
Fernando Alonso	7	3	3	6	2	R	5	4	4	R	R	4	-	-	-	-
Nick Heidfeld	R	8	R	10	R	11	R	8	13	17	10	-	-	-	-	-
Heinz-Harald Frentzen	6	9	5	11	R	R	R	R	9	12	12	R	-	-	-	-
Giancarlo Fisichella	12	R	1	15	R	R	10	R	12	R	13	-	-	-	-	-
Ralph Firman	R	10	R	R	8	11	12	R	11	15	13	R	-	-	-	-
Mark Webber	R	R	9	R	7	7	R	7	6	6	14	11	-	-	-	-
Justin Wilson	R	R	R	R	11	13	R	R	13	14	16	R	-	-	-	-
Jacques Villeneuve	9	R	6	R	R	12	R	R	R	9	10	9	-	-	-	-
Jenson Button	10	7	R	8	9	4	NS	R	7	R	8	8	-	-	-	-
Nicolas Kieser	-	-	-	-	-	-	-	-	-	-	12	-	-	-	-	-
Jos Verstappen	11	13	R	R	12	R	R	9	14	16	15	R	-	-	-	-
Olivier Panis	R	R	R	9	R	R	13	8	R	8	11	5	-	-	-	-
Cristiano da Matta	R	11	10	12	6	10	9	11	R	11	7	6	-	-	-	-

KEY: R Retired/NS Non-starter

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# #13: Tight, twisty and murder off-line

Eastern Europe's only direct contact with F1 is a timid circuit, and the swirling dust can be treacherous off the racing line



### Travel info

- If you have any spare time, head into Budapest – it's only 15 miles from the circuit. Visit the fabulous Buda castle or relax in the Turkish baths
- Expect a lively time as the locals mix with an influx of Germans
- Gold grandstand tickets ensure a superb view. For details see [www.hungaroring.hu](http://www.hungaroring.hu) or phone 0036 1266 2040
- Check out [www.motorracingtours.com](http://www.motorracingtours.com) for Page & Moy's £795 3-night package

### 2002 results

#### Top eight finishers

- Rubens Barrichello**  
Ferrari F2002, 1h 41m 49.011s (112.073mph)
- Michael Schumacher**  
Ferrari F2002 +0.434s
- Ralf Schumacher**  
Williams-BMW FW24 +13.356s
- Kimi Räikkönen**  
McLaren-Mercedes MP4-17 +29.479s
- David Coulthard**  
McLaren-Mercedes MP4-17 +37.800s
- Giancarlo Fisichella**  
Jordan-Honda EJ12 +1m 8.804s
- Felipe Massa**  
Sauber-Petronas C21 +1m 13.612s
- Jarno Trulli**  
Renault R202 +1 lap

#### Fastest lap

**Michael Schumacher**  
Ferrari F2002, 1m16.207s, 116.685mph (new record)

#### Number of laps

70

#### Race distance

190.682 miles

#### Top eight qualifiers

- Rubens Barrichello**  
Ferrari F2002, 1m 13.333s (121.253mph)
- Michael Schumacher**  
Ferrari F2002 +0.059s
- Ralf Schumacher**  
Williams-BMW FW24 +0.413s
- Juan Pablo Montoya**  
Williams-BMW FW24 +1.373s
- Giancarlo Fisichella**  
Jordan-Honda EJ12 +1.547s
- Jarno Trulli**  
Renault R202 +1.647s
- Felipe Massa**  
Sauber-Petronas C21 +1.714s
- Nick Heidfeld**  
Sauber-Petronas C21 +1.796s

#### When to watch ITV

**Qualifying 1**  
23.30 Friday August 22

**Qualifying 2**  
12.40 Saturday August 23

**Race**  
12.05 Sunday August 24

**Highlights**  
23.15 Sunday August 24

*Times subject to change*

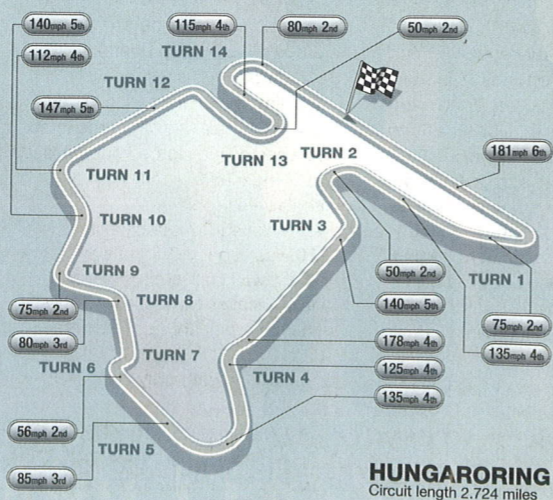
### Driver's eye



#### Mark Webber

"The set-up is maximum downforce and very short gearing. After the brief, dusty, main straight you turn late into Turn One because the apex is a long way around. Drag the car to the right for the tighter Turn Two; you're travelling downhill and it's vital to get the car on line for Turn Three to ensure speed onto the straight."

Then a good left-hander and a right-hander that's bumpy on the exit. Next, the chicane, where you need good rhythm, and a series of corners crucial to the lap time. A new section precedes a downhill chicane with a kerb that's a bit of a car breaker. Then a pathetic left-hander and a narrow line through the last corner which widens out onto the straight."



### MEMORY (PIT)LANE

## Monaco's master moved east

A circuit calling for heroic overtaking nerve was tailor-made for the nerveless Senna

The addition of the Hungarian Grand Prix to the calendar, back in 1986, was a trifle unexpected. Bernie Ecclestone was looking to expand the championship behind the Iron Curtain, but the Berlin Wall had yet to fall, and Hungary became the front-runner only when Russia fell by the wayside. The Dutch Grand Prix, at the ageing Zandvoort circuit, was brushed aside – never to return – and F1 headed east.

The opening race attracted a crowd of more than 200,000, and while the twisty track wasn't to the liking of most drivers, the spectators loved it.

So did Ayrton Senna – five times winner at equally tortuous Monaco.

Over the first six Hungarian GPs Senna was the master, either winning or finishing runner-up. In '86 and '87,

driving for Lotus, he played second fiddle to fellow Brazilian Nelson Piquet, but in 1988 he scored his first win – unsurprising when you consider McLaren claimed 15 of the 16 races that season. Then, in '89 and '90, it was back to second behind Nigel Mansell's Ferrari and Thierry Boutsens's Williams respectively.

Winning ways returned in '91 and '92, but Senna's fine run came to an end when he was forced out of his final Hungarian Grand Prix, in '93, with throttle problems.

Ayrton's team-mate back in 1986 was Johnny Dumfries and he will always remember the race fondly because he scored his only world championship points there: two for coming fifth. His short F1 career ended after only five more

races when he was replaced at Lotus by Satoru Nakajima.

A similar fate befell Jos Verstappen. He claimed his first podium in Hungary in '94 when he finished third behind his Benetton team-mate, Michael Schumacher. He repeated the feat at the very next race, Belgium, but was dropped for the following season in favour of Johnny Herbert. Picked up by Simtek for '95, Verstappen has since driven for a host of teams, but that was his big chance gone.

And if you think that a good qualifying performance is crucial to a win in Hungary, then Nigel Mansell will beg to differ. Only 12<sup>th</sup> on the grid in 1989, he manhandled his Ferrari to the front, cementing the *Il Leone* legend on the way.

**Stewart Williams**

'THE TWISTY TRACK WASN'T LIKED BY MOST DRIVERS, BUT THE SPECTATORS LOVED IT. SO DID AYRTON SENNA'

Poleman Senna holds off *Il Leone*, Nigel Mansell, in 1991; 4.6sec separated them at the line

LAT. ARCHIVE. CLIVE MASON/GETTY IMAGES



### CRYSTAL BALLS

Revisions, but it will still be slow

A longer circuit and fewer laps but will overtakers prosper?



Mika Häkkinen dives inside Schumi in 2000

A quarter-of-a-mile has been added to the Hungaroring and some might argue that the best place for it would have been on the exit road. The intention is to have the new loop, which pushes the first corner further into the arid countryside, provide a better overtaking opportunity, but it might not make much difference since the original Turn One had been the only place to think about passing on this tight track.

The Hungaroring may be an endless succession of slow and medium-speed corners snaking through equally bland surroundings, but it makes for one of the toughest races from a driver's point of view. The good news is that the track changes have increased the length from 2.47 to 2.72 miles and reduced the number of laps from 77 to 70. The total race distance will be marginally greater, but the drivers will welcome any decrease in the number of times they have to go through the fiddly stuff in stinking afternoon heat.

Based on the absence of overtaking into the supposedly more exciting revised final corner at Magny-Cours, the Hungaroring alteration may have little effect on the actual racing. But the new surface could be crucial in that it might favour Michelin, much as the fresh asphalt did on parts of the Monaco track. In fact, apart from the portable toilets replacing the Hotel de Paris, there are many similarities between the two circuits.

Both are dirty to start with and gradually 'rubber in', and Saturday tends to be just as important as Sunday because qualifying determines the order of the queue during the race. The only difference is that back markers tend to get in the way in Hungary: 16 of the 20 starters finished last year's race. This year, with the field much closer, that could be crucial around the time of the pit stops. Ferrari, on Bridgestone tyres, won as they pleased last year to stitch up the constructors' title, while Michelin brought tyres that were too hard for the liking of McLaren and Williams. Watch for a role reversal in 2003.

**Maurice Hamilton**

Dear Rubens

That Brazilian national anthem of yours must be the longest known to man. Still, it does no harm to share out F1's spoils as evenly as possible, and everybody was delighted that you managed to parlay pole position into a really first-rate victory. It might even – if only slightly – compensate for your annual disappointment at Interlagos.

And how timely it was, especially considering recent vulgar speculation that you might – if I may be so bold as to lift my metaphor from the world of grubby commerce – be a little past your sell-by date. That in turn has given rise to stories that there could be a shoot-out between Giancarlo Fisichella – deified as you know by The Bishop – and that untidy-haired compatriot of yours who hangs around Fiorano testing Ferraris from time to time (see p82), the purpose being to establish which of them will be eaten for breakfast by the blessed Michael from 2005 onwards.

This is vintage Ferrari, of course. In the good old days, the Commendatore, having polished off a luncheon plate of *tortellini alla panna*, amused himself during afternoon testing at Modena or Monza by setting his drivers against each other, the better to establish who would be team leader for the following weekend's *grande epreuve*.

And woe betide anyone who complained. When Phil Hill once opined that it might be nice if the windscreen on his Dino 246 was altered a fraction, he was invited to “keep his mouth shut and his foot down”. I'm bound to say that approach hardly seems the sort of strategy calculated to bring out the best in Schumi – nor can I see Jean Todt adopting it with any enthusiasm – but it certainly shows just how much things have evolved in four decades.

But I digress... Returning to the point – the Silverstone

And to think that the last time a nutter ran onto the circuit – at Hockenheim in 2000 – Rubens also won the race

jamboree – what sort of a rum old do was that? There all the lads were, busying themselves with their 170mph crocodile, nobody making much effort to overtake – the usual thing – when suddenly this cove in fancy dress starts running along the circuit. At first glance I decided it must be some pathological queuer registering his disappointment at not having to wait for five hours to get into Silverstone because they'd improved the traffic arrangements.

Then one of my friends remarked that, having espied what looked suspiciously like a kilt, it must have been Jackie Stewart – only that couldn't have been right because there was only one figure on the track and, since the Duke of Kent wasn't out there too, we could forget about it being the wee Scot. In the end, of course, we discovered that the culprit was an over-anxious padre from the Emerald Isle – perhaps surprisingly, not fully fuelled on his own local fire water – who'd let the excitement of the moment get to him, rather, and had decided to give vent to some religious concern or other. It seems that the gist of his urgings was that we should all spend more time reading the Good Book than watching F1 cars follow one another around race tracks, a viewpoint which, given the interminable procession we'd witnessed a fortnight earlier at Magny-Cours, seemed to me to have more than a passing degree of merit.

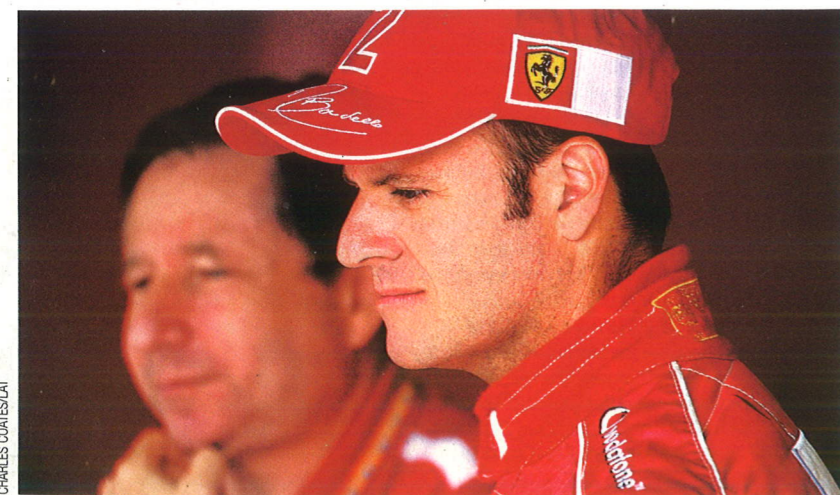
To be frank with you, Rubens, our revved-up Rev may have inadvertently provided the FIA with the answer it needs in its quest for better F1 racing. Forget upside-down, back-to-front running orders or one-lap qualifying; what grand prix racing needs are a few pedestrians wandering among the traffic to spice things up. We could also do with a few randomly positioned road vehicles around the circuits. It would be worth it just to see the expression on Mikey's face when he's flat-chat, wheel-to-wheel with JPM for the lead only for the egg lady's Ford Popular van to reverse out of a side turning right into his path, eh Rubens? Who needs \$25m wind tunnels when we could have all that?

Anyway, once the interloper had been dragged away to the cells, I must say how impressed I was with the quality of the racing. Suddenly everybody seemed to over-dose on adrenalin, dishing up more overtaking than I've seen on the M25 over the past two years. Lovely job, by the way, tucking up the Kimster with that lunge out of Bridge. The boy doesn't know when to give up, does he? You had him well beaten there, even before he tried to turn in on you.

As a sad little coda, I must say how sorry I was to hear that your winner's trophy got broken as you checked in at the airport for the trip home after Silverstone. I understand you were heard to say meekly, “Perhaps I can get another one.” No doubt about that, Rubens – of course you can. All you've got to do is to come back in 12 months and knock off the 2004 British Grand Prix.

Simple enough, surely?  
Yours, waving a shamrock

*the SCRUTINEER*



CHARLES COATES/AT

**'Lovely job, by the way, tucking up the Kimster with that lunge out of Bridge. The boy doesn't know when to give up, does he?'**

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