

AUTOSPORT

www.autosport.com • NOVEMBER 26 2015 • £3.70

AUSSIE HERO

WEBBER

WORLD

CHAMPION

**How Porsche
ace took
WEC title
...just**



haymarket



£8.99

REVEALED How much F1 teams really spend



Renault CLIO RENAULTSPORT
The road provides its destiny,
the track its DNA.

After 115 years in motorsport, our name is synonymous with some of the fastest cars on the track. The same dedication and expertise is now available at our network of expertly trained Renaultsport specialist dealers countrywide.

Visit renaultsport.co.uk to find out more.

The official fuel consumption figures in mpg (l/100km) for the Renault Clio Renaultsport emissions are 144g/km. EU Directive and Regulation 692/2008 test environment figures.



RENAULT

Passion for life



are: Urban 34.9 (8.1); Extra Urban 55.4 (5.1); Combined 44.8 (6.3). The official CO₂ Fuel consumption and CO₂ may vary with driving styles, road conditions and other factors.

WE ARE ALL RACERS



THE HIGH PERFORMANCE TYRE FOR RACERS.

**MICHELIN PILOT SPORT CUP 2,
Approved for the PORSCHE Cayman GT4.**

When it comes to high performance, Porsche and Michelin share the same passion for perfection. So when the uncompromising Cayman GT4 needed a new level of contact with the ground, Porsche and Michelin worked shoulder

to shoulder to craft, test and finally codevelop a truly exceptional high performance tyre. It's simply the latest chapter in more than fifty years the pair have spent together pursuing excellence on the road and in motorsport. No wonder that Michelin has been selected by Porsche as its strategic partner for tyres.



MICHELIN Pilot Sport Cup 2 the track tyre suitable for everyday use. Thanks to MICHELIN Total Performance you can enjoy high performance and optimal safety together in total confidence.



Release your inner racer and discover the MICHELIN high performance tyre range at:
www.michelin.co.uk



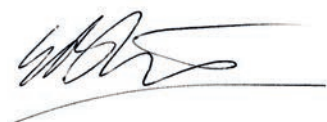
POLE POSITION

Mark Webber deserves the greatest respect

SOME WILL ASK WHY MARK WEBBER STANDS ALONE AS a world champion on our cover. It's a fair question to ask, but with due respect for Timo Bernhard and Brendon Hartley – two superb drivers every bit as deserving of their success – Webber is the one who has had the biggest impact on the hearts of racing fans thanks to his successes in Formula 1.

Two other factors also make Webber such a great story: the frustrations of a grand prix career that ended in the shadow of an all-time great in Sebastian Vettel (although nine F1 wins is still a remarkable achievement), and the fact that he had to battle against the odds even to reach the top level. Webber has had to work incredibly hard for his success, and the difficulty of making it in Europe by having to move from the other side of the world with little financial backing should not be underestimated. That's why he deserves so much respect for what he has achieved.

Until last Saturday in Bahrain, Webber had never won a championship. That injustice has now been corrected. While getting towards the end of his career as a driver, this intelligent, eloquent character still has plenty to offer motorsport.



EDD STRAW EDITOR

edd.straw@haymarket.com

@eddstrawF1

COVER STORY

“No start-up can afford F1's costs of entry without billionaire backing”

Special report, p14



ETHERINGTON/LAT

FIND US ON



Cover images: S Bloxham/LAT

PIT & PADDOCK

8 THIS WEEK IN F1

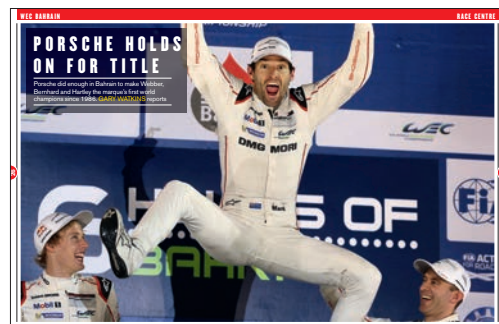
11 IAN PARKES: IN THE PADDOCK

12 THIS WEEK IN MOTORSPORT

FEATURES AND REPORTS



14 SPECIAL REPORT: WHAT FORMULA 1 TEAMS ARE REALLY SPENDING



24 WEBBER'S TITLE WIN

26 BAHRAIN 6 HOURS REPORT

32 ROSENQVIST'S MACAU GP DOUBLE

41 ENGEL WINS GT3 WORLD CUP

43 TCR CHAMPIONSHIP FALLS TO COMINI

44 KYLE BUSCH'S RUN TO THE TITLE

46 ART TAKES GP2 TEAM TITLE IN BAHRAIN

48 INTERNATIONAL RESULTS ROUND UP

50 GP3, MRF CHALLENGE, AUSSIE V8S

54 RACE OF CHAMPIONS

CLUB AUTOSPORT

71 TICKTUM LANDS TWO-YEAR BAN

72 TEAM PARKER GETS BENTLEY DEAL

75 NATIONAL REPORTS

THE BACK STRAIGHT

76 CHRISTMAS GIFT GUIDE

78 THIS WEEK

80 FROM THE SOFA

82 INTRODUCING: JAMIE CAROLINE

AUTOSPORT OFFERS

40 WIN A VIP DAYTONA 24 HOURS TRIP

74 SUBSCRIBE FOR FREE SENNA DVD







THE BIG PICTURE

Sebastian Vettel was crowned Champion of Champions and Andy Priaulx and Jason Plato won the Nations Cup at the Race of Champions in London's Olympic Stadium

Photographer IMP

This week in F1

HONDA'S F1 ENGINE FUTURE

'IT'S TOO LATE FOR RED BULL DEAL NOW'

Honda motorsport chief Yasuhisa Arai says it is too late to supply Red Bull with engines for next season, even if the Milton Keynes squad's likely Renault renewal falls through.

Red Bull contacted Mercedes, Ferrari and Honda regarding a power unit supply for next season after requesting to terminate its deal with Renault a year early.

But Mercedes chose not to supply Red Bull and talks with Ferrari proved fruitless. Honda considered it, but faced a veto from McLaren chief Ron Dennis, and has now decided time has run out.

Red Bull resumed talks with Renault and it is understood to be edging closer to continuing the partnership.

"I think it's too late," said Arai. "Even if we got the offer right now, it's too late."

"Always we've concentrated

on McLaren-Honda as the works team and there is no change."

It is nearly a year since the renewed McLaren-Honda partnership made its track debut in the 2014 post Abu Dhabi Grand Prix test.

Poor performance and reliability have hampered progress ever since, but Arai remains confident Honda knows where it needs to improve. He believes the Abu Dhabi Grand Prix will be a good test to see how much ground has been gained.

"We are still far away from the top or middle teams but we want to confirm how much progress has been made over that year," said Arai. "The team knows where are the strong points and where are the weak points."

"So we will improve the weak points and catch up with the other teams."



STALEY/LAT



XPB IMAGES

ALONSO: HONDA IDEAS DIFFICULT TO COPY

Honda's engine will be impossible for rival manufacturers to copy if its "unique" power unit ideas pay off, says McLaren driver Fernando Alonso.

The Japanese firm has endured a torrid return to F1 with McLaren this year, racking up a string of failures and being mired in the lower midfield.

It has deliberately avoided hiring experienced engineers from established F1 manufacturers and focused on its own homegrown team at Sakura in Japan.

Asked if he thought this was a weakness that left Honda isolated, Alonso said he was certain Honda's distinctive thinking would ultimately prove advantageous.

"If you want to copy what Mercedes do, you can be close to Mercedes, but you cannot ever be better than Mercedes," said Alonso.



TEE/LAT

"Being there in another culture, with another discipline and another ethic of work has maybe been difficult this year because some of the process has been slower

than what it could be, but I think some of the ideas we have are very unique in the paddock.

"If we make them work, it will be difficult for anyone else to copy."

For all the breaking news, visit **AUTOSPORT.COM**

S BLOXHAM/LAT



Williams drops Massa appeal

Williams has dropped its appeal against Felipe Massa's exclusion from the Brazilian Grand Prix.

The right-rear tyre on Massa's car was found to be 27 degrees Celsius above the allowed maximum of 110 degrees.

After finishing eighth at Interlagos, Massa was excluded, only for the team to launch an appeal.

Williams performance chief Rob Smedley claimed the appeal was based on three independent temperature readings that showed Williams was "within the limits set by Pirelli and the prescriptions for this event".

But after further consideration, while believing it had a strong case, Williams chose not to take the matter further, believing any case will have a bearing on its 2016 preparations, and with legal costs to consider.



DUNBAR/LAT

Force India signs Celis to 2016 deal

Force India has signed GP3 racer Alfonso Celis as a development driver for 2016.

Celis will get his first chance behind the wheel of an F1 car at the one-day post-Abu Dhabi Grand Prix test, sharing driving duties with Nico Hulkenberg.

As part of the deal, the 19-year-old Mexican, who has raced in GP3 and Formula Renault 3.5 this year, will participate in seven practice sessions over the course of next season, as well as conducting work in the simulator.

Hill at AUTOSPORT International

Damon Hill will attend AUTOSPORT International at the Birmingham NEC in January to celebrate 20 years since he won the world championship.

Hill, who took the 1996 title for Williams-Renault, will be reunited with his championship-winning car in Birmingham. The FW18 will be part

of a centrepiece display of historic Williams F1 cars alongside the Williams Martini Racing motorhome.

AUTOSPORT International will take place on January 14-17, with the first two days of the event for trade only.

Tickets are available for the public days via autosportinternational.com.



LAT

F1 PREVIEW

ABU DHABI GRAND PRIX

November 27-29



CIRCUIT INFORMATION

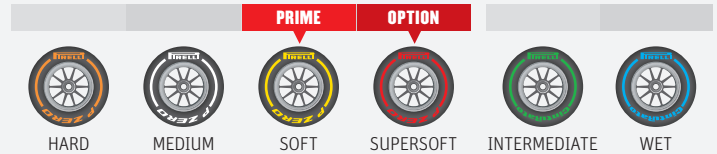
YAS MARINA

LENGTH 3.451 miles NUMBER OF LAPS 55



2014 POLE POSITION Nico Rosberg	1m40.480s
QUALIFYING LAP RECORD Sebastian Vettel	1m38.481s (2011)
RACE LAP RECORD Sebastian Vettel	1m40.279s (2009)

TYRE ALLOCATION



UK START TIMES

LIVE ON BBC AND SKY SPORTS F1

FRIDAY
FP1 1700 FP2 2100

SATURDAY
FP3 1800 QUALIFYING 2100

SUNDAY
RACE 2100

BBC 5 Live and the BBC Sport website will offer live coverage of all sessions. BBC TV will also carry highlights of the race.

PREVIOUS WINNERS

2014 Lewis Hamilton	Mercedes
2013 Sebastian Vettel	Red Bull
2012 Kimi Raikkonen	Lotus
2011 Lewis Hamilton	McLaren
2010 Sebastian Vettel	Red Bull
2009 Sebastian Vettel	Red Bull



THEMES TO WATCH



BATTLE OF THE FINNS
Kimi Raikkonen says he's not bothered about the standings. Valtteri Bottas says fourth is important. There's just one point in it.



TRIO FOR ROSBERG?
Nico Rosberg will aim to end on a high by securing a third successive F1 grand prix victory for the first time in his career.



BATTLE FOR SIXTH
Lotus will bid to hold sixth place in the constructors' championship, with rivals Toro Rosso only nine points behind.

THE ULTIMATE REVIEW OF 2015

Whilst rival F1 annuals come and go, AUTOCOURSE – The World's Leading Grand Prix Annual – is proud to have reached its 65th year of publication as the indisputable leader in its field.

The 19-race Formula 1 World Championship season is covered with its usual meticulous attention to detail. The vastly experienced and much-respected Tony Dodgins and Maurice Hamilton – both long-time paddock insiders – bring you all the drama and intrigue that is Formula 1. Supporting their race commentaries are detailed results spreads that include specially prepared lap charts and tyre strategies.

The 2015 season saw the continuing domination of Mercedes-Benz as a championship-winning force, and Lewis Hamilton took his third World Championship, to equal the tally of his boyhood hero Ayrton Senna.

As ever, politics cast a long shadow over the sport, and the many crises that erupted throughout the year are assessed, along with the implications for the future well-being of Formula 1.

Mark Hughes once more analyses the successes, frustrations and failures of each of the constructors in his Team-by-Team review, which includes key personnel, sponsors and technical specifications of the F1 cars, highlighted by the beautiful F1 car illustrations of Adrian Dean.

The sport's other leading categories are also given ample coverage, including the single-seat ladder from Formula 3 up to GP2, which showcases the pool of rising talent, all aiming to make their way into Formula 1.

Also described is Audi's battle with Porsche and Toyota for sports car racing's World Endurance Championship, and the typical door-banging combat that is Touring Cars, in all their respective categories. Veteran scribe Gordon Kirby gives his no-holds-barred assessment of the racing year in the United States.

AUTOCOURSE traditionally wraps up the year with the most complete record of results published anywhere in a single volume.

With a whopping 384 pages, this lavish yearbook – the largest ever – is essential reading for all fans of global motor-sport.



ONLY £43.50*
INCLUDING FREE UK secure post and packing
*RRP £49.95

To order visit: www.autocourse.com
or call our hotline: +44 (0)1753 689693

Includes FREE and SECURE pre-Christmas delivery!

Last UK order date: 17th December*

*Delivery times dependent upon order destination – see website for details



ONLY £25.00
plus secure post and packing



LIMITED EDITION GRAND PRIX CALENDAR

Icon Publishing Limited are delighted to team up with the world-renowned Cahier Archive, to produce the premium quality, large format, LIMITED EDITION, AUTOCOURSE 2016 CLASSIC CALENDAR.

Sized at 592mm x 420mm, in a landscape format, this sumptuous calendar is printed on 230gsm art board. It reflects Formula 1 through the ages, offering 24 images, all of which are suitable for framing.

The photographs, drawn from seven decades of Grand Prix racing, have been personally chosen by Paul-Henri Cahier, from his Cahier Archive.

To offer you incredible value for money, the calendar leaves are printed on both sides, to give you two images per month. Therefore you have the option to change them over to a personal favourite, or whenever it suits your mood.

THE GRAND PRIX COLLECTION CALENDAR IS ONLY AVAILABLE FROM www.autocourse.com
please visit our website to view all 24 images.

The calendar will be sent in early December, in a protective cardboard carton, via a tracked courier service, in time for Christmas 2015 – providing you make your order by December 17th*

“In these ten years of Formula 1, my greatest joys came from the fans.”

Ayrton Senna

WWW.AYRTONSENNASHOP.COM

Instituto Ayrton Senna  A portion of the revenue from Ayrton Senna brand goes to Ayrton Senna Institute.



Ayrton Senna

INTERNATIONAL SHOP



Ian Parkes

From the paddock

Formula 1's proposed 2017 rules package promises much, but do the people behind it actually know what they want to achieve?

When they were announced back in May, the ideas for “faster cars and thrilling races” in Formula 1 in 2017 – the FIA’s words at the time – were greeted with some fanfare. At long last, the much-maligned Strategy Group – which, as Bernie Ecclestone often says, usually seems to come up with nothing more concrete than the date of the next meeting – announced a raft of recommendations designed to spice up F1 from 2017 onwards. Via a range of proposals such as an aerodynamic rules revolution, wider tyres and a reduction in car weight, the masterplan was for the cars to be up to six seconds a lap quicker than at present.

The only problem was that while the ideas were good on paper, trying to turn them into something more tangible has brought on the usual migraines associated with getting anything done in F1. More often than not, it really does require someone to go and lie down in a quiet, darkened room before untangling the madness of F1’s strategy – or lack of it in many cases. Often all that eventuates from such contemplation is the awareness that more has been bitten off than can be chewed.

F1 finds itself in an invidious situation having had this eureka moment. The belief is there that a solution to the sport’s many perceived ills has been found, but once those involved sit down and think it through, they find they don’t actually know how to get there without running up against further complications – or, indeed, a further tangle of vested interests.

alter how the compound reacts in real-world conditions compared with today’s family of rubber.

That is why Pirelli ideally needs track time with a 2017 car – which it won’t get, since none of the 2017 cars will be ready until the last possible moment. And even if they were, no team would want their ideas paraded in front of their rivals so far in advance of the season. There has been talk of some form of a mule car being provided, but who builds and pays for such a vehicle? Hembery has suggested a current car’s suspension could be modified, but again which team will dip into its pocket, and if there is a willing participant, will they not gain an advantage?

So we have a classic case of blue-sky thinking being broadcast to the world without being interrogated thoroughly beforehand. And it’s a recurrent theme in the proposals for 2017, which, taken as a whole, leave you at a loss to explain what the actual objective is.

Faster cars are all very well. With the planned aero changes, including wider front and rear wings – the latter potentially featuring a swooping effect – and the addition of those broader tyres, the cars will probably look pretty cool. But will that actually result in the more “thrilling races” promised by the FIA?

We all know thrilling racing involves unpredictability and overtaking. For the past two years, since the introduction of the 1.6-litre V6 turbocharged hybrid power unit, we have had some exciting races, but many senior engineers have complained that the sport has

“We have a classic case of blue-sky thinking being broadcast without being interrogated”

Pirelli, perhaps unwittingly, is at the heart of it all. If tyres are to increase by 55mm at the front and 75mm at the rear to 300mm and 400mm, the expansion in the contact patch should mean a significant improvement in lap times, even without amendments to the aero.

One of the cornerstones of Pirelli’s pitch to retain the F1 tyre supply contract was that it was willing to supply whatever the sport wanted, rather than seeking to dictate such hardpoints as wheel sizes. But, as with any major overhaul concerning F1’s rubber, and as Pirelli has flagged up repeatedly, it needs to go testing to evaluate its new rubber properly. It has asked for 16 days next year. Even that has been painful to negotiate, and without a 2017 development ‘mule’ those days will have less value.

Pirelli motorsport director Paul Hembery has confirmed it can simulate the loads likely to be generated. But what Pirelli cannot do is adequately evaluate the compounds because the new width of the tyre, and with it the increase of the air chamber inside, will naturally

become an engine formula and that the tyre compounds are too hard. In Pirelli’s first stint as F1’s sole supplier it was briefed to develop rapidly degrading tyres to add unpredictability, but in the fallout from the 2012 British Grand Prix it became more conservative and overtaking opportunities have indubitably diminished since then.

If an increase in speed is the sole objective of the 2017 rules package then thrills do not necessarily follow. If Nico Rosberg can lap the entire field in Brazil in 2015, bar his team-mate and the two Ferraris, what’s to stop him doing the same in 2017 with a faster car?

As Hembery points out, it all comes down to what the actual brief was when the FIA, Ecclestone and the top teams sat down at a table to discuss potential exciting changes for the future. Did they get what they wanted? Did they even know what it was, or how to get there? It seems to me that F1’s democratic process – where more viewpoints are being aired than ever before – is simply creating confusion rather than clarity. ❧

This week in motorsport

Montoya tops WEC test on LMP1 debut

Juan Pablo Montoya flew on his Porsche LMP1 test outing, recording the fastest lap in the official World Endurance Championship rookie test in Bahrain. The Penske IndyCar and ex-Formula 1 driver described the 919 Hybrid as “a hell of a toy”, setting a best lap of

1m40.861s on a qualification simulation with 10 minutes of the second three-hour session remaining. That compared with the 1m39.670s best from qualifying for this weekend’s Bahrain WEC finale, set by Timo Bernhard in the same Porsche 919 Hybrid.



BAHRAIN TOP TIMES

1	Juan Pablo Montoya	Porsche	1m40.861s
2	Richie Stanaway	Audi	1m42.134s
3	Mitch Evans	Porsche	1m42.946s
4	Anthony Davidson	Toyota	1m43.779s
5	Mike Conway	Toyota	1m43.815s
6	Benoit Treluyer	Audi	1m44.431s

12



Wood Brothers' full-time return

Legendary NASCAR team Wood Brothers will contest its first full Sprint Cup campaign since 2008 with Penske protege Ryan Blaney next year.

The squad is the oldest active NASCAR team, having been racing in the category – always with Ford machinery – since 1950, and is one of the most successful teams in NASCAR history.

Although it has only been a minor player in the 21st century, Wood Brothers took a shock fifth Daytona 500 win with rookie Trevor Bayne in 2011, 35 years after its previous success in NASCAR's premier race.

Team co-owner Eddie Wood said the team was “beyond excited” to return to full-time competition.

Ford reveals GT drivers for US

Long-time BMW driver Dirk Muller has joined Ford for its assault on the GT Le Mans class of the 2016 IMSA SportsCar Championship.

Muller will share the #66 Chip Ganassi Racing-run car with Joey Hand, with whom he won the 2011 American Le Mans Series GT title at the Rahal BMW team.

Ryan Briscoe, a former Ganassi IndyCar driver, and Richard Westbrook will team up in the #67.

IndyCar stars Scott Dixon and Sebastien Bourdais are expected to be part of the line-ups for the IMSA long-distance races and the Le Mans 24 Hours. The World Endurance Championship line-up is expected to be revealed in January.



For all the breaking news, visit AUTOSPORT.COM

CITROËN

...to take WRC sabbatical in '16

Citroen will withdraw from next year's World Rally Championship, taking a season out to develop its all-new 2017 World Rally Car.

The Versailles team's decision confirms its long-term commitment to the World Rally Championship, and it is likely PH Sport or another satellite team would run a DS 3 WRC on a limited programme next

season, albeit with significant input from Citroen Racing.

Mads Ostberg will not form part of its plans in 2016, and he is almost certain to return to M-Sport for a full programme in a Ford Fiesta RS WRC.

A part-programme would keep Kris Meeke involved in competition as well as developing the 2017 car, should the Northern Irishman remain at Citroen.

REMEMBER WHEN

2006



MCKLEIN.DE

Citroen missed the 2006 season to develop its C4, with Kronos Racing running Sebastien Loeb to the title in a Xsara WRC swansong. Loeb's third of nine titles came despite missing the last four rounds.

...to leave WTCC in '17

Citroen's extended WRC programme starting from 2017 will come at the expense of its World Touring Car Championship programme.

The manufacturer will conclude a three-year stint in the series at the end of 2016.

Jose Maria Lopez and Yvan Muller will be the only two factory C-Elysee drivers in the WTCC next season. Argentinian Lopez has claimed both drivers' championships ahead of Muller since Citroen joined, with the team claiming back-to-back manufacturers' crowns as well.



...and lose Loeb after 15 years

Nine-time World Rally champion Sebastien Loeb has parted company with Citroen after 15 years with the marque.

The Frenchman has been confirmed as a Peugeot Sport driver for 2016 and he will begin his programme with his maiden Dakar outing.

Loeb has admitted he was surprised to

be dropped by Citroen, because he expected to contest next year's World Touring Car Championship with the French manufacturer.

He has driven for Citroen for 15 years, winning 78 rounds of the World Rally Championship before his switch to touring cars in 2014.

In brief

LMP2 ACES TIE UP

The US Extreme Speed Motorsports LMP2 Ligier JSP2s will be run in the World Endurance Championship in 2016 by French squad OAK Racing under the ESM banner.

SEVEN BTCC HONDAS

Seven Honda Civic Type-Rs will race in the BTCC next season. In addition to the three factory cars, Eurotech Racing has acquired the TOCA BTCC Licence from Houseman Racing and will field three of the Team Dynamics-built machines, while long-time Toyota Avensis team Speedworks Motorsport will add a Honda for Intermarque racer Matt Simpson to its programme.

FORMULA E TO MEXICO

Mexico City will host the fifth round of the second Formula E season, using a revised version of the Autodromo Hermanos Rodriguez Formula 1 circuit. The March 12 event will be the series' first race at a purpose-built venue, and will take place on March 12.

PRUETT IN ACTION

Five-time Daytona 24 Hours winner Scott Pruett, 55, will return to the US enduro in January with the Action Express team alongside Christian Fittipaldi and Joao Barbosa. He will then join Dane Cameron and Eric Curran in the team's second Coyote-Chevrolet Corvette DP for the Sebring 12 Hours.

MUNOZ AT ANDRETTI

Carlos Munoz will stay with Ryan Hunter-Reay and Marco Andretti at Andretti Autosport for the 2016 IndyCar season.

Ullrich stays on

Audi Sport boss Wolfgang Ullrich will remain in his job for two more seasons.

The Austrian has been given a contract extension that will allow him to remain in his post beyond his 67th birthday in 2017, having hit retirement age at the end of this summer.

The contract extension will be announced at next week's Audi Sport Finale awards ceremony at which its 2016 World Endurance Championship LMP1 challenger will be unveiled.

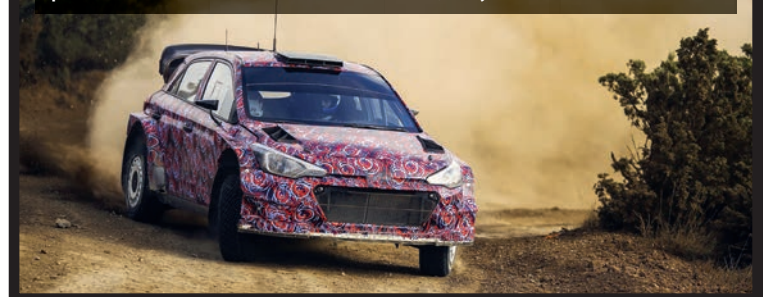
It comes after the DTM "push him out" controversy, which resulted in Ullrich receiving a one-event ban.

The motorsports programmes are not in danger of being dropped or significantly reduced. Basically, we do not question our motorsport efforts

New Volkswagen Group boss Matthias Muller says emissions scandal won't hurt its motorsport commitments

Five-door Hyundai breaks cover

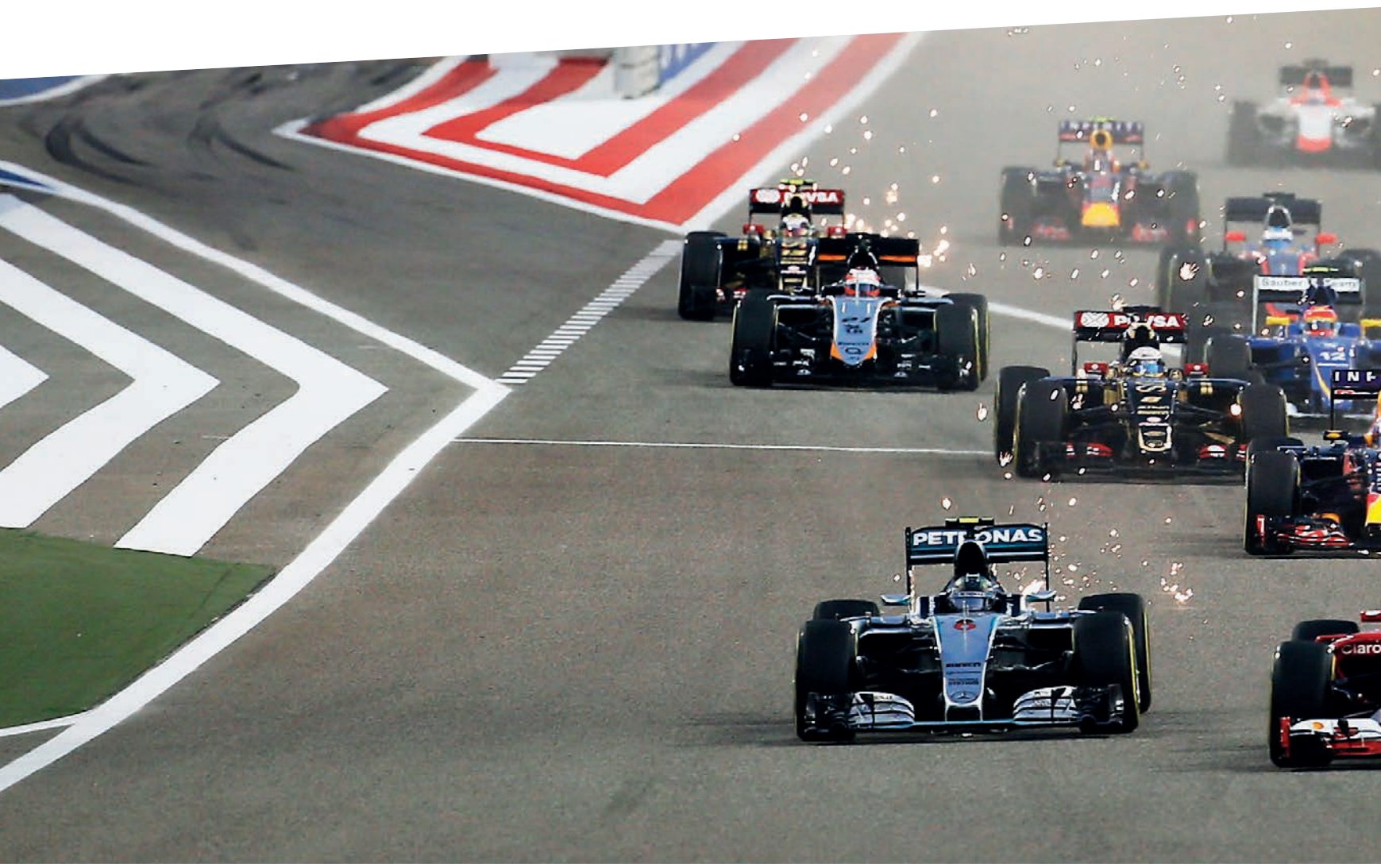
Hyundai's new-generation i20 WRC has broken cover in testing. The Korean manufacturer will run the five-door version, which replaces the planned introduction of the three-door car, for just one season in 2016



COST OF F1

REVEALED

£1,395,
The true cost



000,000

of Formula 1



DUNBAR/LAT

A

Want to know how much each grand prix team really spends? DIETER RENCKEN reveals all

UTOSPORT's The True Cost of F1 is now in its third edition, and therefore able to track the sport's commercial trends. Despite increased spending at the sharp end, the overall picture continues to look bleak – since last year, a team (Caterham) has been lost, while two independents recently confirmed that they had filed official complaints with the EU Commission over the sport's controversial revenue and governance structures.

Another long-standing name – Lotus – relies predominantly on state funding provided by its Venezuelan driver, and stands on the cusp of extinction unless it is saved (by Renault), while it is doubtful whether Sauber, Force India and Manor could survive without driver funding. Indeed, only the continued largesse of Red Bull magnate Dietrich Mateschitz ensures the future of his two teams in the face of serious engine complications.

As McLaren can attest, no title partners or sponsors have come aboard, and existing sponsors are said to be negotiating further downwards off the back of dwindling live attendances and falling TV audiences – the latter having dropped 30 per cent over five years, with no end to the spiral in sight. Even the calendar has taken a knock: this year featured just 19 races after Germany failed to take up various discounted offers.

However, it is not all doom and gloom: Honda rejoined the fray – as engine supplier, again in partnership with McLaren – while next year sees the arrival of the first American team in over 30 years in machine magnate Gene Haas's eponymous operation. Therein, though, lies a stark reality: no start-up can afford F1's costs of entry without billionaire backing...

In any financially driven activity, budget and performance are symbiotic, and thus discrepancies far beyond pure technical and sporting skills or abilities are evident across the grid, with the best-funded teams mainly racing at the sharp end and budget operations generally bringing up the rear. The middle class just survives betwixt and between.

Beginning 2013, Ferrari, Red Bull, McLaren and Williams receive (varying) Constructors' Championship Bonus (CCB) payments from commercial rights holder Formula One Management (FOM), with Mercedes receiving an increased windfall from 2016 after winning back-to-back constructor titles. This structure further widens the gulf between rich and poor, and such payments are identified accordingly. Note: FOM monies are disbursed a year in arrears.

With eight (of 10) teams – including Red Bull Racing, McLaren, Mercedes, Williams and Force India – based in Britain, direct comparisons between UK-domiciled operations are facilitated by Companies House filings. Such accounts are, though, at least nine months in arrears, and thus interviews were requested across the board, and mostly granted. Where teams withheld information, educated estimates are applied. Various sources were consulted and cross-referenced, including filings, known variables, informed assumptions and inside information.

A new addition this year is a 'Bang-for-Buck' (B4B) table, whereby team budgets, excluding engine divisions, are divided by championship points scored as at the Brazilian Grand Prix to provide an efficiency index. Less is more, as they say.

Currencies have been converted from Euro (Ferrari/Toro Rosso), Swiss Francs (Sauber) and US Dollars (FOM) to Sterling for ease of comparison. Rates used: £1 = €1.35/\$Fr1.50/\$1.50



MERCEDES GRAND PRIX

Brackley
German control
Full co-operation/input

2015 BUDGET: MGP £230M EXCL ENGINES

2015 INCOME: £230M

- £60m Daimler
- £85m Sponsors
- £85m FOM 2014, incl. £22.5m bonus



Mercedes F1's activities are split into two separate units: Mercedes Grand Prix (MGP) (race operation), and High Performance Powertrains (HPP) (self-explanatory – see separate section), which operates autonomously and supplies MGP and others. The former is held 60/30/10 by Daimler, team boss/director Toto Wolff and non-executive chairman Niki Lauda, while the latter is a 100 per cent Daimler subsidiary.

While headcount – and saliently salaries per employee – increased after last year's championship success, sponsor income and FOM revenues followed suit, with Daimler's contribution, effectively viewed as global product advertising expense by the car maker, remaining stable at £60m. However, this continuing shortfall remains a worry, potentially causing the board to reconsider its engagement over time should results go south.

Combined, Mercedes constitutes F1's largest global spend – with commensurate headcounts – yet MGP is undoubtedly the most effective B4B operation, delivering the constructors' title at £350k per point, and for around £60m direct cost. The operation is financed by a combination of Daimler funding, sponsorship, customer activities – notably Force India and other engine customers – and burgeoning FOM revenues.

Having scored double consecutive titles, MGP – already a member of F1's Strategy Group – is now a full CCB operation, thus qualifying for additional premium payments estimated at £25m/annum from 2016. Will these be used to reduce Daimler's contribution or increase already dominant performance levels? **Motorsport director Toto Wolff: "If you see it from Daimler's perspective, it's not bad: a global advertising equivalent value of three billion (Euro) in return for its contribution."**

RED BULL RACING

Milton Keynes, Britain
Austrian owned
Full co-operation/input

2015 BUDGET: £200M (ESTIMATED)

2015 INCOME: £210M

- £25m Red Bull
- £80m Sponsors
- £105m FOM 2014, incl. £47m bonus



Red Bull's UK-based operation draws on two interlinked companies: Red Bull Technology (RBT), which produces cars for Racing Bull Racing (RBR), the race team management entity. RBT also provides gearbox, hydraulics and other permitted technologies to Scuderia Toro Rosso, as well as various services to other group companies, so RBR's purified budget is £200m, on which a modest profit is expected.

RBR, however, drops to fourth in the overall classification this season, precipitating an estimated reduction of £10m (for 2016) in FOM revenues. This is, though, partially offset by lower driver retainers after Vettel's move to Ferrari and commensurately reduced performance bonuses, while a number of contractors have been appointed to staff positions – inflating payroll, but decreasing overall outsourcing costs.

RBR's objective remains to reduce dependence on its parent company – ultimately achieving revenue-neutrality – while continuing to generate global brand exposure for the core product through successful campaigns. However, the evident downscaling of Adrian Newey's activities, the uncertain engine situation and reducing FOM revenues will prove challenging...

Team principal Christian Horner: "We've enjoyed a stable sponsor platform, and through tight cost controls have been able to post the only profit among UK-based teams in 2014 despite our drop-off in performance."



Red Bull has offset reduced income with tight cost control

STALEY/LAT



Williams has moved back to join the F1 front-runners

COATES/LAT

WILLIAMS GRAND PRIX ENGINEERING

Wantage, Britain
(Frankfurt Stock Exchange-listed)
Full co-operation/input

2015 BUDGET: *£110M

2015 INCOME: *£110M

- £55m Sponsors
- £55m FOM 2014, incl. £6.5m bonus

**As a listed company, Williams stresses that, for legal reasons, the information provided is indicative, and does not constitute forward projection.*



Williams Grand Prix Engineering (WGPE) moved back to the sharp end after totally reinventing itself – in the process snaring Mercedes power – and it certainly paid off on the scoreboard and balance sheet over the past two seasons.

WGPE has a unique business model, being F1's only listed team.

The founder Sir Frank Williams retains 52 per cent of stock, US investor Brad Hollinger has 10 per cent and newly knighted co-founder Sir Patrick Head 9 per cent, while Toto Wolff (Mercedes) controls 4.9 per cent. Employee funds control 2.5 per cent, with the balance (21.6) being publicly traded on Frankfurt's Stock Exchange.

Having moved away from driver-related funding, Williams has two revenue streams: sponsors and FOM revenues, with the arrival of Unilever and BT contributing to a 50/50 split that is both unique and a lesson to other teams, while Williams Advanced Engineering – a separate business unit – benefits from technical spins-offs and provides a commercial cushion.

Chief executive officer Mike O'Driscoll: "The team's been very lucky – all the work we put in last year is paying off, and obviously that has knock-on effects on commercial discussions as we reach the mid-point of our five-year plan."

SCUDERIA FERRARI

Maranello, Italy
Zero co-operation/input

2015 BUDGET: £295M, INCL. ENGINES (EST. £225M WITHOUT)

2015 INCOME: £295M

- £150m Sponsors, incl. FIAT/Ferrari
- £110m FOM 2014, incl. £60m bonus
- £35m Powertrains



Ferrari is unique in producing an entire car within one industrial complex. It does so by sharing facilities with the road car operation, which supports Gestione Sportiva in lieu of advertising. This complicates issues, for internal policies make accurate revenue/profit splits impossible – with October’s IPO on the New York Stock Exchange serving both to obfuscate matters and divulge previously withheld information.

2015 marks the first year under a totally revised management structure – from president Sergio Marchionne, who committed increased budgets, down – but the new arrivals, particularly team boss Maurizio Arrivabene and quadruple champion Sebastian Vettel, have largely rejuvenated the team, with the Scuderia now confirmed runners-up in the championship.

This will provide increased FOM revenues, of which Ferrari is already, at £110m, the primary beneficiary, further bolstering the war chest of the second-biggest spender in the sport. Add in that Vettel is (allegedly) cheaper than predecessor Alonso, and Ferrari clearly has more disposable income for the future.

Engines are supplied to two customers teams (three from 2016), enabling costs to be defrayed – these are reported separately to provide a purified base.

Ferrari press office: “Please understand that in view of our IPO we have to be very careful about any financial disclosures. Thus we are unable to help.”



Things are looking up for rejuvenated Scuderia Ferrari



Lack of title sponsor is sign of harder times for McLaren

McLAREN RACING

Woking, Britain
Input provided

2015 BUDGET: £180M

2015 INCOME: £160M

- £100m Sponsors, incl. Honda
- FOM (2014) £60m, incl. £22m bonus



How the mighty have fallen. Once regular contenders for chequer, McLaren’s cars now battle to make it past Q1. True, this is primarily down to Honda’s dire engine performance and reliability, but there’s no denying internal issues play their parts. FOM’s payouts and partners are, though, unforgiving, and woeful performance has seen McLaren’s revenues plummet as well as sponsors depart – increasingly so in both instances.

The parent company has restructured itself as McLaren Technology Group, which provides salvation as profits from other activities plugged a £30m gap, while Honda has joined as both engine supplier and commercial partner – allegedly contributing £35m annually, plus engines – without which matters would look bleaker. Sources indicate that McLaren will approach Honda to address a projected £25m shortfall.

However, the continued absence of a title sponsor remains a worry, as does McLaren’s serial lack of championship success – which impacts all revenue streams – with combined driver salaries being arguably the highest on the grid, even if Honda makes substantial contributions here, too. While McLaren is not yet endangered, how much longer can this situation persist?

Chief operating officer Jonathan Neale: “We’re fortunate in having a technology group in which we can at least shelter for some of these difficult times. But it’s not something we can sustain indefinitely.”

FORCE INDIA

Silverstone
Britain (Indian owned)
Full co-operation/input

2015 BUDGET: £110M

2015 INCOME: £105M

- £20m Associates
- £40m Sponsors
- FOM (2015) £45m



Force India's commercial portfolio consists of a balanced mix of shareholder loans, group company support, driver-linked contributions and FOM revenues. None of these components have fluctuated much since last year, so the team's performance hike – one slot up in a confirmed fifth place in the championship – is clearly down to stability and improved use of modest facilities, and an aggressive outsourcing policy.

A technical partnership with Mercedes GP, which sees the team use a full 'rear end' supplied by the reigning champions, has paid off handsomely in terms of speed and reliability, as has a switch to Toyota's wind tunnel, reckoned by most to be the best in the business. A further boost is that both drivers have been confirmed for next year. Any wonder the best of the independents is targeting a future third-place constructors' finish.

Deputy team principal Robert Fernley: "The biggest thing is the transition from our wind tunnel to Toyota's exclusively, and we continue trying to maintain an optimum balance between production and outsourcing of major items."



SCUDERIA TORO ROSSO

Faenza, Italy (Austrian-owned)
Full co-operation/input

2015 BUDGET: £90M

2015 INCOME: £90M

- £37m Red Bull
- £18m Other
- £35m FOM 2014



Scuderia Toro Rosso (STR) exists as a finishing school for Red Bull's cadre of development drivers, and came of age with the successive elevations of Sebastian Vettel, Daniel Ricciardo and Daniil Kvyat to RBR – which bodes well for current drivers Max Verstappen and Carlos Sainz, both of whom are tipped to continue in 2016.

The team continues to expand its Faenza base, while recruitment of staff to service its Bicester (UK) wind tunnel remains on-going. STR operates on a break-even basis, being funded by an expanding portfolio of external sponsors, with the balance of budget underwritten by Red Bull. STR receives substantial support from RBT, particularly now it runs identical rear-end technology to RBR.

Like sister RBR, engine unreliability has cost STR dearly, with no formally announced solution yet in place for 2016.

Team principal Franz Tost: "We continue to support all cost-saving initiatives that will enable us to further develop our young drivers."



Troubled Lotus desperately needs vital investment

LOTUS

Witney, Britain (Luxembourg-owned)
Full co-operation/input

2015 BUDGET: £100M

2015 INCOME: £95M

- £30m PDVSA
- £30m Sponsors
- £35m FOA 2014



Bleaguered Lotus needs to secure a big-daddy investor PDQ, with Renault the most likely – if not certain – suitor. The team floats uncomfortably in that middle ground between majors and independents, carrying large-team overheads on modest income streams, yet without CCB safety nets.

Having previously downsized, there is little fat left to cull, and hence a string of energy-consuming and reputation-battering debtor actions which debilitated this once-proud operation. Following eighth in the 2014 classification, mainly due to Renault's underperformance, both sponsor income and FOM revenue have taken knocks, depleting already thin budgets.

Mercedes power has redressed the performance deficit, but commercially the team is way off where it deserves to be and relies on Maldonado's PDVSA contribution, thus remaining vulnerable.

Chief executive officer Matthew Carter: "From a huge loss in 2013 we recorded a modest loss in 2014, and with our improved performance are targeting sixth place overall and improved fortunes going forward."

MANOR

Banbury, Britain
Full co-operation/input

2015 BUDGET: £60M

2015 INCOME: £60M

- £10m Shareholders
- £20m Drivers/sponsors
- £30m FOM (2014)



Having exited administration, Manor regrouped after attracting the support of Stephen Fitzpatrick, an energy entrepreneur. Key to the team's survival are its FOM's revenues – secured via a top-10 placing in 2014 – which guarantee £30m per annum for the next two years, with drivers and a variety of sponsors contributing to the budget required to run 2014 cars powered by year-old Ferrari powertrains.

Next season should provide an upswing if plans reach fruition: Mercedes units will power Manor's new cars, while restructuring will bring new senior faces aboard. Still, it will be tough going...

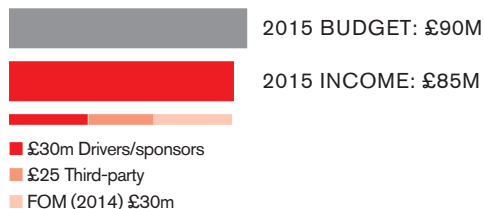
President Graeme Lowdon: "This has been a pretty difficult season, but that's secondary to the fact that the team continues and that's the most important thing."

Sauber's drivers have boosted the team with both funds and points



SAUBER

Hinwil, Switzerland
Full co-operation/input



Sauber swims mid-stream. Unlike its peers, however, it is disadvantaged by invoicing in US\$ but trading in buoyant Swiss Francs. This disparity, compounded by FOM's inequitable revenue structure and lack of points in 2014, lies at the root of its current travails.

However, two well funded (and capable) drivers have led an upsurge in results, and the future is rosier, if not yet bright.

Sauber's state-of-art facilities are its salvation, being rented out to supplement budgets. The balance of funding is made up of a mix of team sponsorship, driver contributions and FOM monies.

Team principal Monisha Kaltenborn: "We have consolidated our partnerships and strengthened our third-party business, but in this environment it remains a permanent challenge."



SBLOXHAM/LAT



Mercedes is most efficient team as well as champions in 2015

BANG-FOR-BUCK EFFICIENCY INDEX

Team	B4B (£m)	Points (Brazil GP)	Budget (£m, without engines)	Classification (Brazil GP)
Mercedes	0.35	660	230	1
Williams	0.43	253	110	3
Ferrari	0.56	401	225	2
Force India	0.88	120	110	5
Red Bull Racing	1.12	178	200	4
Lotus	1.31	76	100	6
Toro Rosso	1.34	67	90	7
Sauber	2.50	36	90	8
McLaren	6.66	27	180	9
Manor	-	0	60	10

IN ADDITION TO DOMINATING BOTH CHAMPIONSHIPS, as expected, Mercedes wins Autosport's inaugural B4B Efficiency Index hands-down with a per-point spend of £0.35m/point, while Williams excelled itself to place second despite having only the fifth-largest budget. Third, as expected, is Ferrari, with Force India doing a superb job on limited resource to place fourth. Fifth is Red Bull Racing after another fraught year.

Not only is McLaren's on-track performance disappointing, but it brings up the rear of the scorers with a per-point spend almost 20 times that of the champions, while point-less Manor has the worst ratio. It will be interesting to see where Haas F1, with its unique model of outsourcing where permitted, slots in next year.

In addition to detailing the index, the analysis provides a vital pointer: the total spent by all 10 teams during the 2015 season amounts to £1.395bn, or an average of £140m each. Only four teams are above the median – Constructors' Championship Bonus teams all crucially enjoying premium payments – while the rest survive on FOM's scraps. Is it any wonder F1's revenue structure is heading for the EU Commission?

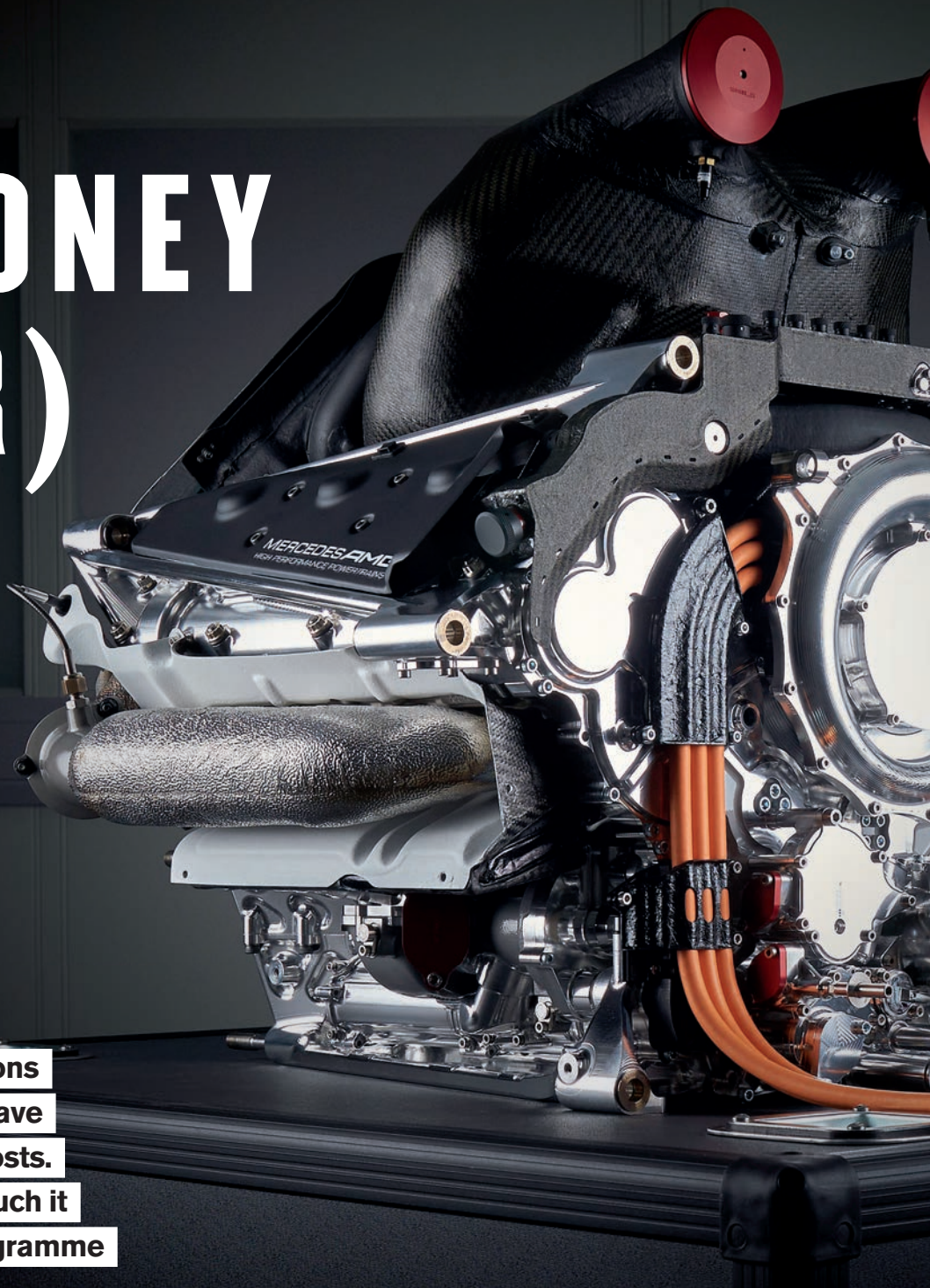
Equally, of the teams' £1.4bn spend, just £588m (42 per cent) was derived from FOM, with the balance generated by commercial sources. Yet, F1's commercial rights holder pockets around £300m from all its streams, or more than even the championship-winning team spent on its entire campaign... ❧



Manor trails at the back in B4B ratio

COATES/LAT

F1'S MONEY (POWER) TRAIN



22

Since the current engine regulations were introduced last year, there have been various complaints about costs.

DIETER RENCKEN reveals how much it costs to run an F1 power unit programme

Formula 1 currently has four engine suppliers, but there are effectively only two providers of customer units – Mercedes and Ferrari – with the other two concentrating, whether by design or circumstance, on dedicated operations: Renault supplies both Red Bull teams, and Honda partners only McLaren.

Each supplier operates to its own business model, with Mercedes-Benz High Performance Powertrains being a 100 per cent subsidiary of Daimler AG, and additionally undertaking research projects on behalf of various group companies, while Ferrari's F1 engine operation operates side-by-side with both the Scuderia and the road car engine division.

Renault Sport F1 in Viry-Chatillon is, after last year's corporate restructure, a sub-division within the mother company's Renault Sport division – and operates mainly on a sub-contractor basis with suppliers. Honda operates its F1 programme as an R&D project, funded in co-operation with Honda Motor Company's marketing division, with project management jointly in the hands of R&D, Marketing and McLaren.

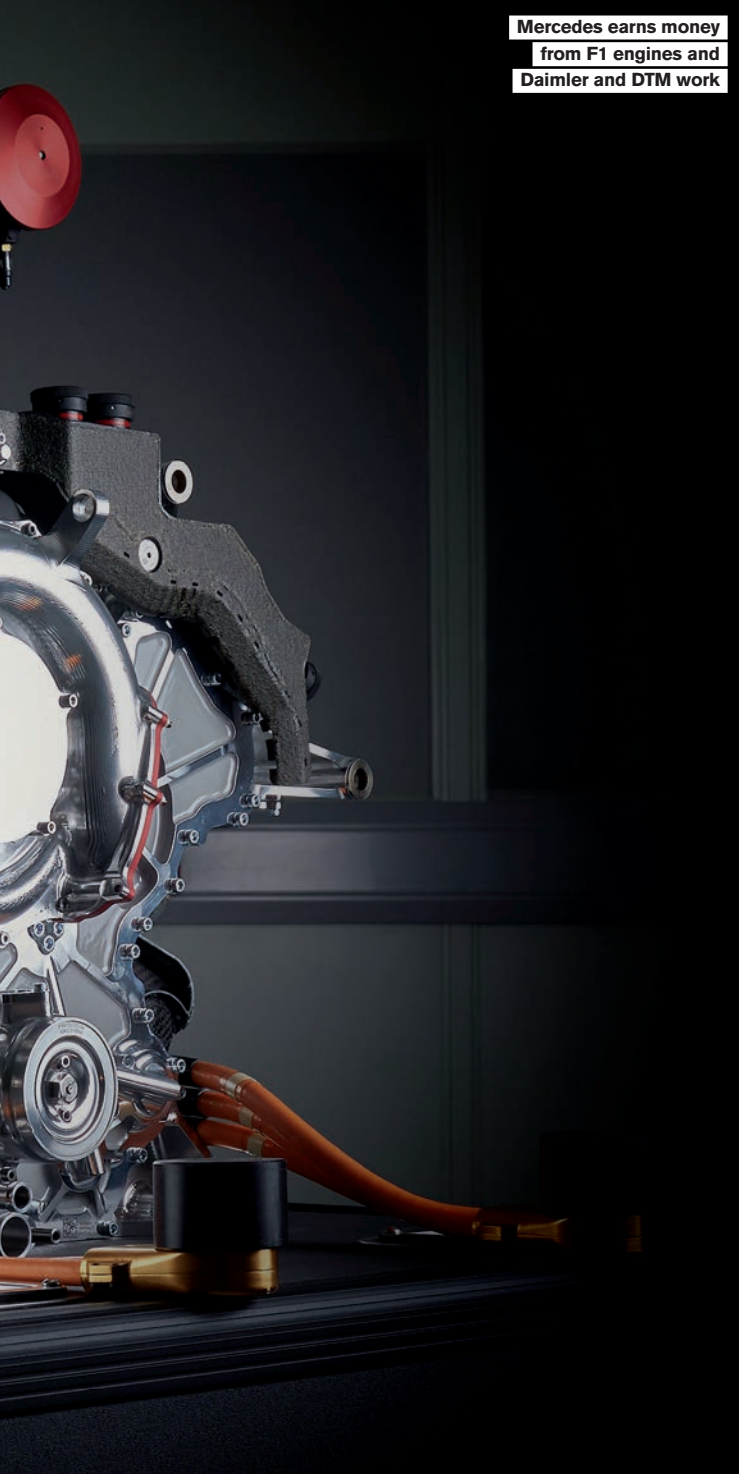
All four engine suppliers operate under disparate national and corporate financial reporting conventions, while their operational models are also vastly different – with their levels of outsourcing varying commensurately. The same applies to engine pricing: Ferrari adjusts internally, Mercedes has fixed (subsidised) prices, whether for supply to its own team or customers, while Renault's marketing division absorbs the difference between cost and price.

Different, too, are their levels of customer activity. Mercedes supplies three teams – Williams, Force India and Lotus – in addition to its own outfit. Ferrari supplies its own team and Sauber with current-spec engines, while Manor currently laps up its 2014-spec hardware – but switches to Mercedes next year – and also supports just the two Red Bulls, although doubtless it wishes it had a larger customer base to defray costs.

By contrast, Honda, which supplies 'free' engines to McLaren as part of the partnership agreement, granted the team right of refusal over supplying rival teams. There also appear to be no prospective suppliers on the horizon, which could cause complications should Renault exit F1 any time soon, as has oft been threatened...

As a result, the FIA recently called for expressions of interest to supply a 'dumbed-down' standard-specification engine, which will further muddy matters by either forcing down prices or attracting existing Mercedes and

Mercedes earns money
from F1 engines and
Daimler and DTM work



MERCEDES HIGH PERFORMANCE POWERTRAINS

Brixworth (German control)

2015 TURNOVER: £150M MGP

2015 COST OF SALES (INCL ADMIN) £140M

- £100m (Subsidised) from engine customers
- £25m R&D work for AMG/Daimler
- £15m Contract DTM programme



HPP, as the company is known within Mercedes, is based in Northamptonshire and previously operated as Ilmor, in which guise it contract-built Mercedes F1 and Indycar engines. The boss is Andy Cowell, who is ultimately responsible to the board, but has a reporting line to motorsport director Toto Wolff. Directors include Niki Lauda, but, surprisingly, not Wolff.

F1 comprises approximately 75 per cent of turnover (and manpower contingent), with the company supplying four teams, including its own. ‘Bare’ engines are said to run to about £13m per annum per two-car team, so clearly F1 operations are indirectly subsidised to the tune of £50m annually by the mothership – given that actual recovery from teams runs to a total of £50m per season.

According to sources, the Mercedes ‘own’ team pays premiums for priority status on development components, but that alone would not make up the shortfall. However, this could not be verified, as such details are not disclosed in terms of exemptions received for inter-group transactions. Thus the exact breakdown of turnover is not available.

The balance of income is derived mainly via R&D for Daimler – predominantly the AMG high-performance division – and work for Mercedes DTM teams, for whom, for example, the category’s four-cylinder engine was developed in-house.

HPP chief operating officer Andy Cowell: “The directors consider quality, technical excellence, speed and flexibility, combined with cost control, to be the principal success factors towards realising the company’s strategies and achieving the company’s targets. Performance against these measurables is reviewed regularly.”

“ANY WONDER FERRARI INVOKED ITS VETO AGAINST COST CAPS?”

Ferrari customers. Is it any wonder that Ferrari recently invoked its veto against engine cost caps; and is it also any wonder that Mercedes motorsport boss Toto Wolff said the proposal “does my head in”?

All these factors make direct comparisons between engine suppliers fundamentally impossible. However, in order to provide an insight into the economics of F1 engine supply, the financial statements filed by Mercedes HPP in terms of British law have been analysed, and reported in a similar format to that used for teams (see panel, right). ❧



Andy Cowell (left) celebrates Merc's 2014 title success

How the Porsche #17 crew won the WEC



Mark Webber, Timo Bernhard and Brendon Hartley came of age as sportscar drivers in 2015.

GARY WATKINS explains how

You would be wrong to say that Mark Webber, Timo Bernhard and Brendon Hartley turned the tables on their team-mates at Porsche. But they did become the equals of Neel Jani, Romain Dumas and Marc Lieb over the course of the 2015 World Endurance Championship. Yet it was events over which the drivers had no control that determined who would be the Stuttgart manufacturer's favoured trio in the push for the drivers' title.

The Antipodean duo in the #17 Porsche 919 Hybrid came of age as sportscar drivers this season. There was clearly a learning process to be undertaken for Webber in his first season back in the discipline after his 12 years of racing in Formula 1. This was made all the harder by the understeering nature of the original car to carry the 919 Hybrid monicker in 2014.

"I was probably frustrated with the car, because we had a lot of

things to improve," Webber says in reference to the understeer. "Patience was required. And coming in with an aggressive mindset after 12 years in F1 made it hard to accept that. It was even worse when you go to tracks where you have so much knowledge and want to try to squeeze more out of it."

The arrival of the high-downforce version of this year's all-new Porsche LMP1 at the 'Ring changed that. "I've been able to get much more out of it and get on the right path," he says.

Yet there's more to it than that. Team insiders suggest that Webber has had a new focus this year, for instance, spending more time with the engineers poring over the data. Did he underestimate the task ahead of him when he joined Porsche ahead of last season? That would be a natural conclusion to reach.

Hartley, who raced in LMP2 in 2012-13, has also become a more complete driver. The 26-year-old



Fifth in Bahrain was enough to claim title

Kiwi has eradicated the mistakes from his game last season to emerge as a true top-liner. His double stint as he fought to come back from the #17 car's early technical dramas was nothing short of stunning.

Austin was a key race for the eventual champions. They had the upper hand over their team-mates and were in the ascendant for the first time in the 919 programme by

the kind of margin that Jani, Dumas and Lieb had often had over them. Equally significant was the battery problem – with the conventional 12-volt unit rather than the hybrid energy-storage system – that robbed the #18 Porsche of second place with just 30 minutes to go.

That changed the dynamic of the season. It meant that Porsche could no longer allow its two cars to



Webber celebrates with Hartley (l) and Bernhard

HOW PORSCHE DOMINATED

On the Tuesday after Porsche's 17th victory in the Le Mans 24 Hours in June, the Porsche team was brought together at its Weissach headquarters. Technical director Alex Hitzinger stood up and made a statement that turned out to be prescient in the extreme.

"I knew what aero performance we would have for the second half of the season," he recalls, "and I said there was no reason why we could not win every remaining race."

The high-downforce version of the 919 Hybrid, with what are known internally as 'kit 5 aerodynamics', turned the tide in the WEC. Hitzinger admits that Porsche had effectively sacrificed the Silverstone series opener in April by racing with a lower downforce package that was a precursor to its full Le Mans kit.

"It was purely down to avoiding any compromise on the aero kit for Le Mans; the absolute priority in 2015 was to win Le Mans," says Hitzinger. "If you do high-downforce development at the beginning of the year, it has to take away from Le Mans aero development."

The events of Silverstone suggested Audi would be able to challenge on the Formula 1 tracks on which the five races of the post-Le Mans leg of the WEC would be held. That turned out not to be the case. Superior aerodynamics were the key weapon in Audi's armoury at Silverstone and played a part in its victory at Spa in May, but post-Le Mans this weapon had been more than matched by Porsche. The



Hitzinger knew new aero kit would be key

writing was on the wall for Audi after it was left trailing in Porsche's wake at the Nurburgring in July.

"Our strength was that we had good aero, but now they have that too," said Lotterer in the wake of the German race. "That's the big difference between now and the first two races. We are racing against an eight megajoule car [with a 4MJ car] and can't compensate for that."

Audi reacted and continued to push hard on development over the remainder of the season, but the R18 was still outperformed by the 919. The Audi was competitive in wet and damp conditions at Fuji and Shanghai, as well as in the dry for the first half of last weekend's Bahrain finale, but it ultimately fell short every time out.

Hitzinger turned out to be bang on the money. Porsche would win each of the final five races.



Porsche 919 had edge over Audi R18

"Patience was required. After 12 years in F1, that was hard to accept" MARK WEBBER



Webber's crash at '10 Korean GP was a low

compete with each other if it was to ensure that it overhauled Audi drivers Andre Lotterer, Benoit Treluyer and Marcel Fassler in the drivers' standings. The Porsche had a clear performance advantage over the Audi R18 e-tron quattro, so it was a no-brainer to start taking a leaf out of its rival's book by invoking team-orders.

Jani, Dumas and Lieb weren't

given a shot at pole from Fuji on, and were denied victory in Japan when Jani had to give up a 30-second lead over Bernhard in the closing stages. The Webber car was on top again in the penultimate round in Shanghai, taking a fourth consecutive victory to lay a firm claim to the drivers' title to go with the manufacturers' crown Porsche wrapped up in China.

There's still another nut to crack

for Webber — the Circuit de la Sarthe at Le Mans. He wasn't as quick as his team-mates in this year's 24 Hours, nor race winners Nico Hulkenberg, Nick Tandy and Earl Bamber, nor Bernhard and Hartley.

"There's still the topic we were talking about on the '14 car, which was still sitting in the [low-downforce] Le Mans car," explains Webber. "There is also eight tenths

of a second in weight: I'm 17kg heavier than Timo. That's not trivial, plus you use a bit more fuel dragging that weight around.

"When it comes to squeezing that last second out, it's not the place where you want to force that. If I'd gone straight somewhere and stuffed the whole thing up, we probably wouldn't be having this conversation now."

PORSCHE HOLDS ON FOR TITLE

Porsche did enough in Bahrain to make Webber, Bernhard and Hartley the marque's first world champions since 1986. **GARY WATKINS** reports



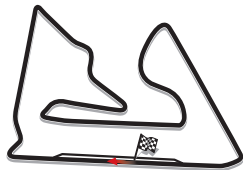


WEC

Bahrain

November 20-21

Round 8/8



AUDI HAD A CAR IN BAHRAIN THAT, FOR THE FIRST time in ages could battle with Porsche on a dry track. That gave us a race in last weekend's World Endurance Championship finale, and not only for victory. Thanks to technical problems for the points-leading Porsche trio of Mark Webber, Timo Bernhard and Brendon Hartley, there was a real fight for the drivers' championship.

The destination of the crown was in doubt for two thirds or so of the day-night race in the desert on Saturday, even though Webber and co had stretched their advantage by a point to 13 courtesy of another pole position from the Porsche 919 Hybrid. A victory for the R18 e-tron quattro of Andre Lotterer, Benoit Treluyer and Marcel Fassler looked a genuine possibility and would have been enough for Audi to snatch an unlikely title had the Porsche drivers finished no higher than the fifth position in which they crossed the line.

The Audi drivers ultimately failed to take the victory that was required once it became apparent that the delayed Porsche would finish somewhere in the lower reaches of the top six. There were multiple reasons for this in a race where the balance between the two German marques subtly changed over the course of the six hours.

The 919 Hybrid of Neel Jani, Romain Dumas and Marc Lieb overcame the repetition of the braking issues that have blighted it repeatedly this year. Audi was hit by a series of little glitches that took the edge off its performance, and the cooler temperatures of the night hours played to Porsche's tyre choice.

There was a fourth reason why the second Porsche scored a long overdue victory, and he's from Switzerland. Jani put the result beyond doubt during a super-swift triple stint after taking the car over from Lieb. The Porsche was on course for the win even before Lotterer need to make an unscheduled stop in the penultimate hour.

Victory for one Porsche and fifth for the other was enough to make Webber, Bernhard and Hartley the marque's first world champions since Derek Bell in 1986. Their margin was just five points after 66 hours of racing over the season.



It was a triumph for "team work" reckoned Webber afterwards, and he was right. The technical issue for the Porsche that opened up the championship battle was addressed first time around with the lost of five laps. The mechanical throttle actuator on the engine needed fixing, and in double quick time.

The car was taken into its garage after only 30 minutes of racing, where it stayed for just eight minutes. It would be back in there in the penultimate hour for another five minutes. Even then, the issue wasn't fully addressed and Webber had his heart in his mouth on several occasions over the final laps when he temporarily lost power.

Yet it wasn't just Porsche's problems that made for such an exciting finale around the 3.36-mile Bahrain International Circuit. Audi was a genuine victory contender in dry conditions for the first

time since the Le Mans 24 Hours in June.

It opted to start the race on an eight- rather than a seven-stint strategy, which meant the R18s would run fewer laps on each set of tyres and a lighter fuel load. That was a tactic worth pursuing, reckoned Audi Sport Team Joest boss Ralf Juttner because the R18s would have needed a late-race splash had the race run under green-flag conditions for its full six-hour duration.

"It means you don't have to do the last three or so laps on the tyres when they are at their worst," he explained.

The tactic worked immediately. The two Audis, including the #7 car in which Fassler had struggled with high front-tyre temperatures during the first stint, were one-two after the first round of pitstops with Lucas di Grassi and Lotterer aboard. They remained at the front deep into the third hour, Lotterer moving ahead of struggling team-mate Loic Duval to take the lead.

Dumas, who started the #18 Porsche, had admittedly struggled with front brake temperatures, a recurrence of a problem that had afflicted the car multiple times this season. The problem, as in the past, was slowly brought under control.

The #8 Audi was out of contention after the outer surface of left-front brake disc exploded on Duval when the #7 Audi and the #18 Porsche came together on track. This happened when the former was brought into the pits during the first of two full-course yellows that allowed it to get back on a seven-stop stop strategy.

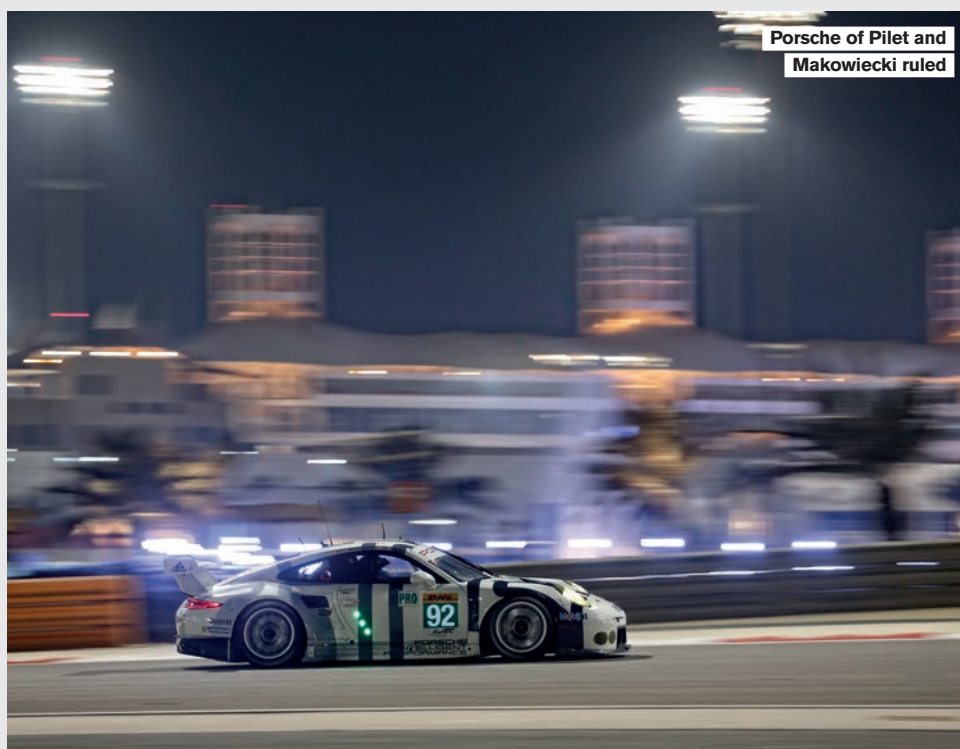
Lieb was able to pass Treluyer, who had taken over from Lotterer after a short but thrilling battle, and then edge away into a seven-second lead before the leaders stopped together under the second full-course yellow. Audi was quicker in the pits and Treluyer was right with Jani



Audis led one-two after first pitstops



Porsches lead away just ahead of Audis at start



Porsche of Pilet and Makowiecki ruled

GTE

And Porsche takes GTE titles, too

PORSCHE BLITZED FERRARI AT A CIRCUIT around which it has always struggled. Manthey drivers Patrick Pilet and Frederic Makowiecki dominated on a day that the Stuttgart marque claimed the drivers' title as expected with their team-mate, Richard Lietz, and came from behind to take the manufacturers' crown as well.

Tyre wear is everything on the Bahrain International Circuit, but the Porsche 911 RSR's appetite for its rear Michelins of previous seasons was nowhere to be seen this time, at least on the winning car. The Pilet/Makowiecki Porsche was quicker over a stint than the chasing AF Corse Ferrari 458 Italia shared by Gianmaria Bruni and Toni Vilander, and it was this that explained the 45-second margin of victory after six hours of racing.

Bruni and Vilander could only shrug their shoulders after the race and suggest it really wasn't much of a race after all.

"The Porsche was on another planet today," said Vilander, whose outside bid to retain his and Bruni's title fell short and left them second in the points. "It was flying at the end of the stint, and we were expecting the opposite. We did a good race, but we were still 45s behind."

Manthey's focus through practice was on formulating a set-up that was kind to its tyres. And once more it opted to qualify its drivers on one set of tyres in the aggregate session.

"We had a strong plan in free practice and did four long runs to prepare for the race. We never normally do that," said Makowiecki. "If you look at the stints, the Ferrari was quicker for the first 10 laps and we were quicker for the last 20. I know which I would prefer."

Lietz and team-mate Michael Christensen had a conservative run to fifth in a car afflicted with a terrible oversteer problem, which remained undiagnosed to the end. Fifth-placed points, combined with the 25 for victory, were enough for Porsche to snatch the manufacturers' crown and Manthey the teams' gong. Ferrari and

AF Corse looked to be on course to take these until Davide Rigon lost a wheel in the second factory entry he shared with James Calado after a rogue bit of metal found its way between the wheel and the hub.

The battle for the GTE Am title was effectively decided in a smoke-filled room before Bahrain. Changes to the Balance of Performance rendered the Ferrari 458 Italia uncompetitive, which meant that the AF Corse Ferrari squad were always unlikely to get the win they needed if they had any hope of depriving the AF-run SMP of the titles.

Emmanuel Collard and Francois Perrodo, who were joined by Matteo Cresoni after regular team-mate Rui Aguas broke his collarbone in a motorcycling accident in the run-up to the race, ended up fourth in class. That was one place ahead of SMP drivers Andrea Bertolini, Viktor Shaitar and Aleksey Basov, who duly took the drivers' title by 17 points.

Aston Martin Racing returned to the GTE Am winner's circle for the first time since Spa with the Vantage GTE shared by Pedro Lamy, Paul Dalla Lana and Mathias Lauda. They came out ahead in a close-fought race with the #88 Proton Porsche 911 RSR shared by Klaus Bachler, Marco Mapelli and Khaled Al Qubaisi.



Porsche's tyre strategy helped

after the stops before the Swiss turned it on.

The Porsche was 14s up when Lotterer took back the controls of the Audi with 90 minutes to go and was straight back in the pits after a confused pitstop in which a mechanic tried to put two wheel nuts on a rear corner. The gap went out to over a minute and Porsche was home and dry in the race and the championship.

Jani posted another impressive performance, but tyre choice probably played a part. Audi had opted for the harder of the Michelin slicks available last weekend. Its cars ran on the 'soft hot plus' tyre rather than the 'soft hot' chosen by Porsche.

Audi experimented with the 'soft hot' on the #8 car when Oliver Jarvis was at the wheel, but the results were inconclusive and the original tyre strategy was maintained.

There was another and arguably more important factor in Porsche's supremacy over the second ▶



Aston Martin won GTE Am race



Wurz bowed out of racing with podium

► half of the race. The Audis weren't operating at optimum potential.

"There were little problems with both cars that hindered us," explained Juttner. "Neither car was running at 100 per cent. We had little things like a fuel pressure sensor not working that we had to overcome."

The extra pitstop for #7 meant that Lotterer finished 85s down at the finish, while there was a further delay for the sister car at the end. It was hit with a three-minute stop-go penalty when four new tyres were put on the car at its final stop rather than two fresh Michelins and two on which the car qualified. These were not part of its tyre allocation, hence the penalty.

This delay had no bearing on the outcome of the championship. Had di Grassi been able to demote the ailing Porsche to sixth there would still have been no end-of-season silverware for Audi.

Toyota posted its best result since the season opener with only its second podium of a dismal season. That had a lot to do with the problems for the new champions' Porsche and the second Audi, but the TSO40 HYBRID was at its most



Problems with Audis lost time and race

competitive since Fuji in October on a track that has always favoured the Japanese manufacturer's cars and its latest hybrid concept.

Alex Wurz bowed out of racing with a podium, notched up together with Stephane Sarrazin and Mike Conway. They finished just ahead of the sister car shared by Sebastien Buemi, Anthony Davidson and Kazuki Nakajima, which lost time in the pits twice, the second while the nose was changed after its Japanese driver hit the Signatech Alpine LMP2. Davidson fought back onto the tail of Sarrazin, but Toyota told its

drivers to maintain position after the final stops.

Toyota was never in a position to defend its 2014 titles this year, but Audi's never-say-die attitude brought it to the brink of the drivers' crown in a thrilling conclusion to a championship that it had already looked to have lost.

"A worthy championship finale" was Juttner's take on events. "My second point," he said, "is that there was a worthy winner."

FULL RESULTS PAGE 46

30

LMP2

Bird flies to victory and hands G-Drive LMP2 title

THE G-DRIVE SQUAD DIDN'T NEED TO WIN IN Bahrain to secure the LMP2 crown for Sam Bird, Roman Rusinov and Julien Canal. But an imaginative tyre strategy gave star driver Bird a scent of victory when he took back the OAK-run Ligier-Nissan JSP2 and allowed him to charge down Nick Tandy in the KCMG ORECA over the final stint.

KCMG, whose ORECA-Nissan 05 Tandy shared with championship outsiders RBradley and Matt Howson, looked like it was going to win this race, though not the title given its 16-point deficit to G-Drive. Tandy did, after all, have more than 10s in hand over Bird after the final round of pitstops.

The KCMG car had leapfrogged ahead of the G-Drive entry because Tandy continued on the same set of Dunlops on which he had

started his final double stint. The Chinese entrant thought its advantage might be enough in the belief that G-Drive would only be able to give Bird two fresh tyres.

That wasn't the case. G-Drive came up with its trick strategy based on the fact that the right front gets a relatively easy life at the Sakhir circuit, so it was able to save a front tyre for later in the race. With three new tyres – and an old one on the least stressed corner – Bird was able to close down Tandy and pull 25s on him. The Briton, whose tyres were now into their second stint, was powerless to react and trailed home 25s behind.

"We'd been thinking very much of the championship, but when I got back in the car, I thought why not try to win the race as well," said Bird. "The car definitely had the speed."



G-Drive squad enjoy the spoils

The ORECA looked to have the better package when the temperatures were hotter during the daylight running, but the G-Drive Ligier, in which Rusinov had struggled early on and been pulled out of, began to improve as the temperatures fell and the track rubbered in. KCMG's cause wasn't helped by a clutch problem that cost them time at just about every pitstop.

G-Drive's second entry snatched third position at the start of the final lap after a charge from Luis Felipe 'Pipo' Derani that was just as impressive as Bird's.

The Brazilian, who was partnered as usual by Gustavo Yacaman and Ricardo Gonzalez, was also given three new tyres at this final stop and was able to pass Nelson Panciatici in the Signatech Alpine ORECA-Nissan 03R into Turn 1 on the final lap.



G-Drive Ligier sped up as track rubbered in

IN THE PADDOCK

GARY WATKINS
CONTRIBUTOR

@gazzasportscars



THEY WERE CHEWING THEIR NAILS down to the quick in the Porsche pit in Bahrain, but so was I as the dramatic events of the WEC finale unfolded in front of me. My nerves didn't concern hopes for one manufacturer or the other, rather a scenario that would have done a disservice to the championship.

Had Lotterer, Treluyer and Fassler won the race, then the eventual champions would have had to have finished one place higher than the fifth position in which they took the chequered flag to secure the title. Even without a recurrence of the throttle problems, I'm pretty sure that wouldn't have been possible. But it would, of course, had Porsche decided to park the #18 car.

Team orders were part of this year's WEC from its resumption at the Nurburgring after



the post-Le Mans summer break. Twice Audi has invoked them, while the most draconian execution of the practice was at Fuji when Jani had to cede a half-minute advantage to Bernhard in the closing laps. That would have paled into insignificance if a driver had been brought into his pits to twiddle his thumbs for five minutes.

No one likes team orders, but they can't be outlawed, as the FIA found out in the noughties. They are part of the game, unfortunately, and always will be so long as manufacturers are spending hundreds of millions in pursuit of success on the track.

So would Porsche have played that game in Bahrain? Team principal Andreas

Seidl's answer went like this: "We would have done everything possible to score the drivers' title." So that's a yes, then.

Fortunately, it didn't come to that, and we'll be enthusing over the winter months about a thrilling championship finale and not debating – and lamenting – the application of team orders in our sport. Phew!

GTE upgrade unlikely in 2016

FULL WORLD CHAMPIONSHIP

status is unlikely to be granted to the GTE class next year.

Plans to upgrade the World Endurance Cup for GT drivers and manufacturers – for which the manufacturers are lobbying – remain a work in progress, according to FIA endurance commission president Lindsay Owen-Jones.

"The idea is progressing, but slowly. The FIA is right in that it won't give out full world championship status like biscuits or sweets," he said. "I respect that and it is important that we build something strong and don't rush into it"



FIA GTE talks are ongoing

S. STALEVILAT

BIG NUMBER

5

Number of titles won by Porsche in this year's World Endurance Championship. The Manthey factory squad sealed the GT drivers' and manufacturers' crowns and the GTE Pro teams' championship to go with the LMP1 squad's title double.



ESM Ligier JSP2s are built by Onroak

Extreme/OAK link-up for 2016

THE US EXTREME SPEED Motorsports LMP2 squad will link up with OAK Racing for the 2016 WEC.

Its pair of Ligier JSP2s, which are constructed by OAK sister company Onroak Automotive, will be run by the French organisation under the ESM banner next year. The partnership follows ESM forging closer links

with OAK and Onroak from the Austin WEC round in September with a loan of a works engineer.

"The relationship has been working really well and the opportunity was there, so we decided to take it for a mixture of financial reasons and sporting reasons," said team boss Scott Sharp.

ACO discusses LMP1 future

WEC PROMOTER AND LE MANS

24 Hours organiser the Automobile Club de l'Ouest has pledged to safeguard the future of the non-hybrid LMP1 privateer class.

The ACO set up a round-table group to discuss ideas for making the division more attractive, and report to the relevant FIA technical working group.

Le Mans sporting manager Vincent Beaumesnil said: "We strongly believe in the future of LMP1 privateers, because they are part of the history of Le Mans. We know that manufacturers can come and go, and we also know that there are constructors who want to build and run chassis who are now not able to do it in LMP2 [because

only four organisations have been granted the right to do so]."

Represented at the first meeting of the group in Bahrain were existing P1 privateers Rebellion and ByKolles. Onroak Automotive/OAK Racing, SMP/BR Engineering, Strakka and Greaves Motorsport, who are all interested in the category, also attended.



Privateers "part of history of Le Mans"

S. BLOXHAM/LAT

NISSAN NEWS SOON?

New Nissan LMP1 team principal Mike Cacamo made his first visit to a WEC race in Bahrain. The American refused to talk about the progress of the GT-R LM NISMO programme, but said there could be news forthcoming in December.

REBELLION SECOND

Rebellion Racing drivers Alexandre Imperatori and Dominik Kraihamer sealed second position in the LMP1 drivers' rankings with their second class win of the season, sharing with Matheo Tuscher. Their Rebellion-AER R-One overcame engine problems to triumph over the ByKolles CLM-AER P1/01 of Pierre Kaffer and Simon Trummer, which was delayed by brake issues.

DEMPSEY MISSES OUT

Actor-racer Patrick Dempsey missed the Bahrain WEC round through filming commitments. Team owner Christian Ried moved across to the Proton squad's #88 GTE Am class Porsche 911 RSR, while Marco Mapelli, who races for the team in the European Le Mans Series, took his place in #77.

BYKOLLES TO RETURN

The ByKolles team has confirmed its intention to return to the WEC in 2016 with a further update of its AER-engined CLR P1/01. "The only question is whether we run one car again or two," said team manager Boris Bernes.

LYNN IN WEC TEST

GP2 racer and Williams F1 development driver Alex Lynn drove in the WEC rookie test, the day after the Bahrain race, in a deal brokered by his mentor, Alex Wurz.

ROSENQVIST AT THE DOUBLE

Prema's Felix Rosenqvist crowned a stellar year by becoming only the second driver to win Macau twice in the Formula 3 era. **MARCUS SIMMONS** reports from an eventful weekend





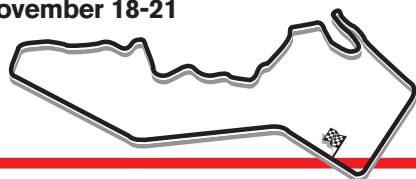


Penalty dropped
Giovinazzi to 10th

Macau GP

Macau (PRC)

November 18-21



FELIX ROSENQVIST WAS ALWAYS THE FAVOURITE, but when does the favourite ever win the Macau Grand Prix? Arguably not since Edoardo Mortara in 2010, the first time any driver had taken a second victory in the event since it switched to Formula 3 rules in 1983. Now, Rosenqvist has become the second to do so.

Throughout the four days of the event, the Swede always seemed to have control of its destiny, but that's not to say that Macau 2015 was a walkover, because there were some strong challengers to the European Formula 3 champion and his Prema Powerteam Dallara-Mercedes. It was predictable that these would include Antonio Giovinazzi and Macau rookie Charles Leclerc, the other two men to lead the European F3 points this season, but perhaps less so that among them would be 2011 Macau GP winner Daniel Juncadella, if only because he was returning to F3 after three years away.

It transpired that Giovinazzi and Juncadella would both be eliminated from contention for victory in the same incident, which was the major flashpoint of Macau 2015. Giovinazzi and the Carlin team had recovered from brake problems on Thursday's opening day of practice and qualifying and he was very much a contender on Friday, when the rubbered-in track usually means that everybody improves. He was fourth fastest in the closing stages when he went on an attack for the front row, and dumped it in the wall just before Maternity Bend. "Really fast in the first corner; really fast in the second corner; too fast in the third corner!" he explained.

Juncadella, meanwhile, provided a major lift for the hitherto-beleaguered Fortec Motorsport team by planting his car on the front row. That was despite effectively missing the opening free practice session with gearbox problems, although he was pretty happy that two red flags prevented anyone from getting into a proper rhythm at this point and minimised his own pain. Juncadella's hot lap as good as equalled Rosenqvist's, forcing the poleman to dig deep to find another couple of tenths just before the red flag appeared for



Tight course, as ever, caught some drivers out

Giovinazzi's accident and terminated the session with three minutes remaining. Could Juncadella have gone quicker too? He doubted it. "I would have to look for a slipstream to gain three or four tenths – the peak of the tyres was gone," he said.

Juncadella also had two extra new tyres in the bag from the weekend allocation of 14 per driver to use over the course of the qualification race and the GP itself, but sadly the last ones are still all shiniely Yokohama-stickered-up...

Giovinazzi had passed third qualifier Leclerc away on the long run to Lisboa, the first braking point, on the opening lap of the qualification race, and had enough momentum to launch down the inside of Juncadella on the brakes. Mindful of the GP pile-up in 2014 triggered by a collision between Esteban Ocon and Tom Blomqvist, Juncadella stayed wide to leave room for Giovinazzi through the corner, and they accelerated out with Juncadella half a car length ahead. Before they got to San Francisco Bend they collided, Juncadella being turned across the front of Giovinazzi's car and into the barriers at a right angle, where he was struck by Ryan Tveter and Callum Iliott in a crash that caused a safety car and destroyed his tub, forcing him out of the event.

Giovinazzi's car was undamaged – indeed, team boss Trevor Carlin said there wasn't even a mark on it from the collision – and he was able to use the slipstream to pass Rosenqvist at the restart, although the momentum he carried into Lisboa meant he kissed the barrier in a rally-car-

Really fast in the first corner; really fast in the second corner; too fast in the third corner!

ANTONIO GIOVINAZZI

on-a-snowbank kind of way. Understandably, the message came up that his collision with Juncadella would be investigated after the race. Puzzlingly, the information that he had been awarded a drive-through penalty appeared just seconds before he took the chequered flag to celebrate a win for all of about three minutes.

Obviously, there was no chance for Giovinazzi to take his drive-through, so he was given a 20-second time penalty instead, dropping him to 10th and – without a miracle – out of the picture for the GP win. It was the motor racing equivalent of a dubious injury-time penalty kick in football knocking him out of the FA Cup (see p36).

So now the task of beating Rosenqvist fell to Leclerc, and what a terrific job the Macau rookie and his Van Amersfoort Racing team did. He was out of the picture on the ▶



Giovinazzi won on the road in the qualification race



Juncadella (left)
left room for
Giovinazzi
before impact

Giovinazzi laments late penalty

ANTONIO GIOVINAZZI'S DRIVE-THROUGH

penalty, applied moments before he crossed the line to win the qualification race, was the major controversy of the Macau Grand Prix.

Many believed that his collision with Daniel Juncadella should have been classified as a good old-fashioned racing incident, and that motorsport's current insurance-company-style blame culture robbed Giovinazzi of at least a chance to win.

"I did quite a good start, and overtook Charles [Leclerc] before Mandarin," said Giovinazzi. "I was inside Juncadella at Lisboa, and on the exit we were together again, with enough space for both of us. I was driving

straight, and was ready to lift before the next corner [San Francisco Bend] because I didn't want to try to overtake him at that point. I don't know what happened, but he spun across me. For sure it was a racing accident."

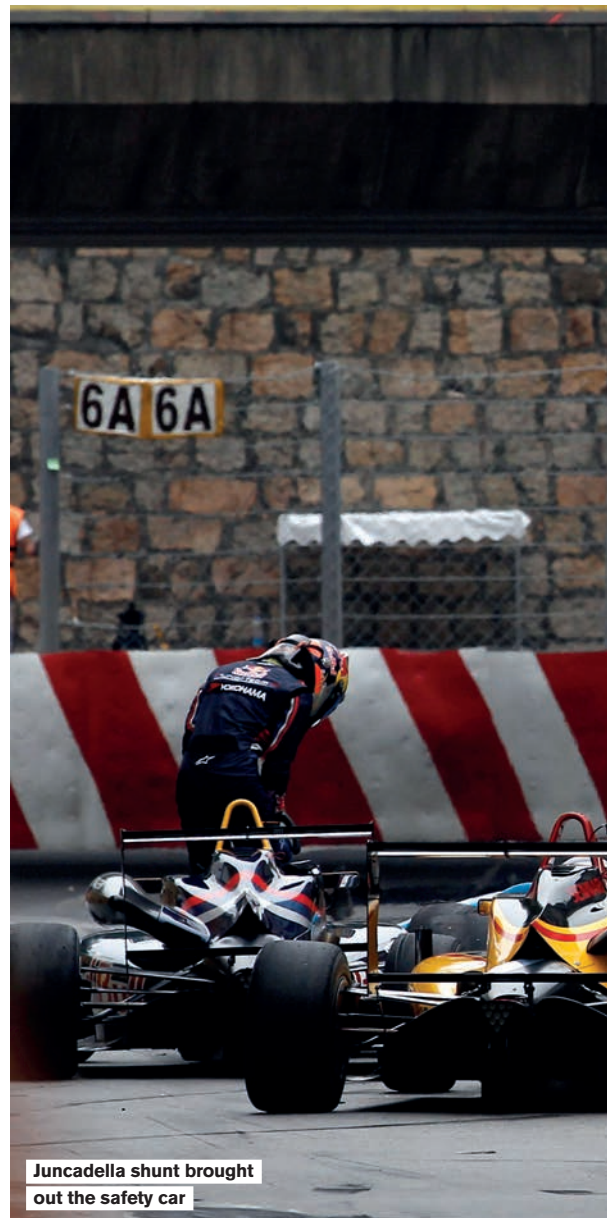
Juncadella, whose car was ruled out of the Grand Prix after the ensuing impact from Ryan Tveter, said: "I knew he was there. Braking into Lisboa I gave him enough room. At the exit I was close to the wall and he was really close to me. It was very unfortunate – I don't think he did it on purpose. He's a smart driver, but there was nothing I could do to avoid the accident."

Since the decision came so late, Giovinazzi was given a 20-second penalty instead. This can't be appealed, but extra evidence can force stewards to change their mind, so Giovinazzi's Carlin team was hoping that onboard footage might sway a reversal. This was to no avail, and Giovinazzi would start the GP from 10th on the grid instead of pole, with fourth at the finish the maximum he could do.

"If he'd started first he would have won," concluded team boss Trevor Carlin. "He did well to get where he did and I'm very proud of him for doing that."



Crash ruled Juncadella
out of the grand prix



Juncadella shunt brought
out the safety car

► build-up day of Thursday, when traffic prevented a clear lap, but he put that right on Friday to go third on the grid for the qualification race. Leclerc was also not too far away on Saturday from beating Rosenqvist to what would become a post-Giovinazzi-penalty win.

Rosenqvist was having some trouble with locking up at the rear. "Because of that I went too far forward on the brake bias," he explained. "It was way off the map, but I only realised after the race." As a result of his finger trouble, he overshot the Melco hairpin and came oh-so-close to the barriers, enabling Leclerc to slash the gap to almost nothing. "I was really lucky to miss the wall," he continued. "I just closed my eyes and hoped for the best."

If there is one thing for which you could criticise Leclerc this season, it's that he's maybe been a little tentative in battle compared with his predecessor at VAR, Max Verstappen. Then again, Verstappen's early-season DNFs meant he was never really in the picture for the championship and didn't have to worry about collecting points. Leclerc laid many of these doubts to rest on Sunday. He slipstreamed Rosenqvist down to Lisboa and judged his braking beautifully on the outside to take the lead.

At the end of the first lap, Leclerc ran wide at R Bend and this allowed Rosenqvist immediately into his slipstream, leaving him in a quandary. "I wasn't even sure if I was going to have to lift [to avoid running into Leclerc before the Reservoir

kink]," said Rosenqvist, "but I didn't want to risk the guy behind [Sam MacLeod] towing me." As a result, Rosenqvist dived for the inside at Reservoir, but Leclerc tucked back into the slipstream and repeated his first-lap manoeuvre at Lisboa to retake the lead.

And then the red flags came out. Gustavo Menezes had lost it at Fishermans Bend and was initially hit by Yu Kanamaru, before Mitsunori Takaboshi and the again-unfortunate Tveter piled in too, leaving wounded Dallaras and associated shrapnel everywhere. Once it was cleared the race continued after one safety-car lap, and at this point Leclerc's challenge ended.

Such was the tow that Rosenqvist was able to easily pass Leclerc out of the Mandarin kink, while the impressive MacLeod was also able to get down the inside at Lisboa to claim second place. This was where the race was lost for Leclerc. He was just over two seconds adrift of Rosenqvist by the time he found a way past MacLeod three laps later, and it appeared that the race was already won.

Leclerc had used two more tyres rather than Rosenqvist over the weekend, so was on used rubber in the race while Rosenqvist had two new Yokohamas and had gone for an aggressive set-up to maximise his pace early on. Towards the end of the race Leclerc was able to catch up, prompting Rosenqvist to say: "One mistake and he would have been there." But, in Leclerc's own words: ►



Leclerc snatched lead
on the opening lap



37

XPB IMAGES

British Formula 3 squads rock the establishment

BRITISH SQUADS FORTEC MOTORSPORT AND Team West-Tec both showed podium pace in Macau, even if it was another of the UK minnows, Double R Racing, that took third with Alexander Sims.

Fortec boss Richard Dutton, who signed up Daniel Juncadella when Pietro Fittipaldi withdrew from Macau because he believed the car would be uncompetitive, described the DTM driver and 2011 Macau winner as “a breath of fresh air really. What a difference. Amazing!”

Juncadella was engineered by Stuart King, who has looked after Oliver Rowland’s Formula Renault 3.5 title-winning campaign, and said: “We’ve had a good car since the beginning. The way we’ve been working every session is really good. I say the car is good, but they’re always pushing to make it better.”

He also got involved in an amusing Twitter spat with Fittipaldi’s uncle Max Papis, who wrote: ‘Wrong call 4 Anto Giovinazzi Dani Juncadella Macau GP. Normal race accident.’ To which Juncadella replied: ‘Jealous because your driver couldn’t drive the car? PS It’s the same car, but now it’s broken.’

West-Tec, meanwhile, is hopeful that its new



MacLeod had an impressive run

relationship with Sam MacLeod can be extended into a full Euro F3 campaign in 2016, while its other driver Ryan Tveter showed flashes of pace.

The other of the small UK teams, T-Sport, also had an encouraging Macau. The new ThreeBond/Tomei engine, on only its second competitive outing, powered Arjun Maini to 10th place and his car was consistently the quickest through

the flat-out first sector.

Team chief Russell Eacott plans to run one Tomei-engined car and one with the British NBE powerplant in 2016. “We have to pay a compliment to the ThreeBond and Tomei people for producing such a quick little engine,” he said. “You can’t get more of a power track than Macau, can you?”



Rosenqvist was the pre-race favourite

XPE IMAGES

► “It wasn’t enough. Felix was really fast at the beginning and it was probably not possible for me to stay in front.”

MacLeod, on his second outing with Team West-Tec (he also contested the Euroformula Open finale with the team), was the surprise star of the event, especially bearing in mind his disastrous 2014 Macau. Engineer Mick Kouros has always turned out a good Macau car, most recently running Pipo Derani to the podium in 2013, and clicked with MacLeod straight away. Unfortunately for them it came to nothing. One lap after being passed by Leclerc, he got into a slide exiting the narrow Moorish right-hander and tapped the barrier, puncturing the front-left tyre and forcing him into the pits.

Now Alexander Sims moved up to third. The Macau veteran – like Rosenqvist on his sixth start – had done an outstanding job to climb to third in the qualification race from 13th on the grid. Tyre graining had hampered the Double R Racing car in qualifying, with Sims unable to do more than three laps before thick black stripes started to appear on the rubber. This was sorted



Extraction crane saw plenty of action

“Felix was really fast at the beginning and it was probably not possible for me to stay in front”

CHARLES LECLERC

for the races, and he made up seven places – thanks to a great start and the Giovinazzi/Juncadella collision – on the first lap of the qualify race before passing Sergio Sette Camara and then MacLeod for fourth on the road, promoted to third with Giovinazzi’s penalty.

Sims couldn’t prevent MacLeod from slipstreaming past him on the run to Lisboa in the Grand Prix, but was in the best position to profit when the Scot made his mistake. At this point, Giovinazzi had carved his way into Sims’s mirrors, and with eight laps still remaining who knew what he could achieve in what was clearly a very quick car. As it transpired, the top four were all incredibly evenly matched, each setting a fastest lap within a tenth of the other, and with no big mistakes the order was set.

There were actually two quicker drivers on track: MacLeod and Sette Camara. Both had rejoined after pitstops for punctures, and marked themselves out as leading contenders for Macau 2016. Sette Camara’s deflation was caused when

he was pincered between Giovinazzi and Santino Ferrucci into Lisboa, making contact with Giovinazzi (although he blamed Ferrucci for not leaving enough room). The Brazilian remained ahead of Ferrucci as he struggled around the mountain, meaning there was an enormous gap from the top six to the rest as they couldn’t find a way past. From here, driver Ferrucci claimed a distant sixth behind Markus Pommer.

Pommer had briefly looked a threat to Rosenqvist when he topped Friday’s free practice, to the extent that some Prema folk erroneously believed he had used new tyres. But the German dropped from fifth to seventh on the grid when he was penalised for impeding Juncadella at the Melco hairpin in qualifying. He was never a factor for victory from then on, and claimed fifth. The top four were too classy for him to have a chance. And Rosenqvist was the classiest of them all.



Sette Camara (20) is a star of the future

➔ FULL RESULTS PAGE 48

IN THE PADDOCK

MARCUS SIMMONS
DEPUTY EDITOR

@marcussimmons54



MACAU ISN'T ALL NEON GLITZ. IT'S also down-at-heel grubbiness. Get away from the casinos and palatial hotels and you find yourself at Police bend, where the track narrows, overlooked by 15-storey apartment blocks, people's washing fluttering briefly in the welcome puff of breeze that breaks the humidity.

To get here, the drivers go downhill, then rise briefly through a left-hander, through which they have to brake for the tortuous second-gear right-hander. With a crown in the middle of the road, it means that the left side of the car gets very light just before turn-in. Easy to lock up and plough into those claustrophobic barriers.

It's also one of the most magnificent places to watch F3 cars in action. I like to watch here in Friday free practice, when drivers are dialled in to the track, and as usual I'm joined by Prema's astute observer Nuno Pinto – he always seems to turn up at the same vantage point as me, whether it's Silverstone, Norisring or Pau. I'm open-mouthed in admiration at the flowing styles of Felix Rosenqvist, Daniel Juncadella and Charles Leclerc. Here come Antonio Giovinazzi and Markus Pommer: both aggressive, Giovinazzi more so, but still effective.

And then there's Callum Ilott. Sideways on entry, the fearless teenager flings the car in and then, as barriers block our view, we hear the throttle barp-barping as he tames a powerslide on exit. He's a great talent, but he won't stay away from those walls for long...



BIG NUMBER

158.7

Average speed in miles per hour of the fastest recorded time in the flat-out first sector. That honour went to Dorian Bocolacci in the slipstream in the qualification race, where he was recovering from a crash in qualifying.

Torrid time for Tom's troupers

JAPANESE POWERHOUSE TOM'S, which has taken more Macau Grand Prix wins than any other team during the F3 era, struggled at the Macau Grand Prix.

Neither Japanese champion Nick Cassidy nor twice runner-up Kenta Yamashita could qualify in the top 20, and New Zealander Cassidy posted the team's best result with 12th.

TOM'S boss Susumu Koumi believes the team had not previously been able to compare its Toyota engine with the European opposition until this year, the second Macau GP with the current-spec powerplants. "Last year we had inexperienced drivers," he said, "and this was really the year we could see our position."

Koumi believes the engine is lacking, and added: "Under current regulations we cannot touch anything except for reliability improvement.



"Also you can see the difference in chassis development. There are a lot of things going on in Europe whereas in Japan we try to minimise cost so the cars are almost original. I feel really sorry for Nick and Kenta."

Because of the lack of power, the team tried to increase straight-line speed by decreasing downforce, but this in turn made the cars trickier in

the mountain section.

Bearing in mind the travails of TOM'S, the B-Max customer Toyota team did an impressive job in qualifying, with Super GT driver and regular F3 returnee Yuhi Sekiguchi 16th fastest and Nissan protege Mitsunori Takaboshi 20th, and Sekiguchi setting the 11th fastest lap of the race.



Sette Camara sets lap record

SERGIO SETTE CAMARA SET A new Macau lap record when he crossed the line on the final lap as the last classified finisher.

The Brazilian had pitted due to a puncture (see main report) and, because Sette Camara was two minutes behind, Sam MacLeod had already been called to the podium to claim the fastest-lap trophy before the time was set.

Sette Camara, who finally got his silverware later at the prizegiving, is expected to remain at Motopark for 2016, and recovered well from problems earlier in the week. He hit the wall in qualifying on Thursday and had driveshaft failure in Friday practice before qualifying seventh.

With Markus Pommer fifth fastest, Motopark was the only team to have two drivers in the top eight in qualifying.

Callum has Ilott to learn



BRITISH RED BULL JUNIOR

Callum Ilott went from zero to hero and back to zero in his first Macau Grand Prix.

The 17 year-old, the youngest driver in the field, crashed in Thursday practice but recovered well to be second fastest in the opening qualifying session, ahead of team-mate Antonio Giovinazzi.

But Ilott plummeted to 18th on the grid when he crashed on his first flying lap of Friday qualifying, and was then unable to avoid ploughing into the Juncadella/Tveter wreckage in the qualification race, injuring his hands. He then made little progress in the Grand Prix, racing with torn ligaments, before crashing at Police.



DENNIS RECOVERS

Britain's Jake Dennis had a tough beginning to his Macau GP debut, with a puncture causing a crash in free practice, then air restrictor and gearbox problems in first qualifying. He recovered to finish in ninth place.

MUCKE'S MIKKEL

Macau rookie Mikkel Jensen started the weekend brightly, running third for much of the opening qualifying session, but touched the wall in second qualifying and lost time while a trackrod was changed by the Mucke squad. He was then caught up in the first-lap pile-up, having his rear wing sheared off when Alexander Albon was launched over his rear end. Albon finished the GP 13th.

LORANDI OUTRUNS

Van Amersfoort's Alessio Lorandi won a battle with Lance Stroll for seventh in the Macau Grand Prix. The Italian teenager had shrugged off fever and ear pain to qualify in the top 10.



WIN A TRIP TO THE

IN FLORIDA, JANUARY 30-31, 2016



"HAVE FUN IN THE FLORIDA SUN NEXT JANUARY"



THE PRIZE INCLUDES:

- ✓ **A TRIP FOR TWO** to the 2016 Rolex 24 At Daytona® in Florida, USA
- ✓ **VIRGIN ATLANTIC FLIGHTS** out on Thursday, January 28 (from Gatwick or Manchester), returning to the UK on Monday, February 1, 2016
- ✓ **FOUR NIGHTS ACCOMMODATION** at the Plaza Resort & Spa, directly on the world-famous Daytona Beach
- ✓ **TWO FOUR-DAY ADMISSION PASSES** giving infield, general admission stadium, garage and Sprint FANZONE access
- ✓ **VIP WELCOME RECEPTION** and behind-the-scenes tour
- ✓ **...AND FINALLY, A PACE CAR RIDE AROUND THE 31-DEGREE HIGH BANKING OF DAYTONA**

For travel packages to the 2016 Rolex 24 At Daytona® email tours@speedchills.com or call 01494 211024

TO WIN ANSWER THIS QUESTION

In what year did the Rolex 24 At DAYTONA® first take place?

- A** 1966 **B** 1970 **C** 1976

...then go to autosport.com/competition
Entries close at 11.59pm December 20, 2015.



TO ENTER VISIT AUTOSPORT.COM/COMPETITION

TERMS AND CONDITIONS 1. Visit autosport.com/competition. 2. Entries close at 11.59pm on December 20, 2015. 3. Prize is as stated above; all additional transfers, excursions, and all taxes including airport taxes and subsistence is not included and must be paid for by the winner. Pace car ride around the 31-degree high banking of Daytona: participants must be at least 18 years of age; weather and racing schedule permitting. 4. Open to UK residents aged 18 and over. 5. No cash alternative. Prizes are non-transferable. 6. For full terms and conditions see autosport.com. The Promoter: **Haymarket Media Group**, Bridge House, 69 London Rd, Twickenham, TW1 3QR



Engel claimed his second consecutive Macau GT win

GT3 MACAU (PRC), NOVEMBER 19-22

Torque speaks as Engel rumbles on

RUMOUR HAD IT THAT MERCEDES NEEDED TO commandeer a show car from the gaudy glitz of Macau's Venetian Hotel for spare parts last Friday night, after Maro Engel and Renger van der Zande had both crashed their SLS AMG GT3s heavily in qualifying.

Urban myth or not, it was great work from the team to repair the wreckage, and Mercedes was rewarded with victory for Engel – and the manufacturer – in the inaugural GT World Cup.

Engel had taken a provisional pole position when he lost it at the Reservoir kink and smacked into the barriers. Then, after the session restarted, van der Zande made it a double dose of aggro for the Merc mechanics when he dumped it into the barriers at Paiol, just at the end of the Solitude Esses. And then there was a third red flag when Andre Couto spectacularly shunted his McLaren at Mandarin. Now there was just time for a brief run, during which Edoardo Mortara appeared to have grabbed pole in his Audi, only for Stefan Mucke, just behind him on the road, to chip a tenth from 'Mr Macau's' time for Aston Martin.



Audis pounced when Mucke hit Van Der Zande

Engel used the torque of the Merc to get past Mortara for second at the start of the qualification race, but appeared to have little answer to Mucke out front. The Craft Bamboo Aston was leading when the safety car appeared on the fourth lap, after Adderly Fong had shunted his Bentley beyond repair. But the restart was where Mucke ultimately lost the race – he accelerated, then braked, then went again, and the stewards hit him with a 10-second penalty.

That promoted Engel to victory from Mortara and the penalised Mucke, with the 18-lap main race still to come. Bearing in mind the torque of the Merc, it's little surprise that Mortara was unwilling to hang around at the start, since there is very little chance of an Audi being able to outaccelerate the SLS from that point in the rev range. Mortara jumped the getaway, giving himself a 10s penalty, and then watched Engel and Van der Zande rumble past him between the Reservoir and Mandarin kinks, and Mucke barge his way through into Lisboa.

Engel's lead hovered around the three-second mark, while van der Zande found himself hotly pursued by Mucke, Mortara and Rene Rast. Soon it was obvious that only tyre wear or backmarkers would decide this race, and it was the latter who obliged before the former became an issue. The first couple of slow drivers weren't a problem, but then the second-place battle got caught up behind John Shen's Porsche at the Melco hairpin. Mucke thumped into Van der Zande, damaging his left-rear bodywork so it was rubbing on the tyre, and then tried to shoulder his way past into Lisboa. As the Aston and Merc made contact, Mortara saw his chance and slipped the Phoenix Audi into second, while Rast was also able to take

advantage and move the WRT Audi into third from Mucke and van der Zande.

Shortly afterwards, Vutthikorn Intraphuvasak shunted his Porsche at the Solitude Esses, bringing out the safety car. Incredibly, Shen lost control at Moorish while the field was going slowly in formation, blocking the track and causing a slow-speed pile-up, which brought a temporary close to the race.

Engel was delighted to make it two Macau GT wins in a row and, more importantly, become the first World Cup winner, while Rast – who was subbing for the injured Laurens Vanthoor – did a fine job on his Macau debut to take second after Mortara's penalty, which dropped the Italian to sixth place.

Well behind the leading group, Darryl O'Young's Aston Martin got the better of Alvaro Parente for what would become fifth. McLaren was hobbled by balance of performance and was slow in the fast first sector, meaning neither Parente nor Kevin Estre would be a factor. Estre retired after a first-lap clash with the Aston of Richard Lyons, while Earl Bamber was also an opening-lap casualty when his Porsche hit the barriers.

● Marcus Simmons

RESULTS

1 Maro Engel (Mercedes SLS AMG GT3), 14 laps in 33m28.832s; 2 Rene Rast (Audi R8 LMS), +2.900s; 3 Stefan Mucke (Aston Martin Vantage GT3); 4 Renger van der Zande (Mercedes); 5 Darryl O'Young (Aston Martin); 6 Edoardo Mortara (Audi); 7 Alvaro Parente (McLaren 650S GT3); 8 Marchy Lee (Audi); 9 Keita Sawa (Bentley Continental GT3); 10 Pasin Lathouras (Ferrari 458 Italia GT3). **QUALIFICATION RACE 1 Engel, 12 laps in 34m38.768s;** 2 Mortara, +5.212s; 3 Mucke; 4 Van der Zande; 5 Rast; 6 Richard Lyons (Aston Martin).

FEEL THE RUSH

GET CLOSE TO THE CARS
STARS & ACTION INCLUDING
EXCLUSIVE ACCESS TO
WILLIAMS MARTINI RACING

14-17TH JANUARY 2016
NEC BIRMINGHAM



AUTOSPORT
INTERNATIONAL

**THE RACING
CAR SHOW**

BOOK NOW

AUTOSPORTINTERNATIONAL.COM
0844 581 1420

TCR MACAU GUIA, NOVEMBER 20-22 RD 11/11

Huff wins Race 1 but Comini takes title

ROB HUFF DOMINATED THE MACAU GUIA EVENT all weekend – until the start of the Guia race itself. The Briton had waltzed his West Coast Racing Honda Civic to victory in the first race, which counted for full points in what doubled up as the finale of the inaugural TCR International series, but a clash with Jordi Gene's Craft Bamboo SEAT Leon eliminated both and triggered a massive pile-up.

Gene had entered the weekend as an outside title contender, with his team-mate Pepe Oriola just a point behind Target Competition SEAT driver Stefano Comini. Swiss-Italian Comini extended the advantage by taking third in qualifying, for which points are awarded, ahead of Oriola, but it was Huff who was on pole by 1.6 seconds from the sister WCR Honda of American Kevin Gleason.

Huff dominated the first race, which acted as the qualification race for the Guia, emerging from a tight moment between Gene and Comini at Reservoir to extend his lead. Gene held Comini and Oriola at bay throughout, Comini speculating that the Spaniard was bottling him up to bring Oriola into play. In the end, Comini held on to take third place, meaning the points gap was now seven – sufficient for Comini to finish one place behind Oriola in the finale and still claim the title.

Gene made his second fast start of the weekend, but his line into Reservoir brought him into contact with Huff, the two slamming into the barriers and then getting assaulted as numerous other cars piled into the wreckage,



the final impact lifting Huff's Civic onto its nose.

After the restart, Oriola tried everything to get past Comini for the lead, including, seemingly, trying to go through the rival SEAT. Numerous times Comini was punted up the rear, and it came to a head when, after a massive tankslapper through Mandarin, he was persistently rammed by Oriola in the braking area for Lisboa. Oriola's radiator had had enough and he crawled to a halt, while younger brother Jordi also retired his Target SEAT shortly afterwards.

That promoted another Target SEAT, that of Andrea Belicchi, to second place, which meant

that Comini's victory and title were safe.

The other frontrunning WCR Honda, the new Step 2 version of Gianni Morbidelli, was given a drive-through penalty because it was on its wheels at the five-minute signal in the break between the two races, but the Italian ex-F1 driver recovered to fourth behind the Engstler VW Golf of Mikhail Grachev.

Morbidelli was largely assisted in this quest by the fact that, of the 30 cars that started the race weekend, only seven remained...

One of the first out was Alain Menu, who suffered terminal engine problems in the Top Run Subaru after just one lap of free practice. Dan Wells lined up the latest of last-minute deals to join Josh Files in the Campos Racing Opel team, but a water leak sidelined him on the second day, while Files shunted in first free practice, missed qualifying and then was caught in the second-race pile-up. James Nash drove the Proteam Ford but technical problems did for him in the first race.

● Marcus Simmons

RESULTS

RACE 1 Rob Huff (Honda Civic TCR), 10 laps in 32m52.232s; 2 Jordi Gene (SEAT Leon Racer), +7.832s; 3 Stefano Comini (SEAT); 4 Pepe Oriola (SEAT); 5 Jordi Oriola (SEAT); 6 Gianni Morbidelli (Honda). **RACE 2** 1 Comini, 10 laps in 40m07.354s; 2 Andrea Belicchi (SEAT), +1.733s; 3 Mikhail Grachev (Volkswagen Golf R); 4 Morbidelli; 5 Rodolfo Avila (SEAT); 6 Robb Holland (SEAT). **POINTS** 1 Comini, 342; 2 Oriola, 312; 3 Gene, 285; 4 Morbidelli, 243; 5 Kevin Gleason, 226; 6 Belicchi, 186.



Comini and Oriola dived in Race 2

Restart brought the winning opportunity



LEVI/LAT

Busch beats way to unlikely title

NASCAR might have bent the rules slightly to allow Kyle Busch to remain eligible for the Chase after his Daytona accident, but he proved a worthy addition to the pantheon of Cup winners

KYLE BUSCH: NASCAR SPRINT CUP CHAMPION.

This doesn't sound anomalous. A man who's been that fast, that deeply in the thick of the story for so long, he was always due a championship at some point. But for it to come in a season he had missed nearly a third of, and in which he would have only been 20th without Chase bonuses, was certainly unconventional.

But not undeserved. NASCAR may have waived some rules to get Busch into the Chase, but it didn't just wave him in – and it made its decisions with a sense of responsibility. Series chiefs acknowledged that the wall he was fired into during the Daytona Xfinity Series race should have had a SAFER barrier on it. If it had, Busch would have been racing in the Daytona 500 next day, rather than starting three months of rehab on injuries to both legs.

Though Busch didn't have to adhere to the rule demanding all Chase participants contest the full season, NASCAR did stipulate that he had to finish in the top 30 in the championship. That goal was 179 points away when he returned for Charlotte in May. He had 15 races to make it and was up against a consistency-biased scoring system that only allowed incremental gains. After four of the 15 races between his comeback

NASCAR

SPRINT CUP

Homestead (USA)

November 20-22

Round 36/36

and the Chase cut-off, he'd got only seven points closer to 30th. A streak of four wins in five races ultimately made the difference, but those triumphs were a necessity, not a luxury.

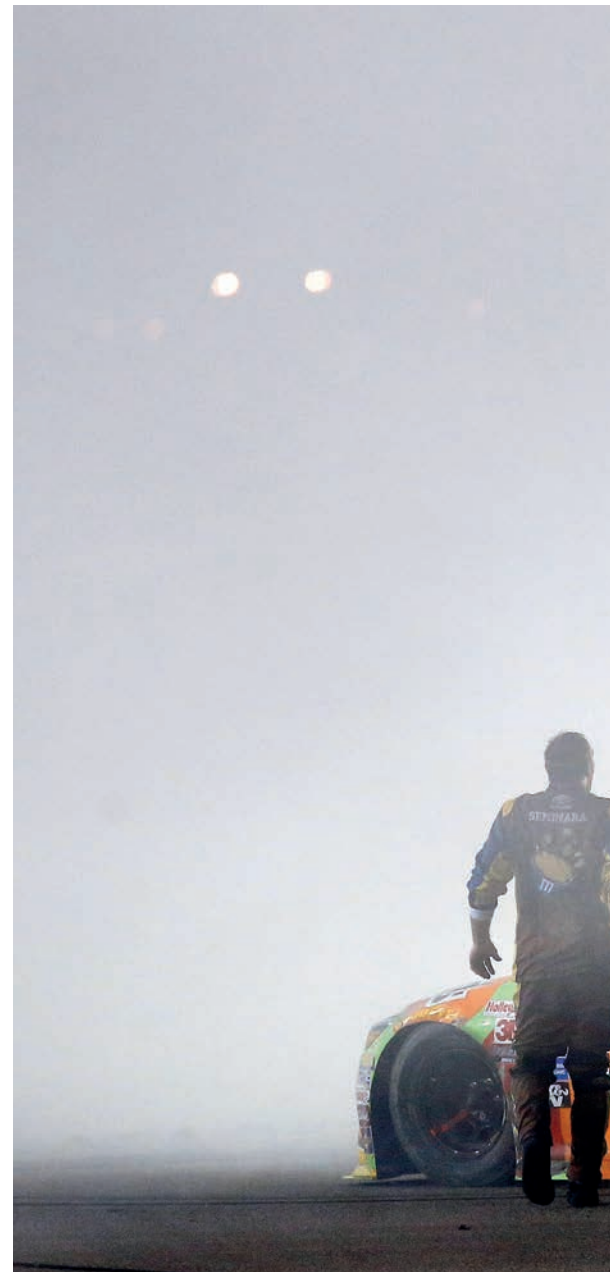
"I don't recommend looking to achieve a championship this way," the Joe Gibbs Racing driver joked. "It's certainly not easy."

Busch didn't win at all through the Chase's knockout stages, but ended each one with sufficient points to progress. He started the denouement weekend with wild handling in practice, and secured a quietly effective third on the grid in a qualifying session where his title rivals were yo-yoing up and down the order.

Reigning champion Kevin Harvick was a case in point. Fastest in round one, he then got knocked out in round two and couldn't understand why his handling had gone awry on his crucial second run. Race day would be a similar story.

Last year any result other than a Harvick title would've felt unjust. He had simply been *fast* from the moment he stepped into the Stewart-Haas Chevrolet and as the championship went 'winner-takes-all', he was invariably either winning or being narrowly denied a win.

But this season, that edge wasn't there. As JGR and Penske enjoyed dominant streaks, Harvick became captain consistency. Two of his three 2015 wins were way back in the first four rounds.



He was a top-three finisher in over half the races, but his pre-Chase declaration that he'd 'pound the Gibbs cars into the ground' when the crunch rounds came proved unfounded.

At Homestead, Harvick was second best. Before a late and very eyebrow-raising 'debris' caution, Busch was running second to Brad Keselowski but nearly 10 seconds clear of Harvick in fourth. Far from jeopardising his title, the seven-lap sprint to the finish gave Busch chance to take full control. Harvick muscled through to second at the restart, but by the time he got there the fast-starting Busch was gone, 1.5s up the road and well on the way to winning a first Cup title with race victory, becoming the first man to achieve the honour with a Toyota too.

His may have been an epic comeback story, but it ranked third in the fairytale charts among the four possible championship outcomes. It was remarkable that Martin Truex Jr and his relatively tiny single-car Furniture Row team were even in the title fight this long given the size of the organisations they were up against, but he'd scrapped his way there on merit. But no matter what strategy dice they rolled (and crew chief Cole Pearn tried pretty much everything), Truex was always swiftly heading back towards his ultimate 12th place. Still, fourth in the championship was 20 places better than last year.



Mario Andretti came to honour Jeff Gordon

Busch celebrated in traditional style



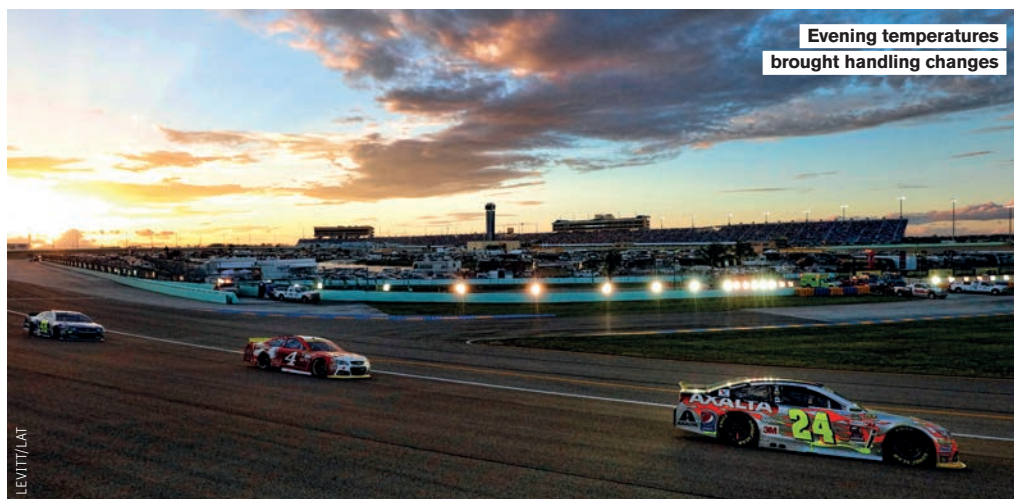
45

“I don't recommend looking to achieve a championship this way. It's not easy”

KYLE BUSCH

The outcome the world wanted was a fifth title for the departing Jeff Gordon. Crucial Martinsville win aside, his 2015 form had been far from champion-esque – three third places mixed with forgettable days. And yet as the crowds lauded him all day, as rivals donned Gordon caps, as his superstar guests Mario Andretti and Lewis Hamilton paid tribute, and especially as Gordon looked to his crew and the grandstands in the final moments before his 797th and last Cup start, even sceptics bought into the fairytale.

When Gordon surged from third to first on an early restart, the roar from the crowd was breathtaking. But that was as good as it got. The car's handling went away in the cooler evening temperatures and it took a last push at the final



Evening temperatures brought handling changes

restart to salvage sixth. Gordon wasn't exiting as the champion, but he was departing in the way a legendary champion should – far enough from the peak of his ability to know it was time to go, but close enough to depart with honour intact.

RESULTS

1 Kyle Busch (Toyota Camry), 267 laps in 3h02m23s; 2 Kevin Harvick (Chevrolet SS), +1.552s; 3 Brad Keselowski (Ford

Fusion); 4 Joey Logano (Ford); 5 Kyle Larson (Chevy); 6 Jeff Gordon (Chevy); 7 Matt Kenseth (Toyota); 8 Kurt Busch (Chevy); 9 Jimmie Johnson (Chevy); 10 Denny Hamlin (Toyota).
POINTS 1 Kyle Busch, 5043; 2 Harvick, 5042; 3 Gordon, 5038; 4 Martin Truex Jr, 5032; 5 Carl Edwards, 2368; 6 Logano, 2360; 7 Keselowski, 2347; 8 Kurt Busch, 2333; 9 Hamlin, 2327; 10 Johnson, 2315; 11 Ryan Newman, 2314; 12 Dale Earnhardt Jr, 2310; 13 Jamie McMurray, 2295; 14 Paul Menard, 2262; 15 Kenseth, 2234; 16 Clint Bowyer, 2175.



Vandoorne and Matsushita master the ART of GP2

Champion Vandoorne and Matsushita took enough points to give ART Grand Prix the teams' title in Bahrain. **AARON ROOK** witnessed the celebrations

46

ART GRAND PRIX IS A NAME SYNONYMOUS WITH developing some of the finest talent in single-seater racing. Lewis Hamilton, Sebastian Vettel and Jules Bianchi are just a few of the famous names that have benefited from driving for the illustrious French outfit.

This year, ART helped Stoffel Vandoorne to the 2015 drivers' championship, and has allowed Honda junior Nobuharu Matsushita to impress in his debut year in Europe. In return, the duo gave ART a fourth GP2 teams' title with a one-two finish in the Bahrain feature race.

Vandoorne missed out on pole to DAMS driver Pierre Gasly for the feature race, but stormed into the lead at Turn 1 and remained there throughout. The McLaren protege was more than five seconds clear before making his mandatory pitstop with only 10 laps to go, and was in such a strong position that he was able to rejoin still up front.

Vandoorne managed his tyres perfectly to take his sixth win of the season.

GP2
Bahrain
 November 20-21



Round 10/11



Matsushita spins at the start of race two

"It was one of our best races this season," said the Belgian. "We had a decent advantage, I made no mistakes. It was good to win again after Spa [in August]. Even though it's not that long ago, it felt like a long time. After winning the championship, you always want to show you're still the guy to beat."

From eighth on the grid, Matsushita fought his

way up to third before his pitstop. He re-emerged behind Alexander Rossi and Mitch Evans. Rossi clipped the rear of Evans at Turn 3 and had to pit for a new front wing, giving Matsushita one place.

Matsushita hassled Evans for a number of laps before deposing the Kiwi with just two laps to go at Turn 1, with the assistance of DRS.

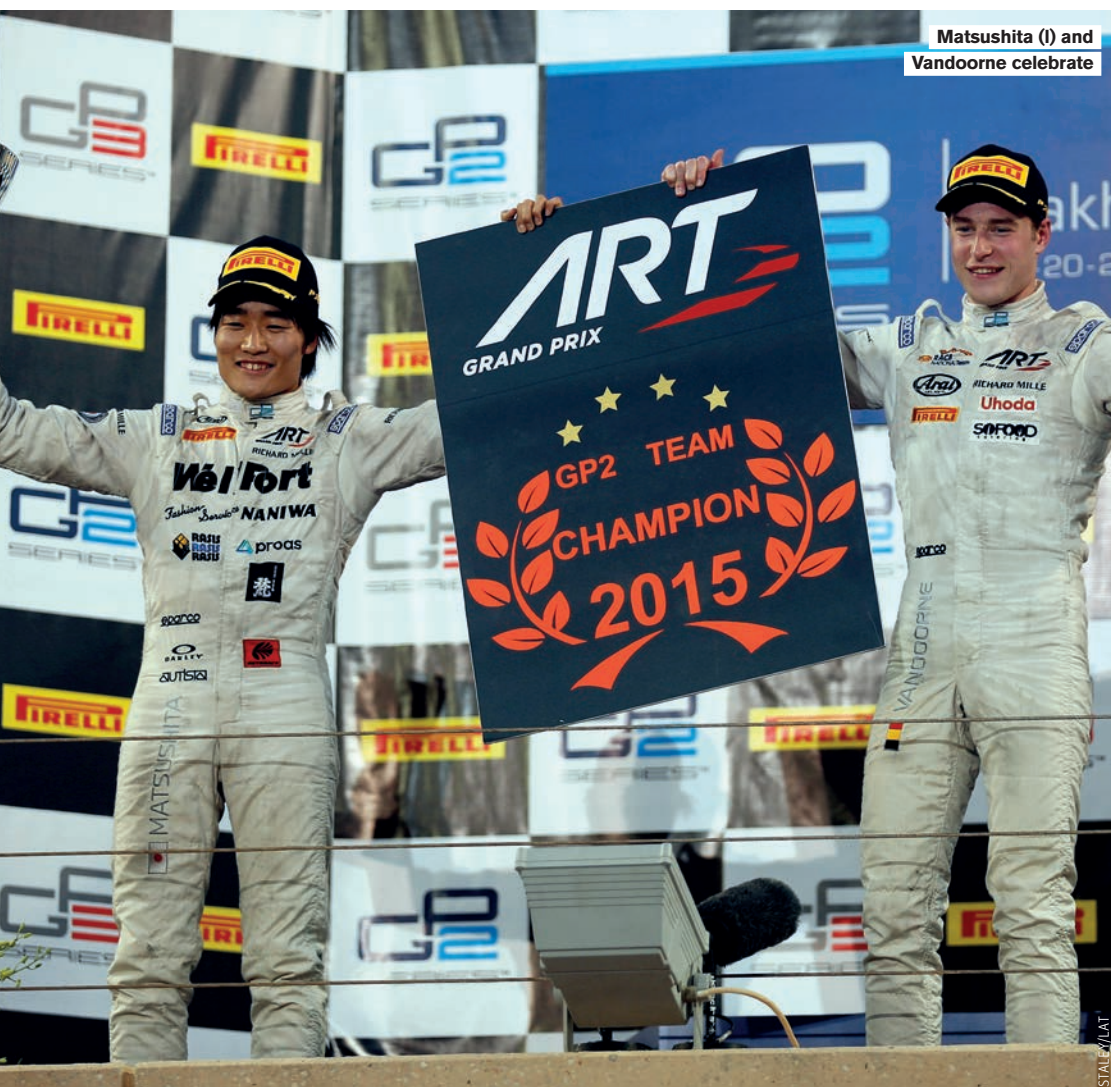
Tyre degradation was a big issue for many as track temperatures were the highest they have been since July's Hungaroring round. Lazarus driver Berthon suffered the most, falling from second to finish 11th. Sergey Sirotkin preserved his tyres well for a late charge but couldn't get past Ferrari junior Raffaele Marciello for fourth.

Williams F1 development driver Alex Lynn held on to eighth place, and reverse-grid pole, despite a late attack from Jordan King.

King narrowly avoided a penalty for an incident that occurred when he was running alongside Haryanto – he veered to the left across the path of the Campos Racing driver, almost causing a collision. The stewards took no further action and the Racing Engineering driver retained ninth.



Evans (9) leads Lynn in the sprint race



Matsushita (l) and Vandoorne celebrate

Saturday's sprint race got off to a messy start when Matsushita, who was up into second, made contact with Haryanto and spun. The contact forced several drivers to take evasive action at Turn 1 and left Matsushita out of the race. Lynn got away cleanly from pole, from Vandoorne and Evans, who both made the most of the confusion in front to jump up the order from eighth and sixth on the grid respectively.

If the messy start wasn't enough to deal with, the safety car was soon out later on the opening lap, following contact between Oliver Rowland and Rene Binder. Formula Renault 3.5 champion Rowland went over the back of Binder's Dallara, and becoming airborne before crashing back down on the track and sliding off into the barriers.

Rowland finished 22nd in the feature race, and the incident in the sprint capped off a weekend to forget for the British driver, who filled in for Richie Stanaway at Status Grand Prix.

At the restart, Lynn pulled away to move out of DRS range of the chasing Vandoorne. But the Belgian was more concerned about what was going on behind him.

Russian Time driver Evans hassled him for a number of laps before setting up a move at Turn 1. Evans was forced to the outside on the straight for Turn 1, so switched back on Vandoorne to give himself better traction and line up a move at Turn 3. The Kiwi executed the move perfectly and he was able to dive down the inside of Vandoorne at Turn 3 to relieve him of second place.

Evans was a man on a mission and his next target was Lynn. Within three laps, Evans was all over the back of the DAMS driver and lining him up for a pass to take the lead. He tried to repeat

“After winning the title, you always want to show you are still the guy to beat”

STOFFEL VANDOORNE

the switchback move he made on Vandoorne earlier, but Lynn was wise to the manoeuvre and was able to hold on to the lead.

Though Lynn's defence was robust, there was nothing he could do when, on the following lap, Evans made a bold, late-braking move up the inside of Turn 3 to take the lead.

Evans soon disappeared into the lead to take his second win of the year, while Lynn struggled with his tyres and fell back into the path of Vandoorne, who passed him with ease at Turn 1. His pace dropped off towards the end of the race but Lynn was still able to hold on to third, his first podium since his feature race win in Budapest.

Further back, Marciello and Sirotkin renewed their battle from the feature race late on in the sprint, with the latter completing a stunning move on the outside of Turn 12 on the final lap to take fourth place away from the Italian.



FULL RESULTS PAGE 46



BLOXHAM/LAT

GASLY'S DROUGHT GOES ON

Despite beating Stoffel Vandoorne to pole position for the feature race in Bahrain, Pierre Gasly (above) endured another winless weekend. The Frenchman came close to picking up his maiden win, finishing second in the feature race at both Budapest and Sochi. But, as of Saturday's sprint race, it has now been 785 days since Gasly's last win, at Paul Ricard in the Formula Renault Eurocup back in 2013.

ROWLAND RETIRES AGAIN

Formula Renault 3.5 champion Oliver Rowland suffered his third GP2 retirement in as many rounds in Bahrain, following his opening lap collision with Rene Binder. Since 2010, Rowland has only had three retirements in all single-seater categories (excluding GP2). But since competing in GP2, he has doubled that total.

EVANS'S LUCKY ESCAPE

Sprint race winner Mitch Evans admitted he got lucky into Turn 1 at the start by avoiding the spinning Nobuharu Matsushita. The Russian Time driver said after the race that he was lucky not to get involved in the melee at the opening corner. "I was pretty lucky at the start, to be honest," said Evans. "I nearly got hit when Matsushita spun. I was really lucky to make it through."

MALJA REPLACES VISOIU

Swedish driver Gustav Malja replaced the injured Robert Visoiu at Rapax in Bahrain. The 20-year-old, who also stepped in for an ill Rene Binder at Spa-Francorchamps for Trident, where he picked up a point, partnered Sergey Sirotkin at the penultimate round, and will also deputise in Abu Dhabi in the final round. Visoiu announced on Twitter he will miss the rest of the season due to an unspecified injury.

DE JONG MAKES HIS RETURN

Daniel De Jong (below) returned to GP2 in Bahrain with Trident, after recovering from a broken vertebra. The Dutchman sustained his injury in a collision at Blanchimont in the feature race at Spa in August. The 23-year-old raced for Trident instead of family team MP Motorsport.



BLOXHAM/LAT

RESULTS ROUND-UP

GP2 SERIES

ROUND 10/11 BAHRAIN, NOVEMBER 20-21 RACE 1 (32 LAPS - 107.612 MILES)

1 Stoffel Vandoorne (B) ART Grand Prix	57m15.184s
2 Nobuharu Matsushita (J) ART Grand Prix	+13.526s
3 Mitch Evans (NZ) Russian Time	+17.617s
4 Raffaele Marciello (I) Trident	+20.494s
5 Sergey Sirotkin (RUS) Rapax	+21.924s
6 Pierre Gasly (F) DAMS	+22.622s
7 Rio Haryanto (RI) Campos Racing	+26.972s
8 Alex Lynn (GB) DAMS	+30.590s
9 Jordan King (GB) Racing Engineering	+31.312s
10 Arthur Pic (F) Campos Racing	+41.514s
11 Nathanael Berthon (F) Daiko Team Lazarus	+43.621s
12 Sergio Canamasas (E) Daiko Team Lazarus	+45.597s
13 Marlon Stockinger (PH) Status Grand Prix	+47.319s
14 Nicholas Latifi (CDN) MP Motorsport	+49.854s
15 Artem Markelov (RUS) Russian Time	+56.728s
16 Gustav Malja (S) Rapax	+57.380s
17 Andre Negrao (BR) Arden International	+59.439s
18 Alexander Rossi (USA) Racing Engineering	+59.845s
19 Daniel de Jong (NL) Trident	+1m00.613s
20 Rene Binder (A) MP Motorsport	+1m00.700s
21 Dean Stoneman (GB) Carlin	+1m08.684s
22 Oliver Rowland (GB) Status Grand Prix	+1m11.829s
23 Sean Gelael (RI) Carlin	-1 lap
24 Norman Nato (F) Arden International	-1 lap

Winner's average speed 112.775mph.
Fastest lap Vandoorne, 1m43.166s, 117.347mph.

QUALIFYING

1 Gasly, 1m39.572s; 2 Vandoorne, 1m39.612s; 3 Marciello, 1m39.648s; 4 Lynn, 1m39.661s; 5 King, 1m39.902s; 6 Nato, 1m40.004s; 7 Evans, 1m40.027s; 8 Matsushita, 1m40.079s; 9 Rossi, 1m40.141s; 10 Pic, 1m40.176s; 11 Haryanto, 1m40.212s; 12 Markelov, 1m40.354s; 13 Binder, 1m40.367s; 14 Sirotkin, 1m40.539s; 15 Berthon, 1m40.571s; 16 Canamasas, 1m40.588s; 17 Stockinger, 1m40.650s; 18 Rowland, 1m40.720s; 19 Stoneman, 1m41.106s; 20 Latifi, 1m41.145s; 21 de Jong, 1m41.208s; 22 Negrao, 1m41.432s; 23 Malja, 1m41.775s; 24 Gelael, 1m42.840s.

RACE 2 (23 LAPS - 77.346 MILES)

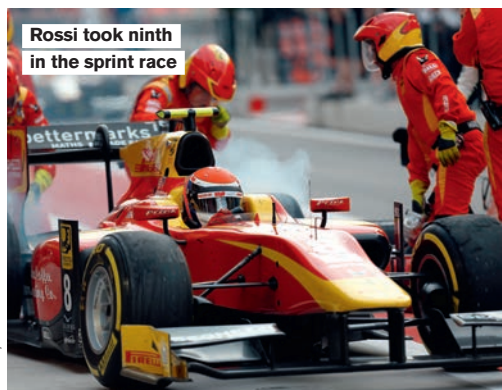
1 Evans, 42m51.663s; 2 Vandoorne, +1.863s; 3 Lynn, +17.489s; 4 Sirotkin, +20.154s; 5 Marciello, +21.026s; 6 King, +21.661s; 7 Gasly, +22.857s; 8 Markelov, +26.686s; 9 Rossi, +27.295s; 10 Nato, +34.387s; 11 Latifi, +37.588s; 12 Stoneman, +42.637s; 13 Malja, +45.771s; 14 de Jong, +47.088s; 15 Gelael, +48.410s; 16 Pic, +48.602s; 17 Canamasas, +59.866s; 18 Haryanto, +59.942s; 19 Stockinger, +1m01.931s; 20 Negrao, +1m09.902s; R Berthon, 17 laps-broken suspension; R Binder, 1 lap-accident; R Matsushita, 0 laps-accident; R Rowland, 0 laps-accident.
Winner's average speed 108.274mph.
Fastest lap Stockinger, 1m43.817s, 116.611mph.

GRID FOR RACE 2

Decided by result of Race 1, with top eight finishers reversed.

CHAMPIONSHIP

1 Vandoorne, 316.5; 2 Rossi, 169.5; 3 Sirotkin, 139; 4 Haryanto, 132; 5 Evans, 120; 6 Lynn, 106; 7 Gasly, 96; 8 Marciello, 92; 9 Matsushita, 68.5; 10 Stanaway, 60.



Rossi took ninth in the sprint race

STALEVILAT

GP3 SERIES

ROUND 8/9 BAHRAIN, NOVEMBER 20-21 RACE 1 (20 LAPS - 67.257 MILES)

1 Marvin Kirchofer (D) ART Grand Prix	37m11.554s
2 Emil Bernstorff (GB) Arden International	+1.546s
3 Esteban Ocon (F) ART Grand Prix	+2.756s
4 Luca Ghiotto (I) Trident	+5.677s
5 Jimmy Eriksson (S) Koiranen GP	+10.417s
6 Artur Janosz (PL) Trident	+13.323s
7 Jann Mardenborough (GB) Carlin	+13.843s
8 Alfonso Celis (MEX) ART Grand Prix	+16.288s
9 Antonio Fuoco (I) Carlin	+18.186s
10 Ralph Boschung (CH) Jenzer Motorsport	+18.900s
11 Matt Parry (GB) Koiranen GP	+23.610s
12 Matheo Tuscher (CH) Jenzer Motorsport	+28.950s
13 Sandy Stuvik (THA) Status Grand Prix	+31.816s
14 Kevin Ceccon (I) Arden International	+31.916s
15 Mitch Gilbert (AUS) Carlin	+37.328s
16 Seb Morris (GB) Status Grand Prix	+37.893s
17 Zaid Ashkanani (KWT) Campos Racing	+40.218s
18 Konstantin Tereshchenko (RUS) Campos Racing	+50.428s
19 Alex Fontana (CH) Status Grand Prix	+52.639s
20 Michele Beretta (I) Trident	-1 lap
R Pal Varhaug (N) Jenzer Motorsport	14 laps-accident damage/black and orange flag
R Matevos Isaakyan (RUS) Koiranen GP	13 laps-accident damage
R Alex Bosak (PL) Arden International	1 lap-accident damage
R Alex Palou (E) Campos Racing	1 lap-throttle sensor

Winner's average speed 108.501mph.
Fastest lap Ghiotto, 1m49.958s, 110.099mph.

QUALIFYING

1 Ocon, 1m46.684s; 2 Ghiotto, 1m47.188s; 3 Ceccon, 1m47.197s;

MACAU F3

MACAU (PRC), NOVEMBER 21-22 (15 LAPS - 57.042 MILES)

1 Felix Rosenqvist (S) Prema Powerteam Dallara-Mercedes F315	48m56.347s
2 Charles Leclerc (MC) Van Amersfoort Racing Dallara-Volkswagen F314	+1.168s
3 Alexander Sims (GB) Double R Racing Dallara-Mercedes F312	+5.075s
4 Antonio Giovinazzi (I) Carlin Dallara-Volkswagen F315	+5.948s
5 Markus Pommer (D) Motopark Dallara-Volkswagen F315	+11.703s
6 Santino Ferrucci (USA) Mücke Motorsport Dallara-Mercedes F312	+16.863s
7 Alessio Lorandi (I) Van Amersfoort Racing Dallara-Volkswagen F312	+18.775s
8 Lance Stroll (CDN) Prema Powerteam Dallara-Mercedes F315	+22.546s
9 Jake Dennis (GB) Prema Powerteam Dallara-Mercedes F315	+24.355s
10 Arjun Maini (IND) T-Sport Dallara-Tomei F314	+24.863s
11 Dorian Boccia (F) Signature Dallara-Volkswagen F315	+28.259s
12 Nick Cassidy (NZ) TOM'S Dallara-Toyota F314	+28.871s
13 Alexander Albon (T) Signature Dallara-Volkswagen F315	+30.255s
14 Andy Chang (PRC) Fortec Motorsports Dallara-Mercedes F312	+32.791s
15 Kenta Yamashita (J) TOM'S Dallara-Toyota F312	+33.546s
16 Yuhi Sekiguchi (J) B-Max Racing Team Dallara-Toyota F312	+34.154s
17 Martin Cao (PRC) Fortec Motorsports Dallara-Mercedes F312	+47.075s
18 Matt Solomon (PRC) Mücke R Racing Dallara-Mercedes F313	+47.369s
19 Mikkel Jensen (DK) Mücke Motorsport Dallara-Mercedes F312	+49.240s
20 Sam MacLeod (GB) Team West-Tec Dallara-Mercedes F314	+57.064s
21 Peter Li (PRC) Jo Zeller Racing Dallara-Mercedes F312	+1m16.973s
22 Sergio Sette Camara (BR) Motopark Dallara-Volkswagen F314	+2m00.679s
R Callum Iliott (GB) Carlin Dallara-Volkswagen F312	9 laps-accident
R Yu Kanamaru (J) Carlin Dallara-Volkswagen F312	8 laps-acc dam/handling
R Gustavo Menezes (USA) Carlin Dallara-Volkswagen F312	0 laps-accident
R Mitsunori Takaboshi (J) B-Max Racing Team Dallara-Toyota F312	0 laps-accident
R Ryan Tveter (USA) Team West-Tec Dallara-Mercedes F312	0 laps-accident
NS Daniel Juncadella (E) Fortec Motorsports Dallara-Mercedes F315	0 laps-accident damage

QUALIFICATION RACE (10 LAPS - 38.028 MILES)

1 Rosenqvist, 24m52.619s; 2 Leclerc, +0.503s; 3 Sims, +2.701s; 4 MacLeod, +8.399s; 5 Pommer, +9.412s; 6 Sette Camara, +13.993s; 7 Ferrucci, +15.538s; 8 Lorandi, +16.627s; 9 Maini, +17.360s; 10 Giovinazzi, +17.871s; 11 Dennis, +18.131s; 12 Boccia, +20.682s; 13 Stroll, +21.872s; 14 Cao, +25.606s; 15 Yamashita, +26.323s; 16 Sekiguchi, +29.468s; 17 Cassidy, +29.931s; 18 Chang, +36.386s; 19 Menezes, +41.342s; 20 Kanamaru, +1m31.509s; 21 Solomon, +1m41.666s; 22 Jensen, +2m00.925s; R Takaboshi, 6 laps-puncture/off; R Li, 3 laps-accident; R Juncadella, 0 laps-accident; R Albon, 0 laps-accident; R Tveter, 0 laps-accident; R Iliott, 0 laps-accident.
Winner's average speed 91.718mph.
Fastest lap Rosenqvist, 2m10.330s, 105.041mph.

RACE 2 (15 LAPS - 50.443 MILES)

1 Ghiotto, 42m51.074s; 2 Ocon, +2.370s; 3 Parry, +9.193s; 4 Bernstorff, +13.550s; 5 Fuoco, +14.242s; 6 Kirchofer, +14.361s; 7 Eriksson, +16.248s; 8 Celis, +17.677s; 9 Boschung, +18.267s; 10 Palou, +19.364s; 11 Gilbert, +22.606s; 12 Janosz, +27.560s; 13 Ashkanani, +27.602s; 14 Isaakyan, +29.797s; 15 Beretta, +31.373s; 16 Bosak, +31.687s; 17 Tereshchenko, +44.310s; 18 Ceccon, +47.601s; 19 Fontana, +55.934s; R Morris, 1 lap; R Mardenborough, 0 laps; R Tuscher, 0 laps; R Stuvik, 0 laps; R Varhaug, 0 laps.
Winner's average speed 70.629mph.
Fastest lap Ghiotto, 1m48.228s, 111.859mph.

GRID FOR RACE 2

Decided by result of Race 1, with top eight finishers reversed.

CHAMPIONSHIP

1 Ghiotto, 227; 2 Ocon, 225; 3 Kirchofer, 173; 4 Bernstorff, 172; 5 Eriksson, 97; 6 Ceccon, 77; 7 Fuoco, 70; 8 Parry, 59; 9 Mardenborough, 58; 10 Palou, 30.



Sims celebrates on the podium

Winner's average speed 69.934mph.
Fastest lap Sette Camara, 2m10.186s, 105.157mph.

GRID

Decided by result of qualification race.

QUALIFYING

1 Rosenqvist, 2m10.474s; 2 Juncadella, 2m10.687s; 3 Leclerc, 2m10.796s; 4 Giovinazzi, 2m11.034s; 5 MacLeod, 2m11.523s; 6 Sette Camara, 2m11.721s; 7 Pommer, 2m11.091s*; 8 Maini, 2m11.722s; 9 Lorandi, 2m11.732s; 10 Stroll, 2m11.794s; 11 Ferrucci, 2m11.965s; 12 Jensen, 2m12.026s; 13 Sims, 2m12.036s; 14 Dennis, 2m12.053s; 15 Albon, 2m12.054s; 16 Sekiguchi, 2m12.197s; 17 Tveter, 2m12.474s; 18 Iliott, 2m12.663s; 19 Kanamaru, 2m12.723s; 20 Takaboshi, 2m12.836s; 21 Chang, 2m12.879s; 22 Cao, 2m12.969s; 23 Yamashita, 2m13.027s; 24 Cassidy, 2m13.162s; 25 Menezes, 2m13.369s; 26 Boccia, 2m13.683s; 27 Solomon, 2m13.736s; 28 Li, 2m14.525s. * grid penalty.

Day-night race rounds off season



EBREY/LAT

WORLD ENDURANCE CHAMPIONSHIP

ROUND 8/8 BAHRAIN, NOVEMBER 21 (199 LAPS - 669.209 MILES)

- 1 Romain Dumas (F)/Neel Jani (CH)/Marc Lieb (D) Porsche Team Porsche 919 Hybrid (LMP1) 6h00m52.843s
- 2 Marcel Fassler (CH)/Andre Lotterer (D)/Benoit Treluyer (F) Audi Sport Team Joest Audi R18 e-tron quattro '15 (LMP1) +1m25.310s
- 3 Alexander Wurz (A)/Stephane Sarrazin (F)/Mike Conway (GB) Toyota Racing Toyota TSO40 HYBRID (LMP1) -3 laps
- 4 Sebastien Buemi (CH)/Anthony Davidson (GB)/Kazuki Nakajima (J) Toyota Racing Toyota TSO40 HYBRID (LMP1) -3 laps
- 5 Timo Bernhard (D)/Mark Webber (AUS)/Brendon Hartley (NZ) Porsche Team Porsche 919 Hybrid (LMP1) -9 laps
- 6 Lucas di Grassi (BR)/Loic Duval (F)/Oliver Jarvis (GB) Audi Sport Team Joest Audi R18 e-tron quattro '15 (LMP1) -11 laps
- 7 Sam Bird (GB)/Roman Rusinov (RUS)/Julien Canal (F) G-Drive Racing (OAK) Ligier-Nissan JSP2 (LMP2) -16 laps
- 8 Nick Tandy (GB)/Matt Howson (GB)/Richard Bradley (GB) KCMG ORECA-Nissan O5 (LMP2) -16 laps
- 9 Luis Derani (BR)/Gustavo Yacamán (CO)/Ricardo Gonzalez (MEX) G-Drive Racing (OAK) Ligier-Nissan JSP2 (LMP2) -17 laps
- 10 Tom Dillmann (F)/Nelson Panciatici (F)/Paul-Loup Chatin (F) Signatech Alpine Alpine-Nissan A450b (LMP2) -17 laps
- 11 Alexandre Imperatori (CH)/Dominik Kraihamer (A)/Matheo Tuscher (CH) Rebellion Racing Rebellion-AER R-One (LMP1) -18 laps
- 12 Pierre Kaffer (D)/Simon Trummer (CH) Team ByKolles CLM-AER P1/O1 (LMP1) -19 laps
- 13 Nicolas Minassian (F)/Mikhail Aleshin (RUS)/Devi Markozov (RUS) AF Racing BR Engineering-Nissan BRO1 (LMP2) -20 laps
- 14 Mathias Beche (CH)/Nicolas Prost (F) Rebellion Racing Rebellion-AER R-One (LMP1) -20 laps
- 15 Jonny Kane (GB)/Nick Leventis (GB)/Danny Watts (GB) Strakka Racing Gibson-Nissan O15S (LMP2) -21 laps
- 16 Oliver Webb (GB)/Pierre Ragues (F)/Chris Cumming (CDN) Team SARD Morand Morgan-SARD LMP2 Evo '15 (LMP2) -22 laps
- 17 Ryan Dalziel (GB)/Scott Sharp (USA)/David Hansson (DK) Extreme Speed Motorsports Ligier-HPD JS P2 (LMP2) -23 laps
- 18 Patrick Pilet (F)/Frederic Makowiecki (F) Porsche Team Manthey Porsche 911 RSR (GTE Pro) -26 laps
- 19 Toni Vilander (FIN)/Gianmaria Bruni (I) AF Corse Ferrari 458 Italia (GTE Pro) -26 laps
- 20 Johannes van Overbeek (USA)/Ed Brown (USA)/Jon Fogarty (USA) Extreme Speed Motorsports Ligier-HPD JS P2 (LMP2) -26 laps
- 21 Jonathan Adam (GB)/Darren Turner (GB) Aston Martin Racing Aston Martin Vantage V8 (GTE Pro) -26 laps
- 22 Nicki Thiim (DK)/Christoffer Nygaard (DK)/Marco Sorensen (DK) Aston Martin Racing Aston Martin Vantage V8 (GTE Pro) -26 laps
- 23 Michael Christensen (DK)/Richard Lietz (A) Porsche Team Manthey Porsche 911 RSR (GTE Pro) -27 laps
- 24 James Calado (GB)/Davide Rigon (I) AF Corse Ferrari 458 Italia (GTE Pro) -27 laps
- 25 Alex MacDowall (GB)/Fernando Rees (BR)/Richie Stanaway (NZ) Aston Martin Racing Aston Martin Vantage V8 (GTE Pro) -28 laps
- 26 Pedro Lamy (P)/Paul Dalla Lana (CDN)/Mathias Lauda (A) Aston Martin Racing Aston Martin Vantage V8 (GTE Am) -29 laps
- 27 Khaled Al Qubaisi (UAE)/Marco Mapelli (I)/Klaus Bachler (A) Abu Dhabi-Proton Racing Porsche 911 RSR (GTE Am) -29 laps
- 28 Patrick Long (USA)/Christian Ried (D)/Marco Seefried (D) Dempsey Racing - Proton Porsche 911 RSR (GTE Am) -29 laps
- 29 Emmanuel Collard (F)/Francois Perrodo (F)/Matteo Cressoni (I) AF Corse Ferrari 458 Italia (GTE Am) -30 laps
- 30 Andrea Bertolini (I)/Viktor Shaitar (RUS)/Aleksy Basov (RUS) SMP Racing (AF) Ferrari 458 Italia (GTE Am) -30 laps
- 31 Paolo Ruberti (I)/Gianluca Roda (I)/Kristian Poulsen (DK) Larbre Competition Chevrolet Corvette C7.R (GTE Am) -30 laps
- 32 Stuart Hall (GB)/Francesco Castellacci (I)/Roald Goethe (D) Aston Martin Racing Aston Martin Vantage V8 (GTE Am) -31 laps

Winner's average speed 111.262mph.

Fastest lap Jani, 1m41.893s, 118.814mph.

LMP2 Tandy, 1m52.177s, 107.921mph. GTE Pro Makowiecki, 1m59.600s, 101.223mph. GTE Am Lauda, 2m01.173s, 99.909mph.

QUALIFYING

- 1 Bernhard, 1m39.670s Hartley 1m39.802s 1m39.736s
- 2 Lieb, 1m39.838s Dumas, 1m40.362s 1m40.100s
- 3 Fassler, 1m40.648s Lotterer, 1m41.958s 1m41.303s
- 4 Duval, 1m41.379s Jarvis, 1m41.436s 1m41.407s
- 5 Davidson, 1m42.021s Nakajima, 1m42.296s 1m42.158s
- 6 Wurz, 1m42.392s Sarrazin, 1m42.532s 1m42.462s
- 7 Imperatori, 1m46.198s Kraihamer, 1m47.122s 1m46.660s
- 8 Beche, 1m45.932s Prost, 1m47.905s 1m46.918s
- 9 Kaffer, 1m47.863s Trummer, 1m48.699s 1m48.281s
- 10 Dillmann, 1m49.829s Chatin, 1m50.157s 1m49.993s
- 11 Bird, 1m49.509s Canal, 1m50.696s 1m50.102s
- 12 Tandy, 1m50.071s Howson, 1m50.910s 1m50.490s
- 13 Derani, 1m49.718s González, 1m51.722s 1m50.720s
- 14 Webb, 1m51.004s Ragues, 1m51.600s 1m51.302s
- 15 Dalziel, 1m51.609s Hansson, 1m51.612s 1m51.610s
- 16 Minassian, 1m51.684s Markozov, 1m52.356s 1m52.020s
- 17 Kane, 1m50.047s Leventis, 1m54.473s 1m52.260s
- 18 Overbeek, 1m51.924s Brown, 1m59.020s 1m55.472s
- 19 Vilander, 1m58.187s Bruni, 1m58.508s 1m58.347s
- 20 Sorensen, 1m57.984s Thiim, 1m59.335s 1m58.659s
- 21 Stanaway, 1m58.754s MacDowall, 1m58.800s 1m58.777s
- 22 Pilet, 1m58.468s Makowiecki, 1m59.509s 1m58.988s
- 23 Adam, 1m58.957s Turner, 1m59.266s 1m59.111s
- 24 Lietz, 1m58.977s Christensen, 2m00.637s 1m59.807s
- 25 Lamy, 1m59.428s Lana, 2m01.616s 2m00.522s
- 26 Ruberti, 2m00.219s Roda, 2m01.670s 2m00.944s
- 27 Bertolini, 2m00.575s Basov, 2m01.402s 2m00.988s
- 28 Collard, 2m01.242s Perrodo, 2m02.350s 2m01.796s
- 29 Long, 2m00.776s Ried, 2m03.920s 2m02.348s
- 30 Hall, 2m00.346s Goethe, 2m06.688s 2m03.517s
- 31 Rigon, 1m58.020s Calado, 2m11.128s 2m04.574s
- 32 Bachler, 4m02.366s Bachler, 4m02.366s

CHAMPIONSHIP

LMP drivers

1 Bernhard/Webber/Hartley, 166; 2 Fassler/Lotterer/Treluyer, 161; 3 Lieb/Jani/Dumas, 138.5; 4 di Grassi/Jarvis/Duval, 99; 5 Buemi/Davidson, 79; 6 Sarrazin/Wurz/Conway, 79.

LMP manufacturers 1 Porsche, 344; 2 Audi, 264; 3 Toyota, 164; 4 Nissan, 0.

LMP2 drivers 1 Canal/Rusinov/Bird, 178; 2 Howson/Bradley, 155; 3 Yacamán/Derani/Gonzalez, 134; 4 Panciatici/Chatin, 86.

GTE drivers 1 Lietz, 145; 2 Bruni/Vilander, 131.5; 3 Christensen, 127; 4 Rigon/Calado, 123; 5 Makowiecki, 118; 6 Pilet, 100.

GTE manufacturers 1 Ferrari, 290; 2 Porsche, 286; 3 Aston Martin, 192.

GTE Am drivers 1 Basov/Bertolini/Shaitar, 165; 2 Collard/Perrodo, 148; 3 Lauda/Lana/Lamy, 144; 4 Rui Aguas, 136.



Porsche trio on top of the world

EBREY/LAT



Ghiotto reclaimed points lead with sprint race win

GP3 BAHRAIN, NOVEMBER 20-21 RD 8/9

Ghiotto and Ocon feel the strain

50

IT'S NOT OFTEN YOU SEE TWO DRIVERS being as open as Luca Ghiotto and Esteban Ocon about the stresses of a title fight. Both desperately want the GP3 title, and the body language of both drivers suggests the pressure of this weekend's title decider in Abu Dhabi could be unbearable.

Ocon started the penultimate weekend in Bahrain in the best possible way, taking four bonus points for pole position and reclaiming the championship lead.

But he was so preoccupied with pushing Ghiotto to the outside at the start of race one that he allowed ART team-mate Marvin Kirchhofer to pass both of them.

From there Kirchhofer was rarely under pressure from behind on his way to a fourth win of the season.

Behind him, it seemed Ocon was on course for his 10th consecutive second place. But Emil Bernstorff had other ideas. After demoting Ghiotto to fourth at Turn 1 with three laps to go, the Arden driver set about catching and passing Ocon, which he did into the downhill left-hander of Turn 10 late on.

"It's better to lose a position than to lose all of the points," said Ocon. "You have to think about points all the time. It's not a great way to race, but it's how we have to manage it."

Thinking about points didn't help

Ocon in race two. From fifth on the grid Ghiotto secured his fifth win of the season, to once again reclaim the championship lead.

Ghiotto was quick off the line and up into second at Turn 1. He didn't hang around for long behind polesitter Alfonso Celis Jr, either. He relieved the new Force India F1 development driver at Turn 1 on lap two and stretched his legs out front.

That was until contact between Sandy Stuvik and Matheo Tuscher brought out the safety car and then the red flag. Status Grand Prix driver Stuvik went straight into the back of Tuscher at speed on the entry to Turn 14 and speared into the barrier.

When the racing resumed, Ghiotto showed no signs of backing off and continued to extend his lead over Celis. Behind, Ocon brushed aside Kirchhofer at Turn 1 and repeated the move on Celis on the following lap. Ocon tried his best to catch Ghiotto but the Italian was in control. Ghiotto crossed the line 2.3s clear of Ocon, who took his 10th second place finish of the season.

The drive of the weekend came from Matt Parry. The Koiranen GP driver started race two down in 11th but charged to third.

● Aaron Rook

FULL RESULTS PAGE 48

MRF CHALLENGE BAHRAIN, NOVEMBER 19-20 RD 2/4

Picariello makes his mark

FORMER ADAC FORMEL MASTERS champion Alessio Picariello made a big impact on his debut in the MRF Challenge, taking pole position and winning both races in Bahrain.

The 22-year-old led race one from start to finish, ahead of a fierce battle for second. Initially, Tatiana Calderon held the position after a fast start before Nikita Troitckiy passed her on the third lap. But Troitckiy couldn't catch Picariello.

Picariello started sixth on the reversed grid in race two. But, astonishingly, he was into the lead after just five corners of the first lap. A rapid start meant he was up to second by Turn 3 before passing Matheus Leist for the lead two corners later. He never looked back.

Pietro Fittipaldi came through to second, with Troitckiy taking the final podium position despite gearbox problems allowing Harrison Newey to put him under pressure in the closing stages.



Picariello took a double on debut

RESULTS RACE 1 1 Alessio Picariello, 10 laps in 20m38.123s; 2 Nikita Troitckiy, +3.707s; 3 Tatiana Calderon; 4 Pietro Fittipaldi; 5 Matheus Leist; 6 Sean Walkinshaw.
RACE 2 1 Picariello, 10 laps in 20m32.866ss;

2 Fittipaldi, +5.081s; 3 Troitckiy; 4 Harrison Newey; 5 Leist; 6 Calderon.
POINTS 1 Fittipaldi, 98; 2 Troitckiy, 86; 3 Calderon, 84; 4 Nobuharu Matsushita, 80; 5 Picariello, 56; 6 Jake Dennis, 53.

V8 SUPERCARS PHILLIP ISLAND (AUS), NOV 21-22 RD 13/14

Lowndes sets up title showdown

MARK WINTERBOTTOM AND CRAIG Lowndes will fight out the 2015 V8 Supercar Championship in Sydney next week following three Holden-dominated races at Phillip Island

With two wins and a third, Lowndes closed the points gap to Winterbottom to 179, with 300 on offer for a clean sweep in Sydney.

While Lowndes was adding to his stellar record at Phillip Island, Winterbottom was conservative, a stance encouraged after an engine problem in qualifying. His Prodrive crew changed motors in his Ford in an amazing 38 minutes, allowing



Whincup celebrates victory in race two



Lowndes leads a Triple Eight one-two

him to finishing seventh, fourth and fourth in the three races.

That latter result was going to be fair until Lowndes's team-mate Jamie Whincup sliced past on the final lap of Sunday's race. It appeared that there could have been stewards' action, until Winterbottom shrugged off the robust manoeuvre as "a good move."

"It really is a championship for Frosty to lose," said Lowndes. "With a 179-point lead, as long as he drives smart and keeps out of trouble, they should have enough of a points gap to walk away with that number one."

The man to take the fight to the Holdens was Scott McLaughlin, whose Volvo S60 was swift enough to be on the podium in all three races. Also prominent were the Nissans, with James Moffat and Todd and Rick Kelly looking solid on the Island's fast, sweeping turns.

The major talking point of the weekend was the David Reynolds-Shane Van Gisbergen clash, which led to Reynolds spinning out of the race and title contention. Van Gisbergen was docked 25 points for causing the incident.

● Phil Branagan

RESULTS

RACE 1 Craig Lowndes (Holden Commodore), 14 laps in 21m50.8798s; 2 Jamie Whincup (Holden), +1.0388s; 3 Scott McLaughlin (Volvo S60); 4 Shane van Gisbergen (Holden); 5 James Moffat (Nissan Altima); 6 James Courtney (Holden).

RACE 2 Whincup, 14 laps in 21m48.2038s; 2 McLaughlin, +1.2981s; 3 Lowndes; 4 Mark Winterbottom (Ford Falcon); 5 David Reynolds (Ford); 6 Scott Pye (Ford). **RACE 3** 1 Lowndes, 45 laps in 1h12m25.3711s; 2 McLaughlin, +1.9700s; 3 Whincup; 4 Winterbottom; 5 Todd Kelly (Nissan); 6 Rick Kelly (Nissan).

POINTS 1 Winterbottom, 3007; 2 Lowndes, 2828; 3 Reynolds, 2688; 4 Garth Tander, 2459; 5 van Gisbergen, 2442; 6 Fabian Coulthard, 2394.

LAMBORGHINI WORLD FINALS SEBRING (US), NOVEMBER 22

Kujala adds World Final title



Kujala leads Niederhauser on the way to victory

PATRICK KUJALA CAPPED A HUGELY successful Lamborghini Super Trofeo season by winning the season-ending World Final event.

Kujala had already wrapped up the European title prior to the final rounds of that series at Sebring in the build-up to the main event. But after taking one win in the European double-header (the other went to Harald Schlegelmilch and Mikhail Stepanov), a win and a second place in the World Finals proved enough to win that overall as well.

The Bonaldi Motorsport driver won the first race after initially

battling with GP3 race-winner Patric Niederhauser. The Swiss was hit with a stop-go penalty for speeding in the pitlane. While he recovered to fifth, he was disqualified for his car being underweight.

With Niederhauser pointless, Kujala knew he didn't need to win the second race. Niederhauser started from pole, and Kujala was content to run behind him and take the runner-up spot. This gave him overall victory ahead of Loris Spinelli and Daniel Zampieri, who took second in the opening race but didn't have the pace to bother Kujala

in the second. Former Formula 3 racers Richard Antinucci and Edoardo Piscopo took third overall.

RESULTS

RACE 1 1 Patrick Kujala, 24 laps in 50m42.815s; 2 Loris Spinelli/Daniel Zampieri, +8.092s; 3 Richard Antinucci/Edoardo Piscopo; 4 Alberto di Folco; 5 Florian Spengler; 6 Afiq Yazid. **RACE 2** 1 Patric Niederhauser, 24 laps in 50m38.888s; 2 Kujala, +8.480s; 3 Spinelli/Zampieri; 4 Antinucci/Piscopo; 5 Shinya Michimi/Kei Francesco Cozzolini; 6 Enrique Bernoldi. **POINTS** 1 Kujala, 27; 2 Spinelli/Zampieri, 22; 3 Antinucci/Piscopo, 20.

AUSTRALIAN F4

Jordan Lloyd took the title with a round to spare. Lloyd's Team BRM entry swept all three races at Phillip Island, with William Brown, Tom Randle, Jimmy Vernon and Luis Leeds taking podiums.

DUBAI INTERNATIONAL

Khalid Al-Qassimi took his third consecutive Dubai International Rally win. The Citroen DS 3 RRC driver beat Abdulaziz Al-Kuwari by 57 seconds.

NASCAR TRUCKS

Erik Jones, 19, became the youngest NASCAR Truck Series champion with sixth at Homestead. Jones finished 19 seconds behind winner Matt Crafton, but Tyler Riddick's third place meant he ended up 15 points off the lead.

NASCAR XFINITY

Roush Fenway Racing's Chris Buescher (below) clinched the second-tier NASCAR crown with 11th place at Homestead. Ty Dillon took second overall with eighth place, while Chase Elliot finished just behind race-winner Kyle Larson to take third place in the standings.



SAVE UP TO 38%

ON FANTASTIC GIFTS THIS CHRISTMAS!



GET 12 ISSUES
FOR **JUST £34.99!**

REASONS TO SUBSCRIBE

- ✓ Exclusive Christmas prices
- ✓ Free gift card for you to send to your friend or relative
- ✓ Give the gift that lasts all year
- ✓ Spread the cost of Christmas when you pay by Direct Debit*

Visit themagazineshop.com/xpa15
or call **0845 124 7040** and quote **XPA15**

Calls cost 7 pence per minute plus your phone company's access charge



FOR MORE GREAT GIFT IDEAS...



WHAT CAR?
13 ISSUES FOR £44.99



FOURFOURTWO
12 ISSUES FOR £39.99



STUFF
12 ISSUES FOR £39.99



F1 RACING
12 ISSUES FOR £39.99



CLASSIC & SPORTS CAR
12 ISSUES FOR £39.99



WHAT HI-FI?
13 ISSUES FOR £44.99



MOTORSPORT NEWS
12 ISSUES FOR £28.95



PRACTICAL CARAVAN
13 ISSUES FOR £39.99



AUTOCAR
12 ISSUES FOR £29.99



PRACTICAL MOTORHOME
13 ISSUES FOR £39.99

UPGRADE TO INCLUDE DIGITAL

Add digital access to this gift subscription from 38p per issue

ORDER FORM

(FOR PRINT ONLY SUBSCRIPTIONS)

If you choose for your subscription to start after Christmas, fill in the form below and return it to us by 10th December 2015 to ensure a prompt start.

Haymarket Magazines - Christmas,
FREEPOST RSBU-TALE-BXJT, PO Box 326, Sittingbourne,
ME9 8FA or visit us at
www.themagazineshop.com/xpa15 or call the Order Hotline
on 0845 124 7040 (quote XPA15)
Calls cost 7 pence per minute plus your phone company's access charge.

How to order:

- 1 Please complete the order form in BLOCK CAPITALS.
- 2 Complete the section headed 'Your Details'
- 3 Enter the name, postcode and telephone number of the person who will receive a magazine subscription as a gift.
- 4 Enter the names of the magazines in the space provided.
- 5 This form can be photocopied for further orders.

YOUR DETAILS (BLOCK CAPITALS PLEASE - MUST BE COMPLETED)

This subscription is: A GIFT OR FOR ME
Start my subscription: IMMEDIATELY OR AFTER CHRISTMAS
Magazine title/s* _____ (*if subscribing for yourself)
Title _____ Name _____ Surname _____
Address _____
Postcode _____

Telephone _____
Email _____
Mobile _____
I wish to pay for a total of _____ subscriptions.
ORDER TOTAL (please complete) £ _____

GIFT SUBSCRIPTION DETAILS (BLOCK CAPITALS PLEASE)

Start my subscription: IMMEDIATELY OR AFTER CHRISTMAS
Magazine title/s _____ No. of issues _____
Title _____ Name _____ Surname _____
Address _____
Postcode _____
Telephone _____

PAYMENT DETAILS

I enclose a cheque made payable to Haymarket Media Group for £ _____
Please debit my: **Mastercard/VISA/Amex/Maestro** for the amount £ _____
Card No.
Valid from Expiry date Issue no. (Maestro only)
Signature _____ Date _____

TERMS & CONDITIONS: This is a UK only offer. *Call 0845 124 7040 or visit www.themagazineshop.com/xpa15 for details on how to save more when you choose to pay by Direct Debit - calls cost 7 pence per minute plus your phone company's standard access charge. If you require any assistance following the purchase of your subscription, then you can speak to a member of our customer service team on 01795 592 986 - calls are charged at local rate. For overseas offers please visit www.themagazineshop.com or call +44 (0) 1795 418 660. For all gift orders received by 10th December 2015, we will post a special gift card for you to send on to the recipient letting them know about their gift subscription. Subscription orders received after 10th December will still receive a gift card but we cannot guarantee that it will arrive before Christmas. A bundle subscription is set-up for an individual user only and components are not transferable. Details on how to access digital editions will be sent via email. Final closing date for orders is 31st January 2016. Saving is based on UK cover prices and is correct as of 1st September 2015. Should you wish to cancel your subscription it will be cancelled on expiry of the current term which will not be refundable, other than in exceptional circumstances. **Haymarket Media Group Ltd** uses a best-practice layered Privacy Policy to provide you with details about how we would like to use your personal information. To read the full privacy policy please visit our website www.haymarket.com/privacy or call us on 01795 592 986. Please ask if you have any questions as submitting your personal information indicates your consent, for the time being, that we and our partners may contact you about products and services that will be of interest to you via post, phone, e-mail and SMS. You can opt-out at ANY time by emailing the datacontroller@haymarket.com or by calling 01795 592 986.

Promo code: XPA15

STARS ALIGN AT OLYMPIC

The Race Of Champions returned to London after a seven-year absence.

EDD STRAW was there to watch as Sebastian Vettel stole the show



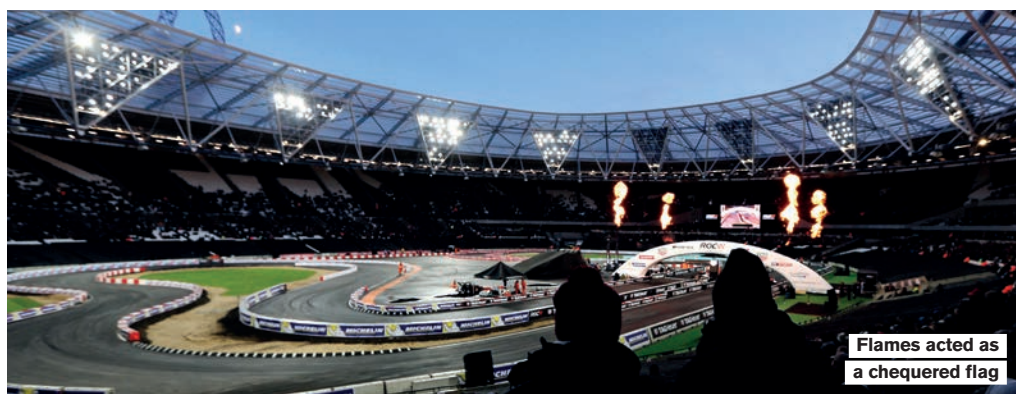
54

Here's something you didn't know about Sebastian Vettel: he used to aspire to be Jason Plato. It's the kind of unexpected fact that emerges when you throw together a bunch of star drivers from four and two wheels, from Formula 1, sportscars, tin-tops and rallycross, for the Race Of Champions. This particular revelation came on Friday night at London's Olympic Stadium, just after Plato and Andy Priaulx (Team England 1) had defeated Germans Vettel and Nico Hulkenberg in the two-driver Nations Cup.

"The first time I did this event was at Wembley in 2008," said Plato. "Seb came over to me and said, 'Hey, I used to play as you on the PlayStation when I was a kid...'"

"It's true... it's true – in the Renault," responded Vettel. And he's still here! I used to win because he was the best."

That light-hearted moment sums up what the Race Of Champions is all about. At a time when racing, even at the lower professional levels, is rightly taken incredibly seriously, it's difficult for drivers to have time to kick back and enjoy themselves. At the Race Of Champions, they race to win once on track but the chance for



them to get together as equals – whether you're a four-times world champion, a BTCC legend or as a star of the future – and have a good time.

"The nice thing about the event is that it's an opportunity to hang out with other drivers," said Vettel. "A lot of them have become friends over the years. We share one common passion: racing. We get to have some fun on the track, but we also get to have some fun outside the track talking about racing, the cars, our experience. It's a great exchange because we are from different categories and it's nice to get to know the person underneath the helmet."

That respect from Vettel towards his rivals was genuine for a driver whose enthusiasm for racing elevates him from the status of mere success story to superstar. But when the visor came down, the German took it as seriously as ever. Whether it was pipping Red Bull team-mate Daniel Ricciardo to victory in their Nations Cup quarter-final on Friday, or defeating nine-time Le Mans 24 Hours winner Tom Kristensen to win the Race Of Champions itself, Vettel took things very seriously.

He showed his class, inflicting defeats on Ricciardo, Kristensen, World Rallycross champion Petter Solberg and Hulkenberg during the two

STADIUM



Vettel celebrates his
2-0 win over Kristensen



“I REALLY, REALLY BELIEVED I COULD BEAT VETTEL... AND IT DIDN'T WORK!”
PETTER SOLBERG

nights, losing only two individual races during the various best-of-three rounds he contested – one to David Coulthard in Saturday's semi-final, and the other to Priaulx in the Nations Cup final.

That shows his versatility, for a range of machinery was in use for the various head-to-head races, held around a circuit that did not include a crossover but instead worked on a 'pursuit' basis, with drivers starting roughly half-a-lap apart. The Radical, the nimble ROC Car, the KTM X-Bow, the Ariel Atom and the Mercedes-AMG GTS all provided some dramatic racing, but the Euro NASCAR was the favourite.

The big, heavy machine was not the easiest to drive and required plenty of working of the rear end.

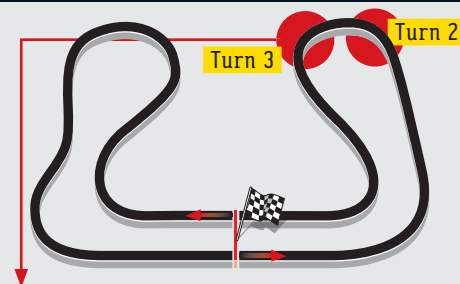
Of course, Solberg was the most entertaining in that car, hurling it around with aplomb during his race against former IndyCar champion Ryan Hunter-Reay in the Nations Cup. Inevitably, Solberg went a little too far, losing the rear and spinning. It seemed things might get a little more dramatic when Hunter-Reay bore down on him shortly afterwards, but prompt flagging from the marshals ensured he backed off!

Inevitably, while Solberg didn't enjoy much success in the head-to-head racing, he found ▶

TRACKSIDE VIEW

SCOTT MITCHELL
FEATURES EDITOR

scott.mitchell@haymarket.com
@ScottMitchell89



Sitting on the outside of Turn 2 offered a great vantage point of what consistently proved to be the most challenging, and rewarding, part of the circuit to get right.

After the sweeping 90-degree left of Turn 1, the nature of the temporary track meant treating Turns 2 and 3 as one corner was extremely important in the pursuit of a lap time. While Turn 2 is another 90-degree left-hander, it almost immediately tightens as Turn 3 effectively brings the circuit back on itself.

As the event wore on, it became clear the quickest line through 3 was to hug the inside as close to the barrier as possible. Getting the variety of machinery rotated for Turn 3 proved difficult for several drivers. Entry speed was quite high and some were keeping constant lock on from the start of Turn 2 until the exit of Turn 3.

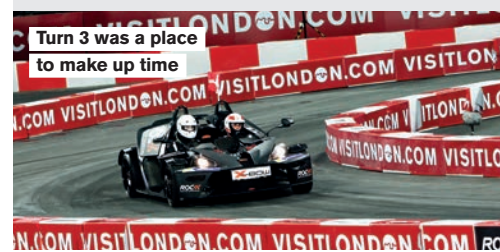
This made getting the nose of the car into the apex of 3 very tricky, and in turn meant keeping the rear under control was difficult as well. While Petter Solberg was

able to make this work in the EuroNascar, it bit Jose Maria Lopez hard in the KTM X-Bow on Friday night. The Argentine had two

bites at the steering trying to make the apex at 3 and failed, running off-line and losing the rear of the car. He caught the slide but was on the dirty part of the track and, as he accelerated, the slide returned and he nosed the barriers moving back across to ready himself for Turn 4.

Conversely, getting Turn 3 right had huge benefits. On one run Sebastian Vettel lost the rear briefly mid-corner and next time round slowed the car visibly more in order to get it rotated earlier and square the corner off. Plenty failed to master it, but not Andy Priaulx. The Guernseyman was comfortably the smoothest driver through this section of the track en route to leading Team England to its first Nations' Cup success.

“The quickest line through 3 was to hug the inside close”



Race Only.

CREDENTIALS REQUIRED

PRI2015
Indianapolis
December 10-12, 2015



The Performance Racing Industry Trade Show showcases the latest in racing technology, ideas and new business opportunities. Connect with the world's top racing professionals and more than 1,100 exhibiting companies in Indianapolis this December.

Register Online at
www.pri2015.com





Plato and Priaulx won Nations Cup



THE SHOWS



Terry Grant took a two-wheel record



Long jumper Greg Rutherford in ROC Skills Challenge action



Wehrlein demoed a 2013 Mercedes F1 car



Motorbike displays were a crowd favourite

► a way to make an impact. He won the ROC Skills Challenge competition, effectively an auto test run in the middle of the track, driving the Ariel Atom. That earned him a place in the press conference alongside Vettel and losing finalist Kristensen, where he promptly stole the show.

"I'm not actually a circuit driver, but I really, really believed this morning that I could beat Vettel... and it didn't work!" said Solberg. "I was thinking about lines and everything, I tried to really do it properly. When I saw the draw Wednesday, I was asking why was Vettel in the first heat. But it was good fun!

"Back to the skills challenge, it's more like rallying or rallycross. I had good fun with the handbrake and playing around a bit. I feel that this is almost bigger than the Race Of Champions... just joking!"

Kristensen chipped in: "Don't you just love a Norwegian speaking English."

"I can tell you one thing, when I came to the Ford factory team in 1999, I couldn't speak English. I just used my arms and legs..."

"You still don't!" shot back TK.

"I think it's cool," said Vettel. "Keep talking. You were saying something about the skills challenge."

That's the kind of interplay that you have no chance to see during the weekly grind of professional racing. But it's clear to see the respect between all of the drivers.

It's unfortunate that the Race Of Champions final itself was something of an anti-climax. Vettel shaded Kristensen in the first race, which pitted the pair against each other in Radicals. Ahead in the second, Kristensen's ROC Car dumped oil on the track, forcing a delay while they switched to KTM X-Bows. Fortunately, Terry Grant was on hand, charging into the crowd while his Legend was doughnutting to borrow someone's smartphone to film a very special, and lengthy, video as he dashed back to the car for more tyre-chewing antics – filming himself all the time.

"It was a very good race in the Radical, brilliantly won by Seb," said Kristensen. "In the second one, we both had a misfire on the ROC Car when we went onto the track – under the high load they were misfiring. Then we got into the

Hunter-Reay closes on Solberg's spinning Euro NASCAR



KTM and it took a long time because there was oil on the track.

"It seems that DC went a bit fast into the lounge to have a drink after his semi-final, so maybe they didn't know he had hit the wall. It was certainly very difficult turning right, and I made sure that it didn't turn right very well! I complained about the misfire, but I didn't want to complain again. But Seb is a deserving champion and a great driver."

With Kristensen piling into the barrier early in the second race, Vettel had a clear run to a victory that he certainly enjoyed. But there had been plenty of great moments on the way to the final.

Home fans had plenty to cheer about, with Coulthard and Blancpain Endurance champion Alex Buncombe making the semi-finals. Then there was the great story of 'ROC Factor' winner Bradley Philpot, a rapid 29-year-old karter and endurance car racer who earned his place in the Race Of Champions before being knocked out in the quarter finals by Buncombe.

There was also Susie Wolff's last competitive outing, losing to Coulthard at the same stage before waving goodbye, and the chance to see other superstars like Felipe Massa and Romain Grosjean in action – as well as Pascal Wehrlein demonstrating a screaming 2013 Mercedes F1 car.

It all made it well worth the crowd braving the biting cold to enjoy. While not exactly making the same impact as the Olympic Games, it was still a great use of the famous stadium. ❧

DRIVES AVAILABLE



BE PART OF THE 2016 ELMS CHAMPIONSHIP



Two funded drivers required for our 2016 Spec Ginetta LMP3.



Silverstone
Apr 15-16

Imola
May 13-15

Red Bull Ring
July 15-17

Paul Ricard
Aug 26 - 28

Spa Francorchamps
Sept 23 - 25

Estoril
Oct 21 - 23

Call: Graham Johnson 07970 685498

www.LananRacing.com

[facebook.com/LananRacing](https://www.facebook.com/LananRacing) twitter.com/lananracing

DRIVES AVAILABLE

BROOKSPEED: DRIVES AVAILABLE FOR - Abu Dhabi 12 Hours 2015 - Carrera Cup 2016 Season



DRIVES AVAILABLE
mb@brookspeer.com
02380 641 150
[@brookspeer](https://twitter.com/brookspeer)



If you would like to advertise in our next Drives Available Feature
please contact Jonathan King
Jonathan.king@haymarket.com
020 8267 5992

DRIVES AVAILABLE



CARBON8 Coupe Cup
Looking To Race in 2016...
3 Ways To Play
www.coupecup.com

- 1 Build your own race car using the series control parts and be on track for around £2500.
- 2 Buy a turn key, good to go, new build race car bespoke to you from £4295. Full support, transport and storage available too!
- 3 Arrive & Drive race hire with us for a single event or a whole season. Tailored packages available.

Where Racing Is Serious Fun...!

EXIT 13 01908 415979 07714 291417
www.exit13.biz sales@exit13.biz



2016 F3 Cup Drives Available

- ★ Dallara F305-7 F3 cars for rent
Fully maintained, cars ready to race or test
Full or partial season with testing to suit your budget
- ★ Full preparation and maintenance package for *your* car including the new for 2015 Dallara F308 - F311 cars
- ★ Exciting new 3 race format in the fastest UK single seater championship

Omicron Motorsport

2014 & 2012 F3 Cup Teams Champions
Contact Tristan Cliffe on: 01508 570351
racing@omicronmotorsport.co.uk
www.omicronmotorsport.co.uk



2014 and 2015 Britcar Sports and Touring Champions

- Drives available for 2016 in our NEW V8 Powered BMW E82 1m.
 - Drives available in our 2014 and 2015 winning BMW E46 M3.
- Both cars available to run in Britcar Endurance, Britcar Production, GT Cup, ERS Race series, Supercar challenge.
 - Full or partial season availability plus tailor-made packages.
 - Cars available for corporate events and driver tuition.

Contact Mike Moss on 07748 115595

mike@mossmotorsportuk.co.uk www.mossmotorsportuk.co.uk

WEB DIRECTORY

ENGINES

Precision machining and engineering
Leading brand replacement & performance engine parts
www.gosnays.co.uk

Tel: 01708 748320



EXHAUSTS

Inconel & Stainless Steel Specialists
SIMPSON
Race Exhausts
Tel: 01753 532222
www.simpsonraceexhausts.com



GEARBOXES

Gearboxman.com
COMPETITION TRANSMISSION SERVICES
Gearboxes & Axles for Road, Race, Rally and more
Telephone: 01582 840008 Fax: 01582 840007

HELMET GRAPHICS

visit: www.liquidcolourdesign.com
Studio: +44 028 93378525
Mob: +44 0770 9442894
LCD
liquidcolourdesign
Helmet Paint | Design | Airbrush | Custom Paint

Mike Fairholme Designs

Sole approved painter of Arai helmets.
Silver Birches, Corby Birkholme, Nr Grantham, Lincs NG33 4LE.
Tel: 01476 550630. Fax: 01476 550029.
email: fairholmedesigns@btconnect.com
www.fairholmedesigns.co.uk

MEMORABILIA

www.
Speed King.cc
EXCLUSIVE MOTORSPORT MEMORABILIA
EST. 1996
We Buy Your Teamgear!

MEMORABILIA

FINAL LAP
For Everything Formula One
www.finallap.net **WE BUY AND SELL**
+44 (0) 1245 287588 / 07771 920345

MOTOR RACING LEGAL ADVICE

Motor Sport Legal Advice
Tudor Alexander, LI.B Solicitor
tudor@fletcherday.co.uk
07887 713512

MOTORHOMES

Signature
Motorhomes Ltd
Signature motorhomes Ltd
RV SALES & SERVICE 01902 725394
www.signaturerv.co.uk
www.signaturemotorhomes.com

RACE PARTS

ARE DRY SUMP SYSTEMS
ARMSTRONG RACE ENGINEERING INC.
WWW.DRYSUMP.COM (916) 652-5282

RACE PRODUCTS

PORSCHE SHOP
10% off with website
voucher code AUTOTEN
Or Call: **0121 585 6088**

CARTEK
MOTORSPORT ELECTRONICS
Info@cartekmotorsport.com
023 80 457747
www.CARTEKMOTORSPORT.COM

RACE PRODUCTS

JJC) race and rally
PASSIONATE ABOUT MOTORSPORT
www.jjcraceandrally.com

RACE RADIO

Pit to Car Autotel
Radio solutions **Digital Race Radio**
0044(0)1508 528837
www.raceradio.co.uk

RACEWEAR

AUTHORISED DISTRIBUTOR
OMP **YBRACING**
MOTORSPORT & PERFORMANCE
WWW.YBRACING.COM

RACEWEAR

demon tweeks
MOTORSPORT
www.demon-tweeks.co.uk

RACING

MANUFACTURERS OF SPORTS PROTOTYPE RACING CARS
NEW & SECOND HAND MCR'S FOR SALE
ARRIVE & DRIVE PACKAGES
MCR RACE CARS

TRAILERS

itchy feet
european & american motorhomes
0345 504 5550

TRAILERS

BRIAN JAMES TRAILERS
» Connected to you
www.brianjames.co.uk

PRG TRAILERS
www.prgtrailers.co.uk
Phone no: +44 (0) 1270 812402

WORKSHOP EQUIPMENT

Image® Manufacturers of bespoke split rim alloy wheels
www.imagewheels.co.uk
IMAGE WHEELS INTERNATIONAL LTD.



TO ADVERTISE IN THE WEB DIRECTORY
PLEASE CALL 020 8267 5271
OR EMAIL: autosport.ads@haymarket.com

BRIAN JAMES TRAILERS

»» Connected to you



www.brianjames.co.uk

Enduring passion for excellence

Almost four decades since Brian James first imagined a better way to make car transporter trailers the passion for excellence runs strong.

A Brian James Trailer has always stood out from the crowd, illustrating in metal, plastic and rubber our passion for producing the finest quality, always exceeding customer expectation.

The latest Race Transporter models are testimony to the innovation and designs our dedicated engineers continue to develop.

Photographed (above), Race Transporter 5

Race Transporter range start from £ 6,750 (excl. VAT).

To find your nearest dealer visit:
www.brianjames.co.uk/dealer



T +44 (0)1327 308 833

For more information and details on the Brian James Trailers range, please contact our head office.

RACE TRANSPORTER



www.woodfordtrailers.com

HIGH QUALITY TRAILERS FOR CLUB, PRIVATE AND PRO MOTORSPORTS



Email: sales@woodfordtrailers.com

01327 263 384

SCAN TO VISIT OUR SITE



WWW.HOPKINSMOTORSPORT.COM



Telephone
(44)1179
509 294



£122,500+vat



- Ref 404** : Ex Marussia F1 Support Transporter; HMS
 New build 2010 complete with 2 offices and workshop area.
 Hydrovane compressor, Ian Webb 120kva generator, 2 x 8m masts and all ancillaries to suit.
 Carrying capacity 1 formula Car.
 As used in the British Super bike championship during 2015



We have 2 identical transporters available from 10/11/15 as used in BTCC & Auto GP.
£99,500+vat each

- Ref 398 & 409** : 2015 Conversions
Top Deck : 3 car capacity max height 1440mm
Lower Deck : Empty Bulk storage area with multi point tracking and portable lista cabinets.
 One Touring Car carrying capacity if required.

WE HAVE OTHER TRANSPORTERS RETURNING 1/11/15 AVAILABLE FOR SALE OR SEASONAL RENTAL.

TRAILERS & TRANSPORTERS

TRAILERS & TRANSPORTERS

PRG TRAILERS

Finest Built British Trailers.



PRG Trailers | Cheshire | UK | Tel: +44 (0) 1270812402
Web: www.prgtrailers.co.uk | Email: info@prgtrailers.co.uk



GB MOTORSPORTS BUILT DOUBLE DECK TRAILER WITH LIVING ACCOMMODATION & HOSPITALITY

Turnkey race trailer with living accommodation and hospitality built by GB Motorsports in 2014, as new condition used only for 6 race meetings.

2 Tonne Dholandia Tail Lift, Bespoke Nose Cone, 12x6 metre Awning by Awning Company LTD, 90sq metres rol-a-trac flooring with custom loading trolley, 8.2 metre Car Deck with Runway Lighting, Unwin Track with Load Rings & Black Coin Rubber Flooring. Full Size Shower, Ceramic Toilet, Wood Flooring, Brushed Aluminium Walls, Chrome Strip Ceilings, LED Lighting, Full Kitchen including; Black Quartz Worktop, Full Size Fridge Freezer, Oven, Microwave & Hob. 4 Sleeping Pods with Memory Foam Mattresses & Individual Power & Lighting. Storage Cupboards & Wardrobes Throughout. 10KW Diesel Generator. Hospitality Items Including 3x 5ft Round Folding Tables / 3x 4ft Rectangular Folding Tables / Chairs / Lighting / Fridge / Urn / Bespoke Black Leather Look Vinyl Covers for all Tables / Flight Trunk. Office/ Meeting Room Including 40" TV with Apple TV, Bluetooth Sound Bar, Apple Airport Extreme Wireless Router, Heating & AC, Inverters & Leisure Batteries, Height 4 Metres.

£120,000gpb Private Sale no VAT

For full specification/ pictures email:
andwheeler@me.com or call +44 7770 442052



5 car race transporter trailer, 9 car awning, large storage areas and hospitality section, Dholandia 1500kg tail lift, unused for 18 months, needs slight TLC and test, everything in good working order **£4950**

John Young 07768 973343



Ex F1 Transporter, totally refurbished, carries TWO cars or loads of bikes/karts + Awning

- ◆ Totally self sufficient
- ◆ Full length GH Awning nearly new.
- ◆ On-board diesel generator
- ◆ Large leisure area with Air Con, full cooking, large TV, seats 8 people, etc.
- ◆ 2 bunks.
- ◆ Full size shower & toilet
- ◆ Masses of locker space.
- ◆ New MOT

Ready to go!

£89,950 or sensible offers.

Tractor unit also negotiable.

David 07860 912461



REVOLUTION

COMPETITION ▲ WHEELS



GR14 RALLY
15 X 6.0 TO 15 X 7.0



MILLENNIUM RALLY
15 X 7.0 TO 15 X 8.0 / 16 X 5.5 TO 16 X 8.0
17 X 7.5 TO 17 X 8.0 / 18 X 8.0 TO 18 X 9.0



MILLENNIUM II RALLY
FLOW-FORMED
18 X 8.0



4 SPOKE RACE
13 X 5.5 TO 13 X 10.0



4 SPOKE RALLY
13 X 5.5 TO 13 X 10.0



5 SPOKE RALLY
15 X 5.5 TO 15 X 9.0



RFX RALLY
13 X 5.5 TO 13 X 6.0 / 14 X 5.5 TO 14 X 6.0



8 SPOKE RALLY
13 X 6.0 TO 13 X 9.0 / 15 X 5.0 TO 15 X 10.0

For more information contact:

TEL +44 (0) 1623 860000 • **FAX** +44 (0) 1623 860165 • **MOB** +44 (0) 7702 845264

www.revolutionwheels.com • **info@rwil.org.uk**

MARKETPLACE

ENGINES



Performance Car and Engine Preparation

85 Station Road, Queensferry, Deeside, CH5 2TB
Tel: 01244 822327
Email: info@groupbmotorsport.com

www.groupbmotorsport.com

Competition Cars for Sale



Audi Quattro Rally Car 1985: Ideal for Group B demonstration events. Brembo brakes, LSD, green injectors, lumenition, forged pistons, alloy sump, big turbo, 3" stainless exhaust, Speedline alloys, seam welded shell, FIA cage, sport Quattro bonnet and high level rear spoiler, coil-over suspension, sport Quattro arms - **£39,990**



FIA Historic Ford Escort Mk2 Rally Car Shell: Beautifully prepared shell, FIA historic cage, arched, big tunnel for ZF gearbox. This car is a full Boreham specification shell and not used since being prepared from a low mileage road car and is in primer - **£15,500**



Brabham: 1972 F3 original Conny Anderson's winning car - fully restored - with history. OKM's engine, ready to race - **£38,000**



Ford Escort Mk2 Rally Car: Light weight Tarmac car. 2.3 all steel dry sumped JRE engine 300bhp, very fast, with 6 speed sequential gearbox, gear indicator light, coil-over suspension with anti-dive and rear anti roll bar, atlas axle with all link bars, big brakes, perspex windows, new Sparco seats and belts, 15" Wheels. Alloy Monte Carlo arch kit and fibreglass bonnet and boot lids. No expense spared in this build, this is an absolute outright winner. Call for extensive build specification sheet - **£49,450**

Competition Cars for Sale

Ford Escort MK2 Rally Replica/Track day show car: 2.0 Vauxhall engine, Quaife pro box, Atlas axle, beautifully prepared, last owner for 15 years, used only for static shows - **£29,500**

Ford Escort MK2 1600 Vauxhall engine rally car: In build, choice of colour, 6 speed Quaife sequential gearbox, Atlas axle, Sparco interior, a Class winner at - **£37,500**

Race and Road Cars For Sale



Subaru RB5: 0 miles since refurbishment by ourselves, an appreciating classic - **£7,250**



Mazda MX5: Production class race car, ready to race with spare wheels and tyres - **£10,000**

Engines



2.0 BDG brand new built, fully dressed immediate delivery **£22,500**

BDA 1600 special short stroke with 0 miles **£12,950**
Duratec 300bhp plus from **£23,000** for race or rally
Vauxhall 1600 alloy blocked 190bhp 0 miles since rebuild **£7,000**
Vauxhall 2.4 alloy block 300+ bhp 0 miles since rebuild **£16,000**
Vauxhall front and wheel drive engines from 1.4 for Nova/Corsa to 2.4 for Escorts
Our engines are built by Graham Hickman (ex RAT) and set up on our own dyno-cell and rolling road.

FLOORING

Kiwi Tiles

Interlocking Plastic Floor Tiles, as used by leading race teams throughout Europe.

- Easy installation & removal
 - Many colours
 - Lightweight
 - Strong and durable
 - Compact & easy to store
 - Top quality
 - Value for money
- Stock Colours:
Red, Blue, Green,
Yellow, Silver, Orange,
Grey, Black, White,
Dayglo Red

Ralt Engineering

Tel: 01865 883354 Fax: 01865 883789
Email: enquiries@kiwitiles.com
www.kiwitiles.com

MEMORABILIA

F1 COLLECTORS .COM



#1 FOR F1 MEMORABILIA & AUTOGRAPHS

We buy and sell F1 items
AYRTON SENNA specialists

Call CHRIS GRINT

01763 274448

email: - sales@f1collectors.com

NUMBER PLATES

MAKE SOMEONE'S
CHRISTMAS

6 DXW

On retention for
immediate transfer
£2995

Wyn Lear - 07469 777557
dloislear@yahoo.co.uk

TYRES

FOR ALL YOUR

AVON
TYRES

MOTORSPORT

RACING TYRES

Inc. ACB 10 Formula Ford
Contact

BMTR LTD

Tel: 0121 331 1122

Fax: 0121 331 1144

email: sales@bmtr.co.uk

see our new website at www.bmtr.co.uk

MOTORSPORT EQUIPMENT



MARDI GRAS
MOTORSPORT
Saloon Car Preparation

Unit 45, Silverstone Circuit
Towcester
Northampton NN12 8GZ

tel: 01327 858006 fax: 01327 858800
email: info@mardigras.co.uk
web: www.performanceclutch.co.uk

Distributors and agents for:

AVUL
RACING FUEL CELLS

VDO
Performance Instruments

HELIX
AUTOSPORT

FIRE SERVICES
Extinguisher Refills on Site

VARLEY RED TOP™
THE ORIGINAL RACING BATTERIES

FERODO RACING

Setrab
Pro Line

AP
RACING

lifeline
Fire & Safety Systems Ltd.

RACELOGIC

Eibach
SPRINGS

S P A
DESIGN

PFC
BRAKES

Castrol

K&N
THE WORLD'S BEST AIR FILTER

SCHRICK

MARKETPLACE

PARTS



USE PROTECTION ADD STYLE

RIMBLADES
Buy Online
www.rimblades.com
£29.99 a set. Available in 10 colours
A GREAT BRITISH INVENTION

PREMISES TO LET



TO LET – NORFOLK - Motorsport Workshops with offices. 302sqm - 780sqm (3,257sqft - 8,404sqft).
Features include: • Dry Air conditioning • Compressed Air system • Plastic floors • Partial airline • High quality office, reception and staff areas • Roller shutter doors • Rural location close to A11/ Snetterton Circuit. • Available immediately as a whole or as individual units.

Tel: 01379 851038

durrants.com



RACE PRODUCTS

demon tweeks PROFESSIONAL MOTORSPORT EQUIPMENT

• EXPERT ADVICE • MASSIVE STOCK • RAPID DELIVERY •

sparco MEDIA CODE: NZ252A

0844 375 2196
www.demon-tweeks.co.uk

LOW CALL RATE CALLS MAY BE RECORDED FOR TRAINING PURPOSES

RACE PRODUCTS

CARTEK MOTORSPORT ELECTRONICS

NEW

Power Control Panels
FiA Rain Lights
Shift Lights
Power Distribution Modules
Wireless Steering Wheel Controls
Coolant Level Alarms
Battery Isolators

Suppliers to:
Porsche
HWA AMG
Ford
KTM X-Bow
Mini Challenge (UK)
Kamaz
V8 Super Cars
Rage Motorsport



www.CARTEKMOTORSPORT.com
CARTEK AUTOMOTIVE ELECTRONICS Ltd
+44 (0)2380 457747 New number
info@cartekmotorsport.com

demon tweeks MOTORSPORT

The largest stocked FHR range available anywhere!

MSA MANDATE

FHR DEVICES will be a mandatory part of safety equipment for 2016*

ONLINE OFFER!
Please go online for details

BE SAFE Get your FHR Device today!
Call now for expert advice

*Please refer to latest MSA Mandate

hans **SCHROTH RACING** **SIMPSON Hybrid** **hans** engineered by **stand21**

www.demon-tweeks.co.uk **0844 375 2196**

LOW CALL RATE CALLS MAY BE RECORDED FOR TRAINING PURPOSES MEDIA CODE: NZ252A

CARS FOR SALE / MOTORSPORT JOBS

AUDI



For Sale
Audi R8 LMS ultra GT3

- 2013 British GT Championship runner up
- 10 podiums in 2015 GT Cup
- Top six finish at 2014 Bathurst 12 Hours
- Multiple race winner
- Available with set up and data information
- Available immediately
- £165,000 (no VAT)
- Substantial spares package (available by separate negotiation), including fresh engine and gearbox



Enquiries welcome.

For more information, please contact Richard Dean on
e: richard@unitedautosports.com
m: +44 (0)7850 350 296

United Autosports, Unit 1, Helios 47, Isabella Road, Garforth,
Leeds, West Yorkshire, LS25 2DY England

unitedautosports.com

AUTOSPORT

Want to advertise a motorsport job?

If you are recruiting in motorsport and wish to advertise with Autosport in print and online please contact

Jamie.Brooker@haymarket.com by email
or call 020 8267 5271.

For all current vacancies advertised please visit
our website www.autosport.com



2015 BTCC Championship winning team

Team BMR are currently looking for experienced, professional staff to join our enthusiastic, growing team at our new factory base in Hertfordshire.

Positions include:

- #1 Mechanics
- #2 Mechanics
- Sub Assembly Technicians
- Truckies/ Tyre Technicians

If you have the relevant skills and knowledge and you can work under pressure and to tight deadlines, are self motivated, enjoy working as part of a team and will share in our passion, commitment and ambition to win, we would love to hear from you.

Please email your CV to vicki@bmracing.co.uk.

Closing date December 10th.



In its plan to develop the Team for the 2016 season, Scuderia Toro Rosso has the following vacancy available:

Head of Aerodynamic Design - ref. "29-15"

We are seeking for a Head of Aero Design to support our Aerodynamic Development Programme at our Wind Tunnel facility based in Bicester, UK.

The Head of Aerodynamic Design, reporting directly to Deputy Head of Aerodynamics Department, will be responsible to ensure that the group output designs will be to the highest standard for model wind tunnel test components as well as for CFD and full size release surfaces. This role will also require you to work closely with Aerodynamicists, Model shop, Wind Tunnel group, full-size design and concept group and you will also be responsible for legality checks of release surfaces to full-size design.

We are looking for someone to drive Aerodynamics design improvements with a creative and proactive approach and continuous improvement and 100% commitment to achieving the performance targets.

You will require a minimum of 5 years' F1 industry experience, a good understanding of F1 Technical Regulations, a solid engineering, or equivalent, qualification, a recent experience of model design and full size surface release, a strong experience of 3D CAD (preferably Siemens NX 7.5 or above).

The successful candidate should have excellent leadership and communication skills and a proven ability to work under pressure, with a minimum of supervision, to the highest levels of accuracy and quality. In addition, the successful candidate must be able to work as part of a team and communicate well with other Designers, Aerodynamicists and Production Staff to constantly improve our design standards, methods and procedures.

The position is based in Bicester (UK).

To apply please upload your CV, including salary information, on the careers page of our website:

http://www.scuderiatororosso.com/en_IT/careers

Please ensure you quote the job reference in your application, specifying your current and expected salary and your notice period.

Closing date for Applications: **20th December 2015.**

PLEASE NOTE: No Agencies please.

WWW.TOROROSSO.COM

MOTORSPORT JOBS



HR280515 – ELECTRICAL SYSTEMS ENGINEER

Working with our Mechanical and Electronic Engineers you will be responsible for the design, installation and specification of our electrical systems. You will have a good understanding of the wiring, connectors and heatshrink systems used within a Formula 1 environment and ideally have experience in the use of Computer Aided Design Harness packages.

Applicants for this role should ideally have a recognised qualification in an Electronics discipline, combined with relevant experience of Motorsport Electrical and Electronic Systems.

HR22061501 – ELECTRICAL TECHNICIAN

We are currently seeking an Electrical Technician to maintain and develop our on-car wiring systems and garage based electrical equipment. You will be responsible for the production of high quality electrical and electronic components, looms and assemblies using your experience of Autosport or Aerospace connectors, MIL spec wiring, heat shrink moulded parts and PCB assemblies.

To be considered you must be able to demonstrate a high level of self-motivation, commitment and be able to work within a high-pressure environment. Good communication skills and the ability to work within tight timescales are prerequisite for the roles. The ability to work well as part of a team, in a pressurised environment, whilst ensuring that exceptional standards are maintained at all times are essential skills within Red Bull Technology.

HR181115 – PATTERN MAKER – 4X4 SHIFT

We are currently looking to recruit a Pattern Maker, within our Manufacturing Department.

You will be responsible for producing tooling block patterns by hand to drawing office instruction and creating block ups for machining. In this busy role you will also hand finish patterns post machining to make ready for painting and moulding. Trim assembly and bonding of composite parts as required.

The ideal candidate will be able to demonstrate commitment to meet aggressive production targets without ever compromising quality. You will also have excellent communication skills and have a proactive can-do attitude. Experience of working in a Formula One environment producing quality patterns and tooling, along with assembling and fitting parts for use in production of composite components is also essential for this role.

CLOSING DATE – 4TH DECEMBER 2015



Technical Director

IMSA seeks a qualified professional to join us in the position of **Technical Director** based in our Daytona Beach, Florida office.

Duties include but are not limited to:

- Lead the direction of IMSA's Technical Department including personnel, strategic planning, budgeting and logistics.
- Develop and present subject matter to IMSA Technical staff including data acquisition systems, analysis and vehicle simulation.
- Adopt current measurement, analysis techniques and protocols for wind tunnel and engine dyno testing. Maximize use and benefit from in-house technical capabilities (NASCAR Research and Development Center, Windshear and the NASCAR engine dyno facility in Concord NC).
- Direct management of IMSA Technical staff
- Manage technical relationships with major manufacturers, sanctioning bodies and stakeholders. Be the Technical lead and representative for IMSA and attend international meetings with the FIA / ACO as required.
- Event operations (at-track)
- Interact with competitors and manufacturers and represent IMSA on all technical matters with a priority on the IMSA WeatherTech SportsCar Championship and the IMSA Continental Tire SportsCar Challenge.
- Approximate travel 50% including weekends.

Required skills/experience:

- Bachelor's or Master's Degree in Mechanical Engineering preferred; and a minimum of ten (10) years auto racing technology, with emphasis in road racing and diverse technical and project management experience.
- Have a high understanding of CFD and aerodynamics.
- Experience in engine development and chassis design, vehicle dynamics and vehicle systems.
- Excellent knowledge of Bosch, Cosworth, Motec and Magneti Marelli data systems.
- Preferably (but not required) fluent in conversational French.

Apply Now:

Learn more about this role and our team by applying for consideration at www.nascar.com/careers



JOIN US ON OUR JOURNEY INTO THE FUTURE.

Our vision: To be the world's most progressive and desired premium car brand.

The future belongs to those who are empowered by a great idea and have the ability to carry it out. At Volvo Car Group, our vision is clear: "To be the world's most progressive and desired premium car brand". We have bold targets when it comes to innovation, sales and customer satisfaction and to make this happen, we need talented people onboard. People with passion, energy, business sense and the drive to innovate. People that want to create the next generation of Volvo cars in a global, dynamic and respectful environment. We will support you to reach your full potential. Join us on this exciting journey into the future.

VIPP

(VOLVO INDUSTRIAL PHD PROGRAM)

UNSTEADY AERODYNAMICS AND ITS INFLUENCE IN VEHICLE STABILITY

At **RESEARCH & DEVELOPMENT** you will be a key contributor to the next generation of outstanding luxury cars from Volvo. Together with other engineers around the world, you and your team will create innovative human-centric car technology that makes life less complicated and more enjoyable for people. Are you interested in design and connected car technology? Do you share our passion for people, the environment and our urge to create a superior driving experience? Research and Development is the place for you to prosper.

More information at WWW.VOLVOCARS.COM/CAREER

CLUB AUTOSPORT

NATIONAL RACING • HISTORICS • RALLYCROSS • HILLCLIMB • TRACK TESTS



Ticktum gets two-year race ban

Youngster out until at least late 2016 after sentence partially suspended

BRITISH TEENAGER DANIEL

Ticktum has been hit with a two-year racing ban by UK governing body the Motor Sports Association for what it deemed “a disturbing and dangerous episode”.

Ticktum overtook 10 competitors under safety car conditions to catch and crash into MSA Formula championship rival Ricky Collard in race three at the Silverstone round.

The 16-year-old may not hold a UK or international competition licence until the end of the ban, the second year of which is suspended for 12 months “on the condition there are no further offences”.

Championship stewards excluded Ticktum from the Silverstone meeting, taking the Fortec driver to 12 penalty points and an automatic three-month ban after also committing a six-point offence

at Croft earlier in the season.

The incident, after which both Ticktum and Collard eventually retired, has since been reviewed at a meeting of the Motor Sports Council National Court.

In his report, Court chairman Guy Spollon described how Ticktum, after a first-lap collision with Collard had dropped him to the back of the field, passed 13 yellow flags, four double-yellow flags, two white flags and 15 safety-car boards to catch back up to his rival during the safety-car period.

Spollon labelled Ticktum’s actions “totally irresponsible and reprehensible in the extreme”.

The ban is effective from September 27 2015, with the first 12 months beginning immediately and absorbing the three-month ban issued by the Silverstone stewards.

In the wake of the Silverstone

incident, Ticktum issued the following statement to AUTOSPORT: “Not only have I let myself down, but more importantly I have let down so many people that are close to me too.

“I want to apologise to my fellow drivers, all those people who have supported me in the motor racing community. I also want to apologise to all the marshals and MSA officials at Silverstone this weekend.

“I have been a fool and I intend to learn the important lessons I need to from this weekend.”

Ticktum must retake his ARDS test before returning to racing and has been ordered to pay £2000 towards the costs of the hearing.

It is understood he had been evaluating a move into Formula Renault 2.0 or Formula 3 in Europe for next season. The ban does not preclude him from testing.

SCOTT MITCHELL FEATURES EDITOR

scott.mitchell@
haymarket.com
@ScottMitchell189



So, what next for the Circuit of

Wales project? Having finally gained planning permission more than two years after the process started, it's understood ground could be broken in the first couple of months of 2016.

First, the judicial review period needs to be cleared. This usually takes around six weeks and it's expected to be over by Christmas. Some work can be done before then, like finishing design plans, completing archaeological investigations, beginning training programmes and potentially fencing off parts of the site where work will take place.

Will the circuit be built? That's a question that many people have asked, and with good reason. There have been plenty of times when the only updates on the project were largely negative. Official reviews that prompted delays and complaints from third parties hardly did the project's name any favours.

Funding is the key. The project is being funded by private backers and state investment, with £2m already coming from the Welsh Assembly. It's understood more is on the way as well, though whether that's from local or central Welsh authorities remains to be seen. Apparently, the £300m of private funding has already been secured, though – and names will soon be made public to prove it.



Circuit of Wales project clears crucial planning hurdle

Construction work on the Circuit of Wales can finally begin in 2016 after the £350m project cleared a vital planning hurdle last week.

The Welsh Assembly approved project organiser the Heads of the Valleys Development Company's

application to deregister 600 acres of common land last week, eight months after the public inquiry into the request took place.

A judicial review period has now started and should be cleared before Christmas, with building work targeted

for January or February next year.

Organisers are still confident the circuit can be built in time to host Britain's MotoGP round in 2017, having had to strike a deal for the event to return to Silverstone this year and next in order to keep its own multi-year contract

with championship organiser Dorna.

The HotVDC has also confirmed Martin Whitaker, who headed up the Bahrain International Circuit operations team as it became the first Middle-East Formula 1 venue in 2004, has become Circuit of Wales CEO.



Continental will return to British GT

British GT

Bentley back to British GT with Parker

BENTLEY WILL RETURN TO THE British GT grid next year as part of a factory deal with Team Parker Racing.

The Leicestershire team will run two factory-blessed Continental GT3s in British GT and two cars in the Blancpain Endurance Series.

Bentley has been absent from British GT since the end of 2014, when the factory M-Sport Racing

team left the championship to concentrate on racing in Europe.

The deal also gives the squad access to M-Sport engineers and factory drivers.

"This is a phenomenal opportunity for us and it's incredibly exciting to be teaming up with a manufacturer like Bentley," said team principal Stuart Parker. "The Continental GT3 is such a well sorted car. Just look at the pedigree

of it in the Blancpain classes and you can see how much development has gone into it. The car has so much potential and it is now down to us to unlock that in the UK, and I'm certain that we can.

"One of the most helpful things about the programme is that both British GT and Blancpain now run on Pirelli tyres, so we'll learn everything twice as fast."

Team Parker Racing has a long history

of success in GT racing, having won multiple Porsche Carrera Cup GB and Caterham titles. It won this year's AM Trophy in the Blancpain Endurance Series running an Audi R8 LMW ultra GT3 for Ian Loggie and Julian Westwood. The team also contested the British GT4 division with Bradley Ellis and Adrian Barwick running a Ginetta G55 this year.

72

Porsche Carrera Cup GB

Ginetta champion Oliphant completes Porsche switch

GINETTA GT4 SUPERCUP

champion Tom Oliphant will switch to the Porsche Carrera Cup GB next season with the title-winning Redline Racing squad.

The 25-year-old had also tested with GT Marques and will move to the category after two-and-a-half seasons racing Ginettas.

"Porsche was an obvious choice. Not only is it on the world-class BTCC package but it's also the toughest single-make sprint series in the UK," he said.

"After taking the time to evaluate our options and testing with a few teams, we decided to go with Redline Racing. I've been very impressed with their history in the sport, they have been a team fighting for the championship nearly every year.

"In 2016, I want to continue my winning ways; I know it's going to be a very tough challenge with so many great drivers announcing their Porsche plans but, with my experience on the BTCC package, I believe we can challenge for race wins from the start."



Porsche move keeps Oliphant on TOCA bill

Mini Challenge

Dunlop deal to give Challenge champ BTCC test from 2016

NEXT YEAR'S MINI CHALLENGE champion will receive a funded test in a British Touring Car Championship machine as part of a new deal with Dunlop tyres.

Mini Challenge organisers confirmed last week that both the new Gen 3 JCW and Cooper Class grids will switch away from Pirelli tyres from 2016 onwards as part of a multi-year deal with Dunlop.

Dunlop has developed a new-spec tyre to suit the more powerful



Mini winner will get a BTCC run

front-wheel-drive Mini, with the construction mimicking the current rubber used in the BTCC.

Next year's champion will be rewarded with a test in a BTCC car, a prize worth £15,000. The team and car model have yet to be determined.

Mini Challenge promoter Antony Williams said: "The move to Dunlop has a lot of potential. We want to strengthen the link between the Mini Challenge and the BTCC.

"The test is the icing on the cake."

DAVE YOUNG PHOTOGRAPHICS

In brief

Rowbottom's Clio gig

Former karting champion Daniel Rowbottom will enter the Renault UK Clio Cup next season with new outfit Team EcoMotive. The 26-year-old previously attempted to join the Clio grid in 2013, before a deal fell through.

Feakins set for GT Cup

Production BMW ace Gary Feakins will step up to the GT Cup next season alongside Caterham regular Brent Millage. Millage has bought the ex-Team Parker Racing Ginetta G55 that Adrian Barwick and Bradley Ellis campaigned in British GT over the last two years. Experienced team Spy Motorsport will run the car.

Roberts in BMW switch

Double BMW Compact Cup champion Steve Roberts has committed to the new 330 Challenge next season. Huntingdon racer Roberts has put his BMW 318ti up for sale and has started work on one of the new 330 Challenge cars, which will have their own standalone series with the BRSCC next season.

TCR signs Chapman

Ginetta Junior regular Matt Chapman is the first driver confirmed for Total Control Racing's bid to land a third successive Ginetta GT5 Challenge title. Sixteen-year-old Chapman, who finished 10th in the Junior points with TCR this year, is the first of three drivers to be confirmed for the squad.

Truck Racing

BTRA insists future is safe amid promotion rights row

THE FUTURE OF THE BRITISH Truck Racing Championship is not under threat according to its organising body, despite a tussle over promotional rights. The British Truck Racing Association, which organises and regulates the British Truck Racing Championship, faces a choice of promoter from next season onwards after a section of drivers established their own company.

Series regulars Steve Thomas, Stuart Oliver and Steve Powell have formed the new Truck Sport UK organisation, and are poised to bid to promote the championship from next season, pledging to help the sport grow and reduce costs. However, the proposal has caused unrest, with some senior members of the paddock questioning the motives behind the new organisation. Organisation of the championship has traditionally been handled by the BTRA committee, of which Thomas was chairman this year. The timing of his departure, along with Oliver and Powell, after the final round this season has sparked the unrest. Truck Sport UK has said that those issues had arisen as a result of communication problems. Remaining committee members will vote this weekend at the BTRA's AGM.



Dispute has upset stalwarts

JONES

Clio Cup

Ciceley opts for Clio Cup

BRITISH TOURING CAR Championship outfit Ciceley Motorsport will enter the Renault UK Clio Cup in 2016, where it will field a minimum of two cars. The race-winning BTCC team opted to expand into the feeder series over an assault on the British GT championship, and will run two operations during TOCA weekends. The team is yet to confirm any drivers, with team principal Russell

Morgan admitting his outfit was assessing a number of candidates. "We are in our third year now of running our own team in British Touring Cars and naturally we're looking to expand," he told AUTOSPORT. "We looked at other opportunities, including British GT, but the racing just didn't appeal to us. "Clios are in the touring car paddock and it's a great opportunity for Ciceley Motorsport to expand."



Ciceley chose Clio run over British GT

EBREY

Volkswagen Racing Cup

GTI champ makes VW jump

PRODUCTION GTI CHAMPION TOM Witts will swap his Mk2 Golf for a brand new Mk7 version next season as he will switch to the Volkswagen Racing Cup with Maximum Motorsport. The 23-year-old, who also participated in the final two meetings of this year's Renault UK Clio Cup with the squad, won 11 of the 12 Mk2 races in 2015, and will move to the Volkswagen category for 2016 with the team. "It's a really highly contested championship with lots of quick drivers, but I will be looking to be in the mix with them all and contesting for race wins," said Witts. "I'm very much looking forward



Witts will step up with Maximum

EBREY

to getting behind the wheel of the Mk7. A lot of time and effort have gone into the build, and the car looks stunning."

HUMBLE PYE

The voice of club racing

Britcar will begin new era in 2016



MICK WALKER

"DUNLOP BRITCAR ENDURANCE ERA IS FULL OF PROMISE"

Last Friday's relaunch of the Britcar concept, with husband-and-wife Claire and Rob Hedley at its helm, is excellent news for competitors seeking longer-distance racing in Britain and beyond. Renewed customer focus, quality events and determination to level the twin playing fields should see Britcar Endurance thrive.

Every championship or series needs a reality check periodically and, having run since 2002, a revamp was due. Britcar effectively formalised the European Endurance Racing Club's activities, with the latter's co-founder James Tucker as its prime mover.

Claire Hedley (née Williams) had done the leg work for years, indeed she knows the product better than anybody. From a racing family – father Geoff and brother Jason are also historic stalwarts – and with Rob on-side, Claire recognised its potential and jumped at the opportunity of taking it over when the time was right.

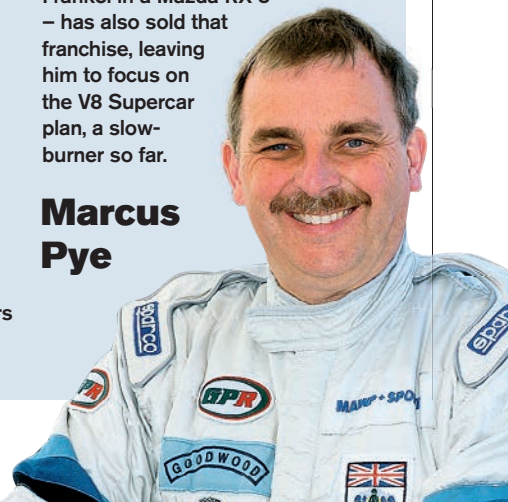
Dunlop Motorsport's initial three-year commitment to supporting the movement is as much a key to the future as Sky and Motors TV coverage and professional hospitality. As title sponsor of the Endurance and Production championships and solus tyre supplier, Dunlop will work hand-in-hand with competitors and the Hedleys to guarantee outstanding value for money.

The eight-event Endurance format, offering two- to four-hour races for three GT and two Production car classes, will surely attract a fine following, as will the Production showpiece ranged over twin 50-minute races per meeting. Both championships will run under the BARC badge and are likely to evolve with customer demand.

Landing a Silverstone GP circuit fixture to start the new era on March 26-27 is a master stroke. Apart from the grid capacity, the date offers European teams contesting the following weekend's Hankook 24 Hours, exclusively for touring cars at the same venue, meaningful testing and an introduction to what is already an attractive regime.

Tucker, who reigned the charismatic Willhire 24 flame at Silverstone in 2002 – I competed in it, finishing second in class with Mike Wilds, Ian Flux and Andrew Frankel in a Mazda RX-8 – has also sold that franchise, leaving him to focus on the V8 Supercar plan, a slow-burner so far.

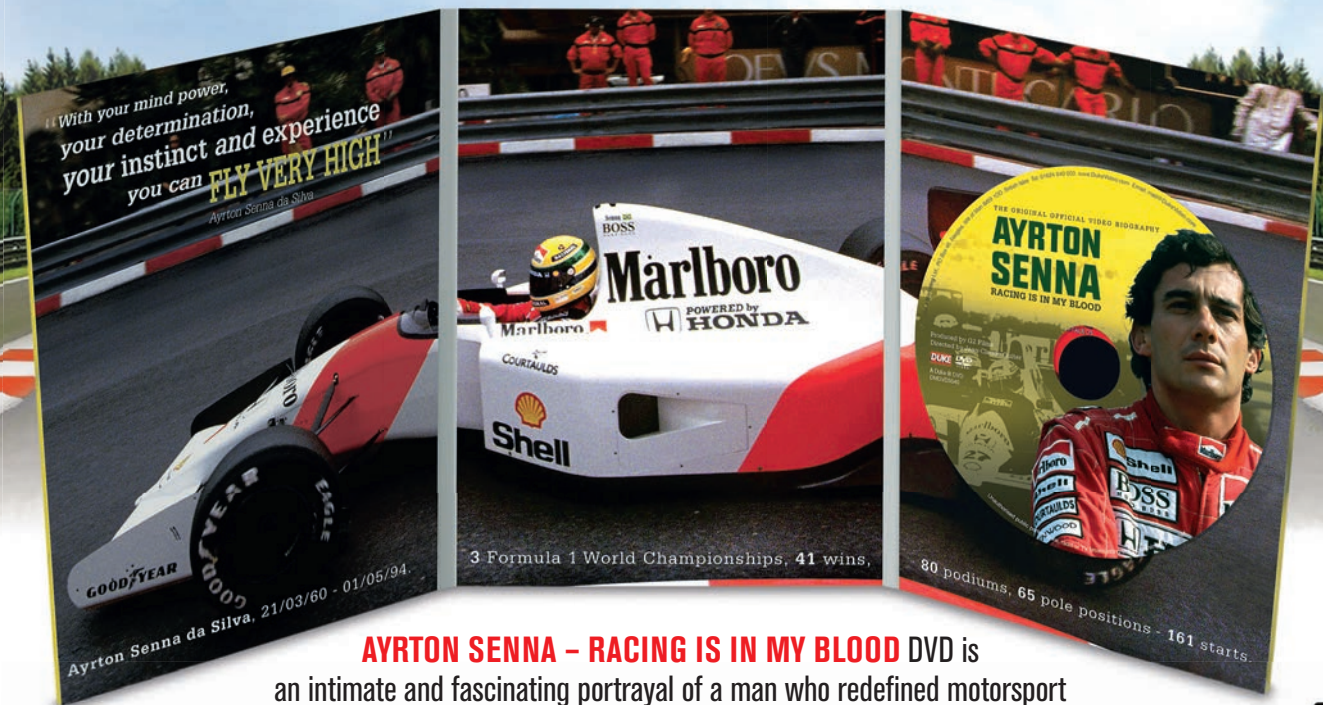
Marcus Pye



FREE

AYRTON SENNA DVD

WHEN YOU SUBSCRIBE TO **AUTOSPORT**



AYRTON SENNA - RACING IS IN MY BLOOD DVD is an intimate and fascinating portrayal of a man who redefined motorsport



SUBSCRIBE TODAY AND GET ALL THIS

- ✓ **FREE GIFT** Ayrton Senna DVD
- ✓ **GREAT SAVINGS**
Save 27% on the cover price
- ✓ **SPREAD THE COST**
Pay just £34.99 every 13 issues by Direct Debit
- ✓ **WORLD-CLASS WEEKLY NEWS**
- ✓ **FREE P&P**
Every issue delivery to your door

VISIT
www.themagazineshop.com/taspo-nov15

OR CALL **08448 488 817**

and quote **M1115P** for print or **M1115B** for print and digital access

Calls cost 7 pence per minute plus your phone company's access charge. Please have your bank details ready.

HURRY! Offer ends December 4 2015 themagazineshop.com

+ PLUS

UPGRADE TO INCLUDE

- ✓ ACCESS TO autosport.com
- ✓ THE AUTOSPORT DIGITAL PAGE-TURNER
- ✓ THE INTERACTIVE IPAD EDITION

ALL THIS FOR JUST AN EXTRA £6.25

TERMS AND CONDITIONS This offer is open to UK residents only. Calls cost 7 pence per minute plus your phone company's access charge. If you require any assistance following the purchase of your subscription, then you can speak to a member of our customer service team on 01795 592 974, calls are charged at local rate. Overseas rates are available on +44 (0) 1795 592 974. Please allow 35 days for delivery of your gift and first issue. The gift will be sent under separate cover from the magazine. Should we run out of gifts, you may be offered an alternative gift – there is no cash alternative. To activate your AUTOSPORT online account visit <https://secure.autosport.com/subs/activate>. php and enter your activation code (your personal magazine subscriber number which will be included in your welcome email/letter) along with your email address to access exclusive autosport.com content, the digital page turner and interactive iPad edition content. Direct Debit rates are valid for one year after which they are subject to change – should prices change we will inform you in writing. We ask that you enter into a Direct Debit agreement with the intention that your subscription will continue for a minimum period of 12 months, even if the frequency of payment is for a shorter period, however, you will still have the right to cancel your Direct Debit in accordance with Direct Debit Guarantee. Should you wish to cancel your subscription it will be cancelled on expiry of the current term which will not be refundable, other than in exceptional circumstances. If a gift is included as part of the subscription offer we reserve the right to request the return of the gift. Details of the Direct Debit Guarantee are available on request. Savings are based on the standard UK cover price of £3.70. Offer ends December 4 2015. Haymarket Media Group Ltd uses a best-practice layered Privacy Policy to provide you with details about how we would like to use your personal information. To read the full privacy policy please visit our website www.haymarket.com/privacy or call us on 01795 592 986. Please ask if you have any questions as submitting your personal information indicates your consent, for the time being, that we and our partners may contact you about products and services that will be of interest to you via post, phone, email and SMS. You can opt-out at ANY time by emailing the datacontroller@haymarket.com or by calling 01795 592 986.

Byrne ended year with pair of wins



ANGLESEY NOVEMBER 22 BRSCC

Rampant Byrne ends year with aplomb

AFTER A TRUCKLOAD OF BAD LUCK at the **Formula Ford** Festival and Walter Hayes, Jake Byrne finished the season in style with two wins at the Anglesey Winter Raceday.

BRSCC Northern champion Tom McArthur put his Van Diemen on pole and led Byrne, Northern driver Doug Crosbie and the **Pre90** National and Northern champion Matthew Cowley – who catapulted from eighth to fourth at the start.

It only took a lap for the top three to swap at Rocket, a 90-degree left at the end of a long, sweeping straight. Incredibly, the order remained the same despite Crosbie briefly taking the lead.

After being released from the clutches of David McArthur, Jason Cooper was soon up in the top-four

battle as he set two fastest laps to move up past Cowley into fourth. Tom McArthur was managing the race well as he maintained a relatively steady lead, and it wasn't until the eighth lap that the momentum swung. Byrne ended lap seven in third, but by the third corner he had taken the lead – one he would not cede. Crosbie pushed him hard to the end while Cooper jumped Tom McArthur for third on the last corner of the last lap in an aggressive move, one he felt was forceful but fair.

Race two started with a bang as front-row starter Crosbie lit up his rear tyres, allowing Tom McArthur and Jason Cooper through. However, Crosbie was back past Cooper by the end of the first lap, and the pair

were past Tom McArthur on the next circuit as he ran wide onto the sodden grass at the exit of Church.

While Tom began his fight back, it became another instalment of the Byrne/Crosbie show, the duo trading fastest laps, until a rare mistake on lap nine by Crosbie saw him spin off at the Corkscrew under no pressure, losing second to David McArthur with Cooper also going through.

All this allowed Byrne to take a 13s win, completing a clean sweep of trophies – the Bernard Baxter and Brian Linley, plus the Moose Trophy awarded for aggregate lowest finish over the two contests.

In both races, Matthew Cowley finished sixth and headed the **Pre90** category.

As the only **Open** entry, Jordan Sanders destroyed the competition in all three **Winter Irish Global Lights, Irish Supercars** and **Open Sports Car** races.

The real battles came behind in the **Irish Global Lights** and **Irish Supercars** classes.

In the first race, the Supercars started behind the **Global Lights** cars in a split grid. Supercar driver James Roe was quicker than any of the **Global Lights** in qualifying, and second only to Sanders, but had to start with the other Supercars at the back, and was on a charge from the word go. He fought his way to third overall, splitting **Lights** top-two Peter Max Drennan and Adam Mackay.



Sanders was cut above in his Juno

The second race saw the **Lights** head to the back and the Supercars start at the front with Roe again the class winner. **Global Lights** honours went to Mark Twomey after an outrageous move from fifth to first in class under braking for Rocket, scoring him sixth overall.

Twomey spun out at the final corner in the third race and handed the class win to Drennan.

The Supercars should have easily been won by Roe, but he crashed into the tyres at the exit of Church in spectacular fashion, gifting Bob Cameron the win.

The two **Winter Sports, Saloons and Caterhams** races were dominated by Joe Spencer in his Caterham, literally in a class of his own. Sam Watkins drove through the field to finish second in the first race, while Mark Davies jumped from 14th to third into Turn 1 in the second race to take second. Joshua Watkins was a double third-place finisher.

● Jack Benyon

RESULTS

FORMULA FORD 1600 (12 LAPS) 1 Jake Byrne (Ray GR13) 16m00.220s; 2 Douglas Crosbie (Van Diemen JL13) +0.367s; 3 Jason Cooper (Swift SC10); 4 Tom McArthur (Van Diemen LA10); 5 David McArthur (Van Diemen LA10); 6 Matthew Cowley (Reynard 88FF).

Class winners Cowley; Jamie Jardine (Reynard 84FF); Colin Williams (PRS RH01). **Fastest lap** Crosbie 1m17.567s (71.94mph). **Pole** T McArthur. **Starters** 16.

RACE 2 (13 LAPS) 1 Byrne 15m42.566s (76.96mph); 2 Crosbie +13.882s; 3 D McArthur; 4 Cooper;

5 T McArthur; 6 Cowley. **CW** Cowley; Jardine; Williams. **FL** Byrne 1m11.716s (77.80mph) **P** Byrne. **S** 16.

WINTER IRISH GLOBAL LIGHTS, IRISH SUPERCARS & OPEN SPORTSCARS (12 LAPS) 1 Jordan Sanders (Juno CN20112) 15m32.781s (71.78mph); 2 Peter Max Drennan (Global GT Light) +1m15.572s; 3 James Roe (ASK Supercar); 4 Alan Mackay (Global GT Light); 5 Ivor Miller (Global GT Light); 6 Michael Conway (Global GT Light). **CW** Drennan; Roe. **FL** Sanders 1m16.301s (73.13mph). **P** Sanders. **S** 19. **RACE 2 (11 LAPS)**

1 Sanders 15m46.841s (64.82mph); 2 Roe +23.303s; 3 Cameron; 4 Philip Jones (ASK Supercar); 5 John Cardoo (ASK Supercar); 6 Marl Twomey (Global GT Light). **CW** Roe; Twomey. **FL** Sanders 1m11.031s (78.55mph). **P** Sanders. **S** 20. **RACE 3 (14 LAPS)** 1 Sanders 15m59.484s (81.41mph); 2 Drennan +1 lap; 3 Twomey; 4 Cameron;

5 Jones; 6 Miller. **CW** Drennan; Cameron. **FL** Sanders 1m06.156s (84.34mph). **P** Sanders. **S** 19. **WINTER SPORTS SALOONS & CATERHAM SERIES (12 LAPS)** 1 Joe Spencer (RS Motorsport Caterham) 15m48.362s (70.60mph); 2 Samuel Watkins (Renault Clío) +49.585s; 3 Joshua Watkins (Renault Clío); 4 William Sharpe (Mini Cooper S); 5 John Cooper (Ford Fiesta Zetec); 6 Mike Hooper (Ford Fiesta Zetec S). **FL** Spencer 1m16.762s (72.69mph). **P** Spencer. **S** 15.

RACE 2 (13 LAPS) 1 Spencer 15m31.982s (77.83mph); 2 Martin Davies +1m18.177s; 3 J Watkins; 4 S Watkins; 5 Romain Sarazin (Nissan 370Z); 6 Jim Kennon (MG ZR). **FL** Spencer 1m10.195s (79.49mph). **P** Spencer. **S** 15.

CHRISTMAS GIFT GUIDE



2016 ENDURANCE CALENDAR

AUTOSPORT contributor Drew Gibson is one of the world's leading sportscar photographers. His annual endurance calendar allows you to enjoy high-quality, large-format reproductions of his most spectacular images.

£24.99
drew-gibson.co.uk



RACING GAMES

What motorsport fan hasn't dreamed of being on track themselves, dicing with the stars of racing? This year, five major games have been released. Prices vary, so shop around for the best deal.

FORZA MOTORSPORT 6

With a vast array of cars and tracks, and handling you can trust, Forza 6 is the game Forza 5 should have been. Add in wet weather, night racing and stunning graphics, as well as new multiplayer leagues, the longstanding Xbox racer has taken a big step forward. But it's no longer the only game in town and, for a more sim-based experience, you might want Project CARS.

Available on: Xbox One, PS4

PROJECT CARS

This multi-level take on the world of motorsport was a bit rough around the edges when it was released, but regular updates since have turned it into a very thorough title. Where else can you find a career mode offering single-seaters, GTs or prototypes in the same game?

Available on: PC, Xbox One, PS4



F1 2015

The first F1 title for latest-generation consoles boasts much-improved handling and brilliant AI, with its main drawback being a lack of depth. But it's a very solid start that suggests Codemasters is on the right track, if only its F1 contract would allow it more freedom to expand the game's inner workings.

Available on: PC, Xbox One, PS4

MOTOGP 2015

Off the back of MotoGP's greatest season in a decade, it doesn't live up to that hype in the gaming world. The bikes are beautifully recreated, but the same can't be said for the tracks, and the handling model is frustrating. It does have the junior classes and an historic two-stroke grid, though, both of which are fun.

Available on: Xbox One, Xbox 360, PS4, PS3, PC

WRC 5

The official WRC series is back on track after a few years in the wilderness, but for all of the positives and attention to minor details that real rally fans will appreciate, inconsistent and inaccurate pacenotes land a painful blow. It should still have enough to appeal to the hardcore fans, though.

Available on: Xbox One, Xbox 360, PS4, PS3, PC



AUTOCOURSE 2015

The Autocourse annual is part of the furniture for the Formula 1 fan, and for very good reason. Now in its 65th year of continuous publication, the 2015 edition can be relied upon to provide an in-depth look at the season that was with insight from some of the grand prix paddock's most seasoned writers. As well as a look back at all 19 races, there is also technical insight into the cars, plus a top 10 driver ranking (which you can compare to AUTOSPORT's own ranking, which will be published in our season review issue!).

£43.50
www.autocourse.com

SUBSCRIPTIONS visit: Themagazineshop.com

A subscription to AUTOSPORT, F1 Racing or Motorsport News is the gift that keeps on giving. Obviously, we are biased, but...

- AUTOSPORT – £39.99 for 12 issues
- F1 Racing – £39.99 for 12 issues
- Motorsport News – £28.95 for 12 issues



LEWIS HAMILTON
A CELEBRATION OF A TRIPLE WORLD CHAMPION

This special magazine, from the makers of F1 Racing, brings together unique insights into the legend of Lewis Hamilton drawn from his nine years racing in F1. Well worth it for any fan of the triple world champion.

£5.99, from all good magazine sellers



DUKE VIDEO

Duke has produced must-see motorsport viewing for several decades, and no fan's Christmas stocking would be complete without one of these titles, available on DVD or Blu-Ray. The F1 season review is the jewel in the crown, but the reviews of BTCC, Le Mans and MotoGP also offer great value for money and superb production values.

- £14.99 F1 2015 DVD
- £16.99 Blu-Ray
- £16.99 BTCC DVD
- £16.99 Le Mans 24 Hours DVD
- £18.99 Blu-Ray
- £16.99 MotoGP DVD

www.dukevideo.com

PORSCHE SOUNDS

This is a book with a difference for Porsche racing enthusiasts. This official title features a CD with 30 engine sounds of selected Porsches and previously unpublished photographs, and has been produced in collaboration with the Porsche archive. Featuring 300 photographs and information on some of the marque's most iconic cars, it's a must-have for any lover of Porsches.



£34.99
earbooks.net



SIGNED MEMORABILIA

The Signature Store stocks a wide variety of memorabilia signed by some of the greatest names in motorsport, including Nigel Mansell, Stirling Moss and John Surtees.



- £75 Stirling Moss 1955 British Grand Prix signed photograph
- £99 Nigel Mansell 'Sparks' Ferrari signed photograph
- £199 Stirling Moss signed steering wheel

thesignaturestore.co.uk



MICHAEL TURNER CHRISTMAS CARDS

For half-a-century, Michael Turner has produced a set of Christmas cards featuring beautiful paintings of moments from that year's racing season. This year, his set of five cards includes Lewis Hamilton's British Grand Prix win, Sebastian Vettel leading in Hungary,

Romain Grosjean on his way to a Spa podium, Nico Hulkenberg in action in Austria and Daniel Ricciardo under the Singapore lights.

£6.50 for the set of five
www.studio88.co.uk



TRACK ART

Graham and Leigh offers bespoke circuit artwork with a difference. Using laser-cutting technology and Baltic birch ply, it can create any track to order, presented with a three-dimensional effect in a hand-made hardwood frame. From Silverstone to Sonoma, Brands Hatch to Bathurst, it's a unique way to celebrate a favourite track... or three.

- £58-£63 for single-circuit frame
- £125-£140 for three-circuit frame

www.grahamandleigh.co.uk



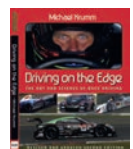
AUTOSPORT INTERNATIONAL TICKETS

The 2016 British motorsport season really gets underway at AUTOSPORT International at the Birmingham NEC on January 14-17. What better gift for a true fan than tickets for this event, which features star cars and personalities from motorsport world?

£35 (adult), £23 (child) with VIP options also available
www.autosportinternational.com

MICHAEL KRUMM
DRIVING ON THE EDGE

Also available from the publishers of Autocourse is the new edition of sports car ace Michael Krumm's book on the art and science of race driving. It offers great insight for the racer or the interested observer alike, and has a place on any racing fan's bookshelf.



£24.99
www.autocourse.com

Haymarket Consumer Media, Bridge House, 69 London Road, Twickenham TW1 3QL, UK. Tel: +44 (0) 20 8267 5804
E-mail: autosport@haymarket.com Website: www.autosport.com

EDITOR
Edd Straw ext.5889
edd.straw@haymarket.com

DEPUTY EDITOR
Marcus Simmons ext.5807
marcus.simmons@haymarket.com

CHIEF F1 CORRESPONDENT
Ian Parkes ext.5810
ian.parkes@haymarket.com

GRAND PRIX EDITOR
Ben Anderson ext.5425
ben.anderson@haymarket.com

F1 REPORTER
Lawrence Barretto ext.5887
lawrence.barretto@haymarket.com

FEATURES EDITOR
Scott Mitchell ext.5370
scott.mitchell@haymarket.com

EDITOR AUTOSPORT.COM
Glenn Freeman ext.5309
glenn.freeman@haymarket.com

DEPUTY EDITOR AUTOSPORT.COM
Matt Beer ext.5811
matt.beer@haymarket.com

INTERNATIONAL EDITOR
Mitchell Adam ext.5432
mitchell.adam@haymarket.com

MANAGING EDITOR
Peter Hodges ext.5903
peter.hodges@haymarket.com

EXECUTIVE EDITOR
Stuart Codling ext.5835
stuart.codling@haymarket.com

GROUP NATIONAL EDITOR
Rob Ladbroke ext.5209
robert.ladbroke@haymarket.com

RALLIES EDITOR
David Evans
david.evans@haymarket.com

ART EDITOR
Lydney Elliott ext.5914
lydney.elliott@haymarket.com

SENIOR DESIGNER
Michael Cavalli ext.5381
michael.cavalli@haymarket.com

PHOTOGRAPHS
LAT Photographic
XPB Images

GROUP PICTURE EDITOR
Peter Mills ext.5918
peter.mills@haymarket.com

AUTOSPORT.COM TECHNICAL TEAM LEADER
Geoff Creighton
geoff.creighton@haymarket.com

SENIOR DIGITAL DESIGNER
Amar Vijay
amar.vijay@haymarket.com

OFFICE MANAGER
Joanne Grove ext.5804
joanne.grove@haymarket.com

SPECIAL CONTRIBUTORS

Gary Watkins	Mark Glendenning	Gary Anderson
Marcus Pye	Dieter Rencken	Alan Eldridge

CORRESPONDENTS

ARGENTINA Tony Watson	ITALY Roberto Chinchero	UK & EIRE Peter Allen, Jonathan Crawford, Jack Cozens, Kerry Dunlop, Tom Errington, Leanne Fahy, Paul Healy, Linda Keen, Alex Kalinauckas, Lewis Larkam, Mark Libbeter, Stephen Lickorish, Marc Orme, Dan Paddock, Graham Read, Hal Ridge, Aaron Rook, Peter Scherer, Ian Sowman, Oliver Timson, Ian Titchmarsh, Eddie Walder, Richard Young
AUSTRALIA Phil Branagan	JAPAN Jiro Takahashi, Len Clarke	
AUSTRIA Gerhard Kuntschik	NEW ZEALAND Bernard Carpenter	
BELGIUM Gordon McKay	RUSSIA Gregory Golyshev	
BRAZIL Lito Cavalcanti	SPAIN Raimon Duran	
FINLAND Esa Ilvonen	SWEDEN Lege Tornvall	
GERMANY Rene de Boer	USA Jonathan Ingram, David Phillips, Dimitris Papadopoulos	

ADVERTISING
Tel: +44 (0) 20 8267 5271
E-mail: autosport.ads@haymarket.com

AD PRODUCTION
Tel: +44 (0) 20 8267 5588
Fax: +44 (0) 20 8267 5320

SALES MANAGER
Jonathan Whitehead ext.5576
jonathan.whitehead@haymarket.com

DISPLAY ADVERTISING
Don Rupal ext.5244
don.rupal@haymarket.com

Karen Reilly ext.5718
karen.reilly@haymarket.com

CLASSIFIED ADVERTISING
Jamie Brooker ext.5271
jamie.brooker@haymarket.com

Jonathan King ext.5992
jonathan.king@haymarket.com

Joe Andrews ext.5908
jo.andrews@haymarket.com

AUTOSPORT.COM SALES MANAGER
Fiona Bain ext.5551
fiona.bain@haymarket.com

AUTOSPORT.COM AGENCY ACCOUNT MANAGER
Jessica McFadyen ext.5820
jessica.mcfadyen@haymarket.com

ONLINE ADVERTISING
Leah Mimms ext.5846
leah.mimms@haymarket.com

SPECIAL PROJECT SALES
James Robinson ext.5384
james.robinson@haymarket.com

ADVERTISING DIRECTOR
Matthew Witham

GROUP PRODUCTION MANAGER
Ailsa Donovan ext.5639
ailsa.donovan@haymarket.com

PRODUCTION CONTROLLER
Abbey Gunner ext.5588
abbey.gunner@haymarket.com

SUBSCRIPTIONS
UK 0844 8488817
OVERSEAS +44 (0)1795 592 974
EMAIL autosport@servicehelpline.co.uk
BACK ISSUES Tel: 0844 8488817

DIRECT MARKETING EXECUTIVE
Kadie Chanter ext.5622
kadie.chanter@haymarket.com

LEASING AND SYNDICATION INTERNATIONAL DIRECTOR
Alastair Lewis ext.8606
alastair.lewis@haymarket.com

SYNDICATION ENQUIRIES
Isia Friend ext.5024
isia.friend@haymarket.com

AUTOSPORT, ISSN number 0269946X, is published weekly by Haymarket Media Group, Bridge House, 69 London Road, Twickenham TW1 3QL, United Kingdom. Airfreight and mailing in the USA by agent named Air Business Ltd, c/o Worldnet Shipping Inc., 156-15, 146th Avenue, 2nd Floor, Jamaica, NY 11434, USA. Periodicals postage paid at Jamaica NY 11431. Subscription records are maintained at Haymarket Media Group, Bridge House, 69 London Road, Twickenham TW1 3QL. Air Business Ltd is acting as our mailing agent.

MANAGEMENT GROUP DIRECTOR
Tim Bulley

GROUP PUBLISHER
Stuart Williams

GROUP EDITOR
Anthony Rowlinson

GROUP COMMERCIAL DIRECTOR
Ben Guynan

SPECIAL EVENTS MANAGER
Laura Coppin

DIGITAL SPECIAL PROJECT MANAGER
Simon Strang, ext. 5093
simon.strang@haymarket.com

DIGITAL PRODUCT MANAGER
Simon Grayson, ext. 5346
simon.grayson@haymarket.com

© 2015, HAYMARKET MEDIA GROUP LTD
Publishing, trade and further subscription details on www.autosport.com. While due care is taken to ensure the contents of AUTOSPORT are accurate, the publishers and printers cannot accept liability for errors and omissions. Advertisements are accepted for publication in AUTOSPORT only upon Haymarket Media Group Ltd's Standard Terms of Acceptance of Advertising, copies of which are available from the Advertising Sales Department of AUTOSPORT.

CIRCULATION TRADE ENQUIRIES
Frontline Ltd, Park House, 177 Park Road, Peterborough, Cambs, PE21 2TS. Tel: +44 (0)1733 555161. Printed in England by Wyndeham Peterborough Ltd. ISSN 0269-946X. AUTOSPORT incorporating AutoClassic, is published weekly by Haymarket Consumer Media, Bridge House, 69 London Road, Twickenham TW1 3QL.

EDITORIAL DIRECTOR
Mark Payton

STRATEGY AND PLANNING DIRECTOR
Bob McDowell

PUBLISHING DIRECTOR
Patrick Fuller

MANAGING DIRECTOR
David Prasher

CHIEF EXECUTIVE
Kevin Costello

recycle
Where you have finished with this magazine please recycle it.

PEFC
PEFC11643-197

This product is from sustainably managed forests and controlled sources

www.pefc.co.uk

Haymarket is certified by BSI to environmental standard ISO14001

THIS WEEK

LETTERS • ON TRACK • TV PICKS • FROM THE WEB • AUTOSPORT.COM

What you think of the motorsport news of the past week



XPB IMAGES

Max shows how to overtake

I like Lewis Hamilton. I like the way he drives. I like the way he goes off between race weekends and enjoys himself and then turns up for a GP and (generally) does the business.

But I do find his claim that he had the pace to beat Rosberg in Brazil, but that it is impossible to overtake there, somewhat hard to take.

Has he not subsequently watched the highlights of the race? Has he not seen all the overtaking that was going on behind him? Let Max Verstappen, for one, have Lewis's car – he'll show him how it's done.

Nico won at Interlagos fair and square. Lewis has his third world championship; he can afford to be a little more gracious.

Dennis Ashmore, by email

Bahrain WEC, six hours of

unadulterated motor racing. Four competitive classes, LMP1 with technology to make F1 weep, close, absorbing competition and in Mark Webber a thoroughly deserving world champion.

I implore all of your readers who think motor racing is F1 to take time next season to have a look at endurance racing. The glory days are coming again.

Mark Wade
By email

How typically British to

immediately start sniping at a true British success. I am of course referring to the recent anti-Hamilton letters from Sheila Barton, Mike Kelly and Peter Wareham.

I would proffer the view that although Lewis has had the benefit of a superior car these past two seasons, the mark

of a driving great surely is shown in the winning of a championship in an inferior car, and to that end I would refer Mr Kelly to 2008. Let's not forget Massa failed to win the championship in both '07 and '08 in the best car. Let's also remember why he was there (Ferrari) in the first place; Michael Schumacher always made sure his contractually bound number two drivers were decent enough pedallers, but not quite championship threats.

Let us also remember why Hamilton is in the best car: because Mercedes wanted him there, and not as a number two to their chosen German (which one could understand), but because he was the best.

Are we now going to say that Fangio was rubbish because his 1954 and '55 Mercs were superior to the rest of the field, or for that matter Prost, Senna and Schumacher?

Let it go, Lewis is the best of the current crop and will remain so until someone better comes along. That is the nature

of our sport, and this magazine should be allowed to celebrate it.

Phil Oakes.
Portishead

The anti-Hamilton backlash in

your letters pages is getting out of hand. Lewis will undoubtedly be counted as one of the greats when the history books are written, with at least three titles and probably more than 50 victories.

He was lucky to win the title in 2008, but unlucky to lose it in 2007. Why do so many people seek to do down one of the greatest British drivers of all time?

Eliot Wilson
By email

CORRECTION

In last week's Japanese Super GT report (p43), the picture of the podium is from the GT300 class, not the Caldarelli GT500 winning car as captioned.

REMEMBER WHEN...

Qatar stages its first world championship-level car racing event when the WTCC visits this weekend. But back in April 2006 it hosted the opening round of the Grand Prix Masters series, won by Nigel Mansell

BIG NUMBER

5TH

Fernando Alonso should start his 252nd grand prix in Abu Dhabi this weekend, which will elevate him to equal fifth in the all-time starts list alongside Jarno Trulli



WHAT'S ON TRACK IN THE UK

EVENT OF THE WEEK

MONDELLO PARK LMC

November 29

The annual Fiesta 6 Hour Endurance race always attracts a strong grid and some big-name drivers. This year, GT ace Damien Faulkner is among the stars. The race gets underway at midday.



No shortage of action in Fiesta enduro

WHAT'S ON TRACK AROUND THE WORLD

ABU DHABI GP

Formula 1 World Championship
Rd 19/19
Yas Marina, United Arab Emirates
November 29
f1.com

GP2 SERIES

Rd 11/11
Yas Marina, United Arab Emirates
November 28-29
gp2series.com

GP2



WORLD RALLYCROSS



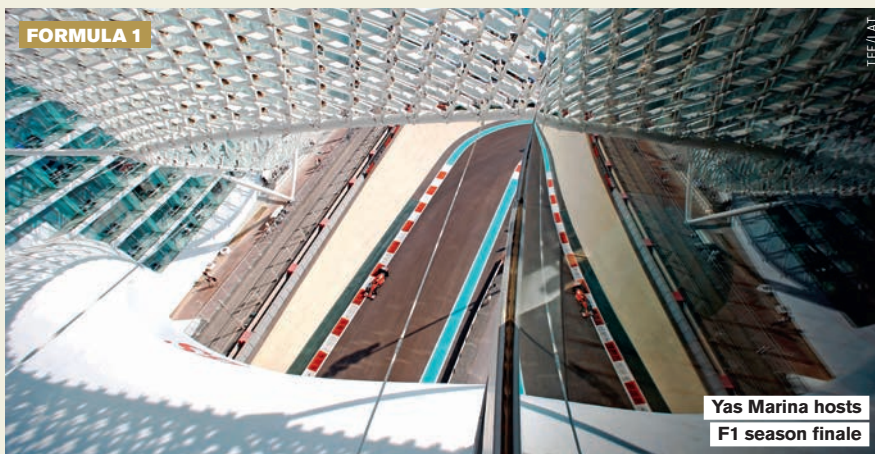
GP3 SERIES

Rd 9/9
Yas Marina, United Arab Emirates
November 28-29
gp3series.com

WORLD TOURING CAR CHAMPIONSHIP

Rd 12/12
Losail, Qatar
November 29
fiawtcc.com

FORMULA 1



Yas Marina hosts F1 season finale

WORLD RALLYCROSS

Rd 13/13
Rosario, Argentina
November 28-29
fiaworldrallycross.com

SUPER TC2000

Rd 11/12
Cordoba, Argentina
November 29
super-tc2000.com.ar

NEW ZEALAND TOURING CARS

Rd 3/7
Hampton Downs, NZ
November 28-29
nzv8touringcars.co.nz

FROM THE SOFA

WHAT'S ON TELEVISION AND IN CINEMAS



McQueen filming with Bell and Redman

Le Mans' toll on the king of cool

THERE HAVE BEEN MULTIPLE attempts to translate the thrill of motor racing onto movie screens, a marriage of subject and medium that seems like a no-brainer. But despite that, the goal remains strangely elusive.

Days of Thunder was a box office hit, largely thanks to Tom Cruise, but failed to capture the reality of NASCAR. John Frankenheimer's *Grand Prix* won three Oscars but was let down by clichéd characters and a bloated runtime. *Rush* arguably came closest to unifying petrol heads and movie-goers, but still alienated many fans with its historical inaccuracies. Even documentaries have been unreliable: while *Senna* was universally acclaimed, *1: Life on the Limit* and *Weekend of a Champion* rightly disappeared into the ether.

Steve McQueen: The Man and Le Mans, in cinemas now, is a documentary about what is, essentially, a documentary. Although *Le Mans* (1971) is technically a drama, it regards plot and character as an unfortunate obligation, prioritising realistic racing. Cherished by racing fans, it made next to nothing at the box office, and cost McQueen more than cash.

On paper, *Le Mans* seemed a guaranteed hit. With a budget of \$6million, America's hottest star literally in the driving seat and in-demand director John Sturges on board, it was no wonder that executive producer



McQueen was an accomplished racer

"The difficulty of the film is brutally apparent in the catastrophes around it"

Bob Rosen thought the film "was a sure thing. This could not miss."

Beaten to the big screen by *Grand Prix*, McQueen had something to prove. He wanted the audience to "enjoy the feeling of power" he felt in the driving seat by "breaking the film barrier".

Filming began with an unfinished script, and McQueen rejected multiple rewrites in his quest for perfection. Risky scenes were shot without planning, leading to serious accidents. Driver David Piper lost half a leg and Derek Bell was left with severe facial burns.

In archive interviews in this new documentary, McQueen calls *Le Mans*

"the most difficult film I've ever done" and that's brutally apparent in the catastrophes around its production. *The Man and Le Mans* outlines the actor's philandering and divorce, his paranoia after appearing on the Charles Manson murder list, his car crash with co-stars Louise Edlind and Mario Iscovich (for which Iscovich took the blame), the departure of Sturges and McQueen's forced removal as producer.

As a documentary, *The Man and Le Mans* soars above *Weekend of a Champion* but can't touch *Senna*. It uses *Le Mans* to examine McQueen himself, but that subject has scope far broader than these confines. The voice recordings are sparse, and fail to resonate as powerfully as those of the similarly dictaphone-led recent Marlon Brando doc *Listen To Me, Marlon*.

McQueen's ego was the production's downfall, though he should have been eminently qualified to bring the adrenaline of the track to auditoriums. His belief that "the racing world is no less creative than film" led to an obsession with authenticity that earned *Le Mans* a fond place among fans but failed to captivate the general public.

It's proof that no matter how great the sacrifices, film cannot fully replicate motor racing and documentary cannot truly capture heroes.

Ally Wybrew

TV pick of

Edited by Aaron Rook and



ABU DHABI GP - LIVE

Sunday BBC1 1210-1515

Sunday Sky Sports F1 1200-1530

With the title settled, one team dominant and Yas Marina not exactly evocative, you'd be forgiven for thinking that the Abu Dhabi GP isn't shaping up to be a classic.

There is a little bit of late-season intrigue, though. Nico Rosberg's why-didn't-you-get-on-with-it-sooner late flourish is making Lewis Hamilton tetchy, and neither will want to go into the winter defeated. Plus tracks with a lot of medium/slow-speed corners have been good for Ferrari and even Red Bull.



WTCC QATAR - LIVE

Eurosport 1

Friday 1815-2015

The World Touring Car Championship said it didn't mind losing Macau because a Friday night European timeslot for a Qatar race under the lights was a better bet for audiences. While no one sane would argue Losail is anywhere near the Guia circuit's league, the hours are indeed more sociable, and there won't be so many safety cars. It's the last chance to see Sebastian Loeb in the WTCC as his racing stint comes to an abrupt end.

Eurosport also has highlights of the World Rallycross finale from Argentina, though not until 2330 on Sunday night.

GET AUTOSPORT ON THE MOVE

ON SALE ALL OVER THE WORLD
 DOWNLOAD IT NOW FROM AUTOSPORT.COM



ONLINE

Top stories on AUTOSPORT.com in the past week

HONDA IDEAS HARD TO COPY – ALONSO

When Honda's "unique" engine design gets into its stride, rivals won't be able to copy it, reckons Fernando Alonso as he argues the Japanese firm's stubbornly independent path will work.

LATEST STRATEGY GROUP DETAILS

Autosport revealed that the budget engine, 2017 aero changes and a new name for Manor would all be on the table when F1's Strategy Group held its latest meeting this week.

VERSTAPPEN GETS HAMILTON'S ANGST

Many laughed when Lewis Hamilton claimed overtaking was impossible at Interlagos while Max Verstappen passed countless cars, but the rookie thinks the champion has a point.

MONTOYA FASTEST IN WEC ROOKIE TEST

Will the IndyCar star and former F1 cult hero be the latest man to try his hand at LMP1 and Le Mans? He certainly enjoyed his Porsche run in Bahrain.

AUTOSPORT+

IS F1 LETTING ITS BEST DRIVERS DOWN?

Has it become harder than ever to work out who the best drivers in Formula 1 really are, wonders Ben Anderson.

AER ENGINE 'FITS' FIA REQUIREMENTS

Sportscar and junior single-seater engine specialist firm reckons it has a unit ready to go that fits the FIA's bill for an independent, 'budget' engine.

the week

Jack Benyon



SBLOXHAM/LAT



GP3 TITLE DECIDER - LIVE

Sky Sports F1
Sat 0820-0905/Sun 0855-0955
 GP3 isn't especially fashionable, but it's generated the best title fight of any of the main Formula 1 feeder series this year. European F3 champion and Mercedes protege Esteban Ocon was supposed to walk this with mighty ART, but hitherto unknown Italian Luca Ghiotto and Trident keep forcing him to finish second, and it's the latter who holds a two-point lead.
 In a change to the regular F1 support schedule, both GP3 races have early slots, and they're live on Sky's F1 channel as usual, as is the GP2 finale.

POINTLESS F1 SPECIAL

BBC1
Saturday 1800-1850
 There are clearly motorsport fans among the backroom brains behind the BBC's hugely popular quiz show Pointless, with F1 regularly cropping up in the categories. It certainly provided the most recent opportunity to shout "Heinz-Harald Frentzen!" at the TV.
 For the F1 edition of its celebrity version, it's enticed Mark Webber, Nigel Mansell, Claire Williams and Christian Horner to join in-house BBC F1 talent David Coulthard, Allan McNish, Suzi Perry and Murray Walker.



LAT



MOONEY

CLASSIC F1

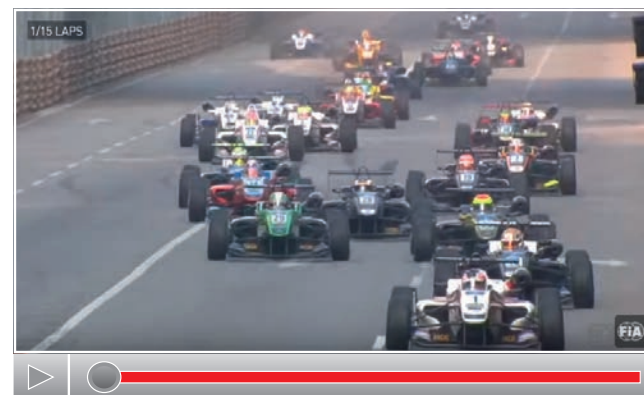
Sky Sports F1
Tuesday 2100-0200
 Sometimes Sky F1's retro fillers seem entirely arbitrary, sometimes you can see a hint of curation in the picks. If next Tuesday's is deliberately scheduled in that order, it's clearly designed to toy with Damon Hill fans' hearts.
 It starts with Hungary 1993 and the euphoria of a maiden win. But then it skips back a month to the crushing blow of his engine failing with a home victory in sight. Then to Monaco 1996, another race that means so much to him, another engine failure while leading. And finally, Hungary 1997 and that agonising last-gasp blow.

MN CIRCUIT RALLY

Motors TV
Saturday 1005-1105
 Autosport's sister publication Motorsport News is supporting an innovative new rally championship on racetracks in 2015. The series turns UK circuits into full-blown rally stages, with watersplashes, jumps, gravel roads and chicanes. Circuit rallying has grown hugely in the UK and this is the first championship to cater purely for it.
 Each round will receive an hour-long programme, and you can catch up with the action from an eventful inaugural event at Oulton Park on Motors TV this week, repeated in various slots.

HOT ON THE WEB THIS WEEK

YouTube ROSENQVIST TAKES SECOND MACAU F3 VICTORY



SEARCH FOR: 2015 FIA F3 Intercontinental Cup - Grand Prix highlights
 Kudos to the FIA for offering highlights from one of the most iconic races of the year – a world away from the 'bloke points phone at TV' which seemed to be the Macau YouTube staple for far too long. Enjoy a masterclass from Felix Rosenqvist.

AUTOSPORT TWEETERS

-  **Edd Straw**
@eddstrawF1
-  **Glenn Freeman**
@glenn_autosport
-  **Marcus Simmons**
@MarcusSimmons54
-  **Ian Parkes**
@ianparkesf1
-  **Ben Anderson**
@BenAndersonAuto
-  **Matt Beer**
@mattofautosport
-  **Stuart Codling**
@CoddersF1
-  **David Evans**
@daveevansrally
-  **Scott Mitchell**
@ScottMitchell89
-  **Gary Watkins**
@gazzasportscars
-  **Mark Glendenning**
@m_glendenning
-  **Mitchell Adam**
@DrMitchellAdam
-  **Lawrence Barretto**
@lawrobarretto
-  **Rob Ladbrook**
@LaddersMN
-  **Autosport**
@autosport

INTRODUCING

Jamie Caroline

Ginetta Junior champion has been smitten by a taste of single-seaters



Jamie Caroline won more than twice as many races as any other driver on his way to this season's Ginetta Junior Championship. Despite that, the 16-year-old faced an agonising wait to be confirmed as the title winner.

He had been forced to take a drive-through early on in the title showdown at Brands Hatch for a jumped start and had to fight back through the pack to claim enough points for the crown. In the end, it hinged on another driver ahead of him being penalised too. The destiny of the title went to an MSA Court of Appeal, and Caroline's victory was confirmed one month after the end of the final round. Eventually, he had another championship to add to his Super One Honda Cadet karting title that he claimed in 2009.

Racing was always going to be part of Caroline's life. His grandfather Dave was a Morgan racer and dad Lee was a two-time TVR Tuscan Challenge champion in 2003 and '04.

"Dad bought me an old Austin Mini and I used to race it around the fields at the back of my house, and then he bought one too," says Caroline. "We used to thrash around with each other in the cars, on quadbikes or anything I could get my hands on."

"I do remember going to watch dad race, particularly when he shared a Mosler MT900 with Phil Keen at Oulton Park in 2006 [when the pair scored a couple of podiums]. It was great to watch, but I already knew that racing was going to be a part of my future."

It all started seriously for Caroline when his dad bought

him a kart when he was seven years old. He spent a season practicing before racing competitively, and the Honda Cadet came in 2009. When the finances to take part in karting meant he could no longer afford to compete in the upper echelons, he looked elsewhere.

"The budgets for karting were ridiculous – we were talking up to £400,000 to run competitively in Europe," says the teenager. "There was no way we could afford that, so Ginetta Junior was the option."

Caroline joined Total Control Racing for the full campaign in 2014 and was a winner in that initial season. He tasted success in the Winter Series after switching to HHC and remained with Charlie Kemp's team this year.

"Looking back, people have said that 2015 was one of the toughest junior championships there has ever been," says Caroline. "We really struggled at the start of the season because the car was down on power and it took us a while to get to the bottom of the problems. It was very obvious at Thruxton."

The team went through every aspect of the car to turn his fortunes around. "We had four different engines, three gearboxes and a new differential," he says. "Finally, we turned it around and got the car to a place that we wanted."

Caroline took five straight wins after that weekend in Hampshire and it teed up his title challenge, but there were bumps along the way. Two incidents later on in the year were ones that Caroline himself puts down to experience.

"It was a learning experience, of course. A couple of times, some of the problems were caused by me over-driving, but I have learned from that," he says. "That's the point of the junior championships, after all."

The next step is unclear. A recent test in an MSA Formula car has given him an appetite for single-seaters, but there is also a temptation to move into the Renault UK Clio Cup series and maintain the tin-top trajectory.

"There are some tough choices ahead," he says. "It's all about the funding. I had great support from Pirtek in 2015 and I want that to continue, but I was blown away by the MSA Formula car. We need to work out what's best for my future." ❧

Matt James

CV

Age 16

Hometown Warlingham, Surrey

2015

1st in Ginetta Junior Championship (10 wins)

2014

6th in Ginetta Junior Championship (2 wins)



1st in Ginetta Junior Winter Series (4 wins)

2011

2nd in the MSA British Cadet Championship

2nd in Super 1 National Comer Championship

2009

1st in Super 1 Honda Cadet Championship



Road to Ginetta title was not smooth

NEXT WEEK

NEW-LOOK AUTOSPORT

Plus: Abu Dhabi Formula 1 season finale

Four day ticket packages from £283pp*
for Rolex 24 At Daytona entry, hotel and
car hire. Available from Speed Chills



Visit Rolex 24 At Daytona

27th January - 1st February 2016

Anglo American Oil Company Ltd. are offering the ultimate ticket package to the Rolex 24 At Daytona, with complete travel packages also available from our travel partner Speed Chills – join us for exclusive access to one of the toughest endurance races in the World!

Travel & accommodation

We have negotiated special discounted rates for your hotel and flight so you can tailor your own trip to Daytona. NEW for 2016 we also have exclusive travel packages available from £283pp* for ticket, hotel and car hire, from our official travel partner, Speed Chills. Speed Chills are members of ABTA and specialise in great value tours to global sportscar events.

For more information on tickets or travel packages, or to express you interest please contact us today!

The Autosport & Sunoco Challenge with Speed Chills trip to the Rolex 24 At Daytona takes you right into the centre of the action. You and fellow fans will get access to the infield, paddock, behind the scenes and garages, whilst also getting to know the two Sunoco Challenge winning drivers, who, yet to be decided, will have won a prize drive during the 2016 Rolex 24 At Daytona Race weekend. Make sure you are there to experience their Daytona debut!

Just a few Rolex 24 At Daytona facts:

- Typical lap time on the World famous oval at Daytona is 1min 43 seconds
- Get close to the action and watch top speeds close to 200mph!
- 24hr sprint race to the chequered flag – the winning margin in 2015 was just 1.33 seconds after 740 laps!
- Chance to meet top drivers such as Christian Fittipaldi, Sebastien Bourdais, Max Angelelli, Scott Dixon and Andy Priaulx and many more on the grid walk.
- 2016 Rolex 24 At Daytona will be first event to use the new facilities within the grandstand redevelopment and from here you can see the whole circuit!

*Based on two people sharing

Autosport/Sunoco Challenge with Speed Chills trip to the 2016 Rolex 24 At Daytona - still only £99!

This exclusive ticket package includes: ultimate endurance ticket; grandstand access; garage access and tour; goodie bag and beer & pizza evening and more! Plus, you will be the first people to experience the brand new visitor facilities at Daytona International Speedway opening in January 2016.



Anglo American Oil Company
hannah@aaoil.co.uk 01929 555974
www.aaoil.co.uk/challenge/travel-daytona
Twitter@sunoco_uk Facebook/Sunocouk

Speed Chills
tours@speedchills.com 01252 717871
www.speedchills.com/imsa/rolex-24-at-daytona
Twitter@SpeedChills Facebook/SpeedChills



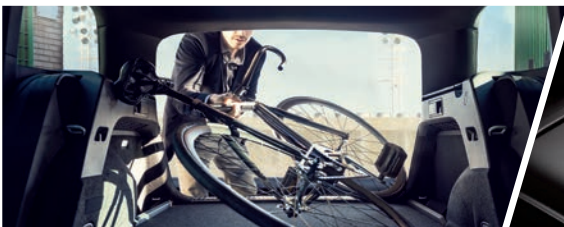
SEAT

THE ALL NEW LEON ST CUPRA 290

CAPABLE, WHICHEVER
WAY YOU LOOK AT IT



TECHNOLOGY TO ENJOY



587 LITRE BOOT

Room for an active lifestyle.



290PS CUPRA ENGINE

Guarantees precision-driving fun.



CUPRA DRIVE PROFILE

Dynamic driving at your fingertips.

Model shown is a Leon ST CUPRA 290 with optional Sub8 Performance Pack, CUPRA Black-Line and Nevada white metallic paint.

FOLLOW US ON: **SEAT.CO.UK**

Official fuel consumption for the SEAT Leon ST CUPRA in mpg (litres per 100km); urban 31.7 (8.9) - 33.2 (8.5); extra urban 50.4 (5.6) - 51.4 (5.5); combined 41.5 (6.8) - 42.8 (6.6). CO₂ emissions 158 - 154 g/km. Standard EU test figures for comparative purposes and may not reflect real driving results.

PERFORMANCE

THE EXPERTS' GUIDE TO

TESTING

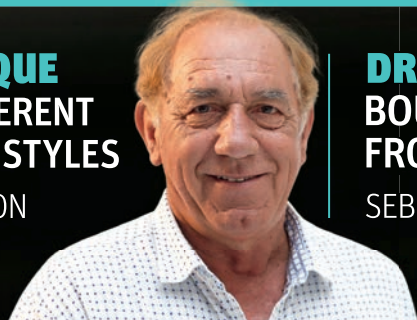
■ MCLAREN'S APPROACH ■ WHERE TO TEST
■ KEEPING RACE SHARP



THE AUTOSPORT PERFORMANCE PANEL

TECHNIQUE
THE DIFFERENT
DRIVING STYLES

ROB WILSON



DRIVER'S EYE
BOUNCING BACK
FROM REJECTION

SEBASTIEN BUEMI



TRACK GUIDE
HOW TO MASTER
DONINGTON PARK

ALEX LYNN



PROGRESS. From the base up.

We sweat the small stuff
so you don't have to.

NASA approved temperature regulation reacts quickly to reduce perspiration by up to 30% when the heat is on, and delivers warmth when it's not. Antimicrobial technology keeps you fresh and superior tailoring helps you maintain concentration.

Introducing Walero. Race ready advanced base layers.

Get The Edge

www.walero.uk

FIA 8856-2000 & SFI 3.3 approved



CONTENTS

IN ASSOCIATION WITH



HARTLEY

YOU'D BE AMAZED AT HOW MANY

people arrive at a testing session with a lackadaisical approach, one that lacks a bit of rhyme or reason. It's remarkably easy to commit to a test day and then drive about and react to things that happen on the day, instead of going there with a proactive plan.

Thanks to help from the likes of Andrew Kirkaldy at McLaren, Carlin's lead F3 engineer Mark Owen and club racing ace Joey Foster, we've assembled the views from people who have a wide range of testing experience across a variety of categories.

Whether it is putting together a comprehensive winter programme or making the most of a limited budget, getting the most for your money is important.

Between that, Alex Lynn's Donington Park track guide and our new simulator partners Position One Motorsports, this latest issue is packed full of lessons we hope you'll find useful in making you a better driver. And if you're looking at building a career in the sport, Sebastien Buemi's Formula 1 recollections give a good account of how your off-track actions are as important as what you do in the car.

SCOTT MITCHELL PERFORMANCE EDITOR

scott.mitchell@haymarket.com

@ScottMitchell89



IN THE ISSUE

4 DRIVING TECHNIQUE Are there really different 'styles'?

World-renowned driver coach and ex-racer Rob Wilson explains what leads different people to adopt different approaches

7 DRIVER'S EYE VIEW Sebastien Buemi

Red Bull F1 reserve, Toyota LMP1 world champion and Renault e.dams Formula E star explains how he turned F1 rejection into a career catalyst



LEICESTER CITY

8 TESTING SPECIAL How to make the most of winter

From the finest tracks in Britain to your best options abroad – including what to race and where – we ask the experts for their tips

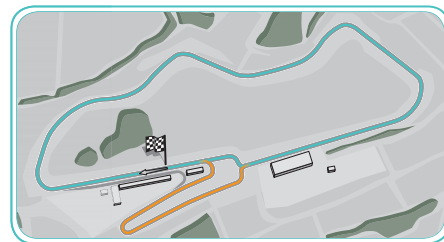
17 COURTING SPONSORS Morris Lubricants

Getting in with a sponsor is a crucial part of racing, but a tough ask. Morris Lubricants is a rare grassroots motorsport backer, as Tom Cave explains



18 TRACK GUIDE Donington Park

He may be a Williams F1 youngster plying his trade in GP2, but lap record holder Alex Lynn knows a thing or two about mastering Donington



24 SIMULATOR SECRETS Position One Motorsports

To kick off our new simulator partnership, we look at the best way to learn a track

26 GETTING STARTED Championships for rookies

So, you've got your licence. Where next? There are a variety of club championships out there for the aspiring racing driver, but three British manufacturers have designed series specifically for rookies. We break them down here



ROB WILSON'S MASTERCLASS

OUR EXPERT EXPLAINS HOW DRIVERS DEVELOP DIFFERENT STYLES AND WHICH ONES EXIST IN FORMULA 1

There's no question drivers bring their own personality to the car. There are abrupt personalities, there are gentle personalities, stylish personalities, attacking personalities, and all of this comes out behind the wheel of a car. You can win races with almost any of those – it depends on who you're up against, what car you're driving and how competitive the class you are competing in is.

You could always say, 'Well, the reason I'm successful is because I'm the greatest attacker in the world'. I knew one guy who had on the dashboard of his Chevy Camaro 'I can outrake anybody' in big letters.

There are definitely different driving styles. We see them from outside the cars, and I certainly see them inside after 30 years and a couple hundred days a year sitting with racing drivers.

It's harder to see styles from the outside in the modern age because the cars have more grip, they stop better, they have less wheelspin, they corner better. Drivers are a bit more like astronauts with full-face helmets and tinted visors, and cars have higher cockpits so you can't see their hands. Plus they don't change gear as much or manually.

Personalities are camouflaged and given that most corners are taken at pretty much the same speed these days because of the handling of the car, the difference between the styles are not so obvious. People will say it's much more competitive now because the gaps are so much closer, but the opportunities to lose time are far fewer. So the opportunity to observe style is reduced – people sit further back from the track and run-offs are bigger, when they used to be able to fall in love with drivers by watching their style. It's harder to do.

It doesn't mean the styles aren't there, even if the difference in performance is not so great. People will get locked into a style and you can get drivers who have 20 years' experience but every year is the same.



Stewart leads Clark
in a battle of styles



Gerry Marshall had
a vivid driving style

So they may as well have had one year in terms of their own development. It's quite a creative exercise, you're constantly working on it – Emerson Fittipaldi was always watching other people, asking why they took a different line, always trying to develop in different ways.

You'll get a personality that says you're either hard on the brake or the throttle. That was a 1950s way of driving. You'll get a driver who will say, 'Well, you must be as late on the brakes as you possibly can'. Others will say, 'I've got to be first on the throttle'. You will get drivers for whom the highest minimum speeds in the corners is the aim.

Driving certainly had greater measure in the old days, when you had to outdrive people in the sense that you'd be bolder and have better car control. These days it's more of an emphasis on direction change, traction and error reduction.

You can win with a variety of styles. There is an ultimate way around a lap and what one tries to do is minimise the disadvantages of someone's style and maximise the advantages. Pastor Maldonado is a very high energy driver – or aggressive – but if that is slightly overdone it can lead to small errors or energy spikes in a lap that can cost time. He is a very fast driver so you'll want to say, 'Very good, but if reduce the energy level a fraction would we have a slightly more harmonious relationship with the surface? Would the car accelerate a little bit better onto the following straight as it has slightly less wheelspin?'

Someone who places an emphasis on high-speed corners may pick up some time in the wet. But when people say, 'I'm really good at fast corners' there is an awful lot less to do. You don't have to downshift, brake

on a threshold or decrease the brake pressure as you transfer a little bit of weight, you're not wanting the best direction change to get traction out of the corner. When the car's balanced it's not that difficult to do.

Jim Clark was probably the most stylish of all in terms of going for an earlier rotation in what he used to call a false apex. If you drew the line it wouldn't look quite right. Jackie Stewart would say he would move the wheel once, but you could manipulate a direction change with the throttle in those cars. These days you can't use the throttle for a subtle rotation as much because the car has too much grip, so it requires a bit more steering, a subtle release of the brakes, a bit more rotation than in Stewart's era. If you do it with the throttle you end up with oversteer and you tear up your tyres.

Stewart got very close to Clark in terms of competitiveness with a slightly more traditional style than Clark. He got close and took over his mantle, I think. Chris Amon put it well; he said he thought Jackie was about as quick as Jim towards the end, but Jackie had to work harder to do it. Could that be the case with Nico Rosberg compared to Lewis Hamilton? Who knows.

You could see the difference in the past with someone like Gerry Marshall, who was a fantastic touring car driver and had a great inner gyro and could hold the world's longest drift, and Ronnie Peterson and Gilles Villeneuve, who were great car-control people and didn't lose a lot of time. The harder tyres they ran in those days didn't suffer as much. Whereas Fittipaldi, Jody Scheckter and Didier Pironi achieved the same things, or more, but were more subtle in their approach.

There is a style. It's in the personality. ■



Barcelona: great for comparing techniques

MAUGER/LAT



Verstappen is pin-point

STALEY/LAT



Vettel relies on grip for late turn-in

XPBIMAGES

COMPARING MODERN F1 STYLES

Carlos Sainz Jr and Max Verstappen have slightly different styles. Sainz is right on the edge and corners go on a fraction longer. He relies a more on on-the-edge car control that occasionally catches him out. Verstappen creates little flatspots on the car; you can see he really concentrates on the rates of decrease of brake pressure, and angling into the corner he's very, very clever. If Sainz was just a little squarer in his approach he wouldn't rely on car control as much and would probably go slightly quicker.

Verstappen seems able to rotate his car sooner, whereas Sainz's rotation is a little later in the corner and requires more control towards the exit. You can achieve pretty much the same laptime, except Sainz is probably having to correct things a little bit more.

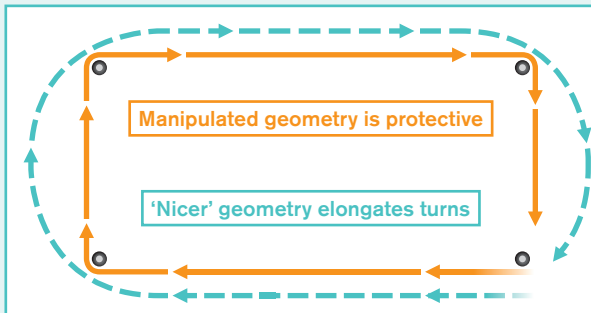
Jenson Button has what is termed a classical style and concentrates very hard on the geometry of the corner. He has really nice rates of input but probably needs a well balanced car for that. On nice geometric lines you have corners that go on a little bit longer, and if you have an issue with the car that problem will be apparent for a greater percentage of the lap, whereas if someone is manipulating a shorter corner it will be smaller (see panel below). He's locked into his pattern and has great success with it – he's proved to be very competitive with Fernando Alonso. We know ultimately people will kill to have Lewis Hamilton in the seat, and in the past Alonso, whereas Jenson's not quite as in demand because people know he may not deliver over a decade what the

other two might. But he's comfortable in his skin and has found a way of being successful most of the time.

Nico Rosberg is more calculating, whereas Lewis's main gift is his relationship with the surface. When he's settled he's got a little more adhesion and he'll introduce the car to every dynamic in a slightly more natural way. He'll always do that, whereas Nico will remind himself to do it.

Kimi Raikkonen had a great feel between the throttle and the surface in that he'd just find the right amount of throttle as the weight came down on the driving wheels. It was magical, but camouflaged a bit by turbo variations – he got caught out a little when the turbo came up in Canada last year. His style's also very good for making very short corners, and he's very good in terms of weight transfer. When he maximises all that he goes very well.

Sebastian Vettel has a slightly later turn – it's all about the exit now. You need very good grip for that rotation not to turn into oversteer, which is why he's sensitive to the rear stability of the car. Lewis or Kimi will introduce the car for longer going into the corner, but on that long right-hander near the end of Barcelona Vettel will always hang out a little bit and rotate later. Lewis or Kimi will roll it in on the inside and gradually build up a feel for the car in doing that. There's no difference particularly in the time, just some difference in what the drivers are used to.



ROB WILSON'S OBLONG ANALOGY

If you have a sore left foot and walk around an oblong, you wouldn't make it a circle, you'd go to the end, a short right, a short right, a short right. It might not be geometrically as nice, but it would protect your sore foot!

CIRCUITO MIKE G GUADIX



The BEST VALUE exclusive TESTING in Europe – From 3250€ exclusive = £2335 todays ex rate

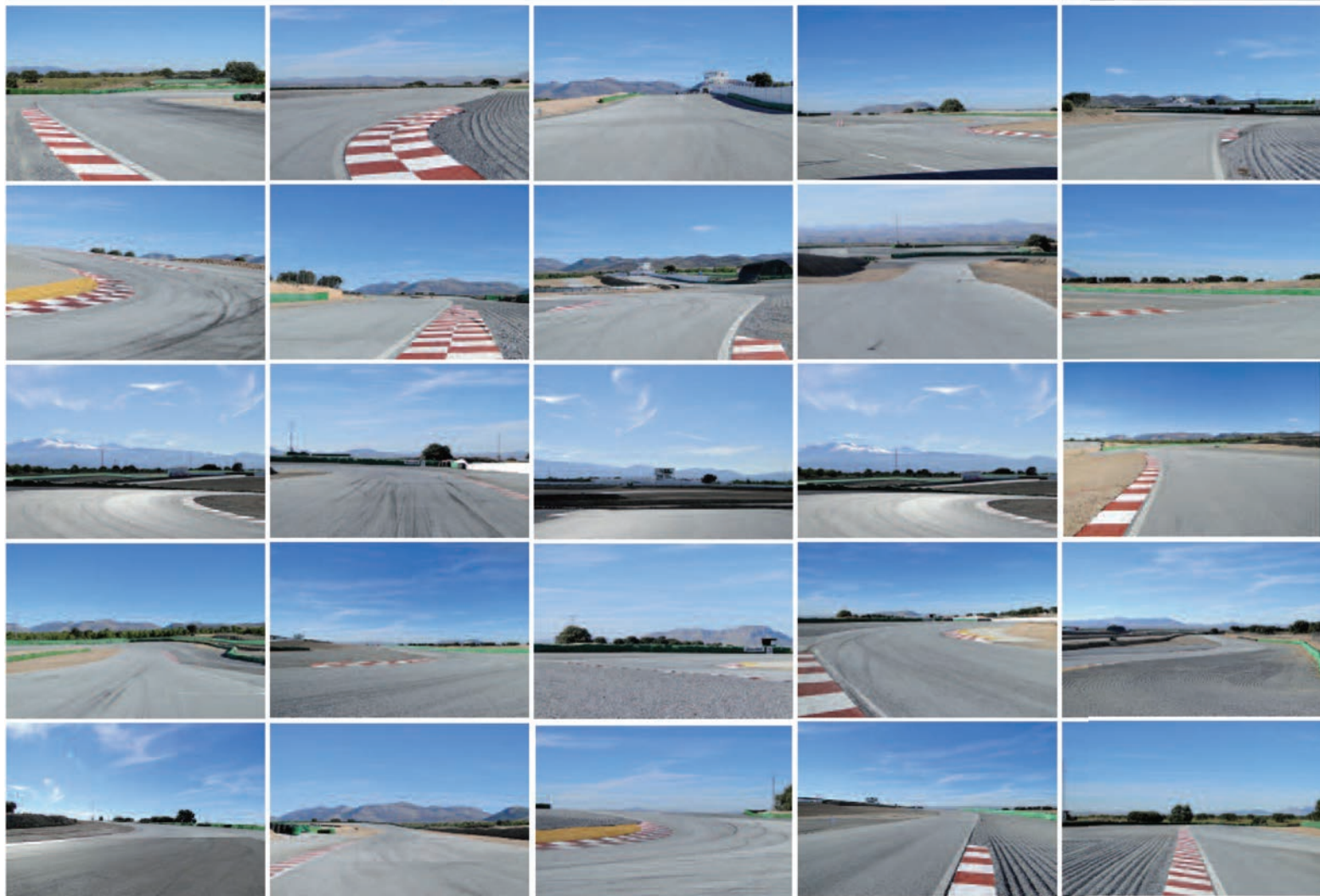
NO NOISE Restrictions: also 24 hr Tests: 4x3 klms Circuits

▶ **DRY SUNNY** South Med Spanish Climate ▶ Purpose-built Test Facility ▶ Technical, Demanding

▶ **REGULARLY successfully** used by many Championship-winning Teams and Drivers

▶ **Race Car Shake Down** Tests, Car Set-up, Driver Lap Time Improvements

▶ **Share Our Passion** Granada/Andalusia ▶ Superb Blue Skies!



to view 600 photos link to: www.flickr.com/photos/guadixcircuit-direct-photos

CONTACT: Clive Greenhalgh 0034 660329070 clive@guadixcircuit.com www.circuitoguadix.com

SEBASTIEN BUEMI INSIDE LINE



HOW THE SWISS WENT FROM BEING DUMPED BY RED BULL TO BECOMING A WORLD CHAMPION (AND MORE)



CAREER HIGHLIGHTS



LEICESTER/LAT

2015-2016	2nd in Formula E after two races, 1 win
2015	5th in World Endurance Championship
2014-2015	2nd in Formula E, 3 wins
2014	WEC champion, 4 wins
2013	3rd in WEC, 1 win
2012	Le Mans 24 Hours debut with Toyota LMP1 team
2011	15th in F1, 15 points (Toro Rosso)
2010	16th in F1, 8 points (Toro Rosso)
2009	16th in F1, 6 points (Toro Rosso)
2008	6th in GP2, 2 wins 2nd in GP2 Asia, 1 win
2007	2nd in European F3, 3 wins
2006	12th in European F3, 1 win (missed first two events) 7th in Formula Renault NEC, 2 wins (missed first two events)
2005	2nd in Formula BMW Germany, 7 wins 2nd in Formula BMW World Final
2004	3rd in Formula BMW Germany, 10 podiums

Y

ou have to be a lucky guy sometimes. It's part of the sport. After what happened at Toro Rosso in Formula 1, obviously it was hard because I felt like I could have done better, and at that time I did not deserve this treatment.

But I couldn't forget all they'd done for me. I was in karting and became European champion, and I felt it was a good move to go into Formula BMW. But I had very limited budget, so I looked at the team I felt was worth my money and Josef Kaufmann Racing was a great team, and compared to the budget I required I felt it was a very good opportunity.

I won the BMW scholarship in 2004 in Valencia and that made it possible to get the budget. Back then Kaufman had a Red Bull driver called Adrian Zaugg, and obviously Helmut Marko would compare the results of the team-mates to his driver.

“It was hard to accept being dropped, but what could I do? Be pissed off? Something I learned from Helmut Marko is you don't look back”

Kaufmann basically knew I hadn't much money, so he pushed for me with Helmut and I felt I deserved it because I was very young and fighting with Sebastian Vettel, and that year he won the title and I finished behind him. It was a great first season and that's how I got into Red Bull.

I always felt that Helmut was quite fair. I always felt I had to perform, but I never felt it was unfair. Some guys had unfair situations where they never got the opportunity, but with Red Bull I did.

When the decision came up to

drop me from Toro Rosso I was upset, but what could I do? I had to accept it and move forwards the best way I could. I looked at my opportunities, and one of the best at the time was to continue with them, to be the reserve driver.

Fortunately I was able to keep a very good relationship with them, and I was able to team up with Toyota in the World Endurance Championship. In a way it all worked out, but I felt I should and could have shown more in Formula 1 with the perfect opportunity. Sometimes you're a bit unlucky and you have to accept it – you just arrive at a certain point, and do the best you can.

I suppose it's like in every marriage. You can't always agree on every decision you make! It was hard to accept, very hard. I was very disappointed, but I felt, what should I do? Be pissed off and things not get better?

The problem is it's a small world. People move around. So if you have a very bad argument with

someone, you might think, 'I'm never going to work with them again so I don't mind, let's argue'. But maybe in five or 10 years you're going to work with him again, because you don't know how things are going to work out. You can't just have an argument because you're sad or disappointed.

This is something I learned from Helmut – you don't look back. You learn from your mistakes, but you don't look back.

I wanted to show I could become world champion in WEC, but I had to be lucky enough to have a good car, which I was. I became champion, I was able to show what I was worth.

The way it turned out is not bad. The situation I am in now in Formula E with Renault e.dams is amazing and in WEC I became world champion. You have to realise how the whole situation is in motorsport. It has to make you stronger and not destroy you. ■



WARNER/LAT



Switch to WEC brought world title

EBREY/LAT

HOW TO GO TESTING

ARE UK TRACKS BEST? HOW LONG SHOULD A TEST BE? WE GATHER
EXPERT OPINION FROM GTs, SINGLE-SEATERS AND CLUB RACING



Kirkaldy runs
(and tests for)
McLaren



“What makes a test valuable is how you structure it. Getting good quality testing time is so important” **ANDREW KIRKALDY**

McLAREN'S VIEW

GT boss Andrew Kirkaldy explains how the British manufacturer approaches testing

THE UK'S NOT ALL BAD...

We actually do the majority of our testing in the UK, at Snetterton more than anywhere else. One of the things for us is once you've got a baseline circuit you know what's good, what's bad. You've got a bank of information and you can work with that. Even through the winter; you still get good days in November and even into December. Paul Ricard, Vallelunga... a lot of our testing is decided by a tyre manufacturer, so they'll decide the track and we'll go there. Now that's dictated more so by their locality. If I was to choose a track when I want to do a driver test I'll probably go to Navarro, because the weather's good, it's not expensive, it's easy to get to. I wouldn't say there's a set situation for us, but the majority is done in the UK.

OVERSEAS RUNNING HAS BENEFITS

Well, it's cheaper for circuit hire abroad. The UK is so expensive, and generally the circuit hire costs make it more expensive even than travelling. OK, if you just did one day then clearly not, but if it's a three-day

test... Snetterton, to give you an idea, in the middle of the summer it's £9000. It's a lot of money for a day. At this time of the year it's £4000, so you're quite happy to do it. If you go to Navarro you're talking £4000 every time. And now, with the euro being particularly weak, it's a very good time for us to test abroad – for flights and everything. Weather is clearly the most important factor, but from a GT perspective we do one race at Snetterton in British GT, whereas we do lots at Spa, Paul Ricard and other places. So it's more relevant to the championships we compete in and makes more sense to test at those tracks.

PICKING THE RIGHT CIRCUITS

When I had a Formula Renault UK team all the British tracks were relevant. Now in British GT it has a relevance but it's a very small part of our business. So you've got to do what's best. We predominantly test on Pirellis but up until now British GT has been Avon. So what does it do for you? And it totally depends on what you're doing. A lot of what we do is code work. And you could do it at Chobham round the corner. Some of it doesn't need a race track, but if it's out and out performance you need something you can gauge against. Also, clearly something like Paul Ricard is huge money – we wouldn't test there unless someone was paying for it or there were 10 teams going.

GIVE YOURSELF TIME

Two days minimum. There's a test at Paul Ricard with seven manufacturers there and one will do a 30-hour test, going through the night. It depends, but it's two days minimum; from a manufacturers' perspective we've got a lot to do and you can never test too much.

WEIGH UP THE COST

We only do exclusive days. We'll rent a track exclusively and run between one and three cars, and a lot of people will only go on general days. If I go on a general day with my plan, which is eight hours of running, and it's red flag, stop, sit there. Actually you look at it and say, 'That day was £5000 and I could have gone for £500, but this was cheaper because I did 10 times the running I would have done, and I got the job done'. To match that with individual general days I've got to do four or five days, and I've got to get my trucks there, get my people there. People say it must cost a fortune in race tracks but not as much as doing 10 times the number of days. Getting good quality testing time is so important.

GET THE RIGHT STRUCTURE

You want a very structured test – that's what makes it valuable. Just turning up and saying, 'We'll drive around and try a few things' isn't very productive. So, we go testing and it's always very specific. Tyre tests, for example, with two days dry, one day wet. We'll test at Navarro in December and that's specifically a brake test. From our perspective it's about having the right technicians, the right conditions, the right data, the right stuff on the car to get the information. That's a manufacturer's view that's very different. Whereas if I have a driver test I'd choose the circuit relative to the test and I'd get a pro driver if I had someone I wanted to test. What happens in our world is a team has a car and says, 'We want to go here and test a new car' and we'll give them a structure of what they should do. 'There's a set-up, these are the tyres you're going to



...so McLaren's 650S
hit the track swiftly

Q&A

WHAT DOES A SINGLE-SEATER POWERHOUSE DO?

MARK OWEN Carlin's chief F3 engineer

WHY IS PEMBREY A CULT FAVOURITE?

We know the circuit very well. It's close to home. It's only got a few corners so there's not a huge amount for the drivers to learn, so they can improve steadily throughout the day. It's not going to cause them too many issues of learning the track – we'll find out how good they are earlier on. There's quick corners there and there's low-speed corners, so you can see what they're like through the range.

There's a lot to be said for going back to the same circuit, so Pembrey certainly was good. I think it's possibly a little bit dangerous now – we do quite a bit of damage there these days.



Owen, left, is very experienced at Carlin

OVERSEAS OR THE UK?

Certainly the reason for us to go to the European tracks is we may well be racing on them, so we'll going to the Red Bull Ring as well. We'll also go to the Nurburgring and Spa, which will be on the calendar, so new drivers will get track time, which is very beneficial.

An area where we need to work is where the circuits are hot – we can't do that in winter testing but in-season I think we'll go to circuits where track temperature is a bit hotter, to get some more information.

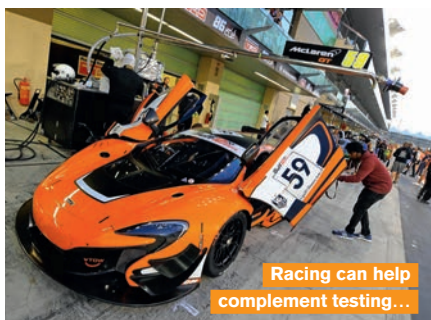
WHY DO YOU GO TO VALENCIA IF YOU DON'T RACE THERE?

We'll do Jerez and Valencia because you never know if those tracks will come up as race circuits! And the Valencia test is reasonably priced. You certainly get a lot of running there because there aren't many red or yellow flags because the marshals are very good. There

seems to be plenty of run-off area and if your car does go off it's returned very quickly so there's not much down-time. Sometimes you can go to some tracks and it's just red flag after red flag and you don't get any serious running done – you just come away very disappointed – whereas there you're very rarely interrupted.

HOW VALUABLE IS THAT?

We'd like to have the whole day to ourselves, but in reality an hour is plenty to get a couple of runs done and then look at data. We're still flat-out during the day getting the mileage done. It's quite a good circuit to try to improve the car and get the driver to learn changes, because there's a lot of corners there – a lot of awkward corners. So you do tend to make changes to the car and it gives the driver a chance to feel those changes and work out where he wants to be throughout the season.



Racing can help complement testing...

use, these are the things that work' – and they work through it in that way. Testing is silly money now, it really is. Wherever you go it's huge. You just have to make sure every minute you have on track is doing something for you, not for the sake of driving round. A GT car probably costs roughly £10/km to run and driving round just for the sake of it is quite expensive! That's fewer tyres, less fuel. If you go into GTE it's probably £20/km and up from there; a DTM car is going to be huge amounts more than that.

WHY RACING ONLY COMPLEMENTS TESTING IN THE RIGHT SCENARIO

We're more involved in racing so we didn't do much development running this year, but if you think about the parts of the car, they're lifed. Let's say the engine is 10,000km – you have to use them as wisely as you can. Everything you do is costing you money. Maybe not that day, but it does eventually. In the long run it does cost you that. It depends what you want; if I've got to go and do a new ABS or traction control code then I can't do it in a race – it's too risky. But racing kilometres are generally what you're testing to do so yes, they are valuable – there are just certain situations you just can't do it.



Valencia is a popular F3 testing venue



TOP TIPS PIGGYBACK ONTO BIGGER TESTS

Charlie Kemp (HHC Motorsport): We go to Valencia for a week with F4 cars. The idea is we piggyback on a number of other teams out there. The F3 drivers try different teams, and then you've got teams that are running underneath F3 level too, so everyone is in one location and it facilitates a decent amount of testing and the cost is reduced.

WHY RACE?

Ferrari junior Lance Stroll went to Florida before F4 and New Zealand before F3

TURNING A LEAP INTO A STEP

The Florida Winter Series was huge. I worked through a tremendous amount. Starts, race pace, just driving a car – I needed more seat time to be really *fully* ready for F4. And to have those four events and all those starts, taking all that experience before having my first starts in F4 was really big. It wasn't just lapping around alone, it was proper racing.



FWS was held in early 2014...

SOMETHING DIFFERENT ISN'T ALWAYS BAD

After F4, doing the Toyota Racing Series was great preparation for Formula 3. Looking at the way the car was built we thought it could be a little closer to F3 than it actually was, but that was irrelevant I think to the purpose we went. That was to race, to do starts, to do as much mileage before race one of Formula 3 and feel like it wasn't just our first race of the season, to feel like we already had that little jump-start before.

It's great. It's also on the other side of the world, so it's not exactly like you're flying to Spain! I had fun. As a life experience it's great going all the way to New Zealand, seeing stuff you've never seen before. I really enjoyed it.



...and Stroll went to NZ in winter 2014/15

DON'T GET COMPLACENT

Every championship's different. Just because things can pan out a certain way there doesn't mean it'll be the same in Formula 3. Things can change. You can never say, 'I finished in front of him in the Toyota Racing Series so that means I'll be again in front'. It's always different. It was good to know obviously that I beat them, it was good motivation for Formula 3, but I didn't relax all of a sudden and say, 'Oh, it's all over'. That never works! It always changes, so you always have to go into a championship with a clear head and start from zero and it builds from there.

CASE STUDIES MRF CHALLENGE AND UK WINTER SERIES

Rupert Svensden-Cook has won the Indian-backed, mainly Middle-Eastern MRF Challenge, and as a driver manager endorses it too

The biggest attraction is the circuits – Abu Dhabi and Bahrain are really good, quality F1 tracks, and Dubai and Madras are a high standard as well.

You have four races in a weekend and five sets of new tyres, plus free practice and qualifying – it's a no-brainer for what it costs. \$50,000 is effectively eight days' testing at F4 level in Europe.

I think MRF tried really hard to get a good calibre of driver to give it the credibility it deserves. The chassis is Dallara, so you can't go wrong in terms of equipment, and the

Renault engine is proven over years of use – it's bulletproof. The unique part is the tyres, but that's why it costs what it costs – it's so heavily subsidised by MRF and it's great they are not backing just one guy.

If you're a rookie, because of the cost and the amount of track time I think you can go and use it as a learning formula. What better way to learn to race? And it's an advanced enough car that you can come out of F3 and use it as a good racing tool as well.

People are coming round. \$50,000 is still quite a lot of money to find at the end of the main European season, and I'm sure most teams would like to talk drivers out of it. It surprises me, but people in motor racing don't always like change!



Indian-born MRF is gaining popularity



F4: UK single-seater racing in the winter

UK WINTER SERIES

HHC Motorsport boss Charlie Kemp runs drivers in the Ginetta Junior and BRDC Formula 4 winter offerings

The main benefit, especially with Juniors or someone new, is it's racing without affecting your main championship.

If someone has never done a race start before, it's better not to have that in front of the TOCA crowds or live on television.

If you look at it in terms of budget you could do more testing, but you do get four races in a weekend, so from being someone who hasn't done a race start you've done two rounds' worth already.

If you wanted to you could go and hire a circuit and race, but it isn't the same!

CLUB LEVEL

Formula Ford 1600 ace and driver coach
Joey Foster gives his take on testing

In modern motorsport, budget is king, and that's the reason most won't go and do testing at club level. But there are so many benefits to spending a day pounding around.

If you take something like Formula Ford 1600, it's a club category but it's also very in-depth and often having a good car comes down to going through the minutiae of it. You can dial an FF1600 car into an individual track if you know how. For example if you're racing at Brands you can change certain elements of the corner weights and the suspension settings to get the car more stable during cornering or braking and find that vital extra tenth.

Look at Medina Motorsport, which won the Festival with Wayne Boyd this year and Walter Hayes Trophy last year. That Van Diemen MS13 is superb and so, so fast, and it's down to John Loebell's knowledge of all the little things, as they add-up to make a big change. It's also things like tyres. The Avon ACB10s look a basic tyre, but you can change settings to get them to switch on earlier or later in the race and move the performance window. You can also get them to last a full weekend if you're on a budget. But you can't do things like that through guesswork.

It comes down to your individual championship and the adjustability the regs allow. If you have an open-rules series your window to find improvement from testing is much wider than if you have spec dampers and engine and gear ratios etc.

I would always recommend Shetterson 300 as a perfect testing track. That layout has a mixture of everything –



Foster: a fan
of video footage

EBREY

from fast, flowing turns that require stability, mechanical grip and/or downforce to hairpins and awkward turns where you have to brake the car when loaded. Brands is also brilliant as there is nowhere like Paddock Hill Bend as a sheer test of driver bravery and car set-up.

Testing is great for the mental side of driving too. If you haven't been in a racing car for a while things start to fade. You're never quite on the edge in the same way and you're never quite as focused or consistent. By testing for a few days you can feel one with the car again and that breeds confidence, and drivers always perform best when they're confident with their cars and know where the limit is and how far they can push it.

When I'm coaching drivers I

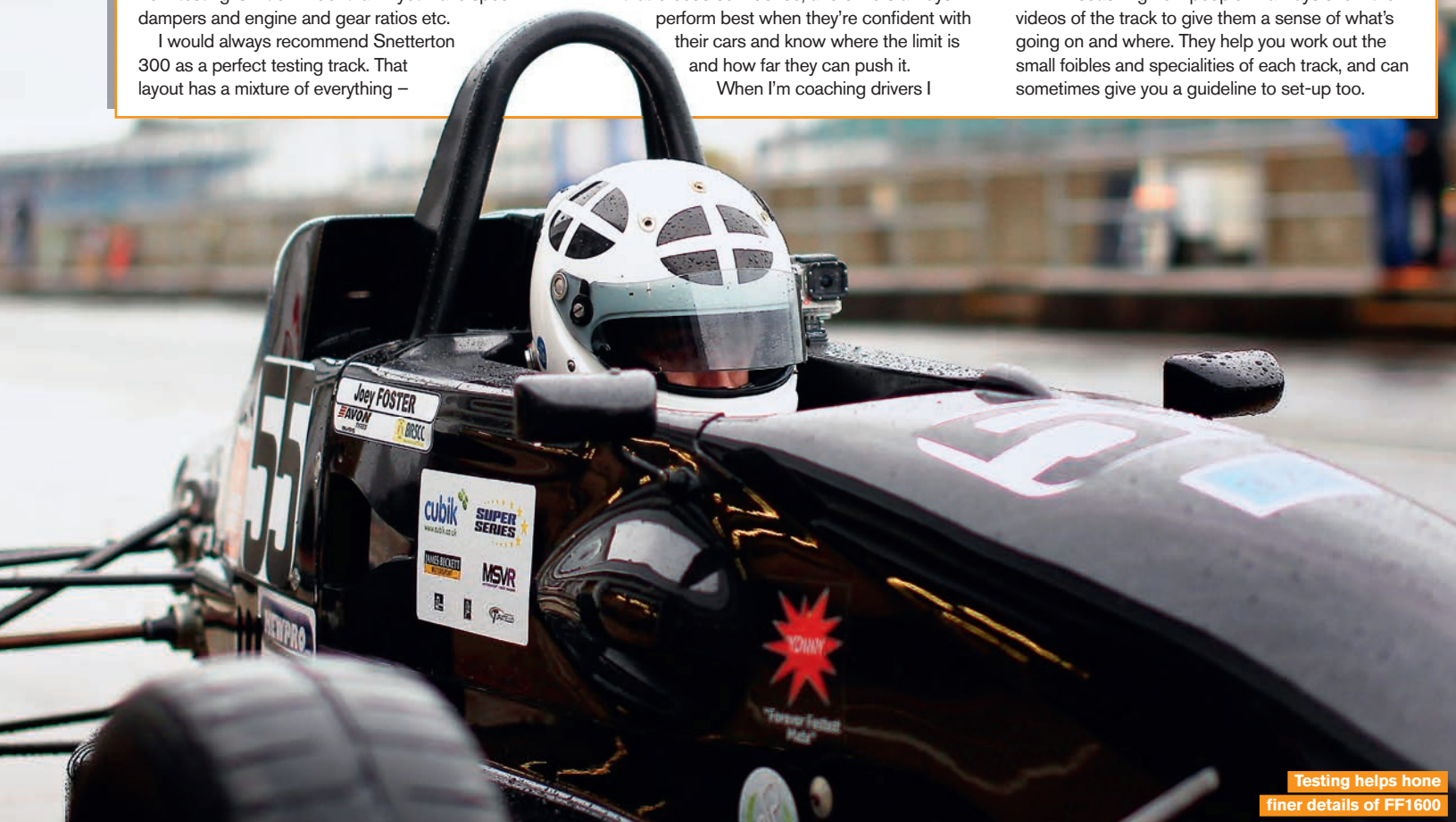
“It's tough to replace testing if you can't afford it, but pounding round has so many benefits”

always tell them to drive for as long as they can regardless of the conditions. I don't believe in sitting in the garage if the track is drying out. Get out there and feel the grip changes and get comfortable with that certain condition as you may have it in a race one day and you need to build your knowledge of how it changes the car.

It's tough to replace genuine testing if you can't afford it. Most people have started using simulators to improve their driving and consistency, but they can cost a fortune too. I used to play Gran Turismo and try to stick as close to a certain laptime as possible to get consistency nailed in my head.

The thing that has been really good though is the rise of the Go Pro, and YouTube is now a very useful resource. The onboard videos are now so detailed and high quality that you can take a lot from them. I was watching James Raven's onboard from the WHT and could see where he was holding his gears and where he couldn't, and it gives you a sense of what gear ratios people are running. Some videos even include a telemetry overlay, which is very useful.

If I'm coaching new people I'll always show them videos of the track to give them a sense of what's going on and where. They help you work out the small foibles and specialities of each track, and can sometimes give you a guideline to set-up too.



Testing helps hone
finer details of FF1600

SCHROTH RACING

WE HAVE THE FIELD COVERED



**XLT
CARBON**



**XLT
SUPERSPORT**

SCHROTH[®]
RACING



© LAT Photographic 2015

**Wide range of HANS Devices,
Harness Belts & Racing Nets**

Visit www.schroth.com/racing to learn more about our products.



Follow us on Facebook
www.facebook.com/schrothracing

DAN WHELDON

KARTING TROPHY



DanWheldonKartingTrophy



@DWNKartingTrophy



AUTOSPORT
INTERNATIONAL

**THE RACING
CAR SHOW**

Friday, 15th January 2016

4pm Start

25 Teams, 3 hr Endurance

Charity Kart Race

The Dan Wheldon karting charity challenge in aid of Alzheimer's at Autosport International Friday 15th January 2016 in the Karting Arena
Teams of 3-6 drivers
30 min practice 3 hr race
£400 per four man team - donation and sponsorship will be greatly appreciated

For entries contact Teesside Karting
01642 231117
admin@teessidekarting.co.uk
Bookings & sponsorship packages
Limited availability

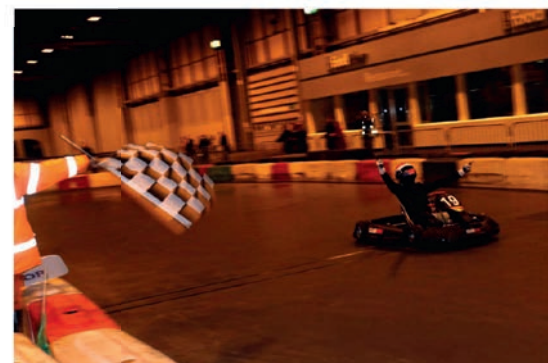
THE RACE DRIVER'S CLUB



www.RaceDriversInc.com



In aid of
Leading the fight
against dementia
**Alzheimer's
Society**



THE FIRST STEP TO SPONSORSHIP

MORRIS LUBRICANTS IS ONE OF THE LARGEST AND LONGEST ESTABLISHED INDEPENDENT OIL AND LUBRICANT MANUFACTURERS IN THE UK – AND ONE OF THE MOST PREVALENT GRASSROOTS BACKERS. BRITISH RALLYING ACE TOM CAVE TALKS THROUGH A CAREER-CHANGING PARTNERSHIP

PUTTING IN THE LEG WORK

In November 2012, after I finished second in the British Championship, I knew that I needed some sponsorship to go into 2013. I wrote over 180 letters and emails, over about three or four weeks. I probably had 20 replies and one reply out of those 20 was a meeting with Morris Lubricants. It all stemmed from a simple letter and evolved into a brilliant partnership.

In 2013 they provided us with oil to run the Citroen DS 3 we ran that year and, from their range of products, all the other lubricants it took to run the car – and they also helped us to enter Rally GB in the Fiesta R5 as well.

It all boils down to the groundwork. You have to put the work in, and that's what 2013 was about and testing how the relationship was going to work. Morris obviously saw a benefit and an opportunity for them.

Sending a letter is the correct way to do it. It shows your intentions, who you are. Morris is a fairly local business and they aren't too far away from where we're based; we're in mid-Wales and they're in Shrewsbury. They're big in our area and I always see their trucks passing. I thought, 'Why not?' I sent the letter and said to myself, 'I'll see how it goes'.

AN INDIVIDUAL APPROACH

I did it myself. That's the best way – they get to talk to you, the person they are supporting. There's no point having a messenger. I think that's where people trying to do what I did go wrong. You need to be yourself, not try and come across as a PR person.

Obviously it's a bit daunting because I've never been in that situation before, but once I got the door open they were a fantastic company to work with. Everything was very easy-going, but that's a family-run business for you. We are the same, we have a family business at home. We don't have to go to corporate meetings to get to the right person. My relationship with Morris was to ring the managing director, which made my



Cave owes a lot to Morris's backing

life easier. I didn't have to wait around weeks for an answer on things.

Ultimately it boils down to 'Can you give me some money to go rallying?' That's the question you are asking, and some people are afraid to do that.

You have to justify it, you have to have some sort of recognition. You can't just turn up and say, 'I've got a rally car, can you come and sponsor me next year?' I did a lot of homework, I had to go and scratch around for sponsors for four or five years, it took me a while to try and get that major sponsorship deal.

OPENING THE DOOR

If a driver is doing BTRDA (British Trial and Rally Drivers Association) events and just wants the support of someone supplying oil, then as a company Morris Lubricants has always been good at that. Supporting grassroots motorsports is really important to them.

I didn't assume Morris would be the kind of company that would then back me to the top level, but that's what they did. In 2014 we agreed full terms of sponsorship with Morris and they paid for my entry into the Drive DMACK Trophy, for five supporting rounds in the World Rally Championship. That year it was a full sponsorship contract and they put money on top for us to do Rally GB again in 2014. It was a very good year!

It's been vitally important for me – it got me to the point where I am in my career now. It gave me the opportunity to break into the world championship, which I probably would never have got without them. It put feet in the doors for me and it's what made it possible for me to compete in the world championship again this year.

It's been a very, very important relationship for me. It gave me the chance in 2014 and this year probably wouldn't have happened, either. ■

MORRIS LUBRICANTS SPONSORSHIP PROGRAMME

Morris Lubricants is looking for brand ambassadors to join its motorsport sponsorship scheme for the 2016 season.

Never one to shun club racing, the British manufacturer will supply oil and lubricants to drivers in various forms of motorsport in the UK, as well as hats, badges and decals.

With a background in everything from national rallying to the British Touring Car Championship, the company is keen to support up-and-coming British talent. Drivers who join the programme will also benefit from technical support to identify and recommend products for their specific vehicles.

Visit www.morrislubricants.co.uk to learn more.

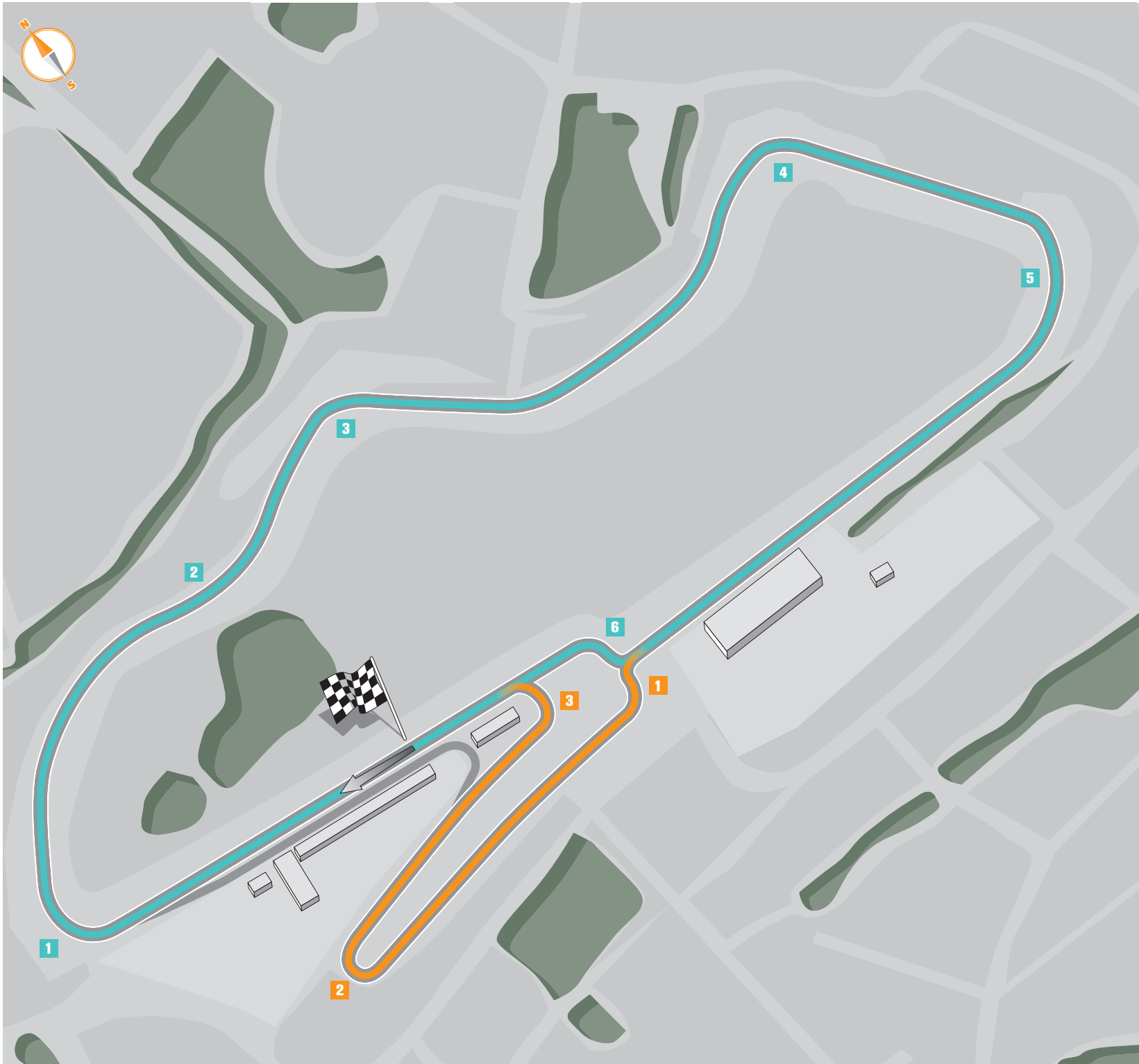
Want to apply for the Morris sponsorship scheme?

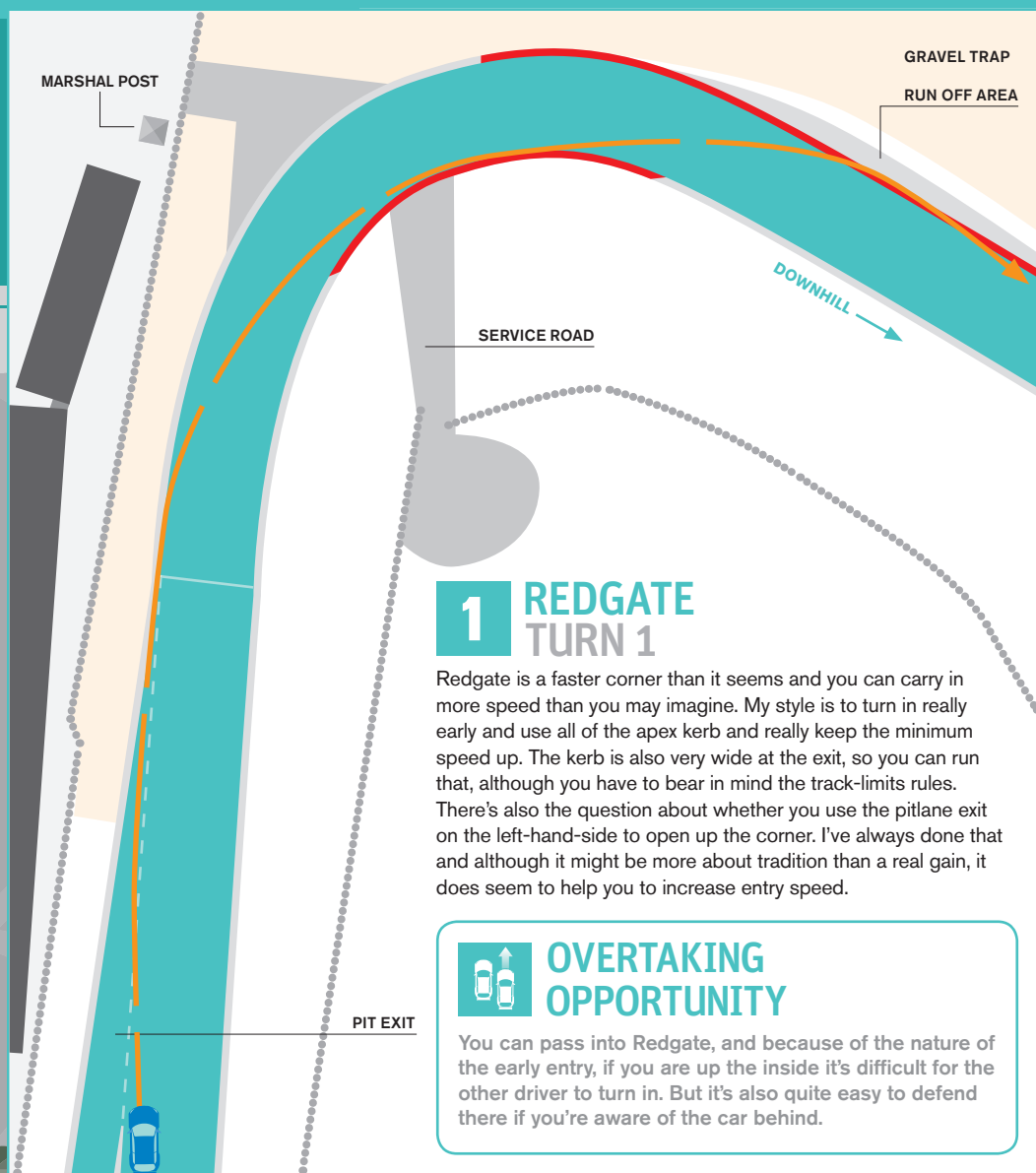
Email sponsorship@morris-lubricants.co.uk and provide details of yourself and your motorsport activity and ambitions. Morris Lubricants will be examining all applications up until January 15 2016.



DONINGTON PARK WITH ALEX LYNN

THE GP2 RACEWINNER TAKES YOU ON A FORMULA 3-BASED TOUR OF BOTH THE NATIONAL AND GP TRACK



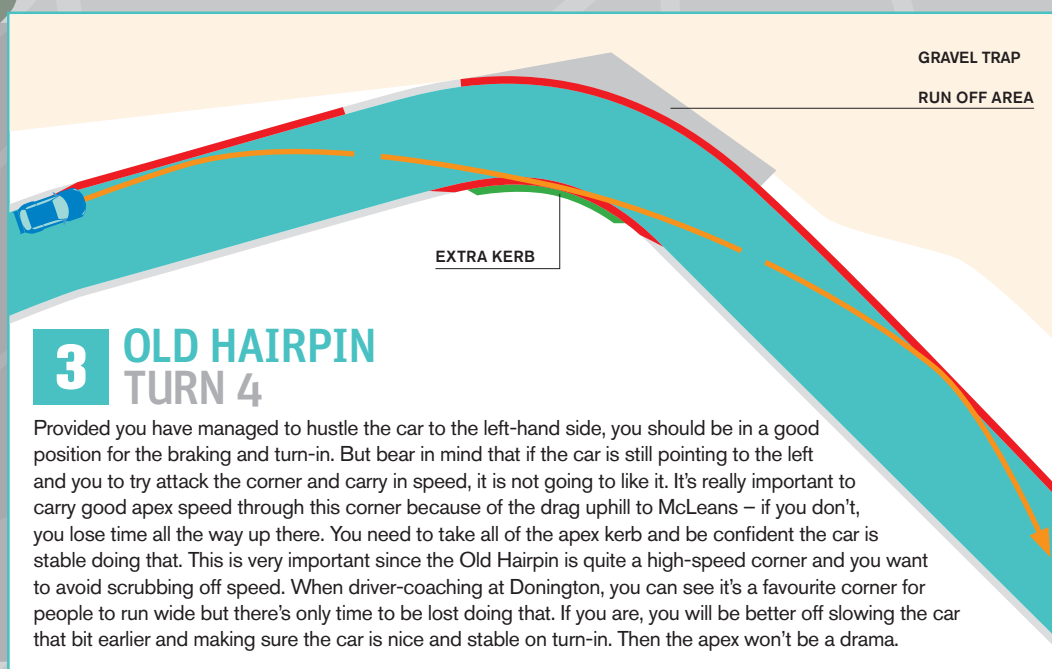


1 REDGATE TURN 1

Redgate is a faster corner than it seems and you can carry in more speed than you may imagine. My style is to turn in really early and use all of the apex kerb and really keep the minimum speed up. The kerb is also very wide at the exit, so you can run that, although you have to bear in mind the track-limits rules. There's also the question about whether you use the pitlane exit on the left-hand-side to open up the corner. I've always done that and although it might be more about tradition than a real gain, it does seem to help you to increase entry speed.

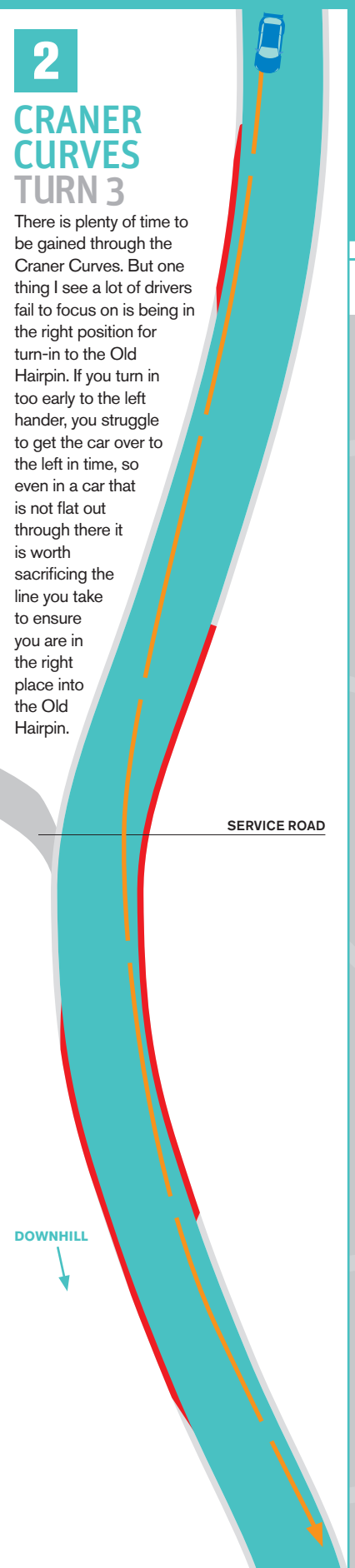
OVERTAKING OPPORTUNITY

You can pass into Redgate, and because of the nature of the early entry, if you are up the inside it's difficult for the other driver to turn in. But it's also quite easy to defend there if you're aware of the car behind.



3 OLD HAIRPIN TURN 4

Provided you have managed to hustle the car to the left-hand side, you should be in a good position for the braking and turn-in. But bear in mind that if the car is still pointing to the left and you try to attack the corner and carry in speed, it is not going to like it. It's really important to carry good apex speed through this corner because of the drag uphill to McLeans – if you don't, you lose time all the way up there. You need to take all of the apex kerb and be confident the car is stable doing that. This is very important since the Old Hairpin is quite a high-speed corner and you want to avoid scrubbing off speed. When driver-coaching at Donington, you can see it's a favourite corner for people to run wide but there's only time to be lost doing that. If you are, you will be better off slowing the car that bit earlier and making sure the car is nice and stable on turn-in. Then the apex won't be a drama.



2 CRANER CURVES TURN 3

There is plenty of time to be gained through the Craner Curves. But one thing I see a lot of drivers fail to focus on is being in the right position for turn-in to the Old Hairpin. If you turn in too early to the left hander, you struggle to get the car over to the left in time, so even in a car that is not flat out through there it is worth sacrificing the line you take to ensure you are in the right place into the Old Hairpin.

KEY CORNER

GRAVEL TRAP

! WARNING!
OFF-CAMBER

4 McLEANS TURN 7

The key here is to be as close as possible to the left-hand side of the track. That is dependent on how you take the flat left-hander, Schwantz, on the approach. As at Redgate, it's a question of making sure you turn in early, using all of the apex kerb and getting off the brake as quickly as possible. It means that you perhaps sacrifice a little in terms of how quickly you get back on the throttle, but it allows you to keep the minimum speed up. The corner is also a little off-camber, and that's why it's so important to turn in early because if you are a little wide, the car won't like it and you will be dragged further off-line.

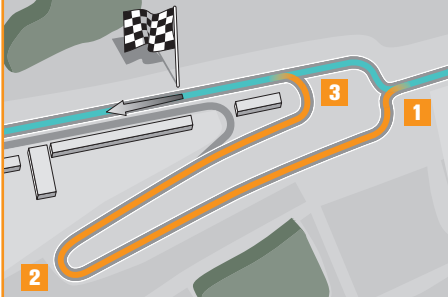
EARLY TURN-IN

! WARNING!
BUMP AT APEX

ACCESS TUNNEL

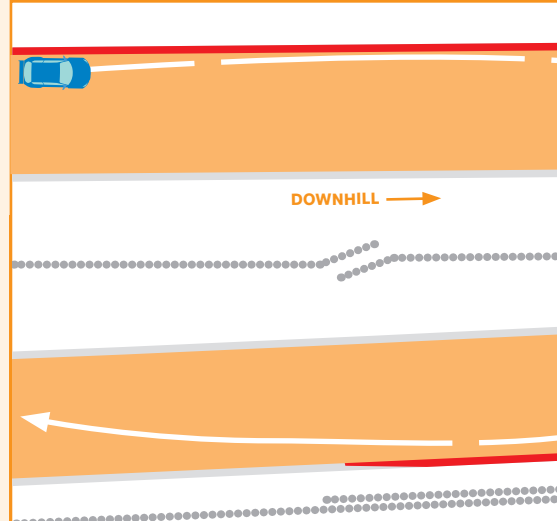
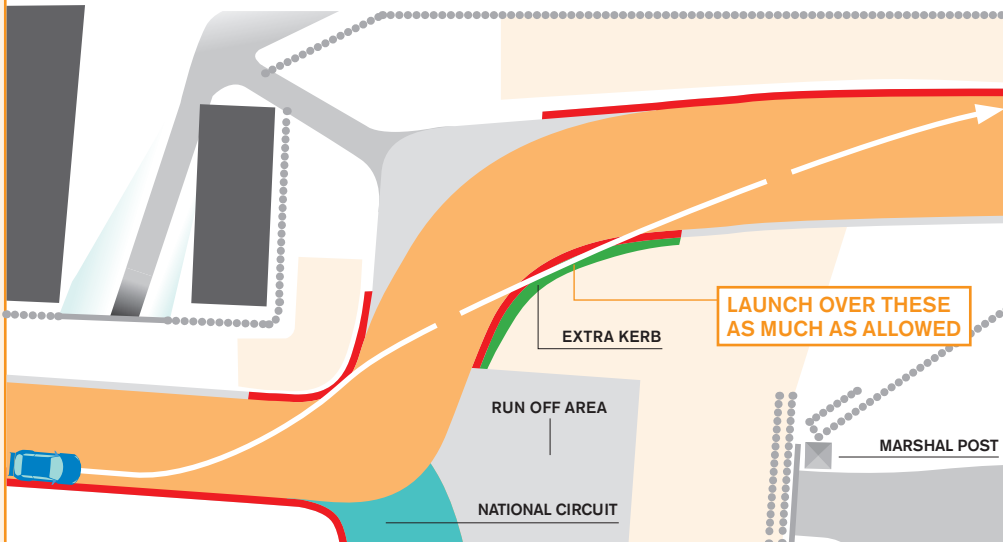
BLIND ENTRY BECAUSE TRACK RISES

GRAND PRIX LOOP



1 FOGARTY ESSES TURNS 9/10

This version of the final chicane is faster than the other. In F3, it wasn't a big brake so it doesn't offer much of a passing opportunity. It's a ballsy corner and about threading the needle: just bang it down a gear and throw it in. The key is getting the entry right and I used to open up the entry a little using the kerb. Then you can launch it over the kerbs, fire it straight to the second apex. If you are close to the limit on the exit, you know you have done a good job. So it's about a little bravery and a high minimum speed.



2 MELBOURNE HAIRPIN TURN 11

You can carry the braking into this corner to 'vee' it off, braking and downshifting to second in Formula 3. Then it almost becomes a double-apex corner that comes back on itself.



EBREVILAT

MARSHAL POST

! DON'T USE INSIDE KERB

5 COPPICE TURN 8

This is the most difficult corner on the track. Because the long straight follows, there is a lot of time to be won and lost here. There's a horrible bump on the apex so I avoid the entry kerb, especially in a single-seater because the car doesn't react well. The theme at Donington is carrying minimum speed and getting off the brake as early as possible rather than trying to get on it later. You have to run a bit of a wall of death at the apex, with the car on the edge, but that is how it should be. In terms of line, there's nothing too special here, just avoid the kerb and make sure you find your turn-in point for the blind entry.

GP CIRCUIT TRACK LAYOUT

! WARNING! SAUSAGE KERB

RUN OFF AREA

! WARNING! SAUSAGE KERB

GRAVEL

6 GODDARDS TURNS 9/10

The right-left leading onto the start/finish on the national configuration is medium-speed. Here, it's all about the exit because it's so easy to run wide onto the main straight. If you are late on the power out of here, it will cost you time. It flows nicely, so just look for an orthodox turn-in point and keep the minimum speed up. Then it's just a relatively straightforward drag to the finish line.

SERVICE ROAD

OVERTAKING OPPORTUNITY

Because it's so difficult to carry the right speed through the previous chicane, there are lots of chances to pass at the hairpin that follows. I remember passing Jack Harvey for the lead here in F3, but I went deep and he repassed me! But if you can hold it at the exit, it's a great chance.

PIT ENTRY

! WARNING! CAMBER

NATIONAL CIRCUIT

3 GODDARDS TURN 12

On this track configuration, it's a left-handed hairpin. You have to take a late turn-in here, then clip the apex. It's incredibly easy to lock up here, either the rear or the fronts, because of the little hump. But if you go in deep, turn-in late and hit the apex, you get great drive onto the straight and for the run to Redgate.

PRODUCT SHOWCASE



MORRIS LUBRICANTS

LODEXOL XFS 75W-90

Lodexol XFS 75W-90 is based on fully synthetic oil technology that has been fine-tuned for use in motorsport applications where high levels of extreme pressure additives and friction modifiers are required to protect the critical mechanisms of limited-slip differentials. In addition to its high load-carrying capability, Lodexol XFS 75W-90 will protect against rust and corrosion and has a low foaming tendency, ensuring an effective oil film

MORRIS
LUBRICANTS

at all times, no matter what the conditions. Shock loading occurs when one of the driven wheels loses traction and the differential locks, redistributing the drive equally. Standard API GL5 gear oils are unable to cope with this extreme condition and therefore is necessary to use a proper limited slip differential oil to promote long component life and the effective distribution of power to the wheels. This product can also be used where plate-type limited slip differentials are employed.

Lodexol XFS 75W-90 has also proven itself in synchro and dog engagement transmission units, ensuring positive shift and maximum component protection.

Performance levels include: API GL-5, WSS M2C939-A, SR-M2C9102-A.

CARTEK

CARTEK's Power Control Panels integrate electrical power distribution and dashboard switches in one, self-contained panel. By incorporating power switching electronics with over-current protection and intelligent functionality, these units remove the need for multiple switches, relays, fuses and circuit breakers, thereby greatly simplifying the wiring, saving weight and maximising reliability.

- Fully electronic with no moving parts.
- Replaces multiple switches, fuses, relays and circuit-breakers.
- Any number of channels, up to a maximum of 16.
- Choice of current settings: 8A, 16A, 24A or 32A.
- Over-current and short-circuit protection.
- High-quality Deutsch power connectors.
- Various functions available including:
- Momentary Latching (with and without power-off memory)
- Flashing Indicators
- Fuel Pumps (ECU control with manual override)
- Wiper Motor with park signal input
- Status LED for each channel.
- Resistant to shock and vibration



The fully customisable nature of these Power Control Panels allow CARTEK to configure systems to customers' exact requirements. Customers can choose the number of channels, channel functions, button colours and switch panel shape, graphics and mountings. CARTEK then aim to deliver fully built, ready to install panels in around three to four weeks.

FOR MORE INFORMATION Please visit our website www.cartekmotorsport.com
PRICES START FROM £625.00+ DEPENDING ON REQUIREMENTS.

VALETPRO

Matte wraps and paint are an increasingly common sight on the road and at racetracks the world over. In the early stages of this trend, ValetPRO went back to the drawing board to design and formulate a quick detailer that was effective, fast to use and offered genuine protection without leaving a shiny finish.

Matte Protect was introduced to the market, and soon word spread. So much so, that ValetPRO has subsequently been approached by Sports Car Protection to create a Matte Wax for long-term protection. Sports Car Protection is a company that looks after an engineering business managing some 200 top-level racing cars, including manufacturer entries for Le Mans – 20 of these race cars being wrapped in a 'frozen' matte vinyl.

Valet PRO's Matte Protect is now an important part of maintaining these race cars at circuits worldwide and is employed to keep and return specialist matte paint and vinyl finish in 'as-new' condition without a gloss effect.



P1 NUTRITION

Racing is intense. In competition, drivers face a sustained strain on the upper body, a core temperature in excess of 90 degrees Celsius and aggressive heart rates and oxygen consumption. Some might discredit the physicality of motorsport, but the extremities are undeniable.

Managing nutrition is a crucial component of any sportsperson's regime, but motorsport is catching up in this area, with dedicated



companies and products being few and far between. P1 Nutrition, the result of more than 25 years of motorsport experience, aims to change that.

RaceFuel is P1 Nutrition's first product and targets the key area of recovery for racing drivers. Every ingredient in RaceFuel is approved by the World Anti Doping Agency (WADA), and is scientifically chosen to meet the needs of racing drivers. Not only does it help drivers over the course of a race weekend but also in training. Added electrolytes and amino acids target the physical needs of racing drivers like no other product on the market.

Ollie Webb (left), the 2014 European Le Mans Champion and 2015 24 Hours of Dubai Champion, is the latest to sign up to the P1 Nutrition Athlete program. In 2015 Ollie made the transition into the World Endurance Championship with a highlight of third place at the Spa Six Hours event.

"Using P1 Nutrition while at the track under intense heat, pressure and long-distance races is a great asset. We need all the energy we can get in these situations both mentally and physically, and I'm happy to say that P1 Nutrition helps me achieve my goals."

P1 Nutrition will be at the Autosport show in the Fitness and Preparation section. Be sure to visit the stand to sample some products and see how to improve your pre-season training.

WHEN EVERY TENTH COUNTS

25 grams of fast absorbing Whey Protein rebuilds and strengthens the key muscles used for cornering and resisting G-Forces.

Added Branched Chain Amino Acids (BCAA's) aid in the fast absorption of protein to strengthen and increase stamina of drivers arms.

Added electrolytes replenish lost nutrients due to cockpit temperatures reaching 70°C.

The high protein content of 25 grams per 30 gram serving strengthens the legs which provide stability and increase the endurance performance of a driver.



www.p1nutrition.com

WALERO

Rally driver and Mini UK Brand Ambassador, Harry Hunt, put Walero base layers to the test during a recent five-day rally race across the Moroccan desert, slicing sand dunes and tackling tough terrain with fantastic results.

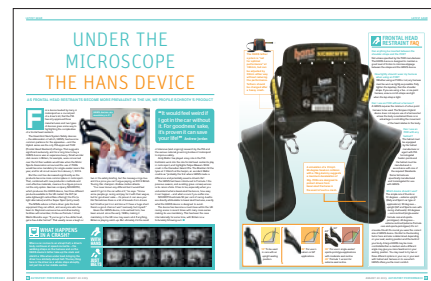
Conditions were intense, but Harry raved about the comfort of Walero's base layers, giving them a thumbs-up, and, with an overall finishing position of seventh, we're giving Harry's rally skills a thumbs-up too.



SCHROTH

Next year, frontal head restraints become mandatory across most racing disciplines in the UK. Are you ready for the rule change?

Courtesy of SCHROTH, brush up on the rule change with our **FREE AUTOSPORT FEATURE** (search 'the rule change British racing's been waiting for' online) and understand the technology behind the market-leading HANS device by revisiting AUTOSPORT Performance's August Latest Gear profile.



HOW TO USE A SIMULATOR TO LEARN A NEW TRACK

MATT BEERS FROM POSITION ONE MOTORSPORTS AND PORSCHE SUPERCUP DRIVER BEN BARKER

MATT BEERS “The main things to learn are the layout and flow of the circuit, putting it in your memory so it’s subconscious. Any thoughts on where you are on track is just distracting your focus”

“That’s the biggest thing with the simulator. You have the ability to drive out of the pitlane and look around, take things in, whereas in reality you can’t. You have the intensity of everything on the day around you and don’t have time to understand everything” **BEN BARKER**

MATT BEERS “In reality you’re limited by variables and time. We switch tyre wear off so the environment is the same lap after lap and you have the same things to deal with. The car you use doesn’t have to be identical but it has to be something driveable and balanced, because you don’t want to have to spend time learning to drive the car”

“The next thing is understanding circuit lines and kerb usage. I’ll always relate a reference to real life. You don’t want to get in when you had a reference in the simulator that’s slightly different in reality. It can teach you which gears to be in and the speed of corners is also relevant, whether it gets tighter or quicker. Maybe a corner has a double apex, or there are elevation changes. The simulator does give you quite a good idea” **BEN BARKER**

MATT BEERS “Imola and Portimao have visibility issues in real life with regards to what you need to commit to before you see it. These things you really need to pick up on. What you see on the sim then needs to be verified on the day - the last thing you want is to use your sim reference and go screaming off the track. It’s about appreciating variables will change when you go to the track”



360-degree motion takes getting used to

ALL PICS: HARTLEY



AUTOSPORT’S DIARY SCOTT MITCHELL LEARNING MONZA IN A PORSCHE CARRERA

Virtual or not, the prospect of jumping on a motion-based simulator for the first time ‘in’ a Porsche Carrera Cup car around Monza is slightly nerve-jangling. But this is the first exercise in a series of simulator-based lessons AUTOSPORT Performance intends to bring you in conjunction with Position One Motorsports. So the guinea-pig role is one I’m happy to take on.

It might seem like a basic lesson, but whatever your level as a driver you will always have the possibility of learning a new track. And, as with most things, the fundamentals are absolutely crucial.

We start with some fun in a Caterham Superlight around the Brands Hatch Indy circuit. Having only ever used a static sim before, the experience of the 360-degree rotation is bizarre at first – it feels like my eyes are never going to adjust. Once they do, after a couple of laps I’m able to get a feel for the steering and pedals. Simulators can’t completely replicate the seat-of-the-pants feel some drivers love, with more emphasis placed on the feedback through the steering. But the motion does help with that because you’re

moving around more in relation to the track, so what I’m doing here is getting comfortable in what I’m driving. This is crucial to ensure I don’t go into the real task blind.

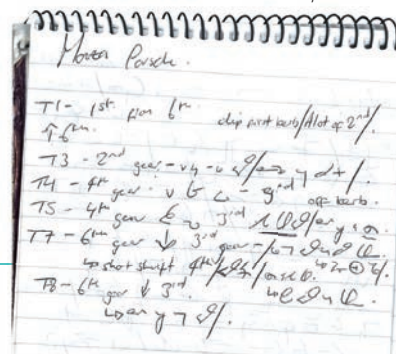
The Porsche is chosen because it’s a model Position One has got well sorted. Monza is too, but it’s also relatively simple in layout and technical challenge.

First, we go over the track map. Ben Barker talks me through gears around the lap, then we go back through and talk through kerb usage. As Barker, a Porsche Supercup podium finisher, has driven here in real life and already had a run in the sim, he’s well placed to explain the differences between the virtual track and reality.

Crucially for this exercise, which is all about preparation for the real world, Barker reports a great deal of similarity

– although he warns me off the kerb at Lesmo 2, which he’d take in real life.

Now it’s time for the first run. Lesmo 1 tightens significantly more than it



Old-school shorthand complements sim tech



WHAT IS POSITION ONE?

Based alongside Gulf Racing, Position One was set up in 2014. It's headed by Matt Beers, who combines a technical and managing director role there with a team manager position with Gulf's European Le Mans Series effort.

Position One uses a motion-based simulator that has 360-degree movement and is based on industry-standard simulation software. The company is pursuing a holistic approach to driver development, with its also facility comprising a gym, shower and treatment room.

It plans to introduce a classroom-based learning area as well to cover technique, fitness advice and driver psychology.

CONTACT +44 (0)20 8123 7245
or info@position-one.co.uk



Win a day with Position One!



- SIMULATOR SESSION
- FITNESS ASSESSMENT
- GULF RACING WORKSHOP TOUR

Follow @P1_motorsports on Twitter or like Position One Motorsports on Facebook
Full terms and conditions on www.position-one.co.uk

appears on the track map, let alone any TV pictures I've seen watching the Italian Grand Prix. Parabolica too. In addition to getting a feel for the car, these are the mental notes I make for when I stop after a few laps for a debrief. These early laps aren't about chasing a decent time.

The data trace shows my initial application of pressure is too low, and dips off too quickly. Barker says the brakes can take a bigger hit. He explains the tightening nature of Lesmo 1 and Parabolica means a naturally later apex, and also runs through braking markers. The 150m board at the Rettifilo chicane, the bridges for the Roggia and Ascari are all real-life markers that work well in the sim, though I'm lacking a little in confidence and need to work towards all of those as the day progresses.

A couple of mistakes creep in and lead to slightly gravelly excursions, so the run is brought to an end. In ideal terms I'm two seconds behind Barker, who has effectively matched his Supercup qualifying time from August. In reality I'm 2.7s back – hooking up my sectors has been tricky – and the messy end to this 10-lap run leads simulator engineer Matt Beers to call me in to calm down and back off from chasing laptime. I'm still massively struggling at Lesmo 1 and Parabolica, where



I've tried to apply Barker's technique. Getting sucked to the kerb is a bad habit I shouldn't be developing, but Beers points out it's better to get into it now so I can snap out of it before (in theory) visiting the circuit for real.

The final debrief is where things click. Barker reiterates how much room I have left to brake at the Rettifilo because I'm getting on the power again before the chicane! But Lesmo 1 and Parabolica are killing me, costing 0.8s and 0.5s respectively. He suggests downshifting from fourth to third for Lesmo 1 later, to help bring the nose to the apex. Braking later and less, he says, will also keep me from diving into the kerb too soon.

The final run is much better. Lesmo 1 is still messy, but there's an improvement, and although I'm applying



a bit too much brake pressure at Parabolica still the corner speed is decent and the exit spot on. Applying the downshift trick to other parts of the laps yields a huge gain elsewhere – 0.35s at the Rettifilo alone!

We call it quits on lap nine, after a succession of PBs culminating in a 1m52.34s, a second behind Barker. The data shows half a second in Lesmo 1 alone. I'm not naive enough to think this would immediately translate to a real life lap of Monza, but it's pleasing to be able to target specific areas to focus on if I were to test there.

Therein lies the benefit of our task. An afternoon's work in Milton Keynes has probably bought me back a session of running at Monza. When time is everything in motorsport, that experience is invaluable. ■



CHAMPIONSHIPS FOR NOVICES

THERE ARE THREE GREAT OPTIONS AVAILABLE TO RACING NOVICES WITH A NATIONAL B LICENCE

So you've got your National B racing licence, but you're not aspiring professional (at least, not yet). That means single-seaters aren't on your radar, but neither is a national-level tin-top or sportscar category.

Flinging yourself into the hustle and bustle of a competitive one-make category like Mazda MX5s isn't appealing either – you need to find your feet. Where better than in a field of novices like you?

If that sounds more like it, then there are a trio of options for you, thanks to the efforts of three of Britain's most significant motorsport

marques – Caterham, Radical and Ginetta.

The long-running Caterham Academy is the bottom rung of its multi-tiered British racing structure, while, in recent years, the launches of the Radical SR1 Cup and Ginetta Racing Drivers Club have made sportscar and baby GT options available to budding racers. ■



CATERHAM ACADEMY

ABOUT Caterham claims to have brought almost 1,000 drivers into motor racing since its Academy launched 12 years ago – and it's easy to see why. It feeds into British motorsport's most significant racing pyramid, and therefore offers myriad options thereafter. The car itself is forgiving, and road-legal as well. It's comfortably the cheapest of the three options, too.

CAR Road-legal Caterham Seven with a 1.6-litre, 125bhp Ford Sigma engine and a five-speed gearbox

COST £22,995+VAT (component kit) or £25,995+VAT (built)

INCLUDES Road-legal car, ARDS test, one test day, one car-control handling day, two sprint events and five race entries

CALENDAR Aintree, Blyton, Rockingham, Castle Combe, Brands Hatch Indy, Oulton Park, Silverstone International



RADICAL SR1 CUP

ABOUT With three seasons in the bag, Radical's SR1 Cup doesn't have the numbers to match Caterham, but what it lacks in history it makes up for in performance. The bike-engined SR1 is by some distance the most potent car for rookies to handle – in fact, it's such a thoroughbred it's a track-only machine that costs more than £40k once VAT is factored in. One for the more confident or more adventurous rookie.

CAR Radical SR1 with a 1.3-litre, 185bhp Suzuki bike engine and a six-speed sequential gearbox

COST £37,500+VAT

INCLUDES Car, race suit, ARDS test, two exclusive track days at Snetterton and Brands Hatch Indy, one at Bedford Autodrome and four double-header race entries

CALENDAR Silverstone Grand Prix, Snetterton 300, Bedford Autodrome, Oulton Park International, Brands Hatch Grand Prix



GINETTA RACING DRIVERS CLUB

ABOUT Lawrence Tomlinson's initiative arrived at the start of last year, and fully embraces the 'club' name it has adopted. Road trips to Le Mans, based at the Ginetta boss's French chateau, are an example of the camaraderie the GRDC attempts to engender. Experience in a baby GT car can lead to a slot as a sub-class within the GT5 Challenge, with steps up to the GT5 proper and GT4/GT3 options thereafter as Ginetta looks to establish its own motorsport ladder.

CAR Road-legal Ginetta G40R with a 1.8-litre, 175bhp Ford Duratec engine, five-speed gearbox

COST £33,300+VAT

INCLUDES Road-legal car with 12 months road tax, ARDS test, two track days, four race entries and GRDC membership

CALENDAR Rockingham, Silverstone Grand Prix, Spa-Francorchamps, Snetterton 300, Donington Park Grand Prix

RACE PREP



WALERO

In the previous issue of Autosport Performance, we detailed how three drivers adopted a more structured fitness regime.

With winter upon us and pre-season just around the corner, can you afford to slack off over Christmas?

Use this guide to chart your fortnightly progress in some of the key areas to monitor your physical fitness.



	START	WEEK 2	WEEK 4	WEEK 6	WEEK 8	WEEK 10	WEEK 12
Weight (kg)							
Resting heart rate (bpm)							
Side plank test (seconds)							
Straight leg raise (degrees)							
Cardio (minutes)							
HIIT/Fartlek cardio (cycles)							

Want to go more detailed?

	START	WEEK 2	WEEK 4	WEEK 6	WEEK 8	WEEK 10	WEEK 12
Blood Pressure							
Body Fat							
Cholesterol							

Valet PRO[®]

PROFESSIONAL VALETING SUPPLIES

Find a stockist at www.valetpro.eu or
call us on 01323 287980



MATTE PROTECT

specialist **AMAZINGLY EFFECTIVE** Professional.
CLEANING *Quick and effective* valeting clean
Used on matter paint
or vinyl wraps
...protects and seals **WAX EMULSION** Water repelling
matte paint...
500ML *MICRO WAX FILM* **PROTECT**
or 5L ...no added gloss...
4 WEEKS PROTECTION www.valetpro.eu EASY TO USE
CAR CARE
designed to refresh matte finishes