

NIGEL ROEBUCK
CHANGING TIMES FOR VETTEL

GRAHAM HILL'S LOTUS



Up close with a Gold Leaf classic

www.motorsportmagazine.com

MOTORSPORT

90TH ANNIVERSARY YEAR



LE MANS SHOWDOWN! PORSCHE vs AUDI vs TOYOTA

Get set for a battle of the giants at the greatest race in the world

F1 FRONTLINE
MARK HUGHES
Merc's advantage: the amazing backstory



Double track test special

1970s HUNT'S HESKETH
The car that set James on his way...

1950s LISTER'S 'KNOBBLY'
Jag-powered prototype heaven!

By Andrew Frankel

JUNE 2014 £4.99
06
9 770027 201186



128 86



78



102

31

112

CONTENTS

VOLUME 90 / NUMBER 6

FEATURES

23 NIGEL ROEBUCK'S REFLECTIONS
...on Malaysia, Bahrain and China

31 F1 FRONTLINE WITH MARK HUGHES
What's behind Mercedes' current dominance, plus sympathies for Stefano Domenicali

52 FORMULA E OVERVIEW
All-electric racing edges closer to reality

78 PORSCHE COMEBACK
With its return to Le Mans imminent, Porsche explains its strategy – and its 15-year absence

86 LUNCH WITH... WOLFGANG ULLRICH
Perhaps the greatest Le Mans team boss ever, he has led Audi to a dozen 24 Hours victories

96 ASTON MARTIN RACING
David Richards and Darren Turner on 10 years of competition for the British outfit

102 LOTUS 49 R8
One chassis' remarkable race history, from Graham Hill in Oz to South Africa via Monaco

112 TRACK TEST: HESKETH 308
The car that catapulted James Hunt to F1 fame

118 THE RECORD: JACK FAIRMAN

120 ULTIMATE PORSCHE 935: JLP-4
It had ground-effect – but wasn't built at Weissach

127 IN THE SPOTLIGHT: ALEXANDER SIMS

128 TRACK TEST: LISTER 'KNOBBLY'
Flat chat in the prototype of a racing legend

REGULARS

- | | |
|------------------------------|--------------------------------|
| 12 MATTERS OF MOMENT | 60 ROAD CAR NEWS |
| 18 MONTH IN PICTURES | 62 ROAD TESTS |
| 48 INTERNATIONAL NEWS | 70 LETTERS |
| 49 GORDON KIRBY | 74 YOU WERE THERE |
| 50 BOOKS & DVDS | 76 SUBSCRIPTIONS |
| 51 WEBSPIN | 137 EVENTS OF THE MONTH |
| 54 MAT OXLEY | 145 SIMON ARRON |
| 56 HISTORIC NEWS | 149 GORDON CRUICKSHANK |
| 57 PRODUCT REVIEWS | 153 DOUG NYE |
| 58 CLASSIC CARS | 156 PARTING SHOT |
| 59 AUCTIONS | |

A FEW DAYS BEFORE THE big sports car season-opener at Silverstone, newly retired Allan McNish was in London to accept the Segrave Trophy at the Royal Automobile Club.

The citation read: 'First Briton to win the Tourist Trophy, the Le Mans 24 Hours and the FIA World Endurance Championship in the same season.'

Yes, 2013 – his last year as a full-time racing driver – was quite a campaign for the 44-year-old. But he remains puzzled by the plaudits he has received since calling time on his career in December. You see, Allan still just thinks of himself as “a wee boy from Dumfries”.

The beautiful trophy named in honour of the great Sir Henry Segrave is awarded for ‘outstanding skill, courage and initiative on land, water and in air – the Spirit of Adventure’. McNish joins a small band of heroes to receive the honour twice, having previously been selected in 2008. He takes his place beside Sir Malcolm Campbell, Sir Stirling Moss, Sir Jackie Stewart, Barry Sheene, Nigel Mansell and autogyro pioneer Wing Commander Ken Wallis.

“I feel a bit of an interloper,” he told me after his eloquent acceptance speech. “OK, I’ve had a good career, been successful and won things, but some of these names are real heroes. I feel a bit odd to be tagged on to the end of the Segrave list – and now twice.”

That’s McNish for you. He’s still the “wee boy” who started his first kart race at Rowrah in 1981 – and not just because he hasn’t grown much since.

“Racing is still the reason I get up in the morning,” he told me as we chatted about his new role at Audi, which goes far beyond the glad-handing ambassadorial brief so many ex-racing drivers fall into. “You know me,” he said. “I’m not into just doing things for the sake of it. It’s got to have a purpose and a result at the end of it.”

“The crux is I have 32 years of racing experience and I’m very much of the opinion that you try to harness these things – and give a little bit back.”

He’ll juggle his BBC Formula 1 punditry with a role still at the heart of Audi Sport, as an intermediary between engineers and drivers. “Increasingly the engineers now, thanks to the complexity of the cars, are working so much on the numbers and the details that sometimes the driver’s feeling in the car can get a



DAMIEN SMITH
EDITOR

bit lost,” he explained. “So I’m there to make sure the reality is still there between what the numbers say and what the drivers are going through. It’s often difficult for a driver to push a point. I made quite a few enemies by pushing a point that I felt was important for my performance, though it didn’t always match other people’s feelings... So I can help on that.”

Pushing young driver talent is something Allan has always been passionate about, and this too is part of his Audi remit. He’s already got stuck in, brokering the deal for top-class graduate Filipe Albuquerque to join Jota’s LMP2 squad for ELMS rounds ahead of his big-break factory debut at Le Mans in June. McNish took satisfaction from that.

But when we spoke, just ahead of Silverstone, the obvious question to ask was: how’s the transition going from current to ex-racing driver? Any pangs of regret?

“If I’m ever going to feel anything it’ll be this weekend,” he said. “It’ll be cool to see ‘1’ on the car, to see my old partners Loic [Duval] and Tom [Kristensen] and to watch the two cars



His cups runneth over: Allan McNish has become part of a select group to win the Segrave Trophy on two occasions

go at it without having a vested interest in one or the other. But I don’t think I’ll wake up on Sunday morning and think, ‘shit’... At Daytona in January I saw Dario [Franchitti] on race morning and said ‘How is it, son?’ That was the first race, for both of us...”

It’s an odd coincidence that these old friends should step away at the same time – albeit in very different circumstances. Allan stopped on his terms, Dario only because the doctors told him to, following his dreadful

Indycar accident at Houston last year.

For McNish, finding peace with retirement must surely be easier – particularly because he knew the time was right to step away.

During our road trip following last year’s WEC round in Austin, Texas (see the December 2013 issue), we’d discussed the inevitability of retirement. It was in the air, even if the decision had yet to be taken. As we talked about it, Allan said he’d always admired Jackie Stewart’s approach to the biggest decision a racing driver will ever take.

Stewart stopped, point-blank, left that part of his life behind him and never looked back. McNish admits he might race something somewhere again at some time, but never with the same old intensity. There are echoes of Jackie in his thoughts about the end.

“The fuel tank was pretty close to the red, and when you get to that point you have to recognise it,” he said.

“I don’t have that sheer enjoyment of pure driving that I had. It had rubbed off over the years. The driving only gets you to winning races, which is where the enjoyment was towards the end. That was probably because a lot of effort went into it, and there was a ‘job’ aspect to it.

“Ask her,” he said, pointing to wife Kelly across the room. “The grumpy times coming home after races where it had gone against us...”

“Harry Tincknell [whom McNish mentors] is doing Le Mans for the first time this year and he was down at our place in Monaco looking at the trophies, including those for second and third at Le Mans.

“As I explained to him, if you go there to win, those trophies represent massive disappointment, like a hole in your heart. Even though it’s a huge achievement, bluntly you haven’t won. I enjoyed the competition element of the races, but only because it led towards the fight to win.

“I’m sure in the fullness of time, after a long break, if I get back into something I’ll probably enjoy the driving again. At Daytona in January there were five minutes in the morning where it felt strange – but it was soon gone. When I got to the circuit I had no interest in jumping in a car.”

McNish loved the life of a racing driver. But now it’s someone else’s turn. He’s already moved on.

MATTERS OF MOMENT

www.motorsportmagazine.com/author/dsmith



“THERE’S NOTHING SLICK ABOUT Donington Park,” I wrote two years ago, following a visit to see my old friend Christopher Tate as he took on the big recovery job as MD of a circuit ravaged by an ill-conceived British Grand Prix bid. “Jonathan Palmer would blanch at the potholes and the peeling paintwork...”

I didn’t mean to stick the boot in, and Christopher took my observations in the

endearing spirit they were intended. But still, I’d stomped on a nerve. Now, Christopher has never let me off the hook on this one, each time he’s updated me on the great working going on at ‘The Heart of

British Motor Sport’. So I had to chuckle when an email pinged in from Mr Tate entitled “Paved external roads at Donington...”

It was followed by photos of brand new, billiard baize asphalt now in place over the rutted surface that was the excuse for a road linking the main entrance to the paddock gate. The least I can do is show you.

Potholes? What potholes? Jonathan Palmer would surely approve.



CONTRIBUTORS

“The train at platform 16 is for all stations to Kuala Lumpur, Manama and Shanghai. A refreshments trolley is available on this service...” The 2014 Formula 1 campaign is getting into its stride and **Mark Hughes** hitched a ride

to watch Lewis Hamilton win three consecutive Grands Prix for the first time in his career. Photographer **James Lipman** has been looking at older machinery, taking some exquisite shots to illustrate two of our latest track tests: a Hesketh 308 and the original Lister Knobbly. **Andrew Frankel** supplied complementary prose. Last but not least, **Gary Watkins** is responsible for this month’s feast of endurance, with a detailed look at the fascinating technical contrasts underpinning the Le Mans 24 Hours.



IN NEXT MONTH'S ISSUE

A bumper celebration as we turn 90...

ON SALE MAY 30

MOTOR SPORT MAGAZINE

Incorporating Speed and The Brooklands Gazette
Founder Editor Bill Boddy MBE

38 Chelsea Wharf, 15 Lots Road,
London SW10 0QJ, UK
www.motorsportmagazine.com

EDITORIAL

Telephone 020 7349 8497 Fax 020 7349 8494

E-mail editorial@motorsportmagazine.co.uk

Editor-in-Chief Nigel Roebuck

Editor Damien Smith

Deputy Editor Gordon Cruickshank

Features Editor Simon Arran

Grand Prix Editor Mark Hughes

Art Editor Damon Cogman

Online Editor Ed Foster

Digital Designer Zamir Walimohamed

Online Assistant Alex Harmer

Picture Editor Jeff Bloxham

Senior Contributing Writers Andrew Frankel,

Rob Widdows

US Editor Gordon Kirby

Editor-at-Large Simon Taylor

Special Contributors Adam Cooper, Paul Fearnley,

Richard Heseltine, Paul Lawrence, Doug Nye,

Mat Oxley, Gary Watkins, Richard Williams

Picture Library LAT Photographic: 020 8267 3000

ADVERTISING

Telephone 020 7349 8496 Fax 020 7349 8494

E-mail sales@motorsportmagazine.co.uk

Commercial Director Sean Costa

Commercial Manager Mike O'Hare

Senior Account Manager Peter De Vries

Classified Sales Executive Peter Hirst

PUBLISHING

Managing Director Giovanna Latimer

Acting Publisher Vaughan Gordon

Marketing Manager James Bissett

Financial Controller Niall Colbert

Head of Subscriptions Marketing Gerard O'Brien

Subscriptions Marketing Executive Robert Brooke

Customer Service Manager Sophie Williams

SUBSCRIPTIONS

UK & Overseas subscriptions +44 (0) 20 7349 8472

Motor Sport Magazine Limited, Unit 38 Chelsea Wharf,

15 Lots Road, London, SW10 0QJ, UK. Motor Sport

subscriptions: Unit 38 Chelsea Wharf, 15 Lots Road, London,

SW10 0QJ, UK. Subscription rates (12 issues): UK £49.99;

USA \$85; rest of world £64. Postage is included. Motor

Sport (ISSN No: 0027-2019) is published monthly by Motor

Sport Magazine Ltd, GBR and is distributed in the USA by

Asendia USA, 17B South Middlesex Avenue, Monroe NJ

08831 and additional mailing offices. Periodicals postage

paid at New Brunswick NJ. POSTMASTER: send address

changes to Motor Sport, 17B South Middlesex Avenue,

Monroe NJ 08831. UK and rest of world address changes

should be sent to Unit 38 Chelsea Wharf, 15 Lots Road,

London, SW10 0QJ, UK, or by e-mail to subscriptions@

motorsportmagazine.co.uk. Subscription enquiries:

subscriptions@motorsportmagazine.co.uk. Subscription

orders: www.motorsportmagazine.com. Distribution:

Marketforce, Blue Fin Building, 110 Southwark Street,

London SE1 0SU. Colour origination: All Points Media.

Printing: Precision Colour Printing, Telford, Shropshire, UK.

No part of this publication may be reproduced in any form

without the written permission of the Publisher. Copyright

© 2014 Motor Sport Magazine Limited, all rights reserved.

We take every care when compiling the contents of this

magazine but can assume no responsibility for any effects

arising therefrom. Manuscripts and photos submitted

entirely at owners' risk. Advertisements are accepted by

us in good faith as correct at the time of going to press.

Motor Sport magazine is printed in England.

SUBSCRIBE!
See page 76
for more details



IN THE SPIRIT OF BOD AND JENKS

THIS MONTH'S EXCLUSIVES ON OUR TABLET EDITION




- US star John Paul Jr interviewed... in 1983
- Goodwood viewed from behind the wheel
- Fully interactive Le Mans front cover




Hertz

Car Sales

 R. Gonzalez

 K. Chandhok

 A. Kapadia

SIDVIN
energy engineering

A

PREM

JKE RACING

MOTORSPORT



THE MOTOR SPORT MONTH IN PICTURES

APRIL 19, 2014

ELMS, Round 1

SILVERSTONE, UK

Karun Chandhok poses with Murphy Prototypes' *Motor Sport* 90-liveried ORECA-Nissan prior to the European Le Mans Series season opener. The Indian shared the car with Rodolfo Gonzalez and impressive new recruit Alex Kapadia, the trio recovering from various setbacks to take eighth place. Kapadia received the radiolemans.com Spirit of the Race award for the part he played in the comeback. That '90' logo, incidentally, refers to *Motor Sport's* landmark anniversary.

JACOB EBBEY



BTCC.NET

APRIL 20, 2014

British Touring Cars, Round 2

DONINGTON PARK, UK

Former BTCC champion Colin Turkington hammers the chicane kerbs in his BMW. The Ulsterman finished second in the final race of the day, after a close tussle with Gordon Shedden (Honda Civic).

APRIL 13, 2014

MotoGP, Round 2

AUSTIN, TEXAS

Another race, another Marc Márquez triumph. Here, the Spaniard's team-mate Dani Pedrosa captures the aftermath of a Honda 1-2. Andrea Dovizioso finished with a welcome third for Ducati.



RED BULL



THE MOTOR SPORT MONTH IN PICTURES



MARCH 30, 2014

Members' Meeting

GOODWOOD, UK

This was the 72nd such event at Goodwood – but the first since 1966. It was a bit like the Revival in terms of spirited competition, but rather less crowded. Here, Andy Shepherd (AC Ace) gets crossed up in his pursuit of Max Girardo's Ferrari 250TDF. Shepherd won the Tony Gaze Trophy race after his rival had a quick spin during the closing stages.

REFLECTIONS
with

>> THE RED BULL DYNAMIC >> F1'S NICE GUYS LOSE OUT >> CHANGING TIMES



Nigel Roebuck



FEELING THE STRAIN

The cherubic grin has gone for now, as the four-time F1 champion finds himself on the back foot. And it's not just that the two Mercedes W05s are faster than Sebastian Vettel's Red Bull: he also has to contain a younger team-mate who has so far proved to be at least the German's equal.

REFLECTIONS
with
Nigel Roebuck



AS THE 1982 SWISS GRAND PRIX (at Dijon...) entered its final minutes, Williams team manager Peter Collins started getting edgy. Keke Rosberg's Cosworth-powered FW08 was catching Alain Prost's slowing Renault, but the laps were running out and it was going to be close.

As well as that, there appeared the possibility – outlandish as it seemed – that Prost might be about to get a little local help. As the cars, now just a few lengths apart, went into lap 78, with three to go, Collins noted that

already an official was unfurling the chequered flag, as if preparing to wave it next time around.

Peter therefore hastened to the rostrum, where he engaged the man in urgent debate, pointing out the race was 80 laps, and we hadn't quite got there yet. "If necessary," he said, "I was going to pin the bloke's arms to his sides, so he couldn't wave the flag..."

Fortunately it was not waved on the next lap, which was good for Rosberg, as on lap 79 he managed to find a way past Prost – but neither did it appear at the right moment, for by now there was complete Gallic confusion, with officials gesticulating in all directions. Keke, who wasn't

going to back off until he saw a chequered flag, finally received it after 81 laps and thus scored his first Grand Prix victory.

In Shanghai there was a similar debacle, the difference being that this time the flag was waved a lap early. Lewis Hamilton saw it but, believing there had been a mistake, did the same as Rosberg and kept his foot in. The flag had been waved after 55 of the 56 laps, and the rule to cover such an error stipulates that the race result shall be taken from the lap before. Thus the Chinese Grand Prix officially ended on lap 54, which was disappointing for Kamui Kobayashi, whose pass of Jules Bianchi on the final lap now counted for nothing.

The cock-up with the flag, and the consequently foreshortened race, meant that Ricciardo, fourth, officially finished three and a half seconds behind Alonso, but in point of fact when the correct flag was waved, after 56 laps, Daniel was but 1.2sec behind.

To separate Fernando, of all people, from a podium finish is the tallest of orders, but Daniel reckoned that, given another lap or two, he might have been able to DRS past the Ferrari – and, who knows, had he been able to catch it a little sooner, he might indeed have made it.

As it was, he had been earlier delayed – behind his team-mate – and had the race gone the full 56 laps, Vettel's initial refusal to obey a team instruction to let Ricciardo through might have cost Red Bull a podium, for during the two laps in which they circulated together they lost nearly three seconds to Alonso. At the flag, as I said, Daniel was just 1.2sec behind Fernando.

Game, set and maths:
Keke Rosberg wins the 1982
Swiss GP, in the wake of
much confusion in the pits



In absolute terms, the foreshortening of the race made this an irrelevance, but Sebastian's behaviour prompted a good deal of comment. At present the world champion is in territory unfamiliar to him, not only without the best car, but also struggling to get on terms with his team-mate. At three of the first four races Ricciardo has outqualified him, and twice Vettel has been ordered to let him through.

Although some disguise it better than others, top Grand Prix drivers are rarely devoid of ego, and of course the very public acknowledgement that you are holding up your team-mate is not easy to bear, but even so Vettel's response in China was singularly churlish.

"Sebastian, let Daniel through, please."

"Which tyre is he on?"

"Primes – but he stopped later than you..."

"Tough luck."

Afterwards Sebastian claimed that, given they were both on the same tyres, he hadn't understood the request, but that when he did, he moved over because, "In the end there was no point in holding him back."

Had he been the 'team player' that Christian Horner inevitably claimed him to be, he wouldn't have held him back at all, and in fact it was irrelevant to suggest he hadn't *understood* the request: all that mattered was that it had been made, in the best interests of Red Bull, and should therefore – however reluctantly – have been obeyed.

Over time Horner has become accustomed to defusing situations, but, "Come on Seb, this is silly...", in Malaysia last year, is as close as ever he has publicly come to criticising Vettel. In Shanghai, while describing Seb as a team player for eventually letting Ricciardo through (if indeed he consciously did), in defence of his initial refusal to do so Christian dug out the old chestnut: "He's a race driver. We employ these guys because they have that fighting spirit. Of course he's going to question it to understand, but as soon as he did, he moved aside..."

In press conferences and paddock conversations Sebastian, as we know, can be both witty and charming, but that – perhaps inevitably for one of his ability and success – is not the whole story, and when things don't go his way those two characteristics tend to be in short supply.

In the car, his natural arrogance can assert itself unattractively. We saw it in the short shrift he initially gave his team in Shanghai, and when Kobayashi – on fresh tyres – dared to overtake him (merely unlapping himself), his outrage came across on the radio like a spoilt little boy: "Tell him to get out of the way!"

In tone it was reminiscent of his contemptuous demand, early in the notorious race at Sepang last year: "Mark is too slow. Get him out of the way..."

At present it seems that Sebastian, in the parlance of today, is not 'in a good place'. From the word go, he has been lukewarm about the new F1, and it must be a shock to the system to find himself not only without the best car, but also – for now, anyway – on the back foot in comparison with his team-mate.

Of course he will come back to winning again – drivers at Vettel's level always do – but I find curious the suggestion (as has also been made of Kimi Räikkönen at Ferrari) that 'as it is, the car doesn't suit his driving style'. When was such a thing ever said of Senna or Schumacher or Alonso? A great driver surely adapts to what he is given, doesn't he? These are very different times, I grant you, but spare a thought for

Stirling Moss, who won at Monaco in a Maserati 250F and a Lotus 18.

At the beginning of last year, talking through the season to come with Anthony Davidson, I began by asking him who would win the World Championship. He didn't hesitate: "Sebastian Vettel."

Why such an instant response? "Because the rules are virtually unchanged. If we were sitting here now, and it was the beginning of 2014, I'd be saying the World Championship was wide open, because the cars will be completely different, with the new turbo engine and so on – and no blown floor. In my opinion, Alonso's the best driver out there, but given that in 2013 the rules stay virtually the same – and the fact that you can still blow the floor, which is such a tricky thing for the engineers to do – I think there's no way Vettel and Red Bull will lose.

"The blown floor gives you more downforce – and it's not 'dirty' downforce, where you gain loads of drag and lose speed on the straight: in effect, it's *free* downforce and there's no downside to it at all. Red Bull has mastered it better than any other team, and Vettel's the master of driving it.

"If you look at the difference between the start of 2012, when the regulations had changed, and they were pretty much without it – and Webber more than held his own against Vettel – and later in the year, when they found the secret again, it tells its own tale, doesn't it?"


"The technique required for driving with a blown floor is *completely* counter-intuitive, that's the point. If you think of it in terms of a motorbike, when you brake and the rear of the bike gets a bit light, the last thing you want to do at that point is downshift, because it's going to lock the rear up – and when that happens in a car, obviously you risk spinning.

"Driving with a blown floor, though, when you downshift, it revs the engine more: with that comes more thrust – and the more thrust that goes through the diffuser, the more grip you have. To a driver, it's the very opposite of what you would instinctively do. Just at the moment you're thinking, 'I can feel the rear moving – I haven't got much grip here' you ask for another downshift, to *help* with the grip.

"The reason why drivers get to the top in the modern era is that they're very good at driving single-seaters with a lot of downforce and peaky power. As I say, if we were a year on, and looking to 2014, I'd be much less confident about predicting the champion, because the cars will be *so* different, with less downforce, much more torque – and, say it again, no blown floor. Why Sebastian seems to be better with it than Mark, I don't really know..."

Webber himself didn't know, either, but he freely acknowledged it to be the case. "It was very powerful for Seb – he is anyway a master of slow-speed corners, and he did a *very* good job with the blown floor – just made it work better than I did, end of story."

According to Helmut Marko, the pantomime villain of the F1 paddock, Vettel has struggled this season, in comparison with Ricciardo, because of problems with both engine-mapping and the latest Pirellis. And that, in light of something else Webber had said, was a surprise: "Two of Seb's other strengths are that he's very, *very*, good with both engine-mapping and tyres..."

Before the season started Mark was confident that, in a new era of F1, Ricciardo would show very well against Vettel, and at the Silverstone WEC race I reminded him of what he had said. "No blown floor, mate! Red Bull's was better than anyone else's, and, like I told 

"IN THE CAR HIS NATURAL ARROGANCE CAN ASSERT ITSELF UNATTRACTIVELY"

REFLECTIONS
with
Nigel Roebuck

you, Seb made brilliant use of it, but now it's gone. There's much less downforce than there was, and Daniel seems to be very comfortable with that..."

Since the embarrassments of the pre-season tests, most of which were Renault-related, to no one's surprise Red Bull's subsequent progress has been considerable, to the point that although – as the team misses no opportunity to remind us – the car remains significantly down on power, over the lap it appears at least a match for all save Mercedes. If history is any guide, we may reasonably expect that gap to close, at which time the mood of its number one driver will presumably lighten. It would surprise me, though, if Vettel's other problem – the uncomplicated pace of Ricciardo – were to melt away.



THUS FAR 2014 IS NOT TURNING OUT TO BE MUCH OF A year for the good guys. In January Martin Whitmarsh was deposed at McLaren following Ron Dennis's in-house coup, and more recently we have had Stefano Domenicali's departure from Ferrari.

On a personal level, Domenicali – like Whitmarsh – will be much missed in the paddock. As team principals of Ferrari and McLaren, the pair did much to repair the relationship between the teams following the state of toxic warfare that existed, particularly through the 'Spygate' affair, during the Todt-Dennis era. Both Stefano and Martin are civilised individuals, but even as I write those words I can hear the old cliché – 'too nice a guy' – being trotted out. Maybe so.

Given the mood of Luca di Montezemolo in Bahrain, Domenicali's departure was not a complete surprise. One way and another, Luca made himself look rather foolish that weekend, not least – in a fine display of solidarity with his team – by theatrically flouncing out of the circuit a dozen laps from the end. "There is nothing more to see..." he said.

Actually, there was.

Back in 2008, when it had seemed momentarily – prior to Lewis Hamilton's last-ditch pass of Timo Glock – that Massa had won the title for Ferrari, Felipe's dignified demeanour at Interlagos moved everyone, but back in Italy, meantime, di Montezemolo was busy destroying his TV set. Perhaps, who knows, Luca had sight of one when he got to the airport in Bahrain, in which case he will have been similarly tempted.

For one thing, for all his naysaying, this had been a riveting Grand Prix; for another, his sainted Ferraris had been embarrassingly off the pace. And for another yet, there was the unendurable sight of Aldo Costa – Ferrari's former technical director – accepting the team trophy on behalf of Mercedes.

When di Montezemolo sacked Costa in May 2011, many thought his decision unjust. "Aldo," murmured a Ferrari insider, "is just another of Luca's scapegoats..." If his talents were no longer required in Maranello, however, in Brackley it was a different matter. Having for years worked with Costa at Ferrari, Ross Brawn lost no time in recruiting him as engineering director for Mercedes: "One quick chat was all it took..."

It might have been happenstance, it might not, but whatever the motive behind sending Costa to the podium in Bahrain, it was inspired, for undoubtedly it will have added salt to di Montezemolo's wound,

and after listening all weekend to his endless complaints about 'the new Formula 1', Mercedes personnel had endured about enough.

Niki Lauda, as ever, was straight to the point: "All this nonsense about sound and fuel... it was one of the best races I've seen in my life, and anyone who complains this is boring is an idiot." Whomever can he have been talking about? Niki offered a clue: "I hope that tomorrow Bernie and Luca take the time to watch it on TV..."

Unlikely, I'd have thought. Through the days building up to the race, Ecclestone and di Montezemolo had missed no opportunity to denigrate 2014-style F1, just as a few days previously had Red Bull *patron* Dietrich Mateschitz. The suggestion was that this three-cornered talking down of the sport's credibility was a sledgehammer attempt to reduce its value preparatory to buying it back from the dread CVC. Asked if such were the case, Bernie was less than convincing: "Not really, no..."

Any other motivation, though, would be hard to fathom. Why else, at the start of an entirely new era of F1, would three of its most powerful figures so determinedly attack it?

It could of course be argued that, in the cases of di Montezemolo and Mateschitz, simple sour grapes were playing a role. For years the patrician Luca, while refusing to countenance criticism of Ferrari by a mere employee (notably one F Alonso, whom he publicly excoriated last autumn), has banged on about his disappointment with the team's performances, endlessly reminding one and all of the privilege of working for the greater glory of Maranello. Having worked his nuts off for several years, and conspicuously flattered the cars he had been given to drive, as proud a man as Alonso did not need to be treated like a schoolboy in disgrace.

If di Montezemolo revels in the grandiloquent gesture, Mateschitz is quite a different proposition, preferring to stay in the background, and being wheeled out for public comment only when required by circumstance.

Twelve months ago he got very agitated by the tyre situation, and on that occasion I agreed with him. With the ultra-delicate Pirellis on offer at the time, the early races of 2013 were farcical, with the drivers cruising for long periods, mindful only of radio instructions to 'make the tyres last'.

"Everyone knows what is happening here," Mateschitz said. "This has nothing to do with classic racing any more – this is a competition in tyre management. Under the given circumstances, we can neither get the best out of our cars or our drivers. The target was to get more excitement into the races, with more tyre changes – but not this much. This is now a different situation from the original intention."

If it were undeniably the case that Red Bull was unable to 'get the best' from its cars, this was because the RB9 had more downforce than anything else, so therefore took more out of the flimsy Pirellis than certain rivals. In effect the car was suffering because it was *too* good, and if many rejoiced at this temporary clipping of Red Bull's wings, still it was difficult to dispute Mateschitz's point that the tyre situation had become ridiculous.

This time around his sentiments were similar, but his beef (after Daniel Ricciardo's disqualification at Melbourne) now lay with fuel, rather than tyre, conservation. "Formula 1," he said, "should again be what it has always been: the ultimate discipline. It is not there to set new records in fuel consumption or so you can talk at a whisper during a race..."

"LUCA DI
MONTEZEMOLO
MADE HIMSELF
LOOK RATHER
FOOLISH"



Funny thing: Dietrich seems rarely to get exercised by anything when his Red Bulls are winning, which they have done with consummate regularity these last four or five years. As he complained about the Ricciardo situation, he warned that his commitment to F1 was not unlimited.

As one who puts four of the 22 cars on the grid, Mateschitz has become a phenomenally powerful figure in F1, and one unusually close to Ecclestone. When he said his piece about the tyres last May, it was a certainty that something would be done about it, and from Montréal on Pirelli brought more durable rubber to the races. If that not surprisingly infuriated such as Lotus, Ferrari and Force India, whose advantage had been instantly compromised, it delighted Red Bull, for the RB9 was now able to spread its wings. Sebastian Vettel won the Canadian Grand Prix, and in the dozen races that followed was defeated only twice.

As he went through his post-race doughnuts in Abu Dhabi, though, perhaps Seb's mind was already on the F1 to come: "Thank you, boys," he said on the radio. "We should remember these days – it won't always be like this..."

In fact, it has been exactly like that – but for Mercedes, rather than Red Bull. And this time around the complaints of Mateschitz (and di Montezemolo, to say nothing of Ecclestone) are rather less easy to resolve than merely adjusting tyre compounds.

The fact is that some years ago all the teams agreed to a new formula that, being in tune with a changing world, just might persuade existing engine manufacturers to stay involved in F1, as well as potentially attracting new ones.



Ever dignified, Domenicali has left Ferrari's F1 team. Above, his former boss courts TV crews

"We all participated in constructing these regulations," Ron Dennis said, "and we need to get on and make the best of them. We should be proud of our technology – these are regulations that in the end are going to reduce fuel consumption across the world. The fact that the cars aren't as noisy doesn't matter: we can fix that easily, so stop the whingeing."

Quite so. On his visit to Bahrain FIA president Jean Todt agreed – with a touch of exasperation – to have the wretched noise question looked into, but that was as far as he was prepared

to go with the wish list of Ecclestone, di Montezemolo & co. This was not a Banana Republic, he said, and it was absurd to be demanding urgent rule changes.

And so it was. The cars have been designed around the rules as stipulated, and it's fatuous to speak in terms of 'changing the fuel flow' or increasing the size of the tank – let alone, God help us, shortening the races. As Mercedes could quite reasonably argue, why was there any need for change? Hardly the team's fault, after all, if its rivals couldn't make the new rules work.

During the build-up to Bahrain, di Montezemolo came forth with an emotional explanation of his distaste for the new F1. "The risk of the new rules," he said, "is drivers having to think about saving tyres and fuel – this is not Formula 1, which should be extreme, from the first to the last lap. The engine should be music, not noise. And the rules should be not so complicated that the people don't understand what's going on, with the fuel meter, and so on. For me F1 is more important than that – it's our life, and we have to think of the future together, and try to share common goals." □

REFLECTIONS with Nigel Roebuck

What Luca appeared to be saying was that F1 should be an entity unto itself, with no need of any kind of nod to a changing world. Had the change in regulations not come about, Mercedes and Renault would have quit, and Honda would not have returned – and that, theoretically, would have left Ferrari to supply every team with engines, as in the dying days of A1GP.

The reason for di Montezemolo's dislike of today's Formula 1 is somewhat at variance from the one he offered two decades ago, when Ferrari was again off the pace, this time because it couldn't get to grips with active suspension.

This was 1993, and Luca's remarks made Patrick Head very angry: "If anyone is letting down the front end of F1," he said, "it's Ferrari, and – surprise, surprise – di Montezemolo is suggesting that the rules need changing! Why? Because he says that 95 per cent of the lessons learned from F1 have no application for road cars, and that's what matters most. Nothing to do with the fact that, whatever they do, their car leaps in the air every time it sees a ripple in the road..."

Four years ago Bahrain opened the season, and the race was about as stimulating as an Ed Balls speech. In the early hours of Monday morning, as we hung about in the airport, many were already suggesting that the new format of Grand Prix racing was a disaster, that the ban on refuelling had been a great mistake.

The late Peter Warr, at the race as a guest of Tony Fernandes (whose team was then known as 'Lotus'), could only smile as he looked on. "Some of these people haven't been around very long, have they? If they had, they'd know that it will come right, because it always does..."

Indeed so, but I'll admit that I have been amazed by how swiftly the latest, ultra-complex, version of F1 has come right. The pre-season tests at Jerez and Bahrain had been so chaotic, particularly for the 'Renault teams', as to prompt some – not altogether facetiously – to speculate that the Australian Grand Prix might not have need of a chequered flag.

In point of fact, there were 15 finishers, and yet again one could only marvel at the abilities of the F1 fraternity.

The Bahrain Grand Prix was a wonderful motor race, and only the most blinkered – or biased – could suggest otherwise. It's a fact that Mercedes had a quantifiable advantage, as evidenced most notably by the rate at which Hamilton and Rosberg pulled away from the field – 23 seconds in 11 laps – after the safety car period towards the end. Let us forget, though, it was just so with Vettel's Red Bull in similar circumstances in Singapore last autumn.

Simply, for the time being at least, the pendulum has swung. In Shanghai, not a great race but still an interesting one, there was no battle between the Mercedes drivers, for Lewis immediately disappeared into a sphere of his own, but Nico, in spite of a poor start and complete telemetry failure, was still comfortably quicker than the rest. Of course other teams, notably Red Bull, will close the gap, but for now it is reassuring to remember the words of Paddy Lowe in Bahrain: "We said from the start that we wanted Lewis and Nico to race from lights to flag..."



Marco Mattiacci had no F1 experience prior to joining Ferrari as team principal

AS NEWS BROKE OF STEFANO Domenicali's resignation, I recalled a conversation with Ross Brawn, in which he talked about living with pressure.

"When Honda decided to pull out of Formula 1 at the end of 2008," Ross said, "and we then decided to try to carry on ourselves, everyone assumed that the pressure on me must have been higher – running a team bearing my own name – than anything I'd experienced before."

"In fact, it wasn't at all, because the pressure was internal. Of course we had a great desire to do well, but there was no *external* pressure on us, in the sense of someone looking over us all the time, and giving us a bollocking if we didn't do well. What I never felt was the tension that's there at Ferrari, and never relents – or, rather, relents the night you win the World Championship and that lasts for just a few weeks."

"At Ferrari," Brawn went on, "it's a pressure born of the media, the *tifosi*, the history... you're under intense scrutiny, and if you make one wrong move you're castigated in the press. OK, you can say, 'I don't care what the press thinks' – but it's there, and people are reading it, and your

family sees it, and it creates a pressure, believe me. Of course the flip side is that when you do well at Ferrari there's nothing like it – so you get both extremes..."

I mentioned to Brawn the name of a celebrated Italian journalist whom Enzo Ferrari somewhat surprisingly hired as team manager in 1967, adding that John Surtees had told me that in fact this fellow had been on the Ferrari payroll long before that: "The Old Man paid him to write stuff critical of Ferrari, just to keep everyone on their toes..."

Ross smiled. "Well, I must say there were times when I wondered if maybe that policy still applied! Sometimes it felt that... things were said to the press just to create pressure and tension: if the team wasn't doing well, we certainly knew about it in the papers. Two or three years into my career at Ferrari Luca and I had a big falling-out over something he'd said – and after that he never took that approach with me again."

Brawn did, of course, have the advantage of being (together with Todt and Schumacher) one corner of an immensely powerful triumvirate within Ferrari, but Domenicali never had any such clout: as a loyal Italian ‘company man’, promoted from within, there was always the presence of di Montezemolo at his shoulder.

Maybe it was the unrelenting pressure of which Brawn spoke that finally told on Domenicali. In light of di Montezemolo’s mood as he left Bahrain, and subsequent remarks that he would do ‘whatever is necessary’ to change the fortunes of the team, Stefano perhaps saw no alternative but to fall on his sword. Others might be feeling a little nervous just now.

Domenicali has been replaced as director of the *Gestione Sportiva* by Marco Mattiacci, and clearly events had proceeded with some pace: in the Shanghai paddock Mattiacci declared that only a week earlier, on the Friday after Bahrain, had di Montezemolo contacted him about a change of role. Three days later came Domenicali’s announcement.

Given that Mattiacci has no previous experience of working in motor racing, some have speculated that his appointment is merely a holding operation, but this seems unlikely, given that prior to accepting di Montezemolo’s call to arms, Marco was the president and CEO of Ferrari North America: this was not some little job from which Luca plucked him.

“I’ve decided,” the Ferrari president said, “to go for a young manager I strongly believe in, and a person from the Ferrari family, thus avoiding me going around the world looking for some mercenary...”

My dictionary defines mercenary as ‘a soldier hired into foreign service, actuated by the hope of reward’, so that will give Messrs Allison and Fry a nice warm feeling and, given that over time such as Postlethwaite, Barnard, Byrne, Brawn and Todt did rather well by the *Scuderia*, Luca’s gratuitously patronising remark comes rather ill.

Perhaps, therefore, there are times – even in Maranello – when only ‘some mercenary’ will do, but di Montezemolo’s hope will be that Mattiacci will grow into the job, and do it one day as Todt did. Luca, I note, has announced that he is going to spend more time on F1 in future. This might even mean staying to the end of a race.

When the rumours gathered strength last summer that Brawn was not relishing life with certain of his new colleagues at Mercedes, I nursed a hope that perhaps he might be tempted back to Ferrari, but at the back of my mind remained snippets of a conversation with him back in 2009.

Ross left the team at the same time as Schumacher, at the end of ’06, and although both eventually returned to F1, it was by no means written in the stars. Michael, still on the Ferrari payroll in an ambassadorial capacity, occasionally came to the races, but out of overalls seemed like a lost soul.

Brawn, meantime, ‘went fishing’, giving himself a year off to go travelling with his wife. He admitted that, as time went by, he actually came to enjoy his sabbatical more rather than less, but eventually concluded that, yes, he did wish to return to F1, and before anything else that meant talking with Ferrari.

“In a way,” Ross said, “one of the purposes of the sabbatical was to put a full stop at the end of my Ferrari career – but I’d made a pact with Jean Todt that if, at any point, I was going to get back in the saddle, I’d come and talk to him first. I had a feeling, though, that I wouldn’t go

back, that it had been a fantastic period in my life, but going back might be like revisiting an old girlfriend – might be a disappointment!

“At the same time I’d have felt terribly awkward moving from Ferrari to another team, so I went to see Jean and met with Luca a few times. Jean was keen for me to come back, and it was all very friendly, but somehow it didn’t really gel.

“One of the problems was that if I’d gone back I would have wanted to do it as team principal. Stefano [Domenicali] had been a great servant to Ferrari, and quite rightly they wanted to give him an opportunity. I didn’t want to stand in Stefano’s way, but what was being discussed was how we might share the role and I didn’t see that as being a workable solution.

“Therefore we found ourselves in a slightly awkward position, in that Ferrari wanted me back, but they weren’t quite sure where to put me. I think we all reached a point where we thought, ‘Well, we’ve had the discussion, and it hasn’t crystallised, so it’s better just to part as friends, and do our own thing’.”

Whereas throughout his time of working for Ferrari John Barnard had refused to countenance living in Italy, Brawn, like Harvey Postlethwaite before him, positively embraced it. Family considerations, though, played a strong part in his original decision to leave.

“In 2004 I signed an extension to my contract for two years, and I told Jean and Luca that this would probably be the last two years. My wife was able to live with me in Italy, because our daughters had busy lives with their careers, but now they were both married, and if grandchildren came along it was natural that she would want to spend more time in the UK, so, in several ways, living in Italy had run its ideal course.”

Once it became clear that a return to Ferrari was not on the cards, Honda lost no time in making an approach and the rest is recent racing history. In the wake of the economic

meltdown, Honda withdrew from F1, but Ross decided to try to keep the team alive. He not only succeeded, but won the World Championship with Jenson Button in 2009.

Thinking back to that time, by the by, one is acutely reminded of how the structure of F1 has changed – and not for the good. Very fortunately for Brawn, his time of crisis coincided with the recent formation of the Formula One Teams Association, and never – before or since – were peace and brotherhood more apparent in the paddock.

“There seems to be a much stronger camaraderie among the teams than there used to be,” Ross said at the time. “It’s a spirit of cooperation almost built out of adversity. Something that evolved from difficulties with the FIA is that the teams have become more united than I can ever remember.

“FOTA was formed in the first place to try to improve F1, not to get into confrontations all the time and, as a body, it was very supportive to us, and crucial to our survival. And so far, despite the efforts of some, it hasn’t fallen apart...”

Ah, but good things always come to an end, and once Bernie Ecclestone had bought off Red Bull and Ferrari, their swift resignation from FOTA (together with subordinates Toro Rosso and Sauber) at a stroke neutered any clout it may have had. Now, in 2014, we are into the glorious age of the F1 Strategy Group, and self-interest flourishes like never before. Cost cap, anyone? ☒

“THINKING BACK, THE STRUCTURE OF F1 HAS CHANGED – AND NOT FOR THE GOOD”

F1 FRONTLINE

with

>> HAPPY DAYS FOR MERC... >> ...AND WHY IT ALL WORKS >> MORE FERRARI POLITICS



Mark Hughes

HAMILTON'S HAT TRICK

Dominant in Malaysia and forced to defend mightily in Bahrain, Lewis Hamilton reverted to cruise control in China to record a third consecutive victory for the first time in his Formula 1 career. It also marked four wins on the trot for Mercedes-Benz. An affectionate pat was the very least his W05 deserved.



S

OMETHING WAS ALWAYS GOING to happen once Luca di Montezemelo arrived in Bahrain full of show, pomp and pronouncements – and was then left embarrassed by how the thrilling race made a joke out of his criticisms of the new formula and, more particularly, how poorly the Ferraris performed. There was too much loss of face, too much tension for there not to be some major fall-out. Just over a week later Montezemelo accepted team principal Stefano

Domenicali's resignation. This was old-school Ferrari, a throwback to the days before Ross Brawn, Jean Todt and Michael Schumacher took the Latin heat out of the team's coalface and rebuilt it in the image of a contemporary cutting-edge F1 entity.

Domenicali (right), who took over the reins in 2007, is a decent and honourable man who has always conducted himself with grace, humility and good humour. It was these qualities, together with Martin Whitmarsh taking over at McLaren from Ron Dennis, that thawed the awful relationship between those two teams.

Unlike some previous Ferrari bosses, the world of private jets and first-class travel was not for him. He took an interest in people and tried his best always. Maybe his best wasn't good enough – under his command the team won the 2007 championship and was a final round contender in 2008, 2010 and 2012 – but it was he who decided so. The initial assumption of many was that he had been left with no alternative by chairman Montezemelo, but according to people inside the team this was not so: he sacrificed himself as an alternative to having to fire someone else. That's just the way things roll at Ferrari now, like a throwback to the 1950s and '60s. It had to be someone's head so he chose to make it his own, to protect those below him.

Perhaps it was just in Stefano's nature that he did not transcend the status of employee even when in the role of team principal. Perhaps he wasn't allowed to. As you may have read in last month's magazine, when Ross Brawn had joined Jean Todt and Michael Schumacher at Ferrari, they made a pact with each other that the senior management (ie Montezemelo) would not break their circle, that they would ensure they each had a clear space to run things the way they deemed necessary. It was clearly a frustration for the boss, even as the team enjoyed the longest run of success of any in history. So when Brawn, after taking his sabbatical in 2007, entered discussions with Montezemelo about coming back from '08, he was spurned and Todt had already been dismissed. Domenicali was Montezemelo's man, a good company employee who would do as requested. So it was never in Domenicali's remit to act as a full team principal. Which has led to where it was inevitably going to; despite the limitations of the role placed upon him, Domenicali's record was good. But under those terms it was never going to match the heights attained during the Brawn-Todt-Schumacher era.


Whether Domenicali had the forceful, ego-driven



STRAIGHT talk

Honour still exists
in the F1 paddock
– but is not
always rewarded

competitive personality required of a true F1 team principal is debatable; he probably was too nice a guy for that. But he was never given that opportunity, always had the straitjacket of employee around him. At one of Luca's pre-season press conferences his answer to a question was interrupted by his mobile phone going off. He answered, said something about 'Domenicali' attending to the matter and with a dismissive wave handed the phone over to Stefano who jumped like an errand boy. It wasn't dignified, and to have imagined Montezemelo treating Todt or Brawn in such a manner would have been unthinkable.

A few years ago Montezemelo offered Adrian Newey several million pounds per year to come and lead Ferrari's aerodynamic department. Adrian turned him down and renewed his Red Bull deal. This coincided with the Ferrari boss making pronouncements about how F1 was too much about aerodynamics and that it should be more representative of road car technology, such as engines. Well, that's exactly what we have now. The Ferrari F14T's aero looks pretty damn good, its power unit less so. Well, with all those TV cameras pointed at Luca as Fernando Alonso and Kimi Räikkönen were passed on the straights as if missing a plug lead, that had to be someone's fault. Apparently it was Domenicali's. 

The backstory behind the three-pointed star's dominance in Formula 1 is a fascinating one – and will make uncomfortable reading for its rivals at Red Bull, Ferrari and McLaren

Why Mercedes is

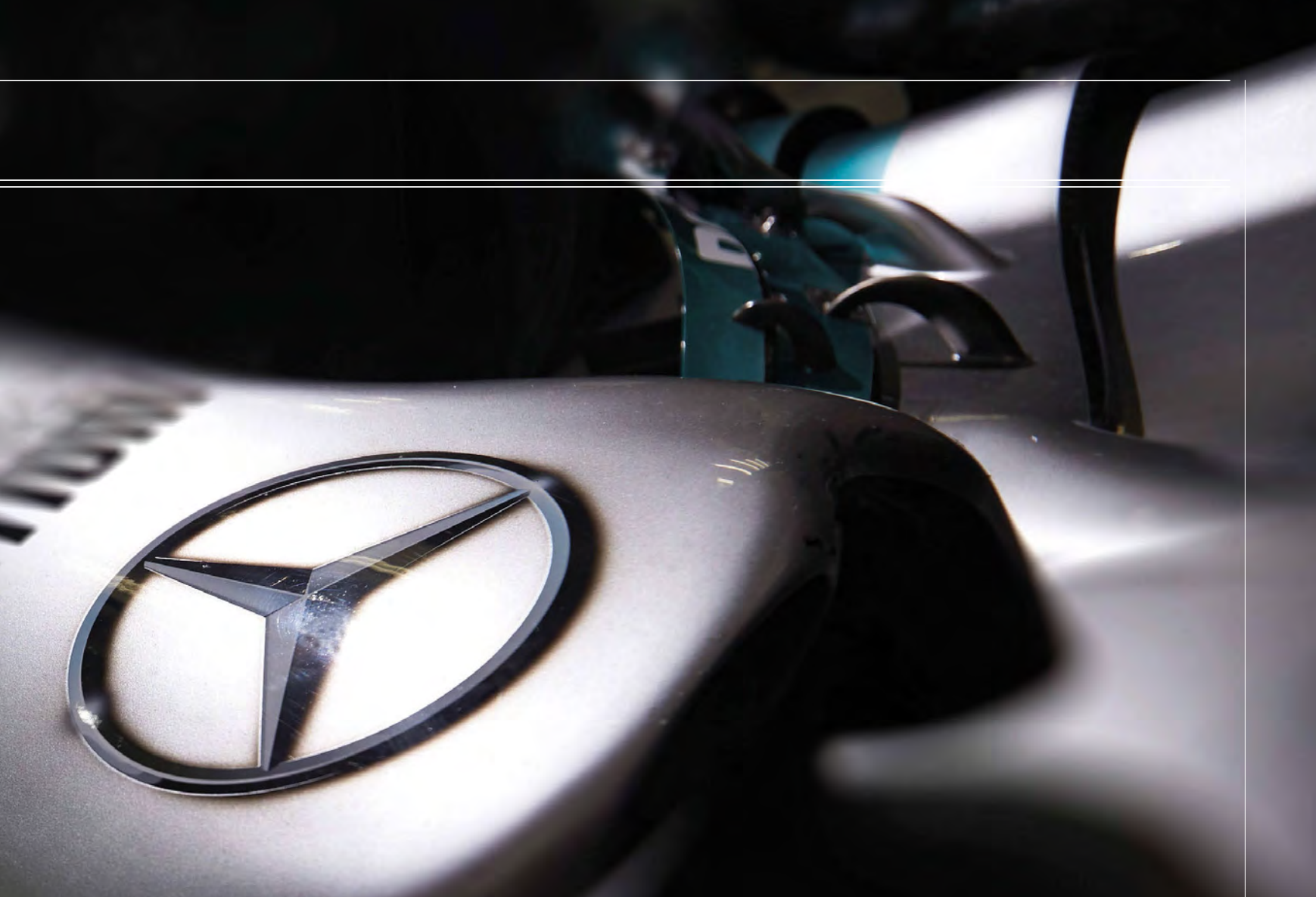
FOR MERCEDES THERE WAS A NICE historical thread to its early dominance of F1 this year. It conformed to a pattern of years ending in '4' (1914, 1934, 1954), seeing its technical superiority in Grands Prix wipe the floor with the best the world could throw at it. But for Merc's chief rivals, such numerical niceties meant nothing. All the Merc dominance symbolised to them was a painful truth: they had failed.

The smaller teams had no need be too hard on themselves, given the vast differences in their resources to those of the top teams, resources that allow a major team to investigate multiple early options in the conception of new cars around a totally new formula and then simply select the one that looks best. But Ferrari, McLaren, Red Bull? What were their excuses? The aftermath of the battle scene elicited

some angry flailing from Red Bull and Ferrari about how it could have come to this, which essentially could be condensed to a single view: the formula is 'wrong'. But lashing out at the new formula was only covering competitive pain and embarrassment and their real question – the one that has spurred competition onward through time – was, "How the hell have they done that?"

In terms of the hardware – the Mercedes W05 – it was simple enough: as you could read in last month's magazine, it's a car that's been conceived around a piece of highly original thinking in the layout of the turbo's compressor, something that has brought compounding advantages to the car in this compounding formula. But how did the team get there? Why them and not anyone else?

It's a five-year story of opportunity, engineering brilliance, sheer grit and tenacity. The most significant parts of the story unfolded in Brixworth, the rural Northamptonshire site of Mercedes High Performance Powertrains where Andy Cowell rules with an affable but steely commitment to the cause. Forty-five years old, he's ex-Cosworth



the works

and joined what was then Ilmor (now Mercedes HPP) in 2004, was chief engineer by 2006, a director by 2008 and has been MD since 2012. He's one of those rare people who can communicate the complexities of their subject in terms readily understandable to an interested layman – the mark of someone who truly knows their stuff. There's no stiff formality or projecting of a status, just down-to-earth enthusiasm and bubbling energy; no-nonsense, approachable and polite – but deeply competitive and totally immersed in his world. His flair as a communicator and the obvious sincerity and soundness of his beliefs make it easy to imagine how he has inspired a collection of hundreds of talented engineers to operate as a single, on-target unit, with a shared vision and an unprecedented degree of openness between chassis and engine people that has minimised 'losses in the system'. He runs any project just as he would one of mechanical design, keeping a wary eye out for losses, routes that the energy might travel unproductively if not guided in the right way. It's particularly apt within a story of the hybrid energy formula.

But Cowell and his team were doing all these things already, even before the new formula. Payback has been amplified by a series of circumstances that played perfectly to these strengths.



UNDERSTAND FIRST OF ALL THAT THE IDEA OF SEPARATING the turbo's compressor from the turbine – the feature at the very heart of the W05's current supremacy – was suggested by the Brackley chassis group back in 2011. When Brixworth confirmed that it was indeed feasible, the design group followed up with a further request about the Spitfire-like straight exhaust arrangement – made possible by the relocation of the compressor – that costs some power but evidently brings a net gain when the aero-enhancing packaging possibilities are fed into the equation. Brixworth, in other words, was the facilitator of a total car design that has brought real advantages – as well as honing the power unit that has significantly more horsepower than those of Renault and Ferrari. The advantages of being an integrated chassis

F1 FRONTLINE

with
Mark Hughes

and engine manufacturer have been massively enhanced by the transition from the frozen-spec V8 era into the new hybrid V6 formula. But the Brackley-Brixworth axis has worked that advantage better than any other.

Theoretically, Ferrari is the most integrated of all, with engine, chassis and aero departments all on one site. There is a half-hour drive between the Mercedes chassis/aero group in Brackley and the engine group in Brixworth – and those two parties have been together under one umbrella only since 2010. There's a cross-channel flight – and a whole culture gap – between Red Bull in Milton Keynes and Renault Sport in Viry.

So structurally Mercedes is not as integrated as Ferrari. But get Cowell onto the subject of how the relationship between Brixworth and Brackley has developed and you begin to see the strength of integration is not just about where the buildings are. "It goes back all the way to December 2008," he says, "when there was the initial discussion about Mercedes powering what became Brawn in 2009. That's when the relationship started – a small group of people here were involved with Ross and the engineering team through 2009. But 95 per cent of the organisation was working with McLaren and had done for the previous 15 years.

"Then for 2010-11-12 [as the former Brawn team at Brackley became the Mercedes works team, and McLaren became merely a customer] we were building the relationship at a deeper and broader level. We had to understand what Brackley had the capacity to do as we built that relationship, because there was a reduction in numbers [compared with McLaren and as the Resource Restriction Agreement took effect].

"We increased the number of meetings and broadened the relationships. A customer relationship is 'here's the product, here's the phase document, here are the connection points, that's it. If you'd like us to do some development work, we'll quote you on it, you'd need to cover all our costs'. A works relationship is our materials science group providing support and building relationships with the real scientists that are now present at Brackley. It's the concept, the very first line that goes down on the CAD screen here marrying up with the very first line that goes down on the CAD screen in Brackley for the chassis. Going all the way up that R&D food chain, building the relationships there and recognising the sensitivities for what would make a fast race car. It's not one part that makes a race car fast, it's the amalgamation of all those systems; it's a balanced overview."

That's the process – and it was helped enormously by the similarly enlightened and straightforward attitudes of Ross Brawn, Bob Bell, Geoff Willis and Aldo Costa, then the respective team boss, technical director, technology director and engineering director at Brackley. But what came out of that process were the crucial questions that led ultimately to the speed of the W05. "Ideas came from all over the

place," says Cowell. "From guys that were building the development engines, guys that were building the cars, guys designing the aero, guys designing plenums... Ideas flooding in."

What should not be under-estimated in this process is how the performance of the Brackley team itself had been boosted as the changes made under Ross Brawn's leadership – the recruitment of Bell, Costa and Willis, the re-arranging of the aero department, the installation of a 60 per cent wind tunnel – came to have an effect. Paddy Lowe, who joined the Brackley team as engineering director last

June after 15 years at McLaren, was perfectly placed to see the level of the team. "It's clear the engine is great; it has more power than the other two engines and in this formula that compounds. That immediately puts us in a different place from teams running other engines. But then there's the team performance and, if you look at where we were last year, you'll see there's been huge progress made over the last couple of years on tyres and aero and other systems – just a better understanding. As a chassis team we've positioned ourselves as being among the top two or three, as we saw last year."

Paddy was also ideally placed to see close-up the difference between customer and works status. "As it became a joint project between Brackley and Brixworth, it was quite clear that the customers would get what they got – not to say it wouldn't work for them, but they were not involved in shaping the architecture of the engine. They would simply get to look at what came out and then decide how to exploit it. Once McLaren was no longer the works team, the relationship changed. If I go back to 2006-08, that period of success for McLaren as the works Merc team, that was technically a very close working

relationship. Through 2009 that was in effect stopped and moved to here. I see there is an even stronger collaboration here than I saw in the McLaren works days. The W05 was inextricably related to what was being done at Brixworth. That was immediately obvious. At the other extreme, McLaren wasn't a works team and, with Honda coming [as McLaren's new engine partner from 2015], Mercedes wouldn't want to be giving them info."

McLaren, just like Force India and Williams, first got to see full details of the new engine and its unique compressor and exhaust layouts when they signed their contracts in the spring of last year. This was well past the time of first principle decisions on long-lead items such as monocoque and gearbox dimensions. They therefore had no hope of being able to incorporate those features as fully into their designs as the team that requested them in the first place – way back in 2011.

But there has been a benefit even beyond that of just works team status. Even when McLaren was Mercedes' official F1 partner, even as Mercedes owned 40 per cent of the team, it was still very much McLaren. There was a very clear distinction between the two entities



Brixworth chief
Andy Cowell
talks power to
Nico Rosberg

**"WE'RE ALL WORKING
FOR ONE COMPANY NOW,
TO MAKE A
FAST 'SILVER
ARROWS' CAR"**



Well integrated organisation leads to supremely well integrated - and currently dominant - power unit

MERCEDES-BENZ

and inevitably this could be felt during any discussions and meetings – even for projects that were for the joint benefit of both. “We’re all working for the same company now,” says Cowell, “and all have the objective of making a fast ‘silver arrows’ car. Ultimately we all work for [Mercedes chairman] Dieter Zetsche in Stuttgart. That has an effect. If you’re all in the same family then every head of a system can say what is good for that system, but if they can explain in complete detail why it’s good for that system without fear of giving it to an organisation that... without fear of IP leak, it’s so much easier. When you’re sat around a table trying to work out where the balances are and where you should do something a little bit different with the turbocharger, if you can have a completely open conversation about what would be good to do and why – why as in depth – It just makes all those decisions easy and the downstream effort less stressful. You don’t have that feeling of, ‘They’ve said what they’d like but they don’t really say why, so I’m busting my nuts, but for what real purpose? So I’m just going to have to trust him or he’s at a higher pay scale therefore I’ll just have to accept it’. All that disappears within one organisation. There is no guardedness about what anyone’s doing and that just relaxes the situation. With McLaren those discussions were ‘majority McLaren, minority Mercedes’.”


As head of McLaren Ron Dennis always raged against the idea of his team being swallowed up by a manufacturer. Brackley – a team rescued on limited resources from the ashes of the Honda pull-out at the end of 2008 – had rather fewer options. The resultant single vision has been to the benefit of the performance of both Brackley and Brixworth and has made for a total greater than the sum of the parts. A more extreme

version of McLaren’s independence from its official engine partner is Red Bull’s relationship with Renault Sport, which at times seems positively adversarial. It’s a partnership in the business sense of engines supplied cost-free, but in the technical collaboration sense hardly at all. Their supplier/client relationship worked fine in the frozen-spec era but has been found wanting as F1 has headed into a technical period requiring a complete re-evaluation from first principles.

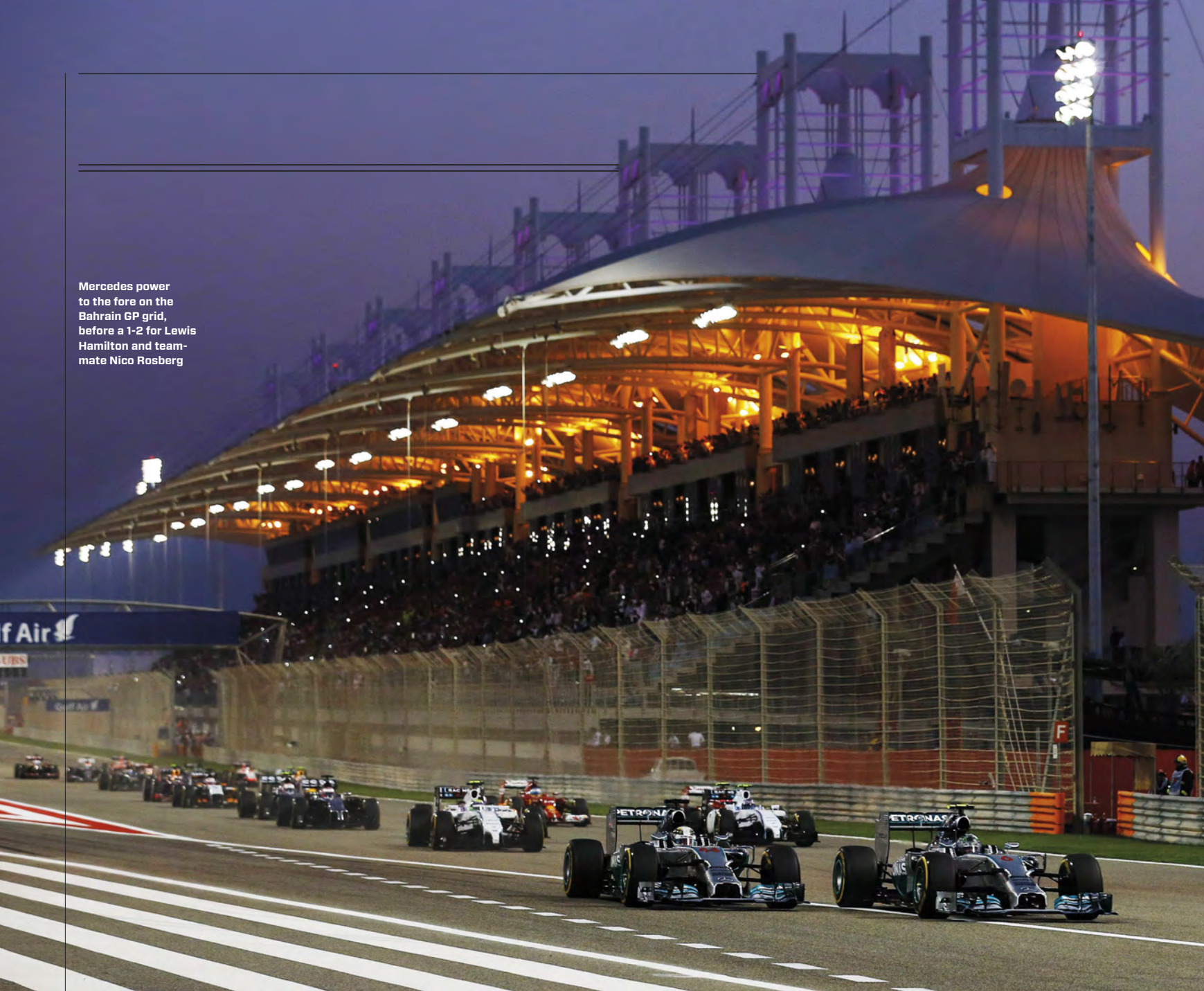
For the customer teams – McLaren now among them – this co-operative process simply couldn’t happen. But at Ferrari there was a similar process and it’s interesting that the F14T and W05 share some key design features, notably the dolphin nose, water-air intercooler and separated turbine and compressor (though Ferrari stopped short of siting the compressor at the front of the engine, wary of the long connecting shaft running the length of the engine turning at 150,000rpm, and its associated bearings). But it’s also clear now that the Ferrari engine department’s expertise in hybrid technology was less than that of Mercedes HPP.

So essentially into this new formula we had only two genuine works teams – Mercedes and Ferrari – when the advantages of being so were immense. And of those two works teams one – Mercedes – had a much more complete understanding of hybrid technology within the company. Why was that so?



MERCEDES BOUGHT INTO HYBRID TECHNOLOGY MORE fully than either Renault Sport or Ferrari. It was already doing so even as the regulations were in their formative stages. Mercedes the road 

Mercedes power to the fore on the Bahrain GP grid, before a 1-2 for Lewis Hamilton and team-mate Nico Rosberg



car company even assigned Brixworth a leading role in the development of electrical power. What started out as a lunchtime paper design at Brixworth became the Mercedes SLS AMG Electric-Drive, an all-electric sports car developed in some newly erected Portakabins on site.

The first-generation hybrid regulations (KERS, introduced to F1 in 2009) were formed three years earlier and it was at this point that the then MD of Mercedes HPP, Ola Kallenius, realised that there was a potentially valuable overlap in where Mercedes the main company and Mercedes HPP needed to invest. "It was decided [at board level] that Brixworth would lead the charge on KERS development," Cowell says, "and at that stage – 2006 – there was zero knowledge either here or in McLaren on how to do that sort of system. So initially we used consultants, companies from outside with more knowledge of the technology. But for that 2009 system we ended up doing more of it than we anticipated, especially with the battery."

The 'hygiene' factors of racing car engineering – minimising weight and volume, keeping it as simple as possible, quick turnarounds – and the aggression with which those aims are pursued can be a culture shock to companies outside racing. As HPP hit those barriers, it took the decision

to invest, to recruit the technology expertise into the company and develop it from there. Cowell says, "To get the performance and reliability needed – especially in terms of integration into a race car – we realised we had to have the expertise in one department with one man overseeing it, otherwise it's not going to be as efficient to manage, and what you get for the money you spend won't be as great. If you're trying to manage lots of different companies it's a huge drain. Every company has a slightly different culture." Minimising losses in the system, in other words. "We recruited a guy in late 2007 specifically for KERS. He'd seen that journey. And he pulled it all together."

The in-house expertise grew and developed – and was reflected in the second-generation KERS of 2011 which was much more of an in-house project. "That was a much more integrated package," Cowell says, "and came about not just through our greater knowledge, but from the input of both McLaren and the Brackley team. This was 2010, so around the time of the changeover from Woking to Brackley. Because both teams were going to be using it we had joint meetings, all three parties in one room, to decide upon what was the right aspect ratio for the KERS module, where the connection points should be, where's it best to put the

F1 FRONTLINE

with
Mark Hughes

circuits, for a generic fast race car. McLaren in those meetings was more experienced in KERS because it had raced it in 2009. The Brawn didn't have KERS, but they were great meetings. Any sense of 'we're opponents' was left at reception and we just sat down and worked out the best way – and that has paid off. It's helped the engineers here who are working on the parts that go inside the ERS module to have the comments from those meetings still ringing in their ears.

"Our current circuit architecture, for some of the DC/DC converters for some of the gate drives and so on, is of an identical ethos to the 2011-13 KERS, just rescaled. If we have a problem with our ERS system we have a chief engineer who understands how it all works; we don't have to call four companies to get them in to ask, 'Why's this not working?' We don't need a group of system integration engineers – it's done at the concept stage, the first layout."

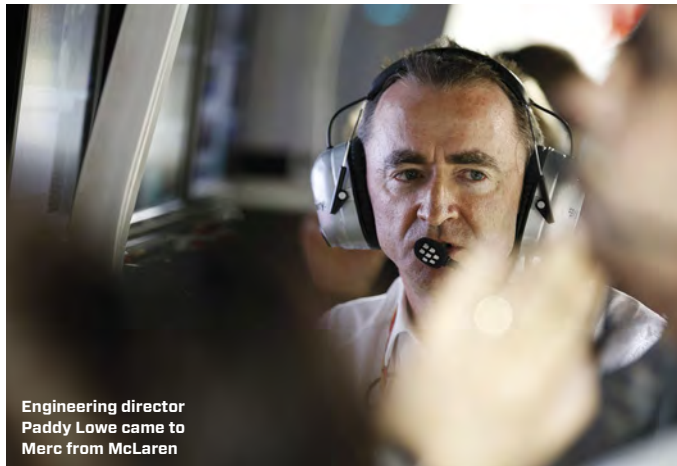
Concurrently Mercedes HPP had been helping frame the new hybrid formula. Renault and Ferrari – and others not yet in F1 – were involved in that process too, but it's probably fair to say that Mercedes knew what its own relative strengths were as it helped form the new formula. "Back in 2010 before an FIA regulation meeting," Cowell says, "Ross Brawn, Bob Bell and myself would have a briefing, then another briefing after the meeting to think about what's the right thing for the sport, and what would be good for us as well."



THE TIMING OF MERCEDES' WITHDRAWAL FROM McLAREN at the end of 2009, to purchase Brawn, was quite serendipitous in that it coincided with the early stages of planning for an all-new formula. Projects were being started from scratch, minimising the growing pains of a new relationship. A lot of the accumulated knowledge benefits of the McLaren-Brixworth partnership were about to be rendered obsolete. This too has been a crucial part of the Brackley team's current success in terms of its own performance and in neutralising the advantages of McLaren, a key rival.

Furthermore, the tightly knit partnership of Cowell, Brawn and their respective lieutenants facilitated a development path that has proved both more rigorous and faster than those of rival programmes.

"When the current regs came out [in June 2011] we were determined to get a performance platform together as soon as possible," Cowell says, "so we could start developing things that would never go in a race car but were dyno-friendly. The mass didn't matter. All the dynamic parts – valves, pistons, rods, crank – needed race intent, but that wasn't so with crankcase and cylinder head. The cooling needed to be race-intent, the architecture too. But we didn't start lightening it on the



Engineering director Paddy Lowe came to Merc from McLaren

MERCEDES-BENZ

"IT'S ABOUT DETERMINATION AND TENACITY BECAUSE ALL OF RACING IS R&D AND THE SUCCESS RATE IS LOW"

outside, and made sure we could do all the development tests we wanted very quickly. It was development-friendly in terms of being able to do quick port changes, quick cam changes etc. We got that together in an impressive time frame, which allows you to start understanding the performance potential of all the systems and therefore their performance authority in a race car. You can then sit down with the people who are pulling together the whole racing car, as one group. Then it's a case of balancing it, based on performance authority and the overall fastest race car. There are some unusual features that have good

performance authority and you start trying to work on them. But the key thing here is that you have to make decisions: are we doing it or not? If you stay in that no-man's land, it's just inefficient. Ross is a no-nonsense sort of person, Bob was up for making those decisions, we're up for making them and therefore it was easy to say, 'OK, that's the overall concept, get on with it'.

"Engineering is a balance – creativity, gut feeling, the best simulation in the available time, understanding that it's doing a thorough experiment that gives you the answer. If you're concerned about reliability you have to run it in a harsh environment

and see that the bits are still OK. If it's a performance idea the torque meter on the dyno or the wind tunnel will give you the answer. It's also about having the bloody determination and tenacity because the whole of racing is R&D and the success rate is low. A 20 per cent success rate in R&D is good. Therefore it's having the tenacity to hang on to the potential gain when it goes wrong a few times, to pick yourself up, dust yourself down, and say, 'All right, what have we learned, what we we going to do now?' and not give up."

There are many gifted and hard-working engineers at both Ferrari and Renault Sport, just as there are in Brixworth. The difference comes in how they have been utilised, managed and inspired. That and a clear-thinking commitment on the part of Mercedes HPP to invest in the future: just what proportion of its income did Red Bull invest at the time? Without the balance sheets of each of the three engine programmes, it's impossible to assess how that commitment compared. As Lowe says: "Some of it we shouldn't pretend to understand. We just do the best job we can and other people do their best and you end up with a set of lap times. But the great thing about this formula is that an engine advantage compounds. If you can make more power from your permitted fuel flow, you're more efficient. You can run less fuel or recover more of the lost energy or a combination of both – and it makes you faster still. I think that's a big part of our current advantage."

They have established themselves as a winning entity worthy of the Mercedes star. Best not get them started on how much potential they reckon Stuttgart's resources might harness...

GRAND PRIX NOTEBOOK

MALAYSIA, BAHRAIN
& CHINA

Rd 2 SEPANG, MARCH 30 2014

1	LEWIS HAMILTON	Mercedes W05	1hr 40min 25.974sec
2	NICO ROSBERG	Mercedes W05	1hr 40min 43.287sec
3	SEBASTIAN VETTEL	Red Bull RB10	1hr 40min 50.508sec

FASTEST LAP LEWIS HAMILTON Mercedes W05 1min 43.066sec

RACE DISTANCE 56 laps, 192.878 miles

POLE POSITION LEWIS HAMILTON Mercedes W05 1min 59.431sec

Rd 3 BAHRAIN, APRIL 6 2014

1	LEWIS HAMILTON	Mercedes W05	1hr 39min 42.743sec
2	NICO ROSBERG	Mercedes W05	1hr 39min 43.828sec
3	SERGIO PÉREZ	Force India VJM07	1hr 40min 06.810sec

FASTEST LAP NICO ROSBERG Mercedes W05 1min 37.020sec

RACE DISTANCE 57 laps, 191.530 miles

POLE POSITION NICO ROSBERG Mercedes W05 1min 33.185sec

Rd 4 SHANGHAI, APRIL 20 2014

1	LEWIS HAMILTON	Mercedes W05	1hr 33min 28.388sec
2	NICO ROSBERG	Mercedes W05	1hr 33min 46.400sec
3	FERNANDO ALONSO	Ferrari F14T	1hr 33min 51.942sec

FASTEST LAP NICO ROSBERG Mercedes W05 1min 40.402sec

RACE DISTANCE 54 laps, 189.559 miles

POLE POSITION LEWIS HAMILTON Mercedes W05 1min 53.860sec

FORMULA 1 LEFT ITS MUTED HYBRID TRAIL through the early-season far stretches of the globe: amid the rubber plantations of Malaysia, the oil-producing region of the Gulf and the ongoing industrialisation of China. Chasing an uncertain future, it nonetheless provided at least one race so thrilling that it left those who'd been critical of the new formula looking silly.

A tropical thunderstorm punctuated the intense humid heat, releasing some of the pent-up energy in Sepang as F1 hit town, staying in hotels recently vacated by the families of those missing souls from flight MH370.


A week later and we were in the desert heat of Bahrain, sitting in a shuttle bus crawling in first gear through a police X-ray scanner near the circuit's perimeter as four uniformed mercenaries, sub-machine guns in their hands, peered through the window, their young faces a worrying mix of confusion and insolence: F1 in Bahrain 2014-style, the Fifth Fleet just a few miles distant, monitoring that the oil flows the required way. A couple of weeks forward from there and we're in the drizzle of the Jiading province of Shanghai, automotive component factories and the tower blocks to house their workers rising out of the perma-smog that sheathes the stadium.

Because Lewis Hamilton had devised a way in Malaysia of using less fuel whilst going faster than his Mercedes team-mate Nico Rosberg, that race was a one-man demonstration – which triggered a few high-profile but ill-considered critical comments of the fuel-saving aspect of the new formula. Just a few days later, as Rosberg found a way of countering Hamilton's Sepang advantage, a thrilling race

between them unfolded in Bahrain that made those criticisms look ridiculous. What that Bahrain thriller also did – in making the final 10 laps after a late safety car a flat-out sprint to the finish with both Hamilton and Rosberg needing to use all their available performance – was to finally lay bare the full scale of the Mercedes W05's superiority over the field. In China, as Rosberg suffered a sequence of niggling problems, we reverted back to the Hamilton dominance of Malaysia and it was clear F1 really needed both W05s working properly for the benefit of the contest.

MALAYSIA

Hamilton's Sepang advantage hadn't been so apparent in wet qualifying, when he'd only shaved pole through being later across the line than Rosberg to start his lap on an improving track. Rosberg didn't even make the front row, Sebastian Vettel splitting the Mercs with his Red Bull, just as Daniel Ricciardo had done in Australia. As in Melbourne, the wet conditions had allowed the RB10's downforce advantage to count for more and the power disadvantage of its Renault engine for less than in the dry.

But on a dry track, it was Mercedes all the way on Sunday, as Hamilton ran unchallenged down to the first turn and Rosberg ignored Vettel's intimidation to squeeze through the narrowing space between Red Bull and pitwall. Getting sideways under power on the exit of Turn Three left Rosberg vulnerable to a double Red Bull attack and his busy defence ensured he was already 2sec adrift of the sister Mercedes at the end of the opening lap. Hamilton's advantage would only increase 



Hamilton's feather-foot advantage diminished by Bahrain, but he still scored in an epic duel with Rosberg

from there, as he found an unbeatable high-momentum rhythm, taking more speed in, keeping the minimum corner speeds up, needing less reacceleration. In the last few minutes he enjoyed burning off the fuel he'd saved to set the fastest lap by an impressive margin.

Ricciardo had outflanked Vettel in the choreography of the opening few corners, showing no sign of being overawed by a quadruple champion team-mate. Vettel used DRS a few laps later to reclaim third place, but Daniel generally kept pace with him until it all went disastrously wrong at his third and final stop. As he drove off, a loose left-front wheel nut counted as an unsafe release, even though he stopped and was pushed back. Unsafe release now carries a mandatory 10-place grid penalty for the next race. Vettel stayed close to Rosberg until the second of three stops after which, as Seb reported, "It was like he found another gear."

Fernando Alonso eventually took fourth, after making a late pass on the two-stopping Force India of Nico Hülkenberg. Alonso had driven what he reckoned was one of the best qualifying laps of his career, just to put the Ferrari fourth on the grid, and pressure levels at the Scuderia were already rising. Hülkenberg's fifth place finish was a long way clear of Jenson Button in the identically powered McLaren. Around a more aerodynamically demanding track than Melbourne, neither McLaren nor Williams looked particularly convincing. Button and the Williams pair, with what's believed to be a 70bhp advantage, finished one minute behind Vettel's Red Bull. That's an average deficit of about 1sec per lap despite a power advantage of about 0.7sec per lap. Was the new McLaren's aero really 1.7sec down on Red Bull's? That was the inference. Williams drivers Felipe Massa and Valtteri Bottas could probably have got closer than that if only they'd been able to pass Button, and there were echoes of Hockenheim 2010 as Massa was instructed to move aside for his team-mate, who reckoned he could have passed the McLaren. In contrast to his Ferrari days, Massa this time refused to comply. But this was all just a side story to the first 1-2 for a full works 'silver arrows' Mercedes team since Monza 1955.

Sonic beeps, possibly from MH370, were being reported from the South Indian Ocean, a few hundred miles west of Perth, as F1 left town.

BAHRAIN

Hamilton's domination over Rosberg in Malaysia – together with Nico's straightforward run to victory in Australia following Hamilton's early retirement – was being used as ammunition by those claiming the new formula had been ill-conceived. As well as the lack of noise, they said, the racing wasn't even good – a point made by both Bernie Ecclestone and Ferrari's Luca di Montezemelo, with the latter repeating his earlier reference to a 'taxi-driving' formula as he pitched up in Bahrain with associated fanfare and flashbulbs. But if he arrived like a lion, he left like a lamb, his chauffeur summoned long before the newly floodlit race had finished, Luca unwilling to stand any more of watching the Ferraris of Alonso and Räikkönen being repeatedly passed on the back straight, unable to summon the traction out of the preceding hairpin or the electrical power boost to defend adequately. For a figure to whom image is all, such loss of face suggested imminent blood-letting at Maranello.

In the short gap between the two race weekends, Rosberg's race engineering crew had prepared a document highlighting the differences between his and Hamilton's technique in Malaysia, essentially laying bare how Lewis had been able to have such a spectacular blend of speed and fuel usage. Coming into the Bahrain weekend Hamilton was clearly





Massa's fine start put him third, ahead of Bottas and the pack, but Perez later took the position

disappointed at this development, yet during the Friday practice sessions he began where he'd left off in Sepang, consistently able to maintain lower fuel consumption while lapping similarly quickly. His ease with some rear end instability into the slower corners was allowing him to need less braking and acceleration. But as the track grip improved through the weekend, so the balance shifted to understeer and his advantage over Rosberg evaporated like a desert mirage. Rosberg took pole, Hamilton locking up and flat-spotting as his final attempt proved 0.3sec slower, though still enough for the front row. Ricciardo qualified third-quickest but would take a 10-place penalty for his unsafe release in Malaysia, promoting Bottas. The Williams FW36 was well served in the low-gear acceleration zones, thanks to Mercedes horsepower. Sergio Pérez's Force India, Räikkönen's Ferrari, Button's McLaren and Massa's Williams filled the slots behind him.

Hamilton undid his grid disadvantage seconds into the race as he out-accelerated Rosberg down to turn one. There was to be no repeat of Malaysia's serenity for Lewis, though: he would need to fight for this one as Rosberg was potentially faster – and it was this dynamic that helped make the Grand Prix a sensationally good one. The two Mercs disappeared off into a race of their own and the distant pack scrapped among themselves, Massa having initially put himself at the head of it with a sensational start. But the Williams was using up its rear tyres faster than the chasing Force India of Pérez. Twelve months earlier Force India and Pérez (then driving for McLaren) had separately starred at this track and now they'd been brought together were doing so again. The Mexican went on to pass Massa, only to be undercut at the first stops by team-mate Hülkenberg, who then got upset as Pérez muscled his way back ahead, hanging Hulk out to dry over the Turn Four kerbs. Just as Button had discovered last year, even a team-mate gets no quarter from Pérez around here and the Mexican went on to secure the final podium place.

But that was all secondary to the equally close racing of the two Mercs up front. Pre-race, it had been decided that whichever of the pair was behind as the first stops approached would be given the slower, prime tyres for the middle stint. This would give that driver a second bite at the cherry by having him on the faster option tyres for the final stint, when the leader would be on the primes. It was the team's way



TURN 8, SEPANG

Close to the edge

“ Small in the frame but getting bigger quick, the heat haze and sun-glint of a car scrabbling over the exit kerb of Sepang's third-gear Turn Eight and in a moment Fernando Alonso's Ferrari bursts into full definition, whispering swoosh to high-pitched blare as it passes.

Into the braking zone for the slightly uphill hairpin of Nine and he's taking all the energy out of the car; all that would-be excess entry speed is being spurned and fed instead direct to the battery. In this way not only is he harvesting more effectively, he is also taming the worst of the traction problem almost everyone is suffering here. The deletion of exhaust-blown diffusers is having more effect in the slow corners than fast, almost everyone visibly grippless here even before getting on the power. Fernando has to wait an age before he's in

the acceleration zone. Others less patient, like Jean-Eric Vergne, power slide out of there, all of that energy spent spinning the tyres uselessly when it could have been kept in the battery instead, ready to be unleashed later.

The Williams pair are suffering a particularly drastic lack of rear grip, though – Valtteri Bottas trying to use the entry oversteer to get him turned in quicker, but with a penalty to pay in how long the slide then lasts. He comes out of there like Roger Clark in a Mk1 Escort. But there's a car that's having little trouble here, which can take so late a turn-in it has its own bit of track specially reserved, that gets rotated so quickly and early into the turn that it's pointed straight in a phase of the corner where others are still wrestling to get the lateral load off the tyres so they can accelerate. That car is the Red Bull. Daniel Ricciardo is making a 'V' out of the turn where the others are creating a time-consuming 'U'. Its traces paint a picture that should worry the rest. Maybe not today, nor even this weekend. But sometime, soon.



F1 FRONTLINE

with
Mark Hughes

of providing equality for its drivers and not simply switching the race off up to the first stops – as we've seen teams do in the past (McLaren, Monaco 2007, for example).

The crucial lap for the Mercedes guys was 19 – that's when the leader would be brought in. After being beaten off the line, Rosberg had initially figured he'd be relying on the fall-back plan and so concentrated on saving fuel early in the race – in order that he could also have greater power as well as extra tyre grip in the final stint. But still Lewis didn't pull away, his pace being limited by the loadings going through his left front as he generated more understeer than Rosberg. Teams have g-loading data and slip sensors that allow them to calculate how much of the tyres' energy they are using up, in order to keep the driver on target for stint length.

At Bahrain Hamilton was nudging against this limitation in the first stint and being advised to control his pace – and it was this that allowed Rosberg still to be in touch as the first stops approached, despite having run conservatively. So on lap 18, he decided he'd make a bid to be in front before they pitted as this would force Lewis onto the fall-back strategy. With DRS flap open down the pit straight Rosberg shot up the inside for Turn One and braked outrageously late to take the lead briefly. Hamilton saw him coming, stayed out wide and simply turned around the back of him to retake the place. On the next lap – his final opportunity to 'invert the strategy' – Rosberg tried again and this time stayed ahead through the duration of the right-handed

Turn One. Hamilton though was still alongside and able, with a fairly ruthless bit of chopping, to get across Rosberg's bows as they approached Turn Three. Nico was on the radio complaining and there were some distinctly nervy people on the Mercedes pitwall. But Lewis had prevailed at this crucial point in the race. Had he not, it's likely that Rosberg's greater pace on the day would have allowed him to have pulled away thereafter. Hamilton pitted first, was fitted with the options and built up a big lead during the middle stint over Rosberg on his primes.

Had Pastor Maldonado not completely misjudged where Esteban Gutiérrez's Sauber was going to be a second or so after the Lotus exited the pits, we'd likely have seen a final stint where Rosberg on his option tyres overturned the prime-tyred Hamilton's 13sec lead with three laps to go. Instead, Pastor succeeded in rolling Gutiérrez, triggering a safety car that wiped out Hamilton's hard-won gap. So upon the restart he was on the slower tyres with the guy on the faster rubber right behind him – and with 10 laps still to go. It looked like game over for Lewis. Remarkably, using pure street-fighting tenacity and perfect 'aggressive defending' that stayed just the right side of acceptable, he held on to take a great victory. Several times Rosberg thought he'd got him either at Turns 1-2-3 or up to

Turn Four, but each time Hamilton prevailed. In their flat-out scrap, they proved 2sec per lap faster than the rest.

Di Montezemelo missed seeing all this – and also Alonso's ironic fist-pumping 'celebration' of finishing ninth.

CHINA

By the time the field assembled at Shanghai, Ferrari team principal Stefano Domenicali had resigned. A good man, but not one who ever transcended the status of company employee, he bowed to the pressure cooker at Maranello to protect those below him whose head might otherwise have been required. Such is the way of corporate politics at Maranello. In his place came Marco Mattiacci, previously CEO of Ferrari North America. Few in the team, let alone the rest of the paddock, had

heard of him. But his appointment was perceived to be very much blessed by Fiat boss Sergio Marchionne.

The third wet qualifying in four races again helped Red Bull, enabling Ricciardo and Vettel – in that order – to split the Mercs of pole-sitter Hamilton and fourth-quickest Rosberg. The Red Bulls had been further helped by changes to the Renault's exhaust and software and were supreme through the aerodynamically demanding middle sector, but still 20kph slower than the Mercs at the end of the long back straight. Ironically, Ferrari's form was much improved, but for no other reason than the track layout

favoured its traits far more than did those of Bahrain, in that it was less demanding of the ERS systems and had several long, fast corners that suited the car well. Alonso qualified a solid fifth and would go on to star in the race. The sister car of Räikkönen continued to suffer an assortment of mechanical problems that limited his track time and it did appear as if the 'A Crew' was reserved for Alonso's car. A crack in the chassis of Räikkönen's F14T had been found during Bahrain testing, and it dated back to Friday practice of the Bahrain GP. Despite his fresh chassis, persistent gearshift problems compromised his China weekend.

Rosberg struggled in wet qualifying, 1.3sec slower than Hamilton – and when his telemetry went down before the race, giving no way of optimising his clutch settings for the start, he was further compromised. Boggling down, he was only seventh into the first corner. Though he'd eventually recover to second, Hamilton's third consecutive victory was never even remotely under threat. Alonso was quite brilliant in judging how much to take from the front-left tyre that is always a big limitation at this track – just enough to hold off a late attack from Ricciardo, who had earlier lost time behind team-mate Vettel until the latter was asked via radio to move aside.

Yes, this season really is rather different. ☑



With Rosberg having a tough day, Hamilton was never under threat in Shanghai



Read Mark's
definitive account
of these races
@ THE MOTOR SPORT
DIGITAL GP REPORT



Blancpain now covers two series, with €100k bonus for the combined winner

New era for GT racing

Generous prize fund attracts quality entry | BY GARY WATKINS

THE TWO SERIES THAT CARRY the Blancpain name arrive in the UK for races at Brands Hatch and Silverstone in May, at the beginning of a new era for international GT racing.

The Blancpain Sprint Series, which takes over from the FIA GT Series, visits Brands for its second round on May 17/18, one week before the second event on the Blancpain Endurance Series schedule at Silverstone.

The two championships have been linked for 2014 under the banner of the Blancpain GT Series. Overall titles will be awarded to both the team and driver or drivers accruing the most points across the two series, with a winner-takes-all €100,000 (£82,600) prize fund going to the highest-scoring team.

The aim of series boss Stéphane Ratel is to develop the two championships, particularly the BSS, by encouraging teams to take part in both and offering further prize money of €100,000 per race in the sprint series. That carrot has yet to pay dividends: the entry for the sprints is at a similar level to last year, though the quality is arguably up.

Ratel reckons that holding station is a positive result for year one of his brave new world and is insistent that there

will be growth over the course of this season and into next.

“The one thing I have learned in this business is that you need patience,” he says. “We have to evolve things progressively so that more teams will decide to do both series in the future.”

Only four teams will compete for the €100,000 by registering for both series. Three of those can be regarded as genuine contenders for the prize fund: the WRT Audi team, with a roster of drivers including 2013 FIA GT Series title winners Stéphane Ortelli and Laurens Vanthoor, and René Rast; the HTP Motorsport squad, whose Mercedes-Benz SLS AMG squad includes last year’s BES champion Maximilian Buhk; and the ROAL BMW team, which brings Alex Zanardi back to racing at the wheel of a Z4 GT3, which he will race alone in the two one-hour sprints at each event.

Other ex-Formula 1 drivers taking part include Nelson Piquet Jr, who will undertake selected events for the BMW Team Brazil squad, while 2008 GP2 champion and sometime Jordan driver Giorgio Pantano races for the new Bhai Tech McLaren team.

The BES entry is down from last year’s

50-plus cars a race to approximately 40, but Ratel doesn’t regard this as a problem. He believes there were too many cars in a series that has the Spa 24 Hours at its centre, and last year received complaints to that effect.

The ART Grand Prix McLaren MP4-12C of Alvaro Parente, Grégoire Demoustier and Alex Prémat won the opening 2014 event, at Monza.

LM age record set to fall

AMERICAN 16-YEAR-OLD MATT McMurry is on course to break Pedro Rodriguez’s record as the youngest driver to take part in the Le Mans 24 Hours.

McMurry, who has been racing since 2012, competed in Silverstone’s European Le Mans Series opener in April, with the Greaves Zytec LMP2, as a first step. The evaluation process is set to continue with an appearance at the second ELMS round in May and then the Le Mans Test Day on June 1.

If he comes through each test, McMurry will drive alongside Chris Dyson and Tom Kimber-Smith in the 24 Hours. By race time he would be 16 years and 202 days old, breaking Rodriguez’s record of 17 years and 126 days.

WEC eyes winter dates

THE WORLD ENDURANCE Championship could become a winter series, climaxing with the Le Mans 24 Hours in June.

The bold initiative has been put forward by the WEC organiser and series promoter Automobile Club de l’Ouest as a way of maintaining the appeal of the series over the course of a season and eradicating the long gap between the Le Mans 24 Hours and the end-of-season flyaway rounds. WEC boss Gérard Neveu uses the term “The road to Le Mans” to describe the philosophy behind the idea.

ACO president Pierre Fillon said: “In principle it is something that we would like to do. It is a good idea on paper, but we have to consider all the ramifications and work out how to manage the transition.”

The campaign would start with the current flyaway events, which would likely be spread out through the traditional off-season, before the series returns to Europe for the races ahead of Le Mans.



“In this business you need patience. We have to evolve things so more teams will do both series in future”
Stéphane Ratel

Hoy targets Le Mans

RECORDING-BREAKING BRITISH Olympian Sir Chris Hoy has revealed a three-year plan to compete in the Le Mans 24 Hours, starting with an attack on this year's British GT Championship.

The former track cyclist, who won six gold medals at the Athens, Beijing and London Olympics, will drive a Nissan GT-R NISMO GT3 in Britain this year for the factory-supported RJN team. At the same time he will join the development programme the Japanese manufacturer runs for its GT Academy gamers-turned-racers. The ultimate goal is to take part at Le Mans in 2016.

Hoy, who took his first steps in motor sport last year in the Radical SR1 Cup for novices, said: "It might sound ridiculous right now, but my ambition in motor sport is to compete at Le Mans.

"Who knows if that's even remotely possible, but it's my dream.

"I'm in the right place to do it. There are fantastic people here who have the right experience, so if I can do what they tell me to do, listen to them and develop, then it might not be a ridiculous dream."

Hoy began his campaign with ninth- and 14th-place finishes in the British GT opener at Oulton Park at Easter, sharing with regular 2014 team-mate Alex Buncombe.

■ The Anglo-Swiss Rebellion Racing squad's new ORECA-built LMP1 turned a wheel for the first time before the first round of the WEC at Silverstone. The team, which had already decided to rely on its old Lolas for the series opener, ran the Toyota-engined car at Paul Ricard with Mathias Beche driving. Further testing was scheduled for the end of April, ahead of the car's planned debut at Spa on May 3.

■ The new Bentley Continental GT3 will race in the USA later this year. Two-time American Le Mans Series outright champion Dyson Racing is aiming to join the Pirelli World Challenge from June, starting out with one car before a full-season campaign in 2015. Team boss Chris Dyson, Bentley factory driver and Dyson regular Guy Smith and team stalwart Butch Leitzinger will share driving duties in the sprint races.



GORDON KIRBY

SAFETY MEANS CONSISTENCY

FORMER TEAM OWNER DERRICK WALKER is in his second season as IndyCar's president of competition and operations. Under his direction IndyCar has seen detail safety improvements to its fleet of 60 or more Dallara DW12 spec racers. But Walker has also been thinking hard about IndyCar's long-term future.

First of all, this year's safety upgrades include foam-filled carbon-fibre panels for additional side impact protection, a stronger carbon-fibre ring circling the cockpit opening and a more compliant headrest made from layered Nomex rather than the old, harder Kevlar material.

Indycars generate plenty of *g*-loads, particularly on ovals, but as part of IndyCar's overall effort to keep costs down the Dallara DW12 doesn't have power steering. Most drivers have complained about it and quite a few have suffered wrist injuries from the steering's vicious kick-back. Cost and space constraints inside the car mean a full power steering system isn't possible, but a hydraulic damper developed by IndyCar and Dallara is expected to be used later this year.

Looking ahead Walker argues for extending IndyCar's long-term contract with Dallara to continue supplying spec chassis, but allowing the teams and engine manufacturers to develop their own bodywork and aerodynamics. Walker is deeply aware that the sponsorship and TV revenue available to IndyCar and its teams simply isn't strong enough to pay for a return to CART's 1990s heyday.

"I don't think we can and I'm not sure that we have to go all the way back to the way it was where we all bought cars from three different manufacturers and the cars had a shelf life of about a year," Walker said. "In those days the big teams had the sponsorship and manufacturer support to buy new cars every year, but I'm not sure that the racing industry

today can support that kind of thing.

"These days there aren't several Dallaras or Lolas or Reynards out there that can do it the way it used to be done – and I'm not sure we need to go back to that. Are we going to attract a lot of fans by spending money on building and racing three different gearboxes that are continually being updated and made obsolete?"

"To me, it's more important for everybody to have the same chassis, because if you put all the development into that chassis you've got a good-quality safety cell. So you retain that development of where the driver sits.

"You can argue that certain components on the car need to be consistent and other parts need to be variables. The variables could be the whole body section. The aerodynamic parts that bolt onto the car, which could be the nose, the wings, the top section, the underbody and engine cover – all those parts that really form the shape and look of the car could be made in faraway places and come together as one race car.

"All the cars could have a similar engine bay and gearbox for cost reasons. If some of these things were retained as well-developed, single-manufacturer items, and the bodywork and wings were open to modification, it would be a step back towards where we used to be.

"I think we need to have different looks and shapes and brands, but I'm not sure that the key components shouldn't be consistent on all cars. I see that as a practical, safe and cost-effective way for us to manage the diversity and creativity that we're seeking without having to go all the way back to the way it was in the 1990s.

"Quite frankly," Walker adds, "I don't see any other way until we get much stronger, healthier and richer, and more people are watching."

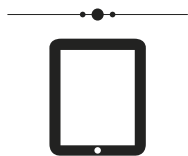
Sadly, I have to agree.



Dakar Peugeot unveiled

PEUGEOT HAS RELEASED THE first images of the machine with which it will next year try to emulate its 1987-1990 Dakar Rally successes.

Technical details of the two-wheel-drive 2008 DKR, whose roster of drivers will include Carlos Sainz and Stéphane Peterhansel, have yet to be announced.



Read extra news and comment on your iPad or tablet @ THE MOTOR SPORT DIGITAL EDITION

Online archive is go

ACCESS TO MOTOR SPORT'S COMPLETE 90-year magazine archive has become easier than ever following its launch online.

Every page from every issue dating back to 1924 is now available on a specially built website, which includes a comprehensive search facility for further ease of use. More than 1000,000 pages, including all advertising as well as editorial articles, will be free to view for the first three months. Thereafter, readers can choose from a variety of subscription options to gain access to one of the greatest motor racing research sources in the world.

To discover the online archive, go to www.motorsportmagazine.com/archive

— OBITUARY —

Giorgio Pianta 1935-2014

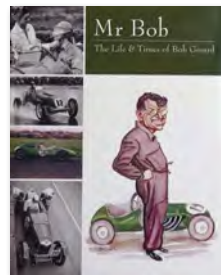
GIORGIO PIANTA, WHO has died at the age of 78, was always dubbed Lancia test driver, but his role within Fiat's competitions depart was more important than that and led to him being given control of motor sport at Alfa Romeo.

The Italian did join up as a test driver and played a key role in development of the Fiat 131 Abarth in which Walter Röhrl won the 1980 World Rally Championship. But his abilities meant he was promoted to take on an organisational role in the Lancia 037 Rallye and S4 Group B car.

"Giorgio was the guy who decided the set-up of all the rally cars," says former Lancia competitions boss Cesare Fiorio. "You always need a good driver to do that and he was, but he also had good technical solutions. That's why I gave him more responsibility."

Pianta went on to mastermind touring car successes with Alfa Corse, winning the DTM with Nicola Larini in 1993 and the BTCC with Gabriele Tarquini one year later.

He left Alfa Romeo before the end of the 1996 International Touring Car season, but continued his involvement in motor sport with a consultancy role for the Italian federation.



BOOKS

Ayrton Senna

Maurice Hamilton

On the 20th anniversary of his death, we have two new Ayrton Senna books to file on an already sagging shelf.

This one has the official blessing of McLaren, the team with whom Senna will always be most associated. Author Hamilton guides us through the familiar story with the surety we'd expect from a journalist who witnessed much of it first-hand. Chunks of first-person quotes help it along, particularly those from less familiar mechanics and engineers who lived the Senna story from the inside.

But in essence, the words are there to accompany a sumptuous photo collection. For hardened readers of this magazine, there's little fresh ground. But for newcomers, and perhaps younger readers looking to find out more beyond the movie, the clean and easy format makes for an excellent introduction to the life of a captivating individual. **DS**

Published by Blink Publishing
ISBN 978-1-90582-587-5, £35

Ayrton Senna

All his races

Tony Dodgins

The second addition to the Senna canon comes via another seasoned journalist, offered by a new publishing house that might in time fill some of the void left by the closure of Haynes' motor racing book division.

And credit where it's due: as a first effort from Evro, this is an

impressive statement of intent.

Tony Dodgins admits the format isn't entirely original: Alan Henry previously adopted the same approach for the career of Stirling Moss. In this case, of course, the subject wasn't available to steer the writer... but with this amount of detail and the many added extras Dodgins offers, that disadvantage becomes less important.

The race synopses begin with Senna's first foray to Europe for the 1978 World Karting Championship at Le Mans, and goes from there to May 1, 1994. Great stuff, but it's the features around the reports that really set this book apart.

Fresh, in-depth conversations with Terry Fullerton, Ralph Firman, Rick Morris, Dennis Rushen, Calvin Fish, Dick Bennetts and Martin Brundle – all key characters in Senna's pre-F1 story – add fantastic detail.

This approach continues through the F1 years, with assorted pull-outs on key moments. The patchwork approach adds up to an impressively complete collage, making this a significant addition to the ever-growing Senna library. Pleasingly, the price is as 'accessible' as the format. **DS**

Published by Evro Publishing
ISBN 978-0-9928209-0-9, £40

Mr Bob

The Life & Times

of Bob Gerard

Graham Gauld et al

This co-authored work was much helped by family research, which is why it gives such a detailed picture of 'Mr Bob', well-known and popular racer of the 1950s and '60s. Though he is long gone, period interviews give him a strong voice, and plenty of quotes convey

something of the character of this gentleman competitor and motor trade entrepreneur, from finding his feet in trials through his familiar ERA and Cooper-Bristol adventures to becoming an F2 team entrant for such as Henri Pescarolo in the 1960s. An illuminating biography of a talented amateur and well organised entrant. **GC**

Published by Porter Press

ISBN 978-1-907083-15-4, £40

Road Racers

Stephen Davison

In essence this is a sumptuous photographic essay, but that's too simple a label to do justice to one of the finest books – on any topic – that I've opened of late.

Author-cum-photographer Davison has been hooked on motorcycle road racing since the early 1970s and has written several books (his subjects including Joey Dunlop). The latest has relatively little text – thoughtful captions apart – but then words would largely be superfluous, such is the images' impact.

Some are funny, others poignant, but most are just breathtaking. Many of the most eye-catching come from La Bañeza, Spain, host of a road race since 1954. It's a bit less sanitised than F1's now-defunct Valencia street track... Spectators are separated from the action by a strip of plastic ribbon and, occasionally, a hay bale, while one shot shows a local pensioner sweeping the pavement, apparently oblivious to the adjacent heroics. One to add to the bucket list, that.

And it costs less than a modest round of drinks, a detail that serves to make it better still. **SA**

Published by Blackstaff

ISBN 978-0-85640-914-1, £17.99

WEB SPIN

EMANUELE PIRRO PODCAST

Reader question (Mario Carneiro Neto): Do you think Ferrari will come back to Le Mans?

Emanuele Pirro: [Laughs] Do I hope? Yes, of course. I think every serious manufacturer must race at Le Mans for many reasons.

Do I think? I'm afraid I would say 'no'.

Le Mans nowadays is a big commitment in terms of technology and investment. It's not second to Formula 1. If you think, being a successful F1 team, that you can build a competitive Le Mans car, with one hand tied behind your back working on F1, you're underestimating the difficulties and challenges of the World Endurance Championship. When Ferrari starts doing a study into the feasibility of it they will find out that they need almost as big an operation as they have on the F1 team.

I hope I'm wrong because we would all benefit from a Ferrari prototype. But imagine if there was a Ferrari Le Mans operation now? People would say, 'Look, they're doing a Le Mans car and they can't win in Formula 1...' I hope I'm wrong, but I'll be surprised if it happens.

What we're all talking about
@ www.motorsportmagazine.com

ONLINE WITH OUR WRITERS

Paul Fearnley

A history of Ferrari's sporting directors

Direttori Sportivi are like US Presidents: only a few are memorable (for the right reasons). Todt, in office from 1993 to 2007, was one. Montezemolo, as he was known then, was another, bringing order to a team in chaos, from 1974-75.

Mads Ostberg

How I got started on the road to the WRC

I was lucky in that I was surrounded by people enthusiastic about rallying – you need that to get into a sport. I think that's why there have historically been lots of Scandinavians in rallying. It's in the blood and it's also in the standard of national championships. There are lots of things that contribute to a country being good at a sport, but those two are important.

Andrew Frankel

Why I've fallen for this classic 2CV

I decided to buy it as soon as I saw it, though I didn't admit this until the usual financial table-tennis had taken place. This is one of the cleverest cars ever created. Instrumentation consists of an ammeter and a speedometer whose drive also powers the windscreen wipers, so the faster you go, the more you can see.



Mat Oxley

Marc Márquez: "He's playing"

Those corner entries... Márquez was already doing it last season, but with a full year's experience behind him he can dive into a corner, brakes fully on, rear tyre in the air and carry on as if nothing else has happened. No doubt the set-up of his RC213V helps, but even so his rivals must be weeping.

TOP TWEETS

@Damien_Smith Congratulations to @allanmcnish for Segrave Trophy, presented today. 2013 included TT win, Le Mans win and title of world champion. Respect.



@matoxley Segrave Trophy winner was car racer McNish. Here's Bazza with trophy in '77. For sure only man to wear jeans at RAC!

@SportmphMark

Very sad to see resignation of Ferrari's Stefano Domenicali, a very genuine and honourable man who always put the people in his team first.

@Andrew_Frankel Domenicali. Sad when the good guys go and I wonder what can now be done to salvage 2014 for the Scuderia or anyone without an MB powertrain.



@AnotherEdFoster Good to see @AinslieBen's name on an @AMR_Official car rather than a boat.

@Damien_Smith Members' Meeting was a hit today. Out-revived the Revival. Fantastic hour-long Moss Trophy twilight race. Hadfield vs Bryant – great duel.

@Andrew_Frankel More musical chairs at Bentley. Durheimer is back. Company has now had four CEOs in as many years, albeit two of them the same person.

MOST READ THIS MONTH

What's been catching the attention of our online community

Bahrain Grand Prix report
By Mark Hughes

Marc Márquez: "He's playing"
By Mat Oxley

Bernie-led consortium to buy part of F1
By Mark Hughes

Prost talks up Formula E

French legend believes motor sport has to think laterally, so new electric series is a forward step | BY SIMON ARRON

DENIAL WOULD BE POINTLESS.

The passing silver projectile looks like a conventional racing car, but sounds like something from Scalextric's yet-to-be-announced 1:1 range.

We're at Issoire, France, the private test track that nestles next to the wonderfully diverse car museum of former rally amateur Auguste Turuani, who from the mid-1970s competed in many a World Championship event under the pseudonym 'Tchine'. Inside you'll find everything from a Ferrari 328 to an Alpine A110 via an NSU Prinz, while outside the new Dallara-Spark Formula E car glides through a Michelin tyre test. It's part of the final preparatory process before teams take delivery of their productionised electric racers, for which official testing begins at Donington Park on July 3 (little more than two months before the first scheduled race, in Beijing).

At Le Mans last year, Michelin introduced slick tyres that could be used in the wet – to a certain point. For Formula E, it has developed an all-weather tyre that looks like something you'd ordinarily see on a BMW 3-series, yet feels very different.

The man at the helm is former Williams F1 tester, Le Mans Series champion and Sebring 12 Hours winner Emmanuel Collard. "Despite its appearance," he says, "it's a proper competition tyre with none of the sidewall movement you'd feel on the road."

"The whole exercise has been quite surprising. The car feels just like a traditional single-seater, a Formula Renault or F3 perhaps. It's a little short of power, but then I'm here testing tyres so it's important to have a decent battery range and we're not running to full potential. It's stable under braking, has good aero balance and feels very good through quick corners – the only thing missing is engine noise, but you soon get used to that. It takes perhaps three laps, after which you don't really notice."

Looking on is Alain Prost, for whose long-defunct F1 team Collard once also tested. The four-time world champion – who has committed to try a Formula E car at some stage,




"That's the key. We want the outside world to see how much progress is being made"
Alain Prost

although he hasn't fixed a date – is a partner in e.dams, one of 10 teams committed to the new, all-electric series that will take place in city centres around the world.

"If we have spectacle and sport," Prost says, "I don't see that noise matters so much. In F1 there was a time when eight-, 10- and 12-cylinder engines were competing together. Sitting in the pits, you could identify some cars by sound alone as they passed, but we live in different times. After a few races, people will get used to it."

"I'm not negative about the noise. I know there are going to be arguments, but I think things should be left in their natural state: if you have a championship for electric cars, why make things artificial?"

For the 2014-15 season all teams will use identical equipment, but from 2015-16 they will be free to develop their own ideas. "One-make rules work in some categories," Prost says, "but you couldn't have them in F1 or it wouldn't be F1 any more – you need competition, technology and development. Formula E will be like that from the second year. Drivers will have to manage the energy – a new kind of motor racing – but we're very optimistic that batteries will improve from year to year, and that's the key. We want the outside world to see how much progress is being made."

"If we put on a show and develop useful technology, I believe it will be a success." 



Alain Prost with the Dallara-Spark Formula E prototype at the Issoire test track, eastern France

MICHELIN



WWW.FOTOFINERS.COM

MAT OXLEY

REMEMBERING AN ORIGINAL THINKER

SEVEN DECADES AGO A FARMER'S SON from County Down changed the course of motorcycle racing history. Rex McCandless was a self-taught engineer with a brilliant, creative mind, quick temper, deep mistrust of authority and a fondness for a drink. To call him a maverick would be gross understatement.

His crowning achievement was a chassis design that became the standard, for racing and road bikes, for the next 35 years or so. He attributed his success to curiosity, enthusiasm and what he called uncommon sense.

When racing returned after the Second World War, the new multi-cylinder machines built by Moto Guzzi, Gilera and MV Agusta made Norton's once mighty single-cylinder Manx look positively antiquated.

Everyone seemed convinced that more horsepower was the way forward, except McCandless. "Rex believed that in typical road races more was to be gained by making the machine handle better through the twisty and bumpy bits," wrote biographer RL Jennings in *To Make A Better Mousetrap*.

At that time most road bikes still had rigid rear ends and even the Gilera four that won the 1950 500cc World Championship used a friction-damped rear.

McCandless's moment of epiphany came during a wartime hill climb in County Dublin, where he nearly lost control of his ill-handling Triumph Tiger 100. "It was forcibly imparted that it was a struggle between the bike and me as to who was in charge," he later recalled.

Thus while he spent the war repairing trucks and other transport for the Ministry of Supply, he was really thinking about how to make motorcycles handle better. He worked tirelessly

– often toiling away for days in his corrugated-iron shack of a workshop with barely any sleep – and meandered his way towards the answer.

First, he tried to sell his know-how to Triumph, over dinner. When the Triumph engineer told him the company had no interest in any 'foreign' invention, McCandless upended the table in his face.

Norton wasn't much more receptive. After starting work for the renowned Birmingham-based marque in the late 1940s – on a strictly freelance basis, because he couldn't abide working under a boss – McCandless spent several years fighting to get the company just to try his chassis technology on its Manx race bikes. In the end, a stand-up argument with race chief Joe Craig was settled in the MD's office, where McCandless issued a direct challenge: try my chassis or I'm off.

A back-to-back test was duly arranged on a section of the Isle of Man TT course in January 1950, with Norton's recently signed Geoff Duke and Rex's business partner Artie Bell, another TT winner, doing the riding. Duke recalls hammering through the fearsome Kate's Cottage left-hander aboard the McCandless Manx a good 10 miles per hour faster than he had managed on the factory bike with its rudimentary 'garden gate' chassis.

"I soon realised that this machine set an entirely new standard in road-holding," Duke later wrote. The McCandless chassis was a thing of great beauty. Its secret was its seminal all-welded, twin-loop tubular steel frame that provided greatly improved rigidity and a wide base for the swing-arm, which put the arm's pivot close to the gearbox sprocket to allow more suspension travel and therefore softer

springing. This is why it held the road so well.

Also crucial were new welding methods, his patented remote-reservoir hydraulic rear shocks – which several decades later became de rigueur on high-performance road bikes – and a change in the balance of the motorcycle. While most engineers put engine and rider as far back as possible to improve rear traction, McCandless moved them forward to put more weight over the front wheel. This is why his motorcycles turned so well.

After the Isle of Man tryout, Norton equipped its top factory riders with McCandless chassis for the 1950 TT. They destroyed the opposition, monopolising the Junior and Senior podiums. Duke (shown here hurtling through the bottom of Bray Hill) bettered the Senior race record by almost 11 minutes. When Norton's former TT winner Harold Daniell told people that the bike was as comfortable to ride as a feather bed, the name stuck and gained a capital F.

The following summer Duke took his first 500 world title, riding a Featherbed Manx that had 30 per cent fewer horsepower than the Gileras he defeated. Eventually, of course, the Italians and everyone else worked out where they'd been going wrong and copied the design. The age of the single-cylinder GP bike was over but McCandless's idea remained the blueprint until the mid-1980s, when the Japanese copied the aluminium beam-type frame originated by Spaniard Antonio Cobas.

While developing the Featherbed, McCandless's quicksilver mind found time to create a four-wheel-drive racing car (powered by a Manx engine) and a four-wheel-drive off-roader (with a Norton Dominator twin).

And he still liked to ride a bit. During the 1952 North West 200 race he was enjoying a battle with a rival when they collided and crashed. McCandless continued his duel, right there by the racetrack, with a spot of fisticuffs.

In a reasonable world, Norton would have incorporated the Featherbed design into its road bikes, but it didn't. McCandless drew plans to equip the entire Norton range, only to be told the factory had a five-year supply of existing frame lugs, so it would be too costly to retool. That's how the British motorcycle industry was run into the ground.

McCandless later built a Triumph-powered autogyro, devised a technique for burning coal at lower temperatures (saving the National Coal Board millions) and perfected the technique for brewing blackberry wine, which he made in batches of up to 450 gallons.

When asked by a friend why he brewed in such large quantities, McCandless looked perplexed and replied, "I drink half of it and give the other half to friends". ☑



"While developing the Featherbed, McCandless's quicksilver mind found time to create a four-wheel-drive racing car"



An ex-Villeneuve Ferrari 312T5 will return to Montréal for the HGP race

ALL IMAGES: JAT

Classic F1 for Montréal GP

Villeneuve T5 set to appear in Canadian showpiece | BY PAUL LAWRENCE

THE GLOBAL HISTORIC F1 CAR movement has received another major boost with news that the four-event Masters HGP series will open with a support race at the Canadian GP.

Organised by the US arm of the Masters organisation, the North American series for 3-litre F1 cars will deliver a field of 25 cars from the 1970s and 1980s for the June 7/8 event on the Circuit Gilles Villeneuve, Montréal.

The star car at this 45th running of the Canadian Grand Prix will be the ex-Villeneuve Ferrari 312T5, the car the French-Canadian took to fifth place in his home race in 1980.

“We couldn’t find a better moment to bring back some of the greatest cars seen in the past,” said event organiser François Dumontier. “As Montréal is hosting a round of the FIA Formula 1 World Championship for the 35th time, we’re extremely proud to add Masters HGP to our programme.”

Ron Maydon from Masters HGP added: “We are thrilled to be part of an event with the prestige and heritage of the Canadian GP. For Masters HGP to be recognised as a support race to a



■ A Williams FW11, used by Nigel Mansell to win the last World Championship Grand Prix at Brands Hatch in July 1986, will be on display at the Kent track during the Masters Historic Festival on May 24-26. The car will be part of the event’s celebrations of the 50th Anniversary of Brands Hatch’s first Grand Prix.

■ The famous ex-Jo Bonnier Ecurie Filipinetti Lola T290 will be back on track this season, in the Martini Trophy with new owner Mark Richardson. Richardson acquired the car from musician Neil Primrose and will run it in period Gitanes livery, as used by Bonnier in 1972.

modern-day F1 race is a massive honour and to open our 2014 season at a Grand Prix is a huge compliment to the series.”

In addition to the ex-Villeneuve Ferrari, the entry should include Mario Andretti’s 1976 Lotus 77, John Watson’s 1982 McLaren MP4/1B, Jody Scheckter’s 1978 Wolf WR6, Jan Lammers’s 1979 Shadow DN9 and Keke Rosberg’s 1983 Williams FW08C.

Group B revived at Lydden

THE ERA WHEN GROUP B RALLY cars moved into rallycross will be celebrated during the UK’s first round of the new FIA World Rallycross Championship, which takes place at Lydden Hill on May 24/25.

When Group B cars were banned from rallying in 1986, many of the cars transferred to rallycross and were further developed. Now some of the greatest GpB monsters will be back in action.

“We wanted to mark the arrival of the new World Rallycross Championship at Lydden with something truly special,” said venue boss Pat Doran. “We’ve really done that with what’s going to be

an astonishing turn-out of these fantastic GpB cars. Many of today’s rallycross fans will never have seen these epic machines in action.”

Entries include Doran (Ford RS200), Olle Arnesson (Audi Sport Quattro S1), and Rob Gibson and Lawrence Gibson (MG Metro 6R4s).

Party time for two tracks

TWO OF BRITAIN’S RACE TRACKS will celebrate major anniversaries this summer as Croft hits 50 and Cadwell Park marks 80 years since its first competitive event.

Croft Autodrome hosted its first meeting, the *Daily Mirror* Trophy, on August 3 1964. On August 2/3 2014 the fifth Nostalgia Weekend will include Historic Touring Cars, Historic Formula Ford and Historic Formula 3.

Meanwhile, the VSCC will honour 80 years of Cadwell Park with its annual race meeting at the Lincolnshire track. Cadwell Park was first used for motorbike racing in 1934 on a chalk track, although it was the post-war era before it came into regular use.



Retro rally closer to reality

ALTHOUGH PLANS LAST SUMMER for a dedicated rally for Group B machinery of the 1980s fell through, the Rallying with Group B movement has arranged for a group of up to 15 cars to run ahead of the main field on this year’s Rally of the Midlands.

The June 21 Leicestershire event, which uses the Mallory Park circuit as a prime venue, will feature the spectacular cars running as a demonstration group over most of the route, which is based around Hinckley.

“There will also be more cars on display at Mallory Park,” said the project’s prime mover Steve Davies, “and we plan to run them there.”

100 F1 cars on parade

THE PROMOTERS OF THE Silverstone Classic (July 25-27) are aiming to establish a record for the greatest number of F1 cars on track together. The target for the planned track parade on the Sunday is 100 cars, including many that will be racing over the course of the weekend.

With events for the FIA Masters Historic Formula One Championship and two grids from the Historic Grand Prix Car Association, almost 100 F1 cars could be racing. More recent chassis, due to be on display, are likely to join the parade. The Classic is also marking the fact that this year's British Grand Prix will be the 50th such event at the Northamptonshire track.

RAC moves to Sunderland

SUNDERLAND WILL BE THE HOST city for the 2014 Roger Albert Clark Rally (November 28-30), as the event moves north for the biggest shake-up in its 10-year history.

With the rally start, finish and HQ all based in Sunderland, the route will make extensive use of the Kielder forest complex and take in several stages that are completely new to the event.

"This is the major refresh I wanted to give the event," said rally manager Colin Heppenstall.

"It should deliver the fresh challenge that competitors wanted. We are very grateful to everyone in Sunderland for their enthusiastic co-operation."

Tragedy mars VSCC event

VSCC RACER GARRY WHYTE DIED and two other drivers were hospitalised as a result of two separate accidents during the club's annual Spring Start meeting at Silverstone.

Whyte was running second in Saturday's Vintage Racing Car event when he rolled his 1921 GN Gnome at Brooklands corner. Suffering from serious head injuries, he was transferred to hospital by air ambulance but never regained consciousness and died a few days later.

In Sunday's 500cc F3 race, Richard Bishop-Miller and John Turner were involved in an accident at Becketts and required hospital attention. Both were later released after treatment.

— OBITUARIES —

Al Fleming

Experienced racer Al Fleming died in an accident at Hockenheim in April, when his Lotus Elan rolled. The chemical engineer was at the German circuit ahead of the Triumph and British GT race. Fleming raced his beloved Elan regularly at Knockhill before venturing farther afield over the last five years and often shared the car with his son, Nick.

Tony Birchenhough

Former sports car racer Tony Birchenhough, best known for racing at Le Mans in the 1970s, has died at the age of 79. He took five finishes at Le Mans and won the Thermal Efficiency Cup on three occasions. He started racing with a Chevron B8 and enjoyed considerable success with Lolas and Chevrons in other major 1970s sports car races.

Garry Whyte

VSCC racer Garry Whyte, 26, died from injuries sustained during the club's Spring Start meeting at Silverstone. Originally from Glasgow, Chippenham-based Whyte was driving Nick Topliss's 1921 GN Gnome when the accident occurred. He started competing in the summer of 2011 and was a popular competitor in VSCC hillclimbs with a Riley.



PRODUCTS

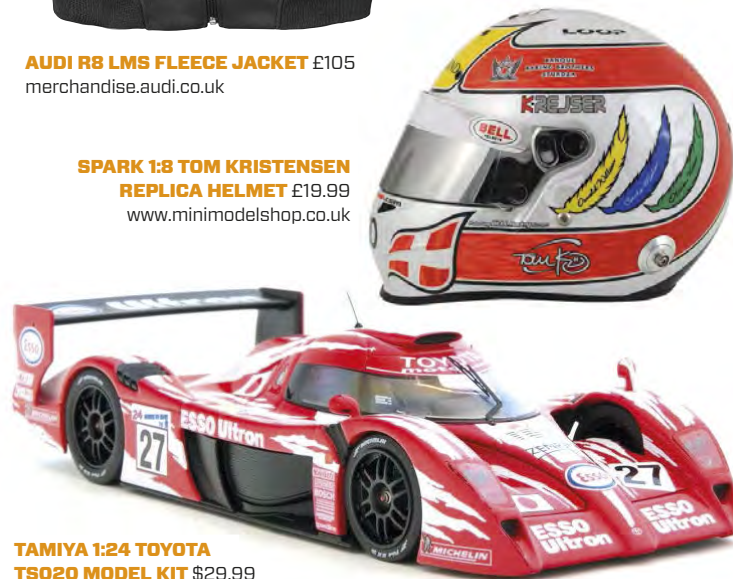
PORSCHE 956 LE MANS 1982
140x60cm VINYL BANNER £45
www.retroracingart.com



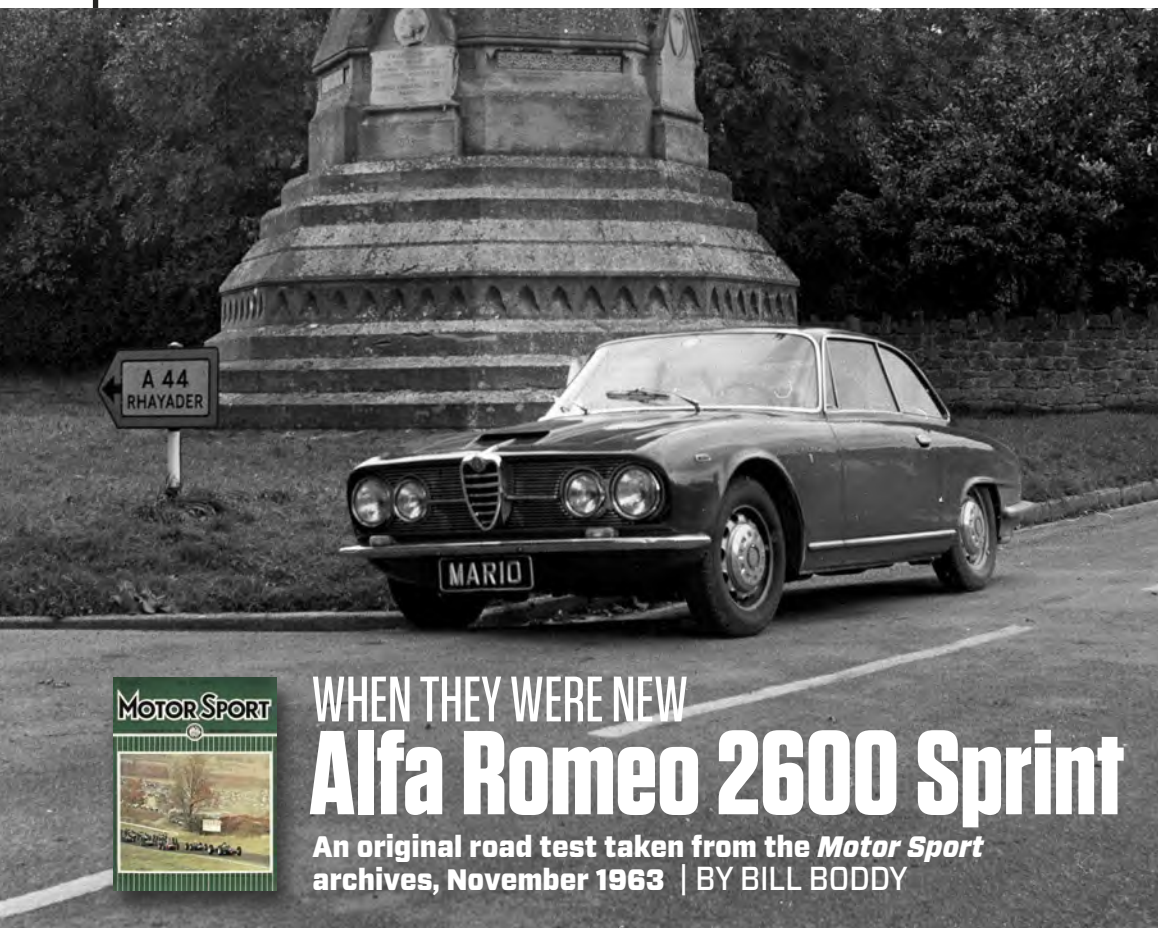
PORSCHE RACING
COLLECTION MEN'S
T-SHIRT £30
shop1.porsche.com/uk

AUDI R8 LMS FLEECE JACKET £105
merchandise.audi.co.uk

SPARK 1:8 TOM KRISTENSEN
REPLICA HELMET £19.99
www.minimodelshop.co.uk



TAMIYA 1:24 TOYOTA
TS020 MODEL KIT \$29.99
www.towerhobbies.com



WHEN THEY WERE NEW Alfa Romeo 2600 Sprint

An original road test taken from the *Motor Sport* archives, November 1963 | BY BILL BODDY

MOTOR SPORT CERTAINLY HAS waited a very long time to report on any Alfa Romeo, although I believe we did road-test a 22/90 model in 1927...

Alfa Romeo describes the 2600 Sprint Saloon as “long awaited” and there is no denying that it is well worth the wait. It is beautifully made, technically exciting and comprehensively equipped, but the charm is enhanced by its individuality, the smooth flow of power and unexpected flexibility of its six-cylinder, 2582cc, dohc engine.

The engine, with its triple Solex carburetors united by a vast air-intake trunk, is unquestionably impressive and pleasing to the eye, and provides 165hp, the camshafts driven by two silent chains. Other highlights of the specification are an oil radiator incorporated with the water radiator, the five-speed gearbox, a rigid coil-sprung back axle located by upper triangle and lower links, and servo-assisted front discs.

The Bertone-bodied 2600 is a beautifully appointed motor car. Indeed, I find it difficult to avoid superlatives in trying to convey what a splendid possession it is, and what unadulterated

joy on the road. The test car was left-hand drive, but the Sprint will soon be available in RHD. The two front seats are separate bucket-type chairs that hinge forward to give access to the rear. Legroom is limited in the back, but the Sprint is definitely a four-seater. The test car was finished in a sober gunmetal and upholstered in beige leather of unmistakable quality. The doors shut quietly and the final air of luxury is imparted by electric window lifts.

One very notable aspect is the extremely good all-round visibility, which gives pleasure to scenery-loving occupants and enhances the safety factor. The steering wheel is exactly the right size, a business-like three-spoke racing affair in keeping with the demeanour of this Alfa Romeo.

Hooded before the driver are three Veglia dials of equal diameter. At each end of the wide wood-strip fascia are aircraft type, swivelling fresh-air vents, with minor controls and the Blaupunkt push-button radio in between and three flick switches beneath. Hanging below are two plated pull-back levers, for choke and hand-throttle.

The pedals are all at the same level,


permitting simultaneous operation of brakes and throttle. A small crank handle is provided for use should the window lifts fail. A foot-operated washers-cum-wipers control is the other very welcome item, also found on Fiats. After which it seems hardly necessary to add that an under-bonnet lamp is provided and that the large luggage boot is illuminated as its lid rises.

The curved front grille carrying the famous Alfa Romeo dummy radiator adds greatly to the car's impressive appearance, as does the shallow air-intake on the bonnet. The test car was shod with Pirelli Cinturato tyres, which gripped well and did not protest on fast corners. It is disappointing to report, though, that the body showed rust in places, some fittings were crudely made and, as the tests progressed, the doors dropped on their hinges.

Driving the six-cylinder Alfa Romeo is a rare pleasure, because this is a car that responds to good driving and the overall characteristics of which achieve a very high standard of near-perfection.

Three pumps on the accelerator suffice to start the engine, a very quiet power unit and smooth right through the rpm range. On the road there is ample performance and unexpected docility. The gearlever is man-sized, a trifle stiff on the test car, but it moves very quickly. For long-legged cruising the highest gear is most acceptable, 4000rpm for instance representing just over 80mph. The steering has lost all trace of ‘Alfa twitch’, no kick-back or vibration coming through the wheel. It is geared almost exactly right, at three turns lock-to-lock, in conjunction with a commendably small turning circle.

The driving position is excellent, the outstandingly comfortable seat adjusting easily. The brakes are very light to apply yet immensely powerful and progressive. Roll is minimal and the cornering characteristic virtually neutral, making the Alfa a delight on twisting roads. There is mild understeer but road-holding reaches a very high standard and the car is beautifully balanced. Indeed, it is difficult to convey in print the subtle fascination of driving this beautiful car. Instant response to the accelerator, quiet, rattle-free running in which no road noise and scarcely any wind noise permeates the windows, stability, luxury and a rare individuality combine to lift 2600 Sprint motoring far


ALFA ROMEO SPECIALISTS

DTR performance
www.dtrsports.com

Classic Alfa
www.classicalfa.com

Alfaholics
www.alfaholics.com

from the commonplace, and its body appointments and very thorough heating and ventilation make it an ideal vehicle for long-distance touring.

A long cross-country journey, heavily laden, was accomplished at a running time average of 46mph before the driver was accustomed to the car and without trying very hard, in spite of congested towns and the usual traffic hold-ups. Any brief straight or deserted country lane saw the speedometer at 80mph, but I found 100mph all the car cared to do on the roads encountered on this particular route. For the actual potential of the 2.6-litre Alfa Romeo, however, let



us turn to figures checked against an electric speedometer. In its technical literature Alfa Romeo claims a maximum speed of 124mph in the forward gears – and 33mph in reverse! The test car being deemed to have an engine too new to extend fully, another car was provided, with which the following acceleration figures were obtained (average of several runs, two up): 0-50mph: 8.4sec; 0-60mph: 11.6sec; standing-start ¼ mile: 17.8sec.

In conclusion, experience of this fine car confirms that Alfa Romeo still builds motor cars! The 2600 Sprint coupé is a car that makes old men feel younger and enables young men to reduce their journey times very appreciably. In this country it costs £2899 7s 2d with purchase tax. Discerning drivers who appreciate performance, refinement and individuality in a car that is extremely satisfactory to behold will put this on their 'short list', if they are prepared to overlook some unhappy aspects of body fittings and premature rust, which the Bertone coachwork revealed.

ALFA ROMEO 2600 SPRINT FACTFILE

Production: 1962-68
Power: 145/165bhp
0-60mph: 11.6sec
Max speed: 124mph

Despite sweet engine, Alfa's last inline six, fine Giugiaro styling and comfortable cruising, 2600 had less impact than later and handier four-cylinder Giulias. Rarity makes parts scarce. Coupé and spider more desirable than dull-looking saloon, Zagato-shaped SZ rarest of all.

Perfect spec: SZ – as long as someone else has already restored it

AUCTIONS



A summary of classic and racing auctions from around the world - in numbers | BY ALEX HARMER

Mecum Auctions

@HOUSTON APRIL 10-12

1964 FORD GT40

CHASSIS GT/104

Driven in period by Phil Hill, Bruce McLaren, Chris Amon, among others. Third at 1965 Daytona 2000Kms. One of only two GT40s prepared by Shelby American for 1965. Considered 'the most original and correct prototype Shelby American team car'

Sold for \$7 million

RM Auctions

@MONACO MAY 10

1958 Lister-Jaguar 'Knobbly'

Chassis BHL EE 101 Recognised as the original Knobbly. Purchased new by Briggs Cunningham and raced by Walt Hansen to the 1958 SCCA title. To be sold with spare engine and FIA papers
Estimate: £1.2-1.4 million

1989 Ferrari 640

Chassis 110 Driven by Gerhard Berger in six GPs during 1989. Features the first semi-automatic, paddle-shift gearbox in F1. Restored by Ferrari
Estimate: £500,000-755,000

1964 Alpine M64

Chassis 1711 Class winner at Le Mans and Reims 1964, driven by Roger Delageneste and Henry Morrogh. The last and most successful of only three produced
Estimate: £125,000-165,000

1980 Tyrrell 010

Chassis 010/3 Driven by Jean-Pierre Jarier, Derek Daly, Eddie Cheever and Michele Alboreto from '80-81

Crashed famously by Daly at Monaco in 1980

Comes with full FIA paperwork
Estimate: £180,000-240,000

STIRLING MOSS & DENIS JENKINSON

Works entry in the 1956 Mille Miglia. Restored in 1987 with consultation from the factory

1956 Maserati 450S

Estimate: £3.3-4.6 million

1955 Lancia D50A recreation

Chassis D50A-0007R One of five replicas constructed from original plans.
Estimate: £670,000-755,000

1966 Ferrari Dino 206S Spider

Chassis 028 Extensive hill climb history with numerous period wins. One of only 18 built
Estimate: £1.2-1.6 million

Ayrton Senna's race suit

Worn throughout the 1991 season, including Senna's win at Monaco. Comes with McLaren certificate
Estimate: £25,000-30,000

MAY AUCTION CALENDAR

- 5 SHANNONS Melbourne Autumn Classic, Warrigal Road, Cheltenham, Victoria
- 8-10 AUCTIONS AMERICA Auburn Spring Sale, Auburn Auction Park, Indiana
- 9 COYS Légende et Passion, Espace Fontvieille, Monaco
- 10 RM AUCTIONS Monaco Sale, Le Sporting Monte-Carlo

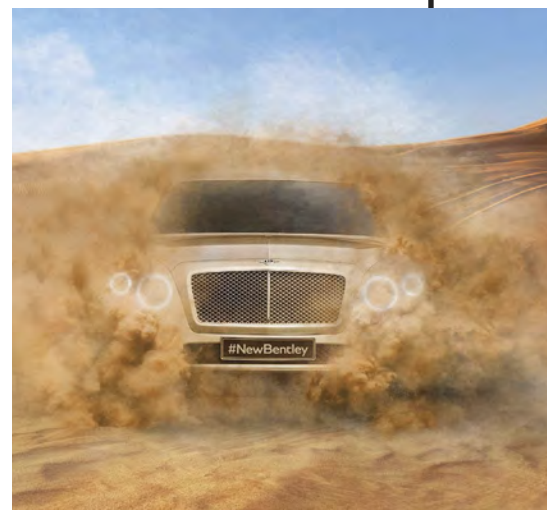
- 13-18 MECUM Auctions Original Spring Classic, Indiana State Fairgrounds
- 17 BONHAMS Aston Martin Works Sale, Newport Pagnell
- 18 BONHAMS Spa Classic Sale, Spa-Francorchamps
- 24 SILVERSTONE AUCTIONS Sale, Silverstone
- 26 SHANNONS Sydney Late Autumn Classic, Reserve Road, St Leonards, NSW



Discovery concept previews whole new sub-brand for Land Rover

will the all-new Discovery be launched.

Key technologies showcased on the Discovery Concept include laser terrain scanning, so the car can adapt itself to whatever obstacles are presented when driven off road, functions like indicators, lighting and wipers being actuated by simple gestures from the driver and, wait for it, remote control of the entire car. Were it to make it into production this would allow the 'driver' to manoeuvre the car while standing outside it, enabling it to squeeze through gaps, back up accurately to trailers and be guided safely through extreme off-road conditions.



Disco name to spread

Extra models will extend scope of Land Rover | BY ANDREW FRANKEL

LAND ROVER HAS OF LATE SPENT so much time, money and energy on the Range Rover and its Evoque and Range Rover Sport derivatives, you'd be forgiven for thinking it had forgotten about the poor old Discovery, down there in the engine room, slogging its guts out to provide adventurous families with honest, high-quality transport rather than a fashion statement on wheels.

If it had forgotten, it's remembered now. On the 25th anniversary of the Discovery's birth, Land Rover presented only the third all-new version at the New York motor show. Called the 'Discovery Vision Concept', it previews the look not only of the next Discovery, which is unlikely to go on sale until next year at the earliest, but a whole new family of cars designed to make the Discovery a multi-model sub-brand in exactly the same way Range Rover is

today. Land Rover will then aim to do the same with a series of rugged Defender-branded cars.

For now, however, the first Discovery model to go on sale will not be the replacement for the existing car but instead the current Freelander, whose name is to be retired. It will be named the Discovery Sport and, like the current Range Rover Sport, will be available with either five or seven seats. Only then



Bentley SUV glimpsed

BENTLEY HAS SHOWN A TEASER shot (above) of its new SUV. Most such images are designed to whet the appetite of a hungry public, though being released so far ahead of the car's 2016 launch it seems fairly clear that the purpose this time is to reassure said public the new car will look nothing like the ghastly EXP9 F previously shown.

From what can be told, the new car will no longer be radical in appearance but will look much like other Bentleys, albeit somewhat farther from the ground. The car is a departure for Bentley in more ways than one and the most radical turn in the company's 95-year history. Not only is it the marque's first SUV, it will also be the first Bentley to be offered with diesel engines and hybrid powertrains.

Production has been confirmed for Crewe, where it will be built up around a new platform that will also underpin

the next Audi Q7, Volkswagen Touareg and Porsche Cayenne. Bentley is already sitting on more than 2000 orders for the car two years before anyone can buy one, so it seems likely to increase Bentley sales from last year's already record high of more than 10,000 units.

In other Bentley news, there have been more boardroom changes, with Wolfgang Durheimer returning to the head of the table after a couple of years as Audi's engineering boss. This leaves the outgoing chairman, Wolfgang Schreiber, in the unusual position of both replacing and being replaced by the same man. Counting Durheimer twice, this means Bentley has now had four chief executives since 2011 and the departure of the comparatively long-serving Franz-Josef Paefgen.

Porsche's GT3 woes

PORSCHE HAS SUSPENDED production and recalled every one of the 785 new 911 GT3s so far delivered, following catastrophic engine fires in two cars. Owners were contacted and told under no circumstances even to drive their cars to the dealer while the problem was sourced. It was traced to a con-rod fastener that failed, prompting Porsche to replace in its entirety every engine on every car built to date. It is believed that this has not only put back production of the highly specialised car (which is designed and developed by the Motorsport department) by six months, but also delayed the launch of the GT3 RS. "We were planning to have it at the Goodwood Festival of Speed," an insider said, "but now we'll be lucky to have it before the end of the year".

The troublesome engine in the GT3 is the first in the 15-year history of the 911 sub-brand not to use the famed 'Mezger' race engine, whose claims to fame include Porsche's most recent Le Mans victory in 1998; instead it employs a version of the far cheaper direct-injection engine used by most other 911s of recent years. When it comes, the new RS will be lighter and have power raised from the current 475bhp to about 500bhp, but will derive the majority of its additional lap time from a radical aerodynamic rethink. "It is a far bigger step forward than the last RS," said a contact who has driven the car at length, "perhaps the biggest step forward for any RS model."



David Brown Coupé - retro looks on capable Jaguar underpinnings

Brown's retro coupé

THE NAME DAVID BROWN IS returning to the road with a new Jaguar-based coupé looking really rather like a re-interpreted Aston Martin DB5.

The new David Brown is unrelated to the man responsible for Aston Martin after the war and his aim is to produce a car with the look and character of a timeless classic, but the engineering integrity and dynamic abilities of a brand new sports coupé.

Underneath its decidedly retro shape lies the entire superstructure and powertrain of a modern 503bhp Jaguar XKR, not that this is in any way obvious from its appearance. Not only are its exterior panels beaten by hand from sheet aluminium, the interior is unique to the car, too. Brown intends to build a run of 100 cars priced at £495,000 each plus local taxes.

Bertone files for bankruptcy

LEGENDARY ITALIAN STYLING house Bertone has entered bankruptcy proceedings. The company has faced increasing financial difficulties, with spiralling debts for a number of years.

Bertone was founded in 1912 but really came to prominence under the guidance of Nuccio Bertone in the 1950s. Under his leadership the company was responsible for such landmark designs as the Alfa Romeo Giulietta and Giulia Sprints, the Lancia Stratos and Lamborghini Countach,

■ McLaren has announced it is axing the 12C supercar. The 625bhp machine led McLaren's return to road cars in 2011, but was criticised for its conservative appearance. Since the introduction of the 650S with a further 25bhp, enhanced chassis and a nose that apes the P1 hypercar, demand for the 12C has dried up, owners apparently happy to fork out the extra £20,000 to convert their 12C order into a £195,250 650S.

■ Mazda has shown part of its new MX-5 at the New York show. The backbone chassis retains a traditional front-engined, rear-drive layout but attention to detail means the new car will weigh less than the outgoing model, and possibly even under 1000kg as an entry-level car. Mazda is believed to have looked long and hard at the 1989 original and elected to revert to simplicity of engineering and purity of line in its design.

Espada and, of course, Miura. The Miura has long been held by many to be the single greatest supercar design of all time and while arguments have raged over who actually styled it (Marcello Gandini, Giorgetto Giugiaro and Bertone himself have all been cited), it is unquestionably the product of Bertone the company, if not the person.

Caterham and Renault split

THE CATERHAM-RENAULT JOINT venture, to produce a new generation of affordable supercars by 2016, has hit the rocks. While both manufacturers are believed still to be pursuing their own plans for such a car, it seems certain they'll no longer be based on the same platform and built side by side in the old Alpine factory in Dieppe. No official reason for the split has been given by either side, but sources have suggested that not only were the ultimate aims of both companies too disparate, but also that the tiny Caterham concern wanted to move the project forward at an entirely different rate to Renault.



Q50 closer to reality

INFINITI'S 550BHP Q50 'EAU ROUGE' concept has taken a substantial step towards becoming a production reality, with functioning prototypes being produced in the UK and tested by director of performance Sebastian Vettel.

If the car is given the green light, Infiniti will have the ability to rival the likes of the BMW M3, Audi RS4 and Mercedes-Benz C63 AMG, and the brand will also become far more visible in Europe, where it struggles to make significant headway against the established German companies. The car features the same 3.8-litre twin-turbo V6 as the GT-R coupé, but it is likely to drive the rear wheels alone. If the go-ahead is given, production is likely to commence next year.



PORSCHE MACAN

In a market sector it can't ignore, Stuttgart has built a sure seller - but no star | BY ANDREW FRANKEL

ATTIBUTES OF NO practical value are rarely desirable in a car. There are exceptions of course, such as the Alfa 4C's stunning appearance doing much to offset its many dynamic flaws. But the Porsche Macan's party trick is of so little use to anyone it is entirely irrelevant, save for the fact it comes close to redeeming a car whose very existence I had started to consider unjustifiable. To whit, if you enter a corner on a slippery race track with the throttle closed it will approach said turn in a lurid slide and, thanks to its rare ability to direct 100 per cent of its power to its rear axle, drift out of the curve power-on and with as much opposite lock as you can handle.

An utterly pointless attribute in such a car you will agree, except to someone searching for some distinguishing feature

to separate it from the vast hordes of faceless, mid-sized SUVs that roam the land in ever increasing quantities. Something that makes it a Porsche.

Because on first acquaintance you may wonder just how worthy it is of the shield of Stuttgart on its nose. This is because as even Porsche readily admits, the Macan is no fresh design but one adapted from the now old and always unremarkable Audi Q5 SUV.

Of course platform-sharing is the way all mass-produced cars are created these days - you'll not find a major model produced by a major manufacturer whose underpinnings are not shared with another: the economies of scale are just too important to ignore.

And, yes, in Porsche's case there is precedent, for the Cayenne has been built on the same foundations as the Audi Q7 and Volkswagen Touareg for a dozen years now. The difference is that Porsche was still able to turn the



FACTFILE

£59,300

ENGINE
3.6 litres, six cylinders,
twin turbocharged

POWER
394bhp @ 6000rpm

TORQUE
405lb ft @ 1350rpm

TRANSMISSION
Seven-speed double
clutch

0-62MPH 4.6sec
TOP SPEED 155mph
ECONOMY 31.7mpg
CO₂ 208g/km

Cayenne into an ultimate: the fastest, most entertaining and, if you got a 550bhp Turbo S, simply brutal SUV money could buy. In the way of almost all Porsches for a number of decades now, it could and still can do things no other car in its class could countenance. The Macan has no such obvious talent. It's not the biggest nor smallest, most powerful, fastest nor visually arresting SUV. Indeed at first it's hard to see what's so very Porsche about it. Which is why it becomes so important to find some characteristic to show its creators still know what makes a Porsche a Porsche, even if that thing is not relevant to the everyday duties the car is likely to be called upon to perform.

Porsche makes a stout defence of the Macan's right to be considered a legitimate son, rather than an adoptee given a new identity and a makeover. It points out that little more than a third of its components are shared with the

Audi and that the two petrol engines available – twin-turbo V6 units of 3-litre and 3.6-litre displacement for the Macan S and Macan Turbo respectively – are homegrown Porsche original engines, although they will now be made available to the rest of the VW group. They also make clear that all Macans get not only Porsche's own PDK double-clutch transmission but the aforementioned, unique four-wheel-drive system with its electro-mechanical centre diff. Nevertheless it should also be said that the Macan Diesel S, which will outsell both petrol models put together, takes its 258bhp 3-litre diesel engine in unchanged form from the Q5. Also the Q5's 309bhp diesel, which you might think would be perfect for the Macan cannot be chosen, at least for now. Bear in mind too that, model for model, the Macan is more than 100kg heavier than the Q5 and, in diesel form, actually weighs more than the long-wheelbase version of the Audi A8 limousine using the same engine.

Yet from such unpromising raw material comes not just a convincing SUV, but one that can wear its Porsche badges if not with pride, then at least without appearing as a character in an HM Bateman cartoon.

I drove the Turbo first. You'd never know its Audi origins from its interior,



which in fact is the standard Porsche cabin pulled, squeezed and stretched around its inherited hard points. So you still get an analogue speedo that's so difficult to read that Porsche also provides a digital speed read-out, and there's still a larger tachometer front and centre. The driving position is elevated, but not by enough to persuade those who really buy these cars to look down on people to abandon their Cayennes.

The engine responds to a prod with a purposeful woofle and when you step a little harder there's just enough time to feel like a stone being pulled back in a catapult before it flings you up the road. The sound is purposeful and more than backed by the accompanying


Macan is built on bones of Audi Q5 but with substantial re-engineering. Interior has more Porsche cues to reinforce badge

performance. What it's not is characterful, not in the same way it would be if the same amount of power had been developed using the larger but normally aspirated V8 engine Porsche has at its disposal. These days even a Porsche Turbo can no longer be seen to be above the tedious necessity for decent fuel consumption and the lower CO₂ emissions that come with it.

The biggest compliment I can pay its road handling is that there comes a time when you're driving along, having a perfectly pleasant time, and realise you've forgotten it's a two-tonne SUV at your command. It's poised and accurate and my only concern is the ride quality, which even in eastern Germany was only just good enough. Were I ordering one for the UK, I'd think hard about optional air springs.

Of course the car most British customers will order is not the Turbo but the diesel or, to be more precise, Diesel S. If you're wondering why Porsche has given an entry-level model an 'S' badge, it's because it's only the cheapest Macan you can buy for now. Next year Porsche will bring to market a base Macan that uses a 2-litre, four-cylinder Audi diesel engine and time alone will tell whether that stretches the brand too far. In the meantime the 3-litre V6 diesel confers pleasant, accessible performance and, allegedly, more than 44mpg.

The only car I can't figure out is the petrol Macan S, which features a stroked down 3-litre version of the Macan Turbo although, confusingly for those familiar with Porsche naming strategy, it has turbos, too. It's £16,000 cheaper than the Turbo, but there's a whole host of equipment that's not included on the S and the engine, while sweeter, has an emasculated mid-range so you have to really rev it to get decent results, which doesn't seem right in this kind of car. And it's barely any more economical.

Such reservations notwithstanding, the Macan is set to become the fastest-selling Porsche in history because that badge combined with its price and positioning will make it irresistible to many. To me if a Cayenne can call itself a Porsche then so can the Macan. It is the best car in an admittedly rather underachieving class. And if the requirements of membership of that class have resulted in a car more to be admired than adored, I don't see that Porsche can be blamed. 





VOLKSWAGEN GOLF R

Finally, it's a good month if there's an R in it

HAVE NEVER SEEN THE POINT of VW's frequent attempts to out-GTI the Golf GTI. Whether it was the last-generation Golf R or the earlier R32s, they've all been overblown and overpriced and have asked owners to accept compromises in ride and handling in no way offset by the undoubted gain in performance. In my most recent review of one – the Golf R cabriolet – I described its modifications as akin to pouring custard onto roast beef.

But this new Golf R is a different proposition, and comes based on VW's latest, lighter and stiffer MQB platform. Power from its 2-litre engine has risen from 220bhp for a standard GTI to 300bhp, a startling number for so small an engine. And unlike any other Golf, its power is diverted to all four corners of the car. You can buy one with three or five doors, with manual or double-clutch transmission.

And thanks to bespoke bodywork, wheels and tyres, you'll not struggle to distinguish it from its less potent sisters. In the past these modifications would have served only to heighten the disappointment when you actually got to drive the thing. No longer: an old

Golf R is a waste of money, a new one is the best premium hot hatch on sale.

For a start, it is extremely fast. VW claims a 5.1sec dash to 62mph for the manual car I drove, but it's certainly quicker than that. Either the test car was giving unusually good power in the cool, dense air in which I drove it, or VW is being its usual conservative self. If it had claimed 4.5sec, I'd not have blinked. But it also makes a nice noise, with a smooth but offbeat thrum interesting enough to sound almost like a five-cylinder motor at times.

But it's what VW has done to the chassis that really makes the car stand

FACTFILE

£29,900

ENGINE
2.0 litres, four cylinders, turbocharged

POWER
300bhp @ 6000 rpm

TORQUE
380lb ft @ 1850 rpm

TRANSMISSION
six-speed manual, four-wheel drive

0-62MPH 5.1sec
TOP SPEED 155mph
ECONOMY 39.8 mpg
CO₂ 165g/km

out. Instead of setting up the suspension merely to harness its 300bhp, now it's actually tuned to exploit it; its edges are now sharper, not softer. Indeed for those who find the current GTI capable but slightly antiseptic, an R is not so much an upgrade as a transformation. With optional adaptive dampers, it provides outstanding body control that gives drivers the confidence without which no car can ever be quick from point to point, let alone entertaining. And it comes with electric steering with feel so honest it seems hardly synthesised at all. But best of all the Golf is genuinely agile: the grip levels will make you smile, but what gets you giggling is the car's willingness to adjust its attitude to every whim of your right foot.

A Golf with a sense of humour? You'd certainly be forgiven for thinking so, and deciding it was well worth handing over the extra £3775 required to buy an all-wheel-drive 300bhp Golf R over a two-wheel-drive 220bhp Golf GTI.

In the past I have always told people they'd be mad to part with thousands more for an 'R' model Golf when the standard GTI was so capable. The more I think about it, the more I think they'd now be only a little less mad not to.





MASERATI GHIBLI

A pointer to the future, but needs sharpening

IT'S TAKEN A WHILE FOR THE penny to drop, but Maserati's bosses at Fiat now recognise the company couldn't credibly continue as an ultra-low volume manufacturer of charming but expensive, often infuriatingly flawed coupés and saloons. The name is one of the least polluted of all automotive brands, having been left untainted by the image of the outside-lane bully, the overpaid footballer or the ostentatious poseur. Its growth potential is enormous.

And this new Ghibli saloon, along with the forthcoming Levante SUV, is the car intended to transform that potential into sales. It's started well: before 2013, Maserati had never sold a five-digit number of cars in a year. Last year, and despite the Ghibli only being on sale for some of it, sales rose to 22,500.

The car is based on an abbreviated version of the platform used by its Quattroporte big sister and comes with a 3-litre twin-turbo petrol V6 offering either 325 or 404bhp depending on whether you choose the standard or 'S' model, or a 271bhp 3-litre diesel that'll

account for almost all European sales. To give you an idea of just how inbred the global motor industry has become, this diesel is a Mercedes design made available to Chrysler during the DaimlerChrysler days, which is why it's still used in now Fiat-owned Jeeps and therefore available to Maserati. It's built by VM Motori in Italy.

The diesel is the only Ghibli I've driven and it's intoxicating and irritating in approximately equal measure. It's a tempting proposition because it looks gorgeous on the outside and, so long as you're happy to spend more than £2000 on additional Poltrona Frau fine leather, the same can be said for the interior, too. It seems to work on paper, with convincing acceleration coupled to sensible fuel consumption.

On the other hand, it doesn't feel as fast as these figures suggest, nor is the engine as smooth as I'd like. This is Maserati's first stab at putting a diesel engine in one of its cars: the results are far from disastrous, but it shows.

The chassis is similarly flawed. At high speeds on open, flowing roads the Ghibli



FACTFILE

£48,830

ENGINE
3.0 litres, 6 cylinders,
turbocharged

POWER
271bhp @ 4000 rpm

TORQUE
443lb ft @ 2000 rpm

TRANSMISSION
eight-speed automatic,
rear-wheel drive

0-62MPH 6.3sec

TOP SPEED 155mph

ECONOMY 47.1mpg

CO₂ 158g/km

gets into a good rhythm, but on tighter, less well surfaced roads it's not so self-assured. Ride quality is mediocre and – despite a standard limited-slip diff – traction in the wet is no better than poor.

The result is a frustrating car, largely because it's easy to see how much better it could and should be. The design is sound because it combines those looks with a genuinely spacious cabin; the brand is ripe for exploiting and it is only the detail engineering that lets it down.

I think enough customers will feel inclined to forgive it, because it's so refreshingly different to German premium brands. The real test will come a few years down the line when for those customers the novelty has long worn off and they have to choose whether to get another or return to something less imaginative but more effective. That gives Maserati a little time to iron out its bugs and, if it does, I think the Ghibli retains the potential to transform the brand. If not, it will signal the loss of the biggest, best opportunity to turn Maserati into the car company it could so clearly become. ☐

MG3

Octagon-badged hatch boasts more facets than you'd expect



SLOWLY AND OUT OF THE ashes of BMW's disastrous acquisition of Rover, small octagons are starting to appear. MG, the marque that apparently no amount of bad management can kill, is once more showing definite signs of life.

Nor is this MG just some opportunistic badge engineering by the marque's Chinese owner, SAIC Motor. Although the two MGs to have gone on sale under this new management are both developments of models for the Chinese market, the MG6 can trace its lineage (and some components) back to the Rover 75, while this new MG3 was largely developed in the UK. Moreover both cars are assembled in Longbridge from CKD kits sent over from Shanghai. But while the MG6 is a convenient spin-off of SAIC's Roewe 550, the MG3 was conceived and developed as an MG in its own right.

The raw material is not promising. This is a Fiesta-sized hatch powered by an off-the-peg GM 1.5-litre petrol engine with seemingly little to offer by way of power, performance, economy or emissions. In its strut and torsion beam suspension, there appears little chance for it to shine, either.

But in a significant way, shine it does.

The first smart thing MG did was accept it had to find a way of making its presence felt in a market already overcrowded with impressive small hatchbacks. A pricing strategy designed to undercut the opposition saw to that. This means a top-spec MG3 Style with 104bhp costs more than £2300 less than the very cheapest five-door Fiesta you can buy, with 59bhp.

But its best move was giving the car to members of the same chassis team that produced the MG ZR, ZS and ZT. Back then they turned rather unprepossessing raw material into cars that, whatever their other failings might have been, attracted rave reviews for their handling. The MG3 deserves no less today.



FACTFILE

£9999

ENGINE
1.5 litres, four cylinders

POWER
104bhp @ 6000 rpm

TORQUE
101lb ft @ 4750 rpm

TRANSMISSION
five-speed manual, front-wheel drive


0-62MPH 10.4sec
TOP SPEED 108mph
ECONOMY 48.7mpg
CO₂ 136g/km

It would be no exaggeration to call this anonymous-looking little shopping car a hoot to drive on the right road. It grips hard, darts into the apex, wriggles around its axis if you snap the throttle shut and is capable of humbling all sorts of apparently more senior equipment if there are plenty of miles on the journey.

The rest of it is good enough. I ended up doing a couple of hundred miles in the top-spec model and was pleased to find I could sit there in cruise-controlled, air-conditioned comfort, listening to digital radio or my iPod, taking calls via fully integrated Bluetooth. And all this for less than £10,000.

MG now finds itself in an unfamiliar position as significant quantities of people are starting to take a real interest in the brand once more. And I think in the MG3, they'll find not just a likeable car, but a bargain too.

So I await its next move with interest. The chassis is crying out for more work to do and I think a turbo version of this car, with suitable visual enhancements but a price kept under similarly tight control, would be very interesting, not least because of the paucity of decent fast hatches selling for less than £15,000. In terms of the way the world now views MG, I think it could be a game changer.


Watch all four of our road test cars in action
@ THE MOTOR SPORT DIGITAL EDITION

Called to account

Mark Hughes' April column sums up brilliantly what us long-term addicts could not have done so pointedly. That having been said, we the spectators/paying public, have long been sacrificed to the Gods of the almighty dollar, as he states so well, but good luck getting any of them to react.

May I suggest a running challenge and a new monthly feature for the FIA (Todt), Ecclestone, past GP greats (Stewart, Moss, Hill, Webber et al, most of whom will speak their minds entertainingly) to constructively answer your points.

Second, why not conduct a reader poll and see the size of support for your suggestions. I expect it to be huge.

Yes I know I'm dreaming, but hope springs eternal...

Stephen Goss OBE, Boca Raton, Florida, USA

On the Mark

Wow, what a great explanation by Mark Hughes of the McLaren saga. I've been a *Motor Sport* reader since at least 1972 and Mark's explanation of the Team McLaren/Ron Dennis/Anthony Hamilton contretemps was extremely insightful and so well written. Congratulations to the world's very best magazine of its kind. Keep up the great journalistic standards you espouse. We in the former colonies greatly appreciate your efforts.

Bill Canfield, McLean, Virginia, USA

Don't forget the driver

As the battle rages over the future of F1, surely the big picture is that we're all in it because we love it, regardless of money, reputation or anything else. It is a human endeavour; do not under-estimate the cost of belittling that same human element. Spectators empathise with the driver, not the machinery; no one goes to a Grand Prix to see KERS in action, or marvel at a flapping paddle – we go to see 'derring-do', bravery and skill. Big, bad Bernie might well be right on the noise issue, time will tell, but attracting fans to GP2 and GP3 might be the right way to broaden appeal, letting F1 be the vehicle for manufacturers to test their technologies, advertisers their hoardings and investors their money machines.

I remember Bruno Senna running away from an F3 pack with only Mike Conway remaining within spitting distance. What happened to their F1 careers? If it depends so much on financial backing, proper talent will not be recognised. Have you ever heard anyone say "who do you think you are, Pastor Maldonado?"?

As a musician I remember when engineers ruled the roost and musicians were marginalised – it didn't work then, either.

Nick Reece, Llanelltyd, Dolgellau, Gwynedd

Hushed up

I went to the Australian GP meeting (below) – what a let-down. The approaching cars are silent in racing terms and little better from behind. What interests me is that journalists attending the winter testing must have known that. It was woeful and you all kept saying it was just different. Vested interests everywhere it seems, but the truth is now out.

John Winterburn, Melbourne, Australia



CONTACT US

WRITE TO:
Motor Sport,
38 Chelsea Wharf,
15 Lots Road,
London SW10 0QJ

OR E-MAIL:
editorial@
motorsport
magazine.co.uk

(Further letters may appear in our digital edition only. Please include your full name and address)

Bin your earplugs

Like Nigel Roebuck, I have some great memories of the turbo tearaways from Formula 1 in the 1980s.

My favourites were watching Ayrton Senna wrangling the bucking Lotus-Honda through the first chicane at the Adelaide street circuit and seeing Nelson Piquet emerging like a bullet from a cloud of thick black exhaust smoke down the pit straight at Monza. The sound and the fury were amazing and scary.

On both occasions I was privileged to be watching trackside as a journalist, a role I filled again for the 19th straight

year at the Australian Grand Prix.

I can report from Albert Park that the new-generation V6 turbos sound awful, a view shared by my colleague and veteran F1 reporter Mark Fogarty.

They are so quiet that you cannot hear the whistling, popping and banging that made the Eighties cars so entertaining. In fact, they were quieter than the Porsches racing in the Carrera Cup at the AGP and you no longer even need earplugs.

The reason they are so quiet is that all the energy from the exhaust is being captured for energy storage.

Since Nigel was not at Albert Park, I think he's going to get an unpleasant surprise when he actually hears the cars on a grand prix weekend in Europe.

The final verdict, rightly, goes to the paying punters and was easy to assess. Dozens of people at the AGP people told me they wanted to watch the V8-powered Red Bull being driven by David Coulthard in demonstration runs "because it sounds like a real Formula 1 car".

Paul Gover, Queensland, Australia

Silence can be golden

My wife and I have just returned from honeymoon in Malaysia, during which we attended the F1 Grand Prix. Having watched Melbourne and seen the numerous discussions surrounding the noise of the new F1 power units, I was intrigued to hear the cars live.

Having been to numerous Grands Prix during the past 20 years, I have heard the various V12, V10 and V8 configurations. I have to say, it was a great relief to sample first-hand the 2014 cars at speed. The sound is different, but remains loud and certainly 'racy'. The biggest change is that you cannot hear the cars unless one is passing in front of you.

We were seated in the start/finish grandstand, but you couldn't hear the cars on the straight behind us, or once they had turned past the first corner. This is significantly different, as last year I was in our Hungarian holiday home – 30km from the Budapest track across open countryside – and could hear the cars during free practice.

The engine/turbo combo creates a loud enough noise to increase one's pulse, but still have a comfortable conversation with the nearest and ☐

dearest sitting in the next seat. It also means I can hear the commentary over the PA, which was almost impossible in the past, and therefore have a better understanding of what is happening during the race.

Back at home I sped through my TV recording to see how it was conveyed by 5.1 television audio – nothing like the real thing. Therefore, I think the armchair viewer is not getting the best experience. Perhaps FOM TV needs to make a change to microphone positioning and how they set the audio levels for the global feed?

In summary, this could be a good thing for circuits and promoters. Fans need to be encouraged to buy tickets and go to the races, and circuits won't get the NIMBY brigade complaining about noisy cars spoiling their Sunday potterings. Perhaps we could see this new era of F1 leaping through Dingle Dell once again? We can all dream.

Paul Genge, by e-mail

Conspicuous consumption

How can Formula 1 claim to be going green with the inclusion of yet another floodlit race (Bahrain)? The inclusion of night and twilight races on the calendar must use considerably more energy than the V8s did when entertaining us.

The new V6 turbo era having begun, we have not failed to be disappointed by the lack of noise.

Bernie should forget about New Jersey and Long Beach and try to secure a race on the moon, which would be perfect in this new era of Formula 1 – no atmosphere.

Anthony Delaine-Smith, Bourne, Lincolnshire

Where sports cars lead...

In your May issue Nigel Roebuck reflected on an earlier era of F1 turbos. In his article he refers to "Renault's debut in 1977", but the pioneering began when the firm entered the 1976 Le Mans 24 Hours and tried to beat Porsche (succeeding two years later).

As we see at the present time, it is in endurance racing that we find the new advances in power sources that are relevant to motor cars we will soon be able to buy for use on the public highway. Long live Le Mans and sports car racing.

Brian Joscelyne, Braintree, Essex



Peter Revson – a serious player, despite a reputation unfairly laid on him

Max Revson

I want to thank you for including Andrew Frankel's retrospective on Peter Revson in the April issue of *Motor Sport*. Those of us who saw the man drive knew he was good. He was Jackie Stewart-smooth, if not quite Stewart-quick. I saw the famous Sebring 1970 race in which he carried movie star Steve McQueen to second place in the Porsche 908/2, behind Mario Andretti's Ferrari 512. Every time I looked up, it was Revson in the car; whenever I timed a lap, he was five seconds quicker than McQueen (although let's give McQueen credit for making arguably the best racing movie, *Le Mans*, until *Rush*).

I also saw a different side to Revson at Watkins Glen in 1973. During the pre-race parade, a detractor in the stands yelled out to him and called him a "candy-ass". From his perch atop the back of the car, Revson challenged the heckler to come out of the stands and see if he could whip a candy-ass. Good looking? Yes. Serious? Oh, yes.

Denny Gioia, State College, Pennsylvania, USA

A book worth finishing

I was particularly interested to read Andrew Frankel's article about the career of Peter Revson (April 2014), having just

read Phil Kerr's excellent book *To Finish First*. In the book Phil Kerr makes the same point about Peter Revson – he was a playboy by reputation only, and was dedicated to his sport.

I came across *To Finish First* in the bargain book section of a garden centre of all places, attracted by the superb Michael Turner painting of a McLaren Can-Am car on the front cover; a quick look inside confirmed I had to buy it. At that time I had not come across Phil Kerr before, nor had I any idea of his contribution to motor sport and F1 in particular. The book documents his journey, initially with his close friend Bruce McLaren, to the UK from New Zealand in the late 1950s. It goes on to give a fascinating account of his time with Cooper, Jack Brabham and McLaren, where he was a director until 1974. Phil then resigned from McLaren to return home to New Zealand.

The book also includes an account of Bernie Ecclestone's early and significant contribution to the Formula One Constructors Association, a timely reminder of his excellent work in those early days. For anyone wishing to read up on F1 history, *To Finish First* is a very good place to start.

Mick Miller, Burghfield Common, Berkshire

Beauties or beasts

It used to be said that if it looks right, it probably is right.

What, then, are we to make of the Porsche 919, Audi R18 or, horror of horrors, the Toyota TS040?

Beauty may be in the eye of the beholder, but I think I prefer a Porsche 917, Ford GT40 or Maserati 250F.

John Clegg, Chadderton, Greater Manchester

Healey achievements

Your report of Erle Morley's death in the May issue omitted two of the great achievements Donald and Erle recorded.

Driving the big Healey they won the Alpine Rally in 1961 and 1962, and were well placed in the 1963 event before retiring when the back axle failed, losing the opportunity to emulate Ian Appleyard and Stirling Moss by winning a golden Coupe des Alpes.

I attended a celebration dinner organised by the Eastern Counties Motor Club when they won the Alpine in 1961. Don Wright, Bucklesham, Suffolk

YOU WERE THERE

www.motorsportmagazine.com/forum



1

STEVE JONES

"My father took these pictures," wrote Steve Jones, "and I wondered whether they'd be of interest...?" Not too difficult, that one. Jones Sr was present at Le Mans in 1964, when Jean Guichet and Nino Vaccarella took their Ferrari 275P to victory **1** The Mauro Bianchi/Jean Vinatier Alpine M63 comes in for a service: the car finished, but wasn't classified **2** Cutting-edge transport for the Pedro Rodriguez/Skip Hudson Ferrari 330P



MICHAEL MILLER

Mainstream sports car racing returns to Brands Hatch this season, courtesy of the Blancpain GT Series, but it used to be an annual staple. Michael Miller took these at the 1971 BOAC 1000Kms **1** Jacky Ickx (Ferrari 312PB) and Rolf Stommelen (Alfa Romeo T33) lead the field en route to the start **2** The Martini 917s of Vic Elford/Brian Redman and Gijs van Lennep/Gérard Larrousse lead what looks like the John Burton/John Bamford Chevron B19, unless readers know otherwise...



SEND US YOUR IMAGES

If you have any images that might be suitable for *You Were There*, please send them to:

Motor Sport,
38 Chelsea Wharf,
15 Lots Road,
London SW10 0QJ

or e-mail them to:
editorial@motorsportmagazine.co.uk



On the pace Franchitti given key Indy role

THREE-TIME INDIANAPOLIS 500 winner and 2011 Hall of Fame inductee Dario Franchitti will drive the Chevrolet Camaro pace car at this year's 500.

The race takes place on May 25, almost eight months after the Houston accident that ended the Scot's competitive career. Doctors advised the four-time IndyCar champion not to race again due to injuries sustained when his Dallara flew into the fencing around the



street circuit after a collision with Takuma Sato. Since the incident Franchitti has been working as an advisor for Chip Ganassi's IndyCar squad, helping replacement Tony Kanaan acclimatise, but is ecstatic to be back on the track that brought him so much success.

"It's a tremendous honour to drive the pace car," he says. "As a motor sport historian and three-time winner of this great race, I'll appreciate every minute of pacing the field. Although I won't be competing in the greatest spectacle in racing, this will be as close as one person can get to the action. I can't wait."

Log on to:
www.motorsportmagazine.com/halloffame
to explore the career of Dario Franchitti
PLUS videos and career photo galleries

MEMBERSHIP OFFER

Simply complete the order form, attach your payment and send it to:
 Freepost RSGT-RJLG-KGLX, *Motor Sport* magazine,
 Unit 38, Chelsea Wharf, 15 Lots Road, London SW10 0QJ, UK
 (No stamp required if posted from the UK.)

- Yes, I would like to subscribe to *Motor Sport*
- I am an existing subscriber.
Please renew my subscription with this offer

Bundle options		Print Options	
	12 months	24 months	
<input type="checkbox"/> UK	£55.99	£95.99	<input type="checkbox"/> UK
<input type="checkbox"/> UK	£52 by Direct Debit		<input type="checkbox"/> UK
<input type="checkbox"/> Rest of World	£70	£126	<input type="checkbox"/> Rest of World
<input type="checkbox"/> USA	\$94	\$159	<input type="checkbox"/> USA
			12 months
			24 months

Digital Options 12 months £49.99
 24 months £89.99

MY DETAILS

Title Forename Surname
 Address
 Postcode Country
 Telephone
 E-mail

GIFT RECIPIENT

Title Forename Surname
 Address
 Postcode Country
 Telephone
 E-mail

PAYMENT OPTIONS - 3 EASY WAYS TO PAY

1. I wish to pay by Direct Debit (UK only). Please complete the form below (or a copy) and send to the address above, or call our subscription hotline
Instruction to your Bank or Building Society to pay by Direct Debit

To the Bank Manager (Bank/Building Society) Originator's identification number
 Address 5 5 6 9 6 5
 Postcode
 Name of account holder Please pay Motor Sport Magazine Ltd from the account detailed in this instruction subject to the safeguards assured by the Direct Debit Guarantee. I understand that this instruction may stay with Motor Sport and, if so, details will be passed electronically to my Bank/Building Society.
 Bank/Building Society account number
 Bank sort code
 Banks and Building Societies may not accept Direct Debit instructions for some types of account
 Signature
 Date

2. Please debit my: Visa Mastercard Amex Maestro
 Card no:
 Expiry Date:
 Maestro: Issue number: Security number:
 (Start date) (If applicable) (Last 3 digits on reverse of card)
 Signature Date

3. I enclose a cheque for _____ (payable to *Motor Sport*)

Terms & conditions: This offer is subject to availability. Offer closes on June 30, 2014. To ensure delivery of gift set before Sunday 16th June we require all orders UK order to be placed before 9 June and Rest of World orders before 3 June. Free gift will be sent to subscription donor. Subscriptions by Direct Debit will automatically renew upon expiry. Should the price increase thereafter you will be notified in advance. You can cancel at any time and receive a full refund on any issues yet to be mailed, with no questions asked. This offer is available to new subscribers only. *Motor Sport* may send you details of our products and services which we think may be of interest to you. Please tick if you do not wish to receive such offers by post or telephone Please tick if you do not wish to receive such offers by e-mail Occasionally we may pass your details to selected companies. If you do not wish to receive their products or offers, please tick this box QUOTE CODE FP14

Available in...



SAVE 50%

Bundle

The total *Motor Sport* experience

Get monthly delivery of your print magazine, instant access to the interactive digital magazine, as well as uninterrupted access to the *Motor Sport* online archive for 90 years of *Motor Sport* content.

Print

Save on the high-street price and receive issues direct to your door before they are in the shops.



SAVE 25%

Digital

Get instant access to the digital magazine, which contains fantastic interactive articles and videos. Also includes access to all our digital supplements such as Grand Prix reports.

Note: digital edition only available for iPad and Android tablets.



SAVE 25%



THIS FATHER'S DAY...
Why not treat Dad (or yourself) to a magazine gift that will last all year long?

Save up to 50%

and get *Grand Prix Driver by Driver* DVD and Book Gift Set FREE

WHEN YOU SUBSCRIBE TO MOTOR SPORT



RACING THROUGH TIME: STIRLING MOSS DVD Sir Stirling Moss is known throughout the world as the greatest racing driver never to win the Formula 1 World Championship. In this candid look at his racing past, Moss talks about the cars, his team-mates and rivals, and the great events in which he took part. Documenting his entire racing portfolio from his earliest days and breakthrough into Formula 1 to his career-ending accident in 1962, this programme is a great tribute to a true sporting legend and a must-have for all fans of British motor racing.

GRAND PRIX DRIVER BY DRIVER BOOK A comprehensive collection of profiles of the best drivers to have raced in Grands Prix and Formula 1. From the legendary pre-war aces such as Nuvolari, Caracciola and Varzi to World Championship Grand Prix stars such as Moss, Fangio, Clark, Senna, Schumacher, Hamilton and Vettel, this book examines the careers of some of the finest drivers in the history of motor sport. Packed with superb illustrations and statistical information, each profile looks at a driver's successes, failures and most memorable moments.



3 EASY WAYS TO SUBSCRIBE



Visit www.motorsportmagazine.com/FP14



Call 020 7349 8472
or USA Toll Free on 1-866-808-5828
and quote FP14



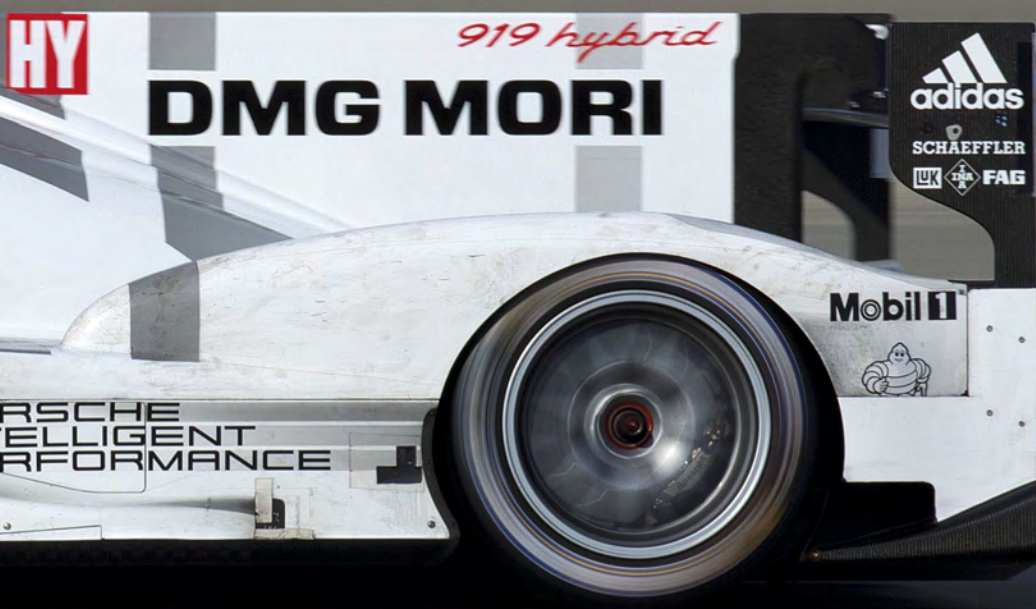
Complete and post the form on the opposite page

THE LONG ROAD HOME

Audi has ruled for 14 years, but for many Porsche is still the true king of Le Mans. Now -



finally – it returns. Racing’s most anticipated comeback is on **writer GARY WATKINS**



IT STARTED OFF AS A sabbatical: Porsche was only meant to be absent from the top of the sports car racing tree for one year. Now, 15 seasons after its withdrawal from top-line endurance racing, the German manufacturer is finally returning to its rightful place. That means the sharp end of the grid at the Le Mans 24

Hours and, now that there is one again, what we might generically call the world sports car championship.

The new 919 Hybrid LMP1 coupé ends the great interregnum – let’s call it so because Porsche is undoubtedly King of Le Mans – that began in late November 1998, just five months after it notched up a 16th outright victory in the 24 Hours. There have been false dawns along the way, most notably the still-born LMP2000 and the hope offered by the LMP2 RS Spyder, but after more than three years of planning, the great marque is now once again taking on the world and bidding for Le Mans victory number 17.



IT HAS BEEN QUITE A JOURNEY FOR Porsche, during which time the company has undergone a dramatic transformation. It is a very different organisation from the one that was an almost ever-present force at Le Mans through the 1970s, '80s and '90s. For a start, its ownership has changed: it has been subsumed into the Volkswagen Group, starting in 2009. But the changes run deeper. Porsche has gone from a niche sports car manufacturer building 18,000 cars a year in 1998 to 129,000 in 2012, with an expanding model range that sells more SUVs than it does sports cars.

The stars finally aligned to bring Porsche back. A new set of rules with an emphasis on efficiency was critical at a time that Porsche was beginning to develop its 918 plug-in hybrid super car. The recreation of the World Endurance Championship out of the Intercontinental Le Mans Cup was important, although it was confirmed when the decision to return was already made, and then there were changes in senior management at the company. Wendelin Wiedeking, the architect of Porsche as we know it today, left the company, with Matthias Müller arriving as his replacement and Wolfgang Hatz as research and development boss, the board position at Porsche with responsibility for motor sport.

“Probably about time,” is how Hatz describes Porsche’s comeback. That is why it was right up near the top of his agenda when he rejoined Porsche over the winter of 2010/11.

“When I came back – and I am an old



**“THERE WERE ONLY TWO
OPTIONS – FORMULA 1 OR LMP,
BUT LE MANS IS OUR
SECOND HOME”**



Porsche man – in 2010, it was clear for me that we had to return,” says Hatz, whose first spell at Porsche in 1989-1993 included an involvement in the unsuccessful 3.5-litre V12 Formula 1 engine raced by Footwork. “It was one of my targets. I was born in the race department: for me it was clear we had to do it.

“We had to return at some point, but the fit

with 2014 was perfect. We knew in which direction the regulations would go. The objective was that they should very much have road relevance and that fitted our strategies.”

Hatz and his predecessor Wolfgang Durheimer have used the terms “big motor sport” or “high-level motor sport” when talking about Porsche’s return. Those phrases



Porsche's hybrid system (right) employs water-cooled batteries recovering energy from both front axle and an exhaust turbine

The complexity of the rules has a lot to do with it, of course, but so does that long absence. Porsche believed it had to start again and has put together an all-new organisation on its Weissach R&D campus, entirely separate from the existing Porsche Motorsport department that produces the range of competition 911s from Supercup one-make racer to the GTE class Porsche 911 RSR that will race alongside the 919 in the WEC this year. This includes assembling an in-house race team: Porsche, in keeping with its long traditions, will run the cars itself without the assistance of an outside partner such as Joest (Audi) and ORECA (Toyota).

It is estimated that fewer than 10 per cent of

Hitzinger. "We did a lot of concept studies in the beginning, when we were looking at different technologies potentially available and in parallel talking to the regulators, the FIA and the Automobile Club de l'Ouest. It took us into the second quarter of 2012 to do more defined concept studies. Then it became clear which direction we should take."

That direction included a change of the energy storage system Porsche would employ. It originally planned to go down the same route as rival Audi, using a flywheel or mechanical battery developed by Williams Hybrid Power. It had run such a system on its 911 GT3-R Hybrid Nürburgring 24 Hours racer of 2010-11 at the same time as Audi



clearly encompass Formula 1, which Hatz admits was an option.

"There were only two options – F1 or LMP, but Le Mans is our second home," he says.

Hatz explains that Porsche could have been forced to go F1 had the VW Group supervisory board decided not to allow a head-to-head clash with Audi in LMP1. Perhaps the more likely scenario is that Audi would have been pushed into Formula 1 to leave the way clear for its newly acquired sister marque. Müller's comments in 2010 about the possibility of Porsche going F1, backed up by those of Durheimer, have been widely interpreted as part of the game of politics as the two marques manoeuvred for the right to go for Le Mans glory when the new rules came on stream in 2014.

The supervisory board, as history relates, didn't have a problem with Audi and Porsche racing at Le Mans, so long as they were using different technologies. That means diesel power for Audi and petrol for Porsche.

That the Porsche contender would be powered by petrol was one of the few decisions already in place when it announced its intention to return to Le Mans three years before its projected comeback. Porsche's return has been a long time coming, but it has also been a long time in the making.

the 200-plus staff working on the LMP1 project were existing Porsche employees with experience of its previous racing programmes. LMP1 vice-president Fritz Enzinger, regarded as Hatz's man on the project, joined from BMW. Likewise team principal Andreas Seidl, who has charge of the race squad, worked at the Sauber BMW F1 team and then continued with the Munich marque in its first year back in the DTM in 2012, while technical director Alex Hitzinger came from F1 and Red Bull Racing, where he was head of future technologies. There were, interestingly, also a number of staff recruited from the defunct Peugeot 908 P1 turbodiesel programme.

Hitzinger says that when he joined Porsche in December 2011, "There were just a few people looking at ergonomic studies and stuff.

"We had to build a completely new team from scratch and even had to create the infrastructure of the buildings," he says. "We have brought in people from all over the place and from very different horizons."

Key decisions about technology that the car we now know as the 919 Hybrid would employ were still to be taken. That was a job made all the more difficult by the fact there weren't firm regulations in place at the time.


"At the very beginning, there was only a rough idea about the regulations," says

was independently forging a link with the British company.

"When I arrived, we looked at the whole spectrum of technologies again and we did a proper in-depth analysis and then changed course," says Hitzinger.

The 919 runs a lithium-ion battery pack because, adds Hitzinger, it offers the best compromise between energy density, power density and weight. In layman's terms that's the amount of energy that can be stored and the rate at which it can be stored and then released.

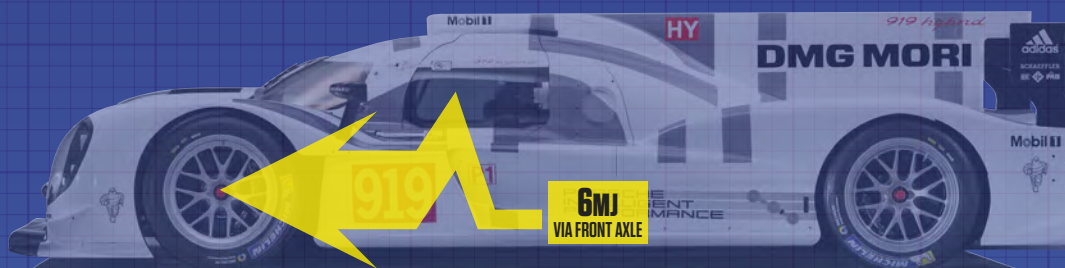
The new rulebook allows two energy-retrieval mechanisms in the LMP1-H (H for hybrid) class in which manufacturers must run. Porsche, in common with both Audi and Toyota, has opted for a front-axle system to recuperate kinetic braking energy (a Motor Generator Unit – Kinetic in F1 terminology) and a second system driven by exhaust gases.

Opting for front-axle energy retrieval was a no-brainer with the abolition of the so-called '120 Rule', which prevented Audi from returning power to the front wheels below 120km/h (75mph) in 2012-13. The higher braking loads on the front axle also make such a system more efficient than one on the rear axle and offers advantages of traction by making an LMP1 car four-wheel drive for key phases of each lap. 

DIFFERENT WAYS TO SKIN A CAT

Facing the same rules, the three manufacturer teams have taken separate paths

LISTEN TO AUDI, TOYOTA AND PORSCHE, AND YOU'LL BE LEFT IN NO DOUBT THAT EACH IS CONFIDENT it has picked the best technical solutions to the conundrum set by the 2014 LMP1 rulebook. That's what makes the 2014 World Endurance Championship so intriguing. The three factory players have each chosen different engine configurations (split between two different types of fuel), different means of retrieving energy and different storage systems. The bottom line is that they can't all be right.



"To be able to fit a big hybrid system, you have to have a very light base car. We think you want a light and compact engine and a very highly efficient engine. One way to achieve this is to downsize."

Alex Hitzinger, Porsche LMP1 technical director

PORSCHE 919 HYBRID

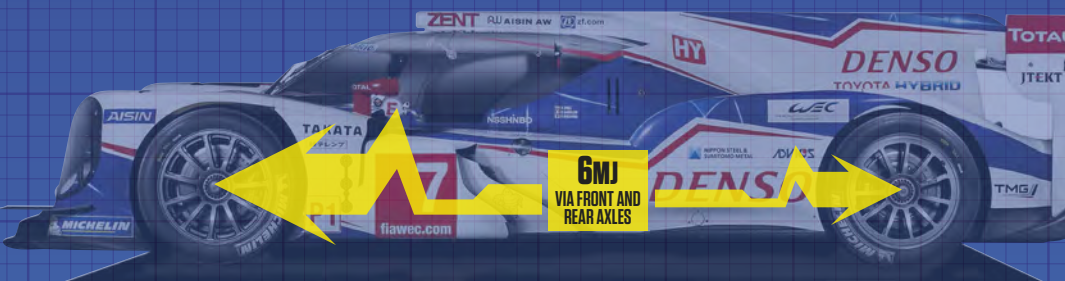
Engine: 2.0-litre single-turbo direct-injection V4

Fuel Petrol

Hybrid class 6MJ

Energy-retrieval system Front-axle kinetic, exhaust gas-driven turbine

Storage system Water-cooled lithium-ion batteries



"A small-capacity turbo is efficient in your wife's car, but not in a racing car. If you want to increase the efficiency, you need to drop the revs."

Pascal Vasselon, technical director Toyota Motorsport GmbH

TOYOTA TS040 HYBRID

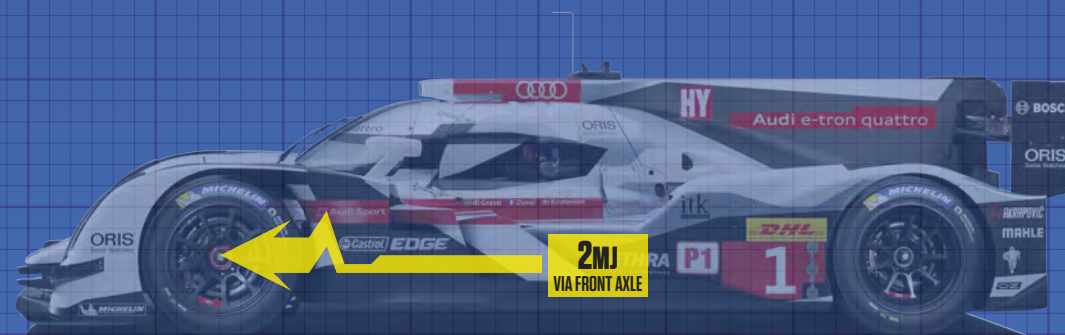
Engine 3.7-litre normally-aspirated V8

Fuel Petrol

Hybrid class 6MJ

Energy-retrieval system Front and rear-axle kinetic

Storage system Super-capacitor



"We think the combination of the diesel engine and the 2MJ system is a better combination than going into a bigger class and having the problem of not getting the weight where you want it."

Wolfgang Ullrich, head of Audi Sport

AUDI R18 E-TRON QUATTRO

Engine 4.0-litre single-turbo direct-injection V6

Fuel Diesel

Hybrid class 2MJ

Energy-retrieval front-axle kinetic

Storage system Flywheel 

The exhaust system is distinct to that employed in F1 (an MGU-Heat) and that originally planned for Audi on its latest R18 e-tron quattro, in that it recuperates energy not via the turbo but a second turbine in parallel. This is more efficient, argues Hitzinger, who also points out there's no need for an active F1-type system that can put power back into the turbo to reduce lag: "If you don't have a problem [with lag], you don't need it."

There are four sub-classes of hybrid power allowed under the new rules, ranging from two megajoules per lap of the 8.47-mile Circuit de la Sarthe at Le Mans to eight megajoules. There is a sliding scale of energy or fuel allowed to cars running in each, but there is an incentive in terms of fuel allocation to run in one of the higher classes.

Porsche, like Toyota, has opted for the second highest, which allows for 6MJ to be returned to the track per lap of Le Mans. That is a change from its initially-stated intent to run in the highest class after it struggled to hit the 8MJ figure with its systems. The choice of engine is inextricably linked to the decisions about the hybrid systems.

"The regulations are all about efficiency and weight. Nobody talks so much about the

"WINNING IN 2015 IS SOMETHING WE HAVE TO DO. WE WANT ANOTHER LE MANS VICTORY"

weight. But the weight is extremely important in these regulations," Hitzinger says. "There is an incentive built into the regulation to have a very big hybrid system. In order to have weight to spare to invest in the hybrid system, a lighter base car is an advantage.

"We think you want a compact engine, a light engine and a very highly efficient engine. One way to achieve this is to downsize."

That explains Porsche's choice of a single-turbo four-cylinder of two-litre capacity. A vee configuration was favoured over an in-line set-up, again in the interests of weight saving because it allows the engine to be a structural component.

"If you went for an in-line four, you would have to have some kind of spaceframe around [the engine] and that is obviously additional weight and complexity," says Hitzinger.

This V4 engine was beset by a serious vibration issue from the moment it undertook its initial roll-out at Porsche's Weissach test facility in June last year. It led to a major redesign – including a change in the firing order – that was put in place almost immediately after the shakedown.

"We recognised it straight away at the rollout and we reacted," reveals Hitzinger. "It was a big call, but we did the right thing."

The long lead time on the design and delivery of a crankshaft meant that the new engine didn't run in the car until Porsche's final test of 2013, at the Algarve circuit in Portugal last December. Hitzinger suggests it is wrong to believe that Porsche wasted the head start it gained over rivals Audi and Toyota by getting the car out so early.

"For sure we didn't do much performance testing in the beginning last year, but then that was never going to be the priority with a new car and concept," he says. "There was a lot that we learnt all over the place on the car."



THE ALGARVE TEST WAS A TURNING point for Porsche and was followed by further encouraging tests at Bahrain and then Sebring, when revised aerodynamics came on stream. The team then went to Paul Ricard, ahead of the official WEC test at the same venue at the end of March, for an endurance run. It didn't complete 24 hours, but it did manage to pass the six-hour mark – the duration of all WEC races apart from Le Mans – on two occasions.

The Porsche also ran reliably through the two days of the official 'Prologue', with only one of the cars spending any serious length of the time in the pits. This was the most significant fact to emerge from a test in which the no20 Porsche topped the times in the hands of Brendon Hartley. The times were of little significance, given that each of the three manufacturers was sticking to its own programme, but the reliability of the Porsche was not. It changed the way some are viewing the 919 programme.

Porsche, however, is sticking to its relatively modest goals for year one of the programme with its two cars, one that Hartley shares with star signing Mark Webber and Timo Bernhard and the other (no14) driven by Romain Dumas, Neel Jani and Mark Lieb. Enzinger says that finishing races is the first priority and being competitive is the second, while Webber has talked about the desire to "get some bubbles here and there" this season.

Those boxes were all ticked first time out at Silverstone in April with third place for Webber, Bernhard and Hartley. "A dream start" is how Enzinger put it, but Porsche is still regarding this as a learning year. For next season, though, there can be only one aim. "Winning in 2015 is something we have to do," says Enzinger.

"We want another Le Mans victory." 🏆



PORSCHE HAD WON THE 1998 Le Mans 24 Hours with its 911 GT1-98

(below), but the new carbon-chassis machine was thrashed in that year's FIA GT Championship by Mercedes. The final score was 10-0 in Merc's favour. That beating was the catalyst for Porsche's decision to take a year out of top-line sports car racing in 1999.

The company's racing hierarchy saw that the writing was on the wall for its turbocharged flat-six concept, which had powered all its Le Mans winners since the 917. By autumn 1998 it had already started on an all-new car and, crucially, engine to replace the short-lived GT1-98.

"We knew it was over for that engine," says long-time Porsche senior engineer Norbert Singer. "In terms of efficiency we were not able to compete at the top level.

"There wasn't really the development on turbo engines at that time, so the idea was to have a larger-displacement normally aspirated engine, which would be much better in terms of acceleration."

It quickly dawned on Singer, Porsche Motorsport boss Herbert Ampferer and R&D boss Horst Marchart that time was too short to undertake the project in time to defend its Le Mans crown in 1999.

"It was clear that we couldn't do it -



a new car, a new engine and a new gearbox – in half a year” continues Singer, “so we said we don’t come back in ‘99.”

There were other factors. These included rule changes that Porsche believed would benefit LMP900s, as LMP1 prototypes were then known, over GT1 machinery such as its own car in what was about to become the GTP class, with removal of the pretence that they were road cars. That night Ampferer also, presciently, talked about the need to build a “motor sport pyramid”, which today is firmly in place with Porsche’s range of 911 racers.

Ampferer made it clear on the night of Porsche’s bombshell, dropped at its annual prize-giving ceremony in late November, that the new car would be a prototype rather than a GTP machine. That open-top prototype, which became the LMP2000, ran for the first time at

Porsche’s test track in November 1999, only to be axed before it had left the gates and, according to unconfirmed stories, long before it was even assembled.

Porsche was changing, the transformation spearheaded by the arrival of the Cayenne SUV, and Wiedeking decided resources had to be focused on development of this vehicle.

That has resulted in a conspiracy theory that still abounds to this day – that Porsche was prevented from going up against Audi, then about to start its second season in prototype racing, by VW Group chairman Ferdinand Piech, whose family was a major shareholder in Porsche.

Singer says this can be discounted.

“I asked Mr Marchart two or three years ago about that,” he says. “He said that it was all bullshit. Porsche needed

the money to develop the Cayenne. Looking back it was a big step: it turned Porsche into a much bigger company.”

Instead the LMP2000 project spawned Porsche’s Carrera GT supercar. Technology employed on the LMP900 prototype found its way into the million-dollar machine, as did its five-litre V10 powerplant. There was talk of this car being raced in the GT1 category by Ampferer at a time when many were predicting the demise of the prototype division.

Singer insists that a racing future was never envisaged for the Carrera GT, on the strict instruction of Wendelin Wiedeking.

“When we stopped the LMP we asked ‘what are we to do?’ We have no work. Wiedeking said you can make a GT car out of the LMP2000, which became the

Carrera GT. That made us smile, but at the first meeting about the car, he said, ‘I tell you, this car will never go to the race track, because if you have a race car in mind it will become far too expensive and we cannot afford it. This is a road car. It was clear from the beginning.”

The knowledge from the LMP2000, both on the chassis side and on the engine, was utilised when Porsche finally did build another prototype in 2004. The RS Spyder was, of course, an LMP2, all that Wiedeking would sign-off, although there was a clear hope at Porsche Motorsport that it would lead on to an LMP1.

“Our goal was always to prepare for LMP1,” says Hartmut Kristen, who had replaced Ampferer by the time the decision to build the RS Spyder was made in late 2003. Unfortunately, by the time Porsche might have been ready to move up the company was in the throes of the power struggle that ultimately led to the company becoming part of the VW Group, and the world was in the midst of an economic turn-down.

Both situations had to be resolved before Porsche could finally decide to return to top-flight sports car racing.

THE INTERREGNUM

How Porsche’s 12-month lay-off from endurance racing turned into a 15-year absence from Le Mans



Watch the last moments of that '98 Le Mans win
@ THE MOTOR SPORT DIGITAL EDITION





{ LUNCH WITH }

DR WOLFGANG ULLRICH

Synonymous with Audi's success in touring car and endurance racing, he'll be chasing the company's 13th Le Mans win in 15 years this June


writer SIMON TAYLOR | photographer JAMES MITCHELL



B EING A RACER, AND BEING a winner, takes many forms. The man in the cockpit climbs onto the podium and sprays the champagne, and he gets most of the glory. But without the serried ranks lined up behind him who have used their own skills to get him there – designer to aerodynamicist, engineer to strategist, sponsorship hunter to pit crew and even personal trainer – that champagne would never get sprayed. Motor racing at its highest level has always been a team sport, even if the media find it easier to focus their attention on the individual.

To pull those disparate specialists into a cohesive whole, to unite and motivate them, all the best teams have a father figure. This man, at his best, will be able to draw on a variety of talents. First, he must have the business savvy and the persuasion to convince the suits around the boardroom table, whether they be sponsors or proprietors, that the millions he wants to spend on racing will produce a commercial

benefit worth even more millions. Then he will need the engineering ability to conceive his own vision of the car, and gather around him the design talent to convert that vision into reality. This is all before we get to hiring and managing the right driving talent, pulling together the race personnel that will allow cars and drivers to maximise their potential, and building speed and reliability through testing and racing to move forward towards a common goal.

That goal, in the case of my lunch guest this month, is what many regard as the world's greatest motor race: *Les Vingt-Quatre Heures du Mans*. Dr Wolfgang Ullrich has directed and overseen victory at Le Mans an extraordinary 12 times in the past 14 years, an unrivalled achievement for one man. There have also been multiple endurance victories around the world, from Fuji to São Paulo, from Sebring to Spa, as well as championship glory in DTM, BTCC and Super Touring series around the world. For more than 20 years Wolfgang has been Audi's Director of Motorsport, but for him there is no question of this senior role allowing him to 

keep his suit on and delegate to a subordinate the tense, on-the-job, minute-by-minute management of each race. This June, at the age of 63, he will be in his overalls at Le Mans as always from Saturday morning, doing a 35-hour day in the Audi pit and directing every lap, every pitstop, every strategic decision until the finish flag on Sunday afternoon. Just as much as the men in the cockpits of the R18 e-tron quattros, Dr Ullrich is a racer.

At the track he is a serious, authoritative man, totally focused, even forbidding, and very much the team leader. But having accepted my invitation to a bowl of pasta at his favourite Italian restaurant, a stone's throw from the giant Audi factories at Ingolstadt, Wolfgang relaxes into the role of a favourite uncle: friendly, courteous and charming, with frequent bursts of self-deprecating laughter. That makes him, in my experience anyway, a typical Austrian.



HE WAS BORN IN VIENNA IN 1950, AND credits his grandfather with sparking his interest in technology. "At home he was always working on something – repairing a neighbour's washing machine, or taking something to pieces. As a child I spent hours watching him. And at each step he explained to me what he was doing, to make sure I understood. I'd always loved cars, and I went on to do an automotive engineering degree at the University of Vienna, which makes a speciality of that subject. Austria is a small country, but it has a long heritage of automotive design: Dr Ferdinand Porsche was Austrian, and so was Hans Ledwinka [whose streamlined road car designs for Tatra were truly innovative]. It's in our culture somehow. If that's what you want to study, you don't need to go abroad: you can get a very good degree in Vienna.

"After my degree I went on to a doctorate, doing various specific projects for the motor industry. My first contact with motor sport came when the Technical Institute, as an independent body, was asked by the FIA to investigate the water injection that some of the new F1 turbo engines were using. There'd been an appeal from a normally aspirated team about its legality, and it landed on my desk. I had to contact all the engine suppliers and analyse their systems, and this got me close to the technical heart of top level racing.

"When I left university I joined the Austrian manufacturer Steyr-Daimler-Puch, but I still wanted to get into motor sport, and using one of my contacts from the water-injection project I approached Renault. I had a good meeting with the people at Viry-Châtillon, and soon after that I got a verbal offer to join their F1 team. But a week later came a letter to say that it had been a bad year for the automotive



DR WOLFGANG ULLRICH CAREER IN BRIEF

Born: 27/8/1950, Vienna, Austria

1993 Appointed Head of Audi Motorsport in November

1994-1999 Super Touring programmes in several countries, multiple title successes **1999** Audi enters Le

Mans, R8Rs taking 3rd and 4th **2000-02** Le Mans winner **2004** Audi joins DTM as factory team, wins title;

first of five straight Le Mans victories **2010-13** Audi increases Le Mans win tally to 12 **2012-13** Audi scoops revived World Endurance Championship

industry generally, Renault's F1 budget was being heavily reduced and the firm was having to sack people. There was nothing they could do and the offer was withdrawn.

"But another contact got me a job at Porsche, which was then doing the TAG turbo engine for McLaren. I was working alongside the guys who did that engine, but I didn't have much involvement, just some crankshaft calculations, things like that. From Porsche I did some work for a catalytic systems supplier, and then suddenly, near the end of 1993, I was contacted by an old friend from university, Herbert Demel, who was then head of technical development at Audi – he later became CEO.


He said, 'Come and run Audi Motorsport'. So I came to do the same job I do today. I haven't made any progress at all! [Uproarious laughter.] Although then it was 65 people, now it is 265. More people, more cars, more classes of racing. And in 20 years, yes, we have won some races.

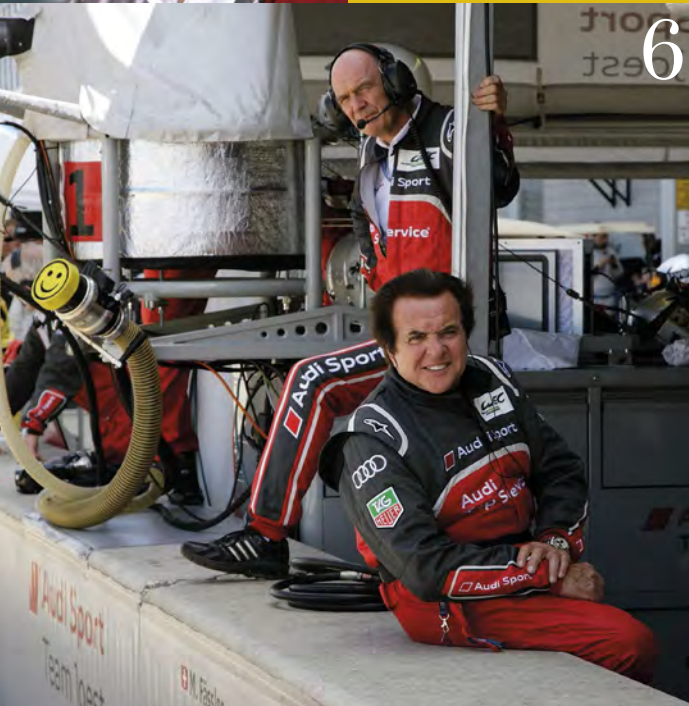
"But it very nearly didn't happen at all. On the Friday afternoon I left my previous job and travelled here, ready to start my new job on Monday morning. And on Sunday evening I had a call from Demel. He had some bad news for me. There had been an Audi main board meeting on the Thursday, and because of the general recession in automotive markets they had approved the decision to withdraw totally from all involvement in motor sport. 'But', said Albert, 'If you can persuade them in the next few days to change their minds, if you can come up with something worthwhile for less money and sell it to them, you will still have a job.'

"So from the first I had to work very hard to keep Audi in racing. I proposed a smaller programme in Super Touring, with a drastically reduced budget but using local importers as far as possible. We started winning straight away, although not in Germany, and then in 1995 Frank Biela won the one-race World Touring Car Championship at Paul Ricard. In '96 we went into your BTCC with Biela, and he pretty much dominated it. That year in late September Frank won the last BTCC race at Brands Hatch, so we had the titles for drivers and manufacturers there, and the same day Emanuele Pirro won the last two rounds of the German Super Touring Championship at the Nürburgring, clinching that title. So we sent a plane to Brands, picked up Frank and brought him back to the 'Ring. We had a good party.

"The Super Touring rules kept you pretty close to road-car spec, and in different countries we were up against BMW, Ford, Alfa Romeo, Opel, Toyota, Nissan, Renault, Honda, Peugeot. It was all very competitive. We ran in seven championships, including Australia, South Africa, Spain, Belgium and Italy, and we won them all. In each case it was with a national importer team, but working with a group of our own people from Audi Sport."

After such success in touring cars, an endurance sports car programme was the next step. "Audi had by then a lot of experience in touring cars and rallying, but we had no experience of Le Mans at all. At the end of 1997 I heard that Reinhold Joest, whose organisation had run Porsches so well for so long, might be available because Porsche was reducing its LMP programme. In fact Joest's Porsche-powered privateer entries had won Le Mans in '96 and '97, and nobody ever thought that Reinhold would move away from Porsche. But I called him, we met, we signed a contract, and we've worked together ever since.

"At first we tried two different approaches in endurance racing, the open R8R and the 



1 Frank Biela leads rivals into Fosters at Oulton Park, en route to victory during his successful BTCC title campaign in 1996 2 Audi's hedge-betting R8R and R8C at Le Mans in 1999 3 Historic diesel victory at Le Mans, 2006 4 Early days, Ullrich's first full Audi season in 1994 5 Sarthe win number 12, 2013 6 With longtime ally Reinhold Joest at Le Mans in 2012 7 Mike Rockenfeller won last season's DTM title - and became the sixth Audi driver to have done so since 2004

coupé R8C, both using a twin-turbo 3.6 V8. In England we took over the old TOM'S Toyota factory in Norfolk, which we wanted because it had all the equipment for carbonfibre manufacturing, and we had none of that in Germany. We called it Racing Technology Norfolk. We built the R8Cs at RTN, and Richard Lloyd and Audi Sport UK ran those, while Joest ran the R8Rs. At Le Mans in 1999 the coupés had gearbox problems, but the Joest cars finished third and fourth, so that was a good start. It was a conservative car and we never expected to win: we just wanted to get through to the end. We had to carry the reputation of a brand that didn't have technical failures in racing, so we were taking a big risk. But in those days – it's 15 years ago now – you could reckon that if you got your sports-prototype through the race without a major repair, you'd be on the podium. You had to be patient: let the others race, let the others break, don't get nervous if you are two laps behind.

“But for 2000 we knew we had to make a big leap. That was the R8. It brought us victory at Le Mans first time out – in fact we finished 1-2-3 – and that car went on to have a racing life, a winning life, of six seasons. We had to develop it year by year, of course: better aerodynamics, TSFI (turbo stratified fuel injection), lots of on-going work. But the basic

“LET'S HAVE A GEARBOX WE CAN CHANGE WITHOUT LOSING MORE THAN A LAP”

concept didn't change. We incorporated a detachable rear end because we'd analysed all the reasons why top teams had retirements at Le Mans, and the most frequent mechanical failure was the gearbox. With our gearbox partners we'd come up with a very good transmission, but we couldn't guarantee to make it bullet-proof. So we said, let's try to have a gearbox that we can change without losing more than a lap, which at Le Mans is less than 3min 40sec. That was our target. It was a brilliant concept: an entire rear end sitting ready and waiting in the pit, gearbox, suspension, driveshafts all assembled, with the geometry and set-up exactly right, so that if you unbolt the old back end and put on the new one, the car will drive exactly as it did before.

“Because of this we won many races that we would have lost, not because of gearbox failures, but because of accident damage. If the driver could somehow nurse the car back to the pits we could send him out again in less than four minutes. But the ACO [Le Mans organiser l'Automobile Club de l'Ouest] decided that it did not follow their idea of endurance. So, although we hadn't had a single gearbox failure and had only used the facility because of accidents, after 2005 they banned it.



“IT WAS IN APRIL 2001, TESTING AT THE Lausitzring, that we lost Michele Alboreto. That was the most negative day of my career: first, because when something like that happens it is the worst, and you will do anything to avoid it. And second, because it was Michele. He'd already won Le Mans for Joest in 1997, aged 40, and when Joest and Audi first got together Reinhold recommended him to me. From the start of our endurance programme he was a friend and guide to our younger drivers, and put a lot of personal effort into working with them and passing on all his experience. He was fourth at Le Mans for us in 1999, then third in 2000. And his character and his approach made him invaluable in testing. I could ask him exactly what he thought, and he would give me an intelligent, constructive answer. If we had a difficult day's testing he was always the last to leave the circuit. He would have a good word for everybody working on the project, because he felt so much part of our team.

“At the Lausitzring you have a banked test oval, and you have an infield handling track. Our routine that day was to do two high-speed laps of the oval, then two laps of the infield track, then into the pits. Then out, the handling track, onto the oval, and then in. He came in, we changed tyres, he went out onto the handling track and he picked up a slow puncture. But in the slow section he didn't feel it. Then onto the oval the pressure was already too low, and at high speed the tyre failed. After that we developed our tyre pressure monitoring system, which has been on all our race cars ever since.”

Joest-run R8s finished 1-2 at Le Mans in 2001 and 1-2-3 in 2002, but now there was a new string to the VW Group racing bow: the Bentley Speed 8. Designed by Peter Elleray, who had been responsible for the Audi R8C, it was built at RTN in Norfolk. Although it used the Audi V8 engine, it had several key differences, including Xtrac transmission and Dunlop tyres. After earning third place in 2001 and fourth in 2002, Bentley triumphed at Le Mans in 2003.

“Richard Lloyd was team principal, and the team manager was John Wickham. We'd worked with John ever since we first came into the BTCC. Apart from the engine the whole car



Ulrich had to persuade Audi to remain in the sport late in 1993 – but his persuasive powers have proved spectacularly fruitful

was done in England, so it was very much a Bentley project. But we supported it and our people were involved: it used the synergies of the group. And to help run the cars at the race we dressed up some good Joest people in green overalls. But 2003 was a busy year because, although we had no works/Joest cars we had R8s from Champion, Audi Sport UK and Audi Japan. The Bentleys finished 1-2, the Champion car was third and the Japan car fourth.” The huge British contingent in the crowd was ecstatic as Tom Kristensen, Dindo Capello and Guy Smith led home Johnny Herbert, Mark Blundell and David Brabham in the first Bentley victory at Le Mans for 73 years.

In 2004 and '05 the R8 continued its winning ways at Le Mans. Officially customer teams



now ran the cars, but in most cases they came direct from the factory. “Team Goh, for example, sent its Japanese mechanics to Ingolstadt for four months to build up the car, learn everything about it, learn to work with our people. And when they all got to Le Mans it was like one squad, a mix of our guys and the Japanese, the English and so on.”

Meanwhile Wolfgang and his team were already working on their dramatic new concept for 2006: the R10 turbodiesel. This was a major initiative for Audi, and perhaps the most dramatic way yet to strengthen the marketing message of the brand through motor sport. “Diesel technology was now vitally important for our road car programme. Its image was economical, reliable, responsible; but it wasn’t

sporty. We wanted to change that, and we knew it would be a great story if we could be the first to go to Le Mans with a diesel car and win. But first we had to persuade the ACO, whose rules stipulated only one type of race fuel, that it was worthwhile, not just for us but for others.”


The R10 TDi was raced first in the Sebring 12 Hours in March 2006. Audi had won Sebring with the R8 for the past six years running, but this was a trip into the unknown. Both cars, run under the banner of Audi North America, had problems in practice and qualifying, and in the race one was out after four hours with an electronic failure. “The other car said to itself, ‘OK, now it’s race day. Time to forget my problems and do my job’.” It took Kristensen, Capello and Allan McNish

to a comfortable win. “But for us that race was just part of the development programme. Straight after winning the 12-hour race, and without touching the car, we were back on track at 8 o’clock on Monday morning and we did another 12 hours. And 24 hours at Sebring is tougher than 24 hours at Le Mans.”

Of the diesels that went to Le Mans that June, one had sundry problems that delayed it enough to drop it to third at the end, behind the fastest Pescarolo. But the other, driven by Biela, Pirro and Marco Werner, won by four laps. History had been made. The same trio won in 2007, but the other two cars retired after separate accidents – remarkably, the first time a Joest-run Audi had retired at Le Mans. That year Peugeot had arrived with a pair of its own turbodiesels, and got one home in second place. And in ’08 Le Mans became a serious battle between these two manufacturers, with Peugeots qualifying 1-2-3 and starting as favourites. At the flag the McNish/Kristensen/Capello Audi had it by a whisker, with Peugeot second and third, Audi fourth, Peugeot fifth and Audi sixth. It had been a close-run thing.

And then came 2009, and the only time in his involvement in the race since 1999 that a car ultimately directed by Wolfgang Ullrich has not won Le Mans. To vanquish Peugeot, Audi developed a new car, the R15. “It was a completely new aero concept, with a lot of the air that we would normally try to get around the car passing through the car. That allowed us to raise downforce to a new level. We have a wonderful partnership with Michelin, which worked with us to try to maximise the potential, but to find the right set-up for Le Mans we had to set the cars up very stiff, and that compromised the handling. So in absolute terms we lacked pace. Peugeot finished one-two, we salvaged third place. It was a big disappointment: but afterwards we had a good party with the Peugeot guys.”

For 2010 the R15 had become the R15-plus, with the previous year’s aerodynamics radically rethought. “And Michelin’s rubber now worked so well with the car that we could do five stints on one set of tyres.” This time everything went to Audi’s script: the R15-plus TDi finished 1-2-3, while Peugeot had a nightmare of engine failures. “It was not how we wanted to win, and when the last Peugeot blew up I could not really find a big happy smile. I remember one of my engine guys was grinning when it happened, and I said to him, ‘Think about how it would feel if it happened to you. We want to win in a straight fight, not like this.’ I always had a good sporting relationship with Peugeot’s Oliver Quesnel, and their engine man Bruno Famin.”

For 2011 new rules downsized the engines from 5.5-litres to 3.7-litres, and a totally new car was needed. For the R18 Audi opted for a single-turbo V6 and coupé bodywork. The race started badly when two cars were in 

horrifying accidents. “Allan was running just behind Timo Bernhard. The GT Ferrari they were lapping only saw one Audi in his mirrors and moved across on Allan, who went cartwheeling over the barriers. Our cars are very strong, but we don’t want to prove it like that. Then Mike Rockenfeller crashed late on Saturday night, so for the last 17 hours we only had one car. Then in the closing stages André Lotterer was leading by a small margin when,

when he went out in practice Emanuele and I got on a golf cart and went out to watch. On his second lap Tom came fantastically quickly down into Turn Two, and Emanuele and I looked at each other with the same thought: ‘He’s not going to make it’.

“Tom went straight off, into and under the tyre barrier, and disappeared completely. When the dust settled all you could see was this huge pile of tyres with just the rear wing sticking out.

because in a 24-hour race you might pass him 50 times. If you can’t be sure how he will react as you catch him, it’ll spoil your rhythm.

“Who shares with whom in the Audis is always my decision. There’s some psychology involved, I suppose, and I try to put similar driving styles together, but more practically it’s about size. We put tall Mr Biela and little Mr McNish in the same ALMS car for a full season, and it worked well because Allan had an extra seat that dropped straight in over Frank’s seat. But if you have two drivers who work well as a pairing, and you put a third driver with them who doesn’t fit in, then the good pairing is gone as well. The best driver teams build up a good level of friendship and end up spending a lot of their free time together, as working colleagues who genuinely like each other. Those are the teams that work really successfully as a unit.”

McNish has been a stalwart of Audi’s endurance racing programme for 11 seasons, but since the end of last season he is no longer on the roster. Was Wolfgang surprised by the Scot’s decision to retire? “I wasn’t surprised when he said he wanted to talk to me about it, but I didn’t necessarily expect that he would stop completely. But having discussed it with him, I think it was the right move. I wanted to keep him for 2014, but he felt that was the moment to stop everything, no testing, nothing, and I did not try to make him change his mind.”



“Did I tell you about the time I dug Tom Kristensen out of a tyre wall at Sebring?”

“THE BEST DRIVER TEAMS BUILD UP A GOOD LEVEL OF FRIENDSHIP AND END UP SPENDING A LOT OF FREE TIME TOGETHER”

a couple of laps before he was due in for a splash-and-dash, we saw from our systems that he had a slow puncture.

“If we’d brought him in at once that would have committed us to an extra fuel stop, and we would have lost the race. We had an urgent strategic discussion and Tom Kristensen was part of that: his input was key. When drivers have retired from the race, once they’ve showered and changed, they always want to stay in the pit as part of the team until the end. So we nursed Lotterer round for two more laps, monitoring the tyre pressure and keeping him informed. Then he came in, took on fuel plus a full set of tyres, and we got him out with only a 6sec lead. He went flat out, and at the flag, after more than 3000 miles of racing, he had just 13sec over the first of the three Peugeots.

“Tom is an exceptional guy, and there’s no question that as a driver he is on a very high level. But I must tell you about when he first joined us in 2000. He came in as a Le Mans winner and was very keen to make a good impression on me. I put him with Emanuele and Frank, and their first race together was Sebring. Of course he wanted to qualify quickest, and

There was one marshal the other side waving a flag but nobody else seemed to be doing anything, so Emanuele and I climbed over the fence and started digging into the tyres to get him out. Tom tells the story: he’s in the cockpit, it’s all gone quiet, it’s all dark and then the tyres open up, it gets light and what does he see floating above him? The face of his new boss...

“Tom is the only one of my drivers who has been able to do LMP and DTM at the same time, and be competitive in both. That’s unusual, because the disciplines are completely different. A fast driver will be fast in any type of car, but it’s not just about the lap times. It’s about handling traffic. In DTM you’ll be fighting with 12 or 15 cars that can all be within a couple of tenths. At Le Mans there is a big speed differential between you and the LMP2 cars, and more with the GTs. You have to approach each overtaking manoeuvre quite differently. Even a small contact with another car is probably going to spoil your race, maybe break a fin or something. You have to feel what the other guy is going to do in each fraction of a second. It’s your job to learn and remember how the driver of each car is likely to behave,



INEVITABLY OUR CONVERSATION HAS concentrated on Le Mans and endurance racing, but Audi’s activities in touring cars and DTM have continued alongside its LMP programmes. So I ask about the notorious DTM race at Barcelona in 2007. The Deutsche Tourenwagen Meisterschaft was then a straight fight between groups of teams each running C-class Mercedes-Benzes or Audi A4s. “At the penultimate round in Spain there was a lot of tension between the Audi drivers and the Mercedes guys, and the gossip before the race said that a couple of the Mercedes drivers had been given the job of getting rid of our people. And in the race, that’s what happened. After three separate incidents in which our front-running cars were put off the track by Mercedes men, I could hear our drivers saying over the radio to their engineers, ‘Give me permission and I will drive this one off.’ That’s when I said, ‘We don’t do as they do, and the world shall see it’. I got on the radio to each of the seven Audi drivers who were left and gave the order: stop racing now, drive slowly into the pits and retire. Let Mercedes carry on playing on their own. So that’s what happened. It’s the first time I have ever seen [former Mercedes competitions boss] Norbert Haug completely speechless. ▣

“It wasn’t an easy decision, and it wasn’t fair to the spectators, who’d paid to come and see a proper race. It was like a whole football team walking off. But I didn’t want us to play that game. So Mercedes scored all the points that day, and it could have wasted all we had worked for that season. But in the final round at Hockenheim three weeks later we clinched the championship with Mattias Ekstrom.”

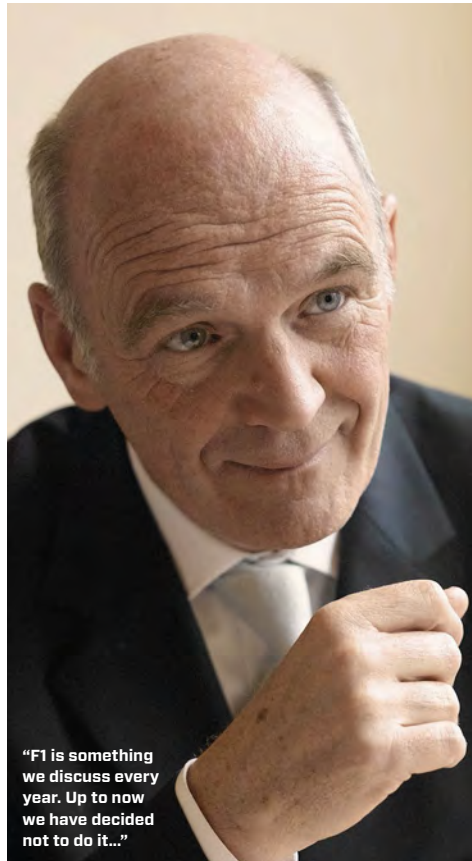
Back to Le Mans, and the arrival in 2012 of hybrid technology both for Audi and for Peugeot’s replacement as its most serious rival, Toyota. The Audi system, developed with Williams Hybrid Power, moved to part-time four-wheel drive. The engine powered the back wheels conventionally, while at the front kinetic forces generated under braking were converted into electric energy and stored in a spinning flywheel. Under acceleration, this power was returned to drive the front wheels. Wolfgang hedged his bets by running two R18 e-tron quattros and two conventional R18 Ultras, and the hybrid cars finished one-two, with the Ultras third and fifth. The Toyotas both crashed early on. In 2013 the order at the front was Audi-Toyota-Audi-Toyota-Audi, but celebrations were subdued because of the death just after the start of GT racer Allan Simonsen.



SO TO THIS YEAR’S RACE, WHICH LOOKS like being the most technically fascinating 24 Hours in living memory, driven by a dramatically revised rulebook that is intended to keep the race meaningful in a changing world. How does Wolfgang feel about the imposition of the new rules, which are committing the manufacturers to ever more development expenditure?

“It’s what we wanted. This new rulebook happened because we and the other manufacturers pushed for it – just like we pushed hard for diesel fuels a few years ago. Road car design is concentrating more and more now on the efficient use of energy, and our racing – technically as well as on the marketing side – has to support the brand, it has to have meaning and relevance for our road cars. The ACO and the FIA wanted that relevance for the future, too. So four years ago we started to work on it together. We all agreed that the way forward is to reward any reduction of energy wastage, and the new rulebook is a significant step in that direction.

“What is interesting is that the three big teams are each approaching the challenge differently. The Porsche is a V4 petrol turbo, the Toyota is a normally aspirated V8, ours is a V6 turbo diesel. And we have further developed our flywheel system. No more do the rules limit the amount of horsepower we have available. Nor do they limit the amount of air going into



“F1 is something we discuss every year. Up to now we have decided not to do it...”

the engine – that would be crazy, because air is free. What the rules do is give us a set amount of energy, and the car that can go farther and faster on that amount of energy will win the race. We have 30 per cent less fuel available to us than last year, and our target is to achieve the same speed and distance as we did in 2013. Each year’s rules will reduce the energy permitted: less in 2015, less again in 2016.

“It’s not just the technical challenge, but a human challenge too. All through the race a sonic system controlled by the organisers will continuously measure the amount of fuel going into every car’s engine. If your car uses its fuel too quickly you have three laps to bring it down to the correct average, or you will incur a stop-go penalty. The driver gets information on the dash so that he can optimise his lap time against fuel usage, and if he has used too much because, say, he has been fighting another car, he knows how much he must save. All last season we were working on concepts to use less fuel without increasing lap times at all, retraining the gas-guzzlers if you like, and for them it’s another personal challenge. So now the driver will play an even bigger role in determining between defeat and victory.

“Motor sport is a unique proving ground. Unlike some motor manufacturers who promote their brands through racing, Audi Sport is not a separate company from the parent; we are intertwined with the road car

technology. We are doing our development under the public gaze, and we have to ensure first that it works, second that it is competitive and third that it wins. Then, three years later, we can tell our customers that lessons learned on the track really have come through into their new road car. Energy efficiency is a major example – TSFI has already saved millions of gallons of fuel on our road cars – but there are others: like headlights. On the R18 we went to LED matrix lights, and this year we also have the laser lights that are sensitive to the steering. You’ll see this on our road cars soon.”

A key part of Wolfgang’s job continues to be persuading Audi’s main board, and indeed that of the VW Group, that the massive expenditure on endurance racing is justified, especially when new rules make previous cars obsolete and ramp up design and development costs. “With the marketing people I work out what makes the most sense to support the brand, its technology and its message. Then, every year, I have to submit my plans to the board: this is what I want to achieve, this is the budget I need to achieve it.” So is there any danger that, with Audi and Porsche both ultimately part of the VW Group, a suit at a board meeting is one day going to ask why they are spending all this money competing against themselves? “Each brand is completely different, but both have important Le Mans history. The new technology now allowed in the rules encourages different concepts to be explored within the same group, different answers to the same question. And, even in the same family, you have competition between brothers.”

Would one of the brands ever be diverted off in the direction of Formula 1? “We discuss it every year. Up to now we have always decided not to do it, and the relevance of Le Mans to road car development has reinforced this policy. But, you know, things can change...”

Wolfgang gets precious little free time, especially during the season, and what he does get he likes to spend with his family. “I have a big mix at home. From my first family I have a 33-year-old daughter, with two grandchildren, and my son by my second marriage is now 14. He never misses Le Mans. He has already been 14 times: the first time he came he was three months old.

“As for me, I am very much looking forward to the second weekend in June. The Le Mans 24 Hours is what I love. This year it will be specially fascinating, and specially hard to predict. All the way up to Sunday afternoon, and the final flag.”



View Truth in 24 II: Every Second Counts, the documentary on Audi’s 10th victory at Le Mans in 2011

@ THE MOTOR SPORT DIGITAL EDITION

TEN YEARS AND MORE than 200 racing cars. Perhaps that's the most significant statistic of Aston Martin Racing's first decade. The big wins, most notably the back-to-back GT class successes at Le Mans, inevitably stand out in the minds of sports car fans. But it's the sale of racers to customers around the world that has made the British manufacturer so prolific in modern motor racing. That in itself is remarkable given the sporadic and patchy record of Aston's racing activity since its 1950s heyday under David Brown.

Aston Martin's growing buoyancy as a car manufacturer has been led by German CEO Ulrich Bez, since a consortium buy-out finally freed the company from the stifling control of Ford in 2007. But a patriotic British racing entrepreneur is the true foundation upon which modern-day Aston Martin is built.

It was David Richards who gathered that consortium to return Aston to independent ownership. And it was Richards who, in 2004, convinced Ford to allow Aston to come back to competition. He did so with the brave guarantee that his own Prodrive concern would carry all the risk of a racing programme that would be based from the start on customer car sales. The racing division's 10th birthday is a direct testament to Richards' vision and faith in his own workforce.

Darren Turner was at the wheel when AMR took its first steps in the autumn of 2004, and this June he will lead the team back to Le Mans for what will be his 12th 24 Hours. *Motor Sport* brought team boss and driver together to reflect on a colourful first 10 years of competition. □

STARTER FOR 10



For the past decade, Aston Martin Racing has been a fan favourite at Le Mans. As founder David Richards and driver Darren Turner tell us, those 10 years are just the beginning

writer DAMIEN SMITH



The latest Vantage testing at Portimão earlier this year, 10 years on from AMR's tentative first steps with the DBR9 at Donington Park, left



ASTON MARTIN RACING

PRO

Gulf

Gulf

MICHELIN

Ontime
AUTOMOTIVE

30 prodRIE 30

Gulf

MICHELIN

“IT STARTED FROM MY ENTHUSIASM for Aston Martin,” Richards says. “I owned a DB3S and had been to the factory trying to persuade them to go motor racing, knocking on the door every year. At Prodrive we’d done the Ferrari 550 Maranello programme [which scored a Le Mans class win in 2003], but Aston would say ‘there’s no budget, Ford won’t let us spend any money’. Then along came the DB9.

“The way we funded the Ferrari programme was novel. So I said, ‘Let’s put together a proposal on that basis, where we take all the risk at Prodrive’. All they had to do was basically agree to license Aston Martin Racing to us, and we’d sell the cars, sort the entries, run the merchandise, everything. Much to our surprise Ford accepted the idea. We had a very simple two-page contract that outlined the obligations, and away we went with the first of the DBR9s, based on the new generation of road cars. Out of the box it was a great car, as Darren will tell you because he drove it first.”

“I think it was November, a nice day at Donington,” Turner says. “It was supposed to be a shakedown, with no expectations. But within 10 laps we were doing stuff with a race car that’s usually 2000kms old. That was a really special day, that roll-out, and it was the start of what has led us here 10 years later.”

“We knew we had a good platform,” Richards says. “Yes, the DB9 was front-engined and rear-wheel drive, but the engine was pretty well behind the axle, certainly on the race car. And the weight balance was about 52-48 by the time we’d finished with it, which is perfect.”

Aston Martin returned to racing at the Sebring 12 Hours in March 2005 – and won first time out, on one of the world’s roughest, toughest tracks. “Testing started on the Tuesday and we were initially two or three seconds off the pace,” says Turner, who shared the winning car with David Brabham and Stéphane Ortelli. “But the temperature over the week went up and the car started to dial in as rubber went down. When it came to race day we were bang on the pace. Expectations had been simply to get the car to the finish. But to have barely any problems and win was amazing.”

“It was our first major set-to with Corvette, too, which has become like the home derby for us at Le Mans each year,” Richards says.

“It’s like having an older brother who you can wrestle with and have a bit of banter,” adds Turner about his American rivals. “The sportsmanship between us and Corvette has always been so good. You have to be strong to beat them, so to do it first time out – and on their home territory, too – was extra special.”

Since 2008 AMR has become synonymous with the iconic blue and orange livery of Gulf Oils, but of course at the start the factory DBR9s ran in colours that offered a direct nod to the David Brown era.

“We started with ‘Aston Martin Racing Green’ and felt it was important to establish the team’s identity from the word go,” Richards says. “It’s a problem for a racing team when your identity is captured by a sponsor. So for the first few years we ran in green and the first win at Le Mans [in 2007] was in those colours. But then we looked around to see what iconic brands were out there, and in my view only three were appropriate. The long-term agreement with Gulf has served us both well.”

The partnership got off to a perfect start with class victory at Le Mans in ’08, to complete back-to-back successes at the big one. But both Turner and Richards recall the first with most fondness. “That was the hardest-fought, I would say,” David recalls. “In the last stint the heavens opened and they put the safety car out. David Brabham was on the radio, saying ‘I can hardly drive it.’”

Turner adds: “Certain problems had come our way in previous Le Mans campaigns – some of them driver inflicted!” He was mortified by the damage he incurred in ’06, when striking marker cones at the Sarthe circuit. “In ’07 we

really had to deliver,” Turner says. “In that race our car spent the least amount of time in the pits, not only in our class but in the entire field.”

BY CONQUERING LE MANS TWICE, IN successive years, Richards now made a big decision. Fifty years on from Roy Salvadori, Carroll Shelby, DBR1 and all that, Aston would battle for overall honours at the greatest race of them all. An Aston-engined Lola had dipped a toe in the water at Le Mans ’08. For ’09, the commitment was total.

“Once you’ve won everything in GT, you think surely it’s about time to have a go for an outright win,” he says. “The V12 was very strong, so there was a lot of carryover from that. We just had to put it into a prototype chassis, which we managed to acquire [courtesy of Lola]. Of course, they [Le Mans organiser the ACO] needed to get the balance of performance right and still to this day I think if they had done that between the diesels and ourselves we would have had a good battle. As it was, it never happened. Audi always had a lap or more in hand. Every time we went out there we were the best of the petrol class and in 2009 we were fourth overall, so we never quite made the podium. I don’t think that reflects well enough on the effort and performance, which was pretty sensational. And it was the crowd’s favourite too, with the sound of that V12 and the look of the car in the Gulf colours.”

Undaunted, Richards was encouraged by new prototype rules for 2011 that convinced him to take the campaign to the next level: an ambitious, all-new, bespoke design with which to take on the might of Audi and Peugeot. But the AMR-One mid-engined spyder would prove to be the team’s *bête noire*.

“We looked at the new regulations carefully and the guys persuaded me that we should be adventurous with a small-capacity 2-litre turbo, and a chassis featuring innovative aerodynamics,” Richards says. “We committed to the programme too late without enough resources. Occasionally you have to hold your hand up and say ‘we screwed up.’”

The immediate canning of the project and a refocus on the GT market was a fresh beginning, as the Vantage replaced the venerable DBR9. It also marked the departure of long-time team manager George Howard-Chappell. “The return to GTs gave us a clear focus, coinciding with John Gaw’s arrival to run the operation,” Richards says. “We reorganised the team and now our customer base is building all around the world. Every weekend an engineer flies off somewhere to service, look after and support a customer.

“We’ve got three products now. Along with the top-class GTE, we’ve produced more than 100 GT4 cars, expanding into America with a one-make series this year. The GT3 car was a



Celebrating a victorious debut at Sebring in 2005 and, below, the soulful Lola-Aston B09/60

“WE HAD A VERY SIMPLE TWO-PAGE CONTRACT AND AWAY WE WENT...”



real ground-up design and it was a bit of a spin-off from an experience I had a few years ago. I had the opportunity, thanks to Anthony Bamford, to drive a Ferrari 250GTO. I found out what an easy car it was to drive and realised that was the GT3 we had to build. We're making them for non-professional drivers, not Darren Turners.

"The previous customer car, the DBRS9, was difficult to drive. I remember a customer saying 'I get into it with some trepidation. I do frighten myself'. Well, that's not the purpose. So as a result we sat down to look at it again."



Turner carried out much of the early testing with the Vantage GT3. "As David says, it's not going to bite you. The DBRS9 was difficult, even for the pro driver. GT3 has grown and is a great format for GT racing around the world right now. The fact the Aston is one of the more competitive cars and the fact it's easy to drive means a pro can get in and enjoy it – I've done the Nürburgring 24 Hours in one which was amazing – and it's equally good for an amateur driver in a national championship."



SO 200 RACING CARS AND COUNTING. What's next for AMR? "Well, we're marking the first 10 years, but I still think there is a lot more to come," Richards says. "We have stability now in the GT regulations, so I don't see us making any radical changes for a couple of years. But we're going through this transformation process as they amalgamate GTE with GT3, which should be beneficial for everyone. Then we'll have to think about what our next product is going to look like."

"I didn't realise Aston had sold 200 cars in that 10-year period," Turner says. "That's impressive. If you think about us compared with some of our rivals we're quite a new entity, so there's plenty still to learn. And in those 10 years generally we've been successful. There have been a few little blips, but nothing more."

"I'm not sure I'll still be here to celebrate 20 years, but it's been a privilege to drive through the first 10." 📷

LE MANS 2014

Aston vs Ferrari vs Porsche vs Corvette

DOES DARREN TURNER SHARE THE love/hate feelings that so many of his colleagues express about the Le Mans 24 Hours? "Nah, it's all just love!" he says, grinning. "It's the biggest race of our year, there's a lot of pressure, you are under the spotlight – but that makes it even more of a joy to go and race there?"

Whether Aston Martin Racing, with three entries each in GTE Pro and Am, has any hope of adding to its tally of class victories remains to be seen. In the World Endurance Championship season-opener at Silverstone Aston scored a 1-2 in the amateur class, but in the primary Pro category was soundly outpaced by Porsche and Ferrari. The 'Balance of Performance' formula dictated by race organiser the ACO will be all-important.

"This is the dilemma the sport faces: the rules are structured around the balance of performance," David Richards says. "As time goes on it is refined to make for better racing. When you introduce new cars it can upset the situation, which is what happened with the Porsche last year. Then this year we have the new Corvette, which we won't have raced until we get to Le Mans. But there should be enough data for the ACO to get it right?"

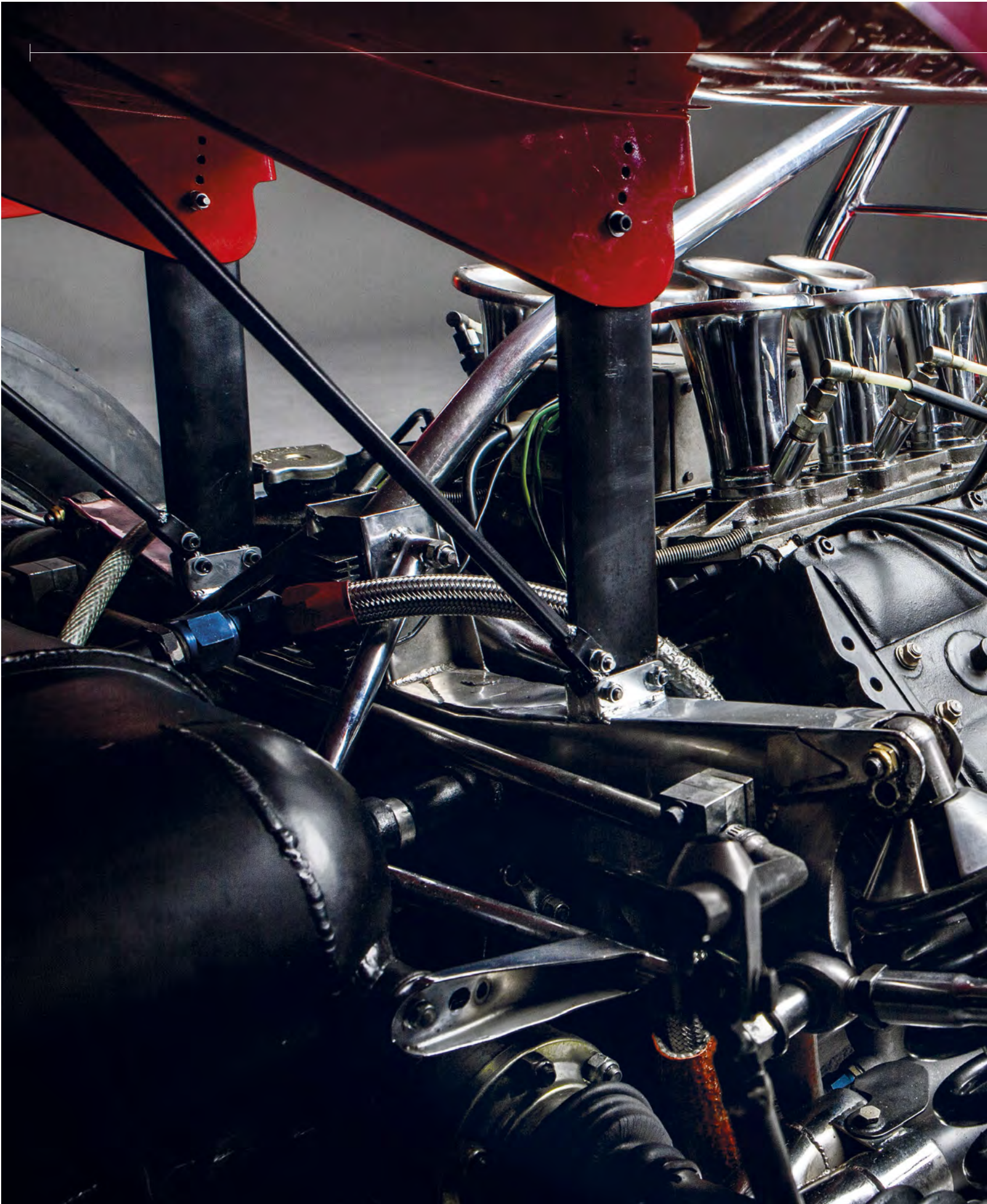
Turner adds, "Early indications show that there has been a change. Towards the end of last year it was fairly level between all the manufacturers, so hopefully after Silverstone there's enough data to go away and look at it before Le Mans. That is part of GT racing. Some people might say that balance of performance shouldn't be a part of racing, but it wouldn't work without it."

Richards warms to the theme. "Take the example of the three makes competing in the WEC. They are fundamentally different. We have a front-engined Aston Martin with a rear transaxle, a mid-engined Ferrari and a rear-engined Porsche. You couldn't get more disparate cars and yet we all compete in the same market place on the high street, so it's quite right they should be balanced in the racing environment"

A year on from the death of Allan Simonsen, killed on the third lap of what would turn into AMR's most emotionally draining race, nothing would honour his memory more than victory. But will the 'BoP' help or hinder the quest to honour AMR's fallen comrade? We'll find out come June.



The Turner/Dumbreck/Mücke Vantage battles a factory Porsche en route to third in class at Le Mans last year



Technical focus *Lotus 49 R8*



Tasmanian double

Intended purely for racing Down Under, this Lotus 49 suddenly found itself carrying the world champion's Grand Prix hopes at Silverstone

writer GORDON CRUICKSHANK
photographer SIMON CLAY

Last of the Dawson-Damer collection to be sold, R8 was recently restored to Gold Leaf livery by Classic Team Lotus




LT CAN'T BE OFTEN that half a car has turned the racing world on its head, but Colin Chapman's Lotus 49 was an evolutionary surge – yet only half the story. The other half, of course, was the single most successful Grand Prix engine ever, the Cosworth Double Four-Valve. Genius in both camps. And if both sires are geniuses, the offspring is bound to be something special. With a mere nine chassis built, give or take some destruction and reconstruction in period that spawned 12 chassis numbers, and fewer than that surviving, it's a rare thing to see a 49 changing hands. But Goodwood's Festival of Speed is the home of rare things, and this year a 49 with World Champion Graham Hill's handprints all over it is going to auction with Bonhams. It's going to be an exciting few minutes in that marquee come June... You already know the 49's clean-cut concept: unbolt the four mounts of the DFV

and you're left with a two-wheeled torpedo and an engine with onboard suspension. That compact V8 handles virtually all of the suspension loads through a small rear subframe; the only forces handled directly by the monocoque come from the radius rods that locate the reversed wishbones fore and aft. Thanks to all that volcanic activity inside it the engine block is already more than tough enough to handle suspension forces, so any chassiswork alongside it is redundant weight. Bolted together, that short monocoque and super-stiff engine further meant an exceptionally rigid unit, allowing delicate handling adjustments. Chapman was far from the first to realise this, but this was the first time he had been able to shape chassis and powerplant together, a mechanical symbiosis that catapulted racing car design into its next generation.

We're very used to the principle now – the load-bearing engine/transmission/suspension lump forming an affordable race-winning package that created the 'garagiste' era: if you could assemble a halfway decent front end you were immediately on the same grid as the big boys. But, as with so many of Chapman's Big Things, few saw just how seismic a shift was coming when he and Cosworth's Keith Duckworth huddled over a drawing board to plan both motor and machine in parallel.

Not that the load-bearing engine was a surprise. Like everyone else, Lotus had been heading this way already, and the BRM-powered Type 43, the team's contender for 1966's new 3-litre regs, had finally dispensed with any rear chassis extensions. But the H16 was a wide unit that meant a wide chassis and little chance of switching power plants if it wasn't successful. And it wasn't, which made the secret Type 49 all the more crucial. Bob Dance, the legendary Lotus spanner-wielder, remembers that although the 49s were assembled in the main factory at the new Hethel base, the doors were kept firmly locked and you needed a cast-iron excuse to get inside.

While Lotus would effectively have exclusive use of the DFV for 1967, the engine's godfather Walter Hayes saw major publicity benefits for Ford, the name on the cam-covers, and persuaded all parties it should then be available to all. Duckworth also knew this was something he could sell to many teams, but the layout was shaped in very close parallel with the Lotus. According to Jabby Crombac, "The positions of the two mounting bolts at the base of the engine were dictated by the width of Jim Clark's bottom", and you can hardly get finer tailoring than that. Otherwise Maurice Philippe, handling the detailed chassis design, inserted no other leaps forward – one step at 



a time, chaps: the rocker-arm front end with inboard coil/shock and leading link was current Lotus practice, as was the ZF gearbox, though this would prove problematic. And most of it was on view: bodywork consisted of the slenderest of glassfibre cladding up to the driver, and nothing behind. Chapman had figured out that behind here the flow was such a mess anyway that another panel was just dead weight that got in the way at pitstops. Dance confirms the accessibility advantage of the whole layout: “You could get to the oil pumps and filters and the water pumps easily instead of having to remove the engine. And changing engines was very straightforward too – just those four 3/8th UNF bolts.”

The result, revealed at that unforgettable Dutch Grand Prix of 1967, was a machine of such obvious engineering brilliance that hearts must have sunk along the pitlane. Not that it swept the board that season. Despite that maiden victory at Zandvoort in June 1967 and a succession of pole positions, the rapid and revolutionary 49 kept losing out to conventional machines. It was the way forward, but it took upgrades to suspension, half-shafts and brakes, plus solving DFV timing gear problems, before the 49B would realise the potential. With its forward-angled rocker arms to give a longer wheelbase, better-located rear wheels through a heftier subframe and a Hewland gearbox for simpler ratio changes, not to mention an assortment of fins, flips and frighteningly tall wings, the B would bring Lotus the 1968 world title – but for Hill, not Clark as all expected...



BUT BEFORE THE B, THE 49s HAD A holiday in the sun in the Tasman series, that off-season racing riot in which Europe’s Grand Prix drivers headed south for the winter to mix it with the Antipodes’ best around the circuits of New Zealand and Australia. The parties, the water-skiing and the fun were legendary, but the racing was serious, and like the other teams Lotus loaded the best cars it could onto the freighter – in this case a pair of F1 chassis. Bob Dance confirms that there was no spec difference for racing down under, barring a capacity drop: Tasman cars ran to 2.5 litres, which meant Cosworth assembling a short-stroke DFV to suit – technically known as DFV, of 360bhp. Team Lotus simply bolted this to chassis R1 and R2. Equally simply, Jim Clark ran away with the 1968 Tasman title. And suddenly the green and yellow paint was gone and the cars were covered in tobacco. Gold Leaf, to be precise, a red, gold and white eye-catcher that grated with some as a sell-out – and then became passionately popular, a gilded blazon of success.

That Lotus not only carried on racing after the death in April of the great Jim Clark but also collected that year’s World Championship owes much to qualities Hill discovered in himself, levels of grit and leadership some might have doubted he possessed. Nor was it a hollow achievement: facing the Cosworth-powered Matra MS10 of Jackie Stewart, Hill had a tough battle; but aided by increasingly effective aerodynamic aids on the 49B, and the fact that Stewart missed two rounds through injury, the

“R8 WAS HURRIEDLY PRESSED INTO SERVICE FOR ATTWOOD TO USE IN THE PRINCIPALITY”





1968 crown came to Hethel.


By the end of that season chassis numbers were heading for double figures when it was time to think about a Tasman tour. “They just picked a couple out of the group,” says Bob Dance, “and sent them off to Australia with a couple of mechanics – I think they sent guys who had come from Australia or New Zealand.” The two chassis fitted with the small V8 and sent on that long sea voyage to Pukekohe, for the New Zealand GP in January ’69, were R8 and R9. However, as mods had continued through the season these late chassis incorporated some B-spec improvements, such as radius rod mounts tunnelled into the monocoque to reduce rear toe-in.

It’s chassis R8 you’re looking at in these photos; it was Hill’s mount in the series, and though it let him down in the first two rounds, he brought it home second in the next brace of

races. But by then no one could catch Chris Amon’s 2.4-litre Dino Ferrari, and it was Hill’s new team-mate Jochen Rindt who almost upheld Lotus honours by finishing runner-up – to Graham’s displeasure, as having crashed R9 the Austrian had ended up with R10, a new car to full B spec. Suddenly Hill’s vehicle looked dated in comparison, and as if it felt unloved it turned in problem after problem. When their southern trip ended Hill was more than happy to be getting back into his B-spec R6 (the second chassis with that number), which had brought him victory in Mexico the previous year and would take him into the 1969 F1 season too – at least for three and a half races.

This, of course, was the era when aerofoils

took off. Tried out in Australia, the 49Bs, like their rivals, now sported high-rise wings acting directly on the suspension – phenomenal extra grip with virtually no weight penalty, which naturally excited Chapman immensely. But as both Hill and Rindt discovered at Montjuïc, the wings weren’t stressed to handle the reversed loadings over humps; they broke up, sending both cars spinning to destruction. While Hill took over the team spare, Rindt’s Tasman mount R10, for Monaco, R8 was hurriedly pressed into service for Richard Attwood (replacing the injured Rindt) to use in the Principality. Despite being dropped into a car almost of the previous year’s specification, minus all wings following their sudden banning, he delivered a fine drive to fourth, while Hill took a record fifth victory at a circuit where he sparkled.

That should have been R8’s last works 



After life as a works car, R8 was raced successfully by such as Dave Charlton

“DAWSON-DAMER COLLECTED THE REMAINS OF R8 AND SLOWLY HAD THEM BUILT UP INTO A COMPLETE CAR ONCE AGAIN”

outing, as Chapman was determined to concentrate on the 4WD 63, and arranged to sell R8 to Jo Bonnier to force the issue. But so unwieldy was the 63 that both his drivers rebelled ahead of the British round, forcing the Lotus chief to postpone the sale and put Graham back into the Tasman car, by now rebuilt to full B spec and fitted with a low rear aerofoil and twin top radiator exits. It was hardly his finest hour: all the 49s stuttered with fuel-feed problems and Hill toured to seventh.

Having been made by Chapman to struggle with the ill-fated 63 at Silverstone instead of the handier 49 promised to him, Swedish privateer Bonnier finally got his gloves on R8 for the German GP, but his excitement was dashed by a fuel leak that put him out in four laps, and things got worse back in England for the Gold Cup at Oulton Park when a huge practice smash smothered Ecurie Bonnier's hopes for the car. Once again it returned to the works for surgery, where it received some of the latest Team upgrades that would in the end keep the landmark 49 design competitive for a remarkable four seasons.

But if 1969 had petered out into disappointment for this example of arguably the best F1 design available, it was about to

experience a triumphant second life, far away below the equator, in the hands of another privateer, Dave Charlton.



THOUGH BORN IN YORKSHIRE, IT WAS South Africa that gave Dave Charlton his stage and he became a bit of a racing legend locally. Despite being 24 when he had his first race (he won that, and his last race too), he went on to win the Formula 1-based national championship six years in succession, matching rival John Love. Funded by his construction magnate patron Aldo Scribante, cat-loving Charlton not only bought ex-works machines but even achieved a dream by driving for Team Lotus in a 72D alongside Emerson Fittipaldi – though only once, in the 1971 British GP at Silverstone. He retired, but took the car home to South Africa, where it brought more success for Team Scribante. He would achieve some fame in '72 when he contested three European rounds in it – not for his results but for bringing 200 gallons of his own fuel from South Africa to please his sponsor, oil firm Sasol.

Before that, though, Charlton was the next guardian of R8, obtaining it from Bonnier at the end of the '69 season, switching its tobacco

branding to Lucky Strike and proceeding over the next two years to string together a run of victories, so many of them at Kyalami that it was referred to by one commentator as 'the Charlton centre'. A regular entrant in his home GP, Charlton achieved his best South African GP result in R8 in 1970 – only a 12th place, but the car also rewarded him with the first two of his national titles. Taking him to nine wins in 1970 and another four the following season, the ex-Tasman Lotus proved a remarkably reliable mount until July 1971 when Charlton crashed it at the Roy Hesketh track, just before his works debut in the UK and his switch to the later Lotus. It had been an impressive record for a privateer, and a fine achievement for a team thousands of miles from both Cosworth and Lotus keeping a DFV going so well for a complete season between rebuilds.

Repaired yet again, R8 passed to another South African, Piet de Klerk, who entered many of the same national events as Charlton but without much of the success, and after a last run of DNFs and retirements, the now weary machine was taken over in mid-72 by airline pilot Meyer Botha. It was in Botha's hands shortly afterwards, 32 laps into the False Bay '100', that the Lotus had the big smash that finished the first part of its career.

That could have been it for an out of date and very second-hand racing car, its monocoque too bent to be worth resurrecting when historic racing was broadly still in the future. It could have met the fate of most of its fellow 49s, sliced, diced and melted back to minerals; but thank goodness for enthusiasts like the Hon John Dawson-Damer. With his brother the Earl of Portarlington, DD as he became known shipped out in his 20s to Australia where he became a champion rally co-driver and a major figure in the historic racing world. He was also a passionate Lotus fan, saving several racing chassis from oblivion and assembling an impressive private collection that he eagerly demonstrated and raced wherever possible, including at Goodwood. It was he who collected the remains of R8 and slowly had them built up into a complete car once again, proudly racing the finished machine at Adelaide in 2000. Sadly that same year his 4WD Type 64 went out of control on the Goodwood hill, killing both him and a marshal.

Last of Dawson-Damer's collection to be sold by the family, R8 recently went to Classic Team Lotus when it reached the UK. It has been cosmetically returned to the form in which Graham Hill had his last outing in it – nose wings, low-mounted rear aerofoil, red and gold paint and the champion's number 1 in its roundels. It's a wonderful link to a great driver. But more than that, wherever this prime exemplar of Chapman's vision ends up, it will always be a tribute to the man whose passion saved it from scrap, John Dawson-Damer. 🏁



R8 in the hands of Jo Bonnier and, right, multiple South African F1 champion Dave Charlton



THE MEN BEHIND THE WHEEL

The half-dozen who took a turn at Lotus 49 R8's helm



GRAHAM Hill

Double world champion, 14 GP wins, Le Mans and Indy winner
Drove R8 in seven Tasman races (best result 2nd) and one GP, Silverstone - 7th



RICHARD Attwood

Le Mans winner and GP racer
Drove R8 in one GP, Monaco - finishing an excellent 4th



JOAKIM Bonnier

Double Targa Florio winner, GP winner
Drove R8 in one GP, Germany - DNF - and crashed in practice at Oulton Park Gold Cup



DAVE Charlton

GP and F1 driver, six-time SA Champion
Drove R8 in 20 F1 races - 13 wins in South African domestic series



PIET de Klerk

GP and Le Mans driver
Drove R8 in 12 F1 races - best result 2nd in SA domestic series



MEYER Botha

Airline pilot, sports car and F1 driver
Drove R8 in two F1 races - best result 5th in SA domestic series



Lakeside, Australia, 1969: Hill leads Courage (Brabham) and Lotus team-mate Rindt



HESKETH

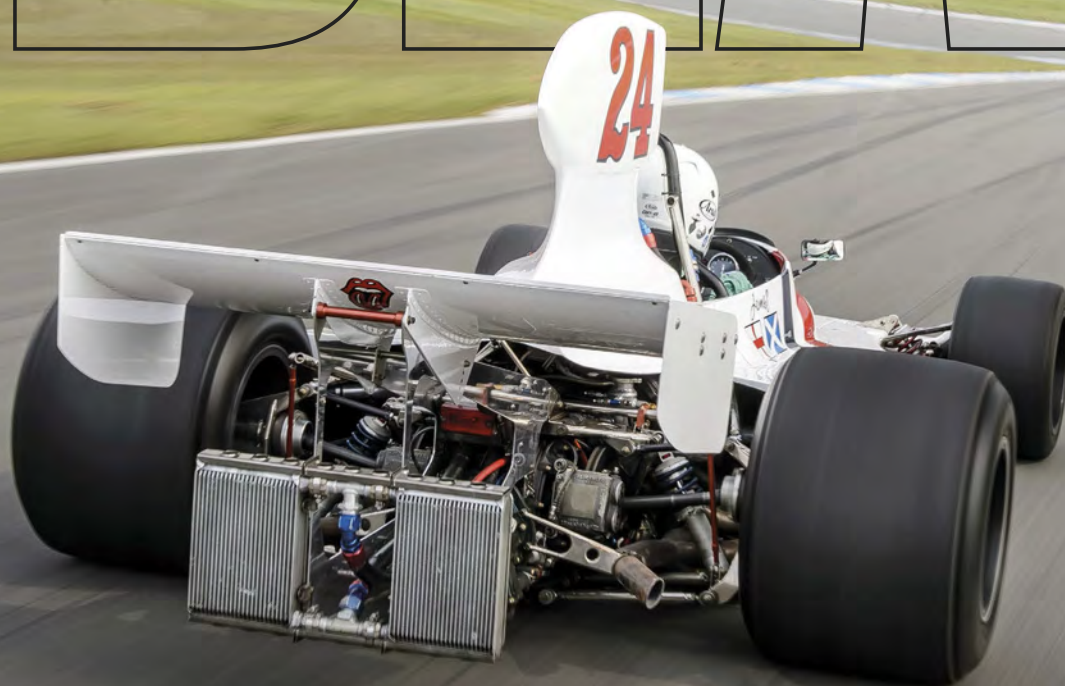
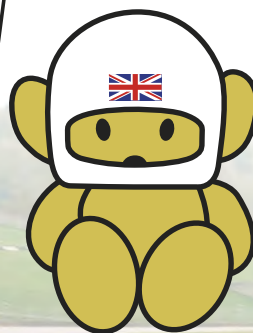
24

HESKETH



FOLLOW THE

BEFAR



The Hesketh 308 gave James Hunt his maiden Formula 1 victory – and in the least likely of circumstances, at the 1974 International Trophy. The car was recently restored, prior to sale; *Motor Sport* was thrilled to sample the distinctive design

writer ANDREW FRANKEL | photographer JAMES LIPMAN

T

ODAY, IN ALMOST any car and weather conditions, Silverstone's Woodcote is not a corner but simply an acceleration zone leading onto the old pit straight towards Copse. But 40 years ago it was a proper sweep, one to

rival Spa's Blanchimont, Suzuka's 130R or Signes at Paul Ricard. A corner, in short, that many drivers said was flat and may even have thought was flat. In reality it tended to induce an involuntary lightening of pressure on the throttle that, when connected to a Ford Cosworth DFV, could be heard by most of the population of Northamptonshire.

"James was the only one. He was flat." The voice on the telephone belongs to Sir Thomas Alexander Fermor-Hesketh, 3rd Baron Hesketh, and he is speaking of his former employee. Indeed he is referring to a day, a race, a lap, a precise moment in time where in the world's eyes at least, James Hunt came of age.



THE 1974 DAILY EXPRESS BRDC

International Trophy might not have enjoyed World Championship status, but it was a well-attended Formula 1 race. Pressure from British sponsors led Lotus, McLaren, Surtees, Lola, BRM and Brabham to hot-foot it back from Kyalami to take part in the 40-lap race, with the back of the field padded by the best of the contemporary F5000 crop. Hunt's light had already gleamed that very season, when he briefly took the lead of the season-opening Argentine Grand Prix. But it was only for an instant as, seemingly so surprised by the turn of events, he promptly threw his car off the track.

This was different. Hunt had raced for Hesketh in Argentina but was actually in the team's year-old March. Now he was in a Hesketh. But the start at Silverstone was as inauspicious as his two previous outings in the brand new Dr Harvey Postlethwaite-designed 308 – the car having already retired in the early laps of both the Brands Hatch Race of Champions and the South African Grand Prix. Hunt was on pole and, says Anthony 'Bubbles' Horsley, who ran the team, "We knew he'd win if he didn't throw it away which, of course, he'd done so often in the past. I think one of the most important things Hesketh did for James was to teach him how to win."

When the flag fell, Hunt duly threw it away. Crawling off the line with his clutch cooked, the front half of the field, led by Jochen Mass in his Surtees TS16 and Ronnie Peterson in the radical Lotus 76 fled. 'Superswede' disposed of



Le Patron keeps 'Bubbles' and team - including his maverick driver James Hunt - under his purview

the Surtees in short order and set about building a healthy lead.

Hunt must have been about the last man on the grid Ronnie would have expected to see in his mirrors 20 laps later. But there he was. Instead of flooring the throttle and incinerating what was left of its clutch, Hunt had driven gently and let it cool. By the time it recovered he was in 15th place, but not for long. By lap five he was fifth having driven straight past the entire F5000 field and most of the F1 machines,

and by lap 13 he was second. Predictably enough Peterson was more difficult to catch: it would take until lap 28 for the move to come, but if ever a move was worth the wait, this was it. Flying down towards Woodcote, Ronnie took the classic racing line because not even James Hunt was going to post one down the inside at 160mph. Surely?

The move is interesting for so many different reasons. Clearly there's the sheer spectacle of two flimsy aluminium F1 cars slithering around

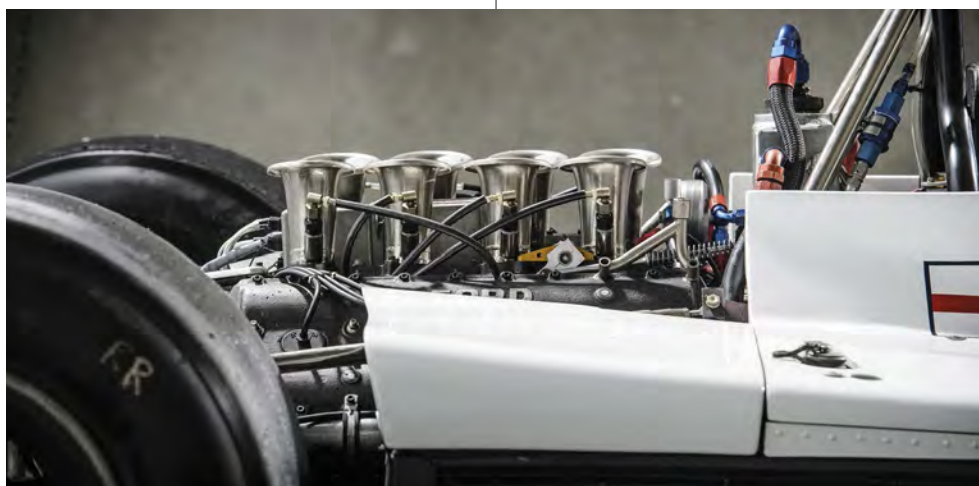
on their slicks side by side at such speed. There is also its significance, for it would be the first time a Hesketh had led a Formula 1 race. Two more things. Hunt's reputation then was that of a wild man with little finesse, but if you look at his line it is surgically precise. Legend has it that he was on the grass but, having looked at it frame by frame time and again, I think he was more impressively merely *at* the grass, so close that perhaps even the gentle curve of the Firestone sidewall might have overhung the odd blade, rather than the contact patch. And finally there is what everyone always misses: Peterson's driving.

At least Hunt could clearly see his quarry but Ronnie saw what must have been a totally unexpected move coming, gave just enough

afterwards." These words are fascinating to me, because they reveal so much about how important winning at home was to the team, and also the nonchalant way they chose at least to appear to be going about it.



THE HESKETH 308 ITSELF IS LOOKING almost nonchalant in the Donington pitlane today. It has come over from the US and, like the Lister to be found elsewhere on these pages, is to be sold at RM's Monaco auction on May 10. His Lordship, known in the day to Hesketh employees as *Le Patron*, will be in attendance. The car is estimated to be worth between €400,000-€700,000 but with its history and the post-*Rush* Hunt hullabaloo, anything is possible.



"I SAW A WHITE WALL OF PAPER AS ALL THE PROGRAMMES IN THE CROWD WENT UP AS JAMES APPEARED IN FRONT"

space and kept them both on the track. In that moment, Hunt trusted Peterson with his life.

Sadly for Lord Hesketh, he didn't see the move at all from his vantage point. "There were no monitors in those days, so all I saw was a great white wall of paper as all the programmes in the crowd went up." Bubbles just remembers "James appearing in front of us and the Lotus." And that was that. Ronnie retired two laps later and James ran away to victory, crossing the line 47sec ahead of Mass. And only then, when Hunt was seen nursing a rather bruised right hand was it revealed that, on lap two, the top of the gearlever had come off in his hand and he'd been smashing the remaining alloy stump to and fro ever since.

"It was a great moment to savour," recalls Bubbles, "and we could all go to the pub

It is, of course, the first Hesketh F1 car and has had what is described as 'a recent, complete and correct' restoration. As mentioned, it failed to finish at Brands and in South Africa, won in Silverstone and sat out most of the rest of the season as the T-car. The chassis was sold in 1975 to Harry Stiller Racing and was used by both Alan Jones and Harald Ertl, though neither scored any points.

As we shall see, there is nothing revolutionary about its design. In the past some have sought to explain how a happy gathering of enthusiasts managed to meet and on occasion beat the world's biggest and best F1 teams, but there seems to be no single magic wand waved by Hesketh. The secret, if such a thing there be, is that Hesketh Racing was a sight more committed to F1 than it led others to believe.

Bubbles, who seems as relaxed and easy going today as he was reputed to be then, actually ran a very tight ship among whose talented crew were Dave 'Beaky' Sims (previously Jim Clark's mechanic at Lotus) and Nigel Stroud (who'd go on to design the Le Mans-winning Mazda 787B).

"The establishment didn't take us seriously at all," his Lordship says, "and I wouldn't have stayed in the sport nearly so long if it had. They just saw me as a fat aristocrat throwing his money around. Showing they could be beaten suddenly became rather important."


And then there was the car. Postlethwaite had been poached from March and had immediately turned Hesketh's 731 into the quickest of them all. "But we knew we'd lose him if we didn't give him an entire car to design," Hesketh says.

Postlethwaite died in 1999, sadly, but in a curious booklet called *The Heavily Censored History of Hesketh Racing* published by Hesketh in 1974, just as the rest of the world thought Hesketh had only just got going, he spoke of the car. "What really matters about a racing car is the overall concept; the detail design is relatively unimportant. We had to make a car that was conceptually good but reliable, so we had to be fairly conventional... The overall concept was of a small, narrow-track, very aerodynamic type of racing car rather than perhaps a McLaren or Lotus type of racing car."

So like the vast majority of machines on the grid at the time, it used Cosworth DFV power, though his Lordship did harbour ambitious but eventually stillborn plans to use an all-new Hesketh V12 for 1975. Transmission came courtesy of a Hewland five-speed gearbox while the monocoque was a stressed aluminium design built to accommodate Hunt's 6ft 2in frame, a fact that on its own would today almost certainly preclude any hope of an F1 career.

Suspension features double wishbones at the front with March uprights and Jack Knight steering. At the back there is a system involving parallel lower links, a single upper link and radius rods. Postlethwaite's bodywork was neat and clean with an adjustable front splitter and a distinctive tall, thin airbox developed from an idea trialled successfully on the March.

How quick would it be? Although it was deemed unready to race, the car did travel to the Brazilian Grand Prix and, in testing after the race, lapped 1.8sec faster than pole. "Slightly irritating, that," says Lord Hesketh today.

As for the finances of such a venture, they seem to come not so much from another era as another world. Hesketh paid Hunt £12,000 for the 1973 season and £60,000 for 1975, the year in which he won the Dutch Grand Prix and Hesketh and he finished fourth in the championships for constructors and drivers. Considering there were 20 of the former at one stage or another during the season, and more than 50 of the latter, some sense of the achievement's scale can be seen. 

In *The Heavily Censored History...* Hesketh maintains not only that F1 was cheaper than F2, but that the entire 1973 season cost just £30,000 – £68,000 to rent and run the March 731 offset by £38,000 in prize money. Even including the cost of designing their own car, Bubbles reckons 1974 came in at only “approaching £200,000”.

Thanks to Hunt's size this is one of very few 1970s F1 cars in which I am truly comfortable. Even in the less precise world of 40 years ago, the size, shape and location of Hunt's body must have compromised the car's weight, its distribution and frontal area. But when the nose is added the bodywork presses down on the top of my left foot, a problem says Hesketh that forced Hunt to cut the tops off his boots. It would be interesting to see how the FIA might react to a driver trying to do the same today.

Inside, it is as you'd expect. The Smiths dials are all small and difficult to read at a glance. There's a central rev-counter, flanked by twinned gauges giving oil temperature and pressure on one side, water temperature and fuel pressure on the other. There's a driver-adjustable brake balance bar, too.

Although the car has been restored, there is no one at Donington to vouch for its state of preparedness and say how hard it's sensible to push. But the Avons are used and look old and while it may all be mechanically on the money, it's quite a step simply to assume that's the case. When I climb in the tell-tale is at 10,800rpm, which might well be fine but comes under the category of risks I don't have to take. Knocking it back to 9500rpm is hardly going to cramp my style on a busy test day swarming with everything from historic saloons to Group C cars and modern single-seaters. I ask for it to be reset, to avoid any chance of misunderstanding.

I have to say I have rarely felt more fraudulent than when trundling out of the garage to the stares of everyone in the Donington pitlane, in a white Hesketh with the teddy bear on its nose and a single word 'James' on its side. Really we should be at Silverstone with a Lotus 76 in my slipstream, but opportunities to run unsilenced F1 cars do not often present themselves.

“IT'S GENUINELY STAGGERING THAT THE TINY TEAM COULD PUT ONE OVER THE SCUDERIA”

I spend a few laps just checking it out. All the needles are steady and point in the right direction, but by the usually explosive standards of your common-or-garden DFV, this one is merely thrilling rather than frightening. It probably needs only minor adjustment to restore what should be about 485bhp, but the way the power is delivered over a broad area suggests it's at least possible this motor has been put together with long-term reliability and flexibility more than outright power in mind. The gear ratios are also slightly strange, with almost no step between third and fourth but with a fifth so high the car won't pull more than 7500rpm on the back straight.

But there's nothing tricky here, nothing in the way it goes, stops or steers to suggest there's

anything that couldn't be found and fixed. It turns in accurately and, while it understeers a little more than you might think in slow corners, that could be easily dialled out, probably most effectively by a fresh set of Avons. Hesketh says Harvey's cars were always better in high-speed corners, which is why they tended to go well at quick circuits like Silverstone, a fact Peterson would have been uniquely able to confirm. And while I am in no position to confirm or deny, the way it would hurtle through the Craner Curves, feeling better the faster you went, reminded me what a formidably effective weapon even a 40-year-old F1 car can be.



OF COURSE THE 308 WOULD CONTINUE to be developed and, in 308B form would deliver James, Bubbles, the Doc and *Le Patron* a stunning victory at Zandvoort in 1975, made all the sweeter by the presence of Niki Lauda's Ferrari 312T under Hunt's rear wing for the latter part of the race. Even if Hesketh Racing never achieved its founder's dream of delivering the F1 World Championship, it's genuinely staggering that the team could put one over the Scuderia when its entire staff could – as Hesketh put it to me – sit comfortably around the dining room table at La Réserve in Beaulieu-sur-Mer.

There are so many other Hesketh tales to tell – the yachts, the cars and an intriguing assertion from his Lordship (confirmed by Bubbles) that he was the only person ever to be offered free Ferrari engines by Enzo himself. Together they deserve a story in their own right. For now I have thoughts only for a moment at Silverstone, when a maverick driver of a maverick team took an outstanding car – this car – and showed the world what could be done with skill, determination and balls the size of Berkshire. 🏁



Harvey Postlethwaite's unusual high-rise airbox was a rare departure from an otherwise conventional layout



{ JACK FAIRMAN • NÜRBURGRING, 1959 }

READY, STURDY, GO...

Ditched, and with no help in sight, 'Jolly' Jack Fairman had it all to do if Aston – and Stirling – were not to lose the gruelling Nürburgring classic...


writer GORDON CRUICKSHANK **illustrator** GUY ALLEN

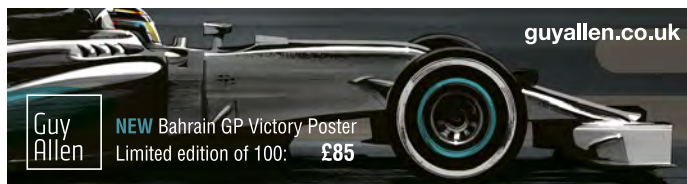
DISASTER. WAITING with clenched fists in the Nürburgring pits for his now long-overdue teammate, Stirling Moss was doubly annoyed. Jack Fairman must have crashed or blown up their shared DBR1, and that meant not only a race lost, but also a financial hit for The Boy...

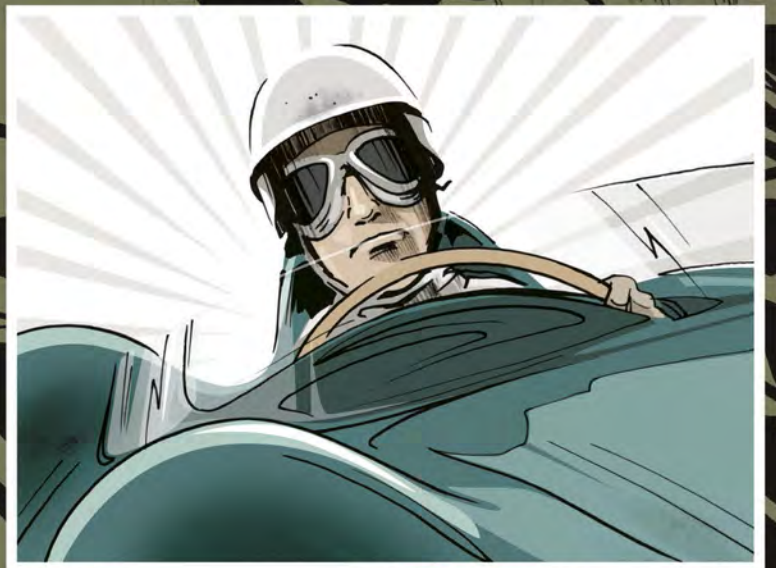
Aston shouldn't have been there. Le Mans was the firm's main focus, and by spring 1959 it was the DBR1's only planned race. Despite two failed attempts behind it, the car now looked reliable enough, leaving the larger-engined DBR2 to score championship points elsewhere. But relentlessly eager as ever, Stirling Moss wanted to repeat his previous year's 1000Kms victory and agreed to fund the outing if he didn't win. And if he did, he got the pot...

It began well, Moss heading the Le Mans start and snatching a lead. Sixteen times he improved his time, handing over to Fairman

with six minutes over the Ferraris, his chief rivals. Just as well, for Jack was no star at the wheel and Moss meant him to drive only the minimum stint. Then the rain appeared – and Fairman didn't. Baulked, he had spun off the road at Brünchen corner and beached the undamaged machine. Disconsolate, Moss collected his gear to leave – but Fairman was tough. Seizing a fencepost he tried to lever the car off the bank. No good. Instead, the sturdy Englishman braced his back against the flimsy alloy tail and heaved, inching the green machine towards the Tarmac as the Ferraris of Brooks and Hill passed once, twice, three times.

By sheer determined muscle he got the Aston on the track, restarted it and headed for the pits, where a surprised Moss hauled him out and began a stunning comeback. On the swooping, tree-lined circuit he just flew, reeling in the Ferraris and winning one of his finest races. Fairman may have dropped a brick, but he'd redeemed himself with the makings of another Moss masterclass. 







THE FAB

4

By 1982 the Porsche 935 was at the end of its competitive life in Europe, but the Americans kept finding ways to make it ever faster. JLP-4 became its apotheosis

writer MAURO BORELLA

WHEN PORSCHE DECIDED TO STOP PRODUCTION OF THE legendary 935 at the end of the 1970s, it was private teams who took on the job of racing and modifying them, or even building new ones. In later years, non-factory cars won some of the most prestigious races – the Porsche 935 Kremer K3 triumphing in the 1979 Le Mans 24 Hours, for instance. In America the Porsche 935 was *the* car to have and some US teams built and raced such specials with great results, especially JLP Racing. This is the story of the last and wildest of its 935s, the JLP-4 – the machine that brought ground-effect to GT racing.

During the 1981 season IMSA wanted to cap the 935's supremacy by allowing purpose-built GTP Prototypes – such as Lola's T600 – to race against them. Although the 935's top-level race career was already almost dead in Europe, it was still in full swing in the US. □



One of the most familiar racing dynasties in the States was JLP Racing, founded by John Paul Sr with his son John Jr, rapid racers both. JLP always had the latest and quickest cars and, after some experience with big Corvettes and other cars, the team started a programme based on the Porsche 935, but effectively turned it into a prototype to beat the GTPs at their own ground-effect game.

This eventually ran to four increasingly radical cars. JLP-1 was destroyed in an accident, while JLP-2 was basically a modified 935 K3. For JLP-3, however, they abandoned the Porsche chassis and mated the latest twin-turbo, 3.2-litre Porsche engine, with about 800bhp, to a complete tube frame built by GAACO in Georgia. The whole was cloaked beneath 935 K3 bodywork.

The tube-frame choice was not new. Back in 1978 Porsche used one for its 935/78, the famous Moby Dick, followed soon by replicas from privateers such as Joest and Kremer. The production 911 steel platform simply could not cope with such huge power. A tubular chassis brought much improved rigidity and stiffness.

Highly successful though JLP-3 was – in 1981-82 it would take nine wins from 27 races – Paul Sr was sure they could build something even more advanced to win the '82 IMSA Championship outright. During 1981 he asked Dave Klym, owner of FABCAR in Georgia, a respected racing car company that was repairing and even manufacturing Porsche 956/962 monocoques under licence and today produces Daytona Prototypes, to start building the definitive 935: JLP-4.



IN CHARGE WAS LEE DYKSTRA, THE engineer later responsible, among other things, for the design of the Jaguar GTP Prototypes. Dykstra used all the latest technologies available at the time, including a centre monocoque chassis stiffened by tube frame structure front and rear, double wishbone front suspension, rocker arm rear suspension and, most radical of all, full ground effect with lateral skirts like period Formula 1 cars.

"I did some aero work on the JLP-3," Dykstra says, "designing some venturi shapes in the rocker panel area that exited in front of the rear wheels. That was successful, so John Sr commissioned a complete car to incorporate more ground effect. It was a challenge trying to get tunnels around the engine, but we gained some space by using rocker-arm rear suspension with the uprights completely in the wheels."

The only Porsche parts used were the roof and side window frames (to comply with IMSA regulations), the brakes, wheels and the latest upside-down four-speed 935 gearbox, fitted with big titanium axles. Like the factory-built Moby Dick, JLP-4 was right-hand drive. "It's the only car I raced with left-hand shift," John



The racing Pauls: John Sr, centre, and son John Jr to the right. Above, JLP-4 takes shape

Jr says. "It was hard to get acclimatised."

Full-width Moby Dick-style bodywork incorporated a massive rear spoiler, optimised in the wind tunnel.

"The underbody configuration was pretty well fixed, but we spent a lot of time in the Lockheed tunnel sorting car attitude, wing location and front downforce," Dykstra says. There were some snags to sort, too.

"When we first built the car we had the air for the engine going into the doors," John Jr says. "But when it went to the tunnel we found that the air in the NACA duct was turning around and coming back out, so we had to modify the design. This was one of the many problems encountered in building such an advanced car in the days when ground effect was a fairly new science."

Pushing it along was the final version of Porsche's Type 930/80 flat-six, air-cooled, twin-plug 3.2-litre engine, with flat fan and Kugelfischer mechanical injection, producing about 840hp at 1.2 bar boost pressure. Built with the specific intention of winning the sprint races, leaving to JLP-3 the long-distance events, JLP-4 was not even fitted with lights, while air jacks and centre-lock wheels made for quick tyre changes during races. The car apparently cost more than \$750,000 when a 'normal' Kremer 935 K3 could be bought for one third of that. Dave Klym from FABCAR says he recently found some old JLP-4 invoices and it took more than 3600 man hours to build.

"The car was very different to drive, because of the ground-effect. That was a real challenge," Paul Jr says. "It was bottoming

One of the most familiar racing dynasties in the States was JLP Racing, founded by John Paul Sr with his son John Jr, rapid racers both. JLP always had the latest and quickest cars and, after some experience with big Corvettes and other cars, the team started a programme based on the Porsche 935, but effectively turned it into a prototype to beat the GTPs at their own ground-effect game.

This eventually ran to four increasingly radical cars. JLP-1 was destroyed in an accident, while JLP-2 was basically a modified 935 K3. For JLP-3, however, they abandoned the Porsche chassis and mated the latest twin-turbo, 3.2-litre Porsche engine, with about 800bhp, to a complete tube frame built by GAACO in Georgia. The whole was cloaked beneath 935 K3 bodywork.

The tube-frame choice was not new. Back in 1978 Porsche used one for its 935/78, the famous Moby Dick, followed soon by replicas from privateers such as Joest and Kremer. The production 911 steel platform simply could not cope with such huge power. A tubular chassis brought much improved rigidity and stiffness.

Highly successful though JLP-3 was – in 1981-82 it would take nine wins from 27 races – Paul Sr was sure they could build something even more advanced to win the '82 IMSA Championship outright. During 1981 he asked Dave Klym, owner of FABCAR in Georgia, a respected racing car company that was repairing and even manufacturing Porsche 956/962 monocoques under licence and today produces Daytona Prototypes, to start building the definitive 935: JLP-4.



IN CHARGE WAS LEE DYKSTRA, THE engineer later responsible, among other things, for the design of the Jaguar GTP Prototypes. Dykstra used all the latest technologies available at the time, including a centre monocoque chassis stiffened by tube frame structure front and rear, double wishbone front suspension, rocker arm rear suspension and, most radical of all, full ground effect with lateral skirts like period Formula 1 cars.

"I did some aero work on the JLP-3," Dykstra says, "designing some venturi shapes in the rocker panel area that exited in front of the rear wheels. That was successful, so John Sr commissioned a complete car to incorporate more ground effect. It was a challenge trying to get tunnels around the engine, but we gained some space by using rocker-arm rear suspension with the uprights completely in the wheels."

The only Porsche parts used were the roof and side window frames (to comply with IMSA regulations), the brakes, wheels and the latest upside-down four-speed 935 gearbox, fitted with big titanium axles. Like the factory-built Moby Dick, JLP-4 was right-hand drive. "It's the only car I raced with left-hand shift," John




Jr says. "It was hard to get acclimatised."

Full-width Moby Dick-style bodywork incorporated a massive rear spoiler, optimised in the wind tunnel.

"The underbody configuration was pretty well fixed, but we spent a lot of time in the Lockheed tunnel sorting car attitude, wing location and front downforce," Dykstra says. There were some snags to sort, too.

"When we first built the car we had the air for the engine going into the doors," John Jr says. "But when it went to the tunnel we found that the air in the NACA duct was turning around and coming back out, so we had to modify the design. This was one of the many problems encountered in building such an advanced car in the days when ground effect was a fairly new science."

Pushing it along was the final version of Porsche's Type 930/80 flat-six, air-cooled, twin-plug 3.2-litre engine, with flat fan and Kugelfischer mechanical injection, producing about 840hp at 1.2 bar boost pressure. Built with the specific intention of winning the sprint races, leaving to JLP-3 the long-distance events, JLP-4 was not even fitted with lights, while air jacks and centre-lock wheels made for quick tyre changes during races. The car apparently cost more than \$750,000 when a 'normal' Kremer 935 K3 could be bought for one third of that. Dave Klym from FABCAR says he recently found some old JLP-4 invoices and it took more than 3600 man hours to build.

"The car was very different to drive, because of the ground-effect. That was a real challenge," Paul Jr says. "It was bottoming" 



The racing Pauls: John Sr, centre, and son John Jr to the right. Above, JLP-4 takes shape

MARK WUNDERKER



JLP-4 was able to give full-blown GTP cars a run for their money - and sometimes beat them



BRITTY MARTIN

at speed on the straights, and we had to respring the suspension because of the downforce it was creating. But after we sorted that problem the car was very nice to drive. And very quick. It was four seconds a lap faster around Road Atlanta than JLP-3. I set many lap records ahead not only of the other 935s, but also against full GTP cars like the Lola T600.”



ONCE THE 1982 IMSA SEASON BEGAN, the Pauls won the two first races – the Daytona 24 Hours and Sebring 12 Hours – in the ‘old’ JLP-3, the first car to win both in the same year. In the meantime, to add another weapon to his armoury, Paul Sr also bought one of the latest Lola T600 GTPs, with which John Jr scored other championship points. But the racing world was waiting for JLP-4 and on July 11, 1982, at the IMSA Championship round held at Brainerd Raceway, Minnesota, the car finally appeared, resplendent in its new Miller Beer livery.

Opposition was fierce, including Danny Ongais and Ted Field in their sinister black Interscope-sponsored Lola T600 GTP and John

Fitzpatrick with his Porsche 935 Kremer K4. Paul Jr and JLP-4 started from the front row alongside Ongais and won overall, setting fastest lap en route. With this win and points obtained with JLP-3 and the Lola T600, Paul Jr was looking good to win the 1982 IMSA Championship and was also well placed in the Porsche Cup.

In the next race, at Sears Point on July 25, Paul Jr had to retire JLP-4 with an engine problem, but he won again at Portland ahead of Fitzpatrick, Field and Hurley Haywood (in another 935). Paul Sr and Haywood were only ninth when they shared the car at Road America, after assorted problems, and it was then badly damaged in a testing shunt at Road Atlanta. While JLP-4 was rebuilt, Paul Jr reverted to JLP-3.

The final race of 1982 took place at Daytona, by which stage Paul Jr had already clinched the IMSA title. The car sported number 1 for the weekend, rather than the usual 18, and was back in the team’s customary blue and yellow livery, sponsor Miller having departed. There were other changes, too, the rear bodywork

having been extended following tests in the Lockheed wind tunnel.

There was still another title up for grabs, the coveted Porsche Cup. Unfortunately for Paul Jr, JLP-4 suffered a tyre blowout at high speed on the banking, damaging the rear suspension and putting him out. The trophy went instead to Bob Wollek, who finished second in John Fitzpatrick’s 935 K4, behind the Lola of Field and Ongais. Even so, Paul Jr was happy with his season. “I won the title as a 22-year-old,” he says, “and that made me the youngest winner ever. The competition was very tough. I had to race against big names like Ongais, Haywood, Fitzpatrick and Wollek. They were great times and I remember them fondly.”

JLP-4 was used only once in 1983, at the Road Atlanta 500Kms in April. This time Paul Jr was co-driving with René Rodriguez and they finished sixth overall. The competitive days of even the most sophisticated 935s were over, even in the USA, because the GTP Prototypes had become simply too fast.



SHORTLY AFTER JLP-4’S LAST RACE, THE team was beset by business and legal problems: Paul Jr became mired in a world of lawyers, court cases and even prison, while Paul Sr found infamy through drug trafficking and attempted murder offences. The team folded and Paul Jr gave the car to Phil Conte, a racing friend. Later JLP-4 went to the famous Petersen Museum in Los Angeles, where it remained on display for almost 15 years.

It was subsequently restored by Robert Tornello, an enthusiast from Florida. JLP-4 has since been used in some historic events and at a couple of Porsche’s Rennsport Reunions, where Paul Jr had the chance to drive it again. He calls JLP-4 as the best 935 he drove, adding that he almost cried when he and the car were reunited.

Now this unique piece of engineering is in Europe, ready to be seen at major events including the Goodwood Festival of Speed.

Not only are many original parts still with it, including the full set of moulds to replicate the unique bodywork, chassis and suspension, but also more than 100 original drawings and build sheets, some about 4.75 metres long. There are also photos, race programmes and posters, and even a rare model of JLP-4 issued to celebrate the 1982 IMSA Championship win.

But there is a poignant end to this tale. Paul Jr is fighting Huntington’s Disease, which affects the neurological system, and is patron of the Huntington’s Disease Fund (for more information go to www.johnpauljrhd.com).

The intention of JLP-4’s new owner is not only to display and race the car, but also to use it on fund-raising occasions to help Paul Jr and others affected by this terrible disease.

A blast from the past is being used to create fresh hope for the future. ❏



Alexander Sims

Sam Smith meets a new racing breed – a driver who’s fast, versatile... and fascinated by a potentially electric future

IT WAS PATRICK HEAD WHO ONCE SAID that racing drivers are like light bulbs. “You just screw one in and then replace him with another when he’s done.”

If you were to follow such brutal wisdom nowadays, you might be interested in meeting Alexander Sims. The 25-year-old is very much in demand – as he proved during a spectacularly diverse 2013 campaign. It began with one focused programme, as a factory GT driver, taking in the Blancpain Endurance Series with the French Hexis Racing team and a McLaren MP4-12C.

Second place in the intensely competitive championship proved a worthy highlight, but by mid-season things started to get busier.

“Status GP called me to deputise for one of its drivers during the GP3 meeting at the Nürburgring,” he says. “Then Carlin did the same for Spa. In addition to that, Three Bond/T-Sport needed someone at short notice for the remainder of the FIA F3 season. All of a sudden I found myself racing pretty much every weekend.”

Sims did an extraordinary job, scoring a superb GP3 win at Spa, notching up five F3 podiums and finishing off with a fighting fourth place in the Macau Grand Prix. Versatility sets him apart – and he relished the challenge. “I noticed that I had slightly changed,” he says, “in the sense that I actually enjoyed the racing more. I was no less intense in the car, but it was actually how I was out of it that reaped results. I realised you don’t need to be too severe away from the cockpit. It actually wastes mental energy to be overly ‘tight’ when you are not driving, which yields a payback when you come to compete.”

“My more relaxed demeanour definitely helped me last year to perform better in the car. My friends and family noticed it and I felt it myself. Perhaps it was getting away from the cut and thrust of single-seaters for a while, who

knows? Whatever, it helped me as a person and to have a more balanced outlook on life.”


For 2014 Sims is again a driver in demand. The year started in the best possible way as he was snapped up by BMW to become an official factory driver. He will race in both the Nürburgring and Spa 24 Hours as well as the majority of the British GT Championship. As opportunities go, this one is huge.

As he sits in a BMW i3 electric road car that he is testing for the day around the lanes of his home in Soham,

Cambridgeshire, Sims also ponders the inevitable links with the new and innovative FIA Formula E Championship. His knowledge, passion and genuine understanding of electrically powered vehicles make it an obvious fit for a crack at the series that kicks off this September, in Beijing.

“I admire what the FIA Formula E Championship is creating and it is of enormous interest to me, irrespective of whether or not I am directly involved,” Sims says. “FIA Formula E looks to be a good way to engage a youthful market and to make low-carbon racing cool. That can only be a good thing for future generations.”

“I’m a real geek when it comes to electric cars and love how they can contribute to a more sustainable life. I have driven a Tesla for a few years and really enjoy it. To me it represents what future motoring can be all about. I’m fascinated with the simplicity of it all and how its performance always surprises people, particularly when they experience the torque. But once the novelty factor wears off, you forget you are driving an electric car. It’s a great way to travel.”

Sims will be a major asset to the BMW GT programme in 2014 but – as is so often the case with racing’s more thoughtful and interesting characters – there is an awful lot going on beneath the surface. 



CAREER IN BRIEF

Born: 15/03/1988, London
1998-2005: karting **2006-2008,** Formula Renault (2nd in 2008 UK championship) **2009:** F3 **2010:** F3 (4th in Euroseries), AutoGP **2011:** GP3, F3 **2012:** ELMS, F3 **2013:** Blancpain GT series, GP3, F3 **2014:** works BMW GT driver

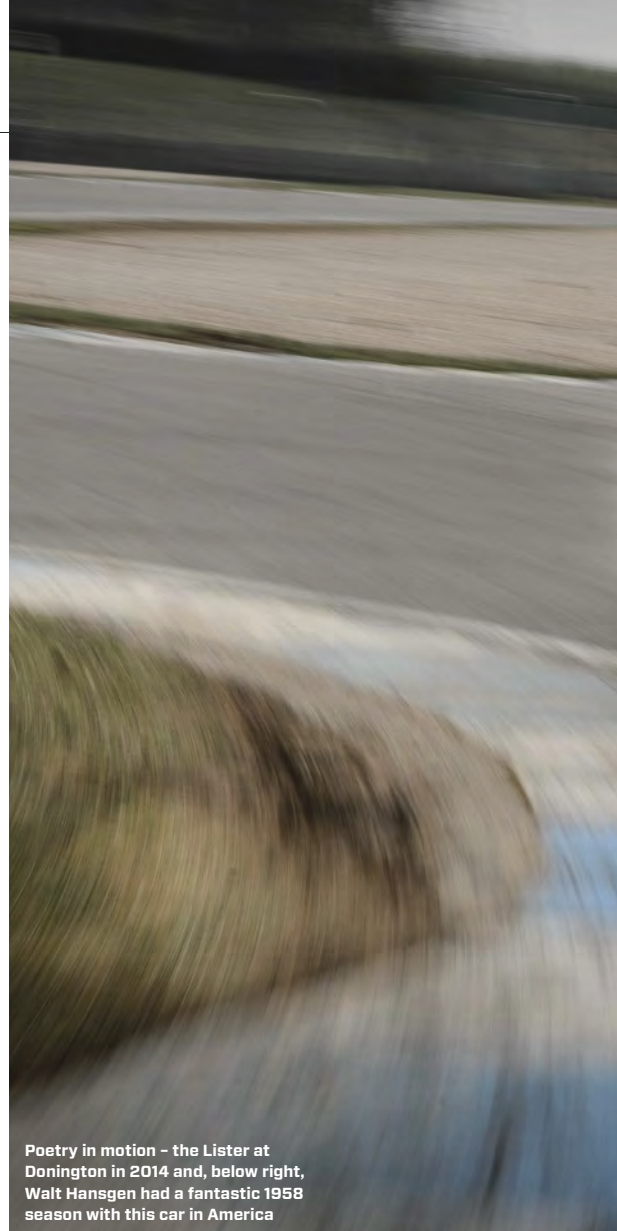
The court of



Track test *Lister-Jaguar Knobbly*

King Archie

The most famous Lister still in existence is going under the hammer. *Motor Sport* was offered the privilege of time at its helm
writer ANDREW FRANKEL | photographer JAMES LIPMAN



Poetry in motion – the Lister at Donington in 2014 and, below right, Walt Hansgen had a fantastic 1958 season with this car in America

IT WASN'T THE THOUGHT that was strange, so much as the timing of its arrival. If you are busy juggling power and steering as someone else's very valuable racing car slithers around beneath you on a damp track, your brain should have space for nothing else. Anything less than undivided attention would seem an

abrogation of duty. But the thought still found a remote recess, tunnelled in, lodged there and wouldn't go away. It was simply the hope that in 1958, when Walt Hansgen hurled this very Lister-Jaguar to victory after victory in SCCA events across America, he knew how much fun he was having.

It's not a given. Often in my regular life, testing cars with number plates, I drive old road cars that seem twice as much fun today as they did in period, because they're now seen in the context of modern machines that are heavier, softer, more comfortable and less responsive. Likewise the Lister. Most times I talk to professional racing drivers who've been given permission to race at, say, the Goodwood Revival, they tell me they've not had so much fun since they were last in a race car with no downforce and a surfeit of power over mechanical grip. Or at least that's the view of those who love driving as well as winning.

Driving a Lister-Jaguar as fast as possible could not be reduced to the role of a mere job, or considered in any way routine, even if you

few people I'd describe as a genuine hero of mine, the ridiculously courageous and fast Archie Scott Brown. The offer to test it before it heads off to its new home was simply too good.

Knobbly Listers are often and erroneously thought to be synonymous with Lister-Jaguars. They are not: not all Lister Jaguars were Knobblys, and not all Knobblys were Jaguar-powered. If you think of a Lister, however, I'd bet that the image now swimming before your eyes is not powered by MG, Bristol, Maserati or Chevrolet, but a Jaguar car with impossibly low bodywork draped over the wheels and engine to negotiate its way cleverly around the Appendix C minimum windscreen height rule for period sports cars. That car is the Knobbly.

This chassis was the first to be shown to the press and offered for sale. It was essentially a development of the Jaguar-powered (but not Knobbly) prototype, built specifically for Scott Brown for the 1957 season. He won 11 of 14 races he contested and equalled or broke the outright sports car lap record at every circuit he visited. Lister was not the first garagiste to use Jaguar power in a sports car – the concept had already been tried by HWM, Cooper and Tojeiro to name but three – but of them all, the Lister was in a class of its own. Sadly Archie's '57 car, by far the most successful Lister ever to race, no longer exists.

The design philosophy behind the new car was to make it as low as possible, to reduce its centre of gravity, while minimising its frontal area, a job made difficult by the size and height



found it quite enjoyable and realised you were lucky to have it. Because driving a properly sorted Lister, as this car so clearly is, ranks among one of the most enjoyable things I have ever done with a steering wheel in my hands.

How that wheel got there is one of simple expediency: this Lister is one of the star lots of RM's Monaco auction on May 10. Any *bona fide* Lister would qualify for that description, but this isn't just 'any' Lister. This is the original factory prototype of Lister's offering to the sports racing car market for the 1958 season, better known to you, me and everyone else as the Knobbly. It was first raced by one of very

of the straight-six twin-cam engine, which was therefore tilted by 15 degrees as it had been in the '57 car. Bodies were offered in aluminium or magnesium alloy weighing half as much, but potentially combustible (the catastrophic consequences of which would claim the life of Scott Brown later that year in another car).

The Jaguar engine was available in a range of capacities from the 3-litre limit mandated for the world sports car championship to 3.8-litre for Formula Libre events such as those in which Hansgen would barnstorm around the US.

Beneath the body the car was fundamentally conventional, but beautifully executed with a

tubular ladder frame chassis, double wishbone front suspension and a De Dion rear end with inboard brakes. Multiple gear ratios providing for top speeds all the way from 140 to a potential 200mph were available for the standard four-speed Jaguar transmission.

It seems the prototype was originally intended for Ecurie Ecosse, but nabbed at the last minute by Briggs Cunningham. That's why the car is variously referred to as EE 101 (the number on the original chassis plate), BHL 101 (for Brian Horace Lister) and even BHL EE 101. They are all the same car and, unlike certain other alleged Listers that might or might



“TODAY THE CAR LOOKS GORGEOUSLY AUTHENTIC AND LIGHTLY BATTERED FROM STERN TO STERN”



not have been built in Cambridge in the 1950s, its provenance is undisputed.

Cunningham wanted the Lister because his own cars were now obsolete, as was the most obvious alternative – the Jaguar D-type. Of cars that were readily available to customers, the Lister appeared to be the quickest thing around. He bought two that arrived just in time for Sebring, this car to be shared by Scott Brown and Hansgen, the second (BHL 102) for Ed Crawford and Pat O'Connor. At the start Archie was able to mix with the works Astons and Ferraris, but in one of the earliest signs that the Jaguar XK engine cared not in the least for its 3-litre displacement, the motors blew on laps four and six respectively. Archie's car suffered the additional indignity of being rammed and mounted by Olivier Gendebien's Testa Rossa as it slowed to a halt. The Ferrari nevertheless recovered to finish second to its sister car, but only after Archie – wearing Pirelli tyre tracks on his shirt and helmet according to Robert Edwards' essential *Archie and the Listers* – had considerably hung around for long enough to direct Gendebien's dismount.

The car then stayed in America for Hansgen to dominate in SCCA racing up and down the east coast, winning his class with consummate ease. The advent of more slippery Costin-bodied Listers in 1959 (not to mention Cooper Monacos and Scarabs) spelt a less successful season and the car was retired. Since then it has spent time on both sides of the Atlantic, being restored once in the 1980s.



TODAY THE CAR LOOKS GORGEOUSLY authentic and lightly battered from stem to stern. I hope its next keeper does whatever is required to keep it mechanically on top of its game, but leaves the war wounds to speak for its history.

I'd feared I'd struggle to get comfortable in a car designed for the heavily disabled Scott Brown with his substantially abbreviated lower limbs. In fact there's legroom enough, more than a C-type and about the same as a D-type. What you notice more is how low you sit, even though visibility all around is excellent, at least if you're reasonably tall. There is no attempt to civilise the surroundings. All around is bare aluminium, punctuated by dials that aren't easy to read at a glance.

I don't know what specification the engine has – it's a wide-angled 3.8 with triple Webers (though Cunningham engineer Alfred Momo made an experimental 3.75-litre motor that will be sold with the car) – but even within these confines power outputs can vary considerably. I expect this motor is in a reasonably sensible state of tune because the car feels competitively quick, but the power flows evenly from fewer than 3000rpm up to my self-imposed,

conservative 5500rpm limit. The noise is of course pure Jaguar, while the gearbox is characteristically slow and precise. A racing dog box would be far quicker and more satisfying to use, but Jaguar's strategy in the day was to use syncromesh on the basis that, in long-distance racing, time lost would be more than balanced by the increased likelihood of a tired driver not ruining the box and therefore the race.

The pedals are not arranged for comfortable heel-and-toe downshifts, so you have to be careful not to lock the rear tyres under braking as you can in a D-type, but the brakes themselves are magnificent for a sports car of this era. I'm told the inboard rear discs can overheat in extremis, but there is no chance of that at a freezing cold Donington Park.

It diverts entirely from the D-type script through corners. My early laps were damp, but the nose would communicate the incipient understeer on turn-in through a gentle lightening of steering loads in a manner that was little less than exquisite. Immediate gentle application of power would actually make the car run a little wider still, but if instead you lifted just enough to make the nose angle back into the turn and then squeezed the throttle, the Lister would enter a broad phase of gently drifting neutrality, a place of automotive ecstasy in which I'd happily live out my days.

You can of course press harder and reach an unlikely attitude to the road, but I preferred to leave this area as a safety net, a little leeway for when you hit a sodden patch of asphalt.



SOMETIMES, GIVING BACK SOMEONE else's million-plus car is a relief, simply because you've done your job and everything remains in the same number of pieces. Not today. It is no exaggeration at all to say I had to have quite a stern word with myself, accept my work was done and that nothing was more important than the car remaining in a fit state to be sold. I have been very lucky to drive most front-running 1950s sports cars, but none that combines raw pace through a corner with such sweetness on the limit as this.

Inevitably the course of Lister history changed irrevocably after Scott Brown lost his life at Spa in May 1958. Drivers as eminent as Stirling Moss and Jim Clark would continue to succeed in Cambridge cars, but Brian Lister's heart was not in it now that Archie was gone. On July 23 1959, Lister announced its withdrawal from all forms of racing.

Many Listers exist today, far more than were built. Some are original, some purport to be so, others are sanctioned recreations and some are plain fakes. Almost all replicas are Knobblys, however, and you can see why. Imitation has always been the sincerest form of flattery and time spent in the first Knobbly leaves no doubt as to why this is the most imitated of all. 📌



Yours for £250,000: recreation Listers taking shape

REBUILDING THE PAST

A new batch of Knobblys is being made... with official Lister approval

MOST LISTER FANS WILL KNOW already that a new batch of Knobblys is being created by Lister

Cars with, importantly for those concerned about the cars' credibility, the blessing of 87-year-old Brian Lister.

Whittaker bought rights to the Lister name from Laurence Pearce, the man who'd taken the marque back to Le Mans in the 1990s with the distinctive Storm. Most of the original jigs and drawings still existed at George Lister Engineering, the company founded by Brian Lister's grandfather in 1890. The Whittakers commissioned George Lister Engineering to create a series of new Knobbly chassis while Shapecraft would make the bodies and Crosthwaite and Gardiner the complete Jaguar powertrain, including the engine and gearbox. If you wanted a Chevy instead, that could be arranged, but no one has yet asked.

The result will be a newly created Knobbly, to original factory specification, that's entitled to call itself a Lister. Whether it should be regarded as a replica, recreation or a continuation car is a battle of semantics in which I'd rather not engage. It will be sold with complete FIA papers and should be

eligible to race wherever an original Lister is eligible to race, though it should be said that eligibility alone is no guarantee of an entry.

What the car should guarantee is that you can have a Knobbly that looks and behaves just like an original Lister, but for a fraction of the cost.

Whittaker has priced each complete car at £250,000 plus VAT and confirms they are eligible to be registered for use on the public road.

His plan for now is to make 10 Knobblys, after which he wants to make one-offs of the earlier Lister-MG, Lister-Bristol and Lister-Maserati. He has no plans at present to make any Costin-bodied cars, nor a recreation of the unique spaceframe coupé that was made but never raced in period by the works.

Lister was good enough to bring the first of three Knobblys to Donington, in a state of near completion.

Though I am no Lister expert, the quality of the workmanship is of the highest order and, comparing it to the Cunningham Lister, it seems as authentic as conceivably possible. Whittaker assures me his cars will be quicker because he maintains Lister supplied one specification of car to his customers while retaining a slightly superior spec for factory models.



**MOTORSPORT
INSURANCE**

www.motorsportmagazineinsurance.com

EXCLUSIVE READER OFFER

For all your cars, you need only one insurance provider

Valued readers of *Motor Sport* magazine are being offered a 10 per cent discount and free legal cover. Just quote MSR15



Call now for a 10% discount and quote MSR15

0844 557 9214

www.motorsportmagazine.com/insurance

Policy features

- Second-car discounts
- Excess protection insurance
- Approved repairer network
- Courtesy vehicle
- Glass cover included
- Multi-vehicle discounts
- No vehicle age restrictions
- Agreed valuations on request
- Limited-mileage discounts
- Club member vehicle insurance discounts
- Salvage retention option on a total loss
- Wedding use extension available
- Specialist repairer network



We can cover

- Drivers aged 21 to 79
- Driving other cars
- High-performance vehicles
- High-value vehicles
- Prestige vehicles
- Imported vehicles
- Modified vehicles
- 4x4 vehicles

Win!

Motor Sport Insurance is giving you the chance to win one of four places on a track-day experience at the Silverstone Grand Prix Circuit, courtesy of SpeedSport

**MOTORSPORT
INSURANCE**
www.motorsportmagazineinsurance.com



The prize includes

- + Breakfast in the Silverstone Wing
- + A number of sighting laps with professional racing driver Callum Macleod
- + At least 6 laps behind the wheel with Callum, learning lines, braking points and techniques
- + Video analysis of your laps in an F1 pit garage, in the company of a race engineer
- + Lunch, soft drinks and tea/coffee will be provided throughout the day
- + Winners will take home in-car footage

To enter the competition go to www.motorsportmagazine.com/competition/ and fill in your details

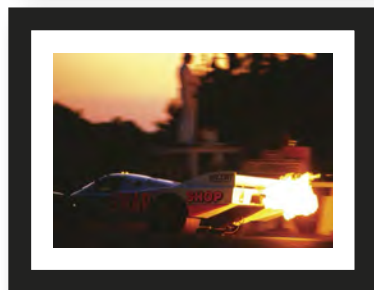
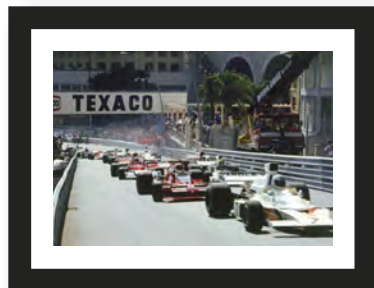
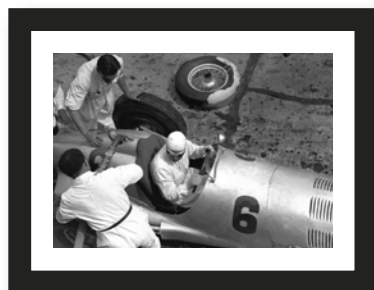
SpeedSport specialises in the field of race car preparation, corporate hospitality, driver management, track days and official motor sport distribution for Tesa tape

For more information on SpeedSport go to www.speedsport.co.uk or contact info@speedsport.co.uk Tel: 01327 858167



Create the perfect gift

at the online *Motor Sport* photo store



Browse a wide selection of stunning images that have been carefully researched and chosen by the *Motor Sport* team. We've worked with the world-renowned LAT Photographic to source images covering everything from pre-war racing to the current day, including Formula 1, rallying, sports cars and other categories. Available in a variety of formats, from large/small canvasses, high-quality framed prints, jigsaws and mugs to T-shirts, this makes present shopping easier for you, your friends and family.

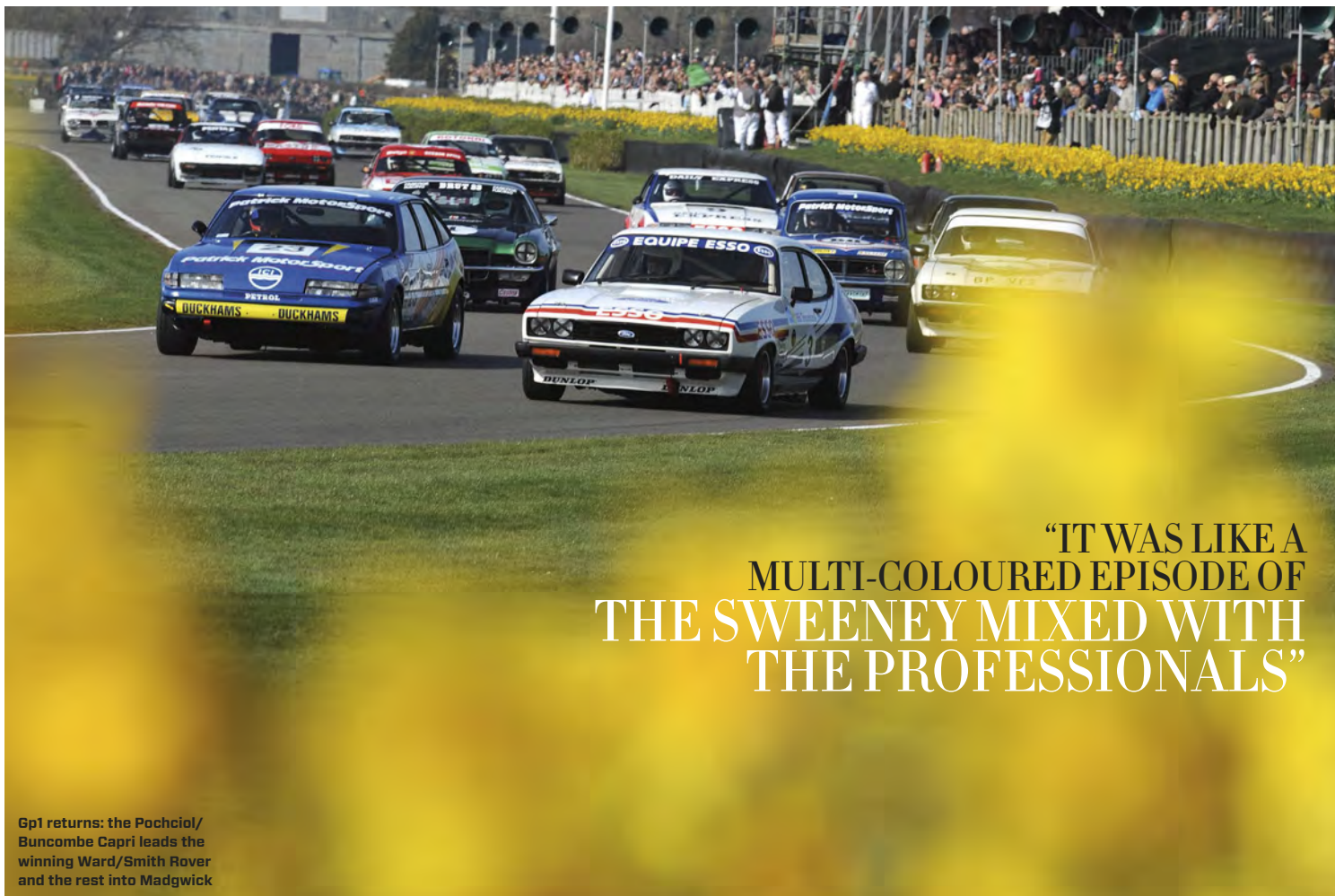


To own images of your favourite racers visit:

photos.motorsportmagazine.com

EVENTS OF THE MONTH

72ND MEMBERS' MEETING ❖ WEC ❖ HSCC THRUXTON ❖ VSCC SPRING START ❖ BARCELONA MASTERS



“IT WAS LIKE A
MULTI-COLOURED EPISODE OF
THE SWEENEY MIXED WITH
THE PROFESSIONALS”


Gp1 returns: the Pochciol/Buncombe Capri leads the winning Ward/Smith Rover and the rest into Madgwick

72nd
Members' Meeting
Goodwood

S

ATURDAY MORNING, 7AM. GOODWOOD IS RESPLENDENT in sunshine as the early birds wander through the main gate. The pale blue banners embellished by '72' are assiduously non-Revival spec, but the Sussex circuit's defining spring signature awaits. Goodwood's verges are awash in a sea of yellow.

Who else would invest more in daffodils than any other single ingredient for a race meeting 'reboot'? "There are 300,000 bulbs," Lord March says with a grin. "It's all thanks to a Dutchman we know who sends me bulbs every year. They were all planted in just one night, by a machine he won't let anyone see..."

The detail makes all the difference, and no one understands this better than the Earl of March and Kinrara. He was palpably nervous that Saturday, but didn't need to be. The 72nd Members' Meeting, 48 years after the 71st, was a monumental feat even by Goodwood's high standards. We have a new favourite race meeting. 

EVENTS

OF THE MONTH

Not everything worked, though. As Simon Arron explains on page 145, the ticketing plan and exclusivity for Goodwood Road Racing Club members needs refining – largely because too few of them stumped up. Crowds roughly a quarter the size of Revival attendances were a big part of the charm, but we hear the meeting was a loss-maker. Knowing Lord March and his team, you can bet the 73rd won't be.

The Group B rally sprint and high-speed demos of 1980s turbo F1 cars and Le Mans prototypes offered fresh flavours beyond the usual pre-66 palates. All looked fabulous in the paddock, and on track too. But they also lacked vim. No one expected a repeat of Nelson Piquet's near-mythical sub-minute lap, allegedly set in a Brabham during Goodwood's 'lost years' of the '80s. But the runs behind Ferrari F40 pace cars were muted to the point of... well, pointlessness. A good idea, but a rethink is required next time.

Yes, we demand a next time, for the simple reason that the racing was so damned good. Classes familiar to Revival crowds congregated for the two-day 'clubbie', but with top billing going to the out-of-period Group 1 saloons of the 1970s and 1980s. It was like a multi-coloured episode of *The Sweeney* mixed with *The Professionals*, as Stuart Graham stormed Sunday's second instalment of the suitably titled Gerry Marshall Trophy. Back in a Brut 33 Camaro, Graham looked set for victory until he missed the pit 'window' to hand over to team-mate Nigel Garrett. "I think it's what they call a 'strategy error'," he said with a blush. Still, he'd looked great out there.

Chris Ward, supported by Andrew Smith on Sunday, thus scored a Marshall double. Smith later added his own personal pair by seeing off Gary Pearson in the Salvadori Cup finale – but only just. The battling Lister Knobbles almost provided the best race of the meeting, but the dusk-into-darkness Moss Trophy had already claimed that title on Saturday evening.

This was as good as any Revival TT Recreation. Rob Hall led initially in the Ferrari 'Breadvan' from Jackie Oliver's 250GT (bright yellow blending nicely into the daffodils). But when Oliver punctured and the 'Breadvan' faded after the driver changes, Simon Hadfield came to the fore in Wolfgang Friedrichs' Aston Martin DB4GT. Then as darkness fell and headlights blazed on the last day of winter, another less familiar



Right livery, right body language: the Ward/Smith Rover exits the chicane. Below, from left: Oliver Gavin, Nick Swift, Darren Turner



'Breadvan' loomed in his mirrors...

Twyman Racing had only just completed its recreation of the lesser-known Lotus 11 low-drag coupé, but the odd little car, driven by Joe Twyman and Oliver Bryant, stole the meeting. Bryant lacked the oomph of Hadfield's Aston, but harried last year's TT winner all the way to the flag. The spectacle was up there with the best of this 'modern' Goodwood era.

The sight of 25 pre-war Bugattis was another highlight on Sunday afternoon as Type 35Bs and Cs twirled among 37s, 51s and a particularly rapid 59/50B III

driven splendidly by Tom Dark. Chris Goodwin dominated a lively Surtees Trophy for Can-Am sports racers in his vibrant McLaren M1B, while Gary Pearson (BRM P25) snatched the Brabham Trophy for 1950s F1s after Roger Wills' Cooper broke its gearbox in the dying minutes. He'd been lucky this time, but Goodwood isn't quite Goodwood without a Pearson win.

Then again, these meetings are about so much more than race results. Nick Swift's mighty Mini antics were show-stealers. His Richard Longman-esque 1275GT nipped away at the



Gp B rally sprint (above). Sports car and F1 parades lacked vim (below right and main). Smith's Salvadori-winning Lister (below left). Moss Trophy battle, bottom.



Rovers and Capris in the Marshall Trophy races, while his Cooper S (admittedly a runaway winner in the Sears Trophy) just made everyone smile each time he flung it around Madgwick.

There were fewer 'superstars' than at the Revival, although modern GT heroes Darren Turner and Oliver Gavin revelled in the mix of machinery. Forget smiles, Darren had us in giggles as he squirted around Madgwick without a lift in the tiny, eponymous Turner Mk1 he'd prepared for the occasion. Such feats captured the true spirit of the 72nd Members' Meeting. *Damien Smith*



ALL IMAGES BY SIMON ARRON



STRANGERS IN THE NIGHT

Ed Foster reflects on his Goodwood circuit baptism... or at least what he could see of it

WHEN YOU DON'T KNOW A CIRCUIT, YOU try to absorb as much information as possible before leaving the pitlane. The best advice I received before racing an MGB in the Moss Trophy at the 72nd Members' Meeting came from five-time Le Mans winner Emanuele Pirro. "Enjoy every metre," he said, "because racing at Goodwood is such an honour"

Many times I've watched from the sidelines at the Revival, and many times I'd wondered what it would be like to compete at the track. It was as expected in some senses, but not in others.

It was as exciting and exhilarating as I'd imagined, but even more of a challenge.

First of all the circuit is very fast. It's also more technical than some appreciate – and it has to be borne in mind that the MGB belonged to my managing director's husband. "Just keep turning right, you'll be fine," was the advice from one member of the *Motor Sport* editorial team. Thank you for that, Simon Arron.

There was no way I was going to get down to a competitive time during seven qualifying laps and then a half-hour stint in the race. Plus, it was dark by the time my race stint began (and besides, I'm never all that quick in the first place).

As Pirro mentioned, however, it didn't matter. We finished 15th out of 30, so were perfectly respectable, especially when you looked at some of the exotica on the grid in the shape of Ferrari 250GT SWBs, Jaguar E-types and Aston Martin DB4GTs.

The challenge of trying to find braking points in the dark is something I've never come up against (I did the Citroën 2CV 24 Hours many years ago, but they don't really require braking points). It was racing in the dark that I will remember the most fondly. That, and realising that Pirro is as wise as he is quick.

My thanks to Paul Latimer for letting me loose in such a forgiving and enjoyable car at a wonderful meeting. ☑



See Ed in action on your iPad or tablet @ THE MOTOR SPORT DIGITAL EDITION



MICHELIN

WEC
Silverstone

"I TELL YOU WHAT," SAID MARK WEBBER with a smile. "We're going to have some good races this year." His first taste of the World Endurance Championship had been the tonic he'd hoped for after the grind of Formula 1, but after a debut podium in the new Porsche 919 Hybrid shared with Timo Bernhard and Brendon Hartley his prediction can surely be judged a wry Aussie understatement.

As this month's cover story highlights, the return of Porsche to the top class of sports car racing is the most exciting comeback since '68-spec Elvis clad in leather – and it's all the sweeter for the battle with both Audi and Toyota. The Silverstone 6 Hours was our first glimpse, and while it raised more questions than answers, it did at least confirm what we'd hoped: it's super-close between the three main players.

Toyota scored a historic 1-2 in front of a decent-sized crowd, with Anthony Davidson relishing his addition to the RAC Tourist Trophy alumni alongside team-mates Sébastien Buemi and Nicolas Lapierre.

The sister car had beaten Audi to pole – by just 0.005sec over the four-lap average! – after a great effort by Kazuki Nakajima, team-mate Alex Wurz securing the lead at the start of the race. Early skirmishes between the Toyota TS040s and Audi's pair of R18 e-tron quattros were breathtaking, as the Porsches held a watching brief, before a combination of changing weather and Toyota's unforgiving

tactical calls dictated the outcome.

At the first sign of rain, the Cologne-based team chose to split its cars' strategies: Wurz was given full wets, Buemi Michelin's clever untreaded intermediates. Both drivers knew the latter was the rubber to have, but Wurz grudgingly accepted the team's decision to hedge its bets.

"It was a surprise," he said. "The strategy call didn't favour us, but for the team it was the right decision to put its eggs in two baskets – especially at Easter. It's just a shame the right egg wasn't in our basket..."

The Davidson car would gain a lap on its sister during a safety car period called due to the demise of the second Audi, on a bad day for Ingolstadt. Lucas di Grassi, who has replaced the retired Allan McNish with world champions Tom Kristensen and Loïc Duval, had

Toyota (top) overcame tricky conditions to begin its WEC season with a solid 1-2. Mark Webber (below) showcased Porsche's potential, but Audi (bottom) had a weekend to forget



already dropped his R18 at Woodcote when the drizzle began. The Brazilian nursed his mount back to the pits, but the front-end damage was such that he went no further.

The no 2 car was delayed by André Lotterer spinning into the Stowe gravel. Then towards the close of the third hour, Benoît Tréluyer lost its tail on the entry to Copse, snapping the nose into the barrier on the inside of the fast corner. His increasingly desperate attempts to leave the gravel trap were in vain as Audi marked its first total non-finish since Petit Le Mans 2011.

Porsche thus benefited from Audi's own goals to score its podium. But Webber's stint in the dry had shown the 919's pace is genuine when he caught and passed Sarrazin before a scheduled stop dropped him back to third. The point had been made.

Heavy rain swept across Silverstone in the final hour, forcing a safety car and an early conclusion, red flags halting the action after five hours and 22 minutes.

In truth, the tension had already been spent in the top class, but we'd seen enough to be left wanting more.

Porsche's 911 RSR and Ferrari's F458 Italia engaged in a battle royal for GTE Pro honours. Fred Makowiecki lucked in with a timely pit stop as the weather turned to secure victory in his first World Endurance Championship start for Porsche, sharing with Richard Lietz and Marco Holzer. *Damien Smith*

FORTHCOMING EVENTS

MAY 2014

- 3 **WEC** Spa 6 Hours
- 3-4 **BRC** Carlisle Rally
- 3-4 **World RX** Portugal
- 3-5 **Donington Historic Festival**
- 4 **TUSC** Laguna Seca
- 4 **MotoGP** Spain
- 4 **WTCC** Hungaroring
- 4 **BTCC** Thruxton
- 4 **DTM/Euro F3** Hockenheim
- 4-5 **British GT/F3** Rockingham
- 5 **BSB** Oulton Park
- 5 **British GT/F3** Rockingham
- 8-11 **WRC** Argentina
- 9-11 **GP de Monaco Historique**
- 10 **IndyCar** Indianapolis
- 10-11 **European F3** Pau
- 11 **F1** Spain
- 11 **WTCC** Slovakia
- 11 **WSBK** Imola
- 15-17 **ERC** Acores
- 15-18 **Mille Miglia**
- 17-18 **HSCC** Int'l Trophy
- 17-18 **Pau Historique**
- 18 **MotoGP** France
- 18 **DTM** Oschersleben
- 18 **Blancpain** Brands Hatch
- 24-25 **F3** Silverstone
- 24-26 **Masters Festival** Brands Hatch
- 24-25 **World RX** GB
- 25 **F1** Monaco
- 25 **Indianapolis 500**
- 25 **WTCC** Salzburgring
- 25 **WSBK** Donington
- 25 **Blancpain** Silverstone
- 30-31 **BRC** Jim Clark Rally
- 31 **TUSC** Detroit
- 31-1 **IndyCar** Detroit
- 31-1 **DTM/European F3** Hungaroring

JUNE 2014

- 1 **MotoGP** Italy
- 1 **British GT** Silverstone
- 5-8 **WRC** Italy
- 7 **IndyCar** Texas
- 7 **TUSC** Kansas
- 8 **F1** Canada
- 8 **WSBK** Sepang
- 8 **WTCC** Moscow
- 8 **BTCC** Oulton Park
- 13-14 **Le Mans Legends**
- 13-15 **Cholmondeley Pageant of Power**
- 14-15 **WEC** Le Mans



- 14-15 **World RX** Norway
- 14-15 **Brooklands Double 12**
- 15 **MotoGP** Catalunya
- 15 **BSB** Snetterton
- 19-21 **ERC** Ypres
- 21-22 **WTCC/Euro F3** Spa
- 21-22 **British GT/F3** Snetterton
- 22 **F1** Austria
- 22 **WSBK** Misano
- 22 **WTCC** Spa
- 26-29 **Goodwood Festival of Speed**
- 27-28 **BRC** Scotland
- 27-29 **WRC** Poland
- 28 **MotoGP** Assen
- 28-29 **IndyCar** Houston
- 28-29 **DTM/Euro F3** Norisring
- 28-29 **World RX** Finland
- 29 **TUSC** Watkins Glen
- 29 **Blancpain** Paul Ricard
- 29 **BTCC** Croft
- 29 **BSB** Knockhill

JULY 2014

- 4-6 **Le Mans Classic**
- 5-6 **World RX** Sweden
- 6 **F1** Great Britain
- 6 **IndyCar** Pocono
- 6 **Blancpain** Zandvoort
- 6 **VSCC** Shelsley Walsh
- 11-12 **British GT** Spa
- 12 **IndyCar** Iowa
- 12-13 **TUSC** Mosport
- 12-13 **DTM/Euro F3** Moscow
- 12-13 **World RX** Belgium
- 12-13 **Brands Hatch Superprix**
- 13 **MotoGP** Germany
- 17-19 **ERC** Estonia
- 19-20 **IndyCar** Toronto
- 20 **F1** Germany
- 20 **BSB** Brands Hatch
- 24-25 **TUSC** Indianapolis
- 25-26 **F3** Spa
- 25-26 **Eifel Rally Festival**
- 26-27 **Blancpain** Spa
- 27 **F1** Hungary
- 31-3 **WRC** Finland

Benn Simms and Tiff Needell (above) fought hard for one win apiece. John Cleland won Super Touring opener, below. Mallock driver Mark Charteris (111, bottom) burst through to beat F2 and F5000 rivals in the wet



HSCC Thruxton

JOHN CLELAND wins a touring car race in a Vauxhall Vectra. Tiff Needell scores a dramatic Formula Ford

victory in a Lotus 69... the very same chassis in which he notched up his first such success, and at the very same circuit, 42 years beforehand. Thruxton's second Easter Revival was a masterclass in the art of time distortion.

While Cleland and Needell made headlines, star of the meeting was Mallock driver Mark Charteris. In the first Derek Bell Trophy race, won by Neil Fowler (March 782), Charteris capitalised on his Clubmans car's lightness of foot to give Neil Glover's F5000 Lola a hard time. He was finally beaten by a whisker.

By the time of Sunday's second race, the circuit was partially under water – the dawn of a storm that would eventually lead to the temporary suspension of racing and cause two of the final four races to run concurrently.

Conditions were deteriorating when Fowler led away, but Charteris soon moved ahead to win by almost 40sec. John Harrison completed a memorable Mallock 1-3 as theoretically more potent rivals flourished in the puddles.

Cleland's victory in the first Super Touring race was a little fortuitous, long-time leader James Dodd (Honda Accord) retiring late on with driveshaft failure. Patrick Watts (Peugeot 406) finished second, but went one better in Sunday's slippery conditions, beating Simon

Garrad (Renault Laguna) and Cleland.

Needell was in the thick of a four-way battle early in the opening FF1600 race, but Merlyn drivers Michael O'Brien and Maxim Bartell spun from contention and left the former Ensign F1 driver to tussle with Benn Simms (Jomo). The latter had just retaken the lead, on lap 10, when the race was red-flagged after Daniel Stanzl crashed heavily. He was unhurt, but the result was declared after nine laps, when Needell was ahead.

The second race featured a repeat two-way duel, and Simms profited from an easier run through lapped traffic to cement a 1-1 draw.

Neil Brown (Ford Mustang) won the most spectacular of Saturday's races, outflanking Tim Davies (Lotus Cortina) into the chicane on the final lap to win by 0.320sec, with Sean McInerney (BMW 1800Ti) third. Engine tuner Brown was absent on Sunday, when McInerney dominated. Roger Godfrey (Mini) slithered past Davies on the final lap to take second.

Callum Grant (Merlyn) won both Formula Junior races, helped in the first when Andrew Hibberd (Lotus 20) spun and later retired with a dead engine. Oliver Ford (Lotus Europa) won the '70s Road Sports race, after challenger David Tomlin (up from the back of the grid in his Ferrari 308) suffered a right-rear tyre failure, and Robin Pearce (Morgan) dominated its Historic counterpart. Graeme and James Dodd (Ginetta G16) triumphed in the first Guards Trophy, from Chris Goodwin (McLaren M1B), while the second was yet another Saturday highlight. Paul Tooms (Lotus Elan) and Michael Whitaker (TVR Griffith) were inseparable for most of its 40 minutes, until Whitaker's quick late spin settled the issue.

The final few races were shortened to fit, victories going to Richard Trott (Chevron B43, Classic F3), Michael O'Brien (Merlyn Mk20, Classic Racing Cars), Benn Simms (Reynard SF77, Historic FF2000) and the irrepressible Charteris, who had to work hard to oust Classic Clubmans rival Ray Mallock.

For all that Sunday afternoon's conditions turned out to be fairly miserable, the event was anything but. *Simon Arron*

EVENTS

OF THE MONTH

THE SPECTACLE OF 10 ERAs CELEBRATING 80 years of the revered marque was a highlight of the annual VSCC Spring Start race meeting at Silverstone. Mark Gillies, working as hard as ever at the wheel of R3A, claimed a prestigious victory as new owner Dick Skipworth marked the return of the car he owned a decade ago.

Building on the success of last year's extended event, the Spring Start was a two-day, 21-race affair and honoured everything that is good about the VSCC as the club enters its 80th year. Sadly, the darker side of vintage racing was also apparent. GN Gnome racer Garry Whyte succumbed to injuries sustained during the weekend and two 500cc F3 drivers were hospitalised.

Gillies shook off any jet-lag from another Atlantic crossing by running third in Saturday's Patrick Lindsay Memorial race with R3A, heading the pre-war cars by a handy margin. Up front, Tony Wood took the TecMec Maserati to a narrow victory over Marshall Bailey's Lotus 16 after a spirited contest. Wood later added a pre-61 victory on Sunday.

Sunday's ERA race allowed Gillies to continue his form as he edged five seconds clear of Nick Topliss (R4A), who had Duncan Ricketts in close company at the wheel of the E-Type.

The HGPCA's season charged into life with a brace of races for pre-66 cars and both featured a fine contest between Jon Fairley (Brabham BT11) and Miles Griffiths (Cooper T51). They traded the lead many times over the 38 racing laps and Fairley won twice. Griffiths made him work, however.



PETER MCALOY

VSCC Spring Start Silverstone



JEFF BROWN



PETER MCALOY

Winner Mark Gillies leads away the all-ERA field in R3A, top. Jon Fairley (Brabham) and Miles Griffiths (Cooper) dispute HGPCA honours, above. Duncan Potter's MG leads a customarily diverse VSCC field, right

The front-engined Formula Junior pack began its stand-alone championship with victory for Simon Goodliff (Lola Mk2), but reigning FJ champion Mark Woodhouse ran him close in the Elva he has raced for 16 years. The intrepid Justin Maeers was great value in the GP Itala and Lanchester Trophies race as he oversteered his GN Parker to victory, but the event was sadly shortened after Whyte crashed while running second. *Paul Lawrence*



Catalan Classic Revival Barcelona

Fish and Lyons head the Historic F1 dash to Turn One, but Hartley (31, right) won twice

AS FORMULA 1 FANS DISCUSSED THE merits of their sport's new sound and quality, the FIA Masters Historic F1 Championship blasted into life with a 31-car grid in Barcelona – and it produced some tremendous racing.

Steve Hartley (Arrows A4) won both parts of the Spanish double-header, his first success coming after leader Michael Lyons (Hesketh 308E) and pole qualifier Simon Fish (Ensign N180) both retired. That allowed Hartley to triumph from Joaquin Folch (Brabham BT49C) and Belgian touring car legend Jean-Michel Martin (Fittipaldi F8).

Martin emerged as Hartley's closest challenger in race two, but Lyons was the star as he tigered his way from the back to finish fourth overall and win the pre-78 division.

Simon Hadfield and Leo Voyazides dominated much of the weekend as they took the Greek driver's cars to several victories.

They won the FIA Masters Historic Sports Car event in Leo's Lola T70 Mk3B, ahead of the similar car of Jason Wright/Andy Wolfe, while American Charles Nearburg humbled many of the big bangers in his Lola T212.

The Anglo-Greek duo's victory in the Gentlemen Drivers pre-66 GT opener came after the similar AC Cobra of Wright/Wolfe suffered mechanical problems, allowing the Jaguar E-type of Carlos Monteverde/Gary Pearson into second ahead of Jamie Boot's TVR Griffith, which was shared by former British F3 racer Martin O'Connell.

Pre-66 Touring Car honours also went the way of Voyazides and Hadfield, as their Ford Falcon emerged ahead of the similar car of Mike Gardiner/Phil Keen. Former Superkart ace Gardiner led early on, but there was no stopping Voyazides once he had moved to the front. Gardiner/Keen took second while Graham Wilson/Andy Wolfe secured third in the former's Lotus Cortina.

The Masters 70s Celebration runners joined a local and eclectic mix of cars in the Trofeo del Arco, but established Masters racer Mark Bates (Porsche 911 RSR) was the man to beat. He won both parts, while local ace Manuel Hermida (BMW M3) was best of the rest, with Paul Pochciol hustling his Ford Capri to third in both legs. *David Addison* 📧

JOIN US FOR A SPECIAL DAY TO REMEMBER



On July 1 2014 I would be delighted if you would join me and my friends at Mercedes-Benz World, on the historic Brooklands site in Weybridge, Surrey, for a memorable experience, both on and off-track!

Please help me celebrate my double anniversary year, and support HSF by entering a team of four to compete in the HSF Team Karting Challenge, alongside fellow corporates and stars of motor sport, past and present.

And for those of you not competing, you are welcome to join my friends and I for the post-race G. H. Mumm Champagne evening reception, prize-giving and auction.

In the first 12 months of the new HSF-supported service, Kent, Surrey and Sussex Air Ambulance have performed 69 emergency blood transfusions. Please help HSF to save more lives, improve quality of life for people with injuries and inspire young people to fulfil their potential.

It will be a super event and I would be thrilled if you could join us.

*With very best wishes,
John Surtees OBE*

What is the HSF Team Karting Challenge and Champagne Reception?

Now in its third year, this special event is established as a firm favourite on both the corporate and motor sport calendar, bringing together many motor sport celebrities in British Grand Prix week.

The karting itself is a challenging two-hour endurance race in which you will be driving Daytona's high-performance DMax karts. Some experience would be useful, but is not essential as the detailed brief and practice on the day will teach you all you need to know.

It is 50 years since John Surtees OBE secured his Formula 1 World Championship. The Barber Museum and race track in Birmingham, Alabama, is home to a collection of cars and motorcycles associated with John's life, including his title-winning Ferrari 158. The owner, George Barber, has made this car available to John for the

season, with the challenge to raise £50,000 for HSF – a sum he has promised to match.

In celebration of John's remarkable racing career on two wheels and four, the Ferrari 158 will lead a spectacular on-track car display during the racing programme.

As the sun sets over the track, you will step out of your race suit and into the superb, state-of-the-art venue, where you will be able to explore fascinating exhibitions, get up close to legendary Mercedes-Benz vehicles and enjoy a champagne and canapé reception.

Steve Rider and Henry Hope-Frost will host the evening, interview John's special guests and the day's track stars, award the prestigious 'H' trophies and present a glittering auction, hosted by Bonhams.

G. H. Mumm Champagne will, once again, be poured by generous arrangement with the House and Bernie Ecclestone.

HOW TO GET INVOLVED

- Enter a team or teams to compete in the 2014 HSF Team Karting Challenge
- For non-competitors, purchase individual tickets for the evening G. H. Mumm Champagne and canapé reception
- Share this invitation with your family, friends and business contacts.



To enter a team of four costs £1000 (including four tickets to the G.H. Mumm Champagne and canapé reception). In addition, we ask you to confirm that your team will secure a minimum of £500 in sponsorship or make a minimum donation of £500. For non-karters, to attend the evening G. H. Mumm Champagne and canapé reception costs £65 per person. Please email info@henrysurteesfoundation.com to secure your place on the grid, or to reserve individual tickets for non-karters to attend the evening G. H. Mumm Champagne and canapé reception. Numbers are strictly limited, and will be allocated on a first-come, first-served basis.



Henry Surtees Foundation
Registered Charity Number: 1137388
www.henrysurteesfoundation.com

ON THE ROAD WITH

SIMON ARRON



Possibly the only man with both F1 and Mallory Park media passes. Next stop..?

www.motorsportmagazine.com/author/simonarron/



ALL IMAGES SIMON ARRON

Sears Trophy winner Nick Swift leads the Cortinas away in his 1293 Mini Cooper S

BACK TO THE FUTURE

Goodwood, March 29/30: the 72nd running of an old favourite proves genuinely innovative...

IT WASN'T QUITE HOW Goodwood felt during the 1980s, when it was a sleepy test venue that happened to have a good café – the perfect rendezvous point ahead of a day testing road cars around the South Downs – but it was similar. The approach roads showcased Sussex at its tranquil best, with only the occasional, stubborn pheasant impeding progress.

The principle of Goodwood's 72nd Members' Meeting has been explained many times, but merits brief repetition: it was conceived as an invitation-only event for members of the Goodwood

Road Racing Club, a throwback to similar meetings staged for BARC disciples in the 1950s and 1960s. The news ignited many an internet forum (something you didn't get 50 years ago) as club racing was swamped by significant and unusual controversy, but Lord March doesn't do things by halves.

Fuelled by their passion for the Goodwood Revival, the wider public didn't want to miss another Goodwood 'event'; GRRC members, meanwhile, wanted payback on their investment, a high-quality race meeting without the queues or the crush. But when tickets were not taken up in sufficient

numbers, it was inevitable that they would be offered more widely. Result? Irritation on both sides.

Henceforth, the solution is probably to limit the number of tickets and sell them only to GRRC members for a fixed period (and perhaps at a discount), but make it clear that any surplus will become generally available after a set date. That should eliminate any confusion. As for the pricing (£75 for one day, £120 for two), it was a lot more than it costs to attend most clubbies (advanced tickets for the same Saturday's BARC fixture at Oulton Park were £10), but compared favourably with what some Premier League clubs charge to watch a 90-minute match. Predictably, though, a modern-day Goodwood 'clubbie' turned out to be little of the sort.

For the most part, the racing was uniformly engaging. Some cars will have been familiar to Revival regulars, but the headline Gerry Marshall Trophy – for Group 1 saloons that raced during Goodwood's 32-year hibernation – added a splash of varietal colour and noise. Goodwood is customarily reserved for cars relevant to its original years of operation, 1948-1966, but its ethos also extends to crowd-pleasing and the tin-tops fitted the bill. It mattered not that an HB Vauxhall Viva, shared by Paul Chase-Gardener and Gerry Marshall's son Gregor, was never a Gp1 car in period...

To hear a couple of Mazda RX-7s being primed in the paddock was a delicious throwback to the days of sumptuous aural diversity. The

symphony lasted some time, too. "You have to warm them up for about an hour," said Patrick Watts, sharing Ian Cowley's Pentax-liveried RX-7, "or else they blow an oil seal..."

You wondered how many Group 1 cars would survive the 45-minute feature race, given the smoky haze that heralded their practice session, but 19 of the 25 starters were still running by the end – and they were every bit as good to watch as they sounded. That applied equally to the 1960s saloons in the Sears Trophy, wherein Nick Swift (Mini Cooper) delivered a masterclass in the tricky art of perpetual momentum.

The themed parades were less dramatic. The promotional blurb showed turbocharged F1 cars belching flame, but that was never going to happen behind a pace car (even if it was a Ferrari F40). On Sunday, one of the F1 cars failed to keep up and would have been lapped by said pace car, had passing been permitted. A nice concept, but it needs further thought.

The best race was also the longest, the 60-minute Moss Trophy that ended in complete darkness on Saturday evening. It was possible to follow the action, simply because Simon Hadfield (in Wolfgang Friedrichs' Aston DB4GT) and Oliver Bryant (sharing the Lotus 11GT 'Breadvan' with Joe Twyman) were knotted together in the fastest two silhouettes.

An enthralling, nip-and-tuck duel ended with Hadfield just ahead – and it was only then that I noticed quite how cold it had become, a tribute to the insulating properties of first-rate racing.



FIRST AMONG SEQUELS

Donington Park, March 23: a sumptuous start to the four-wheeled season

THE RITUAL ONCE BEGAN ON THE 6.16 train from Hale to Cuddington, quiet Cheshire villages separated by about half an hour. The final few miles to Oulton Park were covered by bicycle – and there was a fair chance you'd arrive before the bloke on the gate, which effectively waived the 30p entry fee.

That, though, was 1974. Forty years on, my first car race meeting of the campaign involved circumnavigating the club-going dregs of London's suburbs and hitting the northbound M1 at a time of day that a) enabled a motorway to fulfil its designated purpose and b) got me to Donington Park in time for the standard cocktail of scrambled eggs, mushrooms, beans and so on.

Mission accomplished.

The paddock was rammed upon arrival, the public parking areas rather less so – symbolic of the status quo and not just a consequence of my obsessive breakfast pursuit. People flock to meetings with the highest profile, but that's not always where you'll find the best racing.

The principal lures? A Classic Formula Ford race with 30-plus cars, their form untainted by the aerodynamic clutter that sometimes stifles close competition, plus assorted Classic



The Twyman/Bryant Lotus 11 'Breadvan' was taped together in time for the Moss Trophy...



Rivals avoid Ian Jeary's spinning Lola. Above, Dave Mepham leads MGOC adventurer Terry Savory



Touring Car Racing Club championships (some allowing drivers to exercise cars in preparation for Goodwood) and various Caterham classes in which the regulations apparently dictate that thou shalt race no fewer than 15 abreast.

Mike Gardner was among the FF1600 front-runners, in a Crosslé 30F recently acquired from prolific Northern Irish racer Tommy Reid's collection. "It has a bit of a misfire," he said, reaching in his van for a feeler gauge. "I've not been used to dealing with cars that still have points..."

Ben Mitchell won both FF1600 events, the

first easily so and the second after a tight tussle with fellow Merlyn Mk20 racer Callum Grant. The sport's essence, though, was perhaps best espoused by Mitchell's mentor Simon Hadfield.

Biffed from the first race in his freshly restored Royale RP24, and without enough spares to effect on-site suspension repairs, he left the circuit to pick up a Lotus 51 – conveniently stored only a few miles away – and returned to start race two from the pits before carving through the field to finish 10th.

As you do.

Caterhams running in standard formation, with Andy Molsom and Chris Rome to the fore

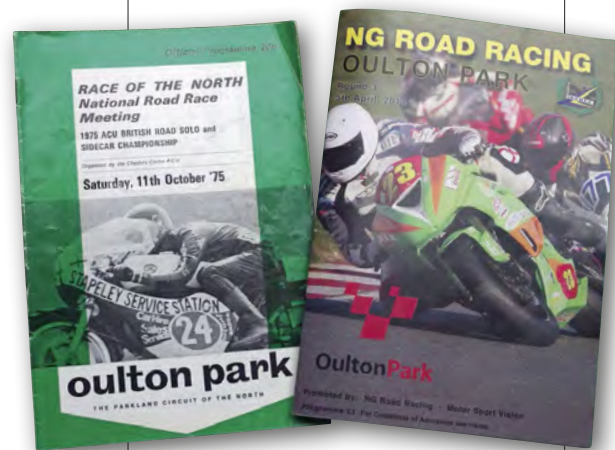


TICKET TO RIDE

Oulton Park, April 5: 39 years of wasted opportunity finally come to an end...

IN A PREVIOUS EXISTENCE I WOULD have been in Bahrain on this day, covering Mercedes-Benz's domination of Formula 1 qualifying (and wondering why the Grand Prix wasn't taking place somewhere else – France, perhaps, or else Imola).

Instead, after idling through assorted schedules, I opted for a 400-mile day return to my first Oulton Park motorcycle meeting since October 11 1975, when 160 1000cc racers (plus 17 reserves) battled through four heats to annex one of 40 places in the final. Star names that day included Ron Haslam, who was entered in the 250, 350, 500 and 1000 classes (although he didn't feature among the 90-strong sidecar entry).



Five decades on, grids were similarly full – if a little more diverse – for the second NG Road Racing fixture of the year. Most regular observational haunts have their customary appeal – Druids and Lodge, for instance – but motorcycles also draw you elsewhere. Cars are rarely very lively at Hill Top, for instance, but bikes tend to be quite the opposite as their front wheels go light. And cars don't flirt so spectacularly with the sleepers through the left-handed kink at Clay Hill, either.

No matter how familiar the terrain might be, it feels like a completely different circuit. 📺

HISTORIC SCENE WITH

GORDON CRUICKSHANK



One wheel in the past: searching out what's new in the old car world

www.motorsportmagazine.com/author/gordon-cruickshank



Justin Maeers manhandling the spectacular Parker-GN around Cadwell Park

AIR POWER IN ACTION

How Justin Maeers and his GN special lifted the Motor Sport Brooklands Trophy

IF ON YOUR WAY TO A VSCC meeting you're overtaken in a blast of noise by a spindly pointy-tailed cyclecar going unfeasibly quickly, chances are it has Justin Maeers at the wheel, winner of the 2013 *Motor Sport* Brooklands Memorial trophy. Maeers has been a GN addict for many years, and his current hit is the famous Parker-GN, motivated not by a V-twin but by four pots of a 6.2-litre DH Cirrus engine that ought to be in an aeroplane. As well as our trophy, Maeers also carried off the Longstone Tyres championship for cars driven to events – and even without

trying it I reckon that's quite an achievement. It must be like sitting in a tin bath in a wind tunnel.

All season long Justin was driving to VSCC events, racing hard and driving home again, topping the *Motor Sport* Trophy rankings for pre-1940 cars that could have run at Brooklands. And it's not just to go racing.

"I drive it a lot on the road," he says of his outrageous special. "It's a fantastic road car. I even drove it from Dijon to Flaine in the Alps and went ice racing in it. I can honestly say that driving it up a mountain pass was the finest driving experience I've ever had." □

GORDON CRUICKSHANK

He began racing in a four-wheeled three-wheeler Morgan, the RIP Special, which he still has. "I've raced in other fields," he says. "A crash in a GN-Ford put me off for a while, then I raced a TR3 for several years and bought a Lola T70. But it just wasn't as much fun; I missed the crack of the vintage world. The VSCC is such a brilliant way of going racing – everyone's in it for the right reasons."

Justin has another very original 1922 GN for VSCC trials to fill the off-season, but loves to get back to the Parker's grunt. The car has been racing since it was new in 1922, first with its original GN twin, then from 1926 with a JAP, and from '79 with the Cirrus lump.

"Mark Walker sorted it and got it going quickly in single-seater form. Nine years ago he offered it to me, but my wife said if I bought it she wanted to come along. So we built a 1½-seater body!"

That hasn't slowed it down: between Walker and Maeers the Parker holds a stack of hillclimb and sprint records and is a spectacular sight on the track, as anyone who watched Maeers' epic Mallory Park battle with Robert Carr's AC/GC can attest. Justin is a worthy winner of our venerable trophy, heading Charles Gillett (Frazer Nash) and Andrew Mitchell (HRG).

The GN pair occupy Maeers fully (in between running his high-end lighting company), so he loans the RIP Morgan (also a Prescott record holder) to young drivers. "We must encourage young members," he says, "and the 'Nash and Morgan sections are particularly friendly to them." Meanwhile the T70 is for sale, because, says Justin, "there are so many brilliant things to do in the VSCC and only so much time!"



MS Trophy winner Maeers tried other racing but prefers "brilliant" VSCC



Fastest car in the world, Thrust SSC – huge, dramatic, brutal

SUPERSONIC CITY CENTRE

Thrust SSC makes a dramatic centrepiece at Coventry's Transport Museum

IN APRIL DOUG NYE WROTE ABOUT THE stillborn Coventry Climax flat-16 F1 engine, suggesting that there might be one in the Coventry Transport Museum. So on my way somewhere I went to the museum to ask. And there isn't. (Can anyone tell us where any surviving units are?) But there is an impressive collection of British cars, bikes and motorcycles, 99 per cent of them with a Coventry connection, so I did the tour.



Cheshire Classic Cars
Nissan 240RS

Fancy a Group B rally car driven by a World Champion? Ex-Colin McRae, this has been fully refurbished to works spec and is ready to compete in historic events

£65,000, cheshireclassiccars.co.uk

DREAM GARAGE
What we'd blow the budget on this month



Richard Thorne
Morgan Plus 8 racer

Well-known competitor in the Morgan Challenge series, fitted with 3.9-litre V8 and alloy body and wings and ready to race. You too can experience 280bhp on sliding pillars!

£42,000, www.rtcc.co.uk



RMD
Rondeau M378

It ain't pretty, but this machine has entered more Le Mans races than any other car – an amazing 10 times, placing second, third and fifth. Driven by Streiff, Schlessler, Elford.

£POA, www.rmd.be

I didn't choose the best time to arrive, a week or two before the museum begins a huge redevelopment project that will revamp most of the galleries and upgrade facilities (while remaining open to visitors). And to go with this 21st-century makeover, the museum gets a 12th-century extension. Built in the late 1100s as a chapel-hospital, the Grade 1-listed Old Grammar School, empty for 30 years, will become an additional exhibition and education space.

It's hard to picture the days when so many vehicles were manufactured in this area (136 makes are on show), but the succession of defunct marques on display tells a tale of burgeoning enterprise in a new field, inter-war expansion and gradual, painful decay. Crouch and Crowden, Harper and Gwynne and scores of other badges – they would have made Bill Boddy's eyes light up but failed adequately to tickle the public's fancy; as the tour hits the BL years and the shrivelling of Britain's remaining motor industry, the soundtrack in the gallery changes tellingly to *Ghost Town* by Coventry band The Specials...

I'm always a happy customer for a scene-set, so the 'street' of vintage shops and garages, tools and spares spilling across the workshop floor, kept me entertained, and the bicycles – or more correctly, the cycles as the wheel count goes from one to five if you count trailers – demonstrate a fascinating range of ingenious answers to pedal power. Slightly off the transport theme is the Blitz Experience, a smoke-filled ear-thumping evocation of the city's WWII devastation packed with rubble, dust, crushed vehicles and collapsed walls. Powerful. But not as powerful as Thrust SSC.

I hadn't seen Richard Noble's supersonic LSR breaker in person before and wasn't prepared for the sheer size of it, squatting in a tunnel like a nuclear bunker. I approached via the tail, a towering black T above a skinny fuselage with the staggered steerable rear wheels squeezed inside; far ahead the afterburner nozzles on the vast fat Rolls-Royce Spey engines (the same as powered the Phantoms that Thrust pilot Wing Commander Andy Green first served on) point threateningly at you, and it's a long way forward to the cavernous twin air intakes and floor-hugging needle snout. Only when you turn and look back do you see the tiny canopy through which Green, control yolk snapping from side to side, squinted to keep this missile



Museum celebrates Coventry's central role in UK motor manufacturing


roughly on the black line of oil that led to 763mph and Mach 1 success. It's tempting to compare it to the Tornado F3 fighters Green used to fly at work, but Thrust SSC's ground-hugging crouch and the locomotive brutality of the steel tube frame are a million miles from aviation tech.

What a contrast to move 500 yards to Spon Street, lined with medieval buildings that

survived not only the Blitz but over-eager planners. Most have been moved here, corralled by the ring road like a building zoo, but the sagging jetties and drooping rooflines of these ancient timber-framed structures remind you that low-tech can survive stress and age just as well as high. I'll look forward to another visit to Coventry when the museum revamp is finished next year.

FIRE UP MY TARDIS

If second sight was widespread we'd all own a valuable classic


YOU GET USED TO 'IF ONLY' STORIES IN THIS BUSINESS, BUT AN ENCOUNTER AT A wedding recently produced a tale that made me grimace. A gentleman of, shall we say, some seniority was telling me about his experiences in the motor industry in Chelsea in the 1950s and '60s. One day in the mid-Sixties a young man pulled up at his garage in a peculiar old car and asked if they could store it for a couple of weeks. Terms were agreed and the man disappeared. For two years. Finally my acquaintance, wanting to expand his premises, got fed up of the abandoned relic and paid someone to drag it away and scrap it. He still remembers the odd winged mascot, and the badge saying 'Voisin'... 

THE RACES THAT MADE THE LEGENDS

100


GREATEST GRANDS PRIX

SOUVENIR SPECIAL



From the publishers of
MOTORSPORT

£7.99



5 010791 422009

STARRING MOSS • FANGIO • NUVOLARI • CLARK • STEWART • PROST • SENNA • MANSELL



Our 100 Greatest Grands Prix Souvenir Special is now available direct from us at £7.99 – order while stocks last.

Packed full of what we think are the most significant Grands Prix in history. Will you agree with our choices?

To buy a copy of this special edition magazine visit:

<http://shop.motorsportmagazine.com>

FROM THE ARCHIVES WITH

DOUG NYE



Our eminent historian dips into the past to uncover the fascinating, quirky and curious



The underpinnings of Sydney Allard's wild sprint special. What could possibly go wrong?

CELEBRITY

SYDNEY'S OPERA HORSE

Problems with a 4wd Ferguson trigger memories of bygone engineering complexity

LATE ON THE SATURDAY night at Goodwood's '72' meeting, I was walking through the paddock when I happened upon a perplexed little group huddled over the fabulous four-wheel-drive Ferguson P99. Owner/driver Stuart Rolt explained that its Climax engine had subsided into silence on his first practice lap, and his little team had been struggling to revive it ever since. They had some signs of a spark – if a weak one – and they had fuel, but the one proved obstinately disinclined to ignite the other. The wonderful old

Fergie – the last front-engined Formula 1 car ever to win a front-line motor race – was in deep trouble. Next day it got worse, as the revived old lady sheared a halfshaft – and three-wheel-drive is not ideal...

Now it's odd how one's mind works – at least, yours truly's – but thinking about 4WD cars in trouble in Sussex paddocks revived a buried memory of Brighton Speed Trials, from the same September day on which Aston Martin clinched its Sports Car World Championship title by winning the Goodwood TT (despite having burned down its pit). It concerns Syd Allard's

amazing twin-engined, four-wheel-drive sprint special.

Back in 1946, Allard had lost faith in his sprint special's flat-head Ford V8 engine. He was attracted instead to a German ex-Wehrmacht air-cooled Steyr V8. It gave about 90 horsepower, which was more than the humble Ford V8 while also being 100lbs lighter. Its air-cooling would also save the extra weight and complication of a fluid-filled cooling system. He acquired four of the engines plus a spare crankcase and assorted spares.

The Steyr 60-degree V8 comprised a cast-iron crankcase with individual finned cylinder barrels, each bank supporting a light-alloy head with two pushrod-operated overhead valves per pot. Ignition was by a Scintilla Vertex magneto and induction via eight individual Amal carburettors.

Right through the 1950s, Allard ran the engines very successfully in his single-seat sprint and hill climb car. He enlarged the capacity progressively to 3.7 litres and pumped up output from 90bhp at 3600rpm to 180-plus at 5000. He was a fan of four-wheel drive and for 1959 installed two of his surviving Steyr V8s side by side in a (by Allard standards) lightweight chassis frame in butt-welded 14-gauge mild steel – actually from Allard Clipper three-wheeler frame stock. The engines were assembled upon dry-sump oil pans only two inches deep, which dropped their mass well down within the car. Near-solid front suspension was by transverse leafspring and double wishbones, with a Ford commercial forward differential unit mounted on the centreline and

carrying a single Girling disc brake crosswise just behind.

There was no effective rear suspension, just an Allard diff unit bolted to the chassis frame with 12-inch diameter 1¾in-wide drum brakes upon its cheeks. Each outboard chassis member then carried a fabricated housing to accommodate fully floating hubs located laterally by a de Dion tube. Intrepid Syd was to sit just ahead and to the right of this rear diff, with a three-gallon fuel tank to his left, pressurised by a driver-operated hand pump.

Ahead of the driver, each Steyr V8 engine drove through a Ford V8 three-speed gearbox. The right-hand unit's first gear ratio matched that of second in the left-hand 'box. Each unit drove a short shaft into a case housing a series of sprockets. Final drive was then by chain to power the front and rear propshafts that were divided by a free-wheel device, allowing rear-wheel drive to over-ride that to the front.

Gearchanging involved two Ford

The way things used to be in contemporary F1, before the adoption of *parc fermé*: mechanics attempt late-evening repairs to Stuart Rolt's troubled Ferguson



CLASH OF THE TEUTONS

How a duel between Mercedes drivers ended badly, although neither party was to blame

WATCHING THE LONG-TAIL LE MANS cars hurtling around Goodwood, under escort by the Cottingham boys in their pair of wonderfully frenzied Ferrari F40 course cars was a great reminder of how enjoyable many of that era's championship races really were.

Recalling that period with Jochen Mass raised the image of a huge wall of solid water being hurled into the Brands Hatch sky as his

black Sauber-Mercedes careened into the rain-filled tyre barrier on the exit of Clearways in the early laps of the 1988 1000Kms.

Jochen said: "You can see it all as it happened on YouTube today. I was in second place, chasing Klaus Ludwig in the leading Porsche 962, with my Mercedes team-mate Mauro Baldi right on my tail. We came down into that last turn with a little C2-class Tiga up ahead. It moved left, Ludwig dived through on the inside and I was set up to follow when I think the C2 got a wheel on the grass and half-spun back into me. Its nose tucked under my left rear wheel, which spun me left-handed and fired me straight off into those tyres. It was a hell of an impact. We ended up back in the middle of the track, with bits everywhere, clouds of steam and smoke, the

Consul column levers mounted vertically, side-by-side, to the driver's left. Off the line Syd would select first in both gearboxes, then as soon as possible change the left-hand 'box into second – matching bottom gear ratio in the right-hand 'box. Eight sprockets were mounted on the centreline propshaft, driven by four chains from each engine. Minimising the time each engine would be driving a different ratio to its sister, Allard's next upchange sequence would be from second to top in the left-hand gearbox, then first to second in the right-hand 'box. Running a 2.8:1 top gear ratio, plus 6.00x16 front tyres and 7.00x16 rears, he calculated top speed at 5500rpm as 165mph...

This complex assembly stood only 30in tall, and open-wheel bodywork was envisaged, but I think not made. Allard also talked about acquiring a set of new American 'slicker' drag-racing tyres for this latest projectile.

His firm friend and long-time associate Tom Lush recalled, "It was taken to Silverstone on two occasions, but although making extremely rapid getaways it would not keep running and failed to produce even one complete lap!" He believed no attempt was made to start and run it at the Brighton Speed Trials, but there are accounts of it being towed vigorously on the A23 yet steadfastly refusing to light up.

Ultimately this costly and time-consuming project was abandoned, and it was left to Harry Ferguson Research to do the job properly – a few months later – as frontier-technology high-tech replaced austerity-era make-do and mend.

water from those tyres showering back down from the sky. A disaster, but at least nobody got hurt apart from my feelings...

"When I got back to the pits Peter Sauber thought I'd just written off his car through driving too hard to hold off Baldi. He had no idea I'd been hit by the guy I was trying to lap [American Steve Hynes]. His first words were, 'Zo – did you think it entirely necessary to destroy my car like that?' And it was a long time before he saw the video and realised it really hadn't been my fault"

Then the genial German laughed and added: "Mauro was a good guy and a good driver too, but as a good German I wasn't about to be scared of any Italian."

Tell it like it was, mate, tell it like it was...



WELL DONE, FAITHFUL SERVANT

How a treasured Sunbeam was given a fresh lease of life, thanks to 2000 man hours and wonderful dedication

Many drivers tasted success in the 350hp Sunbeam, including Campbell, Chassagne and, pictured, Guinness

IT WAS TWENTY YEARS AGO THAT THE National Motor Museum's ex-Sir Malcolm Campbell 350hp Sunbeam was being warmed up, when as chief engineer Doug Hill recalls, "There was a brief clatter, and it just stopped."

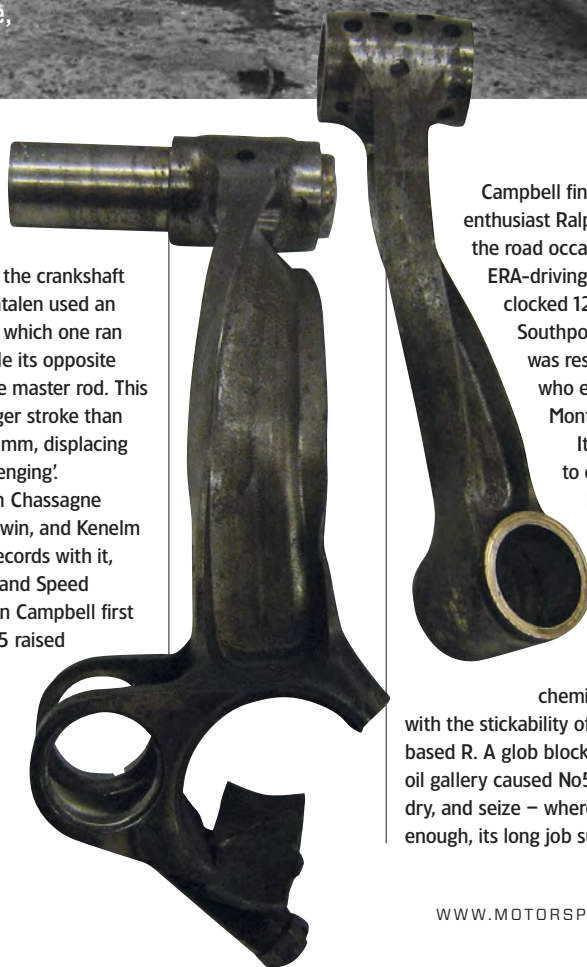
A rod and piston had punched a rectangular slot through the ancient crankcase. Happily, the four three-cylinder blocks escaped damage, but it still took some 2000 man hours to revive the 350hp just this spring, thanks to Doug's and senior mechanic Ian Stanfield's NMM team, with wonderful support from the Sunbeam Enthusiasts' Club and volunteers.

The big Sunbeam is a one-off. Breton chief engineer Louis Coatalen built it to win Brooklands races and set new speed records. Upon its launch, Sunbeam emphasised that its 60-degree V12 was not merely a surplus aero engine, but tailor-made.

In fact the unit is a unique hybrid combining features of both Sunbeam's 60-degree Manitou and 90-degree Arab V12s. Its

cylinders are arranged with two alloy blocks in tandem on each bank, with sohc per bank driven by 16 gears from the crankshaft nose. To minimise length, Coatalen used an articulated con-rod system in which one ran on the crankshaft journal while its opposite partner ran in a journal on the master rod. This gave one cylinder bank a longer stroke than the other, 135mm against 142mm, displacing 18,322cc. Balance was 'challenging'.

In 1921 at Brooklands, Jean Chassagne scored the big car's first race win, and Kenelm Lee Guinness began setting records with it, including in 1922 the World Land Speed Record, at 133.75mph. Captain Campbell first drove it that year, then in 1925 raised the WLSR to 146.16mph, at Pendine. Back on the Welsh beach he and the 350hp Sunbeam later pushed the WLSR above 150mph for the first time – at 150.76mph – and in 1926 to 152-plus.



Campbell finally sold the big car to enthusiast Ralph Aspden, who ran it on the road occasionally. As late as 1936, ERA-driving band leader Billy Cotton clocked 121.5mph in it on Southport Sands. In wartime it was rescued by Harold Pratley, who eventually sold it to Lord Montagu in 1958.

Its big bang is attributed to old, jellied Castrol R having solidified in the oil galleries. A modern solvent had been recommended to flush out the system, but evidently the 1990s lubricant

chemists hadn't quite reckoned with the stickability of smelly old vegetable-based R. A glob blocking the crank's internal oil gallery caused No5 main bearing to run dry, and seize – whereupon the old rod cried enough, its long job supremely well done... ☑





PARTING SHOT

MAY 21

1948

STAMFORD BRIDGE, LONDON

Oval racing draws decent crowds from time to time, but perhaps not on this scale. Note the three pragmatic spectators perched, Monza-style, on that Bovril hoarding. In 1928 Stamford Bridge became the first major London stadium to host speedway races – and dirt-track midgets would also later compete on the shale around Chelsea’s football pitch.



To buy this photo or other classic racing shots, visit photos.motorsportmagazine.co.uk